



# Rio Grande Valley Metropolitan Planning Organization 2023 Safety Planning Report

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Transportation Planning and Programming Division



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# Safety Planning Report Profiles

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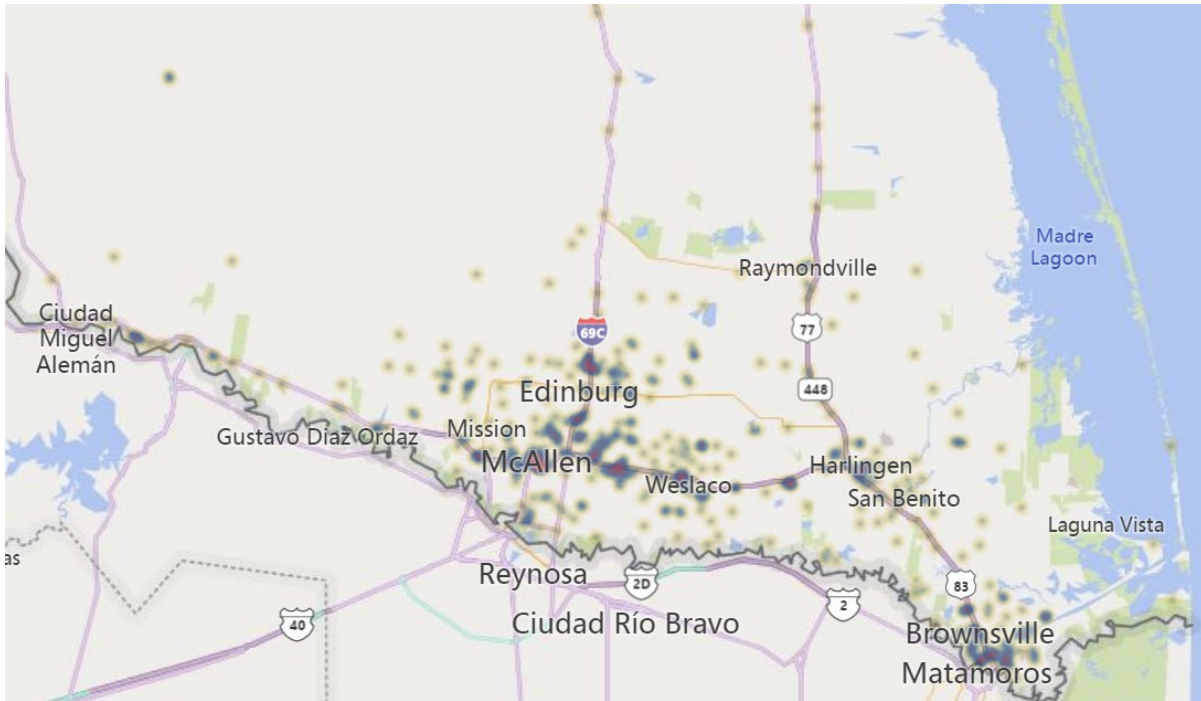
## Rio Grande Valley Metropolitan Planning Organization (RGVMPO)

### Data-Driven Plan of Action

The Rio Grande Valley Metropolitan Planning Organization (RGVMPO) safety planning efforts and associated programs seek to further transportation safety awareness, conduct outreach, provide crash data and analysis, and assist in coordinating safety efforts across the Rio Grande Valley region. RGVMPO utilizes detailed Crash Record Information System (CRIS) data to identify the location and contributing factors of traffic crashes throughout the region. The Texas Department of Transportation (TxDOT) manages and makes available the Crash Record Information System (CRIS). CRIS compiles crash reports submitted by law enforcement responding to crashes and provides a database of crash locations, contributing factors, driver vehicle, and vulnerable road user characteristics.

