

TIRZ 17 Memorial City Area Detention Basin



**HOUSTON
PUBLIC WORKS**

**SPRING BRANCH INDEPENDENT
SCHOOL DISTRICT – WORKSHOP**

INFRASTRUCTURE

WBS #: M-430296-0017-3



PRESENTATION AGENDA

- 1. Project Introduction**
- 2. Project Need**
- 3. History and Background**
- 4. Project Overview**
- 5. SBISD Specifics**
- 6. Easements and ROW**
- 7. Construction Sequencing**
- 8. Funding**
- 9. Schedule**
- 10. Next Steps**



PROJECT INTRODUCTION

Project Description:

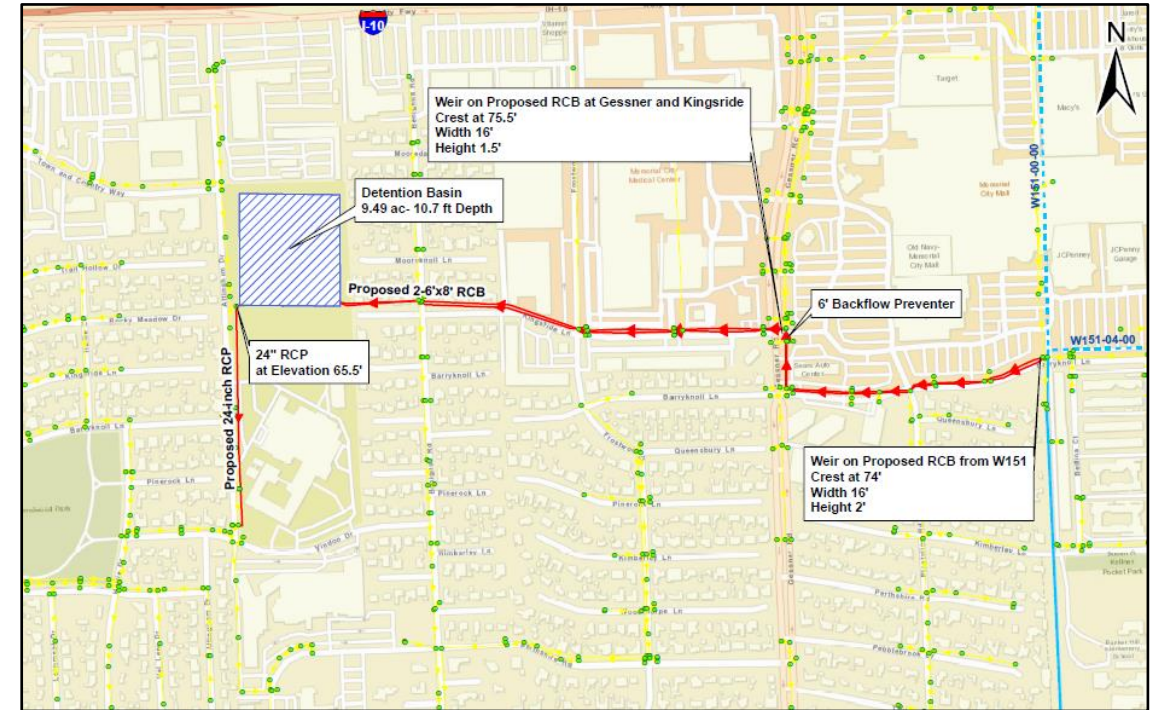
Regional flood mitigation project with nearly 100 ac-ft of detention volume

Purpose:

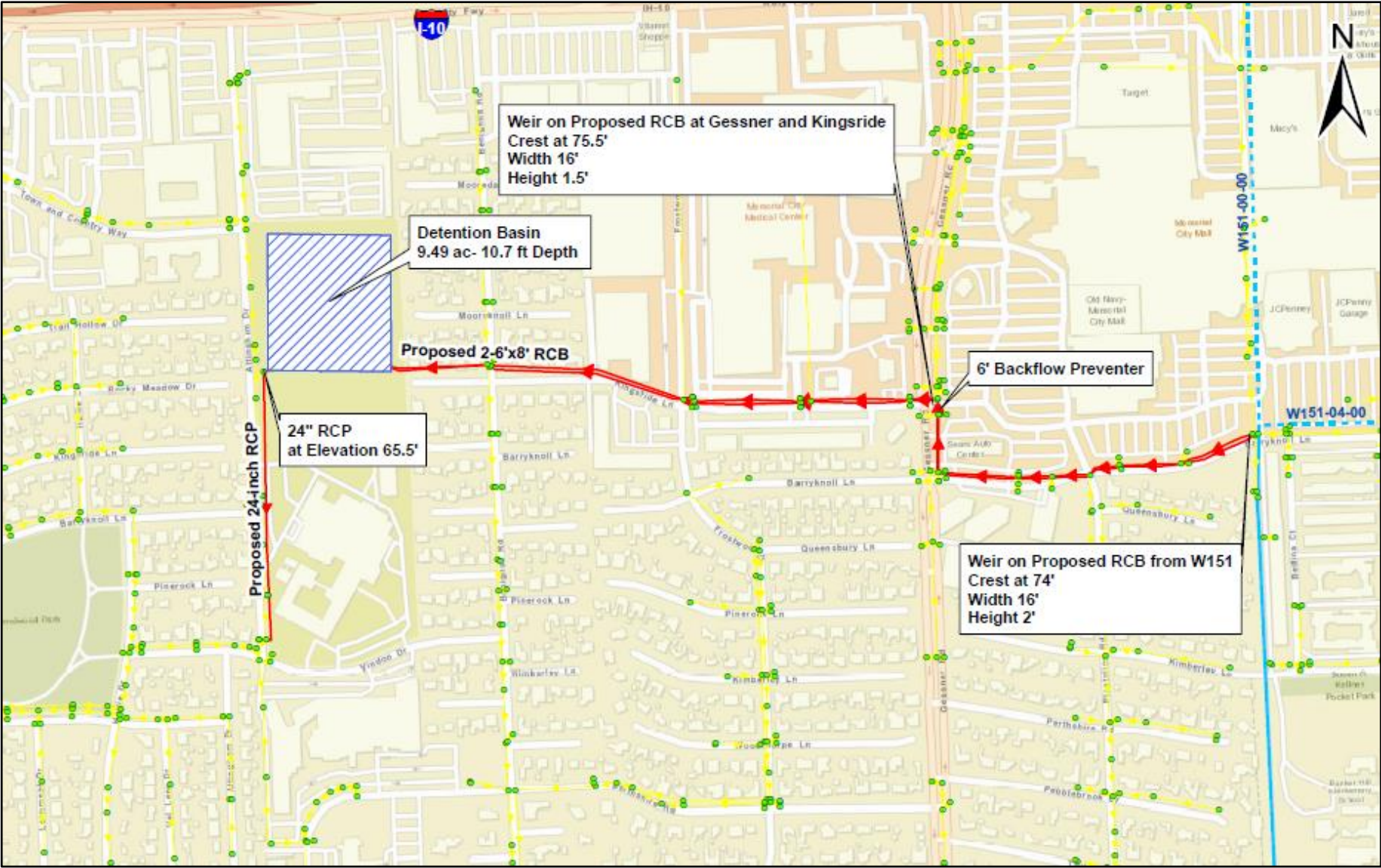
Reduce the loss of life and property due to flooding in the Memorial City Area.

