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COUNCIL WORK SESSION SUMMARY ROUTING SLIP

Meeting Date February 8, 2016

TITLE: TRANSIT SHORT RANGE PLAN UPDATE.

Are there attachments to the Council Work Session Summary?	**Yes** ☒	**No** ☐
Will there be a Video Presentation for this item?	**Yes** ☐	**No** ☒
Will there be a PowerPoint Presentation for this item?	**Yes** ☒	**No** ☐
If "yes", will a copy of the PowerPoint Presentation be included on the Council Work Session Agenda?	**Yes** ☐	**No** ☒

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City of Las Cruces®
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Council Work Session Summary

Meeting Date: **February 8, 2016**

TITLE: TRANSIT SHORT RANGE PLAN UPDATE

PURPOSE(S) OF DISCUSSION:

☒ Inform/Update

☐ Direction/Guidance

☐ Legislative Development/Policy

BACKGROUND / KEY ISSUES / CONTRIBUTING FACTORS:

RoadRUNNER Transit is the public transportation system of the City of Las Cruces and serves as a vital link for the mobility of many of the city's citizens. It is important in creating; a better quality of life, a sustainable environment, more employment opportunities, easy access to healthy food, and dynamic economic development in the city and the region.

The present RoadRUNNER Transit route alignments consist of bi-directional alignments and one-way loops operating at 60-minute headways. The city has grown since 2008 when the RoadRUNNER Transit routes were last revised; adding new residents, businesses, industries, and services. These additional land uses and other factors necessitated a revision of the routes to be more efficient and effective. A review and update of the RoadRUNNER Transit system is required by the Federal Transit Administration every five years as a condition for continuing funding for capital and operations of the system.

The Short Range Transit Plan Update (SRTPU) was developed jointly between Nelson/Nygaard (consulting firm who assisted in the SRTPU development), RoadRUNNER Transit staff, and Mesilla Valley Metropolitan Planning Organization (MVMPO) staff. The process included:

- on-board and Internet surveys to obtain public opinion of RoadRUNNER Transit riders
- interviews with RoadRUNNER Transit fixed route service bus drivers
- several presentations for participants in the Ocotillo Empowerment Congress
- presentation on June 8, 2015 at the City Council Work Session
- monthly progress reports of the plan and two formal presentations on July 16 and September 10, 2015 to the Transit Advisory Board
- public hearings on July 1, July 8 and July 11, 2015 to obtain crucial information for route revisions
- several presentations and updates by MVMPO staff was provided to the Policy Committee, Technical Advisory Committee, and Bicycle/Pedestrian Committee
- Transit Advisory Board recommended the approval of the SRTPU at their September 10, 2015 meeting as presented before the City Council on June 8, 2015

Continue on additional sheets as required)

The SRTPU when adopted by the City Council will be the main strategic plan for immediate changes to the routes and overall operation of the fixed route system of RoadRUNNER Transit system.

SUPPORT INFORMATION:

1. Attachment "A", Short Range Transit Plan Final Report.

(Continue on additional sheets as required)

Attachment A

Short Range Transit Plan

FINAL REPORT

City of Las Cruces/RoadRUNNER Transit

October 2015

Mesilla Valley Metropolitan Planning Organization

RoadRUNNER Transit

In cooperation with

NELSON NYGAARD

Table of Contents

Page

1 Executive Summary 1-1
2 Demographic Evaluation 2-1
3 System Overview 3-1
4 Route Profiles 4-1
5 Operator Feedback 5-1
6 Peer Review 6-1
7 Customer Survey Results and Public Comment 7-1
8 Service Recommendations 8-1
9 Long-Range Investments 9-1
10 Performance Metrics 10-1
11 Service Design Guidelines 11-1

Table of Figures

Page

Figure 1 Population Density 2-3
Figure 2 Employment Density 2-4
Figure 3 Employment Locations for Low-Income Workers 2-5
Figure 4 Home Locations for Low-Income Workers 2-6
Figure 5 Zero Vehicle Household Density 2-7
Figure 6 Low-Income Household Density 2-8
Figure 7 Median Household Income 2-9
Figure 8 Senior Density 2-10
Figure 9 Young Adult Density 2-11
Figure 10 Disabled Population 2-12
Figure 11 Transit Propensity Index 2-13
Figure 12 RoadRUNNER Route Characteristics 3-1
Figure 13 RoadRunner Transit Fare Structure 3-2
Figure 14 Fixed-Route Fleet 3-3
Figure 15 Dial-a-Ride Fleet 3-3
Figure 16 Weekday Transfer Matrix 3-5
Figure 17 Saturday Transfer Matrix 3-5
Figure 18 Historical Ridership Trends 3-6
Figure 19 RoadRUNNER System Map 3-7
Figure 20 Route Ridership Comparison 3-8
Figure 21 Route Productivity Comparison 3-9
Figure 22 System Ridership 3-10
Figure 23 Route 10 Inbound Weekday Ridership Activity 4-3

Figure 24 Route 10 Outbound Weekday Ridership Activity 4-4
Figure 25 Route 20 Inbound Weekday Ridership Activity 4-6
Figure 26 Route 20 Outbound Weekday Ridership Activity 4-7
Figure 27 Route 30 Inbound Weekday Ridership Activity 4-9
Figure 28 Route 30 Outbound Weekday Ridership Activity 4-10
Figure 29 Route 40 Weekday Ridership Activity 4-12
Figure 30 Route 50 Weekday Ridership Activity 4-14
Figure 31 Route 60 Inbound Ridership Activity 4-16
Figure 32 Route 60 Outbound Ridership Activity 4-17
Figure 33 Route 70 Inbound Weekday Ridership Activity 4-19
Figure 34 Route 70 Outbound Weekday Ridership Activity 4-20
Figure 35 Route 80 Weekday Ridership Activity 4-22
Figure 36 Route 80 Outbound Weekday Ridership Activity 4-23
Figure 37 Route 90 Clockwise Weekday Ridership Activity 4-25
Figure 38 Route 90 Counterclockwise Weekday Ridership Activity 4-26
Figure 39 Peer Review Agencies 6-1
Figure 40 Cities of Peer Review Agencies 6-2
Figure 41 Service Characteristics 6-3
Figure 42 Service Area Population 6-4
Figure 43 Service Area Size (sq mi) 6-5
Figure 44 Population per Square Mile 6-5
Figure 45 Revenue Hours 6-6
Figure 46 Revenue Miles 6-6
Figure 47 Vehicles Operated in Peak Service (Fixed Route) 6-7
Figure 48 Average Fleet Age (Fixed Route) 6-7
Figure 49 Total Funds Expended 6-8
Figure 50 Total Local Contribution 6-8
Figure 51 Percent Local Contribution of Total Funds 6-9
Figure 52 Effectiveness Measures 6-10
Figure 53 Passenger Trips 6-10
Figure 54 Passenger Trips per Revenue Hour 6-11
Figure 55 Efficiency Measures 6-12
Figure 56 Farebox Recovery 6-12
Figure 57 Survey Responses by Route 7-1
Figure 58 Intercept Survey: Number of routes taken 7-2
Figure 59 Online Survey: Number of routes taken 7-2
Figure 60 Intercept Survey: Routes transferred to or from 7-3
Figure 61 Online Survey: Routes transferred to or from 7-3
Figure 62 Intercept Survey: Trip Purpose 7-4
Figure 63 Online Survey: Trip Purpose 7-4
Figure 64 Intercept Survey: Age 7-5
Figure 65 Online Survey: Age 7-5
Figure 66 Intercept Survey: Ethnicity 7-6
Figure 67 Online Survey: Ethnicity 7-6
Figure 68 Intercept Survey: Household Size 7-7

Figure 69 Online Survey: Household Size 7-7
Figure 70 Intercept Survey: Vehicles per Household 7-8
Figure 71 Online Survey: Vehicles per Household 7-8
Figure 72 Intercept Survey: Annual Household Income 7-9
Figure 73 Online Survey: Annual Household Income 7-9
Figure 74 Intercept Survey: Comments by Category 7-10
Figure 75 Online Survey: Comments by Category 7-11
Figure 76 Proposed Route 10 North Main 8-3
Figure 77 Proposed Route 20 University (Weekdays) 8-5
Figure 78 Proposed Route 20 University (Saturday) 8-6
Figure 79 Proposed Route 40 Mesilla 8-8
Figure 80 Proposed Route 60 Missouri 8-10
Figure 81 Proposed Route 70 Madrid 8-12
Figure 82 Proposed Route 80 Picacho 8-14
Figure 83 Proposed Route 110 Bataan 8-16
Figure 84 Proposed Route 120 Solano 8-18
Figure 85 System Map (Phase 1-4) 8-19
Figure 86 System Map (Phase 5) 8-20
Figure 87 Route Distances and Speeds 8-21
Figure 88 Connection Times 8-21
Figure 89 Existing and Recommended System 8-22
Figure 90 Summary of Phase 1 Recommendations 8-23
Figure 91 Summary of Phase 2 Recommendations 8-23
Figure 92 Summary of Phase 3 Recommendations 8-23
Figure 93 Summary of Phase 4 Recommendations 8-24
Figure 94 Summary of Phase 5 Recommendations 8-24
Figure 95 Summary of Cost Estimates for Recommendations 8-24
Figure 96 Potential Bicycle Facilities 9-2
Figure 97 Recommended Performance Standards 10-3
Figure 98 Route Performance Categories 10-3

1 EXECUTIVE SUMMARY

Introduction

RoadRUNNER Transit is a division of the City of Las Cruces that provides fixed-route bus service and Dial-a-Ride paratransit service. Several changes were made to the RoadRUNNER system in March 2008 to improve route directness and reduce customer travel time. Over the next five years, ridership gradually increased while service levels remained fairly constant.

In November 2013, the Mesilla Valley Intermodal Transit Terminal (MVITT) opened in downtown Las Cruces. This facility serves at the primary transit hub in Las Cruces by providing customers with a safe and convenient off-street transfer location for local and regional transit services. While timed connections between select RoadRUNNER routes can currently be made at the MVITT, the facility has capacity to support additional connections. Mesilla Valley Mall serves as a second transfer point for most RoadRUNNER Transit routes.

Comprehensive Service Evaluation

The initial phase of the study included a comprehensive evaluation of the entire transit system and service area. Socio-economic and demographic characteristics of the Las Cruces area were analyzed to identify concentrations of high transit demand. Employment characteristics were also examined. Ridership for each route, trip, and bus stop in the system was evaluated to measure the performance existing service. The evaluation process also included extensive field work in which each bus route were reviewed.

A number of important findings were during the comprehensive service evaluation process:

- Routes 10 and 90 on-time performance issues are negatively impacting the entire system
- Several routes (Routes 50, 80, and 90) lack direct access to grocery stores
- Some customers wait 30 minutes at the Mesilla Valley Intermodal Transit Terminal or Mesilla Valley Mall to transfer to other routes
- The limited number of bus bays (6) at the Mesilla Valley Intermodal Transit Terminal results in staggered arrival times (some routes depart on the hour while others depart on the half hour)
- The indirect nature of several routes result in inconvenient travel times
- A high percentage (47%) of customers transfer to reach their final destination
- Choice riders constitute a minimal percentage of total riders
- Increased service span and Sunday service are the most common customer requests

Interviews with RoadRUNNER Transit bus operators were conducted to obtain information regarding operational issues, ridership trends, and customer requests. A customer intercept survey was conducted at the Mesilla Valley Intermodal Transit Terminal and on-board buses during January 2015. Customers' opinions were also obtained via the Internet over a period of two months. Interview and survey responses identified a wide range of issues, needs, and opportunities across the entire system.

Service Recommendations

Findings from the comprehensive service evaluation and outreach effort were summarized in an existing conditions report that served as a basis for service recommendations.

Service recommendations are divided into two categories:

- System route restructuring
- System service expansion

System restructuring recommendations include a series of route changes that streamline routes and reallocate service from unproductive corridors to areas with greater transit need and higher ridership potential. Restructuring recommendations also seek to reduce inefficiencies that have developed over time due to changes in development, traffic, and infrastructure. As indicated in the customer survey, system improvements such as these will improve ridership growth potential by attracting choice riders.

System expansion recommendations require additional funding to increase the number of service hours and number of vehicles. Expansion recommendations are intended to build upon restructuring recommendations.

Process, Public Comment and Plan Review

The plan was developed jointly between consulting firm of Nelson/Nygaard, RoadRUNNER staff and MVMPO staff. The planning process commenced on October 15, 2014. The initial evaluation of the bus routes involved: on-board and Internet surveys (boarding and alighting by bus stop, passenger travel patterns and opinions about service), use of demographic data and other observations. Early on in the process, the representative of Nelson/Nygaard involved those who are on the ground level of the System's operation: the RoadRUNNER fixed-route drivers. On October 28, 2014, their opinions about operations were solicited thorough a relaxed and open discussion facilitated by the consultant. (The drivers' comments can be found in Section 7 of the Plan.) Throughout the process drivers have been kept abreast of the process and comments forwarded to the consultant. The findings or surveys, as well as demographics and drivers' opinions, became the basis of the proposed routes.

During the process, the staff of the MVMPO gave several presentations and provided updates to the Policy Committee, Technical Advisory Committee and Bicycle/Pedestrian Advisory Committee of the Mesilla Valley Metropolitan Organization; and to the RoadRUNNER Transit Advisory Board. Several presentations and updates were given to the participants in the Ocotillo Institute for Social Justice throughout the process.

After the systems evaluation and proposed routes were ready in draft form, Nelson/Nygaard gave a presentation to the City of Las Cruces City Council at Council Work Session on June 8, 2015. The staff noted the Council comments and then proceeded to set up the public hearings.

Three public hearings were held on July 1, July 8 and July 11, 2015 to obtain crucial information for route revision. Notices were placed on RoadRUNNER buses and notifications given through various venues to alert the public and particularly riders about the public hearings. All locations were accessible by public transit and by those who are physically challenged and English-Spanish translation services were provided.

The first public hearing on July 1 was conducted in an open house format at the Mesilla Valley Intermodal Transit Center (MVITT). Posters and maps explaining the basic findings, proposed routes and operations recommendations were placed around the waiting room of the MVITT. MPO and RoadRUNNER staff discussed with individuals and small groups the Plan using the posters as the basis for discussion. The

other two hearings were conducted as formal presentations with discussions. The public attendance at all three meetings were such that everyone was able to express their concerns in a relaxed atmosphere. (The public comments from the public hearings can be found in Section 7.)

During July 2015, the staff of RoadRUNNER Transit and MVMPO did dry runs on the routes simulating the presence of stops along the proposed routes. The routes were revised according to these runs to accommodate operational concerns and some additional coverage areas.

The MVMPO staff made two formal presentations before the RoadRUNNER Transit Advisory Board on July 16 and September 10, 2015. The RoadRUNNER Transit Advisory Board at their September 10, 2015 meeting recommended the approval of the Short Range Transit Plan Update. The first presentation presented the findings including the preliminary proposed routes as the second only included discussion primarily focusing on the revised proposed routes based on dry runs of the routes. These were public meetings and there were a good representation of bus patrons at this meeting

The Plan's process was one that was inclusive, transparent and deliberative. There was a collaborative effort between the RoadRUNNER and the MVMPO with drivers, non-profit organizations and the public to ensure that all parties had ample opportunities to be involved in the development of the Plan. These same groups will be essential in the transition from the old routes to the new ones. It is anticipated that there will be some glitches and some confusion when the new routes are implemented. The network created through this process will be key in making the movement to the new routes ones a relatively smooth one.

Report Organization

The Final Report consists of nine additional chapters, which are summarized below.

- Chapter 2 evaluates socio-economic and demographic conditions within the Las Cruces/RoadRUNNER Transit service area to better understand transit demand and service gaps.
- Chapter 3 provides an overview of RoadRUNNER Transit fixed routes, including recent operational and performance data.
- Chapter 4 consists of detailed profiles of each route that describe service characteristics, ridership patterns, and on-time performance.
- Chapter 5 provides an overview of feedback obtained by bus operators during interview sessions held at the start of the project.
- Chapter 6 presents a review of peer agencies.
- Chapter 7 summarizes customer feedback obtained through an intercept survey conducted by Mesilla Valley Metropolitan Planning Organization staff and the results of the public hearings.
- Chapter 8 details service recommendations.
- Chapter 9 provides a summary of long-range investments that should be considered to enhance transit service in Las Cruces. This chapter was written by the Mesilla Valley Metropolitan Planning Organization.
- Chapter 10 consists of performance metrics to be utilized regularly to monitor service effectiveness.
- Chapter 11 outlines service design guidelines to assist in future transit planning.

2 DEMOGRAPHIC EVALUATION

This chapter summarizes demographic and socio-economic characteristics in the RoadRUNNER Transit service area, with a focus on population segments that have a higher likelihood to use transit. Data are from the 2010 US Census, 2008-2012 American Community Survey 5-year estimates, and the 2011 US Census Longitudinal Employer-Household Dynamics (LEHD).

Population Density

As Figure 1 illustrates, population densities are moderate throughout much of the service area. Areas of high population density include the southern portion of Roadrunner Parkway, New Mexico State University on-campus student housing, and isolated pockets along East University Avenue, Nevada Avenue, Montana Avenue, South Telshor Boulevard, Espina Street, and Mars Avenue.

Employment

Employment density depicted in Figure 2 is more visibly concentrated within the service area. The locations with the highest employment density are in downtown and in the area directly east of I-25, with employment centers including Mesilla Valley Mall and Memorial Medical Center.

Figure 3 shows employment locations for workers earning less than $15,000 annually. The highest concentrations of these jobs are most present in and around downtown, NMSU, Mesilla Valley Mall, commercial areas along Amador and Lohman Avenue, and the area west of downtown between Picacho and Amador Avenues.

Figure 4 shows home locations for workers earning less than $15,000 annually, which are scattered across the City of Las Cruces and surrounding area. Prevalent concentrations include the area between Lohman Avenue, Interstate 25, University Boulevard, and El Paseo Road, as well as the area south of Apodaca Park.

Socio-Economic Factors

For self-evident reasons, zero-vehicle households are much more likely to make use of available transit services than car-owning households. While some households are car-free by choice, vehicle ownership generally shares a strong relationship with household income. A review of Figure 5 and Figure 6 reveal that the highest concentrations of zero-vehicle households also have the highest concentrations of low-income households. Areas that share these characteristics include Picacho Avenue between Motel Boulevard and 17th Street, Montana Avenue, 3 Crosses Avenue, Madrid Avenue, and University Avenue just north of New Mexico State University (NMSU), which has a heavy student population. Figure 7, depicting median household income, further illustrates that lower-income households are concentrated towards the center of the city, while wealthier households tend to be located towards the east and in less-densely populated neighborhoods.

Specific Population Segments

Other populations that tend to depend on transit are seniors (adults 65 and older), young adults, and people with disabilities. As Figure 8 and Figure 9 demonstrate, senior and young adult populations are relatively evenly distributed across the service area. Pockets of higher density for the senior population are located within the area east of Solano Drive and south of Madrid Avenue, and in the Good Samaritan Society, a senior center east of Telshor Boulevard. The highest concentration of young adults is in the areas around NMSU and Mesilla Valley Mall. Distribution of populations with disabilities, as depicted in

Figure 10, is largely concentrated within the service area, with the highest concentrations directly east and southeast of downtown.

Transit Propensity

A transit propensity map, shown in Figure 11, was created by combining densities of seniors, young adult, low-income households, households without vehicles, and disabled populations. Overlaid with the fixed-route system, it appears that the areas with most need and likelihood to support transit are located within close proximity to existing RoadRUNNER service. The most visible exceptions include Mars Ave, which is approximately ½ mile north of the Venus Transfer Point across Bataan Memorial Hwy, and the unincorporated community of Tortugas, which is adjacent to I-10 and south of Mesilla Park.

