I-11 & Intermountain West Corridor Study

Intermountain West Corridor
Study Update

In partnership with

ASCE / ASHE Annual State Conference

September 11th, 2014
Section 1105(e)(5)(C)(i) of the Intermodal Surface Transportation Efficiency Act of 1991 is amended by adding at the end of the following: “The routes referred to subparagraphs (A)(iii) and (B)(i) of subsection (c)(26) are designated as Interstate Route I-11.

- Congressional Designation for US93 only
- Lacking understanding of the potential benefits a new corridor could provide
1956 Federal Aid Authorization
1957 - 1998 Additions
Answer several questions:

1. What is the Justification to make significant investments in this corridor?

2. Is the Congressional Designation from Las Vegas to the vicinity of Phoenix sufficient?

3. What Reasonable and Feasible Corridors should be considered?

4. What steps should be taken next?
## Corridor Vision

### Corridor Justification

- **2.2 Preliminary Opportunities and Constraints**
- **2.3 Past Planning Studies and Strategies**
- **2.4 Existing Unmet Needs Transport Characteristics**
- **2.5 Identify National and International Patterns, Trends, and Forecasts**
- **2.6 Preliminary Business Case Foundation**
- **2.7 Approach to Corridor Planning**
- **2.8 Corridor Justification Report**

### Alternatives Evaluation and Next Steps

- **3.1 Feasibility Assessment of Northern Nevada Connectivity Segment**
- **3.2 Feasibility Assessment of Southern Arizona Connectivity Segment**
- **3.3 Prioritization**
- **3.4 Alternatives Analysis Study of Priority Section 1 – Phoenix Metropolitan Area**
- **3.5 Alternatives Analysis Study of Priority Section 2 – Southern Nevada/Northern Arizona**
- **3.6 Alternatives Analysis Study of Priority Section 3 – Las Vegas Metropolitan Area**
- **3.7 Program Implementation Plan**
- **3.8 Final Purpose and Need**
- **3.9 Final PEL Process**
- **3.10 Final Business Case Foundation**
- **3.11 Corridor Concept Report**

### Timeline

<table>
<thead>
<tr>
<th>Months</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<td>Aug</td>
<td>Sep</td>
<td>Oct</td>
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<td><strong>Phase I</strong></td>
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<td>1.1 Corridor Vision Summary</td>
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<td>3.3 Prioritization</td>
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<td><strong>Phase III</strong></td>
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<td>3.4 Alternatives Analysis Study of Priority Section 1 – Phoenix Metropolitan Area</td>
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<td>3.5 Alternatives Analysis Study of Priority Section 2 – Southern Nevada/Northern Arizona</td>
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**Notes:**
- The timeline and tasks are placeholders for illustrative purposes.
- The diagram and text are designed to show the progression and interconnection of various phases and tasks involved in the Corridor Vision study.
A north-south transportation system that would connect borders, link economies, and generate prosperity for the Intermountain West region.
## Corridor Justification

### Work Tasks

#### Phase I
- **1.1 Corridor Vision Summary**
- **2.2 Preliminary Opportunities and Constraints**
- **2.3 Past Planning**
- **2.4 Identify National and International Patterns, Trends, and Forecasts**
- **2.5 Identify National and International Patterns, Trends, and Forecasts**
- **2.6 Preliminary Business Case Foundation**

#### Phase II
- **2.7 Preliminary Business Case Foundation**
- **2.8 Corridor**

#### Phase III
- **3.1 Feasibility Assessment of Northern Nevada Connectivity Segment**
- **3.2 Feasibility Assessment of Southern Arizona Connectivity Segment**
- **3.3 Priority Section**
- **3.4 Alternatives Analysis Study of Priority Section 1 – Phoenix Metropolitan Area**
- **3.5 Alternatives Analysis Study of Priority Section 2 – Souther Nevada/Northern Arizona**
- **3.6 Alternatives Analysis Study of Priority Section 3 – Las Vegas Metropolitan Area**

### Alternatives Evaluation and Next Steps

#### 2012
- **Aug**
- **Sep**
- **Oct**
- **Nov**
- **Dec**

#### 2013
- **Jan**
- **Feb**
- **Mar**
- **Apr**
- **May**
- **Jun**
- **Jul**
- **Aug**
- **Sep**
- **Oct**
- **Nov**
- **Dec**