Need:

Reduce flooding and future flood losses in the area. Lower the water surface elevation during flood events in Ditches W151-00-00 and W153-00-00 and reduce street and structural flooding in the community south of the Memorial City Area.



PROPOSED STORM SEWER SYSTEM



LEAD AGENCIES AND PARTNER



PROJECT NEED

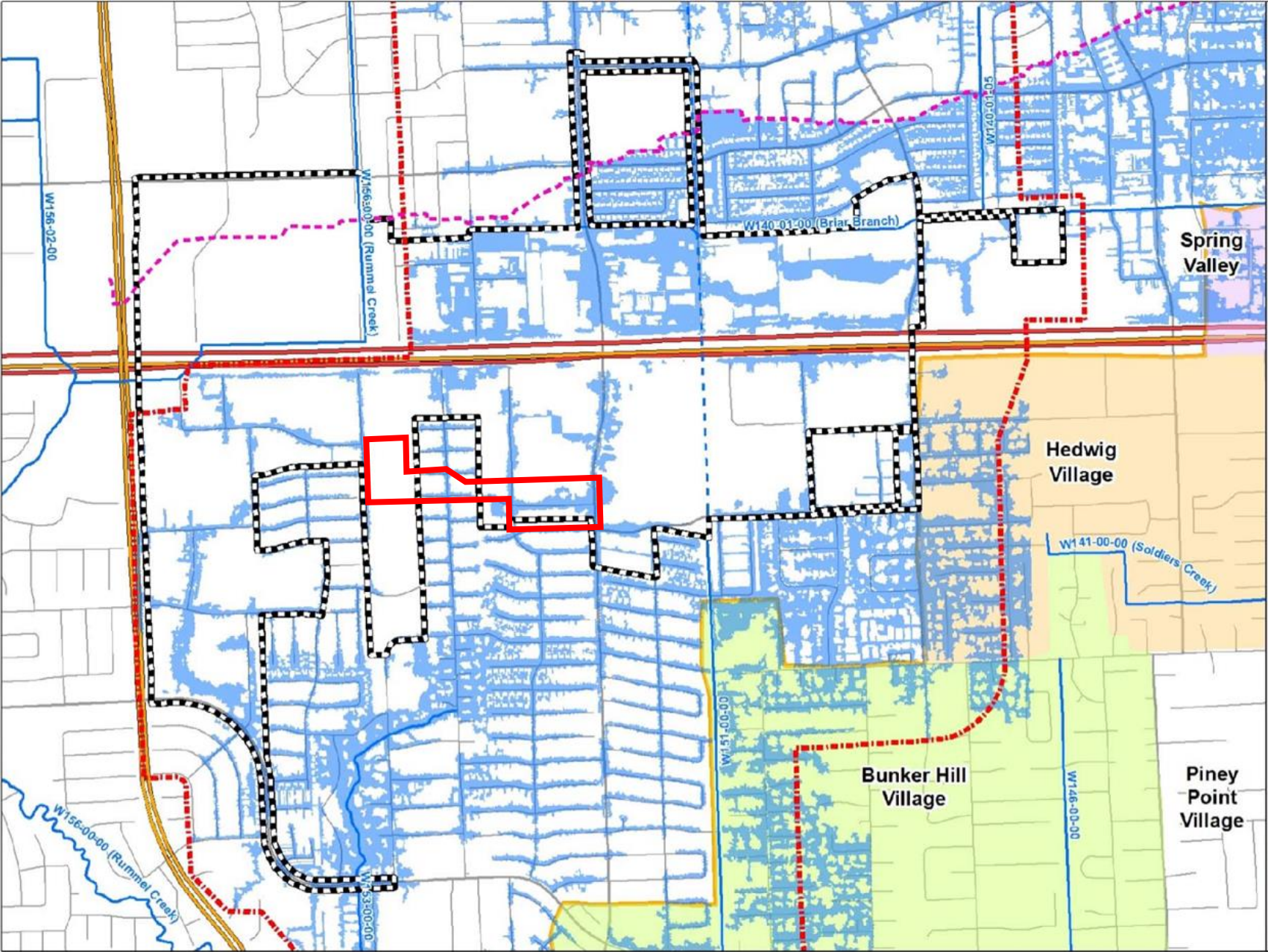
Historical Flooding Events:

- April 2009 Event – 9.5 in / 24 hr
- Memorial Day 2015 – 11.5 in / 24 hr
- Tax Day 2016 – 9.8 in / 24 hr
- Harvey 2017 – 18.6 in / 24 hr
- Imelda 2019 – 7.4 in / 24 hr

| 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 |

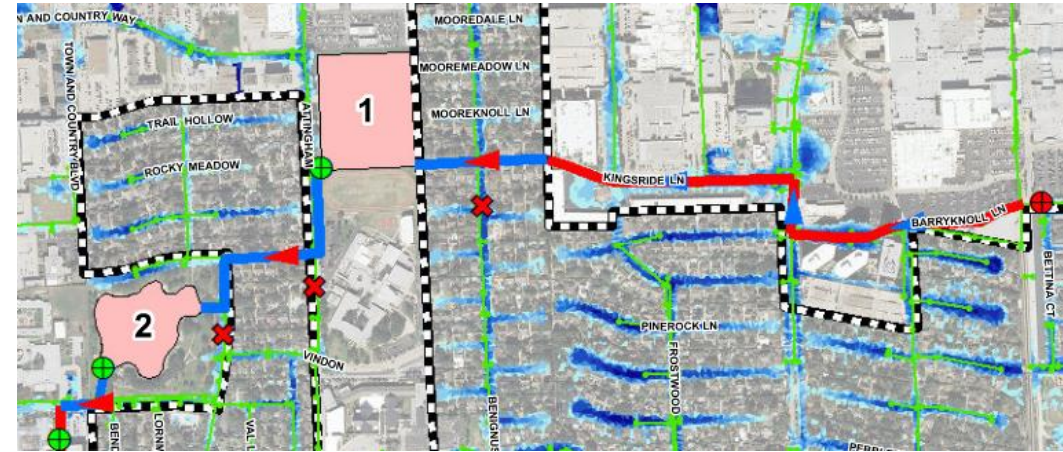


PROJECT NEED – APRIL 2016 TAX DAY

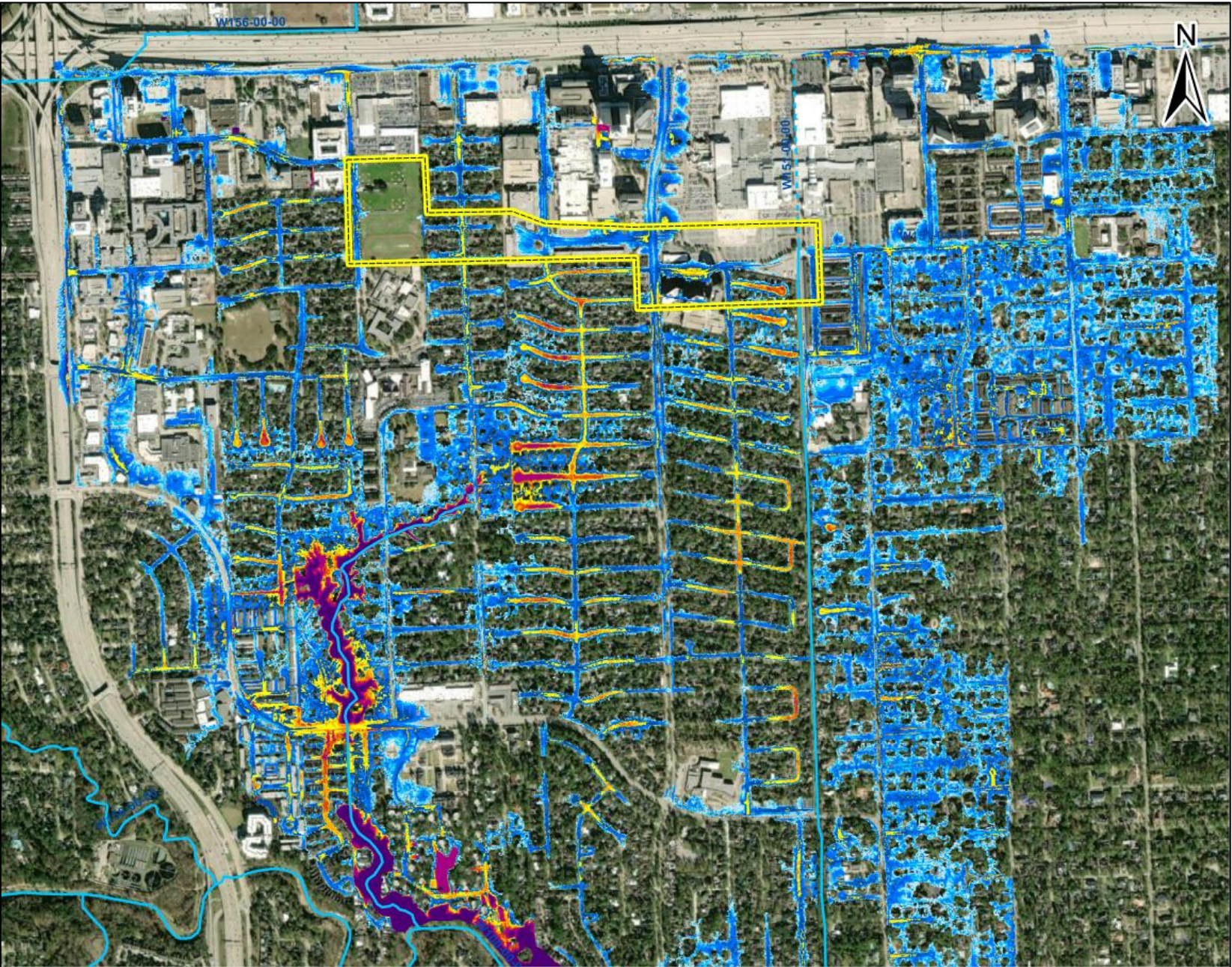
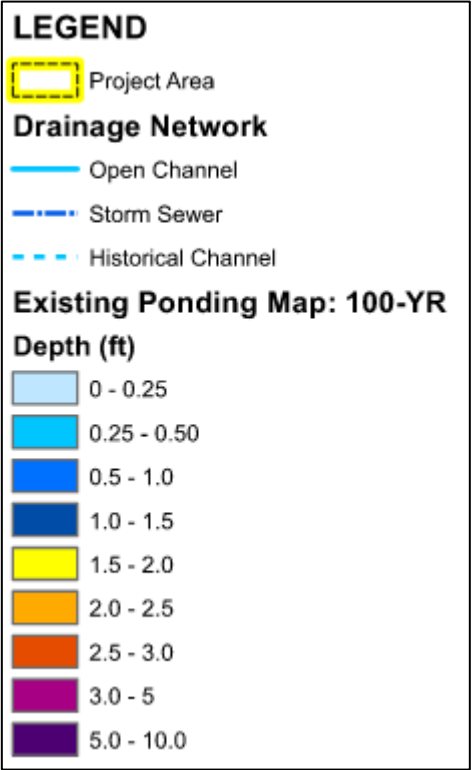


