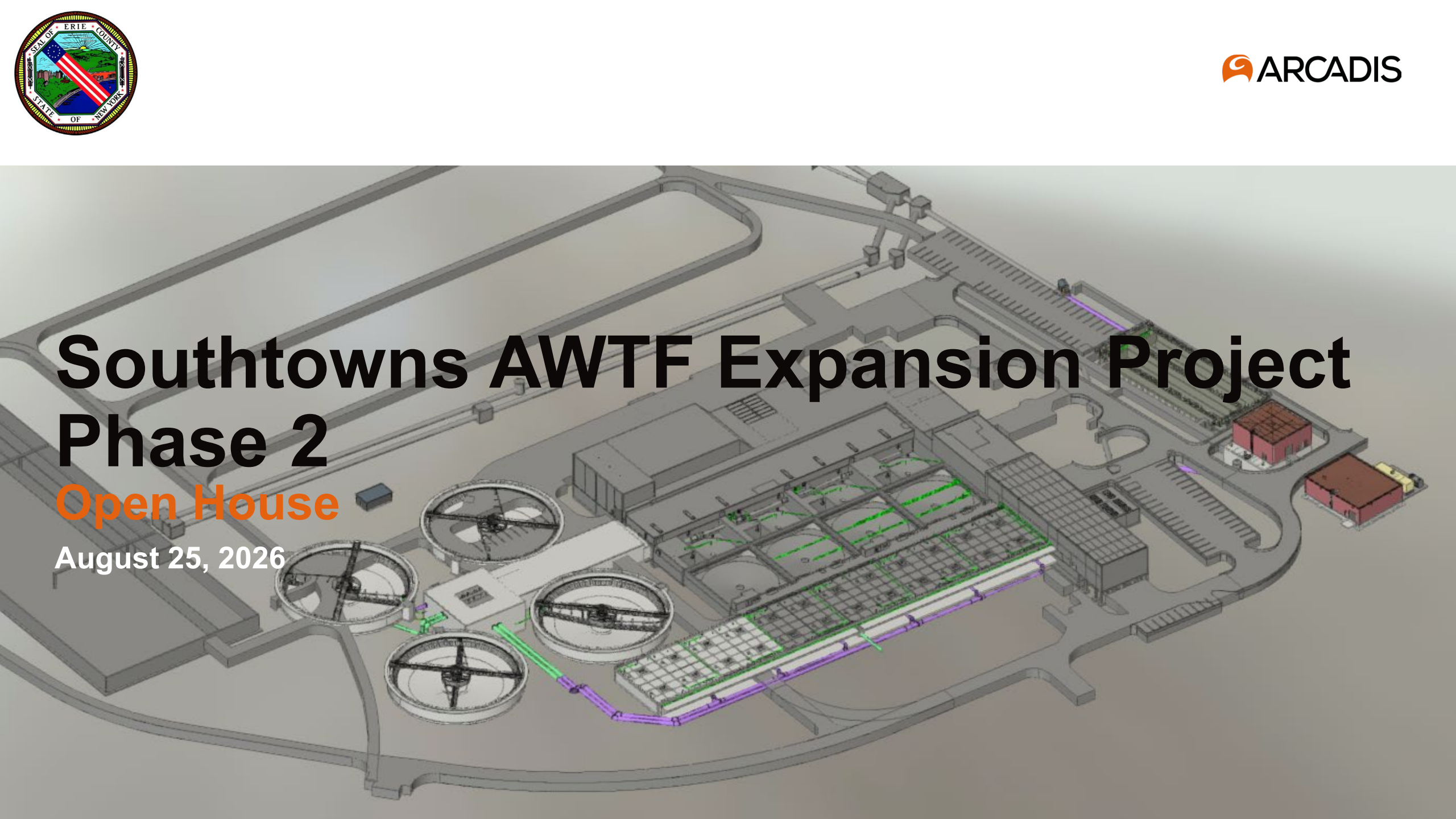


A 3D architectural rendering of the Southtowns AWWTF expansion project. The rendering shows a large industrial facility with several large circular tanks on the left, a central rectangular building with a grid-like roof, and various pipes and walkways. The ground is a light gray, and the sky is a pale blue gradient. The text "Southtowns AWWTF Expansion Project" is overlaid in large black font, and "Phase 2" is below it in a slightly smaller black font.

Southtowns AWWTF Expansion Project Phase 2

Open House

August 25, 2026

Agenda

- | | | | |
|---|---|---|---|
| 1 | Open House Purpose and Project History | 5 | Project Funding Requirements |
| 2 | Original Site and Facilities | 6 | Contact Information and Open Discussion |
| 3 | Implementation Approach and Current Status of Phase 1 | 7 | Site Visit |
| 4 | General Description of Phase 2 Work | | |

Purpose of Open House and Project/Facility History

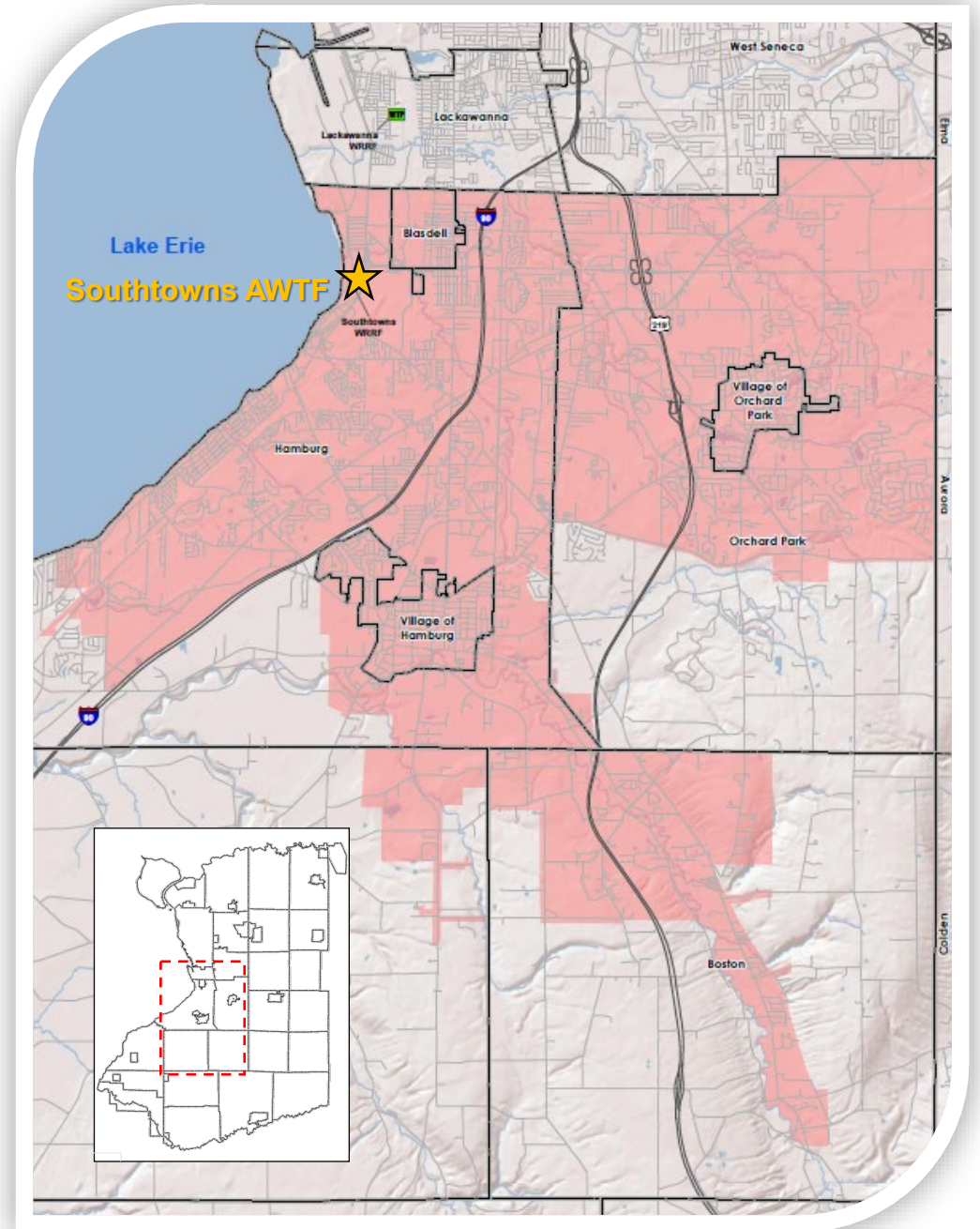
Southtowns Advanced Wastewater Treatment Facility (AWTF)

- Purpose of today's meeting - "Get the word out!"
 - Introductions:
 - Owner: Erie County Department of Environment and Planning (ECDEP) Division of Sewerage Management (DSM)
 - Engineer: Arcadis of New York, Inc.
 - Lots of construction in Western New York
 - Help potential Bidders and Subcontractors prepare
- Southtowns AWTF went "on-line" in December 1980
- Initially eliminated 12 underperforming treatment plants in the "Southtowns" area and intercepted flows previously conveyed to the Buffalo Sewer Authority
 - A 13th treatment plant was eliminated as part of the "Rush Creek Interceptor" project in 2016*
- Presently treats ~20 million gallons per day

* - 2017 NYS APWA Environmental Project of the Year



Southtowns AWTf – Service Area



Southtowns AWWTF Expansion – Project Drivers



Driver #1 – Planning Horizon



Driver #2 – Regulatory Requirements

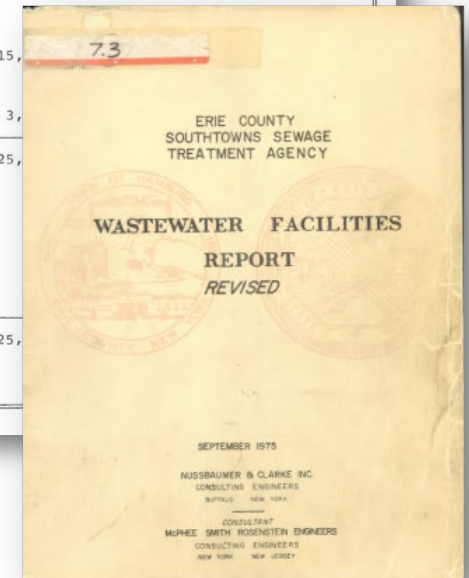


Driver #3 – End of Useful Life



TABLE 3
SUMMARY OF ANTICIPATED WASTE CHARACTERISTICS (lbs/day)

District	1975			2000			2025		
	BOD	SS	PO ₄	BOD	SS	PO ₄	BOD	SS	PO ₄
Mount Vernon	610	800	110	880	1,080	110	1,180	1,390	120
Wanakah	410	540	70	620	770	80	830	980	90
Cloverbank	150	190	30	230	290	30	300	350	30
Locksley Park	150	190	30	230	290	30	300	350	30
Amsdell Heights	70	100	10	100	120	10	120	150	10
Hamburg Master District	1,450	1,900	250	3,510	4,320	450	5,240	6,200	530
Southeast 2000 acres between Railroad and Thruway	70	100	10	610					
Erie County Sewer District #3 (Northeast Hamburg) (Armour-McKinley) (Orchard Park)	3,820	5,010	660	12,270	15,000	1,500			
Village of Hamburg including Taylor Rd.	1,570	2,050	270	2,630	3,000	300			
Sub-Total	8,300	10,880	1,440	21,080	25,000	2,500			
Woodlawn									
Blasdell									
Osborne-Sagamore									
Hamburg Misc. Sewer Districts									
Town of Hamburg									
Town of Orchard Park									
Town of Boston									
Town of Eden									
Total	8,300	10,880	1,440	21,080	25,000	2,500			