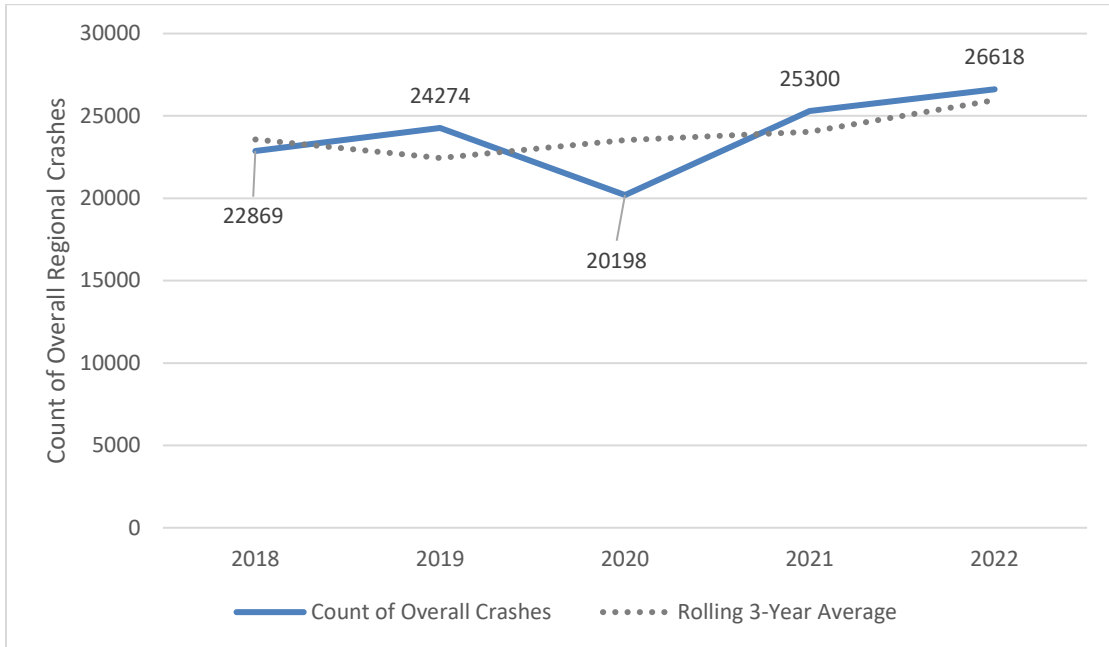
The CRIS safety data is used for project selection, planning, and development. It is used within regional planning products including the MTP and TIP. The MPO uses this data in public outreach and awareness during planning updates, and to provide periodic updates to the policy board and technical advisory committee. Staff has also used CRIS data to create heat maps showing the concentration of crashes in the region at intersections and along road segments. RGVMPO uses CRIS data to conduct detailed analyses to aid local transportation partners with implementing cost effective safety improvements as a matter of routine when they make other maintenance or operations investments into the transportation system.

The following safety trends were determined from TTI analysis of the 2023 TxDOT Crash Record Information System (CRIS) data set examining the data years 2018-2022. As shown in figure 1 below, most fatal crashes in the Rio Grande Valley region occur primarily on the I-2, I-69C, and US 83 corridors clustered around the urban centers of Brownsville, Harlingen-San Benito, McAllen, and Edinburg.



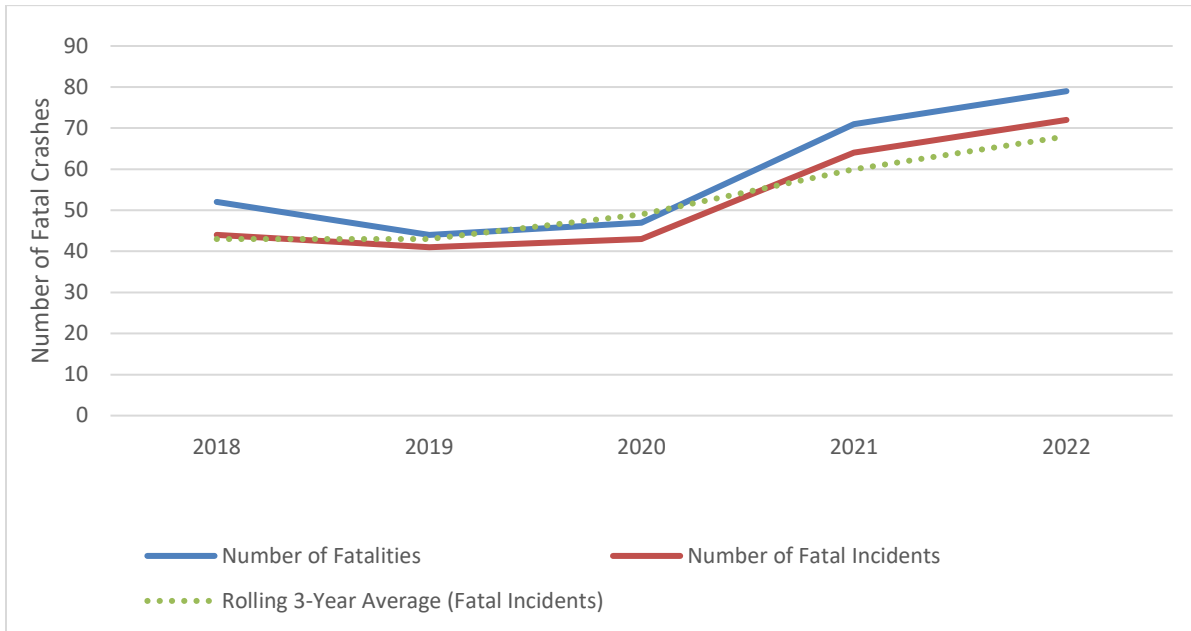
**Figure 1. Location of Fatal Crashes in the Rio Grande Valley MPO Region from 2018-2022**

Figure 2 displays how overall crash counts are showing a steady increase for the Rio Grande Valley MPO planning area, even with the large decrease in 2020.