PROJECT HISTORY

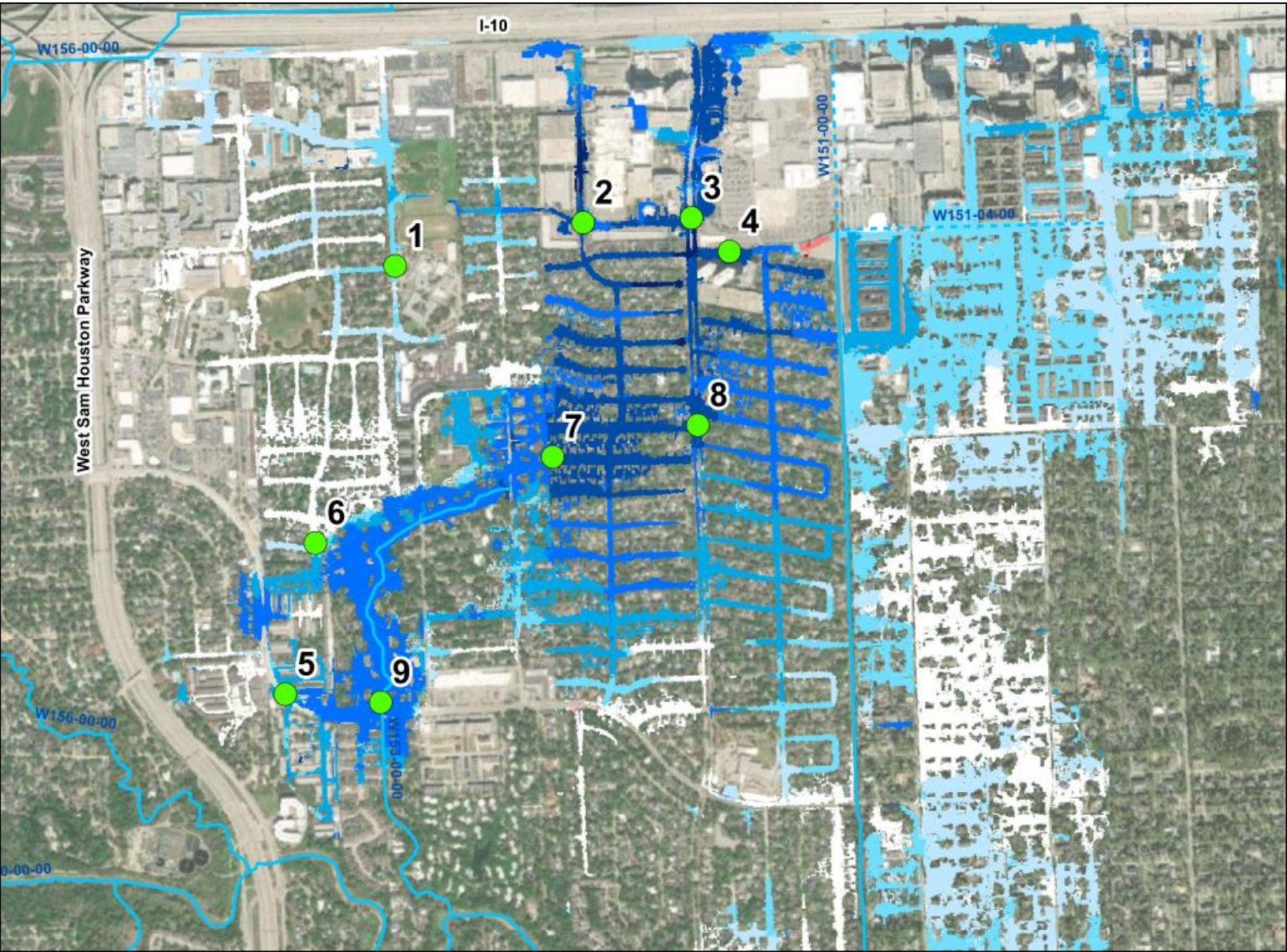
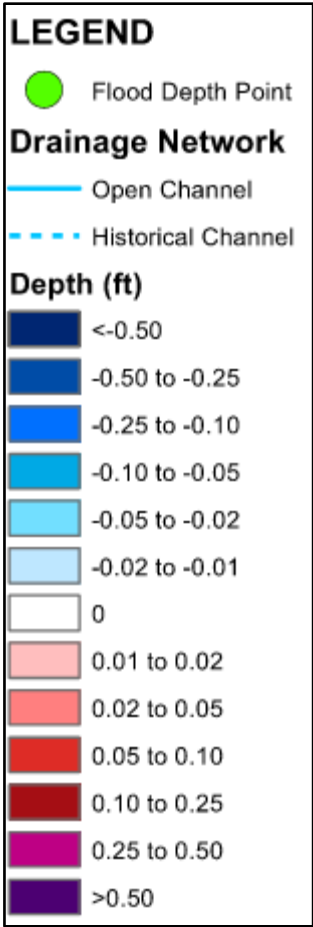
- **April 2009 Event: Regional Drainage Study – HCFCD/TIRZ 17**
 - Strey Lane to W151-00-00: City of Bunker Hill Partnership
 - Explored Regional Detention on Buffalo Bayou
- **2014 – Regional Drainage Study Update – TIRZ 17**
 - Gessner Road to Buffalo Bayou
 - Explored Regional Detention on Buffalo Bayou – Determined Not Feasible
- **2015 – Shifted to Current Project with Detention Under MMS**
 - Extensive Search for Other Detention Options
 - Initiated Discussions with SBISD



