

# Appendix D

## Transportation System and Plan Integration



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# Section 1

## Introduction

### 1.1 Background

The Colorado Department of Transportation's (CDOT) 2045 Statewide Transportation Plan (Your Transportation Plan) is a blueprint for maintaining and improving the state's multimodal transportation system over the next 25 years. It includes a 10-Year Strategic Project Pipeline to help address the critical multimodal transportation needs of community members and businesses. Updated every five years, Your Transportation Plan identifies trends affecting transportation, estimates future needs and revenues, establishes an overarching vision and specific goals, outlines measures and performance objectives, and proposes implementation policies to achieve the vision and goals.

### 1.2 Plan Integration Purpose

The transportation planning process includes extensive coordination both internally at CDOT and externally with regional planning partners and organizations, other key stakeholder groups, and the general public. Stakeholder input is leveraged, along with planning integration, to develop the 10-Year Strategic Project Pipeline. The transportation planning process is strengthened by better integrating planning products—modal plans and functional plans—prepared by CDOT and its divisions/branches.

Your Transportation Plan also integrates tribal plans and regional transportation plans (RTPs) from the state's 5 Metropolitan Planning Organizations (MPOs) and 10 rural Transportation Planning Regions (TPRs). Further information on these plans is detailed in Appendix F, MPO and RTP Plan Integration.

The intent of plan integration is to influence an integrated transportation system and improve linkages of other modes into Your Transportation Plan, which ultimately achieves a more comprehensive plan. Multimodal activities are a major consideration in the way CDOT plans for future transportation investments.

### 1.3 Plan Integration Framework

Your Transportation Plan is linked to three goal areas—Mobility, Safety, and Asset Management. The various statewide modal and functional plans, listed in Table 1-1, help serve as a means for stakeholder input, needs identification, and project planning to achieve these goal areas.

**Table 1-1 Modal and Functional Plans**

Modal	Functional
<ul style="list-style-type: none"> <li>▪ Statewide Transit Plan</li> <li>▪ Colorado Freight Plan</li> <li>▪ Truck Parking Assessment</li> <li>▪ Colorado Freight and Passenger Rail Plan</li> <li>▪ Statewide Bicycle and Pedestrian Plan</li> <li>▪ Colorado Aviation System Plan</li> <li>▪ Colorado Statewide Intercity and Regional Bus Network Plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strategic Transportation Safety Plan</li> <li>▪ Risk-Based Asset Management Plan</li> <li>▪ Smart Mobility Plan</li> <li>▪ Emerging Mobility Impact Study</li> <li>▪ Air Quality Action Plan</li> <li>▪ Statewide Transportation Demand Management Plan</li> <li>▪ State Emergency Operations Plan</li> <li>▪ Colorado Downtown Streets Plan</li> <li>▪ High Demand Bicycle Corridors Project</li> </ul>

Source: CDOT, 2020

To better tell the story of these goal areas in Your Transportation Plan, the following key elements of each plan were reviewed and integrated:

- Goals and objectives;
- Trends (e.g., travel, population, economic);
- Issues and needs;
- Highlighted policies and initiatives;
- Performance measures; and
- Priority projects and other strategic actions, where identified.

Coordination with CDOT divisions/branches was necessary to ensure meaningful plan integration, discuss specific significant projects and priority corridors, and identify general improvements needed.

## 1.4 Transportation System

While any individual dataset can only illustrate a small facet of Colorado's current transportation system, combining and comparing multiple sets of data across different multimodal themes and geographic areas has the power to tell a much clearer story. Data were drawn from a variety of sources to document the existing conditions for Colorado's transportation system. Sources included CDOT's databases, such as the Traffic and Safety Engineering Library, C-Plan interactive online mapping platform, and Online Transportation Information System (OTIS). The OTIS is an integrated set of applications and tools that provide information and data frequently used for transportation planning and project development. Available information was used to provide an inventory of the transportation system by mode.

## Section 2

# Review of CDOT Plans

As envisioned by CDOT, Your Transportation Plan is to be driven by public input and policy direction, including existing state and federal law and recently completed modal and functional plans. Your Transportation Plan supports and integrates key principles and goals established in various statewide modal plans and functional plans. Modal plans are developed and updated for transit, freight and passenger rail, aviation, and bicycle and pedestrian modes. Functional or topical plans are developed and updated for specific transportation functions, including safety, emerging and smart mobility, operations, and asset management. Each plan includes goals and objectives to maintain and improve Colorado’s transportation system and may provide an implementation framework through strategic policies and performance measures to achieve those goals. These plans are the foundation used to influence transportation decisions throughout the development of Your Transportation Plan. In addition, the critical issues and transportation needs discussed in these plans (and regional transportation plans) helped to identify a statewide list of projects which were evaluated and prioritized in the development the 10-Year Strategic Project Pipeline. These priority projects may be realized to best accommodate or consider multiple modes, allowing for the creation of a more synchronized transportation system.

As such, important findings of these plans were reviewed and fully integrated into Your Transportation Plan. The transportation-related issues and needs are summarized below and categorized into three goal areas—mobility, safety, and asset management.

## 2.1 Modal Plans

### 2.1.1 Statewide Transit Plan

CDOT updated the Statewide Transit Plan as part of Your Transportation Plan. The draft update is integrated into Your Transportation Plan and available in Appendix J to the plan.

### 2.1.2 Colorado Freight Plan

The 2019 Colorado Freight Plan is the state’s first comprehensive multimodal freight planning effort that examines the current challenges and emerging opportunities across all modes of Colorado’s freight systems and freight-reliant businesses. The 2015 Fixing America’s Surface Transportation (FAST) Act requires the preparation of a state freight plan for each state to obligate federal funds under the National Highway Freight Program (NHFP). This plan guides the allocation of NHFP fund. In addition, this plan provides CDOT and partners with strategic guidance on critical improvements and investments in freight systems and supports Colorado’s vision of a safe, efficient, coordinated, and reliable system for the movement of goods. This plan and the Colorado Freight and Passenger Rail Plan were completed together in a collaborative environment with a Joint Plan Advisory Committee (JPAC) providing further strategic direction.

To keep Colorado’s economy competitive, Colorado must continue to maintain its existing rail infrastructure, while preserving future capacity and improving mobility. Economic development opportunities are closely linked to freight transportation infrastructure and communities across the state are looking to develop intermodal hubs, logistics parks, and manufacturing and distribution centers in order to attract businesses that depend on efficient transport connections

and options. Transportation options, including intermodal centers, air cargo facilities, freight rail terminals, highway capacity, and even technologies such as autonomous trucks or rapid travel freight transport are critical to supporting Colorado’s growing economy.

Overall, the transportation needs and issues related to mobility, safety, and asset management identified by the Colorado Freight Plan include:

**Table 2-1 Needs Identified in the Colorado Freight Plan**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>Expand North-South connections</li> <li>Reduce congestion around bottlenecks on major interstate highways (i.e., I-25 and I-70) and key freight corridors (i.e., US 85 and US 287) in communities along the Front Range—increasing delays and physical constraints on goods movement impact delivery times, travel reliability and costs for businesses and consumers, and impact Colorado’s economic competitiveness</li> <li>Provide access to Class I and short line railroads in Eastern Plains and Southern Colorado<sup>1</sup></li> <li>Utilize logistics-based land use and development (e.g., industrial parks and economic development zones) with efficient transportation connections, especially in rural areas</li> <li>Improve rail connections to Texas, Illinois, and California for Colorado’s key industries and producers</li> </ul>	<ul style="list-style-type: none"> <li>Implement safety improvements that reduce conflicts between trucks and passenger vehicles or obstacles</li> <li>Add passing lanes or shoulders of a minimum of 8 feet in rural areas</li> <li>Add additional truck safety ramps on steep grades</li> <li>Implement weather-related improvements</li> <li>Utilize technology to provide real-time information about safety and available parking</li> <li>Invest in safe, accessible truck parking and truck chain up stations.</li> <li>Design roundabouts or other complex intersections on major truck routes with lower curbs, larger truck aprons, or greater radii</li> <li>Work with local governments to improve zoning and regional freight land use planning to mitigate incompatible development (e.g., schools, hospitals, dense residential developments) along or near rail operations due to occurrence of noise, safety risks, and hazardous materials</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitate or replace structurally deficient bridges that are located along critical rural freight corridors—includes bridges with limited clearances or that do not meet minimum standards for condition or load-bearing capacity</li> <li>Add pavement in poor condition, which can increase wear and tear on vehicles, damage goods while in transit, and cause safety concerns</li> <li>Provide additional capacity or upgrades to truck parking areas, truck safety ramps, and passing lanes</li> <li>Mitigate rail capacity constraints, upgrade track conditions, and support industrial rail development</li> <li>Address vertical clearance of tunnels that limit the ability of rail to ship double-stacked shipping containers</li> </ul>

Source: Colorado Freight Plan, 2019

As CDOT is committed to a collaborative process for freight planning and to provide funding and support to address these needs, the Colorado Freight Advisory Council (FAC) plays a key role in advancing strategies and implementation efforts identified in the Colorado Freight Plan. The implementation of many of these needed improvements would be guided by the Colorado FAC, which is composed of stakeholders and planning partners from industry associations and private business. Several freight related projects were included in the development of the 10-Year Strategic Project Pipeline.

