
ODOT
OKLAHOMA DEPARTMENT OF TRANSPORTATION
WELCOME
Public Meeting For
SH-51 Over East Beaver Creek and
Improvements to the SH-51/US-77 Junction
In Logan County
July 29, 2014

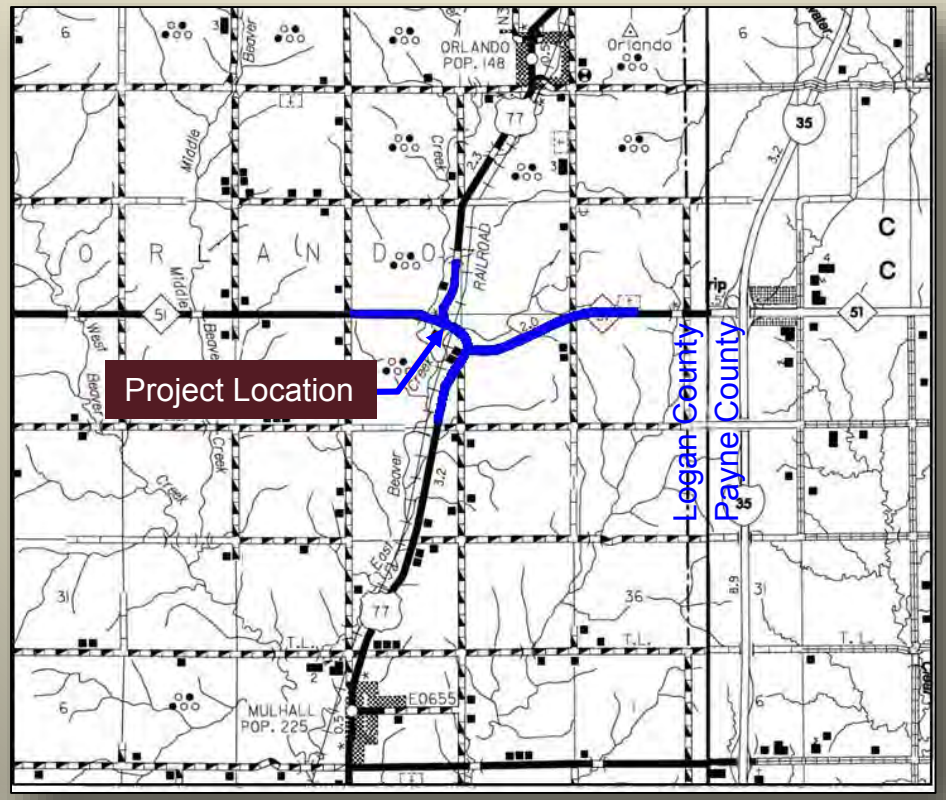
TEAM INTRODUCTIONS

- **ODOT**
  - Bryan Taylor - Division 4 Engineer
  - Joe Echelle - Division 4 Construction Engineer
  - Siv Sundaram - Environmental Programs
  - Tim Vermillion - Division 4 NEPA Project Manager
  - Daniel Nguyen - Project Management
  - Eduardo Elder - Roadway
  - Bob Rusch - Bridge
  - Jay Herbert & Joel Law - Right-of-Way & Utilities
  - Frank Roesler III - Public Involvement Officer

- **GARVER**
  - Jenny Sallee - Project Manager/Roadway Lead
  - Matthew Youngblood - Bridge Lead
  - Caleb Mudford - Roadway Designer
  - Kirsten McCullough - Environmental Lead
  - Lacee Stanley - Environmental Specialist

PURPOSE OF THIS MEETING

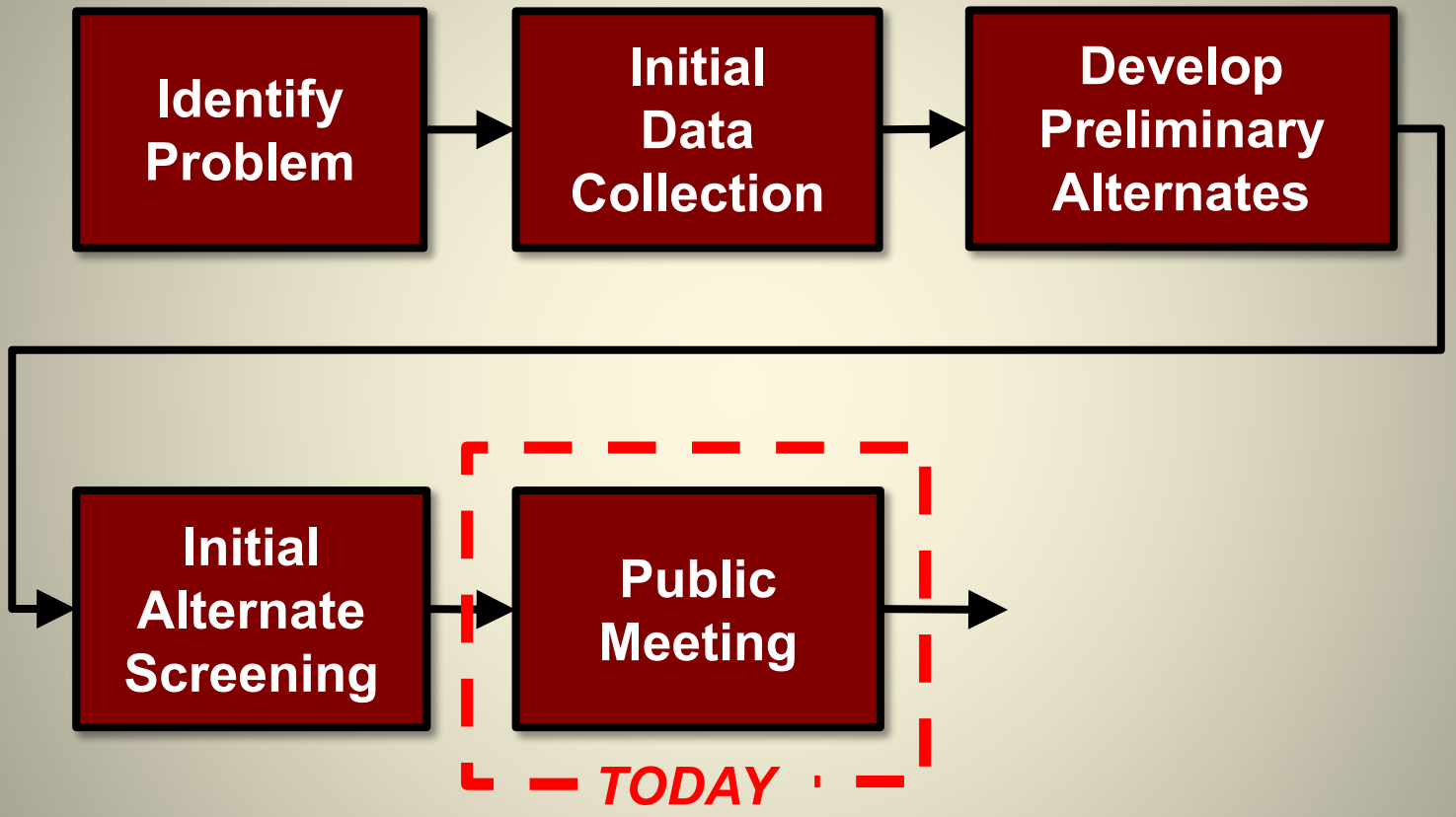
…is to Inform the Public and Solicit Comments About the Proposed Improvements to SH-51 Over East Beaver Creek and to the SH-51/US-77 Junction in Logan County



PURPOSE OF THE PROJECT

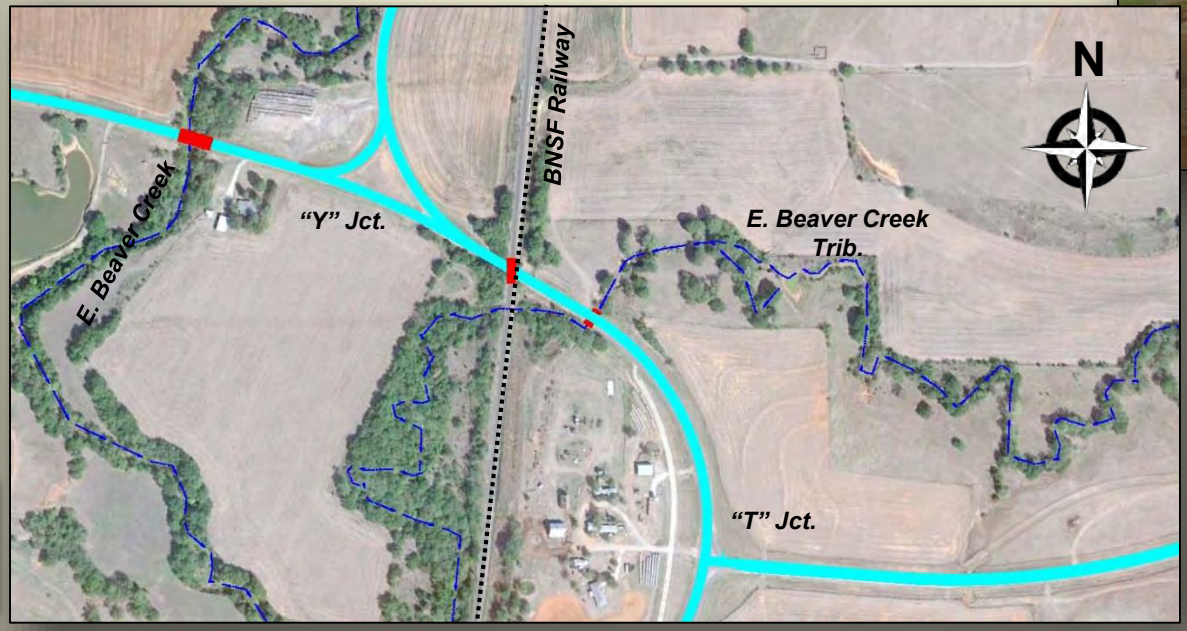
…is to Correct the Structurally Deficient Bridge on SH-51 Over East Beaver Creek and to Improve the Safety of the Roadway and the SH-51/US-77 Junction

PROJECT DEVELOPMENT PROCESS



PROJECT AREA INFORMATION

- **General Data**
  - 2-Lane Roadways With 2-ft Shoulders
  - Speeds – Posted 65 mph, Advisory 55 mph
  - 2 Junctions
    - W. SH-51/N. US-77 (“Y” Junction)
    - E. SH-51/S. US-77 (“T” Junction)
  - 3 Bridge Structures (E. Beaver Creek, Trib. to E. Beaver Creek, BNSF Railway)
  - Projected Traffic (2038): 2,400 Vehicles/Day (25% Trucks)



