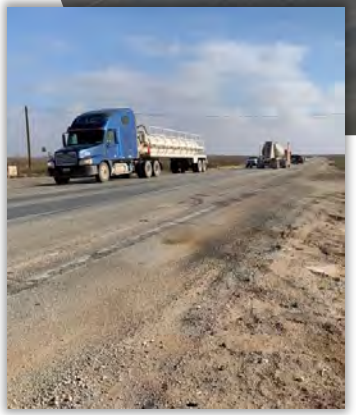


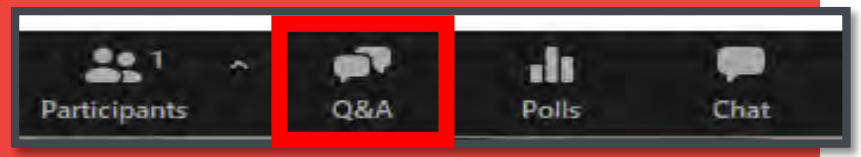
Virtual Public Information Meeting

NM 31-128 Alignment Study and Design-Build Project CN 2104330

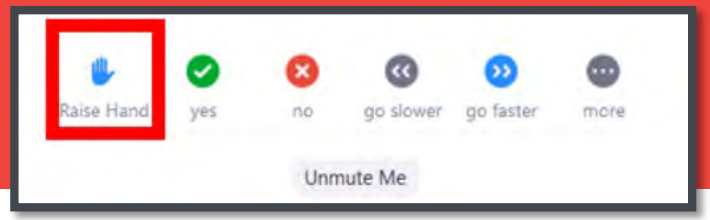
August 31, 2021

Meeting Platform: Zoom

- Zoom Webinar – only presenters will be on video
- This meeting is being recorded
- Questions & Answers – Please add project-related questions in the Q&A dialogue box



- During Q&A, if you would like to speak, raise your hand (*9 if you have dialed-in)



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Presenters

New Mexico Department of Transportation (NMDOT) Team Presenters:

- **Francisco Sanchez**, NMDOT District 2 District Engineer
- **Michael Smelker**, NMDOT Project Development Engineer
- **Terry Ward**, WSP Project Manager
- **Jennifer Hyre**, WSP Environmental Planner

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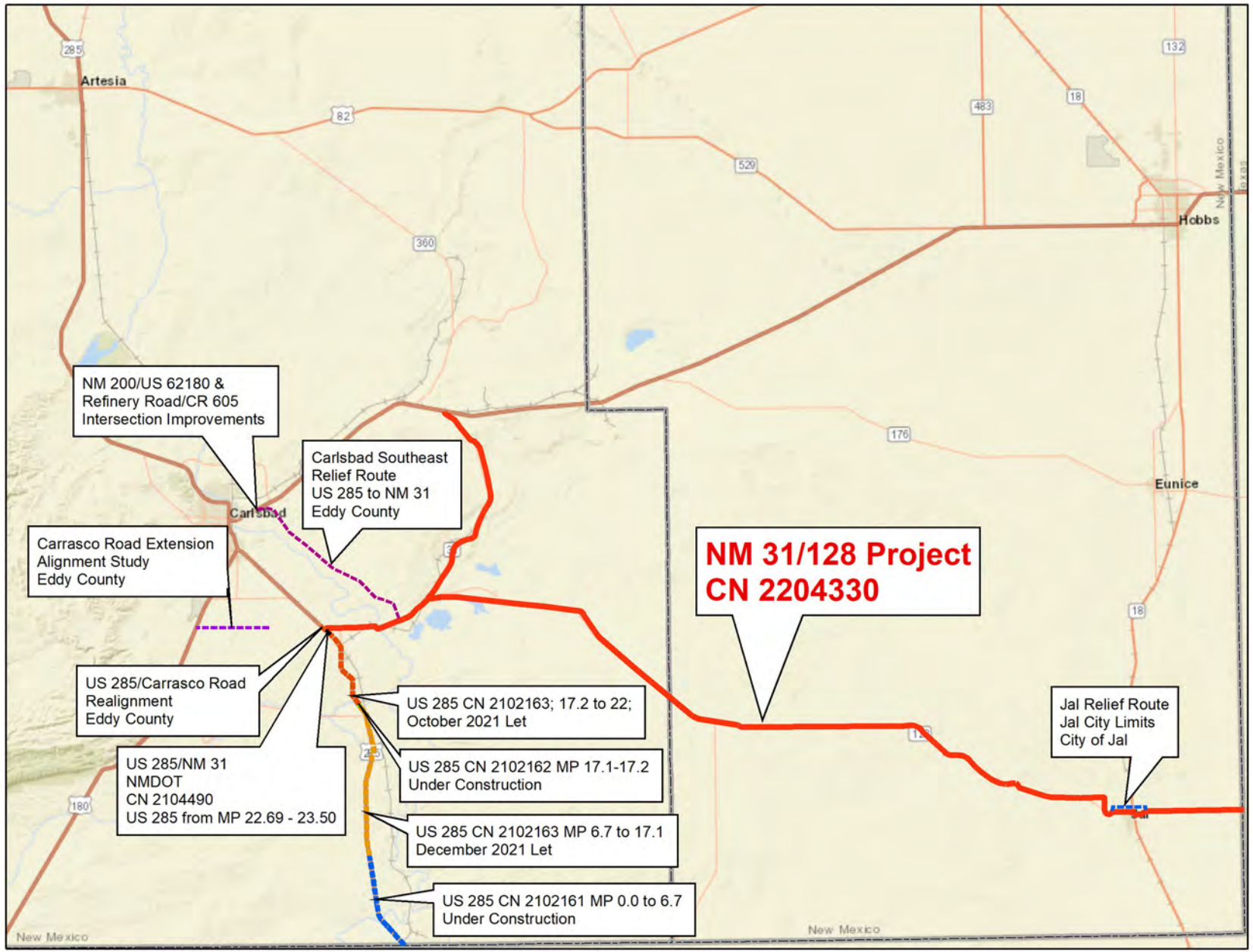
Agenda

- **Presentation Topics:**
  1. Project Background and Purpose & Need
  2. Existing Conditions and Project Context
  3. NMDOT Project Development Process
  4. Preliminary Alternatives
  5. Comparative Analysis and Key Findings
  6. Design-Build Procurement – Phase I and Project Phasing
  7. Schedule and Next Steps
- **Questions**

Numerous Active Projects in SE NM

Tonight we're here to talk about the NMDOT NM 31-128 Project



NM 31 128

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Project Background and Purpose & Need

NM 31 Background

- **NM 31**, also known at the **Potash Mines Road**, is a rural two-lane north-south roadway connecting US 285, also known as the **Pecos Highway**, to US 62, also known as the **Hobbs Highway**, just east of Carlsbad – a distance of approximately **22.7 miles**.

NM 128 Background

- **NM 128**, also known as the **Jal Highway**, is a rural two-lane east-west roadway connecting **NM 31** to Texas with an urban section through Jal, also known as Kansas Avenue – a distance of approximately **59.9 miles**.

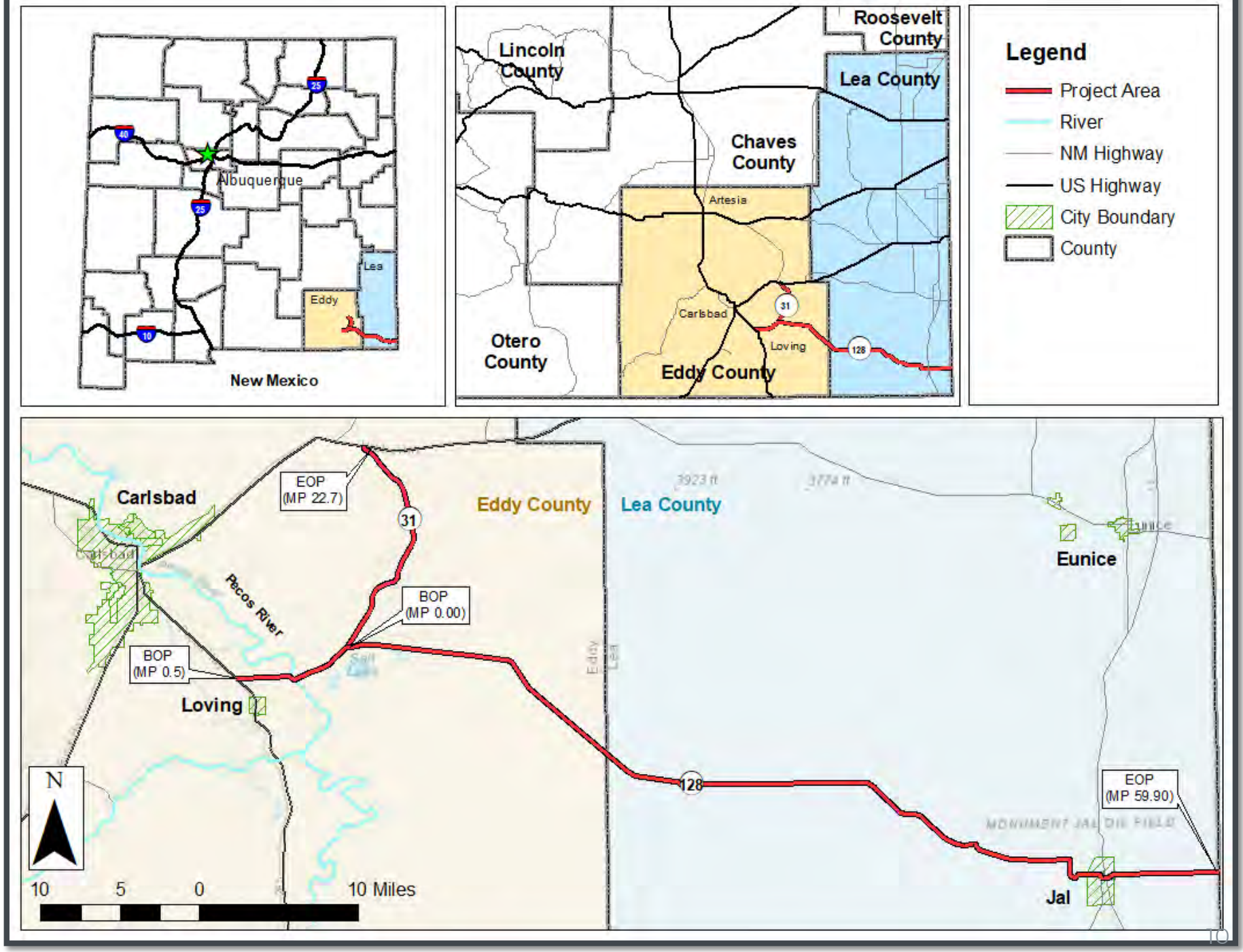
NM 31-128 Background

- Both roadways pass through largely unpopulated semi-arid lands but are part of a major supply route network for local oil and gas production/exploration operations within southeastern New Mexico within Eddy and Lea counties.

