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November 4, 2024

Xavier Garcia
DR Horton, Inc.
8440 Wyoming Blvd NE, Suite A
Albuquerque, NM 87113

Re: Aspire – Traffic Study Update

Mr. Garcia,

This memo documents an update to a previously completed Traffic Study involving the intersection of Coors Boulevard and Rio Bravo Boulevard (NM 500)/ Dennis Chavez Boulevard within the City of Albuquerque. Lee Engineering has completed this update for DR Horton, Inc. All analyses and items contained herein conform to the report update scoping requirements set forth in a scoping meeting held on March 5, 2024, with DR Horton, Inc. and the New Mexico Department of Transportation (NMDOT).

Background

Previous Traffic Study

The purpose of this study is to re-evaluate recommendations made for the intersection of Coors Boulevard and Rio Bravo Boulevard (NM 500)/ Dennis Chavez Boulevard in the Aspire Traffic Impact Study submitted in May of 2021 by Lee Engineering. The previous analysis was a comprehensive study of the Anderson Heights development.

Growth Rate and Trip Generation from Previous Analysis

The growth rate and trip generation applied to this analysis were taken from the previous analysis. The applied growth rate from the previous analysis was 1%. Trip generation for the development from the original study is reproduced in Table 1, Table 2, and Table 3. Trip routing percentages and assignments are shown below in Figure 6 and Figure 7, reproduced from the previous analysis.

Table 1: 2023 ITE Trip Generation from Previous Analysis

Use	Units		TRIP GENERATION						TRIPS					
			Daily Rate	AM Peak			PM Peak			Daily	AM Peak		PM Peak	
	Rate	Enter	Exit	Rate	Enter	Exit	Daily	In	Out	In	Out	In	Out	
Single Family Detached Housing (210) Phase 1	306	Dwelling Units	9.44	0.74	25%	75%	0.99	63%	37%	2889	57	170	191	113

Table 2: 2025 ITE Trip Generation from Previous Analysis

Use	Units		TRIP GENERATION						TRIPS					
			Daily Rate	AM Peak			PM Peak			Daily	AM Peak		PM Peak	
	Rate	Enter	Exit	Rate	Enter	Exit	Daily	In	Out	In	Out	In	Out	
Single Family Detached Housing (210) Phase 2	117	Dwelling Units	9.44	0.74	25%	75%	0.99	63%	37%	1105	22	65	73	43

Table 3: 2027 ITE Trip Generation from Previous Analysis

Use	Units	TRIP GENERATION						TRIPS					
		Daily Rate	AM Peak		PM Peak		Daily	AM Peak		PM Peak		In	Out
			Rate	Enter	Exit	Rate		Enter	Exit	In	Out		
Single Family Detached Housing (210) Phase 3	83 Dwelling Units	9.44	0.74	25%	75%	0.99	63%	37%	784	16	47	52	31

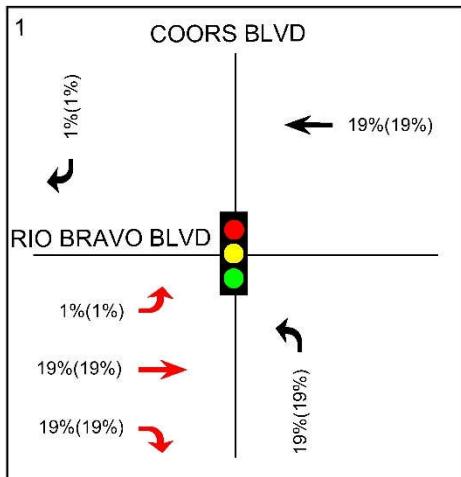


Figure 1: Development Trip Routing Percentages

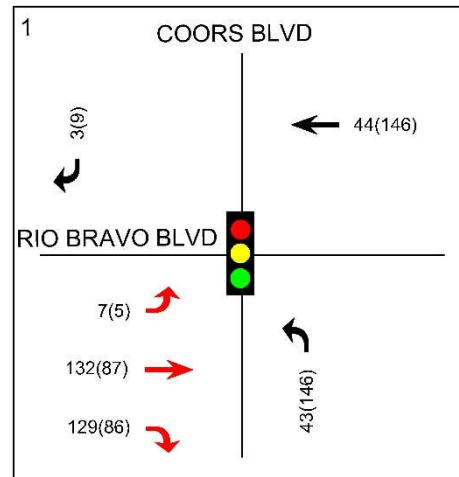


Figure 2: Development Trip Routing Volumes

Previously Recommended Mitigations

Several recommendations, including signal timing and lane configurations, were made in the previous study for the intersection of Coors Boulevard and Rio Bravo Boulevard (NM 500)/ Dennis Chavez Boulevard. Figure 3 shows the recommended configuration reproduced from the report:

- Signal timings are recommended to be made by a licensed Professional Traffic Operations Engineer (PTOE).
- For the EBT/R, it is recommended that a dedicated right-turn lane be constructed and restriped.
- For the WBL, it is recommended that additional capacity be added by restriping the existing chevron to an additional left-turn lane. Additionally, it is recommended that the phasing be converted to protected-only due to sight distance restrictions.
- For the NBL, it is recommended that additional capacity be added by reconfiguring the median to be a back-to-back curb with 400 feet of storage.
- For the NBL and WBT, no further mitigations are recommended at this time as no receiving lane is present for an additional lane and, as stated previously, is attributed to a regional traffic issue.

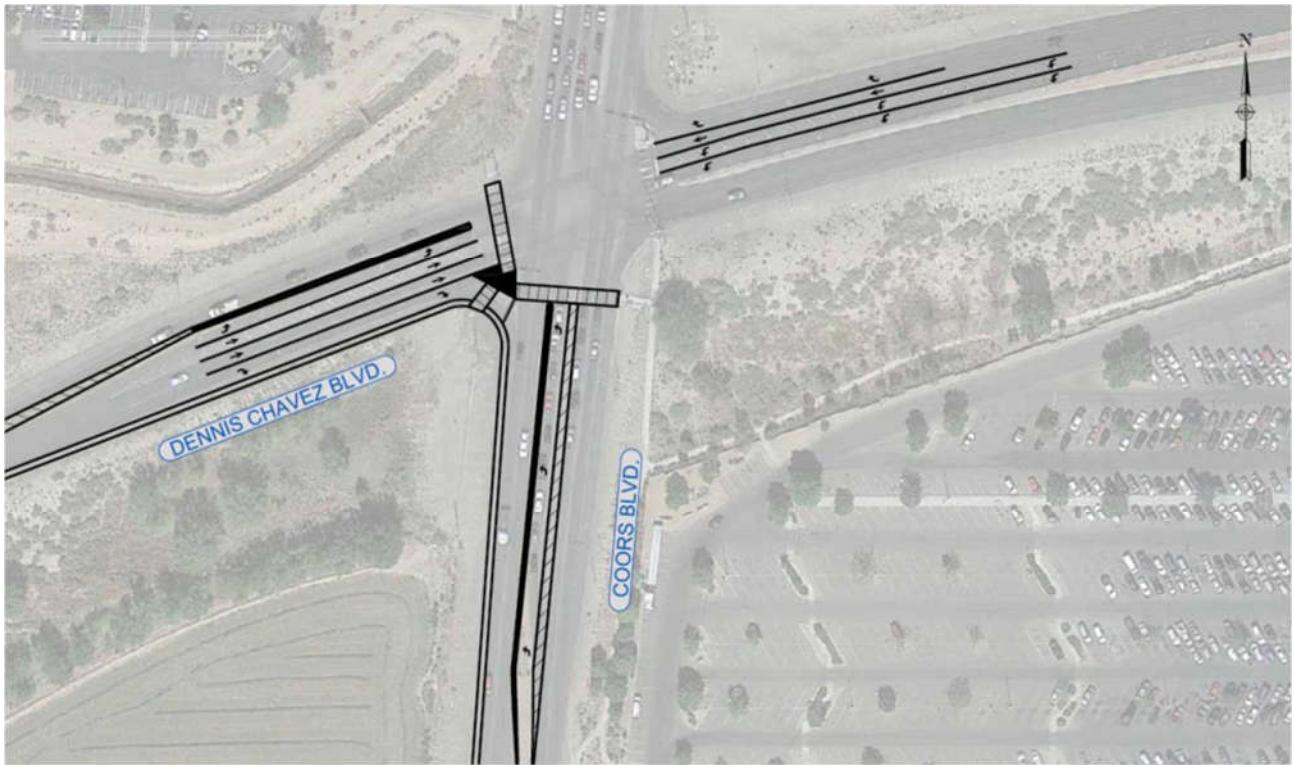


Figure 3: Coors Blvd Roadway Re-Configuration Concept Drawing (2021 Study)

Recommendations for other intersections

DENNIS CHAVEZ BLVD & 118TH ST It is recommended that the traffic signal be periodically re-time and adjusted as developments in the surrounding area are constructed. It is also noted that the development does not contribute traffic to the northbound left and right movements. Additional through lanes and right turn lanes are not recommended at this intersection as receiving lanes is not currently present departing the intersection. Additionally, it is understood that Bernalillo County is in the process of designing minor signal improvements to add flashing yellow arrow left turns at the intersection. However, the details of this project are not currently finalized. Under 2027 full-build conditions the developments share of contribution to traffic volumes at this intersection is projected to be 7% (170 trips generated / 2608 total peak hour vehicles) during the AM peak and 16% (226 trips generated / 1413 total peak hour vehicles) during the PM peak.

