

## Safety Analysis Report



### Lobo Crossing

Albuquerque, New Mexico

Prepared for:  
SimonCRE Gibson II, LLC

Prepared: April 23, 2025

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Prepared by:  
**Bowman**  
Bowman Consulting Group, Ltd.



Carlos G. Garcia, P.E.  
New Mexico PE License Number 26896

Bowman Job # 460223-01-001

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## **Introduction**

This report summarizes the findings of the safety analysis associated with the Traffic Impact Analysis (TIA) completed by Bowman for the proposed Lobo Crossing development located in the City of Albuquerque, New Mexico. The purpose of this report is to analyze the existing crash history and potential impact to the surrounding roadway network related to the proposed site utilizing the methods of the Highway Safety Manual (HSM).

## **Description of Proposed Development**

The proposed development will consist of a mix of retail stores and restaurants to create a new shopping center. The shopping center will provide a total of 347,672 square feet of commercial space. Access to the center is proposed via three roadway and/or driveway connections.

Alumni Drive, which intersects Gibson Avenue, will be extended north from its current terminus. The intersection of Gibson Avenue and Alumni Drive is then anticipated to be signalized with development of the site. A connection to West Road at its southwestern point will be provided and this roadway will then follow the western and southern border of the parcel. This new roadway will intersect with the extension of Alumni Drive and will extend to the east to provide a new full-movement access driveway along University Boulevard located opposite existing access that is approximately 325 feet north of Eastern Drive. This intersection, which is currently unsignalized, is proposed to be signalized with the development of the site.

## **Study Area**

The study area for the TIA and Safety Analysis was agreed upon at a Pre-Scoping meeting with officials from the New Mexico Department of Transportation (NMDOT) and the City of Albuquerque to consist of the following intersections:

- Gibson Boulevard and University Boulevard (Signalized)
- Avenida César Chávez and University Boulevard (Signalized)
- I-25 NB Ramp and Avenida César Chávez (Signalized)
- I-25 SB Ramp and Avenida César Chávez (Signalized)
- Gibson Boulevard /Miles Avenue and Broadway Boulevard (Signalized)
- University Boulevard and Commercial Driveway/Proposed Driveway (Proposed Signal)
- Gibson Boulevard and Alumni Drive/Commercial Driveway (Unsignalized)
- Gibson Boulevard and Mulberry Street (Unsignalized)
- I-25 NB Ramp and Gibson Boulevard (Unsignalized)
- I-25 SB Ramp and Gibson Boulevard (Unsignalized)
- Avenida César Chávez and West Rd./Langham Road (Unsignalized)

## Existing Crash Data Summary

Per the parameters established in the NMDOT D3 TIA Scoping Letter dated 11/25/2019, crash data spanning the three-year period beginning January 1, 2021, and ending December 31, 2023, was requested and is summarized for each study intersection in **Table 1**. Please note that the 'other' crash type noted include all single-vehicle incidents and those where crash type data is not available.

**Table 1. Crash Summary**

Gibson Blvd. and University Blvd.								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	26	9	0	11	7	3	14	35
2022	12	9	0	10	4	1	6	21
2023	14	9	0	9	7	1	6	23
<b>TOTAL</b>	<b>52</b>	<b>27</b>	<b>0</b>	<b>30</b>	<b>18</b>	<b>5</b>	<b>26</b>	<b>79</b>

Avenida César Chávez and University Blvd.								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	11	7	0	5	6	1	6	18
2022	6	2	0	4	1	0	3	8
2023	4	4	0	2	1	2	3	8
<b>TOTAL</b>	<b>21</b>	<b>13</b>	<b>0</b>	<b>11</b>	<b>8</b>	<b>3</b>	<b>12</b>	<b>34</b>

I-25 NB Ramp and Avenida César Chávez								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	16	3	0	7	6	0	6	19
2022	10	8	0	12	5	0	1	18
2023	8	2	0	5	1	0	4	10
<b>TOTAL</b>	<b>34</b>	<b>13</b>	<b>0</b>	<b>24</b>	<b>12</b>	<b>0</b>	<b>11</b>	<b>47</b>

