



Capital Program Update

Lynnfield Center Water District
Building a More Resilient Water Supply

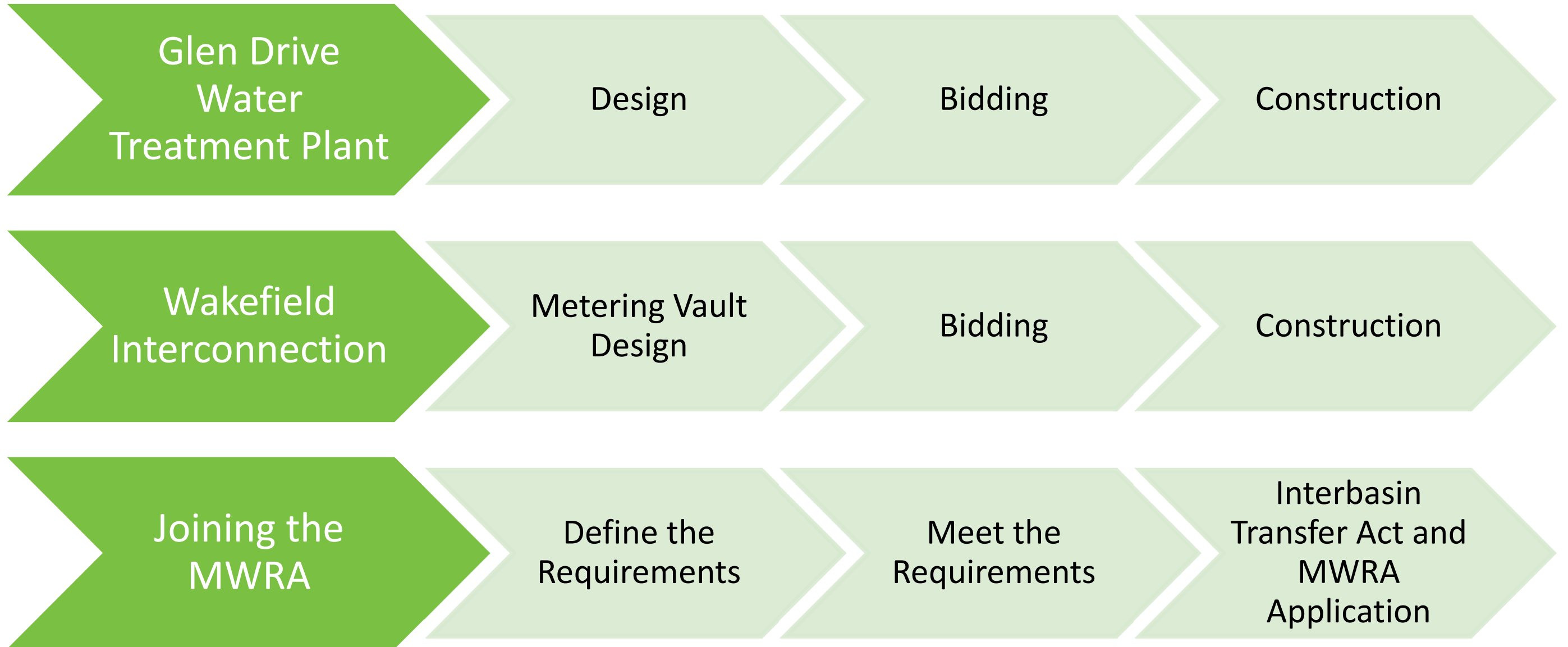
Anne Malenfant, P.E.,
PMP

March 28, 2022

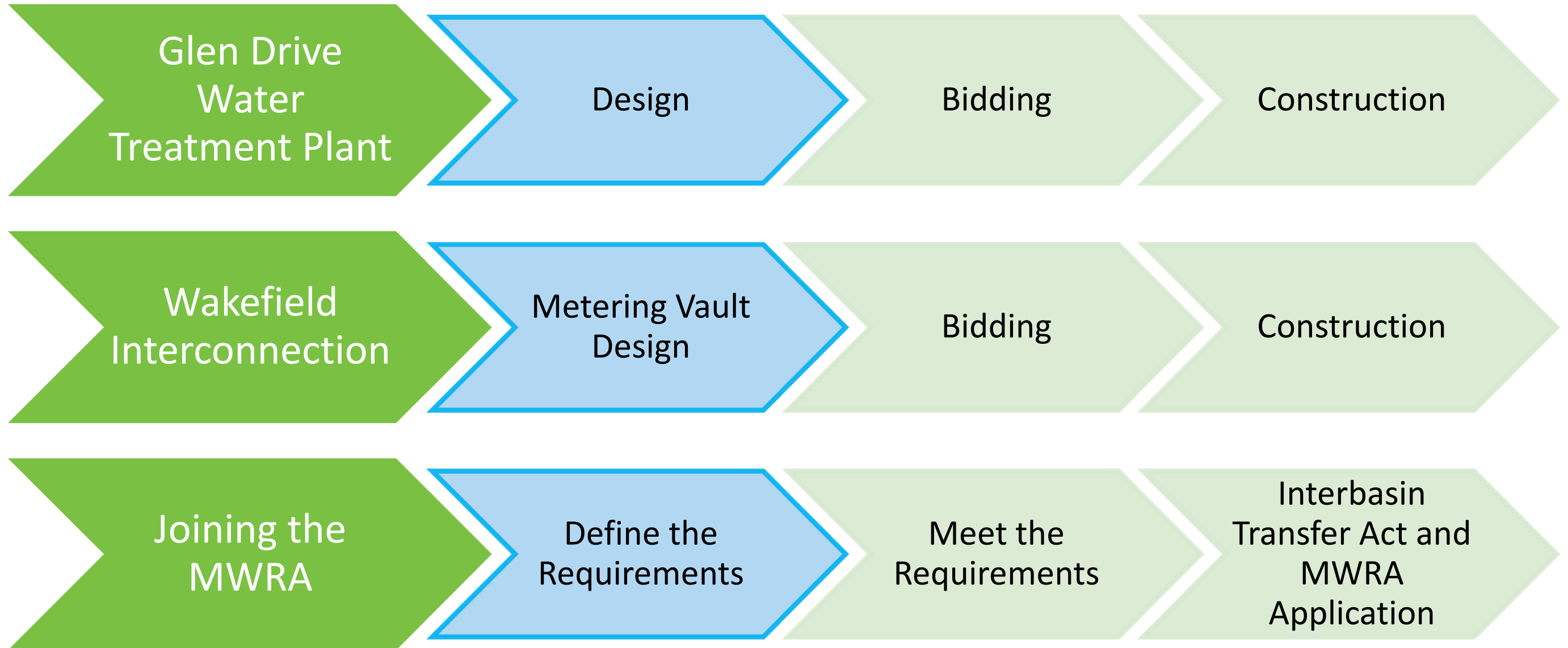


**CDM
Smith**[®]

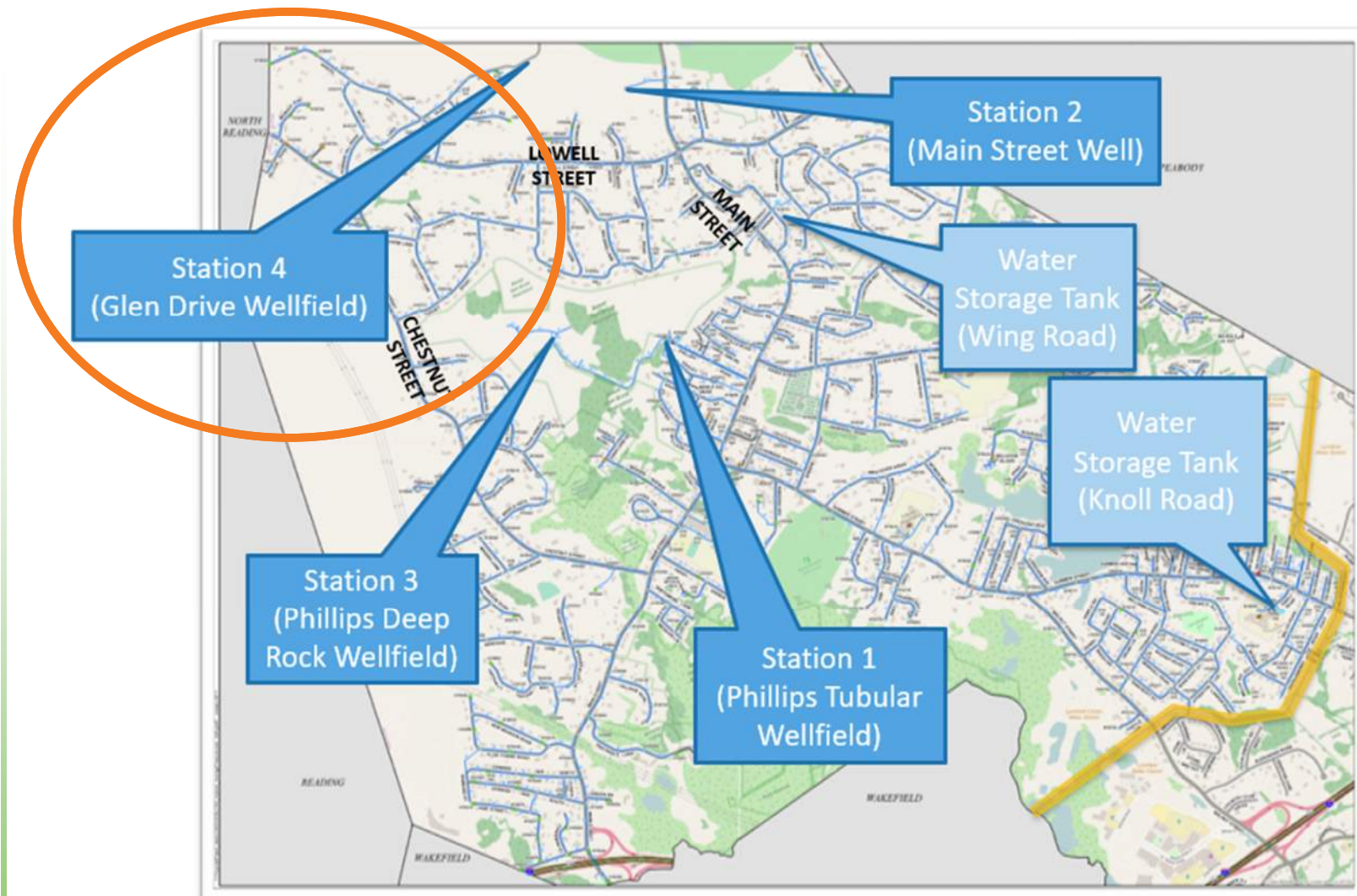
Capital Program Projects



Capital Program Projects