PROJECT NEED – 100-YR EVENT



PROJECT BENEFITS



PROJECT BENEFIT

Financial Impact:

- Flood Damage Avoidance Benefit: \$82M to \$108M
- Property Value and Property Tax Influence
- SBISD Tax Base Benefits

Non-Financial Impact:

- Homeowner and Student Piece of Mind

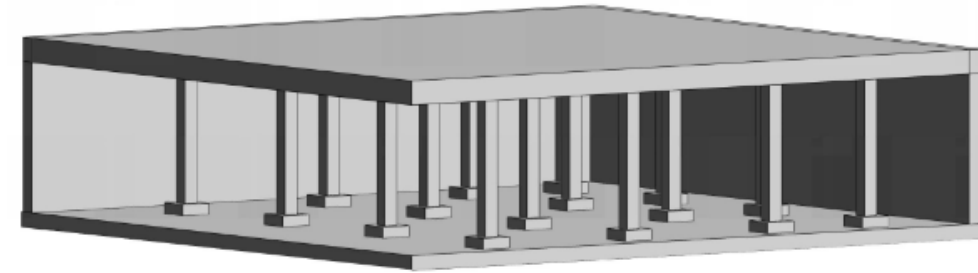
Flood Reduction:

- Structures Removed from Flooding (100-yr): 111
- Structures with Reduced Flood Risk (100-yr): 775
- Structures Removed from Flooding (10-yr): 52
- Structures with Reduced Flood Risk (10-yr): 265
- Inundation Area Reduction (Acres): 37 (100-yr)



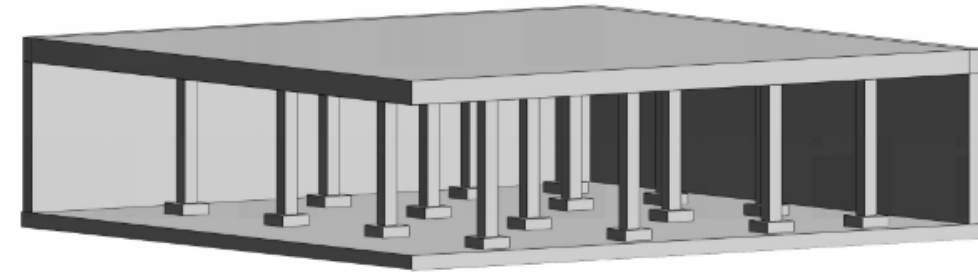
IMPACTS TO SBISD

- Short Term Financial Impact – Compensation for Drainage Easement
- Long Term Financial Impact – Working Closely with SBISD Team to Ensure Future School Constructability



