

# 1

## TRANSIT EXISTING CONDITIONS ANALYSIS

The newly formed RGVMP is working collaboratively with regional transit providers to develop a Transit Development Plan (TDP) as a major component of the RGVMP 2045 MTP. This section will help tell the transit story of the RGV community. The development and delivery of tools and strategies will empower the MPO and the regional transit providers to evaluate, coordinate, and deliver transit on behalf of the community. This will build on the recent and successful coordination efforts among all the project partners, such as the formation of the Lower Rio Grande Valley Regional Transit Advisory Panel (RTAP).

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## INTRODUCTION

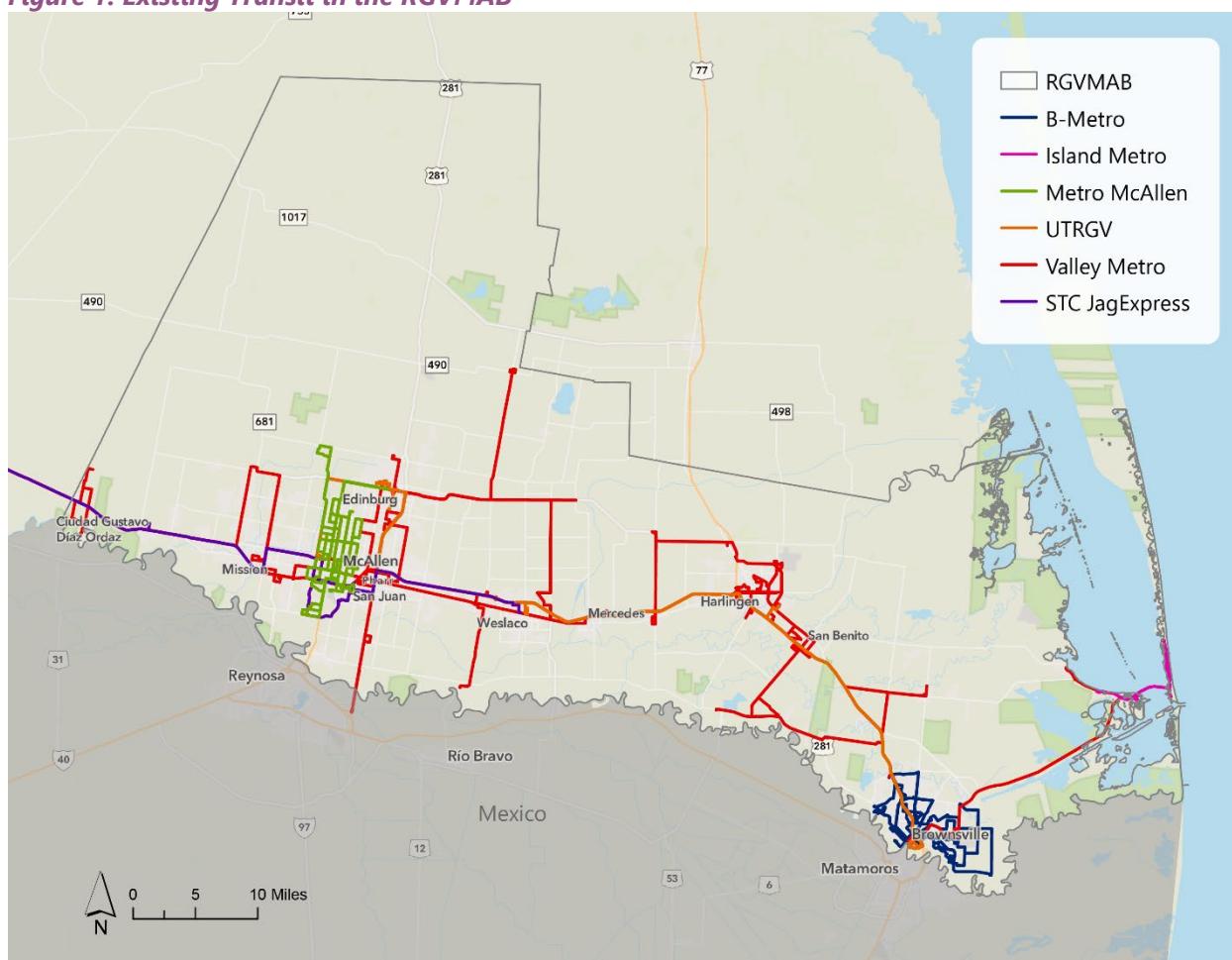
As a major component of the RGVMPO 2045 MTP, the newly formed MPO is working collaboratively with regional transit providers to develop a Transit Development Plan (TDP). This plan will help tell the transit story of the RGV community. The development and delivery of tools and strategies will empower the MPO and the regional transit providers to evaluate, coordinate, and deliver transit on behalf of the community. This will build on the recent and successful coordination efforts among all the project partners, such as the formation of the Lower Rio Grande Valley Regional Transit Advisory Panel (RTAP).

The plan will provide the following key components:

- Operational Analysis
- Market Analysis
- Origins and Destinations/Ridership Analysis
- Regional Service Standards
- Route and Service Recommendations
- Implementation Plan

The region for analysis is the Rio Grande Valley Metropolitan Area Boundary (RGVMAB), which consists of Cameron and Hidalgo Counties. The RGVMAB contains an intricate, interrelated transit system comprised of several different service providers and a wide variety of transit service options, shown in Figure 1. To identify system strengths and weaknesses, it is critical to create an inventory of current transit providers' services in the region. This level of understanding helps inform the processes and methodologies used to develop locally sensitive solutions that will address existing gaps and duplications in service. While the TDP analysis only considers data within the RGVMAB, project partners will be able to deploy these tools, solutions, and strategies wherever they provide service, even where this extends beyond the study area.

Figure 1: Existing Transit in the RGVMA





## OPERATIONAL ANALYSIS

The first step in developing the TDP 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 the regional 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.

### ***Provider Profiles***

The provider profiles below offer an introduction to the detailed operations for Valley Metro, Brownsville Metro, Metro McAllen, Island Metro, and Valley Metro's FTA-funded partnerships with University of Texas Rio Grande Valley (UTRGV) and South Texas College (STC).

## VALLEY METRO

## SERVICE PROVIDER



The Lower Rio Grande Valley Development Council provides public transportation in urbanized and non-urbanized areas of the lower Rio Grande Valley through its transit department, Valley Metro. Valley Metro operates service in Hidalgo County, Cameron County, Willacy County, Starr County, and Zapata County.



## ROUTES

Valley Metro funds and/or operates **36** routes and demand response services:

- 20 Valley Metro Routes
- 1 Metro Express Route
- 4 UTRGV Vaquero Express Routes
- 5 UTRGV VOLT Routes
- 1 UTRGV EVABL Route
- 3 South Texas College Routes
- 2 Demand Response Areas



## MAJOR DESTINATIONS

McAllen Central Station  
UT Rio Grande Valley (Edinburg)  
South Texas College Pecan Campus  
UTRGV Academic Health Center  
Valley International Airport  
La Plaza Brownsville  
UT Rio Grande Valley (Brownsville)  
Brownsville SPI International Airport  
Port Isabel



## PEAK VEHICLE

30 vehicles deployed at peak service times



## ANNUAL DATA

**6,384,393** Passenger Miles  
**709,226** Unlinked Trips  
**2,195,682** Vehicle Revenue Miles  
**101,291** Vehicle Revenue Hours  
**0.3** Unlinked Trips/Revenue Mile  
**7.0** Unlinked Trips/Revenue Hour



## SERVICE TYPES

Fixed route local bus, commuter bus, flexible transit service, demand response



## OPERATING EXPENSES

**\$3.16** per Vehicle Revenue Mile  
**\$68.41** per Vehicle Revenue Hour  
**\$1.09** per Passenger Mile  
**\$9.77** per Unlinked Passenger Trip

## Funding Sources

	OPERATING	CAPITAL
Fares	\$4,145	\$5,912
Local	\$1,741,959	\$448,608
State	\$1,255,988	\$0
Federal	\$3,946,253	\$3,334,603
Total	\$6,948,345	\$3,789,123



## OPERATING HOURS

Schedules vary by route

**Monday - Saturday**  
6:00 am - 9:00 pm

**Sunday**  
8:00 am - 6:00 pm



# VALLEY METRO

SERVICE PROVIDER



## LEAVING FOR WORK

The most frequent times people leave for work are between:

- 1<sup>st</sup> 7:00am-7:30am
- 2<sup>nd</sup> 7:30am-8:00am
- 3<sup>rd</sup> 8:00am-8:30am

\*within Cameron and Hidalgo Counties



## TRAVEL TIME



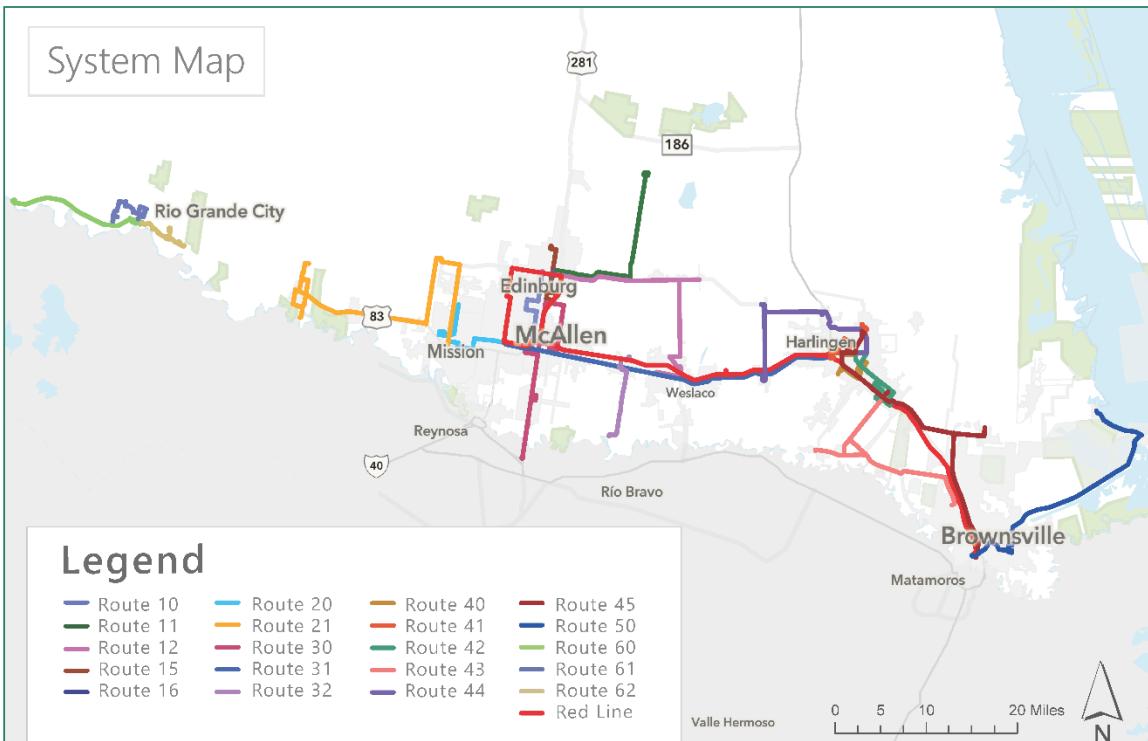
22.5% travel >30 minutes



3.6% travel >60 minutes

\*of approximately 450,000 people surveyed within Cameron and Hidalgo Counties

System Map



## VALLEY METRO

SERVICE PROVIDER



**Mission**  
Foy's Supermarket  
*Mission Station*

**McAllen/San Juan**  
South Texas College  
Pecan Campus  
McAllen Central Station  
STC Nursing & Allied  
Health Center  
*San Juan Station*

**Edinburg**  
UT Rio Grande Valley  
Visitor's Center  
UTRGV Visual Arts  
Building  
Hidalgo County  
Courthouse  
*Edinburg Transit  
Terminal*

**Donna/Weslaco**  
Donna City Square Park  
Donna Park & Ride  
Weslaco Transit Center

**Harlingen/San Benito**  
Harlingen Transit Terminal & Greyhound Station  
UTRGV Regional  
Academic Health Center  
San Benito City Hall

**Brownsville**  
La Plaza Terminal

**South Padre Island**  
Port Isabel  
Laguna Heights

**Raymondville**  
*Raymondville Park & Ride*

**La Feria**  
La Feria City Hall



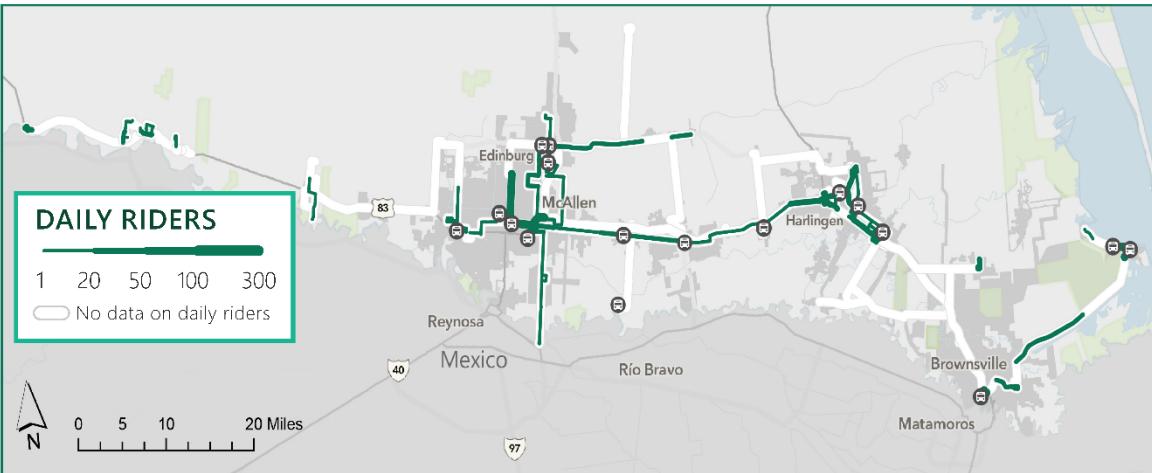
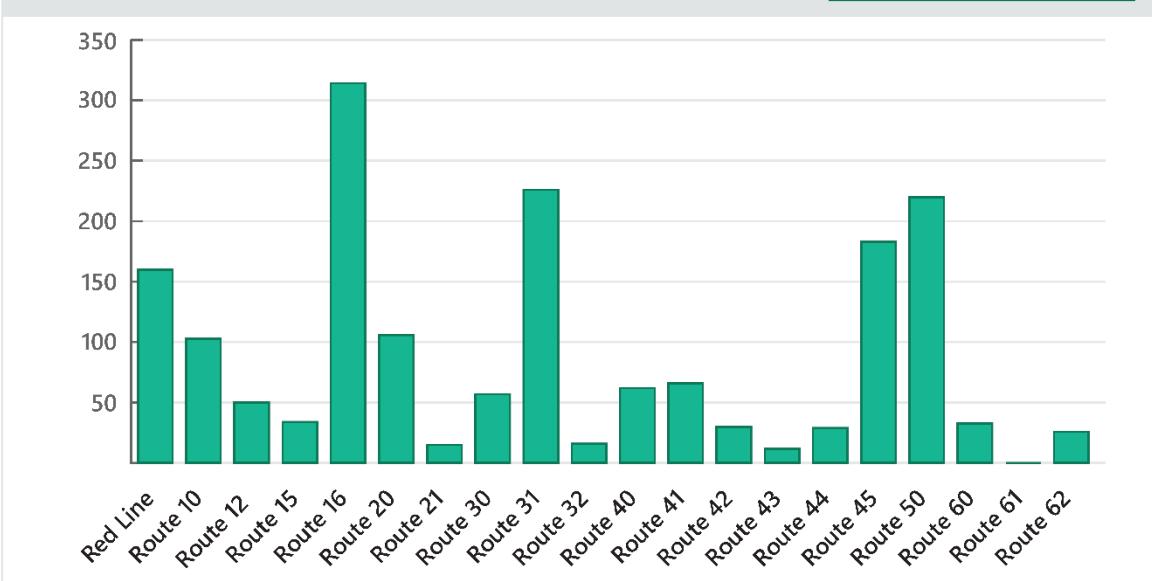
# VALLEY METRO

SERVICE PROVIDER



## DAILY RIDERSHIP

1,759 Avg Daily Riders

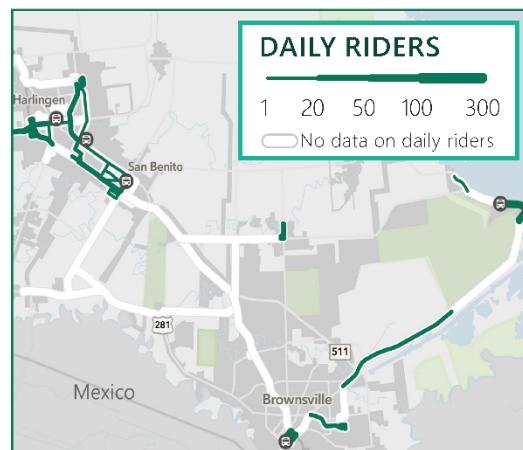
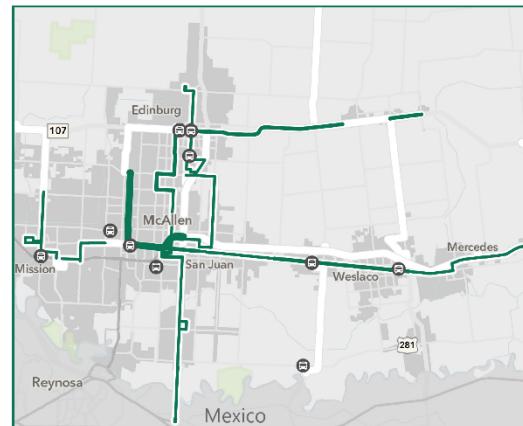
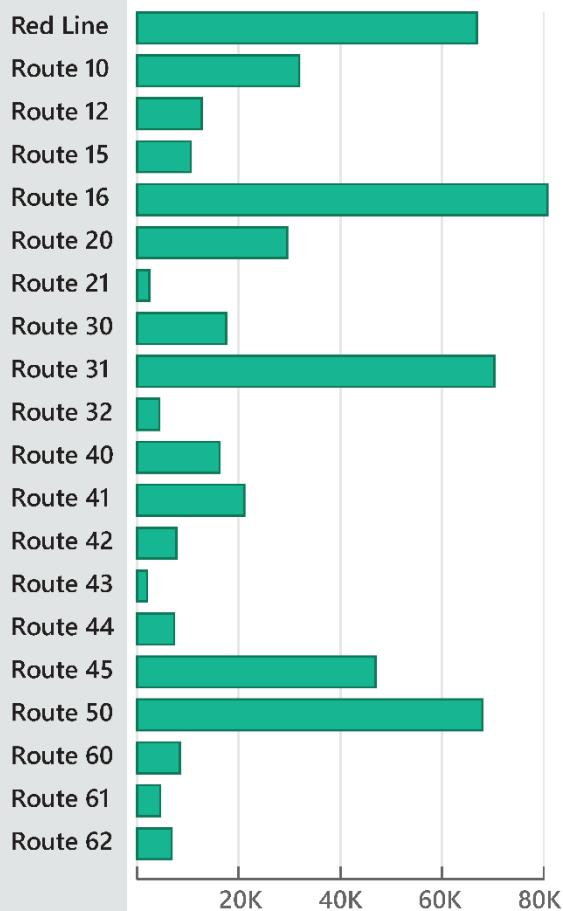


## VALLEY METRO

SERVICE PROVIDER



## ANNUAL RIDERSHIP

**515,900 Annual Riders**

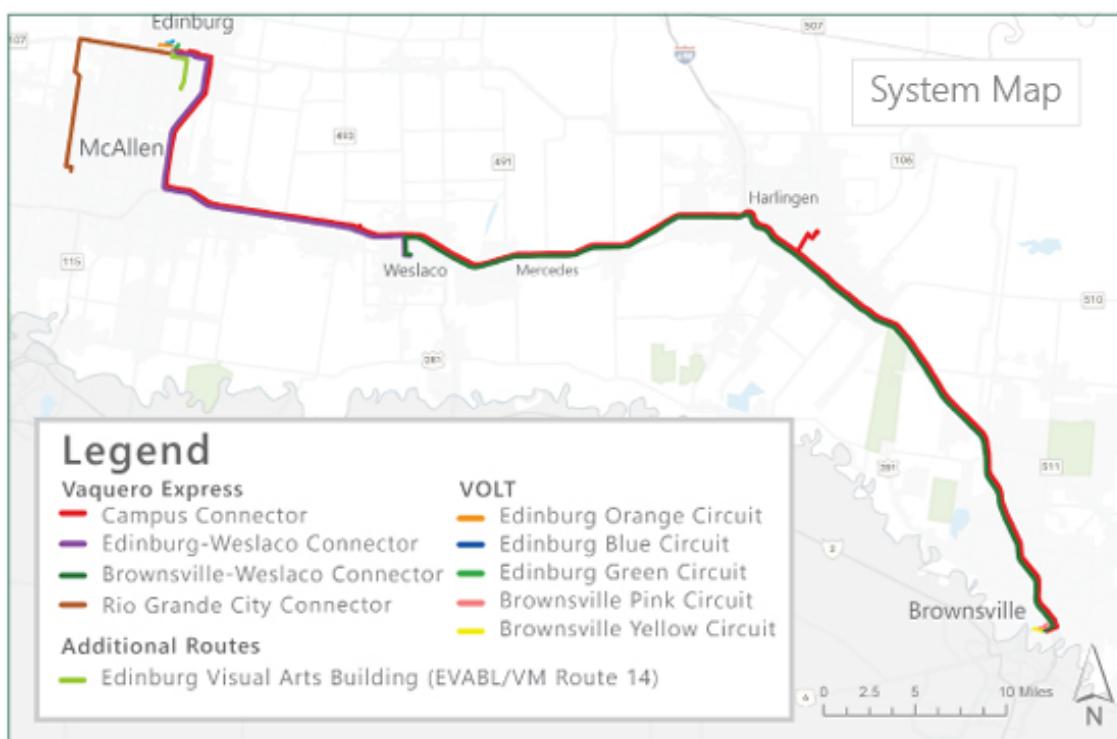


# UT RIO GRANDE VALLEY

# UTRGV

## SERVICE PROVIDER

The University of Texas Rio Grande Valley provides transit service to students, faculty, staff, and the general public through a partnership with Valley Metro. UTRGV receives FTA funding as a subrecipient of Valley Metro and operates a route system that links campuses across the Valley under the Vaquero Express brand. Additional intracampus transit is provided in Brownsville and Edinburg through electric transport carts running flexible routes under the VOLT brand. All routes operated by the University are free and open to the general public.

