Lumpkin Road Improvements
CIP Number T - 1709

Presented to the Board of Directors
September 24, 2013
Lumpkin Road Improvement Objectives

- Improve safety and mobility
- Provide pedestrian access
- Improve drainage deficiencies
- Upgrade traffic components
- Replace aging public utilities
Lumpkin Road Improvement Highlights

• $ 10 million infrastructure project
• 12 month construction schedule
• 20 acre-feet of new detention
• 100 year flood event design
• +/- 3600 LF new concrete roadway
• Extends from IH-10 to Northbrook
• 40’ curb and gutter section
• 6’ wide pedestrian walkways
• Landscaping and amenities
Existing Conditions – Drainage

• Buffalo Bayou watershed
• Primary outfall is IH-10
• Open ditches / RCB
• Westview detention basin
  • Volume = 16 acre feet
Improved Conditions – Drainage

- 30-inch restrictor at IH-10
- 2 - 8’x8’ RCB IH-10 to Home Depot
- 36-inch restrictor upstream
- 8’ x 8’ RCB Home Depot to Westview
- 4’ x 4’ RCB Westview to Northbrook
- 54-inch RCP branch to Shadow Oaks
- Detention option B – 31.4 AC-FT
PROPOSED 100 YR SHEET FLOW PONDING

Legend
- Restrictors
- Existing Manholes
- Existing Storm Sewers
- Option 3 Proposed Storm Sewers
- Existing Maximum Flood Extents

Option 3 Maximum Flood Depths
- < 0.25'
- 0.25' - 0.50'
- 0.50' - 0.75'
- 0.75' - 1.00'
- 1.00' - 2.00'
- 2.00' - 3.00'
- 3.00' - 5.00'
- 5.00' - 10.00'

- 54" RCP Neighborhood Flood Relief Sewer
- 30" Restrictor
- 36" Restrictor
- Detention Option B
- Existing 7'x4' RCB and Proposed 4'x4' RCB Redirected to Basin
- Abandon/Plug
- Approx. 1270’ of 2.3" x 8’ RCB
- Approx. 950’ of 1.8” x 8’ RCB
- Approx. 1290’ of 3.4” x 4’ RCB

Lumpkin Road TRC
WESTVIEW DETENTION BASIN

- Lowering Basin +/- 8 FT
- Existing 16.1 Ac-Ft
- Total 31.4 Ac-Ft
- 30’ Maintenance Berm
Additional Detention Volume = 20.7 acre-ft

- **Box Culverts**

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume</th>
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<tbody>
<tr>
<td>Existing Trunkline</td>
<td>1.55 acre-ft</td>
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<tr>
<td>Proposed Trunkline</td>
<td>6.94 acre-ft</td>
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<tr>
<td><strong>Additional Capacity</strong></td>
<td><strong>5.39 acre-ft</strong></td>
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</table>

- **Detention Basin**

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume</th>
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</thead>
<tbody>
<tr>
<td>Existing Basin</td>
<td>16.1 acre-ft</td>
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<tr>
<td>Proposed Basin</td>
<td>31.4 acre-ft</td>
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<tr>
<td><strong>Additional Capacity</strong></td>
<td><strong>15.30 acre-ft</strong></td>
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</table>
Existing Conditions – Roadway

- Asphalt pavement
- Two undivided lanes
- No shoulders
- Open ditch
- Built in mid 1970’s
- No speed limits
- No sidewalks

Lumpkin Road – Typical Section
Improved Conditions – Roadway

- Reinforced concrete paving
- 60’ right of way
- 35 MPH speed limit
- Two 12’ lanes each way
- One 14’ turning lane
- Traffic signal upgrade
- Improvements north of Westview to Northbrook
  - Commercial trucking
  - Wide turn radius
  - Pavement transition

Lumpkin Road Improvements – Typical Section
RIGHT-OF-WAY ACQUISITION – I-10 TO WESTVIEW

