



Colorado Freight and Passenger Rail Plan

Appendices



COLORADO
Department of Transportation

2018



Contents

- Colorado Transportation Commission: SFPRP Resolution 4**
- Acronyms Used in this Rail Plan 9**
- Glossary of Common Terms..... 11**
- Freight Railroad Carrier Profiles 16**
 - BNSF Railway16
 - Union Pacific Railroad17
 - Cimarron Valley Railroad18
 - Colorado & Wyoming Railway19
 - Denver Rock Island Railroad19
 - Great Western Railway of Colorado20
 - Kansas and Oklahoma Railroad21
 - Kyle Railroad Company22
 - Nebraska Kansas & Colorado Railway23
 - Rock and Rail Railroad24
 - San Luis Central Railroad24
 - San Luis & Rio Grande Railroad25
 - Colorado Pacific Railroad26
 - UTAH Railway27
 - Deseret Power Railroad27
- Summary of Survey Outreach Results 29**
 - Transportation and Colorado’s Traveling Public29
 - Transportation and Colorado’s Economy35
 - Transportation and Colorado’s Agricultural Industry56
 - Transportation and Colorado’s Natural Resources Industry67
- Meeting and Presentation Materials 75**
 - Colorado Transportation Commission76
 - Transit and Rail Advisory Committee87
 - Rail Plan Working Group 128



APPENDIX A

COLORADO TRANSPORTATION COMMISSION: SFPRP RESOLUTION

The Colorado Transportation Commission formally adopted the State Freight and Passenger Rail Plan in August of 2018. The following resolution demonstrates Colorado's commitment to this plan and to ongoing efforts to address freight and passenger rail issues, needs, and opportunities in Colorado.

Resolution # TC-18-08-05

Resolution to Approve the State Freight & Passenger Rail Plan for the State of Colorado.

Approved by the Transportation Commission on August 16, 2018.

STATE FREIGHT & PASSENGER RAIL PLAN DOCUMENT

WHEREAS, the Colorado Transportation Commission (Commission) has statutory authority pursuant to 43-1-106, C.R.S. to approve, accept, and amend various planning documents resulting from Section 135 Title 23 of the USC, and 43-1-1101 through 1105 C.R.S.; and

WHEREAS, Congress passed the 2008 Passenger Rail Investment and Improvement Act (PRIIA) which requires states to have an approved State Rail Plan in order to be eligible for federal funding for freight and passenger rail investments; and

WHEREAS, the mission of the Colorado Department of Transportation is to provide the best multi-modal transportation system for Colorado that most effectively and safely move people, goods and information; and

WHEREAS, an eighteen month planning effort incorporating considerable stakeholder involvement including a Rail Plan Working Group and Freight Advisory Council, has led to the completion of the Plan; and

WHEREAS, a draft plan was made available for a 30+ day review and comment period; and

WHEREAS, comments received by CDOT have been reviewed and incorporated, as appropriate;

NOW, THEREFORE BE IT RESOLVED, the State Freight & Passenger Rail Plan of 2018 be adopted as the basis for the railroad element of the future CDOT Statewide Long Range Transportation Plan (2045 Plan);

BE IT FURTHER RESOLVED, upon acceptance of this resolution, CDOT will forward the Plan to the Federal Railroad Administration (FRA) for final concurrence.

FREIGHT RAIL

WHEREAS, two Class 1 (national) and twelve Class 2 or 3 (short line) freight railroads serve Colorado with over 2,684 route-miles of track in the state; and

WHEREAS, the freight railroads serving Colorado employ more than 2,500 people in Colorado and move 20 percent of all freight in/from/to Colorado; and

WHEREAS, there are 2,129 public crossings of state and interstate highways by freight railroad tracks, which influence CDOT decisions for those same highways; and

WHEREAS, short line railroads are incubators of economic development in manufacturing, processing, and resource industries; and

WHEREAS, CDOT receives approximately \$3 Million per year of FHWA Section 130 funding for purposes of public highway / railway crossing safety improvements;

NOW, THEREFORE BE IT RESOLVED that CDOT should seek to strengthen freight railroad coordination to fulfill the Department's mission for the State, which seeks to effectively and safely move *goods*; and

BE IT FURTHER RESOLVED, that CDOT should pursue reasonable measures, within fiscal constraints, to ensure the safety and efficiency of freight rail movements as part of a comprehensive and multi-modal freight delivery network.

PASSENGER RAIL

WHEREAS, 28.9 million trips are made annually aboard the Regional Transportation District's (RTDs) light rail and commuter rail network; and

WHEREAS, by Transportation Commission Resolution TC-17-11-13 (November 2017), RTD receives \$3 Million per year in FASTER transit funds and much of that is used for passenger rail purposes; and

WHEREAS, nearly 0.3 million additional trips are made annually aboard Amtrak's intercity trains through Colorado; and

WHEREAS, CDOT has performed studies to confirm the technical feasibility of intercity commuter rail, as well as intercity high speed rail and rapid speed advanced guideway systems (AGS); and

WHEREAS, the I-70 Mountain Corridor PEIS Record of Decision identified an Advanced Guideway System (AGS) as a part of the Preferred Alternative and the ROD adaptive management / decision-making process; and

WHEREAS, CDOT has made small, strategic investments (\$5 Million) in competitive or discretionary funding opportunities such as PRIIA, TIGER, and rail disaster recovery programs, and has been party to over \$75 Million in returns from such efforts 2012 through 2017;

WHEREAS, one of those efforts was successful in restoring self-supporting train service between Denver Union Station and Winter Park in 2017; and

WHEREAS, major metropolitan areas of the United States, and around the world, are served by both metropolitan rail and intercity rail systems, and have thereby supported their economic growth; and

WHEREAS, Colorado's Front Range population between Fort Collins and Pueblo is forecast to grow from 4 Million persons now to over 6 Million persons by 2040; and

WHEREAS, the State of Colorado Legislature created the Southwest Chief & Front Range Passenger Rail Commission to oversee the preservation and expansion of Amtrak Southwest Chief rail service in Colorado, considering that such service is extended to Pueblo and Walsenburg, and to facilitate the development and operation of a Front Range passenger rail system that provides passenger rail service along the Interstate 25 corridor [SB 17-153]; and

WHEREAS, the 2018 Colorado Legislature funded the Southwest Chief & Front Range Passenger Rail Commission with \$2.5 Million [SB 18-001]; and

WHEREAS, the Southwest Chief & Front Range Passenger Rail Commission is seeking to hire a Project Director and conduct further rail system studies; and

WHEREAS, CDOT is a non-voting member of the Southwest Chief & Front Range Passenger Rail Commission;

NOW, THEREFORE BE IT RESOLVED that with staff time and, with resources separately approved by the CDOT Transportation Commission, if any, CDOT should advance the idea of Front Range passenger rail; and

BE IT FURTHER RESOLVED that CDOT should seek to strengthen passenger railroad coordination to fulfill the Department's mission for the State, which seeks to effectively and safely move *people*; and

BE IT FURTHER RESOLVED, that CDOT should continue the policy of positioning Colorado for funding that becomes available to advance passenger rail and/or rapid speed transit.

RAIL: PLANNING FOR THE FUTURE

WHEREAS, coordinated efforts are required to leverage multiple funding sources and develop investment and mobility partnerships; and

WHEREAS, coordinated applications for competitive or discretionary funding tend to be more successful than CDOT stand-alone applications; and

WHEREAS, financial partnerships with other organizations, public or private, minimizes the net cost to the traveling public to deliver freight and passenger mobility solutions; and

WHEREAS, small studies (e.g. feasibility studies, and categorical exclusions) to larger studies (e.g. Planning & Environmental Linkage (PEL), Environmental Assessments (EA), and Environmental Impact Statements (EIS)) are required to seek funding, receive funding, and advance projects to construction; and



WHEREAS, CDOTs efforts are strengthened by the advice and counsel of the Freight Advisory Council (FAC) and its Freight Rail Subcommittee, the Transit & Rail Advisory Committee (TRAC), the Statewide Transportation Advisory Committee (STAC), the Southwest Chief & Front Range Passenger Rail Commission (SWC & FRPRC), and the Regional Planning Commissions (RPCs) of the state (representing the fifteen transportation planning regions (TPRs) of the state); and

WHEREAS, the Colorado Public Utilities Commission (PUC) is the statutory authority for oversight of rail crossing safety generally, and is the State Safety Oversight Authority (SSOA) for FTA-funded passenger rail corridors specifically; and

WHEREAS, such studies and relationships as noted above assist CDOT and the CDOT Transportation Commission in prioritizing efforts using limited resources;

NOW, THEREFORE BE IT RESOLVED that CDOT should integrate planning processes and efforts to the maximum extent possible, and to the maximum benefit of Colorado.

ENHANCING ECONOMIC DEVELOPMENT

WHEREAS, Class II or III (short line) track built for less than 286,000-pound loads can be an impediment to economic development in the state; and

WHEREAS, other states around the country have more active freight rail investment programs involving low-interest loans and/or economic development grants than Colorado; and

WHEREAS, freight rail yards in central locations throughout Colorado represent an enormous fixed-asset investment and land-use commitment supporting industries of Colorado; and

WHEREAS, freight rail delivery options are especially important to agricultural, farming, and resource industries along-side truck delivery options; and

WHEREAS, commercial, office, and retail industries rely on low-cost passenger rail options to attract and retain workers; and

WHEREAS, CDOT HQ & Region 1 offices included site location criteria to attract and retain workers now and into the future; and

WHEREAS, state law requires the Executive Director of CDOT to report to the State Legislature annually on the potential for rail line / rail corridor abandonments for purposes of preservation (e.g. prevent unnecessary removal) or re-purposing of those assets (e.g. from freight to passenger rail);

NOW, THEREFORE BE IT RESOLVED that CDOT should maximize freight (air, truck, rail, and other modes) planning and freight partnerships, and should also maximize passenger rail planning and partnerships to enhance the economic connections across Colorado.


Herman Stockinger, Secretary
Transportation Commission of Colorado

8-16-18
Date



APPENDIX B

ACRONYMS USED IN THIS RAIL PLAN

- AAR - Association of American Railroads
- AGS - Advanced Guideway System
- BNSF - BNSF Railway
- C&TSRR - Cumbres & Toltec Scenic Railroad
- CDOT - Colorado Department of Transportation
- CFP - Colorado Freight Plan
- COSIB - Colorado State Infrastructure Bank
- DOT - Department of Transportation
- DRCOG - Denver Regional Council of Governments
- DTD - Division of Transportation Development
- DTR - Division of Transit and Rail
- EIS - Environmental Impact Statement
- FAC - Freight Advisory Council
- FAF - Freight Analysis Framework
- FASTER - Funding Advancements for Surface Transportation and Economic Recovery (2009)
- FHWA - Federal Highway Administration
- FRA - Federal Railroad Administration
- FTA - Federal Transit Administration
- FY - Fiscal Year
- HPTE - High-Performance Transportation Enterprise
- HRCSF - Highway-Rail Crossing Signalization Fund
- ICS - Interconnectivity Study
- INFRA - Infrastructure for Rebuilding America
- JPAC - Joint Project Advisory Committee
- KDOT - Kansas Department of Transportation
- mph - miles per hour
- MPO - Metropolitan Planning Organization
- NAMS - Northwest Area Mobility Study
- NMDOT - New Mexico Department of Transportation
- OEDIT - Office of Economic Development and International Trade



OTP - on-time performance
P3 - public-private partnership
PHMSA - Pipeline and Hazardous Materials Safety Administration
PRIIA - Passenger Rail Investment and Improvement Act of 2008
PTC - Positive Train Control
PUC - Public Utilities Commission
RSIP - Rail Service and Investment Program
RTD - Regional Transportation District
SB - Senate Bill
SFPRP - State Freight and Passenger Rail Plan
SLRG - San Luis & Rio Grande
SSO - State Safety Oversight
STAC - Statewide Transportation Advisory Committee
STB - Surface Transportation Board
STRACNET - Strategic Rail Corridor Network
SWP - Colorado Statewide Transportation Plan
TIGER - Transportation Investment Generating Economic Recovery
TPR - Transportation Planning Region
TRAC - Transit and Rail Advisory Committee
TTCI - Transportation Technology Center, Inc.
UP - Union Pacific Railroad
VMT - Vehicle Miles Traveled
V&S - Victoria & Southern Railway



GLOSSARY OF COMMON TERMS

Advanced Guideway - A term used to describe high-speed fixed transit systems, including passenger rail, monorail, maglev, or other rapid travel technologies.

Association of American Railroads (AAR) - The railroad policy, research, standard setting, and technology organization that focuses on the safety and productivity of the U.S. freight rail industry.

Backhaul - The process of a transportation vehicle (typically a truck) returning from the original destination point to the point of origin. A backhaul can be with a full or a partially loaded trailer or rail car.

Branch Line - A rail line that serves one or more stations beyond the junction of the main line or another branch line. A feeder line that brings freight to main lines.

Boxcar - An enclosed railcar, typically 40 or more feet long, used for packaged freight and some bulk commodities.

Bulk Cargo - Cargo that is unbound as loaded or is without count in a loose unpackaged form. Examples of bulk cargo include coal, grain, ore, or petroleum products.

Capacity - The number of trains that can pass through an area in a certain period of time, depending on the quantity and configuration of tracks.

Carload - Quantity of freight (in tons) required to fill a railcar; the amount normally required to qualify for a carload rate.

Carrier - A firm that transports goods or people via land, sea, or air.

Class I Carrier - A classification of regulated carriers based on annual operating revenues-motor carrier of property greater than or equal to \$5 million. For railroads, carriers with annual carrier operating revenues of \$467 million or more (adjusted for inflation, base year 1991). There are two Class I railroads in Colorado: Union Pacific (UP) and BNSF Railway (BNSF).

Class II Carrier - A classification of regulated carriers based on annual operating revenues-motor carrier of property \$1 to \$5 million. For railroads, carriers with annual carrier operating revenues of less than \$467.0 million but more than \$37.4 million (adjusted for inflation, base year 1991).

Class III Carrier - A classification of regulated carriers based on annual operating revenues-motor carrier of property less than or equal to \$1 million. For railroads, carriers with annual carrier operating revenues of \$37.4 million or less (adjusted for inflation, base year 1991), and all switching and terminal companies regardless of operating revenues. There are 12 Class III railroads operating in Colorado.

Classification Yard - A railroad terminal area where railcars are grouped to form train units.

Colorado Rail Passenger Association (ColoRail) - A statewide non-profit and voluntary organization working to develop passenger rail and transit services in and through the State of Colorado.

Commodity - An item that is traded in commerce. The term usually implies an undifferentiated product competing primarily on price and availability.

Commodity Flows - Data that describes the movement of goods. This information is used for transportation planning and decision-making.

Commuter Rail - Short-haul passenger transportation usually with routes less than 50 miles in metropolitan and suburban areas with morning and evening peak period operations.



Container - A "box," typically 10 to 40 feet long, that is used primarily for ocean freight shipment. For travel to and from ports, containers are loaded onto truck chassis or on railroad flatcars.

Containerized Cargo - Cargo that is transported in shipping containers that can be transferred easily from one transportation mode to another.

Conventional Rail - Traditional intercity passenger rail services of more than 100 miles with as little as one to as many as 7 to 12 daily frequencies; may or may not have a strong potential for future high-speed rail service. Top speeds of up to 79 mph to as high as 90 mph generally on shared track. Intended to provide travel options and to develop the passenger rail market for further development in the future.

Crossdocking - Logistics process involving unloading materials from an incoming truck, a trailer, or a railroad car and loading the material directly into outbound trucks, trailers, or rail cars with little or no storage in between.

Demurrage - A penalty charge assessed by railroads for the detention of cars by shippers or receivers of freight beyond a specified free time.

Distribution Center - A centrally located warehouse where goods shipped long distances by rail are loaded onto trucks for short-haul delivery to regional retail stores or final business destinations. Also called a reload center, it combines the economies of rail with the flexibility of truck pickup and delivery.

Dock - A space used for receiving merchandise at a freight terminal.

Double stack - A train of specially equipped flat cars on which containers are stacked two-high.

Drayage - Transporting of rail or ocean freight by truck to an intermediate or a final destination; typically, a charge for pickup/delivery of goods moving short distances (e.g., from marine terminal to warehouse).

Export - Goods moving out of a location. Can be domestic export (destination within the United States) or international export (destination outside the United States).

FasTracks - A multibillion-dollar public transportation expansion plan initiated in 2004 for the Denver metropolitan region. Developed by the Regional Transportation District (RTD), the voter approved transit expansion program includes new commuter rail, light rail, and express bus services.

Flatbed - A trailer without sides used for hauling machinery or other bulky items.

Freight Analysis Framework (FAF) - A dataset produced by the US Bureau of Transportation Statistics and Federal Highway Administration that integrates data from various sources to analyze freight movement among states and major metropolitan areas by all transportation modes. Starting with data from the 2012 Commodity Flow Survey and international trade data from the Census Bureau, FAF incorporates data from agriculture, extraction, utility, construction, service, and other sectors.

Freight Forwarder - A person whose business is to act as an agent on behalf of a shipper. A freight forwarder frequently consolidates shipments from several shippers and coordinates booking reservations.

Freight Rail - The movement of goods and cargo in purpose-built freight rolling stock (e.g., boxcars and flatcars) that is typically, but not necessarily, hauled by diesel-power locomotives.

Free Trade Zone (FTZ) - An area or a zone set aside at or near a port or an airport, under the control of the U.S. Customs Service, for holding goods duty-free pending customs clearance.

Front Range - Colorado's most populous region, generally extending north-to-south from Fort Collins to Trinidad.

Grade Crossing - Intersections where a highway, a road or a street, including associated sidewalks or pathways, crosses one or more active railroad tracks at grade. Crossings may be public, if the roadway is public, or private, if located exclusively on private lands and roads.



Gross State Product (GSP or GDP) - Measurement of a state's economic output that is approximately equal to the total value added from all industries in a state.

Gross Weight - The total weight of a rail car, along with the weight of its entire contents. Much of the U.S. Class I rail system is approved for heavy axle rail cars that can handle up to 286k lbs., or in some cases 315k lbs., gross weight. However, some rail lines, or locations along rail lines—in most cases, bridges—are not capable of adequately handling and distributing excess weight and may have restrictions for rail cars greater than 286k lbs. or more based on the length of the rail car.

Hazardous Material (Hazmat) - A substance or material that the U.S. Department of Transportation has determined to be capable of posing a risk to health, safety, and property when stored or transported in commerce.

High-Speed Rail, Express - Frequent express service between major population centers 200 to 600 miles apart, with few intermediate stops. Top speeds of at least 150 mph on completely grade-separated, dedicated rights-of-way (except for some shared track in terminal areas). Intended to relieve air and highway capacity constraints.

High-Speed Rail, Regional - Relatively frequent service between major and moderate population centers 100 to 500 miles apart, with some intermediate stops. Top speeds of 110 to 150 mph, grade-separated, with some dedicated and some shared track (using positive train control technology). Intended to relieve highway and, to some extent, air capacity constraints.

Import - Goods moving into a location. Can be domestic import (origin within the United States) or international import (origin outside the United States).

Intercity Rail - Long-distance passenger rail service generally greater than 125-mile route distances, including Amtrak services.

Industrial Interchange - Interchange of cars from one railroad to another that takes place within the confines of a customer's plant. Industrial switching track serves industries, such as warehouses, mines, mills, factories, etc.

Interchange - The transfer of cars from one railroad to another railroad at a common junction point.

Intermodal - Describes the transfer of freight between modes, such as rail to truck. Also used to describe intermodal container shipments commonly used in international shipping.

Intermodal Train - A freight train that consists of any combination of roadrailer equipment, double-stack or container flat cars, or flat cars equipped for multi-level auto-rack or auto frames.

Intermodal Terminal - A location where links between transportation modes and networks connect. Using more than one mode of transportation in moving persons and goods. For example, a shipment moved more than 1,000 miles could travel by truck for one portion of the trip and then transfer to rail at a designated terminal.

Interoperability - Technical compatibility of infrastructure, rolling stock, signaling, communications systems, and other operational characteristics across freight and passenger rail systems, regardless of owner or operator.

Last Mile -In the freight context, last mile refers to the final segment of a supply chain, moving goods from a distribution center to the end user. In the passenger context, last mile often refers to infrastructure, services, or systems to connect a passenger to or from a station to a final origin or destination.

Line Haul - The movement of freight over the road/rail network from origin terminal to destination terminal, usually over long distances.

Light Rail - A mode of electrified or diesel-powered rail-based passenger transit, usually in urban areas, which is distinguished by operation in routes of generally exclusive, though not necessarily grade-separated, rights-of-way.

Logistics - All activities involved in the management of product movement; delivering the right product from the right origin to the right destination, with the right quality and quantity, at the right schedule and price.

Manifest Train - Train made up of mixed rail cars (boxcars, tank cars, piggyback cars, etc.).

Milepost - A marker that identifies by number a given track location. It shows the number of miles from one point on the division to another point.

Multimodal - General term for all integrated passenger transportation modes, including transit, rail, car, pedestrian, and bicycle.

Passenger Rail - A broad term describing all rail services that primarily move people.

Passenger Rail Investment and Improvement Act of 2008 (PRIIA) - As enacted by Congress in 2008, this act reauthorizes the National Railroad Passenger Corporation, better known as Amtrak, and strengthens the U.S. passenger rail network by tasking Amtrak, the U.S. Department of Transportation, Federal Railroad Administration, states, and other stakeholders in improving service, operations, and facilities.

Positive Train Control (PTC) - A system of functional requirements for monitoring and controlling train movements. PTC uses communication-based technology that provides a system capable of reliably and functionally preventing train-to-train collisions, overspeed derailments, incursions into established work zone limits, and the movement of a train through a main line switch in the wrong position. As mandated by Congress in the Rail Safety Improvement Act of 2008 (RSIA), Class I railroad main lines transporting hazard materials and any railroad main lines with regularly scheduled intercity and commuter rail passenger service are required to fully implement PTC.

Quiet Zone - The FRA Train Horn Rule (49 CFR Part 222) provides the opportunity for localities to mitigate the effects of train horn noise by establishing specified areas where railroads are directed to cease the routine sounding of their horns when approaching public highway-rail grade crossings. Train horns may still be used in emergency situations or to comply with other federal regulations or railroad operating rules. Localities desiring to establish a quiet zone are first required to mitigate the increased risk caused by the absence of a horn.

Rail Siding - A short branch off a main railway line with only one point leading onto it. Sidings are used to allow faster trains to pass slower ones or to conduct maintenance.

Rail Spur - A short, usually dead-end, section of track used to access a facility or a loading/unloading ramp. It also can be used to temporarily store equipment.

Regional Railroad - Railroad defined as line-haul railroad operating at least 350 miles of track and/or earns revenue between \$40 million and \$467 million.

Reliability - Refers to the degree of certainty and predictability in travel times on the transportation system. Reliable transportation systems offer some assurance of attaining a given destination within a reasonable range of an expected time. An unreliable transportation system is subject to unexpected delays, increasing costs for system users.

Right-of-Way - In the strictest sense, land or water rights necessary for the roadbed and its accessories. However, it is commonly used to describe property owned and/or operated by a railroad.

Scenic Railroads - Passenger transportation services primarily for recreation and not travel to and from a destination. Scenic and historic railroads include steam locomotive operations, cog railways, and narrow-gauge track railcars.

Section 130 - The Railway-Highway Crossings (Section 130) Program provides funds from the Federal Highway Administration to eliminate hazards at railway-highway crossings. CDOT administers funds to improve and upgrade railway-highway crossing infrastructure and equipment.



Short Line Railroad - Freight railroads that are not Class I or regional railroads that operate less than 350 miles of track and earn less than \$40 million.

Southwest Chief and Front Range Passenger Rail Commission (SWC&FRPRC) - A group established by the Colorado General Assembly in 2017 as the convening organization responsible for facilitating future passenger rail services in key corridors and developing legislation to facilitate the development of a Front Range passenger rail system that provides passenger rail service in and along the Interstate 25 corridor.

Switching and Terminal Railroad - Railroad that provides pickup and delivery services to line-haul carriers.

Supply Chain - Starting with unprocessed raw materials and ending with final customer using the finished goods.

Tank Car - A rail car designed to carry liquids, compressed gases, or granular solids. All railroad tank cars are built to specifications, standards, and requirements established, implemented, and published by the U.S. Department of Transportation, Transport Canada (TC), and/or Association of American Railroads.

Terminal - A facility owned by a railroad on its line for handling freight and for breaking up, making up, forwarding, and servicing trains. Also refers to a designated area within a metropolitan area where one or more rail yards exist.

Ton-Mile - A measure of output for freight transportation; reflects the weight of shipment and the distance it is hauled; a multiplication of tons hauled by the distance traveled.

Trackage Rights - The purchase, for a fee, of the right for one railroad to run on tracks owned by another.

Transloading - Transferring bulk shipments from the vehicle/container of one mode to that of another at a terminal interchange point.

Twenty-foot Equivalent Unit (TEU) - The 8-foot by 8-foot by 20-foot intermodal container used as a basic measure in many statistics and as the standard measure used for containerized cargo.

Unit Train - A train of a specified number of railcars handling a single commodity type that remain together until a designated destination or until a change in routing is made.

Vehicle Miles Traveled (VMT) - A unit to measure vehicle travel made by a private vehicle, such as an automobile, a van, a pickup truck, or a motorcycle.

Warehouse - Storage place for products. Principal warehouse activities include receipt of product, storage, shipment, and order picking.

Waybill Data - A dataset compiled by the Surface Transportation Board used to analyze rail movements at the national, state, and regional levels. The Carload Waybill Sample is a stratified sample of carload waybills for all U.S. rail traffic submitted by those rail carriers terminating 4,500 or more revenue carloads annually. A waybill is a shipping document prepared by a carrier at the point of origin showing the point of origin, destination, route, shipper, consignee, description of shipment, weight, charges, and other data necessary to rate, ship, and settle.



APPENDIX C

FREIGHT RAILROAD CARRIER PROFILES

BNSF Railway

BNSF, a subsidiary of Berkshire Hathaway Inc., is headquartered in Fort Worth, Texas. BNSF directly owns and operates more than 32,500 route miles of track in 28 U.S. states and 3 Canadian provinces serving the western two-thirds of the United States. When second, third, and fourth main line trackage, yard trackage, and siding trackage are included, the length of track that the railway directly controls rises to more than 50,000 route miles across the country. For administrative purposes, BNSF is divided into 10 operating divisions, including a Colorado Division headquartered in Denver. BNSF operates several transfer facilities throughout the western United States, facilitating the transfer of intermodal containers, highway trailers, motor vehicles, and other freight traffic.

Ownership and History

BNSF is the product of nearly 400 railroad lines that merged or were acquired over time. BNSF's initial operation in Colorado began in 1870 by the Colorado Central Railway between Denver and Golden. The youngest predecessor of BNSF is the Burlington Northern Railroad, created in 1970 with the merger of five railroads. The Burlington Northern and Santa Fe Railway was created in 1996, when the Atchison, Topeka and Santa Fe Railway was merged into the Burlington Northern Railroad. Also in 1996, with the merger of the Southern Pacific Railroad (SP) into Union Pacific, BNSF gained merger-conditioned access to new customers located on the former SP main line between Denver and the Utah border west of Grand Junction as part of more than 4,300 route miles of expanded access in the western United States. On February 12, 2010, BNSF joined Berkshire Hathaway.

Infrastructure and Connections

In Colorado, BNSF owns 804 route miles of track and operates on trackage rights over Union Pacific for an additional 537 route miles. BNSF has rail yards in Denver, La Junta, Parachute, Pueblo, Sterling, and Trinidad; equipment maintenance shops in Denver and Golden; and an intermodal facility in Denver. Amtrak provides passenger service over BNSF east of Denver, connecting Denver with Chicago, and across southeastern Colorado, connecting Lamar, La Junta, and Trinidad with Chicago, Kansas City, and Los Angeles. BNSF has direct control over 33 intermodal hubs and 23 automotive distribution facilities in the United States. BNSF also serves a major automobile distribution center just south of Denver, where new automobiles are delivered for sale throughout the Mountain and High Plains states. In 2015, BNSF invested approximately \$141 million in Colorado for capacity expansion and maintenance. In 2016, BNSF invested approximately \$100 million in its network in Colorado and approximately \$4.3 billion in capital expansion and maintenance across its system. In addition to maintaining and expanding its core network and related assets, BNSF acquired new locomotives, freight cars, and other equipment, continued implementation of PTC, and invested in expansion and efficiency projects to enhance productivity and velocity.

Commodities and Markets

As a national leader in intermodal transportation (truck trailers and containers moved by rail), BNSF delivers a variety of consumer products, packaged goods, paper products, clothes, appliances, electronics, and automobiles to Colorado retailers and businesses. Rail services also support development of the Denver/Julesburg Basin/Niobrara shale deposits in northern Colorado by moving fracking sand, pipe, and other oilfield inputs and equipment to logistics facilities and to ship Colorado-origin crude oil to markets throughout the United States.

BNSF also hauls more beer than any other railroad. BNSF hauls lumber and building materials from around the country to meet construction demand in Colorado and hauls fertilizer and farm inputs to Colorado to support agricultural industries. BNSF hauls Powder River Basin coal, Colorado's largest commodity by weight, from Wyoming and Montana to and through Colorado to locations across the country. BNSF's 2016 top originating commodities by unit volume from Colorado included industrial products, consumer products, agricultural products, and coal. BNSF's top 2016 terminating commodities by unit volume into Colorado included coal, consumer products, industrial products, and agricultural products. Since 2014, BNSF has been instrumental in locating 12 new or expanded facilities in Colorado, creating more than 100 jobs, and creating more than \$30 million in investments. Projects include CHS, Inc. in Holyoke, the Plains Marketing, LP crude oil facility in Tampa (in Weld County), and GP Aggregates in Lamar. BNSF employs 1,575 workers in Colorado and 41,000 employees nationwide. BNSF had intrastate gross operating revenues of \$24.5 million in Colorado in 2016. In 2016, BNSF originated 112,770 carloads, highway trailers, and containers; terminated 211,477 carloads, highway trailers, and containers in Colorado; and transported 632,119 carloads within the state.

Union Pacific Railroad

Union Pacific (UP) is a Class I railroad operating in Colorado for more than a century, dating back to initial connections to the Transcontinental Railroad. Today, UP's network covers 23 states in the western two-thirds of the country and serves many of the fastest growing U.S. population centers. UP employs 1,208 individuals in Colorado and nearly 43,000 nationwide. UP is headquartered in Omaha, Nebraska, and serves more than 7,000 communities across the United States.

Ownership and History

UP was incorporated under the Pacific Railroad Act of 1862. UP's presence in Colorado dates back to 1867, when track was laid across the northeastern tip of the state as the transcontinental railroad progressed across the country. The Denver Pacific rail spur, connecting Denver to the transcontinental rail line at Cheyenne, Wyoming, in 1870, became part of the UP shortly thereafter. UP achieved its size by purchasing several other railroads, notably the Missouri Pacific, Chicago and North Western, Western Pacific, Missouri-Kansas-Texas, and the Southern Pacific (including Colorado-based Denver & Rio Grande Western). These acquisitions more than doubled UP's route miles, provided connections to the ports of San Francisco and Oakland, and provided UP access to Texas, Oklahoma, Minnesota, Colorado, and other major markets.

Infrastructure and Connections

UP operates a major network of east-west and north-south lines on 1,503 route miles of track in Colorado. Amtrak provides passenger service over the UP line west of Denver, connecting Denver with California on the California Zephyr route. UP owns 26 percent of Ferrocarril Mexicano, a Mexican railroad with a track network of more than 5,000 miles, covering more than 70 percent of Mexico. UP currently owns more than 32,100 route miles of track and has more than 50,000 miles of track when passing track, switching lines, yards lines, and other main lines are included. In Colorado, UP operates 1 intermodal and 7 transload facilities located in the Denver metropolitan area. UP has rail yards in Denver, Grand Junction, and Pueblo; an intermodal hub in Denver; and equipment maintenance shops in Denver, Pueblo, and Grand Junction. UP owns the Tennessee Pass Line between Pueblo and Dotsero, which remains out-of-service on most of the line, except for operations by the Rock and Rail Railroad short line and the Royal Gorge Route Railroad. UP has 8,500 locomotives across its network.

Commodities and Markets

In the State of Colorado, primary commodities handled by UP include grain, automobiles and trucks, consumer and manufactured goods, coal, and energy development products. UP also serves a major automobile distribution



center just north of Denver, where new automobiles are delivered for sale throughout the Mountain and High Plains states. From 2011 to 2015, UP's capital investment was more than \$322.7 million in Colorado. From 2006 to 2015, UP invested approximately \$33 billion in its overall network and operations. In 2015, UP originated 203,534 carloads and terminated 154,215 carloads in Colorado. In 2016, UP had gross operating revenues of \$56.8 million in Colorado. UP's 2015 top originating commodities by volume in Colorado included coal, intermodal-wholesale, crude oil, wheat, and consumer machinery. UP's top 2015 terminating commodities by volume in Colorado included coal, intermodal-wholesale, non-metallic minerals, assembled automobiles, and cement/miscellaneous minerals. Overall, in the United States in 2015, UP had gross operating revenues of \$21.8 billion, an increase of 22 percent since 2010. UP's business mix over its entire network includes agricultural products, automotive, chemicals, coal, industrial products, and intermodal. UP serves many of the fastest-growing U.S. population centers, operates from all major West Coast and Gulf Coast ports to eastern gateways, connects with Canada's rail systems, and is the only railroad serving all six major Mexico gateways.

Cimarron Valley Railroad

The Cimarron Valley Railroad (CVR) is a Class III railroad with a line operating between Springfield, Colorado, and Satanta, Kansas. CVR runs over the former Cimarron Valley and Manter Subdivisions of the former Atchison, Topeka and Santa Fe Railroad (now BNSF) tracks in Oklahoma, Colorado, and Kansas. CVR runs southwest from Dodge City, Kansas, to Satanta, Kansas. The line divides into two routes at Satanta, with a southern route that runs to Boise City, Oklahoma, and a western route that extends to Springfield, Colorado.

Ownership and History

CVR, originally constructed in 1912, began operating after the line was purchased from Burlington Northern Santa Fe Railroad in February 1996. CVR is a subsidiary of the Western Group, located in Ogden, Utah. The Western Group owns four other railroads, a railroad construction company, and a rail services company. The line previously extended southwest of Springfield to Pritchett, Colorado, though BNSF abandoned this section of the line and removed the switch to connect to the BNSF Boise City Subdivision and the rail. Between 2006 and 2009, the CVR was at risk of abandonment but was saved by establishing a P3 among KDOT, local counties, and economic development interests. In late 2009, KDOT and partners began planning to renovate and upgrade the line. In 2011 brush fires in Haskell County, Kansas, damaged the CVR line. CVR completed repairs to the affected structures in 2012.

Infrastructure and Connections

CVR operates on a total of 256 route miles of track through Kansas, Colorado, and Oklahoma. In Colorado, the CVR operates on approximately 32 miles of track, or around 13 percent of the railroad's 242 total route miles. The line in Colorado runs from the Kansas border to Vilas, Colorado, in Baca County. CVR operates 7 locomotives with additional trains deployed during grain season to accommodate the harvest. There are 17 public and 18 private at-grade crossings on the CVR in Colorado. There are 5 grain elevators along the CVR, with 3 in the Town of Walsh and 2 in the Town of Vilas. The CVR interchanges with BNSF at Springfield, Colorado.

Commodities and Markets

CVR hauls primarily agricultural commodities (such as wheat, corn, and milo), along with sand, cement, poles, pipe, and fertilizers. CVR in Colorado hauls primarily agricultural products. In 2016, the CVR had \$5 million in interstate revenues, none of which was reported in Colorado.





Colorado & Wyoming Railway

The Colorado & Wyoming Railway Company (CW) is in Pueblo, Colorado, and operates a 5-mile-long switching line. The CW has approximately 100 employees who service several companies in the Minnequa Industrial area of Pueblo. The CW is a wholly owned subsidiary of the Rocky Mountain Steel Mills Division, which is a unit of EVRAZ Oregon Steel Mills.

Ownership and History

Founded in 1899, CW served as a subsidiary company of the Colorado Fuel and Iron Company (CF&I). Its primary function was to haul loads of minerals, and for a short time as a passenger line, from the mining districts to the Pueblo steelworks. It also serviced the mill yard by moving heavy loads of steel products from one area to another. Historically, CW served three non-contiguous divisions: the Northern Division near Sunrise, Wyoming, where the company operated its large iron ore mine; the Middle Division at the Pueblo steel mill site; and the Southern Division, mainly servicing Las Animas and Huerfano counties. At its peak, the three divisions totaled 116 route miles of track. At Sunrise, Wyoming, the iron ore was hauled from the mine 5 miles away to Hartville, Wyoming, and later to Guernsey, Wyoming, where the rail line connected with other railroads, mainly the Colorado & Southern and Chicago, Burlington & Quincy, later both part of Burlington Northern. Iron was then brought to the steelworks at Pueblo on these lines. The Middle Division, which was by far the largest, operated within CF&I's Pueblo plant. This division handled raw materials, scrap, and other shipments coming into the plant and hauled finished products to the connecting railroads for shipment to customers. The Southern Division, built from 1900 to 1908, originated mainly coal and coke for delivery on connecting railroads to the steelworks.

Infrastructure and Connections

CW operates 10 locomotives, 3 of which are load haul and 7 of which are switchers. CW's Middle Division connects with BNSF's Spanish Peaks Subdivision and UP's Walsenburg Subdivision.

Commodities and Markets

Clients served locally include EVRAZ Rocky Mountain Steel Mills, Xcel Energy, Nortrak, and Progress Rail Services. EVRAZ Pueblo produces steel products, including rail, seamless pipe, rod, and coiled reinforcing bar hauled by CW. CW supports Xcel Energy's operations at the Comanche Generating Station, the largest power plant in Colorado. Nortrak designs and manufactures trackwork and associated products for Class I railroads, mass transit systems, street car lines, and industrial applications. Progress Rail performs mobile rail welding services. In 2016, CW's operating revenues were \$12.4 million, and intrastate income was approximately \$4 million. CW moved approximately 1.05 million tons and 2.37 million ton-miles in 2016.

Denver Rock Island Railroad

The Denver Rock Island Railroad (DRIR), a privately owned and operated Class III railroad in Denver and Commerce City, operates three terminal switching yards at the Silver Yard, North Washington Industrial Yard, and Stock Yard Lead. DRIR provides first and last mile connections between industries and the national railroad network. The UP and BNSF deliver cars to interchanges where the DRIR takes possession of the rail cars and delivers them to customers. DRIR employs approximately 23 people in Colorado.

Ownership and History

In 1993, the Denver Terminal Railroad Company began operating the line as the DRIR. In 2005, DRIR agreed to an exchange of rail lines with UP. Under the exchange agreement, UP acquired the Sandown-Belt Junction line from DRIR in exchange for lines at the Stock Yard Lead and North Washington Industrial Yard. DRIR operates two lines





at the National Western Complex: the River Spur, which runs along the South Platte River, and the Center Spur, which runs along the west side of the stockyards, both of which date back to the early 1900s. The two lines currently carry two trains per day in each direction and switching movements for local businesses. The National Western Stock Show owns the ground under the tracks along the River Spur and along Center Spur adjacent to National Western Drive. The DRIR has exclusive rights to use the land for railroad purposes. The City and County of Denver applied for but was not awarded a FASTLANE grant for 2017 to fund a portion of the redevelopment that would include relocation of DRIR's River Spur in the same corridor as the existing Center Spur, rehabilitation of the Center Spur track, relocation of the DRIR storage facility, and construction of a rail bridge/pedestrian underpass along the newly consolidated corridor.

Infrastructure and Connections

DRIR owns 6.2 miles of switching track in Denver and operates on 27 miles of industry track. This includes 4 miles of former Chicago, Rock Island and Pacific Railroad, of which UP owns 3.2 miles and DRIR has operating rights to serve the shippers. DRIR owns and operates two former UP industrial switch areas known as the Stock Yard Lead and North Washington Industrial Yard. DRIR has a third yard, Silver Yard, located west of Quebec Street in Commerce City and Denver. While DRIR has connections with both UP and BNSF, its only freight interchange point with BNSF is at the north end of the Globeville yards just north of I-70 in the National Western Complex. DRIR also has a maintenance facility located along the River Spur just south of Race Court, also in the National Western Complex area. DRIR's track and structures are all 286k lb. weight capable.

Commodities and Markets

DRIR hauls a wide array of commodities, including barley, salt, roofing tar, building materials, and steel, and has several transload facilities. Mars Steel Corporation, which is also owned by the Mars family who also owns the DRIR, is one of the operators that transloads on the 30-acre Silver Yard site. Additional customers include Boise-Cascade, EVRAZ Rocky Mountain Steel, CMC, and Banner Rebar. DRIR has been unaffected by the fluctuations in coal and petroleum traffic in Colorado and has seen a steady increase in freight traffic over the last 5 years. DRIR is surrounded by urban development on all sides, limiting their future growth potential unless they can acquire additional properties. The expansion of the National Western Complex will result in additional at-grade crossings of the DRIR and downsizing track footage. The DRIR moved 1.06 million tons and 27.63 million ton-miles in 2016 with intrastate operating freight revenues of approximately \$2.09 million and intrastate net income of \$1.56 million.

Great Western Railway of Colorado

The Great Western Railway of Colorado (GWR) operates 80 route miles of track in the northern Colorado Front Range, including interchanges with BNSF and UP. GWR routes consist of a line from Loveland to Johnstown, where it splits to Milliken and Longmont. South of Windsor, the line splits to go to the Great Western Industrial Park, Greeley, and Fort Collins. The Great Western Industrial Park, serviced by the GWR, is a 3,000-acre master planned development that is also Colorado's largest Foreign-Trade Zone and is located within the Weld County Enterprise Zone.

Ownership and History

GWR was founded in 1901 to serve the Great Western Sugar Company and other sugar, beet, and molasses companies in Colorado. It also operated passenger services from 1917 to 1926. GWR served the Great Western Sugar Company out of Longmont until 1977 when trucks took over this service and sugar beets were phased out in favor of corn-based sweeteners. All GWR's track remains in place, except the Windsor to Eaton line that was



abandoned in 2004 and is being converted to a rail trail. The company, acquired from Great Western Sugar by BROE Group in June 1986, has been managed by OmniTRAX of Denver since 1991.

Infrastructure and Connections

GWR has three interchanges with BNSF (Fort Collins, Longmont, and Loveland) and four with UP (Fort Collins, Kelim, Greeley, and Milliken). Since BROE's purchase of GWR in 1986, capacity has grown from approximately 500 carloads annually to more than 36,000 loads as of 2016. GWR has five locomotives, one caboose, one passenger car, and six freight cars.