A freight mobility initiative that CDOT is leading is the development of a website that provides real time information about weather, safety, and work zones. The website is a quick way to gain an understanding of road restrictions pertaining to bridge weight limit restrictions, bridge clearances, and other relevant information throughout Colorado.

<sup>1</sup> According to the Surface Transportation Board (STB) – the federal agency overseeing economic regulations of rail freight – Class I railroads are defined as having operating revenues of \$489,935,956 million or more.

### 2.1.3 Colorado Freight and Passenger Rail Plan

The 2018 Colorado Freight and Passenger Rail Plan was prepared to provide a framework for future freight and passenger rail planning in Colorado. It is a resource for public and private planning partners, including rail operators, to understand current issues and future needs, connecting trends and issues to opportunities, and identifying high priority strategies for future action. It complies with the requirements of the Federal Passenger Rail Investment and Improvement Act of 2008 (PRIIA) and consistent with planning requirements by the Federal Rail Administration (FRA) and the State of Colorado. This plan and the Colorado Freight Plan were completed together in a collaborative environment with a Joint Plan Advisory Committee (JPAC) providing strategic direction.

CDOT works closely with public and private partners to ensure that rail planning is coordinated and helps to advance policies and projects that keep Colorado's people and goods moving by rail safely and more efficiently. Common themes, identified through public engagement, included support and opposition to the concept of developing Front Range passenger rail service; significant anecdotal support for the business attraction and location benefits of commuter and light rail systems; significant interest in maintaining and expanding rail service to agricultural and natural resource production regions, particularly in areas of the state currently underserved by Class I or short line railroads; and, the criticality of freight rail services and rail-served facilities to attract and retain industrial and manufacturing companies. Through the development of this plan, considerable work has been completed to establish a thorough list of improvement needs, as recognized by CDOT private industry, economic development agencies, rail operators, and other public and private partners.

Overall, the transportation needs related to mobility, safety, and asset management identified by the Colorado Freight and Passenger Rail Plan include:

**Table 2-2 Needs Identified in the Colorado Freight and Passenger Rail Plan**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>▪ Add rail capacity to accommodate future freight demand and continue to study Front Range passenger rail</li> <li>▪ Extend intercity or commuter rail service from Denver to Colorado Springs and on to Pueblo</li> <li>▪ Extend intercity rail service throughout the state and as far as Cheyenne, Wyoming and El Paso, Texas</li> <li>▪ Double track the UP belt line</li> <li>▪ Acquire additional cars to add seating capacity to California Zephyr between Denver and Grand Junction</li> <li>▪ Re-route of the Southwest Chief through Pueblo and Walsenburg to Trinidad</li> <li>▪ Construct loop track and connection track in the Windsor industrial park</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improve safety at railroad/highway at-grade crossings (e.g., add gates/flashers, widen crossing, traffic control, lights, bells)</li> <li>▪ Implement railroad overpass/underpass projects at locations where a new grade separation is needed or where an existing grade separation needs rehabilitation or reconstruction</li> <li>▪ Provide pedestrian bridges over railroads</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implement short line improvement projects necessary to allow smaller railroads to effectively work with Class I railroads and to better support local and state economic development; these projects mostly improve tracks and structures to support standard 286,000-pound rail cars or to allow higher operating speeds.</li> <li>▪ Reconstruct intermodal rail and park-and-ride facilities</li> <li>▪ Provide siding and track extensions and double tracking</li> <li>▪ Reconstruct wye trackage or triangular junctions in which a triangular joining arrangement of three rail lines connect to each incoming line</li> </ul>

Source: Colorado Freight and Passenger Rail Plan, 2018



### 2.1.4 Truck Parking Assessment

The 2019 Colorado Truck Parking Assessment serves as a key component of CDOT's overall efforts to understand truck parking availability and needs. It examines eight critical freight corridors within Colorado to quantify the level of parking supply and demand and identify solutions with the potential to improve truck parking concerns.

Almost 3,800 truck parking spaces were identified across the state spread over 180 truck parking sites. About two thirds of the sites are located along interstates, with the remainder located along US routes and state highways. CDOT's rest areas provide less than 10 percent of these spaces, with most of the inventoried spaces provided by commercial facilities. Surveyed truck drivers identified truck parking limitations as a high concern and that acceptable long-term truck parking can require more than one hour. Segments of I-25 and I-70 surrounding Denver were found to have the most severe truck parking issues. On US route and state highway segments, parking was not considered to be difficult (relative to interstates). Difficulty finding safe and legal parking is relatively common when road closures occur, particularly in the Denver area. When road closures occur, rerouting is relatively uncommon. Also, parking shortages in Colorado can make fatigue management/hours of service compliance often difficult. Additionally, the enforcement of laws prohibiting ramp/shoulder parking may create conflict with truck drivers' hours of service compliance.

It was concluded that many road segments within the eight critical freight corridors demonstrate a need for additional truck parking spaces, both currently and in the future. It is envisioned that this assessment will spawn additional future efforts to assess, develop, plan, implement, and/or construct truck parking improvements across the state. Initial priority could be given to interstate corridors showing heavy usage conditions. Numerous strategies should be explored for adding parking spaces, including:

- Constructing new CDOT facilities;
- Expanding existing CDOT facilities;
- Contributing in development of new truck stop facilities by private entities; and
- Identifying opportunities for expansion of existing private parking facilities through partnerships.

The Truck Parking Assessment does not identify specific statewide trucking needs related to mobility, safety, and asset management applicable to Your Transportation Plan integration; however, several truck related projects were included in the development of the 10-Year Strategic Project Pipeline.

### 2.1.5 Statewide Bicycle and Pedestrian Plan

The objective of the 2015 Colorado Statewide Bicycle and Pedestrian Plan is to implement an approach for evaluating project completion that is consistent, defensible, and reflective of the needs and perspectives of stakeholder groups by identifying broad statewide goals achieved through biking and walking activity, summarizing existing conditions, and creating investment decision criteria to evaluate candidate bicycle and infrastructure projects and programs.

The number of bicyclists and pedestrians biking and walking for both recreational and utility purposes in Colorado is high due to Colorado's favorable weather, beautiful scenery, physically

active citizenry, and tourist industry. Issues and needs related to bicycle and pedestrian planning include a lack of data and deficient safety infrastructure throughout the state. According to the National Household Travel Survey (NHTS), Colorado ranks second among states in bike commuting with nearly two percent of commutes made by bicycle.

Additionally, Colorado Blueprint, which represents Colorado's economic development strategy, leverages Colorado's physical environment and natural resources to promote economic growth and identifies bicycle and pedestrian infrastructure as contributing to Colorado's quality of life.

The Bicycle and Pedestrian Plan describes several performance measures that are used as investment decision criteria. Projects that further statewide bicycle and pedestrian-related goals will:

- Increase bicycling and walking activity;
- Expand recreational opportunities and enhance quality of life;
- Improve public health and reduce disease and obesity;
- Improve environment, air quality, and fossil fuel independence;
- Provide transportation equity;
- Enhance safety;
- Maximize transportation investments; and Improve state/regional economy.

