

# CHAPTER 5

## *The State's Rail Service and Investment Program*



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## Chapter 5 The State's Rail Service and Investment Program

Nevada's Rail Service and Investment Program has been presented in the two previous chapters, Chapter 3 Passenger Rail Strategic Plan, and Chapter 4 Freight Rail Strategic Plan. Doing so in this manner accommodates stakeholders' ability to focus on the area of rail development that is most relevant to their professional, commercial, and/or community interests. Chapter 5 encompasses the list of potential rail growth projects envisioned at the outset of the new Nevada State Rail Plan (NVSRP). It is meant to be expanded throughout the next 4-5 years before the state is required to submit its update to the Federal Railroad Administration.

Freight projects included in the Rail Service and Investment Program (RSIP) are all connected to private sector business growth projects, with benefits accruing to the businesses involved, as well as the communities who enjoy more jobs and sustainable freight transportation. Projects that are commercially relevant can be assessed based on the overall benefit cost calculation of the underlying business development. That evaluation process and decision to proceed connects the investments directly to the results that a rail plan is designed to advance—an improved economy and environment, and a safer transportation system.

Because of Nevada's unique situation of having no active shortline railroads, every rail development project requires the active collaboration of either or both of the state's Class I rail providers, Union Pacific, and BNSF. It has been of the utmost importance to organize and present rail development opportunities of commercial scale that will be meaningful to the Class I's. The quantity, scale, and quality of revenue-generating freight rail projects listed here certainly merits the attention of the railroads, private infrastructure investors, and public infrastructure programs—creating new opportunities for funding and operating partnerships.

The freight rail projects listed below have a total estimated cost of \$578MM. This is a sum that private-sector infrastructure investors are well positioned to invest.<sup>1</sup> According to the magazine *Infrastructure Investor*, the top 30 global infrastructure investors allocated \$321B to this investment class in 2019 with hundreds of billions of investment capital in the hands of companies not in the top 30. Many of these funds are motivated to invest in North American rail infrastructure projects. The NVSRP elevates the fundability of individual projects by aggregating the opportunities and integrating transportation planning with economic development.

This capital could flow to projects many different ways other than directly from investment funds to the project. In many cases capital flows indirectly from funds to rail-related developments, through rail-experienced banks, through rail asset holding companies, or through rail service provider operating conglomerates.

In addition to this private-sector funding, there is broad-based interest at the federal level in infrastructure funding as an economic stimulus strategy.

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<sup>1</sup> "Meet the 30 largest infrastructure investors," Infrastructure Investor Global Summit, [source link](#), (2019)

Projects have been gathered from the over 230 stakeholder interviews that have occurred during the development of the NVSRP. Projects will continue to be added to the investment program as stakeholder engagement continues post-plan preparation.

**Table 5-1: Rail Service and Investment Program Freight Project List, All Regions–Four-Year Horizon**

#	Project Name	County	Short Description	Contracted Description	Commodities	Track Mi*	Cost	Company	Region	Horizon
1	Blue Diamond property	Clark	Development	Rail Connection	TBD	0.1	\$250,000	Blue Diamond Branch Line	1	4
2	Ryze Renewables	Clark	Expand rail terminal	Terminal Expansion	alternative fuel	0.25	\$2,000,000	Ryze Renewables	1	4
3	Apex Industrial Park	Clark	Connect to UP main line	Rail Connection	TBD	4	\$5,000,000	Land Development Associates	1	4
4	Panaca Mines	Lincoln	Connect to UP main line	Rail Connection, plus TL	pozzolan	3	\$4,000,000	Salt River Materials Group	2	4
5	Victoria Mine	Elko	Connect to Nevada Northern	Rail Connection	copper, silver, fuel, lime, etc.	8	\$12,000,000	US Mine Corporation	3	4
6	Long Canyon Mine	Elko	Connect to Nevada Northern	Rail Connection	refractory ore, I/B fuel, lime	2	\$3,000,000	Nevada Gold Mines	3	4
7	Pan & Gold Rock Mines	White Pine	Transloading on Nevada Northern	Transload	cyanide, sulfates	0.1	\$200,000	Kinross Gold	3	4
8	Silver Lion Farms	White Pine	Transloading on Nevada Northern	Transload	I/B fuel, fertilizer; O/B hemp	0	\$200,000	Silver Lion Farms	3	4
9	Robinson Mine	White Pine	Re-connect to Nevada Northern	Rail Connection	O/B copper concentrate; I/B fuel, lime, steel balls	1	\$1,000,000	Robinson Mine	3	4
10	Kinsley Mine	White Pine	Transloading on Nevada Northern	Transload	cyanide, sulfates	0.1	\$200,000	Liberty Gold	3	4
11	Nevada Northern Railway	White Pine	Rebuild track and Rt. 93 rail crossing	Track Rebuild	copper, hemp, fuel, tourists	128	\$100,000,000	Nevada Northern Railway	3	4
12	Wells Heavy Industrial Park	Elko	Connect to UP main line	Rail Connection	TBD	1	\$4,000,000	City of Wells	4	4
13	NGM Rail Connections	Eureka & Lander	Connect Cortez & Goldrush mines to Goldstrike gold processing facilities	Rail Connection	refractory ore, I/B fuel, lime, ammonium nitrate, sulfuric, peroxide, cyanide, ash, etc.	50+	\$100,000,000	Nevada Gold Mines	4	4

