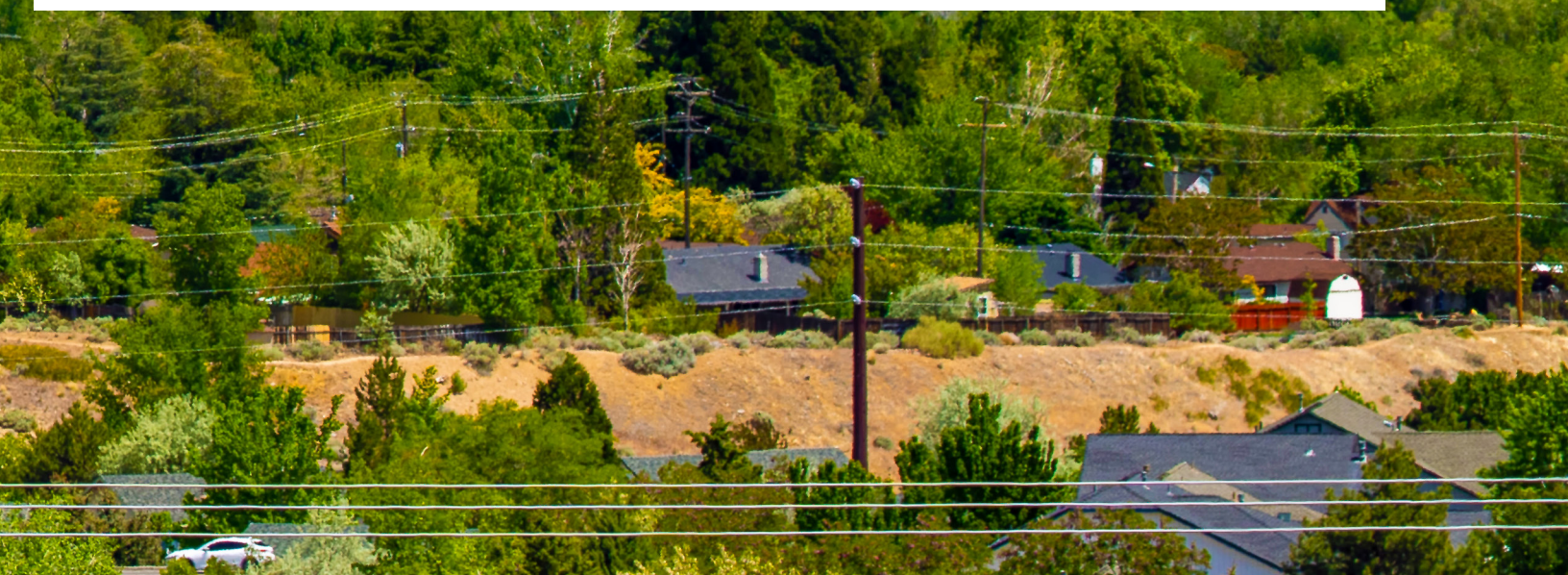
2050 RTP

Regional Transportation Plan

2025 Update


Build
BETTER
Future



LETTER FROM THE EXECUTIVE DIRECTOR

The Regional Transportation Commission of Washoe County (RTC) is pleased to present the 2050 Regional Transportation Plan Update (RTP). This RTP sets the course for transportation investment in our region over the next 25 years and includes projects and programs that can create economic opportunities, protect air quality, improve connectivity, increase mobility, and sustain a high quality of life.

This RTP reflects our community's long-range vision for transportation in the Truckee Meadows and was developed in coordination with policy makers, elected officials, stakeholders, and the public. I would like to thank the community, our regional partners and RTC staff for their commitment and participation during the planning process.

I also recognize and thank the RTC Board of Commissioners for their leadership and vision in guiding the future of transportation investment in the Truckee Meadows.

Sincerely,
Bill Thomas, AICP
Executive Director

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A SPECIAL THANK YOU

A special thank you to our regional partners who served on the Agency Working Group, Inter-County Working Group, and the RTC staff who contributed to the development of this RTP!

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EXECUTIVE SUMMARY

INTRODUCTION

This Regional Transportation Plan (RTP) fulfills federal and state legal requirements by establishing a 25-year vision for transportation improvements within the Truckee Meadows region, including short- and long-term strategies, prioritized projects, and a fiscally constrained roadmap for implementation. In addition to meeting the federal requirements for a regional transportation plan, this RTP also serves as the long-range transportation plan for purposes of compliance with state law through its utilization by the Truckee Meadows Regional Plan (the Regional Plan) developed by the Truckee Meadows Regional Planning Agency (TMRPA).

This RTP serves as the foundation for addressing the region's current and future transportation needs, ensuring the safe, efficient, and sustainable movement of people and goods while supporting economic growth and improving quality of life. Additionally, this RTP, and the planning program it reflects, allows the region and its projects to be eligible for federal formula funding and to compete for federal discretionary grants.

As the designated Metropolitan Planning Organization (MPO) for Washoe County, the Regional Transportation Commission of Washoe County (RTC) is tasked with conducting continuing, cooperative, and comprehensive multimodal transportation planning for the Truckee Meadows region including the development of the RTP.

THE TRUCKEE MEADOWS REGION

The Truckee Meadows Region (the region) refers to the over 6,000 square mile area which includes all of Washoe County except the portion within the drainage basin of Lake Tahoe. To effectively address transportation need the unique dynamics of the region should be considered. One of the primary factors shaping transportation need is population growth. The recently adopted TMRPA 2024 Washoe County Consensus Forecast projects that Washoe County's total population will grow from 515,085 in 2024 to 602,455 in 2044. This translates to an average of about 4,500 new residents per year. Given this expected population increase, an overarching function of this RTP is to plan for the needed growth of transportation infrastructure, programs, and services in order to retain high levels of connectivity and accessibility across the region.

REGIONAL GOALS

This RTP outlines goals representing the desired state of the regional multimodal transportation system over the next 25 years. Federal law establishes seven national transportation goals, and MPOs are encouraged to align their long-range plans with these or develop equivalent goals, per United States Department of Transportation (USDOT) guidance. Additionally, ten federally required planning factors addressing priority community concerns must be integrated into the metropolitan transportation planning process.

This RTP includes nine unranked goals, representing the desired state of the region's transportation future. The goals were developed based on federal requirements, national objectives, and input from stakeholders and the public. They identify priorities for the region and also guide the creation of objectives and evaluation criteria used to prioritize transportation projects. Linking project selection to these goals ensures the resulting projects can address the region's transportation priorities. The nine RTP goals below are explored in detail through the goal chapters of this RTP.

- RTP Goal #1: Safety
- RTP Goal #2: Maintain Infrastructure Condition
- RTP Goal #3: Congestion Reduction
- RTP Goal #4: System Reliability and Resiliency
- RTP Goal #5: Efficient Freight Movement and Economic Vitality
- RTP Goal #6: Equity and Environmental Sustainability
- RTP Goal #7: Reduced Project Delivery Delays
- RTP Goal #8: Accessibility and Mobility
- RTP Goal #9: Integrated Land-Use and Economic Development

FINANCIAL ELEMENT

This RTP determines if proposed transportation investments including roadways, transit, bike, pedestrian, and technology projects and services, are feasible and can be funded within the next 25 years. It includes a financial plan that projects future revenues, adjusts for inflation, and suggests additional funding strategies, if needed. Revenue estimates consider growth, inflation, and changes in fuel efficiency, using Year-of-Expenditure (YOE) dollars for accuracy.

Funding sources include federal programs under the Infrastructure Investment and Jobs Act (IIJA), state and local taxes, and local developer fees. While revenues are expected to grow modestly, funding gaps remain, especially for public transit projects.

Project prioritization is critical to ensuring funds are allocated to those transportation investments that best position the region to meet the RTP's goals. Project prioritization is based on input from stakeholder agencies as well as the RTP goals and objectives. Transit system needs are identified through a short-range transit plan which aims to maintain current services while identifying future opportunities, such as extending bus lines and improving connections.

Funding does not exist for all projects identified through the RTP process, necessitating an unfunded list of projects. Unfunded projects are those that would be included in the RTP if additional funding resources were available and those that could be considered in the event additional funding is identified. As revenues from most funding sources are not keeping up with the growing need for transportation projects within the region, RTC faces a difficult challenge in setting priorities for future spending. However, this RTP provides the framework for future decision-making by identifying the projects most valuable to, and having the greatest impact on the region.

RESUMEN EJECUTIVO

INTRODUCCIÓN

El Plan de Transporte Regional (RTP, por sus siglas en inglés) cumple con los requisitos legales federales y estatales al establecer una visión a 25 años para la mejora del transporte en la Región de Truckee Meadows, incluyendo estrategias a corto y largo plazo, proyectos priorizados y con limitaciones fiscales, organizados dentro de un marco viable para su implementación. Además de satisfacer los requisitos federales para un plan de transporte regional, el RTP también actúa como un plan de largo plazo que respalda los propósitos de la legislación estatal, formando parte del Plan Regional de Truckee Meadows (Plan Regional), elaborado por la Agencia de Planificación Regional de Truckee Meadows (TMRPA, por sus siglas en inglés).

El RTP es la herramienta clave para abordar las necesidades de transporte actuales y futuras en la región, asegurando el movimiento seguro, eficiente y sostenible de personas y bienes, al mismo tiempo respaldando el crecimiento económico y mejorando la calidad de vida de los habitantes. Además, el RTP y el programa de planificación que representa, permiten que la región y sus proyectos sean elegibles para recibir financiamientos federales y participar en programas federales de subvenciones discrecionales.

Como la Organización de Planificación Metropolitana (MPO, por sus siglas en inglés) designada para el condado de Washoe, la Comisión de Transporte Regional del Condado de Washoe (RTC, por sus siglas en inglés) tiene la tarea de llevar a cabo la planificación de transporte multimodal de manera continua, cooperativa e integral para la región de Truckee Meadows, incluyendo la elaboración del RTP.

LA REGIÓN DE TRUCKEE MEADOWS

La región de Truckee Meadows (la región) abarca un área de más de 6,000 millas cuadradas, que incluye todo el condado de Washoe, excepto la parte perteneciente a la cuenca del Lago Tahoe. Para abordar eficazmente las necesidades de transporte, es esencial tener en cuenta las dinámicas particulares de esta región. Uno de los factores más relevantes que influyen estas necesidades es el crecimiento poblacional. Según el Pronóstico de Consenso 2024 del Condado de Washoe, recientemente adoptado por TMRPA, se proyecta que la población total del Condado de Washoe aumentará de 515,085 en 2024 a 602,455 en 2044, lo que representa un promedio de aproximadamente 4,500 nuevos residentes por año. Dado este esperado crecimiento, la función primordial del RTP es planificar el desarrollo de la infraestructura, los programas y los servicios de transporte para mantener altos niveles de conectividad y accesibilidad en toda la región.

METAS REGIONALES

El RTP establece las metas que definen el estado deseado del sistema de transporte multimodal regional durante los próximos 25 años. La legislación federal establece siete metas nacionales de transporte, y fomenta a las MPO a alinear sus planes a largo plazo con estas metas o a desarrollar metas equivalentes, según la guía de la agencia USDOT. Además, durante el proceso de planificacion de transporte metropolitano, se deben integrar diez factores de planificación requeridos por el gobierno federal, los cuales incluyen las prioridades e intereses de la comunidad.

El RTP establece nueve metas no priorizadas que representan el estado deseado para el futuro del transporte en la región. Estas metas se desarrollaron tomando en cuenta los requisitos federales, los objetivos nacionales, así como los aportes de las partes interesadas y la retroalimentación del público. Estas metas no solo identifican las prioridades para la región, sino que también orientan la creación de objetivos y criterios para evaluar y priorizar proyectos de transporte.

Al vincular la selección de proyectos a estas metas, se asegura que los proyectos se enfoquen en las prioridades más relevantes para la región.

Las nueve metas del RTP se exploran con mayor detalle en los capítulos correspondientes:

- RTP Meta #1: Seguridad
- RTP Meta #2: Mantener la condición de la infraestructura
- RTP Meta #3: Reducir la congestión
- RTP Meta #4: Fiabilidad y resiliencia del sistema
- RTP Meta #5: Movimiento eficiente de carga y vitalidad económica
- RTP Meta #6: Equidad y sustentabilidad ambiental
- RTP Meta #7: Reducir los retrasos de entrega del proyecto
- RTP Meta #8: Accesibilidad y movilidad
- RTP Meta #9: Integrar el uso de terrenos con desarrollo económico

ELEMENTO FINANCIERO

El RTP evalúa la viabilidad y financiación de las inversiones propuestas en transporte incluyendo proyectos y servicios relacionados con carreteras, tránsito, bicicletas, peatones y tecnología, para los próximos 25 años. Esto abarca un plan financiero que proyecta los ingresos futuros, ajusta los costos por inflación y propone estrategias de financiación adicionales si fuera necesario. Las estimaciones de ingresos consideran factores como el crecimiento, la inflación y los cambios en la eficiencia del combustible, utilizando el monto total de los gastos en dólares del año correspondiente (YOE, por sus siglas en inglés) para garantizar mayor precisión.

Las fuentes de financiación incluyen programas federales bajo la Ley de Inversión en Infraestructura y Empleo (IIJA, por sus siglas en inglés), así como impuestos estatales y locales, y tasas de impacto y permiso para desarrolladores inmobiliarios. Aunque se prevé un modesto aumento en los ingresos, persisten déficits financieros, especialmente en el ámbito de los proyectos de transporte público.

La priorización de proyectos es fundamental para asegurar que los fondos se asignen a las inversiones en transporte que mejor posicionan a la región para cumplir con las metas del RTP. Este proceso de priorización de proyectos se basa en los aportes de las agencias involucradas, así como en las metas y objetivos establecidos por el RTP. Las necesidades del sistema de transporte público se identifican a través de un plan de corto plazo, enfocado a mantener los servicios actuales mientras se exploran oportunidades futuras, como la expansión de las líneas de autobús y la mejora de las conexiones.

No se dispone de financiación suficiente para todos los proyectos identificados a través del proceso del RTP, por lo que es indispensable contar con una lista de proyectos sin financiamiento. Los proyectos sin financiamiento son aquellos que se incorporarían al RTP si se dispusiera de recursos adicionales y aquellos que podrían evaluarse en caso de identificarse fondos adicionales. Dado a que los ingresos provenientes de la mayoría de las fuentes de financiación no logran cubrir la creciente demanda de proyectos de transporte en la región, RTC enfrenta el difícil desafío de priorizar el gasto futuro. No obstante, el RTP ofrece un marco sólido para la toma de decisiones, al identificar los proyectos más relevantes y con mayor impacto en la región.

CHAPTER 1

Introduction

Why is the Regional Transportation Plan (RTP) important to the Truckee Meadows Region? Put simply, the RTP matters because transportation plays a vital role in both the region's quality of life and economic prosperity. Therefore, having a RTP is essential for identifying, prioritizing, and implementing the transportation projects, programs and services necessary to community mobility.

A RTP is required by federal and state law. The Regional Transportation Commission of Washoe County (RTC) is the entity responsible for developing the RTP, in collaboration with policy makers, elected officials, stakeholders, and the public. Public and stakeholder engagement is vital throughout the RTP development process, and the process itself is intended to build greater consensus around the RTP. The development of the RTP requires a regional, collective effort.

The RTP is required to address at least a 20-year planning timeframe. It must also include short- and long-term strategies to foster the development of an integrated multimodal regional transportation system that facilitates the safe and efficient movement of people and goods. Additional requirements of the RTP include a prioritized and fiscally constrained list of the transportation projects for the region that are needed over the next 20 years.

An update to the RTP is currently required every four years due to air quality regulations. This 2050 RTP Update serves as an update to the current plan which was adopted on March 19, 2021.

RTC is the designated Metropolitan Planning Organization (MPO) for the Truckee Meadows region and is therefore required by federal law to develop the RTP for the region. Federal law requires a MPO to be created when an urbanized area (as defined by the Census Bureau) reaches 50,000 in population. The MPO for the Washoe County area was first created in 1979 when the Census reported a population of 50,000 in the urbanized area.

Per 23 Code of Federal Regulations (CFR) 450.312, federally required MPO planning boundaries must include, at minimum, the Census defined urbanized area, "plus the contiguous area expected to become urbanized within a 20-year forecast period for the metropolitan transportation plan," but that boundary can be extended in order to foster effective transportation planning. Additionally, MPOs are required to review their planning boundaries every ten years when the Census determines new urbanized areas. The current MPO planning boundary includes the urbanized area and extends to encompass all of Washoe County, except the portion within the drainage basin of Lake Tahoe, an area over 6,000 square miles with an estimated population of 493,556, according to Truckee Meadows Regional Planning Agency (TMRPA) regional population estimates.

As the MPO, RTC conducts a continuing, cooperative, and comprehensive multimodal transportation planning program consistent with federal planning law. Federal planning law is largely found in Titles 23 and 49 of the United State Code (USC), and United States Department of Transportation (USDOT) Code of Federal Regulations (CFR). The RTP, and the planning program it reflects, allows the region and its projects to be eligible for federal formula funding and to compete for federal discretionary grants.

This RTP has been developed to comply with both federal and state planning requirements. In addition to meeting the federal requirements for a regional transportation plan, this RTP also serves as the long-range transportation plan for purposes of compliance with state law through its utilization by the Truckee Meadows Regional Plan (the Regional Plan) developed by the Truckee Meadows Regional Planning Agency (TMRPA). TMRPA shares a similar planning area to RTC and produces a regional land-use plan, the Regional Plan, which is a comprehensive plan for managing growth and development, inclusive of transportation facilities. For the purposes of the Regional Plan, state law requires the RTP to include transportation facilities that will be necessary to support future development as prioritized in the Regional Plan. The RTP must also establish the timeframe within which those transportation facilities would need to be made available to satisfy the requirements created by future development. The RTP must be found by TMRPA to be in conformance with their Regional Plan to ensure it supports TMRPA's efforts to plan for orderly growth and development in the region.

In addition to serving as the MPO and conducting the regional transportation planning program, RTC also delivers transportation projects and services. As required by federal law, the RTP identifies a prioritized and fiscally constrained list of the transportation projects and services that are needed in the region. The project list is included as Appendix B. RTC delivers many of the projects and services on that list and makes related decisions regarding the use of regional revenue sources that are dedicated to transportation purposes. RTC delivers roadway projects and other multimodal facilities as part of its regional street and highway program. RTC operates the regional transportation system including public transit and other transportation services. RTC also administers regional programs pursuant to interlocal cooperative agreements such as the Regional Pavement Preservation Program, and the Regional Road Impact Fee Program.


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CHAPTER 2

The Truckee Meadows Region

The Truckee Meadows region (the region) refers to the over 6,000 square mile area which includes all of Washoe County except the portion within the drainage basin of Lake Tahoe. The region encompasses a diverse landscape, with the Sierra Nevada mountain range to the west and the expansive Great Basin to the east, it is also characterized by its unique blend of urban and rural environments. The region includes the urban hubs of the City of Reno and the City of Sparks as well as a mosaic of neighborhoods, each with its own distinct character. The region's proximity to Sacramento and the San Francisco Bay Area offers economic and tourism opportunities but can also create transportation challenges.

POPULATION

The region is home to a diverse range of ethnicities and cultures stemming from a strong immigrant history, proximity to diverse populations in Northern California, and a desirable quality of life. Just over 60 percent of Washoe County residents identify as White, non-Hispanic. Hispanic or Latino is the next largest demographic at nearly one-quarter of the population. The remaining population represents a broad cross-section of race and ethnicities.

Within the MPO planning area, the population is currently estimated at 493,556, reflecting an increase of 19 percent, or 78,936 residents since 2010, for an average of 6,568 new residents per year. The Nevada State Demographer's Office forecasts a population increase for Washoe County to 579,706 by 2042, an increase of 15.5 percent from the 2022 population or 78,071 residents. This equates to an average of 3,904 new residents per year. TMRPA's 2024 Washoe County Consensus Forecast (CF) on population growth incorporates the State Demographer's projection along with three other independent sources to minimize projection bias.

The recently adopted CF is more optimistic and projects that Washoe County's total population will grow from 515,085 in 2024 to 602,455 in 2044. This translates to an average of about 4,500 new residents per year and an average annual growth rate of 0.81 percent.

Population growth estimates for Washoe County outpace projected growth for the United States, which, according to the Congressional Budget Office, is expected to average approximately 0.3 percent annually between 2023 and 2053. As the population continues to increase, there will likely be greater overall pressure on the existing transportation system.

EMPLOYMENT

Between 2014 (when Tesla announced Storey County as their first Gigafactory location) and 2023, the region added an average of 7,100 jobs per year. This important period of industry diversification has significantly affected the distribution of job types in the Reno-Sparks economy. Businesses in the region, previously dominated by leisure and hospitality, have begun to shift toward a logistics and manufacturing hub. Secondary economic impacts, resulting from spending and hiring in these growing sectors, also created job gains in the Construction, Professional and Business Services, and Education and Health Care Services industries.

According to the State of Nevada's Current Employment Survey of employers, there were 271,900 jobs spread across worksites located in Storey and Washoe Counties, as of May 2024. The area also saw an additional 6,380 jobs (2.4 percent) added in January 2024 through May 2024, compared to the same period in 2023. Based on recent trends, increasing employment in Storey, Lyon and Washoe Counties can be expected to continue.

HOUSEHOLD INCOME

In 2022, 10.2 percent of households in Washoe County had incomes at or below the poverty level, which is lower than the state of Nevada at 12.5 percent, and lower than the national poverty rate of 11.5 percent, according to 2022 American Community Survey 1-year Estimates. A lower poverty rate for Washoe County stems from several factors such as a robust local economy consisting of opportunities for both professional and skilled labor, and employment diversity. In contrast, during the years leading up to the 2008 Great Recession, the County was dependent on just a few employment sectors.

HOUSING

As of 2022, Washoe County had around 192,420 households compared with 160,797 households in 2010, according to the US Census ACS 5-year Estimates. This represents a near 20 percent increase in households since 2010. The majority of residences are single-family homes at 65 percent, followed by multi-family housing at 29 percent, and finally, mobile homes around 6 percent. Like many communities, the demand for housing in the region outpaces supply, even with a strong residential construction sector. In fact, 2023 saw the City of Reno issue the highest number of new residential construction permits ever.

TRANSPORTATION

The transportation system in the region includes roadways, pedestrian and bicycle facilities, transit services and facilities, air, rail, and inter- and intrastate bus service. Based on 2023 Nevada Department of Transportation (NDOT) vehicle miles traveled (VMT) data, freeways dominate the traffic landscape, accounting for 44.0 percent of total vehicle VMT with 1,736,216,564 miles traveled across 87 miles of road in 2023. Major arterials and minor arterials together represent a significant portion of traffic, with 19.9 percent and 19.4 percent of the total VMT, respectively.

Local roads, despite their extensive mileage at a total of 1,561 miles, contribute only 11.4 percent to the total VMT. Major collectors and minor collectors play a smaller role, with 0.5 percent and 4.9 percent of the total VMT, respectively.

Regional Roadways

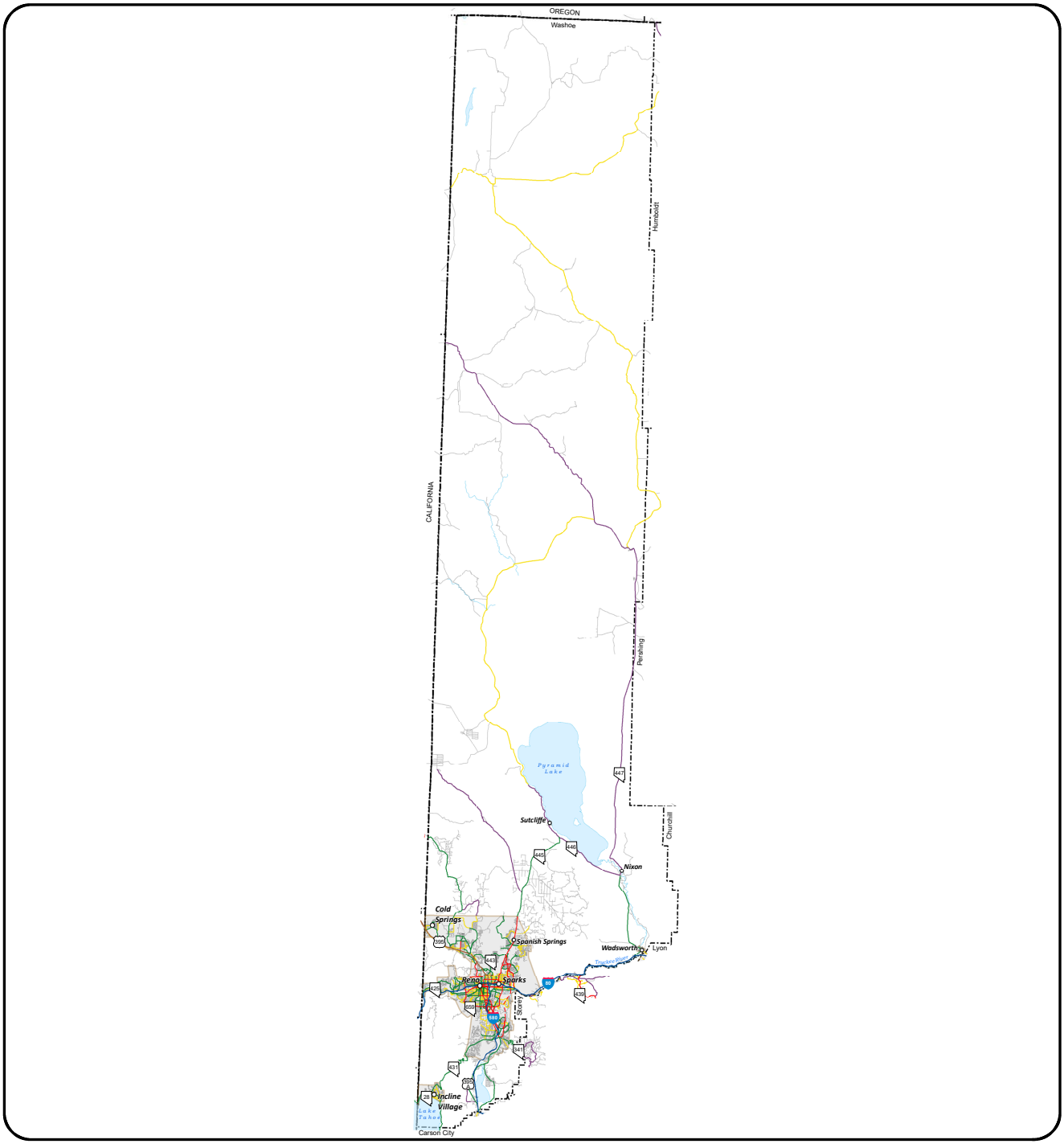
Previous versions of the RTP have utilized the term “Regional Roads” to describe roadways where both RTP projects and RTC programs were implemented. This RTP seeks to clarify and differentiate between eligibility requirements of regionally significant projects for inclusion in the RTP and the eligibility requirements of projects for programming activities of the RTC such as the Pavement Preservation Program. Roadways eligible for the Pavement Preservation Program, as shown in Appendix F, may include some roads, as agreed to by the local jurisdictions, with a roadway functional classification of local.

Projects eligible for inclusion in the RTP, and for federal funding, must adhere to the federal definition of regional significance, and project location aligns, in most cases, with a roadway functional classification of arterial or collector.

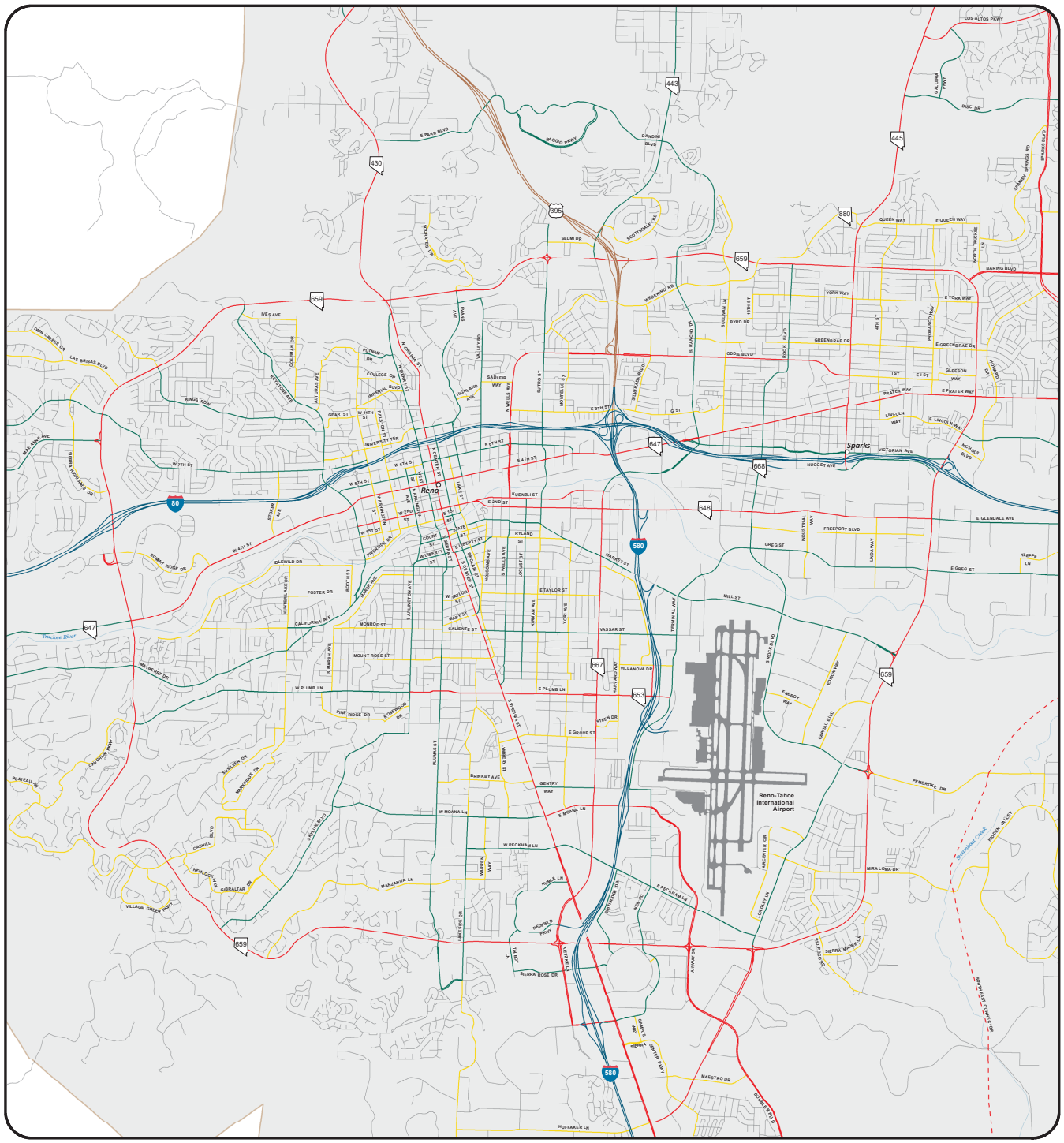
Roadway functional classifications are determined by the United States Department of Transportation (US DOT) Federal Highway Administration (FHWA). Functional classifications are based on the type of service the road provides, and the design elements of the roadway such lane widths, shoulder widths, and curve radii. The four main road functional classifications are: Principal Arterial, Minor Arterial, Collector, and Local.

Public roads that are functionally classified higher than rural minor collector, rural local, or urban local are eligible for federal-aid highway assistance. Rural minor collectors and local roads usually do not qualify, although certain federal funding sources can be used on bridges and tunnels that are not part of the Federal-aid highway system. The utilization of the functional classification system is also crucial for reporting on performance metrics. Map 2.1 and Map 2.2 show the functional classification of roads in the region. Table 2.1 summarizes the four main roadway functional classifications.

Map 2.1 NDOT 2016 Functional Roadway Classification



Map 2.2 NDOT 2016 Functional Roadway Classification Map Inset



2016

PREPARED BY
THE NEVADA DEPARTMENT OF TRANSPORTATION

Existing	Proposed Unbuilt	
		1 Interstates
		2 Other Freeways and Expressways
		3 Other Principal Arterials
		4 Minor Arterials
		5 Major Collectors
		6 Minor Collectors
		7 Local Roads
		Urban Limits
		State Line
		County Lines

0 0.275 0.55 1.1 1.65 2.2 Miles

ROADWAY FUNCTIONAL CLASSIFICATION

RENO- URBANIZED B-2

WASHOE COUNTY, NEVADA

Table 2.1 Main Roadway Functional Classifications
Source: FHWA.DOT.GOV and FHWA Highway Functional Classification Concepts, Criteria and Procedures 2023 Edition

Functional Classification	Description
Principal Arterial	• Interstate System, freeways and expressways • Provide the highest level of mobility and the highest speeds over the longest uninterrupted distance • Access is controlled with the fewest points of access • Posted speeds generally between 55 and 75 mph
Minor Arterial	• Include multilane highways, and other important roadways that supplement the Interstate System • Provide service for trips of moderate length, serve geographic areas that are smaller than their Principal Arterial counterparts and offer connectivity to the higher Arterial system • Connect principal urbanized areas, cities, and industrial centers • Access points are few • Posted speed generally between 50 and 70 mph
Collectors	• Major and minor roads that connect local roads and streets with arterials • Provide less mobility than arterials at lower speeds and for shorter distances • They balance mobility with land access, with some access points • Posted speeds generally between 35 and 55 mph
Local	• Provide limited mobility and direct access to residential areas, businesses, farms, and other local areas • Access points are many • Posted speeds generally between 20 and 35 mph

Access Management

Access Management Standards are used in the design of future improvements to regional roads and the classification of existing improvements for planning purposes. Access refers to the entry of vehicles to and from the traveled portion of a roadway. This access can be to/from homes or businesses adjacent to the road, from intersecting streets or from parking on the sides of the roadway. Access control is a proven safety measure, as it reduces the potential for vehicle conflict. Vehicles need to access the roadway, but they also interrupt the flow of traffic. The greater the number of these interruptions, the more impact they have on flow. Access management controls the amount of these interruptions and is a tradeoff between the need for access and the maintenance of traffic flow. The degree to which access is managed needs to be appropriate to the type of adjacent land uses, volume of traffic and purpose of the roadway.

Access management decisions are made based on the latest edition of the NDOT Access Management System and Standards manual, Transportation Research Board Access Management Manual, or locally-adopted standards, as directed the local jurisdiction. Access management can include an analysis of the functional area at signalized intersections.

Access management may typically involve exercising control over the number and location of driveways and turning movements. Related to this is the control of the type of movements allowed into or out of these driveways through such things as signage and medians. Access control may also involve control of parking adjacent to the travel lanes. The degree to which access of all types is controlled can have a substantial impact on the ability of a roadway to carry traffic. For example, consider the very limited access allowed on an interstate highway versus a neighborhood street. The degree of access is an important consideration in sizing the street and highway system. All other things being equal, the greater the degree of access control, the greater number of vehicles that can be accommodated per lane. When the degree of actual access significantly exceeds the original planning assumptions, significant unforeseen problems can occur, inducing additional congestion.

Access controls also have a direct impact on safety as shown in Table 2.2. Minimizing the number of turning movements across lanes of traffic has been demonstrated to reduce crashes.

Table 2.2
Effects of Access Management Techniques Access Management Technique

Access Management Technique	
1. Add continuous two way left turn lane (TWLTL)	35% reduction in total crashes 30% decrease in delay 30% increase in capacity
2. Add nontraversable median	55% reduction in total crashes 30% decrease in delay 30% increase in capacity
3. Replace TWLTL with a nontraversable median	15%-57% reduction in crashes on 4-lane roads 25%-50% reduction in crashes on 6-lane roads
4. Add a left-turn bay	25%-50% reduction in crashes on 4-lane roads Up to 75% reduction in total crashes at unsignalized access 25% increase in capacity
5. Type of left-turn improvement a. painted b. separator or raised divider	32% reduction in total crashes 67% reduction total crashes
6. Add right-turn bay	20% reduction in total crashes Limit right-turn interference with platooned flow, increased capacity
7. Increase driveway speed from 5 mph to 10 mph	50% reduction in delay per maneuver; less exposure time to following vehicles
8. Visual cue at driveways, driveway illumination	42% reduction in crashes
9. Prohibition of on-street parking	30% increase in traffic flow 20%-40% reduction in crashes
10. Long signal spacing with limited access	42% reduction in total vehicle-hours of travel 59% reduction in delay 57,500 gallons fuel saved per mile per year

Source: TRB Access Management Manual

Design standards and operational standards (agreed to by implementing jurisdictions) can help facilitate trip movements. Some important considerations include the following:

1. On-street parking shall not be allowed on any new arterials. Elimination of existing on-street parking shall be considered a priority for major and minor arterials operating at or below the policy level of service.

2. Minimum signal spacing is for planning purposes only; additional analysis must be made of proposed new signals in the context of existing conditions, planned signalized intersections, and other relevant factors impacting corridor level of service.

3. Minimum spacing from signalized intersection/spacing from other driveways

4. If there are more than 30 inbound, right-turn movements during the peak-hour

5. If there are more than 60 inbound, right-turn movements during the peak-hour

6. Minimum spacing on collectors

Additional roadway design access elements that influence safety and traffic flow include the following:

- Number of through lanes
- Minimum signal spacing
- Left turn from a major street
- Right deceleration lanes at driveways
- Driveway spacing
- Number of signalized intersections per mile
- Design speed
- Bicycle facilities
- Left turn lanes
- Left turn from minor street or driveway
- Median type or existence of median

The Access Management Standards shown in Table 2.3 are used in the design of future improvements to regional roads and the classification of existing improvements for planning purposes.

Table 2.3
Access Management Standards

Access Management Class	Posted Speeds	Signals Per Mile and Spacing[2]	Median Type	Left FromMajor Street? (Spacing from signal)	Left From Minor Street or Driveway?	Right Decel Lanes at Driveways	Driveway Spacing[3]
High Access Control	45-55 mph	2 or less Minimum spacing 2350	Raised w/ channelized turn pockets	Yes 750 ft. minimum	Only at signalized locations	Yes[4]	250 ft./500 ft
Moderate Access Control	40-45 mph	3 or less Minimum spacing 1590 feet	Raised or painted w/ turn pockets	Yes 500 ft. minimum	No, on 6- or 8-lane roadways w/o signal	Yes[5]	200 ft./300 ft
Low Access Control	35-40 mph	5 or less Minimum spacing 900 feet	Raised or painted w/turn pockets or undivided w/painted turn pockets or two-way, left-turn lane	Yes 350 ft. minimum	Yes	No	150 ft./200 ft.
Ultra-Low Access Control	30-35 mph	8 or less Minimum spacing 560 feet	Raised or painted w/turn pockets or undivided w/painted turn pockets ortwo-way left-turn lane	Yes 350 ft. minimum	Yes	No	150 ft./200 ft. 100 ft./100 ft.[6]

Regionally Significant Projects

Federal law requires regional transportation plans to emphasize facilities that serve national and regional transportation functions. Per 23 CFR § 450.104: "Regionally significant project means a transportation project (other than projects that may be grouped in the TIP and/or STIP or exempt projects as defined in EPA's transportation conformity regulations (40 CFR part 93, subpart A) that is on a facility that serves regional transportation needs (such as access to and from the area outside the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, or employment centers; or transportation terminals) and would normally be included in the modeling of the metropolitan area's transportation network. At a minimum, this includes all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel."

The core function of the MPO is to develop the RTP, through which the MPO is required to identify transportation projects that are considered critical for regional connectivity. This RTP addresses regional transportation issues involving the multimodal transportation system, identifying and prioritizing projects on existing or proposed roadways that handle high volumes of vehicle trips, facilitate connectivity across different jurisdictions, overcome significant travel barriers, or otherwise comply with the federal definition of regional significance. In terms of roadway functional classifications, RTC generally considers projects on the following roadways to be regionally significant:

- Principal arterial highways or minor arterials that are direct connections between freeways and other arterials, provide continuity throughout the region, and generally accommodate longer trips within the region, especially in the peak periods on high traffic volume corridors
- Collectors that cross a significant travel barrier or provide access to major existing or future regional facilities

Though functional classification often determines a project's regional significance, local conditions may also meet the federal definition of regional significance. As a result, projects are evaluated on a case-by-case basis to determine their eligibility for inclusion in the RTP.

This RTP does not identify projects on roadways that are functionally classified as local roads. The local jurisdictions (Washoe County, the City of Reno, and the City of Sparks) engage in planning efforts that focus on identifying and prioritizing projects on local roads. The function of the RTP is to identify regionally significant projects, however the RTC is also responsible for regional programs such as the Pavement Preservation Program. Roadways eligible for the Pavement Preservation Program, as shown in Appendix F, may include some roads, as agreed to by the local jurisdictions, with a roadway functional classification of local.

RTC and the local jurisdictions collaborate and cooperate to plan, construct, and maintain the regional road network. Varied goals and regulations require differing criteria for roadway planning and programming efforts. Transportation and air quality modeling, safety analysis and programming, and access management standards all have unique requirements and criteria. Likewise, criteria appropriate to regional RTC programs such as the Regional Pavement Preservation Program, the Regional Road Impact Fee Program, and RTC's overall regional street and highway program vary based on regulatory and other factors.

State Roadways

As outlined in the 2020 NDOT One Nevada Transportation Plan, the statewide transportation planning program focuses on the state highway system, which includes the four categories of regionally significant roadways listed below.

- Interstate Routes
- US Routes
- State Routes

- Other state-owned roads that are regionally significant

The regionally significant state-owned roads in the region are referred to as state roads for purposes of this RTP. The RTC integrates NDOT planning for state roads and related projects into its transportation planning program and NDOT projects on state roads are included in the prioritized list of regionally significant projects that must be included in the RTP.

Pedestrian and Bicycle Facilities

The pedestrian and bicycle network in the region includes sidewalks, multi-use paths, bike lanes, bike paths, overpasses, crosswalks, and bike amenities. Roadway projects are planned and designed to include pedestrian and bicycle facilities for purposes related to vehicle capacity, safety, and accessibility and mobility, considering all users of the roadway. Pedestrian and bicycle facilities can provide greater accessibility and mobility options to further the interests of congestion management, public health, regional air quality, and quality of life. In some cases, pedestrian and bicycle facilities can also provide increased regional connectivity.

Transit Services and Facilities

RTC transit services include regional fixed-route, paratransit, and a micro-transit system. Facilities that support those services include transit stations, transit routes, dedicated roadway lanes for transit routes, bus stops, passenger transfer facilities, and park-and-ride locations. The RTC has two main transit stations, 4th Street Station in downtown Reno, and Centennial Plaza in downtown Sparks, as well as a passenger transfer station at Meadowood Mall in Reno. The fixed-route system has 20 routes on approximately 204 miles of roadway that connect approximately 136 square miles in the region. RTC's intercity transit service connects Washoe County and Carson City.

The RTC has two bus rapid transit (BRT) routes, one on Virginia Street connecting north and south Reno, and one on 4th Street and Prater Way connecting Reno and Sparks, that include BRT stations and dedicated transit lanes. There are over 800 bus stops in Reno and Sparks that are part of the public transit system. Regional park-and-ride facilities are located at the Summit Mall in Reno and in the North Valleys area. Map 2.3 shows RTC transit routes and the area of transit service.

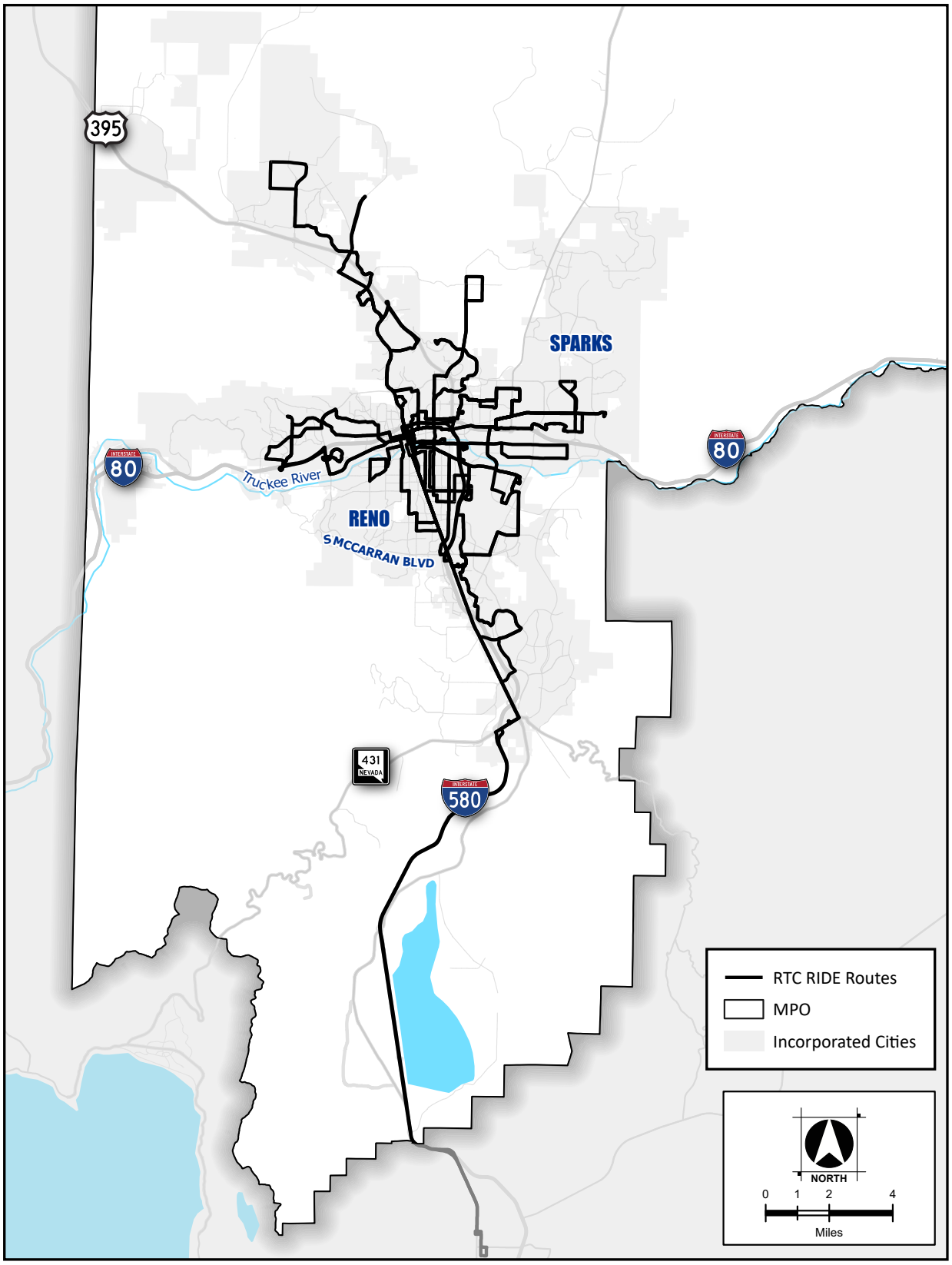
Air, Rail, and Inter- and Intrastate Bus Service

The Reno-Tahoe Airport Authority (RTAA) operates and maintains the Reno-Tahoe International Airport (RNO), as well as the Reno-Stead Airport which does not carry commercial airline traffic. RNO is the 62nd busiest airport in the United States, with approximately 4.6 million passengers per year, generating a total economic impact of $3.6 billion annually, according to the Reno-Sparks Convention & Visitors Authority (RSCVA) 2023 Economic Impact Study. RNO hosts ten commercial airlines and three cargo carriers, which access more than 20 nonstop destinations that can link passengers to virtually anywhere in the world. RNO is vital for tourism in the region as it is a key entry point for people looking to explore the Reno and Lake Tahoe area. The billions of dollars generated annually by the airport translate into jobs, infrastructure development, and community investment that directly benefit Nevada's critical tourism industry.

The region is also served by passenger rail. Amtrak provides daily rail service via a station in downtown Reno under agreement with the Union Pacific Railroad (UPRR) to use its tracks. Train services generally cater to regional and cross-country travelers. The UPRR railyard in Sparks is an integral part of the railroad's 32,000-mile operation and has been a focal point for the safe and efficient operation of freight trains over Donner Summit. UPRR has nearly 1,200 miles of track and 600 employees in the state, and the UPRR railyard in Sparks plays a critical role in the efficient movement of goods in and around Nevada.

Inter- and intrastate bus service to the region is provided by Greyhound. Pick-up/drop-off locations include the Amtrak station in Downtown Reno, the RTC's Centennial Plaza, and the Reno-Tahoe International Airport.

Map 2.3 RTC Existing Transit Routes



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CHAPTER 3

Performance Measures and Targets

Performance measures and targets help to support long-range investment and policy decision-making. The RTP must include a description of the performance measures and performance targets used in assessing the performance of the transportation system. Those performance measures must include the national performance measures established by federal law and regulation. The RTP must monitor and report on progress toward achieving targets for the national performance measures. As the MPO, the RTC must also integrate into the metropolitan planning process, directly or by reference, the performance measures and targets in state transportation plans and planning processes.

PERFORMANCE-BASED PLANNING

Federal law requires MPOs to conduct performance-based transportation planning. The RTP must be developed through a performance-driven, outcome-based planning approach. Performance-based planning and programming is a system-level, data-driven process to identify management and operational strategies and capital investments. It is intended to result in more efficient investment of transportation funding by focusing on national and regional transportation goals, increasing accountability and transparency, and improving decision-making.

The RTP is the centerpiece of RTC's comprehensive performance-based transportation planning program and serves as an umbrella document that informs programming decisions, including the development of RTC's Regional Transportation Improvement Program (RTIP). The RTP draws from multiple regional and state performance-based plans, programs, and processes, and connects performance measures to goals and objectives in order to identify needs, progress, and gaps in the performance of the transportation system.

The United States Department of Transportation (USDOT) identifies essential elements for performance-based long-range transportation plans, and the overall transportation planning process. The RTP has been structured to reflect current USDOT guidance on performance-based planning.

NATIONAL PERFORMANCE MEASURES AND TARGETS, AND SYSTEM PERFORMANCE REPORT

As the MPO, RTC must establish performance targets for the national performance measures. Those targets are summarized in Table 3.1. As RTC is both the MPO and the transit system provider in the region, RTC develops a Transit Asset Management Plan and a Public Transportation Agency Safety Plan. RTC updates those transit plans regularly to monitor, report, and evaluate progress in meeting those targets.

The RTP must include a system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the national performance targets. The following system performance report describes the national performance measures and targets to evaluate the condition and performance of the region's transportation system.

Table 3.1 Performance Measures and Targets

Performance Measure	Performance Target	Baseline or Target Value	Most Recently Available Performance
Safety			
(Federal) Number of fatalities (5-year average)	**(RTC)** Aspirational target is 0. **(NDOT)** Reduction in the number of fatalities compared to trend value (5 year)	46 (2018-2022) Washoe County	47 (2023) Washoe County
(Federal) Rate of fatalities per 100 million VMT (5-year average)	**(NDOT)** Reduction in the number of fatalities compared to trend value (5 year)	1.16 (2018-2022)	1.31 (2022)
(Federal) Number of serious injuries	**(NDOT)** Reduction in the number of serious injuries compared to trend value (5 year)	161.8 (2018-2022)	148 (2022)
(Federal) Rate of serious injuries per 100 million VMT (5-year average)	**(NDOT)** Reduction in the number of serious injuries compared to trend value (5 year)	4.17 (2018-2022)	3.8 (2022)
(Federal) Number of non-motorized fatalities and serious injuries (5-year average)	**(NDOT)** Reduction in the number of non-motorized fatalities and serious injuries compared to trend value (5 year)	44.2 (2018-2022)	48 (2022)

Infrastructure Condition			
(Federal) Condition of pavements on the Interstate System	**(NDOT)** Percent of pavement on the Interstate system in good (and poor) condition	>90% (<50%)	73.9% (2.4%)
(Federal) Condition of pavements on the NHS (excluding the Interstate)	**(NDOT)** Percent of pavement on the Interstate system in good (and poor) condition	>90% (<50%)	44.8% (20.3%)
(Federal) Condition of bridges on the NHS	**(NDOT)** Percent of NHS bridges classified in good (and poor) condition	>35% (<7%)	47.1% (1.2%)
(NDOT) Condition of non-NHS bridges	**(NDOT)** Percent of non-NHS bridges classified in good (and poor) condition	>35% (<7%)	55.3% (3.1%)
System Reliability			
(Federal) Travel time reliability	**(NDOT)** Percentage of person-miles traveled that are reliable on the Interstate System (non-Interstate NHS)	≥87.1% (≥87.1%)	95.8% (72.9%) INRIX 2023
(Federal) Freight reliability	**(NDOT)** Truck Travel Time Reliability (TTTR) Index	≤1.25	1.5 INRIX 2023
Traffic congestion			
(Federal) Peak hour excessive delay	**(NDOT)** Annual hours of Peak Hour Excessive Delay (PHED) per capita	≤11.0 hours	11.2 INRIX 2023
(Federal) Non-single occupant vehicle travel	**(NDOT)** Percent of non-single occupant vehicle travel	≥23.1%	30.5% ACS 1 Yr (2022) 32.2% Urbanized Reno, PMR 2023
Emissions			
(Federal) Total emissions reductions from CMAQ projects	**(RTC)** Estimated emissions reduction from CMAQ projects as reported		**PM_{10}: 0.0137** **NO_X: 0.8537** **VOC: 5.0299** **CO: 249.4149** **(2023) CMAQ Report**

CHAPTER 4

Goals and Objectives

The 2023 USDOT Guide for Performance-Based Planning defines a goal as a broad statement that describes a desired end state. The Guide defines an objective as a specific, measurable statement that supports achievement of a goal. These strategic elements set the stage for the performance measures that are incorporated in the plan and help to drive investment and policy priorities that address transportation system and community outcomes. Planning is a continuous process and plan goals and objectives can and should build on those from previous plans.

STATE AND LOCAL PLANNING

This RTP draws from past state and local plans and programs, to help shape the goals, objectives, performance measures, and targets in future planning and programing processes. Federal law requires that RTC integrate certain performance-based plans into the transportation planning process. RTC must integrate, either directly or by reference, the goals, objectives, performance measures and targets described in those plans. State and local plans that were reviewed and integrated as a part of the RTP planning process include the following:

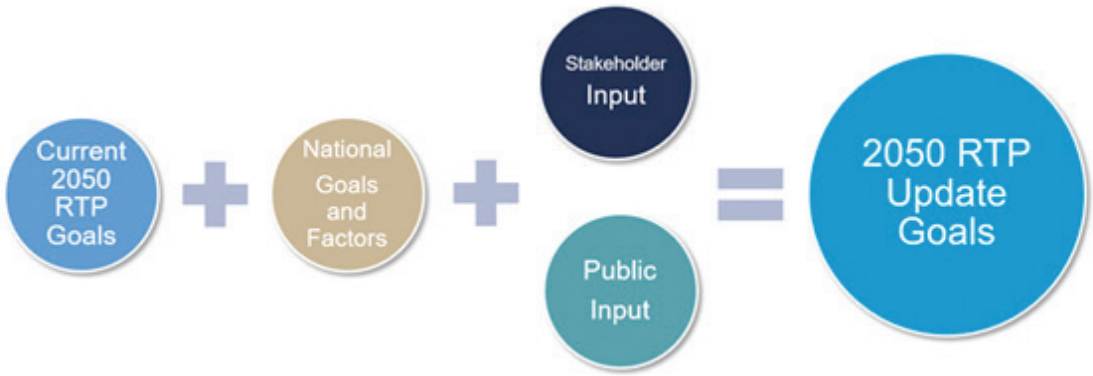
- 2024 RTC South Virginia Street Transit-Oriented Development (SVTOD) Plan
- 2024 RTC Regional Freight Plan
- 2024 RTC Active Transportation Plan – Walk & Roll Truckee Meadows
- 2024 Truckee Meadows Regional Plan
- 2023-2027 RTC Transportation Optimization Plan Strategies (TOPS)
- 2023 Washoe County Master Plan – Envision Washoe 2040
- 2021-2025 Nevada Strategic Highway Safety Plan (SHSP)
- 2022 Nevada State Freight Plan
- 2050 RTC Regional Transportation Plan (RTP) (Adopted March 2021)
- 2020 One Nevada Transportation Plan
- 2020 NDOT Coordinated Human Services Transportation Plan
- 2020 RTC Public Transportation Agency Safety Plan
- 2019 RTC ADA Transition Plan
- 2018 RTC Regional Travel Characteristics Study (Regional Household Travel Survey)
- 2017 RTC Bicycle and Pedestrian Master Plan (BPMP)
- 2017 City of Reno Master Plan – ReImagine Reno
- 2016 RTC Complete Streets Master Plan
- 2016 City of Sparks Comprehensive Plan
- 2014 NNPH Air Quality Management Division (AQMD) Carbon Monoxide and PM_{10} Maintenance Plans

RTP GOALS

The goals in this RTP describe a desired end state for the regional multimodal transportation system over the next 20 years. Federal law and regulation establish seven national goals. As explained in USDOT guidance, MPOs should incorporate the national goals into their long-range transportation plans or provide new goals that align with them. In addition, ten planning factors must be considered within the metropolitan transportation planning process. These planning factors address a wide array of issues important to communities. As shown in Figure 4.1, current RTP goals, the federally required planning factors, and the national goals were considered in the development of Plan goals.

Stakeholder and public input was utilized in the development of the draft goals which were also vetted through the Agency Working Group (AWG). A summary of the public and stakeholder engagement process conducted for this RTP is included as Appendix A.

Figure 4.1 RTP Update Goal Development Process



The goals in this RTP, collectively, are a broad statement that describes the intent behind transportation investments in the region. The goals were used to develop objectives and evaluation factors for project prioritization. Keeping the Plan's goals at the core of project prioritization will result in a project list that can best meet the identified transportation goals for the region. Figure 4.2 illustrates the process of creating evaluation measures from goals.

Figure 4.2 RTP Update Evaluation Factors Process

The following nine (unranked) goals were created for this RTP and reflect the desired state of transportation for the region over the next 20 years. Each goal is further discussed in nine goal chapters of this RTP.

1. Safety

To achieve a significant reduction in traffic fatalities and serious injuries on regional roadways.

2. Maintain Infrastructure Condition

To maintain regional roadway infrastructure in a state of good repair.

3. Congestion Reduction

To achieve a significant reduction in congestion on the regional roadway network.

4. System Reliability and Resiliency

To improve the efficiency, resiliency, and overall reliability of the multimodal transportation system.

5. Efficient Freight Movement and Economic Vitality

To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

6. Equity and Environmental Sustainability

To enhance the performance of the transportation system while protecting and enhancing equity and the natural environment.

7. Reduced Project Delivery Delays

To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process.

8. Accessibility and Mobility

To increase the accessibility and mobility of people on the transportation system and enhance the integration and connectivity of the transportation system.

9. Integrated Land-Use and Economic Development

To increase partnership among local jurisdictions and other stakeholders to identify how transportation investments can support regional development goals.

RTP OBJECTIVES

Objectives in this RTP support the achievement of the goals for the multimodal transportation system. Objectives are intended to reflect outcomes that are experienced by system users and the public, and integrate objectives described in state transportation plans and processes. Building on previous versions of the RTP and other planning efforts, this RTP addresses the following nine objectives under the nine goals, as shown in Table 4.1 below. Each objective is further discussed within the goal chapters.

Table 4.1 2050 RTP Update Goals and Objectives

	Goal	Objective
1	Safety	Reduce Traffic Fatalities and Serious Injuries
2	Maintain Infrastructure Condition	Manage Existing Infrastructure Efficiently
3	Congestion Reduction	Manage Vehicle Travel Demand and Reduce Congestion
4	System Reliability and Resiliency	Integrate All Travel Modes and Increase Travel Options
5	Efficient Freight Movement and Economic Vitality	Improve the Movement of Freight and Goods
6	Equity and Environmental Sustainability	Promote Equity and Environmental Justice
7	Reduced Project Delivery Delays	Monitor Implementation and Performance
8	Accessibility and Mobility	Provide a Regional Transit System and Other Transportation Services
9	Integrated Land-Use and Economic Development	Improve Regional Connectivity

CHAPTER 5

Goal #1: Safety

The goal of Safety is defined in this RTP as the achievement of a significant reduction in traffic fatalities and serious injuries on roadways. The goal is achieved through its objective to: Reduce Traffic Fatalities and Serious Injuries. This chapter describes the regional efforts and strategies to address safety in a manner that will result in the reduction of fatalities and serious injuries for all road users.

The following efforts and strategies are described in this chapter:

SECTION 1 – SAFETY ANALYSES AND PLANNING

SECTION 2 – SAFETY DESIGN STANDARDS

SECTION 3 – REGIONAL SAFETY COLLABORATION

SECTION 4 – COMMUNITY SAFETY AWARENESS AND EDUCATION

SECTION 1 – SAFETY ANALYSES AND PLANNING

The RTC conducts several safety analyses and planning activities. As discussed in Chapter 3, RTC utilizes national and state performance measures to track and report on data that are related to safety. Safety data are also collected through regional efforts and through local tools like the RTC High Injury Network. Safety data are analyzed to inform RTC planning efforts such as corridor studies and area plans. The RTC is also preparing to develop a comprehensive safety action plan with funding from the Safe Streets and Roads for All grant program that will utilize robust data collection to produce a predictive safety tool to assist in creating a safer transportation network. RTC and regional activities involving safety data analysis and planning are further described below.