I-25 SB Ramp and Avenida César Chávez								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	13	11	1	9	5	0	11	25
2022	6	4	0	7	1	0	2	10
2023	10	4	0	9	0	0	5	14
<b>TOTAL</b>	<b>29</b>	<b>19</b>	<b>1</b>	<b>25</b>	<b>6</b>	<b>0</b>	<b>18</b>	<b>49</b>

Gibson Blvd./Miles Ave. and Broadway Blvd.								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	5	5	0	4	1	2	3	10
2022	10	7	0	8	0	2	7	17
2023	4	3	0	2	1	0	4	7
<b>TOTAL</b>	<b>19</b>	<b>15</b>	<b>0</b>	<b>14</b>	<b>2</b>	<b>4</b>	<b>14</b>	<b>34</b>

**Table 1. Crash Summary (continued)**

Gibson Blvd. and Alumni Dr./Comm. Dwy.								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	3	1	0	2	1	1	0	4
2022	0	0	0	0	0	0	0	0
2023	5	0	0	2	1	0	2	5
<b>TOTAL</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>9</b>

Gibson Blvd. and Mulberry St.								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	7	3	0	3	1	0	6	10
2022	7	2	0	1	0	4	4	9
2023	10	3	0	7	3	0	3	13
<b>TOTAL</b>	<b>24</b>	<b>8</b>	<b>0</b>	<b>11</b>	<b>4</b>	<b>4</b>	<b>13</b>	<b>32</b>

I-25 NB Ramp and Gibson Blvd.								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	20	2	1	3	6	2	12	23
2022	6	1	0	3	1	1	2	7
2023	5	5	0	2	2	2	4	10
<b>TOTAL</b>	<b>31</b>	<b>8</b>	<b>1</b>	<b>8</b>	<b>9</b>	<b>5</b>	<b>18</b>	<b>40</b>

I-25 SB Ramp and Gibson Blvd.								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	8	3	0	0	3	3	5	11
2022	0	0	0	0	0	0	0	0
2023	2	0	0	0	1	0	1	2
<b>TOTAL</b>	<b>10</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>13</b>

Avenida César Chávez and West Rd./Langham Rd.								
Year	Crash Severity			Type of Crash				TOTAL
	PDO	Injury	Fatal	Angle	Rear End	Sideswipe	Other	
2021	2	0	0	0	1	0	1	2
2022	2	0	0	1	1	0	0	2
2023	4	1	0	0	0	0	5	5
<b>TOTAL</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>9</b>

## **Highway Safety Manual Analysis Summary**

Additionally, a safety analysis based on the predictive methodology established in the Highway Safety Manual (HSM) was performed. This predictive methodology considers traffic volumes, intersection geometry, and intersection operations among other factors to predict crash frequency (per year) for each intersection. Analysis of all study intersections except for the ramp terminal intersections with I-25 was based on Part C, Chapter 12 – Predictive Method for Urban & Suburban Arterials using the Urban and Suburban Arterials Spreadsheet v 3.2 (updated April 2020). Ramp terminal intersections with I-25 were analyzed using the methodology established in Part C, Chapter 19 – ramps and ramp terminals using the Enhanced Interchange Safety Analysis Tool (ISATe), developed by NCHRP.

The predicted and expected crash frequency was evaluated based on the HSM for all study intersections in existing conditions. Expected crash frequency considers both the predicted crash frequency and the observed crashes (documented in **Table 1**). Predicted crash frequency was then estimated for future conditions once the site is developed based on anticipated traffic assignment as noted in the TIA. In order to provide a consistent comparison to existing conditions, no background traffic growth or traffic associated with nearby developments was included. Additionally, since an interchange improvement project is scheduled for the interchange of I-25 with Gibson Boulevard, predicted crash frequency in future conditions for both the current and future configurations was evaluated.

The results of the HSM analysis are presented in **Table 2**. Please note that Chapter 12 (Arterials) of the HSM provides separate predicted/expected results for single-vehicle crashes and multiple-vehicle crashes for arterial intersections, while Chapter 19 (Ramps and Ramp Terminals) provides a single predicted/expected result for both single-vehicle and multiple vehicle crashes.

