Transportation Element

7. TRANSPORTATION

7.1. INTRODUCTION

Southern Sandoval County's development pattern in what is now the City of Rio Rancho evolved as a result of several economic and geographic circumstances that established the transportation framework of the City.

Before incorporation in 1981, Rio Rancho was an AMREP Southwest housing development known as Rio Rancho Estates. The first houses in the area were built in the 1960s. This early development pattern resulted in a platting of 91,000 acres of residential lots without the requirement for public infrastructure like paved streets, curbs, gutters, sewers, and drainage. This early platting placed lots along potential roadways that formed a modified grid. However, the road rights-of-way set aside by this platting are narrow and unable to accommodate higher capacity road facilities needed for a growing population.

During the 1980's, much of the emphasis by AMREP Southwest was to provide affordable housing in the greater Albuquerque area market. During this time, the demographics of the community changed with a large influx of first-time home buyers and families. Rio Rancho's location west of the Rio Grande River and AMREP's emphasis on affordable housing ensured the areas start as a bedroom community to the job centers located east of the river in Bernalillo County.

To accommodate Rio Rancho's growth, the State of New Mexico improved the region's transportation infrastructure by extending NM 528 from the river valley at the southern boundary of the Village of Corrales to the west up the river escarpment, turning north, and continuing to what is now US550. NM528 served as the backbone of the transportation network in the area and heavily influenced Rio Rancho's growth.

The location of an Intel Corporation computer chip manufacturing plant brought several thousand jobs to the City in the mid-1980s and had a major impact on the community.

The Vision 2020 Comprehensive Plan was a response to area-wide growth and the emergence of the Rio Rancho City Center. Base year conditions, projected land uses, as well as population and employment figures, reflect updated information produced by the Mid-Region Council of Governments (MRCOG) for the 2008 base year and 2035 projection year. The Land Use Element of the Rio Rancho Comprehensive Plan uses MRCOG data as the basis for population and employment growth, and is consistent with the larger regional forecast.

By 2035, Rio Rancho is projected to accommodate approximately 65,000 additional households and roughly 30,000 new jobs over the 2008 household and employment figures, which will greatly impact Rio Rancho's current transportation network.

The implementation section in this element identifies transportation needs necessary to support anticipated growth in the City of Rio Rancho as well as regional growth in the surrounding area. The Transportation Element attempts to create a multi-modal framework for sustainable long-term growth in accordance with the Land Use Element of the *Plan*. In areas outside the City limits, designations and improvements included in this plan element are considered recommendations to the appropriate lead agency responsible for that area or facility.

As previously identified in the Population and Housing Element, Maps PH-2, PH-3 and PH-4 spatially show where growth in the City of Rio Rancho is expected to occur between 2008 and 2035. This information is taken directly from the Mid-Region Council of Governments (MRCOG) small area forecast for the region. The data is based on the University of New Mexico's Bureau of Business and Economic Research County Projections for Employment and Population growth. The MRCOG uses UNM BBER population projections as large area control, and allocates population and jobs to smaller Data Analysis Sub-Zones (DASZ). The allocation of jobs and population to smaller areas takes into account the accessibility of an area to utilities, transportation systems, etc.

Map PH-2 depicts the anticipated change in Rio Rancho's population density between 2008 and 2035. Persons per acre are expected to increase in the Quail Ranch Area and moderately along the Paseo del Volcan Corridor and

US 550. This projection is based on current antiquated platting and its anticipated effects on population distribution.

There will be opportunities to increase population densities in and near emerging employment centers and at future high capacity transit stations throughout the City. The Transportation Element includes components that support this type of sustainable land-use.

Map PH-3 shows Rio Rancho's growth between 2008 and 2035 for population and employment. Employment growth is represented by red dots (each dot represents 20 new jobs). The map shows that Rio Rancho City Center and the Enchanted Hills Business Park are emerging employment centers as are the Unser/Westside and Quail Ranch areas. The yellow and green shading on the map indicates the areas expected to see population growth, with the darker areas experiencing the highest growth.

Map PH-4 shows the anticipated increase in employment density between 2008 and 2035. The darker colors on this map indicate areas that have a higher number of jobs per acre. To see these maps please refer to the maps at the end of the Population and Housing Element.

The Rio Rancho City Center, Paseo del Volcan between Unser Boulevard & US 550, the Unser Blvd. & Westside Area, and the Broadmoor Drive & Northern Blvd. area are anticipated to emerge as future growth nodes.

The City of Rio Rancho will encourage mixed use and housing densification near these areas. Transit and intermodal connections (auto, bike, pedestrian) and "complete streets" concepts will be a major focus in these areas to ensure sustainable growth.

7.2. EXISTING TRANSPORTATION POLICY

In October of 2004, the Governing Body adopted a Transportation Policy document to support the City's previously adopted Comprehensive Economic Development Policy. The Development Services Department and the Public Works Department were both charged with implementing the goals and objectives of the Transportation Policy. The document outlined a series of goals and objectives for the development of the future transportation network in the City based on the following points:

1. Creation of a clearly defined network of major streets on a regular north/ south and east/west grid, using half-mile spacing for collectors and one mile spacing for arterials.
2. Allow sufficient right of way for at least four vehicular lanes, medians, pedestrians, bicycles, and transit to promote multi-modal transportation and accessibility to all users.
3. Provide redundancy in the grid system to provide alternative routes in case of emergencies, accidents, and maintenance or capital construction.
4. Control street access commensurate with the facility designation and adjacent land use in order to balance accessibility and mobility.
5. Construct new transportation projects to be fully compliant with the 1990 Americans with Disabilities Act (ADA), while continuing upgrades to existing infrastructure.
6. Increase the use of Intelligent Transportation Systems (ITS) technology to improve traffic safety and efficiency, and promote emergency and transit pre-emption, signal coordination, incident management, warnings to motorists, and peak period traffic flows.
7. Continue the designation and enhancement of gateways and corridor streets and in the City.
8. Address corridor aesthetics including landscaping, walls, gateways and corridor enhancements, and artwork, and avoid the tunnel effect of the unnecessary use of walls except in cases of noise abatement and separation of incompatible adjoining land uses.

The Transportation Policy has been incorporated into the comprehensive planning process. Modifications to land use ordinances, zoning, platting, and building permits have been incorporated into the plan update to support this policy.

The Transportation Policy also required the Public Works Department to work with Development Services to produce, monitor, and control access to the transportation network through the adoption of land use and corridor plans. Public Works was charged with the development of standard street cross sections for multi-modal transportation uses and standards for traffic impact study requirements. The Public Works Department is also responsible for preparing the Transportation Policy updates for the Governing Body, the Planning and Zoning Board, and the Capital Improvements Plan Citizen's Advisory Committee (CIPCAC), and coordinates with Sandoval and Bernalillo County's transportation projects within the City.

7.3. Rio Rancho Street Design

The major streets of Rio Rancho are laid out in a modified grid system, which includes major diagonal streets such as Idalia Road and NM 528. The grid system is a work in progress and has not been completed across the City due to the pattern of antiquated platting that has characterized the City's growth. The major north-south streets in this grid are Unser Boulevard, Broadmoor Boulevard, Loma Colorado Drive, and Rainbow Boulevard with intersecting east-west streets being Westside Boulevard, Southern and Northern Boulevards, Progress Boulevard, Laban Road and Paseo del Volcan. Many of these roads will require future improvements including widening and/or extensions.

Rio Rancho's street and intersection design and transportation engineering requirements are covered in the transportation chapter of the City's *Development Process Manual* (DPM). This document together with the City of Rio Rancho Design Criteria and Standard Details for Streets provide the framework for the design and construction of the road network as required by the City's subdivision ordinance and for the City's Capital Improvement Plan. The guidelines are briefly summarized in the following paragraphs.

