Poplar Heights Tank Replacement

Public Meeting

Timber Lane Elementary School
July 13, 2023
6:30 to 7:30 PM

Fairfax Water

Agenda

1. Introductions
2. Background and Objectives
3. Project Details
   - Proposed Tank Design
   - Water Main Installations
   - Conceptual Site Layout
4. Project Schedule
5. Tank Photographs and Renderings
6. Questions

Fairfax Water – Who We Are

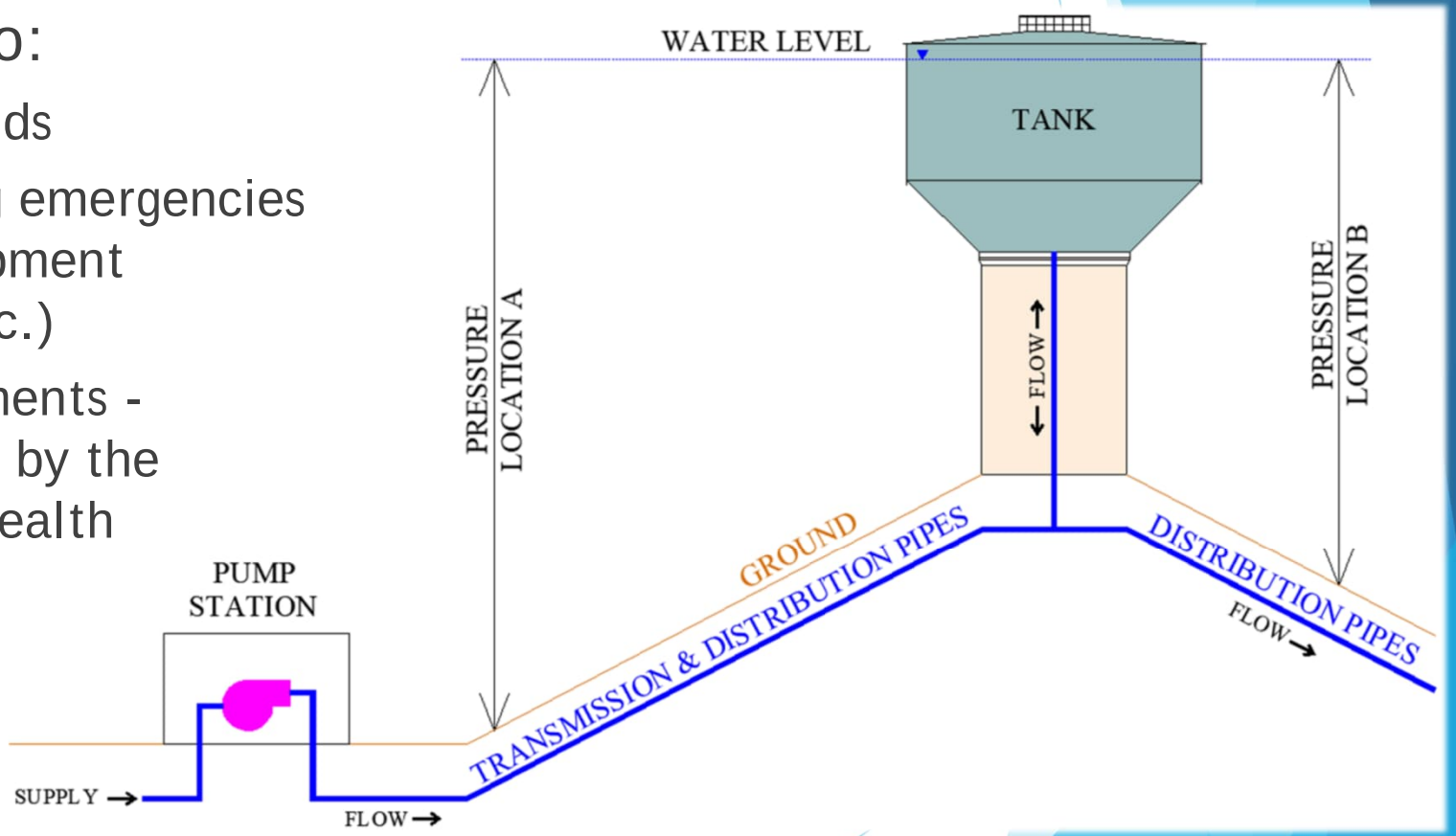
- Chartered in 1957 by the State Corporation Commission as a public, non-profit water utility
- Regulated by the Virginia Department of Health
- Largest water utility in Virginia, serving nearly 2 million people in Northern Virginia
  - Retail – Fairfax County and Cities of Falls Church and Fairfax
  - Wholesale – Loudoun Water, Prince William County Service Authority, Virginia American Water (City of Alexandria and Dale City), Dulles Airport, Fort Belvoir, Town of Vienna, and Town of Herndon
- Water only – sanitary sewer system managed by Fairfax County
- Acquired City of Falls Church water system in 2014
  - Poplar Heights tank acquired from City of Falls Church

