

# T/O Ulysses Route 96 Watermain Extension Feasibility Evaluation

May 31, 2023

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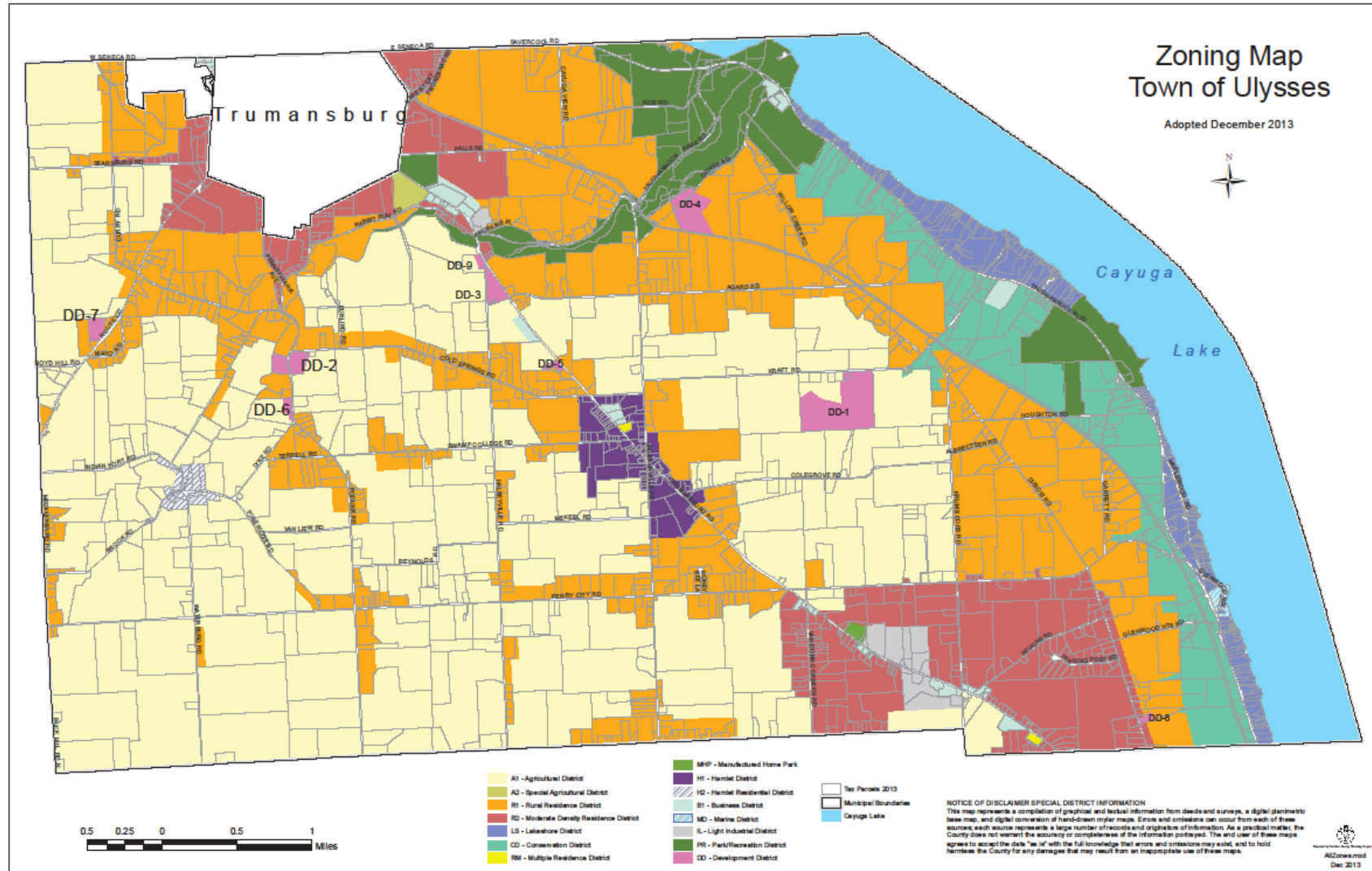
# Background

