PBMPO POLICY BOARD PROJECT BRIEFING

Interregional Planning Environmental Linkages (PEL) Study

PERMIAN BASIN MPO

July 17, 2023

Permian Basin MPO Metropolitan Planning Organization

FREESE AND NICHOLS

CAMBRIDGE SYSTEMATICS

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MAVERICK PRODUCTIONS

Study Area

and Study Objective

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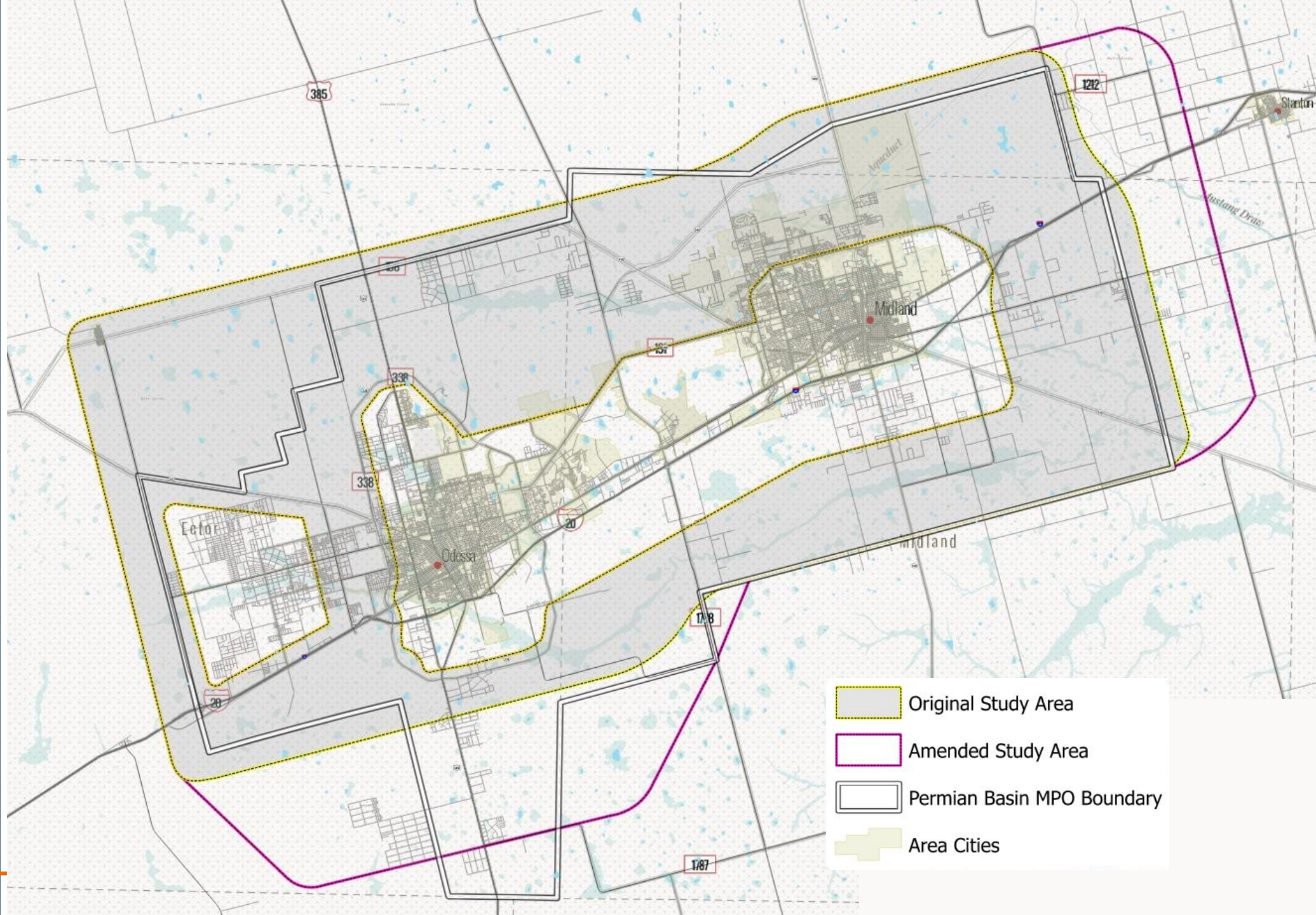


PEL Basics

Planning Environmental Linkages

What is a **Planning & Environmental Linkage (PEL)** Study?

- A holistic approach to identify transportation alternatives
- Identifies goals for future mobility corridors (or other transportation improvements) based on:
  - Environment
  - Community
  - Economic Development
- Planning study *informs* the environmental review process (NEPA)
- Leverages multiple stakeholders
  - TxDOT, Cities, Counties, PBMPO, Private Entities

PEL Basics

Interregional Loop Study

Objectives of Study:

- Region-wide shared vision
- Understanding study area stakeholder and partner capabilities/limitations
- Broad awareness and understanding of study area
- Collaboration tool to assist and facilitate orderly area development

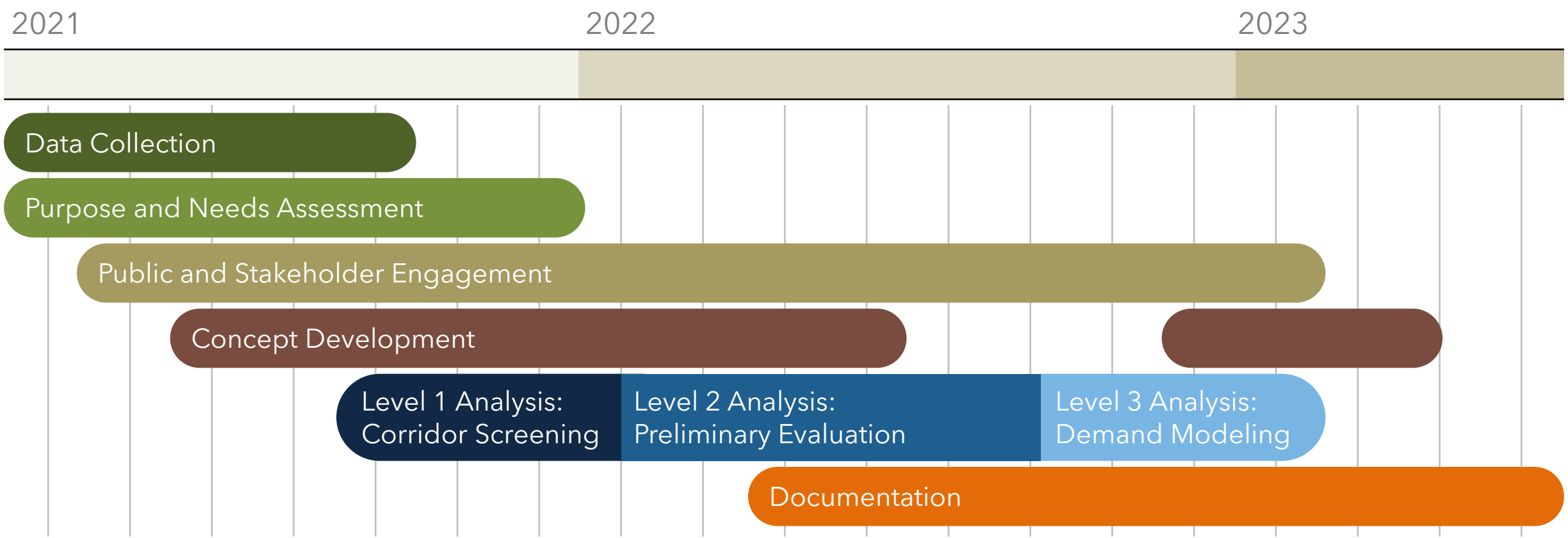
Purpose of *this* PEL:

- Identify potential corridors for future evaluation
- Establish collaborative forum for common vision for an ***interregional* transportation facility**
  - Enhance safety and mobility
  - Better movement of goods and services
  - Higher functional classification for more comprehensive service

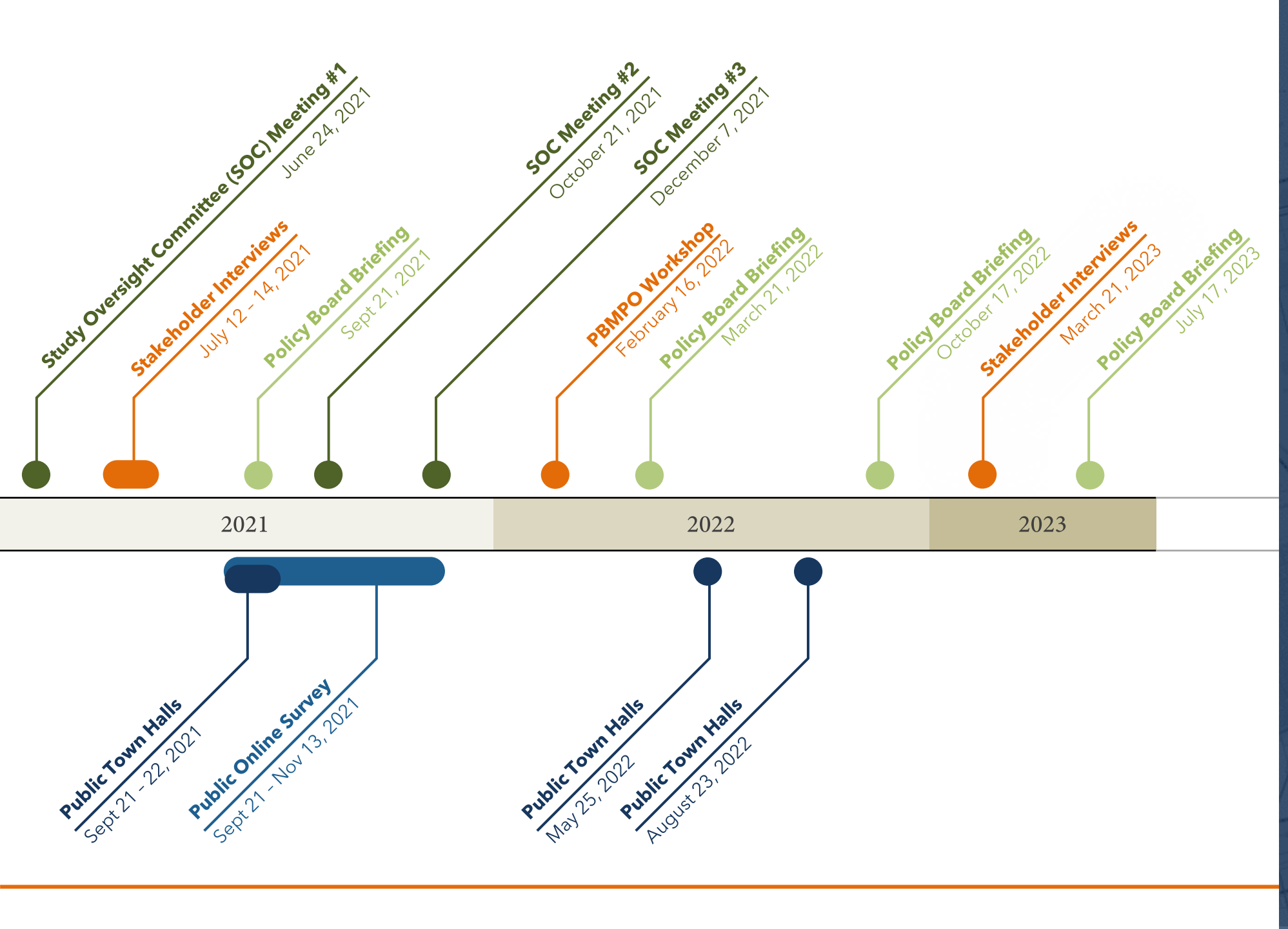
Study Process

- Data Collection
- Public & Stakeholder Involvement
- Purpose and Needs Assessment
- Develop and Screen Potential Alternatives
- Project Next Steps