Identify Problem

PROJECT AREA INFORMATION *cont'd....*

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  - 3 Bridge Structures (E. Beaver Creek, Trib. to E. Beaver Creek, BNSF Railway)
  - Projected Traffic (2038): 2,400 Vehicles/Day (13% Trucks)
- **Collision Data**
  - Total: 14 Documented Accidents (2008-2013)
    - 10 Personal Property Damage
    - 4 Injury
  - Slightly Higher Than the State Average for Collisions

Identify Problem → Initial Data Collection → Preliminary Alternates → Alternate Screening

EXISTING CONDITIONS WARRANT IMPROVEMENT

- **Existing Bridge Conditions**
  - Age of Structures vs. Design Life
  - East Beaver Creek
    - Structurally Deficient
  - BNSF Railway over SH-51
    - Substandard Clearance
  - East Beaver Creek Tributary

Identify Problem → Initial Data Collection → Preliminary Alternates → Alternate Screening

EXISTING CONDITIONS WARRANT IMPROVEMENT *cont'd....*

- **Roadway Deficiencies**
  - Narrow Shoulders
  - Horizontal Curves (Curvature and Superelevation)
  - Limited Sight Distance
  - Vertical Curve Under Railroad
- **Drainage Concerns**
  - Sump Condition Under Railroad
  - E. Beaver Creek Oxbow

Identify Problem | Initial Data Collection | Preliminary Alternates | Alternate Screening

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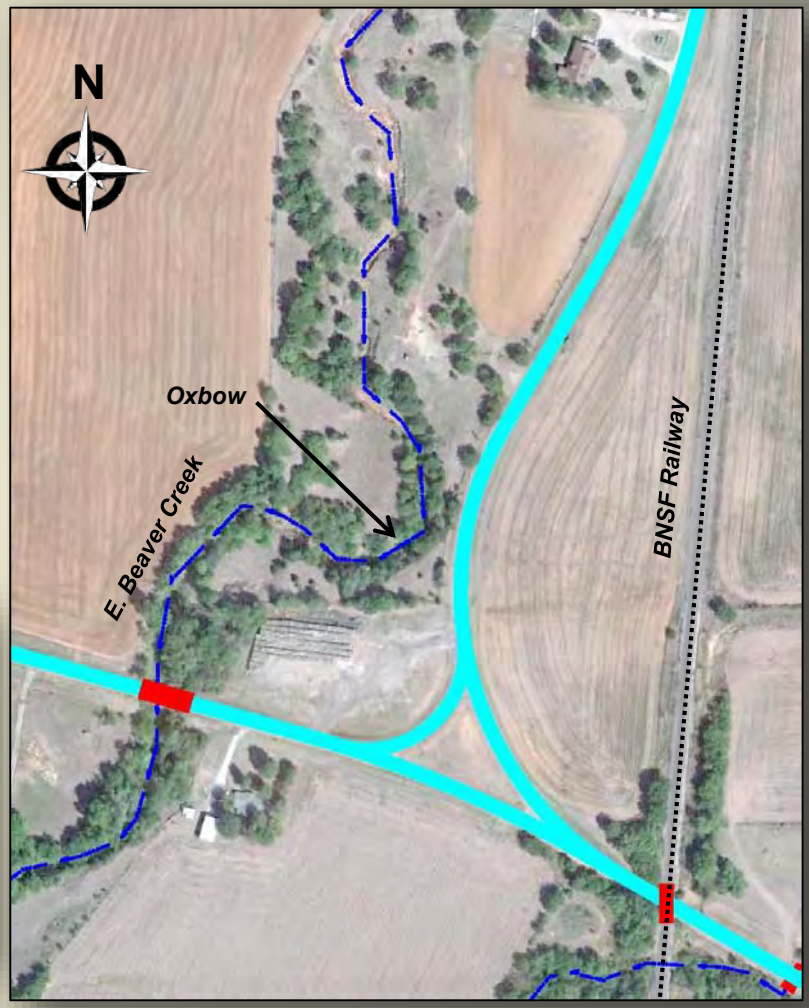

Identify Problem → Initial Data Collection → Preliminary Alternates → Alternate Screening

GATHER PROJECT INFORMATION

- **Identified Project Constraints**
  - Junctions
  - Railroad
  - Creeks
    - Crossings
    - Creek Oxbow
  - Residences/Businesses
    - Driveways
    - Local Access
  - Utilities
  - Environmental Considerations

Identify Problem → **Initial Data Collection** → Preliminary Alternates → Alternate Screening

GATHER PROJECT INFORMATION *cont'd....*

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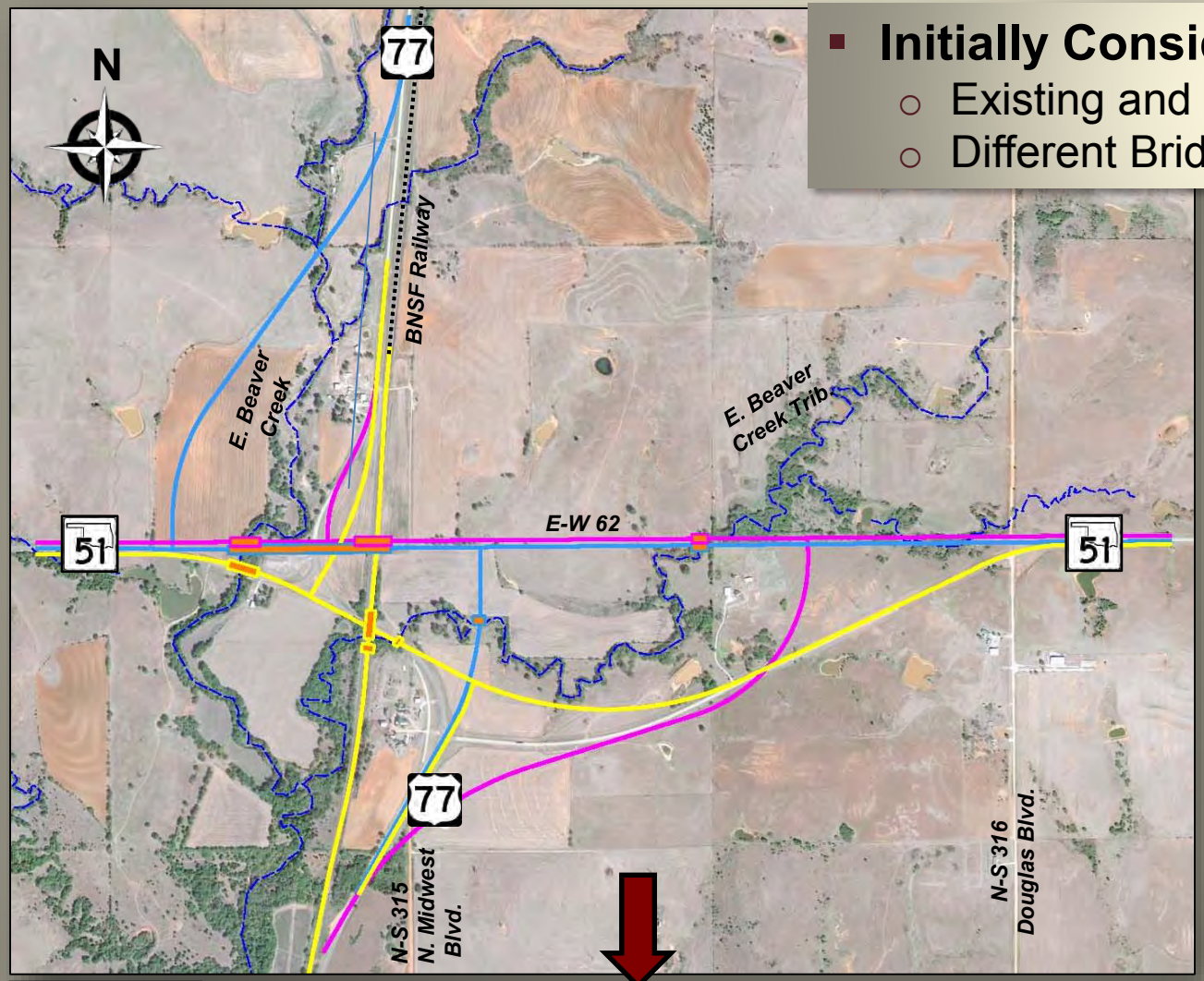
DEVELOPMENT
OF
ALTERNATES

DEVELOPMENT OF ALTERNATES

- **Proposed Design Criteria**
  - Roadway Typical Sections
    - Two 12-ft Lanes
    - 8-ft Shoulders
  - Define Through Movement as SH-51
  - Design Speed – 65 mph
  - Left Turn Lanes at Junctions
  - Maximum Superelevation of 6%
  - Minimum Bridge Clearance for Traffic
  - Drainage Structure Design 50-Year Storm

Identify Problem → Initial Data Collection → **Preliminary Alternates** → Alternate Screening

DEVELOPMENT OF ALTERNATES *cont'd....*



- **Initially Considered Three Alternates**
  - Existing and New Alignments
  - Different Bridge Configurations

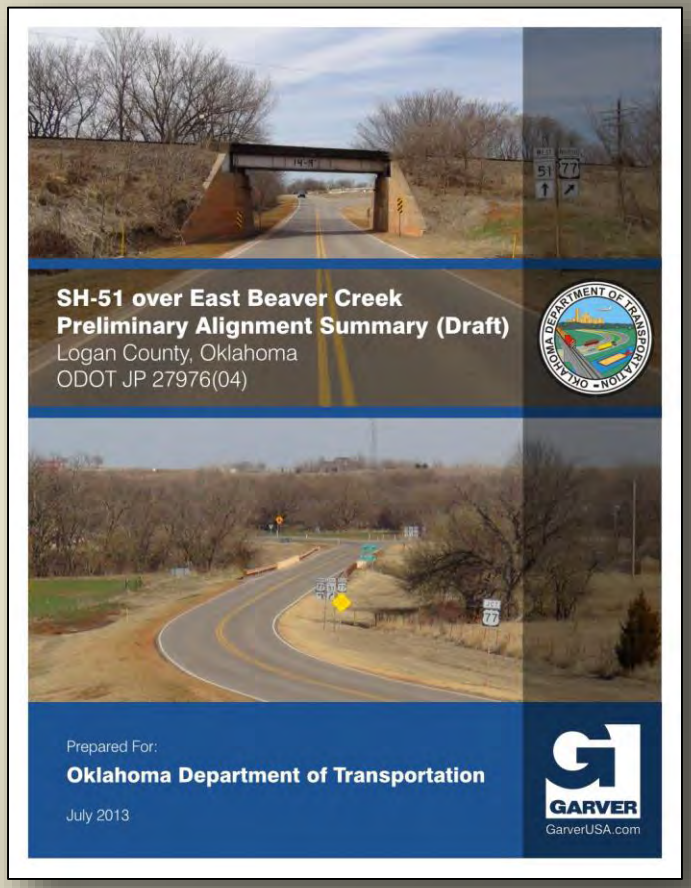
LEGEND

- Alternate 1
- Alternate 2
- Alternate 3

Identify Problem → Initial Data Collection → **Preliminary Alternates** → Alternate Screening

