

# Table of Contents - NFWB Mar. 25, 2024 Agenda Packet

1) March 25, 2024 NFWB Meeting Agenda .....	2
2) Draft March 4, 2024 NFWB Meeting Minutes .....	6
3) March 25, 2024 Personnel Action Sheet .....	12
4) RESOLUTION 2024-03-006 - ACCEPTING LABELLA PROPOSAL FOR WATER MAIN REPLACEMENT ENGINEERING SERVICES .....	13
5) 2024-02-19 - LaBella Associates Capital Projects Proposal .....	15
6) RESOLUTION 2024-03-007 - ACCEPTING NUSSBAUMER & CLARKE PROPOSAL FOR WATER TREATMENT PLANT SCADA CONTROL SYSTEM UPGRADE ENGINEERING SERVICES .....	96
7) 2024-02-19 - Nussbaumer & Clarke Proposal for WTP SCADA Survey and Conceptual Design Engineering Services .....	98
8) RESOLUTION 2024-03-008 - ACCEPTING AECOM PROPOSAL FOR ENGINEERING SERVICES - WWTP CAPITAL PROJECTS .....	135
9) 2024-02-19 - AECOM Proposal for Capital Improvement Projects .....	137
10) RESOLUTION 2024-03-009 - ACCEPTING AECOM PROPOSAL FOR CALUMET AVENUE SEWER REHABILITATION PROJECT ENGINEERING SERVICES .....	212
11) RESOLUTION 2024-03-010 - PROCUREMENT OF VAC CON COMBINATION SEWER CLEANING TRUCK AND DISPOSAL THROUGH TRADE IN OF 2017 AQUATECH COMBINATION TRUCK .....	214
12) 2024-03-20 - Updated VacCon Quotation - Increased Trade Value and Specified Delivery Date .....	216
13) VacCon Chassis Details - VIN Redacted .....	220
14) RESOLUTION 2024-03-011 - WWTP PROJECT 3 ENGINEERING SERVICES AGREEMENT – CONTROLS AND BELT FILTER PRESS REFURBISHMENT .....	221
15) 2024-03-21 - Nussbaumer & Clarke WWTP Project 3 Proposal .....	223
16) Nussbaumer & Clarke Work Hour and Fee Breakdown .....	230
17) RESOLUTION 2024-03-012 - WATER TREATMENT PLANT ROOF REPLACEMENT CHANGE ORDER APPROVAL .....	233
18) 2024-03-19 - WTP Roof Replacement Change Order No. 4 .....	235
19) RESOLUTION 2024-03-013 - APPROVE AND ACCEPT 2023 AUDIT AND INVESTMENT REPORTS ... .....	251
20) Draft 2023 Audit Documents .....	252



## **AGENDA**

### **Business Meeting of the Niagara Falls Water Board March 25, 2024 at 5:00 p.m.**

**Water Treatment Plant Conference Room  
5815 Buffalo Avenue, Niagara Falls New York 14304**

Meeting may be attended in person or via videoconference – visit [NFWB.org](http://NFWB.org) for details. Please refer to work session packet posted to [NFWB.org](http://NFWB.org) for copies of documents noted on agenda that are not part of this packet.

#### **1. Preliminary Matters**

##### **a. Attendance:**

**Asklar (Board Member/Chairman of Finance/Member Exec. Staff Review Cmte.)**

**Forster (Chairman)**

**Kimble (Board Member)**

**Larkin (Board Member/Vice Chairwoman/Governance Chairwoman/  
Chairwoman Exec. Staff Review Cmte.)**

**Leffler (Board Member/Member Exec. Staff Review Cmte.)**

##### **b. Public Comments (All speakers must register with the meeting clerk prior to roll call and are limited to three minutes per person – total time for all speakers may not exceed one hour).**

##### **c. Comments from Chairman Forster**

##### **i. 2024 Budgeted Expenses - Expenditures of User Rates, Fees, and Charges Less Debt Service**

- d. **Presentations**
    - i. **EFPR Group, CPAs – Independent Auditors’ Report**
  - e. **Letters and Communications**
    - i. **2024-03-14 - Correspondence with City of Niagara Falls Regarding Eclipse**
    - ii. **2024-03-14 – COVID Wastewater Surveillance Update Memorandum**
  - f. **Prior Meeting Minutes**
    - i. **Draft March 4, 2024 Meeting Minutes**
2. **Acting Executive Director – Michael Eagler**
- a. **WWTP Project Budget Tracker (CPL)**
  - b. **WWTP Construction Schedule Tracker (CPL)**
  - c. **Financial Award Summary (CPL)**
3. **Operations Executive – David Conti**
4. **Outside Infrastructure Updates – Cortez Bradberry**
5. **Engineering – Douglas Williamson**
6. **Personnel Items – David San Lorenzo**
- a. **March 25, 2024 Personnel Actions**
  - b. **Union Time Paid by Water Board**
7. **Information Technology (IT) – Jonathan Joyce**

**8. Finance – Brian Majchrowicz**

- a. Revenue Budget Performance Report through 2/29/2024**
- b. Sewer Fund Expense Budget Performance Report through 2/29/2024**
- c. Water Fund Expense Budget Performance Report through 2/29/2024**
- d. Board Fund Expense Budget Performance Report through 2/29/2024**
- e. Key Bank and Bank on Buffalo Balance Report**
- f. Wilmington Trust Balance Report**
- g. Treasury Account Balance Report**
- h. Capital Payments**
- i. Budget Amendments Report**

**9. Questions Regarding February 2024 Operations and Maintenance Report**

**10. Safety – John Accardo**

**11. General Counsel and Secretary – Sean Costello**

**12. From the Chairman**

**13. Resolutions**

**2024-03-006 – ACCEPTING LABELLA PROPOSAL FOR WATER MAIN REPLACEMENT ENGINEERING SERVICES**

- a. 2024-02-19 - LaBella Associates Capital Projects Proposal**

**2024-03-007 – ACCEPTING NUSSBAUMER & CLARKE PROPOSAL FOR WATER TREATMENT PLANT SCADA CONTROL SYSTEM UPGRADE ENGINEERING SERVICES**

- a. 2024-02-19 - Nussbaumer & Clarke Proposal for WTP SCADA Survey and Conceptual Design Engineering Services**

**2024-03-008 – ACCEPTING AECOM PROPOSAL FOR ENGINEERING SERVICES - WWTP CAPITAL PROJECTS**

- a. 2024-02-19 - AECOM Proposal for Capital Improvement Projects**

**2024-03-009 – ACCEPTING AECOM PROPOSAL FOR CALUMET AVENUE SEWER REHABILITATION PROJECT ENGINEERING SERVICES**

- a. 2024-02-19 - AECOM Proposal for Capital Improvement Projects (Included in agenda packet following Resolution 2024-03-008)**

**2024-03-010 – PROCUREMENT OF VAC CON COMBINATION SEWER CLEANING TRUCK AND DISPOSAL THROUGH TRADE IN OF 2017 AQUATECH COMBINATION TRUCK**

- a. **2024-03-20 - Updated VacCon Quotation - Increased Trade Value and Specified Delivery Date**
- b. **VacCon Chassis Details - VIN Redacted**

**2024-03-011 – WWTP PROJECT 3 ENGINEERING SERVICES AGREEMENT – CONTROLS AND BELT FILTER PRESS REFURBISHMENT**

- a. **2024-03-21 - Nussbaumer & Clarke WWTP Project 3 Proposal**
- b. **Nussbaumer & Clarke Work Hour and Fee Breakdown**

**2024-03-012 – WATER TREATMENT PLANT ROOF REPLACEMENT CHANGE ORDER APPROVAL**

- a. **2024-03-19 - WTP Roof Replacement Change Order No. 4**

**2024-03-013 – APPROVING AND ACCEPTING INDEPENDENT AUDIT AND INVESTMENT REPORTS**

- a. **EFPR 2023 Audit Documents**

14. Unfinished/Old Business

15. New Business & Additional Items for Discussion

16. Executive Session (if needed)

17. Adjournment of Meeting



## MINUTES

### Business Meeting of the Niagara Falls Water Board March 4, 2024 at 5:00 p.m.

Water Treatment Plant Conference Room  
5815 Buffalo Avenue, Niagara Falls New York 14304

Meeting could be attended in person or via videoconference.

#### 1. Preliminary Matters

*Chairman Forster called the meeting to order at 5:00 p.m.*

##### a. Attendance:

Asklar (Board Member/Chairman of Finance/Member Exec. Staff Review Cmte.) *Present*

Forster (Chairman) *Present*

Kimble (Board Member) *Present via Videoconference*

Larkin (Board Member/Vice Chairwoman/Governance Chairwoman/  
Chairwoman Exec. Staff Review Cmte.) *Present*

Leffler (Board Member/Member Exec. Staff Review Cmte.) *Present via Videoconference*

b. Public Comments (All speakers must register with the meeting clerk prior to roll call and are limited to three minutes per person – total time for all speakers may not exceed one hour).

##### c. Comments from Chairman Forster

i. 2024 Budgeted Expenses - Expenditures of User Rates, Fees, and Charges Less Debt Service

- d. Presentations (none scheduled)
- e. Letters and Communications
  - i. 2024-02-16 - COVID Wastewater Surveillance Update Memorandum
  - ii. WWTP Order on Consent Q4 2023 Quarterly Progress Report
- f. Prior Meeting Minutes
  - i. Draft January 22, 2024 Meeting Minutes

*Motion by Board Member Larkin and seconded by Board Member Asklar to approve the January 22, 2024 meeting minutes.*

*Asklar \_\_Y\_\_ Forster \_\_Y\_\_ Kimble \_\_Y\_\_ Larkin \_\_Y\_\_ Leffler \_\_Y\_\_*

*Motion carried, 5-0.*

**2. Acting Executive Director – Michael Eagler**

- a. WWTP Project Budget Tracker (CPL)
- b. WWTP Construction Schedule Tracker (CPL)
- c. Financial Award Summary (CPL)

*Mr. Eagler noted that review of the Emergency Action Plan (“EAP”) has been completed. Several minor revisions have been identified and will be addressed before a revised version of the EAP is finalized and distributed.*

**3. Operations Executive – David Conti**

- a. Confined Space Inventory / Procurement of Fall Arrest Equipment

*Mr. Conti noted that updated fall arrest equipment is on order.*

*In connection with the Lead Service Line inventory, crews will be hydro-excavating and we have developed an application to enter service line material data into the system.*

*For the hydrant replacement program, the 2024 goal is 100 hydrants, 25 are completed.*

**4. Outside Infrastructure Updates – Cortez Bradberry**

**5. Engineering – Douglas Williamson**

**a. Update on Capital Projects RFP**

*Mr. Williamson informed the Board that seven proposals were received. Staff is reviewing the proposals and expects to recommend award of several projects to one consultant. This may be more efficient and reduce inspection-related costs.*

**6. Personnel Items – David San Lorenzo**

**a. March 4, 2024 Personnel Actions**

**b. Union Time Paid by Water Board**

*Mr. San Lorenzo stated that Union Time utilization compares similarly to last year at this time.*

*Motion by Board Member Larkin and seconded by Board Member Asklar to approve Sections A and B on the Personnel Actions report.*

*Asklar   Y   Forster   Y   Kimble   Y   Larkin   Y   Leffler   A   (internet disconnection)*

*Motion carried, 4-0.*

**7. Information Technology (IT) – Jonathan Joyce**

*Mr. Joyce reported that IT has deployed Darktrace monitoring software and implemented a change to prevent bad actors from spoofing the NFWB.org email domain. CISA has been scanning our systems, no critical or high vulnerability issues have been identified. IT has deployed some Windows 11 computers, beginning to prepare for the end of Windows 10 support next year.*



**8. Finance – Brian Majchrowicz**

- a. Audit Status Update
- b. Key Bank and Bank on Buffalo Balance Report
- c. Wilmington Trust Balance Report
- d. Treasury Account Balance Report
- e. January 2024 Capital Payments
- f. Revenue Budget Performance Report through 12/31/2023
- g. Sewer Fund Expense Budget Performance Report through 12/31/2023
- h. Water Fund Expense Budget Performance Report through 12/31/2023
- i. Board Fund Expense Budget Performance Report through 12/31/2023
- j. Budget Amendments Report

*Mr. Majchrowicz reported that the audit is progressing well and is anticipated to be completed on time for approval at the March 25 Board meeting.*

**9. Questions Regarding January 2024 Operations and Maintenance Report**

**10. Safety – John Accardo**

*Mr. Accardo noted that a process safety analysis for the Water Treatment Plant disinfection process is underway.*

**11. General Counsel and Secretary – Sean Costello**

**12. From the Chairman**

**13. Resolutions**

**2024-03-001 – PROCUREMENT FROM NYS OFFICE OF GENERAL SERVICES  
INFORMATION TECHNOLOGY UMBRELLA CONTRACT**

- a. 2024-01-19 - Insight Quotation for Verkada, No. 0227038940

*Motion by Board Member Kimble and seconded by Board Member Larkin to approve.*

*Asklar \_\_Y\_\_ Forster \_\_Y\_\_ Kimble \_\_Y\_\_ Larkin \_\_Y\_\_ Leffler \_\_Y\_\_*

*Motion carried, 5-0.*

**2024-03-002 – AWARD BID FOR WTP EMERGENCY CHLORINE SCRUBBER**  
**a. WTP Chlorine Scrubber Bid Award Recommendation Letter and Bid Tabulation**

*Motion by Board Member Leffler and seconded by Board Member Larkin to approve.*

*Asklar \_\_Y\_\_ Forster \_\_Y\_\_ Kimble \_\_Y\_\_ Larkin \_\_Y\_\_ Leffler \_\_Y\_\_*

*Motion carried, 5-0.*

**2024-03-003 – AUTHORIZING SETTLEMENT OF PERSONAL-INJURY LITIGATION WITH WILLIAM LOBIANCO**

*Motion by Board Member Larkin and seconded by Board Member Asklar to approve.*

*Asklar \_\_Y\_\_ Forster \_\_Y\_\_ Kimble \_\_Y\_\_ Larkin \_\_Y\_\_ Leffler \_\_Y\_\_*

*Motion carried, 5-0.*

**2024-03-004 – AUTHORIZING CPL SERVICES FOR REPLACEMENT OF ADDITIONAL SECTION OF 77TH STREET WATER MAIN**

- a. 2024-01-19 - CPL Proposal for Engineering Services to Add to 77th Street Water Main Replacement Project**
- b. 77th Street Water Main Replacement Location Map**

*Motion by Board Member Larkin and seconded by Board Member Leffler to approve.*

*Asklar \_\_Y\_\_ Forster \_\_Y\_\_ Kimble \_\_Y\_\_ Larkin \_\_Y\_\_ Leffler \_\_Y\_\_*

*Motion carried, 5-0.*

**2024-03-005 – PROJECT 1 CHANGE ORDER FOR WWTP SEDIMENTATION BASIN NO 2 CATWALK CONCRETE REPAIRS \***

**\*Note: This is Resolution No. 2024-01-004, renumbered but otherwise the same as resolution tabled at January 22, 2024 meeting.**

- a. **2024-01-09 - Hohl Proposal for Sedimentation Basin No 2 Catwalk Concrete Repairs**

*Chairman Forster stated the Board still has no way to know if this price is good, or high. He wants three bids.*

*Mr. Eagler noted that JM Davidson engineering has been asked to review whether full replacement is needed, or if less extensive repairs are possible.*

*Motion by Board Member Forster and seconded by Board Member Kimble to table this Resolution.*

*Asklar   Y   Forster   Y   Kimble   Y   Larkin   Y   Leffler   Y*

*Motion to table carried, 5-0.*

**14. Unfinished/Old Business**

**15. New Business & Additional Items for Discussion**

**16. Executive Session (if needed)**

**17. Adjournment of Meeting**

*Motion by Board Member Larkin and seconded by Board Members Leffler and Kimble to adjourn the meeting at 5:26 p.m.*

*Asklar   Y   Forster   Y   Kimble   Y   Larkin   Y   Leffler   Y*

*Motion carried, 5-0.*

Niagara Falls Water Board  
 Personnel Actions and Report  
 Monday, March 25, 2024

**Personnel Actions Sheet & Requested of the Board.**  
 All appointments are subject to the appointee meeting the minimum qualifications and all applicable civil service conditions.

**A. PERSONNEL ACTIONS RECOMMEND TO HIRE**

Line Item Number	Position	Department/Location	Pay Rate or Grade	ADDITIONAL INFORMATION
1	<u>Industrial Waste Inspector</u>	<u>Industrial Monitoring</u>	<u>18A - \$22.32-\$26.38/hr</u>	<u>Succession planning.</u>
2	<u>Industrial Monitoring Coordinator</u>	<u>Industrial Monitoring</u>	<u>23A - \$30.04-\$35.61/hr</u>	<u>Succession planning.</u>

**B. RECOMMENDED PROMOTION / MOVE / APPOINTMENT**

Line Item Number	Name and Position	Type of labor move	Change in pay rate or grade	ADDITIONAL INFORMATION
1	Matthew LaGamba Senior Industrial Waste Inspector	Appointment	From \$27.91/hr to \$29.36/hr	Succession planning. Appointee is currently an Industrial Waste Inspector.

**C. PREVIOUSLY TABLED PERSONNEL ACTIONS**

Line Item Number	Action and Position	Department/Location	Pay Rate or Grade	ADDITIONAL INFORMATION

**D. OTHER PERSONNEL ACTIVITY FOR BOARD NOTIFICATION**

Name	Position	Department/Location	Pay Rate	ADDITIONAL INFORMATION

**E. PERSONNEL ON LONG TERM LEAVE OF ABSENCE**

Name	Last Day Worked	Dept.	Return Status	Comments
CMM	12/1/2023	Inside Maint	Unknown	Workers Comp.

*NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-006*

**ACCEPTING LABELLA PROPOSAL  
FOR WATER MAIN REPLACEMENT ENGINEERING SERVICES**

**WHEREAS**, in January 2024 the Niagara Falls Water Board issued a request for proposals for engineering services in connection with various planned capital projects, including for replacement of several water mains; and

**WHEREAS**, the Water Board has been awarded grant funds which will partially offset the total cost of the water main replacements that are the subject of this resolution; and

**WHEREAS**, a total of five proposals were received for the water main replacements; and

**WHEREAS**, Water Board staff recommend acceptance of the proposal by LaBella Associates to perform the water main replacement engineering services described below, as awarding multiple projects to one engineering firm allows for administrative efficiencies and cost savings, including by facilitating bid packages with multiple projects, and because LaBella’s proposal demonstrates that it has qualified personnel, and the lowest overall proposed fee to perform this engineering work:

<b>Capital Item</b>	<b>Project Description</b>	<b>DWSRF Grant No.</b>	<b>LaBella Proposed Engineering Fee for Survey, Design, and Bidding</b>
W9	10th St. & Michigan Ave. Main - Lockport St. to Ontario St. & 10th St. to 11th St.	18588 and 19056	\$52,000
W17	Laughlin Dr. Main - 82nd St. to Bollier Ave.	19056	\$48,000
W21	Ontario Ave. Main - 13th St. to Main St.	19056	\$41,000
W25	Van Rensselaer Ave. Main - 900 Block	19056	\$8,000
W29	Witkop Ave. and 85th St. Loop	19056	\$43,000
W13	81st St. Main - Frontier Ave. to Niagara Falls Blvd.	18587	\$83,000
W15	College Terrace Main - Madison St. to College Ave.	18587	\$20,000
W24	Rivershore Drive Main - S. 86th St. to 91st St.	18587	\$36,000
	Estimated Cost for Geotechnical Investigation for All of the Above Projects		\$84,760
	<b>Total Recommended Award:</b>		<b>\$415,760</b>

**WHEREAS**, the Water Board has determined to award only the survey, design, and bidding engineering services for these water main replacement projects to LaBella at this time, with award of construction inspection and administration services to be pending negotiation of an appropriate not-to-exceed fee once bid packages are developed and information has been obtained regarding the sequence of construction for the water main replacements;

**NOW THEREFORE BE IT**

**RESOLVED**, that on behalf of the Niagara Falls Water Board, its Chairperson hereby is authorized to execute an agreement to be negotiated with LaBella Associates to perform engineering survey, design, and bidding for the water main replacement projects referred to as Capital Items W9, W17, W21, W25, W29, W13, W15, and W24, consistent with LaBella’s February 19, 2024 proposal and for a total fee not to exceed \$415,760.

*Water Board Personnel Responsible for Implementation of this Resolution:*

- Executive Director
- Director of Technical & Regulatory Services
- General Counsel

*Water Board Budget Line or Capital Plan Item with Funds for this Resolution:*

- Capital Plan Items: W9, W17, W21, W25, W29, W13, W15, and W24
- Capital Items Provided by: D. Williamson
- Available Funds Confirmed: B. Majchrowicz (Financing Plan: EFC/DWSRF)

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	<b>Yes</b>	<b>No</b>	<b>Abstain</b>	<b>Absent</b>
Board Member Asklar	[   ]	[   ]	[   ]	[   ]
Board Member Kimble	[   ]	[   ]	[   ]	[   ]
Board Member Larkin	[   ]	[   ]	[   ]	[   ]
Board Member Leffler	[   ]	[   ]	[   ]	[   ]
Chairman Forster	[   ]	[   ]	[   ]	[   ]

Signed By:

Vote Witnessed By:

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Nicholas J. Forster, Chairman

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Sean W. Costello, Secretary to Board

**Prepared for:**

Michael S. Eagler, Sr.  
Acting Executive Director  
Niagara Falls Water Board  
5815 Buffalo Avenue  
Niagara Falls, NY 14304

**Submitted by:**

LaBella Associates  
300 Pearl Street  
Suite 130  
Buffalo, NY 14202  
(716) 551-6281



**Capital Projects Proposals**

**NIAGARA FALLS WATER BOARD  
FEBRUARY 19, 2024**



February 19, 2024

Michael S. Eagler, Sr.  
Acting Executive Director  
Niagara Falls Water Board  
5815 Buffalo Avenue  
Niagara Falls, NY 14304

RE: RFP- Capital Projects

Dear Mr. Eagler:

In response to the Niagara Falls Water Board's Request for Proposals, I am pleased to provide the attached proposals for the following project categories:

- Standby Generator
- Carbon Area Lighting. Switchyard Improvements
- Water Distribution System Improvements

LaBella Associates, DPC (LaBella) is an established firm, employing over 1,750 team members, 105 of which reside in the Buffalo office. In addition to the engineering team highlighted in Section 7 of this proposal, our diverse team also includes a team of planners and grant specialists that not only assure compliance with funding agencies, but also partner to lean on in pursuit of future funding. All team members identified have the capacity to perform the work as outlined in each categorical proposal.

I trust that this proposal adequately responds to your request and will be sufficient to enable the Board to select LaBella for these projects. Should you have any questions with regard to our proposal or if you need additional information, please do not hesitate to contact me at (716) 710-3036 or [mrogalski@labellapc.com](mailto:mrogalski@labellapc.com).

Sincerely,  
LABELLA ASSOCIATES, D.P.C.

Michael Rogalski, PE, LEED AP  
Vice-President | Project Sr. Manager

Donald Hoefler, PE  
Project Manager



**Capital Projects  
Request for Proposals  
Niagara Falls Water Board**

**Wastewater Treatment Facility**

Location: 1200 Buffalo Avenue, Niagara Falls NY 14304

Projects – refer to attachment A, 2021 Sewer Engineering Report	Submitting On Project, YES or NO
WWTP-12 Roof Repairs	No
WWTP-16 Standby Generator	Yes

Projects – refer to attachment B, 2022 Sewer Engineering Report	Submitting On Project, YES or NO
WWTP-1.2 Influent Channel Leak Repair of Expansion Joints	No
WWTP-1.3 Sediment Basin #5 Treatment of Backwash	No
WWTP-3.2 Grit Pump Flow Meters	No
WWTP-3.3 Rapid Mix Tank Cleaning	No
WWTP-5.5 New PA and Fire Alarm System	No
WWTP-5.6 Carbon Area Lighting, Switchyard Improvements	Yes
WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection	No
WWTP-6.3 Carbon Filter Mud Valve Replacements	No
WWTP-11.6 Removal and Replacement of Plant Water Piping	No

**Sewer Collection System**

Location: Calumet Avenue, Niagara Falls, NY

Projects – refer to attachment C, 2023 Sewer Engineering Report	Submitting On Project, YES or NO
Calumet Avenue 48 inch brick sewer rehabilitation	No

**Water Treatment Plant**

Location: 5815 Buffalo Avenue, Niagara Falls NY 14304

Projects – refer to attachment D, 2021 Water Engineering Report	Submitting On Project, YES or NO
WTP-2.1 - SCADA Control System Upgrades	No
WTP-6.1 - Chlorine System Upgrades	No

**Capital Projects  
Request for Proposals  
Niagara Falls Water Board**

**Water Distribution System**

Location: various throughout City of Niagara Falls NY

Projects – refer to attachment D, 2021 Water Engineering Report	Submitting On Project, YES or NO
W2 - 20 inch main from Beech Avenue Storage Tank to Ontario Street	Yes
W9 - 10th Street & Michigan Ave - Lockport St to Ontario St & 10th St to 11th St	Yes
W17 - Laughlin Drive Main - 82nd Street to Bollier Avenue	Yes
W21 - Ontario Avenue Main - 13th Street to Main Street	Yes
W25 - Van Rensselaer Avenue - 900 Block	Yes
W29 - Witkop Avenue and 85th Street Loop	Yes

Projects – refer to attachment E, 2023 Water Engineering Report	Submitting On Project, YES or NO
Alternative 2H - Install New Ground Storage Tank and Pre-Packaged Pumping Station at Beech Avenue	Yes
W13 - 81st Street watermain - Frontier Avenue to Niagara Falls Boulevard	Yes
W15 - College Terrace watermain - Madison to College Avenue	Yes
W24 - Rivershore Drive watermain - S. 86th Street to 91st Street	Yes

# TABLE OF CONTENTS

Cover Letter  
Response Form

## SECTION 1

Standby Generator Proposal

## SECTION 2

Carbon Area Lighting, Switchyard  
Improvements

## SECTION 3

Water Distribution System Improvements

## SECTION 4

Firm Overview

## SECTION 5

Familiarity with NYSEFC Requirements

## SECTION 6

Relevant Experience

## SECTION 7

Key Staff



**SECTION 1.**

**STANDBY GENERATOR PROPOSAL**



February 19, 2024

Michael S. Eagler, Sr.  
Acting Executive Director  
Niagara Falls Water Board  
5815 Buffalo Avenue  
Niagara Falls, NY 14304

RE: **WWTP-16 Standby Generator**  
**LaBella Proposal No. P2305689**

Dear Michael:

LaBella Associates, D.P.C. is submitting the following proposal to Niagara Falls Water Board (NFWB) to provide engineering design services associated with providing back-up standby power for the wastewater treatment plant (WWTP) at 1200 Buffalo Ave., Niagara Falls, NY. This is based on the Request for Proposal (RFP) for Capital Projects issued by the NFWB and the "Wastewater Treatment Plant Capital Improvement Projects Engineering Report and Estimates", dated November 2021. This proposal outlines our understanding of the project, proposed scope of work and associated fees.

## PROJECT UNDERSTANDING

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The current power distribution system throughout the WWTP is distributed at 13.8-kilovolts and transformed down to a utilization voltage, typically at 480-volts, then 208/120-volts. There are only two back-up standby generators on site which does not allow for full 100% operation of the treatment process in a power outage.

The goal of this project is to provide on-site standby power so that the entire WWTP process can function in the same manner as if the process was on utility power. This may mean 100% generator back-up or partial back-up energizing most loads so there is no interruption to wastewater treatment process. Whatever approach is implemented, it will be based NFWB input and the allocated budget. According to the 2021 Report and the RFP, the budget for the Standby Generator project is \$1,500,000.

There are several approaches to accomplish the above stated goals. During the Survey and Conceptual Design phase, the design team will survey the entire electrical distribution system and become familiar with NFWB's treatment plant process. Several conceptual designs for a standby power system with associated construction costs will be presented to the NFWB for consideration. Once and design approach is selected the design team will commence the Design Documents phase. Consideration will be given to generator lead times and necessary upgrades to existing electrical distribution equipment. Also, there will be impact on other design disciplines such as structural, architectural, civil and mechanical. These disciplines will be included in the final design package and coordinated accordingly.



## SCOPE OF SERVICES

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The RFP describes the scope of services with the following tasks that will be provided as part of our proposal as outlined below:

- Task 1: Survey
- Task 2: Conceptual Design
- Task3: Design Documents
- Task 4: Assist with NYS EFC Reporting
- Task 5: Bidding Assistance
- Task 6: Construction Administration
- Task 7: Construction Inspection

## ASSUMPTIONS & EXCLUSIONS

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The following is a list of assumptions and services excluded from this proposal. However, should these items become necessary; we would appreciate an opportunity to negotiate a fee.

- An existing AutoCAD or similar version site survey that provides topographic, boundary and utility information will be provided by NFWB. Performing site survey is not included. If required, we can provide a separate proposal for those services.
- Electronic AutoCAD floor plans of the buildings will be provided by NFWB.
- As-built record drawings of the W/WTP are available for use during design.
- Up to two construction cost estimates will be provided at the 60% and 95% submissions.
- Hazardous material sampling, lab testing and report are not included. If it been determined suspect material exists and will affect construction, we can provide a separate proposal for those services.
- Variance Applications is not included.
- It is assumed there will be no building additions for the standby generator expansion. If required, we can provide a separate proposal for those services.
- Load testing of existing generators are not included. NFWB will provide all necessary kilowatt demand information through utility bills. If required, we can provide a separate proposal for those services.

## FEES

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The following is our Not-to- Exceed fee including our direct expenses broken out as follows:

- |                               |             |
|-------------------------------|-------------|
| • Survey                      | \$7,500.00  |
| • Conceptual Design           | \$15,000.00 |
| • Design Documents            | \$90,000.00 |
| • Bidding Assistance          | \$7,500.00  |
| • Construction Administration | \$30,000.00 |
| • Construction Inspection     | TBD         |

Total: \$150,000.00

Construction Inspection (CI) services are difficult to determine until a conceptual standby power system has been developed and approved. This generator project may not be as labor intensive as a typical civil engineering project, therefore may not require full-time



inspection for the duration of the construction period. Also, we understand the NFWB may have available qualified staff that could support some CI functions. Once the project has been developed, we propose to negotiate CI services at that time.

### ACCEPTANCE

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If this proposal is acceptable, we are ready to start work upon receipt of written authorization or Notice to Proceed, followed by execution of the NFWB Agreement. This will serve as our agreement for the proposed services. If you have questions or require further clarification, please contact me directly at (716) 710-3036 or email at [mrogalski@labellapc.com](mailto:mrogalski@labellapc.com). We appreciate the opportunity and look forward to working with you.

Respectfully submitted,  
LABELLA ASSOCIATES, D.P.C.

Michael D. Rogalski, PE, LEED AP  
Vice President – Regional Manager Building Engineering



## **SECTION 2.**

# **CARBON AREA LIGHTING, SWITCHYARD IMPROVEMENTS PROPOSAL**



February 19, 2024

Michael S. Eagler, Sr.  
Acting Executive Director  
Niagara Falls Water Board  
5815 Buffalo Avenue  
Niagara Falls, NY 14304

RE: **WWTP-5.6 Carbon Area Lighting, Switchyard Improvements**  
**LaBella Proposal No. P2305689**

Dear Michael:

LaBella Associates, D.P.C. is submitting the following proposal to Niagara Falls Water Board (NFWB) to provide engineering design services associated for Carbon Area Lighting and Switchyard Improvements at 1200 Buffalo Ave., Niagara Falls, NY. This is based on the Request for Proposal (RFP) for Capital Projects issued by the NFWB and the "Wastewater Treatment Plant Capital Improvement Projects Engineering Report and Estimates", dated November 2021. This proposal outlines our understanding of the project, proposed scope of work and associated fees.

## PROJECT UNDERSTANDING

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The lighting system in the Carbon Building is not conducive to the environment. The area appears to be a mix of linear fluorescent (perhaps replaced with LED tubes) and old Metal Halide high-bay luminaires. The intent could be to replace the lighting system in kind or evaluate the layout and propose a new layout with LED luminaires constructed to withstand the environment with lighting levels that conform to Illuminating Engineers Society (IES) guidelines.

It is unclear what the Switchyard improvements entail. LaBella has a power system division that specializes in medium voltage distribution and outdoor switchyards. Our power system engineer, Tom Kennedy Jr., PE is on our team and will work with the NFWB and evaluate equipment in the switchyard and provide recommendation for improvement that meet the allocated budget. According to the 2021 Report and the RFP, the budget for the Carbon Area Lighting and Switchyard Improvements is \$500,000.

## SCOPE OF SERVICES

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The RFP describes the scope of services with the following tasks that will be provided as part of our proposal as outlined below:

- Task 1: Survey
- Task 2: Conceptual Design
- Task 3: Design Documents
- Task 4: Assist with NYS EFC Reporting
- Task 5: Bidding Assistance
- Task 6: Construction Administration



- Task 7: Construction Inspection

### ASSUMPTIONS & EXCLUSIONS

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The following is a list of assumptions and services excluded from this proposal. However, should these items become necessary, we would appreciate an opportunity to negotiate a fee.

- As-built record drawings of the WWTP are available for use during design.
- Up to two construction cost estimates will be provided at the 60% and 95% submissions.
- Hazardous material sampling, lab testing and report are not included. If it been determined suspect material exists and will affect construction, we can provide a separate proposal for those services.
- Variance Applications is not included.
- Electronic AutoCAD floor plans of the buildings will be provided by NFWB.

### FEES

---

The following is our Not-to- Exceed fee including our direct expenses broken out as follows:

- |                               |             |
|-------------------------------|-------------|
| • Survey                      | \$5,000.00  |
| • Conceptual Design           | \$7,500.00  |
| • Design Documents            | \$30,000.00 |
| • Bidding Assistance          | \$2,500.00  |
| • Construction Administration | \$10,000.00 |
| • Construction Inspection     | TBD         |

Total: \$55,000.00

Our fee is based on 11% of the proposed construction cost. Without knowing the scope of the switchyard improvements, if that work become excessive far exceeding the allocated budget, we would like the opportunity to re-negotiate our fee for the appropriate level of effort required to properly engineer the switchyard improvements.

Construction Inspection (CI) services are difficult to determine until the Switchyard improvements have been identified. Depending on the level of complexity of the lighting project there may not the need for a full-time inspection for the duration of the construction period. Also, we understand the NFWB may have available qualified staff that could support some CI functions. Once the project has been developed, we propose to negotiate CI services at that time.

### ACCEPTANCE

---

If this proposal is acceptable, we are ready to start work upon receipt of written authorization or Notice to Proceed, followed by execution of the NFWB Agreement. This will serve as our agreement for the proposed services. If you have questions or require further clarification, please contact me directly at (716) 710-3036 or email at [mrogalski@labellapc.com](mailto:mrogalski@labellapc.com). We appreciate the opportunity and look forward to working with you.



Respectfully submitted,  
LABELLA ASSOCIATES, D.P.C.

Michael D. Rogalski, PE, LEED AP  
Vice President – Regional Manager Building Engineering



## **SECTION 3.**

# **WATER DISTRIBUTION SYSTEM IMPROVEMENTS PROPOSAL**



February 19, 2024

Michael S. Eagler, Sr.  
Acting Executive Director  
Niagara Falls Water Board  
5815 Buffalo Avenue  
Niagara Falls, NY 14304

RE: **Water Main Replacement (Various Streets in Niagara Falls, NY)  
Scope & Fee Proposal**

Dear Michael:

LaBella Associates, DPC (LaBella) is pleased to submit the following proposal to the Niagara Falls Water Board (NFWB) in response to the Request for Proposals (RFP) for Capital Project Design Services. LaBella's design professionals have successfully completed, design, permitting, and bidding of various watermain replacement projects across New York State, including Erie County Water Authority and the NFWB.

**LABELLA IS A PARTNER**

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At LaBella, we aim to be more than just a provider of professional services; we aspire to be a true partner to our clients. Recognizing that the NFWB is currently undertaking a historic upgrade to their existing water and wastewater systems, we are committed to effectively communicating the design with the NFWB throughout the process. Our approach is designed to ensure that the NFWB's vision and requirements are fully integrated into the project, while minimizing additional workload on staff. By fostering open communication and collaboration, we aim to create solutions that are both innovative and aligned with NFWB's goals, ensuring that we add value beyond the conventional client-service provider relationship.

**INTRODUCTION AND UNDERSTANDING OF THE PROJECT**

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Recognizing the critical nature and urgency of the required improvements to the water system, and their significance for the Niagara Falls community, we propose a comprehensive scope of work designed to efficiently meet the required grant timeline. Per the RFP, it is our understanding that the NFWB seeks qualified Professionals to design and administer several portions of water main replacement across the City of Niagara Falls. We stand ready to deliver support as our proposal includes survey field work/ data collection, design, permitting, and bidding assistance services.

This proposal is in response to the following scope items from the RFP:

<i>NFWB Project #</i>	<i>Project</i>
W2	20 inch main from Beech Avenue Storage Tank to Ontario Street (~ 3,200 LF)
W9	10th Street & Michigan Ave - Lockport St to Ontario St & 10th St to 11th St (~ 2100 LF)
W17	Laughlin Drive Main - 82nd Street to Bollier Avenue (~1,800 LF)



W21	Ontario Avenue Main - 13th Street to Main Street (~2,000 LF)
W25	Van Rensselaer Avenue - 900 Block (~300 LF)
W29	Witkop Avenue and 85th Street Loop (2,450 LF)
W13	81st Street watermain - Frontier Avenue to Niagara Falls Boulevard (~3,400 LF)
W15	College Terrace watermain - Madison to College Avenue (~900 LF)
W24	Rivershore Drive watermain - S. 86th Street to 91st Street (~1,500 LF)

The following represents a comprehensive overview of the scope of work outlined in this proposal:

#### Technical Approach:

- **Task 1 (Survey):** LaBella will provide survey that involves verification of existing conditions and equipment, integration with existing project elevations and measurements, documentation of other existing features in the project area, establishment of baseline control and benchmarks, and comprehensive mapping of all gathered data as necessary for the preparation of design and construction documents.
- **Task 2 (Conceptual Design):** The LaBella design team will collaborate with NFWB to develop initial schematic water main layouts, identify proposed pipe materials and diameters, assessing hydraulic requirements, and integrating the proposed infrastructure with the existing NFWB water system to ensure efficient water distribution and minimize service disruptions to customers.
- **Task 3 (Design Documents):** The Design Documents phase involves developing permit review level engineers report, drawings, and specifications which include assessment of alternatives, evaluation of cost, and preliminary coordination existing utilities. Through the Detailed Design Phase, LaBella will develop comprehensive construction drawings and specifications, include hydraulic calculations, material selection and sizing, as well as final coordination with local authorities for permits.
- **Task 4 (NYSEFC Reporting):** LaBella routinely collaborates with state agencies on grant-funded projects. We will coordinate the proposed work with the New York State Environmental Facilities Corporation (NYSEFC) on behalf of the Niagara Falls Water Board (NFWB). This includes assisting the NFWB with MWBE and EEO reporting requirements by preparing all necessary documentation for quarterly reporting. Additionally, following construction, LaBella will obtain and submit required items to the EFC as part of their Document Collection and closeout process. This encompasses providing a variety of documents such as pay applications, inspection reports, MWBE reports, American Iron & Steel certificates, wage rate interviews, change orders, and meeting minutes, along with completing the Document Collection Form questionnaire and coordinating with the NFWB for their signature.
- **Task 5 (Bidding Assistance):** LaBella will assist the Niagara Falls Water Board (NFWB) throughout the project's bidding phase, including:
  - Distributing Bid Documents in PDF format to the NFWB, NYS DEC, and NYS EFC for review and administrative purposes, with hard copies available at both the



Consultant's and the NFWB Engineer's offices. For distribution to prospective bidders, the Project Manual will be available for online download.

- Responding to bidder inquiries, clarifying questions, and preparing necessary bid addenda (as needed).
  - Facilitating a pre-bid conference at the project site to assist the NFWB, addressing technical queries.
  - Evaluating bids from the three lowest bidders at bid opening for adherence to requirements, including any proposed equipment and material substitutions.
  - Generating a bid evaluation report to identify the lowest responsible bidder and provide recommendations on substitutions.
  - Communicating responses to bidder questions and clarifications, as well as issuing bid addenda and the bid evaluation report to the NFWB electronically in PDF format.
  - Managing the list of bidders, handling inquiries, and disseminating bid documents and addenda.
  - Upon NFWB's approval of the low bid(s), the consultant will:
    - Prepare conformed contract documents.
    - Draft agreements for the NFWB and low bidder(s) and gather necessary documentation for agreement finalization.
    - Organize a post-bid/preconstruction meeting at the WWTP with low bidder(s) to overview the contracting and construction procedures.
    - Issue a Notice to Proceed for each contract on behalf of the NFWB.
- **Task 6 (Construction Administration):** During Construction, LaBella will coordinate with NFWB and the Contractor to oversee the construction process, ensuring compliance with design specifications and completion of project record drawings. This role will include managing contractor coordination, conducting progress meetings, negotiating change orders and project documentation.
- **Task 7 (Construction Inspection):** Construction observation will task LaBella and their MWBE/ WBE subconsultants with on-site observation to monitor progress, verify adherence to design specifications, document the quality of materials and workmanship, address any issues or deviations from plans, and act as the liaison between the NFWB and the contractor as needed.



## DESIGN TEAM CONSIDERATIONS

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LaBella takes pride in its professional design team spread across the state. The NFWB will gain from our extensive experience and talent pool available statewide while working with local (Buffalo) engineering staff throughout design and construction. We are particularly proud of our strong relationships with multiple municipal water system clients, including the NFWB. We are eager to leverage this experience and professionalism for the benefit of the NFWB.

## MWBE UTILIZATION GOALS

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Beyond our in-house design team, LaBella will utilize our extensive network of MWBE (Minority and Women-Owned Business Enterprises) design partners to support the project, to fulfill the NFWB's utilization goals. Upon approval, LaBella will provide a detailed MWBE utilization plan consistent with NFWB goals.

## PROJECT SCHEDULE AND FEES

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LaBella recognizes the importance of adhering to the strict schedule requirements detailed in the RFP. A major advantage of partnering with LaBella is access to an extensive team of talented engineers and designers across New York State, enabling us to conduct simultaneous design and drafting activities. Additionally, during the Preliminary Design phase, we will evaluate the feasibility of combining several of the smaller projects into single bid documents, which will decrease construction costs due to consolidation mobilization and other realized cost synergies. Below is our anticipated design and construction schedule that exceeds the requirements of the RFP to provide a buffer, should construction of the projects experience unexpected delays. (\*Note: The following schedule details high level phasing. LaBella will continuously update the overall project schedule for NFWB to review throughout design and construction. The schedule represents overlap of Survey and Design phases as we anticipate to proceed with design as survey data becomes available..)

- Project Kickoff (April 2024)
- Survey and Data Collection Phase (April 2024 - July 2024)
- Preliminary Design Phase (June 2024 – October 2024)
- Detailed Design Phase (October 2024 – February 2025)
- Bidding Phase (February 2025 – April 2025)
- Construction Phase (Summer 2025 – Summer 2027)
- Construction Completion (Fall 2027)

**\*Schedule Note:** Due to increased design complexity and need for enhanced coordination with CSX, project W2 20" main from the Beech Ave. tank to Ontario Street watermain may surpass the outlined design and construction schedule. Nevertheless, it is expected that construction will conclude prior to the April 2029 completion deadline specified in the RFP.

**Proposed Fee:** Please see our proposed fee on the following page.





We appreciate the opportunity to provide this proposal. We are proud of our ability to provide high quality service and fair pricing. Should you have any questions or need further information, please do not hesitate to reach out.

Respectfully submitted,

LaBella Associates

Donald J. Hoefler, PE  
Senior Civil Engineer – Municipal

Theodore E. Donner, PE  
Senior Civil Engineer - Municipal

NFWB Water Main Replacement - Professional Services Budget		
NFWB Project #	Task Description	Proposed Not-To-Exceed Fee (Survey, Design, and Bidding)
W2	<b>Beech Avenue Storage Tank to Ontario Street (~4,165 LF)</b>	
	Survey, Design, and Bidding	\$ 110,000
	Construction Administration	\$ 33,320
	<b>W2 Total</b>	<b>\$ 143,320</b>
W9	<b>Lockport St to Ontario St &amp; 10th St to 11th St (~2,100 LF)</b>	
	Survey, Design, and Bidding	\$ 52,000
	Construction Administration	\$ 16,800
	<b>W9 Total</b>	<b>\$ 68,800</b>
W17	<b>82nd Street to Bollier Avenue (~2,450 LF)</b>	
	Survey, Design, and Bidding	\$ 48,000
	Construction Administration	\$ 19,600
	<b>W17 Total</b>	<b>\$ 67,600</b>
W21	<b>13th Street to Main Street (~2,100 LF)</b>	
	Survey, Design, and Bidding	\$ 41,000
	Construction Administration	\$ 16,800
	<b>W21 Total</b>	<b>\$ 57,800</b>
W25	<b>Van Rensselaer Avenue - 900 Block (~300 LF)</b>	
	Survey, Design, and Bidding	\$ 8,000
	Construction Administration	\$ 2,400
	<b>W25 Total</b>	<b>\$ 10,400</b>
W29	<b>Witkop Avenue and 85th Street Loop (2,200 LF)</b>	
	Survey, Design, and Bidding	\$ 43,000
	Construction Administration	\$ 17,600
	<b>W29 Total</b>	<b>\$ 60,600</b>
W13	<b>Frontier Avenue to Niagara Falls Boulevard (~3,500 LF)</b>	
	Survey, Design, and Bidding	\$ 83,000
	Construction Administration	\$ 28,000
	<b>W13 Total</b>	<b>\$ 111,000</b>
W15	<b>Madison to College Avenue (~1,000 LF)</b>	
	Survey, Design, and Bidding	\$ 20,000
	Construction Administration	\$ 8,000
	<b>W15 Total</b>	<b>\$ 28,000</b>
W24	<b>S. 86th Street to 91st Street (~1,850 LF)</b>	
	Survey, Design, and Bidding	\$ 36,000
	Construction Administration	\$ 14,800
	<b>W24 Total</b>	<b>\$ 50,800</b>
	<b>Total Survey, Design, Bidding and Construction Administration Fee</b>	<b>\$ 441,000</b>
	<b>*Estimated Total Geotechnical Investigation Fee</b>	<b>\$ 84,760</b>
	<b>Total Construction Administration Fee</b>	<b>\$ 157,320</b>
	<b>**Total Construction Inspection Fee</b>	<b>\$ 254,340</b>
	<b>Total Overall Fee</b>	<b>\$ 937,420</b>
<p>*Note - Individual project areas will be evaluated on a site by site basis to determine the need for full Geotechnical Investigation in an attempt to control total project costs.</p> <p>**Note - Based on a percentage of Proposed Construction Costs. Construction duration varies based on timing of material deliveries and the final scope of the project. Therefore, Construction Administration and Inspection services fee is shown as Estimated at this point. There is potential for cost savings due to combining multiple projects from Construction Mobilizations Costs as well Administration and Inspection Services.</p> <p><b>Any Permit Fees - particularly CSX fees are to be paid directly by the Niagara Falls Water Board</b></p>		



**SECTION 4.**  
**FIRM OVERVIEW**

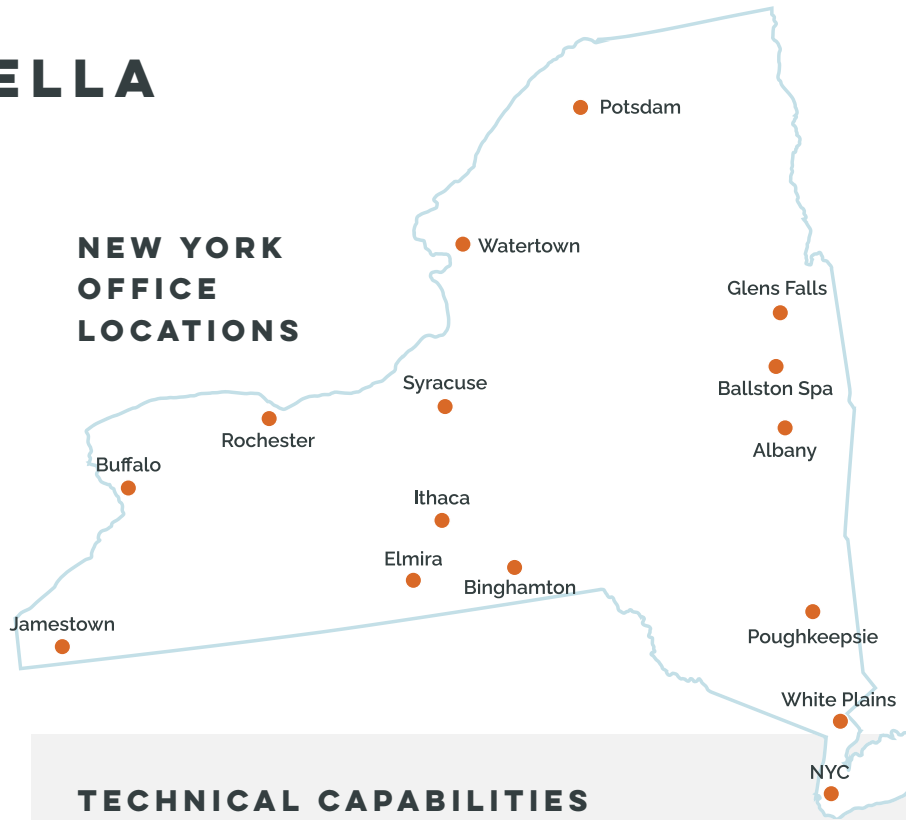
# ABOUT LABELLA

At LaBella Associates, our job is to create – structures, plans, ideas, results. As a nationally recognized Design Professional Corporation, that's a given, right?

But here's what really drives us: creating partnership between our team and our clients. So much so that we become one team, unified in the unrelenting pursuit of exceptional performance on each and every project. Reliability. Accountability. Collaboration. Respect. Not skills we went to school for, but innate in LaBella team members.

The pursuit of partnership is embedded in our culture – has been since our inception in 1978. And it affects client outcomes in profound ways. It means we're built to expertly execute projects from start to finish. That we have the talent and resources to take on any challenge. That projects are completed on time, on budget, and beyond expectations. And that we win awards – not just for our talent, but also for our ethics, employee culture, and growth.

Today, our wheelhouse is broad, with four key service offerings: Buildings, Energy, Infrastructure, and Environmental. Our reach is widespread with over 1,500 staff located throughout the country and Europe. We're headquartered in Rochester, NY– but our impact is seen, felt, and experienced around the world.



## TECHNICAL CAPABILITIES



### INFRASTRUCTURE

- Civil Engineering
- Environmental
- Planning
- Transportation Engineering
- Land Surveying



### BUILDINGS

- Architecture
- Planning
- Buildings Engineering
- Environmental
- Land Development & Landscape Architecture



### ENVIRONMENTAL

- Environmental Consulting
- Environmental Contracting
- Buildings Engineering
- Solid Waste



### ENERGY

- Program Management
- Renewables
- Planning
- Power Systems
- Environmental
- Civil Engineering



# FIRMWIDE ORGANIZATION



# MECHANICAL & ELECTRICAL ENGINEERING

Whether your project requires new systems or the maintenance and retro-fitting of existing, our engineers have the technical know-how to improve building performance. Our mechanical, electrical, plumbing, and fire protection engineers work with facility managers to increase energy efficiency, continue operations while addressing capital improvements, and provide system controls and monitoring.



## Mechanical Engineering Services

- HVAC/Precision Cooling System Design
- Plumbing
- Fire Protection
- Distribution Systems
- Building Systems
- Facilities Evaluation and Design
- Industrial Process Piping and Systems

## Electrical Engineering Services

- Electrical Main Switchgear and Power Systems
- Lighting and Life Safety Design
- Fire Detection and Alarm Systems
- Security and Access Control Systems
- Telephone and Data Communications
- Electric Utility Engineering
- Process Control and Instrumentation

## Fire Protection Systems Experience

At LaBella, our fire protection engineers review your needs, identify hazards and code requirements, and design systems that aid in preventing, controlling, and mitigating the effects of fires.

We assist building owners in meeting their fire protection system goals. We have provided third party review for the design submissions of others in support of building codes and standards.

Our fire protection engineers provide the following services:

- Code Compliance Review
- Wet and Dry Pipe Design
- Hydraulic Calculations
- Fire Pump Design
- Foam/Chemical Systems
- Smoke Control Design
- Fire Alarm Design
- Fire Sprinkler Design
- Fire Suppression Design
- Mass Notification Design
- Backflow Prevention

## Energy Engineering

- Energy Audits
- Energy Conservation Services
- Performance Contracts
- Lighting Retrofits
- Co-Generation
- Energy Management Systems
- NYSERDA Assistance

## Commissioning Services

- Evaluation of Facility Requirements
- Compliance and Performance Reviews
- Field Verification
- Identify and Correct System Installation Deficiencies
- Review of Operations and Maintenance Manuals for Compliance
- Post Construction Assessments



We've dehumidified water parks and electronically locked prisons. We've shored historic buildings from the river rapids below them. And we've put energy to work smarter and more efficiently than ever before.



Whether your project requires new systems or the maintenance and retro-fitting of existing, our engineers have the technical know-how to improve building performance. Our multi-disciplinary team of mechanical, electrical, plumbing, fire protection and structural engineers work together on a full range of services, from foundation design to commissioning. We work with facility managers to increase energy efficiency, continue operations while addressing capital improvements, and provide system controls and monitoring.

# BUILDINGS ENGINEERING

## Mechanical Engineering

- HVAC/Precision Cooling System Design
- Plumbing
- Fire Protection
- Distribution Systems
- Building Systems
- Facilities Evaluation and Design
- Industrial Process Piping & Systems

## Energy Engineering

- Energy Audits
- Energy Conservation Services
- Performance Contracts
- Lighting Retrofits
- Co-Generation
- Energy Management Systems
- NYSERDA Assistance

## Structural Engineering

- Structural Design & Inspections
- Load Ratings
- Construction Phase Engineering
- Utility Structural Design
- Foundation Design

## Commissioning Services

- Evaluation of Facility Requirements
- Compliance & Performance Reviews
- Field Verification
- Identify & Correct System Installation Deficiencies
- Review of Operations & Maintenance Manuals for Compliance
- Post Construction Assessments

## Electrical Engineering

- Power Distribution Systems
- Lighting & Life Safety Design
- Fire Alarm Engineering
- Security & Access Control Systems
- Telephone & Data Communications
- Electric Utility Engineering
- Process Control & Instrumentation

# CIVIL ENGINEERING



LaBella provides a broad range of civil engineering services that are performed by staff experienced in project administration, design, and construction.



## Wastewater

Collection, Conveyance and Treatment

Treatment Plant Operations

Infiltration and Inflow Studies

Sewer Rehabilitation

Sludge Management

## Stormwater Management

Conveyance

Stormwater Management Facilities & Practices

SWPPP Inspections

MS4 Management

## Municipal Engineering

Town & Village Boards

Planning & Zoning Boards

## Utility Design

Gas & Electric

Municipally Owned

## Site Development

Site Selection/Evaluation

Planning Board Assistance

Site Layout

Grading & Utility Design

Stormwater Management

SPDES Compliance

## Domestic Water

Source Development

Treatment, Storage & Distribution

## Mapping

3D Surface Modeling

GPS & GIS

## Hydraulics

Backwater Analysis & Flood

Watershed Hydrologic Studies

Dynamic Stormwater Computer Modeling

## Street Design

Pavement Analysis & Evaluation

Roadway & Streetscapes

Traffic Analysis

Construction Services

## Inspection

Plants

Water Mains

Sewers

Tanks

Roadways





## **SECTION 5.**

# **FAMILIARITY WITH NYSEFC REQUIREMENTS**

# FIRM EXPERIENCE

## Recent Successful Grant Applications

LaBella has been successful in securing over \$540 million for municipal clients in the last 40 years. The following describes some of the NYSEFC grant applications prepared for municipal clients by LaBella that were funded **in the last five years**. For many of these projects, we also supported our clients with planning, engineering, architectural, and environmental services to progress the projects—often to completion.

**\$12**  
MILLION  
LOCALLY  
SINCE 2018

### NYSDEC Water Quality Improvement Project (WQIP) Program

Communities include:

- Town of Queensbury Rockhurst Sewer District \$6.1M Requested/Funded (2021)
- Lake George Land Conservancy ClarkHollow Bay Land Acquisition \$3.7M Requested/Funded (2021)
- Town of Stillwater Saratoga Lake Water Quality Study \$30k Requested/Funded (2019)
- Town of Lake George Wastewater Treatment Plant \$2.5M (2018)



**\$4.2**  
MILLION

### Environmental Facilities Corporation Green Innovation Grant Program (GIGP)

Communities include:

- City of Cohoes Canal Square Park \$1.1M Requested/Funded (2017)
- Village of Hudson Falls Paris Park \$725k Requested/Funded (2018)



**\$630**  
THOUSAND  
LOCALLY IN  
RECENT YEARS

### NYSEFC Engineering Planning Grants

Communities include:

- Village of Massena WWTP Upgrades \$50k Requested/Funded (2022)
- Village of Massena Sewer Slip Lining \$50k Requested/Funded (2022)
- Town of Lake George Caldwell Sewer District I/I Study \$50k Requested/Funded (2019)



# FIRM EXPERIENCE

## Recent Successful Grant Applications

**\$17.5**  
MILLION  
IN LAST  
5 YEARS

### NYSEFC Water Infrastructure Improvement Act (WIIA)

Communities include:

- Village of Pawling MTA Trunk Sewer \$508k Requested/Funded (2023)
- Village of Attica Water Treatment Plant Improvements \$5M Requested/Funded (2022)
- Wayne County WWTP Regional Tank \$3.9M Requested/Funded (2019)

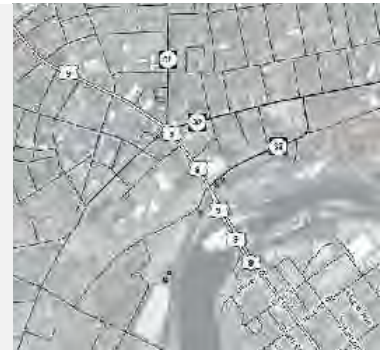


**12**  
PROJECTS  
IN 3 YEARS

### NYSEFC Drinking Water State Revolving Fund (DWSRF) and Clean Water State Revolving Fund (CWSRF)

Communities include:

- City of Glens Falls WWTP \$815k Requested/Funded (2018)
- City of Glens Falls Henry Street \$468k Requested/Funded (2019)





## **SECTION 6.**

# **RELEVANT EXPERIENCE**



## **GENERATOR EXPERIENCE**

# ERIE COUNTY DEP & DSM

## East Aurora Water Resource Recovery Facility Comprehensive Electrical Study

### CLIENT PARTNER

Mary L. Plesh, P.E.  
Sanitary Engineer  
Erie County  
Div. of Sewerage Management  
716-858-7407  
mary.plesh@erie.gov

LaBella Associates performed a comprehensive electrical study for Erie County Department of Environmental & Planning, Division of Sewerage Management on the East Aurora Water Resource Recovery Facility, a wastewater treatment plant located in East Aurora, NY.

The specific focus of the study was on a failing backup power generation system and a lack of redundancy for a facility considered to be critical infrastructure.

LaBella performed a building condition assessment of electrical systems via field survey, staff interviews, and an investigation of record documents. In addition, LaBella documented existing equipment types, the condition of equipment, and any code deficiencies by system type.

Based on the electrical study findings, specific recommendations were given for identified deficiencies, with priority and probable construction costs provided for each.

LaBella was able to provide multiple upgrade options and layouts for modernizing the backup power generation system for redundancy, to bring the system up to Critical Operations Power System (COPS) standards, and to account for future plant process upgrades.

Study Cost: \$18,400



LaBella provided multiple upgrade options and layouts for modernizing the WWTP's backup power generation system for redundancy.



# ERIE COUNTY DEP & DSM

## East Aurora Water Resource Recovery Facility (WRRF): Control Building Interior Improvements

### CLIENT PARTNER

Mary L. Plesh, PE  
Sanitary Engineer  
Erie County  
Div. of Sewerage Management  
(716) 858-7407  
Mary.Plesh@erie.gov



LaBella Associates D.P.C., under its term agreement with Erie County Department of Environment & Planning was retained to provide full architectural, engineering, and construction inspection services for the renovation of the former Control Building that once served as the central hub of the wastewater treatment plant.

The existing Control Building was vacated and needed to be used to its full potential. The building, built in the early 1950s, is approximately 1,800 square feet, 2-story, and underwent structural repairs and building envelope improvements such as a new roof and windows in 2016. The project intended to move program functions from the on-site temporary trailer to the Control Building, thereby removing the trailer from the site to free up valuable space.

The project included a laboratory testing area, separate men's and women's locker rooms with toilet and shower facilities, an employee break room, office space, and general storage. All new interior finishes with new doors were provided. Furniture & equipment was either relocated from the temporary trailer or provided as part of the contract.

The building included significant modifications of the interior spaces, including the total gut of the entire second floor and a portion of the first floor. All HVAC, plumbing, and electrical systems were gutted with all new systems and equipment installed. The original building was not air-conditioned, thereby requiring new rooftop HVAC equipment. New utility services from the site, such as water, gas, sewer, communication (internet / SCADA), and electric power, were installed.

LaBella provided complete construction administration and daily inspection services of the project working with four prime contractors and the County to see the project through to completion.

Construction Cost: \$1,015,276  
Year Complete: Feb 2023



# DRESSER-RAND

## Guascor Power 2 MW Genset Power Plant

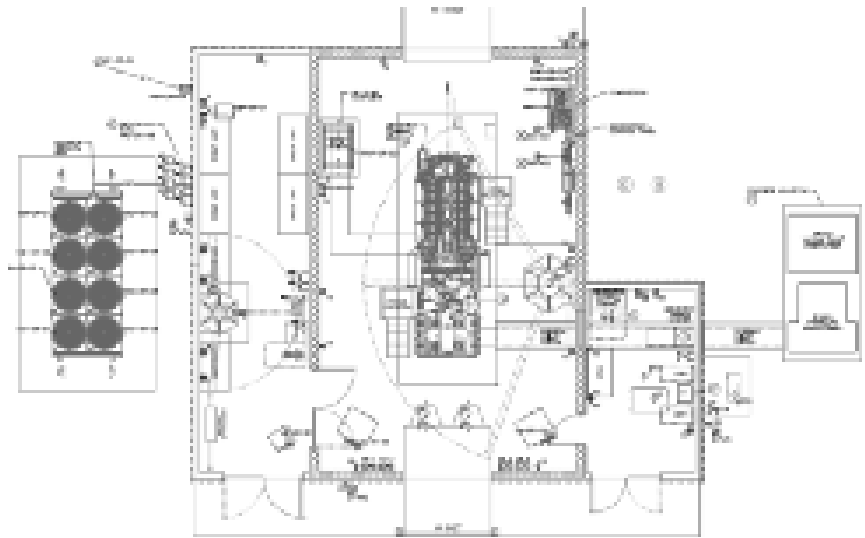
CLIENT PARTNER

Confidential

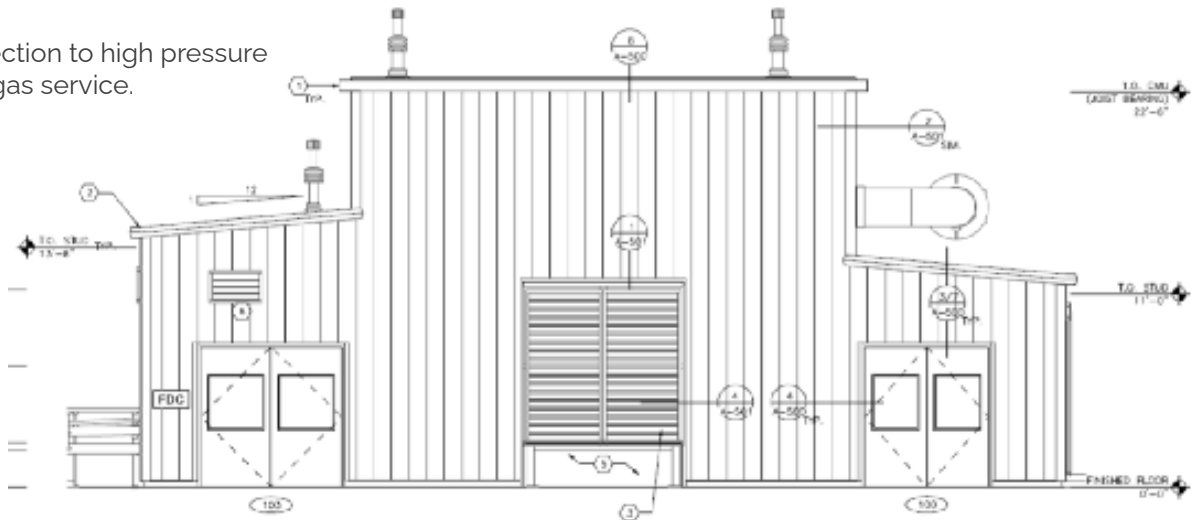
LaBella Associates worked with LeChase Construction to complete design services for the Guascor Power 2 MW Genset Power Plant in Olean, NY. LaBella provided design services for architecture, mechanical, plumbing, electrical and structural engineering.

Other work included:

- 2 MW gas fired generator and ancillary equipment.
- Design of interconnection piping, control and power wiring.
- New generator building including maintenance shop and control room.
- Tight acoustical requirement
- Environmental control of generator building including make-up/relief air systems.
- Interconnection to high voltage plant distribution.
- Coordination with utility concerning interconnection or power.
- Connection to high pressure plant gas service.



LaBella provided design services for architecture, mechanical, plumbing, electrical and structural engineering.





# DAEMEN COLLEGE

## Charles J. Wick Campus Student Center Standby Generator

### CLIENT PARTNER

Don Phillips  
Director of Facilities  
Daemen College  
716-839-8222  
dphillip@daemen.edu



LaBella provided engineering services for the design of a standby natural gas exterior generator for the Charles J. Wick Campus Student Center at Daemen College in Amherst, New York.

The project involved connecting strategic loads within the building that would be served by a generator during an power outage as students seek a safe place to stay.

A new 208/120volt, 3-phase, 125-kW natural gas-fired generator serves the following:

- Heating Equipment
- Sump Pumps
- Kitchen Equipment
- Cooler / Freezers
- Café Dining Lighting
- Security Desk

Several panelboard feeders that serve these loads were intercepted and re-routed to a new 400-amp distribution panel and a 400A-3 Pole automatic transfer switch. A new concrete

LaBella had to submit to the Town of Amherst Planning board to obtain approval for the project.

pad and 6-inch round, concrete-filled bollard were installed for physical protection of the exterior generator.

LaBella had to submit to the Town of Amherst Planning Board to obtain approval for the project. This required revising the location of the generator to satisfy the Town's Planning Board.

Construction Cost: Est. \$150,000

Year Completed: 2018



# ERIE COMMUNITY COLLEGE

## Campus-Wide Replacement of Emergency Generators

LaBella Associates was selected to design generator replacements at select buildings (12 total) on the Erie Community College (ECC) North Campus-Williamsville, NY; South Campus – Orchard Park, NY and the City Campus – Buffalo, NY. Most of the existing standby power generators were past their useful life and some did not operate at all. Most existing generators were located inside each building which did not conform to current codes. New natural gas generators were located outside existing buildings to conform with code, freeing up valuable space in mechanical rooms.

The power distribution connecting the generators were reconfigured to conform to the latest National Electrical Code (NEC) by adding an automatic transfer switch to serve non-life safety loads. New natural gas piping is tapped at the main meter at each building to fuel the outdoor generators. Some of the electrical panels serving back-up generator loads were replaced in-kind due to the age and condition. In some buildings, as a cost saving approach, existing generators that are fair-good condition remained and new emergency and exit sign lighting was designed to comply with the NEC, saving the cost of replacing a generator and adding a transfer switch.

Completion: December 2021

Construction Cost: \$977,260



### CLIENT PARTNER

Natalie Tan, RA, LEED AP  
Assistant Architect  
Erie County DPW  
natalie.tan@erie.gov  
(716) 858-4954



(Top Photos) New Generator at ECC North, Spring Student Center

(Bottom Photo) New Generator at ECC South, Building 2



# MONROE COUNTY

## Children's Detention Center, Electrical Utility Separation

### CLIENT PARTNER

Michael Marinar  
Facility Operator  
(585) 753-5940  
mmarinan@monroecounty.gov



LaBella was retained by Monroe County to upgrade the existing emergency generator system that supplies the Children's Detention Center.

Design included the interception of the existing underground feed and reroute it to a new medium voltage pole riser near the main driveway to the facility.

Electrical services to the facility were fed from the State Facility power distribution switchgear on the South side of Rt. 251. The medium voltage (15 kV class) switchgear was used to distribute power throughout the facilities and also served as the connection point for the facilities standby power generator.

Design included the interception of the existing underground feed and reroute it to a new medium voltage pole riser near the main driveway to the facility. A pad mounted, 275 kW, exterior enclosed, diesel generator with a 600 A, exterior-rated automatic transfer switch and exterior rated generator distribution switchboard was installed near the entrance sally port. The equipment was sized to support all current building loads,

anticipating future expansion building loads and to provide full facility backup.

A new 480V building service feeder was installed to send the generator distribution switchboard to each building as well as picking up the gate power and perimeter lighting. New 480V service were also installed in each building and the existing building distribution was re-fed from this service.

Construction Cost: \$312,000

Year Completed: 2015



# NFTA

Niagara Frontier Transportation Authority  
485 Cayuga Drive Back-up Data Center

## CLIENT PARTNER

Dennis Lupp, PE  
Project Manager  
NFTA  
(716) 855-7375  
dennis\_lupp@nfta.com



New air conditioning for the data center and backup generator will serve the backup data center.

This project consists of converting an empty 830 square foot, first floor space into a backup data center for the Buffalo Niagara International Airport (BNIA). An existing 2,466 square foot office space above will receive new electric and lighting. New air conditioning for the data center and backup generator will serve the backup data center.

switches are to be provided in the building to serve the data center equipment and the office space above.



Construction Cost: \$351,400

Year Completed: 2020

A pre-engineered data rack solution was provided. This system consisted of eight separate cabinets integrated into one system. In addition to housing IT electronics, this system is equipped with self-contained cooling, back-up cabinet exhaust, self-contained fire protection, 40 KVA UPS with batteries and an overhead power distribution system.

The backup power system consist of a natural gas 125-kW, 120/208-volt outdoor generator with weather proof enclosure. The existing grade will be saw cut for a new concrete pad, concrete bollards surround by a chain link fence. Two automatic transfer



# NFTA

## Electrical Vault Upgrade at Airport

The Niagara Frontier Transportation Authority retained LaBella to upgrade the main electrical vault equipment at the Niagara Falls International Airport. The project consisted of replacing the existing airfield lighting constant current regulators and replacing the existing 250-kW diesel Onan generator.

The existing constant current regulators for the airfield lighting had reached their useful life expectancy. The project included replacing five (5) existing 480V airfield lighting constant current regulators with new 480V constant current regulators. Two of the five regulators will be used as a hot spare (connected and ready to go) and a cold spare (available to be connected) regulator. Additionally, two (2) existing 240V regulators were replaced with new 480V constant current regulators. This required the removal of existing transformers and a re-distribution of power feeders to the new regulators.

The existing controls for all of the regulators were existing to remain. The existing generator had been relocated to the airport from another airport in 2002 and had reached its useful life. The generator replacement consisted of replacing the existing 250-kW diesel generator with a new one. The existing automatic transfer switch, remote annunciators and battery charger were also replaced. One of the remote annunciators was located in the airfield tower and was not readily available to the maintenance personnel. This remote annunciator was removed and a new indication system was designed. The new system included a telephone dialer and visual indication on the outside of the electrical vault building to indicate when the generator is running and when there is a fault. The telephone dialer allows the system to dial several phone numbers and provide



### CLIENT PARTNER

Dennis Lupp, PE  
Project Manager  
NFTA  
(716) 855-7375  
dennis\_lupp@nfta.com



prerecorded messages. This allows the maintenance personnel to respond as needed more quickly.

The project included the reuse of the existing louver for air intake and exhaust. Power was provided to new motor operated dampers. The existing fuel-oil day tank and pumping system was re-used with new fuel piping from the day tanks to the new generator.

The power to the airfield lighting must remain operation twenty four hours a day seven days a

Construction Cost: \$220,000  
Year Complete: 2018

week. Temporary power during construction was designed with a mobile trailer mounted generator to serve as a standby during construction.

LaBella also provided construction support services.



# UPMC CHAUTAUQUA WCA

## Switchgear & Generator Replacement

The University of Pittsburgh Medical Center (UPMC) Chautauqua WCA (the former Women's Christian Association Hospital) retained LaBella for an upgrade to the main electrical equipment of the hospital. The project consisted of replacing the existing Federal Pacific custom double ended switchgear rated at 480/277-volt, 4000-amp with integral automatic transfer switches, replacement of the three 500-kW diesel Onan generators.

The Federal Pacific double ended switchgear was removed in its entirety. This allowed room to add a paralleling generator switchgear. Three 500-kW generators were replaced with two 750-kW units. The design also included connecting an existing standalone 1-MW Cummins diesel generator that was installed 5 years prior for an emergency department addition to the hospital. The existing 1-mW will now parallel with the two new 750kW units.

A new power distribution approach eliminates two large transfer switches, provides smaller ampacity transfer switches, and adds several transfer switches all to provide the facility with better load management. Bypass isolation, closed transition transfer switches are used for Life Safety and Critical Branch load while standard closed transition type transfer switches were used elsewhere.

The existing main 4000-amp Square normal main switch gear was modified with motorized circuit breakers to achieve a main-tie-main configuration that did not exist. Temporary power during construction was design with a mobile 2-MW trailer connected to a motorized circuit breaker in the normal switchgear to serve as a standby during construction.



### CLIENT PARTNER

Cecil M. Miller III  
VP Ancillary & Support  
Services  
UPMC Chautauqua WCA  
(716) 664-8340  
millercm12@upmc.edu



To comply with the National Electrical Code and NFPA 110, a separate 2-hour rated room was built to separate normal power equipment and emergency equipment. New HVAC for ventilation of the generator room included two new roof mount air intakes and the reuse of the 3rd generator louver for additional air intake. The new generator utilize the existing exhaust openings with new louvers and dampers. The existing fuel-oil pumping system was replaced with new fuel piping and day tanks. The existing main

Completion Date: July 2019  
Total Construction Cost: \$2,910,000

underground 12,000 fuel tank recently replaced is to remain. Minor structural modifications on the floor below were made to accommodate the new generators. New concrete pads for each generator were design to absorb the vibrational load.





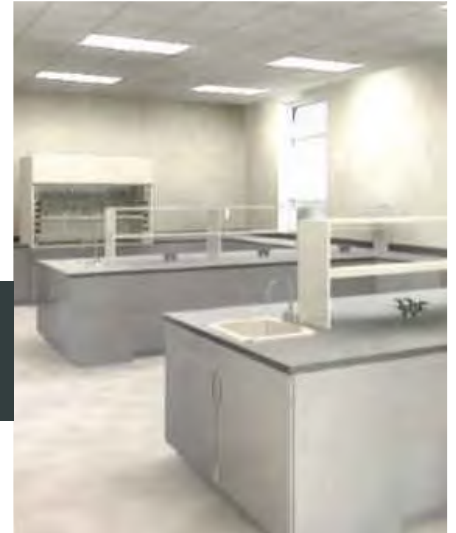
## **LIGHTING & SWITCHYARD EXPERIENCE**

# CITY OF GASTONIA

## Water Treatment Plant Renovation & Upgrades

### CLIENT PARTNER

Matt Bernhardt  
Director of Public Works  
704-866-6843



LaBella has been a client of the Gastonia Water Treatment Plant for over 50 years.