Data Analyses

The collection and analysis of crash data is important for continuous safety planning. RTC works closely with Nevada Department of Transportation (NDOT) to analyze and publish information about safety trends over time as well as the specific safety impacts of particular projects. RTC staff serve on the Strategic Highway Safety Plan (SHSP) data team and receive weekly updates about data available from NDOT and the Nevada Office of Traffic Safety (OTS). RTC also uses these data to perform a more in-depth analysis to produce tools like the High Injury Network (HIN) to inform project selection and design. Finally, the RTC utilizes data collection and analysis agreements with UNR to better understand crash and near-miss characteristics as well as potential contributing factors based on roadway and intersection attributes.

Nevada State Highway Safety Plan

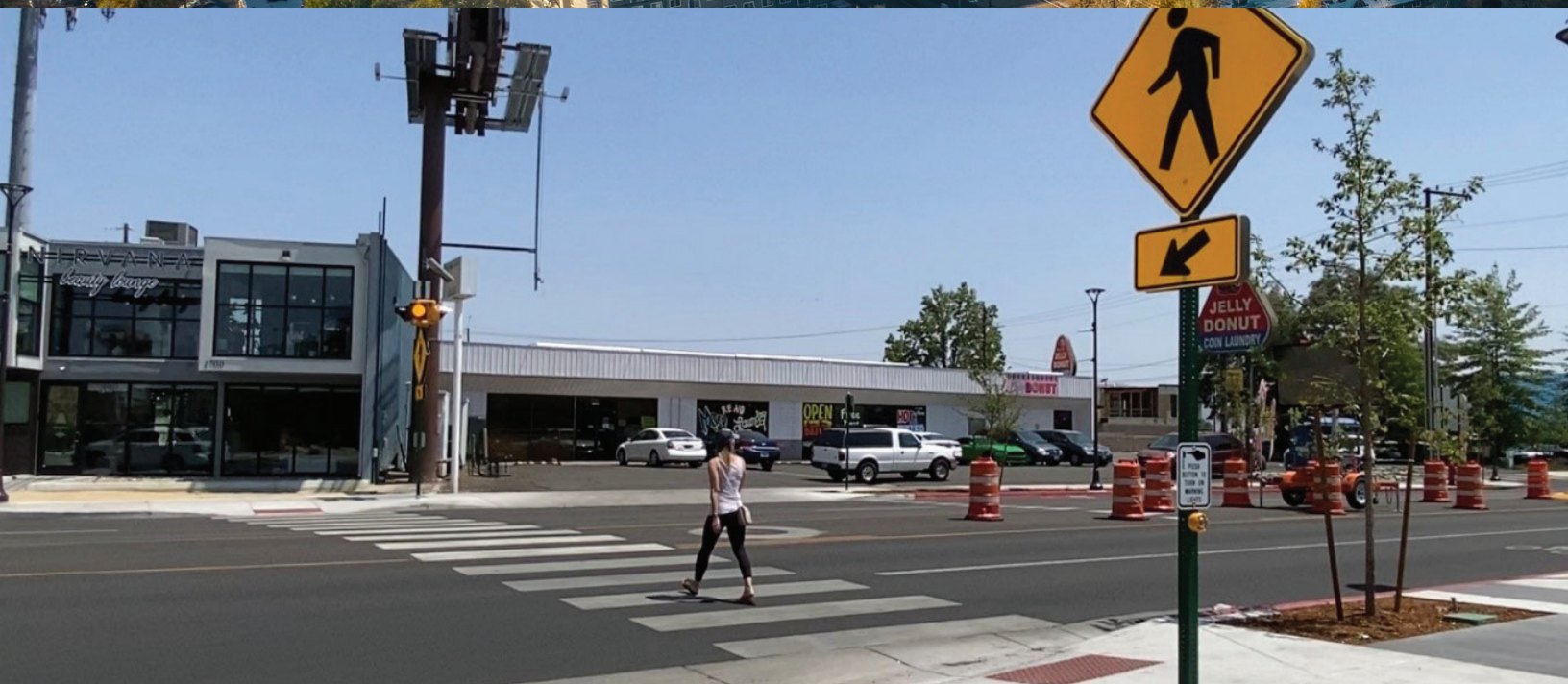
The Nevada State Highway Safety Plan is produced by NDOT in cooperation with many agencies, including the RTC. It is a comprehensive statewide safety plan that identifies the greatest causes of fatalities and serious injuries on Nevada roadways and provides a coordinated framework for reducing the crashes that cause fatalities and serious injuries. It establishes statewide goals and strategies focusing on the 6 "Es" of traffic safety: Equity, Engineering, Education, Enforcement, Emergency Medical Services/Emergency Response/Incident Management, and Everyone. The goals of this plan are incorporated into the RTP, and many of the Vision Zero Truckee Meadows pedestrian-oriented goals align with the plan.

Corridor and Area Plans

Corridor planning is used to identify safety concerns and infrastructure solutions. The RTC has conducted plans for several corridors in the region that have been incorporated into the investments shown in the RTP project listing provided in Appendix B. These plans incorporate safety analyses, needs for multimodal investments such as bicycle facilities and sidewalks, and other operational needs. For example, an area plan has been completed for Verdi which details safety and other infrastructure needs. Additionally, the Active Transportation Plan, which is covered in more detail in Chapter 12, establishes a pedestrian experience index and bicycle level of traffic stress that seek to determine potential barriers to active transportation. These indicators reflect what a non-motorized user's perception of safety might be and how comfortable they might be using the facility. The Active Transportation Plan recommended a formal Active Transportation Program be established, under which a series of Neighborhood Network Plans will be developed. These plans aim to create a safer environment for all users of the active transportation network, reducing the risk of crashes and injuries. Projects in several corridor and area plans have advanced to design and delivery, including West Fourth Street, East Sixth Street and Sun Valley Boulevard.

SECTION 2 – SAFETY DESIGN STANDARDS

Safety design standards and facility elements can greatly impact both roadway and transit safety. The RTC employs safety design standards in the installation of roadway projects and at bus stops and bus stations. The RTC's activities involving safety design standards for roadway and transit are further described below.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Safe Roadways

The primary objective of roadway design is to develop facilities that meet the long-term transportation needs of the region in a safe, efficient, and cost-effective manner complying with all applicable statutes, codes, and regulations. The range of roadway safety improvements, which are selected based on roadway context, attributes and transportation patterns, are effective in reducing roadway fatalities and serious injuries. These improvements are based on the FHWA's Proven Safety Countermeasures initiative. The FHWA Proven Safety Countermeasures include the following:

- Appropriate speed limits for all road users
- Speed safety cameras
- Variable speed limits
- Bicycle lanes
- Crosswalk visibility enhancements
- Leading pedestrian interval
- Medians and pedestrian refuge islands
- Pedestrian hybrid beacons
- Rectangular Rapid Flashing Beacons (RRFB)
- Road diets (roadway reconfiguration)
- Walkways
- Enhanced delineation for horizontal curves
- Longitudinal rumble strips and stripes
- Median barriers
- Roadside design improvements at curves
- SafetyEdge technology
- Wider edge lines
- Backplates with retroreflective borders
- Corridor access management
- Dedicated left- and right-turn lanes at intersections
- Reduced left-turn conflict intersections
- Roundabouts
- Systemic application of multiple low-cost countermeasures at stop-controlled intersections
- Yellow change intervals
- Lighting
- Local road safety plans
- Pavement friction management
- Road safety audit

The RTC's Street and Highway Program states that projects may include any of the above as "standard improvements," as determined necessary by RTC staff during project scoping or the preliminary design phase.

The RTC installs design treatments that encourage cars to travel at speeds closer to the posted speed limit, based on research that shows speed management can reduce the number and severity of crashes. In 2022, The National Highway Traffic Safety Administration found that speed contributed to 29 percent of all traffic facilities. The research also shows that the average risk of death for a pedestrian reaches 10 percent at an impact speed of 23 mph, 25 percent at 32 mph, 50 percent at 42 mph, 75 percent at 50 mph and 90 percent at 58 mph.

The RTC uses Complete Streets design principles in its projects, wherever applicable, which apply context-sensitive solutions to support all types of transportation. The primary purpose of Complete Streets projects is to provide safe access and travel for all users, including pedestrians, bicyclists, motorists, and transit users of all ages and abilities. These design treatments have been demonstrated to consistently reduce crashes on roadways in the Truckee Meadows, and many of them are part of FHWA's Proven Safety Countermeasures initiative. On state-owned facilities, NDOT also applies improvements in Intelligent Transportation Systems (ITS) to help identify and provide notification of crashes, which helps with emergency response and to reduce the risk of secondary crashes.

While all projects are designed with safety in mind, projects included in this RTP that address specific roadway safety issues, were identified in road safety audits, or are in high-crash locations are listed below.

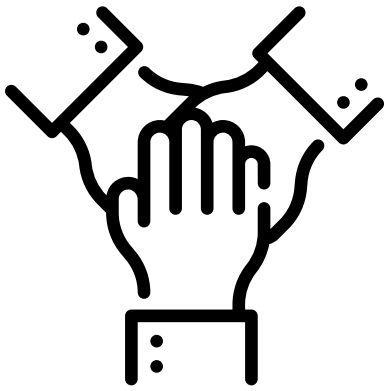
- East 6th Street Bicycle Facility and Safety Improvements
- Keystone Avenue Improvements
- Military Road Capacity and Safety
- Mill Street Capacity and Safety
- Mt. Rose Corridor Study Recommendations Phase 1 Improvements
- Pembroke Drive Safety
- Sparks Boulevard Corridor – Phase 2
- Sun Valley Boulevard Corridor Improvements

Safe Transit Operations

Ensuring safe service is one of the four goals identified in the Transportation Optimization Plan Strategies (TOPS) which serves as the RTC's short-range transit plan. The plan is the basis for changes to the RTC's public transportation services over a five-year period. The stated objective associated with the TOPS safety goal is: "maintain and operate transit vehicles and stations to ensure customer safety." Travel by transit is already safer than by car as research by the National Safety Council indicates the national passenger vehicle death rate, per 100,000,000 passenger miles, was over 50 times higher for cars than for buses. RTC strives to ensure continued safety in transit operations with high standards for maintenance, security, and coordination with law enforcement and local jurisdictions. Examples of recent RTC efforts to improve safety at bus stops include implementation of the Public Transit Agency Safety Plan, the installation of solar-powered lights where feasible, and the installation of security cameras onboard vehicles and at RTC RAPID stations, RTC 4TH STREET STATION, and RTC CENTENNIAL PLAZA.

SECTION 3 – REGIONAL COLLABORATION

Regional safety operations include the RTC's partnership in the Nevada Traffic Incident Management program as well as emergency management, Road Safety Assessments and Safety Management Plans. Additionally, participation as a member of the Vision Zero Truckee Meadows Task Force is another way the RTC improves safety through regional collaboration.



Nevada Traffic Incident Management

The goal of the Nevada Traffic Incident Management (NV TIM) program is to remove incidents (crashes) from Nevada's highways and restore normal travel operations as safely and quickly as possible. TIM is a systematic, statewide, multi-agency effort to enhance the safe and quick clearance of traffic crashes; support prompt, reliable, and interoperable communications; improve responder safety; support economic vitality by reducing delays; and reduce secondary crashes. The NV TIM Coalition is a forum of collaborative members from public and private agencies that facilitates continuous dialogue about TIM practices. These well-rounded, multi-disciplinary teams bring together their diverse experience to advance and implement TIM practices within specific areas of responsibility across the state.

NV TIM partners include:

- Nevada Department of Transportation (NDOT)
- State of Nevada Department of Public Safety
- Law Enforcement (City and County)
- Fire and Rescue (City, County, and Volunteer)
- Local Ambulance Agencies
- Local Emergency Management Offices / Services
- Public Works (City, County, and Tribal)
- Environmental Agencies / Hazardous Materials Responders (private and public)
- Towing and Recovery
- Federal Highway Administration, Department of Homeland Security, and Federal Transit Administration
- Media and Agency Public Information Officers
- Traffic Management Centers / Dispatchers (public and private)

Road Safety Assessments and Safety Management Plans

Regional transportation and safety experts take part in NDOT's Road Safety Assessments (RSA) and Safety Management Plans (SMP) which are efforts to identify roadway safety issues and recommend solutions to correct them. The assessments and plans are conducted in partnership with NDOT, RTC, local government agencies, emergency responders, and bicycle and pedestrian experts. RSAs and SMPs are formal safety performance reviews of existing or future roads or intersections by multi-disciplinary teams which are performed to support corridor studies and identify short-, medium-, and long-term roadway safety improvements.

Emergency Management Plan

The RTC Emergency Management Plan (EMP) is a critical portion of the framework for emergency response and preparedness throughout Washoe County. The EMP is intended to support a comprehensive, all-hazards approach to emergency response management and works seamlessly with Washoe County's Plan along with other agency, jurisdiction, and neighboring county plans. The EMP will respond to a region-wide spectrum of emergencies as warranted by external professional emergency response organizations. The purpose of the plan is to protect life, minimize damage, and ensure continuity of operations so essential services may continue to be provided to the community. The EMP applies to all emergencies that could impact Northern Nevada. Planned training, exercises, and drills are part of the EMP. These planned events provide better coordination, response, and management of actual incidents or events. Planned events allow regional partners to test and exercise plans to improve the response and management of actual events.

Vision Zero Truckee Meadows and the Safe System Approach

In 2017, the RTC led the creation of Vision Zero Truckee Meadows (VZTM) and formed an associated task force made up of members of local, regional, state, and federal government, universities, non-profits, emergency response, health providers, and the public. The VZTM Task Force was established to take equitable, data-driven, and transparent actions to improve safety throughout the community. The Task Force maintains that the only acceptable number of traffic deaths in our community is zero and has a stated goal of reaching zero traffic fatalities and serious injuries by 2030.

Vision Zero implements a Safe System Approach, which is based on the premise that it is unacceptable to allow deaths and serious injuries to occur on the roads. To achieve zero deaths and serious injuries, crashes must be managed so that when they do happen, the kinetic energy exchange on the human body is kept below the tolerable limits for serious harm to occur.

This important principle is at the core of applying a Safe System Approach in designing and operating the road system. The Safe System Approach is guided by six principles—or fundamental tenants—and five elements, which are avenues for implementation. A Safe System cannot be achieved without all five elements working in synergy. With a Safe System Approach, weaknesses in one element may be compensated for with solutions in other areas. A true Safe System Approach involves optimizing across all the elements to create layers of protection against harm on the roads.

The VZTM Task Force created an Action Plan, originally adopted in 2019 and updated in 2022, that guides actionable steps meant to bring the region closer to its goal of zero fatalities and serious injuries. RTC continues to facilitate activities and regular meetings of the Task Force. It also maintains a website, VisionZeroTruckeeMeadows.com, where the Action Plan and other information can be found.

SECTION 4 – COMMUNITY AWARENESS AND EDUCATION

Raising public awareness about safety concerns and providing educational materials are important tools to improve safety. RTC attends various outreach events and provides the community with safety materials and information. Of particular importance is safety messaging related to pedestrians and bicyclists, who are considered the most vulnerable road users. To that end, the RTC communicates best practices in safety and participates in outreach activities using forums such as the Vision Zero Truckee Meadows Task Force and Safe Routes to School. Additionally, safety measures are often shared with the public through programs such as "The Road Ahead With RTC" segments on KOLO 8 as well as Truckee Meadows Bicycle Alliance, SMART TRIPS, Northern Nevada Public Health, social media, and dedicated and targeted webpages.

Safe Routes to School

The RTC works closely with the Washoe County School District and NDOT to implement a Safe Routes to School (SRTS) Program. The program includes a significant educational component geared toward K-12 students, parents, and school staff. The School District Police Department SRTS Coordinator conducts regular school-based events to teach K-12 grade students how to be more visible to motorists and how to follow safety precautions. The SRTS Coordinator also works with parents, school faculty, and staff to reconfigure school zone areas and to implement no-idling zones in a way that minimizes potential conflicts between motorists and pedestrians. The SRTS Coordinator is also a source of input to the RTC about capital investments that would improve safety on roadways near schools.

RTC SMART TRIPS

The RTC SMART TRIPS program assists businesses and citizens in using sustainable modes of transportation and adopting trip reduction strategies. A reduction in vehicle trips is a critical step toward maintaining and improving air quality in the Truckee Meadows and reducing traffic congestion. In addition to promoting the benefits of sustainable transportation, the SMART TRIPS program helps educate the public on how to travel safely. Safety messages for motorists, bicyclists, and pedestrians are distributed throughout the year at public events and employee benefit fairs. Safety lights that can be worn on clothing or placed on bikes are also given to members of the public at these events. SMART TRIPS safety brochures can be downloaded from rtcwashoe.com in the Safety and Security section of the About page.

CHAPTER 6

Goal #2: Maintain Infrastructure Condition

The goal, Maintain Infrastructure Condition, is defined in this RTP as maintaining regional roadway infrastructure in a state of good repair. The goal is accomplished through its objective to: Manage Existing Infrastructure Efficiently. This chapter describes the regional efforts and strategies to manage existing multimodal infrastructure efficiently.

Collectively, the purpose of these efforts and strategies is to obtain the best and most efficient use of existing resources, stretch limited resources further, and, in some cases, reduce the need for costly capital investments. RTC strives to maximize the use of limited resources by maintaining existing systems in good repair and continuously seeking operational improvements. This is most apparent in RTC's pavement preservation and transit programs. These programs provide a framework for obtaining the best and most efficient use of existing resources, minimizing life-cycle costs, and in some cases reducing the need for costly capital investments.

The following efforts and strategies are discussed in this chapter:

SECTION 1 – PAVEMENT PRESERVATION PROGRAM

SECTION 2 – TRANSIT ASSETS AND INFRASTRUCTURE

SECTION 1 – PAVEMENT PRESERVATION PROGRAM

Whether traveling by automobile, transit, bicycle, or as a pedestrian, all roadway users benefit when streets are well maintained. The goals of pavement preservation are to keep roadways in good condition and to minimize long-term repair costs. By applying the most cost-effective treatment in the right location, at the right time, pavement life cycle costs can be minimized, and serviceable pavement life can be maximized. An effective pavement preservation program saves money and keeps roadways in good condition for the traveling public.

The pavement condition of roadways in the region is maintained through pavement preservation efforts at the state, regional, and local levels. At the state level, the Nevada Department of Transportation's (NDOT) pavement preservation program addresses the state highway system. At the regional level, RTC manages a Regional Pavement Preservation Program that addresses roadways of regional significance. At the local level, Washoe County, Reno, and Sparks have pavement preservation programs for roadways within their respective jurisdictions that are not eligible for the RTC Pavement Preservation Program. The local jurisdictions are also responsible for routine maintenance of all roadways within their respective jurisdictions, such as street sweeping, snow removal, and pothole repairs.

As shown in Table 6.1, roadway usage and ownership vary. Variables such as ownership and facility type must be considered in the efficient management of existing multimodal infrastructure.

Table 6.1 – Roadway Facilities in Washoe County

RTC does not own or operate any roadways
Local roads serve neighborhoods and carry the fewest trips on the system
Local roads and minor collectors are maintained by the local jurisdictions (Reno, Sparks and Washoe County) and carry 16% of the vehicle miles traveled (VMT) in Washoe County
Collectors serve as connections between local and arterial roads
Arterials carry the majority of trips on the roadway system and function as alternatives to highways to relieve traffic congestion
Arterials and major collectors carry 47% of VMT in Washoe County and are eligible for funding through the RTC Pavement Preservation Program
I-80 and US 395 are maintained by NDOT and carry 37% of the VMT in Washoe County

RTC Regional Pavement Preservation Program

RTC manages the Regional Pavement Preservation Program which includes eligible roadways within Washoe County. Eligibility criteria include both the functional classification of the roadway and the Average Daily Traffic (ADT). Eligible roads must be collector and above in functional classification and must carry a minimum of 5,000 ADT.

Approximately 25 percent of non-state roads (not owned or maintained by NDOT) in Washoe County are eligible for the Regional Pavement Preservation Program. The current list of eligible regional roadways for pavement preservation projects is provided as Appendix F. The pavement preservation roadway list is updated approximately every three years through a comprehensive regional assessment of roadway pavement assets and condition.

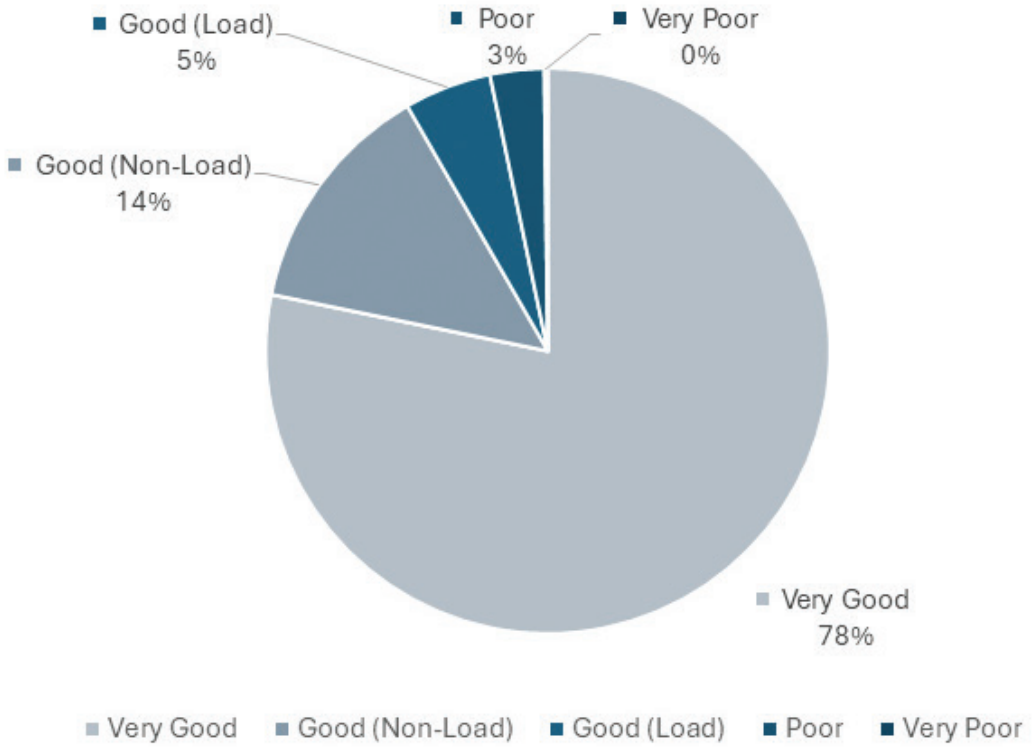
The Program is funded through a portion of the annual fuel tax revenue which is set aside for pavement preservation. The fuel tax is a function of previous voter approval, state statute, and Washoe County code. The Regional Pavement Preservation Program is an efficient use of tax-funded resources as preventative maintenance maximizes the life of the roadway and prevents costly repairs. It is six to ten times less expensive to properly maintain roadways than to allow them to fail and pay for costly reconstruction treatments.

In order to determine which roadways need maintenance and in what timeframe, RTC collects and tracks Pavement Condition Index (PCI) data for each eligible roadway and utilizes the Regional Pavement Management System (PMS). The PMS tool helps to prioritize pavement preservation projects and provide a comprehensive regional assessment of roadway pavement assets and condition. Projects are selected based on both this initial analysis and input from the Pavement Preservation Committee which consists of public works and maintenance staff from Washoe County, the City of Reno, and the City of Sparks.

The Regional Pavement Preservation Program has significantly improved roadway conditions and reduced the region's backlog of pavement reconstruction needs. Since initiation of the program, the average PCI for eligible roadways has been raised to within the optimal range for minimizing costs and maximizing performance life.

As seen in Figure 6.1, over 78 percent of roads are in Very Good condition, while slightly more than three percent are in Poor or Very Poor condition. PCI ratings of 70 and above are considered Very Good; 55-70 is considered Good (whether Non-Load or Load); 40-55 is considered Poor; and a PCI under 40 is considered Very Poor. It should be noted that although the Good (Non-Load) and Good (Load) categories share the same PCI range, load-related distresses and failures require more intensive corrections, whereas non-load-related failures are less costly to address.

Figure 6.1 – Condition of Regionally Significant Roads



Despite the overall Very Good rating of the roads in the region, challenges do exist in maintaining existing roadways. More efficient cars that use less fuel and electric cars are affecting the amount of fuel sold and taxed. The reduction in fuel tax revenue for this program could impact the region's ability to maintain the Very Good - Good rating in the future.

State and Local Government Pavement Preservation Efforts

NDOT performs pavement preservation on the state highway system in the region and throughout the state. The NDOT pavement preservation program's goals and strategies to achieve and sustain a state of good repair over the life cycle of its assets are included in the NDOT Transportation Asset Management Plan (TAMP). The goal for highway maintenance is to assure that NDOT-maintained roads are maintained to as high a level as possible consistent with work plans, policies, program objectives, budget, and available resources. NDOT defines highway maintenance as the preservation of roadway facilities in a safe and usable condition and divides this program into three areas:

- Routine Maintenance – work needed on a daily basis to repair damage to the highway system and perform operational activities which keep the traveling public moving in a safe and efficient manner. Examples are crack filling, striping, sweeping, culvert cleaning, repairing concrete, replacing traffic signs, and sealing pavement.

- Capital Improvement – work that will slow down the deterioration or extend the life of the highway system. Examples are chip seal, cold in-place recycle, microsurfacing, bridge maintenance, slope flattening, and guardrail installation.

- Emergency Activities – work needed due to accidents and natural disasters to stabilize and remediate travelways and damaged structures. Examples are snow removal, traffic incident cleanup, flood damage repair and guardrail/ impact attenuator repair.

NDOT also uses a PMS to assess its roadway pavement assets and condition, and to prioritize pavement preservation projects. PMS enables NDOT to make informed decisions on how to maintain and improve the condition of the roadway network while maximizing pavement performance through the practical use of available funds. NDOT collects pavement condition data annually or biennially, which is used to assign a Present Serviceability Index value that aids in determining which facilities are in a state of good repair. It also allows NDOT to make informed and cost-effective decisions about prioritizing pavement preservation activities.

Washoe County, the City of Reno, and the City of Sparks perform pavement preservation on the roadways that are not included in NDOT's pavement preservation program or the Regional Pavement Preservation Program. Streets and highways have different needs and the performance indicators for highways are not the same as those for an urban network.

Washoe County is required to use all gasoline tax revenues for road maintenance and to maintain condition of the roads to meet a regional standard of 73 on the PCI. The County evaluates maintenance and reconstruction needs based on an analysis of PCI, timing, cost, and available funds.

The City of Reno's Pavement Management group uses a PMS to assist in evaluating the pavement condition, serviceable life, and maintenance strategies for its 755 miles of City owned roads, 22 miles of alleys, and 75 parking lots. The City conducts an annual survey of a portion of city streets to collect data used to produce a PCI rating. This PCI rating is used to determine what type of treatment is most appropriate and a PMS is used to evaluate maintenance strategies that help minimize costs while improving overall pavement conditions.

NDOT and local governments face challenges in their ability to fund and operate effective pavement preservation programs and other maintenance and operations activities. However, through the effective use of their available resources, local governments work to maintain local roads in an optimal state of repair. While these local roads account for approximately 60 percent of roadways in the region, they only carry 11 percent of VMT in Washoe County.

SECTION 2 – TRANSIT ASSETS AND INFRASTRUCTURE

In accordance with federal regulations in 49 U.S.C. 5326 and 49 CFR 625, RTC has developed a Transit Asset Management (TAM) Plan to monitor and manage public transportation capital assets to enhance safety, reduce maintenance costs, increase reliability, and improve performance. The TAM Plan was developed in 2018 with an update completed in 2022.

TAM is defined, in the RTC TAM Plan, as a "strategic and systematic process through which an organization procures, operates, maintains, rehabilitates, and replaces transit assets to manage their performance, risks, and costs over their life cycle to provide safe, cost-effective, and reliable service for the community." RTC is committed to operating a public transportation system that offers reliable, accessible and convenient service with safe vehicles, equipment and facilities.

TAM combines the components of investment (available funding and revenue), rehabilitation and replacement actions, and performance measures with the outcome of operating assets within the parameters of a state of good repair. Sufficiently maintained assets, those in a state of good repair, are instrumental to RTC's ability to provide reliable service, as well as minimize operating and maintenance costs over the life cycle of rolling stock, equipment, and facilities. A capital asset is considered to be in a state of good repair when it is able to operate at a full level of performance.

RTC considers TAM to be a critical component in managing its growing service demands with limited financial resources. The TAM Plan includes an asset inventory portfolio, an asset condition assessment, a decision support tool and management approach, and investment prioritization that are used to aid in the following:

- Assessing the current condition of capital assets
- Determining the condition the assets should be in and what level of performance they should achieve
- Identifying the unacceptable risks, including safety risks, in continuing to use an asset that is not in a state of good repair
- Deciding how to best balance and prioritize anticipated funds (revenues from all sources) to improve asset condition and achieve a sufficient level of performance within those means

The TAM Plan establishes a process for supporting investment decision-making, including project selection and prioritization. The process involves use of a tool developed to prioritize assets for investment, and another to maximize the use of available resources to meet the greatest needs. The first tool in the process uses a weighted prioritization score of each factor used in the assessment. The resulting score for each asset can be used to produce a ranked list that is further refined in the next step.

Following this asset weighting, assets with a total weighted prioritization score of 2.75 or more are fed into a data analysis model which identifies the combination of assets with the highest sum of weighted prioritization scores while utilizing a minimum of 90 percent of the identified budget for that year. The result is a final prioritized list of projects that will maximize available funds to address the most immediate needs.

CHAPTER 7

Goal #3: Congestion Reduction

The goal of Congestion Reduction is defined in this RTP as achieving a significant reduction in congestion on the roadway network. The goal is achieved through its objective to: Manage Vehicle Travel Demand and Reduce Congestion. This chapter describes the regional efforts and strategies to address congestion reduction.

The following efforts and strategies are described in this chapter:

SECTION 1 – CONGESTION MANAGEMENT PROCESS

SECTION 2 – INTELLIGENT TRANSPORTATION SYSTEMS

SECTION 1 – CONGESTION MANAGEMENT PROCESS

The Congestion Management Process (CMP) was developed as part of the RTP and is documented in Appendix D. The CMP establishes a framework for the RTC to prioritize projects aimed at reducing traffic congestion, enhancing transportation system performance, and meeting broad regional goals. The CMP's scope covers the major roads and freeways in the Truckee Meadows region, emphasizing data-driven congestion analysis, such as using INRIX data and the regional travel demand model to identify congestion hotspots and plan targeted improvements.

The CMP aligns closely with the overarching RTP goals, emphasizing safety, infrastructure condition, congestion reduction, system reliability, freight movement, equity, environmental sustainability, efficient project delivery, and accessibility. One of the CMP's primary objectives is to reduce both recurring and non-recurring congestion by implementing various strategies, including signal timing improvements, expanding fiber optic network connectivity, and strengthening traffic incident management practices. These initiatives collectively support smoother and more efficient traffic flow across the region.

Performance measures are central to the CMP and have been developed in alignment with federal legislation, specifically the Infrastructure Investment and Jobs Act and Moving Ahead for Progress in the 21st Century Act. These measures include targets for safety, infrastructure, system reliability, freight movement, environmental sustainability, and mobility, providing a clear structure for assessing progress and aligning with national transportation goals.

The CMP also includes mechanisms for monitoring and evaluating project performance. Through annual reports and performance plans, the RTC assesses project outcomes and makes adjustments as necessary based on performance data and community feedback. This adaptive approach ensures that projects remain responsive to evolving regional needs.

The CMP emphasizes a well-defined project selection framework, drawing on input from community members, studies, and partner agencies. Projects are prioritized based on criteria that reflect congestion, safety, and multimodal integration, aligning with the RTP project prioritization. This approach supports RTC's goal of Congestion Reduction to achieve a significant reduction in congestion on the roadway network.

SECTION 2 – INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems (ITS) improve the transportation system by optimizing traffic flow, enhancing safety, and reducing congestion. RTC has developed an ITS Strategic Master Plan and invested heavily in ITS to reduce congestion and improve safety through the following strategies:

1. Real-Time Traffic Monitoring – Using sensors, cameras, and GPS data, smart traffic management systems continuously monitor traffic conditions. This data is analyzed to detect congestion, crashes, and other incidents in real-time.

2. Adaptive Traffic Signal Control – Traffic signals are adjusted dynamically based on current traffic conditions. This helps to minimize wait times at intersections and improve overall traffic flow.

3. Incident Detection and Management – Automated systems can quickly identify crashes or breakdowns and alert emergency services. Early detection and response to incidents minimizes the amount of time lanes are blocked and reduces traffic queuing.

4. Predictive Analytics – By analyzing historical and real-time data, these systems can predict traffic patterns, potential congestion points, and possible high-risk crash locations. This allows for proactive measures, such as adjusting traffic signals or providing route recommendations to drivers.

5. Enhanced Infrastructure and Public Information Systems – Intelligent infrastructure, such as dynamic message signs, motorist apps, and smart intersections, provides real-time information to drivers about traffic conditions, alternate routes, and estimated travel times which helps distribute traffic more evenly across the regional transportation network.

6. Public Transit Integration – Coordinating public transportation schedules and routes with real-time traffic conditions and providing transit priority systems at traffic signals makes buses more reliable, encouraging increased usage which reduces congestion.

These technologies and strategies work together to create a more efficient and safer transportation network.


RENO

CHAPTER 8

Goal #4: System Reliability and Resiliency

The RTP goal of System Reliability and Resiliency is defined in this RTP as improvement in the efficiency, resiliency, and overall reliability of the multimodal transportation system. System reliability refers to travel time predictability and resiliency refers to the ability of the transportation system to adapt as well as respond and recover quickly in emergency events. The goal of system reliability and resiliency is achieved through its objective to: Integrate All Travel Modes and Increase Travel Options. This chapter describes the regional efforts and strategies to integrate all travel modes and increase travel options. Collectively, these efforts and strategies aim to achieve the goal of system reliability and resiliency.

The following efforts and strategies are discussed in this chapter:

SECTION 1 – COMPLETE STREETS

SECTION 2 – ACTIVE TRANSPORTATION

SECTION 3 – ENVIRONMENTAL SUSTAINABILITY, FLOOD AND STORMWATER MANAGEMENT

SECTION 1 – COMPLETE STREETS

Complete Streets design principles apply context-sensitive solutions to integrate travel modes, and provide safe access and travel for all users, including pedestrians, bicyclists, motorists and transit users of all ages and abilities. These design treatments have been demonstrated to consistently reduce the number and severity of crashes on roadways. In the Reno-Sparks metropolitan region, Complete Streets designs encourage motorists to drive at posted speeds and provide a designated space for walking and biking.

Reducing the potential for crashes also improves travel time reliability as crashes are not predictable and can slow or stop traffic, adding time to a trip. The range of Complete Streets improvements, which are selected based on corridor land-use characteristics and transportation patterns, include the following:

- Roundabouts
- Narrow (less than 12-foot) travel lanes
- Reducing vehicle and pedestrian conflict points by reducing underutilized travel lanes
- Adding center turn lanes
- Adding bicycle lanes, multiuse paths, buffered bike lanes, or sharrows
- Installing or upgrading sidewalks and crosswalks
- Installing pedestrian crossing/waiting areas in median islands
- Installing or upgrading transit stops

The projects in this RTP support Complete Streets design objectives, including projects that focus on community livability as well as regional connectivity. Multimodal projects address the safety, and mobility needs of all corridor travelers, but generally do not add additional lane capacity for automobiles. Regional connectivity projects also incorporate Complete Streets design concepts. With the exception of freeway projects, all road widenings are evaluated for upgrades to the sidewalk network, as well as transit stops and bicycle lanes where it is consistent with applicable plans and policies. Additional information about specific projects and design objectives is available in the 2016 RTC Complete Streets Master Plan.

SECTION 2 – ACTIVE TRANSPORTATION

Active transportation is a way of getting around that relies on human physical power. This includes walking, cycling, rolling (skateboarding, scooters), and using a wheelchair. When active transportation is part of a transportation network, the network's travel options increase and the network is made more resilient. Adding redundancy through multiple modes provides options for mobility and network adaptability if a roadway corridor becomes unavailable due to an emergency. Additionally, as mode shift occurs and travelers choose to utilize active transportation, instead of a vehicle, roadway congestion decreases, extending the longevity of the existing roadway system.

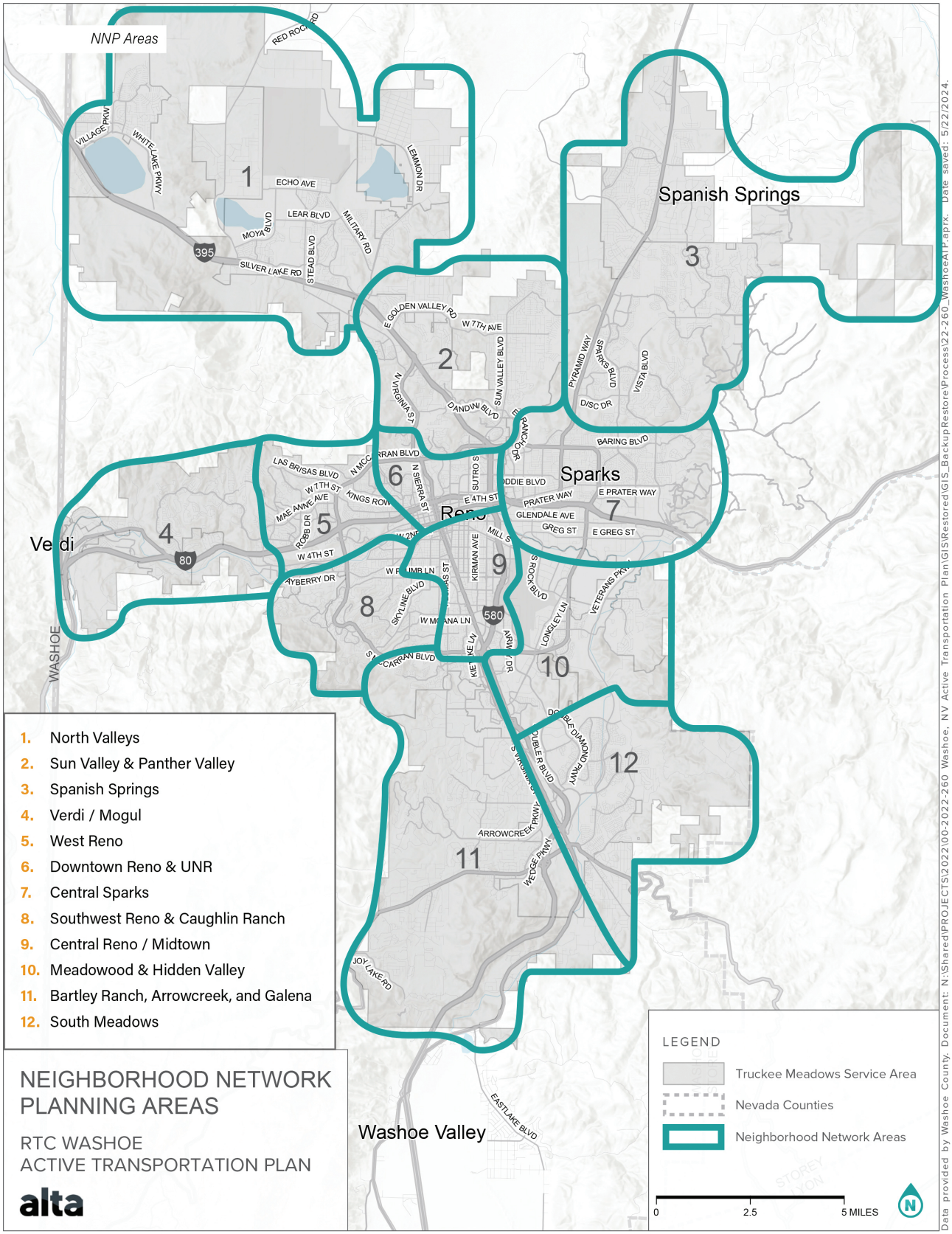
Active Transportation Plan

Approved by the RTC Board in September of 2024, the RTC Active Transportation Plan (ATP) establishes a clear vision and goals for the future of active transportation in the Truckee Meadows and introduces a new approach to active transportation planning through Neighborhood Network Planning (NNP). The NNP approach will engage residents and stakeholders at the local level to identify active transportation solutions that address the unique needs of each neighborhood. The goals of the ATP are to:

- Improve Safety
- Expand Mode Share
- Maintain the System Sustainably
- Enhance the Community

The ATP is RTC's guiding document for project identification, prioritization, design, and implementation as related to active transportation improvements. The community-driven Plan moves beyond the Complete Streets approach by emphasizing the importance of a well-connected neighborhood as a key driver of active trips. The Plan identifies 12 active transportation neighborhoods within the Truckee Meadows, as shown in Map 8.1. RTC will complete a neighborhood network plan (NNP) for each of the twelve neighborhoods to identify and prioritize projects that create a comfortable and safe environment for active transportation for residents, business owners, and other stakeholders in that area.

Map 8.1 Neighborhood Network Planning Areas



To quantify the increases in safety and comfort on the active network, the ATP presents two key metrics: bicycle level of traffic stress (BLTS) and pedestrian experience index (PEI). These two metrics use factors such as level of separation, type of facility, speed limits, and number of vehicle lanes to determine how attractive a bike facility or sidewalk is to an "interested but concerned" user. Additionally, the active trip potential metric considers land use to highlight areas with the strongest potential for increased active trips if given supportive infrastructure for people to use.

The ATP is also equipped with a typology guide containing best practices for roadway design to achieve target BLTS and PEI levels. This typology guide can be used to inform project managers and designers in places with or without an associated neighborhood plan.

The approach to implementation recommended by the ATP, is the formation of an Active Transportation Program guided by an Active Transportation Technical Working Group (ATWG) which will include representatives from the City of Reno, City of Sparks, and Washoe County. The Active Transportation Program will focus on planning, design, and construction of active transportation improvements identified through the neighborhood planning process.

Performance metrics are another key part of this Plan and are designed to measure how well policy and infrastructure changes improve sidewalk and bike path quality and utilization.

Spot Improvements

RTC programs funds each year to implement spot improvements for ADA, and other pedestrian and bicycle improvements. A summary of bicycle and pedestrian improvements completed through the Spot Improvement Program from 2020 to 2023 is provided in Table 8.1.

Table 8.1 Bicycle and Pedestrian Spot Improvements 2020-2023

Year	Bike Lane Miles	Sidewalk Miles	MUP Miles	New Crosswalks	Crosswalks Replaced	Crosswalk Warning Devices (Pair)	Crosswalk Lighting	Pedestrian Ramps
2020	5.96	8.11	0	5	154	6	4	270
2021	3.67	3.57	0	8	285	9	3	113
2022	1.94	1.64	0.51	9	55	16	65	163
2023	5.93	4.71	2	16	384	27	64	183
Total	17.50	18.03	2.51	38	878	58	136	729

SECTION 3 – ENVIRONMENTAL SUSTAINABILITY, FLOOD, AND STORMWATER MANAGEMENT

Weather events can have significant effects on the transportation network, causing disruptions to infrastructure and service. Similarly, the transportation network has the potential to aid in the environmental sustainability of the region, reducing the impacts of disruptions and contributing to sustainability efforts. Efforts of particular relevance to transportation include emissions reduction, stormwater management, and flood prevention. RTC and regional activities involving environmental sustainability and stormwater management are further described below.

RTC Sustainability Efforts

RTC provides the region with sustainable multimodal transportation options, including infrastructure that supports active transportation. As a part of this commitment, RTC adopted a Sustainability Policy in September 2011. This policy affirms RTC initiatives to promote, continually improve upon, and implement sustainable practices:

RTC Sustainability Policy

The RTC shall provide a safe, effective, and efficient transportation system that addresses environmental, social, and economic sustainability issues. By providing sustainable transportation, the RTC can actively play a role in improving the health and economic competitiveness of the region as well as reduce costs by using resources more efficiently.

Sustainability Plan

In 2017, RTC completed its Sustainability Plan, which serves as a guideline for conducting operations more efficiently by implementing sustainable practices and continuing to provide sustainable and reliable transportation options. The plan created a benchmark of the current sustainability initiatives in which the RTC engages. It also includes a comprehensive organizational vision of sustainability to guide RTC's future planning and construction efforts, operations and maintenance, and internal activities.

Facilities and Vehicles

RTC incorporates sustainable practices at its facilities. Some examples of these efforts include upgrades to improve the efficiency of HVAC systems, installation of external LED lighting, reduction in water usage for landscaping, and solar lighting at several bus shelters. In addition, RTC purchases sustainable products for use in daily maintenance and operations.

RTC operates a mixed fleet of alternatively fueled fixed-route buses, including 100 percent battery electric, hydrogen fuel cell, and hybrid-electric buses. Additional information is available in Chapter 9.

Stormwater Management

The design of roadway infrastructure has an important role in minimizing the adverse impact of stormwater and protecting water quality. Protecting the safety and quality of our water resources is a key consideration during the entire process of a project from planning to construction. To minimize any potentially harmful impacts to our water resources during any stage of a project, RTC prioritizes stormwater management from the beginning. During the construction of any roadway, each contractor is required to develop a Stormwater Pollution Prevention Plan, which identifies any potentially harmful impacts to local water resources caused by the construction project and develops mitigation strategies to eliminate or mitigate those potential impacts.

In addition to managing impacts to water resources during construction, the design of all roadway projects incorporates stormwater management techniques to address runoff. Stormwater run-off from roadways often contains harmful pollutants such as oil, grease, heavy metals, solids, and nutrients. Due to the impermeable nature of roadways, stormwater run-off from roadways collects these pollutants and carries them to local rivers and other water bodies such as the Truckee River, Virginia Lake, or Pyramid Lake. Due to the impermeable nature of roadways, stormwater run-off from roadways collects these pollutants and can carry them to local rivers and other water bodies such as the Truckee River, Virginia Lake, or Pyramid Lake.

Water Quality Protection

Truckee Meadows Water Authority, Western Regional Water Commission, Nevada Division of Environmental Protection, and Washoe County Health District have collaborated to create the 2020 Integrated Source Water and Watershed Protection Plan for Public Water Systems and the Truckee River in the Truckee Meadows Plan. This Plan serves as a watershed management tool for organizations, agencies and the public to help protect water quality. TMRP has implemented this Plan through a new policy for their 2024 Regional Plan, NR 15 -Source Water Protection and Watershed Management, which states that, "Local government and affected entity master plans and other similar plans shall include policies that:

- Reference and/or utilize the Integrated Source Water and 319(h) Watershed Protection Plan for Public Water Systems and the Truckee River in the Truckee Meadows. Available at: https://washoecountycleanwater.org/

- Promote awareness and consideration of critical source water protection areas as identifiedin the above referenced plan."

Washoe County Community Climate Action Plan

Washoe County is currently in the process of developing its first-ever Community Climate Action Plan (CAP). The purpose of the CAP is to identify specific actions that can help protect the local climate, improve public health, and reduce risks associated with increased greenhouse gas (GHG) emissions. The CAP aims to be a guide for residents, businesses, and public agencies to contribute to the County's target of net zero GHG emissions by 2050. As part of plan development, the County is working with local and regional jurisdictions, public agencies, and community organizations to identify and recommend sustainability best practices across multiple sectors, including transportation. The CAP strategy most pertinent to the transportation sector is emissions reduction.

To reduce emissions in the transportation sector, the Plan will focus on two goals. The first is to lower the number of vehicles on the road and total vehicle miles traveled (VMT). The second goal is a shift from traditional combustion engine vehicles to cleaner vehicles such as zero -emissions vehicles or to active transportation modes such as walking, biking, and riding scooters.

Washoe County Regional Resiliency Study

As described in the 2014 Washoe County Regional Resiliency Study, the Truckee Meadows area has endured significant flood events over the course of its history. Some of the earliest-documented floods coincided with deep snow accumulations, followed by unprecedented heavy rain and flood events occurring in California during the 1860s. Regionally destructive flood events have periodically followed with notable floods occurring in 1907, 1955, 1963, 1997, and 2016. Economic impacts and infrastructure damage were significant to area business and transportation features.

The Northern Nevada Region has evolved a proactive approach in determining flooding potential since the 1997 event by developing the regional Truckee River Flood Warning Plan and installing a flood warning system of river and precipitation gauges. Recent flood prevention projects include the Truckee River Flood Control Project that aims to protect critical areas of the region to a one percent frequency (100- year) flood event.

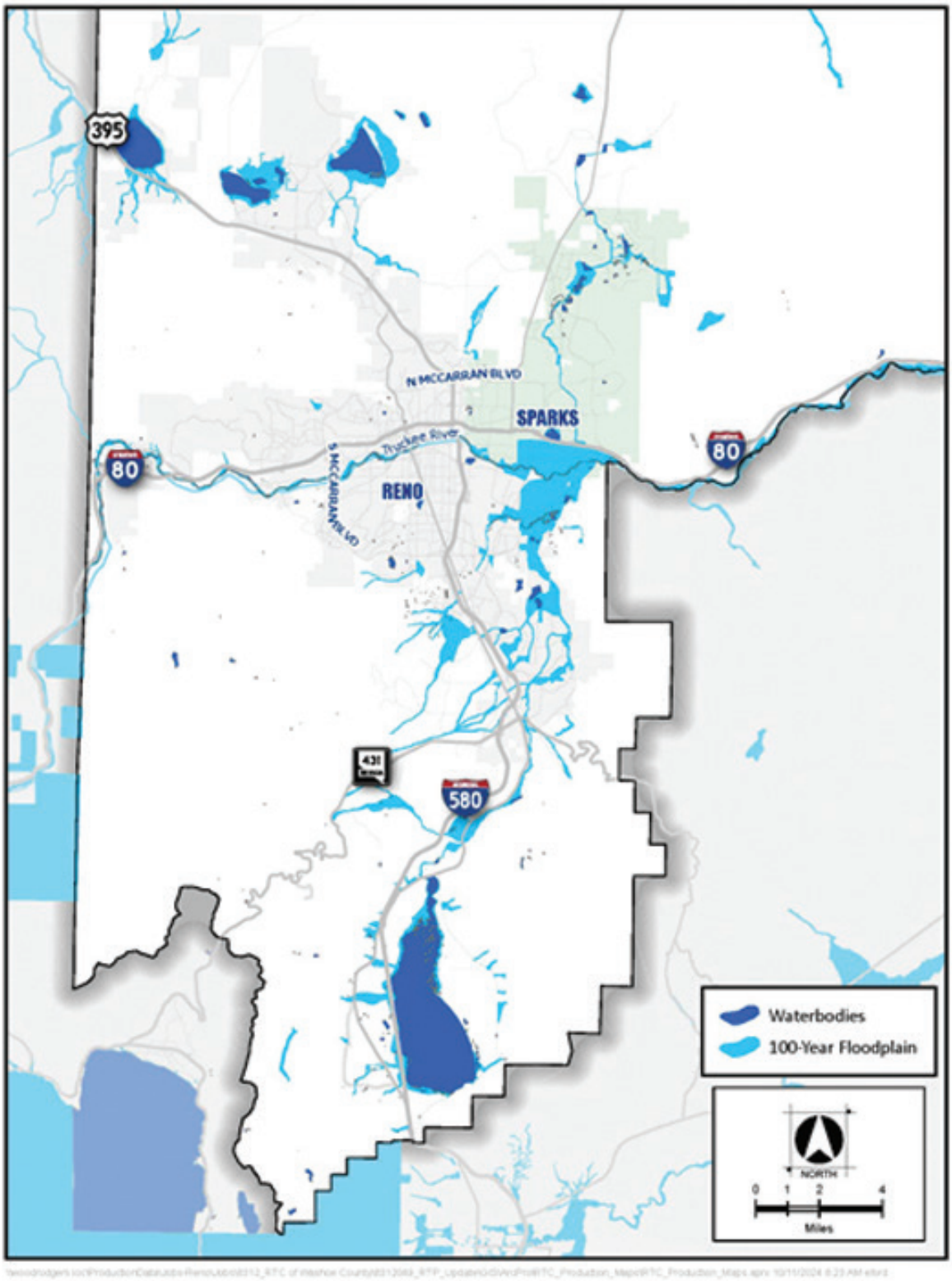
Washoe County Floodplain Management

Washoe County has been a member of the National Flood Insurance Program (NFIP) since 1984, reviewing all new development in special flood hazard areas (Flood Zones). Washoe County's membership in the NFIP provides residents an option for federally backed flood insurance for any structure, whether located within the floodplain or not. In addition, residents can receive a discounted rate on their flood insurance.

In May 2009, Washoe County qualified to be part of the Federal Emergency Management Agency (FEMA) Community Rating System (CRS), a program which rewards communities through further discounts on flood insurance, for activities that exceed the minimum NFIP requirements.

Currently, all development in flood zones is controlled by Washoe County Flood Hazard Ordinance 416, and FEMA regulations. Map 8.2 shows a map of the floodplains in Washoe County.

Map 8.2 Washoe County Floodplains



Truckee River Flood Project

The Truckee River Flood Management Project (The Flood Project) is an ongoing joint effort among the cities of Reno and Sparks, Washoe County, the US Army Corps of Engineers, and numerous other stakeholders to reduce the devastating impacts of flooding in the Truckee Meadows. There is a need for flood prevention activities in the Truckee Meadows as approximately every 10 years, the Truckee River overflows its banks, causing damage to homes, businesses, and infrastructure. Significant flooding of the Truckee River occurred in 1986, 1997 (the flood of record), and 2005. In 2017, high flows almost overtopped the riverbanks. The implementation strategies of The Flood Project are designed to provide 100-year level of flood protection for the Truckee Meadows and include projects such as the construction of levees, floodwalls, vegetative terraces and ecosystem restoration.

CHAPTER 9

Goal #5: Efficient Freight Movement and Economic Vitality

The goal of Efficient Freight Movement and Economic Vitality is defined in this RTP as the improvement of the regional freight network, strengthening of the ability of rural communities to access national and international trade markets, and support of regional economic development. The goal is achieved through its objective to: Improve the Movement of Freight and Goods. Effective goods movement is vital to the economic competitiveness of Northern Nevada and to the overall health of the transportation system. This chapter describes efforts and strategies to address efficient freight movement and economic vitality through the improved movement of freight and goods.

The following efforts and strategies are described in this chapter:

SECTION 1 – RTC REGIONAL FREIGHT PLAN

SECTION 2 – NATIONAL, STATE, AND LOCAL POLICIES AND PLANS

SECTION 3 – OUTREACH AND COORDINATION

SECTION 4 – PROJECTS SUPPORTING FREIGHT AND GOODS MOVEMENT

SECTION 1 – RTC REGIONAL FREIGHT PLAN

In 2024, RTC adopted the Regional Freight Plan which identifies the transportation needs and priorities that will support a thriving regional economy through efficient freight and goods movement as well as workforce access. While the Plan focuses primarily on Washoe County, it is recognized that freight and its associated economic impacts expand across multiple county and jurisdictional boundaries in Northern Nevada and Northern California. The Plan therefore considers needs and opportunities in surrounding counties in addition to the Truckee Meadows. The five goals of this Plan are:

1. Improve safety – Transportation safety is a guiding principle for RTC, and providing for the safety of freight movement on Washoe County roadways is an important element of planning for goods movement.

2. Improve multimodal integration and rail access – About a quarter of freight activity in Northern Nevada transfers between multiple modes, which could include truck, rail, and/or aviation. Providing for efficient connections between modes is essential. Maintaining rail access to existing industrial properties helps ensure the seamless movement of goods and supports industrial operations. Because rail service is difficult to restore once lost, the Regional Freight Plan identifies preservation of rail access as a key priority.

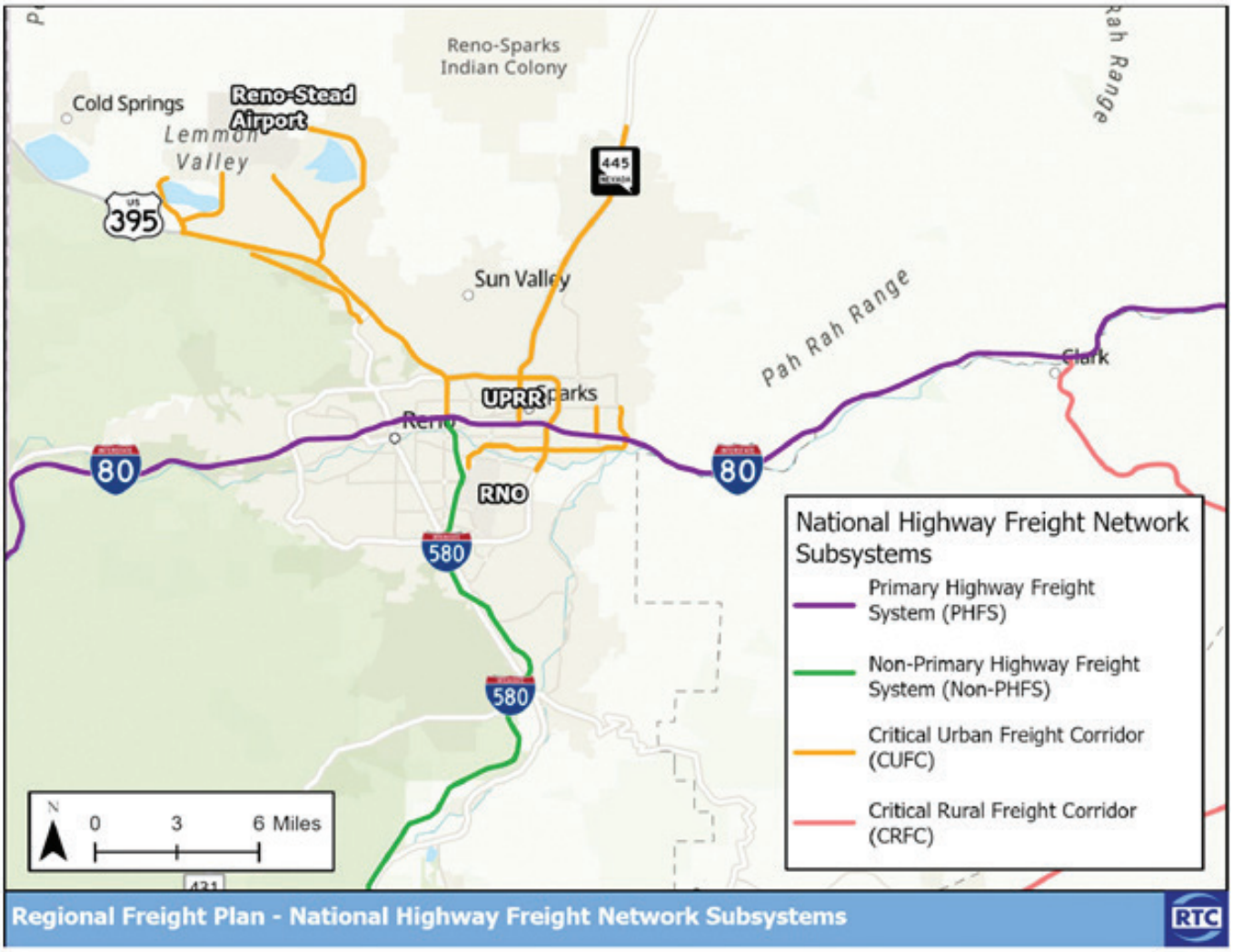
3. Improve efficiency of freight movement – Reducing travel delays and improving travel time reliability is important for freight movement, just as it is for all types of transportation in the region.

4. Provide for equity and sustainability in freight movement – Freight may have impacts on neighborhoods and the environment that are different from other types of transportation. Potential impacts resulting from noise, air quality, and safety are of particular concern in traditionally underserved areas.

5. Improve truck parking – The limited availability of truck parking is one of the most significant and challenging issues facing Northern Nevada. With periodic winter closures on I-80 over the Sierra Nevada, this is a concern that impacts Washoe County in addition to communities along I-80 across Nevada and beyond.

The Regional Freight Plan emphasizes the significance of regional highways that provide a critical link in both national and local goods movement. Regional roads connect manufacturers to intermodal transfer sites as well as the larger freeway network. Freight-significant regional roads are designated by NDOT as Critical Urban Freight Corridors, and include corridors such as McCarran Boulevard, Pyramid Way, and Lemmon Drive. Map 9.1 shows the 2023 National Highway Freight Network Subsystems within urban Washoe County and surrounding areas.

Map 9.1 National Highway Freight Network



Source: NDOT

Tables 9.1 and 9.2 show the top commodities by tonnage and value in 2022 and 2050 (projected). The purpose of the top commodity analysis is to understand trade patterns and enhance freight planning by identifying key goods that drive trade flows and their impact on the region's economy.