Figure 1 Population Density

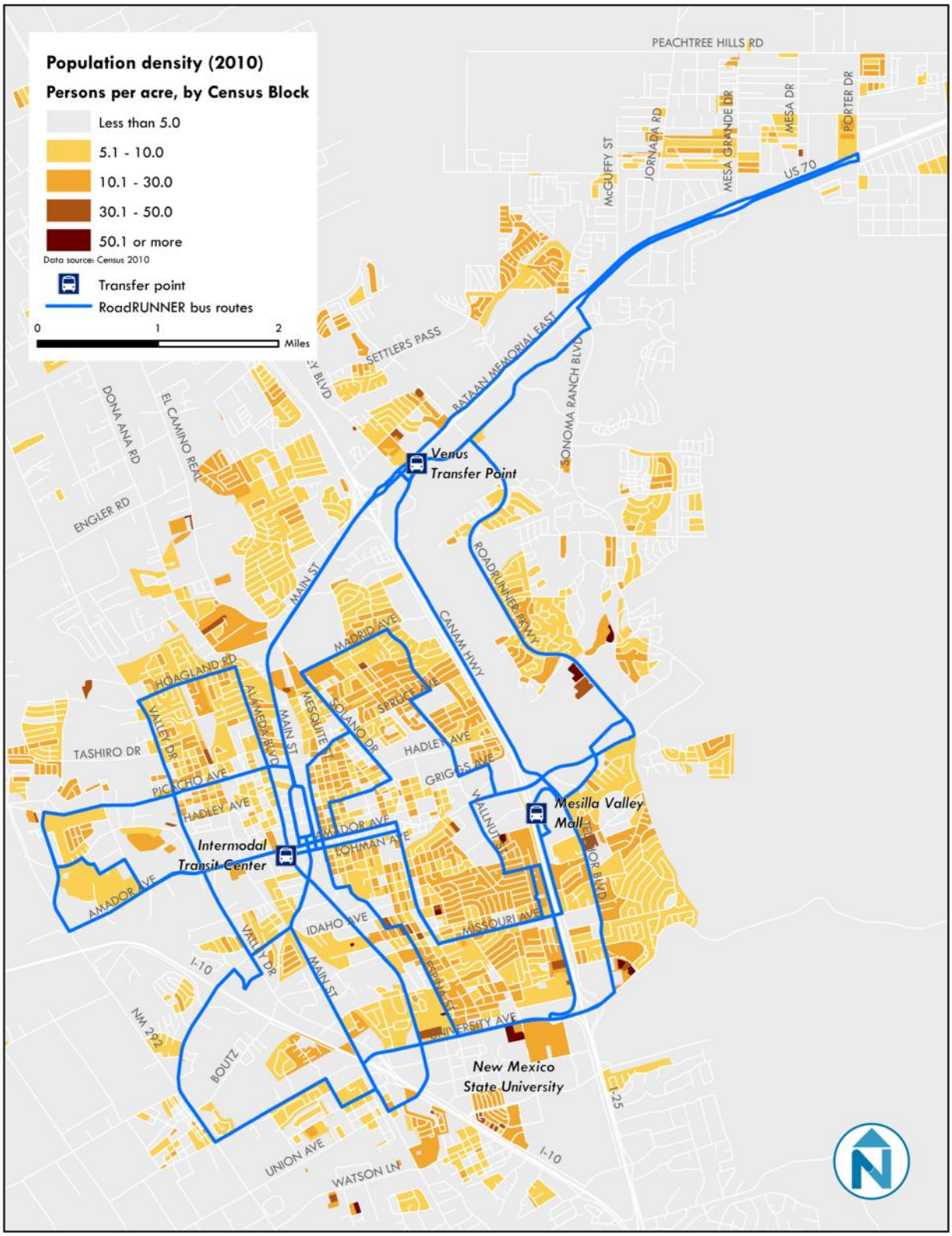


Figure 2 Employment Density

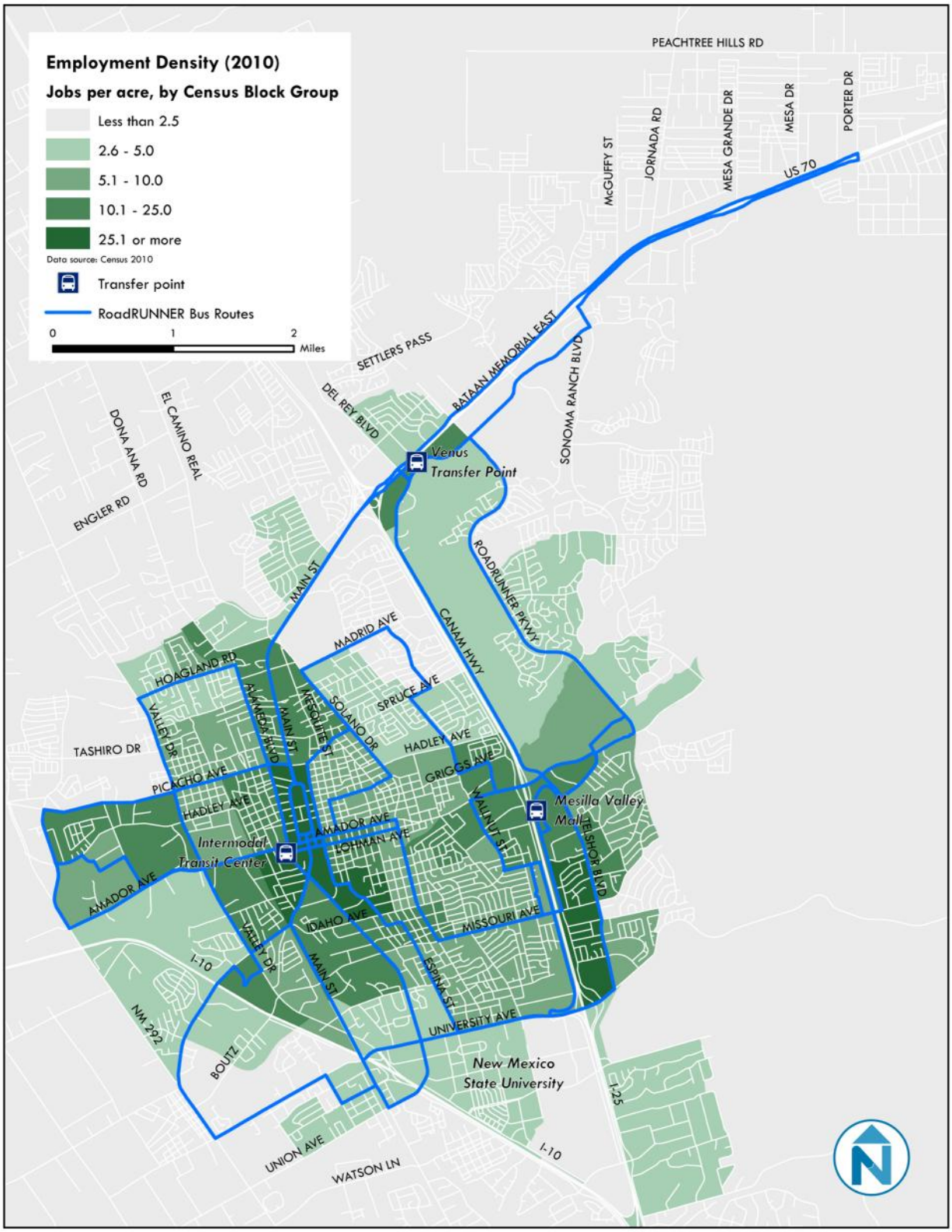


Figure 3 Employment Locations for Low-Income Workers

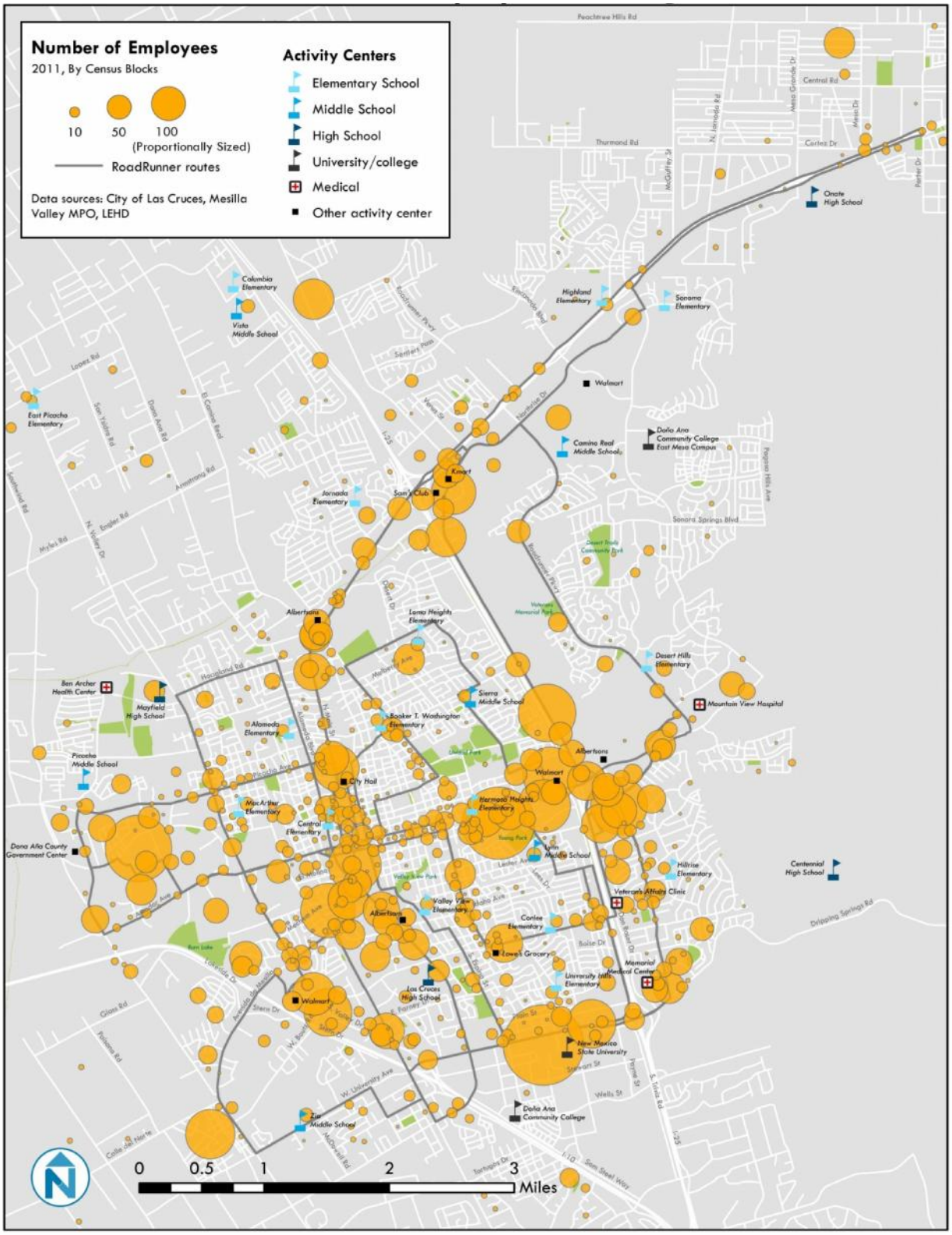


Figure 4 Home Locations for Low-Income Workers

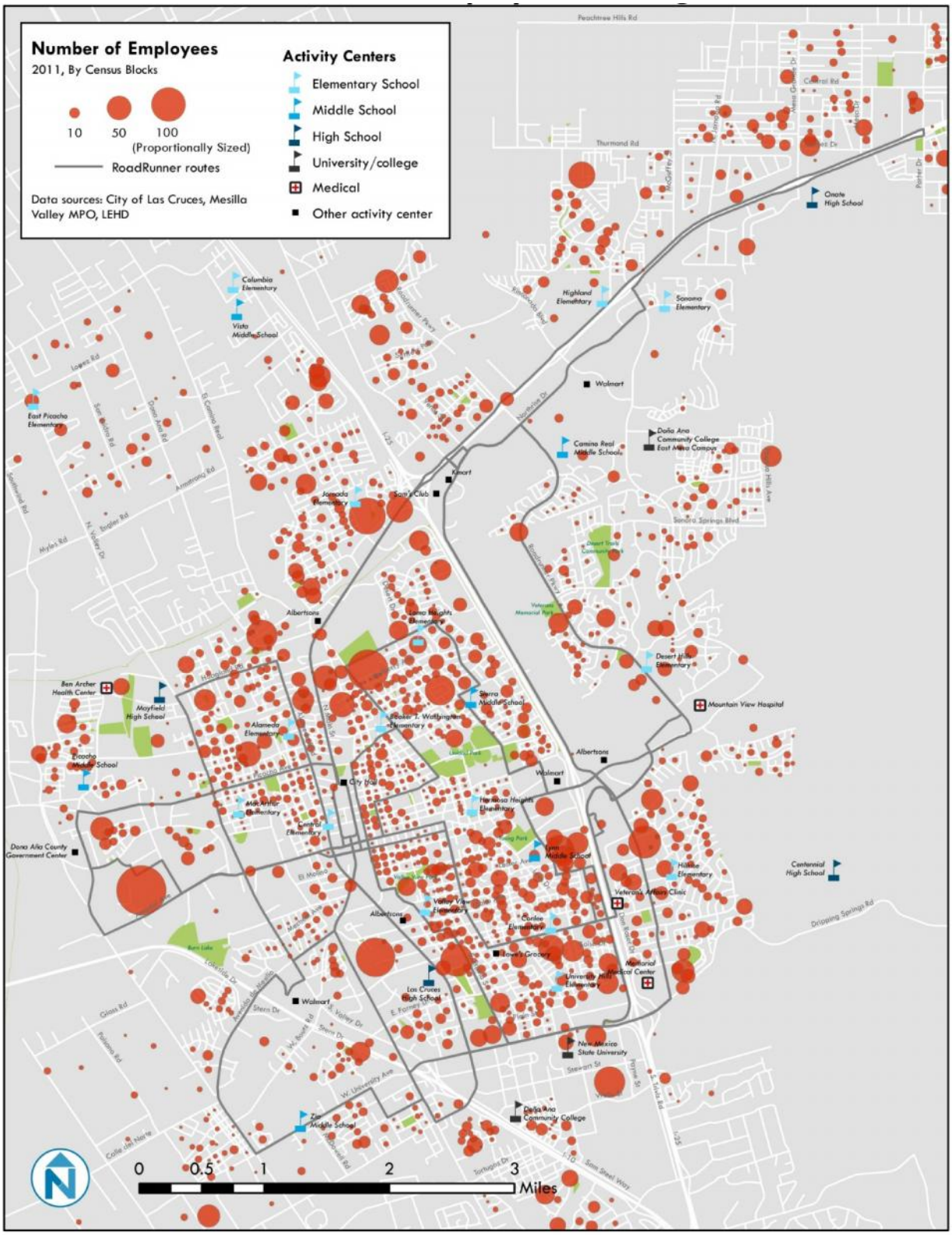


Figure 5 Zero Vehicle Household Density

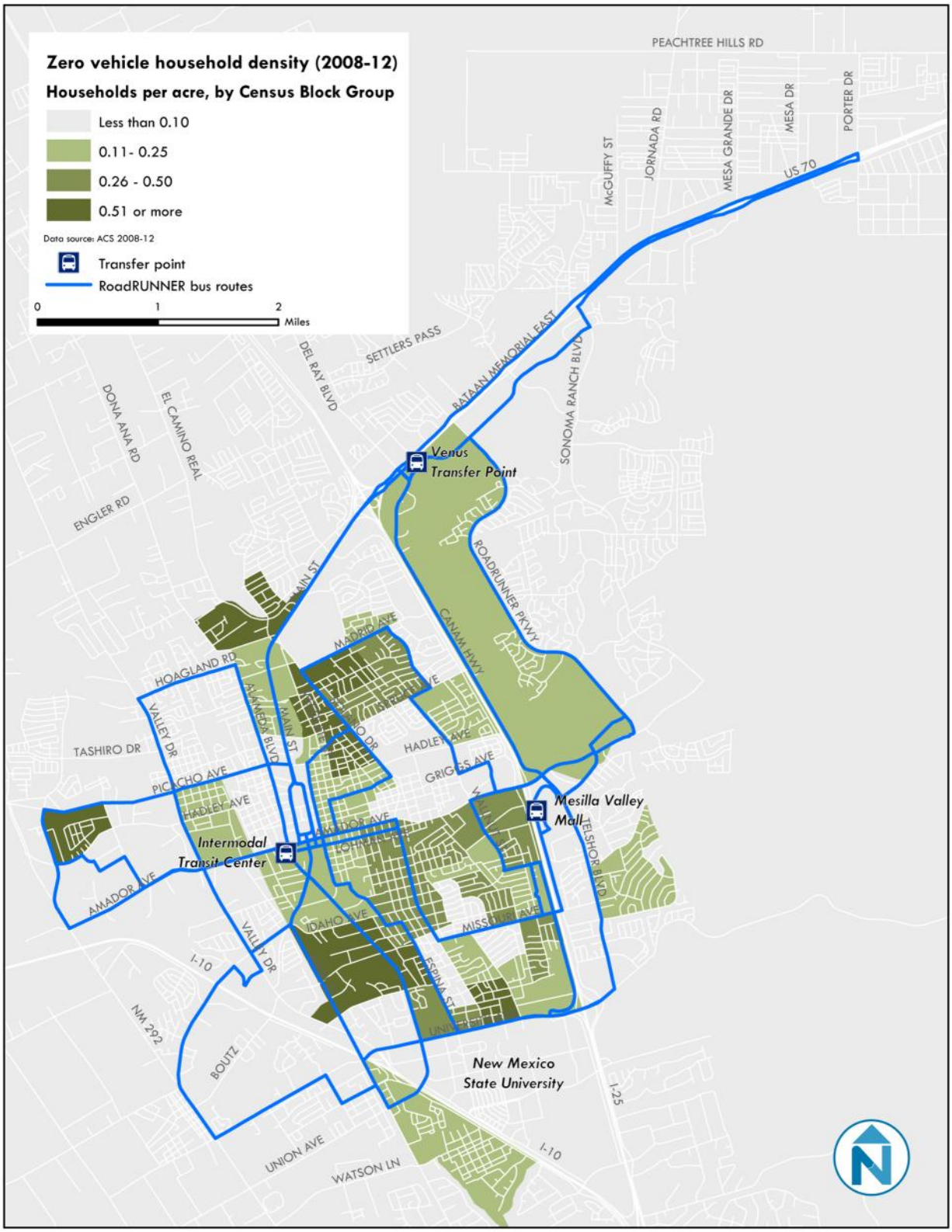


Figure 6 Low-Income Household Density

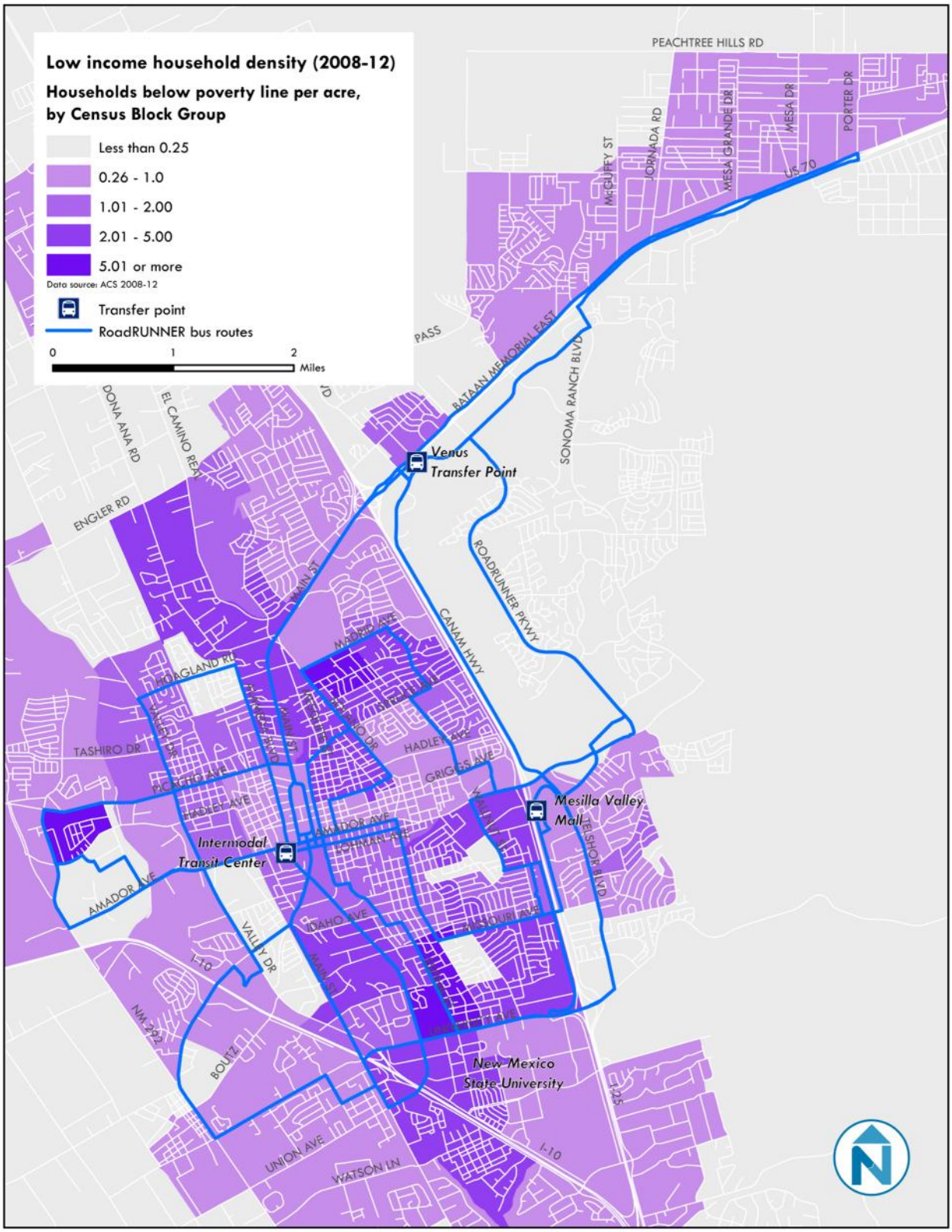


Figure 7 Median Household Income

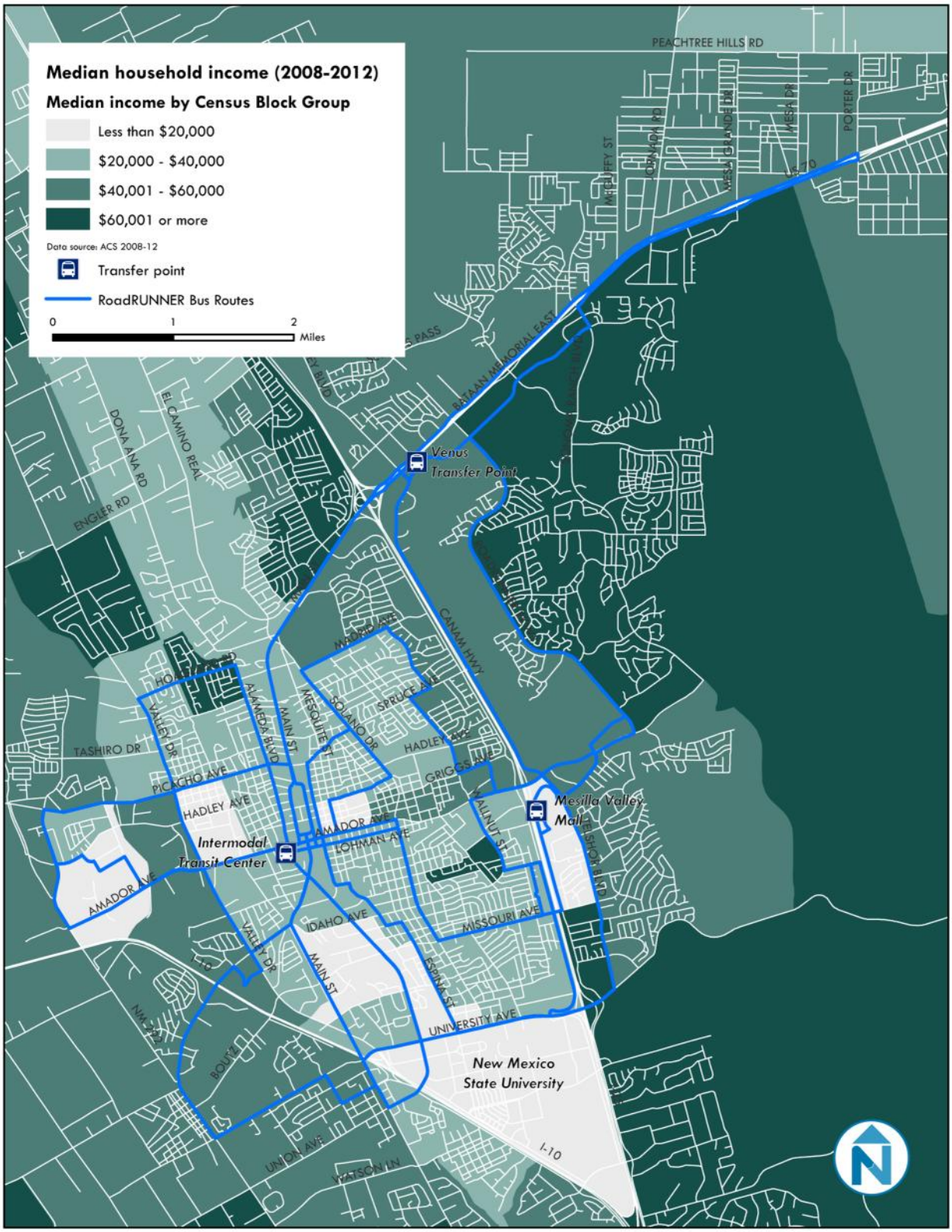


Figure 8 Senior Density

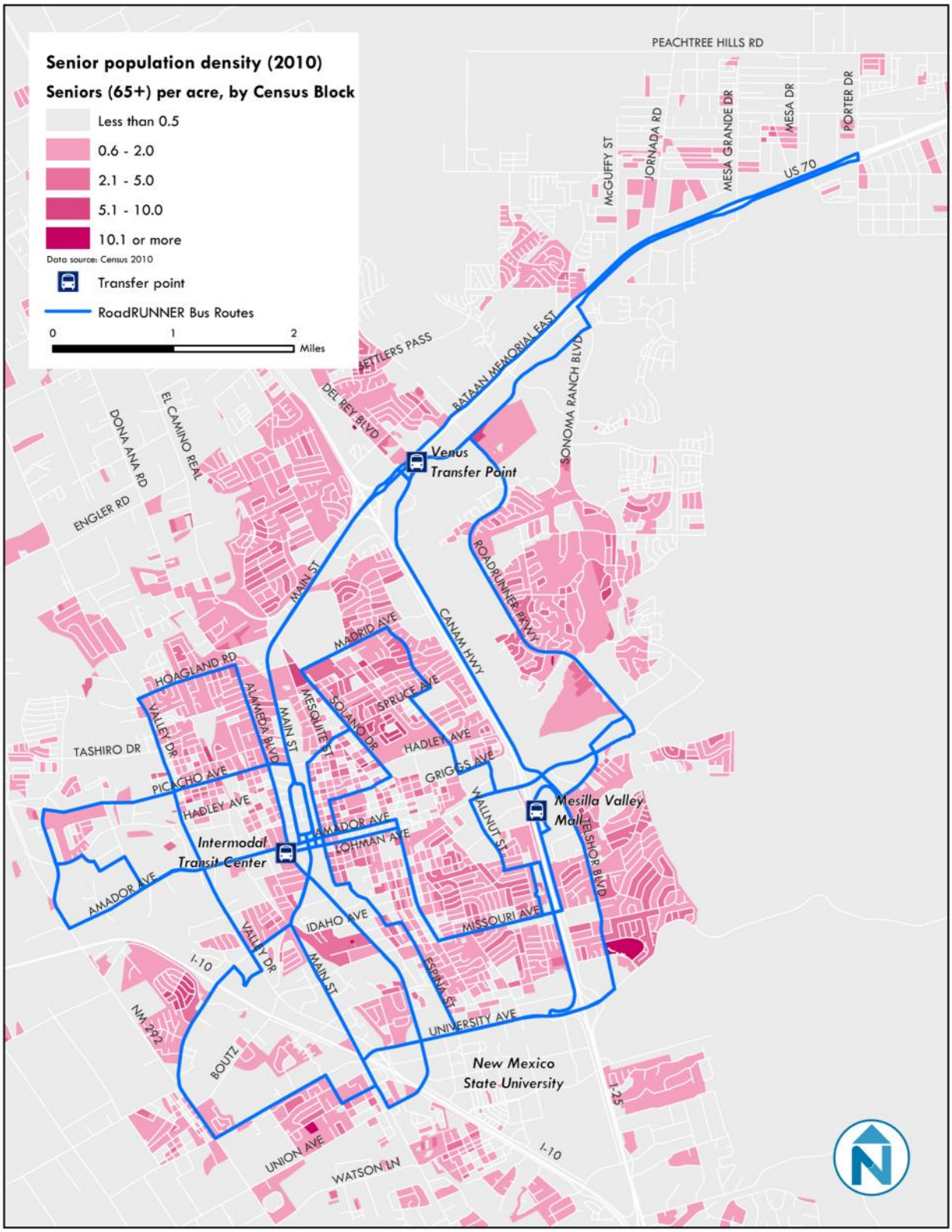


Figure 9 Young Adult Density

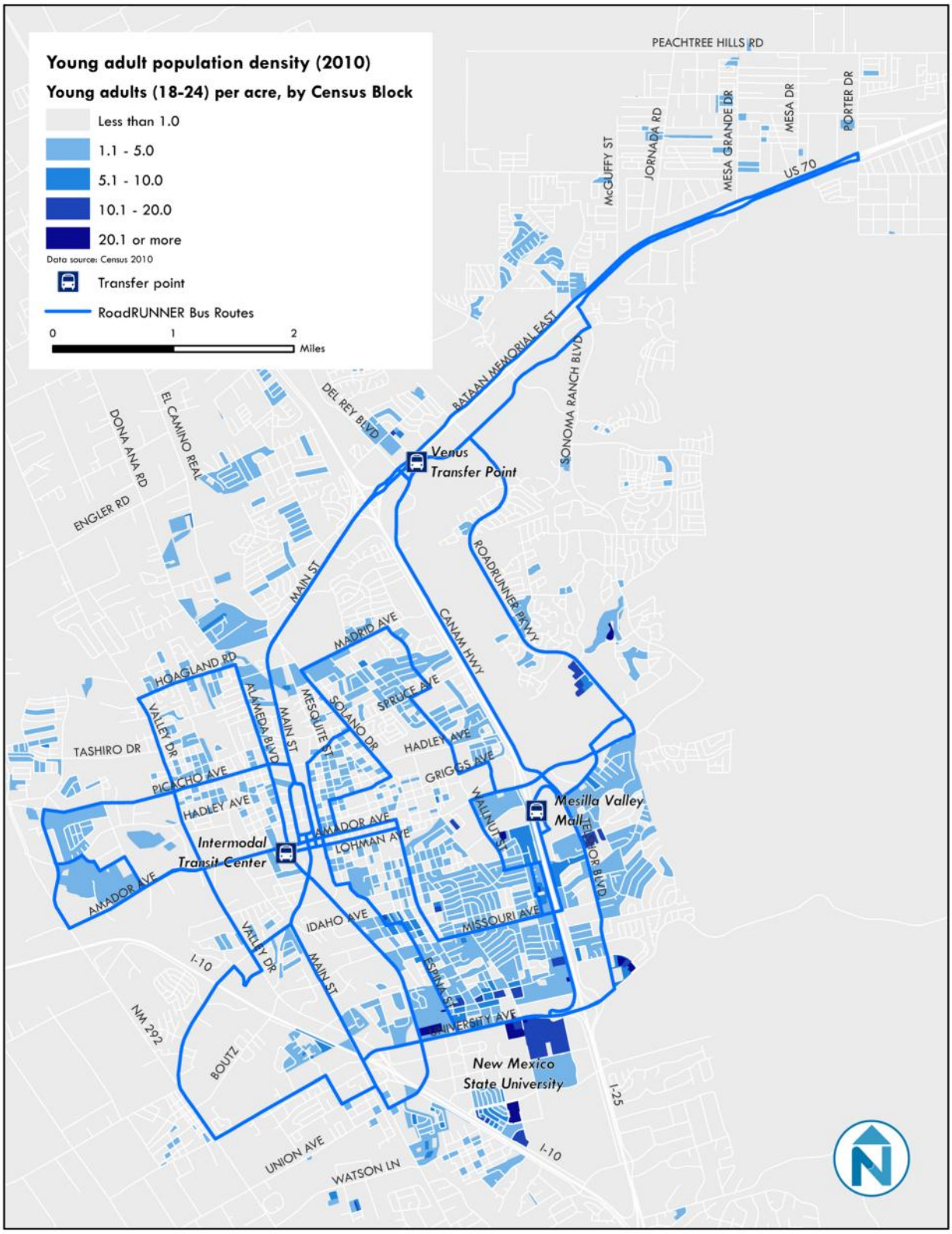


Figure 10 Disabled Population

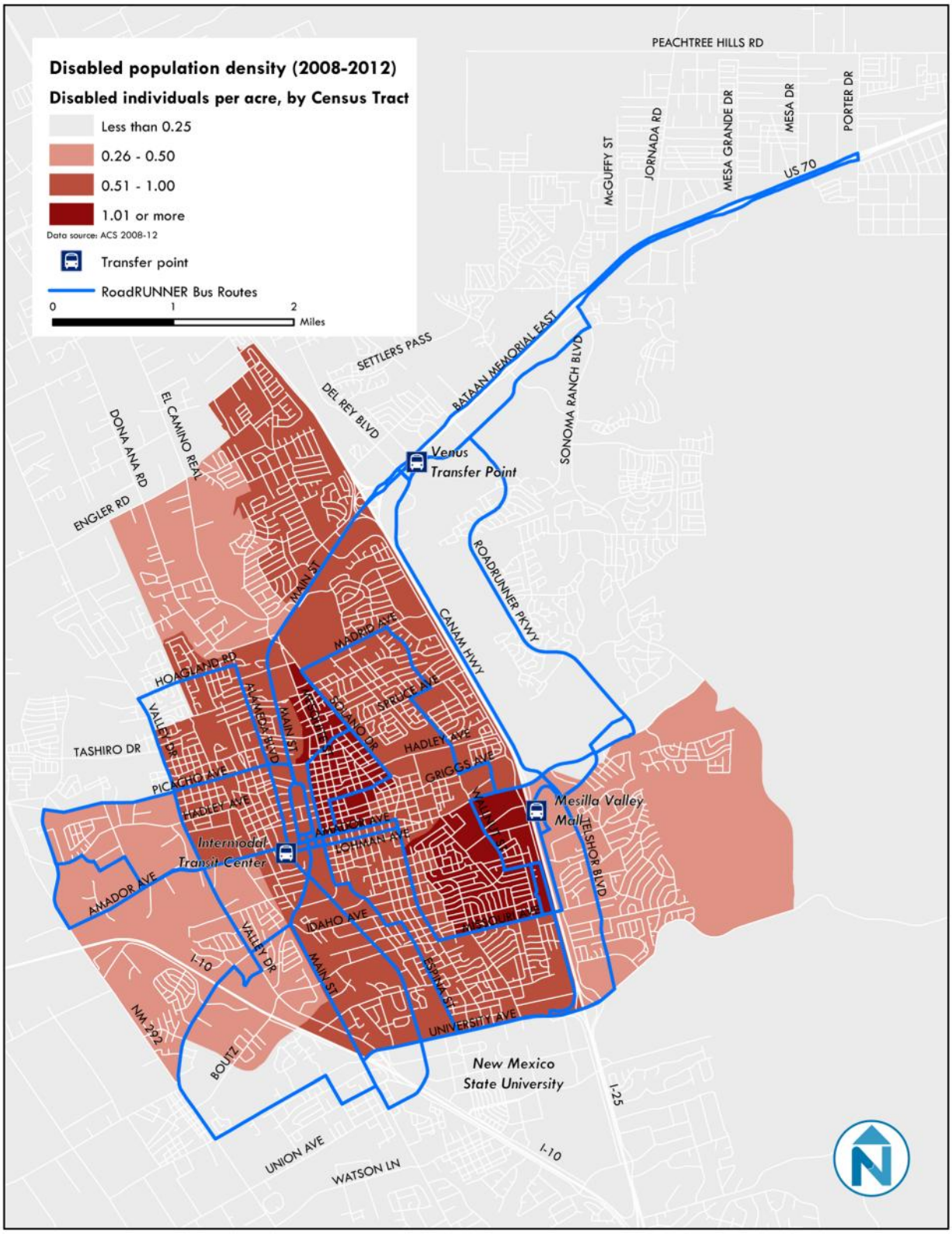
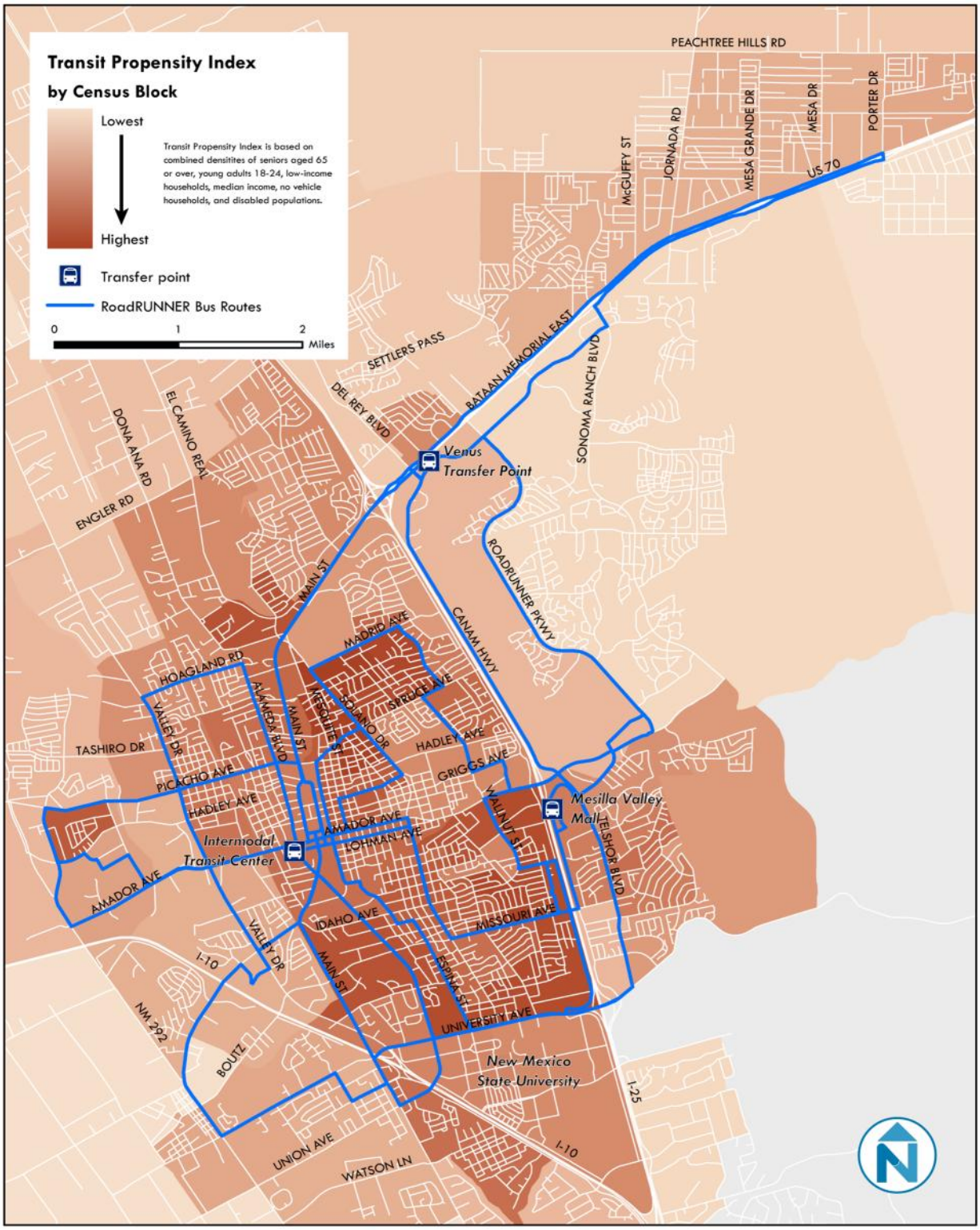


Figure 11 Transit Propensity Index



3 SYSTEM OVERVIEW

RoadRUNNER Transit

RoadRUNNER Transit is the public transportation system of the City of Las Cruces. The system consists of eight fixed routes operating Monday-Friday from 6:30 a.m. – 7 p.m. and Saturday from 9:30 a.m. – 6:30 p.m. RoadRUNNER does not operate on Sundays or major holidays (New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day).

Most RoadRUNNER route alignments consist of bi-directional alignments and one-way loops operating at 60-minute headways. Route 80 consists of alternating loops that depart the Mesilla Valley Intermodal Transit Terminal every 30 minutes. Each route makes a timed transfer at either the Mesilla Valley Intermodal Transit Terminal (MVITT) or Mesilla Valley Mall (MVM). Routes 20, 30, 60 and 70 terminate at both facilities. Figure 12 provides an overview of RoadRUNNER route characteristics.

Figure 12 RoadRUNNER Route Characteristics

Route	Headway	Weekday Revenue Hours	Saturday Revenue Hours	Vehicles	Average Speed (mph)	Alignment	Terminal Point(s)
10 – Desert Orange	60	12.5	8.5	1	17.9	Bi-directional	MVITT
20 – Sun Yellow	60	12.5	8.5	1	11.6	Bi-directional	MVITT, MVM
30 – Aggie Crimson	60	12.5	8.5	1	11.9	Bi-directional	MVITT, MVM
40 – Pecan Brown	60	6.5	4.5	0.5	17.0	Loop	MVITT
50 – Rio Grande Blue	60	6	4	0.5	12.4	Loop	MVITT
60 – Sky Blue	60	12.5	8.5	1	12.1	Bi-directional	MVITT, MVM
70 – Chile Green	60	12.5	8.5	1	12.3	Bi-directional	MVITT, MVM
80 – Cactus Green	30	12.5	8.5	1	11.9	Alternating loops	MVITT
90 – Roadrunner Red	60	12.5	8.5	1	17.5	Alternating loops	MVM

In addition to the regular one-way fare, RoadRUNNER Transit also offers a series of pass options to provide customers with savings with encouraging regular use of the system. Fares are described in Figure 13.

Figure 13 RoadRunner Transit Fare Structure

Category	One-Way Fare	Day Pass	Weekly Pass	31-Day or 30-Ride Pass
Adult (Ages 19-59)	$1.00	$2.25	$8.00	$30.00
Youth (Ages 6-18)	$0.50	$1.25	$4.00	$15.00
Senior Citizen (Ages 60 and older)	$0.50	$1.25	$4.00	$15.00
Persons with Disabilities	$0.50	$1.25	$4.00	$15.00
Medicare Holders	$0.50	$1.25	$4.00	$15.00
Students with Valid School ID	$0.50	$1.25	$4.00	$15.00
Children (Ages 5 and younger) – Limit 3	Free	Free	Free	Free

Aggie Transit

Aggie Transit is a cooperative service between New Mexico State University (NMSU) and the City of Las Cruces consisting of two shuttle routes operating on weekdays during semesters. Aggie Transit routes operate from 7 a.m.-6 p.m. and are available to students with a valid Aggie ID.

The Green Route (Route 1) is a campus circulator that connects student parking lots on the eastern edge of the NMSU campus with the core area of campus by operating bi-directionally along Stewart Street. The Blue Route (Route 2) connects student housing on the southern edge of the NMSU campus with the NMSU and DACC campuses by operating a clockwise loop east of I-10 and south of University Boulevard.

Doña Ana Community College Shuttle

The City of Las Cruces and Doña Ana Community College jointly fund a limited-stop shuttle that connects the Doña Ana Community College (DACC) East Mesa Campus with Mesilla Valley Mall. The DACC Shuttle is free and open to the public. Routes operate on weekdays during Fall and Spring semesters. Mesilla Valley Mall is the terminal point for Routes 20, 30, 60, 70, and 90. Students may travel between the Espina and East Mesa campuses by using a combination of Aggie Transit Route 2, a RoadRUNNER Transit Route 30, and the DACC Shuttle.

Dial-a-Ride

Dial-a-Ride is a curb-to-curb on-demand transportation service provided by The City of Las Cruces to senior citizens and qualified individuals with disabilities as defined by the Americans with Disabilities Act (ADA). Dial-a-Ride complements the RoadRUNNER Transit system and provides trips within the City of Las Cruces. Wheelchair accessible cutaway vehicles are used to operate Dial-a-Ride service. Fares are $2.00 for each one-way trip and free for senior citizens.

Vehicles

The City of Las Cruces owns a combination of 35-foot coaches and cutaways to operate fixed-route and dial-a-ride services. Several vehicles are approaching the end of their respective life cycle. Fixed-route and dial-a-ride fleet information is provided in Figure 14 and Figure 15.

Figure 14 Fixed-Route Fleet

Year	Manufacturer	Fuel Type	Vehicle Length	Seating Capacity	Standing Capacity	Total Vehicles	Average Mileage per Vehicle
2000	NOVA	Diesel	35	39	19	3	290,743
2004	Gillig	Diesel	35	32	19	8	367,207
2008	Gillig	Diesel	35	32	19	4	174,392
2010	Gillig	Diesel	35	32	19	1	143,082
2011	Arboc	Gasoline	24	15	0	2	60,016

Figure 15 Dial-a-Ride Fleet

Year	Manufacturer	Fuel Type	Vehicle Length	Seating Capacity	Standing Capacity	Total Vehicles	Average Mileage per Vehicle
2004	Goshen	Diesel	23	14	0	3	158,558
2006	Starcraft	Diesel	23	14	0	3	118,151
2006	Starcraft	Diesel	23	6	0	2	139,366
2008	Starcraft	Diesel	23	14	0	2	116,075
2008	Starcraft	Diesel	23	6	0	2	102,763
2010	Glaval Bus	Gasoline	25	15	0	6	76,676
2012	Glaval Bus	Gasoline	23	6	0	3	32,669

Transfer Points

Mesilla Valley Intermodal Transit Terminal (MVITT)

The City of Las Cruces opened the Mesilla Valley Intermodal Transit Terminal in December 2013. The facility includes a climate-controlled lobby, restrooms, vending machines, and a customer service information desk. Six saw-tooth bus bays are available to RoadRUNNER Transit routes. Five routes (10, 20, 40, 60, and 80) arrive on the hour, and four routes (30, 50, 70, and 80) arrive on the half hour.

The facility provides intermodal connections with two New Mexico Department of Transportation (NMDOT) routes. The NMDOT Gold Route travels to and from El Paso with several stops in between. The NMDOT Gold Route stops at the MVITT four times during the morning and seven times during the afternoon. Two additional morning and one afternoon trip serve NSMU. The NMDOT Silver Route connects Las Cruces with the White Sands Missile Range via US 70. The Silver Route has an intermediate stop at the MVITT, NMSU, and the Ashley Furniture store in Las Cruces. The Silver route has one afternoon and one morning trip. NMSU is served on both trips, but the MVITT is only served in the morning.

Z-Trans is a regional transit provider that offers transportation to and from Alamogordo and many points within and beyond Alamogordo. The Z Trans Orange Route connects Alamogordo, Holloman Air Force Base, and the community of Organ with several destinations in Las Cruces, including MVITT, NMSU, Mesilla Valley Mall, Memorial Medical Center, and DACC East Campus. The Z-Trans Orange route stops at the MVITT four times during the morning and seven times during the afternoon.

Rio Grande Transit provides service from Elephant Butte, Truth of Consequences, and Hatch to Las Cruces. It connects to the RoadRUNNER system at the MVITT. Frequency has been temporarily reduced due to a break in support by the SCRTD. It is expected that beginning September 1, 2015, service will be restored to three inbound and three outbound trips to Las Cruces.

Mesilla Valley Mall (MVM)

Five RoadRUNNER Transit routes serve the Mesilla Valley Mall. Routes 30, 70, and 90 arrive on the hour, while Routes 20, 60, and 90 arrive on the half hour. A high number of transfers occur daily and it is unclear exactly how many riders are actually destined to the mall. Riders are also able to connect with the DACC Shuttle route or Z-Trans Orange Route.

Buses loop around the mall ring road and stop on the west side of the mall. In addition to operating in internal parking lots with pedestrian activity, routes entering MVM must also contend with narrow lanes and obstructions at the mall entrance driveway.

Venus Transfer Point (VTP)

Routes 10 and 90 have an on-street connection on Venus Street just southeast of Bataan Memorial Highway. The transfer point consists of stops on both sides of the streets with a shelter on the east side of the street and no amenities at the west side of the street. A relatively high number of boardings and alightings occur at VTP, as it is the only point where both routes connect.

Transfer Matrix

Weekday and Saturday transfer patterns are depicted in Figure 16 and Figure 17. While the highest transfer rates involve Routes 20, 30 and 80, several customers transfer between routes that arrive at MVITT at different times, indicating a need for increased timed connections to reduce or eliminate the 30-minute wait between some routes.

Figure 16 Weekday Transfer Matrix

		To Route									
	Route	10	20	30	40	50	60	70	80	90	Total
From Route	10	-	5	3	2	0	6	0	3	10	29
	20	8	-	1	5	0	10	1	10	6	41
	30	1	1	-	0	5	1	12	9	8	37
	40	0	2	4	-	0	1	2	5	0	15
	50	1	6	1	0	-	3	1	4	0	16
	60	5	9	0	3	0	-	1	9	5	32
	70	0	1	14	0	2	1	-	6	4	27
	80	3	9	12	4	3	9	6	-	0	46
	90	6	5	6	0	0	3	3	1	-	23
	Total	25	38	40	15	11	33	25	46	33	265

Figure 17 Saturday Transfer Matrix

		To Route									
	Route	10	20	30	40	50	60	70	80	90	Total
From Route	10	-	4	0	2	0	3	3	2	5	18
	20	2	-	0	4	0	10	1	6	1	23
	30	1	1	-	0	1	1	7	3	3	15
	40	1	0	4	-	0	3	1	4	0	12
	50	0	3	1	1	-	2	1	2	0	9
	60	4	6	1	3	0	-	0	5	3	21
	70	1	1	9	2	1	1	-	5	2	19
	80	1	4	4	1	1	7	5	-	0	23
	90	1	2	4	0	1	2	3	0	-	12
	Total	9	19	22	12	4	28	20	26	12	150

Historical Ridership Trends

RoadRUNNER Transit system ridership has grown at a steady rate over the past five years while service levels have remained constant. While the increase in ridership can be attributed to a number of factors, population growth is the most likely explanation. Between 2010 and 2013, the population of Las Cruces increased 3.8% from 97,621 to 101,324. Between 2010 and 2013, estimated total employment in the City of Las Cruces has increased by 3.1% from 40,712 to 41,983. Ridership tends to peak during the spring and fall, corresponding with NMSU enrollment patterns. Historical ridership trends for RoadRUNNER Transit, Aggie Transit, and the DACC Shuttle are depicted in Figure 18.

Figure 18 Historical Ridership Trends

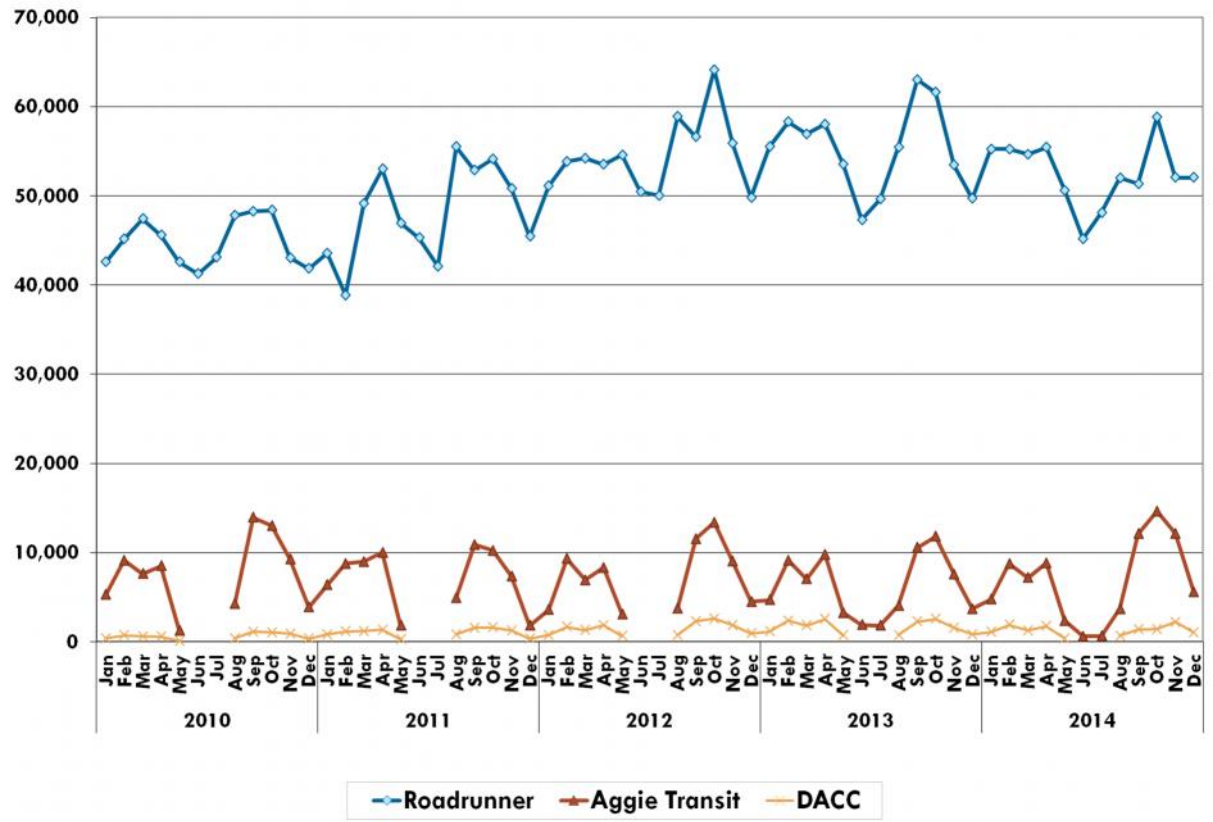
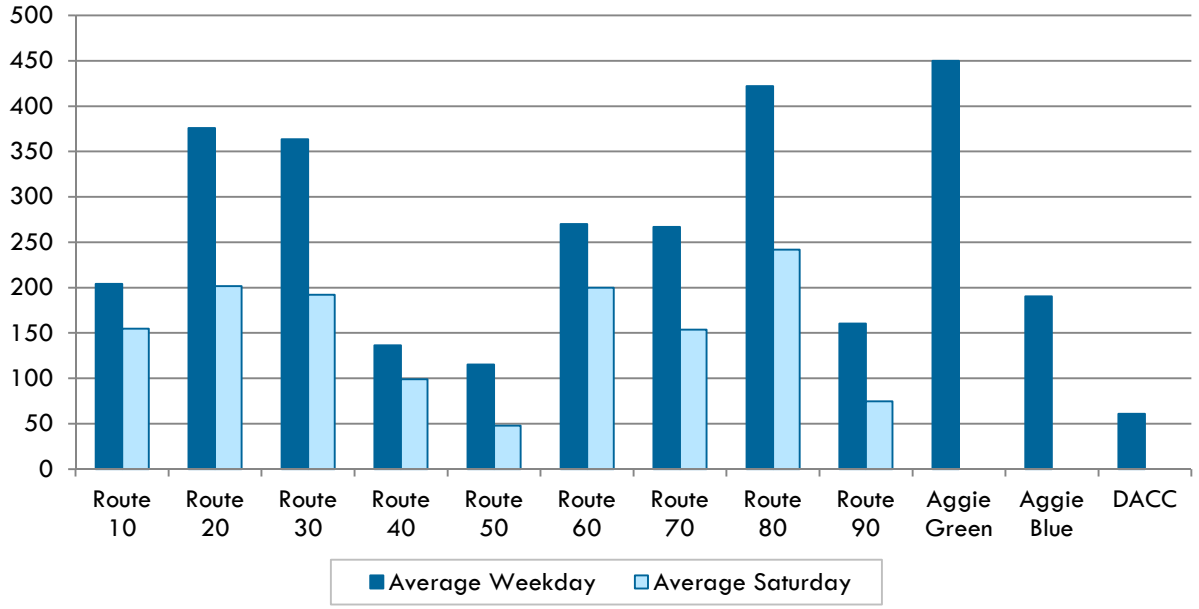


Figure 19 RoadRUNNER System Map

Route Ridership

RoadRUNNER Transit average weekday route ridership varies significantly due to differences in demand and frequency. Furthermore, some routes drop off more significantly than others from weekdays to Saturdays. Figure 20 illustrates average weekday and Saturday ridership for all fixed routes operated by RoadRUNNER Transit based on October 2014 farebox data. RoadRUNNER Transit routes with the highest ridership include Route 80, which operates two alternating loops that depart MVITT every 30 minutes. Routes 20 and 30, which serve NMSU, are the next most productive routes.