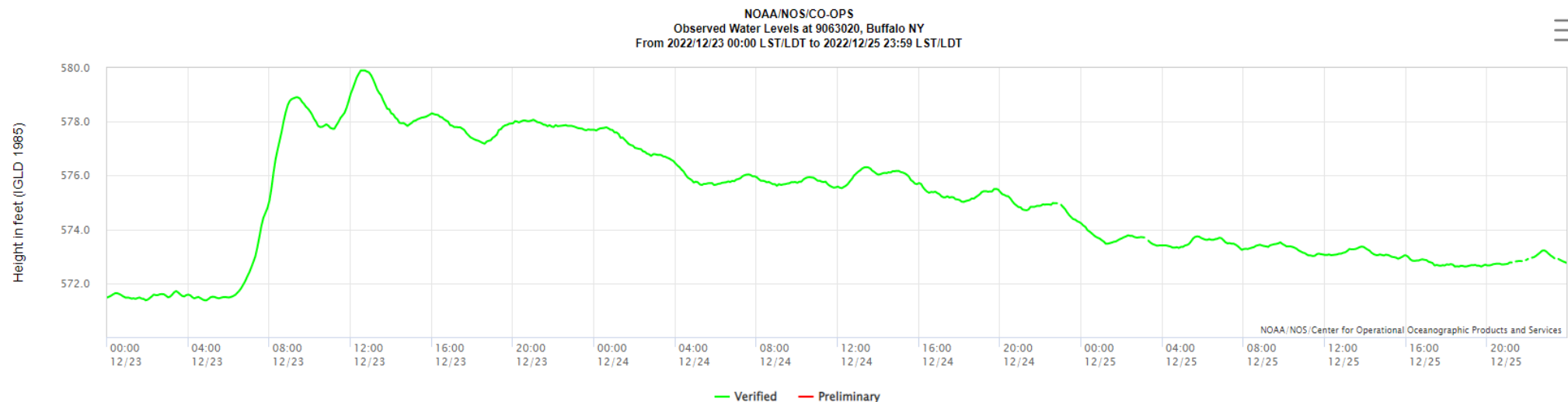
Southtowns AWTF – Current vs. Planned: Key Parameters

Current Operations

- Peak Secondary Flow Throughput: 30-40 MGD
- Peak Flow Throughput: 110 MGD
 - At lower lake levels
- Total Residual Chlorine: 2 mg/l

Planned Operations

- Peak Secondary Flow Throughput: 55 MGD
- Peak Flow Throughput: 110 MGD at any lake levels
 - Hydraulic relief at lake levels above 99th percentile
- Total Residual Chlorine: 0.375 mg/l

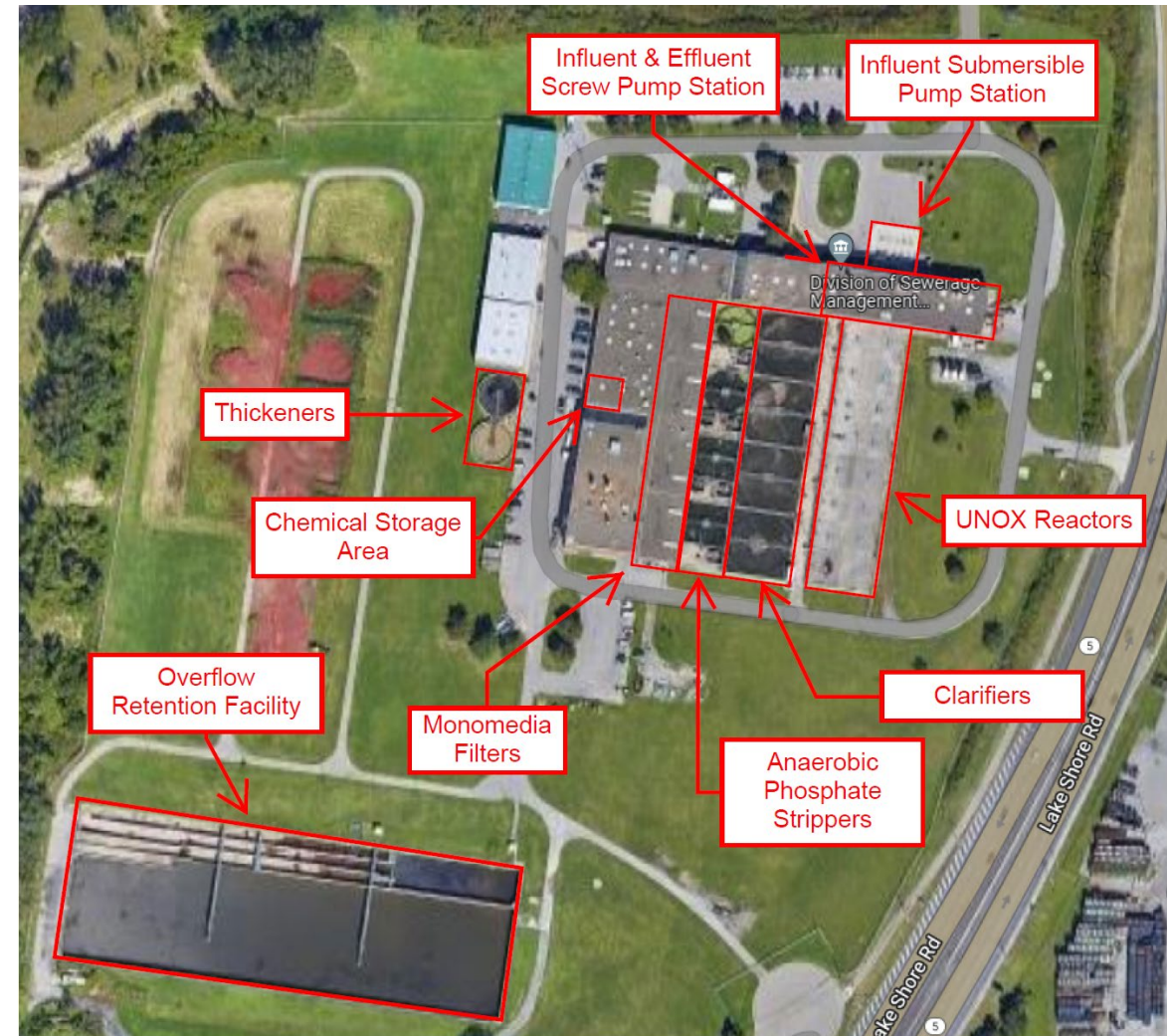


Original Site and Facilities

Original Southtowns AWWTF Facilities

Main Treatment Processes:

- Influent screening and pumping
- High-pure oxygen activated sludge system (UNOX)
- Clarifiers
- Monomedia filtration
- Sodium hypochlorite disinfection
- Effluent pumping
- 66-inch dia. outfall in Lake Erie
- Overflow retention facility



Implementation Approach

Southtowns AWWTF Phase 1 and Phase 2 Expansion Project

Phase 1

- Disinfection and Effluent Pumping Improvements: including chlorination/dechlorination via a new chlorine contact tank and a new effluent pumping station
- ORF/Outfall Modifications: including replacement of existing outfall diffuser ports, replacement or paralleling of existing ORF discharge pipe, and construction of onshore hydraulic relief.

Phase 2

- Aeration/UNOX: including two new UNOX tanks, new UNOX influent distribution piping, various modifications to change the flow path and liquid depths in the UNOX system, new UNOX mixers, and general rehabilitation of existing tanks.
- Clarifiers: including new clarifiers, new distribution chamber, new RAS/WAS pump station
- Additional Needs Assessment Work



Schedule and Project Delivery

Major Milestones	Phase 1 (<i>Actual</i>)	Phase 2 (<i>Anticipated</i>)
Submit Engineering Plans and Specifications to DEC for Approval	<i>February 28, 2023</i>	<i>February 18, 2025</i>
Advertise for Bids	<i>August 17, 2023</i>	September 2026
Award Contract and Commence Construction	<i>NTP: December 18, 2023</i>	Q4 2026 / Q1 2027
Complete Construction	<i>Milestone: Fall 2025 Final: Summer 2026</i>	Fall 2030

- Traditional design-bid-build delivery method
- Project labor agreement (PLA) → single prime contract
- Pre-Phase 2 Contracts for critical path Work
 - Contract No. 81, Pre-Phase 2 Electrical Improvements – ongoing; completion summer 2028
 - Contract No. 82, Ash Landfill Reclamation – completed
 - Contract No. 85, ORF Influent and Oxygen Piping Replacement – completed





Erie County Department of Environment & Planning
 Division of Sewerage Management
 95 Franklin Street Buffalo, NY 14202

Set No. _____

Construction Contract Project Manual
 Volume 1 of 1

Erie County Sewer District No. 3
 Southtowns Advanced Wastewater Treatment Facility
Pre-Phase 2 Electrical Improvements
 Contract No. 81

March 2025

Prepared by:
 Arcadis of New York, Inc.
 50 Fountain Plaza, Suite 300
 Buffalo, New York 14202
 +1 716 697 0900

30119430

Status of Work

Phase 1

Scope of Physical Improvements

- Effluent submersible pump station
- Chlorine contact tank and dechlorination facilities
- Parallel ORF effluent piping and outfall improvements
- Hydraulic relief point
- Needs assessment:
 - Electrical substation and plant-wide generator



Aerial View

Scope of Physical Improvements

- Effluent submersible pump station
- Chlorine contact tank and dechlorination facilities
- Parallel ORF effluent piping and outfall improvements
- Hydraulic relief point
- Needs assessment:
 - Electrical substation and plant-wide generator



