I-45 NHHIP Segment 3C
Flood Mitigation

For additional information about the Project, visit us online at: **www.txdot.gov/nhhip**

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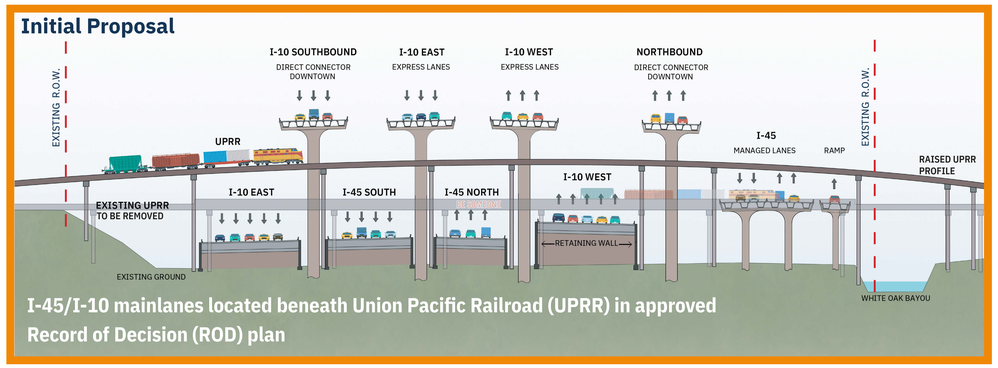
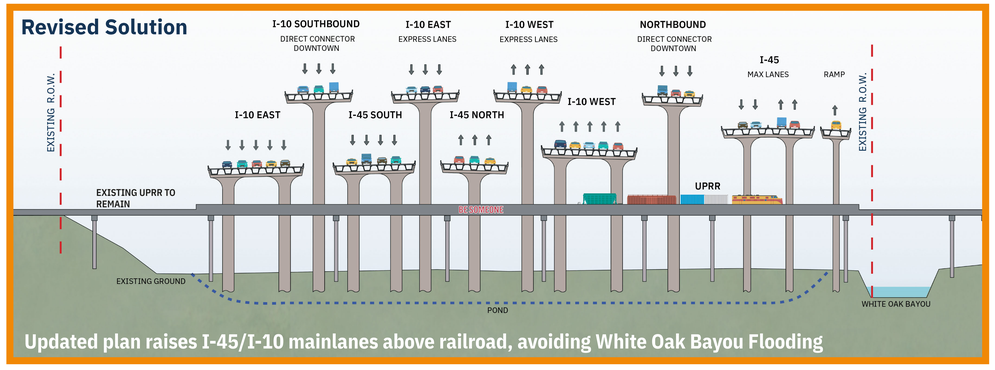
FLOOD MITIGATION THROUGH RAISING THE MAINLANES



I-45/I-10 mainlanes located beneath Union Pacific Railroad (UPRR) in approved Record of Decision (ROD) plan



Updated plan raises I-45/I-10 mainlanes above railroad, avoiding White Oak Bayou Flooding

1. **Initial Proposal:** I-45 and I-10 mainlanes were proposed to be at-grade and elevated above the 100-year Atlas-14 water surface elevation.
   - **UPRR Bridge Changes:** The existing UPRR bridge (the "BE SOMEONE" bridge) would need to be removed and raised by approximately 12 feet.
   - **Rail Network Impact:** Raising the railroad would disrupt UPRR's operations and local streets, requiring longer transitions and causing extended closures.
2. **Revised Solution:** The new design elevates all roadways above the UPRR bridge, which:
   - Avoids impacts to UPRR's daily operations.
   - Improves drainage and reduces flooding risks.
   - Increases detention capacity under the roadways for better flood management.
3. **Interchange Adjustments:** The interchange will be slightly higher than initially planned.
   - Primarily located in a non-residential area.
   - Because of its location, minimal noise impacts are anticipated.
4. **Railroad Accommodation:** Supports the future realignment of the railroad as requested by the City of Houston.
5. **Cost Adjustment:** The cost is projected to align with or come in under the initial proposal.

KEY IMPROVEMENTS

1

DETENTION PONDS
5 Proposed Detention Ponds

FLOOD REDUCTION BENEFIT
I-45/I-69/I-10 to remain passable in 100-year Atlas 14 storm event.

2

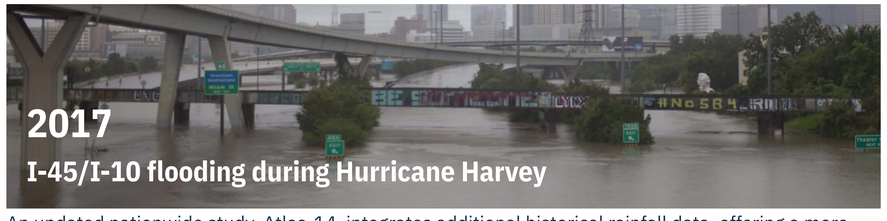
NORTH & SOUTH CANAL PROJECTS
Enhanced Flow Capacity Along Buffalo Bayou Between I-69 and Main Street

FLOOD REDUCTION BENEFIT
1.5 to 3-foot decrease in 100-year Atlas-14 flood water surface elevations along Buffalo Bayou in downtown

3

PUMP STATIONS
2 Proposed Pump Stations

The numbers on the map at the bottom corresponds to the major improvements listed. The blue striped boxes on the map represent the locations of the North and South Canal projects along White Oak and Buffalo Bayous.



I-45/I-10 flooding during Hurricane Harvey

An updated nationwide study, Atlas-14, integrates additional historical rainfall data, offering a more accurate representation of long-term rainfall patterns. Atlas-14 includes significant rainfall data from Hurricane Harvey, enhancing the study's comprehensiveness.