DENNIS CHAVEZ BLVD & 98TH ST It is understood that a construction project to add additional lanes at 98th & Dennis Chavez Blvd is currently underway as part of the Ceja Vista development. Current construction efforts are widening the intersection to accommodate additional lane geometry, including a southbound left-turn auxiliary lane, eastbound and westbound through lanes, and northbound lanes. It is understood that while the project is constructing an additional southbound left turn lane, the additional lanes will not have receiving lanes on Dennis Chavez Blvd outside of the intersection and, therefore, will not be activated until Dennis Chavez is widened. Auxiliary lanes are being constructed therefore satisfy the above recommendation. Under 2027 full-build conditions the developments share of contribution to traffic volumes at this intersection is projected to be 6% (172 trips generated / 2728 total peak hour vehicles) during the AM peak and 10% (231 trips generated / 2416 total peak hour vehicles) during the PM peak.

DENNIS CHAVEZ BLVD & UNSER BLVD It is recommended that an additional southbound left turn auxiliary lane be constructed at the intersection. Currently, space exists between the southbound right turn lane and the southbound left-turn lane that could be used as an additional left-turn lane. To accommodate the additional southbound left turn lane, it is recommended that the westbound approach be re-striped moving back existing stop bar and adding additional pavement to receiving eastbound legs will allow for both left south bound left turns to make dual movement. Furthermore, extending eastbound left storage bay to 400' by restriping lanes will provide more capacity. Concept drawing with roadway re-configuration is shown below in Figure 15. It is noted that the development does not contribute traffic to the southbound left turn movement. Under 2027 full-build conditions the developments share of contribution to traffic volumes at this intersection is projected to be 5% (172 trips generated / 3616 total peak hour vehicles) during the AM peak and 6% (231 trips generated / 4034 total peak hour vehicles) during the PM peak.

DENNIS CHAVEZ & CONDERSHIRE BLVD No recommended improvements as deficiencies exist under 2020 conditions, and the development is not anticipated to contribute traffic to the failing side-street movements. The addition of sidewalks and bike facilities should be considered to meet current street element dimensions set forth by DPM. Under 2027 fullbuild conditions the developments share of contribution to traffic volumes at this intersection is projected to be 6% (147 trips generated / 2445 total peak hour vehicles) during the AM peak and 7% (196 trips generated / 2714 total peak hour vehicles) during the PM peak.

98TH ST & AMOLE MESA AVE It is recommended that a traffic signal warrant analysis be performed for the intersection once traffic volumes return to non-COVID conditions. As previously stated, a traffic signal could be warranted in the future as traffic volumes grow. If future operation of intersection becomes unacceptable but does not warrant a traffic signal, then a two-lane roundabout should be considered. Construction of multi-lane roundabout could pose challenges geometrically. Furthermore, cost-to-benefit of installing a roundabout should be examined. See the signal warrant section for more details. Under 2027 full-build conditions the developments share of contribution to traffic volumes at this intersection is projected to be 9% (105 trips generated / 1183 total peak hour vehicles) during the AM peak and 11% (141 trips generated / 1325 total peak hour vehicles) during the PM peak.

98TH ST & COLOBEL AVE Under 2027 full-build conditions the developments share of contribution to traffic volumes at this intersection is projected to be 8% (90 trips generated / 1082 total peak hour vehicles) during the AM peak and 10% (121 trips generated / 1215 total peak hour vehicles) during the PM peak. No recommended improvements. **AMOLE MESA AVE & MESSINA DR** Under 2027 full-build conditions the developments share of contribution to traffic volumes at this intersection is projected to be 33% (131 trips generated / 395 total peak hour vehicles) during the AM peak and 35% (175 trips generated / 506 total peak hour vehicles) during the PM peak. No recommended improvements.

2024 Conditions

Presently, **Coors Boulevard and Rio Bravo Boulevard (NM 500)/ Dennis Chavez Boulevard** is a 4-legged signalized intersection maintained by the City of Albuquerque. Signal detection is present for all movements, and the signal is time-of-day coordinated. The eastbound approach comprises a left-turn lane, a through lane, and a shared through-right lane where the right turn is channelized. The westbound approach comprises a left-turn lane, a through lane, and a channelized right-turn lane. The northbound approach comprises a left turn lane, two through lanes, and a right turn lane. The southbound approach

comprises dual left-turn lanes, a through lane, and a shared through-right lane. Chevron striping separates the left and through lanes on all approaches except the southbound approach. Pedestrian crosswalks are present on all approaches except the southbound approach of the intersection. Furthermore, crosswalks exist across the westbound and eastbound channelized right turns.

Turning Movement Counts

Turning movement counts were collected on Thursday, March 7, 2024. Figure 4 and Figure 5 shows the study intersection and collected volumes.



Figure 4: Vicinity Map

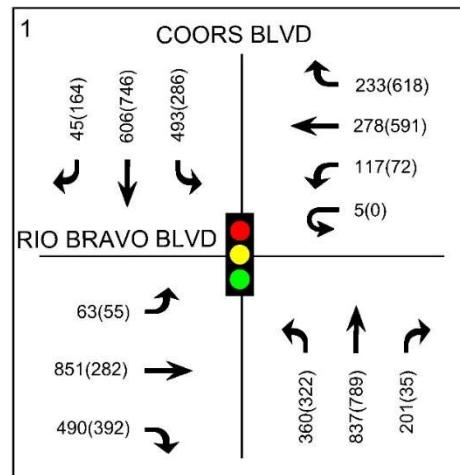


Figure 5: Existing Year (2024) Volumes

Adjacent Developments

As discussed in the scoping meeting, two adjacent developments have been approved and are constructed or under construction: the Ceja Vista Apartments and the Avanzando Development. The Ceja Vista Apartments have been built out and are assumed to be included in the collected turning movement counts. The Avanzando Development, which is described below, is expected to be built out by 2025. Trips were included in the future year analysis scenarios of this report.

Avanzando Development

The Avanzando Development is expected to be completed by 2025. Trips from this development were assumed based on the percentages provided in the Avanzando Development report. Table 4 below is the trip generation reproduced from the report. Figure 6 and Figure 7 below are the assumed trip routing percentages and assignments.

Table 4: Avanzando Development Trip Generation

Avanzando Development (Rio Bravo Blvd. / Loris Dr.)						
Trip Generation Data (ITE Trip Generation Manual - 11th Edition)						
COMMENT	USE (ITE CODE)	DESCRIPTION	24 HR VOL	A. M. PEAK HR	P. M. PEAK HR.	
			GROSS	ENTER	EXIT	ENTER
	Summary Sheet		Units			
"A"	Automated Car Wash (948)		1	-	-	39 39
"B", "C1", "E2"	Fast Food Restaurant w/ Drive-Thru Window (934)		8.62	4,030	196	188 148 137
"C2"	High Turnover (Sit-Down) Restaurant (932)		4.42	473	23	19 24 16
"D"	Coffee/Donut Shop w/ Drive Thru Window and No Indoor Seating (938)		2	358	40	40 15 15
"E1"	Drive-In Bank (912)		4	500	21	13 53 55
"E3"	Medical-Dental Office Building (720)		4.86	101	12	3 6 13
"F"	Strip Retail Plaza <40K - Linear (822)		30.00	1,634	42	28 99 99
	Subtotal Trips Generated (Unadjusted)			7,096	334	291 384 374
	Internal Capture Trips				(9)	(9) (84) (84)
	Subtotal Trips Generated (Adj. for Internal Capture)			7,096	325	282 300 290
	Pass-by Trip Adjustment		30%		(98) (85) (90) (87)	
	New New Trips (Adjusted)			7,096	227	197 210 203

