

MARCH 2012

CALIFORNIA NEVADA ARIZONA UTAH

I-15 CORRIDOR SYSTEM MASTER PLAN



MOVING PEOPLE
MOVING GOODS

CH2MHILL.

Acknowledgements

The I-15 Corridor System Master Plan (Master Plan) and the associated technical studies are products of the hard work and commitment of each of the I-15 Mobility Alliance (Alliance) partner organizations and their dedicated staff. Their efforts are a testament of outstanding partnership and a true spirit of collaboration, without which this Master Plan could not have succeeded.

Susan Martinovich, Director of the Nevada Department of Transportation (NDOT) and 2011 American Association of State Highway Transportation Officials (AASHTO) President, served as the Chair of the Alliance's Executive Board and, through her agency, provided the initial funding for this effort. Without this support, the creation of the Master Plan and Alliance would not have been possible. Her leadership and vision were an inspiration to all those participating in the Alliance.

I-15 Mobility Alliance Partners

The I-15 Mobility Alliance partners that have participated in this effort are listed below in alphabetical order.

- American Magline Group
- Amtrak
- Arizona Department of Transportation (ADOT)
- Arizona Game and Fish Department
- Bear River Association of Governments
- Burlington Northern Santa Fe (BNSF) Railway
- Brookings Mountain West
- Bureau of Land Management
- Cache Metropolitan Planning Organization
- California Department of Transportation
- California High Speed Rail Authority
- California Trucking Association
- California-Nevada Super Speed Train Commission
- Carmen Group Inc.
- City of Clearfield
- City of Fontana
- City of Henderson
- City of Las Vegas
- City of Layton
- City of North Las Vegas
- City of Ontario
- City of Orem
- City of Rancho Cucamonga
- City of South Salt Lake
- City of St. George
- Clark County Department of Aviation
- Clark County Public Works
- County of San Bernardino
- DesertXpress
- Economic Development Corporation of Utah
- El Dorado Holdings
- Envision Utah
- Federal Highway Administration
- Federal Railroad Administration
- Five County Association of Governments
- Freeway and Arterial System of Transportation
- Iron County
- Los Angeles Metro Transportation Authority
- Mohave County
- Mountainland Association of Governments
- National Park Service - Lake Mead National Recreation Area
- Nellis Air Force Base
- Nevada Department of Transportation (NDOT)
- Nevada Division of State Parks
- Nevada Highway Patrol
- Nevada Motor Transport Association
- Nevada State Office of Energy
- Northern Arizona Council of Governments
- NV Energy
- Orange County Transportation Authority
- Port of Long Beach
- Port of San Diego
- Regional Transportation Commission of Southern Nevada
- Riverside County Transportation Commission
- Riverside Transit Agency
- Salt Lake City Chamber of Commerce

- San Bernardino Associated Governments
- San Diego Association of Governments
- Sierra Club, San Diego Chapter
- Sierra Club, Utah Chapter
- Southern California Association of Governments
- Southwest Airlines
- State of Nevada Division of Environmental Protection
- The Toll Roads
- Union Pacific Railroad
- U.S. Army Corps of Engineers
- Utah Department of Transportation (UDOT)
- Utah Transit Authority
- Utah Trucking Association
- Wasatch Front Regional Council
- Washington County
- Western High Speed Rail Alliance

Consultant Support

The consultant team of CH2M HILL would like to recognize the tireless efforts of the I-15 Mobility Alliance partners in providing invaluable data, resources, and assistance in capturing, analyzing, and summarizing the technical data into this Master Plan. The consultant teams and their specific roles in this project include:



CH2MHILL

CH2M HILL – Prime consultant, partner agency coordination, technical studies, Master Plan, and responsible for overall project management



CDM/Wilbur Smith Associates – Freight analysis and data management



THE
SKANCKE
COMPANY

The Skancke Company – Strategic advisor



Brookings Mountain West – Megaregions definitions



Horrocks Engineering – Utah's programming and prioritization



Photo: Monument Valley, Utah



Photo: Downtown Salt Lake City, Utah

Preface

Older generations in America remember the original interstate highway system concept developed in the 1950s. The system is a part of our culture, and re-educating and inspiring the public—among all age groups—to think differently about how the Interstate 15 (I-15) Corridor connects all four Alliance states and beyond is a key challenge. A mindset is needed that envisions a transportation system without borders, connecting rural areas with metropolitan and micropolitan regions in ways that sustain economic prosperity and enhance our quality of life.

Globalization, evolving trade relationships, and technological advances continue to change economies around the world. Each of these factors has an effect on the transportation network that serves the region and the ability to meet the changing demands for multimodal mobility. Many of these changes will affect commodity flows along the I-15 Corridor. The I-15 Corridor is a national asset with global impacts and enormous value when considering transport of every type and mode. Expanding the definition of transportation, the multimodal movement of goods and people can be extended to include the movement of resources essential to economic activity and quality of life for the communities served by the corridor. By expanding our concept of transportation, the potential value of the I-15 asset increases exponentially.

In the western United States (U.S.), the I-15 Corridor is the spine of a transportation network extending more than 1,470 miles through the states of California, Nevada, Arizona, Utah, Idaho, and Montana. I-15 is a unique, diagonally oriented artery linking coastal ports to inland population centers and connecting with major east-west corridors that serve the entire U.S. The corridor's ability to continue to support the economic vitality of the nation and the western states is increasingly challenged by congestion and safety issues. To address this, integrated, multimodal solutions that move people and freight to, between,

and within the metropolitan economies must be considered. Future transportation modes and routes must focus on increasing system efficiency by alleviating congestion and improving safety. An integrated, multimodal perspective allows us to reduce the friction between modes of transportation to maximize people and goods carrying capacity.

The I-15 Corridor System Master Plan is a summary document of a series of technical studies conducted by the I-15 Mobility Alliance, that includes a long-range multimodal plan, and a vision for development of facilities along the corridor. The technical studies are updated periodically and posted on the I-15 Mobility Alliance website (www.i15alliance.org), which also includes an interactive map and database of projects of interregional significance that can be sorted by state, project type, implementation timeframe, and lead organization.

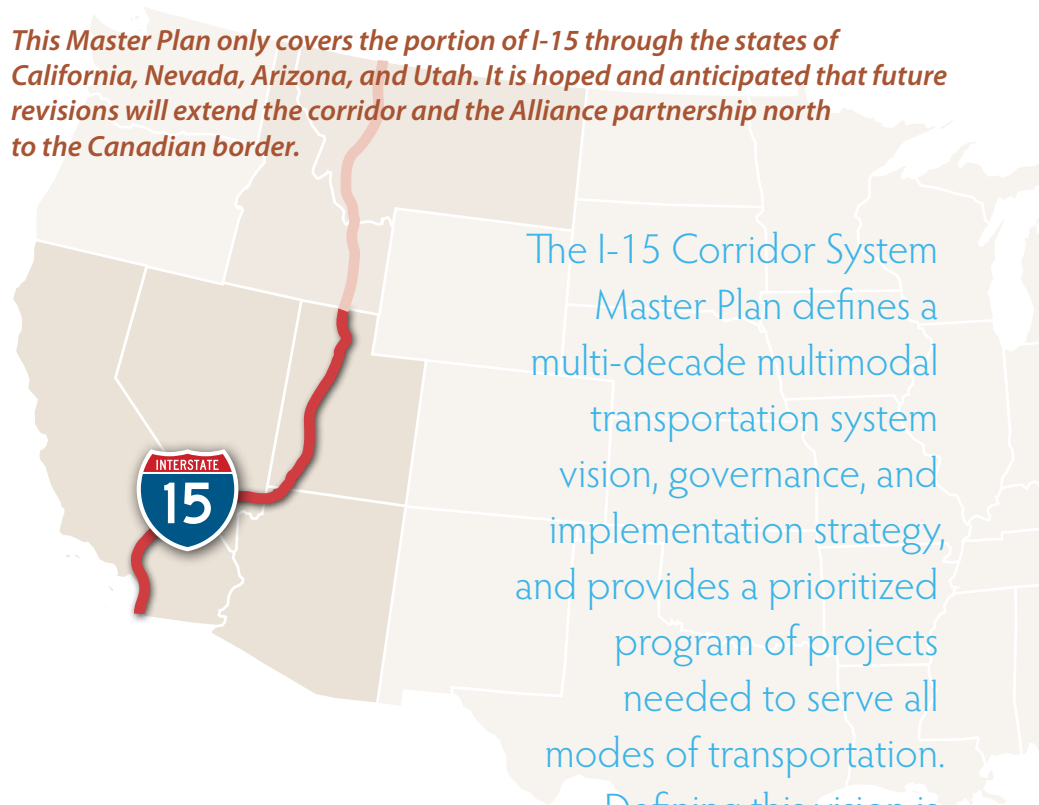
This Master Plan and the associated technical studies are meant to evaluate the corridor as a whole and are not intended to produce a state by state analysis nor to supplant the priorities established by the various agencies of the I-15 Mobility Alliance.

The Master Plan tells a story of the importance of the corridor and the challenges facing it, and outlines an approach for addressing these challenges, including multi-jurisdictional and interest group collaboration. Each of the five chapters tells the following part of the story:

- Chapter 1: **One Region, One Corridor, One Vision**—defines this transcontinental corridor and provides an overview of its importance to the nation and local communities served by it.
- Chapter 2: **Moving People**—describes the socio-economic make-up of the adjoining megaregions and the opportunities and challenges of moving people between these major population centers via car, rail, and airplane.

- Chapter 3: **Moving Goods**— establishes the importance of goods movement to the financial well-being and quality of life of those living along the corridor, and to the nation. The opportunities and constraints of moving goods between these major population centers is described, starting with goods arriving via inland and sea ports, and continuing their journey by truck, rail, or airplane.
- Chapter 4: **A Call to Action**— emphasizes the need for a plan that is socially, politically, environmentally, and financially enduring, and outlines a process for achieving it.
- Chapter 5: **I-15 Mobility Alliance**— introduces the organizational structure and mission of the Alliance, and the successes that can be achieved through collaboration.

This Master Plan only covers the portion of I-15 through the states of California, Nevada, Arizona, and Utah. It is hoped and anticipated that future revisions will extend the corridor and the Alliance partnership north to the Canadian border.

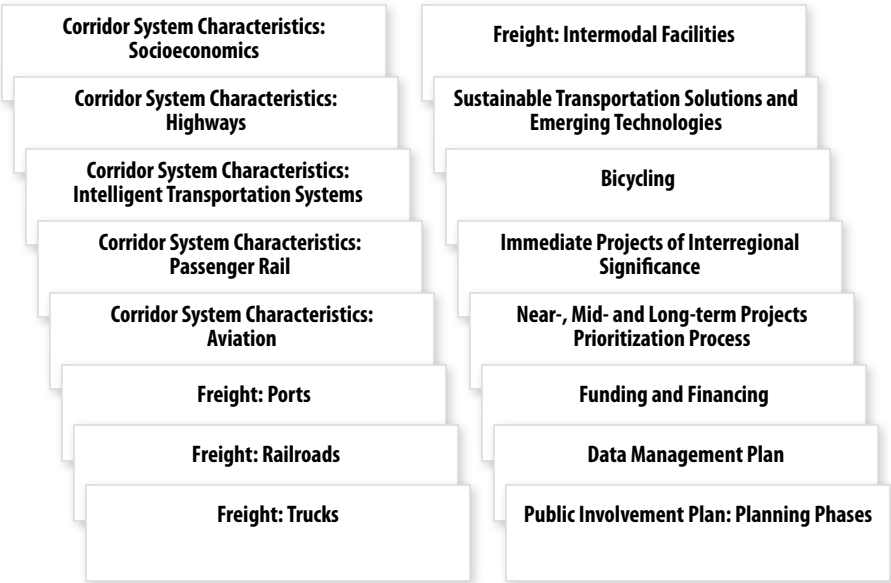


The I-15 Corridor System Master Plan defines a multi-decade multimodal transportation system vision, governance, and implementation strategy, and provides a prioritized program of projects needed to serve all modes of transportation.

Defining this vision is a regional partnership between government and private interests in Nevada, California, Arizona, and Utah—the I-15 Mobility Alliance. Developing a clear unified vision of the I-15 Corridor enables us to look beyond highway corridor preservation and focus on regional and global competitiveness.

The I-15 Mobility Alliance seeks to establish a “best practice” standard through the creation of a sustainable regional planning process for the I-15 Corridor System that defines potential future transportation improvements and corridor collaboration across the U.S.