- Both roadways are classified as Major Collectors, which connect urban areas with **populations over 5,000**, serve traffic generators typically of intra-county importance (ex. consolidated schools, employment centers, mines, regional parks), but may also cross county boundaries, and tend to collect traffic from local roads to rural minor arterials.

Location Map

NM 31 – 22.7 miles
NM 128 – 59.9 miles



Stakeholders

We've spoken with all of them

- Eddy and Lea County
- City of Jal
- City of Carlsbad
- Bureau of Land Management (BLM)
- State Land Office (SLO)
- Oil & Gas Industry
- Waste Isolation Pilot Plant (WIPP)
- Mosaic and Intrepid Potash
- United Salt Corporation
- Burlington Northern RR
- Texas New Mexico RR
- TxDOT
- FHWA

NM 31 128

EDDY COUNTY NEW MEXICO

CARLSBAD

JAL NEW MEXICO small town. big heart.

Lea COUNTY new mexico

PERMIAN STRATEGIC PARTNERSHIP

NMOGA NEW MEXICO OIL AND GAS ASSOCIATION

WIPP

INTREPID Essential Minerals for Success

Mosaic

USC UNITED SALT CORP.

BNSF RAILWAY

WATCO

TEXAS DEPARTMENT OF TRANSPORTATION

U.S. Department of Transportation Federal Highway Administration

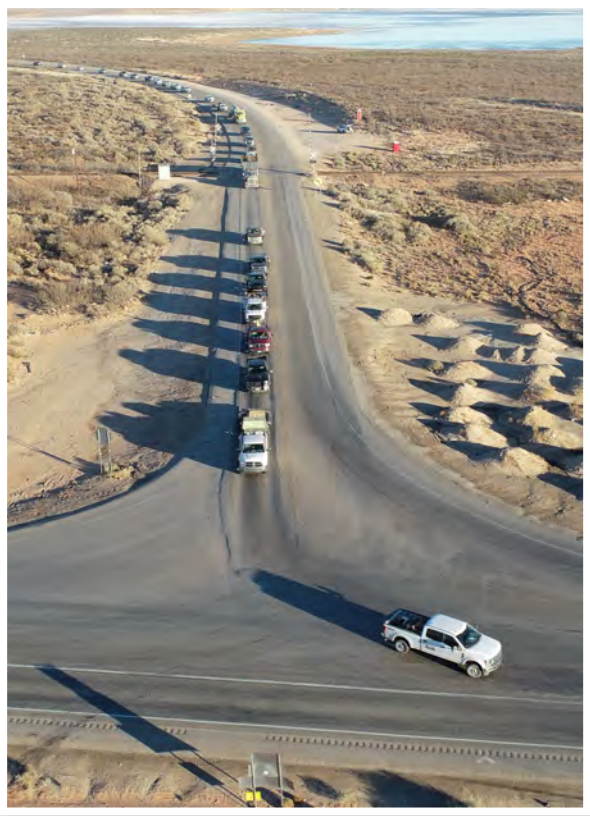
Project Website

- **Project Information: https://nm31-128project.nmdotprojects.org**
  - This presentation and recording of tonight's public event will be posted here

Project Purpose

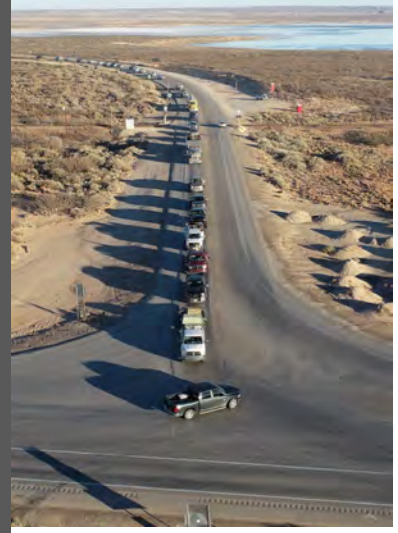
- The project's purpose is **to improve NM 31 and NM 128 to mitigate problems with highway safety, traffic capacity and congestion, and condition of the roadway and related infrastructure**

Project Need



- Traffic Safety
  - » **722 crashes** occurred on NM 31 and NM 128 for the six-year period **between 2014 and 2019**
    - —**28%** of all crashes resulted in fatalities and injuries
    - —**27** fatal crashes occurred
    - —Primary crash types include **rear-end, head-on, over-turn, and right-angle crashes**
  - » Crash types are indicative of **inadequate safe passing areas**, **conflicts at intersections**, **lack of turn lanes**, and **narrow shoulders**

Project Need



Traffic Capacity and Roadway Condition

- Features of the existing highways and traffic flow contribute to safety and operational problems
  - Lack of turn lanes at intersections
  - Operational problems at railroad crossings
  - High truck percentage and vehicle platooning
  - Roadway geometry and cross section
  - Pavement condition

NM 31 128

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Existing Conditions and Project Context

Traffic and Safety

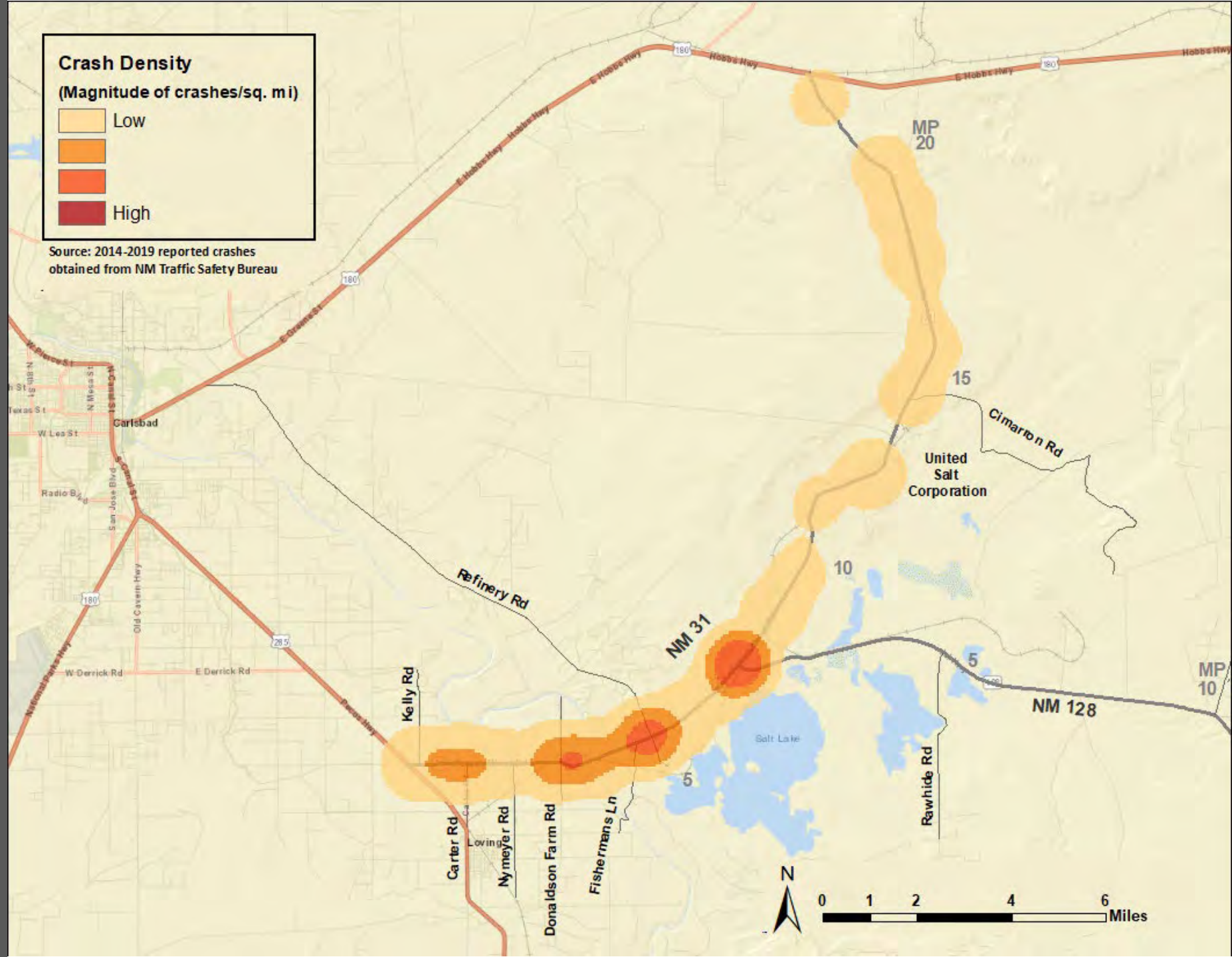
NM 31 Crashes

NM 31 Crashes

- NM 31 from 2014-2019, approximately **169** recorded crashes, including **3** fatalities
- The NM 31/128 Intersection has a **crash rate 4.5 times higher than the adjacent highway segments**

