Understanding the current state of transit in Las Cruces is vital to planning for the future. What works well, and what could be improved? Where do people need transit most, and where do people want to go? The answers to these questions lay the groundwork for helpful recommendations and alternatives.
INTRODUCTION

The first step in developing the RoadRUNNER Short Range Transit Plan (SRTP) is to establish a baseline and understand the state of transit as it operates today. Understanding the existing system will help establish thresholds used for the development of future service. The operational analysis also reveals what aspects of the existing transit system work well and identifies opportunities for improvements, which will in turn inform the development of recommendations such as route alignment modifications and service level adjustments. This process helps pinpoint the strengths and eliminate the weaknesses of the system in a manner that improves transit for existing passengers and positions it to attract new passengers.

The analysis of existing conditions in Las Cruces includes the following:

- Profiles of Each Route
- Ridership Analysis
- Market Analysis
- Desire Line Analysis

Each part of the existing conditions analysis is discussed in greater detail below.

Figure 1-1: Overview of Study Area
OPERATIONAL CHARACTERISTICS

RoadRUNNER Transit currently operates 8 American with Disabilities Act (ADA) accessible fixed routes that originate at the Mesilla Valley Intermodal Transit Terminal located at W. Lohman Ave. and S. Alameda Blvd. RoadRUNNER fixed routes include eight different routes, as seen in Figure 1. RoadRUNNER Transit also provides fare-free ADA paratransit service, referred to locally as ADA Dial-A-Ride, which provides on-demand service for senior citizens or persons whose disability creates challenges to using the fixed route service. A detailed analysis of RoadRUNNER paratransit service can be found in Chapter 2.

While most transit systems operate on a “hub and spoke model,” RoadRUNNER transit operates on a dual hub and spoke model. Instead of having one major transit hub, RoadRUNNER has two: Mesilla Valley Intermodal Transit Terminal (MVITT) and Mesilla Valley Mall (MVM). Each RoadRUNNER route has a connection to one of the two transit hubs, and several have connections to both, making transferring between lines easier. Additionally, several routes intersect with each other, as shown in Table 1-1 below.

Table 1-1: RoadRUNNER Shared Stops

<table>
<thead>
<tr>
<th>Stop Name</th>
<th>Route</th>
<th>Route 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missouri across from Wok-N-World</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Telshor @ Hotel Encanto</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Foothills, Horizon View</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Lohman West &amp; Roadrunner</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Lohman @ Dunkin Donuts</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Telshor @ Mesilla Valley Mall</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>University @ Pan Am Plaza</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>University &amp; Jordan</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Missouri before Durazno</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Lohman across Ross &amp; Marshalls</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Amador &amp; Mesilla</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Amador &amp; Gospel Rescue Mission</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Amador &amp; McSwain</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Divot across from Walnut</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Mesilla Valley Mall</td>
<td>8</td>
<td>3</td>
</tr>
</tbody>
</table>

The eight RoadRUNNER routes currently cover over 1,500 miles each day, providing service from 6:30am to 11:00pm each weekday and from 9:00am to 6:00 pm each Saturday. The frequency of most routes is 60 minutes, but Routes 2 and 5 provide 30-minute frequency, as shown in Table 2.
### Table 1-2: RoadRUNNER Routes Level of Service

<table>
<thead>
<tr>
<th>Routes</th>
<th>Service Day</th>
<th>Span</th>
<th>Frequency</th>
<th>Average Daily Boardings</th>
<th>Annual Boardings</th>
<th>Peak Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 1</td>
<td>Weekdays + Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00 pm Saturdays</td>
<td>60 min</td>
<td>157</td>
<td>47,704</td>
<td>1</td>
</tr>
<tr>
<td>Route 2</td>
<td>Weekdays + Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00 pm Saturdays</td>
<td>30 min</td>
<td>494</td>
<td>151,127</td>
<td>3</td>
</tr>
<tr>
<td>Route 3</td>
<td>Weekdays + Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00 pm Saturdays</td>
<td>60 min</td>
<td>122</td>
<td>37,333</td>
<td>1</td>
</tr>
<tr>
<td>Route 4</td>
<td>Weekdays + Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00 pm Saturdays</td>
<td>60 min</td>
<td>162</td>
<td>49,295</td>
<td>1</td>
</tr>
<tr>
<td>Route 5</td>
<td>Weekdays + Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00 pm Saturdays</td>
<td>30 min</td>
<td>203</td>
<td>62,146</td>
<td>1</td>
</tr>
<tr>
<td>Route 6</td>
<td>Weekdays + Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00 pm Saturdays</td>
<td>60 min</td>
<td>181</td>
<td>55,152</td>
<td>1</td>
</tr>
<tr>
<td>Route 7</td>
<td>Weekdays + Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00 pm Saturdays</td>
<td>60 min</td>
<td>140</td>
<td>42,801</td>
<td>1</td>
</tr>
<tr>
<td>Route 8</td>
<td>Weekdays + Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00 pm Saturdays</td>
<td>60 min</td>
<td>238</td>
<td>72,666</td>
<td>1</td>
</tr>
<tr>
<td>Aggie Green Route</td>
<td>Weekdays</td>
<td>7:00am – 6:00pm</td>
<td>10 min</td>
<td>361</td>
<td>66,130</td>
<td>2</td>
</tr>
<tr>
<td>Aggie Blue Route</td>
<td>Weekdays</td>
<td>7:00am – 6:00pm</td>
<td>20 min</td>
<td>231</td>
<td>19,759</td>
<td>1</td>
</tr>
<tr>
<td>RoadRUNNER System</td>
<td>Monday Saturday</td>
<td></td>
<td></td>
<td>2,141</td>
<td>604,113</td>
<td>1.25</td>
</tr>
</tbody>
</table>