Table 9.1 Top Commodities by Tonnage and Value in 2022

Top Commodities by Tonnage (Tons)		**Top Commodities by Value (USD)**	
Gravel	5M	Electronics	$7B
Nonmetallic Mineral Products	5M	Miscellaneous Manufactured Products	$7B
Natural Sands	2M	Textiles/Leathers	$4B
Waste/Scraps	2M	Machinery	$3B
Coal - not elsewhere classified (n.e.c.)	1M	Mixed Freight	$3B
Top 5 Total	15M	Top 5 Total	$24B
All Commodities Total	28M	All Commodities Total	$24B

Source Freight Analysis Framework 5.4.1, disaggregated by Cambridge Systematics Inc. 2023

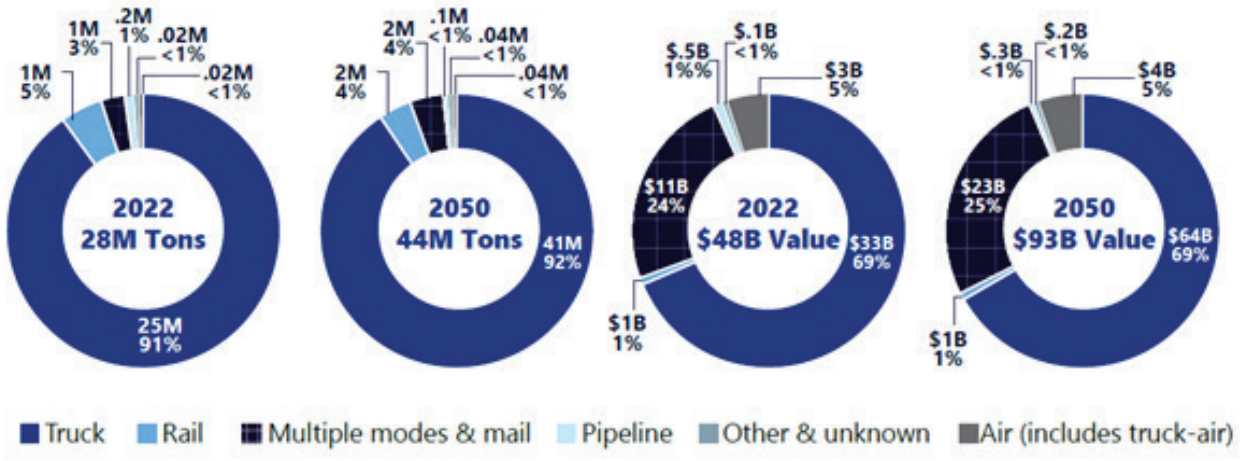
Table 9.2 Top Commodities by Tonnage and Value in 2050

Top Commodities by Tonnage (Tons)		Top Commodities by Value (USD)	
Gravel	8M	Miscellaneous Manufactured Products	$15B
Nonmetallic Mineral Products	8M	Electronics	$13B
Natural Sands	3M	Textiles/Leathers	$9B
Basic Chemicals	3M	Pharmaceuticals	$6B
Waste/Scrap	2M	Machinery	$6B
Top 5 Total	24M	Top 5 Total	$49B
All Commodities Total	44M	All Commodities Total	$93B

Source Freight Analysis Framework 5.4.1, disaggregated by Cambridge Systematics Inc. 2023

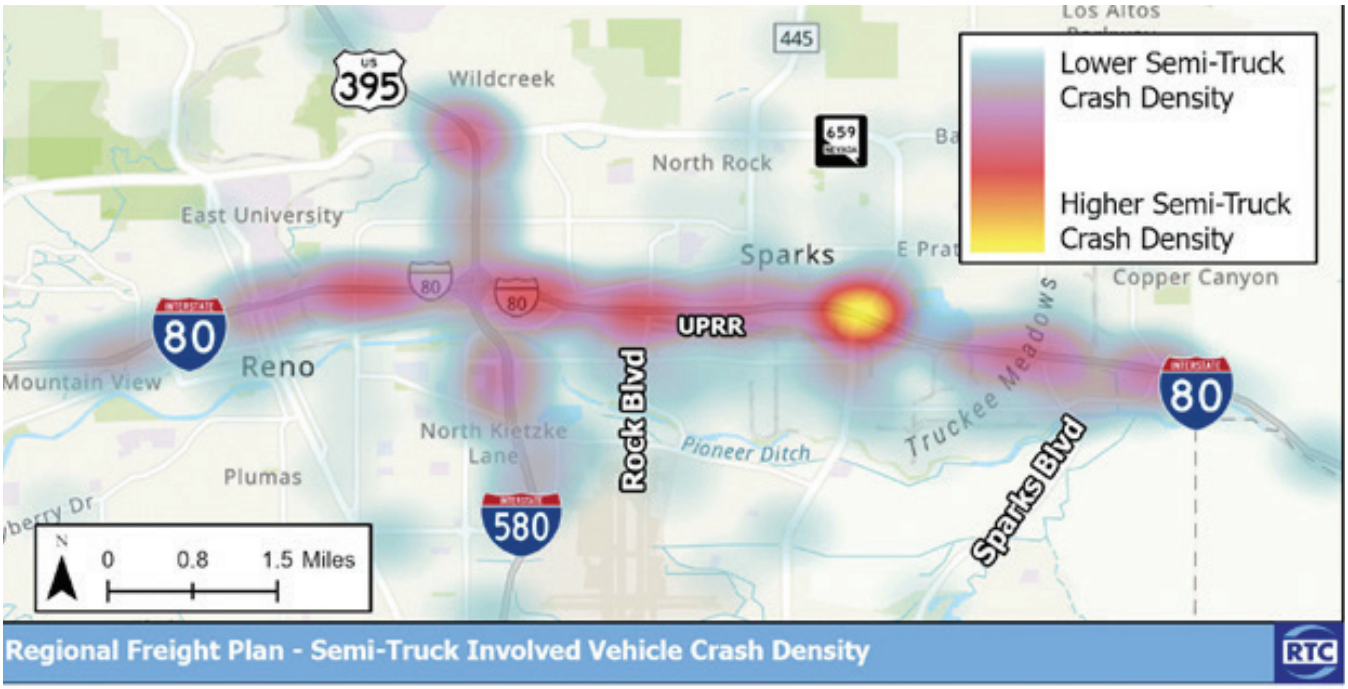
Most of the goods movement activity in the region is transported by truck, as shown in Figure 9.1. The Regional Freight Study examined the impacts of this high volume of truck traffic on safety. Map 9.2 illustrates that the highest concentration of semi-truck involved vehicle crashes occur on the freeways, with a particular hotspot along I-80 in industrial Sparks. A project included in this RTP that addresses safety concerns in the corridor is the widening of I-80 to three lanes in each direction from East McCarran Boulevard in Sparks to Vista Blvd. Though a need for the region, this project currently has no identified funding.

Figure 9.1 Commodity Flow Modal Split in 2022 and 2050 by Tonnage and Value



Source: Freight Analysis Framework 5.4.1, disaggregated by Cambridge Systematics Inc. 2023

Map 9.2 Truck-Involved Crashes in Central Reno and Sparks



SECTION 2 – NATIONAL, STATE, AND LOCAL POLICIES AND PLANS

An overview of key national, state, and local freight plans and policies that affect the movement of freight and goods is provided below.

National Policy

The 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21) established a policy to improve the condition and performance of the national freight network. The purpose of the policy is to provide a foundation for the United States to compete in the global economy and achieve goals related to economic competitiveness and efficiency, congestion, productivity, safety, security, and resilience of freight movement. This is particularly significant in Northern Nevada, through which a significant amount of national freight movement occurs. The 2015 Fixing America's Surface Transportation Act (FAST) emphasized the importance of coordination between local governments and freight transportation providers.

The passage of the current transportation bill, the 2021 Infrastructure Investment and Jobs Act (IIJA), further reinforces the importance of freight to the national economy. Specifically, the IIJA Act established grant programs, such as INFRA, to fund critical transportation projects that benefit freight movements.

Nevada State Freight Plan

The 2050 RTP supports the vision and goals described in the Nevada State Freight Plan (NSFP), which was adopted in 2017 and updated in 2022. The following strategic goals were identified in the NSFP with supporting objectives and performance measures:

- Economic Competitiveness
- Mobility and Reliability

- Safety
- Infrastructure Preservation
- Advanced Innovative Technology
- Environmental Sustainability and Livability
- Sustainable Funding
- Collaboration, Land-Use, and Community Values

These goals provide the context for the implementation of 18 strategies listed in the NSFP that will collectively address improvements to Nevada's freight network to achieve the desired vision.

Nevada Truck Parking Implementation Plan

According to the Federal Highway Administration, truck parking shortages are a national safety concern. Washoe County has a deficit of approximately 250 truck parking spaces. The Nevada Truck Parking Implementation Plan was developed in 2019. This plan identifies opportunities to expand and improve existing facilities and integrate truck parking technology in response to rising demand, changing hours of service requirements and safety standards, and rapid advancements in technology.

When implemented, these improvements will help truck drivers by providing adequate and safe public truck parking where it is most needed and enhanced by real-time truck parking availability information. The RTC has been an active participant in developing and implementing the Nevada Truck Parking Implementation Plan.

Nevada State Rail Plan

The 2021 Nevada State Rail Plan was developed by NDOT. The plan reflects Nevada's leadership with public and private transport providers at the state, regional, and local levels, to expand and enhance passenger and freight rail, and better integrate rail into the larger transportation system. The 2021 Nevada State Rail Plan:

- Provides a plan for freight and passenger rail transportation in the state.
- Prioritizes projects and describes intended strategies to enhance rail service in the state to benefit the public.
- Serves as the basis for federal and state investments in Nevada.

Nevada's geography and historic development patterns have resulted in two primary rail corridors, which generally run east-west across the state, along with a few supplemental branch and excursion lines.

Rail shipments accounted for eight percent of the shipments to other states, six percent of the total traffic to Nevada, and less than one percent of in-state traffic in 2015. The Union Pacific (UP) Railroad operates two east-west corridors; Burlington Northern Santa Fe (BNSF) Railway has rights to operate on nearly three-quarters of the UP railways in Nevada. The northern corridors serve Reno and Sparks, as well as other Northern Nevada communities, and connect with Salt Lake City and Denver to the east and with Sacramento and the San Francisco Bay Area to the west. Amtrak operates once a day passenger rail service in each direction across this northern Nevada corridor; I-80 generally parallels the rail lines in this corridor. There are a total of 144 route miles of freight railroad in Washoe County.

The first UP rail yard in Sparks was built in 1904. From that point, Sparks was an important stop for trains serving Nevada businesses and residents. Today, the UP railyard in Sparks is an integral part of the railroad's 32,000-mile operation. Playing a major role in the application of distributed power, the Sparks railyard has been a focal point for the safe and efficient operation of freight trains over Donner Summit. With nearly 1,200 miles of track and 600 employees in the state, the Sparks railyard plays a critical role in the efficient movement of goods in and around Nevada.

RNO Master Plan

Reno's proximity to major West Coast ports provide next day capability for movement of cargo back and forth for import and export as well as domestic spoke and hub services via air, truck, or rail. Reno has customs facilities and personnel to handle import and export needs, while Reno-Tahoe International Airport (RNO) is capable of handling a variety of international and domestic services and flights. In 2019, RNO handled more than 66,621 tons or nearly 147 million pounds of cargo shipments.

Approximately 402,465 pounds of cargo arrives or departs the airport each day. Companies handling air cargo at RNO include DHL, FedEx, and UPS (Reno-Tahoe Airport Authority, 2019). RNO is within a designated foreign trade zone and is located within two miles of both major highway corridors, I-80 and US 395, and less than one mile from the UP Sparks Intermodal Facility.

More details about the airports and planned expansion initiatives can be found in the RNO Master Plan, approved in January 2019.

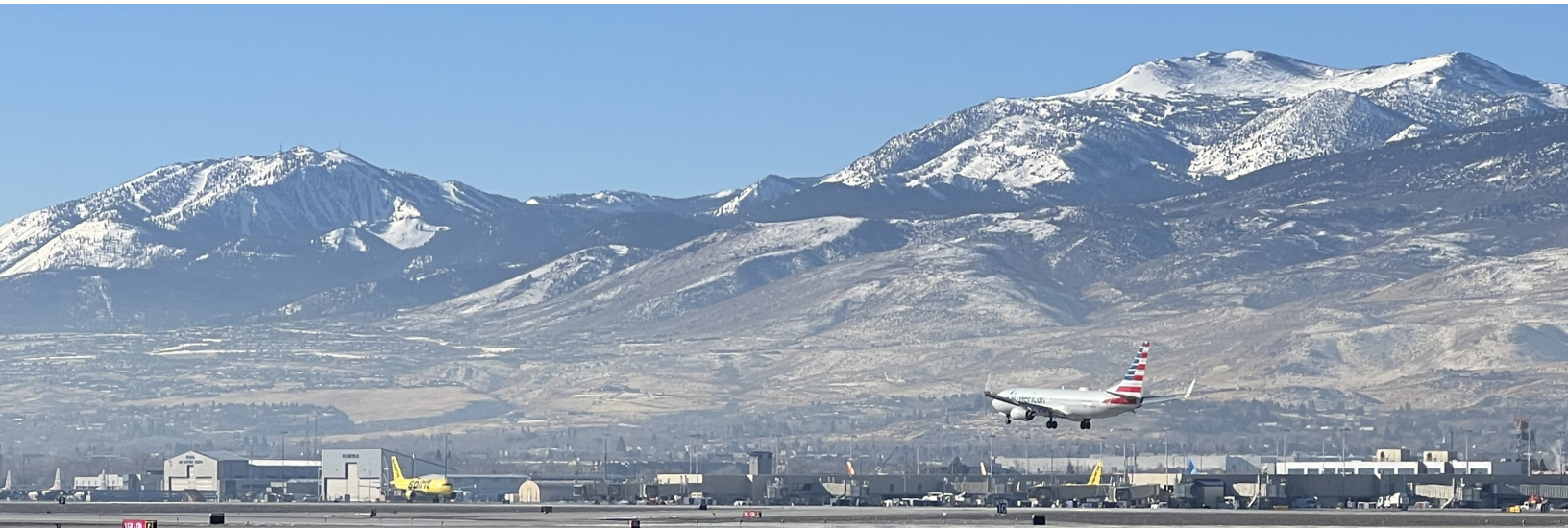
SECTION 3 – OUTREACH AND COORDINATION

The Freight Advisory Committee (FAC) is a group formed during the development of the Nevada State Freight Plan to coordinate and collect input from a range of public and private sector stakeholders. FAC meetings are held quarterly. RTC has been participating in the meetings and working closely with NDOT and other partners to develop and prioritize freight projects.

Additionally, the Regional Freight Plan recommends the creation of a Regional Freight Advisory Committee that would include a combination of public and private sector agencies and organizations with an interest in freight and goods movement. This committee, in combination with surveys of those agencies and organizations, would be used to foster collaboration and information sharing among stakeholders to guide implementation of recommendations in the Regional Freight Plan and Regional Transportation Plan.

Truck parking challenges and potential solutions specific to Northern Nevada were discussed during a FAC workshop. This workshop provided the RTC an opportunity to engage with public and private sector partners on potential shared solutions. Topics included:

- Truck parking situation throughout the US and within Northern Nevada



- Current truck parking assessments and needs
- Best practices and possible solutions
- Development of truck parking actions, strategies, and priorities

SECTION 4 – PROJECTS SUPPORTING FREIGHT AND GOODS MOVEMENT

Multiple projects in this RTP focus on improving freight and goods movement through Northern Nevada. Three of these projects are summarized below.

- Systemwide Intelligent Traffic System (ITS) improvements on I-80 and US 395/I-580

  - This project makes improvements to traffic signal timing. Traffic signal timing determines traffic movements for different time intervals depending on variables like average traffic flow levels. ITS improvements support freight and goods movement by reducing idle times and delays, making roadway travel more efficient for freight trucks.

- Pyramid Highway/US 395 Connector

  - This project supports freight and goods movement by improving capacity and safety and reducing travel delays. Efficient corridors, characterized by consistent travel times, are essential for ensuring timely deliveries and reducing supply chain disruptions.

- Spaghetti Bowl Project and US 395 Widening

  - Phase 1 of improvements to the Spaghetti Bowl have been completed and Phase 2 of the project includes the widening of the segment eastward to Sparks Boulevard. This project supports freight and goods movement by improving capacity and safety and reducing travel delays. I-80 through downtown Reno and Sparks contains the highest concentrations of truck-involved crashes in the region and NDOT's planned I-80 improvements as part of the Spaghetti Bowl Project, are a high priority for improving safety.

CHAPTER 10

Goal #6: Equity and Environmental Sustainability

This RTP defines the goal of Equity and Environmental Sustainability as enhancing the performance of the transportation system while protecting and enhancing equity and the natural environment. The goal of equity and environmental sustainability is achieved through its objective to: Promote Equity and Environmental Justice. The RTC strives to serve the transportation needs of all residents and visitors in the region without discrimination based on age, income, race, language, ethnicity, or ability. This chapter describes the regional efforts and strategies to promote equity and environmental justice.

The following federal policies and associated actions are discussed in this chapter:

SECTION 1 – TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

SECTION 2 – AMERICANS WITH DISABILITIES ACT (ADA) OF 1990

SECTION 3 – EXECUTIVE ORDER ON ENVIRONMENTAL JUSTICE

SECTION 4 – EXECUTIVE ORDER ON CLIMATE CHANGE AND SUSTAINABILITY

The RTC complies with the above federal policies and requirements and implements each toward the goal of achieving equity and environmental sustainability.

SECTION 1 – TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

According to Title VI of the Civil Rights Act of 1964, "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Per Title VI, RTC is required to take steps to ensure that no discrimination occurs based on the factors above.

RTC transportation projects and services are implemented in conformance with the RTC Title VI Report. The RTC submits a Title VI Report to the Federal Transit Administration every three years, with the most recent report approved by RTC's Board in February 2023. Additionally, the RTC submits a Title VI Certification and Assurance to the FTA on an annual basis.

An inclusive participation strategy is one of the primary measures used to comply with Title VI requirements. RTC ensures that persons who are a member of a minority group, have low-income, and/or have Limited English Proficiency (LEP) are able to provide meaningful input into the planning process. One example of inclusive participation practices is public meetings which are held in locations near transit routes and where translators and materials are provided in Spanish and English. RTC works with senior centers, assisted living facilities and senior organizations within the RTC transit service area to introduce seniors and people with disabilities to the RTC Travel Training Program. The Travel Training Program curriculum includes a presentation about RTC transit services and a field trip allowing the participants to experience riding the bus. The goal of the program is to make the participants feel more comfortable using public transportation as well as to solicit input from them about RTC services.

In addition to outreach efforts designed to engage people with disabilities, RTC also ensures persons with LEP understand the transit operations of RTC RIDE and RTC ACCESS by making the following information available in both English and Spanish:

- RTC RIDE bus route information
- RTC ACCESS Rider's Guide
- Signs on buses (fare signs, information for RTC RIDE programs, etc.)
- Signage at the bus stops stating detour information or temporary route changes
- Bus announcements explaining how to exit the bus
- RTC ACCESS voice recordings that reminds passengers of upcoming reservations
- RTC Passenger Services has Spanish speaking passenger service representatives available to assist passengers
- RTC website content is translatable to multiple languages, including Spanish.

Another strategy in place to ensure compliance with Title VI requirements is the RTC complaint process. RTC has established complaint procedures to receive, investigate, and track Title VI complaints. These procedures include a Title VI policy statement, specific directions detailing how to file a complaint, an explanation of how the complaint will be investigated, and a complaint form specific to the RTC. The RTC complaint process and forms are translated into Spanish and are available in other languages upon request.

Equal Opportunity in Procurement

Many of RTC's transportation projects are implemented using federal sources of funding. RTC is an Equal Opportunity Employer and encourages Minority, Women, and Disadvantaged Business Enterprises (DBE) to participate in the competitive procurement process. All planning and project development work is procured and administered through RTC's Board-adopted DBE Program. RTC supports inclusive economic development by incorporating nondiscriminatory elements in its DBE program to facilitate competition by small businesses and ensure DBEs have an equal opportunity to receive and participate in contracts. RTC sets project-specific DBE goals, provides DBE training, and conducts outreach to local and regional DBEs to advise them of opportunities. RTC has established an overall goal of 1.3 percent for DBE participation in FTA and other federally-funded contract opportunities for federal fiscal years 2023 – 2025. This goal is updated triennially, and changes based on the relative availability of DBE firms in the region and the type of projects proposed for implementation during the triennial period.

The State of Nevada has a robust workforce development and apprenticeship program. Similarly, RTC's contracting regulations promote the hiring of underrepresented workers and residents. For example, RTC works with the Small Business Development Center at the University of Nevada, Reno to develop a listing of local and regional small businesses. RTC utilizes this listing and a directory of Emerging Small Businesses, developed by the Nevada Governor's Office of Economic Development, to conduct procurement outreach.

In addition, Nevada's Apprenticeship Utilization Act requires that "a contractor or subcontractor engaged in horizontal construction who employs workers on one or more public works during a calendar year pursuant to NRS 338.040 use one or more apprentices for at least three percent, or any increased percentage established pursuant to subsection 3, of the total hours of labor worked for each apprenticed craft or type of work to be performed on those public works." Finally, Nevada's prevailing wage requirements ensure that jobs created by RTC projects will pay a fair wage. Construction contracting companies, hired by RTC, also must comply with Nevada's prevailing wage requirements and federal DBE programs.

Objectives of the RTC DBE Program are to ensure nondiscrimination, remove barriers to DBE participation, create full and fair opportunities for equal participation by small businesses in federally funded contracting and procurement opportunities, and assist in the development of DBE firms that can compete successfully in the marketplace. RTC's procurement policies comply with all applicable civil rights and equal opportunity laws, to ensure that all individuals – regardless of race, gender, age, disability, and national origin – benefit from federal funding programs.

SECTION 2 – AMERICANS WITH DISABILITIES ACT (ADA) OF 1990

The Americans with Disabilities Act (ADA) of 1990 requires that disabled persons have equal access to transportation facilities and services. This includes wheelchair accessible accommodations in the transit system. RTC complies with ADA requirements in all aspects of its administration and operations. Specific examples are provided below.

ADA Transition Plan

RTC adopted an updated ADA Transition Plan in 2020, which identifies and prioritizes ADA needs at RTC facilities. The updated Plan complemented the 2011 ADA Transition Plan by incorporating its previous action items and expanding the scope of the plan. The ADA Transition Plan addresses physical obstacles in areas that are open to the public in the six RTC buildings and at 360 RTC transit stops. The ADA Transition Plan update also included the provision of a schedule for implementing the access modifications, and identification of a position and official who is responsible for implementing the ADA Transition Plan. As RTC continues to address ADA-related issues identified in the Plan, the Plan will be updated at regular intervals or as needed.

Bus Stop and Sidewalk Connectivity Program

RTC initiated a program that funds ADA improvements and sidewalk connectivity at high-priority bus stops in 2019. These improvements were completed in 2023. However, additional phases of the program are expected to be identified and completed in future years. The RTC will continue to upgrade bus stops in accordance with the needs identified through the ADA Transition Plan and its subsequent updates. RTC also works with local governments to bring existing bus stops up to ADA standards as part of the development review process.

Accessibility of the Transit Fleet

The RTC fleet used for RIDE (fixed-route), ACCESS (paratransit), and FlexRIDE (microtransit) services contain accessibility features such as wheelchair ramps and lifts, interior and exterior audio announcements, accessible stop requests with audible chimes, and others to aid users in navigating the system. The ACCESS service provides service specifically for those with disabilities that prevent them from riding the RIDE service independently some or all of the time. It provides door-to-door, prescheduled transportation for people who meet the eligibility criteria of the ADA.

Additionally, the RTC Reasonable Modification Policy allows individuals to make requests beyond those noted above or required by law. RTC may allow the reasonable modification of its policies to accommodate the needs of persons with disabilities in order to allow them to fully utilize available services.

Improving Accessibility of the Regional Road Network

RTC Active Transportation Plan includes a tool to help identify areas in the region most in need of pedestrian and bicycle facility improvements. The ADA requires that newly constructed or altered facilities be readily accessible to and usable by persons with disabilities. When reconstruction of roadways occurs, upgrades must be provided to bring the roadway into compliance with ADA standards. As RTC delivers major roadway improvements, project area sidewalks and crosswalks are brought to current ADA standards.

Examples include the recently completed Oddie/Wells Corridor Multimodal Improvements, Sky Vista Parkway Capacity, and Sparks Boulevard Corridor Phase 1 projects, which were all designed to provide wider and/or safer sidewalks with accessibility improvements.

SECTION 3 – EXECUTIVE ORDER ON ENVIRONMENTAL JUSTICE

Executive Order 12898 – the Executive Order on Environmental Justice – requires the identification and assessment of disproportionately high and adverse impacts on minority and low-income populations. The 1994 Presidential Executive Order directed every federal agency to identify and address the effects of all programs, policies, and activities on minority populations and low-income populations. Nearly three decades later, the federal government built upon and strengthened its commitment to deliver environmental justice to all communities across America through Executive Order 14096 (2023).

The Executive Order includes implementation and enforcement of environmental and civil rights laws, preventing pollution, addressing climate change and its effects, and working to clean up legacy pollution that is harming human health and the environment.

Effective transportation decision-making depends upon understanding and properly addressing the unique needs of different socioeconomic groups. RTC considers the potential adverse impacts of projects on environmental justice populations. This includes impacts to neighborhood cohesiveness, regional accessibility, neighborhood quality of life, and health impacts. RTC also implements outreach strategies targeted toward minority residents and households with Limited English Proficiency (LEP). These strategies include outreach in Spanish-language media, bilingual meeting and transit notices, and the availability of bilingual staff at public meetings. These strategies are impactful as the population of Washoe County consists of 37 percent minority and four percent of households with LEP. Map 10.1 shows the relation of census tracts with higher than county average LEP population to projects included in this RTP.

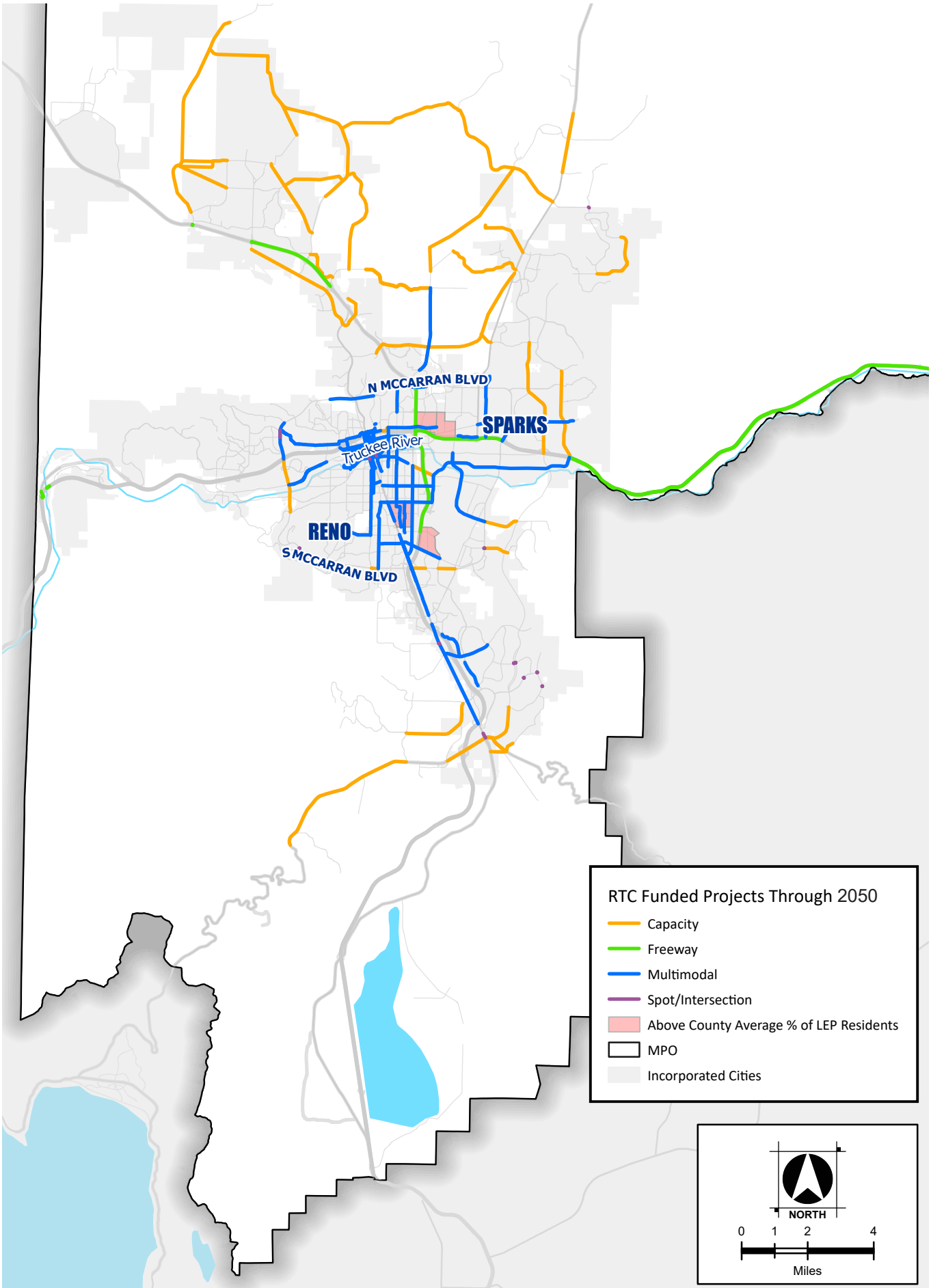
It should be noted that the demographic data used in this chapter was produced using the Climate and Economic Justice Screening Tool (CEJST), which was created under the 2021 Executive Order 14008to identify communities that are experiencing burdens in any of eight categories. The tool uses census tracts boundaries from 2010 as well as data from the 2019 American Community Survey five-year estimates. More information on Executive Order 14008 and CEJST is provided in Section 4 of this chapter.

When RTC alters transit service, staff ensures that no disproportionately high or adverse impacts on minority and low-income populations occur. When a major service change is being considered, staff receives input from passengers, including many people who are part of minority and low-income populations. RTC policy identifies a major service change as:

- A reduction or increase of 10 percent or more of system-wide service hours
- The elimination or expansion of any existing service that affects:
  - 25 percent or more of the service hours of a route
  - 25 percent or more of the route's ridership (defined as activity at impacted bus stops)

Additionally, RTC holds a formal public hearing and analyzes how these changes will impact all passengers within the RTC service area. RTC transit activities are continually reviewed, and the results are summarized once every three years in a Title VI Report, which is described in Section 1 of this chapter.

Map 10.1 Census Tracts with Higher Limited English Proficiency Populations



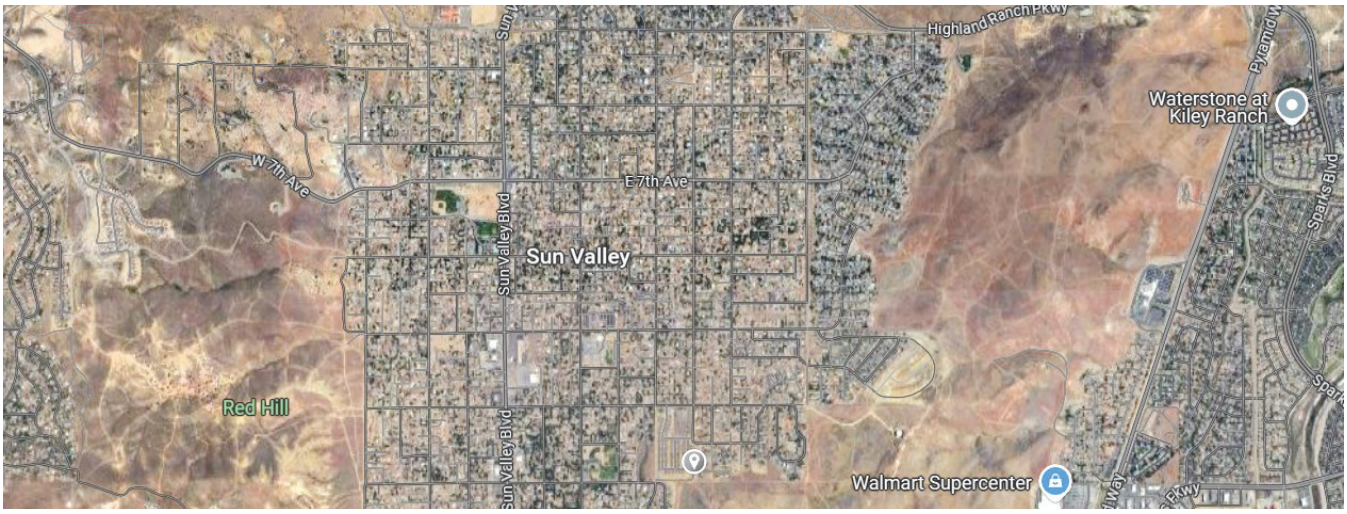
The projects, programs, and services in this plan provide enhanced mobility to all residents regardless of age, race, language, or income. Several of the projects that focus on pedestrian safety, bicycle accessibility, and quality of life are located in lower income communities, including the multimodal improvements on East Sixth Street, Sun Valley Boulevard, and Vassar Street.

Many projects on regional roads in areas with low-income communities involve bringing them up to current ADA-accessibility standards and improving pavement condition. While construction may generate temporary negative impacts, the long-term mobility benefits of these projects will be significant.

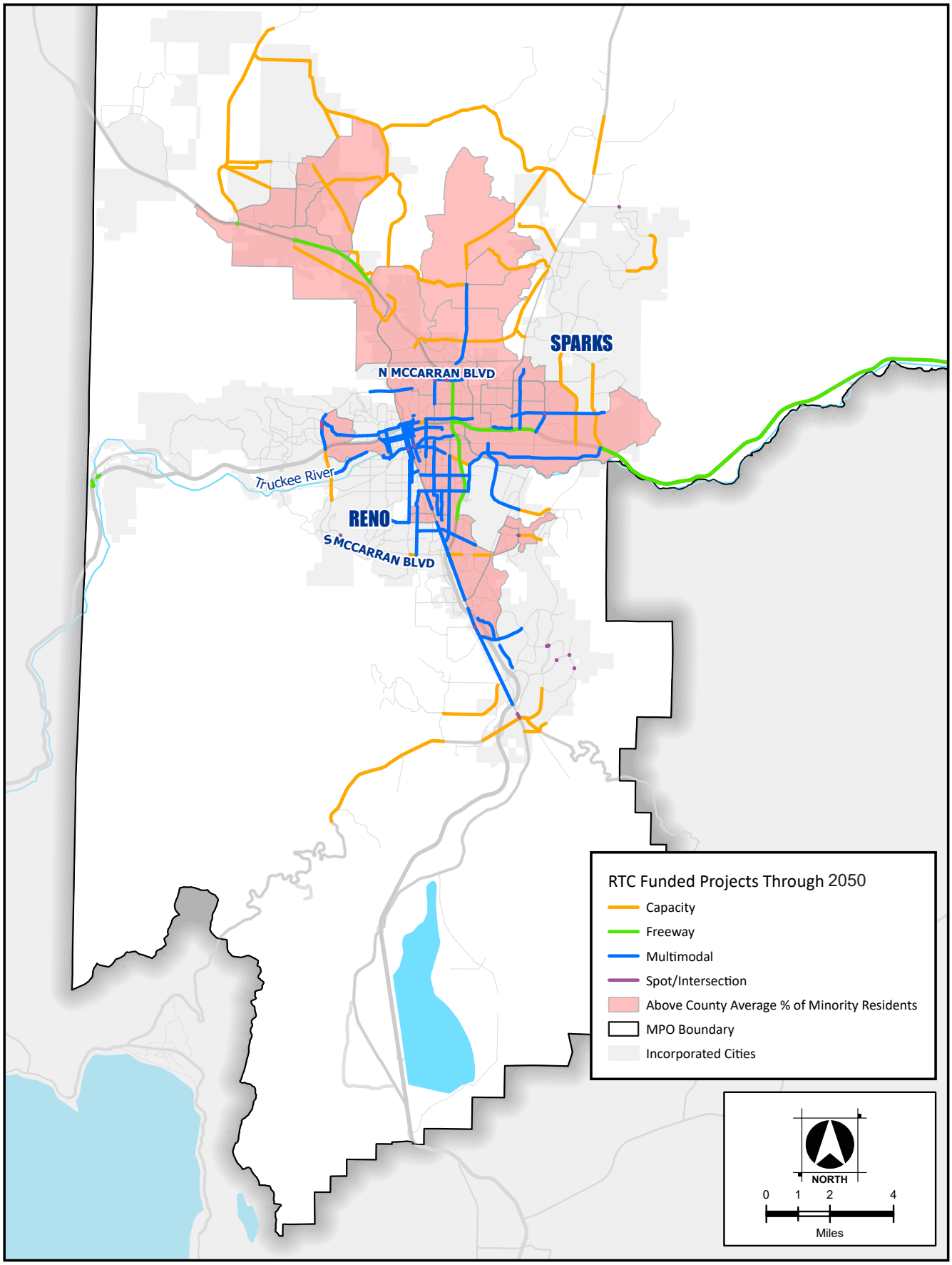
Table 10.1 Demographic and Socioeconomic Summary, 2019 ACS Five-Year Estimates

	Washoe County Population and Demographics	Population Within ¼ Mile of Roadway Projects	Population Within ¼ Mile of Transit Routes
Persons 65 Years and Over	72,890 (16.0%)	70,033 (15.8%)	53,448 (15.0%)
Minority population	168,722 (36.9%)	164,453 (37.1%)	145,939 (41.0%)
Persons Below Poverty Level	50,827 (11.1%)	49,890 (11.3%)	44,652 (12.5%)
Limited English Proficiency Households	7,030 (3.9%)	6,868 (3.9%)	6,593 (4.6%)
Total Households	182,180 (100%)	176,550 (100%)	142,961 (100%)
Total Population	456,936 (100%)	443,415 (100%)	356,267 (100%)

As shown in the table of demographic information above, approximately 37.1 percent of the residents living within ¼ mile of the projects included in the RTP and 41 percent of the residents living within ¼ mile of transit routes are members of a minority group. Just under 37 percent of Washoe County residents are members of a minority group. These data indicate that transportation investments and benefits are shared equitably throughout the community. Map 10.2 shows the relation of census tracts with higher than county average minority population to projects included in this RTP.



Map 10.2 Census Tracts with Higher Minority Populations



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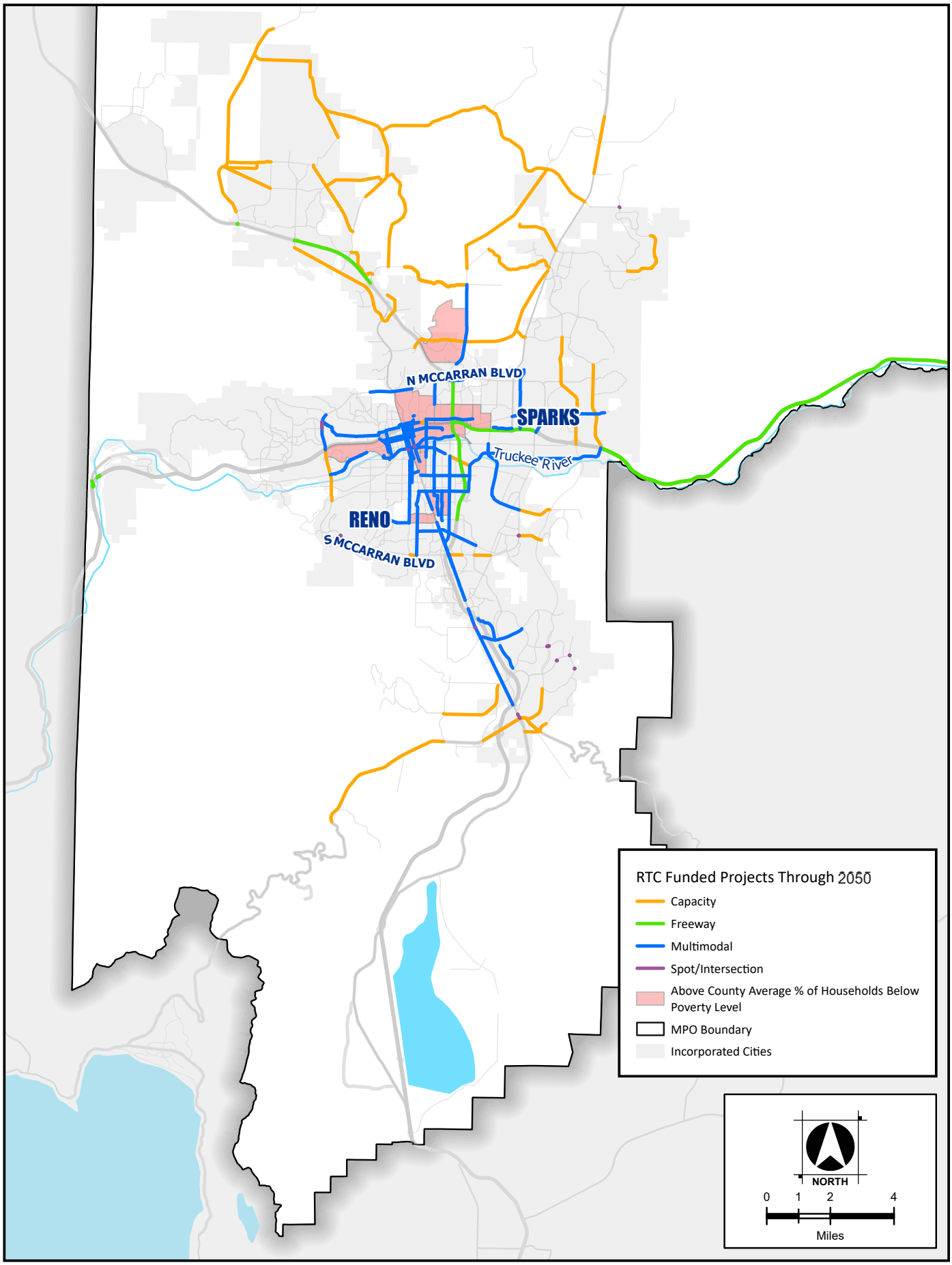
Approximately 11.1 percent of Washoe County residents have incomes that are below the poverty level. About 11.3 percent of residents near roadway projects and 12.5 percent of residents near transit routes have incomes below the poverty level. The proportion of seniors served by the projects and services in the RTP is slightly lower than the county average; this is because of the high senior populations in lower density outlying areas such as Cold Springs and southwest Reno, which are not served by transit. Maps 10.3 and 10.4 show the distribution of RTP projects relative to the location of populations experiencing higher than average poverty levels or that are age 65 or older.

RTC's outreach includes numerous efforts to support transportation for economically disadvantaged populations. RTC also provides bus passes to charitable organizations at discounted rates, or for free. For example, bus passes are provided to the Reno Works program, which transitions homeless individuals in Washoe County into jobs and housing.

RTC participates in, and organizes, numerous events for seniors, disabled individuals, and students of all ages. These events help residents connect with transportation services that are often a lifeline for many individuals, allowing them to access social activities, medical appointments, educational opportunities, and employment. Notably, the RTC organizes the Stuff-A-Bus for Seniors drive, which collects needed donations of clothing and other essentials.

Thousands of seniors also interact with RTC at the annual Senior Fest event. In addition to incorporating seniors and persons with disabilities on standing committees, these populations are also offered free mobility travel training. This training instills confidence and builds skills in using transit and navigating the community.

Map 10.3 Census Tracts with Higher Poverty



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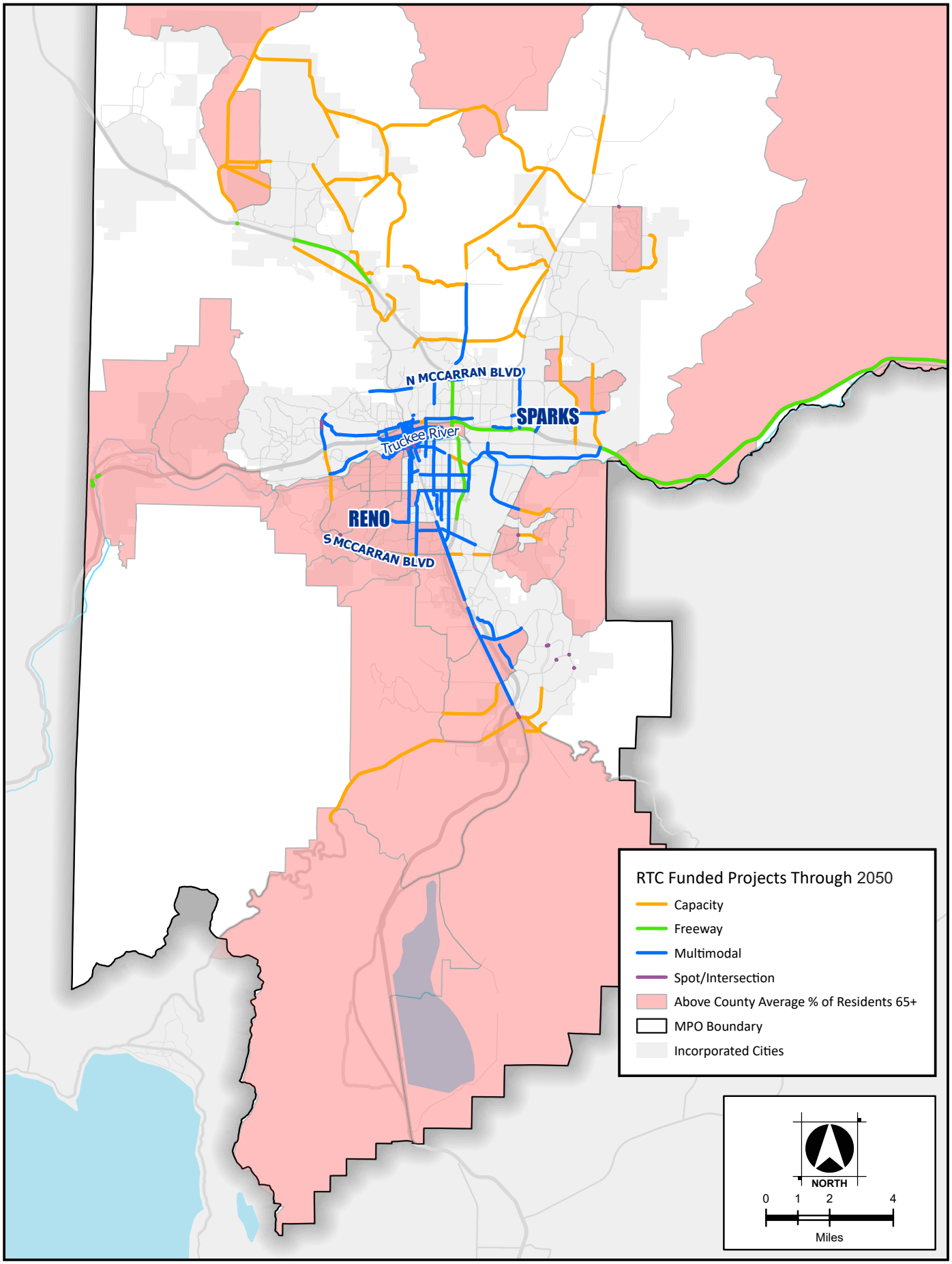
Map 10.4 Census Tracts with Higher Senior Populations



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SECTION 4 – EXECUTIVE ORDER ON CLIMATE CHANGE AND SUSTAINABILITY

Executive Order 14008 on Tackling the Climate Crisis at Home and Abroad addresses issues related to climate change and sustainability. One of the initiatives under this order is Justice 40. Justice 40 establishes a goal that 40 percent of overall benefits from certain federal climate, clean energy, and affordable and sustainable housing investments flow to disadvantaged communities that are marginalized by underinvestment and overburdened by pollution.

In response to Justice 40, hundreds of federal programs have been updated to ensure that disadvantaged communities receive the benefits of new and existing federal investments. Investments made will help confront decades of underinvestment in disadvantaged communities and bring critical resources to communities that have been overburdened by legacy pollution and environmental hazards.

In response, RTC has reaffirmed existing policies to ensure meaningful engagement and equitable investment in the planning, design, and implementation of projects.

For example, RTC utilizes the Climate and Economic Justice Screening Tool (CEJST) to identify disadvantaged census tracts directly impacted by proposed projects. The tool uses various datasets as indicators of burdens, which are organized into eight categories: 1) climate change, 2) energy, 3) health, 4) housing, 5) legacy pollution, 6) transportation, 7) water and wastewater, and 8) workforce development.

RTC may also reference other tools, such as the Environmental Protection Agency's (EPA) Environmental Justice Screening and Mapping Tool (EJScreen) or the Department of Transportation's (DOT) Screening Tool for Equity Analysis of Projects (STEAP) to identify disadvantaged or Justice40 populations. Maps 10.5 and 10.6 were produced using the EJScreen tool to show the relation of disadvantaged populations to RTP projects and RTC RIDE routes, respectively. Once identified, these communities will typically be targeted for outreach events as determined by the applicable project's community engagement plan. Engagement strategies ensure meaningful participation of these communities consistent with Federal Highway Administration (FHWA) guidance in Promising Practices for Meaningful Public Involvement in Transportation Decision-Making.


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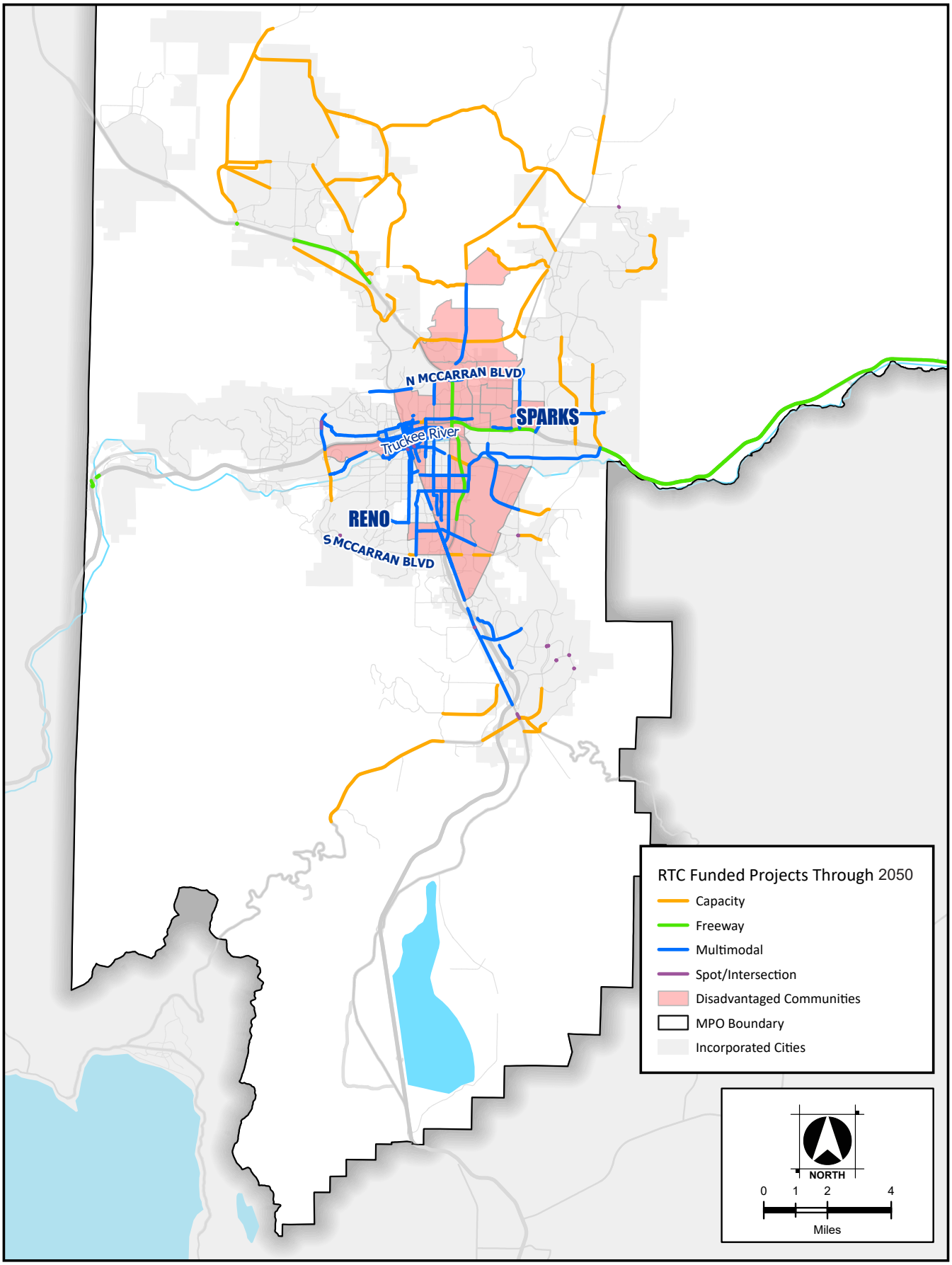
Map 10.5 Environmental Justice Populations and RTP Projects



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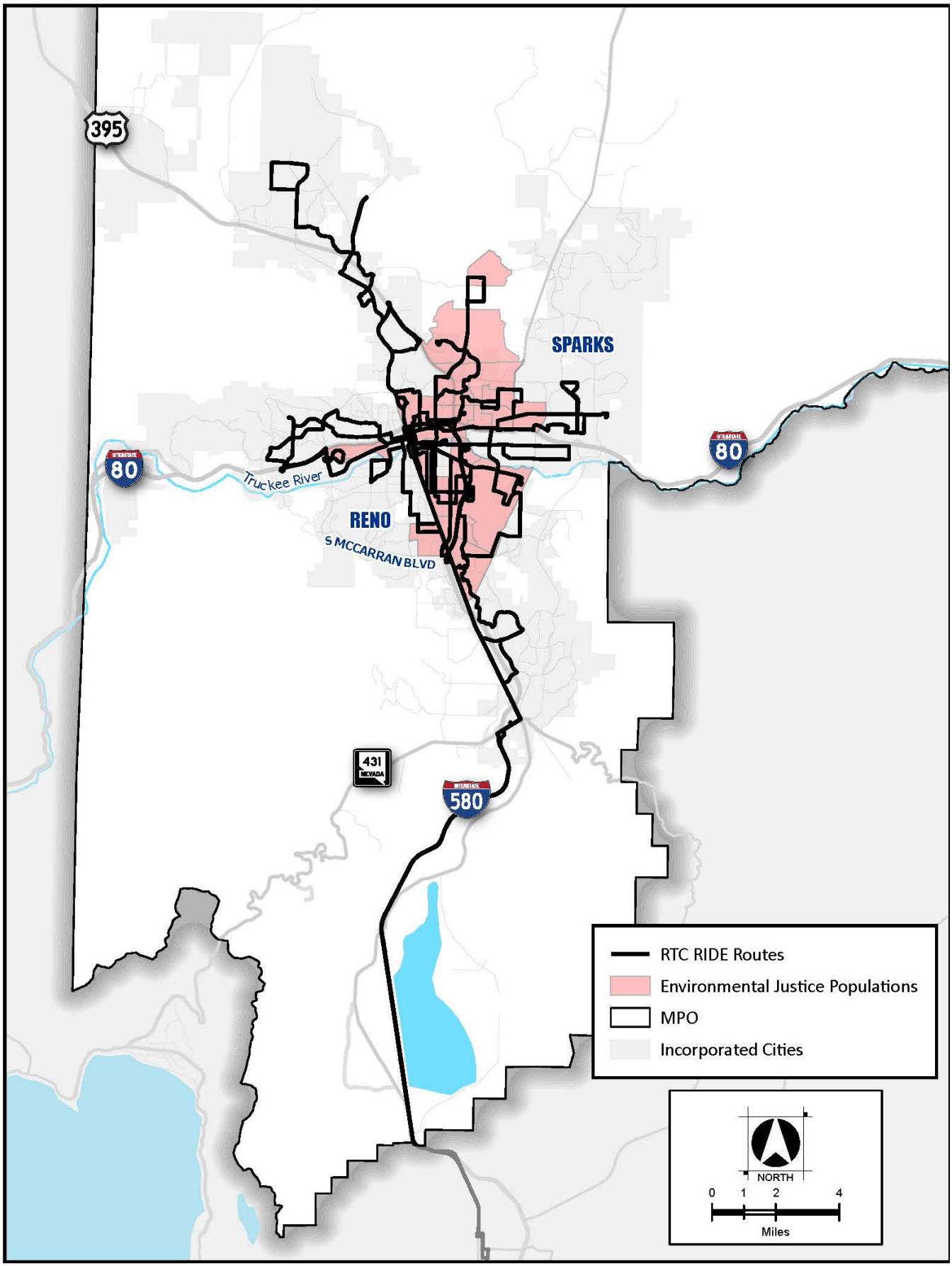
Map 10.6 Environmental Justice Populations and RTC RIDE Routes



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CHAPTER 11

Goal #7: Reduced Project Delivery Delays

The goal of Reduced Project Delivery Delays is defined in this RTP as a reduction in project costs, promotion of jobs and the economy, and the expeditious movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process. This includes reducing regulatory burdens and improving agencies' work practices. The goal is achieved through its objective of Monitoring Implementation and Performance.

Effective implementation and performance monitoring fosters a culture of accountability and continuous improvement. By aligning system performance with broader regulatory and funding priorities, RTC can streamline compliance and make projects more competitive for federal grants and support. This proactive oversight ensures that the delivery process remains aligned with national priorities, supports economic growth, and enhances the movement of people and goods while reducing regulatory burdens and optimizing project delivery practices.

This chapter describes the regional performance measures used to support the goal of reduced project delivery delays. The following performance measures and practices are discussed in this chapter:

SECTION 1 – RTC PERFORMANCE PLANS

SECTION 2 – SAFETY

SECTION 3 – ROADWAY INFRASTRUCTURE CONDITION

SECTION 4 – CONGESTION REDUCTION

SECTION 5 – SYSTEM RELIABILITY

SECTION 6 – ENVIRONMENTAL SUSTAINABILITY

SECTION 7 – TRANSIT STATE OF GOOD REPAIR AND OTHER TRANSIT MEASURES

SECTION 8 – RTC KEY PERFORMANCE INDICATORS (KPIS)

SECTION 1 – RTC PERFORMANCE PLANS

The Fixing America's Surface Transportation Act and the Moving Ahead for Progress in the 21st Century Act provide a framework for linking goals and performance targets with project selection and implementation. Performance management leads to more efficient investment of transportation funds by focusing on national transportation goals, increasing accountability and transparency, and improving decision making.

Performance plans chart progress toward achieving performance targets and are used to facilitate a community conversation about the track record of the RTC's transportation program. The performance measures included in performance plans build upon existing and planned data collection efforts. RTC develops the following performance plans:

- Regional Transportation Plan, to be updated every four years, which includes a discussion of:
  - Anticipated effects of the improvement program toward achieving the performance targets
  - How investment priorities are linked to performance targets
- Annual Metropolitan System and Transit Performance Report, which includes:
  - Evaluation of the condition and performance of the transportation system
  - Progress achieved in meeting performance targets
  - Evaluation of how transportation investments have improved conditions
- Transit Asset Management (TAM) Plan
- Transportation Optimization Plan Strategies (TOPS)
- Public Transportation Agency Safety Plan

The U.S. Secretary of Transportation, in consultation with states, MPOs and other stakeholders, establishes national performance measures for several areas: pavement conditions and performance for the Interstate System and National Highway System, bridge conditions, injuries and fatalities, traffic congestion, on-road mobile source emissions, and freight movement on the Interstate System. States, in coordination with MPOs, set performance targets in support of those measures, and state and metropolitan plans describe how program and project selection will help achieve the targets. RTC has collaborated with the Federal Highway Administration (FHWA) Nevada Division Office, Nevada Department of Transportation (NDOT), and other stakeholder jurisdictions and agencies to develop performance measures. These performance measures and targets are updated upon release of national and state performance measures.

SECTION 2 – SAFETY PERFORMANCE MEASURES

The RTC's aspirational vision is that zero fatalities on our region's roadways is the only acceptable goal and RTC recognizes that reaching that goal requires time and significant effort by all stakeholders.

The safety performance targets identified in the RTP represent important steps in working toward the ultimate goal of eliminating traffic-related deaths and serious injuries. The safety performance targets are considered interim-performance levels that make progress toward the long-term goal of zero fatalities. This approach is consistent with guidance from the U.S. Department of Transportation, NDOT, as well as states and MPOs across the nation. RTC tracks progress toward safety goals using the following safety performance measures:

- Number of Fatalities and Rate of Fatalities per 100 Million Vehicle Miles Travelled (VMT) – These performance measures address vehicles on all roadways within the metropolitan planning area and utilize data provided by the Fatality Analysis Reporting System (FARS). The aspirational goal of zero fatalities is consistent with the Nevada's Strategic Highway Safety Plan.

- Number of Serious Injuries and Rate of Serious Injuries Per 100 Million VMT – Serious injuries resulting from automobile crashes are also tracked by FARS.

- Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries – This data is provided by NDOT.

- Preventable Transit Crashes Per 100,000 Miles of Service – RTC tracks the number of preventable crashes (that is, the number of crashes in which the driver is at fault) that RTC RIDE and RTC ACCESS vehicles experience. While traveling on a bus is much safer than riding in other types of vehicles, RTC continuously strives to increase safety of transit travel.

SECTION 3 – ROADWAY INFRASTRUCTURE CONDITION

The six FHWA national performance measures for assessing roadway pavement infrastructure condition reflect elements in the Highway Performance Monitoring System, including the International Roughness Index, rutting for asphalt surfaced pavements, faulting for jointed concrete surface pavements, and cracking percent. The measures include the percentage of pavements in good and poor condition on both the Interstate System and Non-Interstate National Highway System, as well as the percentage of bridges in good and poor condition.

