



# Executive Summary



## Introduction

Nevada, like many states, has railroads at the heart of its modern development, with Reno, Sparks, Las Vegas, Caliente, Winnemucca, and many other towns founded with the arrival of rail. While railroads are hardly top of mind in the 21<sup>st</sup> century, reconnecting with their value to a well-working, sustainable society is key to Nevada's future.

When people in the United States are asked about railroads the almost universal response proceeds down a dual path. One is that people immediately think about passenger rail, not freight rail, wondering aloud why the U.S. doesn't have beautiful trains like Europe or Asia. The second path is where they share their latent enthusiasm for trains in general. While the paucity of passenger train service in the U.S. provides one impression of rail in our country, people are usually surprised to learn that the U.S. freight rail system, unlike our passenger rail system, is a global leader.

Yet, in spite of this leadership, North America shares a dynamic with the rest of the world, wherein freight railroads' market share of land transportation lags problematically behind truck transport.<sup>1</sup> The early 20<sup>th</sup> century saw the U.S., which already benefited from a privately owned rail network of 254,000 miles, choose to make direct public investments toward a system of roads for both passengers and freight. While this road network has supported massive population and industrial growth, its public subsidization has been a major influence on the rail system's contraction to 134,000 route miles. The Nevada rail system has receded from its 1914 peak of 2,422 miles to its current 1,193 miles while the state's population and industrial activity continue to expand.

The Nevada State Rail Plan (NVSRP) has been created in support of Nevada's commitment to creating a balanced transportation system that moves goods and people sustainably.

## Purpose of this Plan

The Nevada Department of Transportation (NDOT) determined in 2019 to commission a new Nevada State Rail Plan that exceeds basic federal requirements. NDOT's goal was to update the state rail plan by meeting the FRA requirement of assessing Nevada's current rail system and highlighting what an efficient freight and passenger transportation system could do when aligned with these goals of the One Nevada Transportation Plan:

**Enhance Safety:** Expanded use of rail will improve safety due to the inherently safer mode of rail transportation.

**Preserve Infrastructure:** Less freight traffic by truck will reduce wear and tear and maintenance expense of state and federal highways.

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<sup>1</sup> North American Transborder Freight Data. (2018, March 16). ([source link](#))

**Optimize Mobility:** Utilizing and planning for an efficient rail infrastructure will optimize mobility of people and goods.

**Transform Economies:** As local communities around the state expand industrial development a rail plan will add to the success of their economies.

**Foster Sustainability:** Creating an efficient transportation system will help limit emissions and improve air quality.

**Connect Communities:** Illuminating rail options throughout the state enables both passenger and freight connectivity between communities.

The NVSRP updates the 2012 Nevada state rail plan with a new approach to public-sector transportation planning that:

- Engages with the economic development community and the private sector from the outset to create and implement commercially relevant plans
- Addresses the marketplace dynamics that have led to a shrinking rail network and service in Nevada
- Identifies growth opportunities for freight rail that the private-sector business and investment community are attracted to fund
- Builds on existing rail assets and private-sector initiatives to grow passenger rail transportation
- Supports the sustainability of Nevada’s industrial development and transportation

The NVSRP has been created with the input of over 270 Nevada stakeholders from government, industry, and the community. It is a strategic plan that will be continuously refined and advanced with ongoing input from these stakeholders.

## Goals of the 2021 Nevada State Rail Plan

- Integrate rail and truck transportation for logistics services that capitalize on the strategic location of the state and its businesses
- Mitigate the negative transportation impacts of industrial development and population growth on the environment and communities
- Integrate freight transportation with strategic land-use planning
- Develop options for the efficient transportation and distribution of minerals and bio-resources and their return logistics for recycling, reuse, and re-manufacturing
- Improve the safety of freight rail transportation
- Explore how the state can leverage private-sector passenger rail initiatives and expand Amtrak service
- Provide a structure for ongoing rail project support
- Establish a public/private funding mechanism for new rail infrastructure

## Key Findings

Traditional rail plans are packed with freight rail data. Counter-intuitively, it is trucking data that is most useful in a rail plan. Truck shipment data provides critical visibility into the bulk of a region's freight activity, illuminating the path toward an ideal truck-rail balance. The 2021 Nevada State Rail Plan is informed by a thorough analysis of rail and truck freight data.