Overall, the statewide bicycle and pedestrian needs related to mobility, safety, and asset management include:

**Table 2-3 Needs Identified in the Statewide Bicycle and Pedestrian Plan**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>▪ Increase bicycle and pedestrian levels of service (LOS)</li> <li>▪ Increase the number of multi-use pathways</li> <li>▪ Pursue projects nearby underserved populations and areas with high levels of tourism</li> <li>▪ Promote recreational travel and induce mode shift to bicycling, walking, transit</li> <li>▪ Implement projects that promote students and staff walking and biking to schools</li> <li>▪ Pursue projects in dense employment areas</li> <li>▪ Enhance pedestrian comfort and safety where state highways act as Main Streets through communities</li> <li>▪ Install permanent bicycle and pedestrian counting devices</li> <li>▪ Pursue bicycle and pedestrian projects along scenic byway and projects that provide better access to public lands</li> </ul>	<ul style="list-style-type: none"> <li>▪ Compute the expected number of crashes after implementing a given safety countermeasure at a specific site</li> <li>▪ Add multi-use paths that separate bicyclists and pedestrians from motor vehicles Add shoulders to better accommodate bicyclists</li> <li>▪ Enhance pedestrian crossings of state highways, particularly within communities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Repair state-owned bicycle and pedestrian facilities and modify curbs and sidewalks to be ADA compliant</li> <li>▪ Remove debris from shoulders</li> <li>▪ Maintain the pavement quality of shoulders for a smooth riding surface</li> </ul>

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>Connect new projects to existing bicycle and pedestrian facilities, transit services, and along congested roadways</li> </ul>		

Source: Statewide Bicycle and Pedestrian Plan, 2015

Bicycle and pedestrian needs and considerations were included in the development of the 10-Year Strategic Project Pipeline.

### 2.1.6 Colorado Aviation System Plan

The 2011 Colorado Aviation System Plan (CASP) is a performance-based aviation system plan developed by CDOT and the Colorado Division of Aeronautics. CASP is a tool to track how well the aviation system is performing, identify the changes in system performance, and define the relationship between system performance measures, benchmarks, and facility/service objectives and aviation grants issued by the Division of Aeronautics. The CASP categorizes airports in three categories for analysis: major, intermediate, and minor airports. Refer to Figure 3-1 for a map of the airports in Colorado.

CASP utilizes six performance measures to evaluate the State's aviation system:

- Activity;
- Expansion Potential;
- Economic Support;
- Coverage and Emergency Access;
- Investment; and
- Security.

Overall, CASP discusses consistent need for facility, service, and equipment improvements for airports assigned to each of the three role categories. Between 2010 and 2030, over \$2.2 billion is needed to meet this plan's capital improvement costs, development needs, and facility, service, and equipment objectives, excluding Denver International Airport. It is estimated that \$1.3 billion in funding could be available to respond to these costs; however, this leaves a potential funding gap of \$900 million.

Overall, aviation needs related to mobility, safety, and asset management identified by the Colorado Aviation System Plan include:

**Table 2-4 Needs Identified in the Colorado Aviation System Plan**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>Increase runway lengths, widths, and strength</li> <li>Improve maintenance and overall condition of primary runway, taxiway, and apron pavements</li> <li>Implement parallel taxiways</li> <li>Implement a vertical guidance approach (precision approach or LPV/APV) to</li> </ul>	<ul style="list-style-type: none"> <li>Improve snow removal and de-icing equipment</li> <li>Implement security-related enhancements, including safety/security fencing; community watch programs; emergency/security contact lists; and signage</li> </ul>	<ul style="list-style-type: none"> <li>Improve ground transportation services, on-site parking and fueling services</li> <li>Establish master plan that is current within 7-10 years for all commercial airports</li> </ul>

Mobility	Safety	Asset Management
airports to increase accessibility and various support services <ul style="list-style-type: none"> <li>Improve ground transportation and access to/from airports</li> </ul>	<ul style="list-style-type: none"> <li>Improve on-site weather reporting</li> <li>Add facilities necessary to support patient and physician emergency transport needs</li> </ul>	<ul style="list-style-type: none"> <li>Improve terminals, aprons, hangars, and maintenance facilities</li> </ul>

Source: Colorado Aviation System Plan, 2011

In the coming decades, Colorado is anticipated to outpace much of the rest of the nation in terms of population and economic growth, and the state already sits on the cutting edge of technological advancements that will shape the future of our nation's airspace. CDOT Division of Aeronautics, airports, and the many users who rely on the state's aviation system must continue to take a proactive planning approach to keep pace with these rapid evolutions. In 2020, CDOT Division of Aeronautics will have a new 2020 CASP that will outline its investments in safety, operational capacity and pavement maintenance. The plan aims to elevate overall system performance and outline performance measures and targets that relate to plan goals of Safety and Efficiency, Access and Mobility, Economic Sustainability, and System Viability. The plan will serve as a guide for federal, state and local airport improvement funding and priorities. Aviation issues that will be carefully considered include fuel availability; hangar development and expansion; pavement reconstruction; and runway, taxiway and ramp improvements to support growing demand and larger aircraft. In addition, an evaluation of future aviation trends will be provided, including, but not limited to, remote control towers, along with electrification and potential automation of aircraft.

### 2.1.7 Colorado Statewide Intercity and Regional Bus Network Plan

The objective of the 2014 Colorado Statewide Intercity and Regional Bus Network Plan is to address bus services operating in Colorado that travel between cities and regions throughout the state and to guide the development of bus services between cities and regions in Colorado. The plan reviews and summarizes existing intercity bus service, regional services operated by public agencies, casino shuttle services, airport and resort services, and Amtrak Thruway Services. The evaluation of existing services identifies issues and needs related to intercity bus travel. In 2014, Colorado's intercity bus network received \$41 million in public investment and \$58 million in private investment. Due to the increasing role of private investment in Colorado's intercity bus network, profitability has become a major consideration in the provision of bus service. CDOT aims to ensure that its service does not compete with existing private service providers, in terms of considering locations along their routes, and only provides essential routes that do not exist to fill in service gaps. The study finds that there are three chief markets with needs served by intercity bus service—travelers between cities, travelers to and from the airport, and commuters.

The goals of the Statewide Intercity and Regional Bus Network Plan are described as:

- Provide for a network of reliable regional and intercity transit services that serve multiple travel needs and markets;
- Develop infrastructure that supports and enhances transit efficiency;
- Provide for good quality regional and intercity transit services across Colorado with connections to local transit systems and other transportation modes; and
- Provide for stable funding for intercity and regional services.

A wide variety of improvement opportunities are also identified by the Statewide Intercity and Regional Bus Network Plan to track progress towards goal fulfillment. The needs primarily focused on transit mobility and demand; those needs include:

**Table 2-5 Needs Identified in the Statewide Intercity and Regional Bus Network Plan**

Mobility	Asset Management
<ul style="list-style-type: none"> <li>▪ Implement six new intercity routes throughout Colorado</li> <li>▪ Formulate service planning studies covering travel corridors</li> <li>▪ Implement four new regional/essential services routes</li> <li>▪ Provide a framework for providing services through formulation of a Regional Network Plan</li> <li>▪ Implement pilot program to study more flexible and affordable alternatives to expensive existing service</li> <li>▪ Disseminate up to date transit travel information using new technology</li> <li>▪ Create a means to share ticketing across multiple public and private providers</li> <li>▪ Identify methods of cost and revenue allocation among state level programs using federal dollars</li> <li>▪ Change financial management policies and consider how the Section 5311(f) program and FASTER funds work with local funding</li> <li>▪ Develop internal management capacities for transit operations and monitor their effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintain bus stops and shelters</li> <li>▪ Improve transit centers</li> <li>▪ Maintain the state's fleet of intercity and regional buses</li> </ul>

Source: Colorado Statewide Intercity and Regional Bus Network Plan, 2014

## 2.2 Functional Plans

### 2.2.1 Strategic Transportation Safety Plan

The 2020 Strategic Transportation Safety Plan provides data-driven approaches to address issues that can impact traffic safety including emerging issues such as drugged driving and distracted driving. Colorado adopted the Towards Zero Deaths goal through this effort. The plan's vision is to reach to zero deaths and serious injuries across the state. The vision is inspired by a traveler's personal goal of not being injured when walking, driving, or using other modes. The plan's mission is to urge diverse state and local agencies to contribute a role to bring down deaths and injuries. Causes of crashes are entrenched into human factors, infrastructure limitations, cultural and environmental forces. Due to the complexity it is important that various state and local entities each play a role.

The plan offers crash data analysis results and insight into safety issues and recourse based on the discussion and efforts put together by public agencies, private organizations and advocacy groups. Analysis of 2014-2018 crashes shows that:

- Colorado has 11.6 deaths per 100,000 people, placing it at middle of traffic death rates across all states;
- Approximately 30 percent of all fatal crashes involved impairments from alcohol and/or drugs; and
- Pedestrian fatalities increased by 48 percent and bicyclist fatalities more than doubled since 2014.

The plan also identifies supporting emphasis areas, including actions to address commercial vehicle safety. The four broad emphasis areas are: high-risk driver's behavior, vulnerable users, high-risk locations, and safety programs. In addition, the 15 highest priority Tier 1 strategies were developed especially focusing on proven countermeasures that historically performed well

to buck the trends in crashes. A summary of the strategies is presented below. These would all relate to safety needs. Safety related projects developed as part of safety planning efforts were included in the development of the 10-Year Strategic Project Pipeline.