Fairfax Water – Providing an Essential Community Service since 1957

- Every community needs safe, clean, and reliable water
  - Fairfax Water's mission is to provide its customers with reliable and abundant water of exceptional quality
- System reliability is entirely dependent on water supply facilities. Our water system includes:
  - 32 pump stations
  - 30 tanks
  - 4,000+ miles of water main

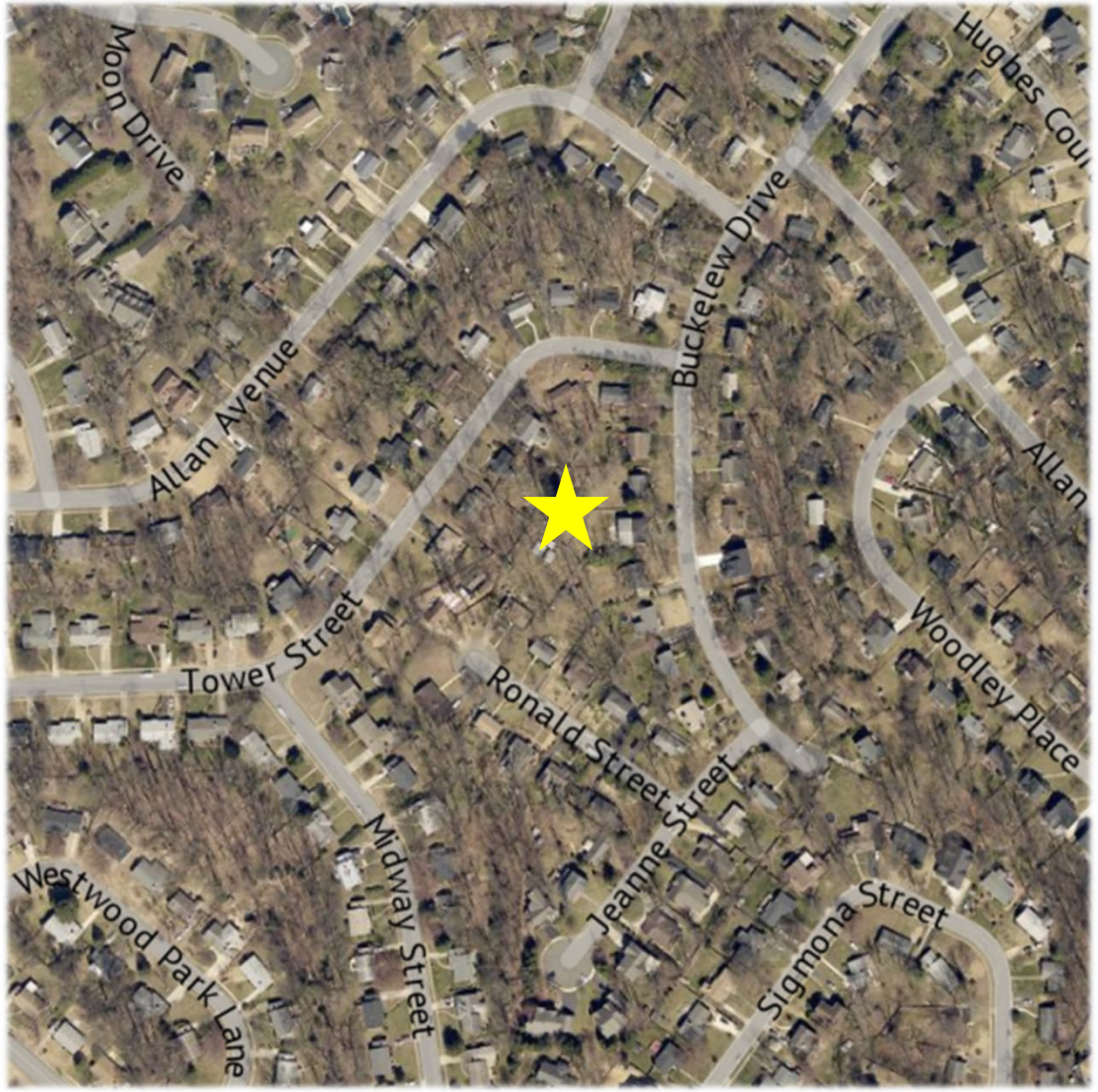
Why Do Water Systems Have Tanks?

