

Program Development

Utah I-15 Truck Parking Project

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Utah I-15 Truck Parking Project

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Utah's I-15 Truck Parking Project

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Utah I-15 Truck Parking Project

Congressional Focus on Truck Parking

- The Transportation Equity Act for the 21st Century (TEA-21) was enacted June 9, 1998 as Public Law 105-178
- **Section 4027 of TEA-21 required the following:**
 - Study to determine the location and quantity of parking facilities at commercial truck stops/travel plazas and public rest areas that could be used by motor carriers to comply with Federal hours of service rules
 - Study to include:
 - ✓ Inventory of current facilities serving the National Highway System
 - ✓ Analysis of where shortages exist and are projected to exist
 - ✓ A plan to reduce the shortages



Utah I-15 Truck Parking Project



- In 1999, the Federal Highway Administration (FHWA) requested feedback on how to best conduct the study as required in Section 4027 of TEA-21
- The first step of the study was to administer and evaluate a **national truck driver survey** about driver parking needs and the adequacy of current parking facilities
 - The survey was conducted on location in 7 states and was also mailed to commercial truck stops in 27 states
 - More than 2,000 surveys were collected
 - **Utah was not surveyed on location or by mail**
- The study was published in March 2002
- The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was enacted August 10, 2005 as Public Law 109-59
 - **Section 1305 of SAFETEA-LU created the Truck Parking Facilities pilot program** that provides funding to address the shortage of long-term parking for commercial vehicles on the National Highway System

Utah I-15 Truck Parking Project

Utah's I-15 Truck Parking Project

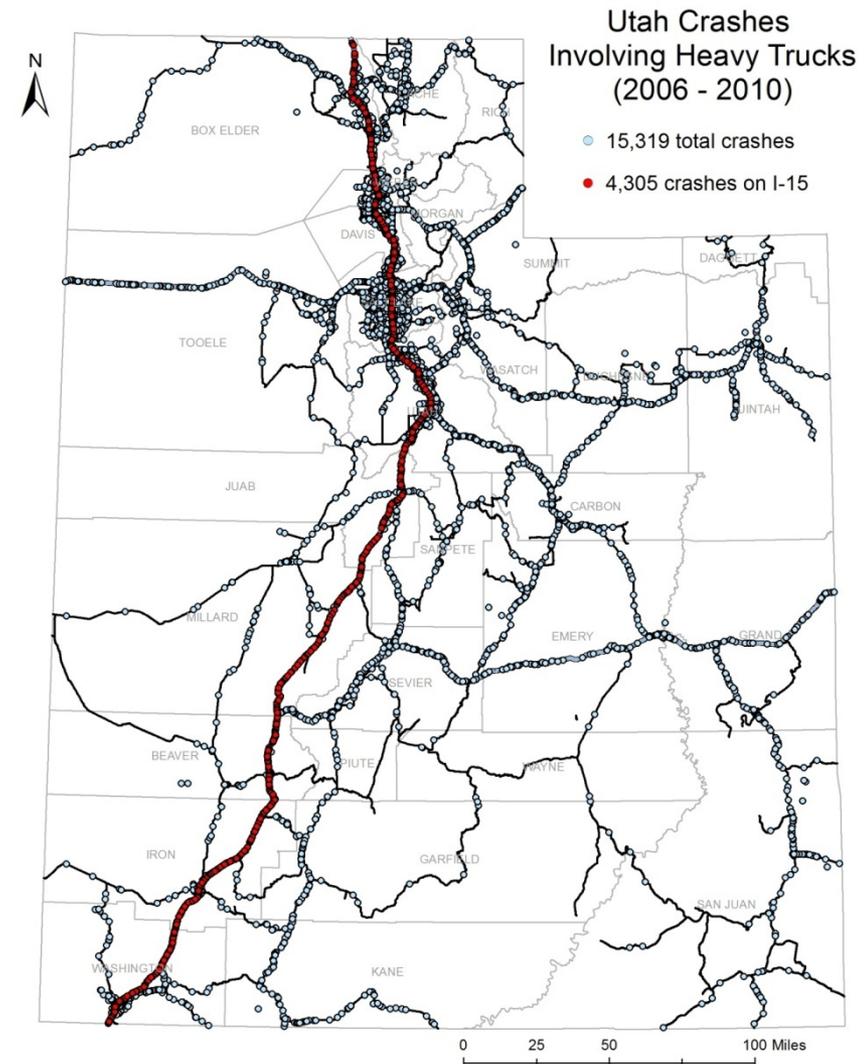
- UDOT submitted an application for the Truck Parking Initiative grant in February 2008
- **FHWA awarded UDOT \$545,000** in August 2010
- UDOT formed a Project Management Committee in September 2010 consisting of representatives from the Utah Trucking Association, Utah Highway Safety Office, FHWA Utah Division, UDOT's Planning Group, Motor Carrier Division, and Traffic Operations Center



Utah I-15 Truck Parking Project

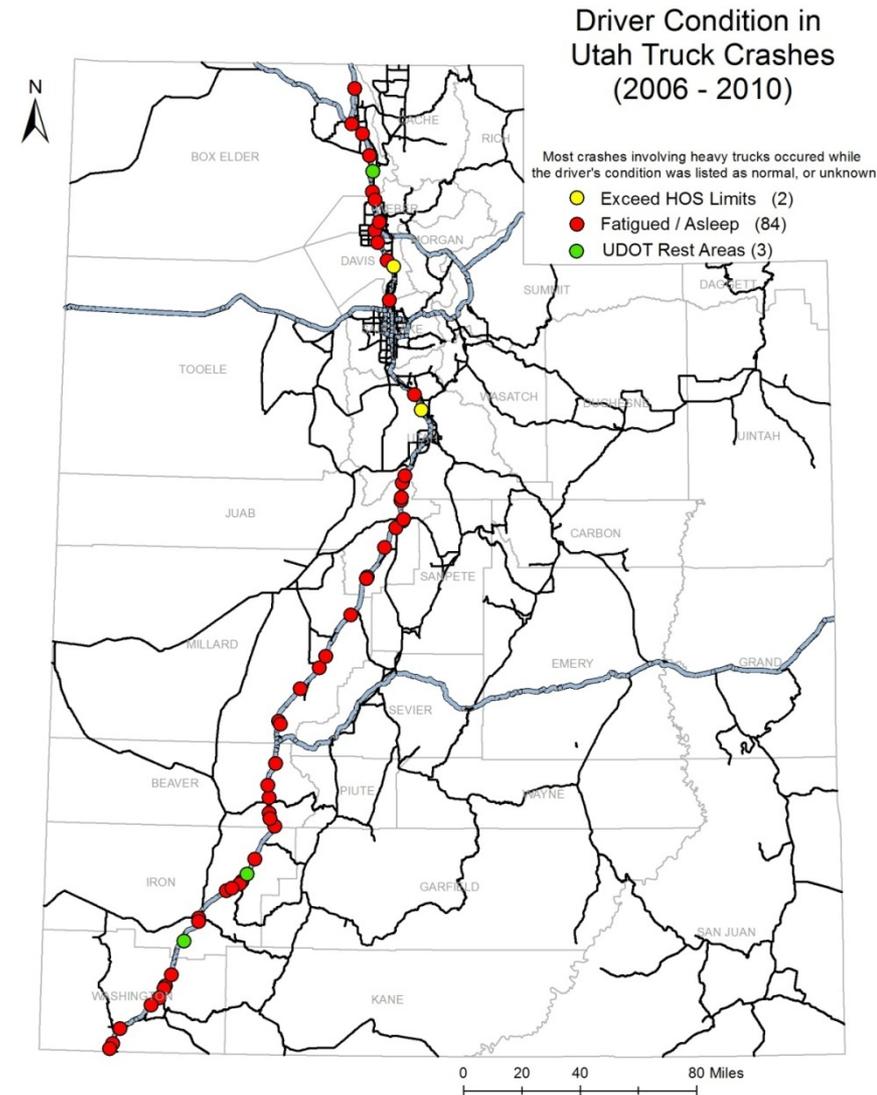
Utah's I-15 Truck Safety Data

- Crashes involving trucks (class 8 and above)
 - While **9%** of all crashes involved a truck, trucks represent **12%** of all vehicle miles traveled (VMT) in Utah
 - Truck crashes on I-15 involved drivers from **50 states and 7 Canadian Provinces**
 - The statewide average truck crash rate is **11.6** crashes per 100 million VMT
 - The truck crash rate on I-15 is **13.6** crashes per million VMT and consistent with the expected crash rate



Utah I-15 Truck Parking Project

- **98%** of truck crashes caused by driver fatigue occurred greater than **5 miles** away from the closest UDOT rest area
- **44%** of truck crashes caused by driver fatigue occurred greater than **5 miles** away from the closest truck parking facility (commercial truck stop, rest area, and port-of-entry)
- According to a study by the Federal Motor Carrier Safety Administration the average per cost per truck crash is \$101,000 in 2010 USD
- Truck driver fatigue related crashes on I-15 in Utah cost an average of \$1 million per year



Utah's I-15 Truck Parking Survey

- Survey goal was to use the national survey, apply locally, and determine the answers to four questions:
 - How truck drivers plan for and address their parking needs
 - How truck drivers select when, where and at which facilities they park
 - What truck drivers think of the adequacy of current parking facilities
 - How truck drivers would like to receive information about truck parking availability

For Office Use Only

Date: _____ Time: _____ Facility ID: _____ Recorder: _____

Utah I-15 Truck Parking Needs and Preferences Survey

Directions:

1. Please be assured that all responses are anonymous and confidential. You do not need to include any identifying information on this survey and your individual responses will not be reported to anyone.
2. Your responses are important to us! We appreciate your thoughtful feedback. Your responses will influence policy recommendations to improve truck parking along I-15 in Utah.
3. Please complete this survey alone. Do not confer with others about your responses while taking the survey. Please take this survey only once.
4. You cannot give a wrong answer. We are interested in your opinions. Please respond to all items based on your experience and perceptions.
5. This survey is not related to regulatory issues such as hours of service, load types, weight, etc.
6. If you have any questions, please call 801-307-3400 for Vern Keeslar or Helen Peters.