7.3.1 Design Traffic Volumes

Roads are designed to carry the "peak hour" traffic volume for a project "design year." The peak hour in our region typically occurs during the PM work commute. The peak hour traffic loads for design consideration are based on traffic modeled for a future year when build-out for the project area is complete (typically 20 years from the implementation year of the project).

The City of Rio Rancho relies on the Mid-Region Council of Governments socio-economic and traffic forecasts as baseline data for determining peak hour design year traffic volumes on major streets. This data is typically refined and used in the roadway capacity analysis to determine the number of lanes needed for the anticipated future peak hour traffic volumes and to ensure that intersections are designed with adequate turning lanes and signalization to accommodate identified future traffic volumes.

7.3.2 The Functional Classification System

Functional classification of roads came into practice in the 1920s and 30s, and it was codified into official recommendations at the national level in the 1960s and 70s. It is the core concept that informs traffic engineers and planners what types of roads to build and how they ought to connect.

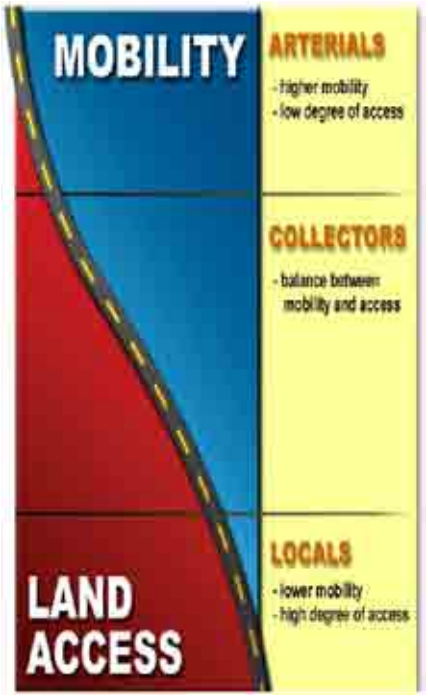
In practice, functional classification emphasizes three key points:

- The longer the trip the bigger the roadway.
- The bigger the roadway, the faster its traffic should travel.

The faster the traffic on a roadway, the more limited access it must have from adjacent land-use. Figure T-1 provides a graphic description of the functional classification system with a textual description following the figure.

Figure T-1: Functional Classification

In Figure T-1, "Mobility" is analogous with travel speed/time and "Land access" represents the frequency of intersections and driveways on a stretch of roadway. The relationship shown is: As mobility increases, land access should decrease.



Arterials are at the top of the functional classification list. They are designed for high levels of mobility, long distance trips and higher travel speeds for the movement of traffic. Land access is subordinated to this primary function.

Collectors are intermediate level streets that receive traffic from the local street network that serve commercial and residential development and distribute it to the higher level arterials. Collectors are designed to carry moderate volumes of traffic at moderate speeds over medium distances.

Locals are lower level streets that are designed to provide access to land uses. They are typically located in residential subdivisions and large scale commercial centers. Traffic volumes and travel speeds are low, travel distances are short. Locals provide the highest degree of land access.

The City of Rio Rancho *Development Process Manual* (DPM) provides the following discussion on functional class: "Functional classification is the process by which urban and rural roads are grouped into classes or systems according to the kind of service they will provide. The basic functional systems used in this classification are arterials, collectors, and locals. Using national classification terminology, these systems are sub-classified based on the trips served, the areas served, and the operational characteristics of the streets or highways. Typical cross sections are shown in the City of Rio Rancho Standard Details."

Map TR-1 shows the current year (2010) functional classification of Rio Rancho roads. The roads shown in red and green are principal and minor arterials, respectively. Those shown in blue are collectors. The gray roads represent the local network.

The City of Rio Rancho's street design criteria and standard details for streets are tied to roadway functional class. As part of the Design Criteria and Standard Details, the City has a series of typical street cross sections for different functionally classified streets which show how the elements of the street are arranged within the right-of-way (ROW) for the roadway.

A City of Rio Rancho local street requires 50 feet of ROW. The elements contained within the ROW include: two driving lanes, curb and gutter, landscape buffer, and sidewalks on both sides (See Appendix 3).

A City of Rio Rancho collector street usually requires a *minimum* ROW of 68 feet. Street elements include: Raised center median with turn bays, at least two driving lanes, two bike lanes, curb and gutter, landscape buffer, and sidewalk on both sides (See Appendix 4).

A City of Rio Rancho collector in an office or commercial district requires 80 to 102 feet of ROW. Street elements include: Parallel or angled parking and wide sidewalks. Bicycles are accommodated by providing 15 feet driving lanes (See Appendix 5).

City of Rio Rancho Arterial streets require the most ROW and usually contain multiple lanes in order to carry large volumes of traffic and facilitate turning movements. Arterials are generally access controlled, meaning that the number of access points to the roadway are limited, and intersections are signalized to progress traffic flows.

The design criteria for arterials are established to create a roadway capable of carrying large traffic volumes at higher speeds.

A two lane minor arterial may require 86 feet of ROW for only one driving lane and a bike lane in each direction. A four lane minor arterial may require 106 feet of ROW for two driving lanes in each direction, plus bike lanes, sidewalks, and landscaping buffers. Minor arterials include landscaped medians and left turn lanes at intersections (See Appendix 6 and 7).

For both a four lane and six lane principal arterial, the City of Rio Rancho requires a minimum 156 feet of ROW. Minimum design standards for principal arterials include: Multiple travel lanes, raised and landscaped medians, bike lanes, curb and gutter, landscape buffer, sidewalks and dedicated turn lanes (See Appendix 8 and 9).

7.3.3 LEVEL-OF-SERVICE STANDARDS

Level-of-service (LOS) standards are incorporated into the design and engineering of the City roads according to their *functional classifications*. Level-of-service standards are qualitative measures that describe the traffic flows and congestion levels of the roadway section. LOS A means a roadway with low volumes of free flow traffic traveling at high speeds, while LOS F means high levels of congestion with forced flows or gridlock. LOS C is generally considered an acceptable level of service with moderate volumes and stable flows.

The City of Rio Rancho Development Process Manual (DPM) contains the following discussion on level of service:

"The desired Level-of-Service (LOS) designations for each roadway section shall be used in the traffic analysis to support roadway function classifications, sizing of interim roads and determining the number of intersection auxiliary lanes that are required.

A summary description of Level-of-Service is given:

- Free flow, with low volumes and high speeds.
- Reasonably free flow… speeds beginning to be restricted by traffic conditions.
- Stable flow zone, most drivers restricted in freedom to select their own speed.
- Approaching unstable flow, drivers have little freedom to maneuver.
- Unstable flow… may be short stoppages.
- Forced or breakdown flow."

Rio Rancho's "major street" network consists of collectors and arterials. The City's impact fee ordinance requires an overall daily vehicle mile capacity to vehicle mile of travel ratio (VMC/VMT) of 2.00 or better on the major streets

network. This corresponds to an average daily LOS B. This means that the major street network is expected to operate at an average of 50 percent of capacity over a 24 hour period. There are congested segments of the major street network during peak travel periods, but current traffic counts confirm that the City's major street system operates within the mandated level-of-service

7.3.4 Traffic Impact Analysis

Traffic impact analyses (TIAs) are required for most major developments in the City of Rio Rancho. The City has established a trip generation of 100 trips during the morning or afternoon peak commute period as the threshold for determining if a TIA is necessary. The City uses the International Transportation Engineer's (ITE) *Trip Generation* manual as the basis for determining trip generation for specific land uses.