PEL Study Timeline

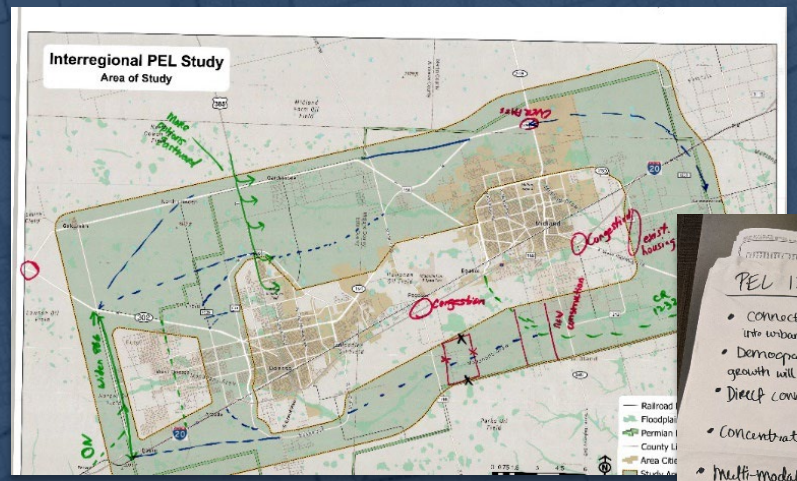


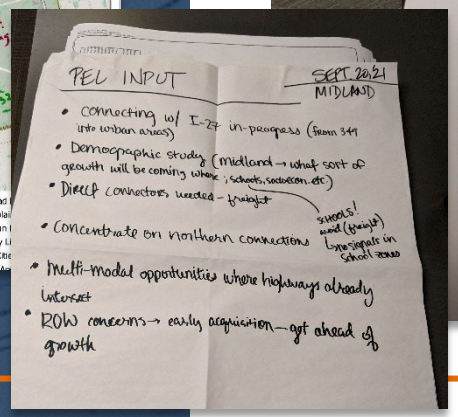
Public Engagement



Public & Stakeholder Input:

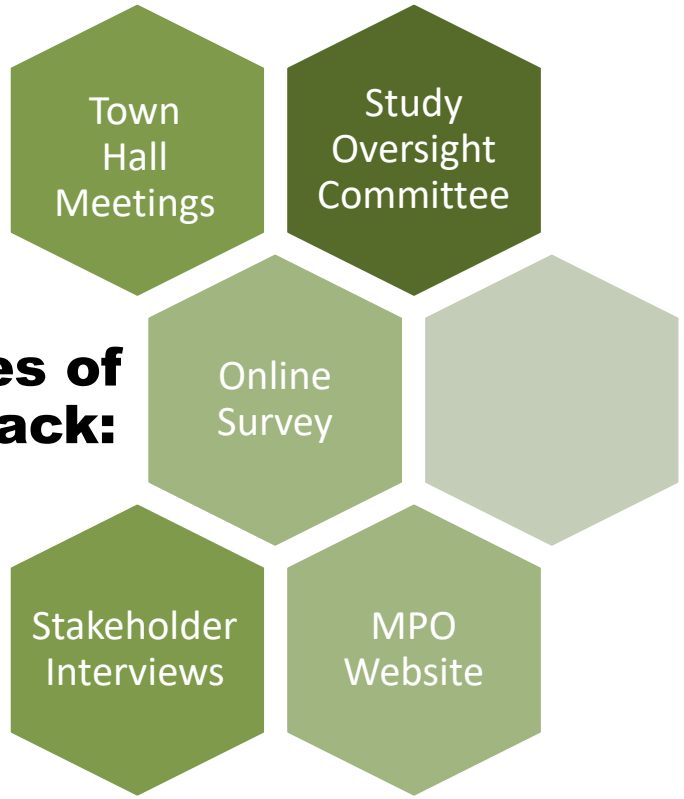
the basis for Alternatives Development



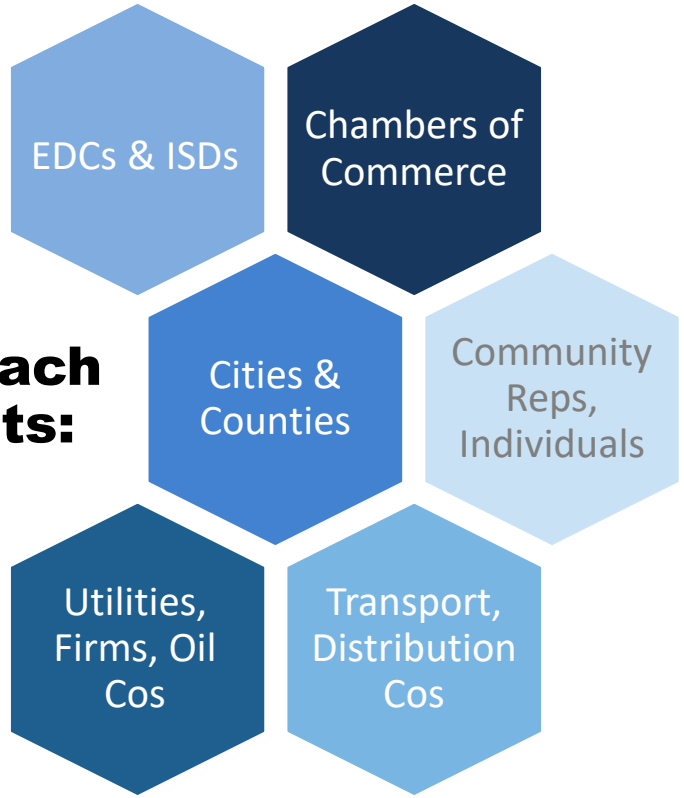


Public
Engagement

Sources of Feedback:



Outreach Efforts:



What We Heard

Outreach Trends

- Preference for higher consideration of environmental criteria

Highest Priorities

- Congestion Reduction
- Overall Crash Reduction
- Pavement/Bridge Conditions
- Travel Time Reliability
- Economic Development

Most Needed

- Roadway Connectivity
- Safety
- Intersection Improvements
- Supporting Local Development
- Supporting Local Economy

Purpose & Needs Assessment

Connectivity (Nodes)

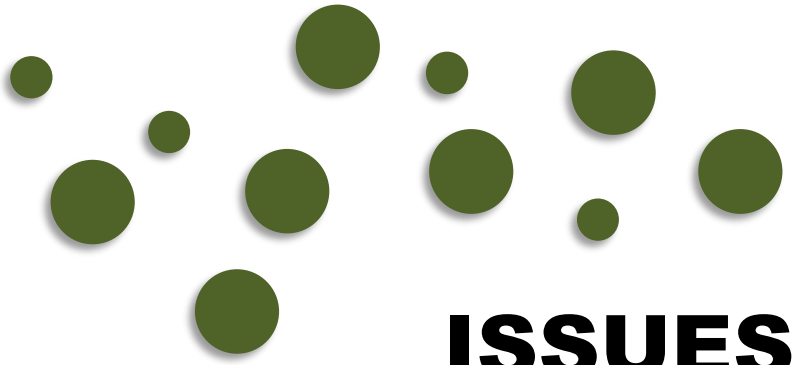
Safety

Mobility (Links)

Access and Proximity to Growth

Interregional Benefits

PEL
Process



ISSUES

Problems to address in the region

NEEDS

Ideal solutions to address these issues

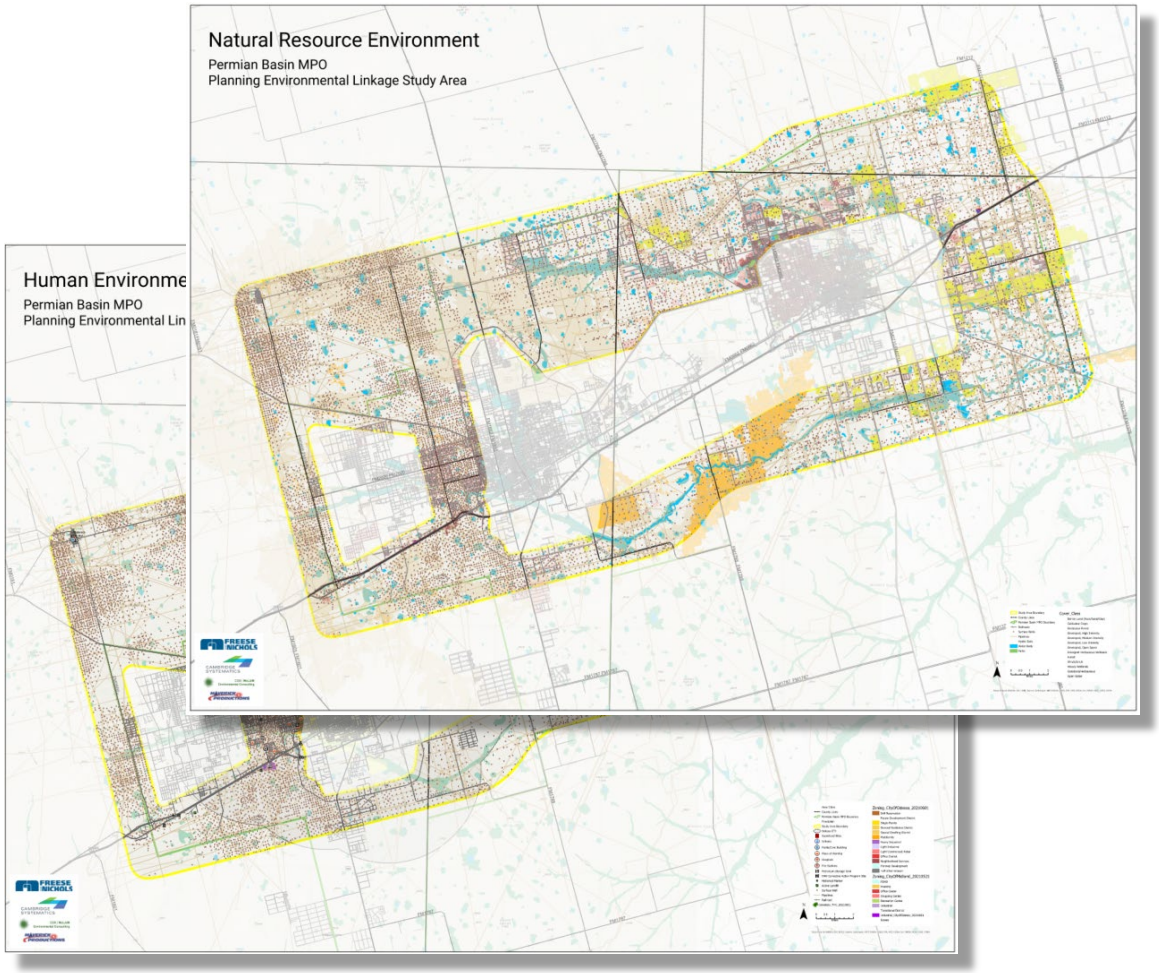
PURPOSE

Ways to work toward meeting the needs

PEL
Process

ISSUE	NEED	PURPOSE: *The purpose of the PB MPO PEL Study is to develop conceptual transportation alternatives that address the stated needs. An alternative may do this by:*
There is a lack of alternative routes for through-movement of goods and travelers.	Connectivity (Nodes)	Providing system relief or additional traveler choice via an alternate route for movement of goods and travelers
Above-average crash rates and fatal crashes.	Safety	Creating safer regional movement
Incomplete interregional networks channel truck traffic and commuter traffic together.	Mobility (Links)	Extending or expanding the existing network
Simultaneous increases in development and energy manufacturing have led to rapid, shifting demand growth on existing roadways, rail lines, and pipelines.	Proximity & Growth (Access)	Providing appropriate level of access to existing or anticipated economic and development activity
Inconsistent interregional consideration for transportation solutions	Interregional Benefits	Providing regional connectivity and access for both Midland, Odessa; and Ector, Midland, and Martin Counties.