- Control water system pressure
- Provide water storage to:
  - Meet peak system demands
  - Sustain operations during emergencies (e.g., main breaks, equipment outages, fire-fighting, etc.)
  - Meet regulatory requirements - Fairfax Water regulated by the Virginia Department of Health



Typical Water Tank Operation

Poplar Heights Tank Location



Source: Fairfax County GIS

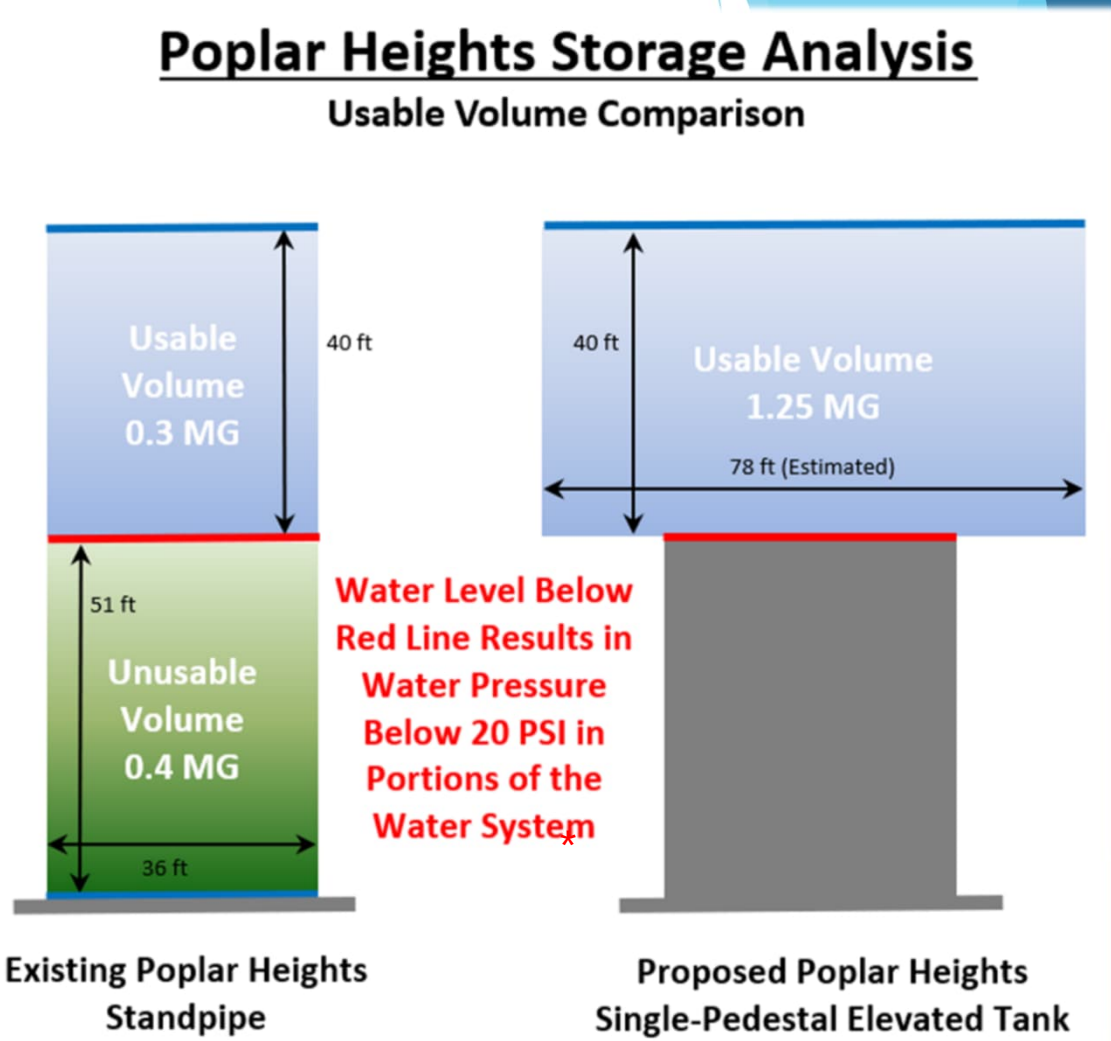
Existing Poplar Heights Tank

- Only water storage in the zone
- Style of tank is inappropriate for current use
  - 60% of water is unusable
  - Provides inconsistent pressures
- Undersized, limiting:
  - System resiliency during emergencies (e.g., breaks, power outages, etc.)
  - Fire flow reserves
- 71 years old
  - Tank has reached end of useful life and is functionally deficient