Based on the results of the HSM analysis, the observed average crash frequency in existing conditions exceeds the predicted average crash frequency for the following intersections:

1. Gibson Boulevard and University Boulevard
2. Avenida César Chávez and University Boulevard
3. I-25 NB On/Off Ramp and Avenida César Chávez
4. Gibson Boulevard/Miles Avenue and Broadway Boulevard
5. Gibson Boulevard and Alumni Drive/Commercial Dwy.
6. Gibson Boulevard and Mulberry Street
7. I-25 NB On/Off Ramp and Gibson Boulevard
8. I-25 SB On/Off Ramp and Gibson Boulevard
9. Avenida César Chávez and West Road/Langham Road (single vehicle only)

Due to the increase in traffic volumes associated with the development, predicted crash frequency is anticipated to increase throughout the study area.

**Table 2.** Highway Safety Manual Analysis Results

INTERSECTION		EXISTING CONDITIONS					PROPOSED CONDITIONS		
		Predicted Average Crash Frequency (/year)			Observed Crash Frequency (/year)	Expected Average Crash Frequency (/year)	Predicted Average Crash Frequency (/year)		
		N <sub>p(TOT)</sub>	N <sub>p(FI)</sub>	N <sub>p(PDO)</sub>			N <sub>p(TOT)</sub>	N <sub>p(FI)</sub>	N <sub>p(PDO)</sub>
Gibson Boulevard and University Boulevard	Multiple-Vehicle	<b>5.29</b>	1.86	3.43	24.67	18.34	<b>5.51</b>	1.94	3.57
	Single-Vehicle	<b>0.27</b>	0.06	0.21	1.67	0.40	<b>0.28</b>	0.06	0.22
Avenida César Chávez and University Boulevard	Multiple-Vehicle	<b>1.57</b>	0.49	1.09	9.67	4.65	<b>2.21</b>	0.70	1.52
	Single-Vehicle	<b>0.13</b>	0.04	0.09	1.67	0.20	<b>0.17</b>	0.05	0.12
I-25 NB On/Off Ramp and Avenida César Chávez		<b>5.09</b>	1.69	3.40	15.67	10.72	<b>5.04</b>	1.62	3.42
I-25 SB On/Off Ramp and Avenida César Chávez		<b>6.56</b>	1.76	4.80	16.33	10.73	<b>8.39</b>	2.18	6.21
Gibson Boulevard/Miles Avenue and Broadway Boulevard	Multiple-Vehicle	<b>4.11</b>	1.34	2.76	8.33	6.71	<b>4.37</b>	1.43	2.94
	Single-Vehicle	<b>0.27</b>	0.07	0.20	3.00	0.52	<b>0.29</b>	0.08	0.21
Gibson Boulevard and Alumni Drive/Commercial Dwy.	Multiple-Vehicle	<b>1.88</b>	0.78	1.10	3.00	2.36	<b>6.20</b>	2.21	4.00
	Single-Vehicle	<b>0.15</b>	0.05	0.10	0.00	0.17	<b>0.30</b>	0.07	0.24
Gibson Boulevard and Mulberry Street	Multiple-Vehicle	<b>1.49</b>	0.61	0.88	8.67	5.40	<b>1.91</b>	0.74	1.17
	Single-Vehicle	<b>0.09</b>	0.03	0.06	2.00	0.26	<b>0.11</b>	0.03	0.08
I-25 NB On/Off Ramp and Gibson Boulevard	<i>Existing Configuration</i>	<b>5.33</b>	1.74	3.59	10.67	10.10	<b>6.02</b>	1.99	4.03
	<i>Future Configuration</i>						<b>4.84</b>	1.61	3.23
I-25 SB On/Off Ramp and Gibson Boulevard	<i>Existing Configuration</i>	<b>1.665</b>	0.655	1.01	4.33	2.79	<b>2.01</b>	0.83	1.18
	<i>Future Configuration</i>						<b>3.79</b>	1.41	2.38
Avenida César Chávez and West Road/Langham Road	Multiple-Vehicle	<b>0.92</b>	0.34	0.58	0.67	0.85	<b>1.55</b>	0.61	0.93
	Single-Vehicle	<b>0.13</b>	0.04	0.09	2.33	0.29	<b>0.16</b>	0.04	0.11
University Boulevard/Site Access	Multiple-Vehicle	<b>0.15</b>	0.07	0.07	0.00	0.13	<b>2.22</b>	0.69	1.53
	Single-Vehicle	<b>0.03</b>	0.01	0.02	0.00	0.03	<b>0.18</b>	0.05	0.12

