

Proposed Drainage Project with Harris County Flood Control

Update: 11/7/22

WCID110 hosted a Townhall Meeting on October 26, 2022, to present information concerning a proposed Regional Drainage Project that will be located on the East side of IH-45, south of Cypresswood Drive and north of FM1960. Attending and speaking at the meeting were State Representative Valoree Swanson, House District 150, Commissioner Tom Ramsey, Harris County Precinct 3, Jonathan St. Romain with the Harris County Flood Control District, John Davis, Langford Engineering, Inc., and Vanessa Sommer and Tom Dowdy, Directors with WCID 110.

The proposed site for the regional drainage project is undeveloped and owned by the Harris County Flood Control District (“Flood Control”) and Harris County. It is an ideal location to construct regional drainage facilities to mitigate flooding along Cypress Creek on the East and West sides of IH-45. This presents an excellent opportunity for immediate action to mitigate flooding in this area.

Currently, WCID 110 is negotiating an interlocal partnership agreement with Flood Control to establish a plan for the implementation of this Regional Drainage Project. Flood Control has indicated a willingness to commit \$6,000,000 to this Regional Drainage Project. A pledge of \$6,000,000 from Flood Control will require \$6,000,000 in matching funds from other benefitted entities, thereby establishing funding of \$12,000,000 for this Regional Drainage Project. WCID 110 is in a position to kick start this Regional Drainage Project by committing \$500,000 in matching funds, with Flood Control committing \$500,000, which \$1,000,000 will pay for Phase I of the Regional Drainage Project, which is preparation of the preliminary engineering report to be performed by Flood Control for this Regional Drainage Project. The remaining funds of \$11,000,000 (\$5,500,000 from Flood Control and \$5,500,000 in local matching funds) will be used for Phase II of the Regional Drainage Project, which will be the initial construction of the Regional Drainage Project. WCID 110 is in the process of exploring options to obtain the \$5,500,000 in matching funds. Options include federal, state, and local assistance. ***No new taxing entity or additional layer of government will be created to fund the Regional Drainage Project.***

Information presented about this Regional Drainage Project can be found on the WCID 110 website (www.wcid110.com) and an article was also posted in the most recent Community Impact publication.

Additional information will be provided as WCID 110 moves forward on this Regional Drainage Project over the next several months.

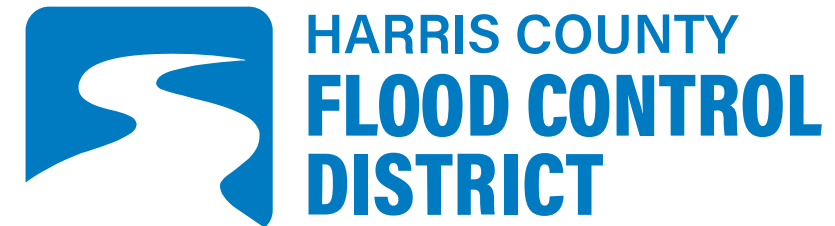
Regional Drainage Project With Harris County Flood Control

Hosted by HCWCID110

Wednesday, October 26, 2022

7 – 9 p.m.

Lemm Elementary



Agenda Overview

1. Welcome and introduction

by Jeannie Perkins

Vice President HC 110 Board of Directors

2. Opening Statements by Elected Officials

3. Flood Mitigation

by Vanessa Sommer

Secretary HC 110 Board of Directors

4. Overview of Regional Drainage Project

by Jonathan St. Romain,

Harris County Flood Control District

5. Regional Drainage Project and Potential for Flood Mitigation

by John Davis

Langford Engineering, Inc.

6. Funding for Regional Drainage Project

by Tom Dowdy

Treasurer HC 110 Board of Directors

7. Letters of Support

8. Questions

9. Adjourn

Welcome and Introduction

Mrs. Jeannie Perkins, Vice President HC110



Opening Statements from State Representative Valoree Swanson

- Sworn in as the State Representative for House District 150 on January 10, 2017.
- A sixth-generation Texan and mother of four grown children.
- Worked in commercial real estate, after getting her Bachelor's of Business.
- Involved in the community for years as a children's Bible study and Sunday school leader, a children's sports team representative and referee, a member of various boards.



Opening Statements from Precinct 3 Commissioner Tom Ramsey

- Under the new map, Precinct 3 now spans as far west as Cypress - as far north as Tomball and Huffman - and as far east as Crosby.
- Responsibilities for Commissioner Ramsey's office include approximately 47% of all unincorporated Harris County, 6,750 lane miles of roadway, 68 parks, 10 Community and Nature Centers, and 9 hike and bike trails, including the nation's longest urban-forested corridor - the Spring Creek Greenway.
- Precinct 3 is also proud to be home to and partner with, 14 school districts, 11 cities, 203 municipal utility districts, and approximately 1,000 neighborhoods.
- Commissioner Ramsey has a long track record of improving the safety, infrastructure, livability, and financial health of the communities he serves.
- An award-winning civil engineer turned senior executive and public servant, Tom has led companies, a city, key action groups, and more throughout his 42-year career.
- A Texas native, Tom grew up in Crockett, and graduated from Texas A&M University with a B.S. in Civil Engineering.



Flood Mitigation

Vanessa Sommer, Secretary of HC110



Overview of Regional Drainage Project

Jonathan St. Romain, P.E.

Department Manager, Capital Projects South
Harris County Flood Control District



**HARRIS COUNTY
FLOOD CONTROL
DISTRICT**

Bond Approved on August 25, 2018

List updated May 2020

- 181 projects across all watersheds
ALL projects in the 2018 Bond Program have been initiated, as of August 25, 2021.
- 38 projects added based on community input (\$400M+)

\$2.5B Bond funds

+ ~\$2.4B Partner funds (\$1.35B received)