Definition:

Truck Parking Facility is an area designated for truck parking, including private truck stops, public rest areas, pull-offs, and ports of entry.

Section A: Background

1. Which one of the following driver categories best describes you? (Please mark only one.)
 - Independent owner/operator (1 power unit)
 - Independent owner/operator (multiple power units)
 - Driver for an owner/operator
 - Driver for a small-sized carrier (carrier with 2-10 power units)
 - Driver for a medium-sized carrier (carrier with 11-100 power units)
 - Driver for a larger-sized carrier (carrier with more than 100 power units)
2. In addition to yourself, how many people are in the truck with you? (Please mark only one.)
 - No one else, just me
 - One other person
 - More than one other person
3. Is your trailer refrigerated? (Please mark only one.)
 - No
 - Yes
4. Are you typically a long-haul or short-haul driver? (Please mark only one.)
 - Long-haul (sleep away from home for work)
 - Short-haul (sleep at home) (If you selected short-haul, you can opt out from completing the survey)

Survey Process

- Developed survey and methodology to match National effort for comparison purposes
 - **24 total questions**
 - 9 questions were same as the National Survey
 - 9 questions were modified from National Survey
 - 6 questions were different from National Survey
- Local questions included
 - What type of communication technology do you current have available in your truck?
 - Is your trailer refrigerated?
 - Where did you start driving from today?
 - Where is home base?



Survey Methodology

- Statistically valid sample size determined by the average daily combination truck traffic along I-15 in Utah
 - 383 at the 95% confidence level
 - **433 surveys** were collected from drivers representing **224 cities in 35 states and 5 Canadian Provinces**

Survey Distribution and Collection

- Survey done at 8 locations between February and June 2011
 - 11-2 pm (204 surveys collected)
 - 4-8 pm (226 surveys collected)
- Truck drivers were approached using standard protocol
- Participation was voluntary to complete the seven page, paper-based survey taking approximately 12-15 minutes to complete

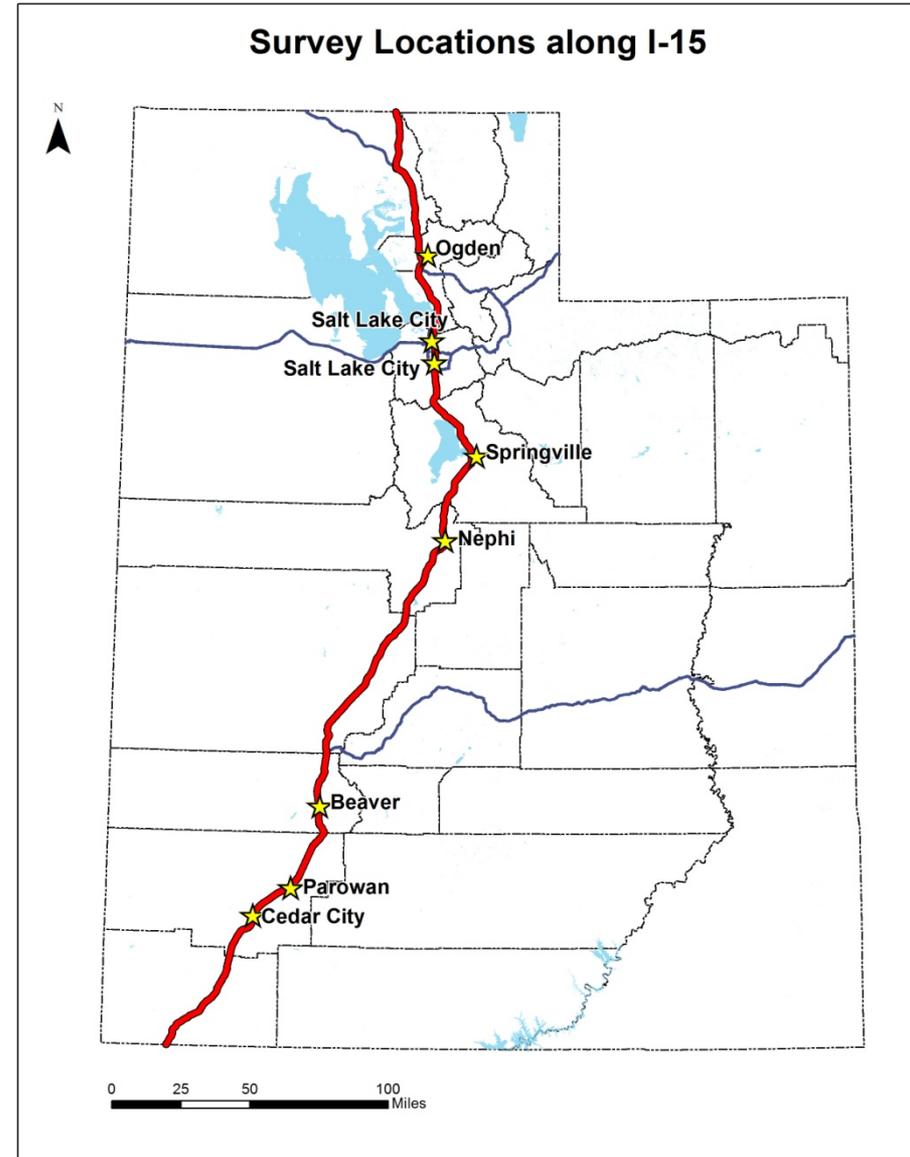
Survey Lessons Learned

- Separate truck terminals from warehouses as truck parking locations
- Electronic logs reduced participation in our time-consuming survey
- Value in face to face interaction (improved input and comments)

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Survey Locations

- Ogden, Pilot Flying J (70)
- Salt Lake City, SAPP Brothers (61)
- Salt Lake City, Pilot Flying J (39)
- Springville, Pilot Flying J (50)
- Nephi, Pilot Flying J (58)
- Beaver, Ernie's Truck Plaza (47)
- Parowan, TA Travel Center (57)
- Cedar City, Love's Travel Stop (51)



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I-80/I-15 Corridor: Southern California Freight Connection

- I-15 provides a direct link between I-80 and Southern California
- South of Salt Lake City, most freight on I-15 is east/west, not north/south
- Like Sacramento in Northern California, Barstow is the freight crossroads of Southern California
- I-15's relationship to I-80 is critical to understanding the I-15 truck parking shortage



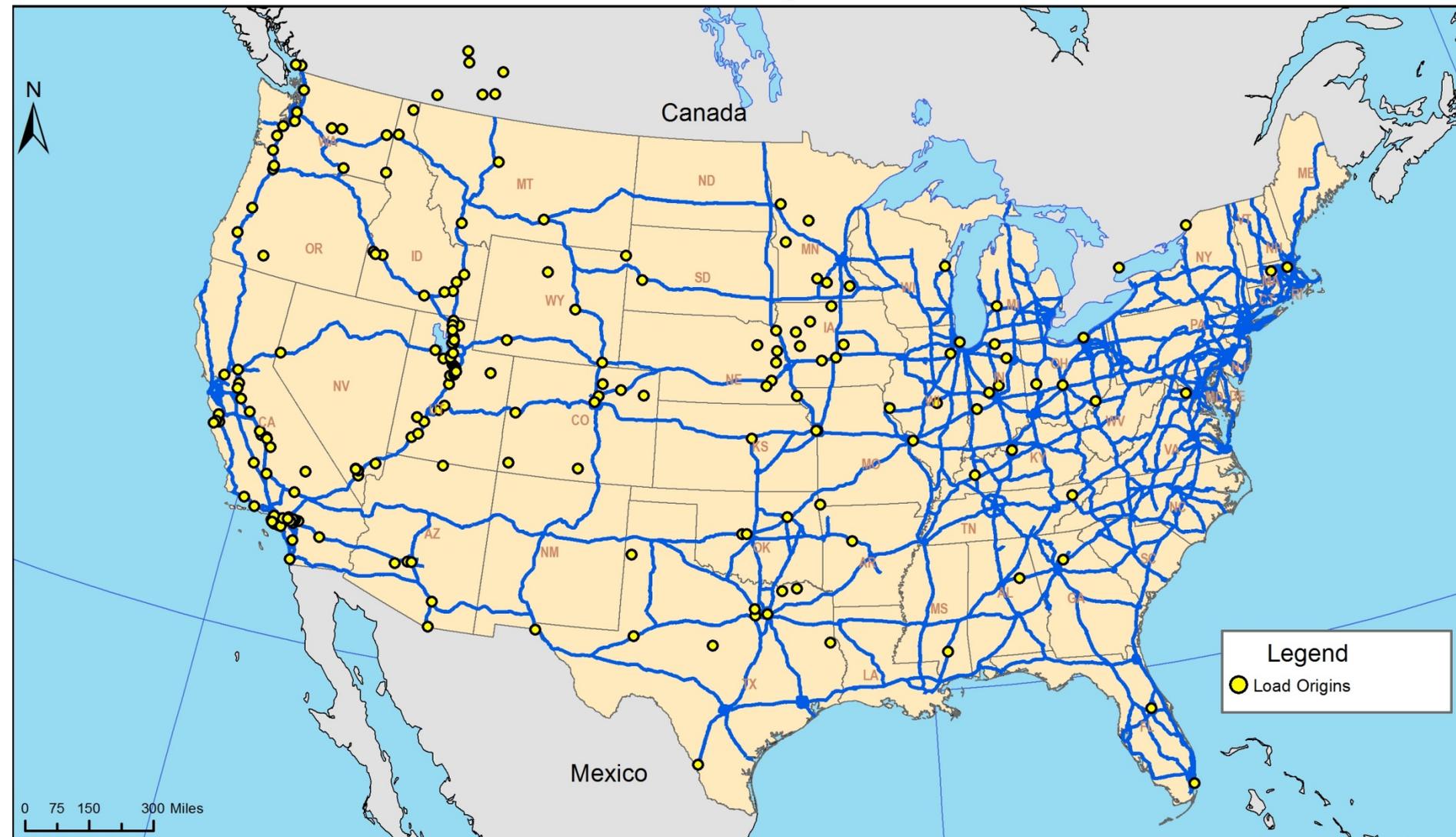
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Drivers Home Base



