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tomorrow, today.

2022

Western Canal Corridor Analysis (WW1060, WW1246, WA1546)

Resident Update – KC Ranch Phase 2 & Rio Caballo

Agenda

- 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

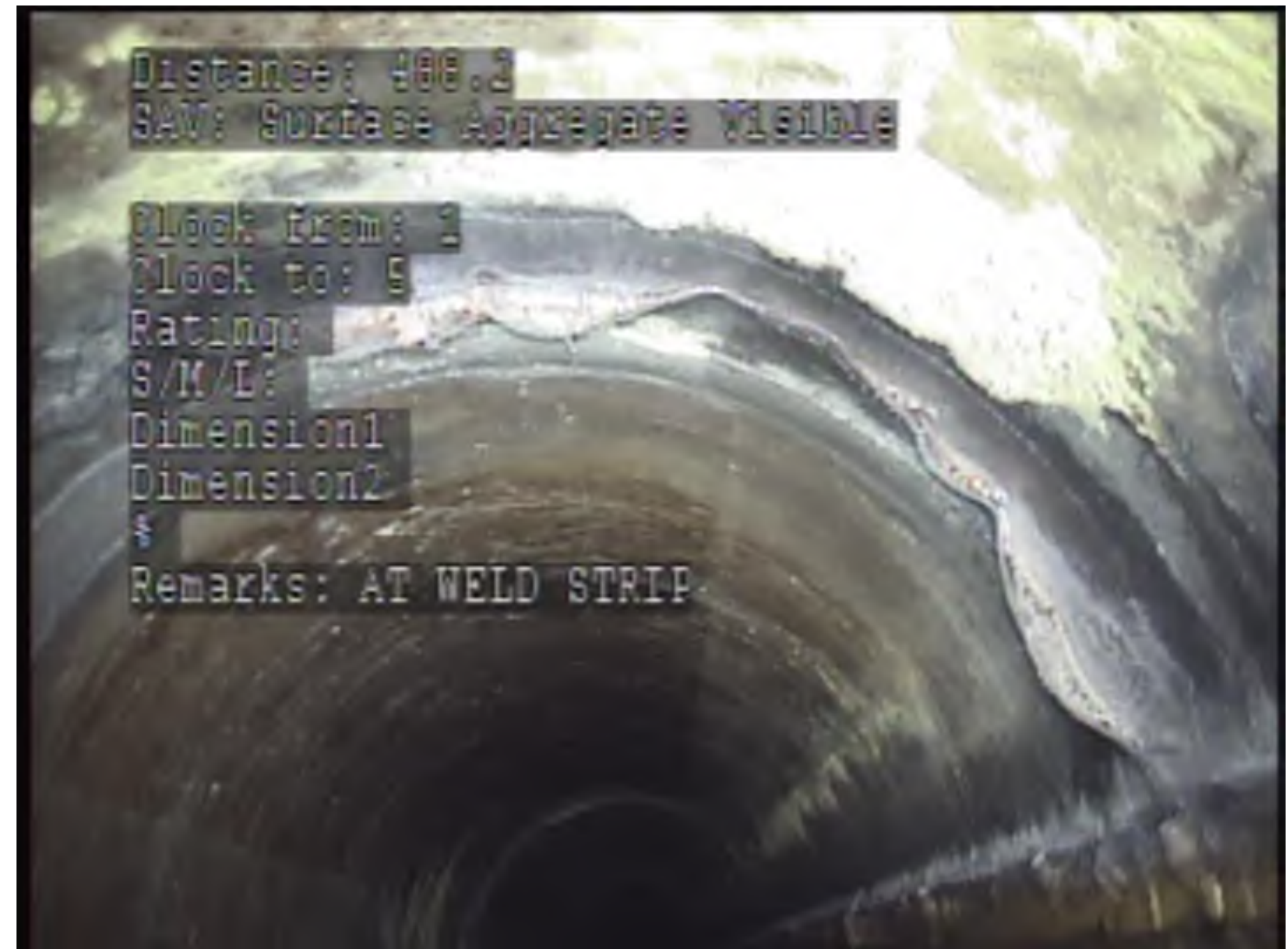