Gather Data & Analyze Feedback

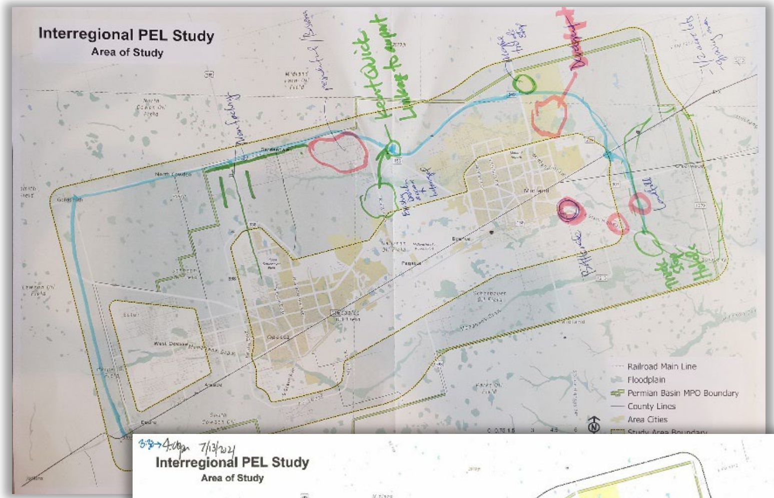


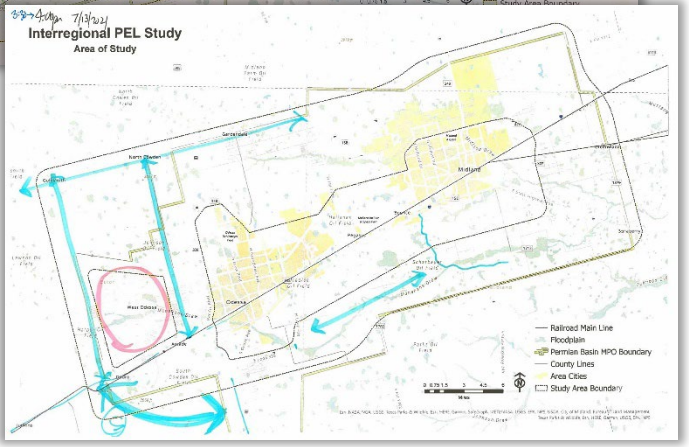
Data Sources

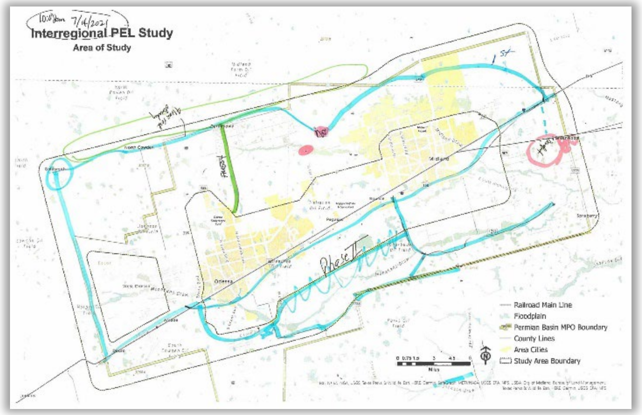
- Transportation Systems, existing and planned
- Environmental Resource Data
  - Archeologic, Demographic, Built Environment, Ecosystems, Conservation, Hazardous Materials, etc.
- Major utilities, oil, and gas operations
- Census demographics
- TxDOT and local access management policies
- Travel Demand Forecasting
- Land Use Plans and Zoning Maps

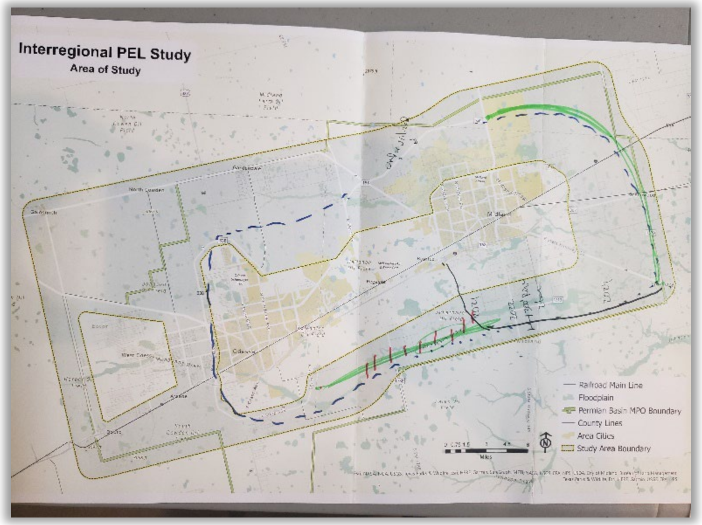
Identification of Potential Corridors

- Stakeholder and Public Input
- Study Area Data (Environmental, Physical Factors)
- “Clean Slate” Approach
- Results: 1200 miles of suggested corridors