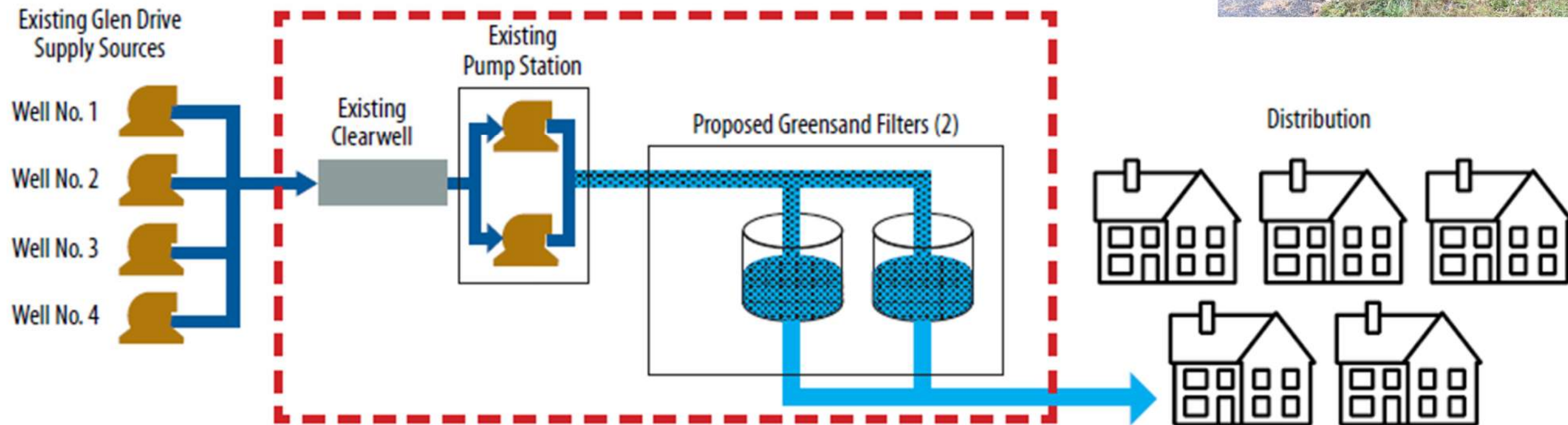


Glen Drive Water Treatment Plant Design

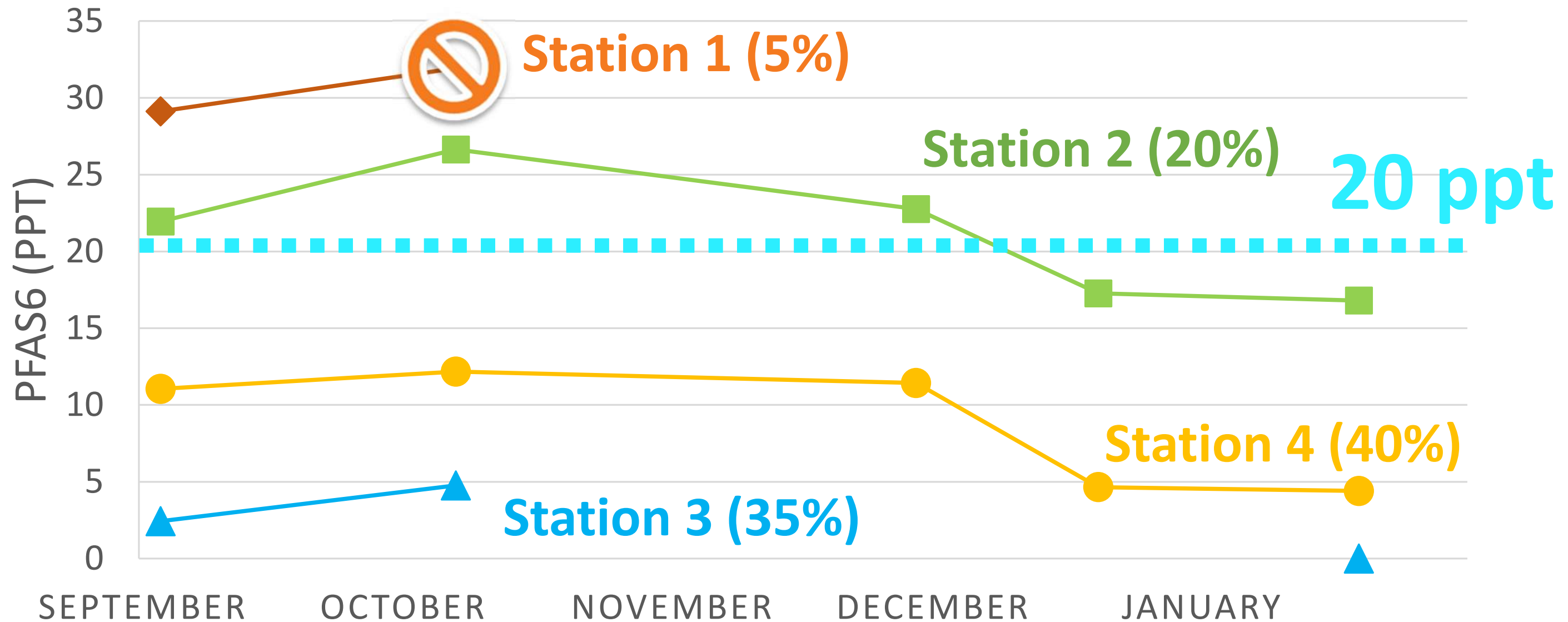


Glen Drive Water Treatment Plant Design

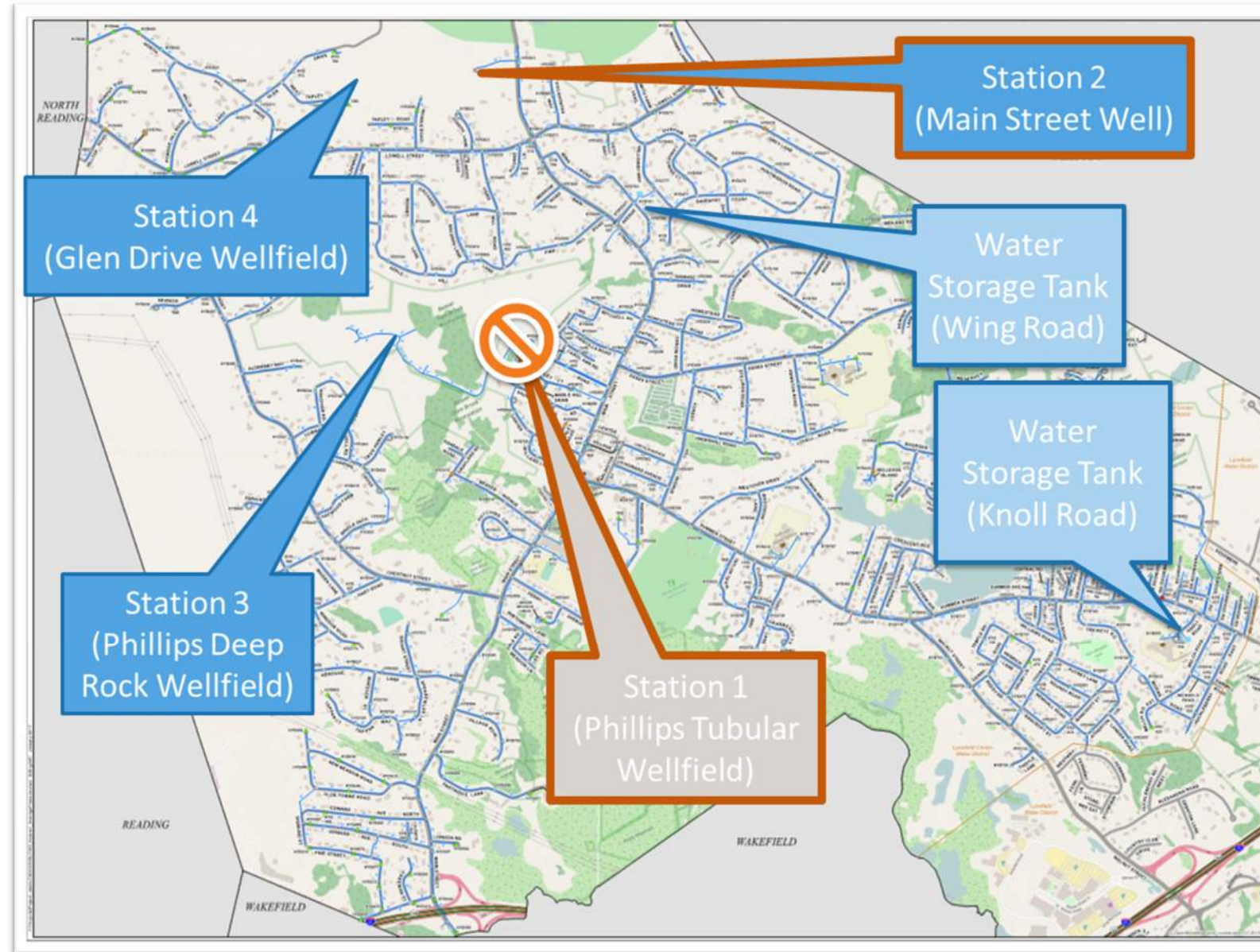
- Existing Glen Drive Pump Station
- Addition of greensand filters to remove iron and manganese



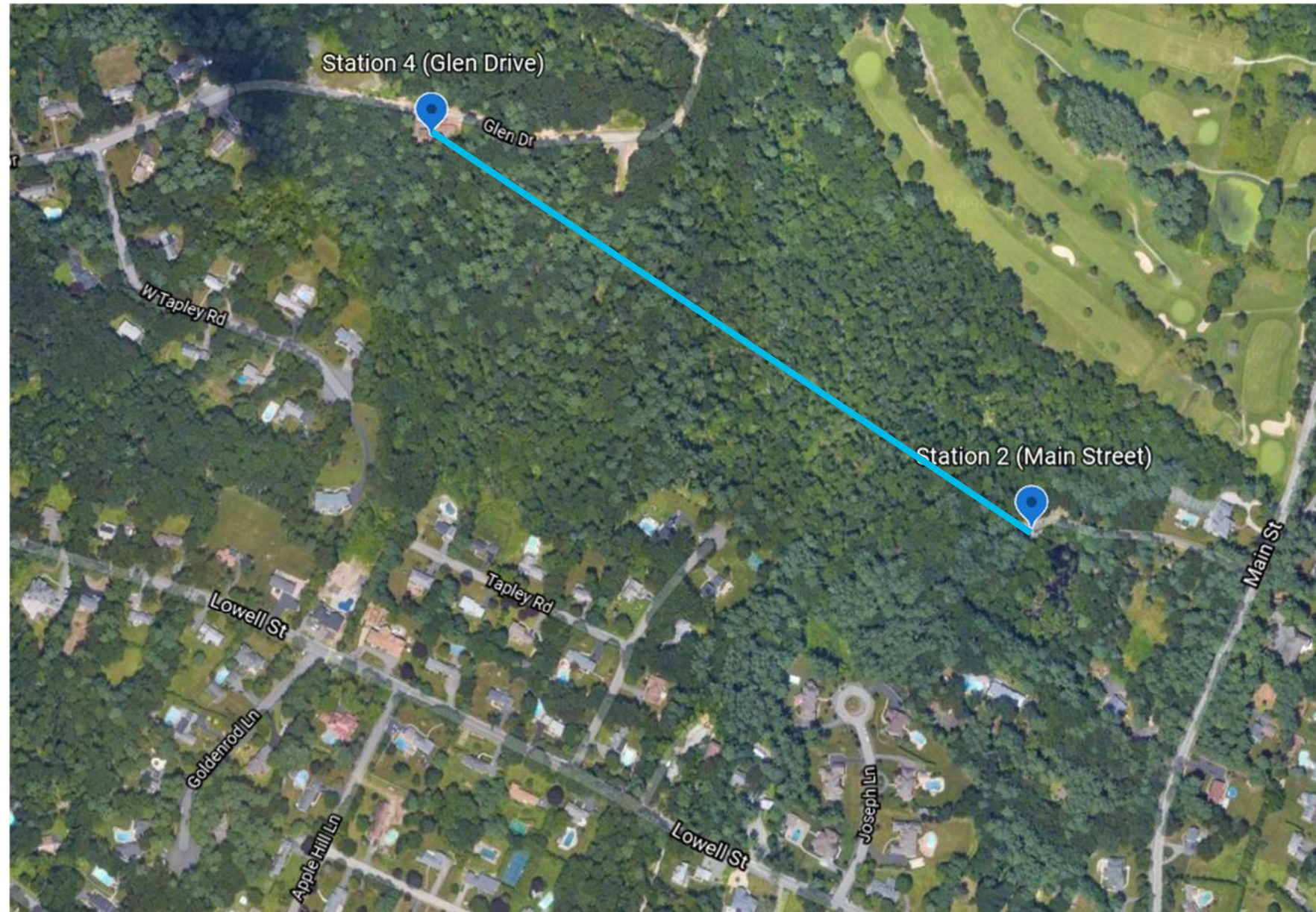
But What About PFAS?