**Fare Structure**

Fares for the RoadRUNNER transit system cost $1.00 per ride for adults age 19 to 59. Some riders may be eligible for a $.50 reduced fare, including youth (ages 6 to 18), senior citizens (60 and older), persons with disabilities, Medicare holders, or students with valid school identification.
Children younger than five can ride for free. Day passes are also available for $2.00 at full fare and $1.00 reduced fare, as well as other types of passes shown below. Tickets can be bought with a credit card at Albertsons, City Hall, East Mesa Customer Service Center, and the MVITT Center. Funding for RoadRUNNER transit is provided by fare revenues and supplementary funding through the City of Las Cruces. Additionally, service to DACC-East Mesa Campus on Route 2 is partially subsidized by DACC.

Table 1-3: RoadRUNNER Fare Passes

<table>
<thead>
<tr>
<th>Pass Type</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Passes</td>
<td>$2.00 at full fare and $1.00 for reduced fare</td>
</tr>
<tr>
<td>Weekly Passes</td>
<td>$8 at full fare and $4 for reduced fare</td>
</tr>
<tr>
<td>31-Day Passes</td>
<td>$30 at full fare and $15 for reduced fare</td>
</tr>
<tr>
<td>30-Ride Passes</td>
<td>$30 at full fare and $15 for reduced fare</td>
</tr>
</tbody>
</table>

**Intersecting with Other Transit Providers**

In addition to the 8 routes that RoadRUNNER transit operates, they commonly intersect with South Central Regional Transit (SCRTD) routes, New Mexico Department of Transportation (NMDOT) routes, Z Trans (a service operated by a nonprofit), and Aggie Routes, which is a transit line operated by RoadRUNNER transit for New Mexico State University (NMSU). Table 1-4 shows the available transfers between different providers, and the maps below display their routes.

Table 1-4: RoadRUNNER Routes that Transfer to Other Providers

<table>
<thead>
<tr>
<th>Route</th>
<th>SCRTD Routes</th>
<th>NMDOT Routes</th>
<th>Z Trans</th>
<th>Aggie Routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 1</td>
<td>Yes – Green Line</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Route 2</td>
<td>Yes – Red Line</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Route 3</td>
<td>Yes – Green Line</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Route 4</td>
<td>Yes – Red Line</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Route 5</td>
<td>Yes – Red Line</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Route 6</td>
<td>Yes – Red Line</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Route 7</td>
<td>Yes – Red Line</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Route 8</td>
<td>Yes – Red Line</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
NMDOT ROUTES
The NMDOT operates multiple park & ride locations during peak commute times to increase mobility options for the general public in New Mexico. While the service coverage includes multiple municipalities, the routes intersect with RoadRUNNER transit in the Gold and Silver Lines specifically. The Gold Route runs from Las Cruces to El Paso, and the Silver Route runs from Las Cruces to the White Sands Missile Range, as shown in Figure 1-3.

Figure 1-3: NMDOT Gold and Silver Lines
AGGIE ROUTES

Aggie Transit is operated by RoadRUNNER transit and provided by NMSU at no cost to students. The service operates on campus Monday through Friday while class is in session (including the summer session), and services stop operating during school breaks and holidays. Figure 1-4 shows the Aggie Routes.

Figure 1-4: Aggie Routes
Z-TRANS
Z-Trans, now known as the Orange Route, is a public transportation provider in the Tularosa Basin and nearby region. Since 2001, Z-Trans has been operating and moving people to and from Alamogordo, Holloman AFB, La Luz, Tularosa, Mescalero Apache Reservation, and Las Cruces. Specifically, the route the connects to RoadRUNNER service runs from Alamogordo to Las Cruces. The transit service is made possible by Zia Therapy Center, Inc. in Alamogordo. Z-Trans is partially subsidized by SCRTD to provide service to the Las Cruces area from Alamogordo, and the City of Las Cruces provides partial funding for this service through SCRTD.