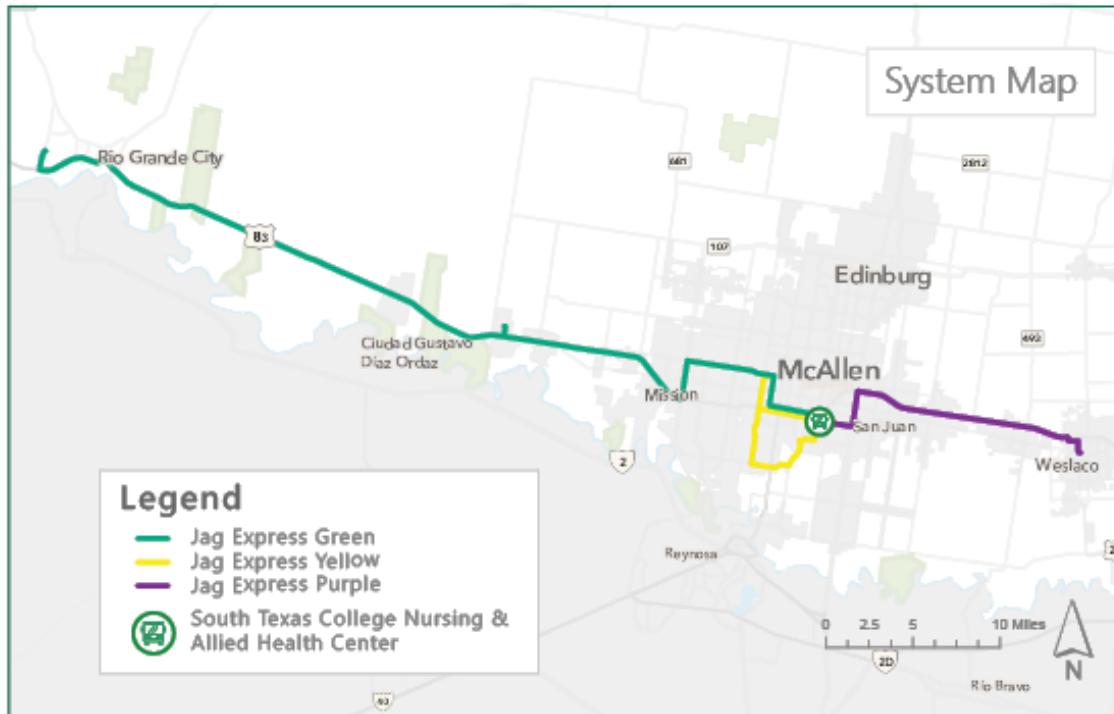


## JAGEXPRESS

SERVICE PROVIDER



South Texas College partners with Valley Metro to provide service to campuses. There are three routes that serve South Texas College which are branded as the JagExpress. In addition to serving the South Texas College campuses, the Jag Express connects nearby communities and resources.





## UTRGV AND STC

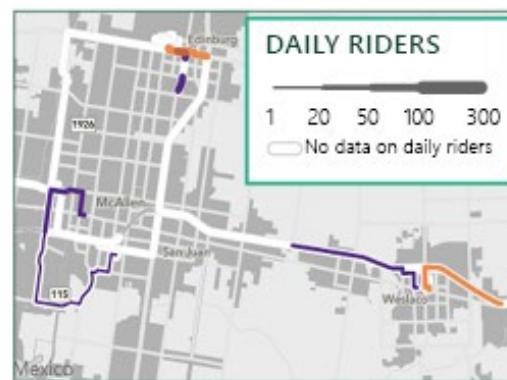
### SERVICE PROVIDERS



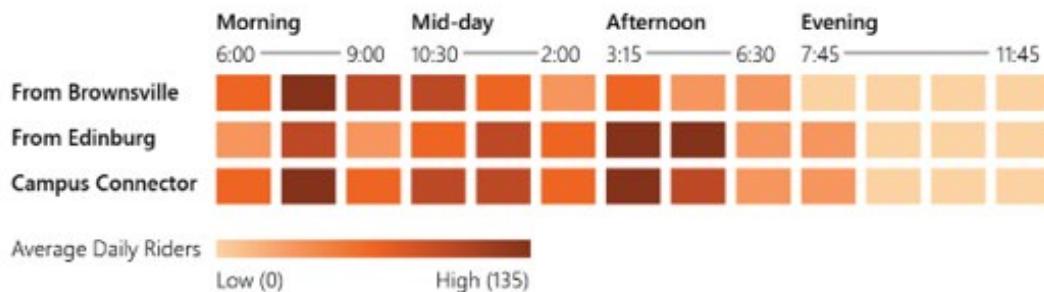
#### RIDERSHIP

UT Rio Grande Valley carries an average of **1,457** daily riders and **298,916** riders annually, **97%** of which are students.

South Texas College carries an average of **59** daily riders and **14,421** riders on the Jag Express annually.



#### UTRGV CAMPUS CONNECTOR TRIP RIDERSHIP



## B METRO

### SERVICE PROVIDER



The City of Brownsville offers public transit through its provider, B Metro, operating within Cameron County. B Metro provides service within the Brownsville City limits, connecting at the primary multimodal terminal downtown called La Plaza, and a smaller secondary hub called the Northside Transit Station.



#### ROUTES

B Metro currently operates 13 routes in addition to a paratransit demand response service.

- Route 1 Westend
- Route 2 Jefferson/Central
- Route 3 Rockwell
- Route 5 Alton Gloor
- Route 6/6A Southmost
- Route 7 Billy Mitchell
- Route 8 Lemon
- Route 9 Austin
- Route 11 Old Port Isabel
- Route 13 Pablo Kisel
- Route 14 Scorpion Connector
- Route 20 North
- Route 30 Southeast



#### MAJOR DESTINATIONS

- Brownsville SPI International Airport
- Olivieira Arnulfo Memorial Library
- Sunrise Mall
- Gateway International Bridge
- Gladys Porter Zoo
- Valley Baptist Medical Center
- Valley Regional Medical Center
- Valley Grand Manor Nursing Home
- Wal-Mart Supercenter



#### TRAVEL TIME



22.0% travel >30 minutes



3.1% travel >60 minutes

\*of approximately 85,300 people surveyed within the City of Brownsville



#### LEAVING FOR WORK

The most frequent times people leave for work are between:

1<sup>st</sup> 7:30am-8:00am

2<sup>nd</sup> 7:00am-7:30am

3<sup>rd</sup> 8:00am-8:30am

\*within the City of Brownsville



# B METRO

## SERVICE PROVIDER



### OPERATING HOURS

Schedules vary by route  
Monday - Saturday  
6:00 am - 8:15 pm



### SERVICE TYPES

Fixed route local bus,  
demand response paratransit



### CONNECTIONS

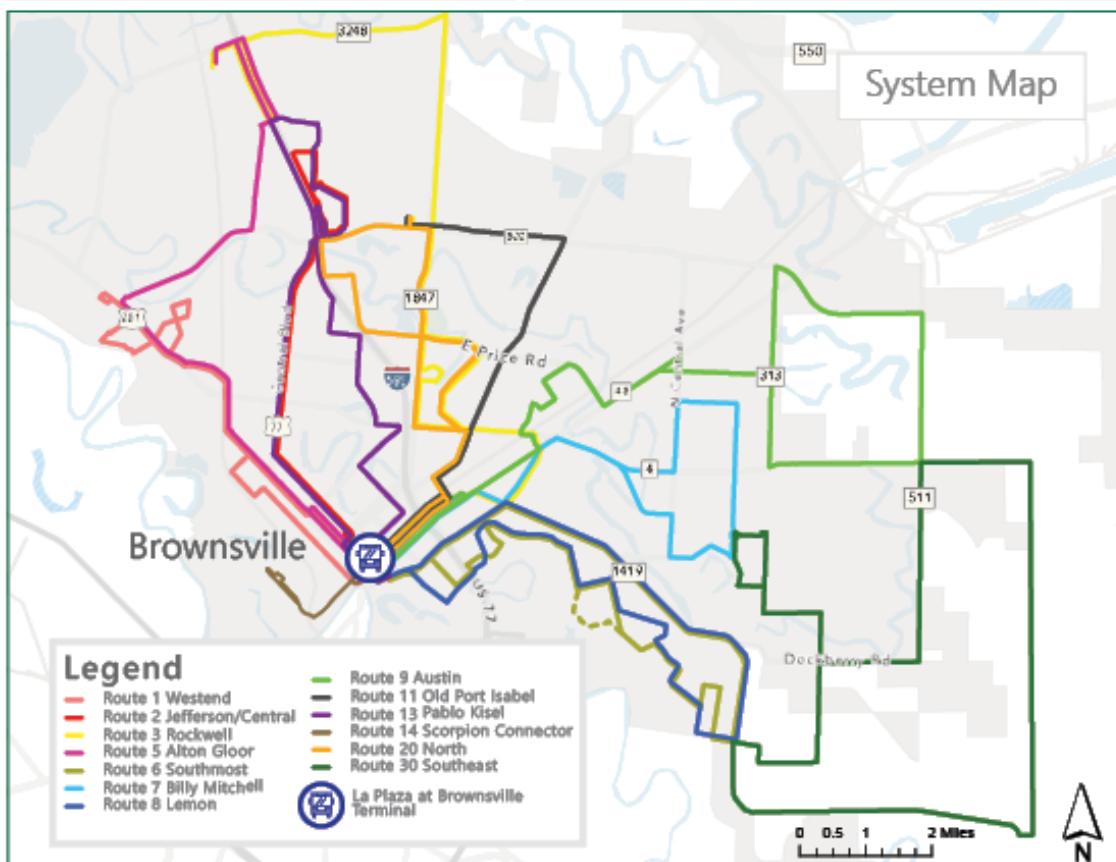
Valley Metro

43 San Benito - Brownsville  
45 Cameron Career Connection  
Blue Line/Route 50 Brownsville-Port Isabel  
Metro Express Red Line



### PEAK VEHICLE

17 vehicles deployed at peak times



## B METRO

## SERVICE PROVIDER



## ANNUAL DATA

12,504,691 Annual Passenger Miles  
1,582,769 Unlinked Trips

1,543,303 Vehicle Revenue Miles  
93,844 Vehicle Revenue Hours

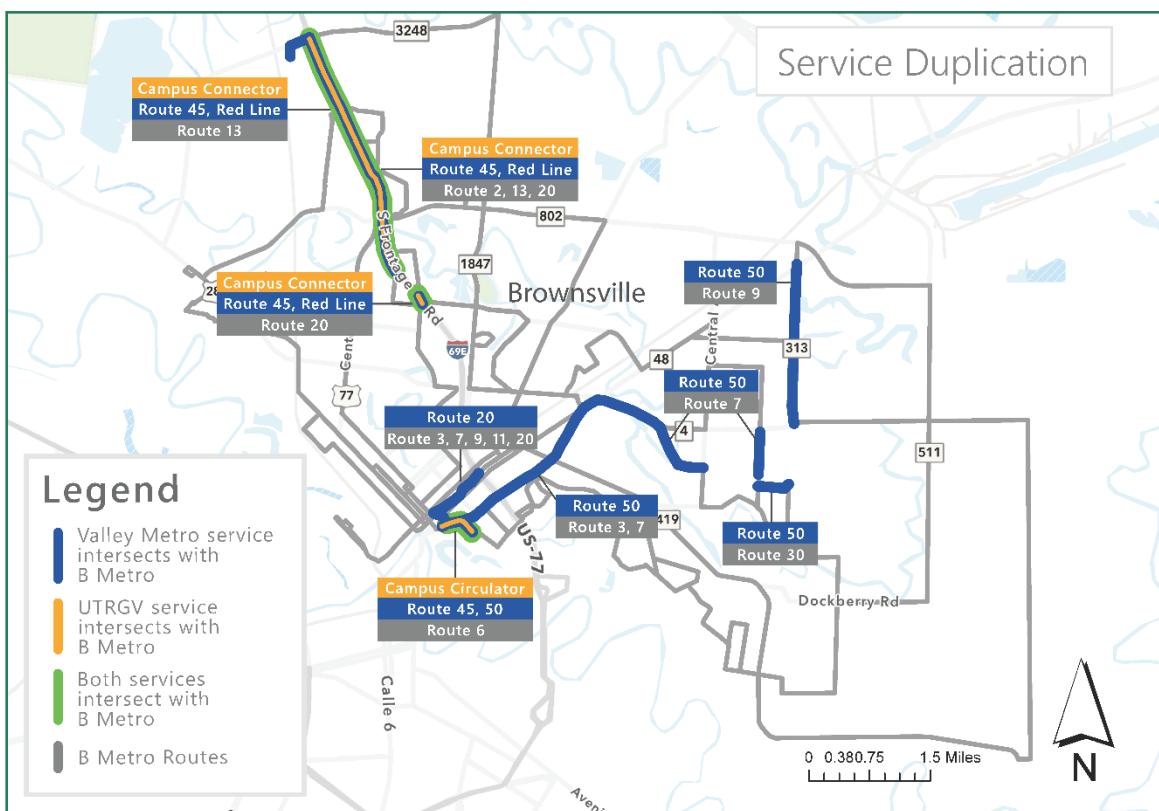
1.0 Unlinked Trips/Revenue Mile  
16.9 Unlinked Trips/Revenue Hour



## EXPENSES

\$5.12 per Vehicle Revenue Mile  
\$84.23 per Vehicle Revenue Hour  
\$0.63 per Passenger Mile  
\$4.99 per Unlinked Passenger Trip  
Funding Sources

	OPERATING	CAPITAL
Fares	\$2,062,024	\$178,113
Local	\$2,190,626	\$82,446
State	\$563,947	\$0
Federal	\$3,087,997	\$9,597
Total	\$7,904,594	\$270,156





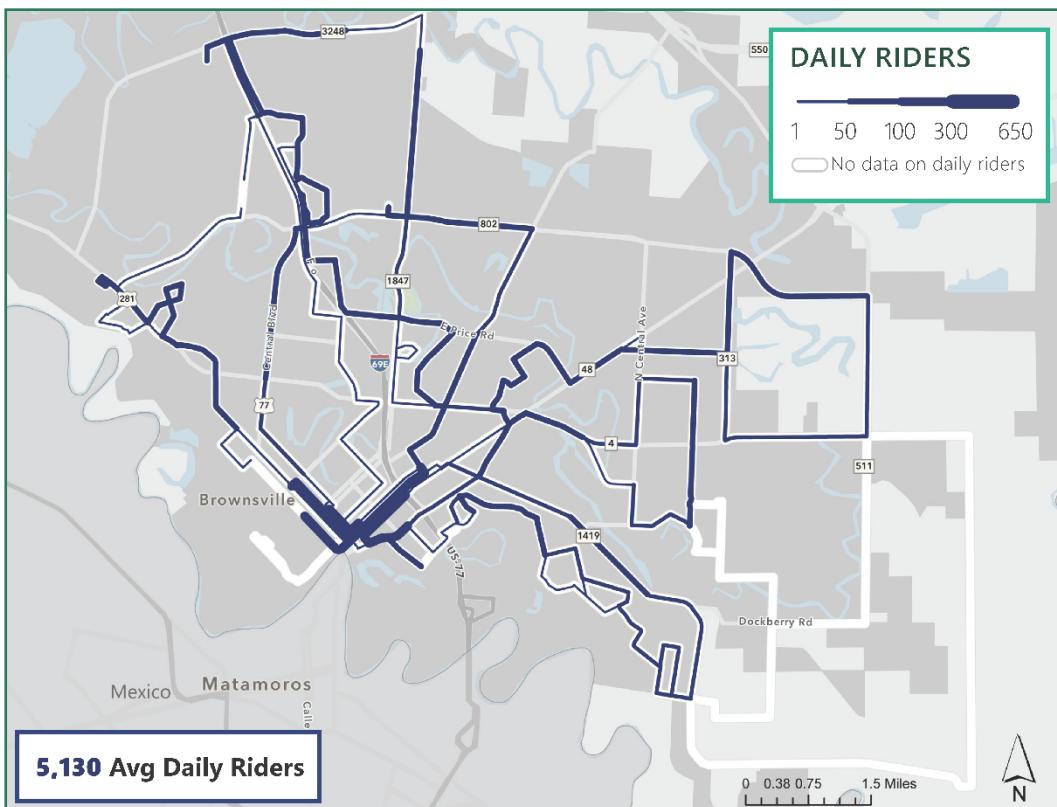
# B METRO

SERVICE PROVIDER



## ANNUAL RIDERSHIP

**1,578,247 Annual Riders**



## METRO MCALLEN

SERVICE PROVIDER

SUBRECIPIENT OF LRGVDC  
VALLEY METRO



The City of McAllen's Transit Department was created in 2001 in order to manage and maintain Central Station, the City's International Transit Terminal Facility. Metro McAllen currently operates nine (9) intracity bus routes and a paratransit bus service for eligible patrons. The bus system hub is the downtown terminal facility, Central Station, where passengers can connect to an array of international, national, regional and intracity destinations. McAllen is a community characterized by land use and destinations that support transit with multiple universities in the service area, a well defined urban core, and access to regional, national and international connectivity at the Central Station and the International Airport.



