



## Replacement of the I-91 Wastewater Pumping Station

Wallingford Sewer Division

Tuesday March 4, 2025 at 6:00 p.m.

# WSD Presentation Agenda

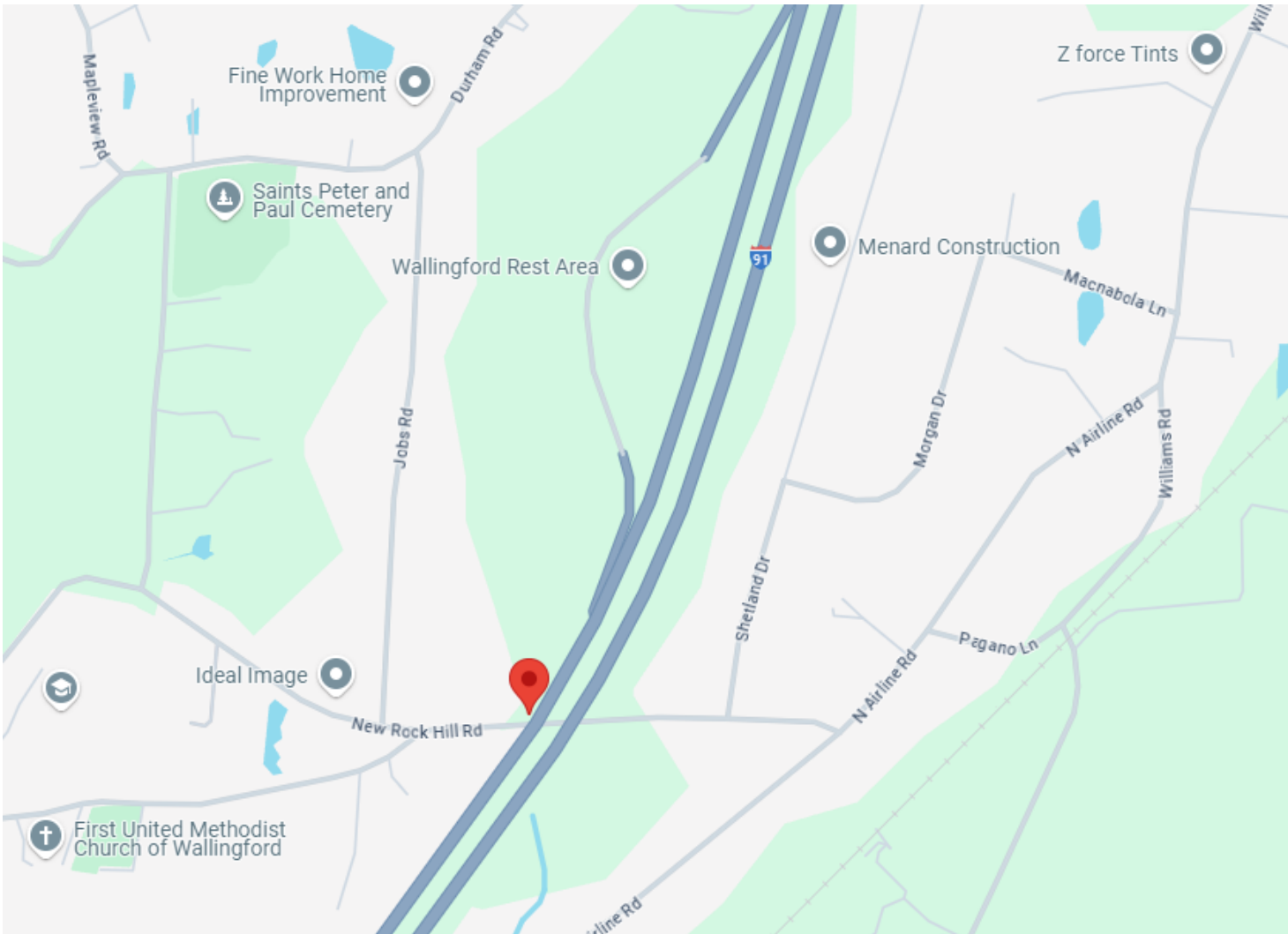
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- ❑ Location
- ❑ Existing Pumping Station Information and Metrics
- ❑ Project Goals and Objectives
- ❑ Proposed PS Design and Metrics
- ❑ Funding
- ❑ Timeline
- ❑ Questions and Discussion