At the time of this publication, the technical documents that make up the comprehensive I-15 Corridor System Master Plan include:



1. ONE REGION, ONE CORRIDOR, ONE VISION

2. MOVING PEOPLE



3 MOVING GOODS



pg 23

4 A CALL TO ACTION



pg 39

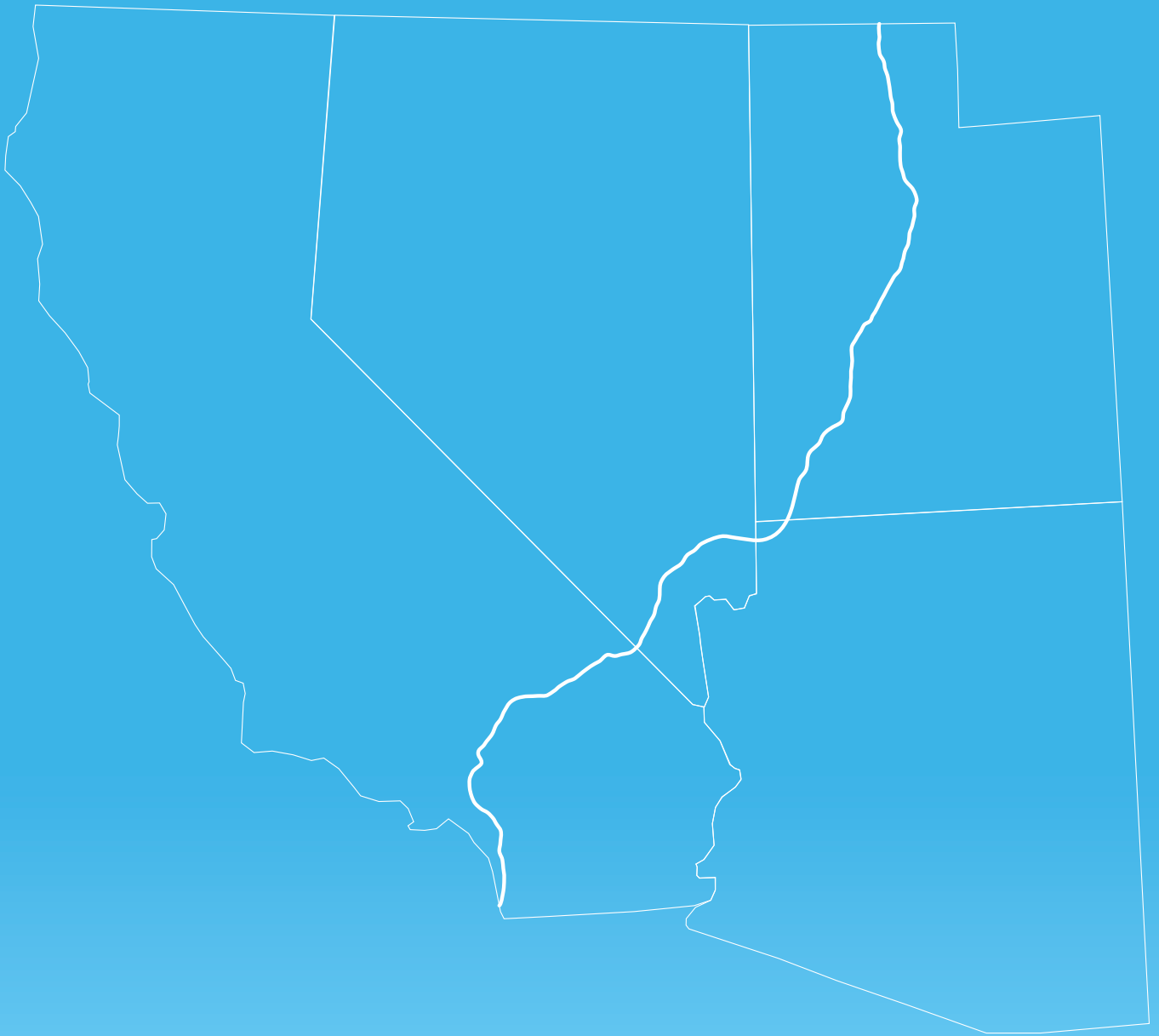
5 I-15 MOBILITY ALLIANCE



pg 49

1. ONE REGION, ONE CORRIDOR, ONE VISION





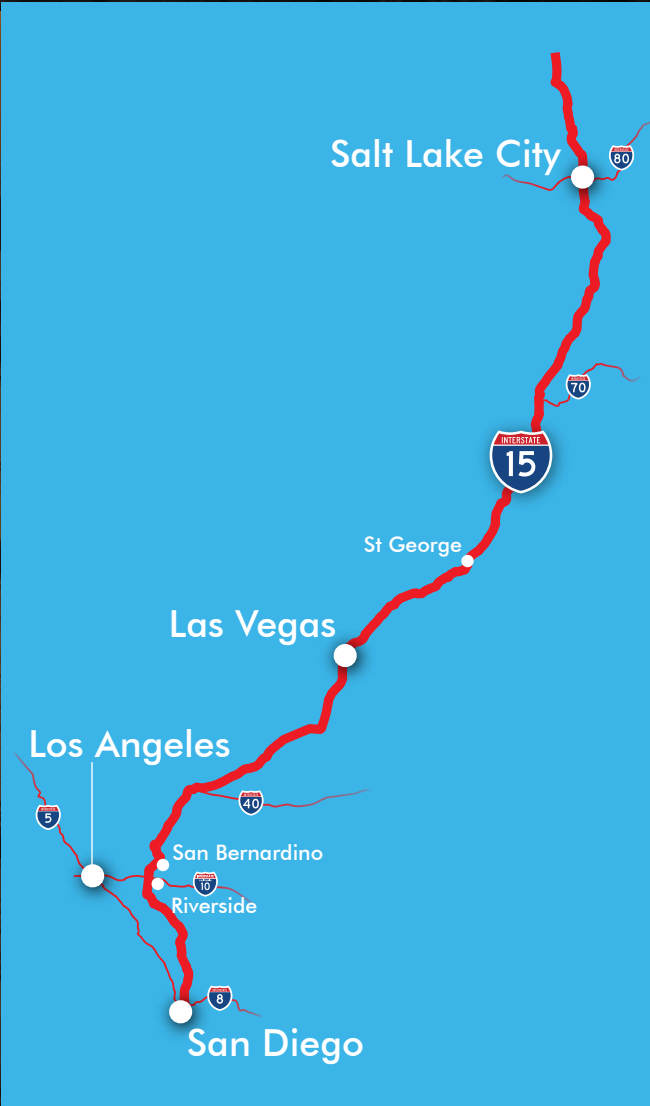
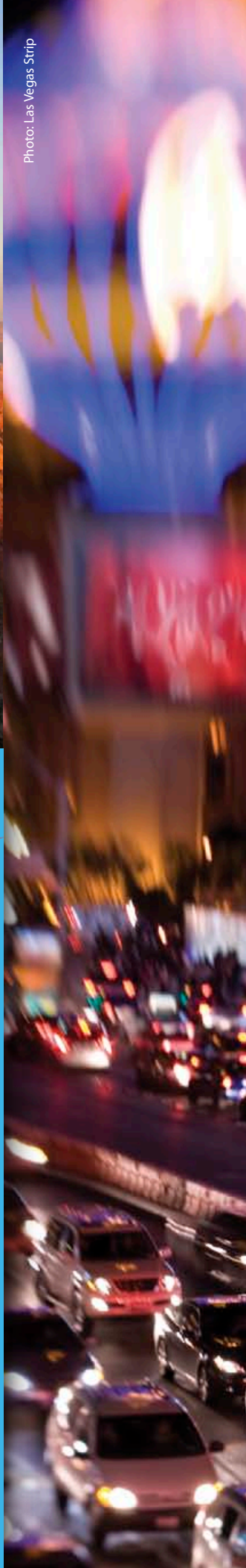
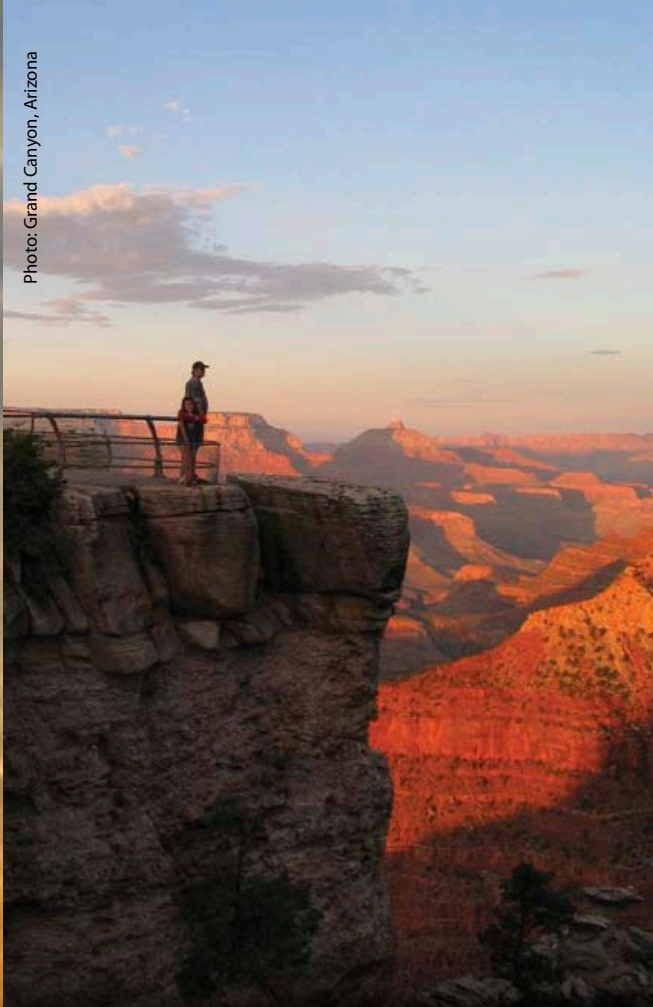




Photo: Angels Rest in Zion National Park, Utah



Photo: Snowbird, Utah



From the beaches of San Diego to the resort corridor in Las Vegas and beyond to the natural wonders of Utah, the I-15 Corridor takes residents of the West on vacation; transports \$120 billion of commerce annually to and from local communities and the global market place; and delivers \$52 billion in tourism revenue to local communities.

The I-15 Corridor is an asset of enormous value to the West and to the nation. The I-15 Corridor System Master Plan will lay the groundwork for improved mobility, economic prosperity, and a sustainable quality-of-life for the citizens we serve.

Susan Martinovich,
NDOT Director and
2011 AASHTO President

Globalization, evolving trade relationships, and technological advances continue to change economies around the world. Each of these factors impacts the ability of our transportation network to meet the evolving demands that 21st century megaregions make on infrastructure.

Maintaining mobility in a global world requires a comprehensive evaluation of the movement of people, energy, commodities, communication, technology, and the connection between and within places. Nowhere is this more apparent than along the I-15 Corridor, which connects Southern California to Canada, traversing California, Nevada, Arizona, Utah, Idaho, and Montana along the way: on the one hand as a major interstate corridor;

on the other as the main street of a megaregion.

Developing a long-range vision for this 843-mile highway corridor requires innovative, multimodal transportation solutions that address the divergent needs of the widest spectrum of users while supporting safety and security. To develop this vision, a broad spectrum of stakeholders from the western states of California, Nevada, Arizona, and Utah

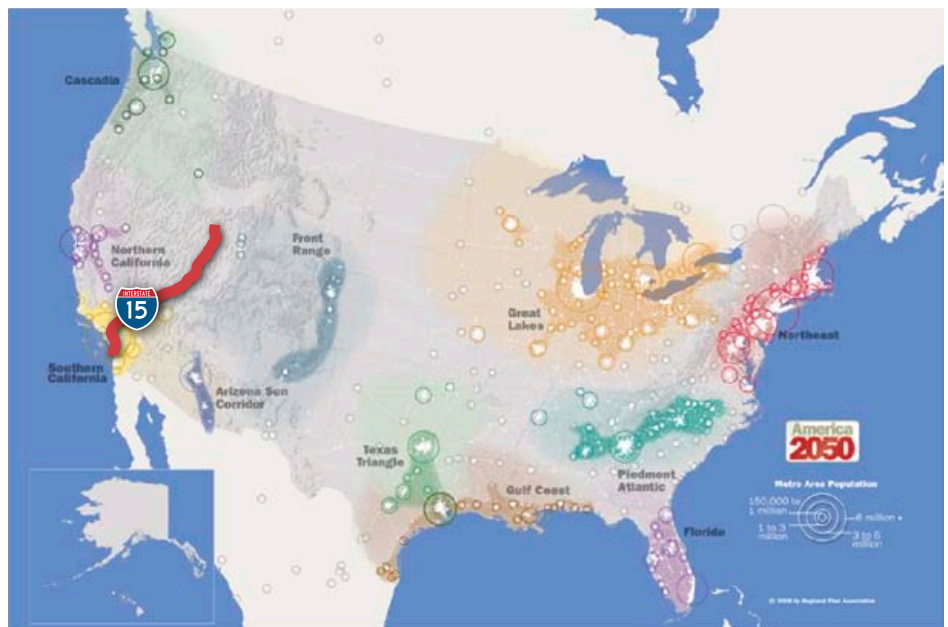


EXHIBIT 1.1

The population of the megaregions that I-15 serves is predicted to increase substantially in the future. As the megaregions grow increasingly contiguous, so too will commuter traffic, freight movement, and tourist trips. The resulting congestion produces a ripple effect across the region as traffic delays in Las Vegas can slow down travel in California and Utah.

Source: America 2050; www.america2050.org/maps



have formed the I-15 Mobility Alliance. This is a collaborative alliance through which common mobility issues derived from economic and demographic pressures can be evaluated, prioritized, and addressed.

Harkening back to the birth of the highway system, Thomas McDonald, head of the federal Bureau of Public Roads sought in 1921 “a definite plan of cooperation between the states and the federal government, which will ensure that the primary systems of each state are connected up with the primary system of the adjoining states.” Today the I-15 Mobility Alliance seeks to do the same—work cooperatively with the states and federal government to develop a transportation network with broad public and industry support; expand our concept of transportation; and increase the value of I-15 as a local, regional, and global asset.

Expanding the definition of transportation, the multimodal movement of goods and people can be extended to include the movement of commodities essential to economic activity and quality of life for the communities served by the corridor. These include electricity, fuels including natural gas and hydrogen, water, communications and data, and other resources. These dimensions bring new partners and resources into the program and, in the broadest sense, also embrace green energy and the reduction of carbon emissions and environmental impacts that can accelerate support for the plan and development of all users.

VISION OF THE ALLIANCE

The I-15 Mobility Alliance is a strategic partnership that brings together government, business, and community stakeholders in a shared vision to plan, develop, finance, construct, and manage a safer, more efficient, and reliable multimodal transportation corridor.



Critical to the economic viability of the U.S., the I-15 Corridor moves people and goods through major trade gateways, tourist destinations, and population centers throughout the West.

The I-15 Corridor's ability to continue to support the economic sustainability of the nation and the western states is increasingly challenged by congestion and deteriorating safety conditions. To address this, the I-15 Mobility Alliance developed the I-15 Corridor System Master Plan that presents an integrated, multimodal prescription to move people and freight to, between, and within metropolitan economies along the corridor. The Master Plan focuses on future transportation modes and routes that will improve system efficiency and enhance the I-15 Corridor to alleviate congestion and improve safety. The Master Plan views I-15 as a multimodal activity corridor that also includes the energy, communications, data, and resource transmission lines that bind the megaregions of California, Nevada, Arizona, and Utah. This integrated, multimodal perspective will reduce friction between modes of

transportation to maximize the carrying capacity for people and goods.

The I-15 Corridor was designated by the U.S. Department of Transportation (USDOT) in 2007 as one of six Corridors of the Future because of its regional significance for transportation of goods and people. The entire I-15 Corridor comprises 1,470 miles of interstate highway—60 percent (843 miles) of it is within the four-state I-15 Mobility Alliance including 288 miles in California, 124 miles in Nevada, 30 miles in Arizona, and 401 miles in Utah. The study area for the Master Plan also considers other population centers that are connected to I-15 by major highways (in particular, Phoenix, Arizona).

It is the desire of the Alliance to expand the current partnership of states to include Idaho and Montana in the future—thus covering I-15 in its entirety.



EXHIBIT 1.2

The prestigious designation given to I-15 in 2007 as a Corridor of the Future recognizes that the health of the corridor directly impacts the wealth and welfare of the region it serves.