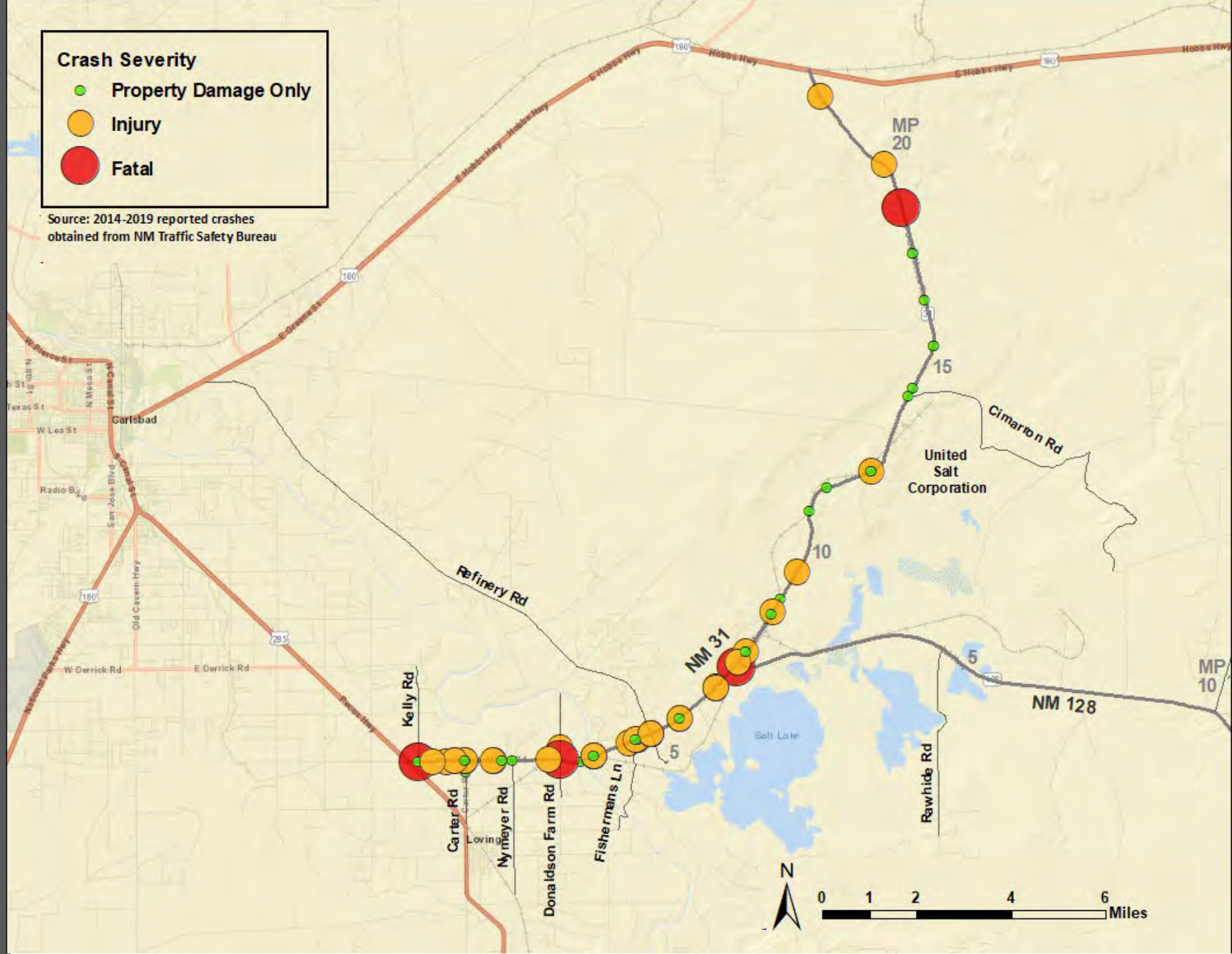
Traffic and Safety

NM 31 Crash Density



Traffic and Safety

NM 31 Crash Severity



Traffic and Safety

NM 128 Crashes

NM 128 Crashes

- NM 128 from 2014-2019, approximately **553** recorded crashes, including **24** fatalities.

Traffic and Safety

NM 128 Crash Density

Traffic and Safety

NM 128 Crash Severity

Traffic and Safety

NM 31 Average Daily Traffic and % Trucks

NM 31 Segment	Average Daily Traffic Volume (vehicles/day)	
	2019	2041
US 285 to Kelly Road	7,900	10,200
Kelly Road to Carter Road	7,900	10,700
Carter Road to Nymeyer Road	8,700	11,700
Nymeyer Road to Donaldson Farm Road	10,000	13,400
Donaldson Farm Road to Fishermans Lane	10,900	14,800
Fishermans Lane to US Refinery Road	10,500	14,000
US Refinery Road to NM 128	10,200	13,600
NM 128 to Salt Corp Site	3,200	4,200
Salt Corp Site to US 62	3,200	4,300

% of Trucks east of Refinery Road – 17%
% of Trucks west of Refinery Road – 14%

Traffic and Safety

NM 128 Average Daily Traffic and % Trucks

NM 128 Segment	Average Daily Traffic Volume (vehicles/day)	
	2019	2041
MP 0.0 to WIPP Road	8,200	10,600
WIPP Road to Red Road	8,200	10,600
Red Road to Buck Jackson Road	8,200	10,600
Buck Jackson Road to Orla Road	8,200	11,500
Orla Road to Delaware Basin Road	9,200	12,000
Delaware Basin Road to Battle Axe Road	9,200	12,600
Battle Axe Road to 3rd St	10,400	14,000
3rd St to NM 18	9,400	12,600
NM 18 to Schooley Road	6,200	8,300
Schooley Road to Willis Road	6,200	8,300
Willis Road to NM/Texas Stateline	6,200	8,300

% Trucks generally range from 20-30%

Project Traffic Delay

City of Jal

September 29, 2019 (Sunday) from 4:23 pm to 5:15 pm

Video

Pavement Conditions

Deteriorated Pavement Conditions

- Existing Pavements are generally in poor condition
- Rehabilitation of some existing pavements
  - Preserve recent pavement investments to the extent possible
    - ✓ Predominately NM 128
- Reconstruction in Jal
- New pavements for 4-lane expansions and passing lanes
- Consider trucks

Drainage Challenges

Drainage Challenges

- Plugged drainage structures
- Corrosive soils
- Jal floodplain areas
- Pecos River bridge scour

NM 31 Drainage

Drainage Challenges

- NM 31 – **85** crossing drainage structures
  - Additional **10** turnout drainage structures
- Many drainage structures filled-in
- Corrosive soils and drainage structure conditions
  - From US 285 for the first 2 miles
  - Around NM 31/128 intersection (mileposts 7-8)
  - Mileposts 10-14
- Pecos River bridge scour
  - Our river survey identified existing scour

NM 128 Drainage

Drainage Challenges

- NM 128 – **122** crossing drainage structures
  - Additional **60** turnout drainage structures
- Plugged drainage structures
  - Approximately **101 of the 122** crossing structures have sedimentation
- Corrosive soils and drainage structure conditions
  - First **12 miles** of NM 128, including the Salt Lakes
- Jal floodplain areas

Access Management

- **NM 31 Access Points**
  - Approximately **94** turnout locations
- **NM 128 Access Points**
  - Approximately **308** turnout locations
  - Plus **30** turnouts to “frontage road”
- **Potentially Remove NM 128 Frontage Road**
- **Priority Access Management Improvements**

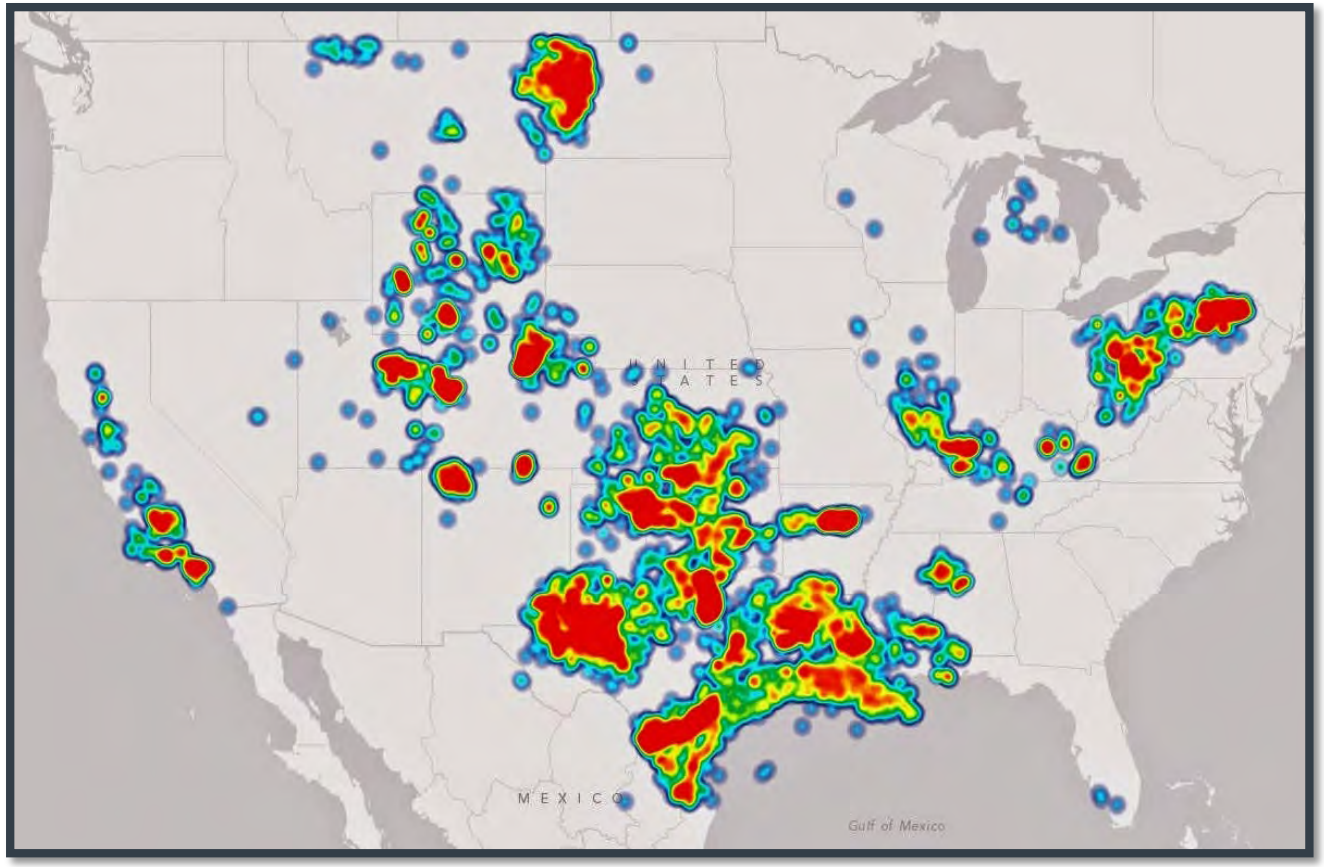
Utilities

- **109 Utility Companies**
  - » **45** on NM 31
  - » **64** on NM 128
- **Fastlines or Lay Flat lines**
  - » Ownership recently determined for all
- **Considerable Effort Expended for Successful Delivery**