***Protecting Our
Community
Today***

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

***Careful
Stewardship
of Resources***

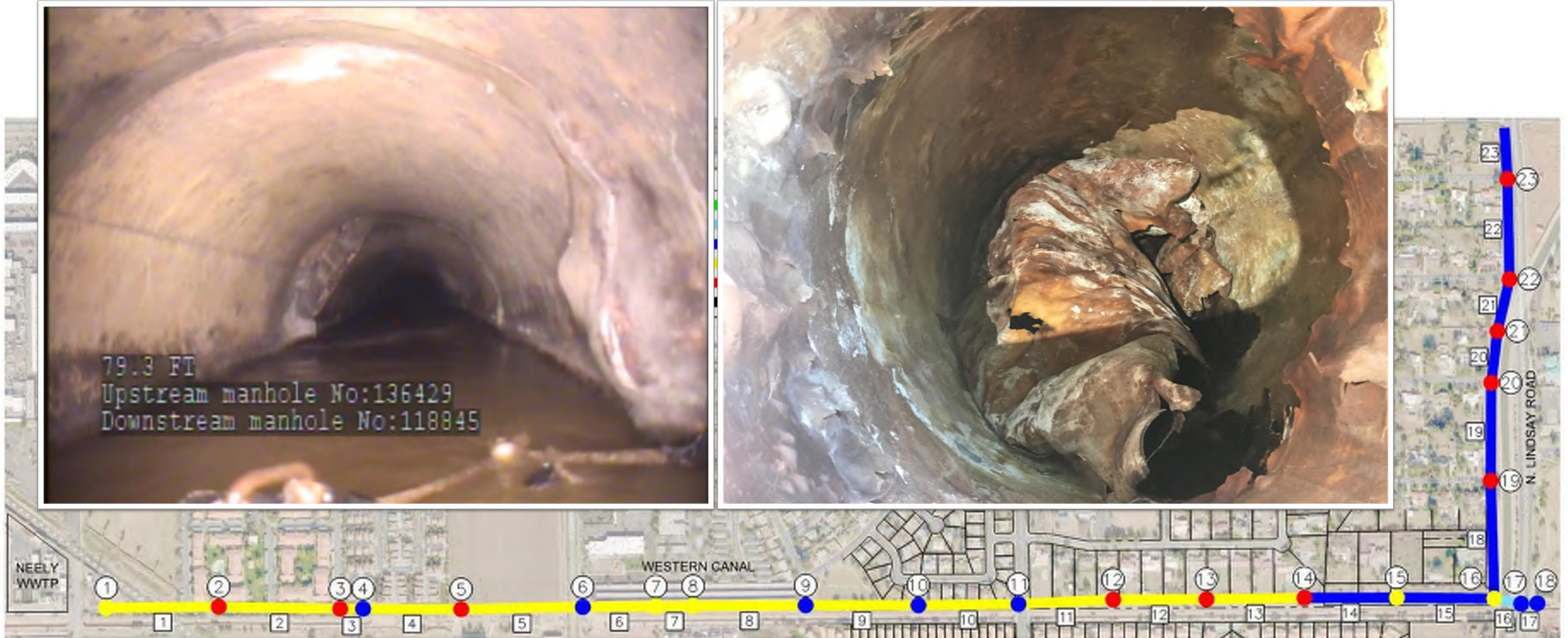
Project Catalyst



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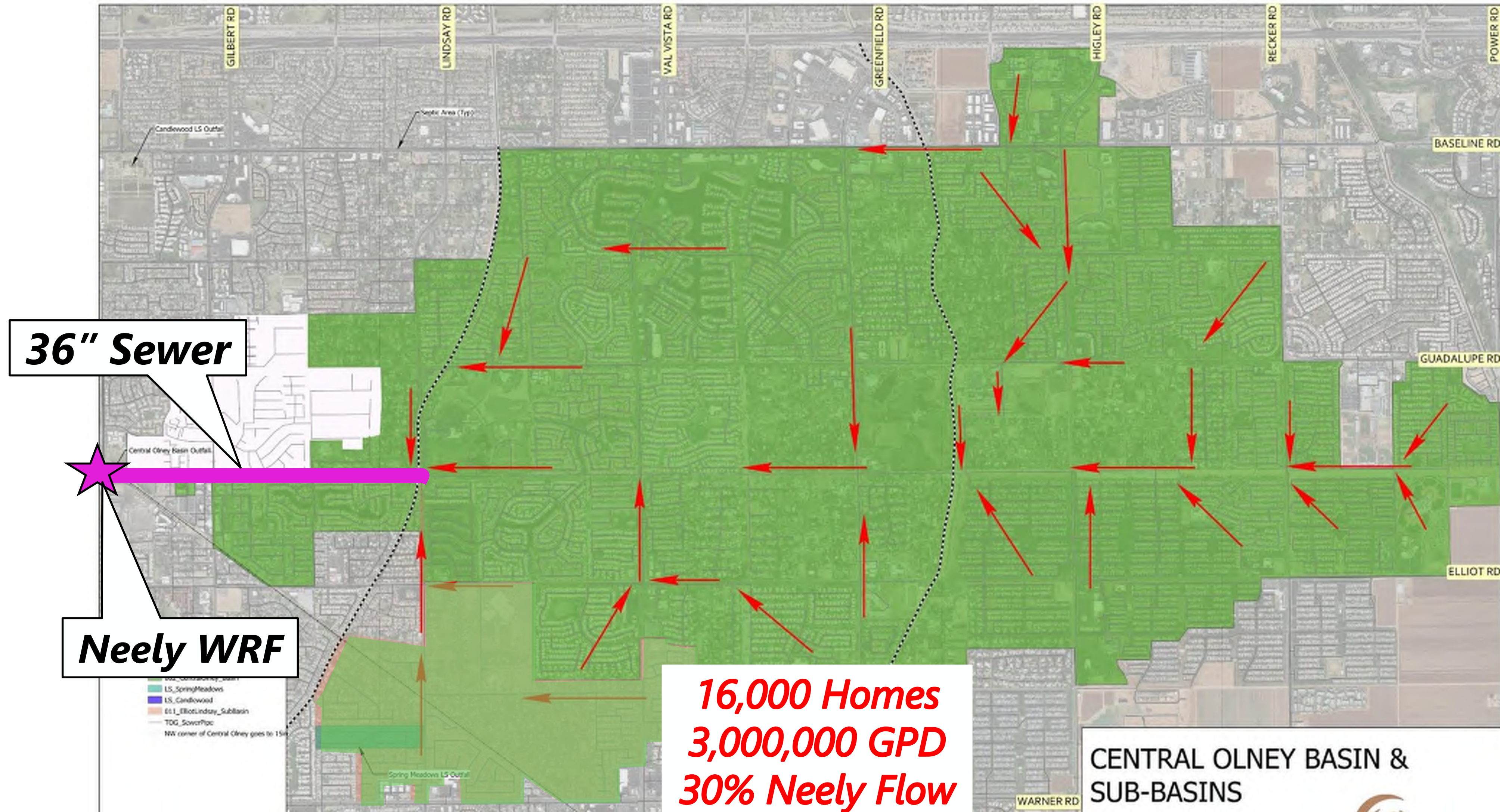
Project Catalyst