= ~\$4.9B Total anticipated



Channel Modification



Stormwater Detention



Channel Maintenance



Storm Repair



Home Buyouts



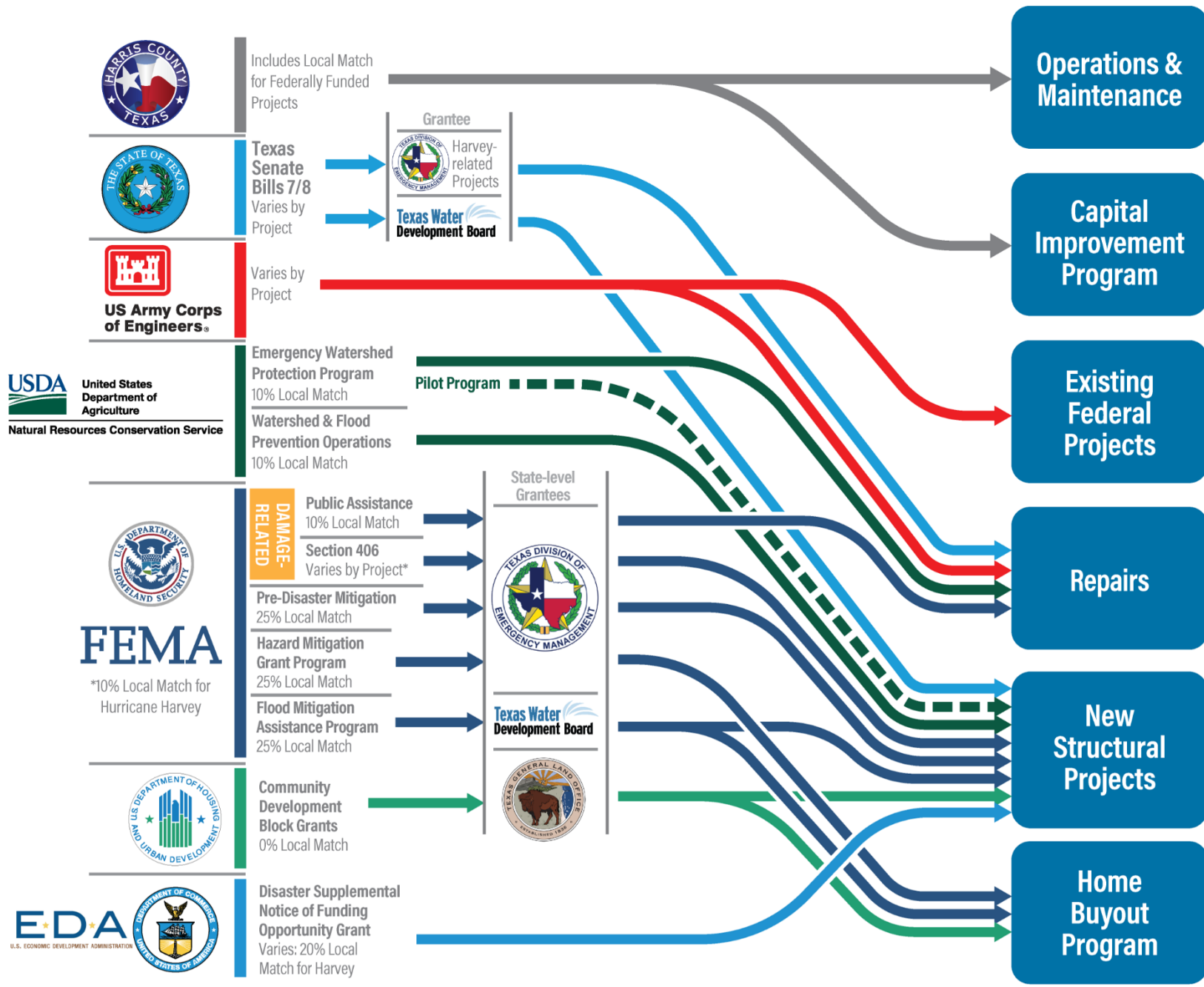
Engineering Study



Other Jurisdiction

To learn more about the 2018 Bond Program and see the full project tables, please visit www.hcfd.org/2018-bond-program.

HARRIS COUNTY
How is
FLOOD CONTROL DISTRICT
 funded for disaster recovery & resiliency?



Cypress Creek Implementation Plan Overview

Potential stormwater detention basin sites in the watershed

- Identifies
- Prioritizes

Roadmap: Enables the Flood Control District to deliver projects strategically and efficiently in a heavily developed area

22 recommended basins

- Up to 12,800 acre-feet
- \$597 million construction

Emphasizes the need for property acquisition throughout the watershed to be able to construct the stormwater detention basins



Cypress Creek Implementation Plan – Prioritization Roadmap

Michael Baker Study

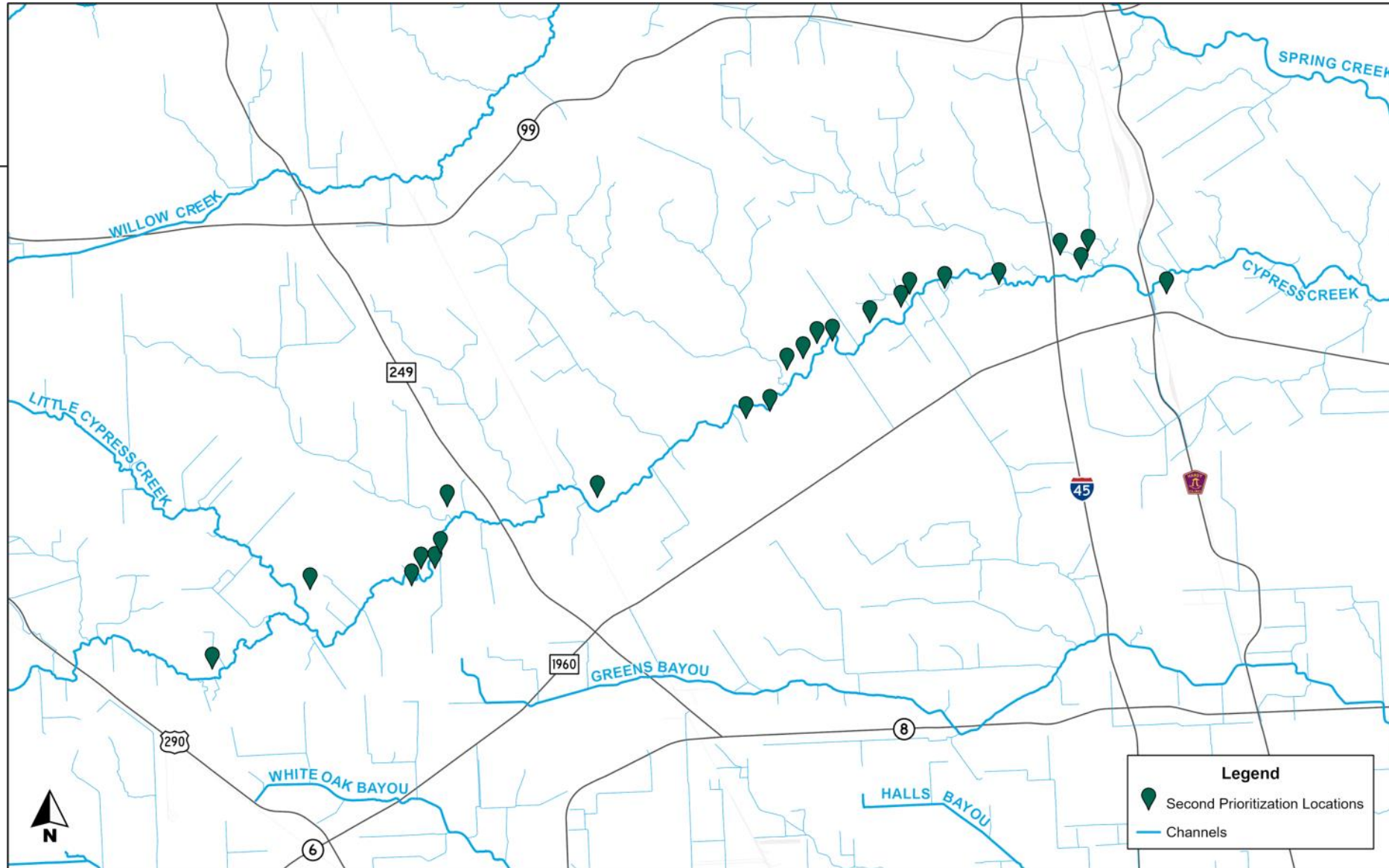
- Initially was update to 2003 Tributaries Master Plan
- Determined > 25,000 ac-ft stormwater detention needed in the Cypress Creek Watershed