#### 2014
- **Jan**
- **Feb**
- **Mar**
- **Apr**
- **May**
- **Jun**
- **Jul**
American Southwest Megaregion

- Two designated megapolitans exist in relative close proximity
- Economic diversification and transportation crossroads opportunities

<table>
<thead>
<tr>
<th>Population</th>
<th>2008</th>
<th>2050</th>
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<tbody>
<tr>
<td>Southern California</td>
<td>23</td>
<td>36</td>
</tr>
<tr>
<td>Arizona Sun Corridor</td>
<td>5.3</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Southwest Megaregion</strong></td>
<td>28.3</td>
<td>47.3</td>
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</tbody>
</table>

Source: UNLV, Brookings Mountain West, 2012
## Advancing Arizona's and Nevada's Economic Initiatives

<table>
<thead>
<tr>
<th>Industry Targets</th>
<th>Requires Regional Transportation Network</th>
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<tbody>
<tr>
<td>Advanced Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Aerospace, Aviation, Defense</td>
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<tr>
<td>Agriculture</td>
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<tr>
<td>Biotechnology</td>
<td></td>
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<tr>
<td>Healthcare</td>
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<tr>
<td>Information and Computer Technology</td>
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<tr>
<td>Life Sciences</td>
<td></td>
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<tr>
<td>Mining and Materials</td>
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<tr>
<td>Optics</td>
<td></td>
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<tr>
<td>Renewable Energy</td>
<td></td>
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<tr>
<td>Science and Technology</td>
<td></td>
</tr>
<tr>
<td>Tourism, Gaming, and Entertainment</td>
<td></td>
</tr>
<tr>
<td>Transportation and Logistics</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Arizona Commerce Authority 2013, Greater Phoenix Economic Council 2013, Tucson Regional Economic Opportunities 2006, Nevada Governor’s Office of Economic Development 2013
Create Opportunities for Integrated Manufacturing

- Work together to produce goods
- Components cross border multiple times during production
- Results in significant manufacturing employment
- Attracts industries: auto, aerospace, medical device appliances, machinery….
- Only feasible with adequate infrastructure in place
Create Opportunities for Integrated Manufacturing

Mexico more competitive for manufacturing outsourcing than China

- GDP grew 5.4 percent in 2010
- $35 billion increase in purchases from the U.S.
- 14th largest economy in the world
- China’s labor cost advantage shrunk to 14%
- Close proximity to U.S.

Business Case: Return on Investment

+ 240,000 jobs

Costs: ($12b - $13b)

Economic Benefits: ($4b - $24b)

Travel Benefits: ($26b - $39b)

Note: This graphic is solely intended to illustrate the scale of the return on investment potential and not the actual value. Combining the values of the economic and travel benefits may result in an over-estimate due to double counting some factors. These planning level estimates reflect costs and benefits for a highway-only corridor from Mexico to Las Vegas, above and beyond planned improvements.
Alternatives Evaluation and Next Steps

Corridor Vision

Corridor Justification

Alternatives Evaluation and Next Steps
Alternative Evaluation Process

**EVALUATION CRITERIA**

**UNIVERSE OF ALTERNATIVES**

**LEVEL 1 SCREENING**
- Legislation
- System Linkage
- Trade Corridor
- Modal Interrelationships
- Capacity/Congestion
- Economic Vitality
- Project Status/Transportation Plans and Policies
- Environmental Sustainability
- Land Use and Ownership
- Community Acceptance
- Cost

**LEVEL 2 SCREENING**
- Modal Interrelationships
- Capacity/Congestion
- Economic Vitality
- Environmental Sustainability
- Project Status/Transportation Plans and Policies
- Land Use and Ownership
- Community Acceptance
- Cost

**RECOMMENDED ALTERNATIVES FOR FURTHER CONSIDERATION**
Recommendations

- **Recommended Corridor(s)**
  - **Southern Arizona:** Nogales (Alternative C)
  - **Phoenix:**
    - One Concept; I-10 to Wickenburg
    - Two Concepts; South of I-10 to Casa Grande
  - **Northern Arizona:** US 93 (Alternative Q)
- Multi-use evaluation
  - Rail Consideration
  - Alternative Energy
Future Corridor Signing

• Future Corridor Signs along US 93 (4 locations)
Recommended Reasonable and Feasible Corridor - Southern Arizona
Pima County Proposal

