Public Meeting

I-35 Corridor from John Kilpatrick Turnpike North to Waterloo Road
October 26, 2017 @ 6:00pm
Edmond Community Center Auditorium
Before we get started...

...Please turn off or mute any electronic devices, and make sure you have a Handout and Comment Form available. Please hold your questions until after the presentation has ended.
Presentation Outline

- Meeting & Study Purpose
- Existing Conditions
- Frontage Road Concepts
- Study Timeline
- General Questions & Comments
Purpose of this Meeting

To inform the public and obtain input on the frontage road concepts under consideration for the I-35 corridor from Memorial Road to 2nd Street through Edmond, Oklahoma.

Purpose of this Study

To determine the safety and traffic needs of the I-35 mainline, interchanges, and frontage roads from the Kilpatrick Turnpike north to Waterloo Road; and to evaluate potential solutions.
Overall Study Location

Frontage Road Study Area

Overall Study Location

Frontage Road Study Area

Memorial Rd.
33rd St.
2nd St.
15th St.
Sooner Rd.
Air Depot Blvd.
Sorghum Mill Rd.
Coffee Creek Rd.
Covell Rd.
Danforth Rd.
Midwest Blvd.
John Kilpatrick Turnpike
Oklahoma
Overall Study Objectives

- Improve Traffic Efficiency Along Frontage Roads and at Frontage Road Intersections
- Improve Capacity of I-35 Mainline
- Increase Safety
Existing Conditions
Existing Conditions

- **I-35 Mainline**
  - Constructed in the 1950s
  - 6 Lanes from Memorial Road to 2\textsuperscript{nd} Street
  - 4 Lanes from 2\textsuperscript{nd} Street to Waterloo Road
  - I-35 Southbound is only 4 Lanes for \(\frac{1}{4}\) mile South of Memorial Road
  - AM and PM Gridlock Where Mainline Drops to 4 Lanes
    - AM Gridlock Southbound at Memorial
    - PM Gridlock Northbound at 2\textsuperscript{nd} Street
Existing Conditions

• I-35 Frontage Roads
  • Constructed in Early 1980s
  • Two-Lane, Two-Way Traffic
  • Turn Lanes at Intersections
  • (2)-13’ Driving Lanes with Curb and Gutter
  • Stop Sign Control on Ramp Exit
  • Button Hook Entry to and Exit from I-35
Existing Businesses / Future Development
Areas of Consideration

Integris
Henderson Hills
Wal-Mart/Sam’s
Mercy

E. 2nd Street
E. 15th Street
E. 33rd Street
Traffic Volume

• Vehicles Per Day, Present and Future
  • I-35: 76,000 (2016) / 125,000 (2040)
  • W. Frontage Road: 7,000 (2016) / 10,300 (2040)
  • E. Frontage Road: 4,000 (2016) / 5,150 (2040)
Collision Data
Overall Corridor
Memorial Rd. to Waterloo Rd.

2011 To 2016
• 839 Collisions
• 301 Injured/Poss. Injure
• 4 Fatality Collisions
• Higher Than Avg. Collision Rate
Collision Data
Frontage Road
Memorial Rd. to 2nd St.

2011 To 2016
- 227 Collisions
- 75 Injured/Poss. Injured
- 1 Fatality
Environmental Constraints

• Performed a Reconnaissance-Level Study to Evaluate Existing Resources in the Study Area, Such As:
  • Public Parks and Recreational Areas
  • Cemeteries
  • Airports
  • Federal and Indian Lands
  • Historic and Archaeological Sites
  • Potential Contamination Issues
  • Waters and Wetlands
Environmental Constraints

Study Area
Potential Hazardous Materials
Streams
Wetlands
US Army Corps of Engineers Property
Frontage Road Concepts
Why Is This Study Needed?
"If You Live or Work Around Here"

• How do I get home?
• How will customers find my business?
• Ambulance needs to get to hospital...
• Will I have to go out of my way to go down the street?
• Will the ramps really back up cars on the interstate if we do nothing?
Why Are Improvements to Frontage Roads Needed?

