

TIRZ 17 Memorial City Detention Basin

WBS#: M-430296-0017-4



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We Keep All of This Running.

Public Engagement
SBISD Board Meeting
October 27, 2026

PRESENTATION AGENDA

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PROJECT INTRODUCTION

Project Description:

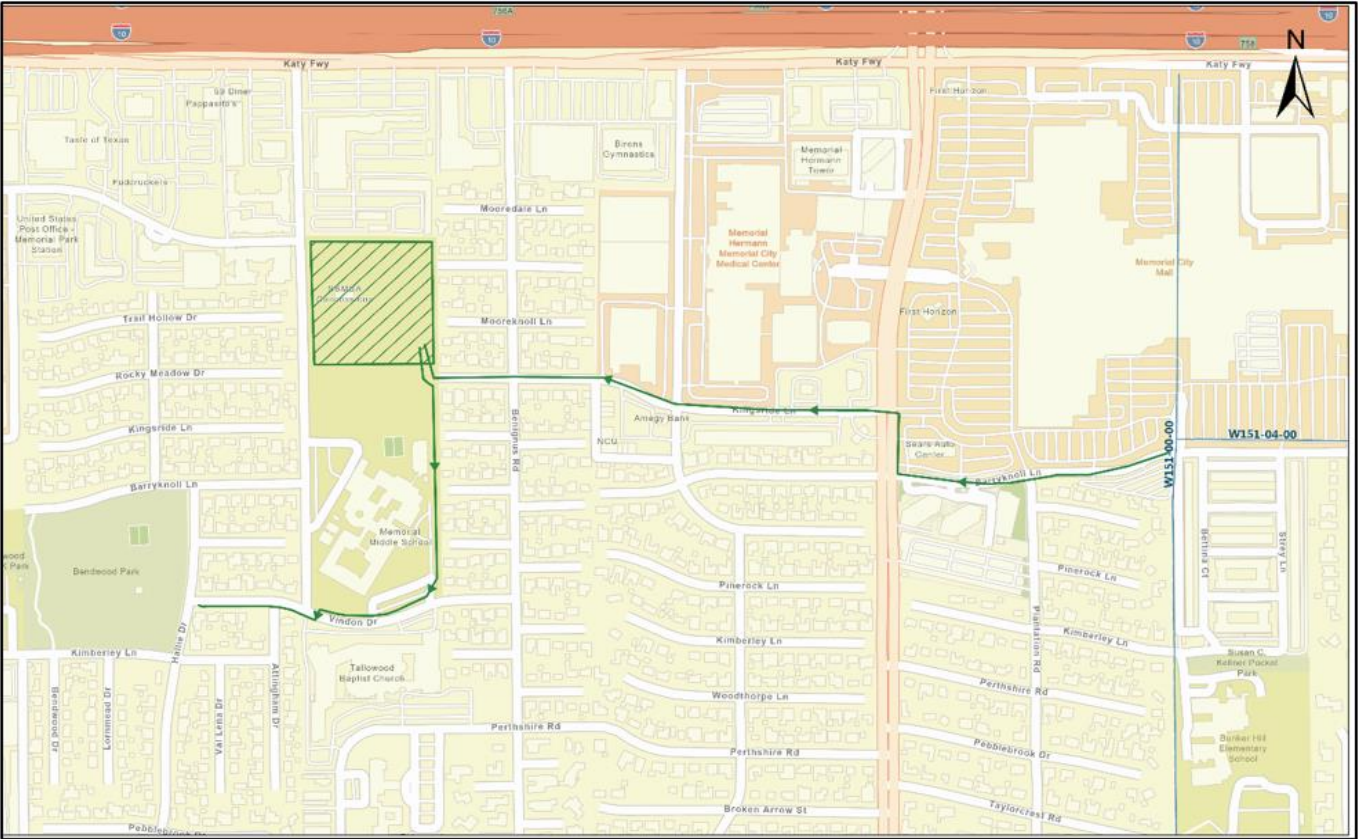
- Regional flood mitigation
- 94 ac-ft of detention volume

Purpose:

- Reduce property damage due to flooding (natural disaster)

Need:

- Provide relief for ditch systems W151-00-00 and W153-00-00, lower the water surface elevation
- Reduce street flooding