DEVELOPMENT OF ALTERNATES *cont'd....*

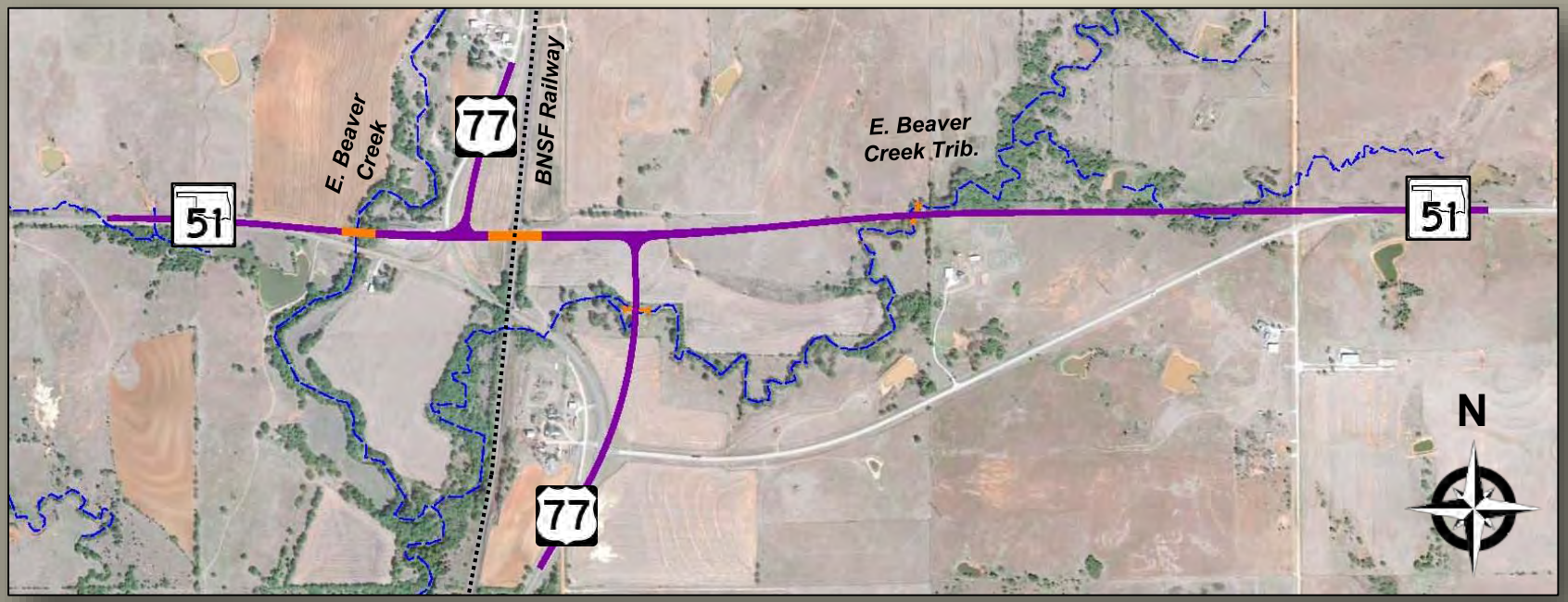
- **Evaluation Criteria**
  - Impacts to Private Property
  - Impacts to Railway
  - Impacts to Streams (Channelization)
  - Impacts to Other Environmental Resources
  - Constructability and Maintenance of Traffic During Construction
  - Cost – Construction, Right-of-Way, Utilities
- **Alternate 2 – Rose to the Top**



Identify Problem → Initial Data Collection → Preliminary Alternates → **Alternate Screening**

DEVELOPMENT OF ALTERNATES *cont'd....*

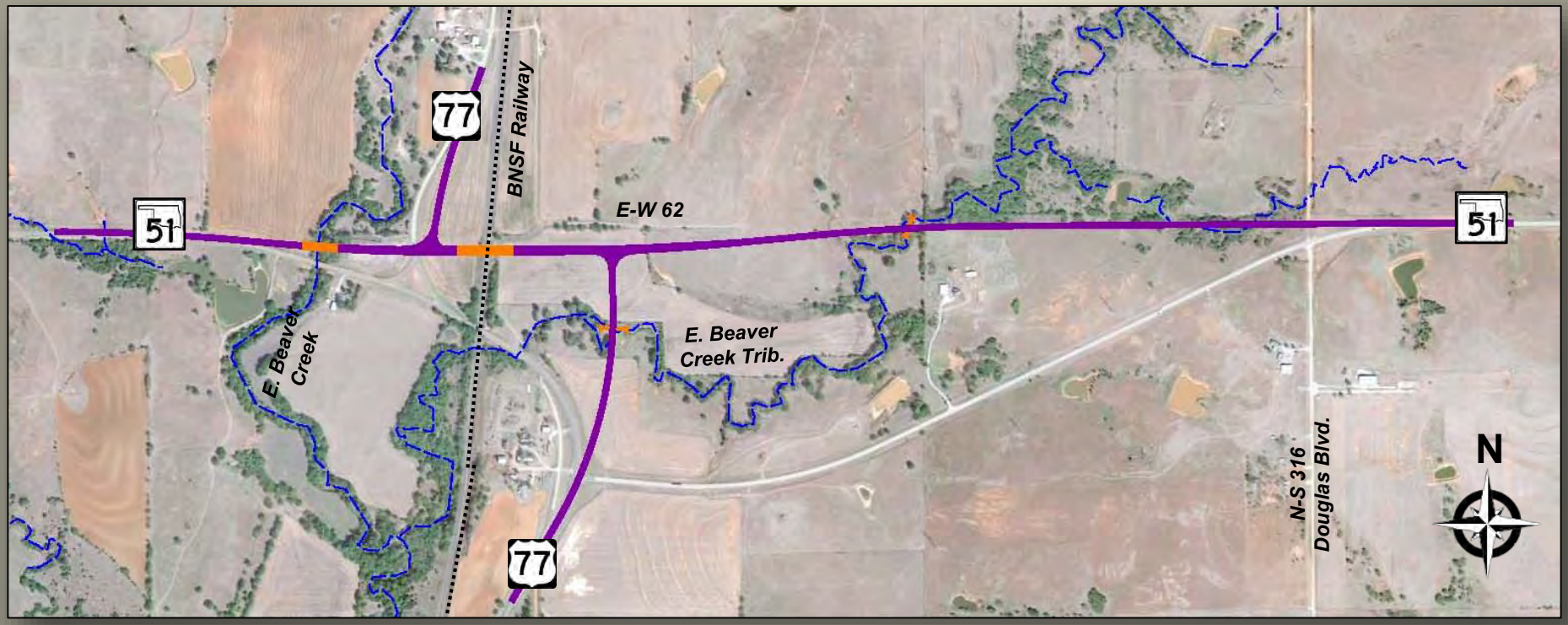
- **Developed Alternate 2R**



Identify Problem → Initial Data Collection → Preliminary Alternates → **Alternate Screening**

ALTERNATE 2R

- **Overview**
  - 65 mph Design Speed
  - Realigns SH-51 Close to Section Line
  - New Intersections With US-77 With Turn Lanes
  - Keeps US-77 N. Close to Existing Alignment
  - 4 Bridges (E. Beaver Creek, BNSF Railway, E. Beaver Creek Trib.)
  - Eliminates Need for Railway Underpass – Bridge over Railroad