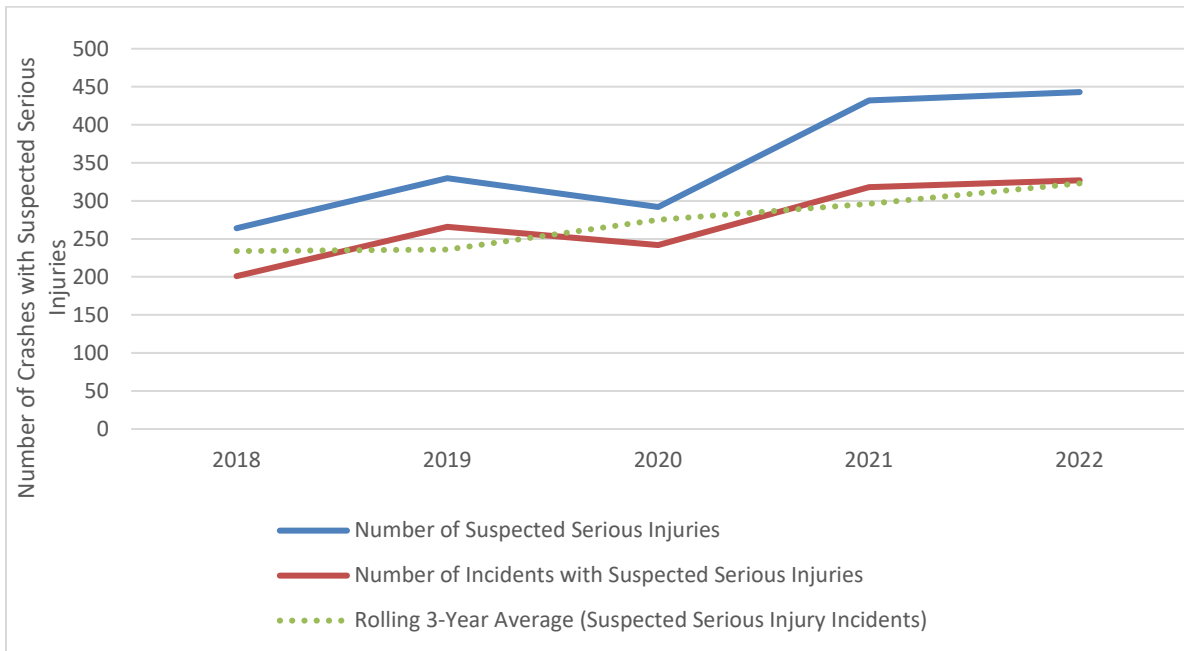
*Figure 2. Overall Rio Grande Valley MPO Regional Crash Trend*

Fatal crash and fatality trends from CRIS data from 2018 to 2022 are depicted in Figure 3. The frequency of fatalities and fatal crashes increased significantly in the five- year period. In general, the frequency of fatalities and fatal crashes mirror one another, except from 2020 onward when the levels of fatalities per fatal crash began to rise.



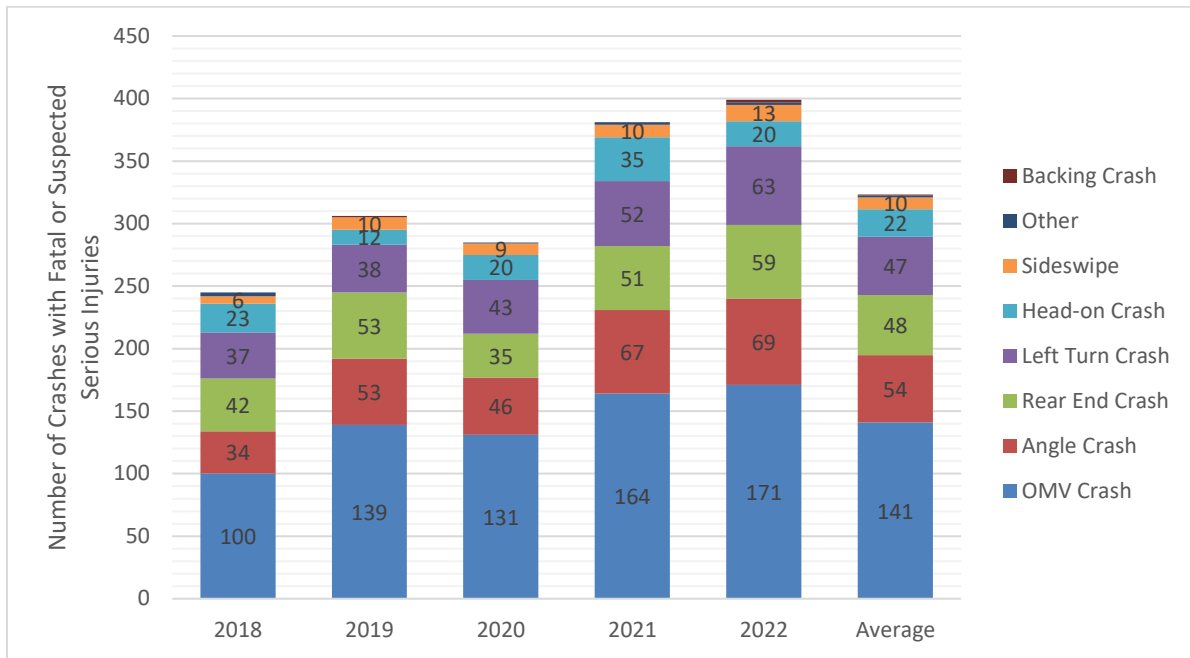
***Figure 3. Fatalities and Fatality Crashes from 2018 to 2022***