SCRTD ROUTES
SCRTD Routes serve communities throughout Dona Ana County, including the following municipalities: Las Cruces, Hatch, Mesilla, Sunland Park the Village of Dona Ana, and El Paso. As a regional transit district, the SCRTD allows for greater connection between a variety of providers and local governments. Table 1-5Figure 1-5 shows SCRTD and Z-Trans routes.

Figure 1-5: SCRTD and Z Trans Routes
Route 1 provides service to north-central Las Cruces, making a loop around the I-25 and Main Street interchange. Like many of the RoadRUNNER routes, Route 1 begins and ends at Mesilla Valley Intermodal Transit Terminal (MVITT). While there are no significant transfers to other RoadRUNNER routes, Route 1 does transfer to SCRTD Routes, NMDOT, and Ztrans via the MVITT station. Ridership is at its highest during the middle of the day and starts to drop off heavily at 5:00 pm.

**AVERAGE DAILY BOARDINGS**

157

**ANNUAL RIDERSHIP**

47,704

**AVERAGE BOARDINGS PER REVENUE HOUR**

6.2

**KEY DESTINATIONS:**
- Mesilla Valley Hospital
- US Post Office
- Jornada Elementary
- Walgreens / CVS
- Las Cruces VA Clinic
- LA Academia Charter School
- Big Brothers Big Sisters
- Broken Spoke TapHouse
- Central Elementary
- Branigan Cultural Center
- Corner Deli

<table>
<thead>
<tr>
<th>Service Day</th>
<th>Span of Service</th>
<th>Frequency</th>
<th>Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays and Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00pm Saturdays</td>
<td>60 minutes</td>
<td>17 trips</td>
</tr>
</tbody>
</table>

**Peak Buses**

244

**Route Miles**

1

**Cost per Boarding**

$13.17
Timepoints

MVITTT
N Main across from Taco Bell
N Telshor Blvd & Summit Ct
Del Rey & Engler

Del Rey & Engler
N Main @ Sonic
N Main @ Mountain
MVITT

AVERAGE DAILY RIDERSHIP
FEBRUARY 2019- FEBRUARY 2020

Ridership is average compared to other RoadRUNNER routes.

KEY TRANSFERS

MVITTT
Route 2 provides crucial connections between the MVITT and college campuses in Las Cruces. Additionally, Route 2 connects the dual hubs within the RoadRUNNER system; MVITT and Mesilla Valley Mall. Transfers to Routes 3, 6, 7, 8 are available through 7 different stops on route 2. Many of these connections occur on E Foothill Rd, as well E Lohman, where the routes intersect. Notably, Route 2 is the most productive RoadRUNNER route. Peak times for Route 2 include 9:00am and noon, but ridership begins to increase greatly at 7:00am.

### AVERAGE DAILY BOARDINGS

494

### ANNUAL RIDERSHIP

151,127

### BOARDINGS PER REVENUE HOUR

14.4

### KEY DESTINATIONS:

- New Mexico State University
- DACC
- DACC East Mesa Campus
- Walmart
- Sonoma Ranch Apartments
- Mountainview Regional
- Walgreens
- Citizens Bank of Las Cruces

<table>
<thead>
<tr>
<th>Service Day</th>
<th>Span of Service</th>
<th>Frequency</th>
<th>Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays and Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00pm Saturdays</td>
<td>30 minutes</td>
<td>33 trips</td>
</tr>
</tbody>
</table>

3 Peak Buses

356 Route Miles

$10.90 Cost per Boarding
Route 3 begins at Mesilla Valley Mall and goes all the way to Porter Avenue on Bataan Memorial, providing the farthest northeast service in Las Cruces. Riders can also transfer to Route 2 via multiple stops on Lohman Avenue. Route 3 has the lowest ridership of all routes, but with very distinct peak times; ridership spikes at 9:00am, spikes again at 1:00 to 2:00 pm, and then decreases steadily throughout the day.