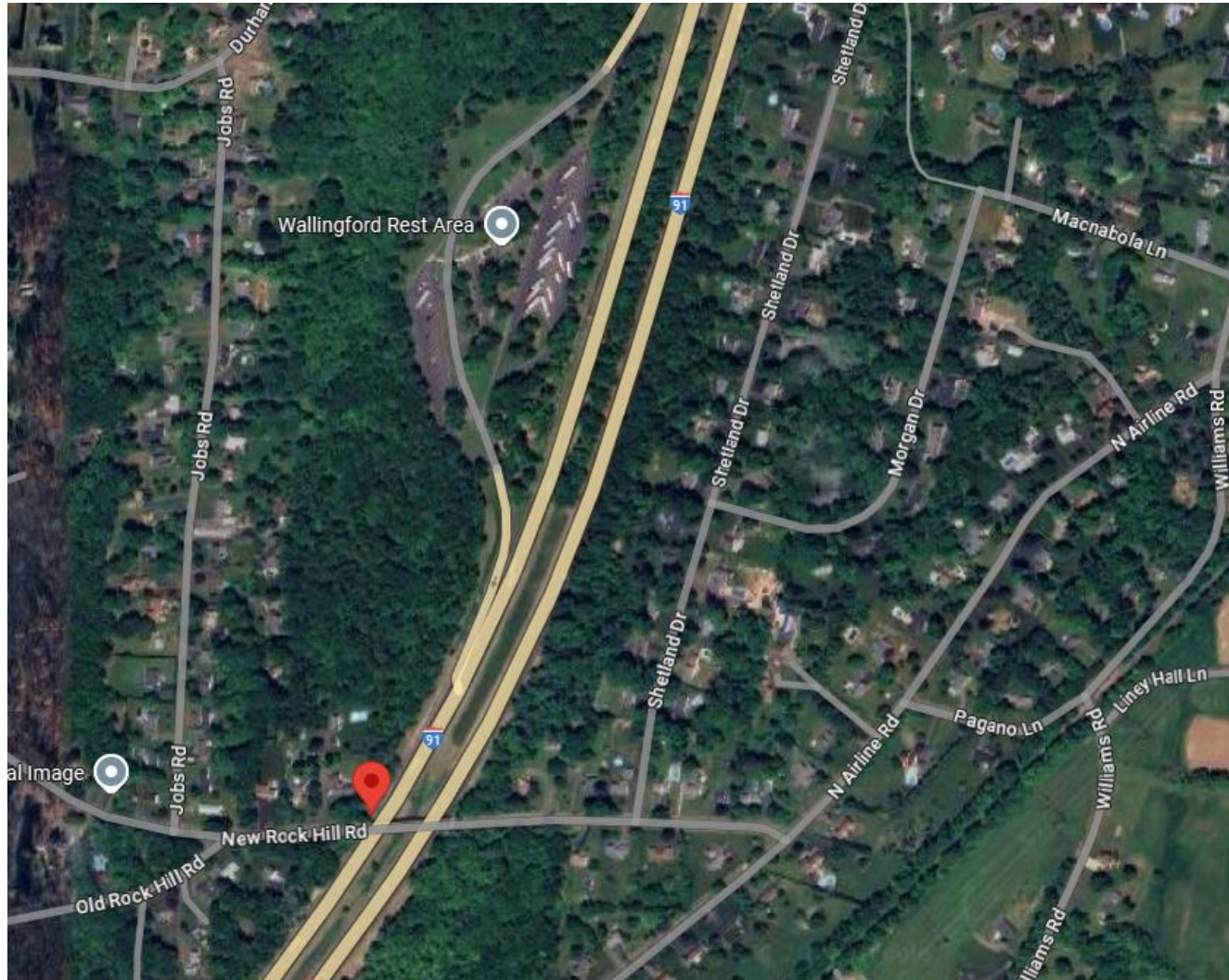
# Location

1030 New Rock Hill Road, Wallingford



# Location (continued)

## 1030 New Rock Hill Road, Wallingford





# Existing Pumping Station Metrics

## I-91 Wastewater Pumping Station

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- ❑ Installation Date 1972
  - ❑ Wetwell Volume 1,010 gallons
  - ❑ Containment Basins 10,000 gallons
    - ❑ Located in the MacKenzie Reservoir Watershed
  - ❑ Number of Pumps 2
  - ❑ Pump Size 10 HP
  - ❑ Design Point of Pumps 250 gpm
  - ❑ Standby Generator 45 KW
- 





# Existing Infrastructure

## I-91 Wastewater Pumping Station

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- ❑ I-91 PS site layout looking south, with containment basins, wetwell and dry well, and standby generator building
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# Existing Infrastructure (continued)

## I-91 Wastewater Pumping Station

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- Standby generator building with interior fuel tank, with wetwell and dry well in the foreground
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# Existing Infrastructure (continued)

## I-91 Wastewater Pumping Station

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- ❑ Underground containment basins with 10,000-gallon capacity looking north toward the I-91 rest area
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# Existing Infrastructure (continued)

## I-91 Wastewater Pumping Station

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- Dry well with pumps and piping
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# Existing Infrastructure (continued)