The requirements for TIAs include: site design, trip generation, site access plan, evaluation of the site's impact on the existing and future roadway system using design hour and design year traffic volumes, and the improvements necessary to mitigate both on-site and off-site impacts.

The proposed intensity of development should be compatible with the mitigated transportation system. The City reserves the right to limit intensity and/or modify development access to protect the overall transportation system.

If the results of the TIA show that the proposed development would overload the capacity of the street system, developer-funded improvements to fully mitigate the impacts would be required as part of any subdivision improvement agreement or impact fee development agreement.

7.4. Mid-Region Council of Governments as the Metropolitan Planning Organization

The Mid-Region Council of Governments (MRCOG) is the regional planning body for the Five-County area consisting of: Bernalillo, Sandoval, Valencia, Torrance and southern Santa Fe. The City of Rio Rancho is a member of the MRCOG and is represented on the MRCOG board and executive board.

The MRCOG is also the Metropolitan Planning Organization (MPO) for the Albuquerque Metropolitan Planning Area (AMPA). The AMPA is a sub-set of the MRCOG area and encompasses all of Bernalillo County, Southern Sandoval County and the Village of Los Lunas in Valencia County. Rio Rancho is located within the AMPA.

The Metropolitan Transportation Board (MTB) is the governing body for the MPO. The City of Rio Rancho is represented on the MTB. The MTB is made up of elected officials from jurisdiction inside the AMPA including: The City of Albuquerque; the Village of Tijeras; the Village of Los Ranchos; the Town of Los Lunas; the City of Rio Rancho; the Village of Corrales; the Town of Bernalillo; Sandoval County; Bernalillo County; Rio Rancho Public Schools; Albuquerque Public Schools; Albuquerque Metropolitan Arroyo Flood Control (AMAFCA); Sandoval County Arroyo Flood Control (SCAFCA); Eastern Sandoval Country Arroyo Flood Control Authority (ESCAFCA); and the surrounding pueblos. Voting membership is determined by population.

The principal function of the Mid-Region MPO is to maintain a long-range transportation plan for the AMPA (Currently the *2030 Metropolitan Transportation Plan*), and a short-range Transportation Improvement Plan for AMPA (Currently the 2010-2015 Transportation Improvement Plan). The MPO is the forum that provides the framework for continuous, cooperative and comprehensive regional transportation decision making. Information on the MRCOG and the Mid-Region MPO can be found on the web at http://www.MRCOG-nm.gov.

7.4.1 Mid-Region MPO Metropolitan Transportation Plan

A Metropolitan Transportation Plan (MTP) is a tool for helping people in a metropolitan area determine how their area is growing and whether they want it to continue going in that direction. An MTP analyzes what would happen if current trends in housing and job growth and transportation were to continue for the next 20 years or more. It shows what would happen if no planning for the future was done and if no transportation investments were made and then proposes an alternative to that scenario.

The Mid-Region MPO MTP (Currently the 2030 MTP) presents the ways the Albuquerque Metropolitan Planning Area (AMPA), including Rio Rancho, plans to invest in the transportation system to the year 2030. It includes both long- and short-range program strategies and actions that will lead to the development of an integrated transportation system that facilitates the efficient movement of people and goods. It offers a set of recommendations aimed at relieving congestion, maintaining air quality, and improving quality of life.

These long-term recommendations guide decisions about which specific transportation projects to fund and construct in the short term.

Development of the MTP includes engaging the public and other interested parties in accordance with MTB-approved public involvement procedures. Additionally, the MTP conforms to:

- Federal Planning Regulations (Title 23, Code of Federal Regulations, Part 450)
- State Implementation Plan (SIP) Revision: Limited Maintenance Plan for Carbon Monoxide (CO) for Albuquerque/Bernalillo County New Mexico
- The Albuquerque/Bernalillo County Air Quality Control Board Transportation Conformity regulations, (NMAC Title 20, Chapter 11, Part 3)

The adopted 2030 MTP for the AMPA can be found on the web at http://www.MRCOG-nm.gov.

The Mid-Region MPO updates the MTP every four years. The 2035 MTP is currently under development, with adoption anticipated in Spring 2011. Both the Transportation Element and the Land Use Element of the *Rio Rancho Comprehensive Plan Update* draw from draft data being developed for the Mid-Region MPO 2035 MTP.

7.4.2 Mid-Region MPO Transportation Improvement Plan

A Transportation Improvement Plan (TIP) is a planning and programming document that indicates how federal funds will be used in a metropolitan region.

A TIP includes all transportation projects that will receive Federal highway and transit funds and all transportation projects considered regionally significant regardless of fund source. All projects in the TIP must be consistent with the locally adopted long range regional transportation plan (the MTP). A TIP must be fiscally constrained meaning the total amount of monies programmed for a region is based on estimates of funding "reasonably expected to be available."

According to Federal regulation, a TIP must cover a period of at least four years and be updated at least every four years. The Albuquerque Metropolitan Planning Area (AMPA) TIP spans six years and is updated every two years, with periodic revisions made when necessary.

At the Mid-Region MPO, the AMPA TIP and its amendments must be approved by the Metropolitan Transportation Board (MTB). Once approved by the MTB, the AMPA TIP is incorporated into the Statewide Transportation Improvement Plan (STIP) administered by the New Mexico Department of Transportation.

The current AMPA TIP covers Fiscal Years 2010-2015. Each fiscal year runs from October 1st through September 30th. All projects contained in the AMPA TIP are consistent with the adopted Mid-Region MPO 2030 MTP. The AMPA TIP includes all transportation projects utilizing federal aid funds and all regionally significant transportation projects regardless of fund source planned within the AMPA, including Rio Rancho projects. The AMPA TIP can be found on the web at http://www.MRCOG-nm.gov.

The Mid-Region MPO will be updating the AMPA TIP as part of the 2035 MTP, with adoption anticipated in Spring 2011.

7.5 The Rio Rancho Transportation Network

7.5.1 The Road Network

Maps T-2 & T-3 show the base year 2008 Rio Rancho Road Network and spatially depicts the areas where congestion is becoming a problem during the peak morning and evening commute periods.

This graphic shows that congestion within the City of Rio Rancho is a relatively localized problem that affects the major roads connecting Rio Rancho from the larger metropolitan area. These facilities operate over capacity and experience severe congestion during both the morning and evening commute periods. Congestion on these facilities suggests that Rio Rancho is exporting a large percentage of its available workforce to other jurisdictions. This trend will continue in the future, but the percentage may decrease due to more jobs being created within the City of Rio Rancho.

The City of Rio Rancho supports efforts to improve regional transportation connections from the northwest side of the Metropolitan Area to the south and continuing across the Rio Grande to the employment centers in the north Interstate 25 corridor and the City of Albuquerque Central Business District. Traffic forecasts completed for the Mid-Region 2030 MTP indicate that congestion on the Rio Grande bridges within the metro area increase

substantially over time. Further, the 2030 MTP does not identify the implementation of any new river crossings or expansion of existing river crossing as projects to be completed by the year 2030. The City of Rio Rancho recognizes the need to increase transportation capacity in these areas and supports efforts to improve the regional transportation network to support projected growth. The City believes that transit will play a prominent role addressing additional future capacity needs. Map T-4 depicts future transportation projects.

The City must also improve the transportation network within its boundaries to accommodate anticipated Rio Rancho population and employment growth. An improved transportation network would also enhance the attractiveness of the City and its ability to attract new businesses and higher paying jobs. Key infrastructure improvements will help grow the Rio Rancho economy and provide a better quality of life for City residents. Consideration of freight access to industrial and commercial locations must be considered as well as improving overall mobility within the City.

