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tomorrow, today.

2022

# Western Canal Corridor Analysis (WW1060, WW1246, WA1546)

## Resident Update – Village 2

# Agenda

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- Project Catalyst
- Review Existing Conditions
- Summary of Corridor Analysis
- Recent Failure Experiences
- Next Steps
- Questions



# *Our Responsibility*



To Protect Public Health by Protecting  
Public Infrastructure.



***Core Values Guiding This Project***

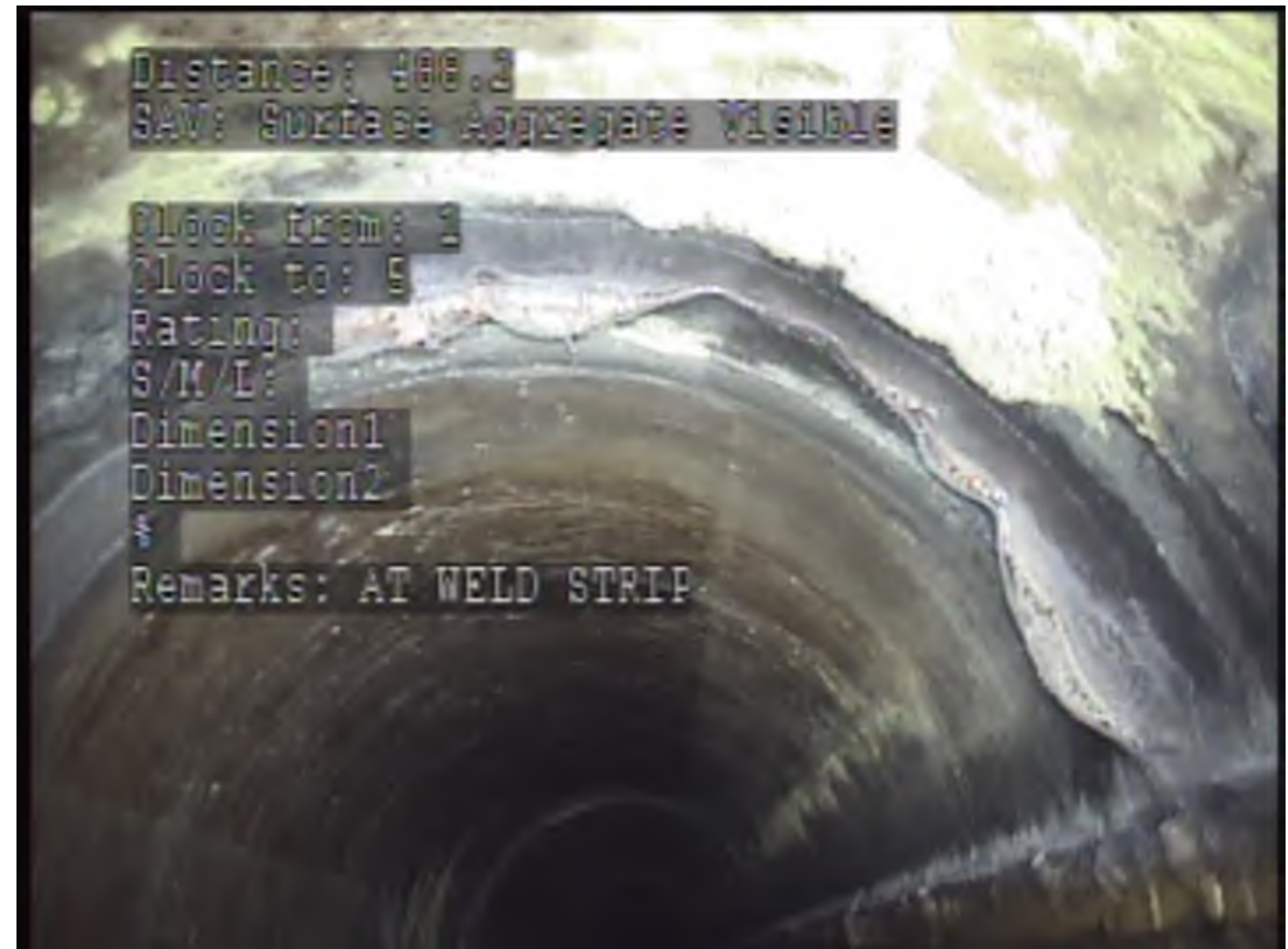


***Protecting Our  
Community  
Today***

***Protecting  
for Gilbert's  
Future***

***Careful  
Stewardship  
of Resources***

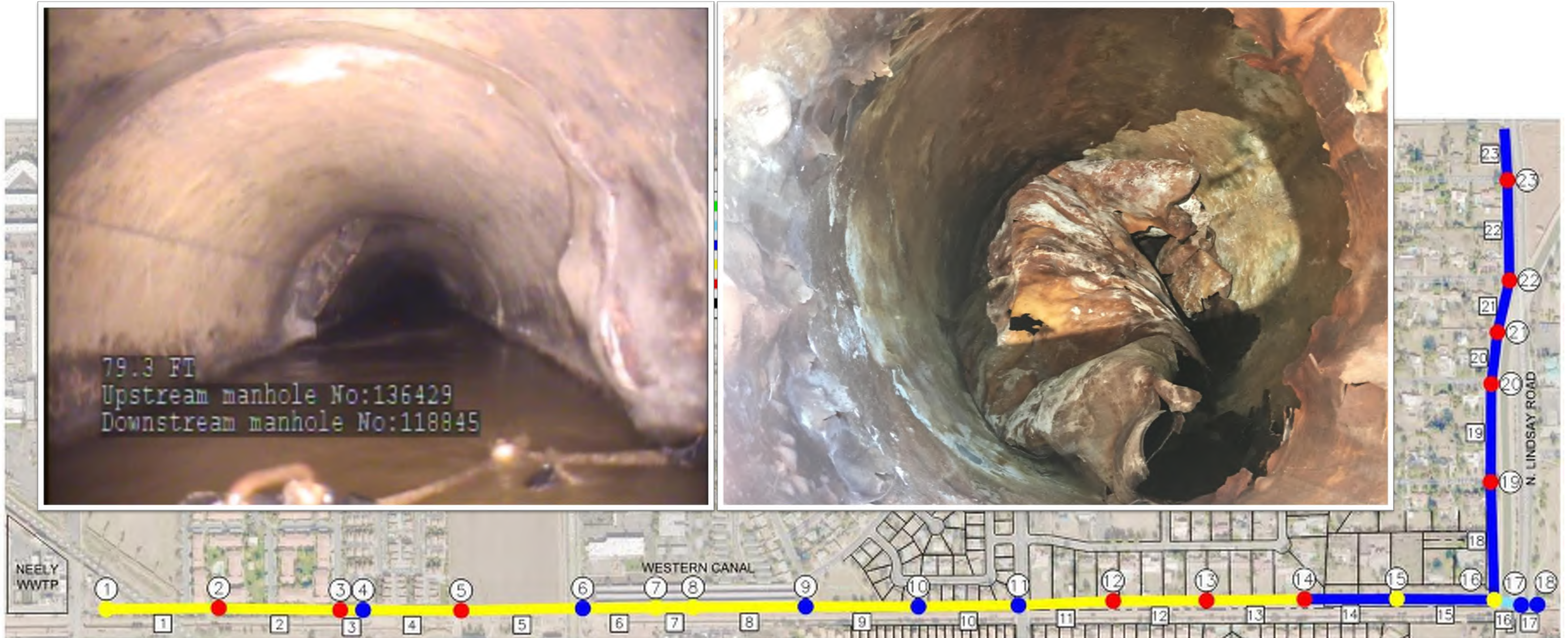
# Project Catalyst



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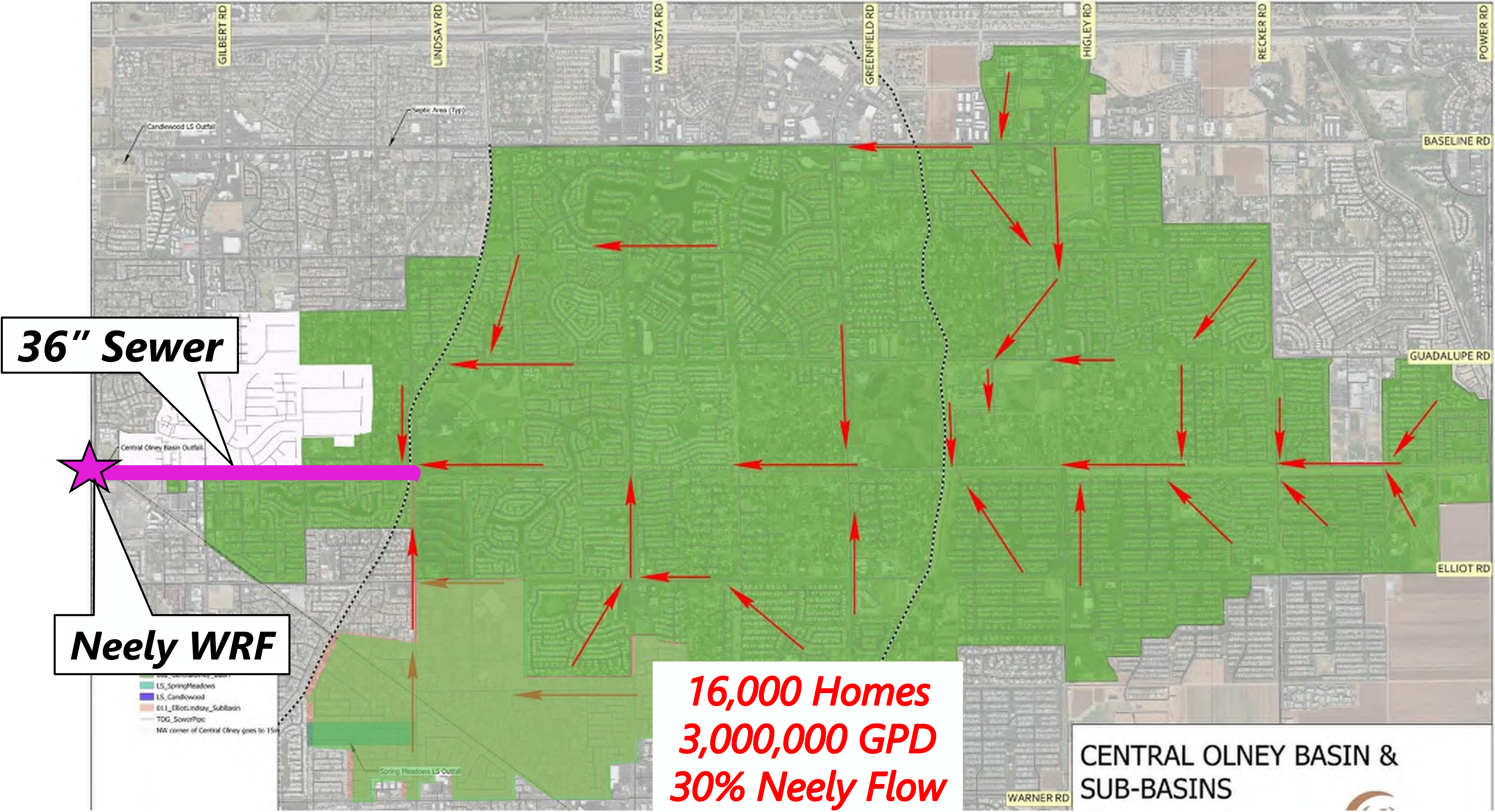
# Project Catalyst