But What About PFAS?



But What About PFAS?



But What About PFAS?

- How to address Station 2?
- Extended interim treatment – time to evaluate permanent options
 - Station 2 treatment at Station 4 (Glen Drive)
 - Increase Wakefield/MWRA interconnection
 - Permanent treatment at Station 2
 - More wells at Station 3 and Station 4



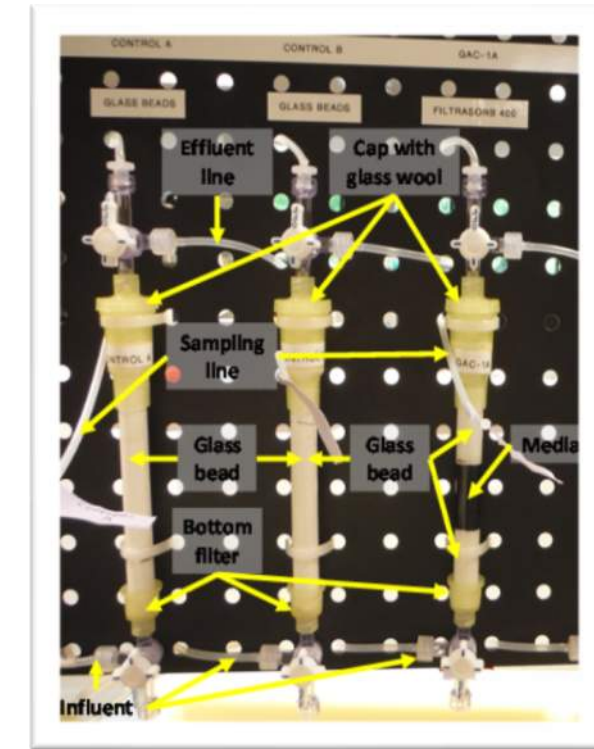
But What About PFAS?

- Add separate PFAS building to Glen Drive WTP design
 - Maintain similar schedule
 - Be prepared for funding opportunities
- If no funding or select alternative PFAS mitigation
→ remove building from design
- Buildings can be combined after securing funding

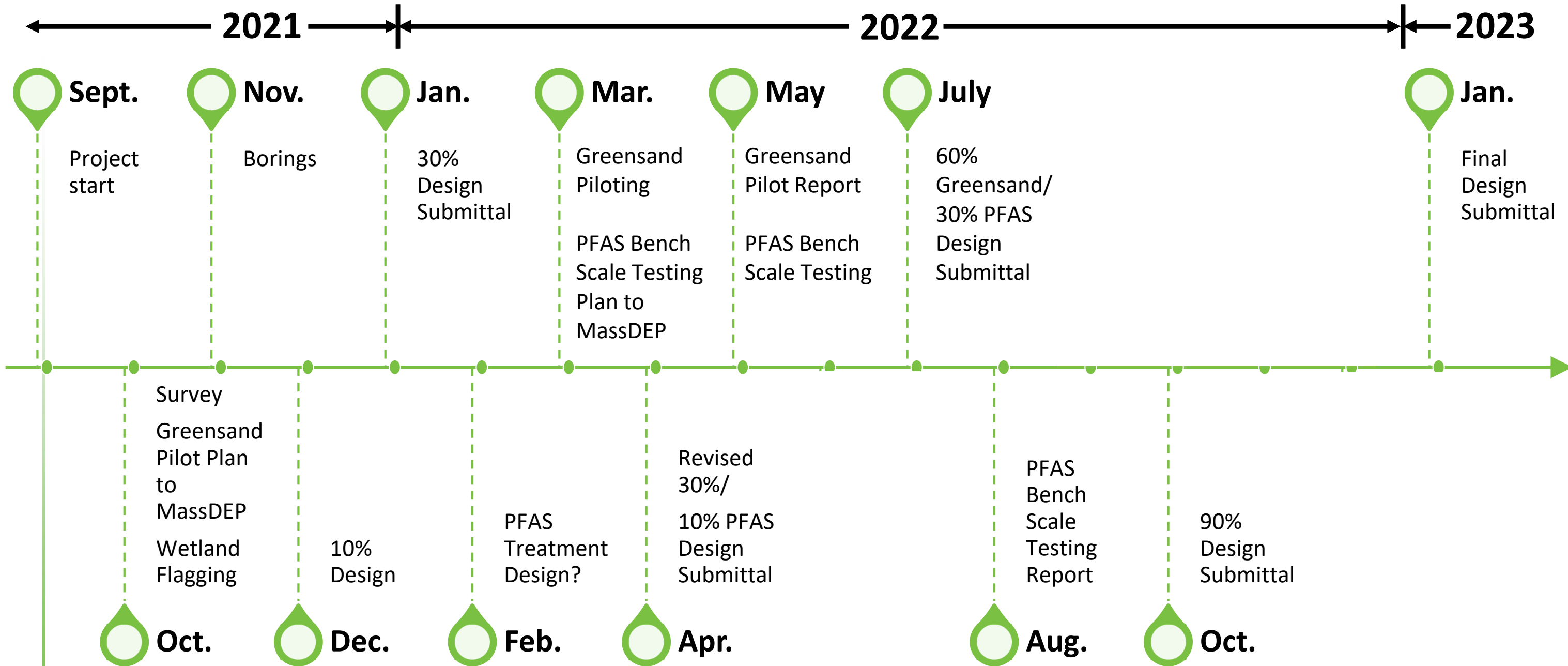


PFAS Treatment at Glen Drive

- Granular activation carbon (GAC) media in pressure vessels
- Bench scale testing - Rapid Small-Scale Column Tests (RSSCTs)
- Testing both Station 4 (Glen Drive) and Station 2 (Main Street)



Glen Drive Water Treatment Plant Design

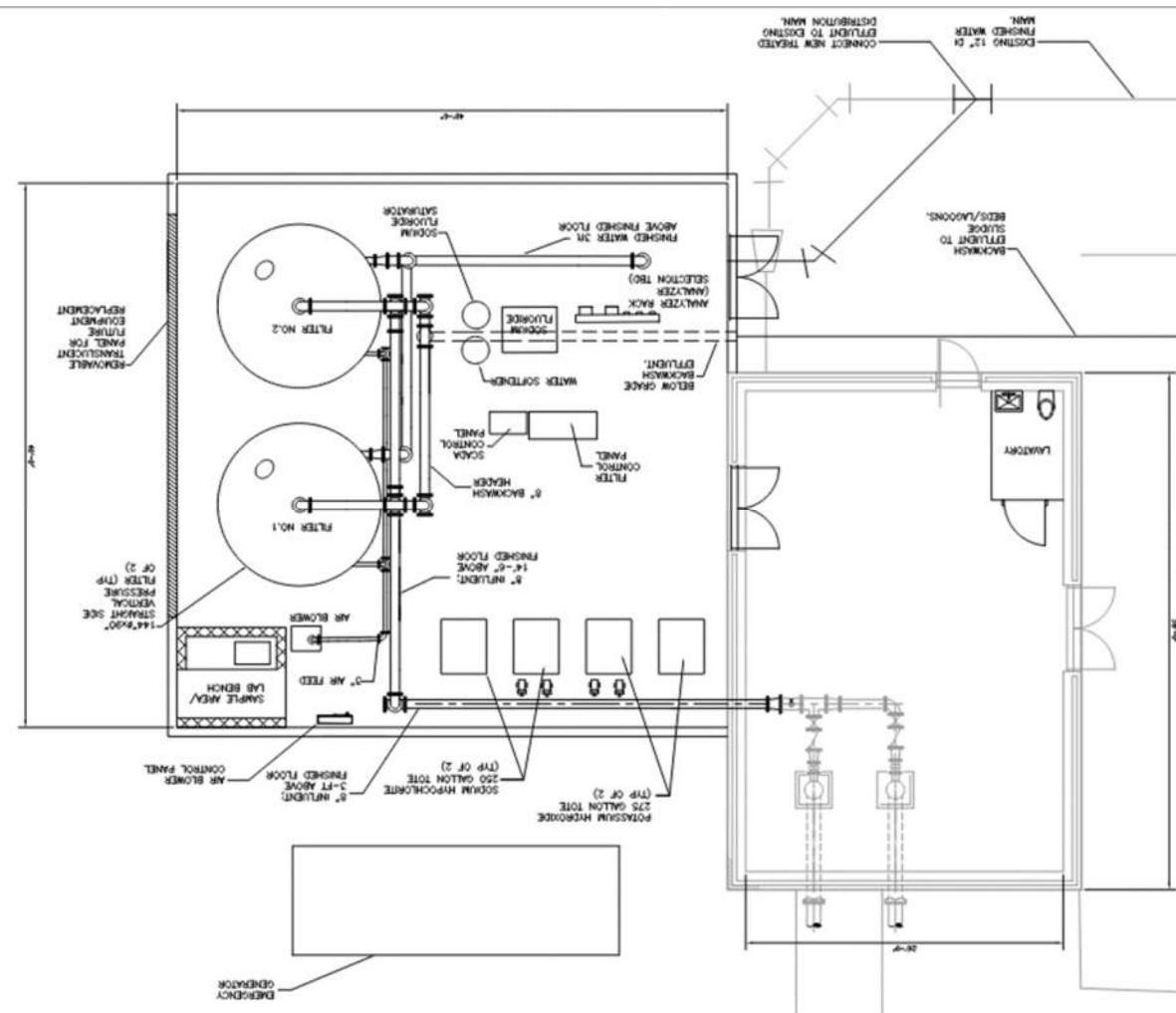


Glen Drive WTP Design – Iron/Manganese Piloting

- January 2022 approval of Pilot Plan from MassDEP
- March 28, 2022 start
- 2 weeks of piloting
- Pilot report
- Filtered water – PFAS bench scale testing