**ONE ALTERNATIVE WITH MEASURED IMPACT**

**IMPACTS**

- **Right of Way**, 2035 acres
  
<table>
<thead>
<tr>
<th>Ownership</th>
<th>Acres</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>State Trust</td>
<td>827</td>
<td>41</td>
</tr>
<tr>
<td>City, County and Federal</td>
<td>716</td>
<td>35</td>
</tr>
<tr>
<td>Private; mostly vacant agricultural</td>
<td>492</td>
<td>24</td>
</tr>
</tbody>
</table>

- **Residential Structures**: 47

- **Mitigation Obligation**: 4,964 acres to buffer public reserves and protect wildlife corridors

**LENGTHS IN PIMA COUNTY**

- Future I-11 Option: 1 to 2 = 56 miles
- Aerospace/Sonoran Corridor: 21 miles
- Sahuarita to Mexico: 47 miles
Recommended Reasonable and Feasible Corridors - Phoenix Metropolitan Area
Recommended Reasonable and Feasible Corridors - Las Vegas Metropolitan Area
Existing Transport Characteristics: **Freight Rail**

US/Mexican Border Rail Crossings

<table>
<thead>
<tr>
<th>Current Trains per Day</th>
<th>25-50</th>
<th>0-15</th>
<th>50-100</th>
<th>15-25</th>
<th>100-200</th>
</tr>
</thead>
</table>

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Multimodal Opportunities
Multimodal Opportunities

Potential Alternate Rail Corridors
Next Steps - Ultimate Corridor

Northern Nevada;
Corridor Feasibility Studies

Boulder City;
Construct Bypass

Northern Arizona;
Upgrade US93 to Interstate Standards where appropriate

Phoenix Metro;
NEPA evaluation of multiple Alternatives

Southern Arizona;
NEPA evaluation of multiple Alternatives
Outreach & Partnership

- Stakeholder Participation: more than 50 meetings, over **350 organizations** participated

- Public Meetings
  - **Vision:** 193 attended meetings in Henderson and Phoenix (Oct. 2012)
  - **Level 1 Alternatives Analysis:** October 2013: 274 attended meetings in Avondale, Tucson, Kingman, Las Vegas, and Carson City (Oct. 2013)
  - **Level 2 Alternatives Analysis:** February 2014: **Over 2,000 participants** in Virtual Public Meeting (Feb/Mar 2014)
  - **Corridor Concept:** Over 200 attended meetings in Tucson, Phoenix and Las Vegas (Jun 2014) Virtual Public Meeting (Jun 18 – Jul 18)

- Website: thousands of comments, 500 signed up for email blasts

- Media: Over 100 stories published (Print, television, new media)

- YouTube Videos
What we’ve heard - General comments

• General support for corridor, citing economic development, congestion, and safety improvements

• Concerns, primarily related to specific alternatives and concern for resources and environment.
Next Steps

• **National Environmental Policy Act (NEPA) Analysis**
  – Estimated at $60 Million; Nogales to Nevada State Line
  – Segments of Independent Utility (SIU)
    • Southern Arizona - (Mexico to Casa Grande)
    • Phoenix Metro Area
      – Casa Grande to I-10 West
      – I-10 West to Wickenburg

• **Interim Improvements**
  – Utilize existing facilities while planning of ultimate facility is completed
Interim Improvements

- **Southern Arizona**
  - Upgrade existing Corridors
  - SR189; I-10; I-19; I-8

- **Central Arizona**
  - New connection from I-10 to Wickenburg
  - Upgrade SR85

- **Northern Arizona**
  - Widen US 93 to a 4-lane roadway

- **NEPA Analysis of Ultimate Corridor**
Interim Improvements

I-40/US93 System Interchange; Design Concept Study

US93 Antelope Wash; Under Construction

US93 Carrow to Stephens; Pending construction funding

US93 MP185 to MP191; Construction in FY15

I-10 SR87 to Picacho; Construction in FY22

I-10 Ina Road Interchange; Construction in FY16

I-10 Ruthrauff Interchange; Construction in FY17

I-19 Ajo Way Interchange; Construction in FY15

I-19 Irvington Interchange; Design in FY19

SR189 Corridor Plan; Design Concept Study and EA
Cross-Collaborative Partnerships

I-11 and Intermountain West Corridor Study has identified:

• Technical Actions
• Multimodal Accommodations
• Public Policy Actions
• Marketing/Branding Actions

Partnerships among corridor constituents will be required to achieve successful and efficient implementation of the I-11 and Intermountain West Corridor