## I-91 Wastewater Pumping Station

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- ❑ Original circa-1972 45 KW standby generator
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# Project Goals and Objectives

## I-91 Wastewater Pumping Station

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- ❑ Address **wetwell surcharge conditions**
  - ❑ Precipitation events
  - ❑ Existing pump capacity and PS piping constraints
  
- ❑ Increase the size and flowrate of the pumps
  - ❑ Existing pumps are constant speed
  - ❑ New pumps will be **variable frequency drive (VFD)**
  
- ❑ Increase the size of the **containment tanks**
  - ❑ Pump station is located in the MacKenzie Reservoir Watershed
  - ❑ Operate in series (lead-lag configuration)



# Project Goals and Objectives (continued)

## I-91 Wastewater Pumping Station

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- ❑ Improved access to pumps for maintenance and repairs
    - ❑ Better site layout
  
  - ❑ Replace aging infrastructure **beyond its expected lifecycle**
    - ❑ Increase reliability
    - ❑ Reduce maintenance
    - ❑ Reduce (eliminate) operating regular labor, overtime labor and benefits expenses during precipitation events
  
  - ❑ Increase the capacity of the standby generator
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# Proposed Pump Station Metrics

## I-91 Wastewater Pumping Station

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- ❑ Wetwell Volume 3,700 gallons
  - ❑ Containment Basin 33,500 gallons
    - ❑ Located in the MacKenzie Reservoir Watershed
  