Cypress Creek Implementation Plan builds off of Michael Baker study

- Looked at 46 detention basin sites
- Initial prioritization
- 22 recommended basins include all 9 basin sites from the Michael Baker study

Implementation plan provides roadmap for the *first* 12,800 ac-ft.

Proposed Stormwater Detention Basin Locations



Cypress Creek Implementation Plan – Next Steps

Projects in final design:

- TC Jester Stormwater Detention Basin - \$9M congressional earmark
- Westador Stormwater Detention Basin - \$8M congressional earmark
- Mercer Stormwater Detention Basin - \$15M CDBG-DR

E&Rs – Excavation and Removal Contracts

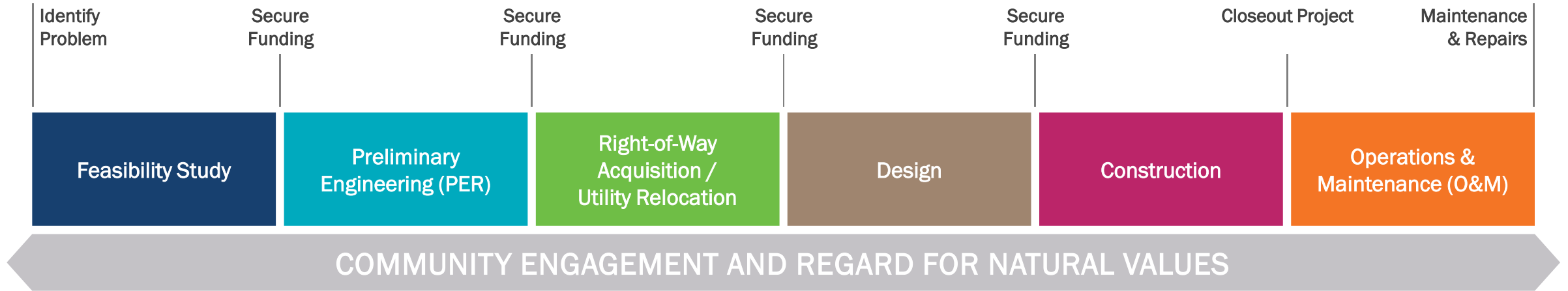
- Environmental due diligence
- Site plan

Continued partnership development

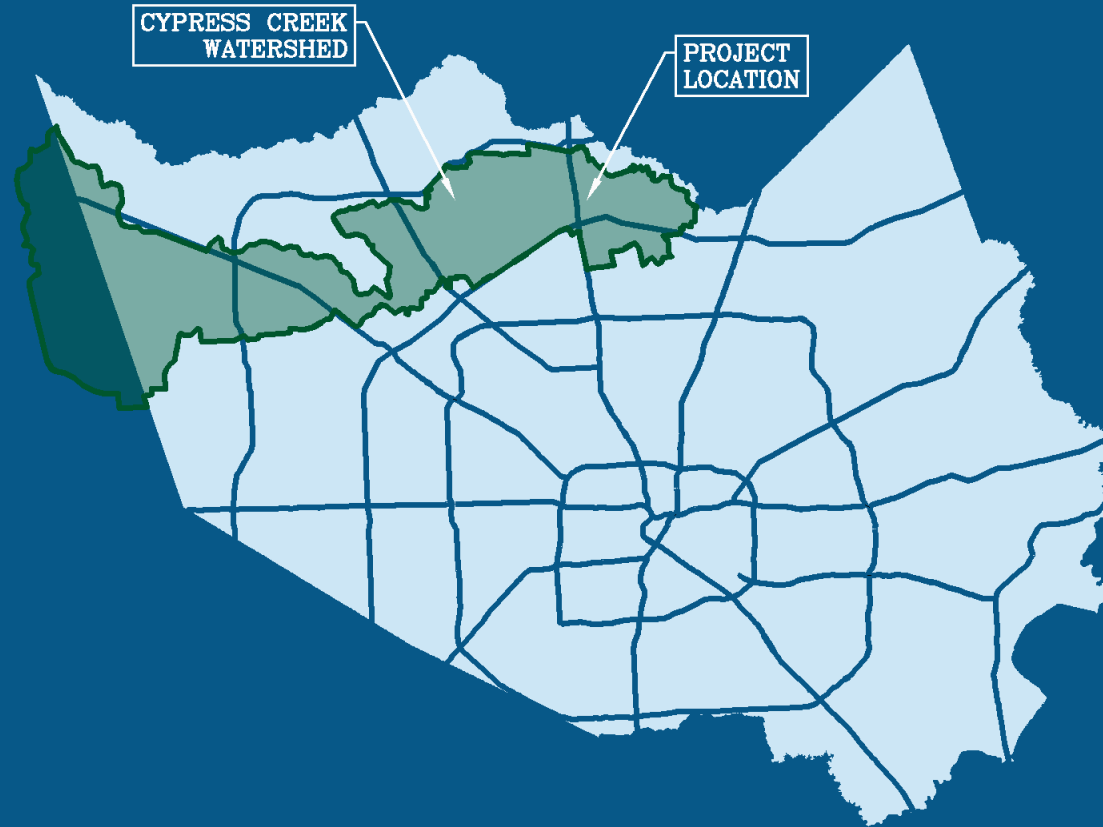
- Grants
- Local partners using Z-02 funds