Oil and Gas Activity

Some of the research we studied

- **Permian Basin Oil & Gas: A 20-mile corridor of NM 31 and NM 128**
  - Existing, 5 and 10-year projected activities (current)



Heat Map of Oil & Gas Drilling in the U.S. (DrillingMaps.com, 2014)

Karst & Cultural Resources

- NM 31 and NM 128 corridors have potential for karst and underground geologic hazards (i.e., voids, sinkholes, caves)
- Field investigations and mitigation strategies under development

- Known archaeological/cultural resource sites
- Field investigations underway to asses potential impacts

Agency and Stakeholder Outreach

- **Key Challenges**
  - » Reaching corridor users
    - — Message boards for public meeting today
  - » The Jal community
    - — Separate public meeting
  - » Oil & gas companies
    - — Meetings with industry

NMDOT Project Development Process

Project Development Process

- Phase I
  - **Currently in this phase**
- Phase II
  - *Final Design*
- Phase III
  - *Construction*

Phase IA/B: Alignment Study

- *Establish Why Improvements are Needed*
- *Evaluate Alternatives and Select How Improvements will be Implemented*

Phase IC: Environmental Processing

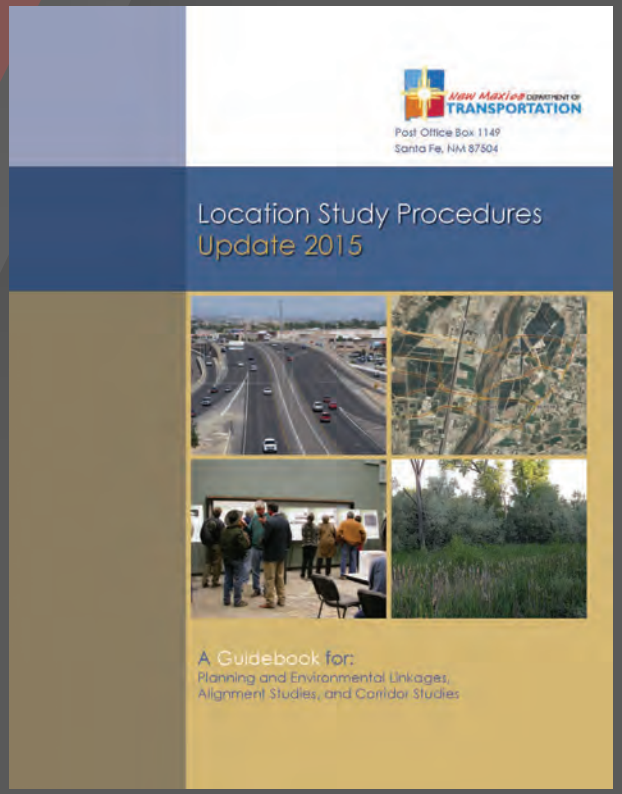
- *Environmental Investigations*
- *Obtain Authorization to Construct Improvements*

Phase ID: Preliminary Design

- *Preliminary Engineering*
- *Define Right-of-Way Needs*
- *Prepare Engineering Cost Estimate*

Stakeholder and Public Involvement
– Ongoing throughout Phase I

Collect Comprehensive Data



- ✓ Design and ROW Survey
- ✓ Environmental Surveys
- ✓ Pavement Condition
- ✓ Drainage Conditions
- ✓ Traffic Operations and Safety
- ✓ Access Management
- ✓ Agency Input
- ✓ Stakeholder Input

NM 31 128

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Preliminary Alternatives

Proposed Alternatives

Key Challenges

- Traffic and safety
- Safely maintaining traffic & access during construction
- Karst
- Salt Lakes
- Environmental stewardship
- Funding
- Utility facilities (above-ground and underground)
- Stakeholder engagement

Traffic and Safety

Traffic and Safety Improvements

- Review corridors
  - Consider expansion to 4-lanes
  - Add passing lanes
- Review intersections
  - Enhance safety and capacity
  - Consider adding signals at 3rd Street and NM 18 in Jal

Project Research Studied

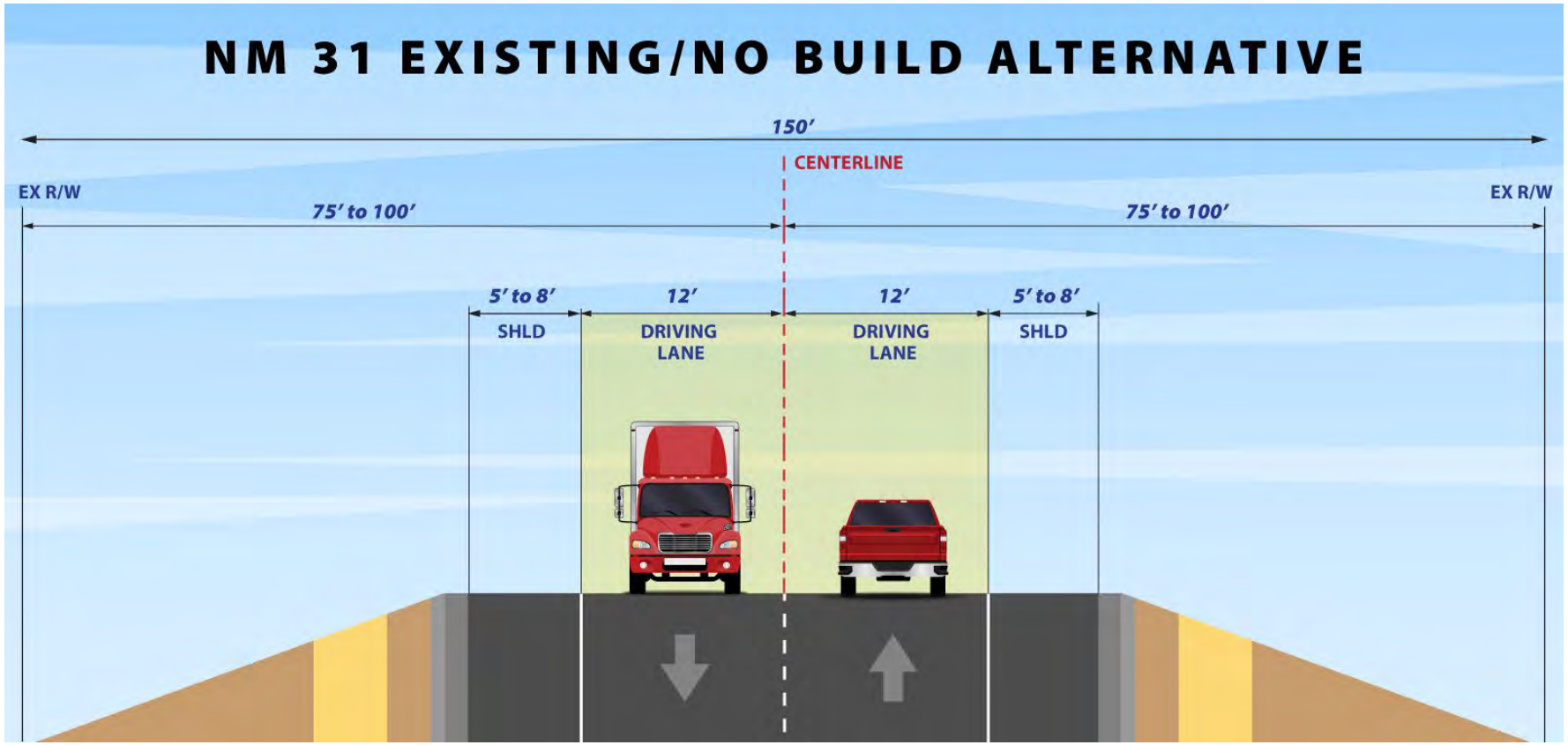
- **Texas Transportation Institute (TTI)**
  - Tools and Strategies to Mitigate Impacts of Energy and Natural Resources Development prepared for the Odessa District of the Texas Department of Transportation (TxDOT) *(September 2019)*
  - Improving the Design and Construction of Pavements Impacted by Energy Development in the Permian Basin prepared for the Odessa District of the Texas Department of Transportation (TxDOT) *(May 2000)*
- **Georgia DOT**
  - Safety Performance of Rural Four-Lane Undivided Roadways and Rural Four-Lane Roadways with a Two-Way Left-Turn Lane *(December 2020)*
- **FHWA**
  - Restricted Crossing U-Turn Informational Guide *(August 2014)*
- **Missouri DOT**
  - Benefits and Design / Location Criteria for Passing Lanes *(March 2004)*