#### Organization:

- Select a safety champion to lead the statewide safety programs.
- Clarify and document the responsibilities of each agency and staff.

#### Communication:

- Coordinate with existing programs to improve and avoid duplication of effort at the state and local level.
- Use consistent message formats across the state to get to wider audience.

#### Law and policies:

- Build a coalition among partners to lobby and revise laws, policies and reach out to more people.
- Increase priority of safety in states funding decision process.
- Educate law makers on the effectiveness of occupant protection laws and promote changes to address with up-and-coming trends of distracted driving
- Increase requirements for obtaining new licenses and when renewing.

#### Design/Engineering:

- Increase priority of safety at design stage of new projects and alternatives selection process.
- Streamline data management and develop consistent digital crash reporting at local roads.
- Focus education of proven countermeasures geographically to inform local county engineers, officials where the crashes are occurring.
- Modify state design standards to include proven crash countermeasures.

#### Education and Enforcement:

- Aim educational campaigns to influence high-risk driver behaviors.
- Include safety courses in the school curriculum to be taught to students of young age.
- Increase manual/automated enforcement at locations where violations and crashes are more common.

### 2.2.2 Risk-Based Asset Management Plan

The 2019 Risk-Based Asset Management Plan aims to advance processes that optimize asset investments to achieve its performance goals. The plan prepares Colorado's transportation infrastructure for the future by analyzing risks, costs, resources, and opportunities for innovation. Under federal requirement, the plan also includes an asset inventory of the National Highway System (NHS) pavement and bridge assets, as well as their conditions. The 2018 model projections forecast that the state needs an invest of approximately \$273 million per year from 2020 to 2030 to achieve 80 percent the target set by the plan. Compared to the projected budgets for the Surface Treatment program and roadway-surface maintenance for the next 10 years—about \$259 million per year—there is a deficit of about \$14 million per year.

Overall the asset management needs related to mobility, safety, and asset management identified by the Risk-Based Asset Management Plan include:

**Table 2-6 Needs Identified in the Risk-Based Asset Management Plan**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>Implement and improve Intelligent Transportation Systems (ITS) and signalization</li> </ul>	<ul style="list-style-type: none"> <li>Repair, reconstruct, and replace bridges as necessary, especially deck areas</li> <li>Implement safety-related improvements such as six-inch striping, cable guardrail, and rumble strips</li> </ul>	<ul style="list-style-type: none"> <li>Develop a coordinated data-sharing process and data collection, integration, and analysis</li> <li>Better align data with organizational needs</li> <li>Improve modeling and project prioritization</li> <li>Improve target-setting and performance measurement</li> <li>Better preserve road equipment and protect from geohazards</li> <li>Improve facilities such as rest areas and other related buildings</li> <li>Improve pavement conditions</li> <li>Improve drivability by addressing roughness, rutting, cracking, and corner breaks</li> <li>Implement repairs, reconstruction, and replacements for bridges</li> <li>Improve structural integrity of bridges, culverts, walls, and tunnels</li> </ul>

Source: Risk-Based Asset Management Plan, 2019

Asset management needs were key considerations in the development of the 10-Year Strategic Project Pipeline.

### 2.2.3 Smart Mobility Plan

Innovation is infused in many different areas across CDOT, allowing for creative thinking and the best use of new technologies in a variety of settings. In 2019, CDOT created the Office of Innovative Mobility to implement tools that allow for real-time information to be used in traffic operations and incorporate ridesharing, electrification, and new technologies. Working with the Division of Transit and Rail, the Office of Innovative Mobility is also exploring tools to better integrate transit systems across Colorado, thus enhancing the transit experience for all Coloradans. For example, “Connected Colorado” provides an opportunity for CDOT to work with transit providers to enhance the availability of data.

The purpose of CDOT’s 2019 Smart Mobility Plan is to identify potential areas where smart mobility projects can be implemented in each of CDOT’s five regions. Smart mobility is defined as the beneficial use of new transportation technologies to improve safety and efficiency on roadways. Smart mobility projects may include:



- Installing intelligent transportation system (ITS) tools on urban arterials;
- Implementing transit signal priority for priority transit use;
- Queuing detection systems on urban and rural highways;
- Adding ramp meters;
- Providing freight information and priority systems for smart truck parking; and
- Implementing congestion pricing plans.

Overall, the transportation needs related to mobility, safety, and asset management identified by the Smart Mobility Plan include:

**Table 2-7 Needs Identified in the Smart Mobility Plan**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>▪ Invest in multimodal transportation</li> <li>▪ Install ITS tools on urban arterials</li> <li>▪ Implement Transit Signal Priority for priority transit use</li> <li>▪ Implement dynamic transit operations solutions</li> <li>▪ Queue detection systems on urban to rural highways</li> <li>▪ Add ramp meters</li> <li>▪ Provide freight information and priority systems for smart truck parking</li> <li>▪ Implement congestion pricing plans</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implement pedestrian safety improvements</li> <li>▪ Increase the percentage of work zones that are “smart” work zones</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implement measures to improve data sharing and data management</li> </ul>

Source: Smart Mobility Plan, 2019

### 2.2.3.1 Connected and Autonomous Vehicles

The Smart Mobility Plan will help CDOT identify and prepare assets, data management, communications systems and infrastructure to facilitate advanced technologies, including connected and autonomous vehicles.

Rapid advancement in technology has created a need for transportation departments to prepare for the future of mobility. In 2017, CDOT created a program focused on the deployment and strategy for connected and autonomous technologies. The program focuses on the state’s strategy related to advanced vehicle technologies and connected vehicle infrastructure, data, and introduction of vehicle automation throughout various state efforts, including statewide deployment of connected vehicle infrastructure over more than 400 miles of connected vehicle infrastructure across Colorado, data evaluation and partnerships with local jurisdictions. In addition, CDOT will continue to chair the Autonomous Mobility Task Force, which reviews the safe deployment of autonomous vehicles that do not comply with federal, state, and local regulations. To date, Colorado has had two autonomous vehicles deployments that have gone through the Task Force process (EasyMile transit bus and CDOT’s maintenance vehicle-autonomous truck mounted attenuator) and is exploring opportunities to expand these types of pilots.



### 2.2.3.2 Fiber Plan

High-speed fiber optic communications is integral to CDOT to deliver essential transportation services and improve operational conditions. Over the past 20 years, CDOT has acquired about 1,400 miles of fiber optic infrastructure either by constructing or working with public and private partners. The Fiber Plan provides direction on where resources can focus on expanding the fiber network throughout the state to provide public benefit. It employs a data-driven methodology to ensure that corridor prioritization is focused to maximize and coordinate implementation efforts in CDOT and with external partners, including redundancy to create a carrier grade network. This plan reviews and evaluates existing procedures and processes with respect to fiber implementation. In conjunction with this Plan, CDOT works with both public and private entities to expand broadband service, by supporting partnerships and existing fiber assets.

### 2.2.4 Emerging Mobility Impact Study

The 2019 Emerging Mobility Impact Study is a compilation of findings and recommendations that meet the requirements of Senate Bill (SB) 19-239, which require CDOT to examine the impact of technological and business model changes related to commercial vehicles. This research utilizes real-time mobile device speed data to identify top congested corridors for trucks and indicators of truck travel delay and associated costs of delay to commercial vehicles.

Colorado's transportation network is under stress due to high population growth rates, having increased by 500,000 community members between 2010 and 2017 and a projected population of seven million by 2040. Additionally, Colorado's transportation network is a source of increasing traffic congestion delay and increasing emittance of harmful pollutants. Emerging mobility technologies, including transportation network companies (TNCs), and deliveries generated by e-commerce exacerbate those problems. It was estimated that in 2030 there would be a total of 400,000 vehicle trips and 11 million vehicle miles traveled (VMT) per day for emerging mobility services, which would be 4.3 percent and 7.2 percent of the share of travel, respectively.

CDOT will consider feedback from the SB 19-239 Working Group regarding the type and structure of potential taxes and fees for TNCs and emerging mobility providers and develop policy recommendations to guide the Colorado State Legislature for action during the 2020 Legislative Session. The fees would help to fund needed transportation infrastructure, including multimodal infrastructure and the infrastructure needed to support the adoption of zero-emissions vehicles.