- MRB Group is the Town of Ulysses Engineer and has been involved in ongoing Engineering Reports and District Formation evaluations for various water utility aspects of the Town
- MRB Group was tasked with evaluating the feasibility of an interconnection with the Village of Trumansburg along Route 96 from the Fairgrounds to Cold Springs Road, watermain extension along Route 96 to Taughannock Park Road and watermain extension from Cold Springs Road to Smart Start Daycare Facility

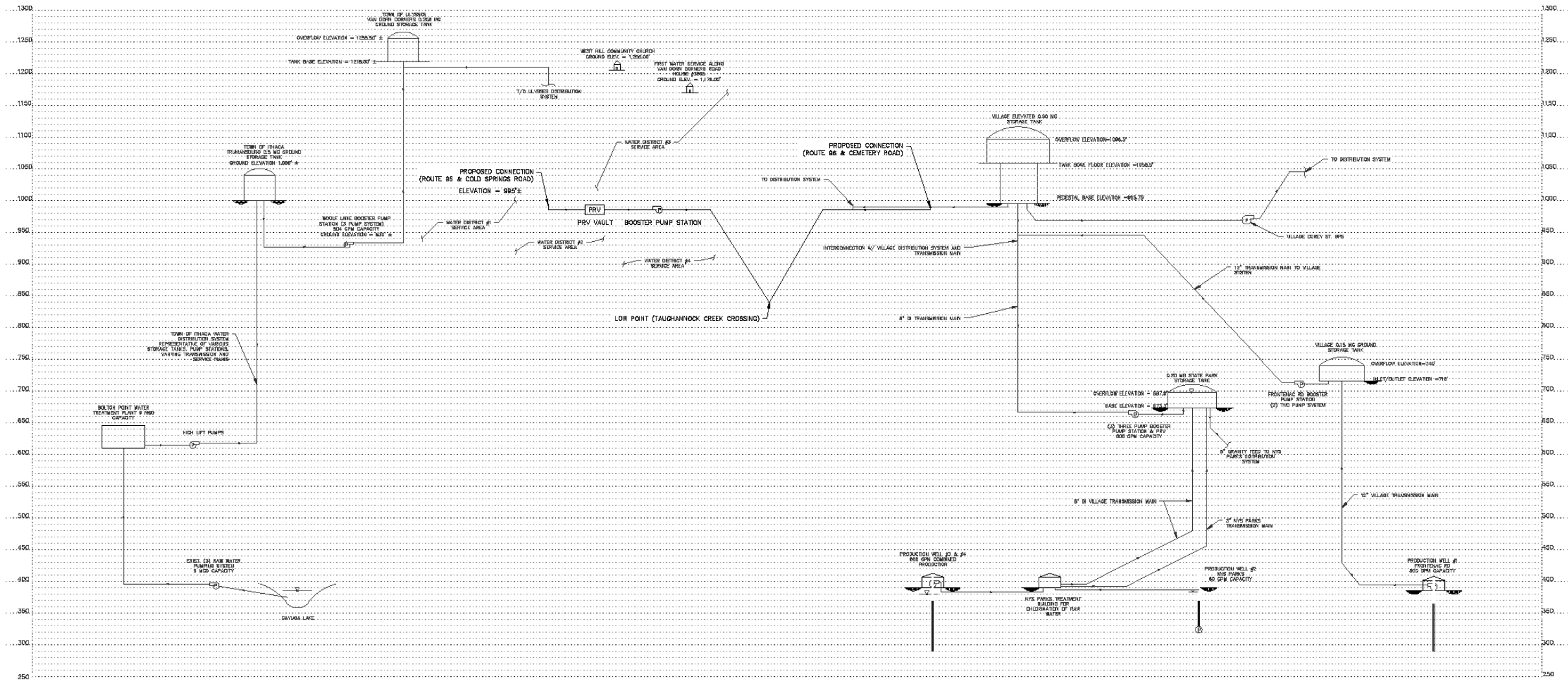
# Study Area

- MRB Group evaluated the potential extension of water from the Village of Trumansburg to Cold Springs Road and Route 96 intersection. Three options were evaluated:
  - Option 1 – Extension from Village of Trumansburg near intersection of Cemetery Road and Route 96 to Cold Springs Road for an interconnection with Water District #3