ALTERNATE 2R *cont'd....*

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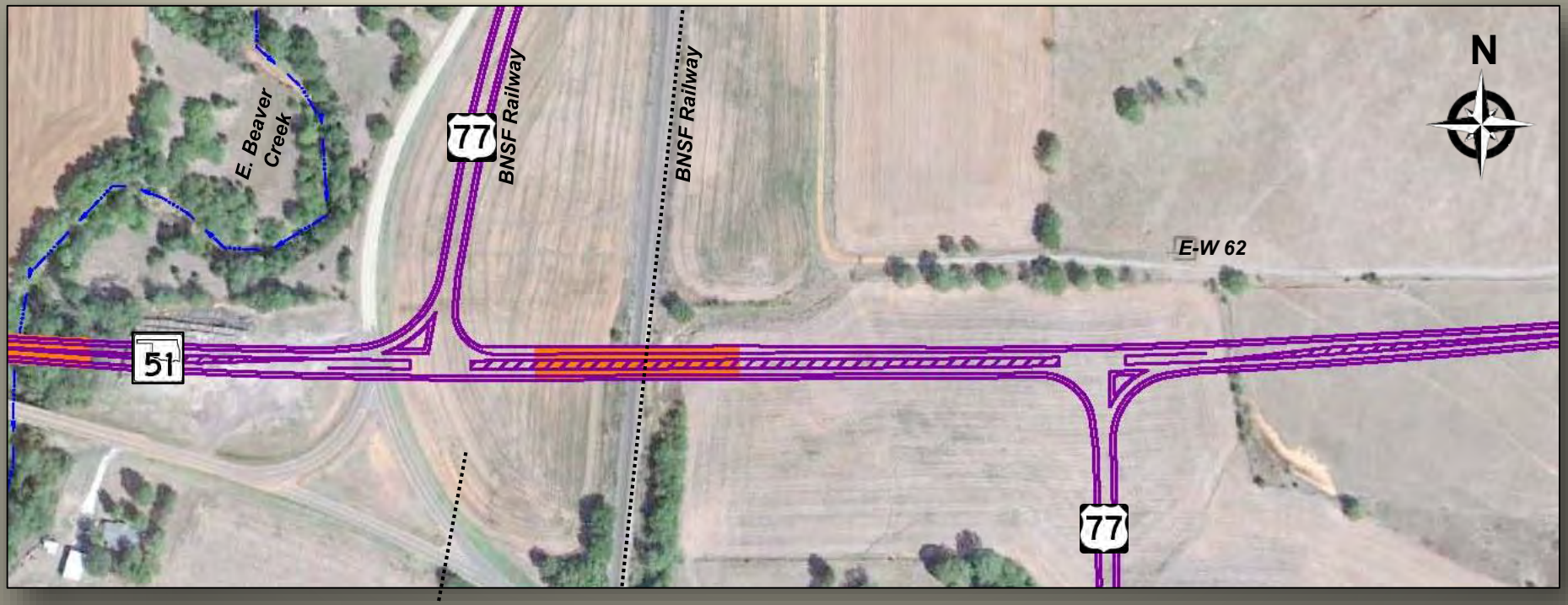
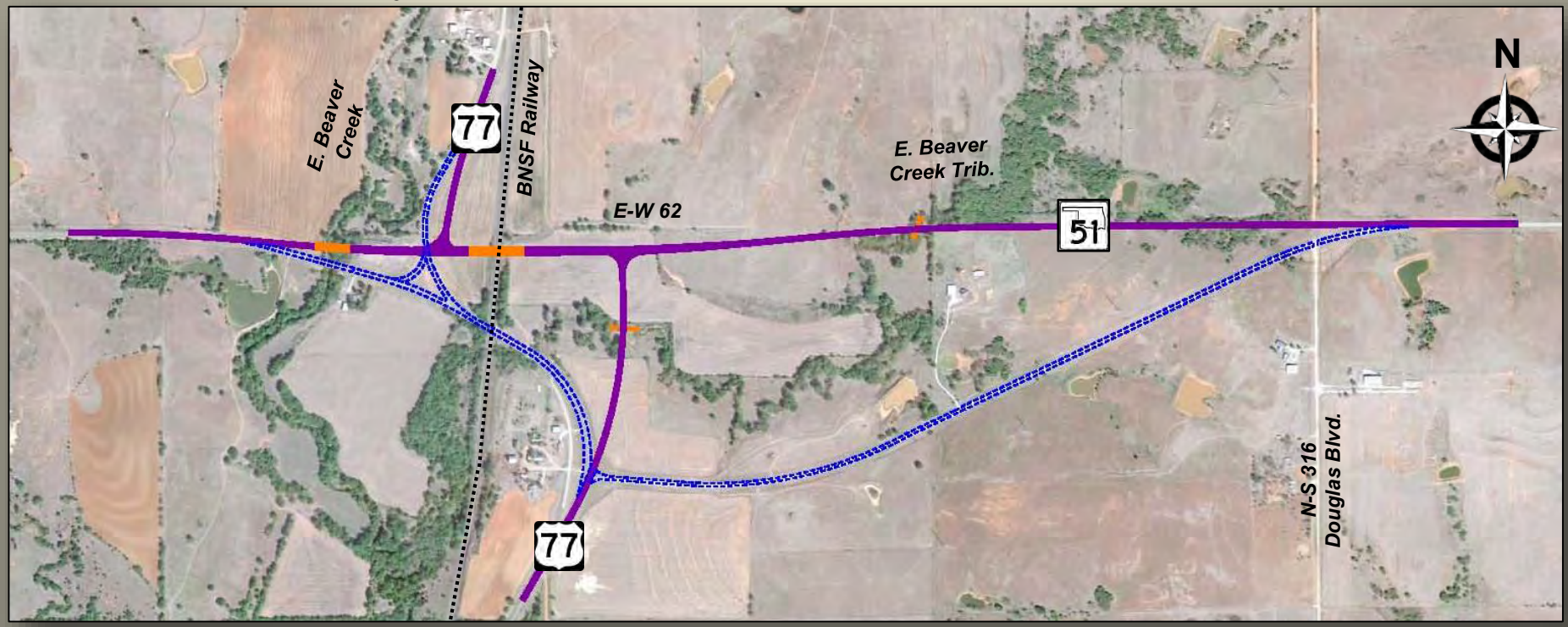


ALTERNATE 2R *cont'd....*

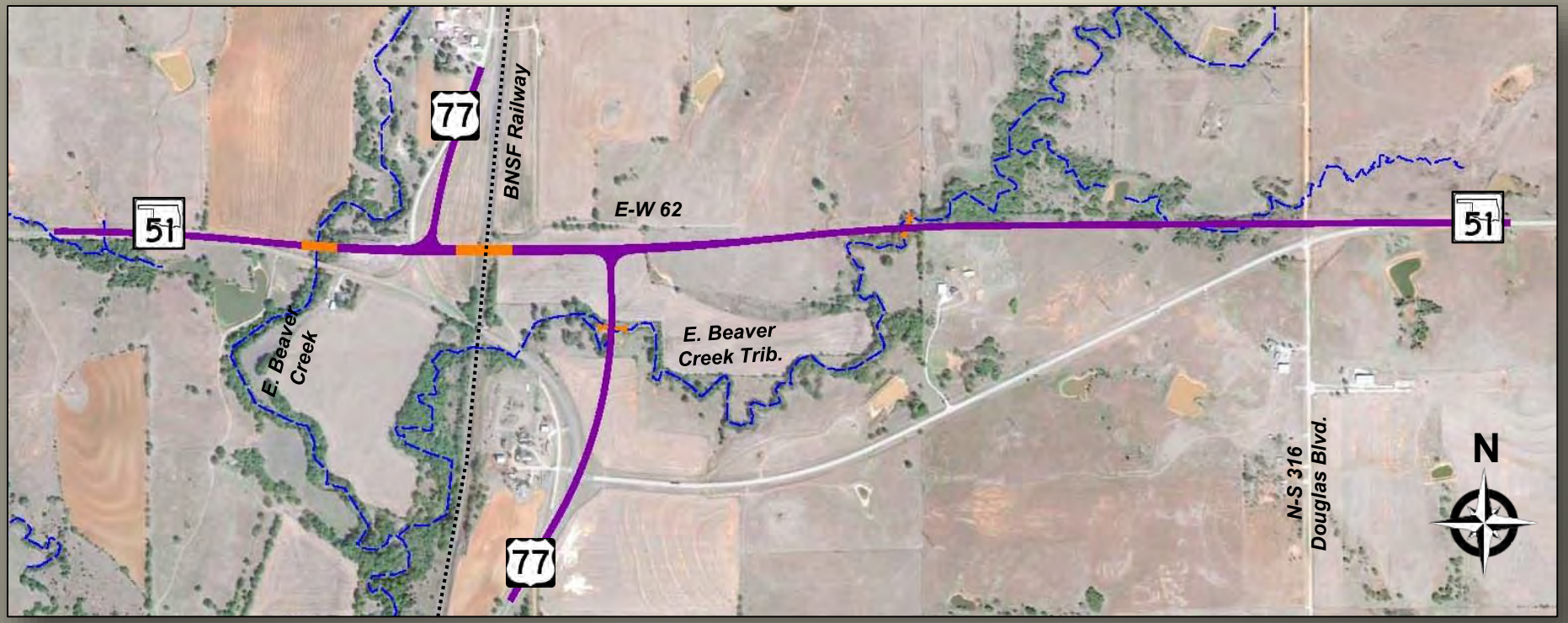
- **Key Features**
  - Minor Changes to Access – To Be Determined
  - Leaves a Portion of Existing SH-51 in Place
  - Minimizes Impacts to E. Beaver Creek
  - Construction Cost: Estimated at $21.5 Million
  - Estimated Right-of-Way Cost of $350,000
  - No Relocations of Homes or Businesses
  - Requires Utility Relocations Estimated at $2.1 Million




BRIDGES

PROPOSED BRIDGE STRUCTURES

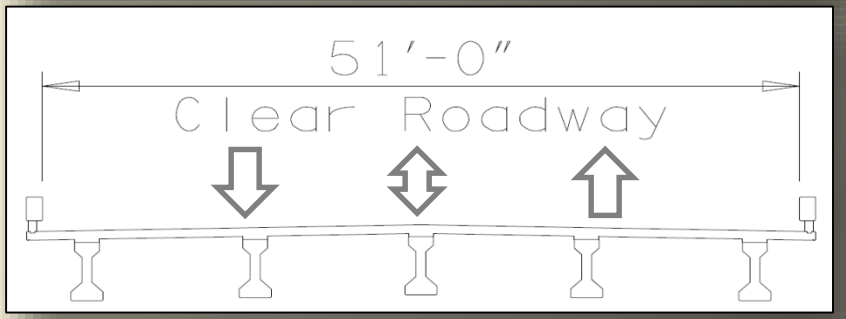
- **Proposed Bridge Structures**
  - SH-51 Over East Beaver Creek
  - SH-51 Over BNSF Railroad
  - SH-51 Over East Beaver Creek Tributary
  - US-77 Over East Beaver Creek Tributary



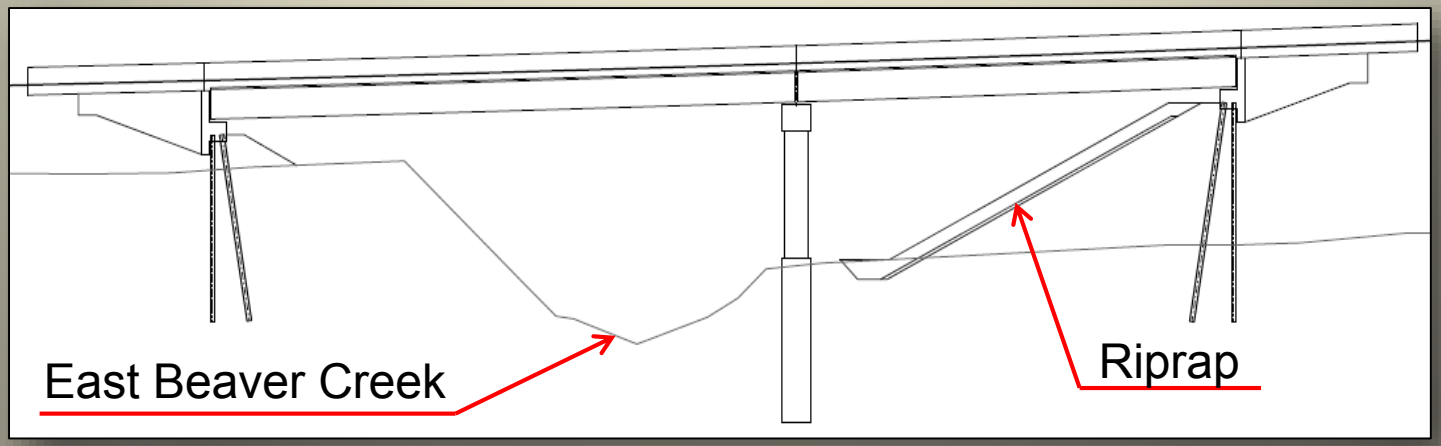
Proposed Structures Within Limits

PROPOSED
EAST BEAVER CREEK BRIDGE

- **Proposed Bridge Structures**
  - Bridge System Type (East Beaver)
    - 2-Span Bridge over Channel
    - Concrete Girders of Varying Length
    - Maintain Existing Low Beam Elevation
  - Bridge Design Cross Section
    - Minimum of Two 12-ft Lanes of Traffic With 8-ft Shoulders
    - Wider Bridge for Added Turning Lanes