The City of Gastonia underwent a substantial capital improvement project for the upgrades of their water treatment plant that was originally designed by the LaBella team. This project involved major upgrades to the existing infrastructure as well as the addition of new buildings and water treatment infrastructure.

The major engineering work for this project included: rebuilding the process trains 1 thru 4 with membrane filters; major upgrades to the electrical system including energy efficient lighting; complete renovation and upgrade to building mechanical systems including energy efficiency HVAC systems; new laboratory and office spaces; new perimeter

security fencing; upgrade the existing building façade; stabilization of structures in the south plant; constructing a 5.0 MG clearwell; and installing updated SCADA systems. The project was produced and coordinated using REVIT modeling which provided detailed coordination between multiple engineering disciplines.

Construction Cost: Est. \$58 Million

Year Complete: Est. July 2018





# AVANGRID

## South Perry Substation

South Perry Substation is an existing 115/69/34.5 kV substation serving electrical utility customers in the southern tier of New York State.

To support growth and improve reliability in the area, Avangrid initiated a project to upgrade an existing 115/34.5 kV transformer to a higher MVA rating, as well as adding a redundant 115/34.5 kV transformer and associated switchgear, bussing, and controls.

Beyond the upgrades to the 115/34.5 kV system, a new 230/115 kV bulk power substation was also introduced at the site to harden the 115 kV distribution system.

LaBella Associates was initially retained to perform detailed engineering for the protection, control, monitoring, and automation systems at this site. These services were performed by our protection and control engineering team in our Power Systems Division.

As the project progressed, LaBella's environmental team was retained to prepare spill prevention control and countermeasures (SPCC) plans and modifications to the civil and electro-mechanical designs to address oil containment concerns in the event of a spill.

When the design was approaching completion, LaBella's civil engineering team was retained to prepare solutions for storm water management which were not addressed in the original design, as well as to obtain the required site plan approvals and associated building permits required from the local authority having jurisdiction.

### CLIENT PARTNER

Kyle Duck  
Manager - Programs/  
Projects - NYSEG  
(585) 953-1808  
kduck@nyseg.com



Avangrid initiated a project to upgrade an existing 115/34.5 kV transformer to a higher MVA rating, as well as adding a redundant 115/34.5 kV transformer and associated switchgear, bussing, and controls.

LaBella prepared Storm Water Pollution Prevention plans (SWPP) as well as modifications to the existing civil work to meet the project's needs, and obtained the required approvals to progress with construction.

Construction is currently underway, with completion of the 115 kV yard anticipated in 2018, and completion of the 230 kV yard anticipated in 2019.

Construction Cost: \$30 Million

Year Completed: Est. 2019



# DASNY

## Electrical Upgrades at University of Buffalo – Ellicott Complex

The University of Buffalo, as part of a facility condition assessment, has identified the electrical distribution equipment at the Ellicott Complex, which mainly serves as student residence dormitories, requires to be upgraded. The assessment concluded that Fargo, Evans (formerly Porter), Red Jacket, Richmond, Spaulding and Wilkeson Quadrangle would be included in a multi-phase, multi-year project upgrade. As part the current DASNY Term Contract, LaBella was retained to preform full engineering services for the electrical upgrade project.

All six buildings range in similar size and age, from 9 to 10 stories, from 143,000 to 174,000 square feet and they all were open for occupancy in 1974. Typically, floors one through four are the full size of the building footprint, the fifth floor is approximately half the building footprint and floors sixth through ten have a minimal square footage footprint.. Much of the equipment is over 45 years old and past its useful life. The following is a general summary of the work for each building:

- Replace the existing 4000-amp, 480/277-volt switchgear consisting of three, 2000-amp fused bolted pressure switches with new 3000-amp switchgear and three 1200-amp solid state circuit breakers, sub-metering, surge suppressor device and a N.O./N.C. circuit breaker arrangement for a portable generator connection. Based on kW demand readings the switchgear was able to be downsized.
- Replace three 2000-amp, main lug only, 480/277-volt Main Distribution Panels, with new 1200-amp MDPs
- Replace approximately 15-20 distribution panels throughout. Panels are rated at 480/277-volt and 208/120-volt, ranging from 400-amps to 1,000-amp.
- Retrofit and/or replace approximately 70-80 branch panelboards throughout. Panels are rated at 480/277-volt and 208/120-volt, 100-amp and 225-amp.



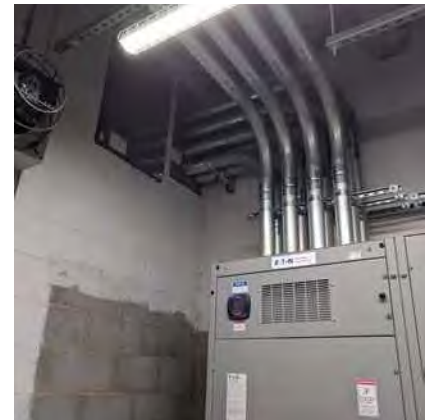
- Replace approximately 7-10 dry type transformers, 480-volt primary to 208/120-volt secondary, ranging from 15kVA to 300kVA.
- Replace all common area lighting. Corridor lighting consists of a T8 fluorescent bare lamp strip concealed above in a ceiling cove have been replaced with an LED Retrofit kit. Existing downlights were fitted out with LED retrofit kits. Stair hall lighting consisting of a T8 fluorescent bare lamp strip concealed above in a ceiling cove, were replaced with LED wall mount luminaries. Approximately 800-900 luminaires were retrofitted or replaced. New corridor lighting controls were replaced, connecting lighting to the building management system.
- Replace approximately 60-80 exit signs in their entirety, with LED type. An additional 10-15 exit signs are added to comply with current code.
- Replace electrical receptacle and switch devices in all dormitory rooms, bathrooms, corridor, etc.

### CLIENT PARTNERS

Tracy Conhiser-Uy, AIA  
DASNY  
(716) 566-4413  
TConhise@dasny.org

Ahmed Aljuboori, P.E., LEED  
AP BD+C  
DASNY  
(716) 566-4407  
aaljuboo@dasny.org

Leigh McMullen, AIA, LEED  
AP  
University at Buffalo  
(716) 645-5386  
leighmcm@buffalo.edu



Depending on building, totals range from 500-1,000.

- Preparation of arc-flash and coordination studies for each building.

To accommodate these replacements modifications were made to the power distribution system for better reliability and safety based on coordination studies performed by LaBella. Also, existing door modifications and replacements were necessary to accommodate electrical equipment installation. Minor hazardous material abatement is required for exit sign installation and other building modifications required to accommodate new electrical equipment.



# DASNY

## Electrical Upgrades at University of Buffalo – Ellicott Complex

With the multi-phase, multi-building project approach LaBella determined Wilkeson to be the first building for electrical upgrades since it is scheduled to be closed in the summer of 2019 for interior renovation work. The following lists the schedule of buildings in order of priority and completion.

### Wilkeson Quad

Status: Completed in January 2021

Cost: \$1,375,000

### Evans Quad (formerly Porter)

Status: Completed August 2022

Cost: \$744,000

### Richmond Quad

Status: In construction, Estimated August 2024 completion

Cost: \$1,244,400

### Fargo Quad

Status: In construction, estimated January 2025 completion

Cost: Estimated at \$1,570,000

### Spaulding Quad

Status: Starting construction

Cost: \$1,811,000

### Red-Jacket Quad

Status: Starting design

Cost: Estimated at \$1,800,000



# HIGH VOLTAGE ELECTRIC SERVICE

Renssealaer County Sewer District #1 115KV Breaker,  
13.2KV Recloser and Relay Replacement

## CLIENT PARTNER

Gus Mininberg  
High Voltage Electric  
Services, Inc.  
518-869-4961  
kv115@aol.com



Pictured left is a SEL-851 Feeder Protection Relay that was used for this project.

Project initially started as development of a maintenance plan but during the site visit the existing 115kv circuit switcher displayed a red flag along with a 13.2kv recloser being inoperable. Knowing this HVES and LaBella worked in close collaboration to find a replacement solution. End result new GE SF6 circuit breaker and the SEL-851 for protection on the 115kv side. 13.2kv side is GW viper with SEL-651R2.

Provided the following services:

1. Physical layout of two (2) new 115kv breakers.
2. New protection and control drawings for the two (2) 115kv breakers.
3. Using SEL Grid configurator to program SEL-851
4. Programing of the two (2) GW VIPER with SEL-651R2 for control.

During the course of this project LaBella has been evaluating the use of the new SEL-851 and providing feedback to Schweitzer Engineering.



# NORTH TONAWANDA CSD

## Energy Performance Contract

North Tonawanda City School District enlisted LaBella to provide engineering services for an energy performance contract to upgrading existing HVAC, lighting and plumbing systems while providing substantial energy savings. Existing systems across six schools including controls infrastructure, water heating systems, lighting, and air handling equipment were all past their expected life.

LaBella assisted with the development of the districts RFP and the selection of an Energy Service Company (ESCO) who would audit the facility and implement potential projects.

After district review and approval of the recommended measures, LaBella developed design documents and specifications for construction and performed commissioning services to ensure proper implementation. The measures installed as part of the energy performance contract saved the district a total of \$176,190 annually.

The scope of the project includes:

- Interior & Exterior Lighting
- Controls Hardware/ Software
- Boiler Plant Replacements
- Pool Dehumidifier Replacement
- Domestic HW Systems
- Culinary Exhaust Controls
- Air to Air Heat Recovery

Project Cost: \$5,323,867

Year Complete: 2021



### CLIENT PARTNER

Anthony Montoro  
Assistant Superintendent  
North Tonawanda CSD  
716-807-3536



The measures installed as part of the energy performance contract saved the district a total of \$176,190 annually.



# NEW YORK POWER AUTHORITY

## NYC H+H/McKinney Turnkey Comprehensive Energy Upgrades Project

### CLIENT PARTNER

William Dickerson  
Project Manager  
NYPA  
(914) 287-3248



In 2022, LaBella was engaged by the New York Power Authority (NYPA) to execute a comprehensive energy upgrades project at the Dr. Susan Smith McKinney Nursing and Rehabilitation Center, part of the NYC Health + Hospitals network.

Project Location



Basis-of-Design W2W Heat Pump System

The facility is 175,193 sq. ft. and is located in Brooklyn's East Flatbush neighborhood. The DSSM facility serves thousands of patients in a disadvantaged area of NYC and is a part of the larger Kings County hospital campus which is a cornerstone of the community.

Utilizing a progressive design-build approach, LaBella developed design documents for upgrades at DSSM, including the following scope of work:

- LED lighting upgrade, with replacement of ~2,700 fixtures
- BMS upgrade, including conversion from pneumatic to digital
- Chiller replacement, involving removal of the electrical

centrifugal chillers and replacement with 2 banks of modular, water-to-water heat pumps for connection to a future geothermal loop (700 tons total installed)

LaBella hosted a private bid, and recommended awards to design-build partners for the implementation phase of the project, in which LaBella will act as the Construction Manager.

This project preceded a district geothermal study of the larger Kings County hospital campus, in which LaBella determined feasibility of installing a ground loop to serve McKinney, and 3 other buildings in the area. This project will be one of the first of its kind in NYC.

Project Value: \$8.3M

Design Completed: July 2022

Estimated Completion: Summer 2024



# LABELLA EXPERIENCE

## Power Systems Experience

LaBella provides full service engineering designs for all facets of utility power systems, from concept through commissioning. Our attention to detail has resulted in LaBella projects becoming design standards for our clients. In challenging conditions, our experience has allowed us to provide innovative solutions to achieve our client's goals. Some examples of recent full-service design projects:

### Western New York: 12 kV Expansion

Substation Expansion project, adding a second 115 kV source, a second 12 kV transformer, 115 and 12 kV bus ties, SF6 switchgear and control house, full system automation and HMI, and a new yard cable trench system. Space constraints required developing unique 115 kV vertical combination

Year Complete: 2017

structures, combining dead end support, instrument transformers, disconnect switches, and a circuit breaker bay.



### Western New York: New 115-34.5 kV Substation

Green field indoor substation, including architectural design, in a mixed residential and commercial area. The project included (2) new 115 kV sources, 115 kV SF6 switchgear, (2) 30/40/50 MVA transformers, 34.5 kV SF6 switchgear, automation, and all supporting systems. This challenging assignment

Year Complete: 2018

provided a maintainable design, but also met strict noise level and architectural appearance requirements from the municipality.



### Southern Tier New York: 230-115-34.5 kV Substation Expansion

Substation Expansion project, adding a third 115-34.5 kV transformer, new 34.5 kV bus and distribution breakers, replacement of all existing 34.5 kV line circuit breakers, control house expansion, Power Line Carrier Communications Improvements, and numerous

Year Complete: Est. 2019

other ancillary items.



# SUNY FREDONIA

## Critical Maintenance Projects

The following list of Civil, Architectural, Mechanical, Electrical and Plumbing critical maintenance projects were completed at the SUNY Fredonia campus. Most of these projects were under \$100,000 in construction costs.

### Alumni and Gregory Halls, Bathroom Upgrades –

Renovations to eight existing student bathrooms within Alumni Hall and ten bathrooms in Gregory Hall. Bathrooms were renovated to be ADA accessible. Completed 2012

### Exterior Lighting Improvement Rockefeller Plaza –

Replaced (74) canopy downlights with LED type. Provide new handrail lighting. Provide ACM abatement on existing downlights. Completed 2016

### Jewett Hall – Replace AC-7

– Replaced 2000 CFM indoor air handling unit chilled water cooling only for an interior office space, complete 2016.

### Maytum Hall Replace Water Heater –

Relocate existing 72 KW instantaneous electric water heater from exterior wall to prevent freezing, complete 2017.

**Mason Hall Lighting** – Replace (11) 12ft. pedestrian style light poles with LED type, replace all underground wiring back to panel, complete 2017.

**Grissom and Andrews Hall** – Replace 150 GPM Duplex Sewage Ejector Pump in basement. Separate project for each building, completed 2017.

**Williams Center Grease Trap** – Provide report to address grease build up issue in pipe, provide



recommendations to rectify problem and obtain contractor pricing, complete 2017.

### Gregory Hall – HVAC Upgrade –

Provide a new 2,600 CFM AHU, 7.5 ton DX cooling with new VAV ductwork distribution system for new communication marketing department 1st floor offices, complete 2017, Cost \$135,000.

**Dods Hall – Women's Locker Room Toilet Replacement-** Site visit and specification to replace wall hung toilets, complete 2017

### Fire Alarm System Cost

**Estimating** – Provide rough order of magnitude cost estimating to replace and upgrade fire alarm/mass notification systems in the Service Complex, complete 2018.

### Gregory Hall AC Rehab –

Replace outdoor condensing unit and chilled water heat exchanger for 2nd floor University Police office, completed 2018.

### Site Lighting Improvements

– **Phase I** – Replace (21) 12ft. pedestrian style light poles with LED type between University Commons and Chautauqua Hall, replace all underground wiring back to panel, complete 2018.

## CLIENT PARTNER

Tim Bentham  
Assistant Director of Facilities  
SUNY Fredonia  
716-673-3453  
timothy.bentham@fredonia.edu



### Campus Roadway/Milling -

Working with Services, evaluate existing pavements, specify and produce bid construction documents annually for the last 3 years.

### Pedestrian Safety Improvements

- Assist the Campus with ongoing evaluation of existing sidewalk conditions and recommending replacement inclusive of ADA curb cuts and cross-walks. Developed projects over the last 3 years

### Fenton Hall Patio Reconstruction

- Provided design services for the replacement of a 1,000 s.f. concrete patio, complete with drainage and landscaping. Work is scheduled to be completed in the Summer of 2022.







## **WATER DISTRIBUTION EXPERIENCE**

# CITY OF BUFFALO

## Water System Improvements - 2021 South Project

### CLIENT PARTNER

Peter Merlo, PE  
Principal Water Engineer  
Buffalo Water Board  
716-851-4771

LaBella Associates was selected by the City of Buffalo to complete the Water Distribution System Improvements – 2021 South Project. The project consists of replacing the existing watermain with a new ductile iron pipe watermain throughout a neighborhood in South Buffalo. The project consists of the following roadways:

- Abby/New Abby Street: 3300 LF
- Baraga Street: 2000 LF
- Germania Street: 1650 LF
- Mystic Street: 1350 LF
- Beacon Street: 1100 LF
- Boone Street: 900 LF
- Pembina Street: 700 LF
- Bell Avenue: 670 LF
- O'Connor Avenue: 650 LF
- Amelia Street: 220 LF

The Water System Distribution System – 2021 South Project represents the most recent City of Buffalo, project along with others, that the City of Buffalo is completing to represent the City of Buffalo's on-going efforts to comply with the Environmental Protection Agency's Lead and Copper Rule Revisions. Along with other requirements, the Rule Revisions requires municipal water systems to inventory their customer's water services and document full replacement (within the right-of-way AND from the right-of-way to the meter) of any lead service contamination.

The project design consisted of working with the City of Buffalo to determine the most efficient replacement alignment that minimizes utility conflicts and maximizes utility separation distances. The utility crowded urban right-of-way with an existing twin 84" sewer throughout much of the neighborhood complicated the proposed alignment. Once the alignment was finalized LaBella



worked with the City of Buffalo to review water services throughout the project. Water service records were reviewed and summarized. Record locations with documented lead services were identified for replacement. Water services with incomplete/indeterminant lead water service records were also identified to be field verified and replaced as necessary.

Trench and pavement restoration treatments were outlined, the project was finalized and reviewed with the City of Buffalo. The project was bid in the Fall of 2023. LaBella addressed bidder's

questions, issued addendums, reviewed the bids and completed a bid tabulation. LaBella made a final bid recommendation to the City of Buffalo for approval.

Construction is anticipated to begin in Spring 2024. LaBella will provide the general services during construction and resident inspection for the project.

**Construction Cost:** \$5,520,150



# CITY OF BUFFALO

## Fruit Belt Waterline Cleaning and Lining

The City of Buffalo's location on Lake Erie and at the western end of the Erie Canal fueled vibrant continuous growth through the first half of the 20th century. The City's growth was supported by its proximity to the lake which has provided it with an abundant source of affordable drinking water. During this growth, a majority of the City of Buffalo Water infrastructure, consisting of approximately 825 miles of water main pipe, 23,860 valves, 80,000 service connections and 7,966 fire hydrants, were constructed. As a critical piece of infrastructure, the water system must be functional 24 hours a day, 7 days a week; however, the public often overlooks this artery until there is a disruption of service or inadequate pressure to fight a fire. As the population decreased during the second half of the 20th century, the demand on the existing system stabilized to less than 50% of the system's designed capacity. As an older system, the operation and maintenance costs of the water system increases yearly; thus requiring the City to manage the system, its maintenance, and repair/reconstruction as financially efficient as possible.

The City hired LaBella to improve the water system serving the east side of the Fruit Belt neighborhood, which had been plagued with low water pressure and volume. The system's deficiencies in this neighborhood were a result of the tuberculation of the existing cast iron watermains. Tuberculation is a bacterial-based oxygen-driven form of corrosion that results in iron oxide precipitation. The deposition of iron oxide (tubercles) from the water, as



opposed to material being "taken away, has progressively clogged the pipes through the years.

Since the watermains were considered structurally sound based on review of the watermain break records, the project called for the cleaning and relining instead of replacement of approximately 5 miles of watermain within the neighborhood

Cleaning and relining the watermain was considered as a cost effective alternative to the reconstruction of approximately 5 miles of watermain within the neighborhood.

### CLIENT PARTNER

Peter Merlo, P.E.  
Principal Water Engineer  
Buffalo Water Board  
716-851-4771

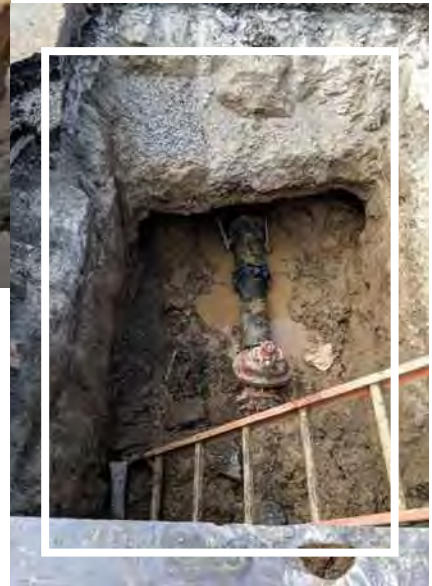


# CITY OF BUFFALO

continued



The cleaning of the watermain, mechanically removes the tuberculated build up iron oxide while the relining process reestablishes the cement lining within the watermain.



The cleaning of the watermain, mechanically removes the tuberculated build up iron oxide while the relining process reestablishes the cement lining within the watermain. The cleaning and relining of the pipe rejuvenates and extends its service life while improving service pressure and volume.

The cleaning and relining process requires a smaller work zone footprint, reduces the disruption to the neighborhood's service, and is less expensive than full reconstruction.

Full reconstruction of the watermain would require that the full length of the watermain is excavated, removed, replaced, and would require extensive restoration of the project area; whereas cleaning and relining of the watermain is facilitated by excavation of access ports at select locations in the project area. The cleaning and relining equipment is inserted into the system at the access ports and the watermain is cleaned and relined between access ports. The access ports are repaired with new pipe and the area is restored to pre-construction conditions.

LaBella worked with the City of Buffalo to solicit project bids, ultimately awarding the \$4.4 million dollar project to Mainlining America, LLC.

We are also tasked with keeping the neighborhood informed of the construction progress and associated disruptions, LaBella provided construction administration and resident inspection services. The cost effective cleaning and relining project was successfully completed in only 2 years increasing area wide pressures extending the service life of the

rejuvenated watermain on a shorter less disruptive schedule the full reconstruction.

**Construction Cost:** \$4.4 Million

**Construction Completed:** November 2019

# CITY OF ROCHESTER WATER BUREAU

## 3B and 3C Lead Service Line Replacement

### CLIENT PARTNER

Michael Bushart  
City of Rochester Water  
Bureau  
(585) 428-7500

LaBella Associates was selected by the City of Rochester Water Bureau (RWB) to complete 3B and 3C Lead Service Line Replacement Projects. The Lead and Copper Rule, as updated by the Environmental Protection Agency, establishes new regulations, testing and timeframes to better protect children and communities from the risks of lead exposure. The City of Rochester has taken a proactive approach to identify and replace lead water service lines with the goal of replacing all lead services by 2030.

The typical water service replacement consists of two segments, with each segment having differing maintenance designations. The "outside" service consists of the portion of the water service from the connection at the main to the curb valve. This portion is typically located in the public right-of-way and by City Code, RWB is responsible for maintenance of this section. The "inside" service is considered the section located between the curb valve to the building located typically on private property. The property owner is responsible for maintenance and replacement of this section.

The City of Rochester replacement projects replace all the "outside" service portions and replaces all "inside" services that contain lead (either lead, lead-lined iron or galvanized iron). The projects include design efforts to document and verify known service materials, development of plans outlining the replacement of all outside services and all "known" lead inside services and includes investigatory work to identify all undocumented inside services and replace if lead is identified. The efforts



Blueprints of the Lead Service Line.

for 3B and 3C Lead Service Line Replacement consists of 922 services and 743 services respectively.

LaBella is responsible for the review and assembly of all City-maintained GIS Data (water facilities, rights-of-way, property information, trees, etc..) and County maintained GIS sewer data. We will review the pavement conditions of the project streets, outline areas of spot milling, deep milling and crack sealing and outline the final surface treatment between chip sealing and milling and overlaying. LaBella staff handle SEQRA documentation including applications to NYS Office of Parks, Recreation and Historical Preservation, as well as coordinate with all utilities within the project area to assess impacts and outline planned upgrades to their facilities prior to completion of the project.

LaBella will complete a preliminary and final plan submittal including an

engineering report, project specifications and cost estimates. We will assist in the bidding of the project by completing addenda, attend and assist the pre-bid meeting, analyze the bids and submit a letter of recommendation for award.

LaBella will handle the construction administration of the project including public information meetings, attending the pre-construction meeting, shop drawing review and field change sketches. LaBella's team will provide all Resident Project Representation services throughout the duration of construction.



# ERIE COUNTY WATER AUTHORITY

## Castle Hill Pump Station Replacement

Erie County Water Authority (ECWA) acquired the Castle Hill Pump Station and associated distribution system from the Town of Aurora in 2019.

The existing pump station, which serves approximately 200 residences, lacks sufficient space for operation and maintenance, excludes numerous features ECWA desires, and includes antiquated and inefficient pumps. Per ECWA preference and to comply with applicable regulatory requirements, the existing pump station will be replaced.

To document the existing pump station's deficiencies and ensure the project's eligibility for a Water Infrastructure Improvement Act grant, LaBella completed a preliminary engineering report including an existing conditions evaluation, alternatives analysis, life-cycle cost estimate, and suggested asset investment schedule.

The replacement pump station will be constructed on the same site. Similar to the existing configuration, the new pumps' suction pipe will branch off of an existing main which serves as the inlet and outlet to a 1 million gallon storage tank, owned by the Village of East Aurora, also located at the site.

To maintain adequate distribution system pressure despite the varied topography of the service area, the distribution system includes several pressure zones regulated by pressure reducing valves. LaBella created a hydraulic model of the distribution system, incorporating data from ECWA GIS, to facilitate the selection of process equipment. The model enables



the simulation and evaluation of multiple scenarios, thus ensuring the selection of the most appropriate process equipment for the new pump station.

After the selection of process equipment based on the established design parameters, LaBella designed the pump station building using our multidisciplinary expertise in architecture, civil, structural, geotechnical, and mechanical/electrical/plumbing (MEP) engineering. LaBella's team coordinated closely with ECWA to ensure the building design includes all desired features.

Our team is versed in building information model (BIM) design tools, which allows for more efficient integration of overlapping design requirements and schedules. LaBella's environmental specialists helped shepherd the project through the State Environmental Quality Review (SEQR) process, and our regulated building materials team identified any hazardous

### CLIENT PARTNER

Michael J. Quinn, PE, BCEE  
Sr. Distribution Engineer  
Erie County Water Authority  
mquinn@ecwa.org  
(716) 685-8203



materials present in the existing pump station and specified safe disposal methods.

LaBella will complete design documents for review by the Erie County Health Department, and then assist ECWA with construction procurement, administration, and observation.

**Project Cost:** Estimated \$2M

**Project Completion:**  
Estimated 2023

**Construction Schedule:** TBD  
(pending ECWA budgetary considerations)



# ERIE COUNTY WATER AUTHORITY

## LA-005 - Water System Improvements City of Tonawanda

LaBella Associates was selected by the Erie County Water Authority (ECWA) to complete the 2021-2022 Water System Improvements within the City of Tonawanda. Contract LA-005 consisted of upgrading/replacing the existing watermain with new ductile iron pipe watermain on the following project roadways:

### City of Tonawanda

- Niagara St - 1460 LF - 8" DIP
- Two Mile Creek - 840 LF - 8" DIP
- Maldiner Ave - 1060 LF - 12" DIP
- Cranbrook Rd - 420 LF - 12" DIP
- Syracuse St - 80 LF - 8" DIP
- Cornell Ct - 290 LF - 8" DIP
- Linwood Ave - 80 LF - 8" DIP
- Crestwood Ct - 140 LF - 8" DIP
- Walter Ave - 110 LF - 8" DIP
- Morgan St - 1270 LF - 8" DIP
- Fillmore Ave - 1360 LF - 12" DIP
- Highland Ave - 1570 LF - 8" DIP
- Steiner Ave - 910 LF - 8" DIP
- Milton St - 310 LF - 8" DIP
- Queen St - 300 LF - 8" DIP
- King St - 40 LF - 8" DIP
- Dexter St - 30 LF - 8" DIP
- Hillcrest Rd - 30 LF - 8" DIP

The project design included working with ECWA to determine an efficient replacement alignment that minimizes utility conflicts and maximizes utility separation distances. Coordination meetings with ECWA finalized the alignment and advanced design. The watermain replacement design and proposed restoration was reviewed and approved by the City of Tonawanda. Design improvements were coordinated with the New York State Department of Transportation and Erie County



Department of Public Works who have maintenance jurisdiction over Niagara Street and Two Mile Creek Road, respectively.

Plans and specifications were finalized and a construction estimate was completed. The project was reviewed and approved by ECWA and the Erie County Health Department.

LaBella worked with ECWA to successfully bid the project. Bids were reviewed and a recommendation letter was issued to ECWA. COVID-19 and supply chain issues delayed the start of construction. Construction started in the Fall of 2023.

To date, approximately 25% of the project is completed. Construction is anticipated to resume late winter/early spring

of 2024. LaBella will continue to provide the General Services During Construction and Resident Inspection.

Construction is anticipated to be completed in Summer of 2024.

**Construction Cost:** \$3,530,000

### CLIENT PARTNER

Michael Quinn  
Sr. Distribution Engineer  
Erie County Water Authority  
sdenzler@ecwa.org



# ERIE COUNTY WATER AUTHORITY

## LA-001 - Water System Improvements Town of Cheektowaga and Village of Lancaster

Each year, the Erie County Water Authority (ECWA) completes a series of watermain reconstruction projects within their Service Area. ECWA contracted with LaBella Associates to complete the 2020-2021 Water System Improvements within the Town of Cheektowaga and Village of Lancaster. Contract LA-001 consisted of upgrading/replacing the existing watermain with 8" ductile iron pipe watermain on the following project roadways:

### Town of Cheektowaga

- Shanley Street - 1420 LF
- Griswold Street - 1000 LF
- Pleasant Pkwy - 350 LF
- Willowlawn Pkwy - 420 LF
- Meadowbrook Pkwy - 460 LF

### Village of Lancaster

- Sturm Street - 560 LF
- Aurora Street - 1570 LF
- Scott Street - 500 LF
- Holland Avenue - 450 LF

The project design included working with ECWA to determine an efficient replacement alignment that minimizes utility conflicts and maximizes utility separation distances. Coordination meetings with ECWA finalized the alignment and advanced design. The watermain replacement design was reviewed and approved by the municipalities (Town of Cheektowaga and Village of Lancaster) as well as the New York State Department of Transportation and Erie County Department of Public Works who have maintenance jurisdiction over Clinton Street (Shanley Street connection) and Aurora Street, respectively.



Once final design was established, project specifications were finalized, and the construction estimate was completed, the project was submitted to Erie County Health Department for approval. LaBella addressed Contractor questions and completed and issued addenda. LaBella reviewed the bids and made a final recommendation to ECWA.

LaBella and ECWA successfully bid the project in January 2021. The project was started in April 2021 and completed in October of 2021. LaBella was responsible for general

services during construction, and construction inspection. LaBella worked with ECWA to review the project in conjunction with Town of Cheektowaga's sanitary sewer project and successfully negotiated trench restoration in lieu of milling and overlaying the impacted roadways, resulting in significant cost savings to ECWA. LaBella's field representation worked to keep neighbors informed and ECWA received positive feedback for our efforts.

**Construction Cost:** \$2.0 million



### CLIENT PARTNER

Steve Denzler  
Distribution Engineer  
Erie County Water Authority  
sdenzler@ecwa.org



# TOWN OF KENDALL

## Water System Improvements

LaBella Associates was retained for the design of eight projects to install approximately 25 miles of water mains to extend the Town's distribution system. Many residential wells had become contaminated from failing septic systems. Other wells suffered from poor quantity during the summer months. These projects completed a major loop to reinforce fire flows and provide greater reliability of service within the Town and included chlorine booster stations and pressure control vaults. The projects were funded through a combination of grants and loans from H.U.D. Small Cities program and Rural Development.

### Grant Management Experience

Our firm has extensive experience in developing and administering public infrastructure projects throughout Western New York. We have assisted numerous communities to develop applications for CDBG and other funding for water, sewer and other projects. In many cases, we have also assisted the grantees to implement, complete and close out the grant awards. Our primary role is to assist the community to comply with the regulatory and other requirements of the funding agency, including procurement, environmental review, financial management, reporting and other requirements. We work closely with the project engineers to ensure that the CDBG contract conditions are included in the bid and contract documents and that labor standards provisions are monitored throughout the construction period. We closely monitor the project budgets, prepare drawdown requests and budget modifications, if needed. We assist the grantee to prepare



reports to the funding agencies, as required. In addition, we work with grantees to compile the documentation needed for the CDBG monitoring of the completed project and guide grantees through the monitoring process and project close out.

LaBella has completed over 25 miles of water mains to extend the Town's distribution system.

### CLIENT PARTNER

Tony Cammarata  
Town Supervisor  
(585) 659-8201  
supervisor@townofkendall.com





## **SECTION 7.**

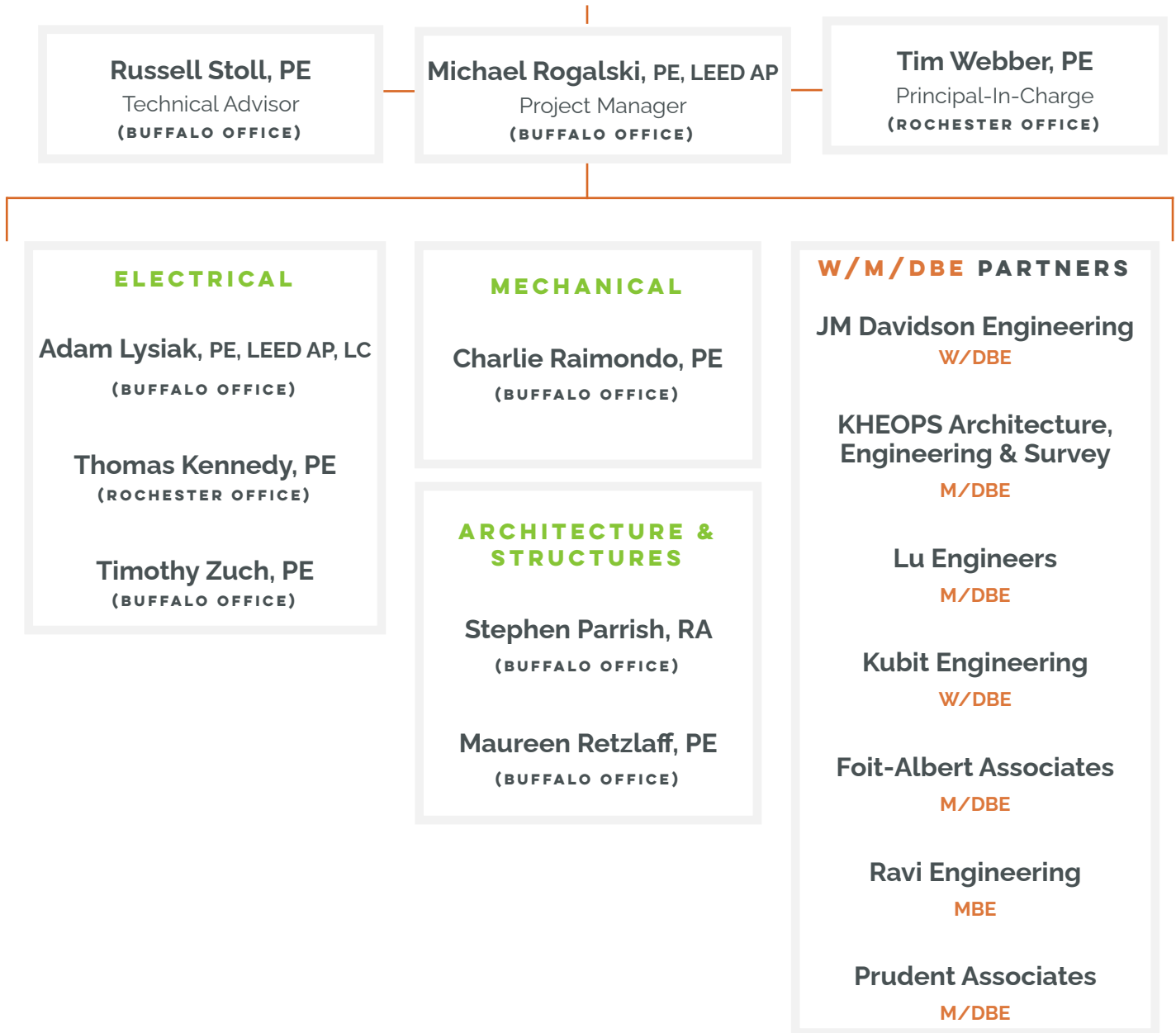
### **KEY STAFF**

# TEAM ORGANIZATION

We build a project team by thoughtfully engaging professionals that have demonstrated reliability, accountability and collaboration.

## NIAGARA FALLS WATER BOARD

### GENERATOR, LIGHTING & SWITCHYARD TEAM





# MICHAEL D. ROGALSKI

Vice President / Regional Manager Building Engineering

Mike is a Vice President and Regional Leader for LaBella's Buffalo MEP and Structural Group. He has over 33 years of experience in electrical design and specification of power distribution systems, grounding and lighting systems, and QA/QC for manpower projects. Mike has extensive skills in contract document preparation, client services, construction budget monitoring, engineering design support and project management services.

## PE, LEED AP

Professional Engineer  
NY, NJ, OH, PA, MA, LA, NC, SC

## EDUCATION

SUNY University at Buffalo: B.S.,  
Electrical Engineering

Erie Community College:  
A.A.S., Electrical Engineering  
Technology

## ORGANIZATIONS

National Council of Examiners  
for Engineering & Surveying

US Green Building Council-  
LEED Accredited Professional

### NFTA: Buffalo Niagara International Airport Standby Generator Expansion—Buffalo, NY

Project Manager for \$1.4M project to add three (3) diesel generators and electrical distribution work to provide standby power to jet bridges and gate counters.

### NFTA: 175 Aero Drive BNIA Transit Airport Police Building— Buffalo, NY

Principal Engineer for the upgrade of electrical systems to comply with Critical Operation Power Systems per the NEC. Work included a new electrical service and add a new 125 kW generator. Approximate project cost is \$350,000

### NFTA: BNIA Emergency Generator Study—Buffalo, NY

Project Manager to study options to upgrade back-up power at the Buffalo Niagara International Airport. Report provided five alternatives ranging from \$1.2 million to \$5 million.

### NFTA: Electrical Vault Upgrades at Niagara Falls International Airport—Niagara Falls, NY

Project Manager for the upgrades

to the main electrical vault equipment at the airport. Project consisted of replacing the existing airfield lighting constant current regulators and replacing the existing 250-kW diesel Onan generator. Project also included the reuse of the existing louver for air intake and exhaust. Approximate cost was \$250k.

### NFTA: Buffalo Niagara International. Airport, 485 Cayuga Back-up Data Center— Buffalo, NY

Project Manager for a \$350k electrical mechanical project that featured a new gas-fired, 125-kW backup generator to serve data center and ancillary office space. Work included power distribution to data center equipment, data rack cooling and general cooling of the data center space. New power and lighting to office space and a 48-strand fiber optic cable from the adjacent air field ductbank.

### Daemen College: Wick Campus Center Standby Generator, Amherst, NY

Project Manager for the design of a standby natural gas exterior generator for the Wick Campus Student Center at Daemen



College. The project involved connecting strategic loads to a new 208/120 volt, 3-phase, 125-kW natural gas fired generator was used. Several panel-board feeders that serve these loads were intercepted and re-routed to a new distribution panel and automatic transfer switch.

**Erie Community College: Campus Wide Generator Replacement—Williamsville, NY**

Project Manager for generator replacement for the three ECC campuses, covering 10 buildings with new generator sized from 30kW to 150kW. Project cost approximate \$900,000

**SUNY College at Potsdam: Generator Upgrades—Potsdam, NY**

Project Manager for the replacement of diesel generators at 10 campus buildings. Responsible for the preparation of feasibility study, construction documents, bidding and construction administration through close-out. Project cost was approximately \$650,000. Work included removal of existing diesel generators; replaced with appropriately sized diesel units, upgrade transfer switches for code compliance (life safety and stand-by), removed remote fuel tanks and piping with sub base tanks under generator fuel lines, power distribution modifications, site/civil modifications including concrete pads and retaining walls at Raymond Hall.

**Monroe County: Frank E. VanLear WWTP—Rochester, NY**

Electrical Engineer for a multi-million dollar upgrade to the 135 mgd treatment plant facility near Lake Ontario. Work included upgrade several motor control centers, new aeration blowers;

new dual feed 480-volt electric service. Upgrade electrical distribution equipment at all exterior basins; new lighting and instrumentation wiring. Provided services from construction documents through close-out.

**Village of Newark: WWTP Reconstruction—Newark, NY**

Electrical Engineer for an approximate \$23 million reconstruction of the existing 3 MDG WWTP. Work included a new 480-volt, 1600-amp service, power distribution and fiber optic cabling throughout site, new blower building, upgrade pump station, new material handling building, new influent building that process raw sewage classified as Class 1, Div. 1, and other upgrades. Provide full electrical engineering and with instrumentation & control for all processes.

**Village of Waterloo: WWTP Upgrades—Waterloo NY**

Electrical Engineer for an upgrades to the existing 1.25 MDG plant that include a new chemical feed building, upgrades to the clarifiers, a new UV process station and miscellaneous upgrades the main plant building.

**Mount Crested Butte WWTP—Mount Crested Butte, CO**

Electrical Engineer for 1.2 MGD expansion of the current plant. Designed new 480/277 volt, 1600amp electric service and coordinated with local utility, designed emergency power system which consisted of 750 KW diesel generator and PLC controlled load steps. Designed power distribution, which includes motor control centers to all buildings. Designed branch power and lighting systems in hazardous locations for all

buildings. Designed lightning protection system and ground grid system for entire site.

**Erie County Sewer Authority—Lancaster, NY**

New 7,000 sf addition to existing Erie County Sewer District building in Lancaster NY, replaced entire electric service, power distribution, lighting, fire alarm and security system in the existing building.

**Monroe County: Trolley Blvd Pump Station—Gates, NY**

Electrical Engineer for a multi-million dollar upgrade to the pump station on Trolley Street in Rochester. Provided a new 1600-amp 480/277-volt service, new motor control centers. Three new 280-HP lift pumps with VFDs, harmonic filters and manual transfer switch to generator cable tap box for a portable generator. Provided instrumentation and control wiring to serve the process.

**Village of Newark: Pump Station NYS Rte 31—East Newark, NY**

Electrical Engineer for a new pump station building to replace underground lift pumps. New 208/120-volt 400-amp service to serve two 20-HP pumps, new lighting and 60 KW exterior natural gas generators was provided. Provided instrumentation and control wiring to serve the process.



## ADAM LYSIAK

Senior Electrical Engineer

Adam is a Senior Electrical Engineer with 15 years experience in a wide range of project types including commercial, education, industrial, and healthcare projects, with an emphasis on power distribution and lighting design. He also has experience in fire alarm, site lighting, access control, and communications systems.

**PE, LEED AP, LC**  
Professional Engineer  
NY, OH

**EDUCATION**  
SUNY University at Buffalo: B.S.,  
Electrical Engineering

**CERTIFICATIONS/  
REGISTRATIONS**  
U.S. Green Building Council—  
Leadership in Energy and  
Environmental Design  
Accredited Professional

National Council on  
Qualifications for the Lighting  
Professions—Lighting Certified  
Professional

**NFTA: 175 Aero Drive BNIA  
Transit Airport Police Building—  
Buffalo, NY**

Project Engineer for the upgrade of electrical systems to comply with Critical Operation Power Systems per the NEC. Work included a new electrical service and add a new 125 kW generator. Approximate project cost is \$350,000.

**East Aurora WRRF, Erie County  
Sewer District Number 8 -  
Control Building Improvements  
(electrical condition assessment  
and study)**

Lead electrical engineer on comprehensive electrical condition assessment and study to determine existing conditions, paths to upgrade, engineers opinion of probable costs, and priorities to upgrade the plant; which had few redundancies and a failing backup generator and transfer switch. The assessment found other failing devices, code, and safety issues. Recommendations for priorities, multiple upgrade paths, and next steps were given to help client prioritize and budget for upgrades.

**East Aurora WRRF, Erie County  
Sewer District Number 8 -  
Control Building Improvements  
(design and bid/construction  
admin)**

Lead electrical engineer on full interior renovation of the old control building to create new lab space, office, breakroom and wash areas, relocation of plant computer and communications systems, expansion of plant fiber network, and full MEP systems replacement; while maintaining existing plant process equipment.

**East Aurora WRRF, Erie County  
Sewer District Number 8 -  
Control Building Improvements  
(electrical upgrade project)**

Project Manager on comprehensive electrical upgrade project to correct deficiencies found in electrical study and increase redundancies. Includes new service, service electrical building, generator, separating MCC's with individual transfer switches, general electrical upgrades, safety and convenience upgrades. Includes survey and geotechnical report to allow for proper consideration of overall site layout to avoid problematic areas which may in the future be prone to flooding where the existing electrical service is, and to get electrical equipment out of the way of the



process area to allow for a plant UV treatment process expansion in the future.

**Gastonia Water Treatment Plant: Twin Rivers Utilities—Gastonia, NC**

Project Engineer for a \$60 million comprehensive renovation and refit of a water treatment plant including a 30,000 sf addition and a 52,000 sf renovation. Project included substantial power distribution upgrades to bring the facility to modern standards including a new 480V main-tie-main unit substation fed from medium voltage, a new 208V distribution with redundant power feeds into the plant, and all new distribution throughout the plant.

**Tioga County: DSS Generator Addition—Owego, NY**

Project Electrical Engineer providing additional backup power to a portion of an existing office building and integrating this with the existing power distribution system.

**Monroe Community College: MCC Downtown Campus Infrastructure Separation, Demolition, and Abatement Construction Project—Rochester, NY**

Project Electrical Engineer for the separation of electrical utilities of the MCC purchased buildings from Kodak owned buildings, including a new medium voltage switchgear, medium voltage transformers, and a new fire pump.

**Buffalo Public Schools: School 95 Waterfront Academy Roof and Air Handler Replacement—Buffalo, NY**

Sr. Electrical Engineer responsible for this project which includes replacing nine indoor air handling units, kitchen exhaust fan replacement, steam trap

replacement, and upgrading pneumatic controls to digital.

**Dunkirk City School District: 2020 Planned Facilities Upgrades Project (2019-2020)—Dunkirk, NY**

Lead Electrical Engineer that provided design and construction administration services for a project which involved new door access control system across the district, new lockdown notification systems, boiler & HVAC replacements & upgrades, secure vestibule entrance/main office & cafeteria additions/renovations at School 7.

**North Tonawanda Central School District: 2015 Capital Improvement Project (2016)—North Tonawanda, NY**

Electrical Engineer that provided design and construction administration services for a project which involved the conversion of antiquated elementary school into middle school including new power distribution & boiler room. Assisted with design of campus conversion from Co-Gen plant to Utility fed electrical service. Collaborated with staff to ensure consistency across project.

**Niagara Frontier Transportation Authority: BNIA 485 Cayuga Backup Data Center—Cheektowaga, NY**

Electrical Engineer that managed construction support services during installation of project which involved conversion of warehouse storage space to a backup data center and office space.

**DASNY: Electrical Upgrades at University of Buffalo, Ellicott Complex, Wilkeson Quad—Buffalo, NY**

Electrical Engineer for facility condition assessment to identified

electrical equipment that needed to be upgraded at the Ellicott Complex. Wilkeson Quad needed the following upgrades: switchgear with new amps and circuit breakers with submetering, main distribution and branch panels, transformers, all common areas, corridor, downlighting, stair hall lighting, and wall mount luminaries were replaced with LED retrofit kits (approximately 800). Also, replaced exit signs with LED types.

**Town of Greece: New Police HQ Building—Greece, NY**

Project Engineer leading the lighting design for a new 28,181 sf, two-story police headquarters building utilizing efficient luminaire and control systems.

**Rochester Gas & Electric: Russell Station MLS Building Upgrade—Rochester, NY**

Project Electrical Engineer for the repurposing and renovation of a Main Lift Station into a ground water treatment station. Project included new industrial process equipment and maintaining existing process equipment.



# THOMAS KENNEDY JR.

Power Systems Engineer

Tom has over 13 years of experience in the Power Engineering Field. He is experienced with design, specifications and construction support for a range of projects. Tom has designed protection and control systems for various low, medium, high voltage configurations and distributed generation based around Schweitzer Engineering, Basler, and Beckwith equipment. He has performed engineering studies including short circuit coordination, arc flash studies, and soil resistivity tests. Part of Tom's duty at LaBella is coordinating work flow with remote offices for substation projects.

## PE

Professional Engineer  
NY, PA, ME, CT, NH, VT, NC, OR

## EDUCATION

University of Pittsburgh at  
Johnstown; B.S., Electrical  
Engineering Technology

SEL University: Prot 401 -  
Protecting Power Systems for  
Engineers

University of Wisconsin-  
Madison: National Electrical  
Safety Code IEEE C2-2017

### High Voltage Electric Service, Inc.: Rensselaer County Sewage Treatment Plant, 115 kv Breaker Replacement—Troy, NY

Performed 3D scans of the  
existing substation and general  
arrangements of breakers.  
Designed relay schematic  
designs using new SEL-851.

### High Voltage Electric Service, Inc.: Lydall 34.5 kv Disconnect Switch Replacement—Hoosick Falls, NY

3D scanned existing structure  
and developed design drawings  
for installation of the new 34.5 kv  
disconnect switch.

### High Voltage Electric Service, Inc.: Regeneron 13.8kv Emergency Generator Coordination & Relay Programming—Tarrytown, NY

Developed and implemented  
relay settings and configuration  
files for a (4) 4 MW diesel  
generator system interconnected  
with the facility 115kv to 13.8kv  
main substation.

### RG&E Filmore Generator Replacement—Rochester, NY

Performed site work to verify  
conditions and developed

options for the replacement of  
the generator. Designed electrical  
service for the RG&E facility  
consisting of two buildings and  
determined on how the work will  
be done in phases.

### RG&E Station 5 Headgates Assessment—Rochester, NY

Performed site work to determine  
what repairs were needed to  
the existing electrical damaged  
during the flooding event.  
Prepared a report detailing the  
repairs needed and developed  
electrical drawings based on the  
report.

### NYSEG Amenia Substation Rebuild—Amenia, NY

Electrical Engineer providing the  
design on the protection and  
control aspects of the substation  
rebuild with GIS switchgear  
enclosed in the control house.  
Designed relay panels, AC/DC  
distribution and communications  
systems for 69kV/46kV/13.2kV  
station.

### NYSEG Silver Springs Substation—Silver Springs, NY

Electrical Engineer providing the  
design on the protection and  
control aspects of (2) 4.8kV and (1)





34.5kV breaker replacement and upgrading the 34.5kV Motor Op control. Designed new relay panel for distribution circuits and the motor op control. Created Bills of Materials and Cable schedules. Performed site visit to verify existing equipment and wiring.

**NYSEG Warsaw Substation—  
Warsaw, NY**

Electrical Engineer providing the design on the protection and control aspects of (2) 12.5kV and (1) 4.8kV breaker replacement. Designed new relay panels for distribution circuits. Created Bills of Materials and Cable schedules. Performed site visit to verify existing equipment and wiring.

**SUCF: SUNY Cobleskill  
Substation Switchgear  
Replacement—Cobleskill, NY**

Electrical Engineer providing work on the protection and control design of the new switchgear. Developed the Relay Three Line and performed the relay and fuse coordination for the project. Prepared maintenance commissioning plan and sequence of operation for the substation.

**NYSEG Westover Goudey 34.5kV  
Cap Banks—Binghamton, NY**

Electrical Engineer providing the work on the protection and control aspects of (4) 34.5kV Cap Banks at (4) different substations. Designed relay panels, performed fault current CT saturation calculations and created Bills of Materials and Cable schedules.

**High Voltage Electric Service,  
Inc.: Regeneron 115kv Main  
Substation—Tarrytown, NY**

Developed relay settings for (14) feeder relays on the 13.8kv distribution system.

**Messer Air Products**

Designed a replacement substation 115kv/13.8kv MVA rated.

**Gravity Renewables: Chittenden  
Falls Hydro Neutral Grounding  
Reactor—Cazenovia, NY**

Designed and implemented (2) neutral grounding for 1 MW hydro exporting to National Grids 13.2 kv system. Existing site data was gathered from a 3D scan.

**Gravity Renewables: Dahowa  
Hydro IA—Greenfield, NY**

Developed programming for SEL RTAC (Dahowa Hydro) communications to National Grid Orion RTU. Coordinated with National Grid and NYISO for communication and commissioning along with taking part in the testing of the system. Implemented an HMI for the Interconnection with the Hydro facility and National Grid with the ability to see power production and operate and close the 34.5kv recloser.

**FLO Breaker Replacement—  
Various locations**

Electrical Engineer providing the work on the protection and control aspects of (42) Distribution Breakers. Designed relay panels and created Bills of Materials and Cable schedules. Performed site visit to verify existing equipment and wiring.

**NYSEG Battery Replacement  
Projects—Various locations, NY**

Electrical Engineer for 12 NYSEG substations battery replacement designs with voltage 24.48.125 VDC.

**Soil Resistivity Tests —Various  
Locations, NY**

Electrical Engineer performing soil resistivity at over 10

substations. Proposed testing location and prepared report on the tests.

**Co-generation Plants Various  
Clients—New York NY**

Electrical Engineer providing the interconnection and electrical system design of a combined electric generation and heating plant. Co-gen plants ranged in size from 100-500kw. Prepared interconnection documents for submission to local utility and developed specifications based on client needs and all applicable building codes.

**Harris Corporation 4kV Switch  
Replacement—Rochester, NY**

Electrical Engineer providing field work to determine gear size and feeder lengths. Updated the facilities short circuit values and developed engineering drawing to show location of the new 4kV switches.

**Revere Copper Relay and  
Switchgear Upgrade—Rome, NY**

Electrical Engineer providing drawings for a switchgear and relay upgrade based on client specifications.

**GAMESA Chestnut Flats Wind  
Farm—Altoona, PA**

Electrical Field Engineer providing monthly inspections and maintenance recommendations to the owners.

**Substation Transformer  
Testing—Various locations  
throughout Pennsylvania, West  
Virginia and Maryland.**

Electrical Field Engineer responsible for performing maintenance tests on substation transformers.



# TIMOTHY B. ZUCH

## Senior Electrical Engineer

Tim is a Senior Electrical Engineer with 34 years of experience encompassing various project types including higher education, industrial, commercial, water treatment, and amusement parks. This work included design of substations, power distribution, motor controls, grounding, lighting protection, lighting, telephone/data communication, and fire alarm systems.

### PE

**Professional Engineer:**  
NY, TX, NH

### EDUCATION

**State University College at Buffalo: Master of Science, Industrial Technology**

**State University College at Buffalo: Bachelor of Technology, Electrical Engineering**

**Erie Community College: Associate of Science, Engineering Science**

### **NYPA: Zinc-Air Energy Storage System Enabling at the University of Buffalo—Buffalo, NY**

Sr. Electrical Engineer for an electrical upgrades project at the UB Baker Chilled Water Plant. This project included enabling work associated with the installation of a Zinc-Air Energy Storage System being installed as a separate project to support the chilled water plant during peak load situations and reduce demand charges during summer operation.

### **Water Treatment Facility—Crested Butte, CO\***

Electrical engineer who designed the electrical systems for the new facility. The design included a new electrical service, power distribution to the facility and process equipment, grounding, lightning protection, fire alarm, and lighting systems.

### **Hornell WPCP Improvements Phase 1— Hornell, NY**

Sr. Controls Engineer for \$6M project for replacement of process equipment and building systems.

### **East Aurora WRRF – Electrical Upgrade Project — East Aurora, NY**

Electrical Engineer for the replacement of electrical distribution equipment and replacement of standby generator.

### **Kensington Expressway—Buffalo, NY**

Electrical Engineer working with subconsultant and National Grid to coordinate new 23-kV electrical service for new expressway tunnel project. Designed substation building for the two single ended metered substations.

### **Six Flags Fiesta Texas Raptor Roller Coaster—Antonio, TX\***

Electrical Engineer that designed the power distribution to the coaster motors and and control conduit arrangements to the field mounted control devices.

### **Six Flags Fiesta Texas Dive Roller Coaster—Antonio, TX\***

Electrical Engineer that designed the power distribution to the coaster motors and and control conduit arrangements to the field mounted control devices.



*\*Projects under previous experience*



# CHARLES F. RAIMONDO

## Senior Mechanical Engineer

Charlie has more than 22 years experience in HVAC design. His responsibilities include all facets of project management, such as maintaining client relations, generating contract documents, construction administration, and quality control. He has extensive experience in mechanical design and code compliance.

### PE

Professional Engineer  
New York

### EDUCATION

University at Buffalo: B.S.,  
Mechanical Engineering

### ORGANIZATIONS

American Society of  
Heating, Refrigerating and  
Air Conditioning Engineers  
(ASHRAE)

US Green Building Council-  
LEED Accredited Professional

#### Town of Amherst Waste Water Treatment Plant: HVAC Improvements to Various Buildings—Amherst, NY

Sr. Mechanical Engineer for HVAC system design, project management and construction administration of a multi-building HVAC improvement project throughout the Town of Amherst waste water treatment plant. Project included replacement of boilers and air handling units, upgrading controls and energy improvement measures.

#### Van De Water Treatment Plant & Raw Water Pump Station HVAC Upgrades—Tonawanda, NY

Sr. Mechanical Engineer & Project Manager to upgrade the HVAC controls and systems within the two facilities. The existing HVAC systems within VDWTP has antiquated controls, some of which are not functioning and some require manual operation. RWTP has antiquated stand-alone controls.

#### Buffalo Water Authority: Col. Ward Pumping Station Renovations—Buffalo, NY

Sr. Mechanical Engineer for HVAC system design of a renovation to the engineering office building and laboratory space in the filtration plant. Project included modernization of the existing steam heating and ventilation systems within the two spaces.

#### SUNY Fredonia: Science Technology Education and Laboratory Facility—Fredonia, NY

Sr. Mechanical Engineer for HVAC system design and construction administration of a 90,000 sf state-of-the-art new construction science and technology education and laboratory facility. Project included a 400 ton central chilled water plant, high efficiency central hot water boiler plant and laboratory environmental controls. Building was designed to comply with LEED Silver Certification Status.

#### SUNY Fredonia: Maytum Hall Renovation—Fredonia, NY

Sr. Mechanical Engineer for HVAC system design, construction administration and project management of a multi-phased renovation and HVAC system upgrade of the Campus's existing I.M. Pei designed administration high rise tower. The 800-ton central chilled water plant was completely replaced with high efficient chillers, which feeds five surrounding buildings. A new decentralized boiler plant was added to feed five surrounding buildings and taken off the Campus central high temperature loop. Project also included a complete overhaul of the four-pipe fan coil system, new central VAV air handling units for common spaces and updated digital controls.





# STEPHEN PARRISH

Project Architect

As an Architectural Designer and Project Manager, Mr. Parrish has provided project design and management for over 25 years. Steve has vast experience designing for Industrial and Manufacturing projects with an emphasis on those involving hazardous materials and ADA requirements. He is extremely proficient in Quality Assurance and Code Reviews, which expedites the review processes with local and state authorities thus ensuring that aggressive deadlines are met through creative, practical and efficient solutions to complex code issues

**RA**  
NYS Registered Architect

**EDUCATION**  
University at Buffalo, State University of New York:  
Bachelors of Professional Studies in Architecture

**ORGANIZATION**  
LEED Accredited Professional

NYS Certified Code Enforcement Official

### IIMAK, New Print & Test Lab - Amherst, NY

Project Architect; IIMAK was looking to consolidate their print lab, testing lab, & wide format print lab into a single space in a central location to serve a dual function. The main use of the lab is to serve as the day-to-day print lab used for testing & troubleshooting. It will also serve a show-piece space during client visits to allow customers to see IIMAK's products used in the customer's printers.

tremendous growth, Pine needed to expand their clean room space as well as their shipping/receiving & warehouse areas. With the increase in capacity, a new employee entrance, additional locker rooms, & a break room were included. The new 48,000sf addition almost triples the square footage of the building and allows for future clean room expansion within the building shell.

### Pine Pharmaceuticals, New Pharmaceutical Manufacturing Facility - Tonawanda, NY

Project Manager; Design of a new 25,000 s.f. facility comprised of FDA cGMP and USP 797 and 800 compliant ISO Level 8, 7, and 5 hazardous and nonhazardous compounding clean rooms. Approx. 15,000 s.f. of the building is dedicated to manufacturing, fulfillment and warehousing operations, and the balance of 10,000 s.f. accommodates office and employee support functions.

### Ivoclar Vivadent, Office & Manufacturing Additions/ Renovations - Amherst, NY

Project Manager; Experiencing robust business growth, LaBella and the Client undertook a strategic planning initiative to identify how to take best advantage of their Amherst, NY facility to accommodate anticipated staffing growth and to consolidate manufacturing operations. The project included 6,000 s.f. of new office space, 12,000 s.f. of warehouse and distribution space and 6,000 s.f. of manufacturing space along with additional parking and associated site work.

### Pine Pharmaceuticals, Addition Design - Tonawanda, NY

Project Manager; Based on early,





# MAUREEN RETZLAFF

## Senior Structural Engineer

Maureen serves as a Senior Structural Engineer in the Buildings Group of LaBella's Structural Engineering Division and has over 11 years of experience. Her main responsibilities include document production and project assistance. She has experience in RAM Structural, AutoCAD and Revit for document production. Maureen also has project experience in higher education, K-12, healthcare, and local municipalities.

**PE**  
Professional Engineer, NY

**EDUCATION**  
University at Buffalo: M.S.  
Structural and Earthquake  
Engineering

University at Buffalo: B.S. Civil  
Engineering

### Northland Corridor: Redevelopment Project, Phases 1 & 2—Buffalo, NY\*

Structural Engineer responsible for the renovations made to the existing 235,000 sf structure, comprised of more than 9 separate buildings. The project scope included a full structural assessment of the existing space, analysis of all existing roof truss members and reinforcement to meet current code loading requirements and added weight of renovations. A steel framed mezzanine design was also developed, along with structural support of reconfigured doors, windows, wall and roof openings, and updated mechanical equipment. Responsible for full structural design and for production of construction documents.

space. Additionally, the warehouse area was designed with joists and joist girders for the roof framing system, and load bearing precast concrete tilt-up walls on the exterior. A reinforced concrete structure, with a flat plate roof slab design, supported multiple roof mounted fermenting tanks and was designed to accommodate additional tanks in the future. Responsible for all structural design and for producing construction documents and details.

### Cummins Engine Plant Conveyor System—Jamestown, NY\*

Structural Engineer responsible for the analysis of the existing steel roof framing with the addition of a large overhead conveyor system, used to support diesel engines.

### Big Ditch Brewing Company: 6700 Transit Road— Cheektowaga, NY\*

Structural Engineer for the proposed 100,000+ sf brewing facility, to include a restaurant, banquet space, offices, and warehouse/production space. Structural design included a two-story steel framed building with moment frames for lateral resistance and a 70-foot-long steel truss to clear span the

### MJ Mechanical at 95 Pirson Parkway—Tonawanda, NY

Structural Engineer for the new 39,000 sf office and warehouse facility. Roof framing of the building was designed using open web joists and joist girders, supported by interior steel columns and exterior precast concrete bearing walls. Responsible for full structural design and assistance of document production.

*\*Completed under previous employment*

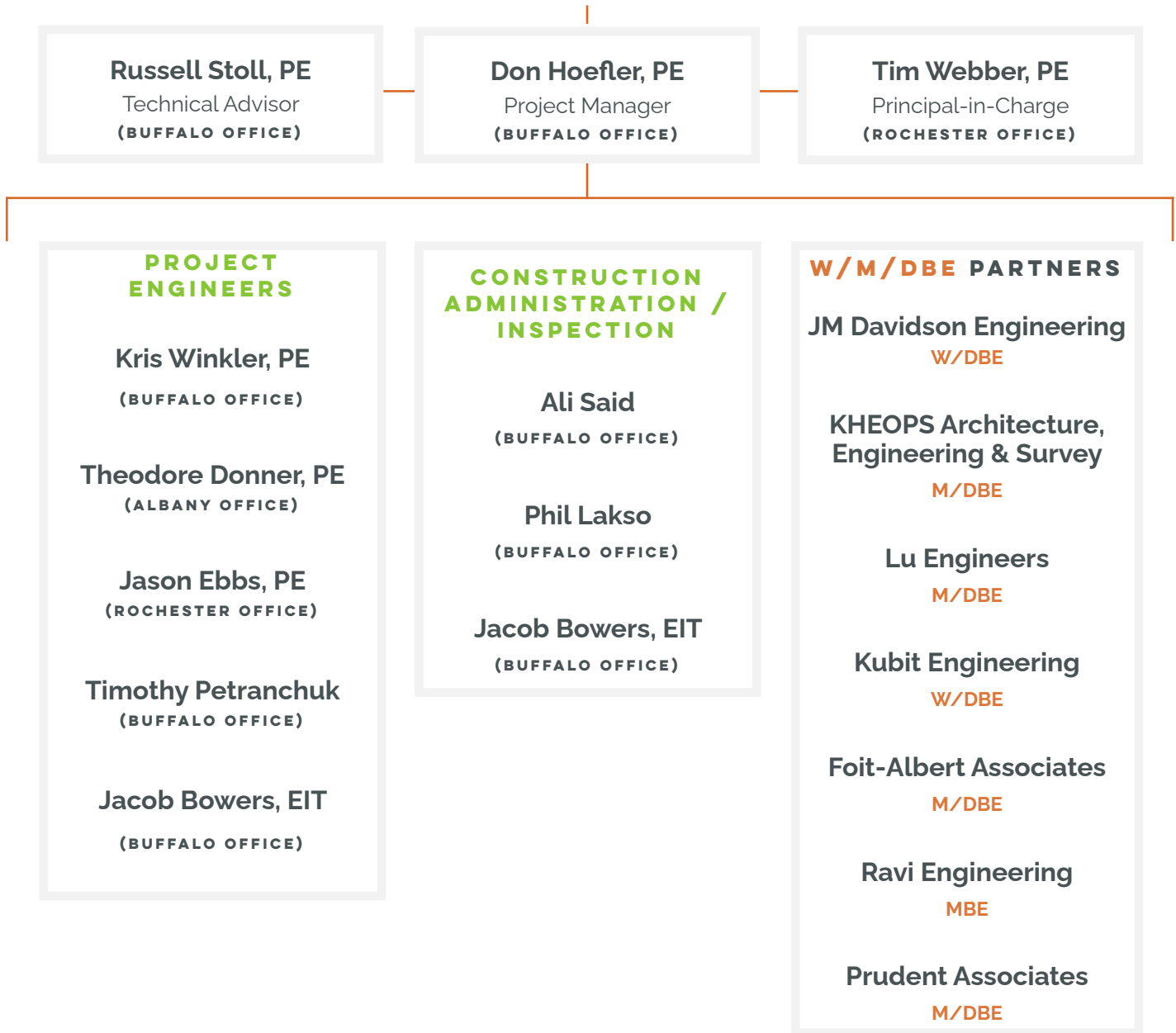


# TEAM ORGANIZATION

We build a project team by thoughtfully engaging professionals that have demonstrated reliability, accountability and collaboration.

## NIAGARA FALLS WATER BOARD

### WATER DISTRIBUTION TEAM





# DONALD HOEFLER

Senior Civil Engineer

Don has 29 years of experience in municipal engineering design, principally on infrastructure projects. He has served as a project engineer and manager on many watermain designs and pump station facilities.

## PE

Professional Engineer, New York

## EDUCATION

Clarkson University: BS Civil Engineering

## ORGANIZATIONS

Newstead Planning Board

### **Erie County Water Authority: LA-001 Water System Improvements—Cheektowaga & Lancaster, NY**

Senior Project Engineer for the project consisting of design and construction of 7,000 LF of watermain for a neighborhood in Cheektowaga and various locations in the Village of Lancaster. The design portion consisted of coordinating with the ECWA, review and approval of all agencies, and assisted in the completion of project plans, specifications and estimate. Also, provided bidding support and general services during construction.

### **Sanitary Sewer Replacement – Gasport NY**

Senior Project Engineer for the design, preparation of contract documents, bidding and construction oversight for the replacement of approximately 1200 LF of sanitary sewer along State Street. State Street is adjacent to and parallels the Erie Canal. The existing clay tile sanitary sewer was experiencing significant infiltration. Worked with the Town of Royalton to design a replacement sewer that achieved the required invert elevations while cost effectively managing the impacts of the existing bedrock elevation.

### **Erie County Water Authority: LA-005 Water System Improvements—City of Tonawanda, NY**

Senior Project Engineer for the Water Authority project for replacing ~12,000 LF of watermain in the City of Tonawanda. The project consisted of design coordination with the ECWA, obtaining design concurrence/approval from the City of Tonawanda, NYSDOT and Erie County Health Department and assisting in the completion of project plans, specifications and estimate.

### **City of Buffalo, Fruit Belt Waterline Cleaning and Lining—Buffalo, NY**

Senior Civil Engineer; led the effort to improve the water system serving the east side of the Fruit Belt neighborhood which had been plagued with low water pressure and volume. Since the watermains were considered structurally sound based on review of the watermain break records, the project called for the cleaning and relining instead of replacement of approximately 5 miles of watermain within the neighborhood. LaBella was tasked with keeping the neighborhood informed on the construction progress and associated disruptions and provided construction administration and resident inspection services.





# RUSSELL J. STOLL

Senior Civil Advisor

Russell is an experienced Project Manager and Professional Engineer with over 42 years of broad and varied engineering project experience. He has been a manager, engineer, and municipal liaison for Erie County Water Authority and is experienced in managing teams and coordinating tasks and projects to produce on-time and with-in budget results. Russell is excellent at communication, interpersonal, supervisory skills, and leadership ability and maintains a broad overview while attending to detail.

## PE

Professional Engineer, NY, NJ, CT

## EDUCATION

SUNY Buffalo: B.S. Civil Engineering (Cum Laude)

Erie Community College: A.A.S. Construction Technology

## ORGANIZATIONS

Board Member – Cross Connection Control Foundation of the Niagara Frontier

Adjunct faculty - Erie Community College, Construction Technology/Civil Technology Department

Professional presentations: NYWEA, AWWA, Various municipal training seminars

Past Member - Town of Amherst Traffic Safety Board

Past Director – Engineering Society of Buffalo

## CERTIFICATIONS

LEED® Accredited Professional

Grade D Water Operators Certificate

*\*Completed under previous employment*



### Erie County Water Authority: Chief Operating Officer—Erie County, NY

Responsible for the Operations division, including staff, facilities, and assets. Authority-level approvals, governmental affairs communications, and liaise with local, state, and federal legislators. Coordinate and communicate with similar water authorities throughout New York State, provide media response to inquiries, and provide authority-level leadership. (2019-2023)

### Erie County Water Authority: Executive Engineer—Erie County, NY

Responsible for operation, maintenance, and regulatory compliance of the Authority's water treatment plants, storage tanks, pump stations, and distribution system, including staff oversight, budgeting, capital improvements planning, and execution. Review work and projects performed by department heads, unit heads, and operations directors within engineering and operations departments. Liaise with municipalities, other water authorities, and municipal departments. (2016-2019)

### Erie County Water Authority: Distribution Engineer—Erie County, NY

Supervisor of Design, responsible for review of water system improvement project designs and construction documents, backflow prevention design submittal, as-built records and maps, and staff supervision. The Municipal Liaison was responsible for coordinating between ECWA and municipalities in the service area. (2012-2015)

### TVGA Consultants: Senior Project Manager/Associate—Various Locations, NY

Senior Project Manager for design and construction phase projects for multi-phase, multi-discipline, and multi-consultant public and private sector infrastructure and building projects. Responsible for client/project development, preparation of proposals, scopes of work, and associated budgets. Preparation and technical review of project deliverables, including reports and designs, and managing project schedules and budgets. Project team/sub-consultant selection and coordination and staff management. (2008-2011)





# KRISTOPHER WINKLER

Senior Civil Engineer

Kris is a Project Manager with over 24 years of experience responsible for managing a variety of Civil-Site projects across New York State. His responsibilities include managing projects from start to finish including site layout, grading, drainage, sewers and utilities. Kris has experienced navigating site projects through regulatory review and permitting agencies. He regularly manages projects collaborating directly with clients, design team, CM team, and site contractors. He supervises civil engineering technicians and performs Quality Control and design task oversight. Kris has experience in preparing designs and calculations for stormwater management, combined and sanitary sewers, erosion control, grading, site layouts, utilities, cost estimating and roadways. Kris regularly coordinates with MEP Building Engineers and Architects for both new building and building renovation projects and prepares cost estimates for site development.

## PE

Professional Engineer, New York License No. 084011

## EDUCATION

State University of New York at Buffalo: B.S. Civil Engineering

## ORGANIZATIONS

American Public Works Association: Member

### Buffalo Sewer Authority (BSA): Green Infrastructure Term Assignments— Buffalo, NY

As Green Infrastructure Engineer prepared or supervised green infrastructure designs for various Buffalo DPW streetscape projects including Genesee Street Gateway project, Niagara Street Rehabilitation Phase 3, 4, 4A and Fillmore Avenue Rehabilitation. Design work included off site detention in abandoned lots, porous pavement parking lots, and rain garden designs for water quantity control. Approved field changes working directly with BSA and Inspection staff.

### Moot/Campbell Water Service Replacement Project, Buffalo State College — Buffalo, NY

Civil Project Manager for major water service replacement (8" and 6" Domestic, 4" Fire Protection). Prepared construction documents and performed contractor over site working directly with Campus Facility Director and Plumbing

staff. Design work including supervision of civil technicians, participating in Pre-Bid meeting, responding to pre-bid and post bid rfis. During construction coordinated water shut downs, pressure and disinfection testing with campus and site contractor. Approved contractor payment applications.

### Erie County Water Authority: City of Tonawanda Water Improvements— Tonawanda, NY

As Civil Engineer, Kris supervised preparation of a Stormwater Pollution Prevention Plan (SWPPP) and Sediment and Erosion Control Design for this water main replacement project. Kris supervised staff for meeting NYSDEC stormwater permit requirements.





# THEODORE E. DONNER

Civil Engineer

**PE**

Professional Engineer, NY

## EDUCATION

SUNY College of Environmental Resource Engineering: B.S. Environmental Resource Engineering

Ted is a Civil and Environmental Engineer with specialized experience in Water/Wastewater Management and Municipal Engineering. Ted has more than 10 years of experience working with municipalities throughout New York State leveraging strong project management and communication skills to deliver a synchronized design process

### Niagara Falls Water Board (NFWB)—Niagara Falls, NY

Project Manager for State Funded Capital Improvements Projects at the Niagara Falls Water Board wastewater treatment facility. Engineering services include overseeing more than 11 projects to upgrade various phases of the wastewater treatment process.

### NFWB Water Mains—Niagara Falls, NY

Replacement of 50+ year old failing water mains throughout the City of Niagara Falls, NY. Improvements were also designed throughout the system to improve resilience and fire flows.

### Town of Lockport and Town of Newfane, NY

Project Engineer for Design and Construction of Townwide Wastewater distribution system improvements including a combination of Inflow and Infiltration investigation, repairs, and pump station upgrades.

### NFWB: WWTP Capital Improvement Project—Niagara Falls, NY

The NFWB Wastewater Treatment Plant (WWTP) is a physical/chemical treatment plant designed originally in the 1970's to handle significant industrial use in the City of Niagara Falls, NY. Ted served as Project Manager for a \$27M Capital Improvement Project at their 48 MGD Involvement

directly in design of various improvements to the electrical system, 20 MGD gorge pumping station, carbon filtration system, and various other components within the facility. Additionally, assisted in development of a long term improvement plan at the WWTP as well as evaluation of feasibility of converting the existing WWTP to a biological treatment plant.