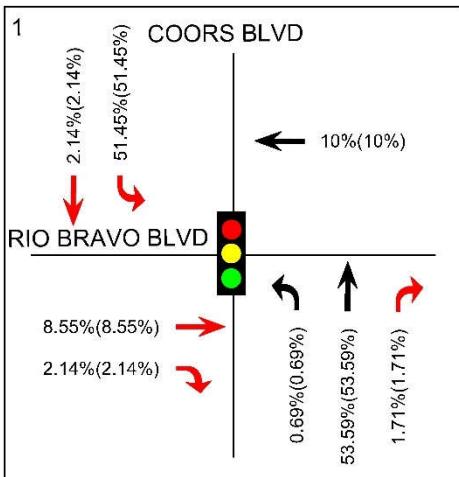


Figure 6: Avanzando Trip Routing Percentages

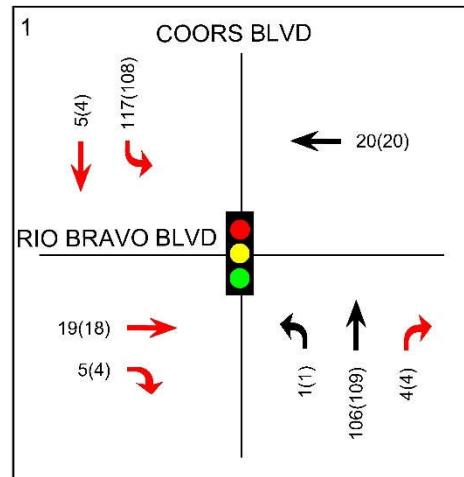


Figure 7: Avanzando Trip Routing Volumes

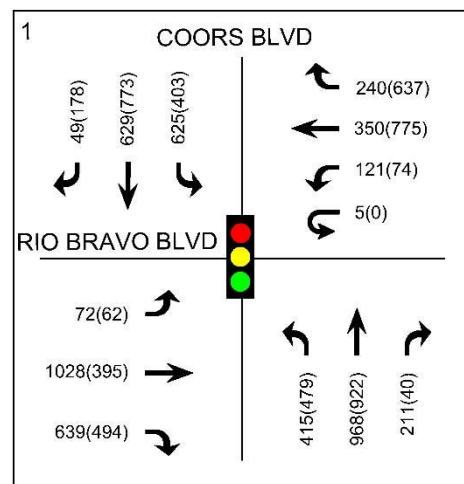
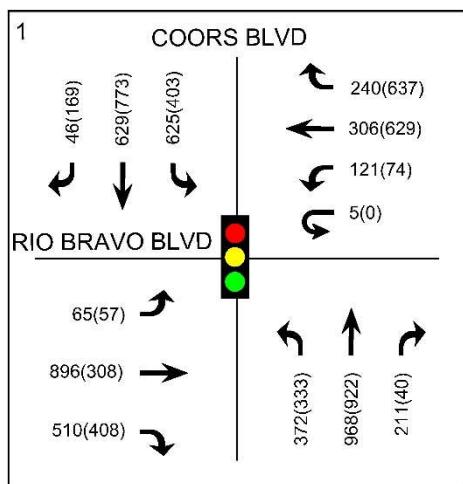
Traffic Analysis

Traffic Scenario Development

Volume Calculations

Traffic Volumes used in the current Build-Out Year 2027 are shown below in Figure 8 and Figure 9. Analysis volumes were calculated as follows:

- Build-Out Year 2027 Background—2027 traffic volumes are projected from the Existing traffic volumes via the application of a growth factor developed in the previous analysis plus trips from the Avanzando Development.
- Build-Out Year 2027 Total – 2027 background volumes plus trips generated by the proposed development.



Capacity and Queueing Analysis

Highway Capacity Software (HCS) was used to analyze the intersection for Level of Service (LOS) and 95th percentile queueing conditions. HCS implements methods and procedures detailed by the Highway Capacity Manual. Detailed capacity output sheets showing all individual movements can be found in the Appendix. Table 5 summarizes the intersection delay, level of service, and queueing under Existing Year 2024, Build-Out Year 2027 Background, and Built-Out Year 2027 Full-Build conditions. The following conclusions are made from the analysis.

Delay and LOS Results

Where LOS results are present, all movements operate at acceptable LOS during the AM and PM peaks except:

- Under the Existing conditions:
 - EBT operates at LOS F during the AM peak hour.
 - WBT operates at LOS F during the PM peak hour.
 - NBL operates at LOS F during the AM and PM peak hours.
 - SBT operates at LOS E and F during the AM and PM peak hours, respectively.
 - SBR operates at LOS E and F during the AM and PM peak hours, respectively.
- Under the Build-Out Background conditions:
 - EBT operates at LOS F during the AM peak hour.
 - WBT operates at LOS F during the PM peak hour.
 - NBL operates at LOS F during the AM and PM peak hours.
 - NBT operates at LOS F during the AM peak hour.
 - SBT operates at LOS E during the AM and PM peak hours.
 - SBR operates at LOS E during the AM and PM peak hours.
- Under the Build-Out Full Build conditions:
 - EBT operates at LOS F during the AM peak hour.
 - WBT operates at LOS F during the PM peak hour.
 - NBL operates at LOS F during the AM and PM peak hours.
 - NBT operates at LOS F during the AM peak hour.
 - SBT operates at LOS E during the AM and PM peak hours.
 - SBR operates at LOS E during the AM and PM peak hours.

Queueing Results

Where queue length results are present, existing storage lengths are sufficient to accommodate 95th percentile queue lengths except:

- Under Existing conditions
 - EBT is expected to not accommodate the 95th percentile queue lengths during the AM peak hour.
 - WBT is expected to not accommodate the 95th percentile queue lengths during the PM peak hour. 95th percentile queue lengths calculated by HCS exceed measured turn lane lengths.
 - NBL is expected to not accommodate the 95th percentile queue lengths during the AM peak hour. It is also expected to experience Queue Storage Ratio (QSR) deficiencies.
- Under Build-Out Background
 - EBT is expected to not accommodate the 95th percentile queue lengths during the AM peak hour. 95th percentile queue lengths calculated by HCS exceed measured turn lane lengths.
 - WBT is expected to not accommodate the 95th percentile queue lengths during the PM peak hour. 95th percentile queue lengths calculated by HCS exceed measured turn lane lengths.

- NBL is expected to not accommodate the 95th percentile queue lengths during the AM peak hour. It is also expected to experience Queue Storage Ratio (QSR) deficiencies.
- NBT is expected to not accommodate the 95th percentile queue lengths during the AM peak hour. 95th percentile queue lengths calculated by HCS exceed measured turn lane lengths.
- Under Build-Out Full Build
 - EBT is expected to not accommodate the 95th percentile queue lengths during the AM peak hour. 95th percentile queue lengths calculated by HCS exceed measured turn lane lengths.
 - WBT is expected to not accommodate the 95th percentile queue lengths during the PM peak hour. 95th percentile queue lengths calculated by HCS exceed measured turn lane lengths.
 - NBL is expected to not accommodate the 95th percentile queue lengths during the AM peak hour.
 - NBT is expected to not accommodate the 95th percentile queue lengths during the AM peak hour.
 - It is also expected to experience Queue Storage Ratio (QSR) deficiencies. 95th percentile queue lengths calculated by HCS exceed measured turn lane lengths.