Proposed Mainline Alternatives

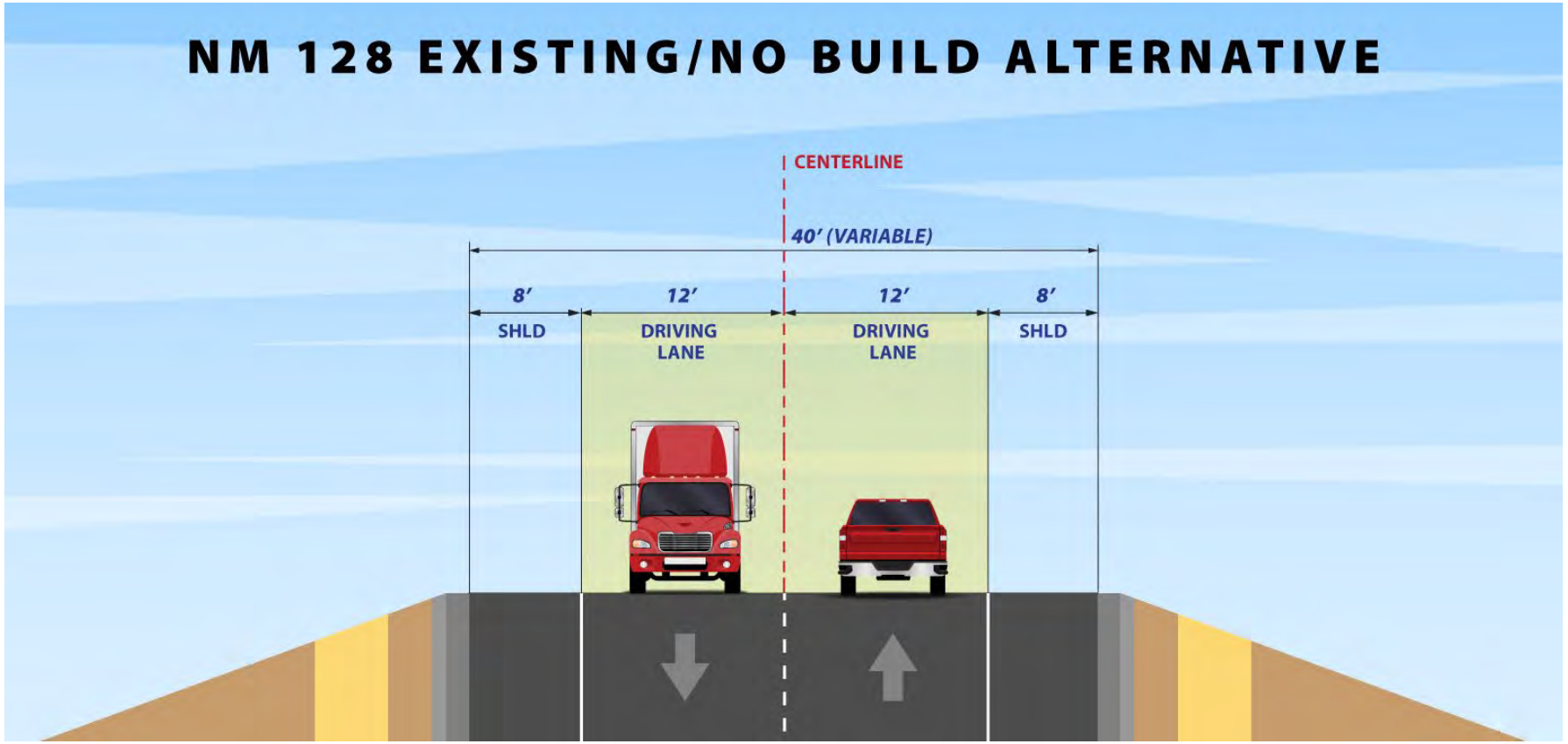
- Highway Improvements
  - **What is a Typical Section?**

    A Typical Section is a **graphical representation of the proposed work as if you were standing at a location looking down the roadway**.