In 2019, Governor Polis set a goal of reaching 940,000 light duty electric vehicles on the road by 2030. To achieve this goal, he set in motion a number of initiatives in which CDOT is a key partner. This includes the adoption of the zero-emission vehicle standard by the Air Quality Control Commission in 2019, providing more electric vehicle options to Colorado consumers, as well as investments in charging infrastructure across Colorado. CDOT also serves as the lead state agency in distributing Volkswagen Settlement funding to transit agencies to support transit electrification, and will support transit agencies in early planning in preparation for future electrification of their fleets. CDOT works closely with other state partners, including the Colorado Energy Office and the Colorado Department of Public Health and Environment to coordinate consumer education, funding programs, and planning efforts around electrification.

Overall, the transportation needs related to mobility, safety, and asset management identified by the Emerging Mobility Impact Study include:

**Table 2-8 Needs Identified in the Emerging Mobility Impact Study**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>▪ Discount fast charging</li> <li>▪ Provide rebates for EV drivers</li> <li>▪ Increase the number of drivers reached in education and awareness campaigns</li> <li>▪ Collect revenue from fee applied to new mobility services</li> <li>▪ Implement congestion management incentives</li> </ul>	<ul style="list-style-type: none"> <li>▪ Decrease the number of crashes caused by emerging mobility technologies</li> </ul>	<ul style="list-style-type: none"> <li>▪ Expand fast charging network</li> <li>▪ Provide incentives for home charger installation</li> <li>▪ Increase the number of community charging hubs</li> <li>▪ Increase the number of cars exchanged in the Cars for Clunkers program</li> <li>▪ Increase the number of EVs purchased by companies</li> <li>▪ Expand electric micromobility infrastructure</li> <li>▪ Improve roadside services for EVs</li> </ul>

Source: Emerging Mobility Impact Study, 2019

### 2.2.5 Air Quality Action Plan

The goal of the 2017 Air Quality Action Plan is to reduce air pollution from Colorado's transportation sector as well as improving safety and operations. The plan puts forth statewide strategies to reduce transportation emissions that aim to promote system efficiency; reduce VMT; promote alternative fuel vehicles; increase vehicle fuel efficiency; and collecting/deflection emissions. The plan evaluates the success of these air quality goals can be measured by the following performance goals:

- Reduction in annual VMT;
- Reduction in motor vehicle emissions, including criteria pollutants, carbon dioxide;
- Reduction in on-road gasoline consumption; and
- Reduction in greenhouse gas tailpipe emissions.

CDOT is anticipated to receive approximately \$68 million, from the State of Colorado through the Volkswagen Settlement's Environmental Mitigation Fund, to be used statewide within the next 10 years on air quality related projects. Based on initial public input, agency staff expect to focus the bulk of these funds on electric vehicle charging infrastructure, alternative fuel vehicle replacements for conventionally (gasoline and diesel) fueled transit and freight vehicles, and airport ground support equipment. CDOT is also pursuing \$2 billion from the Zero Emission Vehicle Fund.

Overall, the transportation needs related to mobility, safety, and asset management identified by the Air Quality Action Plan include:

**Table 2-9 Needs Identified in the Air Quality Action Plan**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>▪ Reduce roadway speeds, including speed harmonization, improved enforcement, and ramp metering</li> <li>▪ Increase traffic signal timing optimization and anti-idling ordinance</li> <li>▪ Reduce congestion, including bottleneck relief, congestion pricing</li> <li>▪ Improve freight intermodal connections</li> <li>▪ Decrease the need to travel</li> <li>▪ Increase vehicle occupancies</li> <li>▪ Increase energy efficient options, including incentives for alternative fuel vehicles usage</li> <li>▪ Improve integration of transportation and land use planning in coordination with local governments</li> <li>▪ Reduce distances between key destinations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improve incident management</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improve statewide electric vehicle charging infrastructure</li> <li>▪ Increase alternative fuel corridors</li> <li>▪ Increase workplace charging initiatives</li> <li>▪ Adopt alternative fuel vehicles within agency and private fleets</li> <li>▪ Improve public transportation and non-motorized transportation improvements and incentives</li> <li>▪ Improve parking management and pricing</li> <li>▪ Integrate employee-based strategies such as telework</li> <li>▪ Improve car sharing programs</li> </ul>

Source: Air Quality Action Plan, 2017

## 2.2.6 Statewide Transportation Demand Management Plan

Transportation demand management (TDM) is the application of strategies and policies to reduce motor vehicle travel demand, or to redistribute this demand in space or in time with the overall goal of reducing traffic congestion. The 2019 Statewide Transportation Demand Management Plan was developed in two phases to establish statewide operations and management strategies and to identify potential congested highway corridors which may receive benefits from implementing demand management strategies, including technologies and operational tactics benefiting commercial vehicles. The Phase 1 Report: Colorado Transportation Options, and Phase 2 Report: Program Needs Assessment and Implementation Priorities have concluded that the densest, most populated urban areas in the state have the most need for congestion relief and tend to have the largest palette of TDM options available, with opportunities for multi-modal synergies. TDM is applicable for smaller communities if they have a special traffic generator such as a college or a recreation area. In order to complete Phase 2 of the TDM Plan, the plan utilized a custom geodatabase as a tool to evaluate TDM service needs, composed of tabular, demand-side land use data, and supply-side transportation infrastructure geodatabases to create the model.

In the areas with the highest levels of congestion, approximately eight MPO/TRP areas, the Statewide TDM Plan has determined that there would be 549 projects with a total cost of approximately \$8.19 billion in order to meet the needs required by the state. Several demand management related projects were included in the development of the 10-Year Strategic Project Pipeline. The transportation needs related to mobility, safety, and asset management identified by the Statewide Transportation Demand Management Plan include:

**Table 2-10 Needs Identified in the Statewide Transportation Demand Management Plan**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>▪ Implement additional managed lanes, express lanes, and dedicated transit lanes</li> <li>▪ Install slip ramps to improve bus services</li> <li>▪ Create bus rapid transit corridors and Fastrack corridors</li> <li>▪ Implement operational improvements to existing transportation services to improve speed and reliability by extending service hours to early morning, evenings and weekends as well as increasing trips per day</li> <li>▪ Improve First and Last Mile connections between transit, employment, residential, and shopping destinations</li> <li>▪ Improve transit connections to airports</li> <li>▪ Improve commuter transit services, including the expansion of commuter van services</li> <li>▪ Implement additional low-floor buses to maintain and enhance routes to accommodate improved headways</li> <li>▪ Create additional park and ride centers and improvements to existing park-and-ride centers, such as increasing the number of parking spaces, median improvements, and sidewalk improvements</li> <li>▪ Create transit centers, especially in highly congested, downtown areas</li> <li>▪ Create additional mobility hubs, including RTD stations, bus turnaround, bike-n-ride shelters, car share services, and transit transfers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Enhance security</li> <li>▪ Improve transit station platforms</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improve roadway conditions, including shoulder expansions and paving, improved grading and drainage, improved pedestrian crossings and better signage</li> <li>▪ Incorporate alternative fuels into existing transit services, such as acquiring additional electric HOP vehicles, replacing the existing bus fleet with electric buses, and creating additional charging infrastructure</li> <li>▪ Adopt a solar power bus fleets and associated charging facilities</li> <li>▪ Improve bus stops, including increasing the number of bike racks and improving bus shelters</li> </ul>

Source: Statewide Transportation Demand Management Plan, Phase 1, 2018 and Phase 2, 2019

### 2.2.7 State Emergency Operations Plan

The 2019 Colorado State Emergency Operations Plan outlines the state guidelines for its response and recovery responsibilities during an emergency or disaster event. This plan can only be activated through the issuance of a Gubernatorial Executive Order and is intended to be flexible so that it can be adapted to small or large events and various types of communities that present complex challenges that cannot be adequately addressed within the routine operations of local government. The plan provides a structure and mechanism for a coordinated effort by state, local and federal agencies, volunteer organizations and private businesses to support in providing for the prevention of injury, loss of life, minimizing human suffering and the protection of public health and property of community members, visitors and communities of Colorado. The plan sets forth the necessary requirements to ensure effective planning and procedures, resource management, training, exercise, communications, and public information dissemination will result in responding to and recovering from an emergency or disaster. The plan does not discuss any mobility, safety, or asset management related needs that are applicable for integration into Your Transportation Plan but helps to address the security planning factor in Your Transportation Plan.

During the coronavirus (COVID-19) pandemic, CDOT will provide the general public with a safe and reliable transportation system but recognizes there may be an impact to the implementation of projects and programs. A future appendix will be developed to provide further details related to COVID-19 to improve the resiliency of state's transportation system.