Table 5: HCM Results for Coors and Rio Bravo Boulevard

Coors & Rio Bravo Boulevard																						
Existing (2024)																						
AM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS	PM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS			
	EBL	360	51.0	0.1	0.16	24.4	C				EBL	360	43.4	0.1	0.45	30.7	C					
	EBT	—	1787.7	0.0	1.09	335.9	F				EBT	—	259.6	0.0	0.50	31.8	C					
	EBR	—	—	—	—	0.0	A				EBR	—	—	—	—	0.0	A					
	WBL	520	100.5	0.2	0.72	32.2	C				WBL	520	58.7	0.1	0.37	27.8	C					
	WBT	—	249.5	0.0	0.40	28.1	C				WBT	—	811.9	0.0	0.98	91.4	F					
	WBR	—	—	—	—	0.0	A				WBR	—	—	—	—	0.0	A					
	NBL	250	1247.1	5.0	1.14	346.8	F				NBL	250	520.2	2.1	0.98	108.5	F					
	NBT	—	487.8	0.0	0.86	51.9	D				NBT	—	339.4	0.0	0.61	30.4	C					
	NBR	250	124.0	0.5	0.24	29.5	C				NBR	250	26.1	0.1	0.06	19.8	B					
AM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS	PM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS			
	SBL	215	237.9	1.1	0.80	34.0	C				SBL	215	120.5	0.6	0.45	26.5	C					
	SBT	—	403.2	0.0	0.76	55.8	E				SBT	—	651.4	0.0	0.95	87.7	F					
	SBR	—	380.6	0.0	0.76	56.3	E				SBR	—	615.5	0.0	0.95	90.1	F					
	Build-Out Background (2027)											Build-Out Full Build (2027)										
	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS		Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS			
	EFL	360	52.8	0.2	0.18	24.7	C				EFL	360	45.1	0.1	0.46	30.7	C					
	EBT	—	2341.0	0.0	1.15	325.9	F				EBT	—	285.3	0.0	0.55	32.5	C					
	EBR	—	—	—	—	0.0	A				EBR	—	—	—	—	0.0	A					
	WBL	520	103.9	0.2	0.73	32.2	C				WBL	520	60.7	0.1	0.41	28.3	C					
	WBT	—	273.7	0.0	0.45	28.8	C				WBT	—	1208.5	0.0	1.05	163.0	F					
	WBR	—	—	—	—	0.0	A				WBR	—	—	—	—	0.0	A					
	NBL	250	1441.8	5.8	1.18	409.8	F				NBL	250	609.4	2.4	0.99	136.7	F					
	NBT	—	1557.8	0.0	1.14	318.1	F				NBT	—	427.4	0.0	0.76	36.7	D					
	NBR	250	114.4	0.5	0.23	32.3	C				NBR	250	15.5	0.1	0.03	21.1	C					
	SBL	215	334.5	1.6	0.91	46.6	D				SBL	215	170.2	0.8	0.66	27.9	C					
AM Peak	SBT	—	414.7	0.0	0.78	57.2	E				SBT	—	521.8	0.0	0.89	64.0	E					
	SBR	—	392.8	0.0	0.78	57.6	E				SBR	—	502.4	0.0	0.89	64.9	E					
	Build-Out Background (2027)											Build-Out Full Build (2027)										
	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS	PM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS			
	EFL	360	58.4	0.2	0.21	25.0	C				EFL	360	48.9	0.1	0.48	30.7	C					
	EBT	—	4539.6	0.0	1.34	657.2	F				EBT	—	379.1	0.0	0.70	37.2	D					
	EBR	—	—	—	—	0.0	A				EBR	—	—	—	—	0.0	A					
	WBL	520	104.1	0.2	0.73	32.2	C				WBL	520	61.6	0.1	0.53	30.5	C					
	WBT	—	315.1	0.0	0.52	30.1	C				WBT	—	3687.6	0.0	1.30	586.4	F					
	WBR	—	—	—	—	0.0	A				WBR	—	—	—	—	0.0	A					
	NBL	250	2197.8	8.8	1.32	644.7	F				NBL	250	2917.9	11.7	1.43	835.5	F					
	NBT	—	1557.8	0.0	1.14	318.1	F				NBT	—	427.4	0.0	0.76	36.7	D					
	NBR	250	114.4	0.5	0.23	32.3	C				NBR	250	15.5	0.6	0.03	21.1	C					
	SBL	215	334.5	1.6	0.91	46.6	D				SBL	215	170.2	0.8	0.66	27.9	C					
AM Peak	SBT	—	418.1	0.0	0.78	57.5	E				SBT	—	535.2	0.0	0.90	66.7	F					
	SBR	—	395.6	0.0	0.78	58.0	E				SBR	—	514.4	0.0	0.90	67.2	E					
	Build-Out Background (2027)											Build-Out Full Build (2027)										
	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS	PM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS			
	EFL	360	58.4	0.2	0.21	25.0	C				EFL	360	48.9	0.1	0.48	30.7	C					
	EBT	—	4539.6	0.0	1.34	657.2	F				EBT	—	379.1	0.0	0.70	37.2	D					
	EBR	—	—	—	—	0.0	A				EBR	—	—	—	—	0.0	A					
	WBL	520	104.1	0.2	0.73	32.2	C				WBL	520	61.6	0.1	0.53	30.5	C					
	WBT	—	315.1	0.0	0.52	30.1	C				WBT	—	3687.6	0.0	1.30	586.4	F					
	WBR	—	—	—	—	0.0	A				WBR	—	—	—	—	0.0	A					
	NBL	250	2197.8	8.8	1.32	644.7	F				NBL	250	2917.9	11.7	1.43	835.5	F					
	NBT	—	1557.8	0.0	1.14	318.1	F				NBT	—	427.4	0.0	0.76	36.7	D					
	NBR	250	114.4	0.5	0.23	32.3	C				NBR	250	15.5	0.6	0.03	21.1	C					
AM Peak	SBL	215	334.5	1.6	0.91	46.6	D				SBL	215	170.2	0.8	0.66	27.9	C					
	SBT	—	418.1	0.0	0.78	57.5	E				SBT	—	535.2	0.0	0.90	66.7	F					
	SBR	—	395.6	0.0	0.78	58.0	E				SBR	—	514.4	0.0	0.90	67.2	E					
	Build-Out Background (2027)											Build-Out Full Build (2027)										
	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS	PM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS			
	EFL	360	58.4	0.2	0.21	25.0	C				EFL	360	48.9	0.1	0.48	30.7	C					
	EBT	—	4539.6	0.0	1.34	657.2	F				EBT	—	379.1	0.0	0.70	37.2	D					
	EBR	—	—	—	—	0.0	A				EBR	—	—	—	—	0.0	A					
	WBL	520	104.1	0.2	0.73	32.2	C				WBL	520	61.6	0.1	0.53	30.5	C					
	WBT	—	315.1	0.0	0.52	30.1	C				WBT	—	3687.6	0.0	1.30	586.4	F					
	WBR	—	—	—	—	0.0	A				WBR	—	—	—	—	0.0	A					
	NBL	250	2197.8	8.8	1.32	644.7	F				NBL	250	2917.9	11.7	1.43	835.5	F					
	NBT	—	1557.8	0.0	1.14	318.1	F				NBT	—	427.4	0.0	0.76	36.7	D					
	NBR	250	114.4	0.5	0.23	32.3	C				NBR	250	15.5	0.6	0.03	21.1	C					
	SBL	215	334.5	1.6	0.91	46.6	D				SBL	215	170.2	0.8	0.66	27.9	C					
AM Peak	SBT	—	418.1	0.0	0.78	57.5	E				SBT	—	535.2	0.0	0.90	66.7	F					

Crash Summary

At the request of the NMDOT, a crash summary for the major intersections within the study area has been completed. The purpose of this analysis is to highlight trends and observations from summarized crash data. Crash data provided by the New Mexico Department of Transportation (NMDOT) for the years 2019 to 2021 is summarized in Table 6. This intersection is also on the MRCOG High Fatality—Injury Network (HFIN), which is included in the map below.

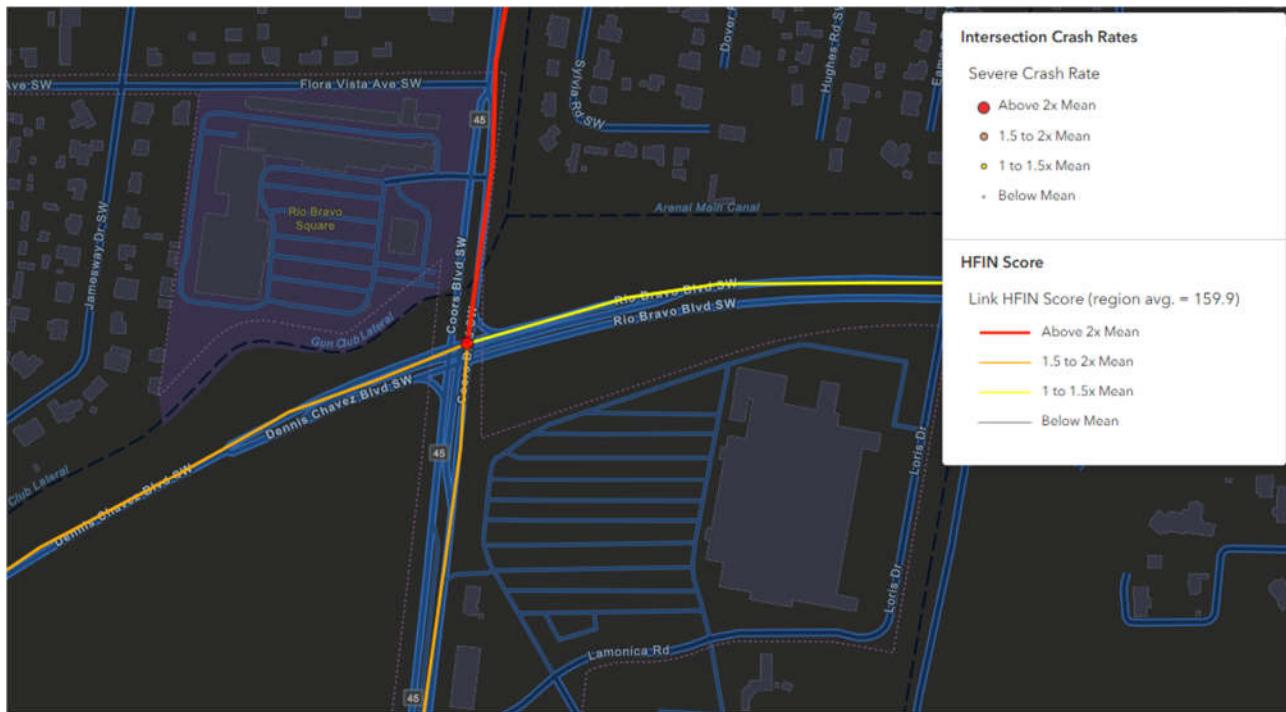


Figure 10: Coors Blvd and Rio Bravo Blvd (NM 500) HFIN Map

From the table below, the following observations are made:

- For the intersection of Coors Boulevard and Rio Bravo Boulevard (NM 500)/ Dennis Chavez Boulevard
 - Within the years 2019 to 2021, 180 crashes were reported.
 - The most common crash type was Other Vehicle – From Same Direction/Rear End Collision.
 - 59% of reported crashes occurred during daylight hours, and 39% occurred under Dark-Lighted or Dark-Not Lighted conditions.
 - No fatal crashes were reported from 2019 to 2021.
 - 28 injury crashes were reported, and 155 crashes were classified as Property Damage Only.
 - There were 2 pedestrian-involved crashes reported.
 - The most common contributing factor was Driver Inattention.