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Load Origins



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Highlights of Survey Responses

Section A: Background

- 32% drive for a larger-sized carrier (carrier with more than 100 power units)
- 28% are independent owner/operator (1 power unit)
- 79% drive by themselves
- 38% have a refrigerated trailer
- 95% were long haul drivers
- Based on driver interviews, more than half were connecting to or from I-80



Highlights of Survey Responses

Section B: Parking Patterns and Preferences

- 97% decide themselves where to park
- 66% make that decision while they are driving
- Why do truckers park on ramps and shoulders?
 - **82% no empty spaces at truck stops or rest areas**
 - 72% no nearby parking facility
 - 33% not aware of available parking in nearby truck stops or rest areas
- Top five important features at truck stops
 - Restrooms
 - Convenience to highway
 - Showers
 - Fuel
 - Restaurant



Highlights of Survey Responses

Section C: Parking Solutions

- What type of real-time information on truck parking availability would help?
 - 69% want location of parking facilities
 - 56% want to know features (food, fuel, showers)
 - 51% want number of truck parking spaces
- What communication technology is available in your truck?
 - 84% CB radio
 - 82% a mobile phone
 - 57% on-board navigation equipment (GPS)
 - 45% personal computer, laptop or notebook



Utah I-15 Truck Parking Project

Highlights of Survey Responses

Section C: Parking Solutions (continued)

- Driver preference to receive information about availability of truck parking
 - Variable message sign (VMS)
 - Paper map of truck parking locations
 - Highway advisory radio (HAR)
- Possible truck parking improvements to I-15
 - Build more truck stop parking spaces
 - Build more rest area parking spaces
 - Stop enforcement from waking drivers



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Highlights of Survey Responses

Section D: Information About This Trip

- How far are you away from home base?
 - 62% less than 1,000 miles
 - 31% 1,000 to 2,000 miles
 - 9% 2,000 miles or more
- Where did you last park your truck to sleep?
 - **65% last parked to sleep at a truck stop**
 - 12% have not yet parked to sleep
 - 10% last parked to sleep at a loading bay/terminal
 - 9% last parked to sleep at a rest area



Highlights of Survey Responses

Section D: Information About This Trip (continued)

- Where is the next place you plan to park your truck to sleep?
 - **65% next place to sleep is at a truck stop**
 - 14% home
 - 13% next place to sleep is at a loading bay/terminal
 - 7% next place to sleep is at a rest area
- Comments about long-term truck parking along I-15 in Utah by survey respondents
 - 70% of truck drivers did not write open ended comments
 - Quotes from truck drivers
 - ✓ Call-in number – illegal. Text to mobile phone – illegal. Call to my mobile phone – illegal. (while driving)
 - ✓ Reopen closed rest areas
 - ✓ Need parking spaces for oversized loads

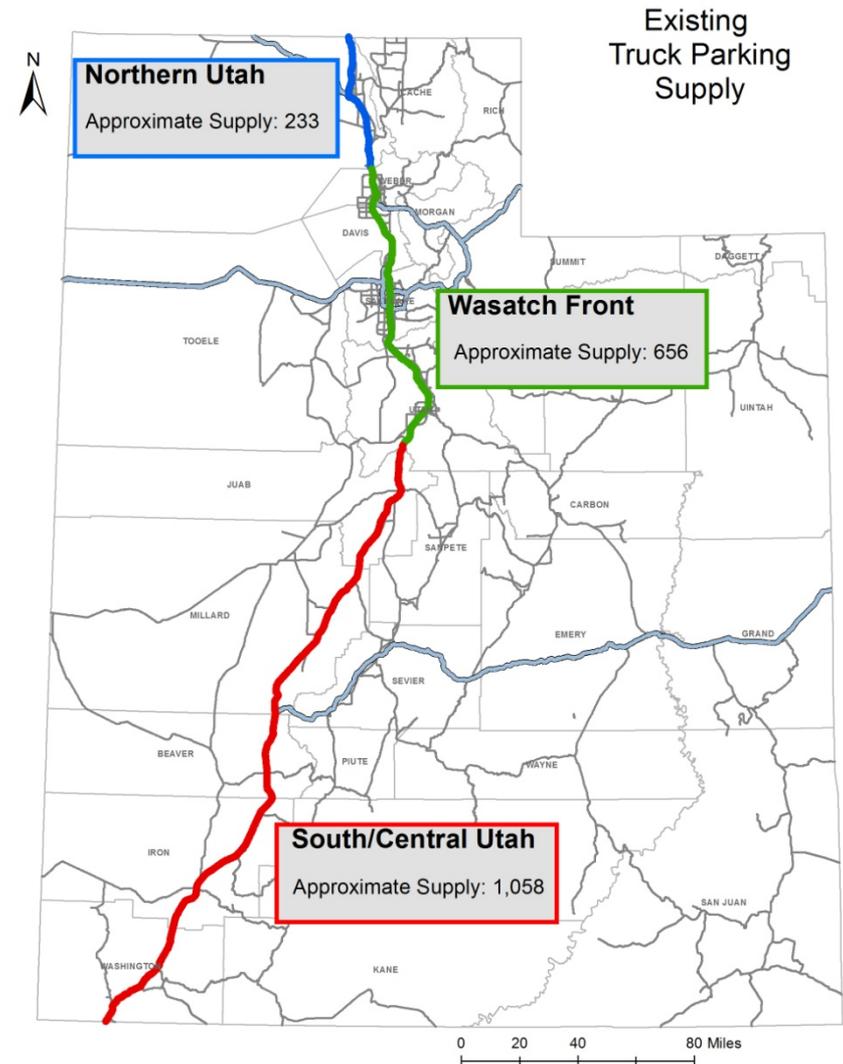
Estimating Long Term Truck Parking Supply/Demand Supply

- Identified long-term truck parking spaces at commercial truck stops, public rest areas, and ports-of-entry
- Divided the I-15 corridor into three segments
 - Northern Utah (mostly rural)
 - Wasatch Front (mostly urban)
 - South/Central Utah (mostly rural)
- Determining how we account for other parking supply
 - Local streets
 - Truck terminals/warehouses
 - Vacant parking lots (such as closed big box stores and truck stops)
 - Big box stores (such as Wal-Mart and)
 - Park-n-ride lots

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Utah I-15 Existing Truck Parking Supply

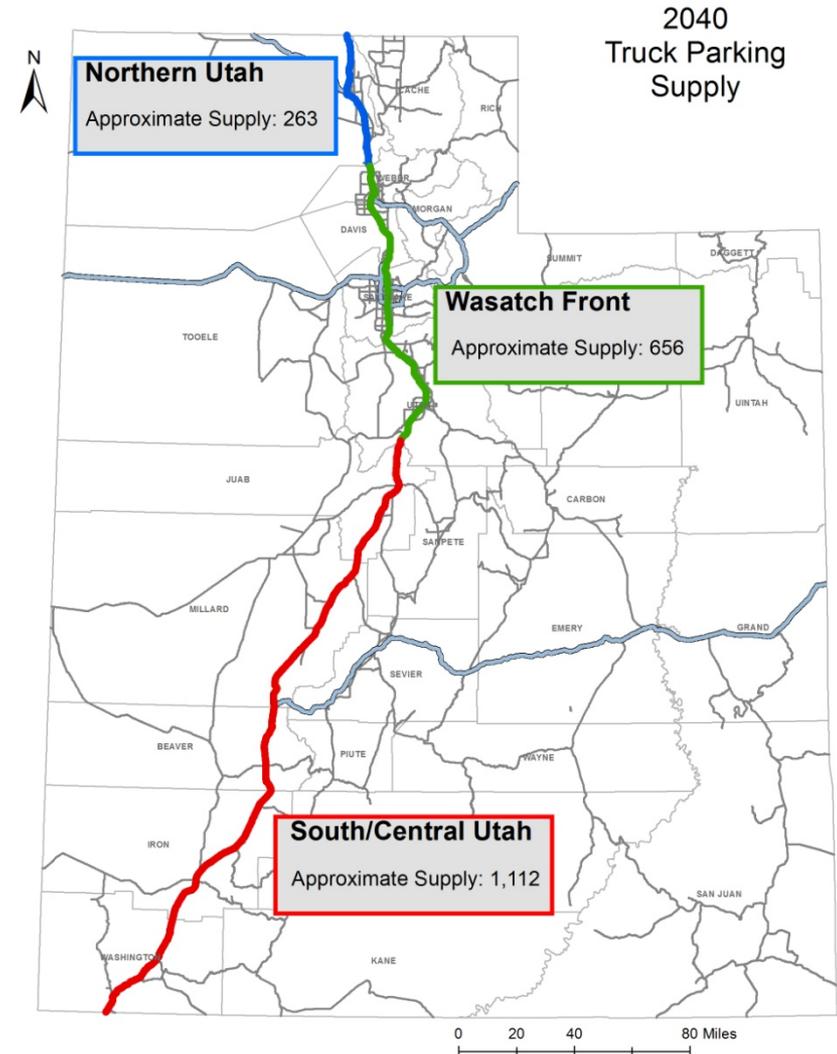
- 31 commercial truck stops
 - 1,693 parking spaces
- 8 public rest areas
 - 94 parking spaces
- 4 ports-of-entry
 - 120 parking spaces
- 2 commercial retail location
 - 40 parking spaces
- 45 total locations
 - 1,947 parking spaces



Utah I-15 Truck Parking Project

Utah I-15 Future Truck Parking Supply

- 31 commercial truck stops
 - 1,693 parking spaces
- 8 public rest areas
 - 158 parking spaces
- 4 ports-of-entry
 - 120 parking spaces
- 2 commercial retail location
 - 40 parking spaces
- 45 total locations
 - 2,031 parking spaces
- Only 84 additional truck parking spaces planned