Western Canal Corridor



WW1060 - 36" Sewer

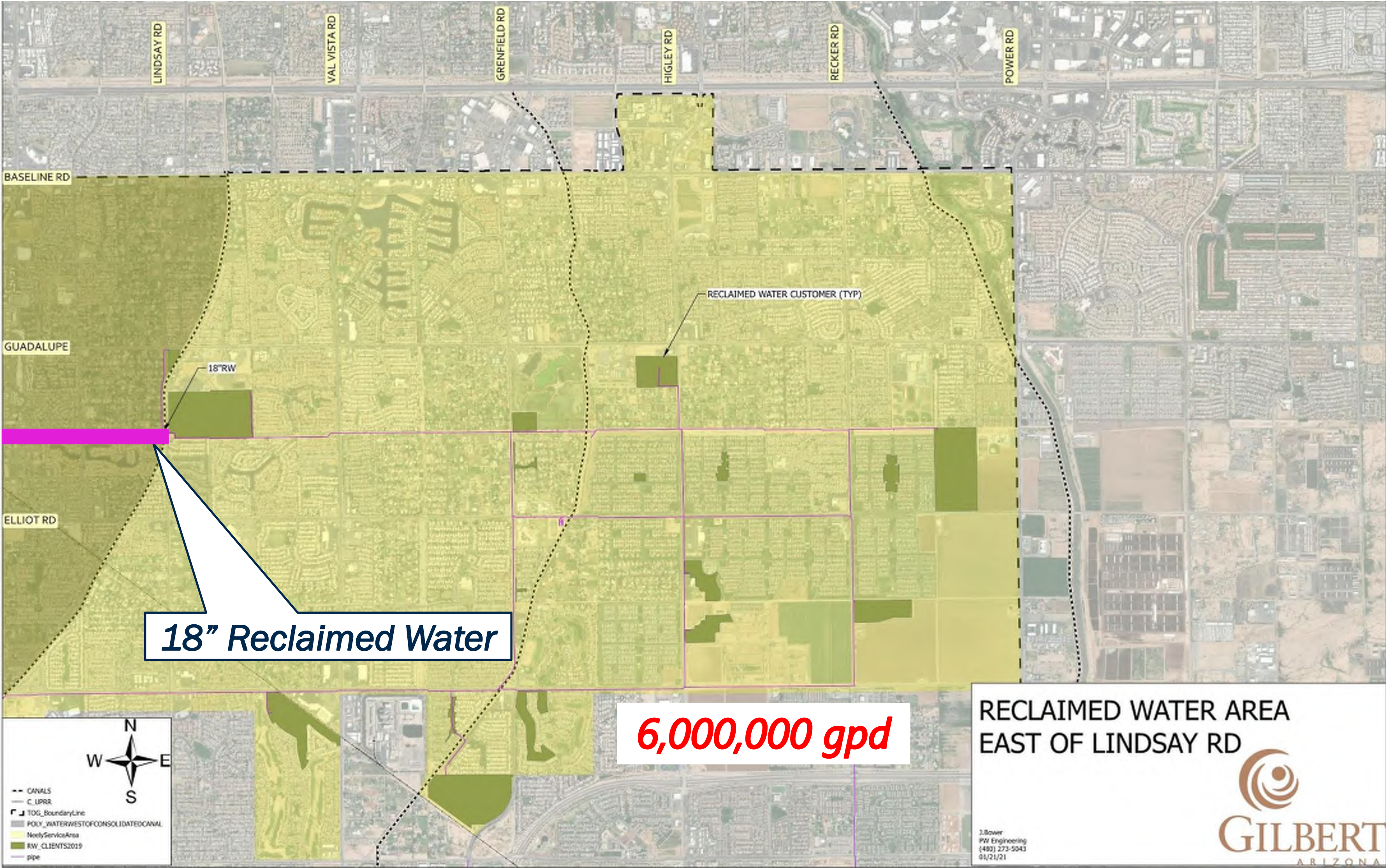


36" Sewer

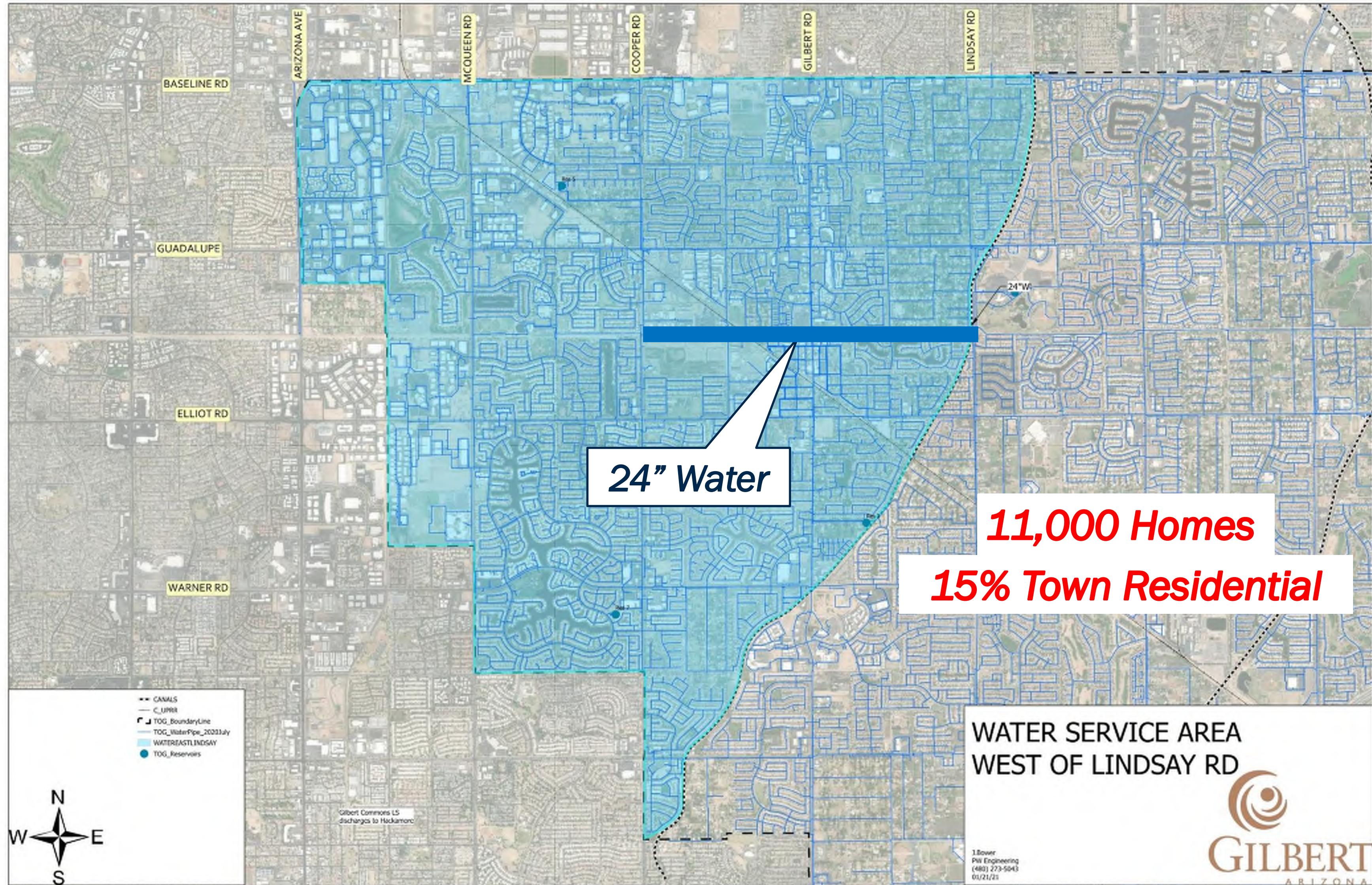
Neely WRF

16,000 Homes
3,000,000 GPD
30% Neely Flow
17% Town Flow

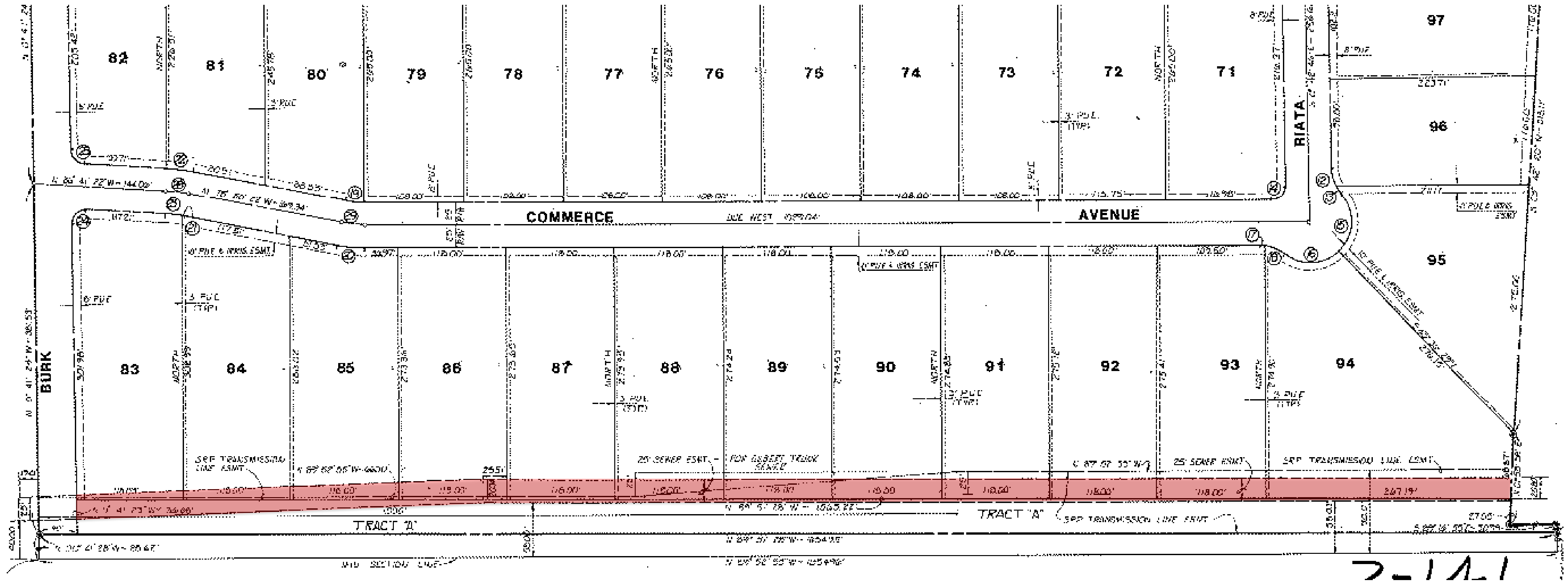
WW1246 – 18” Reclaimed Water



WA1546 – 24” Potable Water



Easement History (1986 Plat & 1985 Easement)