Bridge Design Cross Section



Bridge Design Elevation View

PROPOSED EAST BEAVER CREEK BRIDGE *cont'd....*

- **Proposed Bridge Structures**
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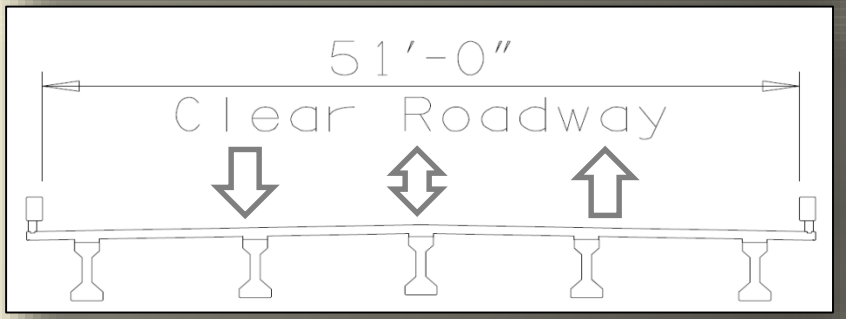
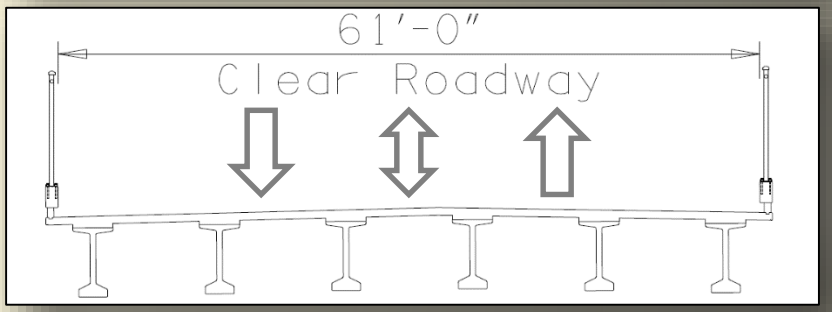


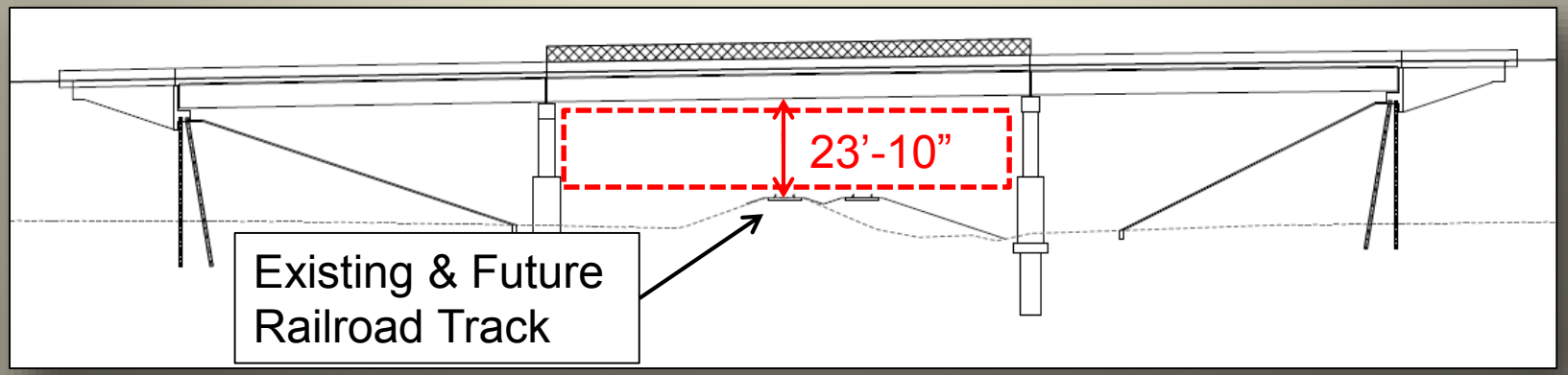
Bridge Design Cross Section

PROPOSED BNSF RAILROAD BRIDGE

- **Proposed Bridge Structures**
  - Bridge System Type (BNSF RR)
    - 3-Span Bridge over BNSF Railroad
    - Concrete Girders with Varying Length and Throw Fences
    - Intermediate Piers Designed to be Crashworthy & Slope Paving
    - 23-ft - 10-inch Vertical Clearance
    - 100-ft Clearance Window
  - Bridge Design Cross Section
    - Wider Bridge for Added Turning Lanes



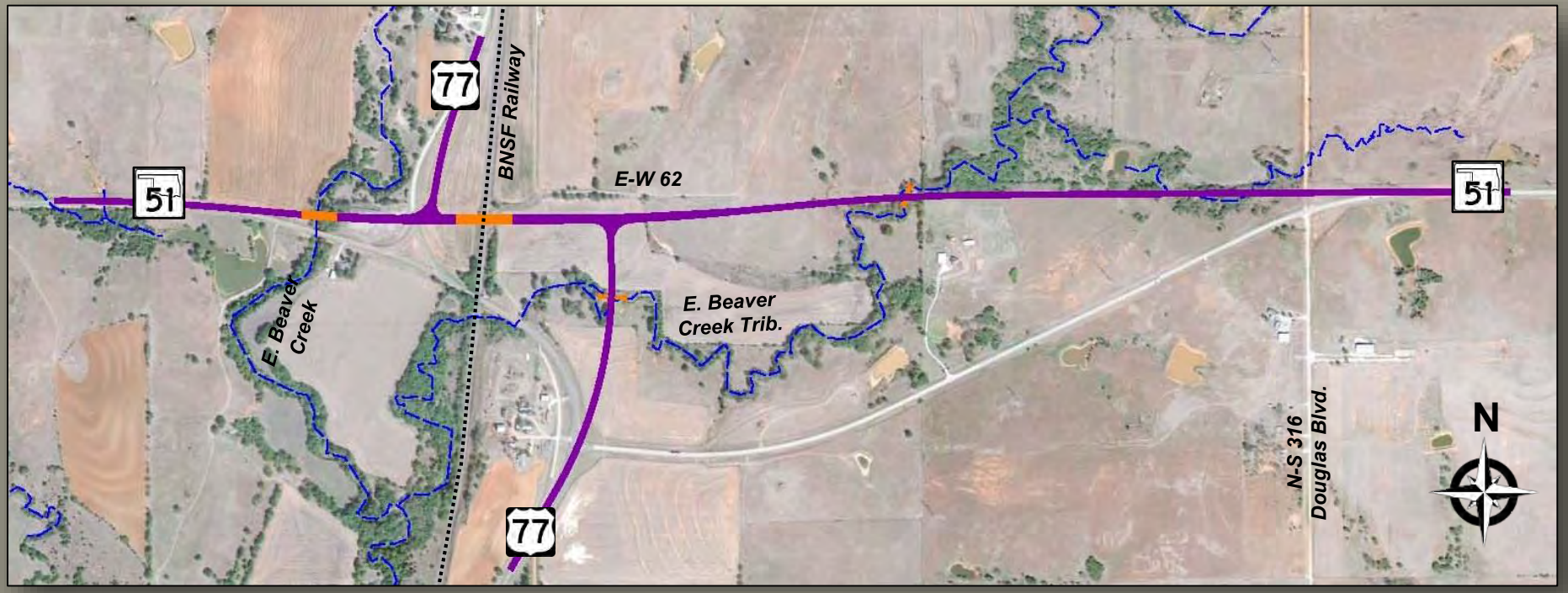
Bridge Design Cross Section



Bridge Design Elevation View

PROPOSED
E. BEAVER TRIBUTARY RCB

- **Proposed Bridge Structures**
  - Bridge System Type
    - Reinforced Concrete Box
    - Multi Cell Opening Boxes
    - Appropriately Sized in Final Design