### NFWB: Water System Improvements—Niagara Falls, NY

Developed several improvements for an aging industrial water system, encompassing piping replacement, water system modeling, and the design of enhanced storage solutions

### Niagara County Water District Improvements, Niagara County, NY

Various improvement projects to the 24 MGD water treatment and water distribution system.

### North Chautauqua County Water District, Niagara County Water District, and Town of Evans, NY

Project Engineer for development of the District and improvements throughout the member communities. Projects included storage and distribution system improvements throughout the region, consistent with the Districts goal to provide safe and reliable water to customers.





# JASON R. EBBS

Project Manager

## PE

Professional Engineer, New York

## EDUCATION

Rochester Institute of Technology: B.S. Civil Engineering

## ORGANIZATIONS

American Public Works Association

Member of the Town of Penfield Transportation Committee

Jason has over 12 years of design experience in the field of civil engineering. With a diverse design background in commercial, educational, and the municipal market sectors, he has worked on a variety of different projects in New York, New Jersey, and Pennsylvania. Jason specializes in site development, utilities, water main, sanitary sewer, and stormwater management. Jason continues to demonstrate positive leadership skills and excellent client coordination and communication abilities associated with each of his projects.

### Village of Albion – South Clinton & West Academy Street Water Main Improvements:

Project involved the replacement of approximately 4,800 lf cast iron water main pipe in the Village of Albion to meet current ISO fire flow requirements. Project involved a hydraulic analysis of the existing and proposed water system, preparation of and Engineering Report, and Orleans County Department of Health Approval.

### SUNY Oneonta: Site Improvements & Safety Upgrades Hunt Union Parking, Water Lines & Bugbee Road—Oneonta, NY

Project Included: Redesign of Hunt Union Parking Lot, redesign of Bugbee Road & Ravine Parkway Intersection, replacement of City & Campus owned water mains, grading and drainage improvements, stormwater management measures to meet NYSDEC SWPPP requirements.

### Town of Mendon – Water System Improvements – Extension 5 to Water District No. 1:

Project involved the installation of approximately 7,100 lf of polyethylene encased ductile iron water main, water service

installation, hydrants and other appurtenances. Project involved coordination with the Town of Mendon, and Monroe County Water Authority (MCWA), Monroe County Department of Health (MCDOH), Monroe County Department of Transportation (MCDOT) and New York State Department of Environmental Conservation (NYSDEC) approval.

### Clinton Water Department: Main Street Water Main Replacement—Borough of Lebanon, NJ\*

Project involved the design of 6,160 lf of 8" ductile iron pipe water main to replace an existing deteriorating 6" main. The project also included two stream crossings via directional boring with HDPE pipe. The design also included water service connections, disinfection & dechlorinating, appurtenances, and abandonment of the existing main. Oversaw the preparation of plans, and cost estimate. Prepared construction documents (front end & technical specifications). Coordinated and reviewed soil sampling results. Coordinated with local agencies to obtain road opening and soil conservation permits. Coordinated with the New Jersey Environmental Infrastructure Trust





# TIMOTHY PETRANCHUK

## Senior Civil Designer

Timothy's experience includes the design of various projects for local municipalities. His very broad background in survey, site design, road reconstruction, and water and sanitary sewer installation/replacement, storm sewer installation/replacement gives him the versatility to function strongly within many disciplines. He has performed in the capacity of Engineering Designer for the preparation of contract documents including digital terrain modeling, generating profiles and cross sections, earthwork calculations and quantity take offs, sheet layouts, specifications, cost estimates. He is proficient in the use of several software packages and he has extensive experience in AutoCAD Civil 3d and Water CADD.

### EDUCATION

**Mohawk Community College:**  
**AAS, Civil Engineering**  
**Technology**

#### **Erie County Water Authority: LA-001 Water System Improvements—Cheektowaga & Lancaster, NY**

Senior Designer for the construction of 7,000 LF of watermain for in the Town of Cheektowaga and Village of Lancaster. Completed the project layout for review and approval of the ECWA. Prepared project bid documents consisting of project plans, details and interconnections and specifications. Submitted the plans to and obtained approvals from the Erie County Health Department. Will complete the record drawings to ECWA requirements.

#### **Erie County Water Authority: LA-005 Water System Improvements—City of Tonawanda, NY**

Senior Designer for the construction of 12,000 LF of watermain for in the City of Tonawanda. The project included the completion of the project layout for review and approval of the ECWA and preparation of the project plans, details and interconnections and specifications. The project is currently in design with a proposed February 2022 bid date.

#### **North Central Watermain—Village of Springville, NY**

Senior Designer for the Community Development Block Grant (CDBG) project for the replacement of

~ 2,000 LF of watermain in the Village of Springville. Completed the project plans, specification and estimates in compliance with CDBG requirements and obtained Erie County Health Department approvals.

#### **City of Buffalo, Fruit Belt Waterline Cleaning and Lining—Buffalo, NY**

Construction documents for the cleaning and lining of 25,000 linear feet of cast iron water main within the city's fruit belt neighborhood. Project involved the review of existing utility information from records. The project involved the creation of plans, specifications and details and the Department of Health approval

#### **Erie County Water Authority: T-18, Lackawanna Watermain Replacement—Lackawanna, NY**

Sr. Designer on a waterline replacement project involving the replacement of ~6,000 LF of undersized and severely deteriorated cast iron waterlines with new 8" ductile iron piping with all associated appurtenances. Duties included utility collection, right of way, and property owner information for plan and profile preparation along with construction details.





# JACOB C. BOWER

Civil Engineer

Jake has 4 years of civil engineering field and design work. He has experience working on municipal projects as a designer, construction inspector and as a project engineer. Jake has experience in large infrastructure projects such as water main distribution, sanitary sewer collection, low pressure sewer systems, pump station design, roadway design and erosion & sediment control design and inspection. Additionally, prior to joining LaBella, Jake worked for a site contractor as a laborer installing utilities and completing many different site projects.

## EDUCATION

Cleveland State University,  
Bachelor in Civil Engineering

## PROFESSIONAL ORGANIZATIONS

Tau Beta Pi Engineering Honor Society

### Town of Kendall: Water District No. 10 - Kendall, NY

The USDA Rural Development sponsored project included preparation of three separate contracts for the construction of the 6500 lf of new ductile iron and pvc water main. Jake assisted with the design and the construction management throughout the project. He also, was responsible for organizing and completing the documentation required by Rural Development for the 3 contracts to receive the appropriate funding.

### Seabreeze & Vicinity Water District: Seneca Road Water Main Replacement - Irondequoit, NY

The project consisted of the replacement of 1350 LF of 6" DIP water main on Seneca Rd with 8" directionally drilled HDPE pipe. The existing main was nearing the end of its serviceable life and had numerous breaks that damaged the road and residential private property. The project was particularly challenging do to the steep slopes, existing utilities and soil conditions. Jake assisted with the design, construction administration and construction inspection throughout the project.

### Town of Irondequoit: REDI MO. 68 - Bay Shore Boulevard Sanitary Improvements - Irondequoit, NY

The Project is to connect 30 parcels sewage to the Monroe County Collection system via a Low Pressure Sewer System (LPSM) and abandon the current residential septic treatment. The project requires 2400 LF of 1"-3" DR-11 LPSM and the installation of 29 Grinder Pumps, Alarm Panels and Laterals. Jake assisted in the design and coordination with various agencies regarding funding and permitting throughout the design portion of the project.

### Town of Irondequoit: REDI MO. 64 - Bay Village Pump Station Replacement - Irondequoit, NY

The Project included the removal and replacement of an existing pump station with a new 18' deep station designed with submersible pump. The project also involves the abandonment of an existing ACP force main and installation of 2,100 LF of new directionally drilled HDPE forcemain. Jake assisted in the design of the new pump station and force main and conducted the construction administration throughout the project.





## PHILIP J. LAKSO

### Construction Inspector

Phil has 38 years of experience in Engineering Supervision of Highway and Bridge reconstruction projects in Western New York. Phil's experience spans many WNY agencies including NYSDOT, NYSTA, as well as many local Cities, Towns, Villages, and Counties. Most recently Phil has worked on several projects with both the City of Buffalo and Chautauqua County as exemplified with the following:

#### EDUCATION

**Erie Community College:**  
Construction Technology

#### CERTIFICATIONS

Level 4 NICET, Highway Construction

OSHA 10-Hour Safety Course

Soils and Erosion Control Training (NYSDEC)

**City of Buffalo Department of Public Works, Seneca Street Rehabilitation- Buffalo, NY: Resident Engineer/Office Engineer**

This \$2.5M project completed in 2018 involved full depth roadway reconstruction, milling and overlaying, decorative LED street lighting installation, curb and sidewalk replacements, landscaping amenities, traffic signal modifications, drainage improvements, and new signing and striping.

**Chautauqua County Department of Public Facilities. Millennium Parkway – Talcott St. Extension - City of Dunkirk, NY Resident Engineer/Office Engineer**

The project consisted of 0.8 miles of roadway reconstruction in mixed residential and commercial portions of the City, as well as 0.6 miles of new highway through an adjacent Brownfield Redevelopment Site. This \$6.8M project included new drainage facilities, replacement of an old failing large culvert, a new traffic signal, intersection improvements to accommodate larger vehicles, utility relocations, as well as SWPPP inspections and other NYSDEC environmental compliance components.

**City of Buffalo, Department of Public Works Kenmore Ave. Reconstruction - Buffalo, NY Chief Inspector**

This \$7.5M phased rehabilitation project from Klauder St. to Main St. spanned several municipalities and involved both residential and commercial properties. This project consisted of both full depth reconstruction as well as some sections of mill and overlay, granite curb installation, sidewalks and handicapped ramps, drainage and traffic signal installation, as well as new project signing and striping.

**Chautauqua County Department of Public Facilities, Progress Drive Rehabilitation and Middle Road Re-Alignment - Dunkirk NY. Resident Engineer/Office Engineer**

This \$2.5M highway reconstruction and realignment project was completed to Improve Access to the North County Industrial Corridor. Along with the highway work, this project included many drainage features including open roadside ditches, underground detention, a project SWPPP as well as temporary and permanent stormwater maintenance structures.





## ALI SAID

### Civil Engineer / Construction Inspector

Dynamic, accomplished Construction Site/ Field Engineering and construction inspection highly regarded for 12+ years of progressive experience in facilitating construction across project, site, and field engineering. Respected as a motivational, influential leader and collaborator who ensures on-time, high-quality results while remaining within budget. Builds and maintains lasting relationships, driving clear communication and organizational coordination through a people-focused approach. Out-of-the-box thinker who excels in solving complex problems to deliver superlative outcomes.

#### EDUCATION

University at Buffalo, State University of New York: BS Civil Engineering

Siblin College: Associate of Applied Science in Architecture

#### **Erie County Water Authority: LA-001 Water System Improvements—Cheektowaga & Lancaster, NY**

Resident Project Engineer for the construction of 7000 LF of watermain for at various locations in Cheektowaga and the Village of Lancaster. Provided the day to day project inspection, coordinated field changes and change orders with the Contractor and ECWA, processed pay applications and interfaced with the residents impacted by the construction and will compile the information for the completion of the record drawings.

updated a handbook to convey best practices, common issues, and lessons learned. He maintains clear communication in discussing project progress details with clients & contractors, emphasizing actionable reporting/updates and upholding the highest professional standards and works with senior leadership to effectively manage contractor's invoices (\$1M/month) by inspecting & monitoring the progress at construction sites, creating new standard operating procedures to improve issues resolution.

#### **City of Buffalo: Fruit Belt Waterline Cleaning and Lining Project - Buffalo, NY**

Senior Inspector for this \$4M project. Ali inspected construction and produced clear, concise reports to organize needs and workflow. He focused on continuously optimizing the use of project resources, including in-house, external contractors, & subcontractors, leading to \$100K+ in annual cost savings despite operational challenges. Ali is responsible for ensuring flawless execution on daily project plan covering measurements, drawings, GPS locating, pipes installing, etc. and authored and regularly

#### **Erie County Water Authority: LA-005 Water System Improvements—City of Tonawanda, NY**

Project Engineer and Resident Inspector for completing the design of ~12,000 LF of watermain in the City of Tonawanda. Provided design and estimating support.

#### **North Central Watermain—Village of Springville, NY**

Construction Inspection for the construction of ~2,000 LF of watermain on North Central Avenue from Main Street to Eaton Street in the Village of Springville. Responsibilities consisted of coordinating with the contractor, processing the pay application and completing the record drawings.



**ACCEPTING NUSSBAUMER & CLARKE PROPOSAL FOR WATER TREATMENT PLANT SCADA CONTROL SYSTEM UPGRADE ENGINEERING SERVICES**

**WHEREAS**, in January 2024 the Niagara Falls Water Board issued a request for proposals for engineering services in connection with various planned capital projects, including for upgrades to Supervisory Data Acquisition and Control (“SCADA”) equipment at the Water Treatment Plant, certain elements of which are original to the plant, to replace outdated equipment and to add additional sensors and functionality to improve efficiency and effectiveness of plant operations and maintenance; and

**WHEREAS**, the Water Board has been awarded grant funds which will partially offset the total cost of the SCADA control system upgrades as part of Drinking Water State Revolving Fund (“DWSRF”) project No. 19056; and

**WHEREAS**, one proposal was received for the water treatment plant SCADA upgrade work, from Nussbaumer & Clarke and dated February 19, 2024; and

**WHEREAS**, Water Board staff have reviewed that firm’s proposal, which includes a reasonable statement of the firm’s project understanding as well as project staff with appropriate qualifications and experience; and

**WHEREAS**, because certain preliminary engineering services are required in order properly to develop a full scope for engineering design and bidding, Nussbaumer & Clarke’s proposal is to conduct survey and conceptual design work for a total lump sum fee of \$12,000, with a proposal for full engineering and design work contingent on the exact scope of work determined to be appropriate;

\* CONTINUED ON NEXT PAGE \*



**NOW THEREFORE BE IT**

**RESOLVED**, that on behalf of the Niagara Falls Water Board, its Chairperson hereby is authorized to execute an agreement with Nussbaumer & Clarke, Inc., to perform survey and conceptual design of upgrades for the water treatment plant SCADA system, consistent with that firm’s February 19, 2024 proposal and for a lump sum fee totaling \$12,000.

*Water Board Personnel Responsible for Implementation of this Resolution:*

- Executive Director
- Director of Technical & Regulatory Services
- General Counsel

*Water Board Budget Line or Capital Plan Item with Funds for this Resolution:*

- Capital Plan Items: WTP-2.1, SCADA Control System Upgrades
- Capital Items Provided by: D. Williamson
- Available Funds Confirmed: B. Majchrowicz (Financing Plan: EFC/DWSRF)

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	<b>Yes</b>	<b>No</b>	<b>Abstain</b>	<b>Absent</b>
Board Member Asklar	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman Forster	[ ]	[ ]	[ ]	[ ]

Signed By:

Vote Witnessed By:

\_\_\_\_\_  
Nicholas J. Forster, Chairman

\_\_\_\_\_  
Sean W. Costello, Secretary to Board



# Proposal

for

## Engineering Services



### Niagara Falls Water Board

### Request for Engineering Services

### Capital Projects – Water Treatment Plant

Prepared For:  
Niagara Falls Water Board  
5815 Buffalo Ave.  
Niagara Falls, NY 14304

Prepared By:  
Nussbaumer & Clarke, Inc.  
80 Main Street, Unit A  
Lockport, New York 14094



Request for Engineering Services Proposal  
Capital Projects – Water Treatment Plant



# Table of Contents

Company Experience..... 3

Key Staff ..... 5

Statement of Understanding ..... 9

Relevant Project Experience .....11

Familiarity with NYSEFC & Funding ..... 14

Availability of Key Personnel.....15

Organizational & Financial Strength.....16

Logistical Capabilities & Familiarity.....17

Design & Construction Schedule..... 18

Project Fee .....19

Appendix A – Staff Resumes

Appendix B – Subconsultants Profiles

Prepared By:  
Nussbaumer & Clarke, Inc.  
80 Main Street, Unit A  
Lockport, New York 14094



# Company Experience



Embarking on a journey toward a massive 5-year Capital Improvement project encompassing your Wastewater Treatment Facility, Sewer Collection System, Water Treatment Plant, and Water Distribution System requires a partner who not only understands your unique challenges but also possesses the local insight and commitment to transform your vision into reality.

Enter Nussbaumer & Clarke, Inc. (Nussbaumer) - your seasoned ally in the successful completion of capital projects.

Imagine a team deeply rooted in Western New York, with local offices in Lockport, North Tonawanda, Buffalo, and East Aurora, positioned strategically to respond swiftly to your community's needs. For over 90 years, we've been more than just consultants; we've been designers of local success stories, contributing to the growth and prosperity of communities throughout New York State.

Our story isn't just about our rich history; it's about empowering our community with tailor-made solutions that address your specific challenges. As a full-service firm, we bring a wealth of local experience, ensuring that our designs are not only well-informed but also attuned to the intricacies that make your community unique.

Led by owners Michael T. Marino, P.E., and Michael J. Borowiak, P.L.S., our dedicated team members, including licensed engineers, land surveyors, and certified construction inspectors, are more than professionals — they're your neighbors, passionate about enhancing the places we all call home.

Our collaborative approach is not just about providing services; it's about building enduring relationships with our clients. With a focus on technical ability and client satisfaction, we've successfully partnered with hundreds of municipal, utility, and private clients. This breadth of experience has given us a profound understanding of the delicate balance between community needs and environmental impact.

At Nussbaumer, we pride ourselves on being more than consultants — we're advocates for your community's success and safety. Our commitment to quality, integrity, and innovation sets us apart, making us a trusted advisor and friend throughout the lifecycle of your projects, regardless of size.

We believe in providing quality and valuable consulting engineering services that transcend conventional standards. As we look forward to continuing our dedicated service to communities, we're excited about the prospect of collaboratively contributing to the sustainable development and resilience of the places we collectively call home.

Let's embark on this journey together — where your community's success is not just a goal but a shared commitment.

---

***"Empowering our clients' visions, our proven track record reflects effective cost control, efficient design and approvals, steadfast schedule maintenance, quality work, and unwavering responsiveness."***

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As requested, please find below the relevant information addressing the criteria outlined in Appendix A of the NFWB RFP.

Our firm has become one of the oldest, complete solution, multi-disciplined professional services **corporations** with over **90 years** of proven experience in water, wastewater, electrical, structural and mechanical engineering projects. Two of our four offices are in Niagara County within 20 miles of the project sites, which provides proximity of resources, management, and tools.

**Contact Information:**

Firm Name: Nussbaumer & Clarke, Inc.  
Contact Person: Michael T. Marino, PE, Chief Executive Officer  
Main Address: 3556 Lake Shore Road, Suite 500, Buffalo, NY 14219  
Niagara County: 80 Main St., Unit A, Lockport, NY 14094  
Telephone Number: (716) 827-8000  
Fax Number: (716) 826-7958  
Email: mmarino@nussclarke.com

Nussbaumer is a Professional Engineering **corporation licensed to do business in New York State.**

**Any other names under which proposer has done business in the past 10 years:**

Nussbaumer & Clarke, Inc. has not done business under any other name(s) in the past 10 years.

**List all subsidiary and parent companies:**

Nussbaumer & Clarke, Inc. operates independently without any subsidiaries or parent companies.

**History of Debarment, Suspension, or Termination:**

Nussbaumer & Clarke, Inc. has never been debarred or suspended by any government entity. We have not been found not responsible or declared in default for any contract. No contracts have been canceled for cause, and we have not been required to pay liquidated damages.

**Bankruptcy Proceedings:**

Nussbaumer & Clarke, Inc. has not filed for bankruptcy or been subject to any involuntary bankruptcy proceedings.

**Legal Actions or Investigations:**

Nussbaumer & Clarke, Inc. has not been a party to any legal action or government investigation related to our business practices. Neither the firm nor any of our principals or agents have pleaded guilty or entered into a consent order in connection with fraud, collusion, bid rigging, price fixing, or bribery.





# Key Staff

Embarking on transformative capital projects requires a partner who not only understands your community's unique challenges but is also deeply entrenched in the local fabric. Meet Nussbaumer & Clarke, Inc., your trusted ally, bringing forth a team of highly qualified professionals committed to delivering successful outcomes for the Niagara Falls Water Board (NFWB).

Our dedicated staff, based in the heart of Lockport and Buffalo, boasts more than experience – they are local and familiar with the intricacies of the project area and its distinctive challenges. Choosing Nussbaumer means choosing a team that not only works locally but lives and breathes the community's needs and is able to offer an unparalleled level of responsiveness.

In the realm of water treatment plant projects, our team shines. Armed with extensive experience, we specialize in hydraulic modeling, developing detailed engineering design plans and Contract Documents, providing Bidding Assistance, Construction Administration, Construction Inspection, and funding coordination with agencies such as EFC. Nussbaumer is familiar with the intricacies of funding programs such as WIIA, BIL, CDBG, GIGP, and tailoring customized work plans specific to your project's needs. Our track record speaks for itself – successful outcomes that reflect a commitment to excellence.

What sets us apart is not just our technical prowess but our longstanding relationships with funding agencies as well as local and state regulators. These connections not only expedite project timelines but also create a collaborative environment, ensuring a seamless navigation of potential challenges. When you choose Nussbaumer, you're choosing a partner dedicated to precision, timeliness, and the technical excellence of our staff. Further, Nussbaumer prides itself on employing an experienced, highly qualified construction inspection team to help ensure proper attention to project details as the project design becomes reality.

Allow us to introduce our team with significant experience in municipal water treatment plants and infrastructure funding. Our project team is poised to help the Niagara Falls Water Board design and installation solutions and prioritize improvements and project efficiencies.

Let's embark on this journey together, where your community's success is not just a goal but a shared commitment.

The key staff members who will work on this Project supporting the NFWB include:

- Michael Marino, P.E., Chief Executive Officer, as Client Relationship Manager
- Craig Alexander, S.E., P.E., Structural Project Oversight & QA/QC Review
- James Zgoda, Project Manager
- Andrew Basista, Electrical Engineer
- Daniel Ott, C.P.D., Design & Plumbing Engineer
- Christopher Freese, Construction Services Manager



### Mike Marino, P.E. – Client Relationship Manager



Mr. Marino is CEO of Nussbaumer and a civil engineer with over 28 years of municipal engineering experience including time as Assistant Public Health Engineer for the Niagara County Department of Health. He supports dozens of municipalities with project development and identification of funding options. His experience includes evaluation, design, and construction of a wide variety of municipal water and wastewater infrastructure projects throughout WNY. Mike will work with you to ensure all your needs are met.

### Craig Alexander, S.E., P.E. – Structural Engineering / Project Manager



Mr. Alexander brings an impressive 26-year track record as a seasoned civil/structural engineer, contributing his wealth of expertise to a diverse range of municipal, commercial, and industrial projects. His comprehensive experience encompasses key responsibilities such as design development, structural analysis and design, preparation of construction documents, specifications, and providing vital support throughout the construction phase. Clients throughout Western New York have benefited from Mr. Alexander's specialized skills, and we are confident that his leadership will contribute significantly to the success of this endeavor.

### James Zgoda – Electrical Engineering



Mr. Zgoda's wealth of expertise spans over 34 years in electrical/mechanical design experience, showcasing a mastery of electrical systems. His expertise extends across various domains within the energy and electrical fields, underscoring his comprehensive understanding of the intricacies associated with solar farms and other energy-focused projects. His deep-rooted relationships with National Grid and other utilities position him as an asset to our team. These established connections not only ensure a streamlined communication process but also enhance our ability to navigate regulatory requirements seamlessly. In addition, Mr. Zgoda's extensive network includes relationships with electrical-focused companies that can play a pivotal role in locally sourcing and producing equipment. This strategic approach not only minimizes potential delays but also contributes to the overall success of the project.

### Andrew Basista – Electrical Engineering



Mr. Basista has a focus on electrical projects, with an impressive background of 8 years in commercial and industrial electrical experience. Andrew has been instrumental in a variety of electrical initiatives, showcasing his versatility and commitment to excellence. His responsibilities span the entire project lifecycle, from the initial site visit and system specification to creating one lines, site plans, and all necessary drawings. His proficiency extends to managing grid-connected and off-grid projects across various state parks, schools, and administrative buildings. Andrew's meticulous oversight, from training park crews for solar installations to commissioning systems, reflects his commitment to ensuring the success of each project.



### Daniel Ott, CPD – Engineer – Plumbing



Mr. Ott is a member of our Mechanical/Electrical/Plumbing (MEP) Department with 37 years of experience, including design of complete plumbing systems, design of lighting systems, and evaluating buildings to ensure they meet the New York State Building. Dan has worked on several treatment plant aspects over the years including water/wastewater treatment plant upgrades, generator upgrades, and pump station renovations.

### Christopher Freese, Construction Services Manager



Mr. Freese is a dedicated construction professional with a history of meeting project goals utilizing consistent and organized practices. Chris brings 23 years of experience in construction management on sites of all types and sizes. His site management experience helps ensure site safety, proper construction operations, coordination of on-site staffing, and overall project management of each project site.

### Inspection Staff

In addition to our staff identified above we have a bench of depth to help with the construction inspection expertise. Including six NICET certified inspectors and four highly experienced construction inspectors (who are NICET equivalent) our team has a combined 270+ years of industry experience, all with specific water system experience, some of which were former local water utility field staff.

### Support Staff

We also have a team of in-house administrative staff who are instrumental in grant writing and administration, and the preparation of written materials, including correspondence, reports and construction related contracts, submittals, and documents. This group is also responsible for conducting quality/accuracy review of written materials prior to distribution to clients.

### Introduction of Subconsultants: Enhancing Diversity and Expertise

We recognize the importance of fostering diversity and promoting inclusivity in our projects, aligning with the goals set by the Niagara Falls Water Board. Committed to meeting and exceeding M/WBE and SDVOB goals, we have strategically partnered with a select group of subconsultants who bring a wealth of expertise across various disciplines.

In addition to helping us achieve the specified MBE, WBE, and DBE goals specified by the Niagara Falls Water Board, our esteemed subconsultants play a pivotal role in strengthening our project capabilities. With proficiency in civil, site, survey, inspection, environmental, permitting, process, and structural engineering, they augment our in-house capabilities to ensure comprehensive and timely project delivery.

Our collaborative approach extends beyond meeting compliance thresholds; it reflects our dedication to innovation, and community engagement. By leveraging the collective strengths of our team, strive to deliver successful outcomes that align with both your timelines and budgetary considerations.







A detailed plan to meet, M/WBE and SDVOB goals set forth in the RFP will be developed once each project scope is finalized.

We take pride in the diversity of talents within our extended team, recognizing that a rich array of perspectives leads to more creative solutions and successful project outcomes. As we embark on this endeavor together, we are confident that our collective capabilities will contribute to the success and impact of your transformative project. A more detailed Firm Profile for each company can be found in Appendix B.



JMD has been certified as a Women Business Enterprise (WBE) by New York State and the County of Erie & City of Buffalo Joint Certification Committee. Focused on the water and wastewater industries, staff are all experienced civil engineers, and construction inspectors, many of whom have been working with the Niagara Falls Water Board.



Lu Engineers is a NYS-certified Minority and Disadvantaged Business Enterprise (M/DBE), and a Veteran solely owned Professional Corporation established in 1980. Offering professionals specializing in civil, site, environmental, and transportation engineering.



Advanced Design Group Professional Engineering and Land Surveying, P.C. (ADG) is a local full-service, multidisciplinary civil engineering firm providing planning, design and construction management services for residential, commercial and industrial subdivisions and site plans throughout the country. ADG is certified as a Woman-Owned Business Enterprise (WBE) in the State of New York and Erie County.



KHEOPS, is a New York State Licensed, minority-owned (MBE) professional services firm. Experienced in delivering complete Architectural, Engineering & Land Surveying services.



Encorus Group is certified as a Service-Disabled Veteran-Owned Small Business (SDVOSB) at both the federal and New York State levels. Professional engineers in all major disciplines, registered architects, and field personnel. Also offering an accredited civil materials testing laboratory.



Frandina Engineering and Land Surveying, PC provides high quality land and construction surveying services throughout Western New York. As a wholly-owned Woman Business Enterprise (WBE). The firm is also a certified Disadvantaged Business Enterprise (DBE).



# Statement of Understanding

## WTP-2.1 – SCADA Control System Upgrades

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Nussbaumer has prepared our Statement of Understanding based on information in the Request for Proposals, and our past experience on similar SCADA projects for other utilities. Nussbaumer's understanding of the Water Treatment Plant (WTP) SCADA Control System Upgrade Project for the Niagara Falls Water Board (NFWB) follows and also includes Nussbaumer's approach to completing the scope of Services presented in the RFP.

The existing SCADA system in the WTP is mostly original equipment from the late 1990's. Most of the PLC's in the system are old Allen Bradley PLC-5's that run software that is no longer supported by the manufacturer or conform current industry standards. There also is additional equipment and devices throughout the WTP which are not connected to the SCADA system. Lack of connection for these items in the SCADA system requires the operators to have to walk to various locations to ensure the process is functioning properly. The existing large motor's throughout the WTP have no RTD bearing temperature or vibration sensors connected to the SCADA system. The existing sludge pumping building currently is not tied into the SCADA system. Some equipment that has been installed in this building should be connected to the SCADA system. Access to the sludge pumping building in the winter is difficult at times due to required plowing along the existing access path.

SCADA system upgrades/replacement will be evaluated to meet requirements of the facility.

Nussbaumer proposes to do a conceptual design study to determine the best solution to upgrade or replace the SCADA system. The study will evaluate several options and associated costs for replacement/upgrades to the SCADA system. It will include review of the existing P&ID drawings, existing input/output for each cabinet, and existing network configuration. Additional equipment to be handled by the SCADA system will also be evaluated. Nussbaumer will walk the existing facility with plant personnel to determine what additional equipment needs to be added and/or what additional device signals need to be added to the SCADA system. A secured encrypted radio, WiFi or cellular protocol connection will be investigated to allow communication with the remote sludge pumping station.

The SCADA system shall be designed per EPA Water and Wastewater Cybersecurity and Infrastructure Security Agency (CISA) and ISA 112 SCADA System standards.

This design study will then be used to produce construction documents, including drawings, specifications, a construction estimated cost, and an estimated construction schedule to replace the existing SCADA system.

### Task 1: Survey

Nussbaumer will coordinate with the NFWB to acquire any additional drawings and current input/output information needed. Nussbaumer will meet with the appropriate personnel from the WTP to field verify the information on the plans is accurate and determine what additional equipment should be connected to SCADA. During conceptual design, Nussbaumer will make a second visit to the WTP to review and discuss options being considered and field verify any other information required. This information will be used as required to prepare conceptual design, design, and construction documents.

Nussbaumer believes no actual topographic survey will be required for this project.

### Task 2: Conceptual Design

The project will begin with a kickoff meeting held between Nussbaumer and NFWB. At this time, Nussbaumer will introduce project staff, establish communication protocols, and review the project understanding, scope of work and other requirements. At this meeting, although most likely unofficially requested prior, official requests will be made to obtain record drawings.





Nussbaumer will begin preparing a conceptual design report to determine work scopes required to meet the NFWB and WTP requirements. The conceptual report will include options and associated construction budget estimates. The NFWB will evaluate options and decide on a final scope of work for design documents.

Nussbaumer will request additional meetings while working on this report with the NFWB to discuss options and coordinate with NFWB as necessary to examine existing equipment, determination of needs and recommended improvements. A report submission shall be made to the NFWB detailing these items with estimated costs and conceptual design plans.

### **Task 3: Design Documents**

Upon acceptance of the Conceptual Design Report and options selected to define the scope of work for the design documents, Nussbaumer will provide a cost for the design documents. This fee will be determined by the scope of improvements selected by the NFWB. This engineering cost will be for tasks 3 through 7 and is typically in the 10 to 15% of the estimated construction cost. Upon authorization from the NFWB, Nussbaumer will begin the design documents. The Design phase will include both the preliminary and final designs. The preliminary design will be considered at approximately 70% design level and be submitted to NFWB for review. This submittal will include plans, Contract Documents (including technical specifications) and estimated cost of construction. Nussbaumer will work with the NFWB prior to the submission of the preliminary design documents to make certain the design details used meet NFWB standards and will incorporate as appropriate NFWB Standard Specifications. Nussbaumer will supplement the standard specifications as needed to prepare a complete set of technical specifications. As noted in Addendum No. 1 to the RFP, NFWB does not have standard procurement and contracting requirements. Nussbaumer has used EJCDC documents for these requirements on other similar projects, and we propose to use these in this instance. If used, Nussbaumer will review and discuss the EJCDC procurement and contracting requirements with the NFWB. Included with these procurement and contracting requirements will be the additional forms the NFWB provided in Addendum No. 1.

Furthermore, New York State (NYS) Environmental Facilities Corporation (EFC) has specific documents that are required to be included in the proposal book. Nussbaumer will work with the NFWB and NYS EFC to confirm the appropriate information is included in the proposal book.

Upon receipt of comments to the preliminary design, Nussbaumer will take the design to the approximately 95% design level. As with the preliminary design level, drawings, Contract Documents, and estimate will be submitted to the NFWB for review. If additional changes are made, they will be incorporated into the final documents to be used for bidding.

### **Task 4: NYS EFC Reporting**

This task will be negotiated after the acceptance of the Conceptual Design Task.

### **Task 5: Bidding Assistance**

This task will be negotiated after the acceptance of the Conceptual Design Task.

### **Task 6: Construction Administration**

This task will be negotiated after the acceptance of the Conceptual Design Task.

### **Task 7: Construction Inspection**

This task will be negotiated after the acceptance of the Conceptual Design Task.



# Relevant Project Experience

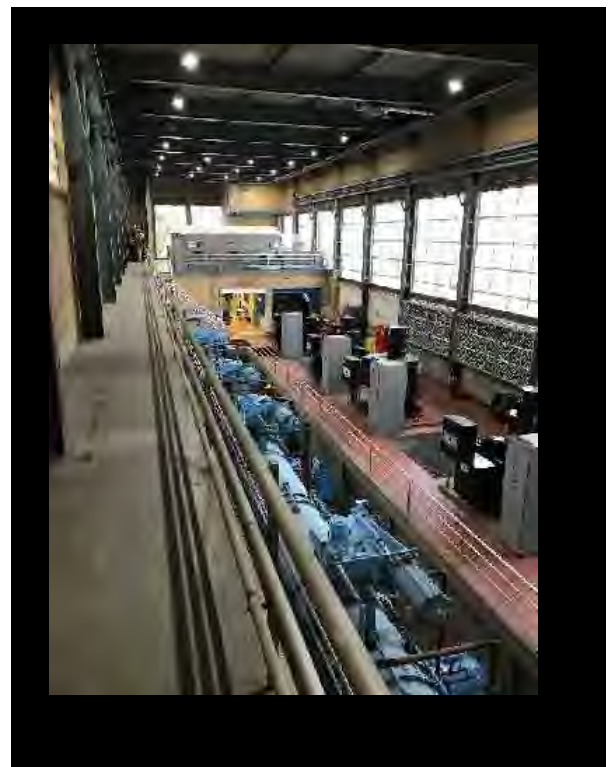
## CITY OF BUFFALO

### Massachusetts Pump Station Improvements

The City of Buffalo retained Nussbaumer to provide engineering services in connection with the rehabilitation, modifications, and upgrades at the Massachusetts Avenue Pump Station (Mass Station). Phase 1 consisted of electrical system upgrades including the high voltage electrical substation, switchgear, vacuum circuit breakers, transformers, motor control centers, VFD's, panelboards, motors, feeders, and related electrical systems, and controls. Nussbaumer performed an Engineering Study which included the recommended electrical upgrades, associated cost, and implementation schedule.

Based on findings and recommendations of the Study, Nussbaumer is currently working with the City to provide Design and Bidding Services in connection with the following:

1. Rehabilitate the existing 23kV electrical substation in the existing location.
  - a. Structural and architectural improvements to the substation building.
  - b. New 23kV switchgear, vacuum circuit breakers, protective relaying, DC battery system, and medium voltage transformers with load tap changers.
  - c. Modifications to the three National Grid 23kV primary feeders and metering.
2. New substation secondary feeders routed underneath the existing railroad to the pump station via existing pathways (i.e., tunnels and conduits).
3. Addition of permanent standby backup power via a single diesel generator and automatic 5kV transfer switch.
4. New 5kV electrical switchgear, protective relaying, and motor control centers.
5. New low voltage transformers, motor control centers, and panelboards designed for 208V/120V.
6. New electric distribution feeders, both medium and low voltage.
7. Rehabilitate Pump #1.
8. Rehabilitate Motor #1 and convert to brushless DC excitation.
9. Replace Motors #2 and #4 with larger 1750hp induction units.
10. Provide variable frequency drives (VFDs) for Motors #2 and #4.
11. Construct an addition to the Pump Station above the former Chlorine Room for the VFDs, including a HVAC system.
12. Remove the existing hydraulic actuator system for the discharge header valves and tunnel valves and replace hydraulic actuators with electric motor actuators.
13. SCADA control integration to facilitate both local and remote operation of the equipment.
14. Ground fault circuit interrupters and branch circuits to equipment (i.e., dewatering pumps) will be upgraded.



## ERIE COUNTY WATER AUTHORITY Systemwide Standby Power (NC-31)

The Erie County Water Authority (Authority) retained Nussbaumer & Clarke, Inc. to evaluate requirements for the installation of standby power for all of their facilities throughout its service area. The Standby Power Study provides a plan for the Authority to maintain the public water supply during an event in the electric power grid. The project consisted of a system wide evaluation of emergency standby power needs for the Authority's facilities under a localized or a large scale power outage. This included all Authority operated sites including the two water treatment plants, pump stations, storage tanks, the Service Center, Ellicott Square offices, and the Water Quality Laboratory. The purpose of the Study was to evaluate permanent standby power for certain critical locations and an appropriate number of portable generators for the remaining pump stations and/or tank sites to provide average day demands to the Authority's entire service area.



The scope of services was a methodical assessment of each facility to determine whether or not the facility requires permanent standby power or intermittent standby power provided by portable generators. Other parts of the Study included preparing manpower requirements, cost estimates, and fueling and maintenance schedules. The detailed scope of services included:

1. Review and summarize information furnished by the Authority regarding average day system demands, pumping operations, and tank drawdown rates, including SCADA data, GIS based demand data, and water system reports.
2. Review and summarize information regarding equipment and electrical demand at each facility.
3. Complete an evaluation of the standby power needs for each of the Authority's facilities.
  - a. Evaluate the need for permanent or portable standby power at each facility by analyzing regulatory criteria, reviewing pumping and storage data, and power outage data.
  - b. Identify all equipment which requires standby power supply.
  - c. Evaluate emergency generator equipment and appurtenances.
  - d. Size generators for the standby power needs at each facility.
  - e. Inspect each facility to locate a site for the standby power equipment and a means to connect the standby power equipment to the existing electrical equipment.
  - f. Make recommendations for the type and size of standby power equipment and electrical, mechanical, and site modifications required at each facility.
4. Prepare a 5-year strategic plan for installation of the permanent and portable generators.
  - a. Prepare a strategic plan for the deployment of the generators under a large scale power outage.
  - b. Confirm the number of generators and associated equipment required to maintain the water system in an extended power outage.
5. Determine the staffing requirements for generator testing, maintenance and deployment.
6. Prepare cost estimates for procurement and installation of all equipment, and appurtenances.



## CITY OF BUFFALO Rehabilitation of Equipment in Low Lift Pump Station Colonel Francis G. Ward Filtration Plant

Nussbaumer & Clarke, Inc. was retained by the City of Buffalo to evaluate the condition of the low lift/raw water (6) and wash water (2) pumps installed circa 1920, and to issue a report including recommendations for improvements to the equipment and facility.

Nussbaumer was subsequently retained to provide engineering services for the design and construction of the recommended equipment rehabilitation and various other improvements at the facility. The work included the complete replacement of the medium voltage electric switchgear, rehabilitating seven of the eight existing pumps and motors, replacing Low Lift No. 6 with a new/smaller variable speed drive pump and motor, installation of a SCADA system and integration with the existing monitoring and control system, and painting of the piping and equipment. Construction of the \$3.98M project spanned a five year period and was done in multiple phases to allow the treatment plant to remain in operation while the work proceeded.

The electrical work also included 5kV incoming utility metering, relaying, and disconnects; 5kV automatic transfer switches, 5kV fused motor starters, 5kV fused distribution switches, 4160V - 480Y/277V step down transformers, 480V motor control centers and 5kV, 480V power factor correction capacitors, and short circuit, coordination and arc flash studies. Main-tie-main arrangements were installed on the 5kV switchgear and 480V motor control centers enabling the facility to be fed from either of two separate utility services or plant generators to maintain pumping operations.

These improvements have significantly improved the efficiency, reliability and operation of the pumping equipment and extended the useful life of this important water treatment facility for the customers of the BWB.





# Familiarity with NYSEFC & Funding

Nussbaumer brings a wealth of experience and a proven track record in navigating the intricacies of New York State Environmental Facilities Corporation (NYSEFC) requirements. Our familiarity extends beyond mere compliance; we have successfully secured funds for clients and orchestrated the design and management of projects funded through EFC grants and loans.

For years, we have collaborated with municipalities, including the City of Lockport, the Town of Tonawanda, Village of Kenmore, City of Jamestown, and the Town of Cheektowaga, to implement impactful improvements to their water systems, most grant funded.

Having served 11 out of the 20 municipalities in Niagara County, we have established a strong presence and familiarity with the region. Our commitment goes beyond project execution—we actively engage in supporting clients, offering grant writing assistance, and collaborating with various funding agencies. Notably, our extensive experience includes partnering with the City of Lockport on 20 diverse projects, many involving multiple funding agencies. We have also had similar success with dozens of other municipalities outside of Niagara County.

Focusing on our Niagara County experience, coordinating with funding agencies is a strength we bring to the table. We have successfully supported municipalities such as the City of North Tonawanda, Village of Wilson, Village of Lewiston, Town of Pendleton, and Town of Porter, managing over 65 combined projects, all requiring coordination with multiple funding agencies. Our adept team ensures adherence to agency timelines, facilitating accurate and timely reimbursements.

Understanding the critical importance of meeting funding agency timelines, we boast a proven track record of consistently achieving this for our clients. This experience, coupled with our local presence and knowledge of the Niagara County landscape, positions us as a reliable partner.

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***"Elevating projects through grant experience – our pledge to quality documentation and reporting ensures your vision becomes reality."***

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Moreover, our experience in water infrastructure is extensive. From studies and evaluations to comprehensive improvement plans, we have successfully undertaken projects of varying complexity. Our capabilities include design, and the preparation of comprehensive engineering plans and reports. We specialize in crafting customized work plans tailored to the unique requirements of each project.

Our proficiency extends to collaborating with funding programs such as DWSRF, CDBG, and WIIA. Our professionals are well-versed in navigating agency-specific timelines, reporting requirements, and reimbursement processes. With a proven track record of delivering successful outcomes, we assure you smooth and efficient project execution.

As we embark on this journey with the Niagara Falls Water Board, our commitment is unwavering—to leverage our local experience and grant qualification to provide you with tailored solutions that align seamlessly with your objectives. We look forward to the opportunity to contribute to the success of your capital projects and the enhancement of the Niagara Falls community.



# Availability of Key Personnel



At Nussbaumer, our commitment to the timely and successful completion of your project is rooted in the availability and dedication of our local, qualified staff. The key to our success lies in our deep bench of professionals, all of whom have local experience, ensuring a timely response to your needs.

Our Buffalo office, conveniently located within a 40-minute drive, and our Lockport office within a 20-minute drive, will be the hub for all project-related activities. This strategic positioning allows us to not only understand

the unique challenges of the Niagara Falls Water Board's projects but also facilitate a timely response to your requirements.

Our team, comprising engineers, project managers, and support staff, is exclusively based in Western New York, including offices in Lockport and Buffalo. This means that the individuals working on your project are intimately familiar with the local landscape, regulations, and community dynamics. This local connection translates into heightened responsiveness, ensuring that we can promptly address any issues that may arise and adapt to changing project needs.

We recognize that the anticipated project duration spans up to five years, presenting both challenges and opportunities. At Nussbaumer, while we cannot precisely forecast staff availability for such an extended timeframe, our commitment to your project remains unwavering. The inherent strength of our deep bench, comprised of skilled professionals across various disciplines, positions us to meet your evolving needs with flexibility and agility. We understand that project dynamics may shift, and unforeseen circumstances can arise. Rest assured, our adaptability is not just a promise but a testament to our local presence and robust team structure.

Understanding that workload dynamics may fluctuate, we take pride in our ability to pivot and reallocate resources as needed. With a moderate workload on the proposed team, we have the flexibility to scale up or down depending on project demands. This adaptability is a direct result of our robust local team and the synergies we share across our offices.

By keeping our team local, we can ensure consistent, hands-on management and timely responsiveness. This ensures that your project will benefit from the experience and dedication of our professionals, fostering a collaborative and efficient working relationship.

As a local firm deeply embedded in the Western New York Community, we understand the value of being present, responsive, and accountable. With Nussbaumer, you can trust that our availability, local experience, and commitment to quality will be instrumental in the seamless and timely completion of your projects. We look forward to the opportunity to demonstrate our capabilities and contribute to the success of the Niagara Falls Water Board's endeavors.

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***"From responsiveness to agile resource allocation, we are committed to your project's success. With a local team deeply rooted in the community, we pledge to be your partner ensuring that your needs are met promptly, efficiently, and with the dedication only a hometown firm can provide."***

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# Organizational & Financial Strength

At Nussbaumer, our commitment to organizational and financial responsibility goes beyond mere compliance; it is an integral part of our mission to deliver value and reliability to our clients. Our approach to financial management is designed to benefit you in the following ways:

**Transparent and Timely Financial Reporting:** We understand the importance of transparency and timeliness in financial reporting. Our commitment to presenting true and fair financial statements, prepared in accordance with generally accepted accounting principles, ensures that you receive accurate and relevant information in a timely manner. This commitment is driven by our belief in providing you with the insights needed for informed decision-making.

**Ethical Practices:** Our organizational culture is rooted in high moral standards and a commitment to honesty. This ethos extends to our thoughtful processes and affairs, ensuring alignment with industry standards of professional ethics associated with engineering and land surveying code of conduct. By maintaining this ethical atmosphere, we prioritize your trust and confidence in our operations.

**Effective Internal Control System:** This system assurance of the correctness of our financial accounts and the fiduciary responsibilities we uphold over the assets of the company. It is a proactive measure to mitigate risks and ensure the integrity of our financial operations.

**Compliance with Regulations:** Our audit reports adhere to applicable rules and regulations set forth by the government. This commitment to compliance is not just a box-checking exercise; it is a pledge to uphold effective standards of financial accountability and regulatory adherence, offering you the confidence that comes with adherence to legal requirements.

**Independence and Corporate Governance:** We have implemented policies to ensure the independence of our senior management, aligning with corporate governance requirements. This commitment ensures that our decision-making processes remain objective and in line with the interests of our clients. It is a proactive measure to maintain the industry standards of corporate governance, enhancing our accountability to you.

In summary, our commitment to organizational and financial responsibility is a direct reflection of our dedication to providing you with quality service. By choosing Nussbaumer, you are not just gaining a service provider; you are gaining a partner committed to transparency, ethics, and responsibility excellence. We assure you that our systems and practices are designed to serve your interests and contribute to the success of your endeavors.





# Logistical Capabilities & Familiarity

We are excited about the prospect of collaborating with the Niagara Falls Water Board (NFWB) on your capital improvement project and addressing the Statement of Logistical Capabilities and Familiarity with the Project Area. At Nussbaumer & Clarke, Inc., our unwavering commitment to delivering successful outcomes is backed by a rich 90-year history of experience in wastewater treatment facilities (WWTF), water treatment plants (WTP), and water distribution systems.

## **Familiarity with the Project Area:**

Our team is familiar with the Niagara Falls Water Board's facilities, having worked on similar projects throughout their careers. In addition, we are currently actively collaborating with 11 out of the 20 communities in Niagara County. Our in-depth understanding of the local landscape, regulatory environment, and community dynamics uniquely positions us to navigate the nuances of the project area seamlessly.

In particular, our ongoing work at the NFWB Wastewater Treatment Facility, focusing on electrical components through our on-call services, demonstrates our current involvement and commitment to enhancing the operational efficiency of critical infrastructure. This experience directly aligns with the scope of projects in your capital improvement plan and reinforces our capability to deliver successful outcomes.

## **Logistical Capabilities:**

At Nussbaumer & Clarke, Inc., we pride ourselves on our robust logistical capabilities honed through decades of managing complex projects. Our commitment to seamless collaboration with NFWB staff and any involved consultants is reflected directly in our collaboration efforts for the WWTP Upgrades – Project No. 3. Beyond this recent project our capabilities in waterline design, construction administration, and construction inspection span decades of staff experience. In addition our rich history of collaboration with EFC and other funding sources has always helped to ensure project success. Our proven commitment to our clients is the cornerstone of our ability to navigate challenges, streamline processes, and deliver unparalleled results for a number of municipal clients in WNY.

## **Key Client Relationship Manager:**

Our dedicated team, led by Michael Marino, P.E., Chief Executive Officer, brings a wealth of experience to the table. With over 28 years of experience and a deep understanding of municipal engineering, Mr. Marino will serve as your Client Relationship Manager for this project. His local residency and previous work with the Niagara Falls Water Board including commissioning support for the Water Treatment Plant uniquely position him to ensure effective communication and project satisfaction in cooperation with the talented staff we bring to this project.

In conclusion, Nussbaumer & Clarke, Inc. is fully equipped to meet the challenges outlined in the RFP. Our familiarity with the project area, combined with our logistical capabilities and seasoned staff, positions us as the ideal partner for the successful execution of NFWB's capital improvement projects.

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***"Where Experience Meets Efficiency:  
Nussbaumer & Clarke, Inc. brings a  
local of logistical capabilities and a  
understanding of the project area to  
the table. With a seasoned team  
boasting extensive experience in  
wastewater treatment facilities, water  
treatment plants, and water  
distribution systems, coupled with key  
staff members like Michael Marino, P.E.,  
leading the charge, our commitment is  
not just to projects but to seamless,  
successful outcomes."***

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# Design & Construction Schedule

At Nussbaumer, we understand the significance of delivering projects in a timely and efficient manner. Our proposed timetable for the design and construction phases is based on our extensive experience and a meticulous understanding of the unique considerations involved in your project. It's important to note that the actual timelines may be influenced by factors such as the time of year, seasonal construction availability, the authorization date to commence work, and a signed contract in place prior to the project kick-off.

TASK	Time Frame
1. Survey	Concurrent with Conceptual Design
2. Conceptual Design	12 Weeks
3. Design Documents	TBD
4. NYS EFC Funding/Agency Reviews	TBD
5. Bidding Assistance	TBD
6. Construction Administration	TBD
7. Construction Inspection	TBD

It is essential to acknowledge that the above timetable is an initial estimate, and we are committed to working closely with you to align our activities with your preferences and project requirements. Our flexibility allows us to adapt to changing circumstances, ensuring that the project progresses seamlessly. Regular communication and collaboration with your team will be prioritized to address any potential adjustments based on external factors.

A detailed schedule will be developed during Conceptual Design. Our goal is to deliver a successful project that meets or exceeds your expectations, and we look forward to the opportunity to contribute to the realization of your vision.



# Project Fee

Nussbaumer & Clarke's proposed fee is presented below. Should Nussbaumer be selected by NFWB a detailed breakdown of work elements showing titles, estimated manhours and billing rates will be submitted per the RFP.

TASK	Task Fee	
1. Survey	\$ 2,400.00	Lump Sum
2. Conceptual Desing	\$ 9,600.00	Lump Sum
3. Design Documents	TBD	
4. NYS EFC Funding/Agency Reviews	TBD	
5. Bidding Assistance	TBD	
6. Construction Administration	TBD	
7. Construction Inspection	TBD	
<b>TOTAL FEE</b>	<b>\$ 12,000.00</b>	

Our proposed total fee for Tasks 1 and 2 of the required work is \$12,000.00. The proposed cost for Tasks 3 through 7 cannot be determined until scope of the project from the Conceptual Design is determined.

We appreciate the comprehensive overview of the upcoming projects spanning the next five years, each presenting unique challenges and opportunities. Understanding the dynamic nature of these endeavors, we have prepared our fee proposal based on our 2024 rate schedule.

Given the distinct nature and timeline of each project, we acknowledge the potential for variations in the project schedule. Our proposed fee structure is tailored to the specific requirements anticipated for the year 2024. However, we understand that project timelines can evolve, and certain projects may overlap or be executed in tandem.

To accommodate the fluidity of the schedule and ensure transparency, we want to highlight that our proposed fee is contingent on the work being completed within the calendar year 2024. Should any portion of the work extend beyond this timeframe, there will be a rate escalation to align with our subsequent rate schedules.

Our intention is to work collaboratively to navigate the intricacies of the project schedule and explore opportunities for streamlined execution. Flexibility is paramount, and we are open to discussions to align our services with the evolving needs of the projects over the next five years.

Our intent is to offer flexibility and clarity in presenting the financial aspects of our proposal. We are open to further discussions and adjustments based on your preferences or any specific budget considerations. Our primary goal is to ensure that the proposed fee structure aligns seamlessly with the project's requirements and your organization's financial expectations.

Should you require additional details or wish to discuss specific elements of the fee proposal, we welcome the opportunity for further dialogue to address any questions or concerns you may have.





# APPENDIX A

## Staff Resumes





# Michael Marino, PE

## Senior Associate

As Chief Executive Officer, Mr. Marino oversees Nussbaumer’s municipal engineering department projects in an executive/administrative capacity. He has 28 years’ experience in the evaluation, design, and construction of a wide variety of municipal infrastructure projects in New York and Pennsylvania.

Mr. Marino serves as the retained engineer for numerous communities in Western New York, providing invaluable support from project conception to completion. Additionally, he extends his expertise to several other municipalities, offering assistance in securing funding and guiding projects through every stage of development. In his role, Mr. Marino oversees municipal engineering aspects and construction inspection for multiple projects, ensuring adherence to quality standards and regulatory requirements. With extensive experience in evaluating, designing, and constructing various municipal infrastructure projects across Western New York, he brings a wealth of knowledge and expertise to each endeavor.

### Recent Experience

- **City of North Tonawanda, Wastewater Treatment Plant** – Provided QA/QC for the design of power system improvements at the plant. Improvements included two (2) new 5kV utility services, switchgear, transformers, standby emergency generators, transfer switches, and motor control centers. Services also included short-circuit analysis, protective device coordination, and arc-flash risk analysis.
- **City of Lockport, NY, Wastewater Treatment Plant (WWTP) Ultraviolet (UV) Light Disinfection Improvements**– Project Principal responsible for oversight of the evaluation, design, and construction of the UV light disinfection system for the Lockport WWTP, providing over 90 million gallons per day (MGD) of wastewater treatment for the City and Town of Lockport. The project includes preparation of specifications, drawings, cost estimate, and schedule in accordance with the modified State Pollutant Discharge Elimination System (SPDES) discharge permit’s schedule of compliance. The design included calculating the hydraulic performance through the existing plant process tanks and through the proposed UV system within the existing chlorine contact tanks (CCTs); upgrades to existing CCT equipment; elevating equipment for flood resiliency; and installing a UV system bypass for use during maintenance or heavy rain events.
- **City of Buffalo– Colonel Ward High Service Pump Improvements** - Project Manager responsible for the design for two new high service pumps for the City’s Division of Water. New smaller pumps were designed to meet decreasing demands, save on power consumption, and avoid over pressurizing the distribution system. Plans included two new 800 HP 20 mgd vertical centrifugal pumps, which required extensive floor modifications to install a new 48-inch suction header pipe, new flow control rotovalves, several motorized butterfly valves, new discharge piping, and SCADA control upgrades. The project also included upgrades to the existing 50 mgd high service pumps to improve the priming system, discharge check valve, and automate the pump changeover procedures. Due to the success of the project, plans for additional energy savings measures have been prepared including the installation of an additional 800 HP pump, HVAC and lighting improvements, and system-wide SCADA integration.

### Contact

(716) 827-8000 ext. 257  
mmarino@nussclarke.com

### Education

SUNY at Buffalo,  
BS Civil Engineering, 1996

### Licenses

Professional Engineer (PE)  
2001 - New York (078995)  
2015 - Pennsylvania (084169)

### Experience

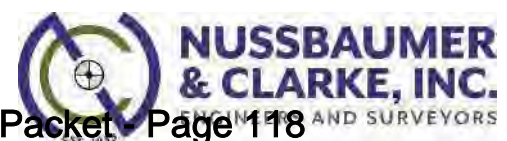
9 - Nussbaumer & Clarke, Inc.  
28 - Total

### Societies

American Water Works Association, (Past Chair, National Management & Leadership Division; Co-Chair, AWWA/WEF 2008 Utility Management Conference Planning Committee; Former Trustee, AWWA Technical and Education Council; Member, PCC Pipe & Fittings Standards Committee)  
New York Section American Water Works Association (Past-Chair, Board of Governors; Chair, Section Awards Committee Member, Program Committee)  
Western New York Waterworks Conference (Secretary, Board of Governors; Co-Chair, Education Committee)

### Disciplines

Municipal Engineering  
Potable Water  
Wastewater  
Stormwater  
Capital Planning



- **City of Buffalo - Colonel Ward Chlorination System Replacement** - Project Manager responsible for the design of replacement chlorine equipment at the City's 160 mgd Water Treatment Plant. The project includes a new emergency system to shutdown the 1-ton cylinders, new automatic changeover system, evaporators, automatic gas feeders, educators, replacement piping and valves, instrumentation and SCADA control upgrades.
- **Town of Tonawanda, Water Treatment Plant Pump Station Heating Upgrades** - Project Manager for engineering report and analysis of the Water Treatment Plant regarding the condition and performance of the existing steam heat system for the Pumping Station. The report considered different options for future heating systems with performance; operation and maintenance data. A comparison of alternatives including cost estimates for repair or replacement of the pumping station heating system, potential incentive programs for new systems, life cycle costs and operation and maintenance requirements was considered. Prepared a recommendation regarding improvements to the Pumping Station heating system based on findings. The new system design included replacement of all existing water source unit heaters in the pump station with gas unit heaters, including all new gas lines. Nussbaumer provided general services during construction including construction review of quotes received, recommended award, and provided periodic inspection of the work during installation of the new heating system.
- **City of Buffalo - Water Treatment Plant Filter, Gallery Rehabilitation** - Project Manager during the construction of \$20 million in improvements including: civil/structural rehabilitation; mechanical/piping upgrades; HVAC system addition; electrical modifications; and asbestos remediation. This project was financed via a NYS Environmental Facilities Corporation (EFC) Drinking Water State Resolving Fund (DWSRF) loan.
- **Thousand Islands Bridge Authority (TIBA) - Water Treatment Plant Feasibility Evaluation** - Project Manager evaluating the feasibility of establishing up to a 1-MGD facility to treat St. Lawrence River water to supply potable water to the surrounding communities. The evaluation encompassed permitting requirements, establishment of a subaqueous intake, low lift pump station, membrane filtration plant, chlorine disinfection, finished water storage, and high service pumping. As part of the evaluation, conceptual operations and maintenance costs and rate structures were developed.
- **City of Buffalo - 60-inch Watermain Joint Sealing** - Project Manager for design of repairs to one of the City's primary transmission mains. It was determined that due to advanced age, many joints within the transmission main began to leak. Based upon video inspection, it was determined that there were approximately 100 joints to be mechanically sealed over a 1,000-linear foot stretch from the water treatment plant and crossing railroad tracks and Interstate-190. The design included installation on internal joint seals and replacement three electric actuators on the City's primary transmission mains.
- **City of Geneva - Membrane Filtration Project** - Project Manager for the development of construction drawings for the City's Treatment Plant filtration improvements. The project involves the installation of two Membrane Filtration Units to replace existing diatomaceous earth (DE) filters in the plant's treatment building. The design of this system also included a hydraulic evaluation performed for a variety of flow conditions. This evaluation was used to determine if the existing vertical turbine pumps would supply sufficient pressure to the proposed membrane filters, without over-pressurizing the existing slow sand filtration process. Sequencing for taking the existing DE filters off-line after full build-out of the new Membrane Filtration units was considered. This project required correspondence with the New York State Department of Health to ensure compliance with their regulations for gaining the necessary approvals, as well as coordination with the City forces performing the construction work.
- **City of Wheeling - Water Pollution Control Facility Improvements** - Preparation of plans and specifications for Capital Improvements to the Wastewater Treatment Plant worth over \$10 million. The design included a UV disinfection system, new headworks bars screens, two new centrifuges, and a sodium bisulfite dechlorination system.
- **City of Lockport, Retained Engineer** - Provided planning, design and general services during construction for numerous recreational space, sewer and water infrastructure projects. Provided grant writing and administration to support projects funded via CWSRF, WIIA, WQIP, GIGP, DASNY, ARPA, and BIL. Projects have included a kayak launch, design of a pavilion and comfort station improvements as part of a Canalway Grant, planning for an all-inclusive playground as part of a State Parks Grant and technical support with a Skate Park funded in part by grants from The Skatepark Project and the Ralph C. Wilson Foundation.
- **Town of Tonawanda, Various Engineering Support Services** - Provided engineering planning, design and general services during construction as requested by the office of the Town engineer. Also provided grant application and administration support services. The work performed has encompassed a wide array of recreation space projects including rehabilitation of the Town golf dome, conversion of the former Lincoln Ice Arena and field house, and technical assistance with the new ice rink, splash pad, pickle ball court and ruby pit at Brighton Park.



# Craig Alexander, SE, PE, LEED AP

## Vice President

Mr. Alexander has 28 years of experience working as a civil structural engineer. He has provided his engineering expertise on a variety of Municipal, Commercial, and Industrial projects responsible for design development, structural analysis and design, preparation of construction document, specifications, support throughout construction and performing quality assurance reviews for the structural engineering department.

### Recent Experience

- **Town of Tonawanda, Engineering Department** - Project Manager for on-call engineering assistance with the building department for numerous projects. Projects include back-up/standby generators for numerous sites, trouble shooting equipment failures and recommendations, street lighting design, building evaluations, pool filtration system replacement, police building renovation, electrical service upgrades, solar system modifications for roof replacements, and fueling system replacements. Work also includes budget assistance to recommend upgrades for all systems.
- **City of Buffalo, Massachusetts Ave. Pump Station Electrical Upgrades Project** - Project Manager for electrical engineering and design documents for capital improvements and upgrades to the pumping station and substation with three (3) 23kV utility feeds. The electrical work included upgrading and replacement of the high voltage service equipment, transformers, 5kV distribution system, proposed back-up generator, automatic transfer system design, replacement of 240V equipment and distribution with a new 120/208V system, pump replacement of hydraulic valve actuator with electrical actuators, pump motor rehabilitation and new VFD's, and new control system. Project also included electrical construction estimate.
- **ECWA, Contract NC-043, Newstead Water Tank Pump Station, Town of Newstead** - Project Manager responsible for the design and drafting of a pump station at the Newstead Water Tank. The project involves the design of a pump station to fill the Newstead Water Tank to the levels required to efficiently operate the ECWA water system in the respective pressure zone.
- **City of Buffalo, Department of Public Works, Capital Improvement Plan** - Project Manager for structural analysis component of the ongoing comprehensive capital improvement plan for four facilities; Colonel Ward Pumping Station, Filtration Building, Massachusetts Avenue Pumping Station, and Grover Cleveland Tank.
- **City of Buffalo, Department of Public Works, Structural Emergency Services** - Project Manager for various tasks under the project including Colonel Ward Pumping Station Structural Analysis/Door Archway Shoring, Filter 22 Wall Repair, and Colonel Ward Pumping Station Wall Facade Repair.
- **Village of Lewiston DPW—Facility Expansion Project** - Project Manager responsible for the design of two (2) additions to the existing building, one on the south side and one on the east gate end, in addition to a new standalone "volunteers" building to the southeast of the existing building. Work included obtaining required bonds and insurance, permits and fees, excavation and clearing, installation of select structural fill, backfill, site drainage, grading, asphalt pavement, landscape restoration, 92'-0" by 40'-0" engineered metal building system including structural frame, uninsulated metal walls and insulated sloped roof.

### Contact

(716) 827-8000 ext. 217  
calexander@nussclarke.com

### Education

State University of New York at Buffalo,  
MS Structural Engineering,  
BS Civil Engineering, 1996  
Adjunct Professor—SUNY @ Buffalo

### Licenses

Professional Engineer (PE)  
2003—New York (080901)  
Other States: IL, CT, DE, FL, GA, IA, KS,  
MA, MI, NC, OH, OK, SC, TN, TX, VA, WI  
Structural Engineer (SE)  
2013—Illinois (81007330)

### Experience

2 - Nussbaumer & Clarke, Inc.  
28 - Total

### Certifications

LEED Accredited Professional  
NCEES, Model Law—Structural Engineer  
January 2013  
NCEES, Council Record

### Societies

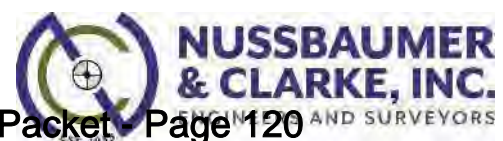
American Institute of Steel Construction  
(AISC)

### Disciplines

Structural Engineering  
Transportation  
Municipal  
Industrial

### Articles

Modern Steel Construction, July 2013,  
"Holding Down the Fort"  
Modern Steel Construction, December  
2013, "Gateway to Savannah"





- **Newfane - Wastewater Treatment Plant- Newfane, NY** - Structural for the design of various plant improvements including new process building and grit filter structure.
- **Buffalo Sewer Authority Term Agreement, Multiple Awards** - Structural Engineer for treatment plant upgrades, energy efficiency, CSO modifications, interceptor sewer and green infrastructure.
- **Onondaga County Wastewater Sludge Dryer facility, Syracuse, NY** - Structural Engineer for project the design of a facility to house a new sludge dryer to significantly reduce operating costs for Onondaga County. The site conditions required a specialized system of very deep driven piles, grade beams and structured slabs.
- **Strasburg Wastewater Treatment Plant, Design-Build Upgrade and Expansion - Strasburg, VA** - Structural Engineer for the design of the wastewater treatment plant's primary pumping and treatment systems including a new 10 MGD pump station and enhanced nutrient removal system that consists of fine screens upstream of new suction lift pumps, conversion of the existing oxidation ditches to equalization basins, as well as design of a new grit collection and treatment system. Our design-build team was able to shave \$14 Million from the previous consultant's construction estimate.
- **Horseheads, Well No. 5 Filtration Project, Horseheads, NY** - Structural Engineer for the FEMA funded project to construct a new water filtration plant and pump station. Four options to bring the water system within compliance of NYS Public Water System Part 5-1.30 were identified and evaluated; ensuring both capital and life cycle costs were considered to provide an economically sustainable solution.
- **Iroquois and Broadway Sewage Pump Stations, Erie County, NY** - Structural Engineer who provided engineering and design for the rehabilitation of the Iroquois and Broadway East Pumping Stations. The work included evaluating of the existing conditions of each of the pumping stations, providing recommendations for improvements including pump replacements, electrical modifications, and repairs to the dry and wet wells; and providing cost estimates for alternates.
- **Village of Westfield, Upgrade of the Village Water Pollution Control Facility and Main Sewage Pump Station, Westfield, NY** - Structural Engineer for preliminary engineering, grant assistance, detailed design, and construction services for an approximate \$5,000,000 upgrade of the Village Water Pollution Control Facility and Main Sewage Pump Station.
- **Washington County Sewer District EPC, Fort Edward, NY** - Structural Engineer for the implementation of an energy performance contract that includes energy and operational efficiency improvements. The objective of the project is to identify and implement measures that would provide facility improvements and achieve the goal to reduce energy consumption.
- **Seneca Buffalo Creek Casino and Hotel, Buffalo, NY** - Structural Engineer for the design of a 10-story, 2,500 car parking garage, 3-story, 2,300 gaming position casino, and 25-story, 220 suite hotel, with site improvements including: park area, water features, public and private utility upgrades, roadway modifications and streetscaping surrounding the 10-acre site. After the economic downturn in 2008, the \$333 million project was scaled back to \$120 million including: a 4-story, 725 car parking garage and 67,000 sq. ft. casino with two restaurants and sports bar. Developed standards to reuse 540 tons of steel from the partially erected structure, which made up 95% of final structure and saved \$600,000 in steel costs.
- **Quapaw Downstream Casino and Hotel, Miami, OK** - Structural Engineer for the design of a 175,000 square foot, 2000 gaming position casino, and 14 story, 200 room hotel.
- **Remington Park Racino, Oklahoma City, OK** - Structural Engineer for renovations of the existing racetrack facility to provide a new 55,000 sq. ft. casino and entertainment complex.
- **Kiowa Resort and Casino, Randlett, OK** - Structural Engineer for the construction of a new 60,000 sq. ft. gaming facility for the Kiowa Tribal community.
- **Seneca Allegany Casino and Hotel, Phase 2 and 3, Allegany, NY** - Structural Engineer for this new casino and resort including: an 8 story, 1,800 car parking structure, an 11 story, 200 room hotel, a 2-story spa/pool facility, and a 165,000 square feet casino addition.



# James Zgoda

## Electrical Project Manager

Mr. Zgoda has been actively engaged for the past 36 years in Power & Energy Electrical projects including transformers, generators, electric motors, high voltage engineering, and power electronics. Delivering both specialized and routine electrical enhancement projects in a variety of production settings, catering to the specific needs of our municipal clients.

His extensive project portfolio covers a wide range of activities, including the design of high and low voltage variable speed drives and pumps, substation design, replacement switchgear, control systems, power and lighting installations for pump stations, the installation of transfer switches, power distribution, energy management systems. Renovations to Water Treatment Plants including 800+ HP pumps, large capacity motors with variable speed drives, electrical distribution, new and upgraded SCADA systems with multiple facility and equipment controls .

In addition to project execution, Mr. Zgoda has also provided supplementary services such as preparing engineering reports, estimates, plans, specifications, and contract documents. His involvement extends to attending project meetings and providing general support during construction.

### Recent Experience

- **Town of Cheektowaga, Sewer Department Engineering** – On-call engineering assistance with the sewer department for the main pumping station and numerous remote lift stations though out the Town. Work includes trouble shooting and designing repairs and improvements to electrical systems and controls systems, SCADA design, updates and modifications to the SCADA system, troubleshooting power quality problems and replacement or upgrade solutions for failing systems. Work also includes budget assistance to recommend upgrades for all systems.
- **Erie County Water Authority, Sturgeon Point Water Treatment Plant** - Upgrade of raw water pump station to a firm capacity of 90 mgd. Scope involved replacement of two pumps to increase the capacity and rehabilitation of all five pumps with new, premium-efficiency motors. The pump station was also converted from dual 5 KV feeds to dual 480 V feeds including new substations and main-tie-main switchgear. In addition, the motors on the pumps are controlled by variable frequency drives. Nussbaumer also evaluated cost effective measures to convert the pump station in operation from 4160 V to 480 Volt operation.
- **Village of Alden, Broadway (Route 20) Streetscape Improvements Town of Tonawanda Water Treatment Plant** - Electrical engineering and design for the Treatment Plant Electrical Substation and Pump Station Improvements Project to improve and update the existing facility to one that is more reliable, resilient, energy efficient, offers operational flexibility, and is easier and safer to maintain. To achieve this goal, the Project has been broken up into five main components including Low-Service Pump Improvements, High-Service Pump Improvements, Pump Station Valves & Actuator Improvements, Electrical Substation, back-up generator, distribution gear and infrastructure improvements, instrumentation and controls Improvements, and miscellaneous improvements. Project also included electrical construction estimate.

### Contact

(716) 827-8000 ext. 210  
jzgoda@nussclarke.com

### Education

Rochester Institute of Technology  
BS Electrical Engineering - 1989  
SUNY College at Alfred  
AAS Computing Graphics Technology –  
1984

### Certifications

Electrical Safe Work Practices and  
Compliance with NFPA 70E (Arc Flash  
Training (OSHA 29 CFR 910.331-335)  
2014  
Confined Space Entry (2016-2018)  
OSHA 29 CFR 1910.146

### Experience

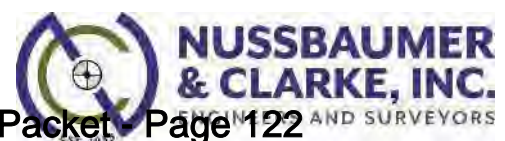
31 - Nussbaumer & Clarke, Inc.  
36 - Total

### Societies

Energy Conservation Citizens Advisory  
Committee, Town of Amherst

### Disciplines

Power & Energy Engineering  
Electrical Design  
High Voltage Engineering  
Power Electronics Design  
Control System Design  
SCADA



- **City of North Tonawanda, Water Treatment Plant** – Electrical engineering and design for renovations to the electrical distribution at the Water Treatment Plant. Work included design of a new 480 volt, 750 kW, indoor diesel generator with remote exterior radiator, new above ground main storage tank, day tank, and fuel filtration system. The work also included new multiple transfer switches with coordinate with the two (2) electrical services and the Generator. The main electrical motor control center was also replaced.
- **Chautauqua Utility District, Water Treatment Plant Improvements** – Design and construction of modifications to raw water pump station and water filtration plant, resulting in no changes to exterior walls or height of buildings, primarily consisting of pump, process and piping improvements to increase permitted capacity from 0.75 MGD to 1.5 MGD and meet finished water quality requirements. Nussbaumer received a Platinum Engineering Excellence Award from the ACEC of New York for the project and design.
- **City of Oswego Water Treatment Plant Expansion** - Electrical/Mechanical design for a major water treatment plant expansion, high lift multi-level pumping station. The additional water treatment and pumping capacity will serve the major "out of district" user, Sithe Energy's 1042 Megawatt Cogeneration Plant in the Town of Scriba. Scope included the use of directional boring (54" diameter) for the 2,200 linear foot crossing under the Oswego River, New York State Canal, and existing marinas, 500 HP variable frequency drives for the high lift pumps, and the treatment plant expansion (16 mgd to 27 mgd capacity) while in continuous operation.
- **Erie County Water Authority, Contract NC-30** - Sturgeon Point Water Treatment Plant, New 90MGD facility with (2) 2500KW stand-by generators, paralleling switchgear, and custom block and brick building to match existing buildings within the facility for housing all the generator and substation equipment, Design, Construction Administration, Start-up Services.
- **Village of Little Valley, Rehabilitation of Wastewater Treatment Plant, Phase I** - Electrical engineering and design documents for capital improvements and upgrades to the treatment plant and 9<sup>th</sup> Street Pump Station. The electrical work at the pump station included replacement of the existing electrical service, pump control panel, and submersible pumps. The electrical work at the water treatment plant included Blower building MCC replacement along with replacement of the three (3) blowers, replacement of the existing generator with a new 480 volt, 150 kW outdoor, enclosed, generator with a day tank under the generator, and electrical for a new UV system.
- **Village of Little Valley, Rehabilitation of Wastewater Treatment Plant, Phase II** – Electrical engineering and design documents for capital improvements and upgrades to the treatment plant. The electrical work at the water treatment plant included electrical power and lighting for a new pole barn over the existing clarifiers, replacement of the MCC at the sludge pump gallery with anew feed to proposed RBC #4, a double throw transfer switch and connection panel for availability to bring a portable generator onto the site and connect to the electrical service, replacement of the main MCC, electrical for headworks bar screen and washer/compactor, grit screw replacement, replacement of headworks gas detection system, electrical for replacement of mudwell pumps, influent pumps, sludge pumps, and grit blowers, flocculation basin mixer and control replacement.
- **City of Dunkirk, Wastewater Treatment Plant Expansion** – Expansion of the City's Wastewater Treatment Plant. The City of Dunkirk determined a need for additional organic capacity at the WWTP in order to meet the requested needs of local industry and to comply with a NYSDEC Order on Consent. The expansion project included proposed aeration tanks with three 300 H.P. variable speed drives and secondary clarifiers located northeast of and adjacent to the existing tanks. The two proposed secondary clarifiers and aeration tanks will be the same physical size as their respective existing units. The new treatment units will be operated in a manner similar to the existing plant operations. The expansion also included several new flow control devices and controls for future plant automation.
- **Hamilton Houston Lownie, Niagara Gateway Apartments** – Scope included traffic study, mechanical, electrical and plumbing services for this reuse project to redevelop architectural significant buildings located at the southeast corner of Niagara Street and Massachusetts Avenue (885 Niagara Street) into a mixed-use.
- **Seneca Nation of Indians Capital Improvements Authority** – Electrical engineer for the following:
  - Cattaraugus Administration Complex – electrical services upgrades
  - Consulting for electrical operational issues at Allegany Wastewater Treatment Plant
- **City of North Tonawanda, Wastewater Treatment Plant** – Electrical engineer for the design of power system improvements at the plant. Improvements include two (2) new 5kV utility services, switchgear, transformers, standby emergency generators, transfer switches, and motor control centers. Services also include short-circuit analysis, protective device coordination, and arc-flash risk analysis.
- **Seneca Nation of Indians, Steamburg Wastewater Treatment Facility** – Electrical consulting for 630 square foot vacuum pump station building, 3,400 square foot



# Andrew Basista

## Electrical Engineer II

Mr. Basista has a focus in SCADA design and electrical power design in water and manufacturing plants, with an impressive background of 8 years in commercial and industrial electrical experience. Andrew has been instrumental in a variety of electrical projects, showcasing his versatility and commitment to excellence. His responsibilities span the entire project lifecycle, from the initial site visit and system specification to creating designs, site plans, and all necessary drawings. Andrew is responsible for electrical support in all our design development, drawings, and specifications. His proficiency extends to electrical grid and power generation, conventional power sources such as fossil fuels and alternative energies such as solar, hydroelectric, and geothermal power.