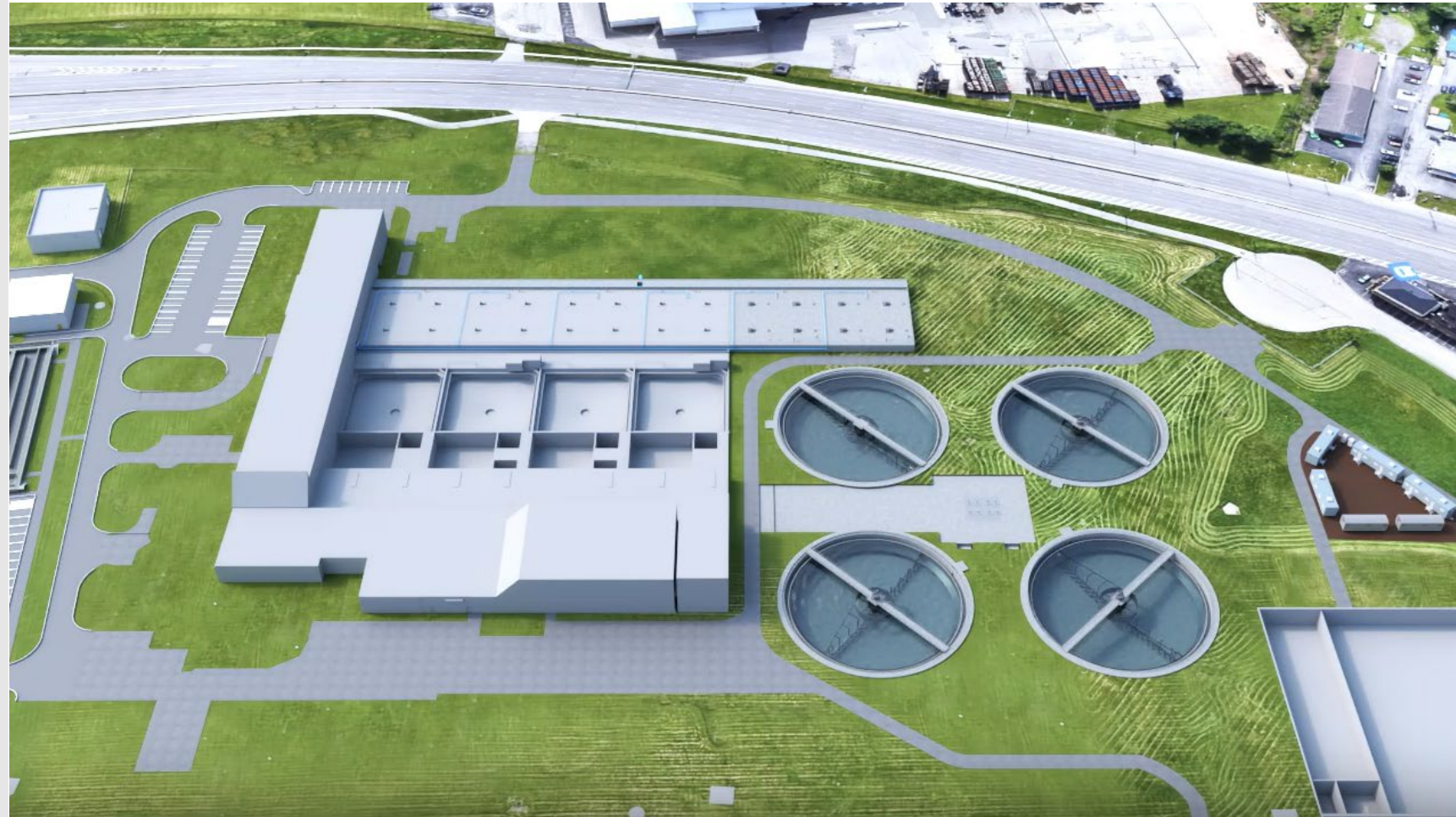
Photo taken on 9/08/2025

General Description of Work

Phase 2

Scope of Physical Improvements

- Structural and mechanical improvements to UNOX reactors
- Two new UNOX reactors
- UNOX reactor influent and effluent channels and piping
- Four new circular clarifiers
- New RAS/WAS pump station
- South Pipe Tunnel
- Other Work



Aerial View

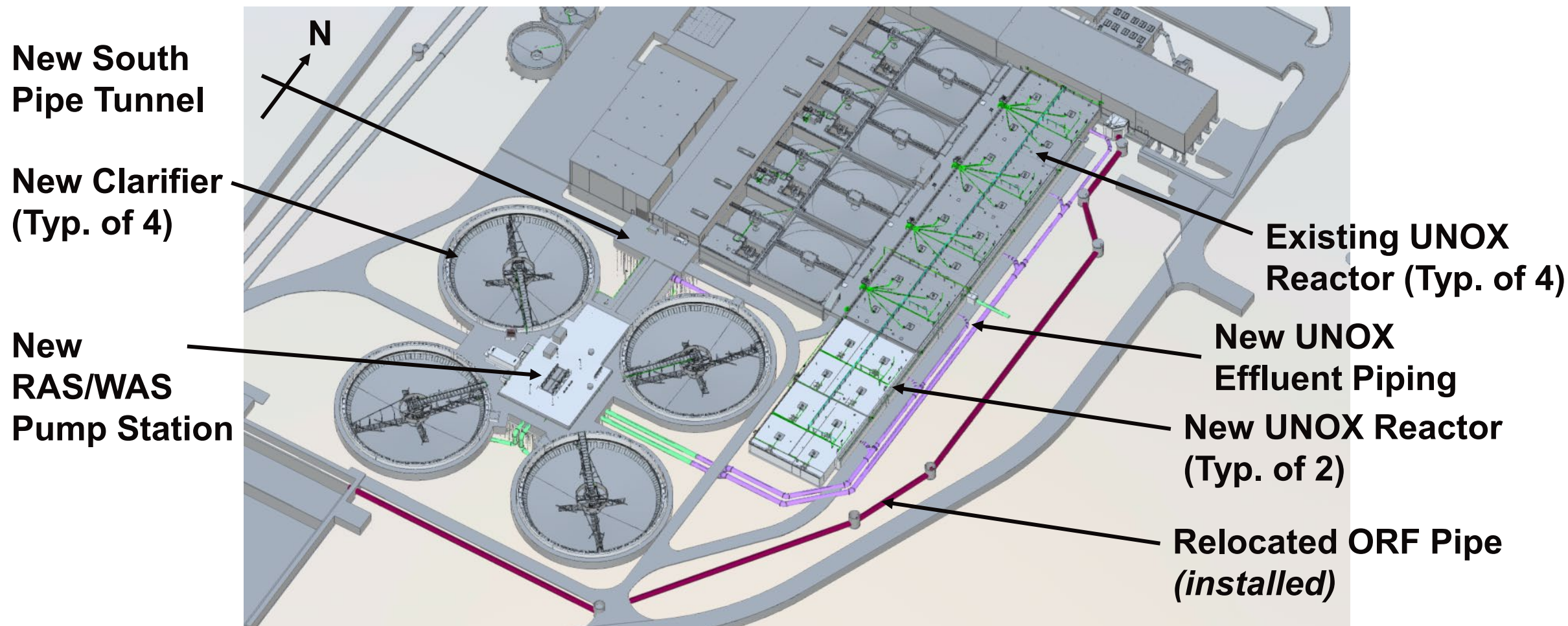
Pre-Phase 2 Contracts

- ORF Influent and Oxygen Feed Relocation (“Contract No. 85”)
 - Completed: July 2026
- Pre-Phase 2 Electrical Improvements (Contract No. 81):
 - Contract Times Commence: 8/04/2025
 - Completion: June 2028
- Ash Landfill Reclamation (Contract No. 82)
 - Contract Times Commence: 9/08/2025
 - Completed: December 2025