Project Objectives

Replace aging Poplar Heights tank to improve water delivery and enhance reliability

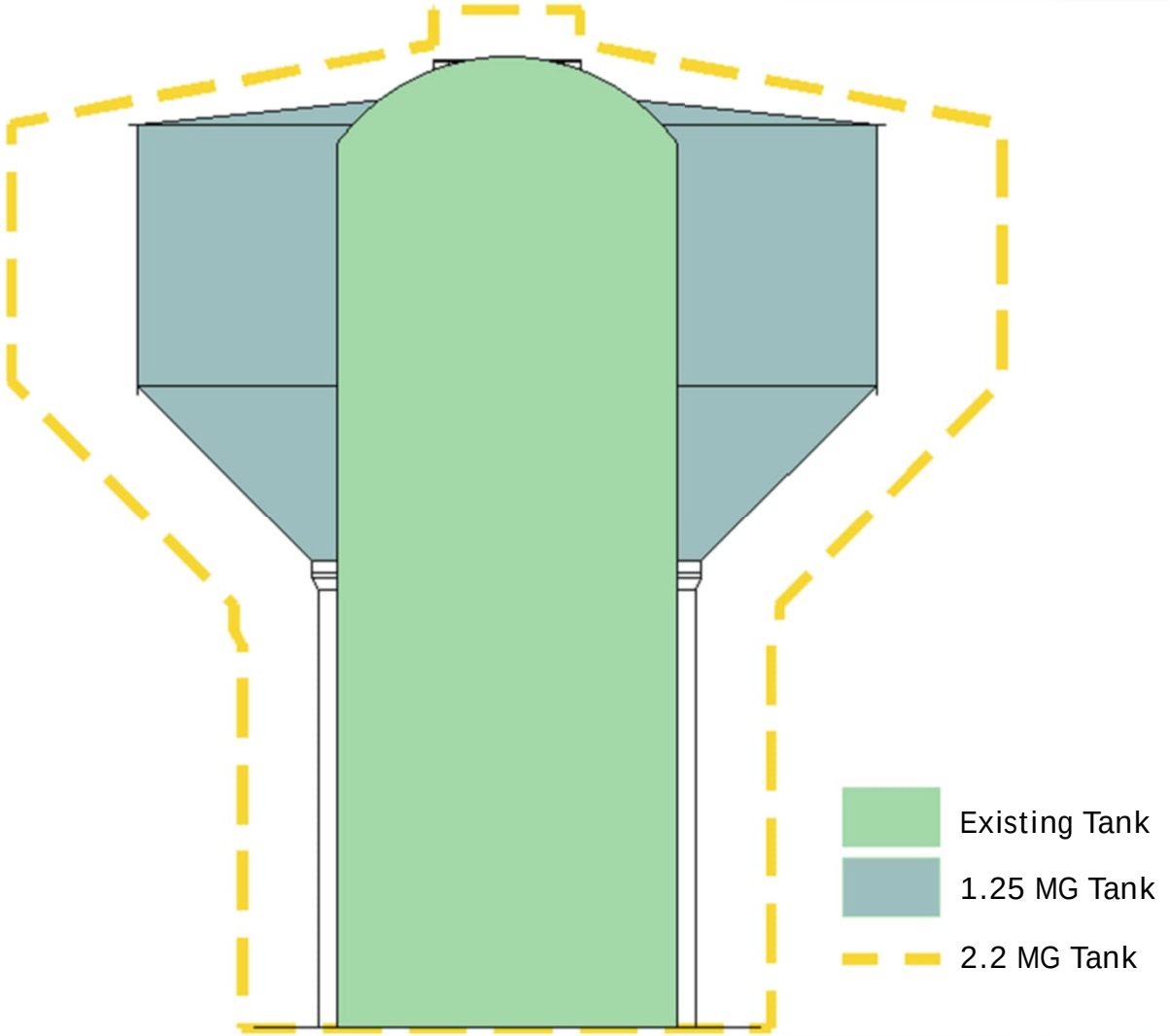
- Provide more consistent water pressure
- Improve water quality
  - Eliminate unusable volume
- Improve system resiliency during emergencies
- Improve fire flows