### Recent Experience

- **City of North Tonawanda, Water Treatment Plant**—Electrical engineer assisted in the renovations to the electrical distribution at the Water Treatment Plant. Work included design of a new 480 volt, 750 kW, indoor diesel generator with remote exterior radiator, new above ground main storage tank, day tank, and fuel filtration system. The work also included new multiple transfer switches with coordinate with the two (2) electrical services and the Generator. The main electrical motor control center was also replaced.
- **Town of Hamburg, Hamburg Water Storage Tank**—Electrical Engineer tasked with coordinating with the contractor to support the design and construction of a new elevated water storage tank, including integration of a generator for backup power.
- **City of Buffalo, Massachusetts Ave. Pump Station Electrical Upgrades Project** - Electrical engineer assisted in the design documents for capital improvements and upgrades to the pumping station and substation with three (3) 23kV utility feeds. The electrical work included upgrading and replacement of the high voltage service equipment, transformers, 5kV distribution system, proposed back-up generator, automatic transfer system design, replacement of 240V equipment and distribution with a new 120/208V system, pump replacement of hydraulic valve actuator with electrical actuators, pump motor rehabilitation and new VFD's, and new control system. Project also included electrical construction estimate.
- **City of Buffalo, Lincoln Park Arena Conversion**—Electrical engineer responsible for design upgrades to the Ice Rink and Locker Room and conversion of new field house.
- **Zeton U.S. Properties, Inc., Lockport, New York**—Engineer responsible for providing electrical support services for the design for a new office/assembly building. Design included water service and backflow prevention for bathroom and kitchen area, and emergency shower. Work also included sanitary sewer and vent piping, and natural gas service and distribution piping. HVAC design included rooftop units, destratification fans and electric heaters.
- **Town of Cheektowaga, Town Hall Generator Replacement**—Engineer responsible for assisting in the design upgrades to the Town Hall buildings emergency backup power services and replacement of generator.
- **City of Lockport, Pine Street Parking**—Engineer responsible for the design of new lighting and electric vehicle charging stations.

### Contact

(716) 827-8000 ext. 267

abasista@nussclarke.com

### Education

SUNY University at Buffalo,  
BS Electrical Engineering, 2016

### Experience

1 - Nussbaumer & Clarke, Inc.

8 - Total

### Disciplines

Electrical Engineering  
SCADA System Design  
Solar Energy  
Electrical Design

- **Lockport Raw Water Pump Station, Generator Purchase Specifications**—Electrical Engineer assisted the City is seeking a Water Infrastructure Improvement Act (WIIA) grant for the installation of an emergency power generator at the City’s Raw Waste Pump Station (RWPS) located on River Road in North Tonawanda. Work included installation of MCC, Controls, and Feeder replacement for pump station.
- **Town of Lewiston, Academy Park Pedestals**—Engineer provided electrical support for service and multiple electrical pedestals for food trucks and events.
- **Town of Pendleton, Pendleton Data Room**—Engineer provided electrical support for the Town with moving server location and placing them in a dedicated lockable location.
- **Bergmann Associates, Architects, Engineers, Landscape Architects & Surveyors, D.P.C., Building Assets** —Engineer provided field mapping of all major load devices across MEP for building listed below electrical support for the Town with moving server location and placing them in a dedicated lockable location.
  - Erie County Department of Public Works Building
  - Erie County Board of Elections Building
  - Erie County Rath Building
- **Town of Tonawanda, Paddock Golf Dome Repairs** – Engineer responsible for performing photometrics and rededicated the existing lighting circuits to a new lighting contractor for increased lighting controls, lighting driving range with pro sports lighting and a bollard system for the putting areas.
- **Town of Hamburg, Hamburg Hub**—Electrical engineer responsible for design of parking lot and park upgrades including hydronic snow melt system and electric vehicle charge stations. Work also included the redesign of park electrical, including a bank hookup pedestal and a new dedicated service.
- **Expeditionary Energy, DePaul Mosaic Apartments Solar System** – Engineer responsible for designing roof mounted ballasted solar array for two building.

## Individual Experience

- **Rich Products Corp. (Buffalo, New York), Associate Automation Engineer**— Associate Automation Engineer who played a crucial role in extensive SCADA development, specification, troubleshooting, field work, support and integration within the framework of an Ammonia Refrigeration Management program. This comprehensive initiative encompassed aspects of life safety, plant shutdown, and energy savings program for 18 Rich Products food production plants throughout the United States. Adhering to a stringent 99.9% uptime standard, the program featured 79 Windows Virtual Servers supporting 80,000 tags seamlessly operating across all plants and cloud services. This setup facilitated remote supervisory control of any plant through an internet connection. The systems included a two-stage historian database for efficient data retrieval and graphical trend representations. The system’s backbone relied on an Allen Bradley PLC, and the Aveva Wonderware System Platform allowed for the utilization of multiple communication protocols such as Ethernet IP, Modbus, BACnet, and Serial. Below are referenced some components of the project, including Life Safety and Security items.

### Life Safety:

- HMI Interface Alarming and Notifications.
- Leak Detected Automatic Emergency Plant Shutdown Evacuation Alarming.
- Manual Plant Shutdown and Evacuation Pushbuttons around the plant.
- 911 Dialer and alarm interlocks to allow safe startup after a shutdown event.

### Security:

- Integrated Windows Active directory for program access management.

- **Rich Products Corp. (Buffalo, New York), Associate Automation Engineer**—As an Associate Automation Engineer additional areas of expertise were:
  - Refrigeration and Energy Management Technical Lead/Project Manager.
  - Refrigeration and Ammonia Safety System Knowledge.
  - IS Networking Experience Involving PLCs, Sensors, HMIs, and Engine Room Equipment.



# Daniel Ott, CPD

## Engineer / CADD Specialist

Mr. Ott is a member of our Electrical/Mechanical/Plumbing (MEP) Department. He has been actively involved in Power & Energy Electrical projects including transformers, generators, electric motors, high voltage engineering, and power electronics. Experience includes design of SCADA systems, design of lightning systems, and evaluating buildings to ensure they meet the New York State Building, Mechanical, Plumbing, NEC and Fire Codes along with ADA compliance. He has been responsible for proposed upgrades and cost estimates for mechanical, electrical, fire alarm, and plumbing systems.

### Recent Experience

- **City of Buffalo Water, Massachusetts Avenue Pump Station Electrical Upgrades** - Electrical design assistance which included power distribution and SCADA. HVAC and boiler design modifications.
- **Erie County Water Authority, Ball Pump Station**—Electrical design assistance for substation upgrade, power distribution, instrumentation, controls and SCADA.
- **Chautauqua Utility District, Wastewater Treatment Plant, Chautauqua Institute, New York** – Design of power distribution, back-up power, and control wiring to new equipment in existing buildings and the site. Design assistance with instrumentation, controls and SCADA.
- **Village of Ellicottville, Wastewater Treatment Plant, Ellicottville, New York** – Design of power distribution, back-up power, control wiring, and lightning system to new equipment in existing buildings and the site. Designed lightning systems for 3 existing and 1 new building. Design assistance with instrumentation, controls and SCADA.
- **Erie County Water Authority – Sturgeon Point – New Electrical Substation Design, Buffalo, New York** – Design of a new 34.5KV to 4160V substation with automatic back-up power generation to feed the main water treatment and pumping station in Western New York.
- **Erie County Water Authority – Contract NC-26B – Pump Station Improvements, Buffalo, New York** – Included design of replacing existing water pump drives with new Variable Frequency Drives driven by PLC controls in the Van De Water raw water pumping station and the Ball Pumping Station. Also designed a new 4160V to 480V substation with automatic generator back-up at the Van de Water Station.
- **Lake Erie Tobacco Fire Pump House, Killbuck New York** – Design of power distribution and lighting to a new fire pump building. Design included power to the fire pumps, pump controllers, and relocated diesel generator.
- **Barton, Hovey, Nardini, Tries, LLP** – Electrical/mechanical support for various architectural projects. Services included building power, tenant power, site lighting, electrical service power, energy management systems, emergency lighting, standby power, fire alarm systems, and controls.
- **Broadway Market, Buffalo, New York** – Plumbing engineering and design of a kitchen area in the Broadway Market. Plumbing design included domestic water, sanitary sewer and vent, and natural gas design. Plumbing included a grease interceptor.

### Contact

(716) 827-8000 ext. 211  
dott@nussclarke.com

### Education

SUNY Erie Community College  
AAS Electrical Technology - 1986

### Certifications

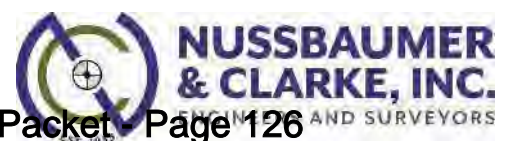
American Society of Plumbing  
Engineers - Certified in Plumbing  
Design (CPD) - 2016  
Confined Space Entry (2016)  
OSHA 29 CFR 1910.146

### Experience

18 - Nussbaumer & Clarke, Inc.  
38 - Total

### Disciplines

Plumbing Design  
Mechanical Design  
Power & Energy Engineering  
Electrical Design  
High Voltage Engineering  
Power Electronics Design  
Control System Design  
SCADA  
CADD Specialist



- **Niagara Refining, Depew, New York** – Design of power distribution and control wiring to new equipment in an existing building renovated into a hydrometallurgy plant. This included plant power, grounding system, back-up power and control wiring to all devices.
- **City Hall and City Court, Fire Alarm Upgrades, Buffalo, New York** – Upgrades to an existing Simplex Addressable Fire Alarm System with voice evacuation at City Hall and a completely new addressable Fire Alarm System with voice evacuation at City Court Building. The two systems will be interconnected to provide a single two building system to provide a single central notification center.
- **Niagara Refining, Depew, New York** – Design of power distribution and control wiring to new equipment in an existing building renovated into a hydrometallurgy plant. This included plant power, grounding system, back-up power and control wiring to all devices.
- **T.M. Montante - Sealing Devices, Lancaster, Photovoltaic (Solar) Installation Lancaster, New York** – Electrical designer for a photovoltaic system on the roof of Sealing Devices. The photovoltaic system was designed in 2011 with a 50 kW system and in 2013 a separate 250kW system operating in parallel with the utility company and disconnecting photovoltaic power when the facility is operating under emergency back-up power. The system has 264 (2011) and 984 (2013) roof mounted DC solar panels in multiply arrays connected to inverters to provide AC power.
- **T.M. Montante - Unifrax, Photovoltaic (Solar) Installation, Tonawanda, New York** – Electrical designer for a photovoltaic system on the roof of Unifrax. The photovoltaic system is a 100 kW system operating in parallel with the utility company and disconnecting photovoltaic power when the facility is operating under emergency back-up power. The system has 400 roof mounted DC solar panels in multiply arrays connected to inverters to provide AC power.
- **Wastewater Treatment Plant, Lockport, New York** – Electrical design assistance for power and controls to a new ultraviolet system to treat waste water in an existing waste water treatment plant.
- **Chautauqua Utility District, Wastewater Treatment Plant, Chautauqua Institute, New York** – Design of power distribution, back-up power, and control wiring to new equipment in existing buildings and the site.
- **Village of Ellicottville, Wastewater Treatment Plant, Ellicottville, New York** – Design of power distribution, back-up power, control wiring, and lightning system to new equipment in existing buildings and the site. Designed lightning systems for 3 existing and 1 new building.
- **Kenmore Community Center, Kenmore New York** – Plumbing design modifications to existing building. Design included plumbing for new bathrooms, natural gas piping, and a reduced pressure zone.
- **Stericycle, Plant Expansion, Dunkirk, New York** – Mechanical and plumbing design for an approximately 12,000 square foot stand-alone structure.
- **Moe's Southwest Grill- New restaurant, Ithaca, New York** - Design and installation of electrical lighting, fire alarms and electrical power.
- **PCB Piezotronics, Depew, New York**—Mechanical Design Engineer – Acceleration Division. Design accelerometers according to sales instruction reports, work directly with sales to generate sales instruction reports, provide evaluation and failure analysis reports for customers, Communicate directly with customers, to evaluate customer problems, write assembly procedures for new sensors, work closely with technicians to assemble and test new designs, design for Manufacturability and Assembly certification, design sensors and reports for flight proof testing.
- **PCB Piezotronics, Depew, New York**—Lead Engineering Technician - Provided testing for acceleration, force and pressure sensors to the full specification, reviewed and signed off on new test procedures, evaluated new test equipment, worked closely with R&D engineers.
- **PCB Piezotronics, Depew, New York**—Calibration Technician - Responsible for calibrating acceleration, force and pressure sensors, reviewed and signed off on new test procedures, trained new technicians.
- **West Valley Nuclear Services Company, Inc., Plant Systems Operator, West Valley, New York** - Performed troubleshooting, performed procedures on transfer of fluids and filter replacements, wrote and performed procedures for a Cement Solidification System of nuclear waste, read piping and instrumentation diagrams.



# APPENDIX B

## Subconsultants Profiles





## Firm Overview

**JM Davidson Engineering, D.P.C. (JMD)** was founded in 2015 by Jaime Davidson, PE to assist in filling the need for women-owned businesses in the civil engineering field. Since then, JMD has grown to include multiple professional engineers, scientists, and construction inspectors, offering a full range of civil engineering services, including water and wastewater, structural, transportation, water resources, and railroad design services. Our firm is headquartered in Western New York, giving us a strong local connection to our clients in the region.

We take great pride in our work. We strive to be selected, first and foremost, for our technical capabilities. Helping our clients meet their **Disadvantaged Business Enterprise (DBE)** and **Women Business Enterprise (WBE)** goals is an added benefit of working with our firm. Over the years, we have developed strong relationships with our teaming partners and our clients because our work is held to the highest standard. We seek to provide valuable contributions to all our projects, ensuring a successful project for everyone involved.

Our current certifications are:

- DBE, New York / Pennsylvania
- WBE, New York
- WBE, Erie County / City of Buffalo Joint Certification Committee
- WBE, Monroe County

## Our Services

### Water / Wastewater

- Collection System Design
- SSES and I/I Investigations
- Water Storage, Transmission, and Distribution System Design
- Sanitary System Smoke Testing
- Construction Administration & Inspection
- Wastewater Treatment Plant Improvement Projects

### Water Resources

- Hydrologic / Hydraulic Modeling
- Storm Drain Design
- Stormwater Management
- Green Infrastructure Design
- Erosion and Sediment Control / Stormwater Pollution Prevention Plans
- Floodplain / Stream Restoration
- Environmental Permitting
- Wetland Delineation

### Structures/Transportation

- Bridge / Culvert Design & Inspection
- Structural Design & Rehabilitation
- Highway Design
- Work Zone Traffic Control Plans
- Trail Designs
- Railroad Track Inspection & Design
- Railroad Public Project Coordination
- Construction Administration and Inspection



## Joseph C. Lu Engineering, P.C.

### Firm Overview

Now celebrating our 43<sup>rd</sup> year, Joseph C. Lu Engineering, P.C., (dba Lu Engineers) is a NYS-certified Minority and Disadvantaged Business Enterprise (M/DBE), and a Veteran solely owned Professional Corporation established in 1980. Our team includes over 85 professionals specializing in civil, site, environmental, and transportation engineering. Our extensive list of clients includes federal, state and local governments, public authorities, all levels of educational institutions, corporate/commercial, as well as those in private industry, developers, and others. The firm is headquartered in Rochester, NY, with additional offices in Buffalo, Albany, Binghamton, New York City, and Syracuse.

### Civil/Site/Environmental Engineering

Since 1980, our firm has provided professional civil engineering services in conjunction with design and construction of both the physically and naturally developed environment. We employ a comprehensive approach to developing land by considering all local, state, and federal development regulations. Our team of engineers balances our client's goals together with their technical knowledge of issues ranging from soils, hydraulics, materials, natural systems, and other sciences to create safe and attractive environments. Our projects include those for university and institutional lands; transportation and utility authorities, residential subdivisions; office parks and commercial shopping centers; mixed-use, industrial and agricultural facilities and others. Our successful track record with municipalities includes transportation and roadway planning; water and wastewater system services; parks and recreation; grant writing and more.

Complementing our Civil Team is a highly qualified team of environmental scientists and specialists, geologists, engineers, and other technical professionals, all of whom possess the range of skills and breadth of experience needed to manage complex projects from conceptual design through to construction completion. Our Natural Resources Group experience includes Environmental Review Policy, including NEPA and SEQR; Stormwater/Erosion and Sediment Control; and Wetland Delineation and Permitting; in addition to extensive knowledge of State Historic Preservation Office guidelines and Stormwater Pollution Prevention Plans. While our Investigation / Remediation Group provides remedial investigations along with remedial design and construction, environmental site assessments, hazardous materials management, soils management and brownfield consulting services. The environmental team is rounded out by our Asbestos Group, providing asbestos surveys, abatement design, asbestos project/air monitoring, HUD lead surveys and abatement design and mold surveys and remediation.

### Among Our Services

- Access Road & Parking Design
- Earthwork/Grading Design
- Environmental Investigation, Inventory, & Analysis
- Geophysical Investigations & GIS
- Hydrogeologic Modeling
- Master Planning
- Municipal Development Code Review
- Natural Resources
- NEPA/SEQR Review
- Permitting
- Phase I and II Site Assessments
- Remedial Investigations
- Sanitary Sewer Design
- Sanitary Sewage Treatment Systems for Residential and Commercial Sites
- Stormwater Management
- Storm Water Pollution Prevention Plans (SWPPP) & Inspections
- Sediment & Erosion Control Systems Design
- Water Supply Design



(716) 754-2256  
adg@adgeniineers.com  
761 Cayuga St., Lewiston, NY 14092

Professional Engineering and Land Surveying, PC

NYS WBE & DBE Certified

## Overview

**Advanced Design Group Professional Engineering and Land Surveying, P.C. (ADG)** is a local full-service, multidisciplinary civil engineering firm providing planning, design and construction management services for residential, commercial and industrial subdivisions and site plans throughout the country. ADG is certified as a Woman-Owned Business Enterprise (WBE) in the State of New York and Erie County.

Founded in 2005, ADG has established a record of high-quality, on-time, cost-effective work. With over 50 years of combined experience, we are confident in our ability to provide quality, responsive and economically sound site-engineering services.

We also provide a wide variety of WBE and non WBE services such as Commercial, Municipal, and Residential Construction Field Site Inspection, Flow Monitoring & Meter Installation, Construction Field Representation, and Consulting Services.

ADG has extensive experience on the field as a sub-consultant for many projects. We provide timely and articulate daily and weekly inspection reports. ADG also reviews and proofreads all plans, codes, and submittals to ensure that all aspects of the project are completed effectively.

## Staff

ADG currently employs one licensed engineer and two NYS EITs. Along with two certified field representatives.





**KHEOPS Architecture, Engineering and Survey, DPC** (KHEOPS) is an established professional services firm with 105 years of local experience, through our predecessor firms. KHEOPS is a New York State Licensed, minority-owned professional services

firm. As a full-service architectural, engineering and survey firm, KHEOPS is experienced in delivering complete Architectural, Engineering & Land Surveying services beginning with conceptual planning, and proceeding through the design phase, and concluding with field construction contract administration.

**What is in a Name?**  
*Pronounced "Key-ops", KHEOPS built the Great Pyramid of Giza, one of the Seven Wonders of the Ancient World. His son, KHAFRA, constructed the second largest pyramid and the Sphinx.*

The firm's has completed various representative projects in all the various public, private and commercial sectors of operation and further consisting of all types of Land Surveying and Engineering projects described as follows;

Topographic Field Surveys for Public/Private/Municipal sectors, used to aid in the design and planning of (streets and highways, public/private utility design and or replacement, future building construction, etc.)

Boundary/Right of Way determination, KHEOPS has vast experience for property boundary and Highway Right-Of-Way Surveys for both the Public and Private sectors.

**YEAR ESTABLISHED:**

In 2013, KHAFRA Engineering Consultants (KHAFRA) founded KHEOPS to provide professional services in the State of New York. In November of 2013, KHAFRA acquired TVGA Consultants, a recognized engineering firm in Buffalo, New York that was established in 1917. KHAFRA was founded in 1986 in Atlanta, Georgia.

**STAFF SIZE:**

**LICENSED ENGINEERS:**

- KHEOPS currently employs 11 New York State licensed engineers, architects and surveyors:
- Structural- 2
- Civil Engineers- 4
- Architects- 2
- Land Surveyors- 6

**CERTIFICATION STATUS:**

- Certified Minority Business Enterprise with the Port Authority of NY and NJ
- Certified Minority Business Enterprise with Empire State Development
- Certified Disadvantaged Business with New York State Dept. of Transportation
- Certified Minority Business Enterprise with Erie County Division of Equal Employment Opportunity



23 Mechanic Street  
Springville, NY 14141

295 Main Street  
West Seneca, NY 14224

encorus.com  
716.592.3980

Encorus Group is a professional engineering, testing, and inspection firm. Founded in 1996, Encorus has a staff of 100 full-time employees working out of three Western New York offices as well as field staff working remotely. This includes licensed professional engineers in all major disciplines, registered architects, and field personnel to support our established and accredited civil materials testing laboratory. Additionally, Encorus Group is certified as a Service-Disabled Veteran-Owned Small Business (SDVOSB) at both the federal and New York State levels.

Encorus Group's design team includes multi-state licensed professional engineers, registered architects, associate engineers and architects, drafters, and administrative personnel. These personnel cover all major engineering disciplines including civil, structural, mechanical, electrical, fire protection, process, and automation, and allows us a breadth of experience typically found only in larger firms. The firm's civil materials testing group provides field inspection of concrete, masonry, soils, asphalt, structural steel, and other construction-related materials as well as the associated laboratory testing required to meet rigorous specifications and standards. Non-destructive testing services include weld inspections and ultrasonic, magnetic particle, liquid penetrant, and radiographic testing. Our field and laboratory technicians and inspectors are trained and certified to a variety of standards including ACI, CWI, and NICET. Encorus Group's mechanical integrity staff is certified in a variety of inspection procedures, including API 510 pressure vessel inspections, API 653 Storage Tank inspections, API 570 Process Piping inspections, and includes Certified Welding inspectors, Steel Tank Institute SP001 inspectors, and ASNT-TC-1A and NBIC qualified inspectors. In 2024, Encorus Group merged with Sienna Environmental Technologies, and can now perform a wide range of services associated with environmental, hazardous, and regulated building materials management and abatement.

**Encorus Group** is a Service-Disabled Veteran-Owned Small Business (SDVOSB).



**FRANDINA ENGINEERING AND LAND SURVEYING, PC**  
**CIVIL ENGINEERS AND LAND SURVEYORS**  
*NYS Certified WBE and DBE Firm*

1701 HERTEL AVENUE  
 BUFFALO, NEW YORK 14216  
 716.883.1299  
[www.FRANDINA.com](http://www.FRANDINA.com)

**Firm Profile – FED ID: 26-2707036**



Frandina Engineering and Land Surveying, PC provides high quality land and construction surveying services throughout Western New York. In 2005, Rosanne Frandina, PE, LS, established Frandina Engineering and Land Surveying, PC as a wholly-owned Woman Business Enterprise (WBE). The firm is also a certified Disadvantaged Business Enterprise (DBE).

In 2011, Frandina Engineering and Land Surveying, PC acquired the records and hired the highly experienced and respected staff of Deborah A. Naybor, PLS, PC.

Our staff has significant experience working on the largest jobs in the Western New York region such as the Buffalo Niagara Airport, Niagara Falls International Airport, The Light Rail Rapid Transit System, The State University Construction Fund projects, University of Buffalo Medical School, Erie County Medical Center, the Buffalo Public Schools Project, Buffalo Waterfront and the Seneca Nation Buffalo Creek Casino in downtown Buffalo as well as projects funded by the NYS Department of Transportation. The firm brings unparalleled familiarity with government regulations and the ability to ensure your projects are fully in compliance with all the required government agencies.

Our experienced staff provides the skills necessary to keep your project on schedule and within budget. With two licensed land surveyors, we have intensive professional supervision of each survey, large or small. We provide electronic drawings in AutoCAD format and our experienced field crews use the latest in modern data collection to quickly and efficiently measure thousands of data points on the ground each day.

We provide the highest levels of service and technical expertise in the professional civil engineering and land surveying fields.

**Frandina Engineering and Land Surveying, PC** is a wholly owned Women Business Enterprise (WBE) and is certified as a WBE and DBE with the following government entities:

- State of New York, and its agencies
- Dormitory Authority of New York
- County of Erie
- City of Buffalo
- Buffalo Board of Education
- Buffalo Sewer Authority
- Niagara Frontier Transportation Authority

**Frandina Engineering and Land Surveying, PC provides:**

- Land Surveying
- Boundary Surveys
- Topographic Surveys
- Construction Stake-Out
- As-Built Surveys
- Anchor Bolt location surveys
- Right of Way acquisitions
- Easement determinations
- Highway design surveys
- Airport Design surveys
- Oil Well plats
- GIS data collection



*NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-008*

**ACCEPTING AECOM PROPOSAL FOR ENGINEERING SERVICES –  
WWTP CAPITAL PROJECTS**

**WHEREAS**, in January 2024 the Niagara Falls Water Board issued a request for proposals for engineering services in connection with various planned capital projects, including for several capital improvement projects at the wastewater treatment plant; and

**WHEREAS**, the Water Board has been awarded grant funds under CWSRF Project No. 6603-16-00 that will partially offset the total cost of the wastewater treatment plant projects that are the subject of this resolution; and

**WHEREAS**, one or two proposals were received for each of the projects that are the subject of this resolution, and Water Board staff recommend acceptance of AECOM’s proposal for the projects described below because that firm has proposed a reasonable fee, its proposed project team is qualified, and because awarding multiple projects to one engineering firm allows for administrative efficiencies and cost savings, including by facilitating bid packages with multiple projects and potential reductions in the cost of construction inspection; and

**WHEREAS**, AECOM’s proposed engineering fees for the projects that are the subject of this resolution, set forth below, are inclusive of survey, design, bidding, construction administration, and construction inspection:

<b>Capital Item</b>	<b>Project Description</b>	<b>AECOM Proposed Engineering Fee</b>
WWTP 1.2	Influent Channel Leak Repair of Expansion Joints	\$79,000
WWTP 3.2	Grit Pump Flow Meters	\$100,000
WWTP 3.3	Rapid Mix Tank Cleaning	\$66,000
WWTP 6.2	Carbon Bed Effluent Cleaning & Inspection	\$80,000
WWTP 6.3	Carbon Filter Mud Valve Replacements	\$58,000
WWTP 11.6	Removal and Replacement of Plant Water Piping	\$173,000
	<b>Total:</b>	<b>\$556,000</b>

\* CONTINUED ON NEXT PAGE \*

**NOW THEREFORE BE IT**

**RESOLVED**, that on behalf of the Niagara Falls Water Board, its Chairperson hereby is authorized to execute an agreement to be negotiated with AECOM to perform engineering services for the wastewater treatment plant capital projects referred to as Capital Items WWTP 1.2, WWTP 3.2, WWTP 3.3, WWTP 6.2, WWTP 6.3, and WWTP 11.6, consistent with AECOM’s February 19, 2024 proposal and for a total fee not to exceed \$556,000.

*Water Board Personnel Responsible for Implementation of this Resolution:*

- Executive Director
- Director of Technical & Regulatory Services
- General Counsel

*Water Board Budget Line or Capital Plan Item with Funds for this Resolution:*

- Capital Plan Items: WWTP 1.2, WWTP 3.2, WWTP 3.3, WWTP 6.2, WWTP 6.3, and WWTP 11.6
- Capital Items Provided by: D. Williamson
- Available Funds Confirmed: B. Majchrowicz (Financing Plan: EFC/CWSRF)

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	<b>Yes</b>	<b>No</b>	<b>Abstain</b>	<b>Absent</b>
Board Member Asklar	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman Forster	[ ]	[ ]	[ ]	[ ]

Signed By:

Vote Witnessed By:

\_\_\_\_\_  
Nicholas J. Forster, Chairman

\_\_\_\_\_  
Sean W. Costello, Secretary to Board



Submitted to:  
Niagara Falls Water Board  
RFP 2024-01  
February 19, 2024



PROPOSAL FOR

# Capital Projects Engineering Services

Delivering a better world

February 19, 2024

Mr. Douglas S. Williamson, PE  
Acting Executive Director  
Niagara Falls Water Board  
5815 Buffalo Avenue  
Niagara Falls, NY 14304

## Proposal for Niagara Falls Water Board Capital Projects Engineering Services - RFP No. 2024-01

Dear Mr. Eagler:

The Niagara Falls Water Board (NFWB) is continually executing multiple capital improvement projects on its wastewater treatment plant (WWTP) and other infrastructure to deliver high-quality services to its customers. AECOM has a unique familiarity with many of the NFWB WWTP unit processes that present opportunities for efficiency and comprehensive evaluations/rehabilitations. Since 2017, AECOM has been evaluating process operations, providing technical support to improve treatment performance, and most recently providing design/construction services. Our experience has allowed us to understand processes within the WWTP and how those processes are interdependent. We look forward to using this expertise as we work with you and your team to provide the engineering support and delivery of the 11 WWTP and one sewer collection system capital projects outlined in your request for proposal (RFP).

In addition to our local knowledge of the facilities and expertise, we have access to several subject matter experts, relevant resources, and multiple projects with comparable challenges and successful outcomes. AECOM's team and approach provides the NFWB with the following advantages:

- **Experience and Continuity.** Our experience will allow us to immediately leverage institutional knowledge of the WWTP operations and maintenance. Our understanding of the WWTP includes the way the NFWB currently operates the sedimentation basins, carbon filters, and manages waste solids. Understanding the past operations and current improvements of the WWTP will reduce the initial learning curve for all the WWTP projects, assist with defining the full scope of each project, and develop project sequencing and likely project packages that will result in cost efficiencies.
- **Past Performance.** We are proud of our history of delivering high quality projects for the NFWB. Past projects range from treatment chemical optimization, full-scale operation review and assistance, bench-scale and pilot-scale testing to full-scale designs for the effluent disinfection system and sedimentation basin upgrades. These and other projects were delivered to provide the NFWB with evaluations and system designs that improve the WWTP performance with system operation, maintenance, and safety at the forefront. Lastly, our relationships within your organization will allow us to develop and implement improvements that will meet NFWB's expectations.
- **Professional Qualifications.** As outlined in this proposal, our project team has extensive relevant experience. This experience, combined with our understanding of the WWTP, its operations, and personnel will allow us to effectively evaluate, design, and implement the multiple WWTP capital projects. John Goeddertz, who will serve as our Client Liaison, is well known to the NFWB staff and has been providing operational support and capital project review for the past several years. Jeff Tudini has provided process engineering, system analysis, design, and project management support for multiple projects, current and past, with NFWB and will serve as the Project Manager for the projects selected. The proposed project team will be supported by nationally recognized Technical Advisors, Jeff Reade and Jim McQuarrie, that will provide technical project oversight, Quality Assurance and Quality Control (QA/QC), and general project guidance.
- **Geographic Location and Depth of Resources.** AECOM offers highly qualified individuals in our Buffalo, New York office with approximately 100 individuals offering a wide range of expertise. AECOM has over 1,500+ professional staff located in Northeast offices to support the NFWB.

AECOM is fully committed to support the NFWB on these capital projects and we look forward to discussing our proposal and approach. Please contact Jeff Tudini at 716-868-4306 or jeffrey.tudini@aecom.com if you have any questions or need additional information. Thank you for your consideration.

Sincerely,

**AECOM USA, Inc.**



Douglas Gove, Jr., PE  
Vice President  
617-721-7005 | doug.gove@aecom.com



Jeffrey Tudini  
Project Manager  
716-868-4306 | jeffrey.tudini@aecom.com

**Capital Projects  
Request for Proposals  
Niagara Falls Water Board**

**Wastewater Treatment Facility**

Location: 1200 Buffalo Avenue, Niagara Falls NY 14304

Projects – refer to attachment A, 2021 Sewer Engineering Report	Submitting On Project, YES or NO
WWTP-12 Roof Repairs	YES
WWTP-16 Standby Generator	YES

Projects – refer to attachment B, 2022 Sewer Engineering Report	Submitting On Project, YES or NO
WWTP-1.2 Influent Channel Leak Repair of Expansion Joints	YES
WWTP-1.3 Sediment Basin #5 Treatment of Backwash	YES
WWTP-3.2 Grit Pump Flow Meters	YES
WWTP-3.3 Rapid Mix Tank Cleaning	YES
WWTP-5.5 New PA and Fire Alarm System	YES
WWTP-5.6 Carbon Area Lighting, Switchyard Improvements	YES
WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection	YES
WWTP-6.3 Carbon Filter Mud Valve Replacements	YES
WWTP-11.6 Removal and Replacement of Plant Water Piping	YES

**Sewer Collection System**

Location: Calumet Avenue, Niagara Falls, NY

Projects – refer to attachment C, 2023 Sewer Engineering Report	Submitting On Project, YES or NO
Calumet Avenue 48 inch brick sewer rehabilitation	YES

**Water Treatment Plant**

Location: 5815 Buffalo Avenue, Niagara Falls NY 14304

Projects – refer to attachment D, 2021 Water Engineering Report	Submitting On Project, YES or NO
WTP-2.1 - SCADA Control System Upgrades	NO
WTP-6.1 - Chlorine System Upgrades	NO

**Capital Projects  
Request for Proposals  
Niagara Falls Water Board**

**Water Distribution System**

Location: various throughout City of Niagara Falls NY

Projects – refer to attachment D, 2021 Water Engineering Report	Submitting On Project, YES or NO
W2 - 20 inch main from Beech Avenue Storage Tank to Ontario Street	NO
W9 - 10th Street & Michigan Ave - Lockport St to Ontario St & 10th St to 11th St	NO
W17 - Laughlin Drive Main - 82nd Street to Bollier Avenue	NO
W21 - Ontario Avenue Main - 13th Street to Main Street	NO
W25 - Van Rensselaer Avenue - 900 Block	NO
W29 - Witkop Avenue and 85th Street Loop	NO

Projects – refer to attachment E, 2023 Water Engineering Report	Submitting On Project, YES or NO
Alternative 2H - Install New Ground Storage Tank and Pre-Packaged Pumping Station at Beech Avenue	NO
W13 - 81st Street watermain - Frontier Avenue to Niagara Falls Boulevard	NO
W15 - College Terrace watermain - Madison to College Avenue	NO
W24 - Rivershore Drive watermain - S. 86th Street to 91st Street	NO

1

# Project Understanding

# 1. Project Understanding

Per the NFWB solicitation 2024-01, AECOM is submitting this proposal for the projects identified in Table 1. As shown in Table 1, AECOM is submitting this proposal to be selected and provide engineering evaluation, design, bid phase services, and construction administration and inspection services for all the WWTP and collection system projects. Given our past and current history with providing similar services for other capital improvement projects at the NFWB WWTP and having background with all the projects included in this RFP, AECOM is well positioned and ready to work with the NFWB team to deliver these projects. Being involved with multiple capital projects that have been designed and installed successfully in the past and currently involved with day-to-day operations and improvements at the WWTP provides a unique opportunity to gain efficiencies with each of the selected projects associated with experience and institutional knowledge. We look to leverage these benefits to find cost and schedule improvements when delivering the selected projects. Furthermore, AECOM will maintain a 'big-picture' mindset with the delivery of these projects understanding that the NFWB WWTP continues the momentum for the potential conversion to a biological treatment process. Understanding this and working with the NFWB project team will help us prioritize the implementation of these projects relative to if/when a future treatment conversion happens.

**Table 1. Projects AECOM is submitting on**

Project	Submitting on Project
WWTP-12 Roof Repairs	YES
WWTP-16 Standby Generator	YES
WWTP-1.2 Influent Channel Leak Repair of Expansion Joints	YES
WWTP-1.3 Sediment Basin #5 Treatment of Backwash	YES
WWTP-3.2 Grit Pump Flow Meters	YES
WWTP-3.3 Rapid Mix Tank Cleaning	YES
WWTP-5.5 New PA and Fire Alarm System	YES
WWTP-5.6 Carbon Area Lighting, Switchyard Improvements	YES
WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection	YES
WWTP-6.3 Carbon Filter Mud Valve Replacements	YES
WWTP-11.6 Removal and Replacement of Plant Water Piping	YES
Calumet Avenue 48 inch brick sewer rehabilitation	YES

## Project Understanding

### WWTP-12 Roof Repairs

**Project Description:** This project includes the replacement of the last five roofs at the WWTP that were not replaced during the 2014/2015 roof replacement project that was engineered and managed by AECOM. These roofs are covered with modified bituminous membrane roofing material and based on the RFP information are showing signs of needing replacement. The remaining roofs include the following:

- Carbon Filter Building Roof (South End Roofs 14, 15 and 16)
- Rapid Mix Tank (Roof 19)
- Sludge Building Loading Dock (Roof 30)

These roofs were not replaced at that time due to lack of funds and a determination that replacement of these five roofs were not critical to the operation of the WWTP. This decision was based upon the fact that these five roofs were over unconditioned spaces (no heat or AC) and the belief that not fixing them would not result in deterioration of the underlying concrete structures.

**Need for Project:** These five roofs are original construction (1978) and are now 45 years old. Per the most recent roof survey performed in 2021, a number of deficiencies were identified. These deficiencies can allow water to penetrate the roof surface that will eventually result in deterioration of the underlying concrete structure. In order to prevent this deterioration of the underlying concrete structure, roof replacement is recommended.

**Criticality of Project:** Although not critical to the current operation of the WWTP, failure of any of these underlying structures would result in significant additional cost to repair the structures. For this reason, further delay in the project is not recommended.

**Other Considerations:** The prior roof replacement engineering work included an asbestos survey and condition assessment, engineering design, bid phase and construction management and inspection. We performed the prior asbestos survey and are intimately familiar with the work to be performed. AECOM can pick up this project where we left off in 2014.

## WWTP-16 Standby Generator

**Project Description:** This project includes providing a standby power system capable of powering the entire WWTP in the event of a power failure. The WWTP currently has an existing emergency generator at the facility which only powers one of the five power centers, and then only includes one main pump and a handful of emergency circuits (lighting, control systems, etc.). The proposed system would be sized to power the entire WWTP and prevent untreated or partially treated wastewater from being discharged in case of power loss.

**Need for Project:** Ten States Standards for WWTP's requires WWTP's to have one of the following:

- Independent power feeders from separate substations, or
- Internal combustion engine emergency backup power system.

Although the WWTP has two power feeders and it is AECOM's understanding that they are from separate substations, loss of power in the past has resulted in significant damage to existing equipment and discharges of partially treated or untreated wastewater. Based on AECOM's past experience, the two feeders likely share a single point of failure somewhere in the system. This project is necessary to protect the assets in place at the WWTP as well as maintain permit compliance.



NFWB's current emergency generator is not capable of powering the entire facility.

As noted in the RFP, the need for a concept evaluation should be considered for this project to evaluate different standby power options. Given that there are two separate power feeds, one option could be to confirm with the utility that there is not a single point of failure upstream in the power distribution network and that the power system can be switched to the backup power feed quickly, reliably, and safely during an emergency. Modifications to allow for the transfer to the

backup power feed may be significantly less expensive than adding a standby power system large enough for the entire facility. If a standby power system is required, an option would be for a new standby power system to be located at the 13.8 KV level and feed the existing switchgear. Alternatively, individual standby power systems could be located at each of the five power centers or a centralized standby power system could be designed at the 480V system. At this time, AECOM believes that placing the standby power system at the 13.8 KV level will be most advantageous as it provides more flexibility as it can be shared between any of the power centers and will minimize O&M effort. AECOM's evaluation will look at each of these options and consider advantages, disadvantages, and costs of each.

### AECOM Differentiator

**AECOM has a design center in the Northeast (Massachusetts) dedicated to water/wastewater multi disciplinary design. The electrical department, led by Yasser Rizk has provided electrical evaluations and design support at treatment facilities ranging from 1 MGD to 1,200 MGD including backup power supply and medium voltage distribution.**

**Criticality of Project:** The extent of backup power systems and/or improvements or upgrades will be further evaluated as part of the concept development phase of this project; however AECOM's experience suggests that standby power generators will more than likely be necessary to protect the WWTP's assets and the environment.

**Other Considerations:** Should a standby power system be needed, each of the options considered will require modifications to the main 13.8 KV switchgear and/or power centers to add in automatic transfer switches, load banks, and other appurtenances. Given the size of the WWTP, its current electrical loads, the potential future loads after the bio-conversion, and the sizing limitations of standby generators, AECOM's evaluation will consider whether it would be beneficial to have a single large generator or multiple smaller generators that have the ability to be synchronized and potentially with room to expand when the bio-conversion takes place. Standby generators are available up to 3 MW but having multiple smaller generators provide additional redundancy and provide more flexibility. Additionally, standby generators generally do not operate well when under-loaded, so care will need to be taken to design a system that does not result in premature failure of the generator due to inefficient operation. Any standby power option

will require a significant investment by the NFWB. Based on a number of our recent projects, equipment costs for diesel standby generators are approximately \$1M per MW of capacity, without installation costs, appurtenances, and modifications to the existing switchgear.

AECOM's evaluation will also consider diesel or natural gas as the fuel source for the standby power system. Generally, diesel standby generators cost substantially less and are smaller than natural gas systems, so it is likely that a diesel system will be preferred.

## WWTP-1.2 Influent Channel Leak Repair of Expansion Joints

**Project Description:** The influent channel at the WWTP is an approximately 500-foot-long concrete channel that lies within the structure referred to as the spine. At its lowest elevation the spine houses the pump gallery that contains piping and pumps to deliver sludge and grit that is collected in the sedimentation basins to subsequent processing facilities. The pump gallery is regularly occupied by plant operators and maintenance staff while tending to the operation and maintenance of the equipment located therein. Located above the pump gallery is the influent channel. The influent channel conveys all flow from the Main Pumps and the Gorge Pumping Station to the sedimentation basins. Flows in the influent channel range from 20 to 85 mgd. The influent channel itself is approximately 11 feet wide by 6 feet high. Within the spine there are expansion joints located at column lines A53 and A29. Column line A53 is located just west of the rapid mix tanks and A29 is located at the stair tower just west of the sludge building. These expansion joints encompass all levels of the spine (pump gallery, influent channel, and the finished walkway that connects the filter building to the sludge building). Currently the expansion joint at column line A53 leaks water from the influent channel into the pump gallery. The leakage has been ongoing for at least the last 5 years, is fairly minor and gets worse in winter when the spine is in a contracted condition due to cold temperatures. Observed expansion/contraction within the spine is on the order of  $\frac{3}{4}$  to 1 inch in length from summer to winter. The expansion joint in the influent channel at column line A29 is not currently leaking.

In order to inspect and repair the expansion joints from within the channel, flow in the influent channel needs to be stopped and the influent channel dewatered to facilitate the work. To access the column A53 expansion joint, all flow from the Main Pumps (up to 65 mgd) and the Gorge Pumping Station (up to 19.5 mgd) must be bypass pumped around the screens and rapid mix tanks and delivered directly to the sedimentation basins. While the influent channel is bypassed, it is

recommended that the influent channel be cleaned and inspected to determine if any additional issues are present. This is recommended because the influent channel has never been drained and inspected. Alternatively, there are methods to stop the expansion joint leak or collect and route the leaking water away from the overhead area in the pump gallery. These methods could be implemented from within the pump gallery and not require the isolation and bypass pumping of the influent channel. These include:

- Install De Neef Dry Oakum soaked in De Neef Pure Polyurethane grout.
- Install a Sikadur Combiflex SG system.
- It may be possible to capture the leakage and direct it to a floor drain that discharges to the head of plant so that the water does not reach the floor. This could be done by installing a leak collection pan or liner at the ceiling level in the pump gallery.

These repairs can be implemented from within the pump gallery and should be extended up the side wall expansion joints, as well. These repairs may not be as good as sealing the joint from within the channel, but a plant shut down and bypass pumping will not be necessary. If a shut down becomes available implementing the two joint repair options noted above can be used within the channel, as well.

**Need for Project:** The current rate of leakage from the influent channel at the A53 expansion joint is fairly minor and results in a constant wet spot on the floor of the pump gallery. As noted previously the leakage is worse in winter but even at its worse still only results in a wet spot on the floor in the pump gallery. The leakage does not cause any significant issues in the pump gallery. While this repair may not present an immediate need given the small leak, if the condition of the A53 expansion joint gets worse and unplanned isolation of the influent channel with bypass pumping and emergency repair is required, the coordination, cost, and potential impacts to the equipment in the pump gallery and associated operations can be significant.

**Criticality of Project:** This work is not considered critical at this time and nuisance conditions (wet floor) could be managed using other means at considerable cost savings.

**Other Considerations:** While this project does not present an immediate need for execution, the combination of this project with Project WWTP-3.3, Rapid Mix Tank Cleaning, may present some opportunities to address both issues and find some economy of scale. Cleaning of the rapid mix tanks does not necessarily require the isolation or bypassing of the influent channel; however, coordinating these projects and completing at the same time or consecutively, may provide some economies with increasing the number



of potential bidders, reducing mobilization and WWTP coordination efforts, and provide for a more thorough cleaning and assessment of the influent channel and rapid mix tanks. Furthermore, if this project is not implemented soon, there are potential repairs that could be implemented from within the lower pipe gallery area without having to isolate and bypass the influent channel until/if a shutdown becomes available. These options are detailed above and should be considered before influent channel isolation and repair from within the channel is conducted.

## WWTP-1.3 Sediment Basin #5 Treatment of Backwash Water

**Project Description:** As part of the December 2019 Consent Order related to the dark water incident, the NFWB was required to evaluate and optimize the operation of the existing WWTP. One of the items studied at that time was optimizing the treatment of carbon filter backwash water. At that time filter backwash water was directed to Sedimentation Basin 5 and treated separately (with primary polymer only) from the rest of the influent wastewater. The water exiting Sedimentation Basin 5 was then discharged directly to the chlorine contact tank for effluent disinfection and discharge, thereby bypassing treatment via the carbon filters. Treatment provided in Sedimentation Basin 5 was less than ideal. No chemical coagulant was added, and only primary polymer was added to the flow. Little to no treatment was being provided in Sedimentation Basin 5. As part of the requirement to optimize treatment, AECOM preliminarily looked at chemical treatment of the backwash water to see if improved treatment could be provided by using different chemical coagulants, along with a different flocculent (polymer). It was determined that improved treatment could be provided by using alternative treatment chemicals. To implement these alternative treatment chemicals in the full-scale plant operation, new chemical storage and feed systems would need to be constructed. Alum based coagulants for example would require a new chemical bulk storage tank system, complete with secondary containment, truck loading area, pumps, pipes, etc. to be constructed along with a new polymer makeup and feed system. Because of the need for a significant capital investment, along with the developments cited below, this capital investment was not undertaken.

**AECOM recommends a discussion with NFWB on the need for this project considering optimized plant operation has resulted in 5+ consecutive years of discharging spent backwashing water to the head of the treatment train.**



AECOM's assistance in testing different coagulants improved backwash treatment and provided alternatives for treating the backwash wastewater in Sedimentation Basin #5

At about the same time that these studies were being conducted plant operations were in the process of being modified and improved such that the number and frequency of filter backwashes was reduced to approximately 30 to 45 backwashes per day compared to well over 100 backwashes per day previously. With reduced backwash frequency, the filter backwash water volume was reduced such that it was capable of being returned to the head of the plant where it could be retreated through all processes (chemical treatment, carbon filtration, effluent disinfection). This practice has been successfully practiced since some time in 2018.

**Need for Project:** As far as the required Consent Order objective of optimizing treatment is concerned, the NYSDEC is of the opinion that the Consent Order objective has been met. Therefore, so long as backwash volumes do not increase to the point that the flows cannot be sent to the head of the plant, no additional treatment of the filter backwash water is required. Considering that this practice of sending backwash flows to the head of the plant has been successfully practiced for 5 years now, this project may be considered a lower priority for implementation with the potential for the concept development and planning phases to be advanced before any significant design efforts are started.

**Other Considerations:** If in the future backwash numbers and volumes increase as a result of changed conditions such that backwash flows cannot be managed by the head-of-plant method currently practiced, then this project should be reconsidered at that time. The last consideration is that the conversion of the WWTP to a biological treatment facility would eliminate the need for this treatment system because filter backwash water would not be generated in the converted facility. The philosophy with the ongoing plant upgrades has been to minimize capital upgrades that would not be necessary if/when the WWTP is converted to a biological treatment facility.

## WWTP-3.2 Grit Pump Flow Meters

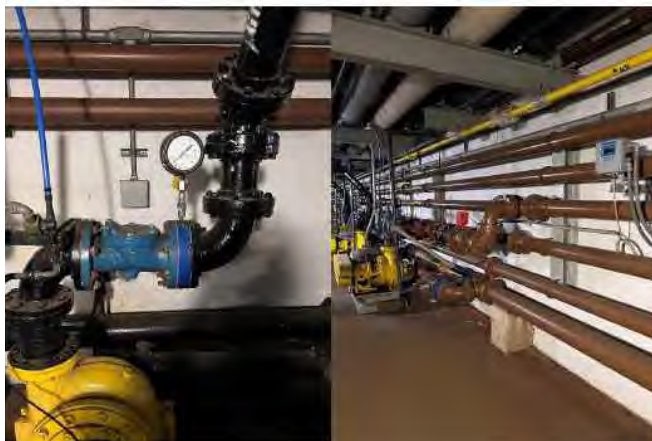
**Project Description:** The WWTP features grit removal and retention facilities in that the sedimentation tank grit compartments and the rapid mix tanks are deep and have highly sloped sides that allow for excellent grit removal capabilities. Many other local WWTPs have difficulties removing grit and that grit accumulates in downstream treatment facilities such as aeration tanks, thickeners, and digesters, causing serious operating issues in these processes as the volume of the tank is gradually consumed by the buildup of heavy grit material. The NFWB does not experience these issues and generally is able to remove the grit in their existing facilities. Currently plant operators manage grit processing from five sedimentation basins and two rapid mix tanks by pumping the grit through two parallel processes consisting of a hydrodynamic cyclone followed by a grit classifier. Typically, the five sedimentation basins are rotated through one of the cyclone/classifiers and the two rapid mix tanks are rotated through the other cyclone/classifier.

When grit is being pumped, flush water is also typically applied at multiple points in the pipe system to keep the grit from plugging the pipeline. At present there are pressure gauges on the grit pump discharge piping but most of the gauges are inoperable. Without flow meters and a lack of functional pressure gauges, there is little information available to the operator to tell whether they are actually pumping grit or just flowing flush water. The grit system is operated intermittently with periods when grit is not being pumped (approximately 8-hour/day). When the grit removal operations are not being conducted eventually the system becomes plugged and/or grit accumulates in the grit screw to the point that the screw trips out. In order to assist the plant operators with the proper operation of the grit system it is recommended that flow meters be installed in the grit piping system so that grit flow can be monitored to verify proper operation of the grit removal system.

In the current system there are ten pumps that move grit from the five sedimentation basins. Each basin has a dedicated grit pump and a spare pump that can be used for grit or sludge service. Each of the two rapid mix tanks has its own dedicated grit pump but there are also provisions to use either grit pump to pull from either rapid mix tank: thereby providing redundancy. Therefore, there are twelve pumps that can be used to move grit. The grit system is typically operated with large volumes of flush water that can be added before the grit pump or to any number of pipe locations downstream of the pumps.

**Need for Project:** The operations staff is unable to determine if they are processing grit from the sedimentation basins and rapid mix tanks with the current system. Magnetic flow meters and operational pressure gauges would allow operations staff to monitor and control this process.

**Criticality of Project:** The worst-case scenario at the NFWB WWTP is that grit accumulates excessively in the grit compartment of the sedimentation basins and requires manual removal using a vacuum truck. This occurs when a grit pump is not removing grit even though it is operating, and the operators think it is moving grit.



Existing grit pumps and piping in pump gallery to locate spaces for implementing flow meters.

So, while the WWTP has operated its grit facilities as described for the past 45 years without any significant negative consequences (other than an occasional manual cleaning of a plugged grit compartment), the addition of properly engineered flow meters would assist the WWTP in better operating these systems and may reduce the need for an occasional manual grit cleaning operation. Further the cost of this work is not that much relative to the potential benefit provided.

**Other Considerations:** The optimal means of deploying grit flow meters would be in a location where it is measuring the flow of grit and water exiting the tank exclusive of any flushing water subsequently added to maintain the grit in suspension. Another factor to consider is the number of flow meters required. If a flowmeter is installed on each pump, it would require twelve flow meters, versus a flow meter installed on the tank outlet would only require seven flow meters (one on each sedimentation basin and one on each rapid mix tank). Alternatively, modifications to the sedimentation basin sludge/grit piping system could be made so that the grit pump and the spare pump are combined before the placement of a flow meter so that one meter could monitor the output from either the grit pump or the spare pump. Doing this however would require piping modifications in the pump gallery.

Additionally, a meter installed at each of the grit cyclone/classifier trains would allow measurement of all flow which would include the flush water being added to the piping along the way. Another factor that must be considered is that the grit being conveyed can be abrasive and the selected flow meter must be able to withstand this abrasiveness without damage. All these factors will be considered by AECOM to arrive at an effective yet cost sensitive solution for meeting the needs of this project.

## WWTP-3.3 Rapid Mix Tank Cleaning

**Project Description:** It is believed that at least one of the two rapid mix tanks is plugged solid with grit. A rapid mix tank that is plugged with grit no longer will remove grit and will also provide minimal residence time during the mixing of ferric chloride with the influent wastewater. Reduced mixing time will make the chemical coagulation process less efficient and therefore make it a less effective treatment process. Therefore, maintaining these tanks free of accumulated grit is critical to the overall process.

Fortunately, the plant was designed with a system of manual stop gates that can be moved to isolate the two rapid mix tanks and allow their emptying and cleaning. Once the isolation gates are installed at the rapid mix tanks' inlet and outlet, all flow in the influent channel then bypasses the rapid mix tanks, the tanks can be pumped empty and then cleaned using a vacuum truck.

**Need for Project:** This work could be performed by plant maintenance and operations staff with assistance from outside sewer staff to operate the vacuum truck or included as part of a construction contract if it is NFWB's desire to have it performed by outside contractors. In addition, AECOM could assist with developing a standard operating procedure with detailed instructions, pictures, and sequencing details to assist the NFWB operations and maintenance staff with executing this work.

If this is determined to not be feasible then a contractor such as National Vacuum should be utilized to do the work after the tanks are isolated by NFWB maintenance staff. The need for outside engineering assistance is expected to be limited for this project.

**Criticality of Project:** This project is critical and should be performed as it impacts the WWTP operating efficiency.

**Other Considerations:** Both the east and west rapid mix tanks have a high-pressure flush water line that directs a large volume of water at the tank outlet to keep it from plugging. One of the two pipes is not functional, and AECOM recommends that when the tank cleaning work is performed the pipes be inspected and returned

to operational status. Furthermore, given the close proximity to the leaking influent channel expansion joint (project WWTP-1.2) and similar work activities of these two projects with isolations, cleaning, and inspection, it maybe useful to combine these projects to potentially find efficiencies with timing, operations and contractor coordination, and cost.

## WWTP-5.5 New Public Address (PA) and Fire Alarm System

**Project Description:** The WWTP does not have a functioning PA system and has never had a fire alarm system. The lack of a public address system is managed via the use of two-way radios that are available to plant operations and maintenance staff or via the use of personal or NFWB provided cell phones. Currently the Chief Operator and the Maintenance Supervisor have NFWB provided cell phones. All employees have personal cell phones. It is expected that this project will include an evaluation of the existing PA system, an evaluation of the code requirements, and a survey of the buildings and facilities that will require PA and fire alarm systems. These evaluations will be used to develop a conceptual design of both the PA and fire alarm systems which will be used as the basis of design for the implementation of the new PA and fire alarm system.

**Need for Project:** The current public address system is not functional and is required for the effective operation of the WWTP and for the safety of the WWTP employees. Similarly, there is no fire alarm system and the NFWB desires to add one for the safety of the WWTP staff and protection of its assets.

**Criticality of Project:** The use of two-way radios and cell phones has proven not to be ideal as there are dead spots within the facility and although a PA system is not required by code, it is important for operations of the WWTP and for employee safety. Similarly, while adding a fire alarm system to an existing building that is not undergoing a major renovation is not required by code, it is prudent to do so for protection of the WWTP's assets and safety of its employees.

**Other Considerations:** AECOM will evaluate the extent to which the current PA system is corroded to determine if it is possible to re-use the existing conduit and wires, which will greatly reduce the cost of replacing the system. AECOM will work with NFWB to determine the requirements for the replacement system, however it should be noted that there are currently only a small number of manufacturers for these types of systems which may limit available options. It may be more economical to equip all staff with two-way radios and install repeaters and signal enhancers where needed to provide full coverage, particularly if new conduit and

wire is necessary. While using wifi for the PA system could be considered and evaluated, AECOM does not typically recommend it for these systems because our experience is that wifi coverage is too spotty in tunnels, galleries, and other process spaces.

Installing a fire alarm system in the WWTP's buildings will be a significant effort and will require the involvement and input from the Fire Department and Building Official. Adding this system will also more than likely trigger the need to add sprinkler systems where required by code. It is also AECOM's experience that Fire Department's and Building Officials will require the addition of emergency lighting, exit signs, and other safety measures at the same time if these are already not in place. Typical components for fire alarm systems include smoke detectors, heat detectors, pull boxes, horns, strobes, duct smoke detectors, control panels, and a means to interface with the Fire Department or third-party security service through a dedicated communication link such as a phone line or antenna. One approach AECOM has employed in the past to streamline this process and would propose to use on this project is to coordinate allowable design criteria with the Fire Department and Building Official, provide these criteria to the Contractor in the Bid Documents, and delegate the detailed design as well as construction of the fire alarm system to the Contractor.

### AECOM Differentiator

**AECOM has designed hundreds of water and wastewater treatment facilities with fire alarm systems and, as a result, is very familiar with the code requirements for these systems at these critical facilities. Our experience in specifying and designing these types of systems means that we already know which design criteria and other information will need to be included in our delegated design specifications.**

## WWTP-5.6 Carbon Area Lighting, Switchyard Improvements

**Project Description:** The existing carbon filter lighting is largely non-operational making observations within the carbon filter beds nearly impossible without an external light source. Plant maintenance staff report that new lighting fixtures are required throughout the filter building as the existing fixtures are not serviceable. Assuming the conduits and conductors serving the lighting within the filter area are in good condition, this work amounts to changing approximately 126 light fixtures with new LED fixtures of the same voltage. The light fixtures should be entirely sealed as the filter bays

tend to be a moist area and can experience low levels of hydrogen sulfide which can lead to corrosion of exposed copper and brass. The fixtures should meet the NFPA requirements for the filter area designation which has previously been identified as a Hazardous area. Alternatively, this project may include the need for new conductors and controls assuming the existing electrical conduits are suitable for reuse. The worst-case scenario would include new conduits in addition to lighting fixtures, conductors, and controls. Given the uncertainty of the condition of the conduits, wires, conductors, etc. and the need to meet the requirements for the NFPA area designation, AECOM recommends that the existing systems be inspected to determine which portions can be reused and which need to be replaced.

With regard to switchyard improvements, it is AECOM's understanding that all switchyard improvements identified in Project 5 have been or are currently being addressed using IDIQ contractor Ferguson and therefore would not have to be addressed as part of this project.

**Need for Project:** At present it is difficult to observe a filter's operation because most of the light fixtures within the filter areas are inoperable. It is recommended that the lighting be restored so that proper operation and maintenance of the filters can be performed until such time as the plant will be converted to a biological treatment facility. In the event the biological conversion is implemented these light fixtures would still be necessary to operate the biological aeration tanks that are proposed to be located in the current carbon filters.

**Criticality of Project:** This project is considered a high priority in order to maintain existing operations and for personnel safety.

**Other Considerations:** New light fixtures should be energy efficient LED fixtures that are completely sealed to provide protection against moisture and corrosion; and have the appropriate rating for the filter area (current designation is Hazardous). The current version of NFPA 820 classifies carbon filters as having a "significant hazard from combustible carbon material" thus requiring an explosion proof lighting fixture. Lastly, AECOM has assisted clients with applying for and receiving energy efficiency rebates from utility providers for the implementation of more energy efficient lighting. AECOM will work with the NFWB to identify potential energy efficiency rebate opportunities associated with this project and provide the information needed to apply for the rebates.

## WWTP-6.2 Carbon Bed Effluent Cleaning & Inspection

**Project Description:** This project includes the draining, cleaning, and inspection of carbon bed effluent (CBE) wet wells. There are two CBE wet wells, the east wet well serves the A-train filters (i.e., Filters 1 through 14) and the west wet well serves the B-train filters (i.e., Filters 15 – 28). The wet well serves as a water storage tank from which the backwash pumps pull water that is used to backwash the carbon filters. The plant water pumps also pull water from the CBE wet wells. Water exiting the CBE wet wells flows over a weir into a 72-inch diameter pipe that flows by gravity to the chlorine contact tank.

**Need for Project:** These wet wells have never been entered and inspected after their construction in the early 1980's under Contract 9. There are several concerns:

- There may be accumulated activated carbon in the wet wells as a result of the initial failure of the carbon filter underdrain system or other operations over the years.
- The wet wells consist of reinforced concrete tanks including the ceiling which serves as the floor of the odor control building. Sulfide is routinely present in the wet well contents (carbon filter effluent), and it is possible that sulfide corrosion of wet well ceiling has been occurring over the approximately 40-years the wet wells have been in operation.

The CBE wet wells are one of only a few remaining areas in the WWTP that have never been inspected.

**Criticality of Project:** Because this is one area that has not been inspected and the potential for ceiling corrosion could cause a structural collapse of the Odor Control Building floor and this is a critical work item.

**Other Considerations:** In order to enter and inspect a wet well, all filters on that side (A Train or B Train) must be taken offline. That will stop the flow of water into that wet well. The plant water pump system must be isolated so that the wet well to be inspected is disconnected from the plant water pumps. Lastly a submersible pump needs to be lowered through the access hatch and the wet well pumped out. Entry for inspection would follow confined space entry procedures. Any accumulated materials would be pumped out using a vacuum truck. Lastly the tank walls and ceiling should be washed down, and the tank walls, floor and ceiling thoroughly inspected. This work will require a specialty contractor to conduct confined space entry with retrieval systems and implement proper cleaning of the wet wells and removal of debris to allow for thorough inspection.

This project could potentially be combined with the influent channel leak repair (WWTP-1.2) and rapid mix tank cleaning (WWTP-3.3) given the potential need for a specialty contractor with confined space and inspection training for each of these projects.

## WWTP-6.3 Carbon Filter Mud Valve Replacements

**Project Description:** Each of the 28 carbon filters have a 6-inch gate valve that can be opened to drain the filter via the underdrain. Recently operations personnel attempted to operate each valve and determined many of them do not turn. It was recommended at that time that each of the 28 6-inch gate valves be replaced.

**Need for Project:** Proper operation and maintenance of the filters requires a functional mud valve to drain a carbon filter for maintenance or other work. The existing valves are approximately 45-years old and are in poor condition and/or non-operational.

**Criticality of Project:** Replacement of non-functioning valves is considered to be a high priority.

**Other Considerations:** Each mud valve is exposed and is readily accessible in the filter gallery. Given the location of these valves at the bottom of the filter beds, there may be some accumulation of solids and sediment around these valves and in the upstream and downstream piping. The need for cleaning and flushing the upstream and downstream piping may be necessary when replacing these valves.



Existing mud valve with accessibility to replace.

## WWTP-11.6 Removal and Replacement of Plant Water Piping

**Project Description:** Project 11.6 was originally part of the list of capital projects (Project 9) under the Consolidated Funding Engineering Report application for which a \$20 million construction grant was obtained. The Project 9 piping evaluation looked at piping throughout the WWTP and ultimately resulted in the following work being done:

- Replacement of plant water (treated effluent) piping in the pump gallery,
- Replacement of sodium hypochlorite piping to the scum building,
- Replacement of sludge pipeline between the Sludge Building and the Thickened Sludge Pump Building.

These projects were determined to be the highest priority piping projects and were addressed with Project 11. Since that time the WWTP has determined that the available water pressure for the belt filter presses is insufficient to properly operate three belt filter presses simultaneously. As a result, this portion of Project 11.6 will focus on upgrades to the process water piping that delivers water to the Sludge Building. Process water is defined as potable water piping that is downstream of a back flow preventer.

The three existing belt filter presses use wash water to keep the dewatering belts clean which improves the dewaterability of the sludge and increases the throughput capacity of the belt filter press. The belt presses are specified to require 88 gallons per minute of water at 110 pounds per square inch (psi) pressure in order to properly clean the belts. There are three existing belt filter presses and potentially a fourth belt filter press may be provided if and when the biological conversion is implemented. Therefore, future water requirements for the belt filter presses will be as high as 320 gallons per minute at 110 psi pressure. In addition to the water requirements of the belt filter presses there are three other areas in the Sludge Building where water pressure/volume requirements need to be addressed. These include:

- The four new polymer makeup systems that were recently installed will be provided with an upgraded water connection capable of delivering the necessary flow and pressure without the need for the booster pump that was installed. This system is specified to operate at 100 gallons per minute at 70 psi.
- Process water will be supplied to the polymer motive water at a regulated water pressure so that operators do not have to continuously monitor and adjust the

plant water motive water pressure that is currently used. This system is specified to operate at 30 gallons per minute at 25 psi.

- The thickened sludge pumps utilize process water for their seal water requirements. This piping system will be tied into the upgraded process water piping and a pressure regulator will be provided for accurate control of seal water pressure to the thickened sludge pumps. This system is specified to operate at 1 to 5 gallons per minute at approximately 25 to 40 psi.
- Wash down water hose bibs will be supplied in the belt filter press area in multiple locations to allow proper cleaning of the belt filter presses. This system is specified to operate at 100 gallons per minute at 100 psi.

This project design will require a hydraulic evaluation of the existing and proposed process water piping along with the design of system upgrades including multiple booster pumps capable of supplying a wide range of flows at varying pressure requirements, upsized process water piping, pressure regulating systems, pressure gauges, and controls. The system will be designed to meet current and future flow and pressure requirements.

**Need for Project:** Upgraded process water pumps and piping in the Sludge Building is critical for the performance of the belt filter presses. Currently only two belt filter presses can be operated and there are times where three belt filter presses are required due to the incoming solids loading. Additionally, if three belt presses can be operated simultaneously it is likely that the need for a second shift belt filter press operator can be eliminated thereby saving considerable cost. At the same time that the belt filter press needs are addressed the project will also correct a number of additional process water requirements in the Sludge Building as identified above.

**Criticality of Project:** This project is a critical project and should proceed with high priority since process water at the required flow rates and pressures are required for the operations within the Sludge Building.

**Other Considerations:** The potential conversion of the WWTP to a biological treatment system may produce an effluent quality that is more amiable for use with belt filter press washing. This approach will significantly reduce the reliance and use of potable water and cost for this process. While the timing of the WWTP conversion maybe outside the schedule for when this project will be implemented, there might be considerations to implement in this upgrade keeping the 'big picture' biological conversion changes in the forefront.

## Calumet Avenue 48-inch brick sewer rehabilitation

**Project Description:** There is an existing 48-inch diameter brick sewer on Calumet Avenue that is experiencing invert erosion to the point that settlement of the overlying street is becoming a concern. The Engineering Report completed by the NFWB (July 2023) indicates that the sewer in question is a 300-foot section, but manhole to manhole (between 13th Street and Highland Avenue) scales to approximately 575-feet. AECOM generally recommends that repairs such as these be performed manhole to manhole, particularly if slip lining is the selected technology.

AECOM will review the CCTV footage of the section of sewer in question and will evaluate the following alternatives:

- Concrete invert repairs and cementitious coating to balance of the pipe.
- Slip lining with cured in place resin set liner,
- Slip lining with Hobas pipe,
- Slip lining with HDPE pipe

An engineering evaluation will be provided before a decision is reached on the selected technology. The alternatives analysis will include a cost evaluation along with pros and cons of each method. Other considerations will include the need for bypass pumping, traffic disruption and control, restoration costs, ease of implementation, and degree of uncertainty associated with the technology.

**Need for Project:** Based on the information provided, AECOM agrees that repair of the sewer is needed. As a value added task, AECOM will evaluate the best repair method as part of the final design scope of work.

**Criticality of Project:** Although it's not clear that this sewer is at risk of imminent failure, it is important that this work proceed to minimize groundwater intrusion into the system and prevent further settlement of Calumet Ave.

**Other Considerations:** AECOM served as the project engineer for the replacement of the Iroquois Avenue sewer project in 2014. This work involved the replacement of approximately 1,500 feet of 54-inch brick sewer along with a 300-foot rock lined tunnel section. The sewer and manholes were in extremely poor condition and allowed significant amounts of groundwater to infiltrate. The work was ultimately performed through a combination of slip lining with Hobas pipe and open-cut sewer installation. AECOM performed engineering evaluations along with design, bid and construction phase services for the project. The project serves as an excellent go-by for the current project.

## Scope of Work

To accomplish the objectives of this project, AECOM provides a discussion of the proposed scope of work following the tasks listed in the Request for Proposal.

### Task 1 – Survey

AECOM will employ the services of a subcontracted survey firm to perform basic survey services related to the execution of the following projects:

- Calumet Avenue 48-inch Brick Sewer Rehabilitation
- None of the other wastewater related projects that AECOM is proposing on require a survey to be performed. Under Task 1 the survey work performed will include:
- Conduct horizontal and vertical survey of the following items:
    - Right-of-way to right-of-way survey of: sidewalks, grass, driveways (including composition), curbs, roadway centerline, utilities (poles, guy wires, manholes, catch basins, valves, vaults, etc.), trees, etc.
    - Sanitary sewer centerline (manhole to manhole) and inverts of all pipes in each manhole.
    - Storm sewer centerline (catch basin and manholes) including inverts of all pipes in each manhole and catch basin.
    - Establish baseline control and benchmarks for use by the contractor during construction.
    - Survey work will be performed at prevailing wage rates as required by New York Municipal law.

Task 1 Assumptions:

- Site surveying will be conducted by a WBE partner consultant, Frandina Engineering and Land Surveying.
- Based on the information provided in the RFP, the site survey length will be approximately 575-feet.

### Task 2 – Conceptual Design

As requested in the RFP, the following capital projects will require the preparation of a Conceptual Design Report that will document further investigations that were conducted in order to develop a detailed scope-of-work:

- WWTP-1.3 Sediment Basin #5 Treatment of Backwash
- WWTP-5.5 New PA and Fire Alarm System
- WWTP-5.6 Carbon Area Lighting, Switchyard Improvements
- WWTP-16 Standby Generator

As part of this task AECOM will coordinate with the NFWB as necessary to examine existing equipment, evaluate alternatives as applicable, determine project requirements, and develop a list of recommended improvements along with an estimate of probable cost. The document will be submitted as a draft and a review meeting will be scheduled. Once finalized the Conceptual Design document will serve as the starting point for the preparation of Design Documents (i.e. Task 3). Insight into each of the Conceptual Design Reports is provided below:

**WWTP-1.3 Sediment Basin #5 Treatment of Backwash**

The Conceptual Design report will include a review of alternatives for handling the carbon bed backwash wastewater. The advantages and disadvantages will be developed for the current operation of returning the backwash wastewater for retreatment and for options to treat it in the Sedimentation Basin 5. If it is determined that this operating scenario provides improved treatment and operating flexibility, then this evaluation will be advanced with jar testing of filter backwash water that will be conducted by AECOM with various chemical coagulants and flocculants. Jar test log sheets will be completed for each test and included in appendices along with photographs taken during the jar testing. Limited analytical testing will be performed during the testing and will primarily consist of pH, turbidity and TSS; and those results will also be provided in an appendix. Based upon the optimal test results, AECOM will provide recommendations for the basis of design for the selected chemical feed system including:

- Coagulant selected,
- Polymer selected,
- Size and location of chemical bulk storage facilities,
- Selection of polymer makeup, storage and feed system,
- Site Plan and Process Flow Diagram,
- Equipment cut sheets for major system components, and
- Construction cost estimate.

**WWTP-1.3 Assumptions**

- Laboratory testing will be conducted with equipment onsite and available at the NFWB laboratory. If 3rd party laboratory testing is required, this will be coordinated and contracted through NFWB existing contracts with outside laboratories.
- Up to 12 jar tests will be conducted to determine optimal chemical combinations and doses.