Easement History (1986 Plat & 1985 Easement)

86 179177

86 179177

GRANT OF EASEMENT

Effective Date: March 12, 1985

County of: Maricopa
State of: Arizona

GRANTOR:
Mr. Victor McCleve
616 East Southern
Mesa, Arizona 85204

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:

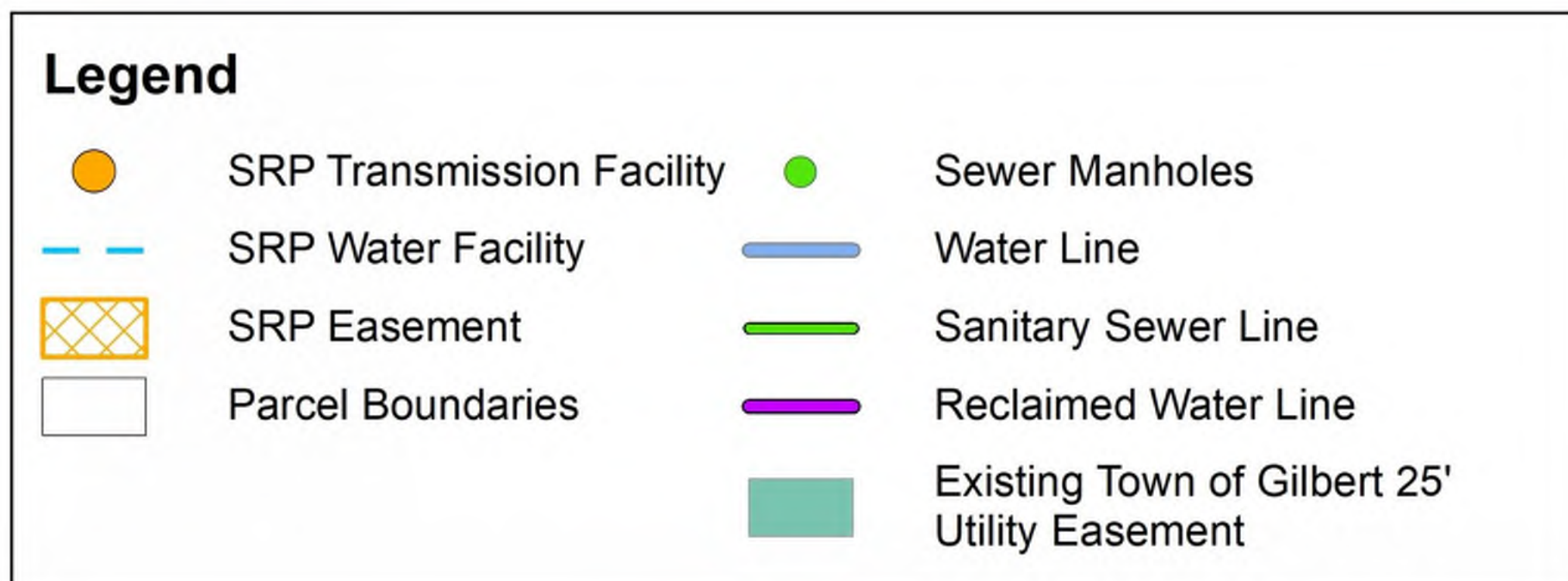
Permanent Utility Easement:

A 25 foot wide public utility easement is to be acquired, of which the south line is approximately 37 feet north of the south line of the subject. The total take area required for this easement is 22,700 square feet.

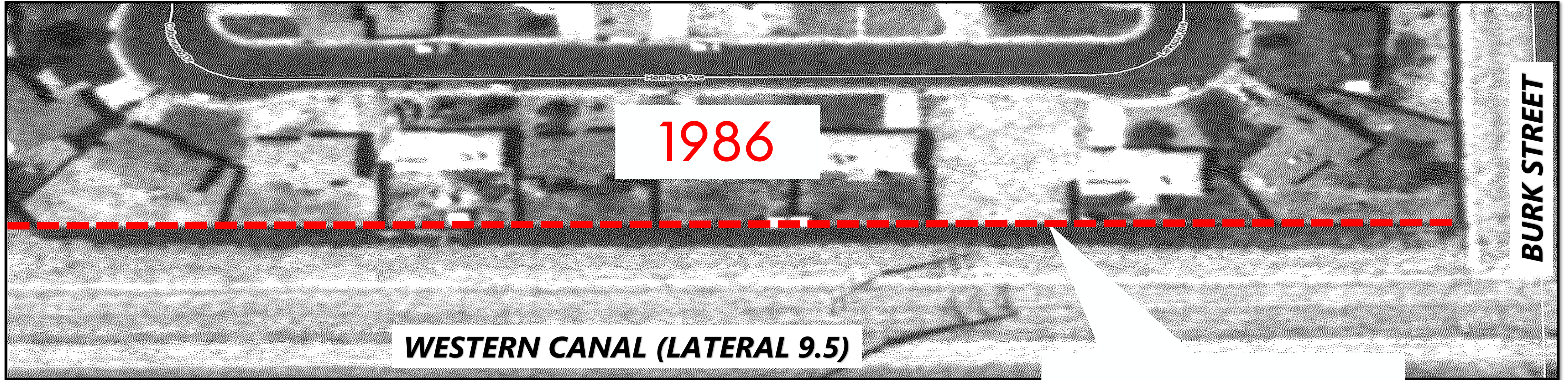
Temporary Construction Easement:

A 15 foot wide temporary construction easement is to be acquired along the south side of the permanent utility easement. This easement will expire upon completion of the project. The total area required is 13,620 square feet.