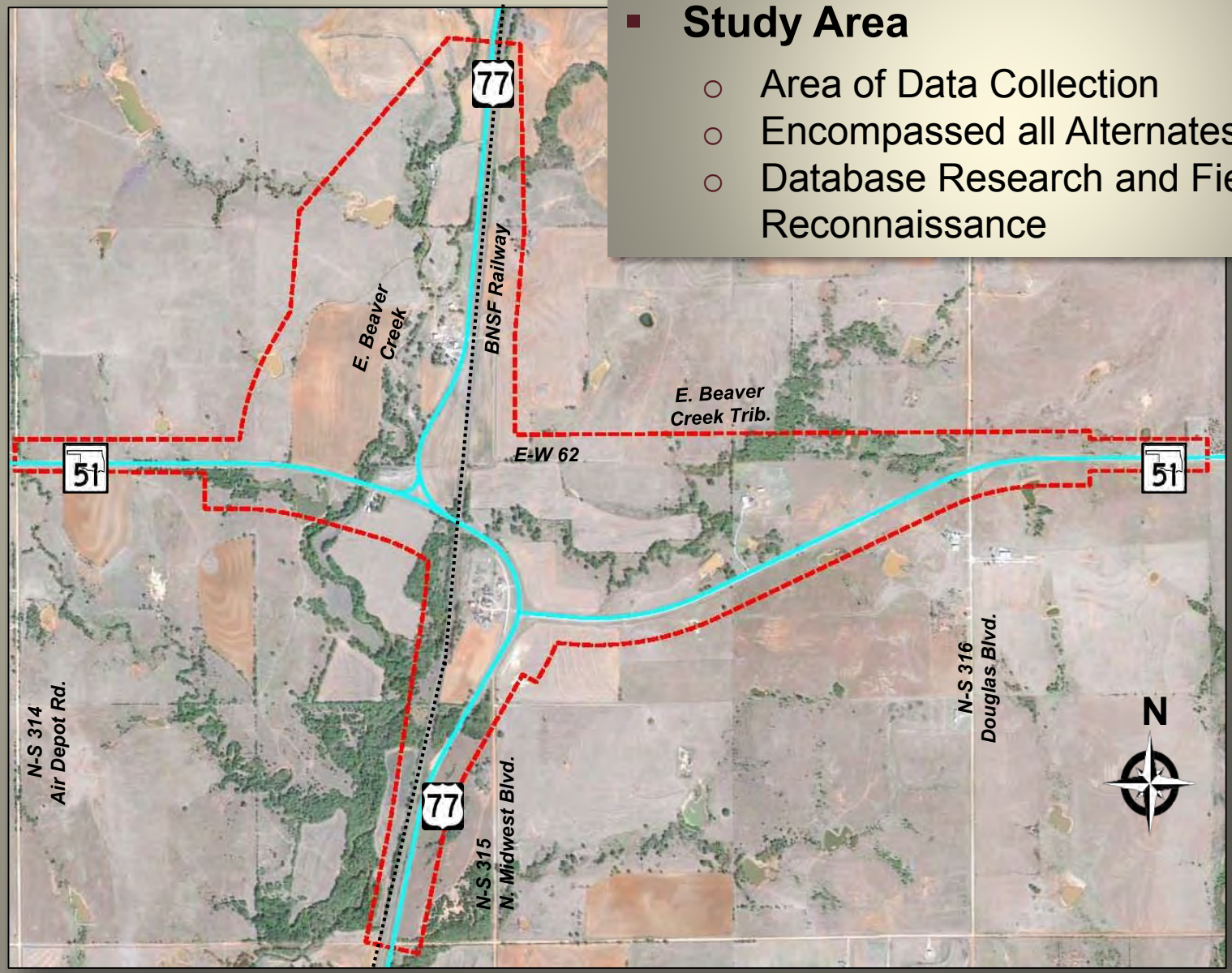


Proposed Structures Within Limits


ENVIRONMENTAL

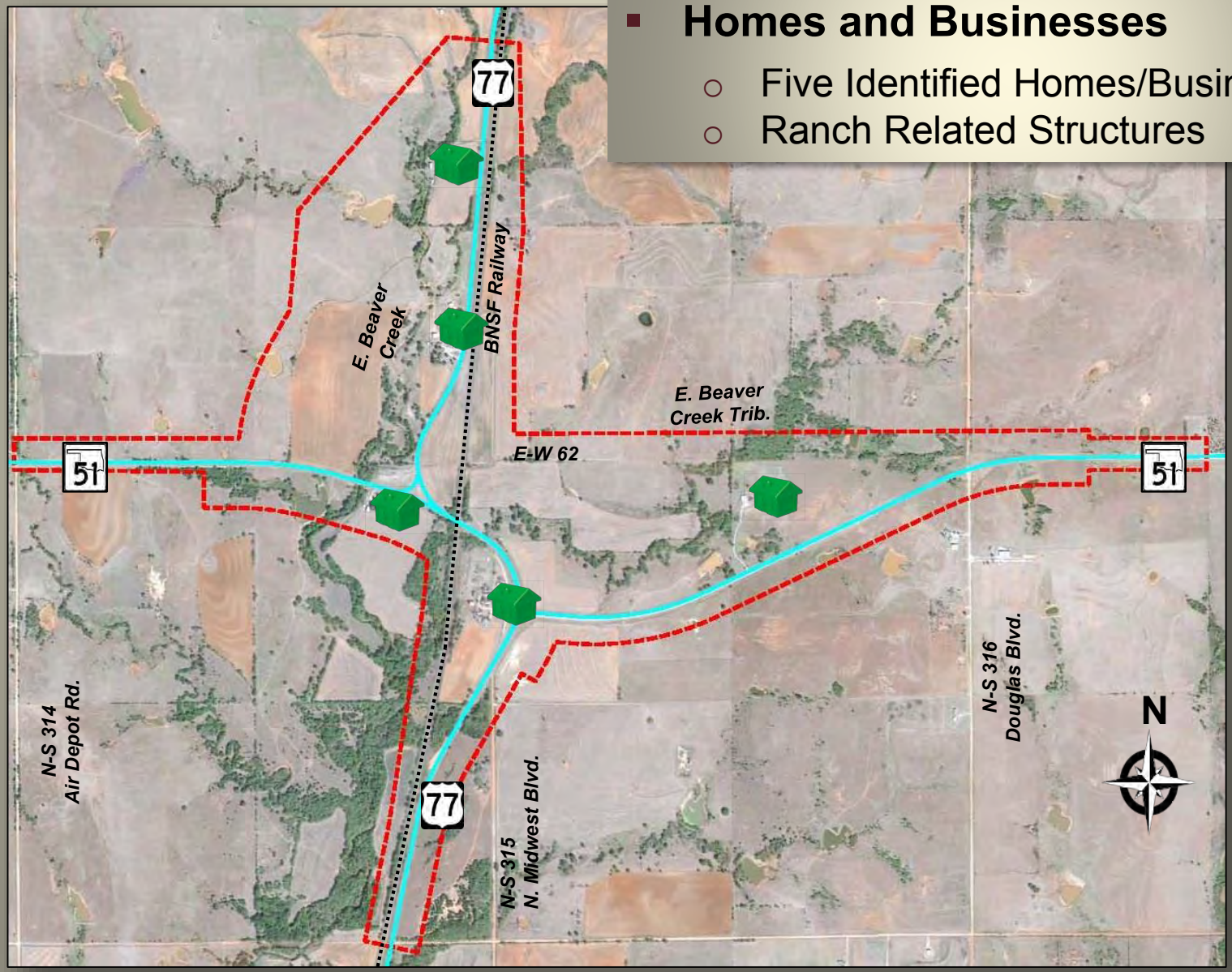
ENVIRONMENTAL CONDITIONS

- **Study Area**
  - Area of Data Collection
  - Encompassed all Alternates
  - Database Research and Field Reconnaissance



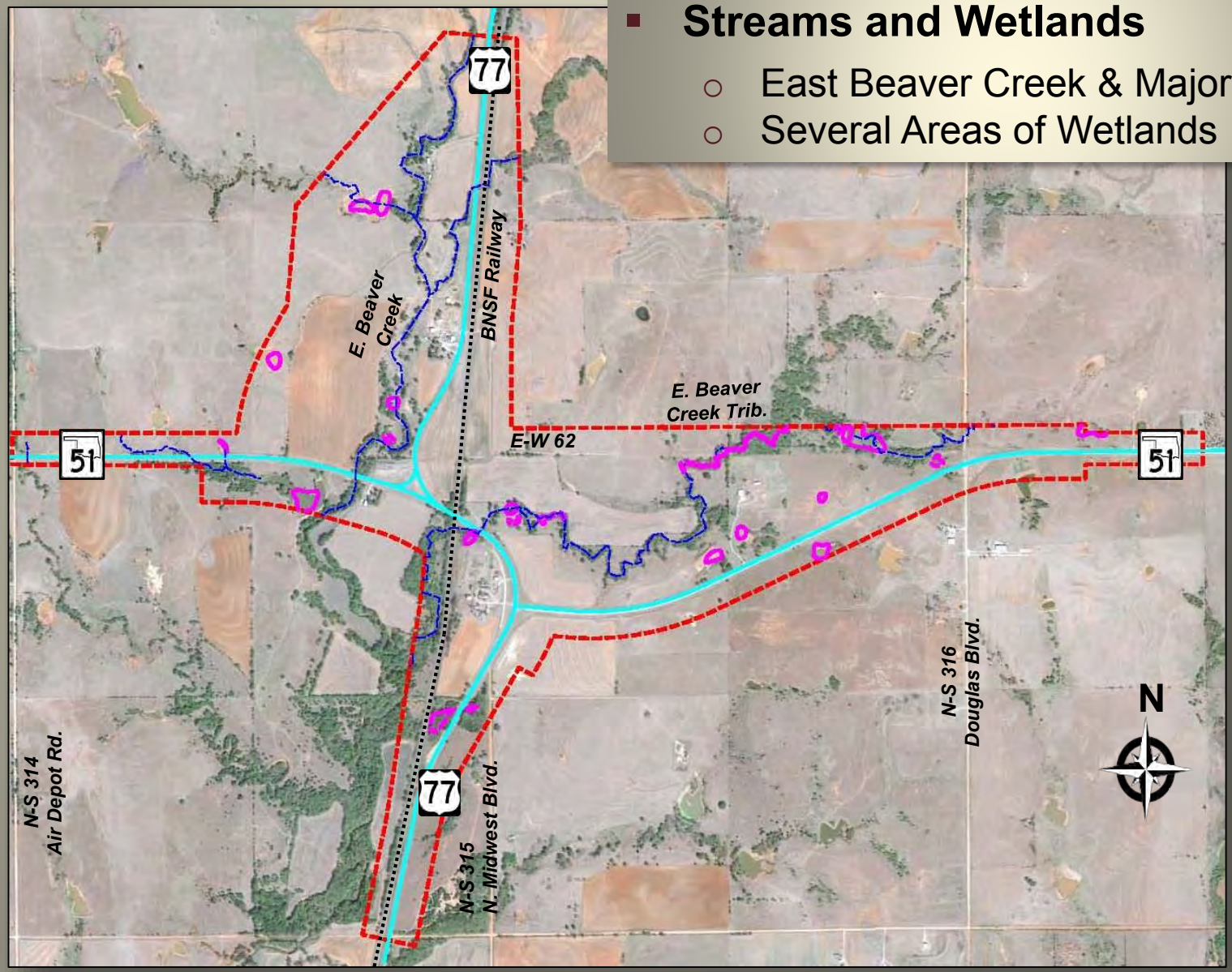
ENVIRONMENTAL CONDITIONS *cont'd....*

- **Homes and Businesses**
  - Five Identified Homes/Businesses
  - Ranch Related Structures