  - Option 2 - Extension from Village of Trumansburg near intersection of Cemetery Road and Route 96 to Taughannock Park Road
  - Option 3 – Extension from Water District #3 along Route 96 from Cold Springs Road to end of parcel of Smart Start Daycare
- Evaluations looked at feasibility of extending water, the sources of water to be provided, cost estimate for the Total Project (public bid) and cost per water service connection.
- Generally, desire for water along Route 96 for various residential/commercial properties is desired as conveyed by various Town staff.
- Smart Start Day Care Facility has documented well water quality issues/concerns and a petition for users south of Smart Start Day Care initially provided input on desire for water.

# Town of Ulysses Zoning Map



# Water System Cross Section



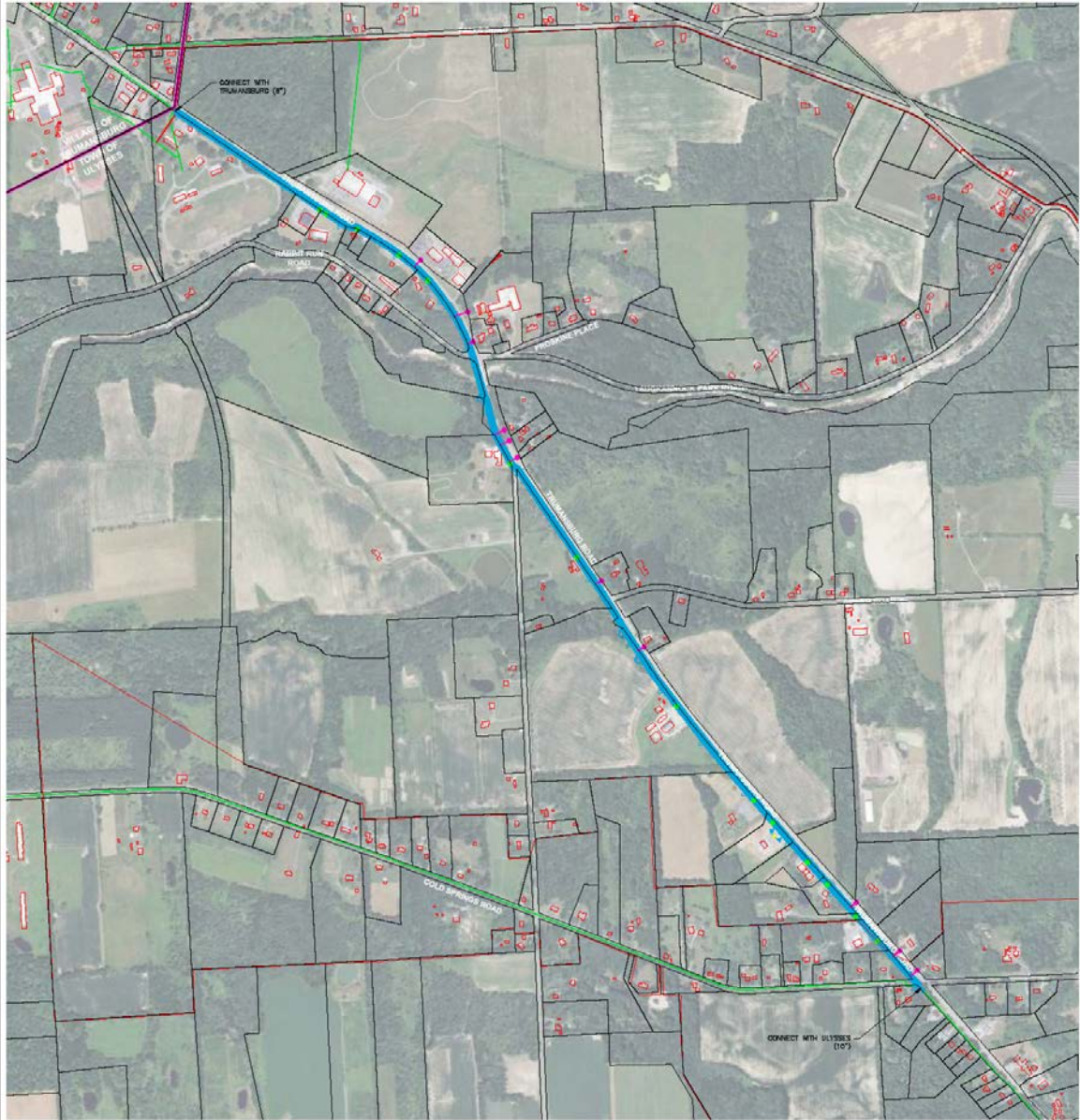
WATER SYSTEM CROSS SECTION  
N.T.S.