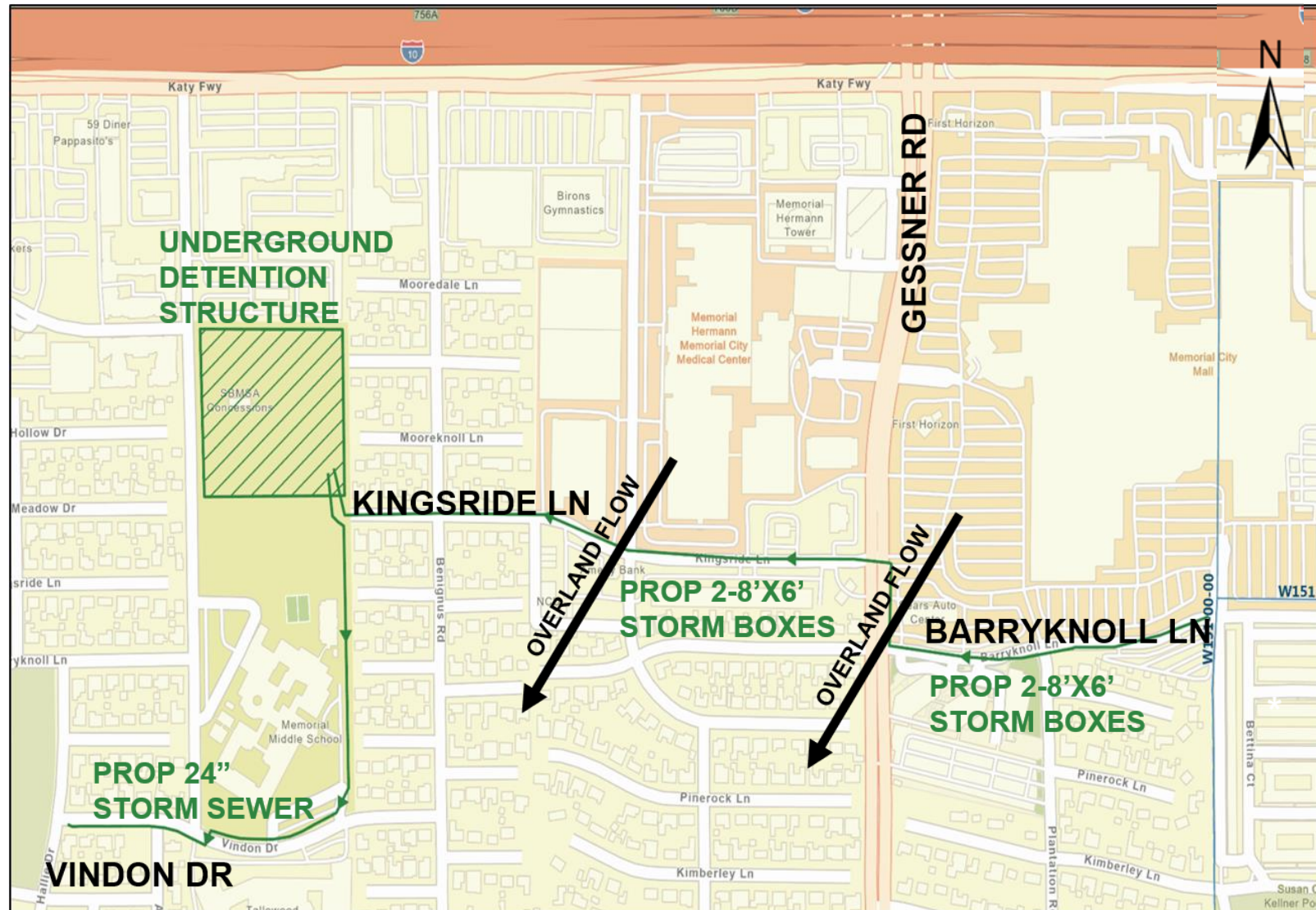


**Project Originated from 2014
Regional Drainage Study**

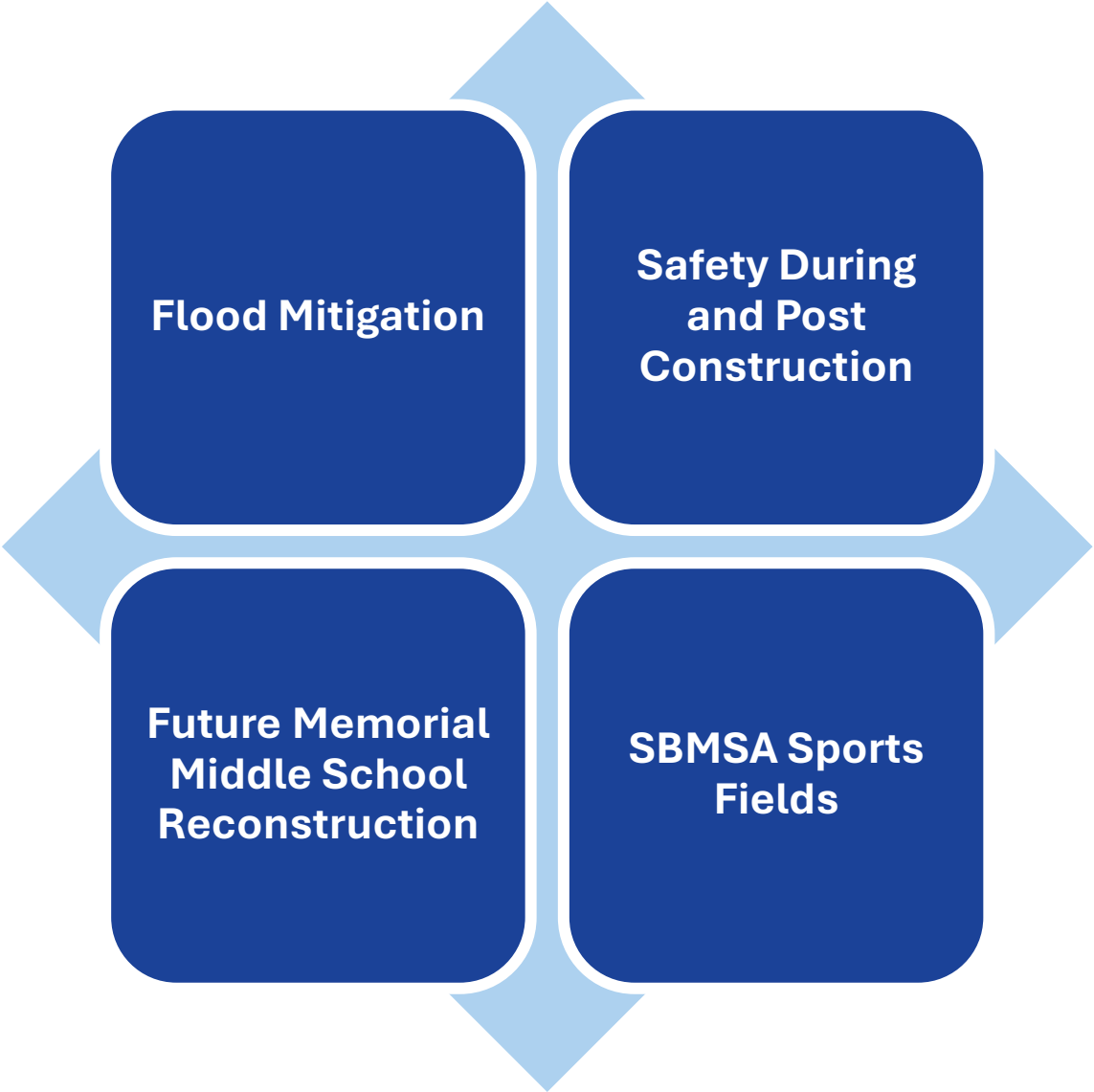
PROPOSED IMPROVEMENTS OVERVIEW

Project Overview:

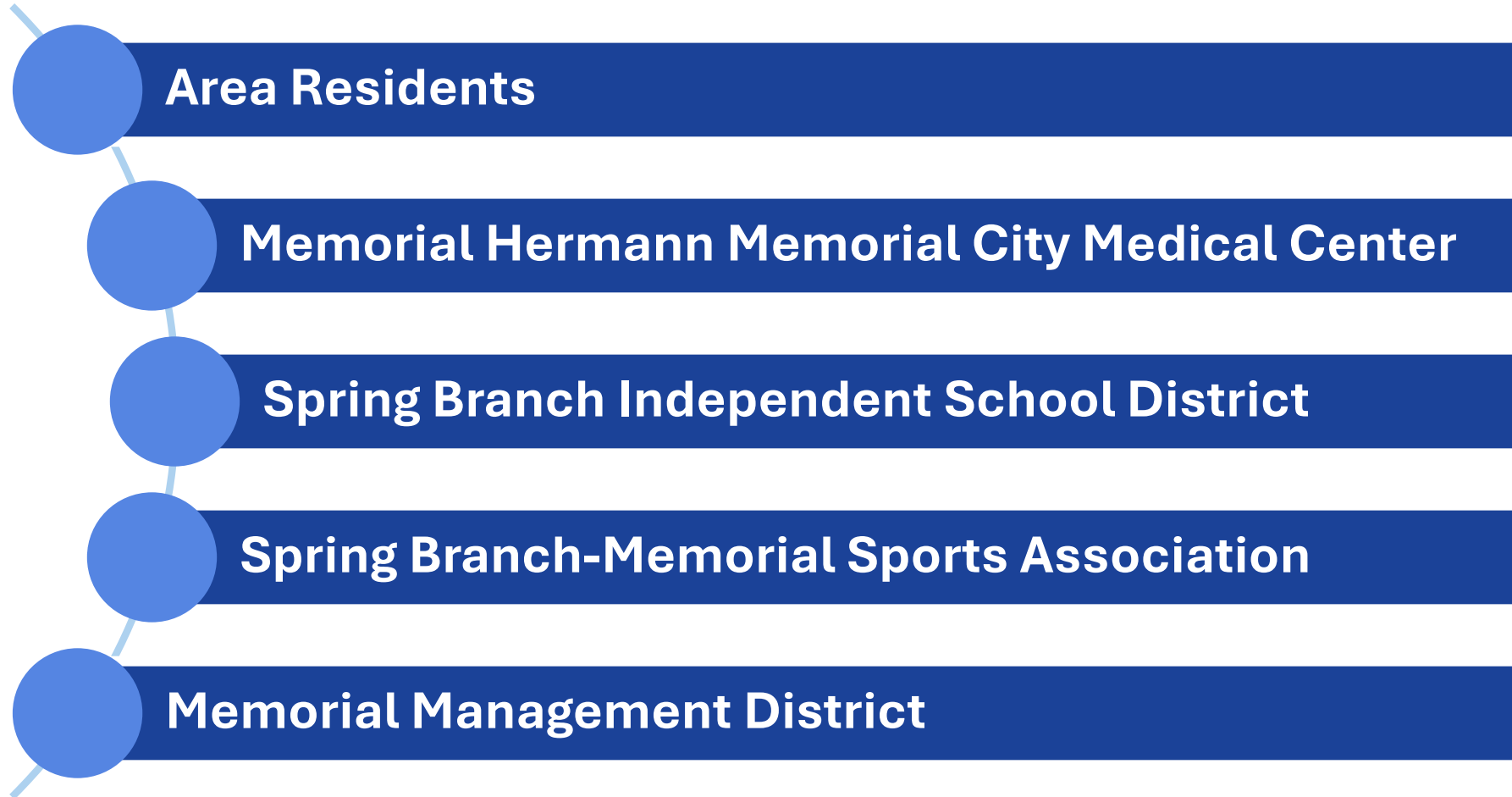
- Gravity drainage system (not pumped)
- Capture stormwater draining to ditch systems W151 and W153, including overland sheet flow
- Store the stormwater in the underground detention vault
- Release the stormwater after the storm when the Vindon Drive storm sewer system has capacity.



KEY PROJECT CONSIDERATIONS



KEY STAKEHOLDERS



PROJECT NEED

Historical Flooding Events

April 2009 Event

9.5 in/24hr

Memorial Day
2015

11.5 in/24hr

Tax Day 2016

9.8 in/24hr

Harvey 2017

18.6 in/24hr

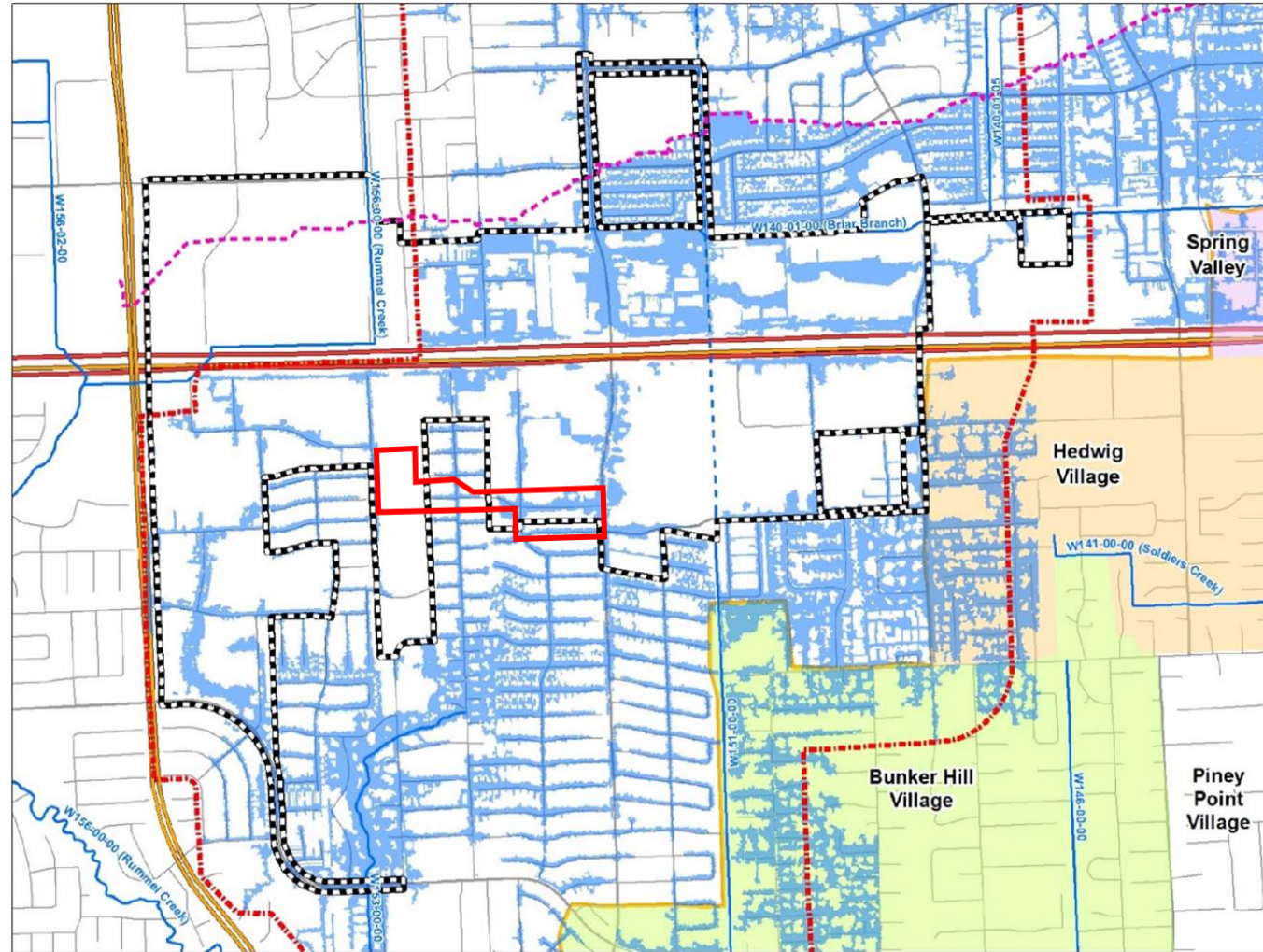
Imelda 2019

7.4 in/24hr

Region 2--Brays, Buffalo, Greens, Hunting, Luce, West Fork San Jacinto, and White Oak										
Period	5-min	15-min	30-min	1-hour	2-hour	3-hour	6-hour	12-hour	1-day	2-day
2-year	0.6	1.2	1.7	2.2	2.8	3.1	3.8	4.4	5.1	5.9
5-year	0.7	1.5	2.1	2.8	3.6	4.1	5.0	5.9	6.9	8.1
10-year	0.9	1.7	2.4	3.2	4.3	4.9	6.2	7.4	8.7	10.2
25-year	1.0	2.0	2.8	3.8	5.2	6.2	7.9	9.7	11.5	13.7
50-year	1.1	2.3	3.2	4.3	6.0	7.3	9.5	11.7	14.0	16.8
100-year	1.3	2.5	3.5	4.8	6.9	8.5	11.3	14.0	16.9	20.4
500-year	1.6	3.1	4.4	6.2	9.6	12.2	16.7	20.9	25.0	29.2