No Build Alternative – NM 31

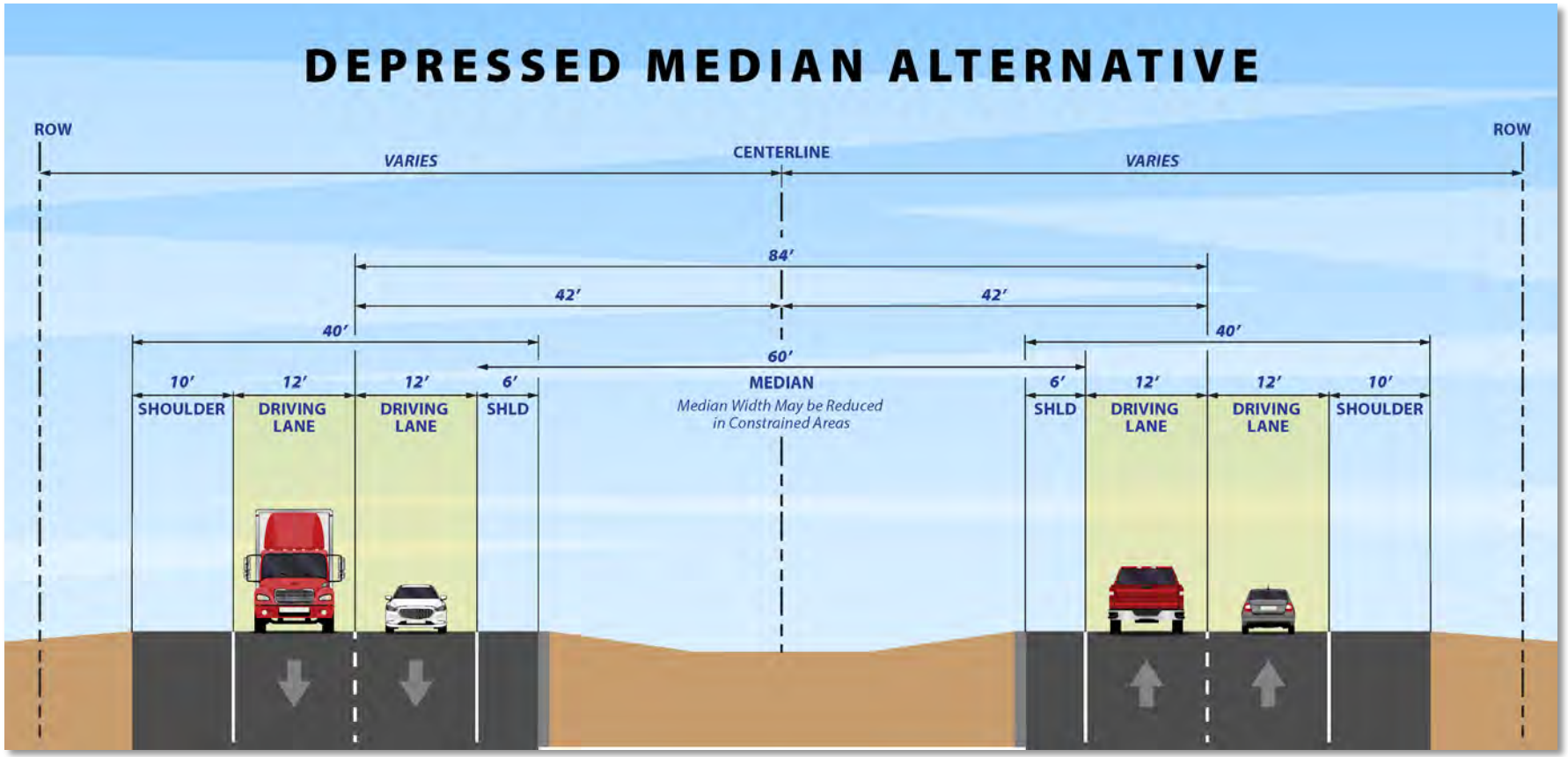


No Build Alternative – NM 128



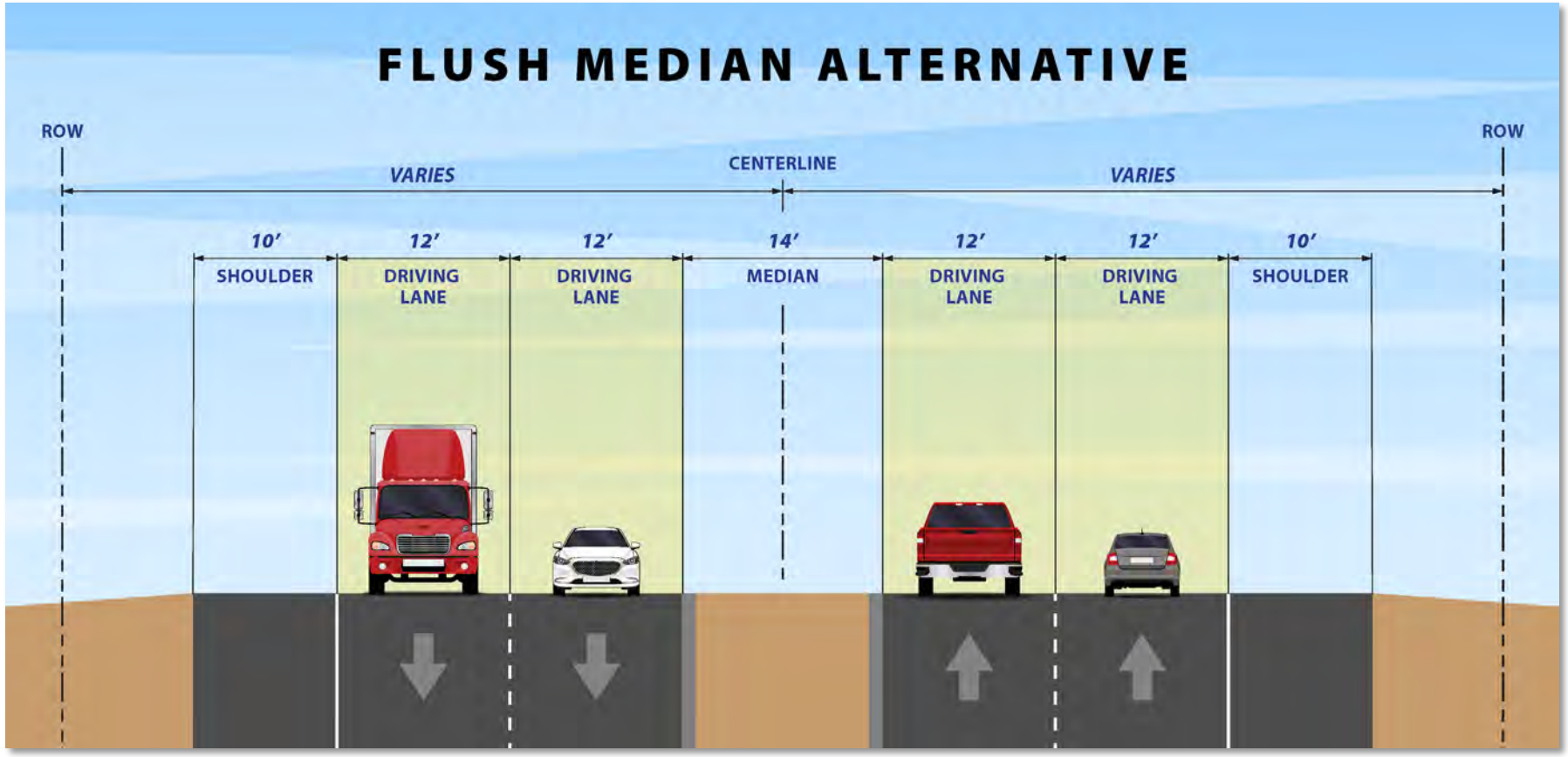
Proposed Mainline Alternatives

Depressed Median Alternatives



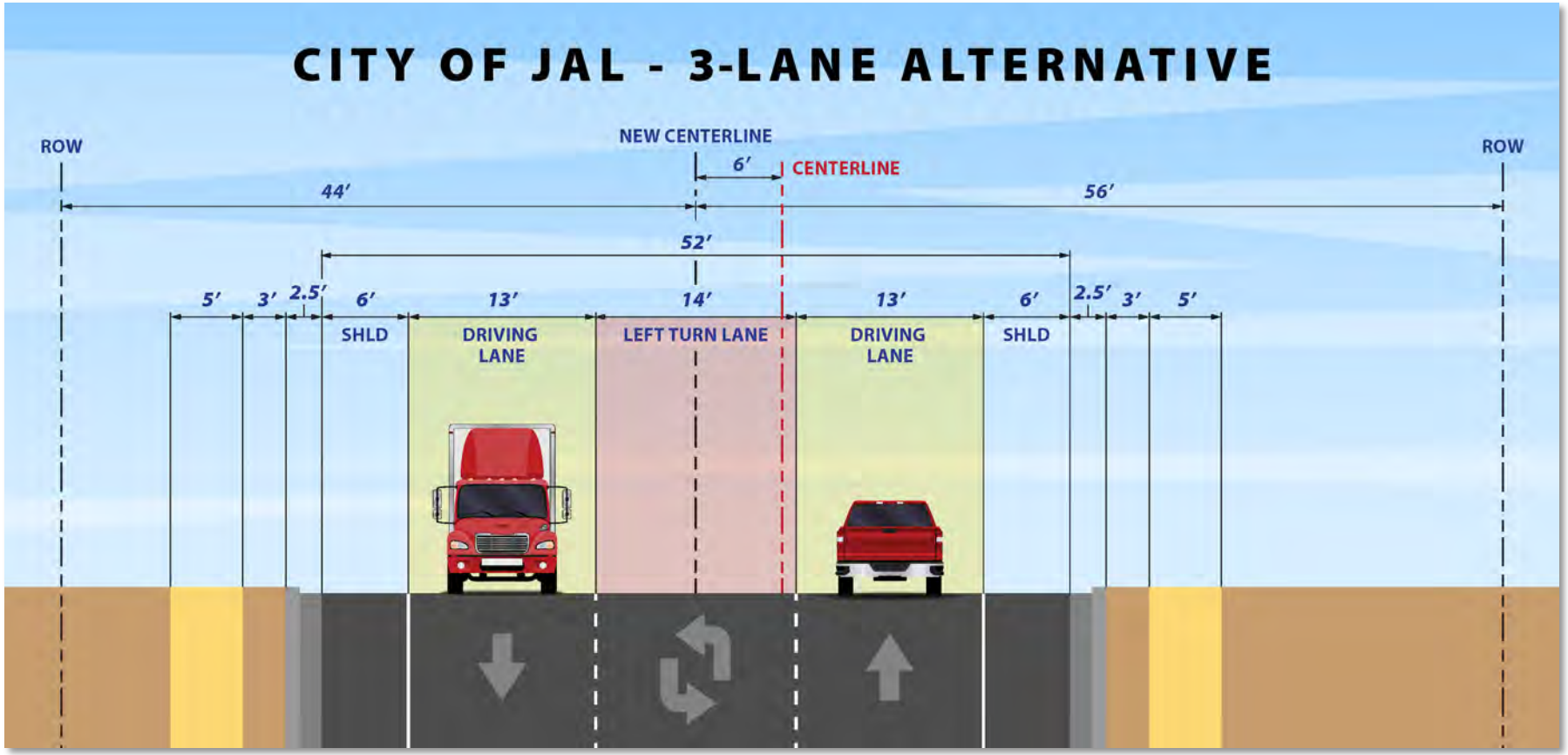
Proposed Mainline Alternatives

Flush Median Alternatives



Proposed Mainline Alternatives

JAL 3-Lane TWLTL Alternative



Proposed Mainline Alternatives

Super 2 Alternative

An Enhanced 2-lane consists of periodic passing lane locations.

Proposed Mainline Alternatives

- **Corridor-wide solutions reviewed first; site specific improvements featured in follow-up public meeting**

- **NM 31 from US 285 to NM 128 and NM 128 from NM 31 to Jal**
  - Depressed median 4-lane alternative
  - Flush median / raised median 4-lane alternatives
  - Super 2
  - Enhanced 2-Lane
- **City of Jal Three-lane TWLTL**
  - 4-lane and 5-lane alternatives considered
- **NM 31 from NM 128 to US 62 and NM 128 from Jal to Texas**
  - 4-Lane
  - Super 2
  - Enhanced 2-lane
- **The “No-Build” will also be considered**

Proposed Intersection Alternatives

- **Signalization, Roundabouts, High-T, and RCUTs**
- **NM 31-128 Intersection Concepts**
  - At grade
  - Grade separated