Table 6: Crash Summary

		Crash Summary	Coors Blvd & Rio Bravo Blvd
CONTRIBUTING FACTORS		Total Crashes	180
	2019	64	
	2020	60	
	2021	56	
Avoid No Contact Vehicle		4	
Cell Phone		2	
Disregarded Traffic Signal		6	
Driver Inattention		132	
Drove Left Of Center		2	
Excessive Speed		18	
Failed To Yield Right Of Way		19	
Following Too Closely		28	
Improper Backing		2	
Improper Lane Change		7	
Improper Overtaking		3	
Made Improper Turn		11	
Other Improper Driving		20	
Other Mechanical Defect		2	
Other, No Driver Error		42	
Speed Too Fast For Conditions		12	
Under The Influence Of Alcohol		9	
%Following Too Closely		6%	
%Failed To Yield Right Of Way		4%	
Excessive Speed		4%	
Fatal Injury (Killed) (K)		0	
Suspected Serious Injury (A)		1	
Visible Injury (B)		9	
Complaint of Injury (C)		18	
Property Damage Only (O)		155	
%Property Damage Only (O)		85%	
%Complaint of Injury (C)		10%	
%Visible Injury (B)		5%	
Daylight		107	
Dawn		3	
Dusk		5	
Dark-Lighted		46	
Dark-Not Lighted		8	
Left Blank		13	
%Daylight		59%	
%Dark-Lighted		25%	
%Dark-Not Lighted		4%	
Pedestrian Involved		3	
Bicyclist Involved		0	
%Pedestrian Involved		2%	
%Bicyclist Involved		0%	
Fixed Object		10	
Other Vehicle - From Same Direction/One Right Turn		4	
Other Vehicle - From Same Direction/One Stopped		17	
Other Vehicle - From Same Direction/Rear End Collision		71	
Other Vehicle - From Same Direction/Sideswipe Collision		10	
Other Vehicle - From Same Direction/Both Going Straight		60	
Other Vehicle - From Same Direction/Both Turn Left		9	
Other Vehicle - From Same Direction/All Others		8	
Other Vehicle - One Left Turn/Entering At Angle		26	
Other Vehicle - One Right Turn/Entering At Angle		8	
Other Vehicle - One Stopped/Entering At Angle		3	
Other Vehicle - Both Going Straight/Entering At Angle		20	
Other Vehicle - Both Turn Right/Entering At Angle		10	
Other Vehicle - From Opposite Direction/All Others		5	
Other Vehicle - From Opposite Direction/Both Going Straight		11	
Other Vehicle - From Opposite Direction/One Left Turn		14	
Other Vehicle - From Opposite Direction/One Right Turn		2	
Other Vehicle - From Opposite Direction		31	
Pedestrian		6	
%Other Vehicle - From Same Direction/Rear End Collision		19%	
%Other Vehicle - From Same Direction/Both Going Straight		16%	
%Other Vehicle - From Opposite Direction		8%	

HCS Result Comparison

The original analysis was completed using an older version of HCS. For a direct comparison, this analysis reproduced the previous HCS results using an updated model with original inputs. The resulting comparison of Build Out Analyses is shown in Table 7.

HCS results from the previous analysis indicate LOS deficiencies on the EBT, WBL, WBT, and NBL movements during the AM and PM peak hours. Current HCS results indicate LOS deficiencies on the EBT, WBT, NBL, NBT, SBT, and SBR movements. QSR failures for the previous and current analyses are also shown on the NBL movement during the AM and PM peak hours.

Table 7: Comparison of HCS Results

Coors & Rio Bravo Boulevard Previous Build-Out Full Build (2027)																					
AM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS	PM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS		
	EBL	360	50.7	0.1	0.16	26.0	C	66.8			EBL	360	55.5	0.2	0.48	32.6	C				
	EBT	--	787.2	0.0	0.96	80.7	F				EBT	--	358.3	0.0	0.72	42.3	D				
	EDR	--	---	---	---	---	A				EDR	--	---	---	---	---	A				
	WBL	520	185.5	0.4	0.87	70.6	F				WBL	520	124.5	2.4	1.34	700.3	F				
	WBT	--	276.9	0.0	0.45	28.8	C				WBT	--	2726.5	0.0	1.21	433.1	F				
	WBR	--	---	---	---	0.0	A				WBR	--	---	---	---	0.0	A				
	NBL	250	1197.4	4.8	1.13	329.2	F				NBL	250	1445.3	5.8	1.18	399.4	F				
	NBT	--	272.7	0.0	0.50	36.3	D				NBT	--	100.8	0.0	0.54	29.0	C				
	NBR	250	112.3	0.5	0.21	25.8	C				NBR	250	47.3	0.2	0.10	17.1	B				
	SBL	215	201.8	0.9	0.53	29.7	C				SBL	215	119.3	0.6	0.41	28.2	C				
	SBT	--	266.0	0.0	0.52	44.7	D				SBT	--	414.7	0.0	0.78	49.9	D				
	SBR	--	252.8	0.0	0.53	45.0	D				SBR	--	397.4	0.0	0.78	50.5	D				
Build-Out Full Build (2027)																					
AM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS	PM Peak	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS		
	EBL	360	58.4	0.2	0.21	25.0	C	235.4			EBL	360	48.9	0.1	0.48	30.7	C				
	EBT	--	4539.6	0.0	1.34	657.2	F				EBT	--	379.1	0.0	0.70	37.2	D				
	EDR	--	---	---	---	0.0	A				EDR	--	---	---	---	0.0	A				
	WBL	520	104.1	0.2	0.73	32.7	C				WBL	520	61.6	0.1	0.53	30.5	C				
	WBT	--	315.1	0.0	0.52	30.1	C				WBT	--	3687.6	0.0	1.30	586.4	F				
	WBR	--	---	---	---	0.0	A				WBR	--	---	---	---	0.0	A				
	NBL	250	2197.8	8.8	1.32	644.7	F				NBL	250	2917.9	11.7	1.43	835.5	F				
	NBT	--	1557.8	0.0	1.14	318.1	F				NBT	--	427.4	0.0	0.76	36.7	D				
	NBR	250	114.4	0.5	0.23	32.3	C				NBR	250	15.5	0.6	0.03	21.1	C				
	SBL	215	334.5	1.6	0.91	46.6	D				SBL	215	170.2	0.8	0.66	27.9	C				
	SBT	--	418.1	0.0	0.78	57.5	F				SBT	--	535.2	0.0	0.90	66.2	F				
	SBR	--	395.6	0.0	0.78	58.0	E				SBR	--	514.4	0.0	0.90	67.2	E				

Conclusion and Recommendations

Mitigated HCS results for the Build-Out Year 2027 are below in Table 8. LOS and queue failures remain on the NBL, NBT, and WBT movements.

Table 8: Build-Out Full Build (2027) with Mitigations

AM Peak	Coors & Rio Bravo Boulevard Build-Out Full Build (2027) With Mitigations												PM Peak																																																																																																																																																										
	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS	Movement	Storage Length(ft)	95% Queue Length (ft/lane)	QSR	V/C	Delay (s/veh)	LOS	Intersection Delay	Intersection LOS																																																																																																																																																					
	EBL	500	61.2	0.1	0.25	27.4	C	EBR	500	48.9	0.1	0.48	30.7	C	EBT	--	564.8	0.0	0.91	50.2	D	EBT	--	185.2	0.0	0.37	29.7	C	EDB	500	442.8	0.9	0.8	46.4	D	EDB	500	313.2	0.6	0.7	36.5	D	WBL	700	133.8	0.2	0.72	43.6	D	WBL	700	59.8	0.1	0.21	24.5	C	WBT	--	335.7	0.0	0.57	34.3	C	WBT	--	3689.5	0.0	1.30	587.0	F	WBR	--	--	--	--	--	A	WBR	--	--	--	--	--	A	NBL	400	1182.9	3.0	1.10	264.6	F	NBL	400	2913.7	7.3	1.43	831.7	F	NBT	--	774.1	0.0	1.00	104.3	F	NBT	--	428.5	0.0	0.76	36.9	D	NBR	250	95.1	0.4	0.19	29.7	C	NBR	250	15.5	0.1	0.03	21.1	C	SBL	250	314.4	1.3	0.89	40.4	D	SBL	250	168.4	0.7	0.66	27.5	C	SBT	--	374.3	0.0	0.78	50.6	D <th>SBT</th> <td>--</td> <td>404.9</td> <td>0.0</td> <td>0.82</td> <td>46.9</td> <td>D<th>SBR</th><td>--</td><td>18.7</td><td>0.0</td><td>0.05</td><td>35.9</td><td>D<th>SBR</th><td>--</td><td>90.3</td><td>0.0</td><td>0.22</td><td>32.8</td><td>C</td></td></td>	SBT	--	404.9	0.0	0.82	46.9	D <th>SBR</th> <td>--</td> <td>18.7</td> <td>0.0</td> <td>0.05</td> <td>35.9</td> <td>D<th>SBR</th><td>--</td><td>90.3</td><td>0.0</td><td>0.22</td><td>32.8</td><td>C</td></td>	SBR	--	18.7	0.0	0.05	35.9	D <th>SBR</th> <td>--</td> <td>90.3</td> <td>0.0</td> <td>0.22</td> <td>32.8</td> <td>C</td>	SBR	--	90.3	0.0	0.22	32.8
								74.1	E																																																																																																																																																														

Consistent with the previous report, recommendations to mitigate deficiencies at Coors Boulevard and Rio Bravo Boulevard (NM 500)/ Dennis Chavez Boulevard are as follows:

- Signal timings are recommended to be made by a licensed Professional Traffic Operations Engineer (PTOE).
- For the EBT/R, it is recommended that a dedicated right-turn lane be constructed and restriped.
- For the NBL, it is recommended that additional storage capacity be added by reconfiguring the median to be a back-to-back curb. The SBL at the Coors Boulevard and Lamonica Road intersection should be limited to 400-FT including taper, per NMDOT comments. The additional 540-FT should be added to the NBL at Coors Boulevard and Rio Bravo Boulevard (NM 500)/ Dennis Chavez Boulevard intersection.
- For the NBL, NBT, and WBT, no further mitigations are recommended at this time as no receiving lane is present for an additional lane and is attributed to a regional traffic issue.

The above recommendations match the original study effort; however, the recommendation to include an additional left-turn lane for the westbound movement was removed as the deficiency is not present in this analysis.