### ROUTES

Metro McAllen currently operates **9** routes:

- Route 1
- Route 2
- Route 3
- Route 4
- Route 5
- Route 6
- Route 7
- Route 8
- Route 9



### MAJOR DESTINATIONS

McAllen Miller International Airport  
South Texas College Main Campus  
UTRGV Edinburg Campus  
Texas A&M Higher Education Center  
New Hope Children's Center  
McAllen Heart Hospital  
Cornerstone Regional Hospital  
McAllen Medical Center  
Life Care Hospitals of South Texas  
HEB Plus  
Wal-Mart Supercenter



### TRAVEL TIME



74.6% travel >30 minutes



40.9% travel >60 minutes

\*of approximately 85,500 people surveyed  
within the City of McAllen



### LEAVING FOR WORK

The most frequent times  
people leave for work are between:

- 1<sup>st</sup> 7:30am-8:00am
- 2<sup>nd</sup> 7:00am-7:30am
- 3<sup>rd</sup> 8:00am-8:30am

\*within the City of McAllen



# METRO MCALLEN

SERVICE PROVIDER



## HOURS

Schedules vary by route

**Monday - Saturday**

6:00 am - 9:00 pm

**Sunday**

8:00 am - 6:00 pm



## SERVICE TYPES

Fixed route local bus,  
circulator, commuter  
bus, paratransit



## PEAK VEHICLE

8 vehicles deployed  
at peak service times



## CONNECTIONS

*Valley Metro*

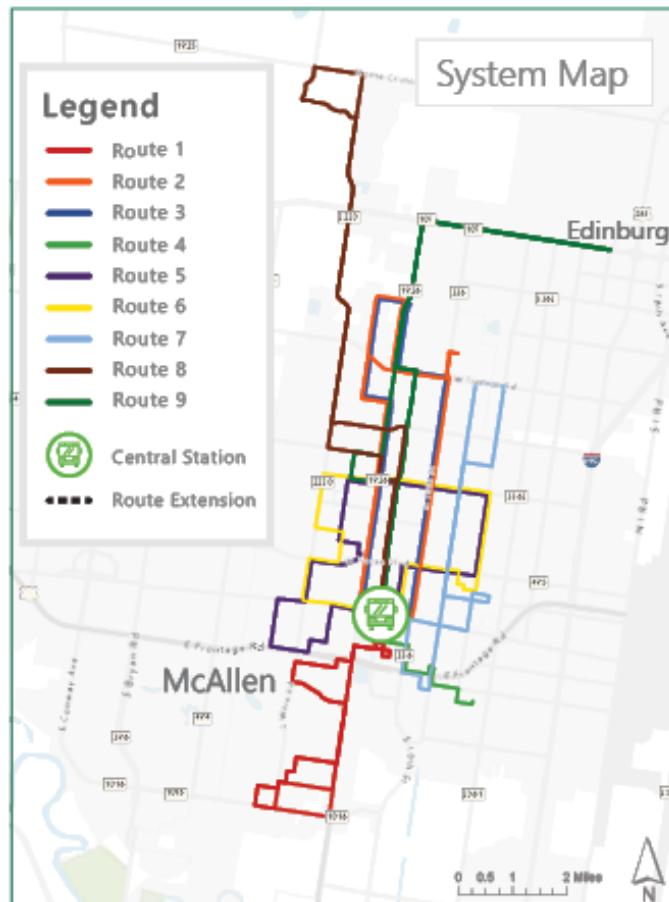
10 Edinburg-McAllen

20 Mission-McAllen

31 Business 83

Metro Express Red Line

*Valley Metro does not stop in McAllen  
other than at Central Station and the  
South Texas College campus.*



## METRO MCALLEN

SERVICE PROVIDER



### ANNUAL DATA

**617,926** Unlinked Trips  
**544,510** Vehicle Revenue Miles  
**39,284** Vehicle Revenue Hours  
  
**1.1** Unlinked Trips/Revenue Mile  
**15.7** Unlinked Trips/Revenue Hour

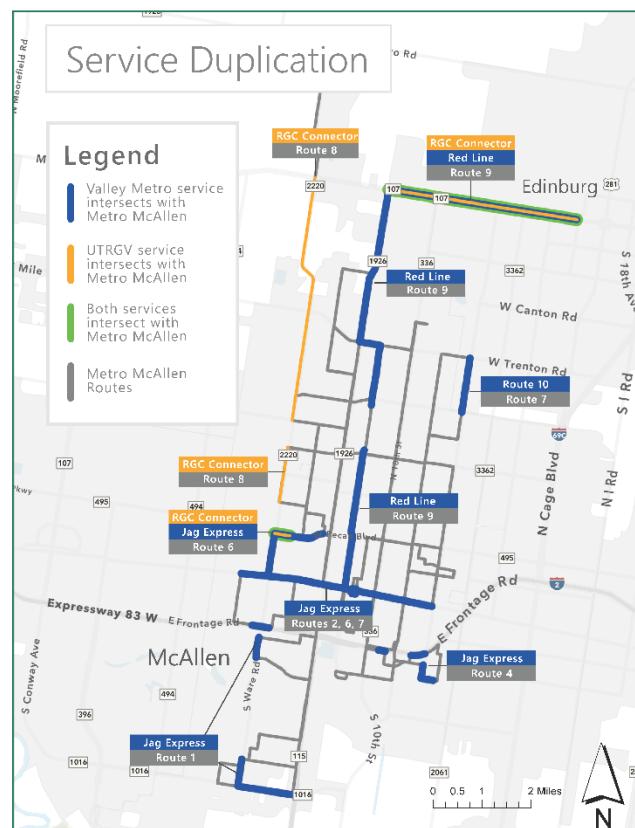


### EXPENSES

**\$4.02** per Vehicle Revenue Mile  
**\$55.73** per Vehicle Revenue Hour  
  
**\$3.54** per Unlinked Passenger Trip

#### Funding Sources

	OPERATING	CAPITAL
Fares	\$348,733	\$0
Local	\$843,540	\$20,523
State	\$315,500	\$0
Federal	\$681,667	\$778,079
Total	\$2,189,440	\$798,602



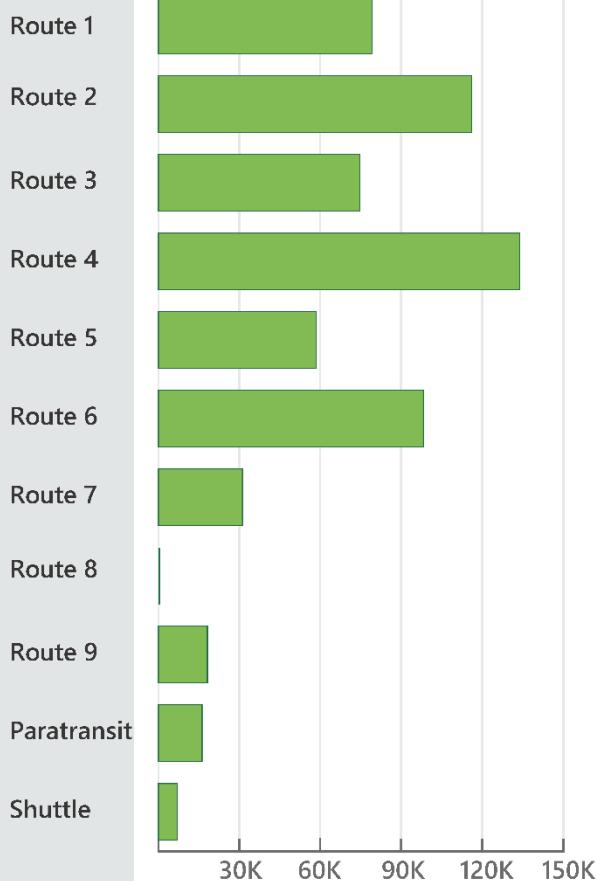


# METRO MCALLEN

SERVICE PROVIDER

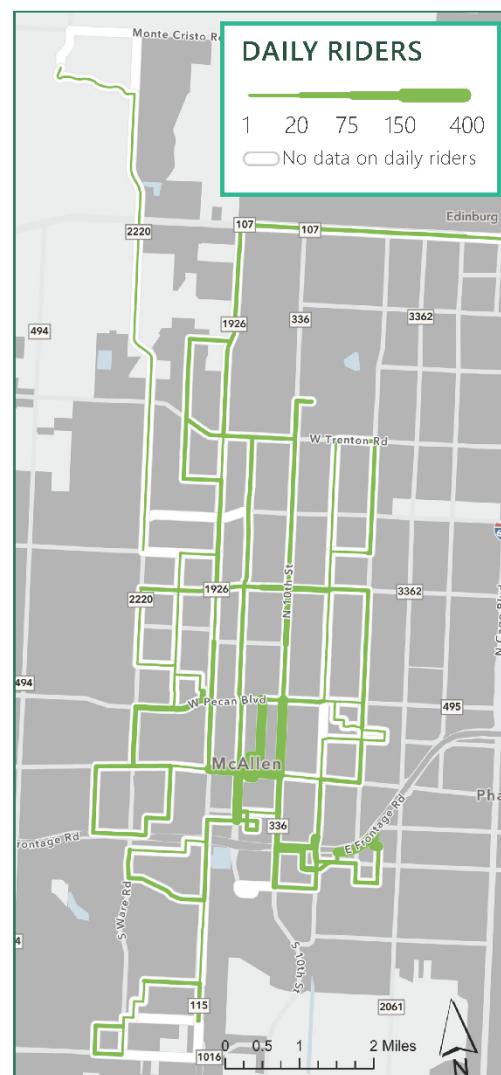


## ANNUAL RIDERSHIP



**3,300 Avg Daily Riders**

**633,495 Annual Riders**



## ISLAND METRO

### SERVICE PROVIDER



Island Metro is a free fixed route system that operates within the City of South Padre Island and Port Isabel, developed by the South Padre Island City Council. The fare-free system operates seven days per week and is funded by the Texas Department of Transportation section 5311 Rural Transit Program, the City of South Padre Island, and the City of Port Isabel Economic Development Corporation.



#### ROUTES

Island Metro operates **4** routes in Port Isabel and South Padre Island:  
Route 1 P.I. / N-Gulf / S-Padre  
Route 2 P.I. / N-Gulf / S-Padre  
Route 3 P.I. / Laguna Heights  
Route 4 S.P.I. / N-Padre / S-Gulf



#### MAJOR DESTINATIONS

South Padre Island City Office  
Queen Isabella Memorial Park  
SPI Convention Center  
Port Isabel Museum  
Las Palmas Shopping Center  
HEB  
Wal-Mart Supercenter



#### TRAVEL TIME



80.5% travel >30 minutes



19.3% travel >60 minutes

\*of approximately 4,800 people surveyed  
within the Cities of South Padre Island and Port Isabel



#### LEAVING FOR WORK

The most frequent times people leave for work are between:

1<sup>st</sup> 8:00am-8:30am

2<sup>nd</sup> 7:00am-7:30am

3<sup>rd</sup> 9:00am-10:00am

\*within the Cities of South Padre Island and Port Isabel



# ISLAND METRO

SERVICE PROVIDER



## Hours

*Schedules vary by route*

**Monday - Sunday**  
7:00 am - 9:00 pm



## Peak Vehicle

9 vehicles deployed  
at peak service times



## Service Types

Fixed route local bus



## Connections

**Valley Metro**

50 Brownsville Port Isabel  
Metro Express Blue Line

## System Map

### Legend

— Route 1 | Route 2

— Route 3

— Route 4



Island Metro  
Multi Modal  
Transfer Station



## ISLAND METRO

SERVICE PROVIDER



## ANNUAL DATA

417,009 Unlinked Trips

360,723 Vehicle Revenue Miles

20,434 Vehicle Revenue Hours

1.2 Unlinked Trips /Revenue Mile

20.4 Unlinked Trips /Revenue Hour



## EXPENSES

\$3.93 per Vehicle Revenue Mile

\$69.30 per Vehicle Revenue Hour

\$3.40 per Unlinked Passenger Trip

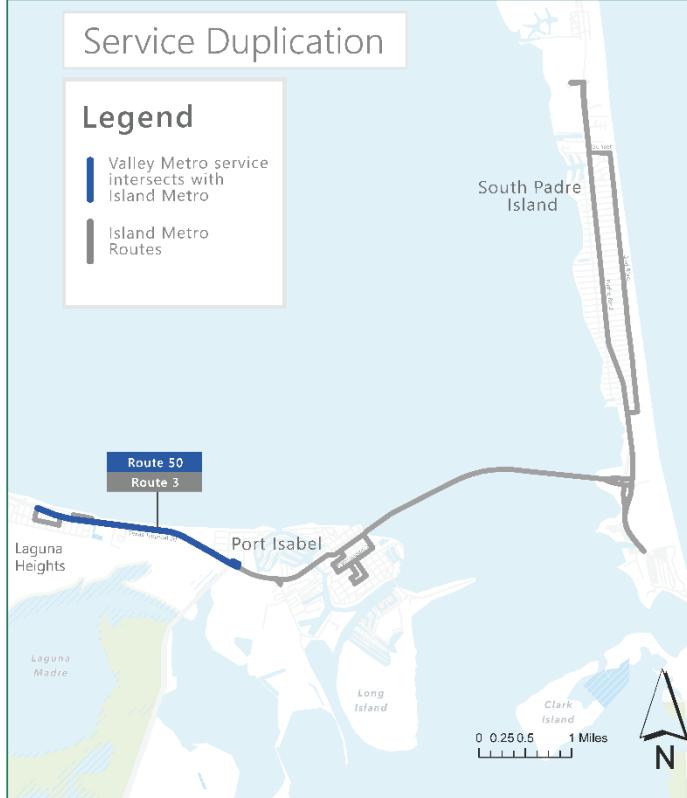
## Funding Sources

	OPERATING	CAPITAL
Fares	\$0	\$0
Local	\$295,082	\$4,186
State	\$432,719	\$110,233
Federal	\$688,278	\$944,017
Total	\$1,416,079	\$1,058,436

## Service Duplication

## Legend

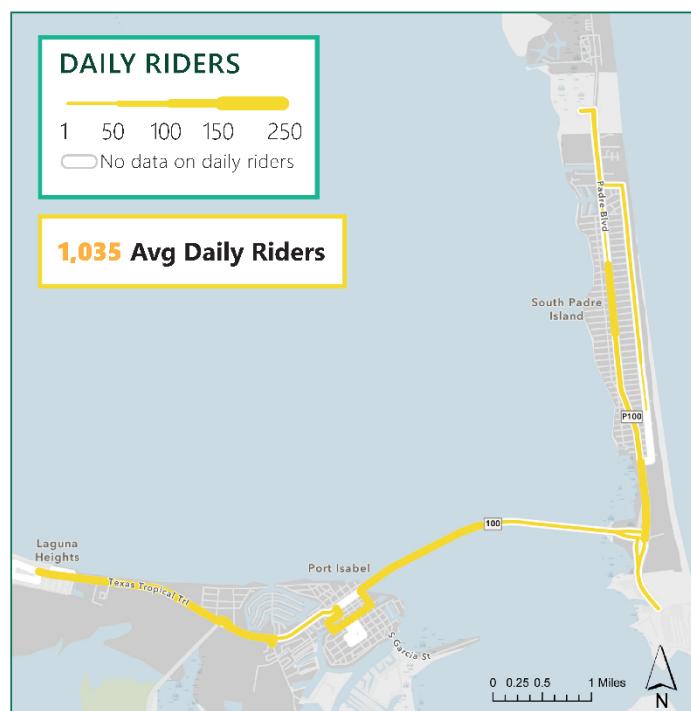
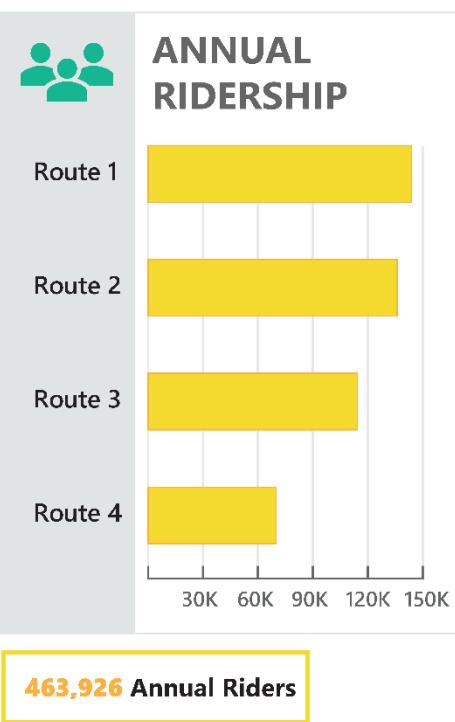
- Valley Metro service intersects with Island Metro
- Island Metro Routes





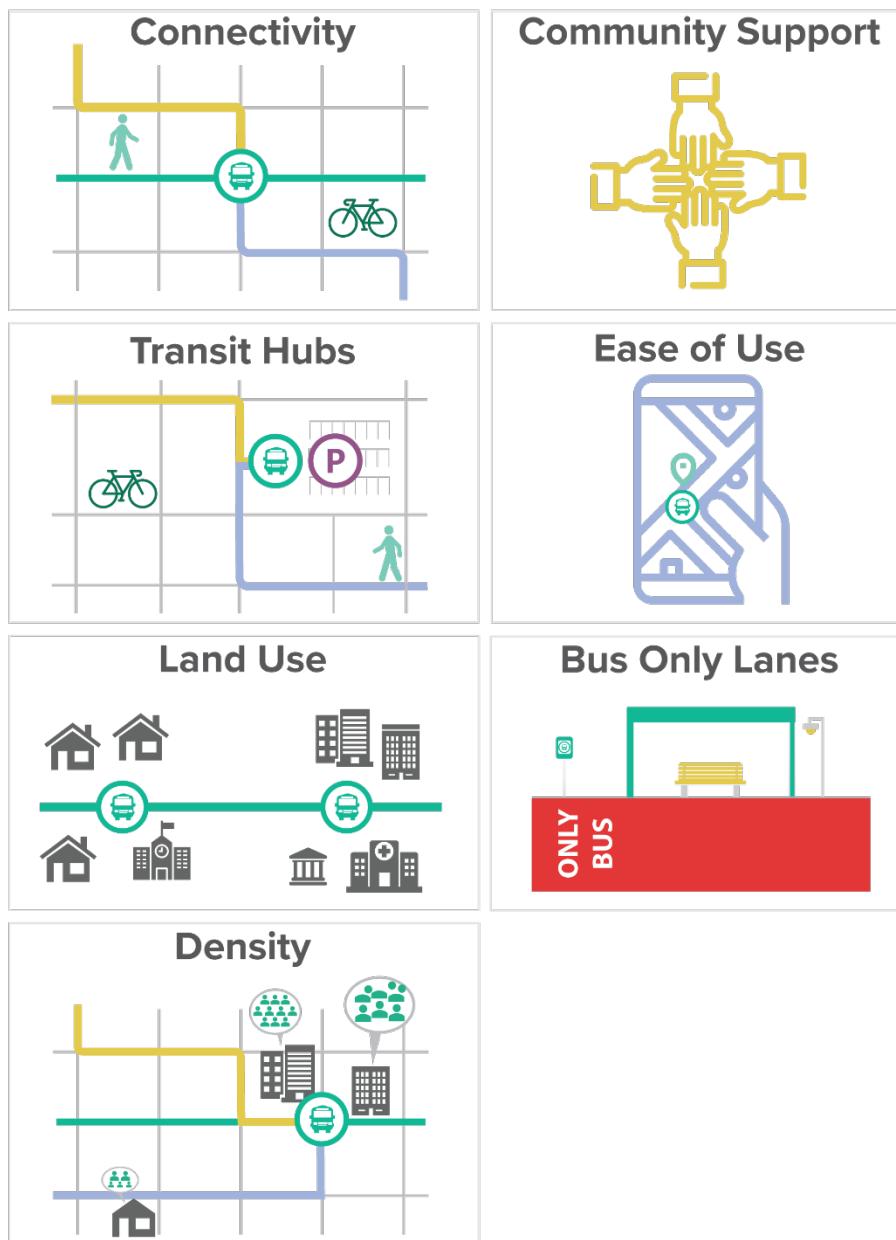
# ISLAND METRO

SERVICE PROVIDER



## MARKET ANALYSIS

Understanding how transit service operates throughout the region is only part of the transit story. It is just as important to understand the community that transit serves. Transit is most successful when the community it operates in is comprised of transit-supportive land uses with dense populations of people who are compelled or need to use transit. It is important that the road network is also designed and built to support transit vehicles and foster multimodal connectivity, and that areas with active transportation networks compliment transit and help to provide seamless transitions between modes.





Transit passengers are normally characterized as either choice or captive riders. As the name implies, a choice rider is defined by the fact that they choose to ride transit even though they have the option of another viable mode by which to travel, normally a car. Captive riders represent a group whose only viable option is to use transit. This term often carries a negative connotation, as it implies riding the bus is something a person is forced into doing and that if given the opportunity, they would likely choose another mode.

The problem with viewing transit through this lens is that the resulting analysis and recommendations usually end up falling into similar categories. Analyses focused on captive riders will look at where the 'need' or 'dependence' in the community is concentrated by identifying population groups characterized by low income, the elderly, or people with disabilities, while analysis that focuses on choice riders will isolate the population and employment densities so that they can maximize the greatest 'potential' or 'propensity.' When recommendations are formed in a mindset that distinguishes between these two groups, questions of prioritizing efficiency vs. coverage often arise. Solutions with choice riders in mind tend to be more focused on efficiency, which may be characterized by frequent routes running intuitive alignments, while conclusions about captive riders may lead to higher-coverage solutions, such as less frequent circulator routes that serve a larger area.