# Western Canal Corridor

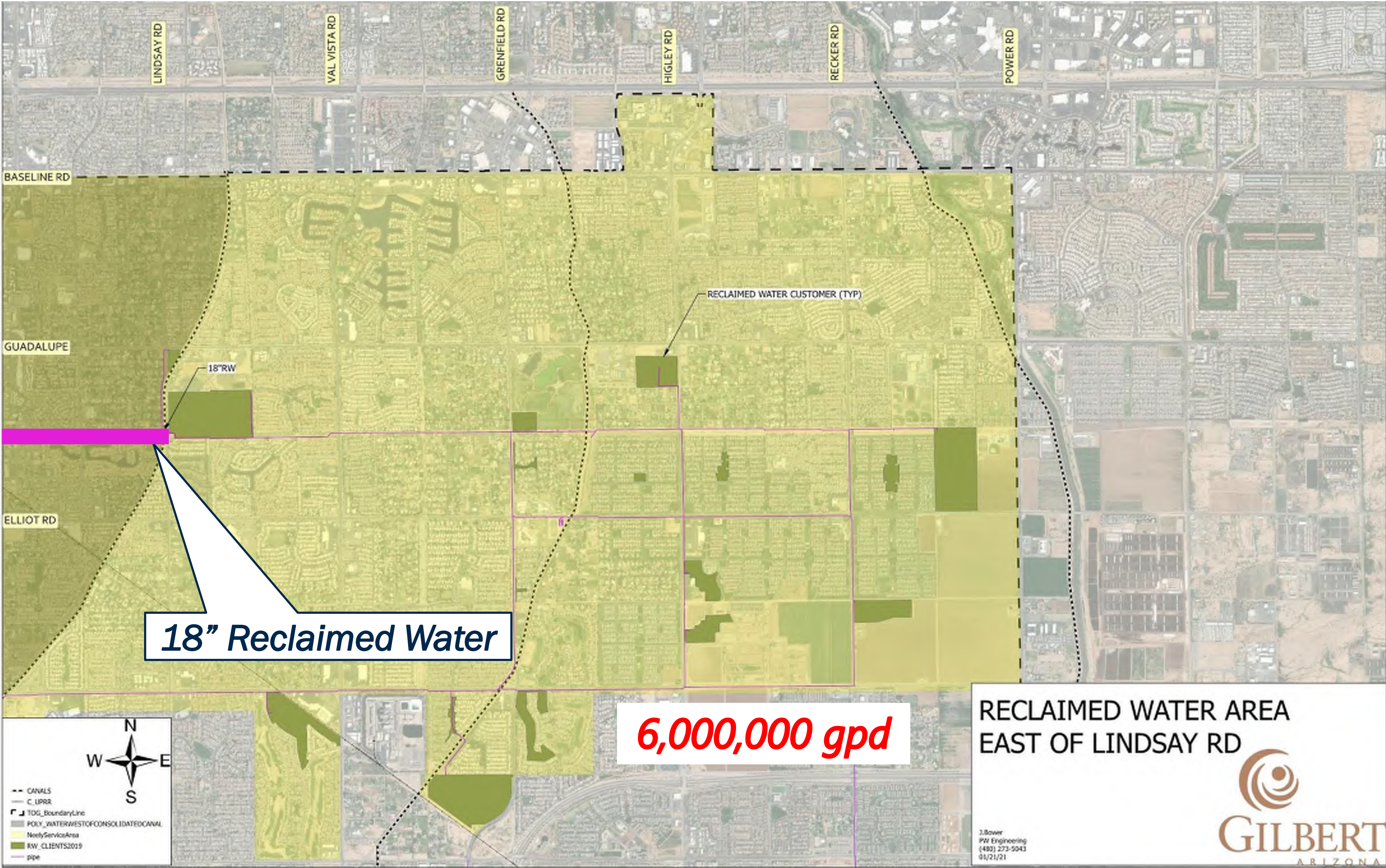


# WW1060 - 36" Sewer

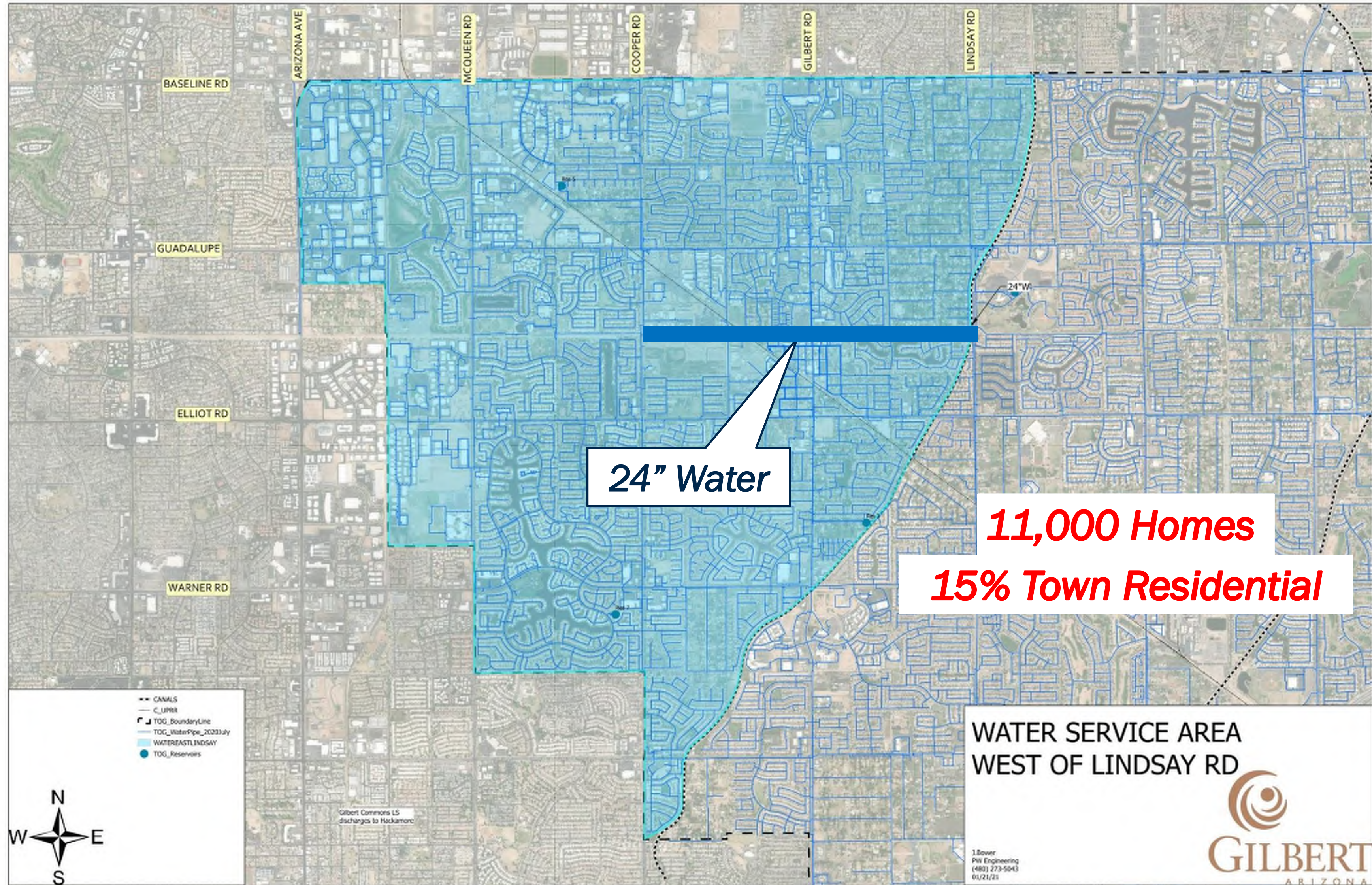




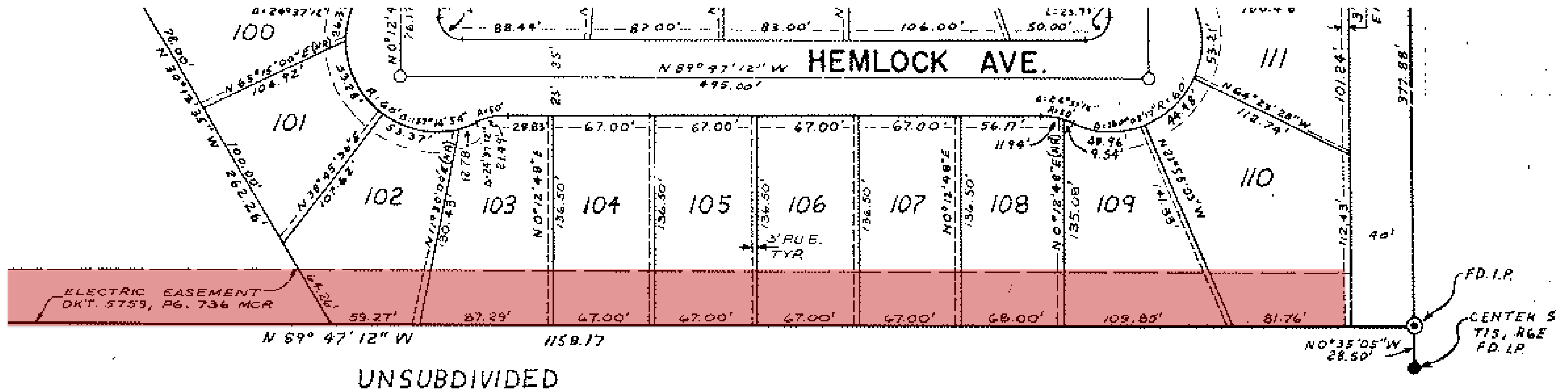
# WW1246 – 18” Reclaimed Water



# WA1546 – 24” Potable Water



# Easement History (1978 Plat & 1985 Easement)



# Easement History (1978 Plat & 1985 Easement)

## GRANT OF EASEMENT

EASEMENT #13

Effective Date: March 12, 1985

County of: Maricopa  
State of: Arizona

### GRANTOR:

The R. H. McCabe Company  
1029 South Lewis  
Mesa, Arizona 85202

### GRANTEE:

Town of Gilbert  
119 North Gilbert Road  
Gilbert, Arizona 85234

