

Flood Resiliency Planning for Harris County

Tuesday, November 9, 2021



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Topics for Consideration

- How did we plan flood damage reduction projects in the past?
- How did Hurricane Harvey affect that?
- How will we plan projects in the future?

Major Eras in District Planning

1937 – HCFCD Created

- Act as Local Sponsor for USACE projects

1940s – 1950s

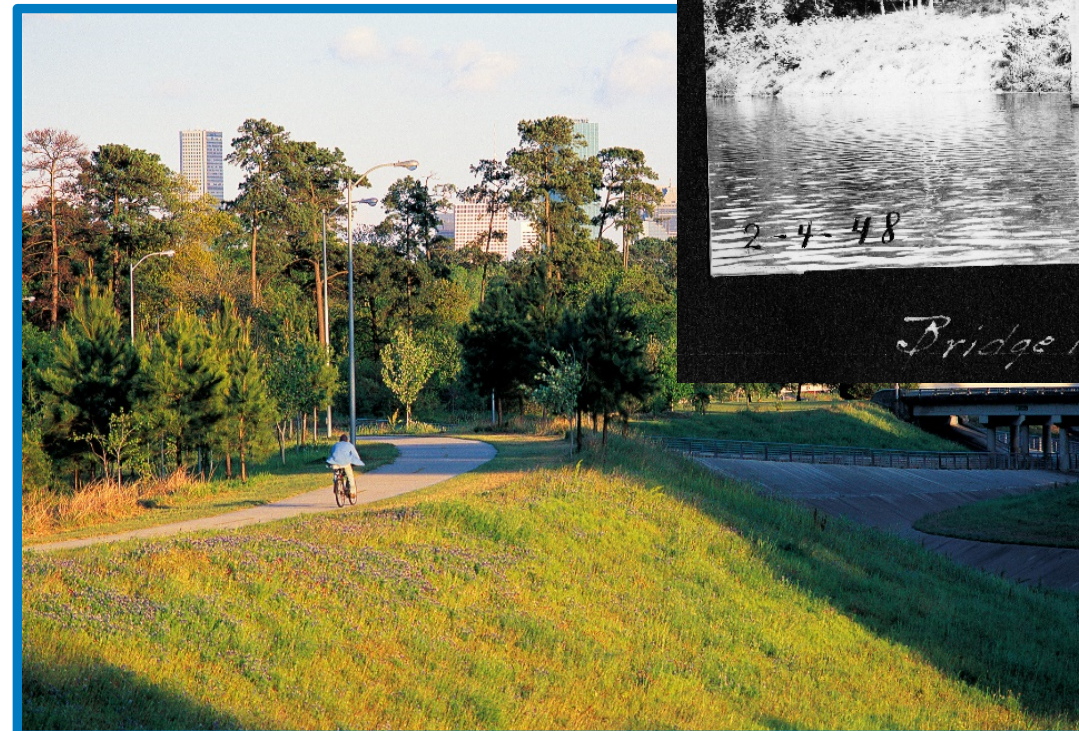
- Addicks Reservoir & Barker Reservoir dams

1960s – 1980s

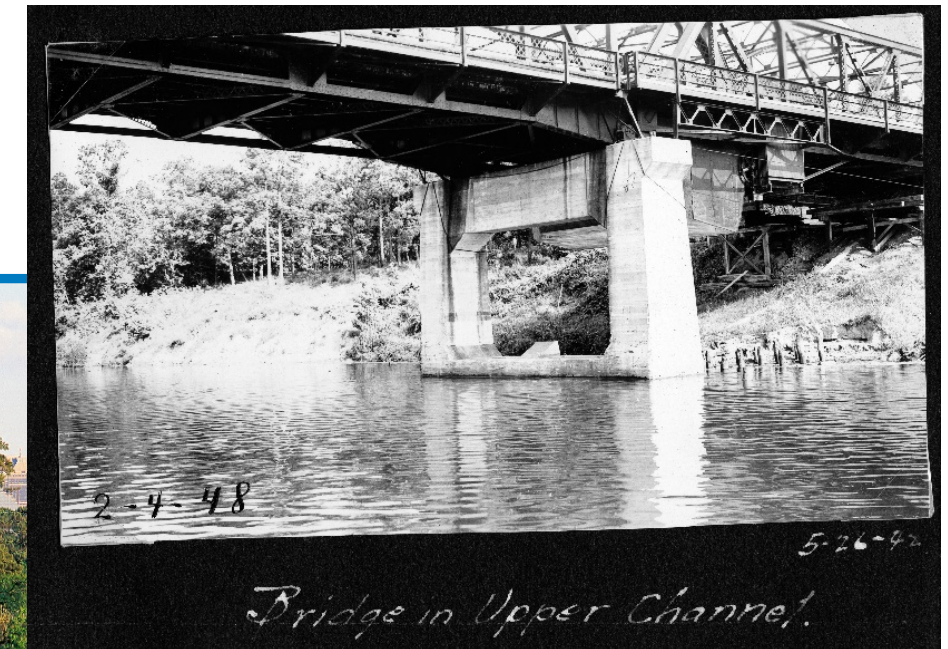
- Major channelization projects on several bayous