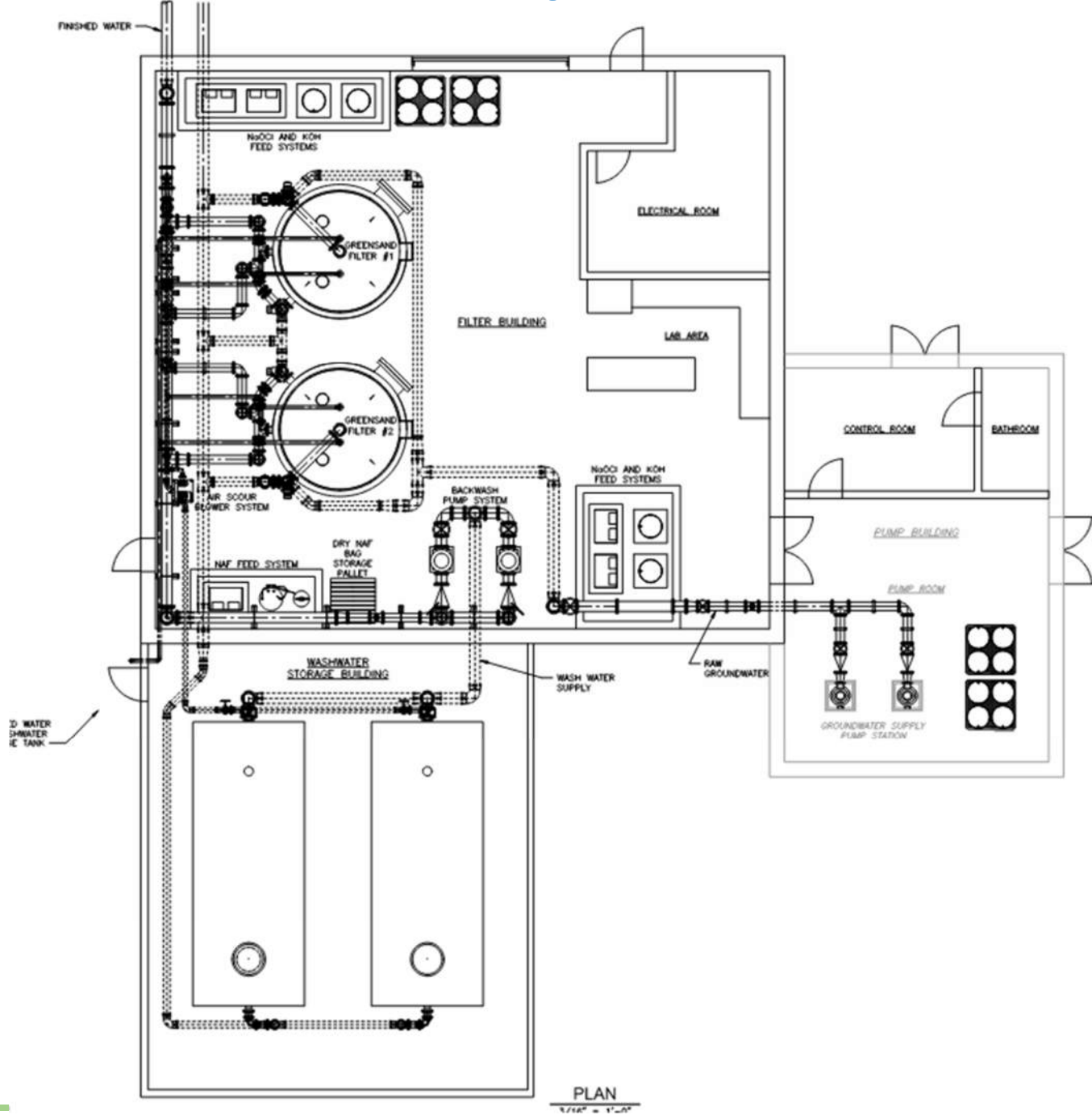
Glen Drive WTP – Concept to 30% Design



Concept

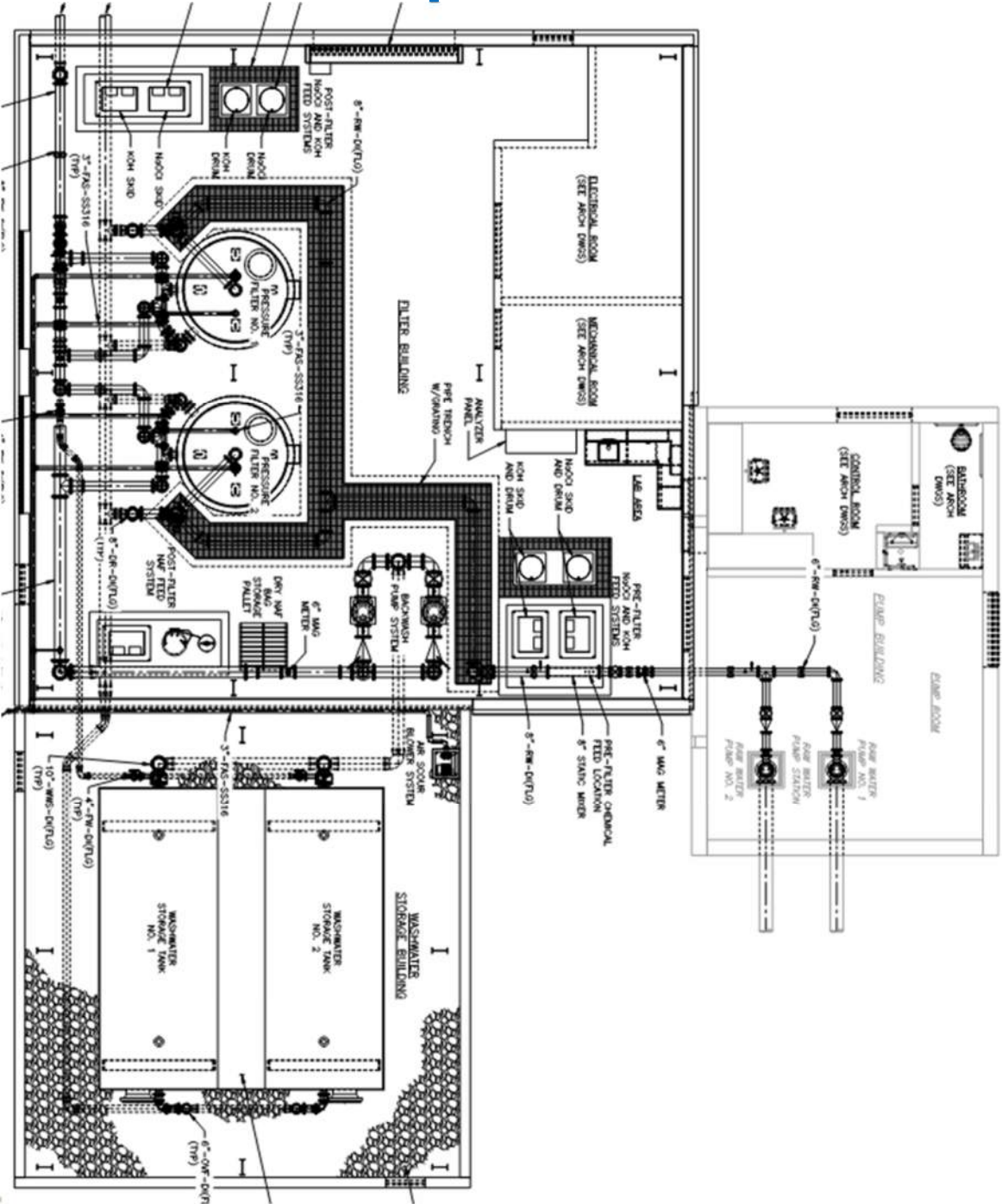


Glen Drive WTP – Concept to 30% Design



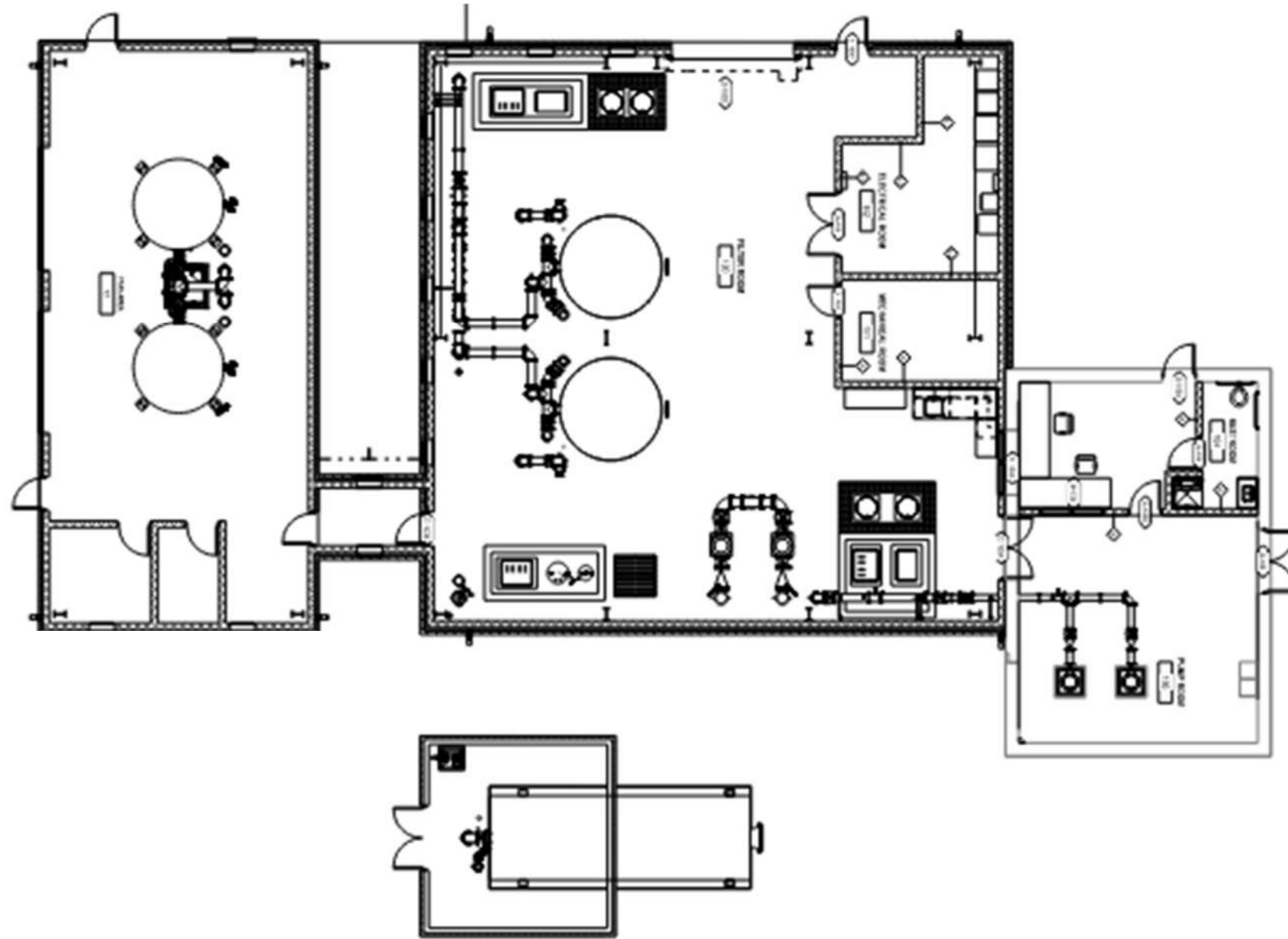
10% Layout

Glen Drive WTP – Concept to 30% Design



30% Layout

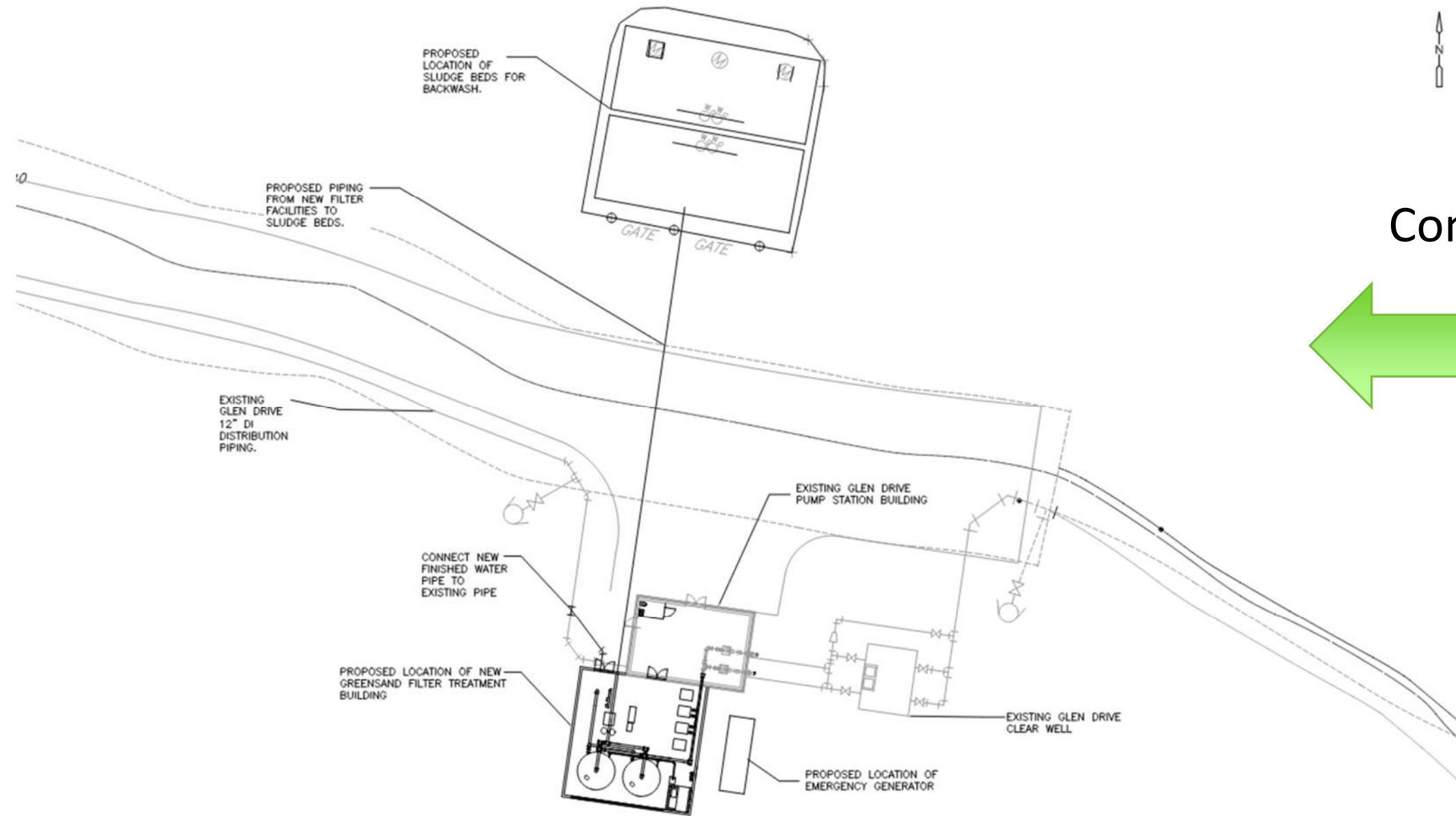
Glen Drive WTP – Concept to 30% Design