Currently, none of the former Great Western Sugar Company tracks have 286k lb. capable track, which includes all lines south of the Fort Collins to Greeley segment. In 2015, GWR invested \$14 million in track, signal and crossings improvements to their Windsor to Greeley line, which runs from State Highway 257 to 8th Street in Greeley. These improvements were an effort to mitigate increased train traffic through the Town of Windsor from the Great Western Industrial Park. Previously, three to six trains traveled through Windsor daily. GWR's improvements rerouted train traffic to the east of the Town of Windsor and included the replacement of 8,700 railroad ties on 10.2 miles of track, new ballast, and the addition of three new sidings for storage to help prevent congestion. The project also included 136-pound welded-rail track, replacement of 13 public grade crossings, and the addition of lights and gates at several grade crossings. Improvements to the line were coupled with the creation of a quiet zone through the Town of Windsor, funded by a \$3.3 million TIGER V grant that included improvements to 13 at-grade crossings and was completed in December 2016.

Commodities and Markets

GWR has expanded service to include customers in the Great Western Industrial Park, including Vestas, Carestream, Front Range Energy, Halliburton, Hexcel, Eastman Kodak, Cargill, Owens-Illinois, Universal Forest Products, Wedron Silica, Anheuser-Busch, and Schlumberger. Commodities transported include agricultural products, paper, plastics, sand, forest products, brewing grains, beer, wind generator blades, medical equipment, oil and gas commodities, industrial equipment, and other miscellaneous products. GWR offers rail-to-truck and truck-to-rail transloading services, including dry bulk, lumber, steel plate, coil, pipes, plastics, and construction products. GWR moved 4.8 million tons on 74,876 freight train miles in 2015 with intrastate operating revenues of \$6.4 million and intrastate net income of \$5.6 million.

Kansas and Oklahoma Railroad

The Kansas and Oklahoma Railroad (KO) is one of the single largest short line railroads by mileage in the industry. Though KO owns only 3 route miles of track in Colorado, it owns 904 route miles of track overall. In Colorado, the KO interchanges with the Colorado Pacific Railroad's Towner Line. The line runs on the KO's Hoisington Subdivision between Healy, Kansas, in the east to Towner, Colorado, at the westernmost edge of KO's owned lines.

Ownership and History

KO began operations in July 2001 after acquiring approximately 678 route miles of rail lines from the Central Kansas Railway (CKR). KO also acquired by assignment from CKR the lease of approximately 225 miles of rail lines and incidental trackage rights over segments of rail lines owned by UP and BNSF. KO, headquartered in Wichita, Kansas, is owned by Watco, a transportation company based in Pittsburg, Kansas.

Infrastructure and Connections

KO has interchanges with both BNSF and UP in Kansas and interchanges with the Colorado Pacific Railroad in Towner, Colorado. The KO has a rail-to-truck transload facility in Brighton, Colorado. Bartlett Grain serves as a transload facility and grain elevator along the Towner Line in Colorado. KO lines in Colorado between milepost 746.6 and milepost 743.6 consist of 136 lb. bolted rail, which is capable of 286k lb. loads.

In 2018, KCVN LLC, and its wholly owned subsidiary Colorado Pacific Railroad, purchased the Towner Line in Colorado from Victoria & Southern Railway. Colorado Pacific intends to lease the Towner Line and its related track and facilities to KO to operate. KO intends to haul wheat and other agricultural commodities on the Towner Line in the future.

Commodities and Markets

KO carries more than 50,000 carloads annually across their lines in Kansas. KO carries diverse agricultural commodities, such as grain, grain products, and industrial products, including chemicals, fertilizers, and paper. KO traffic volumes have grown over each of the past three years and employment continues to trend upward. KO is looking to expand operations onto the Towner Line. KO had no operating revenues in Colorado and had a net loss of \$1.16 million on \$19.9 million of freight revenues overall in 2016.

Kyle Railroad Company

The Kyle Railroad Company (KYLE) is a short line railroad line based in Phillipsburg, Kansas, that operates 550 route miles of track, 80 of which are in Colorado. The KYLE runs from northcentral Kansas into eastern Colorado, terminating at Limon. A portion of the KYLE in Colorado consists of former Chicago Rock Island & Pacific Railroad main line from Chicago to Denver.

Ownership and History

KYLE began operations in February 1982 for the Mid-States Port Authority by the Willis B. Kyle Organization to service the northern Kansas harvest season. During its first year of operation, KYLE yielded nearly 8,000 carloads. Ten years later, the line was generating more than 20,000 carloads per year. The initial KYLE railroad holding company consisted of several railroad properties, including the San Diego and Arizona Eastern Railway; the Oregon, Pacific and Eastern Railway; the C&TSRR; and the Pend Oreille Valley Railroad. In 1997, StatesRail of Dallas, Texas, acquired the KYLE. StatesRail operations were sold to RailAmerica in January 2002. Genesee & Wyoming took over ownership of KYLE when it acquired RailAmerica in 2012.

Infrastructure and Connections

KYLE owns 80 route miles of line in Colorado. KYLE has interchanges with BNSF in Courtland and Concordia, Kansas, and interchanges with UP in Limon, Colorado. On its overall trackage, KYLE hauled more than 500,000 tons in 2015, consisting of 360,000 ton-miles. The weight of rail from milepost 441 to milepost 530 is 100 lbs. Currently, more than 15 percent of the line in Colorado has 10 mph speed restrictions, and none of the track and bridge structures in Colorado are 286k lb. load capable. The Stratton Equity Coop serves as a transload facility and grain elevator for KYLE in Stratton, Colorado.

Commodities and Markets

KYLE serves as an important link between the U.S. Wheat Belt and national markets. The railroad hauls agricultural commodities, including milo, corn, and sunflower seeds, as well as fertilizer, sunflower oil, roofing products, and construction materials. In Colorado, KYLE hauls predominantly agricultural commodities, mostly wheat and corn. Major customers include ADM, Frontier AG, Scoular Grain, and AgMark. KYLE has experienced



growth in grain traffic each year for the past five years and now runs grain shuttle loader operations. In 2015, KYLE hauled 506,000 tons and 43.7 million ton-miles on their tracks. KYLE had 2015 freight revenues totaling \$23.5 million, with a net income of \$12.4 million, including \$265,000 in revenue and \$116,000 in net income in Colorado.

Nebraska Kansas & Colorado Railway

The Nebraska, Kansas & Colorado Railway (NKCR) owns and operates approximately 559 route miles of track in southwestern Nebraska, northwestern Kansas, and northeastern Colorado. In Colorado, NKCR's tracks extend from Sterling, Colorado, east to the Nebraska border near Venango, Nebraska.

Ownership and History

What is now the NKCR was built as the Colorado & Wyoming Railroad (not to be confused with the current short line of the same name) from the Nebraska-Colorado state line through Sterling to the Colorado-Wyoming state line southeast of Cheyenne and opened in 1887. From the beginning, it was operated as part of the Chicago, Burlington & Quincy Railroad, which became the Burlington Northern (BN) in 1970 and BNSF in 1996. NKCR, formerly the Nebraska Kansas and Colorado RailNet, is managed by OmniTRAX and began operations in December 1996. NKCR is headquartered in Grant, Nebraska. NKCR operations were spun off from BNSF in 1996 as part of a major line restructuring and outsourcing effort by BNSF. NKCR was formerly a Class II railroad, hauling 40,000 carloads per year, but only generated 16,000 carloads in 2016, now making it a Class III railroad. NKCR has 23 employees in Grant, Nebraska, and 10 in Colorado.

Infrastructure and Connections

NKCR owns 68 route miles of track in Colorado between milepost 165 to milepost 225 on the Wallace Subdivision and interchanges with BNSF in Sterling, Colorado. NKCR also interchanges with BNSF in Holdrege, McCook, and Oxford Junction, Nebraska. NKCR recently made considerable track improvements in conjunction with upgrade investments by the owners of grain elevators at Venango, Nebraska; Loomis, Nebraska; and Holyoke, Colorado, each of which now loads 110-car shuttle trains. NKCR track was relaid with welded rail in the 1980s between Sterling, Colorado, to Sutherland, Nebraska, to better handle the Nebraska Public Power District's coal trains to and from the Gerald Gentleman Power Plant near Sutherland, Nebraska. Grain elevators operating along the NKCR in Colorado include the Grainland Cooperatives in Holyoke, Haxtun, and Fleming, Colorado, and the Paoli Farmers Cooperative in Paoli, Colorado. In 2015, NKCR filed abandonment applications for 57 route miles of track near Orleans, Nebraska, and filed to discontinue overhead trackage rights over 17.7-miles of railroad owned by KYLE between Almena, Nebraska, and Oronoque Junction, Kansas. The STB made and approved the abandonment decision on November 17, 2016.

Commodities and Markets

NKCR carries a diverse mix of traffic and has attracted high throughput grain elevators to its lines. Top commodities by volume include grains, chemicals, farm and food, waste and scrap, and coal. In addition to grain, NKCR ships liquid fertilizer to shuttle loaders at Maywood, Nebraska; Imperial, Nebraska; and Holyoke, Colorado. Over the last 20 years, incentives have been provided to NKCR to truck grain to central elevators for shuttle loaders. NKCR had freight revenues of \$5.4 million in 2015, \$329,000 of which were in Colorado, and net income of \$1.6 million. NKCR hauled 2.84 million tons over 62,300 ton-miles in 2015.



Rock and Rail Railroad

Rock and Rail Railroad (RRRR) operates on tracks purchased from the BNSF and UP railroads as well as trackage rights. RRRR operates freight service on the former UP Tennessee Pass route between Parkdale, Colorado, and a connection with UP at Cañon City, Colorado. Overall, RRRR operates on 14.75 miles of owned track and 40 miles of trackage rights from the UP, from Parkdale Quarry into the Drennan Industrial Park in Pueblo, Colorado. RRRR connects with both BNSF and UP in Pueblo.

Ownership and History

RRRR is a wholly owned subsidiary of Martin Marietta Materials, Inc., a North Carolina company with its regional headquarters in Colorado. RRRR has been operating for over a decade as the primary common carrier between Parkdale, Cañon City, and Pueblo, Colorado. RRRR holds a 50 percent share in the rail line through the Royal Gorge through Royal Gorge Express (RGX), which purchased track running through the Royal Gorge from Cañon City west to Parkdale, Colorado, from UP in 1998. RGX's other owner, the Cañon City Royal Gorge Railroad (CCRG), operates a tourist passenger train running on the same track through the Royal Gorge. RRRR also owns the 3-mile loop track in Parkdale Quarry that connects to the main line RGX track at Parkdale.

Infrastructure and Connections

RRRR provides services under an interchange agreement with the BNSF and UP. Under the interchange agreement, RRRR is paid a fixed price per railcar interchanged between the BNSF and UP at Pueblo, Colorado, and the end customer. All the track operated by RRRR is 286k lb. load capable. Between Parkdale and Pueblo, track speeds are set at a maximum of 40 mph along 10 miles of the line.

Commodities and Markets

RRRR currently uses UP to distribute aggregates, while all non-aggregate business is distributed through BNSF. In 2008, business for car storage increased and has been increasing ever since, primarily the result of decreasing operations in the coal, oil, and gas industries that require surplus cars to be stored for potential future use. RRRR saw the demand for cement hauling decrease, dropping 30 percent in the past year. Martin Marietta Materials' purchase of RRR in 2015 resulted in an increase in aggregate rock hauling demand and expanded RRRR's business regionally. RRRR currently employs 5 workers. RRRR had freight revenues in Colorado of \$2.3 million in 2016, with a net income loss of \$432,000. RRRR hauled 609,000 tons over 51,800 ton-miles in 2016.

San Luis Central Railroad

The San Luis Central Railroad (SLC) owns and operates 12.2 route miles of freight rail trackage from a connection with the San Luis & Rio Grande Railroad (SLRG) at Sugar Junction in Monte Vista north to Center, Colorado. The SLC's shops and yard are located just north of US 160 near Sugar Junction. SLC is an agricultural line that serves growers throughout the San Luis Valley of Colorado.

Ownership and History

SLC was incorporated in 1913 and was initially founded to haul sugar beets from growers to an online processing mill. Sugar beet growing did not prove popular with local farmers, and the facility soon closed. SLC ran passenger service for a period that ended in 1937. Pea Vine Corp acquired the entire capital stock from the estate of the railroad's founder in 1969. Rail World, Inc. currently owns a controlling interest in SLC and is headquartered in Rosemont, Illinois. SLC has consistently employed a staff of seven employees over the past five years.

Infrastructure and Connections

SLC operates freight traffic through a connection with SLRG. SLC also has trackage rights on 1 mile of SLRG near Sugar Junction. SLC owns 2 locomotives and has 54 leased refrigerated boxcars. SLC's rail is over 104 years old and is 56-lb. rail. SLC's track area is not 286k lb. capable. SLC has 2 bridge structures, though the track, not the structures, is the factor limiting the speeds to 5 mph. Between 2007 and 2010, SLC replaced 1 mile of 56 lb. rail with 90 lb. rail, capable of somewhat heavier loads, but is still not 286k lb. capable.

Commodities and Markets

Primary customers include Smoke & Spuds, Schoenmann Produce, and Proximity Malt. Wheat, feed barley, and potatoes are outbound commodities, while inbound commodities include chemicals and fertilizers. Most raw potatoes originating on SLC are hauled on the Class I network to Texas, while dry potatoes are hauled east to Pennsylvania for dog food production. Cereal grains hauled by SLC are typically destined for Duluth, Minnesota, while feed grains are destined for California. Malt barley grown in the San Luis Valley and hauled by SLC is typically destined for Wisconsin. Overall rail traffic volume on SLC has decreased over the past decade, though the overall mix of commodities transported has remained mostly the same. Total SLC freight revenues for 2016 in Colorado were approximately \$620,000, and net income totaled \$196,000. SLC hauled 84,700 tons over 847,000 ton-miles in 2016.

San Luis & Rio Grande Railroad

SLRG runs west from a connection with UP at Walsenburg, Colorado, over the Sangre de Cristo Mountains at La Veta Pass, and into the San Luis Valley. At Alamosa, the railroad splits with a branch extending south to Antonito, Colorado, just north of the New Mexico border, and northwest to South Fork. SLRG owns approximately 150 route miles of track, 126 miles of which are currently operated. SLRG also operates passenger scenic service from May through October over La Veta Pass, through the San Luis Valley. Rio Grande Scenic Railroad (RGSR) has offered scenic passenger service since 2006.

Ownership and History

The SLRG evolved from a complex history of early Colorado narrow gauge track development in southern Colorado. The oldest predecessor of SLRG was the Denver and Rio Grande Railroad (D&RG), which was chartered in 1870. The D&RG established the initial narrow-gauge track over La Veta Pass, reaching Alamosa in 1878. The D&RG converted the La Veta Pass line to standard gauge around 1900, and later the line to Antonito was also converted to standard gauge. In 1908, the D&RG was consolidated with the Rio Grande Western to form the Denver and Rio Grande Western (DRGW). Narrow gauge rail remained on the line between Antonito and Alamosa until 1968. In 1988, the DRGW purchased the Southern Pacific Railroad (SP), which was followed by the UP purchase and merger with the SP in 1996. The SLRG began operations using lines radiating from Alamosa in 2003, when the UP sold the Walsenburg-to-Alamosa, Alamosa-to-Antonito, and Alamosa-to-Derrick (South Fork) lines to RailAmerica (RA). RA then sold the SLRG to Permian Basin Railways (PBR), a company formed by Iowa Pacific Holdings (IPH), in 2005. IPH was formed in March 2001 to acquire railroads and create rail-related businesses. The SLRG directly employs around 100 full-time and seasonal workers combined and estimates there are roughly 400 jobs that also rely on the SLRG in the San Luis Valley.

Infrastructure and Connections

The SLRG connects with the UP at Walsenburg, which BNSF also serves. By agreement SLRG is obligated to interchange its traffic with UP, although under certain conditions and with UP concurrence interchange with BNSF is available. This occurs most often with unit trains of storage cars. In addition to the UP connection, the

SLRG connects with the San Luis Central Railroad (SLC) at Monte Vista. All the SLRG bridge structures are 286k lb. capable. The SLRG at La Veta Pass is 9,242-feet above sea level, the highest freight rail line in North America.

Commodities and Markets

The primary commodities hauled by the SLRG are grain, minerals, specialty rock products, and produce. SLRG also handles substantial bridge traffic to and from the SLC. The 2008 recession hit the SLRG significantly; most of the SLRG's client base is the same as that before 2008, but their customers are simply shipping less. The SLRG has benefitted from the decrease in coal, oil, and gas demand, where empty cars from the Class I railroads are stored in SLRG's yard in Alamosa. The SLRG is continuing to build-out track for car storage and owns significant land for expansion. The greatest area of commodity growth for the SLRG is focused on forest products, as well as growth in existing customers and commodities. The SLRG hauled 765,000 tons over 81.4 miles in 2016.

Colorado Pacific Railroad

The KCVN LLC (KCVN) and its wholly owned subsidiary Colorado Pacific Railroad LLC (CPRR) is the current owner of the Towner Line, named after the Colorado town at the eastern terminus of the line. KCVN owns and oversees the operation of farmland in several western states. The company's assets include approximately 58,000 acres of land within Cheyenne, Kiowa, and Powers counties, Colorado. This acreage is all within 25 miles of the Towner Line and is primarily dedicated to the cultivation of dryland wheat. CPRR was formed in 2015 to acquire and oversee the resumption of freight operations over the Towner Line.

The Towner Line, built as the Pueblo & State Line in 1887, served as the western end of Missouri Pacific Railway's main line from St. Louis and Kansas City. Missouri Pacific was merged into UP in 1982. Following UP's merger with Southern Pacific in 1996, the Towner Line was threatened with abandonment as traffic was diverted to other lines. The Towner Line consists of approximately 122 route miles between milepost 747.5 near Towner, Colorado, on its eastern terminus, where it connects to track operated by the Kansas & Oklahoma Railroad (KO), and milepost 869.4 near NA Junction, Colorado and an interchange with track owned by the BNSF, on its western terminus.

Ownership and History

In 1998, the Towner Line was purchased by the State of Colorado and operated under lease by several short line operators until its sale to Victoria & Southern Railway (V&S) in 2011. The V&S is affiliated with A&K Railroad Materials, a scrap dealer whose primary business is buying rail lines and selling assets. The Towner Line was the subject of an administrative case before the STB beginning in 2014. Following the resolution of that case in 2017 and pending final sale of the Towner Line in 2018, the KCVN and the Colorado Pacific Railroad are seeking to restore the line for grain hauling operations.

In October 2014, KCVN, the Colorado Wheat Administrative Committee, the Colorado Association of Wheat Growers, and the Colorado Wheat Research Foundation filed a complaint with the STB, alleging that the V&S violated federal law by removing a portion of track and related assets from the western segment of the Towner Line without first seeking abandonment authority. In March 2016, KCVN and Colorado Pacific filed a feeder line application with the STB to acquire the Towner Line and 12 miles of related track and facilities from the V&S. KCVN & Colorado Pacific alleged that the V&S engaged in a systemic plan to drive traffic off the Towner Line with the aim of abandoning it and selling the line's rail assets. KCVN and Colorado Pacific Railroad asserted that V&S raised rates to a prohibitive level around 2011 and engaged in other behavior forcing traffic off the line rather than meeting its common carrier obligation and maintaining the line. KCVN and Colorado Pacific sought to acquire the Towner Line and its related track and facilities and to lease them to a connecting carrier, the KO, to operate. KCVN and Colorado Pacific Railroad assert that rehabilitating the Towner Line would cost an



additional \$3.5 million, and the total cost to restore service would be \$6 million. KCVN owns 58,000 acres of farmland primarily dedicated to dryland wheat within 25 miles of the Towner Line, which collectively are valued at approximately \$50 million.

In July 2017, the STB found that KCVN's application to purchase the Towner Line from V&S met the statutory criteria for a forced sale and that KCVN and Colorado Pacific are financially responsible and eligible to purchase the line. The STB requested that the parties engage in mediation to resolve the net liquidation value of the line to complete the sale. In December 2017, mediation was completed and an agreement for KCVN to purchase the line for \$10 million was approved by the STB.

Infrastructure and Connections

The line interchanges with BNSF and UP at NA Junction, Colorado, just east of Pueblo, and with the KO at Towner, Colorado. Most of the track making up the line is 112 lb. and 115 lb. jointed rail manufactured in the 1940s. Approximately 40 percent of track miles are 136 lb. continuous weld rail track manufactured in the 1970s. Several of the sidings contain much older 90 lb. and 85 lb. jointed rail, some of which may be up to 100 years old. Several grain elevator operations exist along the Towner Line, including Tallman Grain in Brandon, Colorado, and Bartlett Grain in Eads, Haswell, and Towner, Colorado.

Commodities and Markets

Commodities historically transported on the Towner Line consisted primarily of wheat and barley shipped from the Bartlett Grain Company and the Tempel Grain Company.

UTAH Railway

Ownership and History

The Utah Railway Company (UTAH) was incorporated in 1912. The railroad was founded to haul coal from company's mines to Provo, Utah. The Denver & Rio Grande operated the line until 1917 when UTAH began independent service. UTAH operated as a subsidiary of Mueller Industries, Inc. until it was sold to Genesee & Wyoming, Inc. in 2002.

Infrastructure and Connections

Today, the UTAH line extends 47 route miles, and with trackage rights over UP, spans 378 route miles from Ogden, Utah, to Grand Junction, Colorado. Just 32 miles of those trackage rights are in Colorado, between the Colorado/Utah state line and Grand Junction. UTAH connects with BNSF and UP at Grand Junction, Colorado, as well as Utah Railway Junction and Provo, Utah, and hauls coal, as well as brick and cement, building materials, chemicals and petroleum products. The railroad also operates as a switching agent for BNSF in the Salt Lake City, Provo, and Ogden areas.

UTAH is included among Colorado's 12 short line railroads, but activities and impact in Colorado are limited.

Deseret Power Railroad

Ownership and History

The Deseret Power (DPRW) is an electrified private railroad operating in northeastern Utah and northwestern Colorado. DPRW exists only to transport coal from the Deserado Coal Mine located northeast of Rangely,





Colorado, to the Bonanza Power Plant located northwest of Bonanza, Utah. The railroad began operation in 1984 as Deseret Western Railway owned by Western Fuels Utah (WFU). This joint company was owned by the Deseret Generation & Transmission Cooperative, which operated the Bonanza Power Plant, and by the Western Fuels Association. WFU operated the Deserado Mine and transported the produced coal to the power plant.

In 2001, Deseret Generation & Transmission Cooperative bought out the Western Fuels Association and changed the name of WFU into Blue Mountain Energy and changed the name of the railroad to its current designation.

Infrastructure and Connections

DPRW does not have any connection to the national rail network and does not have any signaling system. DPRW's total track is 35 route miles with 17 miles located in Utah and 18 miles in Colorado. Each end of the line has a balloon loop, and a siding is located halfway between the power plant and the mine. There are no grade crossings on the line. All roads use over- or underpasses at track crossings. As of 2015, operations were typically a 44-car train with 3 locomotives running twice a day.



APPENDIX D

SUMMARY OF SURVEY OUTREACH RESULTS

This 2018 Rail Plan focused on engaging private sector businesses and economic development organizations to gather information to help CDOT better illustrate connections between economic competitiveness and freight and passenger rail service. Outreach objectives included soliciting input on issues and needs, investment priorities, future demand, and comments on key plan elements.

CDOT developed a series of web-based surveys to gather input from various stakeholders across the state. These surveys addressed both multimodal freight issues and freight rail and passenger rail issues, needs, and priorities. Surveys were sponsored in partnership with statewide organizations and sent to member mailing lists and included in newsletters.

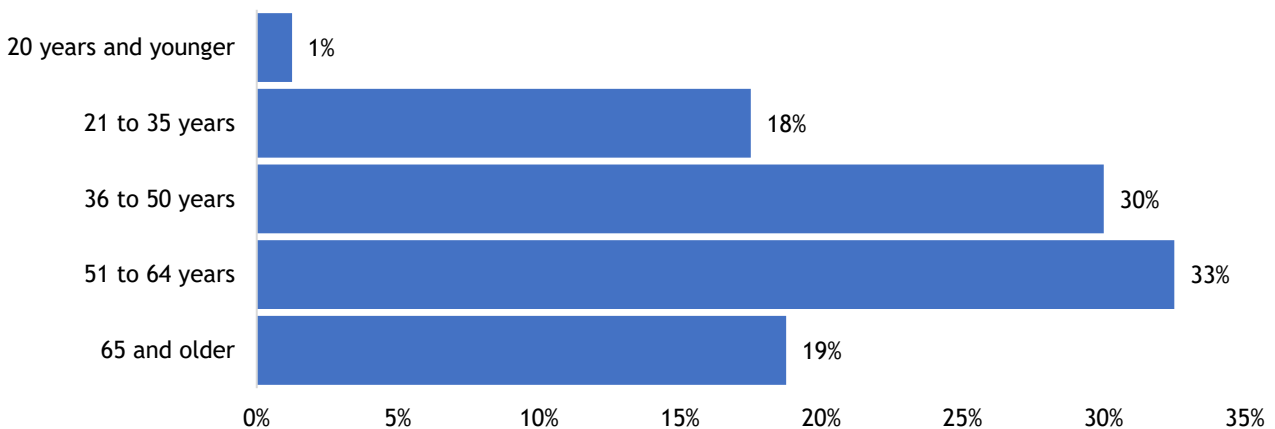
Survey efforts gathered responses from more than 705 respondents across Colorado. Respondents included businesses; regional, local, and private economic development agencies; chambers of commerce; state agencies; city and county governments; elected officials; and CDOT advisory committee members. The following map shows the distribution of survey responses across the state. Most respondents represented communities and businesses along the Front Range with additional respondents in nearly every region of the state.

The following summary includes responses from all surveys received by CDOT across public and industry outreach efforts.

Transportation and Colorado’s Traveling Public

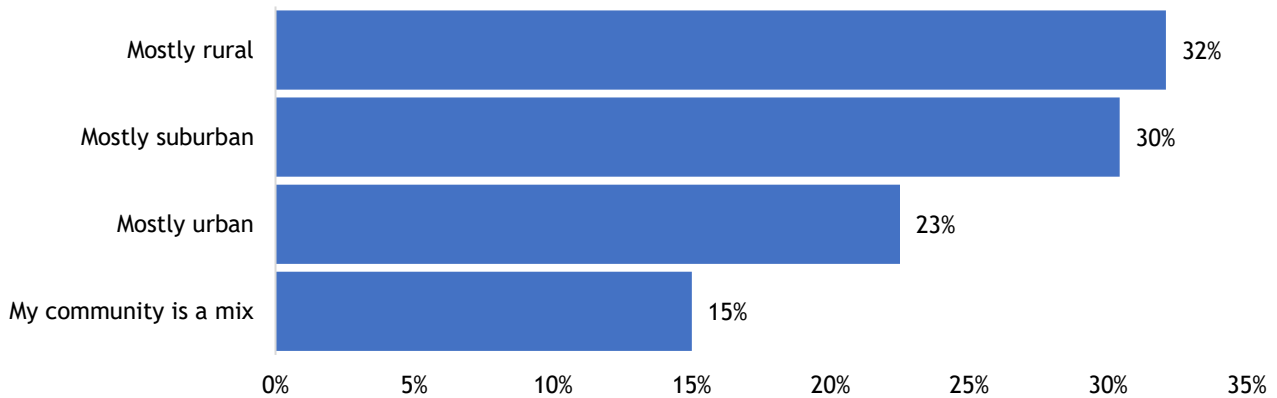
This online survey was distributed to CDOT’s public email list-serve of more than 30,000 email addresses and was posted on social media in May and June of 2017. This survey asked general questions about perceptions of rail traffic, public prioritization of goal areas, and use of passenger rail services in the past year. Overall, 247 survey responses were received.

1) What is your age?

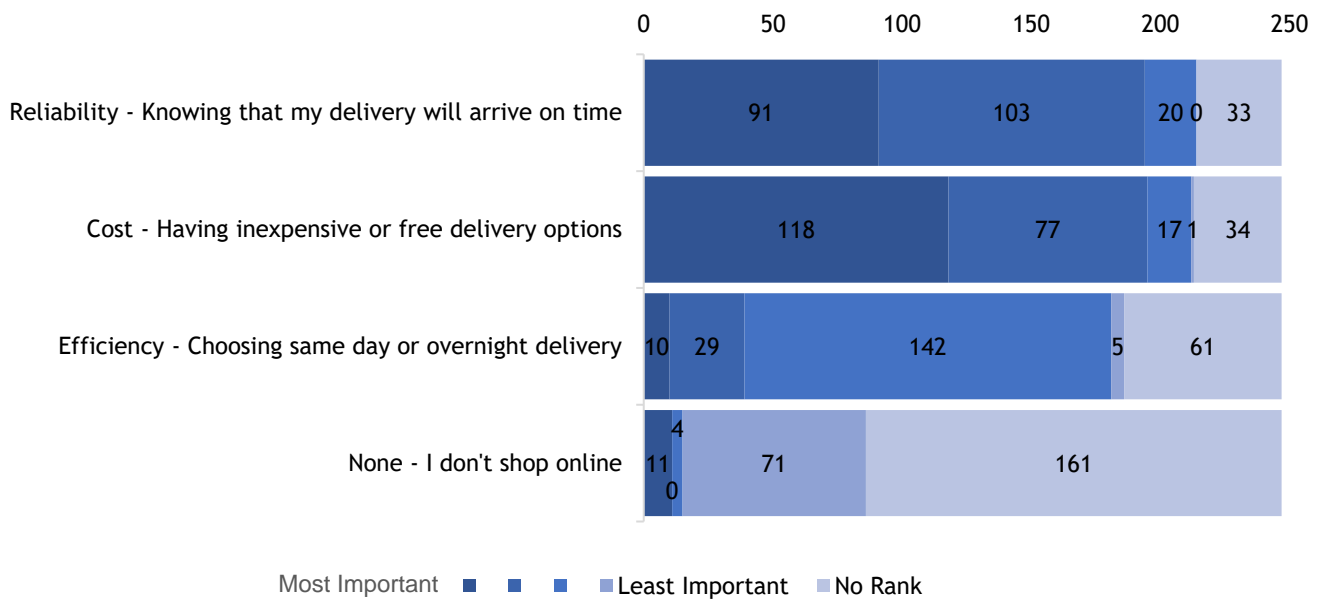




2) What best describes the area you live in?

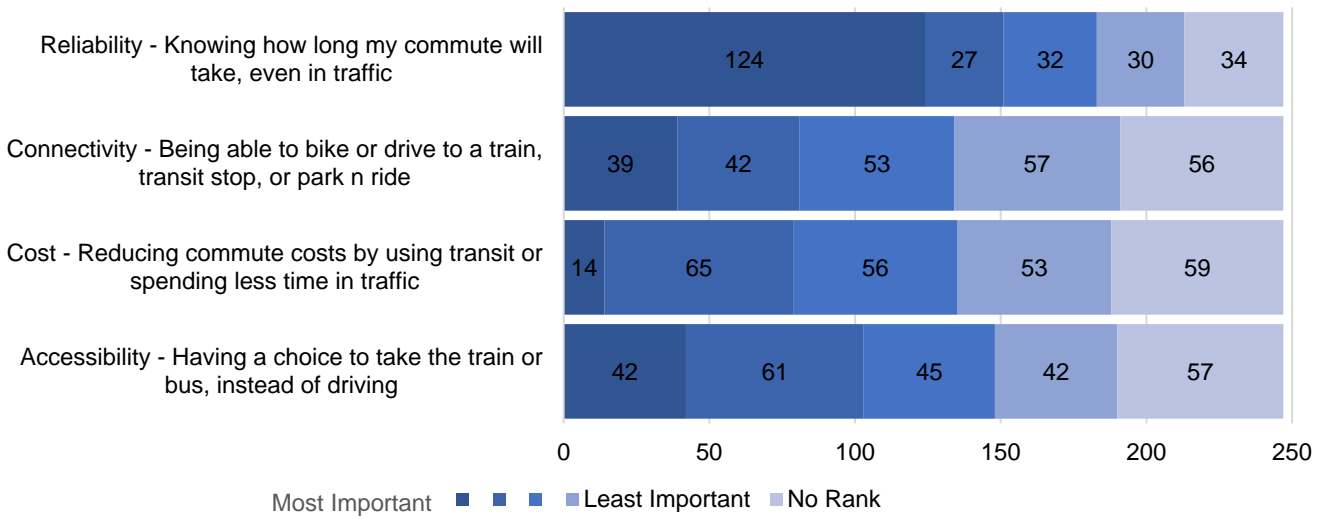


3) When you shop online, what are your expectations for receiving packages and products? Please rank from most important to least important.

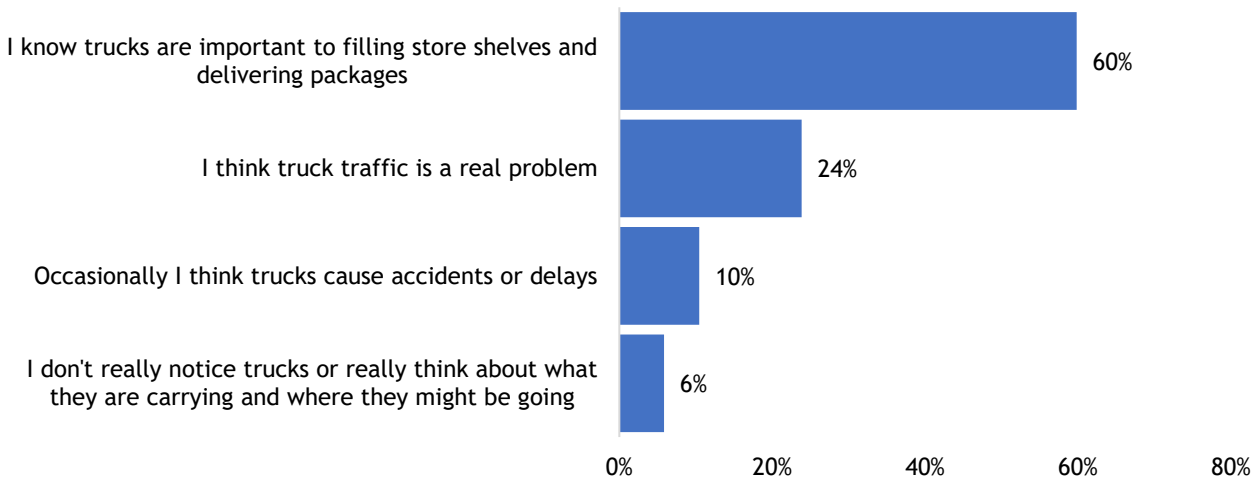




4) When commuting to your workplace, what are your expectations for getting to and from work? Please rank from most important to least important.

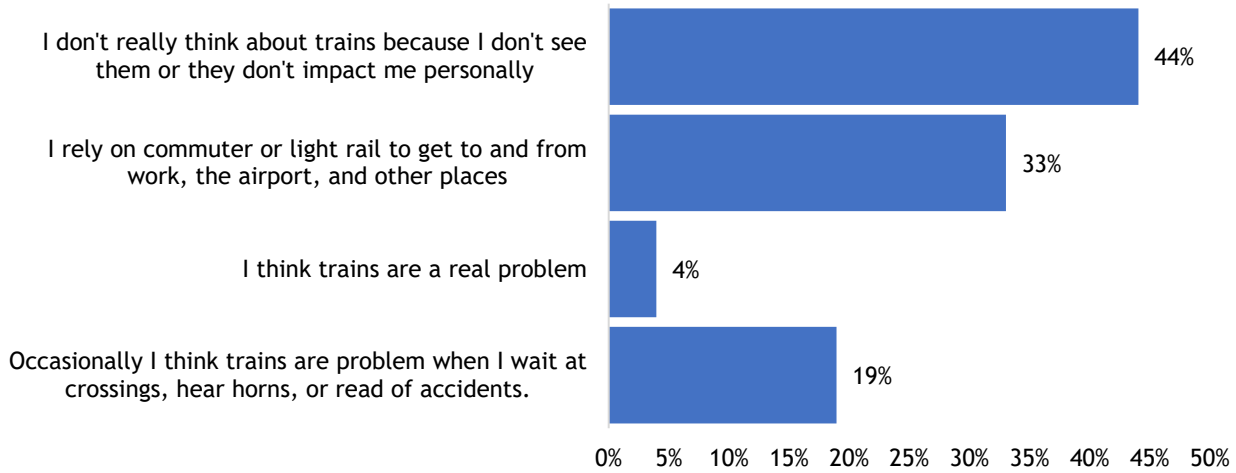


5) What do you think about trucks in Colorado? Select the option that best applies to you.

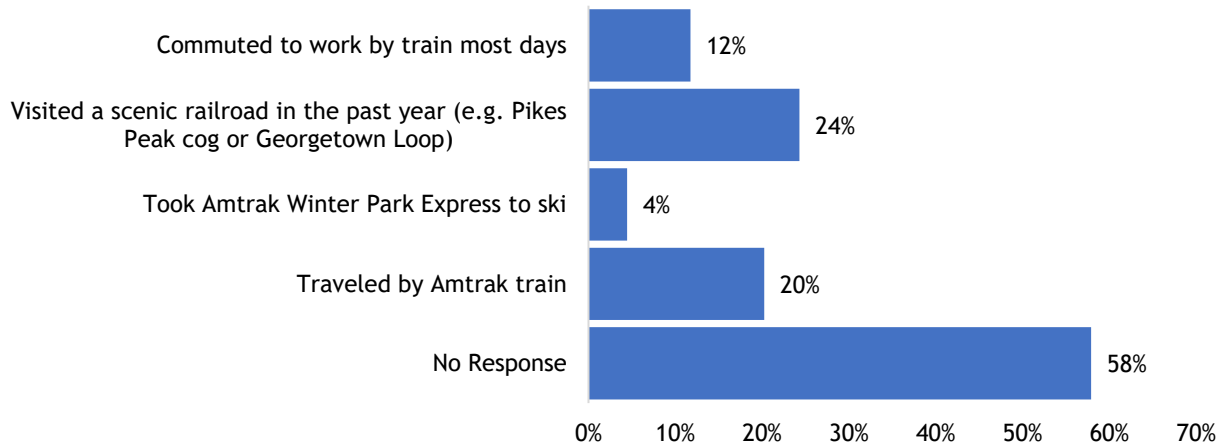




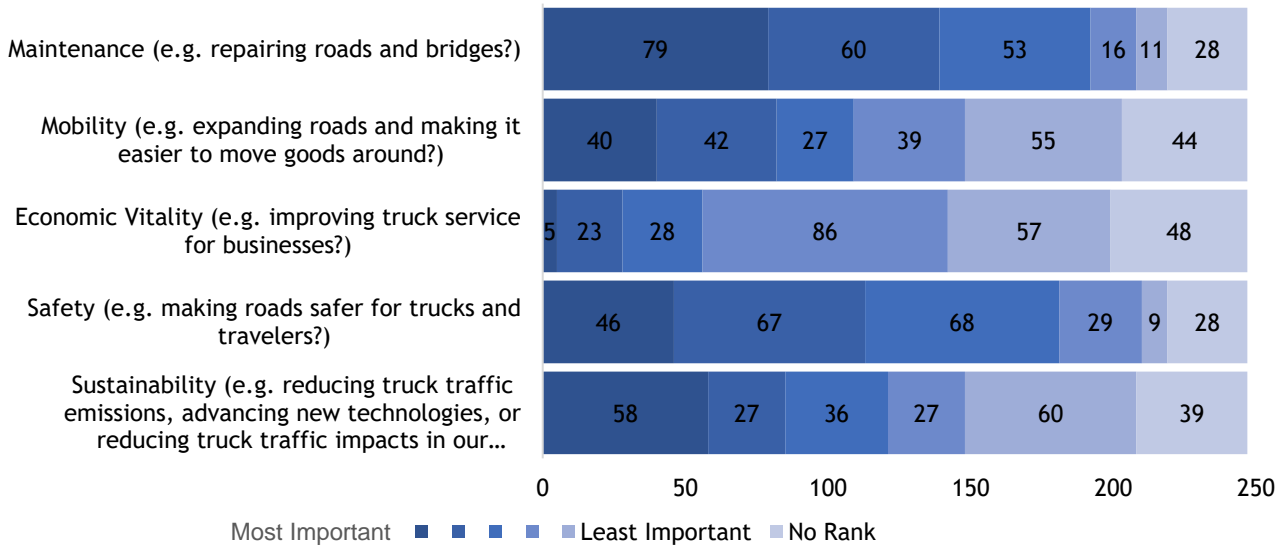
6) What do you think about trains in Colorado? Select the option that best applies to you.



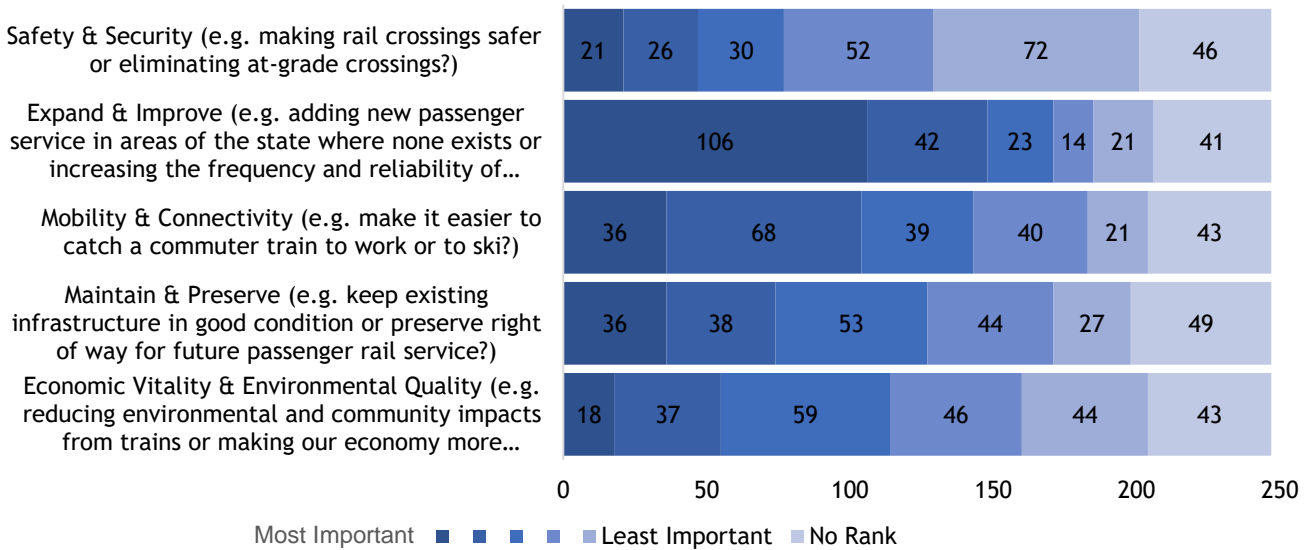
7) In the past year, have you ridden a passenger train in Colorado? Select all that apply.