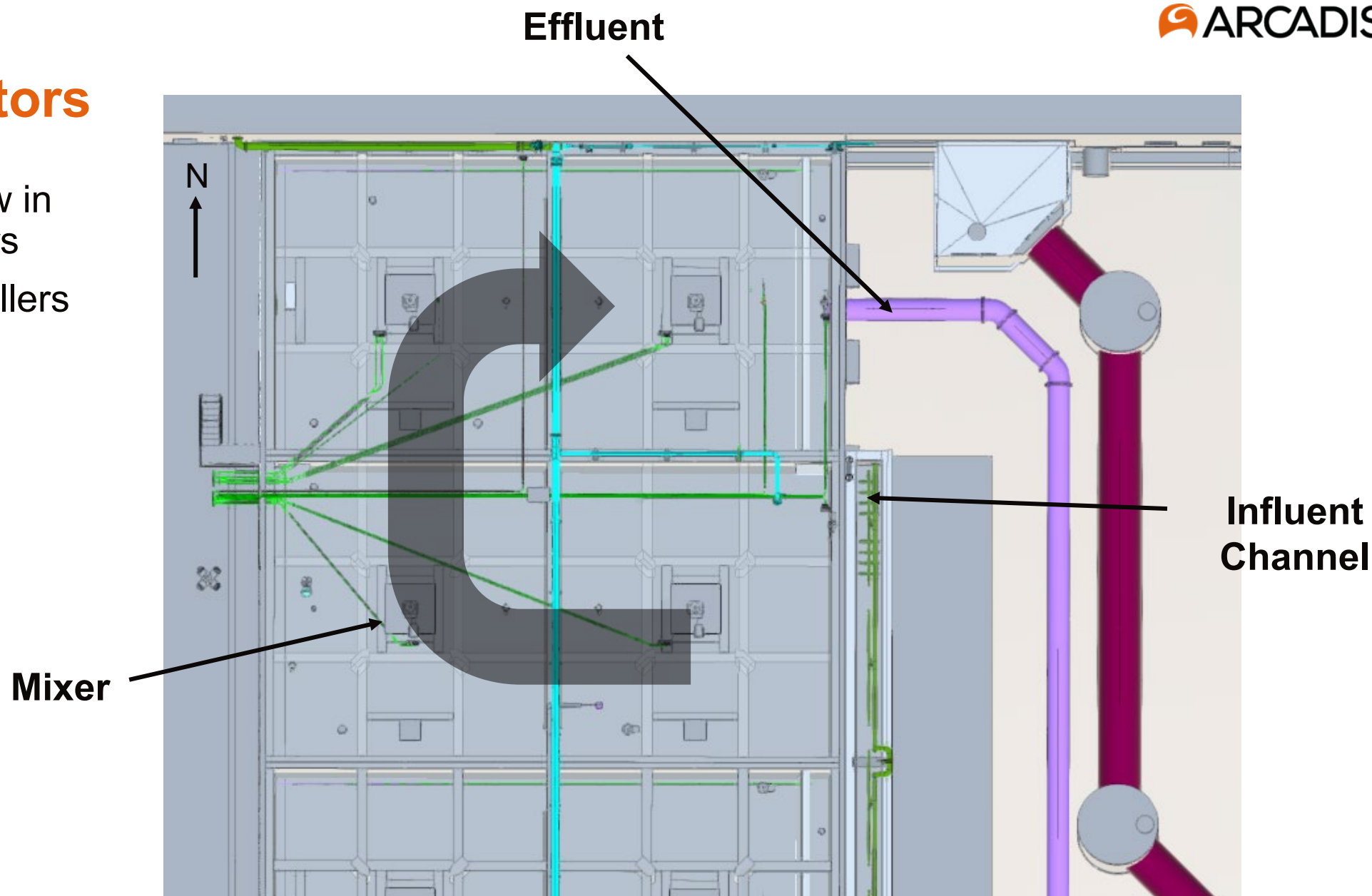


Phase 2 Scope of Physical Improvements



UNOX Reactors

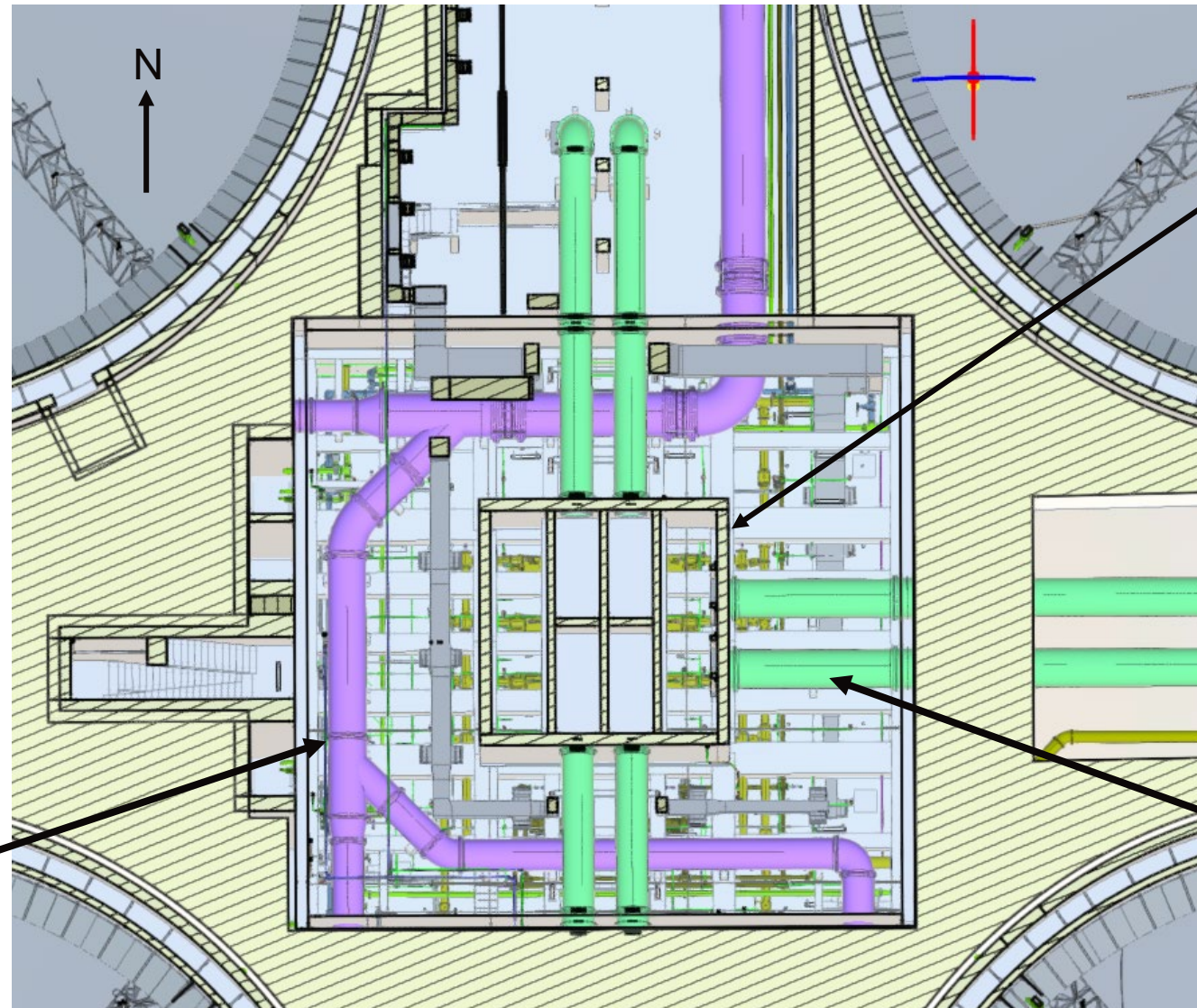
- Reversal of flow in existing reactors
- Disc-style impellers
- Coarse bubble diffusers



RAS/WAS Pump Station

- Horizontal centrifugal end-suction dry pit pumps
- 6 large capacity RAS pumps (operate 4)
- Max. design flow 10 MGD
- 2 smaller capacity RAS pumps
- Max. design flow 1.5 MGD