Proposed Intersection Alternatives

NM 31-128 Intersection Alternatives

Signalization

Proposed Intersection Alternatives

NM 31-128 Intersection Alternatives

Roundabouts

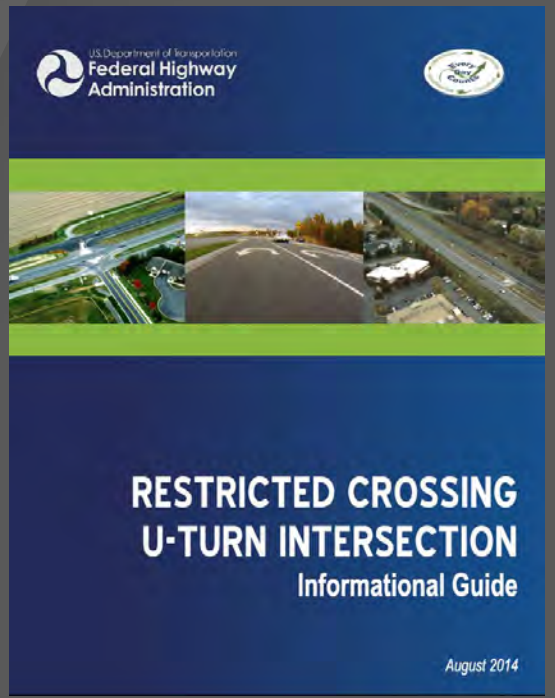
Proposed Intersection Alternatives

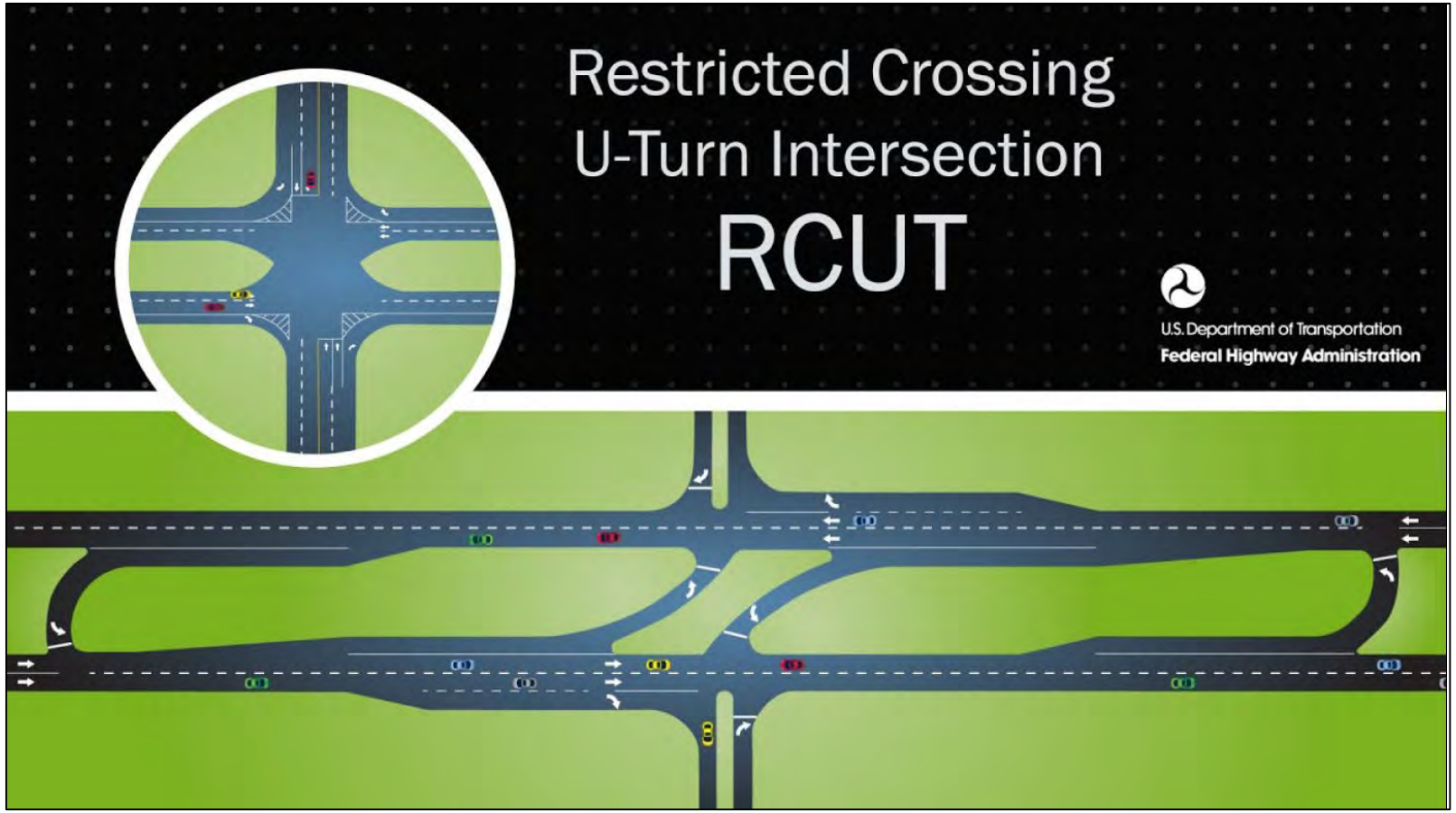
NM 31-128 Intersection Alternatives

High-T

Proposed Intersection Alternatives

NM 31-128 Intersection Alternatives

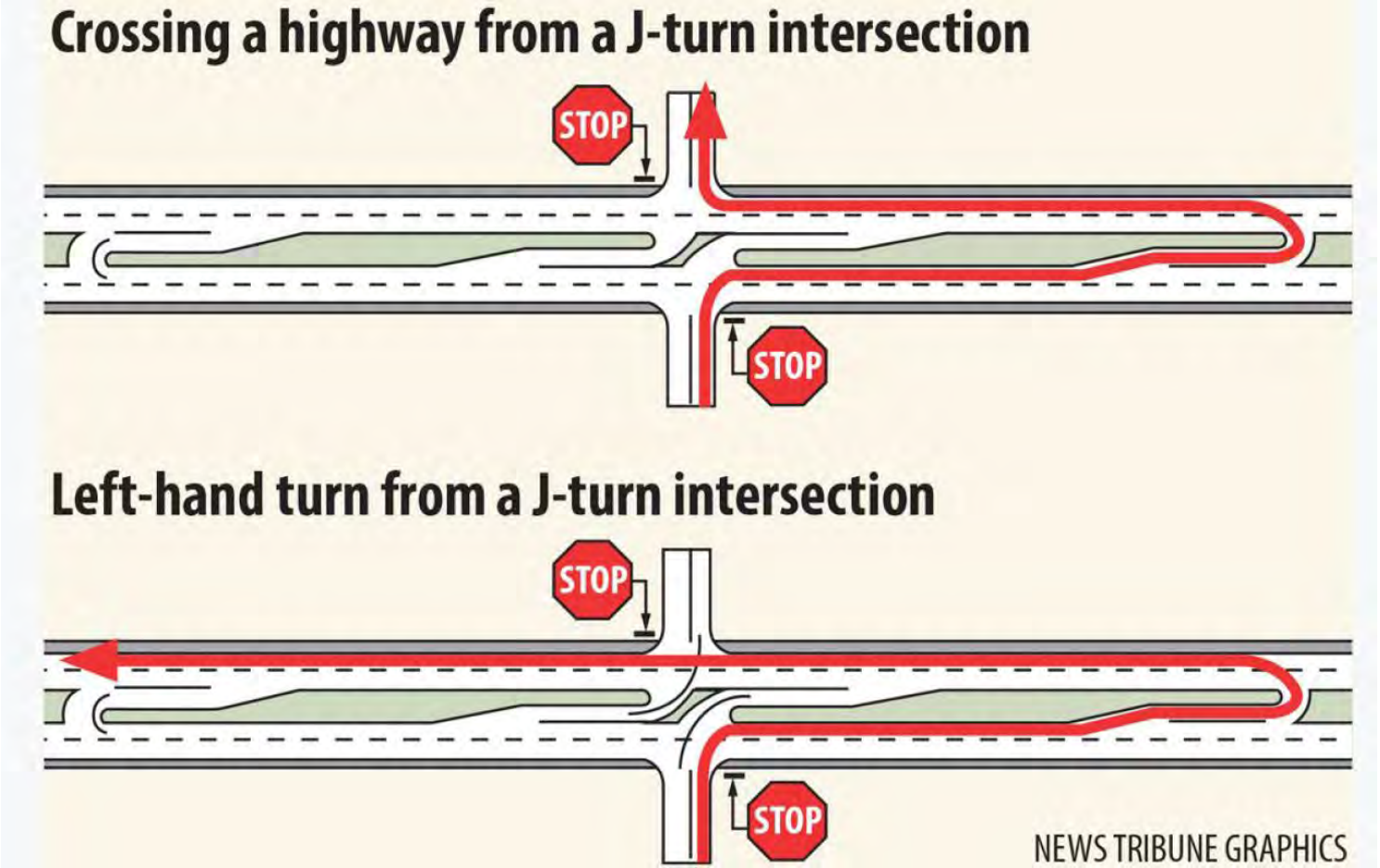




Proposed Intersection Alternatives

NM 31-128 Intersection Alternatives

RCUTs



Proposed Intersection Alternatives

NM 31-128 Intersection Alternatives

NM 31-128 Intersection At-Grade

Proposed Intersection Alternatives

NM 31-128 Intersection Alternatives

NM 31-128 Intersection At-Grade with Roundabout

Proposed Intersection Alternatives

NM 31-128 Intersection Alternatives

NM 31-128 Intersection Grade Separated with RCUT

Proposed Improvements

- Railroads – 5 crossings
- Pavements and geotechnical
- Karst mitigations
- Pecos River bridge
  - Rehabilitate existing bridge
  - New bridge

Proposed Improvements

- **Property surrounding project corridors is a combination of:**
  - Bureau of Land Management (BLM)
  - State Land Office (SLO)
  - Private
- **An Enhanced Conceptual Engineering Design (30% level) is under development**
  - Will depict anticipated construction limits and ROW
- **ROW Acquisition (and Environmental Permitting) will be based on the Enhanced Conceptual Engineering Design**

Proposed Improvements

Maintenance of Traffic During Construction

- Strive to keep NM 31 and NM 128, including all access points open during construction
- Coordination closely with stakeholders
- Contractor expected to provide look-ahead schedules and anticipate traffic impacts
- Traffic delays during construction likely

NM 31 128

Screening

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Comparative Analysis and Key Findings

Comparative Screening Analysis

- Several design concepts were developed to meet the project purpose and need
- These were screened to identify the most promising concepts using qualitative and quantitative assessment
- Screening Criteria
  - Safety benefits
  - Traffic benefits
  - Compatibility with public and industry needs
  - Land use impacts and property impacts
  - Maintenance of traffic during construction
  - Cost (or benefit/cost)

Comparative Screening Analysis

Review of Mainline Design Concepts

- **Enhanced 2-Lane** – Reconstructs rural segments of NM 31 and NM 128 to include
  - **2 traffic lanes** (one per direction)
  - Passing lanes at approximate 5-6 mile intervals
- **Super 2-Lane** – Continuous alternating passing lanes
- **Flush Median 4-Lane** – **4 traffic lanes *with* 14-foot median separation**.
- **Depressed Median 4-Lane – 4 traffic lanes *with* median separation**. Median width and type **varies from 38 feet to 60 feet**, depending on location.

Screening Analysis Findings – Mainline Higher Traffic Corridors

NM 31 from US 285 to NM 128
NM 128 from NM 31 to Jal

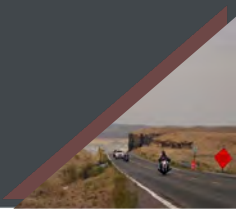
NM 31-128 Mainline Corridor-Wide Alternatives Screening Matrix						
Mainline Alternative	**Safety Benefit**	**Traffic Benefit**	**Compatibility with Public and Industry Needs**	**Land Use and Property Impacts**	**Maintenance of Traffic During Construction**	**Overall Life-Cycle Cost**
Enhanced 2-Lane						
Super 2						
4-Lane Flush Median						
4-Lane Divided Median						

LEGEND

- **High Level of Concerns**
- **Moderate Level of Concerns**
- **Low Level of Concerns**

Enhanced 2-Lane and Super 2-Lane:
Not Recommended for Further Analysis

Screening Analysis Findings – Mainline Lesser Traffic Corridors



NM 31 from NM 128 to US 62
NM 128 from Jal to TX/NM State Line

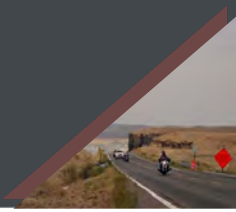
NM 31-128 Mainline Corridor-Wide Alternatives Screening Matrix						
Mainline Alternative	**Safety Benefit**	**Traffic Benefit**	**Compatibility with Public and Industry Needs**	**Land Use and Property Impacts**	**Maintenance of Traffic During Construction**	**Overall Life-Cycle Cost**
Enhanced 2-Lane						
Super 2						
4-Lane						

LEGEND

- **High Level of Concerns**
- **Moderate Level of Concerns**
- **Low Level of Concerns**

4-Lane:
Not Recommended for Further Analysis

Screening Analysis Findings – Major Rural Intersections



NM 31 Intersections
Refinery Road
NM 128
US 62

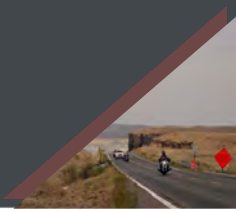
NM 128 Intersections
WIPP Road
Orla Road
Buck Jackson
Others Being Studied

NM 31-128 Major Rural Intersections Alternatives Screening Matrix						
Mainline Alternative	**Safety Benefit**	**Traffic Benefit**	**Compatibility with Public and Industry Needs**	**Land Use and Property Impacts**	**Maintenance of Traffic During Construction**	**Overall Life-Cycle Cost**
Side Street Stop Controlled						
Signalized						
RCUT						
High-T						
Roundabout						

LEGEND
- Major Level of Concerns
- Moderate Level of Concerns
- Low Level of Concerns

Side Street Stop Controlled and Signalization: Not Recommended for Further Analysis

Screening Analysis Findings – Major Urban Intersections (City of Jal)



NM 128 Intersections

3rd Street (Jal)

NM 18 (Jal)