PROJECT NEED – APRIL 2016 TAX DAY

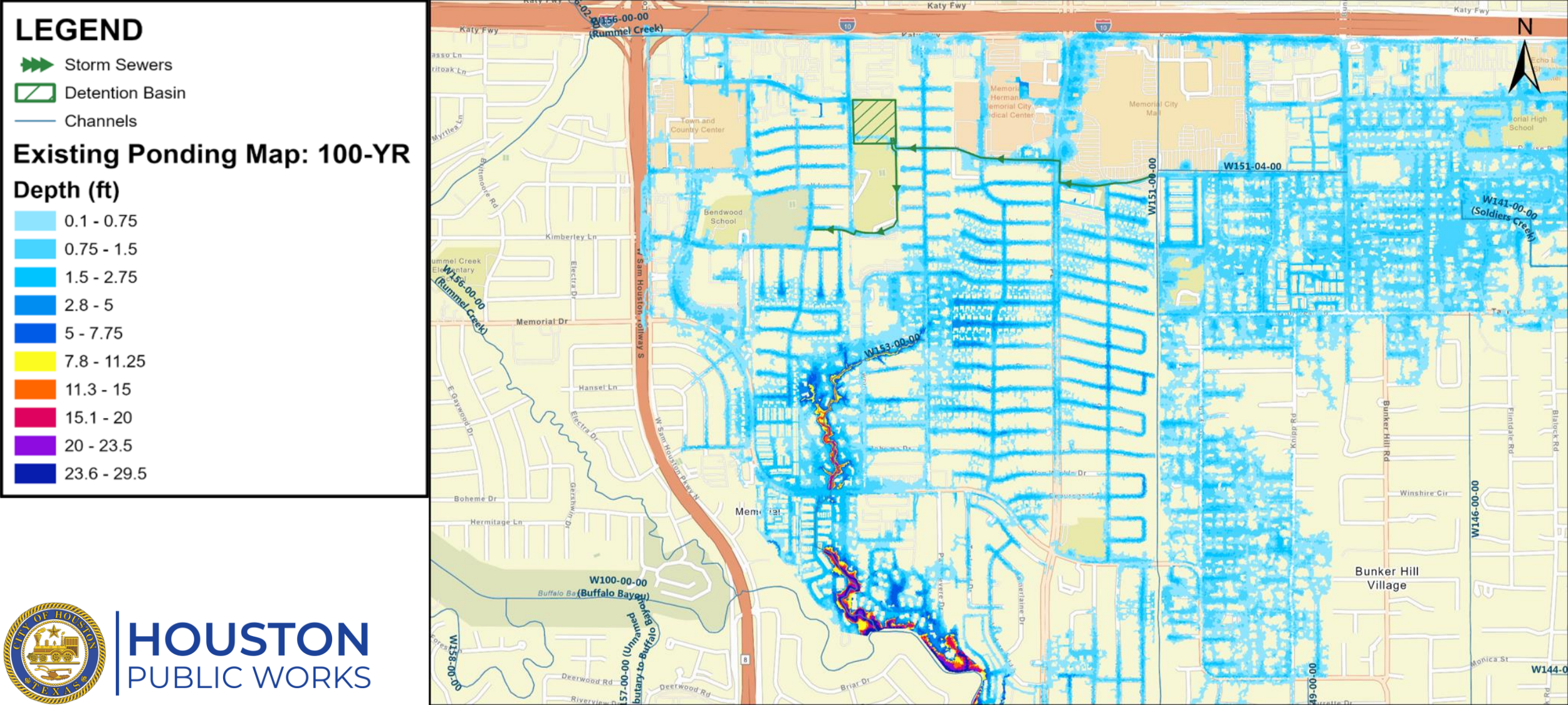


2016 Tax Day Inundation Limits



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PROJECT NEED – EXISTING 100 – YEAR EVENT



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PROJECT OVERVIEW AND BENEFITS – PROPOSED 100 – YEAR EVENT

LEGEND

 Storm Sewers

 Channels

 Detention Basin

Proposed Ponding Map: 100-YR
Flooding Reduction (Ft)

 -3.095 - -1

 -0.999 - -0.75

 -0.749 - -0.5

 -0.499 - -0.25

 -0.249 - -0.1

 -0.099 - -0.05

 -0.049 - -0.01

 -0.009 - 0



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PROJECT BENEFITS

Flood Reduction:

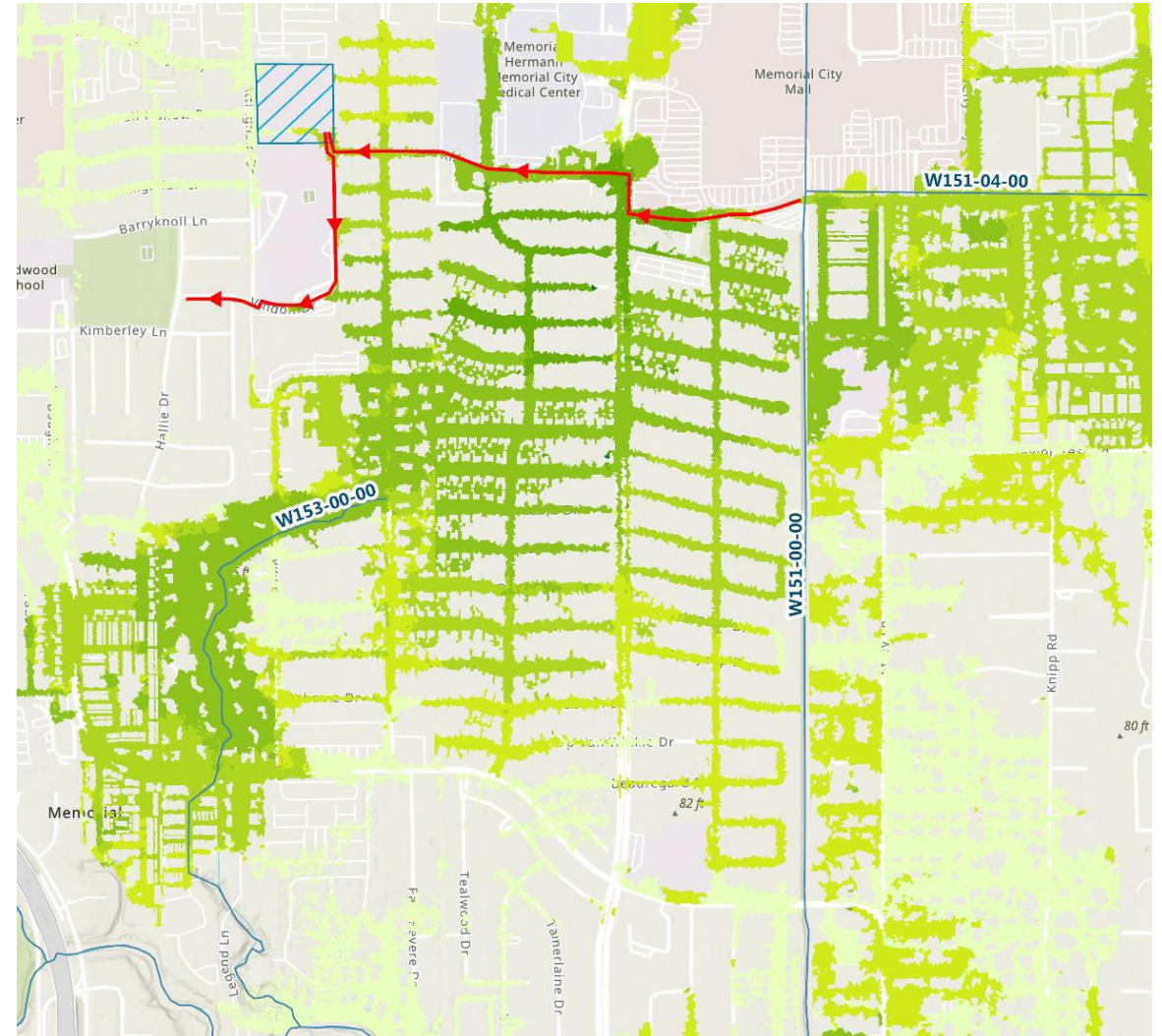
- Over 1,600 structures with reduced flood risk

Financial Impact:

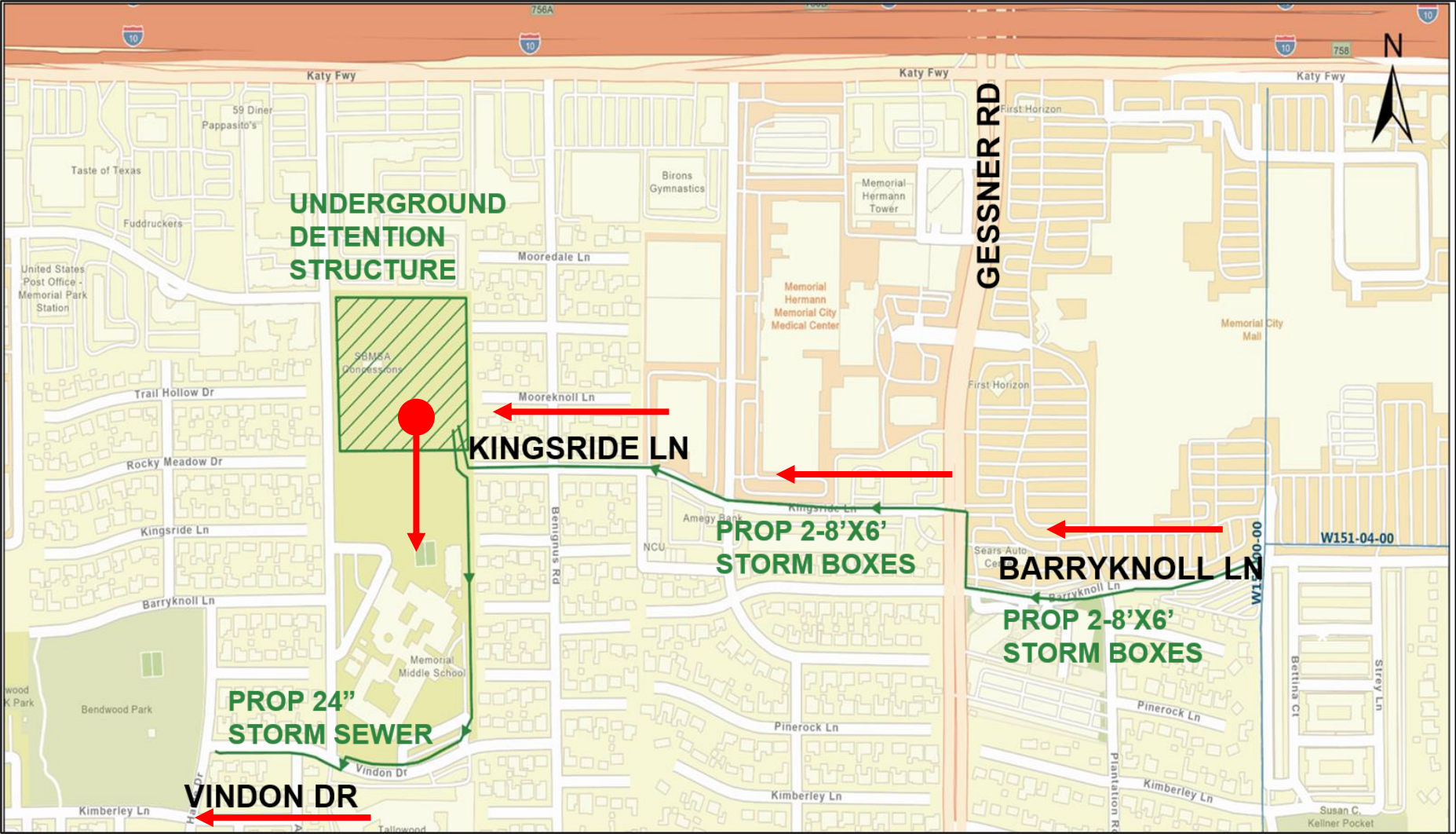
- Flood Damage Avoidance Benefit ~\$114M
- Property Value and Property Tax Influence
- SBISD Tax Base Benefits

Non-Financial Impact:

- Homeowner and Student Piece of Mind

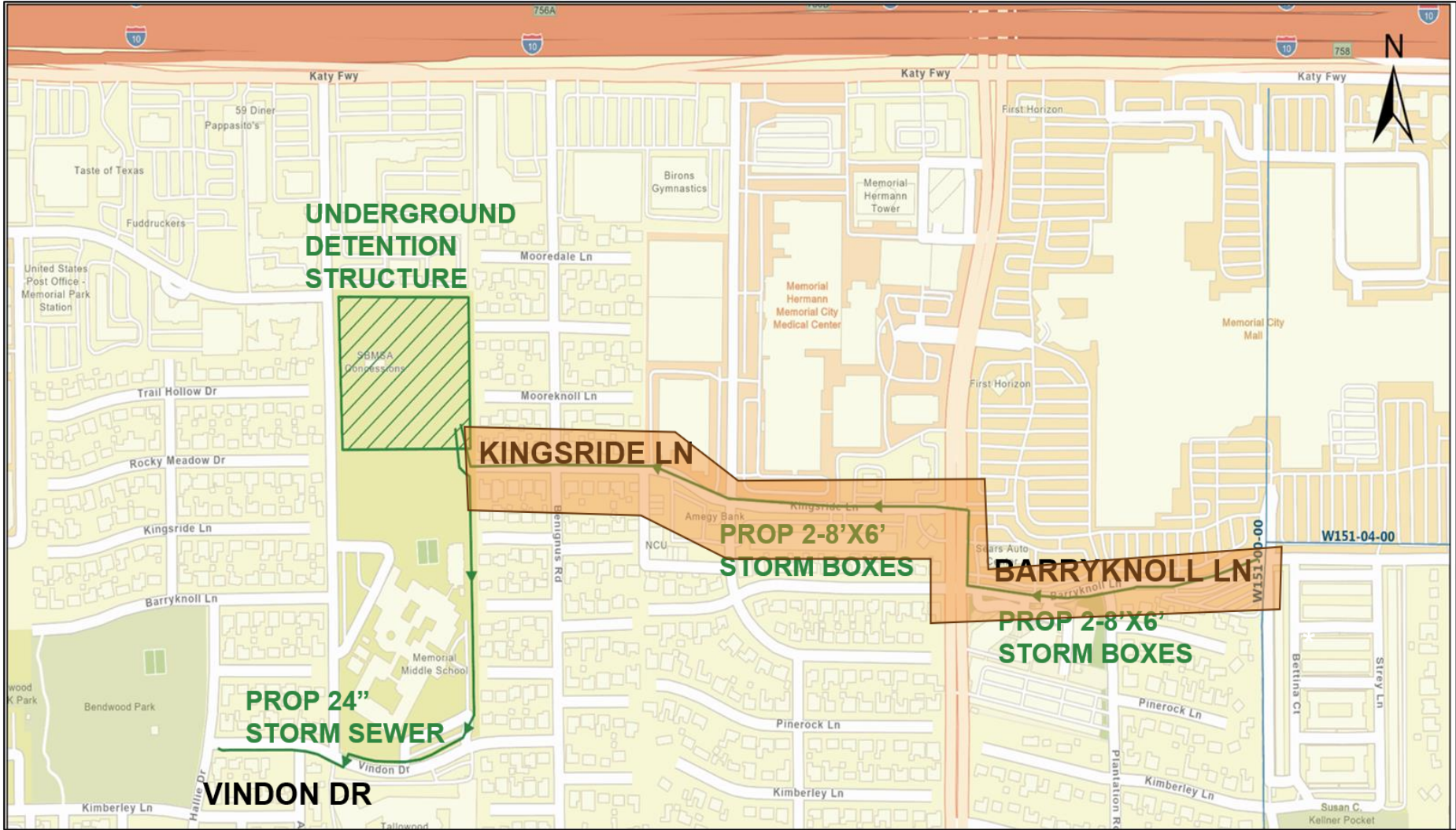


PROJECT OVERVIEW



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PROJECT OVERVIEW – ROADWAY AND STORM SEWER



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STORM SEWERS – TWO PARALLEL 8-FT BY 6-FT STORM SEWERS



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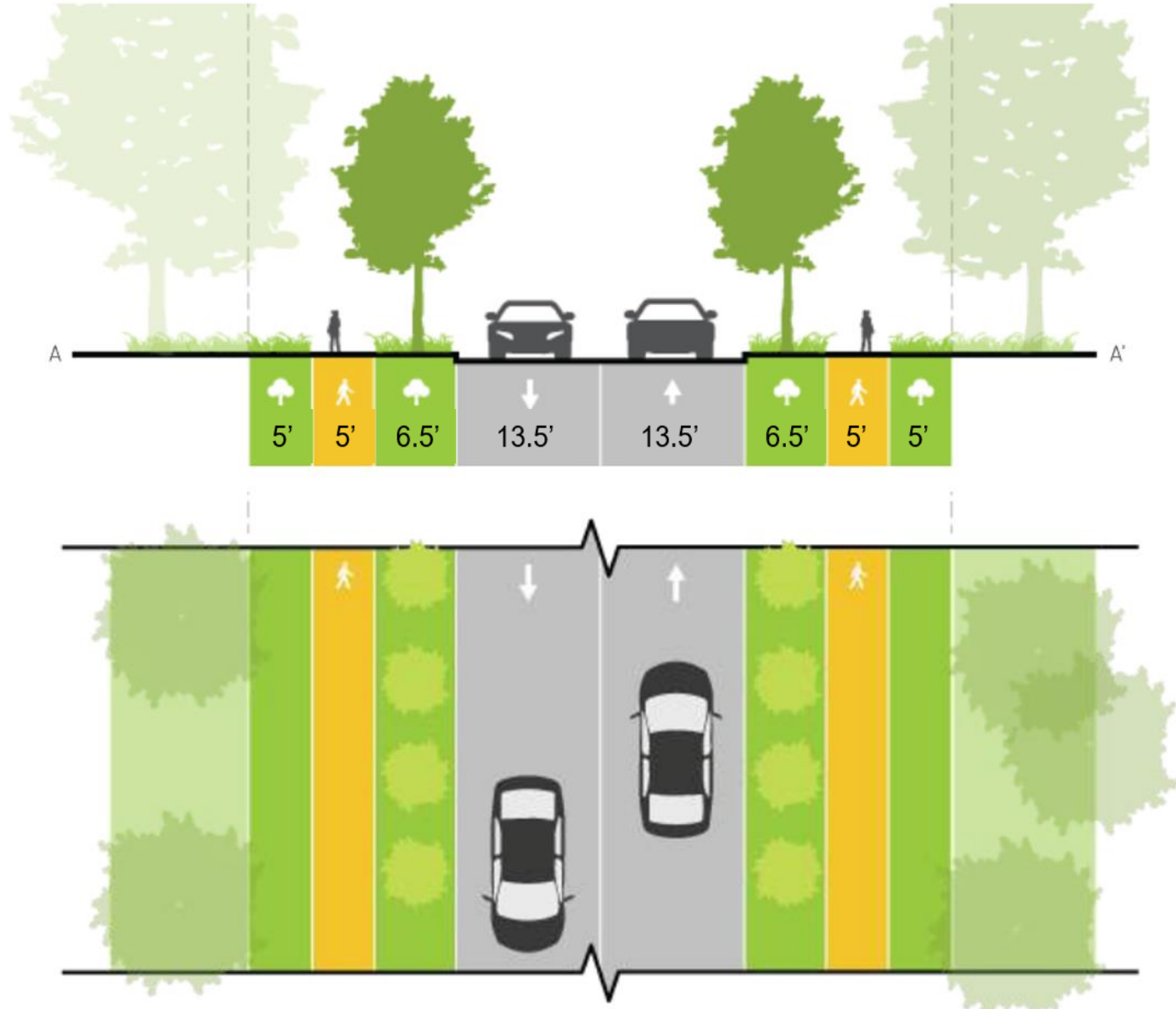
ROADWAY IMPROVEMENTS