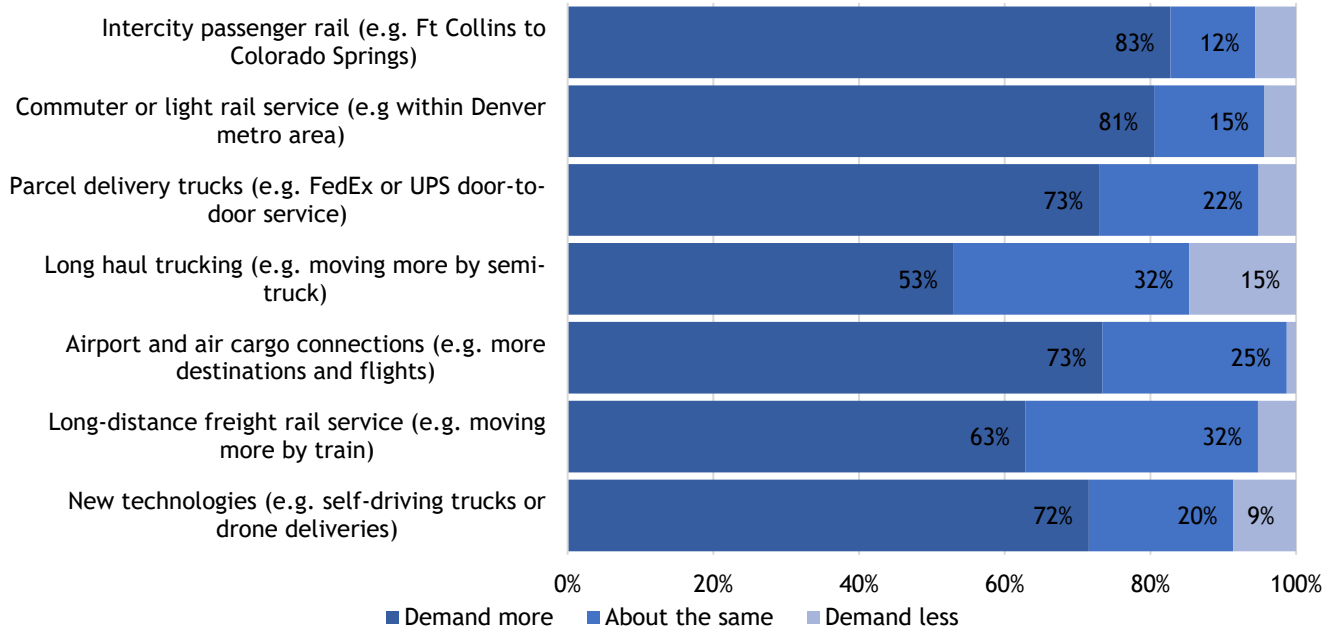
8) How should Colorado prioritize limited transportation dollars to make it easier for trucks to deliver products and packages? Please rank from most important to least important.



9) How should Colorado prioritize limited transportation dollars to make it easier for commuter or light rail trains to help people get around? Please rank from most important to least important.



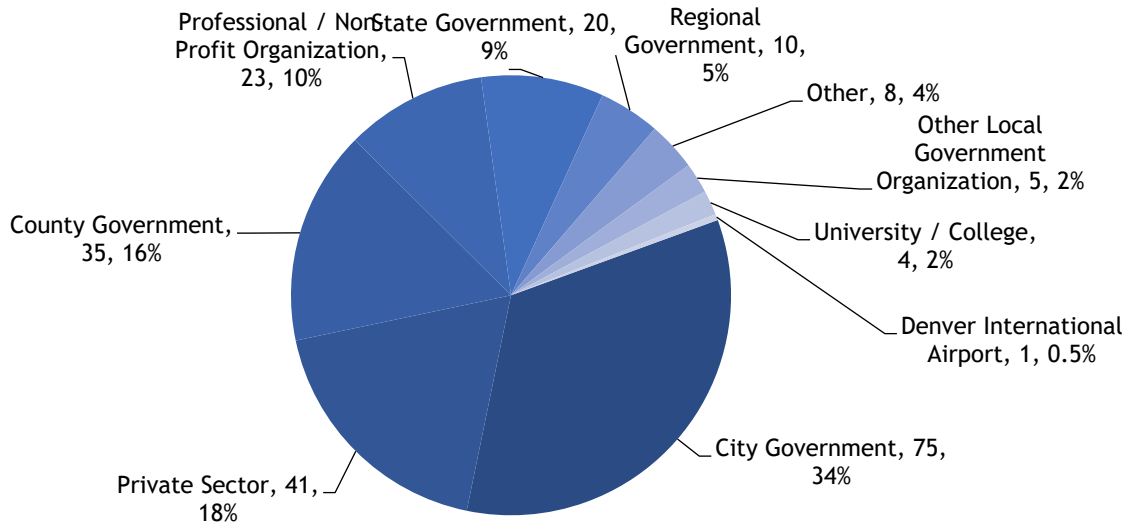
10) By 2030, Colorado’s population will grow by another 2.3 million residents and our economy will add 3 million more jobs. Thinking about the future, do you think businesses and residents will demand more from Colorado’s transportation infrastructure, demand less, or about the same?



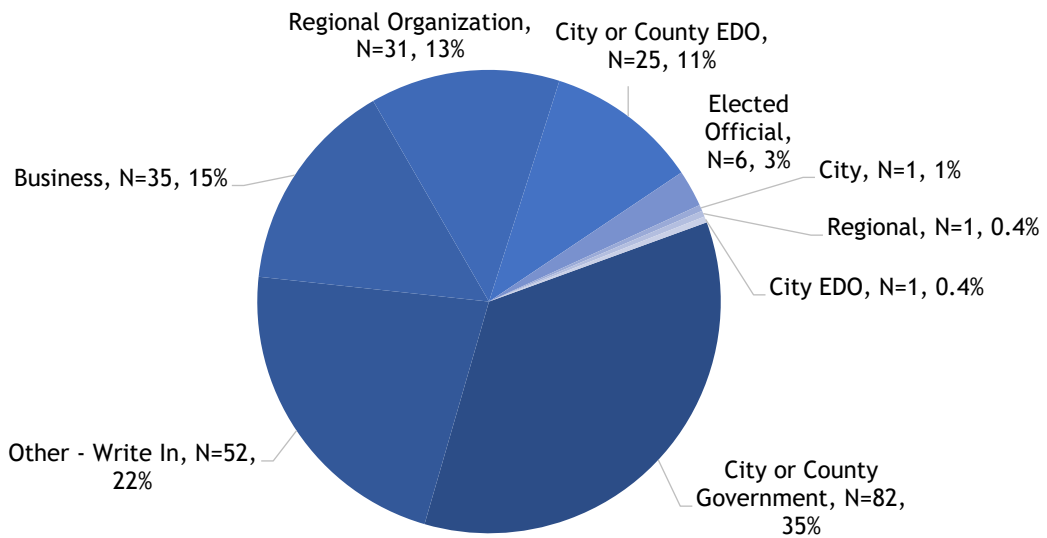
Transportation and Colorado's Economy

Sponsored by the Economic Development Council of Colorado and the Colorado OEDIT, CDOT engaged economic development agencies and businesses in transportation planning. Over 300 survey responses were received from public and private economic development organizations. The survey was released in April and May of 2017. Questions focused on identifying links between transportation and the economy, establishing investment priorities, highlighting issues and needs, identifying challenges and opportunities, and gauging future demand for freight and rail services. Overall 317 survey responses were received.

1) What organization or business do you represent?

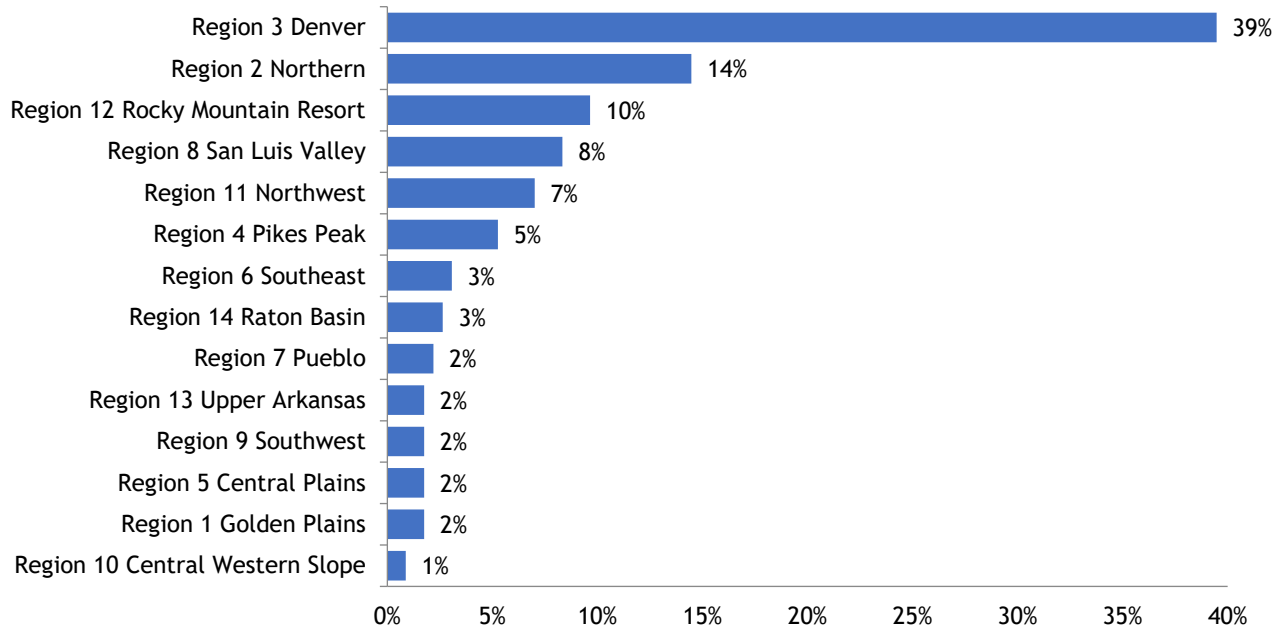


2) What type of organization or business do you represent?

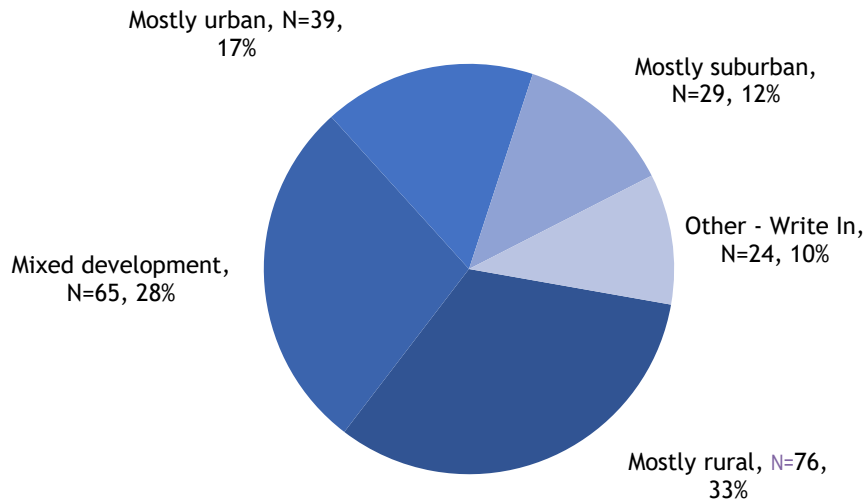




3) What Colorado Planning and Management Region do you primarily operate in?



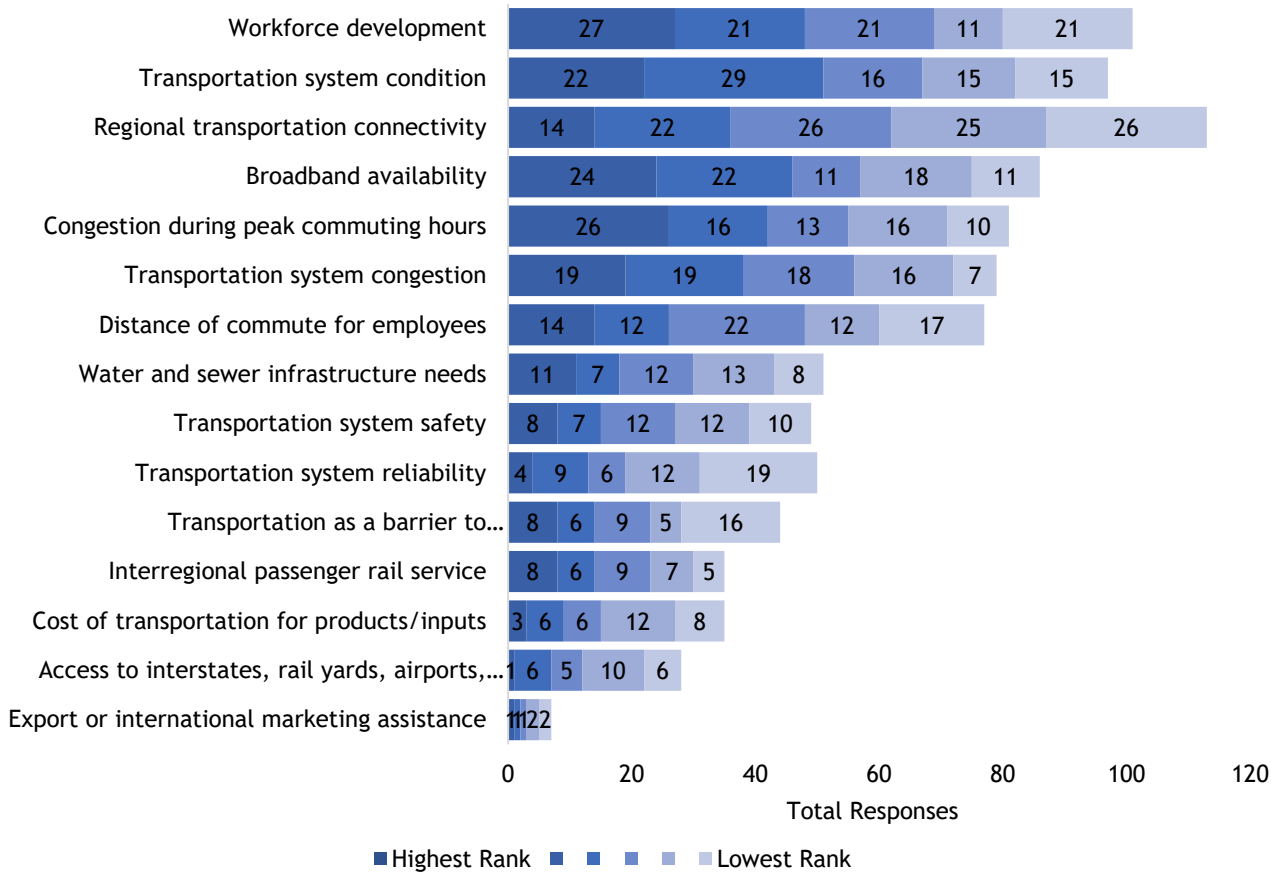
4) What best describes the community or region your organization represents?



4) Other – Write In (Duplicate answers combined)

- Responses
- All of the above
- All development levels
- Frontier, or more remote than rural
- Heavily used recreational corridor
- Mountain resort
- Pretty Rural with a Urban Center
- Residential rural
- Resort community
- Rural resort - Somewhere between rural and suburban.
- Rural with two large towns - Glenwood Springs and Rifle
- The SLV is a very dynamic area. (Region 8)
- We work for both urban and rural jurisdictions

5) What are some of the critical issues and needs you hear from businesses in your region? Please identify the top five issues facing your region today. Rank each issue below with 1 being the most important.





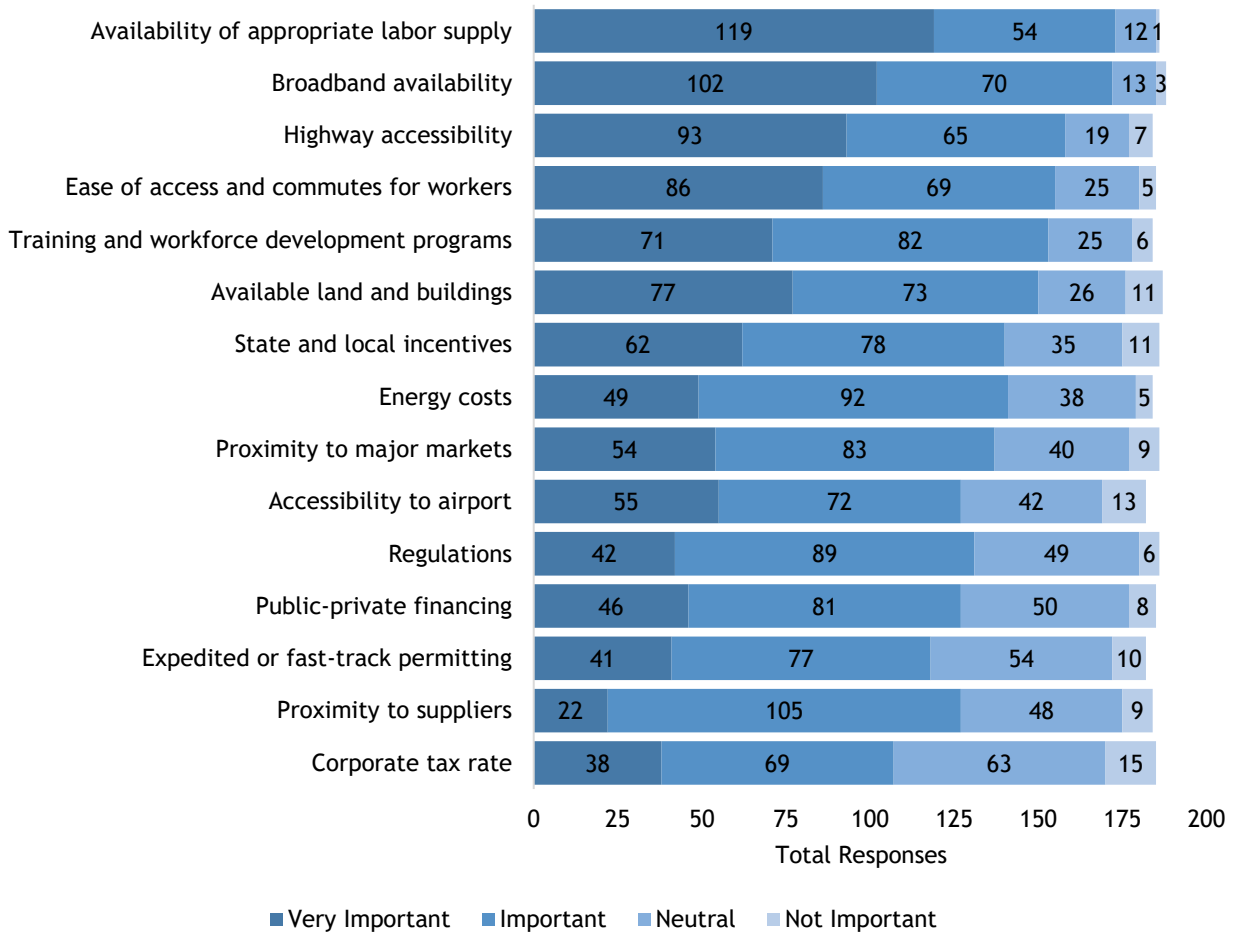
| Overall Rank | Item | Score | Total Respondents | Average Rank |
|--------------|---|-------|-------------------|--------------|
| 1 | Workforce development | 325 | 101 | 3.22 |
| 2 | Transportation system condition | 319 | 97 | 3.29 |
| 3 | Regional transportation connectivity | 312 | 113 | 2.76 |
| 4 | Broadband availability | 288 | 86 | 3.35 |
| 5 | Congestion during peak commuting hours | 275 | 81 | 3.40 |
| 6 | Transportation system congestion | 264 | 79 | 3.34 |
| 7 | Distance of commute for employees | 225 | 77 | 2.92 |
| 8 | Water and sewer infrastructure needs | 153 | 51 | 3.00 |
| 9 | Transportation system safety | 138 | 49 | 2.82 |
| 10 | Transportation system reliability | 117 | 50 | 2.34 |
| 11 | Transportation as a barrier to exports/manufacturing/sales growth | 117 | 44 | 2.66 |
| 12 | Interregional passenger rail service | 110 | 35 | 3.14 |
| 13 | Cost of transportation for products/inputs | 89 | 35 | 2.54 |
| 14 | Access to interstates, rail yards, airports, intermodal centers | 70 | 28 | 2.50 |
| 15 | Export or international marketing assistance | 18 | 7 | 2.57 |

5A) Regional Cross Tabulation: What are some of the critical issues and needs you hear from businesses in your region? Please identify the top five issues facing your region today. Rank each issue below with 1 being the most important. (Weighted Rank)

| Item | All Respondents | Front Range | | Everyone Else | |
|---|-----------------|-------------|-------------|---------------|-------------|
| | Rank | Rank | Rank Change | Rank | Rank Change |
| Workforce development | 1 | 3 | ▼-2 | 2 | ▶-1 |
| Transportation system condition | 2 | 5 | ▼-3 | 3 | ▶-1 |
| Regional transportation connectivity | 3 | 4 | ▶-1 | 4 | ▶-1 |
| Broadband availability | 4 | 7 | ▼-3 | 1 | ▲3 |
| Congestion during peak commuting hours | 5 | 1 | ▲4 | 12 | ▼-7 |
| Transportation system congestion | 6 | 2 | ▲4 | 10 | ▼-4 |
| Distance of commute for employees | 7 | 6 | ▶1 | 5 | ▲2 |
| Water and sewer infrastructure needs | 8 | 8 | ▶0 | 6 | ▲2 |
| Transportation system safety | 9 | 9 | ▶0 | 8 | ▶1 |
| Transportation system reliability | 10 | 11 | ▶-1 | 11 | ▶-1 |
| Transportation as a barrier to exports/manufacturing/sales growth | 11 | 12 | ▶-1 | 7 | ▲4 |
| Interregional passenger rail service | 12 | 10 | ▲2 | 13 | ▶-1 |
| Cost of transportation for products/inputs | 13 | 14 | ▶-1 | 9 | ▲4 |
| Access to interstates, rail yards, airports, intermodal centers | 14 | 13 | ▶1 | 14 | ▶0 |
| Export or international marketing assistance | 15 | 15 | ▶0 | 15 | ▶0 |



6) Please rank the following key factors you believe most impact business location, expansion, and investment decisions within in your region. (4 = Very Important, 3 = Important, 2 = Neutral, 1 = Not Important)





| Overall Rank | Item | Score | Percent of 'Very Important' or 'Important' |
|--------------|---|-------|--|
| 1 | Availability of appropriate labor supply | 3.56 | 93% |
| 2 | Broadband availability | 3.44 | 91% |
| 3 | Highway accessibility | 3.33 | 86% |
| 4 | Ease of access and commutes for workers | 3.28 | 84% |
| 5 | Training and workforce development programs | 3.18 | 83% |
| 6 | Available land and buildings | 3.16 | 80% |
| 7 | State and local incentives | 3.03 | 75% |
| 8 | Energy costs | 3.01 | 77% |
| 9 | Proximity to major markets | 2.98 | 74% |
| 10 | Accessibility to airport | 2.93 | 70% |
| 11 | Regulations | 2.90 | 70% |
| 12 | Public-private financing | 2.89 | 69% |
| 13 | Expedited or fast-track permitting | 2.82 | 65% |
| 14 | Proximity to suppliers | 2.76 | 69% |
| 15 | Corporate tax rate | 2.70 | 58% |

6A) Regional Cross Tabulation: Please rank the following key factors you believe most impact business location, expansion, and investment decisions within in your region. (Weighted Rank)

| Item | All Respondents | | Front Range | | Everyone Else | |
|---|-----------------|------|-------------|------|---------------|--|
| | Rank | Rank | Rank Change | Rank | Rank Change | |
| Availability of appropriate labor supply | 1 | 1 | ▶0 | 1 | ▶0 | |
| Broadband availability | 2 | 4 | ▼-2 | 2 | ▶0 | |
| Highway accessibility | 3 | 2 | ▶1 | 3 | ▶0 | |
| Ease of access and commutes for workers | 4 | 3 | ▶1 | 5 | ▶-1 | |
| Training and workforce development programs | 5 | 7 | ▼-2 | 4 | ▶1 | |
| Available land and buildings | 6 | 5 | ▶1 | 7 | ▶-1 | |
| State and local incentives | 7 | 8 | ▶-1 | 7 | ▶0 | |
| Energy costs | 8 | 9 | ▶-1 | 9 | ▶-1 | |
| Proximity to major markets | 9 | 6 | ▲3 | 12 | ▼-3 | |
| Accessibility to airport | 10 | 10 | ▶0 | 11 | ▶-1 | |
| Regulations | 11 | 11 | ▶0 | 10 | ▶1 | |
| Public-private financing | 12 | 15 | ▼-3 | 6 | ▲6 | |
| Expedited or fast-track permitting | 13 | 12 | ▶1 | 13 | ▶0 | |
| Proximity to suppliers | 14 | 14 | ▶0 | 15 | ▶-1 | |
| Corporate tax rate | 15 | 13 | ▲2 | 17 | ▼-2 | |
| Inbound/outbound shipping costs | 16 | 16 | ▶0 | 14 | ▲2 | |
| Railroad service | 17 | 17 | ▶0 | 16 | ▶1 | |



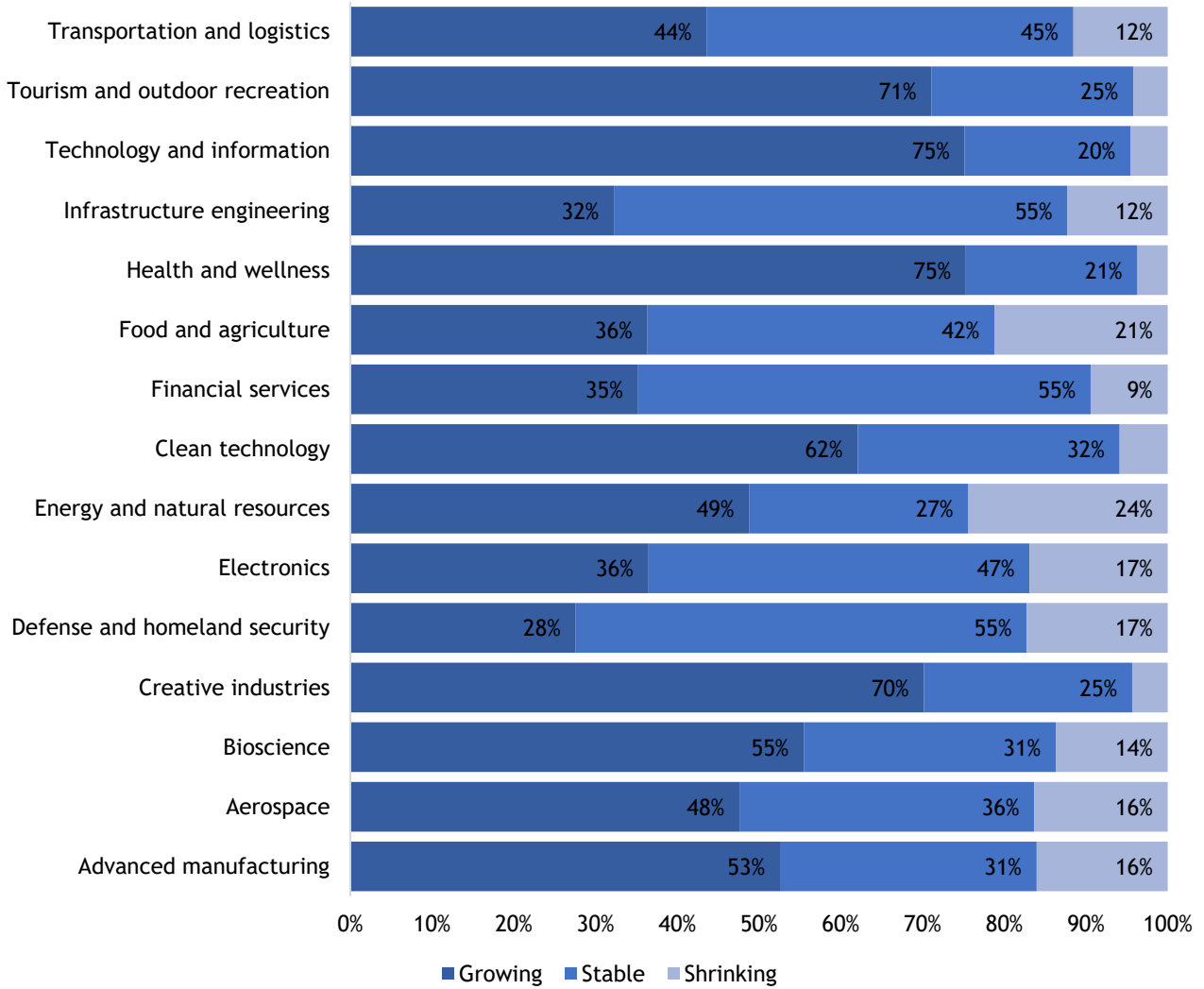
7) How important do you believe freight and rail transportation considerations are in retaining, expanding, or relocating businesses? Can you provide an example of firms that choose to (or choose not to) relocate or expand in your region because of transportation issues?

(This word cloud shows by font size the common use of certain words in individual answers)



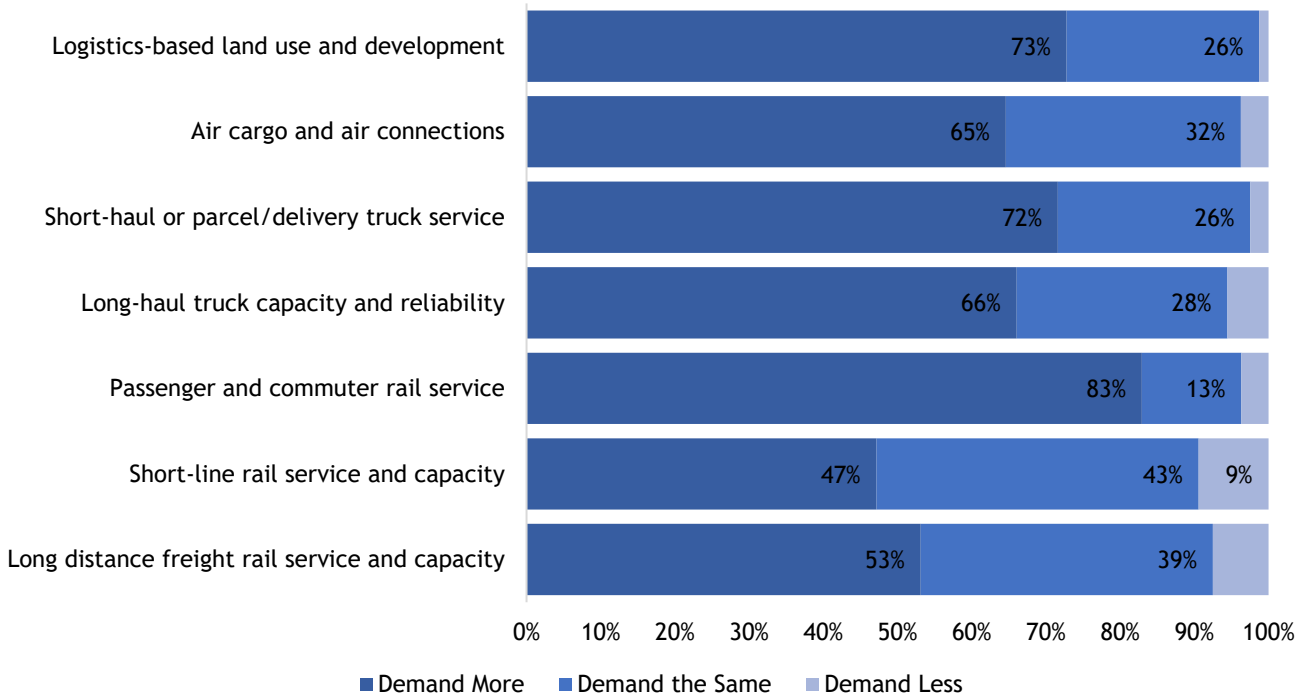


8) Thinking about the types of businesses or industries that are most important in your region, please indicate how the following industry clusters might change over the next 20 years?



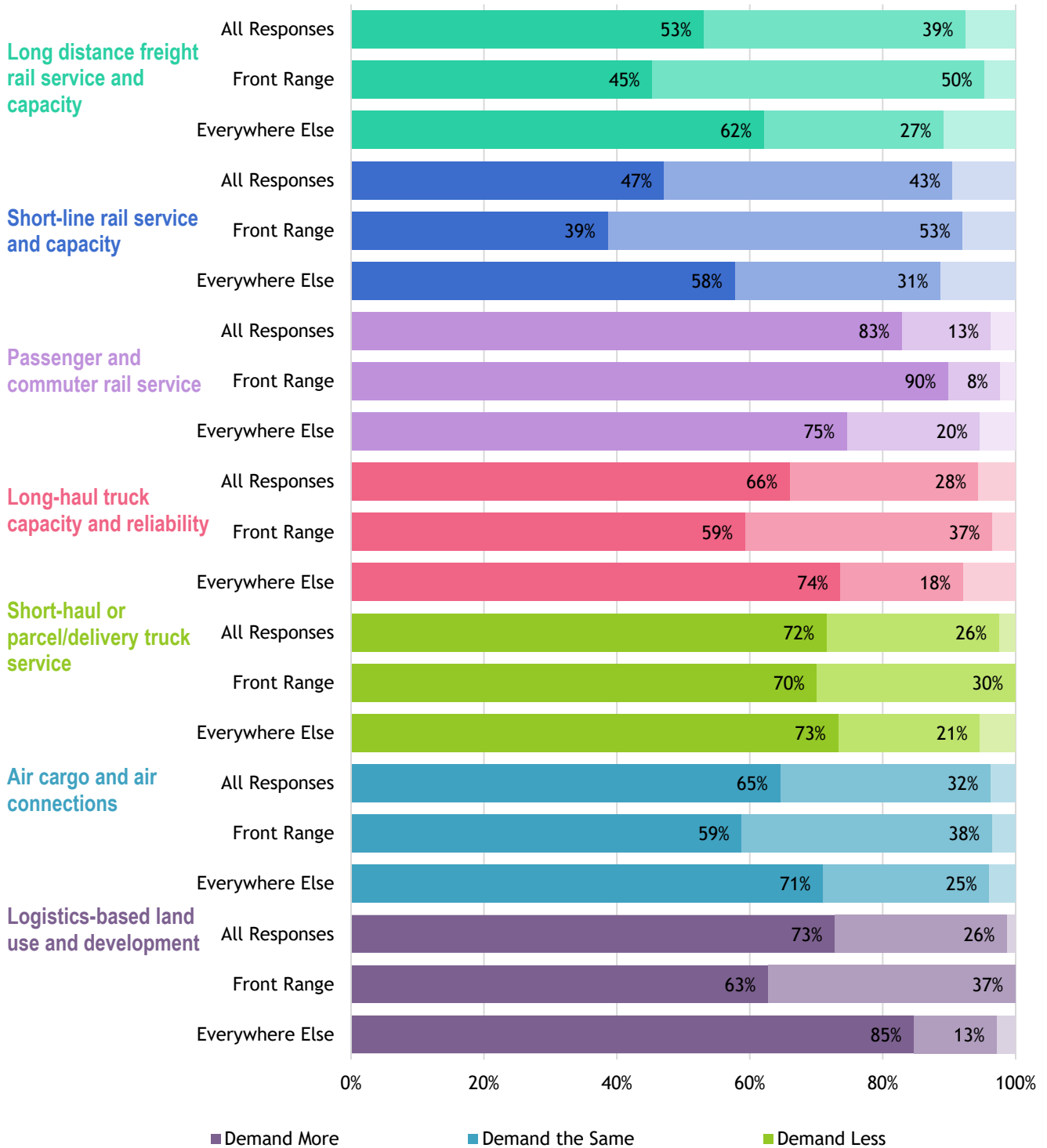
| Options | Total Count | | |
|---|-------------|--------|-----------|
| | Growing | Stable | Shrinking |
| Advanced manufacturing | 82 | 49 | 25 |
| Aerospace | 70 | 53 | 24 |
| Bioscience | 81 | 45 | 20 |
| Creative industries | 113 | 41 | 7 |
| Defense and homeland security | 40 | 80 | 25 |
| Electronics | 54 | 69 | 25 |
| Energy and natural resources | 80 | 44 | 40 |
| Clean technology | 95 | 49 | 9 |
| Financial services | 56 | 88 | 15 |
| Food and agriculture | 60 | 70 | 35 |
| Health and wellness | 122 | 34 | 6 |
| Infrastructure engineering | 50 | 86 | 19 |
| Technology and information | 115 | 31 | 7 |
| Tourism and outdoor recreation | 118 | 41 | 7 |
| Transportation and logistics | 68 | 70 | 18 |
| Write-In | | | |
| Beverage Industry | 1 | 0 | 0 |
| Cannabis | 1 | 0 | 0 |
| Health Care | 1 | 0 | 0 |
| Health Care and Education | 1 | 0 | 0 |
| Integrated living, working, learning, sharing as vital to health and economy. | 1 | 0 | 0 |
| International trade - export/import | 1 | 0 | 0 |
| Marijuana Industries | 1 | 0 | 0 |
| Retail soft goods | 0 | 0 | 1 |
| Sports, outdoor recreation | 1 | 0 | 0 |
| Geothermal | 1 | 0 | 0 |

9) As regional industries grow and change over the coming 20 years, do you think businesses and communities will demand more from Colorado’s freight and rail infrastructure, demand less, or about the same?



| Options | Total Count | | |
|--|-------------|-----------------|-------------|
| | Demand More | Demand the Same | Demand Less |
| Long distance freight rail service and capacity | 85 | 63 | 12 |
| Short-line rail service and capacity | 75 | 69 | 15 |
| Passenger and commuter rail service | 136 | 22 | 6 |
| Long-haul truck capacity and reliability | 107 | 46 | 9 |
| Short-haul or parcel/delivery truck service | 116 | 42 | 4 |
| Air cargo and air connections | 104 | 51 | 6 |
| Logistics-based land use and development | 115 | 41 | 2 |
| Write-In | | | |
| Electric/solar powered trains | 1 | 0 | 0 |
| Environmental integration with everything | 1 | 0 | 0 |
| don't forget about the potential impact of drones! | 1 | 0 | 0 |

9A) Regional Cross Tabulation: As regional industries grow and change over the coming 20 years, do you think businesses and communities will demand more from Colorado’s freight and rail infrastructure, demand less, or about the same?

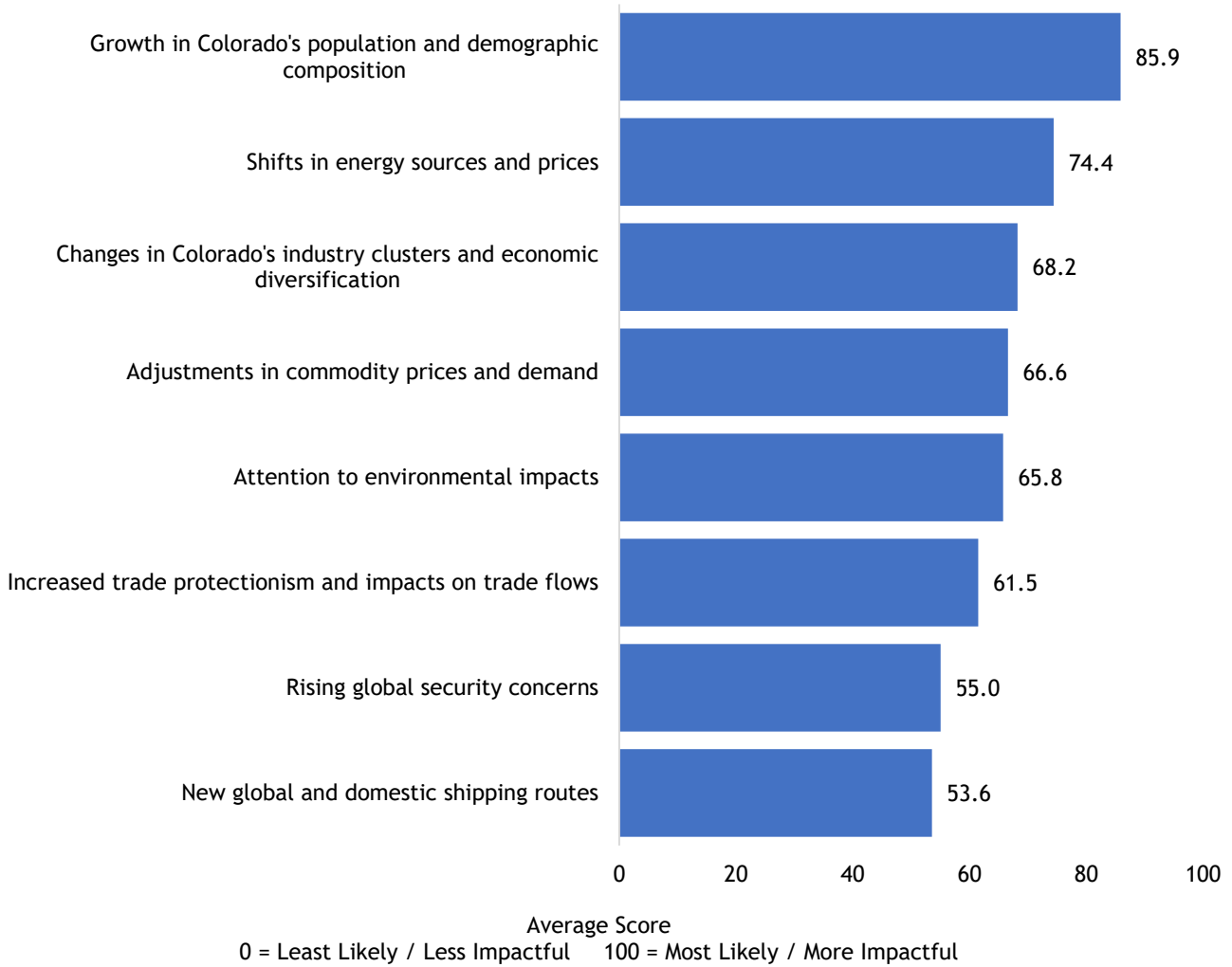




| | Demand More | Demand the Same | Demand Less |
|--|-------------|-----------------|-------------|
| Long distance freight rail service and capacity | | | |
| All Responses | 53% | 39% | 8% |
| Front Range | ▼45% | ▲50% | ▶5% |
| Everywhere Else | ▲62% | ▼27% | ▶11% |
| Short-line rail service and capacity | | | |
| All Responses | 47% | 43% | 9% |
| Front Range | ▼39% | ▲53% | ▶8% |
| Everywhere Else | ▲58% | ▼31% | ▶11% |
| Passenger and commuter rail service | | | |
| All Responses | 83% | 13% | 4% |
| Front Range | ▲90% | ▼8% | ▶2% |
| Everywhere Else | ▼75% | ▲20% | ▶5% |
| Long-haul truck capacity and reliability | | | |
| All Responses | 66% | 28% | 6% |
| Front Range | ▼59% | ▲37% | ▶3% |
| Everywhere Else | ▲74% | ▼18% | ▶8% |
| Short-haul or parcel/delivery truck service | | | |
| All Responses | 72% | 26% | 2% |
| Front Range | ▶70% | ▶30% | ▶0% |
| Everywhere Else | ▶73% | ▶21% | ▶5% |
| Air cargo and air connections | | | |
| All Responses | 65% | 32% | 4% |
| Front Range | ▼59% | ▲38% | ▶4% |
| Everywhere Else | ▲71% | ▼25% | ▶4% |
| Logistics-based land use and development | | | |
| All Responses | 73% | 26% | 1% |
| Front Range | ▼63% | ▲37% | ▶0% |
| Everywhere Else | ▲85% | ▼13% | ▶3% |

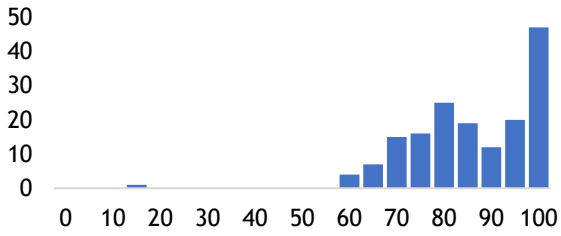


10) Within the next 20 years, what major risks and disruptors do you think could impact Colorado’s economy and the overall demand for moving goods and people? Please rank options in order of most likely/more impactful to least likely/less impactful.