OPTION #1: INTERCONNECT TRUMANSBURG AND ULYSSES

# Evaluation Considerations

- New York State Comptroller's Office 2023 Low Cost Threshold set at \$1,040/year
  - Threshold includes cost for debt service, operation and maintenance cost and other charges (i.e. cost of water).
  - Threshold does not include the cost for hook-up fees
- Cost of water from T/O Ithaca and V/O Trumansburg varies
  - Town of Ithaca Water District #3 Cost = \$10.05/1,000 gallons
    - Assume 50,000 gallons per year (\$502.50/year)
    - Cost for Operation and Maintenance (by Ulysses) not included in T/O Ithaca Water Rate
  - Village of Trumansburg = \$56.25 Base Charge + \$23 capital Charge + \$10.50/1,000 gallons
    - Base charge and Capital Charge billed bimonthly
    - Assume 50,000 gallons per year (\$937.50/year)
- T/O Ulysses Water District #3 has a 30-year Water Service Agreement with Town of Ithaca commencing 30<sup>th</sup> day of October, 2003.
- Water District #3 recently installed a Total Trihalomethane (TTHM) Removal System in Water District #3 to deal with MCL exceedances
- Water consumption to assess # of Equivalent Dwelling Units (EDU's) not included in evaluation.
- Construction within NYS Department of Transportation Right-of-Way generally increases costs and duration of project development
- Ultimately, density is critical in maintaining reasonable cost per individual users

# Option 1 - Site Plan



- 8" Ductile Iron Pipe Watermain
- 10,125 Linear Feet +/-
- 575 Linear Feet +/- Directional Drill
- Booster Pump Station including building, pumps, pipes/valves, electrical power and control wiring and Pressure Reducing Valve structure to enable bidirectional flow of water