Currently, fixed route transit service in the City is limited to two areas. The northern portion of the City is served by Sandoval Easy Express routes operating on US550, north NM 528, and including service inside the Enchanted Hills area. This service provides connections to the New Mexico Rail Runner Express commuter train service on US550 near Interstate 25. The southern portion of the City is served by the City of Albuquerque ABQ Ride route 151 operating on south NM 528 and Southern Boulevard. This service provides connections to the Journal Center activity center located in the north Interstate 25 corridor near Paseo del Norte and to the New Mexico Rail Runner Express commuter train service at the Journal Center Station. New Mexico Rail Runner Express provides commuter based service throughout the corridor between Belen and Santa Fe with a number of stations in the Metropolitan Area.

In addition to fixed route service, there is also a dial-a-ride program that operates in the City, Rio Transit. Rio Transit is a door-to-door service for people over the age of 55 and for disabled persons over the age of 18. This service began as a City of Rio Rancho service and was transferred to Rio Metro effective January 1, 2010.

All transit services currently operating within the City of Rio Rancho are funded by the Rio Metro Regional Transit District (RTD) through a combination of the regional 1/8th cent gross receipt tax for transit operations collected by the District and Federal Aid funds.

The Rio Metro RTD is updating their *Service Plan* to provide a focus on east-west premium transit service with connections to the New Mexico Rail Runner Express Corridor.

The Rio Metro RTD is studying the feasibility of using "fast bus" or "bus rapid transit" service in the Rio Rancho area to ultimately provide connection from the City Center to the US 550 New Mexico Rail Runner Express Station and to the Journal Center and Journal Center New Mexico Rail Runner Express Station. These services along with others being contemplated as part of the Regional Transit District Service Plan update would provide fast, reliable transit connections from Rio Rancho to the Metropolitan activity centers including: Journal Center/North Interstate 25, the City of Albuquerque Central Business District and the City of Albuquerque Uptown Area.

7.5.2 Rio Metro West Mesa Bus Rapid Transit Study

Rio Metro RTD began a study in February 2010 to look at establishing bus rapid transit (BRT) service connecting the West Mesa, including Southern/Central Rio Rancho, and the Journal Center/North Interstate 25 activity center, including connections to the Journal Center New Mexico Rail Runner Express Station. The following is from the Draft Purpose and Need Statement being considered for the project:

"The **Purpose** of the proposed West Mesa Bus Rapid Transit Project is to implement high-capacity public transportation that is less hindered by congestion and that provides efficient, effective, dependable and visually appealing transit service between the South Rio Rancho/West Albuquerque areas and the Journal Center/North Interstate 25 activity center (primary destination market) with connection to the Journal Center New Mexico Rail Runner Express Station. The Project will also consider service to the UNMH/UNM/CNM and Downtown Albuquerque Central Business District (secondary destination markets).

The project supports local, regional, and state plans and goals for land use and transportation, and supports economic development and redevelopment opportunities in the potential service area, while being sensitive to and protecting the natural and built environmental resources, and while obtaining local public participation in its development.

Within the project corridor, the **Objectives** of the Westside Bus Rapid Transit Project are to:

- Improve customer convenience by reducing travel time, increasing service reliability, and making other service improvements.
- Improve operating and other efficiencies to maximize the use of scarce resources.
- Serve as a catalyst for planned transit-oriented development and support development that is consistent with adopted land use plans.
- Help accommodate future growth in travel by increasing public transportation's share of trips.
- Take into account the travel and safety needs of pedestrians, bicyclists, and motorists.
- Contribute to establishing a fiscally stable public transportation system;
- Design the project in a way that is consistent with laws related to resources in the natural and built environment; and
- Support regional and local sustainability policies, including efforts to reduce greenhouse gas emissions."

The Rio Metro RTD is considering a future study for the US 550 Corridor between Rio Rancho City Center and the US 550 New Mexico Rail Runner ExpressStation. Both the current West Mesa BRT study and the potential US 550 BRT study will include station location assessments.

Bus rapid transit typically operates on a station spacing of two to three miles. This allows the service to operate extremely efficiently. BRT stations include park-and-ride components and mixed-use development that includes retail, commercial and residential uses. Map T-5 shows the intermodal transportation facilities operated by MRCOG.

The City of Rio Rancho is promoting land use that would support BRT at the City Center and at specific land-area nodes centered on the following intersections:

- Paseo del Volcan and Broadmoor Drive/30th Street/City Center
- US 550 and Paseo del Volcan
- US 550 and NM 528
- Unser Boulevard and Cherry Road
- Broadmoor Drive and Northern Boulevard
- Broadmoor Drive and Sara Road/Southern Boulevard
- NM 528 and Southern Boulevard
  - Unser Boulevard and Westside Boulevard
  - 19th Avenue and Grande Avenue/NM 528/ Intel
  - Paseo del Volcan and Paseo del Norte

7.5.3 BICYCLE INFRASTRUCTURE IN RIO RANCHO

The City of Rio Rancho recently initiated a Comprehensive Bicycle, Pedestrian and Trail System study to further define system needs. This study will include improving connections to intermodal facilities in Rio Rancho (including future bus rapid transit stations) and providing improved connectivity within activity/employment centers. Further, the study will provide updates to the City of Rio Rancho's typical street cross sections to better incorporate "Complete Street" principles focusing on bicycle, pedestrian and transit accommodations. Map T-6 identifies the long-range bicycle transportation facilities planned for the City of Rio Rancho.

7.6 TRANSPORTATION SYSTEM MANAGEMENT (TSM) / TRAVEL DEMAND MANAGEMENT (TDM)

Transportation System Management (TSM) focuses on lower cost strategies to enhance operational performance of the transportation system. The focus is on finding ways to better manage transportation, maximizing mobility, and treating all modes of travel as a coordinated system. These types of measures include signal timing improvements, traffic calming, access management, intelligent transportation system improvements, and programs that enhance transit operations.

There are a number of TSM measures that are appropriate for Rio Rancho. A list and brief summary of the strategies are listed on the following page:

- Traffic Monitoring and Surveillance
- Signal coordination and optimization
- Signal Priority
- Traveler Information
- Incident Management

Traditionally, the solution to most congestion problems was to build more roadways or add capacity to existing facilities. It has been realized that congestion cannot be managed totally through capacity improvements. Better management of the existing transportation network is necessary to help reduce congestion. This also means coordinating with various agencies in the area to create a seamless transportation network.

Over time, as systems are installed, Rio Rancho will work closely with the Mid-Region Council of Governments Intelligent Transportation Systems (ITS) Committee to fully implement the Regional ITS Architecture and provide both City and regional traveler information, as well as

coordinated incident management. These TSM strategies can work together in the transportation environment to help reduce congestion and decrease travel times.

Transportation Demand Management (TDM) is the general term used to describe any action that removes single occupant vehicle trips from the roadway network during peak travel demand periods. As growth in Rio Rancho and the surrounding area occurs, the number of vehicle trips and travel demand increases. The ability to change a users travel behavior and provide alternative mode choices will help accommodate this growth.

Generally, TDM focuses on reducing vehicle miles traveled (VMT) and promoting alternative modes of travel for large employers of an area. Rio Rancho will support regional efforts to reduce VMT by coordinating TDM efforts with the Rio Metro RTD and the MRCOG Metropolitan Transportation Plan. Rio Rancho will help coordinate TDM in major activity centers and with large employers located within the City. Rio Rancho will support any regional TDM goals established by the Mid-Region MPO.