* Virginia Department of Health Minimum Requirement

Proposed Tank

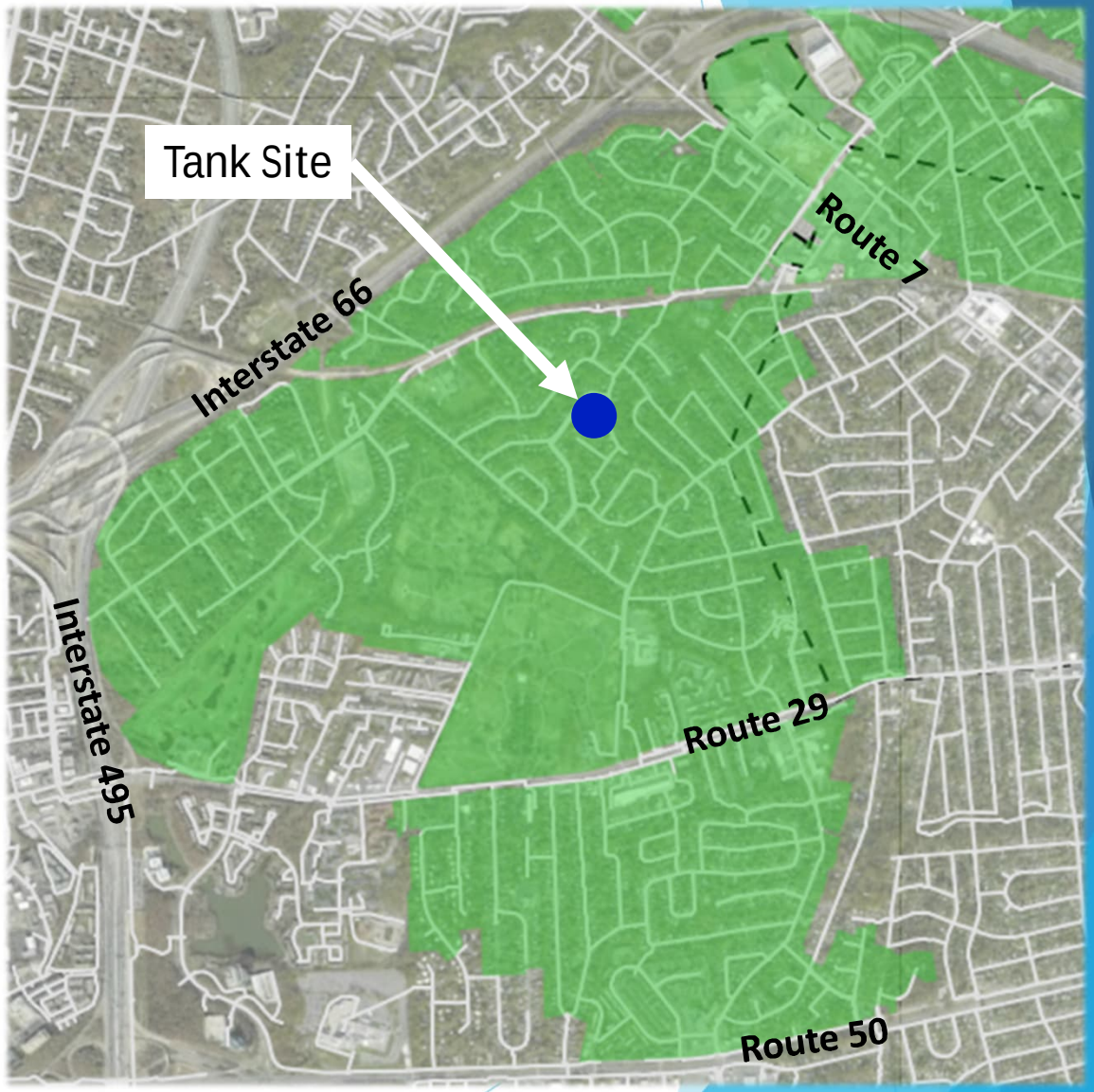
- Approximately same height as existing tank
- Elevated tank design
  - Provides fully usable water storage
  - Meets current standards and best practices
- Increased volume
  - Study noted need for a 2+ million-gallon tank to best meet current and future service demands
  - After evaluation of site constraints, a smaller 1.25-million-gallon tank was selected