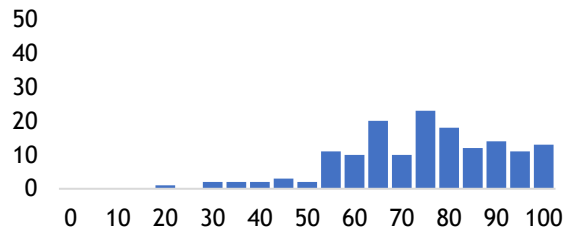




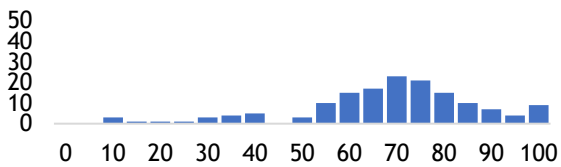
Growth in Colorado's population and demographic composition



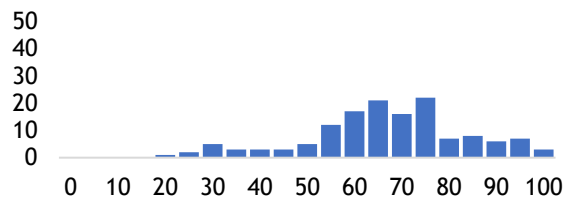
Shifts in energy sources and prices



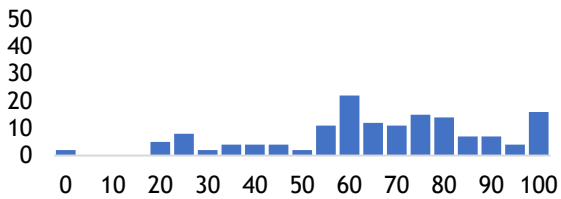
Changes in Colorado's industry clusters and economic diversification



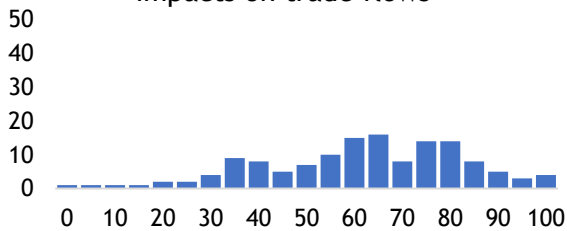
Adjustments in commodity prices and demand



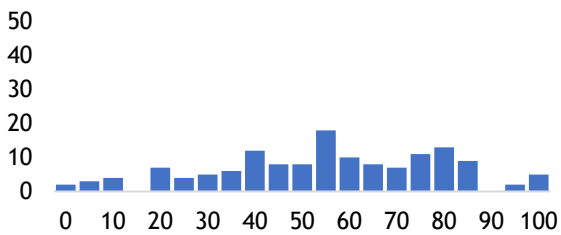
Attention to environmental impacts



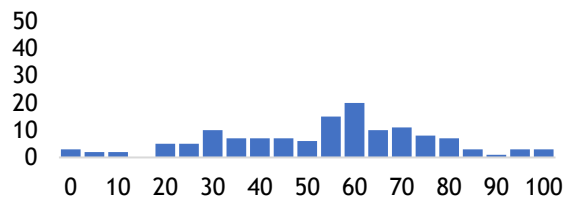
Increased trade protectionism and impacts on trade flows



Rising global security concerns



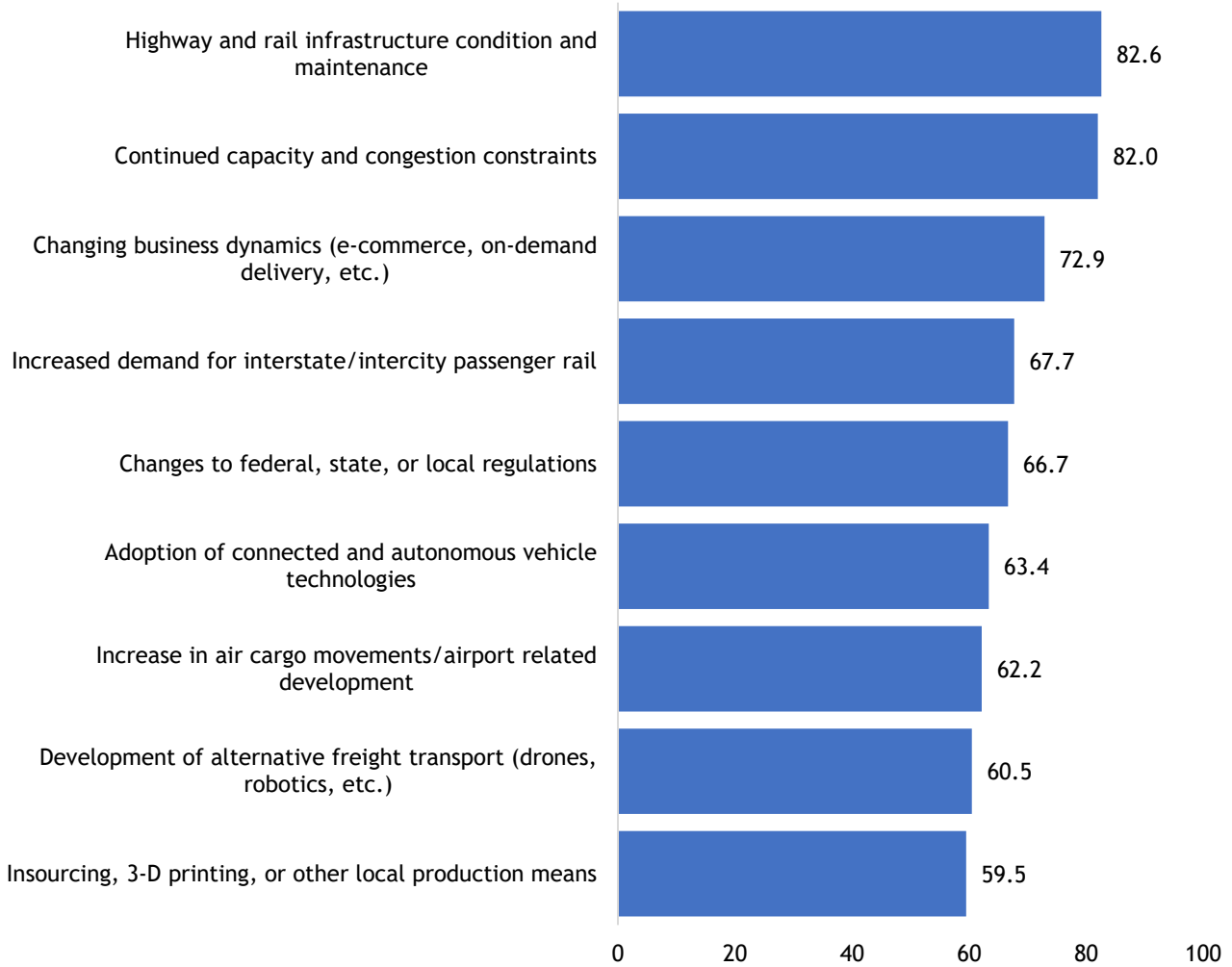
New global and domestic shipping routes



Average Score

0 = Least Likely / Less Impactful 100 = Most Likely / More Impactful

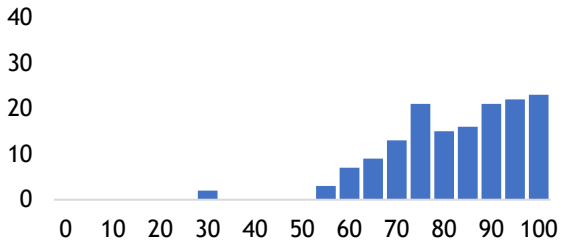
11) Within the next 20 years, what major changes or trends do you think will impact the type of infrastructure and services that Colorado businesses will demand? Please rank options in order of most likely/more impactful to least likely/less impactful.



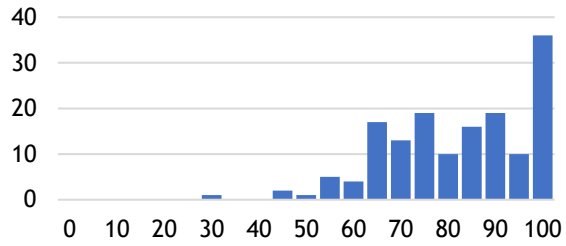
Average Score
 0 = Least Likely / Less Impactful 100 = Most Likely / More Impactful



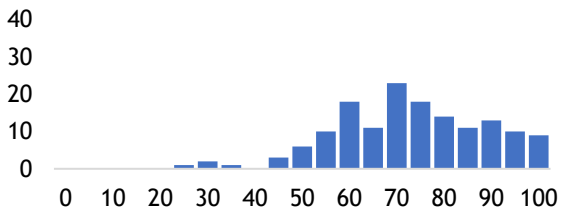
Highway and rail infrastructure condition and maintenance



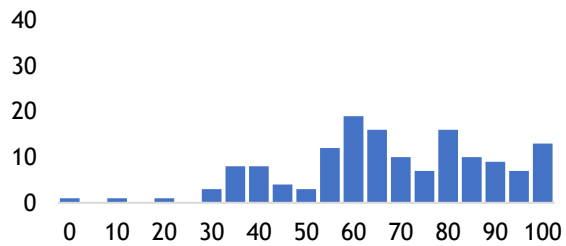
Continued capacity and congestion constraints



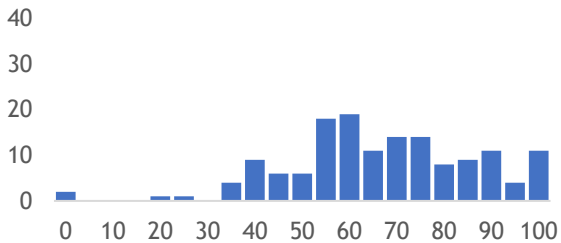
Changing business dynamics (e-commerce, on-demand delivery, etc.)



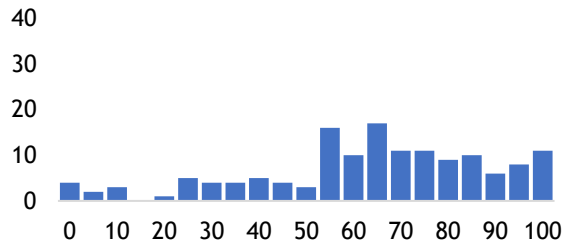
Increased demand for interstate/intercity passenger rail



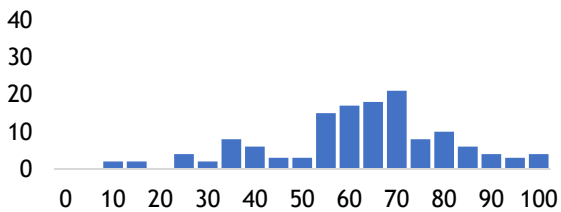
Changes to federal, state, or local regulations



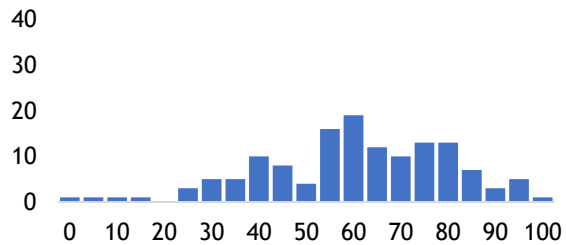
Adoption of connected and autonomous vehicle technologies



Increase in air cargo movements/airport related development



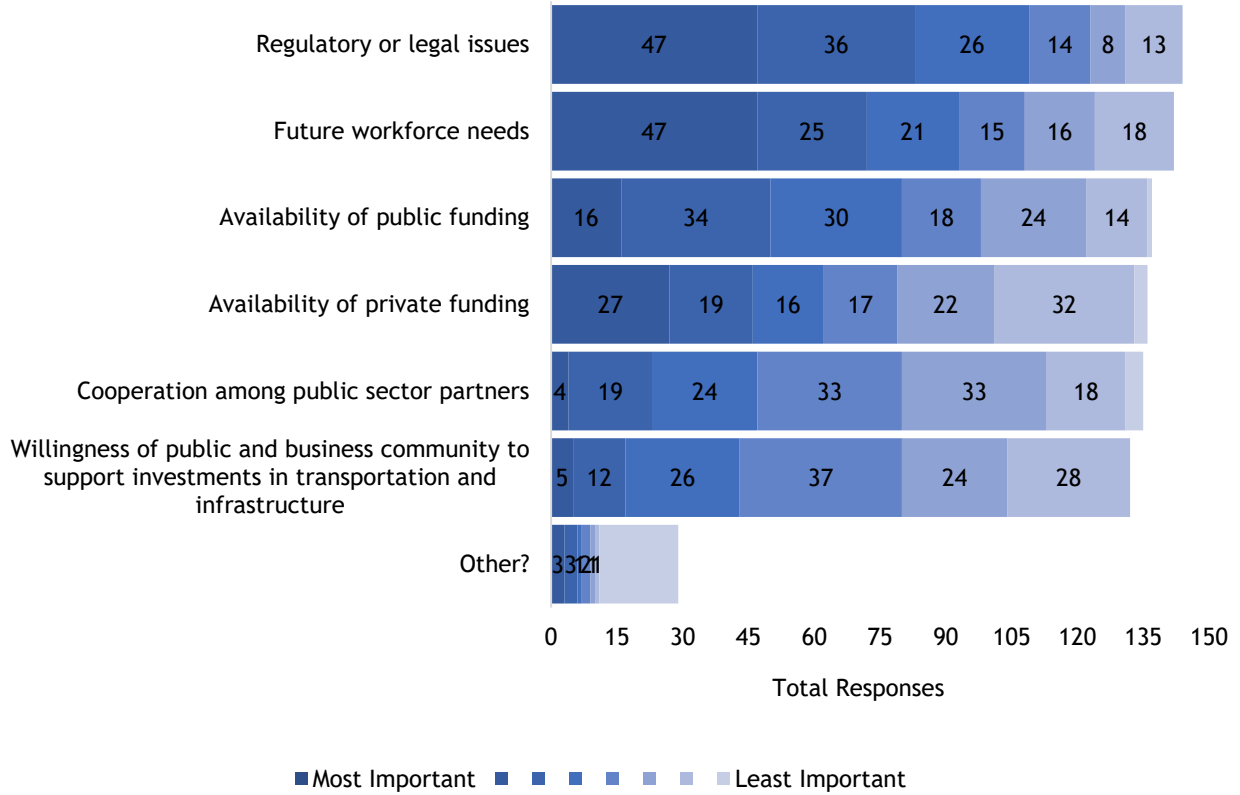
Development of alternative freight transport (drones, robotics, etc.)



Average Score

0 = Least Likely / Less Impactful 100 = Most Likely / More Impactful

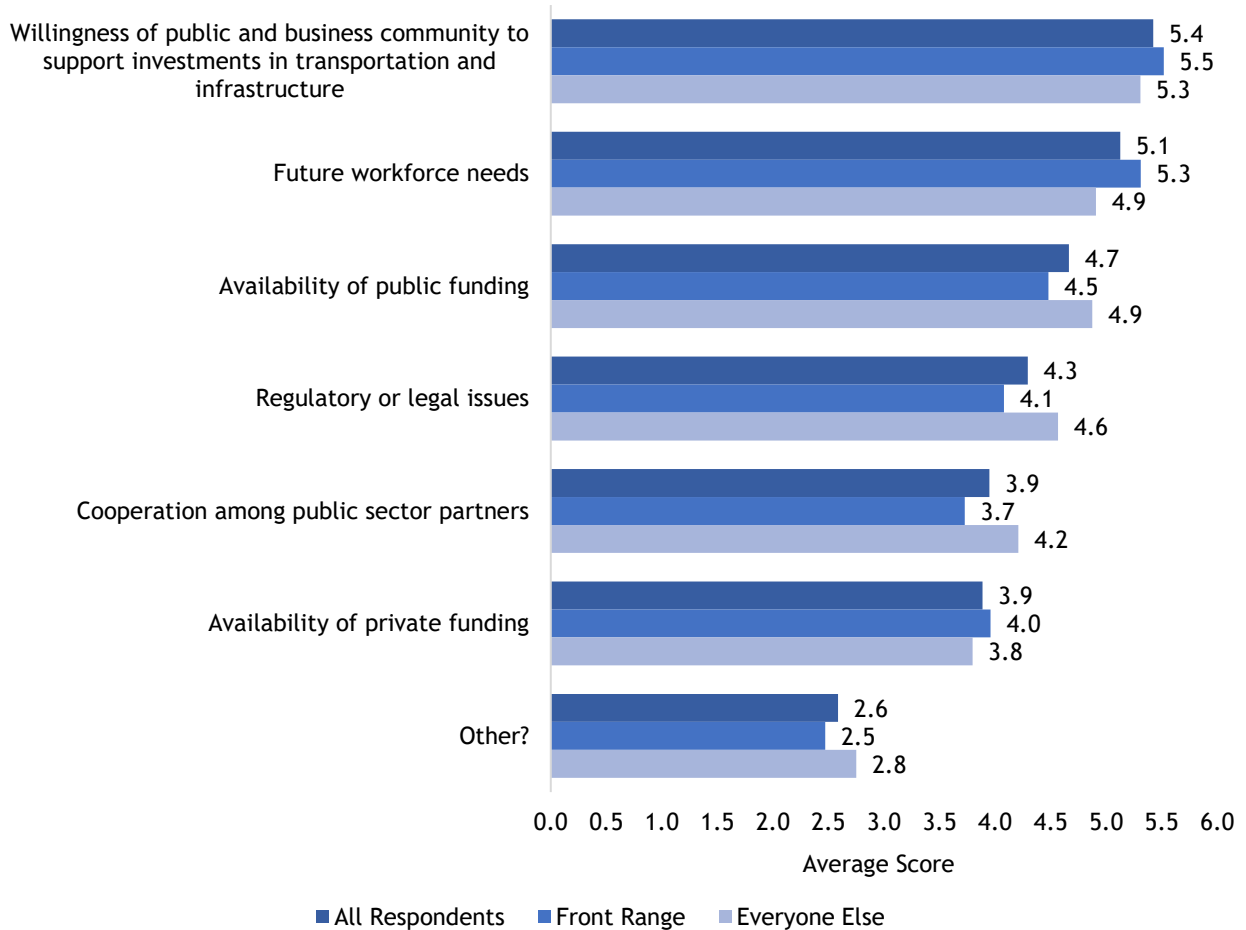
12) What are some of the major challenges, obstacles, or barriers to adequately address the needs of Colorado businesses? Please rank which issues are most critical or least critical for state agencies and planning partners to address. Add and explain other. (7 = Most Important 1 = Least Important)



| Overall Rank | Item | Score | Total Respondents | Average |
|--------------|--|-------|-------------------|---------|
| 1 | Willingness of public and business community to support investments in transportation and infrastructure | 781 | 144 | 5.4 |
| 2 | Future workforce needs | 728 | 142 | 5.1 |
| 3 | Availability of public funding | 639 | 137 | 4.7 |
| 4 | Regulatory or legal issues | 584 | 136 | 4.3 |
| 5 | Cooperation among public sector partners | 533 | 135 | 3.9 |
| 6 | Availability of private funding | 513 | 132 | 3.9 |
| 7 | Other? | 75 | 29 | 2.6 |



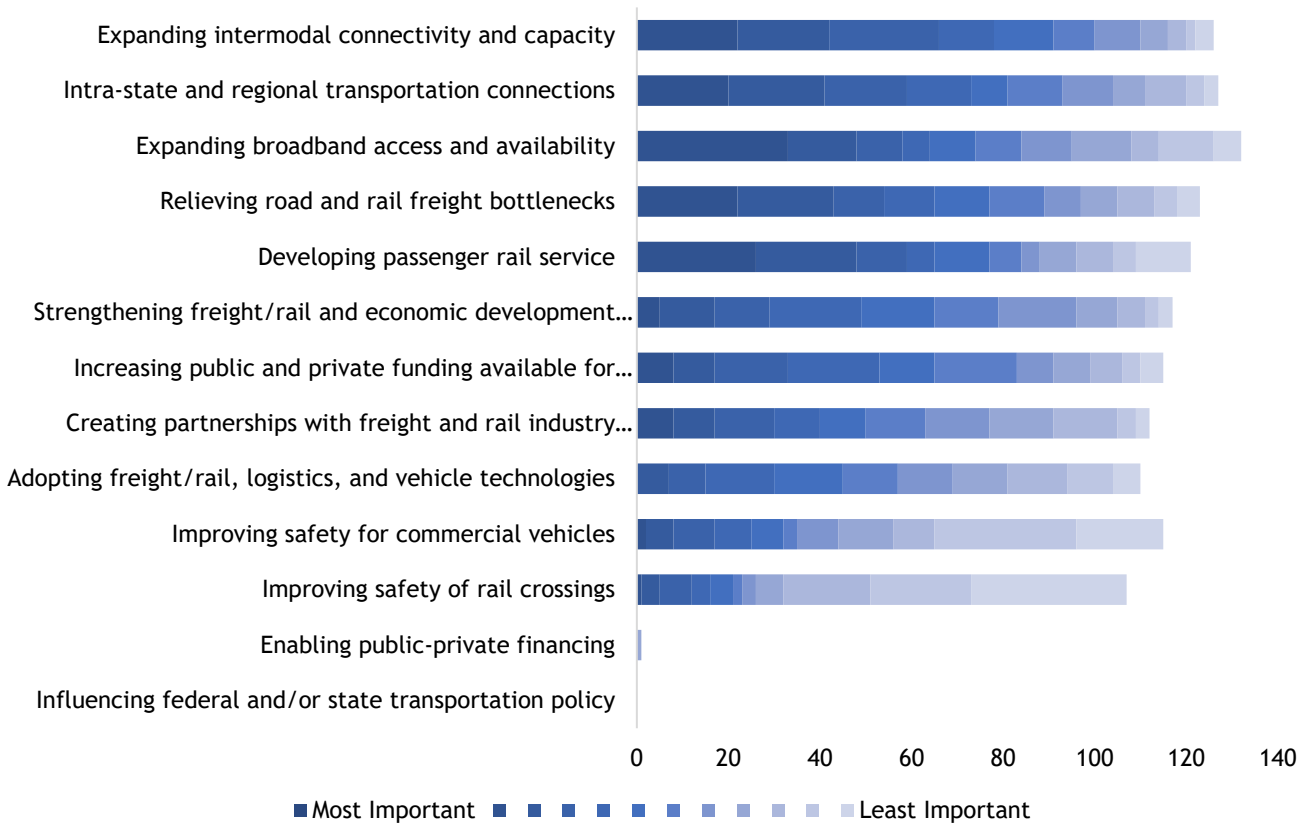
12A) Regional Cross Tabulation: What are some of the major challenges, obstacles, or barriers to adequately address the needs of Colorado businesses? Please rank which issues are most critical or least critical for state agencies and planning partners to address. Add and explain other. (7 = Most Important 1 = Least Important)



| Item | All Respondents | | Front Range | | Everyone Else | |
|--|-----------------|---------------|-------------|---------------|---------------|---------------|
| | Rank | Average Score | Rank | Average Score | Rank | Average Score |
| Willingness of public and business community to support investments in transportation and infrastructure | 1 | 5.42 | 1 | 5.52 | 1 | 5.31 |
| Future workforce needs | 2 | 5.13 | 2 | 5.31 | 2 | 4.91 |
| Availability of public funding | 3 | 4.66 | 3 | 4.48 | 3 | 4.88 |
| Regulatory or legal issues | 4 | 4.29 | 4 | 4.08 | 4 | 4.57 |
| Cooperation among public sector partners | 5 | 3.95 | 6 | 3.73 | 5 | 4.21 |
| Availability of private funding | 6 | 3.89 | 5 | 3.96 | 6 | 3.80 |
| Other? | 7 | 2.59 | 7 | 2.47 | 7 | 2.75 |



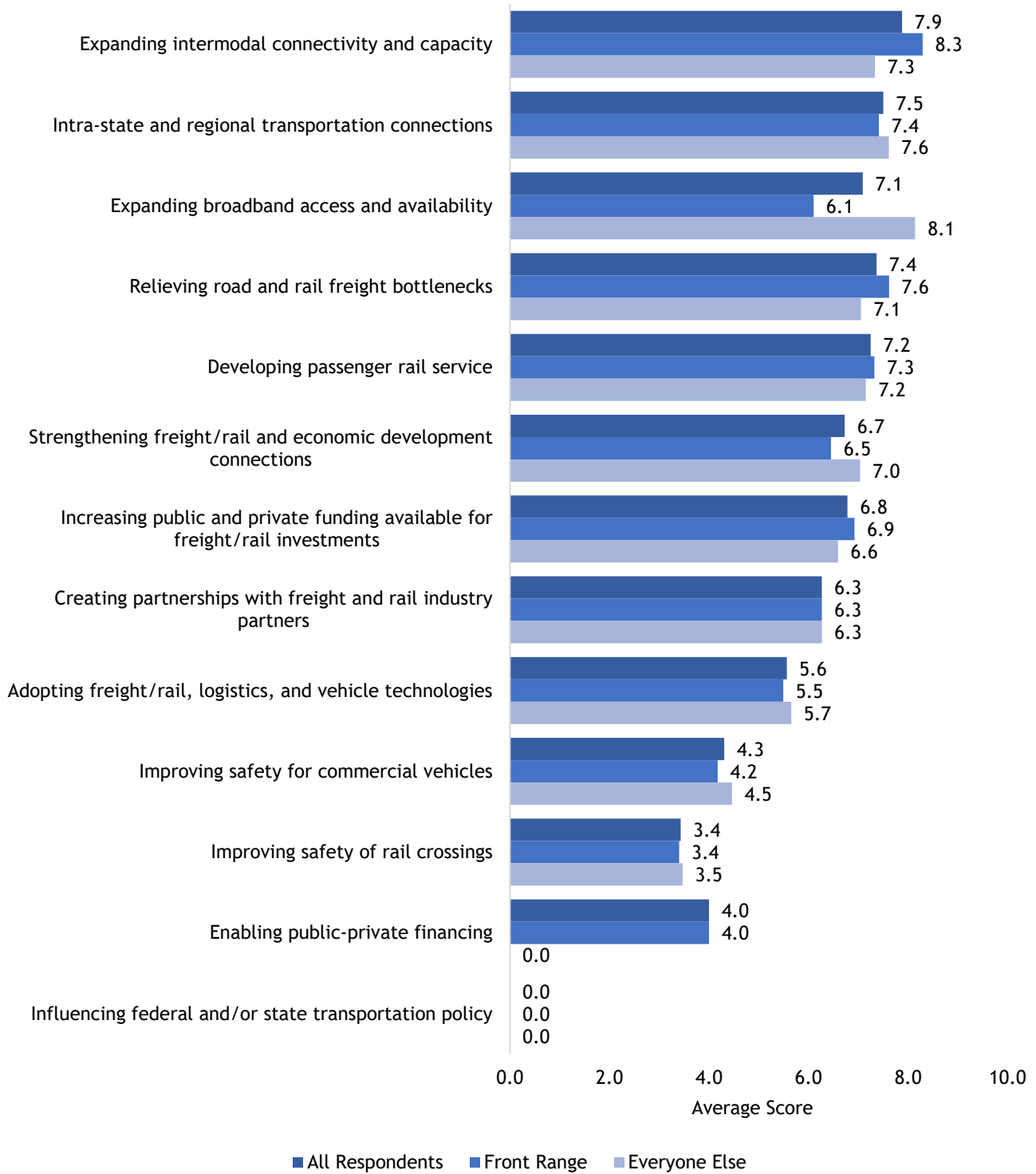
13) Given future risks and challenges, what key transportation and infrastructure opportunities should Colorado focus on in the future? Rank each option to suggest what Colorado should focus on immediately.



| Overall Rank | Item | Score | Total Respondents | Average |
|--------------|--|-------|-------------------|---------|
| 1 | Expanding intermodal connectivity and capacity | 993 | 126 | 7.9 |
| 2 | Intra-state and regional transportation connections | 953 | 127 | 7.5 |
| 3 | Expanding broadband access and availability | 936 | 132 | 7.1 |
| 4 | Relieving road and rail freight bottlenecks | 906 | 123 | 7.4 |
| 5 | Developing passenger rail service | 877 | 121 | 7.2 |
| 6 | Strengthening freight/rail and economic development connections | 787 | 117 | 6.7 |
| 7 | Increasing public and private funding available for freight/rail investments | 780 | 115 | 6.8 |
| 8 | Creating partnerships with freight and rail industry partners | 702 | 112 | 6.3 |
| 9 | Adopting freight/rail, logistics, and vehicle technologies | 612 | 110 | 5.6 |
| 10 | Improving safety for commercial vehicles | 495 | 115 | 4.3 |
| 11 | Improving safety of rail crossings | 367 | 107 | 3.4 |
| 12 | Enabling public-private financing | 4 | 1 | 4.0 |
| 13 | Influencing federal and/or state transportation policy | 0 | 0 | 0.0 |



13A) Regional Cross Tabulation: Given future risks and challenges, what key transportation and infrastructure opportunities should Colorado focus on in the future? Rank each option to suggest what Colorado should focus on immediately.





| Item | All Respondents | | Front Range | | Everyone Else | |
|--|-----------------|---------------|-------------|---------------|---------------|---------------|
| | Rank | Average Score | Rank | Average Score | Rank | Average Score |
| Expanding intermodal connectivity and capacity | 1 | 7.88 | ▶1 | 8.29 | ▼3 | 7.33 |
| Intra-state and regional transportation connections | 2 | 7.50 | ▶2 | 7.41 | ▶2 | 7.61 |
| Expanding broadband access and availability | 3 | 7.09 | ▼6 | 6.10 | ▲1 | 8.14 |
| Relieving road and rail freight bottlenecks | 4 | 7.37 | ▶3 | 7.62 | ▶4 | 7.05 |
| Developing passenger rail service | 5 | 7.25 | ▶4 | 7.32 | ▶6 | 7.15 |
| Strengthening freight/rail and economic development connections | 6 | 6.73 | ▶7 | 6.45 | ▶5 | 7.04 |
| Increasing public and private funding available for freight/rail investments | 7 | 6.78 | ▲5 | 6.92 | ▶8 | 6.59 |
| Creating partnerships with freight and rail industry partners | 8 | 6.27 | ▶8 | 6.27 | ▶7 | 6.27 |
| Adopting freight/rail, logistics, and vehicle technologies | 9 | 5.56 | ▶9 | 5.49 | ▶9 | 5.65 |
| Improving safety for commercial vehicles | 10 | 4.30 | ▶10 | 4.17 | ▶10 | 4.46 |
| Improving safety of rail crossings | 11 | 3.43 | ▶11 | 3.40 | ▶11 | 3.47 |
| Enabling public-private financing | 12 | 4.00 | ▶12 | 4.00 | ▶12 | 0.00 |
| Influencing federal and/or state transportation policy | 13 | 0.00 | ▶13 | 0.00 | ▶12 | 0.00 |

14) Are there specific zones, sites, or facilities within your region or community that would benefit from improved freight connections or advance planning of transportation?

(This word cloud shows by font size the common use of certain words in individual answers)

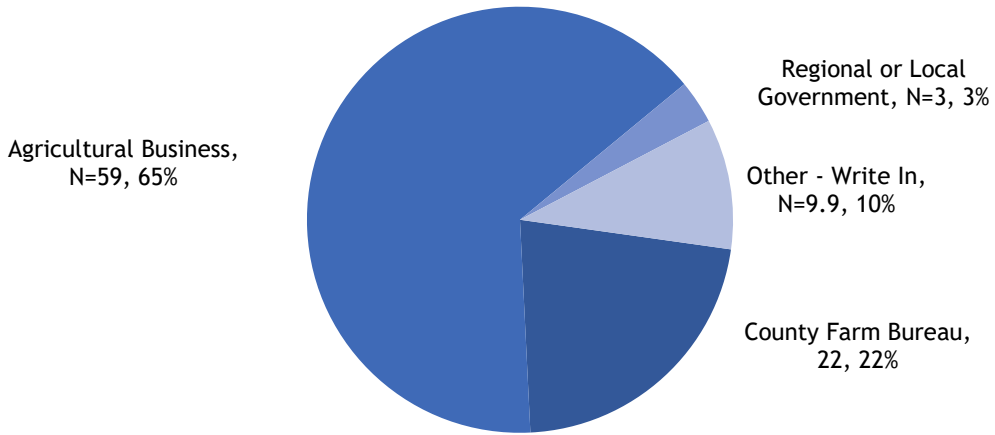




Transportation and Colorado's Agricultural Industry

Working with the Colorado Farm Bureau, CDOT distributed surveys to county farm bureaus and agricultural businesses across the state. The survey was administered in May and June of 2017. Questions were intended to identify priority issues and needs of the agricultural industry and to identify specific transportation-related challenges and opportunities for businesses, including rail services and costs. Overall, 123 survey responses were received.

1) What type of business or organization do you represent?



Other - Write In (Duplicate answers combined)

- Land owner
- Agriculture producer
- Financial institution
- Private individual
- Local business owner
- Private farm
- Rural taxpayer



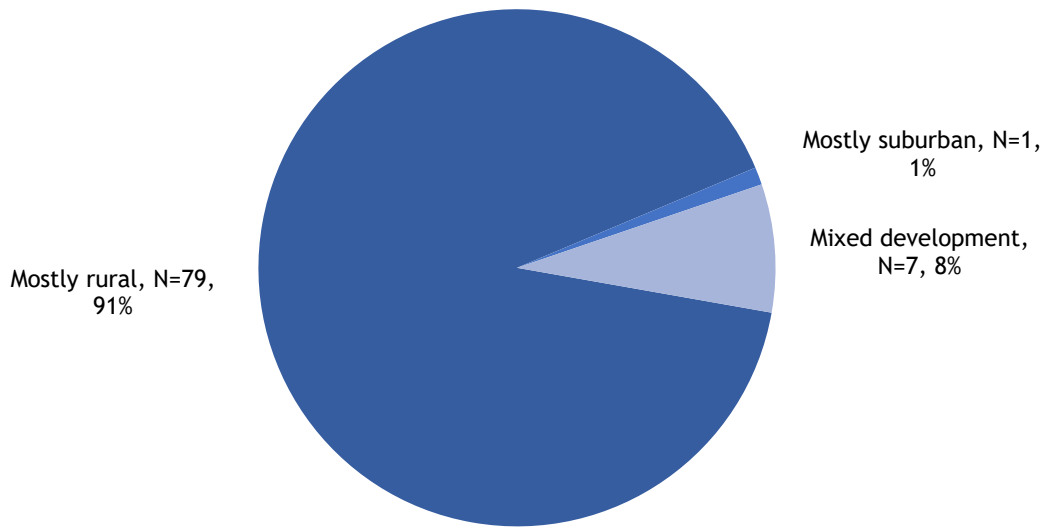
2) What county, or counties, are you primarily located in?

| Response | Count |
|--------------------------------|-------|
| Logan | 5 |
| Elbert | 4 |
| Prowers | 4 |
| Yuma | 4 |
| Weld | 4 |
| Douglas | 3 |
| La Plata | 3 |
| Larimer | 3 |
| Moffat | 3 |
| Washington | 3 |
| Alamosa | 2 |
| Gunnison | 2 |
| Mesa | 2 |
| Pueblo | 2 |
| Archuleta | 1 |
| Baca | 1 |
| Bent | 1 |
| Crowley | 1 |
| Delta | 1 |
| Eagle | 1 |
| Fremont | 1 |
| Huerfano | 1 |
| Kit Carson | 1 |
| Las Animas | 1 |
| Lincoln | 1 |
| Montezuma | 1 |
| Morgan | 1 |
| Otero | 1 |
| Rio Blanco | 1 |
| Rio Grande | 1 |
| Routt | 1 |
| Saguache | 1 |
| Crowley, Lincoln, Otero | 1 |
| Crowley, Pueblo | 1 |
| Elbert, Douglas | 1 |
| Kiowa Lincoln | 1 |
| La Plata, Montezuma, Archuleta | 1 |
| Lincoln, Elbert | 1 |
| Lincoln, El Paso | 1 |
| Lincoln, Elbert | 1 |



| | |
|--------------------------------|---|
| Lincoln, Elbert, Washington | 1 |
| Montezuma, Dolores | 1 |
| Montezuma, Dolores, Hinsdale | 1 |
| Montezuma, La Plata, Dolores | 1 |
| Otero, Lincoln | 1 |
| Otero, Pueblo | 1 |
| Phillips, Sedgwick | 1 |
| Pueblo, Crowley, Otero | 1 |
| Rio Blanco, Garfield, Eagle | 1 |
| Saguache, Chaffee | 1 |
| San Miguel, Montrose, Saguache | 1 |
| Weld, Boulder | 1 |
| Weld, Logan | 1 |

3) What best describes the community or region your organization represents?



4) What are some of the critical issues and needs you hear from producers and businesses in your community? Please identify the top five transportation related issues facing your community today. Rank each issue below with 1 being the most important.

| Item | Overall Rank | Rank Distribution | Score | No. of Rankings |
|--|--------------|-------------------|-------|-----------------|
| Condition of roads and bridges | 1 | | 246 | 58 |
| Safety of roads and highways | 2 | | 146 | 43 |
| Congestion of roads and highways | 3 | | 114 | 33 |
| Cost of transportation for products/inputs | 4 | | 71 | 25 |
| Transportation regulation and policy | 5 | | 65 | 25 |
| Oversize/overweight restrictions | 6 | | 65 | 21 |
| Access to elevators, processing centers, and intermodal centers | 7 | | 51 | 15 |
| Interface between local governments and state/federal governments related to transportation issues and needs | 8 | | 43 | 21 |
| Transportation as a barrier to exports/manufacturing/sales growth | 9 | | 42 | 14 |
| Workforce development | 10 | | 32 | 11 |
| Rail carrier prices and availability | 11 | | 20 | 8 |
| Quality and operation of Ports of Entry | 12 | | 19 | 9 |
| Regional transportation connectivity | 13 | | 19 | 9 |
| Commuting challenges for employees | 14 | | 16 | 8 |
| Availability and cost of reefer trucks | 15 | | 14 | 5 |
| Interregional passenger rail service | 16 | | 11 | 5 |
| Export or international marketing assistance | 17 | | 9 | 6 |
| Availability and cost of containers | 18 | | 6 | 2 |
| Rail service demurrage fees | 19 | | 4 | 2 |

Lowest Rank Highest Rank



5) How important do you believe freight and rail transportation considerations are in retaining and expanding Colorado’s agricultural producers and manufacturers? Can you provide example of businesses that choose to (or choose not to) relocate or expand in your county because of transportation issues?

(This word cloud shows by font size the common use of certain words in individual answers.)





6) Thinking about the types of businesses or industries that are most important in your community? Please indicate how the following industry clusters might change over the next 10 to 20 years?

| | Growing | Stable | Shrinking |
|---|---------|--------|-----------|
| Energy and natural resources Count | 25 | 15 | 15 |
| Irrigated agriculture Count | 1 | 30 | 29 |
| Dryland agriculture Count | 8 | 31 | 18 |
| Dairy/Cattle feeding Count | 11 | 25 | 19 |
| Grazing Count | 7 | 36 | 17 |
| Food and agricultural products manufacturing or processing Count | 10 | 22 | 22 |
| Light manufacturing Count | 12 | 21 | 25 |
| Tourism and outdoor recreation Count | 28 | 23 | 8 |
| Transportation and logistics Count | 21 | 20 | 15 |
| Mining Count | 0 | 0 | 1 |
| Small Farms using Geeen Houses Count | 1 | 0 | 0 |



7) As regional industries grow and change over the coming decades, do you think businesses in your community will demand more from Colorado's freight and rail infrastructure, demand less, or about the same?

| | Demand More | Demand the Same | Demand Less |
|--|-------------|-----------------|-------------|
| Long distance freight rail service and capacity Count | 34 | 22 | 2 |
| Short-line rail service and capacity Count | 23 | 26 | 8 |
| Passenger and commuter rail service Count | 30 | 18 | 9 |
| Long-haul truck capacity and reliability Count | 44 | 15 | 0 |
| Short-haul or parcel/delivery truck service Count | 47 | 13 | 0 |
| Air cargo and air connections Count | 17 | 34 | 5 |
| Logistics-based land use and development Count | 27 | 26 | 1 |
| A railroad to serve the area Count | 1 | 0 | 0 |
| As population grows roads Count | 1 | 0 | 0 |

8) Over the next 20 years, what major risks and disruptors do you think could impact Colorado’s economy and the overall demand for moving goods and people? Please rank options in order of most likely/more impactful to least likely/less impactful. Please explain other.

| Item | Overall Rank | Rank Distribution | Score | No. of Rankings |
|--|--------------|-------------------|-------|-----------------|
| Growth in Colorado's population and demographic composition | 1 | | 499 | 54 |
| Shifts in energy sources and prices | 2 | | 381 | 50 |
| Adjustments in commodity prices and demand | 3 | | 330 | 45 |
| Attention to environmental impacts | 4 | | 301 | 48 |
| Changes in Colorado's industry clusters and economic diversification | 5 | | 272 | 44 |
| Increased trade protectionism and impacts on trade flows | 6 | | 248 | 42 |
| Economic/policy changes in neighboring states | 7 | | 215 | 44 |
| Rising global security concerns | 8 | | 189 | 40 |
| New global and domestic shipping routes | 9 | | 138 | 39 |
| Other? | 10 | | 39 | 10 |

Lowest Rank Highest Rank

9) What are some of the major transportation related challenges, obstacles, or barriers to adequately addressing the needs of Colorado’s agri-businesses and rural communities? Please rank which issues are most critical and least critical for state agencies and planning partners to address. Add and explain other.