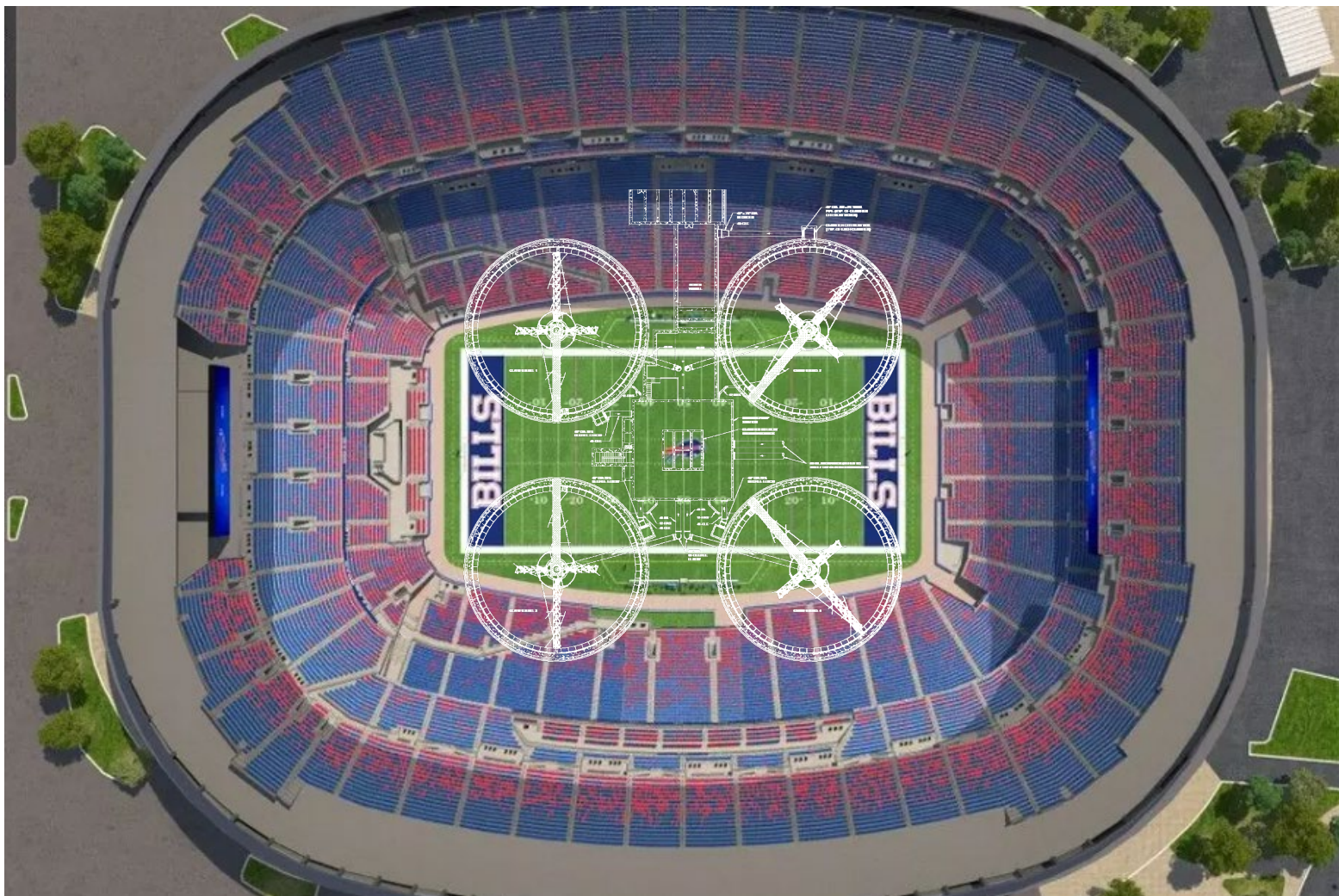
Effluent



Splitter Box

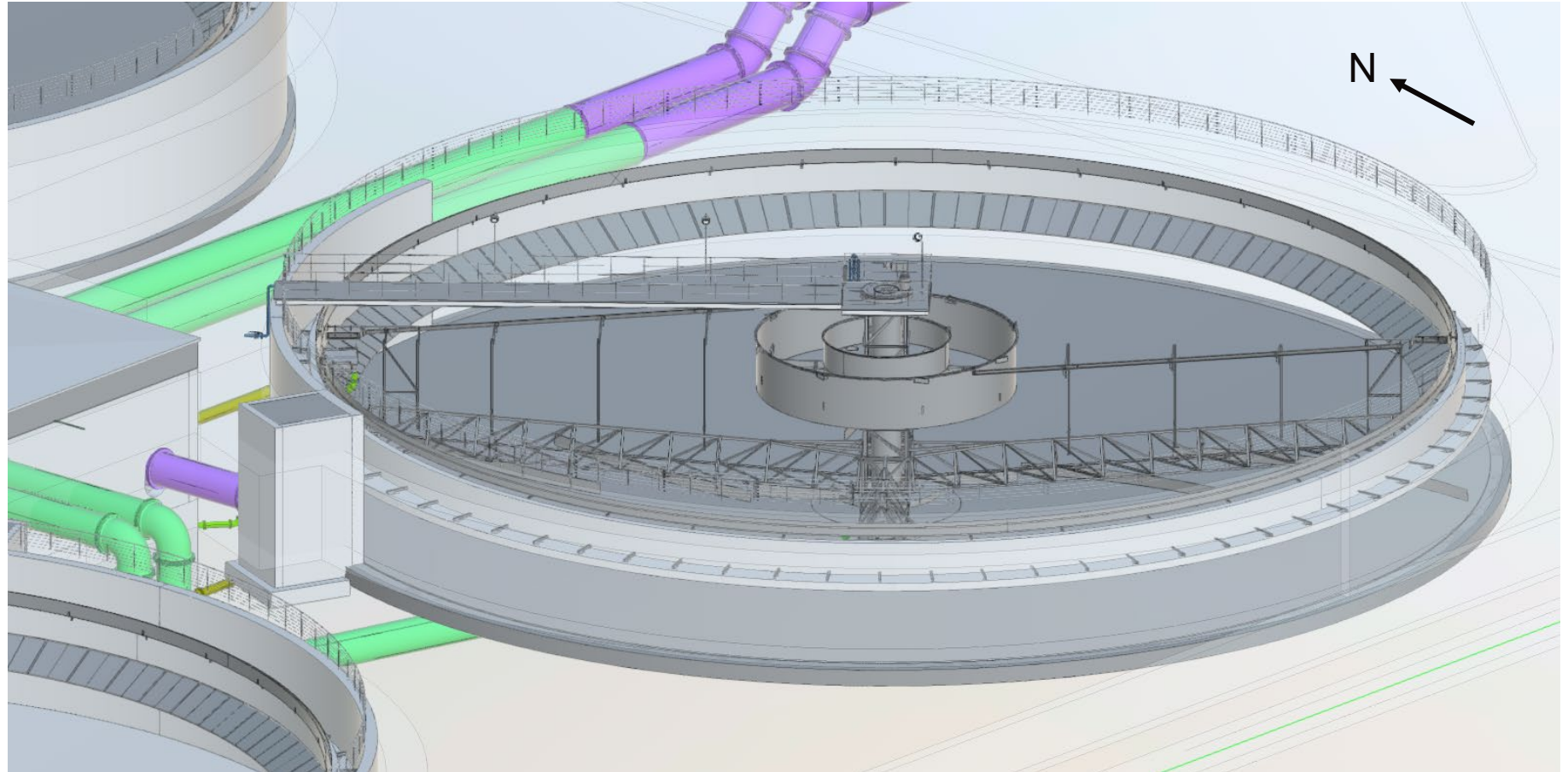
Influent

Secondary Clarifiers – Order of Magnitude

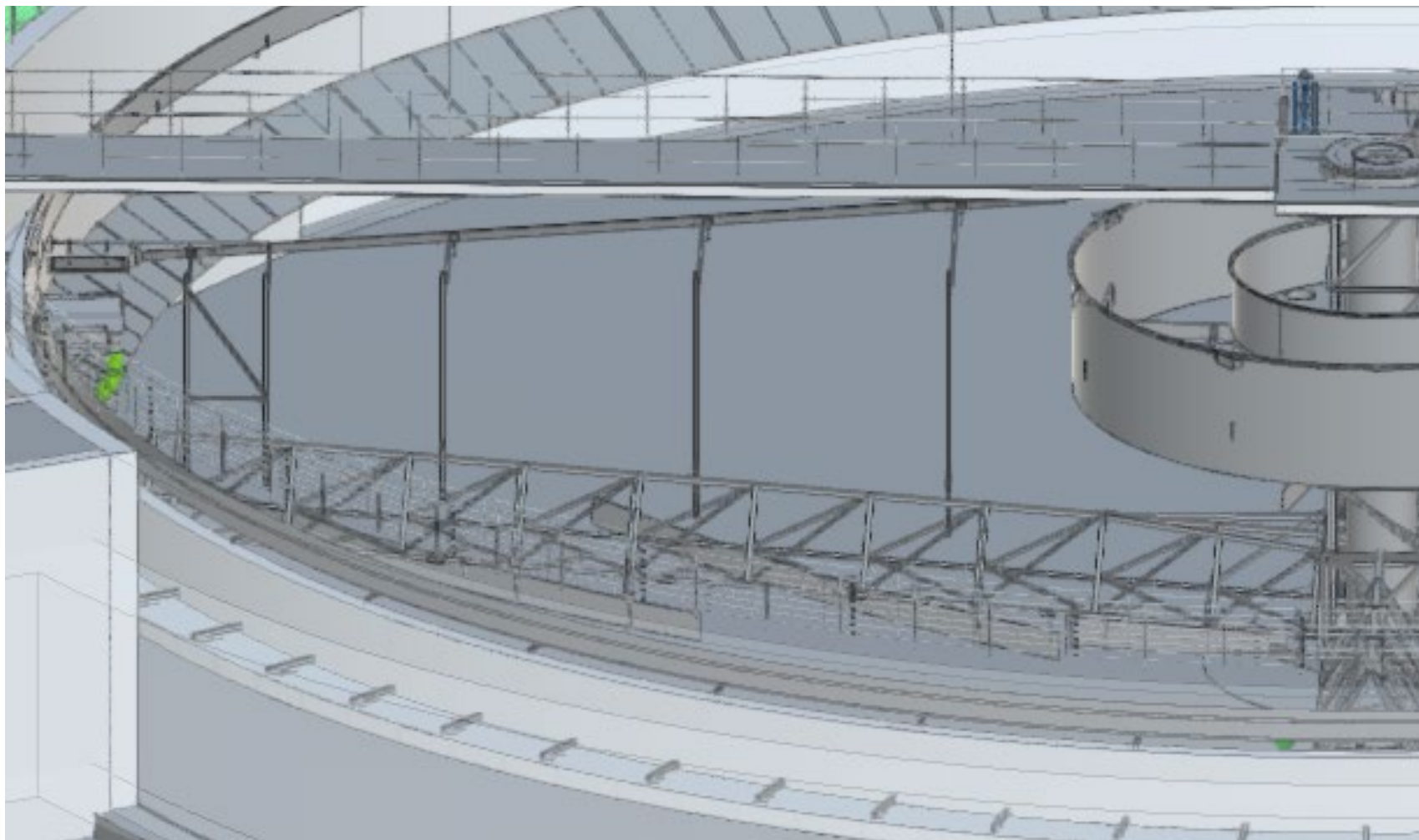


Secondary Clarifiers