### Subject Real Property:

Please refer to legal description on attached Exhibit "A" and plat sketch on attached Exhibit "B".

For Ten Dollars (\$10.00) and other good and valuable consideration, Grantor conveys to Grantee the right to install, repair, maintain, alter, and operate exclusive sanitary sewers and effluent water lines in, into, upon, over, across, and under the Subject Real Property, located in the Town of Gilbert, County of Maricopa, State of Arizona.

### DESCRIPTION OF THE PARTS TO BE ACQUIRED:

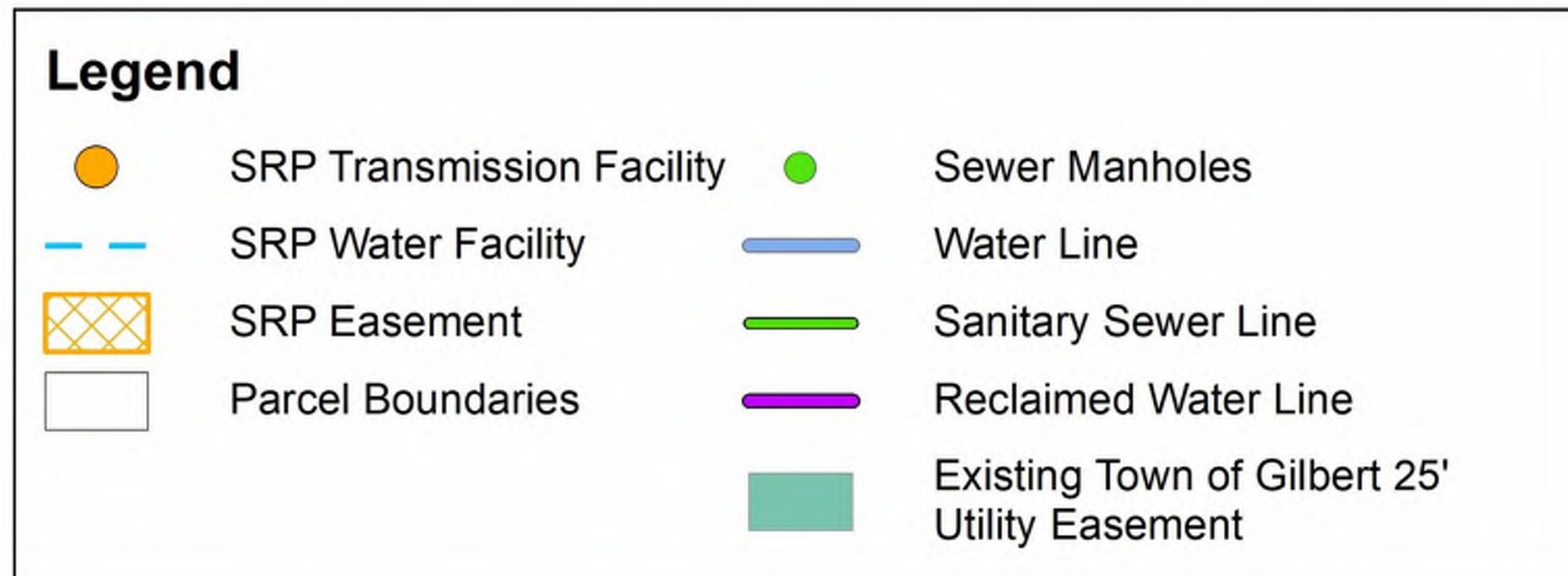
#### Permanent Utility Easement:

A permanent public utility easement 25 feet wide is to be located approximately 11.5 feet north of the south property line. The proposed take is under an existing S.R.P. power easement, which presently restricts the use of that portion of the site. Only marginal use is available for this portion of the property. The total take required is 2,036 square feet.

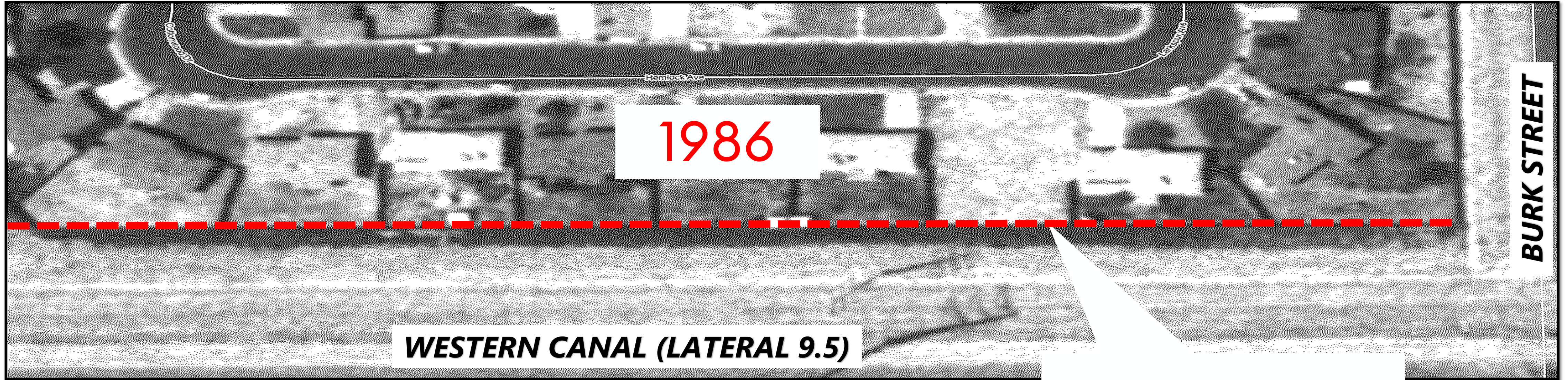
#### Temporary Construction Easement:

The proposed construction easement is to be located over the south 11.5 feet of the site. The power easement mentioned above also runs over this proposed easement. The total area required is 988 square feet.