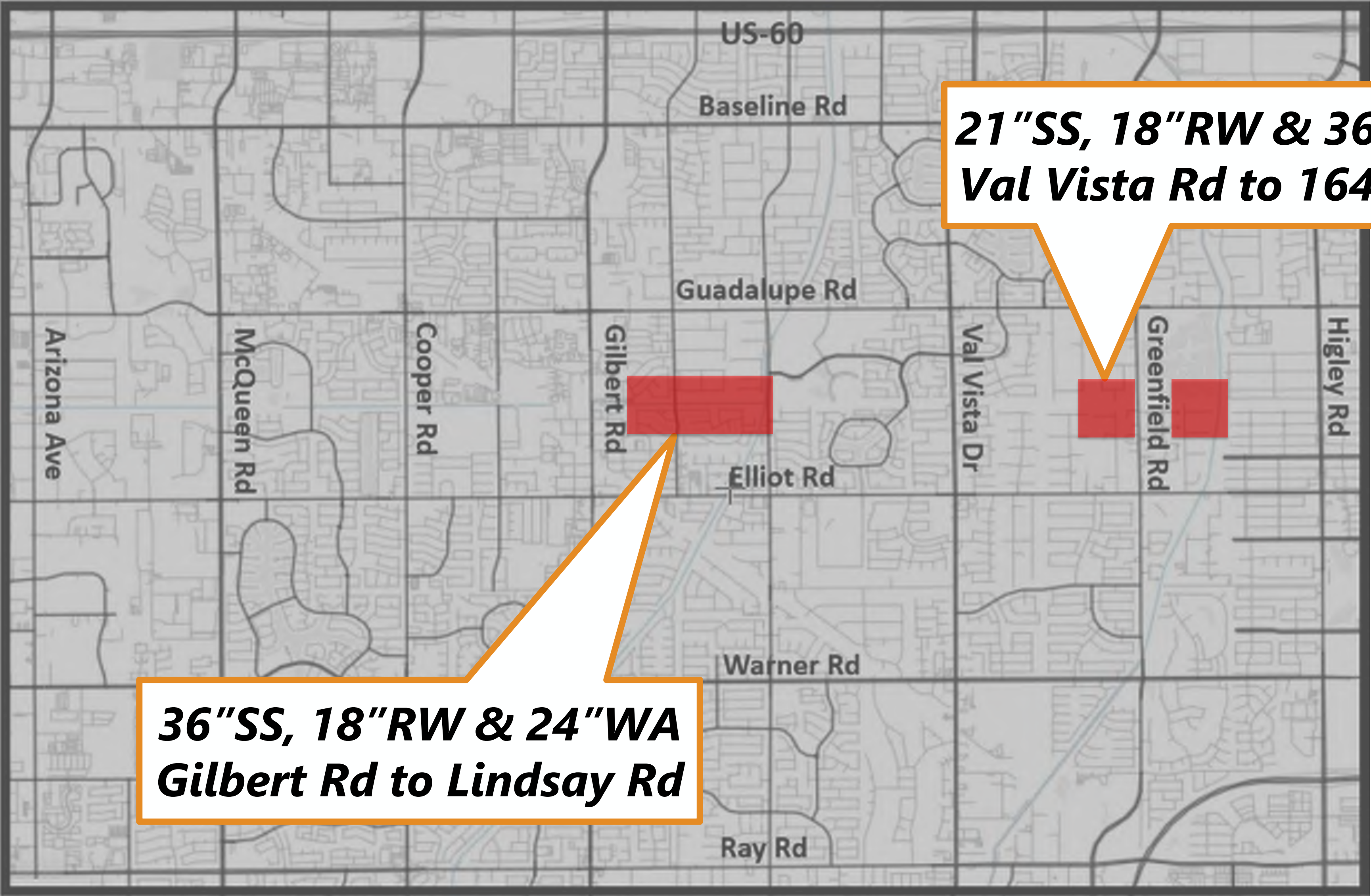
Existing Conditions



1986 and 2016



Significant Utilities within Residential Backyards





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



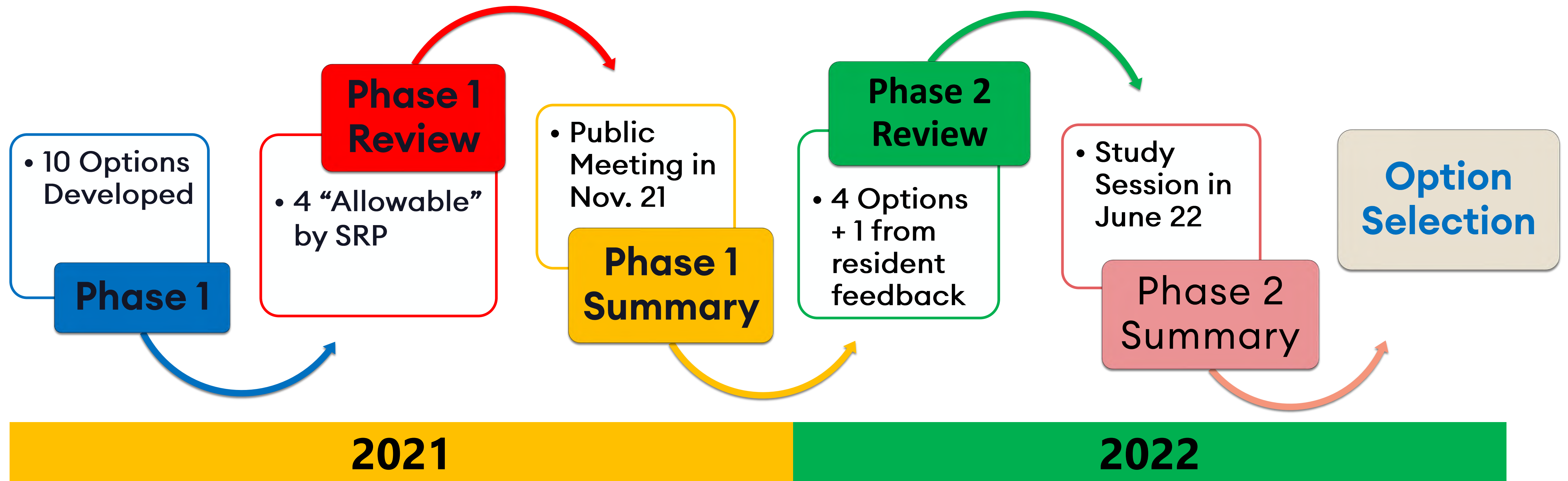
CLICK THE LINKS ABOVE TO NAVIGATE TO THE VIEW