Source: FHWA, USDOT - Corridors of the Future Program

EXPRESS LANES  

MINIMUM TOLL: \$ **0.50**

TO  \$ **0.50** **7** MINS

TO  \$ **0.80** **14** MINS

EXIT 27

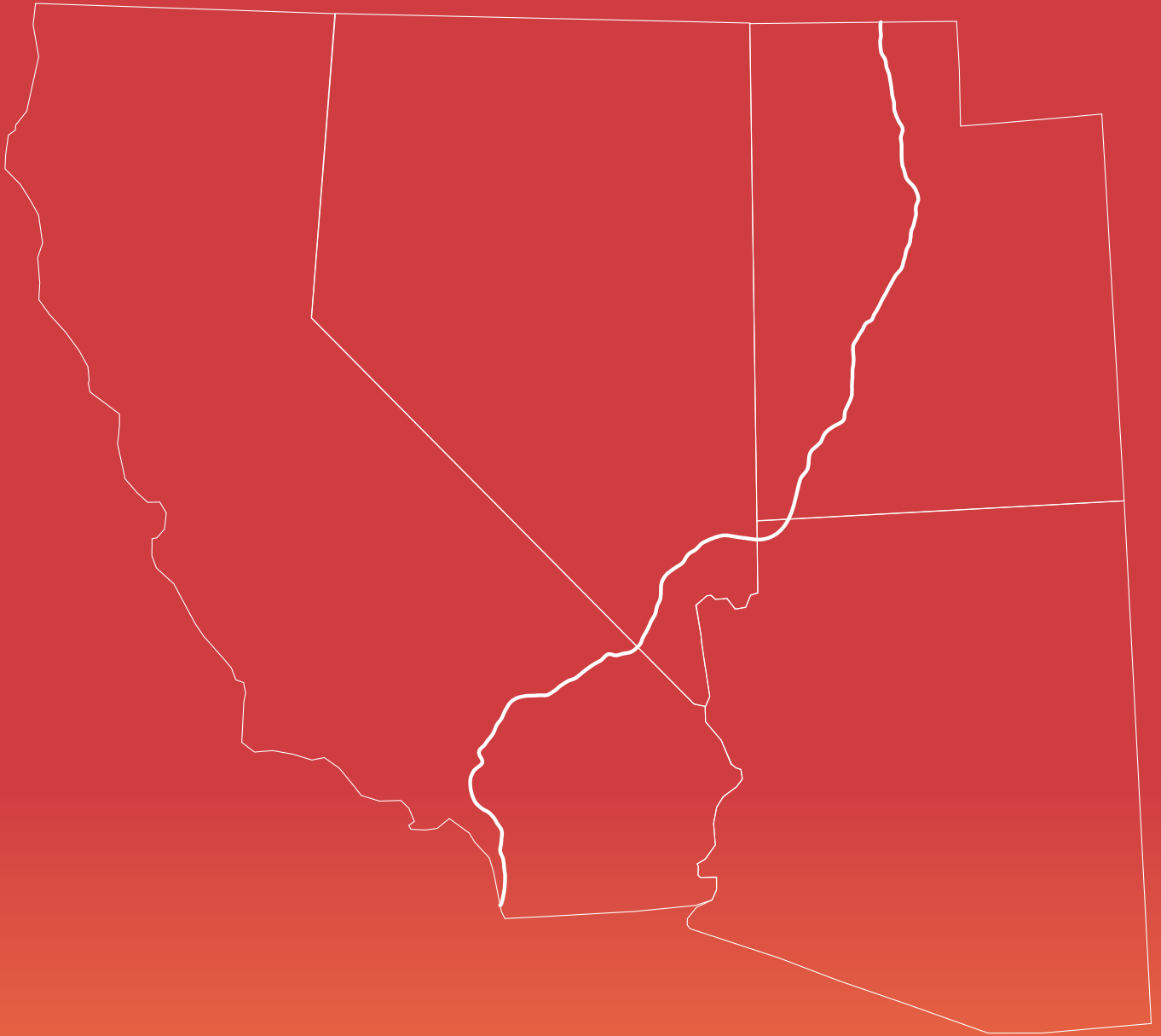
Via Rancho Pkwy

EXIT  **ONLY**



2. MOVING PEOPLE





The I-15 Corridor is the thread that ties 27 million people together economically, culturally, and socially.



The lifeline of 27 million people, I-15 is at the center of commerce, tourism, and the economy of one of the nation's fastest growing regions.

The I-15 Corridor serves a growing region and provides the avenue to work and play for the population surrounding it. The I-15 Corridor also acts as a natural avenue for truck movements out of the ports and agricultural regions of Southern California and onward to major cities such as Las Vegas and Salt Lake City. The I-15 Corridor also helps connect the region to the rest of the U.S. Goods traveling to the Southeast, Midwest, Great Lakes, and Northeast states travel north along I-15 before heading east on I-10, I-40, I-70, or I-80.

The I-15 Corridor traverses some of the most densely populated and fastest growing counties in the U.S., including the urban and/or suburban areas of San Diego, Los Angeles, Riverside, and

San Bernardino counties, Las Vegas, and Salt Lake City. Population in the counties located within 100 miles of the I-15 Corridor accounted for just under 9 percent of total U.S. population in 2009, and is expected to grow to over 10 percent of the total U.S. population by 2050 (Table 2.1). The most significant growth is in the urban areas along the corridor: San Diego, Southern California, Las Vegas, Phoenix, and Utah. In fact, Nevada, Arizona, and Utah were the fastest growing states in the U.S. in 2009, and it is anticipated that populations in the Las Vegas, Phoenix, and Salt Lake regions will almost double by 2050, while Southern California will add over 10 million people.

| | Population | | | |
|-----------------------------|---------------|-------------|-------------|-------------|
| | # of Counties | 2000 | 2009 | 2050 |
| California | 9 | 20,009,400 | 21,998,100 | 33,034,700 |
| Nevada | 3 | 1,412,400 | 1,951,900 | 4,157,800 |
| Arizona | 2 | 271,400 | 324,700 | 598,800 |
| Utah | 24 | 2,181,700 | 2,724,800 | 5,902,900 |
| Total I-15 Corridor | 38 | 23,874,900 | 26,999,500 | 43,694,200 |
| Total U.S. | 3,028 | 281,421,900 | 307,006,600 | 419,853,600 |
| % I-15 Corridor/U.S. | N/A | 8.5% | 8.8% | 10.4% |

* Population includes counties within 100 miles of I-15

TABLE 2.1

The population along the I-15 Corridor is projected to continue to outpace growth in the rest of the nation. By 2050, Southern California will add over 10 million people and populations in Las Vegas, Phoenix, and Salt Lake City will almost double.

Sources: U.S. Census Bureau, SANDAG, CA Department of Finance, Kern COG, UNLV Center for Business and Economic Research, AZ Department of Economic Security, and Utah Governor's Office of Planning and Budget



EXHIBIT 2.1

Some of the largest economic and population centers in the U.S. rely on the I-15 Corridor. Anchored in the south by Southern California, one of the ten largest economies in the world in its own right, the I-15 Corridor cuts across a diverse geography and is critical to this area's continued ability to grow and thrive.

Source: U.S. Census Bureau; U.S. Bureau of Economic Analysis

I-15 is a heavily traveled freeway, not just in densely populated cities, but connecting metropolitan and recreational centers of activity.

As it cuts diagonally across the Intermountain West, I-15 provides a major link between Canada and Mexico, with nearly 300,000 vehicles traveling on it through major metropolitan areas every day.

| | California | Nevada | Arizona | Utah |
|---|------------|----------|----------|----------|
| Center Line Miles | 288 | 124 | 30 | 401 |
| Number of Lanes | 4 to 12 | 4 to 10 | 4 | 4 to 12 |
| Million Vehicle Miles Traveled | 10,350 | 2,073 | 221 | 6,293 |
| Maximum Annual Average Daily Traffic | 294,000 | 246,000 | 23,818 | 244,525 |
| Minimum Annual Average Daily Traffic | 30,000 | 17,000 | 19,181 | 9,400 |
| Speed Limit | 55 to 70 | 65 to 75 | 55 to 75 | 65 to 80 |
| Rest Areas | 4 | 5 | 0 | 6 |

TABLE 2.2

Covering 843 miles, the I-15 Corridor is the backbone of travel to and from the intermountain region of the U.S., one of the fastest growing regions of the country.

Source: 2009 Highway Performance Monitoring System (HPMS) submittals from CA, NV, UT, AZ (2008), Caltrans, NDOT, ADOT, UDOT

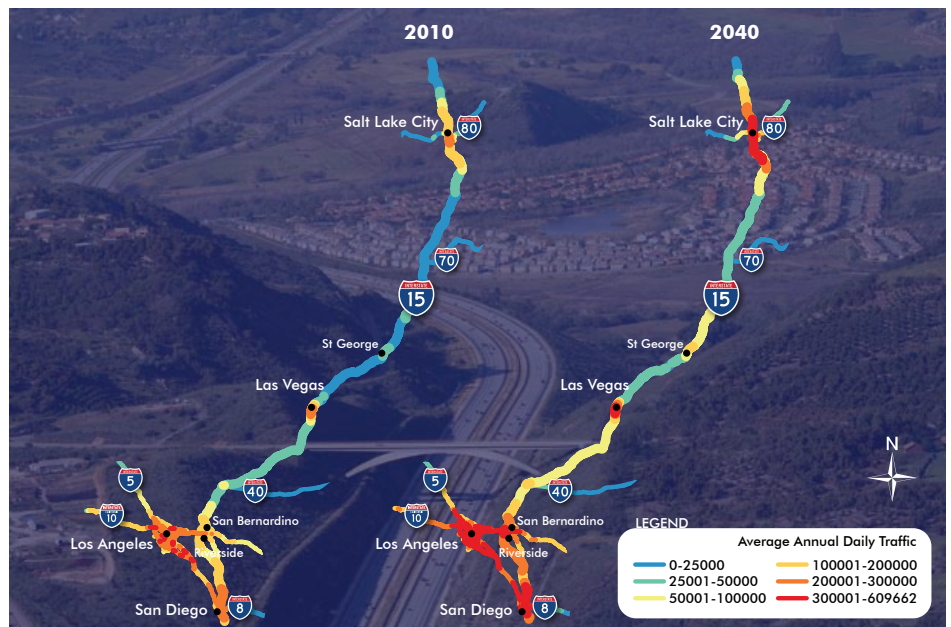


EXHIBIT 2.2

The average annual daily traffic on I-15 is expected to more than triple by 2040.

Source: National Highway Planning Network and Freight Analysis Framework (FAF) 3.1 based on HPMS

Lifeline to \$52 Billion Multistate Tourism Industry

\$120 billion of commerce is transported annually via I-15 to and from local communities and the global marketplace, with approximately \$52 billion of that coming from tourism. For Nevada, I-15 is the single most important tourism corridor and is essential for Southern Nevada's economy. It is the primary access route for interstate tourism between Southern California and Las Vegas, with more than 8 million people driving this corridor annually.

Each weekend over 100,000 people travel the corridor between the two destinations. Most of Utah's spectacular skiing, national parks, and other attractions are accessed via I-15, contributing about \$5 billion to the state's economy. A plethora of theme parks, white sand beaches, and cultural and historical sites attract nearly \$100 billion in tourism revenue annually to California—approximately 20 percent of that traveling via I-15.

Every weekend, the population of a small U.S. city (100,000) travels between Southern California and Las Vegas.

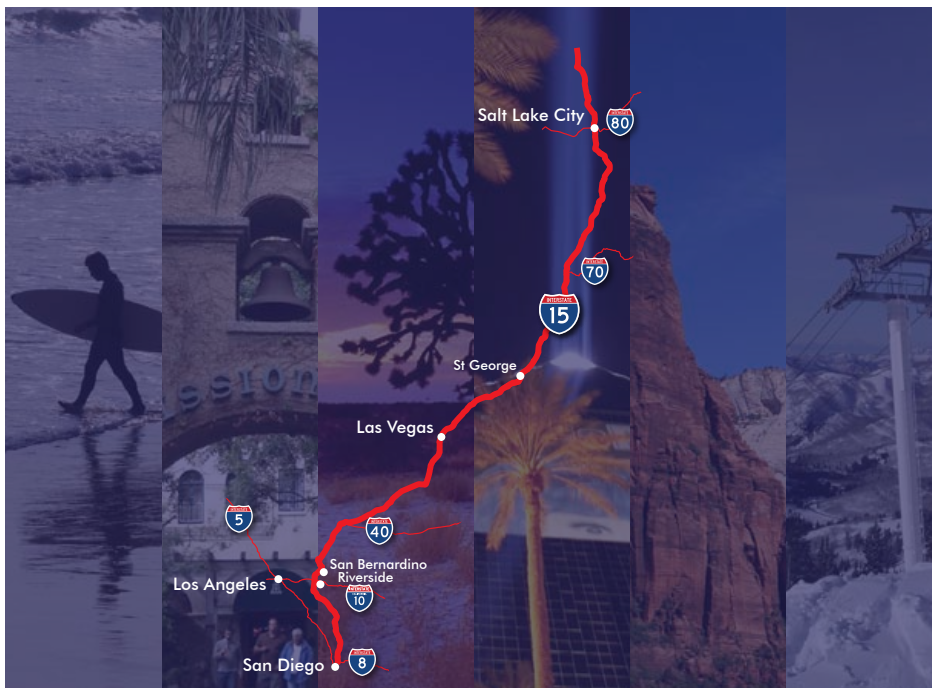


EXHIBIT 2.3

From the beaches of San Diego to the resort corridor in Las Vegas and beyond to the natural wonders of Utah, the I-15 Corridor takes residents of the West on vacation, and delivers \$52 billion in tourism revenue to local communities.



The combination of aging infrastructure, critical safety concerns, and chronic congestion costs our economy millions of dollars a year in delays.

Congestion and Safety: Saving Lives, Saving Money

Population and employment growth projected in counties along the corridor will increase congestion on I-15. The existing Annual Average Daily Traffic (AADT) for the entire I-15 Corridor is expected to more than triple by 2040, substantially exacerbating already apparent performance problems.

The cost of congestion in lost time, money, opportunity, and lives can be significant. In 2009, the average annual cost per auto commuter in the I-15 Corridor urban areas ranged from \$306 in Provo, Utah, to \$848 in San Diego, California.