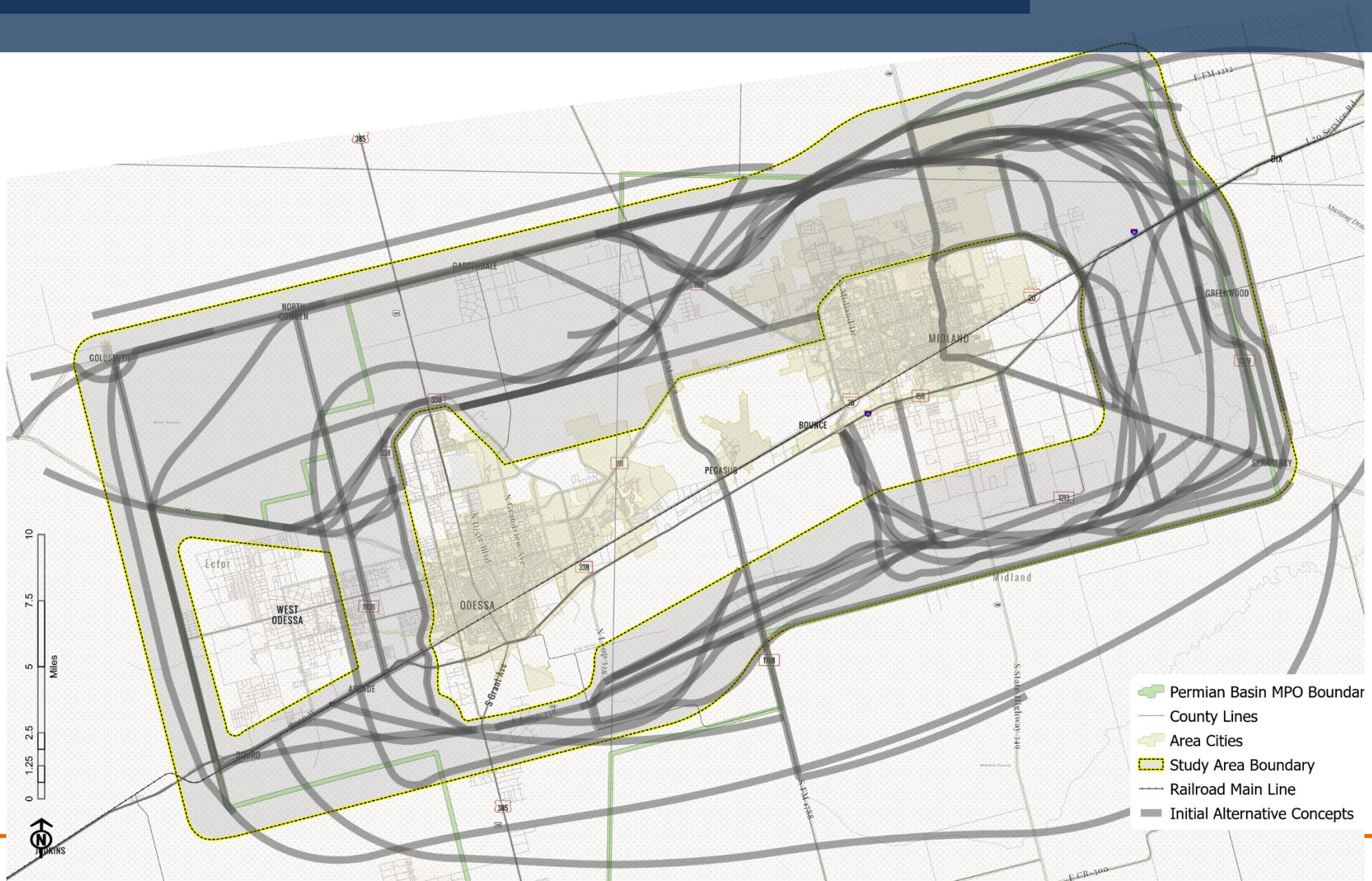








Identification of Potential Corridors

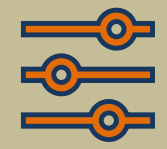


Alternatives Screening

"Universe" of Alternatives

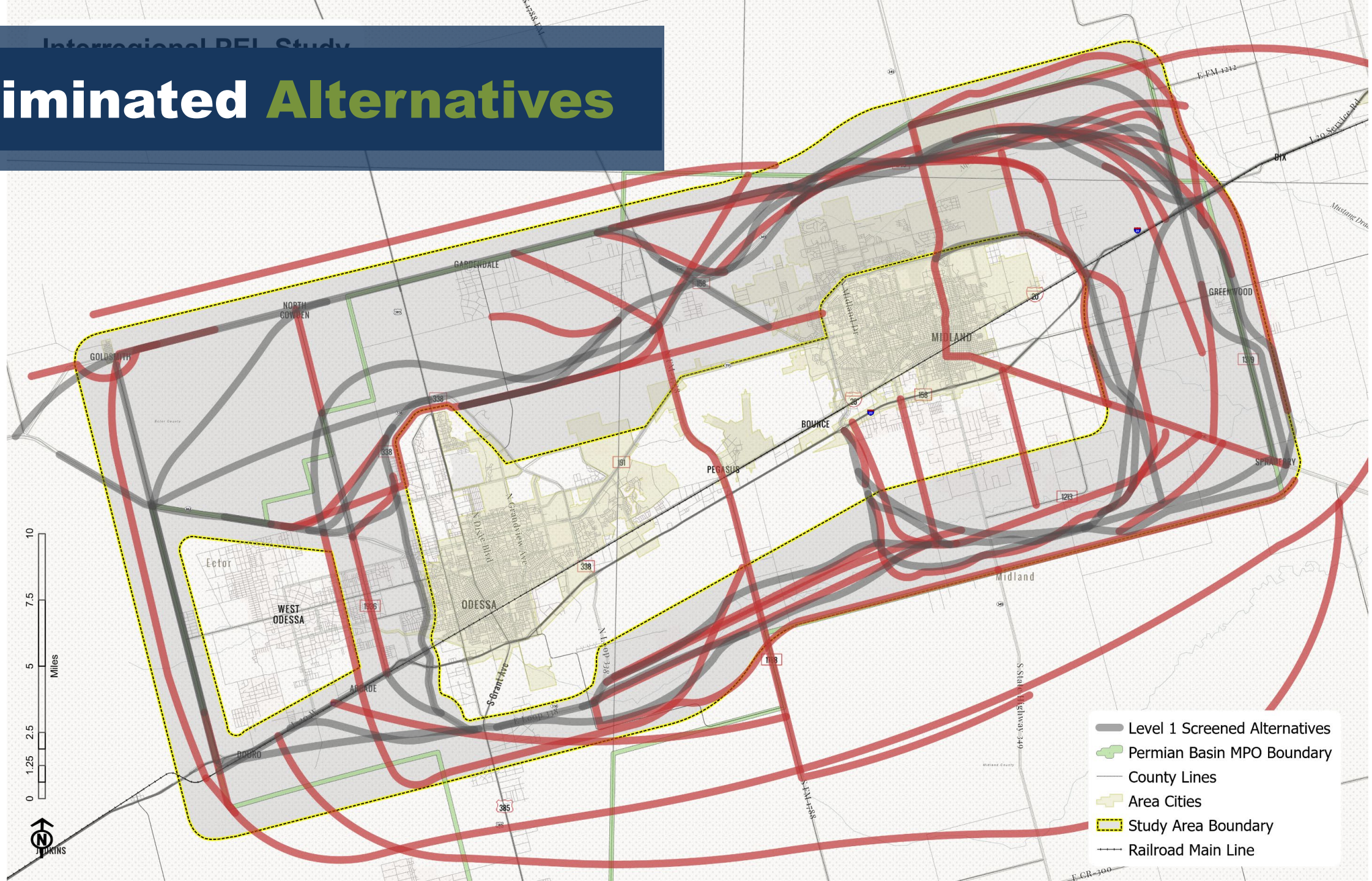
Level 1 Screening:
Meets Purpose & Need

Level 2 Screening:
Comprehensive Evaluation

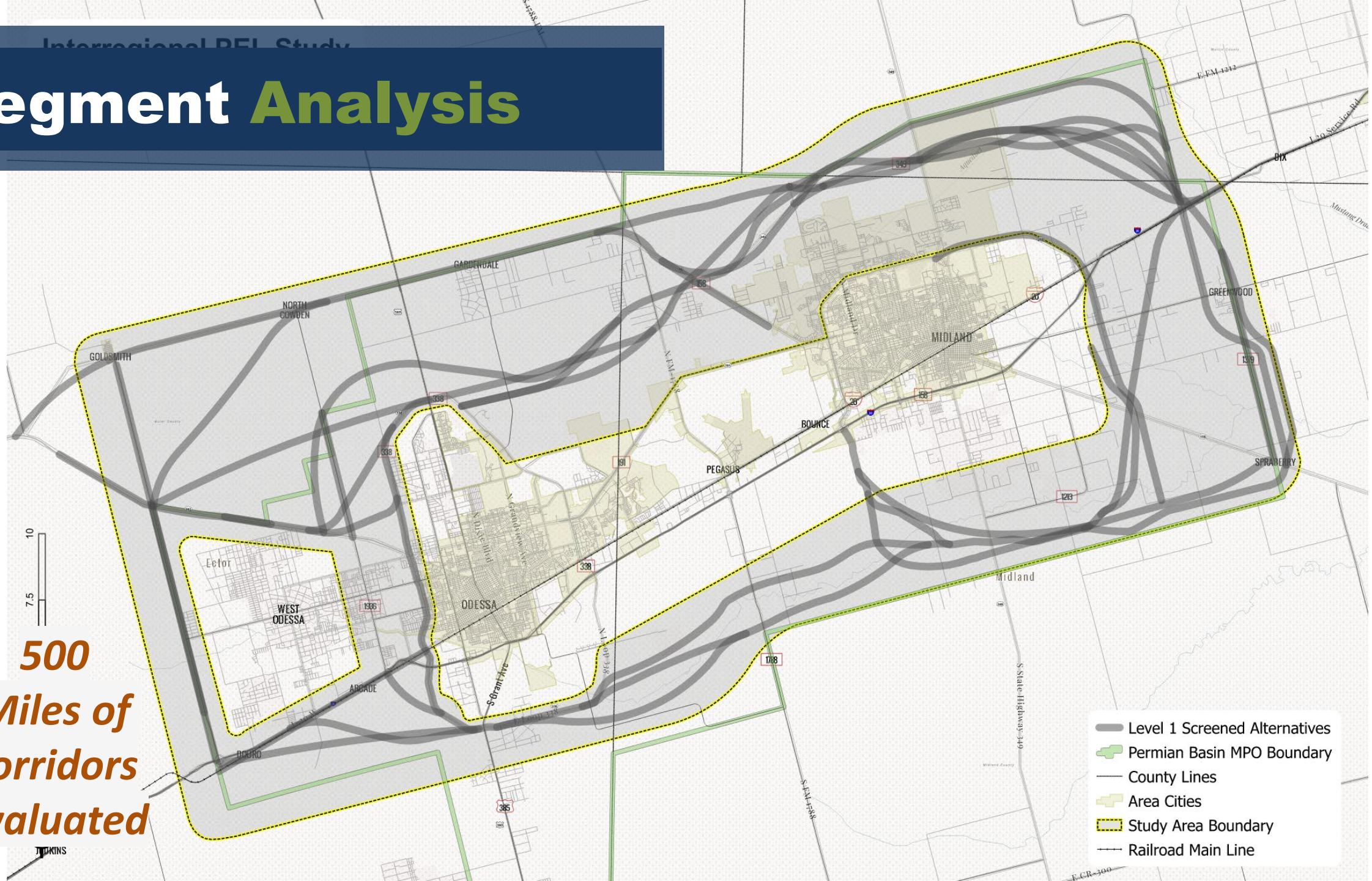


Level 3 Screening:
Refine Areas of Opportunity

Eliminated Alternatives

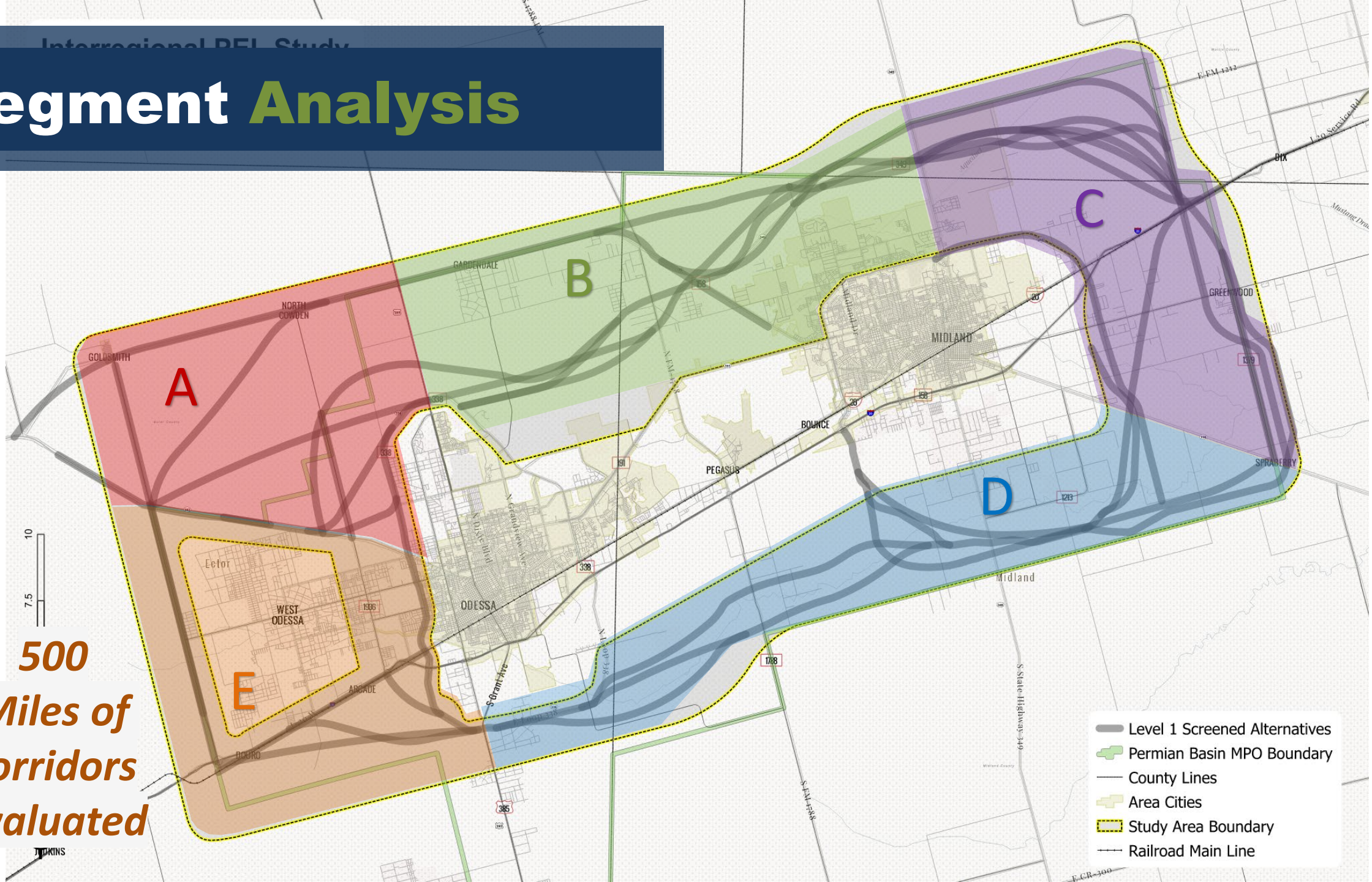


Segment Analysis



500 Miles of corridors evaluated

Segment Analysis