30% Layout w/PFAS

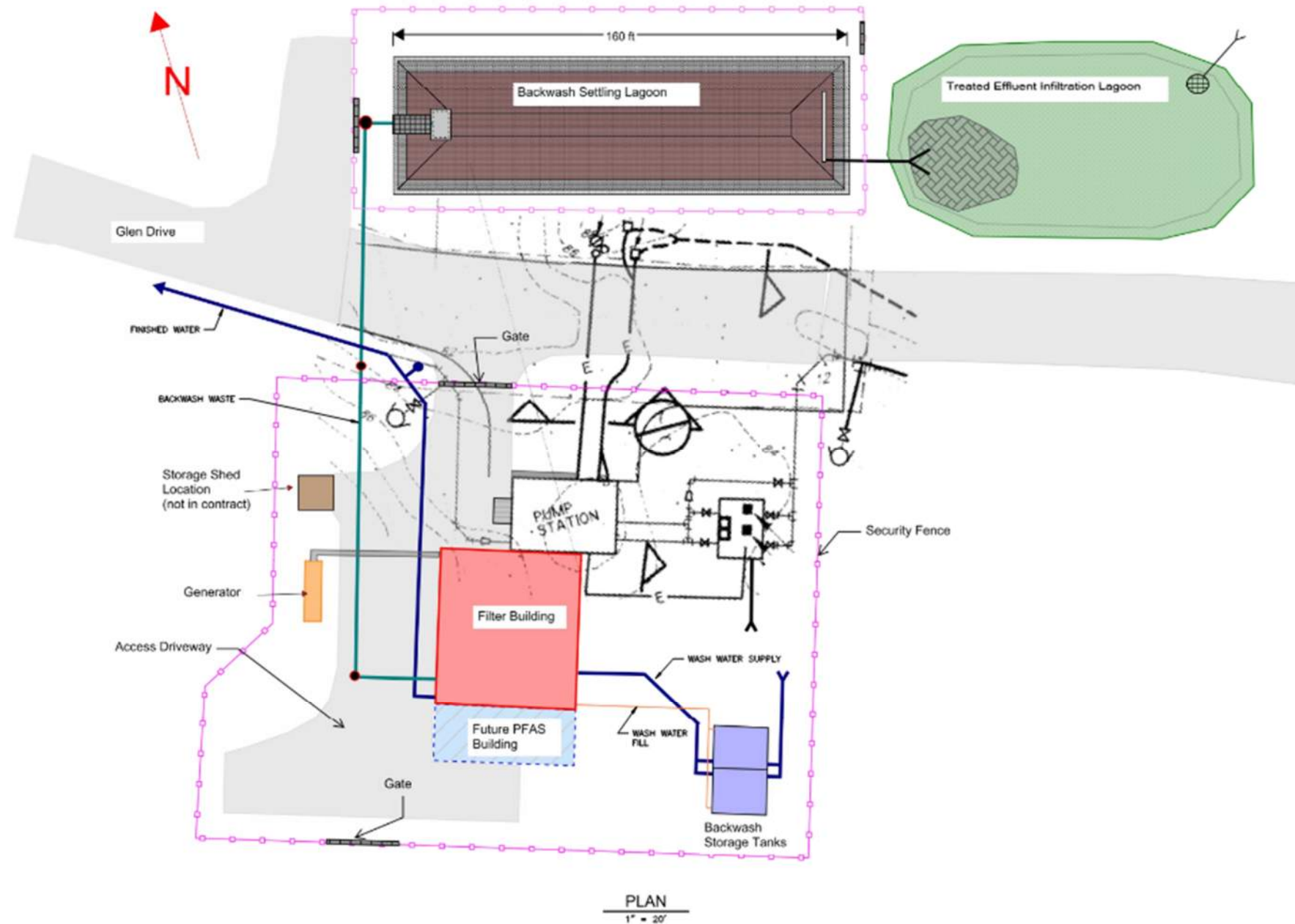


Glen Drive WTP – Concept to 30% Design



Concept

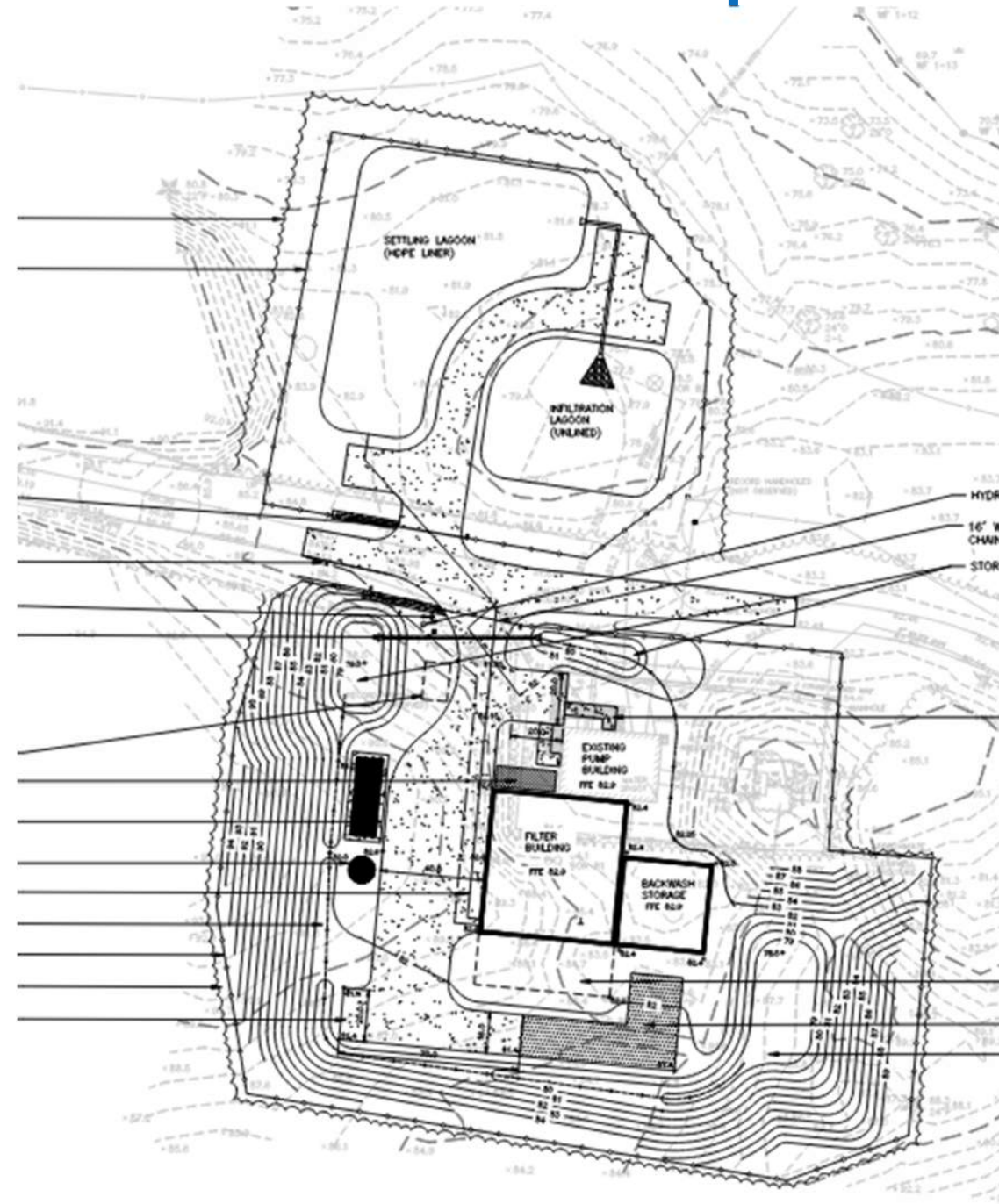
Glen Drive WTP – Concept to 30% Design



10% Design



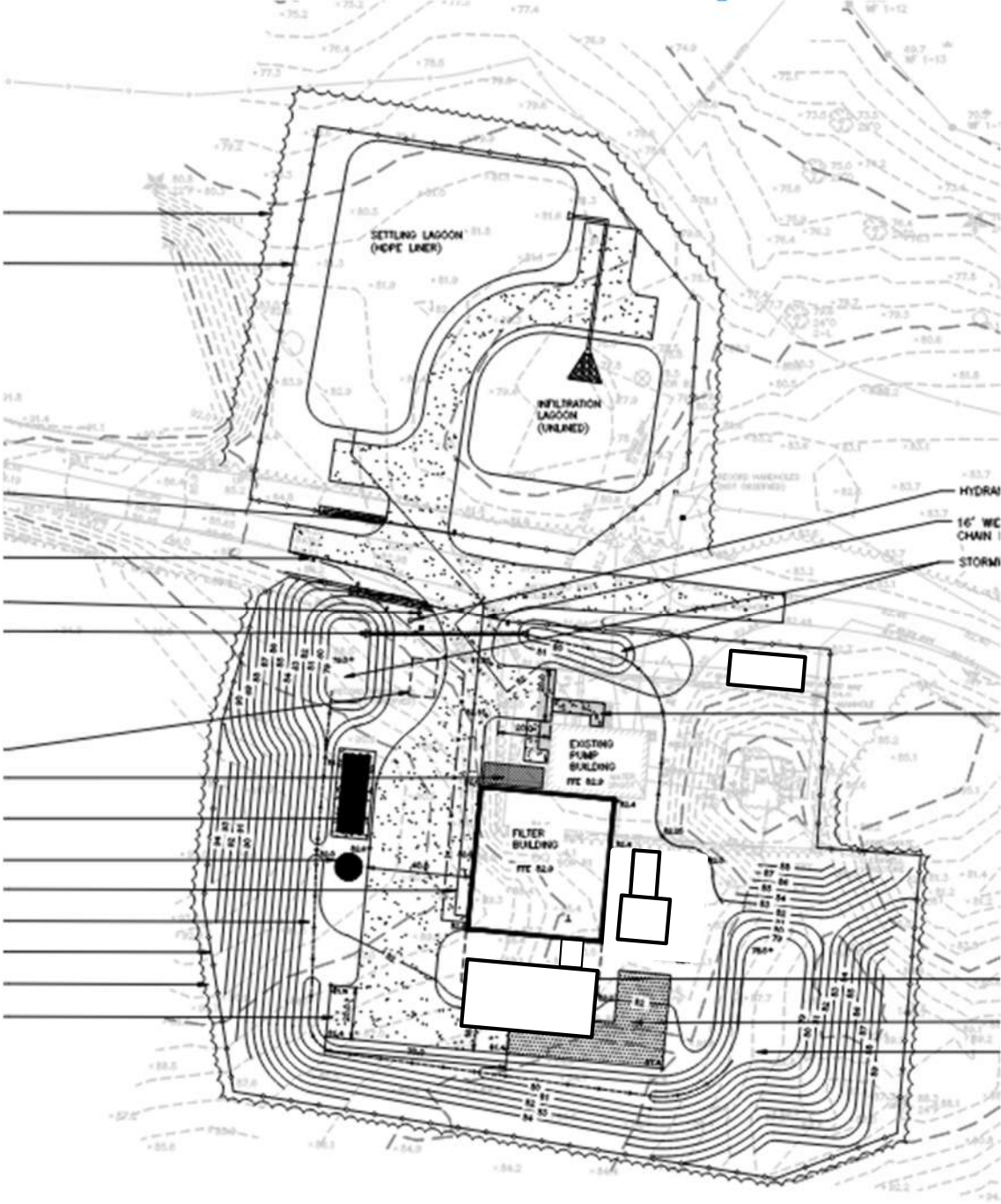
Glen Drive WTP – Concept to 30% Design



30% Design



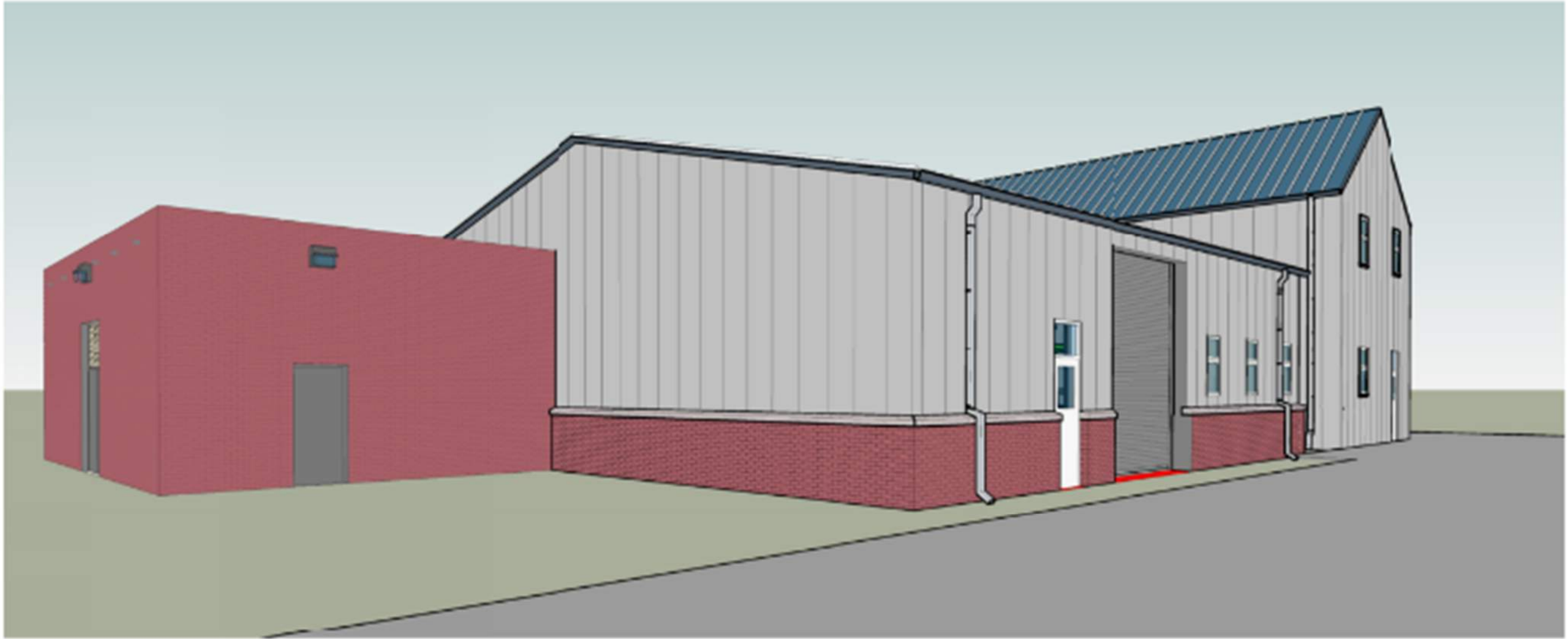
Glen Drive WTP – Concept to 30% Design