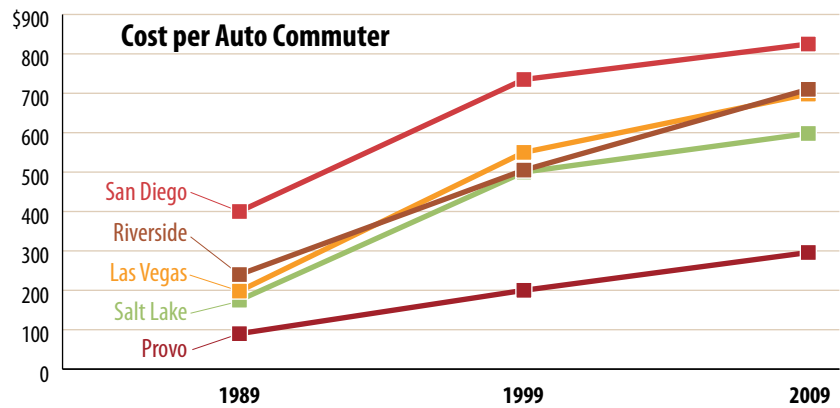


EXHIBIT 2.4

The annual cost of congestion per auto commuter in urban areas.


Source: Texas Transportation Institute: 2010 Urban Mobility Report




Current Congestion

Regional snapshots of the congestion on I-15 are illustrated in the following locations. The I-15 Corridor has the unfortunate distinction of hosting five of the nation's worst trucking bottlenecks according to the American Transportation Research Institute (ATRI). Two of the below locations are on that list.




 The junction of I-15 and I-215 near Devore, California, is one of the worst grade-related bottlenecks in the U.S. Severe delays are common, especially during peak after-noon and weekend hours, when traffic backs up 5 miles in any direction. This heavily traveled junction is impacted by recreational vehicles, commuters, and freight movement. Travel through the high elevation Cajon Pass is one of only three routes into/out of Southern California. In addition to being a primary goods movement corridor, it is the route to recreation in Las Vegas and the Colorado River. Currently the interchange experiences 1,200 daily vehicle hours of delay at an annual cost of \$3.75 million. These numbers are expected to increase by the year 2040 to 25,000 daily vehicle hours of delay at an annual cost of more than \$80 million.




 I-15 in the heart of Las Vegas was designed to carry 130,000 vehicles, but over 270,000 vehicles use this stretch of I-15 daily, and this number is expected to climb to 470,000 vehicles a day by 2025. (ATRI Congestion Ranking: 12)



 I-15 through Washington County in Southern Utah accesses Zion National Park and Bryce Canyon National Park, attracting over 2.5 million visitors annually. In this region, peak-hour delays on I-15 are forecast to increase rapidly, with vehicle delay costs expected to exceed one million dollars per year by 2026. (photo source: <http://www.emagazine.com/archive/1060>)



 I-15 currently carries 43 percent of all traffic in the southern portion of Salt Lake City, where there are no parallel freeway routes. Based on projected growth in population and vehicle miles traveled, it is expected that by 2030, the majority of the mainline I-15 segments and interchanges will be over capacity and heavily congested through these areas, even with the currently funded transportation improvements. (ATRI Congestion Ranking: 82 & 95)

Even with planned improvements in place, congestion delay during peak times on I-15 between Southern California and Las Vegas is projected to grow from 3.19 hours per vehicle in 2012 to 7.03 hours in 2022.

The economic competitiveness of the region depends on the free-flow movement of people and goods.

Future Congestion

In 2040, significant congestion is anticipated throughout much of the corridor, based on placing expected 2040 demand on the existing highway network. Therefore, we will need to increase capacity and efficiency of the corridor to meet this demand.

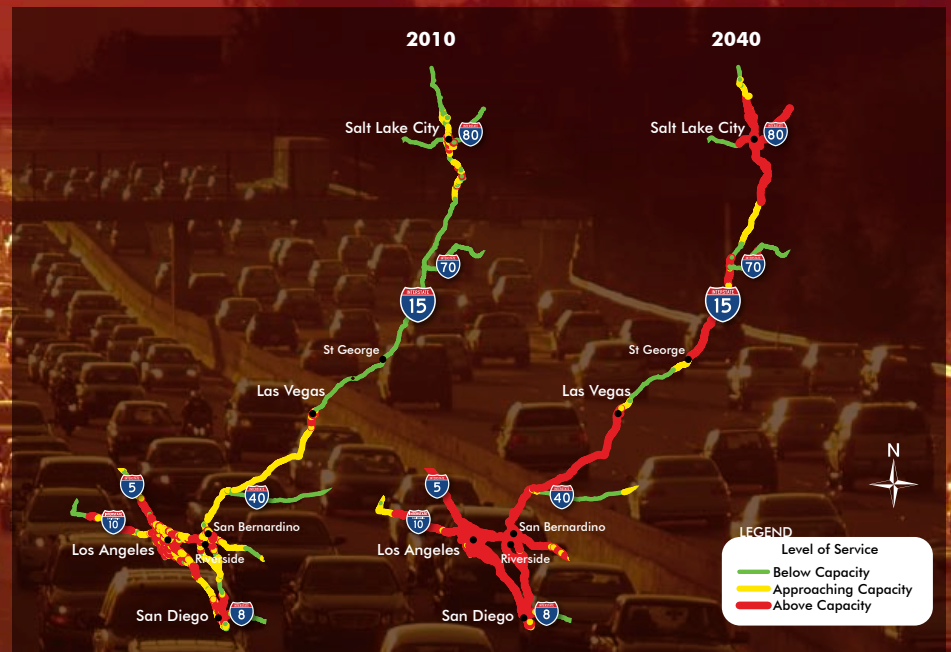
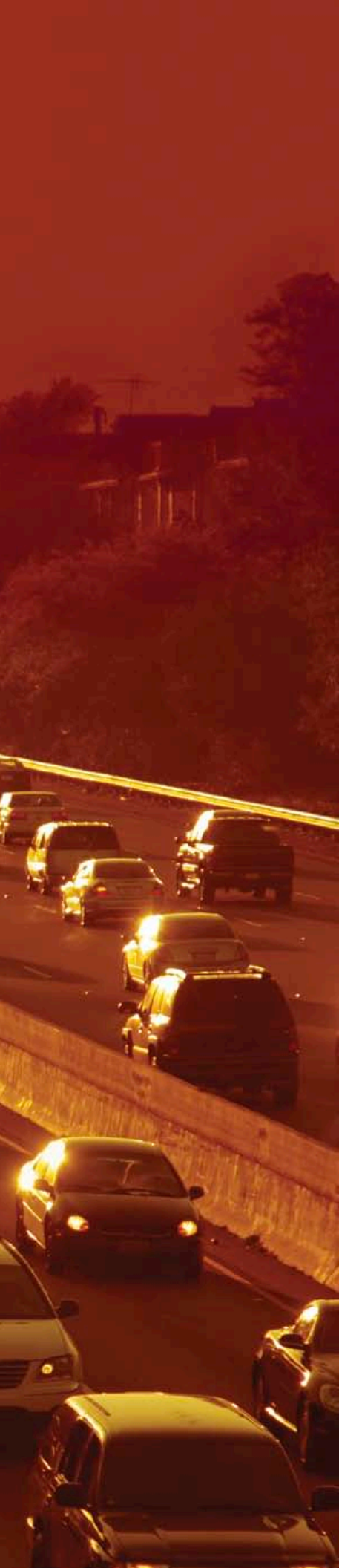


EXHIBIT 2.5

The number of cars and trucks traveling on I-15 is expected to exceed the capacity of the highway in most locations by 2040.

Source: FAF 3 Network based on HPMS



Safety

Traffic incidents contribute to significant delays for both passenger and freight travel as well as costs to the public. Highway fatality locations along the corridor include the rural 113-mile segment in Southern California between Barstow and the California/Nevada border, Las Vegas, St. George, and Salt Lake City near the I-80 junction.

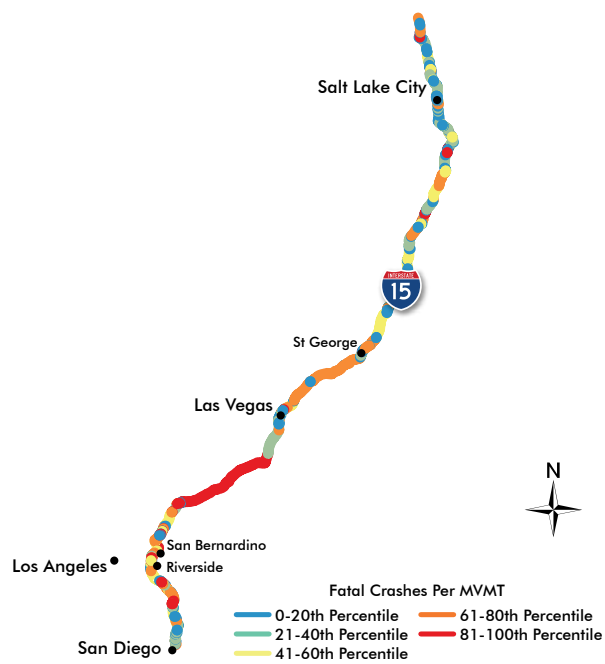


EXHIBIT 2.6

Safety is a critical consideration along this corridor—too many lives are lost each year.

Source: National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS)

Even one life lost is too many.

A lack of long-distance travel options in the U.S. has led to increased highway congestion and airport delays.

Multimodal Options Limited or Reaching Capacity

Passenger Rail

Demand for passenger rail is expected to grow as highway and aviation systems reach their capacities. In particular, California has one of the busiest air markets and some of the most congested highways in the nation, making it a prime candidate for high-speed rail in the near future. Various passenger rail systems operate within the metropolitan regions served by I-15; however, no system connects the regions.

The current passenger rail system is faced with the challenge of limited track capacity due to passenger and freight rail sharing tracks. Of the 21,000 miles of track where Amtrak operates, 97 percent are owned by freight railroads. Sharing track is difficult not only because of the increased number of trains but also because of the speed differential between the two train types. The future of passenger and freight rail relies on maintaining existing services, adding capacity to those services, and exploring new technologies to improve efficiency and reduce travel times.



EXHIBIT 2.7

Freight takes precedence over passenger rail when track is shared, reducing the efficiency and reliability of passenger rail.

Photo source: <http://fastlane.dot.gov/2010/05/dot-aims-to-prevent-rail-crew-distraction.html>

One solution to the challenge of limited track capacity, which has received attention recently, is the potential for new high-speed rail corridors on dedicated track. The California High Speed Rail Authority was created in 1996 to develop a plan for a high-speed rail system from Los Angeles, Orange County, and San Diego in the south to the San Francisco Bay Area and Sacramento in the north.

On July 8, 2011, the Federal Railroad Administration (FRA) issued a Record of Decision for a project-level Environmental Impact Statement (EIS) for the DesertXpress, a 200-mile high-speed rail line that would provide non-stop service between Victorville, California, and Las Vegas, Nevada, along the I-15 Corridor. Trains will travel between the two cities in approximately 80 minutes at speeds initially reaching 150 miles per hour (mph). A future link between Victorville and Palmdale, California, would connect it to the California High-speed Rail network with planned Southern California stations in Los Angeles, Orange, San Diego, and San Bernardino counties. It is estimated that the project will divert approximately 3 million automobile trips from I-15 each year, a transportation shift that will reduce air pollutant emissions from automobiles, reduce overall fuel consumption, provide relief to the demand on I-15, and improve highway safety.

Additionally, the FRA is conducting a Southwest Multi-state Rail Planning Study in the states of Arizona, California, and Nevada. The primary objectives of this study are advancing a multi-state, long-range vision for high-speed and intercity passenger rail growing from the existing plans; developing federal guidelines for multi-state planning; and developing conceptual information on potential rail services for corridors that have not been studied yet, with the goal of enhancing long-range network planning.

Conventional service and high-speed rail options could provide relief to the demand on I-15.



EXHIBIT 2.8

High-speed rail corridors on dedicated track have been designated by the FRA to connect some of the cities in the I-15 Mobility Alliance states.

Source: FRA

In 2025, four of the five metropolitan areas influencing the I-15 Corridor (Los Angeles/Southern California, San Diego, Las Vegas, and Phoenix) will need more capacity at their airports—even with planned improvements.

Aviation

Eleven major airports connect the metropolitan areas between Southern California and Northern Utah. I-15 links 4 of the nation's top 20 airports including top international gateways Los Angeles International Airport (LAX) and McCarran International Airport (LAS). LAX, LAS, and Phoenix Sky Harbor International Airport (PHX) all ranked among the top

10 busiest airports in the U.S., and Salt Lake City International (SLC) and San Diego International (SAN) were ranked in the top 30. Three of the nation's busiest air travel corridors are within this study area, including Los Angeles to Northern California, Los Angeles area to Las Vegas, and Los Angeles to Phoenix.



EXHIBIT 2.9

Airports within the study area serve as major national and international gateways for leisure and business activities as well as significant hubs for goods movement.

The Federal Aviation Administration (FAA) estimates that by 2025 four of the five metropolitan areas influencing the I-15 Corridor (Los Angeles/Southern California, San Diego, Las Vegas, and Phoenix) will need more capacity at their airports—even with planned improvements. Additional capacity improvements will be needed by 2025 to serve the increased air travel demand.



EXHIBIT 2.10

Three of the nation's busiest air travel corridors are within the Alliance states: Southern California to Northern California, Las Vegas, and Phoenix.

Source: America 2050

Los Angeles and Las Vegas serve as major gateways for travelers from the Pacific Rim, contributing additional congestion to an already strained system.