1980s – TS Allison

- Stormwater detention rears its head...
- Pay-as-you-go does away with bonds



White Oak Bayou – Today



White Oak Bayou - 1942

Major Eras in District Planning (Cont.)

TS Allison - 2010

- Act as Local Sponsor for USACE projects

2010 - Harvey

- Budget limitations reduce CIP significantly

Harvey

- Historic \$2.5B Bond

Post-Bond

- Flood Resiliency planning

Project Planning in Previous Eras

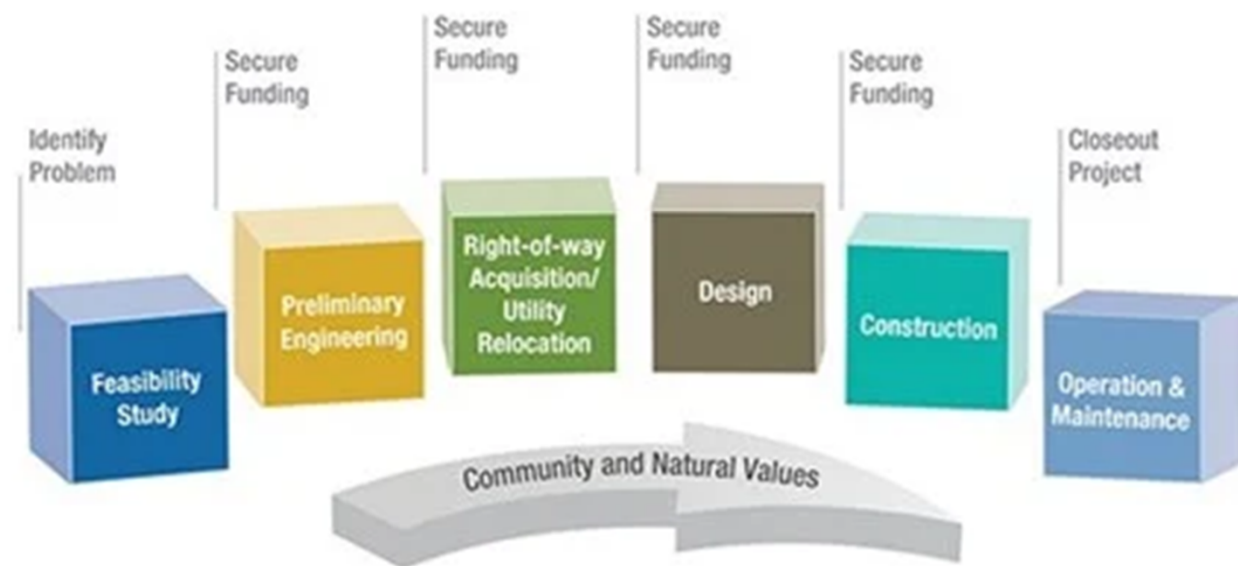
- **Blue Books”** in 1970s and 1980s
- **Watershed Master Plans**
 - Armand Bayou, Clear Creek, others
- **Focused on Structural Improvements to Increase Conveyance**
 - Regional projects
- **Significant Expense and Long Time Periods to Implement**