### Data Has to be Analyzed and Applied, Not Just Charted

Data must be analyzed for commercial relevance to identify specific logistics opportunities and consequently the new markets that can be reached for distribution and sourcing of goods and materials. The NVSRP shares these insights with the stakeholders who can most effectively utilize the information — economic development agencies, land developers, shippers, planners, and transportation providers. These key stakeholders can then apply the insights to advance their business growth opportunities.

### Key Data Findings

- Currently, there is only one warehouse in Nevada actively using a rail siding
- 77% of freight tonnage is carried by trucks
- 70% of trucks in the entire state are moving to or from CA
- 4% of ground freight moving in the state is by rail to or from Nevada businesses
- Most shippers located along rail rights of way do not use rail
  - 41.4% of privately owned sidetracks are not used
  - 96.4% of Union Pacific Railroad (UP) owned sidetracks not needed for linehaul or switching operations are not used
  - 139 truckload shippers located *adjacent to* a UP track could readily build a private sidetrack but have not done so
  - 500+ truckload-quantity shippers *near* rail lines do not use rail

### Key Observations

- Rail routes consist of three east-west main lines, a few branch lines, and no shortlines.
- Intermodal and carload rail service between Nevada and California is limited.
- Intermodal and carload rail service between Nevada and the rest of the country is limited.
- Rail service between Nevada businesses is practically non-existent at just 644 railcars a year.
- There is no regional passenger rail service in Reno or Las Vegas.
- Rail infrastructure and service in Nevada is not keeping up with the growth in warehousing, distribution, and industrial development.
- Rail service in Nevada is 83% through traffic and primarily serves commerce outside the state, except for a few large shippers in the state.

- Since 70% of the trucks moving in and out of Nevada are coming from or going to California, and the boom in warehousing and manufacturing is occurring north and east of Las Vegas and north and east of Reno, increasing truck traffic through the two most populated areas in the state on I-15 and I-80 is problematic.
- Land developers and economic development executives who have not typically focused on the importance of rail logistics are enthusiastically considering passenger and freight rail.

## Primary Opportunities

The NVSRP has been organized to facilitate eight rail-development regions and teams. Strategies for each region are listed below. Eighty (80) rail expansion projects offering an investment opportunity of \$7.8B are listed in *Chapter 5, The State's Rail Service and Investment Program*. These projects involve both passenger rail and freight rail, and horizons of either near-term (1-4 years) or long-term (5-20 years).

- **Region 1.** (Clark County) Redevelop Black Mountain Industrial Center as a rail-served heavy-industry site, connect existing truckload shippers to rail, support land developers in orienting around rail, and develop new regional passenger rail services.
- **Region 2.** (Lincoln County) Establish transload facility for Pozzolan and other commodities.
- **Region 3.** (Ely-North to W. Wendover [White Pine County; some Elko County]) Aggregate shipper needs into a viable redevelopment strategy for the Nevada Northern Railway.
- **Region 4.** (I-80 Corridor, Lovelock to W. Wendover) Create corridor-wide, rail-based land development strategy for I-80 communities, establish freight rail connections with California market and ports, and expand Amtrak services.
- **Region 5.** (TRIC-Fernley-Hazen-Fallon-Silver Springs) Support private-sector freight-rail served developments including investment in an integrated multimodal cargo transfer facility in the Fernley area, and establish public transportation service between Reno, Sparks, and the Tahoe-Reno Industrial Center.
- **Region 6.** (Reno-Sparks-Stead) Focus on connecting existing truckload shippers to rail service.
- **Region 7.** (South of Silver Springs to Beatty) Reestablish civilian freight-rail service to Hawthorne Army Depot, build a truck-to-rail transload facility at Hawthorne, and address the need for local rail service with a transload facility in the Yerington/Wabuska area.
- **Region 8.** (South of Beatty) Set the stage for rebuilding the rail line from Hawthorne to Clark County by strengthening rail service south from Hazen to Hawthorne and then integrating the freight needs of existing and prospective mines between Hawthorne and southern Nevada into a viable rail service plan.
- **Regions 1-8.** Implement the Mining Materials Supply Chain Logistics Strategy for all regions, then for all nine primary Nevada commodity groups.