The market analysis and subsequent recommendations of this plan will not fall into one specific category. Instead, they are based on a holistic look at the community and an understanding of all the micro markets that drive transit, whether they be from need or potential. This regional market analysis will help tell the transit story of the RGV and inform recommendations that will make transit better for everyone in the community. By developing an in-depth understanding of all the markets in the region, the project team will be able to develop tailored solutions that match service delivery tools with the appropriate markets.

By reviewing the region in layers made up of transit potential, need, and destinations, the project team provides a better understanding of the Transit Market. The following section describes the methodology used by the project team to identify the Transit Markets of the RGVMAB.

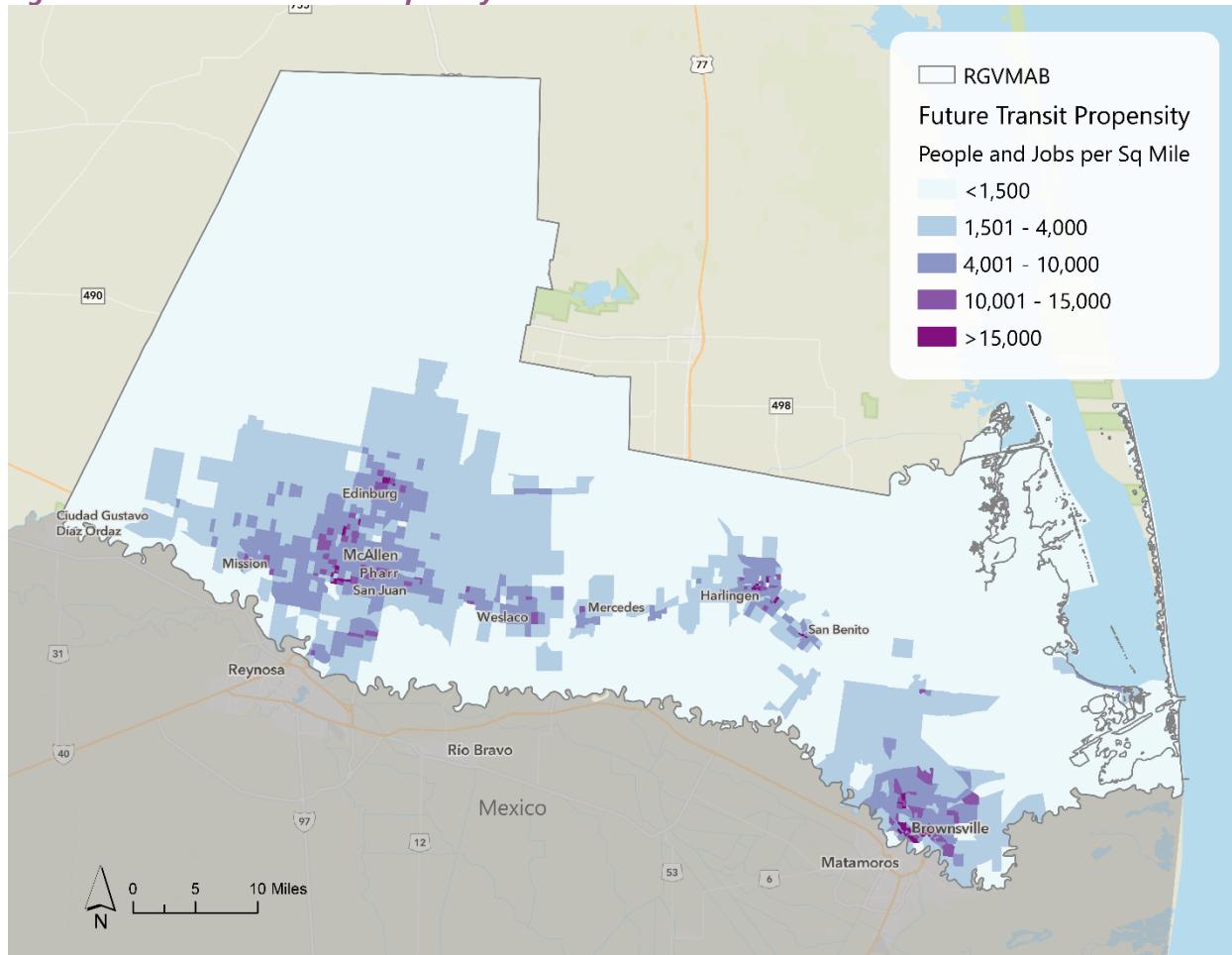
The final product provides transit market scores found within the RGVMAB that help the team understand which areas support and need transit. Market scores consist of individual scores provided to demographic subgroups which represent areas in need of transit service or service improvements. All data was derived from the 2018 American Community Survey (ACS) database. Each demographic subgroup was analyzed by density per square mile to create a standardized scale for scoring. The following subsections discuss the transit measures comprising the scoring method.

## ***Transit Potential***

The RGVMAB is a fast-growing region with expected sustained economic and population growth. Development and land use that has a mix of jobs, retail, and housing indicate areas with high activity and potential for supporting transit use. This highlights existing and future areas that have the potential to generate high ridership as people need to travel between places they live, work, shop, and conduct any recreational activities. One method for identifying transit potential is looking at locations that could support transit service. For this study, transit potential is identified through examining population and employment density or transit propensity. Transit propensity is displayed at the traffic analysis zone (TAZ) level using a

per square mile measurement. Milestone year (2019) and forecast year (2045) RGVMPO TDM outputs for population and employment were analyzed to represent current and future transit potential in the study area. Areas with higher transit propensity can be indicative of development and land uses that support transit use, presented in Figure 2.

**Figure 2: Future RGV Transit Propensity**



## Transit Need

Transit need represents citizen groups who may require special accommodations when it comes to transportation. This includes measuring population densities of those in the non-driving age population, with limited English-speaking proficiency (LEP), people representing minority populations, people with disabilities, and those with low income/under the poverty line. The consideration of these populations creates a robust understanding of existing transit need in the RGVMAB.

An analysis of target transit riders can help to identify the locations which have a higher need for transit service and help to prioritize transit adjustments to better support the community. A target transit rider (TTR) includes the following demographic subgroups:

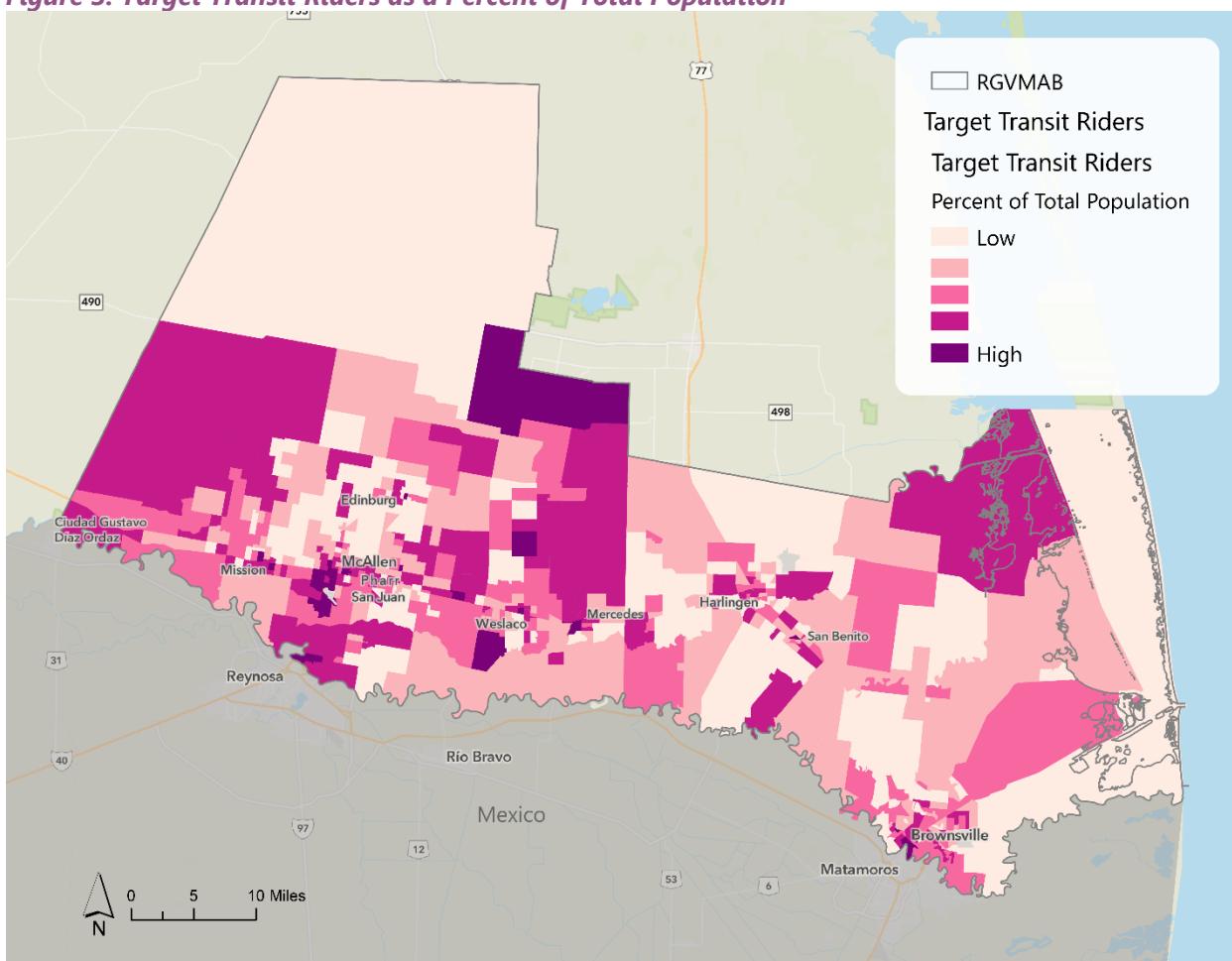
- Non-driving population (youth under 18, and elderly over 65)
- Population with limited English proficiency (LEP)



- Minority populations
- Populations with disabilities
- Population living in poverty, and
- Population without access to a personal automobile.

It is generally assumed that individuals in these demographic subgroups are more likely to rely on public transportation for their mobility needs. Locating the areas in which these subgroups are concentrated can help ensure that the people with the highest need for services have access to reliable and effective transit. It should be noted that a person might be counted in more than one category of need. For example, someone who is 16 years of age, speaks limited English, and lives in a household without a vehicle would be counted in three of the demographic subgroups. This inclusion of individuals in multiple categories benefits the analysis because it ensures that locations with people who have multiple factors limiting their mobility are highlighted prominently in the analysis. A graphic representation of the analysis of TTR for the region is presented in Figure 3.

**Figure 3: Target Transit Riders as a Percent of Total Population**



## Transit Destinations

The analysis of existing conditions considered access to destinations, especially key destinations by transit within the RGVMAB. A total of 32,149 businesses were identified in the RGVMAB. From this total, roughly 44% could be categorized for this analysis.

Accessibility to many amenities can ensure that residents who rely on transit are able to access the basic goods and services for "daily" life. The following major categories were used to organize the destinations dataset:

- Government and Public Services: post offices, libraries, food banks, homeless shelters, government offices, community centers, etc.
- Healthcare Facilities: physicians, pharmacies, dentists, clinics, childcare, hospitals, etc.
- Grocery Stores: major grocery stores, convenience stores, food markets, and health food stores.
- Schools: nurseries, public schools (K-12), colleges and universities, and tutoring services.
- Financial: banks, financial planning, tax return preparation services, accountants, etc.
- Retail: locations for shopping and running errands including clothing, general retail, sporting goods, electronics, beauty salons, pet care, etc.
- Social and Recreational: movie theaters, restaurants, bars, hotels, campgrounds, etc.

Although it is important for transit riders to have access to many goods and services throughout their communities, some services are essential for "daily" life. There are 895 key destinations identified in the RGVMAB, including:

- Government Facilities: community and recreation centers, post offices, libraries, and social service and welfare
- Hospitals and Medical Centers
- Major Grocery Stores
- Public Schools and Colleges

## Distribution of Destinations

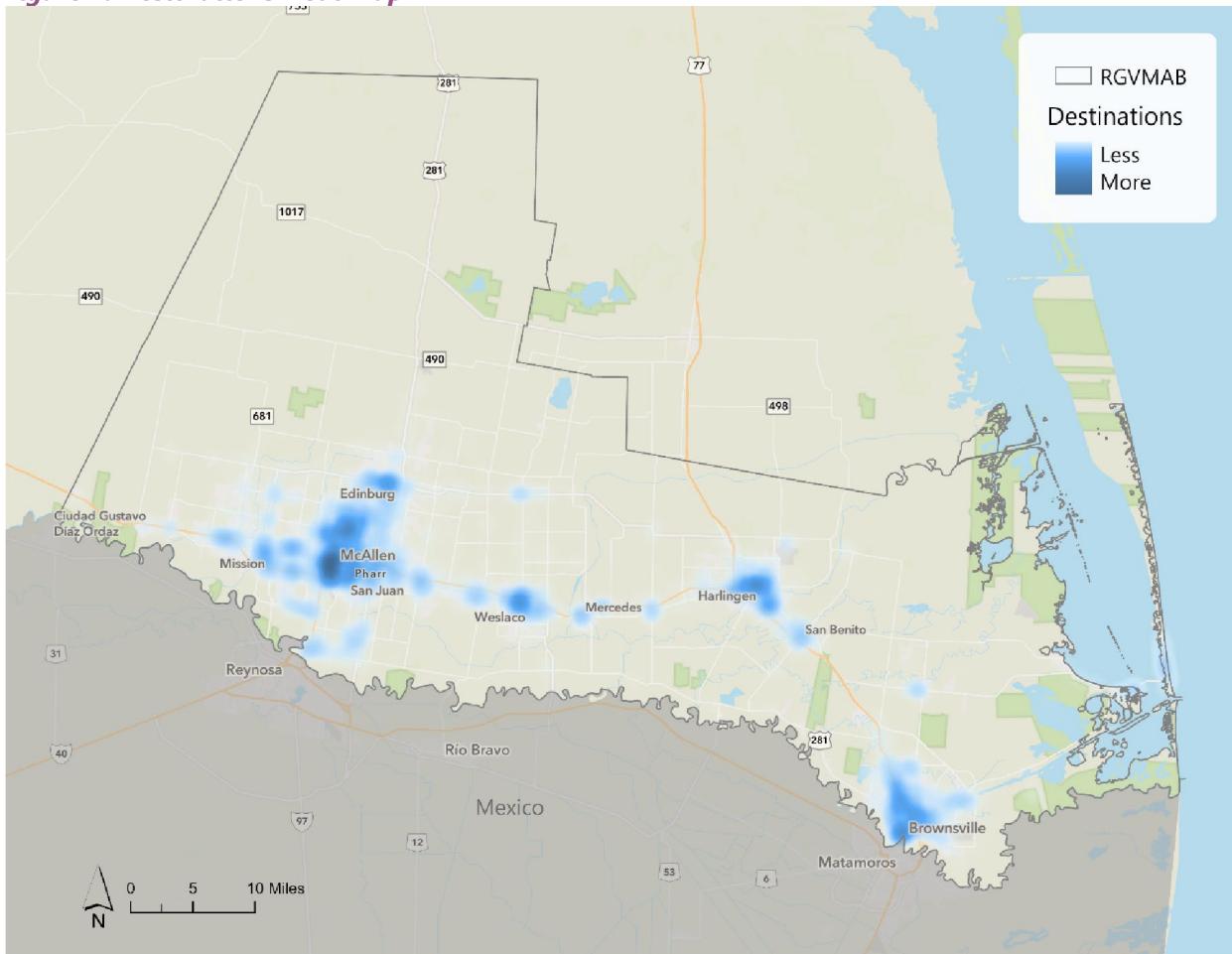
The distribution of destinations in the region can provide insight into areas that require transit services. Many of the businesses in the region are concentrated in the major urban areas or along major corridors within the RGVMAB, presented in Figure 4. Among the types of destinations, most are within the 0.25-mile walkshed to a regional transit route. Healthcare, financial services, retail, and locations for social and recreational activities are highly accessible with more than 80% of destinations in the RGVMAB within access to a transit route, shown in Table 1.



**Table 1: Regional Transit Coverage of Destinations by Category**

Destination Category	RGVMAB	Within Regional Transit Walkshed	% Covered by Transit
Government	577	438	76%
Healthcare	2,074	1,754	85%
Grocery Stores	599	432	72%
Schools	643	351	55%
Financial	1,909	1,632	85%
Retail	3,599	3,013	84%
Social and Recreational	2,593	2,123	82%

**Figure 4: Destinations Heat Map**



## A Region in Layers – Transit Market

Locations of people and jobs which have the potential to support transit, populations in need of transit, and desirable destinations to be served by transit all indicate and contribute to the market for transit in the region. Identifying locations that have high potential markets and inadequate transit supply can assist in the prioritization of future transit investments. For this part of the analysis, criteria from the previous sections were selected, standardized, and scored to provide a cumulative look at transit demand in relation compared to the transit supply. This identifies gaps where demand is not currently met and will help with route design in future stages of the Transit Development Plan (TDP).

Two criteria were identified from each of the three analyses of the transit market (potential, need, and destinations). The criteria selected from the existing conditions analysis are shown in Table 2.

**Table 2: Transit Market Score Criteria**

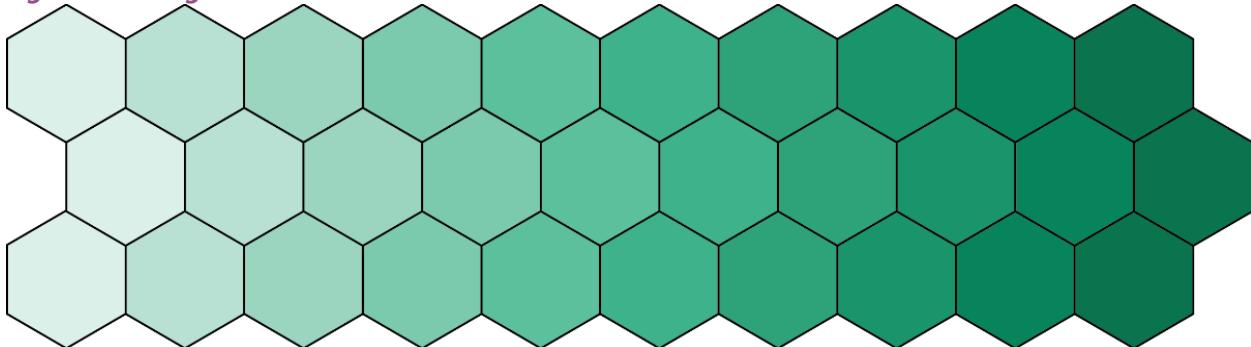
	Criteria	Description	Geography
Transit Potential	Propensity	Estimated number of people and employment per square mile in 2019	Traffic Analysis Zones (TAZ)
	Future Propensity	Forecasted number of people and employment per square mile in 2045	Traffic Analysis Zones (TAZ)
Transit Need	Target Transit Riders (TTR)	Percent of estimated target transit riders relative to total population	Census Block Groups
	TTR Subareas	Comparison of the relative need of the highest need locations	Census Block Groups
Transit Destinations	Destinations	Location of all destinations including schools, shopping, healthcare, banks, social and recreational, and tourism related locations.	Point Data (X and Y)
	Key Destinations	Location of “essential” locations only, or those more crucial to transit riders as described in the destinations section	Point Data (X and Y)

The criteria were standardized in order to make it easier to draw comparisons. The first method for creating a standard unit of measurement was to develop one identical unit of geography, as each of these datasets have different geographies (TAZ, Census block groups, point data). One method is to use hexagon grids to aggregate and compare data. This helps reveal patterns in the data and is suitable for both shape-based and point-based data. For this analysis, the region was divided into hexagons that are 0.25 square miles each, shown in Figure 5.

Each criterion was aggregated to the hexagonal grid using a spatial join in GIS. For shape-based data like the TAZ and Census block groups, a criterion was averaged where a hexagon overlapped more than one shape.