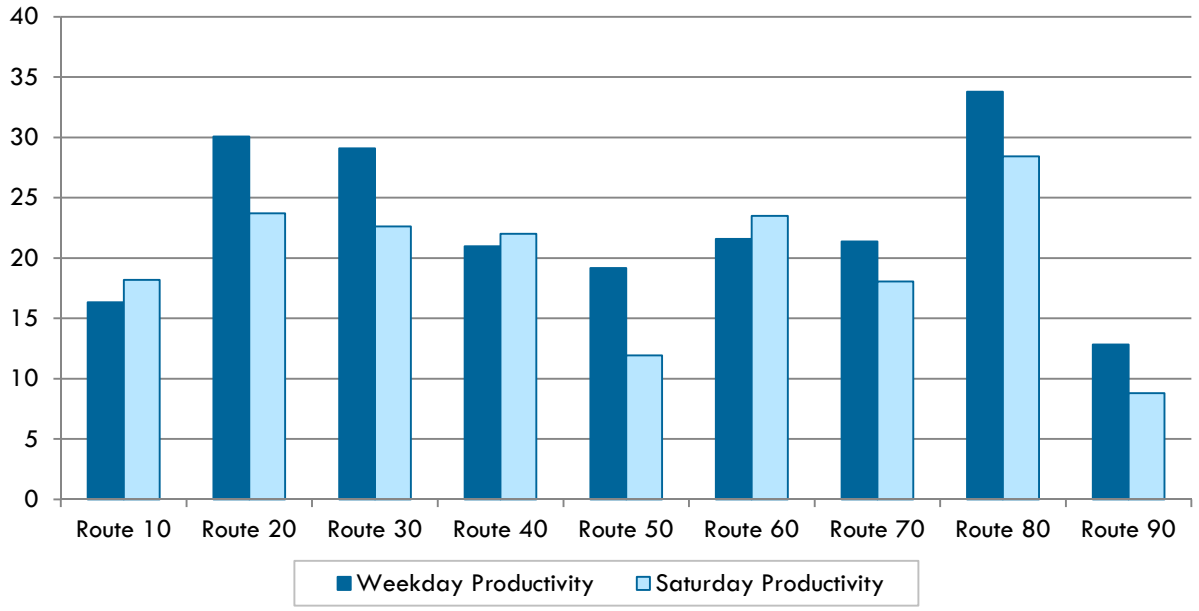
Figure 20 Route Ridership Comparison



Route Productivity

Due to differences in route frequency, a measure of boardings per revenue hour provides a better representation of productivity than total daily boardings.

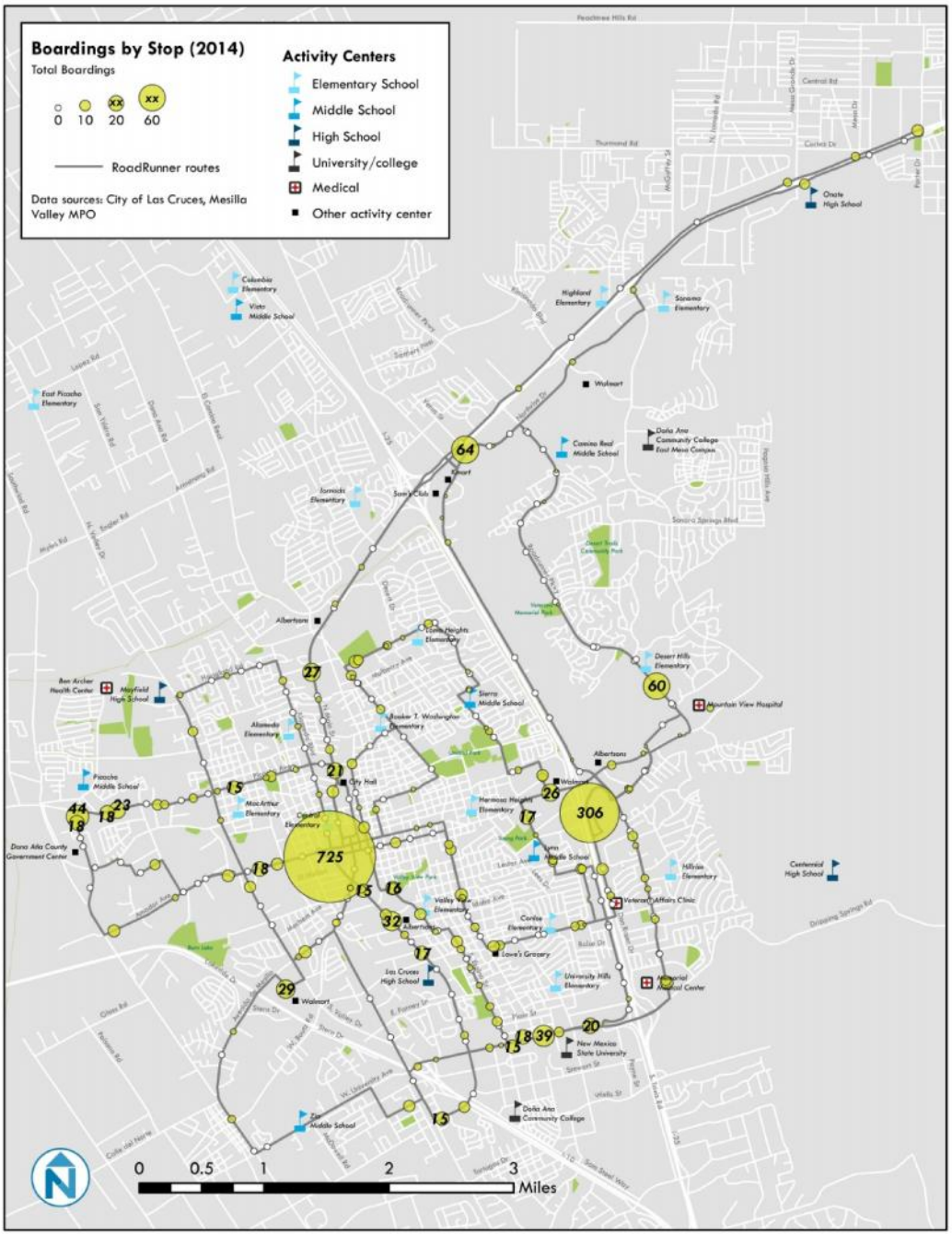
Figure 21 Route Productivity Comparison



System Ridership

Figure 22 depicts average weekday boarding by stop for the RoadRUNNER Transit system. Approximately 45% of system wide boarding activity occurs at the two primary transfer locations, MVITT and MVM. High ridership corridors include University Boulevard, Picacho Avenue, El Paseo Road, South Telshor Boulevard, North Main Street, and portions of Amador Avenue and Lohman Avenue. Both Super Walmart stores and the southernmost segment of Roadrunner Parkway also generate significant ridership.

Figure 22 System Ridership



4 ROUTE PROFILES

This chapter describes each route in the RoadRUNNER Transit System in terms of alignment, connections, stop spacing, ridership activity, and on-time performance. Each route profile also includes boarding and alighting maps based on average weekday ridership. Detailed charts depicting stop-level boarding, alighting, and on-board load is included in Appendix A.

Route 10 – Desert Orange

Route 10 is a bi-directional route operating primarily along North Main Street and Bataan Memorial Highway. Terminal points consist of the Mesilla Valley Intermodal Transit Center (MVITT) and the intersection of Bataan Memorial Highway & Port Road near the East Mesa Recreational Center. Route 10 operates along Northrise Drive in the outbound direction to directly serve Walmart at Rinconada Boulevard. The inbound alignment continues on Bataan Memorial Highway and does not serve Walmart. As a result, some customers ride through the terminal point to avoid crossing to the opposite side of the highway. Additional destinations along Route 10 include Lowe's (grocery store) and Oñate High School.

Direct connections with Routes 20, 40, 60, and 80 are made on the half hour at MVITT. Route 10 also connects with Route 90 along Venus Street, between Bataan Memorial Highway and Northrise Drive. Route 10 serves the Venus Transfer Point (VTP) in both directions, resulting in a loop deviation in the inbound direction.

On-time performance is a regular issue on Route 10, primarily due to its route length. Late arrivals at the MVITT often result in other routes being held to facilitate connections.

Route 10 exhibits strong ridership along North Main Street and at the Venus Transfer Point. Stop spacing north of Venus Transfer Point is significantly greater than the southern half of the route.

Route Characteristics	
Alignment	Bi-directional
Stops	32
Round-Trip Route Length (miles)	17.9
Stop Spacing (miles)	0.56
Weekday	
Service Span	6:30 a.m. – 7 p.m.
One Way Trips	25
Ridership	204
Productivity (boardings per hour)	16.3
Saturday	
Service Span	9:30 a.m. – 6 p.m.
One Way Trips	17
Ridership	155
Productivity (boardings per hour)	18.2

Figure 23 Route 10 Inbound Weekday Ridership Activity

Figure 24 Route 10 Outbound Weekday Ridership Activity

20 – Sun Yellow

Route 20 is a bi-directional route mostly operating along El Paseo Road, University Avenue, Triviz Drive, and Don Roser Drive. Terminal points consist of the Mesilla Valley Intermodal Transit Center (MVITT) and Mesilla Valley Mall. Route 20 operates counterclockwise loop in the outbound direction to serve East Union Avenue and the Grove Apartments. Route 20 previously operated the loop in both directions. However, on-time performance issues resulted in discontinuation of the inbound loop. Additional destinations along Route 20 include New Mexico State University, Ranch Market, VA Clinic, and Human Services Department.

Direct connections with Routes 10, 40, 60, and 80 are made on the half hour at MVITT. Direct connections with Routes 60 and 90 are made at Mesilla Valley Mall on the hour.

Route 20 is the second-most productive route in the RoadRUNNER Transit system. Ridership is strong along El Paseo Boulevard, University Boulevard, and East Union Avenue. Segments of the route with low ridership include Triviz Drive and Don Roser Drive.

Route Characteristics	
Alignment	Bi-directional
Stops	42
Round-Trip Route Length (miles)	11.6
Stop Spacing (miles)	0.28
Weekday	
Service Span	6:30 a.m. – 7 p.m.
One Way Trips	25
Ridership	376
Productivity (boardings per hour)	30.1
Saturday	
Service Span	9:30 a.m. – 6 p.m.
One Way Trips	17
Ridership	202
Productivity (boardings per hour)	23.7

Figure 25 Route 20 Inbound Weekday Ridership Activity

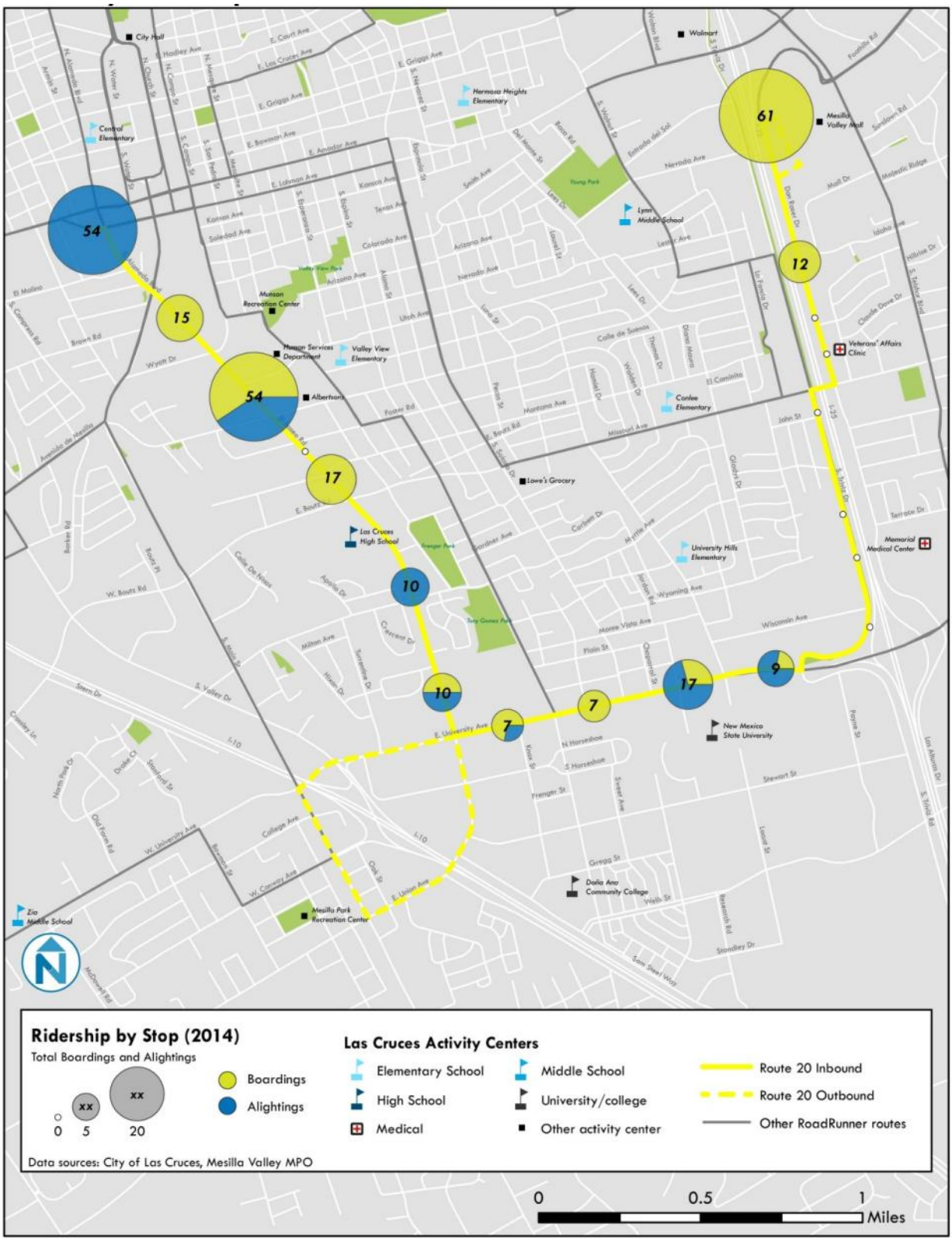
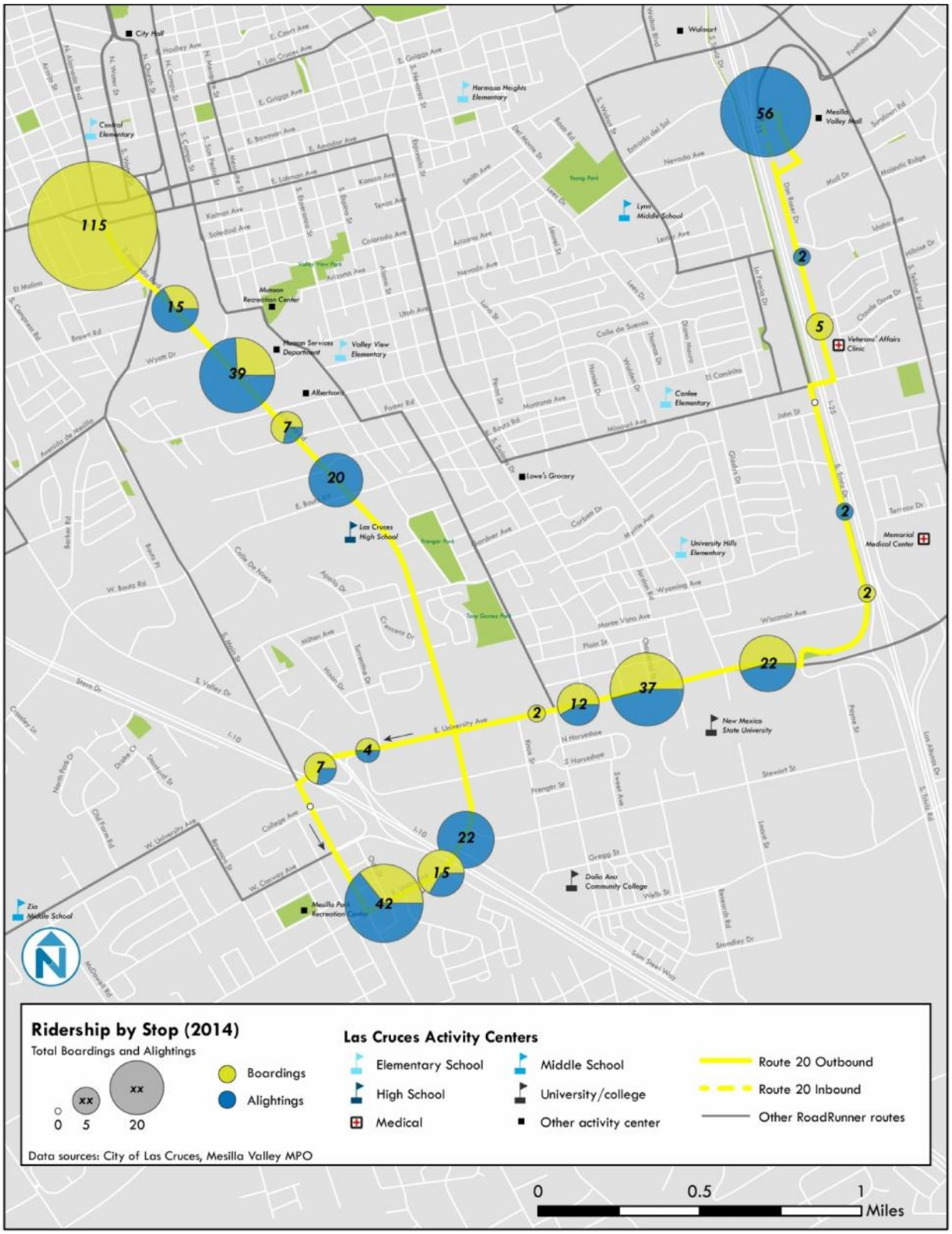


Figure 26 Route 20 Outbound Weekday Ridership Activity



30 – Aggie Crimson

Route 30 is a bi-directional route operating along Mesquite Street, Espina Street, University Avenue, and Telshor Boulevard. Terminal points consist of the Mesilla Valley Intermodal Transit Center (MVITT) and Mesilla Valley Mall. Direct connections with Routes 50, 70, and 80 are made at the MVITT on the hour. Direct connections with Routes 70 and 90 are made at MVM on the half hour.

Route 30 is the third-most productive route in the RoadRUNNER Transit system. Major destinations include New Mexico State University and Memorial Medical Center. Ridership is strong along all segments of the route. One of its few weaknesses is Route 30's sixty-minute headway. Given its adjacent land use patterns, Route 30 has the potential to attract significantly more riders per revenue hour with an improved headway.

Route Characteristics	
Alignment	Bi-directional
Stops	41
Round-Trip Route Length (miles)	11.9
Stop Spacing (miles)	0.29
Weekday	
Service Span	6:30 a.m. – 7 p.m.
One Way Trips	25
Ridership	364
Productivity (boardings per hour)	29.1
Saturday	
Service Span	9:30 a.m. – 6 p.m.
One Way Trips	17
Ridership	192
Productivity (boardings per hour)	22.6

Figure 27 Route 30 Inbound Weekday Ridership Activity

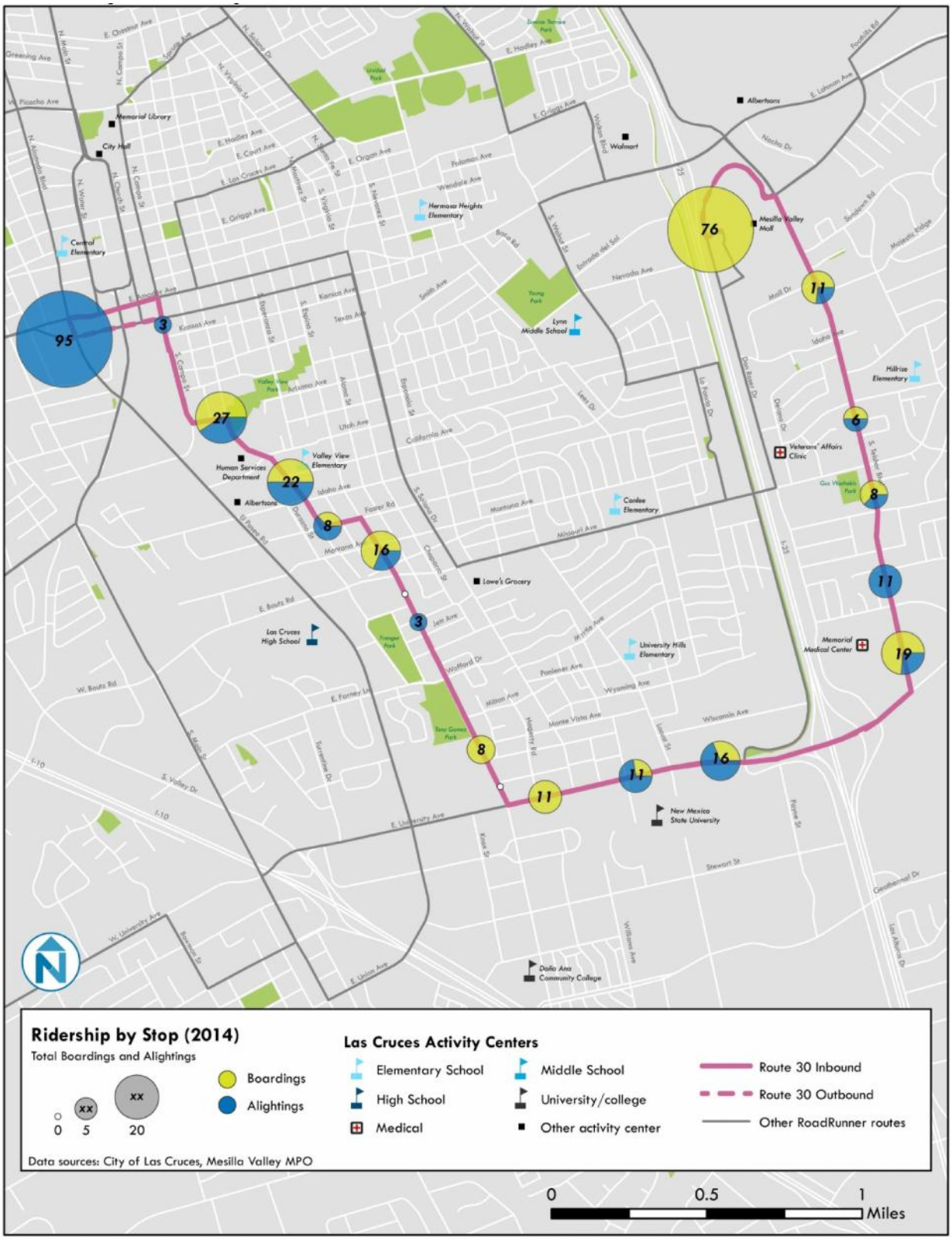
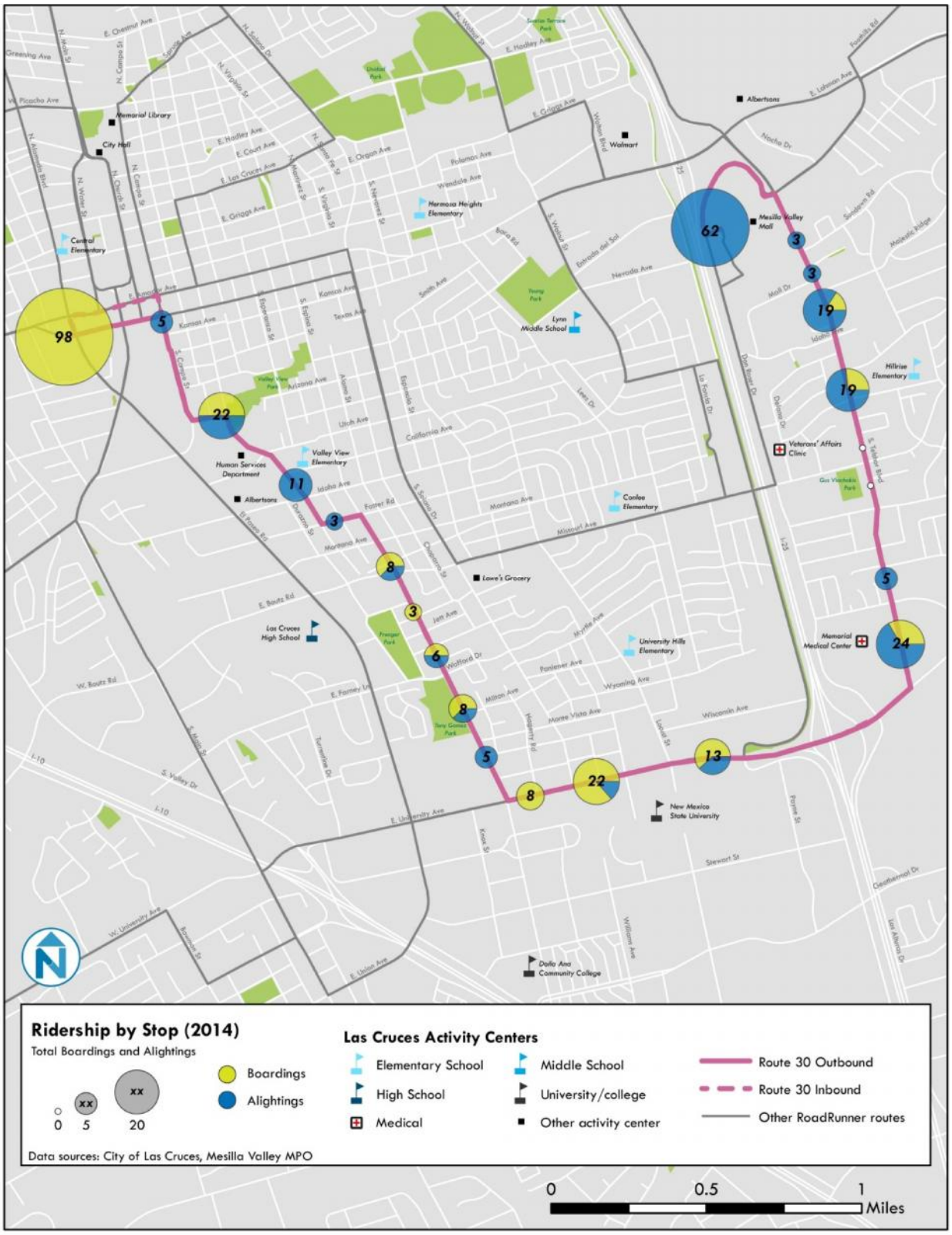


Figure 28 Route 30 Outbound Weekday Ridership Activity



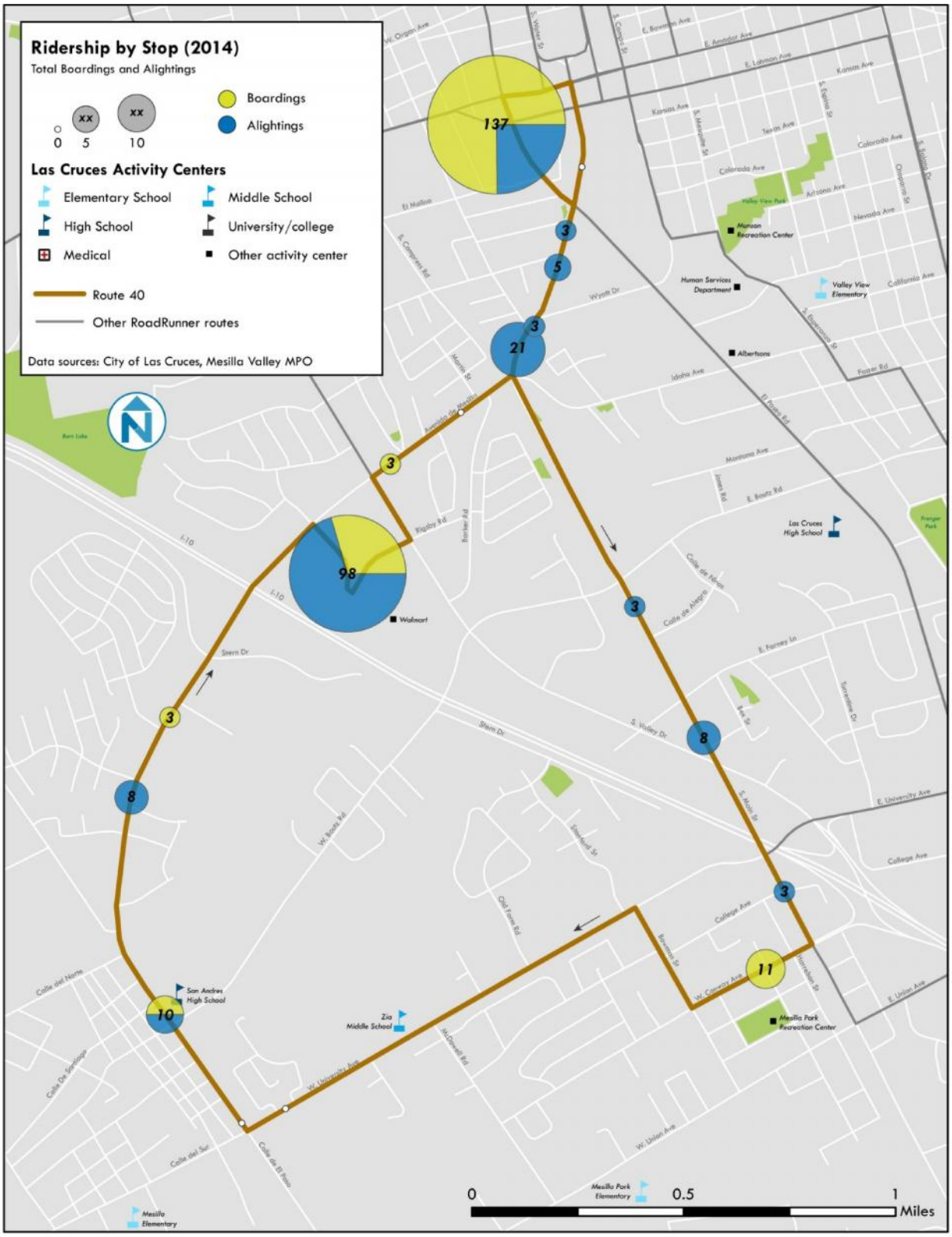
40 – Pecan Brown

Route 40 is a loop route mostly operating along South Main Street, West University Avenue, and Avenida de Mesilla. The route begins and ends at the Mesilla Valley Intermodal Transit Terminal (MVITT). Direct connections with Routes 10, 20, 60, and 80 are made at the MVITT on the half hour. Route 40 is interlined with Route 50 throughout the day. Each route operates a 30-minute loop. As a result, Route 40 only operates the second half of the hour.

The primary destination along Route 40 is the South Valley Walmart. Ridership is low south of I-10 with only eighteen combined boardings.

Route Characteristics	
Alignment	One-way loop
Stops	18
Round-Trip Route Length (miles)	8.5
Stop Spacing (miles)	0.47
Weekday	
Service Span	6:30 a.m. – 7 p.m.
One Way Trips	13
Ridership	136
Productivity (boardings per hour)	21
Saturday	
Service Span	9:30 a.m. – 6 p.m.
One Way Trips	9
Ridership	99
Productivity (boardings per hour)	22

Figure 29 Route 40 Weekday Ridership Activity



50 – Rio Grande Blue

Route 50 is a loop route operating along North Valley Drive, Hoagland Road, and North Alameda Boulevard. The route begins and ends at the Mesilla Valley Intermodal Transit Terminal (MVITT). Direct connections with Routes 30, 70, and 80 are made at the MVITT on the hour. Route 50 is interlined with Route 40 throughout the day. Each route operates a 30-minute loop. As a result, Route 50 only operates the first half of the hour.

No major destinations exist, however the bus stop at the intersection of Valley and Amador generates the highest ridership. It is likely that some riders are staying on board and continuing on Route 40. Route 50 is among the least productive routes in the system at just under twenty boardings per hour on weekdays.

Route Characteristics	
Alignment	One-way loop
Stops	24
Round-Trip Route Length (miles)	6.1
Stop Spacing (miles)	0.25
Weekday	
Service Span	6:30 a.m. – 7 p.m.
One Way Trips	12
Ridership	115
Productivity (boardings per hour)	19.2
Saturday	
Service Span	9:30 a.m. – 6 p.m.
One Way Trips	8
Ridership	48
Productivity (boardings per hour)	11.9

Figure 30 Route 50 Weekday Ridership Activity

60 – Sky Blue

Route 60 is a bi-directional route operating mostly along Lohman Avenue, Solano Drive, Missouri Avenue, and Walnut Street. Terminal points consist of the Mesilla Valley Intermodal Transit Terminal (MVITT) and Mesilla Valley Mall. Route 60 performs a counterclockwise loop along Foothill Drive and Lohman Avenue, which creates significant delays during certain times of day.

Direct connections with Routes 10, 20, 40, and 80 are made at the MVITT on the half hour. Direct connections with Routes 20 and 90 are made at MVM on the hour.

Major destinations include Lowe's Grocery, Walmart, and retail stores at the intersection of Lohman Avenue and Walnut Street. Walmart is not served in the inbound direction due to turn lanes along Lohman Avenue. Route 60 has moderate ridership along its entire alignment.