Project Lifecycle



REGIONAL DRAINAGE PROJECT

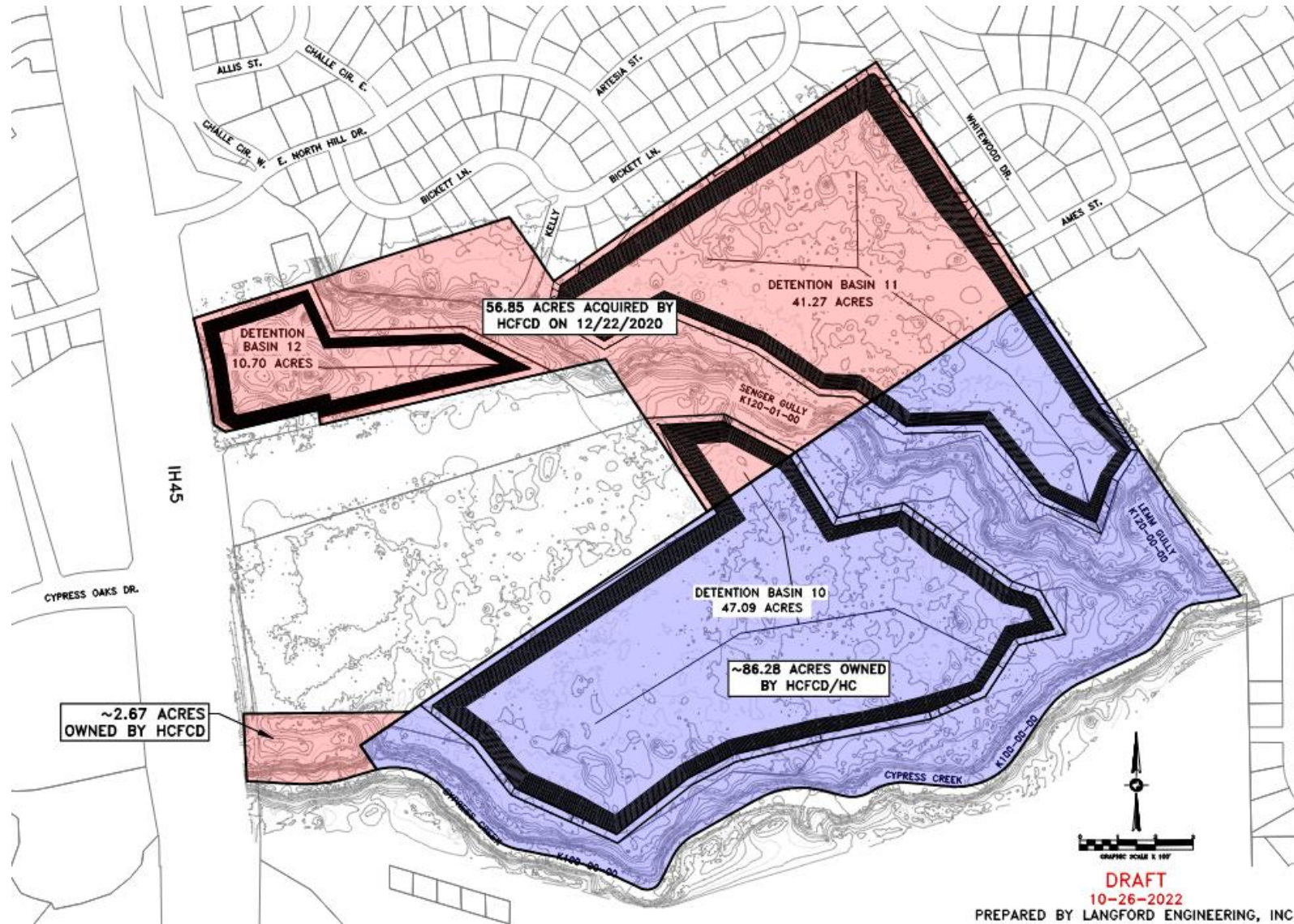


Presented by:
John K. Davis, P.E., President
Norman E. Gutierrez E.I.T, Project Manager



DETENTION BASINS 10, 11, & 12

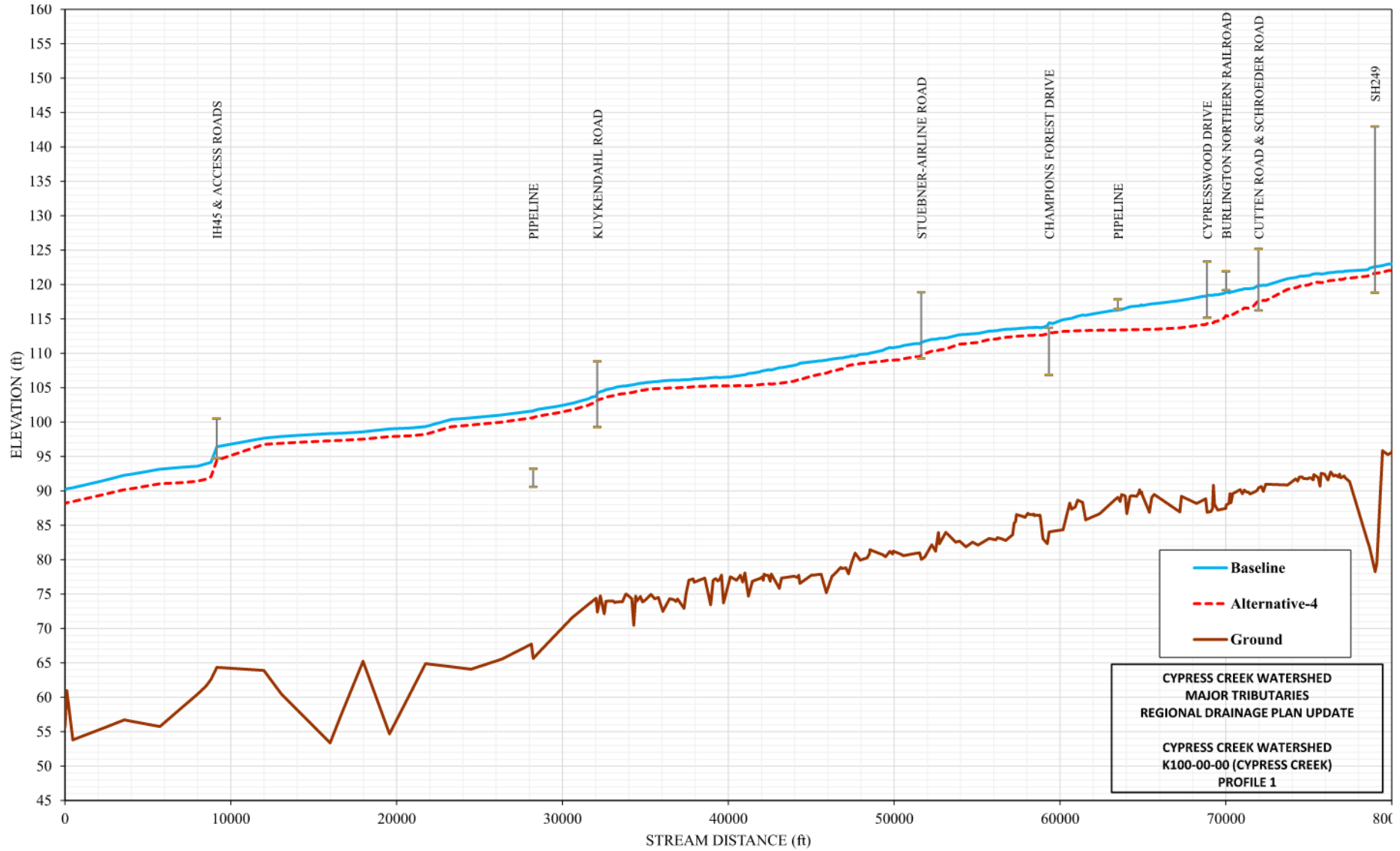
Detention Basins are also known as “SDB South, North & West within the Jones & Carter Report



DRAFT
10-26-2022
PREPARED BY LANGFORD ENGINEERING, INC.