Sincerely,



Jonathon Kruse, PE PTOE

Senior Project Manager

Appendix Items:

Appendix A: Traffic Counts

Appendix B: Signal Timing

Appendix C: HCM Analysis Output Sheets

Appendix D: NMDOT Comments and Comment Response

Appendix A: Traffic Counts



Lee Engineering, LLC
 Phoenix, Arizona - Dallas, Texas
 Oklahoma City, Oklahoma - San Antonio, Texas
 Albuquerque, New Mexico, United States 87113
 5053380988 eabarricklow@lee-eng.com

Count Name: NM 383.02 Anderson Heights TIS
 Site Code:
 Start Date: 03/07/2024
 Page No: 1

Turning Movement Data

Start Time	Coors Blvd Northbound							Coors Blvd Southbound							Rio Bravo Blvd Eastbound							Rio Bravo Blvd Westbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total			
6:00 AM	0	28	60	30	10	0	128	0	51	75	4	1	0	131	0	2	96	42	0	140	0	11	15	22	0	48	447		
6:15 AM	0	40	81	21	12	0	154	0	77	80	0	0	0	157	0	3	125	76	0	204	0	6	22	24	0	52	567		
6:30 AM	0	58	89	29	23	0	199	0	87	87	0	2	0	176	0	9	198	70	3	277	1	11	24	29	0	65	717		
6:45 AM	0	79	129	26	25	0	259	0	95	84	1	4	2	184	0	4	155	82	0	241	0	21	41	37	2	99	783		
Hourly Total	0	205	359	106	70	0	740	0	310	326	5	7	2	648	0	18	574	270	3	862	1	49	102	112	2	264	2514		
7:00 AM	0	69	134	32	16	0	251	0	84	109	7	1	0	201	0	11	166	77	0	254	0	19	62	40	1	121	827		
7:15 AM	0	82	186	36	21	0	325	0	124	126	5	1	0	256	0	8	194	86	0	288	0	22	43	43	0	108	977		
7:30 AM	0	63	166	16	11	0	256	0	103	152	10	3	0	268	0	18	183	129	0	330	3	22	70	60	0	155	1009		
7:45 AM	0	67	222	11	7	1	307	0	87	135	8	5	0	235	0	22	153	116	1	291	2	33	62	53	0	150	983		
Hourly Total	0	281	708	95	55	1	1139	0	398	522	30	10	0	960	0	59	696	408	1	1163	5	96	237	196	1	534	3796		
8:00 AM	0	73	181	11	12	0	277	0	107	138	10	6	0	261	0	11	166	95	0	272	0	34	79	76	0	189	999		
8:15 AM	0	82	165	21	25	0	293	0	90	138	11	5	0	244	0	11	126	96	0	233	0	33	74	62	0	169	939		
8:30 AM	0	58	138	20	31	0	247	0	81	134	4	6	0	225	0	14	145	103	0	262	0	43	54	63	1	160	894		
8:45 AM	0	60	143	21	16	0	240	0	90	129	7	3	0	229	0	7	116	85	0	208	0	21	56	61	0	138	815		
Hourly Total	0	273	627	73	84	0	1057	0	368	539	32	20	0	959	0	43	553	379	0	975	0	131	263	262	1	656	3647		
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
11:00 AM	0	63	131	31	17	3	242	0	56	121	10	3	0	190	0	9	60	63	3	132	0	30	39	73	0	142	706		
11:15 AM	0	62	140	19	16	0	237	0	67	119	10	2	0	198	0	8	52	56	0	116	0	31	55	46	0	132	683		
11:30 AM	0	59	128	31	13	0	231	0	67	124	3	4	0	198	0	14	43	64	0	121	0	31	45	50	1	126	676		
11:45 AM	0	68	129	25	9	0	231	0	75	145	8	2	0	230	0	8	52	78	0	138	0	42	36	39	1	117	716		
Hourly Total	0	252	528	106	55	3	941	0	265	509	31	11	0	816	0	39	207	261	3	507	0	134	175	208	2	517	2781		
12:00 PM	0	56	0	19	11	0	86	0	58	147	10	7	0	222	0	13	119	69	0	201	0	39	61	72	1	172	681		
12:15 PM	0	67	0	28	10	0	105	0	67	168	10	8	0	253	0	2	59	80	0	141	1	33	49	78	0	161	660		
12:30 PM	1	62	0	25	6	0	94	0	62	136	5	7	0	210	0	10	59	86	0	155	0	33	64	100	3	197	656		
12:45 PM	0	62	0	37	9	0	108	0	68	142	17	5	0	232	0	14	63	90	0	167	0	35	53	108	0	196	703		
Hourly Total	1	247	0	109	36	0	393	0	255	593	42	27	0	917	0	39	300	325	0	664	1	140	227	358	4	726	2700		
1:00 PM	0	62	149	32	14	0	257	0	56	155	16	9	0	236	0	10	59	92	0	161	0	23	65	77	0	165	819		
1:15 PM	0	61	151	17	9	0	238	0	75	166	11	9	0	261	0	13	55	96	0	164	0	30	67	82	0	179	842		
1:30 PM	0	67	167	24	6	0	264	0	89	148	16	8	0	261	0	12	68	86	0	166	0	37	68	88	0	193	884		
1:45 PM	0	70	174	27	13	0	284	1	77	156	13	9	0	256	0	15	51	81	0	147	2	28	68	105	0	203	890		
Hourly Total	0	260	641	100	42	0	1043	1	297	625	56	35	0	1014	0	50	233	355	0	638	2	118	268	352	0	740	3435		
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
3:30 PM	0	84	199	13	18	0	314	4	67	183	12	12	0	278	0	15	50	42	0	107	0	33	130	114	2	277	976		
3:45 PM	0	81	211	8	5	0	305	0	86	194	27	9	0	316	0	19	95	96	0	210	0	24	126	123	0	273	1104		
Hourly Total	0	165	410	21	23	0	619	4	153	377	39	21	0	594	0	34	145	138	0	317	0	57	256	237	2	550	2080		

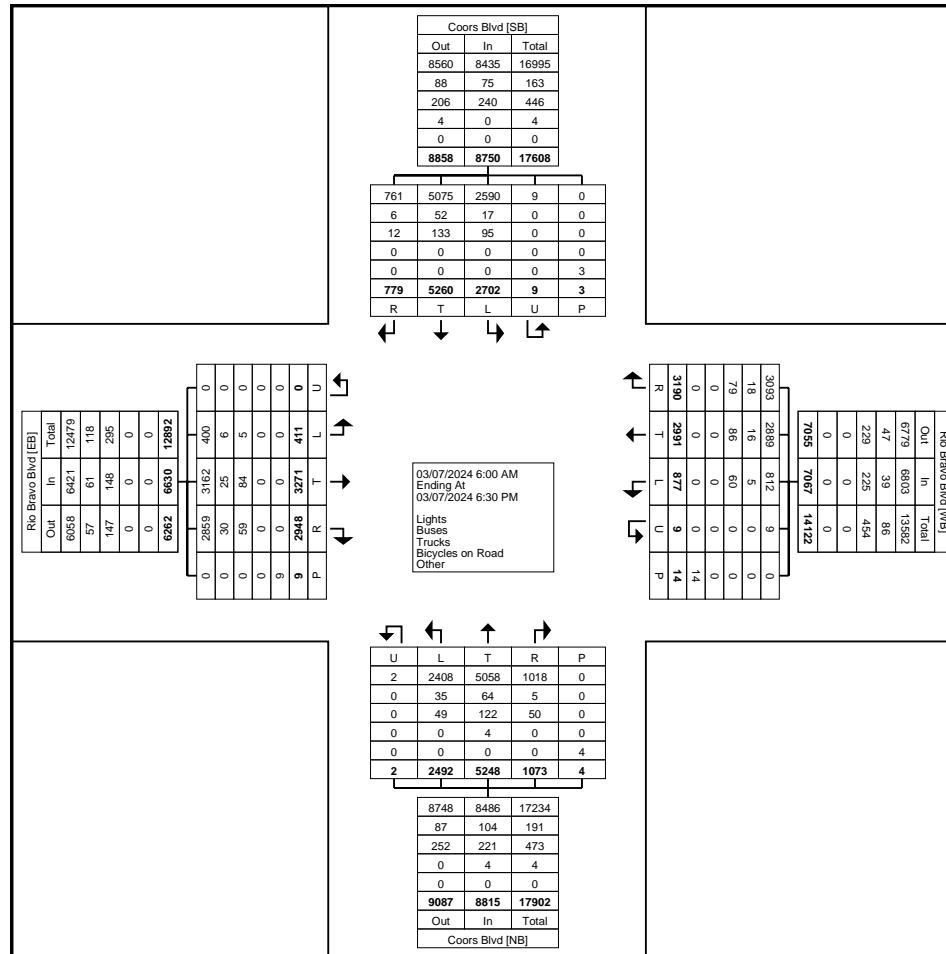
4:00 PM	0	82	212	5	4	0	303	0	66	207	22	11	0	306	0	18	76	77	1	171	0	30	137	149	1	316	1096
4:15 PM	0	80	195	3	5	0	283	0	75	190	14	16	1	295	0	10	74	79	0	163	0	16	141	147	1	304	1045
4:30 PM	0	79	182	4	6	0	271	0	60	167	41	7	0	275	0	10	64	115	0	189	0	15	168	167	0	350	1085
4:45 PM	0	81	200	4	4	0	289	0	85	182	44	9	0	320	0	17	68	121	0	206	0	11	145	155	0	311	1126
Hourly Total	0	322	789	16	19	0	1146	0	286	746	121	43	1	1196	0	55	282	392	1	729	0	72	591	618	2	1281	4352
5:00 PM	0	88	227	2	5	0	322	2	53	155	42	16	0	268	0	12	56	112	0	180	0	9	148	149	0	306	1076
5:15 PM	0	85	187	1	0	0	273	0	66	188	40	6	0	300	0	12	73	123	0	208	0	6	135	142	0	283	1064
5:30 PM	0	90	186	1	2	0	279	0	53	168	25	15	0	261	0	10	36	30	0	76	0	9	146	138	0	293	909
5:45 PM	0	76	207	5	7	0	295	1	72	169	10	23	0	275	0	14	39	42	0	95	0	20	151	131	0	302	967
Hourly Total	0	339	807	9	14	0	1169	3	244	680	117	60	0	1104	0	48	204	307	0	559	0	44	580	560	0	1184	4016
6:00 PM	0	78	191	10	9	0	288	0	66	157	23	9	0	255	0	17	36	53	0	106	0	14	147	139	0	300	949
6:15 PM	1	70	188	19	2	0	280	1	60	186	32	8	0	287	0	9	41	60	1	110	0	22	145	148	0	315	992
Grand Total	2	2492	5248	664	409	4	8815	9	2702	5260	528	251	3	8750	0	411	3271	2948	9	6630	9	877	2991	3190	14	7067	31262
Approach %	0.0	28.3	59.5	7.5	4.6	-	-	0.1	30.9	60.1	6.0	2.9	-	-	0.0	6.2	49.3	44.5	-	-	0.1	12.4	42.3	45.1	-	-	-
Total %	0.0	8.0	16.8	2.1	1.3	-	28.2	0.0	8.6	16.8	1.7	0.8	-	28.0	0.0	1.3	10.5	9.4	-	21.2	0.0	2.8	9.6	10.2	-	22.6	-
Lights	2	2408	5058	619	399	-	8486	9	2590	5075	516	245	-	8435	0	400	3162	2859	-	6421	9	812	2889	3093	-	6803	30145
% Lights	100.0	96.6	96.4	93.2	97.6	-	96.3	100.0	95.9	96.5	97.7	97.6	-	96.4	-	97.3	96.7	97.0	-	96.8	100.0	92.6	96.6	97.0	-	96.3	96.4
Buses	0	35	64	3	2	-	104	0	17	52	5	1	-	75	0	6	25	30	-	61	0	5	16	18	-	39	279
% Buses	0.0	1.4	1.2	0.5	0.5	-	1.2	0.0	0.6	1.0	0.9	0.4	-	0.9	-	1.5	0.8	1.0	-	0.9	0.0	0.6	0.5	0.6	-	0.6	0.9
Trucks	0	49	122	42	8	-	221	0	95	133	7	5	-	240	0	5	84	59	-	148	0	60	86	79	-	225	834
% Trucks	0.0	2.0	2.3	6.3	2.0	-	2.5	0.0	3.5	2.5	1.3	2.0	-	2.7	-	1.2	2.6	2.0	-	2.2	0.0	6.8	2.9	2.5	-	3.2	2.7
Bicycles on Road	0	0	4	0	0	-	4	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	4
% Bicycles on Road	0.0	0.0	0.1	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	-	-	4	-	-	-	-	-	-	3	-	-	-	-	-	9	-	-	-	-	-	14	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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Turning Movement Data Plot