#	Project Name	County	Short Description	Contracted Description	Commodities	Track Mi*	Cost	Company	Region	Horizon
14	Midas Mine	Humboldt	Connect to UP main line	Rail Connection	refractory ore, I/B fuel, lime	30	\$60,000,000	Hecla Mines	4	4
15	Repurpose Sewer Treatment Property	Humboldt	Build connection to UP	Rail Connection	TBD	0.1	\$1,000,000	City of Winnemucca	4	4
16	Thacker Pass Project	Humboldt	Connect to UP main line	Rail Connection	I/B molten sulfur, caustic soda, cyanide, soda ash, fuel	50	\$100,000,000	Lithium Nevada Corporation	4	4
17	Fire Creek Mine	Lander	Connect to UP main line	Rail Connection	refractory ore, I/B fuel, lime	15	\$30,000,000	Hecla Mines	4	4
18	Lander County Railpark	Lander	Connect to UP main line	Rail Connection	TBD	0.1	\$11,000,000	Lander County	4	4
19	40-Mile Desert Land Development	Churchill	Connect to UP main line	Rail Connection	TBD	0.1	\$4,000,000	TOT, LLC	5	4
20	Lahontan Rail Industrial Park	Churchill	Connect to Mina Branch	Rail Connection	TBD	0.2	\$400,000	TOT, LLC	5	4
21	Geothermal Resources Industrial Park	Churchill	Connect to UP main line	Rail Connection	TBD	0.1	\$4,000,000	GRIP LLC	5	4
22	Limestone Mine	Churchill	Transloading site off main	Transload	specialized limestone	0.2	\$4,000,000	Advanced Carbonate Technologies, LLC	5	4
23	Victory Logistics	Churchill	Connect to Fernley Industrial Lead Connect to LA Pacific Lead	Rail Connection	TBD	0.4 1.25	\$4,000,000	Mark IV Capital	5	4
24	TRP Properties	Churchill	Connect to Fallon Branch	Rail Connection	TBD	0.1	\$300,000	Omaha Track Hazen Project	5	4
25	Churchill Hazen Industrial Park	Churchill	Connect to Fallon Branch	Rail Connection	TBD	0.1	\$300,000	TOT, LLC	5	4
26	Northern Nevada Industrial Center	Lyon	Connect to TRIC lead	Rail Connection	TBD	7	\$14,000,000	Reno Engineering	5	4
27	Sierra Springs Opportunity Fund	Lyon	Connect 15-591-09 (120 ac.) Connect 15-581-03 (91 ac.)	Rail Connection	TBD	0.6 0.6	\$2,000,000	Sierra Springs Opportunity Fund	5	4
28	Geothermal Rail Industrial Development	Lyon	Connect to UP main line	Rail Connection	TBD	0.1	\$4,000,000	GRID LLC	5	4