The measures for assessing bridge infrastructure condition are based upon elements in the National Bridge Inventory (NBI), which reports the condition of the bridge deck, superstructure, substructure, and culverts. The data to determine bridge condition using the FHWA measures are provided by NDOT, through their periodic assessment of pavement and bridge infrastructure.

SECTION 4 – CONGESTION REDUCTION

RTC tracks the following measures for Congestion Reduction:

- Level of Travel Time Reliability (LOTTR) – Defined as the ratio of the longer travel times (80th percentile) of a reporting segment to a "normal" travel time (50th percentile), using data from FHWA's National Performance Management Research Data Set (NPMRDS). The measures are the percent of person-miles traveled on the relevant Interstate System and Non-Interstate National Highway System that are reliable. Person-miles take into account the users of the National Highway System. Data to reflect the users can include bus, auto, and truck occupancy levels.

- Truck Travel Time Reliability (TTTR) Ratio – Determined by dividing the 95th percentile time by the normal time (50th percentile) for each segment. Then, the TTTR Index is generated by multiplying each segment's largest ratio from defined time periods by its length, then dividing the sum of all length-weighted segments by the total length of the Interstate. In addition to the national measures, NDOT has identified performance measures through their State Freight Plan. Some of these measures address truck speeds on I-80, I-580, and US 395; fatal crashes involving trucks; and the registration of trucks in Nevada with an engine model year of 2010 or newer (for air quality purposes).

- Transit Passengers per Service Hour – Transit operating efficiency is a priority for RTC. A system-wide average of 21 passengers per service hour is the 2025 performance target for RTC RIDE. This goal is updated every five years through the Transit Optimization Plan Strategies (TOPS) planning process. RTC currently tracks this data and provides regular reports to the RTC Board. This measure is also tracked for ACCESS and FlexRIDE.

SECTION 5 – SYSTEM RELIABILITY

RTC tracks the following measures for System Reliability:

- Peak Hour Excessive Delay – This measure applies to mainline highway segments on the National Highway System that cross any part of an urbanized area with a population of more than 200,000, and that is part of a nonattainment or maintenance area for any one of the criteria pollutants listed under the NAAQS. Excessive delay is based on travel time lower than 20 miles per hour or 60 percent of the posted speed limit travel time, whichever is greater. RTC was required to begin reporting on this measure in 2022.

- Percent Non-SOV Travel – Non-single occupancy vehicle (SOV) travel is defined as any travel mode other than driving alone in a motorized vehicle, including travel avoided by telecommuting. The FHWA has provided three different options for calculating this measure, and RTC has opted to use the American Community Survey (ACS) method (Method A). This method utilizes the most recent ACS 5-year estimates for "Percent; Commuting to Work - Workers 16 years and over." As with the Peak Hour Excessive Delay measure, RTC was required to begin reporting on this measure in 2022.

- Transit System On-Time Performance – The goal of the RTC RIDE system is to have 85 percent of all transit departures occur on schedule. This data is currently collected and reported to the RTC Board. This measure is also reported for ACCESS and FlexRIDE.

SECTION 6 – ENVIRONMENTAL SUSTAINABILITY

RTC tracks the following measures for Environmental Sustainability:

- CMAQ Program Performance Measures – These measures track reductions for each applicable criteria pollutant and precursor in areas designated as nonattainment or maintenance for NAAQS as it relates to the CMAQ Improvement Program. RTC reports these measures annually directly to FHWA.

- Transit Fleet Mix – Monitoring fleet mix not only helps RTC assess transit assets and vehicle budgets, but also helps confirm that efficient and climate-friendly vehicle technologies are being integrated into the RTC fleet and are benefiting the Truckee Meadows community. RTC has set a vehicle replacement goal of a 100 percent electric or CNG fuel fleet by 2040. In support of this effort, RTC has already met its goal of 100 percent battery electric, hydrogen fuel cell, and battery hybrid vehicles for the RIDE fixed-route fleet.

- Auto Emissions – RTC, in partnership with the Northern Nevada Public Health Air Quality Management Division, monitors the emissions generated by on-road mobile sources. The performance target is that auto emissions remain under the emissions budget established in the State Implementation Program.

One of the community benefits of public transportation is a reduction of greenhouse gas emissions. Most fixed-route and vanpool trips replace trips that would otherwise be taken by a SOV. RTC focuses on reducing SOV trips through initiatives such as growing ridership in the fixed-route and vanpool programs.

SECTION 7 – TRANSIT STATE OF GOOD REPAIR PERFORMANCE MEASURES AND OTHER TRANSIT MEASURES

RTC tracks the following measures for Transit State of Good Repair:

- Preventive Maintenance of Transit Rolling Stock and Facilities – The RTC TOPS identifies an inspection and maintenance schedule for transit capital resources. This performance measure tracks the timeliness of implementation of inspections and corrective actions. As of the most recent annual report, 100 percent of preventive maintenance is being performed on time.

- Maintain Industry Standard Vehicle Life Cycle – RTC will maintain vehicles in good repair to the expected life cycle for transit rolling stock. RTC follows FTA useful life standards, which vary by type of vehicle. This measure, as well as related measures such as percent of vehicles past retirement age, are further developed through the TAM Plan.

National transit goals and performance measures are developed by the Federal Transit Administration. These include state of good repair standards for measuring the condition of the following transit capital assets:

- Equipment – Non-revenue support-service and maintenance vehicles
- Rolling Stock – Revenue vehicles by mode
- Infrastructure – Only rail fixed-guideway, track signals and systems. RTC does not own or operate any assets in this category, therefore, this is not applicable to RTC
- Facilities – Maintenance and administrative facilities; and passenger stations (buildings) and parking facilities

RTC reports on a variety of other performance measures related to transit operations with metrics such as ridership, farebox recovery rate, passengers per revenue vehicle hour and revenue vehicle miles. RTC reports on performance measures monthly and provides annual reports for a year-to-year comparison. These reports help RTC monitor the efficiency of transportation services offered and the performance of individual routes to make informed decisions about future projects and demand for services.

SECTION 8 – RTC KEY PERFORMANCE INDICATORS

RTC not only tracks federally required performance measures but also employs Key Performance Indicators (KPIs) to ensure that near-term goals are achieved efficiently. While federal performance measures provide a framework for long-term compliance and progress, RTC uses KPIs to assess and monitor additional metrics that are crucial for the success of programs and projects. These KPIs include operational efficiency, service reliability, customer satisfaction, and safety. By balancing both federally mandated and internal performance measures, RTC ensures that short-term implementations consistently support long-term transportation goals.

Each year, RTC develops and tracks KPIs to assess progress and success in achieving annual strategic goals. The use of KPIs and milestone tracking is central to the approach. Strategic goals are broken into actionable items with specific targets, allowing for real-time tracking of progress. Each project or initiative is categorized as either “on target,” “achieved,” or “off target,” providing a transparent view of the current status.

The KPI and milestone tracking process addresses the goals and milestones across different RTC departments (Engineering, Public Transportation, Planning, etc.), each with its own deliverables, timelines, and performance outcomes. It promotes department collaborations and streamlines project implementation by clarifying expectations and providing transparency. KPIs are developed to monitor departmental progress, in areas such as:

- Engineering Department – Status of road design, construction, and traffic management projects
- Public Transportation Department – Improvements to transit services, infrastructure upgrades, and efforts to expand rider access
- Planning Department – Long-term transportation planning, safety improvements, and public engagement efforts

The KPI process also significantly emphasizes financial stewardship, ensuring that projects stay within budget and outlines long-term financial strategies to sustain operations. KPIs provide a clear framework for assessing RTC’s performance, allowing the organization to track its success in delivering safe, efficient, and sustainable transportation solutions across the region.


RTC RAPID
HAPPY HOLIDAYS
80,000 LB. CAP.
36,287 Kg. CAP
TRASH ONLY
ROTARY LIFT

CHAPTER 12

Goal #8: Accessibility and Mobility

The goal of Accessibility and Mobility is defined in this RTP as an increase in the accessibility and mobility of people on the multimodal transportation system and enhancement of the integration and connectivity of the multimodal transportation system. The goal is achieved through its objective: to Provide a Regional Transit System and Other Transportation Services. This chapter describes the regional efforts and strategies to provide a regional transit system and other transportation services.

Regional travel options beyond single-occupancy vehicles (SOVs) include walking, rolling, and the use of public transit. These modes are a major component of the regional transportation network used for commutes, utilitarian trips, and active recreation. Continued investment in active transportation and public transit is an investment in the social and economic success of the community, especially for vulnerable populations.

RTC seeks to have an interconnected multimodal transportation system that gives residents more travel choices. An integrated regional transportation system must provide mobility options that are appropriate to the land-use context and address the needs of neighborhoods, commercial districts, and the movement of goods.

The following efforts and strategies are discussed in this chapter:

SECTION 1 – LOCAL MULTIMODAL CONNECTIVITY INITIATIVES

SECTION 2 – ADVANCED MOBILITY AND INNOVATION EFFORTS

SECTION 3 – TRANSIT SERVICES

SECTION 1 – LOCAL MULTIMODAL CONNECTIVITY INITIATIVES

Active Transportation Plan and ADA Transition Plan

The RTC Active Transportation Plan was adopted in 2024, and the ADA Transition Plan was adopted in 2020. The two plans establish strategies for the development of a well-connected regional walking and bicycling network that provides residents and visitors a more livable and healthy community.

These planning efforts also created an opportunity to identify safe access to transit stops throughout the region. The ADA Transition Plan included an evaluation of RTC transit stops and accessible connectivity to transit. The Active Transportation Plan's neighborhood approach to improving pedestrian and bicycle infrastructure increases connectivity and provides the community with multimodal transportation options. More information on the Active Transportation Plan can be found in Chapter Eight.

Bicycle Friendly America

The Bicycle Friendly America program, administered by the League of American Bicyclists, provides guidance and recognition for communities working toward the creation of a bicycling culture and environment. A Bicycle Friendly Community, Business, or University welcomes bicyclists by providing safe accommodations for bicycling and encouraging people to bike for transportation and recreation. A bicycle-friendly place makes bicycling safe, comfortable, and convenient for people of all ages and abilities. In 2015, the Reno, Sparks, and Washoe County region was re-designated a bronze level Bicycle Friendly Community by the League of American Bicyclists. The community received this designation based on local efforts to improve and expand the bicycle network. Also in 2015, the University of Nevada, Reno was the first University in the state of Nevada to be recognized as a Bicycle Friendly University.

In December 2016, RTC was awarded a silver level Bicycle Friendly Business designation by the League of American Bicyclists. The Bicycle Friendly Business award recognizes local businesses and corporations for creating a bicycle friendly environment for customers and bicycle commuting employees. RTC was recognized for encouraging employees and customers to bicycle through participation in Bike Month, working with advocacy groups, the installation of a public bike repair area at the RTC 4th Street Station, and offering bike parking in well-lit areas with security cameras. Re-designation occurs every four years, and efforts are currently underway for RTC to update its Bicycle Friendly Business designation.

Truckee Meadows Regional Trails Plan

The mission of the Truckee Meadows Regional Trails Plan, as stated on the Plan webpage, is "to work with community and agency partners to create a regional, sustainable, system trail network that enhances the quality of life for Truckee Meadows residents." The Plan includes goals and objectives that aim to guide future bicycle and pedestrian facilities and facility connectivity throughout the region.

RTC was a planning partner on this effort and Plan implementation is supported by RTC through the Active Transportation Program and by the Truckee Meadows Regional Planning Agency (TMRPA) through a new policy (NR 11) in the 2024 Regional Plan which states that: "Local government and affected entity master plans and other similar plans shall include policies that:

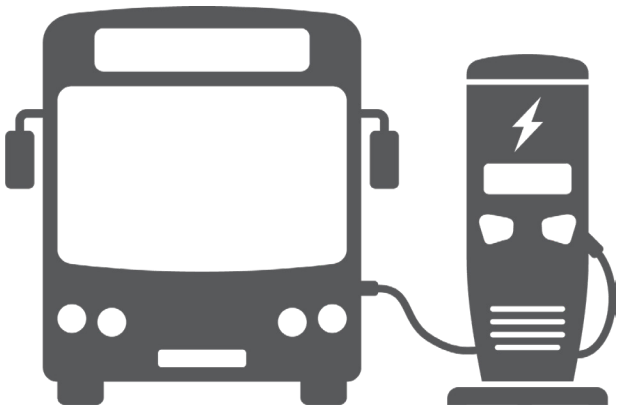
- Reference and/or utilize the Truckee Meadows Regional Trails Plan (TMRTP). Available at: https://www.tmparksfoundation.org/truckee-meadows-trails-initiative

- Promote the construction of trails and trailheads and the connectivity of trails with existing, planned, and proposed trails as identified in the TMRTP."

SECTION 2 – ADVANCED MOBILITY AND INNOVATION EFFORTS

Advancements in mobility and transportation technologies such as alternative fuels, automated vehicles, and shared mobility stand to significantly change the future of transportation networks. RTC and regional activities involving advanced mobility and innovation efforts are further described below.

Zero-Emission Vehicles and Charging Infrastructure



Increasing the proportion of zero-emission vehicles in use throughout the region, including both electric and hydrogen fuel cell vehicles, will have benefits to air quality and reduce greenhouse gas emissions.

The growth of zero-emission vehicles will require the development of fueling/charging infrastructure as well. To prepare for continued growth in the alternative fuel and advanced mobility sectors, in 2022 RTC completed the Electric Vehicle and Alternative Fuel Infrastructure and Advanced Mobility Plan. The Plan investigates advanced mobility solutions that can be implemented in Washoe County to create a more convenient, connected, equitable and sustainable transportation network. In addition to an evaluation of existing electric vehicle charging resources and identification of strategies for long-term development of alternative charging technologies, the Plan also investigates other innovative and emerging mobility trends such as connected vehicles, autonomous vehicles, and micromobility.

Connected and Autonomous Vehicles

The concept of fully autonomous (also called self-driving, driverless, or robotic) vehicles has gone from being a distant possibility to a near-term reality. Vehicles of all types are becoming more autonomous as this technology continues to improve at a rapid rate.

Nevada has been leading the way for autonomous cars and trucks by becoming one of the first states in the nation to pass regulations regarding the safety requirements and licensing for autonomous vehicles. Nevada was also the first state in the nation to provide a license to an autonomous commercial truck.

RTC has also collaborated with the University of Nevada, Reno (UNR) on research into intelligent mobility. UNR's Center for Applied Research integrates expertise in advanced autonomous systems, computer sciences, synchronized transportation, and robotics to help address community needs. The Center has created a Living Lab to allow the testing of mobility technologies in urban environments. The Center and RTC have partnered to research autonomous bus technologies and applications using zero-emission electric vehicles.

In addition to individual vehicles becoming autonomous, some concepts have proposed a fully connected transportation system in which vehicles would communicate with each other and with the surrounding infrastructure could improve both safety and operational efficiency.

Autonomous aircraft are also beginning to emerge as a transportation option of the future. Drones are small aircraft that are piloted remotely and do not require a human to be seated within the aircraft itself. Nevada has been on the forefront of regulating and providing resources to this new technology. In 2015, UNR opened the Nevada Advanced Autonomous Systems Innovation Center as a catalyst for innovation in the field of autonomous systems.

Bike and Scooter Share

Early in 2016, RTC completed the Truckee Meadows Bike Share Feasibility Study. The study researched the possibility of launching a bike share program in the Truckee Meadows region. The study revealed that a successful bike share would likely require a public-private partnership. The study recommended a hybrid system utilizing both smart bike systems and station-based systems. Smart bikes can be rented from any location and all the necessary equipment to facilitate the rental is physically located on the bike. A station-based system utilizes a fixed number of racks at a given location and the user must return the rented bike at one of these locations.

In April 2018, the City of Reno executed the Exclusive Agreement for a pilot dockless (smart bike) bike share program between the City of Reno and City of Sparks, Washoe County, UNR, and The Reno-Sparks Indian Colony. This pilot project was the first in the country that included a tribal government. RTC had a supporting role in the dockless bike share pilot, which involved no public capital infrastructure investment. The pilot project ended, and the local jurisdictions determined not to continue with dockless bike share.

While there may still be interest in bike share for the region, the local jurisdictions and other partner entities would need to revisit the type and structure of any future system.

In 2022, the City of Reno launched an e-scooter share option with Bird in Downtown and Midtown Reno. Scooter operating rules include a “no sidewalk riding” requirement in Downtown and Midtown, as well as designated parking areas. Since the launch of the e-scooter share, 484,276 total trips have been made.

SECTION 3 – TRANSIT

RTC is the main transit provider for Washoe County. Transit is an essential part of the local economy that helps thousands of Washoe County residents get to work each day. Transit supports vibrant development patterns and local zoning and land-use policies. In addition, transit provides a critical public service to residents and visitors. The main benefits of transit service are summarized below:

- Supports the Economy – Getting people to work, including essential jobs and services
- Shapes Development – Economic revitalization
- Provides a Public Service – Mobility for people that do not drive
- Aids Environmental Efforts – Reducing traffic congestion also reduces air pollution
- Provides Access to Essential Services – Providing service to healthcare, pharmacies, groceries, and other public services

RTC transit services, programs, and initiatives are further described below.

RTC RIDE and RAPID

RTC operates the RIDE and RAPID fixed-route bus system. There are 18 RIDE local bus routes, and two RAPID bus rapid transit routes. All routes connect to three major passenger transit centers which are 4TH STREET STATION in Downtown Reno, CENTENNIAL PLAZA in Sparks, and the Meadowood Mall Transfer Center in the southern portion of the service area. Schedules are coordinated at these transit centers to allow riders to quickly transfer between routes. Routes generally operate on compatible clock-based headways of 10, 30, and 60 minutes. The ticket cost is $2, one-way, and in fiscal year 2024 (July 1, 2023, to June 30, 2024), approximately 5.4 million trips were provided on RIDE and RAPID.

RTC Regional Connector

RTC currently provides the REGIONAL CONNECTOR transit route between Reno and Carson City. This premium service carried over 20,000 passengers in fiscal year 2024.

RTC ACCESS

RTC ACCESS is a paratransit service, required as a civil right under the Americans with Disabilities Act (ADA), which provides mobility for people whose disability prevents them from using fixed-route transit service. Rides are reserved through a call center one to three days in advance of travel.

RTC ACCESS passenger trips are made using a combination of full-size accessible cut-away buses, mini-vans, and taxis. The service operates 24 hours a day, seven days a week. In fiscal year 2024, about 140,000 rides were provided. Approximately 3,700 individuals are certified as ADA paratransit eligible in Washoe County and are eligible for the ACCESS service. The ADA requires paratransit service to be provided within ¾ of a mile of fixed-route transit service. The ticket cost is $3, one-way.

RTC FlexRIDE

RTC FlexRIDE is a curbside-to-curbside transit service available by requesting a ride through an app or by phone. Rides can be scheduled at the desired travel time and can be expected to arrive to the curbside closest to the pick-up location in as little as 20 minutes. The convenience of this service has made it very popular with customers and resulted in strong ridership increases over previously offered fixed-route services.

RTC initiated the first FlexRIDE pilot program in Sparks in 2019 and added additional FlexRIDE zones in the North Valleys, Spanish Springs, and Somersett/Verdi in 2020 and in the South Meadows area in 2024. Approximately 110,000 FlexRIDE trips were taken in fiscal year 2024. The ticket cost is the same as the standard RTC RIDE fare.

Taxi and Ride-Hailing

The RTC partners with both taxi and ride-hailing services to broaden mobility options for eligible passengers. Washoe Senior Ride (WSR) Taxi Bucks program is a subsidized taxi program of the RTC and is funded by the ¼ percent of Washoe County sales tax allocated for public transportation. This program extends a mobility option to people who do not live within the RTC RIDE and ACCESS service area. WSR provides alternative, reliable, and affordable transportation to Washoe County residents 60 years and older, RTC ACCESS clients (any age), and Washoe County Veterans (any age). Participants are issued an RTC WSR CardONE re-loadable card, which can be used to pay any part of a taxi fare.

Ride-hailing first became available in the Truckee Meadows through Lyft and Uber in the fall of 2015. On-demand ride-hailing services like Lyft or Uber require a credit card and smartphone app to book and pay for trips. Currently, the RTC offers the RTC Washoe Lyft or Uber Rides which is a subsidized voucher program. The RTC Washoe Lyft or Uber Rides program provides alternative, reliable, and affordable transportation to Washoe County residents 60 years and older, RTC ACCESS clients (any age), and Washoe County Veterans (any age). Each month registered participants receive a $60 voucher subsidy, which can be used to pay any part of a Lyft or Uber ride.

RTC VANPOOL Program

The RTC VANPOOL Program is the fastest growing component of the RTC SMART TRIPS trip reduction program and now represents RTC's largest transit vehicle fleet. This program provides an opportunity to reduce auto trips and serve long-distance commutes effectively. As of 2024, the program has approximately 330 vehicles with vans traveling to locations such as Carson City, the Tahoe-Reno Industrial Center, Spanish Springs, Stead, Herlong, Susanville, and the Lake Tahoe basin. Participants share the costs of the vehicle lease and gas, with RTC providing a subsidy to encourage participation based on the distance traveled. In fiscal year 2024, by reducing auto trips for commuting, the VANPOOL program prevented the emission of over 9,600 metric tons of carbon dioxide (CO_2).

RTC SMART TRIPS

RTC's trip reduction program, RTC SMART TRIPS, encourages the use of sustainable travel modes and trip reduction strategies such as telecommuting, compressed work weeks, and trip chaining. Major components of the program include a bus pass subsidy program in which RTC matches an employer's contribution to their employees' 31-day transit passes up to 20 percent, a subsidized vanpool program, RTC VANPOOL, and an online trip matching program that makes it quick, easy, and convenient to look for carpool partners and also bus, bike, and walking buddies for either recurring or one-time trips.

One of the most common deterrents to ridesharing is the fear of being stranded. Consequently, people who either carpool or vanpool to work can sign up for the guaranteed ride home program and be reimbursed for a taxi ride home up to four times a year if unexpected events prevent normal ridesharing arrangements.

Pedestrian and bicycle travel is promoted by the RTC SMART TRIPS program throughout the year through participation in the Truckee Meadows Bicycle Alliance's Bike to Work Week campaign each spring, and maintenance of the Street Smart website that educates the public about the benefits of walking and how to do it safely.

Privately Operated Intercity Bus Service

RTC supports private intercity bus transportation where feasible and appropriate. RTC leases bus bay access at RTC CENTENNIAL PLAZA to My Ride to Work, which is a service that provides privately operated transit access to employees at the Tahoe-Reno Industrial Center. An estimated 2,000 employees use this service every day. Greyhound, which provides intercity transit access with nationwide connectivity, also leases bus bay access and waiting room space at RTC CENTENNIAL PLAZA.

Additional intercity services include the North Lake Tahoe Express offering service from the Reno airport to Truckee and North Lake Tahoe area, and the South Tahoe Airporter which provides service from Stateline to the Reno airport.

Transit Optimization Plan Strategies (TOPS)

The Transit Optimization Plan Strategies (TOPS) Plan outlines a strategy for transit service and improvements over a five-year period. TOPS provides an overview of the current status of mass transit in southern Washoe County and contains proposed programs and budgets. The main focus of TOPS is RTC RIDE, but detailed operating, capital, and planning information for RTC ACCESS and Tahoe Area Regional Transit (TART) is also included. The TOPS Plan will be updated beginning in 2025 and will include the plan years of 2026-2030. Some elements included in the Plan are the:

- Evaluation of RTC's RIDE service as a component of the overall RTC public transportation service, including recommendations for addition or subtraction of service;
- Comprehensive review of the Washoe Senior Ride Program and areas where RTC can improve the program;
- Comprehensive review of RTC ACCESS service and areas where RTC can improve the program; and
- Evaluation of the grant program for not-for-profit transportation services, as identified in the Coordinated Public Transit-Human Services Transportation Plan.

Coordinated Public Transit-Human Services Transportation Plan

The Coordinated Public Transit-Human Services Transportation Plan (CTP) is required by the Federal Transit Administration (FTA) as a part of the Section 5310 grant funding program. To be funded, projects must be contained in the CTP and improve transportation options for senior citizens and persons with disabilities above and beyond the requirements of the ADA. The current CTP was updated in 2024, and is included in this RTP as Appendix D.

Not-for-Profit Partnerships

RTC's 5310 equivalent sales tax program offers competitive grant funding to organizations, such as nonprofits, that provide enhanced mobility. Mobility services currently funded by this program include the following:

- Non-Emergency Medical Related Transportation through Access to Healthcare Network (AHN)
- Neighbor Network of Northern Nevada (N4) and the purchase of non-ADA Paratransit rides
- Senior Outreach Services volunteer program at the Sanford Center for Aging at UNR to provide transportation for frail, homebound, and below-poverty seniors
- Volunteers of America transportation specifically for senior/disabled clients at its Nevada CARES Campus and Shelter

Maintenance Facility Infrastructure

RTC currently operates the following two transit maintenance facilities:

- Jerry L. Hall Regional Transit Operations and Maintenance Center – Located at Villanova Drive under the I-580 viaduct, this facility is used to store and maintain the fixed-route transit fleet. This 6.8-acre property has capacity to store 78 buses and contains a bus wash, body repair bay, chassis inspection, vehicle inspection area, and RIDE dispatch office.
- Sutro Paratransit Maintenance Facility – Located at Sutro Street and 6th Street near downtown Reno, this facility is used to store and maintain the ACCESS paratransit and FlexRIDE fleets. It contains the ACCESS dispatch office and infrastructure to fuel the Compressed Natural Gas (CNG) fleet. The Sutro facility has also been identified as a back-up office location for RTC administrative staff for operations in the event of an emergency that renders the Terminal Way building inaccessible.

Recent improvements to the property include the construction of a hydrogen fueling station to support the implementation of hydrogen fuel cell buses as a part of RTC's fixed-route service.

Maintenance Facility Needs

RTC has a long-standing commitment to sustainability and utilizing alternative fuels for public transit services including, most recently, the purchase of eight hydrogen fuel cell buses. However, the location of the Jerry L. Hall Regional Transit Operations and Maintenance Center under I-580 precludes the use of this facility for hydrogen fuel cell maintenance. Expansion of the Sutro Maintenance Facility would provide a suitable location to initiate a hydrogen fuel cell program. With an appropriate facility, RTC could also pursue opportunities to transition the ACCESS and FlexRIDE fleet to hydrogen fuel cell technology when it becomes available for the paratransit vehicle type.

In addition, the Nevada Department of Transportation (NDOT) has adopted the Spaghetti Bowl Project, which is a plan for safety, operational, and capacity improvements on I-80 and I-580. Phase 4 of the Spaghetti Bowl Project would involve reconstruction of the Villanova/ Plumb Lane interchanges at I-580 and would require relocation of RTC's fixed-route transit facility. RTC is coordinating with NDOT for timing of the relocation.

To accommodate planned growth in the transit system as well charging and maintenance needs for diesel, electric, and hydrogen fuel cell vehicles, a new/replacement facility would need to include:

- Approximately 10 acres
- 30,000 square feet for maintenance bays
- 45,000 square feet for covered outdoor storage
- 40 bus parking spaces with capacity for 80 buses
- 100 employee and 12 service vehicle parking spaces
- 20 electric bus chargers with 4,000-amp service
- Bus wash, body repair bay, chassis inspection and vehicle inspection pit

The expansion of the Sutro Maintenance Facility could accommodate these infrastructure requirements and still provide a central location that meets transit operational needs.

Passenger Facility Needs

RTC is currently undertaking the following passenger facility improvements:

- Expand RTC 4TH STREET STATION to construct four additional bus bays, electric bus chargers, parking spaces, and operating space in support of RTC's relationship with the City of Reno Business Improvement District Ambassador program
- Bus stop accessibility improvements throughout the region, in support of the ADA Transition Plan
- Improvements of existing BRT stations and construction of potential BRT expansion to correspond with development opportunities


Motel
MOTOR LODGE

CHAPTER 13

Goal #9: Integrated Land-Use and Economic Development

The goal of Integrated Land-Use and Economic Development is defined as an increase of partnerships among local jurisdictions and other stakeholders to identify how transportation investments can support regional development, housing, and tourism. The goal is achieved through its objective to: Improve Regional Connectivity. The improvement of regional connectivity, or connections to points both inside and outside the region, begins with thoughtful and strategic transportation planning to align with the travel needs of both residents and visitors. Such planning informs facility selection and mobility options that create economic development opportunities and ensure that infrastructure is appropriately located with regard to land use. This chapter describes the regional efforts and strategies to address the integration of land-use and support economic development through the improvement of regional connectivity.

The following efforts and strategies are described in this chapter:

SECTION 1 – LAND-USE PLANNING PARTNERSHIPS

SECTION 2 – ECONOMIC DEVELOPMENT PARTNERSHIPS

SECTION 3 – SUSTAINABLE AND EFFICIENT GROWTH

SECTION 1 – LAND-USE PLANNING PARTNERSHIPS

The Integrated Land Use and Economic Development goal is predicated on increasing RTC partnerships among local jurisdictions and other stakeholders to identify how transportation investments can support regional development goals. The purpose of land-use partnerships is the coordination of land use and transportation planning that accommodates pedestrian and bike safety, mobility options, enhances public transportation service, improves road network connectivity, and includes a multimodal approach to transportation. The RTC develops and maintains partnerships with numerous regional and local entities to understand and support the land-use development patterns that should inform transportation planning.

Regional Planning

The RTC collaborates with many regional agencies that influence land-use. Some of the organizations the RTC works with regularly include the Truckee Meadows Regional Planning Agency, Northern Nevada Public Health, Washoe County School District, Washoe County Senior Services, Reno-Tahoe Airport Authority, and the Reno Housing Authority. The RTC also works closely with agencies at the state and federal levels.

An overview of regional planning agencies and their policies that influence transportation investment is provided below.

Truckee Meadows Regional Planning Agency (TMRPA)

RTC and Truckee Meadows Regional Planning Agency (TMRPA) collaborate closely on a wide range of data management and analytical issues. Through a Shared Work Program, the two agencies access data on a common server and undertake joint technical analyses. Additionally, this RTP serves as the long-range transportation plan for purposes of compliance with state law through its utilization by the Truckee Meadows Regional Plan.

The Truckee Meadows Regional Planning Agency (TMRPA) was created by Nevada legislature in 1989 to facilitate regional land-use planning for the region within the City of Reno, City of Sparks and Washoe County. TMRPA is responsible for the preparation and implementation of the Truckee Meadows Regional Plan (referred to as the Regional Plan). The TMRPA is comprised of the Regional Planning Governing Board (RPGB), the Regional Planning Commission (RPC), and TMRPA staff.

The current Regional Plan was updated in 2024 and provides the framework for growth in the Truckee Meadows over the next 20 years. The Plan focuses on the coordination of master land-use planning in the region as it relates to population, land use patterns, public facilities, service provision, natural resources, and intergovernmental coordination. The Regional Plan is a cooperative effort of the local and regional units of government, affected entities, the major service providers, and the citizens of the Truckee Meadows. The Plan is intended to present a regional consensus reached through a process of public conversation and decision-making, to provide a unifying framework for local and regional policies and services.

The Regional Plan also establishes the Truckee Meadows Service Area (TMSA), the area within which services and infrastructure are anticipated to be provided over the next 20 years. The TMSA concept is further refined into five Regional Land Designations to establish a priority hierarchy for managing regional growth. TMRPA requires that local government and affected entities' master plans, facilities plans, and other similar plans promote and not conflict with the growth and investment priorities defined by the Regional Land Designations.

The 2024 Regional Plan defines and ranks in priority for development the five (5) Regional Land Designations as follows: The highest priority is the Mixed Use Core, "an area that promotes the highest density and intensity of development, prioritizes infrastructure provision, and promotes a pedestrian-friendly atmosphere served by transit." The second priority is Tier 1, "an area within the TMSA where a varying range of development is expected and with a secondary priority for development and investment." The third priority is Tier 2, "an area where there is generally less dense development occurring at suburban levels, with a few higher density nodes." The fourth priority is Tier 3, which "comprises the remaining areas within the TMSA. These areas contain lands that are developed at low densities, are undeveloped, or have significant constraints." Finally, the 5th and last priority is the Rural Area which is an area "stretching from the boundaries of the TMSA across the remainder of Washoe County (areas outside TMRPA's jurisdiction such as Tribal Lands and the Lake Tahoe Basin are not included). This area is restricted to very low residential densities and generally consists of dispersed development on large parcels."

The Facilities and Services standards table in the 2024 Regional Plan outlines expectations for various forms of infrastructure both within and outside of the TMSA. In order to align regional efforts, the 2050 RTP Update recognizes this priority hierarchy and the RTC has utilized the hierarchy to inform the projects list and their time frames.

The RTC also consistently coordinates with TMRPA and the local jurisdictions to ensure the priorities in the Regional Plan as well as the master plans are reflected in the RTP.

Further, TMRPA works closely with the local jurisdictions to develop population and employment projections by Traffic Analysis Zone (TAZ), which are assigned in the RTC travel demand forecast model. In accordance with RPGB policy, the Washoe County population and employment projections, called the Consensus Forecast, uses a number of leading forecasts, which has several advantages over using a single source for forecasting population.

Northen Nevada Public Health

RTC formally partners with Northern Nevada Public Health (NNPH), formerly the Washoe County Health District, through NNPH's participation on the RTC Technical Advisory Committee (TAC) which is convened monthly and advises RTC staff and the Board. NNPH Air Quality Management Division (AQMD) and Chronic Disease and Injury Prevention Program actively support transportation investments that improve community health. Additionally, NNPH sponsors several healthy community initiatives based on the concept that health is more than the absence of disease and is defined broadly to include the full range of quality of life issues, including transportation.

Air Quality Management Division (AQMD)

Another RTC partner is the Air Quality Management Division (AQMD) which implements clean air solutions that protect the quality of life for residents of Washoe County through community partnerships and programs such as air monitoring, permitting and enforcement, planning, and education. The Division monitors ambient air quality for the determination of compliance with National Ambient Air Quality Standards (NAAQS). Additional information about air quality is provided in Appendix B.

Because motor vehicles are the largest source of ozone pollution in Washoe County, the Air Quality Management Division (AQMD) has partnered with the RTC and other government and non-government bicycle advocacy groups in the Truckee Meadows to promote cycling in place of vehicle trips. AQMD works with the Truckee Meadows Bicycle Alliance on outreach and events such as Bike Month. Another AQMD's program that promotes community health and sustainable transportation and demonstrates its commitment to collaboration with regional partners is the Rack 'Em Up Program. The program supports bicycle advocacy through outreach and special events.

Chronic Disease and Injury Prevention Program

The Chronic Disease and Injury Prevention Program (CDIP) focuses on modifiable risk factors that impact the top five leading causes of death in Washoe County. One of these factors is lack of physical activity. As part of an effort through the CDIP, as well as to fulfill part of the requirements of Assembly Bill 343, NNPH staff conducted a physical activity survey and subsequent walk audit in an area determined to be in need of a higher degree of focus. A walk audit can briefly be described an assessment used to determine the viability of walking in a given environment. The results of the walk audit were presented to the Vision Zero Truckee Meadows Task Force and, going forward, the RTC will seek to collaborate with NNPH in future walk audit efforts. These efforts will not only help meet the requirement to complete at least one walk audit per year but will assist the RTC in the development of the series of Neighborhood Network Plans discussed in Chapter 12.

Including physical activity as a part of daily activities helps to reduce obesity and the resulting chronic conditions such as heart disease and diabetes. However, this will occur only if safe and accessible sidewalks and bicycle facilities are readily available. Creation of comfortable and convenient active transportation facilities that encourage physical activity is part of RTC's vision for active transportation in the region.

Community Health Improvement Plan

The 2022-2025 Community Health Improvement Plan, developed by NNPH, is based on findings from the 2022-2025 Community Health Assessment and reflects a long-term, comprehensive commitment to addressing public health problems. The plan outlines top priorities and a collective action plan for how health will be improved through a series of goals housed under four focus areas.

One of the primary concerns of participants of community-based meetings under the "Access to Health Care" focus area was lack of transportation to care. This is also one of the primary concerns according to outreach conducted as part of the RTC's Coordinated Public Transit-Human Services Transportation Plan (CTP), which is included in this document as Appendix D. The issues related to the lack of transportation to care are addressed, in part, through the implementation of projects identified in the CTP and RTP.

Washoe County School District

RTC works closely with the Washoe County School District (WCSD) and the Nevada Department of Transportation on the Safe Routes to School (SRTS) Program. The program is funded, in part, by RTC through Surface Transportation Block Group grant funding and was recently expanded under IIJA to explicitly include high schools. The School District Police Department now implements this program for grades K-12, which includes a combination of capital investments, organization of parent volunteers at school zones, development of operational plans, and student education.

The School District's SRTS Coordinator participates in RTC plans and studies to identify important student safety and accessibility issues.

RTC also works closely with WCSD regarding school siting and associated transportation infrastructure needs as part of its Facility Modernization Plan. As the regional school population continues to grow, it will be increasingly important to properly site and orient schools to enhance accessibility and encourage more youth to walk, bike, and roll to school.

Finally, WCSD and SRTS participate as members of the Vision Zero Truckee Meadows Task Force and are often recipients of funding through the RTC's Transportation Alternatives Set-Aside Program. Collaboration resulting from these efforts is typically focused on school zone safety and the enhancement of active transportation facilities.

Washoe County Senior Services

Washoe County's Senior Services Division is committed to building a higher quality of life for all residents, regardless of age. Its mission is to provide a variety of direct and indirect support and services to meet the needs of older adults and those who care for them. Washoe County Senior Services offers a nutrition program, legal services, social services, adult day care, and recreational activities. The Washoe County Master Plan for Aging Services is the roadmap that guides the enhancement and development of Washoe County's senior programs and services.

The Plan's Guiding Principles detail a series of goals, with associated objectives and strategies, and were developed by Washoe County Senior Services' partners, stakeholders, Advisory Board, and employees. The goal for transportation is to expand public and private options that allow seniors to live independently. The RTC involved Washoe County Senior Services in the development of its CTP and also partner in providing transportation information and other resources to local senior citizens.

Reno Housing Authority

The Reno Housing Authority (RHA) was founded in 1943 and was appointed the Public Housing Authority for Reno, Sparks, and Washoe County. The RHA's mission is to provide fair, sustainable, quality housing in diverse neighborhoods throughout Reno, Sparks and Washoe County that offers a stable foundation for low-income families to pursue economic opportunities, become self-sufficient and improve their quality of life. Through its various subsidies, rental assistance, and other programs, the RHA helps ensure 15,000 Nevadans have a safe, secure place to call home.

Local Planning

The City of Reno, City of Sparks, and Washoe County are responsible for local land-use planning in the region. The RTC works extensively with these local jurisdictions to develop and implement projects in accordance with local and regional master planning documents. For example, the RTC participates in the development review processes with each local government to provide input on access management, transit, pedestrian and bicycle facility improvements, and to ensure consistency with long-range and regional transportation plans. Additional coordination occurs at a local and regional level between all agencies, when needed, for specific projects or activities.

A summary of key land-use policies as they relate to transportation for each entity is provided below.

City of Reno

The Reno City Council adopted their Master Plan, titled ReImagine Reno, on December 13, 2017, with additional updates effective as of November 2021.

This Master Plan is the result of the widest public engagement effort in Reno's history. The Plan reflects the ideas, values, and desires of the community, aligning these with a range of plans, policies, and initiatives in place or underway in both Reno and the wider region.

The guiding principles are the first level of policy guidance included in the Master Plan. Each reflects one aspect of the community's visions and values and articulates the type of place desired for Reno. Together, they address a range of topics, providing the framework for Master Plan goals and policies that will help to guide decision-making across the City. Guiding Principle 5, a Well-Connected City and Region, is supported by the following goals:

- Continue to develop a safe, balanced, and well-connected transportation system that enhances mobility for all modes.
- Actively manage transportation systems and infrastructure to improve reliability, efficiency, and safety.
- Facilitate the movement of goods and services throughout the region via truck, air, and rail.
- Encourage the use of transit, car or van pools, bicycling, walking, and other forms of alternative transportation.
- Anticipate and plan for the implications and opportunities associated with connected vehicles, autonomous vehicles (AVs), and the expected transition from personal car ownership to mobility-as-a-service.

City of Sparks

The City of Sparks adopted its comprehensive plan, Ignite Sparks, in August 2016. In 2021, the plan was updated and was found to be in conformance with the 2019 TMRPA Regional Plan. Ignite Sparks establishes goals and policies centered around managing growth through land-use, economic vitality, and connectivity.

Included within its Vision Statement is a desire for "integrated connectivity with a maintained road network which includes bike and pedestrian pathways."

This vision is supported by the following goals:

- Develop a complete, efficient transportation system that gives Sparks residents of all ages and visitors access to employment, housing, services, and recreation throughout urban Washoe County.
- Provide a transportation network that supports business formation and attraction and economic vitality.
- Facilitate non-motorized travel throughout the community.

Washoe County

The Washoe County Master Plan, Envision Washoe 2040, was adopted in 2023 and was found to be in conformance with TMRPA's Regional Plan in 2024. This update removed regulatory information and more detailed standards, integrating them into the Washoe County Development Code. The vision, goals, policies, and actions from the 2010 Master Plan were updated and remain a part of Envision Washoe 2040. The Plan was developed to adapt to today's challenges and opportunities while also aligning with the structure of the TMRPA Regional Plan in order to improve consistency throughout the region and to make interjurisdictional coordination easier.

The document identifies seven planning elements with principles and policies that are informed by an existing conditions analysis and used to address key opportunities and constraints related to each element. These elements were adapted from other plans to further enhance regional cohesion. The land use element was built around the TMRPA Regional Plan and master plans from the cities of Reno and Sparks, as well as the Pyramid Lake Paiute Tribe and Reno-Sparks Indian Colony. The Transportation element considers several RTC documents including the Complete Streets Master Plan, Bicycle and Pedestrian Master Plan, Advanced Mobility Plan, and the (previous) 2050 RTP.

The overarching goal of the land use element is to demonstrate a commitment to the regional form and pattern described by the TMRPA Regional Plan, while the policies express a commitment to direct new development inside the Truckee Meadows Service Area to promote infill development.

The transportation element focuses on the challenges of creating and maintaining a quality transportation system and increasing accessibility across multiple jurisdictions. Envision Washoe 2040 demonstrates a commitment to ensuring that transportation infrastructure meets the needs of existing and future development and responds to the community's desire to pursue innovative transit and multimodal opportunities through the following principles:

- Create an interconnected transportation network.
- Provide an efficient transportation network through coordinated operations, system management, technology, and targeted investments.
- Prioritize multimodal transportation to support healthy communities.
- Coordinate transportation decisions with regional and local partners.

- Reduce transportation-related emissions and pollutants.

Pyramid Lake Paiute Tribe (PLPT)

The Pyramid Lake Indian Reservation is comprised of more than 475,000 acres in Northern Nevada and contains portions of Interstate 80 and several State highways including SR 445, SR 446, SR 447, and SR 427.

The approximately 3,000 members of the Tribe (of whom about 1,300 live on the reservation) are direct descendants of the Northern Paiute people who have occupied the vast areas of the Great Basin for thousands of years. Pyramid Lake is located 35 miles northeast of Reno and is the property of and managed by the PLPT and is visited annually by over 150,000 people from around the world. The PLPT operates its own transit system which serves communities within the Reservation and connects to services in nearby Reno and Sparks.

The Long-Range Transportation Plan (LRTP) for the Pyramid Lake Paiute Reservation (updated in May 2021) provides the inventory and analysis of infrastructure to support improvements to existing transportation facilities and develop new transportation opportunities within the PLPT Reservation and evaluate present and future transportation needs in and around Reservation Lands.

The LRTP establishes a prioritized listing of road improvement/construction projects to meet current and projected transportation needs. The LRTP incorporates these needs by way of the included Tribal Transportation Improvement Program and priority list that is forwarded to the Bureau of Indian Affairs for inclusion in a regional Tribal Transportation Plan and the Statewide Transportation Improvement Program (STIP). Projects from the STIP that are within the RTC's planning area are subsequently adopted into the Region Transportation Improvement Program (RTIP).

Reno-Sparks Indian Colony (RSIC)

The Reno-Sparks Indian Colony (RSIC) is a federally recognized Native American Tribe located within the Truckee Meadows. The RSIC was established in 1917 and was formally recognized in 1936 under the Indian Reorganization Act. Currently, the tribal membership consists of over 1,300 members from three Great Basin Tribes – the Paiute (Numu), the Shoshone (Newe), and the Washoe (Wa She Shu).

The reservation lands primarily consist of the original 28-acre residential Colony and another 15,539 acres in Hungry Valley, which is 19 miles north of the Colony nestled in scenic Eagle Canyon.

Over the past three decades the Colony has assembled various development sites in Reno, Sparks, and Washoe County, representing 83 acres of commercial property. The redevelopment of Reno's East Second Street neighborhood, where half the Colony's residents live, consists of the development of the Three Nations Plaza (Wal-Mart), relocation of the Northern Nevada Transitional Center and the RSIC Health Center.

The development of the 65,000 square-foot outpatient Health Care facility was constructed from the proceeds of the Colony's economic development projects for the benefit of its community members and more than 9,000 Native Americans residing in the region.

The RSIC also operates a fixed-route transit system between the Reno and Hungry Valley communities. The transit system runs Monday through Saturday and includes nine stops to connect Tribal Members with Tribal Government services, the RSIC Health Center, residential neighborhoods, and Tribal Enterprises.

The RSIC's Long Range Transportation Plan (LRTP) identifies and evaluates current and future transportation needs of the Colony. Existing conditions and RSIC's current goals were used to determine present needs, while future needs were evaluated based on the RSIC's social, economic, and development goals and objectives, including specific development proposals, as well as the land use and transportation plans of the surrounding area. The RSIC's LRTP follows the same process noted in the PLPT section above for including projects in the STIP and RTIP.

SECTION 2 – ECONOMIC DEVELOPMENT PARTNERSHIPS

Economic development is supported though regional partnerships and is important to the improvement of regional connectivity. Economic development activities can influence transportation patterns and travel demand which often leads to investment in transportation infrastructure and can also influence land use. For example, a growing tech hub might increase the need for better transportation links, leading to the construction of a new transit line, which is likely to induce increased development around its stations. In this example, the availability and efficiency of transportation options attract businesses and influence economic decisions. Simliarly, efficient transportation connections to the area can induce visitor demand. Areas with well-planned transportation infrastructure are often more attractive for businesses and visitors and can experience faster economic growth. Partnerships are key to keeping in the loop on ongoing economic development activities and aligning transportation planning with those initiatives.

A summary of key economic development initiatives and policies as they relate to transportation for statewide, regional, and local entities is provided below.

Nevada Governor's Office of Economic Development

The Nevada Governor's Office of Economic Development has a vision for a vibrant, innovative, and sustainable economy with high-paying jobs for Nevadans. The 2023 statewide Comprehensive Economic Development Strategy, Realizing Nevada's Electric, Innovative, and Connected Future lays out a roadmap for Nevada to fully develop industries critical to world markets. The document uses a SWOT analysis and an analysis of Nevada's competitive position relative to national and global market trends to develop a strategic plan to align and coordinate action by state policymakers in the areas of clean energy, innovation, and infrastructure. It also identified five target industries—one of which is Transportation and Logistics—and actions to advance them over the next five years.

The University of Nevada, Reno

The University of Nevada, Reno (UNR) was established in Reno in 1891 and serves more than 21,000 students. The University is one of the largest activity centers in the region. RTC often partners with UNR staff and students to conduct research related to engineering and planning projects.

UNR works closely with RTC to promote safe multimodal transportation for its students especially in the downtown and campus areas. The RAPID Virginia Line extension to UNR and the EdPass Program that allows students, faculty, and staff to ride transit free with their university identification card, will reduce the need for cars on campus and greatly expand the traveling convenience for the student population. The partnership with UNR also extended to development of the University Area Multimodal Transportation Study, which identifies planned safety and mobility improvements in the campus area.

The Economic Development Authority of Western Nevada

The Economic Development Authority of Western Nevada (EDAWN) is a private/public partnership committed to adding quality jobs to the region by recruiting new companies, supporting the success of existing companies, and assisting newly forming companies, to diversify the economy and have a positive impact on the quality of life in the Truckee Meadows.

Included in EDAWN's Strategic Plan is the objective to attract new businesses to downtown districts to support job growth in target industries including:

- Advance Manufacturing
- Aerospace and Defense
- Biotechnology
- Blockchain
- Business-to-Business Software
- Fintech
- Internet of Things
- Logistics and E-Commerce

EDAWN is a supporter of RTC's initiatives to promote transportation investments such as bicycle, pedestrian, and transit amenities that can attract people to the region and are quality of life assets for the Truckee Meadows. In addition, strategic transportation investments in roadways facilitate goods movement in support of logistics, distribution, and advanced manufacturing. EDAWN is an advocate for expanding economic opportunities and implementing infrastructure upgrades needed to accommodate expected growth, while doing so without putting a strain on infrastructure.

Reno-Tahoe Airport Authority

The Reno-Tahoe Airport Authority (RTAA), which owns and operates the Reno-Tahoe International Airport (RTIA) and Reno-Stead Airport, is an important asset to the region, generating a total annual economic impact of $3.6 billion and directly supporting over 6,300 jobs. The RTIA is located in the core of the Truckee Meadows and is essential to the economic growth of the region. It serves over four million passengers per year and is estimated to have served 4.6 million in 2023. In 2022, approximately 139 million pounds of cargo arrived/departed RTIA.

The Reno-Stead Airport is a 5,000-acre general aviation facility that is quickly becoming a major economic hub in northern Nevada and is an Federal Aviation Administration (FAA) designated Unmanned Autonomous Systems (UAS) test site. The Reno-Stead Airport campus also includes a business park, which has been identified as a future regional jobs center by TMRPA and represents 60 percent of vacant industrial land in the City of Reno and 37 percent of vacant industrial land in Washoe County. The Reno-Stead Airport business park is designed to cater to industries such as aerospace, advanced manufacturing, and logistics.

The RTIA and Reno-Stead airports are crucial to the success of tourism and cargo-related industries in Northern Nevada, as outlined in the RTIA Master Plan. The plan identifies air cargo growth and the need to expand capacity and modernize air cargo facilities.

These developments not only underscore the RTAA's potential to drive economic growth but also highlights its pivotal role in meeting the region's future employment and industrial needs.

Reno-Sparks Convention and Visitors Authority

The Reno-Sparks Convention and Visitors Authority (RSCVA) was established in 1959 and acts as a marketing organization for the county to promote convention and tourism business. Unlike many convention and visitors bureaus across the country, the RSCVA owns and operates several facilities designed to draw out-of-town visitors. In addition, the RSCVA is mandated by the Nevada State Legislature (NRS 244A), and is not a partnership-based organization. The RSCVA, as a public body, also functions as a collection agency, ensuring that room taxes are distributed to the appropriate governmental organizations benefitting visitors and residents of Reno Tahoe. The RSCVA's vision is to be the preferred outdoor, gaming and event destination and its mission is to attract overnight visitors to Reno Tahoe while supporting the sustainable growth of local communities.

The travel and tourism industry is central to the Northern Nevada economy. With more than 20,000 hotel rooms in the Reno-Sparks metro area, resorts and gaming have long been major economic drivers for the region. Reno is a gateway to the outdoor mountain destinations surrounding the Lake Tahoe area, including world-class ski resorts, and world-renowned hiking trails.

The growing arts community, including Reno's annual Artown festival and the many events associated with the Burning Man festival, are expanding the tourism base. Public art, including sculptures and murals, further integrate this vibrant creativity into the fabric of the community. This emerging arts tourism is further supported by the growing craft brewery and restaurant scenes in downtown Reno and Sparks.

The Truckee Meadows is uniquely suited to hosting large events due to the strength of the existing hospitality industry. Other strengths include the centrally located Reno-Tahoe International Airport and the successful RTC RAPID transit system. The region's major resort hotels are connected to downtown Reno and Sparks as well as the Reno-Sparks Convention Center by the Virginia Line and Lincoln Line RAPID transit services.

Sporting events at various levels, ranging from Reno Aces Minor League Baseball games to high school and senior tournaments, support the local tourism industry and wider economy. More than 15,000 athletes and coaches come to the area annually for basketball and volleyball tournaments, and internationally sanctioned sporting events in bowling, fencing, boxing, handball, and weightlifting. Public transit and the efficiency of traffic operations on the regional road network play a key role in facilitating the movement of the thousands of visitors attending and participating in these events.

The RTC partners with the RSCVA to support the travel and tourism industry and enhance this industry's impact on the local economy. In many cases, the RTC provides special event transportation, as it does during the Best in the West Nugget Rib Cook Off or The Great Reno Balloon Race. The RTC's regular bus service facilitates travel to and from many event venues as well, such as Greater Nevada Field for Reno Aces baseball games, Lawlor Events Center and Mackay Stadium for Nevada Wolf Pack basketball and football games, the Livestock Events Center for the Reno Rodeo and other events throughout the year, the National Bowling Stadium, and many others.

SECTION 3 – SUSTAINABLE AND EFFICIENT GROWTH

Sustainable and efficient transportation network development creates regional connectivity that is integrated with land use and is delivered at the appropriate time and location. Whether for transit service, roadways, or bicycle and pedestrian infrastructure, the RTC seeks to provide the appropriate level of connectivity, at the appropriate time, that will serve the community today and for years to come. Transportation needs for the movement of people and goods evolve, as land development generates travel, travel generates new transportation facilities, new transportation facilities increase accessibility, and increased transportation accessibility attracts further land development. Sustainable growth includes identifying the appropriate investment needed at the appropriate time to keep pace with growth. Efficient growth is achieved through sound transportation planning, based on data, to identify the transportation needs of the region. Sustainably and efficiency or right-timing and right-sizing of the transportation network are essential in order to ensure that the transportation network can serve the needs of the region, now and in the years to come.

An overview of efforts to improve regional connectivity through sustainable and efficient growth is provided below.

South Virginia Street Transit-Oriented Development Plan

The RTC, in partnership with the City of Reno, studied the South Virginia Street corridor to determine the feasibility of extending the Virginia Line Bus Rapid Transit (BRT) service from its current terminus at Meadowood Mall to south Reno. With hundreds of acres of vacant and underutilized land in the corridor, there is opportunity to help shape land-use to improve accessibility and enhance economic development opportunities. The Plan recommended land-use planning tools most appropriate for encouraging a walkable, transit-supportive development pattern that meets the growth and development needs of the region.

High-density housing and employment near transit stops is necessary to support a BRT level of service. Providing safe, convenient, and accessible pedestrian connections to bus stops is essential to promoting not only transit trips, but active transportation trips as well. This type of transit-oriented development (TOD) has advantages beyond increased ridership. Effective transit not only boosts property values and business attractiveness but also stimulates broader economic development by better connecting industry to the workforce on which it relies.

Despite the City of Reno's 2017 adoption of the ReImagine Reno Master Plan, which included the removal of its TOD zoning along South Virginia Street, the region has had success with higher-intensity development. Land-use policies established by Reno, Sparks, and the Truckee Meadows Regional Planning Agency have incentivized this type of development in the Virginia Street, 4th Street/Prater Way, and other key transit corridors. For example, Midtown has emerged as a major shopping and dining destination with a growing residential and office component. Victorian Square in downtown Sparks has also experienced a resurgence, as evidenced by the housing development near RTC Centennial Plaza. Affordable housing and essential services are best suited to locations near transit lines to promote accessibility.

Multimodal infrastructure provides more options to get to work, school, recreational activities and provides access to necessary goods and services. High-capacity transit combined with Complete Streets design elements that provide pedestrian and bicycle access support a vibrant urban environment. The evolution of South Virginia Street, and other areas in the region prioritized for growth, is largely dependent on outside influences and will continue to respond to growth and the market. Planning for and continuing to encourage sustainable growth is essential to ensuring these areas are catalysts for vibrant changes to the community. Infrastructure investments, intergovernmental collaboration, public/private partnerships, and the continued phasing of transit enhancements will all work to support the land-use, transportation, and economic development goals for the region.

Active Transportation Plan: Walk & Roll Truckee Meadows

The RTC's Active Transportation Plan: Walk & Roll Truckee Meadows establishes a clear vision and goals for the future of active transportation in the Truckee Meadows and introduces a new approach to active transportation planning and implementation in the region called Neighborhood Network Planning. This approach has been established to engage residents and stakeholders at the local level to tailor active transportation solutions that address the unique needs of each neighborhood. This innovative and interactive planning process will inform the creation of a comprehensive and connected active transportation network across the Truckee Meadows for all users.

The Active Transportation Plan aligns with the Regional Plan, utilizing its Land Use Tiers to identify Land Use Contexts (Urban, Suburban, and Rural) with similar characteristics that will help guide implementation of active transportation facilities in a context sensitive manner.

Promoting active transportation in Washoe County offers a multitude of benefits which align with and support the goals of the City of Reno, City of Sparks, and Washoe County. Among them is economic development, which is achieved through the creation of a more walkable and bikeable environment. This attracts businesses and residents while supporting local shops and restaurants.

Over the next four to five years, the RTC will complete the series of Neighborhood Network Plans for the twelve Neighborhood Network Planning areas identified in the Active Transportation Plan. The resulting plans will adapt the regional vision and goals to the local context while aligning with overall objectives for the region, as applied through the unique lens of each neighborhood.

Incorporating Land-Use and Economic Development into Project Selection

Effective planning must consider how transportation infrastructure will influence land use and economic development and vice versa, aiming for a harmonious balance that supports sustainable and efficient growth. There is a necessary balance required between economic development and sustainable land use to avoid issues like congestion, environmental degradation, and uneven development. This means incorporating transit-oriented development, mixed-use areas, and maintaining green spaces among the more conventional commercial, residential, and industrial uses.

Integration of land-use and transportation was carried forward as a goal from the previous RTP and was incorporated into the evaluation factors used in selecting projects for inclusion in this RTP. Several projects were developed with a specialized focus toward supporting land-use and economic development policies, as listed below.

BIGGEST LITTLE BIKE NETWORK

- Biggest Little Bike Network (projects on Vine Street, Virginia Street, 5th Street, 6th Street, and Evans Avenue/Lake Street/Sinclair Street
- Buck Drive Circulation
- Sun Valley Boulevard Corridor Improvements
- West Fourth Street Downtown

- West Fourth Street Multimodal Improvement

Examples of projects implemented in support of land-use and economic development under the previous RTP's prioritization are listed below.

- Oddie Boulevard/Wells Avenue Multimodal Improvements
- Holcomb Avenue Rehabilitation
- Peppermill BRT

USDOT guidance related to national goals and planning factors does not explicitly require incorporation or consideration of the relationship between land-use and transportation. However, land-use and transportation are closely connected and are, in turn, linked to economic factors such as housing opportunities, employment locations, commute patterns, and the costs of transportation to households. Effective transportation planning requires integrating land use and economic development policies to ensure that transportation infrastructure supports and is supported by economic activities and land use patterns. The RTC and its partners, recognizing the importance of this dynamic, work to create consistency between local land-use, regional transportation, and economic strategic plans in pursuit of a functional and thriving community.

CHAPTER 14

Prioritizing Projects and Investing Strategically

Federal transportation legislation (The Bipartisan Infrastructure Law (BIL)), enacted as the Infrastructure Investment and Jobs Act (IIJA) requires that the RTP be based on a financial plan that demonstrates how the program of projects can be paid for and implemented. The program of projects incorporates all transportation improvements, including transit (both operations and maintenance), roadway capacity, new roadways, Intelligent Transportation Systems (ITS)/ operations, pavement preservation, and bicycle and pedestrian facilities.

The financial plan must:

- Demonstrate how the adopted transportation plan can be implemented/funded.
- Identify resources from public and private sources that are reasonably expected to be made available to carry out the plan.
- Recommend any additional financing strategies for needed projects and programs.

The financial plan is shown in Year-of-Expenditure (YOE) dollars. Converting all costs and revenues to YOE dollars assumes a more accurate depiction of all costs, revenues and deficits with long-range transportation plans.

This chapter outlines the project development and prioritization methodology, revenue projections, and funding sources including federal, state, and local and regional sources.

SECTION 1 – REVENUE PROJECTIONS

Revenue forecast assumptions identified through this process are outlined below:

- State revenues for vehicle registration fees, motor carrier fees, driver's license fees, and petroleum cleanup funds will increase by 0.92 percent annually matching population growth.
- Regional revenues will increase by 0.92 percent annually matching population growth, with an additional 3.28 percent growth factor for indexed fuel tax.
- Fuel tax at both the State and Regional level are reduced by two percent annually to match CAFE standards of fuel efficiency.
- Federal revenues will increase by two percent annually.
- Each metropolitan region developed forecasts for local tax revenues, based on regional conditions.

While funding programs are subject to change over time, RTC is tasked with using the best available data at the time the long-range plan is developed. In developing the projections, historical growth trends of current revenue sources attributable to the region were considered, as well as current conditions, effects of inflation, and changes in population.

Using these indicators as a base, assumptions were made that there will be increases in all revenue sources over the life of the plan and that the projects included will not exceed the reasonably foreseeable future revenues, which will meet the fiscally constrained plan requirement. Many projects are included in the plan as unfunded needs due to the lack of resources. An example of an unfunded need is the Pyramid/395 Connector. Though funding for Phase 2 of the project has been identified, Phases 3, 4, and 5 currently remain unfunded due to their high cost. Combined, the cost of Phases 3, 4, and 5 is estimated at $756,648,000 with Phase 3 estimated to cost $427,479,000.