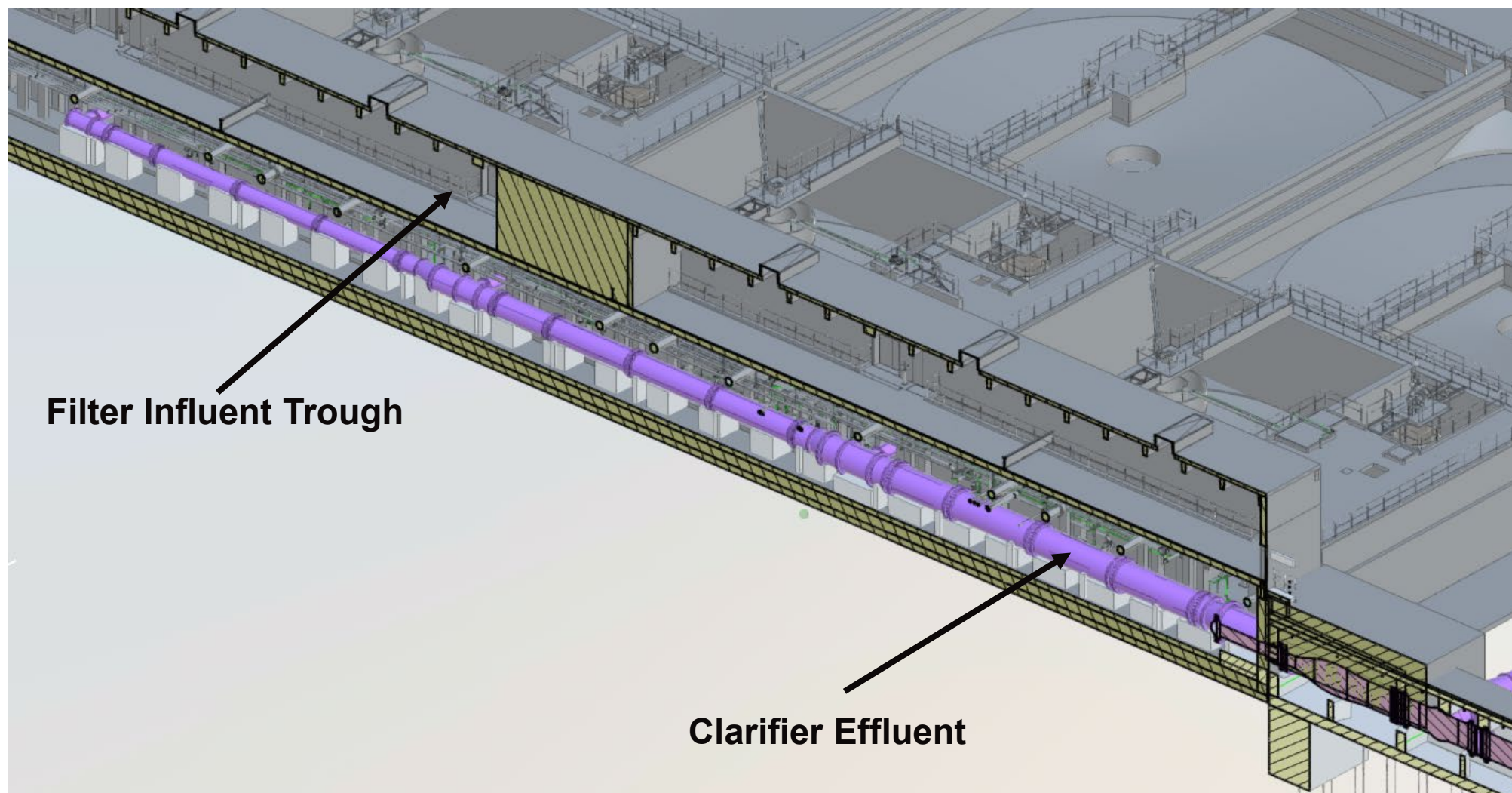
- 4 new secondary clarifiers
- 145-foot diameter tanks
- Spiral rake mechanisms



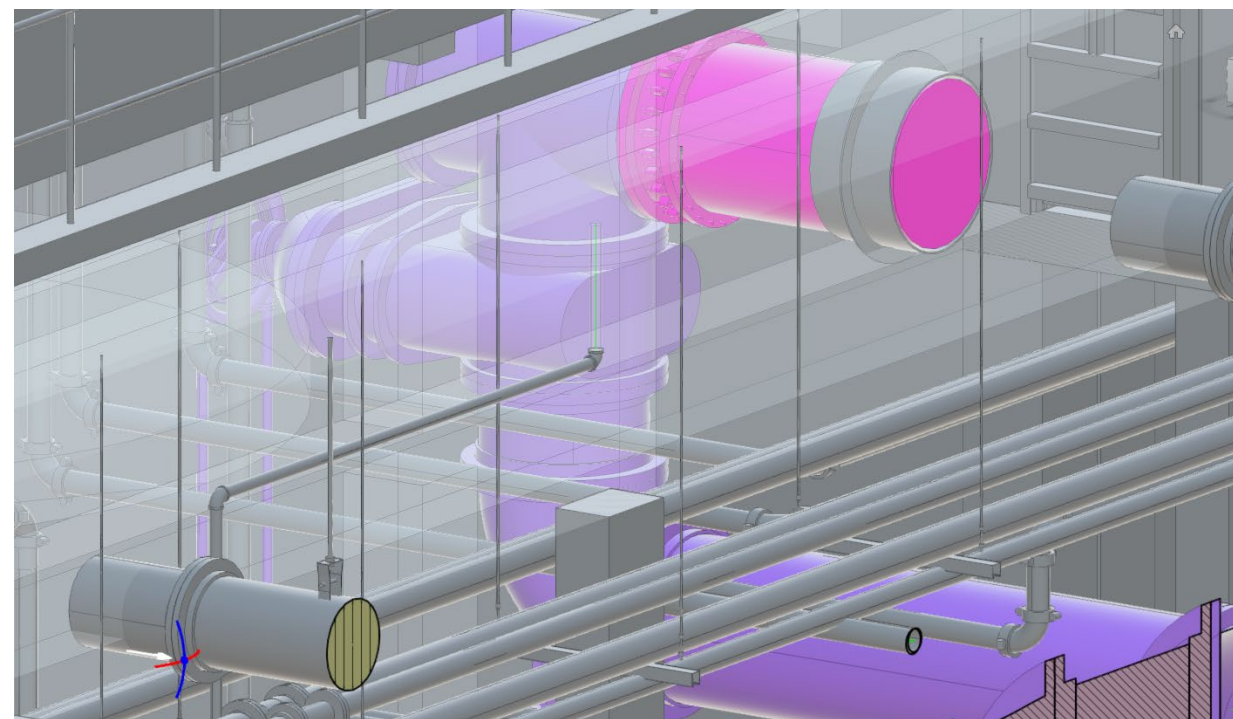
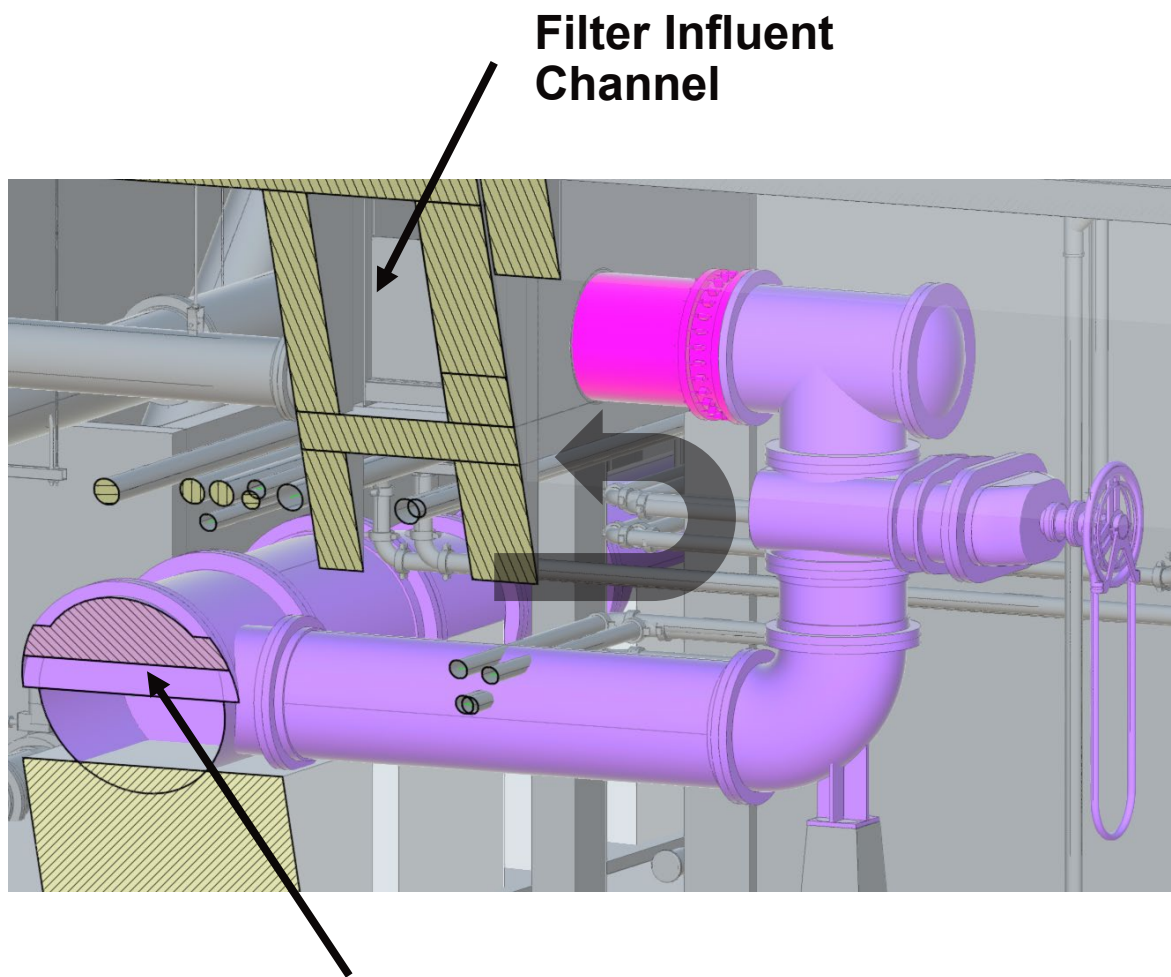
Secondary Clarifiers