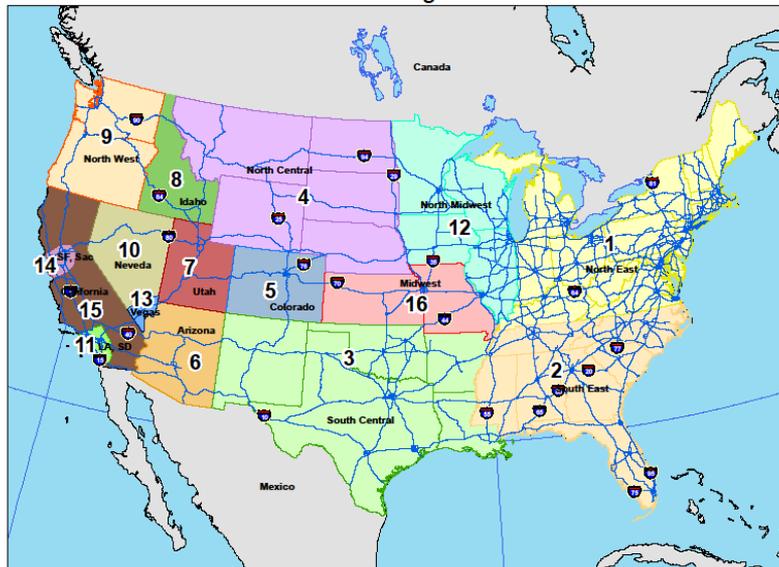


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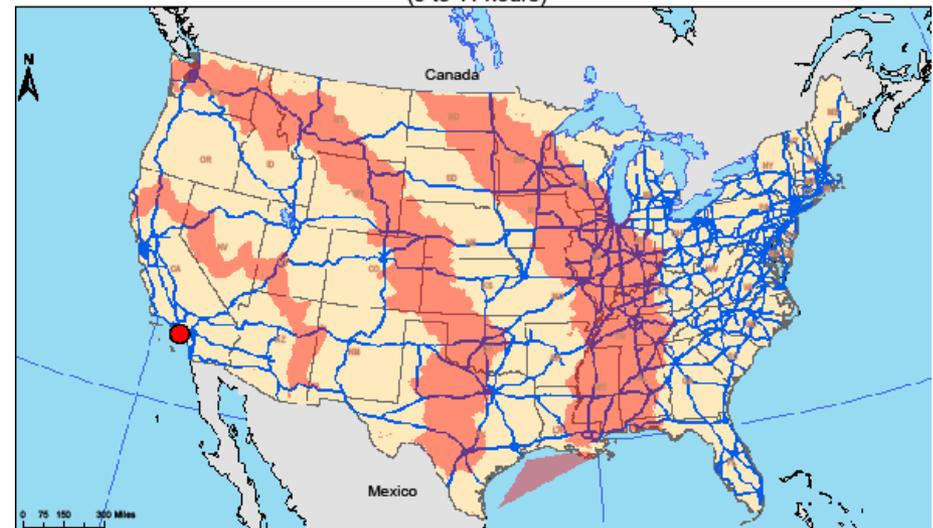
Demand

- Calculated using ratio of drive time versus parking time
- Used Freight Analysis Framework (FAF3) to form 16 districts
- 2007 and 2040 truck volume forecasts
- Truck volumes adjusted using origin and destination data from Utah survey
- Calculated long-haul versus short-haul separately
- Travel time contours by InterPlan using ESRI Network Analyst with National Highway Planning Network

I-15 in Utah Freight Districts

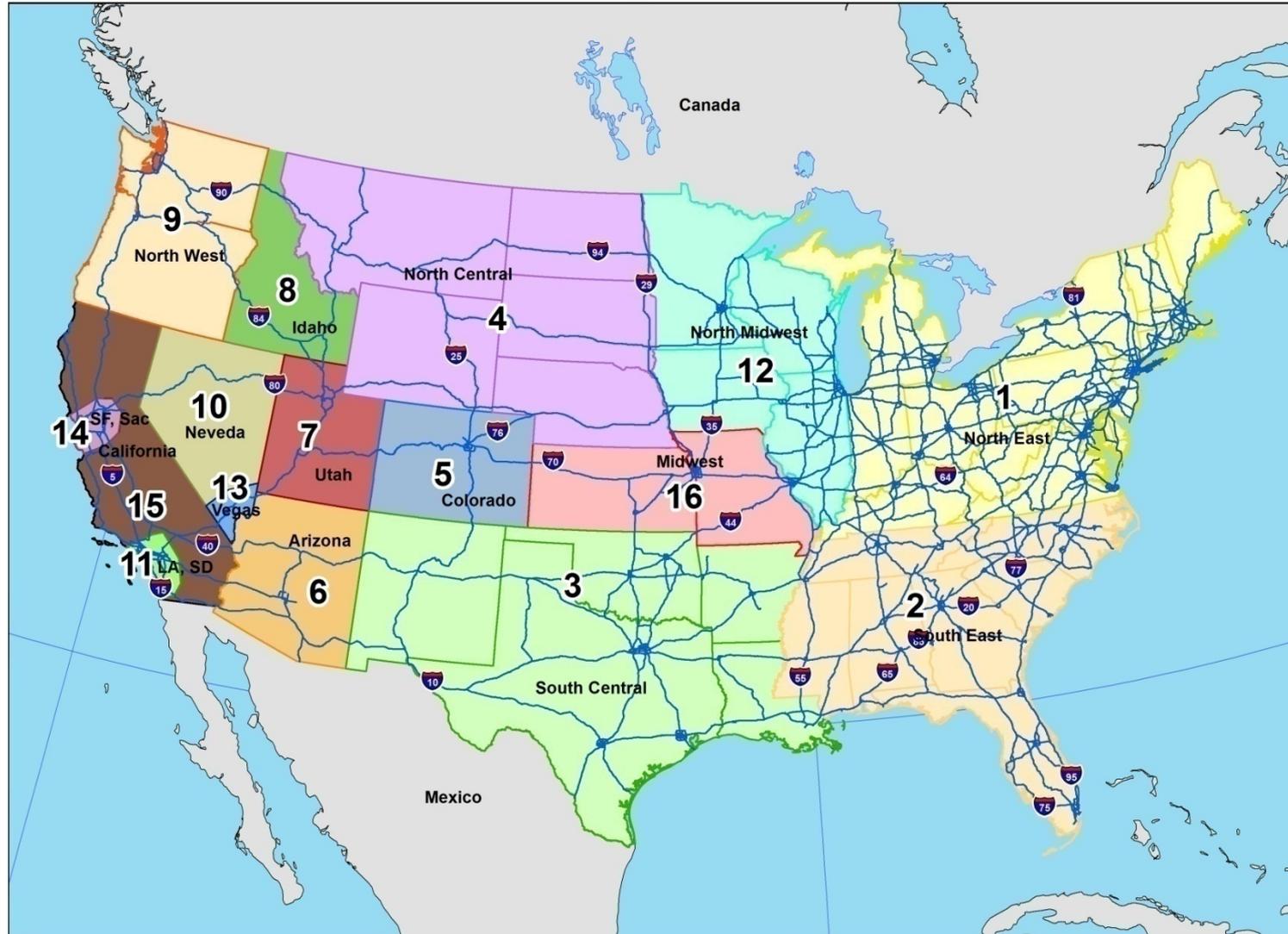


Travel Times from Zone 11/Los Angeles
(9 to 11 hours)



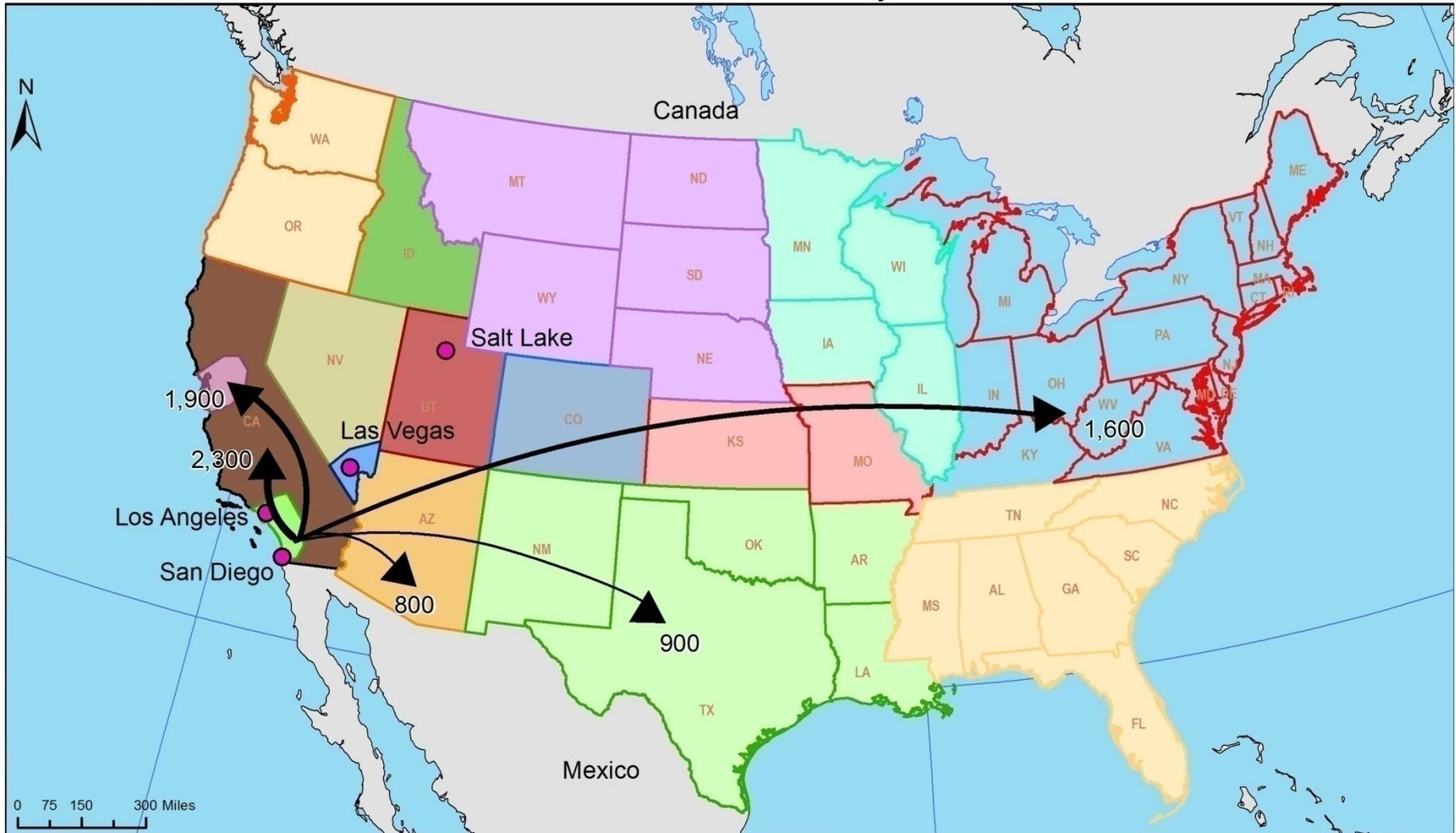
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I-15 Freight Districts