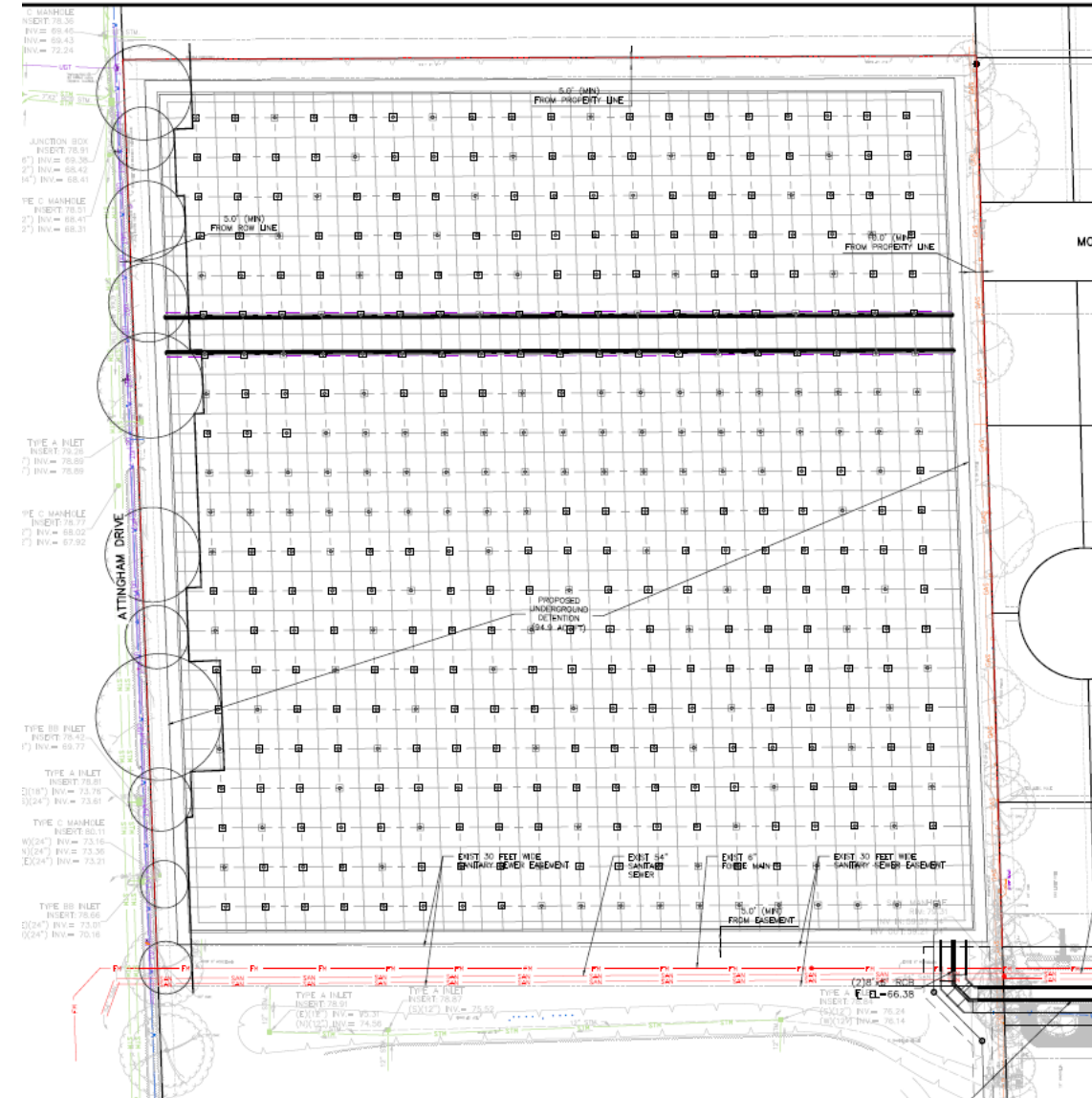
IMPACTS TO SBISD

- How Does this Potentially Impact the Future Reconstruction of Memorial Middle School?
 - Structure concerns with 3-story school on vault?
 - Will this increase our risk of flooding due to detention vault under the northern half of the future school?
 - Ongoing coordination effort with SBISD team.
 - School Utilities: Sanitary Sewer, Water
 - School Campus Stormwater Runoff
 - Foundation Design
 - Draft interlocal agreement with terms between the City and SBISD intended to facilitate the future school construction.