7.7. Complete Streets

Streets in a majority of U.S. cities, including Rio Rancho, have been designed to optimize access and capacity for automobiles. The Complete Streets concept recognizes that this approach has provided limited transportation choices for many people and is not in step with many contemporary community planning initiatives. While Complete Streets still accommodate the automobile, the focus is on providing more transportation choices by designing streets to safely and conveniently accommodate pedestrians, bicyclists, transit and other users. Complete Streets improve mobility and livability by providing safe and comfortable transportation for users of all ages and abilities. They can also enhance public spaces with the incorporation of amenities like landscaping, lighting and other streetscape improvements.

Complete Streets principles can be integrated into the City's planning and implementation process in a variety of ways. Comprehensive plans with goals, policies and actions relating to Complete Streets, like those contained in this Transportation Element, can provide guidance for the adoption of revised street design standards or for the development of new design guidelines for streets.

A Complete Streets approach could be an effective way for the City of Rio Rancho to institutionalize and realize its multi-modal goals and, when included in the early stages of project design, cost can be minimized. Some examples of Compete Streets elements include:

- Sidewalks
- Bike lanes
- Ample crossing opportunities
- Bus lanes
- Pedestrian refuge medians
- Bus shelters and crossings
- Bus pull-outs
- Street furniture
- Sidewalk bulb-outs

There is no one-size-fits-all solution for the design of Complete Streets. Each street should be designed in a way that suits its context, including the facility type, surrounding land uses, vehicle trips and topography. What is the same for all streets is that all users are systematically considered during the design of the street and/or during an improvement project.
Design standards for Complete Streets often address street widths, with varying widths for local, collector and arterial streets and in response to whether the streets are in residential, commercial, or industrial areas. They also address certain landscaping requirements, maximum block lengths, pedestrian crossing treatments, curb extensions, street connectivity, and bicycle lane requirements, to list a few examples.

The City of Rio Rancho will begin implementing a Complete Streets program by designating specific locations as "gateways" and a number of major roadways as "corridor roads" and developing "Complete Streets" criteria that addresses the design of both new construction and rehabilitation projects. Candidates for corridor roads include but are not limited to the following the major roadways: Broadmoor Drive, Loma Colorado Boulevard, Laban Road, Northern Boulevard, Idalia Road, Westphalia Boulevard, Paseo del Volcan (PDV), Progress Boulevard, Unser Boulevard, Rainbow Boulevard, Westside Boulevard, and NM 528 and US 550 to name a few (See Map VEI-1 at the end of the Vision, Executive Summary and Introduction Element).

After completion of the "Complete Streets" criteria for gateways and corridor roads, the City of Rio Rancho will build upon the efforts to develop a City-wide "Complete Streets" policy. Specific standards should be developed in collaboration with a public participation process. The City's Complete Streets policies could also be used as a basis for evaluating transportation projects and could incorporate low impact development techniques. The City should consider developing Complete Streets standards using concepts from nationally recognized Complete Streets initiatives like the one in Charlotte, North Carolina.

7.8. IMPLEMENTATION

7.8.1 DISCUSSION

A city's street network is critical not only to the flow of traffic into and out of the city, but to promote economic vitality as well as the overall image of the city. A city that promotes complete streets as a part of its development by integrating multi-modal transportation such as proper bicycle lanes, sidewalks separated from vehicle travel lanes and well landscaped medians and street edges creates an image that states street design is an integral part of the site design of a development. It also creates a sense of place that promotes pedestrian and bicycle activity.

7.8.2 GOALS

Goal TR-1: Encourage development that effectively mixes land uses to create an efficient transportation system that reduces congestion, improves air quality and creates opportunities to build Rio Rancho's economy.

Goal TR-2: Transportation facilities designed and constructed in a manner to facilitate Rio Rancho's economic goals, enhance livability and meet Federal, State, regional and local requirements.

Goal TR-3: A balanced transportation system that provides access to a variety of transportation options (automobile, transit, bus rapid transit, rail, bicycle and pedestrian facilities).

7.8.3 POLICIES

Policy TR-1: Plan land uses to increase mode share and opportunities for multi-purpose trips (trip chaining) through proper location and design of transportation facilities.

Policy TR-2: Advocate for Rio Metro RTD to implement transit improvements concurrent with roadway improvements to improve access and frequency of service and to increase ridership potential and service area. Encourage development of regional high capacity transit including light rail and bus rapid transit.

Policy TR-3: Maintain levels of service consistent with City and regional goals. Reduce traffic congestion and enhance traffic flow through system management measures including: intersection improvements, intelligent transportation systems, incident management, signal priority, optimization and synchronization and other similar measures.

Policy TR-4: Support complete street designs in the upgrade of existing and the development of future areas of Rio Rancho.

Policy TR-5: Improve traffic safety through a comprehensive program of engineering, education, enforcement and to prioritize and mitigate high accident locations within the City.

Policy TR-6: Provide satisfactory levels of maintenance to the transportation system in order to preserve user safety and ensure facility aesthetics of the system is unimpaired.

Policy TR-7: Plan key arterial routes that are essential for the efficient movement of goods with freight in mind. Ensure adjacent land uses reflect freight route functions.

Policy TR-8: Coordinate transportation projects, policy issues, financing and development actions with all affected governmental units in the area.

Policy TR-9: Plan rights-of-way prior to development review and, where appropriate, officially secure them by dedication or reservation of property.

Policy TR-10: Support the design of streets and highways to respect surrounding land uses, natural features and community amenities.

Policy TR-11: Ensure all rights-of-way and transportation facilities are ADA-compliant.

7.8.4 ACTIONS

Action TR-1: Establish Complete Street standards for Rio Rancho.

Action TR-2: Preserve right-of-way by establishing right-of-way overlays and where appropriate, require developer dedication of right-of-way for transportation.

Action TR-3: Update and maintain street design standards and criteria for neighborhood traffic calming and optimize connectivity to major pedestrian/bike facilities and transit stations.

Action TR-4: Work with Rio Metro RTD to establish future high capacity transit corridors and station locations to target single-occupant vehicles commuting to and from City Center, major employment areas, recreational areas. This can be accomplished by creating and adopting station area land use plans to promote Transit Oriented Development and to define intermodal connectivity needs.

Action TR-5: Maintain a functional classification system that meets the City of Rio Rancho's needs and respects the regional needs of other agencies.

Action TR-6: Work with Rio Rancho area schools and the community to develop a safe routes to school system.

Action TR-7: Establish specific area non-single occupant vehicle modal targets for: the City Center, major employment areas, recreational areas, and future TOD areas consistent with regional goals.

Action TR-8: Implement travel demand management programs that work to shift traffic to off-peak travel hours.