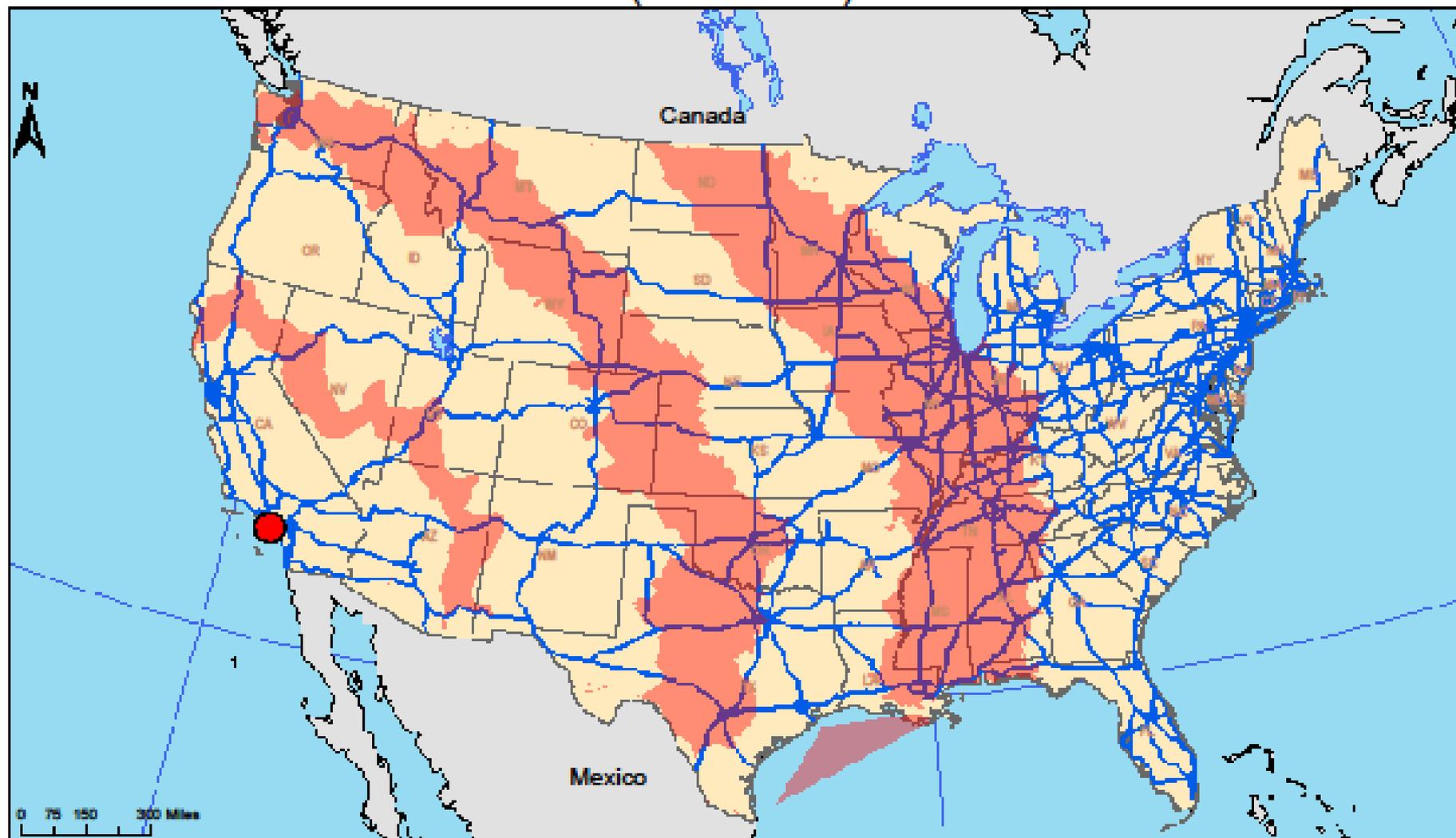
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2007 Freight Movements from Los Angeles Total Trucks Per Day