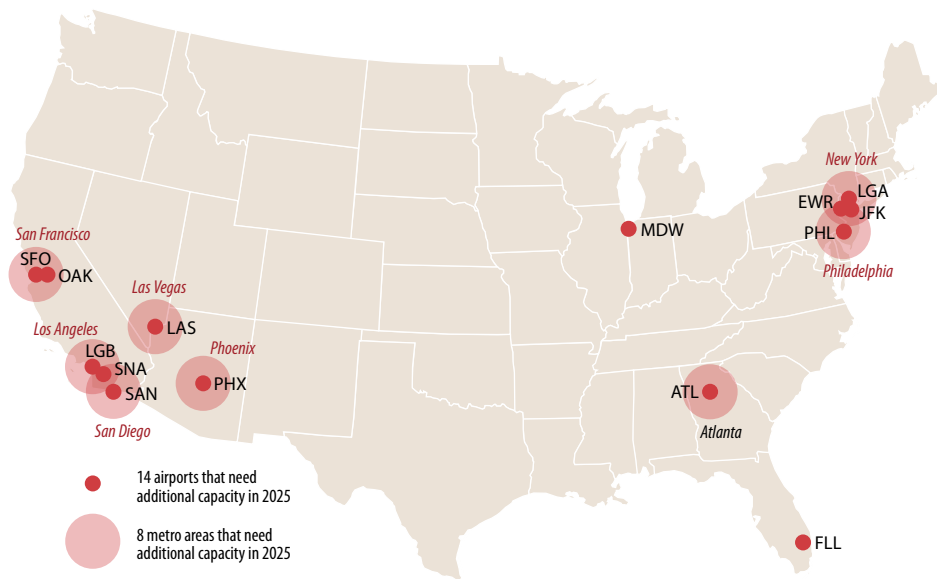


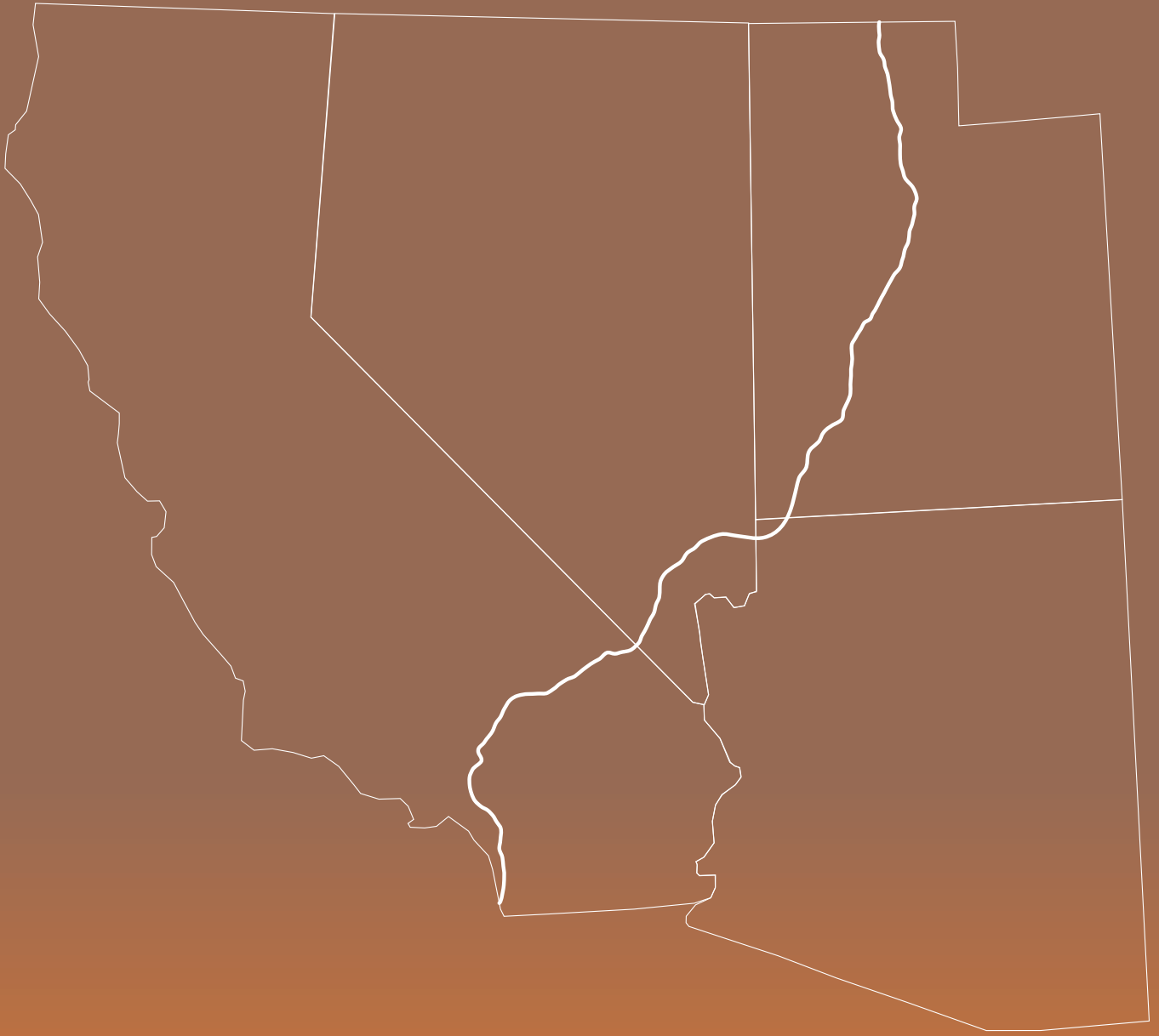
EXHIBIT 2.11

Numerous airports and metropolitan areas will need additional capacity in 2025, even after planned improvements.

Source: FAA 2007 - Capacity Needs in the National Air Space System

3. MOVING GOODS





In 2010, 33 percent of container cargo transported in and out of the U.S. through the Ports of Los Angeles and Long Beach. From these distribution centers, freight is moved north and east along I-15 throughout the entire U.S.

As the lynchpin of goods movement and global trade, I-15 is a victim of its own success. The I-15 Corridor hosts 5 of the 100 worst freight bottlenecks in the country, with chronic congestion that costs our economy millions of dollars a year as a result of delays and inefficiencies.

Ports, Goods Movement and Trade: Creating Jobs, Sustaining the Economy

The reliability of the network to transport goods from the Port of Entry through inland distribution centers and on to the end consumer underlines the very nature of this Master Plan and the importance of the I-15 Corridor to the region, nation, and world.

Imports to the I-15 Mobility Alliance states are projected to more than double by 2040. The expansion of goods movement throughout North and Latin America will redefine business priorities, create new economic opportunities, and challenge transportation networks, including the I-15 Corridor where goods flow from the western U.S. to the rest of the nation.

The Port of Los Angeles and Port of Long Beach have worldwide significance. They are the busiest ports in the U.S. for container traffic, and if combined, would

be ranked sixth worldwide for container traffic according to the American Association of Port Authorities statistics on World Port Rankings in 2009. Combined, they account for approximately 33 percent of the twenty-foot equivalent units (TEUs—most common measure for counting containers) transported in and out of the U.S.

The I-15 Corridor serves as a primary goods movement route serving California and Mexican ports, including portions of the CANAMEX Corridor. As a primary collector-feeder route between Southern California, Mexico, and Canada, the U.S. relies on goods moving on the I-15 Corridor, because it provides an efficient connection between primary east-west trade corridors, specifically, I-8, I-10, I-40/SR 58, I-70, I-80, I-84, and I-90.

| | Truck (\$ million) | | Rail (\$ million) | | Both Modes (\$ million) | |
|--------------------|--------------------|-----------|-------------------|---------|-------------------------|-----------|
| | 2007 | 2040 | 2007 | 2040 | 2007 | 2040 |
| California | \$43,936 | \$173,173 | \$567 | \$1,554 | \$44,504 | \$174,728 |
| Arizona | \$16,227 | \$58,871 | \$5,233 | \$8,068 | \$21,460 | \$66,939 |
| Both States | \$60,164 | \$232,044 | \$5,799 | \$9,623 | \$65,964 | \$241,667 |

TABLE 3.1

Combined Value of Exports and Imports to/from Mexico through California and Arizona Border Crossings (in millions of dollars).

Source: FAF 2010

National Job Impact: 3.4 million

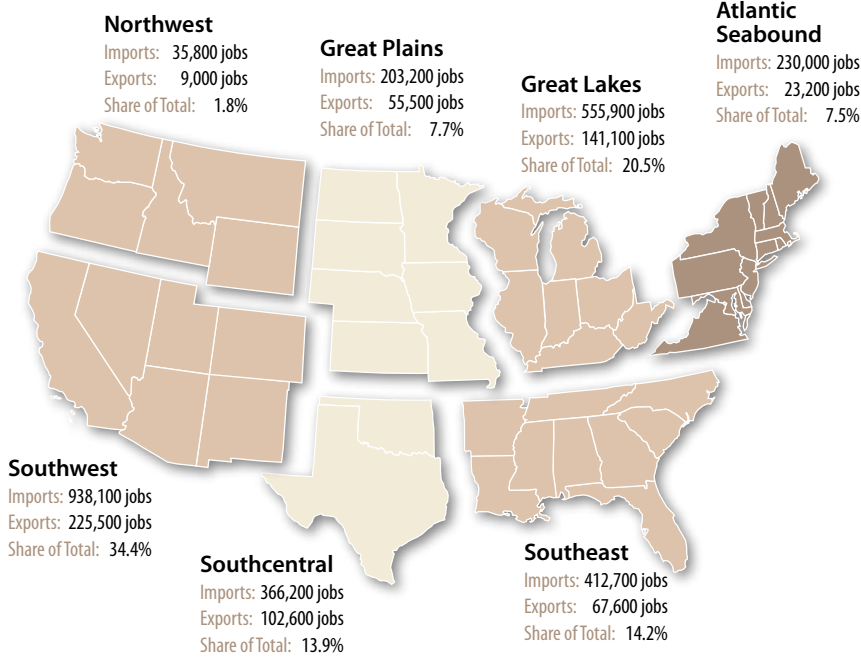


EXHIBIT 3.1

Freight movement originating in Southern California and moving across the country along I-15 and other corridors sustains 3.4 million jobs nationwide.

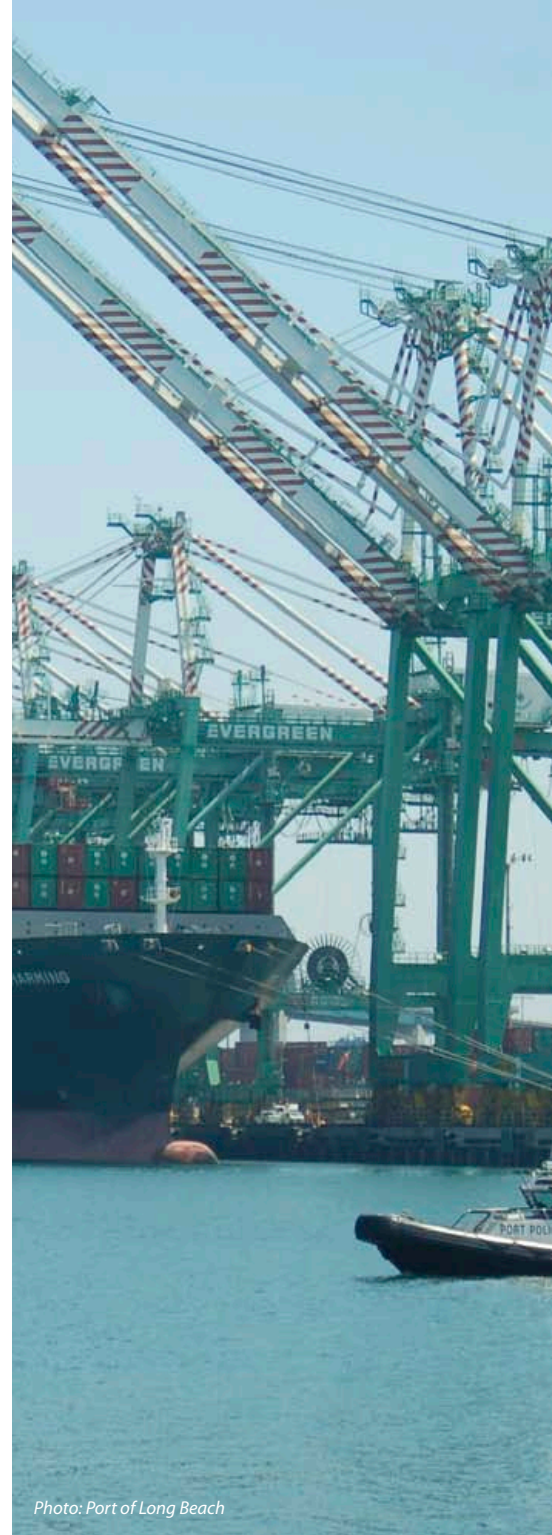
Source: BST Associates, 2007 - The Trade Impact Study



EXHIBIT 3.2

Significant international trade enters the U.S. from sea and land ports in Southern California and Arizona.

Source: National Transportation Atlas Database, Customs and Border Patrol, Google



Imports for the I-15 Mobility Alliance states are projected to more than double to 255.8 million tons by 2040.

Ports of Entry Compete for International Trade

While the ports of Los Angeles and Long Beach process the greatest share of goods moving in and out of the study region, border crossings also play a role in international freight movements. According to the Federal Highway Administration's (FHWA) Freight Analysis Framework (FAF), nearly 10.2 million tons of goods were imported from Mexico, and 11.9 million tons were exported to Mexico through border crossings in Arizona and Southern California.

The ports are major economic drivers for California and the region. As cargo levels increase and the ports regain 2007 levels of productivity, the infrastructure supporting freight and passenger traffic will be strained to maintain current levels of mobility. This gives greater importance to the functioning of our ports and the associated infrastructure to ensure reliable delivery of goods.

The ports of California are the primary gateways to manufactured goods from the Asian markets and the most cost-effective way to deliver goods to North American markets. The expansion of the

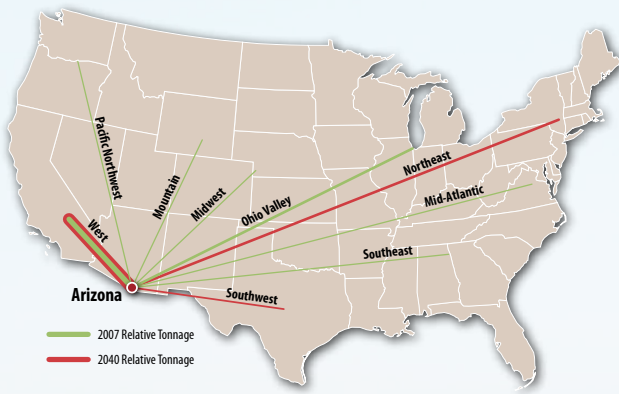
Panama Canal, scheduled for completion on the centennial of its original opening, August 15, 2014, may shift some traffic from West Coast to East Coast and Gulf ports as the all-water route from Asia to the eastern U.S. through the Panama Canal becomes more economical. Eastern ports and railroads are preparing for the increase in freight traffic. Additional competition may come from Prince Rupert, Canada, and new and expanded deep water ports proposed by Mexico.

The I-15 Mobility Alliance states must compete nationally and globally for the investment and jobs needed for a thriving economy. The reliability of freight movement will play a major role in deciding how goods are moved from Asian manufacturers to markets throughout North America. Maintaining I-15's capacity to move goods will help maintain the viability of the Southern California ports and the economy of the region.



EXHIBIT 3.3

Reliability of freight movement will play a major role in how goods are moved from Asian manufacturers to markets throughout North America.



In the I-15 Corridor, imports and exports pass through Southern California ports and border crossings in Southern California and Arizona.

The distribution of goods through the inland ports in California and Arizona mirrors that of the Ports of Long Beach and Los Angeles.