**AVERAGE DAILY BOARDINGS**

122

**ANNUAL RIDERSHIP**

37,333

**BOARDINGS PER REVENUE HOUR**

4.9

**KEY DESTINATIONS:**
East Mesa Recreation Center
Sunrise Mesa Family Community
DACC East Mesa Campus
River Oaks Mobile Homes
Marshalls
Bank of America
Little Tumbleweed Daycare
Sonoma Elementary
Memorial Urgent Care
Lotus Salon
Sonoma Palms Apartment Homes
Mountainview Medical Group
Mesilla Valley Mall
Walmart

<table>
<thead>
<tr>
<th>Service Day</th>
<th>Span of Service</th>
<th>Frequency</th>
<th>Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays and Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00pm Saturdays</td>
<td>60 minutes</td>
<td>16 trips</td>
</tr>
</tbody>
</table>

1 Peak Buses

307 Route Miles

$17.01 Cost per Boarding
Timepoints

- Mesilla Valley Mall (MVM)
- N Roadrunner Pkwy & Stagecoach Avenue
- Northrise @ Rinconada
- Bataan Memorial West & Porter
- Bataan Memorial West & Porter
- RoadRunner & Northrise
- Roadrunner @ Golden Mesa
- Mesilla Valley Mall (MVM)

Average Daily Ridership
February 2019 - February 2020

Route 3 Peak Times
Daily Average Ridership for Each Weekday Hour from February 2019 - February 2020
Route 4 begins at MVITT and runs south down Avenida de Mesilla before cutting east to New Mexico State University. Route 4 also connects to Aggie Routes, providing students with a transfer connection to MVITT. Riders can also transfer to Routes 6 and 7 at stops along Amador Avenue by the transit center. Ridership increases steadily and spikes at noon and 3:00pm, taking a steep decline after the 3:00pm rush.

**AVERAGE DAILY BOARDINGS**

162

**ANNUAL RIDERSHIP**

49,925

**BOARDINGS PER REVENUE HOUR**

6.3

**KEY DESTINATIONS:**
- New Mexico State University
- MVITT
- Dona Ana Community College
- Las Cruces Convention Center
- Picacho Coffee Roasters
- The Blue Door Venue
- Applebee's
- Mesilla Valley Produce
- Gospel Rescue Mission
- The Verge Apartments
- Rio Grande Prep
- Zia Middle School
- Walmart

**Service Day** | **Span of Service** | **Frequency** | **Daily Trips**
---|---|---|---
Weekdays and Saturdays | 6:30am – 10:30pm weekdays, 9:30am – 6:00pm Saturdays | 60 minutes | 16 trips

**Peak Buses** | **195** Route Miles | **$12.82** Cost per Boarding
ROADRUNNER TRANSIT

Timepoints

OUTBOUND
MVITT
Avenida de Mesilla @ Applebee’s
University & Bowman
University @ Whataburger

INBOUND
University @ Whataburger
Avenida De Mesilla @ United Rental
W Amador Ave & McSwain Dr
MVITT

AVERAGE DAILY RIDERSHIP
FEBRUARY 2019 - FEBRUARY 2020

KEY TRANSFERS

MVITT
Route 6
Route 7
Route 5 begins at MVITT on Alameda and runs west on Picacho Avenue. Route 5 then makes a loop via Copper Loop and 17th Street and another loop via S Melendres before returning to MVITT. Other than the transit center, Route 5 has no shared stops. Route 5 has the third-highest ridership of all RoadRUNNER routes. Ridership increases greatly at 7:00am and is highest at noon and 3:00pm; ridership begins to drop off after 5:00pm.

AVERAGE DAILY BOARDINGS

203

ANNUAL RIDERSHIP

62,146

AVERAGE BOARDINGS PER REVENUE HOUR

17.4

KEY DESTINATIONS:
Dollar General
Desert Palms Apartment
Sonic Drive-In
Alma D’orte Charter High School
Thrift Store
Forrester Elementary
Trine’s Nail Creations
Nessa’s Café
Big Larry’s Flower Co.
New Mexico Workforce Connections

<table>
<thead>
<tr>
<th>Service Day</th>
<th>Span of Service</th>
<th>Frequency</th>
<th>Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays and Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00pm Saturdays</td>
<td>30 minutes</td>
<td>33 trips</td>
</tr>
</tbody>
</table>

Peak Buses
110 Route Miles
$10.13 Cost per Boarding
Timepoints

MVITT

Motel & Picacho Plaza

Motel & Picacho Plaza

Picacho @ Lions Park

MVITT

Ridership is high compared to other RoadRUNNER routes.

KEY TRANSFERS

MVITT

Average Daily Ridership
February 2019 - February 2020

Route 5 Peak Times
Daily Average Ridership for Each Weekday Hour from February 2019 - February 2020
Route 6 makes a loop around Main Street, running counter-clockwise on Valley Dr, Routz Rd, Walnut St, Madrid Ave., and Hoagland Rd. Riders are able to transfer to Route 4, 2, and 7 at multiple stops throughout the route. Route 6 also has distinct ridership patterns. Similar to other routes, ridership increases greatly by 7:00am, but then the ridership drastically increases at 9:00am. Two smaller spikes occur at noon and 3:00pm before ridership begins to steadily decline.