Route Characteristics	
Alignment	Bi-direcitonal
Stops	37
Round-Trip Route Length (miles)	12.1
Stop Spacing (miles)	.33
Weekday	
Service Span	6:30 a.m. – 7 p.m.
One Way Trips	25
Ridership	270
Productivity (boardings per hour)	21.6
Saturday	
Service Span	9:30 a.m. – 6 p.m.
One Way Trips	17
Ridership	200
Productivity (boardings per hour)	23.5

Figure 31 Route 60 Inbound Ridership Activity

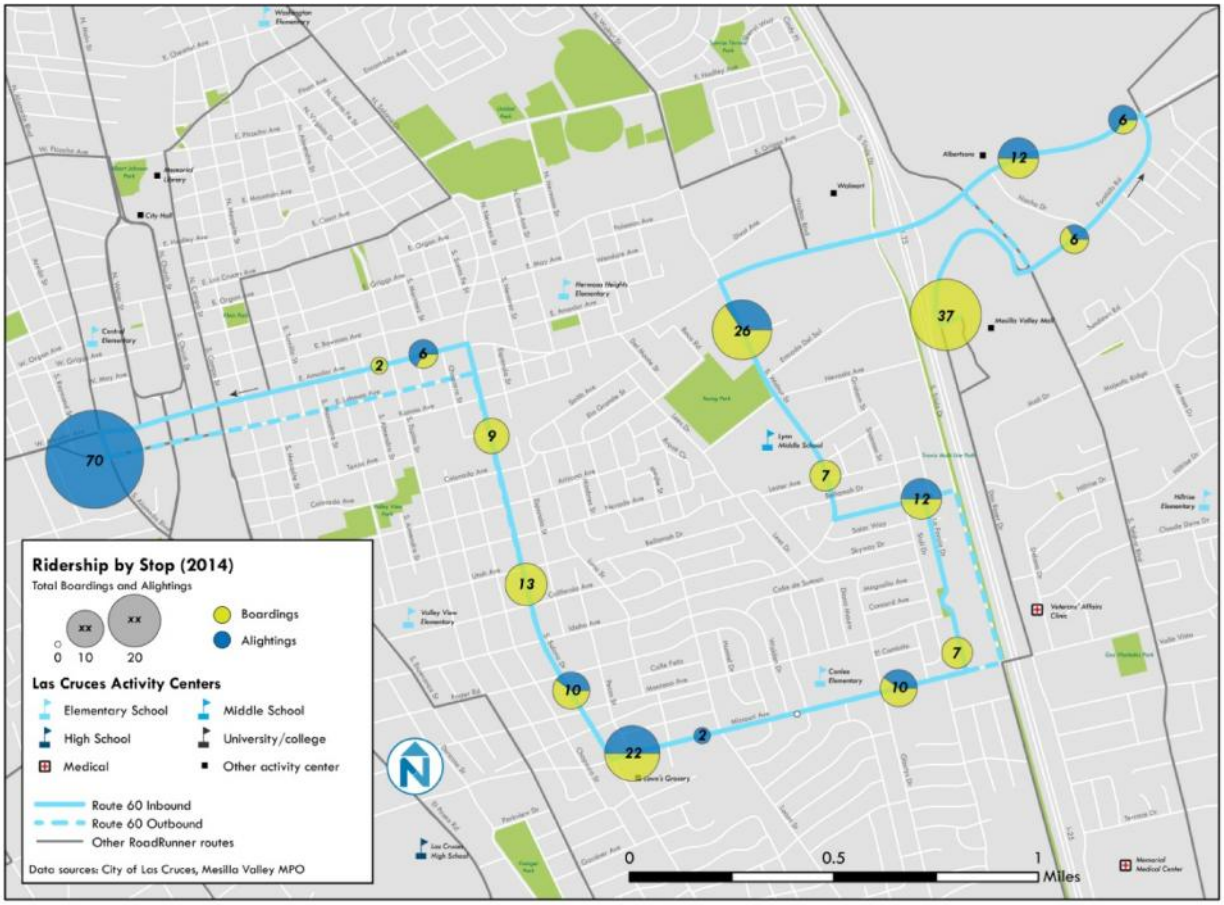
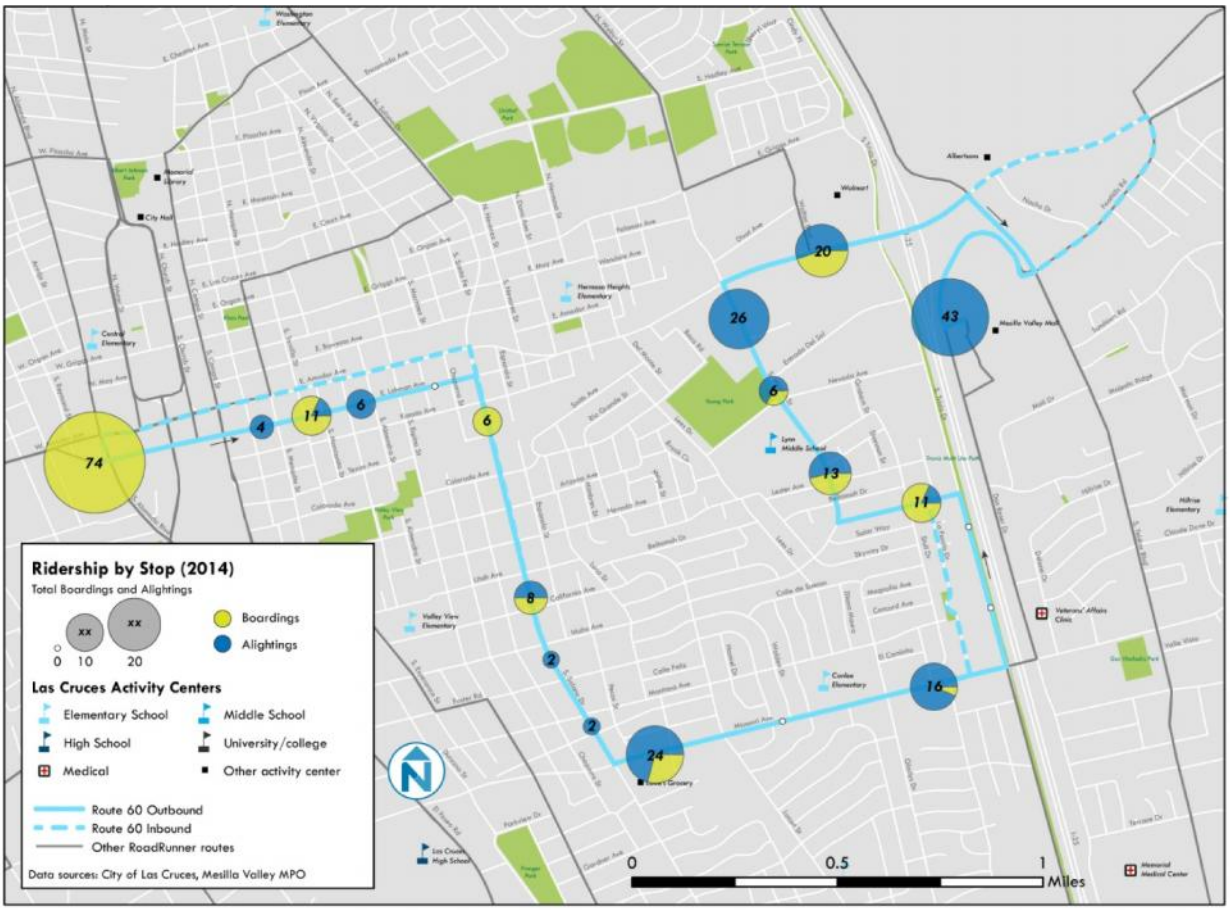


Figure 32 Route 60 Outbound Ridership Activity



70 – Chile Green

Route 70 is a bi-directional route operating along Solano Drive, Madrid Avenue, Walnut Street, and several additional north-central streets. Terminal points consist of the Mesilla Valley Intermodal Transit Center (MVITT) and Mesilla Valley Mall (MVM). Inbound and outbound patterns operate on different streets between the MVITT and Spruce Avenue.

Direct connections with Routes 30, 50, and 80 are made at the MVITT on the hour. Direct connections with Routes 30 and 90 are made at MVM on the half hour.

The primary destination is the Walmart at Walton Boulevard and Lohman Avenue. Ridership is also strong along Madrid Drive but weak along Walnut Street. Route 70 has average productivity and passenger loads compared to other routes in the system.

Route Characteristics	
Alignment	Bi-directional
Stops	42
Round-Trip Route Length (miles)	12.3
Stop Spacing (miles)	0.29
Weekday	
Service Span	6:30 a.m. – 7 p.m.
One Way Trips	25
Ridership	267
Productivity (boardings per hour)	21.4
Saturday	
Service Span	9:30 a.m. – 6 p.m.
One Way Trips	17
Ridership	154
Productivity (boardings per hour)	18.1

Figure 33 Route 70 Inbound Weekday Ridership Activity

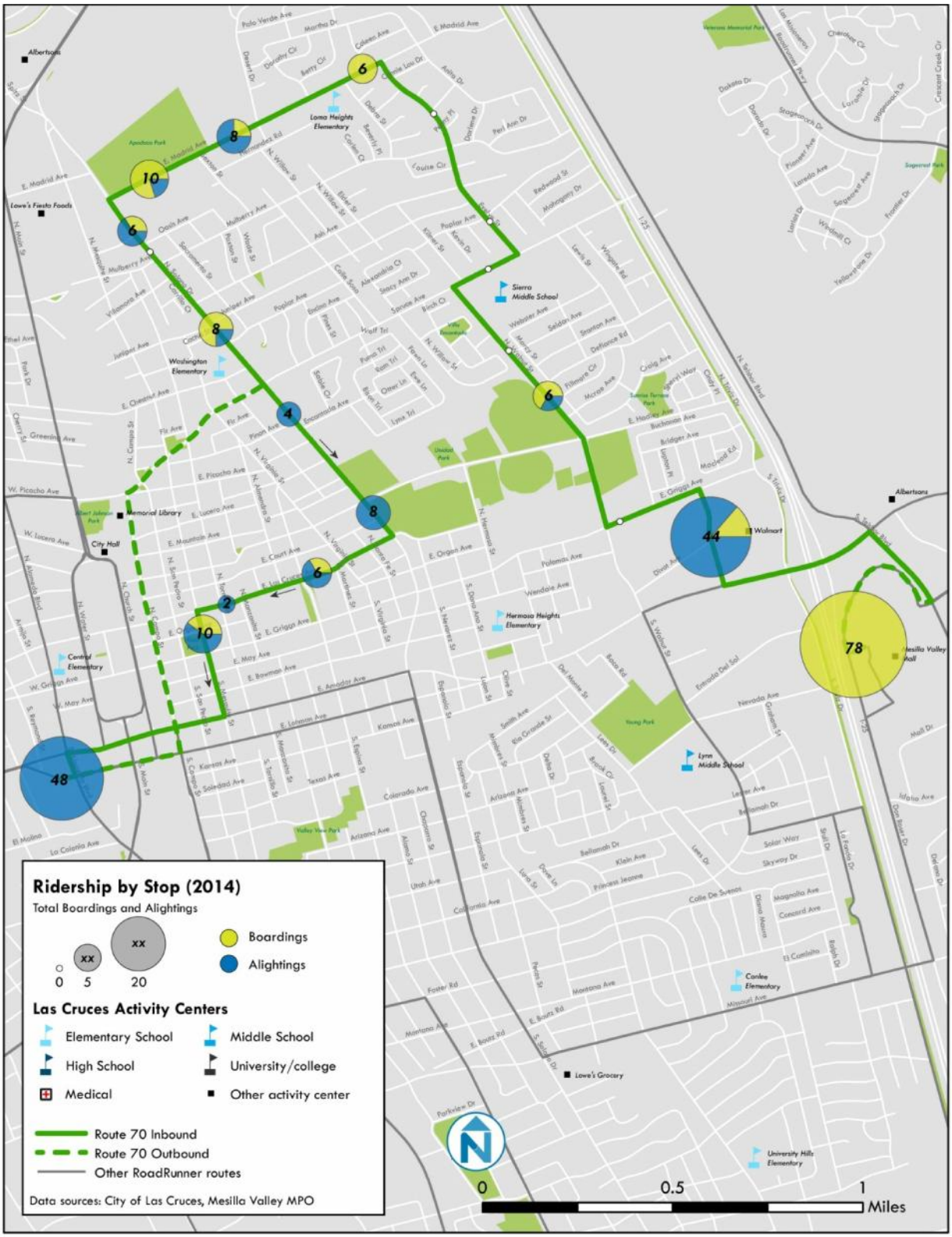
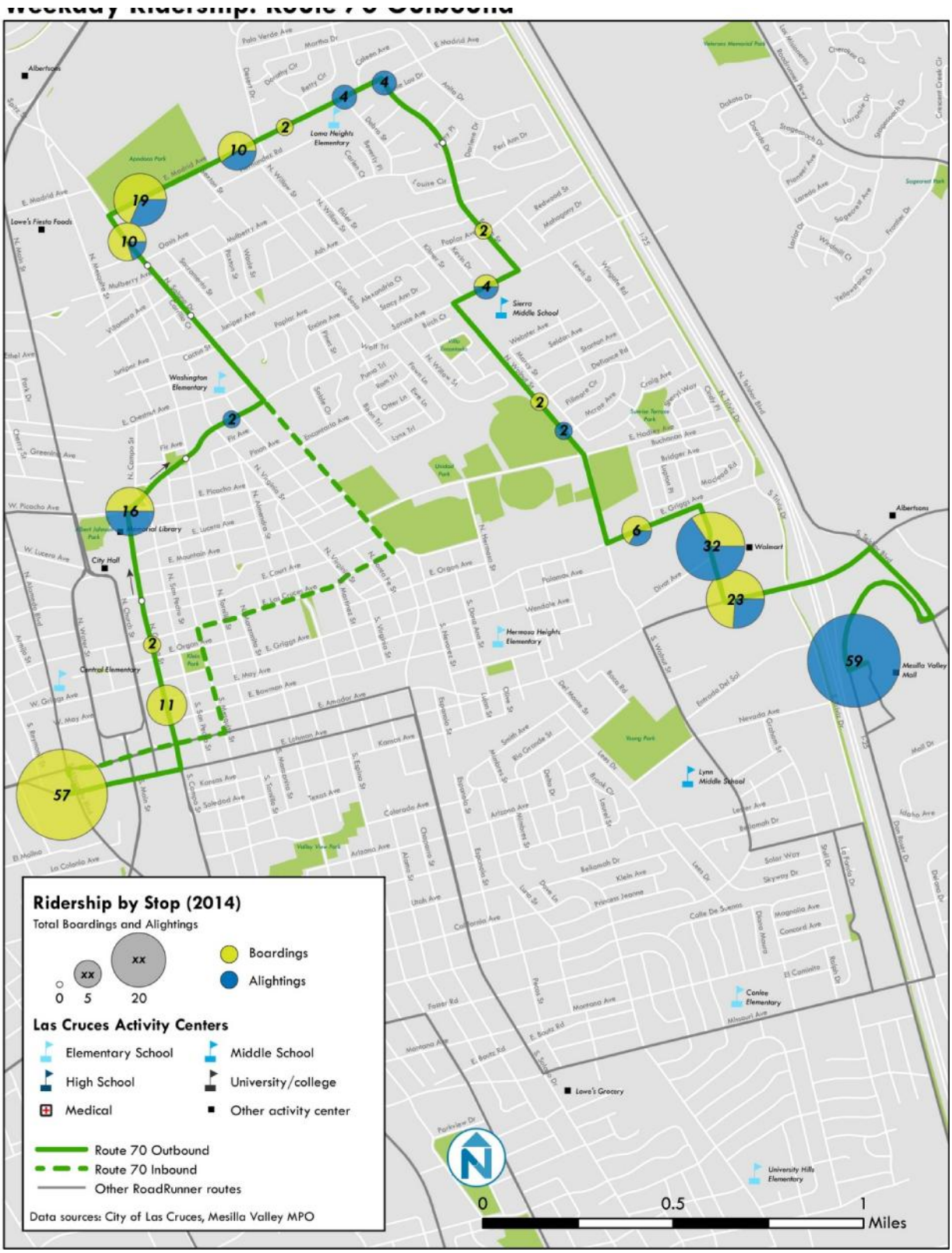


Figure 34 Route 70 Outbound Weekday Ridership Activity



80 – Cactus Green

Route 80 is a loop route operating along Picacho Avenue, Motel Boulevard, and Amador Avenue. Unlike other loop routes, Route 80 operates in both clockwise and counterclockwise directions. Route 80 begins and ends at the Mesilla Valley Intermodal Transit Center (MVITT). The inbound and outbound alignments vary between Doña Ana County Government Center and the intersection of Amador Avenue and 17th Street. Direct connections with Routes 30, 50, and 70 are made at the MVITT.

Route 80 has the highest ridership and productivity of all RoadRUNNER Transit routes. A high number of boardings and alightings occur along Picacho Avenue between 17th Street and Motel Boulevard. Significant ridership activity also takes place near the intersection of Amador Boulevard and Valley Drive. The route deviation to 17th Street and Copper Loop generates moderate ridership.

Route Characteristics	
Alignment	Alternating loop
Stops	43
Round-Trip Route Length (miles)	11.9
Stop Spacing (miles)	0.28
Weekday	
Service Span	6:30 a.m. – 7 p.m.
One Way Trips	25
Ridership	422
Productivity (boardings per hour)	33.8
Saturday	
Service Span	9:30 a.m. – 6 p.m.
One Way Trips	17
Ridership	242
Productivity (boardings per hour)	28.4

Figure 35 Route 80 Weekday Ridership Activity

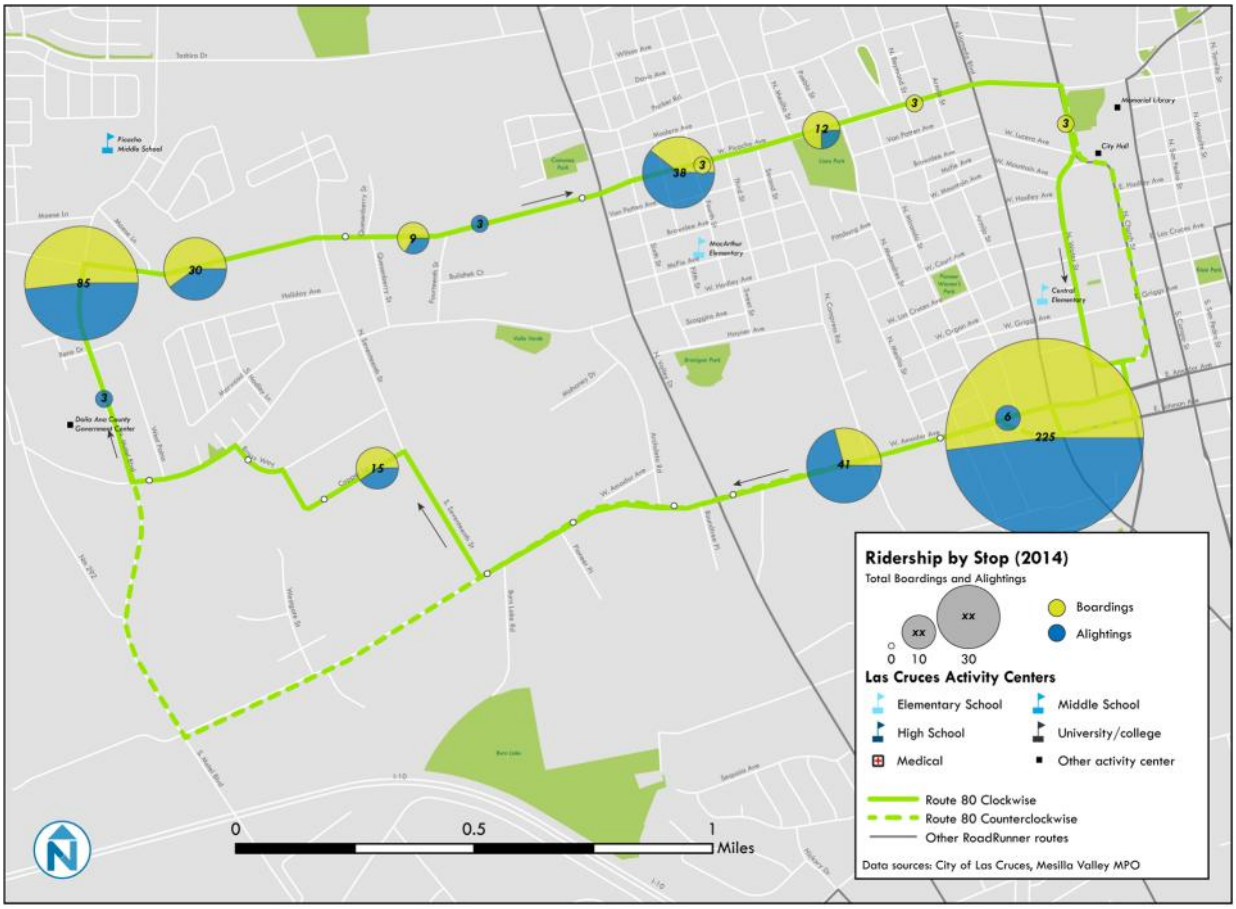


Figure 36 Route 80 Outbound Weekday Ridership Activity

90 – Roadrunner Red

Route 90 is a loop route operating primarily along Telshor Boulevard and Roadrunner Parkway. The primary terminal point is Mesilla Valley Mall (MVM). Direct connections with Routes 30 and 70 are made at MVM. Route 90 also has a direct connection with Route 10 at Venus Transfer Point (VTP) on the hour.

Route 90 is the lowest performing route in terms of ridership and productivity. While most segments of the route have low ridership, the area surrounding the intersection of Roadrunner Parkway and Camino Coyote produces significant ridership. Other destinations include the Social Security Office, Sam's Club, and Kmart.

Route Characteristics	
Alignment	Alternating loop
Stops	39
Round-Trip Route Length (miles)	17.5
Stop Spacing (miles)	0.45
Weekday	
Service Span	6:30 a.m. – 7 p.m.
One Way Trips	25
Ridership	160
Productivity (boardings per hour)	12.8
Saturday	
Service Span	9:30 a.m. – 6 p.m.
One Way Trips	17
Ridership	75
Productivity (boardings per hour)	8.8

Figure 37 Route 90 Clockwise Weekday Ridership Activity

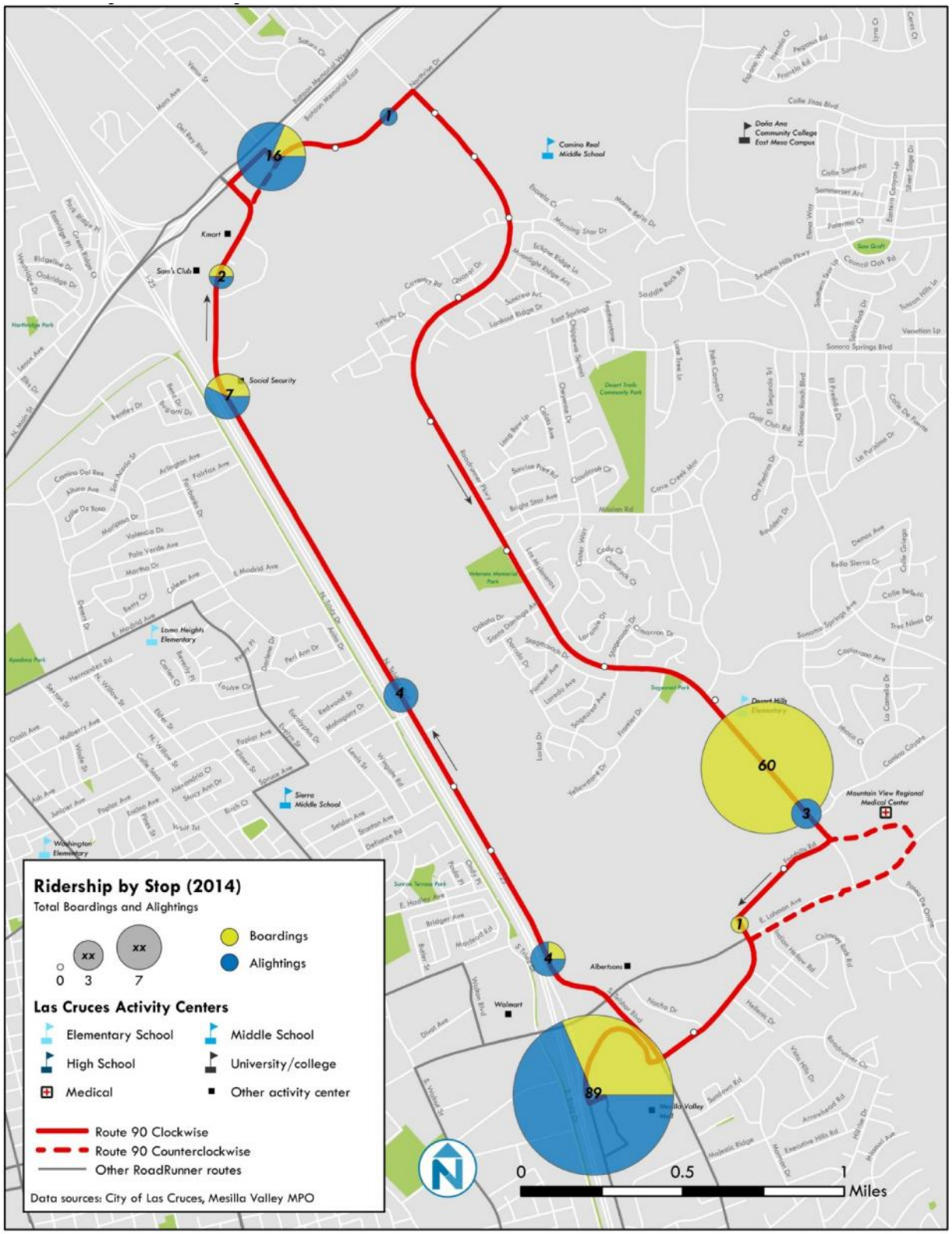
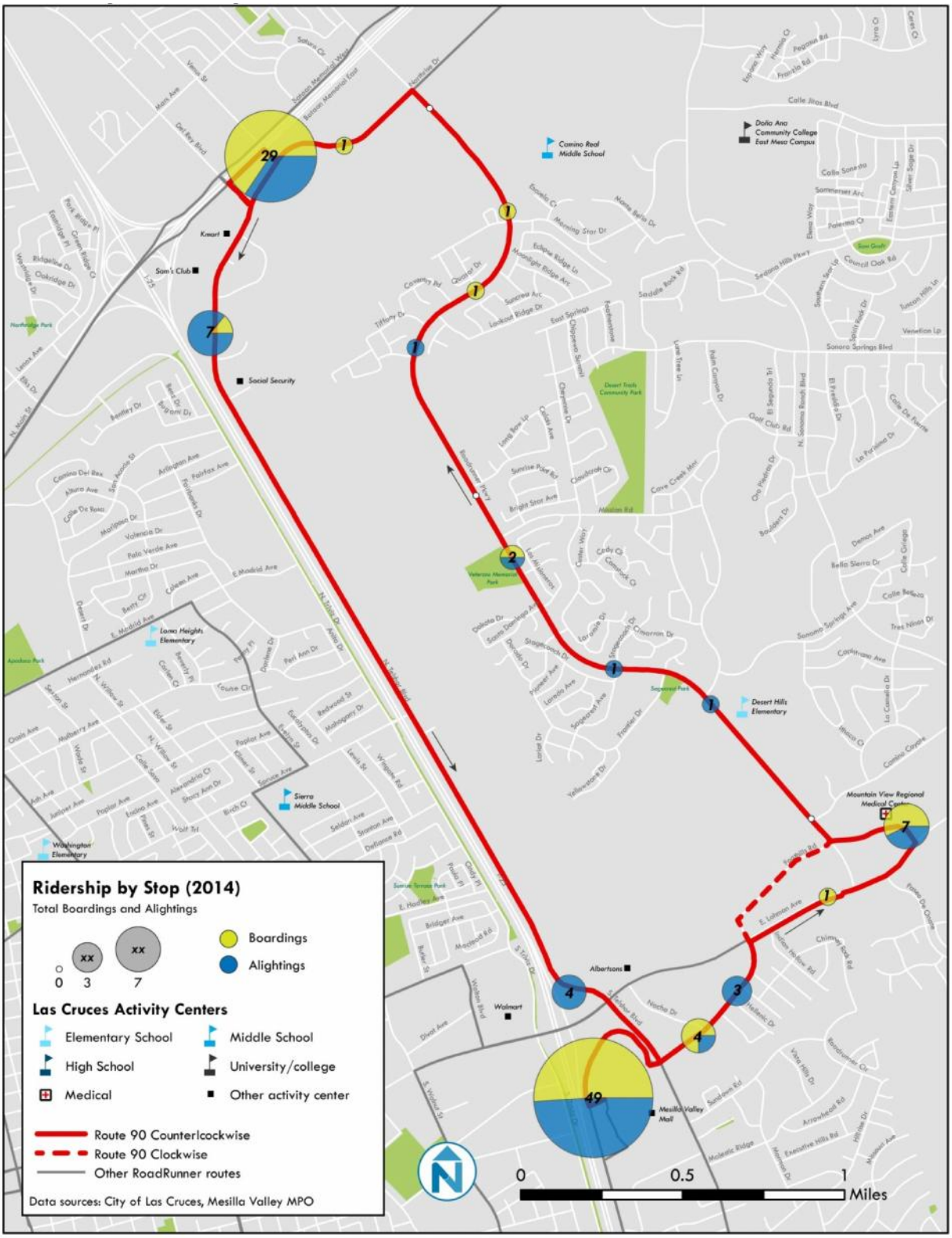


Figure 38 Route 90 Counterclockwise Weekday Ridership Activity



5 OPERATOR FEEDBACK

Bus operator interviews were conducted on October 29, 2014 to obtain feedback on route schedules, ridership observations, bus stop issues, operational concerns, and several other topics. Operator feedback is organized by category and specific route.

General Comments

Route Schedules

- On-time performance
  - Routes 10 and 90 are significantly longer than other routes; scheduled cycle times are not practical
  - Deviations on Routes 20 (Union loop) and 60 (Foothills loop) create significant delay during certain times of day
  - Routes 30 and 70 cycle times are adequate
  - Westside routes (40, 50, 80) rarely fall behind schedule
  - Additional running time is necessary on key corridors due to increased ridership, traffic, and construction
  - Schedules do not accurately reflect increased traffic after 11 a.m.
- Operator impacts
  - Operators feel as though they are constantly "racing the clock"
  - Operators often exceed speed limits to stay on schedule/make connections
  - Operators are stressed and have health concerns about not taking restroom breaks
- Customer impacts
  - Missed connections
  - Customer service is lacking due to operators trying to stay on schedule
  - Schedules should allow more time for wheelchair boardings and mothers with small children
- Operator suggestions:
  - Extend running times to 40 minutes or modify routes in a manner that increases recovery time end route terminals
  - Create consistent schedules and change routes so that 30 minute trips work

Ridership

- Ridership picks up during the first week of the month
- High ridership on Routes 20 and 80
- Low ridership on Route 70

Bus Stops

- Some signs are parallel to the street; all signs should be perpendicular to the street
- Several stops have been added due to customer request, resulting in increased running time
- Consider removing stops with no/low ridership

- Several shelters are in bad locations, presumably added due to Adopt-a-Stop program
- Mountain View Medical Center generates minimal ridership; not worth deviating to
- Accessibility
  - Mountain View Hospital stop not safe/accessible (Route 90)
  - Stop across from Fiesta is not accessible
  - Farmer's Market at Church and Water – have to drop off on-street

Operational Concerns

- Lohman between Foothills and Telshore (Albertson's/Target stop on Route 60) is congested segment
- Boulder at Mesilla Valley Mall entrance needs to be removed; obstructs bus, particularly when bike rack is being used
- Mesilla Valley has 15 mph speed limit
- Del Rey and Baatan has many near accidents due to double turn lane (Route 10)
- Las Cruces to Mesquite (left turn on Route 70)
- Solano to Las Cruces (right turn on Route 70)
- Avenida to Hickory (right turn on Route 40)
- Need additional signage near ITC

Intermodal Transit Center

- ITC needs to be open when buses operate
- No security on weekends; minimal security during the week
- Cleanliness and sense of security at ITC has decreased since opening
- Recent criminal activity at ITC
- ITC has limited cameras; cameras seem to be more focused on monitoring buses than customers
- Operator restroom needs to be fenced/separated in a manner that customers are not able to congregate near doorway
- Policy does not exist for waiting at ITC for buses arriving late; inconsistent practices depending on time of day and supervisor on duty

Venus Transfer Point

- Connection between Routes 10 and 90 at Venus Transfer Point are not reliable
- Why do we have 3 transfer points?

Customer Requests

- Customers request evening service and Sunday service

Transfers

- Riders traveling from Motel area to Social Security must take 3 routes (80/30/90)

Header signs

- Should have route corridor or destination information rather than a naming convention based on colors (e.g. Sky Blue and Chile Green).

Fare

- Constant delays by customers who are not prepared to pay fare upon boarding bus
- Buying passes on bus takes time

Lohman Express Route

- Lohman Express route was well-received by customers during its brief operation
- Operators liked directness and reliability of route
- Consider reinstating service

Route-Specific Comments

Route 10 – ITC/North Main/Bataan Memorial

- Route is consistently behind schedule, even prior to construction on North Main
- Difficulty in merging back into traffic at Golf Course and Spanish Kitchen

Route 20 – ITC/El Paseo/University/Triviz/MVM

- Union loop on eastbound trips often causes route to fall behind schedule
- Routes 60 and 70 are more reliable options for customers traveling from ITC to MVM
- Route is fast towards downtown but slow towards Mall

Route 30 – ITC/Espina/University/Telshor/MVM

- Too many stops on Telshor northbound

Route 40 – ITC/South Main/Avenida de Mesilla

- Consider removing Conway loop due to low ridership
- Poor lighting along stretch of University near the middle school

Route 50 – ITC/Alameda/Valley

- Stops near Walmart but does not serve it directly

Route 60 – ITC/South Solano/Missouri/South Walnut/Lohman/MVM

- Route often faces traffic on Lohman and has difficulty merging after Albertson's stop
- High ridership along Solano (stores, Salvation Army)
- Foothill loop often results in delay that holds up other routes
- Route is fast towards Mall but slow towards downtown

Route 70 – ITC/North Solano/Madrid/North Walnut/Lohman/MVM

- Not many riders on Evelyn

Route 80 – ITC/Amador/Motel/Pichaco

- High wheelchair boardings

Route 90 – MVM/Telshor/Roadrunner

- Serves Social Security; ridership increases significantly at beginning of the month
- Good restroom option does not exist
  - MVM restroom is too far
  - Hospital is too early in the route
  - Operators sometimes use Veteran's Park, which is not clean

6 PEER REVIEW

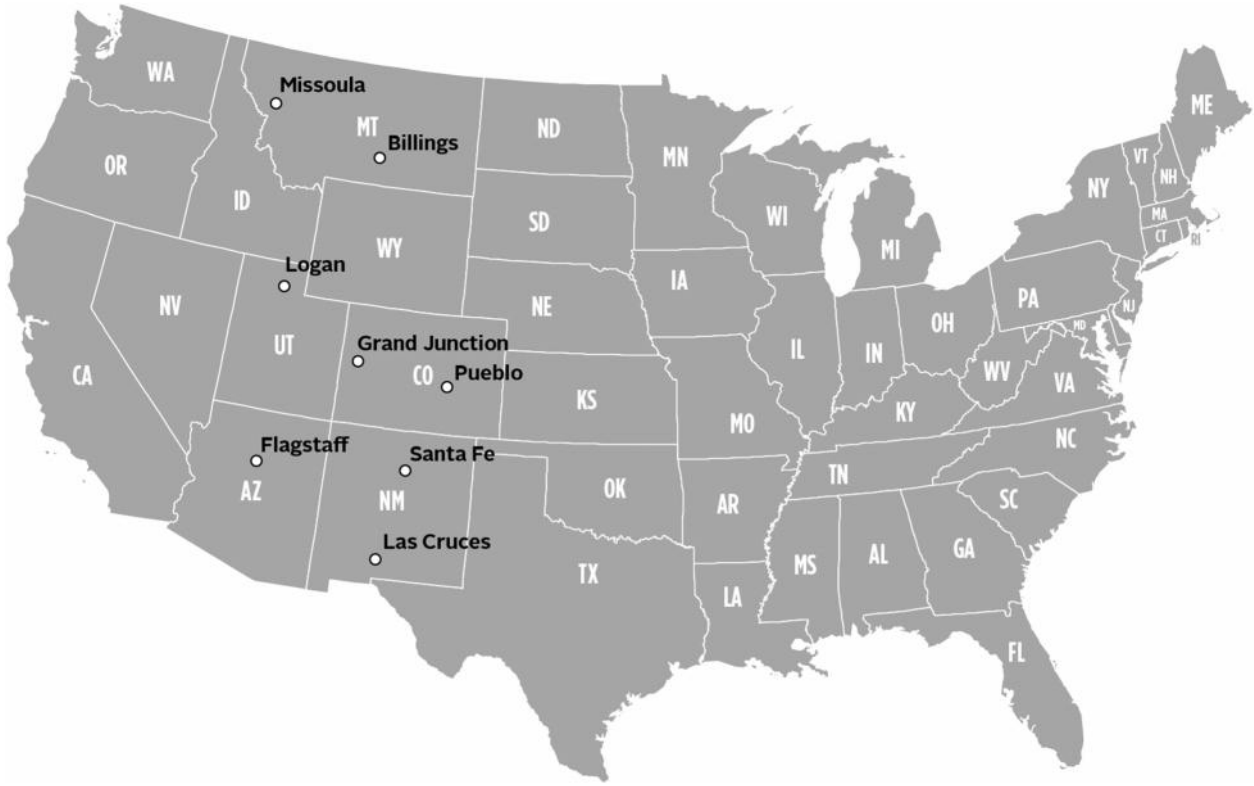
This peer review provides a comparative analysis of fixed-route transit characteristics of RoadRUNNER Transit and seven other transit systems. Peer systems chosen as part of this analysis and are shown in Figure 39 and mapped in Figure 40. Each peer selected operates in a similarly sized city within the western United States. Major universities are present in four of the peer cities.

Figure 39 Peer Review Agencies

System/Agency Name	Location	Organization Type	Passenger Trips	Service Area Population	Service Area Size (sq mi)	Population per Square Mile	Peak Vehicles (Fixed Route)
RoadRUNNER	Las Cruces, NM	City	759,645	107,419	55	1,953	12
Billings Metropolitan Transit	Billings, MT	City	609,194	114,773	34	3,376	20
Cache Valley Transit District	Logan, UT	Authority	1,978,002	95,500	33	2,894	17
Mesa County Transit	Grand Junction, CO	City	974,644	120,000	66	1,818	12
Mountain Line	Flagstaff, AZ	Authority	1,842,322	71,957	35	2,056	15
Mountain Line	Missoula, MT	Authority	886,049	69,999	70	1,000	18
Pueblo Transit	Pueblo, CO	City	995,589	105,000	39	2,692	14
Santa Fe Trails	Santa Fe, NM	City	1,056,970	69,204	41	1,688	22

Source: NTD 2013 Transit Agency Profiles

Figure 40 Cities of Peer Review Agencies



Service Characteristics

Service characteristics such as service area population and service area size, as well as passenger trips, revenue hours, revenue miles, vehicles operated in peak service, total funds expended, total local contribution, and percent local contribution of total funds. RoadRUNNER's performance in relation to the peer group is shown in Figure 41.

Figure 41 Service Characteristics

Measure	RoadRUNNER	Peer Group Minimum	Peer Group Maximum	Peer Group Average	RoadRUNNER % from Average
Service Area Population	107,419	69,204	120,000	94,232	14.0%
Service Area Size (sq mi)	55	33	70	47	18.0%
Population per Square Mile	1,953	1000	3,376	2,185	-10.6%
Revenue Hours	36,557	36,557	73,229	49,861	-26.7%
Revenue Miles	506,260	506,260	868,106	680,924	-25.7%
Vehicle Operated in Peak Service (Fixed Route)	12	12	22	16	-26.2%
Average Fleet Age (Fixed Route)	7.7	5.00	8.40	6.91	11.39%
Total Funds Expended	$6,307,838	$4,643,350	$10,569,734	$6,595,104	-4.4%
Total Local Contribution	$2,322,141	$1,565,869	$6,707,768	$3,036,973	-23.5%
Percent Local Contribution of Total Funds	37%	34%	69%	44%	-16.6%

Source: NTD 2013 Transit Agency Profiles

Figure 42 to Figure 51 illustrate RoadRUNNER's performance characteristics in relation to each peer agency.

- Despite having the third highest service area population, RoadRUNNER operates the second fewest number of fixed-route peak vehicles.
- RoadRUNNER's service area size is slightly above the peer group mean, and population density was 11% lower than the peer group average.
- For revenue hours and revenue miles, RoadRUNNER ranked lowest among the peer group. RoadRUNNER also had the second lowest number of passenger trips. Overall, RoadRUNNER had approximately one-third fewer passenger trips and 25% fewer revenue hours and miles than the peer group average.
- RoadRUNNER operates a larger proportion of demand response vehicles (54% of operating vehicles) compared to the peer agency average (35%)
- RoadRUNNER ranked below the mean in terms of total funds expended ($6.3 million vs. $6.6 million). Total local contribution ($2.3 million) was 24% lower than the peer group average ($3.1 million). The percent local contribution of total funds for RoadRUNNER was 38% (compared to the peer group average of 44%).