The RTP is revisited at least every four years, which allows for timely adjustments to be addressed as needed.

SECTION 2 – FUNDING SOURCES

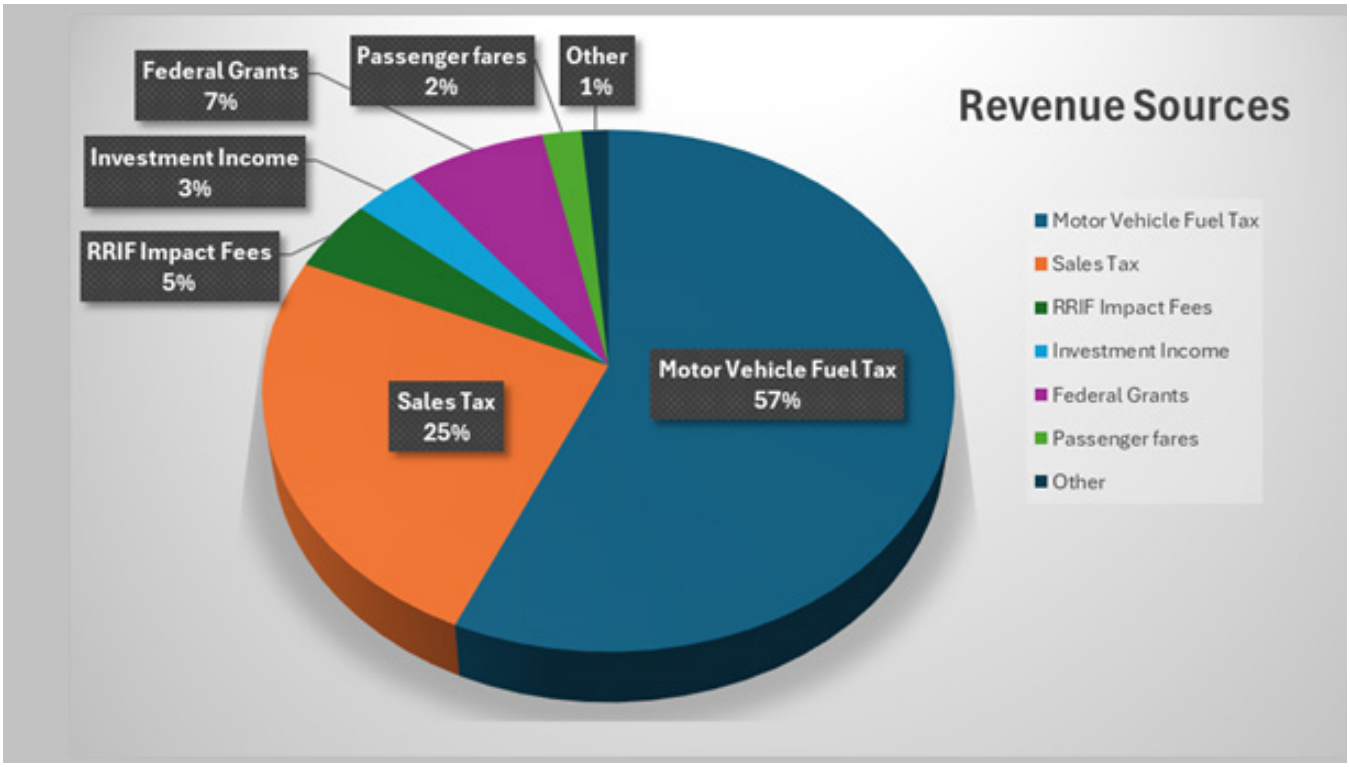
Current revenue sources include the federal government, state government, and RTC. Table 14.1 shows the types of funding sources available and the allowable use under that source, either for roads or transit. The allowable use for the various funding sources is limited by statute, regulation, or state constitutional provisions. As an example, the Nevada Constitution allows local fuel taxes to be spent only on roadway construction. State law precludes the use of fuel tax by RTC for routine roadway operation and maintenance. In addition, some federal funds are restricted to capital improvements and may not be used for operations or maintenance.

Table 14.1 Funding Sources and Allowable Uses

Types of Funds	Uses
National Highway Performance Program (NHPP)	Roads (Primarily)
Surface Transportation Block Grant (STGB)	Roads & Transit
Congestion Mitigation Air Quality (CMAQ)	Roads & Transit
Transportation Alternatives (TA) Set-Aside Program	Roads & Transit
Highway Safety Improvement Program (HSIP)	Roads (Primarily)
FTA Section 5307	Transit
FTA Section 5310	Transit
FTA Section 5337	Transit
Bus and Bus Facilities Program (FTA Section 5339)	Transit
Gas and Special Fuel Tax	Roads
Driver's License, Vehicle Registration, and Motor Carrier Fees	Roads
Regional Road Impact Fee (RRIF)	Roads (Capacity)
Sales and Use Tax	Roads (Capacity)

Revenues in fiscal year (FY) 2024, July 1, 2023, to June 30, 2024, were approximately $180.4 million. Figure 14.1 shows the funding sources for that revenue. In FY 2024, 28 percent of revenues were used for transit and 58 percent were used for roadways, 14 percent for debt service, and 1 percent for MPO Operations.

Figure 14.1 FY 2024 Revenues by Funding Source



Federal Funding

Federal funds for transportation are collected nationally and allocated back to the states through a series of formulas and grants. The FAST Act was the first federal law in over a decade to provide long-term funding certainty for surface transportation infrastructure planning and investment. The Fixing America's Surface Transportation (FAST) Act authorized $305 billion over fiscal years 2016 through 2020 for highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology, and statistics programs. The IIJA (Public Law 117-58, also known as the "Bipartisan Infrastructure Law," continues the FAST Act Metropolitan Planning Program, which establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas. The IIJA provides approximately $350 billion for Federal highway programs over a five-year period (fiscal years 2022 through 2026). Most of this funding is apportioned to States based on formulas specified in Federal law. However, the Bipartisan Infrastructure Law also provides funding through a wide range of competitive grant programs.

The primary funding source provided by the federal government is the Highway Trust Fund (HTF) through the programs in the IIJA. The HTF is comprised of the Highway Account (funds highway and intermodal programs) and the Mass Transit Account. Federal motor fuel taxes are the major source of income into the HTF.

Starting in 2021, HIF programs received increases of 24 percent for Highway Account programs and 32 percent for the Mass Transit Accounts, with increases thereafter in the range of 2 to 3 percent per year. Additional formula funding generally available to the RTC include:

- National Highway Performance Program (NHPP) – Funds are to support the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS and to ensure that investments of federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets to be established in the states asset management plan.

- Surface Transportation Block Grant Program (STBG) – Flexible funding that may be used for projects to preserve or improve conditions and performance on any federal-aid highway, bridge projects on any public road, facilities for nonmotorized transportation, transit capital projects and public bus terminals and facilities.

- CMAQ – Flexible funding for transportation projects and programs to help meet the requirements of the Clean Air Act: to reduce congestion and improve air quality for the region.

- Transportation Alternatives (TA) Set-Aside Program – Funds are for a variety of alternative transportation projects such as transportation safety, bicycle or pedestrian improvements, and Safe Routes to Schools programs.

- Highway Safety Improvement Program (HSIP) – Funds are to improve highway safety on all public roads through a strategic approach that focuses on performance.

- Urbanized Area Formula Grant (FTA Section 5307) – Funds are to support public transportation.

- Enhanced Mobility of Seniors and Individuals with Disabilities (FTA Section 5310) – Funds are to provide improved mobility for seniors and people with disabilities.

- State of Good Repair (FTA Section 5337) – Funds are to provide capital assistance for maintenance, replacement, and rehabilitation projects of high-intensity fixed guideway and motorbus systems to help transit agencies maintain assets in a state of good repair in urbanized areas.

- Bus and Bus Facilities Program (FTA Section 5339) – Funds are to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities.

- Discretionary Grant Programs – Funds are awarded on the basis of a competitive process for eligible transportation projects.

Generally, federal funding programs require a state or local contribution of funds toward the cost of a project, which is referred to as matching funds. The typical match for street and highway programs is 5 percent and for transit programs it is 20 percent.

State Funding

State funding sources include gas tax, special fuel (diesel) tax, vehicle registration fees, motor carrier fees, and driver's license fees. Fuel tax revenue projections take into account the increasing fuel efficiency of cars as new electric, hybrid, and alternative fuel technologies emerge. The majority of state funding is applicable to street and highway projects. Currently no state funding is available to be used for transit projects.

The Nevada State Legislature and RTC are exploring potential alternative transportation funding methods, including a road usage charge for electric and hybrid vehicles and a tax on vehicle miles of travel. The Nevada Department of Transportation is undertaking a more detailed analysis of various funding options to supplement the fuel tax. Only existing revenue sources are included in the financial projections for this plan. RTC is also completing a study specific to local fuel tax replacement options.

Regional Funding

Regional funding sources include fuel tax, sales and use tax, passenger fares and other revenue such as the Regional Road Impact Fee (RRIF) paid by private developers, bus advertising, and lease income.

In 2008, Washoe County voters approved the indexing of fuel taxes to keep pace with inflation. This allows RTC to implement major-capacity projects and the pavement preservation program. In 2002, voters approved a ⅛ cent sales tax that is eligible for both transit and roadway uses, and a 1982 ballot initiative approved the use of ¼ cent sales tax to fund the transit program.

A summary of fuel tax rates is shown below in the table below.

Table 14.2 Summary of Fuel Tax Rates (2025)

Source	Rate Per Gallon
County Optional Plus Inflation Index	51.93¢
County Mandatory	12.22¢
Federal	18.40¢
State	18.45¢

Total Funding

Table 14.3 outlines the revenue projections by timeframe and it identifies whether the funding is eligible for roadway projects or public transportation. This table indicates anticipated revenues in YOE dollars. No new funding sources were considered for the timeframe covered by this document.

Table 14.3 Revenue Projections

Revenue Projections (Year of Expenditure)			
Fund Source	2025-2034	2035-2050	Total
Complete Street Funding			
Federal	$2,005,598,682	$1,708,499,803	$3,714,098,485
State	$843,270,616	$1,325,962,993	$2,169,233,609
Regional	$1,340,924,181	$2,857,455,510	$4,198,379,691
Total	$4,189,793,478	$5,891,918,307	$10,081,711,785
Public Transportation Funding			
Federal	$127,069,486	$263,675,144	$390,744,630
State	$0	$0	$0
Regional	$528,366,112	$1,402,733,115	$1,931,099,227
Total	$655,435,598	$1,666,408,259	$2,321,843,857

SECTION 3 – PROJECT DEVELOPMENT AND PRIORITIZATION

The RTP contains the community's vision for the transportation system. The projects, programs, and activities identified in the RTP are necessary to make the long-range vision a reality. The funding needs assessment includes all jurisdictions (local, regional and state) and all activities, projects and programs on regional roads. A discussion of unfunded needs is also included.

Project Development

Projects in this RTP were developed in coordination with local jurisdictions (City of Reno, City of Sparks, and Washoe County), the Nevada Department of Transportation (NDOT) and regional stakeholders. About half of draft projects were informed by past transportation plans and studies for the region, and the other half were added through a call for projects conducted for the local jurisdictions. The draft project list was provided for review to the RTP Agency Working Group, local jurisdictions, and NDOT. Once the review period concluded, project scopes were developed or confirmed. After project scoping, estimated costs were forecasted for each project. As most of the projects included little or no engineering work, beyond a basic project scope, most cost estimates included in this RTP are intended to be used as a planning-level tool with the expectation that costs will change as projects progress toward implementation.

Project Prioritization

Plan goals and objectives were used to develop a scoring tool for project prioritization. Keeping the Plan's goals at the core of project prioritization produces a project list that can best meet the transportation goals for the region. Metrics selected for the scoring tool included the integration of the new BIL requirement to "provide for consideration of projects and strategies that will promote consistency between transportation improvements and State and local housing patterns (in addition to planned growth and economic development patterns)." This requirement is addressed through several metrics but especially through the metric assessing in which of the five Truckee Meadows Regional Planning Agency (TMRPA) tiers the project is located. The TMRPA tiers identify current and expected housing density for the region. The TMRPA tiers are further discussed in Chapter Thirteen, Land-Use and Economic Development.

The first eight goals were utilized to rank projects, per project type, and the ninth goal was used to determine project timing within the planning horizons. Goals utilized to rank projects were weighted equally, with a total possible score of 100 per goal. The project scoring tool is included as Table 14.4.

Table 14.4 2050 RTP Update Project Scoring Tool

	Goal	Objective	Metric	Score
1	Safety	Reduce Traffic Fatalities and Serious Injuries	Number of crashes per year at project location (High=50, Medium=30, Low=10)	50
			Bike/ped crashes at project location (High=50, Medium=30, Low=10)	50
2	Maintain Infrastructure Condition	Manage Existing Infrastructure Efficiently	Pavement Condition Index (PCI) for project location (Poor=90, Fair=50, Good=0)	90
			Bridge Rating (Poor=10, Fair=5, Good=0, No bridge=0)	10
3	Congestion Reduction	Manage Vehicle Travel Demand and Reduce Congestion	Travel Time Index for peak hour (>1.5=50, 1.5-0.6=30, <0.6=0)	50
			Average Daily Traffic (>14,000=50, 14,000-5,000=30, <5,000=0)	50
4	System Reliability and Resiliency	Integrate All Travel Modes and Increase Travel Options	Is the project a new road segment? (Yes=60, No=0)	60
			Does the project fill technology or facility gaps in the existing network? (Yes=20, No=0)	20
			Is the project a bike/ped project? (Yes=20, No=0)	20
5	Efficient Freight Movement and Economic Vitality	Improve the Movement of Freight and Goods	Distance to freight corridor (roadway, air, and rail) (0=50, <5mi=30, >5mi=0)	50
			Provides access to employment center (Large=50, Medium=30, Small=20)	50
6	Equity and Environmental Sustainability	Promote Equity and Environmental Justice	Does the project provide benefit to an EJ area? (Yes=40, No=0)	40
			Does project improve Pedestrian Experience Index (PEI) rating and/or Bicycle Level of Traffic Stress (BLTS) rating (as defined in the Active Transportation Plan (ATP)? (Yes=60, No=0)	60
7	Accessibility and Mobility	Provide a Regional Transit System and Other Transportation Services	Does the project location have a transit stop? (Yes=40, No=0)	40
			Distance from fixed route transit service (<0.25 mi=30, 0.25-0.5mi=20, >0.5mi=0) And/or distance from BRT service (</= 0.5 mi=30, >0.5 mi=0)	30
			Does the project promote transit? (Yes=30, No=0)	30
8	Integrate Land-Use and Economic Development	Improve Inter-Regional Connectivity	Project is within which of the five TMRPA tiers? (1=70, 2=60, 3=40, 4=20, 5=10)	70
			Does project improve connectivity for tourism? (Yes=30, No=0)	30
9	Reduced Project Delivery Delays (Used in Timing, not Prioritization)	Monitoring Implementation and Performance	What is the project status? (Planning=20, Environmental=50, Design=60, Construction=70)	70
			Private/Other agency funding (Yes=20, No=0)	20
			Project feasibility (High=10, Medium=5, Low=0)	10

SECTION 4 – PLAN INVESTMENT NEEDS

The transportation funding needs for this RTP have been divided into two major categories – public transportation and complete streets. The projects/programs are identified in Appendix B. Needs are shown in YOE dollars and were placed into the following planning horizons:

- 2025-2034
- 2035-2050

Public Transportation

Existing transit-eligible revenues are being utilized for current transit operations. Should additional revenues become available, effective uses for these funds would include increased frequency and span of service on productive routes, as identified in the Transit Optimization Plan Strategies (TOPS), and potential expansions of FlexRIDE service areas. The RAPID transit service provided on the Lincoln Line and Virginia Line is the core of the regional transit system. The unfunded vision for transit includes expansions of these routes, the creation of an inter-regional transit route between Truckee and the Tahoe Reno Industrial Center, development of a new bus transfer facility, a new or expanded bus maintenance facility, and parking/mobility hubs. Due to the significant costs of these projects, they are listed as unfunded needs in the transit vision.

RTC faces rising costs to provide paratransit service if fixed-route service is expanded in the future. RTC is federally required to provide paratransit service to eligible customers within ¾ of a mile of fixed routes. The average RTC ACCESS trip costs about $25 to provide, compared with about $2.50 for the average RTC RIDE trip.

For the purposes of this fiscally constrained plan, the transit system is assumed to remain at existing service. The public transportation needs are summarized in Table 14.6 with costs shown in year of expenditure (YOE) dollars. Other unfunded transit facility needs include a new transfer facility, maintenance facility, and mobility hubs. The transfer facility would accommodate expansion of an electric or hydrogen fuel cell RTC RAPID and RTC RIDE fleet.

Table 14.6 Public Transportation Needs by Activity

Public Transportation Needs by Activity			
	2025-2034	**2035-2050**	**Total**
Operations	$510,232,713	$1,602,207,255	$2,112,530,969
Vehicles	$73,556,341	$110,334,512	$183,890,853
Facilities	$19,535,133	$29,302,700	$48,837,833
Total	$603,324,187	$1,741,844,467	$2,345,168,654

Complete Streets

Complete Streets include pavement preservation, system efficiency, multimodal, and congestion relief projects for regional roads.

Pavement preservation includes the treatments used strategically to keep roads in good condition, extend the useful life of pavement, and minimize the life-cycle costs of eligible roads. Preservation includes preventive maintenance, rehabilitation, and reconstruction of pavements and bridges, as described in Chapter Six, Infrastructure Condition. This RTP includes annual funding for preventive maintenance on eligible roads.

System efficiency projects include traffic signal coordination, communications technology, and other Intelligent Transportation Systems (ITS) technologies that improve traffic flow without adding new travel lanes. These are projects that contribute to the efficient operation of the transportation system as a whole. This RTP includes annual funding for traffic operations improvements.

The RTP includes annual funding for Active Transportation improvements throughout the region. Active transportation projects can impact multiple modes of travel. For example, sidewalk projects that improve ADA accessibility to RTC RIDE bus stops have the potential to allow some RTC ACCESS customers to use fixed-route service instead of paratransit.

Multimodal projects include ADA-accessibility improvements, pedestrian/bicycle facility improvements, and roadway reconstruction projects that focus on safety, economic development, and quality of life rather than auto capacity.

Congestion relief projects typically include the addition of new lanes for general purpose traffic, specific improvements to facilitate goods movement, and other improvements to increase the efficiency of existing road segments and intersections. Capacity improvement needs are identified through the regional travel demand model. Capacity projects also address safety and multimodal transportation needs.

Complete Streets needs are summarized in Table 14.7 with costs shown in year of expenditure dollars.

Table 14.7 Complete Streets Needs

	2025-2034	2035-2050	Total
Pavement Preservation	$225,000,000	$360,000,000	$585,000,000
Traffic Signals/ITS/ Operations	$100,000,000	$160,000,000	$260,000,000
Active Transportation	$50,000,000	$80,000,000	$130,000,000
Major Roadway Projects	$3,759,203,288	$4,653,426,353	$8,412,629,641
Total*	$4,134,203,288	$5,253,426,353	$9,387,629,641

The program of projects in this RTP does not bring all regional roads up to level of service standards. The capacity projects included in the plan reflect the prioritization of the most severely congested corridors and the bottleneck locations that have wide-ranging impacts on the regional network.

The unfunded needs listing includes projects for which no funding is available. These are projects that would be included in the RTP if additional funding resources were available.

Including the unfunded project listing provides an opportunity to identify additional projects for future consideration in the event additional funding becomes available. The total unfunded needs are estimated at approximately $3,926,186,395 for roadway projects.

SECTION 4 – FINANCIAL SUMMARY

As revenues from the majority of funding sources are not keeping up with growing need transportation projects within the region, RTC faces a difficult challenge in setting priorities for future spending. Looking at the revenues and needs for the RTP as a simple budget, once the funds for operating and maintaining the existing system are subtracted from the revenues, the remainder can be applied to new projects or expanded services. These could be new transit services, new roads, widened roads, or bicycle facilities – all modes considered in this RTP.


Entertainment
Food
Home
Medical
Personal Items
Travel
Utilities
Other

CHAPTER 15

Connection to Programming

This chapter will discuss the relationship between the goals of the RTP and the implementation and operation of RTC programs. RTC facilitates programs related to multiple facets of transportation including roadway construction and maintenance, transit operation, congestion management, and active transportation. Coordinating funding and programming for each of these programs is essential to achieve the goals of the RTP.

The following efforts and strategies are described in this chapter:

SECTION 1 – REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM

SECTION 2 – OTHER RTP PROGRAMS

SECTION 1 – REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM

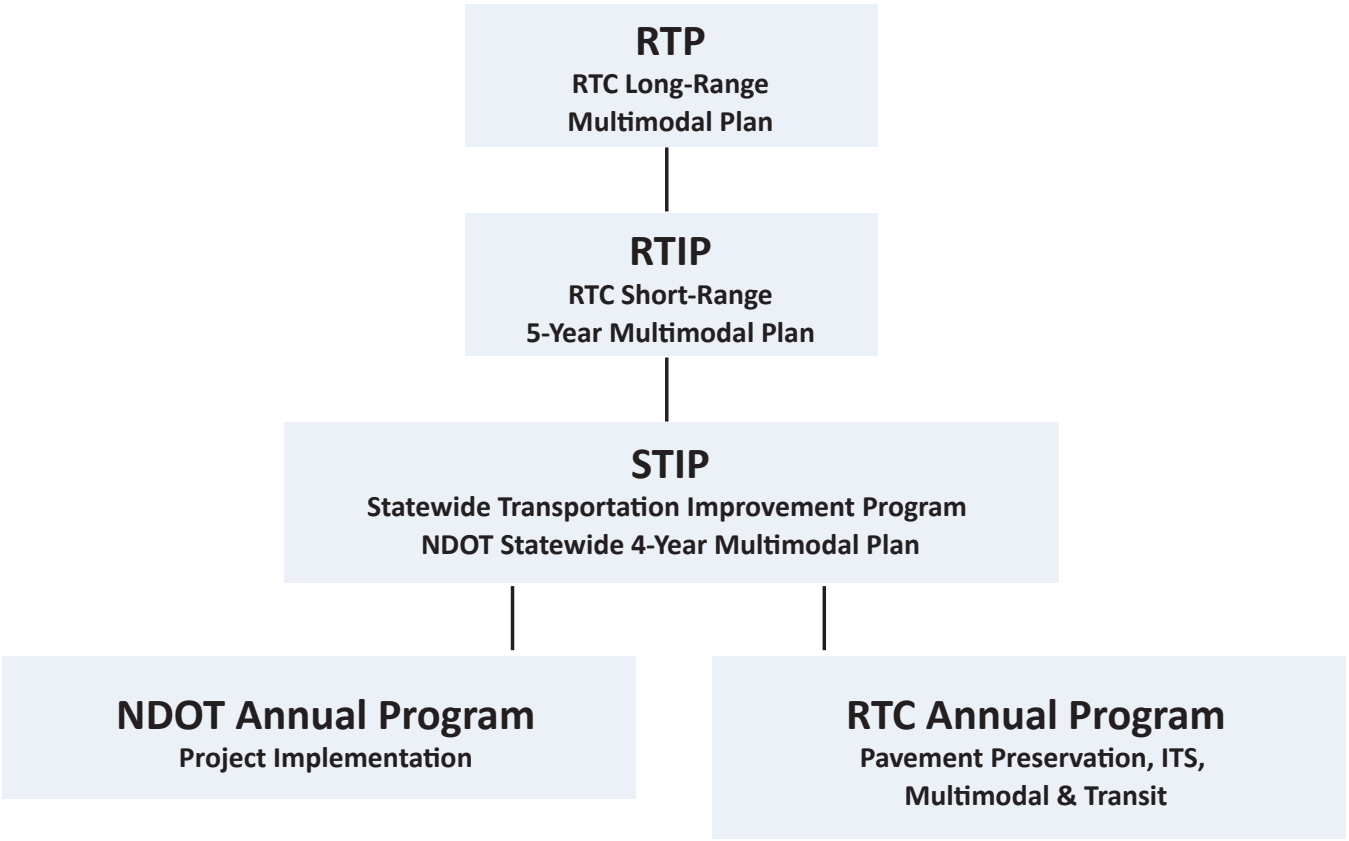
The Regional Transportation Improvement Program (RTIP) is a federally required five-year plan that identifies and prioritizes transportation projects for a region. The RTIP includes a subset of projects from a region's RTP. Projects must be included in the RTP to be eligible for inclusion in the RTIP. RTC, as the Metropolitan Planning Organization for the region is responsible for developing the RTIP.

The RTIP provides a summary of projects and programs by federal fiscal year and shows the agency responsible for implementing the project, funding source and other related information.
The RTIP represents a prioritized program directed at addressing the region's transportation needs while improving the region's safety, air quality, transportation efficiency, and mobility.

The RTIP assists in implementing the RTP by advancing projects selected from the first ten years of the plan. Additional projects are advanced during biennial adoptions of the RTIP and if more funding becomes available. Figure 15.1 shows how the RTP directly impacts project and program implementation through the RTIP.

Appendix B of this RTP includes a fiscally constrained list of projects and programs that represents the needed transportation improvements for the region over the next 25 years. Upon approval of this RTP by the RTC Board, the enclosed list of projects and programs will be eligible for future addition to the RTIP.

Figure 15.1 RTC Planning Process



SECTION 2 – RTP PROGRAMS

RTC facilitates several regional transportation programs. Typically, smaller scale projects such as pavement preservation and active transportation quick-builds are funded through these programs. The following programs have designated budgets and unique criteria that are used to guide project selection and fund eligible projects.

Pavement Preservation Program

The purpose of the Pavement Preservation Program is to maintain roads in good condition and minimize long term costs. The goal is to apply the most cost-effective treatment to the right pavements, at the right time to minimize pavement life cycle costs while maximizing serviceable pavement life. An effective Pavement Preservation Program saves money that can be used for other important transportation initiatives. As part of the pavement preservation system RTC maintains data on index rating for each regional road. Through a process of collaboration and coordination with the local governments, RTC completes roadway preservation projects on eligible roadways within Washoe County. The local governments provide preservation services for roadways not eligible for the Regional Pavement Preservation Program. As part of the pavement preservation system RTC maintains data on index rating for each regional road.

More information about the Pavement Preservation Program can be found in Chapter 6, Infrastructure Condition.

Traffic Signalization Program

RTC has initiated a regional traffic signal optimization and improvement program to enhance the capacity of the existing system and reduce traffic congestion. This is an ongoing program that will allow nearly 400 intersections in the Truckee Meadows to be coordinated. Projects completed through this program seek to achieve two primary objectives: 1) improved traffic flow resulting in improved level of service and 2) mobile source emission reductions through decreased delay, fewer accelerations/decelerations and a decreased number of stops. Modeled benefits of this program include up to an 11 percent reduction of pollutants along improved corridors. This program is funded annually to allow for approximately one-third of the region's signals to be re-timed and optimized each year.

Traffic Intersection Improvements and Intelligent Transportation Systems Program

RTC enhances existing intersections through the Traffic Intersection Improvements Program, focusing on measures that boost service levels and safety. These improvements include intersection widening, reconfiguration, signal installation, and alternative designs such as roundabouts, upgraded traffic signal detection, and equipment enhancements. Eligible projects through the Traffic Intersection Improvements and Intelligent Transportation Systems Program are generally lower cost traffic operation and safety improvements at locations that fall outside of capacity and multimodal projects identified in the RTP. Projects are prioritized through this program based on feedback from the partner agencies and compatibility with the RTP's nine goals including an emphasis on projects that have a lower risk of delivery delays.

RTC administers the Intelligent Transportation Systems (ITS) Program that will leverage technology to reduce congestion along the region's busiest corridors. More information about ITS can be found in Chapter 7, Congestion Reduction.

Regional Road Impact Fee Program

Impact fees under the Regional Road Impact Fee Program (RRIF) have been levied on all new development projects within urbanized Washoe County since 1996. The funds collected are used to finance the costs of capacity enhancement projects necessitated by and attributable to new development. The Program is a way to charge new development for its proportionate fair share of those costs.

Eligible projects must be on the RRIF network, which is comprised of existing or planned arterial or collector streets and roads that meet the criteria specified in the current RRIF Capital Improvements Plan (CIP). As of 2024, those criteria include:

1. Arterials categorized as High, Moderate, or Low Access control as defined by RTC Engineering;

2. Collectors that have a forecast volume of at least 14,000 annualized average daily trips at "build-out," which is defined as full development based on the approved land use assumptions in each jurisdiction;

3. Freeway and highway ramps that connect to arterial or collector streets and roads that are included in the RRIF Network are considered arterial or collector streets and roads.

The RRIF Network only includes arterial or collector streets and roads that meet the criteria above that are either existing or planned in the first 10 years of the RTP. The RRIF CIP is developed using projects identified in the current RTP that are on the RRIF Network, and then further refined using sound engineering and planning judgement to make reasonable adjustments detailed in the CIP document.

The resulting list of projects is the planned capital improvements and facility expansions necessitated by and attributable to new development.

Active Transportation Program

RTC is committed to improving safety and comfort for non-vehicular travelers including pedestrians and bicyclists. Annual funding will be programmed for the implementation of low-cost, high-impact projects identified in the Active Transportation Plan and the subsequent Neighborhood Network Plans. Quick-build projects implemented using program funds will provide valuable insights into how to best increase active transportation infrastructure utilization and can inform where RTC ultimately implements more permanent infrastructure projects. More details about the Active Transportation Program can be found in Chapter 8, System Reliability and Resiliency.

APPENDIX A

Public and Stakeholder Engagement

Appendix A
Public and Stakeholder Engagement

Executive Summary

Purpose

To inform the 2050 Regional Transportation Plan update, the Regional Transportation Commission of Washoe County (RTC) embarked on a process to solicit feedback from the public, regional stakeholders, and elected officials regarding the state of the transportation system and preferences concerning identified focus areas. The information received is intended to help understand public and community concerns and preferences and inform potential agency preferences and weighting that should be considered into the RTP development process.

Key Findings

Across the methods of input from diverse input groups, the top transportation challenges were:

1. Traffic Congestion and Delays
2. Unsafe Driving Conditions and Behaviors
3. Lack Of Safe Connections for Bicyclists And Pedestrians
4. Lack Of Frequent and Reliable Transit Options

The most significant themes that emerged across all input included (additional information below):

1. Regional Planning and Coordination
2. Pedestrian and Cyclist Safety and Infrastructure
3. Public Transit Options
4. Environmental Sustainability

Regional Planning and Coordination

The RTC Board, Regional Government Partners, and Agency Working Group emphasized the need for regional planning and coordination to address the impact of growth and development on the transportation system. Input from the public (Social Sentiment, Community Survey) expresses concern about the strain of new developments on existing infrastructure and public services. There is an opportunity to make explicit within the RTP existing regional coordination efforts underway as well as outline future guidelines for managing regional stakeholder participation.

Pedestrian and Cyclist Safety and Infrastructure

Pedestrian and cyclist safety and infrastructure were other themes mentioned across the RTC Board, Regional Government Partners, Agency Working Group, and Geo-Mapped Community Needs as priority areas for improvement. Specific geographic areas were called out as priority areas to solve for pedestrian and cyclist safety by the RTC Board and Geo-mapped Community Needs, such as Sun Valley and the River Corridor. The Social Sentiment and Community Survey input also indicated high demand for protected bike lanes, sidewalks, and crosswalks, especially in areas with high traffic and along the River Corridor.

Public Transit Options

A reoccurring theme between the RTC Board, Regional Government Partners, Agency Working Group, and Community Survey groups emerged as strong interest in **expanding and enhancing public transit options**, such as bus, light rail, and micro-modal options. The idea of a light rail was primarily mentioned in community input methods. There was also a desire for enhanced public transportation options to the airport. The Social Sentiment and Geo-Mapped Community Needs groups also suggested the greater need for ride-sharing options, carpool lanes, and park-and-ride facilities as options to reduce vehicle dependency and congestion.

Environment Sustainability

Environmental sustainability and resiliency were mentioned by the RTC Board, Regional Government Partners, and Agency Working Group as a key priority when planning for the future transportation system. In these groups, sustainability may encompass reducing vehicle miles traveled, enhancing resident health, and enhancing the resiliency of the transportation system during severe weather. The Community also showed some awareness and support for environmental and sustainability issues, such as implementing idle-free zones, exploring alternative materials for road maintenance, and assessing the impact of electric vehicles and new modes. Sustainability should continue to be a key focus for the updates to the 2050 Regional Transportation Plan.

Methodology

Ensuring a broad participation base helps develop a cohesive effort in regional planning. It also allows RTC's priorities to align with those of other groups and agencies working to enrich the quality of life and create a more livable community. Strong community support for the planning process will also greatly enhance the implementation of specific projects and programs. Public participation in plan development included feedback from four advisory groups, the RTC Board, a public survey and interactive map as well as social sentiment analysis. This input was utilized to inform the goals and objectives for the RTP which provide the direction for transportation investments over the next 20 years and were utilized in project prioritization. Additionally, members of the Agency Working Group (AWG) provided ongoing guidance on many RTP elements such as the goals, objectives and the project scoring tool.

Advisory Groups

The 2050 RTP process was formed with the participation of advisory groups that guided the planning process:

RTP Agency Working Group

The Agency Working Group (AWG) helped to guide, inform, and provide technical expertise in all areas of the plan. The AWG collaborated with the RTC to ensure consistency with other planning strategies, initiatives, and policies in the region. This group has a more expansive membership than the RTC Technical Advisory Committee. A complete list of Agency Working Group members can be found on page 32 of this Appendix.

This group contributed significantly to:

- Coordinating Regional Planning Efforts
- Identifying The Impacts of Transportation on Other Agencies
- Providing A Forum to Present Innovative Ideas at A Regional Level

RTC Citizens Multimodal Advisory Committee

The Citizens Multimodal Advisory Committee (CMAC) is a standing committee that provides feedback to staff and the RTC Board of Commissioners.

The group meets monthly and is made up of residents from throughout the region who are interested in the transportation system. This diverse group represents community needs and concerns related to all modes of transportation. CMAC provided input regarding priorities for projects and services in the 2050 RTP.

RTC Technical Advisory Committee

The Technical Advisory Committee (TAC) is a standing committee that provides feedback to staff and the RTC Board of Commissioners. The group meets monthly and comprises staff members from partner agencies. This group represents perspectives and concerns for local jurisdictions and agencies. TAC provided input regarding priorities for projects and services in the 2050 RTP.

Inter-County Working Group

It is essential that the RTP is comprehensive and illustrates the vision for transportation planning efforts and challenges in Northern Nevada and the Lake Tahoe Region. Inter-regional collaboration with other nearby cities, counties, and MPOs ensures that RTC can build on transportation linkages and economic ties and reduce the duplication of efforts attempting to accomplish the same goal. Collaboration among regions allows for developing greater ideas and partnerships to impact mobility options positively. The Inter-County Working Group included representatives from surrounding jurisdictions, including Carson City, Storey County, Tahoe Regional Planning Agency, Tahoe Transportation District, US 395 Coalition, City of Fernley, Nevada Association of Counties, and NDOT. A complete list of Inter-County Working Group members can be found on page 34 of this Appendix.

Other Inputs

Presentations were provided to the RTC Board. The outreach process also highlights the involvement of other elected officials, boards, and commissions. The RTC provided regular reports to the RTC Board of Commissioners throughout the development process. The Board provided direction at strategic points, including adopting the guiding principles and goals.

The RTP was developed with integration with the Coordinated Human Services Transportation Plan (CTP) outreach process. The CTP was developed in coordination with the RTP. The CTP process included a series of public meetings and stakeholder outreach. Interviews with representatives of human services agencies and non-profits were the initial steps. This included human service transportation providers, medical providers, veteran's services, and transportation network companies. A community transportation survey was conducted to identify issues to consider in the plan.

Digital and traditional media were used to reach a broad audience, including the RTC website, news releases, interviews, videos, the RTC YouTube channel, Facebook and Twitter, The Road Ahead with RTC, and meeting announcements in English and Spanish-language publications. Public comments were received using online surveys, phone calls, and emails.

The following table summarizes methods used to obtain feedback from various groups:

Group	Method(s)	Timeframe
Public	Social Sentiment Scraping	February-March 2024
	Survey	April 8-May 31, 2024
	Geographic Needs Mapping	April 8-May 31,2024
RTC Board	Board Retreat	March 22, 2024
	Board Meetings	Bi-Monthly Updates or Milestones
Agency Working Group	AWG Meetings	Kick-off January 26, 2024

		Bi-Monthly Updates or Milestones
Regional Government Partners	City/County Presentations (3)	April 22-24, 2024
Inter-County Working Group	Inter-County Working Group Meeting	March 1, 2024
CMAC	Committee Meeting	Bi-Monthly Updates or Milestones
TAC	Committee Meeting	Bi-Monthly Updates or Milestones
CTP Team	Senior Events	Survey Through Senior Events in May 2024

Public & Community

Community Survey

Purpose

To understand public concerns and preferences and inform potential agency preferences and/or weighting should that be incorporated into the performance analysis process.

Method

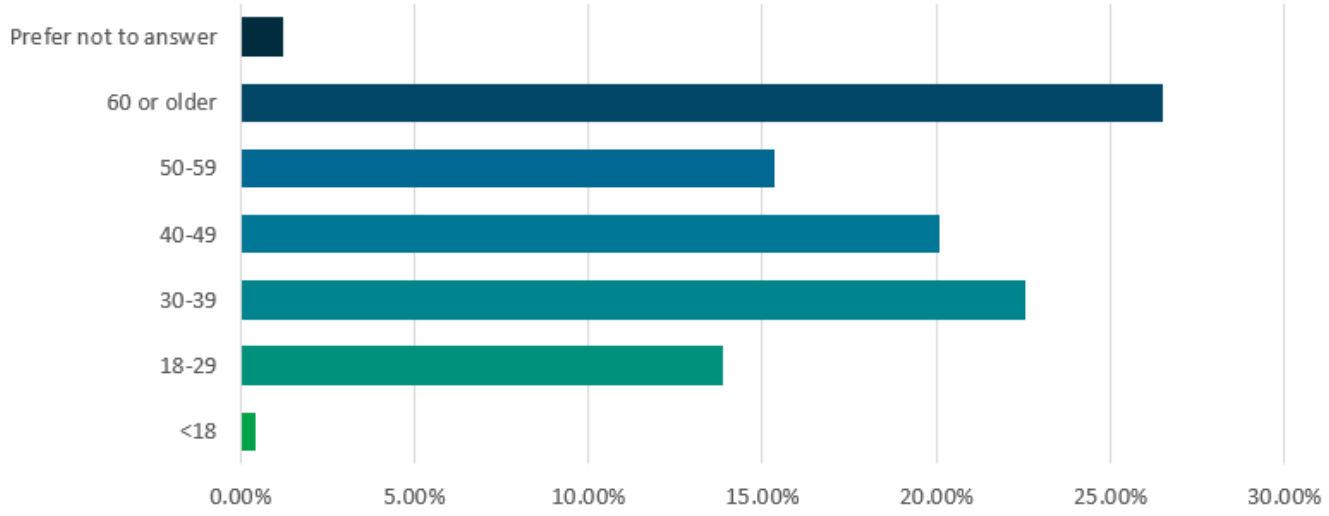
The online survey was available on the RTP public information webpage from April 9 to May 31, 2024. Public outreach efforts are listed below:

- Socials (Facebook, X, Instagram): 1 post/week
- Press Releases: 2
- The Road Ahead Segment: 4/16/24: Regional Transportation Plan Survey
- News Station Stories: 6
    - 4/10/24 (KOLO 8): RTC launches survey for 2050 transportation plan
    - 4/10/24 (KTVN 2): Regional Transportation Commission Invites the Community to Participate in a 2050 Update Survey
    - 5/29/24 (KOLO 8 in-studio): RTC shares Regional Transportation Plan Update Survey to better transportation needs
- Promotion at Aces Greater Nevada Field: May 7 – 31, 2024
- Promotion at Citizen Advisory Boards (CAB): 9
- Senior Events: 1
- E-Blasts:
    - 4/30/24 RTC April eNews (1,271 recipients)
    - 5/29/24 RTP 2024 Survey Household Travel Survey (HHTS) Audience (1,196 recipients)
    - 5/30/24 Oddie Wells Phase 3 Update (267 recipients)
    - 5/29/24 Channel 8 Website Takeover (101 clicks)

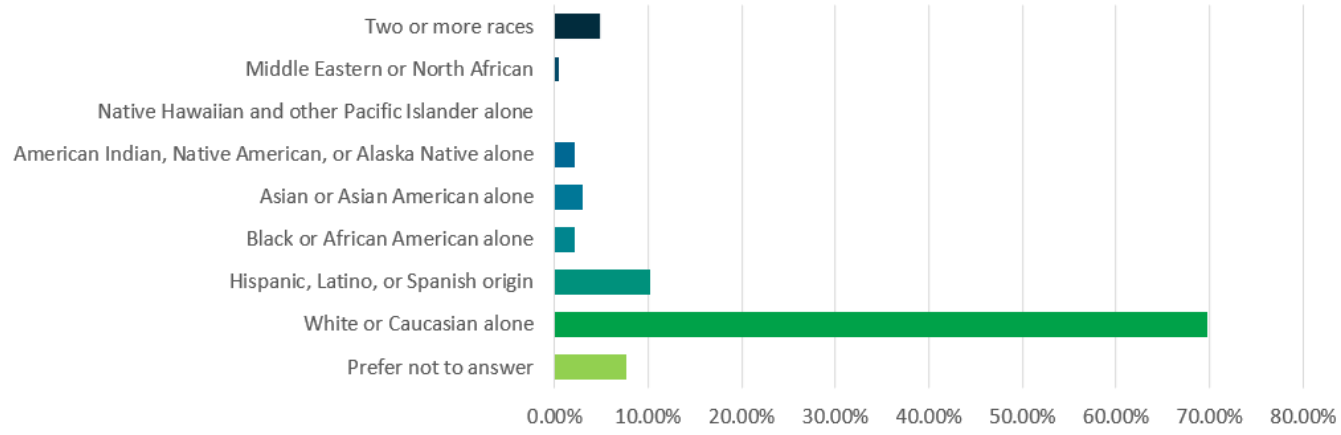
Representation of Respondent Sample

The Washoe County population older than 19 is 371,595, based on US Census Bureau profile data from 2022 American Community Survey 1-Year Estimates. 473 Responses were received. The demographics of the respondents are summarized as follows:

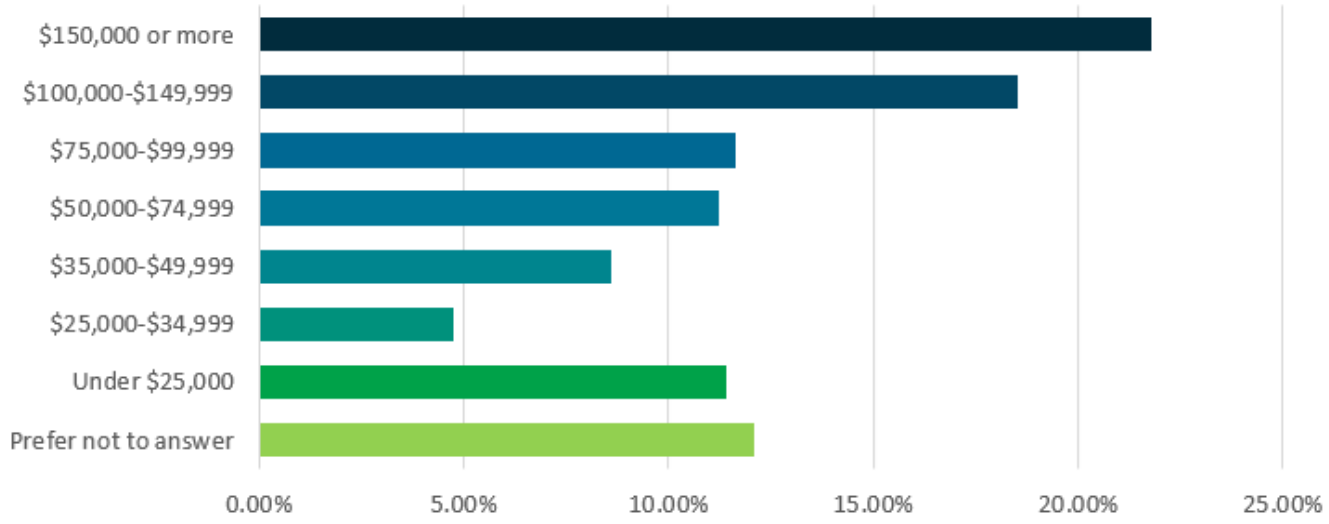
Age



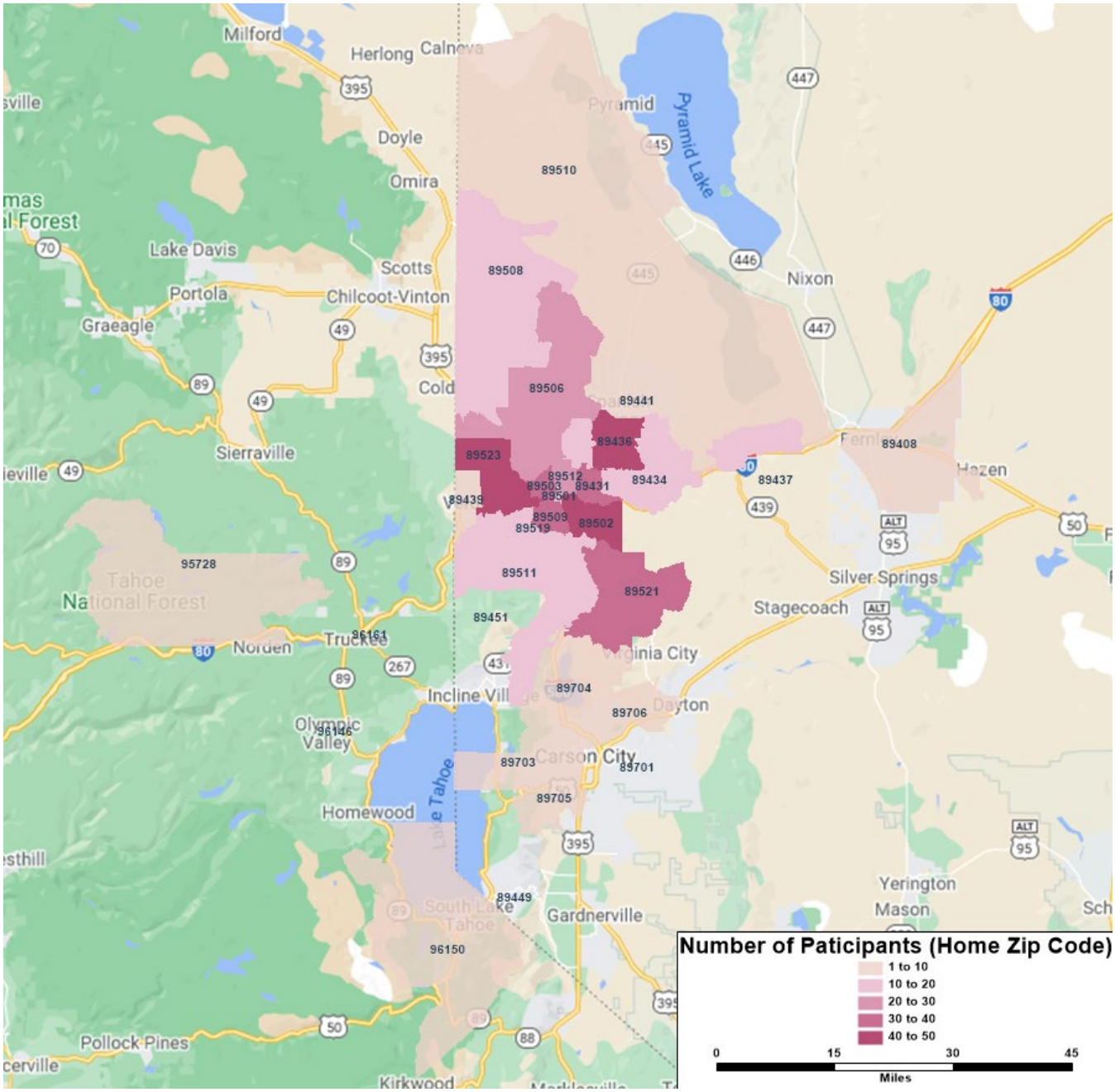
Race/Ethnicity



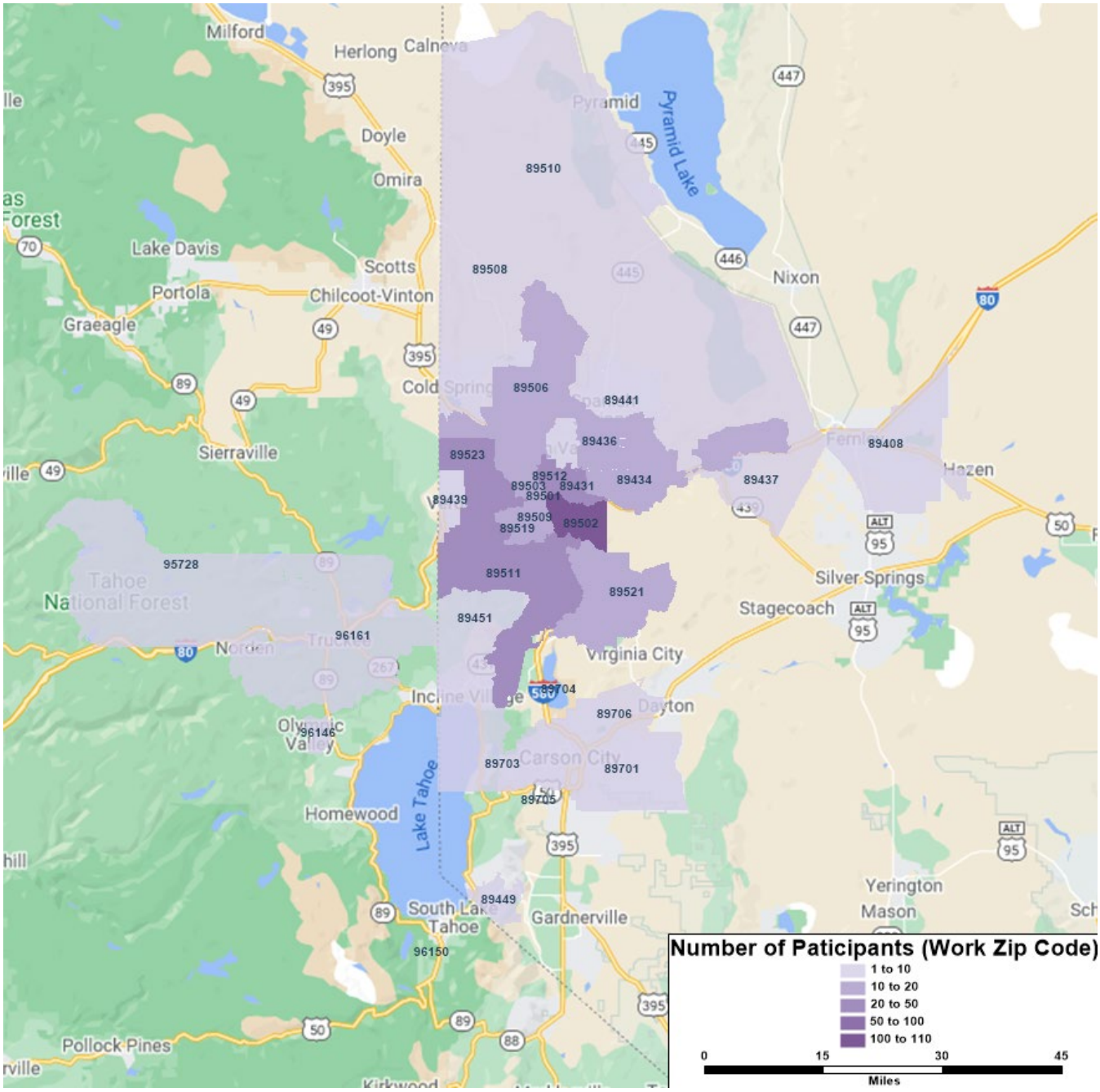
Household Income



Zip Code – Personal (Home)

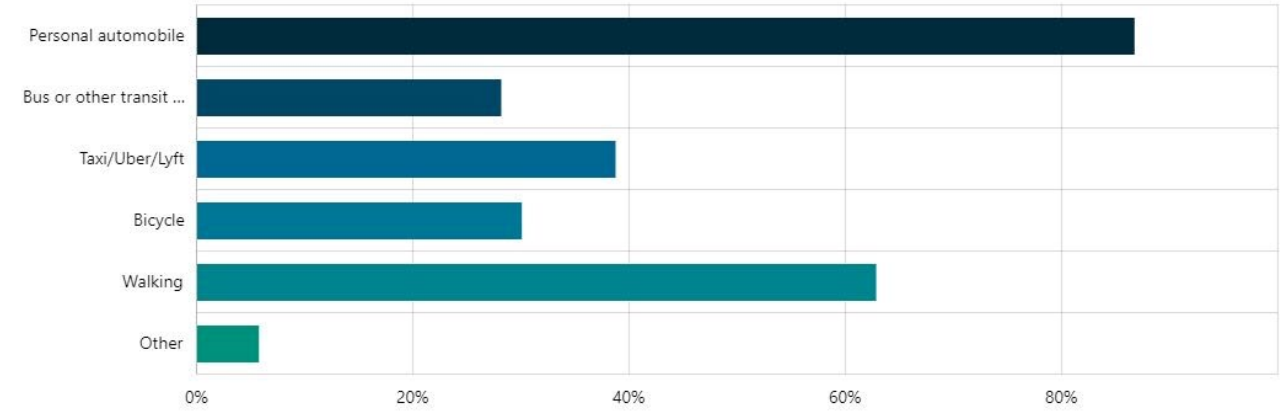


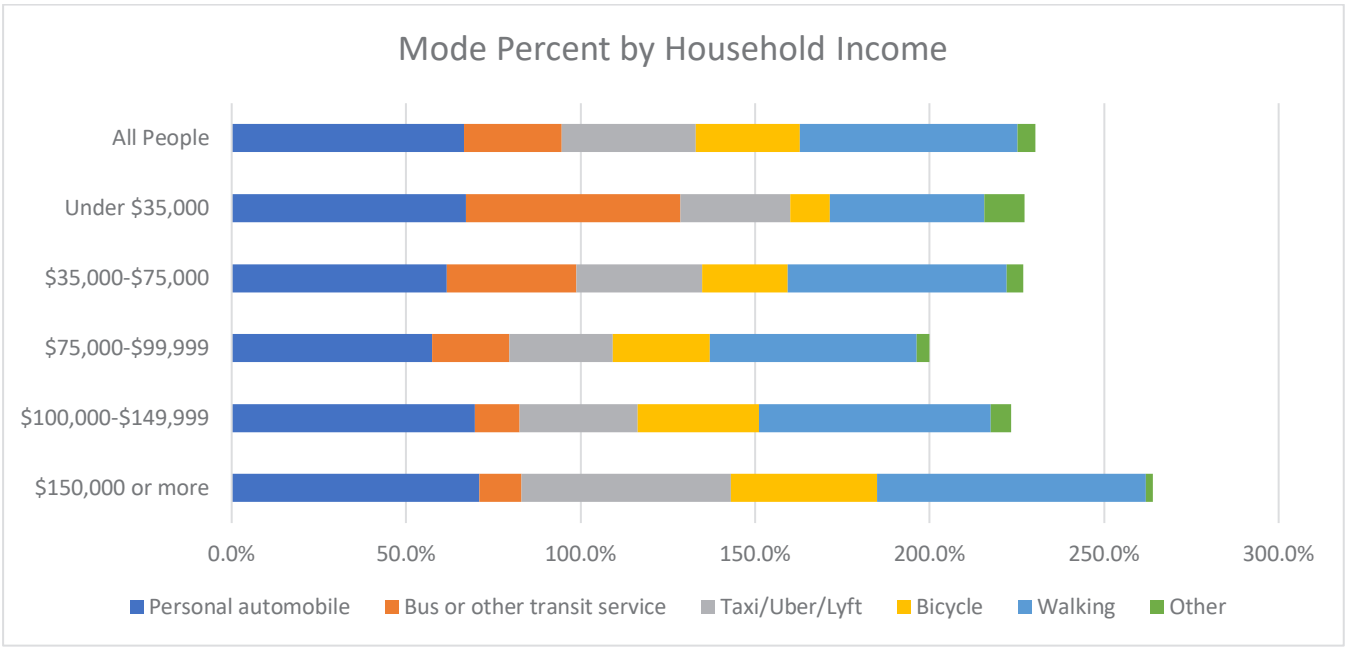
Zip Code - Work



Detailed Analysis

N = 473

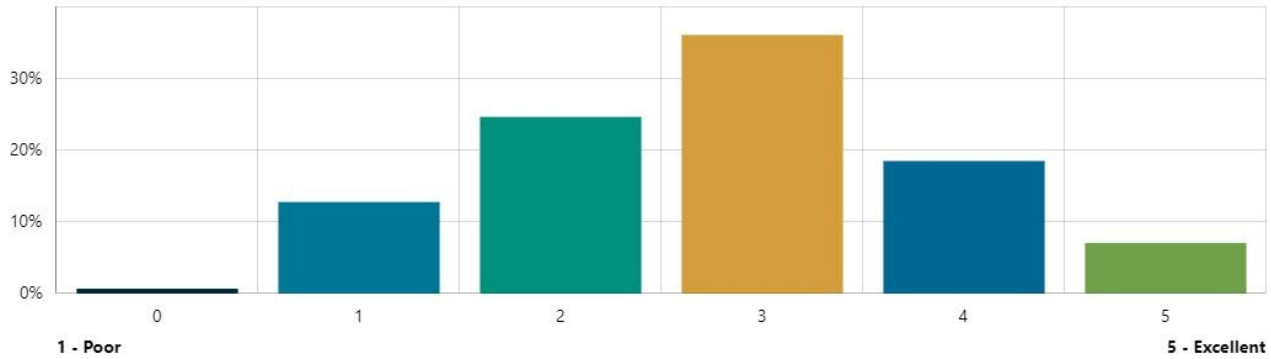




On a scale of 1-5, with 1 being poor and 5 being excellent, how well is the transportation system in Truckee Meadows doing its job of freely moving people and goods?

N = 473

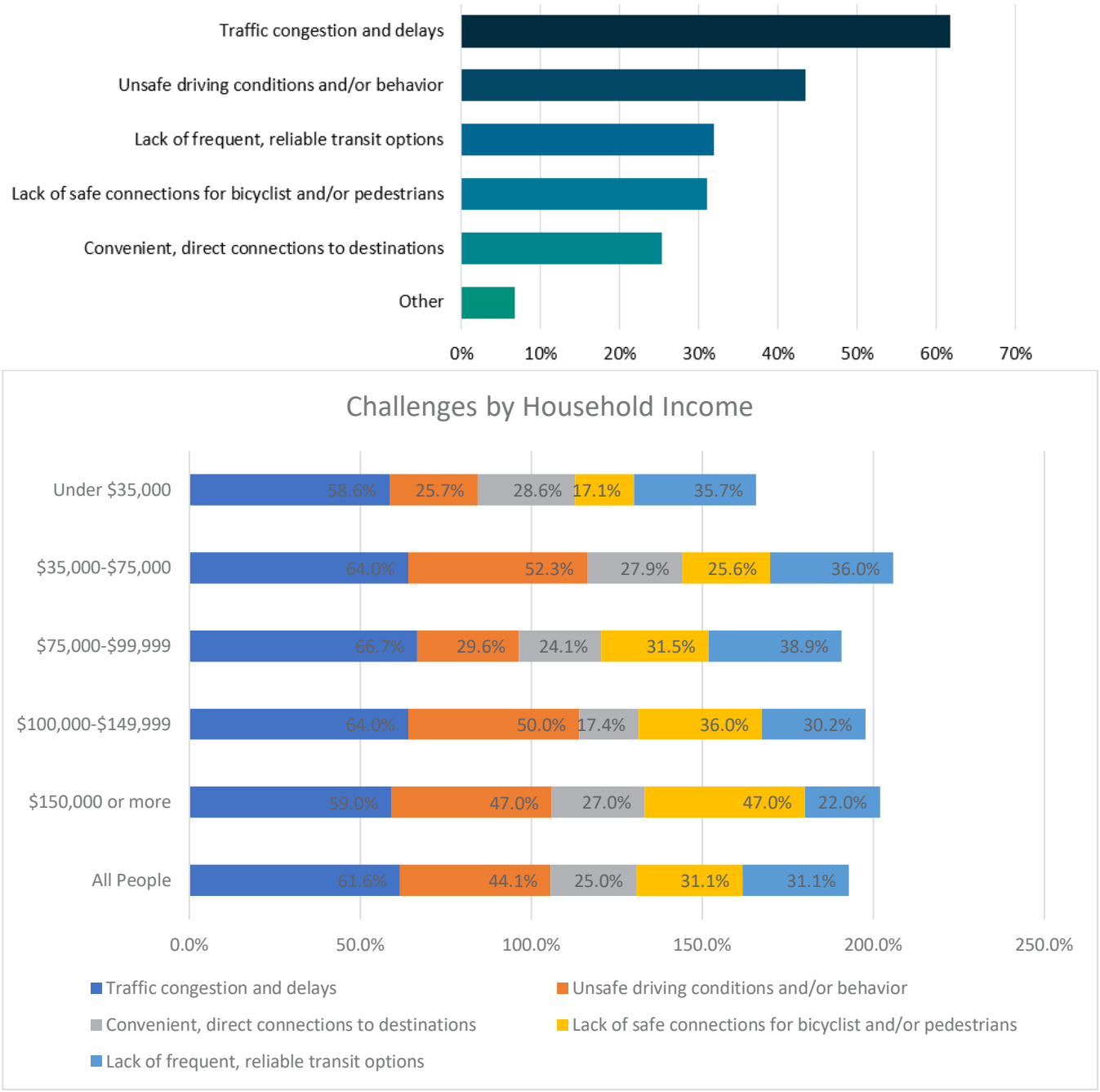
Average: 2.80



What are the two (2) biggest transportation challenges facing the Truckee Meadows?