- Congestion from Increasing Traffic Volumes
- Backed Up Traffic on I-35 at Off-Ramps
- Increased Vehicle Delay - Longer Travel Times
- Inefficiency of Signals
- Safety Issues of Two-Way Frontage
- Consideration for Future Development
Frontage Road Concepts

- **Concept No. 1** – No-Build Alternative
- **Concept No. 2** – Improved Two-Way Frontage Roads
- **Concept No. 3** – Conversion to One-Way Frontage Roads
Frontage Road Concept No. 1
No Build

Maintain Existing Configuration
Frontage Road Concept No. 2
Improved 2-Way Frontage Roads

- Free Flow Right Turn
- Addition or Improvement to Signals
- Additional Turn Lanes at Intersections
Frontage Road Concept No. 3
Conversion to 1-Way

Ramp Configuration
Frontage Road Concept No. 3
Conversion to 1-Way

“Protected Turnaround” Under Kilpatrick Turnpike at Penn Ave.

“Protected Turnaround” Over US-77 at Britton Rd.

“Protected Turnaround” Under I-240 at Walker Ave.
Concept Pros / Cons
Frontage Road Concept No. 1
No Build

**Pros:**
- No Cost to Construct
- Familiar Access to Destinations
- Shorter Travel Distance to Some Destinations

**Cons:**
- Doesn’t Improve Corridor Gridlock
- Doesn’t Improve Safety or Reduce Collisions
- Dangerous Crossing Traffic Conflict Points
- Continues Current Inefficient Traffic Operation
Frontage Road Concept No. 2
Improved 2-Way Frontage Roads

**Pros:**
- Middle Construction Cost of 3 Concepts
- Familiar Access to Destinations
- Shorter Travel Distance to Some Destinations
- Minor Improvement to Intersection Signals and Lane Configurations

**Cons:**
- Only Minor Improvement to Intersection Delay
- Doesn’t Improve Ramp Congestion / Backup
- No Improvement to Stop Sign Delay at Ramp Terminal
- Dangerous Crossing Traffic Conflict Points
Frontage Road Concept No. 3
Conversion to 1-Way

Pros:
• Reduced Travel Time to Destinations
• Reduces “Stop” Time at Intersections
• Reduces Dangerous Turn Movements
• No Ramp Backup onto I-35
• Handles Greater Traffic Volumes
• Traffic Accident Management

Cons:
• Highest Construction Cost of the 3 Concepts
• Longer Travel Distances to Some Destinations
• New Travel Routes
• Blue Logo Sign Improvements
Frontage Road Concept No. 3
Conversion to 1-Way

Pros:
• **Reduced Travel Time to Destinations**
• Reduces “Stop” Time at Intersections
• Reduces Dangerous Turn Movements
• No Ramp Backup onto I-35
• Handles Greater Traffic Volumes
• Traffic Accident Management

Cons:
• Highest Construction Cost of the 3 Concepts
• Longer Travel Distances to Some Destinations
• New Travel Routes
• Blue Logo Sign Improvements
“Protected Turnarounds” Allow By-Pass of Both Intersection Signals

Frontage Road Concept No. 3
Conversion to 1-Way
Existing Travel Pattern
NB I-35 to Fox Lake Lane

Drive Times:
2 Red Lights = 4:56
2 Green Lights = 3:54
Concept 3 Travel Pattern with Turn-Arounds
NB I-35 to Fox Lake Lane

Calculated Drive Time: 2:41
Frontage Road Concept No. 3
Conversion to 1-Way

Pros:
• Reduced Travel Time to Destinations
• **Reduces “Stop” Time at Intersections**
• Reduces Dangerous Turn Movements
• No Ramp Backup onto I-35
• Handles Greater Traffic Volumes
• Traffic Accident Management

Cons:
• Highest Construction Cost of the 3 Concepts
• Longer Travel Distances to Some Destinations
• New Travel Routes
• Blue Logo Sign Improvements

Protected Turnarounds on Bridges
One-Way Frontage Roads
Improved Ramp Configuration
Elimination of Signal at Intersection Decreases “Stop” Time

Frontage Road Concept No. 3 Conversion to 1-Way
Frontage Road Concept No. 3
Conversion to 1-Way