**Figure 5: Hexagonal Grid**



To finalize the standardization process, the project team converted the criteria to a 100-point scale. Each measure was normalized through scoring assignments based on a scale of 0 - 100 for each hexagon. Hexagons with the highest scores contain a value of 100, while the lowest contain a value of 0. For example, a hexagon with a propensity value that is higher than 90% of other propensity hexagons is assigned a value of 90 out of 100. Once each measure was scaled from 0 -100, the measures were aggregated to generate final combined scores, shown in Figure 6. Final scores were then normalized on a scale from 0 - 100. This final combined score is a transit market score which indicates the demand for transit based on the cumulation of these measures, shown in Figure 7.

**Figure 6: Development of Transit Market Score**

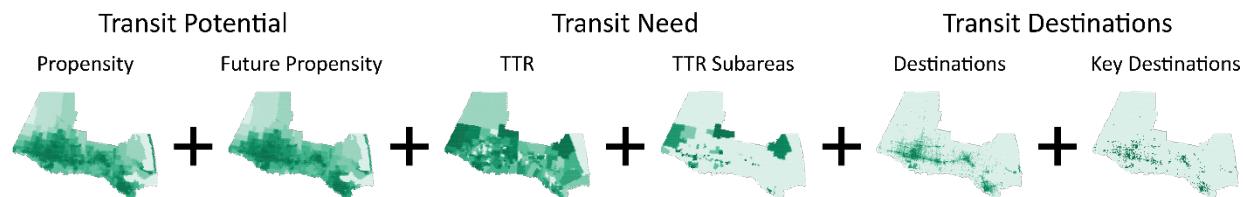
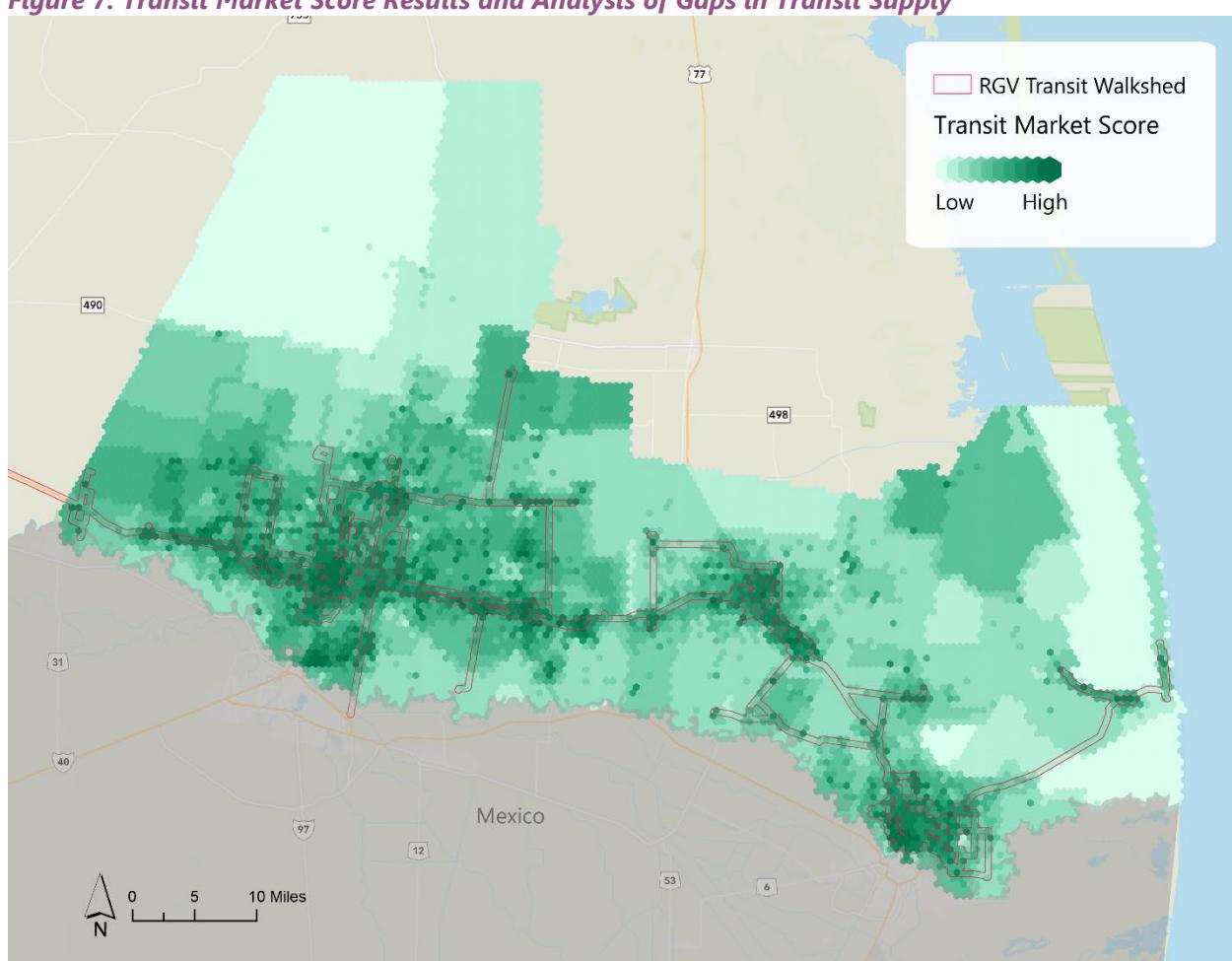


Figure 7: Transit Market Score Results and Analysis of Gaps in Transit Supply





## RGVMAB Key Findings

The following lists key findings resulting from a GIS spatial analysis conducted on the finalized transit market scores for the RGVMAB:

- High scoring block groups tend to be settled around the main urban areas of the RGVMAB.
  - o McAllen, Edinburg, Harlingen, San Benito, and Brownsville
- High scoring block groups also tend to be in smaller area cities, especially along interstate/highway infrastructure, namely I-2.
  - o Mission, Pharr, San Juan, Alamo, Donna, Weslaco, and La Feria
- The spatial distribution of market scores puts emphasis on the need for interagency coordination.
  - o To achieve a regional voice, agencies will need to collaborate to create an effective and efficient transit system.
  - o Accordingly, local transit systems must meet their needs internally and provide connections to regional service (Valley Metro)
- Regional service needs to extend to smaller municipalities lacking local services using regional transportation infrastructure.
- Regional connectivity between smaller urban areas and larger municipal amenities (e.g. healthcare, higher education, etc.) needs to increase.

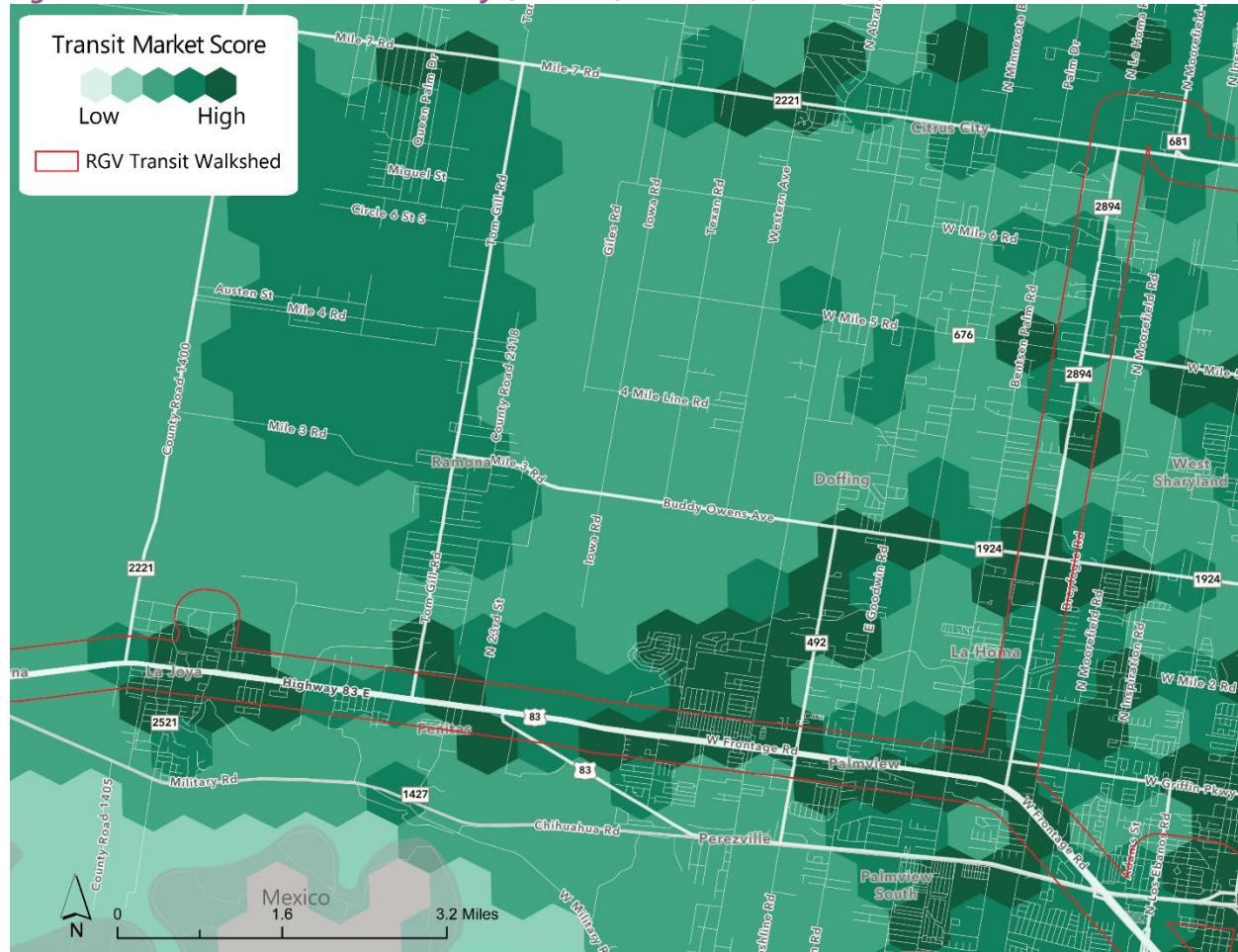
## Sub-Region Findings

The following sections will provide more detail on the GIS analysis for specific sub-regions of the RGVMAB.

### ***Hidalgo County I-2/I-69C Corridors***

West Hidalgo County contains high-scoring hexagons along the US 83/I-2 corridor intersecting La Joya, Penitas, and Palmview. High-scoring hexagons deviate to the north and south near La Homa and Palmview South (Figure 8).

**Figure 8: Transit Market Scores – La Joya, Penitas, Palmview, La Homa, Palmview South**



The area extending from Mission to Alamo (west to east) and Edinburg to Pharr (north to south) displays a zone with contiguous high-scoring hexagons, suggesting a mixture of transit potential and need in the area, shown in Figure 9 and Figure 10. The following describes key findings for McAllen, Mission, Pharr, and Edinburg, shown in Figure 9, and the key findings for Donna, Weslaco, and Mercedes, shown in Figure 10.

McALLEN

The City of McAllen displays transit markets extending north from FM 1016 to West Trenton Road near Tuscan Estates. As the most expansive transit potential/needs area (based on market scores) within the I-2 and I-69C corridors, the area effectively encapsulates the following municipal districts:

- La Paloma
  - McAllen Historic Business Redevelopment zone
  - De Palmas Historic District
  - Westway Avenue
  - Las Villas/Emerald Point
  - Tuscan Estates



It is important to note the presence of a strong existing transit service provider in Metro McAllen. Moving forward, it will be important to emphasize connectivity with regional services such as Valley Metro to support the RGVMPO's regional vision.

### **MISSION**

Areas with high market scores in Mission exist throughout the municipal boundary, including Mission City Hall, the Mission Police Department, and the Mission Housing Authority.

### **PHARR**

High scoring hexagons tend to cluster along the US 281 corridor. The contiguous area extends north from Ridge Road to FM 3461 and contains destinations such as Liberty Middle School, PSJA Stadium, Food Bank of the Rio Grande Valley, and HEB Plus. The second cluster is located south of downtown Pharr.

### **EDINBURG**

Edinburg presents high-scoring hexagons just west of the central business district (CBD), including Altamira West Number 2 Colonia and Wood Colonia. Specific destinations include the University of Texas Rio Grande Valley (UTRGV) – Edinburg, the W. University Drive Walmart Supercenter, and Region One Education Center. Other areas of high potential/need include hexagons containing the Hidalgo County Courthouse, Apollo Park and the Sacred Heart Catholic Church, and the area surrounding I-69C south of E. University Drive containing Lyndon B. Johnson Elementary.

### **DONNA**

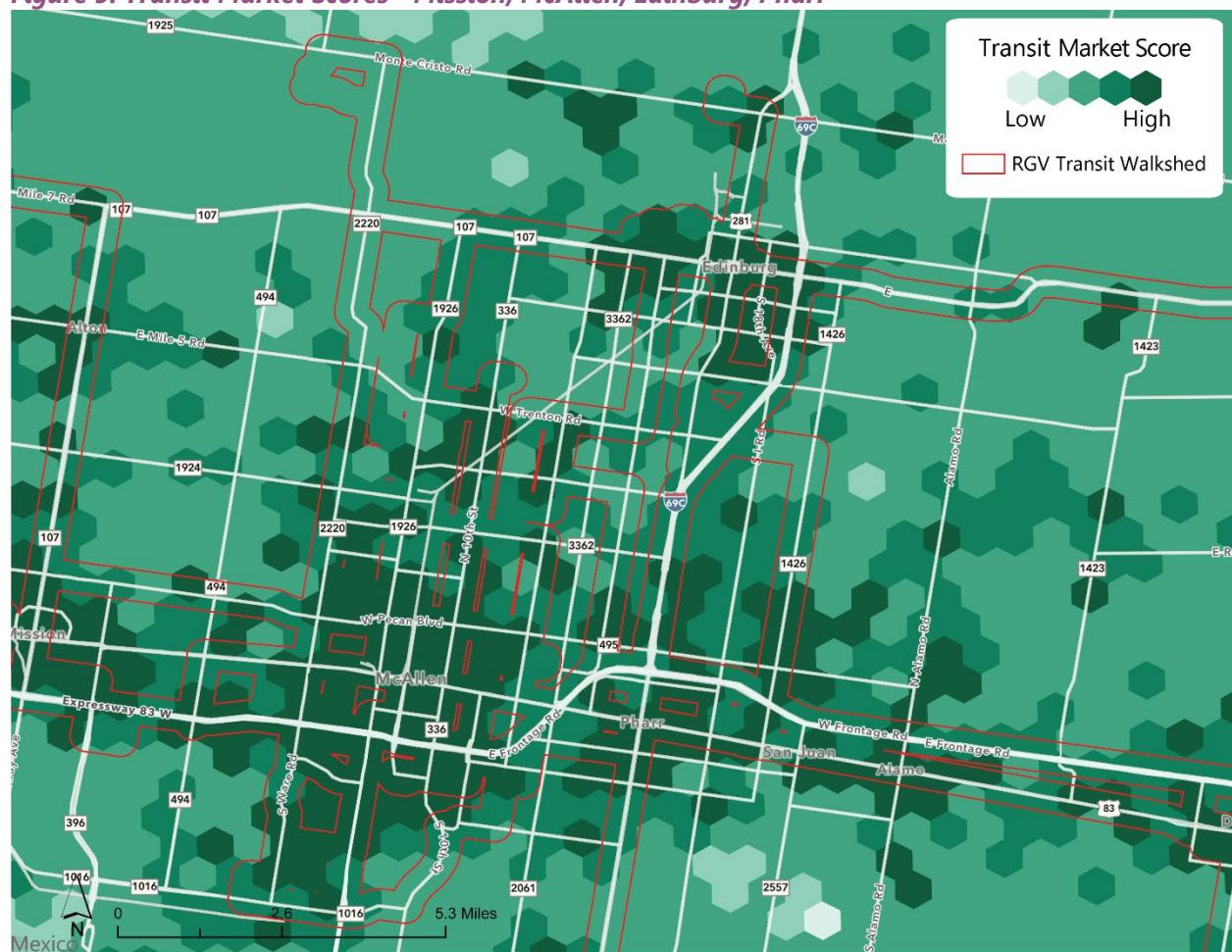
The City of Donna contains two significant clusters regarding transit potential and need. The first occurs west of central Donna and spans from I-2 to South Avenue, and contains destinations such as Big Valley Trailer Park, HEB, and the Holy Cross Center. The second exists southeast of the Hooks Avenue and S FM 493 intersection and contains St. Joseph Catholic Church, Guzman Elementary School, Kwik Pantry Food Mart, Dolphin Motel and RV Park, and Boyce Memorial Park.

### **WESLACO**

High-scoring hexagons exist between E. Business 83 and I-2 and contain major retail centers and destinations such as Weslaco High School, South Texas College – Mid-Valley Campus, and HEB. High-scoring areas also extend south of E. Business 83 along S. Texas Boulevard and contain destinations such as Knapp Medical Center and Weslaco East High School.

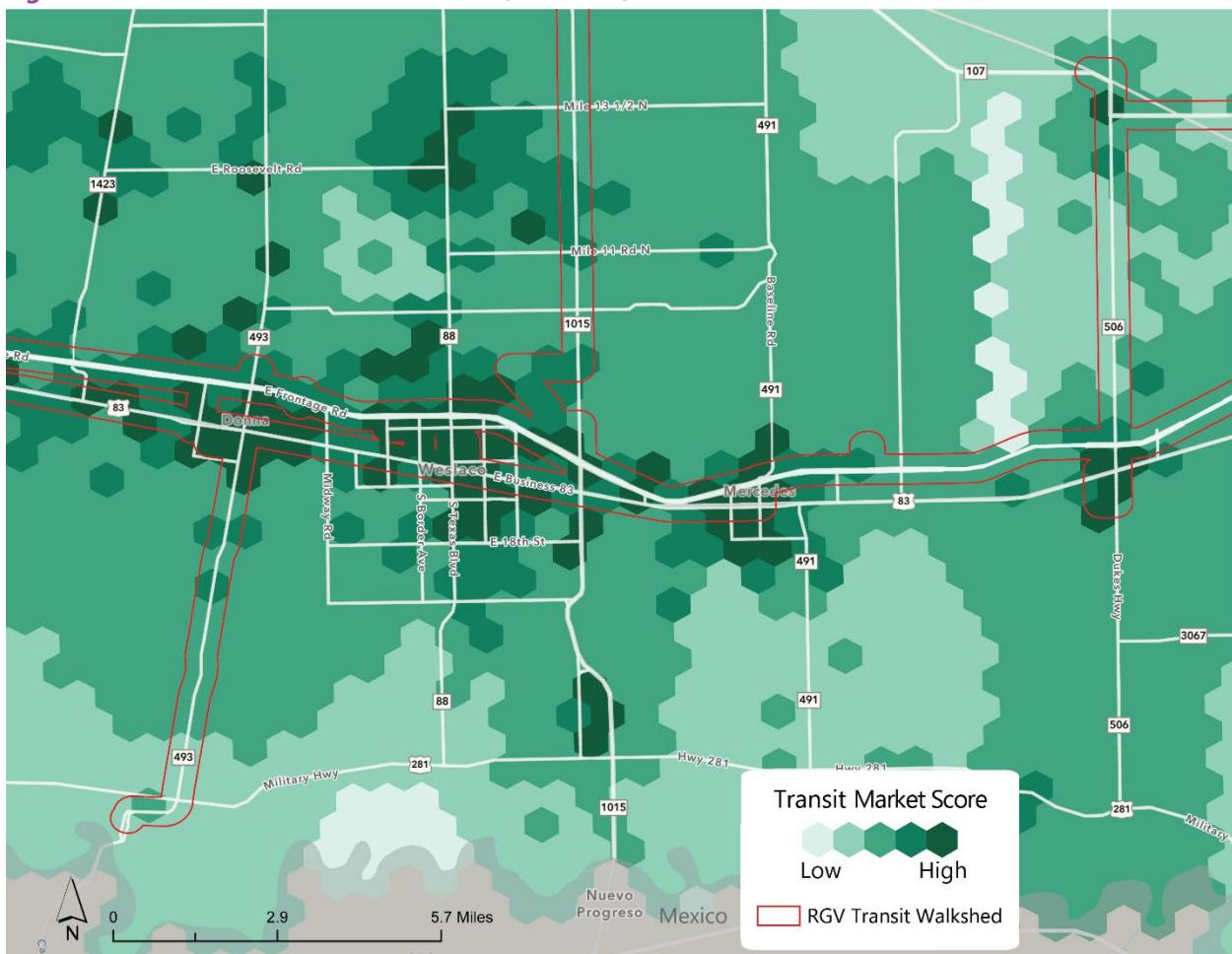
### **MERCEDES**

The majority of West Mercedes contains high scoring transit potential/need hexagons. The Rio Grande Valley Premium Outlets are also located east of FM 491 along I-2 and should be considered for future transit improvements.