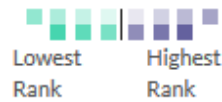
| Item | Overall Rank | Rank Distribution | Score | No. of Rankings |
|---|--------------|-------------------|-------|-----------------|
| Federal or state regulatory, policy, or legal issues | 1 | | 421 | 40 |
| Transportation system condition | 2 | | 411 | 39 |
| Lack of market access due to transportation infrastructure | 3 | | 323 | 37 |
| High costs of shipping products from/to Colorado | 4 | | 321 | 39 |
| Transportation system capacity | 5 | | 314 | 38 |
| Cooperation among government and agency partners | 6 | | 270 | 34 |
| Future workforce needs | 7 | | 256 | 33 |
| Willingness of public and business community to support investments in transportation | 8 | | 250 | 33 |
| Transportation system access | 9 | | 245 | 33 |
| Transportation system safety | 10 | | 236 | 31 |
| Availability of public funding | 11 | | 205 | 31 |
| Lack of competition or choice among shippers | 12 | | 174 | 30 |
| Other? | 13 | | 41 | 7 |

Lowest Rank Highest Rank



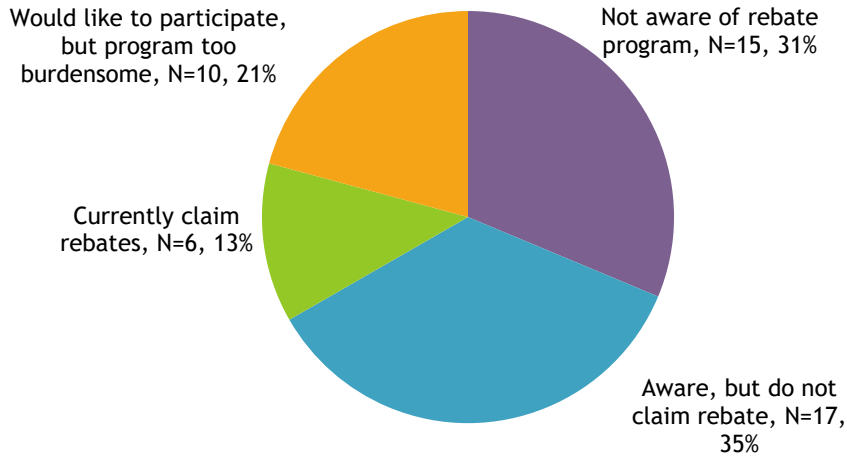
10) Given future risks and challenges, what key transportation and infrastructure opportunities should Colorado focus on in the future? Rank each option to suggest what Colorado should focus on immediately. Please explain other opportunities.

| Item | Overall Rank | Rank Distribution | Score | No. of Rankings |
|--|--------------|-------------------|-------|-----------------|
| Increasing transportation funding in rural regions of the state | 1 | | 514 | 40 |
| Improving bridge maintenance/construction | 2 | | 483 | 41 |
| Increasing oversize/overweight limits on farm vehicles | 3 | | 309 | 34 |
| Relieving road and rail freight bottlenecks | 4 | | 308 | 34 |
| Intra-state and regional transportation connections (e.g rural to urban, North-to South, East to West) | 5 | | 291 | 34 |
| Influencing federal and/or state transportation policy | 6 | | 255 | 29 |
| Improving safety for commercial vehicles | 7 | | 244 | 29 |
| Strengthening freight/rail and economic development connections | 8 | | 224 | 25 |
| Expanding intermodal connectivity and capacity | 9 | | 210 | 27 |
| Creating partnerships with freight and rail industry partners | 10 | | 183 | 25 |
| Increasing public funding available for freight/rail investments | 11 | | 181 | 26 |
| Adopting freight/rail, logistics, and vehicle technologies | 12 | | 168 | 25 |
| Improving safety of rail crossings | 13 | | 143 | 24 |
| Developing passenger rail service | 14 | | 134 | 25 |





11) The State of Colorado offers rebates on gasoline and diesel fuels used on non-public roads, including agricultural equipment and use on private property. Please indicate your familiarity with this program below.



12) Are there specific zones, sites, or facilities within your region or community that would benefit from improved freight connections or advance planning of transportation? For example, elevators, co-packing facilities, free trade zones, intermodal/distribution centers, redevelopment sites, etc. Please describe the location generally, what industry might benefit, and why highway, freight rail, intermodal, or air cargo access is important?

(This word cloud shows by font size the common use of certain words in individual answers.)

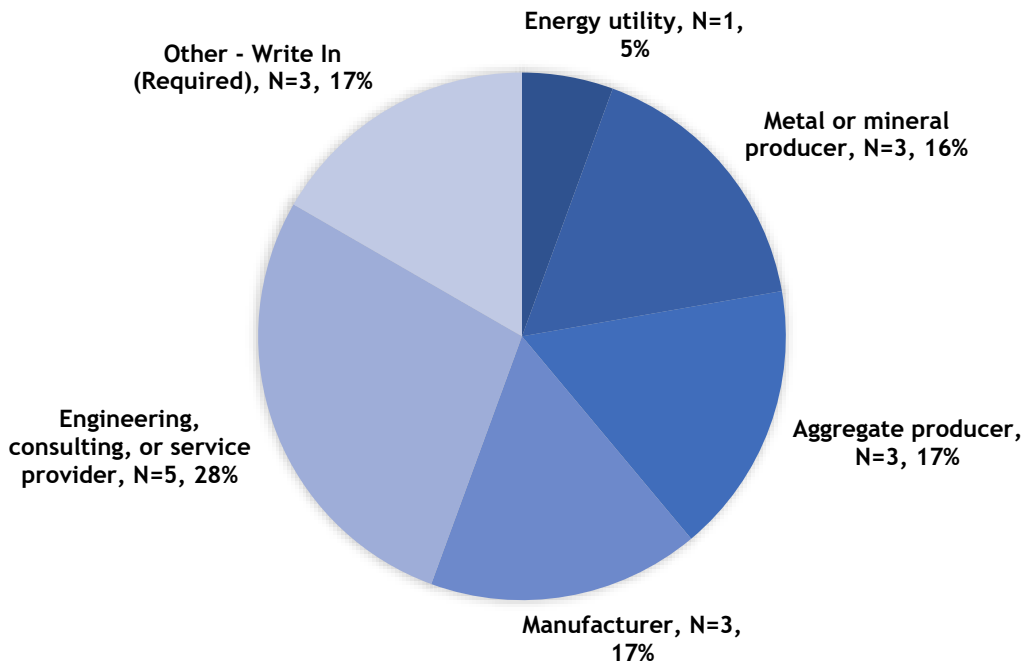




Transportation and Colorado's Natural Resources Industry

In partnership with the Colorado Mining Association, CDOT solicited responses from rail-reliant natural resource businesses, including mineral and aggregate products, manufacturers, utility providers, and engineering firms. This survey was administered in June and July of 2017. Survey questions primarily focused on identifying priority issues for the natural resources industry, describing trends and changes in the transport of products throughout Colorado, and identifying the costs of transportation and logistics to these businesses. Overall, 18 responses were received.

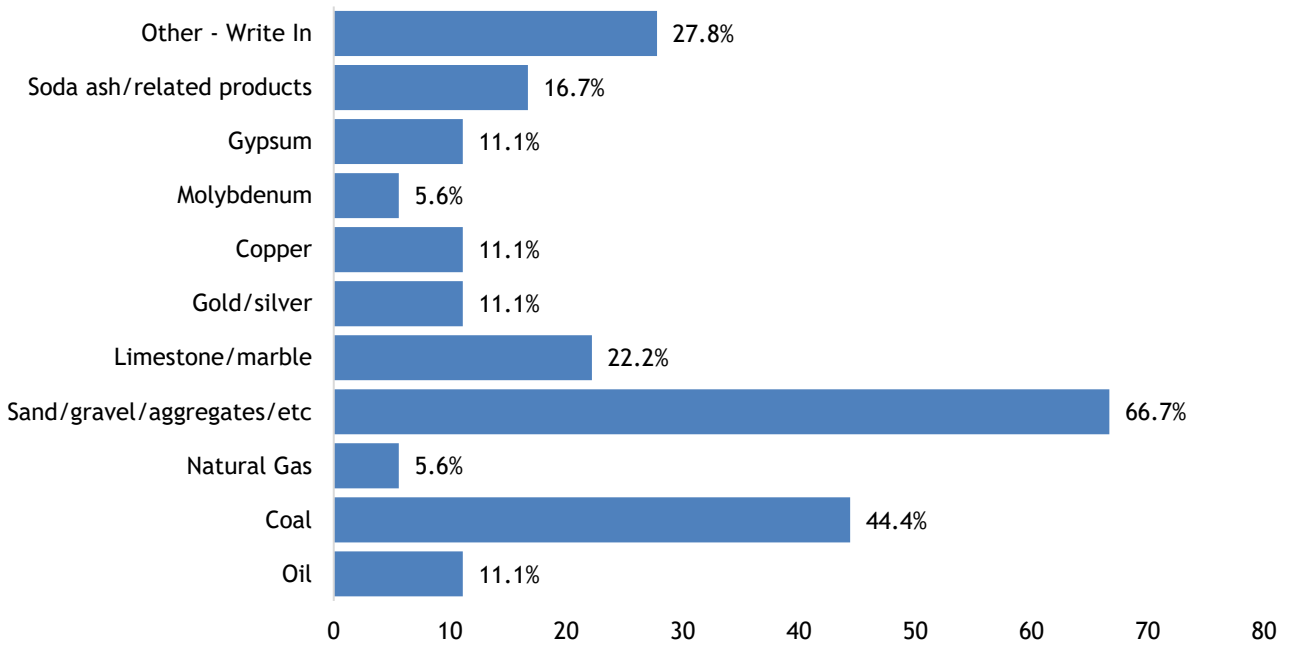
1) What business or organization do you represent? Please select the option that most closely describes your core business. If other, please write in.



Other - Write In Responses
 Asphalt producer, aggregate producer, concrete producer, and utility construction
 Federal government
 University and consulting



2) What primary commodities do you produce, consume, or transport? Select all that apply.



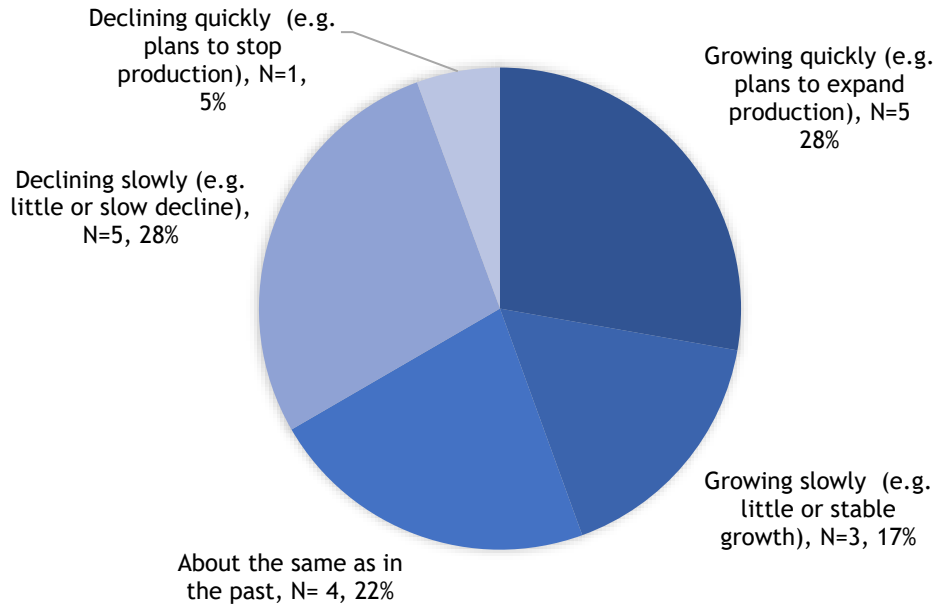
| Value | Count | Percent |
|-----------------------------|-------|---------|
| Oil | 2 | 11.1% |
| Coal | 8 | 44.4% |
| Natural Gas | 1 | 5.6% |
| Sand/gravel/aggregates/etc | 12 | 66.7% |
| Limestone/marble | 4 | 22.2% |
| Gold/silver | 2 | 11.1% |
| Copper | 2 | 11.1% |
| Molybdenum | 1 | 5.6% |
| Gypsum | 2 | 11.1% |
| Soda ash / related products | 3 | 16.7% |
| Other - Write In | 5 | 27.8% |

Other - Write In Responses

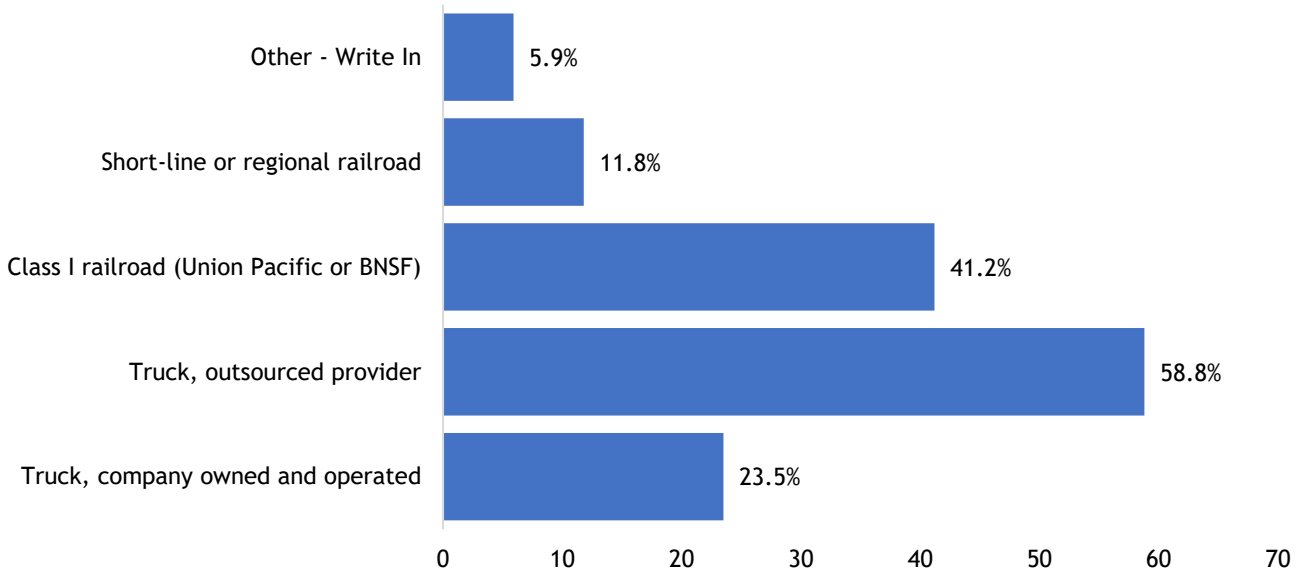
- Asphalt
- Stabilization materials
- Tunneling and underground Construction
- Uranium/vanadium ore



3) What do you think is the general future outlook for production and transport in Colorado for the commodities and products your business produces?



4) What mode of transportation do you primarily rely on to move product in, out, or within Colorado?

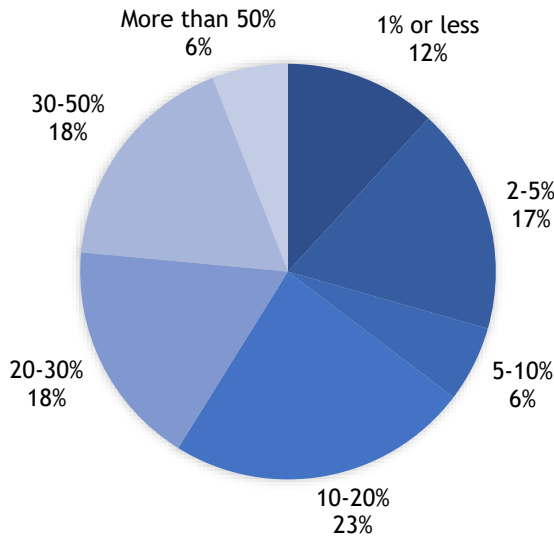




5.) If you are net exporter of natural resource products from Colorado, where does most of your output go and how is it transported? (e.g. what other states or international ports.) Please describe outbound shipments in general terms. This will help CDOT understand what routes and regions are important for moving goods.

| Response | Count |
|--|-------|
| N/A | 3 |
| Colorado and surrounding states. | 1 |
| Exporter going to Midwest and Pacific Rim countries. | 1 |
| OTR Trucks in southwestern CO. | 1 |
| Road and rail | 1 |
| Throughout the US including Florida, Texas, Arizona, Ohio, Missouri, Wyoming | 1 |
| We ship off the West Coast, Oakland, Stockton and Long Beach | 1 |
| Local only | 1 |

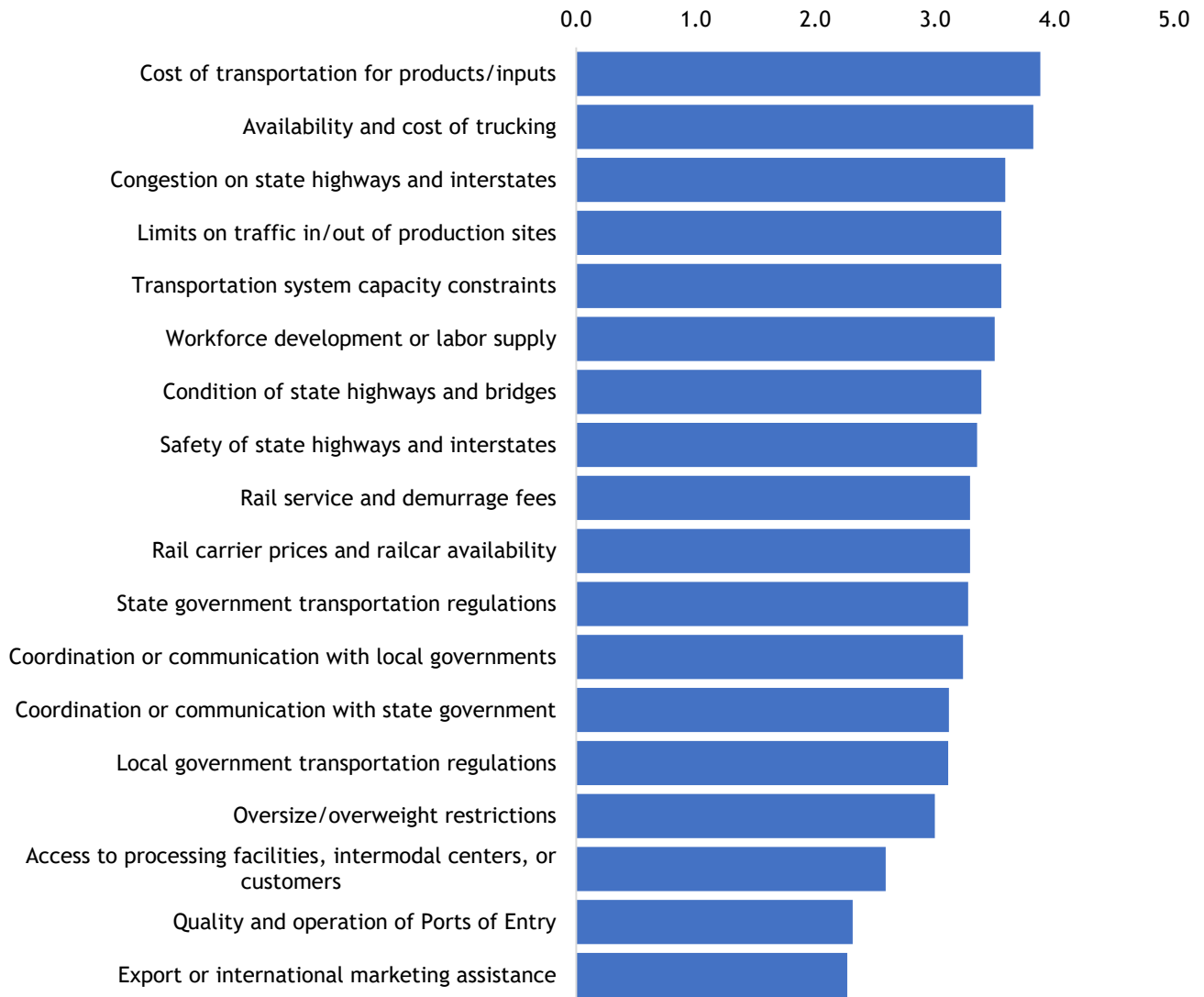
6) Generally, what percentage of your businesses operating costs are related to logistics and transportation? Are those costs increasing or decreasing?



| Comments | Count |
|--|-------|
| Increasing | 3 |
| Increasing rapidly | 1 |
| About the same | 1 |
| The percentage of the cost is really dependent on the destination and can be well over 50% in some cases | 1 |
| This amount is for export sales. Domestic sales would run in the 30% to 50% range depending on the market. | 1 |



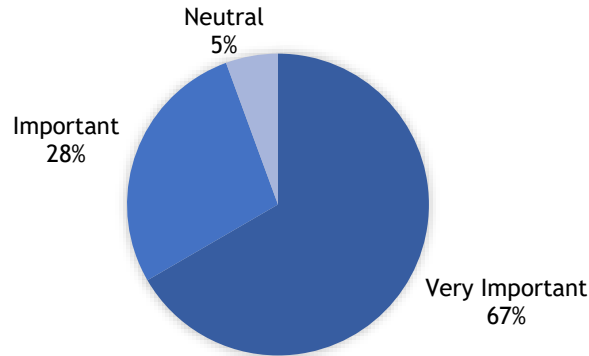
8. What are some of the critical issues and needs that impact your business? Please rate the top transportation related issues facing your industry.



| Comments | Count |
|--|-------|
| Dependence on Rail transportation is continuing to be problematic for the development and expansion of new projects because of costs, inflexibility, and availability of cars. | 1 |
| The most important issue is getting permit approval. The difficulty with local government. | 1 |
| Trucking regulations in Colorado are very restrictive and limit our ability to ship by truck. | 1 |



10) How important do you believe freight and rail transportation considerations are in retaining and expanding Colorado’s mining, energy, and natural resource industries? Can you provide example of businesses that choose to (or choose not to) relocate or expand in Colorado because of transportation issues or costs?



| Comments | Count |
|--|-------|
| All these resources have to be moved or developed by access. The people operating the machines have to want to live where they work. | 1 |
| I cannot provide an example, but I have heard grumblings from contractors. | 1 |
| Lower rail rates would allow us to send CO coal to other states. | 1 |
| Place value commodities are wholly dependent upon access to reasonably rail terms. | 1 |
| Rail costs are the major inhibitor for the ability of Colorado coal to be marketed outside of the region. | 1 |
| The loss of out of State markets is partially due to the cost of rail movement. The rest is due to regulations on utilities as well as inroads from competing fuels. | 1 |

13) Are there any specific projects or state policy changes that would improve your ability to do business in Colorado (e.g, bridge repair, improved weight capacity for a short line railroad, transport restrictions or regulations, or traffic signalization or safety)?

| Response | Count |
|---|-------|
| Increased funding for improvements and more industrial rail/highway hubs | 1 |
| Bridge Repair, Transport restrictions/regulations, signalization and safety. | 1 |
| Free access by both the BN and UP North Fork customers would help. Also the ability to run trucks with second trailers over specific hauls. The right of eminent domain for rail projects is important. | 1 |
| I 25. | 1 |
| No | 1 |
| Overall road repairs and congestion. Folks driving 20 mph over speed limits in construction zones, and terrible traffic control on long term projects (signage/closures/management) | 1 |
| Restrains on obtaining mining permits are ridiculous. | 1 |
| The ability to haul double trailers would make some potential business more economically feasible and open new market opportunities. | 1 |



14) Over the next 20 years, what major risks and disruptors do you think could impact Colorado’s economy and the overall demand for moving goods? Please rank options in order of most likely/more impactful to least likely/less impactful.

| Overall Rank | Item | Score | Total Respondents |
|--------------|--|-------|-------------------|
| 1 | Attention to environmental impacts | 112 | 15 |
| 2 | Growth in Colorado’s population | 110 | 15 |
| 3 | Congestion and capacity constraints on existing infrastructure | 105 | 15 |
| 4 | Shifts in energy sources and prices | 105 | 14 |
| 5 | Adjustments in commodity prices and demand | 88 | 14 |
| 6 | Changes in Colorado’s industry clusters and economic diversification | 86 | 13 |
| 7 | Rising global security concerns | 51 | 13 |
| 8 | Economic/policy changes in neighboring states | 45 | 12 |
| 9 | International trade policy and impacts on trade flows | 41 | 12 |
| 10 | New global and domestic shipping routes | 37 | 12 |

15) As your industry grows and changes in the coming decades, do you think businesses in your region will demand more from Colorado’s transportation infrastructure, demand less, or about the same? Please indicate for each mode.

| | Demand More | About the Same | Demand Less |
|---|-------------|----------------|-------------|
| Long distance freight rail service and capacity | 12 | 5 | 0 |
| Short-line rail service and capacity | 7 | 8 | 2 |
| Passenger and commuter rail service | 6 | 7 | 4 |
| Long-haul truck capacity and reliability | 14 | 3 | 0 |
| Short-haul or parcel/delivery truck service | 13 | 3 | 1 |
| Air cargo and air connections | 5 | 11 | 1 |
| Logistics/industrial-based land use and development | 11 | 5 | 0 |



16.) What are some of the major transportation related challenges, obstacles, or barriers to adequately addressing the needs of Colorado’s mining, energy, and natural resource businesses? Please rank which issues are most critical and least critical for CDOT and planning partners to address.





APPENDIX E

MEETING AND PRESENTATION MATERIALS

Colorado's Rail Plan was guided by input from residents, businesses, and community leaders; freight and passenger rail operators and industry representatives; agency partners; and elected officials. Together, this diverse set of stakeholders provided ideas and insights that helped shape this Rail Plan to position Colorado to proactively address freight and passenger rail issues and priorities.

A Rail Plan Working Group met monthly throughout this planning effort to review key findings and outreach results, develop vision and goal statements, review strategies and recommendations, and provide critical oversight to inform the strategic direction of this Rail Plan. Members included representatives from BNSF Railway (BNSF), Union Pacific Railroad (UP), OmniTRAX, American Short Line & Regional Railroad Association, Iowa Pacific Holdings, RTD, Denver Regional Council of Governments (DRCOG), North Front Range MPO, Pikes Peak Area Council of Governments, Pueblo Area Council of Governments, University of Denver Transportation Program, Colorado PUC, Colorado Rail Passenger Association (ColoRail), STAC, TRAC, I-70 Coalition, and CDOT staff. CDOT acknowledges and appreciates the efforts and ongoing work of our partners and champions who helped make this rail plan possible.

The following compilation includes all presentation materials provided to the Rail Plan Working Group, Transit and Rail Advisory Committee, and Colorado Transportation Commission, Transit and Intermodal Committee.



Colorado Transportation Commission

Transportation Commission, June 20, 2018

 **COLORADO**
Department of
Transportation

COLORADO STATE FREIGHT AND PASSENGER RAIL PLAN

OVERVIEW AND WORKSHOP

Transportation Commission
June 20, 2018

 **State Freight and Passenger Rail Plan**

- Required by Federal Railroad Administration
- Addresses both freight and passenger rail systems
- Strategic and high-level policy document
- Identifies key issues, needs, and opportunities
- Focuses on implementation strategies and actions
- Developed and reviewed with input from key partners

2



Rail Plan Vision and Goals

Colorado's rail systems are a critical component of our multimodal transportation system that enhance mobility and advance economic vitality for all Coloradans.

Ensure that Colorado's rail systems are **SAFE** and **SECURE**

EXPAND and **IMPROVE** Colorado's rail systems for passengers and freight

Provide users and travelers with greater **MOBILITY** and **CONNECTIVITY** options

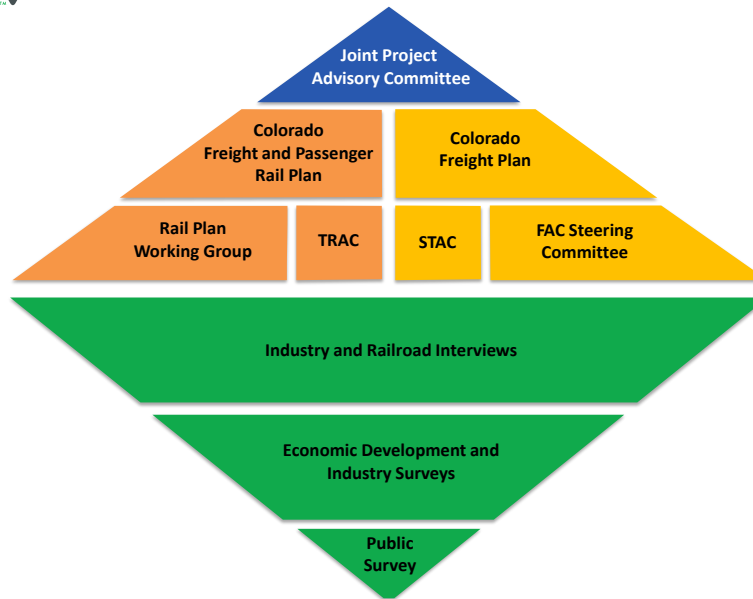
PRESERVE and **MAINTAIN** critical corridors and infrastructure to support Colorado's rail systems

Advance **ECONOMIC VITALITY** and **ENVIRONMENTAL QUALITY** of Colorado's communities and regions

3



Partner and Public Involvement



4



Freight Rail in Colorado

- 14 freight railroads
- 2,684 route miles of track
- 2,523 jobs in freight railroads
- 382,000 jobs in freight-dependent industries
- \$296.3 million in annual direct payroll, spending, and capital investment by Union Pacific and BNSF
- 20 percent of all freight moved in Colorado
- 154 million tons of products and commodities moved
- \$10.3 billion worth of products in, out, and through Colorado

5



Passenger Rail in Colorado

- 1 commuter rail system
- 2 Amtrak routes (+ Winter Park Express seasonal service)
- 8 scenic railroads
- 4.3 million annual RTD commuter rail passengers
- 279,589 Amtrak travelers in and out of Colorado
- 930,000 scenic railroad passengers annually
- \$52 million in Amtrak's economic impact including capital investment, direct jobs, and tourism spending
- \$15 million estimated direct and indirect economic impact for scenic rail

6



Colorado's Key Issues

Cross-Cutting Freight and Passenger Rail Issues

- Funding
- Coordination and joint planning
- Public education and communications
- Land use and development patterns

Critical Freight Rail Issues

- Improvements and planning for rail-served industrial developments
- Targeted freight intermodal connectivity improvements
- Addressing rail service constraints
- Preservation of freight corridors and assets
- Safety and security

Critical Passenger Rail Issues

- Planning for future rail corridors
- Planning for shared use and interoperability
- Targeted passenger multimodal connectivity improvements
- Planning and policy to preserve future capacity
- Addressing quality of life issues

7



Priority Strategies

- Strengthen Rail Coordination
- Address Freight Rail Needs and Issues
- Advance Front Range Passenger Rail
- Integrate Planning Processes
- Enhance Economic Connections

8



Rail Service and Investment Program

- Required element of all state rail plans
- Identifies all potential public or private rail-related improvements or needs
- Ensures eligibility for federal grant opportunities
 - e.g., CRISI, TIGER, BUILD
- Does not commit or allocate any state funding

9



RSIP Studies & Plans

| Study / Plan: Next 4 Years | Funding Source | Estimated Cost | Timeframe |
|--|------------------------|----------------|-----------|
| Front Range Passenger Rail: Phase IA - Define Service Vision / Stakeholder Engagement | State General Fund | \$2.5M | 2018-2020 |
| Front Range Passenger Rail: Phase IB - Service Development Plan | State General Fund (?) | \$6.2M | 2018-2022 |
| Front Range Passenger Rail: Phase II - Formation of Governing Authority | State General Fund (?) | \$0.5M | 2020-2022 |
| Southwest Chief La Junta to Pueblo Extension - Planning | TBD | TBD | TBD |
| Freight Rail Inventory: Determine Capacity and Infrastructure Constraints | TBD | TBD | TBD |
| Shortline Needs Study - Asset Condition Inventory | TBD | TBD | TBD |
| Freight Rail Assistance Program - Feasibility Study | TBD | TBD | TBD |
| Rail elements within larger studies - PELs, BRT, etc. | TBD | TBD | TBD |

10



RSIP Short-term Capital Projects

| Passenger Rail Capital Projects: 4-Year Program | | | |
|--|----------------------------|----------------|-----------|
| | Funding Source | Estimated Cost | Timeframe |
| Southwest Chief Route Stabilization (CO = \$1M FASTER) | TIGER IX | \$26.7M | 2018-2019 |
| Downtown Track & Switches Replacement | RTD | \$15M | 2019-2023 |
| Rail Replacement at Central Corridor | RTD | \$7.5M | 2019-2023 |
| Trinidad Amtrak Station Platform Waiting Shelter | FASTER | \$300K | 2018 |
| Southeast Light Rail Extension – Lincoln to RidgeGate | RTD/FTA Small Starts/Local | \$233M | 2019 |
| North Metro Commuter Rail – DUS to 124 th /Eastlake | RTD | \$836.9M | 2020 |
| Freight Rail Capital Project | | | |
| | Funding Source | Estimated Cost | Timeframe |
| Section 130 Highway-Rail Grade Crossing Improvements | FHWA | \$21.9M | 2018-2022 |

11



Long-term Capital Projects

| Passenger Rail Capital Project - 20 Year Vision | | | |
|--|------------------------|----------------|-----------|
| | Funding Source | Estimated Cost | Timeframe |
| Front Range Passenger Rail: Phase III - Federal Project Development Process (NEPA) and 30% Design | State General Fund (?) | \$150-\$300M | 2022-2024 |
| Front Range Passenger Rail: Phase IV – Final Design and Construction | State General Fund (?) | TBD | 2025+ |
| Southwest Chief Route Stabilization (track & signal improvements) | TBD | \$50M | TBD |
| Southwest Chief La Junta to Pueblo Extension – track, sidings, PTC | TBD | TBD | TBD |
| Southwest Light Rail Extension | RTD | \$180M | TBD |
| Satellite Light Rail and Commuter Rail Maintenance Facilities | RTD | TBD | TBD |
| North I-25 Commuter Rail - Fort Collins to 162 nd & Colorado Station | TBD | \$1.35B | TBD |
| Northwest Commuter Rail – Westminster to Longmont | RTD | \$1.6B | TBD |
| North Metro Commuter Rail – 162 nd /Colorado to 124 th /Eastlake | RTD | \$290M | TBD |
| AGS Feasibility and Advanced Planning – DEN to Eagle County Airport | TBD | TBD | TBD |
| Freight Rail Capital Project | | | |
| | Funding Source | Estimated Cost | Timeframe |
| Section 130 Highway-Rail Grade Crossing Improvements | FHWA | \$3M / year | Annually |

12



Key Implementation Activities

- Ongoing action and partnership on priority strategies
- Creation of Freight Rail Committee of the Freight Advisory Council
- Integration into future planning efforts, including Statewide Transportation Plan, Statewide Transit Plan, and Regional Transportation Plans
- Continued partner involvement through STAC, FAC, TRAC, and SWC/FRPR Commission
- Support for communications and education efforts through Colorado Delivers

13




CDOT Rail Policy Concerns

- Funding decisions
 - Request matching funds for discretionary grants
 - e.g., TIGER grants
 - Request state share of funding for rail projects with statewide significance
 - e.g., Winter Park Platform
- SB 37 Report
 - Rail abandonments, potential rail line acquisitions
- Rail Activity Briefings
 - Significant developments
 - Implementation activities
 - Rail proposals
- Approval of State Freight & Passenger Rail Plan

14



 **COLORADO**
Department of
Transportation

QUESTIONS?

State Freight and Passenger Rail Plan
Project Manager

Sharon Terranova
sharon.terranova@state.co.us
303-757-9753

Transit and Intermodal Committee, January 17, 2018

**Multimodal Freight Plan and
State Freight and Passenger Rail Plan**

Update

T&I Committee
January 17, 2018





Colorado's Freight and Rail Plans

- ▶ **Strategic and high-level** policy documents
- ▶ **Relatable for broad audiences**
- ▶ **Focus on priority strategies and actions**
- ▶ **Implementation oriented**
- ▶ **Living documents with ongoing updates**



2

Involving Stakeholders and Partners

▶ Stakeholder-responsive plans

- Committee representatives directly involved in plan development
 - ▶ *Thank you to our STAC, TRAC, and FAC members*
- Directly involved businesses and economic development representatives
- Built partnerships and connections for future efforts



3



Focusing on Priority Strategies

► Focus on actionable, high priority strategies

- Tactical approach to address critical needs and issues
- Responsive to stakeholders and partners
- Identify short term implementation steps and long term actions
- Provide support and assistance for implementation efforts



4

Identifying Future Investments

Colorado Freight Plan

- Performance-based and stakeholder-driven investment approach
- Allocates NHFP funding to key statewide and regional freight projects
- Specific projects funded under NHFP listed in plan – will be updated regularly

State Freight and Passenger Rail Plan

- Includes anticipated rail-highway crossing projects under FHWA Section 130
- Identifies significant investment needs in freight and passenger rail infrastructure
- Calls for establishing a Freight Rail Assistance Program



5



Communicating with Broad Audiences

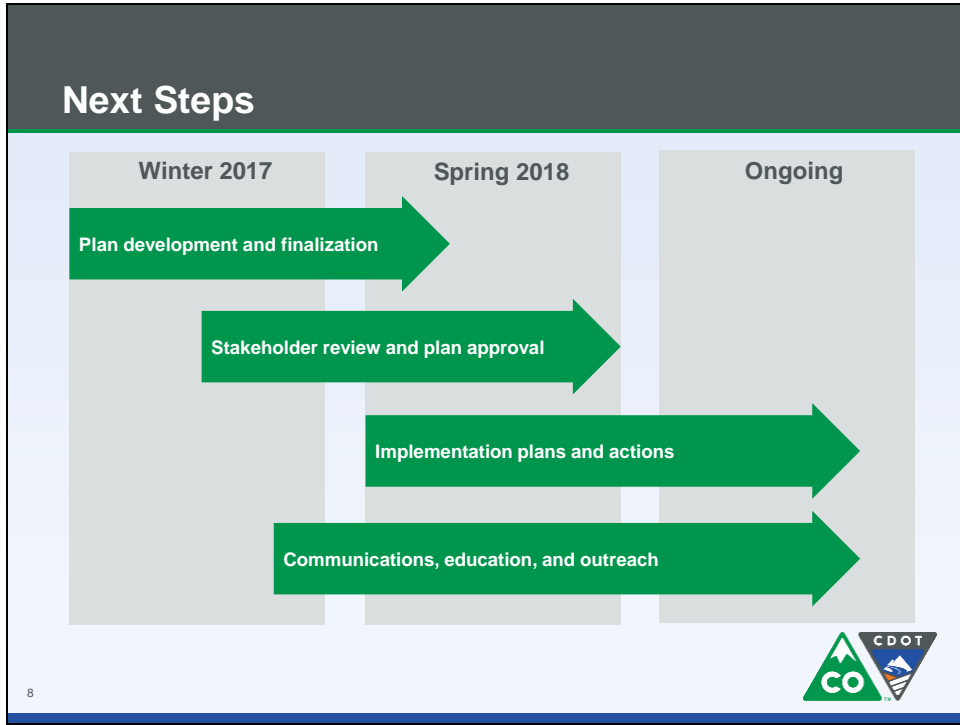
- ▶ Overarching brand
- ▶ Open-source and available to partners
- ▶ Messaging can be customized for various audiences and purposes



6



7



Transit and Rail Advisory Committee

TRAC, January 13, 2017

Multimodal Freight Plan and State Freight and Passenger Rail Plan Development

Transit and Rail Advisory Committee

January 13, 2017



Agenda

- ▶ Joint Project Advisory Committee Guidance
- ▶ Rail Plan Working Group Progress
- ▶ Schedule and Milestones
- ▶ Questions/Feedback

2



Joint Project Advisory Committee (JPAC) Guidance





JPAC Guidance

- ▶ Importance of key messaging and education
- ▶ Engage a wider audience
- ▶ Consider technology and future drivers of change
- ▶ Establish compelling vision and goals

4



Rail Plan Working Group Progress





Rail Plan Working Group Progress

November

- Roles, Responsibilities & Goals
- Data Needs & Sources
- Outreach Concepts

December

- Survey Results
- Economic Analyses Introduction
- Vision & Goals

January

- Issues and Needs
- Stakeholder Outreach
- Finalize Vision

6



Draft Rail Plan Vision

Colorado's rail systems are a critical component of our multimodal transportation system that enhance mobility options and advance economic vitality for all Coloradoans

7





Next Steps



Next Steps

- ▶ **Data**
 - ▶ Compilation & analyses
- ▶ **Discussions**
 - ▶ Stakeholder interviews
 - ▶ Focus groups
- ▶ **Development**
 - ▶ Further refinement of issues and needs
 - ▶ Explore funding and governance models

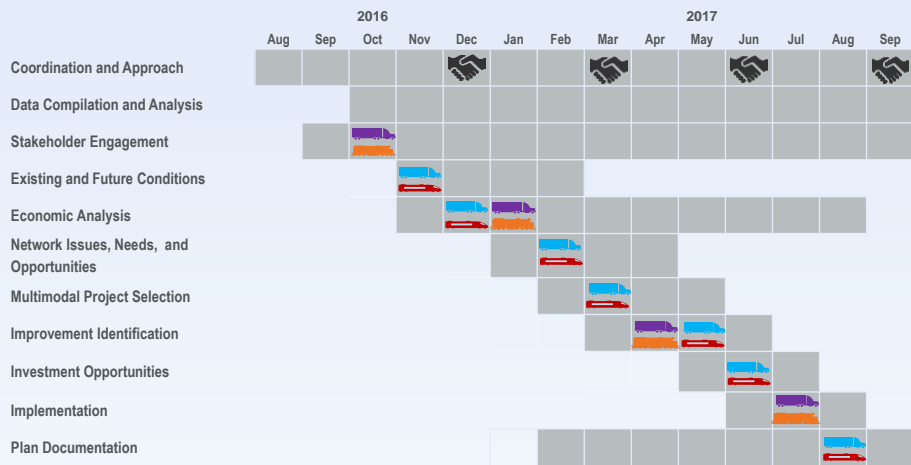




Schedule



Plan Schedule and Milestones



JPAC
 FAC
 TRAC
 MFP WG
 SFPRP WG



TRAC, April 14, 2017



**Multimodal Freight Plan and
State Freight and Passenger Rail
Plan Development**

Transit and Rail Advisory Committee

April 14, 2017



Agenda


- ▶ Rail Plan Vision and Goals
- ▶ Outreach and Engagement Results
- ▶ Identified Issues and Needs
- ▶ Next Steps

2





Vision and Goals

The logo for the state of Colorado (CO) and the Colorado Department of Transportation (CDOT) is located in the bottom right corner of this section.