CYPRESS CREEK HYDRAULIC PROFILE

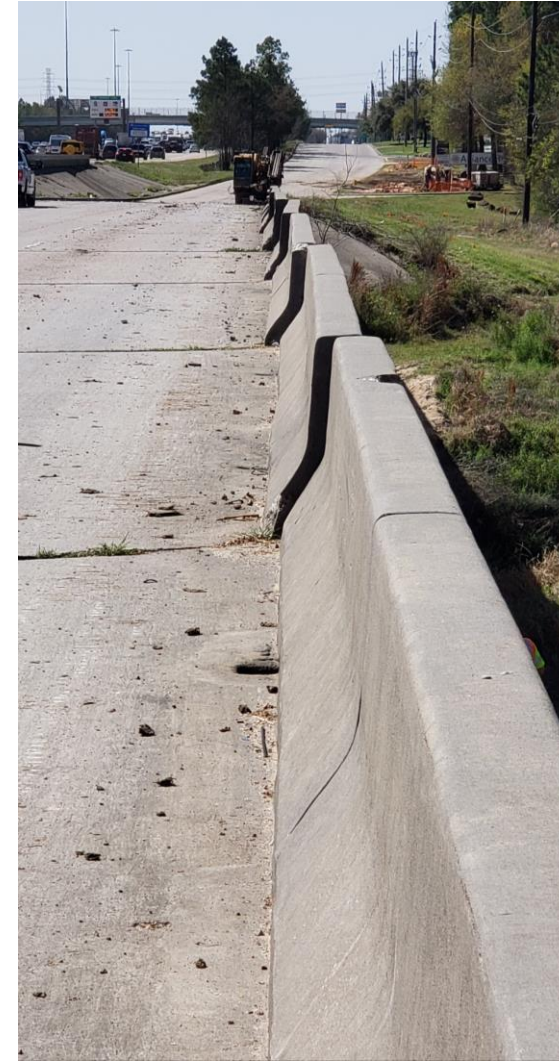
MICHAEL BAKER REPORT



HARVEY DAMAGE AT I45 SOUTH BOUND SERVICE ROAD



I45 SOUTH BOUND SERVICE ROAD
(EAST BARRIER)



I45 SOUTH BOUND SERVICE ROAD
(WEST BARRIER)

WATER SURFACE COMPARISON MICHAEL BAKER REPORT

Table S1: Proposed Detention Basins

Detention Basin ID	Location	Area (ac)	Volume (ac-ft)
1	CI-36	411	9,336
2	CI-20	142	4,576
3	Between US 249 & I 45	232	5,207
7		38	886
8		93	1,960
9		108	2,794
10		76	1,160
11	Downstream of I 45	41	530
12		11	98
Total		1,152	26,546

Table 20: Alternative-4 Flooded Structures and Cost Benefits

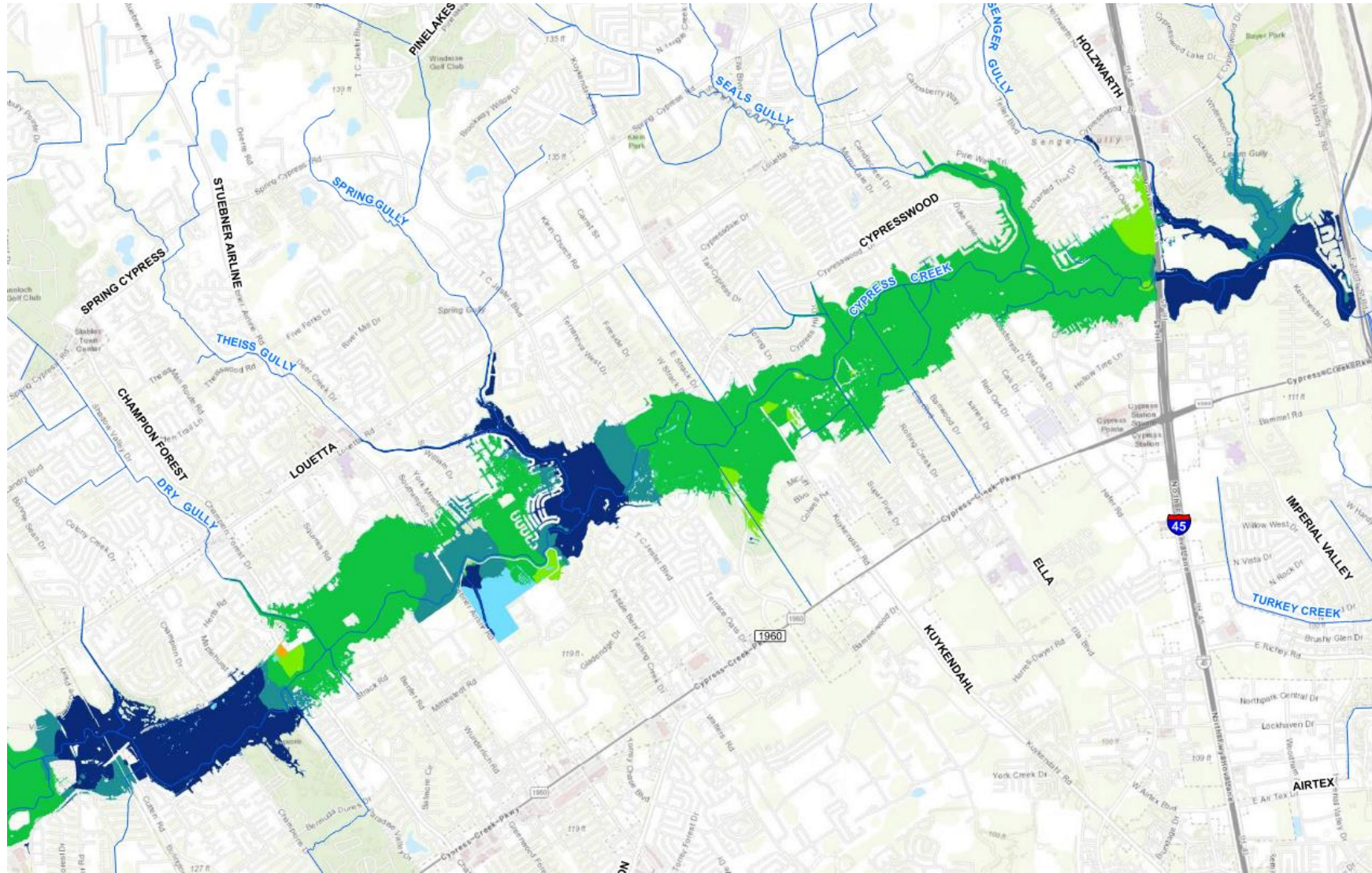
Scenario	Structures in Floodplain	Flooded Structures * (FFL < WSEL)	Value of Structures
Baseline Condition	7,094	4,592	\$1,765,003,595
Alternative-4	5,504	3,497	\$1,299,650,774
Structures Removed	1,590	1,095	\$465,352,821