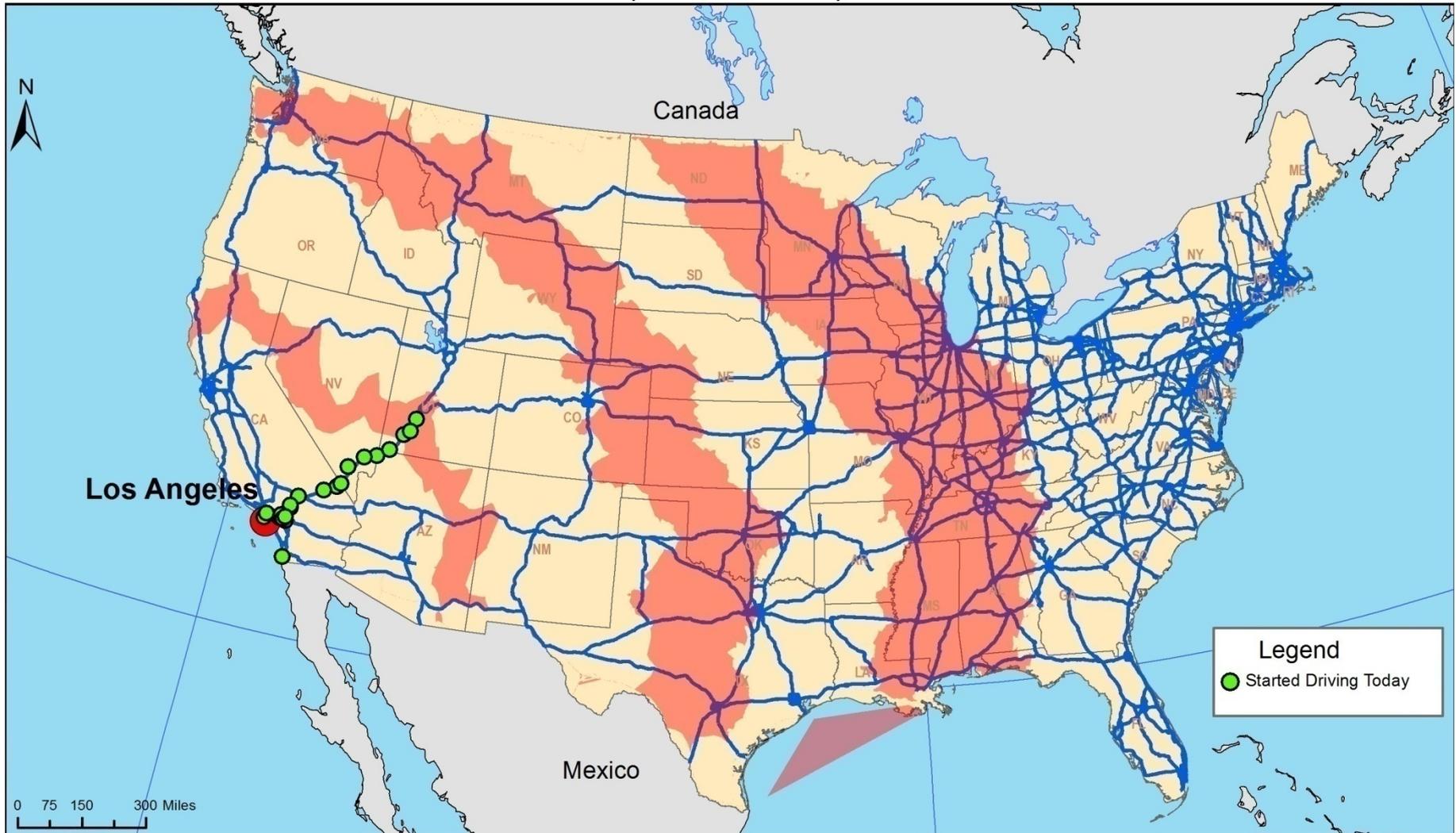
Utah I-15 Truck Parking Project

**Travel Times from Zone 11/Los Angeles
(9 to 11 hours)**



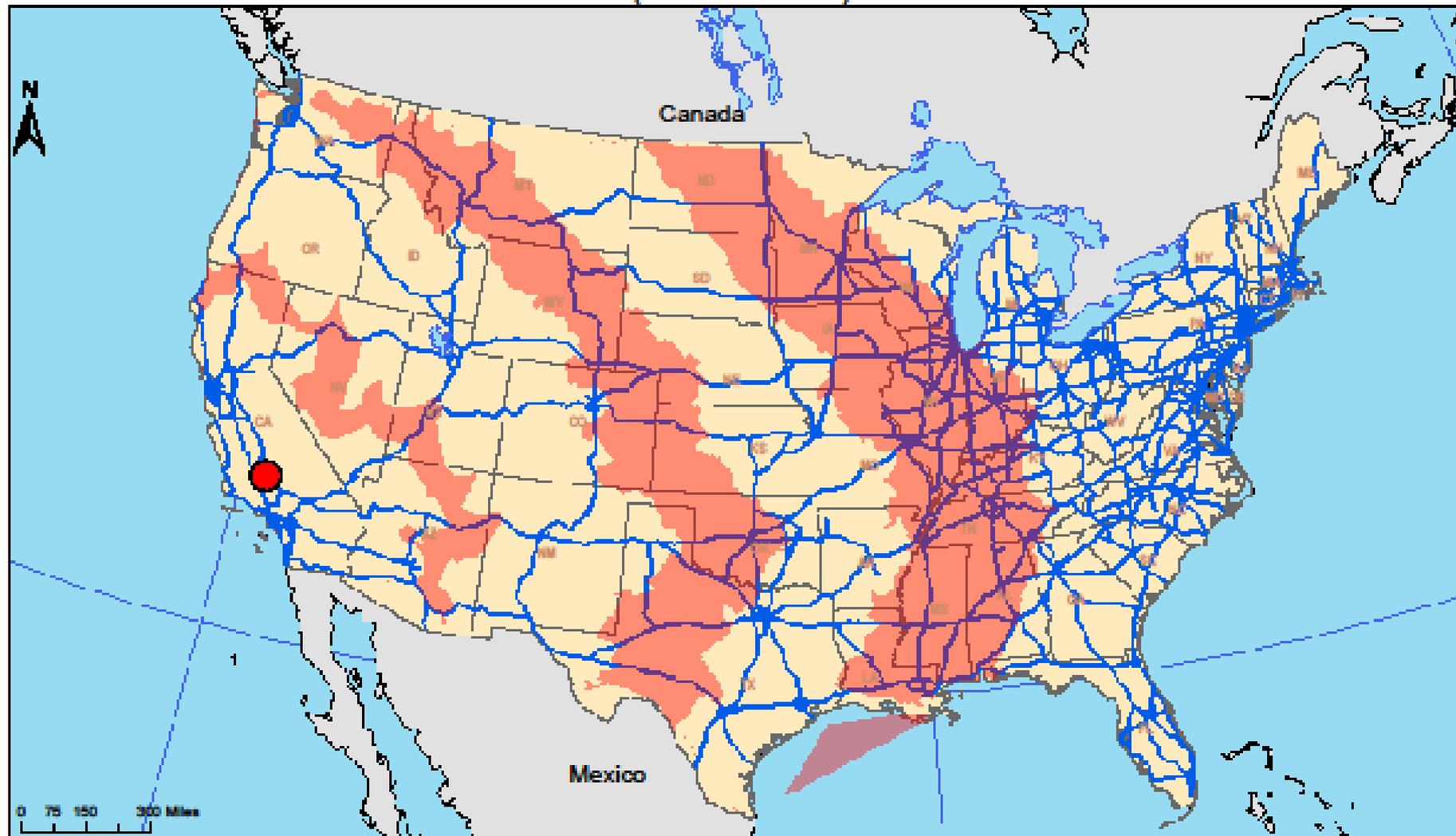
Utah I-15 Truck Parking Project

Travel Times from Zone 11/Los Angeles (9 to 11 hours)



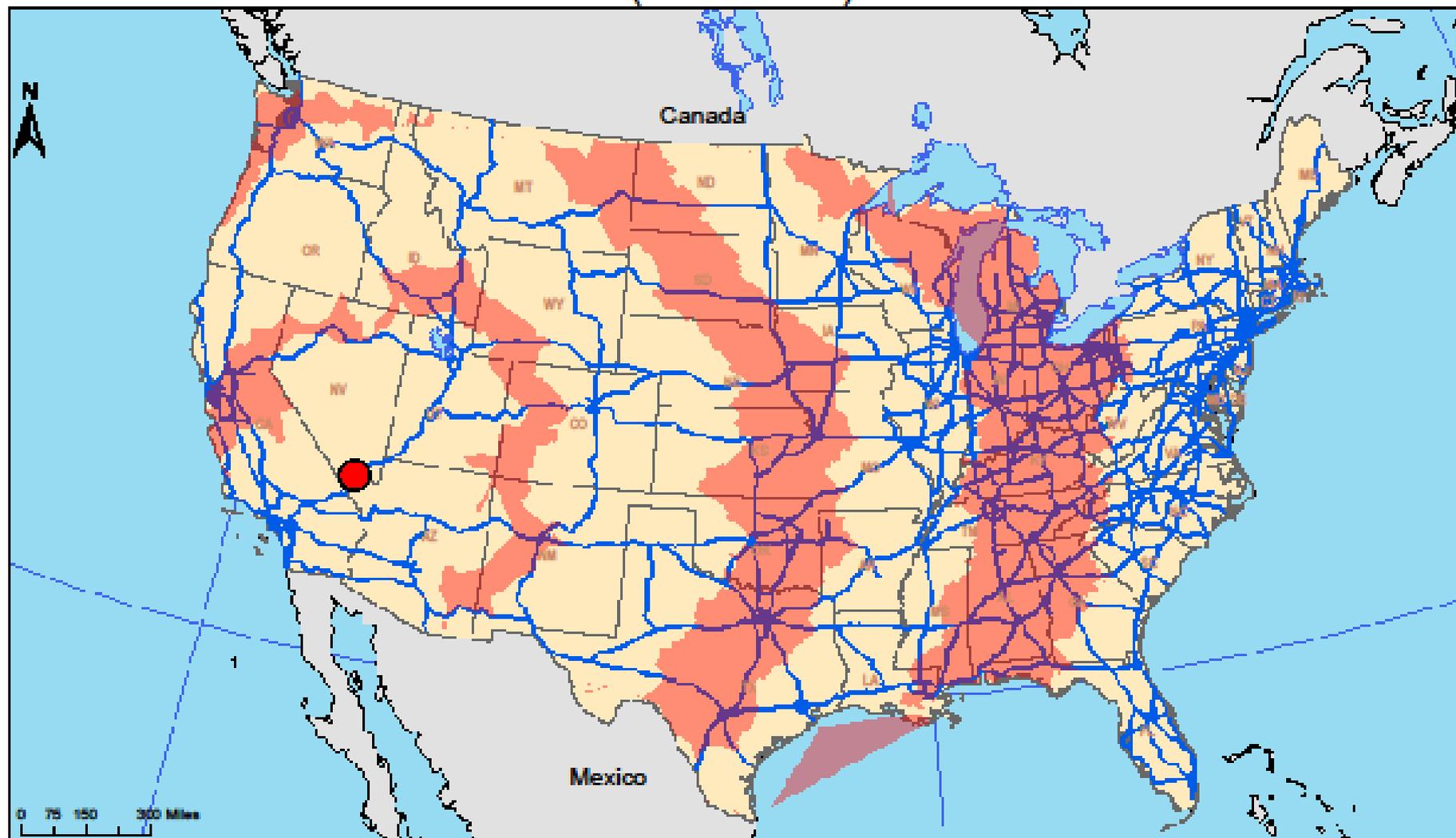
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**Travel Times from Zone 15/Bakersfield
(9 to 11 hours)**



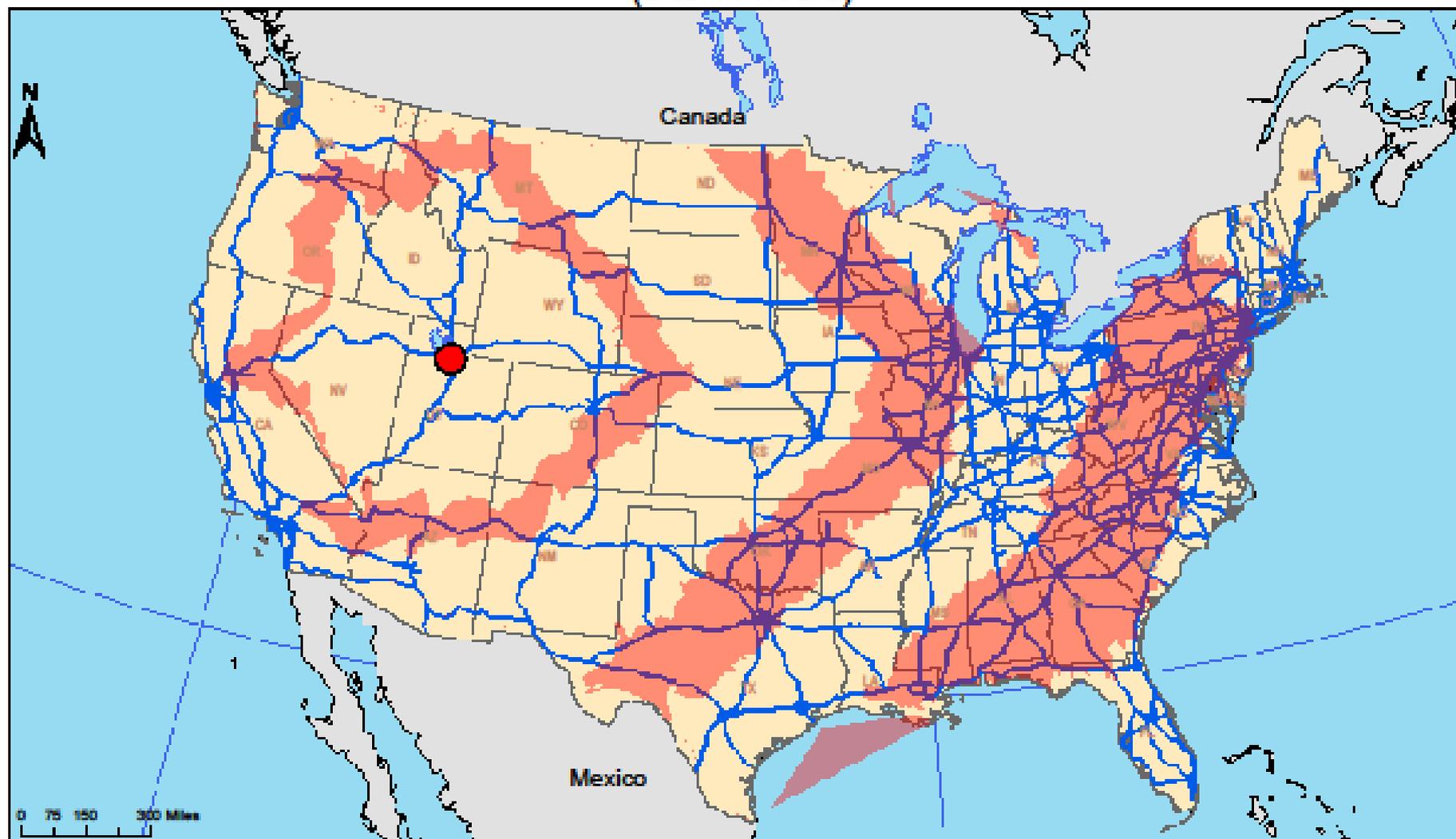
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**Travel Times from Zone 13/Las Vegas
(9 to 11 hours)**



