



MAPLE AVENUE UTILITY UNDERGROUNDING FEASIBILITY STUDY

Presentation for Town Council

Monday, March 8, 2020

Prepared for the Town of Vienna

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Feasibility Study Scope

Data Collection

- Identify existing overhead and underground utilities
- Research existing/proposed site plans
- Prepare base mapping

Conceptual Plan

- Develop preliminary alignments
- Identify Easements
- Prepare phasing
- Prepare ballpark cost estimates

Implementation Strategies

- Research funding sources
- Research code requirements
- Review utility franchise agreements

Final Report

- Document conceptual plans, findings, and recommendations
- Present findings to Town Council

Existing Conditions

Dominion Energy

- Overhead on east side of Maple Avenue
- Underground primary taps to pad mounted transformers
- Underground secondary services from existing overhead transformers
- Line extensions to feed side streets

Verizon

- Overhead on west side of Maple Avenue: Nutley Street to Courthouse Road
- Underground from Courthouse Road to East Street

Cox Communications

- Overhead on east and west side of Maple Avenue
- Underground from Park Street to Beulah Road





Conceptual Plan

- Three main route alternatives for undergrounding
 - Sidewalk Corridor
 - Private Property
 - Roadway Corridor
- Divided into 10 segments
- Selected by ease of location to install transition poles and amount of surface-mounted equipment required.
- Each section is independent of the others

Utility Requirements

- Dominion Energy
 - Concrete encased duct bank with manholes, pad-mounted transformers, and pad-mounted switches
- Verizon
 - Concrete encased duct bank with manholes, hand holes, pedestals
- Cox
 - Duct bank with manholes, hand holes

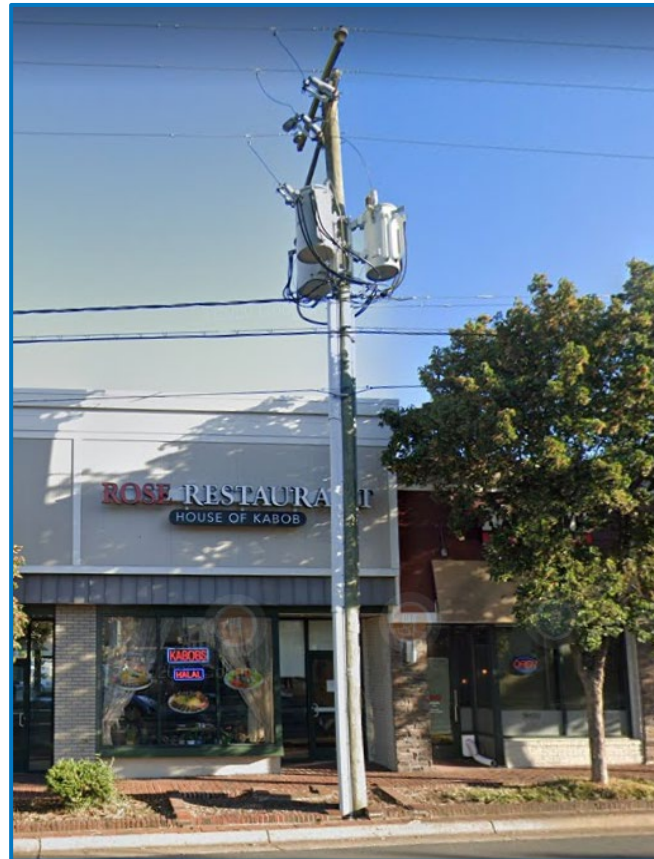
Conceptual Plan

Nutley Street: Multiple circuits require pad-mounted switches to feed the pad-mounted transformers that serve the businesses along the corridor



Conceptual Plan

Between Lawyers Road and Center Street: Three-phase overhead transformer conversion to underground with pad-mounted transformer