*Includes structures missing Finish Floor Level information (FFL = 0)

Table 19: Comparison between Baseline and Alternative-4 Flows and WSELs

Location	Baseline Condition		Alternative-4		Difference	
	Flow (cfs)	WSEL (ft)	Flow (cfs)	WSEL (ft)	Flow (cfs)	WSEL (ft)
I-45	22,466.03	96.42	20,086.47	94.48	-2,379.56	-1.94
Kuykendahl Road	21,524.57	104.33	19,114.58	103.23	-2,409.99	-1.1
Stuebner-Airline Road	18,978.98	111.74	18,510.1	109.76	-468.88	-1.98
Champions Forest Drive	14,072.46	114.43	8,622.6	112.98	-5,449.86	-1.45
Cypresswood Drive	17,812.34	118.4	18,986.2	114.34	1,173.86	-4.06
Cutten Road	15,910.16	119.86	18,160.51	117.65	2,250.35	-2.21
SH249	20,673.94	122.57	19,621.59	121.66	-1,052.35	-0.91
Jones Road	14,043.1	124.82	14,043.72	124.17	0.62	-0.65
Cypresswood Drive	14,715.02	126.22	14,563.56	125.68	-151.46	-0.54
Grant Road	8,061.88	129.02	8,149.03	128.61	87.15	-0.41
N. Eldridge Parkway	15,738.79	130.38	16,243.81	130.07	505.02	-0.31
Huffmeister Road	2,485.63	134.02	2,756.22	133.4	270.59	-0.62
Telge Road	7,648.93	136.73	8,285.56	136.72	636.63	-0.01
Barker Cypress Road	10,023.05	140.93	10,068.03	140.91	44.98	-0.02
US 290	7,476.91	141.4	7,486.02	141.38	9.11	-0.02

WATER SURFACE DECREASES ALTERNATIVE 4 MICHAEL BAKER REPORT



**Cypress Creek Watershed
Major Tributaries
Regional Drainage Plan Update
Bond Projects CI-20, CI-35, CI-36
HCFC Project ID: K100-00-00-P005**

**Exhibit 16 (b)
Cypress Creek Model Results
Baseline vs Alternative-4
WSEL Decreases**

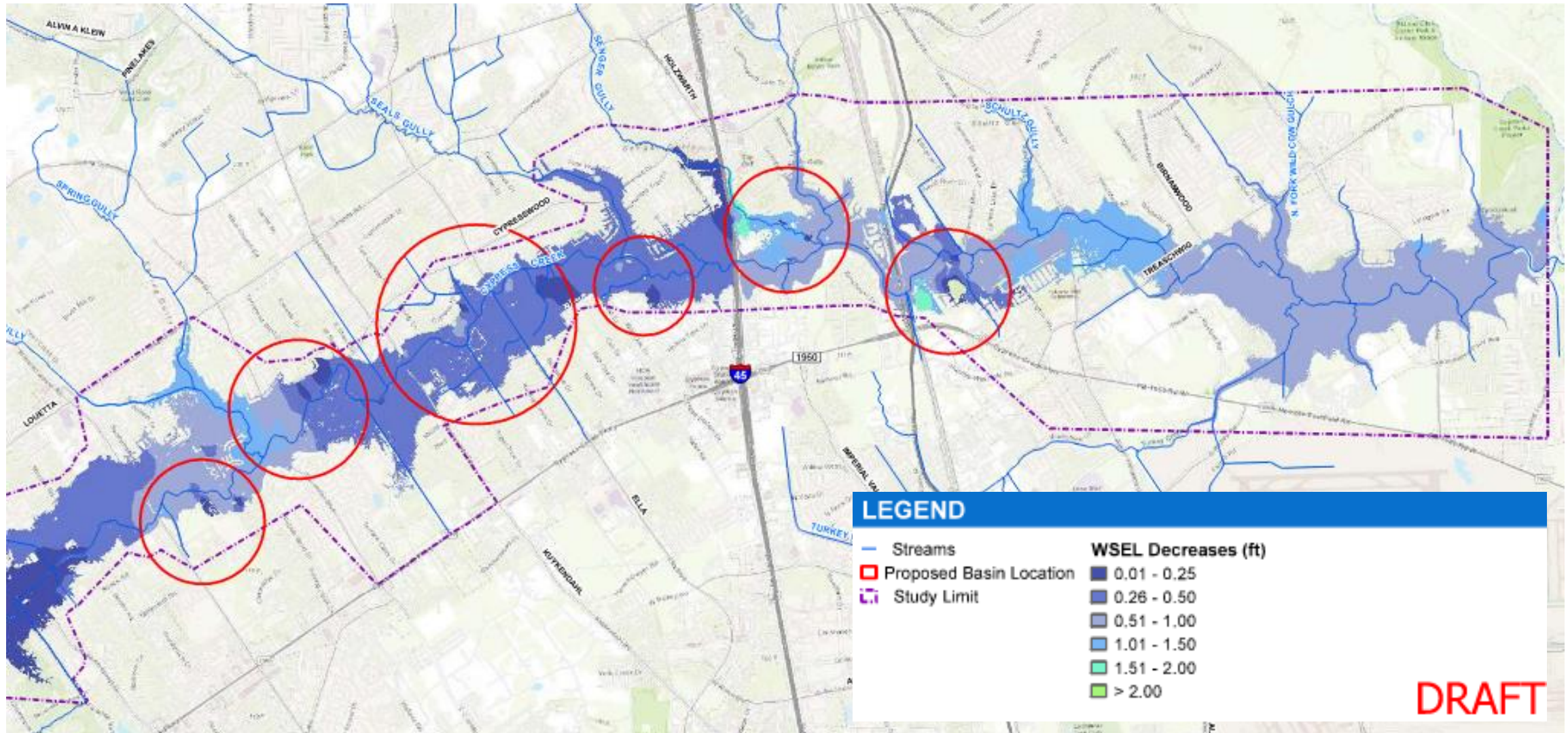
Legend

- Streams
- Alternative-4 Floodplain

WSEL Decreases (ft)