Kingsride Ln

•Neighborhood

•Questions from the Public:

- Access During Construction
- Communication During Construction
- What will the street look like post-construction

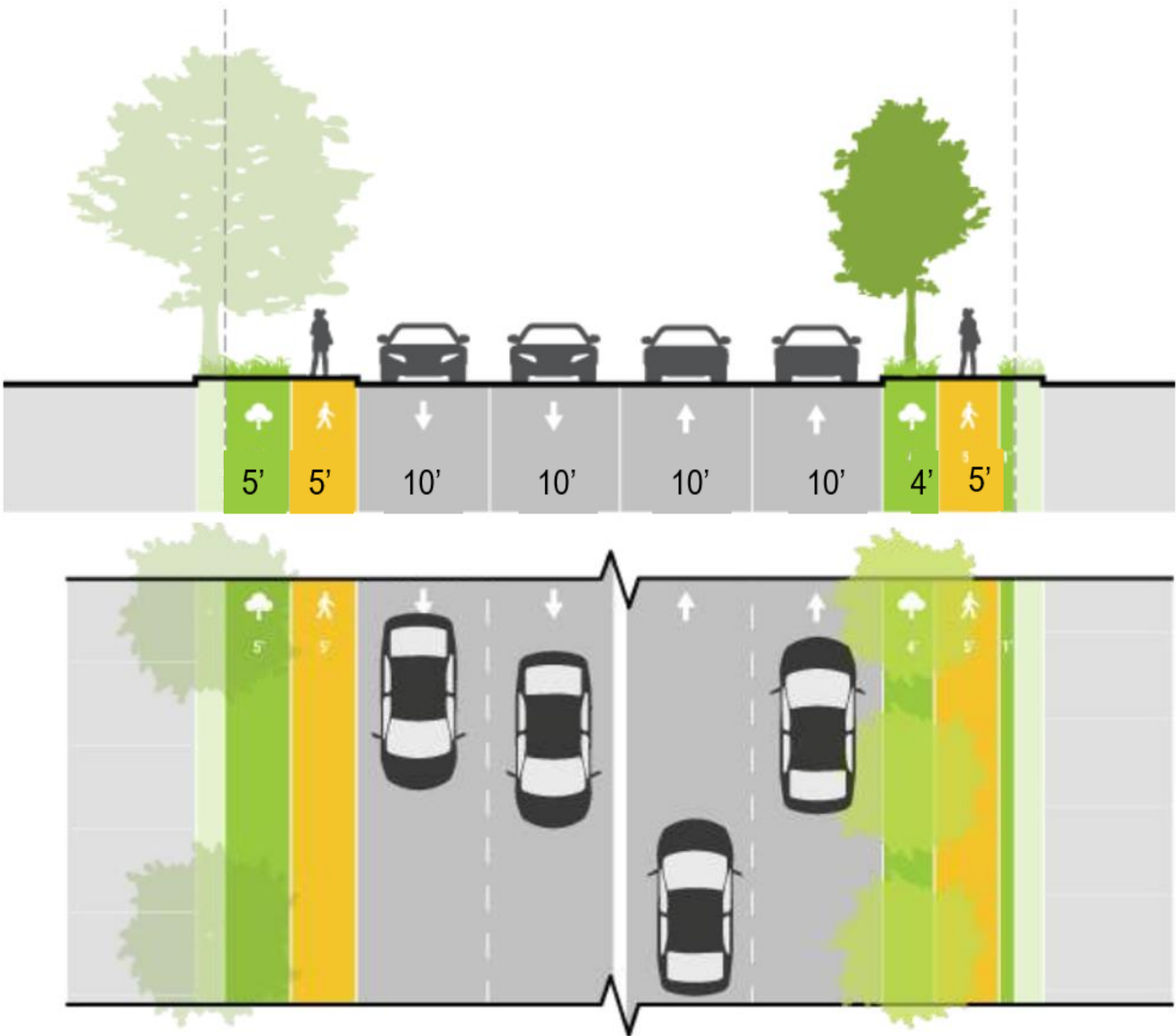


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ROADWAY IMPROVEMENTS

Kingsride Ln

- Commercial Area



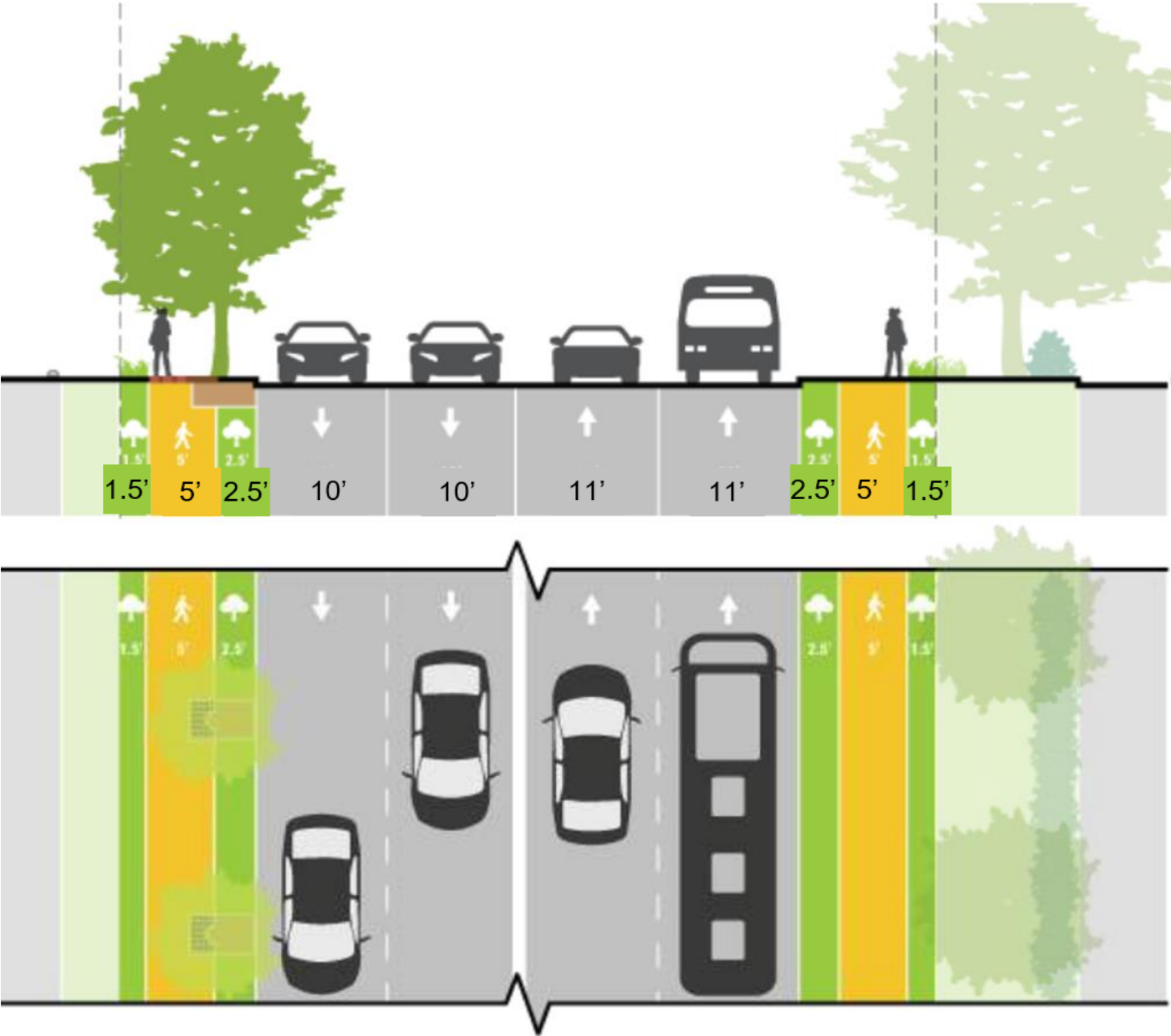
ROADWAY IMPROVEMENTS

Barryknoll Ln

- Commercial Area

Vindon Dr

- Storm sewer is behind curb (Not shown)