# Option 1 Details

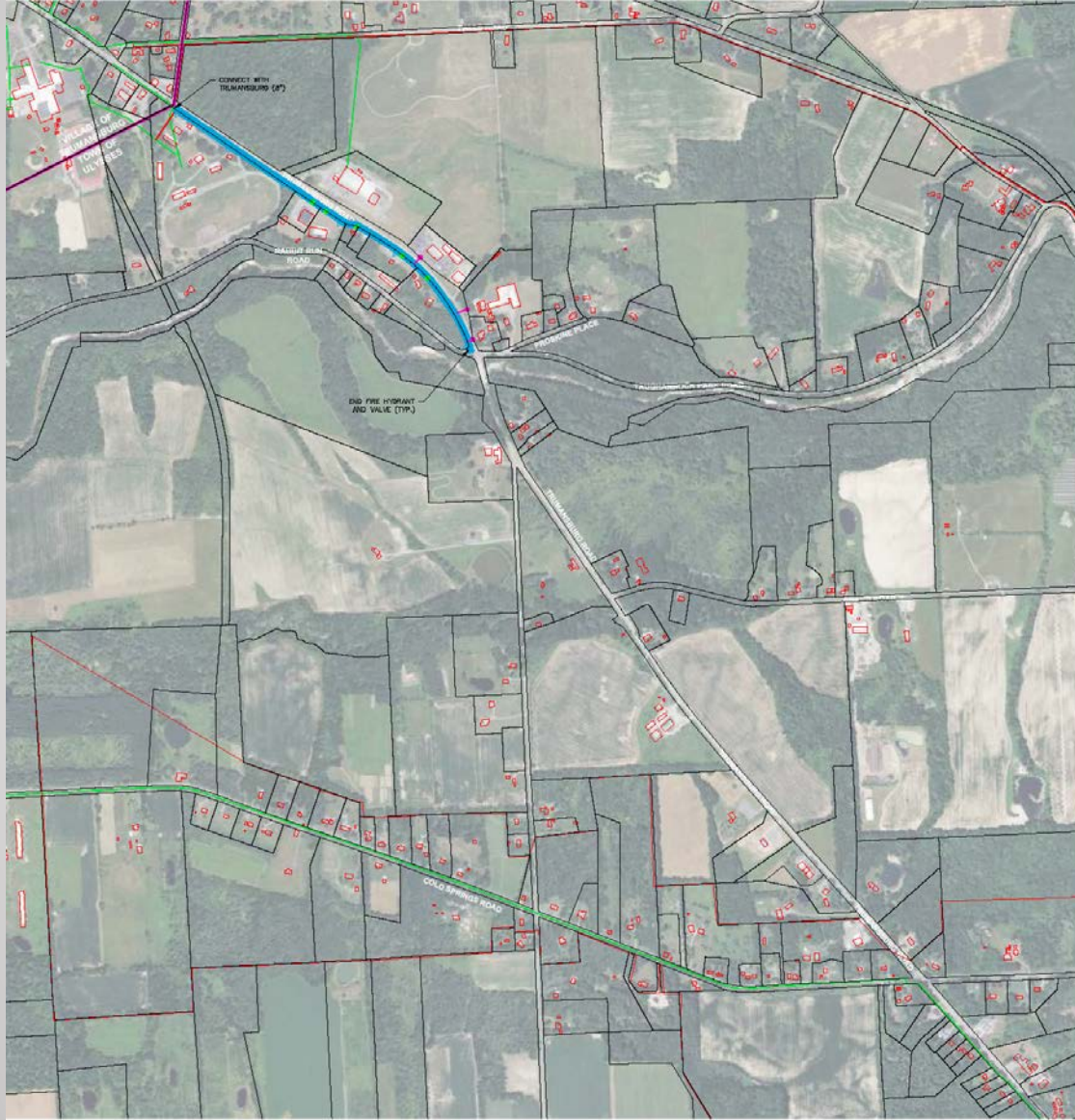
- Design Considerations:
  - Interconnection from Village of Trumansburg near Fairgrounds to Cold Springs Road.
  - Multiple directional drills under stream crossings adding cost to the project when compared to open-cut or trenching the installation of watermain.
    - Taughannock Creek
    - Culvert crossing south of Agard road
  - Source of supply from Trumansburg to Water District #3 was evaluated which requires the inclusion of a Booster Pump Station to convey water to Water District #3 Elevated Storage Tank
  - Several Development Districts (DD9, DD3 and DD5) along the route.
  - Trumansburg Water Supply is Well Water with supply wells in Taughannock Falls State Park and Camp Barton.



# Option 1 Financial Summary

- Total Project Cost = \$3,500,000
  - 30 Water Service Connections
  - 30 year loan with an assumed 3.0% loan rate
    - Debt Service = \$5,800 per connection per year
    - Cost of Water (50K gallons) + O&M = \$937.50
    - Total Cost per Connection/Year = \$6,737.50
  - Total Cost per Connection/Year does not include the cost of a water service 'hook-up' which is the responsibility of each property owner.

# Option 2 - Site Plan



- 8" Ductile Iron Pipe Watermain
- 3,550 Linear Feet +/-
- Construction means/methods for installation of watermain appears generally straight forward

# Option 2 Details

- Design Considerations:
  - Extension from Trumansburg near Fairgrounds to intersection of Route 96 and Proskine Place.
  - Evaluation does not include extension of water along Proskine Place but including Proskine Place may make option cheaper per \$/connection with increase in density
  - Terminating watermain extension before Taughannock Park Road eliminates directional drills which increase cost of watermain installation. This would result in a 'dead-end' watermain that may require periodic flushing of water
  - Would serve the Business Zone along Route 96 and portions of the Residential Zone (R1)
  - Source of Supply from Village of Trumansburg and would not require any supplemental Pump Stations or pressure reducing valves given information known to date.
  - Trumansburg Water Supply is Well Water with supply wells in Taughannock Falls State Park and Camp Barton.