Figure 42 Service Area Population

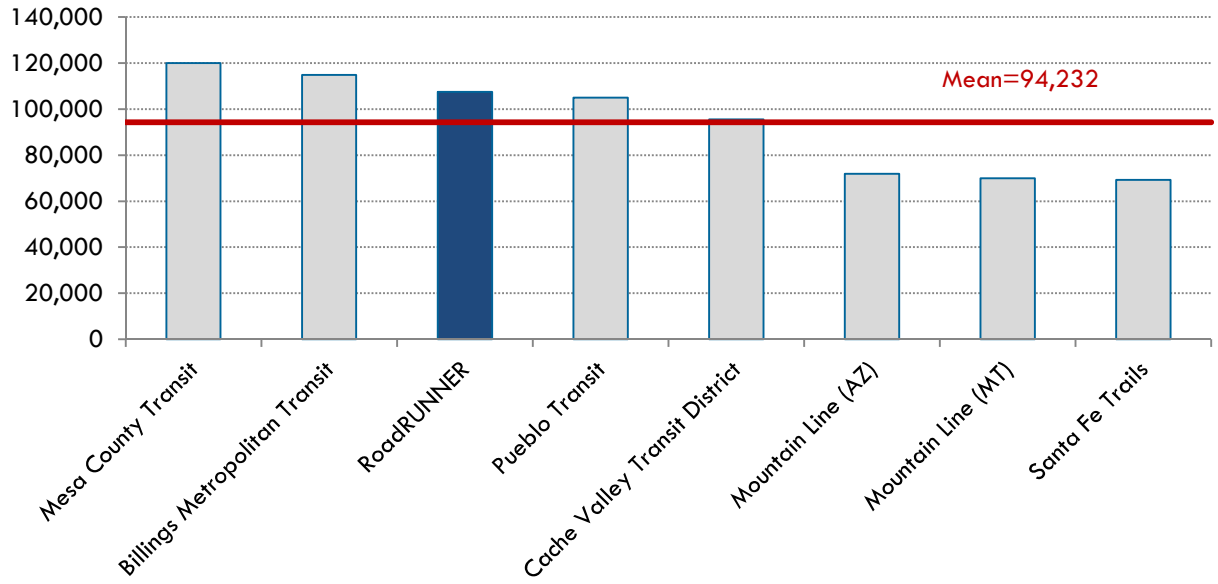


Figure 43 Service Area Size (sq mi)

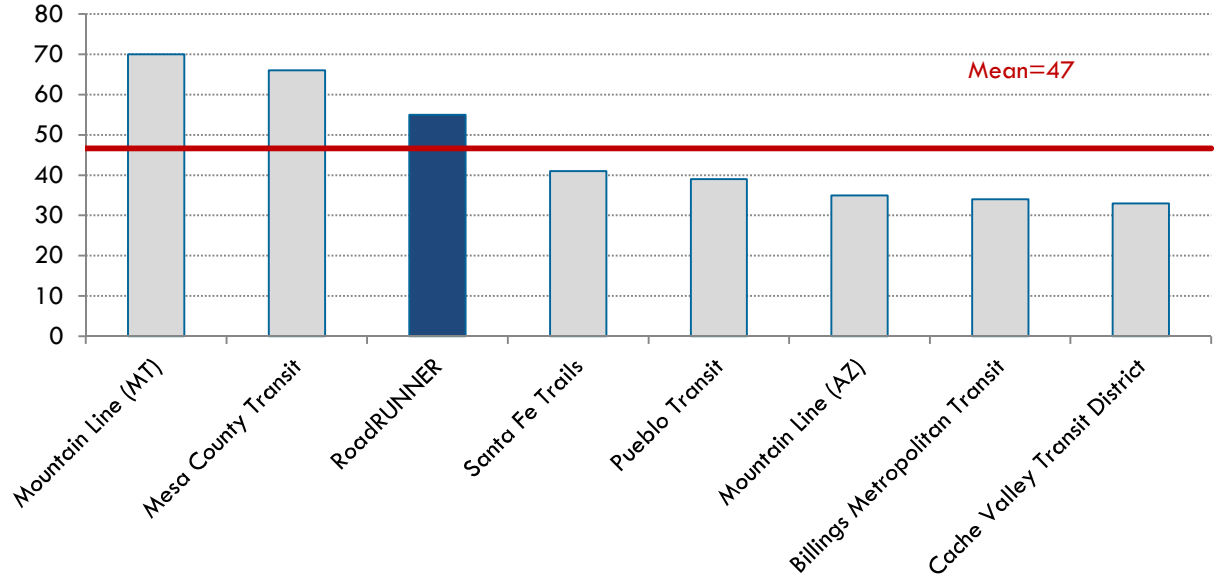


Figure 44 Population per Square Mile

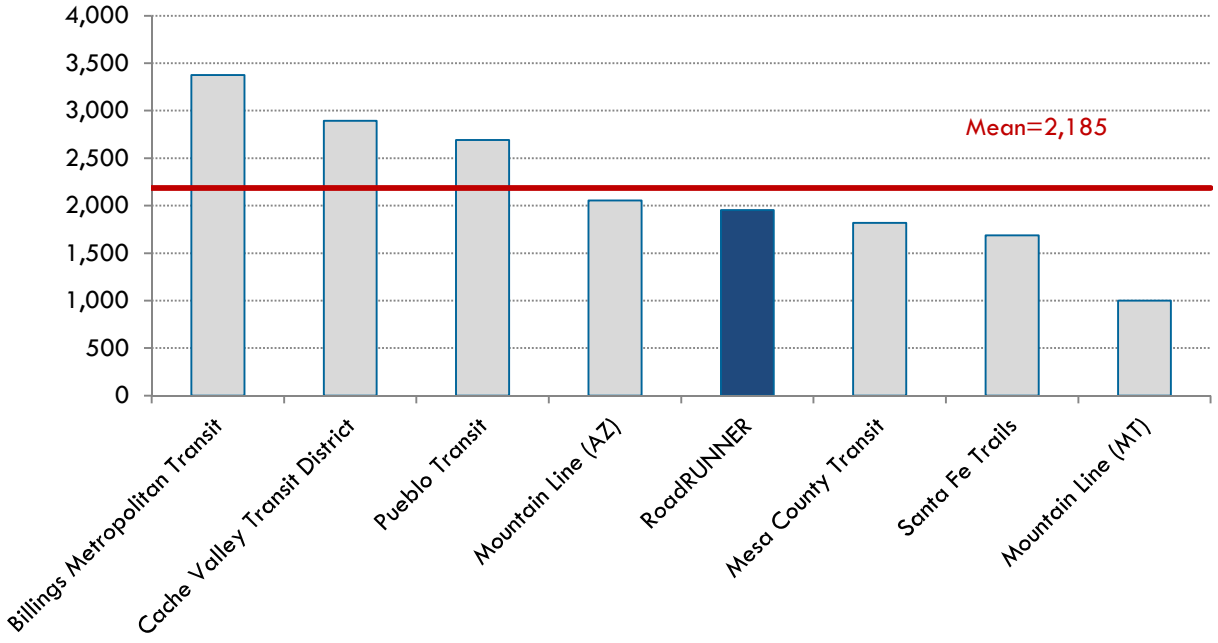


Figure 45 Revenue Hours

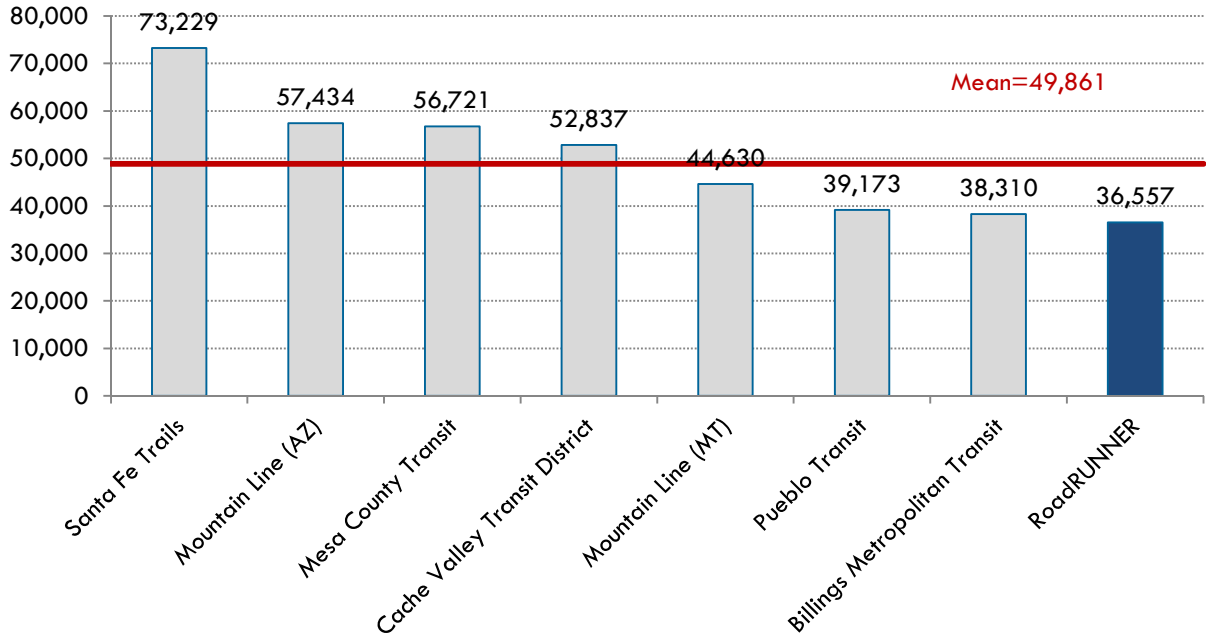


Figure 46 Revenue Miles

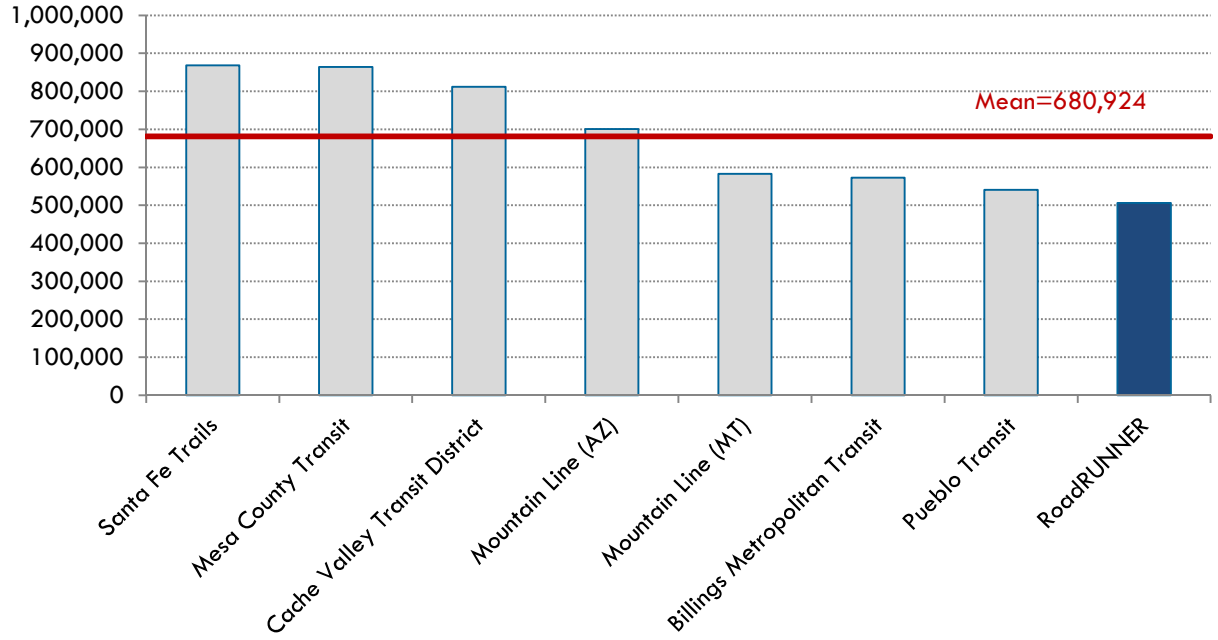


Figure 47 Vehicles Operated in Peak Service (Fixed Route)

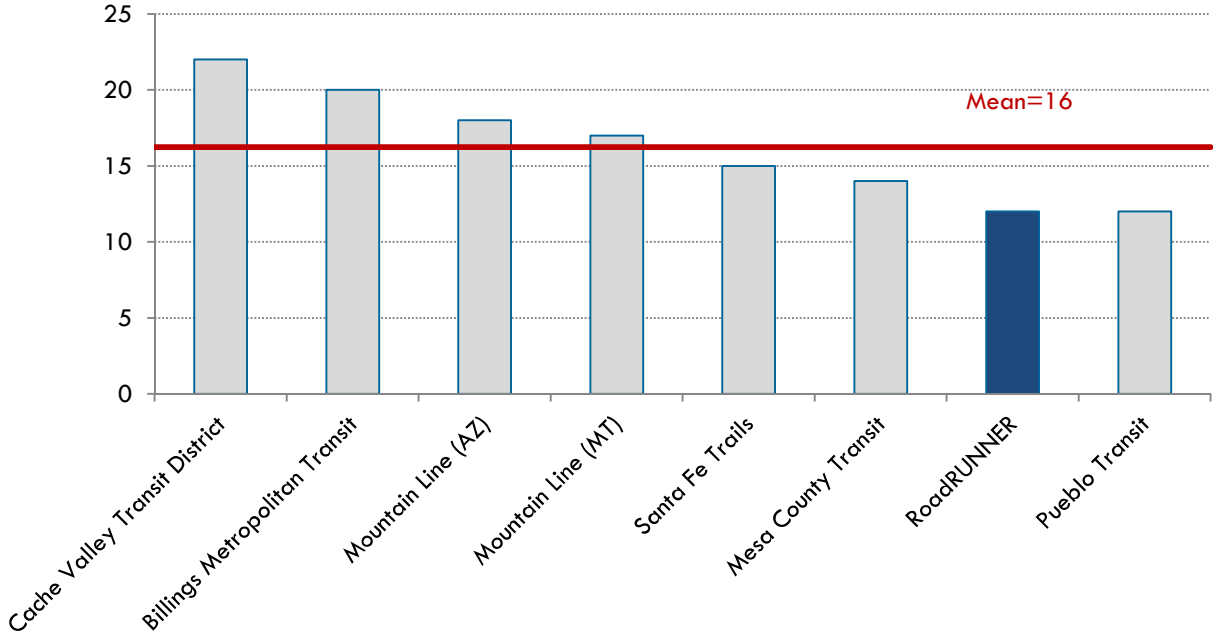


Figure 48 Average Fleet Age (Fixed Route)

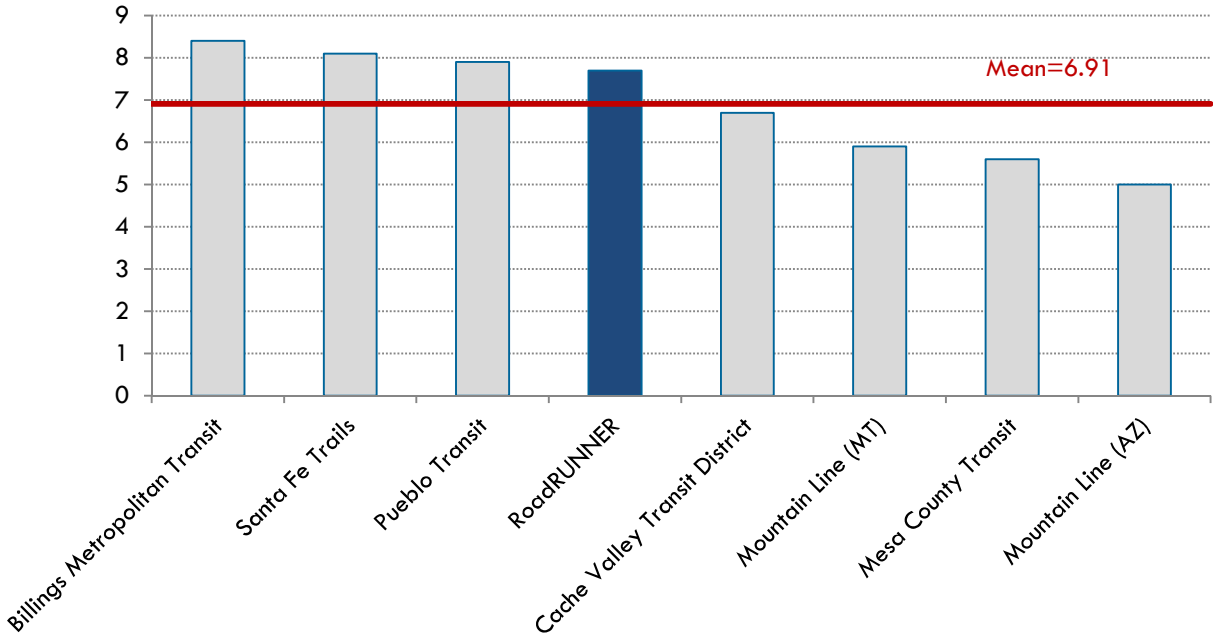


Figure 49 Total Funds Expended

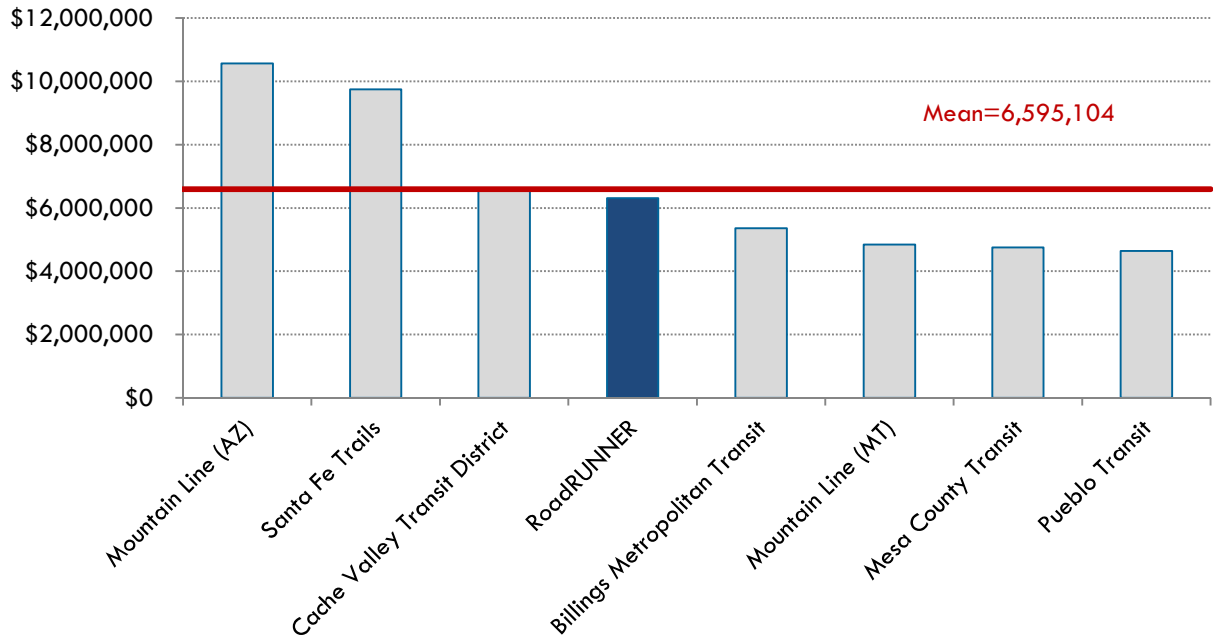


Figure 50 Total Local Contribution

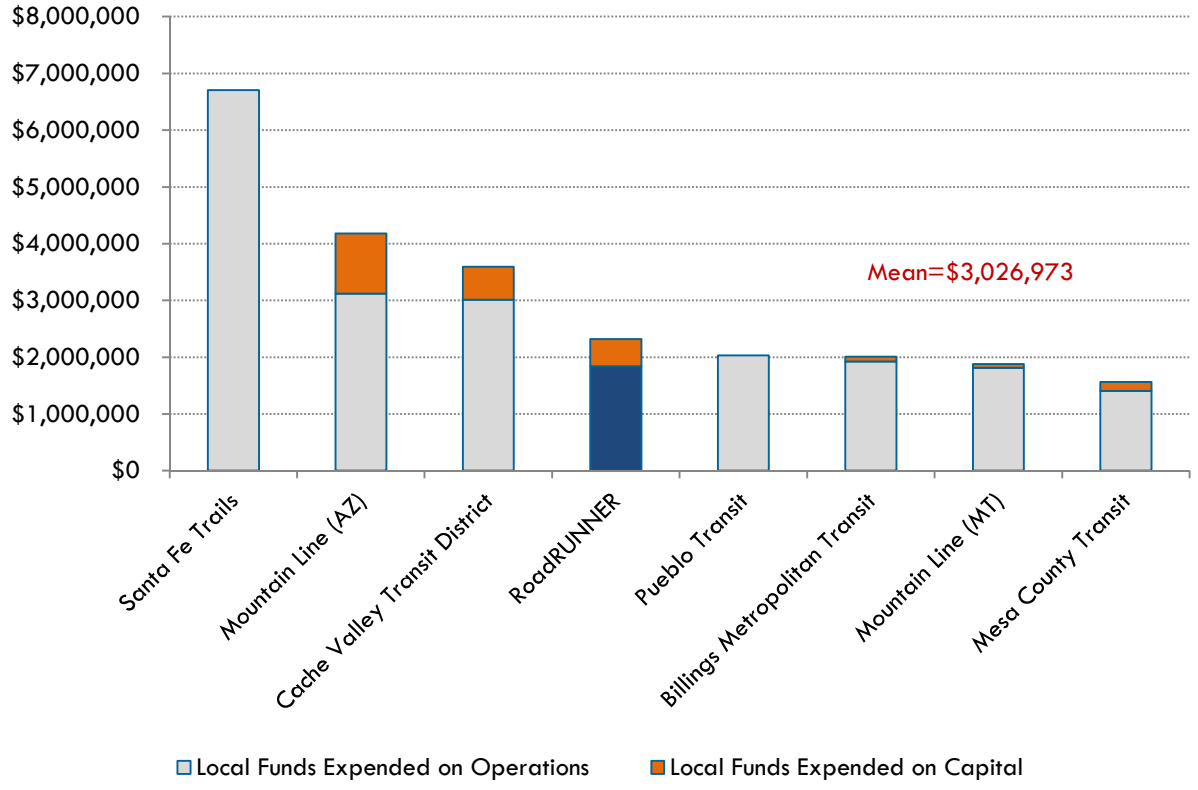
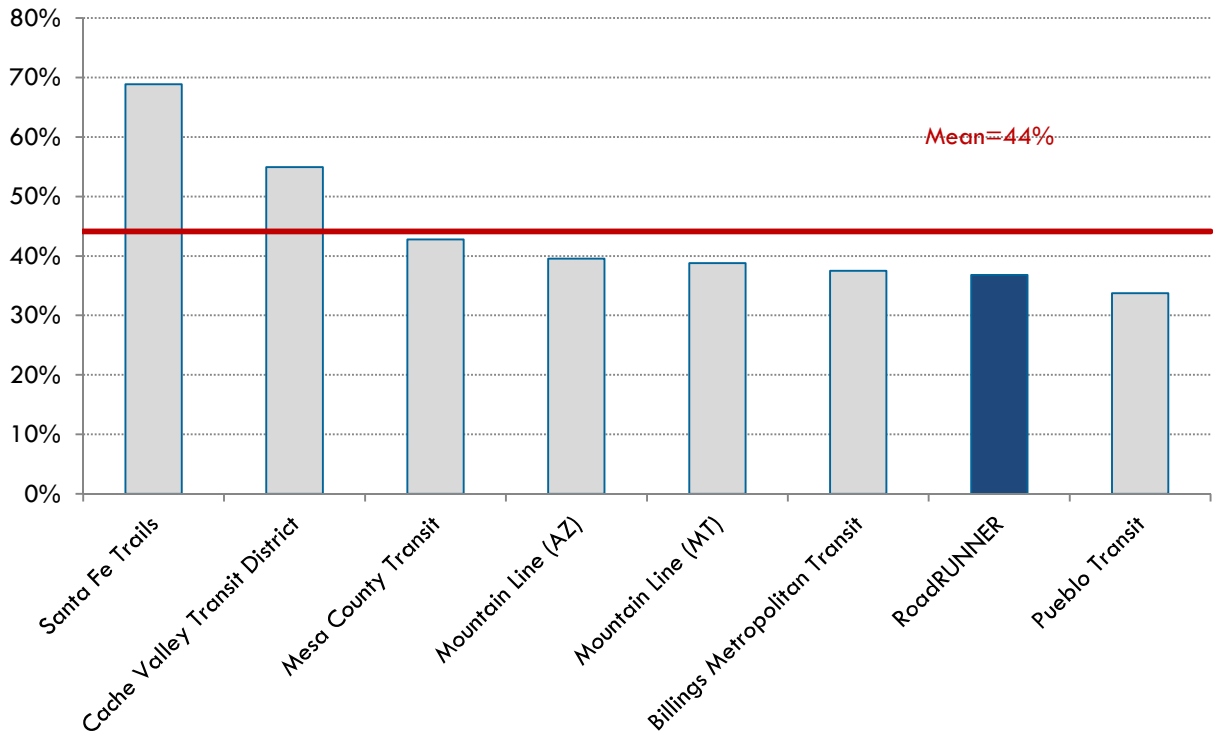


Figure 51 Percent Local Contribution of Total Funds



Effectiveness Measures

Effectiveness measures include passenger trips and passenger trips per revenue. The comparison of RoadRUNNER's measures in relation to the peer group is shown in Figure 52.

Figure 52 Effectiveness Measures

Measure	RoadRUNNER	Peer Group Minimum	Peer Group Maximum	Peer Group Average	RoadRUNNER % from Average
Passenger Trips	759,645	609,194	1,978,002	1,137,802	-33.2%
Passenger Trips Per Revenue Hour	20.78	14.43	37.44	22.89	-9.21%

Source: NTD 2013 Transit Agency Profiles

RoadRUNNER ranked second to last in annual passenger trips. In terms of passenger trips per revenue hour, RoadRUNNER was just below the group average.

Figure 53 Passenger Trips

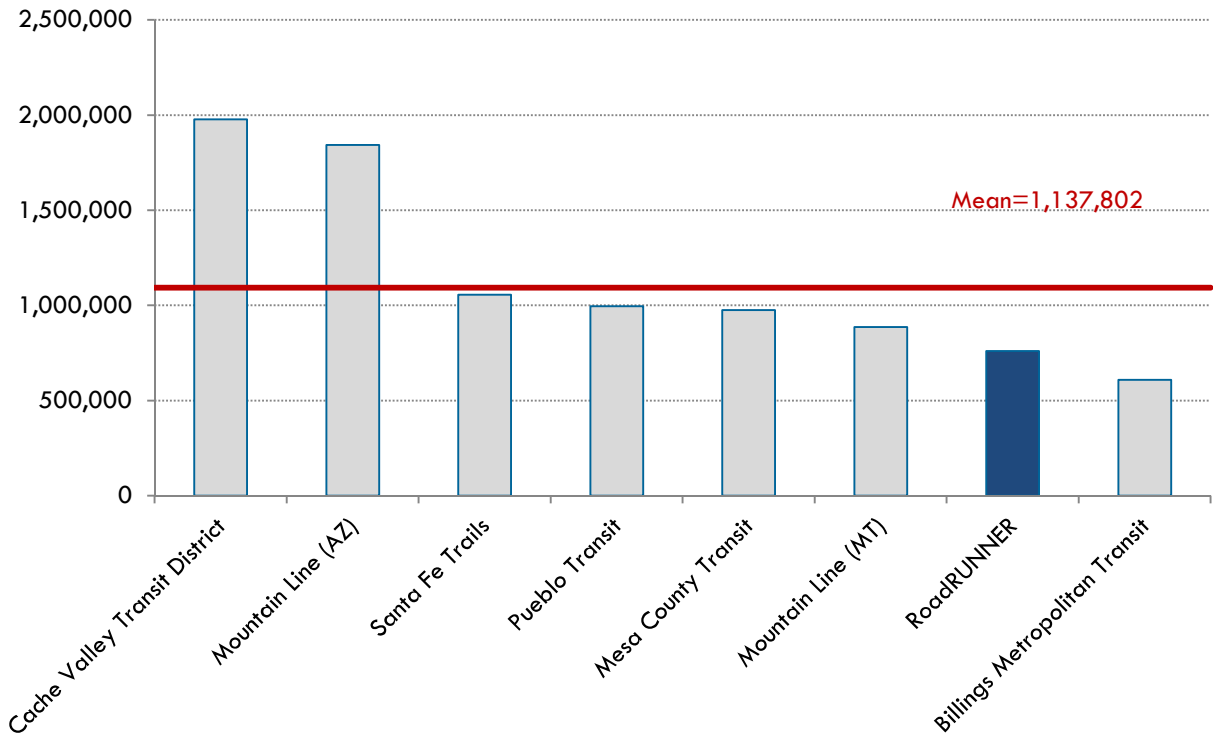
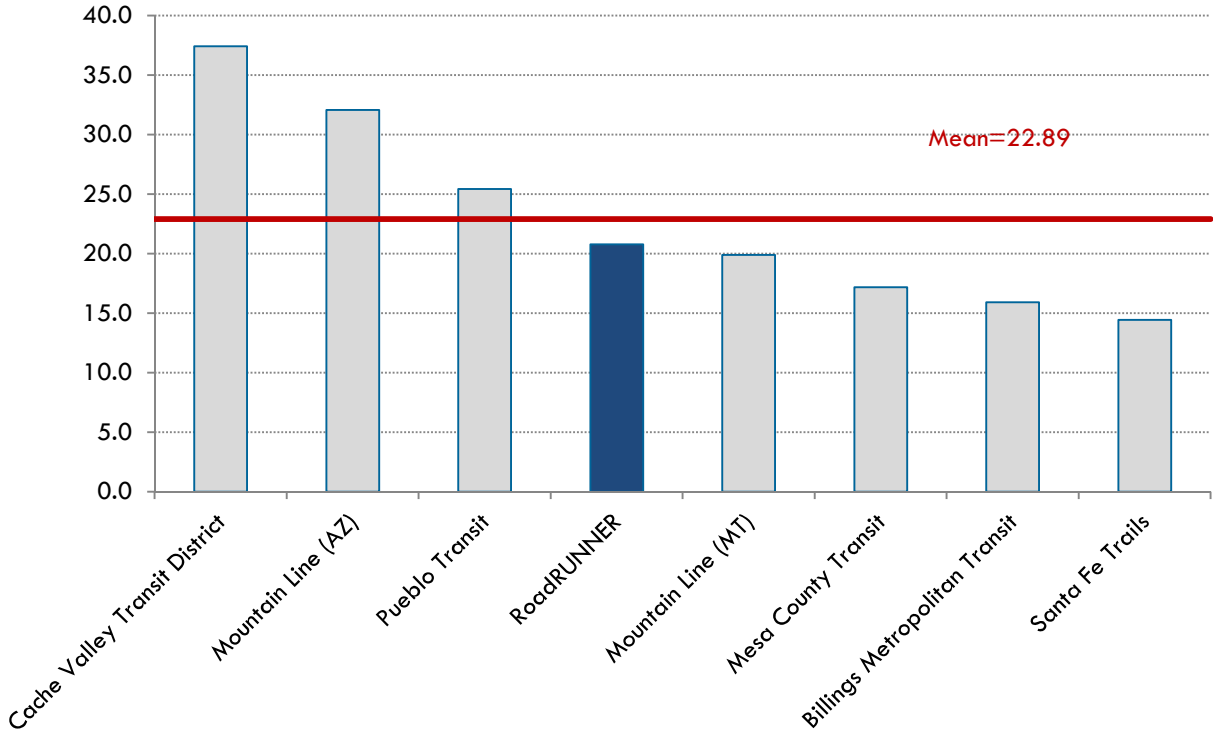


Figure 54 Passenger Trips per Revenue Hour



Efficiency Measures

Farebox recovery is a measure of efficiency. RoadRUNNER's farebox recovery measure in relation to the peer group can be seen in Figure 55.

Figure 55 Efficiency Measures

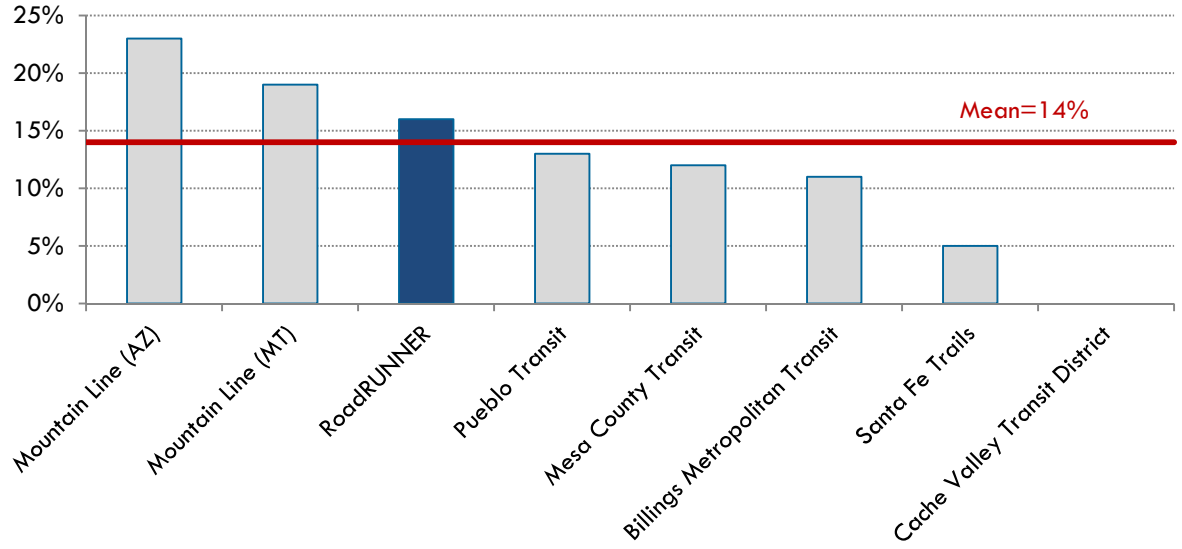
Measure	RoadRUNNER	Peer Group Minimum	Peer Group Maximum	Peer Group Average	RoadRUNNER % from Average
Farebox Recovery	16%	5%	23%	14%	13%

Source: NTD 2011 Transit Agency Profiles.

Note: RoadRUNNER farebox recovery data was unavailable from NTD in 2012 and 2013. Cache Valley Transit District farebox recovery data was unavailable and is not included in the peer group measure.

Figure 56 illustrates RoadRUNNER's farebox recovery in relation to each peer agency. RoadRUNNER ranked third highest, slightly above the peer group average.

Figure 56 Farebox Recovery



Note: Cache Valley Transit District operates as a fare free system and is not included in the peer group measure.

Conclusion

Overall, RoadRUNNER's measures largely fell in the middle to the low end of the peer group. RoadRUNNER had fewer passenger trips, revenue hours, revenue miles, and vehicles operated in peak service compared with the selected peer agencies. When considering remaining measures, RoadRUNNER finished neither first nor last among its peer agencies. In particular, fleet age was closely in line with other peer agencies.

RoadRUNNER had a lower amount of total funds expended and local contribution of total funds compared to the peer group average. At the same time, it was very close to the mean for farebox recovery ratio, placing second overall among peer agencies in this category.

Despite having the second highest service area population, RoadRUNNER operates the fewest number of fixed-route peak vehicles and has a higher proportion of demand response vehicles. Since RoadRUNNER's passenger trips per revenue hour currently ranks below the peer group mean, additional local funding could help improve overall system productivity by improving service and increasing the attractiveness of transit for passengers.

The comparative performance measures included in the peer analysis indicate that RoadRUNNER would experience increased ridership due to increased investment in transit services.

7 CUSTOMER SURVEY RESULTS AND PUBLIC COMMENT

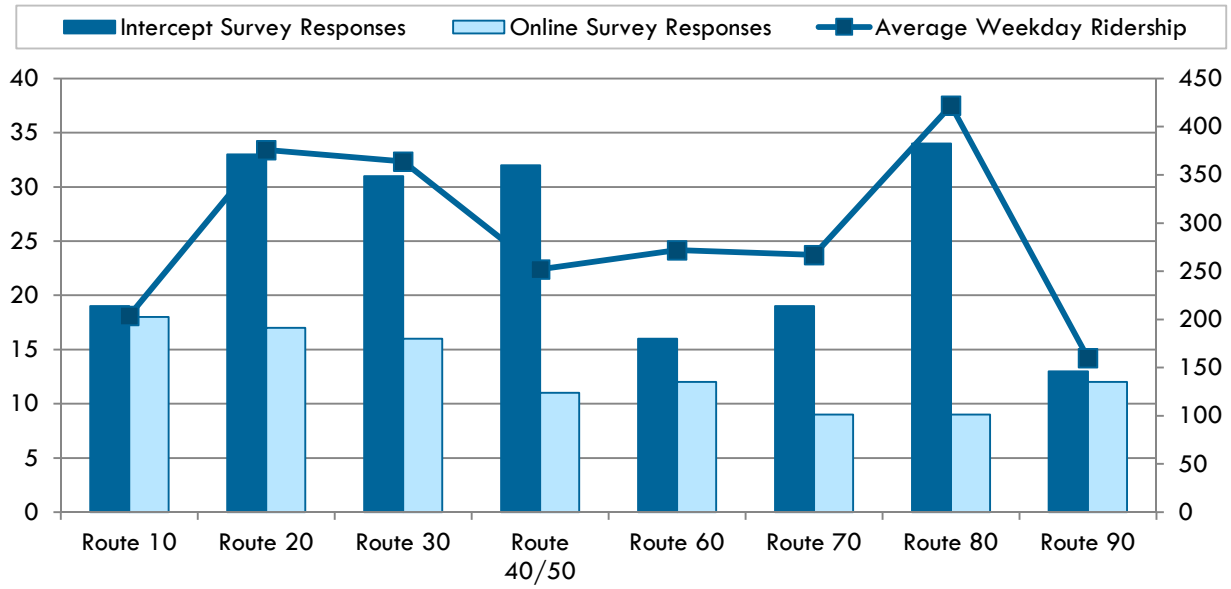
A rider intercept survey was conducted by Mesilla Valley MPO staff during December 2014 and January 2015. The intercept survey was administered at the Mesilla Valley Intermodal Transit Terminal, Mesilla Valley Mall, and on board buses. The survey included a range of questions focused on travel patterns, rider demographics, and general feedback.