**CLICK PINS
TO VIEW OPTIONS
FROM NORTH**

**CLICK PINS
TO VIEW OPTIONS
FROM SOUTH**

**CLICK EXCAVATOR
TO VIEW CONSTRUCTION
SEQUENCING**

Corridor Analysis Summary



Corridor Analysis Options

Option 1

Acquire Easement in Fee

Option 2

Utility Corridor Alley

Option 3

Minimal Acquisition at Manholes

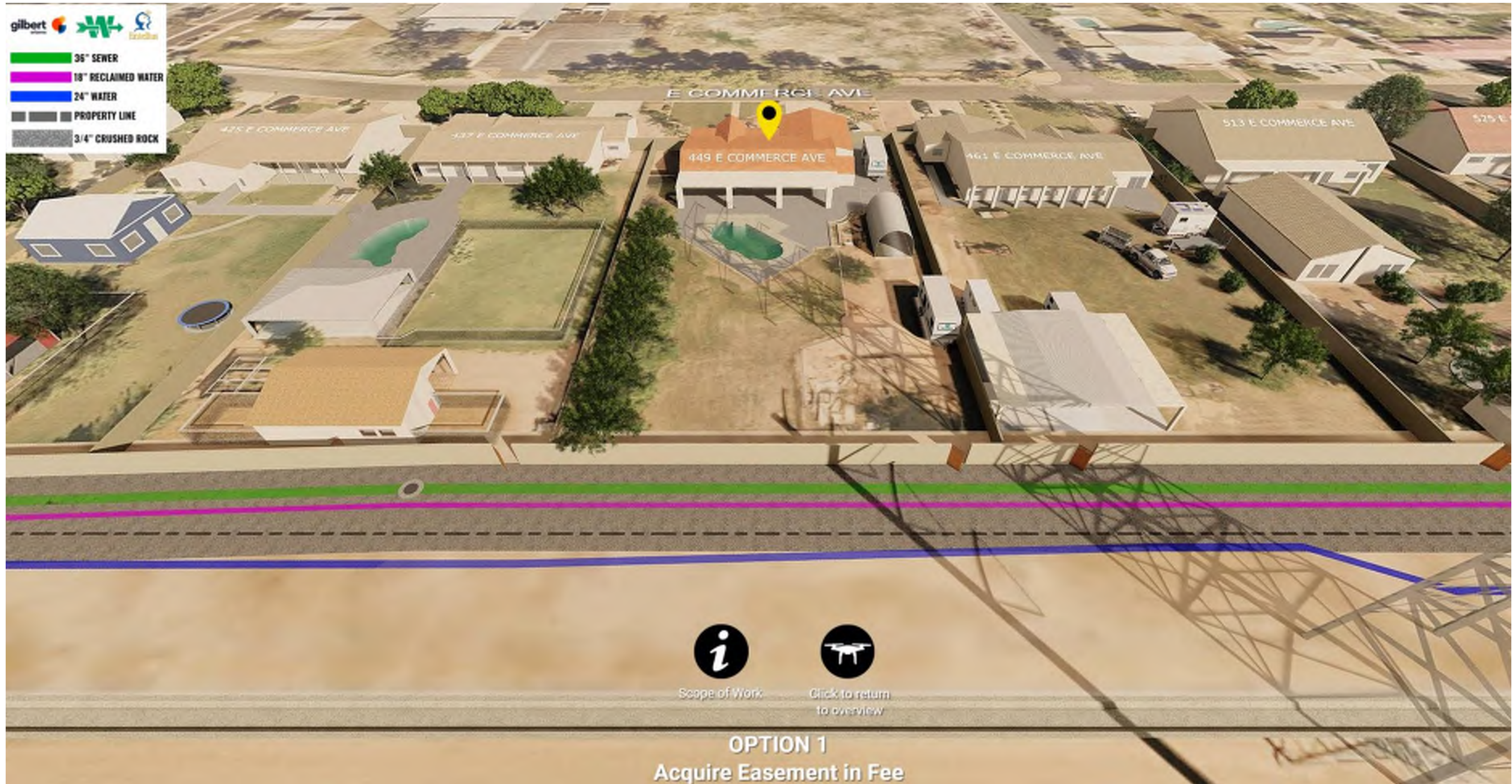
Option 4

Gates to Manhole Properties

Option 5

Gates to Manhole Properties + Relocate Reclaimed Water

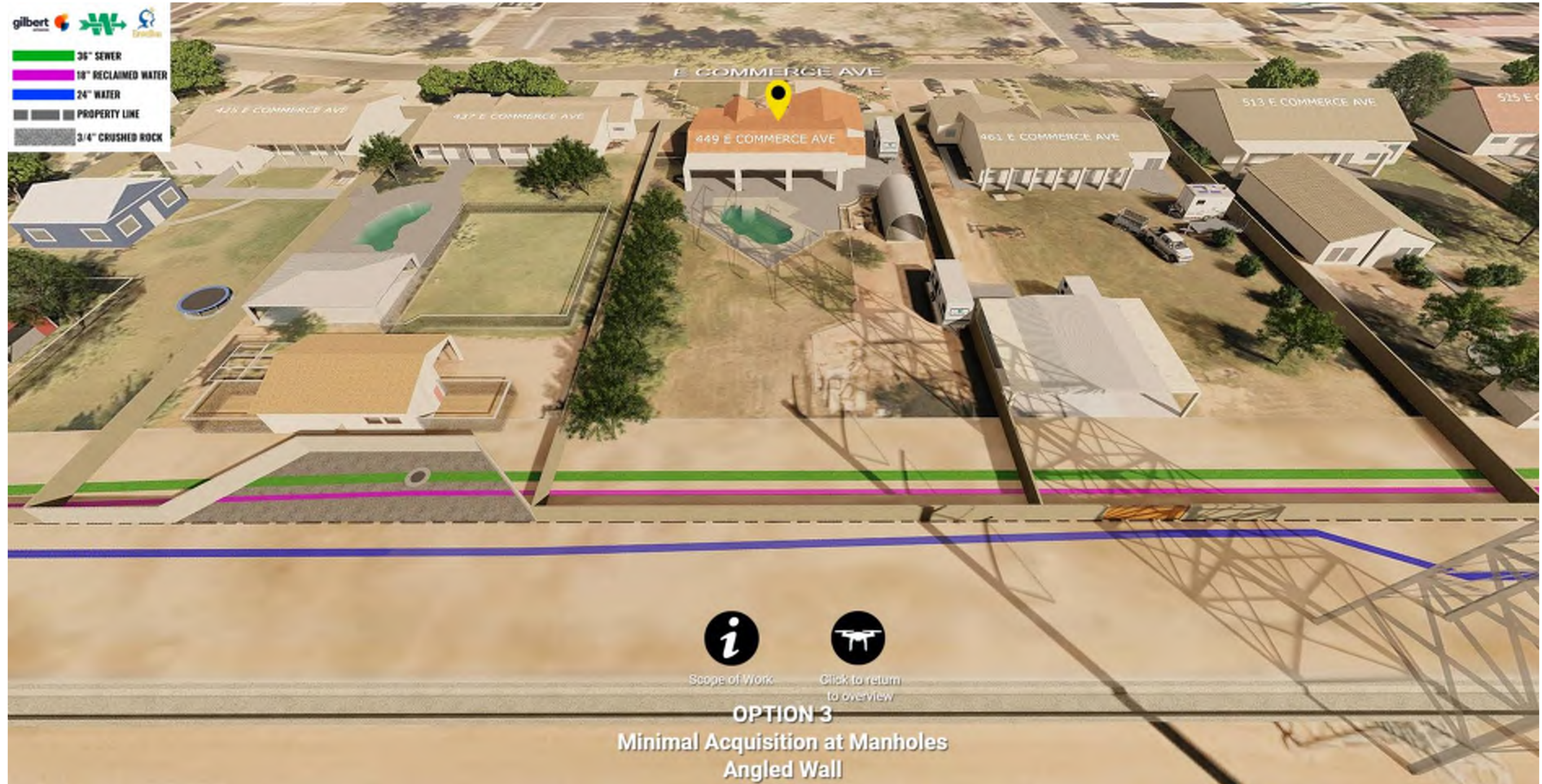
Option 1 – Acquire Easement in Fee



Option 2 – Utility Corridor Alley



Option 3 – Minimal Acquisition at Manholes



Option 4 – Gates to Manhole Properties



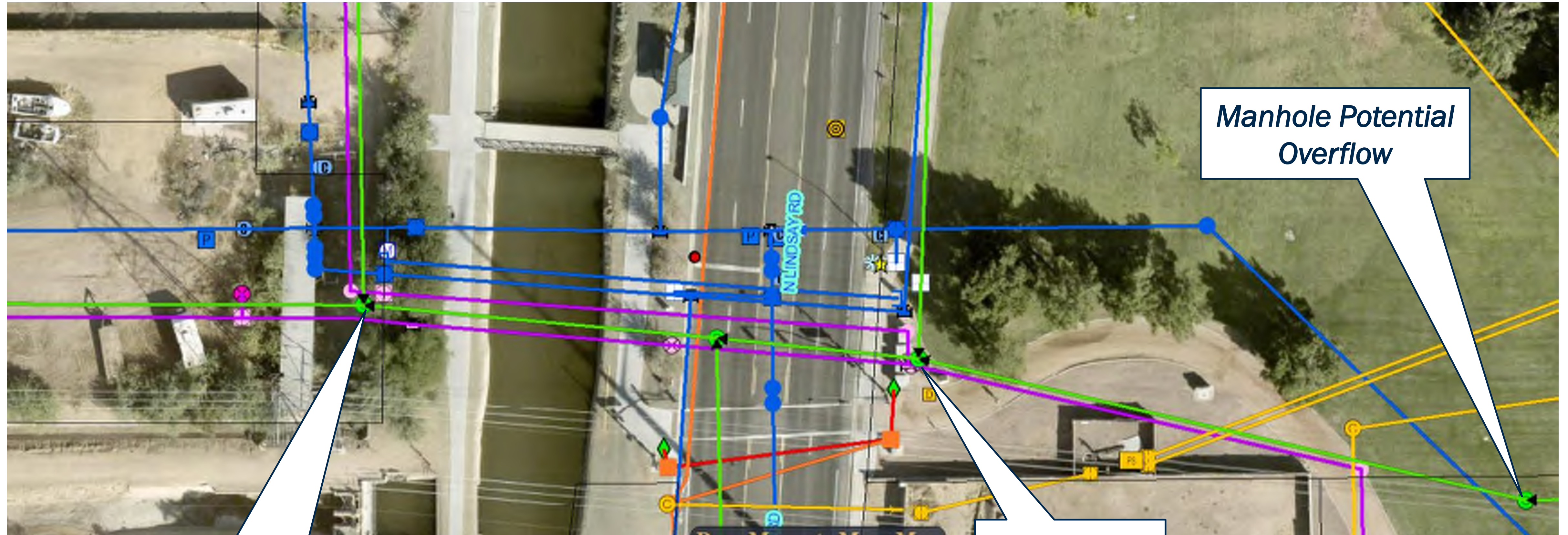