2017 Rail Plan Vision

Colorado's rail systems are a critical component of our multimodal transportation system that enhance mobility and advance economic vitality for all Coloradans.

The logo for the state of Colorado (CO) and the Colorado Department of Transportation (CDOT) is located in the bottom right corner of this section.

4



Revising Rail Plan Goals

▶ **Guiding Principles:**

- Align rail goals with Statewide Transportation Plan and Multimodal Freight Plan
- Link goals to revised rail vision
- Simplify rail plan goal statements
- Strengthen strategies and recommendations to cover additional detail and topics



5

Proposed 2017 Rail Plan Goals

- ▶ Ensure that Colorado's rail systems are **SAFE** and **SECURE**
- ▶ **EXPAND** and **IMPROVE** Colorado's rail systems for passengers and freight
- ▶ Provide users and travelers with greater **MOBILITY** and **CONNECTIVITY** options
- ▶ **PRESERVE** and **MAINTAIN** critical corridors and infrastructure to support Colorado's rail systems
- ▶ Advance **ECONOMIC VITALITY** and **ENVIRONMENTAL QUALITY** of Colorado's communities and regions



6



Outreach and Engagement



Reaching Economic Development Stakeholders

- ▶ **CDOT jointly sponsored a web-survey with the Economic Development Council of Colorado and the Colorado Office of Economic Development and International Trade**
 - **Purpose** – engage key economic stakeholders and organizations in freight and rail planning
 - **Respondents** – regional and local economic development organizations, chambers of commerce, private businesses, elected officials, regional and local government
 - **Response** – over 300 responses in spring of 2017 from all regions of the state and a wide variety of stakeholders



8



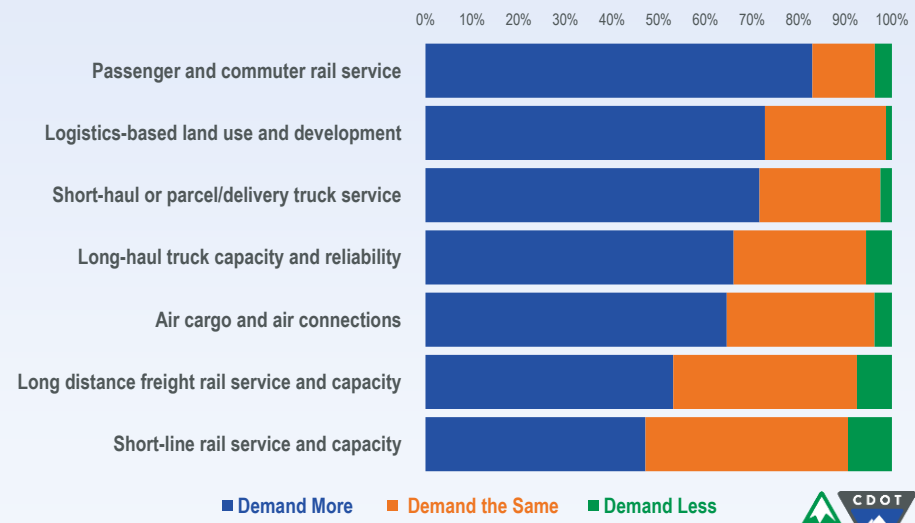
What key factors do you believe most impact business location, expansion, and investment decisions within in your region?

| Percent of responses indicating "Very Important" and "Important" | Colorado Survey | National CEO Survey | More or Less Important in Colorado? |
|--|-----------------|---------------------|-------------------------------------|
| Railroad service | 46.2% | 32.4% | + 13.8% |
| Broadband availability | 91.5% | 79.8% | + 11.7% |
| Accessibility to airport | 69.8% | 58.6% | + 11.2% |
| Proximity to suppliers | 69.0% | 64.3% | + 4.7% |
| Energy costs | 76.6% | 75.3% | + 1.3% |
| Public-private financing | 68.6% | 67.7% | + 0.9% |
| Regulations | 70.4% | 69.8% | + 0.6% |
| Availability of appropriate labor supply | 93.0% | 92.9% | + 0.1% |
| State and local incentives | 75.3% | 75.8% | -0.5% |
| Highway accessibility | 85.9% | 88.0% | - 2.1% |
| Proximity to major markets | 73.7% | 76.3% | - 2.6% |
| Available land and buildings | 80.2% | 83.7% | - 3.5% |
| Inbound/outbound shipping costs | 56.8% | 64.6% | - 7.8% |
| Expedited or fast-track permitting | 64.8% | 74.2% | - 9.4% |
| Corporate tax rate | 57.8% | 78.8% | - 21.0% |

9 National results from Area Development Corporate Survey, 2015



Over the next 20 years, do you think businesses and communities will demand more from Colorado's freight and rail infrastructure, demand less, or about the same?



10





What key transportation and infrastructure opportunities should Colorado focus on in the future?

1. Expanding intermodal connectivity and capacity
2. Intra-state and regional transportation connections
3. Expanding broadband access and availability
4. Relieving road and rail freight bottlenecks
5. Developing passenger rail service
6. Strengthening freight/rail and economic development connections
7. Increasing public and private funding available for freight/rail investments
8. Creating partnerships with freight and rail industry partners
9. Adopting freight/rail, logistics, and vehicle technologies
10. Improving safety for commercial vehicles
11. Improving safety of rail crossings
12. Enabling public-private financing



11

Survey Response Highlights

Nationwide and Charles Schwab located in region due to availability of rail transit. Other businesses tell us the proximity of light rail figured significantly in their location decisions.

Although shared UP/BNSF tracks run through the Grand Valley, lack of access to rail is a common complaint.

Locating near light rail stations is highly desirable, and has been mentioned by many businesses from Blue Spruce Brewery to IQ Navigator an IT firm.

Smuckers chose not to locate in the Colorado Springs region because we don't have a rail-served industrial park. They are one out of approximately 15 we've tracked in recent years.

With our slowed economy, we are facing fewer rail transfers to our area and fear losing the rail service altogether.

We've lost business and jobs due to rail freight cost. Agricultural and perlite are just a couple of examples.

Vestas, Evraz, Rocla, and a dozen other businesses are in Pueblo specifically because of rail. We're vying for renewable energy manufacturing companies, but are disadvantaged due to no rail mass transit to DIA.

Roughly a third of the prospects we've spoken with have asked about rail access, which is difficult (and very expensive) to get, despite two rail lines converging here.

We are long overdue for an I-70 rail system between Denver and Grand Junction. Better rail would serve the Western Slope in countless ways.



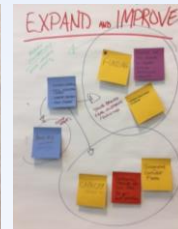
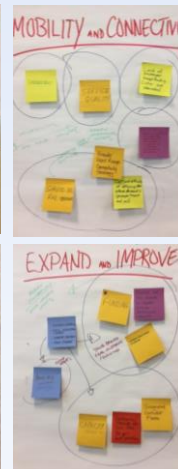
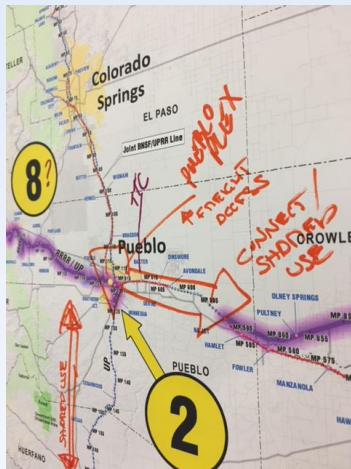
12



Issues and Needs



Working Group Issues Identification



14



Identified Issues and Needs

► Cross-cutting issues

- Funding
- Coordination
- Joint and future planning
- Public education and support



15

Identified Issues and Needs (Cont.)

| | | |
|--|--|--|
| Safety and Security | <ul style="list-style-type: none"> • Land Use, Development, and Zoning • At-Grade Crossings | <ul style="list-style-type: none"> • Trespassing and Theft • Safety Mitigation (PTC, HazMat) • Common Carrier Obligations |
| Expansion and Improvement | <ul style="list-style-type: none"> • Future Corridors and Planning • Rail Served Developable Land/Zones • Local, State, and Federal Coordination | <ul style="list-style-type: none"> • Capacity / Physical Constraints (condition, speed, weight, physical, etc) • Policy, Partners, and Education |
| Mobility and Connectivity | <ul style="list-style-type: none"> • Passenger Multimodal Connectivity • Transit Oriented Development • Shared Use / Interoperability | <ul style="list-style-type: none"> • Freight Intermodal Connectivity • Access to Rail Served Facilities |
| Maintenance and Preservation | <ul style="list-style-type: none"> • Preserve Future Capacity Potential • Funding Limitations • Federal Budget Priorities | <ul style="list-style-type: none"> • Abandonment and Alternative Uses (corridors, lines, facilities, etc.) • Encroachment and Land use |
| Economic Vitality and Environmental Quality | <ul style="list-style-type: none"> • Economic Competitiveness • Future Population Growth • Industry/Export Specific Needs • Tourism and Scenic Railroads | <ul style="list-style-type: none"> • Land Use Compatibility and Access • Community Impacts • Environmental (emissions, contamination) • Quality of Life (noise, vibration) |



16



Identified Issues and Needs (Cont.)

| | Safety and Security | Expansion and Improvement | Mobility and Connectivity | Maintenance and Preservation | Economic Vitality and Environmental Quality |
|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---|
| Funding | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Coordination | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Joint / future planning | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Public education | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Land use and development | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Regional connectivity | | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Capacity and physical constraints | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Rail access | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Preserve future capacity | | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | |
| Intermodal connectivity | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Shared use / interoperability | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Safety | <input checked="" type="checkbox"/> | | | | <input checked="" type="checkbox"/> |
| Security | <input checked="" type="checkbox"/> | | | | |

17



Next Steps





Next Steps

- ▶ **Data**
 - Compilation & analyses
- ▶ **Discussions**
 - Stakeholder interviews
 - Rail stakeholder survey
 - Working Group opportunities workshop
- ▶ **Development**
 - Refine and prioritize issues and opportunities
 - Proceed with draft plan by September 2017



18

TRAC, July 14, 2017




State Freight and Passenger Rail Plan

Update

Transit and Rail Advisory Committee





July 14, 2017





Agenda

- ▶ Rail Plan Progress
- ▶ Outreach and Engagement Results
- ▶ Strategy Development Process
- ▶ Next Steps and Timeline



2

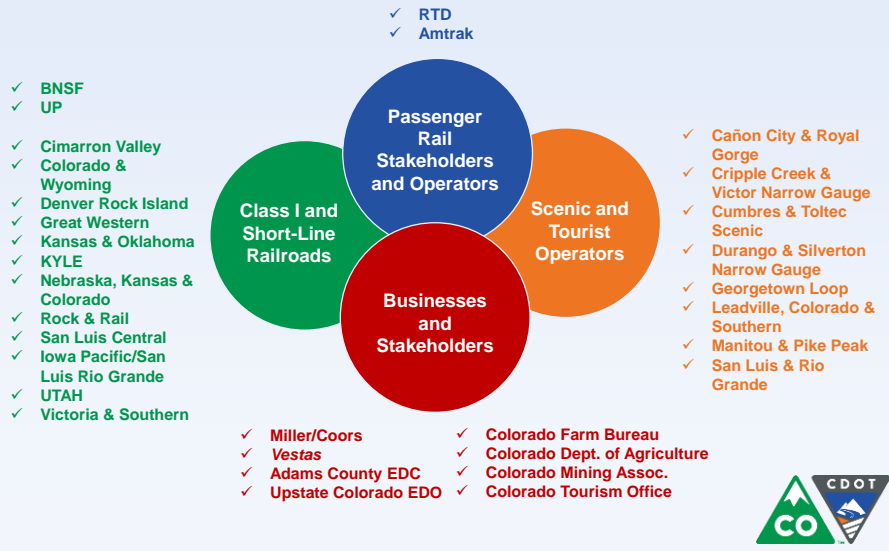
Rail Plan Development



3



Stakeholder Interviews



5

Stakeholder Surveys

Purpose - engage key stakeholders, business, and travelling public in plan development and issues identification

Audience – regional and local economic development organizations, chambers of commerce, private businesses, elected officials, and regional and local governments

Response – over 400 survey responses in spring of 2017 from all regions of the state and a wide variety of stakeholders

Results – survey and interview responses will be integrated into each plan and directly inform priorities and recommendations

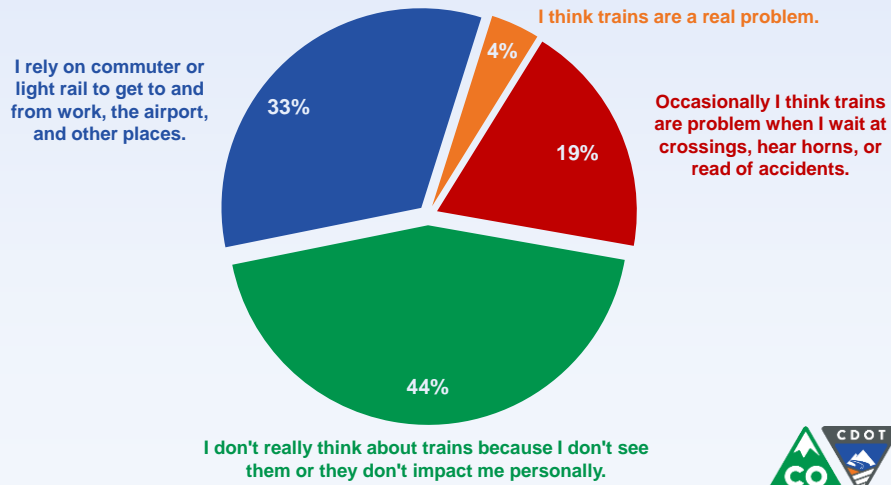


6



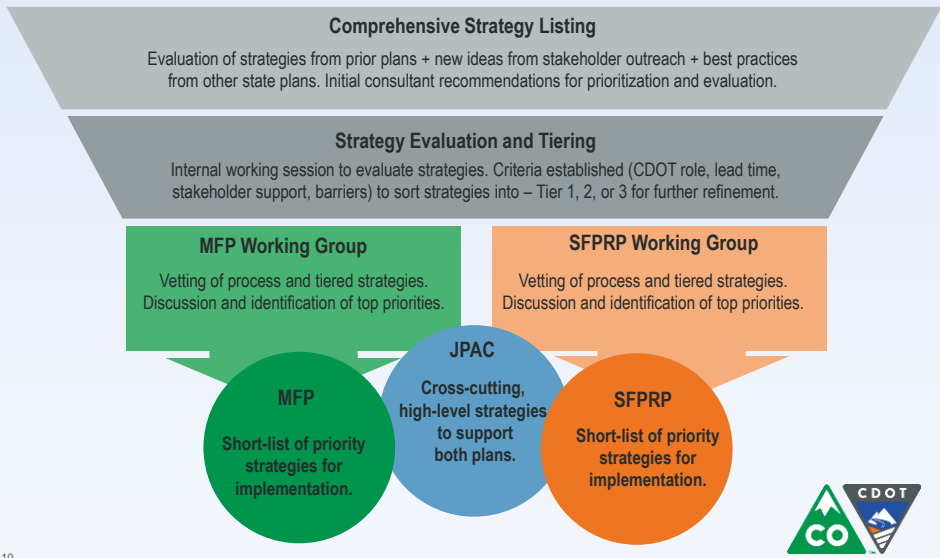
Public Survey - Perceptions

Q. What do you think about trains in Colorado? Select the option that best applies to you.



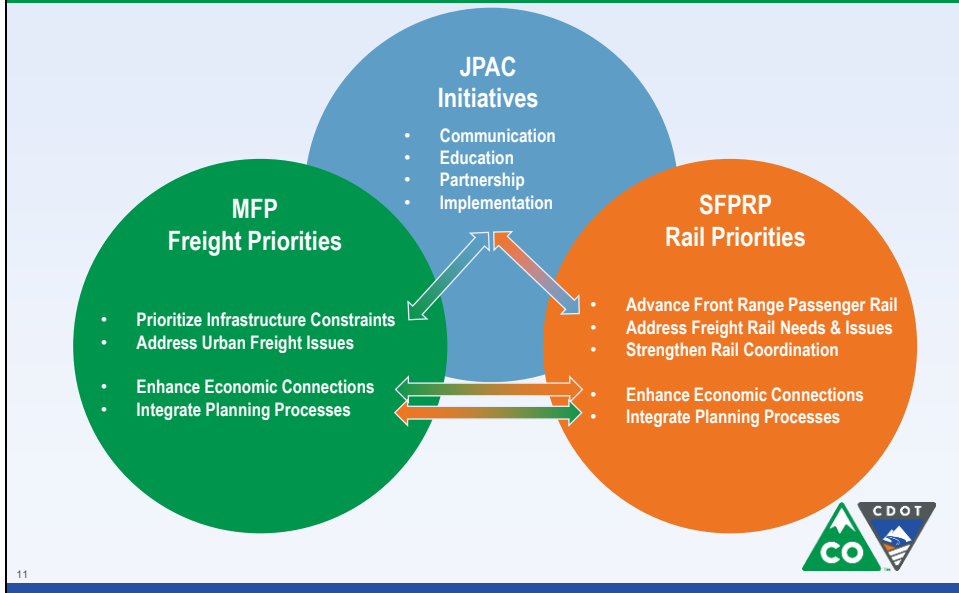
9

Strategy Prioritization Process



10

Priority Strategies



Rail Priority Strategies

| | |
|---|---|
| <p>Advance Front Range Passenger Rail</p> <p>Lead / Support Role</p> <p>Partners</p> <p>Barriers/Constraints</p> <p>Resources/Funding</p> <p>Key Actions</p> <ul style="list-style-type: none"> • Support the Southwest Chief and Front Range Passenger Rail Commission • Integrate findings of prior rail studies to identify future rail corridors • Evaluate future capacity considerations and constraints on corridors • Develop and update priority list of study, mobility, connectivity, and accessibility improvements | <p>Address Freight Rail Needs & Issues</p> <p>Lead / Support Role</p> <p>Partners</p> <p>Barriers/Constraints</p> <p>Resources/Funding</p> <p>Key Actions</p> <ul style="list-style-type: none"> • Develop inventory of short-line rail service and capacity constraints • Design and implement Short Line Assistance Program (e.g. loan fund, grants, incentives, etc.) • Expand SB37 Abandonment process to track additional infrastructure and assets |
|---|---|

12

Rail Priority Strategies

Strengthen Rail Coordination

| | |
|--|--|
| Lead / Support Role  | Partners  |
| Barriers/Constraints  | Resources/Funding  |





Key Actions

- Establish a regular and recurring consultation process between CDOT and rail partners
- Identify annual coordination opportunities
- Identify projects that address infrastructure capacity and mobility constraints
- Coordinate with PUC, railroads, and local planning partners to fund rail crossing improvements
- Monitor Quiet Zones and local concerns
- Provide technical assistance and support to ensure appropriate implementation of PTC



Rail Priority Strategies





Enhance Economic Connections

| | |
|--|---|
| Lead / Support Role  | Partners  |
| Barriers/Constraints  | Resources/Funding  |

Key Actions

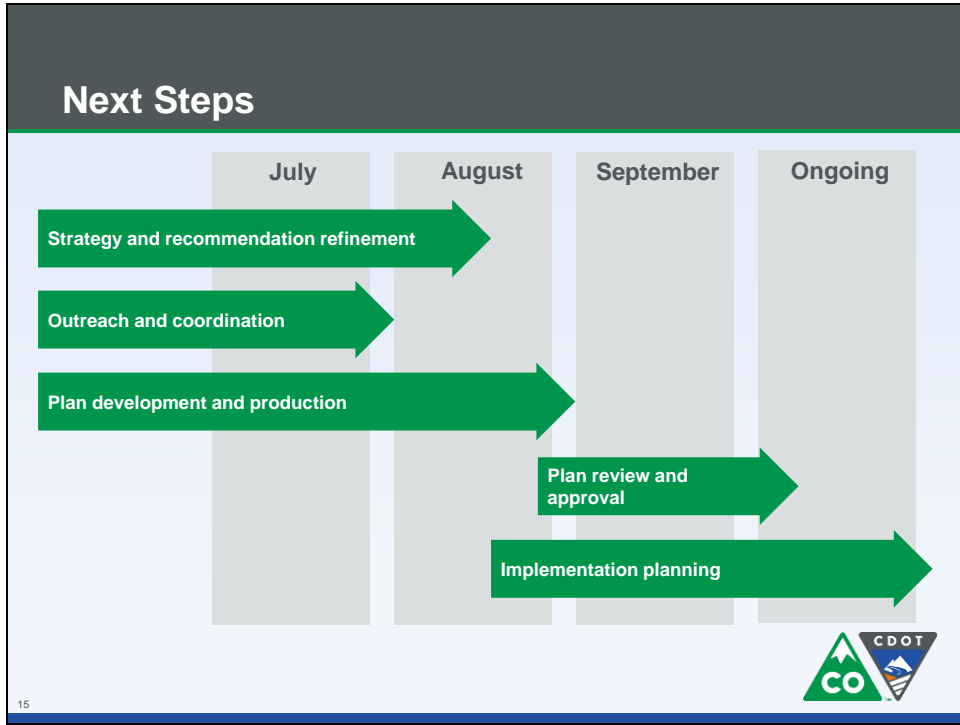
- Develop ongoing coordination processes and communication channels with state, regional, and local economic development agencies
- Work with state and regional economic and education partners to evaluate freight workforce needs
- Quantify regional trade and commodity flows and apply findings to customize transportation plans and strategic projects
- Develop a statewide export and manufacturing transportation strategy

Integrate Planning Processes

| | |
|---|---|
| Lead / Support Role  | Partners  |
| Barriers/Constraints  | Resources/Funding  |

Key Actions

- Create process to educate and inform local planning partners on outcomes of rail studies
- Develop information or guidelines to better integrate local decision-making with statewide rail priorities
- Develop program or process to educate and inform regional planning partners on freight needs and issues
- Consider guidelines or policies that effectively integrate rail issues into CDOT planning and project development processes



TRAC, October 13, 2017

State Freight and Passenger Rail Plan

Update

Transit and Rail Advisory Committee

October 13, 2017



Agenda

- ▶ Key Findings by Goal Area
- ▶ Plan Development Timeline
- ▶ Next Steps - Implementation



2

2017 Rail Plan Goals

- ▶ Ensure that Colorado's rail systems are **SAFE** and **SECURE**
- ▶ **EXPAND** and **IMPROVE** Colorado's rail systems for passengers and freight
- ▶ Provide users and travelers with greater **MOBILITY** and **CONNECTIVITY** options
- ▶ **PRESERVE** and **MAINTAIN** critical corridors and infrastructure to support Colorado's rail systems
- ▶ Advance **ECONOMIC VITALITY** and **ENVIRONMENTAL QUALITY** of Colorado's communities and regions



3

Safe and Secure

Greater Investments Needed to Improve Crossing Safety

- ▶ **2,129** - total public rail crossings in the state
- ▶ **18** - incidents in 2016 resulting in 6 fatalities and 11 injuries
- ▶ **\$3 million** - federal Section 130 crossing safety funding annually
- ▶ **6** - average crossing improvement projects CDOT can complete each year

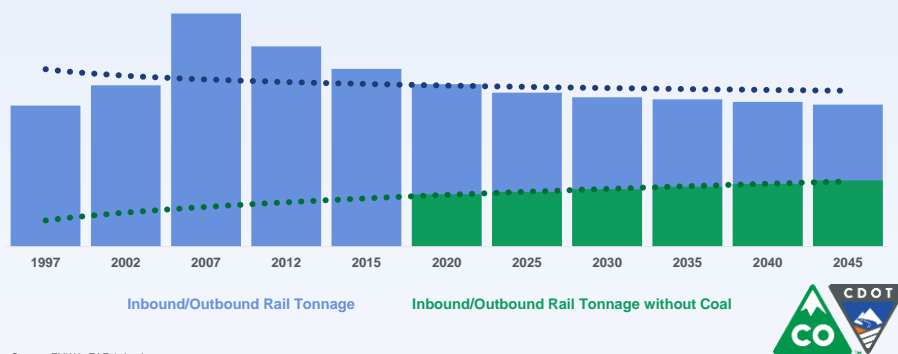


4 Source: Federal Rail Administration, 2017

Expand and Improve

Future Demand for Freight Rail Uncertain

- ▶ **20%** projected decrease in total freight rail tonnage
- ▶ **27%** increase in non-coal traffic
- ▶ Intermodal and natural resource commodity shipments will drive future growth



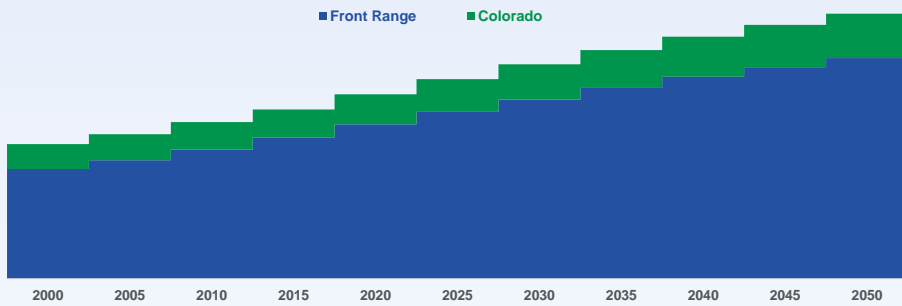
5 Source: FHWA, FAF 4 database



Expand and Improve

Population Growth Will Drive Demand for Passenger Rail

- ▶ 2.7 million new residents by 2045
- ▶ 83% of population will reside along the Front Range
- ▶ 1.6-1.9% increase in vmt on state roadways

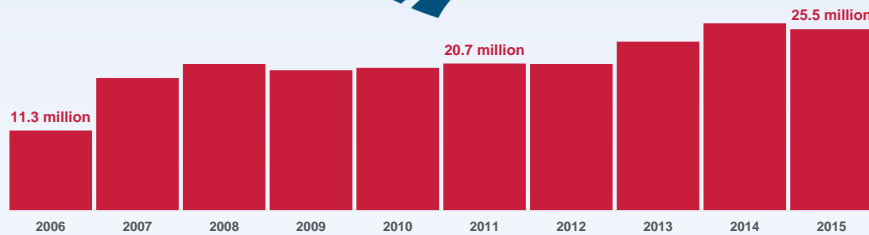
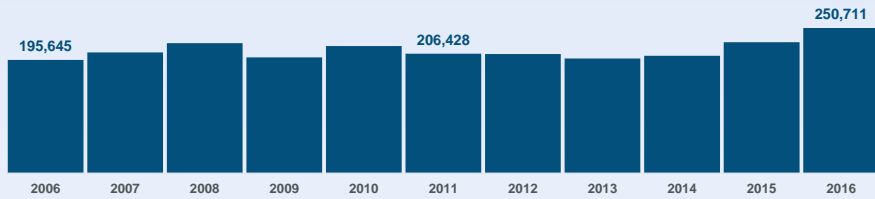


6 Source: Colorado State Demographer, 2017



Mobility and Connectivity

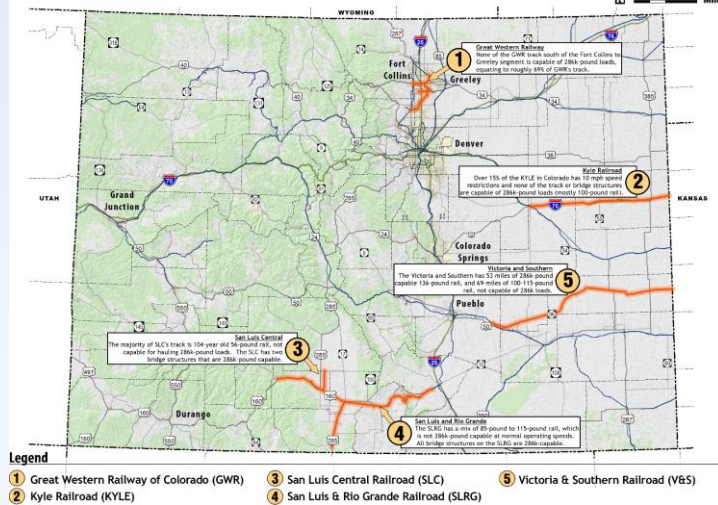
Intercity and Light/Commuter Rail Ridership Growing



7 Source: Amtrak boardings and alightings, 2016 | National Transit Database, RTD unlinked light rail passenger trips

Preserve and Maintain Short Line Needs Significant

Rail Not Capable of 286,000-Pound Loads



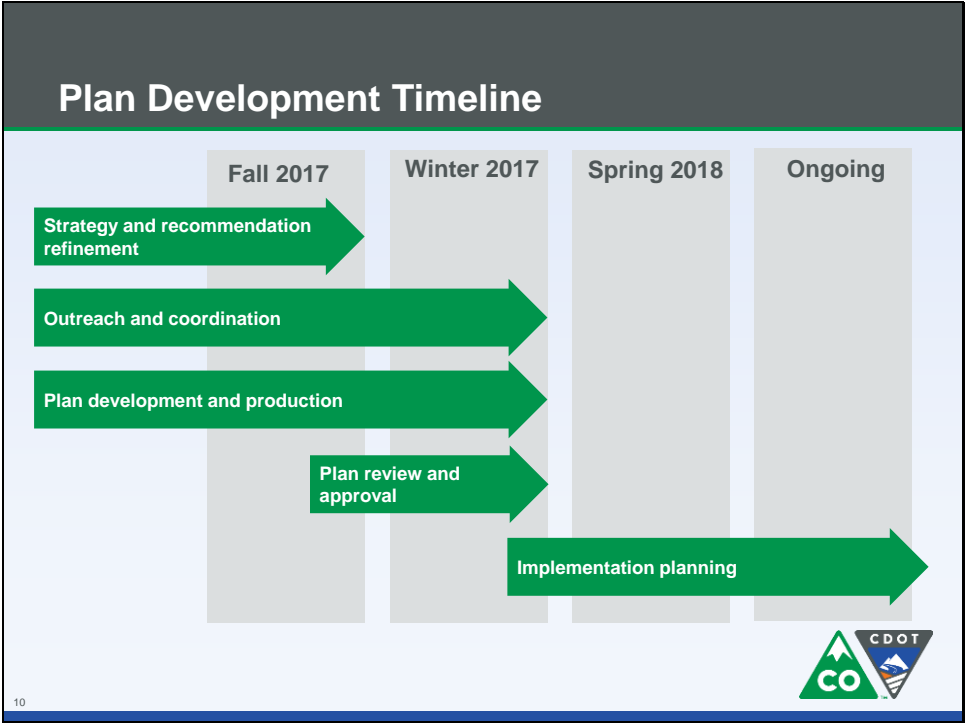
8

Economic Vitality and Environmental Quality Rail Service Benefits Colorado

- ▶ **\$707 million** in direct payroll, spending, and investment by Union Pacific and BNSF
- ▶ **\$52 million** in Amtrak's statewide economic impact including capital investment, direct jobs, and tourism spending
- ▶ **\$15 million** estimated direct and indirect economic impact for scenic rail

- ▶ **4 times** more fuel efficient to move freight by rail than on the highway
- ▶ **470 tons** of freight can be moved by rail on a single gallon of fuel

9 Source: UP and BNSF Fiscal Year Reports, 2016 | Amtrak, State Report 2016 | Cumbres and Toltec 2015 | American Association of Railroads



- ### Next Steps - Implementation
- ▶ Working group will continue to be engaged to guide plan development, review, and communications
 - ▶ Implementation activities to focus on high priority strategies
 - ▶ Regular coordination and communication with rail providers and CDOT
 - ▶ Provide support to Southwest Chief and Front Range Passenger Rail Commission
 - ▶ Coordinate freight rail planning activities through the Freight Advisory Council
- 11
-

TRAC, January 12, 2018



State Freight and Passenger Rail Plan

Update



Transit and Rail Advisory Committee
January 12, 2018



Agenda

- ▶ Plan Highlights and Key Opportunities
- ▶ Communications and Education Strategy
- ▶ Next Steps and Implementation





Plan Highlights



Colorado's Freight and Passenger Rail Plan

- ▶ **Strategic and high-level** policy document
- ▶ Provides **Colorado context**
- ▶ Relatable for **broad audiences**
- ▶ Emphasizes **key issues, needs, and opportunities** for rail
- ▶ Focus on **strategies and actions**
- ▶ **Implementation** oriented



4



Engaging Partners

- Directly involved businesses and industry representatives
- Engaged economic development organizations
- Developed partnerships and connections for future efforts
- Achieved broad geographic representation



7

Engaging Partners – *Coordination is Critical*

- ▶ Significant interest from partners in strengthening coordination and communication
 - Freight railroads
 - Short line railroads
 - Amtrak
 - Scenic railroads
 - Businesses
 - Economic development organizations

- ▶ To capitalize on connections, CDOT must remain committed to ongoing coordination



8



Identifying Future Investments

- ▶ Limited funding for freight and passenger rail improvements
 - Growing **rail crossing safety** needs
 - Rising interest in **rail-served industrial development** opportunities
 - Increasing **maintenance and capacity needs** of short line railroads
 - Broad support for **passenger rail service**
 - Identify **programmed safety projects**
 - Coordination with **economic development organizations**
 - Creation of a **Freight Rail Assistance Program**
 - Support the work of the **SWC/FRPR Commission**

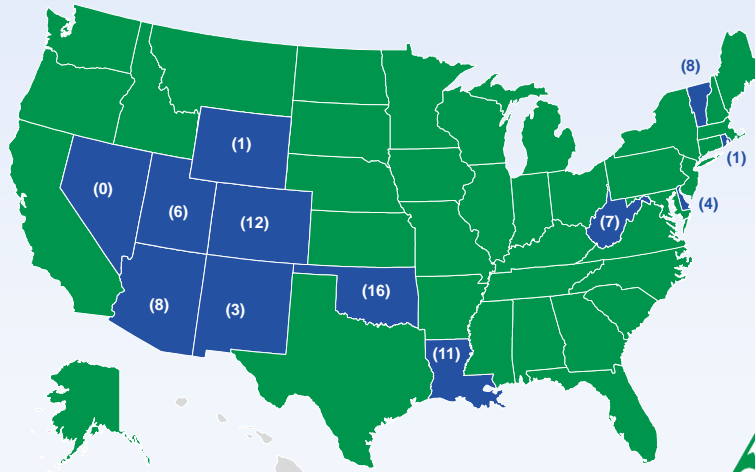


9

Identifying Future Investments - Needs Remain

States with Freight Rail Assistance Programs

States without Dedicated Assistance Programs
(Number of Class II and III Railroads)



10 NCRRP 07-03 State Rail Funding Programs



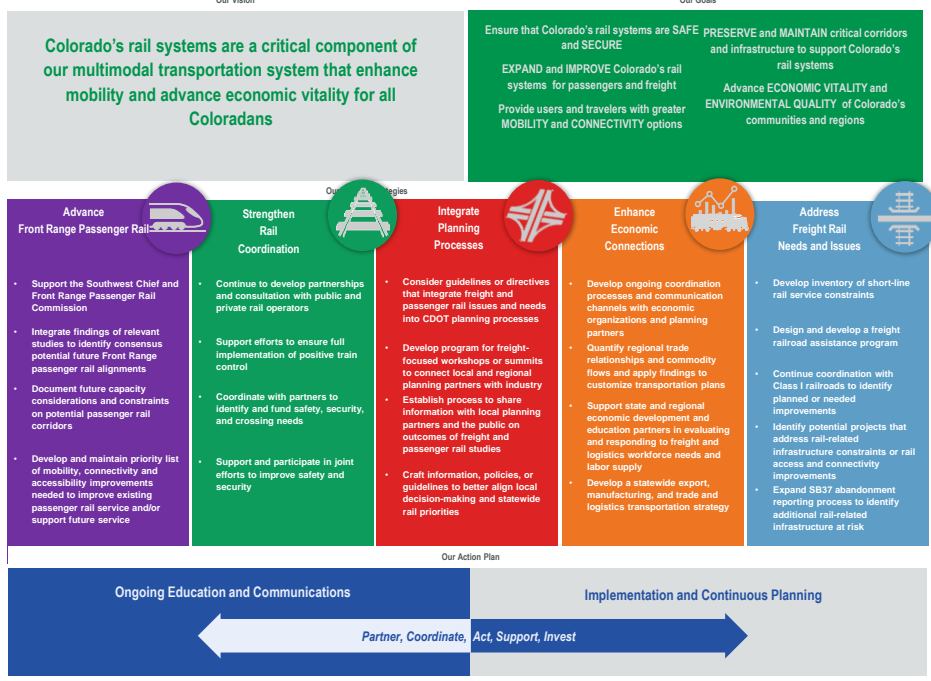
Focusing on Priority Strategies

- Tactical approach to address critical needs and issues
- Responsive to stakeholders and partners
- Develop implementation steps and actions
- Identify future implementation needs (support, partners, funding, research, etc.)



11

Colorado's Rail Plan





Communications and Education



Colorado Delivers

- ▶ Overarching brand
- ▶ Open-source and available to partners
- ▶ Messaging can be customized for various audiences and purposes



14

Current and Potential Partners



15



16





Communications and Education Next Steps

- ▶ Develop website with information, logos, collateral, and media available for download and distribution
- ▶ Encourage partners to use media and collateral in their own organizations' communications
- ▶ Work with organizations, associations, agencies, and businesses to deploy the *Colorado Delivers* brand in engaging and innovative ways
- ▶ Integrate *Colorado Delivers* brand and messaging into future CDOT communications and planning efforts

17



Next Steps





Working Group Members

- Terri Blackmore - North Front Range MPO
- Sara Cassidy - Union Pacific Railroad
- Lee Cryer - RTD
- Sarod Dhuru – BNSF Railway
- Rob Eaton - Amtrak
- Pamela Fischhaber - Public Utilities Commission
- Andy Goetz - Denver University, Transportation Institute
- Steve Gregory - Iowa Pacific / San Luis and Rio Grande
- Matthew Helfant - Denver Regional Council of Governments
- Scott Hoftiezer – CDOT Division of Project Support
- Steve Hurlbert - Winter Park Resort
- Michael Klaus - International Rail Expert
- David Krutsinger – CDOT Division of Transit & Rail
- Bart Mikitowicz – Pueblo County
- Mike Ogborn – American Short Line and Railroad Association
- Kevin Rayes - Pikes Peak Area Council of Governments
- Pete Rickershauser – BNSF Railway
- Vince Rogalski - STAC
- Jim Souby – Colorado Rail Passenger Association
- Jason Wallis – CDOT Division of Transportation Development
- Brian Welch - RTD



19

Review and Next Steps

- ▶ Working Group comments incorporated into current draft
- ▶ TRAC comments due by Jan 19th
- ▶ Adoption by TC and submittal to FRA in March
- ▶ Final publication in April (pending FRA approval)



20



Ongoing Implementation

- ▶ Integration into future planning efforts, including Statewide Transportation Plan, Statewide Transit Plan, and Regional Transportation Plans
- ▶ Support for Colorado Delivers communications and education efforts
- ▶ Continued partner involvement through STAC, FAC, TRAC, and SWC/FRPR Commission



21

TRAC, March 9, 2018



State Freight and Passenger Rail Plan

Update

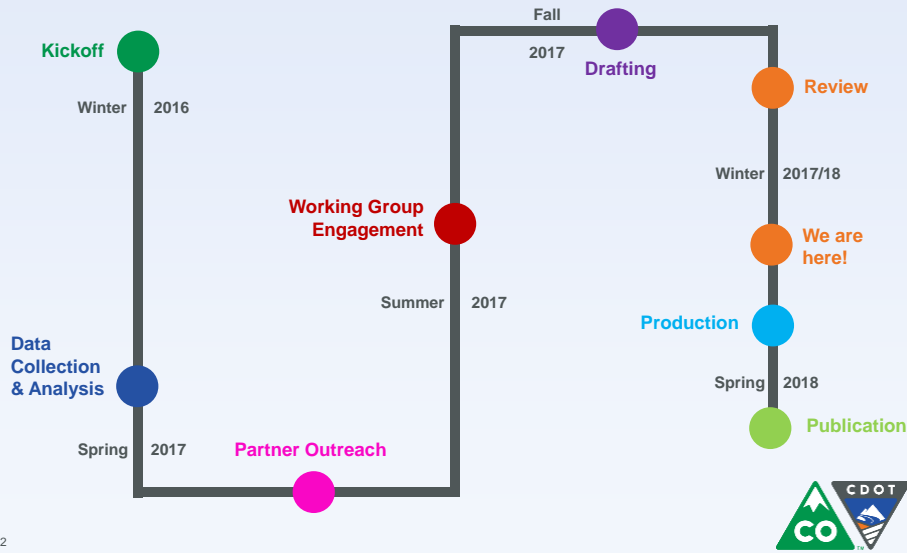


Transit and Rail Advisory Committee
March 9, 2018





State Freight and Passenger Rail Plan Schedule



SFPRP Current Status

- ▶ **Review and comment**
 - Working Group and TRAC comments addressed and/or incorporated into working draft

- ▶ **FRA Preliminary Review**
 - FRA requested significant changes to organization and structure to align with PRIIA guidance
 - PRIIA guidance requires specific plan chapters, headings, sub-headings, content, etc.
 - Prior state rail plans have been approved with wide latitude on plan organization (e.g. NM, KS, MN, GA, etc.)



3



SFPRP Review and Production Period

- ▶ **Final review**
 - Updates to structure of plan requested by FRA are in progress
 - This will not change content or direction of plan, but will change organization and readability
 - More complete development of the 4 and 20-year Rail Service and Investment Program (RSIP)
 - Working group members and TRAC will be asked to provide input on final investment program
- ▶ **Production and development of 'print-ready' plan will follow final review period**



4

SFPRP Next Steps

- ▶ **March 9th TRAC**
 - Status update
- ▶ **March 27th STAC**
 - Presentation on Colorado Freight Plan (CFP) and SFPRP
- ▶ **April 18th TC Workshop**
 - Presentation on CFP and SFPRP
- ▶ **May 11th TRAC**
 - Presentation of revised Rail Service and Investment Plan
- ▶ **May 17th Transportation Commission**
 - Request for adoption / approval of CFP and SFPRP



5



Rail Plan Working Group

Working Group, February 16, 2017



Multimodal Freight Plan and State Freight and Passenger Rail Plan Development

Rail Plan Working Group
February 16, 2017



This slide features a light blue background with icons for a blue passenger train, a green truck, an orange freight train, and a red airplane. The title is in green, and the text below is in grey. Logos for Colorado (CO) and the Colorado Department of Transportation (CDOT) are in the bottom right.