An online version of the customer survey was also made available from December 10, 2014 through May 1, 2015. A flyer describing the Short Range Transit Plan with a link to the online survey was distributed on buses. The online survey was also promoted on the City's cable broadcast and mentioned in the Weekly Newsletter to City Council.

Survey Responses

A total of 94 intercept survey and 45 online survey responses were received. Both surveys asked respondents to indicate which routes they used. The results are graphically displayed in Figure 57. The chart also compares average weekday ridership. The number of intercept surveys collected was approximately nine percent of the average weekday ridership for all routes. The number of online surveys collected was approximately two percent of the average weekday ridership for all routes. The ratio of intercept survey responses to ridership was fairly consistent across all routes.

Figure 57 Survey Responses by Route



Number of Routes Taken

Forty-seven percent of intercept survey respondents and 64% of online survey respondents indicated that they regularly take two or more routes. Sixteen percent of intercept survey respondents and 21% of online survey respondents indicated that they take four or more routes on a regular basis.

Figure 58 Intercept Survey: Number of routes taken

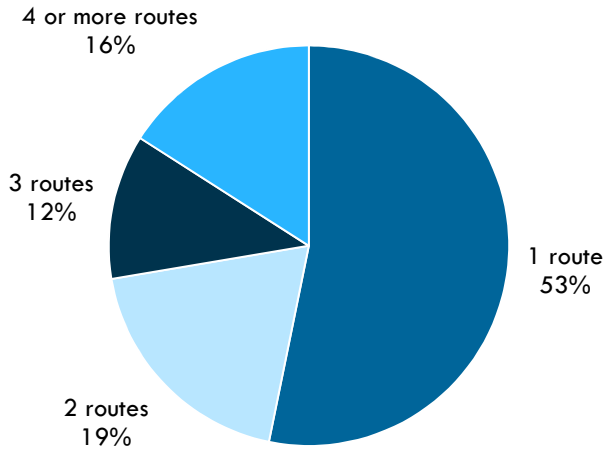
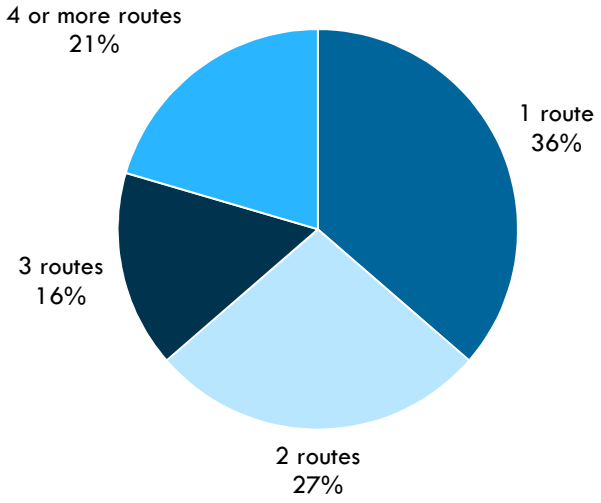


Figure 59 Online Survey: Number of routes taken



Reported Transfers between Routes

Each survey asked respondents to provide information regarding potential transfer activity. According to the intercept survey results, Routes 20, 30, and 80 have the highest percentage of total transfers. It should be noted that the aforementioned routes do not have access to a major grocery store. Less than 10% of riders who use routes 40, 50, 60, and 90 transfer to another route to reach their destination. Survey respondents transferred most frequently to Routes 20 and 30. Many participants also transferred to 10, 60, 80, and 90. Routes 40, 50, and 70 are significantly less utilized for transfers. The online survey had a higher percentage of Route 90 riders.

Figure 60 Intercept Survey: Routes transferred to or from

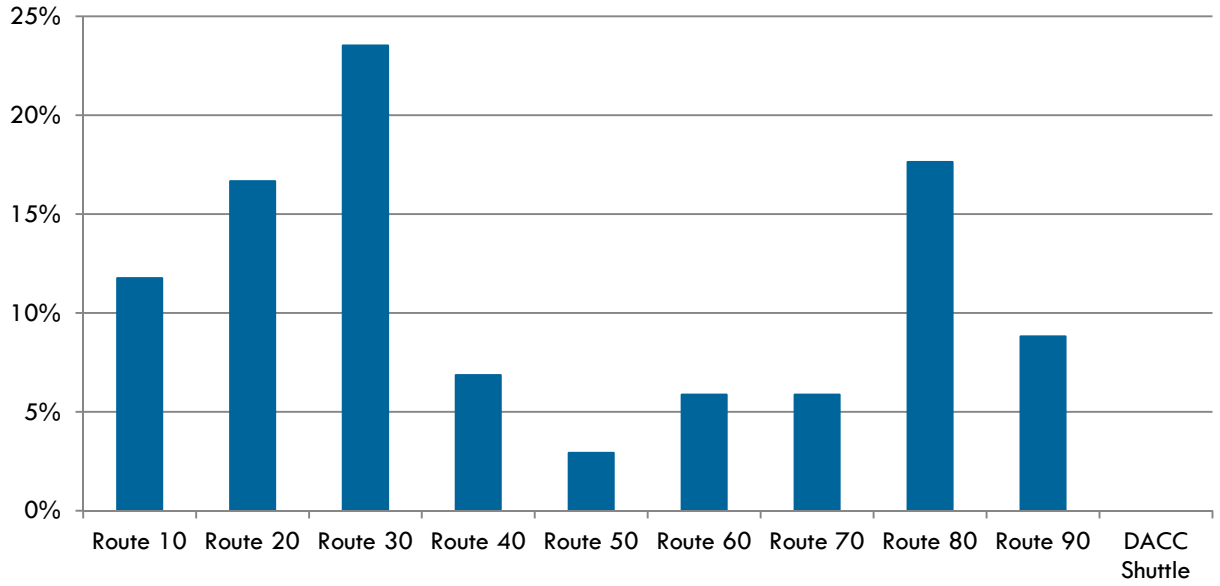
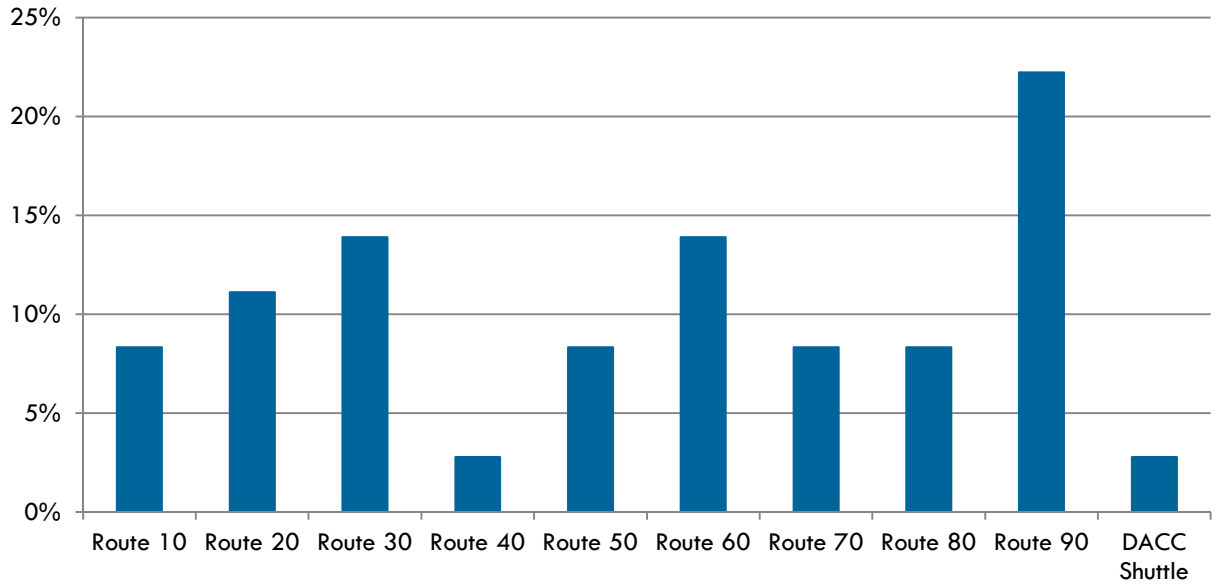


Figure 61 Online Survey: Routes transferred to or from



Trip Purpose

The trip purposes reported by survey respondents are shown below. Over 50% of interecept survey respondents were traveling to go shopping. Slightly over 40% of riders were traveling to or from work, and a further 37% of riders were traveling for medical reasons. Fifteen percent of ridership was generated by K-12 students, while the remaining seven percent of ridership was comprised of college students. In contrast, over 50% of online survey respondents listed travel to and from work as their trip purpose.

Figure 62 Intercept Survey: Trip Purpose

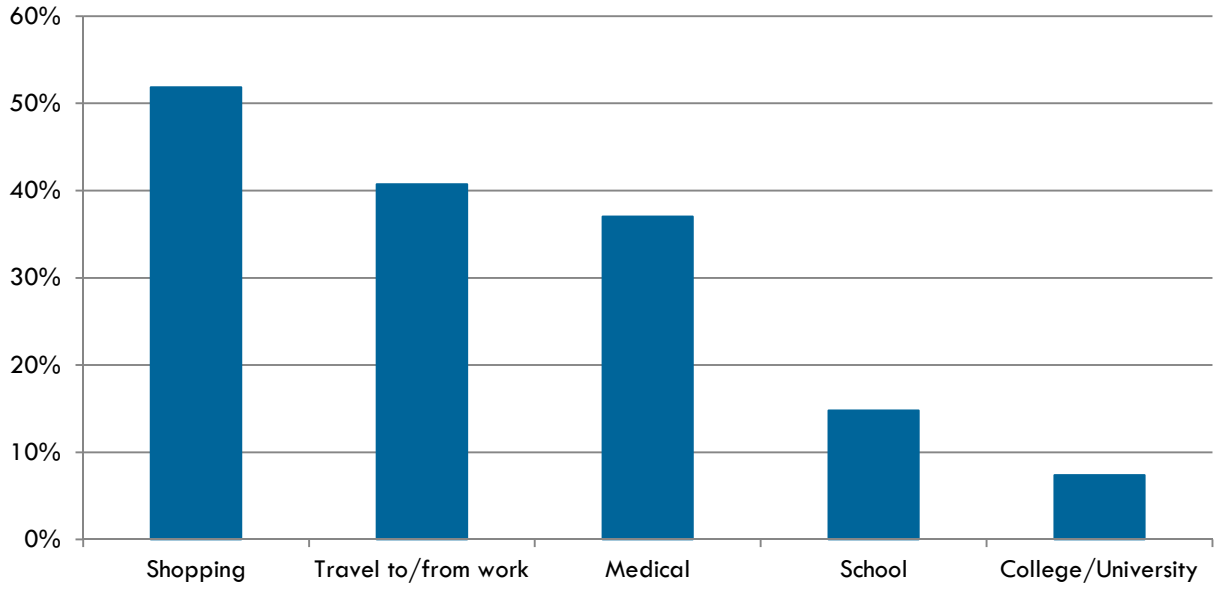
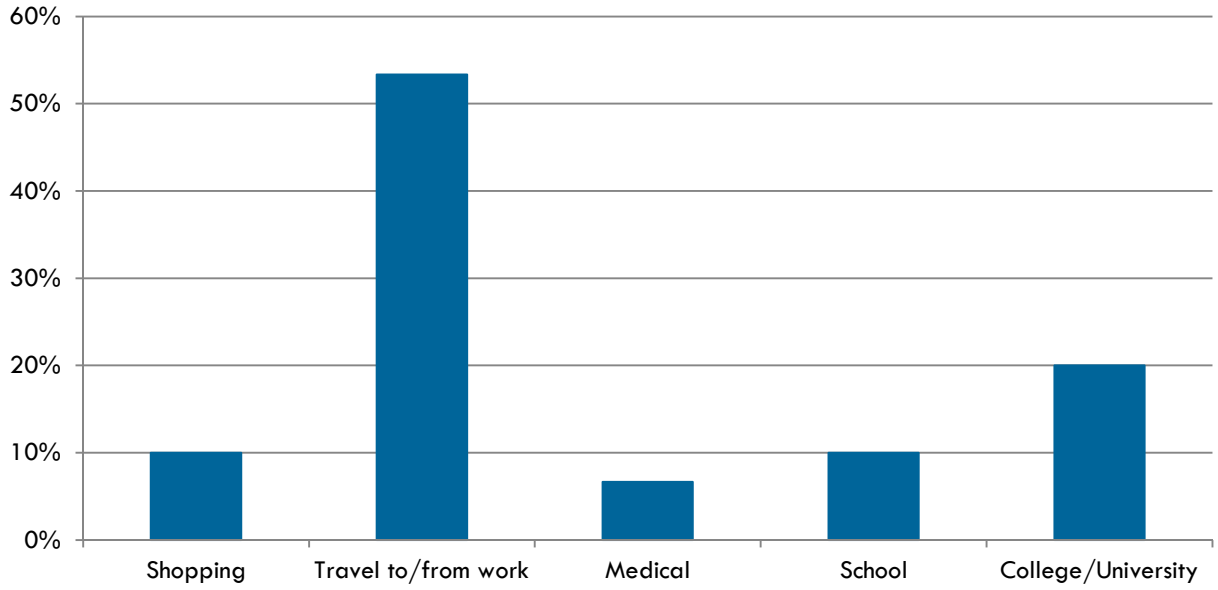


Figure 63 Online Survey: Trip Purpose



Ridership by Age

The age distribution of survey respondents varied significantly from intercept to online survey. Seventy-seven percent of riders who took the intercept survey are between the ages of twenty-five and sixty-four. Over 33% of customers who took the online survey are between the ages of 25-34, indicating that online methods are the most effective ways to reach younger adults.

Figure 64 Intercept Survey: Age

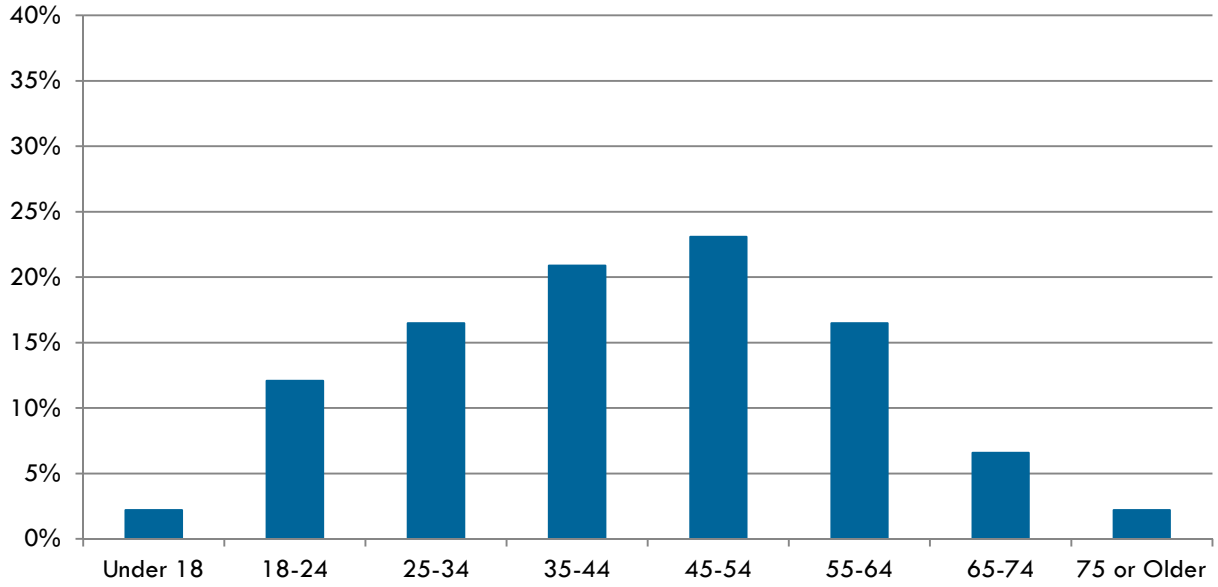
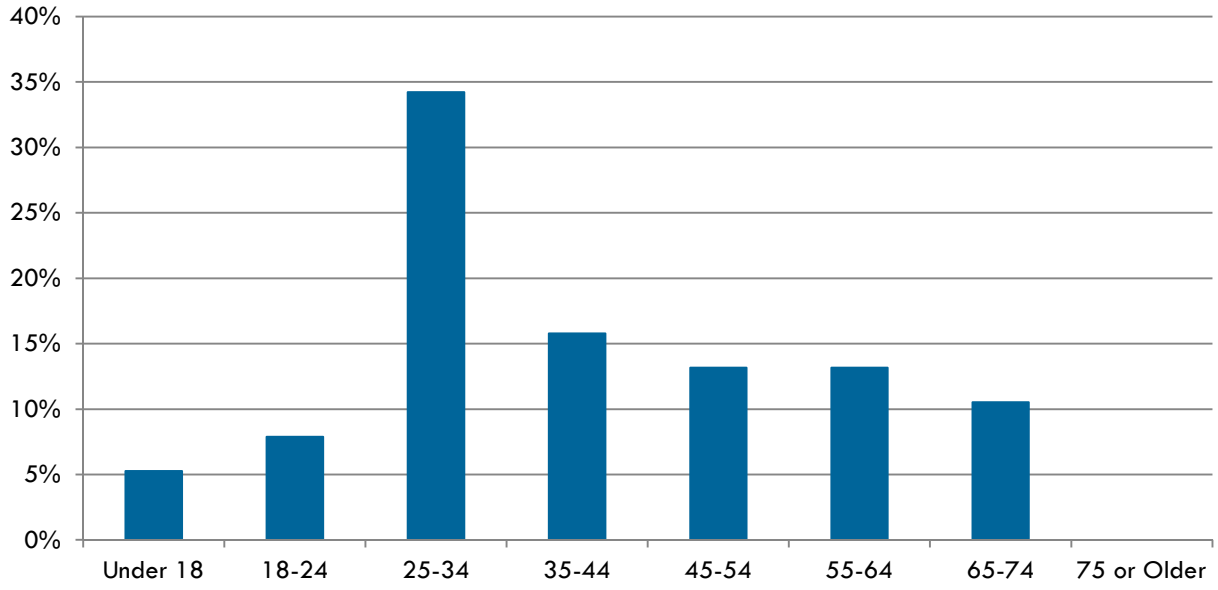


Figure 65 Online Survey: Age



Ridership by Ethnicity

Survey respondents were asked to list their ethnicity. According to each survey, approximately 80% of transit riders are either Hispanic or Caucasian. African-Americans, Pacific Islanders, Asian-Americans, and people who identify as more than one ethnicity comprise a combined 20% of survey respondents.

Figure 66 Intercept Survey: Ethnicity

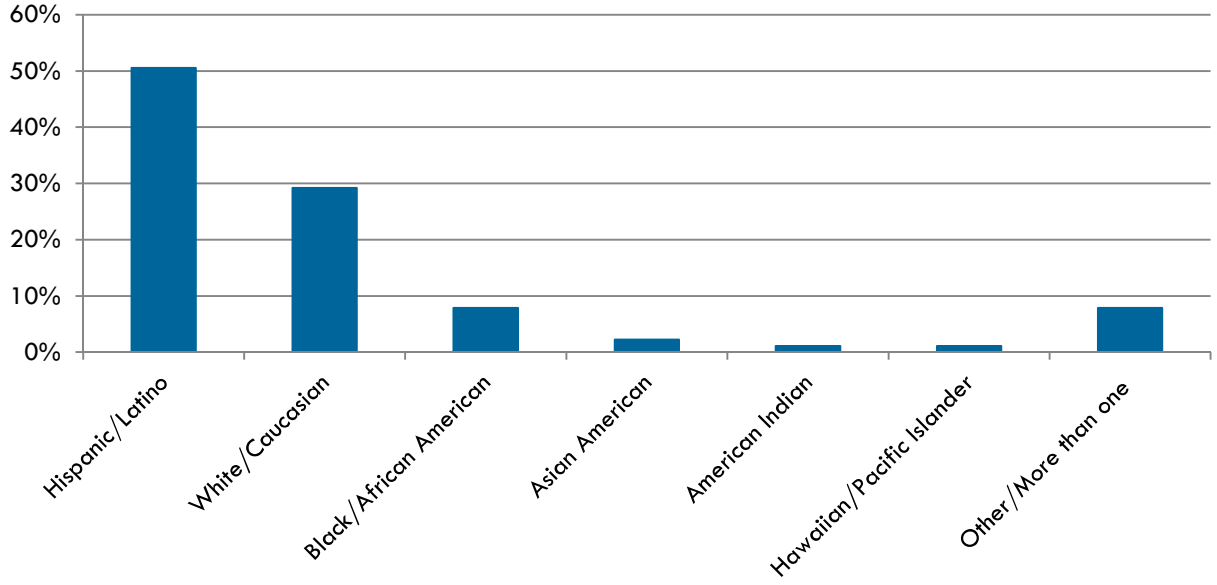
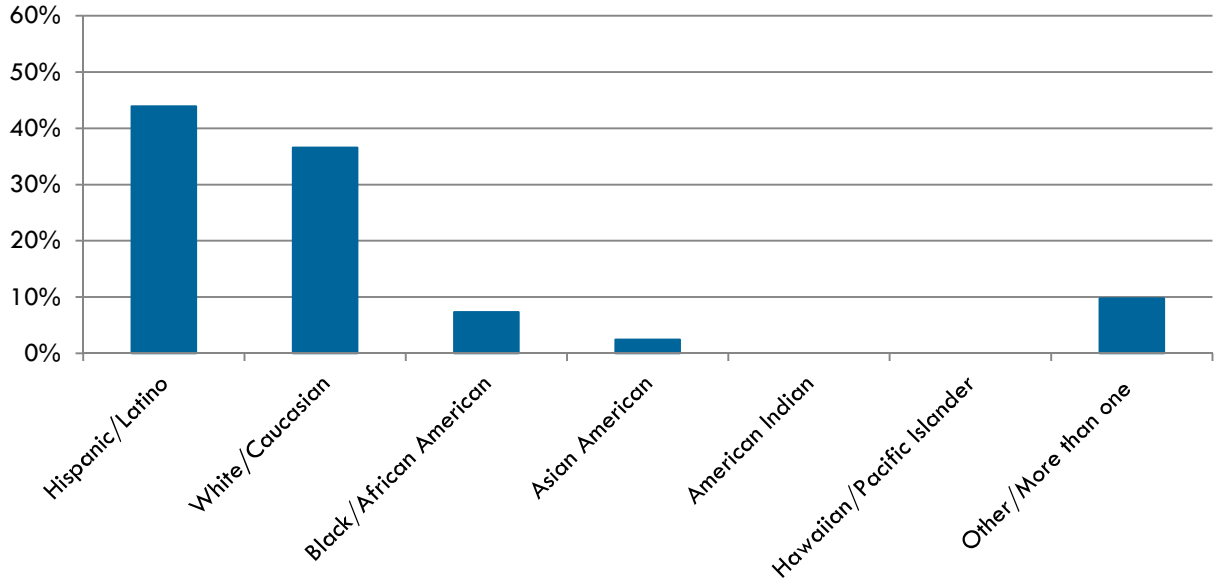


Figure 67 Online Survey: Ethnicity



Ridership by Household Size

The following charts depict distribution of household sizes in the survey sample population. Over 60% of transit riders who took the intercept survey live in one- or two-person households. Online survey respondents tend to have larger household sizes.

Figure 68 Intercept Survey: Household Size

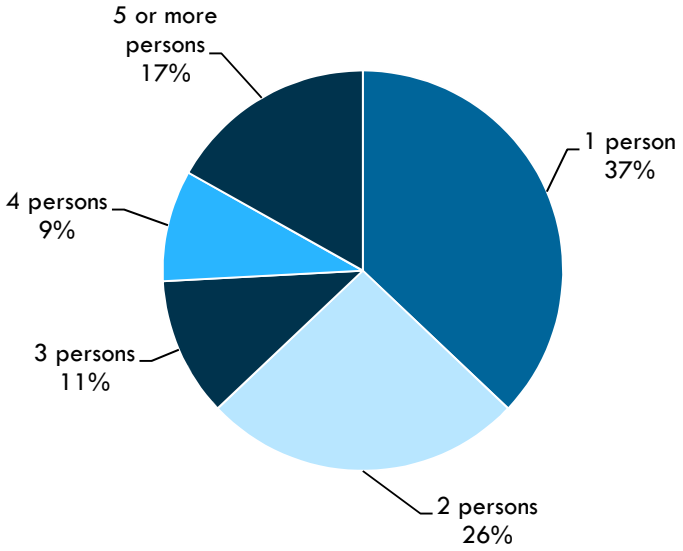
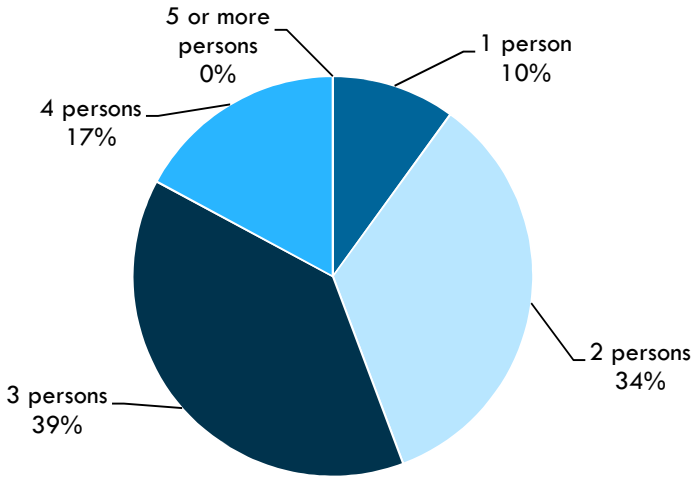


Figure 69 Online Survey: Household Size



Vehicles per Household

An overwhelming majority of transit users do not own a vehicle. Approximately 68% of intercept survey participants do not own a vehicle, 20% have a single car in their household, and 12% have two or more cars in their household. Online survey respondents have a lower percentage of customers without access to a vehicle.

Figure 70 Intercept Survey: Vehicles per Household

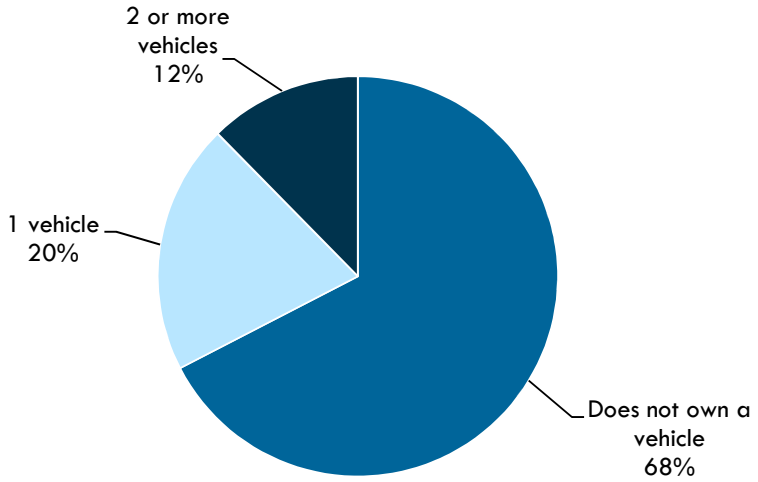
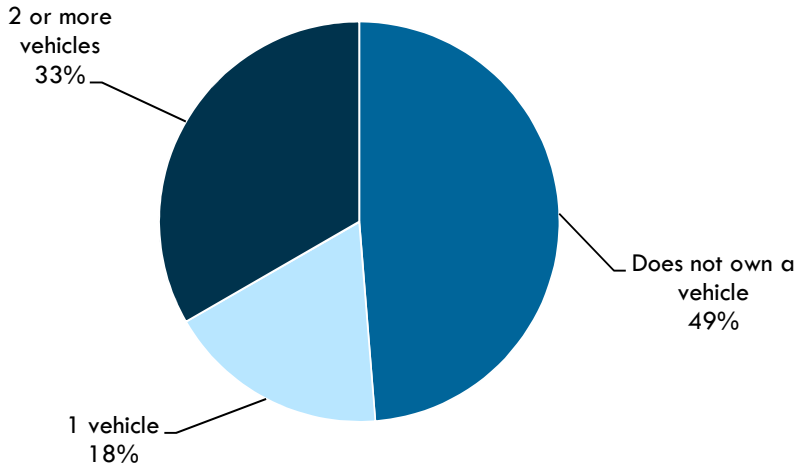


Figure 71 Online Survey: Vehicles per Household



Annual Household Income of Survey Respondents

The majority of transit riders have a household income of less than $20,000. None of the intercept survey respondents reported a household income of over $40,000. However, online survey respondents had a higher percentage of choice riders with higher incomes than intercept survey respondents.

Figure 72 Intercept Survey: Annual Household Income

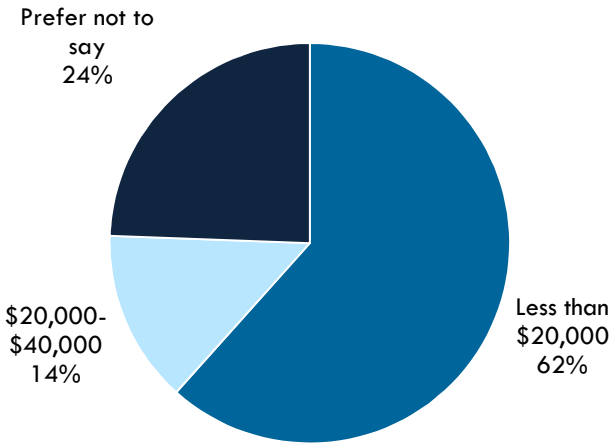
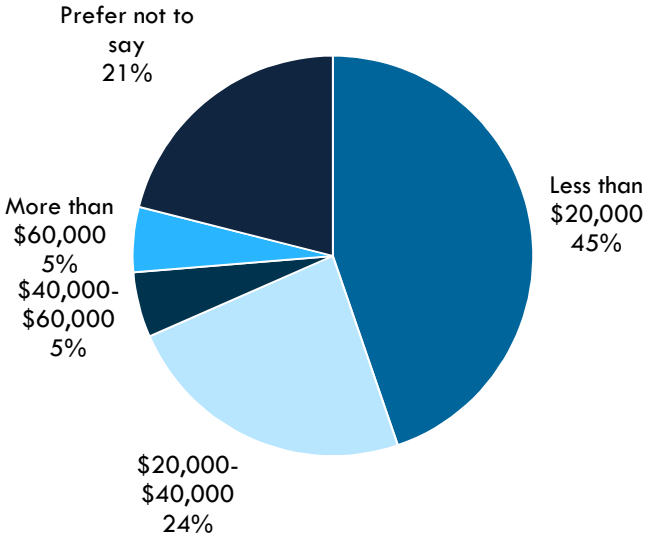


Figure 73 Online Survey: Annual Household Income



Open-Ended Comments

Survey respondents were asked to provide additional comments at the end of each survey. The most significant customer requests included extending hours and providing more service on Sundays.

Figure 74 Intercept Survey: Comments by Category

40 minute interval routes
A bus at Main and Picacho
A bus route on Dona Ana and Del Rey
A stop on Amador near US bank, Later Hours, Upper Management does not accept suggestions, Complaints to management are not heard
Bench at the California & Solano Bus Stop
Better Fares and Better Directions
Drive Faster?
Excellent Service
Good service
Great
Great Drivers!
Great Routes!
Great, Thank You!
Have noticed great improvements to the transit system in the last few years
Kinder Drivers, more frequent routes
Later Hours
Later Hours
Later Hours/Sunday
Longer Hours
Longer Hours/Routes
Longer Hours/Sunday Hours
Make a crosswalk sign by the Walmart on Lohman, hard to cross street
More Buses
More mindful drivers
More routes
More routes
More routes
Nicer Drivers
None
Quicker Times
Some rude drivers
Sunday Hours
Sunday Hours
Sunday Hours
Sunday Hours, Later Hours
Sunday Hours, Later Hours
Very Helpful
Veterans park stop needs a waiting area
Would like a payphone at ITC

Figure 75 Online Survey: Comments by Category

1. Better communication as to re-routes, especially concerning the last run of the day. On the day of the horrible fatal accident at Trivitz & University there was no service to any NMSU stops. Since I catch the bus after 5 I had no way to get info. I was stranded. This has happened more than once. I would suggest someone answer 5412500 during all hours when RRT is operating, or at least when there is a rerouting in progress. 2. It seems that sometimes 90 leaves the VTP prior to 15 after (cell-phone time). I know my stop is 3 miles away and the speed limit is 35 mph and I should never miss the bus if I am out there at 19 after, but it happens once in a while. 3. Bus 30 time points at Locust/University and Missouri/Telshor are only 5 minutes apart. Time point #1 should be earlier. 4. I used to use bike service frequently. I stopped because racks were frequently full after the route change in 2008, and the "no bikes on bus" signs appeared shortly thereafter. I see no problem with bringing a bike onto a nearly empty bus. This policy should be modified to "subject to driver discretion". 5. Some passengers expect too much of drivers for route planning, often to the point of delaying the bus. I think on more than one occasion the driver should have just said "schedules are over there and we have a schedule to keep" instead of providing 5 minutes worth of trip planning details. Sometimes big city attitudes are called for in dealing with passengers. 6. I would suggest later service, at least between NMSU and MVM. The only days that I drive are the days where I know I can't leave work until about 7PM. 7. I seem to be one of about 5 NMSU employees taking the bus to East Mesa neighborhoods, when there are probably more than 500 people making this run every day. I would recommend some sort of advertisement/promotion to make people that for $1 someone will take you to a place that's probably closer to your office than where you actually park.
Earlier and later bus services. Maybe a discount for buying a 30 day/trip pass.
Have a stop on Main St. for the 20. Create parallel routes so transferring is easier.
I believe that service would improve if buses ran on larger/main streets and completely avoid smaller streets in residential areas. It's less confusing if you avoid the " loop" routes that are currently used.
i fall asleep on the bus because of my tourettes syndrome i wish the bus drivers where more understanding
I think you do a very good job with the equipment and staff you have. It would be nice to get a county wide system funded somehow.
If your team doesn't care for the way I'm responding to your questions, then please reconsider how Ms. Margaret responds to your customers.
It would be nice if the Aggie transit near Arrowhead Park Early College would be implemented soon. The time to get from the college back to Porter Drive is 2 hours, it is not a terribly long time, but it would be nice if it was shorter.
Later service for people who work would boost economy and employment opportunities
los horarios el sabado mas temprano (Earlier Saturday hours)
Make sure buses always connect at Transfer Point! Bus service needs to be dependable. More routes please!
More covered bus stops for the handicapped apply for grant to feds check on this I know they have funds for this if it for handicapped people
Please ask the drivers who chew gum to avoid popping their gum into an open microphone
Saturday, to run later and for it to run on Sunday, cause of church service
Seek funding for additional buses and drivers, to provide service two or three times an hour rather than only once an hour in one direction per route.
Sunday service and keeping the lobby open during the weekend
Survey should be given to all who ride the bus. More buses should be added & the city should look into the fixing issues within the transportation department in order for the bus routes, etc to run properly
The drivers are always very helpful and friendly. My only complaint is with people who bring rolling cart on the bus, they take up room and often end up out of the persons control.

Public Comments

Highlights of Public Comments at Public Hearings Held on July 1, July 8 and July 11, 2015

A fair amount of the comments are related to transfer problems between the various routes; particularly, routes 20 and 80. There is also a concern about the transfers between all routes.

New Solano route requested to be implemented in Phase 1.

Route 110 Service on Saturdays.

Service for Convergys and stop in front of the location requested.

Bus stops location and proximity for disabled persons.

Strategies for transit oriented development requested.

Other comments related to driver attitudes and need for restroom facilities when transit center is closed.

Individual Public Comments

-Thank you for the presentation and Q&A session. These are important changes to the transit systems.

Hillary Brinegar

-A change for me will be a mess.
Laura Todd

-The biggest issue is the lack of connectivity between the buses at the MVM transfer point. With this plan the 60 and 60 will truncate at Walmart and not be able to connect at the mall to any other bus which means that it will take longer to get anywhere in town. This means that if I want to go anywhere besides Wal-Mart I will have to go all the (way) to downtown just to go to the University or the Mall or anywhere else for that matter. It also seems that 20 and 80 are two separate routes and the people are not accounting for the amount time it will get around during rush hour and the amount of congestion that goes onto the University from 3 pm-6:30 pm from NMSU and other sources. Also, there needs to be connections on the eastside of town. If the place where the transfers are happening how are taking too long to get in and out to find another place to do but keep them in some form because 60,70, 20, 110 do not connect with each other in any other place but Downtown, and 110 does not connect to anything else either.
Lydiak Pittman

-Service to Elks/Del Rey Loop is badly needed. Convergys employs 400 people currently and we have a goal of doubling our time. The contributions to the tax base will be substantial, not to mention the impact to unemployment and the associated improvements in crime and local economic growth. Please place a stop as close to Convergys as possible.
Jason Heckler, Director of Operations, Convergys

-With longer hours and many buses transferring at the transit center, can we please have availability to bathrooms inside the buildings or porta potties put up. Route 110 needed on Saturdays
Dawn Yates

-I am gravely disabled and walking to Espina/Missouri to catch Route 60 or walking to Foster/El Paseo to catch Route 20 is a hardship for me. I have nausea and motion sickness 24 hours a day. I had a botched stomach surgery. I have dry heaved on some of your busses a few times. This is inconvenient fo

me. The new Solano Route in Phase 5 would work for me!
Patricia Griffiths

-Have you mapped social service locations in the community?
How do we get the city to increase density along transit routes?
Need to do this to get infill and support the transit system?
When will we get an updated Coordinated Mobility Action Plan?
Sharon Thomas Former City Council Member, SCRTD Citizens Representative Board Member

-1. Please don't start Route 60 and Route 70 changes before instituting the Route 120 service
2. Route 120 include a stop at Solano and Spruce intersection3. Make a stop at Del Ray and Bataan/Northrise (so)riders can transfer to Route 110.
4. Assure coordination of between route 80, 70 and 60 at Walton and Lohmann; to allow access to both the mall/east mesa or downtown to connect with 20.
Charles Clements (Transportation Committee member, Ocotillo Institute; Citizen Member, Transit Advisory Board)

Excerpts of comments received from *Ms. Francesca Harrison* submitted as part of the public comment record as a written letter:
Most of the bus routes throughout Las Cruces appear to be a bit "off.(Loose translation.) This is especially true Route 10 which used to run back and forth from Main Street to Venus.
It would be a nice gesture if the city considered a bus shelter in the Albertson's shopping plaza on El Paseo Road.
..the minute the transit station closes, even before the buses for the day officially stop their routes, it is entirely up to the customer to find a restroom if needed. .
(Ms. Harrion's complete letter is on file for inspection.)