## Recommendations

The NVSRP’s Recommendations are designed to be implemented in their entirety, in a coordinated, integrated sequence. The following 17 recommendations comprise a systematic solution to the challenge of optimizing the use of rail for Nevada’s economic expansion and environmental improvement. It is more productive and efficient to transform a system all at once. Each recommendation is accompanied by a link to its coverage in the NVSRP. (Note: Links will be live in final document)

	Recommendation	Page Location	Agency
1	Expand Nevada freight rail service to and from California and points east	<a href="#">Blueprint for Action Approach #12, xxvii</a>	NDOT/GOED
2	Initiate and expand new intermodal services	<a href="#">Chapter 4, p28</a>	NDOT/GOED
3	Facilitate shippers’ early-stage use of the rail network	<a href="#">Chapter 4, p28</a>	RDA
4	Preserve and utilize existing rail assets, including branch lines / industrial lead tracks	<a href="#">Chapter 4, p28</a>	RDA
5	Develop rail operating plans that serve local Nevada	<a href="#">Blueprint for Action Approach #5, vii</a>	RDA
6	Balance long-term project planning with near-term improvements for existing shippers	<a href="#">Chapter 4, p30</a>	RDA
7	Aggregate shippers’ needs into corridor plans through the state freight plan	<a href="#">Blueprint for Action Approach #11, xi</a>	GOED/RDA
8	Co-locate new rail shippers in industrial parks when sensible	<a href="#">Chapter 4, p58</a>	RDA
9	Provide rail-informed expertise to shippers and land developers	<a href="#">Chapter 4, p23</a>	RDA
10	Provide financing solutions for all-size rail infrastructure	<a href="#">Chapter 4, p23</a>	GOED/RDA
11	Evaluate freight movement data for meaningful commercial opportunities	<a href="#">Blueprint for Action Approach #4, xxvii</a>	RDA
12	Facilitate collaborative dialogue among suppliers, customers, transportation providers, developers, and citizens	<a href="#">Blueprint for Action Approach #2, v</a>	RDA
13	Initiate rail-served supply chain planning and add to the state freight plan	<a href="#">Chapter 4, p8</a>	NDOT /GOED/RDA
14	Enact freight transportation land use strategies	<a href="#">Chapter 4, p30</a>	State Lands
15	Establish Partnership with UPRR and BNSF	<a href="#">Blueprint for Action Approach #12, xxvii</a>	NDOT/GOED
16	Support BNSF expansion in Nevada	<a href="#">Chapter 4, p31</a>	RDA
17	Fundamental Performance Measures for Improving Nevada’s Rail System	<a href="#">Chapter 4, p32</a>	NDOT/GOED

## Implementation

The NVSRP tackles the chronic challenges to state rail plan implementation:

- 1) Funding for rail infrastructure
- 2) Follow-up organizational structure and commitment
- 3) Regional marketplace dynamics that throttle rail expansion

The balance of this Executive Summary highlights the elements of the NVSRP that address these implementation challenges. The sections are: Funding Perspectives, and the California-Nevada Supply Chain Alliance.

### Funding Perspectives

#### Freight

NDOT, in commissioning this production of the NVSRP, recognizes that freight-rail development is essentially a private-sector activity. Producing results as a public-sector agency is a function of facilitation, not capitalization. Fortunately, plentiful funding is available from the private sector that stands to gain from rail development. The NVSRP and its stakeholders have positioned rail development as an attractive investment opportunity at a time when global investors are actively seeking investments in North American rail infrastructure. The NVSRP is a guide for responding to that interest. Nevada is ideally poised to support the new national imperatives to re-shore manufacturing and shorten supply chains. Investors will be attracted to fund rail construction as well as the business developments served by this new infrastructure.