The trend in suspected serious (SS) injuries and SS crashes is shown in Figure 4. It shows another significant increase in the rolling average number of incidents with SS injuries despite the decrease in 2020.



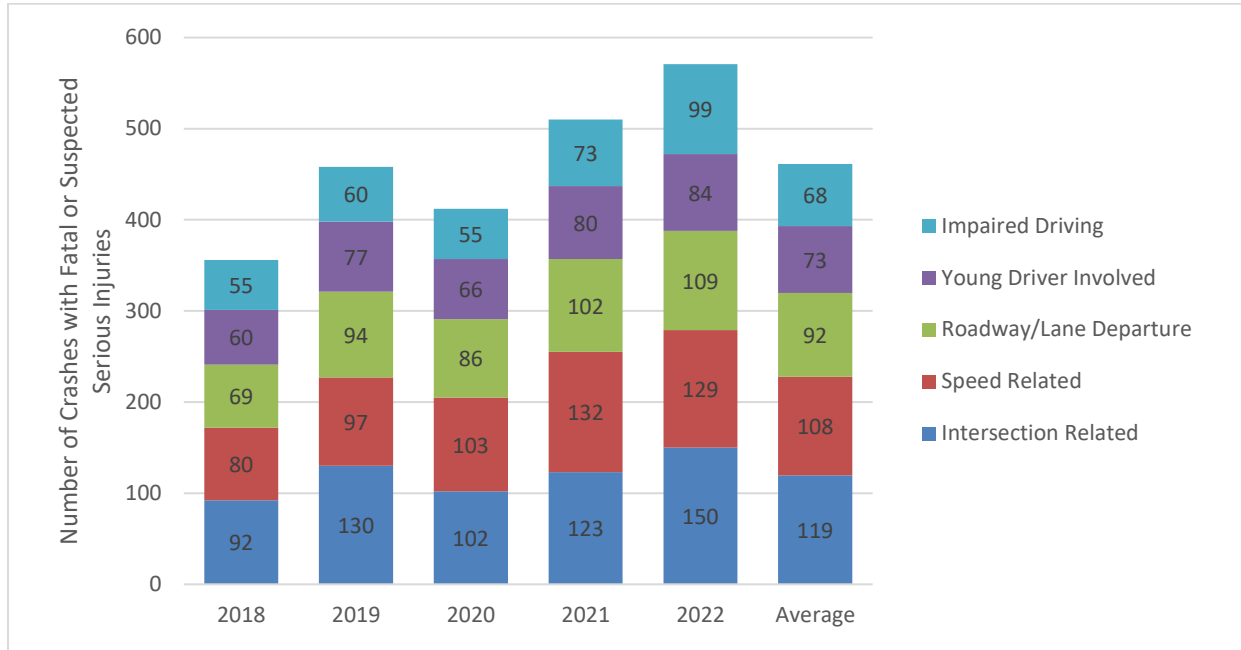
*Figure 4. Suspected Serious Injuries and Crashes from 2018 to 2022*

The distribution of fatal and serious injury crash types is shown in Figure 5. The most discernable trend is the significant increase in the largest four factors over the time period. All other crash types held steady from 2018-2022.



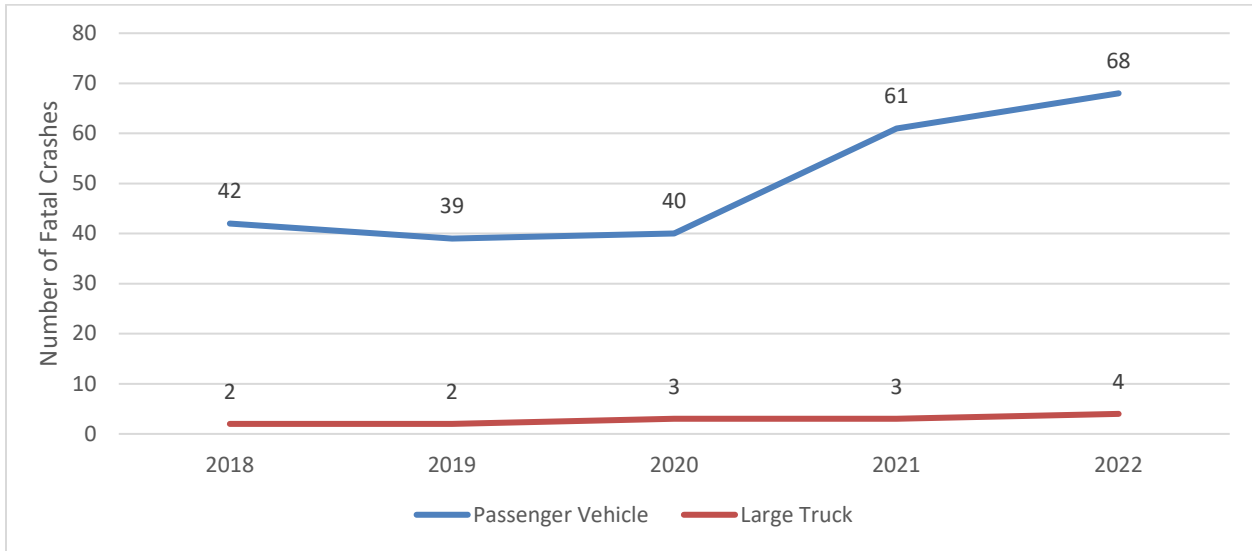
**Figure 5. Fatal and SS Crash Type Distributions from 2018 to 2022**