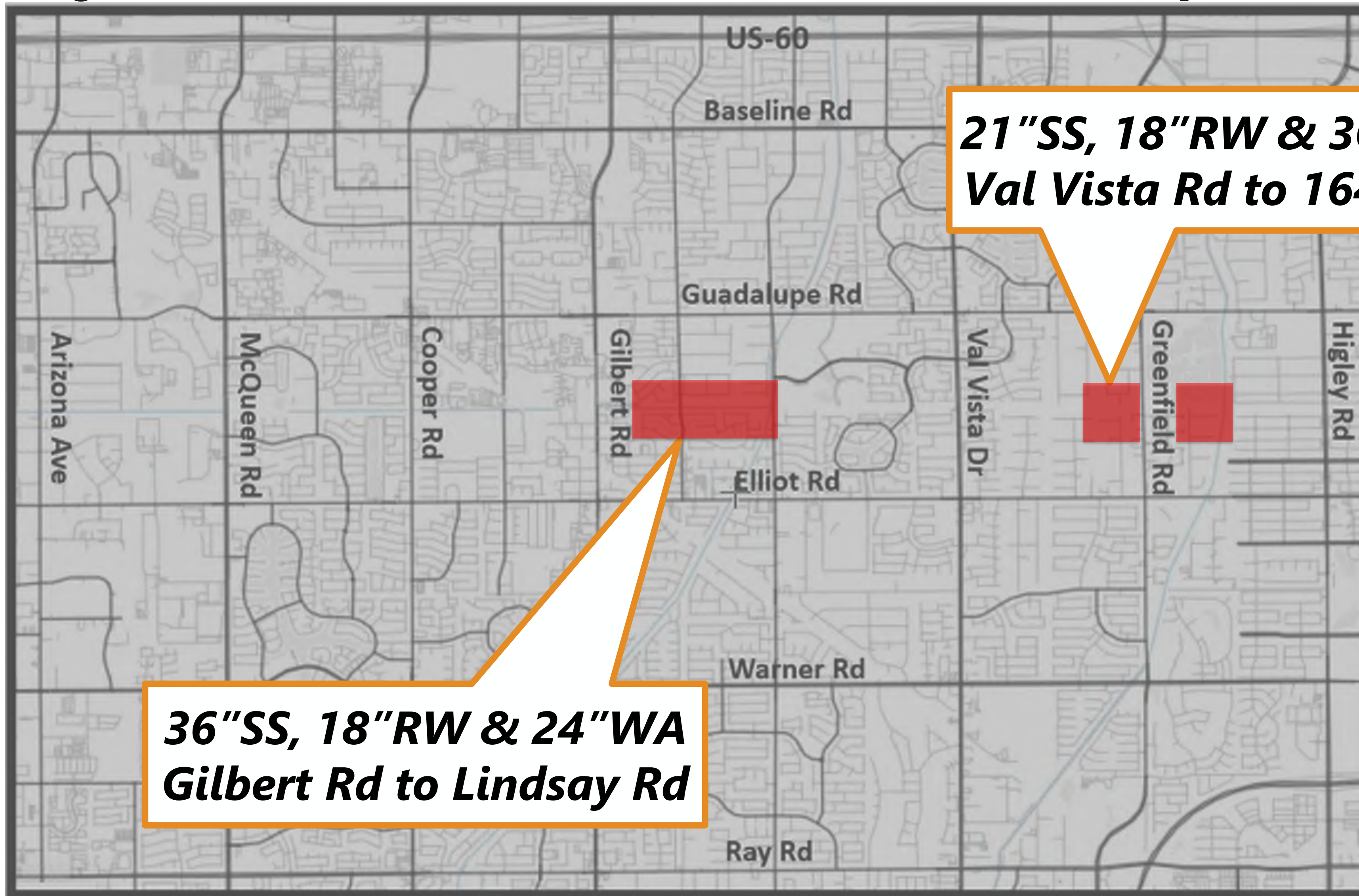
# Existing Conditions



# 1986 and 2016



# Significant Utilities within Residential Backyards



***21"SS, 18"RW & 36"WA  
Val Vista Rd to 164th St***

***36"SS, 18"RW & 24"WA  
Gilbert Rd to Lindsay Rd***

**WESTERN CANAL CORRIDOR ANALYSIS  
LINDSAY ROAD TO GILBERT ROAD  
WW1060, WW1246, WA 1546  
OPTIONS VIEWER**



North

WESTERN CANAL

BURK STREET

WESTERN CANAL

LINDSAY ROAD

**CLICK THE LINKS ABOVE TO NAVIGATE TO THE VIEW**

CLICK PINS  
TO VIEW OPTIONS  
FROM NORTH

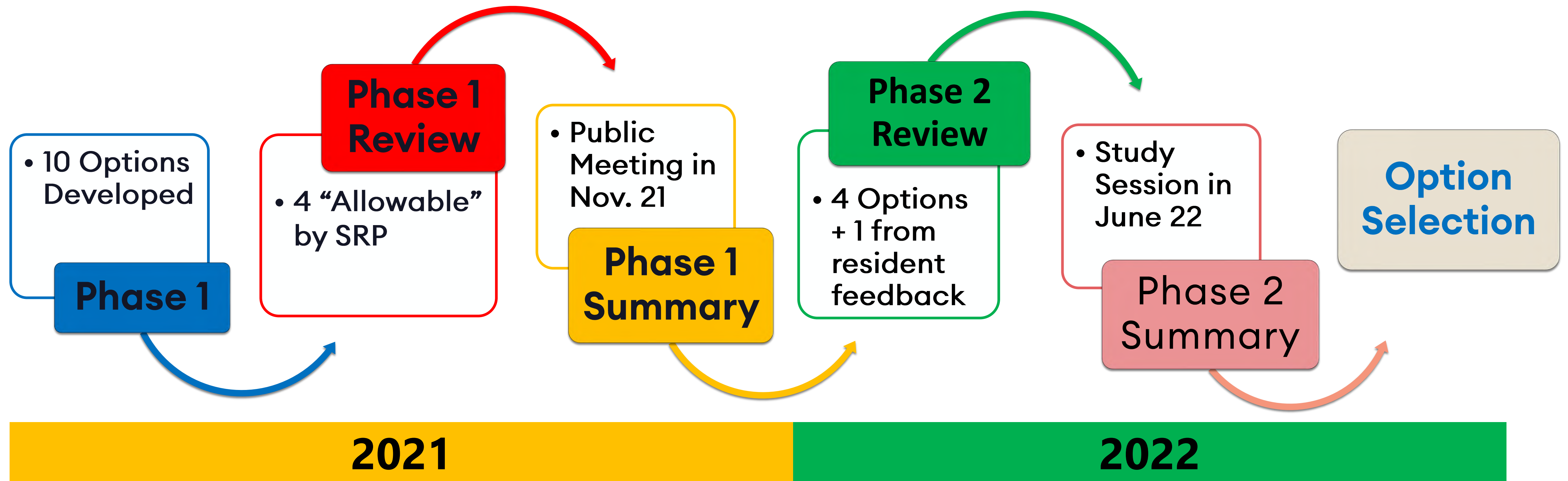
CLICK PINS  
TO VIEW OPTIONS  
FROM SOUTH