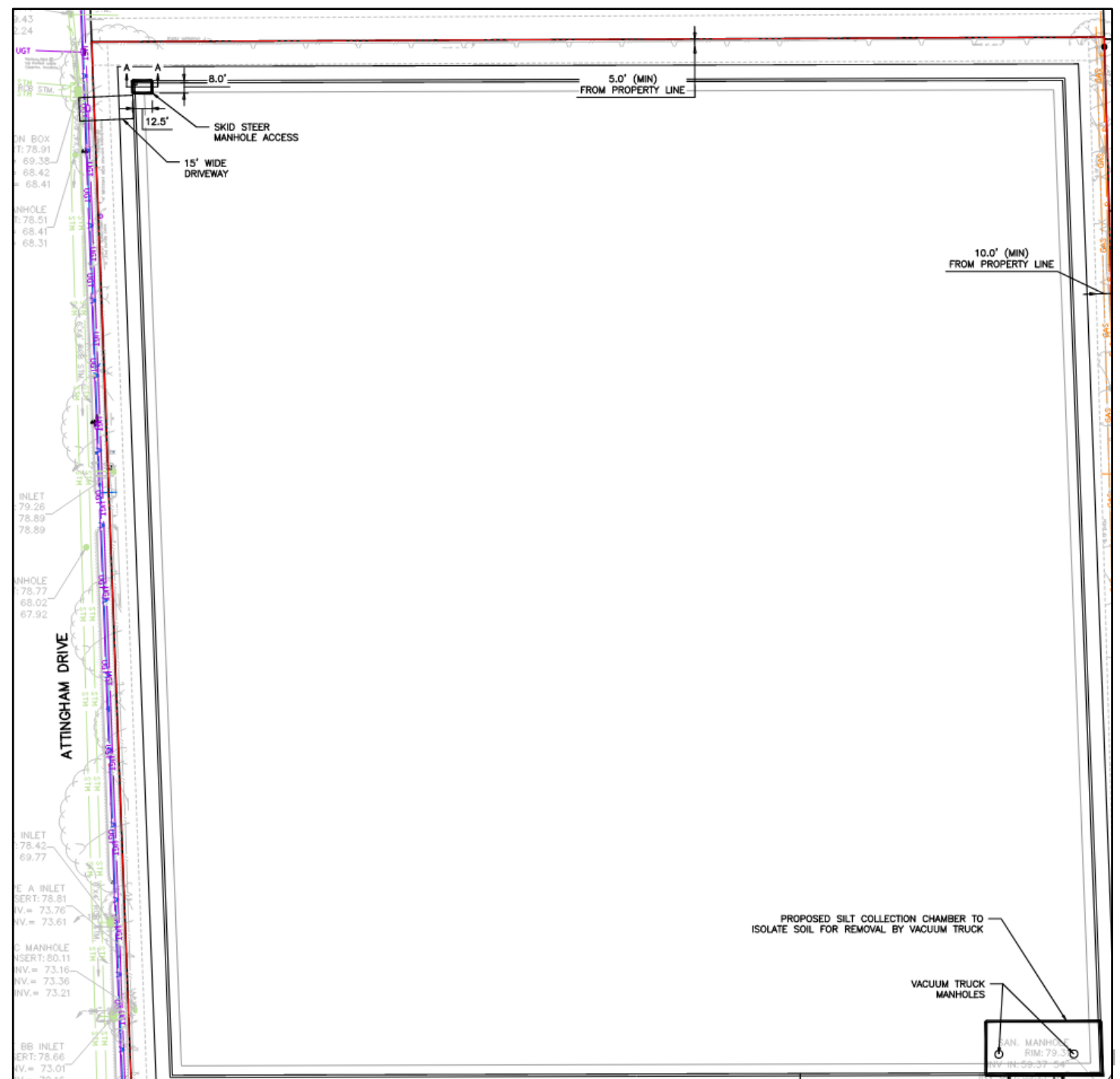
IMPACTS TO SBISD

- What is the Impact on the Existing Trees?
- How will Maintenance Impact School Operations?
- How are Student and Youth Safety Being Accounted for?