The distribution of the top five contributing factors from the region’s safety emphasis areas is shown in Figure 6. All factors, despite annual fluctuations, showed significant average increases in numbers over the 2018-2022 period.



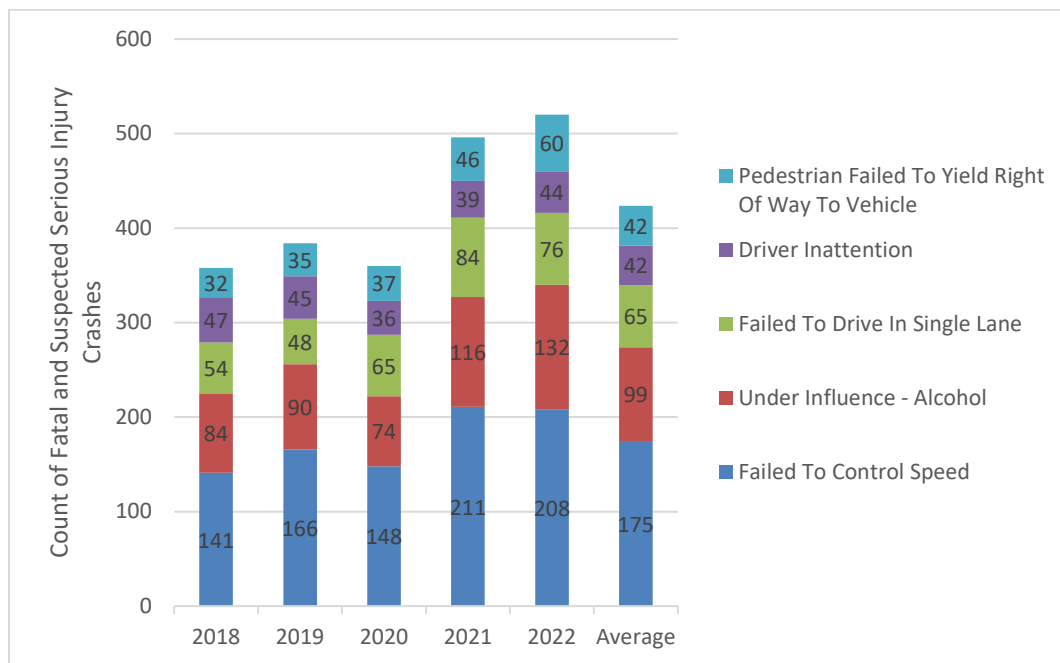
**Figure 6. Distribution of the Top Five Regional Contributing Factors in Fatal and SS Crashes from 2018 to 2022**

Figure 7 depicts the trends in fatal crashes for passenger vehicles and trucks from 2018 to 2022. Truck-involved fatal crashes have remained relatively steady during this period, whereas passenger vehicle-only fatal crashes have increased in the last three years.



*Figure 7. Fatal Crash Counts by Auto and Truck over Five Years*

Figure 8 displays the top five contributing factors for fatal and serious crashes in the MPO region. Failure to Control Speed remained the top factor in the five-year period. Under Influence – Alcohol crashes showed increase from 2018 to 2022.



**Figure 3. Top Five Regional Contributing Factors for Fatal and Suspected Serious Injury Crashes**

**PERFORMANCE MEASURES**

The Rio Grande Valley MPO has adopted TxDOT’s Safety performance measures and targets updated annually. The MPO provides data and information on Safety performance measures in the latest MTP. Presentation in the MTP of RGV MPO safety performance for roadways and is provided in Figure 9 below.