**AVERAGE DAILY BOARDINGS**

181

**ANNUAL RIDERSHIP**

55,152

**BOARDINGS PER REVENUE HOUR**

7.4

**KEY DESTINATIONS:**

- Mountain States Cinema
- Dollar General
- Las Cruces High School
- Cricket Wireless
- Sierra Middle School
- Alta Tierra Apartments
- Loma Heights Elementary School
- Woodcrest Apartment Homes
- Onate Greens Mobile Home Park
- McDonald's
- Walgreens
- Walmart

<table>
<thead>
<tr>
<th>Service Day</th>
<th>Span of Service</th>
<th>Frequency</th>
<th>Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays and Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00pm Saturdays</td>
<td>60 minutes</td>
<td>17 trips</td>
</tr>
</tbody>
</table>

**Peak Buses**

210

**Route Miles**

$10.90

**Cost per Boarding**
**Timepoints**

**OUTBOUND**
- MVITT
- Boutz @ El Paseo
- Walnut & Lester
- Walnut St & Capitan Ave

**INBOUND**
- N Walnut St & Capitan Ave
- Hoagland East Of Rose
- W Amador Ave & McSwain Dr
- MVITT

**Average Daily Ridership**
FEBRUARY 2019 - FEBRUARY 2020

**Route 6 Peak Times**

**Transfers**
- MVITT
- Route 2
- Route 4
- Route 7
Route 7 is Route 6’s clockwise counterpart; while traveling in the opposite direction, it covers almost the exact same route. Riders can transfer to routes 2, 4, and 6 on multiple stops throughout the route. Route 7 ridership steadily increases throughout the day and peaks at 1:00 – 2:00pm before steadily decreasing.

**AVERAGE DAILY BOARDINGS**

140

**ANNUAL RIDERSHIP**

42,801

**AVERAGE BOARDINGS PER REVENUE HOUR**

5.9

**KEY DESTINATIONS:**
- Mountain States Cinema
- Dollar General
- Las Cruces High School
- Cricket Wireless
- Sierra Middle School
- Alta Tierra Apartments
- Loma Heights Elementary School
- Woodcrest Apartment Homes
- Onate Greens Mobile Home Park
- McDonald’s
- Walgreens
- Walmart

<table>
<thead>
<tr>
<th>Service Day</th>
<th>Span of Service</th>
<th>Frequency</th>
<th>Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays and Saturdays</td>
<td>6:30am – 10:30pm weekdays, 9:30am – 6:00pm Saturdays</td>
<td>60 minutes</td>
<td>17 trips</td>
</tr>
</tbody>
</table>

1 Peak Buses

212 Route Miles

$14.01 Cost per Boarding
**ROADRUNNER TRANSIT**

**Timepoints**
- Hoagland Rd & Del Mar Ave
- Walnut & Capitan
- Missouri Ave & La Fonda Dr
- Missouri Ave & La Fonda Dr
- Boutz & Calle de Ninos
- Melendrez & Main
- MVITT

**AVERAGE DAILY RIDERSHIP**

**ROUTE 7 PEAK TIMES**

**KEY TRANSFERS**
- MVITT
- Route 2
- Route 4
- Route 6

Fixed Route Existing Conditions | p. 1-23
Route 8 has the second-highest ridership of all RoadRUNNER routes and provides another crucial connection between the two transit hubs: MVITT and Mesilla Valley Mall. Route 8 starts at MVITT and makes a loop around Missouri Avenue on S. Trivis, East University, and S. Solano Drive. Route 8 also travels north on Solano Drive to E. Madrid Avenue before returning to MVITT. Ridership begins to increase at 7:00 am and peaks at 1:00 - 2:00 pm. By 7:00 pm, most ridership has declined.

**AVERAGE DAILY BOARDINGS**

238

**ANNUAL RIDERSHIP**

72,666

**BOARDINGS PER REVENUE HOUR**

19.3

**KEY DESTINATIONS:**
New Mexico State University
Dona Ana Community College
Old Navy
Southwest Family Dental
Omni Apartments
University Art Gallery
Mountain View Primary Care
College Heights Kindergarten
Desert Springs Christian Academy
Loretto Barber Shop
Family Dollar Store

**SERVICE Day**

<table>
<thead>
<tr>
<th>Weekdays and Saturdays</th>
<th>6:30 am – 10:30 pm weekdays, 9:30 am – 6:00 pm Saturdays</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency</strong></td>
<td>60 minutes</td>
</tr>
<tr>
<td><strong>Daily Trips</strong></td>
<td>17 trips</td>
</tr>
</tbody>
</table>

**Peak Buses**

106

**Route Miles**

$3.59

**Cost per Boarding**
RIDERSHIP ANALYSIS

Ridership analysis is an important piece of understanding the existing conditions in Las Cruces. Ridership data can reveal where people most often get on the bus, where they most often get off the bus, and which routes are the most productive. Figure 1-6 below shows that Route 2 has the most ridership by far, with Route 8 and Route 5 trailing behind. The bar chart looks similar for the Saturday data, as shown in Figure 1-7; Route 2 is the most productive route in the system.