EXHIBIT 3.4

Imports entering the U.S. via Arizona

Source: FAF 2010

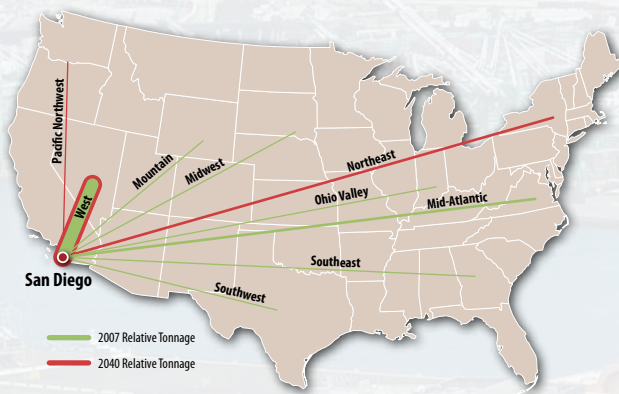


EXHIBIT 3.5

Imports entering the U.S. via San Diego

Source: FAF 2010

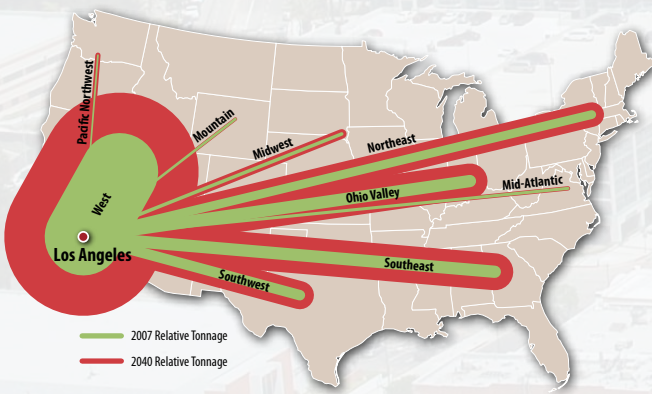


EXHIBIT 3.6

Imports entering the U.S. via Los Angeles/Long Beach

Source: FAF 2010



Intermodal Goods Movement

The greatest interaction between freight railroads and the highway network, including I-15 and its connectors, occurs in Southern California.

Rail shipments from the Southern California ports are of two basic types: long-distance movements to remote markets, and short haul movements to warehouses and distribution centers in San Bernardino and Riverside Counties. Exports through the ports follow the same pattern in reverse.

Exhibit 3.7 shows specific intermodal facilities within the I-15 Corridor. Most of the inland facilities are rail-to-truck or truck-to-rail transfer points, while those within the ports are ship-to-rail or ship-to-truck facilities. Clusters of facility locations can be found around metropolitan areas. Of note is the inland area of California just east of Los Angeles on

I-15, commonly referred to as the Inland Empire. This area in the counties of Riverside and San Bernardino, including the city of Ontario, has a high concentration of warehousing and is centrally located at the crossroads of I-10 and I-40/SR 58 with I-15.

The location of intermodal terminals in Exhibit 3.5 shows that freight moving from the ports to inland transshipment points and warehouses is concentrated near and along I-15 in Ontario, San Bernardino, and Riverside, California. While much of these goods are delivered to local destinations in Southern California by truck, a significant amount is shipped by long haul truck along I-15.

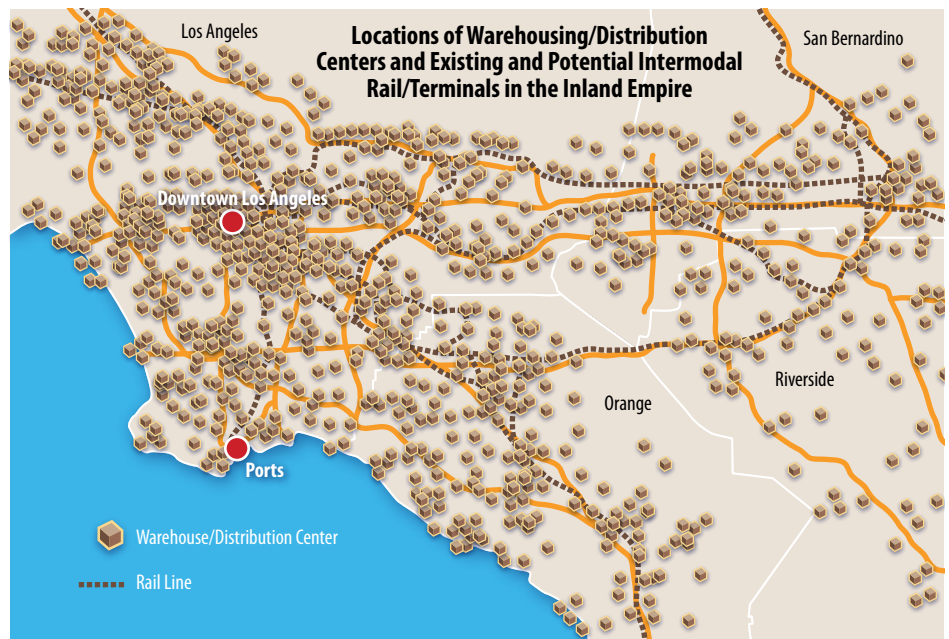


EXHIBIT 3.7

Southern California Intermodal Terminals

Source: Caltrans Electrification of the Freight Rail Network from the Ports of Los Angeles and Long Beach to the Inland Empire, 2008



EXHIBIT 3.8

Cargo containers are transferred between ship, train, and/or truck at intermodal facilities with the greatest concentration in Southern California.

Source: Wilbur Smith Associates (WSA); Bureau of Transportation Statistics National Transportation Atlas Database

The I-15 Corridor is an avenue for truck movements out of the ports and agricultural regions of Southern California and onward to major cities such as Las Vegas and Salt Lake City.

Trucking

As a major trade route, I-15 connects to many of the nation's major interstates (I-8, I-10, I-40, I-70, I-80, I-84, and I-90) and to key state routes and U.S. highways (SR 40, SR 58, US-93, US-95, US-50, US-6, and US-89). Based on FHWA data, these segments of I-15 that intersect with other major interstate corridors have the highest long-distance truck volumes.

With 27 million people living in the counties along the I-15 Corridor and 16 percent of the continental U.S. population living within these four states, I-15 is an economic lifeline to these communities and a vital connection for other regions. The combination of aging infrastructure, critical safety concerns, and chronic congestion costs our economy millions of dollars a year in delays as a result of its inefficiencies.

Between the two ports in the greater Los Angeles area, 48 percent of incoming waterborne freight tons currently leave the area by truck. This is expected to increase to 56.7 percent by 2040. Much like the San Pedro Bay ports, the movement of goods away from the port of San Diego is heavily dominated by trucks. Approximately 90.4 percent of goods exit the area by truck for long-distance trips. In 2007, trucks crossing at Otay Mesa, near San Diego, California, imported goods worth \$20.8 billion and exported goods worth \$9.9 billion.

The projected increase in truck traffic around the inland and sea ports will strain the roadway infrastructure and cause increased congestion. Specifically to I-15, it is estimated that almost 74 percent of long-distance trucks headed to other parts of the country will use I-15 at some point in their journey from the San Pedro Bay ports. Considering the continued growth of port traffic, roadways supporting the ports will be congested and will experience greater delays in the future.

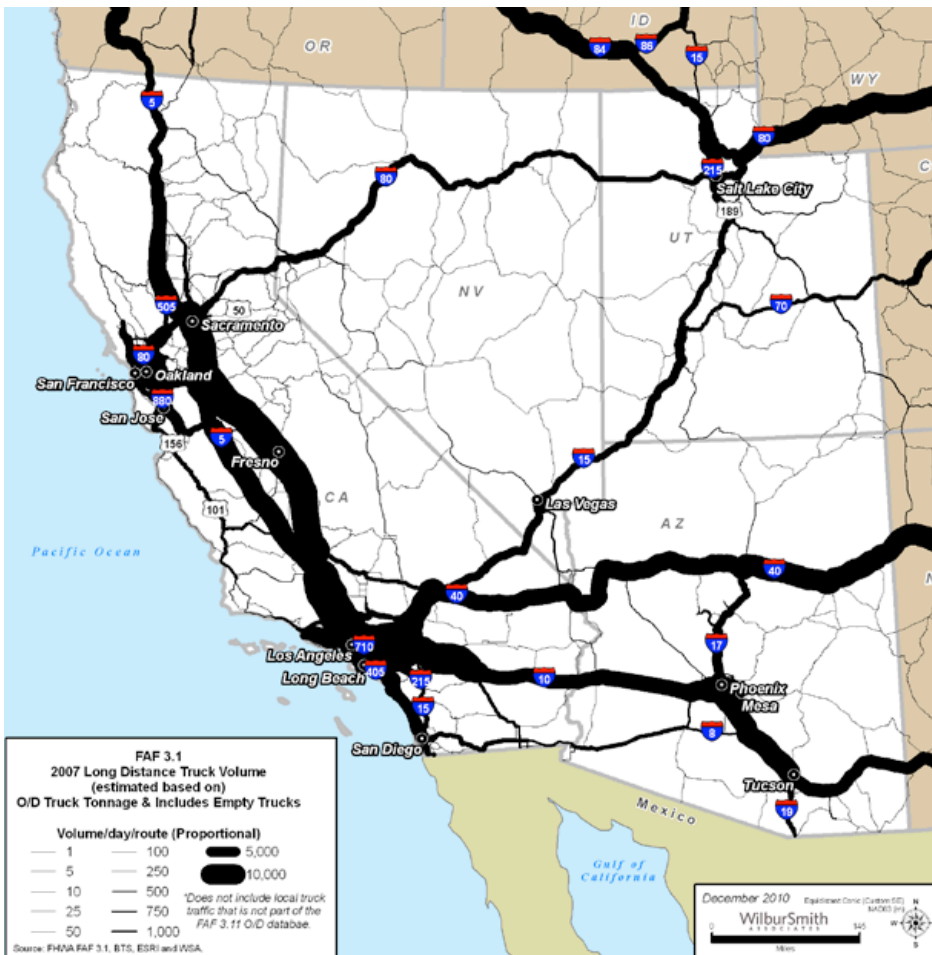


EXHIBIT 3.9

Primary Truck Corridors within California, Nevada, Arizona, and Utah. An estimated 70 million tons of goods traveled along the I-15 at a value of \$68 billion in 2007. This value is expected to increase to \$129 billion by 2040.

Source: FAF, 2010. FHWA FAF 3.1, Bureau of Transportation Statistics, ESRI and WSA

Note: This exhibit does not include local truck traffic that is not part of the FAF 3.1 Origin/Destination (O/D) database. Appendix A of the Freight Technical Memoranda describes the FAF 3.1 database in more detail.

Almost 74 percent of long-distance trucks leaving the ports of Los Angeles and Long Beach use I-15 at some point in the journey.



EXHIBIT 3.10

I-15 is a victim of its own success, as today it plays host to 5 of the top 100 worst freight bottlenecks in the country.

- No. 12: I-15 at I-515, Las Vegas, NV
- No. 23: I-15 at I-10, San Bernardino, CA
- No. 47: I-15 at SR 91, Corona, CA
- No. 82: I-15 at I-215 (South), Salt Lake City, UT
- No. 95: I-15 at I-215 (North), Salt Lake City, UT

Source: ATRI, 2009

Without improvements, demand is expected to exceed both freeway and rail capacity, resulting in costly shipping delays.

Rail

The amount of freight coming in and out of the ports of Los Angeles and Long Beach via rail is greater than at other U.S. ports. The amount of freight moved by rail will continue to increase with the development of the Alameda Corridor, a rail corridor traversing the 20 miles between downtown Los Angeles and the ports of Los Angeles and Long Beach. General cargo (both imports and exports) accounts for 92 percent of the tonnage shipped through the Port of Los Angeles. The Port of Long Beach handles more liquid bulk cargo; therefore, the percentage of general cargo is less than 73 percent. Line haul railroad service for both ports is provided by Burlington Northern Santa Fe (BNSF) and Union Pacific (UP). Therefore, the amount of the inbound general cargo not carried by truck is almost exclusively rail shipments.

The two largest U.S. Class I railroads, BNSF and UP, are the only Class I railroads that operate in our study area. BNSF service starts in San Diego, California and proceeds north along the

coastal rail corridor to Los Angeles and then to points north and east across Arizona, New Mexico, and Texas. UP provides service to a large portion of the region, and one segment of the UP track parallels I-15 from Los Angeles to Salt Lake City.

The demand to move freight by rail through the I-15 Corridor is also expected to exceed track capacity by the year 2035. The following maps show the future (2035) primary rail corridor volumes and track capacity, with and without improvements. Only the UP segment between Southern California and Tucson is currently operating at a level of service exceeding 80 percent of capacity. The future map shows most of the rail corridors would be over capacity and congested without any planned improvements. Improvements including track, siding, separated grade crossing, control system and yard improvements could increase system efficiency and capacity by 2035.

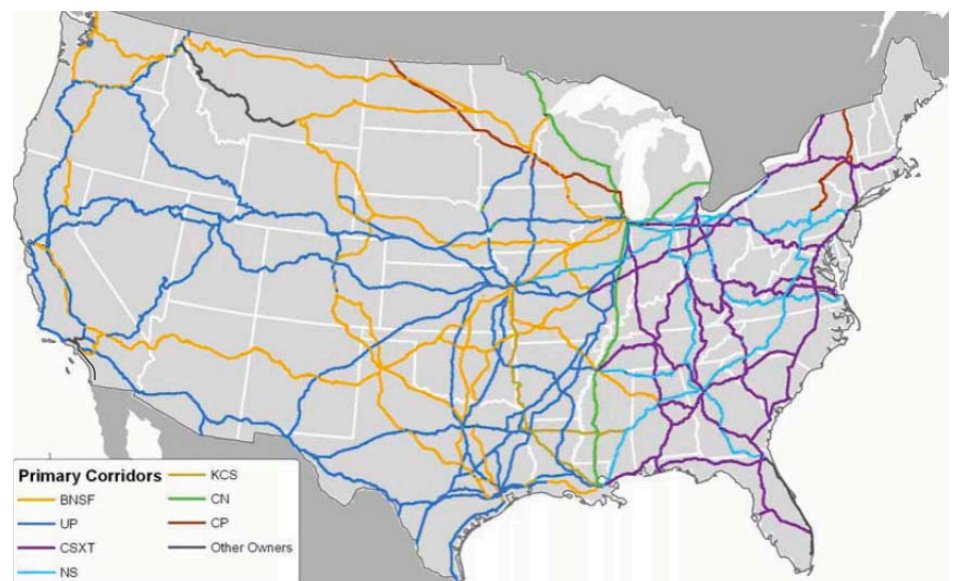


EXHIBIT 3.11

Primary U.S. Freight Rail Corridors

Source: American Association of Railroads (AAR) National Rail Freight Infrastructure Capacity and Investment Study, 2007; and San Diego Association of Governments (SANDAG), San Diego, and Imperial Valley Gateway Study: Comprehensive Freight Gateway Study, 2010.