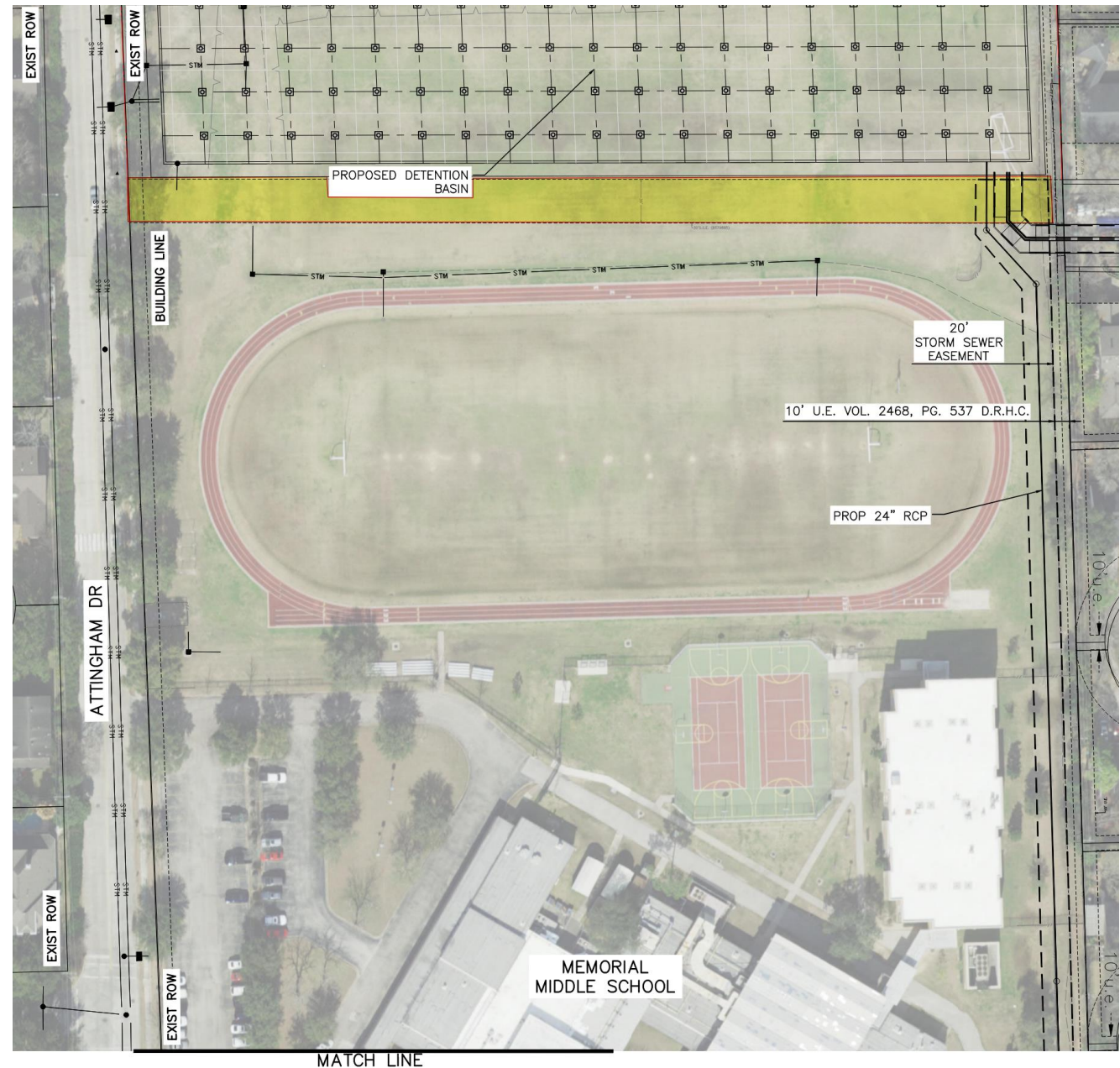
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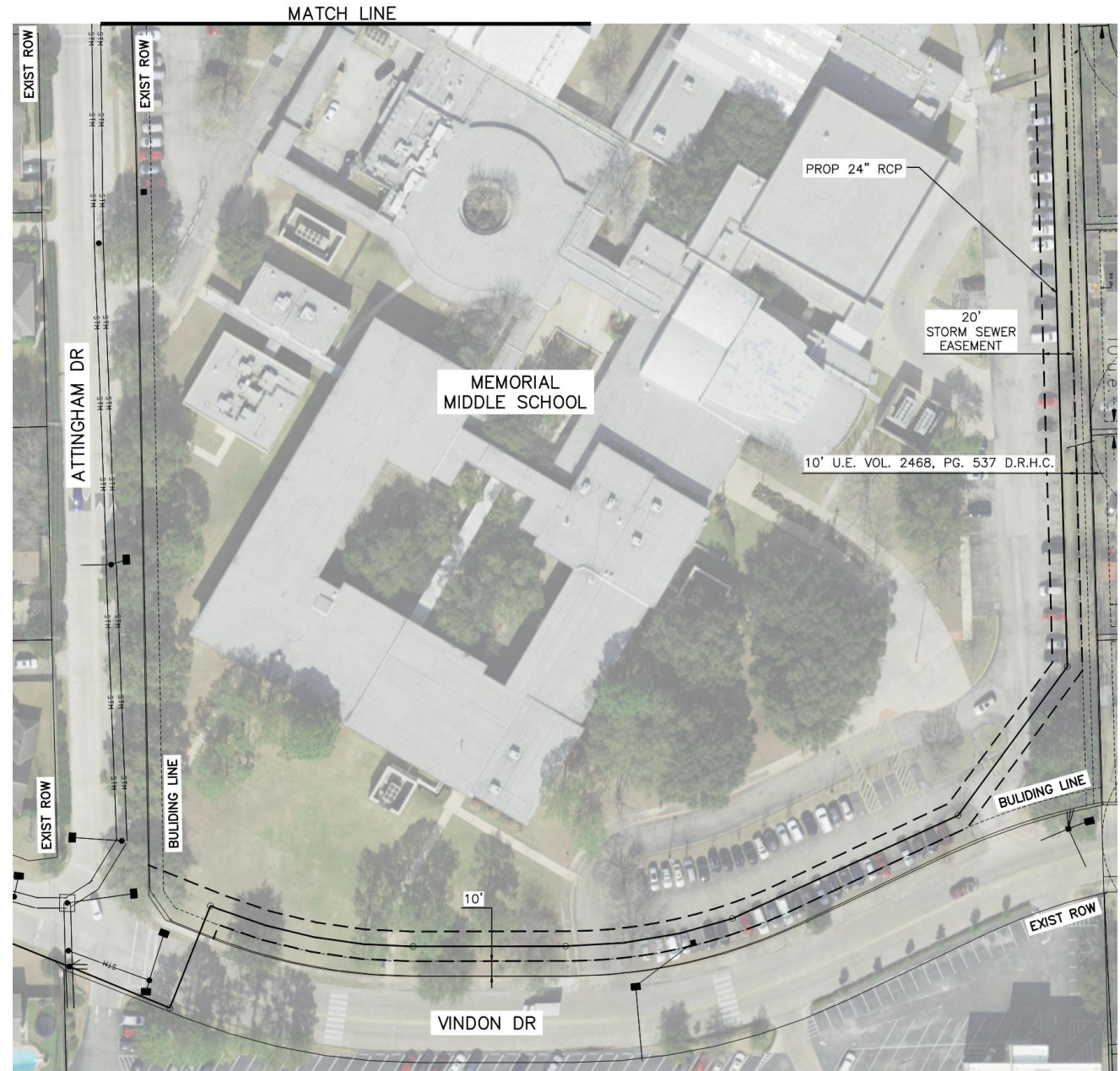
EASEMENTS AND ROW

- Existing Easements on Site
 - 30-ft City of Houston Sanitary Easement for 54-in Sanitary Sewer
 - 30-ft North Perimeter Easement (centered on property line)
 - 10-ft East Side Building Line / Utility Easement
 - 10-ft South Building Line Setback
- Proposed Easements
 - 9-acre Drainage Easement for Vault Construction and Operation
 - 20-ft Wide Drainage Easement for 1,724-LF 24-in Outfall Pipe
- Construction Sequencing
 - Work performed within existing school campus will be completed in the summer months.



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PROJECT COST

- Total Project Cost: \$79M
- Federal Grant: \$26.5M
- HCFCD and Harris County Pct 3 (Ramsey): \$20M
- City of Houston / TIRZ 17: \$32.5M

PROJECT SCHEDULE

- Design Completion: March 2026
- Construction Start: Early 2027
- Construction Duration: ~3 years
- Vault Construction: ~1.5 years



CONTACT US

Contact the City of Houston

Contact the City of Houston Project Team anytime during project development:

Attn: TIRZ 17 Memorial City Area Detention

Project No.: WBS #: M-430296-0017-3

Email: engage@houstontx.gov

Or contact the projects Public Engagement Team via email:

Kenya.Williams@houstontx.gov or Ryan.Prillman@houstontx.gov



thank you!



HoustonPublicWorks.org



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