Agenda

- ▶ State Freight and Passenger Rail Plan Framework
 - Vision
 - Goals
 - Measures





Plan Building Blocks



Freight and Passenger Rail Vision

Colorado's rail systems are a critical component of our multimodal transportation system that enhance mobility options and advance economic vitality for all Coloradans



Freight and Passenger Rail Goals (2012)

- ▶ Create a **balanced** transportation system utilizing **cooperative land use planning** to create **intermodal connectivity** and accessibility without compromising existing service and infrastructure
- ▶ Provide for the **safety** of people, infrastructure, and goods
- ▶ **Expand rail infrastructure** and freight and passenger rail services to meet future demand through strategic investments which include **public-private partnerships**
- ▶ Promote through **education** the **energy efficiency, environmental, and economic benefits** of freight and passenger rail transportation throughout the state
- ▶ Use the efficiencies of freight and passenger rail to develop **livable communities** which enhance **economic growth** throughout the state



Example Rail Goals (WA)

- ▶ Support the state's **economic competitiveness and economic viability** through strategic freight partnerships.
- ▶ **Preserve the ability** of the state's freight rail system to efficiently serve the needs of its customers as well as **preserve the potential** of the system in the future.
- ▶ Coordinate the freight rail system **capacity increases** to improve mobility, reduce congestion, and meet the growing needs of the state's freight rail users, when economically justified.
- ▶ Take advantage of freight rail's modal **energy efficiency** to reduce the negative **environmental impacts** of freight movement in the state.
- ▶ Address the **safety and security** of the freight rail system and make enhancements, where appropriate.
- ▶ Encourage **livable communities** and family-wage jobs through the freight rail system and its improvements.





Example Rail Goals (MA)

- ▶ **Maintain** the Commonwealth's rail system.
- ▶ **Expand** the rail system and its **capacity** to accommodate growth in freight and passenger demand
- ▶ Provide a rail system that is **environmentally and financially sustainable**
- ▶ Improve **intermodal connectivity** for both passenger and freight rail facilities and **coordination** between rail system users
- ▶ Improve the rail system to support sustainable **economic growth** throughout the state and enable Massachusetts to compete in the rapidly changing global economy
- ▶ Enhance the **safety and security** of the rail system



Updates to Rail Goals

- ▶ **Should we consider other concepts...**
 - Agency agility or responsiveness?
 - Mobility, security, etc?
 - Preservation, partnerships, etc?
 - Businesses, travelers, tourists?
- ▶ **Can we effectively communicate these goals and their importance?**
- ▶ **Do these goals adequately capture future needs and issues?**
- ▶ **Are these goals measurable and attainable?**





Example Rail Goals (Brainstorm)

- ▶ ...
- ▶ ...
- ▶ ...
- ▶ ...



Working Group, March 16, 2017



Multimodal Freight Plan and State Freight and Passenger Rail Plan Development

Rail Plan Working Group
March 16, 2017









Agenda

- ▶ **Freight and Passenger Rail Plan Goals**
 - Recommended goals

- ▶ **Economic Analysis and Engagement Activities**
 - Overview of preliminary results

- ▶ **Identifying Critical Issues and Needs**
 - Group discussion of issues by goal area

2



What Are Our Goals for Freight and Passenger Rail?





State Transportation Plan Goals

- ▶ **SAFETY:** Move Colorado toward zero deaths by reducing traffic-related deaths and serious injuries.
- ▶ **MOBILITY:** Improve mobility and connectivity with a focus on operations and transportation choice.
- ▶ **ECONOMIC VITALITY:** Improve the competitiveness of the state economy through strategic transportation investments.
- ▶ **MAINTAINING THE SYSTEM:** Preserve and maintain the existing transportation system.



Multimodal Freight Plan Goals

- ▶ Improve the **SAFETY** of the Colorado Freight System
- ▶ Improve the **MOBILITY** of the Colorado Freight System
- ▶ Improve the **ECONOMIC VITALITY** of the Colorado Freight System
- ▶ Improve **MAINTENANCE** of the Colorado Freight System
- ▶ Improve **SUSTAINABILITY** and reduce **ENVIRONMENTAL** impacts of freight movement





Rail Plan Goal Guidelines

- ▶ **Purpose:**
 - Develop recommended goal language for review by rail working group

- ▶ **Guiding Principles:**
 - Align rail goals with Statewide Transportation Plan and Multimodal Freight Plan
 - Simplify rail plan goal statements
 - Link goals to revised rail vision
 - Strengthen strategies and recommendations to cover additional detail and topics



2017 Rail Plan Vision

Colorado's rail systems are a critical component of our multimodal transportation system that enhance mobility and advance economic vitality for all Coloradans.





Proposed 2017 Rail Plan Goals

- ▶ Ensure that Colorado’s rail system is **SAFE** and **SECURE**
- ▶ **EXPAND** and **IMPROVE** Colorado’s rail system for passengers and freight
- ▶ Provide users and travelers with greater **MOBILITY** and **CONNECTIVITY** options
- ▶ **PRESERVE** and **MAINTAIN** critical corridors and infrastructure to support Colorado’s rail systems
- ▶ Advance **ECONOMIC VITALITY** and **ENVIRONMENTAL QUALITY** of Colorado’s communities and regions



DTR Guiding Principles for Transit and Rail Planning

- ▶ CDOT will consider the role of transit in maintaining, maximizing and expanding system capacity and extending the useful life of existing transportation facilities, networks and right-of-way.
- ▶ CDOT will promote system connectivity and transit mobility by linking networks of local, regional and interstate transportation services.
- ▶ CDOT will work towards integrating transit to support economic growth and development, and the state’s economic vitality. CDOT will pursue transit investments that support economic goals in an environmentally responsible manner.
- ▶ CDOT will establish collaborative partnerships with local agencies, transit providers, the private sector and other stakeholders to meet the state’s transit needs through open and transparent processes.
- ▶ CDOT will advocate for state and federal support of transit in Colorado including dedicated, stable and reliable funding sources for transit. Through partnerships, CDOT will leverage the limited transit funds available and seek new dollars for transit in Colorado.





Prior 2012 Rail Plan Goals

- ▶ Create a balanced transportation system utilizing cooperative land use planning to create freight and passenger rail connectivity and accessibility without compromising existing rail service and infrastructure
- ▶ Provide for the safety of people, infrastructure, and goods
- ▶ Expand rail infrastructure and freight and passenger rail services to meet future demand through strategic investments which include public-private partnerships with privately owned service providers
- ▶ Promote through education the energy efficiency, environmental, and economic benefits of freight and passenger rail transportation throughout the state
- ▶ Use the efficiencies of freight and passenger rail to support communities and enhance economic growth throughout the state



What Have We Learned and Heard?





What Do We Want to Communicate to the Public and Decision Makers?

- ▶ *How many jobs are supported by freight and rail?*
- ▶ *How much does the freight system matter to Colorado's economy?*
- ▶ *What role does transportation play in business decisions and economic development?*
- ▶ *What goods (and people) does the system move and what impact/benefit does that have?*
- ▶ *Why does freight and rail matter to... (a resident, a worker, a visitor, an existing business, a new business, etc.)?*





Freight and Rail Employment in Colorado

Direct Employment

- ▶ **40,765 jobs and 16,529 businesses** are tied directly to freight and rail transportation and logistics in 2015
- ▶ **1 in 6 jobs** in the Colorado economy are indirectly reliant on freight transportation in 2015
 - **341,462 jobs and 27,026 businesses**

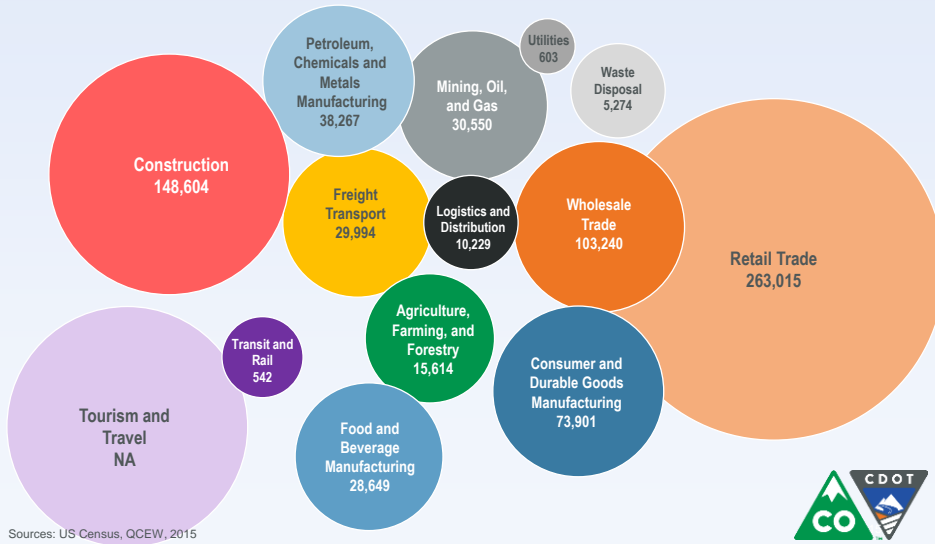
Multiplied Employment

- ▶ **1 export-oriented manufacturing job supports 3 other jobs** in the economy
- ▶ **1 freight rail job supports 4.5 other jobs** in the economy



Sources: US Census, QCEW, 2015 | US Census, Exports from Manufacturing Establishments, 2011 | AAR, 2016

Employment Clusters Trade and Logistics and Freight and Rail Reliant Industries



Sources: US Census, QCEW, 2015





\$155.8 billion or 1/3 of Colorado's economy is generated by freight and freight-reliant industries

Economic Impact of Rail Transport

- ▶ **\$707.1 million** in direct payroll, spending, and investment by Union Pacific and BNSF in Colorado, 2015
- ▶ **\$52 million** in direct payroll, investment, and indirect tourist spending by Amtrak in Colorado, 2016
- ▶ **\$5.3 billion** invested in the Denver Metro area through RTD Fastracks between 2004 and 2016
- ▶ **\$4 dollar return** for every \$1 invested in RTD transit infrastructure over 20 years

Sources: BNSF and Union Pacific, 2015 | CMCA, 2009 | Denver Airport Economic Impact Study, 2013



Economic Impact of Export Manufacturing

- ▶ **\$7.98 billion** in manufactured international exports
- ▶ **\$1.7 billion** in agricultural exports
- ▶ **5,700 Colorado companies** export
 - 87% of exporters are small businesses
- ▶ **41,849 jobs** in the economy depend on exports

Sources: US Census, Foreign Trade Division, 2015



Economic Impact of Tourism and Travel

- ▶ **36 million** overnight visitors to Colorado in 2015
- ▶ **\$19.1 billion** in direct spending by visitors
 - 1st most valuable 'export'
 - 5th largest 'industry'
- ▶ **\$3.2 billion** spent on transportation by visitors to Colorado
- ▶ **7%** of overnight visitors used train service; **44%** used air service
- ▶ **10%** of Colorado tourists visited a scenic railroad

Sources: Colorado Tourism Office, 2015





Transportation Matters to Business

- ▶ *“DIA also was very important to Arrow. They were very interested in efforts to bring non-stop flights between Asia and Denver.”*
- Tom Clark, Metro Denver EDC
Arrow Electronics, one of Colorado’s Fortune 500 companies, is the world’s largest technology distribution providers. Arrow relocated from NY to CO to leverage Colorado’s location and transportation infrastructure.

- ▶ *Over the past 20 years, we’re using twice as many tires for the same mileage. Why? Because the nation’s infrastructure has so many potholes it’s tearing up tires faster than before.*
- FedEx CEO Fred Smith



Sources: Area Development, CEO Survey 2015 | FedEx Testimony House of Representatives, 2017 | Denver Post, 2013

Where Colorado Stands

- ▶ **C+** rating for infrastructure, ASCE 2013
- ▶ **3rd** Best State for Business – CNBC 2016
 - 29th best state for infrastructure, CNBC
- ▶ **18th** in rail tons originated, AAR 2012
- ▶ **25th** DIA cargo movements, ACI 2015
- ▶ **28th** in freight movements originated, BTS 2012
- ▶ **34th** in value of state international exports, Census 2016

Sources: American Society of Civil Engineers, State of Infrastructure, 2013 | CNBC Best States for Business, 2016 | American Association of Railroads, 2012 | Airports Council International, 2015 | Bureau of Transportation Statistics, 2012 | US Census Foreign Trade Division, 2016



Conceptual Supply Chains/Transport Needs

- ▶ **What information and stories would be most interesting?**
 - Beer
 - Ski Trip
 - Construction
- ▶ **What businesses should we try to profile?**
 - Export-oriented manufacturing (Oliver or Reynolds)
 - Recognizable Colorado businesses (Rocky Mountain Chocolate Factory or Celestial Seasonings)
- ▶ **How do we illustrate what moves in Colorado?**
 - Numbers on gross product moved
 - Numbers on freight generation of a family





Stakeholder Outreach and Engagement

- ▶ **Purpose**
 - Engage key stakeholders and organizations in plan development

- ▶ **Information**
 - Gather ideas and insights on trends, challenges, opportunities, and priorities
 - Collect qualitative information to enhance plan and educational messaging

- ▶ **Utilization**
 - Integrate qualitative and quantitative information into plan
 - Develop partnerships and networks



What Are We Asking?

- ▶ **Where is Colorado going?**

- ▶ **What are Colorado's challenges?**

- ▶ **Where are Colorado's opportunities?**

- ▶ **What are your priorities?**

- ▶ **What information can you provide?**



Stakeholder Interviews

- ▶ **Economic Development**
 - Economic Development Council of Colorado
 - Colorado Competitiveness Council
 - Adams County Economic Development Co.
- ▶ **Industry Stakeholders**
 - Colorado Farm Bureau
 - Colorado Department of Agriculture
 - Colorado Mining Association
 - Colorado Petroleum Marketers Assoc
 - Colorado Tourism Office
- ▶ **Freight Reliant Businesses**
 - Miller/Coors /New Belgium Brewing
 - Rocky Mountain Chocolate Factory
 - Albertsons/Safeway
 - Amazon
 - Oliver Manufacturing
 - Reynolds Polymer Technology
- ▶ **Trucking Stakeholders**
 - Celadon Group Inc
 - Tri-State Commodities
 - UPS or FedEx
 - 10-4 Systems
- ▶ **Rail Stakeholders**
 - ColoRail
 - RTD
 - Amtrak
 - Union Pacific and BNSF
 - Iowa Pacific/San Luis Rio Grande
 - Omnitrax
 - Genesee and Wyoming
- ▶ **Air Cargo Stakeholders**
 - Denver International Airport
 - Precision Air Cargo, Inc



What Have We Heard? - Interviews

- ▶ Significant support for *linking transportation and economic development*
- ▶ Strong support for *increased investment in transportation infrastructure and technology*
- ▶ Recognition of *importance of trucking* with acknowledgement of public's *negative perception*
- ▶ Freight rail access and commuter rail are *critical to expand* along the Front Range
- ▶ Growing urbanization along existing corridors may *increase safety and congestion issues* and may force businesses to relocate
- ▶ Limited transportation networks can be a *barrier to business growth* and expansion





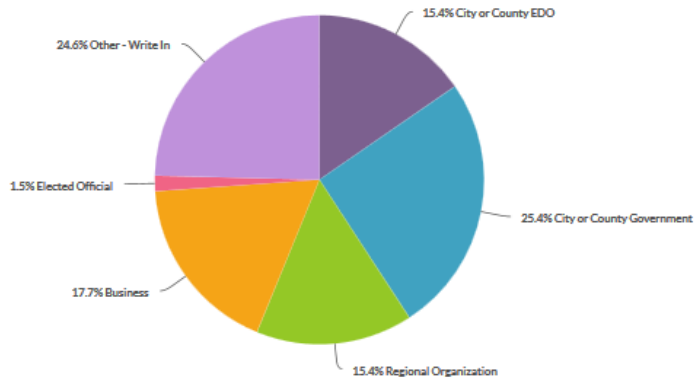
Partner Surveys

- ▶ **Underway**
 - **Regional Economic Development**
 - Championed by OEDIT and EDCC
 - **County Farm Bureaus**
 - Championed by the Colorado Farm Bureau
- ▶ **Planned**
 - **Trucking Industry**
 - CMCA
 - **Passenger Rail**
 - ColoRail
 - **Public**
 - Social media education
 - Brief interest and support surveys



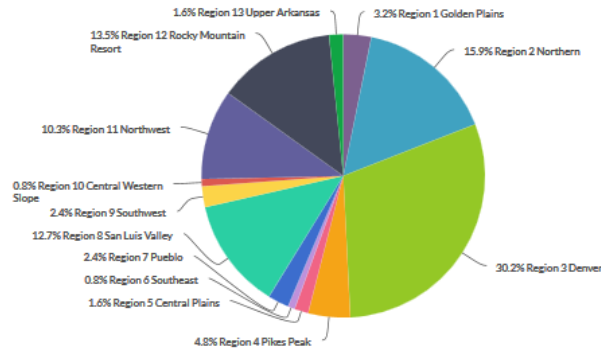
What Have We Heard? – Economic Development Survey

2. What type of organization or business do you represent?



What Have We Heard? – Economic Development Survey

3. What Colorado Planning and Management Region do you primarily operate in? If your organization covers more than one region, please note in the comment box below.



What Have We Heard? – Economic Development Survey (cont.)

6. What are some of the critical issues and needs you hear from businesses in your region? Please identify the top five issues facing your region today. Rank each issue below with 1 being the most important.

| Item | Overall Rank | Rank Distribution | Score | No. of Rankings |
|---|--------------|-------------------|-------|-----------------|
| Workforce development | 1 | | 233 | 67 |
| Broadband availability | 2 | | 208 | 59 |
| Transportation system condition | 3 | | 153 | 49 |
| Regional transportation connectivity | 4 | | 146 | 57 |
| Transportation system congestion | 5 | | 128 | 42 |
| Congestion during peak commuting hours | 6 | | 127 | 38 |
| Distance of commute for employees | 7 | | 120 | 42 |
| Transportation as a barrier to exports/manufacturing/sales growth | 8 | | 103 | 35 |
| Water and sewer infrastructure needs | 9 | | 95 | 32 |
| Transportation system reliability | 10 | | 65 | 26 |
| Cost of transportation for products/inputs | 11 | | 61 | 24 |
| Access to interstates, rail yards, airports, intermodal centers | 12 | | 52 | 20 |
| Interregional passenger rail service | 13 | | 50 | 17 |
| Transportation system safety | 14 | | 44 | 15 |
| Export or international marketing assistance | 15 | | 16 | 6 |





What Have We Heard? – Economic Development Survey (cont.)

21. Given future risks and challenges, what key transportation and infrastructure opportunities should Colorado focus on in the future? Rank each option to suggest what Colorado should focus on immediately. Please explain other opportunities.

| Item | Overall Rank | Rank Distribution | Score | No. of Rankings |
|--|--------------|-------------------|-------|-----------------|
| Expanding broadband access and availability | 1 | | 602 | 78 |
| Intra-state and regional transportation connections | 2 | | 562 | 73 |
| Relieving road and rail freight bottlenecks | 3 | | 534 | 70 |
| Expanding intermodal connectivity and capacity | 4 | | 524 | 71 |
| Developing passenger rail service | 5 | | 493 | 70 |
| Strengthening freight/rail and economic development connections | 6 | | 465 | 68 |
| Increasing public and private funding available for freight/rail investments | 7 | | 455 | 66 |
| Creating partnerships with freight and rail industry partners | 8 | | 392 | 65 |
| Adopting freight/rail, logistics, and vehicle technologies | 9 | | 357 | 64 |
| Improving safety for commercial vehicles | 10 | | 260 | 65 |
| Improving safety of rail crossings | 11 | | 181 | 62 |

Legend: Lowest Rank Highest Rank



What Have We Heard? – Economic Development Survey (cont.)

10. How important do you believe freight and rail transportation considerations are in retaining, expanding, or relocating businesses? Can you provide an example of firms that choose to (or choose not to) relocate or expand in your region because of transportation issues?





What Have We Heard? – Economic Development Survey (cont.)

23. Are there specific zones, sites, or facilities within your region or community that would benefit from improved freight connections or advance planning of transportation? For example, Enterprise Zones, FTZs, intermodal/distribution centers, redevelopment sites, etc. Please describe the location generally, what industry might benefit, and why highway, freight rail, passenger rail, intermodal, or air cargo access is important?



What Critical Issues and Needs Should We Consider?





Identifying Critical Issues and Needs

- ▶ Break into groups
- ▶ Work together within each goal area to identify critical issues, needs, data/information, and potential opportunities
- ▶ Consider 'starter list' of topics; identify others
- ▶ Rotate stations



Identifying Critical Issues and Needs

- ▶ Questions to consider...
 - What issues should Colorado's rail partners respond to and act on in the future?
 - Mark with (S, M, L)
 - What geographic areas or corridors should be considered?
 - Mark up the maps!
 - What issues are most critical to consider within each goal/topic area?
 - Mark with an !
 - What partners or resources are needed to address issues and needs?
 - Mark with (CDOT, Public, Private, Other, etc...)





Working Group, April 20, 2017



State Freight and Passenger Rail Plan Development

Rail Plan Working Group
April 20, 2017





Agenda

- ▶ **Interregional Connectivity Study (ICS)**
 - Overview and key findings

- ▶ **Refining Critical Issues and Opportunities**
 - Cross-cutting issues
 - Priority issues

- ▶ **Next Steps**

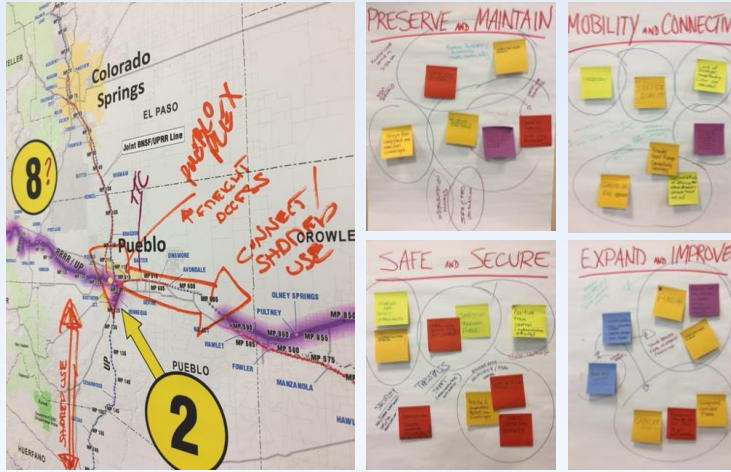


2

Issues and Opportunities



Working Group Issues Identification



4

Identified Issues and Needs

| | | |
|--|--|--|
| Safety and Security | <ul style="list-style-type: none"> • Land Use, Development, and Zoning • At-Grade Crossings | <ul style="list-style-type: none"> • Trespassing and Theft • Safety Mitigation (PTC, HazMat) • Common Carrier Obligations |
| Expansion and Improvement | <ul style="list-style-type: none"> • Future Corridors and Planning • Rail Served Developable Land/Zones • Local, State, and Federal Coordination | <ul style="list-style-type: none"> • Capacity / Physical Constraints (condition, speed, weight, physical, etc.) • Policy, Partners, and Education |
| Mobility and Connectivity | <ul style="list-style-type: none"> • Passenger Multimodal Connectivity • Transit Oriented Development • Shared Use / Interoperability | <ul style="list-style-type: none"> • Freight Intermodal Connectivity • Access to Rail Served Facilities |
| Maintenance and Preservation | <ul style="list-style-type: none"> • Preserve Future Capacity Potential • Funding Limitations • Federal Budget Priorities | <ul style="list-style-type: none"> • Abandonment and Alternative Uses (corridors, lines, facilities, etc.) • Encroachment and Land use |
| Economic Vitality and Environmental Quality | <ul style="list-style-type: none"> • Economic Competitiveness • Future Population Growth • Industry/Export Specific Needs • Tourism and Scenic Railroads | <ul style="list-style-type: none"> • Land Use Compatibility and Access • Community Impacts • Environmental (emissions, contamination) • Quality of Life (noise, vibration) |



5



Identified Issues and Needs

| | Safety and Security | Expansion and Improvement | Mobility and Connectivity | Maintenance and Preservation | Economic Vitality and Environmental Quality |
|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---|
| Funding | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Coordination and planning | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Public education | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Land use and development | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Regional connectivity | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Capacity and physical constraints | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Rail access | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Preserve future capacity | | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | |
| Intermodal connectivity | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Shared use / interoperability | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Safety | <input checked="" type="checkbox"/> | | | | <input checked="" type="checkbox"/> |
| Security | <input checked="" type="checkbox"/> | | | | |

6

Identified Issues and Needs

► Cross-cutting issues

- Funding
- Coordination and planning
- Public education and support



7





Current Capital Funding Snapshot

- ▶ **Public and private rail investment in Colorado (2015-2016)**
 - **\$373.3 million** in capital investment in FasTracks
 - **\$215.1 million** in capital investment and maintenance by UP and BNSF
 - **\$14.4 million** in direct investment by Amtrak in Colorado
 - **\$2.4 million** in CDOT administered Section 130 highway crossing program
 - **\$2-3 million** limited capital state freight and rail grant funding (e.g. Winter Park Express platform, Southwest Chief TIGER)
 - Additional investment by shortline RRs?



8

Funding Priorities

- ▶ **What opportunities should CDOT explore?**
 - Where should we spend limited dollars?
 - What alternative funding sources should we pursue?
 - What should our grant strategies be?



9



Coordination and Planning Opportunities

- ▶ **Land Use**
 - Align with rail strategies
- ▶ **Economic Development**
 - OEDIT/ EDO partnerships
- ▶ **Transportation Studies**
 - CDOT PELs and major investment studies
- ▶ **State, Regional, and Local Coordination**
 - Establishing connections and communications
- ▶ **Public and Private**
 - CDOT and Class I RRs semi-annual coordination meetings
 - Shortline RR coordination?



10

Coordination and Planning Strategies

- ▶ **What opportunities should CDOT explore?**
 - How do we institutionalize coordination?
 - What policies or guidance may CDOT need?
 - What other organizations can play a role?



11



Education and Support Snapshot

58% ...of CDOT/OEDIT survey respondents rated

“Willingness of public and business community to support investments in transportation and infrastructure”

as the first or second most important barrier to addressing the needs of businesses in Colorado



12

Education and Support Opportunities

- ▶ What opportunities should CDOT pursue?
 - Engagement with decision-makers and elected officials?
 - Authorities or advocacy organizations?



13



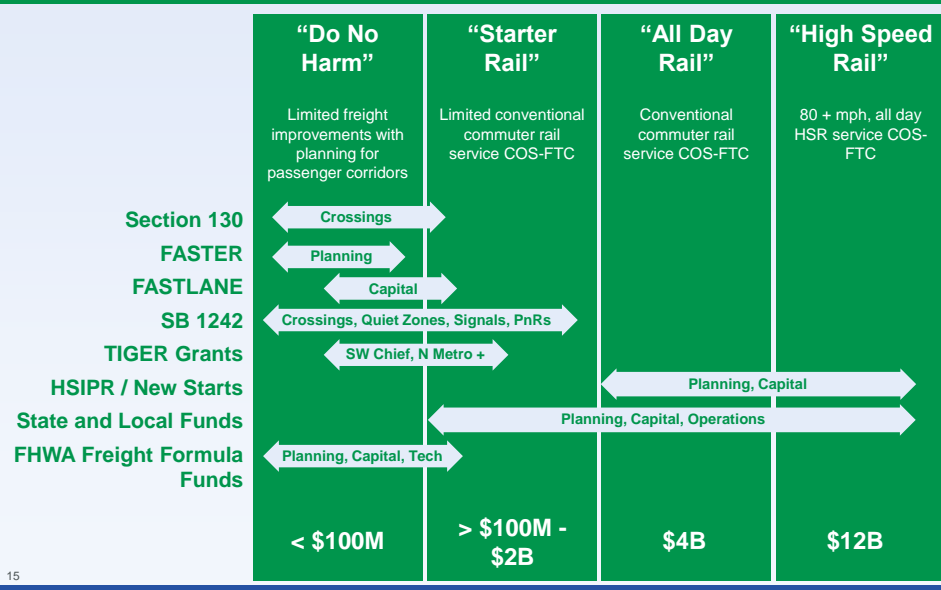
What are your priority issues?

1. Planning for Future Rail Corridors
2. Addressing At-Grade Crossings
3. Planning and Policy to Preserve Future Capacity
4. Planning for Shared Use / Interoperability
5. Educating Public and Decision-Makers
6. Setting State Rail Policy
7. Coordinating Land Use, Development, and Zoning
8. Addressing Rail Service Constraints (condition, speed, weight, physical, etc.)
9. Addressing Quality of Life Issues (e.g. noise, vibration)
10. Transit Oriented Development
11. Targeted Passenger Multimodal Connectivity Improvements
12. Improvements for Rail Access and Rail-Served Sites
13. Planning for Rail Served Developable Land/Zones
14. Targeted Freight Intermodal Connectivity Improvements



14

Future Passenger Rail Corridors



15



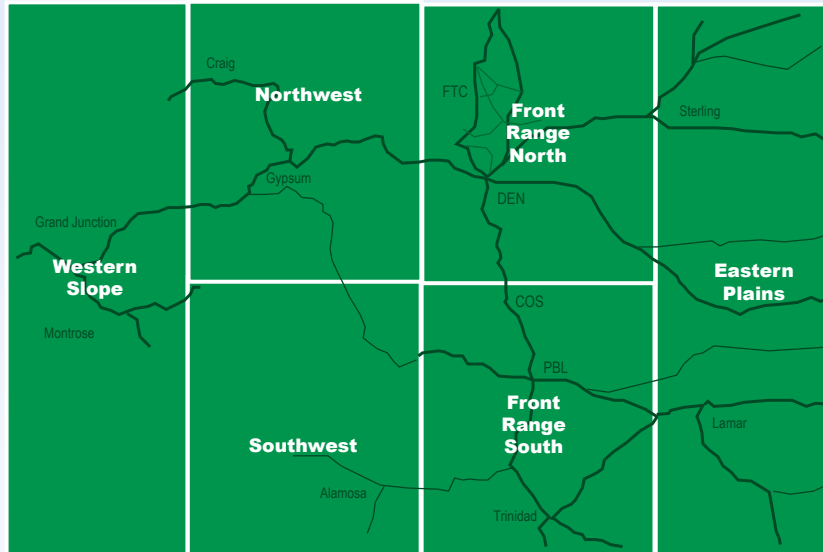
Future Passenger Rail Corridors

- ▶ What opportunities should CDOT explore?
 - What is our preferred passenger rail strategy?
 - What do we need to do to accomplish this vision?



16

Future Freight Rail Corridors



17



Regional Freight Rail Strategies

- ▶ **Should we consider regional strategies?**

- ▶ **What are some priority opportunities in each region?**
 - For example:
 - Preservation
 - Intermodal facilities
 - Connectivity and access
 - Rail industrial / economic development
 - Shared use
 - Capacity constraints
 - Targeted funding



18

Other Future Rail Issues

- ▶ **What opportunities should CDOT pursue?**
 - Short-line / Class 1 railroads
 - “Rail Bank” loan program

 - Scenic railroads / Amtrak
 - Tourism & economic development strategies

 - Additional passenger corridors?



19



Future Preservation Best Practices

- ▶ **At least 11 states** have rail preservation strategies and programs in place, including:
 - Funding programs (grants or loans) for capital improvements
 - Monitoring rail corridors for preservation
 - Supporting public purchase of rail equipment or facilities
 - Providing rail funding as an incentive to businesses to locate or expand in the state
 - Consolidating or developing storage and loading facilities to improve accessibility to rail service
 - Monitoring existing and proposed industrial development
 - Forming Rural Rail Transportation Districts



20

Rail Preservation in Colorado

- ▶ **SB 37 (1997)** - provides CDOT the authority to acquire and preserve right of way. Towner line acquired under this authority.
- ▶ **Policy Directive 1607 (2016)** - identifies state significant rail corridors and directs CDOT to prioritize preservation activities.
- ▶ **Identified priorities**
 - Raton Pass
 - Tennessee Pass Line
 - Fort Collins Branch Line



21





Future Preservation Strategies

- ▶ **What opportunities should CDOT pursue?**
 - What new legislation or authority is needed?
 - What policies or guidance are needed?
 - What coordination is needed?
 - What funding mechanisms are needed?



22

Rail Roles and Responsibilities

| | Funding | Coordination | Education | Legislation | Policies and Guidance | Planning | Preservation | | | |
|--|---------|--------------|-----------|-------------|-----------------------|----------|--------------|--|--|--|
| State Legislature | | | | | | | | | | |
| City & County Elected Officials | | | | | | | | | | |
| CDOT Transportation Commission | | | | | | | | | | |
| Regional Agencies | | | | | | | | | | |
| State, Regional, County, City Staff | | | | | | | | | | |
| Rail Advocacy Groups | | | | | | | | | | |
| Class I RRs | | | | | | | | | | |
| Shortline RRs | | | | | | | | | | |
| Amtrak, RTD, Scenic RRs | | | | | | | | | | |
| Businesses | | | | | | | | | | |
| Freight Stakeholders, Shippers, etc. | | | | | | | | | | |
| CDOT Committees (TRAC, STAC, FAC) | | | | | | | | | | |
| SW Chief/Front Range Passenger Rail Commission | | | | | | | | | | |



23





Next Steps

- ▶ **Next WG Meeting**
 - Late May (TBD)

 - Discussion topics
 - Continue strategy and opportunity identification
 - Funding, implementation and strategic priorities

24



Working Group, May 22, 2017



The slide features a light blue background with several icons: a blue high-speed train on the left, a green semi-truck in the top right, an orange freight train in the middle right, and a red passenger jet at the bottom left. The text is centered and reads: "State Freight and Passenger Rail Plan Development" in large green font, followed by "Rail Plan Working Group" and "May 22, 2017" in smaller grey font. The Colorado and CDOT logos are in the bottom right corner.

State Freight and Passenger Rail Plan Development

Rail Plan Working Group
May 22, 2017





Agenda

- ▶ **Planning vs. Implementation**
- ▶ **Funding Overview**
 - Section 130 Program
 - Other Funding Sources
- ▶ **Refining Critical Opportunities**
 - Passenger Rail Vision
 - Freight Rail Vision
- ▶ **Strategies and Recommendations**
 - Prioritizing Critical Strategies
- ▶ **Next Steps**



2

Planning vs. Implementation





Planning Process

- ▶ **Meet PRIIA requirements**
- ▶ **Establish vision, goals and objectives**
- ▶ **Identify issues and needs**
- ▶ **Consider funding, opportunities, and feasibility**
- ▶ **Prioritize investments**
 - 4-Year Constrained Project List
 - 20-Year Long-Term Project List/Direction
- ▶ **Develop strategies and recommendations**



4

Implementation Needs

- ▶ **Develop targeted and *realistic* strategies and recommendations**
 - What can we accomplish in next 4 years?
 - Focus on most critical priorities
- ▶ **Identify roles and responsibilities**
- ▶ **Leverage or create new partnerships**
- ▶ **Identify resource needs and potential sources**



5



Funding Overview



Current Rail Funding Sources

| FUNDING | AMOUNT | APPLICATIONS | SOURCES |
|--|---------------------------|---|--------------------|
| Federal - Section 130 Program | \$3 million per year | <ul style="list-style-type: none"> Public railway-highway crossing improvements | FHWA |
| Federal - FAST Act Freight Formula Funds | \$8.6 million per year | <ul style="list-style-type: none"> ** Up to 10% for freight intermodal/rail Railroad Revolving Loan & Grant Programs (Shortline Assistance Program) | NHFP |
| State – Discretionary Funds | \$1-2 million per project | <ul style="list-style-type: none"> State and regionally significant projects | FASTER |
| State - Colorado State Infrastructure Bank | \$ N/A | <ul style="list-style-type: none"> Not currently utilized for freight rail applications | COSIB |
| State – Rail Bank Fund | \$ N/A | <ul style="list-style-type: none"> One-time transfers for preservation | State General Fund |



7



Potential Rail Funding

| FUNDING | AMOUNT | APPLICATIONS | SOURCES |
|--|--------------------------------|---|---------------------------------|
| Federal – Competitive Grant Funding | \$1-3 million per year | <ul style="list-style-type: none"> Rail planning and studies Targeted projects to advance starter commuter rail service | TIGER FRA Planning |
| Federal - Order-of-Magnitude New Funding | \$100 million to \$?? billions | <ul style="list-style-type: none"> Corridor extensions (Commuter Rail) System build-out (High Speed Rail) | FTA New Starts FRA HSR Funds |



8

Future Rail Funding

| FUNDING | AMOUNT | APPLICATION | SOURCE |
|-----------------------------------|---|---|-----------------------|
| State – New Funding | \$180 million over 4 or 5 years for transit | <ul style="list-style-type: none"> Statewide Transportation Projects Investment Program / Tier 1 10YR Development Program | SB267 |
| State – New Incremental Funding | \$1-10 million per year | <ul style="list-style-type: none"> Statewide and regionally significant projects | SB 228 or new sources |
| Local – New Discretionary Funding | \$ NA | <ul style="list-style-type: none"> Matching funds for federal grants or state competitive funds Locally funded improvements | Local Funds |



9



Section 130 Program

Scott Hoftiezer, P.E., MBA
RR & Utility Program Manager



Section 130 Program Overview

- ▶ **Created by Congress in 1987 under Title 23 USC**
 - Provides funds for the “Elimination of Hazards” at public railway-highway crossings
 - Linked to significant decrease in fatalities at railway-highway grade crossings
- ▶ **Funded by Federal Highway Administration (FHWA)**
- ▶ **Administered by individual state DOTs**
 - CDOT Division of Project Support
 - PUC involvement



11



Section 130 Program Goal

- ▶ Reduce crash risk of most hazardous public highway rail crossings
- ▶ 2 Types of Upgrades
 - *Crossings with Existing Passive Protection*
 - Install train-activated warning bells, flashing lights, overhead cantilevers, gates & constant warning time circuitry
 - *Crossings with Existing Train-Activated Protection*
 - Upgrade signal equipment, add four-quadrant gates, modernize adjacent highway traffic signals, add a median barrier, etc.
- ▶ Grade Separations/Eliminations



12

Crossing Hazard Index

- ▶ Measure of potential for crashes
 - Predicted number of crashes per year
- ▶ Calculated annually for each public rail-highway crossing
 - Derived from Federal Railroad Administration (FRA)
- ▶ Factors considered in formula:
 - Number of trains, vehicles, main tracks, existing protection, max. train speed, sight distance of driver to tracks
 - # accidents at crossing
- ▶ Diagnostic Evaluation
 - Crossings with highest hazard index value are studied in detail



13



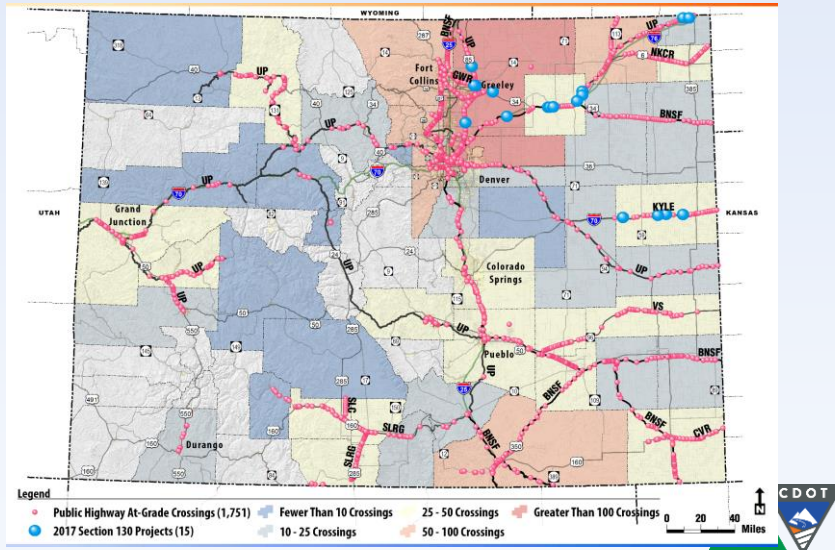
Section 130 Program Project Selection

- ▶ Hazard Index is primary factor used to rank and select projects
- ▶ Final ranking based on combination of:
 - Hazard index, recent accident history and input received
- ▶ Certain rail corridors might be identified as needing upgrades based on increasing rail traffic
- ▶ Opportunity: work with RR's and regions (& locals?) to determine areas of mutual interest for upgrades/investment



14

Statewide Rail Crossings



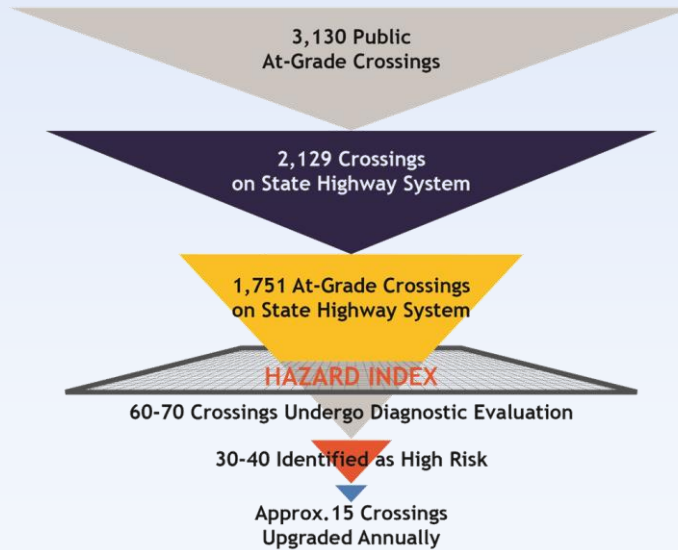


Statewide Rail Crossings

- ▶ Total Crossings: **2,129**
- ▶ At-grade Crossings: **1,751**
- ▶ Grade Separated (Over and Under): **378**
- ▶ Active Warning (lights and gates): **675**
- ▶ Passive Warning (without lights and gates): **1,027**



Crossing Prioritization Process



17



Section 130 Limitations

- ▶ Unlike most other Federal highway funds, local agencies cannot request Section 130 funds
- ▶ Funds cannot be used for RR track improvements or installation of quiet zones
- ▶ Funds may only be used for most critical needs statewide
 - However, counties, cities & towns with jurisdiction over crossings may self-fund safety improvements
 - Local agencies are encouraged to initiate crossing safety improvements using locally available highway safety funding or funds from other sources