**Figure 9: Transit Market Scores - Mission, McAllen, Edinburg, Pharr**

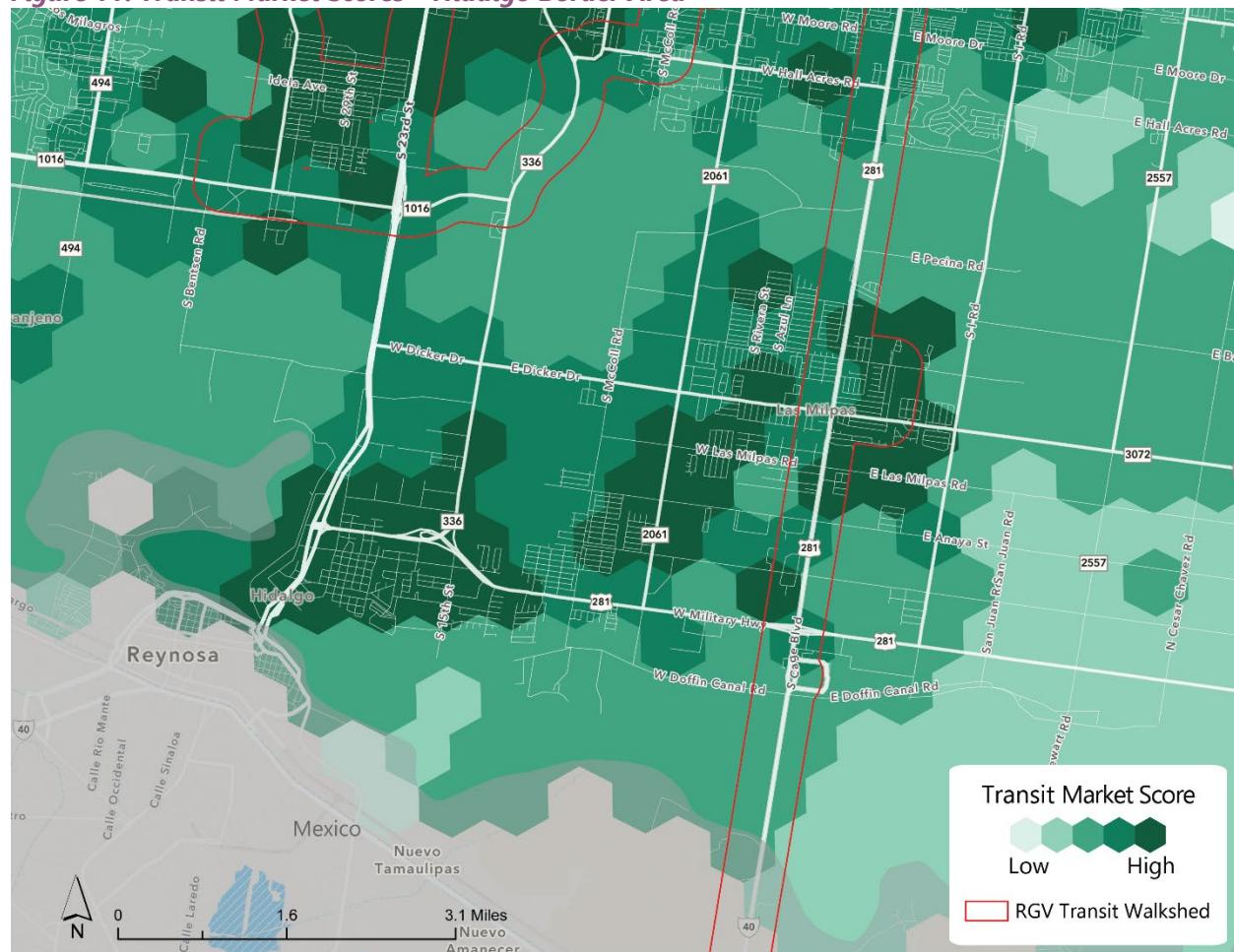


**Figure 10: Transit Market Scores - Donna, Weslaco, Mercedes**



### Hidalgo Border Area

The Hidalgo border area, anchored by the McAllen-Hidalgo International Bridge, contains dense clusters of transit potential/need directly along the border, along the US 281 corridor, and surrounding Las Milpas. This is an important area for consideration as it borders the dense city of Reynosa, Mexico, and provides an opportunity to provide critical connections to established transit systems such as Valley Metro and Metro McAllen. Currently, jitney service is currently provided by private agencies connecting the cities of Hidalgo and McAllen, and Valley Metro provides a vehicle to Hidalgo for elderly transportation. See Figure 11.

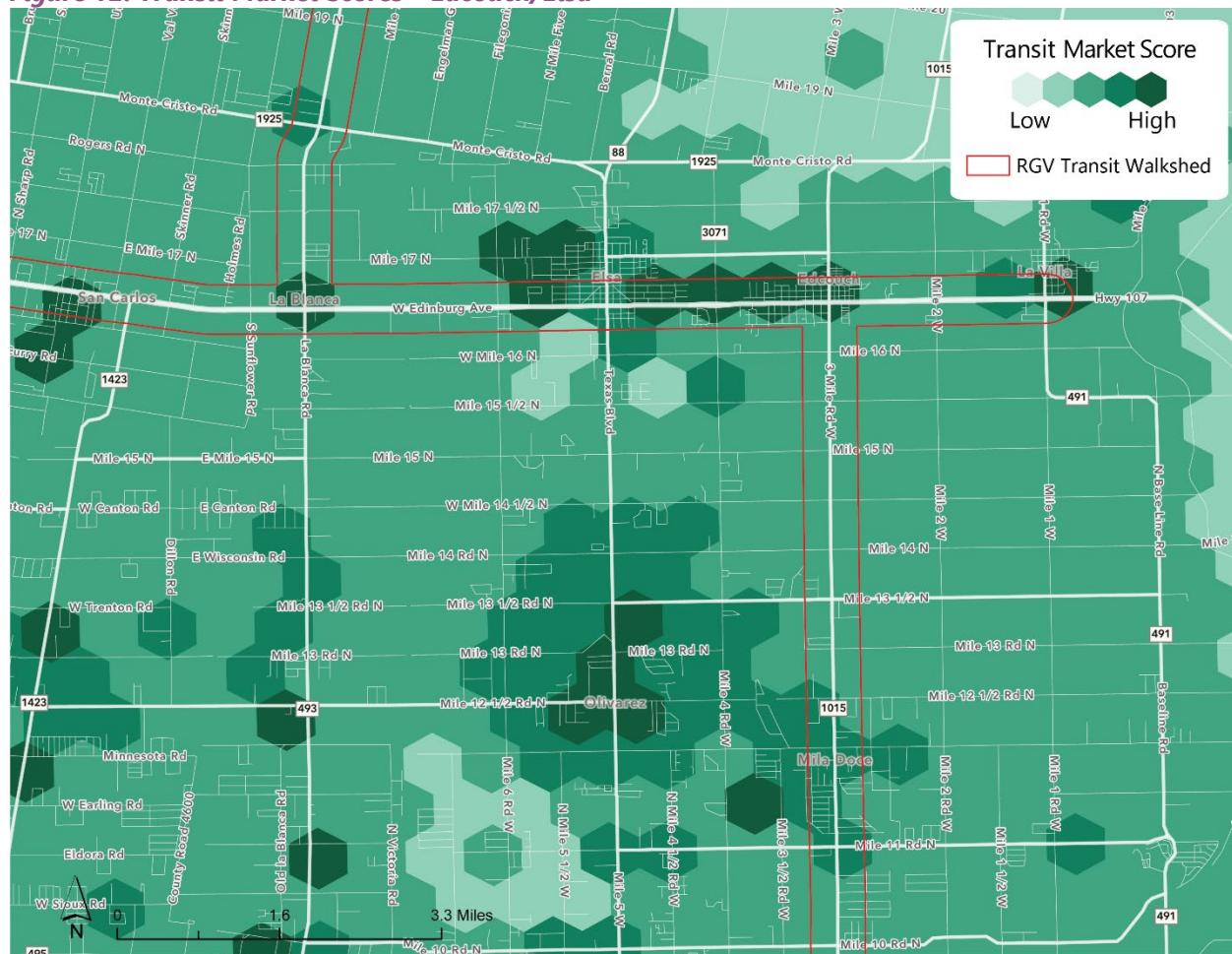
**Figure 11: Transit Market Scores – Hidalgo Border Area**

### Edcouch/Elsa Area

While scores in this area are not as densely clustered as other major municipal areas, the Edcouch/Elsa municipal area is important to consider for potential transit moving forward, shown in Figure 12. While population and employment densities are generally lacking in comparison to other regional jurisdictions, contiguous high-scoring hexagons in the area tend to be in municipal areas and along rural highways and major arterials. This suggests that these areas contain significant transit needs populations (i.e. elderly, disabled, impoverished, etc.). To create a thriving region, consideration must be made for more rural areas.



**Figure 12: Transit Market Scores – Edcouch/Elsa**



### **Harlingen/San Benito Area**

The Harlingen municipal area contains critical interstate and highway infrastructure for the RGVMAB, as well as the Valley International Airport (VIA) which contributes to the movement of people and goods throughout the area. It also represents an area with high population and employment densities bridging the gap between McAllen and Brownsville, shown in Figure 13. Because of this, it is critical for the RGVMPO TDP to emphasize both regional and local transit services.

#### **HARLINGEN**

Like McAllen, the Harlingen municipal area contains contiguous hexagons containing high scores, extending northeast along I-69E and US 77. The following areas should be considered highly when creating transit alternatives:

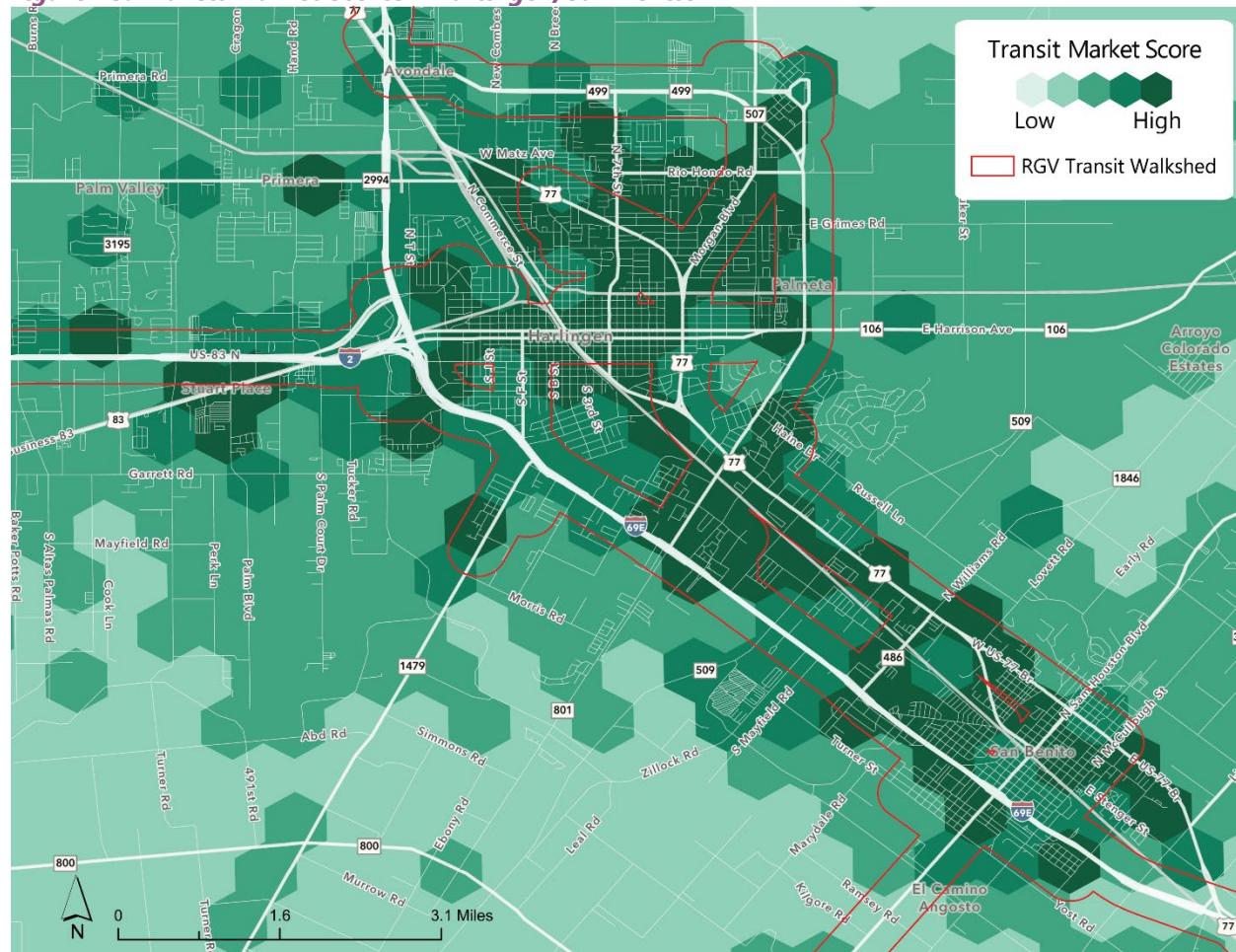
- The area adjacent (east) of I-69E containing the Central Park shopping mall, serving as a major commercial hub for the region.
  - o This is also adjacent to the Valle Vista Mall, Walmart Supercenter, and Bass Pro Shops.
- Central Harlingen, surrounding the commercial and residential areas located along Harrison and Tyler Avenues, which contains local business district Jackson Avenue.

- North Harlingen extending northeast from north Commerce Street and Business Hwy 77 (Sunshine Strip).
  - o This includes Zavala Elementary School, the Texas Department of Public Safety (DPS), Harlingen High School, Jane W. Long Elementary School, and the Keys Academy.
- Valley International Airport (VIA) and its surrounding area.
- Block groups south of Arroyo Colorado, including destinations such as Rangerville Park, Bee First Primary Home Care and Hospice, Harlingen Nursing and Rehabilitation Center, Valley Baptist Medical Center – Harlingen, and Harlingen Medical Center.

### SAN BENITO

- The City of San Benito contains clusters of high-scoring hexagons surrounding downtown San Benito and just east/northeast of the city center across from the Heavin Resaca Trail. The highest scoring areas tend to surround I-69E and US 77 and lead into the Harlingen municipal area.

**Figure 13: Transit Market Scores - Harlingen/San Benito**



### Brownsville/Cameron Park Area

The Brownsville/Cameron Park area presents a unique opportunity for transit as it shares a border with the city of Matamoros, Mexico, and has dense development patterns radiating out from the Gateway International Bridge Port of Entry (POE). Accordingly, these locational characteristics and land use



development trends generate dense areas of transit potential and need throughout the region, shown in Figure 14.

### BROWNSVILLE

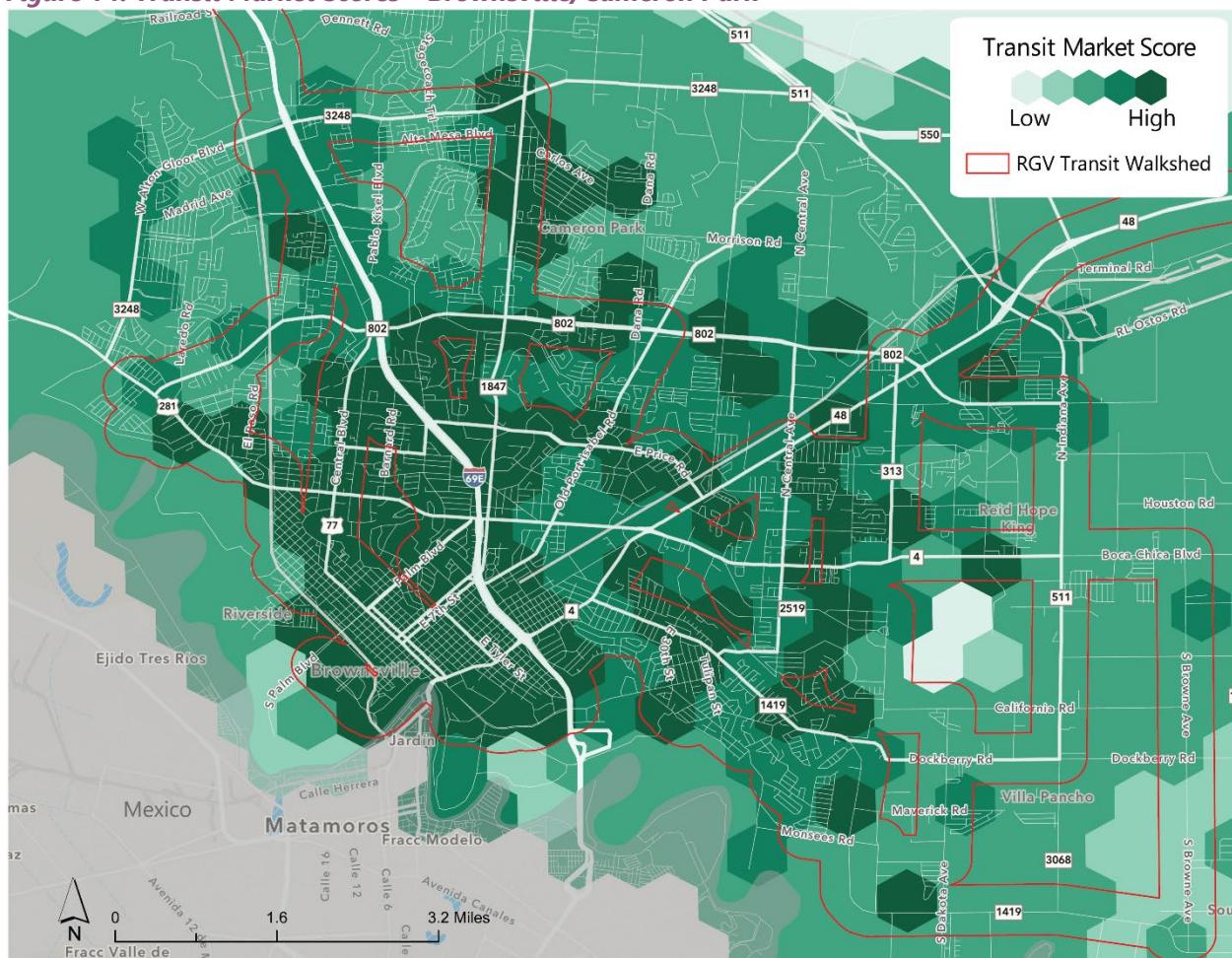
Brownsville contains dense development of both population and employment, containing local businesses, large commercial developments, higher education facilities, and healthcare facilities. At a high level, hexagons with significant scores vary throughout the Brownsville municipal boundary, extending north from the US–Mexico border to FM 802 and east to west from roughly El Paso Road to the Brownsville-SPI International Airport. The following areas should be considered as high priority areas moving forward:

- Downtown Brownsville and the Brownsville border area.
- The immediate area northwest of downtown, containing destinations such as Sams Memorial Stadium, Valley Baptist Medical Center – Brownsville, Adult Continuing Education, and Central Middle School.
- The immediate area northeast of downtown, containing dense residential development, Cameron County Detention Center, Cameron County Courthouse, and Southern Pacific Linear Park.
- The area extending southeast between Tyler Street and UTRGV – Brownsville, containing Longoria Elementary School and UTRGV Casa Bella Apartments.
- The Southmost Blvd. region of the City of Brownsville, specifically following 14<sup>th</sup> Street/Southmost Boulevard containing a mixture of residential and commercial land uses, including HEB.
- North Brownsville east of I-69E, containing Rockwell Manor Apartments, La Villita Apartments, Rockwell Grocery, and Perez Elementary School. This area is also adjacent to retail development including Sunrise Mall, Las Tiendas Plaza, and the Walmart Supercenter.
- Hexagons surrounding Boca Chica Boulevard and Billy Mitchell Boulevard with destinations such as Waterside Apartments, Boca Palma Townhomes, and Conquistador Apartments
- Northeast Brownsville, which is largely residential and contains Perkins Middle School and Sunset Palms RV and Mobile Home Park.