Measures	RGVMPO	2020 TxDOT Target	2030 TxDOT Target*
Number of fatalities	88	3,840	2,280
Rate of fatalities per 100 million Vehicle Miles Traveled (VMT)	1.01	1.406	0.70
Number of serious injuries	393.6	17,394	-
Rate of serious injuries per 100 million VMT	4.49	6.286	-
Number of non-motorized fatalities	24.6	*	
Number of non-motorized serious injuries	55.2	**2,285	

\*TxDOT Targets represent 2030 available reported targets as published in the 2021 UTP

\*\*Target represents combined Non-Motorized Fatalities & Serious Injuries

Source: RGVMPO 2045 Metropolitan Transportation Plan, p. 9-9

**Figure 9 RGVMPO Performance Data in the 2045 MTP**

The plan states: *RGVMPO PM1 performance measures, specifically Rate of fatalities per 100 million VMT and Rate of serious injuries per 100 million VMT are currently below 2020 TxDOT targets suggesting successful regional safety performance.*

As noted in the Safety Analysis portion of the 2045 MTP, *though regional rate of fatality and serious injury are relatively low compared to statewide performance targets, the percentage of non-motorized users involved in fatal and severe crashes warrants a focus on bicycle and pedestrian safety and infrastructure improvements.* Strategies to address these needs are implemented through the TASA scoring process as well as the RGVMPO Active Transportation Plan, both discussed below.

### Coordination and Outreach

The Rio Grande Valley MPO coordinates with the TxDOT Pharr District regarding safety planning. The MPO also coordinates with cities and counties in the region. The MPO engages the public in safety planning activities and document preparation as part of the MTP and TIP. These efforts serve to align safety planning efforts for the region.

#### Online Visioning Tool

RGVMPO created a digital visioning process custom-built for the development of the latest MTP. The tool consists of modules that both educated the public about the plan development process and requested feedback about community values and existing conditions in the region. The main objective of the online visioning process for the MTP was to solicit input from the public regarding their priorities for the future RGVMAB transportation system.

The RGVMPPO conducted interviews with various stakeholders across the MPO area boundary. Stakeholder groups included: environmental groups, transit providers, municipal and county governments, educational institutions, freight industry leaders, port authorities, law enforcement and emergency services, bicycle and pedestrian advocacy organizations, and community interest groups.

In the context of safety planning, the MPO noted two main conclusions drawn from these stakeholder discussions:

- Lacking bike/ pedestrian infrastructure causes people to travel in unsafe conditions.
- More education for drivers on how to share the road is needed.

To maintain focus on active transportation issues, the BPAC exists to address pertinent active transportation matters and present recommendations to the TAC. This subcommittee contains a mixture of TAC members, bicycle advocates, pedestrian advocates, and other relevant stakeholders. Continued support from the RGVMPPO BPAC will be essential to the enhancement of the RGVMPAB active transportation network. The full Active Transportation Plan is available for review on the RGVMPPO website.

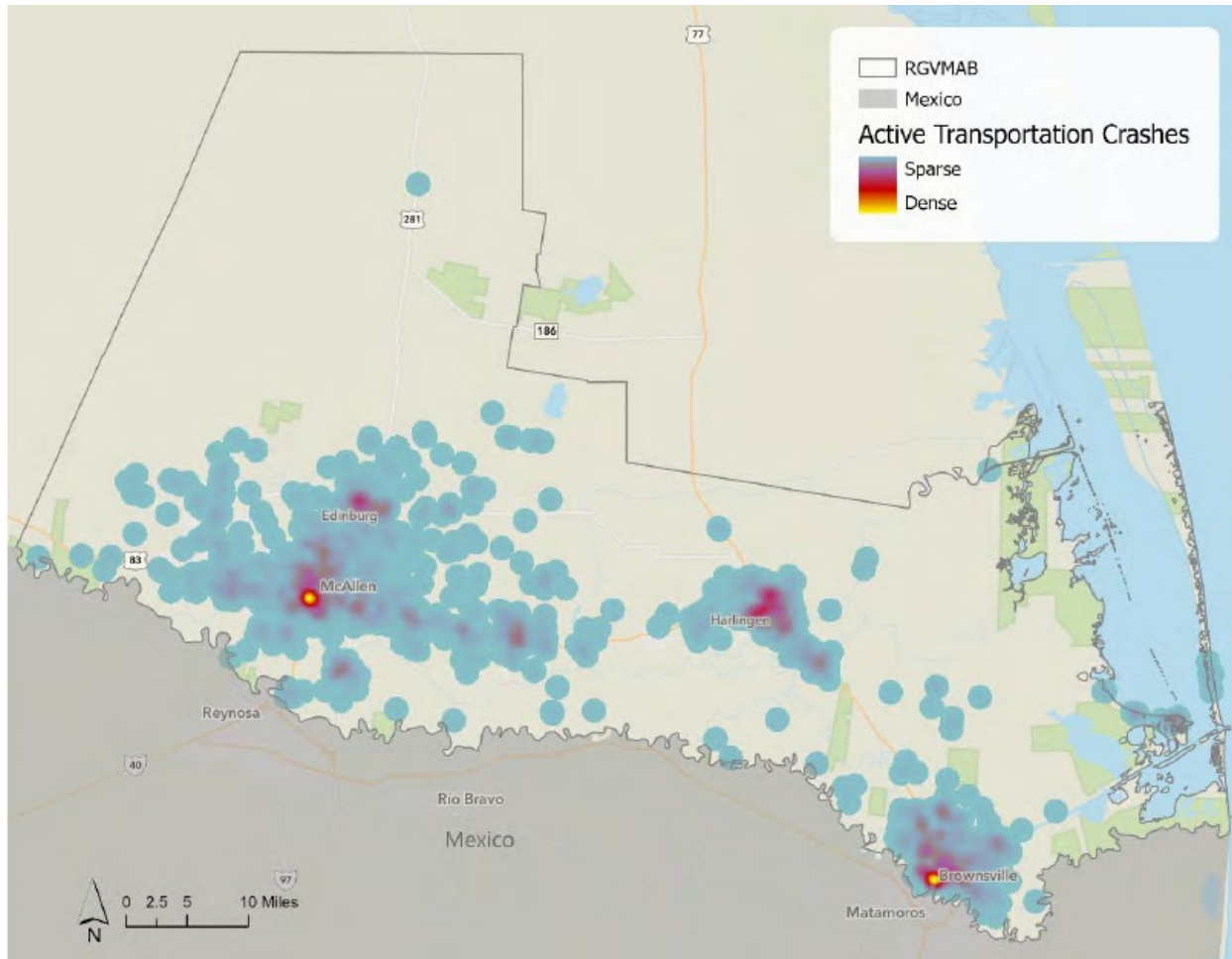
### **ALIGNMENT WITH OTHER PLANS AND EFFORTS**