CLICK EXCAVATOR  
TO VIEW CONSTRUCTION  
SEQUENCING



# Corridor Analysis Summary

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# Corridor Analysis Options

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**Option 1**

**Acquire Easement in Fee**

**Option 2**

**Utility Corridor Alley**

**Option 3**

**Minimal Acquisition at Manholes**

**Option 4**

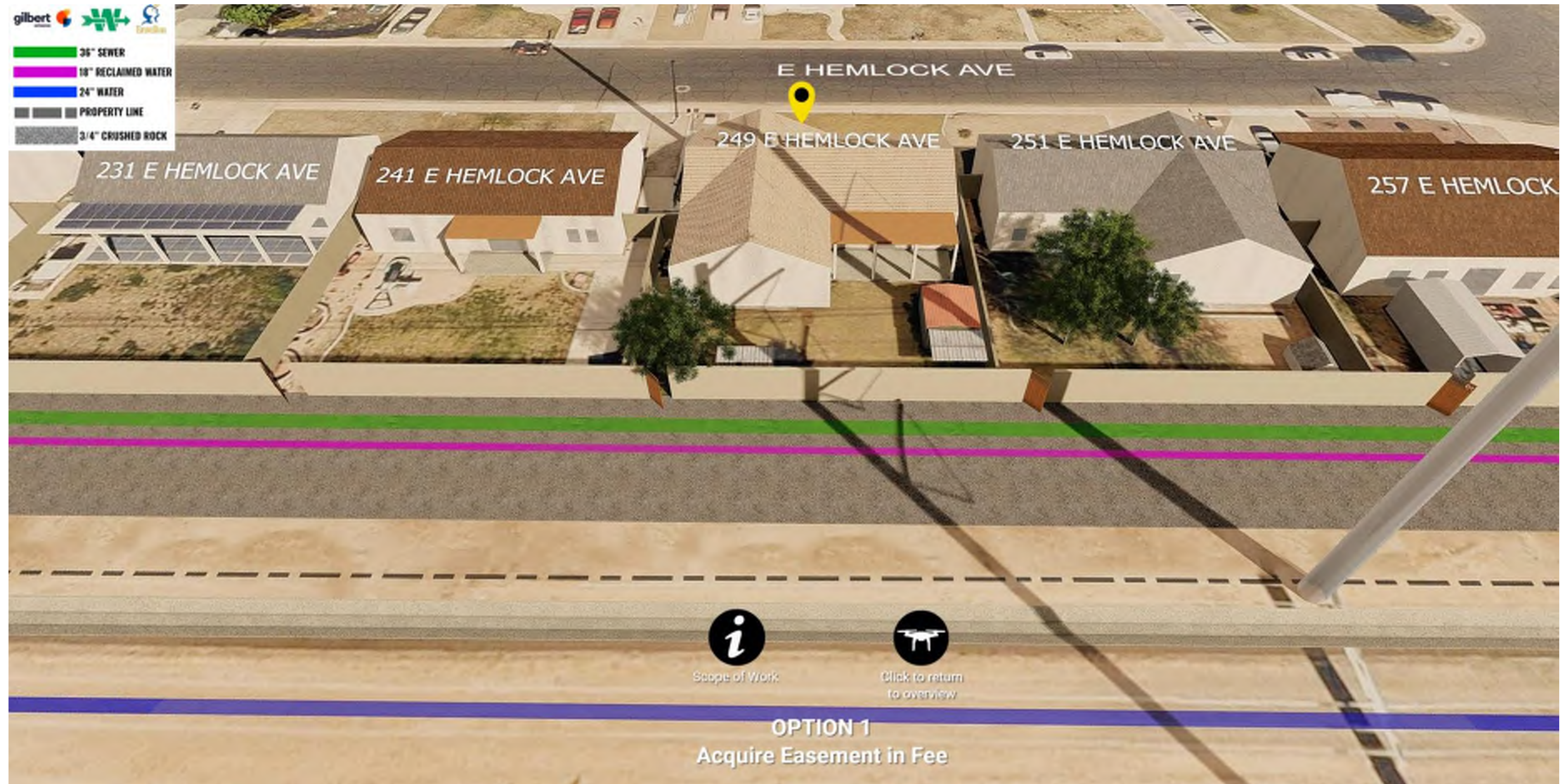
**Gates to Manhole Properties**

**Option 5**

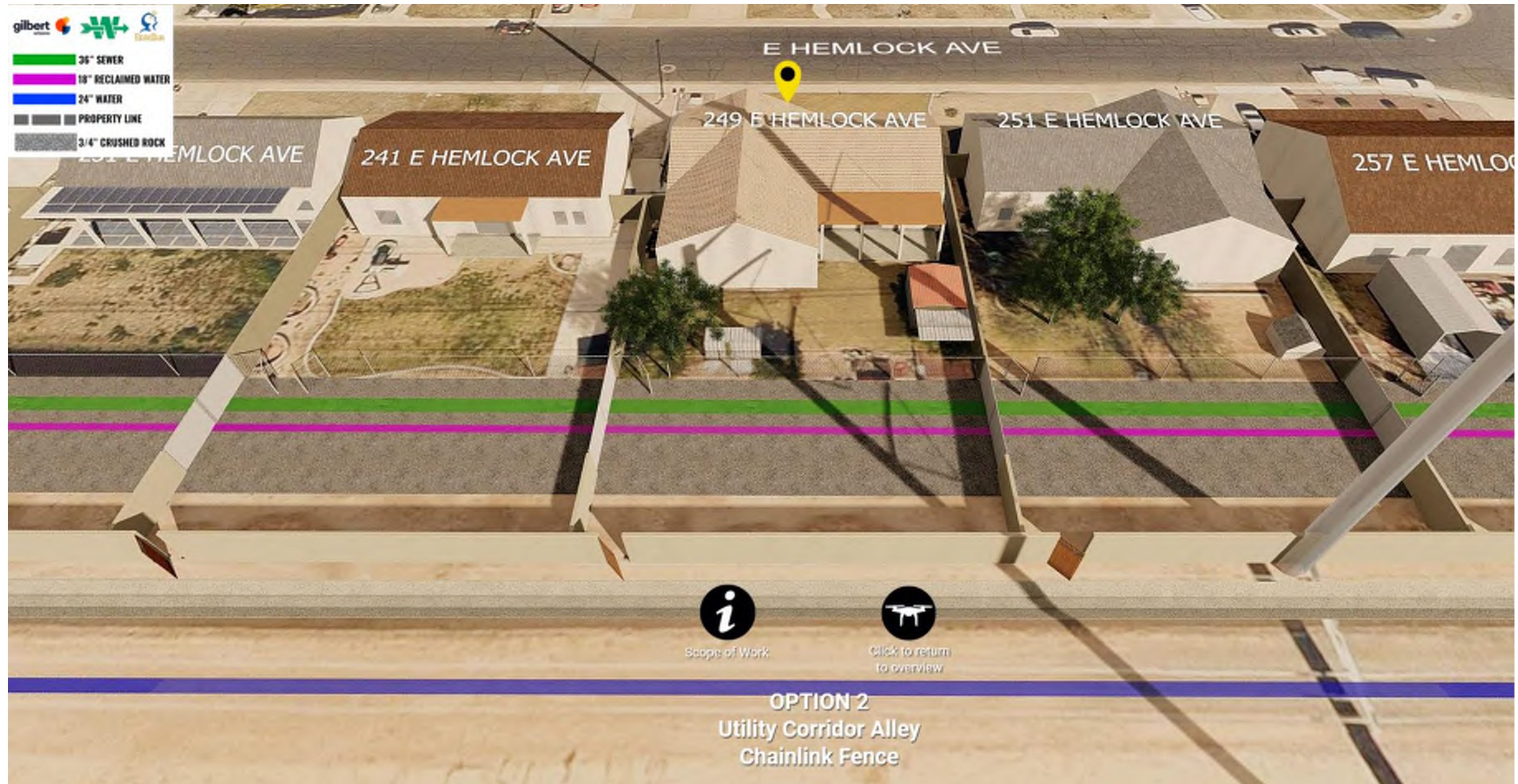
**Gates to Manhole Properties + Relocate Reclaimed Water**

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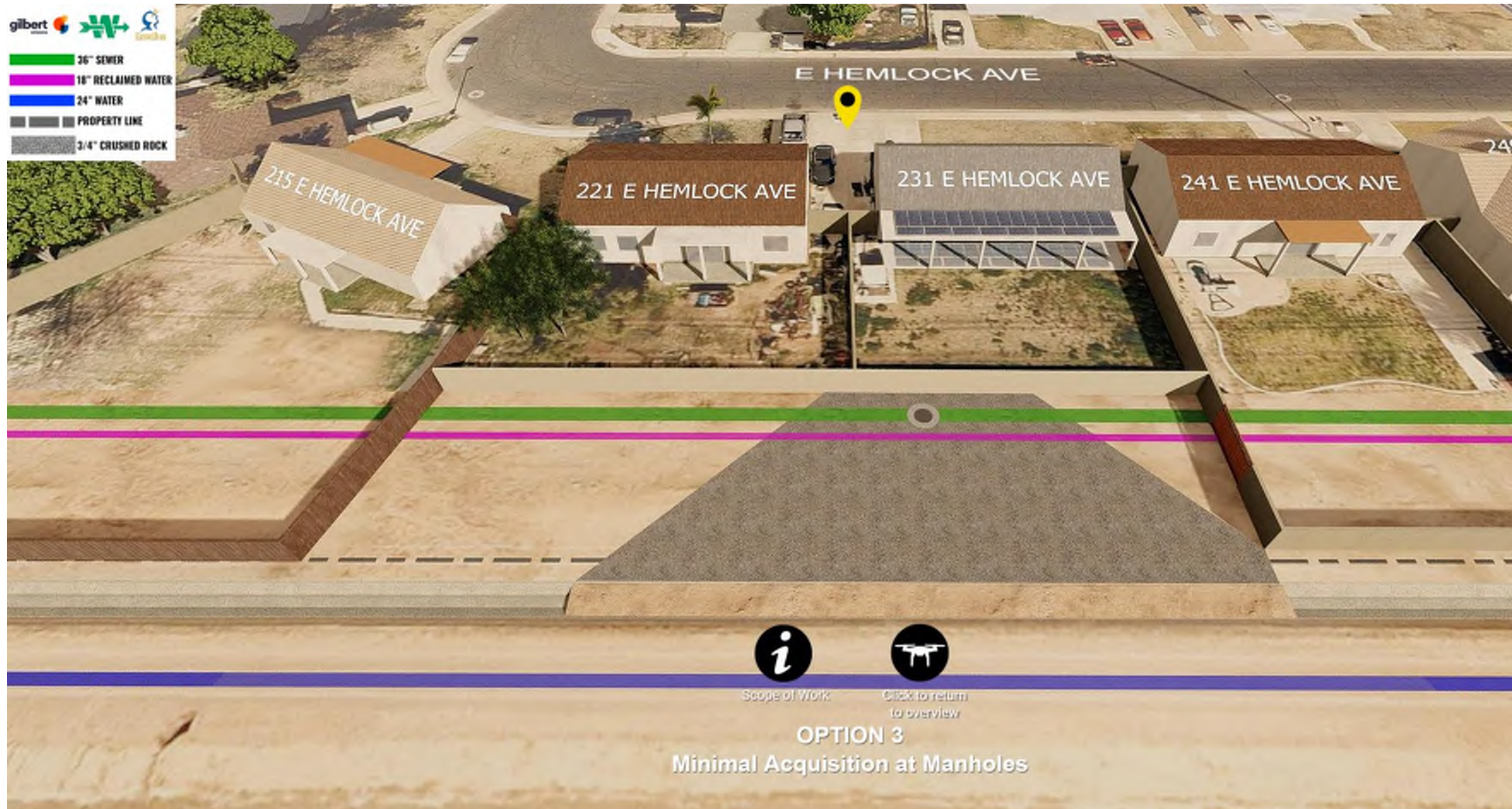
# Option 1 – Acquire Easement in Fee