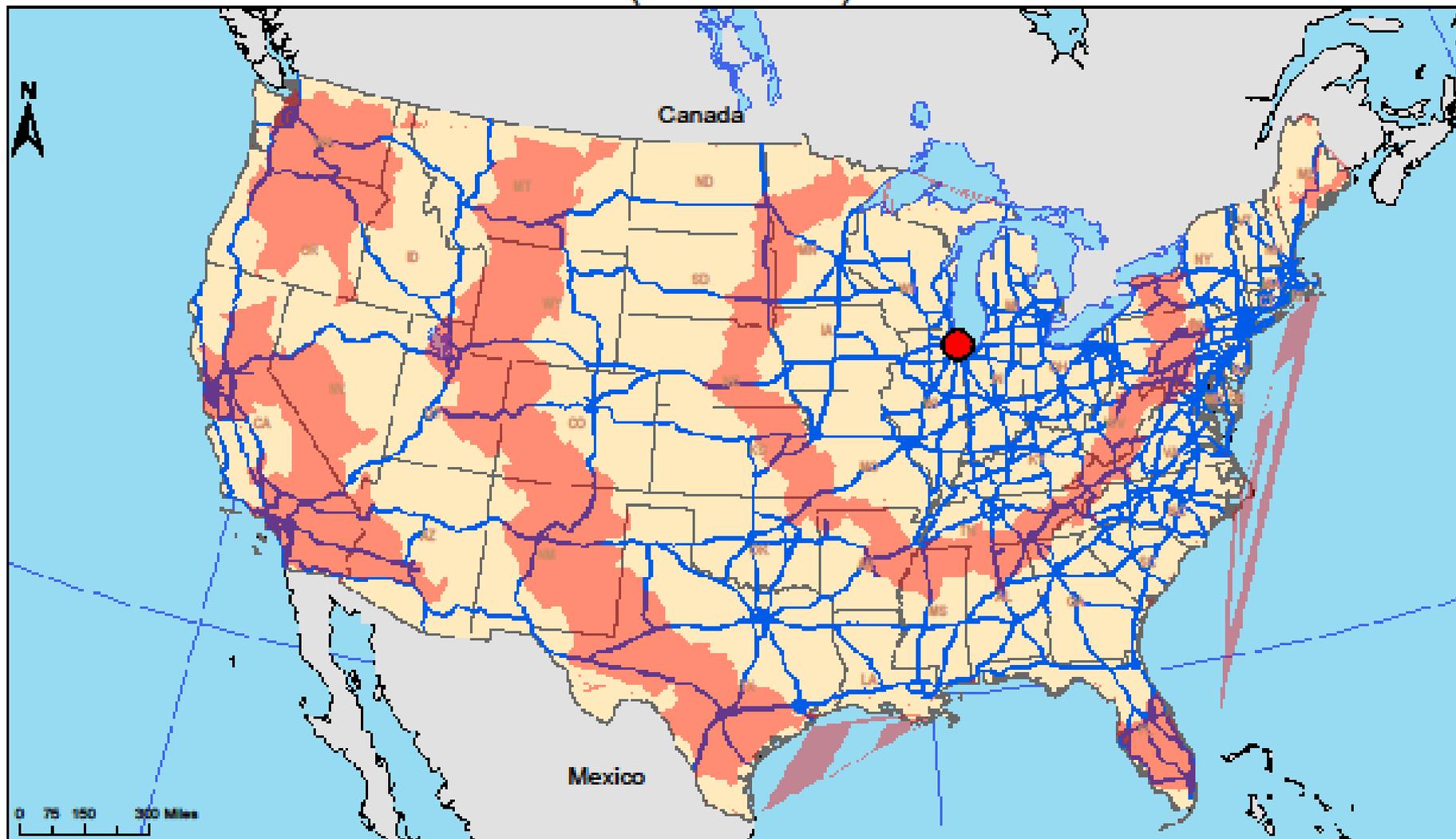
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**Travel Times from Zone 7/Salt Lake City
(9 to 11 hours)**



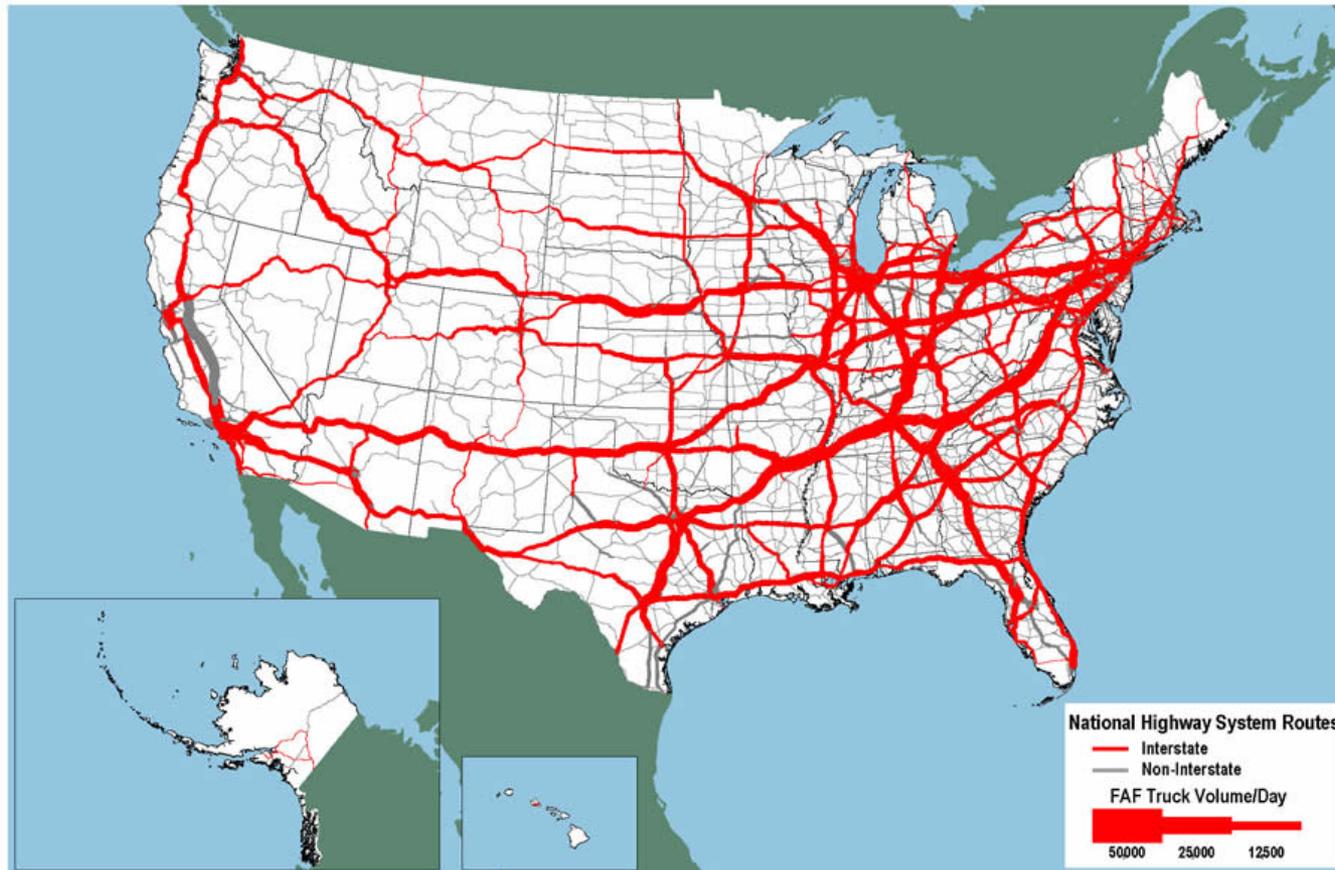
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**Travel Times from Zone 12/Chicago
(9 to 11 hours)**



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Average Daily Long-Haul Freight Truck Traffic on the National Highway System: 2007



Note: Long-haul freight trucks typically serve locations at least 50 miles apart, excluding trucks that are used in movements by multiple modes and mail.
Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 3.1, 2010.