### 2.2.8 Colorado Downtown Streets Plan

The 2016 Colorado Downtown Streets Plan was created as a tool to aid both Colorado communities and CDOT in striking a balance between the many demands that face its downtown streets, particularly where a main street is also a Colorado state highway. The plan is designed to address multiple modes with creative, flexible design solutions that are safe for all users. The plan stresses the importance of integrating economic development goals to further investments in multimodal transportation into planning practices. The plan describes best practices for Colorado's downtown streets, summarized in three main categories:

- Roadway Improvements: promote safety for all users, especially for pedestrians to comfortably crossing the street.
- Roadway Edge Improvements: create a buffer between pedestrians and moving traffic.
- Pedestrian Improvements: improve the sidewalk conditions to meet the needs of all users.

Overall, the transportation needs related to mobility, safety, and asset management identified by the Colorado Downtown Streets Plan include:

**Table 2-11 Needs Identified in the Colorado Downtown Streets Plan**

Mobility	Safety	Asset Management
<ul style="list-style-type: none"> <li>▪ Install roadway signaling enhancements, including phasing of signals, shorter signal cycles</li> <li>▪ Remove major obstacles on sidewalks</li> <li>▪ Install ADA curb ramps</li> <li>▪ Design that encourages or creates multiple walkable destinations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implement intersection enhancements, including protected left turns, signalized crosswalks, countdown timers, refuge islands, adjusted timings for peak and off-peak volumes, and midblock crossing</li> <li>▪ Design streets with dedicated bike lanes</li> <li>▪ Implement adequate curb extensions</li> <li>▪ Reduce roadway speeds and implement raised medians</li> <li>▪ Create parklets and bicycle corrals with high visibility and barriers when possible</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improve bus shelters with adequate lighting</li> <li>▪ Plant street trees</li> </ul>

Source: Colorado Downtown Streets Plan, 2016

### 2.2.9 High Demand Bicycle Corridors Project

The primary purpose of the 2019 High Demand Bicycle Corridor (HDBC) project is to identify key corridors for cyclists along the state highway system. Bicycling is allowed on all Colorado state highways, except where specifically prohibited due to major safety hazards. The project uses statewide data to help prioritize improvements to the routes to make them safer. Cycling also contributes to Colorado's economy. Excluding health, bicycling has an estimated \$1.1 billion impact on the Colorado economy annually, to which bicycle tourism by out-of-state visitors contributes \$448 million. This project uses multiple datasets to identify the current bicycle corridors but does not describe any bicycling needs related to mobility, safety, or asset management applicable to Your Transportation Plan integration.



## Section 3

# Transportation Systems

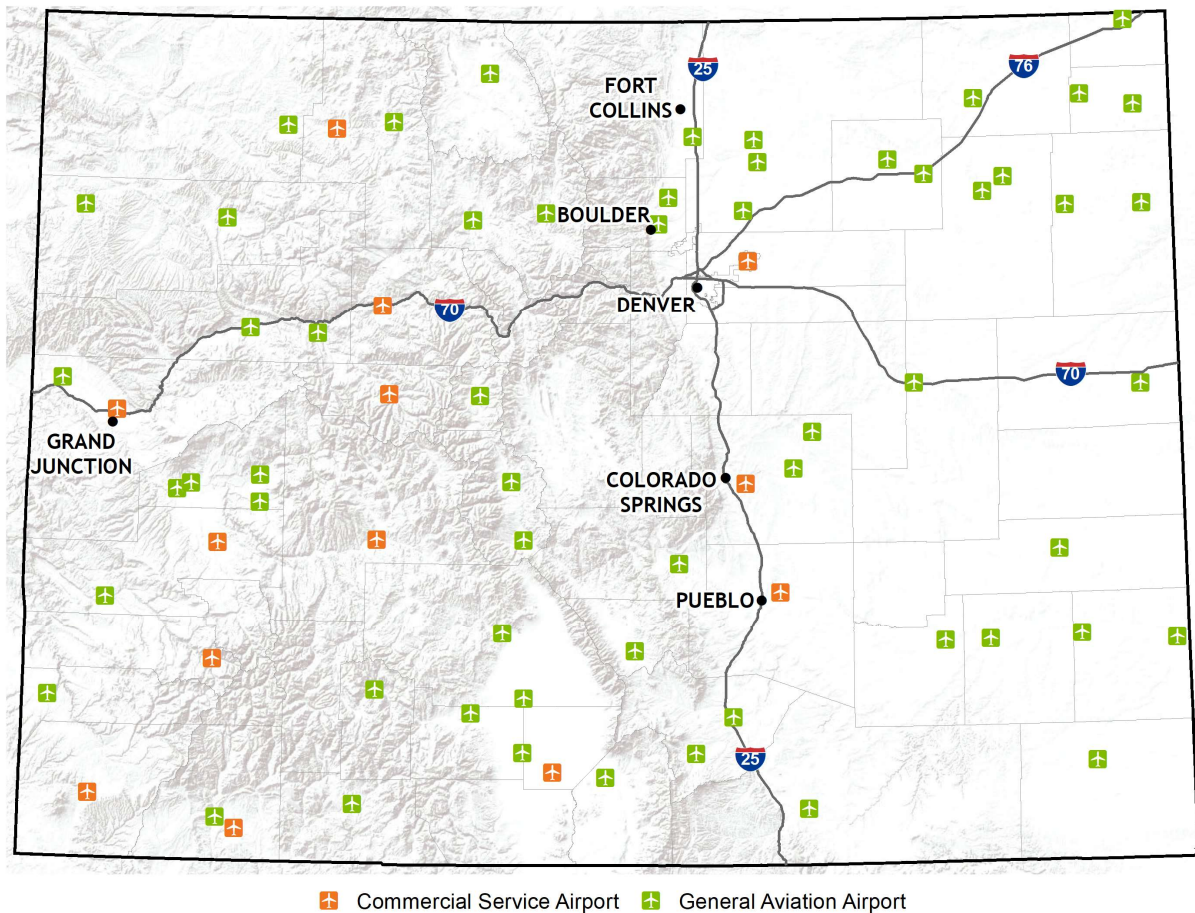
## 3.1 System Modes

Colorado's transportation system is a network of roadways, freight and passenger railways, airports, transit services, and bicycle and pedestrian facilities. The multimodal transportation system is vital to the state's economy because it facilitates the efficient, reliable, and safe movement of persons and goods. The following provides a brief description of the existing transportation system by mode.

### 3.1.1 Airport

The Colorado airport system includes a total of 66 airports, and of which 14 are categorized as commercial service airports and 52 categorized as non-commercial service general aviation airports. Figure 3-1 shows the airports across the state of Colorado.

Figure 3-1 Colorado Airports



Source: Colorado Department of Transportation, 2020.

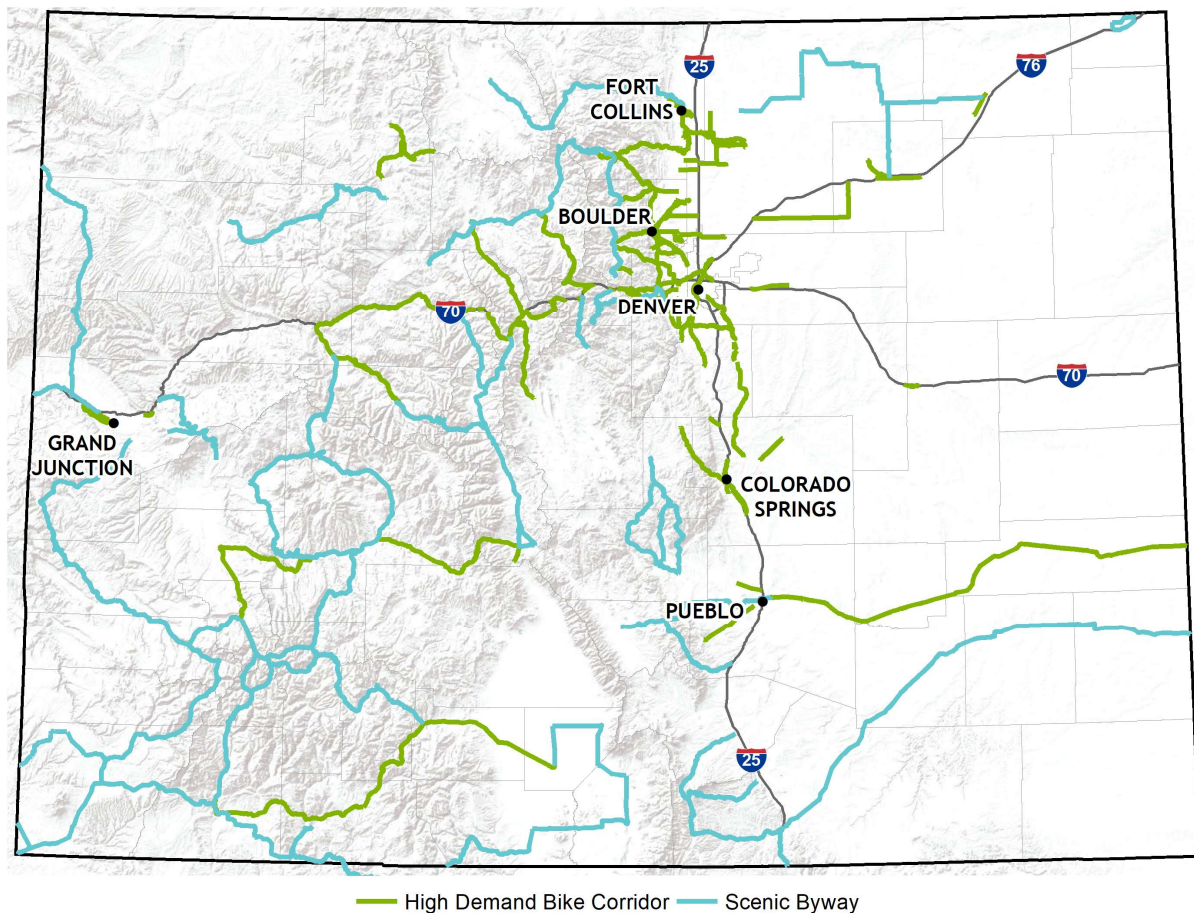
### 3.1.2 Bicycle and Pedestrian Facilities