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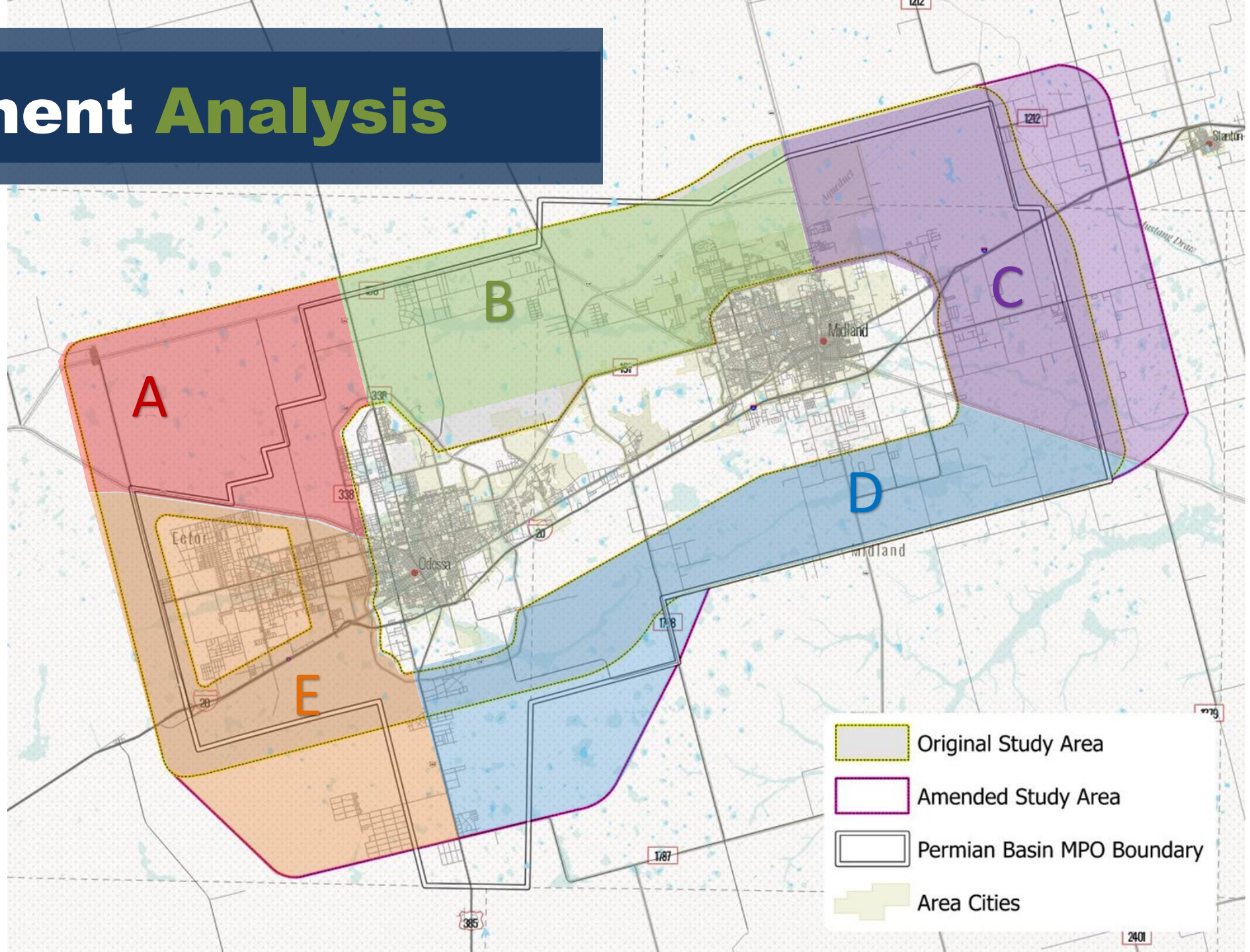

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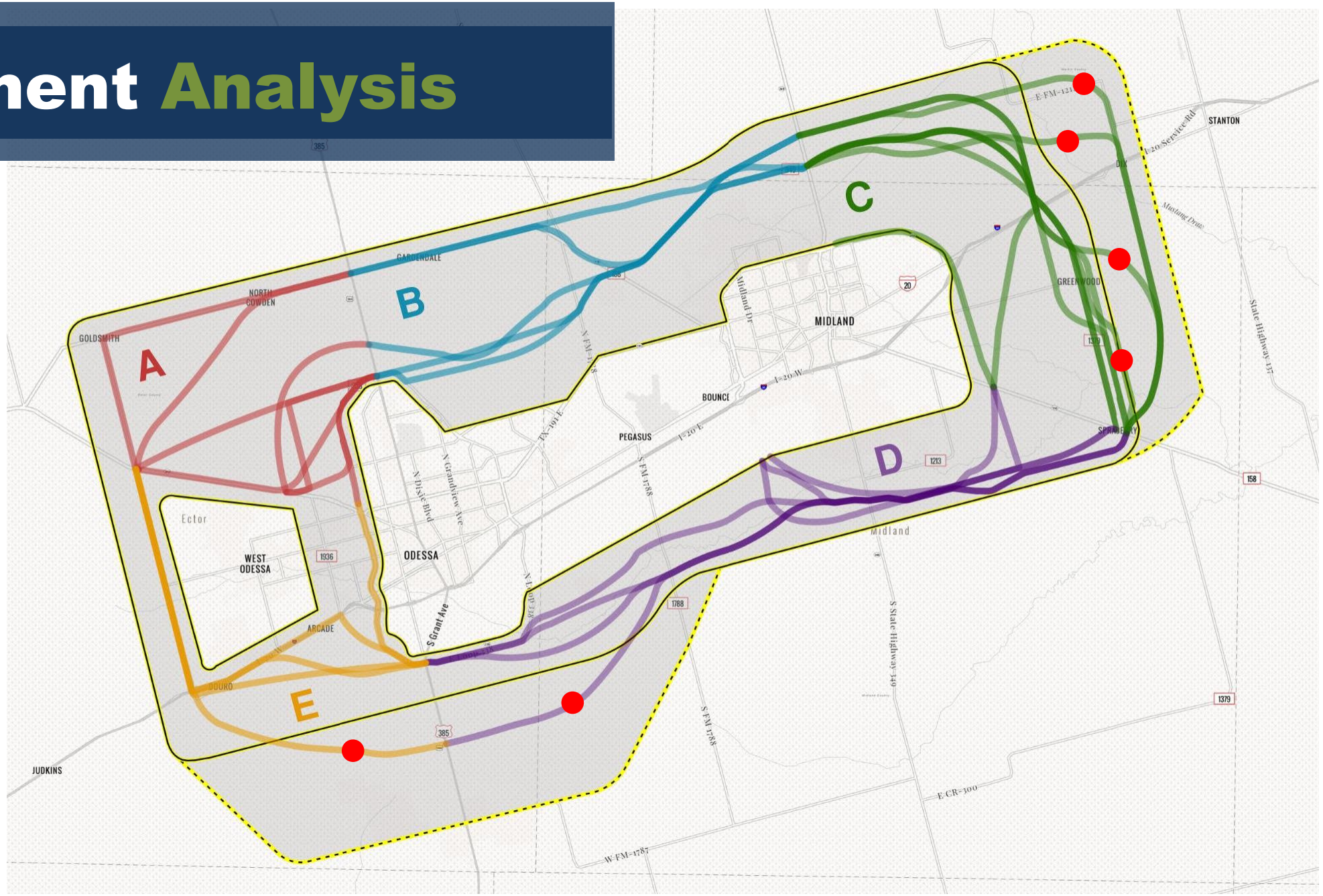
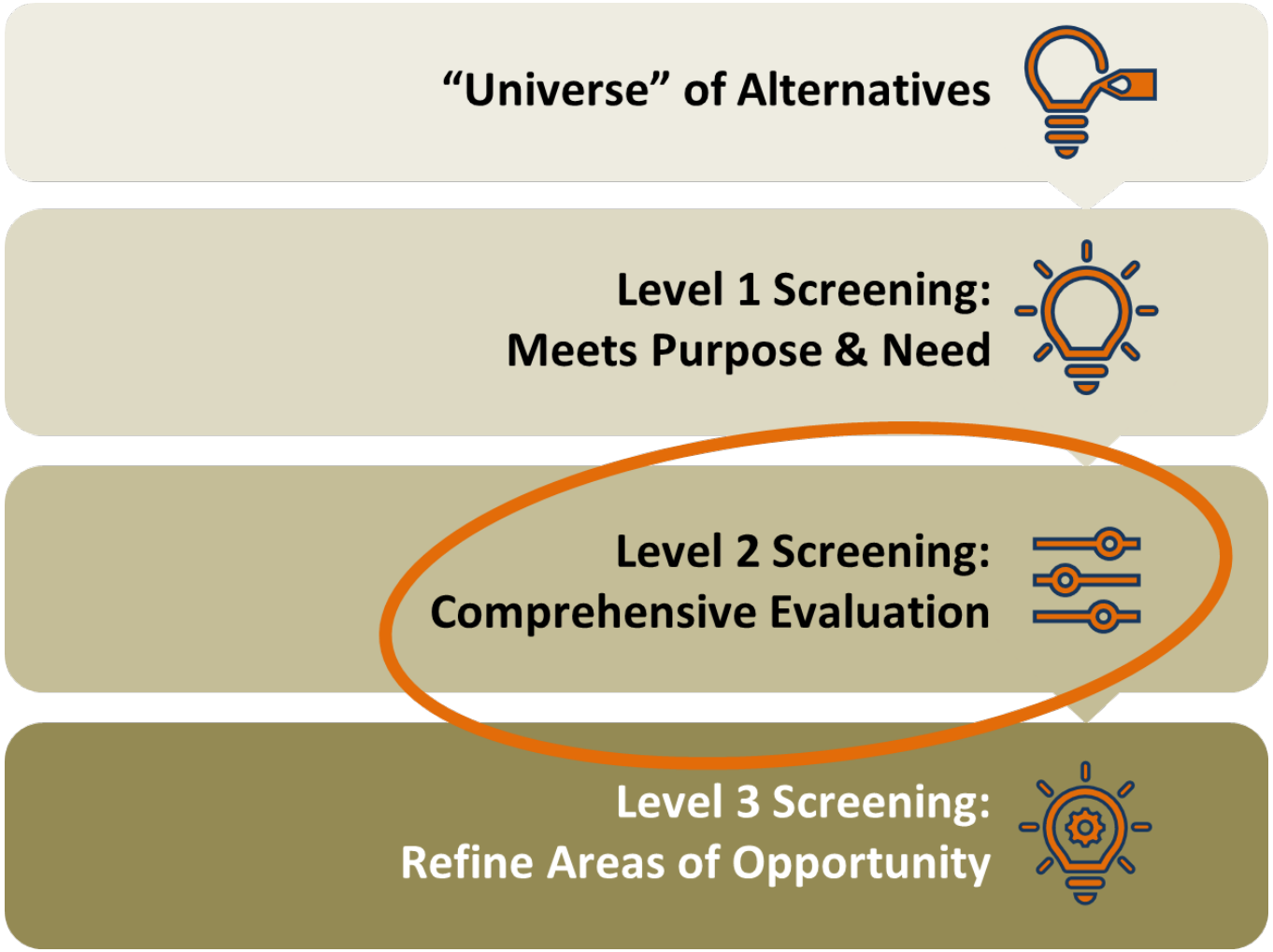


Level 2 Screening Criteria



Level 2 Screening Criteria

Consistency with Regional Plans & Infrastructure

Planned and Existing Systems and Projects

Natural Environmental Impacts

Archeological Sites
Threatened/Endangered Species
Parks and Open Space
Agriculture
Oil and Gas Infrastructure
Etc.

