

Comments on Draft Nevada State Freight Plan

Submitted by

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RAIL Solution's comments are in two parts. First we offer feedback on the specific text and provisions of the draft Nevada State Freight Plan (NSFP). To conclude we provide some current insight into the railroad industry that can help place its challenges and promise in context for future planning.

Part I. Analysis of the NDFP.

A. Dominant focus on highways.

Compelling energy, economic, and environmental advantages derive from moving as much mid- to long-distance freight by rail as possible. **The single greatest failure of the NSFP is its consistent focus on highways, relegating rail to a very much inferior role and including no rail projects in the priority funding list.**

In section after section highway freight transportation is examined in great detail and thoroughly covered in crafting the NSFP's goals and objectives. Yet there is hardly any mention of rail.

For example, the list below claims to be critical factors comprising a competitive freight transportation system for Nevada:

- Chokepoints on major truck routes
- Pavement conditions
- Highway safety
- Bridge conditions
- Vehicular emissions
- Freight- related R&D
- Pavement funding
- Collaboration
- Bridge funding

Not once is rail even mentioned, much less thought to be critical to Nevada's freight transportation system.

Only two of the many strategies defined and described in the NSFP are rail-related. No. 5 deals with preservation of railroad shortlines. No.6 deals with enhanced safety from elimination of grade crossings. These cannot possibly support the future multimodal corridor objectives envisaged. Although the word

“multimodal” appears frequently throughout the draft, no specific initiatives are proposed to create greater rail-truck synergy.

This is both unfortunate and difficult to fathom, because the NSFP recognizes in several places the key role that rail can play.

The NSFP starts out on the right note. In Section 1, “Vision and Solutions” three goals are presented for Nevada’s new logistics model:

- 1. Add strong crossroads connections to gain broader access to more markets from all major points on the compass.*
- 2. Increase Nevada’s capacity and efficiency for intermodal rail–truck and air–truck transfers through a more integrated multimodal configuration.*
- 3. Improve capacity and performance of our freight network in order for Nevada to realize its full potential.*

The pivotal role of rail in achieving meaningful intermodal freight movement and coordination is recognized on p. 1-6:

“Improvements in west-east intermodal rail would add additional freight capabilities for Nevada shippers and receivers. Large volumes of freight transferred from super post-Panamax vessels can nearly triple the amount of 20-foot equivalent units (TEUs) released to a port from a single vessel. The efficient inland distribution of such volumes on the land side will increasingly require railroad economies of scale connections to overcome the inherent inefficiencies clearing these containers: one container, per one chassis, per one truck. The ability of Nevada rail yards to efficiently handle marine cargo and domestic intermodal containers would remove large volumes of containerized cargo from congested urban highways, thereby adding highway capacity and improving air quality along the service corridor.”

. The two Class I rail corridors across Nevada are described. Section 2-2-2 mentions the potential for rail to provide a strategic link between the ports of California and Eastern markets. It also recognizes rail as “a more environmentally friendly and fuel efficient mode of transportation on a ton-mile basis.”

Section 3-5-7, “Mode Specific Trends” contains these two insightful quotations:

“Railroading may be a sleeping giant with respect to Nevada’s long-term multimodal-based business development plans. The prospective development of intermodal shuttle services is an important means to increase access for Nevada’s shippers to gateway ports in California and elsewhere. Nevada-based intermodal services may prove to be an efficient means to serve future distribution and manufacturing firms. If sufficient volumes warrant, the railroads could be excellent partners in public-private sector development projects.

“The next frontier for rail intermodal development is to penetrate the less-than-500-mile market. Both the federal government and the states are taking a more active interest in promoting intermodal transportation because the system helps take trucks off crowded

highways and provides environmental and safety benefits, relieving overall systems congestion and cleaning the air.

And in the Market Analysis section 4-2-2-1, we find another supportive recognition of the key intermodal role for rail:

“Mainline capacity and operational improvements in Nevada can enhance rail efficiency, thereby attracting shipments, from interstate truck traffic to more energy-efficient and environmentally-friendly freight rail, and to relieving traffic congestion, air pollution, and wear-and-tear on the state’s interstate highways (NDOT, 2013). However, while both Reno and Las Vegas are on major national intermodal lines, significant investment in state-of-the-art intermodal terminals would be necessary to serve and attract shippers to both metro areas.”

But somehow along the way rail becomes totally lost.. Section 1-3-2, “Project Prioritization” describes a Multiple Objective Decision Analysis (MODA) tool used to rank future transportation projects by funding priority from Critical to Important. It is beyond the scope of RAIL Solution’s comments to explore how this MODA tool works, but it seems seriously defective in that it has not included any possible rail projects.

The list of priority freight projects for Nevada is found in Attachment E, to Appendix 1-B. Several hundred projects are detailed, ALL HIGHWAY PROJECTS, mostly road widening, truck climbing lanes, and interchange improvements.