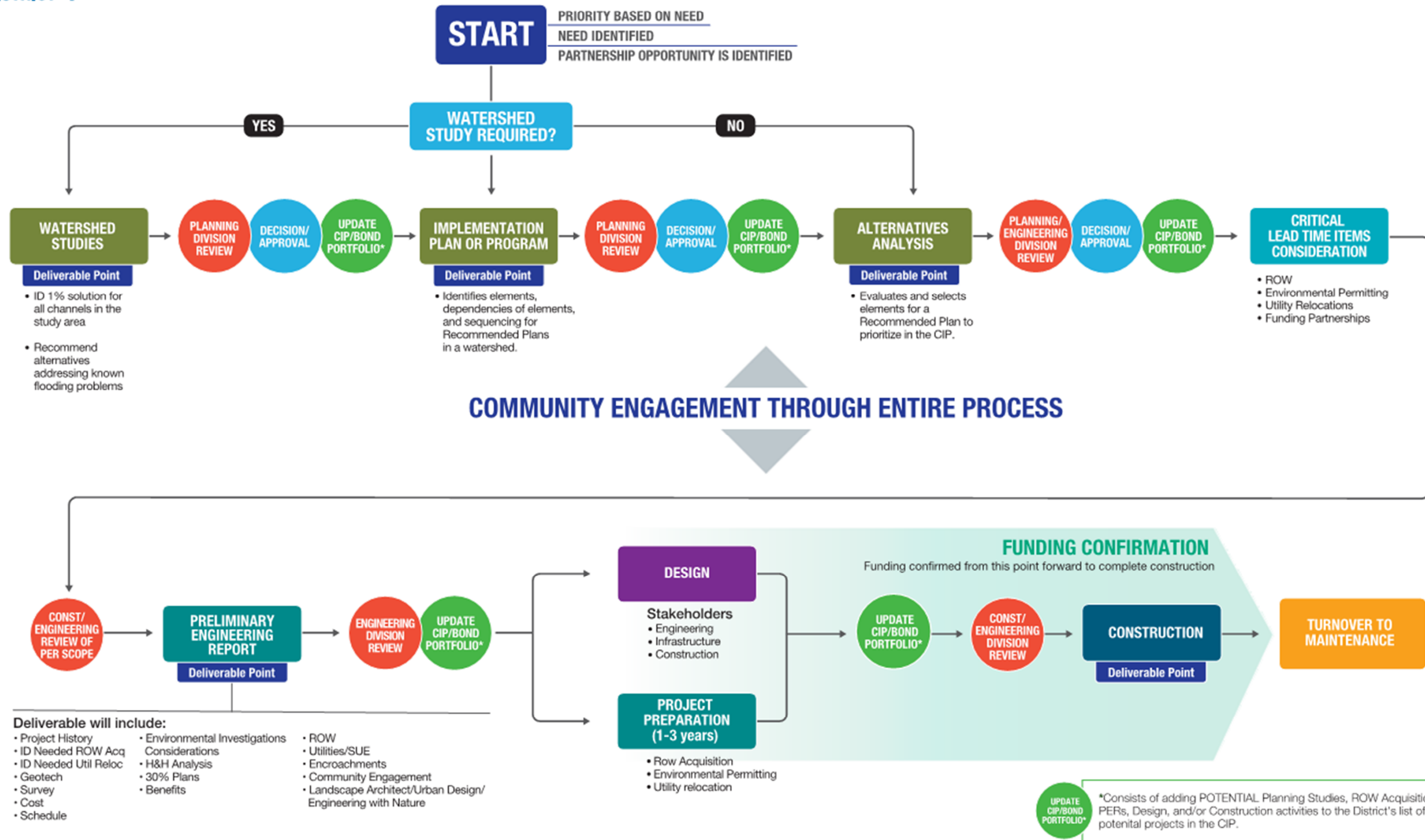
Project Planning for 2018 Bond

- Culmination of Previous CIPs
- Community Outreach Meetings
- Partnership Projects and Future Studies

Flood Damage Reduction Project Lifecycle



OVERVIEW OF DISTRICT PROCESS FOR PROJECT DELIVERY



Project Planning Post Bond

- Infrastructure Resilience Team (IRT)
- Community Flood Resilience Task Force (CFRTF)
- Harris County *Flood Resilience Plan*

Resilience and Equitable Resilience

Resilience

The capacity of people, organizations, and physical systems to “*prepare, plan for, absorb, recover and more successfully adapt to adverse events*”

National Research Council. 2012. *Disaster Resilience: A National Imperative*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/13457>

Equitable Resilience

“[a] form of human-environmental resilience that takes into account issues of social vulnerability and differentiated access to power, knowledge and resources. It starts from people’s own perception of their position within their human-environmental system and accounts for their realities and their need for a change of circumstance to avoid imbalances of power into the future.”

Matin, N., Forrester, J., & Ensor, J. (2018). “What is equitable resilience?” *World Development*. Retrieved from <http://doi.org/10.1016/j.worlddev.2018.04.020>.