ROADWAY SAFETY



SIDEWALK SAFETY



Pedestrian Signals



Truncated Dome Warning Devices



Wheelchair Ramps



Crosswalk

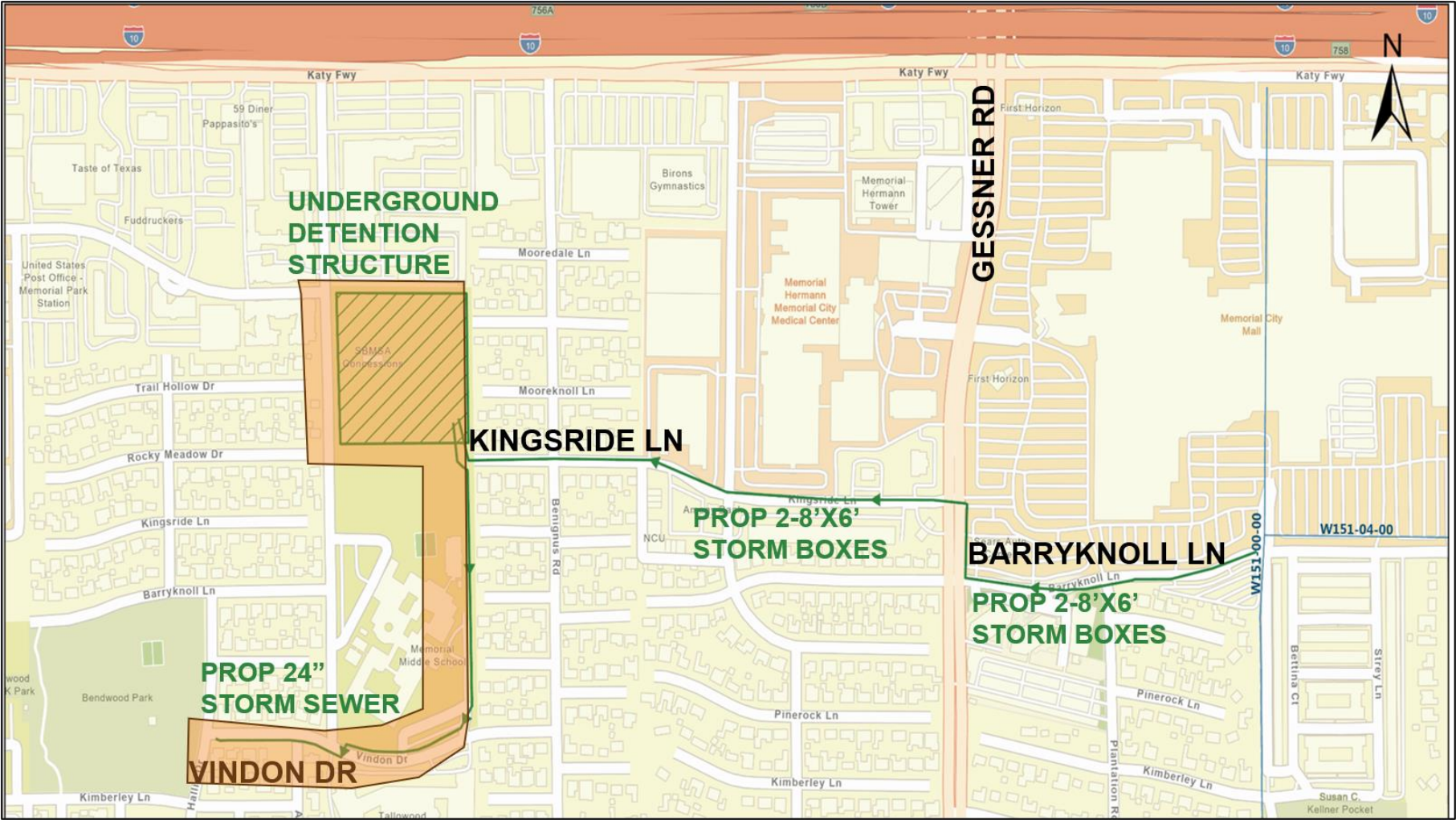


Audible Pedestrian Signals



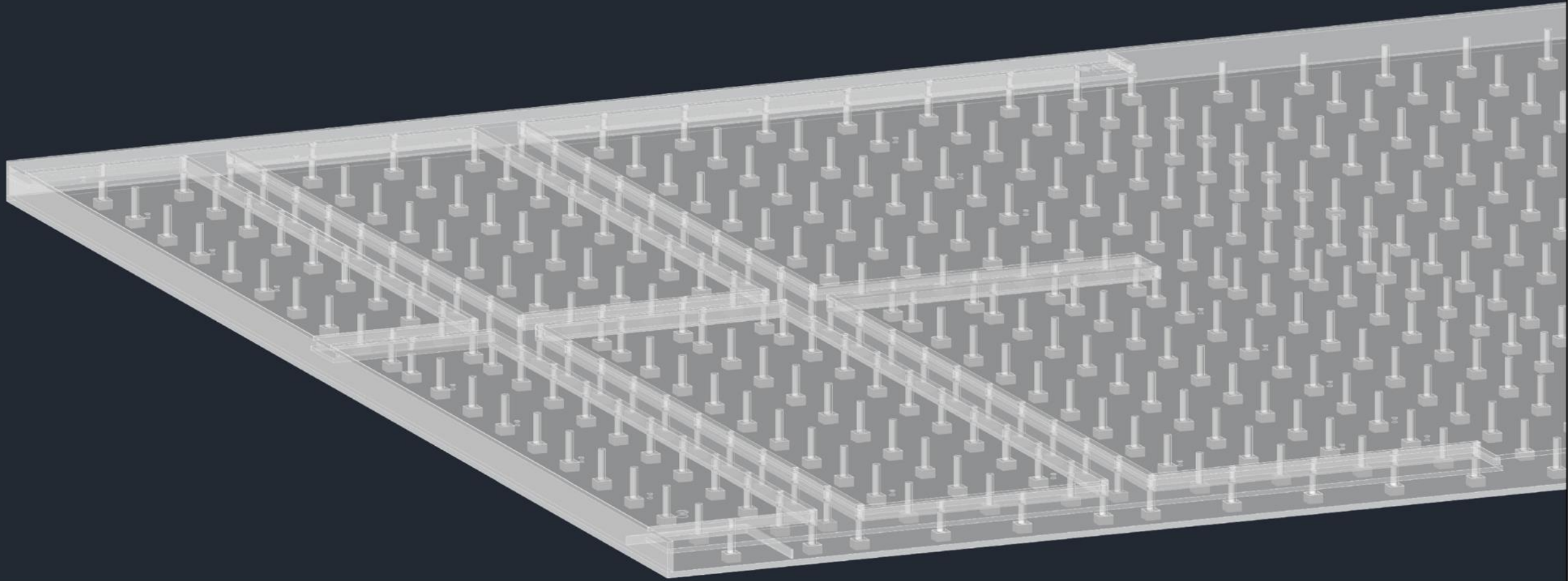
Safety Buffer

PROJECT OVERVIEW – DETENTION



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UNDERGROUND DETENTION STRUCTURE – 94 AC-FT



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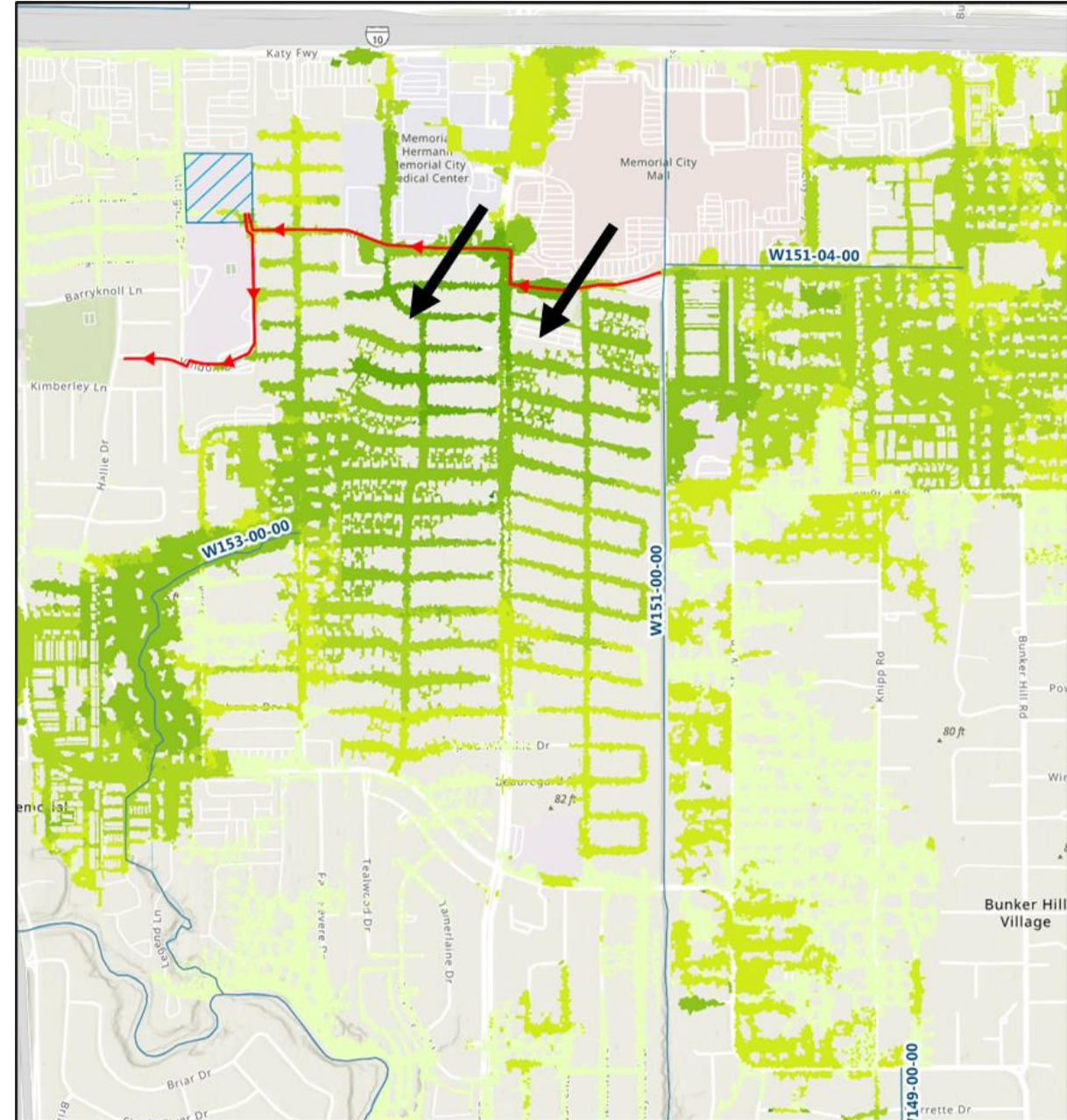
WHY IS DETENTION NECESSARY

Prevent Adverse Impacts:

- Avoid transferring the problem
- Store displaced stormwater
- Build resiliency

Will the Project Negatively Impact the W153 Ditch System?