New Clarifier Effluent Piping in Central Tunnel

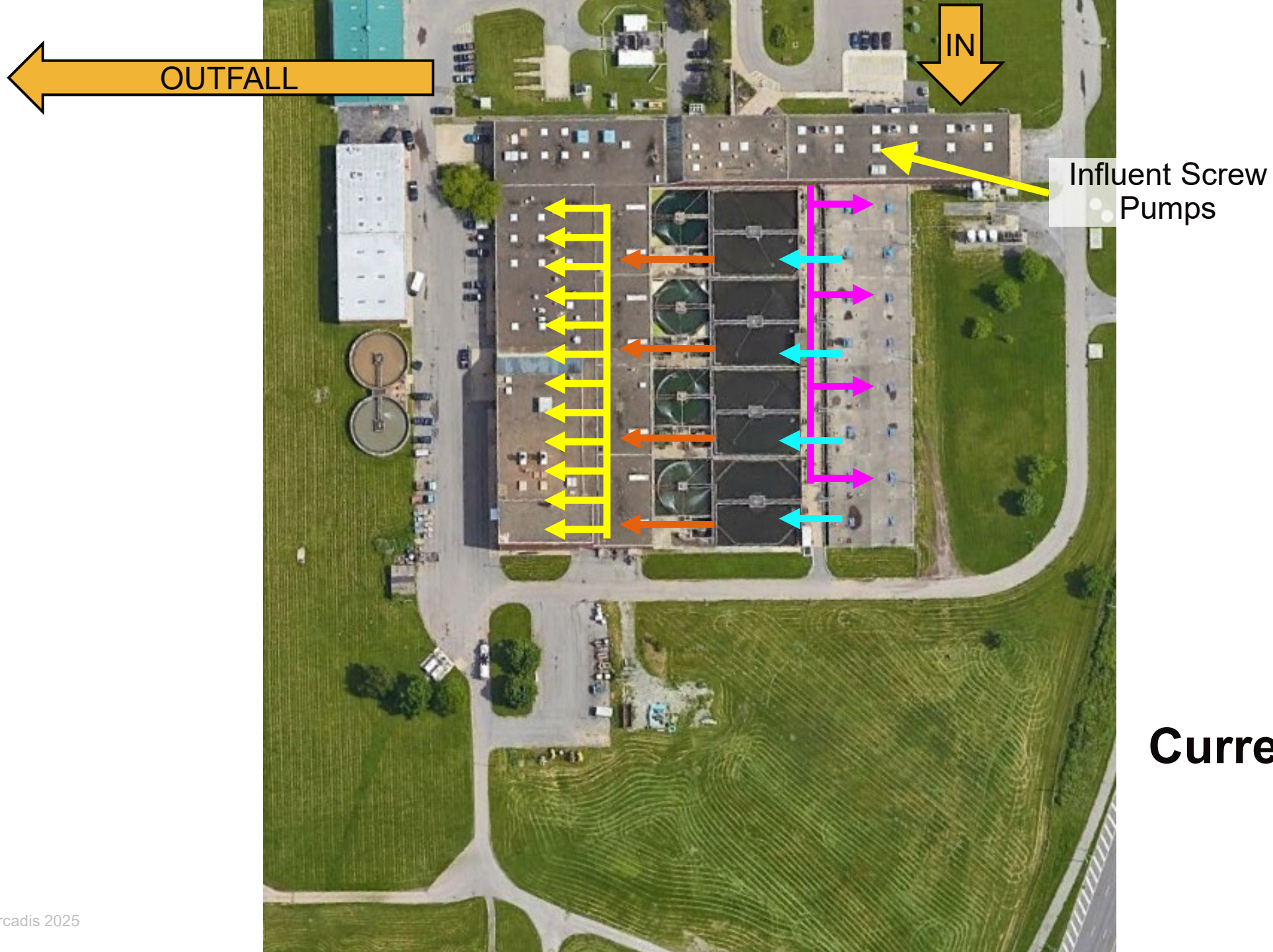


Clarifier Effluent Tie-in to Existing Filter Influent Channel

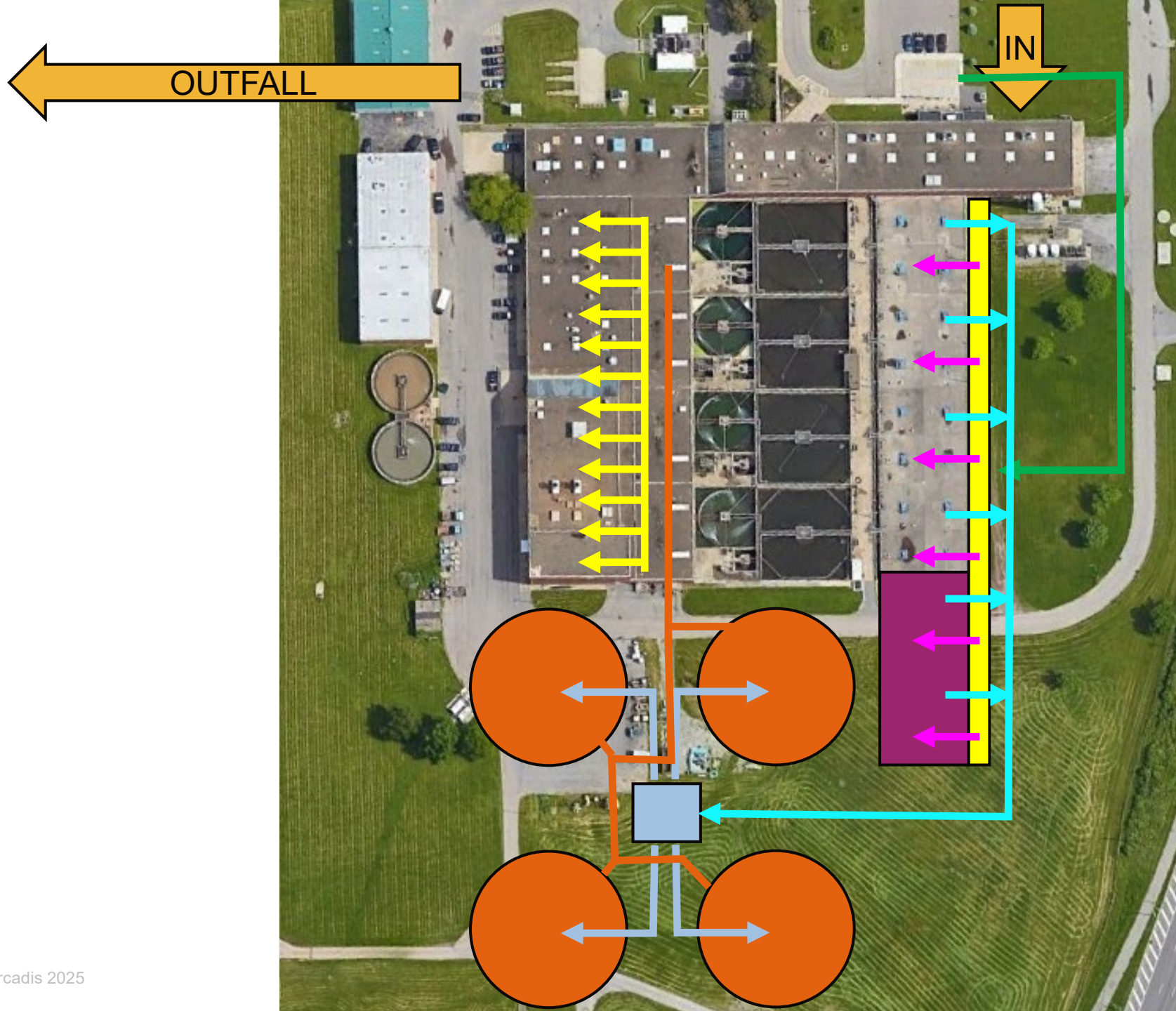


Sequencing and MOPO

Phase 2



Current Operation



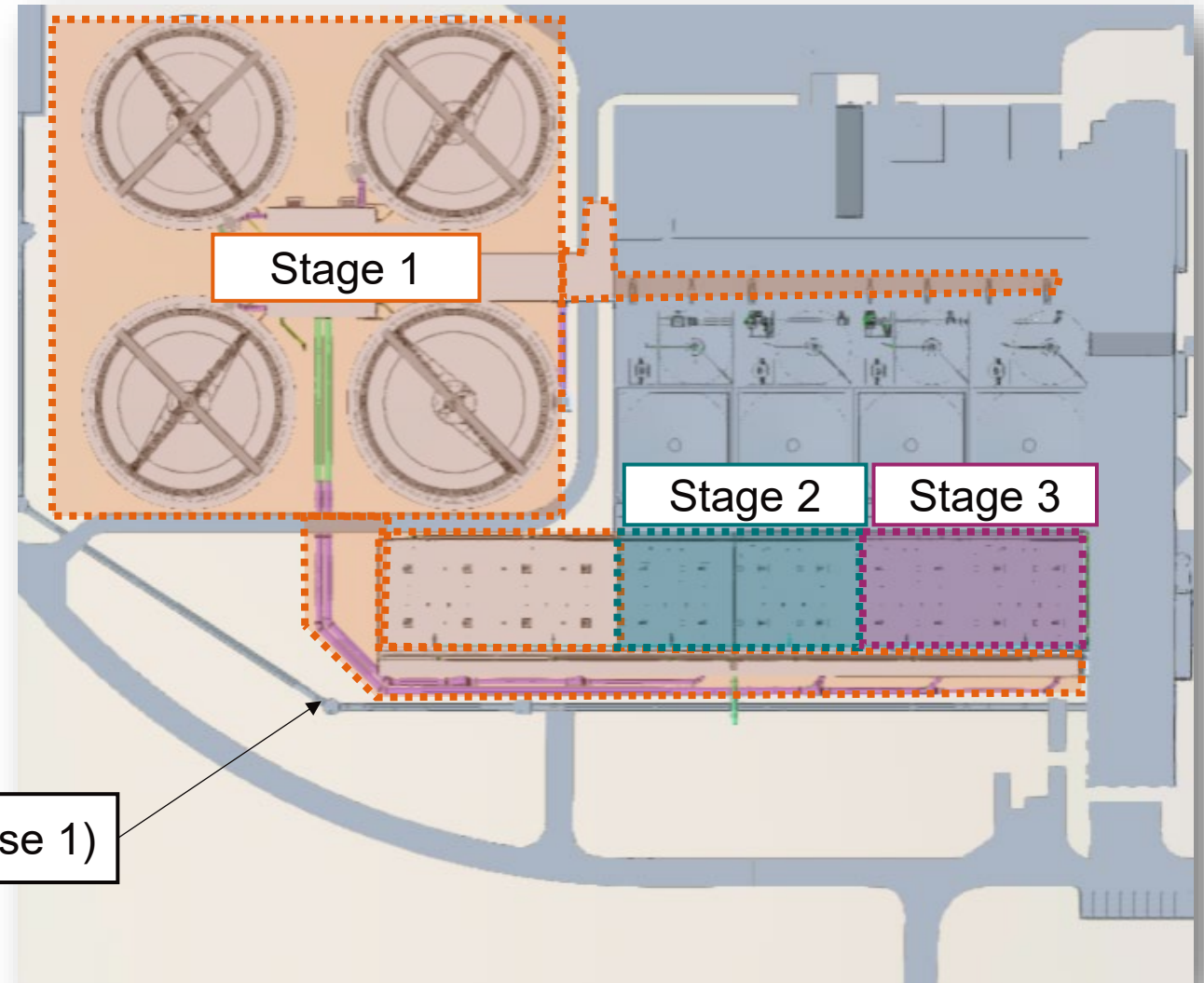
**Final Operation
(Phase 2)**

Major Operational Requirements During Construction

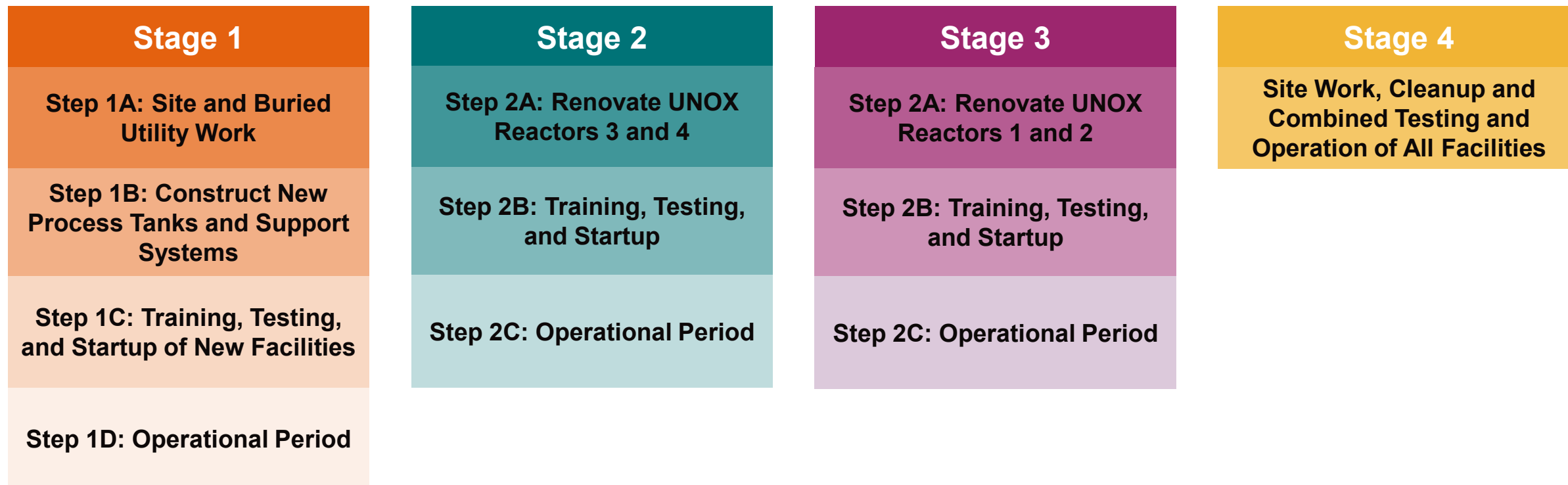


Overview of Stages

- **Stage 1:** Construct New Facilities
- **Stage 2:** Renovate UNOX Reactors 3 and 4
- **Stage 3:** Renovate UNOX Reactors 1 and 2
- **Stage 4:** Site Work, Cleanup and Combined Testing and Operation of All Facilities



Stages



Contract Documents – MOPO

- Section 01 14 16, Coordination with Owner's Operation
 - Sequence of operation
 - Shutdown requirements
 - Table 01 14 16-A Schedule of Tie-Ins and Caps
 - Attachment A – Flow Paths
 - Attachment B – Tie-In Schematics
- Section 40 61 96, Process Control Descriptions

SECTION 01 14 16 COORDINATION WITH OWNER'S OPERATIONS



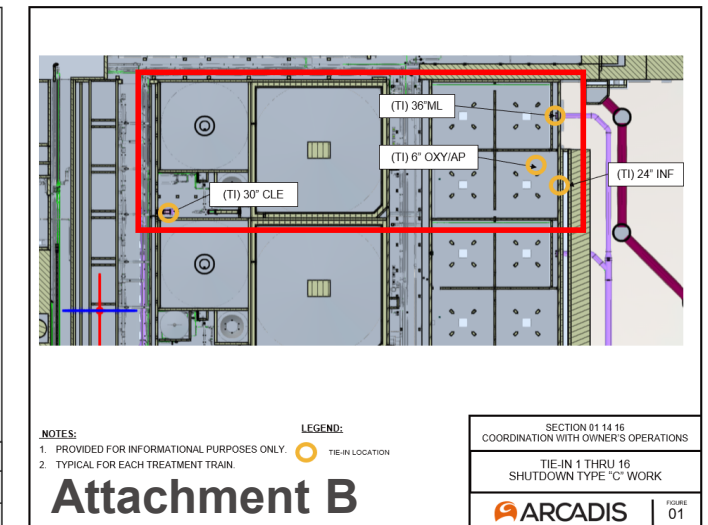
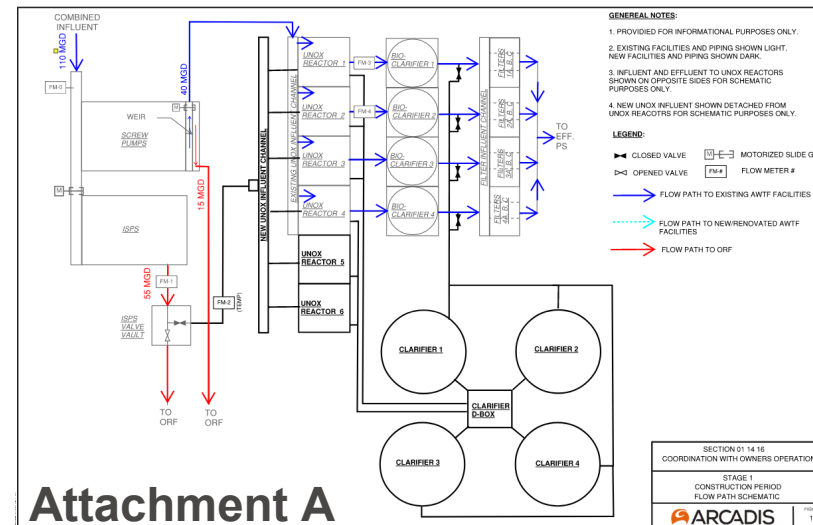
PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

- This Section includes requirements for coordinating with Owner's operations during the Project, and includes requirements for tie-ins and shutdowns necessary to complete the Work without impact on Owner's operations except as allowed in this Section.
- Contractor shall provide all labor, materials, equipment, tools, and incidentals shown, specified, and required to coordinate with Owner's operations during the Work in accordance with this Section.

Tie-In/ Cap No.	New Line Size and Service	Existing (Connecting) Line Size & Service or Structure	Tie-In Building/Location(s)	Construction Stage	Shutdown	Shutdown Duration ⁽¹⁾	Remarks
TI-1	24" INF	UNOX Reactor No. 1	UNOX Reactor No. 1	1	C1	9 days	Core drill through existing UNOX; Provide blind flange or permanently installed slide gate, if available.
TI-2	36" ML	UNOX Reactor No. 1	UNOX Reactor No. 1	1			Core drill through existing UNOX; Provide blind flange or permanently installed slide gate, if available.
TI-3	6" OXY/AP	UNOX Reactor No. 1	UNOX Reactor No. 1	1			Core drill through existing UNOX deck; Construct valve and connect to new 12" OXY/AP header
TI-4	30" CLE	30" Bioclarifier No. 1 effluent	Central Pipe Tunnel	1			Provide temporary coupling to existing 30" bioclarifier effluent pipe



Section 01 14 16, Coordination with Owner's Operation

D. Stage 3: Renovate UNOX Reactors 1 and 2

1. Step 3A: Renovate UNOX Reactors 1 and 2.

- a. Description: This step generally includes the cleaning and renovation of existing UNOX Reactors No. 1 and 2 and related Work.
- b. Major Work Elements: The major elements of Work of this Step are listed below in no specific order. The order of construction of these elements shall be determined by the Contractor.
 - 1) Clean UNOX Reactors 1 and 2.
 - 2) Construct the improvements at UNOX Reactors 1 and 2, including concrete rehabilitation, structural repairs and modifications, and replacement of process mechanical equipment, instrumentation, and electrical support systems.

Description

- 3) Construct all architectural, structural, electrical and instrumentation improvements required to operate the facilities.
- 4) Remove the existing 6" process air piping header along the abandoned UNOX western influent channel.
- 5) Remove the existing 12" purge air piping header along the abandoned UNOX western influent channel.
- 6) Remove the existing 3" oxygen piping header along the abandoned UNOX western influent channel.
- 7) Provide blind flanges/caps on the existing abandoned 6" AP/OXY pipe flanges into each UNOX reactor.
- 8) Construct the weir walls adjustable weirs on the upstream of each Influent Screw Pump.
- 9) Modify the influent screw discharge flume and demolish the portion of the overflow flume in the Influent Screw PS.

Major Work Elements

- c. Flow Path: See Figure 5 on Attachment A.

Flow Path Reference

d. Critical Sequencing and Constraints:

- 1) Stage 3 cannot begin until the Owner's acceptance after the Stage 2 operational period is completed, unless authorized by the Engineer and Owner to begin Stage 3 during the Operational Period of Stage 2C.
- 2) Only one Influent Screw Pump may be taken out of service at a time to construct the weir walls and adjustable weirs.
- 3) Contractor shall modify the influent screw discharge flume to demolish the portion of the overflow flume and construct the isolation walls as shown on the Drawings prior to constructing the weir walls and adjustable weir gates upstream of each Influent Screw Pump.
- 4) UNOX Reactors 3, 4, 5, and 6 and Clarifiers (number of operating units to be determined by Owner) shall remain in service at all times, except for the Shutdowns to perform tie-ins as outlined in Table 01 14 16-A.