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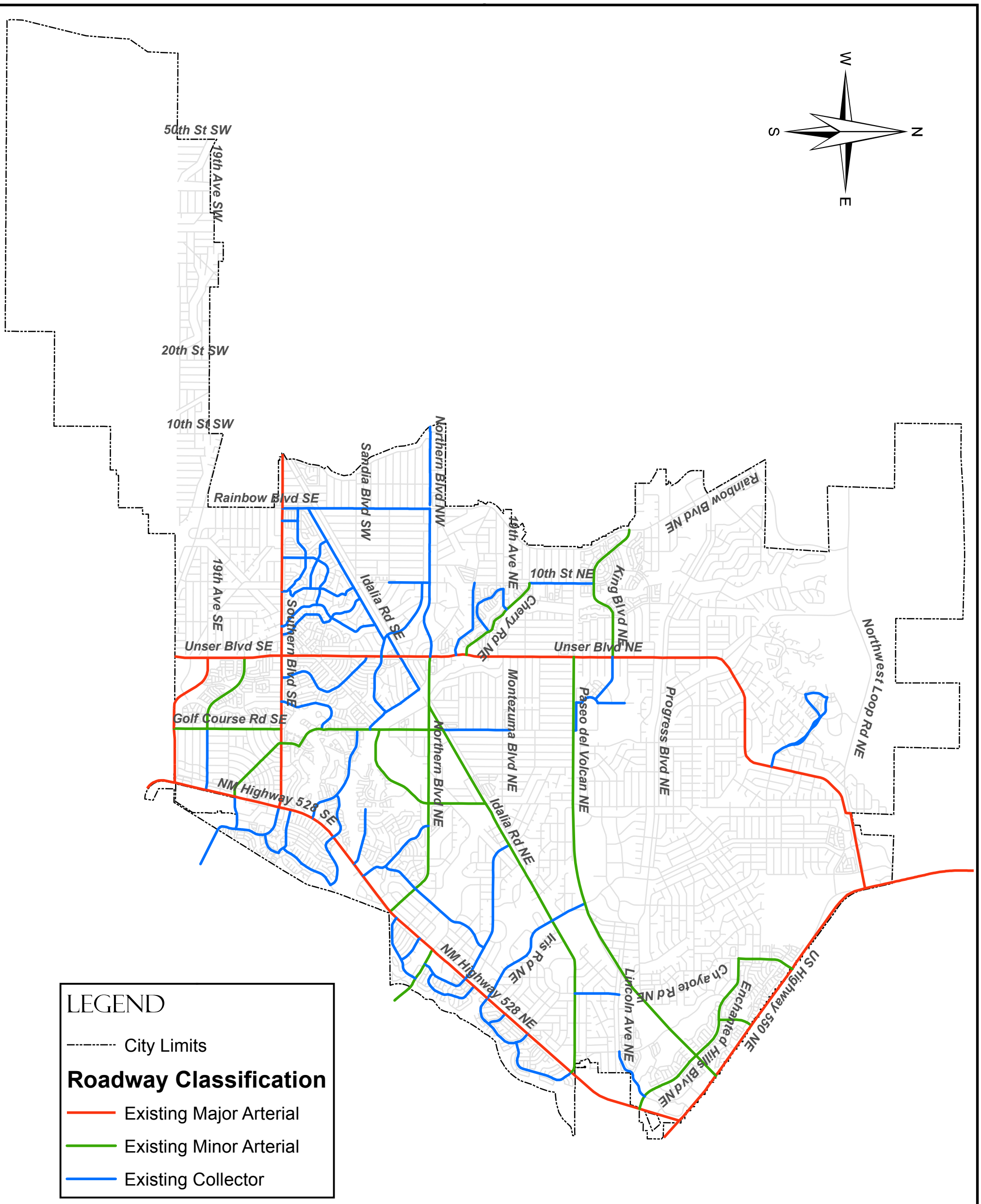

MAP T-1: 2010 ROADWAY FUNCTIONAL CLASSIFICATION SYSTEM

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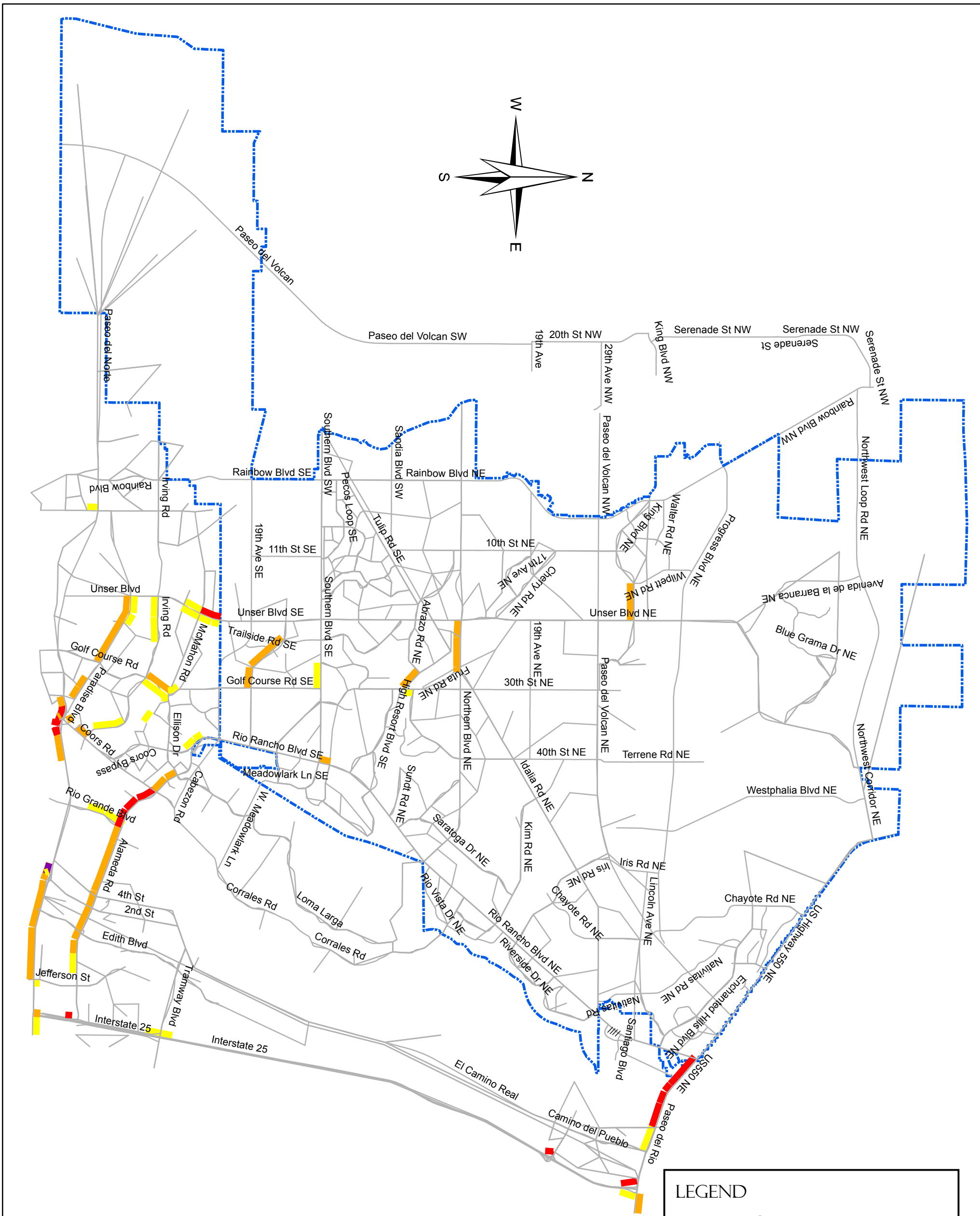

