#### MGE ELECTRIC DISCUSSION

City of Madison Urban Forestry Task Force May 31, 2018

#### PSCW Legal Requirements

- MGE reviews all projects for justified project spending
- MGE spending is subject to PSCW review
- PSC 113.1008 states that customer-requested modifications to the distribution system are to be paid for by the customer

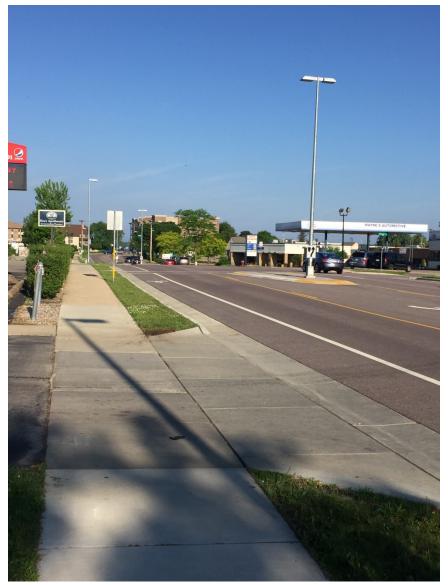
### System Design Factors used for Undergrounding

- Space constraints
- Age of facilities
- Past reliability indices
  - How often have affected customers experienced outages?
  - How long are the associated outages?
- Trimming cycle costs

### MGE History of Undergrounding

- Infancy in 1993 Fox Avenue
- Projects centered around collaboration with City road reconstructions
- City covers the project costs above MGE's requirement for road right-of-way relocations

# Cottage Grove Road - 2016



#### **Equipment Placement**

- Electrical boxes need to be placed on private easement
  - physical and legal protections
- High capacity electric lines may require large switchgear boxes and more cables
- Private easements (for equipment) are necessitated, but cumbersome to negotiate or even obtain

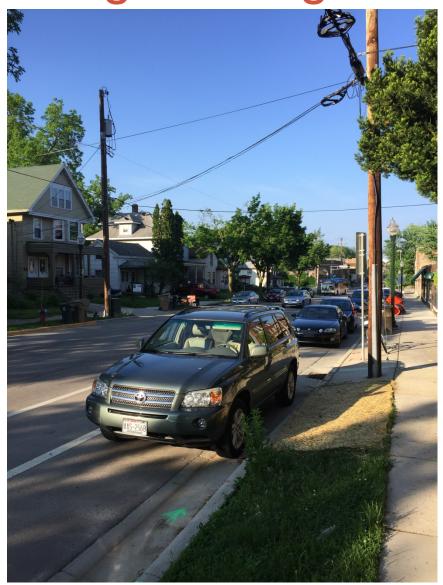
### Padmounted Switching Equipment



### Partial Undergrounding Concept

- Relatively new concept
- Poles are not removed
- High voltage lines (highest wires) are buried
- Overhead services to homes remain as is
- Communication wires remain as is

Partial Undergrounding



#### Joint Facilities

- Communication companies (ATT, Charter, private fiber providers) occupy the lower area of the pole
- These companies need to be accommodated for a total pole line removal
- Compensation is often expected where road project conflict is not involved

# Complex Contractor Work



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