#	Project Name	County	Short Description	Contracted Description	Commodities	Track Mi*	Cost	Company	Region	Horizon
29	Gigafactory Project	Storey	Connect to branch track	Rail Connection	battery packs, drivetrains	2.5	\$5,000,000	Tesla	5	4
30	Sierra Biofuels Plant	Storey	Connect to branch track	Rail Connection	O/B syncrude feedstock	TL	\$2,000,000	Fulcrum BioEnergy	5	4
31	Innovation Park	Storey	Industrial Park	Rail Connection	TBD	0.1	\$4,000,000	Blockchains, Inc.	5	4
32	Pyramid Commercial Center	Washoe	Connect to Fernley Industrial Lead	Rail Connection	TBD	1.7	\$5,000,000	Reno Engineering	5	4
33	Lear Industrial Center	Washoe	Connect to Leareno Industrial Lead	Rail Connection	to closest of 5 buildings:	0.3	\$200,000	Lear Industrial Center	6	4
34	Pozzolan Transloading Site	Washoe	Connect to Leareno Industrial Lead	Rail Connection	pozzolan	0.1	\$100,000	Geofortis Processing & Logistics LLC	6	4
35	Cattle Feed Project	Lyon	Transloading on Mina Branch	Transload	various cattle feeds	0.1	\$150,000	Snyder Livestock Co Inc	7	4
36	Ann Mason Project	Lyon	Connect to Mina Branch	Rail Connection	copper & molybdenum ores	8	\$16,000,000	Hudbay Minerals	7	4
37	Pumpkin Hollow	Lyon	Connect to Mina Branch	Rail Connection	copper ores, I/B fuel, lime, etc.	8	\$16,000,000	Nevada Copper, Inc.	7	4
38	Hawthorne Army Depot car storage	Mineral	Build interchange with UP	Interchange with UP	car storage, transloading bulk	2	\$3,000,000	Top Rail Solutions, Inc.	7	4
39	Round Mountain Gold	Nye	Transloading site at Hawthorne	Transload	ammonium nitrate, lime, diesel	TL	\$250,000	Kinross Gold	7	4
40	Bolo Project	Nye	Transloading site at Hawthorne	Transload	ammonium nitrate, lime, diesel	TL	\$250,000	Barrian Mining	7	4
41	Gold Resources-Isabella Pearl Mine	Mineral	Transloading site at Hawthorne	Transload	ammonium nitrate, lime, diesel	TL	\$250,000	Gold Resources	7	4
42	Extend Mina Br., Thorne to Mina	Mineral	Build on abandoned ROW on BLM	Rail Connection	N/A	33	\$50,000,000	Joint Venture	7	4
43	Basalt Mine (Esmeralda County)	Mineral	Transloading site in Mina	Transload	diatomaceous earth	TL	\$250,000	Dicalite Management Group, Inc.	7	4
Total Cost:								\$580,300,000		

\*miles to reach site, not including serving tracks at site; TL = Transload

**Table 5-1a: Union Pacific Railroad suggested additions to Nevada Rail Service and Investment Program Freight Project List**

#	Area	Project
1	Elko, NV	Run-through tracks to support fluid operation of thru trains, including existing passenger trains, around trains performing yard operations
2	Las Vegas, NV	3.3 miles second main track between Arden and Maul Ave to reduce congestion in a major metropolitan area
3	South Central Route	Siding upgrades to support improved opportunities for trains to meet/pass on single track route