MAP T-2: MORNING NORTHWEST METRO CONGESTED ROADWAYS

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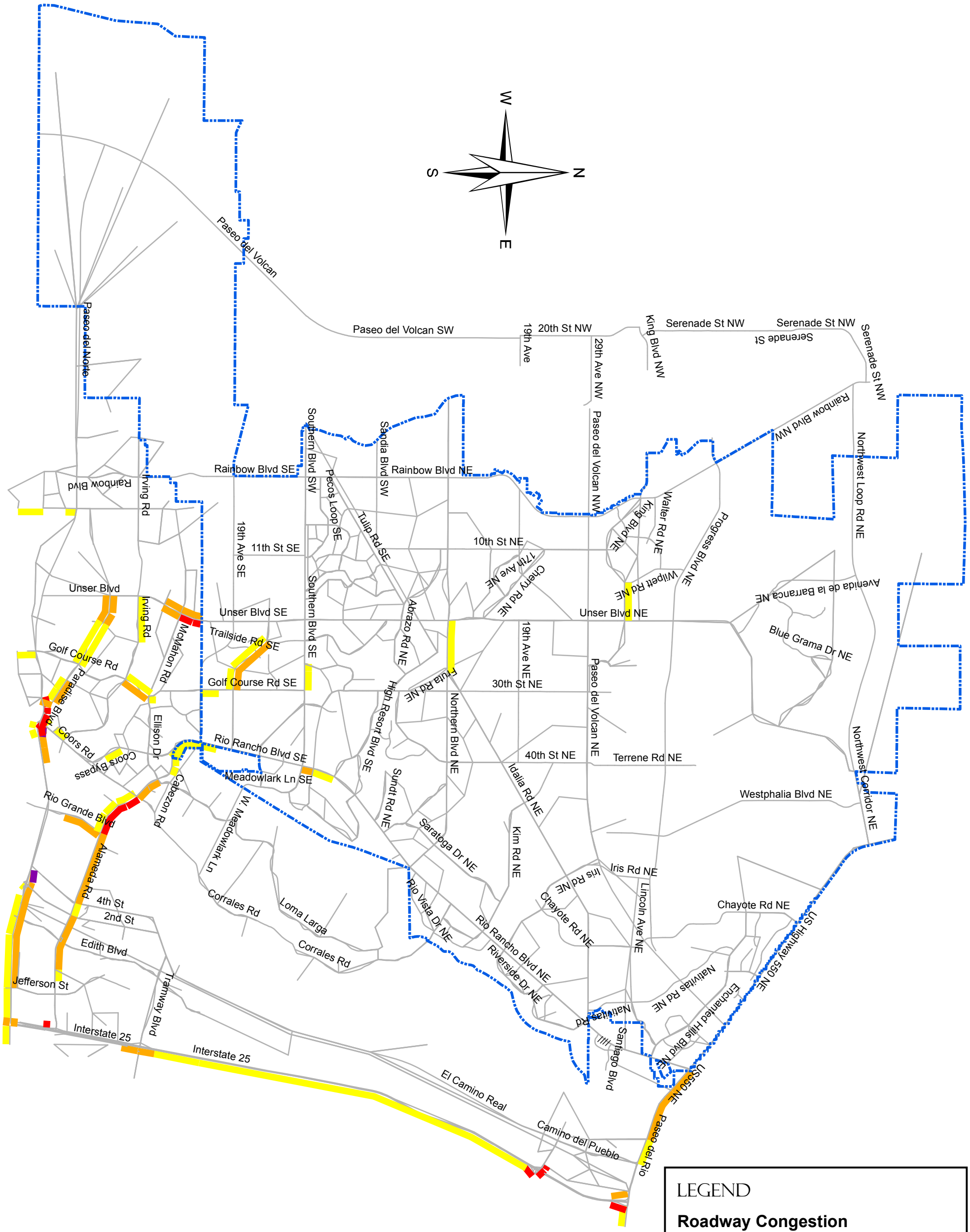

LEGEND

Roadway Congestion

PM - V/C

- Acceptable V/C = 0 - 0.89
- Approaching Capacity V/C = 0.9 - 0.99
- Over Capacity V/C = 1.0 - 1.09
- Severly Congested 1 V/C = 1.1 - 1.49
- Severly Congested 2 V/C > 1.5
- Rio Rancho City Limit

MAP T-3: EVENING NORTHWEST METRO CONGESTED ROADWAYS

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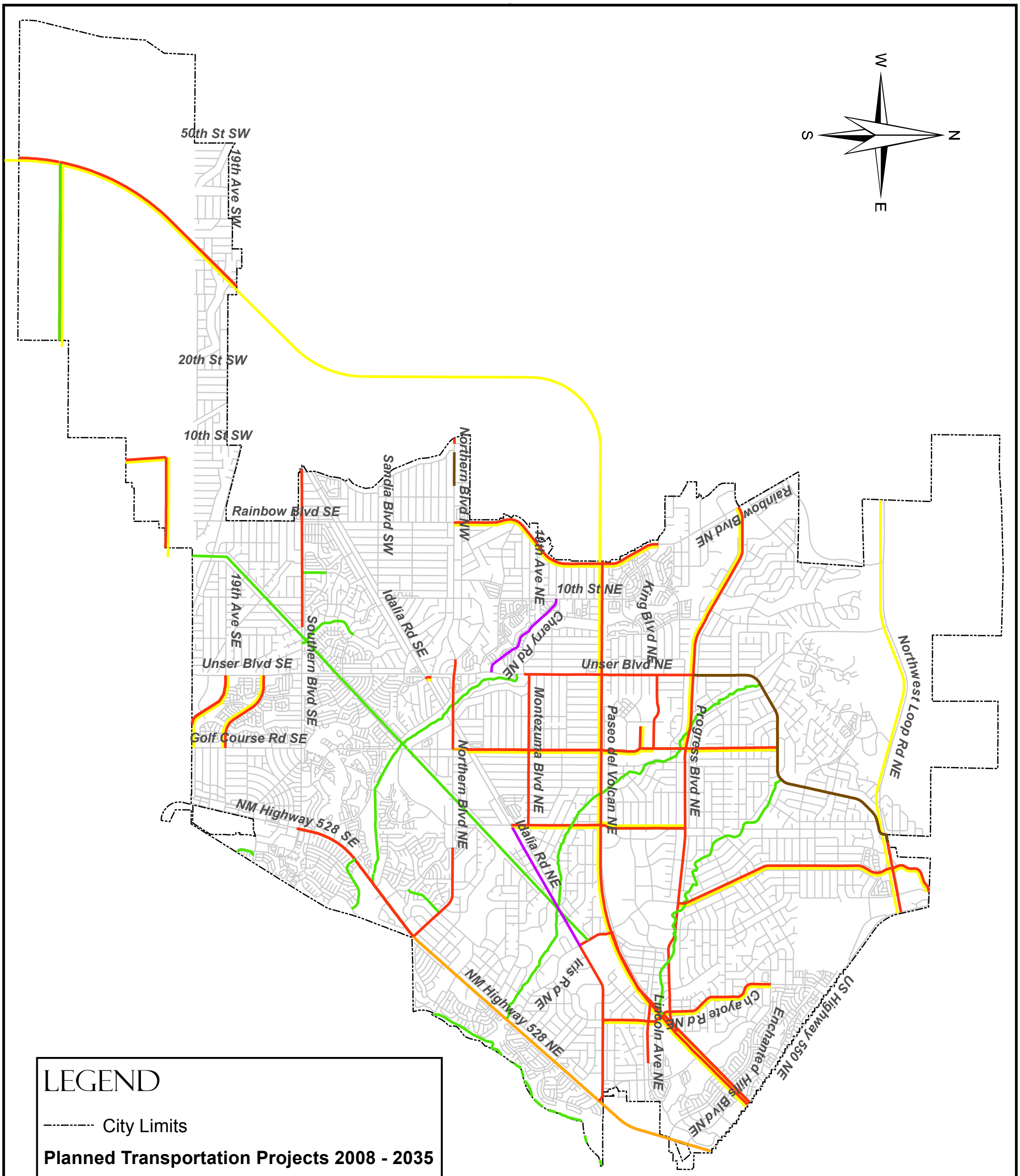