Cost Estimate

TOTAL COST PER PHASE		
PHASE DESCRIPTION	PHASE	COST
Nutley St Intersection	A	\$ 2,100,000
Nutley St to Lewis St	B	\$ 2,200,000
Lewis St to Pleasant St	C	\$ 2,900,000
Pleasant St to Courthouse Rd	D	\$ 2,100,000
Courthouse Rd to Center St	E	\$ 2,300,000
Center St to Mill St	F	\$ 1,000,000
Mill St to Park St	G	\$ 1,900,000
Park St to Glyndon St	H	\$ 1,300,000
Glyndon St to Beulah Rd	I	\$ 2,800,000
Beulah Rd to Mashie Dr	J	\$ 3,400,000
GRAND TOTAL		\$ 22,000,000



Funding Sources

- U.S. Economic Development Administration and Main Street America may provide grants or loans
- Opportunities for FHWA/NVTA if incorporated into larger project with an additional purpose
- Meals Tax
- Special revitalization districts
- Bonds





Franchise Agreement Review

Items to consider when negotiating utility franchise agreements:

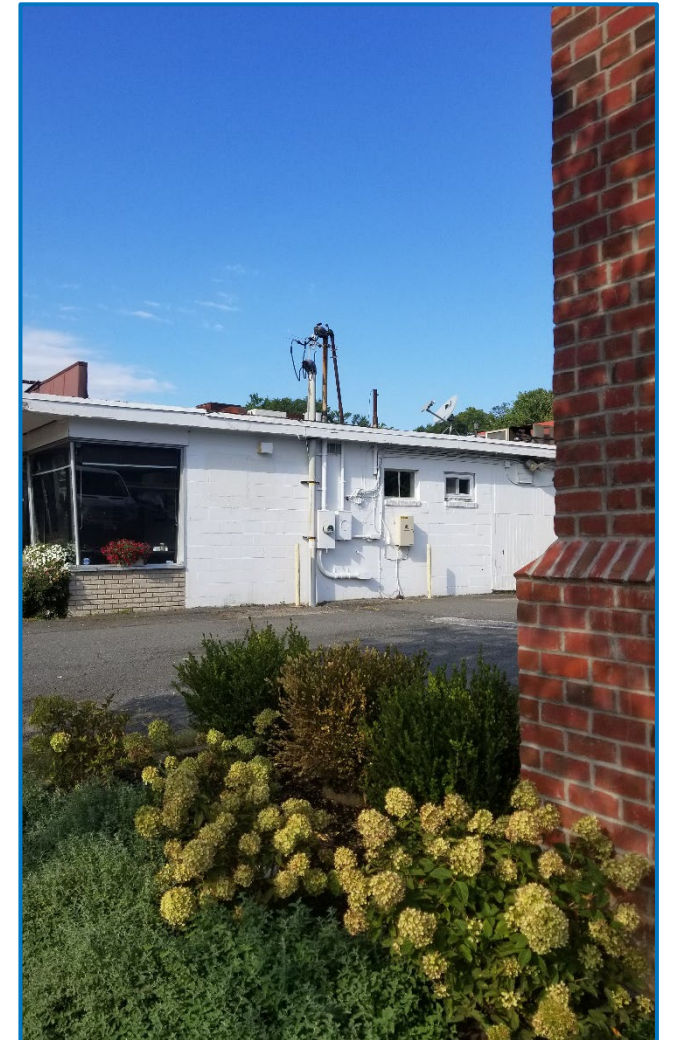
- Single Point of Contact
- Town to review/approve the location of new and relocated facilities
- Utility company to review/approve the location of new and relocated facilities for site plans
- Install new facilities underground
- Upon written notification, relocate facilities in Town's ROW.
- Obtain a permit to use public ROW
- Avoid unnecessary damage to trees
- Negotiate an agreement to underground a specified length of overhead facilities each year





Zoning /Regulatory Requirements

- Establish an underground utility corridor or district
- Incorporate language into the Maple Avenue Commercial (MAC) zone to require undergrounding, contribution to a fund, or provisions for utility easements for above ground facilities such as switches and transformers
- Modify existing codes to require new or relocated overhead utilities to be installed underground
- Utilize proffer negotiations to require utility undergrounding or a contribution with each new project



Implementation

Phased Implementation to Match Anticipated Funding Stream

- Logical termini for each project phase
- Phases must be long enough to be economic and to accomplish visual goals

Align Project Phasing with Planned Redevelopment

- Maximize developer participation/contribution
- Minimize disruption to community