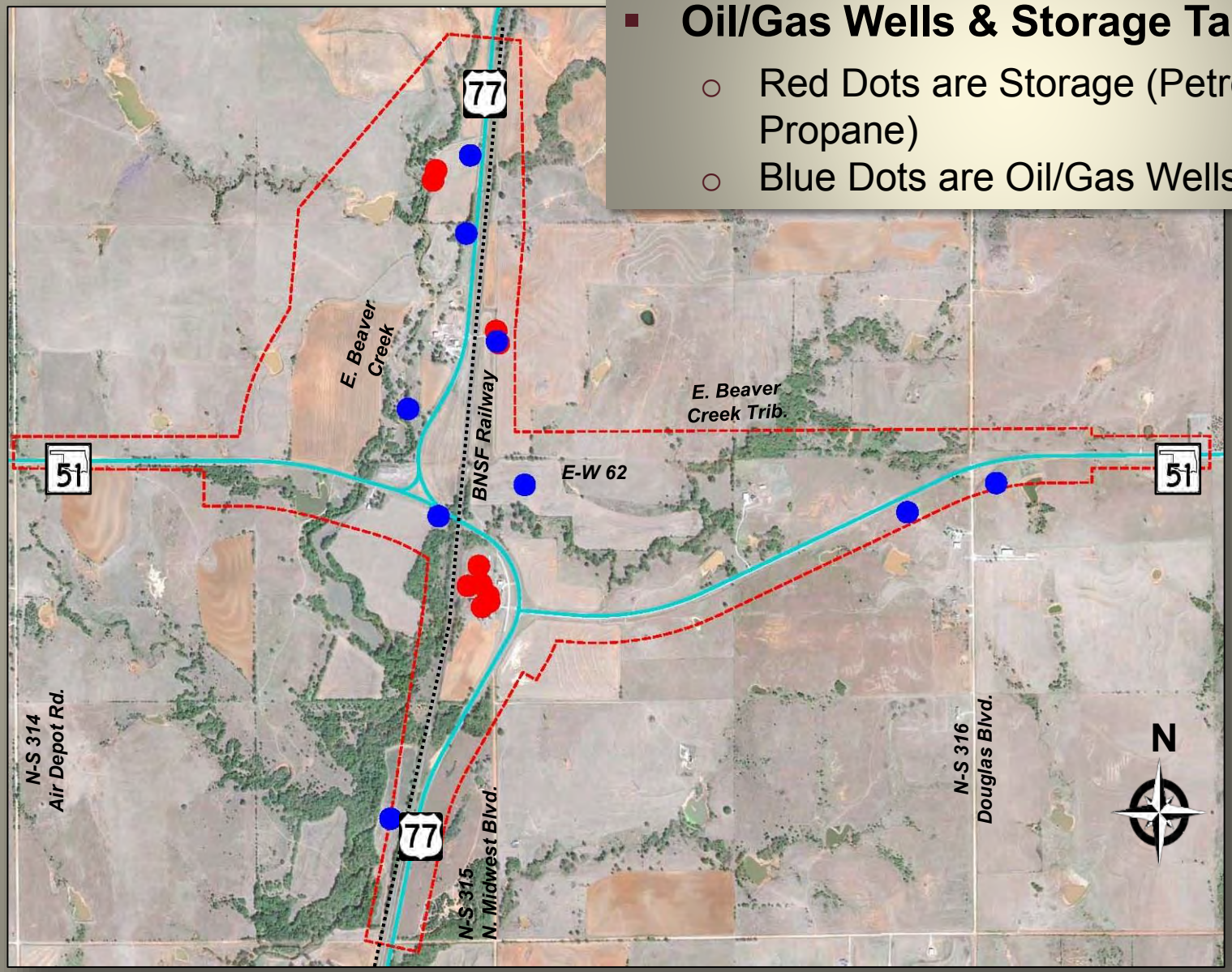
ENVIRONMENTAL CONDITIONS *cont'd....*

- **Streams and Wetlands**
  - East Beaver Creek & Major Tributary
  - Several Areas of Wetlands



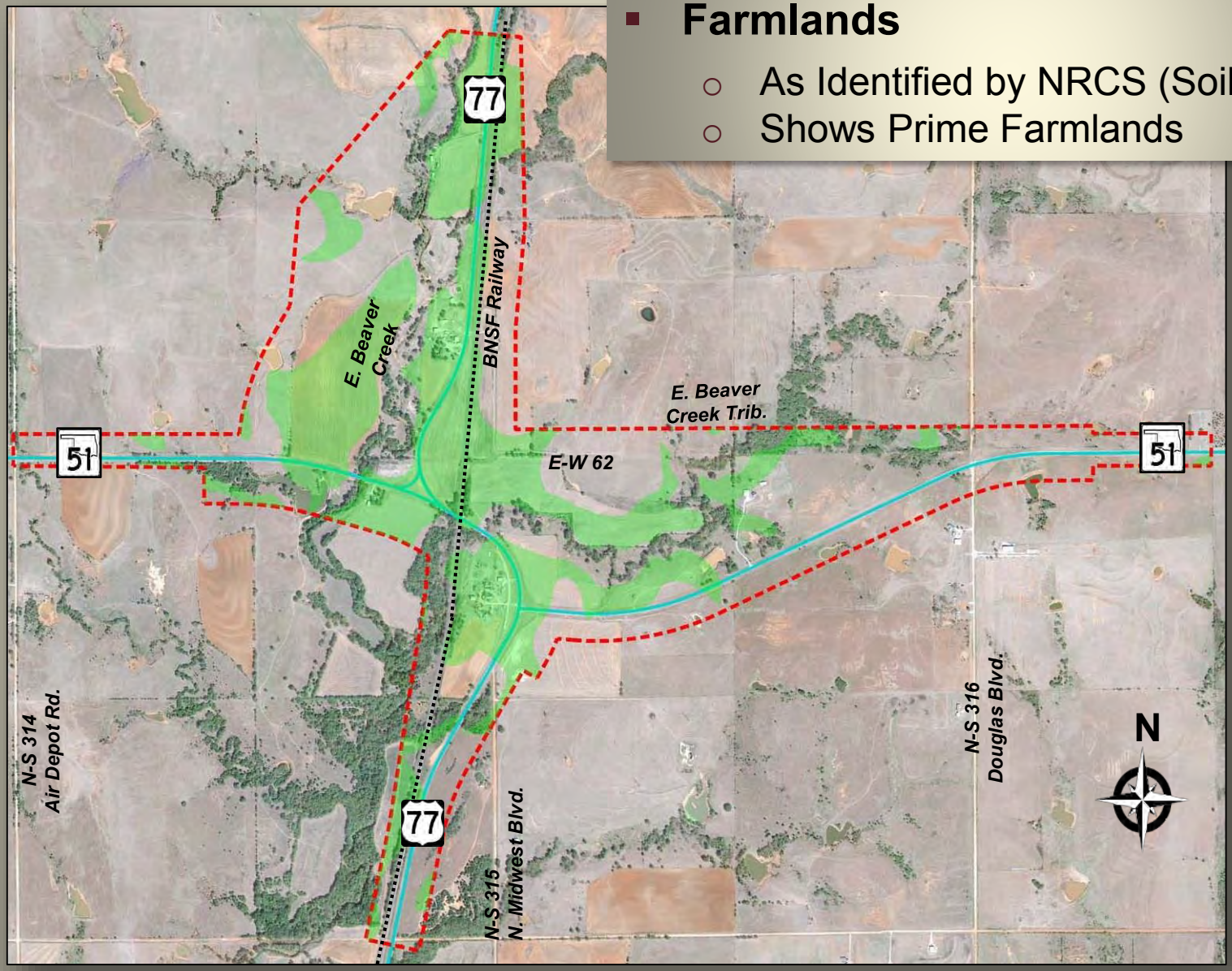
ENVIRONMENTAL CONDITIONS *cont'd....*

- **Oil/Gas Wells & Storage Tanks**
  - Red Dots are Storage (Petroleum, Propane)
  - Blue Dots are Oil/Gas Wells



ENVIRONMENTAL CONDITIONS *cont'd....*

- **Farmlands**
  - As Identified by NRCS (Soil Info)
  - Shows Prime Farmlands



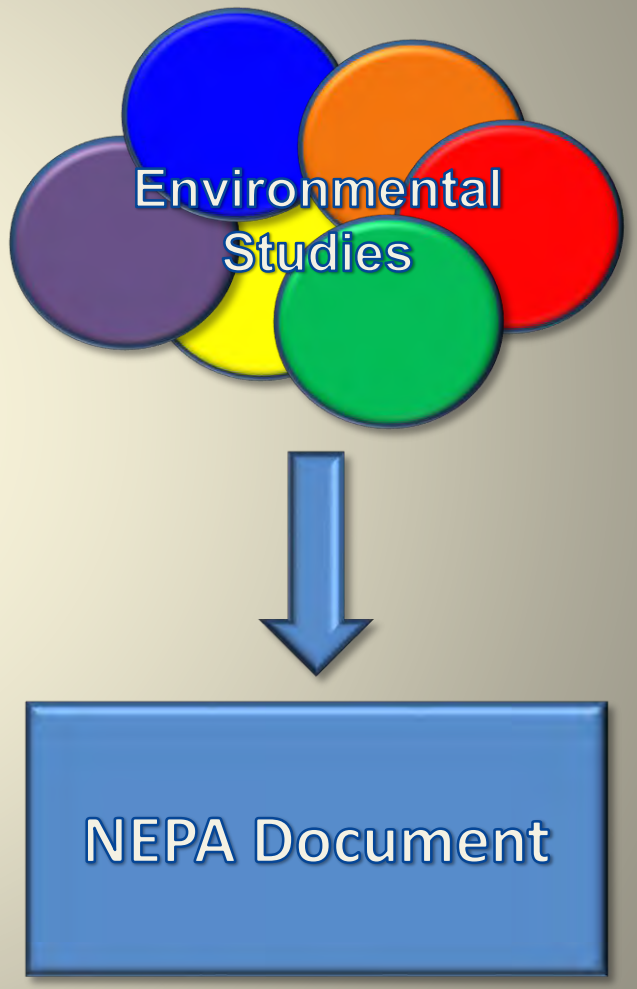
ENVIRONMENTAL IMPACTS

- **Other Resources To Note?**
  - Abandoned Pageant Grounds
  - Others? Please Give Us Your Input!