  - ❑ Number of Pumps 2
  - ❑ Pump Size 20 HP
  - ❑ Design Point of Pumps 410 gpm
  
  - ❑ Standby Generator 80 KW
  - ❑ Precast Concrete Building
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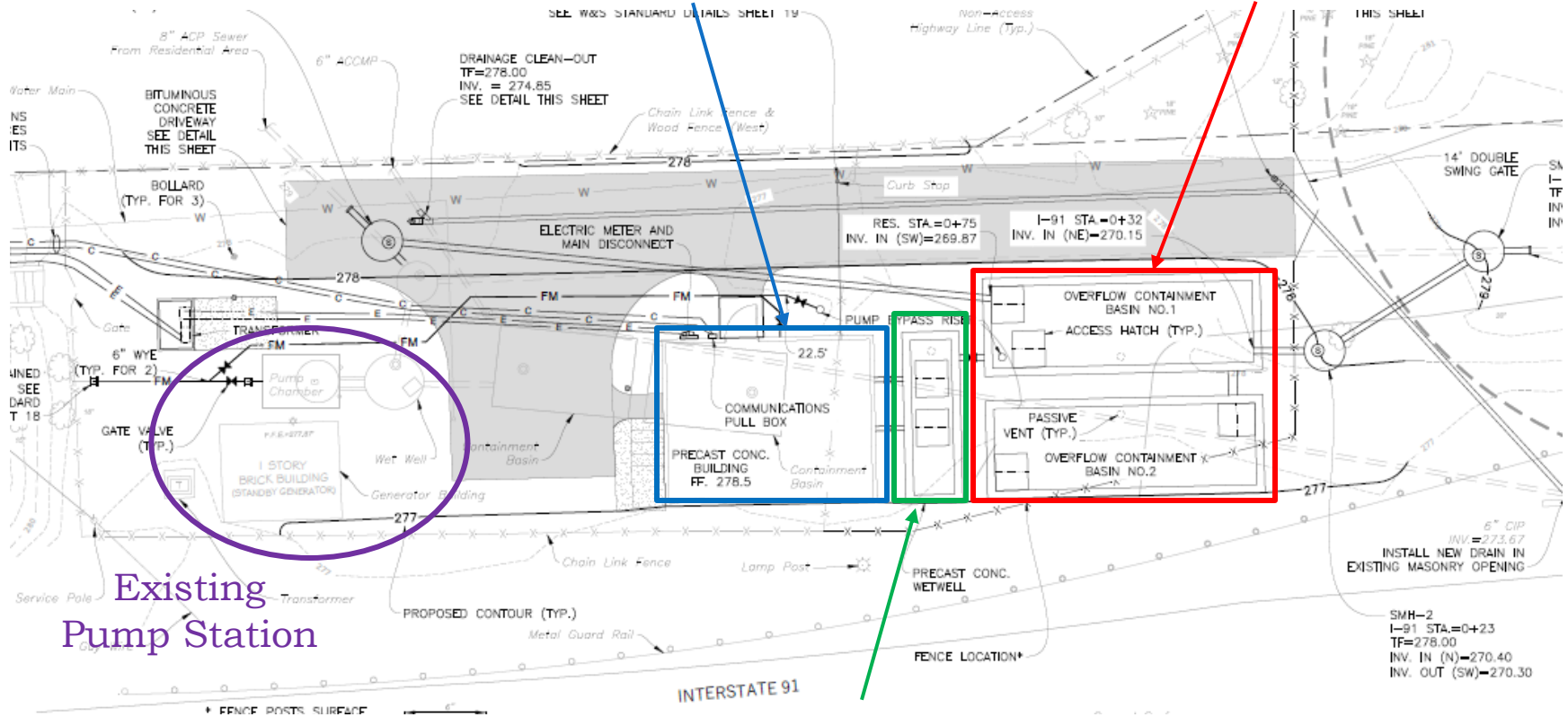