**WWTP-5.5 New PA and Fire Alarm System A**

Concept Evaluation will be conducted to assess the existing PA system, an evaluation of the code requirements, and a survey will be conducted of the buildings and facilities that will require PA and fire alarm systems. These evaluations will be used to develop a conceptual design of both the PA and fire alarm systems which will be used as the basis of design for the implementation of the new PA and fire alarm system. A site visit from AECOM's electrical inspector and/or electrical engineer will be conducted to review the existing system and document the conditions/needs. As part of this site visit, AECOM would coordinate a potential meeting with the local fire department to discuss the type of system, extent of system, and communication methods needed for the facility. Alternatives will be developed including the engineering opinion of probable costs so that a system and preferred option can be selected. The Conceptual Design document will include a description of the type and scale of systems selected for PA and fire alarm systems including:

- Alternatives evaluation including cost estimates
- Site plans,
- Equipment cut sheets

**WWTP-5.5 Assumptions**

- A 2-day site visit will be conducted, and the AECOM project manager, project engineer, and electrical engineer will be in attendance. During this site visit, the AECOM project team will review the existing PA system conditions, review facility layout, meet with NFWB staff to discuss these systems, and plan to coordinate a meeting with the local fire department, if possible.
- AECOM will develop a performance-based delegated design specification for the fire alarm system for bidding purposes. The Contractor will be responsible for the detailed design and construction of the fire alarm system

**WWTP-5.6 Carbon Area Lighting, Switchyard**

**Improvements** As stated in the project approach it is AECOM's understanding that all switchyard improvements have been or are currently being implemented by the NFWB's IDIQ contractor Ferguson Electric and there is no remaining work to be performed at the main WWTP substation. The Conceptual Design document for WWTP-5.6 will focus on the carbon filter lighting efforts and will include the results of field investigations that will determine whether existing conduit, conductor and controls can be reused as part of the carbon filter lighting system replacement. The document will also provide cut sheets for the selected lighting fixtures and a construction cost estimate.



**WWTP-5.6 Assumptions:**

- Visual assessments of the carbon filter lighting system including conduit, fixtures, and panels will be conducted by AECOM's electrical engineer. Assessments will not include electrical testing.
- NFWB personnel will be available during the site visit to answer questions, open electrical panels, and access equipment to be assessed.
- Switch yard improvements will not be assessed as part of this project.
- No changes or additions to the lighting electrical panels will be necessary.

**WWTP-16 Standby Generator** A concept evaluation will be conducted for this project to review the need for new standby power system(s) and the alternatives for protecting the WWTP assets and mitigating the potential for discharges of untreated or partially treated wastewater. One option would be for a new standby power system to be located at the 13.8 KV level and feed the existing switchgear. Alternatively, individual standby power systems could be located at each of the five power centers, or a centralized standby power system could be designed at the 480V system. The Conceptual Design document will include a design basis for alternatives developed based on a review of the existing systems. If a generator system is determined necessary, the selection of a generator (generator sizing) and connections will be detailed based upon an evaluation of the existing power distribution system at the WWTP. Also provided will be a site plan, one -line drawing, and generator cut sheets.

**WWTP-16 Assumptions:**

- Visual assessments of the existing power supply, switch gear, distribution systems, and generator will be conducted by AECOM's electrical engineer and/or partner consultant, Pathfinder. Assessments will not include electrical testing.
- NFWB personnel will be available during the site visit to answer questions, open electrical panels, and access equipment to be assessed.

**Task 3 – Design Documents**

Depending on the projects that are awarded to AECOM, we will look to combine projects that have similar design and implementation disciplines, approaches, and/or present opportunities for efficiency given the interconnection with systems, isolation, implementation, and sequencing. Once this is identified, AECOM will combine the appropriate project design bid packages with the objective of finding potential cost savings.

Preliminary Design will include but not be limited to preparation of the Preliminary Design Approval Document that identifies, assesses, and selects a feasible design alternative. The evaluation will consider cost, environmental factors, project sequencing and constraints, permitting, and coordination with existing utilities. Following approval of the Preliminary Design Document by the NFWB, AECOM will prepare a detailed design consisting of plans and specifications suitable for bidding the work by the NFWB. The plans and specifications will include standard NFWB documents, forms, etc. along with New York State Environmental Facilities Corporation (NYSEFC) grant required documents and forms. The Final Design will include but not be limited to: development of final plans and specifications, construction cost estimates, regulatory agency coordination and approval, and required certifications for the project. Bid documents will be submitted to the NFWB for review at end of preliminary and final design document preparation.

**Task 3 Assumptions:**

- The Preliminary Design Document will include summary tables as necessary to present information. Potential summary tables include preliminary list of equipment, preliminary list of drawings, specification TOC, list of potential contractors, etc.
- Existing facility instrumentation and control system information is available.
- No design review/coordination meetings with the NYSDEC are required.

**Task 4 – NYSEFC Reporting**

AECOM will assist the NFWB with complying with the various NYSEFC reporting requirements that are associated with construction projects funded by the NYSEFC through grants or loans. AECOM will do this, both as a contracted consultant by preparing the necessary reports covering the design and engineering portion of the work, and also monitor the respective Contractor's compliance and reporting during the construction portion of the work. AECOM will perform the following as a consultant under contract to the NFWB:

- Review the terms and conditions of the grant/funding contract signed and agreed to by the NFWB/NYSEFC for the projects undertaken.
- Obtain the latest NYSEFC forms for use in reporting.
- Prepare a disadvantaged business enterprise (DBE) Utilization Plan.
- Prepare Monthly DBE Contractor Compliance Reports.
- Submit relevant forms to the NFWB for submission to the NYSDEC and NYSEFC as appropriate.

AECOM will perform the following as the engineer overseeing the Contractor during the construction project:

- Review Contractor prepared DBE Utilization Plan.
- Review Contractor prepared Waiver Plans (if any).
- Review Contractor prepared Monthly DBE Contractor Compliance Report.
- Submit relevant forms to the NFWB for submission to the NYSDEC and NYSEFC as appropriate including “document collection” efforts near the end of construction such as:
  - Pay applications, inspection reports, MWBE reports, American Iron and Steel certificates, wage rate interviews, change orders, meeting minutes, completed Document Collection Form questionnaires, etc.

### Task 5 – Bidding Assistance

As noted for Task 3, Design Documents, we will work with the NFWB depending on the projects that are awarded to AECOM, to determine design bid packages that make sense to issue together and the schedule for issuing them. Again, the objective is to find efficiencies with bidding projects that make sense to group together with an effort to reduce design and bid services costs. AECOM will provide bid phase services to the NFWB to assist in bidding the work to contractors as we have done in the past. Our services will include:

- Courtesy copies of design documents will be provided to the NFWB, NYS DEC and NYS EFC for review and project administrative purposes.
- Hard copy bid documents will be available for review at AECOM’s office and at the office of the NFWB Engineer.
- Bid Documents will be distributed in an electronic format (PDF and TIF) on a single CD-ROM or thumb drive to prospective bidders. AECOM will maintain and update a bidder list. If desired, AECOM can work with the NFWB to setup an electronic Plan Room that will manage the storage and distribution of the design documents. Contractors will be able access electronic documents from the Plan Room and mitigate potential logistical and time-consuming efforts to acquire the documents. The Plan Room will track the contractors that acquire the electronic documents and provide that information, as needed.
- AECOM will prepare for and conduct one (1) non-mandatory pre-bid conference at the project site and answer technical questions. Following the pre-bid meeting AECOM will prepare meeting minutes to be issued as an addendum.

- AECOM will receive and review bidder inquiries, perform any necessary work to address, and issue addenda to bidders electronically. Addenda will be issued promptly and sufficiently prior to bid opening.
- AECOM will determine compliance with bidding requirements including evaluation of bidder equipment and material substitutions identified in the bid package.
- Following receipt of the bids, AECOM will review and tabulate the bids and will issue a written recommendation to the NFWB for award of the contract. The bid tabulation will be attached to the recommendation letter. If necessary, reference checks will be performed to verify the work experience and performance of contractors.
- Upon the NFWB acceptance of the low bid(s), AECOM will prepare three (3) sets of conformed contract documents including agreements for execution by the Contractor and the NFWB. Upon signature and return of the contract documents with bonding and insurance certificates, we will deliver the documents to the NFWB for review and signature.
- AECOM will conduct a post bid/preconstruction meeting at the WWTP with low bidder(s) to review the contracting and construction processes.
- A Notice to Proceed for each contract will be prepared by AECOM and issued to the Contractor.

In addition to these services identified in the RFP AECOM also proposes to provide the following enhanced services, which we have found can result in an increased number of prospective bidders:

- Notify contractors who specialize in the type of work of the anticipated bid advertisement date. We find that this pre-notification generates interest in the project, helps to generate additional bidders, and ultimately generates more competitive pricing. We have successfully used this approach on other NFWB projects.
- Prepare and submit an advertisement for bidders for publication in the local paper of record. AECOM assumes that the NFWB will pay the cost of the advertisement directly to the publication as has been done in the past.
- Provide a set of plans and specs to the local office of the Construction Exchange for use by contractors, vendors, and material suppliers.

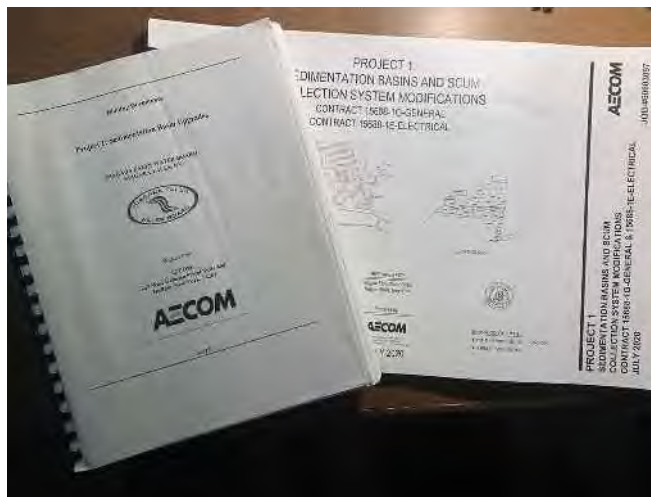
Task 6 Assumptions:

- Up to two addenda will be prepared.

### Task 6 – Construction Administration

AECOM will provide construction design and administration services from the Notice to Proceed until final acceptance of the Work, as limited by the anticipated maximum length of contract(s) of 500 days. It should be noted that depending on the projects awarded and construction contract durations set by those contracts, AECOM will work with the NFWB to coordinate these duration with other work ongoing at the WWTP. Tasks associated with this phase include the following services:

- Review construction progress against the contract requirements,
- Perform routine Contractor correspondence,
- Conduct routine progress meetings at the job site,
- Coordinate the Contractor's activities at the facility so that his operations do not interfere with or obstruct on-going NFWB operations,
- Review and approval of monthly payment applications appropriate for the construction duration of the projects AECOM will be supporting.
- Maintain a Request for Information (RFI), Field Order and Change Order Log.
- Respond to RFIs submitted by the Contractor(s) and issue field clarifications as required.
- Maintain a shop drawing log.
- Review and take action (Approve, Reject, Approved as Corrected) on shop drawings required for the Construction contracts.
- Review and take action (Approve, Reject, Approved as Corrected, Revise and Resubmit) on submitted schedule of values and construction schedules.
- Review and negotiate change order requests.
- Review and approve contract closeout paperwork.
- Conduct and attend bi-weekly construction progress meetings on site with the Contractor(s) and NFWB staff to maintain the projected project schedule and open communication with WWTP personnel. AECOM will prepare agendas and meeting minutes and distribute meeting minutes.
- AECOM will turn over a complete set of construction photos (digital copy, only) along with the field office copy of project submittals; to the NFWB upon project completion.



Bidding documents AECOM has created for another NFWB project.

### Task 7 – Construction Inspection

AECOM proposes to utilize a project engineer that was involved with the project design to observe construction activities on a fulltime or part time basis depending on the nature of the work. The resident engineer will make sure that the project is constructed in accordance with the contract documents. The assumed level of construction inspection effort is identified in the cost proposal and includes:

- Construction inspection hours were estimated based upon an assumed project duration and the need for full-time or part time inspection. Estimated construction inspection hours for each project are listed in the cost table provided in Table 2. There will be a realized cost savings if multiple projects are combined to reduce the overall number of projects and leverage one resident engineer to be able to cover the combined project package.

During this phase AECOM will:

- Conduct on-site inspections of work in progress to determine whether the work is proceeding in general compliance with the Contract Documents.
- Report whenever inspector believes that any work is unsatisfactory, faulty or defective, or does not conform to the Contract Documents, has been damaged, or does not meet the requirements of any inspection, test or approval required to be made.
- Check that tests, equipment and systems startups, and operating and maintenance training are conducted in the presence of appropriate personnel, and that Contractor maintains adequate records thereof. Observe, record, and report to NFWB appropriate details relative to the test procedures and startups.

- Observe materials and supplies to be incorporated into the project by the contractor and recommend acceptance or rejection of these materials based on the approved submittals.
- Notify the Owner of obvious unsafe work practices used by contractor.
- Accompany visiting inspectors representing public or other agencies having jurisdiction over the project and record the results of these inspections and report to NFWB.
- Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract Documents including Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Construction Contract, clarifications and interpretations of the Contract Documents, and progress reports.
- Keep a diary or logbook, recording Contractors' hours on the job site, weather conditions, data relative to questions concerning Change Orders or changed conditions, list of job site visitors, daily activities, decisions, general observations, and specific, more detailed observations as in the case of test procedures.
- Record names, addresses and telephone numbers of all Contractors, subcontractors and major suppliers of materials and equipment.
- Document the contractor's work production including:
  - Maintaining a field notebook,
  - Photographing the work progress,
  - Preparing daily inspection reports documenting work activities, crew size, and material quantities,
  - Maintain records of item quantities for payment purposes,
  - Coordinate work with the Owner's operations including any planned shutdowns, outages, pipe breaks, or any other possible disruption of the Owner's operations.
  - Maintain a set of red-lined construction documents for use in preparing record drawings.
  - Coordinate work with the Owner's operations including any planned shutdowns, outages, pipe breaks, or any other possible disruption of the Owner's operations.
  - Maintain a set of red-lined construction documents for use in preparing record drawings.

## NFWB Cost Proposal

As noted in this proposal and stated in the NFWB RFP, there are potential opportunities to gain efficiencies with grouping projects together to reduce the number of bid packages. This approach will potentially reduce the level of effort and take advantage of the economy of scale relative to the construction services for multiple projects organized as a single or reduced number of projects. Furthermore, AECOM is proposing on all the WWTP projects and single collection system project to take advantage of our background with the WWTP systems and reduce the overall oversight from the NFWB with having to manage multiple consulting firms delivering projects at the WWTP. This approach will provide the NFWB with a single consulting firm and project team providing design and construction management services for the 12 projects associated with the WWTP and collection system upgrades.

As requested by the NFWB, AECOM has developed a cost proposal for the selected projects and reviewed options for cost savings opportunities with a combined project delivery approach. Table 2 shows the proposed cost for delivering the selected projects as individual projects and the cost with potential savings if the selected projects were awarded and completed as a single package. This approach could potentially provide a cost savings of approximately \$280,000 with economies of scale gained from such things as reducing the number of bid packages and meetings, completing project reporting and reviews more effectively as a single package, and being able to provide construction administration and inspection with a local project team and inspector(s) that can serve as the single point of contact for multiple projects.

**Table 2. Cost Proposal for Individual Projects and Packaged WWTP Projects**

Project		Cost		
ID #	Name	Individual Bid Packages	Single Bid Package	Potential Savings
WWTP-12	Roof Repairs	\$216,000	\$1,430,000	\$280,000
WWTP-16	Standby Generator*	\$69,000		
WWTP-1.2	Influent Channel Leak Repair of Expansion Joints	\$79,000		
WWTP-1.3	Sedimentation Basin #5 Treatment of Backwash	\$258,000		
WWTP-3.2	Grit Pump Flow Meters	\$100,000		
WWTP-3.3	Rapid Mix Tank Cleaning	\$66,000		
WWTP-5.5	New PA and Fire Alarm System	\$320,000		
WWTP-5.6	Carbon Area Lighting, Switchyard Improvements	\$142,000		
WWTP-6.2	Carbon Bed Effluent Cleaning & Inspection	\$80,000		
WWTP-6.3	Carbon Filter Mud Valve Replacements	\$58,000		
WWTP-11.6	Removal and Replacement of Plant Water Piping	\$173,000		
Collection Syst.	Calumet Avenue 48-inch Brick Sewer Rehab.	\$145,000		
<b>Total</b>		<b>\$1,710,000</b>		

\*Project only includes concept evaluation. Design phase scope and fee will depend on outcome of evaluation

Furthermore, there could be additional approaches for how best to package these projects with considerations associated with sequencing and WWTP operating schedules, the overall priority of projects and urgency to complete, and grouping of similar projects. Based on AECOM's understanding of these projects and background with the development of the capital improvement projects, we also propose two additional project grouping approaches as showing in Tables 3 and 4. Table 3 presents the project delivery approach based on our understanding of the project priority and/or urgency for completing them. This would reduce the project packages from 12 individual projects to 3 discrete packages based on a relative degree of project priority (i.e., higher, medium, lower).

**Table 3. Cost Proposal for WWTP Projects with Priority Grouping**

Priority	Project		Cost	
	ID #	Name	Three Bid Packages	Potential Savings
Higher	WWTP-11.6	Removal and Replacement of Plant Water Piping	\$259,000	\$14,000
	WWTP-3.2	Grit Pump Flow Meters		
Medium	WWTP-12	Roof Repairs	\$441,000	\$62,000
	WWTP-1.2	Influent Channel Leak Repair of Expansion Joints		
	WWTP-3.3	Rapid Mix Tank Cleaning		
	WWTP-5.6	Carbon Area Lighting, Switchyard Improvements		
Lower	WWTP-16	Standby Generator*	\$870,000	\$60,000
	WWTP-1.3	Sedimentation Basin #5 Treatment of Backwash		
	WWTP-5.5	New PA and Fire Alarm System		
	WWTP-6.2	Carbon Bed Effluent Cleaning & Inspection		
	WWTP-6.3	Carbon Filter Mud Valve Replacements		
	Collection Syst.	Calumet Avenue 48-inch Brick Sewer Rehab.		
<b>Total</b>			<b>\$1,570,000</b>	<b>\$136,000</b>

\*Project only includes concept evaluation. Design phase scope and fee will depend on outcome of evaluation

Table 4 presents the project delivery approach based on grouping projects with similar system upgrades, those that require similar evaluations, inspection, and/or design aspects, and will potentially open the market to more construction bidders for the respective packages. Again, these potential project groupings are based on AECOM’s initial review, and this would be further developed and finalized with the NFWB.

**Table 4. Cost Proposal for WWTP Projects with Similar Project Aspects**

Reason for grouping	Project		Cost	
	ID #	Name	Three Bid Packages	Potential Savings
Outside WWTP	Collection Syst.	Calumet Avenue 48-inch Brick Sewer Rehab.	\$145,000	\$0
Electrical System Upgrades	WWTP-16	Standby Generator*	\$497,000	\$34,000
	WWTP-5.5	New PA and Fire Alarm System		
	WWTP-5.6	Carbon Area Lighting, Switchyard Improvements		
WWTP Upgrades, process cleaning, confined space inspections, piping and process upgrades	WWTP-1.2	Influent Channel Leak Repair of Expansion Joints	\$876,000	\$154,000
	WWTP-3.3	Rapid Mix Tank Cleaning		
	WWTP-6.2	Carbon Bed Effluent Cleaning & Inspection		
	WWTP-3.2	Grit Pump Flow Meters		
	WWTP-6.3	Carbon Filter Mud Valve Replacements		
	WWTP-11.6	Removal and Replacement of Plant Water Piping		
	WWTP-1.3	Sedimentation Basin #5 Treatment of Backwash		
WWTP-12	Roof Repairs			
<b>Total</b>			<b>\$1,518,000</b>	<b>\$188,000</b>

\*Project only includes concept evaluation. Design phase scope and fee will depend on outcome of evaluation

The grouping and delivery of these projects presents potential cost savings of approximately \$140,000 to \$200,000. These potential savings will depend on the final agreed upon grouping and packaging of projects and AECOM reserves the right to negotiate the project budget(s) once the final groupings are determined. Furthermore, some of these projects require concept evaluations and/or alternatives evaluations as part of the initial design phases (i.e., 30 percent basis of design) that may change the overall project and design scope. The proposed budgets presented are based on the information provided as part of this RFP and AECOM proposes to revisit the respective project budgets and scope following the initial evaluation phases. The assumptions used to develop these proposed project cost include:

- Concept design project hours.
  - WWTP-16 Standby Generator: 460-hours
  - WWTP-1.3 Sedimentation Basin #5 Treatment of Backwash: 200-hours
  - WWTP- 5.5 New PA and Fire Alarm System: 460-hours
  - WWTP-5.6 Carbon Area Lighting, Switchyard Improvements: 100-hours
- WWTP-5.5 New PA and Fire Alarm System:
  - Fire Alarm system:
    - The Fire Alarm system will be specified via a performance based delegated design specification and riser diagram acceptable to building official and fire department.
    - AECOM will develop a report and/or drawings to delineate areas that require fire alarm.
    - Any interconnection with HVAC systems does not require revisions to HVAC system controls.
    - Sprinkler system design is not included.
  - PA system
    - Record drawings will be used as the basis and drawing backgrounds for updates.
    - The existing conduit can be reused.
    - Upgrades will only include the replacement of existing components and there will be no expansion needed.
- The WWTP-16 Standby Generator project only includes hours and cost for conducting the concept evaluation phase. As discussed in the Project Understanding section, there could be multiple outcomes from the initial evaluation phase with varying degrees of design required. The design and construction phase services scope and fee will be developed following the completion of the concept evaluation phase when the necessary improvements or upgrades are better defined.
- The WWTP-1.2 Influent Channel Leak Repair of Expansion Joint project will implement repairs and/or mitigating measures at the observed leak in the lower pump gallery. Influent channel isolation and bypass pumping is not included as part of this project scope and fee.
- Parttime hours have been included in this level of effort for resident inspection under the assumption that final resident inspection coverage will be negotiated as part of the final contract execution.

**2**

# Project Team



## 2. Project Team

AECOM provides a blend of global reach, local knowledge, innovation and technical excellence in delivering customized and creative solutions that meet the needs of our clients’ projects.

### About AECOM

As a Fortune 500 firm, AECOM is a leader in all of the key markets that it serves, including water, wastewater, transportation, facilities, environmental, energy, oil and gas, high-rise buildings and government. AECOM’s wastewater practice is the culmination of more than 110 years of experience and technical leadership. AECOM has significant national and local experience providing planning, design, construction and permitting services to a variety of clients facing environmental, regulatory and financial challenges associated with wastewater management.



### Strong Local Presence

AECOM USA, Inc. is licensed to do business in the State of New York and holds the appropriate licenses for engineering and architecture. Our wastewater practice is particularly strong in the Northeast, with over 1,500 engineering professionals in our multiple offices in New York as well as our Chelmsford, Massachusetts Design Center—including AECOM’s electrical, mechanical, architectural, and structural design disciplines. From our long-standing relationships with many area clients, we fully understand the importance of being responsive and flexible to address all project challenges. All of our disciplines have multiple staff members available for each assignment. Because of our depth in relevant disciplines, AECOM can address your concerns quickly and accurately.

### Our Experience Working with Niagara Falls Water Board

AECOM is thoroughly familiar with the facilities, operations and needs of the Wastewater Treatment Facility having worked recently on the following on-site projects:

- **Consent Order Assistance Services:** Multiple Consent Order tasks have been successfully completed by AECOM. Consent Order projects that have been completed to improve the WWTP operations include: effluent disinfection evaluation, improved Sedimentation Basin No. 5 treatment options via chemical addition, carbon filter oxidation evaluation and pilot study, and biological treatability pilot.
- **Sedimentation Basin and Scum Removal System Improvement Project:** \$10 million project to upgrade Sedimentation Basins No. 2 through 5 including new sludge and grit screws. The project also involved improvements to the Scum Building, including new pumps, scum screens, piping and controls.
- **Effluent Disinfection System:** This design was developed based on the preliminary design work completed as a Consent Order project. The effluent disinfection design was developed to allow the WWTP to maintain a consistent final effluent total residual chlorine (TRC) concentration near 1.0 mg/L. The existing system presents challenges with maintaining a consistent effluent TRC concentration resulting in variability and excessive use of sodium hypochlorite.
- **Biological Treatability Pilot Study:** AECOM assisted the NFWB with setting up, operating, and testing two (2) biological treatment technologies to evaluate the efficiency of treating their wastewater using a biological-based process. This evaluation was conducted as part of a Consent Order.
- **Granular Activated Carbon and Carbon Filter Gravel Replacement Project:** \$1.27 million project to remove, dispose of, and replace the existing Granular Activated Carbon filter materials and underlying gravel bed.

# Experience of Key Project Professionals

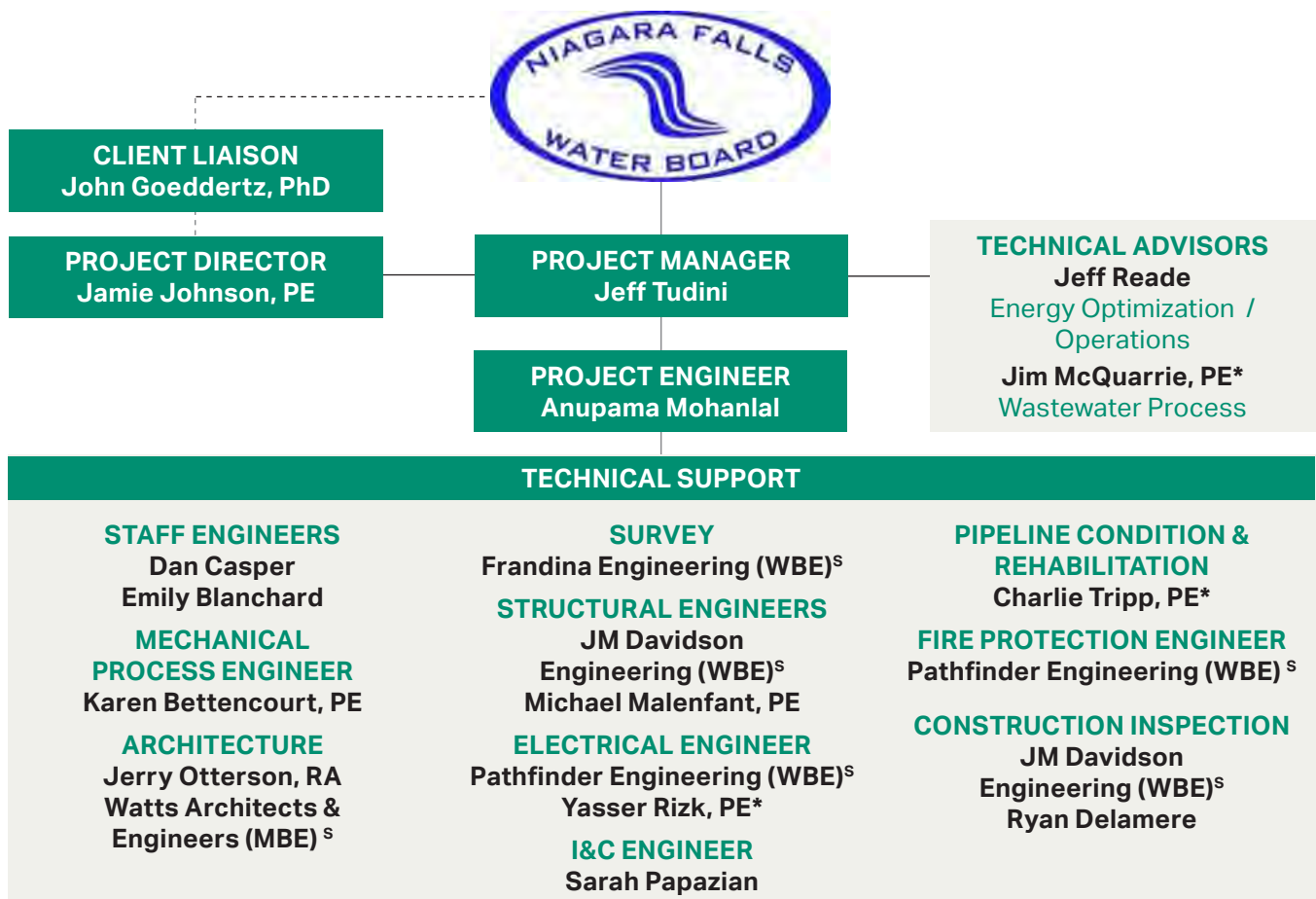
AECOM’s organizational chart below presents our key staff for this project. Our team is structured with dedicated water/wastewater practitioners who have demonstrated experience working on various capital improvement projects.

## Team Introduction

Our team will be led by **Jeff Tudini** as Project Manager, who brings significant recent experience and working knowledge of NFWB’s WWTPs. AECOM’s team also includes technical advisors **Jeff Reade** and **Jim McQuarrie**. Jeff has over 3 decades of experience with the operation and optimization of wastewater treatment facilities and will support this team by providing insight from his years of knowledge. Jim has nearly 30 years of experience with wastewater process innovation and has used this experience across the nation to advise teams on various water projects.

Supporting our project management team will be AECOM’s Northeast Design Center in Chelmsford, Massachusetts. With 150+ water and wastewater engineers and architects—many who have been with the company for 25+ years—this center has significant planning and design resources, including HVAC and plumbing resources, and regularly provides world-class design for major projects. This seasoned engineering team will provide the NFWB with a fully staffed design center specializing in engineering assessment and design production for water and wastewater projects.

On the following pages are brief biographies of our key staff and subcontractors. Detailed resumes showing education, credentials and additional projects are provided in **Appendix A**.



\* PE registration in state other than NY

S Partner Consultant

## Brief Biographies of our Team Members

### ▶ JAMIE JOHNSON, PE, LEED AP — Project Director



**18** years of experience

**BS**  
LEED AP  
NY PE

**10%** available

Jamie is experienced in planning, process design, and permitting for wastewater treatment and collection systems, energy performance, construction management, and project management. She has served as a QA/QC lead on multiple multi-discipline WWTP and pumping system upgrade projects throughout New York State. Jamie is involved in the NY Water Environment Association serving on the statewide Programming Committee, Diversity, Equity, and Inclusion (DE&I) Committee, and is an elected board member of the Western Chapter of NYWEA.

### ▶ JEFFREY TUDINI — Project Manager



**17** years of experience

**MS, BS**

**50%** available

As the project manager, Jeff will lead the day to day activities of the proposed team throughout this assignment. Jeff has 15 years of experience as a consultant in industrial and municipal wastewater treatment including serving as the lead engineer for the NFWB biological treatment pilot and capital improvement design Project 1 (Sedimentation Basin and Scum Collection Modifications).

### ▶ JOHN GOEDDERTZ, PhD — Client Liaison



**36** years of experience

**Phd, MS, BS**

**25%** available

Dr. Goeddertz will bring his knowledge and experience of NFWB's facilities, including multiple evaluations and designs for the WWTP, to provide senior technical guidance. Dr. Goeddertz is a wastewater and stormwater process evaluation and NPDES permitting expert. He has worked extensively in the evaluation, concept design, detailed design, permitting, construction, operations, and troubleshooting of municipal and industrial treatment facilities.

### ▶ JEFF READE — Technical Advisor



**34** years of experience

**MS, BS**

**25%** available

Jeff is a wastewater treatment process specialist with 30 years of combined design, commissioning, and operating experience at both municipal and industrial facilities. He has a proven track record with the integration of treatment plant processes and energy recovery/generation systems and with the application of control systems for optimization and energy management.

### ▶ JIM MCQUARRIE, PE — Technical Advisor



**30** years of experience

**BS**

**25%** available

Jim has over 25 years of practical experience in the municipal wastewater industry evenly split between public and private sector roles. On this project he will support the team with his experience in in wastewater process innovation, and large utility operations management.

### ▶ ANUPAMA MOHANLAL — Project Engineer



**8** years of experience

**MS, BT**

**50%** available

Anupama is a civil engineer with knowledge and professional experience in water and wastewater design work. Her experience includes wastewater treatment plants, water mains, water towers, ground storage tanks, water treatment processes, sewers, and pump stations.

### ▶ DAN CASPER — Staff Engineer



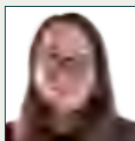
**1** year of experience

**BS**

**50%** available

Dan is a project engineer with professional experience in municipal capital improvement project work. His experience includes municipal facilities, water supply/distribution, sewerage works, and wastewater solutions.

▶ **EMILY BLANCHARD — Staff Engineer**



**1** year of experience  
**MS, BS**  
**50%** available

Emily is a civil/environmental engineer for the water/wastewater group in the Buffalo office. Her experience includes water resources and wastewater solutions. Her responsibilities in various projects include data analysis, shop drawing and submittal review, assisting in site visits, and CAD work.

▶ **KAREN BETTENCOURT, PE — Mechanical Process Engineer**



**23** years of experience  
**BS**  
**20%** available

Karen is an engineer with experience in water and wastewater treatment engineering, design, and drafting. She has designed mechanical process systems for water and wastewater treatment systems and other environmental treatment facilities.

▶ **JERRY OTTERSON, RA — Architecture**



**50** years of experience  
**MS, MBA, BA**  
**20%** available

Jerry is a senior Architectural manager in the Chelmsford office. His areas of expertise include Architectural discipline management, design project management and quality control, construction project management. His project experience includes industrial, water treatment and wastewater treatment facilities, and Department of Defense projects.

▶ **MICHAEL MALENFANT, PE — Structural Engineer**



**24** years of experience  
**MS, BS, NYPE**  
**20%** available

Michael is a senior structural design engineer with experience in all aspects of structural engineering design, engineering computer analysis, construction services, and structural condition assessments throughout the world. He has extensive experience in the analysis, design, field investigation, condition assessment, and retrofit of reinforced concrete structures for water and wastewater treatment facilities and ancillary structures, including pumping facilities.

▶ **YASSER RIZK, PE — Electrical Engineer**



**33** years of experience  
**BS**  
**20%** available

Yasser is a senior electrical engineer in AECOM's Northeast Design Center in Chelmsford, MA, and is the electrical and control systems department manager. He is specialized in electrical engineering and control systems design for wastewater collection, pumping, treatment, and disposal systems. Yasser is highly skilled in electrical system assessment and design and coordination of mechanical process, HVAC, and control systems for environmental treatment facilities.

▶ **SARAH PAPAIZIAN — I&C Engineer**



**15** years of experience  
**BS**  
**20%** available

Sarah is a technical specialist with experience in the design of instrumentation and control systems for a variety of environmental treatment systems including water and wastewater. She is a member of the International Society of Automation and is a Past President of the Boston Section.

▶ **CHARLIE TRIPP, PE — Pipeline Condition & Rehabilitation**



**19** years of experience  
**MS, BS**  
**50%** available

Charlie is a project manager with over 16 years of experience specializing in the design, management, and oversight of municipal infrastructure rehabilitation and construction projects. His portfolio of experience includes a variety of disciplines involving wastewater and stormwater collection systems, water resources, wastewater treatment, and site-civil design.

▶ **RYAN DELAMERE — Construction Inspection**



**12** years of experience  
**BS**  
**100%** available

Ryan is an Engineer-In-Training (EIT) with 12 years of project engineering experience with municipal capital improvement project work, including municipal facilities, water supply/distribution, and sewerage works. His responsibilities have included resident project representation, testing certification, submittal review, quantity measurement and progress documentation.

## Brief Biographies of our Partner Consultants

The AECOM team shares the NFWB's commitment to providing meaningful growth opportunities for M/D/WBE firms on your assignments. We are committed to providing significant subcontracting opportunities for diverse suppliers and often helps further the growth of our M/D/WBE partners.

When selecting subconsultant team members we not only looked for local firms that brought the right credentials, we specifically looked for firms that have successfully worked with AECOM and NFWB. We wanted firms who bring keen insight into the project area, knowledge of NFWB's systems, as well as the design intent of the proposed work to be completed under these services.

### JM Davidson Engineer, DPC



JM Davidson Engineering, D.P.C. (JMD) is a consulting firm located in Western New York that offers a full range of civil engineering services, including structural, transportation, water and wastewater, water resources, and railroad design services. In addition, JMD

is a woman owned business enterprise (WBE) firm with extensive experience locally in the water and wastewater industries.

### Frandina Engineering and Land Surveying, PC



Frandina Engineering and Land Surveying, PC provides high quality land and construction surveying services throughout Western New York. In 2005, Rosanne Frandina, PE, LS, established Frandina Engineering and Land Surveying, PC as a wholly-owned Woman Business Enterprise (WBE). The firm is also a certified Disadvantaged Business Enterprise (DBE).

Their staff has significant experience working on the largest jobs in the Western New York region such as the Buffalo Niagara Airport, Niagara Falls International Airport, The Light Rail Rapid Transit System, The State University Construction Fund projects, University of Buffalo Medical School, Erie County Medical Center, the Buffalo Public Schools Project, Buffalo Waterfront and the Seneca Nation Buffalo Creek Casino in downtown Buffalo as well as projects funded by the NYS Department of Transportation. The firm brings unparalleled familiarity with government regulations and the ability to ensure your projects are fully in compliance with all the required government agencies.

### Pathfinder Engineers & Architects



Pathfinder Engineers & Architects LLP, a Woman-owned Business Enterprise founded in 1998, is a recognized leader in the delivery of sustainable solutions, supporting public and private sector clients in a broad range of markets. They work with their clients to incorporate sustainable practices that can reduce life-time project and operations costs, while maintaining or enhancing the environment and occupant comfort and health. They have implemented

"green" standards for its projects. Pathfinder strives to identify and implement cost-effective energy efficiency measures in its designs for new and existing facilities.

### Watts Architects & Engineers



Watts Architects & Engineers is a professional design services, minority-owned, architecture and engineering firm with over 80 employees. They are a team of architects, engineers, and community builders. They work hand in hand with each of our clients to realize enduring designs and plan trustworthy foundations—to create space for what

matters. As project partners, they are interpreters and amplifiers of your vision, transforming ideas into action and putting principles into practice to help reach your objectives. And that includes proactively managing both budgets and timelines throughout the course of every project—until the job is done. Many of their strongest partnerships have spanned decades, because they earn every opportunity and then, through collaborative success, earn the next one (and the next one). Founded in 1986 as a sole-proprietorship, environmental engineering firm by Edward O. Watts, PE, the firm has since evolved into a professional architecture and engineering design firm, with interconnected office locations in Buffalo, Rochester, Syracuse, and New York City.

**3**

# Relevant Experience

# 3. Relevant Experience

## Demonstrated Experience on Similar Projects

AECOM's Water Practice is the culmination of more than 100 years of experience, technical leadership, and visionary thinking. Specializing in water, wastewater, and civil site services that incorporate sustainable solutions, AECOM offers comprehensive engineering services to local and state agencies and municipalities. Clients count on us for everything from initial planning and compliance studies to detailed design, turnkey construction, and assistance with facility operations and maintenance. They trust us to provide cost-effective engineering solutions that work for them in today's complex regulatory, institutional and public policy settings. With our in-house capabilities, AECOM will be able to address in a timely, cost-effective manner, the issues associated with this contract.

### AECOM Experience

Our projects have involved all components of wastewater planning, collection and treatment, including sewers, pump stations, infiltration/inflow (I/I) and sewer system evaluation survey (SSES) studies, treatment plants, hydraulic modelling, energy evaluations and New York State Energy Research and Development Authority (NYSERDA) studies, overflow retention facilities, and outfalls. AECOM has been responsible for facilities planning and conceptual design studies, design, construction management, and operation & maintenance (O&M) for wastewater collection and treatment systems.

Our full-service Buffalo office, with assistance from our northeast along with our other nationwide offices, offers the following services to provide a "one-stop shop" for all of NFWB's needs:

- Structural Engineering
- Mechanical Engineering
- Electrical Engineering
- Environmental Permitting
- Asbestos / Lead Abatement
- Environmental Remediation
- Energy Audits
- Architecture
- 3D Renderings
- Construction Inspection Services
- Survey
- Fire Protection Engineering
- Health & Safety Audits & Training
- Geotechnical Engineering
- Underground Storage Tank Design & Remediation
- GIS

This variety of services offered allows AECOM to assist NFWB on almost any project.

We have a long history of successfully completed projects for NFWB, where we have repeatedly demonstrated our commitment to quality and our ability to respond to the needs of each project.

Representative examples of our past project work on projects for NFWB and other representative projects that include members of our proposed staff follow.

**AECOM has completed many roof replacements on various water treatment plants. Below is a partial list of where we have done this in the Northeast besides NFWB:**

- Ashley Water Treatment Plant Roof Replacement
- Amelia Earhart Dam – Personnel and Shelter Buildings
- Salem-Beverly Water Supply board WTP Lab Roof
- Portsmouth NH Peirce Island WWTP Upgrade
- Newport, RI WWTP Upgrade Roof Replacement
- Newcastle County, DE WWTP Upgrade

# Wastewater Treatment Plant Professional Engineering Services Project Summaries

## Niagara Falls Water Board, Buffalo, NY

AECOM is and has been contracted to provide professional engineering consulting services to the Niagara Falls Water Board (NFWB) on a variety of critical engineering projects at the NFWB wastewater treatment plant (WWTP).

A sample of the projects assigned and executed include:

### Sedimentation Basin & Scum Removal System Improvements

The project involves comprehensive upgrades to the sedimentation basins, including the replacement of the traveling bridge scum collector, upgrading mechanical drives, extending effluent weirs for compliance, modifying the chain and flight system, upgrading the submersible pumping system, and enhancing the Scum Building with new pumps, screens, heaters, piping, and controls. These improvements aim to eliminate excessive maintenance, ensure compliance with standards, and enhance the overall operation of the NFWB WWTP.



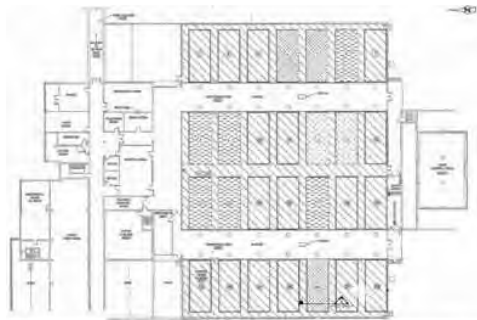
### Effluent Disinfection System Upgrades

The project involves design and construction of a complex effluent disinfection system, addressing unique challenges such as elevated sulfide and reduced iron concentrations. The implemented system, operational since 2021, features four chemical feed pumps with variable frequency drives, six Total Residual Chlorine (TRC) analyzers for process control, and a sophisticated automated control algorithm, resulting in improved effluent TRC values and a more favorable effluent color.



### GAC and Carbon Filter Gravel Replacement

The project encompasses tasks such as preparing an engineer's report and contract documents, providing bid services, construction inspection, management, and record drawing preparation, focusing on the removal, disposal, and replacement of GAC and filter support gravel, as well as inspecting and cleaning the carbon filter interior.



### Client Reference

Niagara Falls Water Board  
 Doug Williamson, PE  
 Director of Technical and Regulatory Services  
 5815 Buffalo Avenue  
 Niagara Falls, NY 14302  
 (716) 283-9770

### Project Cost

Sedimentation Basin & Scum Removal System Improvements – 2020  
 Construction Cost:  
 \$8,316,110

Effluent Disinfection System Upgrades -2021  
 Authorized Amount:  
 \$1,600,000

GAC and Carbon Filter Gravel Replacement- 2020  
 Authorized Amount:  
 \$1,273,500

Pilot Studies (Bio and ClO2) - 2021  
 Authorized Amount:  
 \$1,300,000

Consent Order Assistance Projects  
 Authorized Amount  
 \$350,000

NaOCl Improvement Project (current)  
 Authorized Amount:  
 \$200,000

Onsite Environmental Monitoring (current)  
 Authorized Amount:  
 \$400,000

### Project Personnel

John Goeddertz, PhD  
 Jeff Tudini  
 Jamie Johnson, PE  
 Dan Casper  
 Ryan Delamere

### Project Personnel

JM Davidson Engineering



# Wastewater Treatment Plant Professional Engineering Services Project Summaries *cont.*

## Niagara Falls Water Board, Buffalo, NY

### Biological Treatability & Chlorine Dioxide Pilot Study

The biological treatability study included conducting an 8-month pilot study evaluating the effectiveness of two biological treatment technologies, namely an activated sludge process with a membrane biological reactor (MBR) and an attached growth system using moving bed biological reactors (MBBR). The study aimed to demonstrate the treatability of wastewater, assessed seasonal impacts, and provided design parameters for potential future use of biological treatment processes at the NFWB wastewater treatment plant.

The chlorine dioxide study involved assessing chlorine dioxide as an oxidizer for addition to the NFWB carbon filter influent, aiming to reduce or prevent sulfide formation. Various testing parameters were collected to compare the effects of two oxidants, sodium hypochlorite and chlorine dioxide, on the carbon filter, with the goal of determining whether there is an improvement in meeting effluent chlorine demand requirements.



### Consent Order Assistance Services

Multiple Consent Order items have been successfully completed by AECOM. Consent Order projects that have been completed to improve the WWTP operations include an effluent disinfection evaluation, improving Sedimentation Basin 5 treatment options via chemical addition, a carbon filter oxidation evaluation, and treatability pilots.

### Sodium Hypochlorite Improvements

This project involves providing engineering design and construction phase services for NFWB WWTP improvements including the replacement of Sodium Hypochlorite Storage Tank 216 with provisions for secondary containment as per regulations. Additionally, the project includes the installation of two new sodium hypochlorite addition pumps for carbon filter backwash water and related improvements in the Odor Control Building to support these enhancements.

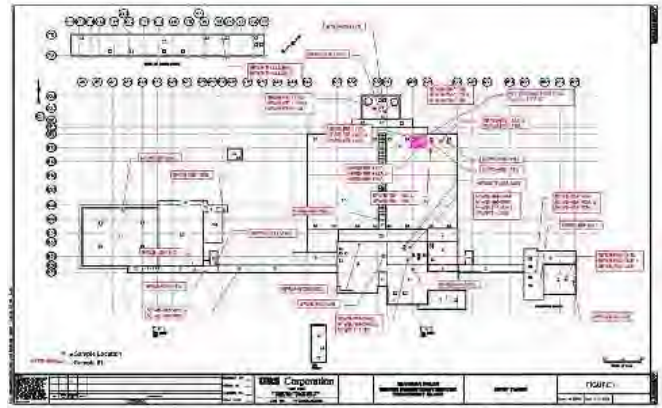
### Onsite Environmental Monitoring

AECOM, serving as the designated environmental monitor, has played a crucial role in providing oversight, recommendations, and guidance for the NFWB WWTP's operations and maintenance, contributing to enhancements in various aspects of the treatment process.



# Wastewater Treatment Plant Roof Replacement Project

## Niagara Falls Water Board, Buffalo, NY



AECOM evaluated, designed, and provide construction phase services for the replacement of the majority of the roof surfaces at the NFWB WWTP. AECOM's scope included the following major tasks:

- Task 1 – Field Investigation and Preliminary Design Report to include infrared roof survey and asbestos survey of all 38 roof surfaces along with recommended scope of construction and cost estimate.
- Task 2 – Detailed Design to include plans and specifications suitable for competitive bidding
- Task 3 – Bid Phase Services
- Task 4 – Construction Administration
- Task 5 – Construction Inspection

This work included the evaluation and design of replacement for the WWTP's 35 year old original roof surfaces. The work included evaluation, design, and construction for the replacement of 33 of the facilities identified 38 roof surfaces. Due to budget constraints five (5) roofs were not replaced at that time (filters, rapid mix, and roof overhang at maintenance shop entrance). AECOM performed both daily on-site construction inspection and all work associated with management of the work and the contractor. The work was successfully performed on-time and on-budget with no significant change orders. AECOM also provided asbestos Project Management services as required by New York State Department of Labor requirements.

### Client Reference

Niagara Falls Water Board  
 Doug Williamson, PE  
 Director of Technical and  
 Regulatory Services  
 5815 Buffalo Avenue  
 Niagara Falls, NY 14302  
 (716) 283-9770

### Project Cost

Engineer's Estimate: \$2.48 million  
 Bid: \$2.25 million  
 Completed Construction: \$2.39 million

### Completion

Design: 2012 - 2013  
 Bid Phase: 2013  
 Construction: 2013 – 2014

### Project Personnel

John Goeddert, PhD

# Front Street Interceptor Rehabilitation

## Capital Region Water, Harrisburg, PA

AECOM performed an evaluation and design phase services for the rehabilitation of a 107-year-old cast-in-place sewer that runs along a park near the Susquehanna River. The Front Street Sewer Interceptor is a major sewer line built in 1911 that carries upwards of 3 million gallons daily of wastewater and stormwater from half the City of Harrisburg and the Susquehanna Township to Capital Region Water's pump station on Front Street. The concrete pipe of the sewer was severely compromised with visible defects prior to rehabilitation.

The Front Street Interceptor Phase II project comprised the cured-in-place pipe (CIPP) rehabilitation of approximately 15,043 linear feet of reinforced concrete pipe that varied in size from 750 mm x 750 mm to as large as 1050 mm x 1050 mm. A variety of rehabilitation technologies were evaluated including CIPP, segmental GRP, spiral-wound PVC, spray-on polymers, and lay-up CFRP composites. CIPP with a reinforced composite was selected as the preferred alternative to proceed to detailed design. Preliminary design was completed in the summer of 2020, detailed design was completed in 2022, with construction taking place between April – September 2023.

The liners were installed in 28 unique shots from April through September 2023. The post-construction assessment was carried out to ascertain compliance of the installed CIPP with the design objectives for the project. The assessment included review of all post-installation closed-circuit television (CCTV) inspection videos, CIPP fabrication wet out reports, CIPP cure installation and monitoring logs, independent third-party laboratory testing of liner segment specific samples cured onsite during installation, and structural assessment of the installed liners versus the site-specific loading.

A design reconciliation review process was conducted as part of this project as a QA/QC for the installed CIPP. This was conducted to confirm the pipe repair would meet the short term and long-term design objectives relative to the structural integrity and overall quality of installation.



### Client Reference

Capital Region Water  
Jeffrey Bowra, PE, PMP  
Vice President of  
Engineering  
3003 North Front Street  
Harrisburg, PA 17110  
(717) 216-5255

### Project Cost

\$18.4M

### Completion

Design: 2020 - 2022  
Construction: 2023

### Project Personnel

Charlie Tripp, PE

# Riverside Pump Station Generator

## Greater Lawrence Sanitary District, North Andover, MA

The Greater Lawrence Sanitary District (GLSD) owns and operates a regional WWTF designed for 52 MGD (average) to treat wastewater generated from the communities of Lawrence, Methuen, Andover, North Andover, Dracut MA and Salem, NH. The WWTF is comprised of preliminary treatment, primary sedimentation, secondary biological treatment, secondary sedimentation, disinfection and dechlorination. Biosolids produced by the treatment process are thickened, anaerobically digested, dewatered and thermally dried.

In 2019, the Massachusetts Department of Environmental Protection (MassDEP) issued an Administrative Consent Order to GLSD to install a permanent standby generator at their Riverside Pump Station (RSPS). The ACO required that the standby generator be installed and operational in only 7 months. Due to the aggressive schedule, there was not enough time to design, bid and install a new standby generator. As a result, AECOM assisted GLSD with the purchase of a used 3MW, 4,160V Caterpillar Model C175-16 diesel generator from Milton CAT. AECOM was also able to fast-track the design and construction of this project including all environmental, air and noise permitting approvals and the project was successfully constructed and brought online to meet the consent order requirements.



### Client Reference

Greater Lawrence Sanitary District  
Cheri Cousens  
Executive Director  
240 Charles St  
North Andover, MA 01845  
978-685-1612

### Project Cost

\$18.4M

### Completion

Design: 2016 - 2021

### Project Personnel

Yasser Rizk  
Jeff Reade  
Michael Malenfant

4

# Organization Qualifications

# 4. Organization Qualifications

## Required Information

### 1. Any other names under which proposer has done business in the past 10 years:

URS Corporation became part of AECOM in 2014. URS Corporation has worked for The City of Niagara Falls and the Niagara Falls Water Board since 1995.

### 2. List all subsidiary and parent companies:

AECOM Technical Services, Inc. owns AECOM USA, Inc. at 100%. AECOM USA, Inc. is a direct wholly-owned subsidiary of AECOM Technical Services, Inc. and an indirect wholly-owned subsidiary of AECOM (parent) company.

Subsidiaries:

AECOM Architects & Engineers (NJ), Inc.

AECOM INGENIERIA S.A. de C.V.

AECOM Libya Housing and Infrastructure, Inc.

AECOM Pacific, Inc.

AECOM Recovery

AECOM USA of Massachusetts, Inc.

AECOM USA of Michigan, Inc.

ATC Architecture, Inc.

Consoer Townsend Envirodyne Engineers of Indiana, Inc  
DIT-Harris, S.A.

DMJM Aviation, Inc.

DMJM, Inc.

DMJM+HARRIS CANADA INC.

Egis-Semaly, Inc.

Envirodyne Engineers, Inc.

Envirodyne Engineers, Inc.

Envirodyne Engineers, Inc.

ESCY Consultants Limited

Frederic R. Harris, Inc.

Lim & Nascimento Engineering Corporation

Material Testing Services, Inc.

Maunsell Harris Consulting Engineers Pvt. Ltd.

Metcalf & Eddy de Panama, S.A.

Metcalf & Eddy of New York, Inc.

Metcalf & Eddy of Ohio, Inc.

P&D Consultants, Inc.

Planeacion de Recursos Cientificos S.A. DE C.V.

The Ellerbe Becket Company, LLC

Urbitran Architectural/Engineering Group, Inc.

Urbitran Architectural/Engineering Group, PLLC

### 3. State whether proposer ever has been:

- **Debarred or suspended by any government entity from entering contracts with it:** No
- **Found not responsible by any government entity:** No
- **Declared in default or terminated for cause from any contract, or had any contract cancelled for cause:**

AECOM USA, Inc. ("AECOM") performs thousands of contracts each year. From time to time,

occasions arise when AECOM does not complete the performance of an awarded contract. These situations include (i) where a client terminates the contract for its convenience; e.g. where the client is unable to secure continued funding for the underlying project and, as a result, terminates the associated contract, (ii) where AECOM ceases performance under the contract in accordance with the applicable terms of the contract in response to the client's nonpayment or other breach, and the contract is ultimately terminated; and (iii) where one of the contracting parties terminates the contract for default.

Upon knowledge and belief, formed after reasonable inquiry, during the past five years, AECOM (i) has not failed to complete a contract where the other party to such contract was not in breach unless the contract afforded AECOM that right and (ii) AECOM has not had a contract terminated by a client wherein that termination was ultimately determined to be other than for convenience.

- **Required to pay liquidated damages on a contract:** No

### 4. State whether proposer has filed for bankruptcy or been the subject of an involuntary bankruptcy proceeding:

No

### 5. State whether proposer has been a party to any legal action or government investigation related to proposer's business practices, or alleging that any of proposer's agents or employees committed:

On June 3, 2020, a whistleblower qui tam suit against various AECOM entities, related to AECOM's work for FEMA after Hurricane Katrina, was unsealed, and DOJ filed a notice indicating their intent to intervene in the case under the False Claims Act. DOJ filed their complaint against AECOM alleging violations of the False Claims Act on July 28, 2020. The allegations in the complaint primarily focus on the conduct of one AECOM employee who was terminated by AECOM in 2010 and focus on conduct largely, although not exclusively, between 2009 and 2011. We do not believe these allegations reflect on our present responsibility as a contractor. Please contact Howard Cohen, Vice President, Assistant General Counsel, Ethics & Compliance, howard.cohen@aecom.com, for additional details or questions. If proposer, any of proposer's principals, or any of proposer's agents has pleaded guilty or entered into a consent order in connection with respect to any of these, provide details.



# Resumes

# Jamie Johnson, PE, LEED AP

## Project Director

Jamie is an environmental engineer, project manager and QA/QC advisor and reviewer with the water/wastewater design group of AECOM. She is experienced in planning, process design, and permitting for wastewater treatment and collection systems, energy performance contracting, construction management, and project management. She has served as the project manager and technical lead on multiple multi-discipline wastewater treatment plant upgrade projects throughout New York State. Jamie is also involved in the NY Water Environment Association serving on the statewide Programming Committee, Diversity, Equity, and Inclusion Committee, and is an elected board member of the Western Chapter of NYWEA.

### Years of Experience

Total: 19  
With AECOM: 3

### Education

BS, Civil/Environmental Engineering, Purdue University, 2005

### Licenses/Certifications

Professional Engineer, NY, MI, TX

LEED Accredited Professional

### Professional Affiliations

New York Water Environment Association

Water Environment Federation

## Project Experience

### **Erie County Department of Environment and Planning (ECDEP), Lackawanna Water Resource Recovery Facility Solids Handling Rehabilitation, Lackawanna, NY.**

Wastewater Design Engineer. Currently providing guidance to the team from 30% basis of design stage through to 60% and 90% detailed design deliverables. Specific tasks include oversight and quality control for detailed drawing and technical specification development, as well as assisting the project manager with project management tasks as necessary.

### **Buffalo Sewer Authority (BSA), Bird Island Treatment Facility Secondary System Rehabilitation, Buffalo, NY.**

Project Manager/Client Manager. Responsible for cost and resource management to support the construction of upgrades to and rehabilitation of the secondary system for the Bird Island treatment facility.

### **Niagara Falls Water Board (NFWB), Interior and Exterior Piping Improvements, Niagara Falls, NY.**

Project Manager. Responsible for various interior and exterior piping-related improvements at the WWTP, including plant water piping, city water piping, spent carbon transport piping, sedimentation basins drain line, and sodium hypochlorite yard piping.

### **Dormitory Authority of the State of New York (DASNY), Mid-Hudson Forensic Psychiatric Center Rehabilitation, Buffalo, NY.**

Project Manager/Technical Lead. Responsible for preliminary design and evaluation of a new sewer pump station to convey sanitary flow from the Mid-Hudson Forensic Psychiatric Center to the City of Middletown Wastewater treatment plant, roughly 18,000 linear feet away with over 120-feet of elevation change along the alignment. The evaluation included preliminary construction costs for the entire utility package, including the sewer route, a water main extension, and a sewer pumping station.

### **City of Auburn, NYSERDA FlexTech and Energy Performance Contract, Auburn, NY.**

Technical Lead. Responsible for an energy performance contract to implement energy efficiency improvements, resulting in operation and maintenance savings. Specific improvements included the replacement-in-kind of an existing grit classifier system, installation of a new septage receiving station, as well as aeration tank feed pump upgrades designed to address the wide range of influent flows at the plant while simultaneously eliminating inefficient double-pumping.



## Jamie Johnson, PE, LEED AP - Project Director

**Erie County Division of Sewerage Management (Erie County DSM), Iroquois Pumping Station Rehabilitation, Lancaster, NY.** Project Manager/ Technical Lead. Responsible for the final design of improvements to the Iroquois pumping station located in DEP's Northern Region. The work included construction of a new concrete drywell, replacement of all internal discharge piping including valves and fittings, installation of two new solids handling influent pumps, complete upgrade of the electrical and control systems, and a new bypass piping arrangement.

**Fresenius Kabi, Wastewater Treatment Facility Expansion Project, Grand Island, NY.** Project Manager. Responsible for this complex project consisting of an expansion of the wastewater treatment facility to accommodate additional flows related to an increase in product production. The work included the installation of a new continuous flow sequencing batch reactor treatment process, new influent pumping station, a new plant-wide SCADA system, and miscellaneous mechanical, structure and architectural modifications throughout the facility.

**City of Dunkirk, Dunkirk WPCP Improvements (Phase 2), Dunkirk, NY.** Project Manager/Technical Lead. Responsible for the alternative's analysis, preliminary engineering, grant assistance, and detailed design for the complete replacement of the WPCP's solids handling processes. The work includes decommissioning of an existing lime silo, demolition of existing conditioning tanks, transfer pumps, piping and appurtenances; installation of two new belt filter presses, installation of a new lime silo to facilitate post-dewatering stabilization, new conveyance system to move sludge throughout the process, new solids handling pumps, piping, valves and appurtenances. The work also included a major overhaul of the electrical and control systems associated with this process.

**Village of Fredonia, Fredonia WWTP Upgrades, Fredonia, NY.** Project Manager/Technical Lead. Responsible for the detailed design, grant application/ administration, and construction phase services for diffused aeration upgrades, complete filter system replacement, backwash pumping improvements, and comprehensive dewatering system replacement including major piping, pumping, polymer and conveyance upgrades; and miscellaneous mechanical, structural and electrical improvements.

**Onondaga County Department of Water and Environmental Protection (OCDWEP), NYSERDA FlexTech Study and Energy Performance Contract, Syracuse, NY.** Technical Lead. Responsible for an energy performance contract to implement energy efficiency improvements resulting in operation and maintenance savings. Specific improvements included post aeration system improvements, replacement of surface aerators, replacement of RAS pumps, replacement of existing centrifugal blowers with new turbo blowers, and associated electrical upgrades, SCADA integration and controls.

**Washington Co. Sewer District, NYSERDA FlexTech and Energy Performance Contract, Fort Edwards, NY.** Technical Lead. Responsible for an energy performance contract to implement energy efficiency improvements, resulting in operation and maintenance savings. Specific improvements included replacement of two centrifugal blowers with two new turbo blowers, replacement of existing coarse bubble diffusers with new ultra-fine bubble diffusers, as well as comprehensive dewatering system upgrades including the replacement of two existing belt presses with two new belt presses, new cake conveyors, polymer system improvements and associated SCADA integration and controls.

**Detroit Water and Sewer Department (DWSD), Detroit Long Term CSO Control Plan Update, Detroit, MI.** Project Engineer. Responsible for the treatment efficiency work group responsible for evaluating treatment technology alternatives for screening and disinfection of CSOs

# Jeffrey Tudini

## Project Manager

Jeffrey is an environmental engineer and project manager with the water/wastewater design group of AECOM. He has extensive experience working on projects at Niagara Falls WWTP. The wide range of projects that he has managed has given him a solid foundation for various consulting projects including, but not limited to, system designs and alternatives evaluations, and system startup/commissioning and operation.

### Years of Experience

Total: 16  
With AECOM: 5

### Education

MS, Civil/Environmental Engineering, SUNY at Buffalo, 2007

BS, Civil/Environmental Engineering, SUNY at Buffalo, 2005

### Licenses/Certifications

N/A

### Professional Affiliations

N/A

## Project Experience

### **Niagara Falls Water Board, Wastewater Treatment Plant Sedimentation Basin and Scum Removal Upgrades, Niagara Falls, NY.**

Lead process engineer and assistant project manager for the design of the capital improvement project to upgrade the WWTP primary treatment system and scum removal process. The design includes multiple unit upgrades with major systems including: increased basin weir length with the addition of effluent finger weir troughs, chain and flight sludge scrapper units, and full upgrade of the scum removal system including the use of fine screen scum separation units.

### **Niagara Falls Water Board, Wastewater Treatment Plant Effluent Disinfection Upgrades, Niagara Falls, NY.**

Process engineer for the design of the capital improvement project to upgrade the WWTP effluent disinfection system. The design was developed to improve the WWTP control and monitoring of the WWTP effluent disinfection process using sodium hypochlorite. This system presents multiple design considerations given the plants variability of chlorine demand from sulfide generation in their secondary treatment process. This system is designed with a robust control and monitoring system to allow for consistent effluent disinfection.

### **Niagara Falls Water Board, Wastewater Treatment Plant Optimization, Niagara Falls, NY.**

Lead process engineer to develop physical/chemical treatment system alternative evaluations to improve the performance of the existing WWTP. Evaluations include: improvements to the effluent disinfection process; physical/chemical treatment optimization (i.e., treatment chemicals); and chemical use (i.e., oxidant) at the GAC filters. As lead process engineer, develop test plans and treatment systems to evaluate optimization conditions and provide Engineering Repots and recommendations for improved system operations.

### **Niagara Falls Water Board, Wastewater Treatment Plant Biological Treatment Evaluation, Niagara Falls, NY.**

Lead process engineer to develop and test pilot-scale biological treatment systems to evaluate if a future conversion of the existing WWTP is an alternative. The technologies tested included a membrane biological reactor (MBR) system and an attached growth moving bed biological reactor (MBBR) system. Pilot testing was conducted over an 8-month period to evaluated multiple test conditions and evaluated the wastewater treatability using different biological systems.

### **Erie County Department of Environmental Planning, Lackawanna Wastewater Treatment Plant, Erie County, NY.**

Lead process engineer and assistant project manager for the evaluation of the Lackawanna WWTP solids handling systems including the gravity thickener, digesters, and the dewatering

## Jeffrey Tudini - Project Manager

process. This evaluation assessed the primary and secondary solid wasting processes, digester operation along with inspections, and overall system conditions. Multiple alternatives were developed to improve the current solids handling process including different digester covers (i.e., fixed, floating, gas holding, and membrane), digester sizes, digester mixing systems, and process monitoring and redundancy equipment.

### **Buffalo Sewer Authority, Wastewater Treatment Plant Co-Digestion Alternatives Evaluation, Buffalo, NY.**

Lead process engineer and assistant project manager for the concept design for accepting high strength waste (i.e., food waste) at the Buffalo Sewer Authority's Bird Island WWTP. Conducted a holistic evaluation for incremental acceptance ranging from 100,000 to 400,000 lbs. VSS/day of high strength food waste for treatment and co-digestion at the WWTP. System evaluation included multiple alternatives including traffic modifications to improve the hauled waste program, unit process upgrades for the receiving station, digestion process, dewatering process, and digestion gas facilities. Ultimately, this evaluation provides the basis for accepting high strength food waste at the WWTP and the road map for capital improvements that align with the incremental acceptance of the high strength waste stream.

### **Southern Company, Wastewater Treatment System, GA.**

Project manager and lead process engineer for a low-volume wastewater treatment system alternatives evaluation and treatment system design. Developed treatment system concept designs for temporary and permanent systems with critical compliance deadlines upcoming. Successfully delivered project scope on time to maintain system compliance and meet future design demands.

**Textile Client, Treatment Evaluation, SC.** Project manager and process engineer for an antimony treatment evaluation project. Perform an alternatives evaluation to review options to modify the facility's existing WWTP to improve treatment for antimony, while reducing chemical costs, and improving sludge management. Assisted the client with reviewing antimony treatment alternatives, provided conceptual designs and cost estimates for the alternatives, and worked with the client to conduct bench-scale testing and confirm the performance of the selected treatment process.

**Effluent Disinfection Evaluation, GA.** Served as project manager and process engineer for an effluent disinfection evaluation project. Perform an alternatives evaluation to review options to comply with new residual chlorine limits, while remaining in compliance with the existing pathogen permit requirements. Assisted the client with reviewing effluent disinfection alternatives, provided conceptual designs and cost estimates for the alternatives, and worked with the client and the selected technology vendors to review the treatment performance.

### **Columbus Water Works, Industrial Discharge Limits, Columbus, GA.**

Project manager and lead process engineer to develop local limits for industrial discharges to the South Columbus Water Reclamation Facility (SCWRF). This evaluation was conducted using water quality analytical data and information provided by CWW. The overall objective is to define the maximum loads available for the current industrial users discharging to the SCWRF and serve as a basis to determine if/what limits need to be set on the industrial sources and/or what improvements or adjustments should be made to the SCWRF to maintain effluent compliance.

### **EPRI and TVA Kingston, Treatment Evaluation/Pilot, TN.**

Project manager for a full-scale FGD wastewater treatment evaluation to optimize physical/chemical treatment performance. This full-scale pilot includes the evaluation of multiple treatment conditions using common physical/chemical treatment chemicals (flocculant and coagulants) to assist EPRI with developing an FGD wastewater treatment operations manual.

### **Textile Client, Multiple Wastewater Treatment Plant Projects, GA.**

Project manager and process engineer for a wide range of projects. Initial scope of work was to evaluate the capacity and operation of existing WWTP as well as mimic with bench scale operations with range of influent sources. Following successful evaluation, Mr. Tudini served as the Client's engineer for a range of projects. Projects/tasks include toxicity identification/reduction evaluations, WWTP operator training, solids management evaluations, permit renewal, antidegradation study, and conceptual effluent filtration study that has progressed to a full-scale design that was successfully constructed and started up in March 2014.

# John Goeddertz, PhD

## Client Liaison

Dr. Goeddertz is a wastewater and stormwater process evaluation and NPDES permitting expert who brings many years of experience working on Niagara Falls WWTP. He has worked extensively in the evaluation, design, permitting, construction, operation, and troubleshooting of stormwater/wastewater management and treatment facilities for both municipal and industrial clients.

### Years of Experience

Total: 36  
With AECOM: 19

### Education

PhD, Civil Engineering,  
State University of New  
York at Buffalo, 1990

MS, Civil Engineering, State  
University of New York at  
Buffalo, 1986,

BS, Civil Engineering, State  
University of New York at  
Buffalo, 1984

### Licenses/Certifications

N/A

### Professional Affiliations

N/A

## Project Experience

### **Niagara Falls Water Board, Wastewater Treatment Plant Sedimentation Basin and Scum Removal Upgrades, Niagara Falls, NY.**

Project Manager for the design of the capital improvement project to upgrade the WWTP primary treatment system and scum removal process. The design includes multiple unit upgrades with major systems including: increased basin weir length with the addition of effluent finger weir troughs, chain and flight sludge scrapper units, and full upgrade of the scum removal system including the use of fine screen scum separation units.

### **Niagara Falls Water Board, Wastewater Treatment Plant Effluent Disinfection Upgrades, Niagara Falls, NY.**

Project manager for the design of the capital improvement project to upgrade the WWTP effluent disinfection system. The design was developed to improve the WWTP control and monitoring of the WWTP effluent disinfection process using sodium hypochlorite. This system presents multiple design considerations given the plants variability of chlorine demand from sulfide generation in their secondary treatment process. This system is designed with a robust control and monitoring system to allow for consistent effluent disinfection.

### **Niagara Falls Water Board, Wastewater Treatment Plant Biological Treatment Evaluation, Niagara Falls, NY.**

Project manager responsible to develop and test pilot-scale biological treatment systems to evaluate if a future conversion of the existing WWTP is an alternative. The technologies tested included a membrane biological reactor (MBR) system and an attached growth moving bed biological reactor (MBBR) system. Pilot testing was conducted over an 8-month period to evaluate multiple test conditions and evaluated the wastewater treatability using different biological systems.

### **Niagara Falls Water Board, Wastewater Treatment Plant Capital Improvements Program Management, Niagara Falls, NY.**

Served as program manager for implementation \$7 million worth of capital upgrades to the Niagara Falls WWTP. Work included project scoping and preparation of engineering RFPs for bidding by consulting firms. An important aspect was preparation of accurate cost estimates that would determine how much work could be performed and stay within the allotted budget. Reviewed engineering proposals and recommended award. Responsible for review of project deliverables during design.

### **Niagara Falls Water Board, Wastewater Treatment Plant Optimization, Niagara Falls, NY.**

Project manager responsible to develop physical/chemical treatment system alternative evaluations to improve the performance of the existing WWTP. Evaluations include: improvements to the effluent disinfection process; physical/chemical treatment optimization (i.e., treatment chemicals); and chemical use (i.e., oxidant) at the GAC filters.

## John Goeddertz, PhD - Client Liaison

**Buffalo Sewer Authority (BSA), Secondary System Rehabilitation and Upgrades, Buffalo, NY.** Project manager. Provided engineering design services to replace the existing fine bubble diffuser aeration system with a more energy efficient aeration system. Rehabilitated the existing secondary treatment system including various valves and flow meters, the return activated sludge system, waste activated sludge system, and installation of stop logs in effluent channels and Chlorine Contact Tank.

**Town of Amherst, Scum System Improvements, Amherst, NY.** Project manager. Evaluated and implemented improvements to the facility's primary, secondary, and tertiary clarifiers scum removal systems (3 separate systems), including replacement of existing inoperable pneumatic injectors with 3 duplex chopper pump centrifugal pump systems. Design improvements included combining both primary clarifiers scum systems into one common system thereby eliminating the need for separate primary scum systems. Provided detailed design and construction phase services.

**Town of Amherst, Gate Actuator Replacement with Hydraulic Actuators, Amherst, NY.** Project manager. Evaluated and implemented improvements to the facility's influent pumping station (Building 1) isolation gates to switch from electric motor actuators to hydraulic cylinder based systems to eliminate having electrical components located in an area that routinely flooded. The work included 9 separate actuators, of which 5 were vertical gates, and 4 were ¼ turn butterfly gates. All 9 gates were powered from a common hydraulic power pack located in the dry well that was not subjected to flooding. Provided detailed design and construction phase services.

**North Chautauqua Lake Sewer District, Wastewater Treatment Plant Upgrades, Mayville, NY.** Project manager. Evaluated the existing condition of the NCLSD WWTP and prepared an engineering report for recommended capital improvements. After acceptance of the Engineering Report by the NYSDEC, tasked with preparing the detailed design and managing the bidding process. The work consisted of replacing the facilities RBCs with new RBCs and replacement of the influent screw pumps and controls. During construction provided resident inspection and construction administration services. The project was completed under budget. As a follow-on project, provided complete engineering services to assist the NCLSD with replacement of the roof on the administration building. Work included asbestos survey, design, bidding, and construction inspection and administration.

**Town of Amherst, Dewatering Polymer Make Up System Replacement, Amherst, NY.** Project manager: Evaluated and implemented improvements to the facility's dewatering polymer make-up and feed systems. Work included a new bulk bag feeder/makeup system that eliminated the need for operators to handle numerous 50 pound bags and the resulting fugitive dust conditions. Design improvements resulted in reduced polymer consumption as a result of improved makeup and aging; along with a reduced unit price for polymer in switching to the larger super sack units. The system also included new polymer feed pumps with VFDs that were integrated into the facility's existing centrifuge controls via the plant's SCADA system. Provided detailed design and construction phase services.

**Town of Chautauqua, Phosphorous Reduction Engineering Evaluation, Chautauqua Heights Sewer District, Chautauqua, NY.** Project manager. In response to the issuance of a phosphorous total maximum daily load (TMDL) the Town of Chautauqua Chautauqua Heights Sewer District (CHSD) was tasked with evaluating and implementing WWTP upgrades that would reduce their phosphorous loading to Chautauqua Lake by approximately 80%. Interim removal limits were also established at 1 mg/l. AECOM evaluated compliance options and determined that significant upgrades to the small plant would be required in order to meet the approximately 0.3 mg/l effluent limitation. Alternatively, options to eliminate the WWTP and instead pump the plant's influent wastewater to the NCLSD WWTP in Mayville were also considered. This option was evaluated as a stand-alone option or implemented in conjunction with an overall "sewer the lake" alternative that would provide sewer service around the entire Chautauqua Lake. Ultimately the option to close the plant and instead convert it into a pumping station that would pump the wastewater to the NCLSD was selected. Grant applications were prepared and submitted to the NYSEFC.

**City of Salamanca Board of Public Utilities, Treatment Plant Upgrades, NY.** Technical Lead. Evaluated effect of proposed casino facilities on existing treatment plant and recommended upgrades to treatment plant to enable processing of casino flows and loadings. Designed and installed upgrades to aeration facilities (fine bubble diffused air with DO control) and solids handling facilities (thickening, dewatering, and pumping). Novel thickening process was implemented to thicken aerobic digester contents so that additional thickener volume was not necessary.

# Jeff Reade

## Technical Advisor - Energy Optimization / Operations

Jeff is a wastewater treatment process specialist with 20 years of combined design, commissioning, and operating experience at both municipal and industrial facilities. His areas of expertise include both aerobic and anaerobic biological processes, treatment plant and conveyance system hydraulics, process automation, and oxygen transfer. Mr. Reade has a proven track record with the integration of treatment plant processes and energy recovery/generation systems and with the application of control systems for optimization and energy management. His process optimization work is informed by his experience as the director of 70 operations and process control staff at Boston's 1,270-mgd Deer Island treatment plant.