B. Failure to include through freight.

The second major shortcoming of the draft NSFP is its failure to include freight flows, both current and future, *passing through Nevada*. **This is a highly critical omission.** There are four types of freight flows: inbound freight terminating in Nevada; outbound freight originating in Nevada; local freight both originating and terminating in Nevada; and through freight neither originating nor terminating in Nevada, often known as “overhead” traffic..

Because the draft NSFP overlooks entirely this last category of freight movement, the conclusions drawn and the planning strategies derived are fatally flawed. We are given no idea as to the relative size and importance of freight flows through Nevada. Because Nevada is a relatively sparsely populated state, it does not generate or consume great quantities of goods. But it sits astride two critical corridors linking both the Los Angeles basin and Northern California to Eastern markets. Sections 3-3-1-1 & 3-3-1-2 discussed these opportunities in detail. The resulting freight flows across the state are huge, and failing to factor in their current impact as well as their future growth has led the NSFP to skewed judgments and omitted major challenges for transportation planning in the years 2015 – 2040. **Through freight flows could well be larger than all the other types combined.**

RAIL Solution has experienced a similar situation in Virginia's Interstate 81 Corridor, where we were founded and are still headquartered. I-81 cuts a swath across 325 miles of mostly rural western Virginia. It is a critical link between Southern producing areas and Northeastern consumer markets, and has been dubbed the NAFTA Corridor. While estimates vary, as much as 80% of I-81's heavy truck flows are passing through Virginia; i.e., they neither originate nor terminate here.

High volumes of through freight flows present unique challenges. One, of course, is the congestion that heavy truck flows can cause on the highway, especially near urban areas, and the conflicts created with automobile drivers. Another is the maintenance burden caused by the heavy road use. Even if the state where the traffic occurs is not originating or terminating the freight, the obligation to maintain the interstate highway falls on that state. And any future construction to expand throughput capacity does as well.

The need for the NSFP to include the impacts and challenges of through freight flows makes it doubly important to consider rail. Assuming that the volume of through freight grows at a rate similar to those projected by the draft NSFP for the other freight types, there seems no way that this entire freight growth impact to year 2040 could be handled across Nevada on expanded highways. The cost and environmental impact would simply be unacceptable.

Section 2-2-2 contains this revealing statement:

"A low percentage of rail-dependent industries (both railcar load and rail/truck intermodal service) and inadequate rail service are considered reasons for Nevada to continue its trajectory of a high truck-only mode share. However, there is an opportunity for increased rail usage. This would require targeting rail dependent industrial developments, and strategically adding rail services for them, such as service to the gateway ports in California, or service to national distribution centers east of the state. Both of these would require increased coordination with the railroads. These would alter the projected baseline mode shares in favor of rail, which is a more environmentally friendly and fuel efficient mode of transportation on a ton-mile basis."

This is a highly important distinction. If only originating freight is to be considered, relying on the truck-only mode may be okay. But coping with freight flows from beyond Nevada's borders can alter the baseline mode share in favor of rail.

C. Conclusions.

1. The NSFP envisages a New Freight Logistics Model. The "key element of the strategy is to unite the focus of Nevada stakeholders around creating a strong crossroad intermodal network. A more integrated multimodal configuration would increase Nevada's capacity and efficiency for intermodal rail-truck transfers." Nevertheless, no intermodal initiatives or funding are mentioned

in the NSFP. These things won't happen by magic. A robust rail-truck intermodal network will require careful and deliberate planning, likely on a public-private partnership basis, with the Union Pacific Railroad and BNSF. Recognition of such an element is totally lacking in the draft NSFP.

2. The role of rail overall is diminished by neglect in the NSFP. A near total preoccupation with truck freight transportation characterizes the document and its funding recommendations. This lack of balance will not serve Nevada well. It will be nearly impossible to accommodate projected freight growth on highways alone.

3. A very critical omission afflicts the NSFP in its failure to consider freight flows passing through Nevada. These substantial freight movements present unique challenges and will benefit from the compelling energy, environmental, and economic benefits of rail transportation.

4. These important shortcomings need to be cogently addressed before the draft NSFP is finalized.

Part II - Significant Rail Planning Issues.

A. Land Ferry.

The Land Ferry concept (aka Truck Ferry or Rolling Highway) is mentioned in a single paragraph in Section 3-5-6 of the draft NSRP. There is no recommendation for further study nor indication of its competitive potential for the future of the I-80 Corridor.

Nevada's DOT is a national leader in promotion and evaluation of the Land Ferry concept, and the UNLV has contributed significant economic data and an educational video with creative computer animation of the concept.

The Land Ferry is a drive-on, drive-off ferry service for long-distance trucks. It requires far less land, time, and logistical support than conventional double-stack intermodal terminals. Because of this more lean and nimble approach, the Land Ferry has potential to crack the elusive intermodal market of under a thousand miles that is not served today by the industry's double-stack business model.

Study funding for a thorough economic and engineering feasibility evaluation of the Land Ferry's applicability to the heavy freight movements in the I-80 Corridor needs to be included in **Table 6. Studies Needed to Advance Freight Priorities, to be Funded from Sources Other than NHFP** in the Implementation Strategies section of Appendix 1-B.