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Turning Movement Peak Hour Data (7:15 AM)

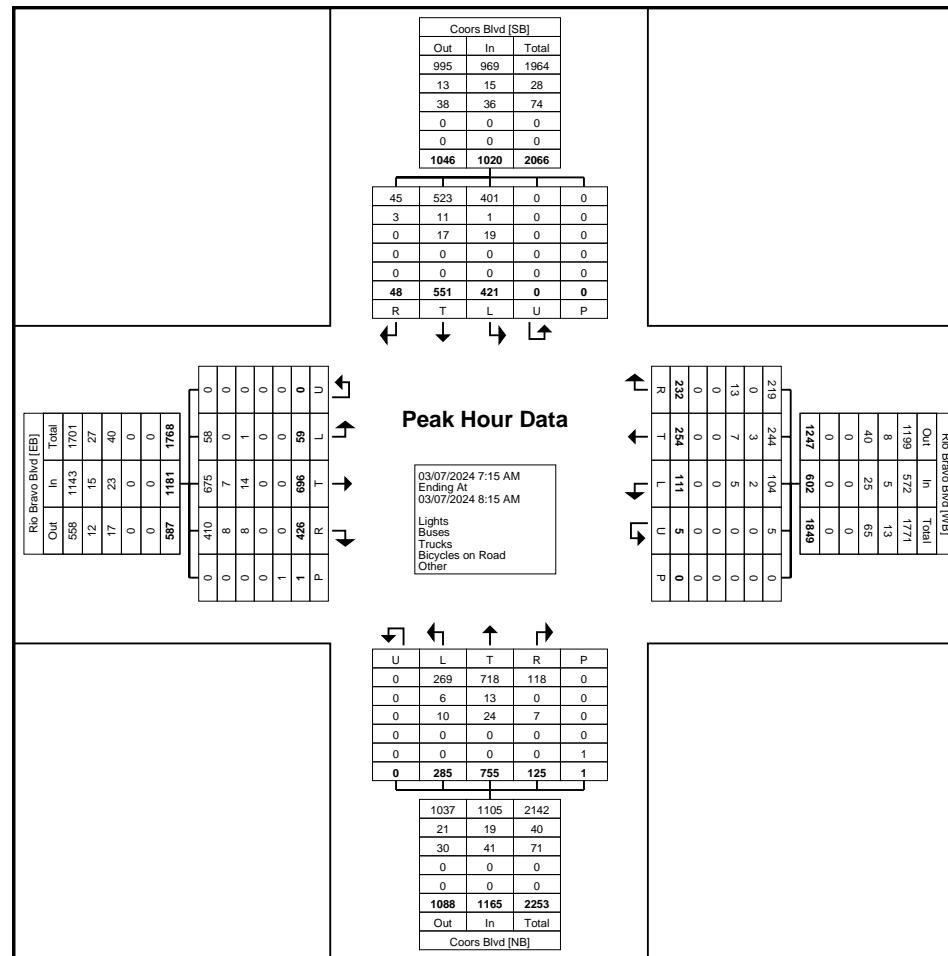
Start Time	Coors Blvd Northbound							Coors Blvd Southbound							Rio Bravo Blvd Eastbound							Rio Bravo Blvd Westbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total			
7:15 AM	0	82	186	36	21	0	325	0	124	126	5	1	0	256	0	8	194	86	0	288	0	22	43	43	0	108	977		
7:30 AM	0	63	166	16	11	0	256	0	103	152	10	3	0	268	0	18	183	129	0	330	3	22	70	60	0	155	1009		
7:45 AM	0	67	222	11	7	1	307	0	87	135	8	5	0	235	0	22	153	116	1	291	2	33	62	53	0	150	983		
8:00 AM	0	73	181	11	12	0	277	0	107	138	10	6	0	261	0	11	166	95	0	272	0	34	79	76	0	189	999		
Total	0	285	755	74	51	1	1165	0	421	551	33	15	0	1020	0	59	696	426	1	1181	5	111	254	232	0	602	3968		
Approach %	0.0	24.5	64.8	6.4	4.4	-	-	0.0	41.3	54.0	3.2	1.5	-	-	0.0	5.0	58.9	36.1	-	-	0.8	18.4	42.2	38.5	-	-	-		
Total %	0.0	7.2	19.0	1.9	1.3	-	29.4	0.0	10.6	13.9	0.8	0.4	-	25.7	0.0	1.5	17.5	10.7	-	29.8	0.1	2.8	6.4	5.8	-	15.2	-		
PHF	0.000	0.869	0.850	0.514	0.607	-	0.896	0.000	0.849	0.906	0.825	0.625	-	0.951	0.000	0.670	0.897	0.826	-	0.895	0.417	0.816	0.804	0.763	-	0.796	0.983		
Lights	0	269	718	69	49	-	1105	0	401	523	30	15	-	969	0	58	675	410	-	1143	5	104	244	219	-	572	3789		
% Lights	-	94.4	95.1	93.2	96.1	-	94.8	-	95.2	94.9	90.9	100.0	-	95.0	-	98.3	97.0	96.2	-	96.8	100.0	93.7	96.1	94.4	-	95.0	95.5		
Buses	0	6	13	0	0	-	19	0	1	11	3	0	-	15	0	0	7	8	-	15	0	2	3	0	-	5	54		
% Buses	-	2.1	1.7	0.0	0.0	-	1.6	-	0.2	2.0	9.1	0.0	-	1.5	-	0.0	1.0	1.9	-	1.3	0.0	1.8	1.2	0.0	-	0.8	1.4		
Trucks	0	10	24	5	2	-	41	0	19	17	0	0	-	36	0	1	14	8	-	23	0	5	7	13	-	25	125		
% Trucks	-	3.5	3.2	6.8	3.9	-	3.5	-	4.5	3.1	0.0	0.0	-	3.5	-	1.7	2.0	1.9	-	1.9	0.0	4.5	2.8	5.6	-	4.2	3.2		
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	0			
% Bicycles on Road	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0			
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-			
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-			
Pedestrians	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	0	-			
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-			



