State Highway 10A Improvements
(from the SH-10 junction extending 6.18 miles east to the SH-100 junction, Muskogee and Sequoyah Counties, Oklahoma)

Open House

January 31, 2017
• Explain purpose and need for SH-10A improvements

• Introduce 7 alternatives considered

• Present preferred alternative

• Receive public feedback/input on the project
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Existing Facility

- Two-lane facility
- Narrow lanes
- No shoulders
- Annual Average Daily Traffic
  - Current (2016) = 1,200 vehicles per day
  - Projected (2036) = 1,700 vehicles per day
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Purpose and Need

- Improve safety
  - 68 collisions recorded from 2005 through 2016
  - Approximately 3 times the statewide average number of collisions
  - Lacks adequate shoulders and clear recovery area
  - Limited sight distance due to substandard horizontal & vertical curves
- Improve facility to meet current design standards
  - Correct roadway deficiencies, enhance safety, and efficiently accommodate traffic
- Accommodate traffic bound for Lake Tenkiller
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Project Extents

SH-10A from the junction of SH-10, extending east 6.18 miles to the SH-100 junction
Reconnaissance Performed to Identify Constraints

- Wetlands and Waters
- Threatened & Endangered Species Critical Habitat
- Archeological Sites and Historic Properties
- Aboveground or Underground Storage Tanks
- Oil/Gas Wells
- Residences
- Commercial Facilities
- Utilities
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Underground and Aboveground Storage Tanks
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Utilities

LEGEND:
- Blue: Water
- Red: Electric
- Orange: Sub-station
- Yellow: AT&T (Overhead)
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Unique Properties

Note: Cultural Resource properties not shown.
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Composite Constraints Map

LEGEND:
- Residence
- Commercial Property
- Church
- Former School (6f)
- Tribal Property
- Water
- Electric
- Sub-station
- AT&T (Overhead)
- US Government Property
- United Methodist Boys' Ranch
- Cemetery
- Wetlands and Waters
- Underground and Aboveground Storage Tanks
Proposed Improvements

- Two 12-foot lanes
- 8-foot paved shoulders
- 1:4 foreslopes
- 8-foot wide ditches
- 1:3 backslopes (maximum)
- Establish adequate clear recovery area
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Alternatives

**LEGEND:**
- Existing SH-10A (Alternative 1)
- Alternative 1A
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5
- Alternative 5A
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Alternative 1: On Existing Alignment

- Goes through Paradise Hill
- Minimal widening and overlay
- Improves superelevation where practical (superelevation = banking on curves)
- Improvements to vertical alignment curves (sag) where practical
- Does not meet current design standards
- Does not address/modify substandard horizontal nor majority of substandard vertical curves
- Slight impacts to Tribal land
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Alternative 1A: On or Near Existing Alignment

- Goes through Paradise Hill
- Improves superelevation
- Does address substandard horizontal & vertical curves
- Slight impacts to Tribal land
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Alternative 2: West Offset

- Goes through Paradise Hill
- Offset alignment replaces 8 substandard horizontal curves & 15 substandard vertical curves
- No impacts to Tribal land
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Alternative 3: East Offset

- Goes through Paradise Hill
- Offset alignment replaces 7 substandard horizontal curves & 12 substandard vertical curves
- Slight impacts to Tribal land
- Unfavorable terrain
- High construction cost
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Alternative 4: South Offset

- Offset alignment replaces 25 substandard horizontal curves & 43 substandard vertical curves
- Does not go through Paradise Hill
- No impacts to Tribal land
- Unfavorable terrain
- High construction cost
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Alternative 5: Southernmost Offset

- Offset alignment replaces 22 substandard horizontal curves & 40 substandard vertical curves
- Does not go through Paradise Hill
- Slight impacts to Tribal land
- Unfavorable terrain
- High construction cost
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Alternative 5A: Southernmost Offset, Through Connection

- Does not go through Paradise Hill
- Meets new construction criteria
- Offset alignment replaces 25 substandard horizontal curves & 45 substandard vertical curves
- Bisects United Methodist Boys’ Ranch
- Slight impacts to Tribal land
- Unfavorable terrain
- High construction cost
## State Highway 10A Improvements
### Alternatives Comparison