B. Steel Interstate.

A key element in RAIL Solution's rail advocacy is the Steel Interstate. Analogous in many ways to the Eisenhower Interstate Highway System, the Steel Interstate would do for railroads what the interstate highways did for roads. A core national network of high-capacity, grade-separated, electrified mainlines would be the backbone for movement of passengers and freight in the 21st Century.

A New Vision for Railroads in the 21st Century



ELEMENTS OF STEEL INTERSTATE DESIGN: A minimum of two grade-separated through tracks, engineered, signaled, and dispatched for 79 MPH to 110 MPH, offering frequent, reliable service. The electrified Steel Interstate System would create adequate capacity to divert most non-local truck freight to intermodal trains, and to accommodate passenger trains without impairing freight operations.

The Nevada State Freight Plan needs to provide for a full assessment of the Steel Interstate concept and its potential to craft a sustainable multimodal transportation network for the future. RAIL Solution is already working with officials in both California and Nevada to evaluate a Steel Interstate rail operation in the I-80 Corridor.

Support, validation, and opportunity for further assessment of this initiative would be enhanced by inclusion in the NSFP. More about the Steel Interstate and its manifold advantages can be found at www.steelinterstate.org

C. Electrification.

Because electrification is a key element of both the Land Ferry and the Steel Interstate, it merits mention here and coverage in the NSFP. There is no technical barrier here. Railroad electrification is in widespread use throughout the world, but only in Amtrak's Northeast Corridor here in the U.S. Technology for catenary and locomotives is well developed and widely available from established vendors.

There are compelling efficiency and environmental advantages to railroad electrification. Acceleration, deceleration, and braking are all improved with electric traction, and fewer, less complex locomotives are needed. These factors all act to improve line capacity and compound the efficiency advantages railroads already enjoy over trucking.

Environmental benefits include:

- Zero locomotive emissions, extremely important in densely populated, urban, and non-attainment zones.
- Helps wean the transportation sector from total dependence on oil.
- Multiple non-fossil fuels can be used to generate electricity, including solar, hydro, geothermal, wind, and nuclear.
- Much greater energy efficiency than using liquefied natural gas (LNG) as a locomotive substitute for diesel oil.

The big obstacle typically cited is the upfront cost of installing catenary along principal mainlines.

Here states can help by bringing together funding partnerships and possibly by issuing or backing bonds. Electric utilities are natural allies. Electricity sales growth has moderated due to decline in heavy industry, the economic downturn, and the rise in aggressive conservation efforts. Utilities need new markets. And railroad rights-of-way can double nicely as transmission line corridors.

Capability to utilize multiple fuels such as wind, solar, and geothermal for production of electricity and hence powering of trains is especially relevant to Nevada in the Interstate 80 Corridor. Because railroad electrification will likely become more commonplace in the U.S. over the next 25 years, Nevada can be a leader by drawing attention to it in today's NSFP.

D. Capacity.

Today's railroads lack the capacity to handle much additional business, making it difficult to divert more truck freight from highways. This stems from over 50 years of build-out of the Interstate Highway System and the competitive impact it had on rail freight volumes. As rail freight declined, railroad managements downsized everything in an attempt to save money on maintenance and property taxes, while maintaining a capital base adequate to service only reduced traffic levels.

Now as congestion on highways becomes increasingly a problem, especially in and around urban areas, there is no slack capacity on the rail network, even though shippers may now be more willing to explore a non-highway alternative.

With demand in excess of supply, railroads suddenly find themselves with pricing power. They can accept more lucrative business and turn away less desirable shipments. This is a welcome development for the rail carriers. As a result, their perceived need for new capacity, or at least the urgency for it, is far less than for a transportation planner seeking to optimize state, regional, or national goals.

Without major new rail capacity on today's railroads, truly truck-competitive freight transportation is unlikely. Required speed, reliability, and cost comparable to over-the-road trucking is just not there.

Shared infrastructure investments, inherent in the Steel Interstate concept and benefiting both passenger and freight trains in the 79 – 110 mph range, make the most economic sense. Today's freight railroads have a record of antipathy to passenger trains, mainly because they sap already-strained system capacity. The long-term goal for transportation planners should be a rail system with adequate capacity for passenger, freight, intermodal, and Land Ferry trains without having them competing for space.

Restoration of long-removed double tracking, addition of new track, elimination of grade crossings, improvements in signaling, and bypasses of urban congested areas are all avenues to boosting capacity on key rail lines.

Ensuring adequate rail capacity on key lines through Nevada will be essential if the state is to bring to fruition the New Freight Logistics Model that underlies the NSFP. Fortunately much of the railroad in the Interstate 80 Corridor of Nevada is already double track because of historically parallel lines of Western Pacific and Southern Pacific, now both part of today's Union Pacific system. Nevada needs to capitalize on this advantage by developing new uses such as Land Ferry that can do much to divert trucks from I-80.