Massing Comparison of Various Tank Sizes

Site Evaluation

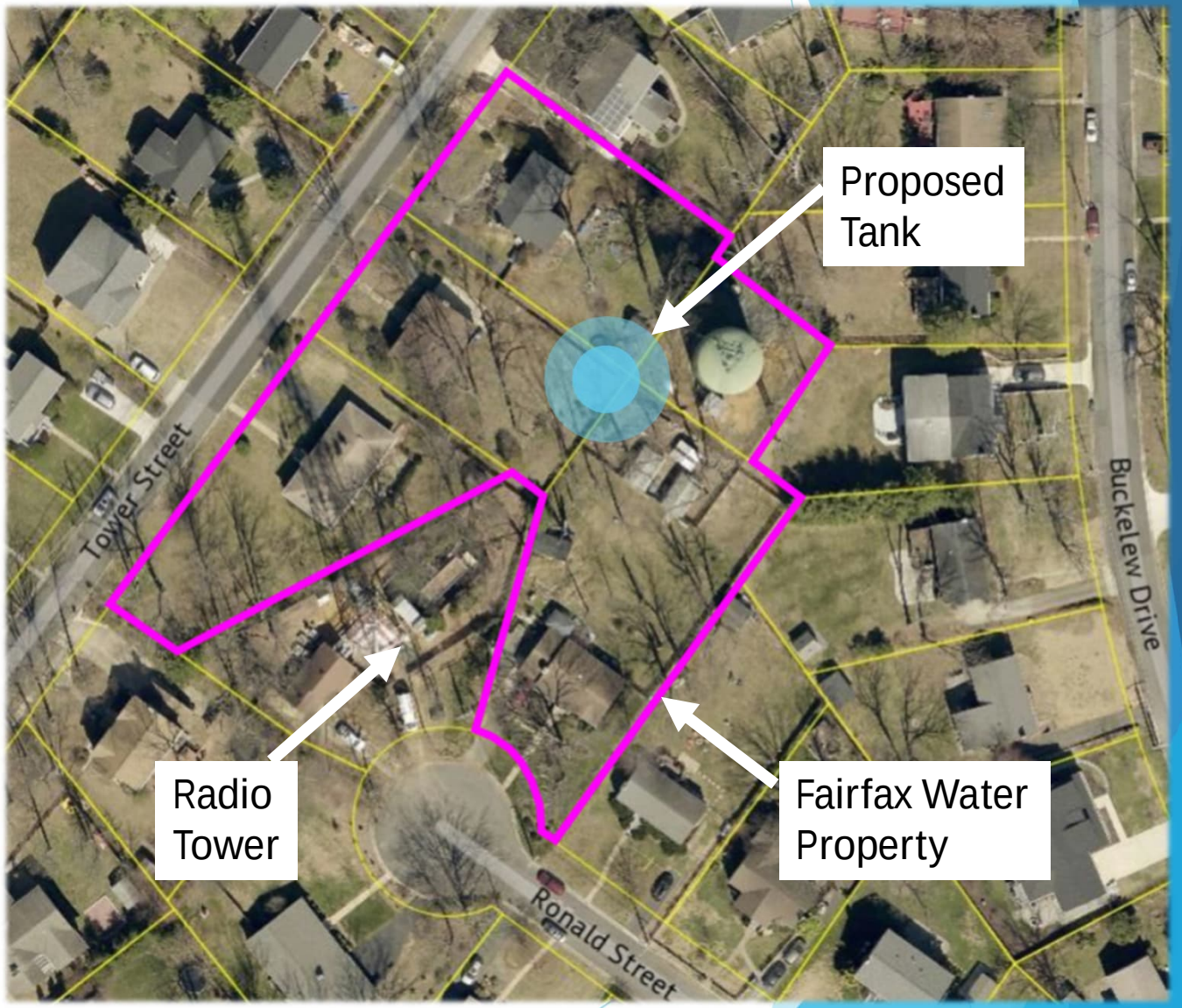
- Site evaluation performed in 2016
- Poplar Heights site was selected for following reasons:
  - Current site used for water storage since 1952
  - Highest ground elevation in area served by tank
  - Located centrally within area served by the tank
  - Best use of existing infrastructure