- 0 - 0.25
- 0.26 - 0.50
- 0.51 - 1
- 1.01 - 1.5
- 1.51 - 2
- > 2

WATER SURFACE DECREASES (DRAFT) – JONES & CARTER REPORT



PROPOSED CONTRIBUTIONS

Preliminary Engineering Report (Phase 1) - \$1,000,000

Harris County WCID No. 110 - \$500,000

HCFCF Matching Funds - \$500,000

Total Construction Funds (Phase 2) - \$11,000,000

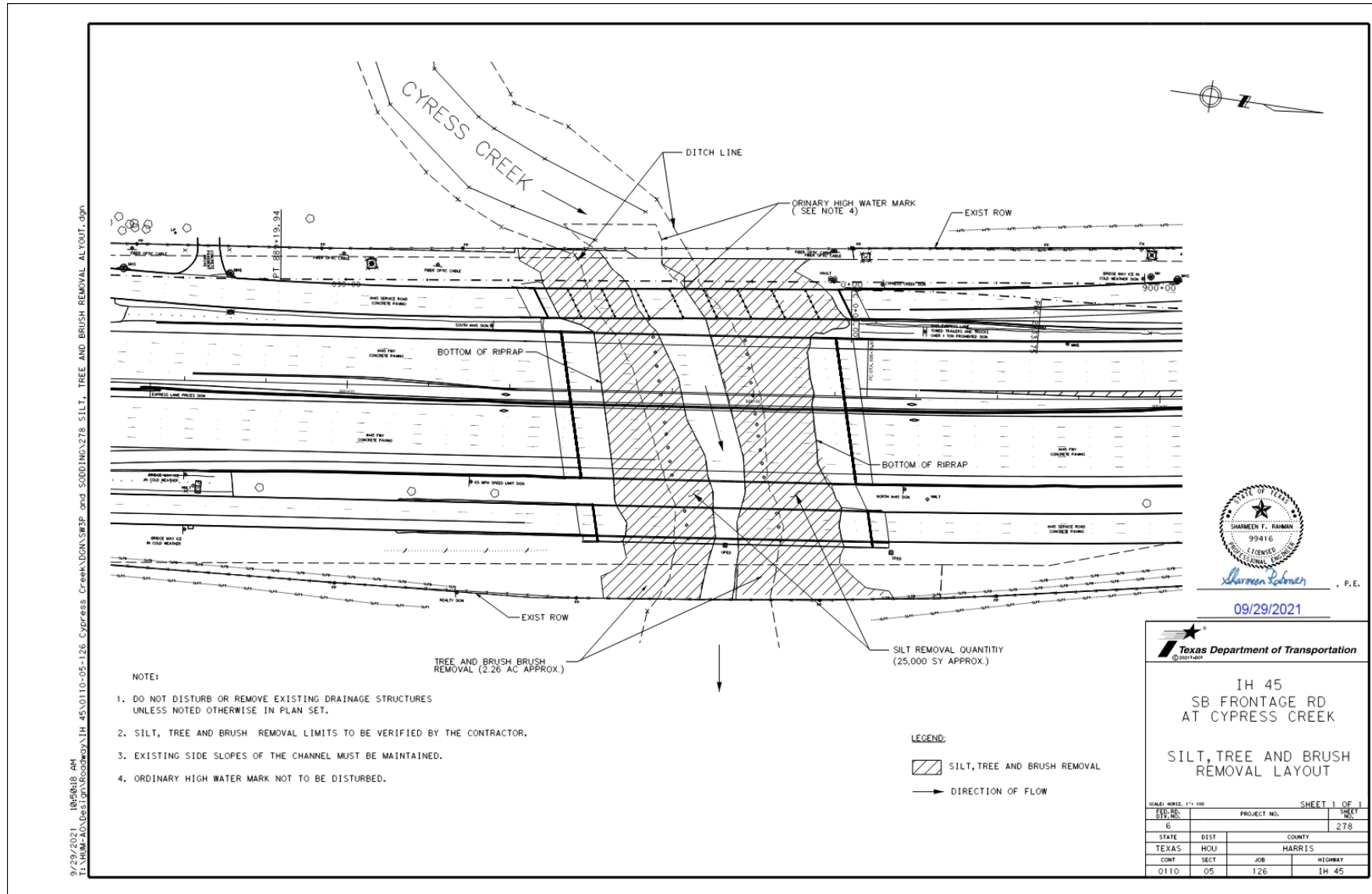
Participating Entities - \$5,500,000

HCFCF - \$5,500,000

TAKEAWAYS

- HCFCO HAS DONE MACRO STUDIES ALONG ALL OF CYPRESS CREEK AND IDENTIFIED APPROXIMATELY 22 SITES WITH FLOOD REDUCTION BENEFITS.
- HCFCO STUDIES HAVE SHOWN THAT DETENTION SITES AND OTHER IMPROVEMENTS WILL RESULT IN A LOWER BASE FLOOD ELEVATION, THUS REDUCING THE NUMBER OF FLOODED STRUCTURES.
- HCFCO WILL IMPLEMENT DETAILED ENGINEERING STUDIES OF IDENTIFIED SITES TO DETAIL MORE EXACT BENEFITS, SUCH AS THE SITE WE HAVE DISCUSSED, LOCATED ON THE NORTH BANKS OF CYPRESS CREEK, JUST EAST OF I-45.
- THIS STUDY IS BEING EXPEDIATED BY THE INTERLOCAL AGREEMENT WITH HCFCO.

SILT/DEBRIS REMOVAL AT I45 AND CYPRESS CREEK



APPROXIMATELY
25,000 CY OF
SILT TO BE
REMOVED.

PROPOSED TRAIL – I45 AT CYPRESS CREEK



EXISTING TRAIL – 249 AT CYPRESS CREEK

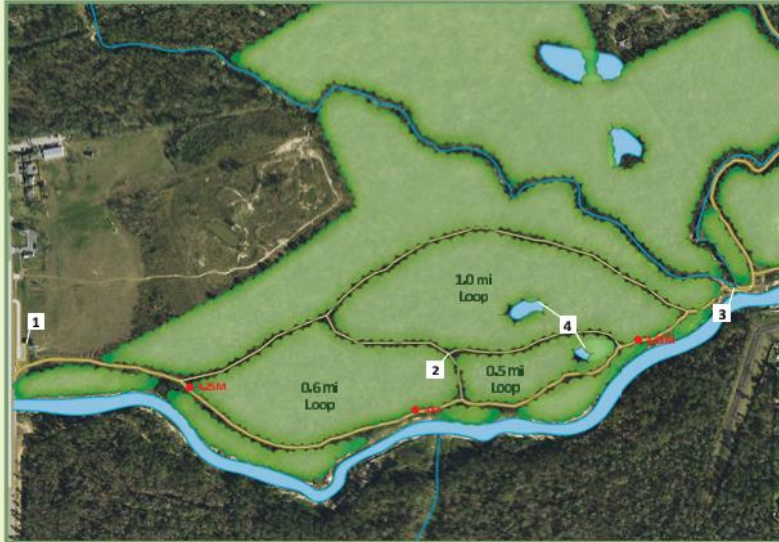


CYPRESS CREEK TRAILS MASTER PLAN – TIMBER LANE UD WEBSITE



CYPRESS CREEK TRAILS MASTER PLAN – TIMBER LANE UD WEBSITE

CYPRESS CREEK TRAILS MASTER PLAN (COUNTY LANDS)