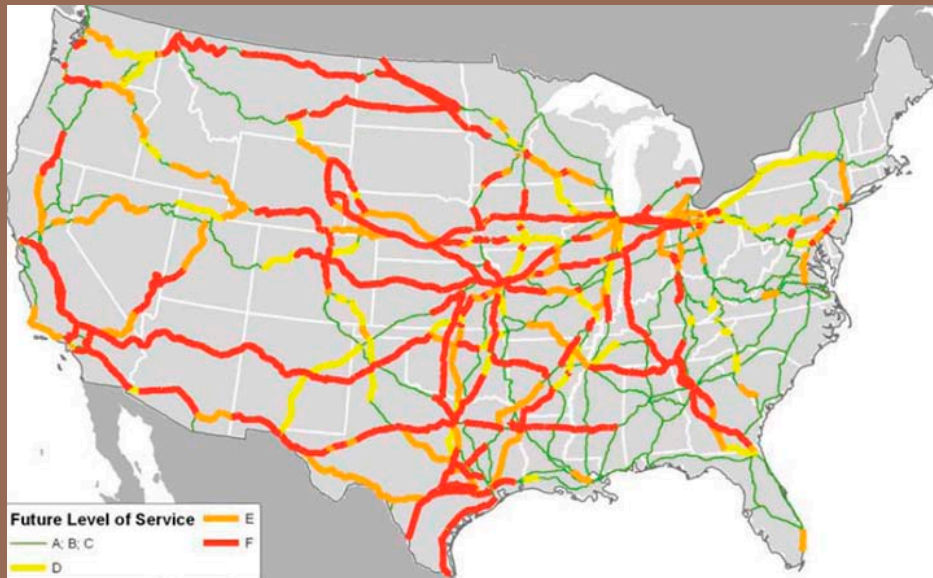


EXHIBIT 3.12

Without improvements, the U.S. rail system will not have enough capacity to haul the projected freight.

Source: AAR National Rail Freight Infrastructure Capacity and Investment Study, 2007

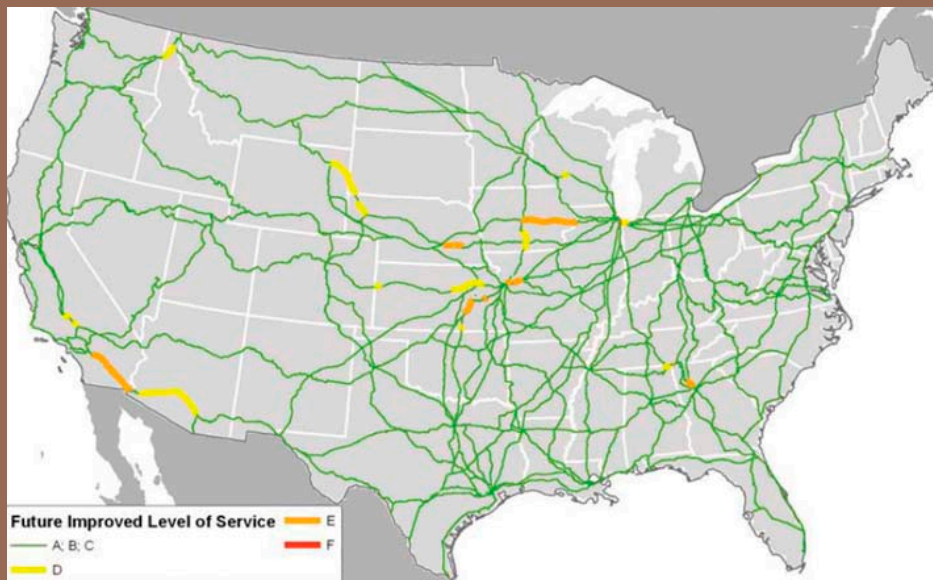


EXHIBIT 3.13

Future Train Volumes vs. Capacity, With Improvements

Source: AAR National Rail Freight Infrastructure Capacity and Investment Study, 2007

Aviation

Some of the major air cargo airports along the corridor include Los Angeles International (LAX), McCarran International Airport (LAS), and Salt Lake City International (SLC). Most air cargo has a high value and is transferred to trucks for quick delivery to its final destination, with a direct impact to the highway network.



Attribution: 2009 FRED

LAS opened the Marnell Air Cargo Center, a 200,928-square-foot freight and distribution facility, in the fall of 2010. Air cargo at LAS is expected to double by year 2020. LAS is ranked 60th in the U.S. for air cargo.

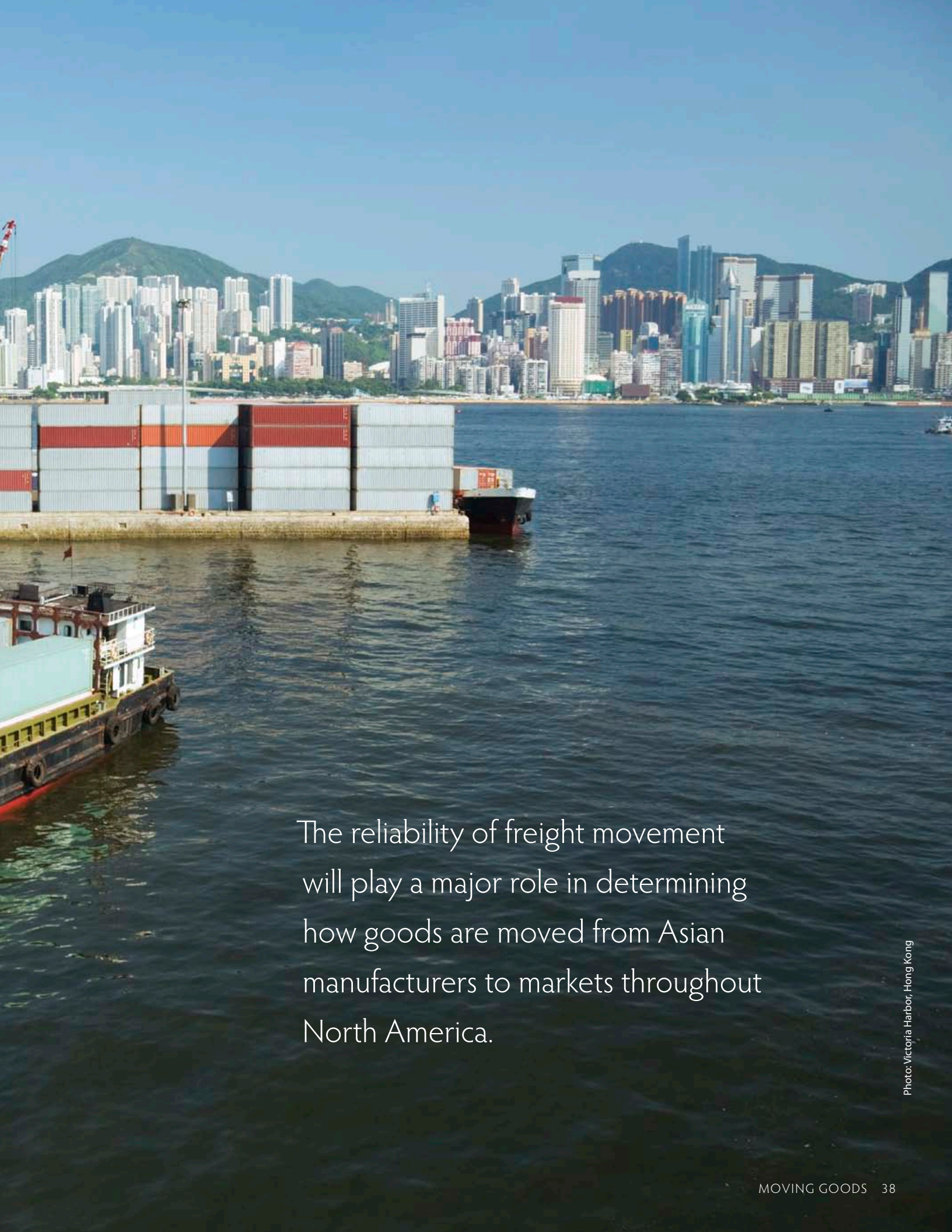


Attribution: Public Domain

SLC serves as an air cargo hub, but most of the cargo does not have a local origin or destination; it stays within the airport and is transferred between aircrafts. SLC is ranked 28th in the U.S. for air cargo. Cargo operations in 2009 at SLC were 149,000 tons and are expected to reach 220,000 tons by 2030.

In the Southern California region, 95 percent of the air cargo activity is centered at LAX, Ontario International (ONT), and John Wayne/ Orange County (SNA) with LAX alone carrying 71 percent. LAX is the world's 14th busiest in air cargo tonnage and the nations' 7th busiest with over 1.7 million tons of cargo in 2010. The cargo operations are expected to grow to 2.5 million tons in 2035. Approximately 50 trucking firms operate within 2 miles of the airport perimeter.





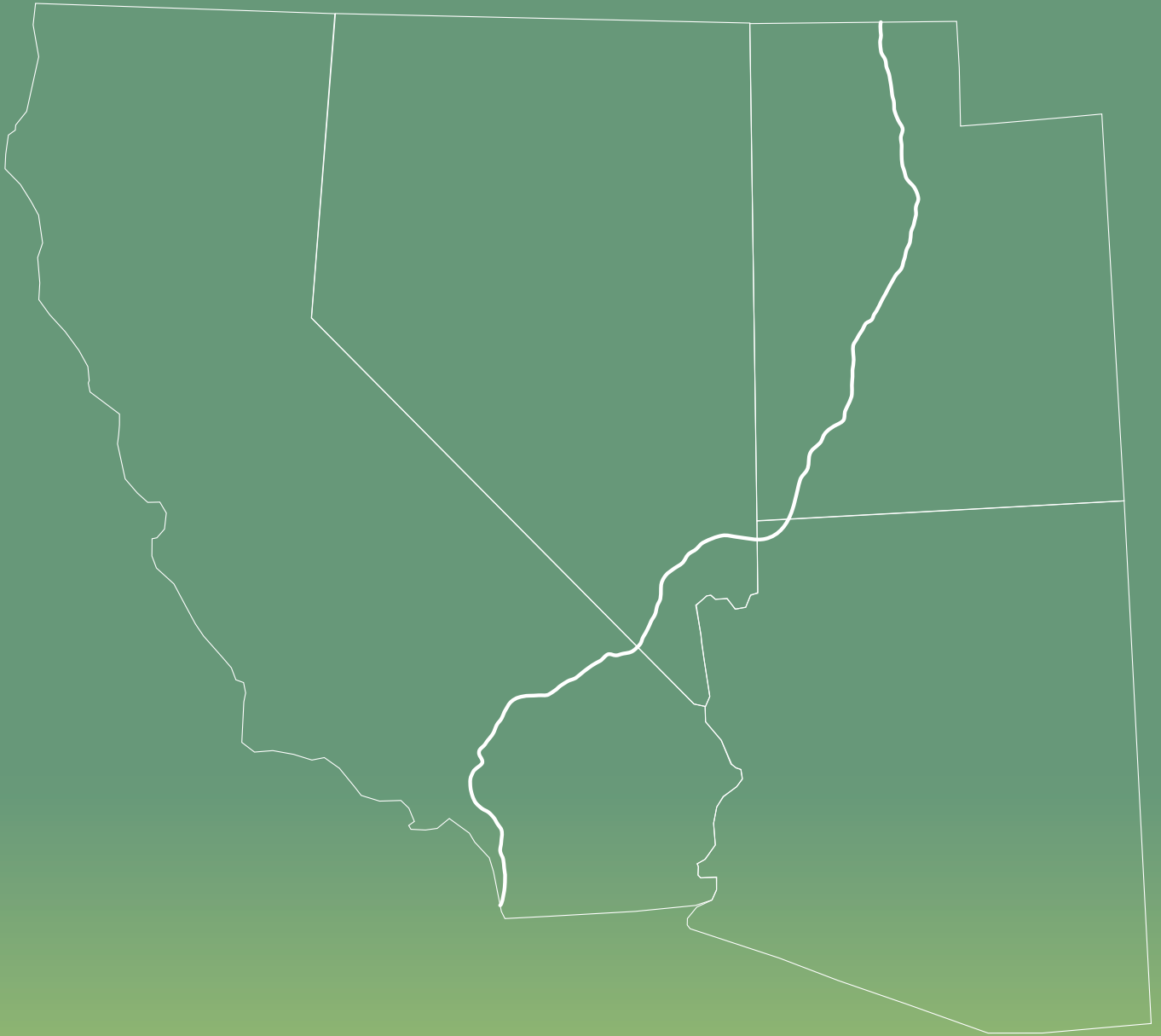
The reliability of freight movement will play a major role in determining how goods are moved from Asian manufacturers to markets throughout North America.

Photo: Victoria Harbor, Hong Kong

4.

A CALL TO ACTION





The I-15 Corridor System Master Plan offers a vision that is socially, politically, environmentally, and financially enduring.

The need is great, and the path forward is challenging, but as the previous chapters have shown, the time to address current and future deficiencies in the I-15 Corridor is now. We must act to maintain and improve the economic competitiveness of the megaregions served by the I-15 Corridor, and it is clear that a multifaceted, innovative, and phased approach is required. We must identify and prioritize projects and programs that promise the greatest benefits for the expense—both economic and environmental.

Creating an Enduring Legacy

Transportation projects and systems serve many different and sometimes competing objectives. Those that endure will do so because they address three fundamental principles: social, environmental, and economic. These three principles are often referred to as the triple bottom line. In times of diminishing economic and natural resources, using sustainable approaches in transportation will allow us to continue to enhance quality of life and serve the transportation needs of the present without compromising the ability of future generations to meet their needs.

A sustainable highway should satisfy life cycle functional requirements of societal development and economic growth while striving to enhance the natural environment and reduce consumption of natural resources. The sustainability characteristics of a highway or roadway project should be assessed and considered for implementation throughout its life cycle, from conception through construction, operations, and maintenance. A sustainable highway should focus on access (not just mobility), moving people and goods (not just vehicles), and providing people with transportation choices.