N = 473

Answer Choice	Percentage	Count
Traffic congestion and delays	61.81%	293
Unsafe driving conditions and/or behavior	44.30%	210
Convenient, direct connections to destinations	25.11%	119
Lack of safe connections for bicyclist and/or pedestrians	31.22%	148
Lack of frequent, reliable transit options	31.22%	148
Other	6.96%	33



Are there any other challenges or general transportation issues that you would like the study team to know about?

N = 344

Inadequate Public Transportation (66)

- Lack of frequent and reliable bus services.

- Limited bus routes, especially in North Valley, Spanish Springs, and Wingfield Springs.
- Poor connection to the airport and regional locations like Fernley and Truckee.
- Demand for light rail systems to connect various parts of the city and neighboring areas.
- Lack of shaded or protected bus stops.
- Insufficient seating and facilities at bus stops.

Safety Concerns (32)

- Unsafe bike lanes and lack of protected lanes.
- Dangerous pedestrian areas and inadequate crosswalks.
- Frequent speeding and reckless driving.

Congestion and Traffic Management (24)

- Poorly timed traffic signals and lack of coordination leading to unnecessary congestion.
- Need for more lanes on major highways like I-580 and Pyramid Highway.
- Overcrowded roads due to new developments without corresponding infrastructure improvements.

Road and Infrastructure Maintenance (21)

- Poor road conditions, potholes, and cracks.
- Inconsistent and substandard bike paths.
- Issues with snow removal affecting bike lanes and sidewalks.

Development and Planning Issues (20)

- Reactive rather than proactive planning for infrastructure.
- Poor planning for new developments leading to congestion and inadequate road capacity.
- Lack of coordination between various development projects.

Cyclist and Pedestrian Infrastructure (19)

- Lack of continuous and safe bike lanes.
- Inadequate sidewalks and pedestrian paths, especially in residential and high-traffic areas.
- Demand for protected bike lanes and better pedestrian amenities.

Need for Alternative Transportation Solutions (14)

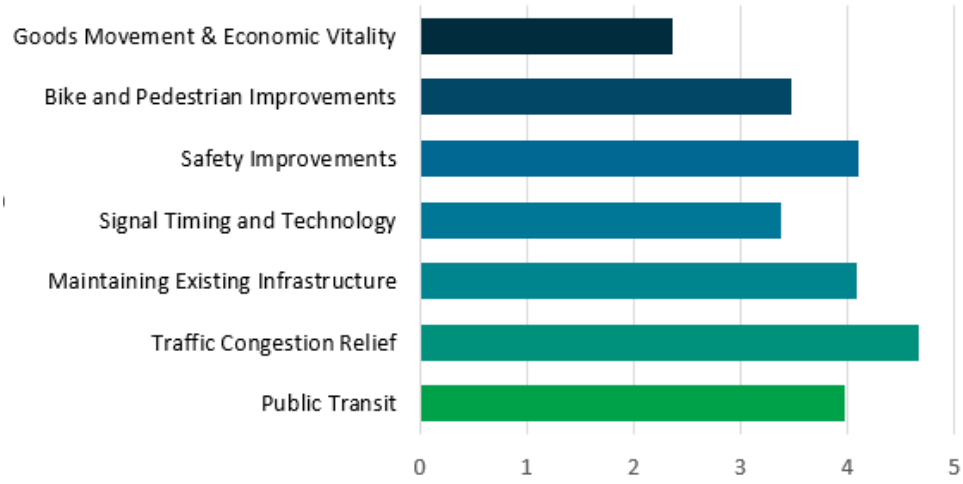
- Demand for ride-sharing programs and carpool lanes.
- Emphasis on developing light rail systems and improving public transit to reduce car dependency.

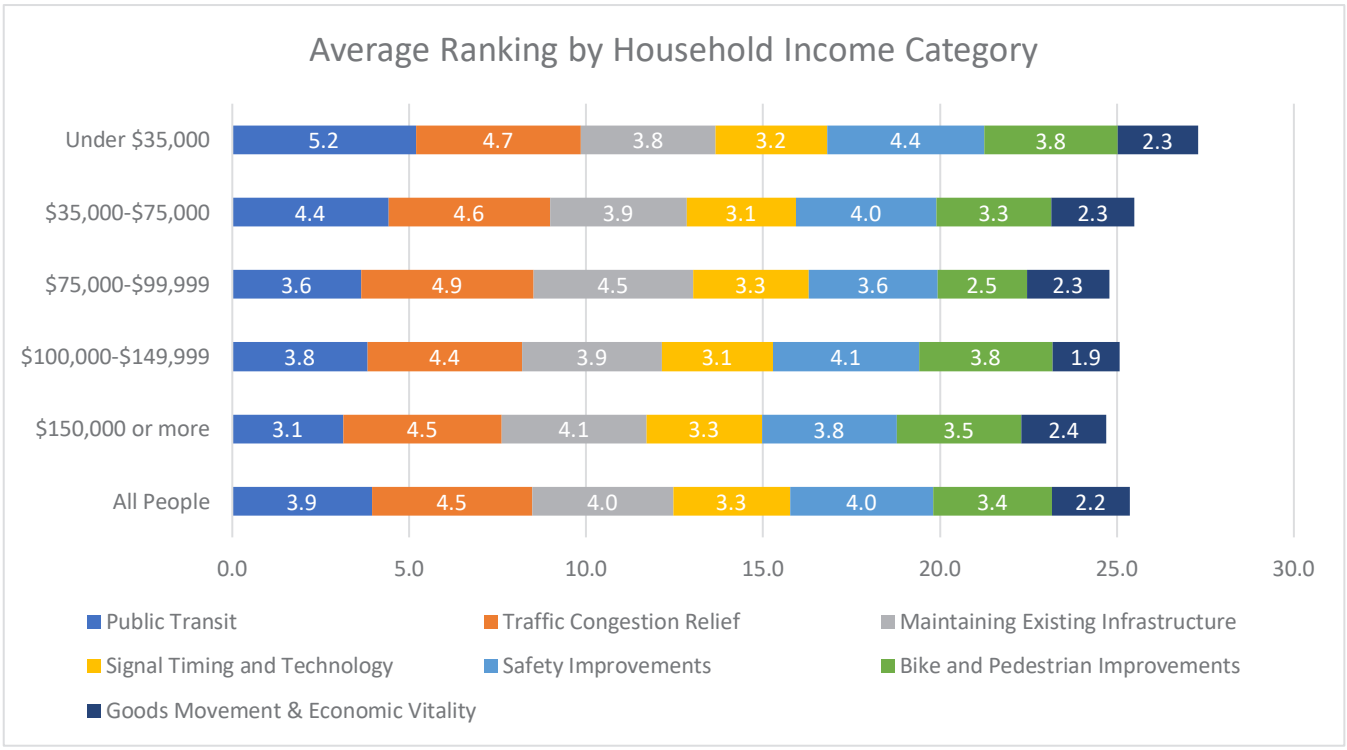
Environmental and Sustainability Concerns (6)

- Demand for idle-free zones to reduce pollution.
- Push for alternative materials for road maintenance to prevent potholes.

If you oversaw transportation funding, how would you rank the following project types on which would receive the most to least funding?

N = 414





N = 414

When you think about transportation in the Truckee Meadows, in 5 words or less, what comes to mind?

N = 444

There is approximately a 15%/85% split between respondents answering positively and negatively about the current transportation system. Most respondents voiced concerns about congestion, slow construction processes/infrastructure, and the unreliability of public transportation options.

Summary Statements

- Unsafe and unreliable public transit
- Growing congestion and traffic delays
- Car-dependent with limited alternatives
- Poorly planned and poorly maintained
- Inadequate public transportation infrastructure
- Frequent road construction causing delays
- Limited bus routes and schedules
- Insufficient bike lanes and paths
- Heavy reliance on personal vehicles
- Slow buses and outdated infrastructure
- Unsafe conditions for pedestrians and cyclists
- Congested roads and poor traffic management
- Inadequate response to population growth
- Inefficient and inconvenient public transport
- High car usage, low alternatives

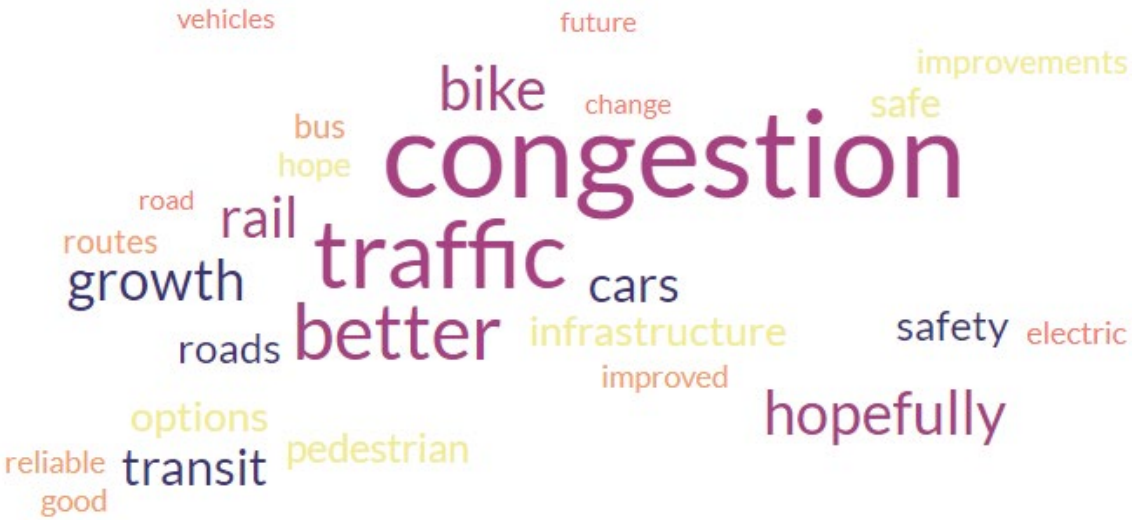
When you think about transportation in the Truckee Meadows in the next 10-20 years, in 5 words or less, what comes to mind?

There is approximately a 30%/70% split between respondents answering positively and negatively about the future of the transportation system. Most respondents are concerned about the region's fast-paced growth and transportation's ability to keep up with growing demand.

Summary Statements

- More reliable bus routes.
- Overcrowded, inadequate public transportation system.
- Expanding population, outdated infrastructure concerns.

- Improved public transit, less congestion.
- High hopes for future improvements.
- Desperately need light rail system.
- Safety for pedestrians and cyclists.
- More lanes for growing population.
- Prioritized sustainable transportation options.
- Inadequate infrastructure, growing traffic issues.
- Need better long-term planning vision.
- Increased congestion, unreliable transit options.
- Improved connectivity, reduced traffic congestion.
- Prioritize efficient public transportation systems.



Geo-Mapping Community Needs

Purpose

To understand public concerns and preferences, as well as inform potential agency preferences and/or weighting should that be incorporated into the performance analysis process. As the nature of this input is specific to geographic locations (coordinates/addresses) the application of the findings exceeds the RTP process. Findings will be used in future planning and corridor studies.

Method

The interactive geo-map was available on the RTP public information webpage from April 9 to May 31, 2024.

Summary of Findings

The heat map below visually identifies areas of concern in specific locations within RTC's jurisdiction. The sections below synthesize input within the Board's prioritized regions: North Valley's, Sun Valley, River Corridor, and Verdi.

North Valleys

Transportation Infrastructure:

- Issues with on/off ramps, slip lanes, and merge lanes
- Suggestions for improvements in road design and traffic flow
- Specific locations mentioned for necessary changes (e.g., I-580, Virginia Rapid Transit, Red Rock Road Interchange)

Public Transit:

- Requests for extending bus routes and improving bus service reliability
- Suggestions for adding shelters at bus stops
- Issues with current FlexRIDE services being unreliable for working individuals

Pedestrian and Cyclist Safety:

- Conflicts between vehicle traffic and pedestrian/bike paths
- Need for infrastructural improvements for safer walking and biking routes
- Specific areas highlighted for lacking sidewalks or having narrow roads unsafe for multiple uses

Community Growth and Development:

- Recognition of growing communities and the need for infrastructure to keep up
- Mention of areas like Cold Spring and Lemmon Valley experiencing rapid growth

Public Amenities:

- Request for the reinstatement of amenities like water fountains in parks
- Suggestions for new amenities such as landscape buffers and pedestrian connections

Traffic Management:

- Need for better traffic management solutions, including traffic lights, roundabouts, and dedicated lanes
- Problems with current traffic congestion and suggestions for improvements

Sun Valley

Pedestrian Safety

- Concerns with pedestrian and bike traffic on mixed-use protected path at I-580 on/off ramp slip lanes

Truckee River Corridor

Pedestrian and Cyclist Infrastructure:

- Calls for pedestrian and cyclist-only bridges, particularly across the river
- Need for protected bike lanes on busy roads and corridors
- Requests for biking/walking paths in areas with high traffic to provide safe routes

Traffic Calming and Road Design:

- Suggestions for narrowing lanes and implementing traffic calming measures, especially in school zones and high-speed areas
- Recommendations for adding bulb-out curb extensions at intersections to improve pedestrian safety and accessibility

Safety and Accessibility Improvements:

- Importance of integrating road design changes to signal drivers to slow down
- Need for cutaways and curb extensions to accommodate people in wheelchairs and with strollers
- Enhancing existing paths and bridges for better pedestrian and cyclist safety

Community and Neighborhood Enhancement:

- Desire to create a pleasant, safe, and accessible neighborhood corridor along the river for pedestrians and cyclists
- Maintenance and improvement of existing paths to better serve the community, such as the Truckee River path

Public Demand and Usage:

- High demand for bike infrastructure due to the presence of various trip generators like schools, shopping centers, and residential areas
- Potential to reduce traffic congestion by providing alternative transportation modes

Bridge and River Crossings:

- Specific mention of bridges (e.g., Sutro St, Wells Ave) needing better accommodation for pedestrians and cyclists
- Suggestions for utilizing existing wide bridges for dedicated biking/walking paths

Verdi

Lack of Sidewalks and Bike Lanes:

- Repeated mentions of the absence of sidewalks and bike lanes in Verdi
- Specific need for pedestrian and bike safety improvements

Infrastructure Improvements:

- Suggestions for adding protected bike lanes that connect to existing paths like the Truckee bike path
- Need for a westbound on-ramp to improve connectivity for Verdi, Mogul, Somersett, and Boomtown

Public Transportation:

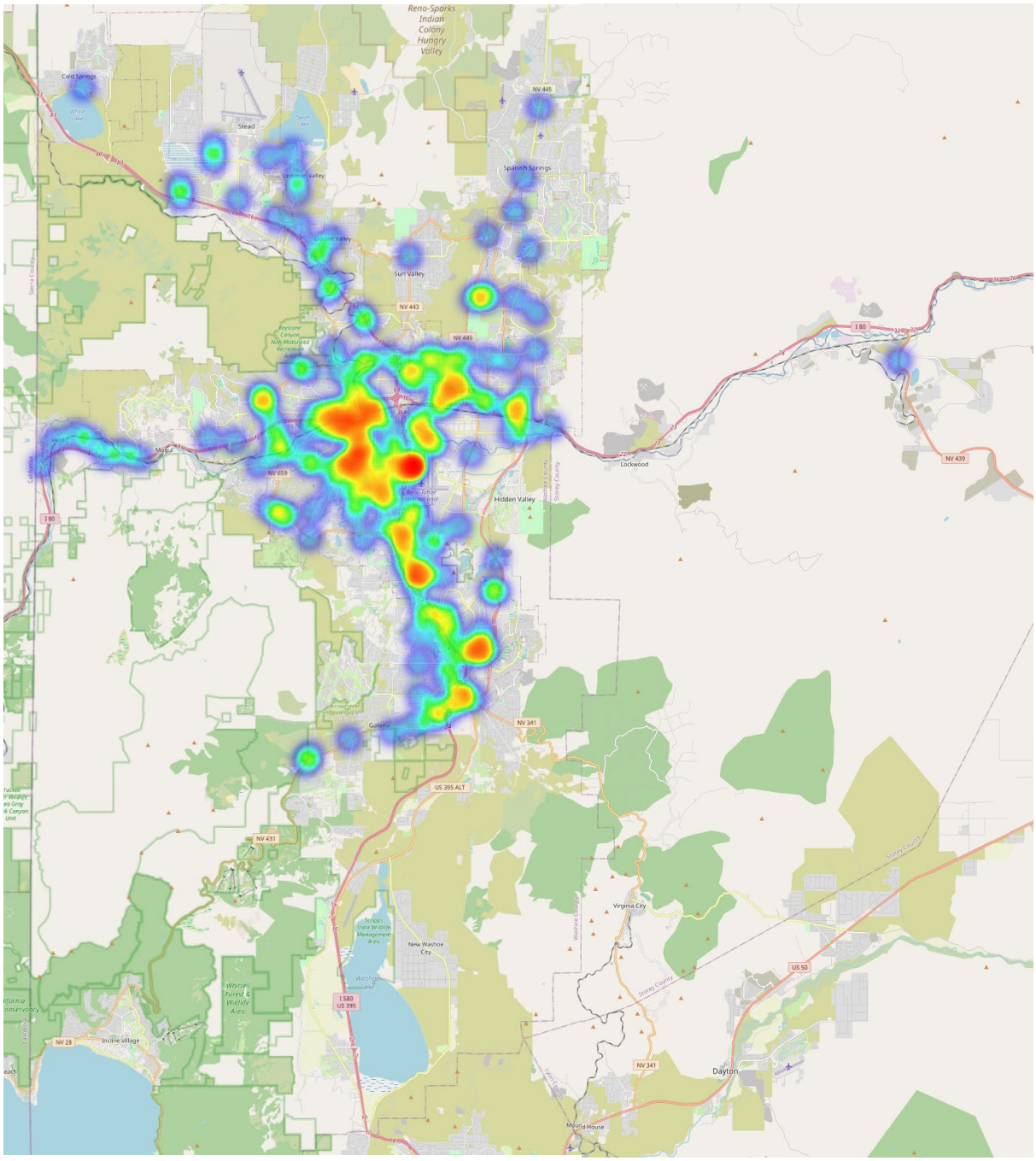
- Request for bus services in the area.

Support for Local Businesses:

- Indication that infrastructure improvements (sidewalks, bike lanes) would benefit local businesses

Park and Ride Facilities:

- Proposal for potential park and ride parking lots



Heat Map of Areas of Concern in Specific Locations from Geo-Mapping Results

Social Sentiment Analysis

Purpose

To gather "observable data" regarding transportation and the transportation network in our community. To summarize broad themes specific to community needs as input into the RTC 2050 Update.

Method

To learn more about local sentiment regarding topics RTC would be interested in, OnStrategy "scraped" the r/Reno subreddit for comments containing specific themes and keywords using custom-built API tools:

- 64,000 members – Reno Subreddit
- 1,782 comments over period 2/11/22 - 2/21/24
- 31 keywords analyzed

When comments on a topic were available, they were analyzed by ChatGPT to apply a "Sentiment Score" running from 1= Very Negative, 3 = Neutral and 5 = Very Positive. The aggregate of the comments makes up the final "Sentiment" score.

The individual "Sentiment" scores were then averaged to determine a topic's overall score. "Sentiments" in the highest third of scores were deemed "Positive," the middle third was deemed "Neutral," and the lowest third was deemed "Negative."

Summary of Findings

"Rides" – Sentiment & Response Themes

Sentiment: 3.28

Reponses: 100

Themes

Rides Response Themes
Tesla's Use of Taxpayer Dollars (Negative) • Critique on Tesla's Funding Source • Impact on Public Services
Driving Behavior on Reno Highways (Neutral) • Traffic Behavior • Driving Habits • Lane Usage
Parking & Bus Usage (Neutral) • Commuting • Winter Parking Options • Public Transportation • Workplace Transportation
Non-Car Travel Options in Tahoe (Inquisitive)

• Seeking Transportation Suggestions • Train, Bus, and TART Exploration • Ride Share Options in the Region

"Drivers" – Sentiment & Response Themes

Sentiment: 3.04

Responses: 99

Themes

Drivers Response Themes
Safety and Crime Concerns (Negative) • Traffic Safety • Altercations on the Road
Transportation and Road Updates (Inquisitive) • Road Conditions & Traffic Updates • Seeking Information on Construction Timetables
Public Transportation Issues (Frustrated) • Complaints about Bus Routes • Ineffectiveness of Public Transportation • Driver Criticism
General Traffic Inquiries (Mixed) • Encouraging Community Interaction • General Traffic Concerns • Desires for Improvement

"Crash" – Sentiment & Response Themes

Sentiment: 3.06

Responses: 97

Themes

Crash Response Themes
Concerns about Road Maintenance (Frustration) • Comparisons with California Roads • Expectations for Public Service • Impact of Snow/Ice on Roads
Accidents Involving Trucks and Dangerous Driving (Concerned) • Semi-Truck Accidents • Unsafe Driving Practices • Plea to Restrict Trucks in Inclement Weather
Witnessing and Reporting Accidents (Concerned) • Access to Witnesses and Reporting Car Crashes • Information Sharing on Accidents

"Road" – Sentiment & Response Themes

Sentiment: 3.18

Responses: 97

Themes

Road Response Themes
Weather and Road Conditions (Mixed: Concern, Frustration, Appreciation) • Snowstorms, Icy Roads, Closures, and Impact on Daily Life
City Development and Projects (Curious & Observation) • Inquiries about Oddie District Project • Improvements in Roads • Development in the City
City Infrastructure and Snow Removal (Concerned) • Comparisons with Other Regions • Effectiveness of Plowing • Expressing Disappointment with Road Conditions
Observations About Driving (Annoyance) • Complaints About Reckless Driving • Concerns About Pets Crossing the Roads • Reflections on Driving Experiences

"Highway" – Sentiment & Response Themes

Sentiment: 3.25

Responses: 97

Themes

Highway Response Themes
Development Impact on Traffic (Negative) • Frustration with increased traffic on Pyramid Highway (McCarran intersection) • Disappointment in the worsening traffic situation and questions the sudden influx of people
Infrastructure and Traffic Management (Neg/Neutral) • Criticism of Road Planning and Infrastructure • Frustration With the Inadequacy of Road Designs, Particularly on Pyramid Highway
Impact of Industrial Development (Negative) • Criticism of the Industrial Development, Particularly the Tesla Gigafactory, For Straining Public Resources Without Adequate Tax Revenue • Expresses Concerns About the Consequences of Rapid Growth on Infrastructure, Education, and Public Services.
Concerns About Truck Impact on Roads and Safety (Negative) • Expressing Concerns about Litter • Unsafe Driving Practices and the Strain on Roads and Safety, (Esp. Impact of Trucks on I-80) • Calls for Safer and More Efficient Trucking Practices

"Traffic" – Sentiment & Response Themes

Sentiment: 3.10

Responses: 96

Themes

Traffic Response Themes
Public Transportation and Commuting (Neutral/Negative) • Discussions on Public Transportation • Concerns about Traffic Affecting Commuting and Daily Life
City Infrastructure and Traffic Management (Negative) • Criticism of Traffic Light Synchronizations • Calls for Better Traffic Management • Complaints About Effectiveness of Current Systems
Community Engagement and Meetings (Neutral/Positive) • Encouraging Community Members to Attend Meetings Regarding Road Improvement • Seeking Feedback and Support for Proposed Changes • Sharing Information About Community Events
Traffic Woes & Road Updates (Negative) • Complaints About Traffic • Road Closures and Construction Causing Inconvenience • Frustration with Delays

"Speeding" – Sentiment & Response Themes

Sentiment: 3.07

Responses: 83

Themes

Speeding Response Themes
Cyclists and Traffic (Neutral/Positive) • Observations About Cyclists Biking Against Traffic
Driving Habits in Reno (Negative) • Complaints About Reckless Driving • Tailgating, Speeding, Aggressive Maneuvers
Electric Scooter Dilemma (Neutral) • Legality of Riding and Electric Scooter • Safety Practices
Pedestrian Accidents and Street Safety (Concerned) • Highlighting Recent Pedestrian Accidents • Discussing Safety Issues Related to Poorly Lit Streets • Advocating for More Street Lights

“Street” – Sentiment & Response Themes

Sentiment: 3.19

Responses: 83

Themes

Street Response Themes
Bus Stop and RTC Bus Parking (Curiosity/Concern) • Concerns about Parked RTC Buses
Traffic Light Functionality (Informative) • Functionality of Traffic Lights • Advice for Optimizing Traffic Flow
Construction Impact on Driving (Frustration) • Challenges to Drivers Based on Construction • Impact to Delivery Services and General Traffic Flow

“Freeway” – Sentiment & Response Themes

Sentiment: 3.07

Responses: 83

Themes

Freeway Response Themes
Traffic Conditions & Closures (Neutral) • Concerns about Road Closures • Inquiries About Specific Traffic Situations • Frustration Over Worsening Traffic Conditions
Road Hazards & Incidents (Informative) • Observation of Road Hazards, Including Tires on Freeways, Cars Pinned Between Barriers, and Reckless Drivers
Enforcement & Emergency Response (Frustration) • Comments on Law Enforcement Observations • Reporting Incidents • Seeking Information for Where to Find Freeway/Road Closure Info

“Biking” – Sentiment & Response Themes

Sentiment: 3.29

Responses: 83

Themes

Biking Response Themes
Bike Safety & Behavior (Concerned) • Observations about Cyclists Behavior on Roads and Intersections • Emphasizing Need for Improved Bike Safety
Bike Lane Infrastructure (Concerned) • Discussions about Conditions of Bike Lanes • Questions on Bike Lane Planning • Community Interest in Enhanced Bike Infrastructure

RTC Board

Purpose

To understand the RTC Board's geographic focus areas for the 2050 Regional Transportation Plan update.

Method

Board members were asked to identify their five top "areas of community need." An open discussion followed.

Summary of Findings

Geographic Priorities

Top Areas of Focus:

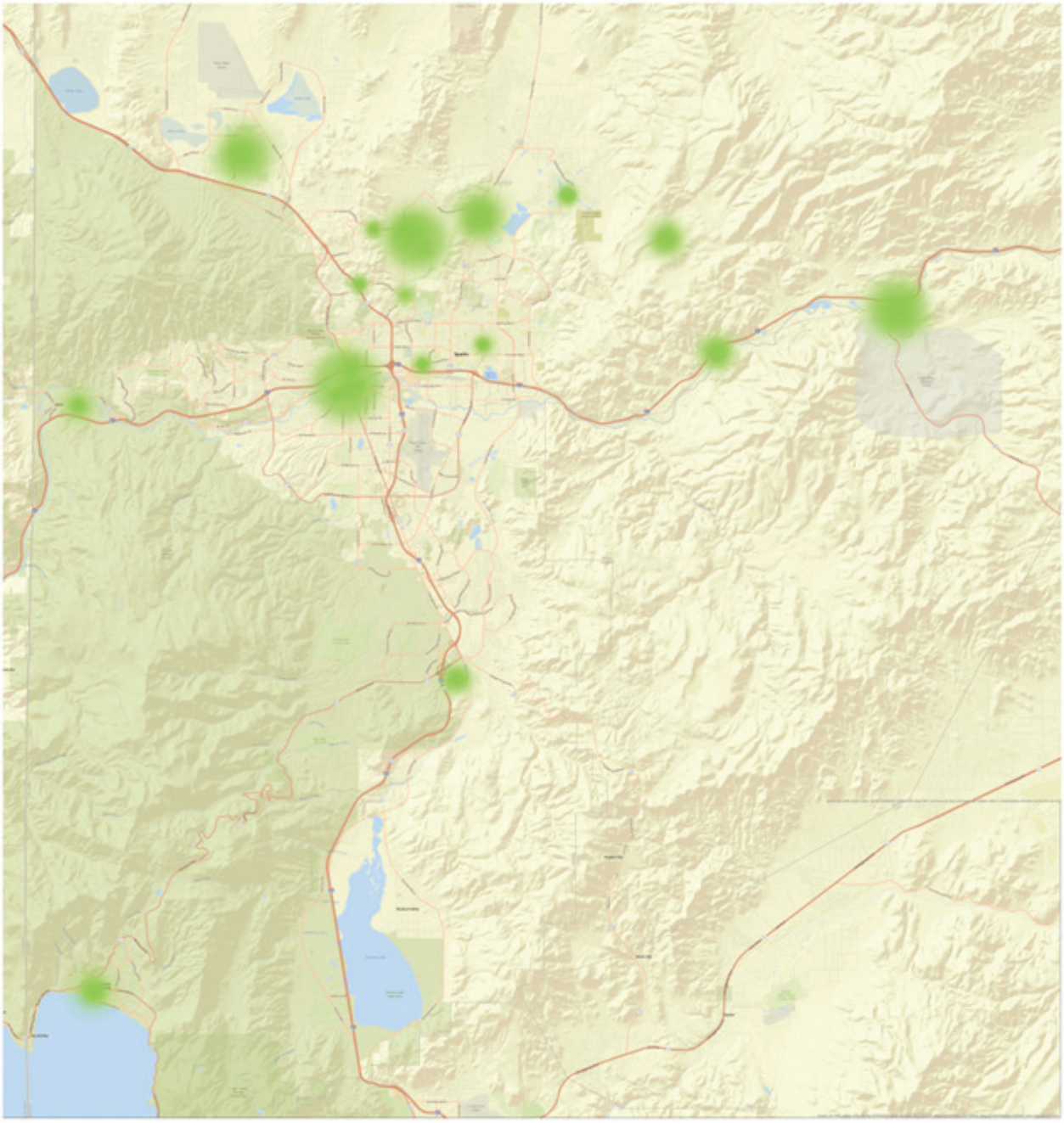
- North Valleys (Resiliency)
- Sun Valley
- River Corridor as Transportation (More Than Downtown)
- Lake Tahoe (Micro, Park & Ride)
- Verdi
- La Posada to USA Parkway

Others:

- 4th Street > Downtown Connect
- Mccarren Sync
- I-80 Spaghetti Bowl
- Downtown

Additional Priorities

- Toll Road To USA Parkway
- Connection To Downtown From 4th Street
- Signals On Mccarren
- Pedestrian Safety in Sun Valley
- Micromodal Facilities in The River Corridor
- North Valleys Congestion Mitigation



Map of Areas of Concern in Specific Locations from RTP Board Input

Regional Government Partners

Purpose

- Present elected officials with 2050 Regional Transportation Plan Update Process.
- Inform Board and Council members of the purpose of the Agency Working Group.
- Accept process and transportation system recommendations and priorities from Board and Council members.

Method

The Washoe County Board of Commissioners, City of Reno City Council, and City of Sparks City Council received an overview of the Regional Transportation Planning process in a regularly scheduled Board meeting.

Summary of Feedback

2050 RTP Update Process

1. Providing Paper Copies of The Survey for Seniors to Complete At An Upcoming Workshop
2. Providing The Public Survey and Webpage for City and County Promotion on Social Media
3. Including Tahoe Transportation District in The Agency Working Group
4. Allowing For Public Input on Specific Roads for Rehab, Maintenance, Etc.

Transportation System

1. Continued Focus on Safety
2. Enhanced Project Communication, Particularly Defining the Difference Between RTC And NDOT Projects
3. Greater Focus on Congestion Reduction in Roadways
4. Detailed Communication of The RTC's Project Funding Prioritization Process
5. Specific Attention To RTC/Tahoe Transportation District's Connection Points
6. Request For Additional Green Bike Lanes to Improve Bicycle Safety

Agency Working Group

Purpose

The Agency Working Group is a cross-organization task force soliciting input from respective organizations on RTP-specific topics for discussion at AWG meetings. Members are responsible for representing their organization's input, perspective, and opinions in RTP planning and acting as a feedback loop to their organizations. A complete list of Agency Working Group members can be found below.

Method

The Agency Working Group meets bimonthly via Zoom. Topics vary but are typically inclusive of:

1. RTTP Project Updates
2. Discussion of Insights Since the Previous AWG
3. Presentation of Technical Work Complete To-Date for Open Discussion

Summary of Findings

Ranking Priority Areas for Research and Analysis

THEME: Efficient Operations Across All Modes (47)

- Efficiency & System Reliability (11)
- Congestion Reduction (11)
- Connectivity of Transportation System (10)
- Regional Integrated & Inclusive Transportation (8)
- Active Transportation (8)
- Transit Infrastructure (7)
- Transit Choices (to include eliminating fares) (2)

THEME: Economic Development and Equity (45)

- Regional Planning & Development (14)
- Goods Movement & Economic Vitality (9)
- Funding Considerations (8)
- Equitable Development (5)
- Strategic Investment & Equitable Project Delivery (3)
- Public Engagement (3)
- Workforce & Student Transportation (2)
- Enhance Travel & Tourism (1)

THEME: Safe and Reliable Transportation System (26)

- Infrastructure Condition (10)
- Safety (to include pedestrian safety) (9)
- Maintainability (5)
- Security of the Transportation System (2)

THEME: Sustainability and Resiliency (21)

- Environmental Sustainability (8)
- Resiliency (natural disasters & stormwater, fuel & energy) (5)
- Reducing Vehicle Miles Traveled (4)
- Resident Health (3)
- Impact of EV & New Modes (1)

Agency Working Group

Members

Jennifer Thomason, Army Corps

Angela Fuss, City of Reno

Grace Mackedon City of Reno

John Flansberg, City of Reno

Kerrie Koski, City of Reno

Kurt Dietrich, City of Reno

Amber Sosa, City of Sparks

Jon Ericson, City of Sparks

Jim Rundle, City of Sparks

Karina O'Connor, EPA

Michael Dorantes, EPA

Abdalla Abdelmoez, FHWA

Bryan Weber, FHWA

Alex Smith, FTA

Taquan Jackson, Keolis

Kevin Verre, NDOT

Sondra Rosenberg, NDOT

Craig Petersen, NNPH

Francisco Vega, NNPH

John English, NNPH

Brendan Schnieder, NNPH

Johnnie Garcia, PLPT

Hillary Lopez, Reno Housing Authority

Elaine Wiseman, RSIC

Candace Stowell, RSIC

Gary Probert, RTTA

Lissa Butterfield, RTTA

Jeremy Smith, TMRPA

Erin Dixon, Washoe County

Julee Olander, Washoe County

Kelli Seals, Washoe County

Mitch Fink, Washoe County

Adam Searcy, WCSD

Kyle Chisholm, WCSD

Rick Martin, WCSD

Jennifer Iveson, WCSP

Nancy McCormick, EDAWN

Brian Buttazoni, BLM

Paul Enos, Nevada Trucking Association

Alexis Motarex, AGC

Carl Hasty. Tahoe Transportation District

Sienna Reid, City of Sparks

Scott Carey, City of Sparks

AWG Top Areas of Focus for the RTP Update

At the AWG kick-off meeting, 30 out of 41 participants selected their top 5 “most important areas for the RTP Update.” The summary is below.

Areas of Focus, Ranked

1. Regional Planning & Development (14)
2. Efficiency & System Reliability (11)
3. Congestion Reduction (11)
4. Infrastructure Condition (10)

5. Connectivity of Transportation System (10)
6. Goods Movement & Economic Vitality (9)
7. Safety (to include pedestrian safety) (9)
8. Environmental Sustainability (8)
9. Funding Considerations (8)
10. Regional Integrated & Inclusive Transportation (8)
11. Active Transportation (8)
12. Transit Infrastructure (7)
13. Equitable Development (5)
14. Maintainability (5)
15. Resiliency (natural disasters & stormwater, fuel & energy) (5)
16. Reducing Vehicle Miles Traveled (4)
17. Public Engagement (3)
18. Resident Health (3)
19. Strategic Investment & Equitable Project Delivery (3)
20. Security of the Transportation System (2)
21. Transit Choices (to include eliminating fares) (2)
22. Workforce & Student Transportation (2)
23. Impact of EV & New Modes (1)
24. Enhance Travel & Tourism (1)

Inter-County Working Group

Purpose

The Inter-County Working Group is a group focused on providing feedback through inter-regional collaboration with nearby cities, counties, and MPOs to ensure that RTC can build on transportation linkages and economic ties and reduce the duplication of efforts attempting to accomplish the same goal.

Method

The Agency Working Group met on 3/1/2024 via Zoom. Topics discussed included:

1. Inter-county transportation issues that cross the boundaries of regions

The Agency Working Group was engaged again in January 2025 to review the draft RTP.

Members

Carl Hasty - District Manager, Tahoe Transportation District

Derek Starkey – City Engineer, City of Fernley

Jeremy Smith, Director, TMRPA

John Clerici – US 395 Coalition

Kathy Canfield – Planning Manager, Storey County

Kelly Norman -Senior Transportation Planner, Carson Area Metropolitan Planning Organization

Michelle Glickert, Principal Transportation Planner, Tahoe Regional Planning Agency

Kevin Verre - Multi-Modal and Program Development Chief, NDOT

Mark Wooster - Performance Analysis Division Chief, NDOT

APPENDIX B

Fiscally Constrained Project List

2025-2034 PROJECTS

Freeway Projects

Project	Limits/Description	YOE Cost Estimate
I-80 East Widening	Vista Blvd. to USA Pkwy.	$659,654,115
I-80 West Reno Bridges Replacement Part 1	Replace Garson Rd., Mogul Rd., W. 4th St., Mae Anne Ave. Bridges	$155,918,245
I-80 West Reno Bridges Replacement Part 2	Replace Truckee River/RR, I-80 Business Loop, Truckee River, S Verdi Rd/RR Bridges	$177,506,926
Reno Spaghetti Bowl Phase 2	I-80 Improvements from Spaghetti Bowl to E. McCarran Blvd.	$809,575,505
US 395 North Valleys Phase 2	US 395 Widening from Golden Valley Rd. to Stead Blvd.	$275,855,357

Capacity Projects

Project	Limits/Description	YOE Cost Estimate
Arrowcreek Pkwy. Capacity	Wedge Pkwy. to Zolezzi Ln.	$18,470,315
Buck Dr. Capacity	Lemmon Dr. to N. Hills Blvd.	$4,797,484
Geiger Grade Road Realignment	New 4 Lane Road from Alt US 395 to Toll Rd.	$101,346,859
Highland Ranch Pkwy. Capacity	Sun Valley Blvd.to Pyramid Hwy.	$61,767,613
Lear Blvd. Connection	Military Rd. to Lemmon Dr.	$43,777,046
Lemmon Dr. Segment 2	Fleetwood Dr. to Ramsey Way.	$81,557,236
McCarran Blvd. Lakeside Dr. to Plumas St. Capacity	Add Lanes, Intersection Improvements, and Shared Use Paths	$7,316,164
McCarran Blvd., Longley Ln. to Airway Dr. Capacity	Add lanes and Eastbound shared use path	$17,990,567
McCarran Blvd., Neil Rd. to South Virginia St. Capacity	Remove Lanes and Provide Protected Shared Use Path.	$8,395,598
McCarran Blvd., Plumb Ln. to I-80 Capacity	Add Lanes, Intersection Improvements, and Shared Use Paths	$55,650,820
Military Rd. Capacity	Lemmon Dr. to Lear Blvd.	$46,175,788
Mill St. Safety and Capacity	Kietzke Ln. to Terminal Way	$38,379,876
Mira Loma Dr. Capacity	McCarran Blvd. to Veterans Pkwy.	$16,431,384
Moya Blvd. Capacity	Red Rock Rd. to Echo Ave.	$28,664,970
Mt. Rose Hwy. Corridor Improvements (Group 1 Projects)	Douglas Fir Dr. to Bordeaux Dr.	$20,509,246
N. Hills Blvd. Capacity	Golden Valley Rd. to Buck Dr.	$43,777,046
North Virginia St. Capacity	Panther Dr. to Stead Blvd.	$101,946,545

Panther Dr. Extension	N. Virginia St. to Panther Dr. to N. Hills Blvd.	$18,590,252
Pembroke Dr. Capacity	McCarran Blvd. to Veterans Pkwy.	$19,189,938
Pyramid Hwy. Operations Improvements	Add Southbound Lane, Egyptian Dr. to Ingenuity Ave.	$17,990,567
Pyramid Hwy./ US 395 Connector Phase 2	Widen Disc Dr. from Pyramid Hwy. to Vista Blvd.	$30,284,121
Sparks Blvd. Capacity	I-80 WB Ramps to Baring Blvd.	$83,776,073
Sparks Blvd. Capacity	Baring Blvd. to Disc Dr.	$54,811,260
Veterans Pkwy. Widening	S. Virginia St to Damonte Ranch Pkwy. Extension	$7,304,170
Vista Blvd. Widening South	I-80 to Prater Way	$23,507,674
O'Brien's Pass Capacity	Spearhead Way to Sun Valley Blvd.	$75,440,443

Multimodal Projects

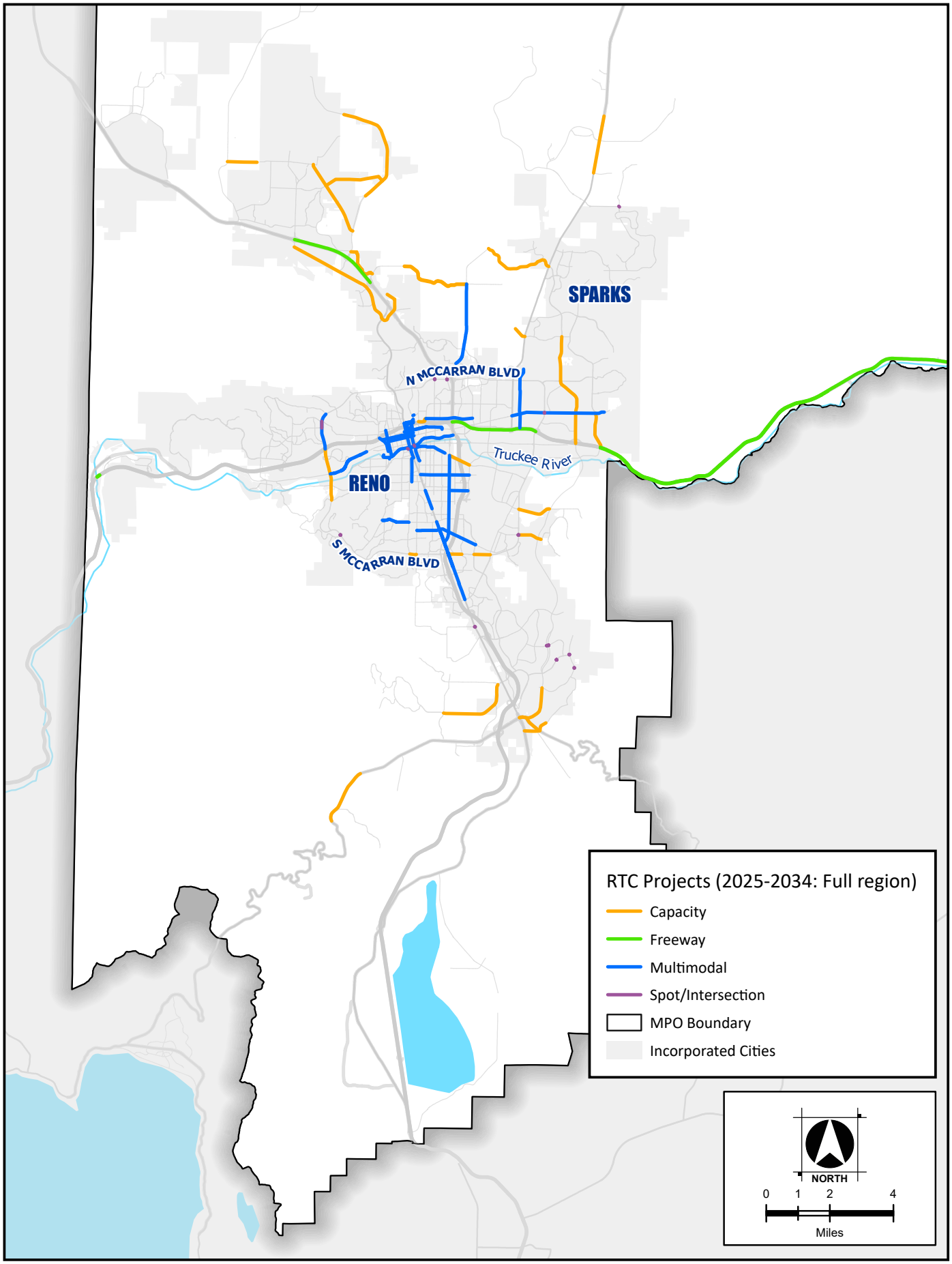
Project	Limits/Description	YOE Cost Estimate
4th St. Bike lanes (Sparks)	Victorian Ave. to Queen Way	$9,834,843
9th St./G St. Multimidal	Enhanced Sidewalks and Bike Lanes, Wells Ave. to El Rancho Dr.	$13,552,894
Biggest Little Bike Network	Multiple Locations	$23,987,422
E. 6th St. Bicycle Facility & Safety	Virginia St. to 4th St.	$29,984,278
Forest St. Safety & Multimodal	Mount Rose St. to California Ave.	$1,319,308
Keystone Ave. Multimodal	1st St. to I-80	$13,552,894
Keystone Ave. Bridge Replacement	Truckee River Bridge Replacement	$89,712,960
Kietzke Ln. ADA Improvements	Virginia St. to Mill St.	$4,797,484
McCarran Blvd. I-80 to Las Brisas Blvd. Multimodal	Provide Protected Shared Use Paths	$4,077,862
Mill St. Downtown Multimodal	Lake St. to Gould St.	$12,113,648
Moana Ln. Multimodal and ADA	Skyline Blvd. to Plumas St.	$13,672,831
Peckham Ln. Multimodal	Lakeside Dr. to Airway Dr.	$18,110,504
Plumb Ln. Multimodal	Bike Lanes and Sidewalks, Kietzke Ln. to Terminal Way	$10,914,277
Prater Way Bike Lanes	Pyramid Way to Probasco Way and Sparks Blvd. to Petes Way	$18,950,064
S. Virginia St. Multimodal and ADA North	Meadowood Mall Cr. to Moana Ln.	$19,429,812
S. Virginia St. Multimodal and ADA South	Longley Ln. to Meadowood Mall Cr.	$14,272,516

Spanish Springs Rd. Safety and Multimodal	N. Truckee Ln. to Sparks Blvd.	$12,593,397
Sun Valley Blvd. Multimodal	Scottsdale Rd. to 7th Ave.	$95,949,689
Truckee River Cantilever	Cantilever Path Behind Auto Museum and AT&T	$6,296,698
Truckee River Vision Plan	Reconfigure Riverside Dr. and Various Intersection Improvements	$5,996,856
Truckee River Vision Plan West	Western Truckee River Improvements.	$14,392,453
University Area Roadway Improvements Phase 1	Multiple Locations	$4,197,799
Vassar St. Bike Facility	Kietzke Ln. to Terminal Way	$6,836,415
Vassar St. Bike Facility	Holcomb Ave. to Kietzke Ln.	$6,716,478
Victorian Ave. Multimodal	Bike Facilities from 16th St. to Pyramid Way	$6,356,667
W. 4th St. Pedestrian & Safety	McCarran Ave. to Keystone Ave.	$32,904,747
W. 4th St. Pedestrian	Vine St. to Sierra St.	$10,194,655
O'Brien's Pass Safety Project	Safety and Shared Use Path from Spearhead Way to Sun Valley Blvd.	$28,425,096

Spot and Intersection Improvements

Project	Limits/Description	YOE Cost Estimate
La Posada Dr. and Cordoba Blvd.	Construct Roundabout	$5,996,856
Lake St. Bridge Replacement	Over Truckee River	$40,178,932
McCarran Blvd./Cashill Blvd.	Add Thru and Left Turn Lanes	$6,116,793
McCarran Blvd./Clear Acre Ln.	Add Intersection Capacity	$2,398,742
McCarran Blvd./Mae Anne Ave./W 7th St.	Add Intersection Capacity	$3,718,050
McCarran Blvd./Mira Loma Dr.	Add Westbound and Northbound Improvements	$4,077,862
McCarran Blvd./Prater Way	Add Southbound Left and Modify Right Turns	$5,277,233
McCarran Blvd./Sutro St.	Add Northbound Thru and Modify Rights	$3,238,302
Rio Wrangler Pkwy. Roundabouts	Steamboat Pkwy. and McCauley Ranch Blvd.	$8,395,598
S. Virginia St./Holcomb Ranch Ln.	Safety and Access Management Improvements	$1,095,626
Sierra St. Bridge Replacement	Over Truckee River	$40,598,712
Steamboat Pkwy./Hampton Park Dr.	Signalization Improvements	$1,095,626
Veterans Pkwy./Carat Ave. Enhancements	Add Eastbound and Westbound Right Turn Lanes	$1,511,208

Map B.1 Projects funded in 2025-2034 (Full Region)



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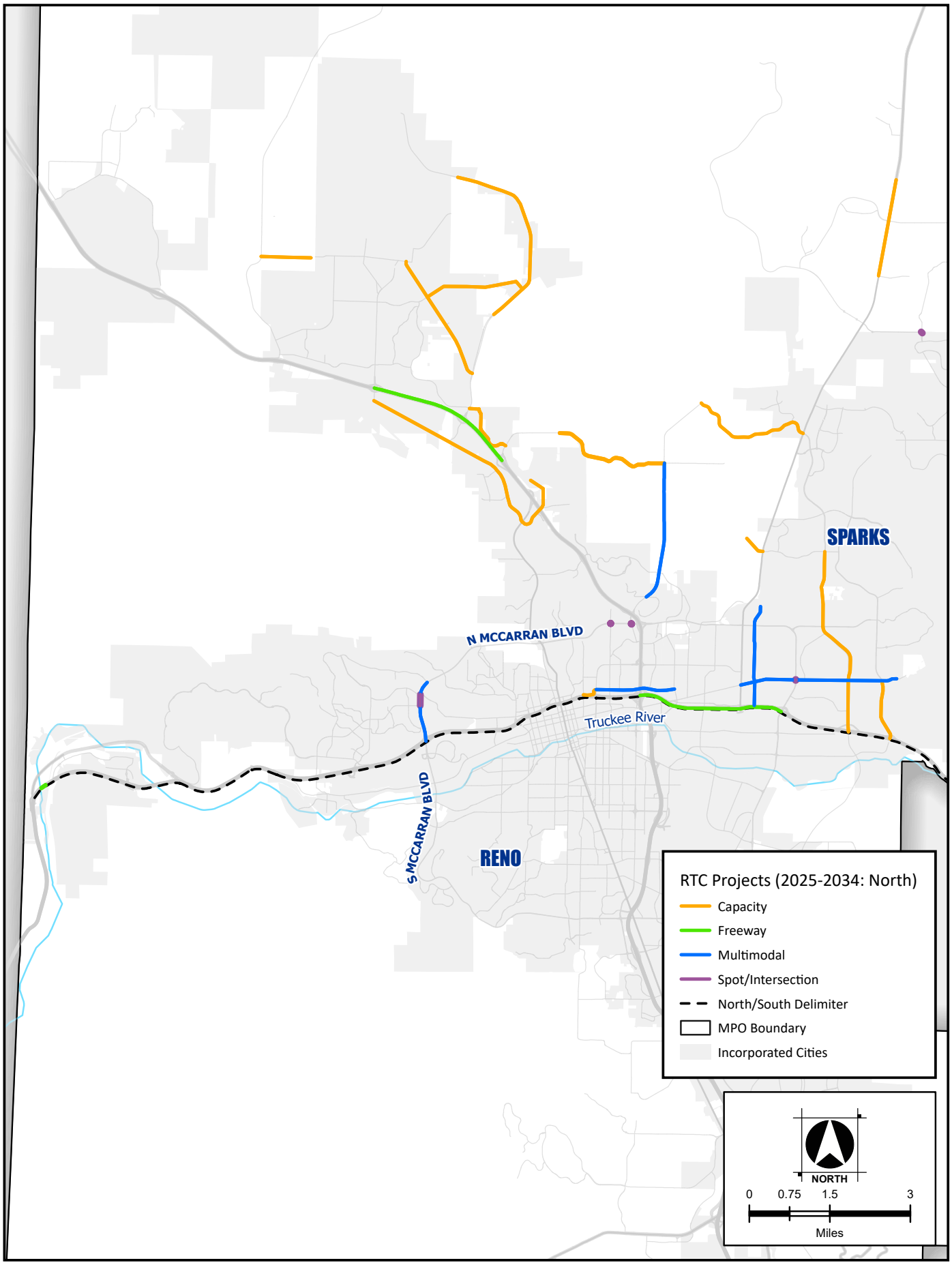
Map B.2 Projects funded in 2025-2034 North



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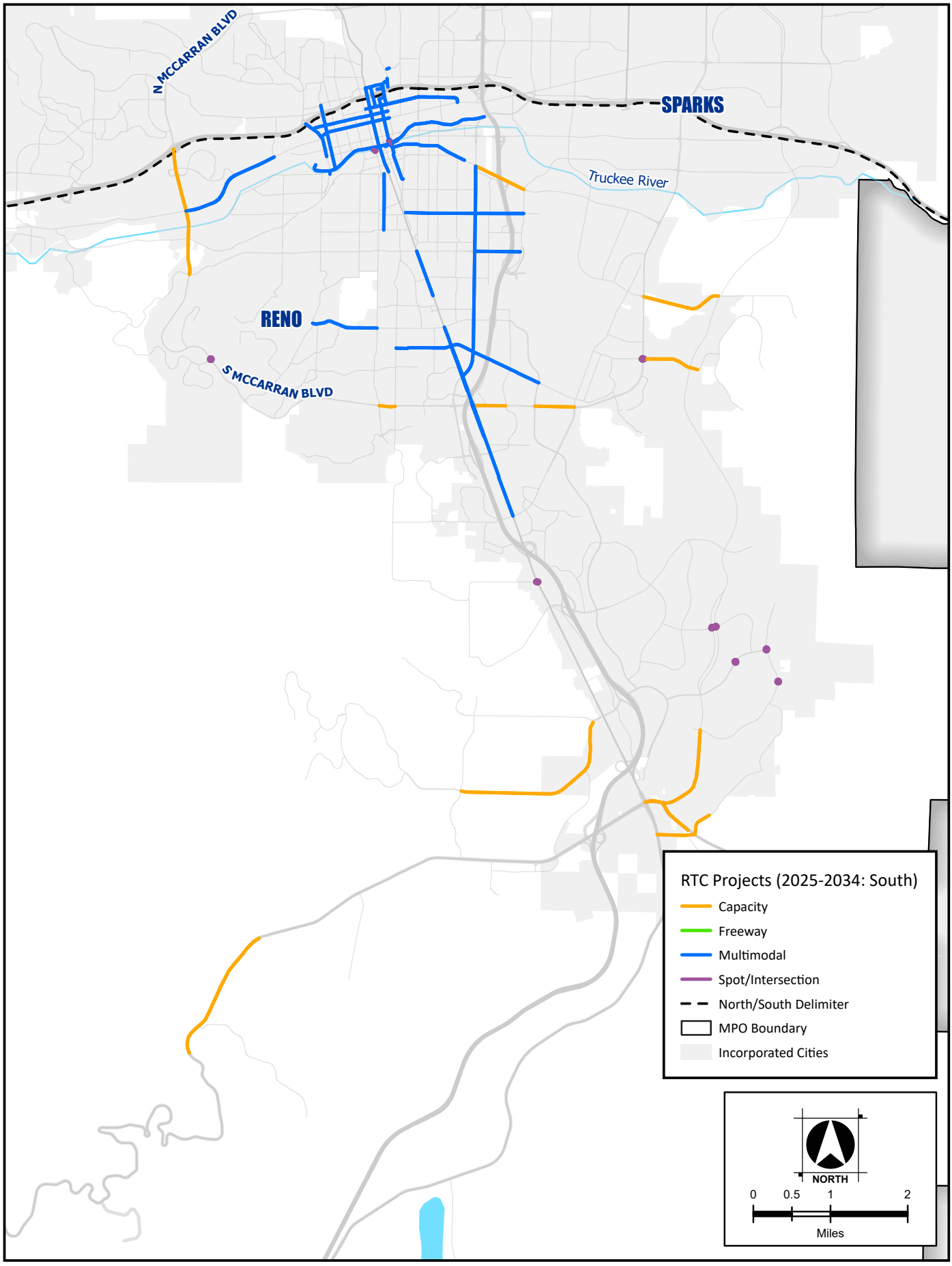
Map B.3 Projects funded in 2025-2034 South



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2035-2050 PROJECTS

Freeway Projects

Project	Limits/Description	YOE Cost Estimate
I-80 / Gold Ranch Rd. Interchange	Reconfigure Interchange and Reconstruct I-80 Eastbound Bridge	$55,108,308
Reno Spaghetti Bowl Phase 3	US 395 improvements from Spaghetti Bowl to N. McCarran Blvd./Clear Acre Ln. Interchange	$734,777,440
Reno Spaghetti Bowl Phase 4	I-580 improvements from Moana Ln. to Spaghetti Bowl	$918,471,800
US 395/Red Rock Rd. Interchange	Interchange Improvements	$12,858,605
US 395/Stead Blvd. Interchange	Interchange Improvements	$12,858,605

Capacity Projects

Project	Limits/Description	YOE Cost Estimate
9th St. Extension	Valley Rd. to N. Wells Ave.	$9,184,718
Arrowcreek Pkwy. Capacity	Thomas Creek Rd. to Wedge Pkwy.	$80,274,435
Bravo Ave. Extension	Road Extension to Lemmon Dr.	$42,800,786
Eagle Canyon Dr. Capacity	Pyramid Hwy. to W. Calle de la Plata	$55,108,308
Echo Ave. Extension	Red Rock Rd. to Moya Blvd.	$66,313,664
Estates Dr. Extension	Lemmon Dr. to Golden Valley Rd.	$170,652,060
Lear Blvd. Extension	Moya Blvd. to Red Rock Rd.	$97,541,705
Lemmon Dr. Extension	Ramsey Way to Red Rock Rd.	$328,629,210
Lemmon Valley to Spanish Springs Connector	New 4 Lane Road from Lemmon Valley to Spanish Springs	$271,500,264
Mt. Rose Hwy. Corridor Improvements (Group 2 Projects)	Bordeaux Dr. to Thomas Creek Rd.	$46,107,284
Mt. Rose Hwy. Corridor Improvements (Group 4 Projects)	Wedge Pkwy. to Veterans Pkwy.	$29,574,792
Parr Blvd. Widening	Ferrari McLeod Blvd. to Raggio Pkwy.	$20,206,380
Pyramid Hwy./US 395 Connector Phase 3	Construct Connector, US 395 to Pyramid Hwy.	$785,254,813
Red Rock Rd. Widening	US 395 to Placerville Dr.	$123,993,693
Sun Valley Blvd. Extension	Road Extension to Eagle Canyon Dr.	$75,130,993
Vista Blvd. Capacity	Wingfield Pkwy. to Hubble Dr.	$76,233,159
Vista Blvd. Widening North	Prater Way to S. Los Altos Pkwy.	$85,234,183
Wingfield Hills Extension	Road Extension to North End of Sun Valley	$67,048,441