8 SERVICE RECOMMENDATIONS

Recommendations were developed based on detailed route analysis, demographic assessment, operator and customer feedback. The initial route restructure is cost-neutral in terms of revenue hours and peak vehicles. The intention of the route restructure was to lay the foundation for growth as additional funds become available. Key benefits of the service recommendations are:

- 30 minute service on high ridership routes
  - Route 20 University
  - Route 80 Picacho/Lohman
- New crosstown service along Lohman/Amador corridor to reduce travel time and transfers
- Direct service to Doña Ana Community College East Mesa Campus from New Mexico State University and Mesilla Valley Intermodal Transit Terminal
- Improved directness on most routes
- Improved access to major grocery and shopping destinations
- Future crosstown service along Solano
- Elimination of Venus Transfer Point and reduced emphasis on Mesilla Valley Mall
- High probability of increased ridership
- Population service area increased from existing. Using 2010 Census data, more than 1,500 people will be served in Phase 1-4 and more than 5,000 in Phase 5, over the existing population.

Each of the eight recommended routes are described below and detailed with a map. Newly installed stops listed for each route do not include existing stops that should be assigned to recommended routes.

Route 10 North Main

Replaces: 10 Desert Orange

Route 10 will be realigned from Northrise Drive, Rinconada, Bataan Memorial Highway to Elks Drive and Del Rey Boulevard to improve coverage in North Las Cruces and further extended south to serve North Triviz Drive and North Telshor Boulevard. This route will serve several major employers, grocery stores and the Social Security office off of North Telshor Boulevard.

Northrise Drive, Bataan Memorial Highway and Rinconada Boulevard will be served by the new Route 110 Bataan. The Venus Transfer Point bus stop will no longer be served by any routes.

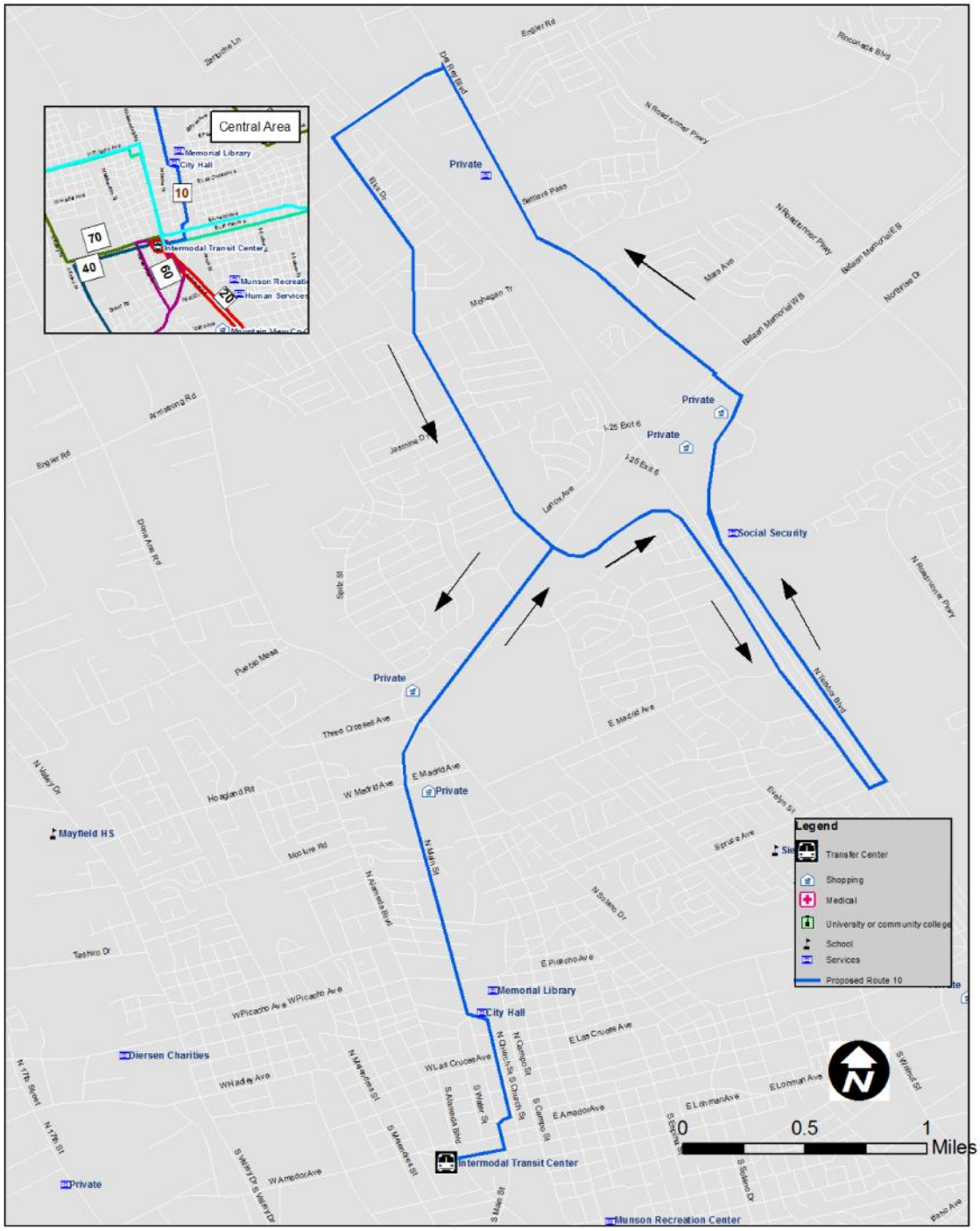
New stops will be installed at the following locations:

- Elks & Lenox
- Elks & Ellendale
- Elks & Edgewood
- Elks & Mohegan
- Elks & Reina
- Elks & Engler
- Del Rey & Parkhill
- Del Rey & Convergys
- Del Rey & Settlers Bend
- Del Rey & Mars

Recommended Service Levels

	Weekday			Saturday			Sunday		
Period	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span
Existing	60	1	6:30 am–7:00 pm	60	1	9:30 am-6:00 pm	-	-	-
Phase 1	60	1	6:30 am–7:00 pm	60	1	9:30 am-6:00 pm	-	-	-
Phase 2	60	1	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 3	60	1	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 4	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm
Phase 5	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm

Figure 76 Proposed Route 10 North Main



Route 20 University

Replaces: 20 Sun Yellow and 30 Aggie Crimson

Routes 20 and 30 will be consolidated to serve the strongest corridors of each route while establishing 30-minute service throughout the entire route. The primary streets served by the new route will be El Paseo Road, Espina Street, East University Avenue, Telshor Boulevard, and South Sonoma Ranch Boulevard. Connections to all RoadRUNNER routes, with the exception of Route 110, can be made at the Mesilla Valley Intermodal Transit Terminal. The route will provide a seamless access between New Mexico State University (NMSU) and Doña Ana Community College East Mesa Campus in addition to serving Memorial Medical Center, Mountain View Hospital, Las Cruces High School, shopping areas, and major higher density residential areas with high levels of transit propensity.

Mesilla Valley Mall will no longer be directly served by Route 20 due to travel time. Triviz Drive and Don Roser Drive will no longer be served due to low ridership. Union Avenue will be served by Route 40 rather than Route 20.

On weekdays, the route would extend to Doña Ana Community College East Campus, replacing the existing Doña Ana Shuttle. On weekends, service would terminate at Mountain View Hospital.

New stops will be installed at the following locations:

- Sonora Springs & Cheyenne
- Sonora Springs & Palm Canyon
- Doña Ana Community College East Mesa Campus

Recommended Service Levels

	Weekday			Saturday			Sunday		
Period	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span
Existing	60	1	6:30 am–7:00 pm	60	1	9:30 am–6:00 pm	-	-	-
Phase 1	30	3	7:00 am–7:00 pm	60	1	9:30 am-6:00 pm	-	-	-
Phase 2	30	3	7:00 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 3	30	3	7:00 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 4	30	3	7:00 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm
Phase 5	30	3	7:00 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm

Figure 77 Proposed Route 20 University (Weekdays)

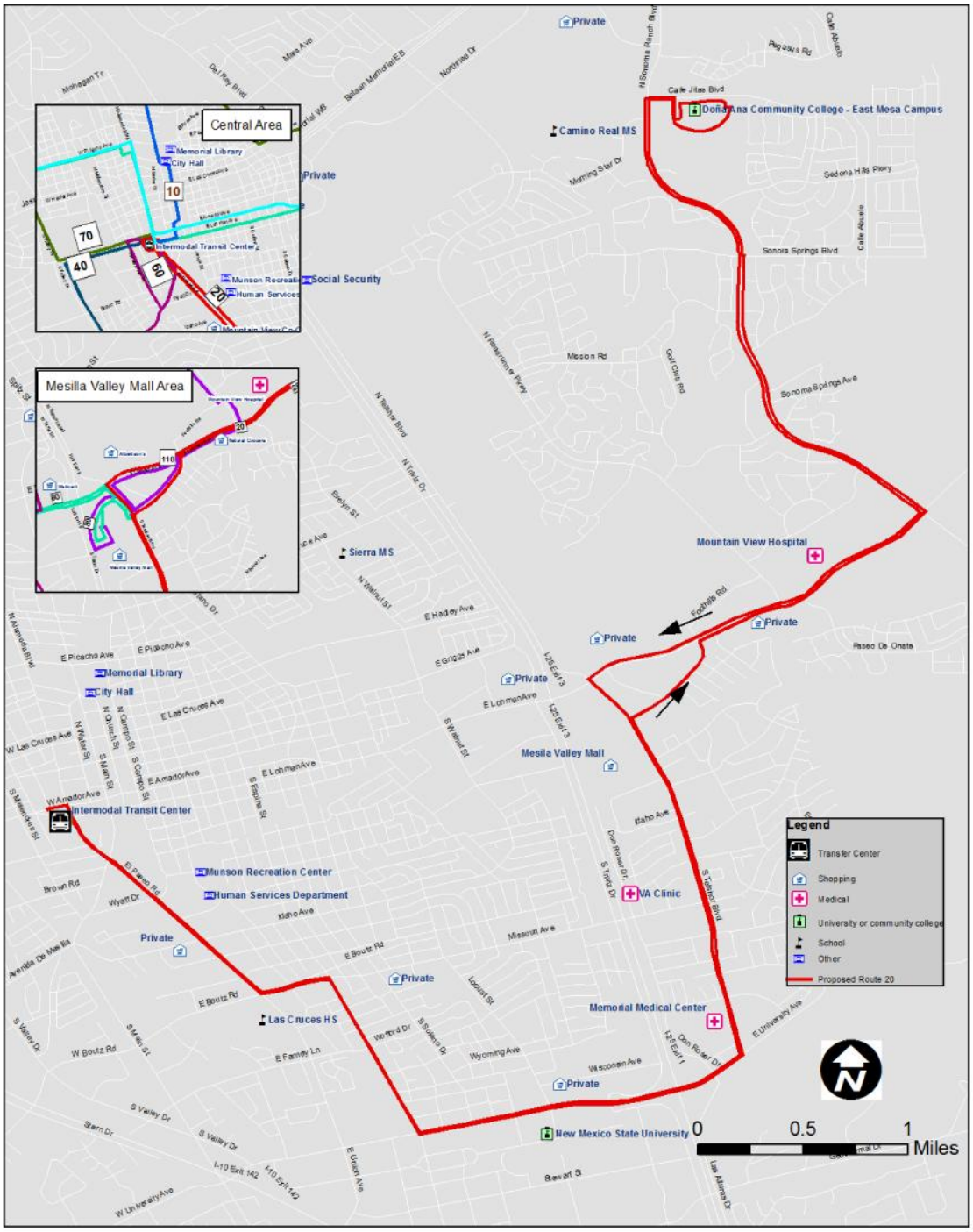


Figure 78 Proposed Route 20 University (Saturday)

Route 40 Mesilla

Replaces: 40 Pecan Brown and a segment of 20 Sun Yellow

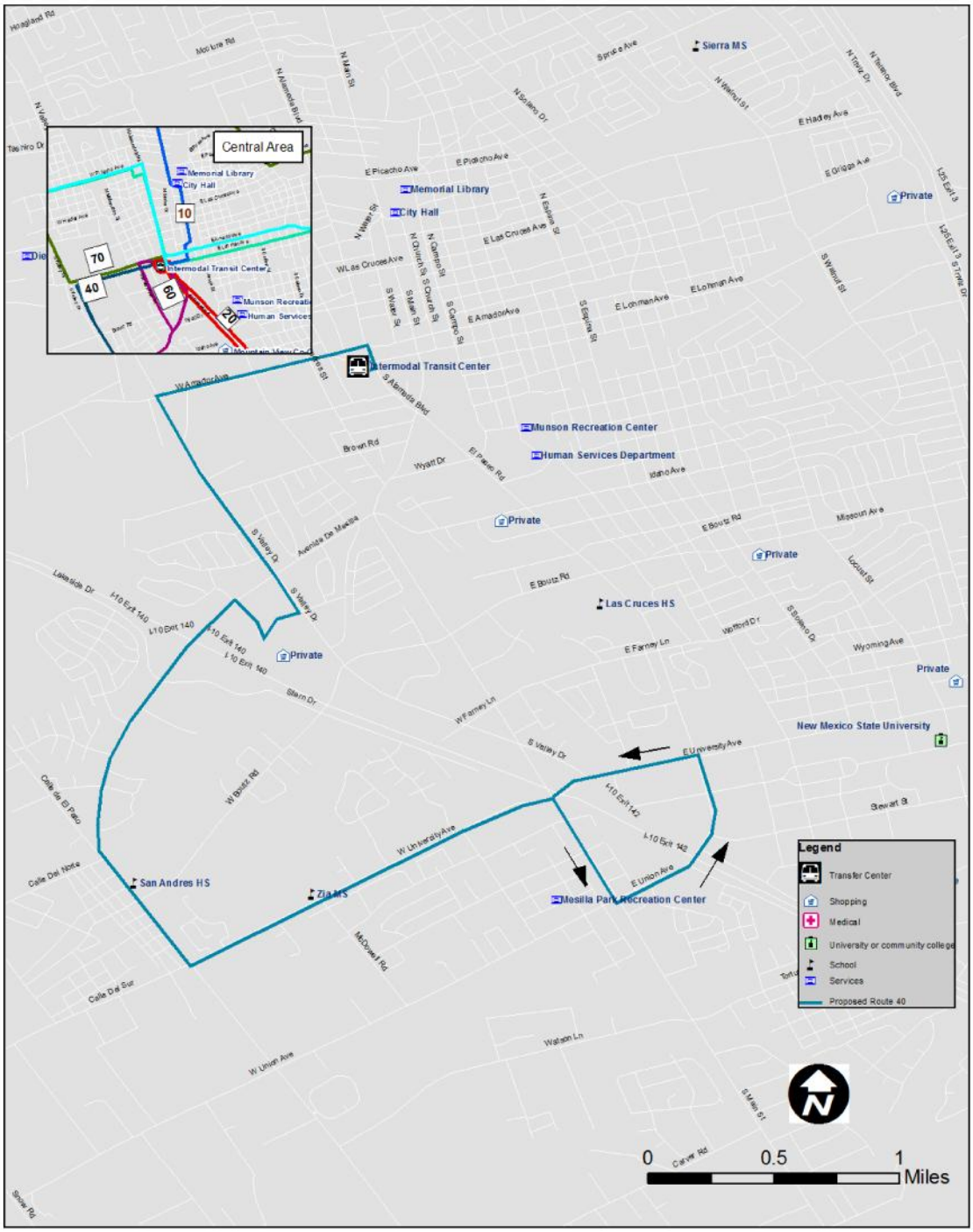
Route 40 will be realigned to operate bi-directionally between the Mesilla Valley Intermodal Transit Terminal, the Town of Mesilla, and Mesilla Park, and the western edge of New Mexico State University. Bi-directional service will improve access to the Walmart on South Valley Drive, which is the primary destination on the route. In addition, this route will serve Zia Middle School and San Andres High School in the Town of Mesilla as well as moderate density residential areas with moderate transit propensity.

East Union Avenue and East University Drive will be added to Service along South Main Street will be eliminated due to low ridership and lack of sidewalks. Rather than being interlined with Route 50, one vehicle will be assigned to Route 40.

Recommended Service Levels

	Weekday			Saturday			Sunday		
Period	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span
Existing	60	1	6:30 am–7:00 pm	60	1	9:30 am–6:00 pm	-	-	-
Phase 1	60	1	6:30 am–7:00 pm	60	1	9:30 am-6:00 pm	-	-	-
Phase 2	60	1	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 3	60	1	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 4	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm
Phase 5	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm

Figure 79 Proposed Route 40 Mesilla



Route 60 Missouri

Replaces: 60 Sky Blue

Route 60 will be realigned from Lohman Avenue, Amador Avenue, and Solano Drive to Avenida de Mesilla, South Valley Drive, and Boutz Road to improve access to Walmart, First Step Clinic, and Las Cruces High School. The route will continue to function as an east-west crosstown connection linking neighborhoods with grocery stores and schools. Route 60 will terminate at the Walmart on Walton Boulevard and no longer serve Mesilla Valley Mall.

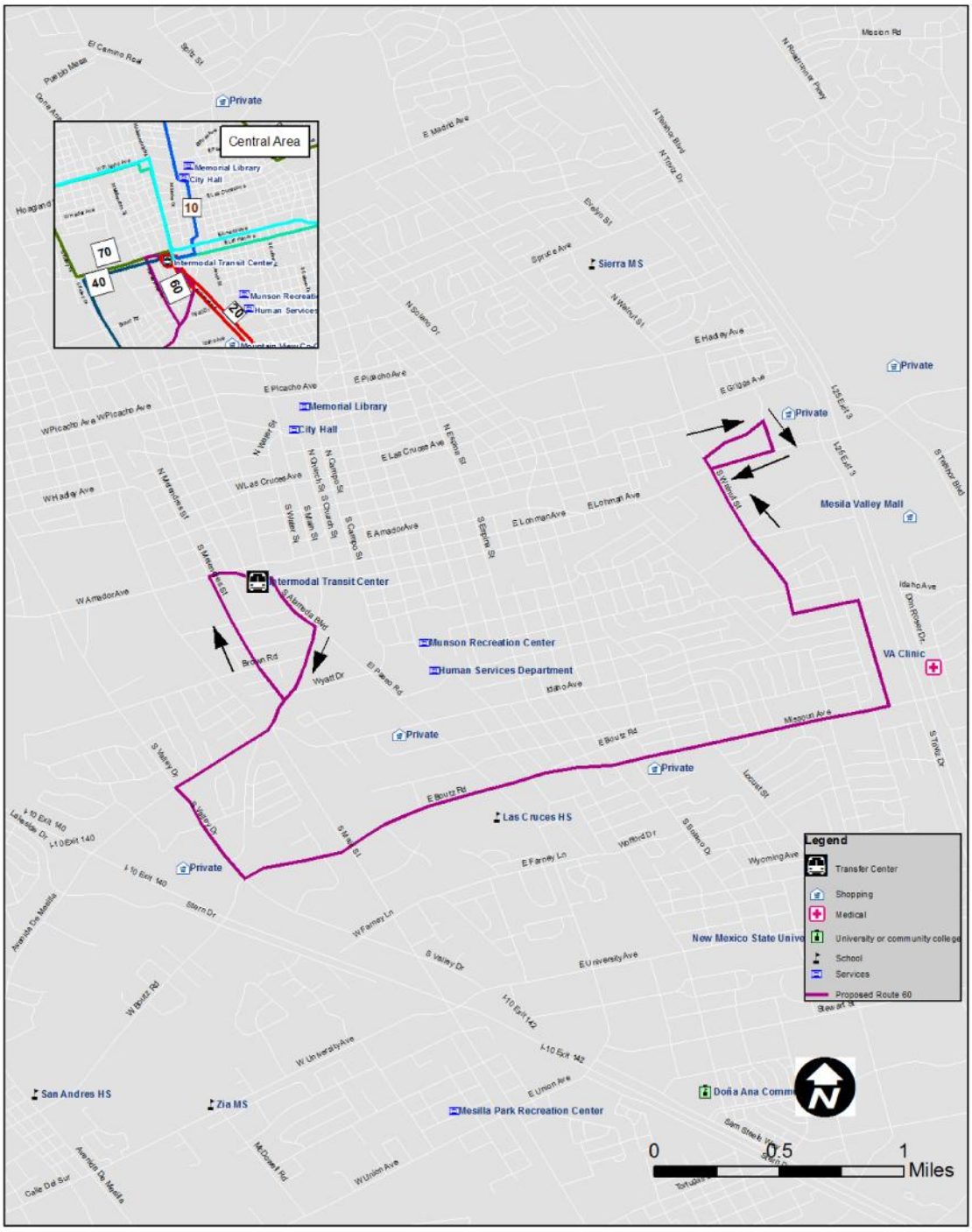
New stops will be installed at the following locations:

- Boutz & South Main
- Boutz & El Paseo

Recommended Service Levels

	Weekday			Saturday			Sunday		
Period	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span
Existing	60	1	6:30 am–7:00 pm	60	1	9:30 am-6:00 pm	-	-	-
Phase 1	60	1	6:30 am–7:00 pm	60	1	9:30 am-6:00 pm	-	-	-
Phase 2	60	1	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 3	60	1	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 4	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm
Phase 5	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm

Figure 80 Proposed Route 60 Missouri



Route 70 Madrid

Replaces: 70 Chile Green and 50 Rio Grande Blue

Route 70 will be realigned from Campo Street, Spruce Avenue, and North Solano Drive to North Valley Drive, Hoagland Drive, East Madrid, North Solano to provide bi-directional service along segments served by existing Route 50. Similar to Route 60, this route provides east-west connectivity between centrally-located neighborhoods, grocery stores, schools, the New Mexico Department of Health office and the Hadley Sports Complex. Route 70 will terminate at the Walmart on Walton Boulevard and no longer serve Mesilla Valley Mall.

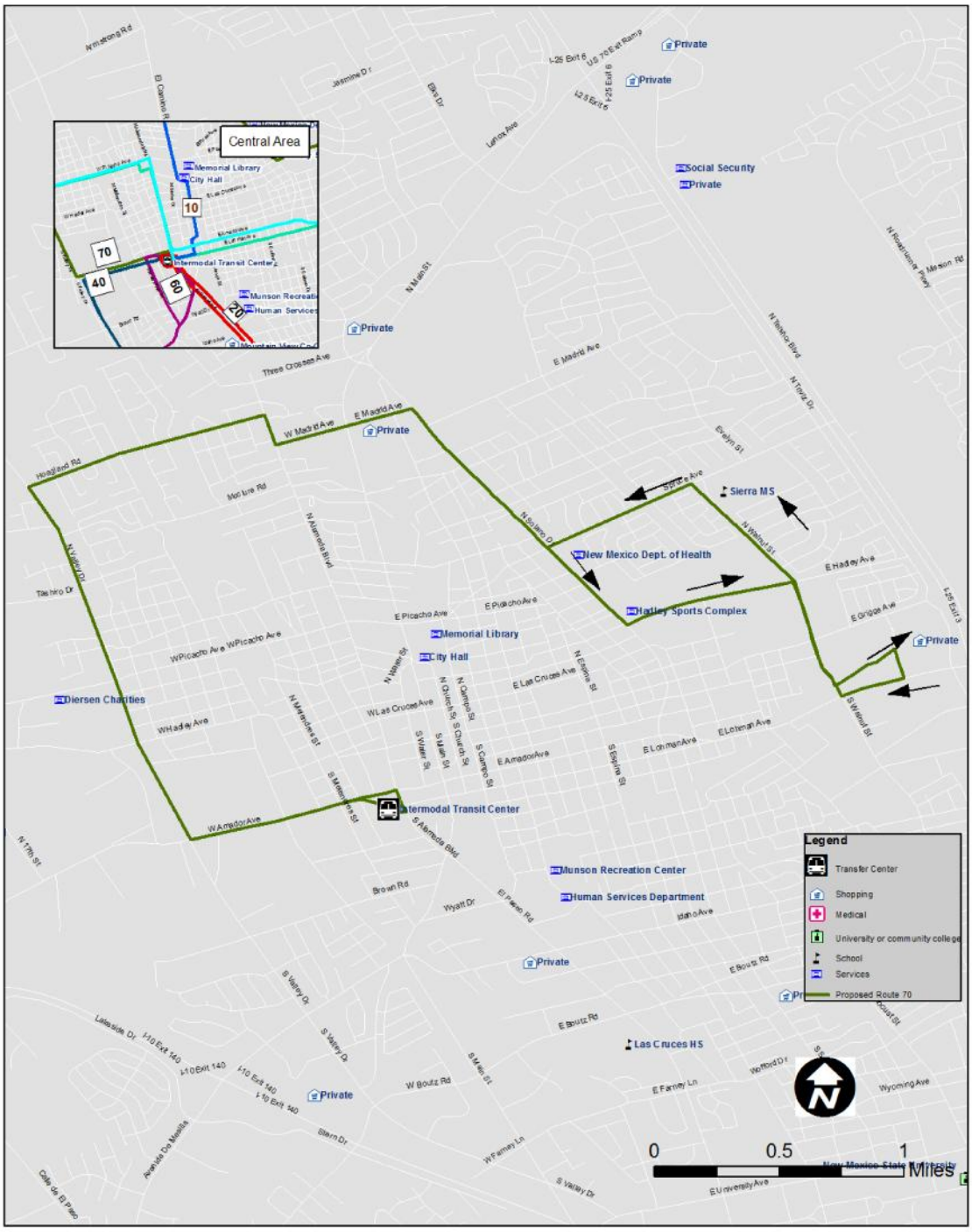
New stops will be installed at the following locations:

- Madrid & North Main

Recommended Service Levels

	Weekday			Saturday			Sunday		
Period	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span
Existing	60	1	6:30 am–7:00 pm	60	1	9:30 am–6:00 pm	-	-	-
Phase 1	60	1	6:30 am–7:00 pm	60	1	9:30 am-6:00 pm	-	-	-
Phase 2	60	1	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 3	60	1	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 4	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm
Phase 5	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm

Figure 81 Proposed Route 70 Madrid



Route 80 Picacho/Lohman

Replaces: 80 Picacho

Route 80 will operate bi-directionally along Picacho to improve route directness and reduce travel time. The route will also be extended to Mesilla Valley Mall, serving the East Amador Avenue and East Lohman corridors. The new service along East Amador and East Lohman reintroduces direct crosstown service that was previously tested and well-received by customers but was eventually discontinued due to a lack of permanent funding.

Route 80 will no longer serve Amador Avenue west of Alameda Boulevard. West Amador Avenue between Alameda Boulevard and South Valley Drive will be served by Route 70. Due to the anticipated customer interest of crosstown service along Lohman and Amador, Route 80 will likely require an additional bus following implementation of its new alignment. This route will serve make direct connections to several key destinations possible such as the Dona Ana County Government Center, the Mesilla Valley Mall and other key shopping and employment centers.

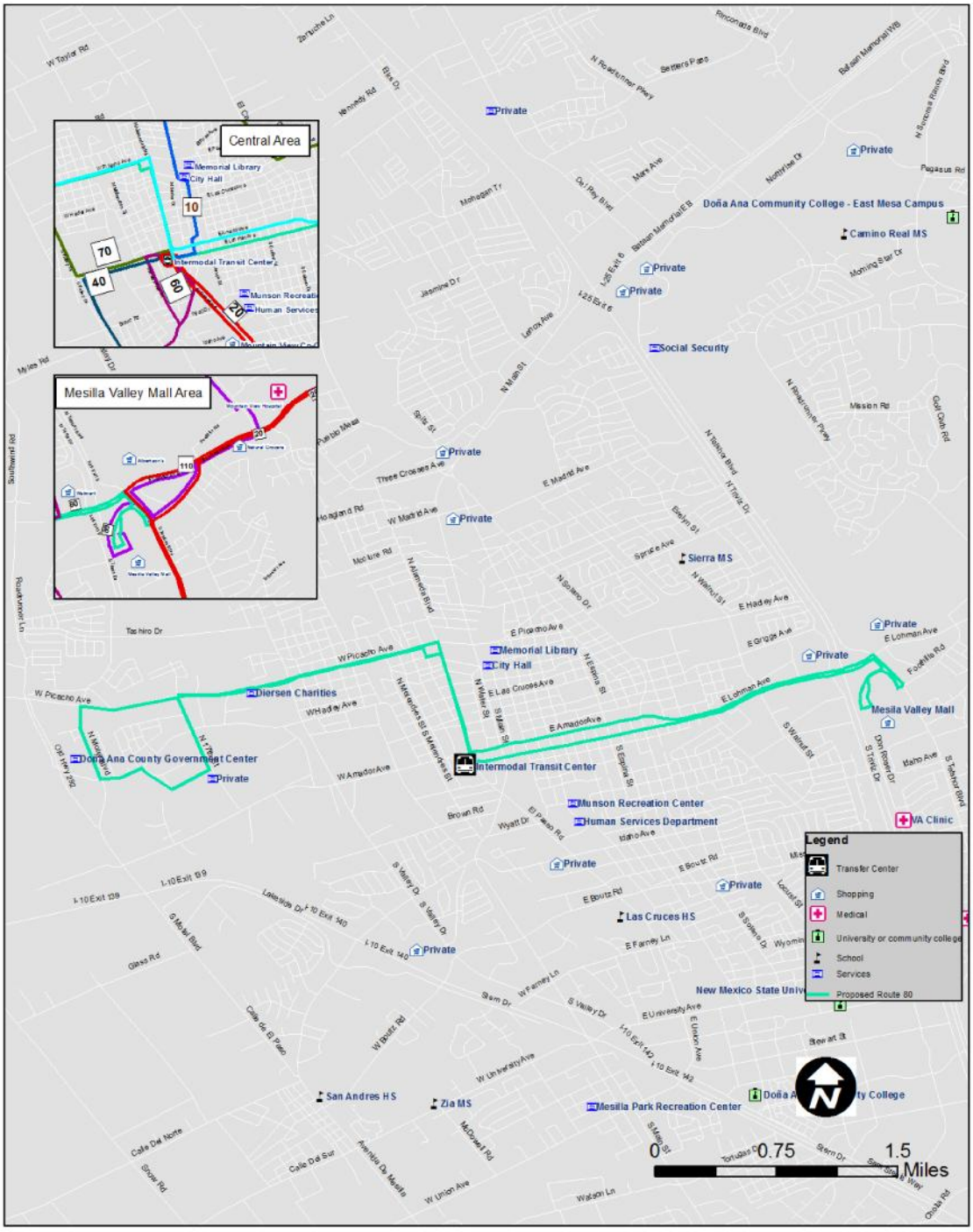
New stops will be installed at the following locations:

- Lohman & Solano
- Amador & Solano
- Lohman & Del Monte
- Lohman & Walnut
- Lohman & Walton

Recommended Service Levels

	Weekday			Saturday			Sunday		
Period	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span
Existing	60	1	6:30 am–7:00 pm	60	1	9:30 am–6:00 pm	-	-	-
Phase 1	60	1	6:30 am–7:00 pm	60	1	9:30 am-6:00 pm	-	-	-
Phase 2	60	1	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 3	30	2	6:30 am–8:30 pm	60	1	9:30 am-7:30 pm	-	-	-
Phase 4	30	2	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm
Phase 5	30	2	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm

Figure 82 Proposed Route 80 Picacho



Route 110 Bataan

Replaces: Portions of 10 Desert Orange and 90 Roadrunner Red

Route 110 replaces the eastern half of existing Route 10 and a portion of the existing Route 90, including a segment of Roadrunner. This route serves the Veterans Park Sports Complex, Mountain View Hospital and various shopping areas. This segment of existing Route 10 generates minimal ridership, yet serves as a lifeline for residents at the northeastern edge of the city, as well as just beyond city limits.

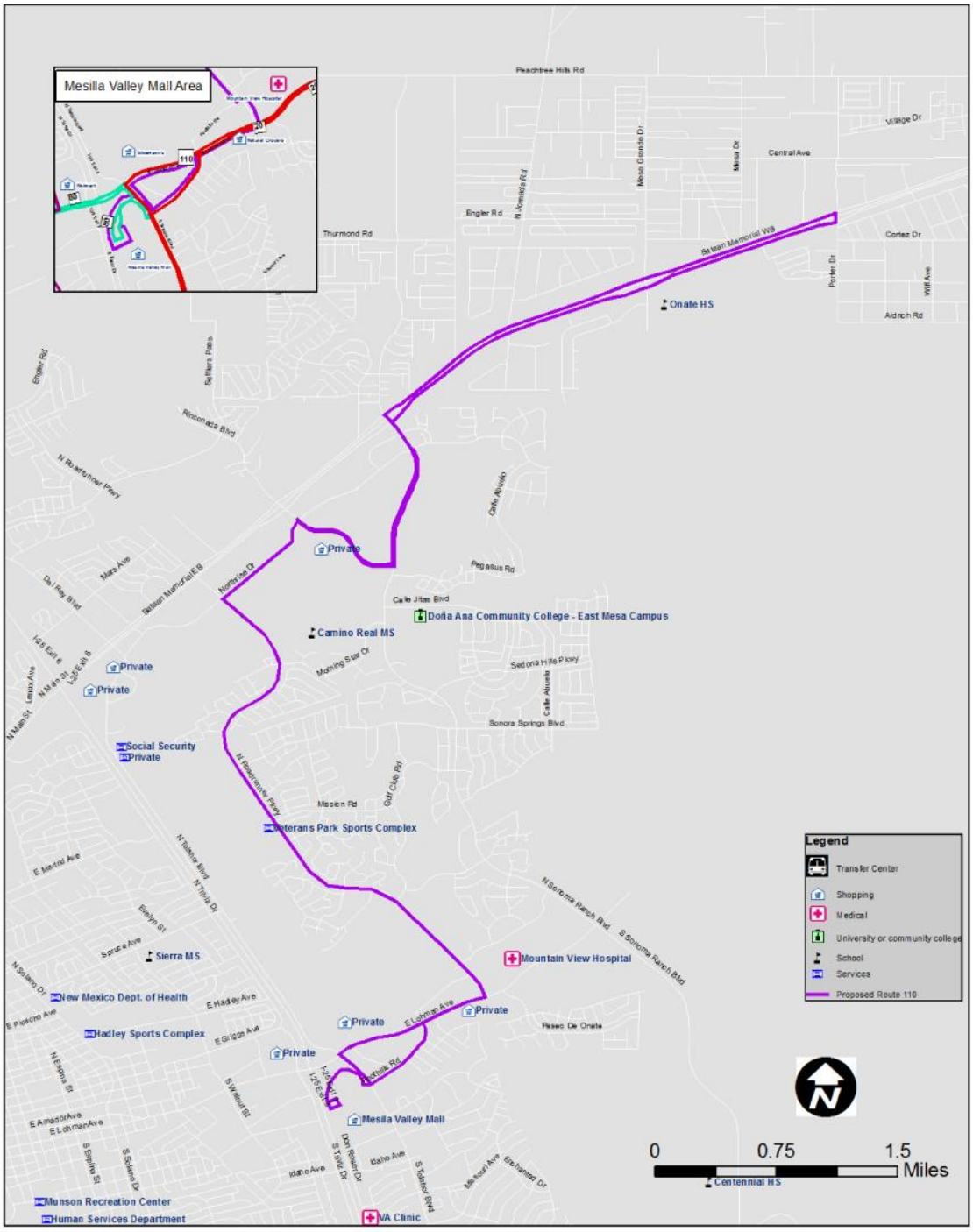
New stops will be installed at the following locations:

- Rinconada & Walmart
- Sonoma Ranch Road & Northrise

Recommended Service Levels

	Weekday			Saturday			Sunday		
Period	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span
Existing	60	1	6:30 am–7:00 pm	60	1	9:30 am–6:00 pm	-	-	-
Phase 1	60	1	6:30 am–7:00 pm	60	1	9:30 am–6:00 pm	-	-	-
Phase 2	60	1	6:30 am–8:30 pm	60	1	9:30 am–7:30 pm	-	-	-
Phase 3	60	1	6:30 am–8:30 pm	60	1	9:30 am–7:30 pm	-	-	-
Phase 4	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm
Phase 5	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm

Figure 83 Proposed Route 110 Bataan



Route 120 Solano

New Route

Route 120 provides crosstown service along the full length of Solano Drive, terminating at North Main and New Mexico State University. This future route will provide faster and more direct service to New Mexico State University from several central neighborhoods.