### Years of Experience

Total: 34  
With AECOM: 18

### Education

MS, Environmental/  
Environmental Health  
Engineering, Worcester  
Polytechnic Institute, 1997

BS, Chemical Engineering,  
Northeastern University,  
1986

### Licenses/Certifications

N/A

### Professional Affiliations

N/A

## Project Experience

**District Water and Sewer Authority, Blue Plains Wastewater Treatment Plant Program Management, Washington, DC.** Provided technical review and process engineering support for several biological nutrient removal/enhanced nutrient removal projects, including the evaluation of ENR alternatives for the Blue Plains wastewater treatment plant. Performed preliminary design of energy recovery systems, including greenhouse gas emissions analyses, in the evaluation of a variety of biosolids processing and energy recovery options. Conducted process evaluations including preliminary design and modeling of a variety of suspended growth, fixed film, and hybrid (IFAS) treatment options.

**Philadelphia Water Department, Digester-Gas-Fueled Cogeneration System Design, Philadelphia, PA.** Process lead for the concept and preliminary design of a digester-gas-fueled cogeneration system for the 150-mgd Northeast water pollution control plant which will produce 5 megawatts of green energy and satisfy more than 80 percent of the facility's heating requirements.

**City of Palo Alto, Aeration System Study, Palo Alto, CA.** Task team leader for aeration system energy/operations and maintenance optimization at the regional water pollution control plant. Responsible for complete review of energy optimization opportunities to include aeration system retrofit, modeling of energy-saving biological process modifications, hydraulic analysis, and dissolved oxygen control strategies.

**Philadelphia Water Department, Northeast Water Pollution Control Plant Digester Gas Piping Replacement, Philadelphia, PA.** Process lead on the concept and preliminary design of a digester gas fueled cogeneration system for the 150-mgd water pollution control plant. The project is in design and anticipated to produce 5 megawatts of green energy and will satisfy over 80 percent of the facility's heating requirements.

**Massachusetts Water Resources Authority, Deer Island Treatment Plant, Winthrop, MA.** Technical lead and project manager for a variety of energy optimization programs at the Deer Island treatment plant to include optimization of operating strategies for a pure oxygen supply system to a large (710-mgd) secondary treatment process, as well as optimization of system hydraulics for a variety of pumping systems throughout the plant.

## Jeff Reade - Technical Advisor - Energy Optimization / Operations

**Massachusetts Water Resources Authority, Deer Island Treatment Plant, Winthrop, MA.** Provided program management oversight for a variety of programs to leverage value of on-site generation systems at the treatment plant. Participation in renewable energy and high demand peak shaving programs resulted in revenue and/or avoided costs over \$1 million annually.

**West Walton Sewage Treatment Works, Activated Sludge Process Design, Construction, and Commissioning, Wisbech, England.** Managed process design, mechanical design/construction, and commissioning at a 10-mgd high-rate activated sludge project. The project incorporated a variety of energy-savings measures including automated dissolved oxygen control of multi-stage centrifugal compressors, and state-of-the-art motor managers on all large horsepower rotating equipment.

**Massachusetts Water Resources Authority, Deer Island Treatment Plant Optimization, Winthrop, MA.** Directed plant optimization improvements at the wastewater treatment plant, including cryogenic oxygen control, digester gas utilization, and secondary reactor operation strategies, which led to savings of more than \$2.3 million annually. Led participation in energy and renewable resource programs, generating an additional \$1.6 million in annual non-rate revenue and plant performance, and meeting eligibility requirements for the Association of Metropolitan Sewerage Agencies' awards for NPDES permit compliance. Had responsibility for program management oversight of the preliminary design of wind power and photovoltaic facilities.

**City of East Windsor, Moving Bed Biofilm Reactor System, East Windsor, NJ.** Process lead for the development of a hybrid (MBBR) biological system for the treatment of a high-strength complex industrial waste to include physical/chemical pretreatment and conditioning.

**City of East Providence, Biological Nutrient Removal Treatments, East Providence, RI.** Provided process engineering support in the development of a variety of BNR treatment schemes to include the application of IFAS in an MLE or Barbedpho configuration for the 10-mgd water pollution control facility.

**City of Cranston, Biological Nutrient Removal Treatment Alternatives Study, Cranston, RI.** Provided process and operations evaluations for the contract operator to evaluate the capacity of the city's 14-mgd

water pollution control facility and the impact of various treatment schemes on BNR performance. Provided recommendations that have since been implemented to improve the capacity and stability of the BNR treatment process.

**City of Meriden, Nutrient Removal Plant Expansion, Meriden, CT.** Process lead for the city's nutrient removal plant expansion. Responsible for the optimization of the biological process to balance biological oxygen demand, total nitrogen, and total phosphorus removal requirements with a combined strategy of biological and physical/chemical treatment to minimize chemical and utility costs. Assist plant operations and maintenance staff in the development of O&M strategies to ensure continuity of operation during construction.

**Various Clients, On-Call Operation and Maintenance Support, Various Locations.** Providing on-call process/operations and maintenance support to a variety of small- to medium-sized industrial and municipal wastewater treatment facilities, as a subcontractor to an international provider of wastewater treatment systems.

**City of Calgary, Bonnybrook Wastewater Treatment Plant Feasibility Study, Calgary, Alberta.** Provided technical review and oversight for a biogas utilization feasibility study for the 130-mgd wastewater treatment plant that evaluated a variety of options including internal combustion engines and gas purification for use with fleet vehicles. Codigestion of fats, oils, and grease was also evaluated in terms of its potential to increase gas output and quality.

**Massachusetts Water Resources Authority, Deer Island Treatment Plant, Winthrop, MA.** Deputy director of wastewater operations at the treatment plant, which provides wastewater treatment services to more than 40 cities in the metropolitan Boston area. Was also senior program manager for plant optimization. Responsible for oversight of enhancement of all process systems to reduce chemical and utility costs without sacrifice to permit compliance, including process design, definition, and prioritization of most major capital projects and prioritization of corrective maintenance activities. Managed the multidisciplinary technical staff supporting the plant's 25,000-tag distributed control system.

# Jim McQuarrie, PE

## Technical Advisor - Wastewater Process

Jim has over 25 years of practical experience in the municipal wastewater industry evenly split between public and private sector roles. On this master planning project he will support the team with his experience in wastewater process innovation, and large utility operations management.

### Years of Experience

Total: 30  
With AECOM: 1

### Education

BS, Rutgers University  
MSCE, Colorado State University

### Licenses/Certifications

Professional Engineer, CO

### Professional Affiliations

N/A

## Project Experience

**Gloucester Water Pollution Control Facility, WPCF Upgrade and Improvements Project, City of Gloucester, MA.** Served as Senior Technical Advisor on the front-end project definition phase of a \$200M upgrade and improvements project for the 15 mgd WPCF. This project upgrades the primary only WPCF to secondary treatment and includes a complete replacement of the sludge management, dewatering, and loadout facilities. Currently, the WPCF hauls dewatered primary sludge that are restricted to landfill disposal and do not meet 503 biosolids quality requirements. The new upgraded facilities will produce dewatered cake that meets Class B requirements plus the site layout of the upgraded facilities include design and site provisions to accept installation of an indirect heat dryer for future positioning on overall sludge hauling and disposal economics and improved biosolids end-use opportunities including Class A options to maximize portfolio option flexibility for the City.

**Utah Division of Water Quality, State-wide Nutrient Removal Cost Impact Study, UT.** Senior Technical Advisor on project team to support the Utah Division of Water Quality with a Statewide Nutrient Removal Cost Impact Study to evaluate the economic impact and environment benefit of nutrient removal requirements for all of Utah's publicly owned treatment works (POTWs). The study estimated economic, financial, and environmental impacts associated with a range of potential nutrient discharge standards for every discharging POTW in the state. Through use of process and cost models, the study quantified the local and aggregate economic impacts that would result from implementation of statewide nutrient discharge standards for treated wastewater across the state and considered sensitivity of cost associated with different tiers of regulatory standards. The study deliverables were also set up and consisted of local area workshops to inform POTWs about how new effluent nutrient discharge limits might be addressed at their facilities, along with the associated capital and operation and maintenance (O&M).

**Metro Water Recovery, Biosolids Dewatering Optimization, Denver CO.** Senior director and technical advisor to project team tasked with addressing and improving the dewatering performance and economics for land use application of 85 dry tons per day of anaerobically digested sludge. Biosolids management is one of the largest cost centers for Metro, and costs are influenced by many factors. The team evaluated the factors that influence biosolids management logistics, dewaterability, and plant available nitrogen and phosphorus uptake limitations and associated costs associated with crop types (winter wheat and corn) on biosolids land application sites.



## Jim McQuarrie, PE - Technical Advisor - Wastewater Process

### **Metro Water Recovery, Robert W. Hite Treatment Facility - Thermal Hydrolysis Pretreatment Engineering Evaluation, Denver CO.**

Senior advisor on program to conduct a detailed in-depth assessment of the potential for thermal hydrolysis pretreatment (THP) as a means of increasing the anaerobic stabilization capacity of the existing twelve digester complex and whether there were any economic or end-use benefits associated with production of a Class A product. The in-depth evaluation compared the feasibility and lifecycle cost-benefit of THP to increase digestion capacity at the 220 mgd facility versus additional pancake digesters or conversion to silo-digesters. The evaluation included 18 months of operation of a THP/digester system to characterize volumetric loadings, ammonia toxicity, sludge rheology and pre- and post-dewatering properties influencing polymer consumption and cake solids dryness.

### **Hampton Roads Sanitation District, Advanced Nutrient Removal Improvements, Suffolk, VA.**

Lead Process Engineer. Lead process engineer for the design of a \$260M nutrient removal and capacity expansion project. The project increases the capacity of the Nansemond Treatment Plant from 30 mgd to 50 mgd to meet HRSD's Sustainable Water initiative for Tomorrow (SWIFT) influent water quality management objectives. Expansion includes primary treatment, primary effluent equalization, 5-stage biological nutrient removal expansion, disinfection, gravity thickeners with integrated fermentation, primary solids screening, dewatering centrifuges, and odor control. Biological improvements design included provisions for implementation of mainstream anammox (Partial Denitrification Anammox (PdNA)) for compact, low-energy and carbon efficient nutrient removal.

# Anupama Mohanlal

## Project Engineer

Anupama is a civil engineer with knowledge and professional experience in water and wastewater design work. Her experience includes wastewater treatment plants, water mains, water towers, ground storage tanks, water treatment processes, sewers, and pump stations.

### Years of Experience

Total: 8  
With AECOM: 1

### Education

MS, Environmental Engineering, University of Illinois, 2018

BT, Civil Engineering, National Institute of Technology, 2016

### Licenses/Certifications

N/A

### Professional Affiliations

N/A

## Project Experience

### **Erie County Department of Environmental Protection, East Aurora Sand Filtration System Evaluation, East Aurora, NY.**

Served as Deputy Project Manager, major tasks encompassed budget oversight, analysis of present and projected flows at the WWTP, assessment of TSS removal efficiency and the state of existing sand filters, examination of alternative filtration technologies like disk filters (cloth media), conducting hydraulic analyses of current and alternative disk filters to gauge available head for gravity flow, prepare layouts for disk filter alternatives in CAD, drafting technical memoranda and cost estimates, and participating in client meetings.

**Chastain and Associates LLC, Decatur, IL.** Engineer, Water/Wastewater. Design water treatment plant, water mains, water towers, ground storage tanks, deep wells, waste treatment processes, sewers, pump stations for public entities. Compose project reports, IEPA loan and permit applications, disbursement requests, change orders, scope and budget proposals, review shop drawings, perform engineering calculations and oversee and guide construction activities. Prepare Safe Routes to School (SRTS), Lead Service Line Inventory (LSLI), Community Project Funding (CPF) grant applications and help communities secure funding for infrastructure improvement projects. Assist with lead inventory, obtain consent easements and initiate lead service replacement projects. Draft construction drawings using Civil3D. Actively participate in municipal meeting and regularly interact with clients to identify assess and solve their infrastructure related problems. Embrace team work and enjoy working closely with project team to identify and resolve complex engineering problems.

**Engineering Enterprises, Inc., Sugar Grove, IL.** Project Engineer, Water/Wastewater. Created CMOM plan, analyzed inflow and infiltration monitoring data, sanitary manhole inspection, smoke testing, and sewer televising data for several municipalities per NASSCO codes. Prepared NPDES permit reports and conducted sewer rate study for municipalities. Performed pollutant local limit evaluation calculations for WWTPs. Conducted risk assessments and prepared emergency response plans for community water infrastructure per America's Water Infrastructure Act. Developed client interaction skills including participation in municipal meetings and prepare and conduct presentations.

**Illinois State Water Survey (ISWS), Champaign, IL.** Field Assistant, Air Quality Research. Operated and troubleshooted field equipment such as continuous air quality monitors, meteorological equipment etc. Deployed and retrieved air samples, documented readings and maintained bookkeeping. Sampled and tested local ground and surface water samples to check for quality issues.

# Karen Bettencourt, PE

## Mechanical Process Engineer

Karen is an engineer with experience in water and wastewater treatment engineering, design, and drafting. She has designed mechanical process systems for water and wastewater treatment systems and other environmental treatment facilities.

### Years of Experience

Total: 23  
With AECOM: 22

### Education

BS, Civil Engineering,  
Northeastern University,  
2003

### Licenses/Certifications

Professional Engineer,  
NY, CT, NH

### Professional Affiliations

Hydraulic Institute

### Project Experience

**New York City Department of Environmental Protection, Croton Water Treatment Plant, Pump Stations, and Residuals Facility Design, New York, NY.** Provided assistance to lead mechanical process engineer for the design of the 290-mgd water filtration plant.

**New York City Department of Environmental Protection, Wards Island Water Pollution Control Plant Upgrade and Battery E Demonstration Project, New York, NY.** Mechanical Process engineer for the upgrade and retrofit of the 25-mgd battery of aeration and final settling tanks at the 290-mgd Wards Island water pollution control plant. Performed calculations, wrote specifications, and provided mechanical equipment selection. Construction services included in duties.

**New York City Department of Environmental Protection, Jamaica Water Pollution Control Plant Study, Design, and Construction, New York, NY.** Provided mechanical process design as part of design and construction services for improvements to the 150-mgd Jamaica water pollution control plant. Facility is located next to Kennedy International Airport in Queens and treats wastewater from a combined sewer service area of more than 25,000 acres. Construction services included in duties.

**City of Meriden, Water Pollution Control Facility Upgrade, Meriden, CT.** Designed mechanical process systems for upgrades and improvements to the 11.6-mgd water pollution control facility to address facility improvements that were identified in a wastewater facilities plan prepared by AECOM and approved by the Connecticut Department of Environmental Protection. Performed calculations, wrote specifications, provided mechanical equipment selection, and interacted with equipment manufacturers. Also provided shop drawing review and answered requests for information from contractors.

**City of Portsmouth, Peirce Island Wastewater Treatment Facility Upgrade, Portsmouth, NH.** Served as the Mechanical Process Engineer for the design and construction of the \$92 million upgrade of the existing Peirce Island WWTF from advanced primary to a 6.1 mgd secondary treatment with nitrogen removal using a two stage biological aerated filter (BAF). Design was implemented in two phases and included a new headworks, aerated grit removal, a secondary influent pump station, two stage BAF with integral mudwells, rehabilitation of the disinfection system, gravity thickener; aerated sludge holding, and dewatering with two rotary

## Karen Bettencourt, PE - Mechanical Process Engineer

screw presses, new electrical system and stand by generator. Due to site constraints a very compact site layout was required, and developed suggested sequence of operations specification and requirements for temporary electrical distribution system.

**Hartford Metropolitan District Commission, Reservoir #6 Water Treatment Plant Filter Evaluation, Pilot Study, Design Improvements, and Construction Services, Bloomfield, CT.** Designed mechanical process systems for improvements to the filtration system 27 MGD Reservoir #6 water treatment plant which was using 30 inches of sand monomedia and was experiencing peak demands during the summer. Performed calculations, wrote specifications, provided mechanical equipment selection, and interacted with equipment manufacturers. Also provided shop drawing review and answered requests for information from contractors.

**City of Newport, Lawton Valley Water Treatment Facility, Portsmouth, RI.** Provided mechanical design services for the design-build new 7.0 MGD water treatment facility. Evaluated alternative processes during the proposal stage, as well as provided preliminary equipment selections, compiled specifications and preliminary calculations. After award, responsible for the entire mechanical process design, including but not limited to final calculations, equipment sizing, equipment selection and specifications. During construction, responsible for shop drawing review and equipment testing and startup.

**City of Newport, Station One Water Treatment Facility, Newport, RI.** Provided mechanical process design services for the design-build retrofit upgrade for the 9.0 MGD water treatment facility. Evaluated alternative processes during the proposal stage, as well as provided preliminary equipment selections, and compiled specifications and preliminary calculations. After award, responsible for the entire mechanical process design, including but not limited to final calculations, equipment sizing, equipment selection, and specifications. During construction, responsible for shop drawing review and equipment testing and startup.

**City of Newburyport, Bartlett Road Water Pump Station, Newburyport, MA.** Provided mechanical process design services for the design and construction of the 1 MGD Bartlett Pond pump station. Performed calculations, wrote specifications, provided equipment selection, and interacted with equipment

manufacturers. Also provided shop drawing review and answered contractors' requests for information.

**Town of Cheshire, Cheshire Water Pollution Control Plant, Cheshire, CT.** Provided mechanical process design for the addition of a biological denitrification filter system for the wastewater treatment plant. Provided plans and specifications for the influent pumps, strainers, denitrification filters, methanol storage and feed systems, backwash pumps, and blowers.

**Mashantucket Pequot Tribal Nation, Foxwoods Casino Lot 9 Expansion Utility Upgrades, Ledyard, CT.** Provided mechanical process design as part of design and construction services for improvements to the water and wastewater infrastructure serving the Foxwoods Casino complex in support of the new hotel and casino facilities being developed at the site's Lot 9 parking area. Performed calculations, wrote specifications, provided mechanical equipment selection, and interacted with equipment manufacturers for the project. Also provided shop drawing review and answered requests for information from contractors.

**Tri-Town Regional Water Treatment Plant, Braintree, MA.** Lead Mechanical Process Engineer for the design of the new 12.5 MGD Water Treatment Facility. Process design included raw water screening and pumping, finished water and backwash pumping station, dissolved air flotation (DAF) technology, granular activated carbon (GAC) filtration, chemical feed systems and residuals pumping and storage.'

**Water Treatment Plant Piloting and Design, Whitinsville Water Company, Whitinsville, MA.** Provided mechanical process design for the Sutton wellfield. Provided review of construction submittals during the construction phase.

**Tewksbury Water Treatment Facility, Tewksbury, MA.** Lead Mechanical Engineer for the design and improvement of the existing 7 MGD water plant. System upgrades to the various equipment within the plant including finished water pumps, vacuum pumps, raw water pump station and chemical feed system.

**City of Gloucester Commercial Street Pumping Station, Gloucester, MA.** Lead mechanical engineer providing a new pump station and wet well for approximately 50 properties located on the coastal area of "the fort". Pumping station consisted of two submersible solids handling pumps each rated for 0.22 MGD.

# Jerry Otterson, RA

## Architecture

Jerry is a senior Architectural manager in the Chelmsford office. His areas of expertise include Architectural discipline management, design project management and quality control, construction project management. Jerry's project experience includes industrial, water treatment and wastewater treatment facilities, and Department of Defense projects.

### Years of Experience

Total: 50  
With AECOM: 42

### Education

MS, Architectural Engineering, University of Illinois - Urbana-Champaign, 1982

MBA, Business Administration/Management, University of Illinois, 1982

BA, Architectural Engineering, University of Illinois, 1980

### Licenses/Certifications

Registered Architect, CT, RI, DE, HI

### Professional Affiliations

Project Management Institute

### Project Experience

**Armed Forces Reserve Center, Armed Forces Reserve Center, Farmingdale, NY.** Senior project manager responsible for total project management for 250,000-square-foot, \$92 million, 4-story building and supporting facilities. The project was initially unsuccessfully bid as an 8A procurement. Assisted New York DOD reconcile bid protests which led to a successful rebid of the project resulting in saving New York more than \$30 million.

**Connecticut Air National Guard, CNAF Upgrade A-10 Engine Surf - Bradley International Airport, Windsor Locks, CT.** Senior project manager responsible for total project management for 33,000-square-foot, \$6.7 million building and supporting facilities.

**Providence Water, Residuals and Backwash Recycle Upgrades for Philip J. Holton Water Purification Plant, Providence, RI.** Serving as Architectural Discipline Lead to provide engineering services for the residuals and backwash recycle upgrades at the Philip J. Holton Water Purification Plant. Currently in design, this project addresses the separation of spent filter backwash waste from the existing drainage system; the construction of a new spent backwash recycle system to manage spent filter backwash; construction of new engineered residuals thickening lagoons; modification of existing drying beds to handle the thickened residuals; construction of a new decant pumping station to handle decant from the new engineered lagoons; and the removal of residuals from the South Sedimentation Basin and Lagoons 1A, 1B, and 2.

**Springfield Water and Sewer Commission Master Plan, Springfield, MA.** Architecture Manager for master plan for design of a new and renovated Water Treatment Facilities as a part of a design-build project for a new finished water clearwell and backwash pumping station.

**Meriden WPCF and Remote Pump Station Upgrades, Meriden CT.** Architecture Manager for design of new buildings and alterations at Wastewater Treatment facility in Meriden Connecticut.

**City of Portsmouth, Wastewater Treatment Plant, Portsmouth, NH.** Manager for Architectural effort for additions and alterations to multiple buildings at a wastewater treatment plant in Portsmouth New Hampshire.

## Jerry Otterson, RA - Architecture

**Wallingford Water Pollution Control Facility, Wallingford, CT.** Architecture Manager for design of a new and renovated Water Treatment Facilities.

**Water Treatment Plant Design, Tri-Town Commission, Braintree, MA.** Architecture Manager for the design of a new, greenfield 12 MGD water treatment plant for the Tri-Town Commission.

**Orleans Wastewater Treatment Facility, Orleans, MA.** Architecture Manager and Architect of Record for design of a new Water Treatment Facility.

**Worcester Road Pump Station, Framingham, MA.** Architecture Manager for design of a new Water Treatment facility in Framingham, Massachusetts.

**Pittsfield Wastewater Treatment Plant Nutrient Upgrade, Pittsfield, MA.** Architecture Manager for design of a new and renovated Water Treatment Facilities.

**Foxborough Chestnut Street Water Treatment facility, Foxborough MA.** Architecture Manager for design of a new Water Treatment Facility in Foxborough, Massachusetts.

**Martha's Vineyard Airport Waste Water Treatment Facility, Martha's Vineyard, MA.** Architecture Manager for design of alterations at Water Treatment facility in Martha's Vineyard, Massachusetts.

**Greenwich Department of Public Works, Old Greenwich, Chapel Lane, and Cos Cob Pump Stations, Greenwich, CT.** Architecture Manager for Architectural design and construction administration services for a water treatment facility in Greenwich, Connecticut.

**Mackenzie Water Treatment Plant Chemical Feed Improvements, Clinton, CT.** Architecture Manager for design of an additions and alterations at Water Treatment facility in Clinton Connecticut.

**Town of Tewksbury, Water Treatment Plant Construction Services, Tewksbury, MA.** Architecture Manager for the design of a new facility and construction of the improvements to a 7 MGD Water Treatment Plant.

**Town of New Milford, Rock Street and Welches Point Pump Stations, Milford, CT.** Architecture Manager for Construction Administration Services for Water Treatment Facility in Milford, Connecticut.

**Mattapoisett Chemical Treatment Facility, Mattapoisett MA.** Architecture Manager for design of a new Water Treatment Facility Pump Stations in Mattapoisett, Massachusetts.

**Woonsocket Regional Wastewater Commission, Woonsocket Wastewater Treatment Plant, Woonsocket, RI.** Manager for Architectural effort to develop construction documents for additions and alterations to wastewater treatment plant in Woonsocket, Rhode Island.

**Washington Suburban Sanitary Commission, Patuxent Water Filtration Plant Design Services During Construction, Laurel, MD.** Architecture Manager for Construction Administration Services.

**New Castle Waste Water Treatment Plant Upgrade, New Castle, PA.** Architecture Manager for design of a new and renovated Water Treatment Facilities.

**City of Hamilton, Woodward Wastewater Treatment Plant, Hamilton, Ontario.** Architectural quality control review lead for architectural effort to develop a design-bid-build proposal for new wastewater treatment building in Hamilton Canada.

**City and County of Honolulu, City and County of - Department of W, Sand Island Wastewater Treatment Plant Secondary Treatment Planning and Design, Sand Island, HI.** Contributing Architect for existing condition survey for water treatment plant at Sand Island Hawaii.

**Passaic Valley Sewerage Commission, Wastewater Treatment Plant Upgrade Program Management Services, Newark, NJ.** Architecture Manager for Owner Project Management services for a Water Treatment Facility at Newark, New Jersey.

**City of Davis, Davis Wastewater Treatment Plant Upgrade - Design-Build Services, Davis, CA.** Architectural Manager for design-build wastewater treatment facility including administration building and laboratory.

**Opequon Water Supply Project, Frederick County, VA.** Architecture Manager for Design Build Proposal for a new Water Treatment facility in Frederick County, Virginia.

**McLoughlin Point Wastewater Treatment Plant, Vancouver Canada.** Architecture Manager for design of a new Water Treatment Facility Process Building in Vancouver Canada.

# Michael Malenfant, PE

## Structural Engineer

Michael is a senior structural design engineer with experience in all aspects of structural engineering design, engineering computer analysis, construction services, and structural condition assessments throughout the world. He has extensive experience in the analysis, design, field investigation, condition assessment, and retrofit of reinforced concrete structures for water and wastewater treatment facilities and ancillary structures, high-pressure treatment cells, and buried storage facilities. Michael also has extensive experience providing structural engineering design oversight, quality assurance, and value engineering for hydraulic structures.

### Years of Experience

Total: 24  
With AECOM: 24

### Education

MS, Civil and Structural Engineering, Duke University, 1998

BS, Civil and Structural Engineering, New Mexico State University, 1996

Graduate Coursework, Construction Management, Northeastern University, 2001-2003

### Licenses/Certifications

Professional Engineer, NY, CT, GA, MA, MD, ME, MI, NJ, NH, NM, OH, RI, UT, VA, WA

### Professional Affiliations

American Society of Civil Engineers  
American Concrete Institute

### Project Experience

**Nassau County, Bay Park Sewage Treatment Facility Effluent Pump Station Upgrades, NY.** Provided Lead structural engineering services for the condition assessment, flood analysis and protection of an existing below grade sewage effluent pump station and the structural design of a new, above floodway electrical facility. Engineering challenges included the analysis of an existing facility for increased hydrostatic forces above and below grade, including unreinforced CMU and brick cladding.

**Massachusetts Water Resources Authority, Braintree-Weymouth Intermediate Pump Station, Braintree, MA.** Provided structural engineering and field inspections for the 45-mgd Braintree-Weymouth intermediate pump station, for the Massachusetts Water Resources Authority, which pumps wastewater through a 42-inch force main into a deep-rock tunnel for transport to the Deer Island wastewater treatment plant.

**DC Water, Bypass Conduit Structural Condition Assessment and Tunnel Dewatering Pump Station Design Reviews, Washington, DC.** Provided lead structural engineering services for a confined space entry structural condition assessment of 1300 linear feet of 8'-0" to 11'-0" diameter semi-elliptical sewer bypass conduit at the 370-mgd Blue Plains Advanced Wastewater Treatment Plant. Performed entry under permit-required confined space conditions, observed conditions, and prepared written documentation of tunnel condition. Provided structural engineering design and review services for 132' diameter by 140' deep tunnel dewatering pump station, including 3-D finite element analysis under typical deep pump station loading. Provided topside structural engineering support for dive team underwater inspection of outfall conduits.

**Town of Provincetown, Biological Treatment Plant, Provincetown, MA.** Lead structural engineer for the design of a new wastewater treatment system in Provincetown, Massachusetts, under a design-build contract. Structural design included the finite-element analysis of a paired semi-circular tank in order to utilize a pre-engineered dome structure as well as to determine the effect of uneven grade around the tank.

**Borough of Chambersburg, Wastewater Treatment Plant Upgrade, Chambersburg, PA.** Provided lead structural engineering services for the design and construction phases of the upgrades to the water treatment plant in Chambersburg. New facilities included an influent pump station and screenings

## Michael Malenfant, PE - Structural Engineer

facility, multiple circular clarifiers, diversion boxes, support buildings, and modifications to existing facilities to accommodate changes in flow rates and newer technologies.

**City of Nashville, CSO Control Program/Overflow Abatement Program, Nashville, TN.** Provided structural engineering technical review as a member of a multi-disciplinary Design Review and Value Engineering team as part of AECOM's larger Program Management Role. Work included independent review of 30%-level design documents for improvements to the Central Wastewater Treatment Plant headworks, aeration basins, secondary clarifiers, and modifications and retrofit of unused basins to accommodate flow equalization as part of the overall Consent Decree.

**South Essex Sewerage District, On-Call Services Contracts, Salem, MA.** Performed structural engineering services for on-call services contracts. Work included seismic analysis and design for mechanical, electrical, architectural, and other non-structural components, structural analysis of existing facilities to determine applicability of modification, and assistance in constructability analysis.

**Capital Regional District, McLoughlin Point Wastewater Treatment Plant, Esquimalt, British Columbia, Canada.** Provided lead structural engineering design services for the design and construction of a 108 megaliter per day liquid treatment facility located on a narrow site at the entrance to Victoria Harbor. Challenges in the design process included an extremely limited sight, zoning restrictions with respect to height and plan area, and construction sequencing to accommodate a rapidly impending consent decree. Design included a structural steel operations and maintenance facility, cast-in-place concrete process train, and incorporation of a green roof and a tsunami-wall in the finished structure. Design included a "no change in footprint" option to increase capacity 15%, compliance with British Columbia Building Code, and eventual achievement of LEED v4 certification.

**City of Davis, Wastewater Treatment Plant Upgrades, Davis, CA.** Provided structural engineering services for the upgrades of an existing 50 year-old wastewater treatment facility. Engineering challenges included working in a high seismic area, the need to maintain plant operations, and demanding schedule requirements.

**City of Bangor, Primary Wastewater Treatment Plant Condition Assessment, Bangor, ME.** Provided lead structural engineering services for the condition assessment of existing facility constructed circa 1960 with upgrades constructed circa 1990. Condition assessment and literature study, including review of construction logs, indicated need for further destructive testing due to the suspected presence of Alkali-Silica Reaction (ASR).

**City of Gardiner, Maine Avenue CSO Storage Tank, Gardiner, ME.** Provided lead structural engineering services for the design of a new, 410,000 gallon combined sewer overflow storage tank located in a significant flood zone. Project challenges include design to resist buoyancy while remaining operational and the future planned use of the top surface of the tank as a concert venue.

**City of Portsmouth, Portsmouth Water Treatment Facility Upgrades, Portsmouth, NH.** Provided lead structural engineering services for the engineering rehabilitation of a 50-year old wastewater treatment facility, structural design of independent additions to existing structures, and design of new buried tanks to assist in process management. Retrofit work included removing and replacing of flooring systems at multiple buildings and seismic qualification of existing lateral load resisting systems.

**Charles River Water Pollution Control District, Secondary Settling Tank Settlement Test, Medway, MA.** Provided lead structural engineering services for the assessment of a 95-foot diameter, 25 foot deep circular tank that experienced a loss of bearing strata during a high groundwater event resulting in a pressure relief plug failing. Assessment include a pre-settlement test structural condition assessment under confined space entry conditions, observation of initial filling of tank, and post-settlement test structural condition assessment and analysis.

**City of Akron, CSO Long Term Control Plan Value Engineering Study, Akron, OH.** Provided structural engineering consulting services as a member of a multi-disciplinary Value Engineering team (under the direction of Robinson, Stafford, & Rude, Inc.) for the 26.5 million gallon CSO storage tunnel, drop shafts, and diversion structures for the Ohio Canal Interceptor Tunnel in Akron, OH. Prepared sketches, cost estimates, and written documentation of proposed alternatives to provide means by which the value of the project as a whole may be improved.



# Yasser Rizk, PE

## Electrical Engineer

Yasser is a senior electrical engineer in AECOM Northeast Design Center in Chelmsford, MA and is the electrical and control systems department manager. He specializes in electrical engineering and control systems design for wastewater collection, pumping, treatment, and disposal systems as well as water treatment facilities. Yasser is highly skilled in electrical system design and coordination of mechanical process, HVAC, and control systems for environmental treatment facilities.

### Years of Experience

Total: 33  
With AECOM: 26

### Education

BS, Electrical Engineering,  
Alexandria University,  
Egypt, 1990

### Licenses/Certifications

Professional Engineer, CA,  
CT, FL, MA, MD, NH, RI, VT

### Project Experience

**City of Stockton, Regional Wastewater Control Facility Progressive Design-Build, Stockton, CA.** Lead electrical engineer for multiple plant improvements to treat 40 MGD (average dry weather, 105 MGD peak hour flow) and meet more stringent nitrogen limits, reduce effluent salinity, and improve overall energy efficiency and operational reliability. Improvements include new influent pumping station and headworks; replacing the existing biotowers, facultative ponds and wetlands with new activated sludge secondary treatment process; replacing existing nitrifying biotowers, dissolved air flotation thickeners, gravity filters, and chlorine contact canal with new tertiary disk filters and UV disinfection; new dewatering facilities using centrifuge technology; new buildings for administration, engineering, laboratory, safety, O&M; optimizing overall plant hydraulics to reduce the multiple pumping steps (currently seven) across the plant to only two pumping steps and rely on gravity for most conveyance through the treatment train.

**Massachusetts Water Resources Authority, Intermediate Pump Station Design and Construction, Braintree and Weymouth, MA.** Provided electrical system design and construction services for the 46-mgd (174,129-m<sup>3</sup>/d) Braintree-Weymouth intermediate pump station and headworks including the electrical system design for the DSL pumps at the Deer Island treatment plant.

**United States Agency for International Development (USAID) - CMC Program, Pump Station and WWTP Upgrade Design-Build, Alexandria, Egypt.** Provided electrical and control systems engineering design and construction support for the expansion of six large pumping stations and upgrade of two 378,541-m<sup>3</sup>/d wastewater treatment plants. Conducted preliminary studies, developed design-build RFP documents, assisted with the bidding process including selection and evaluation of bidders and award of contract, reviewed design submittals during the design phase and managed and oversaw construction activities until successful completion and start-up of facilities.

**City of East Providence, Wastewater System Improvements- Design-Build, East Providence, RI.** Lead Electrical design engineer for design build facility upgrade. The project included upgrade and expansion of the water pollution control facility, two new pumping stations, and upgrade to a number of existing pump stations. The electrical work includes replacement of the entire electrical distribution system at the existing plant and design of a new system at the plant and the pump stations. Provided electrical design services for the facility upgrade including the replacement of the facility electrical distribution system including 4000 amps, 480 VAC Switchboard, 600 KW standby diesel generator and several

## Yasser Rizk, PE - Electrical Engineer

motor control centers. The upgrade also included fire alarm, communications and lighting systems upgrade and replacement.

**Mashantucket Pequot Tribal Nation, Foxwoods Casino Wastewater Treatment Plant Upgrade, Ledyard, CT.** Provided electrical engineering services during construction for upgrade and expansion of the wastewater treatment plant. Supervised construction of electrical systems and provided coordination with other design disciplines. Reviewed and approved electrical equipment shop drawings. Provided design changes as needed during construction.

**City of Davis, Davis Wastewater Treatment Facility Design Build, Davis, CA.** Lead Electrical design engineer for a \$65 million design build facility upgrade. Provided electrical design services for the facility upgrade including the replacement of the facility electrical distribution system including 4000 amps, 480 VAC Switchboard, 2 MW standby diesel generator system and several motor control centers. The upgrade also included fire alarm, communications and lighting systems upgrade and replacement.

**Town of Davie, Water and Water Reclamation Facility Design-Build, Davie, FL.** Lead Electrical design engineer for a \$100 million design-build project consisting of a 6-mgd reverse osmosis water treatment plant (expandable to 12 mgd) and 3.5-mgd membrane water reclamation facility (expandable to 7 mgd.) Also included is a 13.2-kV distribution system with estimated load of 10-MVA, and a 13.2-kV, 10 MW standby generator facility consisting of four 2.5 MW, 13.2 KV diesel standby generators. The current installation phase included the installation of two (total capacity of 5 MW) of the four generator units with space and SWGR available to add the future two units. The facility was designed in 2010 and is currently built and in operation.

**Massachusetts Water Resources Authority, Deer Island Treatment Plant - Electrical Technical Assistance, Boston, MA.** Provided a power system short circuit and coordination study using EDSA software. Created an electrical model with more than 1,500 active buses, 5,500 electrical items, a 13.8-kV distribution system, a 4,160-kV system, and a 480-V AC system with more than 38 substations and 200 motor control centers.

**Town of Ipswich, Force Main and Town Wharf Pump Station Upgrade, Ipswich, MA.** Provided electrical system design and construction services

for improvements to the 3.7-mgd (14,006-m<sup>3</sup>/d) town wharf wastewater pumping station.

**Philadelphia Water Department, Water and Wastewater Systems - General Engineering Services, PA.** Provided electrical engineering services for design of a 7-MW, 13.2kV digester gas cogeneration facility at the Northeast water pollution control plant. Facility design is based on the use of a blend of digester gas and natural gas to drive five 1.4-MW, 13.2kV internal combustion engines to produce electricity and hot water. The electrical power produced is fed into the plant's main 13.2kV switchgear and synchronized to operate simultaneously with the electrical utility system serving the facility loads. Designed the electrical system with the ability to feed up to 2 MW back into the electrical utility grid.

**Cheshire Department of Public Works, Road Pump Station Rehabilitation Design, Mansion, CT.** Provided electrical design for the upgrade of the Mansion Road pump station.

**Town of Essex, New Sewer and Pump Station System Designs, Essex, MA.** Provided electrical engineering services during construction of five pump stations.

**New Jersey American Water, Roselle Booster Pump Station Improvements, NJ.** Provided electrical engineering services for the Roselle booster pump station.

**Wastewater Treatment Facility Upgrade, Taunton, MA.** Lead Electrical design engineer for the design and construction services for the upgrade and rehabilitation of a 12-mgd (45,425-m<sup>3</sup>/d) wastewater treatment plant and 14 pump stations.

**Wastewater Treatment Facility Design-Build, Provincetown, MA.** Lead Electrical design engineer for the design and construction services for new wastewater treatment plant and several pump stations.

**Freedom District Water Treatment Plant Expansion, Carroll County, MD.** Provided electrical system engineering services for a design-build contract for the 8-mgd water treatment plant.

**Rockville Water Treatment Plant, Connecticut Water Company, Vernon, CT.** Lead electrical design engineer for the design and construction services for the \$28 million design-build new Rockville water treatment plant.

# Sarah Papazian, PE

## I&C Engineer

Sarah is a technical specialist with experience in the design of instrumentation and control systems for a variety of environmental treatment systems including water and wastewater. She is a member of the International Society of Automation and is a Past President of the Boston Section.

### Years of Experience

Total: 15

With AECOM: 14

### Education

BS, Mechanical Engineering, UMass Lowell, 2007

### Licenses/Certifications

Professional Engineer, MA

### Professional Affiliations

International Society of Automation

## Project Experience

### **City of East Providence, Wastewater System Expansion - Construction Oversight, Providence, RI.**

Provided design and construction support on a design-build contract to design and build an upgrade and expansion to the existing East Providence water reclamation facilities. The project includes expansion of the existing wastewater treatment plant, two new remote pump stations, and upgrade to a number of existing remote pumping stations. The instrumentation and controls portion of the upgrade included designing the instrumentation and control systems for the main portion of the plant as well as several remote pump stations. Systems included in the upgrade and expansion were the headworks area, dewatering press, aeration tanks, chlorine contact tanks, secondary clarifiers, odor control systems, and chemical additions.

### **City of Portsmouth, Peirce Island Wastewater Treatment Facility, Portsmouth, NH.**

Provided design support and construction services on an upgrade and expansion to the existing wastewater treatment facility. The project includes new headworks, Biological Aerated Filtration (BAF), solids handling, odor control, and associated chemicals and other systems. The entire SCADA system was upgraded, and consists of a centralized PLC with distributed remote IO (RIO) panels. MCCs and VFDs were networked via Ethernet.

### **City of Meriden, Meriden Wastewater Treatment Plant Improvements, Meriden, CT.**

Lead I&C Engineer. Designed instrumentation and control system improvements associated with the phosphorus removal (tertiary treatment) upgrade and ancillary upgrades throughout the existing 11.6 mgd water pollution control facility. The 25 mgd tertiary treatment upgrade included fine screens, influent and effluent phosphorus monitoring, pump stations, tertiary filtration and chemical metering systems. Design was coordinated with the client's system integrator to maintain consistency with their newly upgraded SCADA system.

### **Town of Orleans, Downtown Area Wastewater Treatment Facility and Effluent Disposal, Orleans, MA.**

Lead I&C Engineer. Responsible for Instrumentation and Control System design for a greenfield wastewater treatment plant. The treatment processes utilized influent screens, Sequencing Batch Reactor (SBR) treatment, and UV disinfection. Design required coordination with the associated collection system and pump station contract to ensure uniformity across both contracts.

### **City of Orleans, Downtown Area Collection System and Pump Station, Orleans, MA.**

Lead I&C Engineer. Responsible for Instrumentation and Control System design for three new collection system wastewater treatment pumping stations. The remote stations were designed to communicate with the main plant via fiberoptic cable and radio communication. Control system hardware and software was coordinated with the WWTF design to ensure uniformity across both contracts.

## Sarah Papazian, PE - I&C Engineer

**City of Newport, Newport Water Pollution Control Plant Design-Build-Operate, Newport, RI.** Lead I&C Engineer. Designed instrumentation and control system improvements associated with the process upgrade from 18.5-mgd facility to 30-mgd. Scope included rehabilitation and upgrades for primary and secondary clarifiers, headworks, aeration tanks, chemical systems, odor control systems and effluent pumping. Existing Rockwell SLC processors were replaced with CompactLogix.

**City of Woonsocket, Woonsocket Water Treatment Plant, Woonsocket, RI.** Lead I&C Engineer. Designed the instrumentation and control systems for a new water treatment plant designed to replace an existing plant. Processes included dissolved air flotation (DAF) filters, granular activated carbon (GAC) gravity filters, several chemical metering systems, chlorine contact tank/ clearwell, and finished water pumping and storage. SCADA system was comprised of several distributed PLCs and remote I/O cabinets. Overall SCADA system design included VPN communication offsite, integration of an existing raw water pump station and blending chamber via radio, as well as radio communication to finished water storage tanks for locations for monitoring and control.

**The Metropolitan District, South Hartford Conveyance and Storage Tunnel - Final Design, Hartford, CT.** Lead I&C Engineer. Provided instrumentation and control design for over 20,000-foot-long, 20-foot- diameter conveyance and storage tunnel to transport combined sewer and sanitary sewer waste from South Hartford locations to the Hartford water pollution control facility. Design includes level monitoring and sewer overflow points, gate control, and coordination with odor control systems. Oversaw communication study to evaluate best communication method for remote sites.

**Washington Suburban Sanitary Commission, Western Branch Wastewater Treatment Plant Enhanced Nutrient Removal Upgrade, Upper Marlboro, MD.** Lead I&C Engineer. Provided engineering support during construction of an enhanced nutrient removal (ENR) upgrade at a 30-mgd wastewater treatment plant. The upgrade consisted of raw water pumps, raw water bypass pumps, HRAS bioreactors, NAS bioreactors, NAS return pumps, DAF thickening, thickened sludge storage, and scrubber blow-down pumping. SCADA control included tying into existing RIO panels and providing the necessary new RIO panels.

**Patuxent WFP Phase II Expansion and UV Disinfection Facilities, Patuxent, MD.** Designed the instrumentation and control systems for a plant expansion and ultraviolet (UV) addition for an existing 120MGD water treatment plant in Patuxent, Maryland. Major aspects of the upgrade include adding two filter trains to an existing ten-train system, addition of UV disinfection systems to the discharge of all filter trains and chemical metering of several chemicals. The upgrade also included the addition of a residuals handling system which included centrifuges, mixers, gravity thickeners, and sludge storage and discharge bins.

**Connecticut Water Company, Rockville Water Treatment Plant, Vernon, CT.** Design Build. Lead I&C design engineer for the design and construction services of the new \$28 million design build Connecticut Water Company Rockville Water treatment plant.

**Water Treatment Plant Upgrades, Newburyport, MA.** Designed the instrumentation and control system for two phases of a plant upgrade project for Newburyport, Massachusetts. One phase consisted of adding a new clearwell and associated instrumentation and integration with existing plant SCADA. The second phase included a new equalization tank, capable of providing a specific range of recycle flow to the head of the plant and also quickly draining the tank to nearby lagoons using the same pumps; upgrading existing sedimentation tanks and filters, upgrading existing chemical systems and integrating all of the new equipment with the existing.

**City and County of Honolulu, Sand Island Wastewater Treatment Plant, Honolulu, HI.** Lead I&C Engineer. Provided design support on a secondary treatment upgrade to an existing 90 MGD plant. The project included new process reactors, Membrane Bio Reactors, and solids handling. The instrumentation and controls portion of the upgrade included process instruments, distributed SCADA PLCs, vendor-provided PLCs, and thin client workstations, specified to conform with client's detailed standards. MCCs and VFDs were networked via Ethernet. New work was integrated into an existing SCADA system.

# Charlie Tripp, PE

## Pipeline Condition & Rehabilitation

Charlie is a project manager with over 16 years of experience specializing in the design, management, and oversight of municipal infrastructure rehabilitation and construction projects. His portfolio of experience includes a variety of disciplines involving wastewater and stormwater collection systems, water resources, wastewater treatment, and site-civil design.

### Years of Experience

Total: 17  
With AECOM: 2

### Education

MS, Environmental/  
Environmental Health  
Engineering, Worcester  
Polytechnic Institute, 2012

BS, Civil Engineering,  
University of  
Massachusetts - Amherst,  
2006

### Licenses/Certifications

Professional Engineer, NY,  
CT, NH, ME, RI, MA, DE, NJ,  
MA, PA

### Professional Affiliations

North American Society for  
Trenchless Technology

New England Water  
Environment Association

### Project Experience

#### **Springfield Water and Sewer Commission, Special Projects BOA 2017-2020 - West Parish Filters WTP Upgrade Clearwell, Westfield, MA.**

Project Manager leading Owner's Project Management (OPM) services for the Springfield Water and Sewer Commission (SWSC) in undertaking the design and construction of a 500,000-gallon filtered water Clearwell and integral Backwash-Pumping Station onsite at the SWSC West Parish Filters Facility under a design-build format. The design-build project included design, permitting, construction, and commissioning of the new facilities to replace aging existing infrastructure onsite. The project is anticipated to be completed in late 2023, with an estimated cost of \$24M. Also assisted the Commission through the State Revolving Loan process and was successful at securing both design and construction financing for this project.

#### **Springfield Water and Sewer Commission, Annual Combined Sewer Overflow (CSO) Report, Springfield, MA.**

Project manager responsible for leading this annual project. Responsibilities included budgeting, staffing coordination; and quality review of the end deliverable to the Client on this key report regarding CSO Compliance. This yearly assignment included the installation and maintenance/monitoring of over 45 flow meters and rainfall gauges throughout the City of Springfield. The Project also included periodic updates to the collection system's hydraulic model. The model was used as a basis for the preparation of the Springfield Water and Sewer Commission's Yearly CSO Report to both MassDEP and EPA.

#### **Springfield Water and Sewer Commission, Ongoing Sewer System Cleaning and Assessment Program, Springfield, MA.**

Project manager responsible for managing the daily activities of this annual comprehensive assessment and asset management program. The primary goal of the program was to determine the existing structural and operations and maintenance conditions of sewer pipes within the City's sewerage collection system and utilize this information to develop and advance the various asset management initiatives of the SWSC including a risk-based model for prioritizing and planning capital improvements and proactive maintenance activities. Also responsible for the selection of various asset condition data acquisition technologies, including Closed Circuit and High Definition Television inspections in compliance with Pipeline Assessment and Certification Program (PACP) standards, confined space entries of deep sewer structures, and GPS surveying and MACP inspections of manholes.

#### **Springfield Technical Community College, Pearl Street Parking Lot #2, Springfield, MA.**

Civil engineer designed a 250+ space parking lot in Springfield, MA, including the design of a 200-foot-long, 60-inch diameter, stormwater detention pipe, and related collections infrastructure, to mitigate any peak discharge over 2, 10, 25, and 100 year storm events.

## Charlie Tripp, PE - Pipeline Condition & Rehabilitation

**City of Manchester, Phase II CSO Abatement Program, Manchester, NH.** Technical manager providing technical guidance and internal design peer review services as part of a progressing combined sewer separation project. The design largely focuses on a proposed alignment of large diameter storm drain (24"-60" diameter) for diversion of storm water away from its previous alignment to the Manchester Water Pollution Control Facility. Additional design review includes that of proposed sanitary sewer rehabilitation along a series of residential collector streets in the neighborhood area within Manchester, NH. The drainage design incorporates hydraulic modeling to accommodate peak discharges over the 10, and 25, year storm events through the utilization of various best management practices.

**Narragansett Bay Commission, Final Design Services for OF-218 Facilities Contract IIIA-6, Providence, RI.** Project manager responsible for the development of preliminary, 30%, 60%, 90%, final design, and permitting support services for the construction of a consolidation conduit to the forthcoming Pawtucket Tunnel for combined sewerage conveyance. Some key aspects of the project included the following modifications to the existing flow distribution structure between OF-218 and the existing floatables control structure at the head of the Bucklin Brook; modifications to the existing flow distribution structure between OF-218 and the existing floatables control structure at the head of the Bucklin Brook; a new relief structure on the lower BVI on School Street; new pipelines to consolidate and divert flow from OF-218 and the BVI to a gate and screening structure (GSS), including manhole structures; a new sluice gate structure on the BVI branch of the consolidation conduits; a gate and screening structure to screen CSO flow before it enters the future Pawtucket Tunnel Drop Shaft 218; and an approach channel from the GSS that connects into the Pawtucket Tunnel drop shaft (DS) 218.

**City of Portsmouth, Peirce Island Force Main Replacement Design, Portsmouth, NH.** Subject matter expert for the preliminary design, design, permitting, and engineering services during construction portions of this critical infrastructure project. Responsibilities included the development of detailed design specifications for the slip lining of an approximate 300 linear foot bridge mounted 24-inch diameter sanitary force main via a 20-inch fusible PVC slip liner.

**City of Worcester, Standby Generator Upgrades, Worcester, MA.** Design manager provided management, design, and construction administration services to replace generators at several sanitary sewer pumping stations in Worcester, MA on an on-call basis. Services included design plans and project specifications encompassing equipment type, exhaust piping, connection with existing utilities, site work and retrofitting existing structures to house the replacement generators.

**South Central Connecticut Regional Water Authority, SCCRWA - RWA Sugarloaf Tunnel, Rocky Hill, CT.** Team member who managed and contributed to the performance of a condition assessment analysis for a 14,000 linear foot raw water service tunnel for the South-Central Connecticut Regional Water Authority (SCCWA). The 6'-8" concrete lined horseshoe-shaped Sugarloaf Tunnel was constructed circa 1929 and serves to transfer untreated water from the Lake Hammonasset and Lake Menunkatuc watersheds by gravity flow to Lake Gaillard. The analysis focused upon a comparison between a 2007 vintage man-entry inspection report and a robotic multi-sensor-instrumentation (MSI) platform-based assessment from 2022 for the purposes of determining whether there was noticeable or significant deterioration with the tunnel condition between the two inspections and highlighted defects that could contribute to accelerated deterioration.

**City of Lawrence, West Street Phase II Sewer Replacement, Lawrence, MA.** Team member who provided project management, design, bidding, and construction administration services for the replacement of a brick combined sewer on West Street in Lawrence, Massachusetts. The project included the overall construction of 2,000 lf of PVC gravity sewer ranging in size from 10" to 36" diameter.

**Chicago Department of Water Management - Jardine Water Purification Plant, Sediment Force Main Pipeline Phase II, Chicago, IL.** Subject matter expert responsible for assisting with the development of detailed design specifications to rehabilitate an existing 5,000 linear foot, 18-inch diameter ductile iron Sediment Force Main via sliplining to improve reliability and provide ease of maintenance and inspection of the existing system.

# Ryan Delamere

## Construction Inspection

Ryan is an Engineer-In-Training (EIT) with 12 years of project engineering experience with municipal capital improvement project work, including municipal facilities, water supply/distribution, and sewerage works. His responsibilities have included resident project representation, testing certification, submittal review, quantity measurement and progress documentation.

### Years of Experience

Total: 12  
With AECOM: 12

### Education

BS, Civil Engineering, State University of New York (SUNY), 2010

### Licenses/Certifications

N/A

### Professional Affiliations

N/A

### Project Experience

**Niagara Falls Water Board, WWTP Sedimentation Basins and Scum Removal System Upgrades, Niagara Falls, NY.** Project Engineer. Responsible for replacing the traveling bridge system with a chain and flight system, upgrading all sedimentation basin mechanical drives, installing effluent finger weir troughs to increase basin weir length and upgrades to the scum removal system.

**Niagara Falls Water Board, WWTP Optimization, Niagara Falls NY.** Project Engineer. Assisted with developing physical/chemical treatment system alternative evaluations to improve the performance of the existing WWTP. Evaluations included improvements to the effluent disinfection process; physical/chemical treatment optimization (i.e., treatment chemicals); and chemical use (i.e., oxidant) at the GAC filters. Responsible for developing test plans and treatment systems to evaluate optimization conditions and provide engineering reports and recommendations for improved system operations. After the engineering report, AECOM developed, built and operated a pilot-scale filter bed to analyze the effects of NaOCl and ClO<sub>2</sub> oxidants had throughout the carbon bed. Collected data and operating the pilot 5 days a week for 6 weeks.

**Niagara Falls Water Board WWTP Biological Treatment Evaluation, New York, NY.** Engineer. The project included testing pilot-scale biological treatment systems to evaluate if a future conversion of the existing WWTP is an alternative. The technologies tested included a membrane biological reactor (MBR) system and an attached growth moving bed biological reactor (MBBR) system. Pilot testing was conducted over 8 months to evaluate multiple test conditions and evaluate the wastewater treatability using different biological systems.

**Erie County DEP District No.6, Lackawanna WRRF Digester & Solids Management Upgrades, Lackawanna NY.** Project Engineer. Responsible for the design of replacement digester covers and new hose pumps. Performed site inspections to confirm the existing layout of piping. Prepared drawings and specifications for the project, including removal of the 30-foot diameter intestinal wall in the step 2 digester, new 50-foot diameter gas holding floating cover for step 2 and step 3 digesters, new pumped mixing systems to facilitate digester mixing, replace all interior digester piping, installed 2 hose pumps for thickener underflow, sludge conditioning tank feed and waste activated sludge, install new heat exchanger, condensate traps, sedimentation traps, replace existing 6-inch and 8-inch valves that are currently inoperable and upgrades to existing MCC including new HVAC.

**Evaluation of Erie County Sewer District No. 6 Lackawanna Wastewater Treatment Plant Digestion Process Report, Lackawanna NY.** Project Engineer. Evaluated and prepared design report project for the existing sludge handling system at the Lackawanna WRRF. Several site inspections, including confined

## Ryan Delamere - Construction Inspection

space entry into the step 2 digester, were completed to assess the condition. The evaluation included replacement options for the digester covers, including fixed, floating, gas holder and membrane covers for step 2 and step 3 digesters and additional equipment to give the facility redundancy. Cost estimates were created for all the options and recommended replacing steps 2 and step 3 with a floating cover.

**Erie County DEP, Southtowns AWTF Effluent Disinfection Evaluation, Blasdell, NY.** Project Engineer. Responsible for the evaluation and concept design for the Southtowns advanced wastewater treatment facility (AWTF) effluent disinfection process. This project included an alternative evaluation of chemical chlorination and dechlorination versus ultraviolet (UV) light technology. The facility was given a lower effluent total residual chlorine (TRC) limit, and these evaluations tested the facility's wastewater to verify compliance with both proposed technologies. Testing included collimated beam and ultraviolet transmittance (UVT) to verify the use of UV disinfection technology and bench testing with multiple dechlorination chemicals to verify the destruction of TRC via dechlorination chemicals. This evaluation provided the client with an alternative evaluation, including system design concepts, costs, and recommendations so that a sound decision for system upgrades can be made.

**Buffalo Sewer Authority, WWTP Secondary System Rehabilitations and Upgrades, Buffalo, NY.** Project Engineer. Responsible for assisting with the design of upgrades to the secondary system. The project includes sediment removal, installation of a new fine bubble diffuser aeration system, coarse bubble diffuser system, ninety new sluice gates, and upgrades to the return-activated sludge and waste-activated sludge systems.

**Erie County DEP, Boston Valley Pump Station Improvements, Boston, NY.** Resident Engineer/Construction Inspector. Responsible for rehabilitation and floodproofing of an existing 5 mgd Boston valley pump. The project includes constructing a new 40-foot deep cast-in-place pump station and control building while running the existing pump station. Once the new station was completed, the old pump station was demolished, and the entire site was raised approximately 5 feet to keep the pump station from flooding.

**Erie County DEP District No.3, Rush Creek Interceptor, Blasdell Milestrip Wet Weather Relief Pumping Station and Forcemain, Hamburg and Blasdell, NY.** Resident Engineer/Construction Inspector. Assisted in eliminating sewerage overflows, multiple pump stations and the Village of Blasdell WWTP. The project includes constructing a wet weather relief pump station, 24-inch sanitary sewer forcemain, sanitary gravity sewers, pavement rehabilitation, site work, installation of 24-inch and 27-inch diameter sewer pipe by jacking and boring under railroad tracks and NYS DOT highways, and pipe crossings at Rush Creek.

**Town of Amherst, Brantwood Road Sanitary Sewer Upgrades, Amherst, NY.** Resident Inspector. Supported construction of 708 linear square feet of 18-inch PVC Sanitary Sewer along Main Street, Brantwood Road and Keswick Road replacing existing 15-inch VTP pipe. Responsibilities included resident project representation, quantity measurement, progress documentation, review of the contractor payment request and record drawings.

**Town of Amherst, Smith Road Waterline Replacement, Amherst, NY.** Resident Inspector. Supported the construction of 708 linear square feet of 18-inch PVC Sanitary Sewer along Main Street, Brantwood Road and Keswick Road replacing existing 15-inch VTP pipe. Responsibilities included resident project representation, quantity measurement, progress documentation, review of the contractor payment request and record drawings.

**Town of Amherst, Indian Trail Waterline Replacement, Amherst, NY.** NY. Resident Inspector. Supported the construction of 1900 linear feet of new 8-inch ductile iron water main on Indian Trail Road between North Forest Road and Sheridan Drive. Responsibilities included resident project representation, testing certification, quantity measurement and progress documentation.

**Town of Amherst, Emma Woods Subdivision Public Improvement Project, Amherst, NY.** Resident Inspector. Responsible for constructing a new waterline, sanitary sewer, storm sewer, and road construction off Paradise Road. Responsibilities included resident project representation, testing certification and progress documentation.





# Forms

**ACKNOWLEDGEMENT OF ADDENDA**

RFP TITLE: RFP 2024-01: Capital Projects Engineering Services  
(Write the RFP No. and Title on the Line Above)

DIRECTIONS: Complete Part I or Part II, whichever is applicable.

PART I: LISTED BELOW ARE THE DATES OF ISSUE FOR EACH  
ADDENDUM RECEIVED IN CONNECTION WITH THIS RFP:

ADDENDUM # 1: DATED January 30 , 2024

ADDENDUM # 2: DATED \_\_\_\_\_ , 20\_\_

ADDENDUM # 3: DATED \_\_\_\_\_ , 20\_\_

ADDENDUM # 4: DATED \_\_\_\_\_ , 20\_\_

ADDENDUM # 5: DATED \_\_\_\_\_ , 20\_\_

ADDENDUM # 6: DATED \_\_\_\_\_ , 20\_\_

PART II: DG INITIAL HERE IF NO ADDENDUM WAS RECEIVED  
IN CONNECTION WITH THIS RFP INITIAL HERE

DATE: 02 / 15 / 2024

PROPOSER (SIGNATURE): 

PROPOSER (NAME): Douglas Gove, Jr.

PROPOSER (FIRM): AECOM USA, Inc.

APPENDIX A, FORM No. 5

STATEMENT ON SEXUAL HARASSMENT  
PURSUANT TO STATE FINANCE LAW § 139-1

By submission of this proposal, proposer(s) and each person signing on behalf of any proposer certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, under penalty of perjury, that the proposer has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. Such policy shall, at a minimum, meet the requirements of section two hundred one-g of the labor law.

DATE: 1 / 18 / 24

PROPOSER (SIGNATURE):

[Signature]

PROPOSER (NAME):

Douglas B. Gove, Jr

PROPOSER (FIRM):

AECOM USA, Inc.

STATE OF Massachusetts )  
COUNTY OF Middlesex ) ss.:

On the 18 day of January, 2024 before me, the undersigned, a Notary Public in and for said state, personally appeared \_\_\_\_\_ as a representative of \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the entity on behalf of which the individual acted executed the instrument.

[Signature]  
Notary Public



**APPENDIX A, FORM No. 6**

**REQUEST FOR PROPOSALS  
ACKNOWLEDGEMENT AND CERTIFICATION**

As a duly-authorized representative of the proposer indicated below, I hereby acknowledge that by submitting a proposal in connection with

RFP 2024-01: Capital Projects Engineering Services  
(write RFP Number and Title)

proposer has made a firm offer and agrees to be bound by its terms. Proposer has carefully read the RFP and all addenda, and in submitting this proposal acknowledges proposer understands and agrees to be bound by the requirements set forth in the RFP, except as explicitly stated on a separate sheet attached to this proposal and entitled "Exceptions." Proposer agrees and understands that the terms and conditions set forth in the RFP addenda shall be incorporated into any contract or agreement awarded in connection with this RFP, and agrees to be bound by those terms and conditions.

I recognize that all information submitted is for the express purpose of inducing the Water Board to enter a contract with the submitting business entity. I affirm, under the penalties of perjury, that to the best of my knowledge the information contained in the proposal is full, complete, and truthful.

DATE: 1 / 18 / 24

PROPOSER (SIGNATURE):

[Signature]

PROPOSER (NAME):

Douglas B. Gove, Jr.

PROPOSER (FIRM):

AECOM USA, Inc.

STATE OF Massachusetts )  
COUNTY OF Middlesex ) ss.:

On the 18 day of January, 2024, before me, the undersigned, a Notary Public in and for said state, personally appeared \_\_\_\_\_ as a representative of \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the entity on behalf of which the individual acted executed the instrument.

[Signature]  
Notary Public



**NOTICE OF NFWB'S RIGHT TO TERMINATE**

The NFWB reserves the right to terminate a Contract (including any lease, license, entry permit, or sale documents) in the event it is found that the certification filed by the Proposer, in accordance with New York State Finance Law §139-k, was intentionally false or intentionally incomplete. Upon such finding, the NFWB may exercise its termination right by providing written notification to the Bidder/Proposer in accordance with the written notification terms of the Contract.

**Proposer's Affirmation and Certification**

By signing below, the Proposer:

- a) Affirms that the Proposer understands and agrees to comply with the policy regarding permissible contacts in accordance with New York State Finance Law Sections 139-j and 139-k.
- b) Certifies that all information provided to the NFWB with respect to New York State Finance Law §139-j and §139-k is complete, true and accurate.

DATE: 1 / 18 / 24

PROPOSER (SIGNATURE):



PROPOSER (NAME):

Douglas B. Gore, Jr.

PROPOSER (FIRM):

AECOM USA, INC.

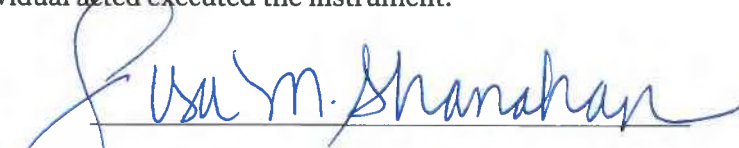
STATE OF \_\_\_\_\_ )

) ss.:

COUNTY OF \_\_\_\_\_ )

On the 18 day of January, 2024 before me, the undersigned, a Notary Public in and for said state, personally appeared \_\_\_\_\_ as a representative of \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the entity on behalf of which the individual acted executed the instrument.



  
Notary Public

APPENDIX A, FORM No. 2

CERTIFICATE OF NON-COLLUSION

Pursuant to New York State Public Authorities Law, Article 9, Title 4, Section 2878, the undersigned proposer hereby subscribes and affirms as true, under the penalties of perjury, the following statement of non-collusion:

By submission of this proposal, each proposer and each person signing on behalf of any proposer certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his/her knowledge and belief:

- (1) The prices in this proposal have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other proposer or with any competitor;
- (2) Unless otherwise required by law, the prices which have been quoted in this proposal have not been knowingly disclosed by the proposer and will not knowingly be disclosed by the proposer prior to opening, directly or indirectly, to any other proposer or to any competitor; and,
- (3) No attempt has been made or will be made by the proposer to induce any other person, partnership, or corporation to submit or not to submit a proposal for the purpose of restricting competition.

DATE: 1 / 18 / 24

PROPOSER (SIGNATURE):

[Signature]

PROPOSER (NAME):

Douglas B. Gove, Jr.

PROPOSER (FIRM):

AECOM USA, Inc.

STATE OF \_\_\_\_\_ )

) ss.:

COUNTY OF \_\_\_\_\_ )

On the 18 day of January, 2024, before me, the undersigned, a Notary Public in and for said state, personally appeared \_\_\_\_\_ as a representative of \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the entity on behalf of which the individual acted executed the instrument.

[Signature]  
Notary Public



## APPENDIX A, FORM No. 3

### NEW YORK STATE FINANCE LAW SECTIONS 139-j AND 139-k (“LOBBYING LAW”) – DISCLOSURE STATEMENT

#### General Information

All procurements by the Niagara Falls Water Board (“NFWB”) in excess of \$15,000 annually, are subject to New York State’s State Finance Law Sections 139-j and 139-k, effective January 1, 2006 (“Lobbying Law”).

Pursuant to the Lobbying Law, all “contacts” (defined as oral, written or electronic communications with the NFWB intended to influence a procurement) during a procurement - from the earliest notice of intent to solicit bids/proposals through final award and approval - must be made with one or more designated Point(s) of Contact only. Exceptions to this rule include written questions during the bid/proposal process, communications with regard to protests, contract negotiations, and RFP conference participation. Nothing in the Lobbying Law inhibits any rights to make an appeal, protest, or complaint under existing administrative or judicial procedures.

Violations of the policy regarding permissible contacts must be reported to the appropriate NFWB officer and investigated accordingly. The first violation may result in a determination of non-responsibility and ineligibility for award to the violator and its subsidiaries, affiliates and related entities. The penalty for a second violation within four (4) years is ineligibility for bidding/proposing on a procurement and/or ineligibility from being awarded any contract for a period of four (4) years. The NFWB will notify the New York State Office of General Services (“OGS”) of any determinations of non-responsibility or debarments due to violations of the Lobbying Law. Violations found to be “knowing and willful” must be reported to the NFWB Executive Director and OGS.

Moreover, the statutes require the NFWB to obtain certain affirmations and certifications from bidders and proposers. This Disclosure Statement contains the forms with which offerors are required to comply, together with additional information and instructions.

#### Instructions

New York State Finance Law §139-k(2) obligates the NFWB to obtain specific information regarding prior non-responsibility determinations. In accordance with New York State Finance Law §139-k, an offerer must be asked to disclose whether there has been a finding of non-responsibility made within the previous four (4) years by any governmental entity due to: (a) a violation of New York State Finance Law §139-j or (b) the intentional provision of false or incomplete information to a governmental entity.

As part of its responsibility determination, New York State Finance Law §139-k(3) mandates consideration of whether an offerer fails to timely disclose accurate or complete information regarding the above non-responsibility determination. In accordance with law, no procurement contract shall be awarded to any offerer that fails to timely disclose accurate or complete information under this section, unless the factual elements of the limited waiver provision can be satisfied on the written record.

**Disclosure of Prior Non-Responsibility Determinations**

**Name of Bidder/Proposer:** AECOM USA, Inc.

**Address:** 1 John James Audubon, Amherst, NY 14228

**Name and Title of Person**

**Submitting this Form:** Douglas Gove Jr., Vice President

**Has any governmental entity<sup>1</sup> made a finding of non-responsibility regarding the Bidder/Proposer in the previous four years?**

Yes  No

**If yes: Was the basis for the finding of the Bidder's/Proposer's non-responsibility due to a violation of State Finance Law §139-j?**

Yes  No

**Was the basis for the finding of Bidder's/Proposer's non-responsibility due to the intentional provision of false or incomplete information to a governmental entity?**

Yes  No

**If yes to any of the above questions, provide details regarding the finding of non-responsibility below:**

Governmental Entity: \_\_\_\_\_

Year of Finding of Non-responsibility: \_\_\_\_\_

Basis of Finding of Non-Responsibility (attach additional pages if necessary): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
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**Has any governmental entity terminated or withheld a procurement contract with the Bidder/ Proposer due to the intentional provision of false or incomplete information?**

**Yes**  **No**

If yes, provide details regarding the termination/withholding below:

Governmental Entity: \_\_\_\_\_

Year of Termination/Withholding:\_\_\_\_\_

Basis for Termination/Withholding (attach additional pages if necessary):

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**APPENDIX A, FORM No. 4**

**EQUAL EMPLOYMENT OPPORTUNITY (“EEO”)  
POLICY STATEMENT AND AGREEMENT**

Proposer hereby agrees to the following EEO policy with respect to its work on any contract awarded in connection with this RFP:

- a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing programs of affirmative action to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on Niagara Falls Water Board (“Water Board”) contracts.
- b) This organization shall state in all solicitations or advertisements for employees that in the performance of the Water Board contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, disability or marital status.
- c) At the request of the Water Board, this organization shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization’s obligations herein.
- d) This organization shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. Proposer and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, pregnancy or pregnancy-related conditions, gender identity, familial status, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.
- e) This organization will include the provisions of section (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the Water Board contract.

**ACCEPTED AND AGREED:**

DATE: 01 / 31 / 2024

PROPOSER (SIGNATURE):



PROPOSER (NAME):

Douglas Gove, Jr.

PROPOSER (FIRM):

AECOM USA, Inc.

## About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle — from advisory, planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy, and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical and digital expertise, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a *Fortune 500* firm and its Professional Services business had revenue of US\$14.4 billion in fiscal year 2023. See how we are delivering sustainable legacies for generations to come at [aecom.com](https://www.aecom.com) and [@AECOM](https://twitter.com/AECOM).

## Contact

Douglas Gove Jr., PE  
Vice President  
T: 617-721-7005  
E: [doug.gove@aecom.com](mailto:doug.gove@aecom.com)

*NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-009*

**ACCEPTING AECOM PROPOSAL FOR CALUMET AVENUE SEWER  
REHABILITATION PROJECT ENGINEERING SERVICES**

**WHEREAS**, in January 2024 the Niagara Falls Water Board issued a request for proposals for engineering services in connection with various planned capital projects, including for rehabilitation of a 48-inch brick sewer on Calumet Avenue; and

**WHEREAS**, the Water Board has been awarded grant funds under CWSRF Project No. 6603-17-00 that will partially offset the total cost of sewer rehabilitation work that is the subject of this resolution; and

**WHEREAS**, one proposal was received for the project, from AECOM and dated February 19, 2024; and

**WHEREAS**, Water Board staff have reviewed that AECOM's proposal, which includes a statement of the firm's project understanding and past experience with similar projects, as well as project staff with appropriate qualifications and experience; and

**WHEREAS**, AECOM's proposed engineering fee of \$145,000 for the project is inclusive of survey, design, bidding, construction administration, and construction inspection;

\* CONTINUED ON NEXT PAGE \*

**NOW THEREFORE BE IT**

**RESOLVED**, that on behalf of the Niagara Falls Water Board, its Chairperson hereby is authorized to execute an agreement to be negotiated with AECOM to perform engineering services for the Calumet Avenue 48-Inch Brick Sewer Rehabilitation, consistent with AECOM’s February 19, 2024 proposal for that work and for a total fee not to exceed \$145,000.

*Water Board Personnel Responsible for Implementation of this Resolution:*

- Executive Director
- Director of Technical & Regulatory Services
- General Counsel

*Water Board Budget Line or Capital Plan Item with Funds for this Resolution:*

- Capital Plan Items: Capital Line for Calumet Avenue  
(Project requires addition of a new CIP item)
- Capital Items Provided by: D. Williamson to Revise CIP
- Available Funds Confirmed: B. Majchrowicz (Financing for Construction May Require CRSRF Financing, Depending on Cost)

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	<b>Yes</b>	<b>No</b>	<b>Abstain</b>	<b>Absent</b>
Board Member Asklar	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman Forster	[ ]	[ ]	[ ]	[ ]

Signed By:

Vote Witnessed By:

\_\_\_\_\_  
Nicholas J. Forster, Chairman

\_\_\_\_\_  
Sean W. Costello, Secretary to Board

*NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-010*

**PROCUREMENT OF VAC CON COMBINATION SEWER CLEANING TRUCK AND DISPOSAL THROUGH TRADE IN OF 2017 AQUATECH COMBINATION TRUCK**

**WHEREAS**, the Niagara Falls Water Board (“Water Board”) outside maintenance crews heavily rely upon and frequently utilize the Water Board’s two combination jet/vacuum sewer trucks for sewer cleaning, hydro-excavating, and more; and

**WHEREAS**, the Water Board’s 2017 AquaTech combination sewer cleaning truck has been used extensively and because certain parts are wearing it requires frequent maintenance and repairs, during which time the outside maintenance crews are deprived of an essential tool, impacting productivity and effectiveness; and

**WHEREAS**, Water Board staff have identified a Vac-Con combination sewer truck Model VPD4212HEN/1300 mounted on a 2025 Freightliner Model 114SD chassis that is available for procurement from Vac-Con Services, Inc., by “piggybacking” pursuant to General Municipal Law Section 103(16) on a contract let by Sourcewell (Contract No. 101221-VAC); and

**WHEREAS**, the March 20, 2024 quote provided by Vac-Con includes on-site customer training and delivery, for a total cost of \$652,038; and

**WHEREAS**, Vac-Con Services, Inc., has offered to provide a trade-in credit of \$125,000 for the 2017 AquaTech combination sewer truck, reducing the total cost to the Water Board to \$527,038; and

**WHEREAS**, Vac-Con’s proposal specifies an April 18, 2024 delivery date, allowing the new equipment to be put in service with little delay;

\* CONTINUED ON NEXT PAGE \*

**NOW THEREFORE BE IT**

**RESOLVED**, that the Executive Director hereby is authorized procure a Vac-Con combination sewer truck Model VPD4212HEN/1300 mounted on a 2025 Freightliner Model 114SD chassis from Vac-Con Services, Inc., as described in that firm’s February 26, 2024 quote, and to dispose of the 2017 AquaTech combination sewer truck, VIN 1FVHG5FE1JHJP7422, by trading it in for a credit of \$125,000 toward the purchase cost, with a net cost to the Water Board of \$527,038.

*Water Board Personnel Responsible for Implementation of this Resolution:*  
Executive Director

*Water Board Budget Line or Capital Plan Item with Funds for this Resolution:*

Capital Plan Items: C-3 Fleet Replacement – Funds necessary for this procurement will come from the transfer from the General Account to the Construction Account, which after all other required deposits and transfers for fiscal year 2023 have been completed will be approx. \$3,876,783.