**Table 5-2: Rail Service and Investment Program Freight Project List, All Regions–Five to Twenty-Year Horizon**

#	Project Name	County	Short Description	Contracted Description	Commodities	Track Mi*	Cost	Company	Region	Horizon
1	Extend Mina Br., Mina to Blair Jct.	Esmeralda	Build on abandoned ROW on BLM	Rail Connection	N/A	36	\$54,000,000	Joint Venture	7	5-20
2	Rhyolite Ridge	Esmeralda	Connect to Mina Branch at Blair Jct.	Rail Connection	boron, lithium O/B, I/B various	12	\$20,000,000	ioneer Ltd.	7	5-20
3	Extend Mina Br., Blair to Goldfield Jct.	Esmeralda	Build on abandoned ROW on BLM	Rail Connection	N/A	23	\$35,000,000	Joint Venture	7	5-20
4	Crow Springs	Esmeralda	Connect to Mina Branch SW of G Jct.	Rail Connection	open-pit perlite and pozzolan	10	\$20,000,000	SR Minerals, Inc.	7	5-20
5	Tonopah Lithium Claims Project	Nye	Connect to Mina Br. at Goldfield Jct.	Rail Connection	I/B molten sulfur, caustic soda, cyanide, soda ash, fuel	7	\$15,000,000	American Lithium	7	5-20
6	Liberty Project	Nye	Connect to Crow Springs Branch	Rail Connection	Molybdenum, copper	7	\$15,000,000	General Moly, Inc.	7	5-20
7	Gemfield Mine	Esmeralda	Transloading site at Goldfield Jct.	Transload	ammonium nitrate, lime, diesel	TL	\$250,000	Gemfield Resources	7	5-20
8	Goldfield Bonanza Mine	Esmeralda	Transloading site at Goldfield Jct.	Transload	ammonium nitrate, lime, diesel	TL	\$250,000	Lode-Star Mining Inc.	7	5-20
9	Hasbrouck Project	Nye	Hasbrouck Project	Rail Connection	ammonium nitrate, lime, diesel	TL	\$250,000	West Kirkland Mining Inc.	7	5-20
10	Round Mountain Mine	Nye	Round Mountain Mine	Rail Connection	ammonium nitrate, lime, diesel	TL	\$250,000	Round Mountain Gold Corp.	7	5-20
<b>Total Cost:</b>							<b>\$160,000,000 (in 2020 Dollars)</b>			

\*miles to reach site, not including serving tracks at site; TL = Transload

The passenger rail projects listed below have a total estimated cost of \$7B in 2020 dollars. At least 73% or \$5.1B is expected to be private sector investment mostly in the Las Vegas – Rancho Cucamonga, CA Brightline West high speed rail project.

Greater emphasis this decade for passenger transportation solutions that reduce traffic congestion and energy consumption and provide environmentally sustainable mobility will motivate public commitments to invest in passenger rail projects.

**Table 5-3: Rail Service and Investment Program Passenger Project List, All Regions–Four-Year Horizon**

#	Project Name	Status Description	Track Mi*	Cost	Company	Region	Horizon
1	<b>Amtrak California Zephyr</b>	Additional Nevada stops requires station funding, UP approval; Elko ADA improvements requires station funding	719	\$40,000,000	Amtrak and NDOT	3, 4, 5, 6	0 - 4
2	<b>Xpress-West—Rancho Cucamonga to Las Vegas</b>	Nevada and California approved issuing PABs, construction expected to begin in 2021, service to begin in 2023	44 in NV	\$5B: \$200M in NV PABs	Fortress Investments	1	0 - 4
3	<b>Thruway expansion &amp; “C”-Route: Reno to Las Vegas by way of Central California</b>	Both require state funding commitments for operations and capital improvements; Existing railroad lines could host a demonstration run in 2021; requires UP/BNSF/Amtrak deal	670 LV to Reno + 108 to SF	\$2,000,000 for demo run	Amtrak, NDOT and Caltrans	1, 5, 6	0 - 4
4	<b>Nevada Northern Railway</b>	McGill Extension requires grant financing, grade crossing funds	2	TBD	Nevada Northern	3	0 - 4
5	<b>Virginia &amp; Truckee Railway Commission</b>	Virginia City Grade Crossing project requires grant program; 2.5-mile long Carson River Canyon extension has environmental approvals, R-O-W and is 90% designed awaiting funding solution	2.5	TBD	Virginia & Truckee Railway Commission	6, 7	0 - 4
6	<b>Nevada Southern Railway— “The Hoover Dam Limited”</b>	Project needs to be evaluated in coordination with Union Pacific, Nevada Southern Railway, Nevada State Railroad Museum, potential casino sponsors and concessionaire	29	\$3,000,000	UP and private contractor	1	0 - 4
7	<b>Las Vegas Xpress X-Train Los Angeles to Las Vegas</b>	Planned start of service in September 2021 requires securing \$100 million in private financing	50 in LV	\$100MM	Las Vegas Xpress	1	0 - 4
8	<b>Reno, Nevada, and Innovation Park</b>	Requires UP approvals, funding, and a contract operator	18	\$25MM	TBD	5,6	0 - 4
9	<b>Extension of the Las Vegas Monorail to Brightline West Las Vegas Terminal</b>	Evaluation by Brightline West, NDOT, RTC of Southern Nevada, Allegiant Stadium, McCarran Airport and Las Vegas Monorail can arrange funding through public-private partnership	10	\$750MM	Las Vegas Monorail	1	0 - 4
<b>Total Cost:</b>				<b>\$817,000,000 + \$5.1B Private Funds</b>			