Figure 1-6: Average Daily Ridership on Weekdays

Figure 1-7: Average Daily Ridership on Saturdays
Peak Times

In addition to understanding which routes are performing better than others, it is helpful to understand when routes are performing best. For many of the routes, there was a clear spike at commuting times and at lunch time; the most frequent surges of ridership occurred at 9:00am, noon or 1:00pm, and 3:00pm. The data in Figure 1-8 shows the composite graph of all ridership and their average peak times throughout the course of a year.

Figure 1-8: Route Ridership and Peak Times
Route Productivity

The average boardings and average alightings for each stop were added together to get a productivity score. Once each stop had its own productivity score, heat maps were used to visualize which segments of the routes had the most boardings and alightings. Figure 1-9 below shows an example; Route 5’s productivity varies throughout the route, with the MVITT stop bringing in the most productivity. However, the west side of Picacho is clearly showing a high level of activity as well. Each route’s heat map can be found in their route profile.

Figure 1-9: Route 5 and Productivity
TRANSIT MARKET ANALYSIS

The way transit service operates in any given area is only part of the transit system’s story. Understanding the community that the transit system serves is just as important as the operational characteristics of a system, if not more so. Why? The greater the support from the community, the more successful the transit system. Transit-supportive land uses and dense populations of people who need or desire to use transit are the true impetus for growth of a transit system. In addition, a road network that is designed for transit vehicles and other modes of non-vehicular transportation provide better connectivity in the region, and places where people can ride bikes, walk, or take part in other forms of active transportation can complement transit, creating a more seamless experience for the transit user. The transit market analysis is a data-driven approach to understanding more of the transit system’s story. Traffic Analysis Zones (TAZs) with high transit demand, clusters of key destinations, and patterns among popular transit stop are all clues how people are traveling, how they’d like to travel, and the overall transit culture in the area.

The Market Analysis for the RoadRUNNER SRTP included four primary steps:
1. Gathering and normalizing data.
2. Scoring each (TAZ) based on how many indicators existed in comparison to the average of the whole study area.
3. Creating a map to visualize the highest-demand TAZs.
4. Comparing high-demand TAZs to the key destinations and landmarks in the area to understand why the TAZ has a high demand.

Market Score Indicators

There are multiple factors at play when analyzing the market demand for transit. It is important to look at circumstances that would make people more likely to need transit—i.e., not having a vehicle, or being unable to drive because of age or disability. Additional factors include population and employment density; people are much more likely to take transit if it gets them where they live, work, or shop. Each of these indicators were closely examined in each TAZ to see if the amount of high-demand factors was greater than the average of the study area. Then, every TAZ was assigned a composite score for its level of indicators.

For example, if a TAZ has a high population density, employment density, poverty density, and households without vehicles density, that TAZ would receive a high transit market score. If the TAZ only had a high level of one of those indicators, it would receive a lower transit market score. The goal is to examine which places in Las Cruces have the most need and the most opportunity to provide transit service. Table 5 shows a breakdown of each indicator and how they were assigned a point value.
**Table 1-5: Market Indicators Scoring Matrix**

<table>
<thead>
<tr>
<th></th>
<th>POINT SCORES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td><strong>Population Density</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Employment Density</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Poverty Density</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Minority Population Density</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Disabled Population Density</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Limited English Proficiency Density</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Households without Vehicles Density</strong></td>
<td>5,102</td>
</tr>
</tbody>
</table>
POLULATION DENSITY

The population density in Las Cruces is highest in the southeast part of the City, but all of central Las Cruces has a fairly high population density, as shown in Figure 1-10.

Figure 1-10: Population Density in Las Cruces
EMPLOYMENT DENSITY

Employment density in Las Cruces also appears to favor the southside of the City, however the western edge of Central Las Cruces shows very high employment density as well, as shown in Figure 1-11.

Figure 1-11: Employment Density
Market Score Results

Once all indicators have been scored individually, the result is the map in Figure 1-12 that displays each TAZ’s total score. The City of Las Cruces’ composite transit market score seemed to be highest in the south-central portions of the City, as shown in the figure below.

Figure 1-13 breaks the market score results down even further, showing only TAZs that scored higher than 18 (meaning multiple indicators scored highly for the TAZs). Each area of high transit demand and their correlating key destinations are then described in greater detail.