Option 5 – Gates to Manhole Properties + Relocate Reclaimed Water



Recent Experiences

- 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

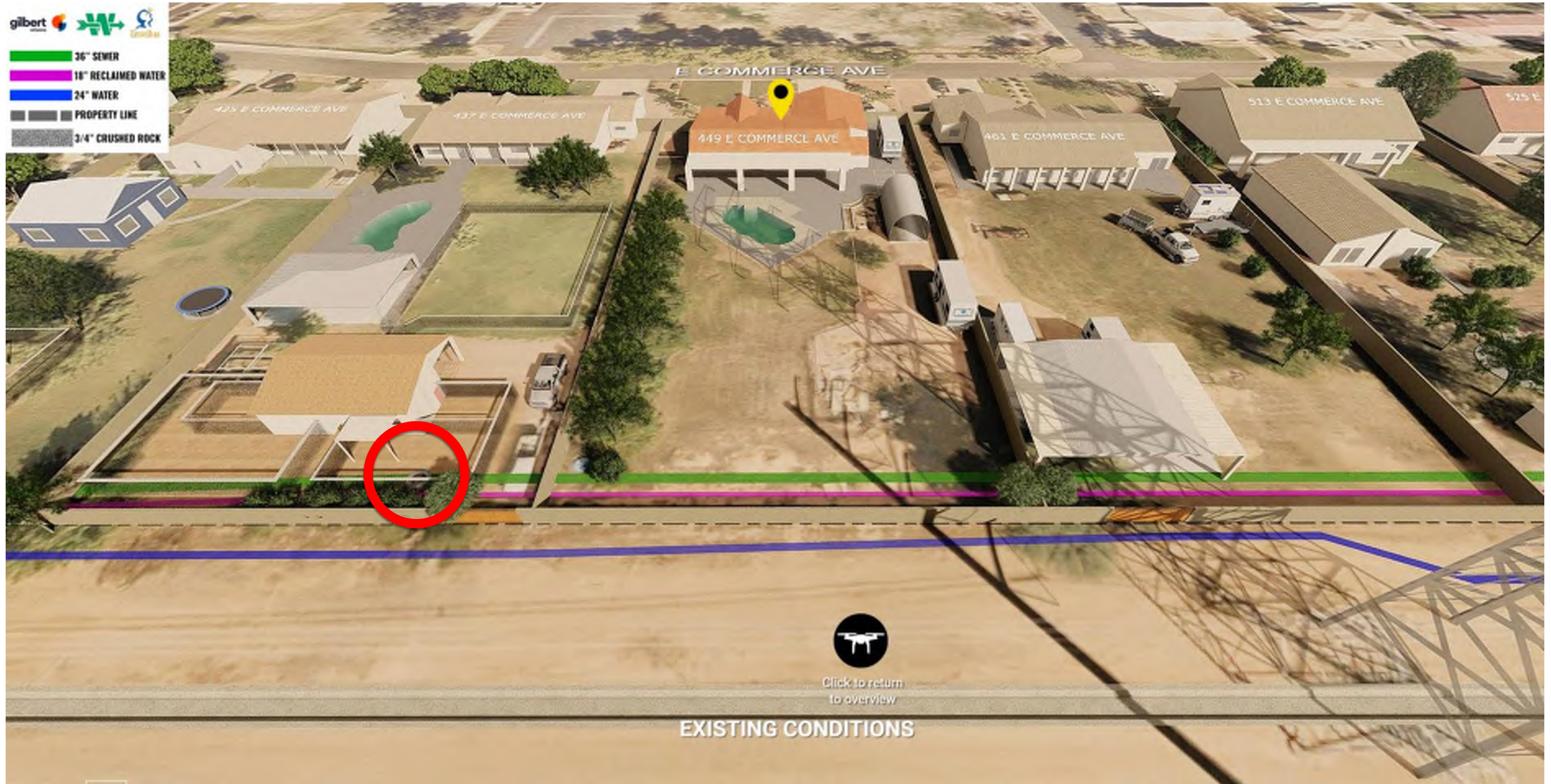
Gravity Sewer Concerns – Freestone Park Blockage (2022)



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Gravity Sewer Blockage - Potential Impact within Corridor



Gravity Sewer Concerns – Western Powerline Trail Failure (2021)



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Gravity Sewer Concerns – Western Powerline Trail Failure (2021)



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Gravity Sewer Failure - Potential Impact within Corridor