### CAMERON PARK

Cameron Park is a colonia not annexed by the City of Brownsville that contains largely residential developments and is seeing growth (Figure 14). Large subdivisions surrounding FM 1847 display high transit market scores and should be considered throughout the TDP process.

Figure 14: Transit Market Scores – Brownsville/Cameron Park

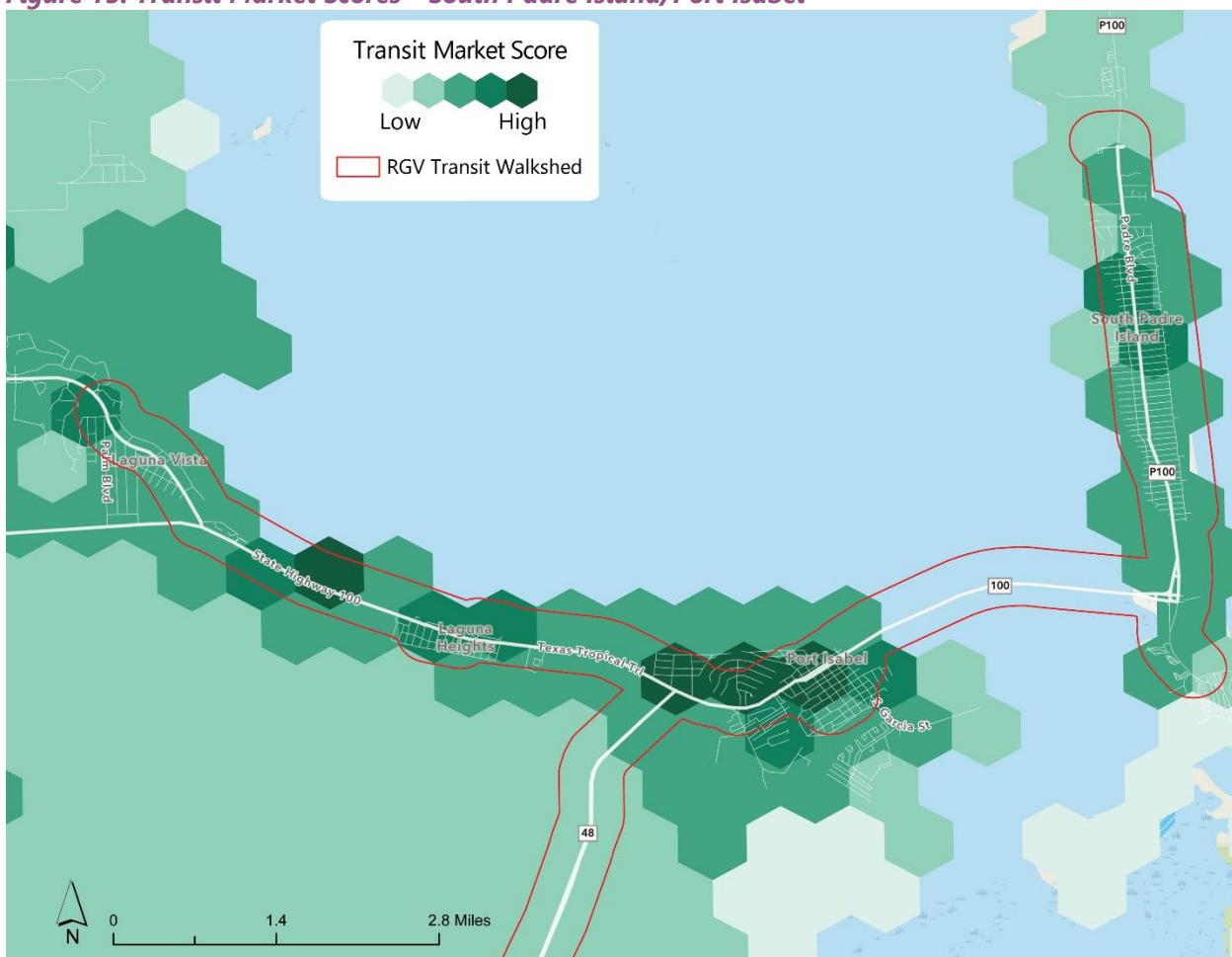


### South Padre Island/Port Isabel

Clusters of transit potential and need follow the SH 100 corridor, showing prominent transit market scores in Laguna Vista, Laguna Heights, Port Isabel, and north South Padre Island, shown in Figure 15.



Figure 15: Transit Market Scores – South Padre Island/Port Isabel



## Border Crossings

The RGVMAB contains 11 border crossings (including roadway, railway, and ferry infrastructure) that facilitate the movement of goods and people between the region and Mexico. Due to the large quantity of border crossing assets, as well as proximity to densely populated cities in Mexico, the RGVMAB serves as a critical region for border transportation activity.

Accordingly, it is important to understand current conditions of the RGVMAB's border crossing facilities as border movement presents an opportunity to provide public transportation and increase accessibility and mobility throughout the RGVMAB. Table 3 below presents border crossing modes from the 2019 TxDOT-TPP Texas-Mexico International Bridges and Border Crossings Study.

**Table 3: RGVMAB Border Crossing Modes and Change in Truck Volume (2008 to 2018)**

Border Crossing	POV	Ped	Bus	Rail	Truck
Texas-Mexico Border Region	X	X	X	X	X
Los Ebanos Ferry	X	X			
Anzalduas Int. Bridge	X		X		
McAllen-Hidalgo Int. Bridge	X	X	X		
Pharr-Reynosa Int. Bridge	X	X	X		X
Donna Int Bridge	X				
Weslaco-Progreso Int. Bridge	X	X	X		X
Free Trade Bridge	X	X	X		X
Brownsville West Rail Bridge				X	
B&M Bridge	X	X			
Gateway Int. Bridge	X	X	X		
Veterans Int. Bridge at Los Tomates	X	X	X		X

Out of the 11 total border crossings in the RGVMAB, seven allow bus traffic and eight allow pedestrian crossings. In 2018 alone, the Rio Grande Valley border crossing region experienced 65,876 passenger bus crossings, along with 7.2 million pedestrian crossings. Further, TDM outputs show high daily trip counts crossing the border (to and from the RGVMAB) in the Hidalgo/Reynosa and Brownsville/Matamoros border crossing areas (see the Desire Line Analysis section below), suggesting cross border travel to be a prominent daily activity in the region.

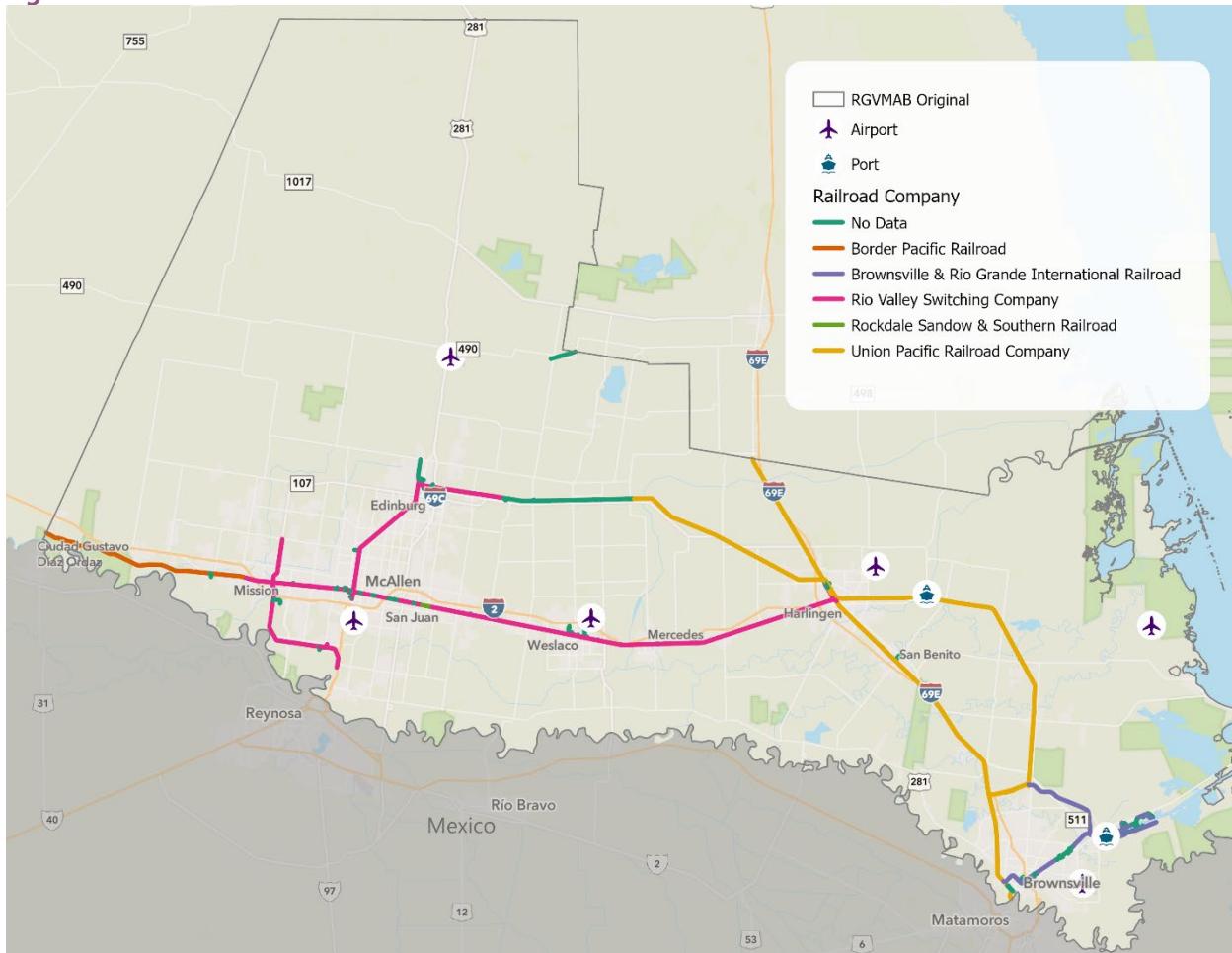


## Railroad Network

RGV's inland and border location creates opportunity for the region, as the area has become a crossover station for both international and domestic rail freight traffic (specifically east-west traffic in the United States), shown in Figure 16. Both the Union Pacific Railroad (UP) and BNSF Railway (BNSF) connect with the Ferrocarril Mexicano Railroad (FXE) in Ciudad Juarez and Chihuahua, Mexico, producing 11% of all border crossing rail freight in Texas annually. Two bridges exist on either side of the Paso Del Norte Border Crossing Bridge. While both train traffic volume and loaded container counts have decreased significantly overall since 2007, both measures have steadily increased over the last 5-6 years.

The RGV region contains roughly 535 miles of railroad facility, 8 miles of rail bridges, and 6 railyards. The UP line stretches throughout the RGVMAB, with the Sunset route connecting the region to Southern California, Houston, Dallas, and Chicago. The BNSF facility begins in the RGV and extends north into New Mexico, where a terminal exists to direct traffic further north or onto an east-west route. Most of the freight that passes through the RGV is directed outside of the region, primarily to the west coast (90%). It is important to take stock of these facilities as the region becomes more 'transit-ready' and begins exploring High Capacity Transit (HCT) options.

**Figure 16: RGVMPO Railroad Assets**

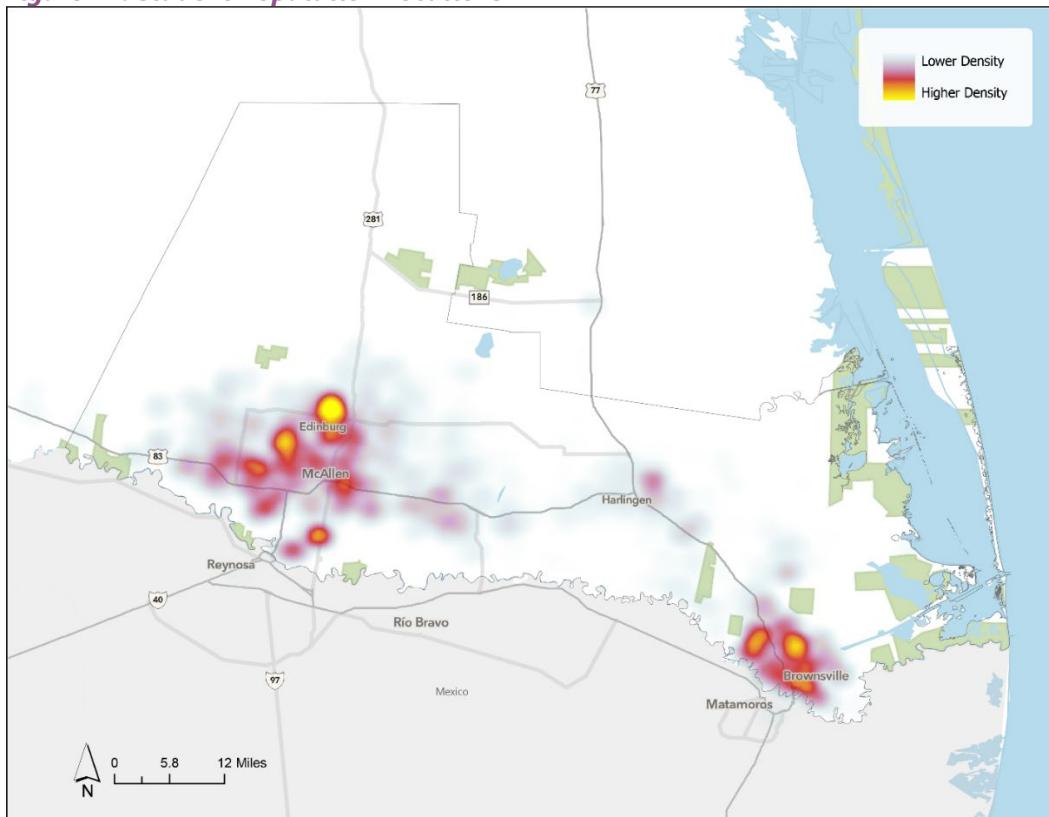


## University Markets

The RGV region is also home to several colleges and universities, including the University of Texas Rio Grande Valley. With nearly 33,000 students and six campuses, UTRGV is one of the larger branches of the UT system. The RGV student population is a considerable demographic that overlaps with many of those that are used to define transit dependence and need as described above. Students often do not own their own cars, and many are employed off-campus full- or part-time. Additionally, given that there are multiple campuses throughout the region, it is not uncommon for students to regularly commute between locations in different cities. Student housing conditions reflect this, and are unique in that residences are largely dispersed, the pattern of which is geographically consistent with the transit demand analysis in the previous section.

For these reasons, it is important to consider how the regional transit system serves students and ways it can be made more accessible to them. The student demographic was used in developing the Transit Market scores described previously. As the regional transit system evolves, particular attention may be paid to connection points between Valley Metro, UTRGV, and South Texas College transit services, other partnerships such as the one between B Metro and Texas Southmost College, as well as to areas with higher densities of the student population. These areas are shown in Figure 17, which will be used to inform route and service level recommendations to ensure that system improvements increase connectivity and minimize students' commute times.

**Figure 17: Student Population Locations**





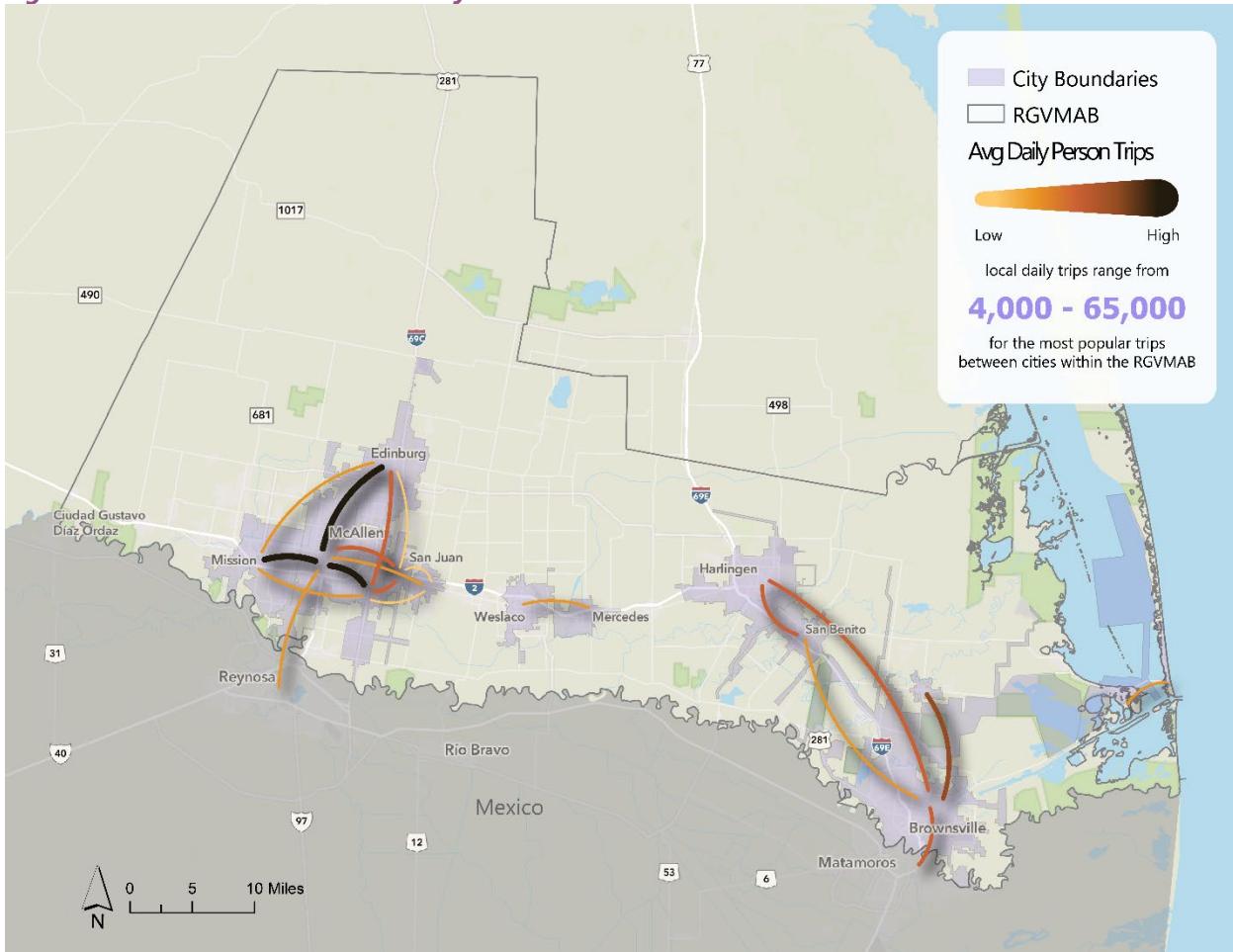
## Desire Line Analysis

The most common transportation mode in the RGV is the automobile. Understanding where most of the population in the RGV is traveling will reveal the most heavily used travel patterns or 'desire lines' in the region. Identifying these desire lines will allow the project team to develop route recommendations that mimic this behavior and position the system to attract new passengers and cause a mode shift toward transit usage. The RGVMAB desire line analysis is shown in Figure 18.

At the regional level, the desire lines show the strongest attractions in the McAllen area. Figure 18 shows the regional relationship between the Harlingen and Brownsville subareas.

Figure 20 shows a more localized desire line example and shows the heavily utilized travel pattern between South Padre Island and Laguna Heights.