Pros:
- Reduced Travel Time to Destinations
- Reduces “Stop” Time at Intersections
- Reduces Dangerous Turn Movements
- No Ramp Backup onto I-35
- Handles Greater Traffic Volumes
- Traffic Accident Management

Cons:
- Highest Construction Cost of the 3 Concepts
- Longer Travel Distances to Some Destinations
- New Travel Routes
- Blue Logo Sign Improvements
Frontage Road Concept No. 3
Conversion to 1-Way

Wrong Turn onto Off-Ramp

Head-On Cross Traffic at Entrance Ramp
Frontage Road Concept No. 3
Conversion to 1-Way

Pros:
- Reduced Travel Time to Destinations
- Reduces "Stop" Time at Intersections
- Reduces Dangerous Turn Movements
- **No Ramp Backup onto I-35**
- Handles Greater Traffic Volumes
- Traffic Accident Management

Cons:
- Highest Construction Cost of the 3 Concepts
- Longer Travel Distances to Some Destinations
- New Travel Routes
- Blue Logo Sign Improvements

Protected Turnarounds on Bridges

One-Way Frontage Roads

Improved Ramp Configuration
Frontage Road Concept No. 3
Conversion to 1-Way

Existing Ramp Backup onto I-35

One-Way Frontage Road = No I-35 Backup
Frontage Road Concept No. 3
Conversion to 1-Way

Drone View of Existing Ramp Backup onto I-35 at E. 15th Street
Frontage Road Concept No. 3
Conversion to 1-Way

Pros:
- Reduced Travel Time to Destinations
- Reduces “Stop” Time at Intersections
- Reduces Dangerous Turn Movements
- No Ramp Backup onto I-35
- **Handles Greater Traffic Volumes**
- Traffic Accident Management

Cons:
- Highest Construction Cost of the 3 Concepts
- Longer Travel Distances to Some Destinations
- New Travel Routes
- Blue Logo Sign Improvements

Protected Turnarounds on Bridges

One-Way Frontage Roads

Improved Ramp Configuration
Frontage Road Concept No. 3
Conversion to 1-Way

Pros:
- Reduced Travel Time to Destinations
- Reduces “Stop” Time at Intersections
- Reduces Dangerous Turn Movements
- No Ramp Backup onto I-35
- Handles Greater Traffic Volumes
- Traffic Accident Management

Cons:
- Highest Construction Cost of the 3 Concepts
- Longer Travel Distances to Some Destinations
- New Travel Routes
- Blue Logo Sign Improvements
Blue Logo Sign Improvements

Frontage Road Concept No. 3
Conversion to 1-Way
Frontage Road Concept No. 3
Conversion to 1-Way

Research by National Cooperative Highway Research Program (NCHRP) “Safety and Economic Impacts of Converting Two-Way Frontage Roads to One-Way Operation” – Texas Transportation Institute, 2011

Pre- and Post-Conversion Study of Impact to 8 Texas Communities
- Summary of Prior Research
- Collision Frequency
- Economic Impacts (Gross Sales, Land Value, Employment)

Conclusions of Comparison
- Characteristics of One-Way Operation Generally Superior
- Observation of Crash Rate Reduction
- Economic
  - Three Cities Showed Increase in Gross Sales (2% to 30% Inc.)
  - No Negative Impacts to Land Values
  - Five Cities Experienced Increase in Employment (2% to 198% Inc.)
Frontage Road Concepts
Study Timeline

Frontage Road Engineering Report – Late 2017
General Questions & Comments

Do you have any general questions or comments about the information presented?
Submit Your Comments

• Leave your written comments with us tonight.
• Download and submit a comment form at:
  www.odot.org/publicmeetings
• Submit your written comments by mail to:
  Oklahoma Department of Transportation
  Environmental Programs Division
  200 NE 21st Street
  Oklahoma City, OK 73105
• Fax your written comments to:
  (405) 522-5193
• Email your comments to:
  environment@odot.org

Please submit your comments by November 9, 2017
Questions Received at the Meeting:

- What is the timeline for construction? How long will it take to build once it starts? What will the impacts be on businesses during construction?
- Any timeline for when it will start?
- Are you looking at bridges at the ½ mile marks? Like at Quail Springs mall?
- At 2nd Street there are traffic signals very close together.
- What about the Waterloo interchange project?