30% Design
w/PFAS



Glen Drive WTP – 30% Design with PFAS



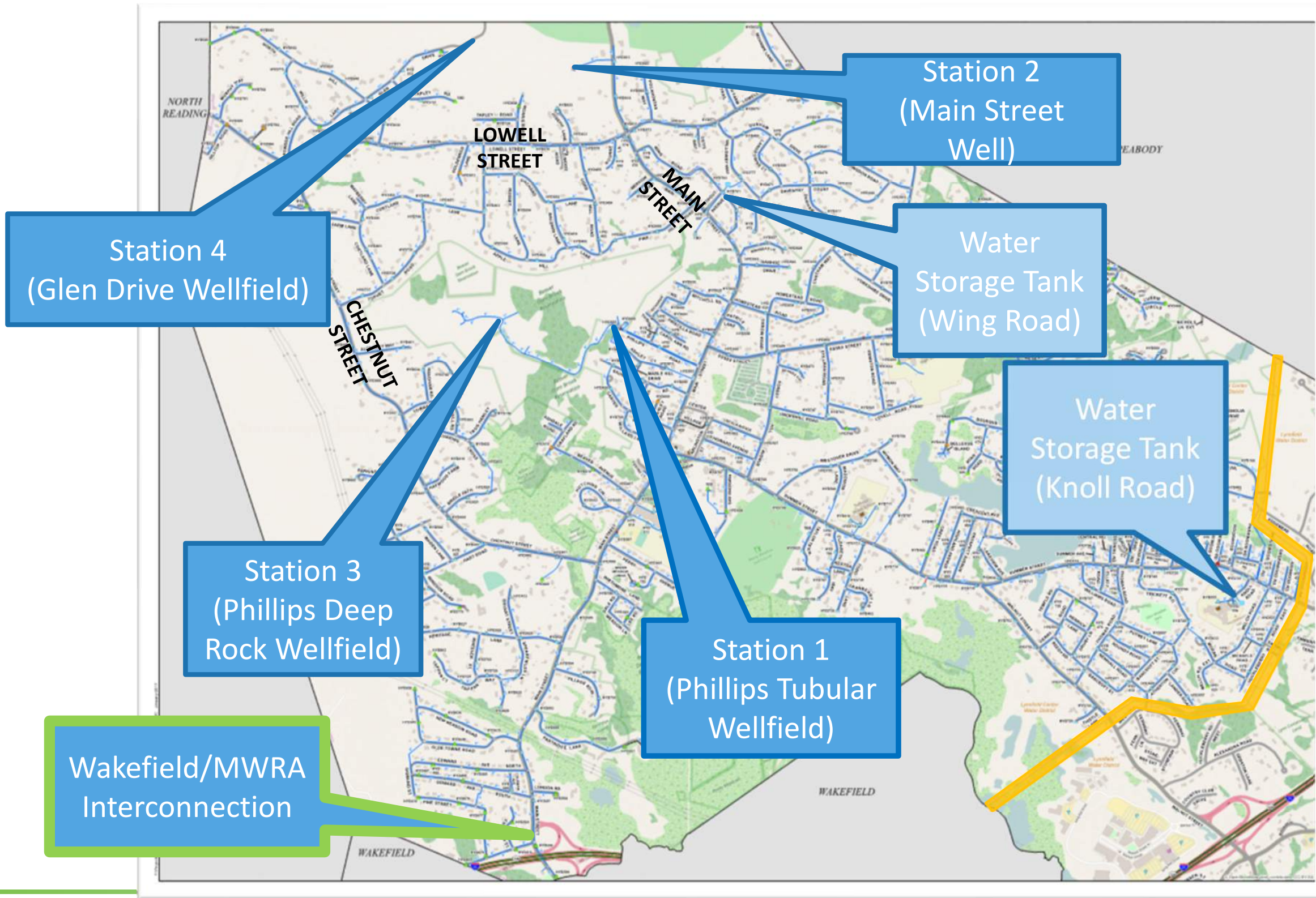
Glen Drive WTP – 30% Design with PFAS



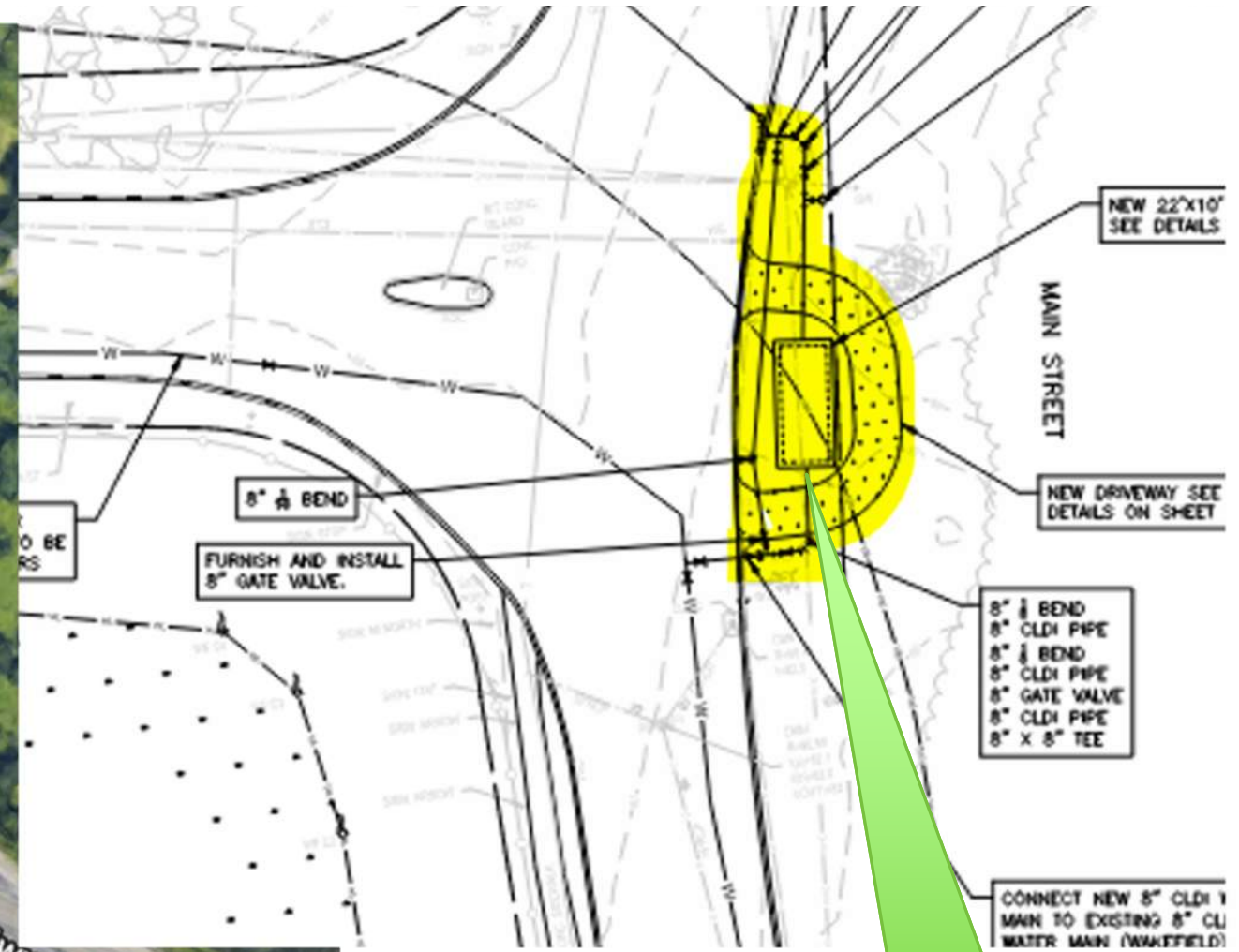
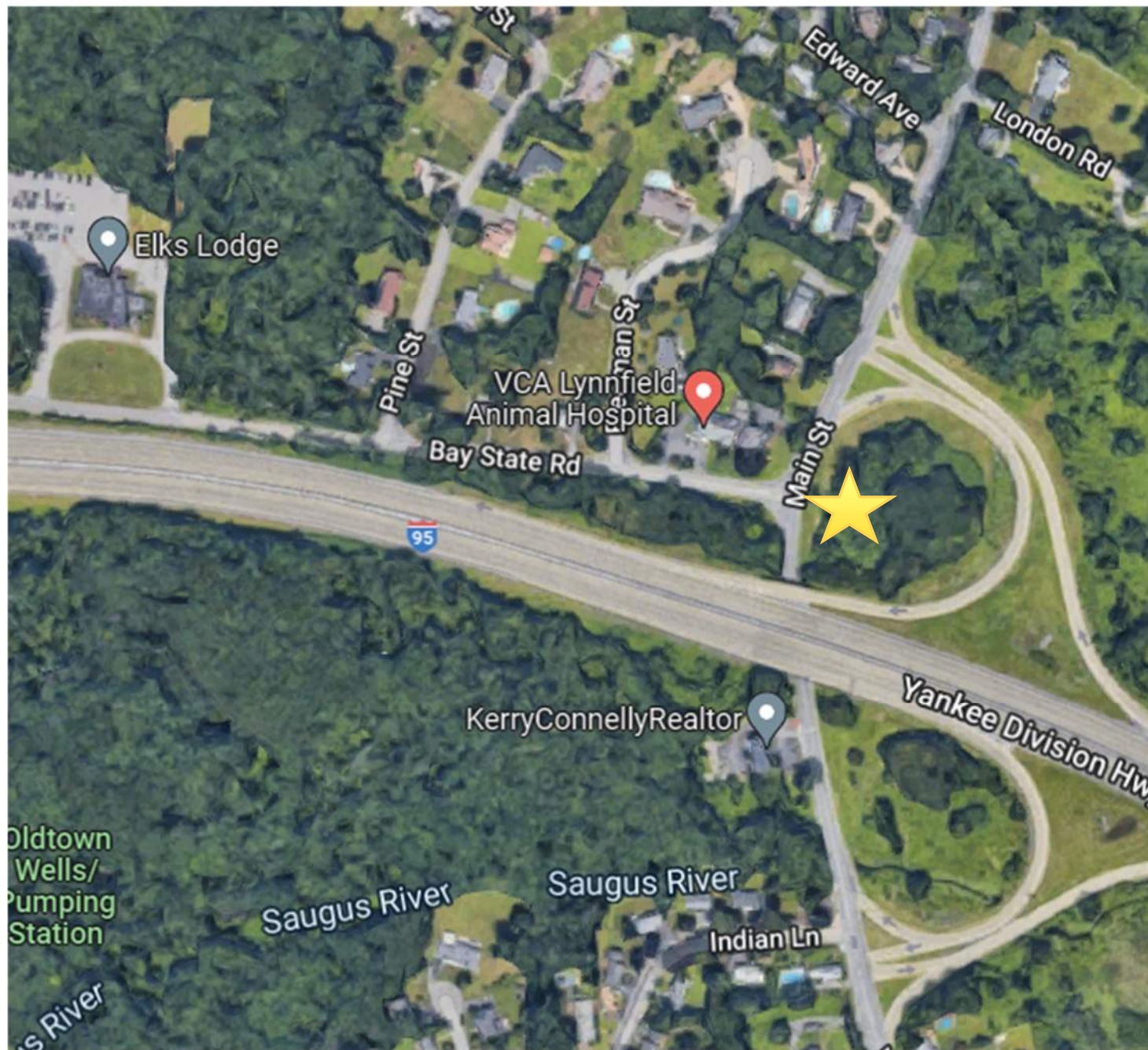
MWRA/Wakefield Interconnection Design

- Goal is to establish an additional water source for LCWD