**Purpose & Need:** Correct Deficiencies, Improve Safety, Accommodate Traffic

<table>
<thead>
<tr>
<th>Project Component*</th>
<th>On or Near Existing Alignment</th>
<th>Offset Alignment</th>
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<tbody>
<tr>
<td>Geometric Design</td>
<td>Red</td>
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<tr>
<td>Shoulder Width</td>
<td>2' Paved</td>
<td>8' Paved</td>
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<tr>
<td>Design Exceptions Required</td>
<td>Numerous</td>
<td>8</td>
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<tr>
<td>Environmental Impacts</td>
<td>None Known</td>
<td>None Known</td>
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<td>Cultural Resources</td>
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<td>None Known</td>
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<td>Potential AST/USt Impacts</td>
<td>2 Locations</td>
<td>2 Locations</td>
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<tr>
<td>Wetlands</td>
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<td>None</td>
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<tr>
<td>Streams</td>
<td>Approx. 400 feet</td>
<td>Approx. 500 feet</td>
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<td>Right-of-Way Impacts</td>
<td>Approx. $1.8</td>
<td>Approx. $1.7</td>
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<tr>
<td>Utility Costs (million)</td>
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<td>Residential Relocations</td>
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<tr>
<td>Commercial Impacts</td>
<td>Minimal; No Structures</td>
<td>Minimal; No Structures</td>
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<td>US Government</td>
<td>Approx. 2 Acre</td>
<td>Approx. 3 Acres</td>
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<tr>
<td>Tribal Property</td>
<td>0.13 Acre</td>
<td>0.10 Acre</td>
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<tr>
<td>United Methodist Boys’ Ranch</td>
<td>Approx. 7 Acres</td>
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<td>Cost</td>
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<td>Total Cost (million)</td>
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<td>Highway Access to Paradise Hill</td>
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<tr>
<td>Through Traffic Mobility</td>
<td>Red</td>
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<tr>
<td>Constructability</td>
<td>Yellow</td>
<td>Yellow</td>
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</tbody>
</table>

*All impact estimates are preliminary only and subject to change upon completion of survey and further design.*
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*Alternative Analysis*

- Eliminate Alternative 1: only minimal improvements
- Eliminate Alternatives 4, 5, and 5A:
  - Alignments offset south of Paradise Hill
  - Do not provide highway access to Paradise Hill destinations
- Alternatives 1A, 2, and 3:
  - Eliminate Alternative 3: most cultural resource impacts and most expensive
- Alternatives 1A and 2:
  - Essentially same alignment, but Alternative 2 includes a short offset segment
  - Alternative 2 has no known tribal land impacts, is more constructible, and better meets current design criteria than Alternative 1A
Alternative 2: West Offset

- Disadvantage:
  - Some residential impacts
- Advantages:
  - Highway access to Paradise Hill
  - Good constructability and complies with design criteria
  - No known impacts to cultural resources
  - Comparable wetlands/waters impacts to Alternatives 3, 4, 5, & 5A
  - No Tribal land needed
  - Lower total project cost than Alternatives 3, 4, 5, & 5A
  - Fewer utility conflicts than Alternatives 1, 1A, & 3
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Preferred Alternative 2: West Offset

- Goes through Paradise Hill
- Offset alignment meets new construction criteria
- Offset segment replaces 8 substandard horizontal curves & 15 substandard vertical curves
- No impacts to Tribal land
• Stakeholder Meeting held October 18, 2016
  • Stakeholders included Agencies, Elected Officials, and Businesses
  • Received 5 written comments and/or concerns
  • General support of the Preferred Alternative

• Tonight’s Open House
  • Comments due by February 14, 2017
  • Review all comments

• Complete design report
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What Happens Next?

- Complete design report
- Complete Environmental Studies, Survey, and Design Plans
- Public Outreach after Environmental Studies Complete
- Begin Right-of-Way Acquisition (Year 2019)
- Begin Utilities Relocation (Year 2019)
- Begin Construction (Year 2021)
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Submit Your Comments

• Leave your written comments with us tonight.

• By mail:
  Oklahoma Department of Transportation
  Environmental Programs Division
  200 N. E. 21st Street
  Oklahoma City, OK  73105

• By fax:
  (405) 522-5193

• By website:
  www.odot.org/publicmeetings

• By Email:
  odot-environment@odot.org

• Please submit your comments by February 14, 2017.
Thank you!

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Preferred Alternative, New SH-10A Alignment

Existing SH-10A Alignment