A high demand bicycle corridor is a designation used by CDOT to plan and prioritize bicycles. There are approximately 2,487 miles of high demand bicycle corridors in Colorado. Figure 3-2 shows the Colorado High Demand Bicycle Corridors.

There are approximately 3,269 bicycle share stations in Colorado, mostly in the communities of Boulder, Castle Rock, Denver, Golden, and Longmont. Additionally, there are approximately 2,493 miles of existing bicycle facilities (e.g., local paths, shared-use paths, side paths, unpaved paths).

Scenic byways are designated routes that have scenic, historic, cultural, recreational, and natural features. These byways often promote tourism and economic development adjacent to the corridors. Eleven of Colorado's 26 byways are designated by the US Secretary of Transportation as America's Byways, which gives Colorado more national designations than any other state. Figure 3-2 shows the scenic byways in Colorado.

**Figure 3-2 Colorado High Demand Bicycle Corridors and Scenic Byways**



Source: Colorado Department of Transportation, 2020.

### 3.1.3 Bus Transit

Intercity bus service is regularly scheduled bus service that connects two or more urban areas, and serves passengers traveling long distances. It serves the general public, can transport

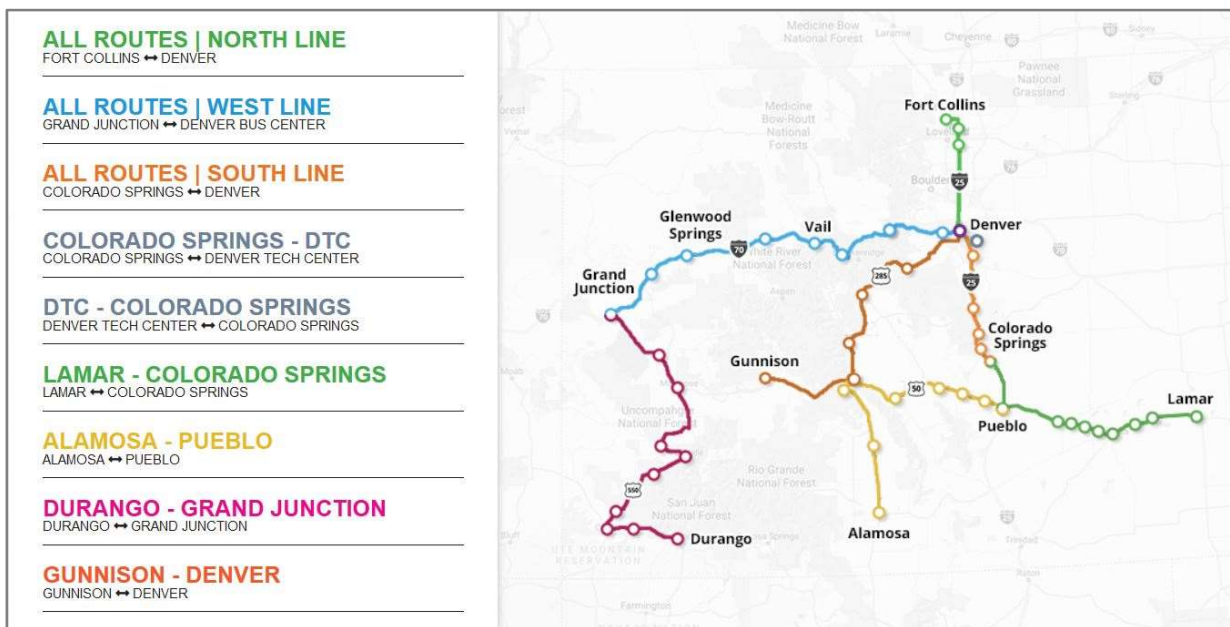
passengers' baggage, and makes meaningful connections with national intercity bus service to more distant points. Intercity bus generally operates with only a few trips each day, but usually operates every day.

Regional bus service also crosses jurisdictional lines but may operate within rural regions or connect to an urban area. Regional services are generally 20 to 60 miles in length. Regional services are often geared around certain markets (e.g., workers or airport shuttles) and operate on schedules geared to these markets. Regional services may also be designed to serve people who need to travel long distances to access government services, medical trips, or other destinations. Some regional services operate only one to two trips each day while others have robust schedules.

CDOT's Bustang is an interregional express bus service offering major routes along the I-25 Front Range and I-70 mountain corridors. Its Outrider (rebranded as Bustang Outrider) is a rural regional network designed to both service local traffic and offer connections to Denver. Together, these routes provide connections between local transit agencies and rural access to urban centers. This service is not intended to compete with existing private service providers but only provide essential routes that do not exist to fill in service gaps.

As shown in Figure 3-3, Bustang services Denver, Colorado Springs, Fort Collins, Glenwood Springs, and more during peak commute hours. Since its launch in 2015, the network has grown in terms of service, ridership, and revenue. Bustang Outrider is poised to add four new routes in 2021 with a phased expansion of priority routes as funding becomes available.

**Figure 3-3 Bustang Routes**



Source: Colorado Department of Transportation, 2020.

### 3.1.4 Rail

#### 3.1.4.1 Freight

There are 14 freight railroads and approximately 2,684 route miles of track. Rail covers about 20 percent of all freight moves in Colorado. Approximately 154 million tons of products and



commodities are moved along Colorado's freight rail lines. Figure 3-4 shows the freight railroads across the state of Colorado.