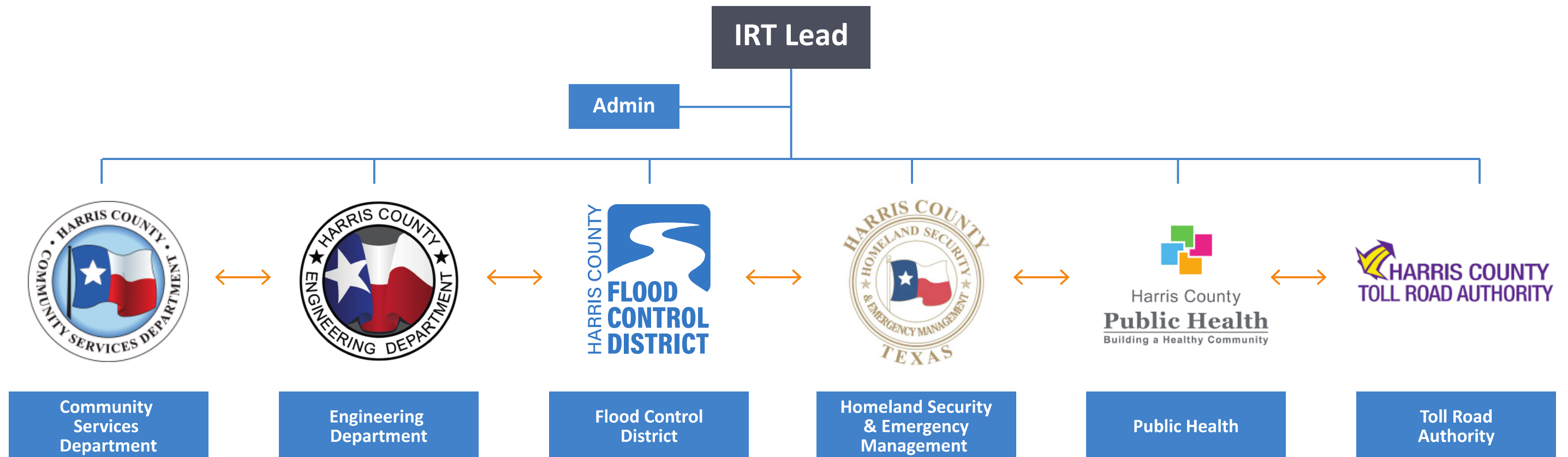
Infrastructure Resilience Team

Mission

Develop an overall approach to improve flood resilience in Harris County, as well as track, evaluate, and measure progress against set goals, strategies, plans, and initiatives

Deliverable

Comprehensive, Holistic, and Inclusive Flood Resilience Plan



Community Flood Resilience Task Force

Mission

To serve in an advisory capacity to the IRT and, in turn and as applicable, the Harris County Commissioners Court to promote collaboration among stakeholders and encourage equitable resilience planning efforts and flood resilience projects that:

- Support holistic, innovative, and nature-based solutions
- Achieve multiple short- and long-term benefits
- Take into account the needs and priorities of the community and promote equitable community-level outcomes in the face of flooding
- Protect communities, homes, and businesses from flood-related hazards

Community Flood Resilience Task Force

“Reshaping” of original Flood Control Task Force created in 1972



- At least one member from each sector:**
1. Housing
 2. Public Health
 3. Engineering
 4. Urban Design/Planning
 5. Flood Risk Mitigation
 6. Environmental Sustainability
 7. Community Leadership or Membership Organization
 8. Equity and Social Justice

- Additional Members:**
9. City of Houston Flood Resilience Employee
 10. Community Member
 11. Community Member
 12. Community Member
 13. Community Member
 14. Community Member
 15. Community Member
 16. Community Member
 17. Community Member

- Out of the 17 members, there must be¹:**
- 2 members from flood-prone-low-income communities
 - 2 members from flood-prone communities of color
 - 3 members with scientific and/or technical expertise in flood resilience or flood risk mitigation

Flood Resilience Plan

Three Phases of “Traditional” Planning



We are here

No formal requirement for what the plan should look like

- *...no great examples either*

Some documents to draw from

- Harris Thrives Resolution
- City of Houston Resilience Plan
- Harris County Transportation Equity Plan
- Ongoing plans and programs at member departments

Future Projects and Programs

- **The Flood Resilience Plan sets the stage for future (post-Bond) project identification and prioritization**
 - Immediate actions and goals will also be identified
- **Programs and action areas identified in the Plan will apply to all departments**
 - Major municipalities and outside counties will/may also participate
- **All 6 departments will need to approve the Plan**

Challenges and Opportunities

- **Near Term Needs vs. Far-Reaching Plan**
- **Educating All Stakeholders**
- **Promoting Flood Resilience and Awareness**
- **Future Internal and External Support**

We want to hear from you!

Please visit our website at www.hcfdc.org to learn more about projects and upcoming community meetings, ask questions and sign up for our mailing list.



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