- No! The W153-00-00 Watershed is a Target Benefit Area for the project.



DETENTION LOCATION OPTIONS – WHY SBISD PROPERTY

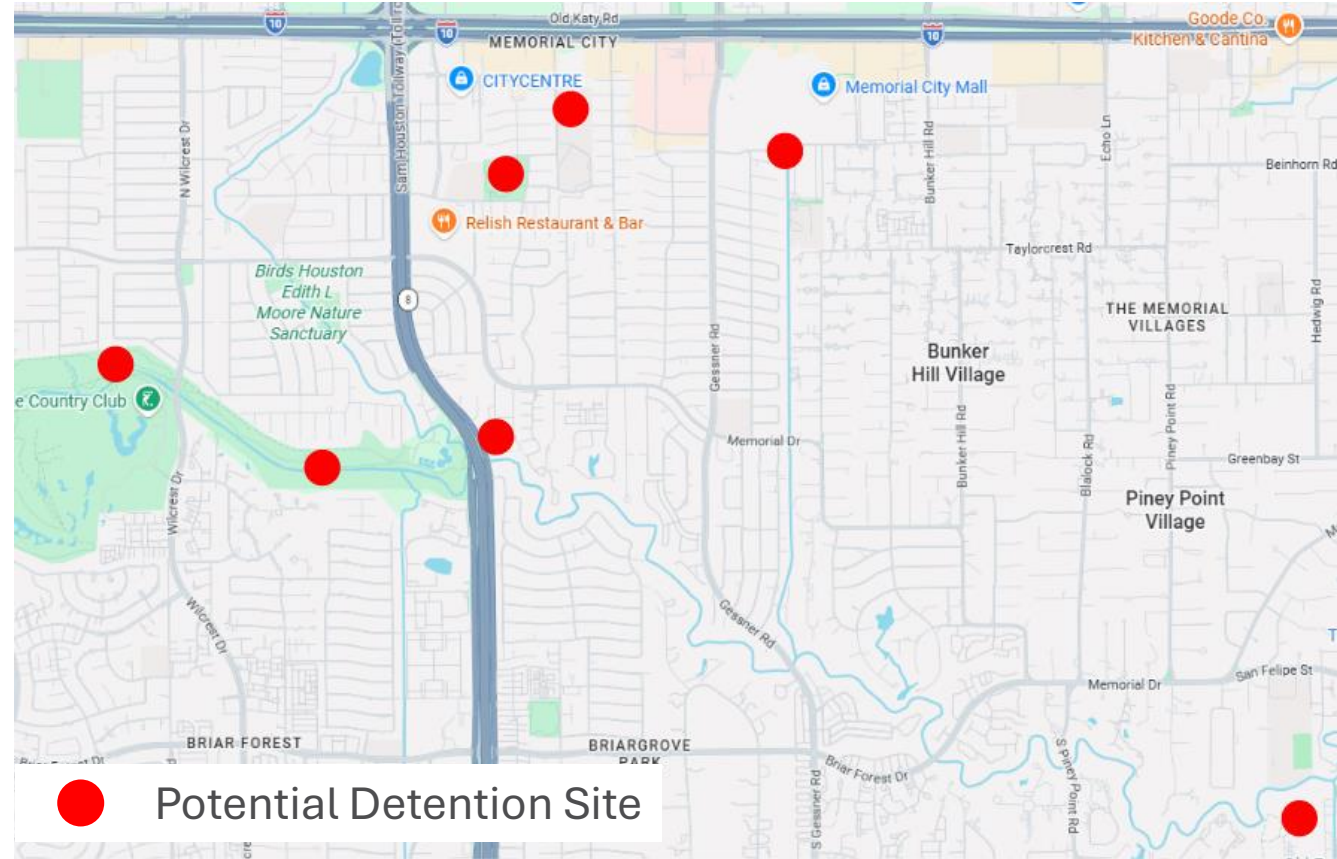
Extensive Search:

- Initial Solution Called for Regional Detention on Buffalo Bayou
- No Viable Regional Detention Sites
- Comprehensive Local (Non-Regional) Detention Site Evaluation

Specific Alternatives Explored:

- Bendwood Park
- Memorial City Mall Parking
- Regional Detention on Buffalo Bayou

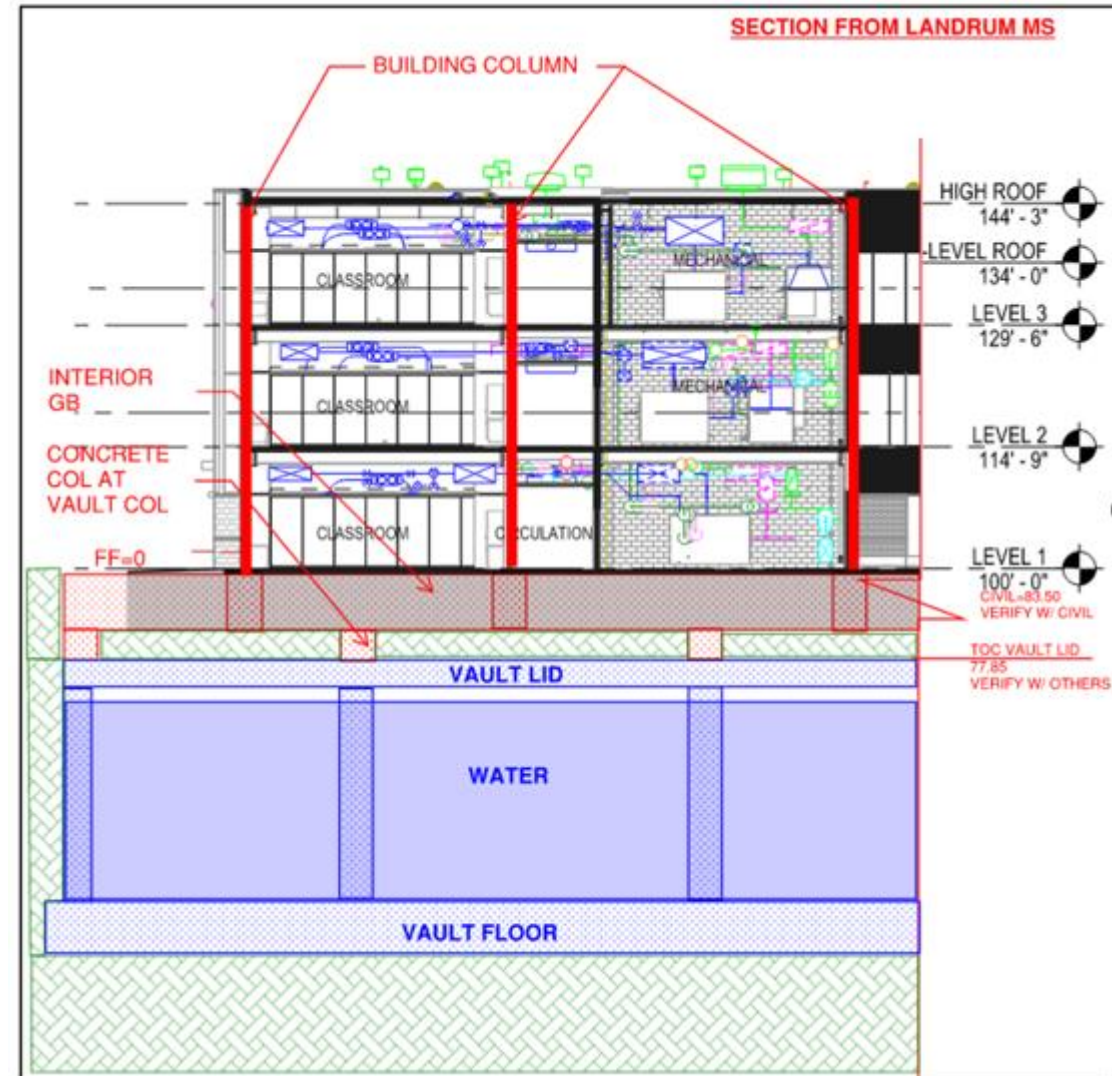
Potential Detention Sites Explored



FUTURE MIDDLE SCHOOL CONSTRUCTION QUESTIONS

Can you safely construct a school on top of an underground detention facility?