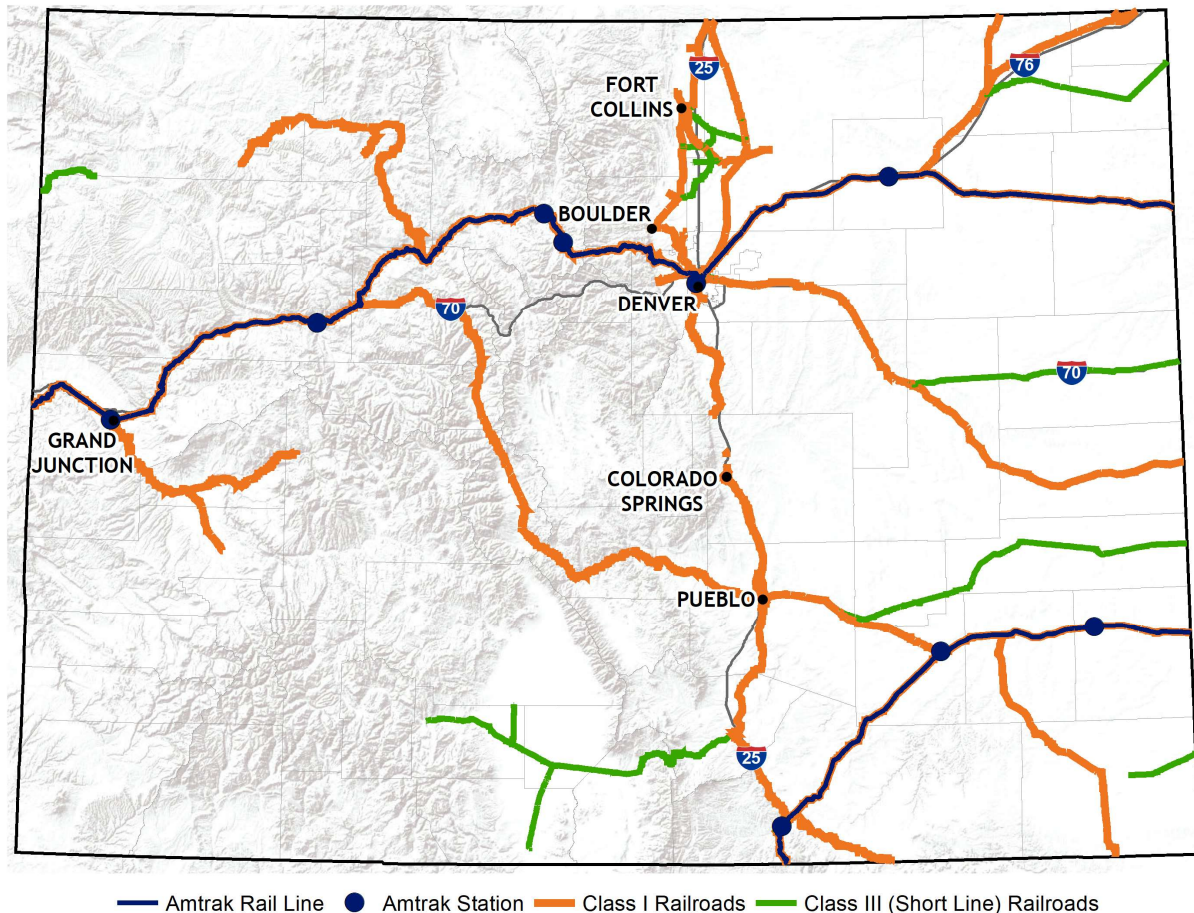
### 3.1.4.2 Passenger

There are approximately 663 miles of passenger rail lines, which are operated by two Amtrak routes. Approximately 279,589 Amtrak travelers move in and out of Colorado. Passenger rail service operates on railroads owned by Burlington Northern Railroad, Burlington Northern Santa Fe, and Union Pacific Railroad. Figure 3-4 shows the Amtrak passenger rail lines across the state of Colorado.

There are eight scenic railroads with an approximate total of 930,000 passengers annually.

Denver Metro Area's Regional Transportation District (RTD) operates 58.5 miles of light rail track and 40 miles of commuter rail track. Approximately 4.3 million commuter rail passengers use RTD service annually. FasTracks is RTD's voter-approved transit expansion program—the largest in the nation—that is transforming transportation through the Denver metro region.

**Figure 3-4 Colorado Freight and Amtrak Rail Lines**



Source: Colorado Department of Transportation, 2020.

### 3.1.5 Roads

Colorado freight corridors are highway routes in Colorado that are critical for interregional and interstate commercial vehicles to transport goods. These corridors have been identified as the

most critical routes to facilitating the movement of goods into, out of, and within Colorado. Together, these corridors cover more than half of all state highway system lane-miles. The state highway system includes all the highways that CDOT owns, operates, and maintains. There are approximately 9,074 miles of roadway within the state highway system, as illustrated in Figure 3-5.

The National Highway System (NHS) are routes that are designated as important to the nation's economy, defense, and mobility. NHS facilities can be either on-system (CDOT owned, operated and maintained), or off-system (locally owned or maintained by cities and counties). Table 3-1 lists the mileage for each functional class.

**Table 3-1 National Highway System**

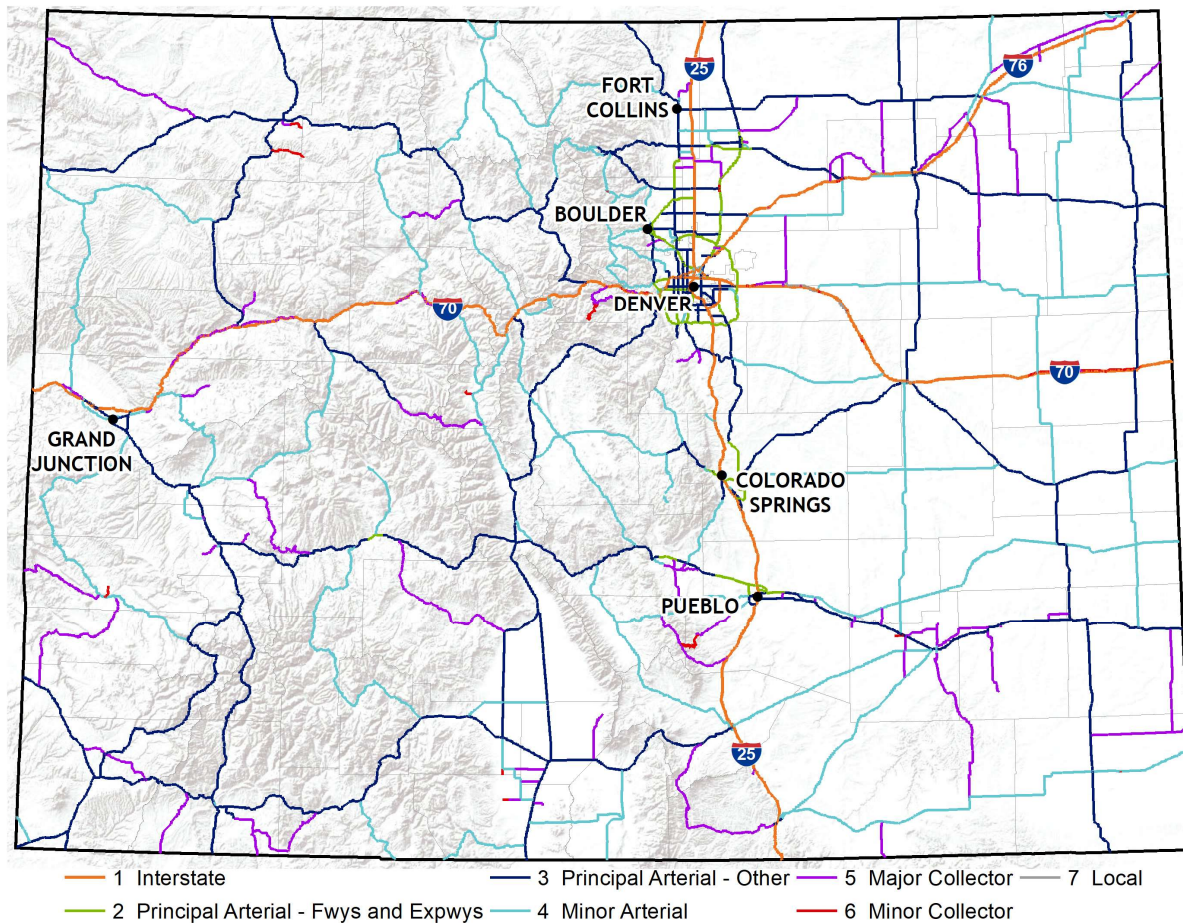
Functional Classification	Mileage
Interstates	952
Principal Arterial - Freeways and Expressways	352
Principal Arterial - Other	3579
Minor Arterial	16
Major Collector	5

Source: Colorado Department of Transportation, 2020.

The Intermodal Surface Transportation Efficiency Act of 1991 established eighty priority corridors nationwide intended to promote collaborative planning along corridors. Five of these corridors pass through Colorado and include:

- Interstate Route 70 (I-70) from Denver, Colorado to Salt Lake City Utah;
- El Camino Real, extends from El Paso, Texas to the Canadian Border;
- Heartland Expressway, extends from Denver/Limon Colorado to Rapid City, South Dakota;
- High Plains, extends along US 50 from Newton, Kansas to Pueblo, Colorado; and
- Ports to Plains, extends from Laredo, Texas to Denver Colorado.

In addition, regional priority investment corridors have been selected by the stakeholders of the rural TPRs as having high importance to the region's transportation system or it is important because of a need for near-term improvements.

**Figure 3-5 Colorado State Highway System**

Source: Colorado Department of Transportation, 2020.

### 3.2 System Interrelationships

Any one of these modes, individually, does not make up Colorado's transportation system. While each mode may strive toward optimal efficiency, collectively all modes connected together make a complex and robust transportation system. CDOT gives special consideration to the systematic merging of different modes of transportation into a single functional system of movement of freight and people, especially connections between modes, such as the quality of bicycle and pedestrian access to transit stops and stations. In fact, CDOT's mission is to provide "the best multimodal transportation system for Colorado that most effectively and safely moves people, goods and information."



To Learn More  
[YourTransportationPlan.com](http://YourTransportationPlan.com)