Social Environmental Impacts

Vulnerable Populations
Community Facilities
Sensitive Receptors

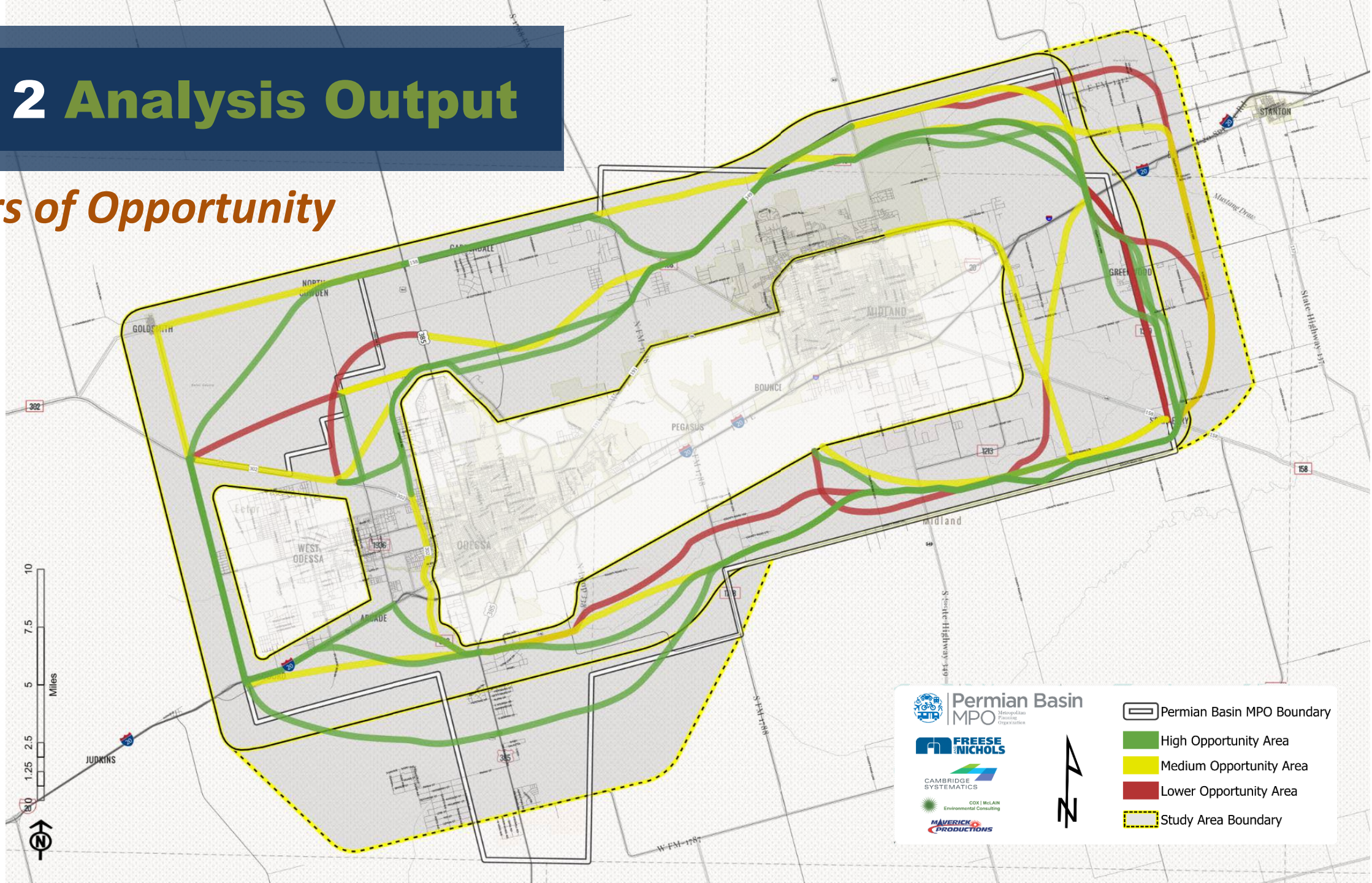
Economic Development

Conducive to future job growth
Land Use Compatibility

Criteria	Attribute Name	Resource Type/Measure	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	E1	E2	E3	E4
2. Consistency with Regional Plans and Infrastructure	2.1 Planned Systems																														
	2.2 Existing Systems																														
3. Modeling																															
4. Natural Environmental Impacts	4.1 Archeological and Historical Sites	NRHP Property																													
		NRHP District																													
		TXDOT Historic Properties																													
		TXDOT Historic Bridges																													
		Historical Markers	x	x							x	x																	x	x	x
		DOE Eligible Points																													
		DOE Eligible Polygons																													
		Archaeological Site																			x				x						
		Historic Highway Routes									x					x	x	x	x	x	x	x	x					x	x	x	x
	4.2 Oil and Gas	Surface Wells	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Pipeline Conflicts	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Storage Tanks	x									x								x								x	x	x	
	4.3 Wetlands or Major Water Features	NHD Flowline	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		NHD Waterbody	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		NWI	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	4.4 Threatened and Endangered Species/Species of Concern	TXNDD			x	x	x	x	x	x			x	x	x			x	x			x	x	x				x			
	4.5 Parks/Open Space/Floodplain	Cemeteries																													
		100-year Floodplain	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Park Areas																													
	4.6 Hazardous Site/Landfills	Petroleum Storage Tank	x																												
		Leaking Petroleum Storage Tank	x			x			x	x								x	x									x	x		
		Industrial and Hazardous Waste Corrective Action (IHWCA)	x			x			x	x																		x	x	x	x
		Superfund Site																										x	x		
		Landfill																													
	4.7 Agricultural Areas	Center Pivot																													
		Prime Farm Land/Farmland of Statewide Importance									x	x				x	x	x	x		x		x								
5. Social Environmental Impacts	5.1 Relocations/Displacements	Population + HHs in 2045											x	x	x	x	x	x	x	x		x	x	x	x	x	x				
	5.2 Area Development	City Limits y/n	x																												
	5.3 Corridor Effect on Community Facilities and Sensitive Receptors	Public Buildings									x	x	x	x	x	x	x	x	x	x	x							x			
		Hospitals																													
		Fire Stations																													
		Schools																													
	5.4 Corridor Effect on EJ and Vulnerable Populations	Block Groups w/ Minority Pop <50%	x	x	x	x	x	x	x	x								x	x												
	5.5 Corridor Effect on Income Levels	Low Income Block Groups										x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
6. Right of Way, Public Support																															
7.1 Economic Development	Conducive to ED and LU Compatibility	Jobs in 2045																													
TOTAL (FINAL) - Collaborative Result			1	2	3	4	5	6	7	8	9 43	10	11	12	13	14 30	15 31 35	16 32	17 33	29 34	18	19 45	20	21	22	23 47	24	25	26	27	28 49

