HMGP DR-4332-TX-0095
NORTH CANAL
BRIEFING TO TTI COMMITTEE
Laura Patiño, Mayor’s Office of Recovery
Aug. 6th 2020
FEMA Hazard Mitigation Grant Program

Supports recovery efforts by providing assistance to enact mitigation measures to reduce the loss of life and property.

STATE
$1 B* available for Texas

LOCAL
$280 M* Available for Houston

MATCH
25% This program requires local governments to match 25% of the total funding.

MITIGATION SAVES!

<table>
<thead>
<tr>
<th>Spent</th>
<th>Saved</th>
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</thead>
</table>

Every $1 spent on mitigation saves $4 on future disaster losses.
# Submitted HMGP Projects

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>DISTRICT</th>
<th>WATERSHED</th>
<th>COST ESTIMATE</th>
<th>FEMA COST</th>
<th>LOCAL COST</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inwood Golf Course</td>
<td>A, C, B</td>
<td>White Oak</td>
<td>$47M</td>
<td>$35M</td>
<td>$12M</td>
<td>Phase I approved, in design</td>
</tr>
<tr>
<td>North Canal</td>
<td>C, H, I</td>
<td>Buffalo, White Oak</td>
<td>$131M</td>
<td>$46M</td>
<td>$85M*</td>
<td>Phase I approved, under procurement</td>
</tr>
<tr>
<td>TIRZ 17</td>
<td>G</td>
<td>Buffalo</td>
<td>$56M</td>
<td>$26M</td>
<td>$30M*</td>
<td>Pending approval</td>
</tr>
<tr>
<td>Lake Houston Dam</td>
<td>E</td>
<td>San Jacinto</td>
<td>$47M</td>
<td>$35M</td>
<td>$12M</td>
<td>Phase I approved, in design</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$281</strong></td>
<td><strong>$142</strong></td>
<td><strong>$139</strong></td>
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</table>

*Local match increased to increase likelihood of award
The application process is lengthy, requiring various steps of review.

HMGP Process

Phase I
- July 2018: Project Scoping
- Project Development
- Project Submission
- Project Review
- Project Award and Obligation
- Oct. 2019: Project Implementation and Monitoring
- Re-Submittal for Phase II approval

Phase II
- March 2020: Project Submittal
- Project Review
- Project Award and Obligation
- Project Implementation and Monitoring
- Award Closeout

We are here! Aug. 2020
DR-4332-TX-095 North Canal

The North Canal project will reduce the risk of flooding to downtown and provide flood damage reduction to upstream areas along White Oak and Buffalo Bayous. The project consists of three components: a high flow diversion channel, an overflow channel, and bridge and channel improvements. The North Canal is at the confluence of White Oak and Buffalo Bayous with the South overflow channel downstream. The bridge and channel improvements provide conveyance capacity to areas along White Oak Bayou, including I-10 west of Downtown Houston.

<table>
<thead>
<tr>
<th></th>
<th>Total Cost</th>
<th>Federal Share</th>
<th>Local Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Canal</td>
<td>$131,249,359</td>
<td>$46,249,359</td>
<td>$85,000,000</td>
</tr>
<tr>
<td>Phase 1: Design,</td>
<td>$7,536,108</td>
<td>$2,655,557</td>
<td>$4,880,551</td>
</tr>
<tr>
<td>permitting, and</td>
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<td></td>
</tr>
<tr>
<td>environmental</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2: Construction</td>
<td>$123,713,251</td>
<td>$43,593,802</td>
<td>$80,119,449</td>
</tr>
<tr>
<td>and property</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>acquisition</td>
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</tbody>
</table>

Project Partners / Steering Committee: HARRIS COUNTY FLOOD CONTROL DISTRICT
MEMORIAL HEIGHTS REDEVELOPMENT AUTHORITY
TEXAS DEPARTMENT OF TRANSPORTATION
Vicinity Map
Current Downtown Development
Potential Downtown Components

North Canal Proposed Alignment

South Canal Alignment
Yale & Heights Components

Yale & Heights Bridges

Channel Improvements
## Design Project Components

<table>
<thead>
<tr>
<th>Bridge and Channel Improvements</th>
<th>North Canal Diversion</th>
<th>South Canal In-Line Detention</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Low profile decking on Yale Street and Heights Boulevard bridges</td>
<td>• Channel diversion</td>
<td>• In line detention area</td>
</tr>
<tr>
<td>• Demolition of abandoned railway bridge</td>
<td>• Relocation of METRO transit facility</td>
<td>• Connection to overflow detention basin, performed by TXDOT as part of NHHIP</td>
</tr>
<tr>
<td>• White Oak Channel improvements at Heights and at I-10</td>
<td>• Property acquisition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Railroad considerations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Flowage easement for downstream areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Buffalo Bayou Partnership package coordination</td>
<td></td>
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</tbody>
</table>

### Environmental/Regulatory Permitting Activities
- Hydraulics & Hydrology Analysis
Next Steps

- Finalize procurement process
- Initiate Phase I – Design and Permitting
  - Critical path: ROW acquisition, flowage easement determination, environmental/regulatory permitting
- Work with state and federal agencies to expedite design and permitting phase
- Re-submit Phase II application for construction approval
- Align with additional partners on parallel path ensure overall amenity vision is achieved for the area
Questions?

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