Pressure Pipe Concerns – Unauthorized Reclaimed Connection



Pressure Pipe Concerns – Unauthorized Reclaimed Connection



Pressure Pipe Concerns – Tempe US-60 Failure



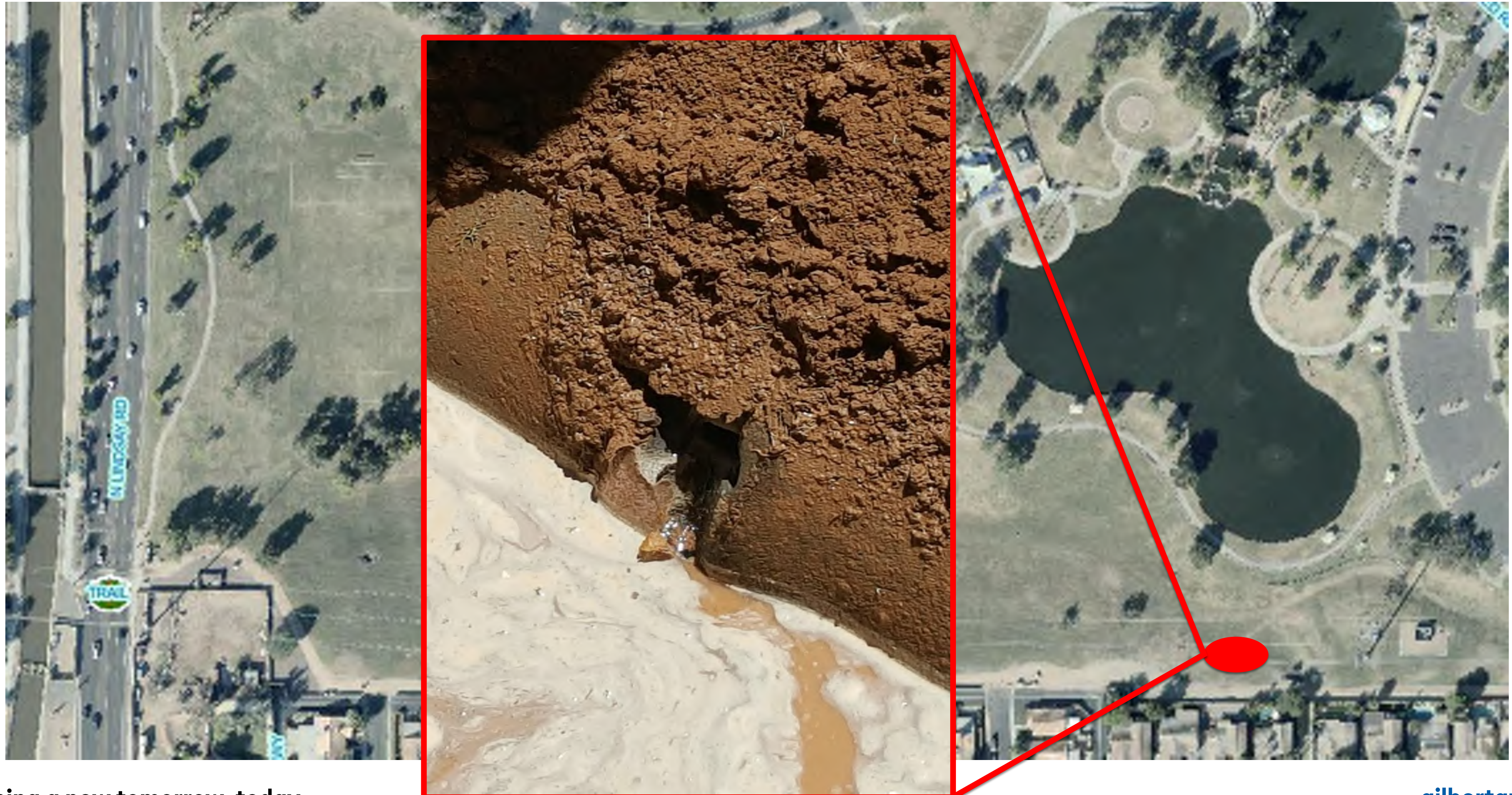
Pressure Pipe Concerns – Western Canal Failure (2021)



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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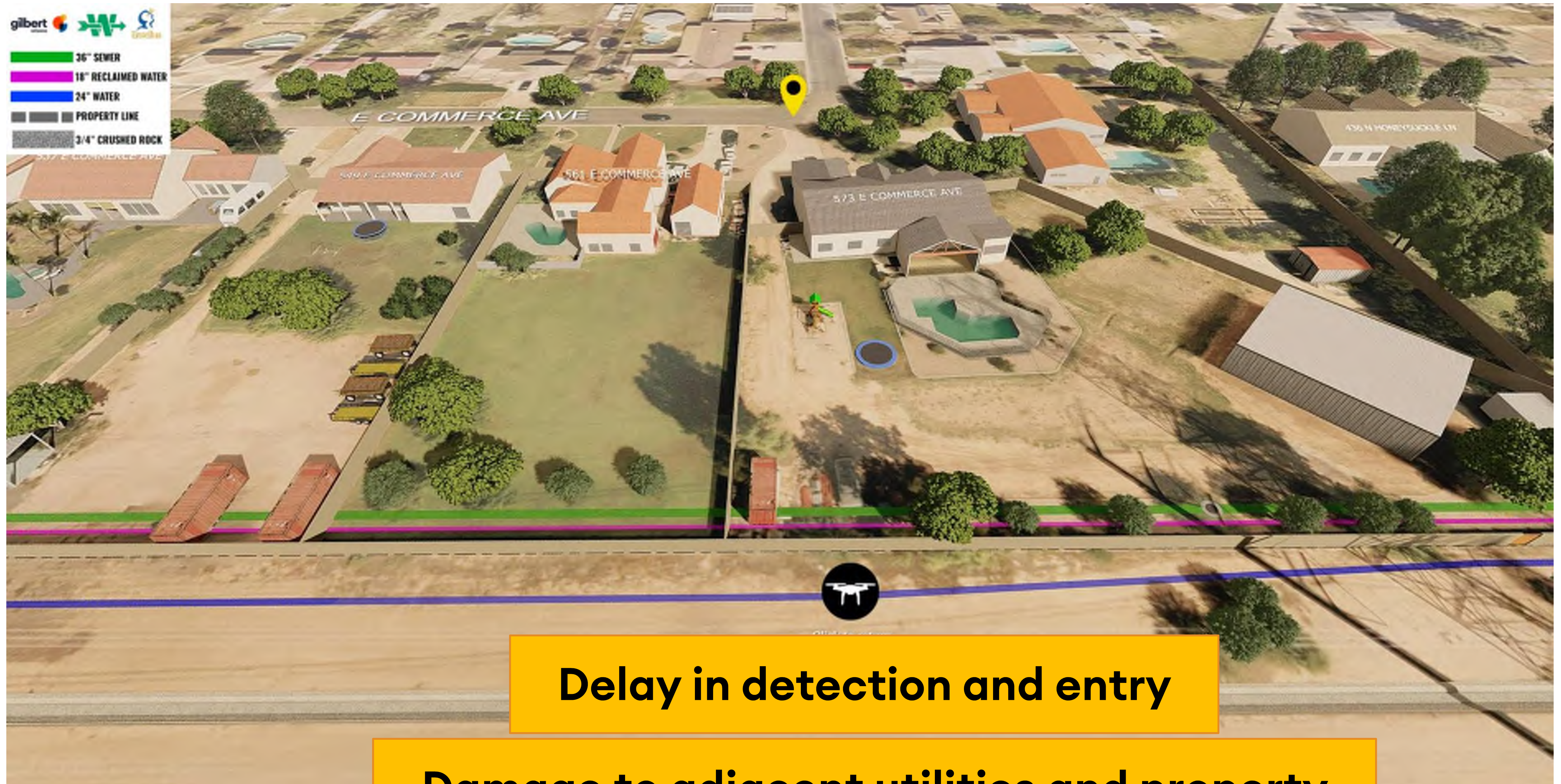
Pressure Pipe Concerns – Greenfield Road Sinkhole (2016)





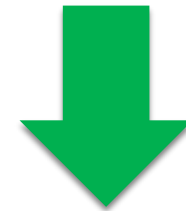











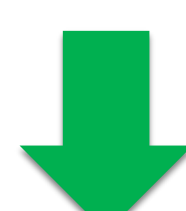
Pressure Pipe Concerns – Greenfield Road Sinkhole (2016)



Impacts to Corridor



Options Comparison – KC Ranch Phase 2 & Rio Caballo

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

Next Steps

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





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Questions