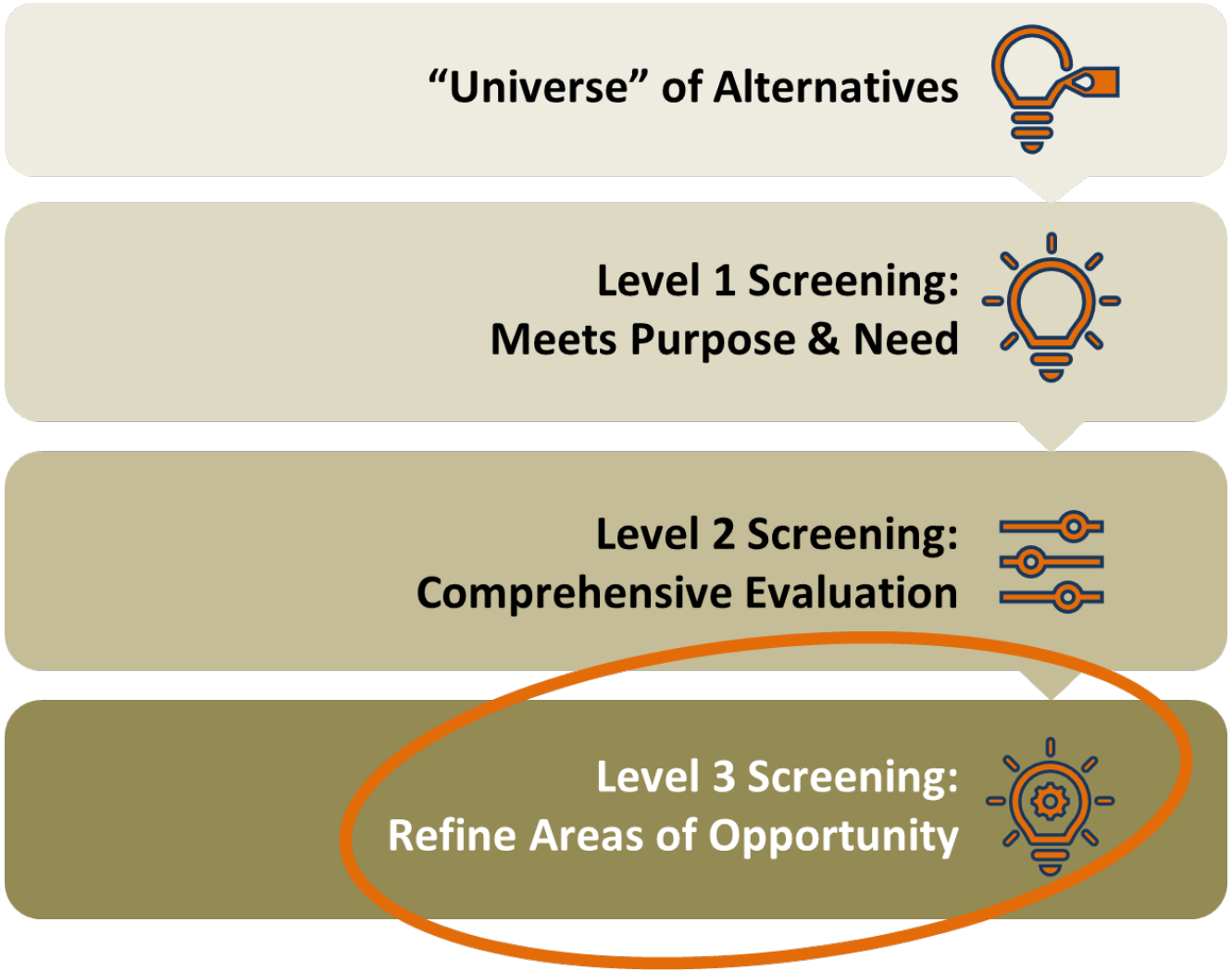
Level 2 Analysis Output

Corridors of Opportunity

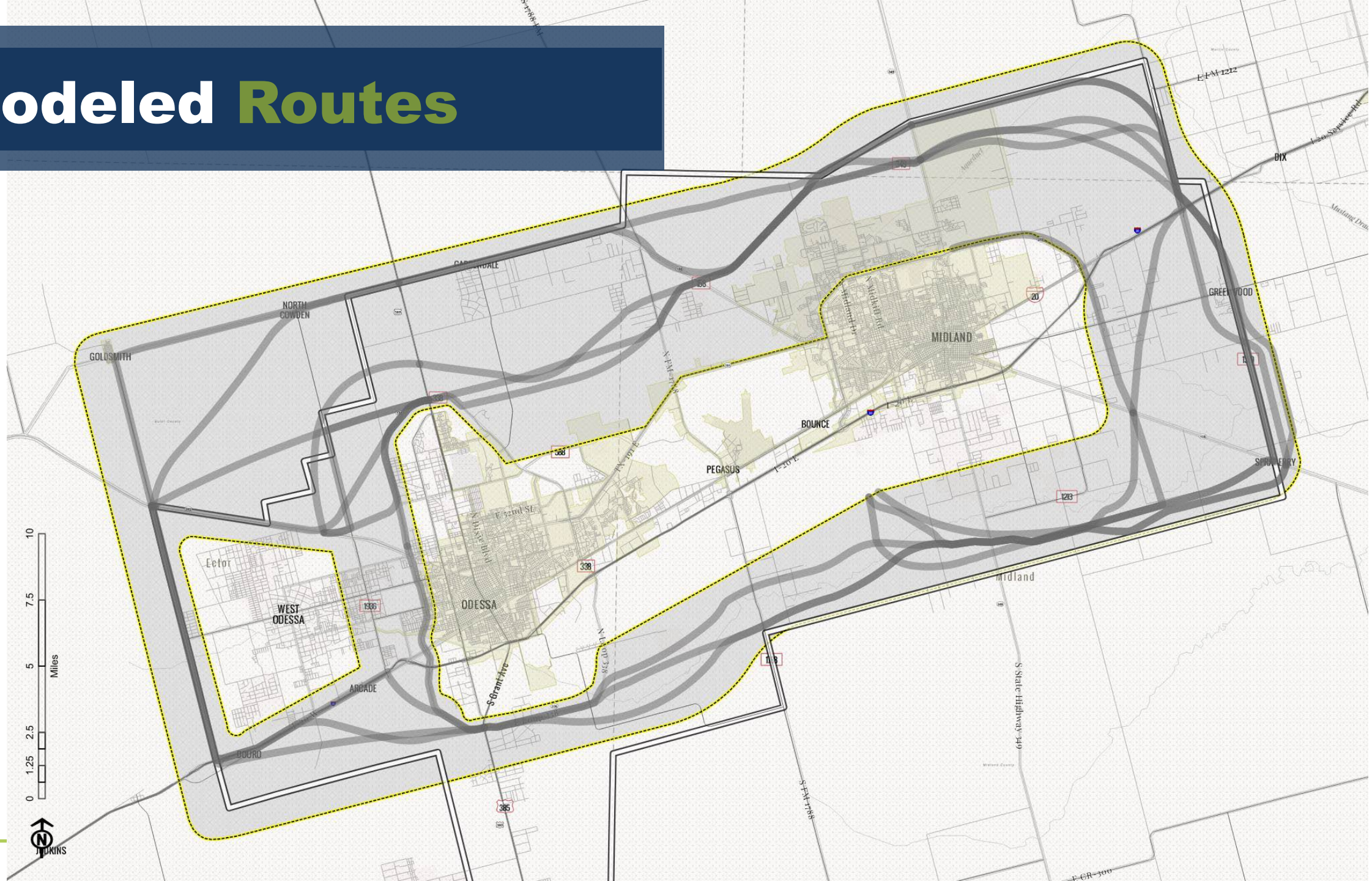


Level 3

Screening



Modeled Routes



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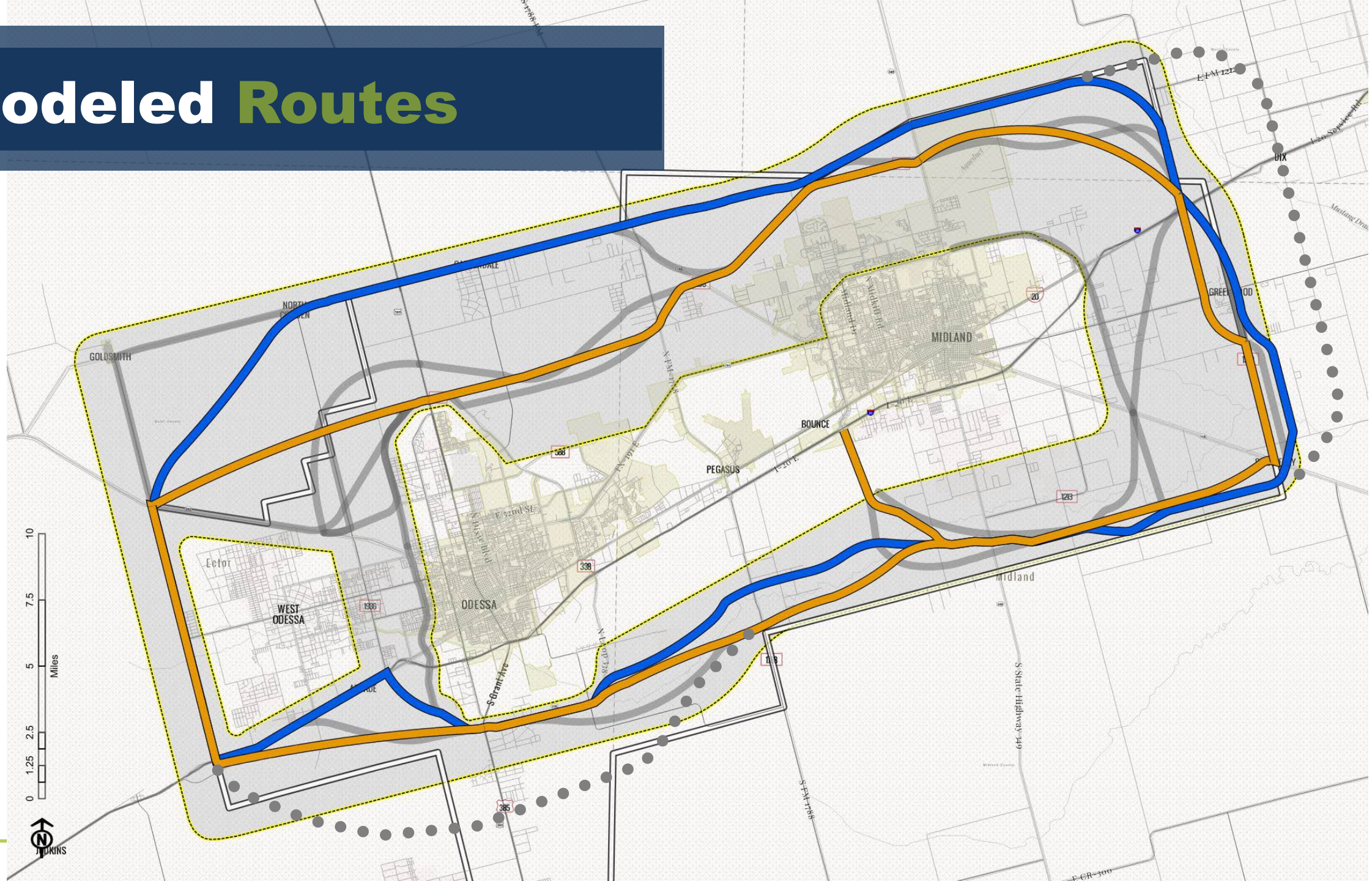
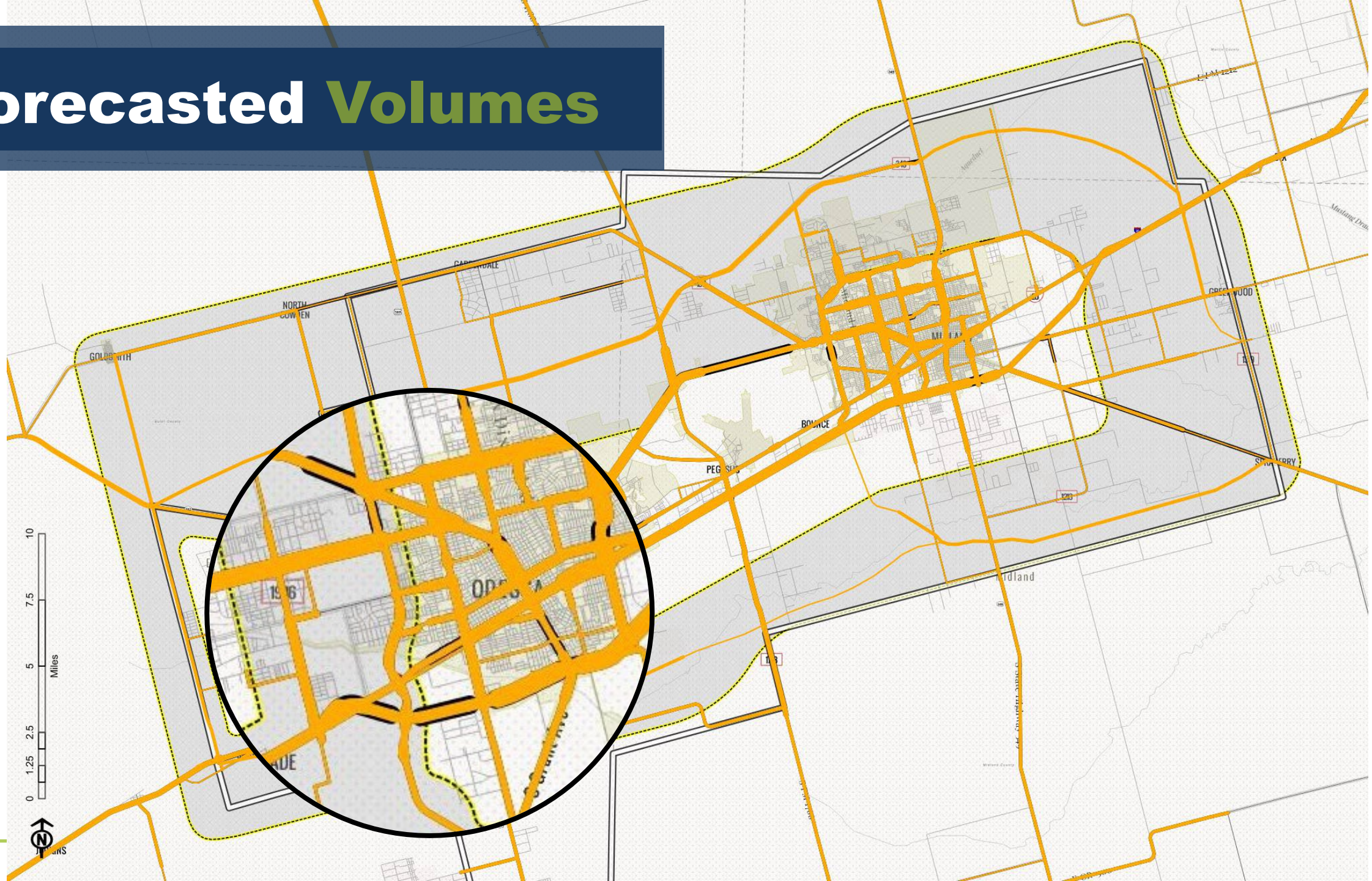


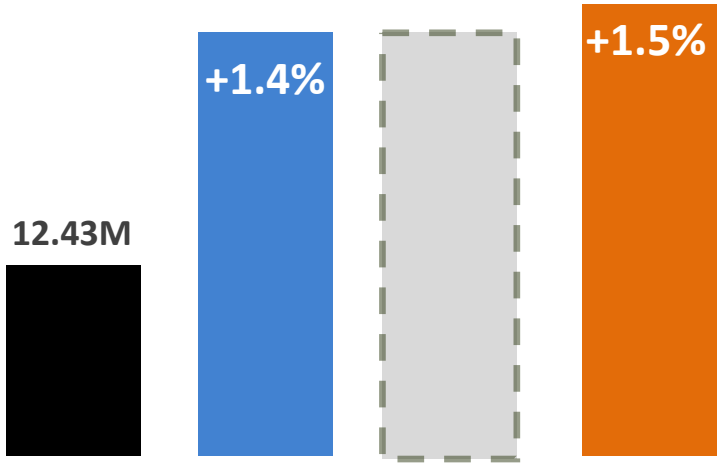
Forecasted Volumes



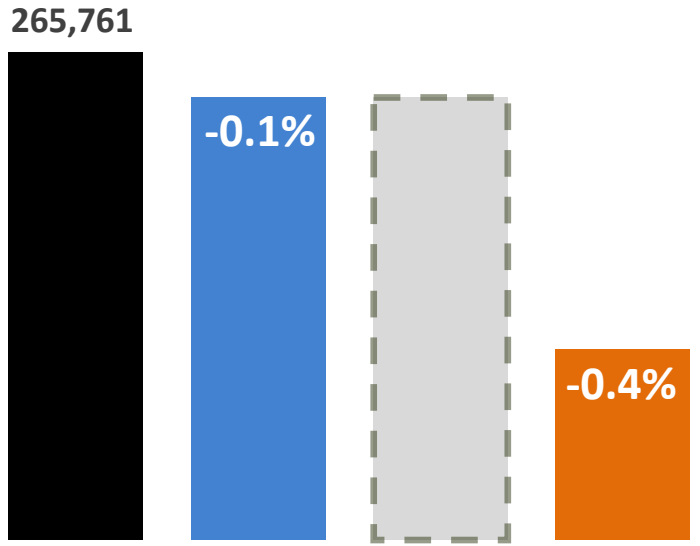
Performance Metrics

DAILY

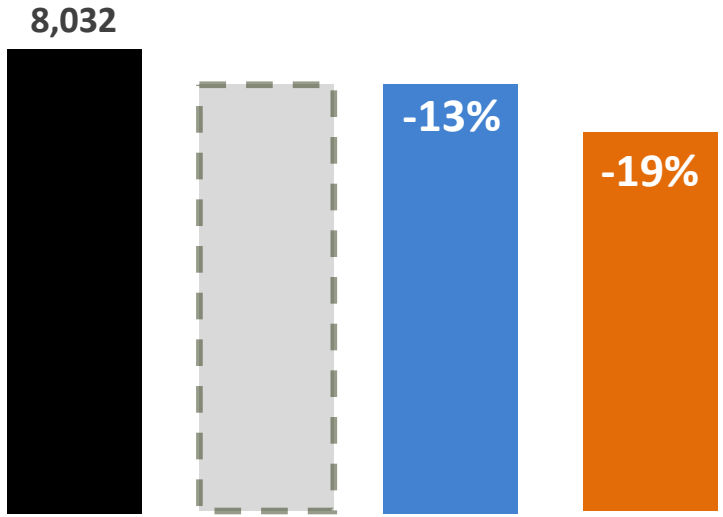
Total Miles Traveled (VMT)