# Option 2 – Utility Corridor Alley



# Option 3 – Minimal Acquisition at Manholes



# Option 4 – Gates to Manhole Properties



# Option 5 – Gates to Manhole Properties + Relocate Reclaimed Water



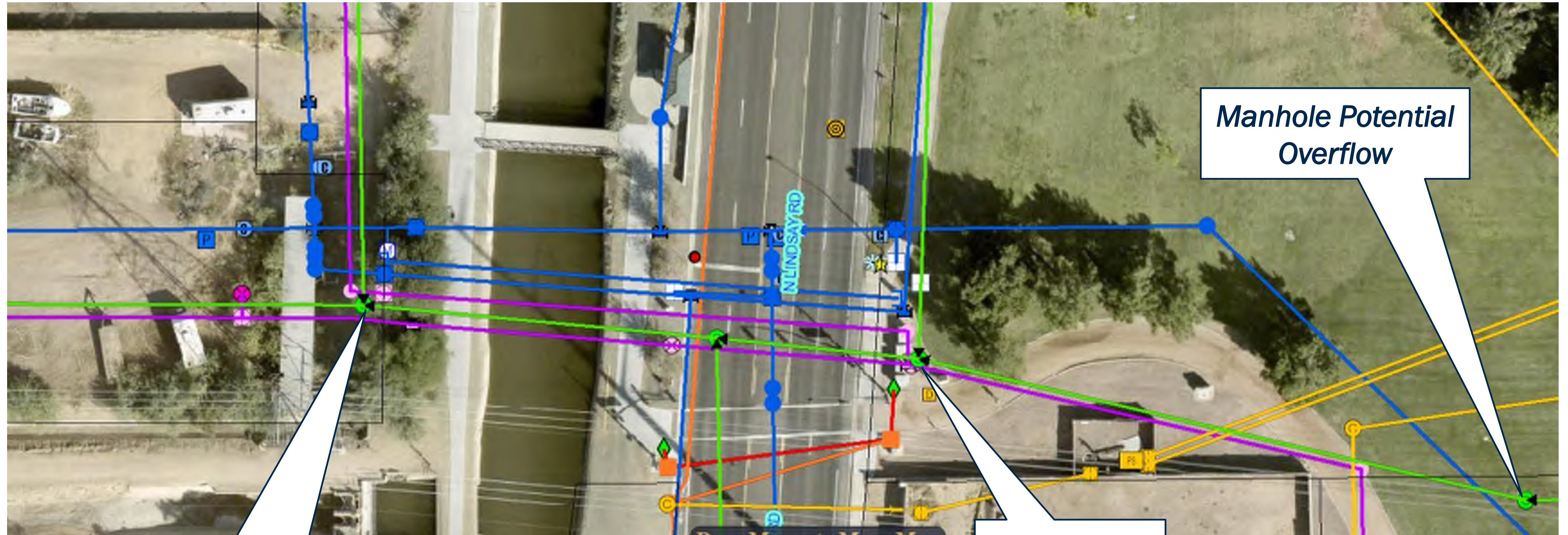
# Recent Experiences

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- An infrastructure failure is not *IF*, it is *WHEN*
- Gravity Sewer Failures - 36” Sewer Pipeline
- Pressure Pipe Failures - 24” Potable Water and 18” Reclaimed Water Pipelines
- Corridor Comparison
  - Details of failure example
  - How a similar failure could impact corridor



# Gravity Sewer Concerns – Freestone Park Blockage (2022)



*Start of corridor and 24 properties*

*Sewer Obstruction*

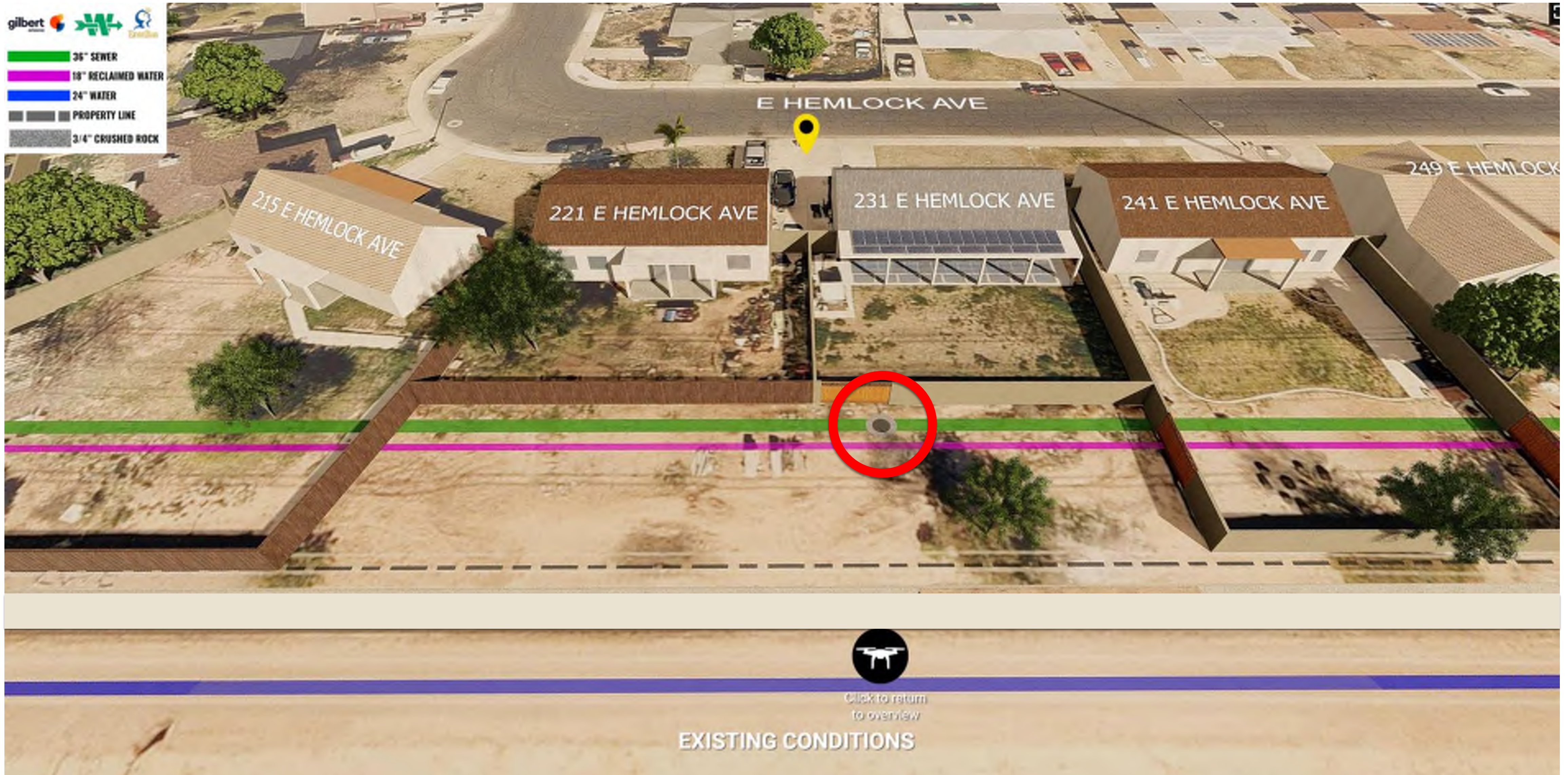
*Manhole Potential Overflow*

# Gravity Sewer Concerns – Freestone Park Blockage (2022)



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# Gravity Sewer Blockage - Potential Impact within Corridor



# Gravity Sewer Concerns – Western Powerline Trail Failure (2021)



# Gravity Sewer Concerns – Western Powerline Trail Failure (2021)



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# Gravity Sewer Concerns – Western Powerline Trail Failure (2021)



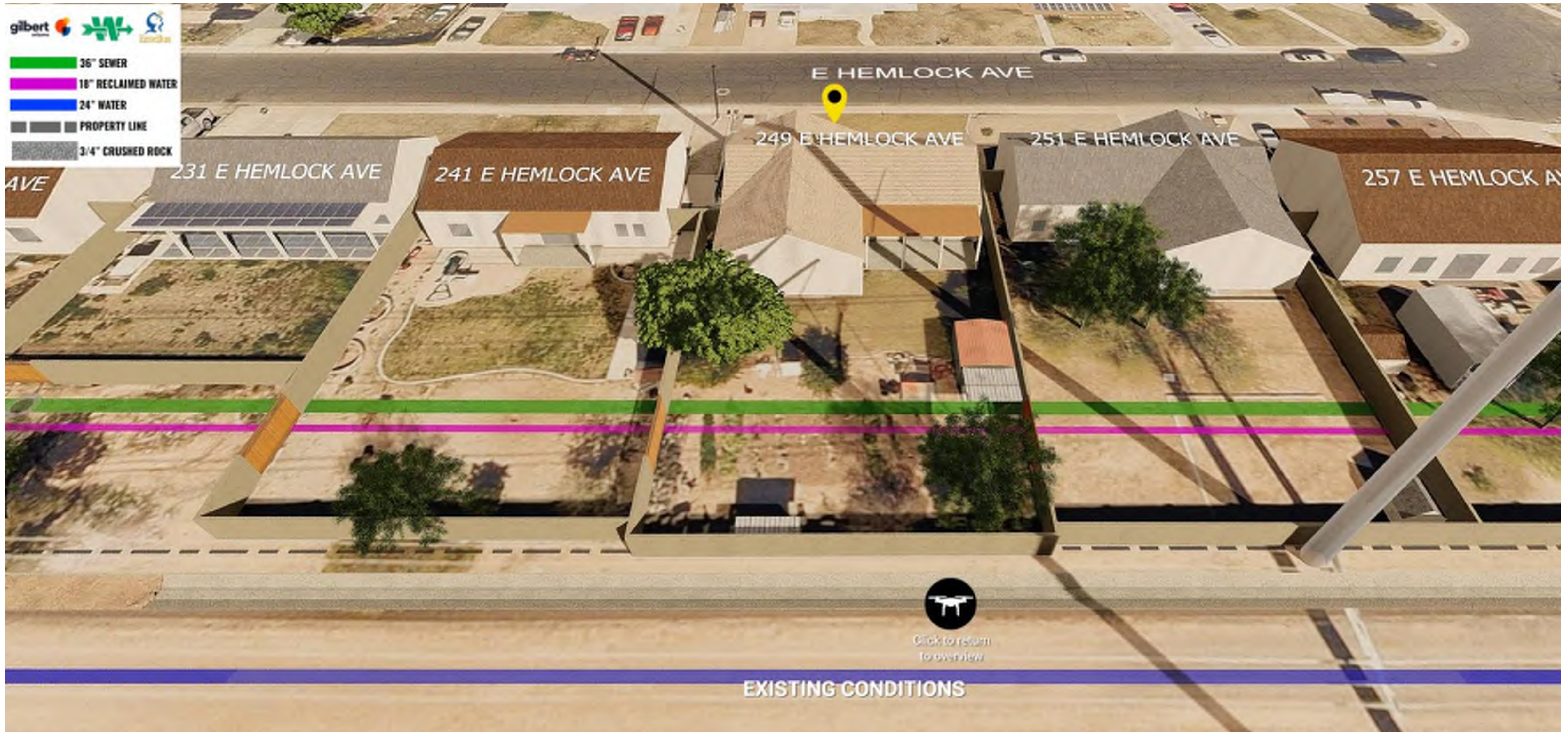
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# Gravity Sewer Concerns – Western Powerline Trail Failure (2021)