- Project will construct a vault to meter and provide location to monitor water quality
- Vault will be located at Main Street and Bay State Road
- MassDOT right-of-way (ROW)



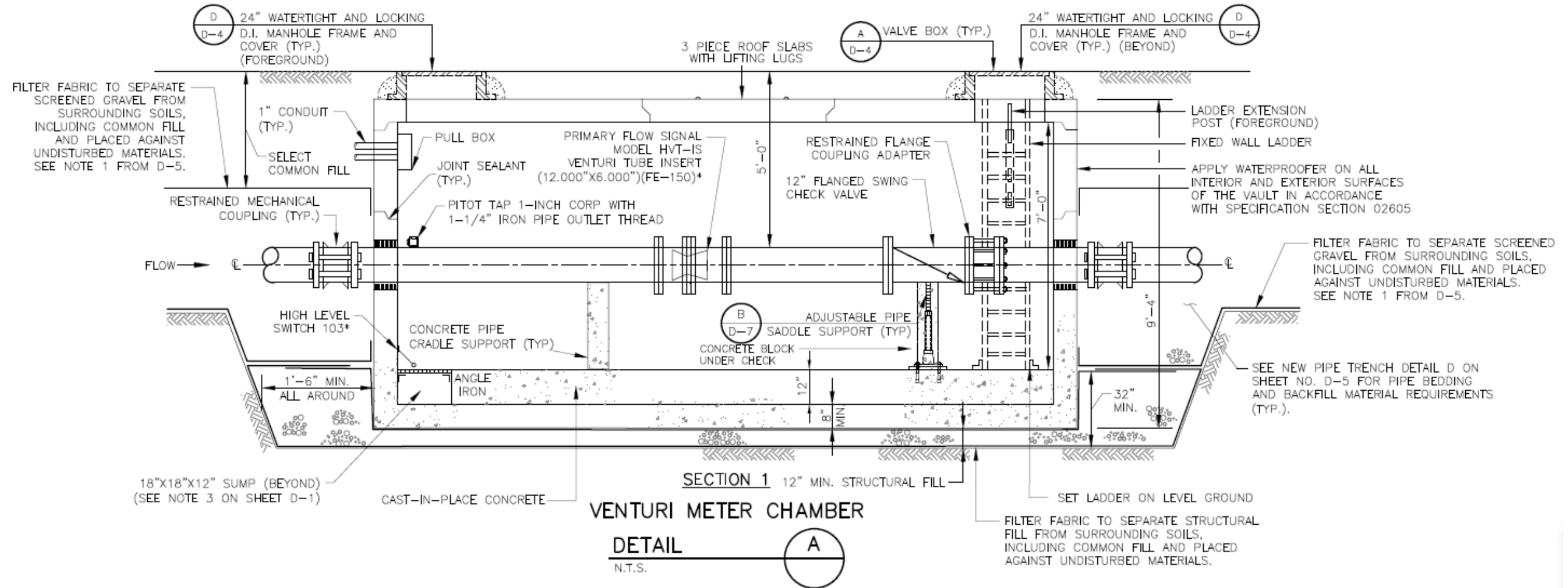


MWRA/Wakefield Interconnection Design



22-ft x 10-ft
vault

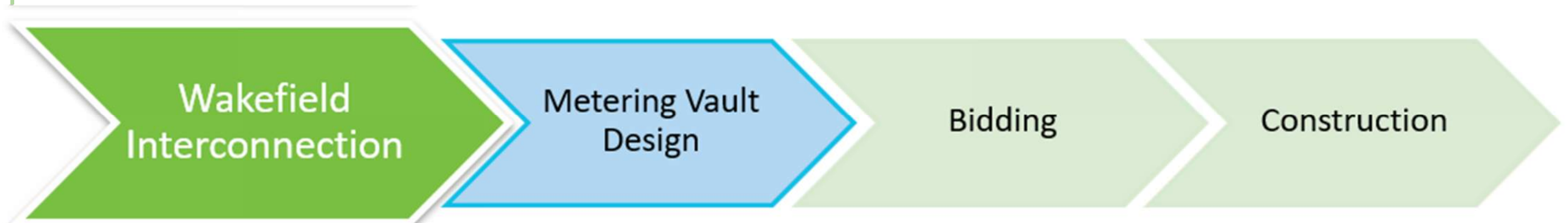
MWRA/Wakefield Interconnection Design



Interconnection Project Status

Completed to Date:

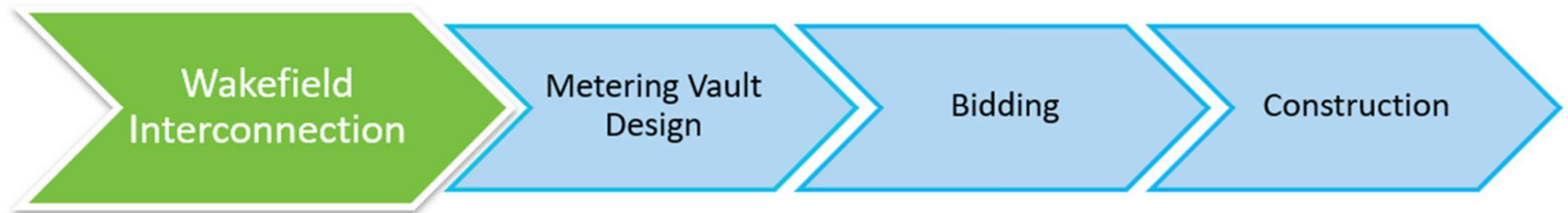
- Survey received from Wakefield on November 17, 2021
- Soil borings conducted on November 24, 2021
- Received Wakefield pipeline design files February 3, 2022
- 10% design March 4, 2022
- Met with Town of Lynnfield March 11, 2022
- MassDOT permit submitted March 22, 2022



Interconnection Project Status

Next Steps:

- Develop bid documents for Summer 2022 bid
- Traffic calming and site access with Lynnfield
- Construction Summer/Fall 2022
- Complete ITA and MWRA process
- Parallel project: SCADA connection and upgrades



Joining the MWRA

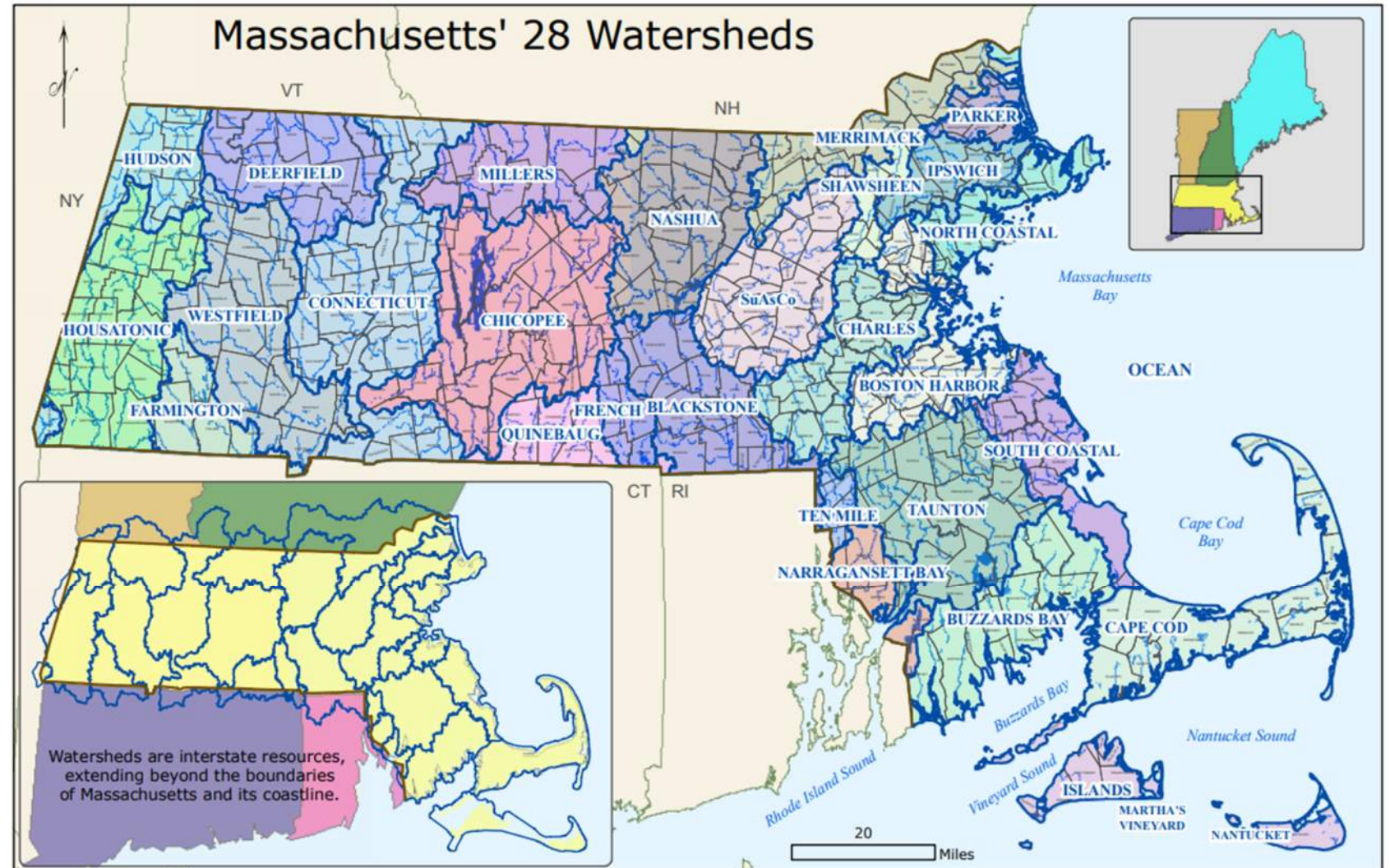
Phase 1 – Determine
the requirements with
WRC



- What is the process?
 - LCWD will be taking water from MWRA which withdraws from a different water basin
 - Requires review under the Interbasin Transfer Act (ITA), governed by Water Resources Commission (WRC) for applicability, insignificance and approval
 - Demonstrate acceptance of admission to MWRA by Board of Commissioners
 - Obtain approval of the Legislature and Governor
 - Submit application to the MWRA Advisory Board and Board of Directors community

WRC Process for ITA

- ✓ Determination of Applicability
- MEPA
 - Environmental Notification Form (ENF)
 - Draft Environmental Impact Report (DEIR)
 - Final Environmental Impact Report (FEIR)
- EIR as Application to WRC for ITA
- WRC Hearings
- WRC Approval for ITA



MWRA Admission – Phase 1

- Completed to Date:
 - Met with:
 - WRC – January 18, 2022
 - MWRA – January 26, 2022
 - MEPA – March 16, 2022
 - Familiarized each with the goals of the project
 - Developed understanding of timelines and requirements

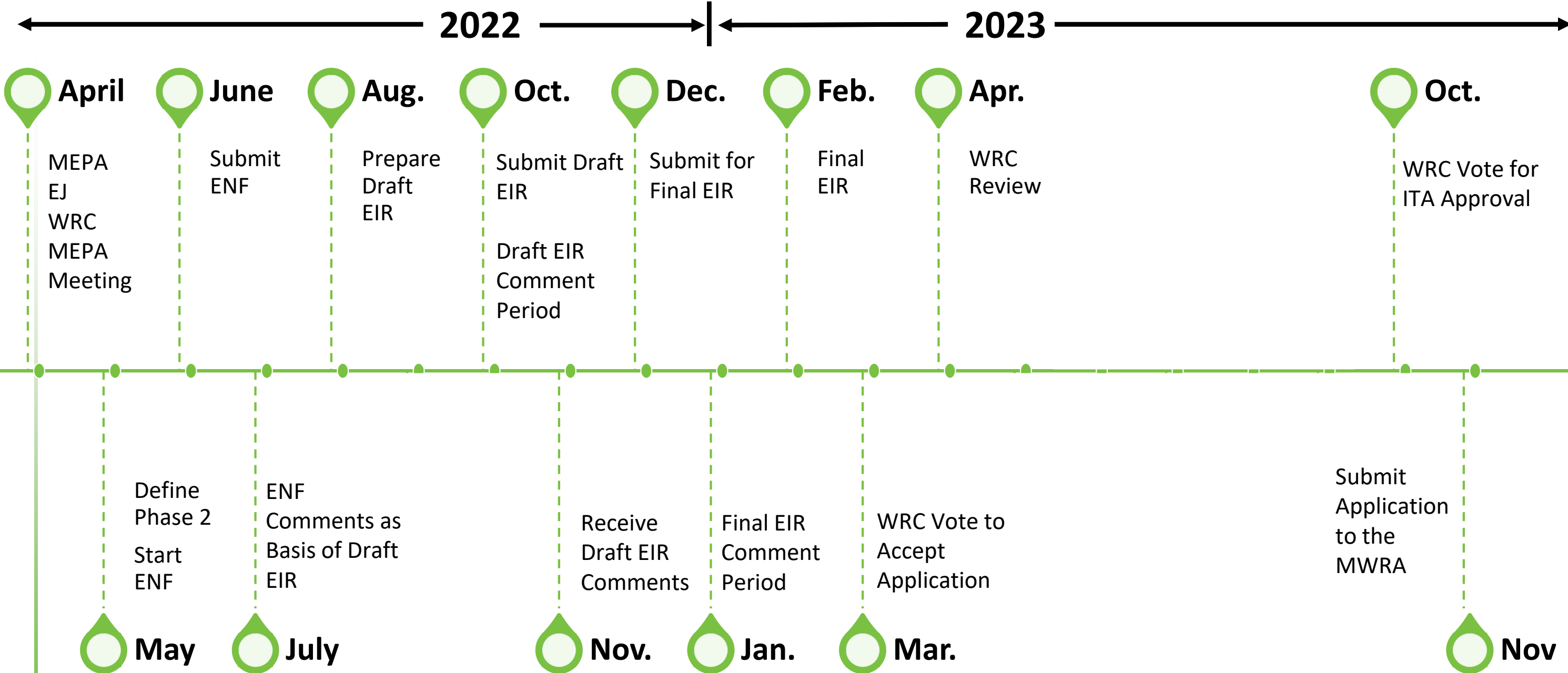


MWRA Admission – Phase 1

- Next Steps:
 - Second meeting with MEPA April 28, with WRC and MWRA to discuss Public Involvement Protocol for Environmental Justice (EJ) Populations
 - Meaningful public involvement
 - Required if project is within certain distance from EJ populations
 - Does it relate to donor basin or to LCWD's project?
 - Establish scope for Phase 2: Meet the Requirements



Joining the MWRA – Possible Schedule



Capital Plan Recap

- All three projects underway
- By our next meeting:
 - Interconnection plans and specs
 - ENF for MEPA/ITA
 - Glen Drive Facility revised 30% design with 10% PFAS, pilot and bench scale testing

Thank You

Questions