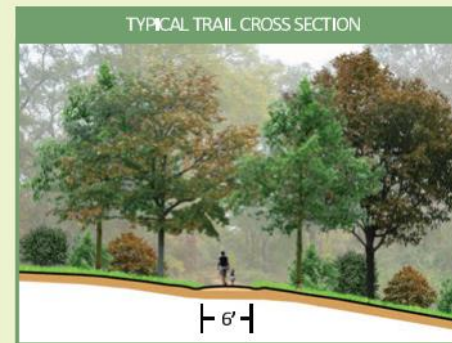


LEGEND

- HIKE/BIKE TRAILS 
- EXISTING VEGETATION 
- WATER FEATURES 
- TRAIL MARKERS 

- PARKING LOT (8 SPACES) 1
- REST AREA 2
- BRIDGE CROSSING 3
- EXISTING WETLANDS 4

SCALE
0 800' 1600' 3200'

Funding for Regional Drainage Project

Tom Dowdy, Treasurer for HC 110



I-45 & CYPRESS CREEK DETENTION BASIN

How do we
fund this
project?

Funding by Harris County Flood Control District

HCFCFD is willing to commit \$6,000,000 toward engineering and construction of the proposed detention pond.

HCFCFD requires matching funds for engineering and construction.

Real Opportunity to Reduce the Number of Homes Flooding

Matching funds of \$6,000,000 is a lot of money but is a real opportunity to take action now to reduce flooding in the future within our utility districts.

Without our partnering in this project, it could a decade or longer before the proposed detention basin might be constructed.

WCID 110 Approach to Project

Divide funding the project into two Phases:

Phase 1 would be an engineering study.

Phase 2 would be design and construction, based on engineering study recommendations and available funding.

Funding Engineering Study

WCID 110 willing to contribute \$500,000 toward engineering study.

HCFCD willing to \$500,000 toward engineering study.

Interlocal Agreement with HCFCD

WCID 110 would take the lead in raising funding and enter into an interlocal agreement with HCFCD.

Districts that would benefit from reduced flooding and willing to participate financially would enter into interlocal agreements.

State and/or Federal Funding

During the Phase 1 engineering study, WCID 110 would seek state and federal funds for the project. Phase 1 will likely take about one year.

WCID 110 has learned of a recent commitment for federal funding for two projects in our area and have hopes of securing state and/or federal funding for this proposed project.

Letter of Support Requested

WCID 110 is requesting benefiting districts support this regional detention basin project by signing a letter of support that is available tonight to take back to your board for consideration.

Letters help to influence state and federal agencies in their willingness to provide funding.

Why State & Federal Agencies Should Provide Funding

Previous Cypress Creek flood studies indicate the construction of regional detention basins will significantly reduce the number of homes that would flood in future flood events.

Fewer homes flooding saves disaster relief fund payments by government agencies and therefore state or federal funding saves agencies money in the future.

What If We Fail To Obtain State and/or Federal Funding

Benefiting districts would have to raise the remaining \$5,500,000 matching contribution.

Each benefiting district's contribution might be based on affected acreage in their district.

Some districts likely lack the reserves to make a contribution.

Funding Idea

WCID 110 consultants have discussed with HCFCD the possibility of districts lacking the reserves to make contributions toward the project being able to enter a Interlocal Agreement with HCFCD to make periodic payments to HCFCD for their share of the project.

Suggestions Welcome

WCID 110 welcomes ideas and suggestions on how to raise necessary contributions if no state or federal funding can be obtained.

Please provide your ideas and suggestions to John Davis outside this meeting.

Where There Is A Will There Is A Way

There is a lot of work and effort required to secure funding for the proposed detention basin. WCID 110 is optimistic that through working together as a coalition of utility districts we can creatively raise the needed funding.

What's The Benefit To Your Board of Directors And Your Property Owners

You will demonstrate your concerns about flooding to the property owners and willingness to take action to reduce flooding.

Every property owner benefits by lowering the reputation of your area being in a flood area and that reputation stigmatizes property sales and values for a period of time after each flood event. Flood mitigation leads to more stable values.

No Financial Obligation Required To Provide Letter of Support

Copies of a Letter of Support are available at this meeting to take back to your Board of Directors for consideration and execution.

Please forward those letters to Maria Parker and Josh Kahn, with SK Law.

Contributions Appreciated

WCID 110 welcomes contributions toward the \$500,000 Phase 1 engineering study.

You will receive a letter agreement to document your contribution.

Thank you for your support and time to attend this informational meeting.

Letters of Support

There is a sample letter of support in the handout you received when you arrived.

If you support this project, we ask that you use this template to create a letter of support from your district and submit this to hcwcid110@sklaw.us

by **AS SOON AS REALISTICALLY POSSIBLE.**

Submitting a letter of support does NOT commit you to any financial expectations or obligations related to this project moving forward.

Question and Answer

Live Questions

- Due to time constraints, only one in-person question per attendee.
- Form a line behind the microphone.
- Once you have asked your question, you may return to your seat.
- We will not be able to engage in conversations at this meeting.
- If we are unable to provide an answer or if the response will take a large portion of time, we may have to provide additional information through our website or email.

QR Code for submitting additional questions

To submit additional questions, use the QR code provided in the packets you received when you arrived. The moderator will ask these questions on your behalf to the presenters.

1. Open your camera app on your phone
2. Point it at the QR code
3. A small box will appear around the code and show the link
4. Push on the link.
5. Submit your question.
6. You can submit additional questions by selecting “Submit Another Response”

Website for Project Information

www.wcid110.com

Harris County
WCID110

WATER / SEWER BILLING / SERVICE INQUIRIES
832-467-1599
f i p

REGIONAL DRAINAGE PROJECT

FLOOD CONTROL INFO

BOARD MEETING
26OCT2022 - 5PM

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Name Email Address **Subscribe Now**

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BOARD & STAFF	CONSULTANTS	SECURITY	UPCOMING EVENTS	
MEETING AGENDAS	MEETING MINUTES	TRASH & RECYCLE	NEWSLETTER	

Thank you all for coming.

WCID110 BOARD OF DIRECTORS