- **Potential Impacts:**
  - Some Acquisition of Private Property
  - Some Loss of Farmlands
  - Channelization of Streams and Filling of Wetlands
  - Impacts to Corrals, Fences
  - Impacts One Abandoned Well
  - Changes to Driveways
  - No Impacts to Residences
  - Visual Changes

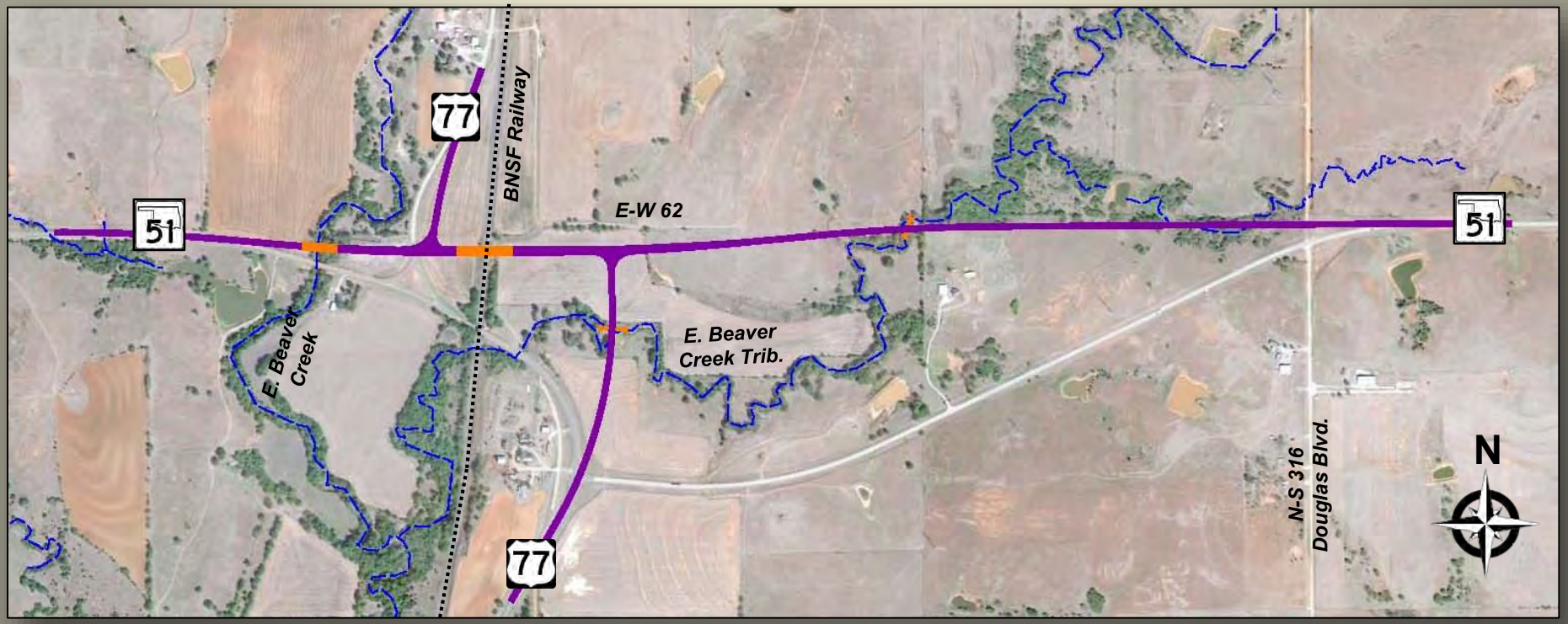
NEXT ENVIRONMENTAL STEPS

- **Detailed Environmental Studies Will be Performed**
  - Archaeological and Historic Survey
  - Wetland Delineations
  - Biological Assessment
  - Hazardous Waste Investigation
  - Noise Study
- **Studies Will be Summarized in an Environmental Document to Satisfy State and Federal Regulations**
- **Later Phase Environmental Activities Will Include**
  - Clean Water Act Permits
  - Stream Mitigation Plan, if Required



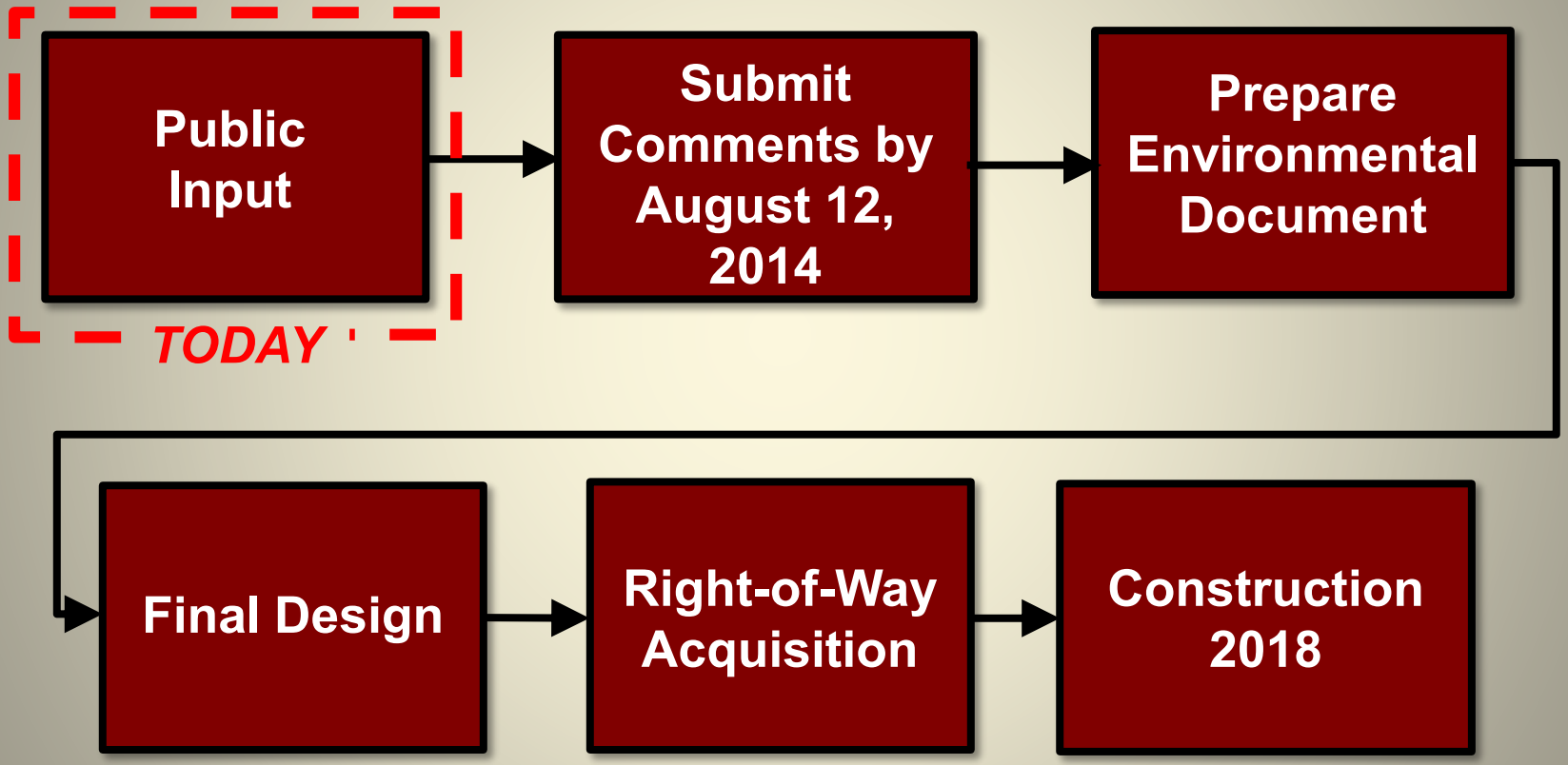
SUMMARY – ALTERNATE 2R

- Defines Thru Movement to SH-51
- Two 12-ft Lanes with 8-ft Shoulders
- Eliminates Confusing Junctions
- Adds Turn Lanes
- Corrects Deficient Sight Distance
- Avoids Oxbow in Creek
- Two Span Bridges, Two Bridge Boxes
- Maintains 2-Lanes of Traffic During Construction
- Avoids Residences



NEXT STEPS

NEXT PROJECT STEPS



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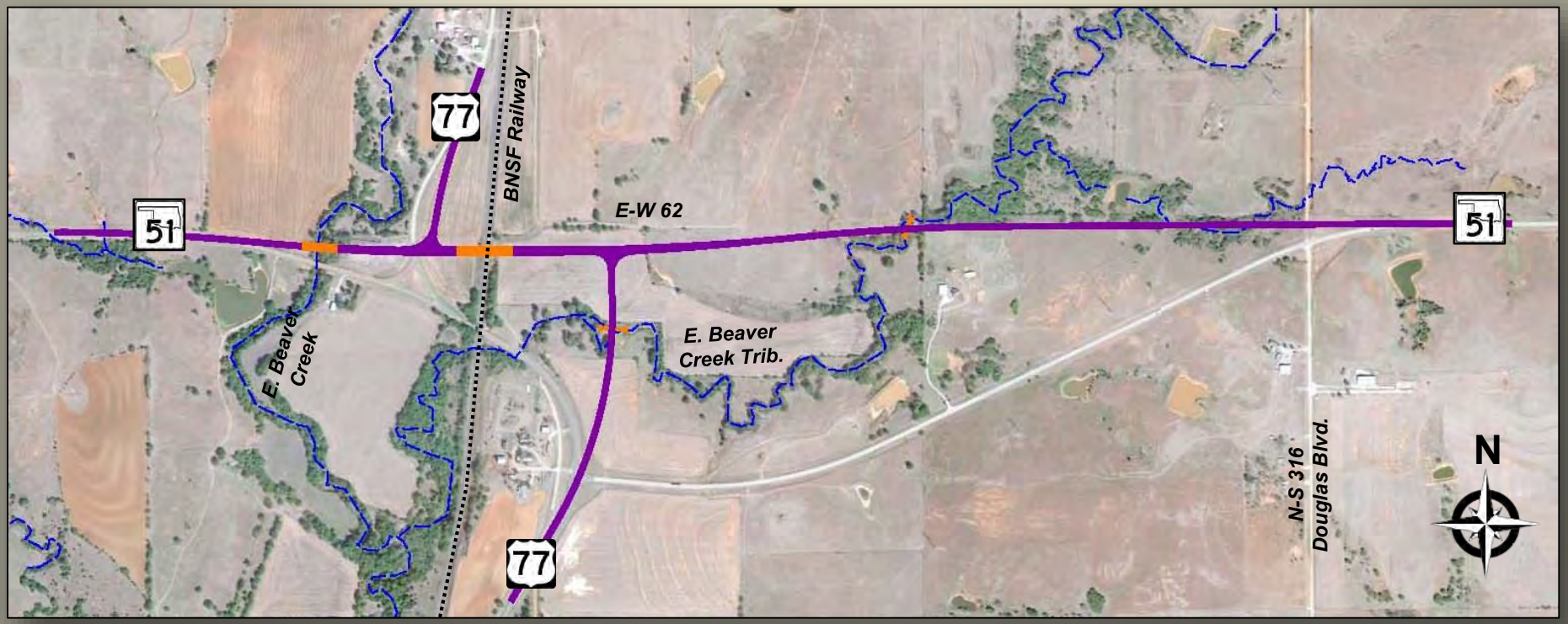

THANK YOU!

Please Submit Your Comments by August 12, 2014

- ✓ Leave Your Comment Form Here Tonight
- ✓ Mail the Comment Form Back to ODOT:
  Environmental Programs Division
  200 NE 21st Street
  Oklahoma City, OK 73105
- ✓ Email Your Comments to ENVIRONMENT@ODOT.ORG

QUESTIONS?