Primary Area served by Poplar Heights Tank

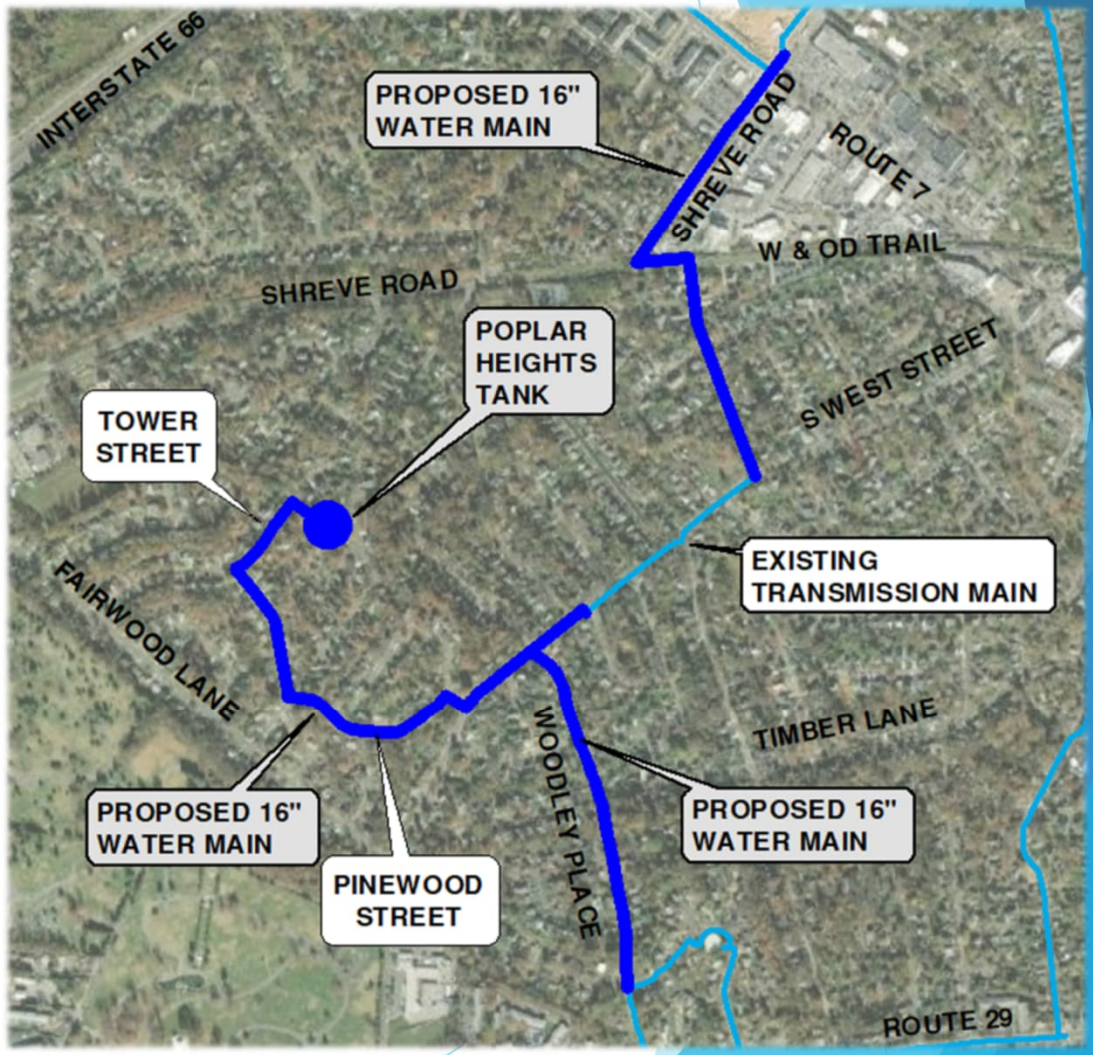
Proposed Tank Site

- Fairfax Water acquired 4 properties adjacent to existing tank site to facilitate construction of the new tank



Water Main Installations

- 8,200 feet of 16-inch water main to serve new tank
- Route allows for replacement of aging water mains in need of replacement
- Roads will be paved after water main installation



Conceptual Site Layout

- Site provides 50-foot-wide vegetated buffer from all privately-owned residences
- Plantings include evergreen trees and shrubs to provide solid year-round screening at maturity
- Entrance offset to minimize sightline
- Removal of two houses required
  - 7405 and 7407 Tower Street
- Existing tank to be demolished prior to construction

Project Schedule

Special Exception and 2232 Application to Fairfax County	Summer 2023
Public Hearings	Mid-2024
Design and Permitting Completion	2024/2025
Water Main Installations	2024/2025
Tank Construction Start	Mid-2025
Tank Construction Completion	Early 2027