**Figure 18: RGVMAB Desire Line Analysis**



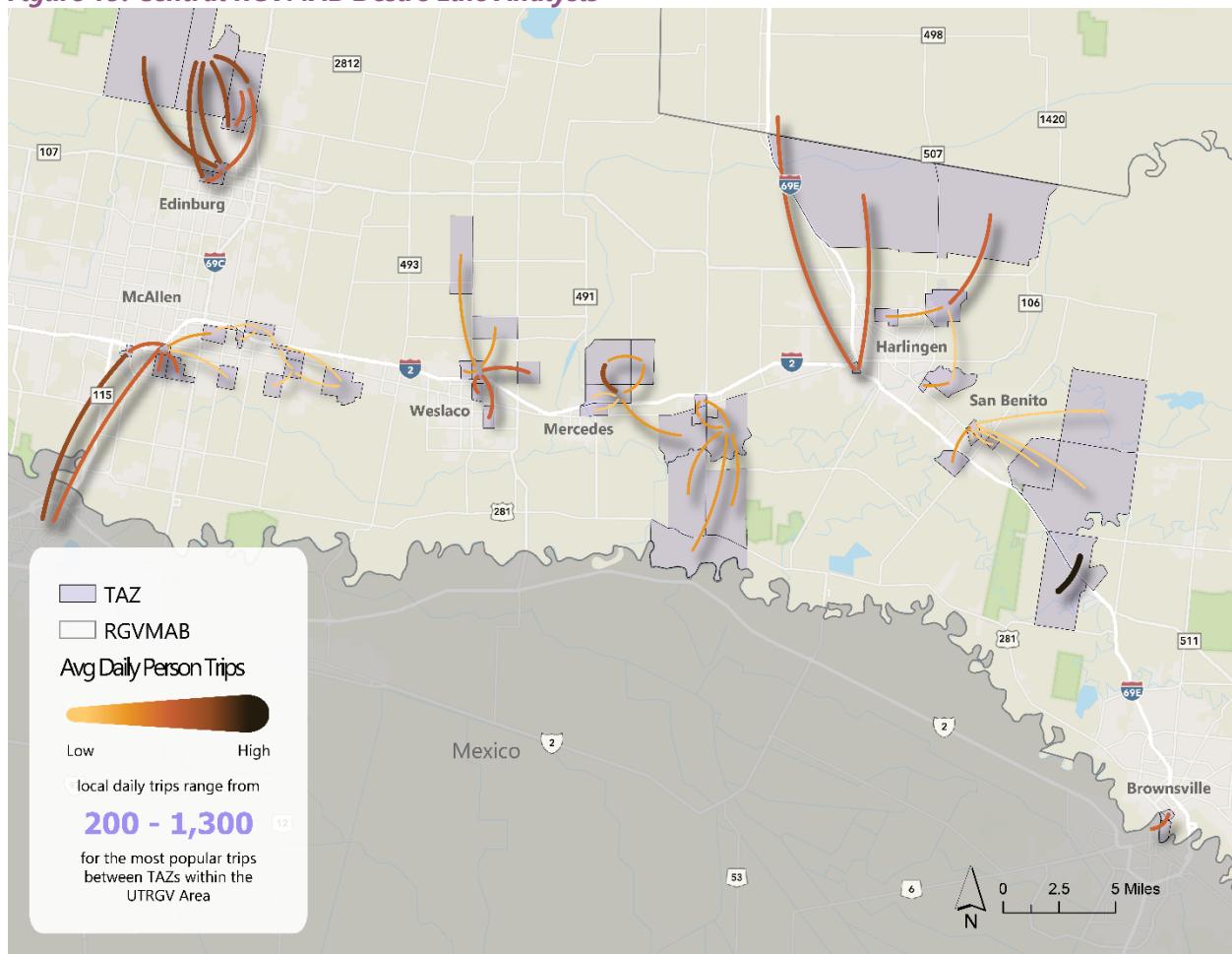
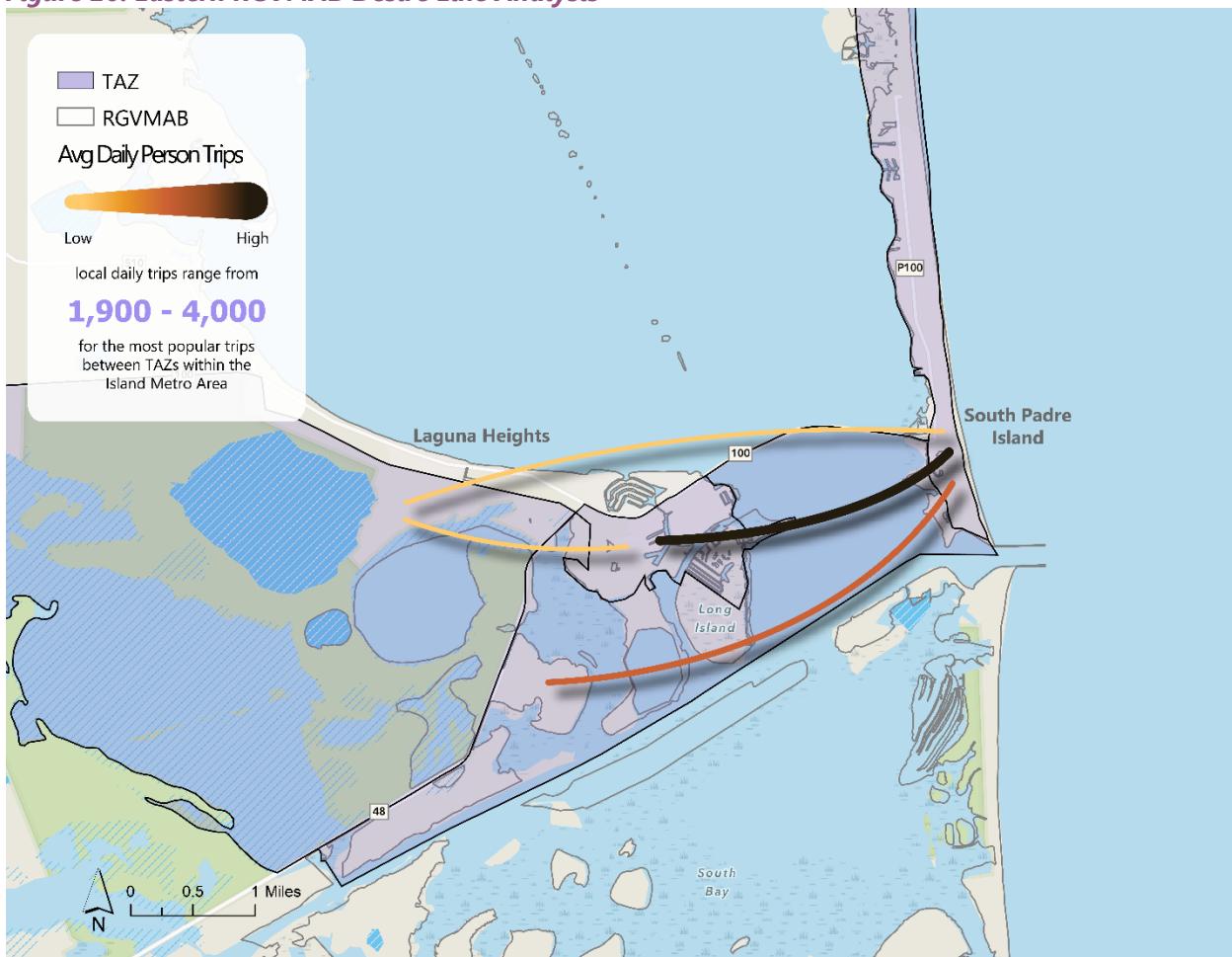
**Figure 19: Central RGVMAB Desire Line Analysis**



Figure 20: Eastern RGVMAB Desire Line Analysis



## ORIGINS AND DESTINATIONS/RIDERSHIP ANALYSIS

Dikita conducted rider surveys of the six transit providers operating in the RGVMAB: Valley Metro, which also works with the UT Rio Grande Valley and South Texas College transit services; Metro McAllen; B Metro; and Island Metro. Transit agencies typically conduct these surveys to gather travel pattern information about their passengers. The RGVMPO requested two types of these surveys, a boarding and alighting counts (B&A) survey and an onboard origin and destination (OD) survey. The B&A and OD surveys were completed simultaneously by teams of one counter and one-to-three interviewers. Both surveys were completed between February 17 and March 12, 2020.

The boarding and alighting survey counted the number of passengers boarding and exiting the bus at every stop for each original trip where interviews transpired. The origin and destination onboard survey instrument was a series of questions administered via personal interviews using tablet computers. One-to-three surveyors boarded buses at the beginning of trips, randomly chose passengers to interview, and interviewed those that were willing to participate. Over the course of the project, a total of 3,007 surveys were collected. After processing, 2,146 (71%) of those surveys were deemed valid.

### *Ridership Analysis*

To provide a closer approximation of the responses from surveys in terms of ridership, the origin and destination survey data was expanded to an estimate of average daily riders using the ridership provided for February 2019 – 2020 provided by each agency. This process contributes to an understanding of where riders are traveling in the region. Also, this allowed for the project team to estimate ridership by segment which were mapped in the provider and route profiles.

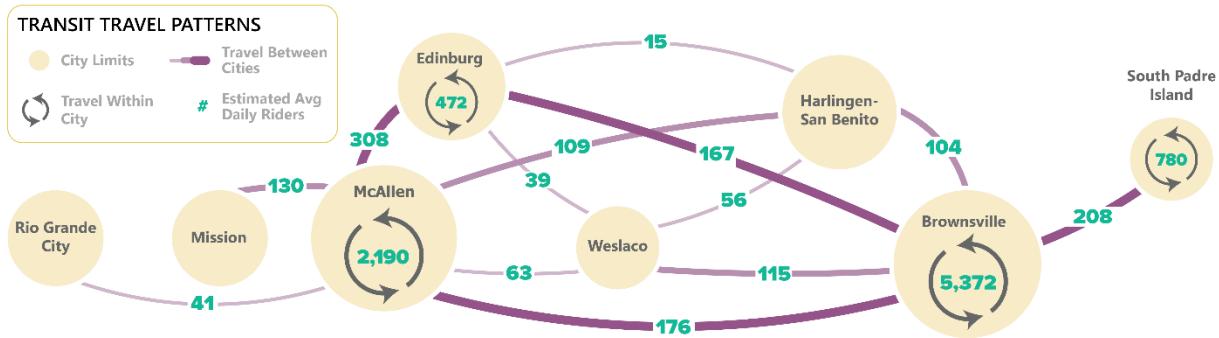
### *Regional Travel Patterns*

The origin and destination data set, which was expanded into estimates of average daily riders can help to identify the current regional transit travel patterns (Figure 21). The location of the start of a rider's trip (origin) and end of their trip (destination) were summarized at the city level. Cities were combined with nearby cities to demonstrate travel to areas within the region. Travel desire lines between cities were included if there were at least 10 daily riders making a trip between the urban areas. Travel within cities were shown for the top 4 urban areas. The following urban areas are summarized and combined in Figure 21:

- **Rio Grande City (RGC):** Roma, Rio Grande City, Sullivan City, and La Joya
- **Mission:** Palmhurst, Mission, Alton, and Granjeno
- **McAllen:** McAllen, Pharr, San Juan, Alamo, and Hidalgo
- **Edinburg:** Edinburg and La Villa
- **Weslaco:** Donna, Weslaco, Mercedes, La Feria, and Progreso
- **Harlingen-San Benito (HSB):** Harlingen and San Benito
- **Brownsville:** Rancho Viejo, Brownsville, Los Fresnos
- **South Padre Island (SPI):** Port Isabel and South Padre Island



**Figure 21: Regional Transit Travel Patterns**



For a more detailed understanding, we can look at the number of riders traveling to (origin) vs from (destination) each city or area in the region. For instance, on average, 176 riders travel between McAllen and Brownsville daily. However, 140 of those riders are traveling to McAllen, while only 36 are traveling to Brownsville. Between Edinburg and McAllen, 221 riders travel from Edinburg, while 87 travel from McAllen. The daily travel by origin and destination cities are presented in Table 4.

**Table 4: Regional Travel Patterns by Origin and Destination City**

		Destination (Traveling to)								
Origin (Traveling From)	City	RGC	Mission	McAllen	Edinburg	Weslaco	HSB	Brownsville	SPI	
	RGC	77	5	35	-	-	-	-	-	
	Mission	-	16	50	4	-	-	-	-	
	McAllen	6	81	2,190	87	25	75	36	-	
	Edinburg	-	-	221	472	-	3	76	-	
	Weslaco	-	-	38	39	19	12	115	-	
	HSB	-	-	34	12	43	109	76	-	
	Brownsville	6	6	140	91	-	28	5,372	132	
	SPI	-	-	-	-	-	-	76	780	

## Rider Characteristics

Another result of the origin and destination survey are responses that can provide more context into the types of transit riders being served in the RGVMAB. It is important to study the demographics and travel behaviors of transit riders. This can help to identify the needs of current riders and guide the recommendations. In particular, the project team was interested in:

- Trip Purpose: where riders are traveling to (home, work, shopping, etc.)
- Accessing Transit Stops: mode used in the first and last mile of a trip
- Alternative Mode: how would a rider make the trip if transit were unavailable
- Demographic Characteristics: Age, Gender, Driver's License, Language, Household Income, and Time Using Transit

### TRIP PURPOSE

Asking transit riders about their purpose for making a trip, or what their destination is, helps to identify the ways people are currently using transit in the region. The most common purpose for trips taken on transit for the surveyed riders in the RGVMAB are trips home (24%) and to work (23%). Riders also commonly use transit for shopping (15%), to get to a K-12 school or college (14%), for personal business (8%), and for recreation (7%). Medical appointments, sightseeing, childcare, and other trip purposes were less common on transit (3% or less).

There are some noticeable differences in the destinations for trips when looking at the different providers in the region. The most common trips taken on the regional service provider, Valley Metro, are often trips to home (28%) and to work (28%). The other main types of trips taken on Valley Metro are recreation (11%), personal business (11%), to college (10%), or shopping (8%). Trips taken using Metro McAllen are commonly to home (32%), shopping (22%), or work (17%). B Metro trips are most often taken to work (24%), home (23%), shopping (16%), and to K-12 schools and colleges (15%). Island Metro trips are often to work (29%), shopping (22%), sightseeing (20%), and personal business (15%).

### ACCESSING TRANSIT STOPS

How people access their transit stop in the first and last mile of a trip is an important measure in determining the connections between transit and other modes. In the RGVMAB, 80% of surveyed riders walked to their stop to get on the bus, and 89% walked from where they got off the bus to their destination. The other ways in which riders reached their stop in the first mile included dropped off or carpooled (15%), drove alone and parked (3%), used a rideshare service (1%), or used a bike or scooter (1%). In the last mile, or where they got off the bus, the use of other modes were similar – dropped off or carpooled (6%), drove alone and parked (3%), used a rideshare service (1%), or used a bike or scooter (1%). For the regional transit provider, Valley Metro, most transit users walk to the location where they get on the bus (71%) and to their destination when they get off the bus (77%). The other common methods used to access a stop for boarding included dropped off or carpool (17%) or drove alone (7%). When alighting the bus, about 8% of riders carpooled, 7% drove alone, 3% used rideshare, 3% used a bike or scooter, and 2% used a mobility aid or wheelchair to reach their destination.

Within each agency in the region, there were some differences in the modes commonly used to access transit stops in the first and last mile of a trip, but most riders walked to and from their transit stops. Metro McAllen had the largest percentage of riders that carpooled or were dropped off at their stop (28%). On B



Metro, 91% of riders walked to their stop and 97% walked to their destination when they got off the bus. For Island Metro, 97% of riders walked to or from their transit stop.

### **ALTERNATIVE MODES**

Passengers were also asked what alternative mode they would have used to make their trip in the instance that transit was not available. 32% of respondents reported that they would have been driven and dropped off at their destination by someone else. Other common alternatives included walking with 18%, carpooling with 17%, using rideshare with 11%, driving alone with 8%, and using a bike or scooter with 5%. Additionally, 9% of riders would not have made the trip at all if transit were unavailable. B Metro and Metro McAllen had the highest portion of riders who would have been dropped off by someone else, with 37% and 38% respectively. Island Metro had the highest number of respondents that would have driven alone with 18%, compared to 4% of Valley Metro riders, 7% of B Metro riders, and 5% of Metro McAllen riders. Riders surveyed on Valley Metro were most likely to have used a rideshare service as an alternative, with 17% responding that they would choose this option. Notably, only 5% of respondents across all providers reported that they would have used a bike or scooter in the absence of transit.

Responses about alternative mode choices suggest that many current transit riders do not have reliable access to a personal vehicle and need access to transit to be able to get around. When these findings are considered in tandem with responses about trip purpose, it can be concluded that users in RGV require transit service to accomplish many tasks in daily life.

### **AGE**

The data collected showed that the most prominent age group for transit riders in the RGV was 41-64 years old. 45% of Valley Metro riders, 25% of B Metro riders, 42% Metro McAllen riders, and 48% Island Metro riders are in this group. The second highest age group was found to be 25-40 years old. 20% of Valley Metro riders, 21% of B Metro riders, 22% of Metro McAllen riders, and 17% of Island Metro riders make up this group. These two age groups represent the core riders for transit service in the RGVMAB.

It is also important to consider the riders that may have limited access to a vehicle due to age or ability. Across all transit service within the RGVMAB, 28% of riders were either under 18 years old or above 65 years old. Survey participants in these age groups comprised 16% of the surveys for Valley Metro, 35% for B Metro, 24% for Metro McAllen, and 31% for Island Metro. This demographic is often heavily reliant on transit service and is shown in the results of this survey to represent almost a third of transit ridership in the region.

### **GENDER**

The rider survey in the RGVMAB found that 54% of the survey participants were female. By provider, Valley Metro riders were 42% female, B Metro riders were 54% female, Metro McAllen riders were 57% female, and Island Metro riders were 65% female.

### **DRIVER'S LICENSE**

Respondents were also asked if they have a driver's license. Across the RGVMAB, 71% of participants do not have a driver's license. Though it has become more common for younger people to not obtain a driver's license as soon as they turn 16 and opt for other transportation options, this result likely expands beyond those individuals who could drive but choose not to and may reflect lack of access to personal vehicles among transit riders. The number of survey participants who responded that they do not have a driver's license was 69% for Valley Metro, 80% for B Metro, 73% for Metro McAllen, and 42% for Island Metro.

## HOUSEHOLD LANGUAGE

Among all survey participants, a majority primarily speak Spanish at home. This trend is reflective of the large Hispanic/Latino community living in the valley. Respondents from B Metro reported the largest number of Spanish speakers, with 90% answering that it is their primary household language, followed by Metro McAllen with 75% and Valley Metro with 51%. Only 40% of Island Metro respondents responded that Spanish is their primary language, a disparity that can likely be explained by the high concentration of tourists that travel from other parts of Texas, many of which have a smaller Hispanic/Latino demographic than the RGV, and utilize the transit system in South Padre Island and Port Isabel. When respondents were asked if they were visitors to the RGV region, 50% of Island Metro riders answered yes, compared to only 20% of the respondents on all systems.

## INCOME

Survey participants were asked to choose the range in which their annual household income falls. Among all participants, 72% earn less than \$35,000 per year, while 10% earn more than \$35,000. Though 18% of respondents declined to answer this question, the trend is similar across respondents from all four transit providers. 80% of B Metro riders, 75% of Valley Metro riders, 66% of Metro McAllen riders, and 43% of Island Metro riders reported earning less than \$35,000 per year.

The median household incomes for Cameron and Hidalgo Counties are approximately \$37,100 and \$38,300, respectively,<sup>1</sup> meaning the data collected indicates that many transit riders in the RGV earn less than the median household income. This finding is significant, as it is more common for lower income families not to own a personal vehicle and instead rely primarily on public transit for daily travel. Individuals in this demographic represent the transit need of the market, which, as described in previous sections, are an important part of the holistic process of planning for a system that suits the needs of the community.

## TIME USING TRANSIT

Survey results depicted that 49% of surveyed riders had been using the transit service for more than 2 years. Of that 49%, there were 19% of participants who stated that they had been using the service for more than 5 years. By provider, the portion of riders surveyed who used transit for more than 2 years was 58% from Valley Metro, 48% from B Metro, 45% from Metro McAllen, and 43% from Island Metro.

Though having dedicated riders who use the service regularly is an important quality of a transit system, it is just as important to attract new riders and provide service that can easily be used by occasional riders when they need or want to use it. Survey results showed that B Metro and Metro McAllen had the largest number of newer riders. 32% of riders surveyed on B Metro and 35% of riders surveyed on Metro McAllen had used the service for 6 months or less, compared to 16% of Valley Metro riders and 18% of Island Metro riders. These results may be due to recent investments and improvements in transit services within the City of Brownsville and the City of McAllen. It is also notable that 35% of Island Metro participants described themselves as not using transit regularly, compared to only 1% on the other systems. This trend is likely related to the 50% of Island Metro respondents who reported being visitors to the region and who are likely using Island Metro while away from their vehicle.

<sup>1</sup> [census.gov/quickfacts/cameroncountytx](http://census.gov/quickfacts/cameroncountytx); [census.gov/quickfacts/hidalgocountytx](http://census.gov/quickfacts/hidalgocountytx)