Critical Constraints and Sequencing

e. Temporary Elements: The Contractor shall provide the following temporary elements:

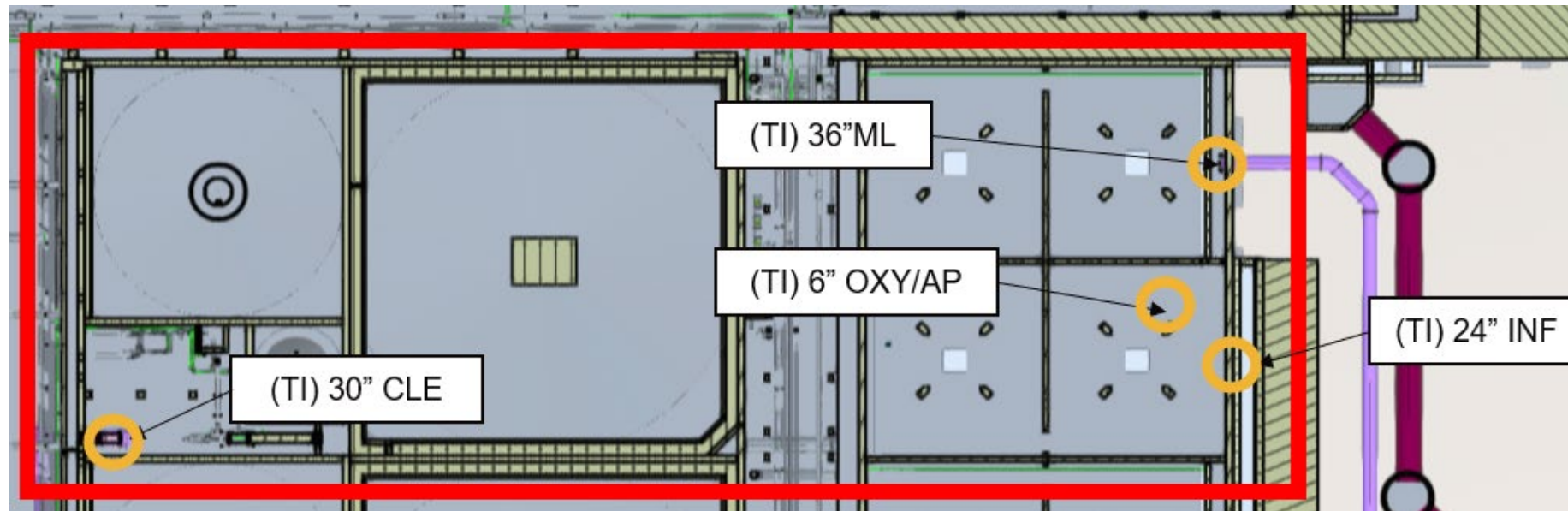
- 1) The Contractor may utilize the Owner's existing stop logs to isolate the lower end of each Influent Screw Pump.
- 2) The Contractor shall design and construct a bulkhead to isolate the upper portion of the Influent Screw Pump that is taken out of service from the shared discharge channel. This shall provide isolation of the work area in the case that a storm occurs and the Influent Screws are needed to send flow to the ORF.

Temporary Elements

Tie-In 1 thru 4 Example

TABLE 01 14 16-A
SCHEDULE OF TIE-INS AND CAPS

Tie-In/ Cap No.	New Line Size and Service	Existing (Connecting) Line Size & Service or Structure	Tie-In Building/Location(s)	Construction Stage	Shutdown	Shutdown Duration ⁽¹⁾	Remarks
TI-1	24" INF	UNOX Reactor No. 1	UNOX Reactor No. 1	1	C1	9 days	Core drill through existing UNOX; Provide blind flange or permanently installed slide gate, if available.
TI-2	36" ML	UNOX Reactor No. 1	UNOX Reactor No. 1	1			Core drill through existing UNOX; Provide blind flange or permanently installed slide gate, if available.
TI-3	6" OXY/AP	UNOX Reactor No. 1	UNOX Reactor No. 1	1			Core drill through existing UNOX deck; Construct valve and connect to new 12" OXY/AP header
TI-4	30" CLE	30" Bioclarifier No. 1 effluent	Central Pipe Tunnel	1			Provide temporary coupling to existing 30" bioclarifier effluent pipe



Attachment B

Tie-In 1 thru 4 Example (Continued)

C. Shutdown C1, C2, C3, and C4: Treatment Train (UNOX Reactor, Bioclarifier, and Filter Set)

1. General:

- a. Equipment Operating During Shutdown: Three UNOX Reactor and Bioclarifier Trains and associated Filters A, B, and C.
- b. Equipment Out of Service During Shutdown: One UNOX Reactor and Bioclarifier Train and associated Filters A, B, and C (only one Train out of service at a time).
- c. Impact on Other Equipment and Processes: Influent flows and loadings to the remaining UNOX Reactor and Bioclarifier treatment trains will be temporarily higher.
- d. Description: The 24" influent and 36" effluent connections to the existing UNOX Reactors 1 through 4 are proposed to occur during Stage 1 to allow for the UNOX Aerated Influent Channel and UNOX Effluent Headers A and B to be constructed in their entirety to simplify staging and eliminate potential shutdowns during Stages 2 and 3. Temporary blind flanges on the piping connections are proposed, however, the slide gates may be installed if available at the time of shutdown. New slide gates shall fit through the existing 36" square openings on each UNOX Reactor. Mixers shall not be removed to facilitate installation of the slide gates or temporary blind. A temporary shutdown of the existing treatment train (UNOX Reactor, Bioclarifier, Filters, and associated systems) is required to facilitate these tie-ins.
- e. Constraints: Shutdown shall occur under the following constraints:
 - 1) Influent Flow Condition: Less than 16 mgd. If the flow to the AWTF unexpectedly exceeds 16 mgd (e.g., in the event of a "pop-up" storm). Contractor must be prepared to abandon this shutdown so Owner can use the UNOX Reactor and Bioclarifier.
 - 2) Maximum Duration: In accordance with Table 01 14 16-A of this Section.
 - 3) The existing mixers shall remain in place during these shutdowns. The existing 36" square openings may be used for access into the UNOX Reactors.

2. Prior to Shutdown:

- a. Obtain Engineer's acceptance of proposed shutdown planning submittal and shutdown notification submittal.
- b. Bring necessary piping, couplings, valves, equipment, and appurtenances to the work areas.
- c. Assist Owner in preparing to take equipment, tanks, basins, and conduits (including piping and ducting) temporarily out of service.
- d. Coordinate other tie-ins to be performed simultaneously.

3. During Shutdown:

- a. Assist Owner to dewater the UNOX Reactor, Bioclarifier Effluent Pipe, and segment of the Filter Influent Channel. Owner will purge UNOX reactor airspace. Provide temporary plugs, bulkheads, or other dewatering methods to maintain a dry work environment.
- c. Clear up to two feet of grit within the UNOX Reactors only in the vicinity of the work areas as needed for core drilling and to allow installation of gates or temporary blind flanges. Grit shall remain in the UNOX reactors.
- d. Provide the temporary blind flanges, couplings, and other items for the tie-ins as required.
- e. With Owner, return equipment and system to operation.

4. Following Shutdown:

- a. Verify functionality of equipment and systems.
- b. Verify operation of new valves.
- c. Verify that joints in conduits (including piping and ducting) are watertight.
- d. Repair joints that are not watertight.

Project Funding Requirements

Project Funding Requirements

Minority- and Woman-Owned Business Enterprise (M/WBE) Goal

M/WBE Goal: 20% of the total contract value*

Subject to the Environmental Facilities Corporation's (EFC) requirements:

- Only firms listed in the Empire State Development directory are considered certified
- M/WBE supplier participation is 60% of their Contract Value
- If a M/WBE waiver is required, EFC waiver request process is to be followed

Service-Disabled Veteran-Owned Business (SDVOB) Goal

SDVOB Goal: 6% of the total contract value*

Subject to Erie County requirements:

- Only firms on the NYS SDVOB directory are considered certified
- SDVOB supplier participation is 100% of their Contract Value
- If a SDVOB waiver is required, Erie County's waiver request process is to be followed

M/WBE and SDVOB Reporting

- EFC's utilization plan and monthly reports will be used for **both** M/WBE and SDVOB tracking
- Erie County's Part D form will be used for closeout

*If the total contract value changes during the Project, the M/WBE and SDVOB goals will change as well

M/WBE and SDVOB Waiver Requests

Good Faith Efforts

- Search the directories for each task (i.e. concrete pouring, paving, etc.)
- The qualified, certified firms that are in the search results must be reached out to and included in the solicitation log

Solicitation Log

- A template is available on EFC's website
- Qualified, certified firms must be contacted **twice via two different methods** before being deemed unresponsive
- Unqualified firms that are included in the ESD directory search results should be included in the solicitation log with a note on why they were deemed unqualified and not solicited

Sample Solicitation Log

Company Name	Certification Type	Work Type (Required on each line)	Location	Contact 1 Date	Contact 1 Type	Result	Contact 2 Date	Contact 2 Type	Result2	Overall Result/Reason Chosen or Not/Comments
Blake Contracting	MBE	Doors and Windows	Rochester	4/12/2014	Fax	Declined	4/14/2014	Phone	Declined	Out of Business
XYZ Corp	MBE	Doors and Windows	Syracuse	4/12/2014	Email	Quote Received	4/21/2014	Phone		Quote too high (quote comparison provided)
Top Inc	WBE	Doors and Windows	Albany	4/12/2014	Email	No answer	4/14/2014	Phone	No answer	No response
Tough Contracting	MWBE	masonry	Liverpool	4/12/2014	Phone	No answer	4/12/2014	Fax	No answer	Out of Business
Quality Inc	MBE	masonry	Plattsburgh	4/12/2014	Email	Declined	4/16/2014	Phone	No answer	Subcontractor declined/too far away
AM General Contractors	WBE	masonry	Plattsburgh	4/12/2014	Fax	No answer	4/16/2024	Phone	Declined	Does not perform requested scope of work

Other Requirements

EFC Guidance for Mandatory State Revolving Fund Terms and Conditions

SECTION 10 SUMMARY OF CONTRACTOR REQUIREMENTS FOR SRF-FUNDED PROJECTS

Forms can be found as attachments to this document or online at www.efc.ny.gov

Forms should be submitted electronically via email or through EFC's [dropbox](#)

To be submitted with this bid:

Guidance Section

☐ [Lobbying Certification](#)

[Section 7](#)

☐ [AIS Contractor's Certification](#)

[Section 4](#)

To be submitted prior to or upon Contract award:

☐ Executed Contracts, Subcontracts, agreements, and purchase orders

☐ MWBE [Utilization Plan](#) and/or [Waiver Request](#)

[Section 2](#)

Tasks for Construction start:

☐ Ensure that all Subcontracts contain correct Required EFC Terms & Conditions

☐ [Display EEO Poster](#)

[Section 2](#)

☐ [Display Waste, Fraud and Abuse Poster](#)

[Section 2](#)

☐ Ensure Construction Sign is Posted

[Section 9](#)

☐ Pay the higher of prevailing federal, state, or local wages including benefits

[Section 5](#)

☐ Display [Davis Bacon Wage Poster](#) AND Wage Rates

[Section 5](#)

☐ Use [Federal Payroll Form \(WH-347\)](#) or equivalent

[Section 5](#)

☐ Obtain apprentice certifications

[Section 5](#)

☐ Obtain [AIS Manufacturer's Certifications](#) for all iron & steel products

[Section 4](#)

Ongoing documentation & tasks:

☐ Submit EEO-1 Report, online

[Section 2](#)

☐ Submit [Monthly MWBE Reports](#) to MBO

[Section 2](#)

☐ Maintain weekly certified payrolls for all Prime & Subcontractors

[Section 5](#)

☐ Maintain proof of payments for MWBE Subcontractors

[Section 2](#)

☐ Maintain AIS Manufacturer's Certifications

[Section 4](#)

Thank you / Questions



Joseph Fiegl, PE

Deputy Commissioner

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Joseph.Fiegl@erie.gov
(716) 858-7537



Jason Williams, PE

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Chelsea Catchpole, PE

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“Southtowns Advanced Wastewater Treatment Facility
Expansion Project”