#### ***Safety-Related Documents and Materials***

Safety is a specific component in all the major plans developed by the RGVMPPO, including the MTP, TIP, and UTP. Safety is discussed in its own section (Chapter 4) in the MTP, the region's Active Transportation Plan, and the regional Transit Development Plan.

Of special note is safety analysis performed for the RGVMPPO Active Transportation Plan. In coordination with the RGVMPPO 2045 MTP update, the RGVMPPO Active Transportation Plan conducted an examination of the planning area to assess where current facilities for walking and biking exist, while also conducting an analysis to examine where demand for walking and biking is most prominent. Gap areas where demand is not adequately served by either walking or biking facilities were identified, and projects were recommended to serve those high demand areas.

Figure 10 below shows an RGVMPO generated heat map of active transportation related crashes in the planning area. It reflects the crash hat map in Figure 1 above.



*Source: RGVMPO Active Transportation Plan, p. C-13*

**Figure 10. Active Transportation Crashes in RGVMPO Area (2015-2019)**

The primary safety planning observations from the RGVMPO 2045 MTP Active Transportation Plan analysis include:

- Opportunities for additional policy and program elements can be found in all major cities within the RGVMAB
- Crashes involving bicyclists and/or pedestrians happen most often during PM peak travel times
- Safety findings suggests that active transportation users bear a disproportionate amount of risk of injury or fatality

### *Work Plan and Priorities*

The RGVMPPO works in close coordination with the TxDOT Pharr District to identify and address regional needs based on state and national goals. Through this process, TxDOT category funding is allocated towards transportation infrastructure projects. For projects addressing highway safety improvements, which include medians, turn lanes, traffic signal, intersections, and rumble strips, through the sub-programs listed below.

- The Federal Highway Safety Improvement Program (HSIP) addresses safety related projects on and off the state highway system administered by the Traffic Safety Division (TRF) with the purpose to achieve major reductions in traffic fatalities and serious injuries on all public roads. TRF provides funding projections to all TxDOT districts for their submission of review for project proposals and concurrence by TRF, for on-system targets, on-system systemic, and off-system projects. Funds are allocated to be supervised by TRF. Evaluation of projects are done by the district level based on three years of crash data (targeted funds) or systemic approved projects as outlined in the HSIP guidance.
- In the Systemic Widening Program (SSW), the allocations are made for roadway widening projects on high-risk narrow highways on the state highway system.
- Road to Zero (RTZ) Program targets to reduce fatalities and suspected serious injuries in the targeted top three contributing categories: roadway and lane departure, intersection safety, and pedestrian safety, by providing funds for projects on the state highway system.

### **Safety Considerations in Project Selection**

RGVMPO incorporates safety into its Category 7 project scoring as shown in Table 1 screenshot below, allowing for 10 additional points for a project that fulfills the requirements.

*Table 1. RGVMPPO Safety Scoring Criteria*

Evaluation Criteria	Evaluation Method - Scoring	Goal Area
Increased Safety	Submitting sponsor is asked to provide explanation of Safety improvements and attach available supportive documentation. Project reviewed against safety data and regional contributing factors.  <b>10 Points</b>	Safety

*Source: RGVMPPO 2045 MTP, p. 9-5*

Table 2 screenshot shows the available points for Transportation Alternatives Set-Aside (TASA) funding project scoring.