# Proposed Pump Station Design

## I-91 Wastewater Pumping Station

Building with Pumps  
and Standby Generator

Containment  
Basins



Existing  
Pump Station

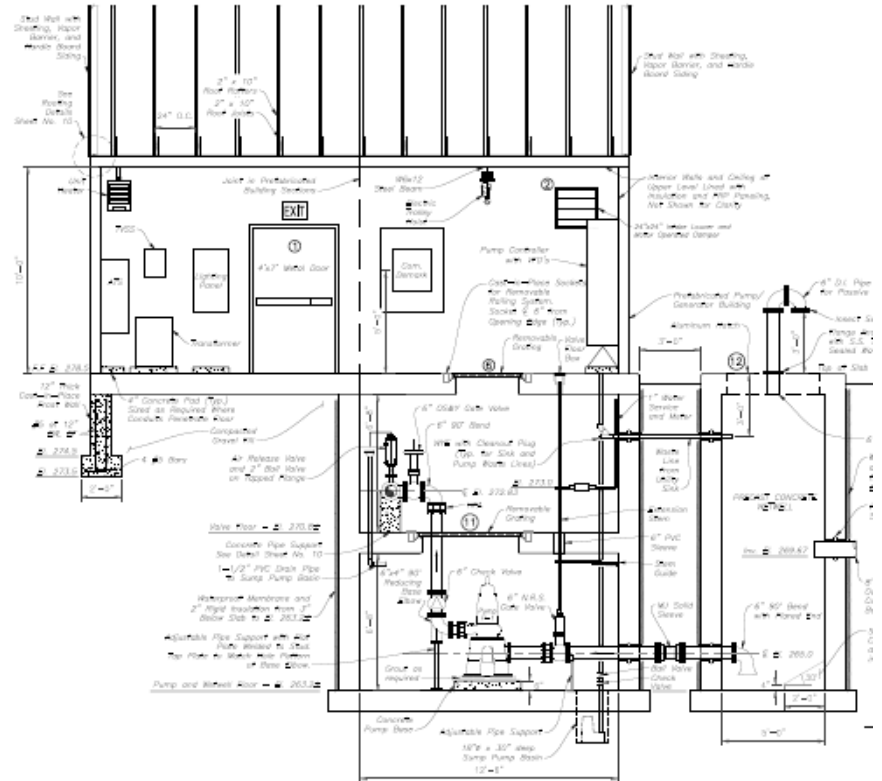
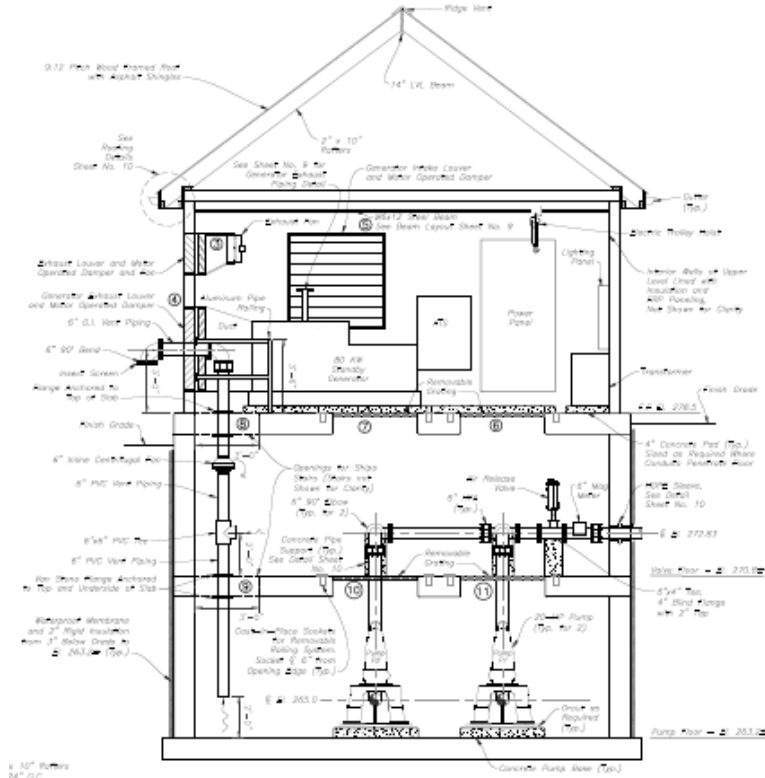
Wetwell





# Proposed Pump Station Design

## I-91 Wastewater Pumping Station



# Funding

## I-91 Wastewater Pumping Station

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❑ Construction-phase Estimate	\$3,400,000.00
❑ Contractor	
❑ Construction Administration	
❑ Contingency	
❑ Bonding Expenses	
❑ Existing Appropriation	(\$1,415,085.00)
❑ Requested Additional Funding	\$1,984,915.00
❑ <i>Say</i>	\$2,000,000.00
❑ Project Appropriation Request	\$3,400,000.00
❑ aka Bond Ordinance	
❑ Per the Comptroller's Office the project appropriation needs to be for the full amount of \$3,400,000.00	



# Timeline

## I-91 Wastewater Pumping Station

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- Design March 2023 – Oct. 2024
- Advertise Project November 14, 2024
- Bid Opening January 21, 2025
- *Contract Award* April 2025
- *Construction* June 2025 – June 2026



# Questions and Discussion

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- ❑ Water and Sewer Divisions Office
- ❑ 203-949-2660



Thank you.

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