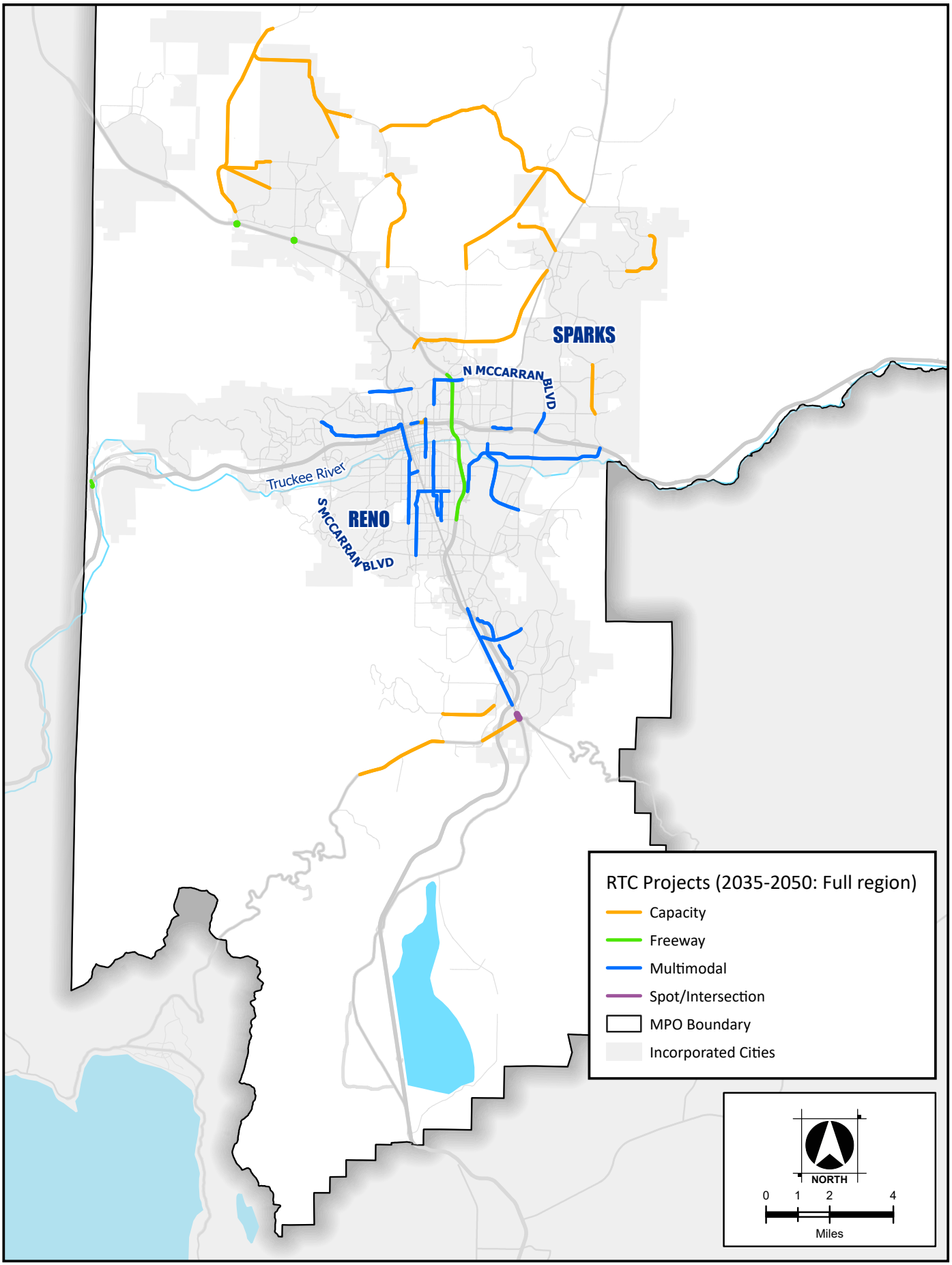
Multimodal Projects

Project	Limits/Description	YOE Cost Estimate
7th St./University Terr. Buffered Bike Lanes	McCarran Blvd. to Sierra St.	$38,759,510
9th St. Buffered Bike Lanes	Evans Ave. to Valley Rd.	$2,388,027
Casazza Dr./Kirman Ave./ Wrondel Way Buffered Bike Lanes	Gentry Way to Kuenzlie St.	$8,817,329
Double R Blvd. Pedestrian Facility	Double Diamond Pkwy. to Lauren Ct.	$3,857,582
Gateway Dr. Pedestrian Facility	S. Meadows Pkwy. to Offenhauser Dr.	$2,314,549
Greg St. Sidewalks and Bike Lanes	Mill St. to Vista Blvd.	$65,027,803
Lakeside Dr. Bike Lanes	McCarran Blvd. to Plumb Ln.	$32,881,290
McCarran Blvd. Prater Way to I-80 Multimodal	Provide Protected Shared Use Paths	$33,432,374
McCarran Blvd. Rancho San Rafael to Evans Ave. Multimodal	Provide Eastbound Shared Use Path	$1,836,944
McCarran Blvd. Sutro St. to Northtowne Ln. Multimodal	Provide Protected Shared Use Paths	$5,327,136
Plumas St./Mary St. Multimodal	Moana Ln. to California Ave. and Plumas St. to Virginia St.	$35,820,400
Plumb Ln. Sidewalks and Bike Lanes	Lakeside Dr. to Kietzke Ln.	$24,063,961
Rock Blvd. Sidewalks and Bike Lanes	Greg St. to McCarran Blvd.	$24,798,739
S. Meadows Pkwy. Bicycle Facility	Bike Facility Improvements from S. Virginia St. to Double Diamond Pkwy.	$15,044,568
S. Virginia St. Multimodal and Transit	Sidewalks, Bike Lanes, and Bus/Bike Lane, Arrowcreek Pkwy. to E. Patriot Blvd.	$75,498,382
S. Virginia St. Safety	I-580 Interchange S. to Arrowcreek Pkwy.	$11,186,987
Sierra St. Sidewalks	Improve Sidewalks, California Ave. to W. 9th St.	$11,389,050
Sutro St. Multimodal	N. McCarran Blvd. to Oddie Blvd.	$20,022,685
Terminal Way Multimodal	Plumb Ln. to Mill St.	$17,450,964
Wells Ave. Bike Lanes and Truckee River Crossing	Moran St. to E. 9th St.	$23,880,267
Yori Ave. Sidewalks and Bike Lanes	Moana Ln. to Plumb Ln.	$14,511,854

Spot and Intersection Improvements

Project	Limits/Description	YOE Cost Estimate
S. Virginia St./Veterans Pkwy.	Triple Southbound Left Turns	$20,252,303

Map B.4 Projects funded in 2035-2050 (full region)



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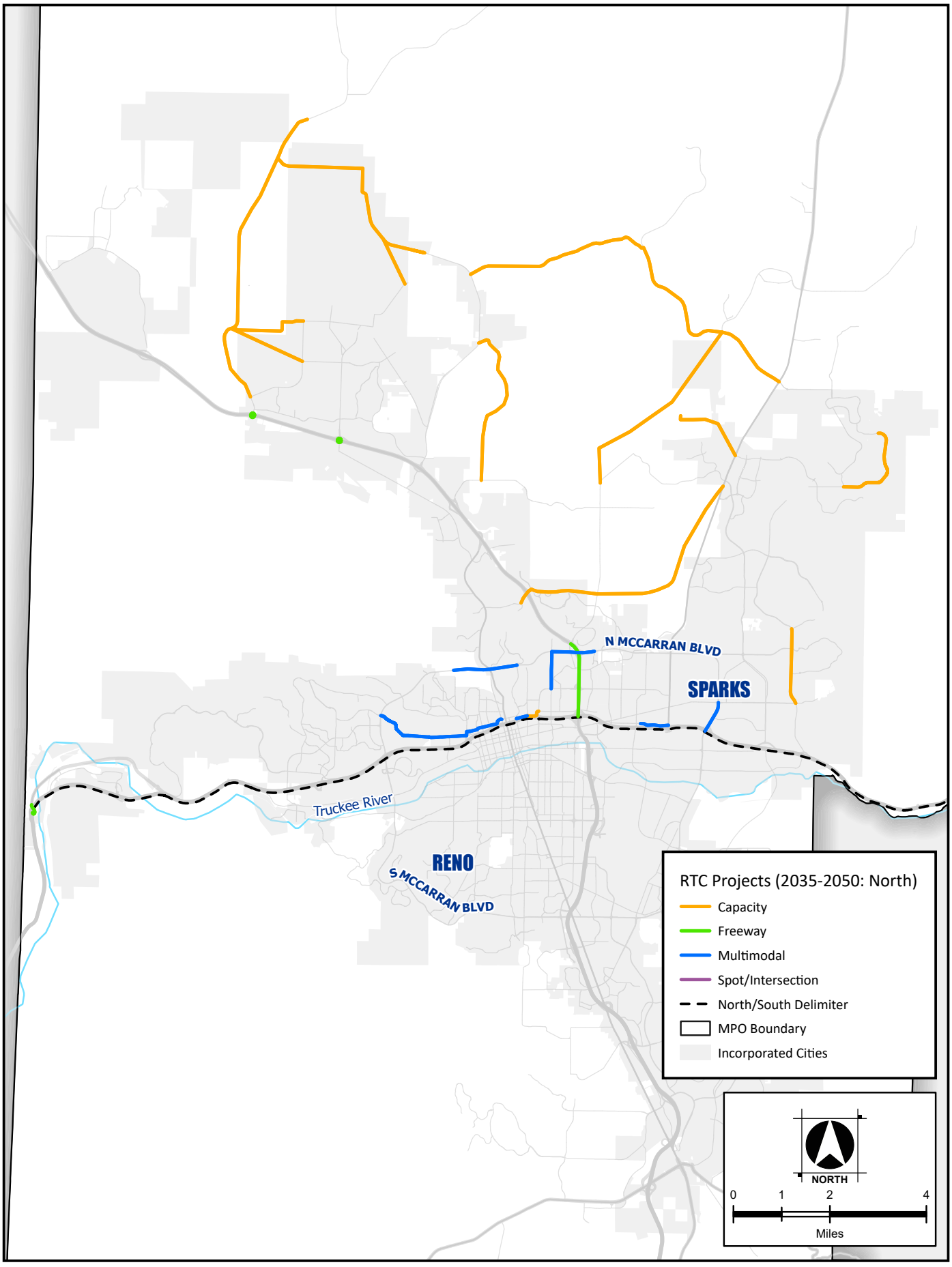
Map B.5 Projects funded in 2035-2050 North



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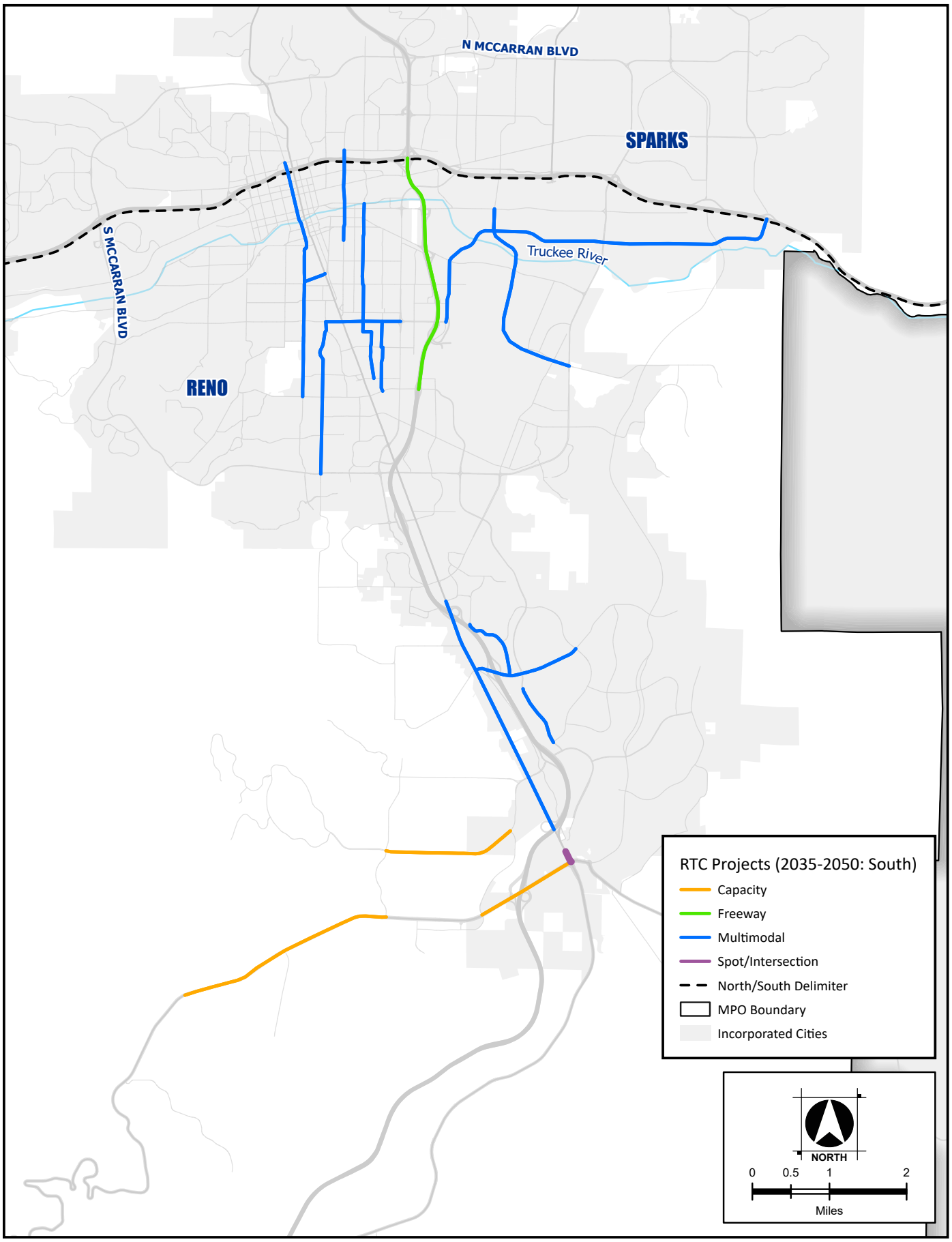
Map B.6 Projects funded in 2035-2050 South



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UNFUNDED PROJECTS

Freeway Projects

Project	Limits/Description	YOE Cost Estimate
I-580 Widening	Neil Rd. to S. Virginia St./Kietzke Ln.	$60,587,210
I-80 / East McCarran Blvd Interchange	Interchange Improvements	$35,000,000
I-80 / Sparks Blvd Interchange	Interchange Improvements	$50,000,000
I-80 Widening - Sparks	E. McCarran Blvd. to Vista Blvd.	$40,000,000
I-80 Widening - Verdi	Gold Ranch Rd. to W. 4th St.	$70,000,000
I-80 Median Cable or Barrier Rail - Verdi	Gold Ranch Rd. to W. 4th St.	$12,000,000
Reno Spaghetti Bowl Phase 5	Southbound US 395 improvements from Spaghetti Bowl to N. McCarran/Clear Acre Avenue interchange	$525,000,000
US 395 Widening - North	Stead Blvd. to Red Rock Rd.	$124,065,525
US 395 Widening for Pryamid Highway Connector Traffic	Clear Acre Ln. to Parr Blvd.	$280,558,660

Capacity Projects

Project	Limits/Description	YOE Cost Estimate
Cold Springs to Red Rock Connector	Mud Spring Dr. to Red Rock Rd.	$165,800,000
McCarran Blvd. Northtown Ln. to Pyramid Way Capacity	Add Lanes, Intersection Improvements, and Shared Use Paths	$43,800,000
N. Virginia St. Extension	Red Rock Rd. to White Lake Pkwy.	$152,500,000
Pyramid Hwy./US 395 Connector Phase 4	System Ramps at US 395	$96,954,000
Pyramid Hwy./US 395 Phase 6	W. Sun Valley Interchange and Local Improvements	$68,026,000
Pyramid Way Phase 5 Widening	4 Lanes, Sparks Blvd. to Calle de la Plata	$232,215,000
Rio Wrangler Pkwy. Widening	4 Lanes from Summer Glen Dr. to Steamboat Pkwy.	$24,300,000
TRI Center Northern Connection	La Posada Dr. to USA Pkwy.	$548,200,000
TRI Center Southern Connection	Eastern Talus Valley Boundary to USA Pkwy.	$913,700,000
South Verdi Rd. Improvements	Bridge St. to Cabela Dr.	$10,000,000
W. Sun Valley Arterial Roadway	New 4 Lane Road, Dandini Blvd. to Eagle Canyon Dr.	$136,500,000

Multimodal Projects

Project	Limits/Description	YOE Cost Estimate
3rd St. Bridge over Canal	Provide Shared Use Path Bridge over Canal on 3rd St. in Verdi	$2,000,000
3rd St. Bridge over Truckee River (East)	Provide Shared Use Path Bridge over Truckee River on 3rd St. East in Verdi	$3,000,000
3rd St. Bridge over Truckee River (West)	Provide Shared Use Path Bridge over Truckee River on 3rd St. West in Verdi	$3,000,000
3rd St. Shared Use Path	Provide Shared Use Path on 3rd St.	$2,000,000
Arrowcreek Pkwy. Pedestrian Facility	Zolezzi Ln. to Thomas Creek Rd.	$1,785,000
Baring Blvd. Bike Lanes	McCarran Blvd. to Vista Blvd.	$16,200,000
Bridge St. Shared Use Path	Verdi Rd. to 3rd St.	$2,000,000
Damonte Ranch Park & Ride	Park & Ride	$2,415,000
Double Diamond Pkwy. Bicycle Facility	Double R Blvd. to S. Meadows Pkwy.	$1,575,000
Eastlake Blvd. Bike Facilities	I-580 Interchange to Old US 395	$21,000,000
El Rancho Dr./Dandini Blvd. Sidewalks	Raggio Pkwy. to Sullivan Ln.	$25,200,000
Geiger Grade Pedestrian Facility	S. Virginia St. to Rim Rock Dr.	$1,260,000
Golden Valley Rd. Bike Lanes	N. Virginia St. to North Hills Blvd.	$5,600,000
Holcomb Ave. Buffered Bike Lanes	Vassar St. to Center St.	$1,800,000
Keystone Ave. Sidewalks and Bike Lanes	Coleman Dr. to Peavine Rd.	$1,250,000
Lake St. Pedestrian Bridge	7th St. to 9th St.	$5,800,000
McCarran Blvd. 4th St. to Baring Blvd. Multimodal	Add Westbound Protected Shared Use Path	$14,200,000
McCarran Blvd. Baring Blvd. to Prater Way Multimodal	Provide Protected Shared Use Paths	$25,000,000
McCarran Blvd. Evans Ave. to Sutro St. Multimodal	Provide Westbound Shared Use Path	$1,400,000
McCarran Blvd. I-80 to Truckee River Multimodal	Protected Bike Lane and Shared Use Path	$29,500,000
McCarran Blvd. Las Brisas Blvd. to Rancho San Rafael Multimodal	Provide Westbound Shared Use Path	$3,900,000
McCarran Blvd. Plumas St. to Mayberry Dr. Multimodal	Protected Bike Lanes in Both Directions	$16,000,000
McCarran Blvd. Rio Encantado Ln. to Longley Ln. Multimodal	Add Southbound Sidewalk	$3,400,000
McCarran Blvd. Rock Blvd. to Perro Ln. Multimodal	Add Southbound Sidewalk	$600,000

Mt. Rose Hwy. Corridor Improvements (Group 3 Projects)	Thomas Creek Rd. to Wedge Pkwy.	$4,100,000
Neil Rd. Bike Lanes	Kietzke Ln. to S. Virginia St.	$5,400,000
S. Meadows Pkwy. Bicycle Facility Upgrades	Double Diamond Pkwy. to Veterans Pkwy.	$2,100,000
S. Meadows Pkwy./Double R Blvd. Park & Ride	Park & Ride Lot	$2,415,000
S. Virginia Street Multimodal and ADA South	Meadowood Mall Cr. To Moana Ln.	$16,200,000
Sierra St. Pedestrian	W. 9th St. to N. Virginia St.	$24,800,000
Skyline Blvd. Bike Lanes	Cashill Blvd. to Arlington Ave.	$14,700,000
Truckee River Idlewild Dickerson Bridge	Bridge Over the Truckee River, Connecting Dickerson Rd. to Idlewild Park	$2,250,000
Truckee River Vision Plan East	Eastern Improvements	$4,000,000
Truckee River Vision Rural West	Rural Western Improvements	$5,000,000
Veterans Pkwy./Geiger Grade Park & Ride	Park & Ride	$2,415,000
Veterans Pkwy./S. Meadows Pkwy.	Park & Ride	$2,415,000
Vista Blvd. Sidewalks and Bike Lanes	Greg St. to S. Los Altos Pkwy.	$25,600,000
W. 4th Street Multimodal	I-80 to S. McCarran Blvd.	$21,200,000
Zolezzi Ln. Sidewalks	Thomas Creek Rd. to S. Virginia St.	$14,500,000

Private Projects

Project	Limits/Description
Parr Blvd. Interchange	Intersection Signalization
White Lake Pkwy. Capacity (North)	US 395 to Village Pkwy.
Vista Knoll Pkwy. Extension	Walmart Driveway To Lemmon Dr.
Rio Wrangler Pkwy. Extension South	Veterans Pkwy. to Damonte Ranch Pkwy.
Lazy 5 Pkwy. Extension	W. Sun Valley Arterial to Pyramid Hwy.
Meridian & Santerra Regional Road Network (Verdi)	Multiple Locations
Rio Wrangler Pkwy. Extension North	Bucephalus Pkwy. to South Meadows Pkwy.
S Virginia St./South Hills Dr.	Signalization Improvements
Ridgeview Dr. North Extension	Ridgeview Dr. to McCarran Blvd.
Robb Dr. Extension	W. 4th St. to I-80
White Lake Pkwy. Extension South	US 395 to Stonegate Entrance
Chase Canyon Segments 1 and 2	New 4 Lane Road from US 395 to 2nd Roundabout
US 395/Red Rock Rd. Interchange	Interim Phase Improvements
White Lake Pkwy. Interchange Upgrades	Interchange Improvement at US 395
Damonte Ranch Pkwy. Extension	Rio Wrangler Pkwy. to Veterans Pkwy
Talus Valley Regional Road Network (South Meadows)	Multiple Locations
Silver Knolls Blvd.	New Road from Red Rock Rd. to Silver Knolls Blvd.
Dolores Dr. Extension	West to Lazy 5 Park
South Meadows Pkwy. Extension	Mojave Sky Dr. to Rio Wrangler Pkwy.
Moya Blvd. Extension	Lemmon Dr. to Echo Ave.
Five Ridges Pkwy.	New Road from Highland Ranch Pkwy. to 2nd Roundabout

APPENDIX C

Air Quality Analysis and Conformity Determination

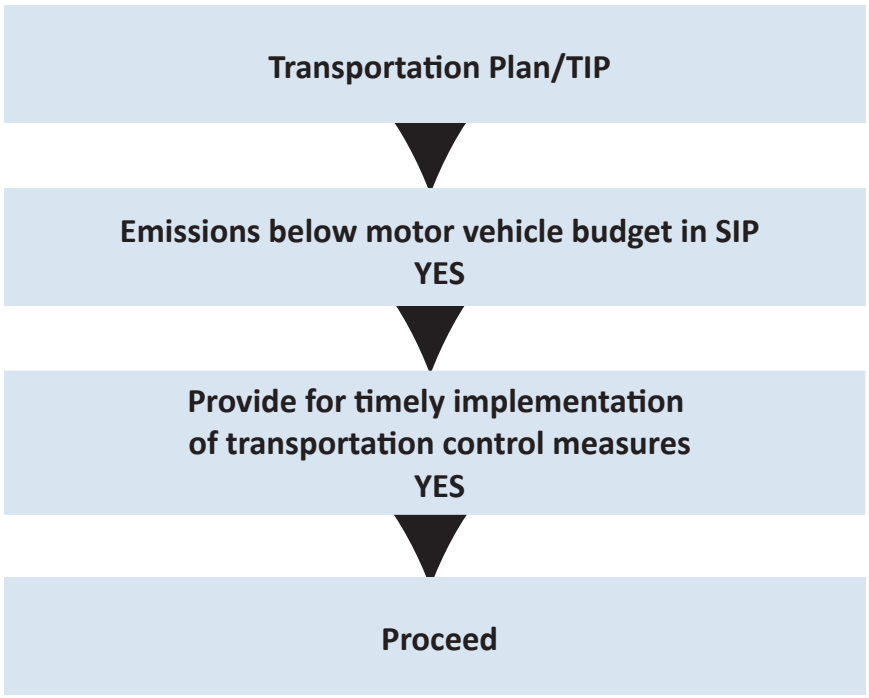
The Clean Air Act Amendments (CAAA) of 1990 require that each state environmental agency develop a State Implementation Plan (SIP). The SIP shows how the state will implement measures designed to improve air quality to meet National Ambient Air Quality Standards (NAAQS) for each criteria air pollutant, according to the schedules included in the CAAA.

Since emissions from motor vehicles make a significant contribution to air pollution, the CAAA also requires that transportation officials make a commitment to programs and projects that will help achieve air quality goals including:

- Providing for greater integration of the transportation and air quality process
- Ensuring that transportation plans, programs and projects conform with the SIP
- Reduction in the growth in vehicle miles traveled (VMT) and congestion in areas that have not attained the U.S. Environmental Protection Agency's (EPA) air quality standards.

Conformity for the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP) are demonstrated when projected regional emissions generated by the plan and TIP do not exceed the region's motor vehicle emissions budgets as established by the SIP. While the MPO is ultimately responsible for making sure a conformity determination is made, the conformity process depends on federal, state and local transportation and air quality agencies working together to meet the transportation conformity requirements. The roles and responsibilities of the partner agencies involved in the air quality conformity analysis are defined in the Washoe County Transportation Conformity Plan. The plan was adopted by RTC and the Washoe County District Board of Health in January 2013.

TRANSPORTATION CONFORMITY



STATUS OF AIR QUALITY POLLUTANTS

Criteria pollutants are considered on a county-wide basis if actual pollutant levels are exceeded outside of the air quality planning area of the Truckee Meadows. The air quality planning area of the Truckee Meadows is determined by EPA to be Hydrographic Area 87 (HA 87) which is shown in Map C.1. The current design values and designation statuses of the criteria pollutants and their NAAQS in Washoe County are listed in Table C.1. Design values are the statistics that the EPA uses to compare ambient air monitoring data to the NAAQS to determine designations. All designations are codified in 40 CFR 81.329

Table C.1
Design Values and Designations (as of December 31, 2023)

NAAQS		Design Value[1]	Designations	
Pollutant (Averaging Time)	**Level**		**Unclassifiable/ Attainment, or Maintenance**	**Nonattainment**
O^3 (8-hour)	0.070 ppm	0.069 ppm	All HAs	---
$PM_{2.5}$ (24-hour)	35 µg/m³	59 µg/m³	All HAs	---
PM_{10} (24-hour)	150 µg/m³	4.3 Expected Exceedances	All HAs[2]	---
CO (1-hour)	35 ppm	2.6 ppm	All HAs	---
CO (8-hour)	9 ppm	1.8 ppm	All Has[3]	---
NO_2 (1-hour)	100 ppb	48 ppb	All HAs	---
NO_2 (Annual Mean)	53 ppb	11 ppb	All HAs	---
SO_2 (1-hour)	75 ppb	3 ppb	All HAs	---
Pb (Rolling 3-month average)	0.15 µg/m³	n/a	All HAs	---

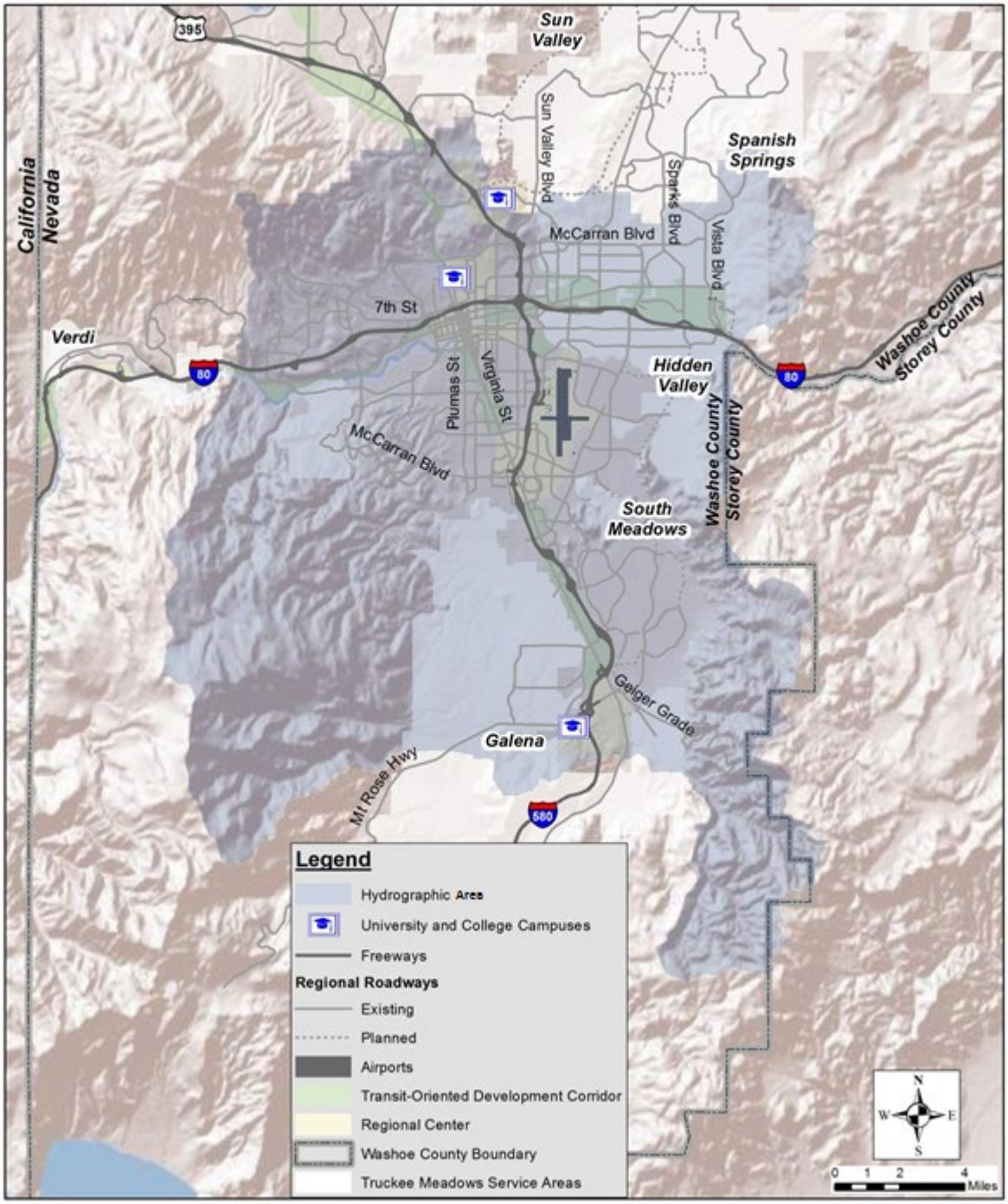
[1] NAAQS that has a multi-year average design value (O_3, both $PM_{2.5}$, PM_{10}, both CO, 1-hr NO_2, and SO_2) has a design value that is affected by wildfire smoke, high winds, prescribed burns, etc.

[2] Maintenance Area for PM_{10} - 80 FR 76232

[3] Maintenance Area for CO - 73 FR 38124, 81 FR 59490

Regional emissions analyses were performed for CO and PM_{10} to demonstrate document conformity with Motor Vehicle Emissions Budgets in the CO and PM_{10} State Implementation Plans. The RTC, in collaboration with the local agencies, has also been implementing programs that reduce motor vehicle emissions in the region.

Map C.1
Truckee Meadows Hydrographic Area 87



TRAVEL FORECASTING MODEL AND MOVES EMISSION MODEL

The RTC's travel demand model was developed in 2024 on the TransCAD platform. The model was calibrated with data collected through the 2023-2024 Regional Household Travel Characteristics Study[1]. The model uses the 2024 Consensus Forecast population and employment provided by the Truckee Meadows Regional Planning Agency (TMRPA). EPA's MOtor Vehicle Emission Simulator (MOVES) is a state-of-the-science emission modeling system that estimates emissions for mobile sources at the national, county, and project level for criteria air pollutants, greenhouse gases, and air toxics. MOVES5 is now the latest official version of MOVES. The analysis for the RTP uses MOVES5 to calculate emission data.

AIR QUALITY ANALYSIS PLAN REQUIREMENTS

Federal regulations are specific in defining the level of air quality analysis necessary for incorporation into the RTP. Section 93, Title 40 of Code of Federal Regulations (CFR) dated August 15, 1997 (effective September 15, 1997), pertains to the criteria and procedures necessary to analyze the air quality impacts of the RTP. For the purposes of an air quality determination, the analysis years are 2020, 2025, 2030, 2040, and 2050. No air quality analysis is required for the street and highway projects identified as unfunded needs. A summary of requirements is listed below:

A. The RTP must contribute to emission reductions in CO nonattainment/ maintenance areas.

B. Air quality analysis years must be no more than 10 years apart.

C. In CO and PM_{10} nonattainment/maintenance areas, analysis must be performed for both pollutants.

D. The last year of the RTP (2050) shall also be an analysis year.

E. An analysis must be performed for each year contained in the motor vehicle emission budget (MVEB) for HA 87 for both CO and PM_{10}, as budgets have been established for these pollutants.

F. For both CO and PM_{10}, the analysis of emissions for the required years cannot exceed the MVEB.

AIR QUALITY ANALYSIS CREDITING PROVISIONS

Federal regulations also allow for crediting procedures over the life of the RTP for the implementation of Transportation Control Measures (TCMs) in which emissions reductions can be quantified. These TCMs are critical to areas such as Washoe County that have and are expected to have continued growth in population and VMT. Several specific TCM measures are in progress or planned in Washoe County that will have quantifiable emissions reductions. These include:

A. Traffic signal optimization program;

B. Conversion of the public transit fleet cleaner fuels;

C. Implementation of trip reduction programs.

These TCMs have been the focus of studies to quantify the air quality benefit of each. The TCMs are described below. The RTC is not taking any credit for reduced emissions associated with these TCMs but may choose to take credit in the future, if conditions warrant.

[1] *https://rtcwashoe.com/planning/2023-2024-rtc-regional-travel-characteristics-study/*

TRAFFIC SIGNAL OPTIMIZATION/TIMING UPGRADE PROGRAM

Traffic signal coordination and improvements seek to achieve two primary objectives: 1) improved traffic flow resulting in improved level of service and 2) mobile source emission reductions through decreased delay, fewer accelerations/decelerations and a decreased number of stops.

The RTC has reviewed several studies and federally accepted models to quantify the reduction of mobile emissions from signal coordination programs. These include signal coordination studies conducted by several cities in southern California and the California Department of Transportation (CALTRANS). A comparison of before and after field studies was conducted and the improvements in all three peak periods were noted. Examples included a statewide average reduction of 14 seconds in stop delay and a 12 percent reduction in the number of stops per mile in the afternoon peak period. Several methodologies were used to take the results of studies to quantify the emission reductions from signal coordination programs.

The pollution reduction results (tons/per day or percentage reduction) from each model vary as some models focus on corridor specific reductions while the others are more of an area-wide reduction projection. Pollutant reductions ranged from 11 percent along specific corridors to 3 percent to 4 percent on a regional level.

The RTC has initiated a region-wide traffic signal optimization and improvements program to enhance the capacity of the existing system, improve safety, and reduce traffic congestion in the region. This is an ongoing program that will allow over 400 intersections in the Truckee Meadows to be optimized. Currently, the average is 80 signals/intersections annually.

CONVERSION OF RTC ACCESS AND RTC RIDE FLEETS TO ALTERNATIVE OR CLEANER BURNING FUELS

Almost 6 million annual passengers with 19.6 million passenger miles are provided service by the RTC RIDE public transit and RTC ACCESS paratransit. While this is a small percentage of total daily travel, it is important in terms of air quality. All RTC RIDE buses are comprised of electric, hybrid diesel-electric and bio-diesel vehicles. RTC ACCESS cut-away vehicles are fueled by Compressed Natural Gas (CNG). These vehicles can reduce mobile emission totals.

Estimates by the California Air Resources Board between standard urban diesel and biodiesel or CNG determined that NOX emissions from vehicles with CNG or cleaner burning diesels were reduced approximately 60 percent.

RTC currently has 19 zero emission battery electric buses and 2 hydrogen fuel cell vehicles in its fixed route fleet with 6 additional fuel cell vehicles scheduled for delivery and placement into service in spring 2025.

TRIP REDUCTION PROGRAMS

The RTC's trip reduction program, RTC SMART TRIPS, encourages the use of sustainable travel modes and trip reductions strategies such as telecommuting, compressed work weeks, and trip chaining. Major components of the program include a bus pass subsidy program in which the RTC matches an employer's contribution to their employees' 31-day transit passes up to 20 percent; a subsidized vanpool program, RTC VANPOOL; and an on-line trip matching program, RTC TRIP MATCH, that makes it quick, easy, and convenient to look for carpool partners as well as bus, bike, and walking buddies for either recurring or one time trips. One of the most common deterrents to ridesharing is the fear of being "stranded."

Consequently, people who either carpool or vanpool to work can sign up for the Guaranteed Ride Home program and be reimbursed for a taxi ride home up to four times a year if an unexpected event prevents normal ridesharing arrangements from working. Making trips safely on foot and by bicycle are also promoted by the RTC SMART TRIPS program throughout the year.

The goals of these programs are to promote trip reduction on a region-wide level, improve air quality, and reduce vehicle miles of travel and traffic congestion. During the period from October 1st, 2023, through September 30th 2024 the air quality benefits of the program were substantial, as shown in Table C.2. The data included the number of people in each vanpool and the average daily trip mileage. The air pollution calculation was obtained by multiplying the number of passenger trips for each vanpool per month by the average daily trip mileage for each vanpool per month and totaling those results to estimate the total VMT eliminated through the program due to the vanpool passengers not driving alone to work. The reduction in VMT was then multiplied by the pollutant factors per mile with those results outlined in the chart below. The emissions factors per mile for each pollutant were provided by Northern Nevada Public Health Air Quality Management Division (AQMD).

Table C.2
RTC VANPOOL Air Pollution Reductions (October 1st, 2023-September 30th, 2024)

Volatile organic compounds (VOC)	64,045.1 lbs
Nitrogen Oxide (NOx)	35,980.4 lbs
Carbon Monoxide (CO)	476,738.7 lbs
Particulate Matter (PM_{10})	256.3 lbs
Particulate Matter ($PM_{2.5}$)	238.4 lbs
Carbon Dioxide (CO_2)	19,204,552 lbs

RTC SMART TRIPS program continues to grow and add more participants. RTC TRIP MATCH is a web-based carpool, bike, bus and walking buddy matching service that eliminates single occupant travel miles.

RTC TRAVEL DEMAND MODEL

The base year for housing, employment, and population data from the TMRPA is 2022. The model uses the 2024 Washoe County Consensus Forecast (CF)[2] population and employment forecasts provided by TMRPA. The CF is produced biannually (every even year) using four independent growth predictions for Washoe County and forecasts both population and job growth over the next 20 years.

As part of an approved shared work program, TMRPA provides the socioeconomic variables of each traffic analysis zone input into the RTC's travel demand model. The overall population and job growth increments from the CF are spatially disaggregated to individual parcels using a geographic information systems model. TMRPA's land use model is the result of years-long, collaborative work with local jurisdictions, affected entities, and partner organizations. The model selects parcels for future development using a robust accounting of existing land use entitlements and growth-related characteristics that influence a parcel's suitability for development. Results of the land use model are aggregated into traffic analysis zones for each travel demand model year.

[2] https://tmrpa.org/washoe-county-consensus-forecast/

Caliper is under contract with the RTC Washoe to develop the travel demand model. In Q4 of 2024, Caliper completed the latest travel demand model for RTC. This hybrid model incorporates innovative methodologies, including machine learning for trip generation, nested destination choice models, and linkage of non-home-based trips to home-based trips by location and mode.

The model was estimated, calibrated, and validated to represent an average weekday in October 2022. The Nevada Department of Transportation (NDOT) has several automatic traffic monitoring stations throughout the county. These continuous count stations provide average daily traffic counts for each month. For validation, Caliper utilized NDOT AADT traffic counts adjusted to October 2022 using seasonal factors developed from continuous count locations, and October transit ridership data for transit assignment. Socio-economic data, as well as roadway and transit networks for the model's 2022 base year, were provided by TMRPA and RTC. The 2022 base-year model demonstrated strong validation results against the traffic and transit counts collected during the same period.

2025, 2030, 2040 and 2050 networks were established for this RTP air quality analysis. The 2025 network consists of the current roadway network and the current transit network. Each of the remaining networks is comprised of the previous model year network with the capacity-related projects and transit service changes included in the RTP.

AIR QUALITY ANALYSIS

An emission test on both CO and PM10 must be successfully completed to make a finding of conformity. The area of analysis for these pollutants is HA 87. As stated previously, the CO and PM10 emissions for the required analysis years cannot exceed the established motor vehicle emissions budget. Analysis is performed for 2025, 2030, 2040 and 2050 for both pollutants.

To initiate the air quality conformity determination, the emission levels for the pollutants in each analysis year are generated. For the MOVES emission model, the 2025 model year source types 42, 43, and 51 are derived from 2023 local data provided by the Washoe County School District, RTC, and Waste Management. All other source types use MOVES default values. The numbers for source types 42, 43, and 51 are scaled proportionally to the default total vehicle population for future projections. MOVES defaults for age distribution and source types not listed above were determined to be more representative than local vehicle registration due to the local registration source type categories not aligning with MOVES HPMS categories, a change in data reporting methodology, and data quality concerns. The fuel input data is from MOVES default.

Based on MOVES5 Technical Guidance, PM10 and CO seasonal temperature and humidity data (November, December, and January) from the 2011 baseline inventory year that was used in the 2014 redesignation request and maintenance plans are the meteorological inputs used for the MOVES5 model run in this conformity analysis. This data was from the NWS station at the Reno-Tahoe International Airport.

The VMT for each facility type is derived from the RTC's travel demand model. Many local roads are approximated as centroid connectors in the model network. Since centroid connectors are not actual roads, the VMT's for local roads are estimated as 12.34% (urban) and 6.15% (rural) of the total VMT's based on NDOT's 2023 Annual Vehicle Miles of Travel Report (August 2024). Average weekday speed by facility type from RTC's travel demand model is provided as input to the MOVES model. Since the RTC travel demand model was calibrated to an average weekday, it does not provide accurate weekend speed data.

Therefore, weekend speed input data is from MOVES default. Total emissions for each facility type are then added to get a daily emission total for the roadway system in the analysis area. Emission totals are shown in pounds per day (lbs./day).

CO ANALYSIS

The MVEB for carbon monoxide (CO), effective October 31, 2016, is shown in Table C.3, which also includes the CO emissions for all analysis years of the RTP. CO under all RTP analysis years are within the MVEB. The tables supporting this analysis are contained at the end of this chapter.

Table C.3
CO Emissions Analysis (lbs. /day)

Analysis Year	MVEB	RTP Analysis
2025	171,509	**54,601**
2030	169,959	**39,693**
2040	169,959	**22,476**
2050	169,959	**17,233**

PM_{10} ANALYSIS

The MVEB for PM10, effective January 6, 2016, is shown in Table C.4, which also includes the PM10 emissions for all analysis years of the RTP. On-road vehicle exhaust emissions are estimated using MOVES5. PM10 under all RTP analysis years are within the MVEB. The tables supporting this analysis are contained at the end of this chapter.

Table C.4
PM_{10} Total Emissions (lbs. /day)

Analysis Year	MVEB	RTP Analysis
2025	6,473	**3,156**
2030	6,927	**3,137**
2040	6,927	**2,988**
2050	6,927	**2,928**

For the PM10 MVEB categories of paved and unpaved road fugitives and road construction, the methodologies and assumptions are detailed below:

- **Paved Roads**

  Paved road fugitive emissions are calculated using emission factors, silt loading, mean vehicle weight, and mean vehicle speed found in AP-42, Section 13.2.1 and VMT data within HA 87 to project to 2050. Silting loading factors for PM10 vary between 0.02 g/m2 to 0.44 g/m2 depending on Annual Daily Traffic (ADT) categories and are within the ranges listed in AP-42 Section 13.2.1. ADT<500 (0.44 g/m2) and ADT=500-5,000 (0.16 g/m2) silt loading factors were derived from locally sourced data. ADT=5,000-10,000 (0.06 g/m2) and ADT>10,000 (0.02 g/m2) uses AP-42, Table 13.2.1-2 silt loading factors. A mean vehicle weight of 2 tons was used. The assumptions used in this methodology were last revised in 2021 and have been used for the National Emission Inventory, RTPs, and maintenance plans.

- **Unpaved Roads**

  Seasonal/Spatial Allocation - As per the 2017 National Emissions Inventory (NEI), an estimated 1703 tons of PM10 is emitted in Washoe County per year due to fugitive dust on unpaved roads. As recommended by EPA, these emissions are adjusted to HA 87 using GIS data from Open Street Map for unpaved roads in Washoe County. Using ArcMap 10.8.2, AQMD found that 8.81% of the unpaved roads in Washoe County are located in HA 87. Additionally, AQMD calculated a seasonal adjustment factor for the PM10 season using Automated Traffic Recorders (ATRs) located in the maintenance area. The seasonal adjustment factor was found to be 0.928.

  Emission Projections - Unpaved road fugitive dust is expected to change in the future based on Local Vehicle Miles Traveled (LVMT). Since local roads are the closest road type to unpaved roads, the change in travel on local roads is used as a proxy for the changes in travel expected on unpaved roads. Additionally, unpaved road emissions are projected to decrease over time as more roads are paved and the maintenance area continues to develop. It is expected that paved road miles will increase annually at 2.6% in the maintenance area based on historical changes to paved road miles. This factor was also used to project forward in AQMD's 1st 10-Year Maintenance Plan for PM10. This is a methodology that was updated in May 2024 in order to accurately project emissions for the 2nd 10-Year PM10 Maintenance Plan and for the National Emission Inventory.

- **Road Construction**

  Any construction activity, which will disturb one acre or more of land, must submit a Dust Control Plan to the AQMD. The approval, or permit, is valid for 18 months from the date of issuance. To estimate emissions from construction activity, the AQMD researched the database containing the Dust Plan Permits. The Dust Plans were divided into three categories: residential, non-residential, and road construction. Acres disturbed were categorized by hydrographic areas. Emission factors for construction, wind erosion, trackout, and miscellaneous construction activity are found in Western Regional Air Partnership (WRAP) Fugitive Dust Handbook, AP-42, and EPA guidance [3, 4, 5]. This has been the methodology used for National Emission Inventory, RTPs, and maintenance plans since 2012. The 1st 10-Year Maintenance Plan used Population Growth Rates from the Nevada State Demographer to project growth in this category.

SUMMARY

A strong commitment to fund and implement feasible TCM measures must be made if acceptable air quality standards are to be sustained. The local jurisdictions and NDOT, through the RTP process, have made the commitment to fund TCMs such as ridesharing, traffic flow improvements, signal coordination, and conversion of public transit fleet to cleaner burning fuels. The 2050 RTP update includes significant investments in bicycle and pedestrian infrastructure. Based on existing and planned commitments, the air quality analysis conducted in this chapter demonstrates that the required air quality conformity determination can be made and the RTP has shown to be in conformance with federal air quality regulations.

[3] WRAP Fugitive Dust Handbook, p. 3-3, Table 3-2, Factors from the 1996 MRI BACM Study, September 7, 2006
[4] EPA; "Control of Open Fugitive Dust Sources"; EPA-450/3-88-008; OAQPS; September 1988
[5] Compilation of Air Pollutant Emission Factors (AP-42) Volume I, U.S. Environmental Protection Agency, Fifth Edition, 1995. Midwest Research Institute. Improvement of Specific Emission Factors (BACM Project No. 1). March 29, 1996

Table C.5
Daily VMT by Facility Type by Analysis Year (Hydrographic Area 87)

Facility Type	2025	2030	2040	2050
Interstate	2,142,359	2,194,063	2,407,286	2,666,463
Other FWYs	441,834	455,748	494,398	589,156
Major Arterial	1,738,263	1,848,184	1,986,923	2,131,913
Minor Arterial	773,681	792,358	868,062	954,543
Collector	174,739	183,241	195,918	210,799
Local	676,197	702,203	763,653	840,663
Total	5,947,074	6,175,799	6,716,240	7,393,536

Table C.6
Emissions (lbs./day)

Analysis Year	CO	On-Road Vehicles PM_{10}	Diesel Idling PM_{10}	Paved Road Fugitive PM_{10}	Unpaved Road Fugitives PM_{10}	Road Construction PM_{10}	Total PM_{10} Emissions
2025	**54,339**	394	0.071	1,767	742	253	**3,156**
2030	**39,476**	345	0.027	1,870	653	269	**3,137**
2040	**22,326**	258	0.004	2,015	430	285	**2,988**
2050	**17,097**	224	0.002	2,236	166	302	**2,928**

The full list of future transportation projects is included in the RTP, while projects modeled for the conformity analysis are detailed below in Table C.7. Projects not modeled are those that do not impact network capacity in the travel demand model. These include:

- Bike/pedestrian projects without lane changes (projects with lane changes, including those that reduce lanes, are included in the modeled list).
- Operational improvements that do not change capacity.
- Spot and intersection improvements that do not alter network capacity in the model.

Table C.7
Capacity Projects on Model Network and Model Years

Project	Description	Model Year
Biggest Little Bike Network	Multiple Locations (lane reduction)	2030
Buck Dr	Lemmon Dr to N Hills Blvd	2030
Butch Cassidy	Extension	2030
E 6th Street Bicycle Facility & Safety Improvements	Virginia St to 4th St (lane reduction)	2030
Lemmon Dr Segment 2	Fleetwood Dr to Ramsey Way(widen from FW to Palace)	2030
Military Rd	Lemmon Dr to Lear Blvd	2030
Mill St Safety and Capacity	Kietzke to Terminal	2030
Pembroke Dr	McCarran Blvd to Veterans Pkwy	2030
Pyramid Hwy - Add Southbound Lane	Egyptian Dr to Ingenuity Ave	2030
Vassar Street Bike Facility	Kietzke Ln to Terminal Way (lane reduction)	2030
Vista Blvd	I-80 to Prater Way	2030
9th St Extension	Valley Rd To N Wells Ave	2040
Arrowcreek Pkwy	Wedge Pkwy to Zolezzi Ln	2040
Chase Canyon Segments 1 and 2 (Private)	New 4 lane road - US 395 to 2nd roundabout	2040
Damonte Ranch Pkwy Extension	Veterans Pkwy to Rio Wrangler Pkwy	2040
Daybreak Road Network(Private)	Multiple locations	2040
Dolores Dr Extension (Private)	West to Lazy 5 Pkwy	2040
Geiger Grade New 4 Lane Rd	Virginia St to Toll Rd	2040
Herz Blvd extension/connection (Private)	Mt Rose Highway to Old US 395	2040
Highland Ranch Parkway	5 Ridges entrance to Sun Valley Blvd	2040
Highland Ranch Pkwy (Private)	Pyramid Hwy to 5 Ridges entrance	2040
Lazy 5 Pkwy (Private)	W Sun Valley Arterial to Pyramid Hwy	2040
Lear Blvd	Connection between Military Rd to Lemmon Dr	2040
McCarran Blvd	Neil Rd. to South Virginia St (lane reduction)	2040
McCarran Blvd	Longley Ln. to Airway Dr.	2040
McCarran Blvd	Lakeside Ln. to Plumas St.	2040
McCarran Blvd	Plumb Ln. to I-80	2040
Meridian & Santerra Road Network (Private)	Multiple locations	2040
Military Rd	Lear Blvd to Echo	2040
Mira Loma Dr	McCarran to Veterans	2040
Moya Blvd	Red Rock Rd to Echo Ave	2040
Moya Blvd Extension (Private)	Lemmon Dr to Echo Ave	2040
N. Hills Blvd	Golden Valley Rd to Buck Dr	2040
NDOT I-80 Operations & Capacity	Vista Blvd to USA Parkway	2040
NDOT Spaghetti Bowl Phase 2	I-80 from spaghetti bowl to eastern McCarran Blvd in Sparks	2040

Project	Description	Model Year
North Virginia St	Panther to Stead Blvd	2040
Panther Dr Extension	N. Virginia to Panther to N. Hills Blvd	2040
Pyramid Hwy/395 Connector Phase 2	Widen Disc Dr from Pyramid to Vista Blvd	2040
Ridgeview Dr North Extension (Private)	End of Ridgeview to McCarran Blvd	2040
Rio Wrangler Pkwy Extension -South (Private)	Damonte Ranch Pkwy to Veterans Pkwy	2040
Rio Wrangler Pkwy Extension-North (Private)	Bucephalus Pkwy to South Meadows Pkwy	2040
Robb Dr Ext (Private)	4th St to I-80	2040
Silver Knolls Blvd - New Road (Private)	Red Rock Rd to Silver Knolls Blvd	2040
South Meadows Extension (Private)	Mojave Sky Dr to Rio Wrangler Pkwy	2040
Sparks Blvd	Baring Blvd to Disc Dr	2040
Sparks Blvd	I80 Off Ramps to Baring	2040
US 395 North Valleys, Phase 2	Golden Valley to Stead Blvd	2040
Veterans Pkwy Widening	S. Virginia St to Damonte Ranch Extension	2040
Vista Knoll Pkwy Ext (Private)	Walmart Driveway To Lemmon Dr	2040
West 7th/Golden Valley Rd	Spearhead Way to Sun Valley Blvd	2040
White Lake Pkwy Extension-South (Private)	US 395 to Stonegate Entrance	2040
White Lake Pkwy - North (Private)	US 395 to Village Pkwy	2040
Arrowcreek Pkwy	Thomas Creek Rd to Wdge Pkwy	2050
Bravo Ave Extension	Extension to Lemmon Dr	2050
Eagle Canyon	Pyramid Hwy to W Calle de la Plata	2050
Echo Ave - Extension	Red Rock Rd to Moya Blvd	2050
Estates Dr Extension	Lemmon Dr to Golden Valley Rd	2050
Lear Blvd Extension	Moya Blvd to Red Rock Rd	2050
Lemmon Dr Extension	Ramsey Wy To Red Rock Rd	2050
Lemmon Valley to Spanish Springs Connector	New 4 lane road from Lemmon Valley to Spanish Springs	2050
NDOT Spaghetti Bowl Phase 3	US 395 from Spaghetti Bowl to N. McCarran/Clear Acre Interchange	2050
NDOT Spaghetti Bowl Phase 4	I-580 from spaghetti bowl to Moana Ln interchange	2050
Parr Blvd	Ferrari McLeod to Raggio Pkwy	2050
Pyramid/395 Connector Phase 3 Connector	US 395 to Pyramid Hwy south of Sparks Blvd	2050
Red Rock Rd	US 395 to Placerville Dr	2050
Sun Valley Blvd Extension	Extension to Eagle Canyon	2050
Vista Blvd	Wingfield Pkwy to Hubble Dr	2050
Vista Blvd	Prater to South Los Altos Pkwy	2050
Wingfield Hills	Road extension to north end of Sun Valley	2050

NOTES:
This table includes only projects that impact model network capacity for the air quality analysis.

APPENDIX D

RTC Congestion Management Plan (CMP)

CONGESTION MANAGEMENT PROCESS

The purpose of the Congestion Management Process (CMP) is to identify how RTC selects and prioritizes projects to reduce traffic congestion. This CMP was developed in coordination with the 2050 RTP performance-based planning process and is consistent with the RTP goals and project evaluation criteria. The CMP is a systematic approach that is collaboratively developed for the region and provides safe and effective management of new and existing transportation facilities.

Congestion management, as defined by the Federal Highway Administration (FHWA), is the application of strategies to improve transportation system performance and reliability by reducing the adverse impacts of congestion on the movement of people and goods. A CMP is a regionally accepted approach that provides information on performance and assesses strategies for congestion management.

The performance management metrics identified in Chapter three, as well as the transportation conformity requirements regarding air quality, have an important role in the CMP. The CMP is an ongoing process, adjusting over time as goals and objectives change, new congestion issues arise, new resources become available, and new strategies are identified and evaluated. The RTP identifies a well-balanced project selection process across all modes of transportation and outlines the implementation schedule and anticipated funding sources for a truly multimodal program.

1 – Congestion Management Objectives

Traffic congestion impedes economic activity, degrades air quality, and has an adverse impact on quality of life in the Truckee Meadows. Traffic congestion on freeway facilities, particularly I-80, has an adverse impact on national freight movement in addition to local traffic operations. Significant proportions of traffic congestion are non-recurring and are caused by crashes, work zones, weather, and special events. The objectives of this CMP are to reduce both recurring and non-recurring traffic congestion.

An important component to this process is the implementation of operations and management strategies that improve signal timing coordination and communications between traffic operations engineers at RTC, NDOT, City of Reno, City of Sparks, and Washoe County. Examples of intelligent transportation systems (ITS) initiatives include the RTC Traffic Signalization Program and ITS Traffic Management Program, which is expanding fiber optic network connectivity. The Nevada Traffic Incident Management (NV TIM) is another important program that addresses incident response.

This CMP supports the advancement of the RTP goals, which are:

- Safety
- Maintain Infrastructure Condition
- Congestion Reduction
- System Reliability and Resiliency
- Freight Movement and Economic Vitality
- Equity and Environmental Sustainability
- Reduce Project Delivery Delays
- Accessibility and Mobility
- Integrate Land-Use and Economic Development

The CMP also provides an opportunity to address freight issues. RTC completed a Regional Freight Plan in coordination with the development of this RTP and regularly participates in Freight Advisory Committee meetings facilitated by NDOT that involved regional partners in freight and logistics, economic development, and infrastructure development. RTC will continue to coordinate with regional stakeholders as freight needs evolve.

2 – Identify Area of Application

The CMP applies to the Reno-Sparks urbanized area in Washoe County, Nevada. This is the planning area addressed in the 2050 RTP Update. It addresses project prioritization for roadway capacity, safety, and operations.

3 – Define System or Network of Interest

The CMP addresses congestion issues on regionally important roads and freeways in the Reno-Sparks metropolitan area, including existing or proposed roadways that handle high volumes of vehicle trips, facilitate connectivity across different jurisdictions, overcome significant travel barriers, or otherwise comply with the federal definition for regional significance. In terms of roadway functional classifications, RTC generally considers the following to be regionally important:

- Arterials that are direct connections between freeways and other arterials, provide continuity throughout the region, and generally accommodate longer trips within the region, especially in the peak periods on high traffic volume corridors.

- Collectors that cross a significant travel barrier or provide access to major existing or future regional facilities.

Level of service (LOS) is a term commonly used to measure the operational conditions for traffic flow, generally in terms of speed and travel time, freedom to maneuver, traffic interruptions and comfort and convenience. LOS is represented by the letters A to F; with A generally representing free flowing traffic and F, representing bumper to bumper traffic. The qualitative description of the conditions that correspond to each level of service is shown in Table D.1.

Table D.1
Level of Service Definitions

LOS	
A	Free flow; individual users are virtually unaffected by the presence of others in the traffic stream
B	Reasonably free flow; the presence of other users in the traffic stream begins to be noticeable
C	Stable flow; each user is significantly affected by the presence of others
D	Approaching unstable flow; users experience poor level of comfort and convenience
E	Unstable flow; users experience decreasing speed and increasing traffic
F	Forced or breakdown flow; users experience frequent slowing and vehicles move in lockstep with the vehicle in front of it

The level of service standards used for assessing the need for street and highway improvements at a planning level are shown in Table D.2. These are the same standards that were first adopted in 2008. Design of the specific facilities will be based on more detailed operational analysis.

Table D.2
Regional Level of Service Standards

LOS	
D	All regional roadway facilities projected to carry less than 27,000 ADT at the latest RTP horizon
E	All regional roadway facilities projected to carry 27,000 or more ADT at the latest RTP horizon

F	4th St/Prater Way – Evans Avenue to 15th St Plumas St – Plumb Ln to California Ave Rock Blvd – Glendale Ave to Victorian Ave Virginia St – Kietzke Ln to S McCarran Blvd Virginia St – Plumb Ln to Liberty St & 8th St to 17th St Sun Valley Blvd – 2nd Ave to 5th Ave Intersection of N Virginia St and Interstate 80 ramps
Except as noted above, all intersections shall be designed to provide a level of service consistent with maintaining the policy level of service of the intersecting corridors.	

TransCAD allows the RTC to perform more a refined analysis of the level of service on the region's roadways. The current method of establishing the level of service on a roadway is based on the ratio of the volume of traffic to the capacity of the road (V/C). This methodology is widely accepted in the industry as a more accurate method of calculating level of service. Table D.3 shows LOS based on V/C.

Table D.3
Level of Service by Volume to Capacity

LOS	V/C
A	0.00 to 0.60
B	0.61 to 0.70
C	0.71 to 0.80
D	0.81 to 0.90
E	0.91 to 1.00
F	Greater than 1.00

RTC identified existing traffic congestion hotspots using INRIX data. INRIX is a web-based data product that allows agencies to support operations, planning, analysis, research, and performance measures generation using probe data mixed with other agency transportation data. The suite consists of a collection of data visualization and retrieval tools. These web-based tools allow users to download reports, visualize data on maps or in other interactive graphics, and even download raw data for off-line analysis.

Each tool has its own unique purposes. Among many other uses, INRIX can provide insight on:

- Real-Time Speed Data
- Travel Time Index
- Travel Time Reliability Metrics
- Queue Measurements
- Bottleneck Ranking
- Other metrics that agencies can use to communicate effectively with the public or decision-makers

The INRIX roadway network includes freeways and major roads in the region. The congestion analysis focuses on AM and PM peak hours when congestion is the most severe. Congestion is measured as observed speed as a percentage of the free flow speed. The INRIX data used for existing congestion analysis is from weekdays during 2023 (Figures 1 and 2). Projected 2050 traffic levels under the build and no-build scenarios are provided in Figures 3 and 4. RTC and NDOT have planned improvements on corridors experiencing the highest levels of traffic congestion, including US 395, Pyramid Highway, Sparks Boulevard, and Vista Boulevard.