Utah I-15 Truck Parking Project

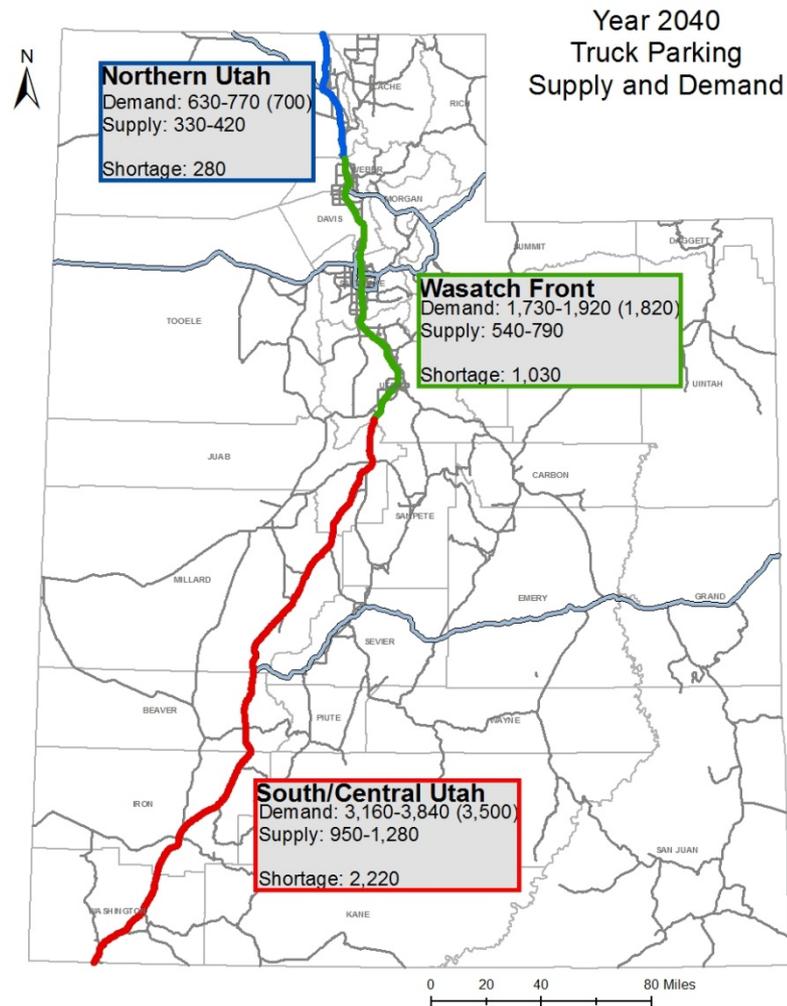
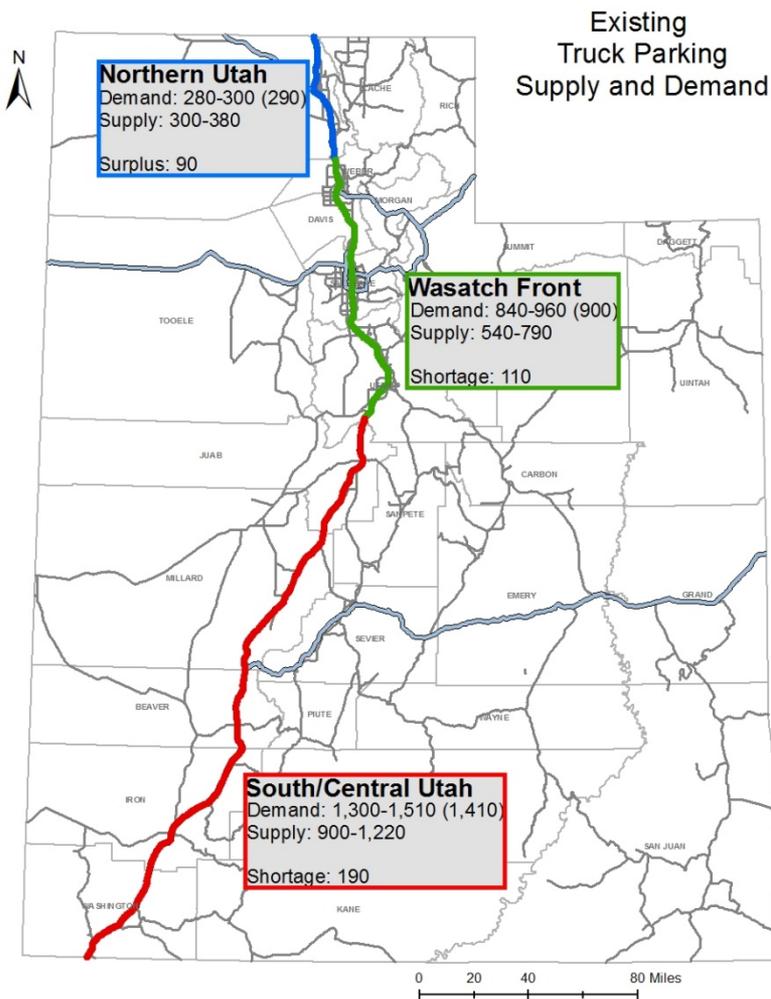
Average Daily Long-Haul Freight Truck Traffic on the National Highway System: 2040



Note: Long-haul freight trucks typically serve locations at least 50 miles apart, excluding trucks that are used in movements by multiple modes and mail.
Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 3.1, 2010.

Utah I-15 Truck Parking Project

Supply/Demand Ratios



Proposed Solutions for Increasing I-15 Truck Parking

- **Concept of Build, Manage, and Use**
- **Build** (construct additional truck parking spaces)
 - Establish state funding assistance/tax incentive programs
 - Establish local government truck parking programs
 - Expand existing rest areas
 - ✓ **As a result of UDOT's truck parking research, in 2011 a \$1.1 million grant was awarded to build 24 additional truck parking spaces for the Lunt Park Rest Area in southern Utah including parking for longer combination vehicles**
 - Build new rest areas
 - Build pull-out truck parking off of Interstates
 - Reopen closed rest areas for truck parking only
 - Promote construction of new commercial truck stops
 - Expand existing truck parking at commercial truck stops

Utah I-15 Truck Parking Project

- I-15 Lunt Park Rest Area Expansion Project



- Completion is scheduled for September 2012



Utah I-15 Truck Parking Project

- **Manage** (better utilization of existing truck parking)
 - Use existing ITS for real time information
 - Promote ports-of-entry truck parking as a “safe haven”
 - **Develop visor card for distribution to truck drivers (map of public and private truck parking spaces in Utah)**
 - Build new ITS for real time information
 - Develop public/private partnerships for real time information
 - Improve truck parking amenities at rest areas
 - Meet with commercial truck stop owners in Utah and exchange information
 - Develop interactive website for truck parking locations in Utah



Utah I-15 Truck Parking Project

- **Use** (expand truck parking options)
 - Explore possible public/private partnerships for truck parking at commercial business lots
 - ✓ Cabela's, IKEA, shopping malls, and other large retail stores/areas
 - Continue close working relationship with the Utah Trucking Association
 - Develop public/private partnerships with warehouse industry
 - Allow truck parking in auto parking at rest areas from dusk until dawn
 - Develop public/public partnerships to increase truck parking availability
 - ✓ Park-n-ride lots and other public parking lots that are vacant after hours



Utah I-15 Truck Parking Project



Summary

- SAFETEA-LU created the Truck Parking Facilities pilot program that provided UDOT with \$545,000 grant to study truck parking along I-15
- Safety data shows truck crashes on I-15 involved drivers from 50 states and 7 Canadian Provinces
- Utah conducted a Truck Driver's Survey along the I-15 corridor in Utah
 - 95% were long-haul drivers representing 224 cities in 35 states and 5 Canadian Provinces
- Existing peak demand finds the I-15 corridor short more than 200 spaces
- **2040 peak demand finds the I-15 corridor short more than 3,500 spaces**
- Study solutions are divided into a three-pronged approach – Build, Manage, and Use
 - All three solution categories contain a public/private partnership component
- Next steps include focus groups with truck stop owners/operators and truck drivers
- Discussion of private sector partnerships to provide more truck parking

Utah I-15 Truck Parking Project

- I-15 provides a direct link between I-80 and Southern California
- South of Salt Lake City, most freight on I-15 is east/west, not north/south
- I-15's relationship to I-80 is critical to understanding the I-15 truck parking shortage
- Commercial truck stop industry reluctant to expand facilities
- Increasing demand for long-term truck parking at public rest areas



Truck Parking and the Utah Statewide Rest Area Plan

- The Statewide Rest Area Plan was completed April, 2007 and made improvement recommendations for Immediate (0-1 year), Near-Term (2-5 year), Mid-Term (6-10 year), and Long-Term (11-20 year) timeframes
- On I-15 alone, the plan recommended adding 85 new truck parking spaces within five years
- While no truck parking spaces were constructed within the five year timeframe, 22 spaces were constructed during the Summer of 2012
- More long-term truck parking spaces need to be implemented statewide

Lunt Park Rest Areas

- Lunt Park Rest Area (NB and SB I-15)
- UDOT, working with FHWA, recently expanded long-term truck parking in southern Utah along I-15 at the Lunt Park Rest Area
- Ten truck parking spaces were added to each side of I-15
- Two oversized truck parking spaces were added to each side of I-15 for longer combination vehicles (LCVs)
- Lunt Park Rest Area now has 40 long-term truck parking spaces
- To accommodate the larger parking area, additional lights were added to each side of I-15
- All new luminaires were installed with LED lamps
- All existing luminaires replaced with LED lamps
- Future conduit placed along exit ramps to enable the addition of three exit ramp lights per direction, similar to interchange lighting, in the future
- Truck Parking areas re-striped with wider pavement markings for longer life and better visibility
- Improved drainage within parking areas

Utah I-15 Truck Parking Project



Looking at the SB I-15 Lunt Park Rest Area split between car and truck parking. New signs were also installed to help direct the traveling public

Utah I-15 Truck Parking Project



See the older edge of parking area and the new parking area with signing for oversized trucks

Utah I-15 Truck Parking Project



Closer view of the newer SB parking area

Utah I-15 Truck Parking Project



SB I-15 oversized truck parking spaces

Utah I-15 Truck Parking Project



SB I-15 oversized truck parking spaces

Utah I-15 Truck Parking Project



View of the old spaces and the new spaces with many trucks that particular day

UDOT's Freight Planning Focus

- Working with transportation, warehousing, as well as business and logistics leaders and organizations on freight operations and needs
- Monitoring freight operations, both nationally and globally, that affect Utah's economy, business community and transportation systems
- Educating government and business leaders, as well as universities and civic groups, on freight operations and issues



Photo by Daniel B. Kuhn

UDOT's "Final Four" Goals (freight focus)

- PRESERVE INFRASTRUCTURE
 - Focus highway infrastructure improvements on Utah's Primary Freight Routes to ensure quality service to Utah's business community
- OPTIMIZE MOBILITY
 - Identify problems impacting freight service and operations in Utah, as well as options for addressing those challenges
- ZERO FATALITIES
 - Through infrastructure improvements for freight such as passing lanes, paved shoulders, turning radii, signal timing, etc.
- STRENGTHEN THE ECONOMY
 - Continued coordination with Utah's businesses and logistics leaders on freight issues, operations and needs

Utah I-15 Truck Parking Project

Questions?



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Utah, the Crossroads of the West