New stops will be installed at the following locations:

- Spitz & El Camino Real
- Solano & Madrid
- Solano & Griggs
- Solano & Amador/Lohman
- Solano & Missouri
- Solano & Wyoming
- University & Chaparral
- Locust & Wisconsin
- Wyoming & Jordan

Recommended Service Levels

	Weekday			Saturday			Sunday		
Period	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span	Headway	Vehicles	Service Span
Phase 5	60	1	6:30 am–8:30 pm	60	1	8:30 am-8:30 pm	60	1	9:30 am-7:30 pm

Figure 84 Proposed Route 120 Solano

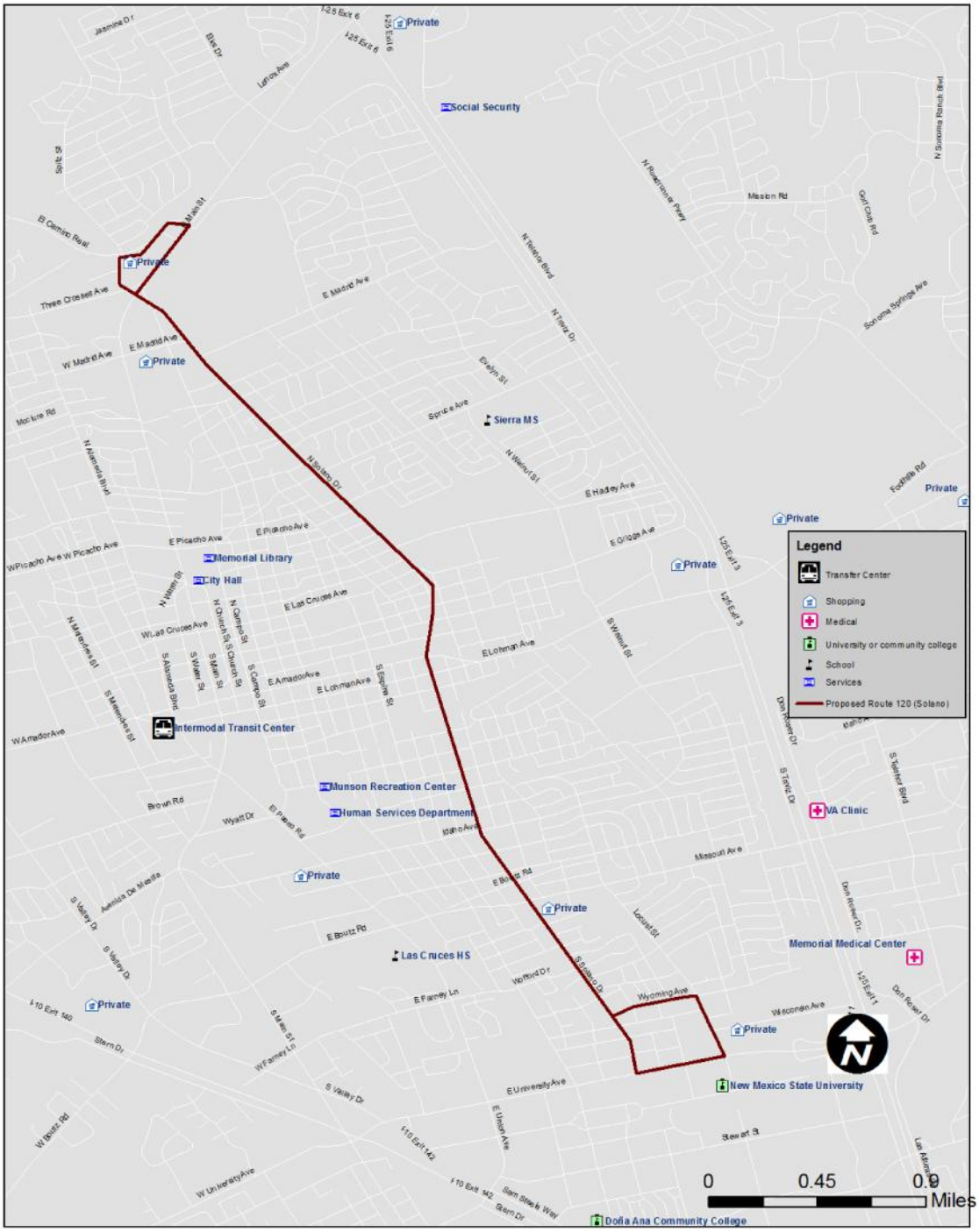


Figure 85 System Map (Phase 1-4)

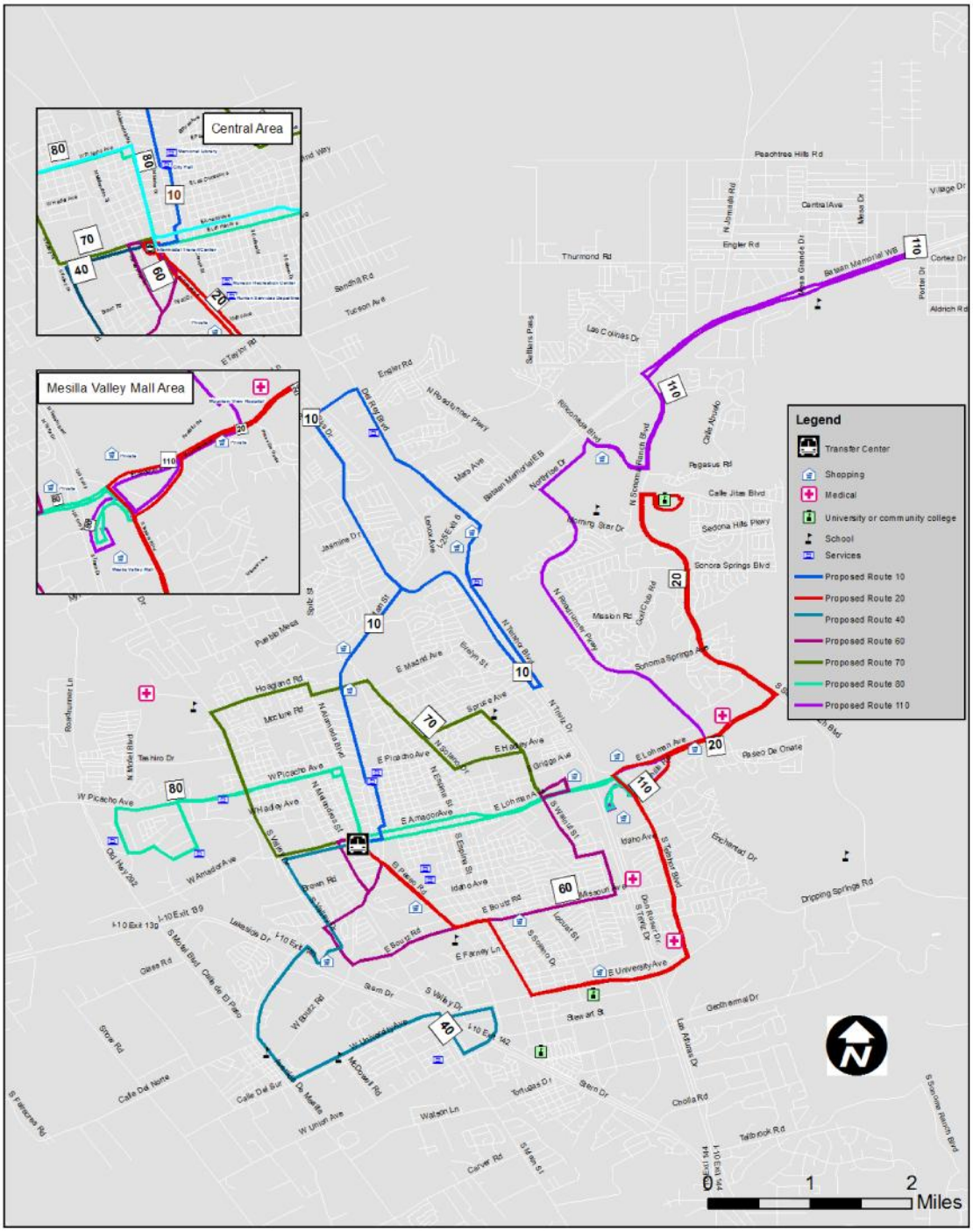
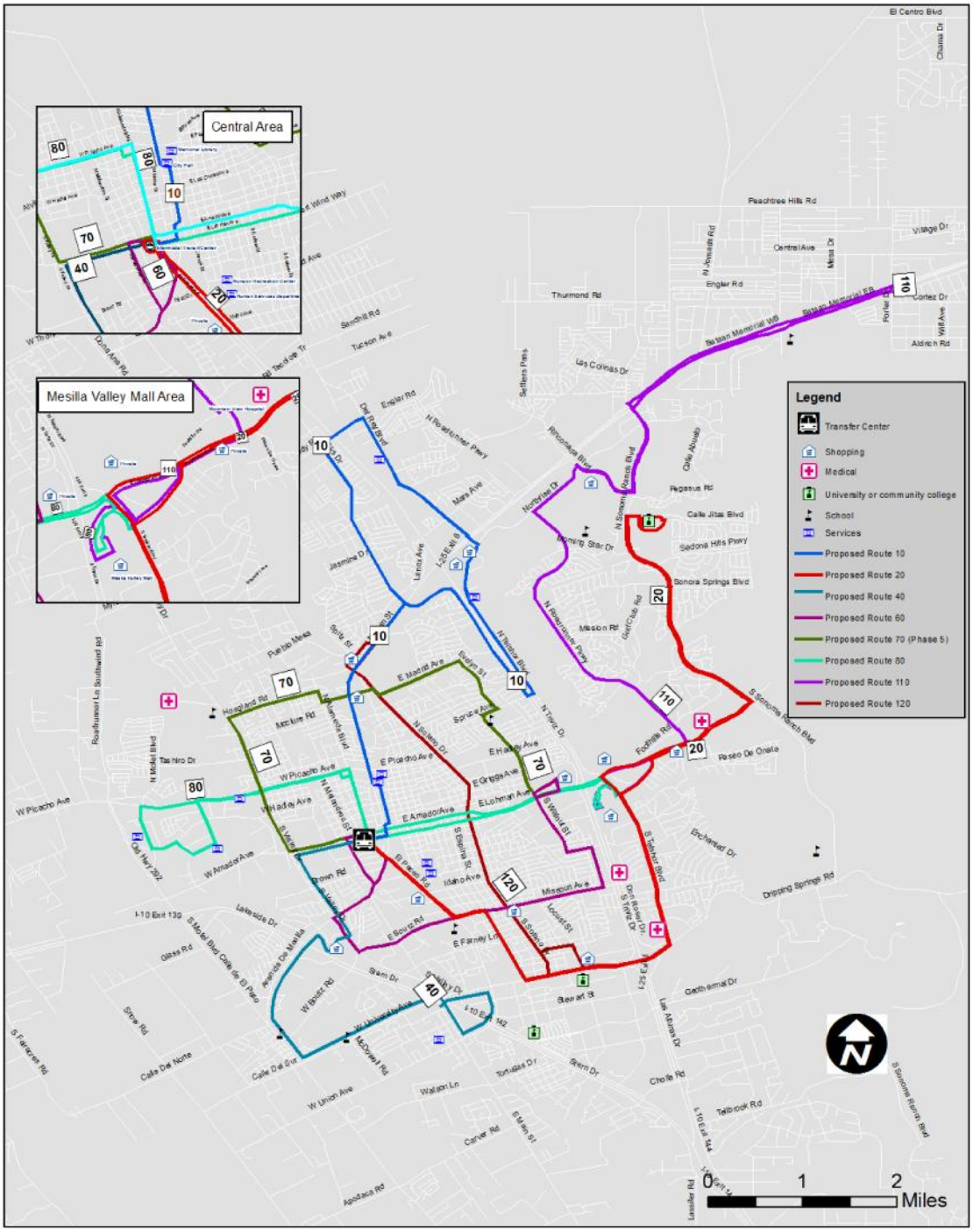


Figure 86 System Map (Phase 5)



Additional Route Characteristics

Route distances vary significantly however, each recommended cycle time is based on running times, speed limits of new corridors, and typical transit conditions (frequent stops and potential delays). Route distances and speeds are listed in Figure 87. The average speed of all proposed routes is 12.8 miles per hour. The average speed of all existing routes is 13.8 miles per hour.

Figure 87 Route Distances and Speeds

Route	Distance (miles)	Cycle Time (minutes)	Average Speed (mph)
Route 10 - North Main	10.7	60	10.7
Route 20 – University (weekdays)	22.0	90	14.7
Route 20 – University (weekends)	13.8	60	13.8
Route 40 - Mesilla	12.3	60	12.3
Route 60 - Missouri	12.0	60	12.0
Route 70 - Madrid	13.4	60	13.4
Route 80 - Picacho/Lohman	12.4	60	12.4
Route 110 - Bataan	17.8	60	17.8
Route 120 - Solano	9.2	60	9.2

Departure times at select route endpoints are listed in Figure 88. Each time indicates the minute of the hour in which the route departs from the specified location.

Figure 88 Connection Times

Route	MMTT	MVM	Walton
Route 10 - North Main	:00	-	-
Route 20 - University	:00	-	-
Route 40 - Mesilla	:00	-	-
Route 60 - Missouri	:00	-	:30
Route 70 - Madrid	:00	-	:30
Route 80 - Picacho/Lohman	:00	:30	-
Route 110 - Bataan	-	:30	-
Route 120 - Solano	-	-	-

A spatial comparison of the existing and recommended RoadRUNNER Transit system is provided in Figure 89.

Figure 89 Existing and Recommended System

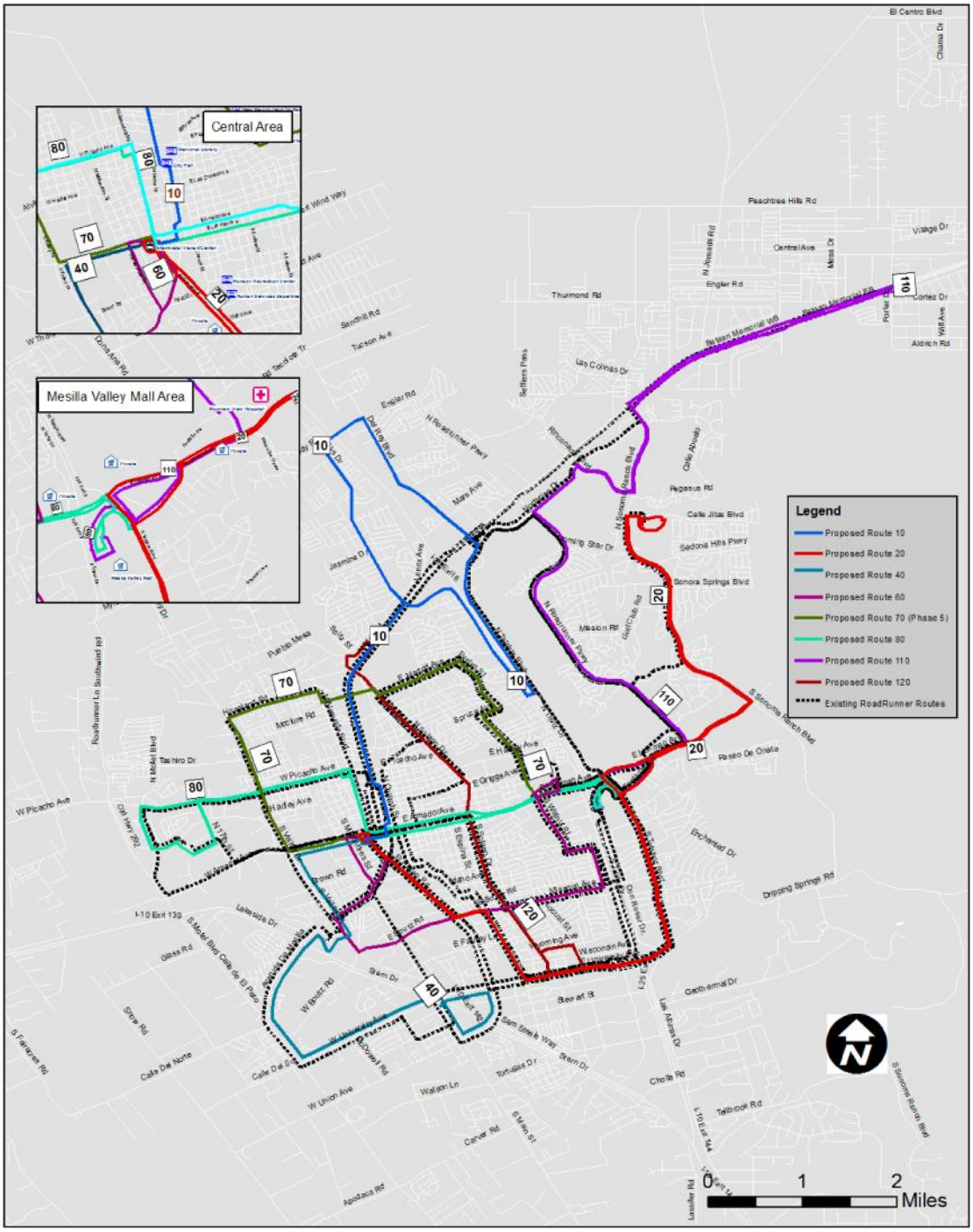


Figure 90 Summary of Phase 1 Recommendations

Route	Recommendation	Revenue Hours	Peak Vehicles
10 North Main	Realign from Northrise/Bataan to Elks/Del Rey	3,629	1
20 University	Consolidate with Route 30; Extend to DACC on weekdays; shorten to Hospital on Saturday	10,004	3
40 Mesilla	Two-way service to Walmart, Mesilla, Mesilla Park, NMSU	3,629	1
60 Missouri	Shorten to Walmart, extend to North Valley/Hogland	3,629	1
70 Madrid	Short to Walmart, extend to South Valley/Boutz	3,629	1
80 Lohman/Picacho	Operate bi-directionally; extend to Mesilla Valley Mall	3,629	1
110 Bataan	New route serving Bataan, Northrise, and North Telshor	3,629	1
Total		**31,781**	**9**

Figure 91 Summary of Phase 2 Recommendations

Route	Recommendation	Revenue Hours	Peak Vehicles
10 North Main	Increase weekday span	4,090	1
20 University	Increase weekday span	11,230	3
40 Mesilla	Increase weekday span	4,090	1
60 Missouri	Increase weekday span	4,090	1
70 Madrid	Increase weekday span	4,090	1
80 Lohman/Picacho	Increase weekday span	4,090	1
110 Bataan	No change	4,090	1
Total		**35,770**	**9**

Figure 92 Summary of Phase 3 Recommendations

Route	Recommendation	Revenue Hours	Peak Vehicles
10 North Main	No change	4,090	1
20 University	No change	11,230	3
40 Mesilla	No change	4,090	1
60 Missouri	No change	4,090	1
70 Madrid	No change	4,090	1
80 Lohman/Picacho	Improve to 30-minute headway on weekdays	7,660	2
110 Bataan	No change	4,090	1
Total		**39,340**	**10**

Figure 93 Summary of Phase 4 Recommendations

Route	Recommendation	Revenue Hours	Peak Vehicles
10 North Main	Increase Saturday span and add Sunday service	4,714	1
20 University	Increase Saturday span and add Sunday service	11,854	3
40 Mesilla	Increase Saturday span and add Sunday service	4,714	1
60 Missouri	Increase Saturday span and add Sunday service	4,714	1
70 Madrid	Increase Saturday span and add Sunday service	4,714	1
80 Lohman/Picacho	Increase Saturday span and add Sunday service	8,284	2
110 Bataan	Add weekend service	4,714	1
Total		**43,708**	**10**

Figure 94 Summary of Phase 5 Recommendations

Route	Recommendation	Revenue Hours	Peak Vehicles
10 North Main	No change	4,714	1
20 University	No change	11,362	3
40 Mesilla	No change	4,714	1
60 Missouri	No change	4,714	1
70 Madrid	No change	4,714	1
80 Lohman/Picacho	No change	8,284	2
110 Bataan	Increase weekday span	4,714	1
120 Solano	New route	4,714	1
Total		**47,930**	**11**

Figure 95 Summary with Cost Estimations for Recommendations

Phase	Fixed Route Revenue Hours	Demand Response Revenue Hours	Cost*	Increase by Phase	Cumulative Increase
1	31,398	21,774	$3,316,330	$0	$0
2	34,925	24,540	$3,734,232	$478, 919	$478,919
3	38,956	24,540	$3,984,489	$428,721	$907,640
4	43.216	28,284	$4,477,848	$511,419	$1,419,224
5	47,930	28,284	$4,773,810	$566,104	$1,985,328

*Costs based on$70.10 per fixed route revenue hour and $49.99 per demand response revenue hour based on National Transit Database estimations.

9 LONG-RANGE INVESTMENTS

Introduction

For many of the citizens of the City of Las Cruces, public transportation is not a luxury, but a necessity. It allows them to get to work, school, grocery stores, medical services, recreational facilities and to visit friends and relatives. The majority of existing riders do not have a vehicle at their disposal or cannot drive due to physical challenges. For these individuals, the RoadRUNNER system allows them independence and flexibility.

Another goal of public transportation is to decrease the dependence of the urban population on motorized private transportation. Having less private vehicles on the City's streets realizes less vehicular pollution, a decrease in the area's non-renewal energy consumption and a more pleasant environment for pedestrians and bicyclists. Moving away from an automobile-oriented environment contributes to creating a more sustainable urban environment and a better quality of life for the citizens of Las Cruces. A good public transportation system also attracts and retains new customers, particularly millennials. Many existing residents might choose public transportation over driving their personal vehicle if given an improved public transit system.

While the Short Range Transit Plan concentrates on route modifications and schedule revisions, this is only one element in ensuring an effective public transportation system. There are additional key components that should accompany this plan as transit-oriented development, bike lockers and bike sharing, a potential relocation of the east side transfer center, supplemental funding for public and private entities, marketing and coordination with other public transportation providers which will enhance the plan.

Transit-Oriented Development

Transit-Oriented Development (TOD) is mixed residential, commercial and employment sites and supplemental facilities for bicycles and pedestrians that enhance the use of public transportation. One of the aspects of TODs is increased density and a concentration of destinations. In addition, being able to bike or walk to transit stops safely encourages transit usage. TOD can be an integral part of Planned Unit Developments, proposed corridors or redevelopment of existing corridors.

Bike Lockers, Bike Sharing

The integration of bicycles with transit extends its coverage area and creates a more transit-friendly environment. On the RoadRUNNER system, there is a heavy utilization of the bike racks located in the front of the buses. At times, there is not enough space for those wishing to store their bicycles on RoadRUNNER buses. Secure bike lockers are one way to provide an alternative for those wishing to store their bike near their originating bus stop. This is also a means to extend the coverage area of routes. Bike sharing consists of individuals paying on-site or online for the use of communal bicycles. The individuals can either use a bike at bike share stand at either end of the trip by putting in money or a credit card or then return it to another bike share stand when finished. Potential bicycle facilities are depicted in Figure 96.

Figure 96 Potential Bicycle Facilities

Additional Transfer Centers

In the beginning stages of the examination of the RoadRUNNER system, there were concerns about the delays at the Mesilla Valley Intermodal Center and the difficulty entering and exiting the Mesilla Valley Mall Transfer Center. Most of this was related to the length of Routes 10 and 90 and connection at timed transfer sites. The proposed route structure in Phase One resolves these issues and decreases the amount of routes having to transfer at Mesilla Valley Mall.

However, in the future it is anticipated that there will be the necessity of having another East Side Transfer Center, possibly located along East Lohman Avenue. The east side of the Las Cruces area is growing more than other areas and has a number of significant attractors (e.g. Memorial Hospital, East Mesa Branch of Doña Ana Community College. In addition, a relocated eastside transfer center could serve as focus for transit-oriented development.

There is also a potential for a Southern New Mexico State University Transfer Center connecting with the internal campus routes, South Central Regional Transit District, and the New Mexico Department of Transportation routes.

Supplemental Funding and Subsidized Services

Many public transit systems in the nation have funds supplied outside of farebox revenue and Federal and State subsidies. Private funds may be directly related to providing direct service for a particular public or private entity. Also, a traditional supplemental private funding can be advertising on public transit vehicles either inside or outside of the bus. These help these systems to provide additional services. The RoadRUNNER system runs internal routes for NMSU and provides a route from the Mesilla Valley to the East Mesa Campus of Doña Community College which is subsidized by the College. In addition, NMSU provides bus passes (UPASS) for all students enrolled at the university.

There may be other services in the future to extend the service of the RoadRUNNER with possible subsidy from private or public entities. This may take the form of late night paratransit services for workers after regular operating hours or for students with late night classes. It could also be late night fixed route services to key destinations subsidized by educational institutions. Such services are being offered by the similar sized or peer group systems.

The subsidy may be by employers in terms of reduced or free bus passes to their employees. This has been done frequently for public and private employers for their employees. Subsidized bus passes could also be through public service organizations such as those whose clients are homeless, low-income, elderly etc. Subsidies are also often provided by various entities for traffic congestion mitigation during festivals and sport events.

Marketing

Changes to the RoadRUNNER system impact the everyday travel routines of customers. Like any product or service change, there is a need for the public to be aware. A major source of information will be the new route maps which will be available at the Mesilla Valley Intermodal Center and other key locations (i.e. Las Cruces City Hall, locations that sell bus passes and important public gathering places.) In addition, the staff through the public information office of the City of Las Cruces will make the public aware of the route and schedule changes.

While it is important to promote the new route changes, marketing is an ongoing effort, essential to the function of any public transit operator. This can take many forms from advertisement in newspapers and newsletters, visibility in local organizations, television spots, and social media. It

can be through programs that will help persons use the bus for the first time. Marketing efforts may also consist of visits to educational institutions major employers.

Many transit systems at the same size as RoadRUNNER transit have personnel to be in charge of marketing, advertising and/or community involvement. Presently, the system does not have dedicated staff for this purpose. It would be recommended that a portion of the budget be allocated for a full-time marketing person with an appropriate budget for advertising and contracting for services.

Closing Remarks

The RoadRUNNER system is a vital to the mobility needs of the urbanized area and the surrounding region. For some, it is their lifeline to jobs, shopping, services and social events particularly those who cannot afford a vehicle or unable to drive because of being too young or disabled. To others, it provides an alternative to their private vehicle saving them money and giving them convenience away from the parking problems etc. The expansion of public transportation adds to the quality of life that is essential in the developing nature of urbanization. It is also crucial to maintaining mobility, reducing air pollution, decreasing dependency on fossil fuels, and minimizing the costs associated with additional roadway construction.

10 PERFORMANCE METRICS

Performance metrics will maximize the effective use of limited resources by creating a rational and transparent evaluation process. This process will assist RoadRUNNER in determining priorities when allocating funds and programming future transit investments. Performance metrics describe the methodology by which services are evaluated. Five metrics are proposed to measure each fixed-route.

Ridership Productivity

Ridership productivity measures route performance based on a unit of service. Routes are evaluated based on passengers per revenue hour, which is calculated by dividing the total number of boardings by the total number of vehicle revenue hours.

Average Daily Boardings ÷ Daily Revenue Hours

Passenger Loads

While passengers per revenue hour and passengers per trip are the important measures of overall route performance, they do not provide insight into conditions along specific segments of the route. Managing passenger loads is crucial in maintaining customer satisfaction, schedule reliability, and safe operations.

Automated passenger counting systems (APC's) provide the capability to record the size of the maximum load on each trip in the system. While RoadRunner does not currently own APC's, two units have been purchased to be rotated among the routes for reliable samples. Passenger load data will highlight where capacity issues are creating routine standing loads or pass-by situations, and where seating capacity is going unused. Depending upon individual circumstances, service level modifications or vehicle assignment modifications may be appropriate when the peak loads approach or exceed seating capacity. Similarly, routes or trips with minimal passenger loads may warrant a closer examination of the route alignment and/or schedule.

Load factors reflect the ratio of passengers to total seated capacity. Load factors vary by route type and time of day. Average peak load factor is the average of all peak loads divided by the average seated capacity of buses employed on a route. For example, if the average peak load of all trips is 30 and the average vehicle capacity is 40, the average peak load factor is 75%.

Average Peak Load ÷ Seating Capacity

Overcrowding on buses often indicates the need for improved headways or increased capacity. Appropriate load factors vary by time of day. During peak periods it is generally acceptable for some passengers to be expected to stand for part of the trip. Thus, during peak periods, routes operating primarily on local arterials may operate with load factors exceeding 100%.

Cost-Effectiveness

Cost-effectiveness is typically expressed in terms of operating cost per passenger or subsidy per passenger. Operating cost per passenger is calculated by dividing all operating and administrative costs by total boardings. Subsidy per passenger is a further refinement of this measure and is

calculated by subtracting revenue generated by fares from gross operating and administrative costs, and dividing by total passengers.

Daily Administrative and Operating Costs ÷ Total Daily Boardings

Schedule Reliability

Schedule reliability is a measure of how well a particular route adheres to its schedule. It suggests whether a customer can count on a bus being there when the schedule says it will be. For most systems, buses are considered on-time if they depart a designated timepoint between zero and 5 minutes later than the scheduled departure time. Buses should never depart a timepoint ahead of schedule unless operators are given explicit permission to do so.

Potential impacts on on-time performance include inadequate running times, traffic conditions, or constructions. A high number of boardings on a particular trip or at a specific stop may also affect schedule reliability if recovery time is insufficient to absorb the added time.

Trips Departing Between Zero and Five Minutes of Scheduled Time ÷ Total Daily Trips

Schedule Efficiency

Schedule efficiency can sometimes be improved by reducing layover at the end of a route or deadhead (time spent traveling to/from the garage or another route), thereby allowing a larger percentage of total service hours to be devoted to revenue time.

Schedule efficiency is measured by calculating the ratio of revenue hours to total platform hours (deadhead, layover, and revenue hours). Schedule efficiency ratios that are higher than those of peer services may point to operating issues such as schedules that cannot be cost-effectively broken into vehicle assignments or routes with distant or inefficient terminal points. Typical schedule efficiency ratio targets are within 80-90%.

While schedule efficiency does not consider actual ridership, it is suggested because it so often points to major inefficiencies in current scheduling practices. Schedules with a high percentage of non-service time are expensive. If that ratio can be improved, cost savings can be achieved, often with minimal impact on riders.

Total Revenue Hours ÷ Total Platform Hours

Recommended Performance Standards

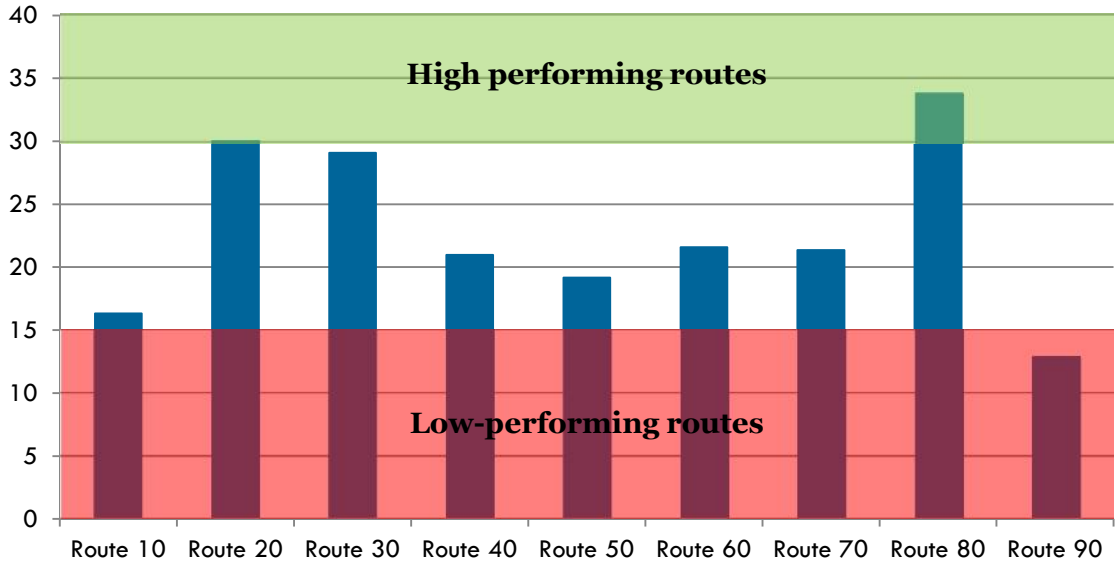
Recommended performance standards are detailed in the table below. Standards are based on recent ridership performance trends and best practices for similar services. Performance standards should be re-evaluated biennially.

Figure 97 Recommended Performance Standards

Service Level	Ridership Productivity	Maximum Passenger Load	Schedule Reliability	Schedule Efficiency
Weekday	25	125%	90%	95%
Saturday	20	125%	90%	95%

Routes performing below 66% (low-performing routes) may require corrective action such as schedule adjustments, route modifications, or consolidation. At the opposite end of the scale, ratings above 133% (high-performing routes) may indicate the demand for additional service in the form of improved headways or peak hour supplemental trips.

Figure 98 Route Performance Categories



11 SERVICE DESIGN GUIDELINES

Service design guidelines are planning tools that are used to expand service to new areas or modify existing routes. RoadRUNNER Transit strives to serve as many local area residents, students, workers, and visitors as they can with their available resources. Service features that attract one type of rider to transit can deter other riders, requiring a balance these types of competing demands. However, there are certain service design principles that will improve service for nearly all riders. This section describes practices that will attract the most riders and balance competing demands.

Service Planning Principles

For people to use transit, service should be designed so that it is easy to understand. In this way, current and potential riders can grasp and use the transportation options available to take them where and when they want to go with ease. Most of the guidelines in this section are aimed at making service intuitive, logical, and easy to understand. Most transit networks are very complicated, and simplification is a key value in creating networks that people can navigate easily to make many kinds of trips.

Route Directness

Routes should be designed to operate as directly as possible to maximize average speed for the bus and minimize travel time for passengers while maintaining access to service. Fast and direct routes tend to be useful to more people than circuitous routes. Even if a trip requires transferring between two routes, it is likely to be faster than a trip using a circuitous route.

Travel times and directness of service can be affected by a series of factors that are a function of the environment in which service operates. Some of these factors include:

- Traffic congestion
- Street geometry and turning movements
- Presence and operations of traffic signals
- Accessibility of streets from adjacent areas
- Stops with high ridership or mobility-impaired customers

Route Alignment

Routes should operate along the same alignment in both directions to make it easy for riders to know how to return to their trip origin location. Exceptions can be made in cases where such operation is not possible due to one-way streets, turn restrictions, or near the end of a route where the bus must turn around. In those cases, routes should be designed so that the opposite directions parallel each other as closely as possible.

While routes that include large loops or several deviations maximize transit coverage, they also result in out-of-direction travel that is not intuitive or attractive to potential customers.

Route Deviations

Routes should not deviate from the most direct alignment unless there is a compelling reason. Potential destinations to deviate service include major shopping centers, employment sites, schools, etc.

In these cases, the benefits of operating the route off of the main route must be weighed against the inconvenience caused to passengers already on board. Additional considerations include the impact on overall route productivity, the increase time added as a result of the deviation, and the schedule coordination with connecting services. In most cases, where route deviations are provided, they should be provided on an all day basis. Exceptions include early morning or late night trips to schools or employment centers with limited hours.

Arterial Streets

All frequent local and local routes should operate on major roadways. The operation of bus service along arterials makes transit service faster and easier for riders to understand and use. Current and potential riders typically have a general knowledge of an area's arterial road system and use that knowledge for geographic points of reference.

Route Length

Routes should be the appropriate length to maximize ridership potential and minimize operational issues. Two routes serving different parts of the service area with a shared terminus, such as a transit center or major destination may be combined as one route or interlined in order to operate more cost-effectively. However, excessively long local routes (cycle times greater than 120 minutes) should be avoided to minimize potential schedule adherence issues.

Schedule Simplicity

A consistent pattern to the schedule is strongly recommended. While headways may vary during the day according to demand, it should not vary with apparent randomness from one trip to the next. Whenever possible, routes should also have clockface headways that divide evenly into an hour, such as every 15, 20, 30, or 60 minutes.

Clockface headways are easier for passengers to remember and can help facilitate better transfer connections between routes. Whenever possible, headways should be set at regular clock-face intervals. However, there are two key exceptions:

- Where individual trips must be adjusted away from clock-face intervals to meet shift times, work times, transfer connections, or other special circumstances
- Where the desired headway of service causes round trip recovery time to exceed 20% of the total round trip vehicle time, leading to inefficient service

Clockface headways also offer greater ease in scheduling timed connections between routes that occur consistently in each hour.

Service Allocation

Service allocation guidelines are used to determine appropriate service levels for fixed-route service and are tailored to each specific route type. RoadRUNNER should strive to meet the

minimum service span and headways guidelines. Additional service guidelines are based on transit best practices.

Service Span

The number of hours per day that a route operates plays a role in determining the effectiveness of transit service for potential users. Transit service must be available near the time a trip needs to be made in order for transit to be a viable travel option. Weekday routes should permit workers and students to make their morning start times, and should end late enough to provide return trips home for second shift workers in urban areas. Service oriented to non-work travel can start later and end sooner.

Headways

Service headways are one of the most important determinants of ridership. More frequent service attracts more passengers assuming a market is present. At the same time, headways have a significant impact on operating costs, and service requirements increase significantly with improvements in headways. Because of the expense of frequent service, headways are normally scheduled based upon existing or potential demand. This may translate into variations in headways throughout the day, with higher headways in peak periods, and less frequent service outside of the peak.

Stop Spacing

The distance between stops is a key element in balancing transit access and service efficiency. More closely spaced stops provide customers with more convenient access as they are likely to experience a shorter walk to the nearest bus stop. Since most riders want service that balances convenience and speed, the number and location of stops is a key component of determining that balance.

Stop Placement

Bus stop placement involves a balance of customer safety, accessibility, and operations. All stops should be fully accessible with a concrete landing and access to sidewalk or pathway. Bus stops should be compatible with adjacent land use and minimize adverse impacts on the built and natural environment.

Near-side and far-side stops allow passengers to board and alight closer to intersection crosswalks and are generally preferred over mid-block stops. Far-side stops allow bus operators to use intersection as a deceleration lane and are preferred at intersections in which buses make left turns and intersections with a high volume of right turning vehicles. Mid-block stops should only be considered if pedestrian crosswalks are present. Mid-block stops may be the only option at major intersections with dedicated turn lanes.

Specific ridership generators may determine the placement of a bus stop. Infrastructure consideration for bus stop placement includes lighting, topography, and roadside constraints such as driveways, trees, poles, fire hydrants, etc.