# Option 2 Financial Summary

- Total Project Cost = \$750,000
  - 10 Water Service Connections
  - 30 year loan with an assumed 3.0% loan rate
    - Debt Service = \$3,775 per connection per year
    - Cost of Water (50K gallons) + O&M = \$937.50
    - Total Cost per Connection/year = \$4,712.50
  - Total Cost per Connection/Year does not include the cost of a water service 'hook-up' which is the responsibility of each property owner.



# Option 3 Details

- Design Considerations:
  - Extension from Cold Springs Road to end of 1966 Trumansburg Road property
  - Would serve Development District DD5
  - Source of Supply from Town of Ulysses Water District #3 (Source Water Town of Ithaca Bolton Point Water Treatment Plant)
  - Would result in a 'dead-end' watermain and periodic flushing may be required.

# Option 3 Financial Summary

- Total Project Cost = \$540,000
  - 10 Water Service Connections
  - 30 year loan with an assumed 3.0% loan rate
    - Debt Service = \$2,725 per connection per year
    - Operations and Maintenance Cost = \$164.00 per connection per year
    - Cost of Water (50K gallons) = \$502.50
    - Total Cost per Connection/year = \$3,391.50
  - Total Cost per Connection/Year does not include the cost of a water service 'hook-up' which is the responsibility of each property owner.

# Considerations and Typical Schedule

- Option 2 and 3 provide feasible solutions to extending water to areas within Town with desire for water. However, both options result in significant user costs when compared to the State Comptrollers Targeted Threshold
- Option 1 is most involved project and would require hydraulic modeling, booster pump station and pressure reducing valve station(s). Engineering and construction means/methods the most difficult but could provide a redundant supply interconnection for Town of Ulysses Water District(s).
- Option 1 will provide an interconnection between Trumansburg and Ithaca. The benefit of the interconnection could extend to other areas above and beyond the service area of Route 96 corridor (i.e. redundancy of supply, cost of water negotiations, larger service area, water quality, etc.)
- General Timeframe for a Project:
  - Map, Plan and Report to approval = 6 months (min.)
  - Coordinate and Secure Funding Agreements = 6 – 12 months
  - Option 2 and Option 3 Design = 3 – 6 months
  - Option 1 Design = 12 Months
  - Option 2 and Option 3 Construction Duration = 8 months
  - Option 1 Construction Duration = 12 - 18 months



# Next Steps

- Informational Public Presentation on Potential Costs of Watermain Extension
  - Gather public interest (Yes/No) based on varying costs
  - Evaluate responses and interest in further pursuing district formation
- Map, Plan and Report (MP&R) followed by an Article 12 petition to meet the two (2) 50% tests followed by Public Informational meeting
- State Comptrollers approval
- SEQR and Negative Declaration (District Formation)

# Key Notes and Conclusion

- The total project cost are estimates, based on the preliminary information available at this time, and past experience with projects of similar scope. However, the cost is highly dependent upon the market conditions and unknown environmental parameters (i.e. bedrock) currently unknown at this time.
- The residents within the potential district will decide if public water is extended to the area(s) of the Town
- The cost of public water has generally increased over the years:
  - “affordable” water district in 2009 was \$603
  - “affordable” water district in 2017 was \$966
  - “affordable” water district in 2023 is \$1,040
    - 2009 to 2023 has shown a 72% increase in cost of water
- Property owners are required to pay for the installation of their own water service from Highway Right-of-Way to their property. Costs vary pending site conditions but may be upwards of \$25 - \$30 per Linear Foot.
- Water Infrastructure Improvement Act (WIIA) 60% Grant

# Questions

- Contact Information:

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