## **Intersection-Level Discussion**

### **Gibson Boulevard and University Boulevard**

Based on the existing crash data, the predominate crash types are angle (38%) and rear-end (23%), with 66% of all crashes being property damage only (PDO) crashes. All incidents involved motor vehicles, with 97% of those involved private non-commercial vehicles. Approximately 44% of crashes occurred in 2021 with even distribution of the remainder in 2022 and 2023.

The expected crash frequency at this intersection is higher than the predicted crash frequency in existing conditions for all vehicle types. The proposed development is anticipated to minimally impact predicted crash frequency at this intersection (less than 5% change from existing conditions for all vehicle counts).

### **Avenida César Chávez and University Boulevard**

Based on the existing crash data, the predominate crash types are angle (32%) and rear-end (24%), with 62% of all crashes being property damage only (PDO) crashes. One crash involved a pedestrian, one crash involved a bicyclist, and one crash involved a motorcycle. 88% of incidents involved only private non-commercial vehicles, with one crash involving a commercial vehicle. 53% of crashes occurred in 2021 with even distribution of the remainder in 2022 and 2023.

The expected crash frequency at this intersection is higher than the predicted crash frequency in existing conditions for all vehicle types. The proposed development is anticipated to impact predicted crash frequency at this intersection (approximately 40% change from existing conditions for multiple-vehicle, less for single-vehicle).

### **I-25 NB On/Off Ramp and Avenida César Chávez**

Based on the existing crash data, the predominate crash types are angle (51%) and rear-end (26%), with 72% of all crashes being property damage only (PDO) crashes. All incidents involved motor vehicles, with 96% of those involved private non-commercial vehicles. Crashes are evenly distributed between 2021 and 2022 with approximately 40% of incidents in each of these years. The expected crash frequency at this intersection is higher than the predicted crash frequency in existing conditions. The proposed development is anticipated to minimally impact predicted crash frequency at this intersection (less than 5% change from existing conditions).

### **I-25 SB On/Off Ramp and Avenida César Chávez**

Based on the existing crash data, the predominate crash types are angle (51%) and other (37%), with 60% of all crashes being property damage only (PDO) crashes. One fatal crash occurred at this intersection in 2021, which was an angle incident taking place overnight between private non-commercial vehicles. One incident involved a motorcycle with all others involving private non-commercial vehicles. 51% of crashes occurred in 2021 with even distribution of the remainder in 2022 and 2023.

The expected crash frequency at this intersection is lower than the predicted crash frequency in existing conditions. The proposed development is anticipated to impact predicted crash frequency at this intersection (approximately 30% change from existing conditions).

### **Gibson Boulevard/Miles Avenue and Broadway Boulevard**

Based on the existing crash data, the predominate crash types are angle (41%) and other (41%), with 56% of all crashes being property damage only (PDO) crashes. One crash involved a bicyclist, and two crashes involved a motorcycle. 85% of incidents involved only private non-commercial vehicles, with two crashes involving a commercial vehicle. 50% of crashes occurred in 2022, with 29% in 2021 and the remaining 21% in 2023.

The expected crash frequency at this intersection is higher than the predicted crash frequency in existing conditions for all vehicle types. The proposed development is anticipated to minimally impact predicted crash frequency at this intersection (approximately 6% change from existing conditions for multiple-vehicle, less for single-vehicle).