Figure 1-12: Market Scores in RoadRUNNER Study Area TAZs
Figure 1-13: TAZs with Highest Transit Demand
Key Destinations

After analyzing the highest-demand TAZs based on their indicator scores, the study area was examined for key destinations. Key destinations can help determine why some areas have a higher transit demand than others, as well as expose areas that may not be accurately represented by the market score alone. Over one thousand key destinations were sourced from ArcGIS Business Analyst and then categorized and overlayed with the market score results, as shown in Figure 1-14.

Figure 1-14: High Demand TAZs with Key Destinations

AREAS FOR CONSIDERATION

Some of the areas not highlighted in the market score results were the N Main St. and Telshor Blvd area and the east side of Lohman Avenue. Both areas had clusters of key destinations, including a variety of clinics and hospitals near Lohman Avenue. Areas with key destinations, such as those in Figure 1-15 and Figure 1-16 below, will be taken into account when making final recommendations for the SRTP.
Figure 1-15: N Main and Telshor Key Destinations

Figure 1-16: East Lohman Healthcare Destinations
TRAVEL PATTERNS ANALYSIS

Automobile travel accounts for most trips within the city of Las Cruces. Analyzing where and why the population is traveling helps reveal travel patterns, or ‘desire lines,’ in the region. Identifying these desire lines will allow the project team to develop route recommendations that mimic existing travel behavior, positioning the RoadRUNNER system to attract new passengers and encourage a mode shift.

For this travel patterns analysis, the ‘study area’ refers to the land area covered by the city limits of Las Cruces.

Methods

The MVMPO Travel Demand Model (TDM) was used to determine the Traffic Analysis Zones (TAZs), a unit of geography used for TDM demographic inputs, that account for substantial trip production within the study area. Forecast year (2040) outputs were used to generate desire lines that help visualize travel patterns in the study area. Travel was measured by the average number of trips taken by a person, regardless of mode, per day.

Desire lines represent trip interchanges between selected TAZ pairs. For example, if “TAZ A” and “TAZ B” account for 40 trip interchanges, this means that during the measured daily period 40 trips go from “TAZ A” to “TAZ B” and vice versa. Trip interchanges between TAZs can be thought of as commute trips. If you leave your house to go to the store or work, you will most likely make the reverse of that trip to return home.

Top TAZ pairs were selected and mapped for trips occurring within the study area (i.e., local trips within the city of Las Cruces), trips from Las Cruces to TAZs in the surrounding region, and trips from the surrounding region to Las Cruces. Local desire lines can highlight where there is potential for mobility on demand (MOD) or local fixed route service, while regional desire lines can show where there may be potential demand for express or commuter transit service in the future.

Findings

Analyzing future travel patterns and existing land uses allows for the creation of service recommendations and alternatives that will be effective in near- and long-term scenarios. Desire lines were overlaid with the study area, relevant jurisdictional boundaries, and key destinations as part of a Geographic Information Systems (GIS) analysis performed to provide a detailed understanding of where people are traveling in and around Las Cruces. Milestone year maps for morning and afternoon travel patterns are provided below for three scenarios.

WITHIN LAS CRUCES

Travel patterns within the city of Las Cruces are commonly centered around TAZs with single-family residential land uses and those bordering major corridors, which often contain a high concentration of commercial and retail destinations. Several high-volume desire lines to the north are seen connecting TAZs adjacent to the I-25 corridor, which is the location of big box retail shopping centers, restaurants, and multifamily apartments with nearby TAZs that are primarily residential with some neighborhood shopping centers. Mesilla Valley Mall, several schools, and medical facilities such as Mountain View Regional Medical Center also draw activity to the area.
TAZs that encompass New Mexico State University – Las Cruces and Doña Ana Community College campuses just north of I-10 also experience a high volume of trips from nearby TAZs in the study area. Desire lines also indicate travel across E University Ave. between campus and single- and multi-family housing, retail, and restaurants.

Figure 1-17: Desire Lines within Las Cruces, AM
Figure 1-18: Desire Lines within Las Cruces, PM

Legend
Within Las Cruces – PM
Las Cruces Boundary
Traffic Analysis Zones

Average Trips
Top Desire Lines

total trips range from
72 – 119
FROM LAS CRUCES

While the total volume of trips from Las Cruces to TAZs farther away is significantly less than internal desire lines, there is still activity drawing a few daily trips from the city to other parts of the region. To the northwest, the towns of Hatch and Salem are located in a top TAZ. To the southwest, the Las Cruces International Airport is an activity generator. White Sands and the Organ Mountains National Monument are located to the east. To the southeast is the New Mexico/Texas border, where the Dona Ana County International Jetport and smaller towns such as Santa Teresa are located.