**Table 5-4: Rail Service and Investment Program Passenger Project List, All Regions—Five to Twenty Year Horizon**

#	Project Name	Status Description	Track Mi*	Cost	Company	Region	Horizon
1	<b>Multistate Intercity Equipment Pool</b>	Requires funding agreement between NV, CA, AZ, and UT	N/A	TBD	NV, CA, AZ, and UT	1,5,6	5-20
2	<b>Southwest Multi-State Rail Planning Study</b>	Requires development of a multi-state high speed funding compact and federal funding commitment	TBD	TBD	NV, CA, AZ, and UT	1,2,4,5,7, 6,8	5-20
3	<b>Extension of Amtrak's Capital Corridor to Reno/ Sparks</b>	Requires Amtrak/UP approvals, CA/NV coordination and shared funding of capital improvements required by Union Pacific	100	\$100MM	Amtrak, Caltrans, NDOT	5,6	5-20
4	<b>Thruway expansion &amp; "C-Route": Reno to Las Vegas by way of Central California</b>	Requires Amtrak/UP/BNSF approvals, CA/NV coordination and shared funding of capital improvements required by Union Pacific and BNSF	670 LV to Reno + 108 to SF	\$250MM for trainsets and trackwork	Amtrak, NDOT and Caltrans	1,5,6	5-20
5	<b>Amtrak Salt Lake City-to-Las Vegas and Los Angeles Service</b>	Requires Amtrak and UP approvals, funding for new equipment and station improvements	212 in NV	\$100MM for trainsets and trackwork	Amtrak, NV and UT	1,2	5-20
6	<b>Virginia &amp; Truckee Railway Commission</b>	Carson City extension requires evaluating alternate alignments, additional river crossings and environmental documentation, plus funding solutions	TBD	TBD	Virginia & Truckee	6	5-20
7	<b>Reno Area Transit Service</b>	Will need evaluation by RTC Washoe County	107	\$400MM+	TBD/RTC	6	5-20
8	<b>Brightline West—Las Vegas Commuter</b>	Requires Brightline West approval and public funding for regional stations, additional passing tracks and regional trainsets	35	\$250MM	TBD/RTC	1	5-20
<b>Total Cost:</b>				<b>\$1.1 Billion (in 2020 Dollars)</b>			

The Nevada Statewide Transportation Improvement Program (STIP) is a list of transportation projects eligible for federal funding.

**Table 5-5: 2021 Nevada Statewide Transportation Improvement Program (STIP) List<sup>2</sup>**

MPO	Title	STIP Cost (2021-2024)	Federal Funds	Federal	State	Local
RTC Washoe	Golden Valley Road Railroad Crossing	\$275,000	Rail	52%	0%	48%
Non MPO	Rail Crossings Humboldt County	\$55,000	Rail	90%	0%	10%
RTCSNV	El Campo Grande Railroad Crossing	\$192,000	Rail	90%	1%	9%
Non MPO	Morison Avenue Railroad Crossing Golconda	\$421,000	Rail	63%	0%	37%
RTC Washoe	Highland Avenue Railroad Crossing	\$305,000	Rail	51%	0%	49%
RTCSNV	Railroad Crossings Consolidation Logandale	\$283,056	Rail	90%	1%	9%
RTC Washoe	Silver Lake Drive Railroad Crossing	\$410,000	Rail	63%	0%	37%

**Table 5-1a: Union Pacific Railroad suggested additions to Nevada Rail Service and Investment Program Freight Project List**

AREA:	PROJECT
Elko, NV	Run-through tracks to support fluid operation of thru trains, including existing passenger trains, around trains performing yard operations
Las Vegas, NV	3.3 miles second main track between Arden and Maul Ave to reduce congestion in a major metropolitan area
South Central Route	Siding upgrades to support improved opportunities for trains to meet/pass on single track route

<sup>2</sup> NDOT website, 2019 Statewide Transportation Improvement Program (STIP) Database, [source link](#), accessed August 22, 2020.