18

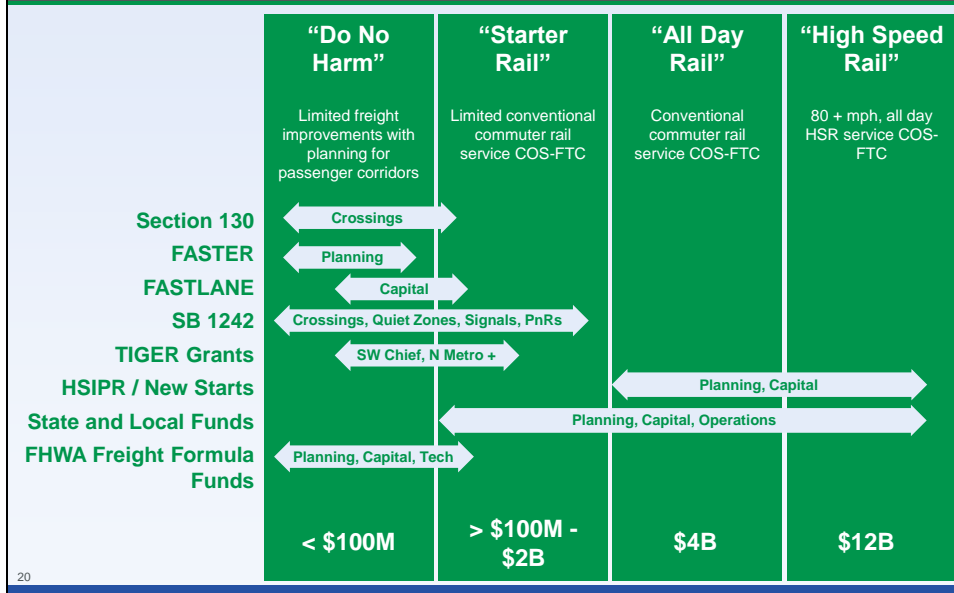


Refining Critical Opportunities



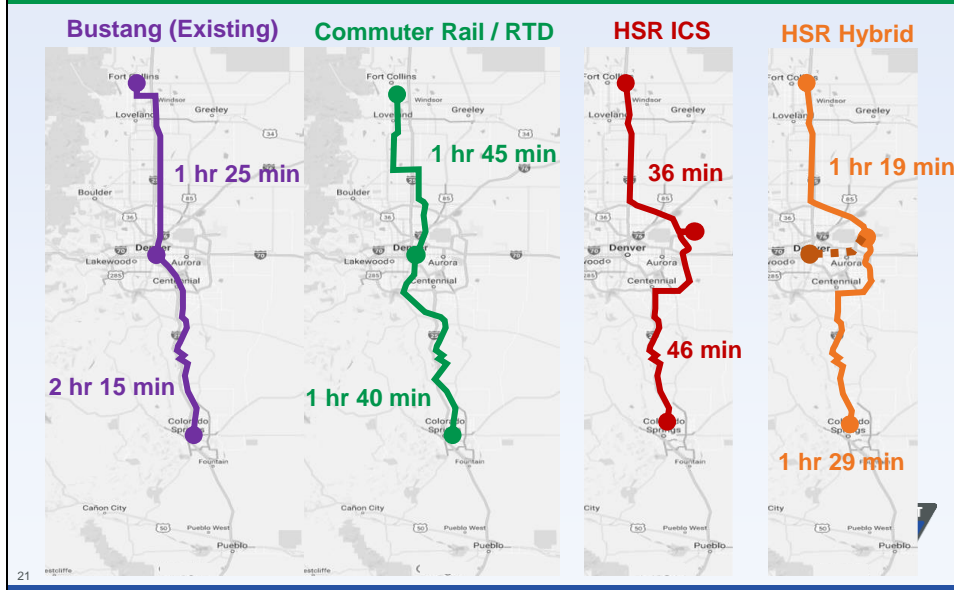


Future Passenger Rail Opportunities



20

Travel Time Options

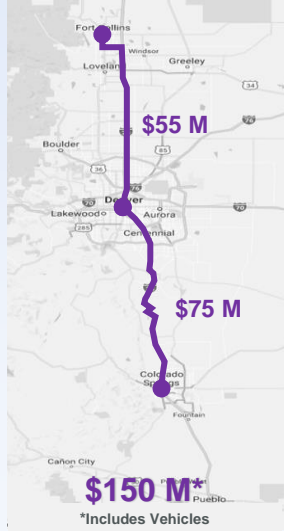


21

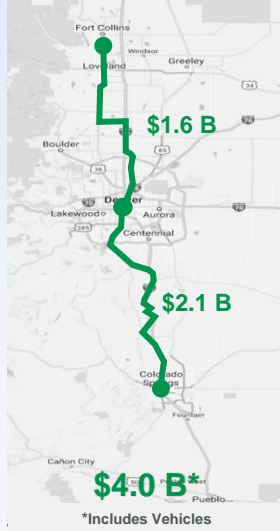


Capital Cost Comparison

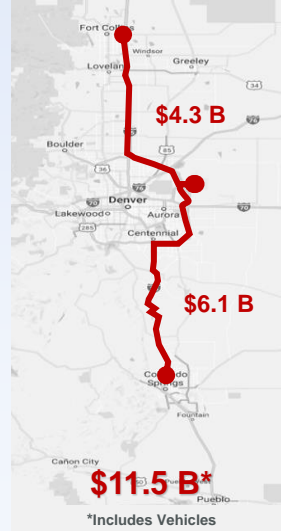
Bustang (w/ future Park & Rides)



Commuter Rail + RTD



High Speed Rail ICS



22

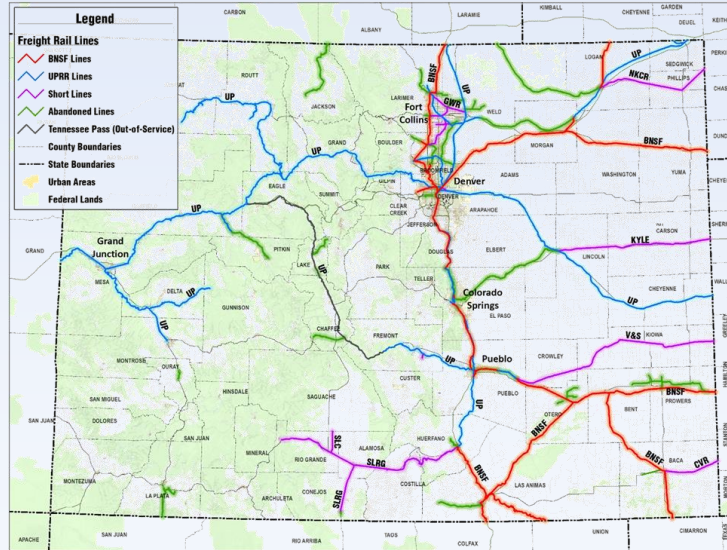
Future Passenger Rail Opportunities

- ▶ **What opportunities should CDOT explore?**
 - What is our preferred passenger rail strategy?
 - What partnerships and agreements do we need?
 - What funding sources are best suited?
 - What projects should we advance first?



23

Future Freight Rail Opportunities



24

Regional Freight Rail Opportunities

- ▶ What is our preferred overall strategy for state investments in freight rail?
- ▶ What are some regional priority issues and opportunities for freight rail?
 - For example:
 - Preservation
 - Intermodal facilities
 - Connectivity and access
 - Rail industrial / economic development
 - Shared use
 - Capacity constraints
 - Targeted funding



25



Strategies and Recommendations



Identified Issues and Needs

| | Safety and Security | Expansion and Improvement | Mobility and Connectivity | Maintenance and Preservation | Economic Vitality and Environmental Quality |
|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---|
| Funding | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Coordination and planning | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Public education | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Land use and development | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Regional connectivity | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Capacity and physical constraints | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Rail access | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Preserve future capacity | | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | |
| Intermodal connectivity | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Shared use / interoperability | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Safety | <input checked="" type="checkbox"/> | | | | <input checked="" type="checkbox"/> |
| Security | <input checked="" type="checkbox"/> | | | | |

27



Identified Issues and Needs

- ▶ **Cross-cutting issues**
 - Funding
 - Coordinated planning
 - Public education and support
 - Land use and development



28

Funding Strategies

- ▶ **2012 recommendations**
 - Position Colorado for future federal funding for freight and passenger-related infrastructure improvements
 - Explore new state and local funding sources for rail-related programs, infrastructure, and services
 - Develop and implement a Short Line Railroad Assistance Program
- ▶ **New recommendations**



29



Coordinated Planning Strategies

► 2012 recommendations

- Facilitate improved communication between communities and railroads
- Coordinate to ensure integration and connectivity with other existing and planned transportation system improvements
- Embrace a performance based evaluation process to coordinate rail alternatives into transportation corridor planning when appropriate

► New recommendations

- Fully integrate rail considerations into major planning and environmental studies in identified rail corridors
- Assist regional planning partners and engineering regions in identifying rail related improvements and projects



30

Education and Communication Strategies

► New recommendations

- Equip CDOT and planning partners with information and education tools to better communicate to the public and decision-makers
- Continue to convene a rail advisory council to guide plan implementation and education
 - Subcommittee of TRAC?



31





Land Use and Development Strategies

► 2012 recommendations

- Facilitate meetings among OEDIT, regional economic development agencies, and representatives of economic sectors to explore opportunities

► New recommendations

- Inform and educate local partners about outcomes of rail plans and studies
- Consider executive orders or planning directives to coordinate decisions in planned rail corridors
- Coordinate with local partners on zoning and development choices in order to preserve right of way
- Identify potential economic development areas that may benefit from rail-served access



32

What Are Our Priority Issues?

- **Planning for Future Rail Corridors**
- **Addressing At-Grade Crossings**
- Planning and Policy to Preserve Future Capacity
- Planning for Shared Use / Interoperability
- **Educating Public and Decision-Makers**
- Setting State Rail Policy
- **Coordinating Land Use, Development, and Zoning**
- Addressing Rail Service Constraints (condition, speed, weight, physical, etc.)
- Addressing Quality of Life Issues (e.g. noise, vibration)
- Transit Oriented Development
- Targeted Passenger Multimodal Connectivity Improvements
- Improvements for Rail Access and Rail-Served Sites
- Planning for Rail Served Developable Land/Zones
- Targeted Freight Intermodal Connectivity Improvements



33



Priority Recommendations

- ▶ What other high priority strategies and recommendations should we consider?

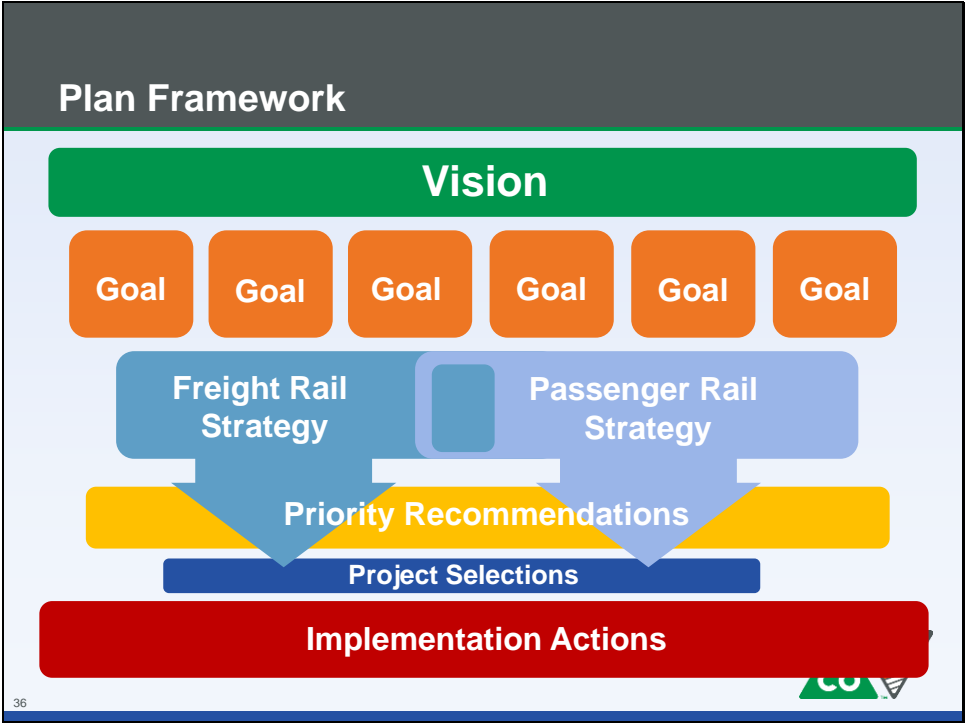


34

Roles and Responsibilities

| Partners and Stakeholders | Funding | Coordination | Education | Legislation | Policies and Guidance | Planning | Preservation |
|--|---------|--------------|-----------|-------------|-----------------------|----------|--------------|
| State Legislature | | | | | | | |
| City & County Elected Officials | | | | | | | |
| CDOT Transportation Commission | | | | | | | |
| Regional Agencies | | | | | | | |
| State, Regional, County, City Staff | | | | | | | |
| Rail Advocacy Groups | | | | | | | |
| Class I RRs | | | | | | | |
| Shortline RRs | | | | | | | |
| Amtrak, RTD, Scenic RRs | | | | | | | |
| Businesses | | | | | | | |
| Freight Stakeholders, Shippers, etc. | | | | | | | |
| CDOT Committees (TRAC, STAC, FAC) | | | | | | | |
| SW Chief/Front Range Passenger Rail Commission | | | | | | | |

35



- ### Next Steps
- ▶ **Next WG Meeting**
 - Friday, June 23rd from 1-3PM (tentative – after STAC meeting)
 - ▶ **Trends and Forecasts**
 - ▶ **Funding Scenarios**
 - ▶ **Project Selection / Draft Investment Plan(s)**
- 37
-



Working Group, October 16, 2017



State Freight and Passenger Rail Plan

Rail Plan Working Group



October 16, 2017

Agenda

- ▶ **What Will The Plan Look Like?**
 - Plan Overview
- ▶ **Are We Focused on the Right Issues?**
 - Discussion of Key Findings and Plan Elements
- ▶ **How Will We Move Forward?**
 - Implementation Approach
- ▶ **What is Next?**
 - Next steps



2



Plan Overview



FRA Plan Requirements

- ▶ Passenger Rail Investment and Improvement Act of 2008 (PRIIA) establishes standard guidance for all state rail plans
- ▶ PRIIA guidance and standard format must be substantially met; though there is some latitude

| |
|--|
| <p>Executive Summary</p> <ol style="list-style-type: none">1. The Role of Rail in Statewide Transportation (Overview)2. The State's Existing Rail System:<ol style="list-style-type: none">2.1. Description and Inventory2.2. Trends and Forecasts2.3. Rail Service Needs and Opportunities3. Proposed Passenger Rail Improvements and Investments4. Proposed Freight Rail Improvements and Investments5. The State's Rail Service and Investment Program6. Coordination and Review <p>Technical Appendix</p> |
|--|



4



Colorado's Rail Plan

- ▶ Colorado context
- ▶ More relatable and visual
- ▶ Recognize data limitations
- ▶ Focus on strategies and policies
- ▶ Implementation oriented

Colorado By Rail

Executive Summary

1. Why Do We Plan?
2. Rail Systems, Governance, and Funding in Colorado
3. Colorado's Rail Systems
 - 3.1. Overview
 - 3.2. Trends
 - 3.3. Needs and Opportunities
4. Passenger and Freight Rail Improvements and Investments
5. State Rail Service and Investment Program
6. Outreach and Engagement

Technical Appendix



5

Key Findings and Plan Elements





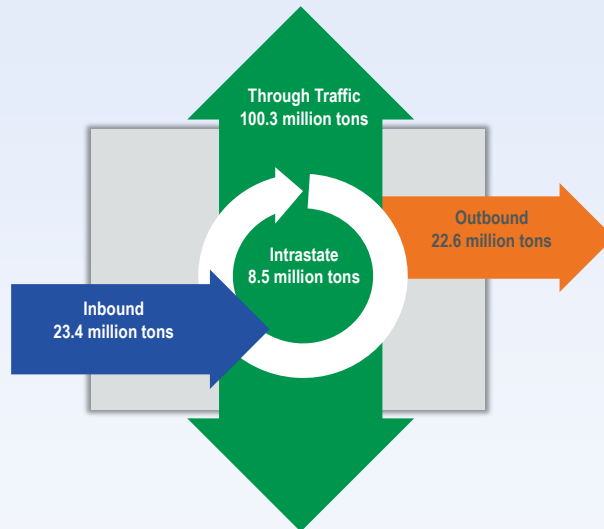
2017 Rail Plan Goals

- ▶ Ensure that Colorado’s rail systems are **SAFE** and **SECURE**
- ▶ **EXPAND** and **IMPROVE** Colorado’s rail systems for passengers and freight
- ▶ Provide users and travelers with greater **MOBILITY** and **CONNECTIVITY** options
- ▶ **PRESERVE** and **MAINTAIN** critical corridors and infrastructure to support Colorado’s rail systems
- ▶ Advance **ECONOMIC VITALITY** and **ENVIRONMENTAL QUALITY** of Colorado’s communities and regions



7

How much are we moving by rail?





Who are our critical trading partners?

| Inbound Trading Partners | | | | | Outbound Trading Partners | | | | | |
|--------------------------|------------------------|-------------------------|----------------------|----------------------|-------------------------------------|-------------------------|-------------------------|-----------------------|---------------------|------------------------|
| Nebraska 260,912 | Montana 223,852 | North Dakota 207,410 | Minnesota 130,788 | Idaho 98,836 | Farm and Food | Arizona 95,000 | Oregon 186,160 | California 264,728 | Illinois 293,228 | Texas 761,595 |
| Wyoming 9,538,694 | | | | | Coal and Petroleum | Illinois 1,357,558 | California 1,452,700 | Nevada 2,076,651 | Texas 2,496,718 | Kentucky 3,742,104 |
| Minnesota 1,701,666 | Wisconsin 1,028,065 | Nebraska 660,000 | Illinois 573,080 | Wyoming 436,126 | Mining | South Dakota 197,147 | California 324,254 | Virginia 348,049 | Texas 1,161,652 | Louisiana 1,798,225 |
| Illinois 621,440 | California 394,514 | Utah 129,900 | Texas 101,120 | Washington 56,040 | Intermodal and Mixed Freight | Texas 34,116 | Washington 39,960 | Utah 60,760 | Illinois 268,120 | California 346,468 |
| Utah 415,088 | Texas 275,500 | Wyoming 273,300 | Nebraska 141,304 | Illinois 137,960 | Bulk Products | Washington 59,400 | Texas 64,920 | Utah 79,480 | Illinois 81,320 | California 137,400 |
| Illinois 387,162 | Oregon 304,000 | Washington 228,000 | Idaho 182,368 | Texas 151,256 | Manufactured Goods | Oklahoma 21,040 | California 23,240 | Indiana 23,598 | Illinois 28,884 | Texas 111,972 |

9 Source: STB Waybill 2014



Where are the most significant freight capacity constraints?

10





How do we respond to industry concerns?

- ▶ **Agricultural producers**
 - Better access and service to grain elevators – on existing lines and new lines
 - Service, timing, cost constraints of rail shift product to truck
 - Are shuttle loading facilities still needed?

- ▶ **Mining and energy**
 - Development and expansion of new projects challenging because of costs, inflexibility, and availability of cars
 - Concerns over Colorado coal shipping rates

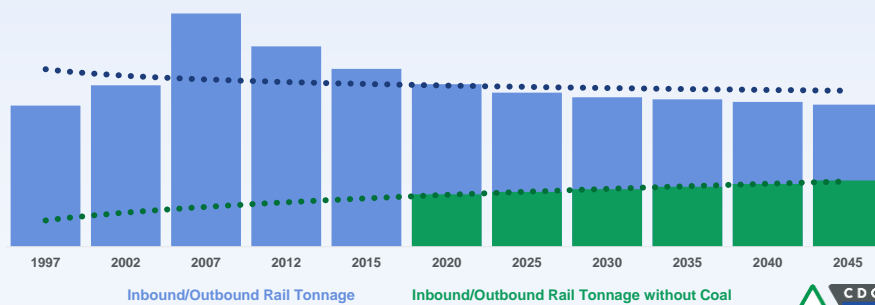
- ▶ **Economic development**
 - Lack of rail access on Western Slope
 - New rail access to industrial sites needed



11

What does the future of freight rail look like?

- ▶ **20% projected decrease in total freight rail tonnage**
- ▶ **27% increase in non-coal traffic**
- ▶ **Intermodal and natural resource commodity shipments may drive future growth**



12 Source: FHWA, FAF 4 database



How can we further support safety improvements?

- ▶ **2,129** - total public rail crossings in the state
- ▶ **18** - incidents in 2016 resulting in 6 fatalities and 11 injuries
- ▶ **\$3 million** - federal Section 130 crossing safety funding annually
- ▶ **6** - average crossing improvement projects CDOT can complete each year

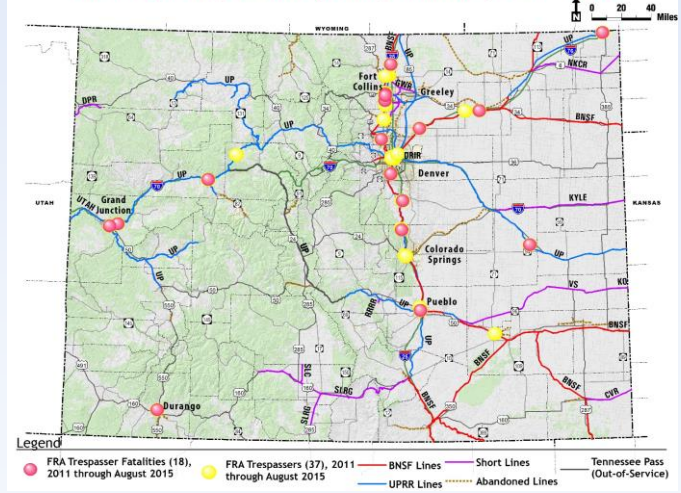


13 Source: Federal Rail Administration, 2017

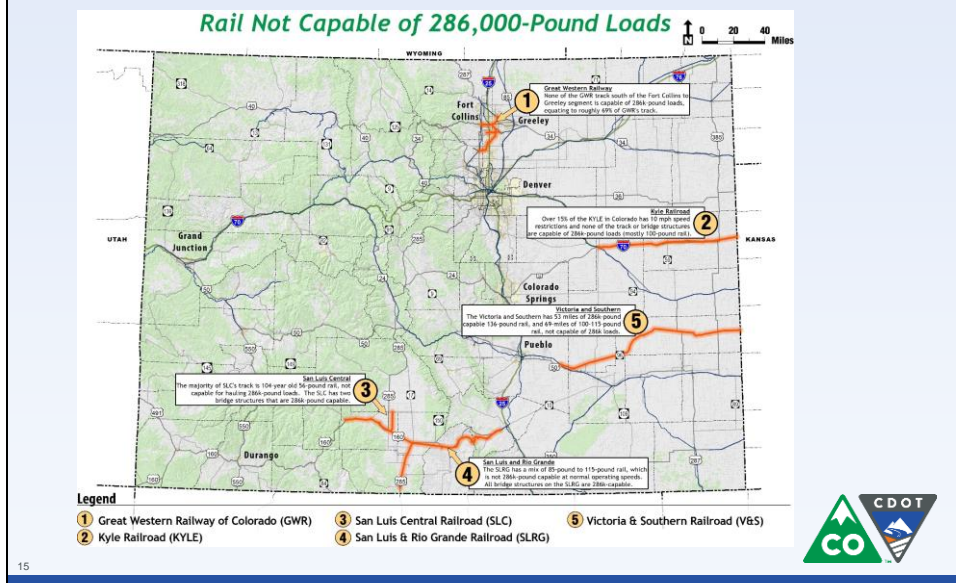


How can we address security needs?

Rail Trespassing and Trespassing Fatalities, 2011 - 2015



What do we know about short line needs?



Short Line Needs Significant

- ▶ **Denver Rock Island Railroad**
 - No room for expansion
 - Impacts to Stockyard Industrial Yard from National Western Complex Expansion
 - Drainage issues
- ▶ **Great Western Railway**
 - 69% of track is incapable of 286,000-pound loads
- ▶ **Kansas & Oklahoma Railroad**
 - No traffic because of Towner Line dispute
 - Could expand operations onto Towner

16



Short Line Needs Significant

- ▶ **Kyle Railroad**
 - None of its track and bridge structures in Colorado are capable of 286,000-pound loads
 - 15% of the line in Colorado is limited to 10 mph

- ▶ **San Luis Central Railroad**
 - 104-year old 56-pound rail, incapable of 286,000-pound loads

- ▶ **San Luis Rio Grande Railroad**
 - Mix of 85-pound to 115-pound rail, not capable of 286,000-pound loads



17

How can we support short line operators?

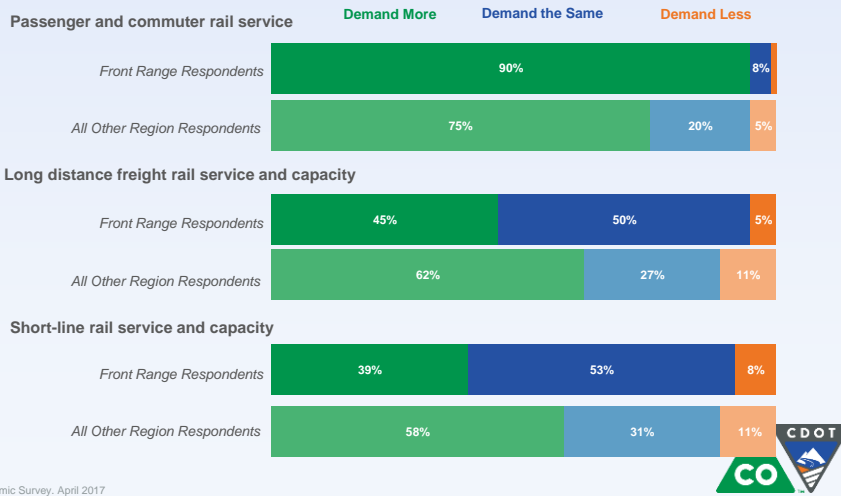
- ▶ Support for assistance program across short line railroads
- ▶ State grant and loan support most helpful
- ▶ Grants of \$250k to \$1m needed



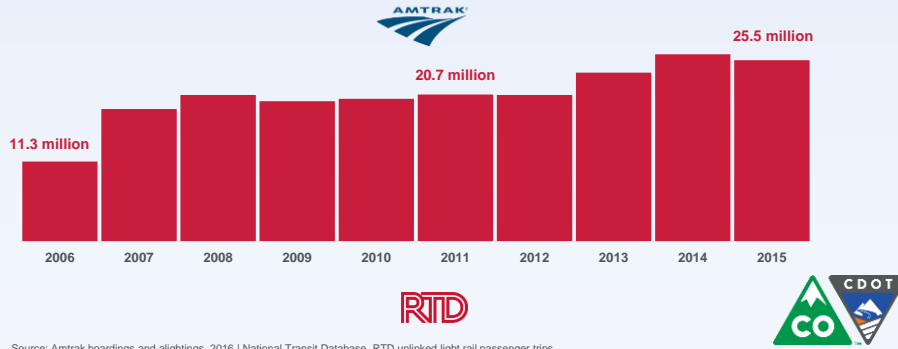
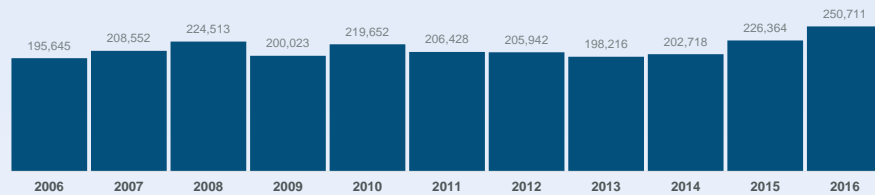
18

How do we build support for future rail service and investment more broadly?

Over the coming decades, do you think businesses in your region will demand more from Colorado's freight and rail infrastructure, demand less, or about the same?

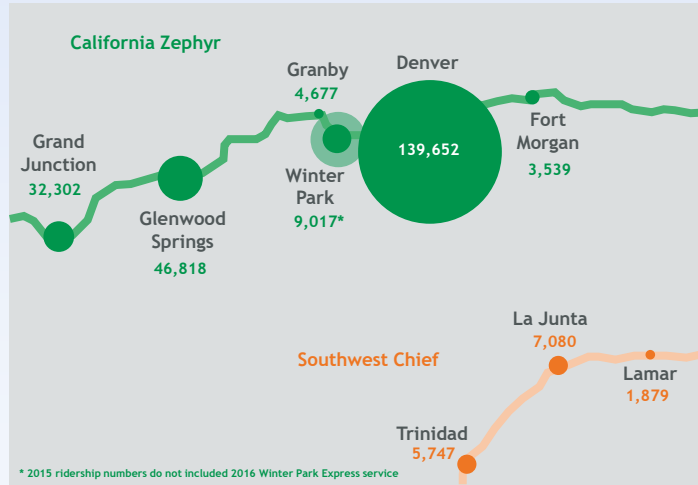


What do we need to support future passenger rail growth?





How do we support continued growth in Amtrak ridership?



Investment Approach





Rail Investment in Colorado

- ▶ Rail plan will include 4 year constrained plan and 20 year vision element
- ▶ No dedicated state funding
- ▶ Limited federal funding (Section 130 and NHFP)
- ▶ RTD programmed commuter rail investments
- ▶ Limited knowledge of private investments



23

National Highway Freight Program

- ▶ **\$83 million for freight specific investments**
 - Approximately \$13m to \$20m per year through 2020
- ▶ **Some rail and rail-related projects eligible**
 - Roadway improvements that provide access to significant rail, intermodal, or other freight facilities
 - Railway-highway grade separation
 - Improvements within the boundaries of public or private freight rail facilities *

* Investments in private facilities limited to 10% per year



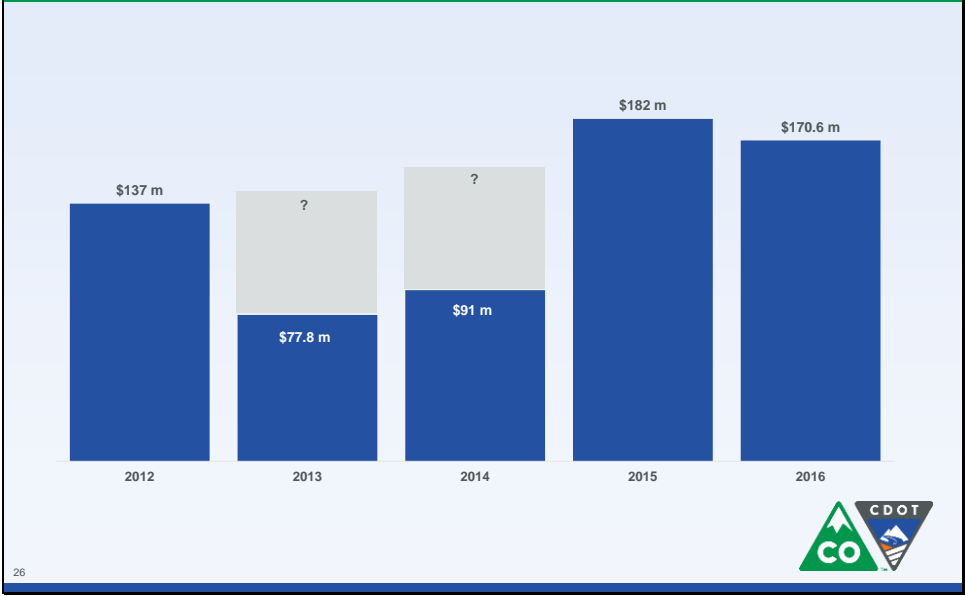
24



Planned Section 130 Expenditures



Private Class I Capital Investment in Colorado





Past Projects and Investments

- ▶ *What are some examples of significant capacity improvements that have been made in recent years?*



27

Planned Projects and Investments

- ▶ **Federal Grant Opportunities – Proposed**
 - SWC Track and Signal Upgrades
 - ▶ TIGER grant - \$25m total (\$15m request)

- ▶ *What are some proposed or potential future capacity projects?*



28



Implementation Approach



Implementation Activities

- ▶ Working group will continue to be engaged to guide plan development, review, and communications
- ▶ Provide support to Southwest Chief and Front Range Passenger Rail Commission
- ▶ Coordinate freight rail planning activities through the Freight Advisory Council
- ▶ Future implementation activities to focus on high priority strategies



30





Communications Strategy

- ▶ JPAC settled on overall communications strategy to advance freight
- ▶ Colorado Delivers overall brand
 - Brand can support many future messages and directions
- ▶ Media to be developed could include video, infographics, slides, stickers, etc



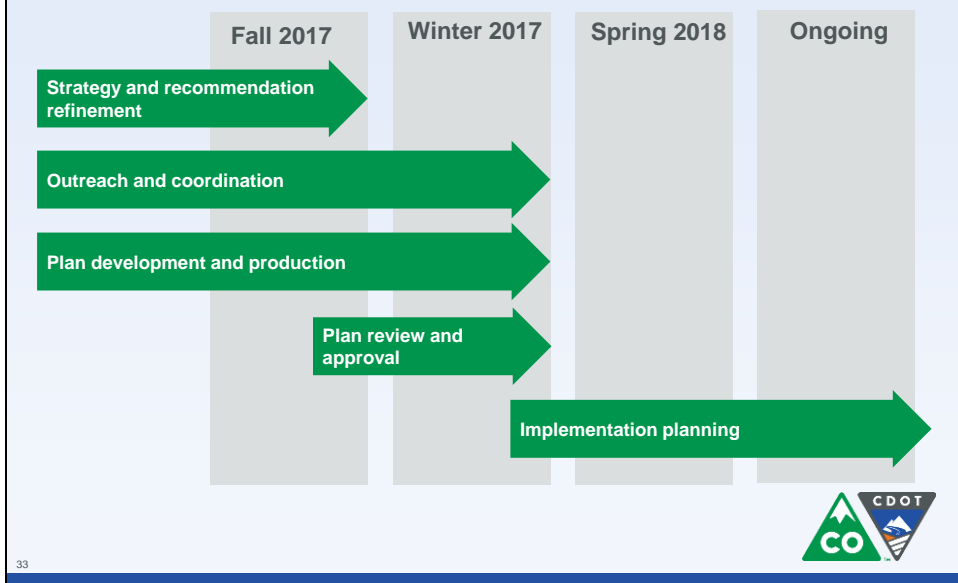
31

Next Steps





Plan Development Timeline



33

Next Steps

- ▶ **Joint Working Group Meeting – Freight and Rail**
 - November 14th, 1-3pm, CDOT Auditorium
- ▶ **Review process and schedule**
- ▶ **Preview of communications material**



34



Working Group, November 14, 2017

Multimodal Freight Plan and State Freight and Passenger Rail Plan Development

Joint Working Group Meeting
November 14, 2017

The graphic features a light blue background with icons for a blue high-speed train, a green semi-truck, an orange freight train, and a red passenger jet. At the bottom, it includes the Cambridge Systematics logo (a stylized 'C' with green, blue, and red segments) and the CDOT logo (a green triangle with a white mountain and 'CO' inside, next to a blue triangle with a white mountain and 'CDOT' inside).



Agenda

- ▶ Welcome
- ▶ Plan Review Process
- ▶ Implementation and Next Steps
- ▶ Communications and Education Strategy
- ▶ Thank You

2



Plan Review Process





Guiding Principles

- ▶ **Comply** with PRIIA and FAST Act requirements
- ▶ **Engage** stakeholders and committees
- ▶ **Align** with CDOT plans and processes
- ▶ **Consider** all modes and key industries
- ▶ **Illustrate** economic impacts and benefits
- ▶ **Leverage** existing resources and data
- ▶ **Utilize** data to drive decisions and performance
- ▶ **Identify** and prioritize projects
- ▶ **Develop** strategies to implement plans and projects
- ▶ **Position** CDOT and partners for future opportunities



4

Federal Requirements

- ▶ Passenger Rail Investment and Improvement Act (PRIIA) establishes standard guidance for all state rail plans
 - Standard format and requirements must be substantially met; though there is some latitude
- ▶ Fixing America’s Surface Transportation (FAST) Act
 - Required elements include: Freight Investment Plan, projects, corridor designation, and other sections



5



Colorado's Freight and Rail Plans

- ▶ Strategic and high-level policy documents
- ▶ Provides Colorado context
- ▶ Intended to be more relatable and visual
- ▶ Recognize data limitations
- ▶ Focus on strategies and actions
- ▶ Implementation oriented
- ▶ Living documents with ongoing updates



6

What Makes A Plan Successful?

Stakeholder Input

- | | |
|---|--|
| <ul style="list-style-type: none"> ▶ Where Have We Been? <ul style="list-style-type: none"> - Recognize past progress and challenges ▶ Where Are We Now? <ul style="list-style-type: none"> - Articulate key issues and needs - Draw on available data to inform decisions | <ul style="list-style-type: none"> ▶ Where Are We Going? <ul style="list-style-type: none"> - Actionable vision and goals - Connect trends to opportunities ▶ How Do We Get There? <ul style="list-style-type: none"> - Clear priorities and actions - Implementation planning |
|---|--|

Stakeholder Commitment



7





Targeted Review Focus

Colorado Freight Plan

1. *Why Do We Plan*
2. *How Do We Plan*
3. *Engaging Stakeholders*
4. ***Connecting the Economy***
5. *Assessing Assets and Condition*
6. *Managing for Performance*
7. ***Investing Resources***
8. ***Identifying Priority Strategies***
9. ***Implementing the Plan***

Freight and Passenger Rail Plan

1. *Colorado By Rail*
2. *Rail in Colorado*
3. ***Colorado's Rail Systems***
4. ***Needs and Opportunities***
5. *Improvements and Investments*
6. *Coordination and Outreach*
7. ***Priority Strategies and Implementation***

10



Review Guidelines

► Less focus on....

- Formatting (e.g. page breaks, styles, etc.)
- Appearance (e.g. layout and design)
- Organization (e.g. structure and chapters)
- Mechanics (e.g. typos, grammar, citations, etc.)

► More focus on....

- Message (e.g. clear story and takeaways)
- Accuracy (e.g. statements, detail, examples)
- Data (e.g. presentation clarity, etc.)
- Visuals (e.g. recommendations for graphics)
- Representation (e.g. did we capture your input?)

11





Plan Review Cycle

- ▶ **November - December**
 - **Comments due before December 4th**
- ▶ **December**
 - Revision and production period
 - STAC presentation and review
- ▶ **January**
 - TRAC presentation and review
 - T&I Committee
- ▶ **February**
 - TC Workshop
- ▶ **March**
 - Submittal of plans to FRA and FHWA

12



Plan Review

- ▶ **Check your inboxes**
- ▶ **Comments in track changes appreciated**
- ▶ **Please include your name in file name (e.g. SFPRP Draft_Enarson)**
- ▶ **Please send additional information, resources, examples or anecdotes**

13

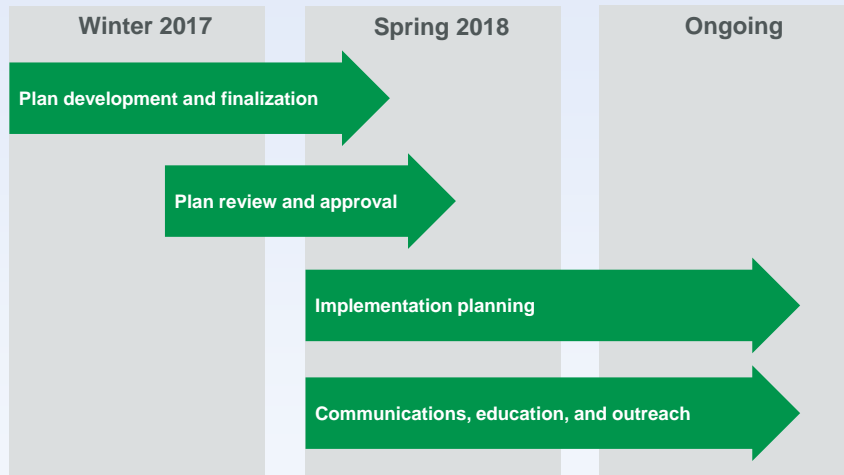




Next Steps



Next Steps



15





Ongoing Implementation

- ▶ **CDOT is committed to advancing freight and rail**
 - Integration into future planning efforts, including Statewide Plan, Transit Plan, and Regional Transportation Plans
 - Support for implementation consultant services
 - Support for communications and education
 - Continued partner involvement through the FAC, TRAC, and SWC/FRPR Commission

16



Communication and Education





Colorado Delivers

- ▶ Overarching brand
- ▶ Open-source and available to partners
- ▶ Messaging can be customized for various audiences and purposes



18

Colorado Delivers

- ▶ Single, unified message
- ▶ Consistent communications from all partners
- ▶ Create visibility and brand recognition
- ▶ Drive audiences to single information source
- ▶ Connect the dots



19






**More than one in six jobs
and one-third of the state's
economy rely on freight**

20



Ongoing Communications and Education

| Social Media and Online Communications | Visible Messaging and Marketing | Partner Tools and Shareable Media |
|--|---|---|
| <ul style="list-style-type: none"> - Videos - Brand website - Partner social media and online communications - CDOT Together We Go and On Air communications | <ul style="list-style-type: none"> - Stickers and decals - Tractor trailer and rail car wraps - Product logo placement - Retailer and manufacturer adoption | <ul style="list-style-type: none"> - Brochures and handouts - Infographics - Slide presentations <ul style="list-style-type: none"> - Industry publications - Media and materials |

21





Example Materials and Information

Social Media and Online Communications

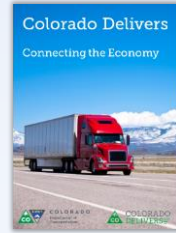


22

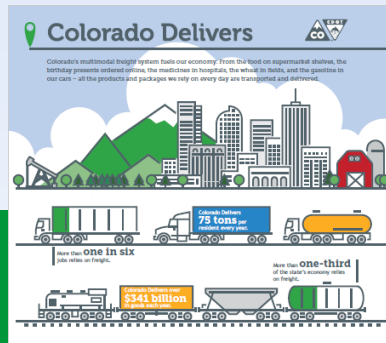
Visible Messaging and Marketing



Partner Tools and Shareable Media



Example Materials and Information



23



Current and Potential Partners



How Can We Make This Work For You?

- ▶ Ideas for partnerships and distribution channels?
- ▶ Ideas for infographic content?
- ▶ Ideas for future messaging and additional audiences?
- ▶ Ideas to customize for your organization?





Communications and Education Next Steps

- ▶ Develop website with information, logos, collateral, and media available for download and distribution
- ▶ Provide media and collateral, such as bumper stickers and infographics, to partners
- ▶ Work with organizations, associations, agencies, and businesses to deploy the *Colorado Delivers* brand in engaging and innovative ways
- ▶ Integrate *Colorado Delivers* brand and messaging into future CDOT communications and planning efforts



26





COLORADO

Department of Transportation

Division of Transit & Rail