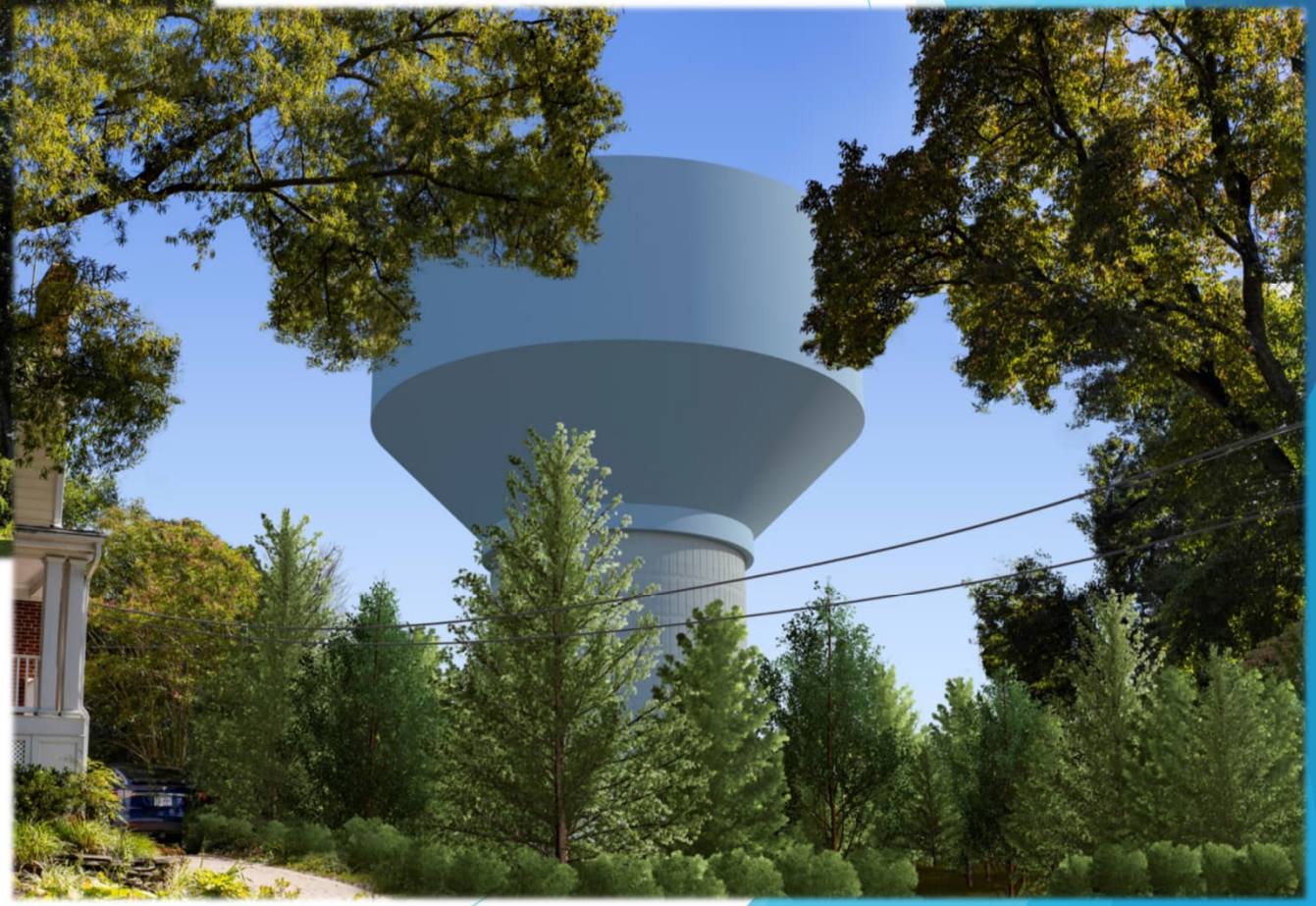
Photographs and Renderings

Looking towards 2522 Buckelew Drive

Looking northwest at 2528 Buckelew Drive

Looking towards 7405 Tower Street

Looking towards 7405 Tower Street



Looking towards 7411 Tower Street

Looking towards 7411 Tower Street

Looking towards 7326 Ronald Street

Looking towards 7421 Allan Avenue

Looking towards 7326 Ronald Street

Questions or Comments?

Questions or comments may be submitted to Fairfax Water in the Comment Box on the project webpage. Please visit www.fairfaxwater.org/poplar-heights-tank-replacement.