Figure 1-19: Desire Lines from Las Cruces, AM
Figure 1-20: Desire Lines from Las Cruces, PM

Legend
From Las Cruces – PM
- Las Cruces Boundary
- Traffic Analysis Zones
- Dona Ana County Boundary

Average Trips
Top Desire Lines

Low
High

total trips range from
1 – 3
**TO LAS CRUCES**

Trip activity originating from outside the study area is higher coming from the areas east and south of Las Cruces. These TAZs are largely rural with some low-density housing. Study area TAZs where high-activity destinations are located, including NMSU Las Cruces, Doña Ana Community College, Mesilla Valley Mall, and Mountain View Regional Medical Center, experience the most travel from external areas.

**Figure 1-21: Desire Lines to Las Cruces, AM**
Figure 1-22: Desire Lines to Las Cruces, PM

Legend
To Las Cruces – PM
- Las Cruces Boundary
- Traffic Analysis Zones

Average Trips
Top Desire Lines

Low
High

total trips range from

14 – 24
HIGH VOLUME TAZ

Figure 1-23 shows the TAZs in Las Cruces that experience the most trip activity across all three of the above scenarios. Table 1-6 summarizes the land use and key destinations found in each of the high volume TAZs.

Figure 1-23: High Volume TAZs
### Table 1-6: High Volume TAZ Characteristics

<table>
<thead>
<tr>
<th>TAZ</th>
<th>Location</th>
<th>Land Use</th>
<th>Key Destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>I-25 and US 70 N Roadrunner Pkwy and Sonora Springs Blvd</td>
<td>Commercial, Single-Family Residential</td>
<td>Lowe’s, Kohl’s, Rio Grande Medical Group</td>
</tr>
<tr>
<td>B</td>
<td>N Roadrunner Pkwy and E Lohman Ave (NE)</td>
<td>Single-Family Residential, Park</td>
<td>Desert Trails Community Park, Mission Lutheran Church</td>
</tr>
<tr>
<td>C</td>
<td>No Roadrunner Pkwy and E Lohman Ave (SW)</td>
<td>Commercial, Educational, Single-Family and Multi-Family Residential</td>
<td>Mountain View Regional Medical Center, Mountain View Surgery Center, Desert Hills Elementary School, Pavilions at Southfork</td>
</tr>
<tr>
<td>D</td>
<td>E Lohman Ave and S Telshor Blvd</td>
<td>Commercial, Single-Family Housing</td>
<td>Quail Ridge Apartments, Target, Albertsons, Solstice Senior Living</td>
</tr>
<tr>
<td>E</td>
<td>I-25 and E Lohman Ave</td>
<td>Commercial, Single-Family Housing</td>
<td>Telshor Tower Plaza, Hotel Encanto, Natural Grocers, Walgreen’s, Renal Medicine Association, NM Kidney Care</td>
</tr>
<tr>
<td>F</td>
<td>S Telshor Blvd and E University Ave</td>
<td>Commercial, Single- and Multi-Family Housing</td>
<td>Mesilla Valley Mall, Las Cruces Primary Care, NM Cardiac Care</td>
</tr>
<tr>
<td>G</td>
<td>E University Ave and I-10</td>
<td>Commercial, Single- and Multi-Family Housing, Park</td>
<td>Park Place Apartments, Mountain View Medical Group, La Buena Vida Park, Memorial Medical Center</td>
</tr>
<tr>
<td>H</td>
<td>I-10 and Stewart St</td>
<td>Public, University, Commercial</td>
<td>New Mexico State University dormitories and academic buildings, Las Cruces Convention Center, NMSU Bookstore, Aggie Health and Wellness Center</td>
</tr>
<tr>
<td>I</td>
<td>I-25 and E University Ave</td>
<td>University, Single-Family Housing</td>
<td>New Mexico State University, Dona Ana Community College, NM Department of Agriculture, NMSU academic buildings</td>
</tr>
<tr>
<td>J</td>
<td>I-25 and E University Ave</td>
<td>University, Educational, Office, Multi-Family Housing</td>
<td>New Mexico State University academic buildings and sports facilities, Chamisa Village Apartments, Arrowhead Park Early College High School, Burrell College</td>
</tr>
</tbody>
</table>
Summary of Travel Patterns

The desire line analysis reveals the location of activity centers that drive trip behavior in and around Las Cruces. A significant number of trips occur between TAZs where retail and commercial centers are located, as well as key destinations such as Mesilla Valley Mall, New Mexico State University, and Mountain View Regional Medical Center.

High-volume TAZs are often located along major interstate/highway corridors including I-25, I-10, and US 70. Desire lines concentrated around these hubs often connect to surrounding TAZs where there are lower density, single-family residential neighborhoods.

Understanding the areas people are traveling within, into, and out of in relation to the RoadRUNNER service area is important to assessing transit service and determining how it can be improved to best serve riders on both a local and regional scale. Findings from the travel patterns analysis will help the project team determine service recommendations that are locally sensitive and appropriate for the transit market in the region.