# Gravity Sewer Failure - Potential Impact within Corridor





# Pressure Pipe Concerns – Unauthorized Reclaimed Connection

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# Pressure Pipe Concerns – Unauthorized Reclaimed Connection

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# Pressure Pipe Concerns – Tempe US-60 Failure

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# Pressure Pipe Concerns – Western Canal Failure (2021)



# Pressure Pipe Concerns – Western Canal Failure (2021)



# Pressure Pipe Concerns – Western Powerline Trail Failure (2018)



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# Pressure Pipe Concerns – Western Powerline Trail Failure (2018)



# Pressure Pipe Concerns – Western Powerline Trail Failure (2021)





# Pressure Pipe Concerns – Western Powerline Trail Failure (2021)



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# Pressure Pipe Concerns – Western Powerline Trail Failure (2021)



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# Pressure Pipe Concerns – Western Powerline Trail Failure (2021)



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# Pressure Pipe Concerns – Western Powerline Trail Failure (2021)

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# Pressure Pipe Concerns – Greenfield Road Sinkhole (2016)

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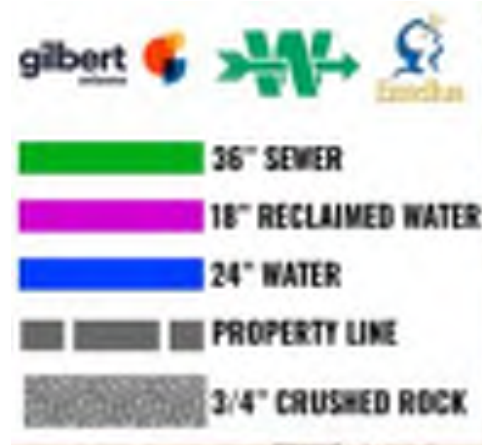




# Pressure Pipe Concerns – Greenfield Road Sinkhole (2016)

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# Impacts to Corridor

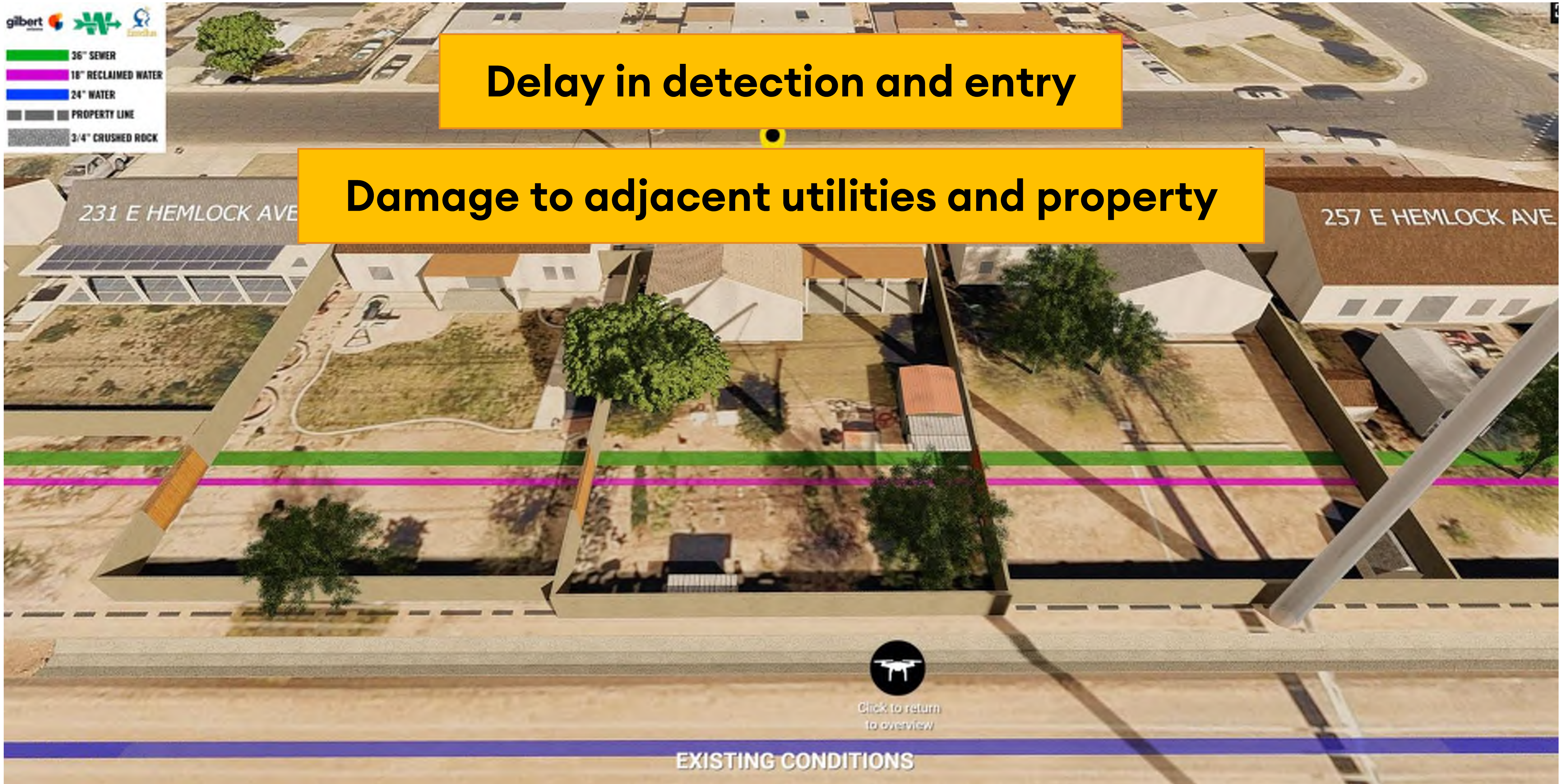


gilbert   

- 36" SEWER
- 18" RECLAIMED WATER
- 24" WATER
- PROPERTY LINE
- 3/4" CRUSHED ROCK

**Delay in detection and entry**

**Damage to adjacent utilities and property**



# Options Comparison – Village 2

Option	Gravity Sewer Blockage	Gravity Sewer Failure	Pressure Pipe Failure
1	=	↓	↓
2	=	↑	↑
3	=	↑	↑
4	=	↑	↑
5	=	↑	↓



# Next Steps

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- Town Council 11/15
- Select Option
- Proceed with design





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# Questions