Alt I – Blvd Section
- Speed Limit - 35 mph
- 26,715 Sq. Ft

<table>
<thead>
<tr>
<th>Owner</th>
<th>S.F.</th>
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<tbody>
<tr>
<td>Home Depot</td>
<td>9,737</td>
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<tr>
<td>HCC</td>
<td>12,711</td>
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<tr>
<td>Gary Mason</td>
<td>132</td>
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<tr>
<td>City</td>
<td>129</td>
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<tr>
<td>Town &amp; Country Sq. Ltd.</td>
<td>4,006</td>
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<td><strong>Total</strong></td>
<td><strong>26,715</strong></td>
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RIGHT-OF-WAY ACQUISITION – I-10 TO WESTVIEW DR.

Alt II – 40’ Section
- Speed Limit - 35 mph
- 5,916 Sq. Ft

<table>
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<tbody>
<tr>
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<td>2,847</td>
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<tr>
<td>HCC</td>
<td>2,808</td>
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<tr>
<td>Gary Mason</td>
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<td><strong>Total</strong></td>
<td><strong>5,916</strong></td>
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Fiscal Year Budget Comparisons

<table>
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<tr>
<th>Description</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td>Planning and Design</td>
<td>$ 411,703</td>
<td>$ 617,798</td>
<td>$ 1,000,000</td>
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<tr>
<td>Acquisition</td>
<td>- 0 -</td>
<td>$ 500,000</td>
<td>- 0 -</td>
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<tr>
<td>Construction</td>
<td>$ 673,478</td>
<td>$ 6,000,000</td>
<td>$ 9,000,000</td>
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<tr>
<td>Total</td>
<td>$ 4,499,703</td>
<td>$ 6,617,798</td>
<td>$ 10,000,000</td>
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- FY2013 = $ 4,499,403 from IH-10 to Westview
- FY2014 = $ 6,617,798 from IH-10 to Northbrook
- FY2015 = $ 10,000,000 from IH-10 to Northbrook + community drainage improvements
## Budget Allocation Break-Down

<table>
<thead>
<tr>
<th>Description</th>
<th>Dollars</th>
<th>Percentage</th>
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<tr>
<td>Drainage</td>
<td>$ 4,500,000</td>
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<tr>
<td>Mobility</td>
<td>$ 2,000,000</td>
<td>20%</td>
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<tr>
<td>Planning and Design</td>
<td>$ 1,000,000</td>
<td>10%</td>
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<tr>
<td>Public utilities</td>
<td>$ 750,000</td>
<td>8%</td>
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<tr>
<td>General Conditions</td>
<td>$ 500,000</td>
<td>5%</td>
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<tr>
<td>Landscape</td>
<td>$ 250,000</td>
<td>3%</td>
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<tr>
<td>Contingency</td>
<td>$ 1,000,000</td>
<td>10%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$ 10,000,000</strong></td>
<td><strong>100%</strong></td>
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</tbody>
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*Note: Excludes ROW private utility relocation costs*
Governmental Reviews

• Construction documents
• Basin modification MOU
• Drainage easement 54”
• Interagency agreement
Lumpkin Roadway Timeline

- **Early finish Spring ‘15**
  - Board Approval: Tue 9/24/13 to Tue 9/24/13
  - Design: Tue 9/24/13 to Fri 4/4/14
  - ROW Acquisition: Tue 9/24/13 to Fri 4/4/14
  - Bid Phase: Mon 4/7/14 to Mon 5/19/14
  - Construction: Tue 5/20/14 to Wed 5/20/15
  - Project Completion: Wed 5/20/15 to Wed 5/20/15

- **Late Finish Fall ‘15**
  - Board Approval: Tue 9/24/13 to Tue 9/24/13
  - Design: Tue 9/24/13 to Fri 4/4/14
  - ROW Acquisition: Tue 9/24/13 to Wed 9/24/14
  - Bid Phase: Wed 8/13/14 to Wed 9/24/14
  - Construction: Thu 9/25/14 to Fri 9/25/15
  - Project Completion: Fri 9/25/15 to Fri 9/25/15
The End

Thank you Board of Directors