Capital Items Provided by: B. Majchrowicz

Available Funds Confirmed: B. Majchrowicz

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	<b>Yes</b>	<b>No</b>	<b>Abstain</b>	<b>Absent</b>
Board Member Asklar	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman Forster	[ ]	[ ]	[ ]	[ ]

Signed By:

Vote Witnessed By:

\_\_\_\_\_  
Nicholas J. Forster, Chairman

\_\_\_\_\_  
Sean W. Costello, Secretary to Board



03/20/2024

COMBINATION JET/VACUUM SEWER CLEANER  
**SOURCEWELL CONTRACT: 101221-VAC**

Customer: NIAGARA FALLS WATER BOARD

Shipping: NEW YORK

<b>Requirement Specification</b>	
Combination jet/vacuum sewer cleaner with all standard equipment VPD4212HEN/1300 (827 at 18") Model year 2025	\$363,550.00
Sourcewell Discount	(\$36,355.00)
Freightliner 114SD Plus 6 x 4 66,000GVWR ISL370 3000RDS	\$124,900.00
Body mounting on Chassis	\$8,150.00
Hydrostatic drive	\$0.00
10' Aluminum Telescoping boom with pendant control station	\$21,434.00
Front Mounted Articulating to Driver side. 600' (1") Capacity (Std. Pivot) hose reel	\$27,497.00
1300 Gallon polyethylene water tank capacity with 10 year warranty	\$0.00
12 Cubic yard capacity debris tank 3/16" corten steel, (5 year warranty) with full opening rear door (minimum 50 degree debris tank dumping, power up and down	\$0.00
Automatic vacuum breaker (prevents operation when full and contains debris when moving unit) and overflow protection	\$0.00
600' of 1" Jet rodder hose	\$1,395.00
Positive Displacement Blower Roots model 827 @ 18" HG	\$0.00
Water pump system: Giant 80 @ 2500 PSI - Single Engine	\$6,043.00
Cobra hose brand	\$0.00
6" Knife valve with center post and handle	\$1,151.00
Flat style rear door in lieu of standard domed door	\$8,491.00
Built in body prop - rear support frame mounted	\$734.00



Requirement Specification	
Debris tank drain screen placement	\$0.00
Rear splash shield	\$2,974.00
Rear, hydraulic pump off system, 200 GPM with 20' lay flat hose	\$12,391.00
Two Screen assemblies over drain ports in debris tank	\$1,398.00
1/4 turn ball valve water drain	\$717.00
50' Capacity retractable hand gun hose reel	\$3,211.00
Air purge system	\$1,309.00
Debris body "Power Flush" System, 8 Jets	\$3,040.00
Hydro-excavation package	\$10,068.00
Pre-Tank Water Filter Y-Type	\$1,463.00
Water pump remote oil drain	\$424.00
Winter recirculating system for rodder hose	\$1,619.00
Hose footage counter	\$907.00
Behind cab boom support	\$5,257.00
Cone storage rack	\$653.00
Rear bumper assembly	\$2,762.00
Remote debris tank grease assembly	\$4,030.00
Remote transfer case engagement	\$3,651.00
LED 4 strobes - (2) front bumper, (2) rear bumper	\$2,994.00
LED Arrow stick	\$4,409.00
LED Midbody flood lights with guards	\$1,152.00
LED Rear mounted flood lights with limb guard	\$1,152.00
Two Mirror mounted LED strobe light with limb guard	\$2,904.00
6 way pendant control	\$802.00
Grounding cable with screw clamp, 25' of cable & Ball Stud Assembly	\$800.00

Requirement Specification	
Low water alarm with light	\$796.00
Rear camera placement	\$864.00
Wireless remote control	\$7,273.00
Traffic camera system with color monitor	\$1,868.00
A 48" Extension for high pressure hand wand	\$269.00
Paper Vac-Con Manual	\$313.00
1" x 20' Length Leader Hose	\$678.00
Lazy Susan pipe rack (Holds 5 Pipes)	\$4,020.00
24" x 18" x 18" Aluminum tool box	\$2,777.00
Aluminum storage box behind cab 16" x 42" x 96"	\$8,025.00
Aluminum storage box 16" x 42" x 96" (upgrade) Behind cab in lieu of standard steel	\$4,287.00
Dry Decking - behind cab storage box 96"	\$837.00
6 ½" x 6" Catch Basin nozzle with serrated end	\$337.00
Paint Vac-Con module: Elite White	\$0.00
Safety striping: Light Blue	\$1,078.00
Paint chassis hood flat black	\$1,204.00
Two standard ENZ nozzles, one sanitary (egg) and one Chisel point penetrator	\$0.00
ICC lighting	\$0.00
Hose guide (tiger tail) for hose protection, hydrant wrench, 25' of fill hose	\$0.00
20 gpm @ 600 PSI wash down system with hand gun and 25' of ½" hand gun hose	\$0.00
Block heater	\$1,462.00
Freightliner 114SD 3 Years/200,000mi. Ext Warranty: Includes 3yrs. Towing. Cummins-ISL370 3yr./150,000mi. (PP1 with after treatment), Allison 3000 5yrs./UNLmi. (Requires TrandSynd Synthetic Transmission Fluid or TES-295)	\$8,198.00
Local dealer pre delivery and inspection	\$0.00

Requirement Specification	
On site customer training	\$4,000.00
Consignee Delivery	\$6,675.00
TOTAL CONTRACT PRICE - DELIVERY DATE 4/18/2024	\$652,038.00
Trade In - 2017 Aquatech B10	(\$125,000.00)
TOTAL PRICE OFFERED TO SOURCEWELL MEMBER AFTER TRADE IN	\$527,038.00

**Delivery is \_\_\_\_\_ Days after receipt of order.**

SOURCEWELL CONTRACT NO 101221-VAC

VENDOR/CONTRACT HOLDER: VAC-CON, INC. 969 HALL PARK RD GREEN COVE SPRINGS, FL 32043 410-924-1004

CONTACT: M.J. DUBOIS EMAIL [MJDUBOIS@DUCOLLC.COM](mailto:MJDUBOIS@DUCOLLC.COM)

**THIS QUOTE IS VALID FOR (30) DAYS FROM THE DATE OF QUOTATION**

**CERTIFICATE OF ORIGIN FOR A VEHICLE**

**FREIGHTLINER**

DATE  
02/13/24

INVOICE NO.  
BW1138

VEHICLE IDENTIFICATION NO.  
[REDACTED]

YEAR  
2025

MAKE  
FREIGHTLINER

BODY TYPE  
TRUCK

SHIPPING WEIGHT  
16837

H.P. (S.A.E.)  
370

G.V.W.R.  
66000

NO. CYLS  
6

SERIES OR MODEL  
114SD

I, the undersigned authorized representative of the company, firm or corporation named below, hereby certify that the new vehicle described above is the property of the said company, firm or corporation and is transferred on the above date and under the Invoice Number indicated to the following distributor or dealer.

NAME OF DISTRIBUTOR, DEALER, ETC.

TOM NEHL JACKSONVILLE, INC  
DBA TOM NEHL  
417 EDGEWOOD AVE. SOUTH  
JACKSONVILLE, FL 32254

THIS PRODUCT IS CERTIFIED BY THE U.S. EPA AND IS NOT INTENDED FOR INITIAL REGISTRATION IN STATES THAT REQUIRE CERTIFICATION BY THE CALIFORNIA AIR RESOURCES BOARD.

It is further certified that this was the first transfer of such new motor vehicle in ordinary trade and commerce.

**DAIMLER TRUCK NORTH AMERICA LLC**

BY:   
(SIGNATURE OF AUTHORIZED REPRESENTATIVE) (AGENT)

4555 N CHANNEL AVE  
PORTLAND, OR 97217

CITY - STATE

22696655

**WWTP PROJECT 3 ENGINEERING SERVICES AGREEMENT –  
CONTROLS AND BELT FILTER PRESS REFURBISHMENT**

**WHEREAS**, the Niagara Falls Water Board (“Water Board”) has been engaged in a project that it refers to as wastewater treatment plant (“WWTP”) Project 3 – Screenings and Grit Transport Equipment Improvements, Polymer Equipment Upgrades, and Dewatering Equipment Control Upgrades, required pursuant to Order on Consent R9-20170906-129 with the New York State Department of Environmental Conservation (“Project 3”); and

**WHEREAS**, there are elements of Project 3 that remain incomplete, particularly with respect to completing wiring and programming of sensors, controls, and meters to allow for integration with the WWTP SCADA system; and

**WHEREAS**, the Water Board also seeks to add to Project 3 the refurbishment of its three belt filter presses by the original equipment manufacturer, to ensure efficient and reliable sludge dewatering; and

**WHEREAS**, pursuant to a proposal dated March 21, 2024, Nussbaumer & Clarke, Inc., has proposed to complete the engineering services required to bring Project 3 to a conclusion, including design, bidding, construction administration, and construction inspection; and

**WHEREAS**, the Water Board at this time deems it appropriate to authorize Nussbaumer & Clarke to proceed with design and bidding services, and once more detail regarding the construction schedule and complexity is available, the Water Board will entertain a proposal for construction phase engineering services to be authorized by further Board resolution; and

**WHEREAS**, Nussbaumer & Clarke has agreed to meet the Water Board’s M/WBE and SDVOB goals in connection with the overall scope of the engineering work for Project 3; and

**WHEREAS**, the Water Board will seek reimbursement of one-half of the cost of this work under its State and Municipalities “SAM” Grant, Phase 1 – Upgrade and Improve the Niagara Falls Waste Water Treatment Plant, Project ID: 15688;

\* CONTINUED ON NEXT PAGE \*

**NOW THEREFORE BE IT**

**RESOLVED**, that the Niagara Falls Water Board hereby authorizes the Chairman to accept the proposal by Nussbaumer & Clarke, Inc., dated March 21, 2024 to perform the design and bidding services described therein on a time-and-material basis and in an amount not to exceed \$129,000, with authorization to proceed with construction administration and observation services to be subject to further Board resolution.

*Water Board Personnel Responsible for Implementation of this Resolution:*

Acting Executive Director  
Director of Technical & Regulatory Services  
General Counsel

*Water Board Budget Line or Capital Plan Item with Funds for this Resolution:*

Capital Plan Item: WWTP 3  
Capital Line Supplied by: D. Williamson  
Available Funds Confirmed: B. Majchrowicz

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	<b>Yes</b>	<b>No</b>	<b>Abstain</b>	<b>Absent</b>
Board Member Asklar	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman Forster	[ ]	[ ]	[ ]	[ ]

Signed By:

Vote Witnessed By:

\_\_\_\_\_  
Nicholas J. Forster, Chairman

\_\_\_\_\_  
Sean W. Costello, Secretary to Board

March 21, 2024

Niagara Falls Water Board  
5815 Buffalo Street  
Niagara Falls, NY 14304



Re: Proposal for Wastewater Treatment Plant Project #3  
Engineering Scope Additions  
File No. 23J1-0154

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Dear Niagara Falls Water Board:

Nussbaumer & Clarke, Inc. (Nussbaumer) appreciates the opportunity to complete the wiring design for the sludge filter presses that were not completed for Project #3 for the Niagara Falls Water Board (NFWB). At the kick-off meeting on December 5, 2023 the additional work was discussed. Nussbaumer conducted a site walk to familiarize themselves with the plant and areas needing additional work. We then reviewed information provided to us by NFWB and CPL.

On December 12, 2023, Nussbaumer returned to the site to gather additional field information for all work discussed at the December 5, 2023, meeting.

We are pleased to submit this proposal for additional engineering services associated with the work required at the WWTP. Our proposal is based on the meetings, field investigation performed, and information provided.

Nussbaumer will provide engineering services and construction documents to bid the work for all scopes as defined below. We have prepared the following scope of services and fee proposal for your review and evaluation.

### **SCOPE OF DESIGN AND BIDDING SERVICES**

1. On board belt filter press sensors - Completion of control wiring to the three belt filter presses. This work was to be performed under the current contract.
  - a. Additional Scope is to replace all sensors on each belt filter press. Coordinate cables to new termination box and re-use existing conduit and wiring for connection to belt filter press control cabinets. Add additional wiring if required. Sensor installation shall be by an Alfa Laval factory certified installer.
2. Additionally, the scope will be expanded to eliminate all wiring passing through the old Blue Control cabinet located on the platform between the belt filter presses. This cabinet will then be removed and all conduit penetrations no longer in use shall be sealed.
3. Lime Feed - Remove the Lime Feed controls from the Blue Control cabinet and rework controls from the local lime feed control VFD cabinets to the DMCP. Also, clean up equipment that is no longer in use in local control VFD cabinets.



4. Sludge Pumps – Currently, the four (4) sludge pumps are controlled as follows, one (1) pump hardwired, two (2) pumps via radio, and one (1) pump via ethernet. The scope of work shall be to install a new ethernet switch in the sludge pump building and connect all sludge pumps to the DMCP via IP3. Nussbaumer shall coordinate with Motion AI with regard to their uncompleted, previously contracted work for Project #3 and to get the work completed within the new construction contract.
5. Polymer Pumps – Install a new cabinet with an ethernet switch in the basement near the polymer pumps and re-use the existing ethernet cable back to IP3. Install new ethernet cables to the three-polymer pump VFD's.
6. Sludge Flow Meters – Install conduits and cables (4-20ma) from each of the four (4) sludge flow meters to the DMCP.
7. Drive motors on the three (3) belt filter presses have built in VFD's and the new filter press controls have a VFD to control these motors. Based upon recent discussions, it is anticipated that the existing VFD's of the drive motors at the belt filter presses will be used. Nussbaumer will provide design for modifications to the existing motors and control cabinets, additional conduit, and cables as required for proper operation. The design shall include new control modules for the existing VFD's in the motor assembly, elimination of the VFD's in the three (3) new control cabinets, and modification for proper pump operation. Modifications to the existing motor/VFD shall be by a Sew-EuroDrive factory certified installer.
8. Belt Filter Presses – Scope OEM to replace wear items (bearings, rollers, etc.) on each filter press. Only one (1) will be out of service at a time. Installation shall be by an Alfa Laval factory certified installer.
9. Lime Silo Level Transmitters – Provide conduit and cables from existing level transmitters to DMCP.
10. Local HMI panels for each belt filter press – determine and design additional screens and programming for the following:
  - a. Add sludge pump control – speed setpoint, speed feedback, pump start/stop, and pump status running.
  - b. Add polymer pump controls - speed setpoint, speed feedback, pump start/stop, and pump status running.
  - c. Add Flow display for sludge pumps.
11. Sludge Conveyor Controls – Replace all zero speed switches on all conveyors. Rework conduit and wiring to connect to DCMP and MCC for control and shutdown.
12. DMCP programming design control functions for existing DMCP panel to handle all the above modifications. Nussbaumer shall coordinate with Motion AI regarding scope required.
13. Provide a budget construction estimate for all the work described above.
14. Provide a preliminary construction estimate for duration of work.
15. Provide stamped signed construction documents for bidding.
16. Attend Contractor bid de-scoping meeting.
17. Bidding and RFI assistance.
18. Bid review and recommendation.
19. Provide Contract award assistance.





## SCOPE OF WORK FOR CONSTRUCTION ADMINISTRATION

1. Nussbaumer is anticipating a one (1) year construction period. NFWB shall be invoiced monthly based upon effort expended in accordance with Nussbaumer's 2024 Standard Billing Rates.
2. Attend preconstruction meeting.
3. Provide construction schedule review and updating during construction.
4. Provide schedule of values, review and pay application approvals.
5. Provide RFI's, Submittals, and Shop drawing review.
6. Provide budget tracking, including change orders and allowance usage during construction.
7. Attend Bi-weekly progress meetings (24) during construction.
8. Provide equipment start-up assistance.
9. Attend Punch walks and provide punch list.
10. Provide recommendation for project completion.
11. Coordinate contractors close out paperwork.
12. Provide review of Contractor O&M manuals.
13. Provide as-built drawings based on contractor mark-ups. Three (3) hardcopy sets shall be provided along with electronic versions of the documents as requested by NFWB.

## SCOPE OF WORK FOR CONSTRUCTION OBSERVATION

1. Provide full time project construction observation, assumed 250 days.
2. Determine progress, quality, and conformance of the work to the requirements of the contract documents.
3. Keep a logbook and prepare daily work reports for each day in which the observer(s) are on site. These reports will detail the weather, types and quantity of labor personnel on site, equipment and materials utilized, work completed, and problems encountered.
4. Attend progress meetings, as required.
5. Review, verify, and approve quantities of work put in place for payment applications of each Contractor.
6. Coordinate and observe all tests and inspections required by the contract documents.

## COMPENSATION AND PAYMENT

Nussbaumer proposes to perform the work described above for the fees as shown below:

Design and Bidding Services	\$129,000.00 (Not-to-Exceed)
Construction Administration	\$ 98,750.00 (Not-to-Exceed)
Construction Observation	\$266,250.00 (Not-to-Exceed)



Nussbaumer will strive to meet NFWB's M/WBE and SDVOB utilization goals. Please note, due to the specialized nature of the electrical engineering design services required for this project, it is anticipated that M/WBE and SDVOB participation may be included in the Construction Observation effort. Any subconsultants utilized will receive prior NFWB approval.

It is understood that NFWB may authorize the Scope of Work in this proposal in a segmented manner.

Upon acceptance of our proposal, please sign where so indicated and return a copy to Nussbaumer. The original is for your file. This will then serve as our Agreement and Notice to Proceed.

Sincerely,

NUSSBAUMER & CLARKE, INC.

Michael T. Marino, P.E.  
Chief Executive Officer

James E. Zgoda  
Electrical Project Manager

Attachment - 2024 Hourly Rate Schedule w/Schedule A

cc: Michael Eagler, Executive Director, NFWB  
Sean Costello, General Counsel and Secretary, NFWB

Accepted by: **Niagara Falls Water Board**

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_



**CORPORATE OFFICE**  
 3556 Lake Shore Road  
 Suite 500  
 Buffalo, NY 14219-1494  
 Phone: (716) 827-8000  
 Fax: (716) 826-7958

**BRANCH OFFICES**  
 Lockport  
 North Tonawanda  
 East Aurora

## 2024 HOURLY RATE SCHEDULE

<u>Job Title</u>	<u>Hourly Rate</u>
Principal Engineer / Principal Surveyor	\$250.00
Sr. Associate	\$200.00
Associate	\$170.00
Project Manager	\$155.00
Sr. Project Engineer	\$150.00
Project Engineer / Project Architect	\$135.00
Engineer 2	\$115.00
Engineer 1	\$100.00
Sr. CADD Designer	\$142.00
CADD Designer	\$118.00
CADD Technician	\$104.00
Engineering Technician	\$90.00
Municipal Infrastructure Specialist	\$110.00
Renewable Energy Manager	\$165.00
Water Distribution Specialist 2	\$100.00
Water Distribution Specialist 1	\$72.00
Project Surveyor	\$137.00
Survey Technician 3	\$110.00
Survey Technician 2	\$95.00
Survey Technician 1	\$84.00
1 Person Survey Crew	\$165.00
1 Person Survey Crew (Prevailing Wage)	\$210.00
2 Person Survey Crew	\$195.00
2 Person Survey Crew (Prevailing Wage)	\$275.00
Construction Services Manager	\$155.00
Construction Administrator	\$110.00
Transportation Manager	\$155.00
Construction Observer 3	\$121.00
Construction Observer 2	\$116.00
Construction Observer 1	\$100.00
Grant Writer	\$90.00
Administrative Assistant	\$80.00
Testimony/Court Attendance (above rate for Job Classification - 4 Hour Minimum Charge)	

**Fixed Costs**

Mileage	at Current Federal Rate
Expenses such as Tolls, Copies, Printing	at Cost
Subconsultant or Third Party Expense	at Cost plus 10%

*Rates are subject to increase January 1st of each calendar year.*

## **SCHEDULE "A"**

By accepting this proposal, the Client ("Client") agrees to the following terms and conditions incorporated into the resulting agreement ("Agreement") between the Client and Nussbaumer & Clarke, Inc. ("Nussbaumer") for the work covered in the proposal ("Work").

### **BASIS OF SERVICES**

If required, the Client shall arrange or establish Nussbaumer's right to enter the property. If the Client does not own the site, Nussbaumer shall require reasonable verification that permission to enter the site has been granted.

Quantities and cost estimates are subject to change due to, but not limited to, actual field conditions encountered, additions or changes to the Work, and changes in conditions on which estimates were based. The Client acknowledges and agrees that Nussbaumer was entitled to and did in fact rely on the information provided by the Client in performing estimates concerning the Work as embodied in this proposal.

### **DELIVERABLES**

Electronic files, drawings, calculations, records, and all other work products generated in connection with the Work are the property of Nussbaumer and may not be used without written permission. Drawings may be filed with the County or Municipality if the drawings were produced for that purpose. Electronic files and/or reproducible documents will be furnished at cost for preparing same and will be noted as a copy. Except for original submittals, any plans ordered or used in connection with the Work will be billed at cost.

### **FEES AND EXTRA WORK**

All fees quoted are for the Work as outlined. Any work not ordered will not be billed. Any work not included in the Agreement or any additional items which may be necessary to comply with applicable laws, codes, rules, regulations, or standards made effective after this proposal will be charged as extras on a time and expense basis or at a mutually agreed upon fixed fee. No extra work will be performed by Nussbaumer unless written approval is received from the Client, and a fee is negotiated.

It is understood that the fees quoted herein for the Work are subject to change upon written notice to the Client should unforeseen complications and/or problems develop during the Work. Any revisions to the Work caused by Client, Municipality, County, Governmental, or Governing Agencies, jurisdictional authorities, permitting agencies, approval agencies, funding agencies, utility companies, other stakeholders, and involved parties; to the extent they increase Nussbaumer's costs of performance under the Agreement, shall be billed in accordance with the attached hourly billing rates, included after Schedule A.

### **INVOICING AND PAYMENT**

Nussbaumer shall render invoices to Client monthly as set forth in this proposal. Client shall promptly review invoices and notify Nussbaumer of any objection thereof; absent such objection in writing within fifteen (15) days of the date of the invoice, the invoice shall be deemed proper and acceptable. Invoices shall be due and payable in full by the Client to Nussbaumer within 30 days of billing. If payment is not received within 60 days of billing, Client shall be considered in breach of contract and Nussbaumer reserves the right to stop Work under this Agreement, or work under any other agreement with the Client, until such time that all Work is paid in full, including interest at 1.5% per month commencing at the 60<sup>th</sup> day from billing. If applicable, all outstanding unpaid invoices must be paid in full prior to filing of the Map Cover with the county Clerk's Office.

No documents will be released unless all fees have been paid for Work completed. The Client agrees that Nussbaumer will not be responsible for providing copies of records generated for this project in case of loss of records by fire, theft, or other causes. Copies of the finished product will be furnished upon payment of the cost of reproductions.

It is also agreed and understood that if Nussbaumer finds it necessary to take legal action for collection of any outstanding amounts due under this Agreement, the Client herein agrees to pay all costs of litigation, including legal fees, court costs, filing and/or recording fees as well as costs involving time spent in preparation for litigation and/or legal proceedings. Should legal proceedings be initiated, it is understood that all proceedings would take place in Erie County, New York. This Agreement, the Work, and any disputes relating to either the Agreement or the Work shall be governed by the laws of the State of New York, without regard to conflicts of law rules.

## **STANDARD OF CARE**

The standard of care for all professional services performed or furnished by Nussbaumer under this Agreement will be the care and skill ordinarily used by members of the surveying and/or engineering profession(s) practicing under similar circumstances at the same time and in the same locality. Nussbaumer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by the company.

Any opinions of probable project cost or probable construction cost provided by Nussbaumer are made based on information available to Nussbaumer and Nussbaumer's experience and qualifications; represents its judgment as an experienced and qualified professional engineer. However, since Nussbaumer has no control over the cost of labor, materials, equipment, services furnished by others, contractors methods of determining prices, competitive bidding, or market conditions. Nussbaumer does not guarantee that proposals, bids, actual project, or construction cost will not vary from opinions of probable cost Nussbaumer prepares.

Construction cost does not include Nussbaumer's compensation or expenses, the cost of land, rights of way, or compensation for properties. Construction cost also does not include Clients legal, accounting, or insurance services; or interest and financing charges incurred in connection with construction, or the cost of services provided by others.

## **INDEMNIFICATION**

To the fullest extent permitted by law, and notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of Nussbaumer and its officers, directors, members, partners, agents, employees, and consultants, to Client and/or owner and anyone claiming by, through, or under Client and/or owner for any and all claims, losses, costs, or damages whatsoever arising out of, resulting from, or in any way related to the Work from any cause or causes, including but not limited to the negligence, professional errors or omissions, strict liability, breach of contract, indemnity obligations, or warranty express or implied of Nussbaumer or its officers, directors, members, partners, agents, employees, or consultants shall not exceed the total compensation received by Nussbaumer for the Work. Nussbaumer shall not be liable to the Client under any circumstances for indirect, special, incidental, or consequential damages, nor shall Nussbaumer be liable to the Client for lost revenue or profits of any nature or character.

To the fullest extent permitted by law, the Client agrees to indemnify and hold Nussbaumer, along with its current and future owners, officers, directors, members, shareholders, parent corporations, subsidiaries, related entities, affiliates, agents, and employees (collectively "Indemnitees") harmless from, against and for all claims by third parties ("Third-Party Claims"), which are caused by the negligence or willful misconduct of the Client or its employees, agents, consultants, or anyone acting by, through, on behalf of, or under the Client. Notwithstanding the foregoing or anything else in the Agreement, the Client's indemnification obligations do not apply to any Indemnitee for any portion of any Third-Party Claims caused by the negligence of such Indemnitee.

## **CLAIMS AND DISPUTES**

All claims or disputes of any kind arising out of the relationship between Client and Nussbaumer shall be submitted to mediation prior to filing suit. All mediation shall be conducted under the Commercial Rules of the American Arbitration Association, with the mediation costs equally borne between the two parties. The language to be used in mediation shall be English. Any action filed between the parties shall be filed in the state or federal courts in and for Erie County, New York. The prevailing party shall be entitled to recover its costs, including reasonable attorneys' fees. If any part of this Agreement is found to conflict with applicable laws, such part shall be null and void, but the remainder of this Agreement shall be in full force and effect.

## **TERMINATION**

The parties agree and acknowledge that there are no verbal representations, promises, understandings or agreements concerning or relating to the Work other than as contained in the Agreement. All previous negotiations and agreements between the parties concerning or relating to the Work are merged into the Agreement. Modifications of the Agreement must be in writing, except to the extent that the invoice may include, and Client shall be obligated to pay, fees or expenses that were orally authorized to proceed promptly with the Work.

This Agreement, unless previously terminated by written notice, shall be terminated by completion of the Work. Termination before completion shall be accompanied by payment for Work completed to that date at per diem rates set forth in the attached hourly billing rates.

## **PROPOSAL PERIOD**

This proposal shall be valid for a period of 30 days, after which Nussbaumer shall have the right to revise any portion thereof. It is also understood that fees quoted herein shall be subject to a 10% increase for those phases of Work not yet completed after a period of one year from date of authorization to proceed.

NCI JOB NUMBER: 23P1-0154		MTM	GM/CMA/DB	zgodaj	basista	freese	fischer	Unassigned	Unassigned	CW	TASK	FEE	TASK
CUSTOMER: NFWB - FILTER PRESS WORK		Principal Engineer	Sr. Associate	Project Engineer	Engineer 2	Construction Services Manager	Construction Observer 3	CADD Designer	CADD Technician	Administrative Assistant	HOURS	SUBTOTAL	SUBTOTAL
PROJECT ESTIMATOR: JEZ													
DATE OF: March 20, 2024													
<b>Task 0: Proposal</b>													
											0	\$ -	\$ -
<b>DESIGN - Task 1</b>													
Belt Filter Press Re-build Specification				16						4	20	\$ 2,480.00	\$ 2,480.00
Belt Filter Press Re-Build Base Plans					24						24	\$ 2,760.00	\$ 2,760.00
Belt Filter Press Plans				8	24						32	\$ 3,840.00	\$ 3,840.00
Field Investigation				4	4						8	\$ 1,000.00	\$ 1,000.00
											0	\$ -	\$ -
Replace 11 sensors on each Belt Press specification				8						4	12	\$ 1,400.00	\$ 1,400.00
Plans					24						24	\$ 2,760.00	\$ 2,760.00
New J-box at each Belt Filter Press					24						24	\$ 2,760.00	\$ 2,760.00
control wiring to Belt Press Local Control Panel					4						4	\$ 460.00	\$ 460.00
Field Investigation											0	\$ -	\$ -
											0	\$ -	\$ -
Belt Filter Press Motor w/ VFD verses VFD in Control cabinet				24	24						48	\$ 6,000.00	\$ 6,000.00
											0	\$ -	\$ -
Belt Filter Press Local HMI Modifications Specifications				16							16	\$ 2,160.00	\$ 2,160.00
Belt Filter Press Local HMI Modifications Plans				8	24						32	\$ 3,840.00	\$ 3,840.00
											0	\$ -	\$ -
Final Review and Stamp Total Job		9									9	\$ 2,250.00	\$ 2,250.00
											0	\$ -	\$ -
											0	\$ -	\$ -
											0	\$ -	\$ -
<b>TOTAL ==&gt; DESIGN - Task 1</b>		<b>9</b>	<b>0</b>	<b>84</b>	<b>152</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>253</b>	<b>\$ 31,710.00</b>	<b>\$ 31,710.00</b>
<b>DESIGN - Task 2</b>													
Control Console removal specifications				8						4	12	\$ 1,400.00	\$ 1,400.00
Base Plan From Above											0	\$ -	\$ -
Plans					40						40	\$ 4,600.00	\$ 4,600.00
remove Lime Pump Controls											0	\$ -	\$ -
Field Investigation					4						4	\$ 460.00	\$ 460.00
											0	\$ -	\$ -
<b>TOTAL ==&gt; DESIGN - Task 2</b>		<b>0</b>	<b>0</b>	<b>8</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>56</b>	<b>\$ 6,460.00</b>	<b>\$ 6,460.00</b>
<b>DESIGN - Task 3</b>													
Lime Feed controls to DMPC Specifications				8						2	10	\$ 1,240.00	\$ 1,240.00
Base Plans					40						40	\$ 4,600.00	\$ 4,600.00
Lime Feed controls to DMPC Plans				4	24						28	\$ 3,300.00	\$ 3,300.00
Clean up existing Lime Feed Control Panels				4	16						20	\$ 2,380.00	\$ 2,380.00
Field Investigation					4						4	\$ 460.00	\$ 460.00
											0	\$ -	\$ -
Sludge Pump Controls to DMCP Specification <i>Motion AI Coord.</i>				8						2	10	\$ 1,240.00	\$ 1,240.00
Sludge pumps Base Plan					0						0	\$ -	\$ -
New switch and drive rewiring for Sludge pumps					0						0	\$ -	\$ -
Field Investigation				4							4	\$ 540.00	\$ 540.00
											0	\$ -	\$ -
Polymer Pump Controls to DMCP via IP3 Specification				8						2	10	\$ 1,240.00	\$ 1,240.00
Polymer Pump Base Plan					40						40	\$ 4,600.00	\$ 4,600.00
New ethernet switch and ethernet cable to 3 VFD's					24						24	\$ 2,760.00	\$ 2,760.00
Field investigation					4						4	\$ 460.00	\$ 460.00
											0	\$ -	\$ -
Sludge Flow meters (4) 4-20mA to DMCP					16						16	\$ 1,840.00	\$ 1,840.00
Field investigation					4						4	\$ 460.00	\$ 460.00
											0	\$ -	\$ -

NCI JOB NUMBER: 23P1-0154 CUSTOMER: NFWB - FILTER PRESS WORK PROJECT ESTIMATOR: JEZ DATE OF: March 20, 2024	MTM	GM/CMA/DB	zgodaj	basista	freese	fischer	Unassigned	Unassigned	CW	TASK HOURS	FEE SUBTOTAL	TASK SUBTOTAL
	Principal Engineer	Sr. Associate	Project Engineer	Engineer 2	Construction Services Manager	Construction Observer 3	CADD Designer	CADD Technician	Administrative Assistant	SUBTOTAL		
Conveyor Zero Speed Sensors replacement Modify controls to MCC Specifications			8	0					4	12	\$ 1,400.00	\$ 1,400.00
Conveyor Zero Speed Sensors replacement Modify controls to MCC Plans			16	24						40	\$ 4,920.00	\$ 4,920.00
										0	\$ -	\$ -
										0	\$ -	\$ -
										0	\$ -	\$ -
										0	\$ -	\$ -
<b>TOTAL ==&gt; DESIGN - Task 3</b>	0	0	60	196	0	0	0	0	10	266	\$ 31,440.00	\$ 31,440.00
<b>DESIGN - Task 4 (removed from Scope)</b>												
Plant Water Booster Pump - Filter Belt Press design		0	0				0	0		0	\$ -	\$ -
Plant Water Booster Pump - Filter Belt Press Specifications										0	\$ -	\$ -
Plant Water Booster Pump - Filter Belt Press Plans										0	\$ -	\$ -
										0	\$ -	\$ -
										0	\$ -	\$ -
										0	\$ -	\$ -
<b>TOTAL ==&gt; DESIGN - Task 4 (removed from Scope)</b>	0	0	0	0	0	0	0	0	0	0	\$ -	\$ -
<b>DESIGN - Task 5</b>												
DMCP/IP3 Panel Control Modifications			40	40						80	\$ 10,000.00	\$ 10,000.00
Field Work			8	8						16	\$ 2,000.00	\$ 2,000.00
										0	\$ -	\$ -
										0	\$ -	\$ -
<b>TOTAL ==&gt; DESIGN - Task 5</b>	0	0	48	48	0	0	0	0	0	96	\$ 12,000.00	\$ 12,000.00
<b>BIDDING - Task 6</b>												
Cost Estimates			40	80						120	\$ 14,600.00	\$ 14,600.00
Full Specification Book			40						40	80	\$ 8,600.00	\$ 8,600.00
Bidding Assistance					80					80	\$ 12,400.00	\$ 12,400.00
										0	\$ -	\$ -
<b>TOTAL ==&gt; BIDDING - Task 6</b>	0	0	80	80	80	0	0	0	40	280	\$ 35,600.00	\$ 35,600.00
<b>Task 7 Construction Administration</b>												
Contracts, Bonds, Insurance						40			20	60	\$ 6,440.00	\$ 6,440.00
Pre-Con Kick Off						10				10	\$ 1,210.00	\$ 1,210.00
Bi-Weekly Mtgs. (24)						120				120	\$ 14,520.00	\$ 14,520.00
Submittals, RFIs, Pay Apps, Change Mngmnt., Closeout						500				500	\$ 60,500.00	\$ 60,500.00
As- Built Drawings		8	40							48	\$ 7,000.00	\$ 7,000.00
										0	\$ -	\$ -
										0	\$ -	\$ -
										0	\$ -	\$ -
										0	\$ -	\$ -
										0	\$ -	\$ -
<b>TOTAL ==&gt; Task 7 Construction Administration</b>	0	8	40	0	0	670	0	0	20	738	\$ 89,670.00	\$ 89,670.00
<b>Task 8 Inspection</b>												
Full time inspection (250 days)						2000				2000	\$ 242,000.00	\$ 242,000.00
										0	\$ -	\$ -
<b>TOTAL ==&gt; Task 8 Inspection</b>	0	0	0	0	0	2000	0	0	0	2000	\$ 242,000.00	\$ 242,000.00
<b>Task 9 not used</b>												
<b>TOTAL ==&gt; Task 9 not used</b>	0	0	0	0	0	0	0	0	0	0	\$ -	\$ -
<b>TOTAL HOURS ==&gt;</b>	9	8	320	520	80	2670	0	0	82	3689	\$ 448,880.00	\$ 448,880.00

Design/Bid + 10% Cont. \$ 128,931.00

CA +10% Cont. \$ 98,637.00

Inspection +10% Cont. \$ 266,200.00

NCI JOB NUMBER: 23P1-0154		MTM	GM/CMA/DB	zgodaj	basista	freese	fischer	Unassigned	Unassigned	CW				
CUSTOMER: NFWB - FILTER PRESS WORK		Principal Engineer	Sr. Associate	Project Engineer	Engineer 2	Construction Services Manager	Construction Observer 3	CADD Designer	CADD Technician	Administrative Assistant	TASK	FEE SUBTOTAL	TASK	
PROJECT ESTIMATOR: JEZ											HOURS		SUBTOTAL	
DATE OF: March 20, 2024														
HOURLY BILLING RATE		\$ 250.00	\$ 200.00	\$ 135.00	\$ 115.00	\$ 155.00	\$ 121.00	\$ 118.00	\$ 104.00	\$ 80.00	FEE SUMMARY			
TOTAL BILLABLE DOLLARS		\$ 2,250.00	\$ 1,600.00	\$ 43,200.00	\$ 59,800.00	\$ 12,400.00	\$ 323,070.00	\$ -	\$ -	\$ 6,560.00	\$ 448,880.00	Subtotal Fee	\$ 448,880.00	
											Total Expenses	\$ -		
											Subconsultant Costs	\$ -		
											10% Contengency	\$ 44,888.00		
												\$ -		
											TOTAL NOT TO EXCEED FEE	\$ 493,768.00		

check sum

493,768.00



*NIAGARA FALLS WATER BOARD RESOLUTION # 2024-03-012*

**WATER TREATMENT PLANT ROOF REPLACEMENT  
CHANGE ORDER APPROVAL**

**WHEREAS**, the roof on the Niagara Falls Water Board (“Water Board”) Water Treatment Plant (“WTP”) is original to that building which was completed in 1997 and is outside of its warranty period; and

**WHEREAS**, in 2023 the Water Board awarded the bid for replacement of the WTP roof to Weaver Metal and Roofing, Inc., for a total sum not to exceed \$3,362,000; and

**WHEREAS**, the Water Board has identified opportunities for savings in connection with the roof replacement project, including saving approximately \$25,000 by omitting the guard shack roof from the scope of work as that roof does not require replacement and through a credit of \$15,497 related to the roof fascia; and

**WHEREAS**, on removing the stone and insulation covering the section of roof over the upper chemical area of the WTP, Weaver Metal and Roofing discovered that the roof pitch needed to be corrected to eliminate ponding and to direct water to roof drains; and

**WHEREAS**, the contractor has presented change order No. 4 dated March 19, 2024 for the project in the amount of \$41,600 to correct this unexpected condition, and CPL, as the Water Board’s engineers, recommends approval of the change order; and

**WHEREAS**, after the \$15,497 credit to the Water Board through the change order related to the roof fascia, the total contract amount after the change order will increase by \$26,103, to \$3,388,103;

\* CONTINUED ON NEXT PAGE \*

**NOW THEREFORE BE IT**

**RESOLVED**, that the Niagara Falls Water Board hereby authorizes the Executive Director to execute Water Treatment Plant Roof Replacement Project Change Order No. 4, dated March 19, 2024, to correct the pitch of the roof over the upper chemical area, for a total cost not to exceed \$41,600; and

**IT IS FURTHER RESOLVED**, that after application of a credit to the Water Board for a prior change order, the change order approved pursuant to this Resolution brings the total amount approved for the contract with Weaver Metal and Roofing, Inc., for replacement of the Water Treatment Plant roof to \$3,388,103.

*Water Board Personnel Responsible for Implementation of this Resolution:*  
Executive Director

*Water Board Budget Line or Capital Plan Item with Funds for this Resolution:*  
CIP Item No. WTP-5, WTP Roofing  
Capital Line Supplied by: D. Williamson  
Funds Confirmed by: B. Majchrowicz

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	<b>Yes</b>	<b>No</b>	<b>Abstain</b>	<b>Absent</b>
Board Member Asklar	[ ]	[ ]	[ ]	[ ]
Board Member Kimble	[ ]	[ ]	[ ]	[ ]
Board Member Larkin	[ ]	[ ]	[ ]	[ ]
Board Member Leffler	[ ]	[ ]	[ ]	[ ]
Chairman Forster	[ ]	[ ]	[ ]	[ ]

Signed By:

Vote Witnessed By:

\_\_\_\_\_  
Nicholas J. Forster, Chairman

\_\_\_\_\_  
Sean W. Costello, Secretary to Board



# AIA® Document G701® – 2017

## Change Order

<b>PROJECT:</b> <i>(Name and address)</i> Niagara Falls Water Treatment Plan Roof Reconstruction 5815 Buffalo Ave., Niagara Falls, NY 14304	<b>CONTRACT INFORMATION:</b> Contract For: General Construction Date: 08/08/2023	<b>CHANGE ORDER INFORMATION:</b> Change Order Number: 004 Date: 03/19/2024
<b>OWNER:</b> <i>(Name and address)</i> Niagara Falls Water Treatment Plan Roof Reconstruction 5815 Buffalo Ave., Niagara Falls, NY 14304	<b>ARCHITECT:</b> <i>(Name and address)</i> CPL 26 Mississippi St., Suite 100, Buffalo, NY 14203	<b>CONTRACTOR:</b> <i>(Name and address)</i> Weaver Metal & Roofing, Inc. 40 Appenheimer Ave. Buffalo, NY 14214

### THE CONTRACT IS CHANGED AS FOLLOWS:


*(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)*

The original Contract Sum was	\$ 3,362,000.00
The net change by previously authorized Change Orders	\$ -15,497.00
The Contract Sum prior to this Change Order was	\$ 3,346,503.00
The Contract Sum will be increased by this Change Order in the amount of	\$ 41,600.00
The new Contract Sum including this Change Order will be	\$ 3,388,103.00

The Contract Time will be unchanged by Zero (0) days.  
The new date of Substantial Completion will be 10/15/2024

**NOTE:** This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

### NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

CPL	Weaver Metal and Roofing, Inc.	Niagara Falls Water Board
ARCHITECT <i>(Firm name)</i>	CONTRACTOR <i>(Firm name)</i>	OWNER <i>(Firm name)</i>
		
SIGNATURE	SIGNATURE	SIGNATURE
Kisha Patterson, AIA Project Architect		
PRINTED NAME AND TITLE	PRINTED NAME AND TITLE	PRINTED NAME AND TITLE
03/19/2023		
DATE	DATE	DATE



<b>REQUEST FOR INFORMATION</b>	RFI #: 07
	Date: 3/7/2024

**WTP – ROOF RECONSTRUCTION – R20.14143.02**

Contractor Name: Weaver Metal & Roofing, Inc.

To: Kisha Patterson Firm: CPL

From: Kaitlin Redpath

**WE REQUEST YOUR ATTENTION (OR CONFIRMATION) REGARDING THE FOLLOWING:**

Subject: Concrete deck on noted areas (attached) are crested at center creating low spots at outside wall and expansion joint.

Location: Multiple Locations

Information is Requested By: ASAP

MESSAGE: After removals were complete on east side of expansion joint it became apparent that the concrete deck was crested at the center, causing the roof drains to be higher than the outside edge and expansion joint. On 3/6, we conducted several field measurements using a laser level to determine the exact height variation between the drain and outside edge / expansion joint at several locations. Photos and roof drawing "0004^A201 Roof New Work Plan\_RFI07" illustrate findings; photo file names correspond with numbers / notes on drawing. (Note: variation measurements adjusted to remove 2.75" height of laser off of roof).

As a result of these height variations, the 1/8" per slope tapered insulation system previously approved would not be sufficient to promote drainage. The recommendation is to install additional tapered insulation panels at the outside walls and expansion joint to level the deck, then proceed with installation of the previously approved tapered insulation system. Included file "Tapered Layout\_Overlay" illustrates the recommended change.

Contractors Name: Weaver Metal & Roofing, Inc.

By: Kaitlin Redpath Date: 3/7/2024

CPL  
26 Mississippi Street  
Suite 100  
Buffalo, NY 14203  
CPLteam.com  
716.852.2100 TEL  
800.274.9000 TEL



A 40 APPENHEIMER AVENUE  
 BUFFALO NY 14214  
 P 716.891.8844  
 F 716.891.9443  
 W WEAVERMRINC.COM

Date: 3/7/2024

Job Reference:

To

Niagara Falls Water Treatment Plant Roof Reconstruction  
 3815 Buffalo Ave  
 Niagara Falls, NY 14304

CPL Architecture  
 26 Mississippi St, Buffalo, NY 14203  
**Attention:** Kisha Patterson

**Change Order #3: RTU Grounding/LPS Installation**

LABOR	RATE	HOURS	COST
1 R Journeymen: Install Additional Tapered (104 sq)	\$ 75.68	224.0	\$ 16,952.32
2	\$ -		\$ -
3	\$ -		\$ -
4	\$ -		\$ -
5	\$ -		\$ -

MATERIAL	UNIT	QUANTITY	\$ PER UNIT	COST
1 AA Panels	each	130	\$ 8.93	\$ 1,160.25
2 A Panels	each	130	\$ 14.96	\$ 1,945.13
3 B Panels	each	130	\$ 20.74	\$ 2,695.88
4 C Panels	each	130	\$ 26.78	\$ 3,480.75
5 D Panels	each	130	\$ 32.60	\$ 4,238.33
6 Low Rise Foam Adhesive	each	3	\$ 1,900.50	\$ 5,701.50

SUBCONTRACTOR	UNIT	QUANTITY	\$ PER UNIT	COST
1				\$ -
				\$ -

<b>LABOR TOTAL</b>	<b>\$ 16,952.32</b>
<b>MATERIAL TOTAL</b>	<b>\$ 19,221.83</b>
<b>SUBCONTRACTOR TOTAL</b>	<b>\$ -</b>
<b>15% O&amp;P</b>	<b>\$ 5,426.12</b>
<b>TOTAL</b>	<b>\$ 41,600.00</b>

**Notes**

See RFI 07.

Thank you for using Weaver Metal and Roofing, Inc. as the provider of roofing services for this project.

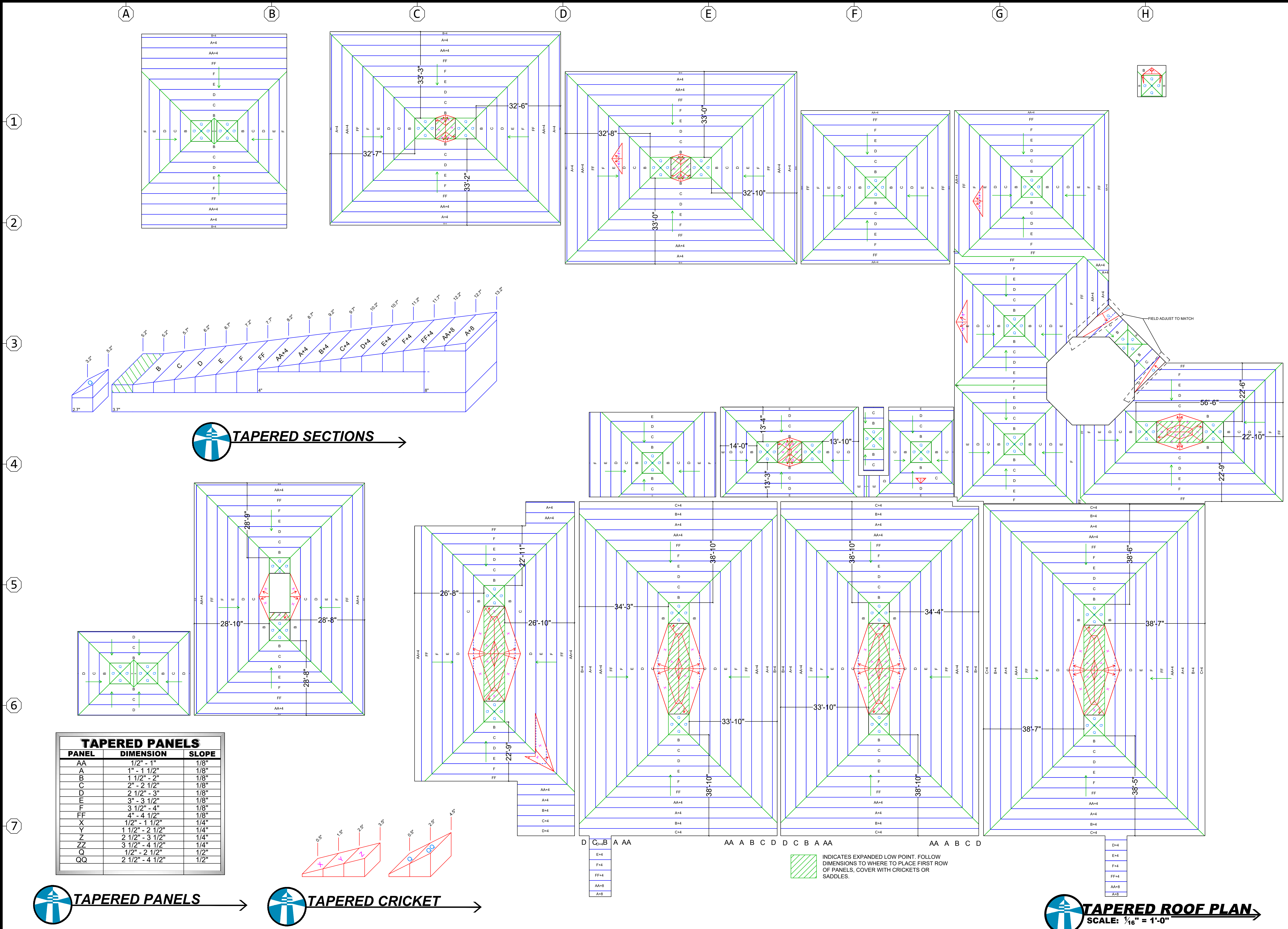
Authorized Signature
This proposal may be withdrawn by us if not accepted within 30 days.
<i>(Contractor's Signature)</i>

*(Date)*

Acceptance of Proposal
The above prices, specifications and conditions are hereby accepted.
<i>(Authorizing Signature)</i>

*(Date)*





**DISCLAIMER:**  
 BEACON ENGINEERING DID NOT PERFORM AND OR CONDUCT ANY DESIGN OR ENGINEERING ANALYSIS IN CONJUNCTION WITH THE PREPARATION OF THESE DRAWINGS. THESE DRAWINGS REPRESENT A RECITATION AND GRAPHIC DEPICTION OF THE MANUFACTURERS SPECIFICATIONS AND THE DESIGN DETAILS ONLY. THESE DRAWINGS SHOULD NOT AND ARE NOT TO BE CONSTRUED AS CONSTITUTING DESIGN ERECTION DRAWINGS, SPECIFICATIONS OR DESIGN DETAILS PREPARED OR APPROVED BY BEACON ENGINEERING. THE ARCHITECT'S/ENGINEER'S APPROVED DESIGN OF THE ROOF IS THE CONTROLLING DOCUMENT. CONTRACTOR REMAINS RESPONSIBLE FOR THE INSTALLATION IN COMPLIANCE WITH THAT APPROVED DESIGN.

**NOTES:**  
 INSTALLER MUST VERIFY ALL FIELD DIMENSIONS, DRAIN AND SCUPPER LOCATIONS AND PRODUCT SPECIFICATIONS FOR ACCURACY. MATERIAL WILL BE SHIPPED TO MATCH THE SPECIFICATIONS AND QUANTITIES NOTED HEREON. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL FIELD CONDITIONS AND COMPLIANCE WITH BUILDING CODE ISSUES.  
 THE TAPERED LAYOUT ILLUSTRATED ON THIS DRAWING REQUIRES THE INSTALLER TO REUSE PARTIAL PIECES OF INSULATION. THEREFORE, DISCARDING MORE THAN HALF OF A USEABLE PIECE OF TAPERED INSULATION AND/OR ONE QUARTER OF A PIECE OF FLAT INSULATION WILL RESULT IN A SHORTAGE OF MATERIAL FOR YOUR TAPERED SYSTEM.



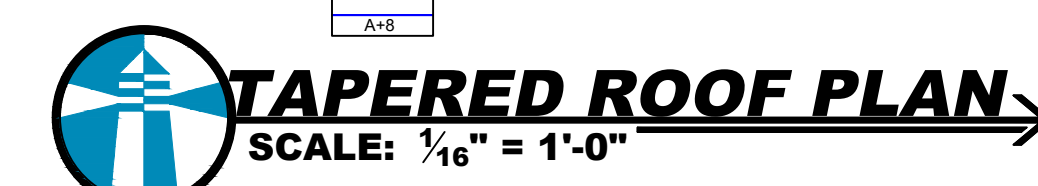
**PROJECT:**  
**Water Treatment Plant Roof Reconstruction**  
 Niagara Falls, NY  
**ROOFING CONTRACTOR:**  
**WEAVER METAL & ROOFING CO**

**PROJECT NOTES:**

**TAPER SPECS**  
 TAPERED MATERIAL: Polyiso 20psi  
 TAPERED SLOPE: 1/2" & 1/8"  
 MINIMUM THICKNESS: 3.20" & 5.20"  
 MAXIMUM THICKNESS: 5.20" & 12.98"  
 R-VALUE (AVG/MIN): MIN R-30.00

**CRICKET SPECS**  
 CRICKET MATERIAL: Polyiso 20psi  
 CRICKET SLOPE: 1/4" & 1/2"  
 MINIMUM THICKNESS: 0.50"  
 MAXIMUM THICKNESS: 3.36"

DATE: 8/9/2023  
 PROJECT NUMBER: F23-19296-R3  
 QUOTE NUMBER: Q230808-49  
 DRAWN BY: B. Bernosky  
 DRAWING PAGES: 1 OF 1















Plot  
← →



3/1/20

5'-0" ←  
2" ↓



4/4











**APPROVING AND ACCEPTING INDEPENDENT  
AUDIT AND INVESTMENT REPORTS**

**WHEREAS**, the Niagara Falls Water Board engaged EFPR Group, CPAs, PLLC (“EFPR”), Certified Public Accountants, to perform an independent audit of its financial statements as of and for the year ending December 31, 2023; and

**WHEREAS**, the Water Board also engaged Bonadio to prepare its annual investment compliance report as required by Section 2925 of the Public Authorities Law; and

**WHEREAS**, the Water Board is in receipt of the independent auditors’ draft audit and investment reports dated March 30, 2023, and Water Board management has advised that it has reviewed and responded to the auditors’ findings;

**NOW THEREFORE BE IT**

**RESOLVED**, that the Niagara Falls Water Board approves and accepts the independent auditors’ report and investment compliance report prepared by EFPR Group, CPAs, PLLC, Certified Public Accountants, as of and for the year ending December 31, 2023.

*Water Board Personnel Responsible for Implementation of this Resolution:*

- Executive Director
- Director of Financial Services

*Water Board Budget Line or Capital Plan Item with Funds for this Resolution:*

Not Applicable

On March 25, 2024, the question of the adoption of the foregoing Resolution was duly put to a vote on roll call, which resulted as follows:

	<b>Yes</b>	<b>No</b>	<b>Abstain</b>	<b>Absent</b>
Board Member Asklar	[   ]	[   ]	[   ]	[   ]
Board Member Kimble	[   ]	[   ]	[   ]	[   ]
Board Member Larkin	[   ]	[   ]	[   ]	[   ]
Board Member Leffler	[   ]	[   ]	[   ]	[   ]
Chairman Forster	[   ]	[   ]	[   ]	[   ]

Signed By:

Vote Witnessed By:

\_\_\_\_\_  
Nicholas J. Forster, Chairman

\_\_\_\_\_  
Sean W. Costello, Secretary to Board

NIAGARA FALLS WATER BOARD

Basic Financial Statements,  
Supplementary Information and  
Independent Auditors' Report

December 31, 2023 and 2022

# NIAGARA FALLS WATER BOARD

## Table of Contents

	<u>Page</u>
Independent Auditors' Report	1 - 3
Management's Discussion and Analysis	4 - 10
Basic Financial Statements:	
Statements of Net Position	11 - 12
Statements of Revenue, Expenses and Changes in Net Position	13
Statements of Cash Flows	14 - 15
Notes to Financial Statements	16 - 44
Required Supplementary Information:	
Schedule of Changes in the Board's Total OPEB Liability and Related Ratios	45
Schedule of the Board's Proportionate Share of the Net Pension Asset/Liability	46
Schedule of the Board's Pension Contributions	47
Other Supplementary Information:	
Schedule 1 - Niagara Falls Water Authority (a Blended Component Unit) - Statements of Net Position	48
Schedule 2 - Niagara Falls Water Authority (a Blended Component Unit) - Statements of Revenue, Expenses and Changes in Net Position	49
Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <u>Government Auditing Standards</u>	50 - 51
Report on Investment Compliance with Section 201.3 of Title Two of the <u>Official Compilation of Codes, Rules and Regulations of the State of New York</u>	52 - 53

\* \* \* \* \*

## INDEPENDENT AUDITORS' REPORT

The Board of Directors  
Niagara Falls Water Board:

### Report on the Audit of the Financial Statements

#### Opinion

We have audited the accompanying financial statements of Niagara Falls Water Board (the Board), as of and for the year ended December 31, 2023, and the related notes to financial statements, which collectively comprise the Board's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Board, as of December 31, 2023, and the respective changes in financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America (GAAP).

#### Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Board and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Prior Period Financial Statements

The financial statements of the Board as of December 31, 2022, were audited by other auditor's whose report dated March 30, 2023, expressed an unmodified opinion on those statements.

#### Correction of Error

As discussed in note 14 to the financial statements, an error resulting in the misstatement of the Board's deferred outflows of resources - OPEB at December 31, 2022 was discovered in the current year. As a result, amounts reported for deferred outflows of resources - OPEB, unrestricted net position (deficit) and employee benefits as of and for the year ended December 31, 2022, have been restated to correct the error. Our opinion is not modified with respect to this matter.

## Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with GAAP, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Board's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

## Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and Government Auditing Standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and Government Auditing Standards, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Board's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Board's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

### Required Supplementary Information

GAAP requires that management's discussion and analysis and the other required supplementary information as listed in the table of contents be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by GASB who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Board's basic financial statements. The other supplementary information as listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with GAAS. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

### Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated \_\_\_\_\_, 2024 on our consideration of the Board's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Board's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Board's internal control over financial reporting and compliance.

Williamsville, New York  
, 2024



NIAGARA FALLS WATER BOARD  
Management's Discussion and Analysis  
December 31, 2023 and 2022

As management of the Niagara Falls Water Board (the Board), we offer readers of the Board's financial statements this narrative and analysis of the financial activities of the Board for the years ended December 31, 2023 and 2022.

Following this Management's Discussion and Analysis (MD&A) are the financial statements of the Board together with the notes thereto. Please read the MD&A in conjunction with the Board's financial statements and the accompanying notes in order to obtain a full understanding of the Board's financial position and results of operations.

The Board was created by an Act of the State of New York, as more fully described in note 1 to the financial statements, and commenced operations on September 25, 2003. In accordance with an agreement with the City of Niagara Falls, New York (the City) the Board received all assets, liabilities and operating activities (including all personnel) of the City's former Water and Sewer Funds. In return, the Board issued debt, which was used to defease outstanding City bonded debt relating to its Water and Sewer Funds.

**Financial Highlights**

- Total net position of the Board was \$11,802,060 and \$7,386,072 at December 31, 2023 and 2022 (as restated), respectively. At December 31, 2023 and 2022 the unrestricted net position (deficit) was, \$(53,557,839) and \$(61,682,726), respectively, which, may be used to meet the Board's ongoing obligations.
- The Board's operating income for the years ended December 31, 2023 and 2022 was \$4,743,272 and \$9,297,865, respectively.
- The Board's total bond indebtedness decreased by \$4,670,211 and \$2,709,498 during the years ended December 31, 2023 and 2022, respectively.
- The Board reflected a liability for other postemployment benefits of \$81,404,487 and \$76,183,820 at December 31, 2023 and 2022, respectively.
- Net position was restated as of December 31, 2022 as described in note 14.

**Overview of the Financial Statements**

This discussion and analysis is intended to serve as an introduction to the Board's basic financial statements which include the financial activities of the Board, the Niagara Falls Public Water Authority (the Authority) (a blended component unit), and the notes to financial statements. The reasons for blending the financial activities are explained in note 1 to the financial statements. An overview of the responsibilities of the Board and the Authority is presented as follows.

<u>Board</u>	<u>Authority</u>
* Owns the System	* Issues debt
* Operates and maintains the System	* Provides proceeds of debt for construction and improvements
* Responsible for System improvements	* Provides oversight regarding adequacy of revenue and System conditions
* Sets rates and collects revenue	
* Pays debt service on bonds	

NIAGARA FALLS WATER BOARD  
Management's Discussion and Analysis, Continued

The financial statements are designed to provide readers with a broad overview of the Board's finances in a manner similar to a private-sector business, and are organized as follows:

- The statements of net position presents information on all of the Board's assets, deferred outflows of resources, liabilities and deferred inflows of resources, with the difference between the four reported as net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the Board is improving or deteriorating.
- The statements of revenue, expenses and changes in net position presents information on how the Board's net position changed during each reporting period. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, revenue and expenses are reported in these statements for some items that will result in cash flows for future fiscal periods (e.g., uncollected water and sewer rents, earned but unused vacation and other postemployment benefits).
- The statements of cash flows presents information depicting the Board's cash flow activities for each reporting period and the effect that these activities had on the Board's cash and equivalent balances.
- The notes to the financial statements provide additional information that is essential to a full understanding of the data provided in the financial statements.

**Financial Analysis**

As noted earlier, net position may serve over time as a useful indicator of the Board's financial position. Assets and deferred outflows exceeded liabilities and deferred inflows by \$11,802,060 at December 31, 2023, as compared to \$7,386,072 at December 31, 2022, as presented as follows:

<u>Condensed Statements of Net Position</u>			
	December 31,		
	<u>2023</u>	<u>2022*</u>	<u>2021</u>
Current assets	\$ 31,800,960	26,832,221	27,745,805
Noncurrent assets	<u>163,743,878</u>	<u>161,850,009</u>	<u>157,906,675</u>
Total assets	<u>195,544,838</u>	<u>188,682,230</u>	<u>185,652,480</u>
Deferred outflows	<u>10,652,401</u>	<u>8,724,024</u>	<u>8,668,717</u>
Current liabilities	22,426,405	13,752,927	14,805,848
Noncurrent liabilities	<u>153,109,322</u>	<u>149,221,515</u>	<u>171,072,687</u>
Total liabilities	<u>175,535,727</u>	<u>162,974,442</u>	<u>185,878,535</u>
Deferred inflows	<u>18,859,452</u>	<u>27,045,740</u>	<u>8,330,875</u>
Net investment in capital assets	45,416,014	48,223,089	40,935,506
Restricted	19,943,885	20,845,709	20,075,669
Unrestricted (deficit)	<u>(53,557,839)</u>	<u>(61,682,726)</u>	<u>(60,899,388)</u>
Total net position	\$ <u>11,802,060</u>	<u>7,386,072</u>	<u>111,787</u>

\*Restated as described in note 14.

NIAGARA FALLS WATER BOARD  
Management's Discussion and Analysis, Continued

The Board's net investment in capital assets was \$45,416,014 and \$48,223,089 at December 31, 2023 and 2022, respectively. This results from the timing of the amortization of the Board's capital debt, as outstanding principal for most of the Board's serial bonds is not paid until late into the life of the debt, while depreciation occurs annually.

The Board's unrestricted net position (deficit) was \$(53,557,839) and \$(61,682,726) at December 31, 2023 and 2022, respectively. The restricted debt service portion of the Board's net position, \$6,079,649 and \$7,736,729 at December 31, 2023 and 2022, respectively, represents funds that are set aside to be used towards debt service. The restricted capital projects portion of the Board's net position, \$786,581 at December 31, 2023 and 2022, represents funds that are set aside primarily for the reconstruction of the Falls Street Tunnel and capital projects. The restricted debt reserve fund portion of the Board's net position, \$7,452,474 and \$7,123,949 at December 31, 2023 and 2022, respectively, represents funds for future debt service payments. The restricted operating and maintenance reserve fund portion of the Board's net position, \$5,625,181 and \$5,198,450 at December 31, 2023 and 2022, respectively, represents funds to pay the cost of extraordinary repairs to and maintenance of the system.

The Board's unrestricted net position is the remainder of total net position after taking net investment in capital assets, restricted for capital projects, restricted for operations and maintenance and restricted for debt related reserves into account. Unrestricted net position (deficit) increased in 2023 by \$8,124,887 because of a decrease in net investment in capital assets of \$2,807,075 and a decrease of \$901,824 in restricted net position. Unrestricted net position (deficit) decreased in 2022 by \$783,338 because of an increase in net investment in capital assets of \$7,287,583 and an increase of \$770,040 in restricted net position.

A comparison of current assets to current liabilities of the Board at December 31, 2023, 2022 and 2021 follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
Current assets	\$ <u>31,800,960</u>	<u>26,832,221</u>	<u>27,745,805</u>
Current liabilities	\$ <u>22,426,405</u>	<u>13,752,927</u>	<u>14,805,848</u>
Ratio of current assets to current liabilities	1.42	1.95	1.87

The Board's total net position increased by \$4,415,988 and \$7,274,285, respectively, during the years ended December 31, 2023 and 2022. Key elements of the changes in net position is as follows:

	<u>Changes in Net Position</u>		
	<u>2023</u>	<u>2022*</u>	<u>2021</u>
Total operating revenue	\$ 39,367,536	41,093,715	38,433,425
Total operating expenses	(34,624,264)	(31,795,850)	(31,328,973)
Operating income	4,743,272	9,297,865	7,104,452
Total nonoperating expenses	(327,284)	(2,023,580)	(1,983,605)
Change in net position	\$ <u>4,415,988</u>	<u>7,274,285</u>	<u>5,120,847</u>

\* Restated as described in note 14.

NIAGARA FALLS WATER BOARD  
Management's Discussion and Analysis, Continued

The Board's major sources of operating revenue are charges for water and sewer services which comprise approximately 98% and 88% of total operating revenue at December 31, 2023 and 2022, respectively. This was a \$2,187,781 increase from 2022 to 2023 and an increase of \$1,605,162 from 2021 to 2022. These revenues are dependent upon rates charged for these services, with such rates being determined by the Board. Please see the section entitled "Economic Factors and Next Year's Rates" within this MD&A for a listing of the rates charged during 2023 and approved rates for 2024.

The Board's largest operating expense area is for contractual expenses which were approximately 41% and 44% of total operating expenses for the years ended December 31, 2023 and 2022, respectively. In 2023, these costs totaled approximately \$14.3 million as compared to \$12.8 million in 2022, representing an approximate \$1.5 million increase in this area.

In 2022, these costs totaled approximately \$14.3 million as compared to \$12.0 million, representing an approximate \$2.3 million increase in this area.

Within the nonoperating revenue (expenses) category, interest expense is by far the largest expense item and represents the cost of carrying serial bonds, which totaled \$73,361,962 and \$77,902,419, at December 31, 2023 and 2022, respectively.

The following is a summary of the Board's cash flow activities for the years ended December 31, 2023, 2022 and 2021:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
Cash flows provided by (used in):			
Operating activities	\$ 11,900,748	13,227,371	10,371,671
Capital and related financing activities	(7,669,342)	(14,046,325)	(11,168,031)
Investing activities	<u>(616,701)</u>	<u>362,606</u>	<u>4,690,071</u>
Change in cash and equivalents	3,614,705	(456,348)	3,893,711
Cash and equivalents at beginning of year	<u>13,053,285</u>	<u>13,509,633</u>	<u>9,615,922</u>
Cash and equivalents at end of year	\$ <u>16,667,990</u>	<u>13,053,285</u>	<u>13,509,633</u>

The Board's available cash and equivalents increased by \$3,614,705 during the year ended December 31, 2023, as compared to a decrease of \$456,348 during the year ended December 31, 2022. Cash provided by operating activities reflected a positive balance was \$11,900,748 and \$13,227,371, respectively, for the years ended December 31, 2023 and 2022.

**Capital Assets and Debt Administration**

**Capital Assets** - The Board's investment in capital assets (net of accumulated depreciation) as of December 31, 2023 and 2022, amounted to \$129,505,080 and \$128,133,165, respectively. This includes land, plant and transmission (infrastructure type assets), machinery and equipment, and construction in progress. The Board's greatest investment in capital assets comes in the form of infrastructure. Significant factors affecting capital assets during the reporting period include:

- The Board recorded total additions to capital assets of \$8,430,482.

NIAGARA FALLS WATER BOARD  
Management's Discussion and Analysis, Continued

- Additions to construction in progress totaled \$8,430,482. Completed capital projects transferred to depreciable asset categories totaled \$10,809,240.
- The Board recorded total depreciation and amortization of \$7,038,507 and \$6,878,867 for the years ended December 31, 2023 and 2022, respectively.

A summary of capital assets, net of depreciation and amortization, where applicable, is as follows:

	<u>2023</u>	<u>2022</u>	<u>2021</u>
Land	\$ 463,713	463,713	463,713
Construction in progress	13,794,125	16,172,883	9,903,918
Plant and transmission assets (water system)	36,436,072	37,319,932	40,202,634
Plant and transmission assets (wastewater system)	72,210,553	67,504,102	68,869,250
Machinery and equipment	6,451,546	6,389,726	5,742,230
Right to use lease assets	<u>149,071</u>	<u>262,749</u>	<u>284,125</u>
Total	\$ <u>129,505,080</u>	<u>128,113,105</u>	<u>125,465,870</u>

Construction in progress represents ongoing capital construction which will be transferred to the appropriate asset category (and begin to be depreciated) upon completion.

More detailed information about the Board's capital assets is presented in the note 4 to financial statements.

**Bonds** - At December 31, 2023 and 2022, the Board had outstanding bonds totaling \$73,361,962 and \$77,902,419, respectively. During the years ended December 31, 2023 and 2022, the Board made principal payments of \$4,540,457 and \$38,509,774, respectively, on these bonds.

The Board used bond debt to finance the original purchase of the assets (net of liabilities and including the water, sewer and storm water systems) from the City. In the future, the Board may utilize bond debt issuances as a primary source of funds for construction, renovations and system improvements.

**Other Postemployment Benefits** - Upon retirement, the Board's employees are entitled to continuous health insurance coverage. At December 31, 2023 and 2022, the liability recorded for these benefits amounted to \$81,404,487 and \$76,183,820, respectively.

**Compensated Absences** - Upon separation, Board employees are entitled to payment of unused sick and vacation time. The total liability relating to these payments at December 31, 2023 and 2022, is \$672,585 and \$605,405, respectively. The timing of the payments relating to compensated absences is dependent upon many factors, including the retirement or separation from service, and is therefore difficult to predict; however, the Board estimates that \$33,629 and \$36,271 of such liability is current at December 31, 2023 and 2022, respectively.

NIAGARA FALLS WATER BOARD  
Management's Discussion and Analysis, Continued

**Economic Factors and Next Year's Rates**

As noted earlier, the Board's largest sources of operating revenues are water and sewer rents from customers. These revenues result from rates charged based on water usage by the individual customer. Rates can be adjusted accordingly in order to help meet the expenses of the Board. When considering rate changes, the Board utilizes the services of a rate consultant to help forecast the magnitude and effects of potential changes. As required by law, the general public's opinions are also taken into consideration, through public hearings, when contemplating a change in rates charged for services. Water rates charged for 2023 and approved rates to be charged for 2024 are as follows:

<u>Amount Consumed</u>	<u>2024</u>		<u>2023</u>	
	<u>Amount to be charged (per 100 cubic feet)</u>		<u>Amount to be charged (per 100 cubic feet)</u>	
	<u>Inside city</u>	<u>Outside city</u>	<u>Inside city</u>	<u>Outside city</u>
First 20,000 cubic feet per quarter	4.48	11.97	4.48	11.97
Next 60,000 cubic feet per quarter	3.88	10.45	3.88	10.45
Next 120,000 cubic feet per quarter	3.29	8.70	3.29	8.70
Over 200,000 cubic feet per quarter	2.75	7.33	2.75	7.33
Minimum charge for water consumption per quarter	58.24	155.61	58.24	155.61

In addition to the above schedule of rates for water consumed, a demand charge is assessed for each user's meter, as set forth below:

<u>Size and Type</u>	<u>2024 Rate (per quarter)</u>	<u>2023 Rate (per quarter)</u>
Under 1" Disc	\$ 3.70	3.70
1" Disc	25.00	25.00
2" Disc	40.00	40.00
2" Compound	40.00	40.00
3" Compound	50.00	50.00
4" Compound	100.00	100.00
6" Compound	220.00	220.00
8" Compound	250.00	250.00
10" Compound	275.00	275.00
12" Compound	400.00	400.00

In addition to charging for water consumption and services, the Board also charges users with respect to sewer and wastewater services provided. All users have been divided into two "user classes" - Commercial/Small Industrial/Residential Users (CSIRU) and Significant Industrial Users (SIU).

NIAGARA FALLS WATER BOARD  
Management's Discussion and Analysis, Continued

Sewer rates for the CSIRU class are determined by the total metered water consumption in each quarter. Rates charged for 2023 and rates to be charged during 2024 are as follows:

<u>Amount Consumed</u>	<u>2024</u>	<u>2023</u>
Minimum charge per quarter (up to 1,300 cubic feet)	\$ 77.09	77.09
Additional usage in excess of 1,300 cubic feet (\$/cubic feet)	5.93	5.93

Sewer rates for the SIU class are determined each quarter based on the actual measured quantities and composition of wastewater flow. Such rates are determined by the Board and are based upon five representative 24-hour composite samples taken quarterly. Rates for the SIU class for the year ended December 31, 2023 and approved for 2024 were \$416,521 per million gallons for wastewater flow; \$1.34 per pound for all suspended solids discharged; and \$2.31 per pound for all soluble organic carbon compounds discharged. In addition, SIU's are charged fees, as needed, for certain other "substances of concern" which are discharged in their wastewater.

**Contacting the Board's Financial Management**

This financial report is designed to provide taxpayers, customers, and creditors with a general overview of the Board's finances and to show the Board's accountability for the money it receives. If you have questions about this report or need additional financial information, contact Mr. Brian Majchrowicz, Michael O'Laughlin Municipal Water Plant, 5815 Buffalo Avenue, Niagara Falls, New York 14304.

NIAGARA FALLS WATER BOARD  
 Statements of Net Position  
 December 31, 2023 and 2022

<u>Assets</u>	<u>2023</u>	<u>2022*</u>
Current assets:		
Cash and equivalents	\$ 16,667,990	13,053,285
Accounts receivable, net of allowance for uncollectible accounts	10,825,192	9,869,836
Due from City of Niagara Falls, net of allowance for uncollectible accounts	2,918,203	2,500,569
Grants receivable	663,530	701,135
Current portion, lease receivable	168,634	184,790
Prepaid expenses	557,411	522,606
Total current assets	31,800,960	26,832,221
Noncurrent assets:		
Investments, unrestricted	19,952,151	22,287,346
Investments, restricted	13,532,123	8,899,838
Lease receivable	754,524	902,406
Net pension asset, proportionate share	-	1,647,314
Capital assets, net	129,505,080	128,113,105
Total noncurrent assets	163,743,878	161,850,009
Total assets	195,544,838	188,682,230
<u>Deferred Outflows of Resources</u>		
Loss on refunding Pension OPEB	1,714,055	1,869,854
	3,002,030	3,494,251
	5,936,316	3,359,919
Total deferred outflows of resources	10,652,401	8,724,024

(Continued)

\* Restated as described in note 14.

See accompanying notes to financial statements.