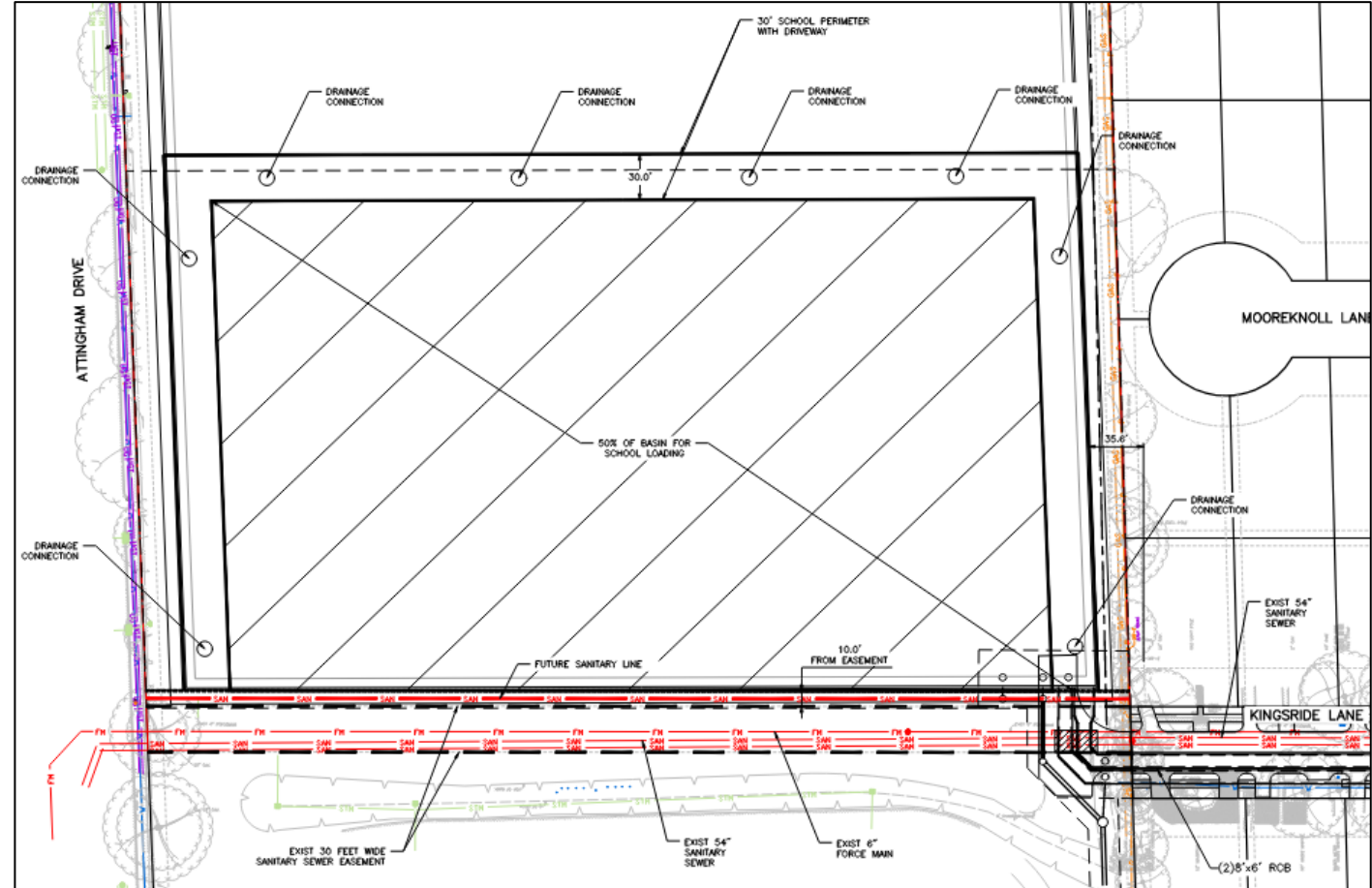
- Yes! The underground detention vault will be built to accommodate future school loads
- Detailed engineering coordination between City and SBISD engineers



FUTURE MIDDLE SCHOOL CONSTRUCTION QUESTIONS

Other Considerations for the Future School

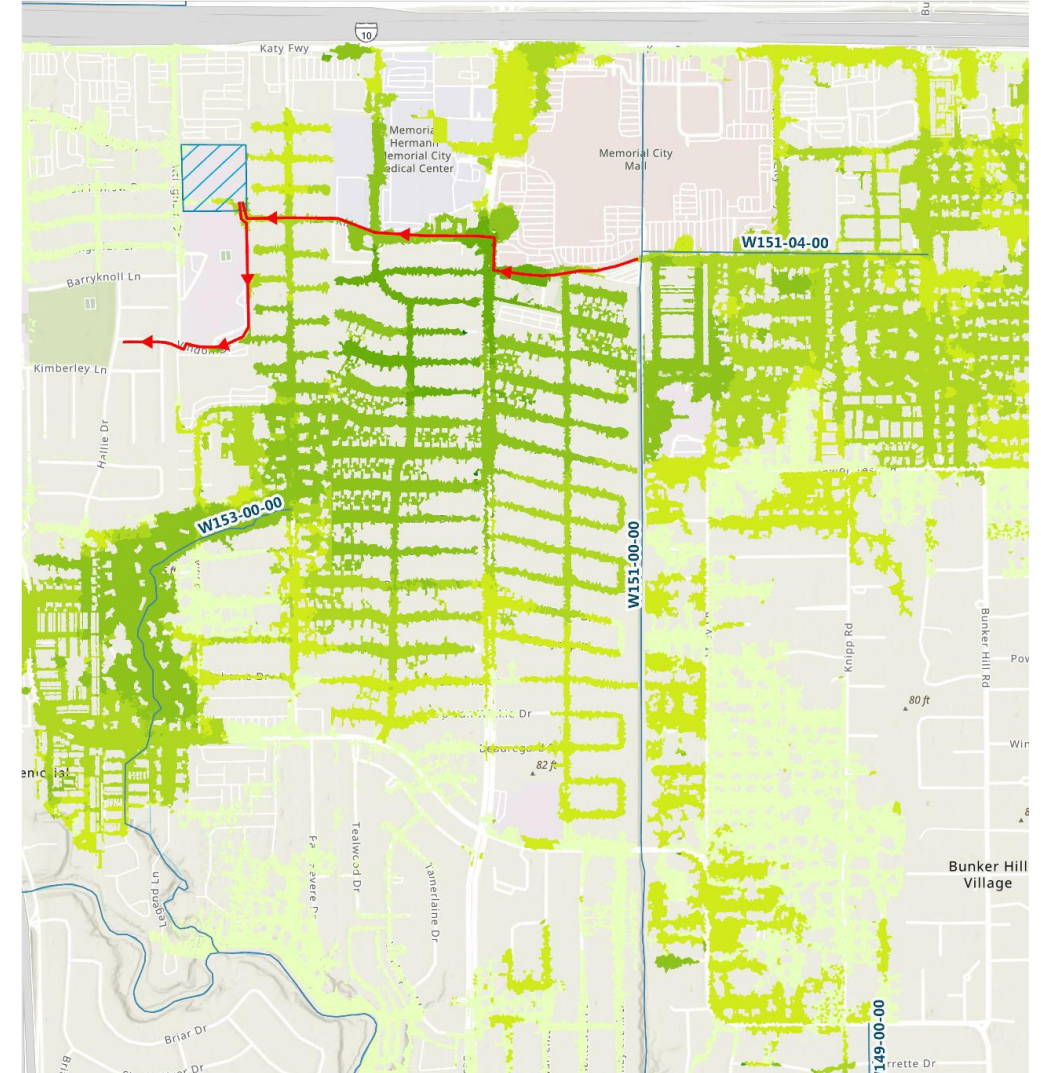
- Accounting for future school utilities
- Coordinating future school access
- Adjacent active school considerations (similar to replacement school campus construction)
- Work within existing school campus for outfall to be conducted during the summer



FUTURE MIDDLE SCHOOL CONSTRUCTION QUESTIONS

Is there a risk that the underground detention could increase flooding at the school campus or in the surrounding community?

- No! The proposed drainage improvements are below ground and gravity-fed.
- The water elevation in the vault can not physically exceed the water from the community where it originated.



FUTURE MIDDLE SCHOOL CONSTRUCTION QUESTIONS

What Safety Considerations have been made for the school?

- Isolated construction area:
 - 10-foot-high wooden paneled separation wall between school and construction zone
 - Site fencing around remaining construction zone
- Restricted access:
 - Locking manhole covers and inlet grates



LEAD AGENCIES AND PARTNERS (FUNDING AND COST)

Lead Federal Agency



FEMA



Recipient of HMGP Funding



Lead Non-Federal Agency
Sub-Recipient of HMGP Funding



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Funding Partners



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PROJECT COST AND BENEFIT

Current Project Cost	\$99 million
Federal Grant	\$26.5-74 million
HCFCDD and Harris County Precinct 3 (Ramsey)	\$20 million
City of Houston/TIRZ 17	\$5-52.5 million
Total Project Benefit	\$114 million

PROJECT TIMELINE

Project Initiation	2014
Grant Award	2019
Design Completion	Fall 2026
Construction Start	Spring 2027
Overall Construction Duration	~1 to 2 years
Vault Construction	~1 to 2 years



WHO TO CONTACT



Send questions or comments to engage@houstontx.gov



Questions? Please dial 3-1-1
Visit houstontx.gov/311 (provide project name or #)



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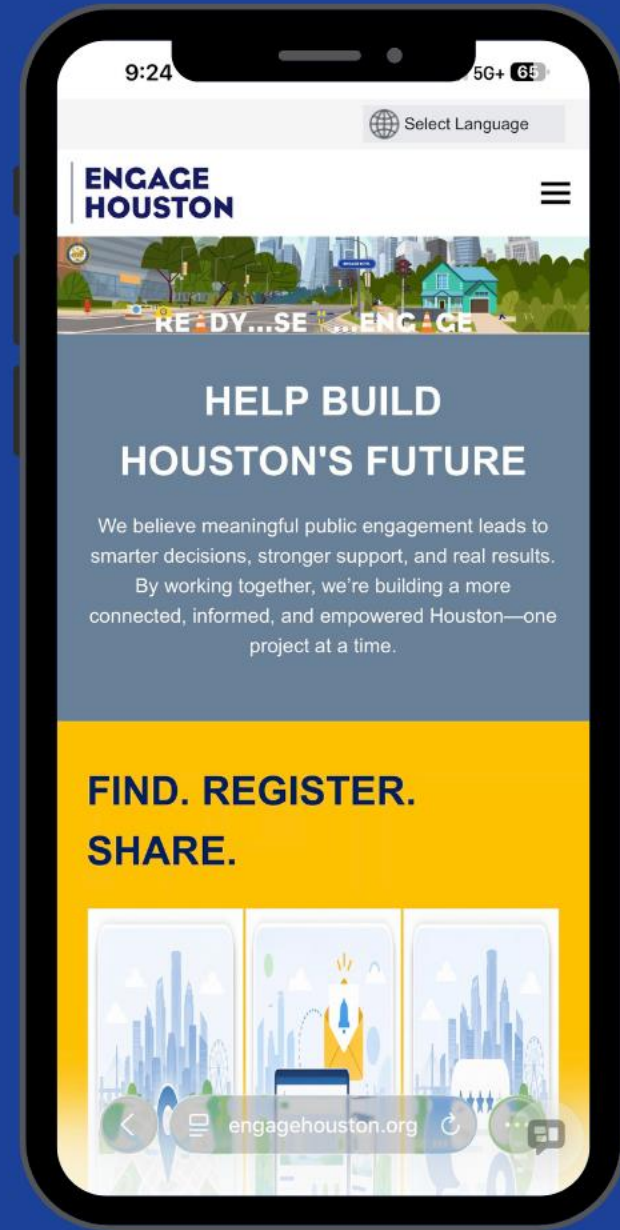


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Engage with us!

- Check your project status
- Ask questions
- Post comments



Thank You!

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