In order to achieve measurable results, it is essential that the I-15 Mobility Alliance be sustainable and maintain the current momentum. A plan for doing so is outlined in Chapter 5.



EXHIBIT 4.1

A sustainable Master Plan addresses real needs of society—economically and with respect to the environment.

Actions we take today need to endure—

In times of diminishing economic and natural resources, using sustainable approaches in transportation allows us to continue to enhance quality of life and serve the transportation needs of the present without compromising the ability of future generations to meet their needs.



Some Emerging Technologies for Interregional Corridors

- Automated Snow Plow Routing
- Biofuels Based Pavements
- Carbon Nano Fiber Reinforced Cement Composite
- Carbon-neutral Roadways
- Car Plug-in Stations
- Design for Deconstruction
- Electrified Freight Railways
- Electric Vehicles (EVs)
- Glass Highways
- Glass Materials in Highways
- Green Cement
- High-speed Rail Passenger Systems
- Heated Bridge Decks
- Hydrogen Highway
- Improvements to Reduce Rolling Resistance for Pavements
- Inherently Low Emission Vehicles (ILEV)
- Intelligent Transportation Systems (ITS) Technologies for Traffic Management
- ITS Technology for Vehicular Spacing and Speed
- Natural Gas and/or Biofuel Fueling Stations
- Online Electric Vehicle (OLEV)
- Pavement Heat Exchangers
- Photocatalytic Concrete (Self-cleaning Concrete)
- Solar Highway Energy Generation
- Solar Roadway Lighting, Markings, and Signs
- Solar/Wind Power in Jersey Barriers
- Sustainable Roadway Rest Stops

EXHIBIT 4.2

Adapting to Drivers of Change - Emerging Technologies. Each of these has application within the I-15 Corridor now or in the lifetime of the Master Plan, and is already being piloted in other U.S. and European corridor programs.

Technology: The Future Is Now

Intelligent Transportation Systems (ITS) are a way to improve mobility and enhance the efficiency of operations of a highway without adding capacity. ITS facilitates better use of all available modes of surface transportation and allows the traveling public to make informed decisions regarding mode choice and route.

From California to Utah, transportation jurisdictions have implemented a range of successful ITS applications along I-15. These applications include hardware improvements such as ramp metering and dynamic message signs (DMS) to display real-time travel information, as well as programmatic systems such as 511 public information lines and Road Weather Information Systems (RWIS). In addition, each state has plans to upgrade the ITS infrastructure. While many of these ITS projects are still in the planning stages, they provide possibilities for future operational improvements.

There are a number of future possibilities for ITS, including corridorwide ITS applications, that are being implemented in different areas across the nation. Future possibilities in the I-15 Corridor include:

- Regional and Interstate Incident Management
- Integrated Corridor Management
- Center to Center Connectivity
- Commercial Vehicle Operations Systems
- Electric Vehicle Recharging Stations
- Tolling Interoperability
- Connected Vehicles (formerly known as IntelliDrive)
- Active Traffic Management Systems (ATMS)
- Active Transportation Demand Management and Commercial Vehicle Information Systems and Networks.

Technology helps to maximize existing infrastructure by better managing the demand and flow of traffic.

CCTV: Closed Circuit Television
TMC: Traffic Management Centers
TOC: Traffic Operations Centers
DMS: Dynamic Message Signs
HOV: High Occupancy Vehicle
HOT: High Occupancy/Toll
HAR: Highway Advisory Radio
RWIS: Road Weather Information Systems
CAD: Computer Aided Dispatch

| State | CCTV | Ramp Meters | Vehicle Detection for Travel Times | TMC/ TOC | DMS | HOV/ HOT/ Express Lanes | HAR | RWIS | CAD | Incident Management | Travel Demand Management |
|------------|------|-------------|------------------------------------|----------|-----|-------------------------|-----|------|-----|---------------------|--------------------------|
| California | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Nevada | ■ | ■ | ■ | ■ | ■ | P* | ■ | | ■ | ■ | ■ |
| Arizona | | | | ■ | ■ | | | | ■ | ■ | |
| Utah | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

■ = Existing, P = Proposed

* Currently there are high occupancy vehicle (HOV) lanes in Nevada (US-95), but the state does not currently provide authority to toll highways/bridges.

TABLE 4.1

ITS and ATMS are being deployed aggressively throughout the corridor.

Note: This table represents ITS components currently in use on I-15. Other strategies may be employed elsewhere in each state on other highways.

A list of prioritized projects will focus and aid the Alliance efforts to advocate for projects supporting the Alliance goals.

Prioritization and Programming: Planning for Success

Articulating the long-range vision of the I-15 Mobility Alliance includes the identification and prioritization of projects along the corridor. On a regular schedule, the I-15 Mobility Alliance will convene to prioritize and agree upon projects of interregional significance to the entire I-15 Corridor and all Alliance partners.

An interactive map of the most current priority projects can be found on the I-15 Mobility Alliance website (www.i15alliance.org). These projects are focused on improving the interregional movement of people and goods along the entire corridor to address the greater need to support the population, economy, and quality of life of the megaregions.

Projects are evaluated and prioritized based on their ability to meet the following criteria:

- 1. Meets one or more Alliance goals**
 - a. Reduce or eliminate congestion impacting the interregional movement of people or goods
 - b. Improve interregional travel time reliability of people and goods movement
 - c. Improve the safety of the interregional movement of people and goods
 - d. Respect and honor the unique goals, objectives, and standards of each sponsoring community
- 2. Meets the triple bottom line**
 - a. Politically/socially viable and sustainable
 - b. Environmentally viable and sustainable
 - c. Financially viable and sustainable
- 3. Provides value (degree of benefit relative to cost)**

Prioritization Process



The purpose of the Alliance prioritization is not to supplant the priorities established by the various agencies of the Alliance. Agency priorities were identified through legitimate, valid processes that reflect each agency's overall mission and the values and goals of those they serve. The Alliance prioritization process was designed to reflect how projects accomplish the very specific goals of the Alliance. The desired outcome is that Alliance advocacy for these projects will complement and reinforce the efforts of the individual agencies as they pursue funding for project implementation.

EXHIBIT 4.3

The Alliance adheres to a rigorous process for identifying, sorting, and prioritizing projects.



EXHIBIT 4.4

An interactive map of the most current priority projects can be found on the I-15 Mobility Alliance website (www.i15alliance.org).

Projects are divided into three implementation timeframes:

- **Immediate Projects of Interregional Significance** are a short list of high priority projects that, with adequate funding, could be substantially implemented within 2 to 5 years. They have community support; have or are expected to have environmental clearance; and have substantial commitments of state and local funding.
- **10-Year Projects of Interregional Significance** are priority projects that with adequate funding could be implemented substantially within 10 years. They have community support, but could still be in the planning, environmental, or preliminary engineering phases of development.
- **Long-term Projects of Interregional Significance** will not be prioritized until they are defined more clearly and their benefits are better understood.

Projects are assigned to broad categories:



Highway/Bridge Projects of Regional and National Significance (HB). Ranging from \$100 million to nearly \$500 million, these projects focus on relieving congestion at critical locations and if/when completed could decrease regional travel time by 25 percent, resulting in the elimination of delays that cost the economy billions of dollars every year.



Tolling and Congestion Pricing (TCP). Using tolling and congestion pricing as innovative funding mechanisms, these projects will harness the power of the market and real-time traffic demand to offer drivers a reliable trip time, which is valuable especially when they have to be somewhere on time. It will also provide an additional funding stream.



Intermodal Freight Distribution (IFD). Projects that streamline and improve international, national, and regional distribution of goods and benefit the economy.



Transit and Rail (TR). Transit options decrease the overall number of vehicles using the corridor while at the same time reducing dependence on fossil fuels.



ITS/ATMS. Targeted use of industry leading technology to decrease congestion and improve safety, travel times, trip reliability, and emergency response times.



National Corridor Planning (NCP). Major long-term improvement studies in the planning phase that run the gamut from transit to multimodal corridors.

“As Executive Board members of the I-15 Mobility Alliance, we recognize the efforts of our many partners who have collaboratively developed and agreed to a short list of high priority projects on this critical commerce corridor that require immediate attention. We join together in partnership and endorse these projects.”

I-15 Mobility Alliance
Executive Board

Current funding constraints require that we use all tools and modes at our disposal to address our transportation challenges.

Funding and Financing: Making the Vision a Reality

The Alliance’s objective is to support efforts to identify and obligate the necessary financial resources to implement worthwhile improvements (projects and services) in the I-15 Corridor; operate and maintain these improvements; and ultimately adapt and renew them at the end of each successive life cycle, so that the corridor is sustainable and relevant for this and future generations. While financing is important, the key to financial sustainability of the corridor is the availability of reliable and adequate funding.

The funding constraints facing the region and nation, demand that we use all tools and modes at our disposal to address these challenges.

Even with traditional federal, state and local funding streams, there is still a funding gap to deliver transportation improvements. In other states and on a national level, additional funding mechanisms are being considered to further close this gap. A few examples of such measures include Road User Fees or Vehicle Miles Traveled (VMT) fees, Local Transportation Corridor Preservation Funding, Lottery Funding, and Congestion Districts.

Historically, the most widely used financing mechanism used to build transportation improvements has been through the issuance of debt instruments such as municipal bonds. Recently, there has been the

introduction of private sector financing into the transportation infrastructure arena principally coupled with long-term agreements to design, build, operate, and maintain facilities or services. This type of investment by the private sector is commonly referred to as a public-private partnership and typically features revenue streams, such as charging a toll to use the facility.

To support the financial sustainability of the corridor, the I-15 Mobility Alliance will work to identify funding and financing by pursuing the following strategies:

- Maximize unique, targeted grant and loan programs such as TIGER, TIFIA, and high-speed rail
- Identify potential new funding sources and inform legislative authority to assist in their support to implement them where appropriate
- Encourage full use and funding of currently authorized funding sources
- Consider funding and delivery strategy successes from Alliance members
- Increase the use of managed lanes (for example, high occupancy/toll lanes [HOT])
- Foster innovative project delivery and procurement strategies such as design-build, design-build-finance-operate-maintain, public-private partnerships, and joint procurements across state boundaries
- Create corridorwide projects for maximum impact
- Collaborate on research, education, and appropriate implementation of funding mechanisms such as VMT fees

Tracking Transportation’s RETURN ON INVESTMENT

\$1 billion INVESTMENT = **27,800** JOBS



\$3 billion INVESTED IN IMMEDIATE PROJECTS OF INTERREGIONAL SIGNIFICANCE



83,400 JOBS

Source: www.fhwa.dot.gov, Employment Impacts of Highway Infrastructure Investment



Photo: 2010 road construction on I-15 in American Fork, Utah.

5. I-15 MOBILITY ALLIANCE





I-15 Mobility Alliance: Strength in Numbers, Success Through Collaboration

The I-15 Mobility Alliance demonstrates what a regional collaborative spirit can do for the country, inspiring citizens to support transportation investments to serve future generations.

The I-15 Mobility Alliance has developed this I-15 Corridor System Master Plan to provide policy and decision makers with a strategic action plan that defines future transportation infrastructure, and supports national, regional, and local approaches to improve freight delivery, and relieve congestion for years to come. In partnership with Nevada, California, Arizona, and Utah Departments of Transportation, the I-15 Mobility Alliance has:

- Built a unified Alliance to set the national standard for cooperative regional mobility
- Delivered an Alliance-driven program vision and brand to transform how people perceive the interstate highway system
- Pioneered a Master Plan that is a model for multi-state corridor planning

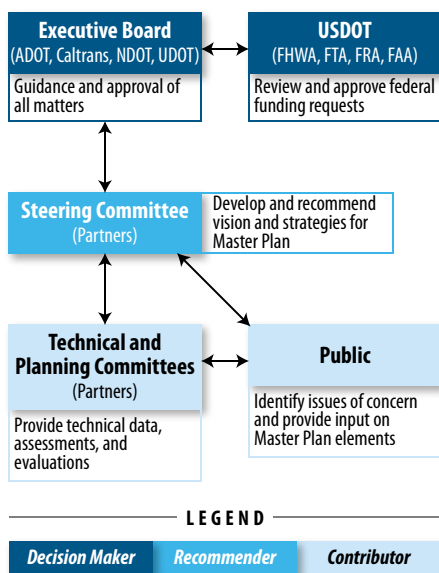
Now that the Master Plan has been developed, the Alliance will strive to:

- Recommend, support, or advocate for advancing Priority Projects
- Inspire citizens to support major transportation investments to serve future generations
- Leverage the political influence of the Alliance states to obtain a greater share of available funding
- Encourage multi-state coordination in project development and financing

The I-15 Mobility Alliance is committed to working together for decades to come and invites participation from all interested and formally recognized organizations. The organizational structure of the Alliance consists of an Executive Board composed of the most senior leaders of the four state DOTs, a Steering Committee including senior personnel from all corridor partners, and several technical and planning committees and subcommittees composed of technical experts in the following fields:

- Project Development (Planning, Programming, Funding)
- Highway Operations (Traffic Engineering, ITS/ATMS)
- Goods Movement (Trucking, Freight Rail, Ports, Aviation)
- Multimodal (Passenger Rail, Aviation, Bicycle)
- Sustainability (Environmental, Emerging Technologies)
- Policy
- Data Management
- Public Outreach

Individuals within the four states and beyond are investing their time and resources to keep this economic artery of the West flowing. The Alliance partners come from state and local transportation agencies, local and interstate commerce, port authorities, departments of aviation, freight and passenger rail authorities, freight transportation services, providers of public transportation services, environmental and natural resource agencies, and others.





Mission Statement

The I-15 Mobility Alliance transcends traditional transportation thinking by advancing innovation, long-range planning, investment, and implementation of multimodal systems; including not only increased mobility of people and goods through highways, freight rail, transit, and high-speed passenger rail, but also forward-looking technologies for the transport of energy, data, and communications.

The I-15 Corridor is a vital linkage in the economy not only of the western U.S., but of the entire nation. Projected increases in commodity flows from the western U.S. and Mexican ports, and population growth will result in expanded segments of I-15 experiencing severe congestion thus impeding commerce, hindering mobility, and degrading the quality-of-life of the people served by the corridor.

The mission of the Alliance and its members is to develop, in partnership with public and private sectors, a comprehensive, multimodal Master Plan for the I-15 Corridor, to prioritize projects and policies of interregional significance, to seek financial and other resources necessary for the implementation of the Master Plan, and to devise appropriate governance mechanisms for the ongoing efficient and effective construction, operations, and maintenance of the corridor on a more sustainable basis.

CALIFORNIA NEVADA ARIZONA UTAH

I-15 CORRIDOR SYSTEM MASTER PLAN