The State's Rail Service and Improvement Program for freight as presented in Chapter 5, lists \$740,300,000 as the total costs of connecting rail infrastructure to 53 currently identified rail growth projects. Where limited public dollars must be responsibly stewarded to address multiple community needs, an amount of this magnitude is typically viewed as a cost, rather than as an opportunity. The NVSRP, recognizing that there is ample private-sector capital for all rail growth projects in Nevada, relates to this funding need as an attractive set of business investment opportunities, rather than as a burden.

#### Passenger

As described in Chapter 3, passenger rail services can reduce traffic congestion, energy consumption, and pollution while improving Nevada's economy and employment opportunities. While most of the freight-rail expansion projects can be funded with private investment, passenger-rail expansion requires significant commitment of public support in all forms.

Public financing from both state and federal sources have traditionally funded rail-passenger projects around the United States. More recently there has been a re-awakening of private financing for passenger rail at levels not seen since the early 20<sup>th</sup> century. The Brightline West high-speed rail service to be built between Las Vegas and Southern California deploys over \$5B in private financing justified by ticket revenues from a projected ridership of over 10 million passengers a year.

The use of existing infrastructure in other rail-passenger projects proposed in the NVSRP lowers capital outlay. Successful implementation of these lower-cost projects can be achieved by utilizing three key financial strategies:

- **Public-Private Partnerships (or P3s)** to plan, finance, design, construct, improve, maintain, operate, or acquire the rights of way for a transportation facility using private financing and matching public funding.
- **State Infrastructure Bank** - The enabling legislation for the Nevada State Infrastructure Bank (“Nevada SIB”) was signed into law June 2017 (NV AB-399)<sup>2</sup>; however, the Bank has not been capitalized. Capitalization of the Nevada SIB would aid the development of rail infrastructure in Nevada.

### California-Nevada Supply Chain Alliance

The NVSRP focuses on the supply chain relationships between Nevada and California that must be addressed to make meaningful improvements in Nevada. NDOT can step into a key leadership role in establishing the *California-Nevada Supply Chain Alliance*.

The California-Nevada Supply Chain Alliance deploys an organizational model for businesses, governments, and communities throughout a region to engage in whole-systems transportation and land-use planning and investment. Following is the rationale for this alliance:

- California is the 5<sup>th</sup> largest economy in the world, after the U.S., China, Japan, and Germany.
- Truck traffic is increasing in both states as California’s supply chain has expanded into Nevada for warehousing, distribution, and production.
- Currently, 70% of all trucks traveling in Nevada are coming from or going to California.
- There are many commercial and economic opportunities that can best be cultivated with an informed redesign of the land transport system between the two states of Nevada and California.
- Currently, aggregates and non-metallic minerals are the two largest commodities trucked from Nevada to California, generating over 500,000 empty return truckloads a year.
- One of the most valuable logistics opportunities for both states is the development of a Fernley-area facility to transload farm and food products from domestic trucks traveling primarily on I-15 through Las Vegas from other states to the Ports of Los Angeles and Long Beach into international containers and then moved by rail to the Port of Oakland, addressing many California issues.
- Improving the stability and profitability of the trucking industry along with the quality of professional and personal life of its drivers is a key opportunity.

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<sup>2</sup>Nevada Assembly Bill 399, [source link](#), effective June 2017.



- Rail rights of way between the two states may be useful for connecting new electric generation in Nevada to the California marketplace.
- Neither the marketplace nor government alone has the power to implement this new level of supply-chain coordination.
- Supply chains are shortening. Local and regional supply chains enabled by rail are needed to add resilience and mitigate the environmental impact of freight movement.
- These large-scale strategies for stable, whole-systems investment will be extremely attractive to major infrastructure investors.

**Welcome to the 2021 Nevada State Rail Plan.**