### **Gibson Boulevard and Alumni Drive/Commercial Driveway**

Based on the existing crash data, the predominate crash type is angle (44%), with 89% of all crashes being property damage only (PDO) crashes. 88% of incidents involved only private non-commercial vehicles, with one crash involving a commercial vehicle. Crashes were evenly distributed between 2021 and 2023, with no crashes occurring in 2022.

The expected crash frequency at this intersection is higher than the predicted crash frequency in existing conditions for all vehicle types. The proposed development is anticipated to impact the predicted crash frequency at this intersection as traffic volumes along Alumni Drive are anticipated to increase substantially with the addition of the development's site traffic. Therefore, a traffic signal is proposed to be installed at this location in order to achieve acceptable traffic operations.

### **Gibson Boulevard and Mulberry Street**

Based on the existing crash data, the predominate crash types are angle (34%) and other (41%), with 75% of all crashes being property damage only (PDO) crashes. One crash involved a motorcycle, and 91% of incidents involved only private non-commercial vehicles, with two crashes involving a commercial vehicle. Crashes were evenly distributed between all three years of data collection.

The expected crash frequency at this intersection is higher than the predicted crash frequency in existing conditions for all vehicle types. The proposed development is anticipated to impact predicted crash frequency at this intersection (approximately 28% change from existing conditions for all vehicle types).

## **I-25 NB On/Off Ramp and Gibson Boulevard**

Based on the existing crash data, the predominate crash type is other (45%), with 78% of all crashes being property damage only (PDO) crashes. One fatal crash occurred at this intersection in 2021 and there was an angle incident occurring in the late afternoon. One crash involved a pedestrian (no existing pedestrian facilities are present), and one crash involved a motorcycle. 90% of incidents involved only private non-commercial vehicles, with two crashes involving a commercial vehicle. 58% of crashes occurred in 2021, with even distribution of the remainder in 2022 and 2023.

The expected crash frequency at this intersection is higher than the predicted crash frequency in existing conditions. The proposed development is anticipated to impact predicted crash frequency at this intersection in its current configuration (approximately 13% change from existing conditions for all vehicle types). Reconfiguration of the interchange is anticipated to result in a decrease in predicted crash frequency compared with existing configuration.

## **I-25 SB On/Off Ramp and Gibson Boulevard**

Based on the existing crash data, the predominate known crash types at this intersection are other (46%) and rear-end (31%) with 77% of all crashes being property damage only (PDO) crashes. One crash involved a motorcycle, with all other incidents (92%) involving only private non-commercial vehicles. 85% of crashes occurred in 2021, with no incidents in 2022 and the remaining 15% occurred in 2023.

The expected crash frequency at this intersection is higher than the predicted crash frequency in existing conditions. The proposed development is anticipated to impact predicted crash frequency at this intersection in its current configuration (approximately 21% change from existing conditions for all vehicle types). Reconfiguration of the interchange is anticipated to result in an increase in predicted crash frequency compared with existing configuration.

## **Avenida César Chávez and West Road/Langham Road**

Based on the existing crash data, the predominate crash type at this intersection is other (67%), with 89% of all crashes being property damage only (PDO) crashes. One crash involved a motorcycle, with all other incidents (88%) involving only private non-commercial vehicles. 56% of crashes occurred in 2023, with even distribution of the remainder in 2021 and 2022.

The expected crash frequency at this intersection is higher than the predicted crash frequency in existing conditions for single-vehicle crashes and lower than the predicted crash frequency in existing conditions for multiple-vehicle crashes. The proposed development is anticipated to impact predicted crash frequency at this intersection (approximately 68% change from existing conditions for multiple-vehicle, less for single-vehicle.)

## **University Boulevard and Site Driveway**

Based on the existing crash data, no crashes were reported at this location in 2021-2023. Traffic volumes associated with the existing driveway on the northbound side of the roadway were observed to be very low. The proposed development is anticipated to increase predicted crash frequency at this intersection due to the addition of a fourth leg to serve the site, significant traffic volumes projected for that leg, and installation of a traffic signal at this location.