Figure D.1
Existing AM Traffic Congestion (2023)

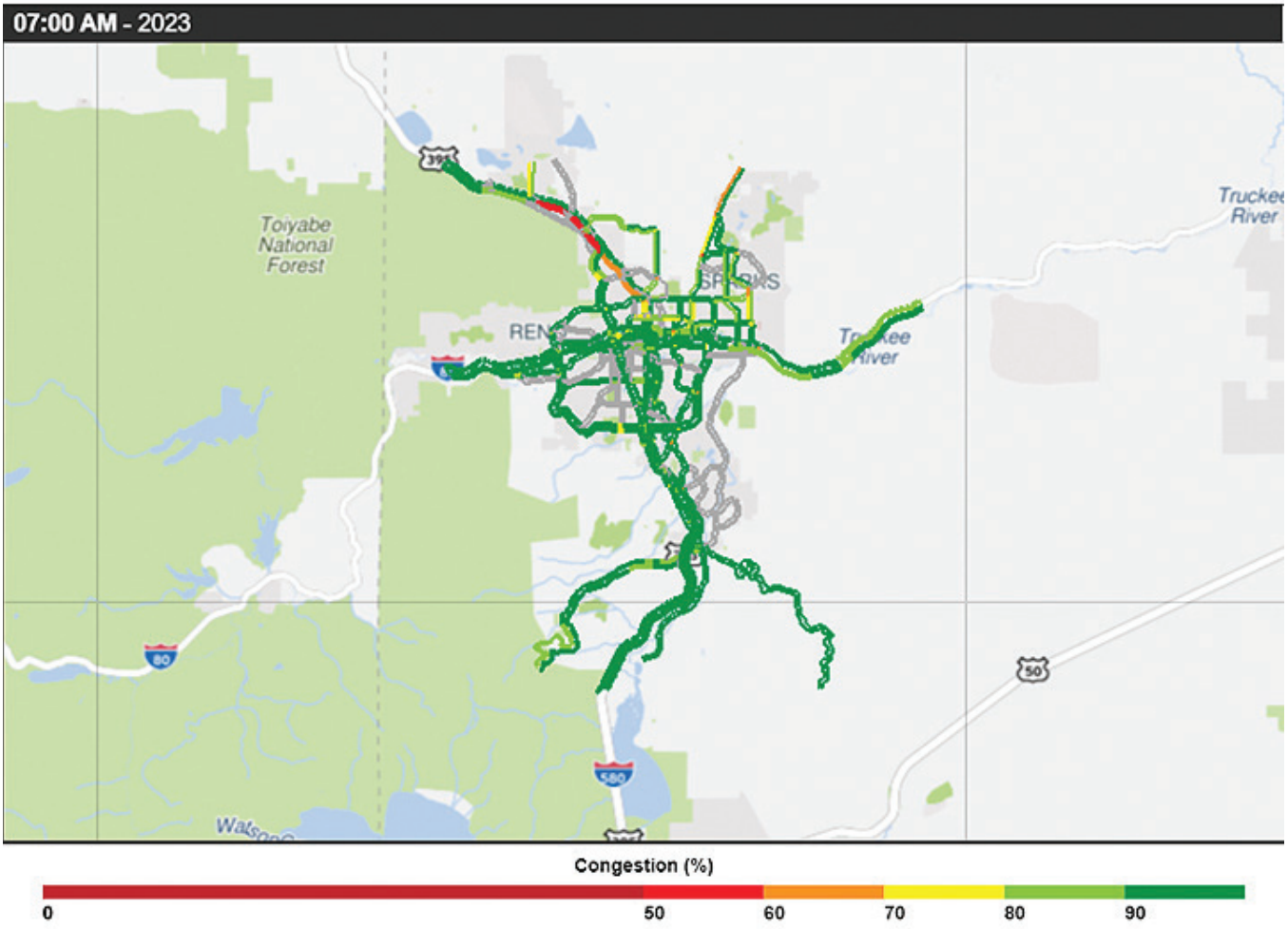


Figure D.2
Existing PM Traffic Congestion (2023)

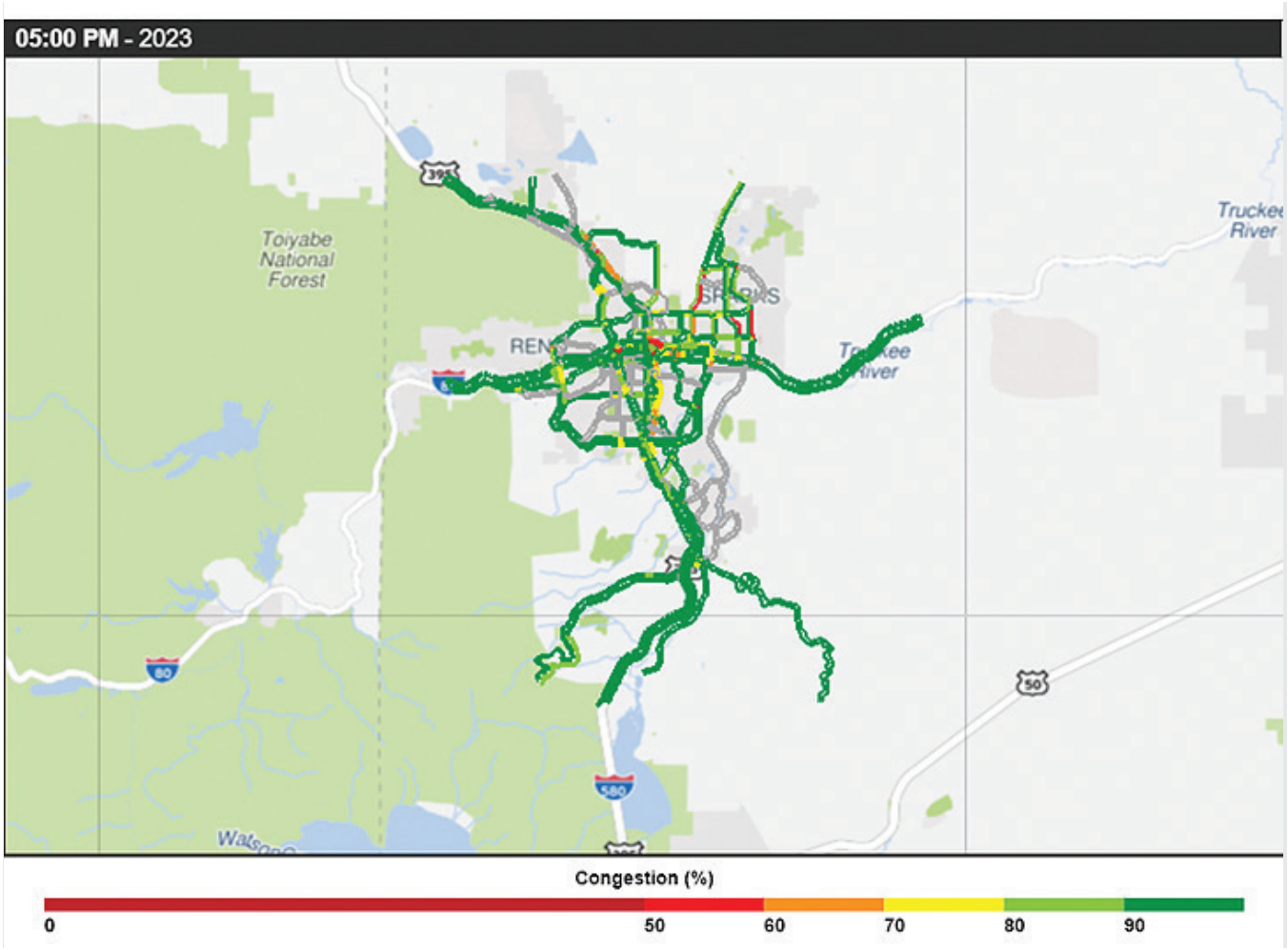


Figure D.3
Projected 2050 No-Build Peak Period Level of Service

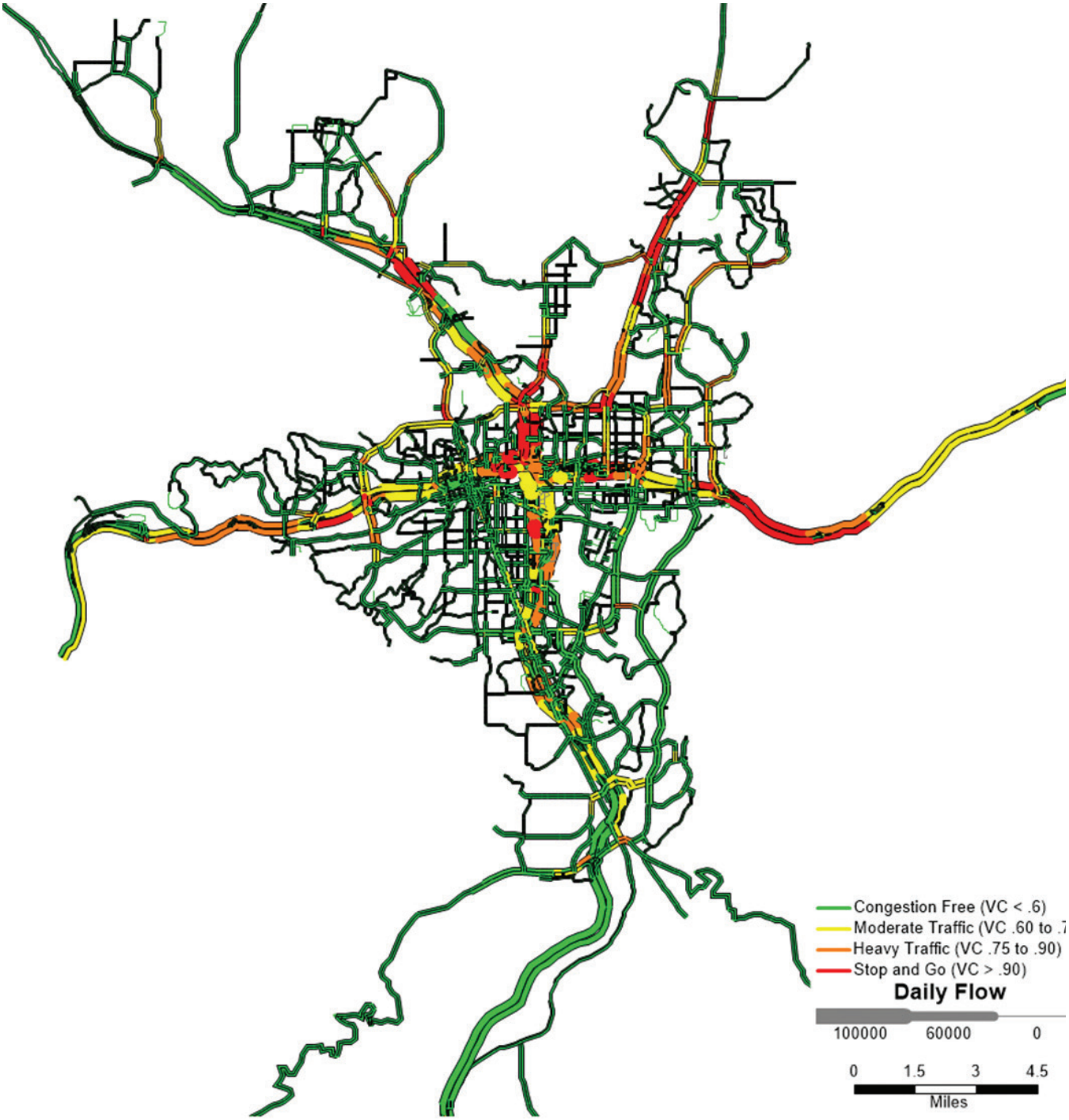
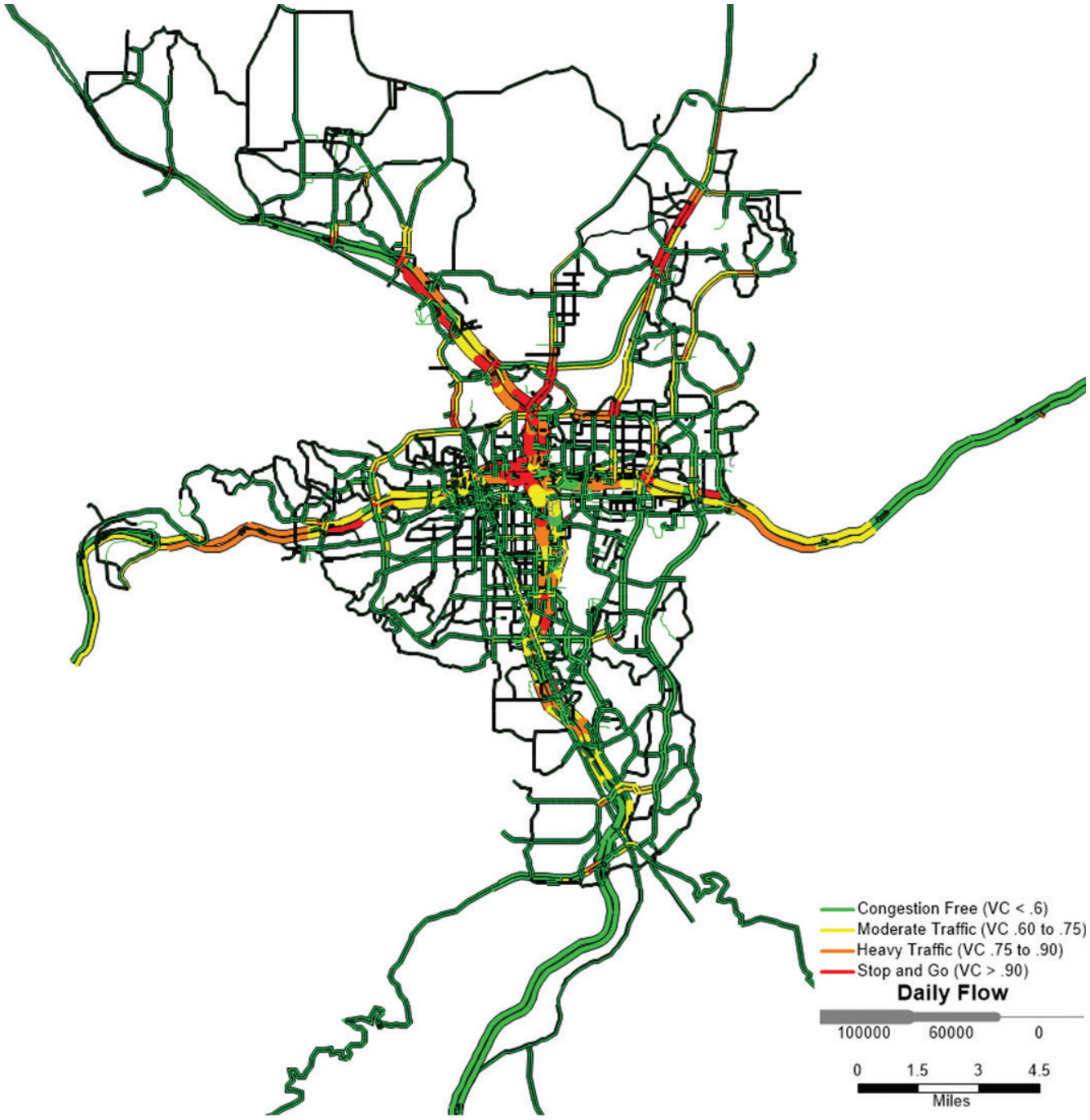


Figure D.4
Projected 2050 Build Peak Period Level of Service



4 – Develop Performance Measures

The IIJA continues the legislation authorized under MAP-21, which created a data-driven, performance-based multimodal program to address the many challenges facing the U.S. transportation system. Performance management will lead to more efficient investment of transportation funds by focusing on national transportation goals, increasing accountability and transparency, and improving decision making. This section describes the performance measures and targets to be used in assessing system performance. RTC will continue to develop annual reports to track progress toward achieving these targets and will continue to gather additional community input into the transportation planning process.

The U.S. Secretary of Transportation, in consultation with states, MPOs, and other stakeholders, established national performance measures for several areas: pavement conditions and performance for the Interstate and National Highway System (NHS), bridge conditions, injuries and fatalities, traffic congestion, on-road mobile source emissions, and freight movement on the Interstate System. States, in coordination with MPOs, set performance targets in support of those measures, and state and metropolitan plans describe how program and project selection will help achieve the targets. The RTC has collaborated with the FHWA Nevada Division Office, NDOT, and other stakeholder jurisdictions and agencies to develop performance measures.

The required national performance goals for federal highway programs include the following:

- Safety – To achieve a significant reduction in traffic fatalities and serious injuries on roadways.
- Maintain Infrastructure Condition – To maintain regional roadway infrastructure in a state of good repair.
- Congestion Reduction – To achieve a significant reduction in congestion on the roadway network.
- System Reliability and Resiliency – To improve the efficiency, resiliency, and overall reliability of the multimodal transportation system.
- Freight Movement and Economic Vitality – To improve the freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- Equity and Environmental Sustainability – To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- Reduced Project Delivery Delays – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process.
- Accessibility and Mobility – To increase the accessibility and mobility of people on the multimodal transportation system and enhance the integration and connectivity of the multimodal transportation system.
- Integrated Land-Use and Economic Development – To increase partnership among local jurisdictions and other stakeholders to identify how transportation investments can support regional development, housing, and tourism goals.

The national transportation goals that have been identified are contained in Chapter four. Also identified is how these national goals link to the RTP goals and applicable performance measures. The zero fatalities goal and crash reduction goals are consistent with the Nevada Strategic Highway Safety Plan.

5 – Institute System Performance Monitoring Plan

MAP-21 also provided a framework for linking goals and performance targets with project selection and implementation. Performance plans will track the progress toward achieving these targets and will be used to facilitate a community conversation about the track record of the RTC's transportation program. RTC develops the following performance plans:

- Metropolitan (Regional) Transportation Plan, to be updated every four years, which will include a discussion of:

  - Anticipated effects of the improvement program toward achieving the performance targets.

  - How investment priorities are linked to performance targets.

- Annual Metropolitan System and Transit Performance Report, which will include:

  - Evaluation of the condition and performance of the transportation system.

  - Progress achieved in meeting performance targets.

  - Evaluation of how transportation investments have improved conditions.

    - Transit Asset Management Plan.

    - Public Transportation Safety Plan

These performance plans will inform the congestion management process, which will be ongoing throughout the life of the RTP.

As projects in the five-year Regional Transportation Improvement Plan (RTIP) are completed, the CMP framework and evaluation criteria will be used to select projects from the RTP for inclusion in future years of the RTIP and future updates of the RTP.
The CMP evaluation criteria for safety, congestion, and multimodal integration are part of the RTP performance measures that will be reported in the Annual Metropolitan System Performance Report.

6 – Identify and Evaluate Strategies

RTC gathered information about priorities for operational strategies and capacity improvements from stakeholders, the general public, and partner agencies. This included the 2050 RTP Agency Working Group, Inter-County Working Group, RTC Technical Advisory Committee, and RTC Citizens Multimodal Advisory Committee. Input was gathered at meetings of the committees listed above, as well as at RTC Board meetings and from the general public. The evaluation criteria were developed based on the RTP goals, which were informed by the public and agency participation process.

RTC also considered national performance measures and the availability of data in development of the evaluation criteria.

The RTP project prioritization framework is a crucial element in the CMP. The projects identified in the 2050 RTP were compiled from a variety of sources, including:

- The previous RTP (developed in 2021).
- Corridor plans and studies such as the McCarran Boulevard Corridor Study, Mt. Rose Highway Corridor Study, South Virginia TOD Study, Lemmon Valley Spanish Springs Connector, Regional Freight Plan, Active Transportation Plan, Verdi Regional Transportation Study, and other corridor plans.
- Road Safety Assessments and Safety Management Plans.
- Community workshops and other public comments.
- A series of online surveys.
- Input from local governing bodies.
- Input from the 2050 RTP Agency Working Group, RTC Citizens Multimodal Advisory Committee, RTC Technical Advisory Committee, Inter-County Working Group, and RTC Regional Road Impact Fee Advisory Committee.

After all project suggestions were reviewed for feasibility and any inconsistencies, each project was evaluated based on a series of criteria developed in support of the RTP goals and CMP.

7 – Implement Selected Strategies and Manage Transportation System

The RTP evaluated and prioritized strategies and proposed projects using a data-driven approach that is directly linked to the RTP goals. Expected funding for the region over the next 25 years as well as timing was then applied to the prioritized project list, resulting in a fiscally constrained project list and a framework for project implementation.

8 – Monitor Strategy Effectiveness

As described in the RTP, RTC monitors the impacts of capacity projects on an ongoing basis. In addition to the annual reports, RTC also develops before and after studies of specific projects that currently address the impacts of safety and operations. The regional travel demand model, combined with updates from our traffic count program, will further be used to monitor impacts on regional traffic congestion. An additional tool is the creation of annual progress reports to document the implementation of the RTP.

The performance measures in the RTP, which will be tracked on an annual basis, are consistent with the CMP evaluation criteria. Monitoring crash and injury data, construction of multimodal elements such as sidewalks and bicycle facilities, and changes in travel delay will assist RTC in continuously evaluating the suitability of projects in the RTP and RTIP for effectiveness.

APPENDIX E

RTC Coordinated Human Services Transportation Plan (CTP)

An exerpt of the CTP Introduction is provided as Appendix E. To access the full document, please visit the following webpage. https://rtcwashoe.com/public-transportation/resources-and-reports/

CHAPTER 1: INTRODUCTION, BACKGROUND, AND PURPOSE

As part of the Regional Transportation Plan (RTP) update process, the Regional Transportation Commission of Washoe County (RTC) has coordinated efforts and development timelines to include an update to its Coordinated Public Transit-Human Services Transportation Plan (CTP). Fundamental to the Federal Transit Administration's (FTA) Section 5310 program is the requirement for projects that utilize this funding source to be "derived from a locally developed, coordinated public transit-human service transportation plan," (also known as a "coordinated plan"). Beyond the requirements of the funding program, the CTP is an opportunity to collaborate with regional partners not normally involved in the transportation planning process, understand the needs of vulnerable populations, and to identify projects that will improve the overall transportation system for the Truckee Meadows region.

The CTP addresses compliance with the requirements of 49 C.F.R. 5310 and the dynamic between the FTA's Section 5310 program, RTC's Section 5310 program, and the RTC's 5310 equivalent sales tax program. It also discusses the stakeholder, provider, and public outreach process, identifying existing conditions, and combining them with a demographic analysis before laying out an implementation plan based on unmet needs. It concludes with a comparison of needs to available resources as well as a summary of findings and recommendations.

Federal Requirements of the Section 5310 Program

Title 49 U.S.C. 5310 authorizes the formula assistance program for the Enhanced Mobility of Seniors and Individuals with Disabilities Program. The FTA refers to this formula program as "the Section 5310 program." The FTA apportions the funds annually to States and/or Designated Recipients based on an administrative formula that considers the ratio of the number of seniors and individuals with disabilities in rural areas (under 50,000), small urbanized areas (50,000 – 200,000), and large urbanized areas (over 2000,000.) These funds are subject to annual appropriations.
The RTC is designated by the Governor as the Metropolitan Planning Organization (MPO) for the Reno metropolitan area. In that capacity, the RTC is responsible for establishing policy direction for transportation planning.

This responsibility includes development and adoption of the Regional Transportation Plan (RTP), the Regional Transportation Improvement Program (RTIP), the Unified Planning Work Program (UPWP), and the Public Participation Plan (PPP), as well as the establishment and approval of federal funding priorities in certain program areas. The RTC, under authority of the State, is the Designated Recipient to Section 5310 funding. The RTC Board has the final authority over expenditure of Section 5310 funding. The RTC's Program Management Plan (PMP) describes how the RTC administers Section 5310 funding but was recently updated to reflect a change in the way this funding is distributed. FTA Circular 9070.1G is an issuance of guidance on the administration of the transit assistance program for seniors and individuals with disabilities under 49 U.S.C. 5310. The CTP further details eligibility requirements, the planning process for and contents of a coordinated plan, and the contents and cycle of the plan before detailing the Plan's development process.

APPENDIX F

RTC Regional Pavement Preservation Roadway List

Road Name	From	To	Functional Class	Policy
15th St	Victorian Ave	C St	Transit	Route
1st St	Lake St	Keystone	Arterial	LAC
2nd St	Kuenzli St	Keystone Ave	Arterial	LAC
2nd St	Kietzkie Ln	Kuenzli St	Arterial	MAC
4th St	McCarran Blvd	Galletti Way	Arterial	MAC
4th St	York Way	Greenbrae Dr	Transit	Route
5th St	N Sierra St	Keystone Ave	Arterial	MAC
5th St	Evans Ave	N Sierra St	Arterial	ULAC
6th St	E 4th St	Evans Ave	Arterial	MAC
6th St	Evans Ave	Ralston St	Arterial	ULAC
7th Ave	Sun Valley Blvd	Chocolate Dr	Arterial	LAC
7th St	Washington St	Robb Dr	Arterial	MAC
9th St	Evans Ave	Sierra St	Arterial	LAC
9th St	El Rancho Dr	N Wells Ave	Collector	LAC
Airway Dr	Longley Ln	Neil Rd	Arterial	MAC
Apple St	Kietzke Ln	Kirman Ave	Transit	Route
Arlington Ave	Skyline Blvd	W 6th St	Arterial	MAC
Armstrong Ln	Susileen Dr	Yuma Ln	Collector	LAC
Arrowcreek Pkwy	S Virginia St	Thomas Creek Rd	Arterial	MAC
Avenida de Landa	Sharlands Ave	Las Brisas Blvd	Collector	LAC
Baring Blvd	Vista Blvd	N McCarran Blvd	Arterial	MAC
Battle Born Way	Galletti Way	Victorian Ave	Arterial	MAC
Beaumont Pkwy	Clubhouse Dr	Glen Eagles Dr	Collector	LAC
Beaumont Pkwy	Avenida de Landa	Clubhouse Dr	Collector	LAC
Belmar Dr	Earthstone Dr	Los Altos Pkwy	Collector	LAC
Bluestone Dr	Huffaker Ln	End of Pavement	Collector	LAC
Bluestone Dr	Portman Ave	E Huffaker Ln	Collector	MAC
Boomtown Garson Rd	Vespucci Dr	I-80	Arterial	MAC
Booth St	California Ave	Idlewild Dr	Transit	Route
Bridge St	S Verdi Rd	3rd St	Collector	LAC
Brinkby Ave	S Virginia St	Plumas St	Collector	LAC
Buck Dr	Lemmon Dr	North Hills Blvd	Arterial	MAC
Cabela Dr	I-80	South Verdi Rd	Arterial	MAC
California Ave	S Virginia St	Hunter Lake Dr	Arterial	LAC
Calle de La Plata Dr	Pyramid Hwy	Eagle Canyon Dr	Collector	LAC
Calle de Oro Pkwy	Wingfield Springs Rd	Cordoba Blvd	Collector	LAC
Campus Way	Sierra Center Pkwy	Neil Rd	Arterial	MAC
Capital Blvd	S McCarran Blvd	Rock Blvd	Transit	Route
Casazza Dr	Wells Ave	Kietzke Ln	Transit	Route
Cashill Blvd	Skyline Blvd	S McCarran Blvd	Collector	LAC
Caughlin Pkwy	S McCarran	S McCarran Blvd	Collector	LAC

Road Name	From	To	Functional Class	Policy
Center St	S Virginia St	Truckee River Bridge	Arterial	MAC
Clear Acre Ln	Wedekind Rd	Dandini Blvd	Arterial	MAC
Colbert Dr	Longley Ln	Maestro Dr	Collector	LAC
Commerce St	N Rock Blvd	Merchant St	Transit	Route
Cordoba Blvd	Calle de Oro Pkwy	La Posada Dr	Collector	LAC
Corporate Blvd	Mill St	Capital Blvd	Transit	Route
Country Club Dr	North Side Lakeshore Blvd	South Side S.R 431	Collector	LAC
Court St	S Virginia St	S Arlington Ave	Arterial	LAC
Damonte Ranch Pkwy (Planned)	Geiger Grade Rd	Steamboat Pkwy	Arterial	MAC
Damonte Ranch	Eastern Terminus	S Virginia St	Arterial	MAC
Dandini Blvd	Sun Valley Blvd	US395	Arterial	MAC
David Allen Pkwy (Planned)	Northern Terminus	Kiley Pkwy	Collector	LAC
Debussy Dr	Sun Valley Blvd	Sun Valley Blvd	Transit	Route
Del Webb Pkwy E	Somersett Ridge Pkwy	Somersett Pkwy	Arterial	MAC
Del Webb Pkwy W	Somersett Ridge Pkwy	Somersett Pkwy	Arterial	MAC
Delores Dr (Planned)	Stonebrook Pkwy	Western Terminus	Arterial	MAC
Disc Dr	Vista Blvd	Pyramid Hwy	Arterial	MAC
Donatello Dr	Highland Ranch Pkwy	Sun Valley Blvd	Transit	Route
Double Diamond Pkwy	Double R Blvd	Double R Blvd	Arterial	MAC
Double R Blvd	Damonte Ranch Pkwy	Longley Ln	Arterial	MAC
E 5th Ave	Lupin Dr	Sun Valley Blvd	Transit	Route
E 8th Avenue	Lupin Dr	Sun Valley Blvd	Transit	Route
E Lincoln Way	Lillard Dr	Sparks Blvd	Transit	Route
Eagle Canyon Dr	Pyramid Hwy	W Calle de La Plata	Arterial	MAC
Eastlake Blvd	Old US 395	Old US 395	Arterial	MAC
Echo Ave	Moya Blvd	Mt Limbo St	Arterial	MAC
Edison Way	S Rock Rd	Mill St	Arterial	MAC
El Rancho Dr	Victorian Ave	Clear Acre Ln	Arterial	MAC
Energy Way	S Edison Way	S Rock Blvd	Transit	Route
Enterprise Rd	Valley Rd	Evans Ave	Arterial	MAC
Equity Ave	Financial Blvd	Corporate Blvd	Transit	Route
Evans Ave	E 2nd St	N McCarran Blvd	Arterial	LAC
Farr Ln	Pyramid Hwy	Wedekind Rd	Collector	LAC
Financial Blvd	Equity Ave	Mill St	Transit	Route
Foothill Rd	S Virginia St	Broken Hill Rd	Collector	LAC
Franklin Way	E Greg St	Kleppe Ln	Transit	Route
Galleria Pkwy Dr	Disc Dr	Los Altos Pkwy	Arterial	LAC
Galletti Way	Glendale Ave	Prater Way	Arterial	MAC
Gateway Dr	S Meadows Pkwy	Offenhauser Dr	Arterial	MAC

Road Name	From	To	Functional Class	Policy
Gentry Way	Neil Rd	Terminal Way	Arterial	MAC
Gentry Way	Kietzke Ln	Virginia St	Arterial	MAC
George Ferris Dr	E Lincoln Way	Legends Bay Dr	Transit	Route
Giroux St	E 2nd St	End of Pavement	Transit	Route
Glendale Ave	Meredith Way	Kietzke Ln	Arterial	MAC
Golden Valley Rd	Dream Catcher Rd	N Virginia St	Arterial	MAC
Greenbrae Dr	Howard Dr	N Rock Blvd	Collector	LAC
Greenbrae Dr	El Rancho Dr	Orovada St	Transit	Route
Greenbrae Dr	4th St	Pyramid Hwy	Transit	Route
Greenbrae Ln	N Rock Blvd	El Rancho Dr	Transit	Route
Greg St	I-80	Mill St	Arterial	MAC
Grove St	Harvard Way	Lymbery St	Collector	LAC
Harvard Way	Linden St	Vassar St	Collector	LAC
Highland Ave	Valley Rd	Evans Ave	Collector	LAC
Highland Ranch Pkwy	Pyramid Hwy	Sun Valley Blvd	Arterial	MAC
Holcomb Ave	S Virginia St	Mill St	Arterial	LAC
Howard Dr	E Prater Way	Sparks Blvd	Collector	LAC
Howard Dr	Nichols Blvd	E Lincoln Way	Transit	Route
Huffaker Ln (East)	Longley Ln	Celeste Dr	Arterial	MAC
Huffaker Ln (West)	Del Monte Ln	S Virginia St	Collector	LAC
Hunter Lake Dr	Rodney Dr	Yuma Ln	Transit	Route
Hunter Lake Dr	Yuma Ln	California Ave	Collector	LAC
Hunter Lake Dr	California Ave	Idlewild Dr	Transit	Route
Idlewild Dr	Booth St	Hunter Lake Dr	Transit	Route
Incline Way	North Side Country Club	Southwood Blvd	Collector	LAC
Industrial Way	Greg St	Glendale Ave	Transit	Route
Keystone Ave	Coleman Dr	N McCarran Blvd	Arterial	LAC
Keystone Ave	Coleman Dr	California Ave	Arterial	MAC
Kietzke Ln	S Virginia St	Neil Rd	Arterial	MAC
Kietzke Ln	Southern Terminus	Neil Rd	Transit	Route
Kiley Pkwy (Planned)	Henry Orr Pkwy	Pyramid Hwy	Collector	LAC
Kiley Pkwy	Northern Terminus	Henry Orr Pkwy	Collector	LAC
Kings Row	Keystone Ave	N McCarran Blvd	Collector	LAC
Kirman Ave	Mill St	Kuenzli St	Arterial	MAC
Kirman Ave	E Plumb Ln	Mill St	Collector	LAC
Kirman Ave	Apple St	E Plumb Ln	Transit	Route
Kuenzli St	Kietzke Ln	E 2nd St	Arterial	MAC
Kumle Ln	Firecreek Crossing	US-395	Arterial	MAC
La Posada Dr	Cordoba Blvd	Pyramid Hwy	Arterial	MAC
Lake St	Mill St	E 6th St	Collector	LAC
Lakeshore Blvd	S.R 28 (West Int.)	S.R 28 (East Int.)	Collector	LAC

Road Name	From	To	Functional Class	Policy
Lakeside Dr	Ridgeview Dr	W Huffaker Ln	Collector	LAC
Lakeside Dr	W Huffaker Ln	W Moana Ln	Arterial	MAC
Lakeside Dr	W Moana Ln	W Plumb Ln	Collector	LAC
Las Brisas Blvd	Silverado Creek Dr	N McCarran Blvd	Collector	LAC
Lazy 5 Pkwy	David Allen Pkwy	Pyramid Hwy	Arterial	MAC
Lear Blvd	Military Rd	Moya Blvd	Arterial	MAC
Legends Bay Dr	George Ferris Dr	E Lincoln Way	Transit	Route
Lemmon Dr	Ramsey Way	N Virginia St	Arterial	MAC
Liberty St	Ryland St	S Arlington Ave	Arterial	LAC
Lillard Dr	E Lincoln Way	E Prater Way	Transit	Route
Lincoln Way	Sparks Blvd	N McCarran Blvd	Arterial	LAC
Linden St	Wrondel Way	Harvard Way	Transit	Route
Locust St	Casazza Dr	Ryland St	Arterial	LAC
Longley Ln	S Virginia St	S Rock Blvd	Arterial	MAC
Loop Rd	Salomon Cir	Vista Blvd	Arterial	MAC
Los Altos Pkwy	Vista Blvd	Pyramid Hwy	Arterial	MAC
Lund Ln	Wedekind Rd	Northtowne Ln	Transit	Route
Lupin Dr	E 5th Ave	E 8th Ave	Transit	Route
Lymbery St	W Moana Ln	Lakeside Dr	Collector	MAC
Mae Anne Ave	N McCarran Blvd	Mesa Park Rd	Arterial	MAC
Maestro Dr	Double R Blvd	Colbert Dr	Arterial	MAC
Marthiam Ave	Cashill Blvd	Susileen Dr	Collector	LAC
Matley Ln	E Plumb Ln	Vilanova Dr	Arterial	MAC
Mayberry Dr	California Ave	W 4th St	Arterial	MAC
Mays Blvd	Southwood Blvd.	Lakeshore Blvd	Collector	LAC
Mccourry Blvd	Northwood Blvd.	S.R 431	Collector	LAC
Meadowood Mall Cir	Virginia St	Meadowood Mall Cir	Arterial	LAC
Meadowood Mall Link	McCarran Blvd	Meadowood Mall Cir	Arterial	LAC
Meadowood Mall Way	Virginia St	Meadowood Mall Cir	Arterial	LAC
Meadowood Mall Way	S Virginia St	Kietzke Ln	Arterial	LAC
Merchant St	Commerce St	Sullivan Ln	Transit	Route
Meredith Way	Kleppe Ln	E Glendale Ave	Transit	Route
Mesa Park	W 4th St	Mae Anne Ave	Collector	LAC
Military Rd	Lemmon Dr	Echo Ave	Arterial	MAC
Mill St	Kirman Ave	S Lake St	Arterial	LAC
Mill St	S McCarran Blvd	Kirman Ave	Arterial	MAC
Mira Loma Dr	Veterans Pkwy	To About 440 Feet East of Veterans Pkwy	Collector	LAC
Mira Loma Dr	Veterans Pkwy	Longley Ln	Collector	LAC
Moana Ln	Plumas St	Skyline Blvd	Arterial	LAC

Road Name	From	To	Functional Class	Policy
Moana Ln	Neil Rd	Plumas St	Arterial	MAC
Mount Rose St	S Virginia St	S Arlington Ave	Arterial	LAC
Moya Blvd	Echo Ave	Red Rock Rd	Arterial	LAC
N Virginia St	Panther Dr	Stead Blvd	Arterial	MAC
N Virginia St	Truckee River Bridge	McCarran Blvd	Arterial	MAC
Neighborhood Way	Eagle Canyon Dr	Treasure City Dr	Arterial	MAC
Neil Ln	Neil Rd	Meadowood Mall Cir	Arterial	MAC
Neil Rd	Kietzke Ln	Gentry Way	Arterial	LAC
Neil Way	Neil Rd	Meadowood Mall Cir	Arterial	MAC
Nichols Blvd	Howard Dr	N McCarran Blvd	Arterial	MAC
Nichols Blvd	N McCarran Blvd	E Victorian Ave	Transit	Route
North Hills Blvd	Golden Valley Rd	Buck Dr	Arterial	MAC
Northtowne Ln	Lund Ln	N McCarran Blvd	Transit	Route
Northwood Blvd	S.R 28 (West Int.)	S.R 28 (East Int.)	Collector	LAC
Nugget Ave	S McCarran Blvd	S Rock Blvd	Arterial	MAC
Oddie Blvd	Pyramid Hwy	Sadleir Way	Arterial	MAC
Offenhauser Dr	Portman Ave	Huffaker Ln	Collector	LAC
Offenhauser Dr	Gateway Dr	Portman Ave	Arterial	MAC
Old US-395	Eastlake Blvd	Mt Rose Hwy	Arterial	MAC
Orovada St	Greenbrae Dr	Silverada Blvd	Transit	Route
Parr Blvd	US395	N Virginia St	Arterial	LAC
Patriot Blvd	Longley Ln	Portman Ave	Collector	LAC
Patriot Blvd	Portman Ave	S Virginia St	Arterial	MAC
Peckham Ln	Longley Ln	Lakeside Dr	Arterial	MAC
Pembroke Dr	Veterans Pkwy	Boynton Slough	Arterial	MAC
Pembroke Dr	Veterans Pkwy	S McCarran Blvd	Collector	LAC
Plumas St	Ridgeview Dr	California Ave	Arterial	MAC
Plumb Ln	Terminal Way	S McCarran Blvd	Arterial	MAC
Portman Ave	Offenhauser Dr	E Patriot Blvd	Arterial	MAC
Prater Way	N McCarran Blvd	Galletti Way	Arterial	LAC
Prater Way	Petes Way	N McCarran Blvd	Arterial	MAC
Prototype Dr	Double R Blvd	Gateway Dr	Arterial	LAC
Putnam Dr	N Sierra St	Washington St	Arterial	LAC
Ralston St	W 2nd St	11th St	Collector	LAC
Red Rock Rd	Northern Terminus	US-395N	Arterial	MAC
Redfield Pkwy	Kietzke Ln	Firecreek Crossing	Arterial	MAC
Regency Way	S Virginia St	S Wells Ave	Transit	Route
Richard Springs Blvd	Lazy 5 Pkwy	Eagle Canyon Dr	Arterial	MAC
Ridgeview Dr	Lakeside Dr	Plumas St	Arterial	MAC
Rio Poco Rd	Reggie Rd	S McCarran Blvd	Collector	LAC
Rio Wrangler Pkwy	Bucephalus Pkwy	Veterans Pkwy	Arterial	MAC

Road Name	From	To	Functional Class	Policy
Rio Wrangler Pwy	S Meadows Pkwy	Bucephalus Pkwy	Arterial	MAC
Robb Dr	I-80	Las Brisas	Arterial	MAC
Rock Blvd	Prater Way	N McCarran Blvd	Arterial	LAC
Rock Blvd	S McCarran Blvd	Prater Way	Arterial	MAC
Ryland St	Mill St	Holcomb Ave	Arterial	LAC
S Virginia St	E Plumb Ln	Truckee River	Arterial	LAC
S Virginia St	Mt Rose Hwy	Plumb Ln	Arterial	MAC
Sadleir Way	N Wells Ave	Valley Rd	Arterial	MAC
Salomon Cir	Vista Blvd	Loop Rd	Arterial	MAC
Selmi Dr	Clear Acre Ln	Sutro St	Transit	Route
Sharlands Ave	Robb Dr	Mae Anne Ave	Arterial	MAC
Sierra Center Pkwy	Maestro Dr	S Virginia St	Arterial	MAC
Sierra Highlands Dr	N McCarran Blvd	Greystone Dr	Collector	LAC
Sierra Rose Dr	Kietzke Ln	Talbot Ln	Arterial	MAC
Sierra St	California Ave	N Virginia St	Arterial	LAC
Silver Lake Rd	Sky Vista Pkwy	Red Rock Rd	Collector	LAC
Silverada Blvd	E 9th St	Wedekind Rd	Collector	LAC
Sinclair St	Holcomb Ave	Mill St	Collector	LAC
Sky Mountain Dr	Mistyridge Ln	S McCarran Blvd	Transit	Route
Sky Valley Dr	Summit Ridge Dr	Mistyridge Ln	Transit	Route
Sky Vista Pkwy	Lemmon Dr	Silver Lake Rd	Arterial	MAC
Sky Vista Pkwy	Silver Lake Rd	Lear Blvd	Collector	LAC
Skyline Blvd	S McCarran Blvd	S Arlington Ave	Collector	LAC
Smithridge Dr	McCarran Blvd	E Peckham Ln	Arterial	MAC
Somersett Pkwy	Del Webb Pkwy	Mae Anne Ave	Arterial	MAC
Somersett Ridge Pkwy	Us Hwy 40 (Verdi)	S/S Del Webb Pkwy	Collector	LAC
South Meadows Pkwy	Eastern Terminus	S Virginia St	Arterial	MAC
South Meadows Pkwy	Desert Way	South Meadows Pkwy	Arterial	MAC
South Verdi Rd	I-80 WB Off Ramp	25' E Of Garson Rd.	Collector	LAC
Southwood Blvd	S.R 28 (West Int.)	S.R 28 (East Int.)	Collector	LAC
Sparks Blvd	E Greg St	Pyramid Hwy	Arterial	MAC
State St	Holcomb Ave	S Virginia St	Arterial	MAC
Stead Blvd	N Virginia St	Echo Ave	Arterial	MAC
Steamboat Pkwy	Rio Wrangler Pkwy	Damonte Ranch Pkwy	Arterial	MAC
Stoker Ave	W 4th St	W 7th St	Collector	LAC
Stonebrook Pkwy	Delores Dr	La Posada Dr	Arterial	MAC
Sullivan Ln	Oddie Blvd	El Rancho Dr	Collector	LAC
Sullivan Ln	Prater Way	Oddie Blvd	Collector	LAC
Summit Ridge Dr	W 4th St	Summit Ridge Ct	Collector	LAC
Summit Ridge Exit/On Ramp	S McCarran Blvd	Summit Ridge Dr	Transit	Route
Sun Valley Blvd	Highland Ranch Pkwy	Dandini Blvd	Arterial	MAC

Road Name	From	To	Functional Class	Policy
Susileen Dr	Marthiam Ave	Armstrong Ln	Collector	LAC
Sutro St	Kuenzli St	Selmi Dr	Arterial	MAC
Talbot Ln	South End	Redfield Pkwy	Arterial	MAC
Tanager St	Village Blvd	Southwood Blvd	Collector	LAC
Tanberg Dr	Seventh Ave	Mineral Ave	Transit	Route
Terminal Way	Gentry Way	Mill St	Arterial	MAC
Thomas Creek Rd	Mt Rose Hwy	W Zolezzi Ln	Collector	LAC
Toll Rd	Sylvester Rd	Geiger Grade Rd	Collector	LAC
University Terrace	N Sierra St	Vine St	Collector	LAC
University Way	Truckee River Bridge	Ninth St	Collector	MAC
US Hwy 40 (Verdi)	I-80	Bridge St	Arterial	MAC
Valley Rd	W 4th St	Enterprise Rd	Arterial	MAC
Vassar St	Kietzke Ln	S Virginia St	Arterial	LAC
Vassar St	Terminal Way	Kietzke Ln	Arterial	MAC
Veterans Pkwy	S Meadows Pkwy	E Greg St	Arterial	HAC
Veterans Pkwy	Geiger Grade Rd	S Meadows Pkwy	Arterial	HAC
Victorian Ave	N McCarran Blvd	Prater Way	Arterial	LAC
Village Blvd	Lakeshore Blvd	Eagle Dr	Collector	LAC
Village Pkwy	Village Center Dr	US-395	Arterial	MAC
Villanova Dr	Terminal Way	Matley Ln	Arterial	LAC
Villanova Dr	Matley Ln	Harvard Way	Collector	LAC
Vine St	1st St	University Ter	Collector	LAC
Vista Blvd	I-80	Wingfield Hill Rd	Arterial	MAC
Vista Blvd	Hubble Dr	Wingfield Hills Rd	Collector	LAC
Vista Knoll Pkwy	Lemmon Dr	Sky Vista Pkwy	Collector	LAC
Washington St	W 2nd St	Putnam Dr	Collector	LAC
Wedekind Rd	Farr Ln	To 330 Feet West of Sutro	Collector	LAC
Wedge Pkwy	De Spain Ln	Arrowcreek Pkwy	Arterial	MAC
Wells Ave	S Virginia St	Ryland St	Arterial	LAC
Wells Ave	Ryland St	Sadleir Way	Arterial	MAC
West St	W 4th St	W 6th St	Arterial	MAC
White Lake Pkwy	US395	Village Pkwy	Arterial	MAC
Windmill Farms Blvd	Kiley Pkwy	Western Terminus	Arterial	MAC
Wingfield Hills Rd	Pyramid Hwy	Rolling Meadows Dr	Arterial	MAC
Wingfield Hills Rd	Vista Blvd	Rolling Meadows Dr	Arterial	MAC
Wingfield Springs Rd	N Wingfield Pkwy Trail	Calle de Oro Pkwy	Collector	LAC
Wrondel Way	Linden St	Apple St	Transit	Route
York Way	N McCarran Blvd	N Rock Blvd	Collector	LAC
Yuma Ln	Hunter Lake Dr	Armstrong Ln	Collector	LAC
Zolezzi Ln	Arrowcreek Pkwy	Thomas Creek Rd	Collector	LAC
15th St	Hymer Ave	Glendale Ave	INDUSTRIAL	

Road Name	From	To	Functional Class
18th St	Glendale Ave	Crane Way	INDUSTRIAL
18th St	Glendale Ave	Hymer Ave	INDUSTRIAL
19th St	Pittman Ave	Pacific Ave	INDUSTRIAL
21th St	Greg St	Pacific Ave	INDUSTRIAL
5th St	Eastern Terminus	Ferrar St	INDUSTRIAL
5th St	Morrill Ave	Wells Ave	INDUSTRIAL
Aircenter Cir	Longley Ln	Longley Ln	INDUSTRIAL
Airmotive Way	Terminal Way	Villanova Dr	INDUSTRIAL
Alexander Lake Rd	Veterans Pkwy	Spring Dr	INDUSTRIAL
Ampere Dr	Rock Blvd	Edison Way	INDUSTRIAL
Asti Ln	Bennie Ln	Ferrari McLeod Blvd	INDUSTRIAL
Automotive Way	Market St	Kietzke Ln	INDUSTRIAL
Barron Way	Reno Corporate Dr	Louie Ln	INDUSTRIAL
Bennie Ln	Gardell Ave	Parr Blvd	INDUSTRIAL
Bergin Way	Kresge Ln	Northern Terminus	INDUSTRIAL
Bible Way	Mill St	Vassar St	INDUSTRIAL
Boxington Way	Lincoln Way	Lillard Dr	INDUSTRIAL
Bravo Ave	Mt Lola St	Ramsey Way	INDUSTRIAL
Bravo Ave	Mt Bismark St	Mt McClellan St	INDUSTRIAL
Brierley Way	Vista Blvd	Lillard Dr	INDUSTRIAL
Brookside Ct	Eastern Terminus	Rock Blvd	INDUSTRIAL
Capital Ct	Eastern Terminus	Capital Blvd	INDUSTRIAL
Catron Dr	Parr Cir	Parr Blvd	INDUSTRIAL
Gentry Way	Kietzke Ln	End of Cul de Sac	INDUSTRIAL
Circuit Ct	Southern Terminus	Isidor Ct	INDUSTRIAL
Clean Water Way	Eastern Terminus	McCarran Blvd	INDUSTRIAL
Cola Ct	Western Terminus	Vista Blvd	INDUSTRIAL
Coliseum Way	Peckham Ln	Moana Ln	INDUSTRIAL
Commercial Row	Lake St	West St	INDUSTRIAL
Condor Way	Western Terminus	Airmotive Way	INDUSTRIAL
Coney Island Dr	Standford Way	Marietta Way	INDUSTRIAL
Corsair St	Aircenter Cir	Longley Ln	INDUSTRIAL
Crane Way	Eastern Terminus	18th St	INDUSTRIAL
Crummer Ln	Virginia St	US395	INDUSTRIAL
Delucchi Ln	Home Gardens Dr	S Virginia St	INDUSTRIAL
Deming Way	Northern Terminus	Spice Islands Dr	INDUSTRIAL
Deming Way	Southern Terminus	Glendale Ave	INDUSTRIAL
Depaoli St	5th St	Tacchino St	INDUSTRIAL
Dermody Way	Northern Terminus	Glendale Ave	INDUSTRIAL
Dickerson Rd	Western Terminus	Chisim St	INDUSTRIAL
Digital Ct	Southern Terminus	Ingenuity Ave	INDUSTRIAL

Road Name	From	To	Functional Class
Distribution Dr	Calle de la Plata Dr	Isidor Ct	INDUSTRIAL
Double Eagle Ct	Western Terminus	Gateway Dr	INDUSTRIAL
Dunn Cir	Northern Terminus	Glendale Ave	INDUSTRIAL
Dunn Cir	Watson Way	Dunn Cir	INDUSTRIAL
E Commercial Row	Western Terminus	Sutro St	INDUSTRIAL
E Nugget Ave	Southern Terminus	Nugget Ave	INDUSTRIAL
Echo Ave	Moya Blvd	End of Pavement	INDUSTRIAL
Echo Ct	Northern Terminus	Echo Ave	INDUSTRIAL
Edison Way	Mill St	End of Pavement	INDUSTRIAL
Equity Ave	McCarran Blvd	Financial Blvd	INDUSTRIAL
Ferrar McLeod Blvd	Gardella Ave	Parr Blvd	INDUSTRIAL
Ferrari St	4th St	5th St	INDUSTRIAL
Financial Blvd	Equity Ave	Capital Blvd	INDUSTRIAL
Franklin Way	Spice Islands Dr	Greg St	INDUSTRIAL
Frazer Ave	Rock Blvd	21st St	INDUSTRIAL
Freeport Blvd	Steneri Way	Rock Blvd	INDUSTRIAL
Freeport Blvd	Rock Blvd	21st St	INDUSTRIAL
Gaslight Ln	Socrates Dr	Socrates Dr	INDUSTRIAL
Gentry Way	Kietzke Ln	End of Pavement	INDUSTRIAL
Gentry Way	Neil Rd	Chris Ln	INDUSTRIAL
Gentry Way	Virginia St	Brinkby Ave	INDUSTRIAL
Glen Carron Cir	Entire Loop	Entire Loop	INDUSTRIAL
Gould St	Mills St	2nd St	INDUSTRIAL
Green Acres Dr	Western Terminus	Virginia St	INDUSTRIAL
Greg Pkwy	Industrial Way	Greg St	INDUSTRIAL
Greg Pkwy	Industrial Way	Greg St	INDUSTRIAL
Hammill Ln	Eastern Terminus	Kietzke Ln	INDUSTRIAL
Harvard Way	Automotive Way	Market St	INDUSTRIAL
Hawco Ct	Eastern Terminus	Ingenuity Ave	INDUSTRIAL
Huffaker Pl	Western Terminus	Virginia St	INDUSTRIAL
Hulda Ct	Hulda Way	Eastern Terminus	INDUSTRIAL
Hulda Way	Northern Terminus	Greg St	INDUSTRIAL
Hymer Ave	Eastern Terminus	21st St	INDUSTRIAL
Icehouse Ave	Western Terminus	Eastern Terminus	INDUSTRIAL
Industrial Way	Greg Pkwy	Gret St	INDUSTRIAL
Industry Cir	Echo Ave	Echo Ave	INDUSTRIAL
Ingenuity Ave	Western Terminus	Pyramid Hwy	INDUSTRIAL
Innovation Dr	Longley Ln	Double R Blvd	INDUSTRIAL
Internation Pl	Glendale Ave	Icehouse Ave	INDUSTRIAL
Inventors Pl	Western Terminus	Isidor Ct	INDUSTRIAL
Isidor Ct	Academy Way	Calle de la Plata Dr.	INDUSTRIAL

Road Name	From	To	Functional Class
Joule St	Edison Way	Rock Blvd	INDUSTRIAL
Kleppi Ln	Greg St	Greg St	INDUSTRIAL
Kresge Ln	Watson Way	McCarran Blvd	INDUSTRIAL
Kuenzli St	Sunshine Ln	Kietzke Ln	INDUSTRIAL
Larkin Cir	Eastern Terminus	Greg St	INDUSTRIAL
Lear Blvd	Eastern Terminus	Military Rd	INDUSTRIAL
Lewis St	Kietzke Ln	Maine St	INDUSTRIAL
Lewis St	Golden Ln	Kietzke Ln	INDUSTRIAL
Lillard Dr	Southern Terminus	Lincoln Dr	INDUSTRIAL
Linda Way	Coney Island Dr	Glendale Ave	INDUSTRIAL
Linden St	Harvard Way	Kietzke Ln	INDUSTRIAL
Locust St	Ryland St	Mill St	INDUSTRIAL
Longley Ln	Rock Blvd	End	INDUSTRIAL
Louie Ln	Longley Ln	Airway Dr	INDUSTRIAL
Louise St	Mill St	Market St	INDUSTRIAL
Madison Ave	Larkin Cir	Larkin Cir	INDUSTRIAL
Manuel St	2nd St	Kuenzli St	INDUSTRIAL
Marietta Way	Southern Terminus	Greg St	INDUSTRIAL
Market St	Villanova Dr	Kietzke Ln	INDUSTRIAL
Matley Ln	Mill St	Vassar St	INDUSTRIAL
Mira Loma Dr	Aircenter Circle	Longley Ln	INDUSTRIAL
Montello St	Southern Terminus	6th St	INDUSTRIAL
Mt Charleston St	Stead Blvd	Echo Ave	INDUSTRIAL
Newport Ln	Newport Ln	Ranger Rd	INDUSTRIAL
Ohm Pl	Ampere Dr	Mill St	INDUSTRIAL
Ormand Ct	Eastern Terminus	Giroux St	INDUSTRIAL
Overmyer Rd	Bergin Way	Watson Way	INDUSTRIAL
Pacifica Ave	19th St	21st St	INDUSTRIAL
Packer Way	Southern Terminus	Glendale Ave	INDUSTRIAL
Panther Dr	Panther Dr	End	INDUSTRIAL
Panther Dr	Business 395	Western Rd	INDUSTRIAL
Parr Cir	Parr Blvd	Parr Blvd	INDUSTRIAL
Pittman Ave	15th St	18th St	INDUSTRIAL
Plaza St	Lake St	Virginia St	INDUSTRIAL
Plumas St	Southern Terminus	Ridgeview Dr	INDUSTRIAL
Production Ct	Lear Blvd	N/End Cds	INDUSTRIAL
Production Dr	Northern Terminus	Resource Dr	INDUSTRIAL
Prosperity St	Golden Ln	Kietzke Ln	INDUSTRIAL
Prototype Ct	Eastern Terminus	Gateway Dr	INDUSTRIAL
Purina Way	Greg St	Spice Islands Dr	INDUSTRIAL
Quail Manor	Southern Terminus	Airway Dr	INDUSTRIAL

Road Name	From	To	Functional Class
Reactor Way	Northern Terminus	Rock Blvd	INDUSTRIAL
Reactor Way	Southern Terminus	Energy Way	INDUSTRIAL
Redwood Pl	Mill St	Market St	INDUSTRIAL
Reno Corporate Dr	Double R Blvd	Barron Way	INDUSTRIAL
Resource Dr	Production Dr	Moya Blvd	INDUSTRIAL
S 16th St	Glendale Ave	Hymer Ave	INDUSTRIAL
Sage Point Ct	Lear Blvd	Northern Terminus	INDUSTRIAL
Sandhill Rd	Double Diamond Pkwy	Double R Blvd	INDUSTRIAL
Security Cir	Virginia St	Virginia St	INDUSTRIAL
Shaber Ave	15th St	18th St	INDUSTRIAL
Snider Way	Standford Way	Steneri Way	INDUSTRIAL
Southern Way	Freeport Blvd	Greg St	INDUSTRIAL
Spice Islands Ct	Western Terminus	Spice Islands Dr	INDUSTRIAL
Spice Islands Dr	Greg St	Greg St	INDUSTRIAL
Spitfire Ct	Eastern Terminus	Turbo Cir	INDUSTRIAL
Stanford Way	Northern Terminus	McCarran Blvd	INDUSTRIAL
Stanford Way	Southern Terminus	Nugget Ave	INDUSTRIAL
Steen Dr	Harvard Way	Kietzke Ln	INDUSTRIAL
Steneri Way	Glendale Ave	Freeport Blvd	INDUSTRIAL
Sugar Pine Ct	Western Terminus	Woodland Ave	INDUSTRIAL
Sunshine Ln	Glendale Ave	Mill St	INDUSTRIAL
Sunshine Ln	Northern Terminus	2nd St	INDUSTRIAL
Tacchino St	4th St	Depaoli St	INDUSTRIAL
Tampa St	Northern Terminus	Timber Way	INDUSTRIAL
Technology Way	Double Diamond Pkwy	Double R Blvd	INDUSTRIAL
Telegraph St	Vassar St	Greg St	INDUSTRIAL
Terabyte Ct	Eastern Terminus	Double Diamond Pkwy	INDUSTRIAL
Terabyte Dr	Double Diamond Pkwy	Terabyte Ct	INDUSTRIAL
Timber Way	Valley Rd	Sutro St	INDUSTRIAL
Trademark Dr	Eastern Terminus	Double R Blvd	INDUSTRIAL
Turbo Cir	Aircenter Cir	Air center Cir	INDUSTRIAL
United Cir	Spice Islands Dr	Spice Islands Dr	INDUSTRIAL
Vassar St	Telegraph St	Terminal Way	INDUSTRIAL
Wall St	Financial Blvd	Corporate Blvd	INDUSTRIAL
Watson Way	Kresge Ln	Dunn Cir	INDUSTRIAL
White Fir	Eastern Terminus	River Front Dr	INDUSTRIAL
Wild Island Ct	Southern Terminus	Lincoln Way	INDUSTRIAL
Wolverine Way	Stanford Way	Glendale Ave	INDUSTRIAL
Woodland Ave	Sugar Pine Ct	4th St	INDUSTRIAL
Yale Way	Market St	Harvard Way	INDUSTRIAL
Yori Ave	Moana Ln	Gentry Way	INDUSTRIAL

APPENDIX G

Resolution of Approval

RESOLUTION AUTHORIZING THE APPROVAL OF THE 2025 UPDATE TO THE 2050 REGIONAL TRANSPORTATION PLAN (RTP) FOR THE RENO-SPARKS URBANIZED AREA

WHEREAS, Title 23 Code of Federal Regulations, Part 450, and Title 49 Code of Federal Regulations, Part 613, require the preparation of a Regional Transportation Plan (RTP) by the Metropolitan Planning Organization (MPO); and

WHEREAS, the Regional Transportation Commission of Washoe County (RTC) has been designated as the Metropolitan Planning Organization (MPO) for the Reno-Sparks Urbanized Area of Washoe County; and

WHEREAS, RTC, through the conduct of a continuing, comprehensive and coordinated transportation planning process and in conformance with all applicable federal requirements, has prepared the 2025 Update to the 2050 Regional Transportation Plan (RTP); and

WHEREAS, RTC finds that pursuant to Title 40 of the Code of Federal Regulations, Part 93, this Regional Transportation Plan conforms with the intent of the State Air Quality Implementation Plan; and

WHEREAS, RTC finds that the RTP has been prepared through a process of community and agency coordination and participation in accordance with the RTC's adopted Public Participation Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY that the Regional Transportation Commission does hereby approve and endorse the 2025 Update to the 2050 Regional Transportation Plan.

CERTIFICATE

The undersigned, duly qualified Chairperson of the Regional Transportation Commission, certifies that the foregoing is a true and correct copy of a resolution adopted at a legally convened meeting held on February 21, 2025.

Alexis Hill, Chair
Regional Transportation Commission

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