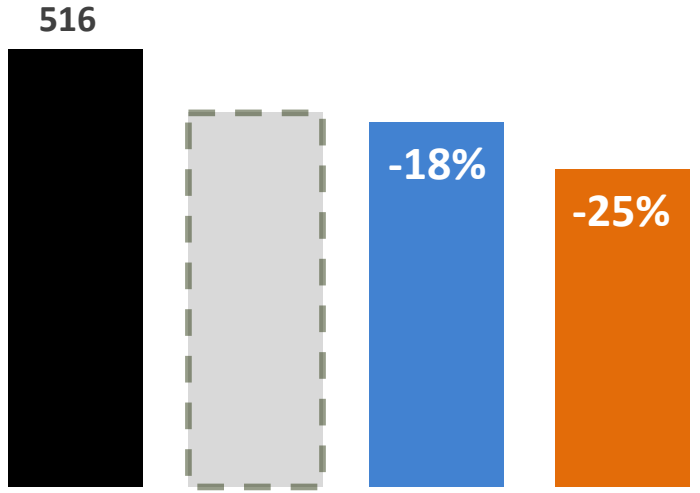
Total Hours Traveled (VHT)



Total Automobile Delay (Hours)



Total Truck Delay (Hours)



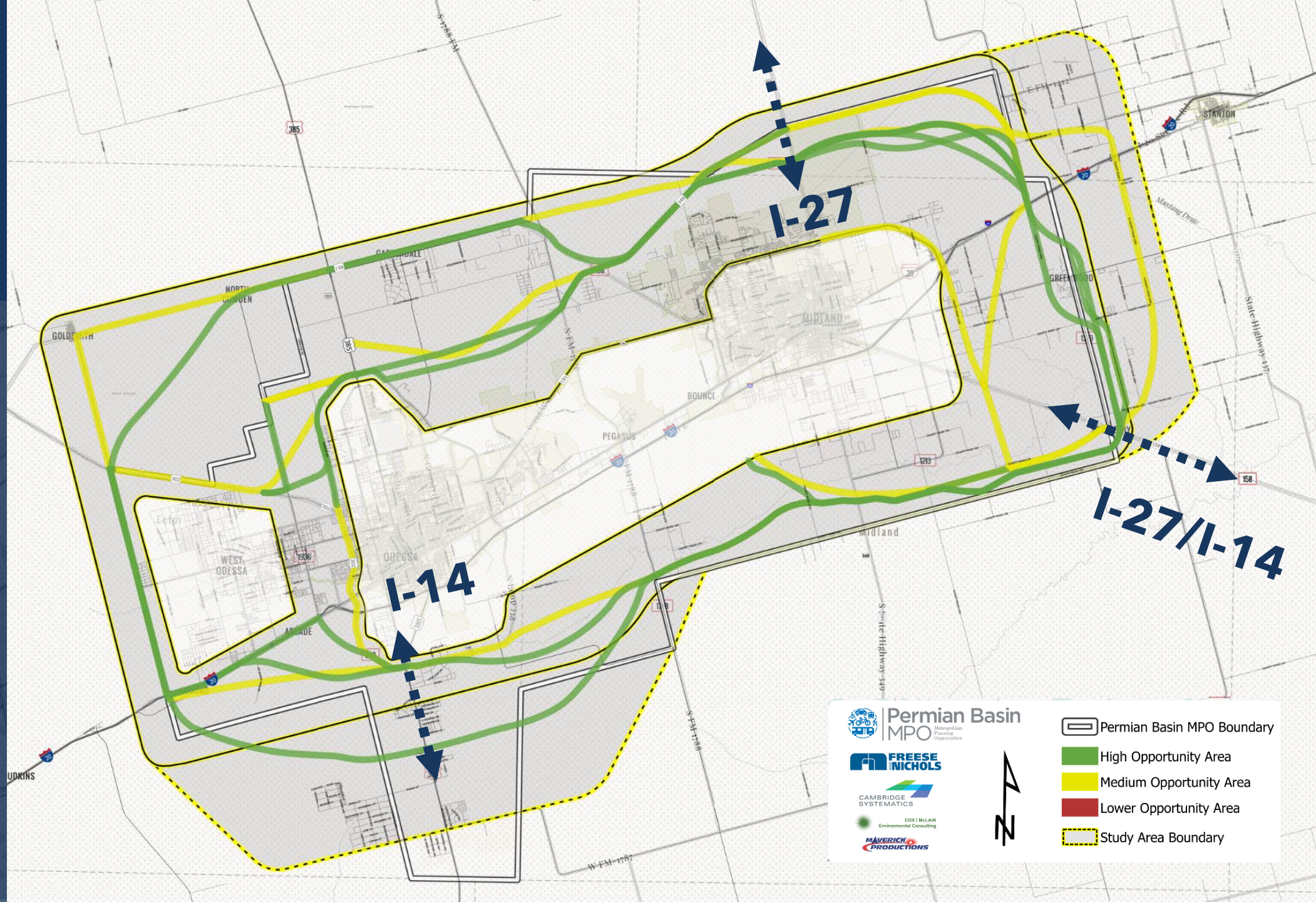
Level 3
Screening

What does this mean for the Interregional Loop?

- Modeled Alternatives
  - Shift in projected truck traffic
  - Reduction in congestion
  - Resiliency benefits
  - Continued growth of urbanizing areas
- PEL Considerations
  - Modeling is only one component of study
  - People- and Environment-Centered Analyses
  - Ultimate Test relies on the Needs and Purpose
    - *Connectivity, Safety, Mobility, Proximity & Growth, Interregional Benefits*

Viable Options

for future consideration



Next steps

Immediate

- Interregional Loop
  - PEL Documentation
  - PBMPO study acceptance; resolution seeking further study

Near term (~2 years)

- Agency-led detailed environmental evaluation (TxDOT)
  - Compare no-build + build alternatives
  - Defined corridors of least impact
    - Field surveys; social, physical, & environmental; cumulative & indirect effects

Medium-term

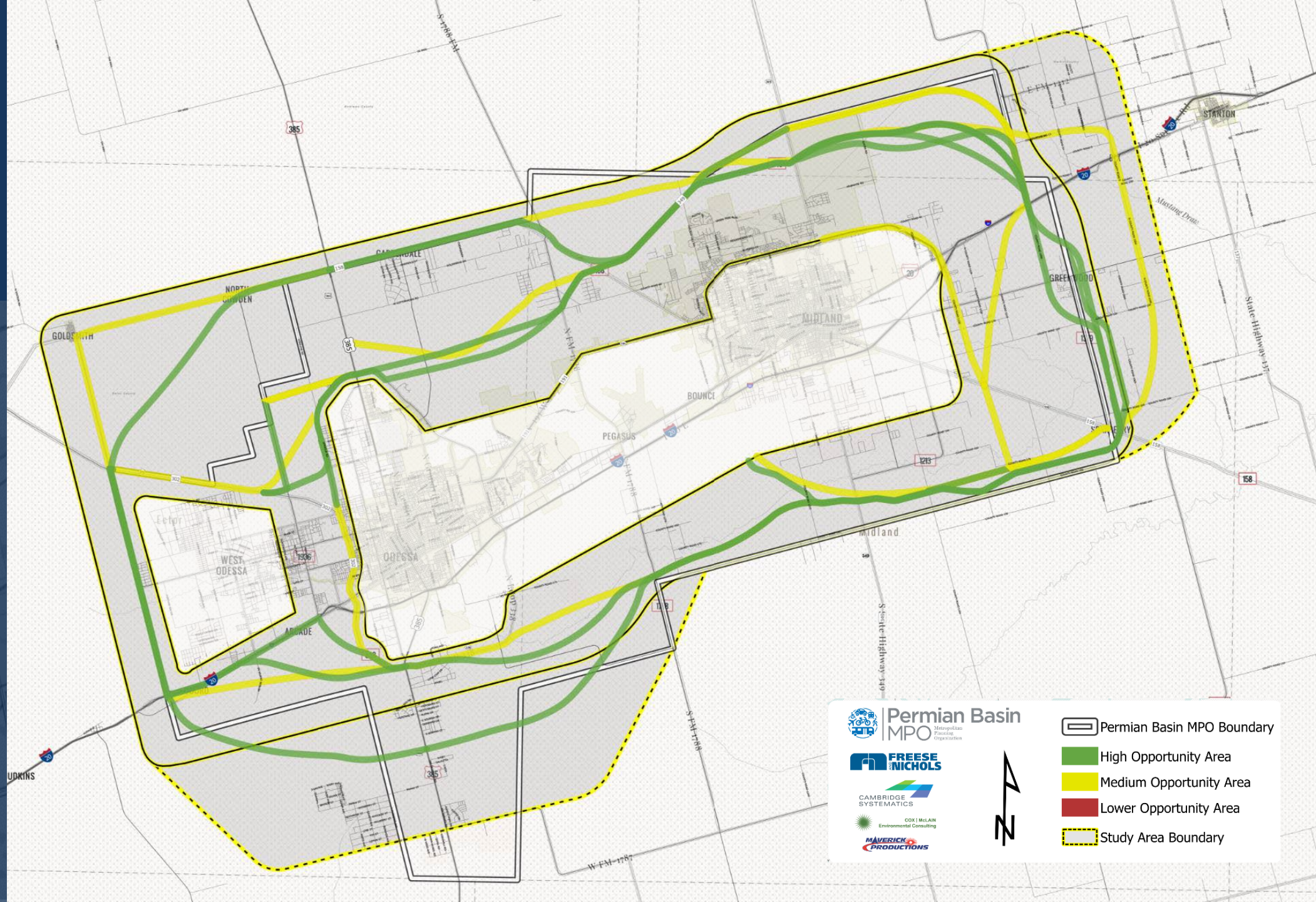
- Formal Environmental Documentation/Public Hearing Process

Long-term

- Corridor Design and Implementation

Final Results

Corridors of Opportunity



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