*Table 2. RGVMPPO TASA Scoring Criteria*

Evaluation Criteria	Description/Factors	Evaluation Method
Improving Safety (Please use whole numbers)	Provides safer and less intimidating facilities for pedestrians, bicyclists, or other non-drivers by improving safety in areas with high numbers of crashes. This involves improved crossing, signalization, traffic calming and other safety improvements.	<p><b>13 PTS</b> - Improves safety in area with high # of crashes within a block (300ft)</p> <p><b>8 PTS</b> - Improves mobility for elderly, disabled, and/or youth (disadvantaged population)</p> <p><b>8 PTS</b> - Improves visibility of non-drivers to vehicular traffic</p>

*Source: RGVMPPO 2045 MTP, p. 9-7*

Table 3 illustrates category funding balances over the life of the current 2023 UTP for Categories 2, 5, and 7 for Rio Grande Valley MPO.

*Table 3. Rio Grande Valley MPO 2023 Funding Balances for Category 2, 5, and 7*

Category 2	Category 5	Category 7
\$214,668,981	\$0	\$87,815,559

The MPO has no additional, unprogrammed funds available to apply to safety-related projects.

**PRIORITIZED PROJECTS**

RGVMPPO safety projects are contained within a Grouped CSJ. Eligible project types include the construction or replacement/ rehabilitation of guard rails, median barriers, crash cushions, pavement markings, skid treatments, medians, lighting improvement, highway signs, curb ramps, railroad/highway crossing warning devices, fencing, intersection improvements (i.e., turn lanes) signalization projects, and interchange modifications. It also includes projects funded via the Federal Hazard Elimination Program, Federal Railroad Signal Safety Program, or Access Management projects, except those that result in added capacity.

Table 4 below is shows funded safety projects from the MPO’s TIP and MTP based on a review of funding sources and project titles.

*Table 4. RGVMPPO Safety Projects List*

CSJ	Roadway	Sponsor	Funding Category	FY	Safety Improvement	Reference Document	Amount
0921-06-390	Citywide	McAllen	9-TASA	2022	McAllen Vision Zero Planning Study	TIP, MTP	\$ 150,000
0921-06-391	Citywide	Rlo Grande Valley/San Juan/Pharr	9-TASA	2022	PSJA Tri-City Ped Safety Improvements - PHASE I	TIP, MTP	\$ 2,561,454
0921-06-392	VA	Edinburg	9-TASA, Local	2022	INSTALLATION OF SOLAR POWERED LIGHTING ALONG THE CANO WALKING TRAIL	TIP, MTP	\$ 600,879
0921-06-393	VA	Donna	9-TASA	2022	REHABILITATION OF DETERIORATED SIDEWALKS AND CONSTRUCTION OF NEW SIDEWALKS	TIP, MTP	\$ 410,014
0921-06-325	FM 1847	Los Fresnos	9-TASA, Local	2023	Construct Sidewalk on west side of FM 1847	TIP, MTP	\$ 466,242
0921-06-327	VA	Cameron Co.	9-TASA, Local	2023	Construct 5' Wide Concrete Sidewalks	TIP, MTP	\$ 423,131
0921-02-432	VA	Rlo Grande Valley/San Juan/Pharr	9, 3 LC	2023	PSJA TriCity Pedestrian Improvements (Phase II)	TIP, MTP	\$ 2,196,840
0921-02-495	Citywide	Pharr	9	2024	PSJA Tri-City Ped Safety Improvements - PHASE I	TIP, MTP	\$ 69,000
0921-02-496	Bridge St.	Hidalgo	9	2024	Bridge St. Pedestrian and Bike Development, Planning - Conceptual design and estimates (1 mile)	TIP, MTP	\$ 87,500

### *Achievements and Next Steps*

The RGVMP *Active Transportation Plan* portion of the 2045 MTP is discussed above. It shows use of safety data by the MPO to enhance planning processes and outcomes. Efforts to implement the plan are aided by the *Bicycle Pedestrian Advisory Committee (BPAC)*.

There have been several, local efforts to develop and implement *Complete Streets* in the planning area. Per the *Hidalgo County MPO 2014 Pedestrian Plan* and *2018 Hidalgo County MPO Bicycle Plan*, several cities had noted efforts to implement *Complete Streets*, including Alton, Donna, McAllen, Mercedes, Mission, Palmhurst, and Weslaco. However, specific methods were not provided.

While policies adopted by local governments represent most *Complete Streets* policies adopted, RGVMP intends to be an integral partner in promoting and implementing *Complete Streets* strategies.

## Appendix A. Interview Documentation

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### Rio Grande Valley Metropolitan Planning Organization

Interview Date: April 13, 2023  
Media: MS Teams  
MPO Staff present: Andrew Canon, Director  
TTI Interviewer: Todd Carlson  
TPP Field Representative: Raymond Sanchez