MAP T-4: RIO RANCHOTRANSPORTATION PROJECTS

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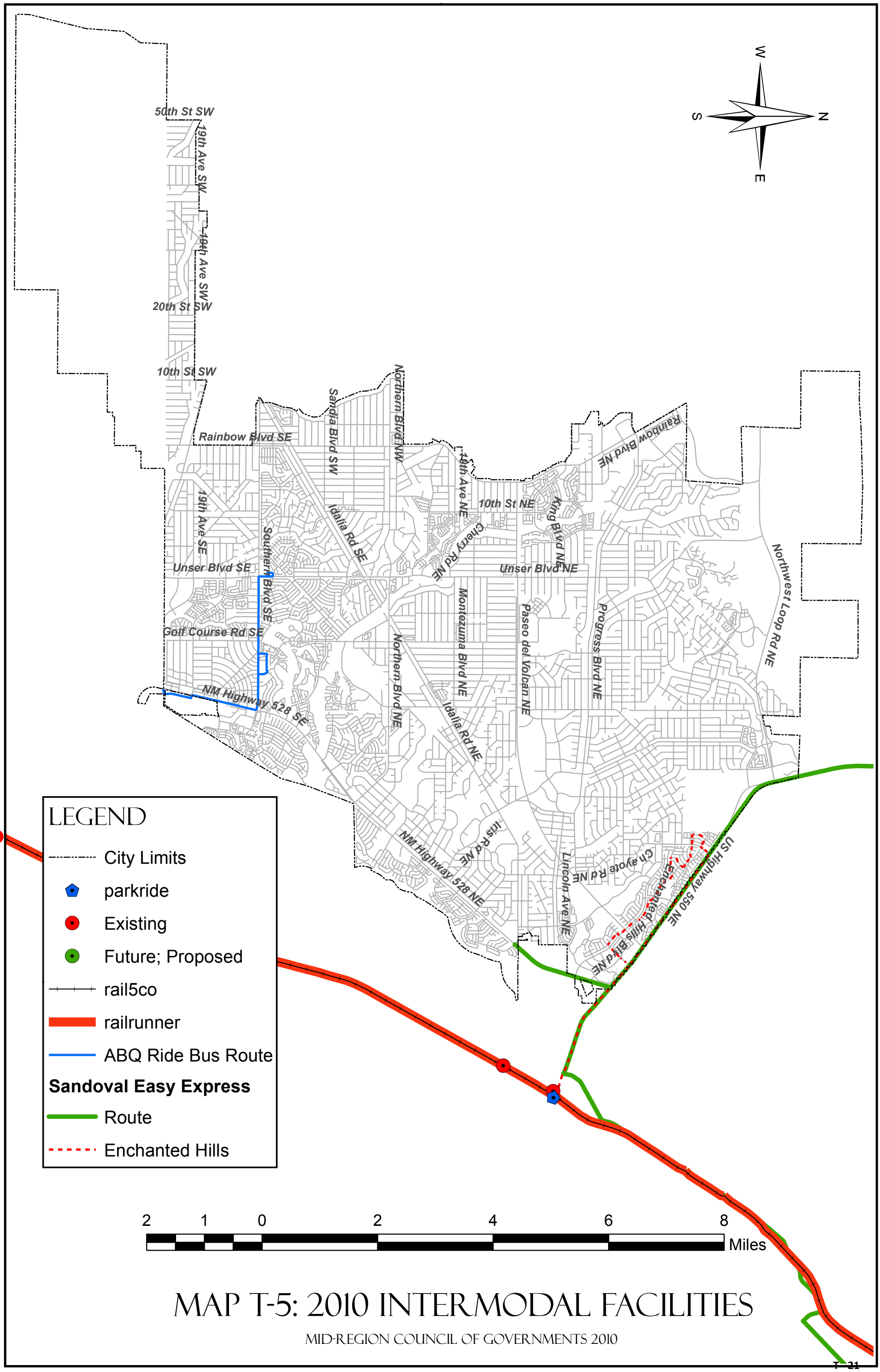

MAP T-5: 2010 INTERMODAL FACILITIES

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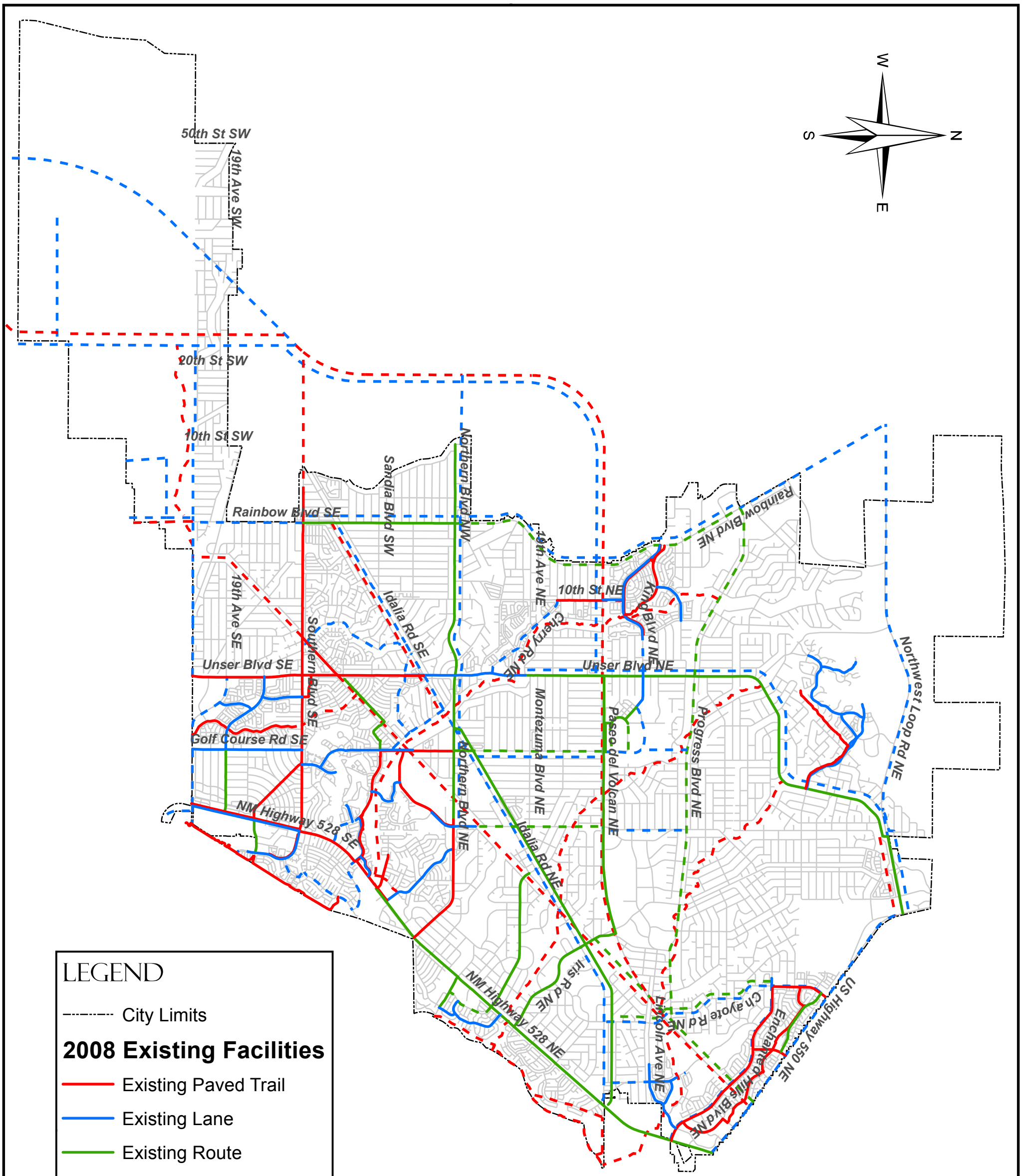

MAP T-6: LONG RANGE BIKEWAY SYSTEM

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