NM 31-128 Major Urban Intersections Alternatives Screening Matrix						
Mainline Alternative	**Safety Benefit**	**Traffic Benefit**	**Compatibility with Public and Industry Needs**	**Land Use and Property Impacts**	**Maintenance of Traffic During Construction**	**Overall Life-Cycle Cost**
Side Street Stop Controlled						
Signalized						
RCUT						
Roundabout						

LEGEND

- Major Level of Concerns
- Moderate Level of Concerns
- Low Level of Concerns

Side Street Stop Controlled, RCUT and Roundabouts: Not Recommended for Further Analysis

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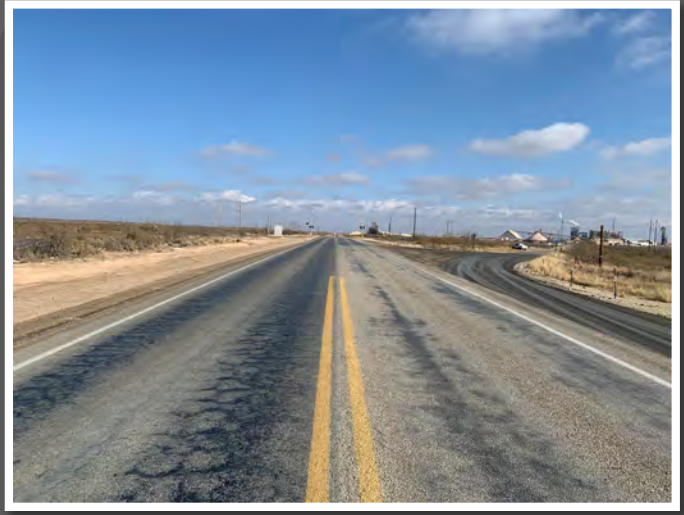
Project Delivery Method:

Design-Build Procurement Phase I and Project Phasing

Design-Build



Design-Build

What is Design-Build?

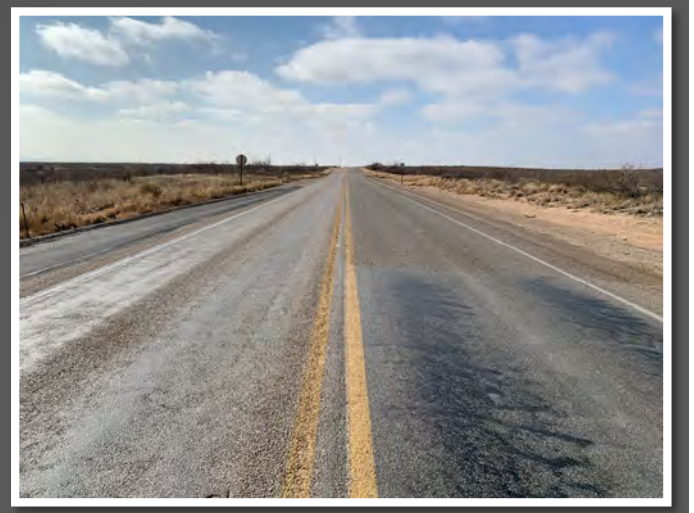
A procurement method where NMDOT **hires a team to complete the design and construct the project**.

Why Does NMDOT want to use Design-Build for this project?

Construction can start sooner as compared to NMDOT finishing all design. Design-Build projects **tend to move at a faster pace.**

It will **look like a traditional project with contractor more involved in public outreach and key items** such as maintenance of traffic, environmental compliance and utility coordination.

Design-Build



Project Goals:

- A high quality, safe, environmentally responsible, durable, and maintainable Project
- Minimum disruption to the local industries and traveling public during construction
- Design-Build Agreement awarded and signed by **Fall 2022**
- Maximizing the value of the Design-Build delivery method

Design-Build

- The overall corridor improvements will be phased
- NMDOT will procure a single design-builder to design and construct the initial Phase I Project
- The Design-Build Project will have alternatives based on funding availability
- NMDOT will use a “best value” approach to select the design-builder

Design-Build

The Design-Build phase (Phase I) will be federally funded and consist of the following base elements:

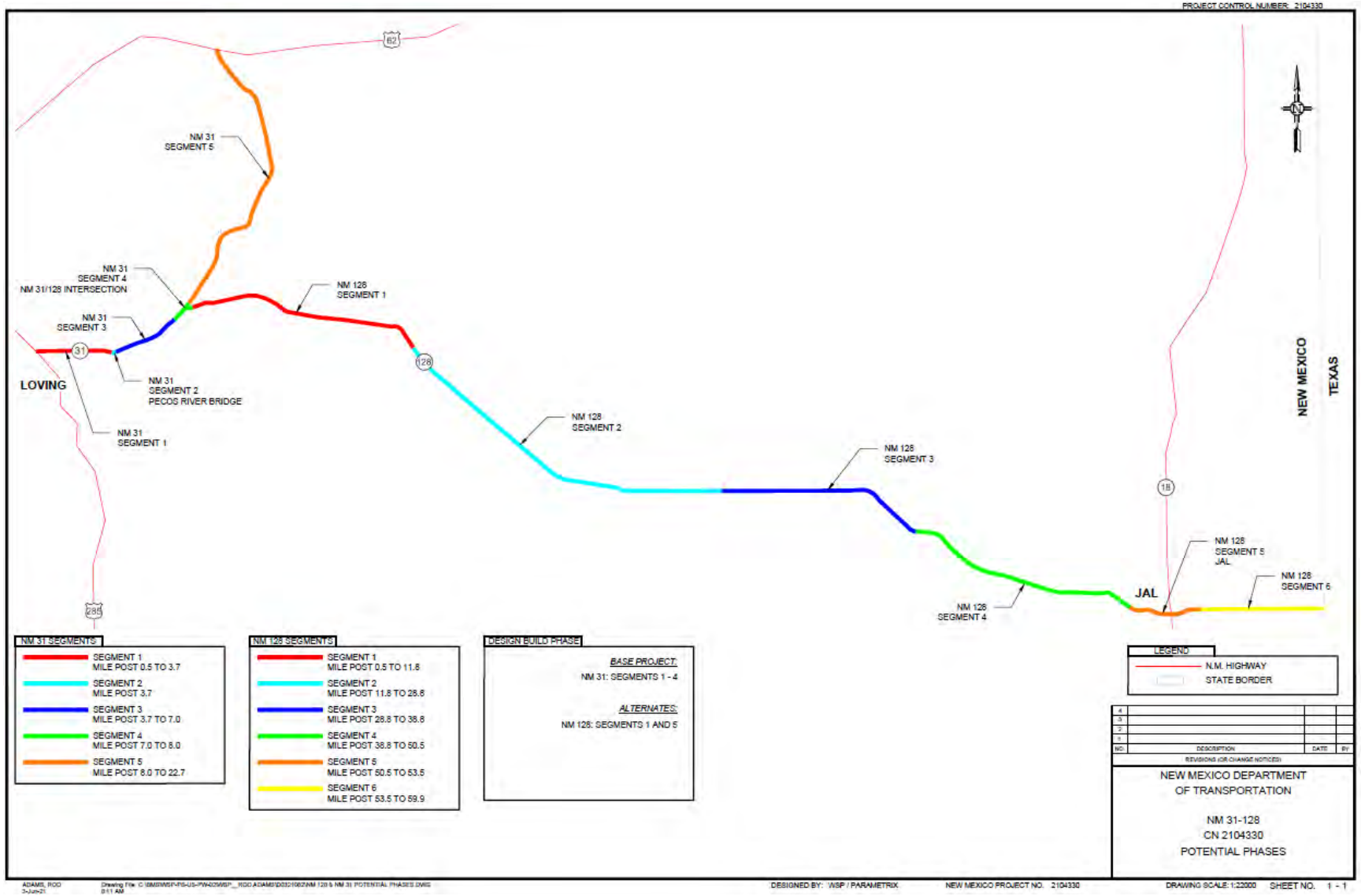
- Improvements to NM 31 from 0.5 miles east of U.S. 285 through the NM 128 intersection
- The NM 31-128 intersection
  - Estimated cost: **$70-$80 million**

Design-Build

The Design-Build Phase (1st) will consist of the following add alternative elements:

- City of Jal Improvements
  - Estimated Cost: **$16-$19 million**
- NM 128 from NM 31 to the WIPP Road
  - Estimated Cost: **$40-$45 million**
- NM 31 and NM 128 Site Safety Improvements
  - Estimated Cost: **$2-$10 million**
- Added into Design-Build Contract or as Deferred Work to the Design Build Agreement, if funding is secured.

Conceptual Project Phasing



Schedule and Next Steps

Project Schedule

- Start of study (Phase IA/B) – **Fall 2020**
  - *Public meeting – **August 2021***
  - *Public meeting for Jal - **September 2021***
- Completion of study – **November/December 2021**
- Initial engineering design development – **Summer 2021 through Spring 2022**
- Environmental analysis & documentation – **Spring/Summer 2022**
- Public meeting – **January/February 2022**
- Anticipated construction (Design-Build) – **Fall/Winter 2022**[1,2]
  - *Multiple Construction Phases Depending on Funding*

1. Estimated
2. Funding dependent

Next Steps

- City of Jal Public Meeting – **September 14**
- Gather Public Input
- Perform Detailed Evaluation of Alternatives
- Finalize Phase IA/B Study
- Hold Additional Public Meeting and Gather Input
- Initial Engineering
- Complete Environmental Documentation
- Develop Design-Build Contract Documents (RFQ, RFP) – **Now through Summer 2022**
- ROW acquisition
- Select Design-Build Team – **Fall 2022**
- Start Construction of Phase I

We Want to Hear from You…

Please provide us with comments by September 30, 2021

Electronic submittals preferred

How to Provide Comments?

- **Email:** jennifer.hyre@wsp.com
- **Call:** (505) 878-6577
- **Mail:** WSP | Jennifer Hyre | Attn: *NM 31-128*
  2440 Louisiana Blvd NE, Suite 400
  Albuquerque, NM 87110

Project website

https://nm31-128project.nmdotprojects.org

All Comments are welcome!!

NM 31 128

THANK YOU

New Mexico DEPARTMENT OF TRANSPORTATION
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Questions

If you would like to speak,
raise your hand
Press *9 if you have dialed-in