NIAGARA FALLS WATER BOARD  
Statements of Net Position, Continued

<u>Liabilities</u>	<u>2023</u>	<u>2022*</u>
<b>Current liabilities:</b>		
Accounts payable	\$ 2,441,633	2,914,218
Accrued liabilities	1,653,583	1,977,901
EFC short-term financing	10,358,810	1,584,352
<b>Current portion of noncurrent liabilities:</b>		
Lease liability	64,868	76,216
Compensated absences	33,629	30,271
Total OPEB liability	2,707,159	2,629,512
Bonds payable	<u>5,166,723</u>	<u>4,540,457</u>
Total current liabilities	<u>22,426,405</u>	<u>13,752,927</u>
<b>Noncurrent liabilities:</b>		
Lease liability	119,010	183,878
Compensated absences	638,956	575,134
Net pension liability, proportionate share	4,042,310	-
Total OPEB liability	78,697,328	73,554,308
Bonds payable	<u>69,611,718</u>	<u>74,908,195</u>
Total noncurrent liabilities	<u>153,109,322</u>	<u>149,221,515</u>
Total liabilities	<u>175,535,727</u>	<u>162,974,442</u>
<u>Deferred Inflows of Resources</u>		
Pension	484,759	5,911,542
OPEB	16,823,828	19,340,387
Leases	884,995	1,066,945
Gain on refunding	<u>665,870</u>	<u>726,866</u>
Total deferred inflows of resources	<u>18,859,452</u>	<u>27,045,740</u>
<u>Net Position</u>		
Net investment in capital assets	45,416,014	48,223,089
Restricted	19,943,885	20,845,709
Unrestricted (deficit)	<u>(53,557,839)</u>	<u>(61,682,726)</u>
Total net position	<u>\$ 11,802,060</u>	<u>7,386,072</u>

\* Restated as described in note 14.

See accompanying notes to financial statements.

NIAGARA FALLS WATER BOARD  
 Statements of Revenue, Expenses and Changes in Net Position  
 Years ended December 31, 2023 and 2022

	<u>2023</u>	<u>2022*</u>
Operating revenue:		
Water rents and charges	\$ 12,842,591	12,219,614
Sewer rents and charges	25,572,184	24,007,380
Licenses and permits	211,989	234,068
Grants	734,746	4,600,664
Other services	<u>6,026</u>	<u>31,989</u>
Total operating revenue	<u>39,367,536</u>	<u>41,093,715</u>
Operating expenses:		
Personnel costs	6,809,309	6,551,398
Contractual expenses	14,331,060	12,847,649
Employee benefits	6,445,388	5,517,936
Depreciation expense	6,924,829	6,777,057
Amortization expense	<u>113,678</u>	<u>101,810</u>
Total operating expenses	<u>34,624,264</u>	<u>31,795,850</u>
Total operating income	<u>4,743,272</u>	<u>9,297,865</u>
Nonoperating revenue (expenses):		
Amortization of bond premium	34,951	190,750
Debt issuance costs	-	(353,518)
Use of money and property	1,680,389	357,879
Gain on sale of property	85,084	47,582
Interest expense	<u>(2,127,708)</u>	<u>(2,266,273)</u>
Total nonoperating expenses	<u>(327,284)</u>	<u>(2,023,580)</u>
Change in net position	4,415,988	7,274,285
Net position at beginning of year	<u>7,386,072</u>	<u>111,787</u>
Net position at end of year	<u>\$ 11,802,060</u>	<u>7,386,072</u>

\* Restated as described in note 14.

See accompanying notes to financial statements.

NIAGARA FALLS WATER BOARD  
 Statements of Cash Flows  
 Years ended December 31, 2023 and 2022

	<u>2023</u>	<u>2022</u>
Cash flows from operating activities:		
Receipts from customers and users	\$ 37,241,888	36,714,635
Receipts from grants	772,351	5,031,812
Payments to suppliers	(13,808,747)	(16,293,046)
Payments to employees	<u>(12,304,744)</u>	<u>(12,226,030)</u>
Net cash provided by operating activities	<u>11,900,748</u>	<u>13,227,371</u>
Cash flows from capital and related financing activities:		
Issuance of lease liability	-	80,435
Payments on lease liability	(76,216)	(104,465)
Purchases of capital assets	(9,388,331)	(7,297,180)
Proceeds from insurance recoveries	-	31,331
Proceeds on sale of assets	85,084	76,829
Repayments of capital debt	(4,572,457)	(38,509,744)
Issuance of capital debt	8,806,458	35,930,000
Deferred loss on refunding	-	(1,869,854)
Interest paid on capital debt	(2,523,880)	(2,030,159)
Payment of debt issuance costs	<u>-</u>	<u>(353,518)</u>
Net cash used in capital and related financing activities	<u>(7,669,342)</u>	<u>(14,046,325)</u>
Cash flows from investing activities:		
Interest received	1,680,389	357,879
Change in restricted cash and investments	<u>(2,297,090)</u>	<u>4,727</u>
Net cash provided by (used in) investing activities	<u>(616,701)</u>	<u>362,606</u>
Change in cash and equivalents	3,614,705	(456,348)
Cash and equivalents at beginning of year	<u>13,053,285</u>	<u>13,509,633</u>
Cash and equivalents at end of year	<u>\$ 16,667,990</u>	<u>13,053,285</u>

(Continued)

See accompanying notes to financial statements.

NIAGARA FALLS WATER BOARD  
Statements of Cash Flows, Continued

	<u>2023</u>	<u>2022*</u>
Reconciliation of operating income to net cash provided by operating activities:		
Operating income	\$ <u>4,743,272</u>	<u>9,297,865</u>
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	6,924,829	6,777,057
Amortization	113,678	101,810
Allowance for doubtful accounts	1,152,265	809,798
Changes in:		
Accounts receivable	(971,531)	975,014
Due from City of Niagara Falls	(1,553,724)	(1,542,977)
Grants receivable	37,605	431,148
Lease receivable	164,038	161,699
Prepaid expenses	(34,805)	(30,957)
Net pension asset, proportionate share	1,647,314	(1,647,314)
Accounts payable	485,264	(3,414,440)
Accrued liabilities	71,854	(129,086)
Compensated absences	67,180	(88,812)
Total OPEB liability	5,220,667	(19,044,520)
Net pension liability, proportionate share	4,042,310	(19,321)
Deferred outflows of resources - pension	492,221	1,099,670
Deferred outflows of resources - OPEB	(2,576,397)	714,877
Deferred inflows of resources - pension	(5,426,783)	69,937
Deferred inflows of resources - OPEB	(2,516,559)	18,887,873
Deferred inflows of resources - leases	<u>(181,950)</u>	<u>(181,950)</u>
Total adjustments	<u>7,157,476</u>	<u>3,929,506</u>
Net cash provided by operating activities	<u>\$ 11,900,748</u>	<u>13,227,371</u>
Supplemental schedule of cash flow information:		
Adjustment for capital assets financed by accounts payable	<u>\$ 1,331,651</u>	<u>2,289,500</u>

\* Restated as described in note 14.

See accompanying notes to financial statements.

# NIAGARA FALLS WATER BOARD

## Notes to Financial Statements

December 31, 2023 and 2022

### (1) Summary of Significant Accounting Policies

The financial statements of the Niagara Falls Water Board (the Board) have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) as applied to governmental units. Included in the Board's reporting entity is a blended component unit, the Niagara Falls Public Water Authority (the Authority).

#### (a) Reporting Entity

The Board was created by Chapter 325 of the Laws of 2002 of the State of New York (the State), codified as Sections 1231-a of Title 10-C of Article 5 of the Public Authorities Law of the State, as amended (the Board Act). The Authority was created by Chapter 275 of the Laws of 2002 of the State, constituting the Niagara Falls Public Water Authority Act, codified as Sections 1230-a through 1230-aa of Title 10-B of Article 5 of the Public Authorities Law of the State, as amended (the Authority Act).

The Board is a corporate municipal instrument of the State consisting of five members primarily responsible for the jurisdiction, control, possession, supervision and use of water, wastewater and storm water systems within the City of Niagara Falls, New York (the City).

The Authority is a public benefit corporation consisting of three members and is primarily responsible for obtaining financing for water, wastewater and storm water systems within the City.

Board members for both the Board and Authority are appointed pursuant to the enabling legislation.

Pursuant to the Board Act and the Authority Act, the Board, the Authority and the City executed an acquisition agreement effective September 25, 2003 whereby the Authority issued bonds enabling the Board to purchase all of the assets, net of liabilities, of the City's public water, wastewater and storm water systems. The Board began operations of these systems on that date.

Currently there are approximately 17,647 residential, 259 commercial and 22 large industrial type customers. Total population served by the water system is estimated at 47,993. The average daily demand is 19.0 million gallons per day. The Board's wastewater system generally covers the same service area and customer base as the water system. The wastewater treatment plant processes approximately 23.9 million gallons of wastewater per day.

Blended Presentation of Component Unit - Although they are legally separate entities, blended component units are, in substance, part of the government's operations. The following is a brief description of the blended component unit included in the primary government:

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(1) Summary of Significant Accounting Policies, Continued

(a) Reporting Entity, Continued

Niagara Falls Public Water Authority - Among the powers given to the Authority is the ability to borrow money and issue negotiable or non-negotiable notes, bonds or other obligations for the acquisition, renovation and improvement to the regional water system.

The Authority may also apply for licenses, permits and approval of plans associated with the acquisition, renovation and improvement of the regional water system. In the process of borrowing funds to improve facilities, professional consultants may be retained to offer technical services and advice for the purpose and benefit of acquiring or improving the systems.

The Authority has entered into an agreement with the Board to make payments for the debt service required by these bonds. The Board is also required to make payments for Authority expenses. The obligation to make debt service is a general obligation to which its full faith and credit are pledged.

The Authority is considered a component unit since the Board is obligated to pay debt service and fund other accounts of the Authority. Thus, the Authority is “fiscally dependent” upon the Board to establish rates and collect fees necessary to pay these debts. Further, the Authority is “blended” with the Board in the financial statements because the Authority exists solely to provide services that predominantly benefit the Board. The Authority has no employees of its own.

(b) Measurement Focus and Basis of Accounting

The financial statements of the Board have been prepared in accordance with GAAP as applied to governmental units. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing government accounting and financial reporting principles.

The activities of the Board are accounted for similar to those often found in the private sector using the flow of economic resources measurement focus and the accrual basis of accounting. All assets, liabilities, deferred outflows of resources, deferred inflows of resources, net position, revenue, and expenses are accounted for through a single enterprise fund with revenues recorded when earned and expenses recorded at the time liabilities are incurred.

Revenues from providing water and sanitary sewer services are reported as operating revenues. Transactions which are capital, financing or investing related are reported as nonoperating revenues. All expenses related to operating systems are reported as operating expenses. Interest expense and financing costs are reported as nonoperating expenses.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(1) Summary of Significant Accounting Policies, Continued

(c) Budgets

The annual budget is the financial plan for the effective operation of the Board and the Authority. The Board uses the budget as a management tool for internal control purposes and to assist in setting of appropriate user charges.

(d) Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources and Net Position

- Cash and Equivalents - The Board's cash and equivalents represent cash on hand, demand deposits, and short-term investments with original maturities of three months or less from the date of acquisition.
- Restricted Cash and Investments - Debt Service Fund - As a result of the purchase of the water and sewer systems from the City, certain bond covenants, as disclosed in note 5, were established requiring resources (consisting of cash and investments) to be maintained for specific purposes necessary to operate the water and sewer systems. The total amount restricted for debt service fund amounted to \$6,079,649 and \$7,736,729, at December 31, 2023 and 2022, respectively.
- Restricted Cash and Investments - Debt Service Reserve Fund - This fund was established to fulfill the debt service reserve requirements on the outstanding bonds as and when they become due. The total amount restricted for debt service reserve fund amounted to \$7,452,474 and \$7,123,949, at December 31, 2023 and 2022, respectively.
- Restricted Cash and Investments - Operating and Maintenance - This fund is restricted to pay the cost of extraordinary repairs to and maintenance of the system. The total amount restricted for operating and maintenance amounted to \$5,625,181 and \$5,198,450, at December 31, 2023 and 2022, respectively.
- Cash has been deposited into various trust funds with a fiscal agent to satisfy certain covenants. Further, the amounts have been invested into various short-term investments in compliance with the Board's investment policy. Certain funds were used for their intended purposes and are no longer available for investment.
- Fair Value Measurements and Disclosures  
A framework has been established for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:
  - Level 1 - Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Board has the ability to access.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(1) Summary of Significant Accounting Policies, Continued

(d) Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources and Net Position, Continued

- Level 2 - Inputs to the valuation methodology include:
  - Quoted prices for similar assets or liabilities in active markets;
  - Quoted prices for identical or similar assets or liabilities in inactive markets;
  - Inputs other than quoted prices that are observable for the assets or liabilities; and
  - Inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 - Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

An asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. There have been no changes in the methodologies used at December 31, 2023.

The following is a description of the valuation methodologies used for assets measured at fair value.

Certificates of deposit - Valued at the closing price reported on the active market in which the individual securities are traded.

Corporate securities (commercial paper and bonds) - Valued at the closing price reported on the active market in which the individual securities are traded.

U.S. Government securities and bonds - Valued at the closing price reported on the active markets in which the individual securities are traded.

The Board assess the levels of the investments at each measurement date, and transfers between levels are recognized on the actual date of the event or change in circumstances that caused the transfer in accordance with its accounting policy regarding the recognition of transfers between levels of the fair value hierarchy.

- Accounts Receivable - All receivables, including accrued unbilled revenues, are reported at their gross values and, where appropriate, are reduced by the estimated portion that is expected to be uncollectible. The Board has adopted a policy of recognizing water and sewer revenues in the period in which the services are provided. Billings to customers generally consist of revenues earned from the prior three months for quarterly billed customers, and revenues earned from the prior month for monthly billed customers.

The collection of current water and sewer charges is performed by the Board. The City, acting as collecting agent for the Board, collects delinquent water and sewer charges, which become a lien upon the premises collected with City taxes.



NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(1) Summary of Significant Accounting Policies, Continued

(d) Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources and Net Position, Continued

- Prepaid Expenses - Prepaid expenses reflect costs applicable to future accounting periods and are recorded as prepaid items in the financial statements.
- Capital Assets - Capital assets acquired by the Board as part of the September 25, 2003 acquisition agreement with the City were reported at fair value on the acquisition date. Capital assets acquired by the Board subsequent to the initial acquisition are stated at cost including interest capitalized during construction, where applicable. Costs include material, direct labor and other items such as supervision, payroll taxes, employee benefits, transportation, and certain preliminary legal, engineering and survey costs. The costs of repairs and maintenance are expensed as incurred. Contributed fixed assets are recorded at fair market value at the date received.

Construction projects are conducted on a continuing basis in order to maintain or enhance the systems. Preliminary legal, engineering and survey costs include studies conducted prior to the actual construction period that directly result in specific construction projects. While capital projects are in process, all associated costs are recorded as construction in progress. Once completed, all costs, including legal, engineering, survey and construction costs, are reclassified to their respective asset categories and depreciated according to their useful lives.

Depreciation has been recorded using the straight-line method of depreciation. The estimated useful lives of the Board's major classes of depreciable assets are based on the utility of the respective assets. The estimated useful lives of depreciable fixed assets are as follows:

<u>Assets</u>	<u>Years</u>	<u>Threshold</u>
Land	N/A	N/A
Water and wastewater systems	20 - 50	\$20,000
Machinery and equipment	3 - 15	\$15,000

- Compensated Absences - Board employees are granted vacation and sick leave, and certain employees are permitted to earn compensatory absences in lieu of overtime. The amount of vacation and sick leave granted varies based on date of hire. In the event of termination or upon retirement, all union employees are entitled to payment for unused accumulated accruals, with limitations defined by their respective collective bargaining agreements. No employee is allowed to carry over more than 12 weeks' of paid vacation from year to year, which limits the Board's total deferred liability for this item. Nonunion employees receive similar benefits.

Payments of vacation and sick leave and compensatory time are dependent upon many factors; therefore, the timing of future payments is not readily determinable. However, management believes that sufficient resources will be available for the payments of vacation leave and compensatory time when such payments become due.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(1) Summary of Significant Accounting Policies, Continued

(d) Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources and Net Position, Continued

In addition to providing pension benefits, the Board provides postemployment health insurance coverage and survivor benefits to retired employees and their survivors in accordance with the provisions of various employment contracts in effect at the time of retirement. Substantially all of the Board's employees may become eligible for these benefits if they reach normal retirement age while working for the Board. Health care benefits are provided through the Board's self-insurance plan. The Board pays 100% of the cost for retiree's health care insurance, excluding co-pays which are the sole responsibility of the retirees. Survivors of retirees hired prior to December 31, 2007 continue to receive healthcare coverage. Future retirees hired after December 31, 2007 will pay 20% of the premiums for their insurance coverage. All retirees will be enrolled in a "Medicare Advantage Plan" at age 65. The Board recognizes the cost of providing health insurance by recording its share of insurance premiums as an expenditure.

- Bond and Note Discounts/Premiums - Discounts and premiums are presented as components of bonds or notes payable. The discounts/premiums are amortized over the life of the bonds and notes on a straight-line interest method.
- Long-term Obligations - Long-term debt obligations are reported as liabilities in the accompanying statement of net position.
- Pension Plan - The Board provides retirement benefits for substantially all of its regular, full-time employees through contributions to the New York State Employees' and Local Employees' Retirement System (ERS). The ERS provides various plans and options, some of which require employee contributions, as described in note 9.
- Deferred Outflows of Resources and Deferred Inflows of Resources - Deferred outflows of resources represents a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (expense) until then. Deferred inflows of resources represents an acquisition of net position that applies to future period(s) and so will not be recognized as an inflow of resources (revenue) until that time.
- Net Position - The Board's financial statements utilize a net position presentation. Net position is categorized as net investment in capital assets, restricted and unrestricted.

Net Investment in Capital Assets - This category groups all capital assets into one component of net position. Accumulated depreciation and the outstanding balances of debt that are attributable to the acquisition, construction or improvement of these assets reduce the balance in this category.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(1) Summary of Significant Accounting Policies, Continued

(d) Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources and Net Position, Continued

Restricted Net Position - This category represents external restrictions imposed by creditors, grantors, contributors, or laws and regulations of other governments and restrictions imposed by law through constitutional provisions or enabling legislation. Restricted net position totaled \$19,943,885 and \$20,845,709 as of December 31, 2023 and 2022, respectively.

Restricted for Capital Projects - Amounts restricted for capital projects is \$786,581 at December 31, 2023 and 2022. In 2007, the Board received \$19,000,000 from the Power Authority under a "Relicensing Settlement Agreement." The Agreement provided for the creation of a "Niagara Falls Water Board Capital Improvement Fund." These funds represent the remainder of the settlement funds and are restricted for future use related to capital improvements of the Board including but not limited to any specific project including the Falls Street Tunnel project.

Restricted for Debt Service Fund - Board restrictions for debt service were \$6,079,649 and \$7,736,729 at December 31, 2023 and 2022, respectively.

Restricted for Debt Service Reserve Fund - Amounts restricted for the debt service reserve fund were \$7,452,474 and \$7,123,949 at December 31, 2023 and 2022, respectively. These funds are controlled by bond trustee. The required minimum balance is the lessor of the maximum future annual debt service requirement or 125% of the average future annual debt service requirements for all outstanding bonds. The required minimum balance was \$6,232,913 and \$6,407,934 at December 31, 2023 and 2022, respectively. This resulted in excess reserves of \$1,219,651 and \$716,015 at December 31, 2023 and 2022, respectively.

Restricted for Operations and Maintenance - Amounts restricted for operations and maintenance were \$5,625,181 and \$5,198,450 at December 31, 2023 and 2022, respectively. These reserves may be used to pay the cost of extraordinary repairs to, and replacements of, the system. Surplus amounts on deposit at the end of the fiscal year may be used for any purpose determined by the Board to be beneficial for the system unless the Authority notifies the Board that it does not concur with such application of surplus and expenditures. The required minimum balance is 1/6<sup>th</sup> of the fiscal years' budgeted operating expenses which equates to \$4,861,056 and \$4,900,942 at December 31, 2023 and 2022, respectively. There were excess reserves of \$764,125 and \$297,508 at December 31, 2023 and 2022, respectively.

Unrestricted Net Position - This category of net position consists of net position that does not meet the definition of "restricted" or "net investment in capital assets." When both restricted and unrestricted resources are available for use, it is the Board's policy to use restricted resources first, and then unrestricted resources as they are needed.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(1) Summary of Significant Accounting Policies, Continued

(e) Use of Estimates

The preparation of the financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(f) Income Taxes

The Board is a public benefit corporation of the State of New York. As such, income earned in the exercise of its essential government functions is exempt from State and Federal income taxes.

(g) Subsequent Events

The Board has evaluated subsequent events through the date of the report which is the date the financial statements were available to be issued.

(2) Cash and Equivalents and Investments

The Board's investment policies are governed by State statute. Board monies must be deposited in Federal Deposit Insurance Corporation (FDIC) insured commercial banks or trust companies located within the State. The Board is authorized to use demand accounts and certificates of deposit. Permissible investments include obligations of the U.S. Treasury and U.S. agencies, repurchase agreements, and obligations of the State or its localities.

Collateral is required for demand deposits and certificates of deposit in an amount equal to or greater than the amount of all deposits not covered by FDIC insurance coverage. Obligations that may be pledged as collateral are outlined in Chapter 623 of the laws of the State.

Custodial Credit Risk - Deposits - In the case of deposits, this is the risk that, in the event of a bank failure, the Board's deposits may not be returned to it. As noted above, by State statute, all deposits in excess of FDIC insurance coverage must be collateralized. As of December 31, 2023 and 2022, all uninsured bank deposits were fully collateralized with securities held by the pledging financial institution's trust department or agent in the Board's name.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(2) Cash and Equivalents and Investments, Continued

The Board's collateral related to the above is as follows for the year ended December 31, 2023 and 2022:

	<u>2023</u>	<u>2022</u>
Book balance	\$ <u>16,667,990</u>	<u>13,053,285</u>
Bank balance	\$ <u>16,682,689</u>	<u>13,689,617</u>
Insured cash - FDIC	500,000	500,000
Uninsured - collateralized with securities held by pledging financial institution	<u>16,922,749</u>	<u>14,266,588</u>
Total insured and collateralized cash and equivalents	\$ <u>17,422,749</u>	<u>14,766,588</u>

Custodial Credit Risk - Investments - For investments, this is the risk that, in the event of the failure of the counterparty, the Board will not be able to recover the value of its investments that are in the possession of an outside party. At December 31, 2023, all of the Board's restricted cash in the form of investments was registered in the Board's name and was invested in U.S. Government backed securities.

The Board's investments at December 31, 2023, consist of the following:

<u>Investments</u>	<u>Maturity</u>	<u>Fair Value</u>
Cash and equivalents	N/A	\$ 3,777,743
Federal Home Mortgage Corp.	8/2024 - 9/2025	4,456,495
U.S. Treasury notes and bonds	1/2024 - 7/2024	12,827,287
Taxable money market funds	N/A	10,424,254
Certificates of deposit	1/2024 - 9/2024	<u>1,998,495</u>
Total investments		\$ <u>33,484,274</u>

These investments are classified as Level 1.

The Board's investments at December 31, 2022, consist of the following:

<u>Investments</u>	<u>Maturity</u>	<u>Fair Value</u>
Cash and equivalents	N/A	\$ 7,335,361
Federal Home Mortgage Corp.	2/2023 - 6/2025	13,145,041
U.S. Treasury notes and bonds	1/2023 - 7/2024	7,063,140
Taxable money market funds	1/2023 - 6/2023	2,243,770
Certificates of deposit	2/2024 - 7/2024	1,237,350
Income	N/A	<u>162,522</u>
Total investments		\$ <u>31,187,184</u>

These investments are classified as Level 1.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(2) Cash and Equivalents and Investments, Continued

Concentration Credit Risk - For investments, this is the risk of loss attributable to the quantity of the government's investment in a single issuer. Investments in single issuers that equal or exceed 5% of total investments have a reportable concentration of credit risk. At December 31, 2023, the Board held 11% in cash and equivalents, 13% in Federal Home Mortgage Corp., 39% in U.S. Treasury Notes and Bonds, and 37% in Taxable Commercial Paper.

(3) Receivables

Major revenue accrued by the Board at December 31, 2023 and 2022 include the following:

(a) Accounts Receivable

Accounts receivable primarily represents amounts due from customers for current and delinquent water and wastewater services provided, including penalties, unpaid bill charges, collection fees and shut-off charges.

Customers are billed either on a monthly or quarterly basis depending on the type of user (industrial or residential), and the level of water and sewer usage. Customers may make payments without penalty on current charges up until 20 days after the date of issue. Any unpaid balances remaining after these 20 days are subject to a penalty of 6%, and those customers receive an unpaid bill notice. If balances still remain unpaid after 30 additional days, final unpaid notices are mailed. The customers are then given 10 days to remit payment, after which the property is tagged, and shut-off procedures begin.

During the first week of December of every year, unpaid balances are transferred to the City tax roll for collections through the subsequent year's tax levy or in-rem property sales. Any amounts relating to unpaid water and wastewater balances collected by the City through these means are delivered to the Board.

For the years ended December 31, 2023 and 2022, \$1,290,479 and \$1,274,304, respectively, were included in allowance for uncollectible accounts to account for receivable balances that may not be collected.

(b) Due from City of Niagara Falls

Due from City of Niagara Falls represents amounts due from the City for the tax transfer. The amount accrued at December 31, 2023 and 2022, net of allowance for uncollectible amounts, were \$2,918,203 and \$2,500,569, respectively.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(3) Receivables, Continued

(b) Due from City of Niagara Falls, Continued

The tax transfer represents uncollected water and sewer charges that have been turned over to the City for collection in conjunction with the City's property tax levy. The City remits amounts to the Board each January and July for collections it receives for the previous six-month period. The due from City of Niagara Falls amount includes any collected but not yet remitted charges at year-end. Charges from all previous years' water and sewer operations transferred to the City that are not collected totaled \$10,574,844 and \$9,021,120 at December 31, 2023 and 2022, respectively. Management has recorded an allowance for uncollectible accounts with respect to these balances of \$7,656,641 and \$6,520,551 at December 31, 2023 and 2022, respectively.

(4) Capital Assets

The Board's capital asset activity for the year ended December 31, 2023 is summarized as follows:

	<u>Balance</u> <u>12/31/2022</u>	<u>Increases</u>	<u>Decreases</u>	<u>Balance</u> <u>12/31/2023</u>
Capital assets, not being depreciated and amortized:				
Land	\$ 463,713	-	-	463,713
Construction in progress	<u>16,172,883</u>	<u>8,430,482</u>	<u>(10,809,240)</u>	<u>13,794,125</u>
Total capital assets not being depreciated and amortized	<u>16,636,596</u>	<u>8,430,482</u>	<u>(10,809,240)</u>	<u>14,257,838</u>
Capital assets, being depreciated and amortized:				
Plant and transmission costs:				
Water system	92,183,878	2,148,131	-	94,332,009
Wastewater system	103,958,676	7,658,084	-	111,616,760
Machinery and equipment	13,985,290	1,003,025	-	14,988,315
Right to use lease assets	<u>364,559</u>	<u>-</u>	<u>-</u>	<u>364,559</u>
Total capital assets being depreciated and amortized	<u>210,492,403</u>	<u>10,809,240</u>	<u>-</u>	<u>221,301,643</u>
Less accumulated depreciation and amortization:				
Plant and transmission costs:				
Water system	(54,863,946)	(3,031,991)	-	(57,895,937)
Wastewater system	(36,454,574)	(2,951,633)	-	(39,406,207)
Machinery and equipment	(7,595,564)	(941,205)	-	(8,536,769)
Right to use lease assets	<u>(101,810)</u>	<u>(113,678)</u>	<u>-</u>	<u>(215,488)</u>

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(4) Capital Assets, Continued

	<u>Balance</u> <u>12/31/2022</u>	<u>Increases</u>	<u>Decreases</u>	<u>Balance</u> <u>12/31/2023</u>
Total accumulated depreciation and amortized	\$ (99,015,894)	(7,038,507)	-	(106,054,401)
Total capital assets being depreciated and amortized, net	<u>111,476,509</u>	<u>3,770,733</u>	-	<u>115,247,242</u>
Capital assets, net	\$ <u>128,113,105</u>	<u>12,201,215</u>	<u>(10,809,240)</u>	<u>129,505,080</u>

The Board's capital asset activity for the year ended December 31, 2022 is summarized as follows:

	<u>Balance</u> <u>12/31/2021</u>	<u>Increases</u>	<u>Decreases</u>	<u>Balance</u> <u>12/31/2022</u>
Capital assets, not being depreciated and amortized:				
Land	\$ 463,713	-	-	463,713
Construction in progress	<u>9,903,918</u>	<u>9,202,627</u>	<u>(2,933,662)</u>	<u>16,172,883</u>
Total capital assets not being depreciated and amortized	<u>10,367,631</u>	<u>9,202,627</u>	<u>(2,933,662)</u>	<u>16,636,596</u>
Capital assets, being depreciated and amortized:				
Plant and transmission costs:				
Water system	92,041,188	142,690	-	92,183,878
Wastewater system	102,493,699	1,464,977	-	103,958,676
Machinery and equipment	12,876,530	1,629,613	(520,853)	13,985,290
Right to use lease assets	<u>284,124</u>	<u>80,435</u>	-	<u>364,559</u>
Total capital assets being depreciated and amortized	<u>207,695,541</u>	<u>3,317,715</u>	<u>(520,853)</u>	<u>210,492,403</u>
Less accumulated depreciation and amortization:				
Plant and transmission costs:				
Water system	(51,838,554)	(3,025,392)	-	(54,863,946)
Wastewater system	(33,624,449)	(2,830,125)	-	(36,454,574)
Machinery and equipment	(7,134,300)	(921,540)	460,276	(7,595,564)
Right to use lease assets	-	<u>(101,810)</u>	-	<u>(101,810)</u>



NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(4) Capital Assets, Continued

	<u>Balance</u> <u>12/31/2021</u>	<u>Increases</u>	<u>Decreases</u>	<u>Balance</u> <u>12/31/2022</u>
Total accumulated depreciation and amortized	\$ <u>(92,597,303)</u>	<u>(6,878,867)</u>	<u>460,276</u>	<u>(99,015,894)</u>
Total capital assets being depreciated and amortized, net	<u>115,098,238</u>	<u>(3,561,152)</u>	<u>(60,577)</u>	<u>111,476,509</u>
Capital assets, net	\$ <u>125,465,869</u>	<u>5,641,475</u>	<u>(2,994,239)</u>	<u>128,113,105</u>

(5) Indebtedness

The Authority issues debt to provide for the acquisition of the water and sewer systems and for the initial funding of operating and maintenance and debt reserves.

In 2012, the proceeds \$(6,607,122) of the Series 2012B Clean Water Bonds issuance were used to payoff the Environmental Facilities Corporation (EFC) Note used to fund North Gorge Interceptor Capacity Restoration Project. These bonds are due in 2041 and bear interest at rates between 0.26-4.27%.

In 2013, the Board issued \$74,240,000 in general obligation bonds with an average interest rate of 4.72% and received an additional premium of \$142,002. The bonds were used for an advanced refunding of \$63,535,000 of 2003 Bonds with an average interest rate of 3.79%. The net proceeds of approximately \$64 million were deposited in a trust with an agent to provide for future debt service payments on the bonds. As a result, the bonds are considered defeased and the liability for those bonds has been removed from the Board's financial statements. The economic gain on the transaction (the difference between the present values of the debt service payments on the old and new debt) is approximately \$1.7 million.

During 2014 net proceeds of the Series B bonds were used to entirely refund the Series 2004 Serial Bonds of \$4,095,000, specifically reducing the interest to be paid by approximately \$610,000.

During 2015, net proceeds of the Series D bonds were used to entirely refund the Series 2005A&B Serial Bonds of \$4,380,000 specifically reducing the interest to be paid by approximately \$550,000. As a result, the bonds are considered defeased and the liability for these bonds has been removed from the Board's financial statements. The economic gain on the transaction (the difference between the present values of the debt service payments on the old and new debt) is approximately \$450,000.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(5) Indebtedness, Continued

During 2016, net proceeds of the Series A bonds were used to entirely refund the Series 2005 bonds of \$23,115,000 specifically reducing the interest to be paid by approximately \$4,100,000. As a result, the bonds are considered defeased and the liability for these bonds has been removed from the Board financial statements. The economic gain on the transaction (the difference between the present values of the debt service payments on the old and new debt) is approximately \$4.1 million. The accounting gain on this refunding was originally \$1,097,923 which will be amortized through 2034. The unamortized gain on refunding amounted to \$665,870 at December 31, 2023.

During 2019, the Board received proceeds of \$2,189,993 from the NYS Power Authority for the Energy Efficiency Program at an interest rate of 2.79%.

During 2022, net proceeds of the Water and Sewer System Revenue Refunding Bonds Series 2022A totaling \$35,930,000 were used to entirely refund the Series 2013A Serial Bonds of \$34,120,000. The discount on this refunding was \$1,869,854 which is being amortized beginning in 2024 through 2034. The Series 2022A bond will be repaid over 10 years beginning in 2024 with interest rates ranging from 2.00% - 3.375%.

Indebtedness activity for the year ended December 31, 2023 is presented as follows:

	Principal Outstanding <u>12/31/2022</u>	<u>Issued</u>	<u>Paid</u>	Principal Outstanding <u>12/31/2023</u>	Due Within <u>One Year</u>
EFC Water Revolving Funds Revenue Bonds -					
Direct Borrowings:					
Series 2012B - Clean Water bond issued in 2012 for \$6,607,122 and maturing in 2041 bearing interest paid semi-annually at 0.26% to 4.27%	\$ 4,660,000	-	(185,000)	4,475,000	185,000
Series 2013B - Clean Water bond issued in 2013 for \$14,030,000 and maturing in 2033 bearing interest paid semi-annually at 3.88% to 5.05%	8,805,000	-	(670,000)	8,135,000	695,000
Series 2013B - Drinking Water bond issued in 2013 for \$5,580,000 and maturing in 2023 bearing interest paid semi-annually at 4.75% to 4.91%	2,370,000	-	(2,370,000)	-	-
Series 2015D - Drinking Water bond issued in 2015 for \$4,380,000 and maturing in 2034 bearing interest paid semi-annually at 3.81% to 4.57%	<u>3,170,000</u>	<u>-</u>	<u>(190,000)</u>	<u>2,980,000</u>	<u>200,000</u>
Total EFC Water Revolving Funds Revenue Bonds - Direct Borrowings	<u>19,005,000</u>	<u>-</u>	<u>(3,415,000)</u>	<u>15,590,000</u>	<u>1,080,000</u>

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(5) Indebtedness, Continued

	Principal Outstanding <u>12/31/2022</u>	Issued	Paid	Principal Outstanding <u>12/31/2023</u>	Due Within <u>One Year</u>
<b>Serial Bonds:</b>					
Series 2013B bonds issued in 2013 for \$8,415,000 and maturing in 2024 bearing interest paid semi-annually at 4.309%	\$ 1,475,000	-	(925,000)	550,000	550,000
Series 2016A bonds issued in 2016 for \$20,130,000 and maturing in 2034 bearing interest paid annually at 3.13% to 5.0%	20,130,000	-	-	20,130,000	2,750,000
Series 2022A bonds issued in 2022 for \$35,930,000 and maturing in 2034 bearing interest paid semi-annually at 2.0% to 3.375%	35,930,000	-	-	35,930,000	575,000
Unamortized premium on bonds issued in 2016 for \$2,335,569 and maturing in 2034	1,546,233	-	(129,754)	1,416,479	129,754
Total Serial Bonds	<u>59,081,233</u>	<u>-</u>	<u>(1,054,754)</u>	<u>58,026,479</u>	<u>4,004,754</u>
<b>NYS Power Authority - Direct Borrowing:</b>					
Series 2019 Mortgage Loan issued in 2019 for \$2,189,993 and maturing in 2028 bearing interest paid semi-annually at 2.79%	1,362,419	-	(200,457)	1,161,962	211,723
Total	<u>\$ 79,448,652</u>	<u>-</u>	<u>(4,670,211)</u>	<u>74,778,441</u>	<u>5,296,477</u>
	Principal Outstanding <u>12/31/2021</u>	Issued	Paid	Principal Outstanding <u>12/31/2022</u>	Due Within <u>One Year</u>
<b>EFC Water Revolving Funds Revenue Bonds - Direct Borrowings:</b>					
Series 2012B - Clean Water bond issued in 2012 for \$6,607,122 and maturing in 2041 bearing interest paid semi-annually at 0.26% to 4.27%	\$ 4,840,000	-	(180,000)	4,660,000	185,000
Series 2013B - Clean Water bond issued in 2013 for \$14,030,000 and maturing in 2033 bearing interest paid semi-annually at 3.88% to 5.05%	9,455,000	-	(650,000)	8,805,000	670,000
Series 2013B - Drinking Water bond issued in 2013 for \$5,580,000 and maturing in 2023 bearing interest paid semi-annually at 4.75% to 4.91%	4,660,000	-	(2,290,000)	2,370,000	2,370,000
Series 2015D - Drinking Water bond issued in 2015 for \$4,380,000 and maturing in 2034 bearing interest paid semi-annually at 3.81% to 4.57%	3,355,000	-	(185,000)	3,170,000	190,000
Total EFC Water Revolving Funds Revenue Bonds - Direct Borrowings	<u>22,310,000</u>	<u>-</u>	<u>(3,305,000)</u>	<u>19,005,000</u>	<u>3,415,000</u>

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(5) Indebtedness, Continued

	<u>Principal Outstanding 12/31/2021</u>	<u>Issued</u>	<u>Paid</u>	<u>Principal Outstanding 12/31/2022</u>	<u>Due Within One Year</u>
Serial Bonds:					
Series 2013A bonds issued in 2013 for \$36,060,000 and maturing in 2034 bearing interest paid semi-annually at 3.0% to 5.0%.	\$ 34,120,000	-	(34,120,000)	-	-
Series 2013B bonds issued in 2013 for \$8,415,000 and maturing in 2024 bearing interest paid semi-annually at 4.309%.	\$ 2,350,000	-	(875,000)	1,475,000	925,000
Series 2016A bonds issued in 2016 for \$20,130,000 and maturing in 2034 bearing interest paid annually at 3.13% to 5.0%	20,130,000	-	-	20,130,000	-
Series 2022A bonds issued in 2022 for \$35,930,000 and maturing in 2034 bearing interest paid semi-annually at 2.0% to 3.375%	-	35,930,000	-	35,930,000	-
Unamortized premium on bonds issued in 2016 for \$2,335,569 and maturing in 2034	<u>1,675,987</u>	<u>-</u>	<u>(129,754)</u>	<u>1,546,233</u>	<u>-</u>
Total Serial Bonds	<u>58,275,987</u>	<u>35,930,000</u>	<u>(35,124,754)</u>	<u>59,081,233</u>	<u>925,000</u>
NYS Power Authority - Direct Borrowing:					
Series 2019 Mortgage Loan issued in 2019 for \$2,189,993 and maturing in 2028 bearing interest paid semi-annually at 2.79%	<u>1,572,163</u>	<u>-</u>	<u>(209,744)</u>	<u>1,362,419</u>	<u>200,457</u>
Total	<u>\$ 82,158,150</u>	<u>35,930,000</u>	<u>(38,639,498)</u>	<u>79,448,652</u>	<u>4,540,457</u>

The annual maturities of long-term debt as of December 31, 2023 are as follows:

NYS EFC Revolving Fund Revenue Bonds - Direct Borrowings:

<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 1,080,000	712,085	1,792,085
2025	1,110,000	663,618	1,773,618
2026	1,145,000	613,235	1,758,235
2027	1,180,000	560,702	1,740,702
2028	1,215,000	505,215	1,720,215
2029-2033	6,710,000	1,632,036	8,342,036
2034-2038	1,905,000	436,155	2,341,155
2039-2041	<u>1,245,000</u>	<u>126,576</u>	<u>1,371,576</u>
	<u>\$ 15,590,000</u>	<u>5,249,622</u>	<u>20,839,622</u>

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(5) Indebtedness, Continued

Serial Bonds:

<u>Year</u>	<u>Premium on bonds</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 129,754	3,875,000	2,026,192	5,901,192
2025	129,754	4,435,000	1,853,492	6,288,492
2026	129,754	4,620,000	1,659,517	6,279,517
2027	129,754	4,820,000	1,455,427	6,275,427
2028	129,754	5,035,000	1,239,337	6,274,337
2029-2033	648,770	27,385,000	3,832,364	31,217,364
2034	118,939	6,440,000	237,988	6,677,988
	<u>\$ 1,416,479</u>	<u>56,610,000</u>	<u>12,304,317</u>	<u>68,914,317</u>

NYS Power Authority - Direct Borrowing:

<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 211,723	58,410	270,133
2025	223,621	46,512	270,133
2026	236,188	33,945	270,133
2027	249,461	20,672	270,133
2028	240,969	6,653	247,622
	<u>\$ 1,161,962</u>	<u>166,192</u>	<u>1,328,154</u>

Interest on long-term debt for the year was composed of:

Interest paid:	\$ 2,523,880
Plus: Interest accrued in the current year	1,003,477
Less: Interest accrued in the prior year	<u>(1,399,649)</u>
Total interest expense	\$ <u>2,127,708</u>

Financing Agreement Covenants

The financing agreement between the Authority and the Board relating to all current and future bonding contain various covenants pertaining to the use and maintenance of the trust funds established from the proceeds of each bonding. At December 31, 2023, management believes the Board was in compliance with the following loan covenants:

The Board is required to establish and collect rates, fees and charges sufficient in each fiscal year at least equal to the sum of:

- (1) 115% of the estimated aggregate debt service and projected debt service payable in such fiscal year;
  - (2) 100% of Board operating expenses and Authority expenses payable in such fiscal year;
- and

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(5) Indebtedness, Continued

Financing Agreement Covenants, Continued

(3) 100% of the amount necessary to pay the required deposits for such fiscal year.

The Board shall review the adequacy of fees, rates and charges at least semi-annually.

The Board shall enforce the payment of any and all amounts owed for the use of the systems.

The Board shall (unless required by law) not furnish or supply, or cause to be furnished or supplied, any product, use or service of the systems, free of charge.

The debt service fund balance, beginning with the first day of each calendar month, shall receive all revenues until the balance in the debt service fund equals the minimum monthly balance. The minimum monthly balance is defined as an amount equal to the sum of the aggregate amounts of debt service that have accrued with respect to all series of bonds, calculating the debt service that has accrued as an amount equal to the sum of:

- (1) The interest on the bonds that has accrued and is unpaid and that will have accrued by the end of the then calendar month; and
- (2) The portion of the next due principal installment for the bonds that would have accrued (as deemed to accrue in the manner interest accrues) by the end of the then calendar month.

Remedies for Default

In the event that the Board shall default in the payment of principal of or interest on any issue of bonds after the same shall become due, whether at maturity or upon call for redemption, and such default shall continue for a period of thirty days, or in the event that the Board shall fail or refuse to comply with the provisions of this title or shall default in any agreement made with the holders of any issue of bonds, the holders of twenty-five percent in aggregate principal amount of the bonds of such issue then outstanding, by instrument or instruments filed in the offices of the clerk of the City, secretary of the Board and the Authority and proved or acknowledged in the same manner as a deed to be recorded, may appoint a trustee to represent the holders of such bonds for the purpose herein provided.

The Board's direct borrowings with EFC contain a provision that in the event of default, EFC may take whatever action at law or in equity may appear necessary or desirable to remedy such default. These remedies include, but are not limited to, mandatory redemption, acceleration, or requiring the Board to immediately redeem the bonds in whole together with all other sums due to EFC. The Board may also owe to EFC interest accrued on the overdue balance.

On April 1, 2021, the Authority issued a Bond Anticipation Note (BAN) Series 2021 through EFC for a maximum amount of \$27,000,000 for the planning, design and construction of improvements to the wastewater treatment plant (WWTP) and Gorge Pump Station. This BAN included \$13,500,000 of interest-free financing and \$13,500,000 of market-rate sum financing. The initial interest rate is 0.00% per annum for the interest-free portion and 0.00% per annum for the market-rate portion under a NYS EFC short-term financing program, which is considered a direct borrowing. This BAN has a maturity date of April 1, 2026.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(5) Indebtedness, Continued

Remedies for Default, Continued

The following is a summary of changes in short-term debt for the years ended December 31, 2023 and 2022:

	<u>2023</u>	<u>2022</u>
Balance at January 1	\$ 1,584,352	1,584,352
Borrowings	8,806,458	-
Payments	<u>(32,000)</u>	<u>-</u>
Balance at December 31	\$ <u>10,358,810</u>	<u>1,584,352</u>

(6) Leases

(a) Receivable

The Board's leasing operations consist of the leasing of land for cellular towers to telecommunication companies. All leases are subject to public procurement requirements, and each has a different mechanism for determining rates and charges. The lease receivables were discounted to a net present value at December 31, 2023 and 2022 using a 2.05% interest rate. Activity of lease inflows for the years ended December 31, 2023 and 2022 is summarized as follows:

	<u>2023</u>	<u>2022</u>
Lease principal	\$ 164,038	181,950
Interest	<u>20,752</u>	<u>20,752</u>
Total lease inflows	\$ <u>184,790</u>	<u>202,702</u>

Future minimum lease payments due to the Board are related deferred inflows of resources as of December 31, 2023 were as follows:

<u>Year</u>	<u>Premium on bonds</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Deferred Inflows of Resources</u>
2024	\$ 129,754	3,875,000	2,026,192	5,901,192	181,800
2025	129,754	4,435,000	1,853,492	6,288,492	146,594
2026	129,754	4,620,000	1,659,517	6,279,517	146,594
2027	129,754	4,820,000	1,455,427	6,275,427	70,940
2028	129,754	5,035,000	1,239,337	6,274,337	70,940
2029-2033	648,770	27,385,000	3,832,364	31,217,364	223,489
2034	<u>118,939</u>	<u>6,440,000</u>	<u>237,988</u>	<u>6,677,988</u>	<u>44,638</u>
	<u>\$ 1,416,479</u>	<u>56,610,000</u>	<u>12,304,317</u>	<u>68,914,317</u>	<u>884,995</u>

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(6) Leases, Continued

(b) Payable

Activity of lease liability for the year ended December 31, 2023 is summarized as follows:

<u>Principal Outstanding 12/31/2022</u>	<u>Additions</u>	<u>Deductions</u>	<u>Principal Outstanding 12/31/2023</u>	<u>Amount due within one year</u>
\$ 260,094	-	(76,216)	183,878	64,868

Activity of lease liability for the year ended December 31, 2022 is summarized as follows:

<u>12/31/2021</u>	<u>Additions</u>	<u>Deductions</u>	<u>12/31/2022</u>
\$ 284,124	80,435	(104,465)	260,094

Annual requirements to amortize long-term obligations and related interest are as follows:

<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	64,868	3,158	68,026
2025	59,881	1,856	61,737
2026	46,533	697	47,230
2027	12,596	108	12,704
	<u>\$ 183,878</u>	<u>5,819</u>	<u>189,697</u>

(7) Compensated Absences

The Board reports the value of compensated absences as a liability. The annual budgets of the operating funds provide funding for these benefits as they become payable. The payment of compensated absences is dependent on many factors; therefore, the timing of future payments is not readily determinable.

<u>12/31/2021</u>	<u>Deletions</u>	<u>12/31/2022</u>	<u>Additions</u>	<u>12/31/2023</u>	<u>Due within one year</u>
\$ 694,217	(88,812)	605,405	67,180	672,585	33,629



NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(8) Other Postemployment Benefits (OPEB)

(a) Plan Description and Benefits

Plan Description - The Board provides continuation of medical, prescription drug, dental, vision and chiropractic coverage for employees who retire and are at least age 50 and have an age, plus years of service, of at least 70. All retirees and future retirees hired prior to December 31, 2007 have no contribution requirements for both individual and family coverage. All future retirees hired after December 31, 2007 are required to pay 20% of the individual and family premiums. The Board currently pays for postemployment health care benefits on a pay-as-you-go basis. These financial statements assume that pay-as-you-go funding will continue.

The Board provides certain health care benefits for retired employees. Substantially all of the employees may become eligible for these benefits if they reach the normal retirement age and have the required minimum age plus years of service working for the Board. At December 31, 2023, the current portion of the postemployment benefits liability was \$2,707,159. The noncurrent portion of the postemployment benefits liability amounted to \$78,697,328 at December 31, 2023.

(b) Employees covered by benefit terms

At December 31, 2023, the following employees were covered by the benefit terms:

Current retirees	110
Active employees	<u>113</u>
	<u>223</u>

(c) Total OPEB Liability

At December 31, 2023 and 2022, the Board reported a liability of \$81,404,487 and \$76,183,820, respectively, for its total OPEB liability. The OPEB liability was measured as of December 31, 2023 with roll forward calculation to the measurement date, and was determined by an actuarial valuation as of January 1, 2022.

(d) Actuarial Assumptions and Other Inputs

The total OPEB liability in the January 1, 2022 actuarial valuation was determined using the following actuarial assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified:

Salary increases	3.00%
Discount rate	3.88%
Healthcare cost trend rates	7.0% for 2023, decreasing to an ultimate rate of 4.5% for 2033

Mortality rates were based on the Society of Actuaries Mortality Improvement Scale MP-2021.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(8) Other Postemployment Benefits (OPEB), Continued

(e) Changes in the Total OPEB Liability

Total OPEB liability at beginning of year	\$ 76,183,820
Changes for the year:	
Service cost	1,228,756
Interest on total OPEB liability	2,904,920
Changes in assumptions	3,716,503
Benefit payments	<u>(2,629,512)</u>
Total changes	<u>5,220,667</u>
Total OPEB liability at end of year	\$ <u>81,404,487</u>

(f) Sensitivity of the Total OPEB Liability to Changes in the Discount Rate

The following presents the total OPEB liability of the Board, as well as what the Board's total OPEB liability would be if it were calculated using a discount rate that is 1-percentage point lower (2.88%) or 1-percentage point higher (4.88%) than the current discount rate:

	1% Decrease (2.88%)	Current Discount Rate (3.88%)	1% Increase (4.88%)
Total OPEB liability	\$ <u>95,558,871</u>	<u>81,404,487</u>	<u>70,407,317</u>

(g) Sensitivity of the Total OPEB Liability to Changes in the Healthcare Costs Trend Rates

The following presents the total OPEB liability of the Board, as well as what the Board's total OPEB liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current discount rate:

	1% Decrease	Current Trend Rate	1% Increase
Total OPEB liability	\$ <u>68,909,176</u>	<u>81,404,487</u>	<u>97,634,560</u>

(h) OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the years ended December 31, 2023 and 2022, the Board recognized OPEB expense of \$2,757,223 and \$3,226,131, respectively. At December 31, 2023 and 2022, the Board reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(8) Other Postemployment Benefits (OPEB), Continued

(h) OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB, Continued

	2023		2022	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes of assumptions	\$ <u>5,936,316</u>	<u>16,823,828</u>	<u>3,359,919</u>	<u>19,340,387</u>

Amounts reported as deferred outflows and inflows of resources related to the pension will be recognized in pension expense as follows:

<u>Year ending</u>	
2024	\$ (1,376,453)
2025	(1,376,453)
2026	(1,376,453)
2027	(1,590,919)
2028	(2,071,071)
Thereafter	<u>(3,096,163)</u>
Total	\$ <u>(10,887,512)</u>

(9) Pension Plan

(a) Plan Descriptions and Benefits Provided  
Employees' Retirement System (ERS)

The Board participates in the New York State and Local Employees' Retirement System (ERS). This is a cost-sharing multiple-employer retirement system. The System provides retirement benefits as well as death and disability benefits. The net position of the System is held in the New York State Common Retirement Authority (the Authority), which was established to hold all net assets and record changes in plan net position allocated to the System. The Comptroller of the State of New York serves as the trustee of the Board and is the administrative head of the System. System benefits are established under the provision of the New York State Retirement and Social Security Law (RSSL). Once a public employer elects to participate in the System, the election is irrevocable. The New York State Constitution provides that pension membership is a contractual relationship and plan benefits cannot be diminished or impaired. Benefits can be changed for future members only by enactment of a State statute. The Board also participates in the Public Employees; Group Life Insurance Plan (GLIP), which provides death benefits in the form of life insurance. The System is included in the State's financial report as a pension trust fund. That report, including information with regard to benefits provided, may be found at [www.osc.state.ny.us/retire/publications/index.php](http://www.osc.state.ny.us/retire/publications/index.php) or obtained by writing to the New York State and Local Retirement System, 110 State Street, Albany, New York 12244.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(9) Pension Plan

(a) Plan Descriptions and Benefits Provided, Continued

The System is noncontributory for the employees who joined prior to July 27, 1976. For employees who joined the System after July 27, 1976, and prior to January 1, 2010, employees contribute 3% of their salary. Employees in the System more than ten years are no longer required to contribute. For employees who joined after January 1, 2010 and prior to April 1, 2012, employees in ERS contribute 3% of their salary throughout their active membership. For employees who joined after April 1, 2012, employees contribute 3% of their salary until April 1, 2013 and then contribute 3% to 6% of their salary throughout their active membership. The Comptroller annually certifies the actuarially determined rates expressly used in computing the employers' contributions based on salaries paid during the System's fiscal year ending March 31.

(b) Pension Asset/Liability, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pension

At December 31, 2023 and 2022, the Board reported an asset (liability) of (\$4,042,310) and \$1,647,314, respectively, for its proportionate share of the net pension asset (liability). The total net pension liability was measured as of March 31, 2023 and 2022, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of April 1, 2023 and 2022. The Board's proportion of the net pension liability was based on projections of the Board's long-term share of contributions to the pension plan relative to the projected contributions of all participating members, actuarially determined.

At March 31, 2023 and 2022, the Board's proportionate share of the net asset (liability) was 0.0188505% and 0.0201517%. The Board's proportionate share of the net asset (liability) increased (decreased) (0.0013012) and 0.0007478 from the March 31, 2022 and 2021 measurement date, respectively.

For the years ended December 31, 2023 and 2022, the Board recognized pension expense of \$1,359,423 and \$79,274, respectively. At December 31, 2023 and 2022, the Board's reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(9) Pension Plan, Continued

(b) Pension Asset/Liability, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pension, Continued

	<u>2023</u>		<u>2022</u>	
	<u>Deferred</u> <u>Outflows of</u> <u>Resources</u>	<u>Deferred</u> <u>Inflows of</u> <u>Resources</u>	<u>Deferred</u> <u>Outflows of</u> <u>Resources</u>	<u>Deferred</u> <u>Inflow of</u> <u>Resources</u>
Differences between expected and actual experience	\$ 430,538	113,523	124,753	161,812
Changes of assumptions	1,963,206	21,697	2,749,183	46,389
Net difference between projected and actual investment earnings on pension plan investments	-	23,748	-	5,394,265
Changes in proportion and differences between the Board's contributions and proportionate share of contributions	133,720	325,791	219,479	309,076
Board's contributions subsequent to the measurement date	<u>474,566</u>	<u>-</u>	<u>400,836</u>	<u>-</u>
Total	<u>\$ 3,002,030</u>	<u>484,759</u>	<u>3,494,251</u>	<u>5,911,542</u>

Board contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the subsequent year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

<u>Year ending</u>	
2024	\$ 473,264
2025	(266,953)
2026	768,795
2027	<u>1,067,599</u>
	<u>\$ 2,042,705</u>

(c) Actuarial Assumptions

The total pension liability as of the March 31, 2023 measurement date was determined by using an actuarial valuation as noted in the table below, with update procedures used to roll forward the total pension liability to the measurement date. The actuarial valuations used the following actuarial assumptions:

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(9) Pension Plan, Continued

(c) Actuarial Assumptions, Continued

Measurement date	March 31, 2023
Actuarial valuation date	April 1, 2022
Inflation	2.9%
Salary increases	4.4%
Investment rate of return, (net of investment expense, including inflation)	5.9%
Cost-of-living adjustments	1.5%

Annuitant mortality rates are based on April 1, 2015 - March 31, 2020 System experience with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2021. The previous actuarial valuation as of April 1, 2021 used the same assumptions to measure the total pension liability.

The actuarial assumptions used in the April 1, 2022 valuation are based on the results of an actuarial experience study for the period April 1, 2015 - March 31, 2020.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of the arithmetic real rates of return for each major asset class are summarized as follows:

Measurement date	March 31, 2023	
	<u>Target</u>	<u>Long-term</u>
	<u>Allocation</u>	<u>expected</u>
Asset type:		<u>real rate</u>
Domestic equity	32.00%	4.30%
International equity	15.00%	6.85%
Private equity	10.00%	7.50%
Real estate	9.00%	4.60%
Opportunistic/ARS portfolio	3.00%	5.38%
Credit	4.00%	5.43%
Real assets	3.00%	5.84%
Fixed income	23.00%	1.50%
Cash	<u>1.00%</u>	0.00%
	<u>100.00%</u>	

\* The real rate of return is net of the long-term inflation assumption of 2.50%.

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(9) Pension Plan, Continued

(d) Discount Rate

The discount rate used to calculate the total pension liability was 5.9%. The projection of cash flows used to determine the discount rate assumes that contributions from plan members will be made at the current contribution rates and that contributions from employers will be made at statutorily required rates, actuarially determined. Based upon those assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

(e) Sensitivity of the Proportionate Share of the Net Pension Asset/Liability to the Discount Rate

The following presents the Board's proportionate share of the net pension liability calculated using the discount rate of 5.9%, as well as what the Board's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate:

	1% Decrease <u>(4.9%)</u>	Current Assumption <u>(5.9%)</u>	1% Increase <u>(6.9%)</u>
Board's proportionate share of the net pension asset (liability)	\$ <u>(9,768,529)</u>	<u>(4,042,310)</u>	<u>742,612</u>

(f) Pension Plan Fiduciary Net Position

The components of the current-year net pension liability of all participating employers as of the respective measurement dates, were as follows:

	(Dollars in Millions)	
Measurement date	3/31/2023	3/31/2022
Employers' total pension liability	\$ (232,627)	(223,875)
Plan fiduciary net position	<u>211,183</u>	<u>232,049</u>
Employers' net pension asset (liability)	\$ <u>(21,444)</u>	<u>8,174</u>
Ratio of plan fiduciary net position to the employers' total pension asset (liability)	90.78%	103.65%

NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(9) Pension Plan, Continued

(g) Contributions to the Pension Plan

Employer contributions are paid annually based on the System's fiscal year which ends on March 31<sup>st</sup>. Retirement contributions as of December 31, 2023 and 2022 represent the projected employer contribution for the period of April 1, 2023 through March 31, 2024 and April 1, 2022 through March 31, 2023, respectively, based on paid ERS wages multiplied by the employer's contribution rate, by tier. These amounts have been recorded as deferred outflows of resources in the accompanying financial statements.

(10) Labor Relations

The majority of the Board's employees are represented by various unions under four collective bargaining units agreements, with the balance governed by Board policies. Contracts for all of the bargaining units covered a seven year term, contracts with three units expire on May 31, 2024 and the fourth contract expires December 31, 2024.

(11) Risk Management and Contingent Liabilities

(a) Insurance

The Board is exposed to various risks of losses related to torts; theft of, damage to and destruction of assets; injuries to employees; and natural disasters, for which the Board carries commercial insurance. There were no settlements that significantly exceeded insurance coverage for the year ended December 31, 2023.

(b) Litigation

The Board is a defendant in a number of lawsuits that have arisen in the normal course of business. While substantial damages are alleged in some of these actions, their outcome cannot be predicted with certainty. In the opinion of the Board, these actions when finally adjudicated will not have a material adverse effect on the financial position of the Board.

(12) Significant Events

As a result of alleged discharges from the waste water treatment plant during the Summer of 2017, the New York State Department of Environmental Conservation (NYSDEC) and the Board entered into a Consent Order on December 19, 2017 (R9-20170906-129). This Consent Order required the Board to pay a civil penalty in the amount of \$50,000 and to implement a schedule of enumerated actions over the following fifteen (15) months. The Board is in the process of implementing these actions under the supervision of the NYSDEC.



NIAGARA FALLS WATER BOARD  
Notes to Financial Statements, Continued

(13) Accounting Standards Issued But Not Yet Implemented

GASB has issued the following pronouncements which will be implemented in the years required. The effects of the implementation of these pronouncements are not known at this time.

Statement No. 99 - Omnibus 2022. Effective for various periods through fiscal years beginning after June 15, 2023.

Statement No. 102 - Certain Risk Disclosures. Effective for fiscal years beginning after June 15, 2024.

(14) Correction of Error

Net position as of December 31, 2022 was restated for a correction of error as follows:

Deferred outflows of resources - OPEB, as originally stated	\$ 5,989,431
Correction of error	<u>(2,629,512)</u>
Deferred outflows of resources - OPEB, as restated	\$ <u>3,359,919</u>
Unrestricted net position (deficit), as originally stated	\$ (59,053,214)
Correction of error	<u>(2,629,512)</u>
Unrestricted net position (deficit), as restated	\$ <u>(61,682,726)</u>
Employee benefits, as originally stated	\$ 2,888,424
Correction of error	<u>2,629,512</u>
Employee benefits, as restated	\$ <u>5,517,936</u>

**NIAGARA FALLS WATER BOARD**  
**Required Supplementary Information**  
**Schedule of Changes in the Board's Total OPEB Liability and Related Ratios**  
**Year ended December 31, 2023**

	<u>2023</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>
Total OPEB liability:						
Service cost	\$ 1,228,756	1,103,028	1,377,099	1,349,028	556,876	540,656
Interest on total OPEB liability	2,904,920	3,924,785	1,921,160	1,769,731	3,280,087	3,234,085
Changes in assumptions	3,716,503	(21,404,432)	(520,053)	5,504,550	-	-
Benefit payments	<u>(2,629,512)</u>	<u>(2,667,901)</u>	<u>(2,530,010)</u>	<u>(2,507,223)</u>	<u>(2,581,965)</u>	<u>(2,546,361)</u>
Net change in total OPEB liability	5,220,667	(19,044,520)	248,196	6,116,086	1,254,998	1,228,380
Total OPEB liability - beginning	<u>76,183,820</u>	<u>95,228,340</u>	<u>94,980,144</u>	<u>88,864,058</u>	<u>87,609,060</u>	<u>86,380,680</u>
Total OPEB liability - ending	<u>\$ 81,404,487</u>	<u>76,183,820</u>	<u>95,228,340</u>	<u>94,980,144</u>	<u>88,864,058</u>	<u>87,609,060</u>
Covered payroll	\$ 5,433,874	5,433,874	4,310,662	4,310,662	3,900,691	3,900,691
Total OPEB liability as a percentage of covered payroll	1498.1%	1402.0%	2209.1%	2203.4%	2278.2%	2246.0%

Notes to schedule:

There are no assets accumulated in a trust that meet the criteria of GASB Statement No. 75, paragraph 4.

Changes of assumptions - Changes of assumptions and other inputs reflect the effects of changes in the discount rate each period. The following are the discount rates used in each period:

<u>2023</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2019</u>
3.88%	4.18%	2.05%	2.02%	3.80%	3.80%

This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10 year trend is compiled, the Board is presenting information for those years for which information is available.

NIAGARA FALLS WATER BOARD  
 Required Supplementary Information  
 Schedule of the Board's Proportionate Share of the Net Pension Asset/Liability  
 Year ended December 31, 2023

ERS

	<u>2023</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
The Board's proportion of the net pension asset (liability)	0.0188505%	0.0201517%	0.0194039%	0.0178786%	0.0160886%	0.0147209%	0.0137476%	0.0134405%	0.0141606%
The Board's proportionate share of the net pension asset (liability)	\$ (4,042,310)	1,647,314	(19,321)	(4,734,365)	(1,139,930)	(475,108)	(1,291,751)	(2,157,242)	(478,381)
The Board's covered payroll	\$ 5,814,126	5,609,483	5,609,604	5,463,366	4,917,159	4,374,241	4,719,361	4,397,005	4,082,614
The Board's proportionate share of the net pension asset (liability) as a percentage of covered payroll	69.53%	29.37%	0.34%	86.66%	23.18%	10.86%	27.37%	49.06%	11.72%
Plan fiduciary net position as a percentage of the total pension liability	90.78%	103.65%	99.95%	86.39%	96.27%	98.29%	94.70%	90.70%	97.95%

\* This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10 year trend is compiled, the Board is presenting information for those years for which information is available.

NIAGARA FALLS WATER BOARD  
 Required Supplementary Information  
 Schedule of the Board's Pension Contributions  
 Year ended December 31, 2023

ERS

	<u>2023</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Contractually required contribution	\$ 632,755	534,448	725,652	640,535	566,475	583,405	659,383	646,238	725,071	864,054	900,289
Contributions in relation to the contractually required contribution	<u>632,755</u>	<u>534,448</u>	<u>725,652</u>	<u>640,535</u>	<u>566,475</u>	<u>583,405</u>	<u>659,383</u>	<u>646,238</u>	<u>725,071</u>	<u>864,054</u>	<u>900,289</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Board's covered payroll	\$ 5,814,126	5,609,483	5,609,604	5,463,366	4,917,159	4,374,241	4,719,361	4,397,005	4,082,614	4,483,962	4,442,277
Contributions as a percentage of covered payroll	10.88%	9.53%	12.94%	11.72%	11.52%	13.34%	13.97%	14.70%	17.76%	19.27%	20.27%

NIAGARA FALLS WATER BOARD  
 Other Supplementary Information  
 Niagara Falls Water Authority (a Blended Component Unit)  
 Statements of Net Position  
 December 31, 2023 and 2022

<u>Assets</u>	<u>2023</u>	<u>2022</u>
Current assets - cash and equivalents	\$ 244,329	196,329
Noncurrent assets - due from Water Board	<u>84,089,066</u>	<u>75,626,198</u>
Total assets	<u>84,333,395</u>	<u>75,822,527</u>
<u>Deferred Outflows of Resources</u>		
Loss on refunding	<u>1,714,055</u>	<u>1,869,854</u>
<u>Liabilities</u>		
Current liabilities:		
EFC short-term financing	10,358,810	1,584,352
Current portion, bonds payable	<u>5,166,723</u>	<u>4,540,457</u>
Total current liabilities	15,525,533	6,124,809
Noncurrent liabilities - bonds payable	<u>69,611,718</u>	<u>74,908,195</u>
Total liabilities	<u>85,137,251</u>	<u>81,033,004</u>
<u>Deferred Inflows of Resources</u>		
Gain on refunding	<u>665,870</u>	<u>726,866</u>
<u>Net Position</u>		
Unrestricted (deficit)	<u>\$ 244,329</u>	<u>(4,067,489)</u>

NIAGARA FALLS WATER BOARD  
 Other Supplementary Information  
 Niagara Falls Water Authority (a Blended Component Unit)  
 Statements of Revenue, Expenses and Changes in Net Position  
 Years ended December 31, 2023 and 2022

	<u>2023</u>	<u>2022</u>
Operating revenue - transfers in	\$ 6,402,043	463,371
Operating expense - contractual	<u>2,000</u>	<u>-</u>
Total operating income	<u>6,400,043</u>	<u>463,371</u>
Nonoperating revenue (expenses):		
Amortization of bond premium	34,951	190,750
Debt issuance costs	-	(353,518)
Interest expense	<u>(2,123,176)</u>	<u>(2,261,162)</u>
Total nonoperating expenses	<u>(2,088,225)</u>	<u>(2,423,930)</u>
Change in net position	4,311,818	(1,960,559)
Net position at beginning of year (deficit)	<u>(4,067,489)</u>	<u>(2,106,930)</u>
Net position at end of year (deficit)	<u>\$ 244,329</u>	<u>(4,067,489)</u>

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER  
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS  
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN  
ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

The Board of Directors  
Niagara Falls Water Board:

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States, the financial statements of Niagara Falls Water Board (the Board), as of and for the year ended December 31, 2023, and the related notes to financial statements, which collectively comprise the Board's basic financial statements, and have issued our report thereon dated \_\_\_\_\_, 2024.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Board's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Board's internal control. Accordingly, we do not express an opinion on the effectiveness of the Board's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements, on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Board's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

### Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Board's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards.

### Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Board's internal control or on compliance. This report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Board's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Williamsville, New York  
, 2024



**REPORT ON INVESTMENT COMPLIANCE WITH SECTION 201.3  
OF TITLE TWO OF THE OFFICIAL COMPILATION OF CODES,  
RULES AND REGULATIONS OF THE STATE OF NEW YORK**

The Board of Directors  
Niagara Falls Water Board:

We have examined the Niagara Falls Water Board's (the Board), compliance with the requirements of Section 201.3 of Title Two of the Official Compilation of Codes, Rules and Regulations of the State of New York (Section 201.3) during the year ended December 31, 2023. Management is responsible for the Board's compliance with Section 201.3. Our responsibility is to express an opinion on the Board's compliance with Section 201.3 based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants and standards applicable to attestation engagements contained in Government Auditing Standards issued by the Comptroller General of the United States. Those standards require that we plan and perform the examination to obtain reasonable assurance about the Board's compliance with Section 201.3. An examination involves performing procedures to obtain evidence about the Board's compliance with Section 201.3. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the Board's compliance with Section 201.3, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

We are required to be independent and to meet our ethical responsibilities in accordance with ethical requirements relating to the engagement.

In our opinion, the Board complied in all material respects with Section 201.3 during the year ended December 31, 2023.

In accordance with Government Auditing Standards, we are required to report significant deficiencies in internal control, violations of provisions of laws, regulations, contracts, or grant agreements, and abuse that are material to the Board's compliance with Section 201.3 and any fraud or illegal acts that are more than inconsequential that come to our attention during our examination. We are also required to obtain views of management on those matters. We performed our examination to express an opinion on the Board's compliance with Section 201.3 and not for the purpose of expressing an opinion on internal control over compliance with Section 201.3 or other matters; accordingly, we express no such opinion. The results of our tests disclosed no matters that are required to be reported under Government Auditing Standards.

This report is intended solely for the information and use of Board management, the Board of Directors, the New York State Office of the State Comptroller, and the New York State Authority Budget Office and is not intended and should not be used by anyone other than those specified parties.

Williamsville, New York  
, 2024

DRAFT

, 2024

CONFIDENTIAL

The Board of Directors, Niagara Falls Water Board:  
Michael J. Asklar  
Nicholas J. Forster  
Renaë Kimble  
Colleen Low Larkin  
Gretchen Leffler

We have completed our audit of the financial statements of Niagara Falls Water Board (the Board) for the year ended December 31, 2023. Considering the test character of our audit, you will appreciate that reliance must be placed on adequate methods of internal controls as your principal safeguard against irregularities which a test examination might not disclose. We now present for your consideration our observations and recommendations noted during our audit.

This report is solely for the information and use of the Members of the Board of Directors, management and others within the Board.

Manual Spreadsheets

We noted that several significant financial areas are tracked manually using excel spreadsheets prior to being recorded in the general ledger. For example, accounts payable for the Plant fund, capital project activity and capital assets are all currently tracked outside of the software. Such a system creates a potential for error due to the manual nature of the process.

We recommend that the Board consider utilizing capital asset software to help manage and maintain the capital asset activity, including all work-in-process. Additionally, we recommend that any capital project activity be tracked and recorded in the general ledger as it occurs.

The Board of Directors, Niagara Falls Water Board:  
Michael J. Asklar  
Nicholas J. Forster  
Renaë Kimble  
Colleen Low Larkin  
Gretchen Leffler  
Page 2

### Uncollectible Billings

The Board currently has a significant balance of uncollectible water and sewer billings that is being carried, and this amount increases annually. Based on our audit procedures and inquiries of management, 100% of the amounts transferred to the City of Niagara Falls (the City) from one year prior to December 31, 2023, are reserved as uncollectible. Of that, an unknown percentage of the amounts transferred are ultimately collected through the City tax re-levy process. In addition, 100% of the amounts more than 120 days old from the non-transferred receivables are reserved as uncollectible. The financial impact of these allowances is that over \$8.9 million has been deemed uncollectible as of December 31, 2023. The Board, in various bond issuances, has covenanted that it will enforce the payment of any and all charges owed to the Board for use of the system. Public Authorities Law Section 1230-j(6) provides that any rates, fees, and charges that remain unpaid shall constitute a lien on the premises that received the service and that such lien may be enforced in the same manner as a lien for taxes. The Board is currently not receiving any supporting documentation or verifying if amounts collected through the tax process are getting remitted to the Board from the City.

We recommend that the Board review all outstanding accounts receivable and determine whether those amounts are in fact uncollectible and those amounts should be written off the books. Additionally, for those customers that are deemed uncollectible, an assessment should be made to ensure that no additional services are being provided to those customers. The Board should consider working with the City or the County of Niagara (the County) to use American Recovery Plan Act funds available to assist with getting customers in Qualified Census Tracts current on their utility bills. This is a specific allowable distribution of these funds. Additionally, it's critical that the Board develop a process to reconcile the list of transferred billings to the actual collections, and to further verify that collections from the City are being returned to Board.

### Segregation of Duties

During our audit, we noted instances where segregation of duties should be reviewed and the identification of key controls over activities should be documented. The Board has undergone a significant amount of turnover in recent years which has led to a concentration of certain duties.

We recommend that the Board study the current internal control environment and develop a plan to reassign non-compatible duties, provide additional monitoring of functions and create cross-training of certain functions as appropriate. Additionally, in connection with this analysis, the Board should ensure that key controls are identified and documented for all accounting transaction cycles within the organization.

The Board of Directors, Niagara Falls Water Board:  
Michael J. Asklar  
Nicholas J. Forster  
Renae Kimble  
Colleen Low Larkin  
Gretchen Leffler  
Page 3

Bank Reconciliations

During our audit of cash and the accompanying bank reconciliations, we noted bank reconciliations are being prepared by the Director of Financial Services and, therefore, are not reviewed each month. In addition, there are old outstanding checks that were being carried over on an annual basis.

We recommend that management review the bank reconciliation and the associated outstanding checks and either remit the amounts to New York State under the unclaimed property laws, void and reissue the checks, or determine if the obligation was otherwise satisfied and can be returned to the Board's cash.

\* \* \* \* \*

We wish to take this opportunity to express our appreciation for the courtesy and cooperation extended to us by the Board during our audit. If you have any questions regarding the foregoing comments or wish any assistance in their implementation, please contact us at your convenience.

Very truly yours,

EFPR GROUP, CPAs, PLLC

## REPORT TO THE BOARD

, 2024

The Board of Directors, Niagara Falls Water Board:

Michael J. Asklar  
Nicholas J. Forster  
Rena Kimble  
Colleen Low Larkin  
Gretchen Leffler

Dear Board Members:

We have audited the financial statements of Niagara Falls Water Board (the Board), as of and for the year ended December 31, 2023 and have issued our report thereon dated , 2024. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards, Government Auditing Standards, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter. Professional standards also require that we communicate to you the following information related to our audit.

### Significant Accounting Principles

Management is responsible for the selection and use of appropriate accounting policies. Significant accounting policies used by the Board are described in note 1 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during the year ended December 31, 2023. We noted no transactions entered into by the Board during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

### Accounting Estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected.

The Board of Directors, Niagara Falls Water Board:  
Michael J. Asklar  
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Page 2

For the year ended December 31, 2023, we evaluated the key factors and assumptions used by management in determining that accounting estimates were reasonable in relation to the financial statements taken as a whole.

#### Significant Disclosures

The financial statement disclosures are neutral, consistent and clear.

#### Difficulties Encountered in Performing the Audit

We encountered no difficulties in dealing with management in performing and completing our audit.

#### Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements.

#### Disagreements with Management

For purposes of this report, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. We are pleased to report that no such disagreements arose during the course of our audit.

#### Management Representations

We have requested certain representations from management that are included in the management representation letter.

#### Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Board's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

The Board of Directors, Niagara Falls Water Board:  
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Page 3

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to our appointment as the Board's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our appointment.

Other Matters

We applied certain limited procedures to management's discussion and analysis and the other required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the other supplementary information, which accompanies the financial statements but is not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

\* \* \* \* \*

This information is intended solely for the use of the Board of Directors and management of Niagara Falls Water Board and is not intended to be, and should not be, used by anyone other than these specified parties.

Very truly yours,

EFPR GROUP, CPAs, PLLC