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Turning Movement Peak Hour Data (11:00 AM)

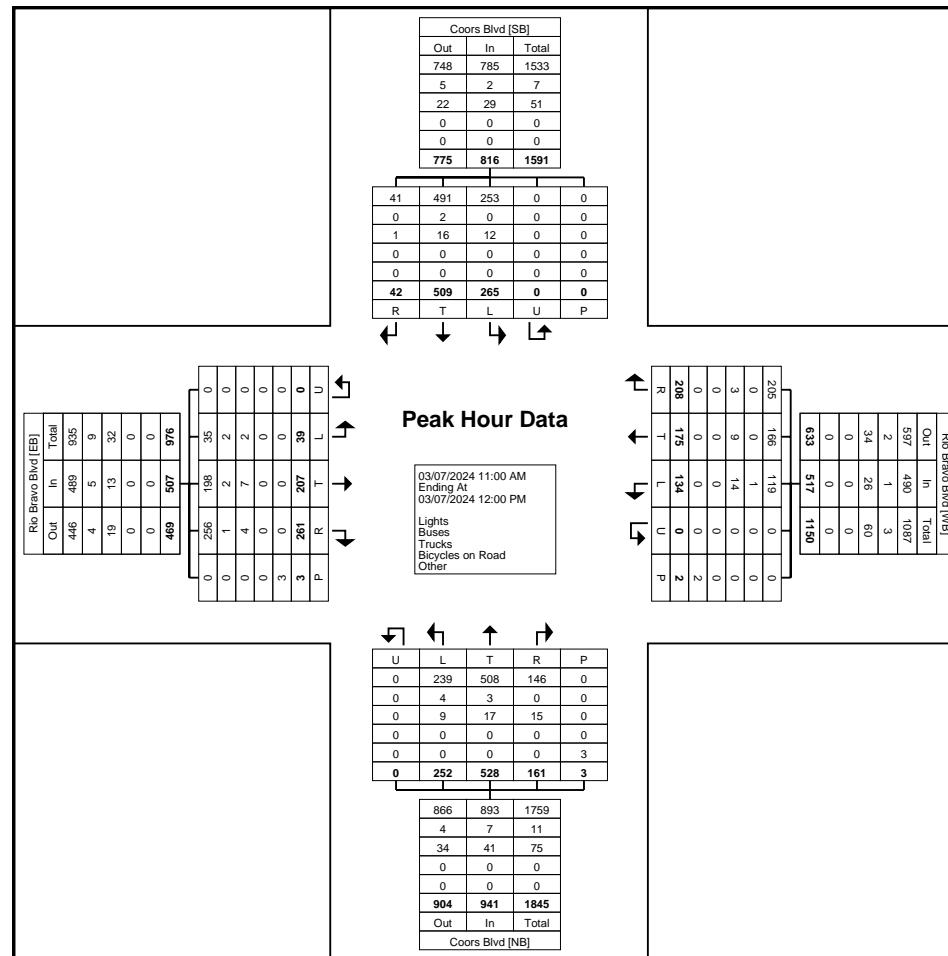
Start Time	Coors Blvd Northbound							Coors Blvd Southbound							Rio Bravo Blvd Eastbound							Rio Bravo Blvd Westbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total			
11:00 AM	0	63	131	31	17	3	242	0	56	121	10	3	0	190	0	9	60	63	3	132	0	30	39	73	0	142	706		
11:15 AM	0	62	140	19	16	0	237	0	67	119	10	2	0	198	0	8	52	56	0	116	0	31	55	46	0	132	683		
11:30 AM	0	59	128	31	13	0	231	0	67	124	3	4	0	198	0	14	43	64	0	121	0	31	45	50	1	126	676		
11:45 AM	0	68	129	25	9	0	231	0	75	145	8	2	0	230	0	8	52	78	0	138	0	42	36	39	1	117	716		
Total	0	252	528	106	55	3	941	0	265	509	31	11	0	816	0	39	207	261	3	507	0	134	175	208	2	517	2781		
Approach %	0.0	26.8	56.1	11.3	5.8	-	-	0.0	32.5	62.4	3.8	1.3	-	-	0.0	7.7	40.8	51.5	-	-	0.0	25.9	33.8	40.2	-	-	-		
Total %	0.0	9.1	19.0	3.8	2.0	-	33.8	0.0	9.5	18.3	1.1	0.4	-	29.3	0.0	1.4	7.4	9.4	-	18.2	0.0	4.8	6.3	7.5	-	18.6	-		
PHF	0.000	0.926	0.943	0.855	0.809	-	0.972	0.000	0.883	0.878	0.775	0.688	-	0.887	0.000	0.696	0.863	0.837	-	0.918	0.000	0.798	0.795	0.712	-	0.910	0.971		
Lights	0	239	508	92	54	-	893	0	253	491	30	11	-	785	0	35	198	256	-	489	0	119	166	205	-	490	2657		
% Lights	-	94.8	96.2	86.8	98.2	-	94.9	-	95.5	96.5	96.8	100.0	-	96.2	-	89.7	95.7	98.1	-	96.4	-	88.8	94.9	98.6	-	94.8	95.5		
Buses	0	4	3	0	0	-	7	0	0	2	0	0	-	2	0	2	2	1	-	5	0	1	0	0	-	1	15		
% Buses	-	1.6	0.6	0.0	0.0	-	0.7	-	0.0	0.4	0.0	0.0	-	0.2	-	5.1	1.0	0.4	-	1.0	-	0.7	0.0	0.0	-	0.2	0.5		
Trucks	0	9	17	14	1	-	41	0	12	16	1	0	-	29	0	2	7	4	-	13	0	14	9	3	-	26	109		
% Trucks	-	3.6	3.2	13.2	1.8	-	4.4	-	4.5	3.1	3.2	0.0	-	3.6	-	5.1	3.4	1.5	-	2.6	-	10.4	5.1	1.4	-	5.0	3.9		
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	0			
% Bicycles on Road	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0			
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-			
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	0.0	-			
Pedestrians	-	-	-	-	-	-	3	-	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	2	-			
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-			



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Turning Movement Peak Hour Data Plot (11:00 AM)



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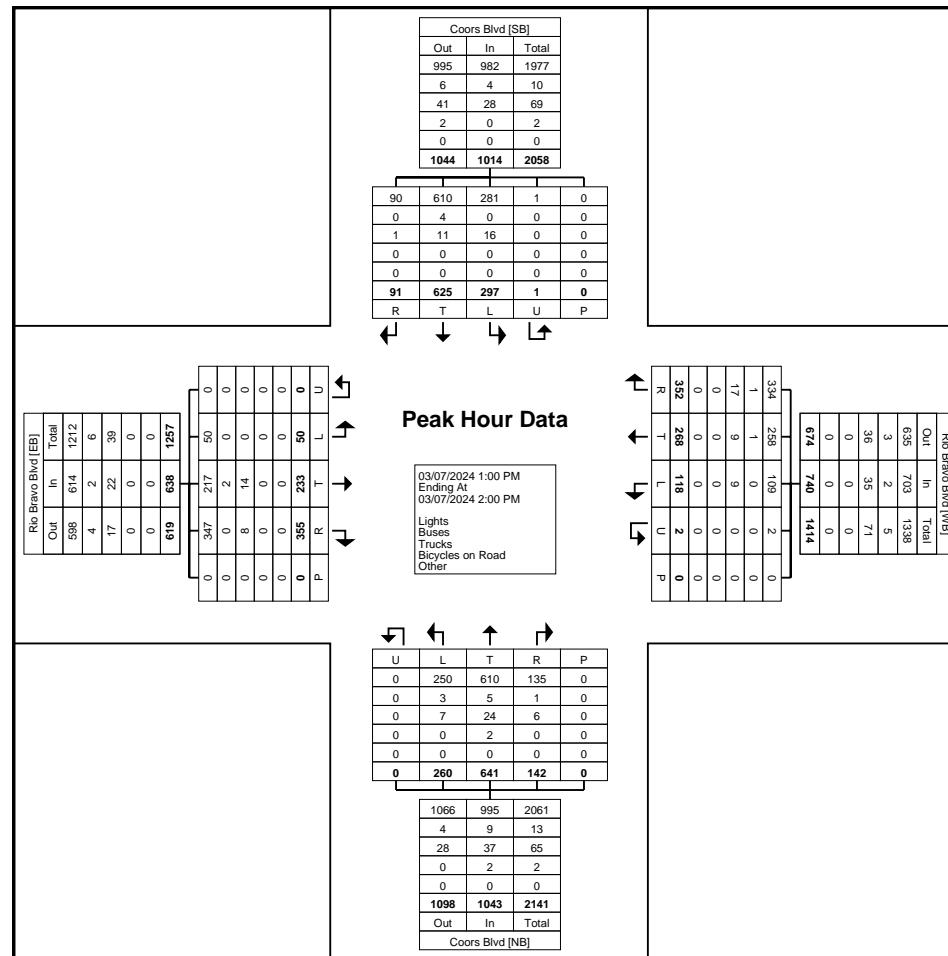
Turning Movement Peak Hour Data (1:00 PM)



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Turning Movement Peak Hour Data Plot (1:00 PM)



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Count Name: NM 383.02 Anderson Heights TIS

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Turning Movement Peak Hour Data (4:00 PM)

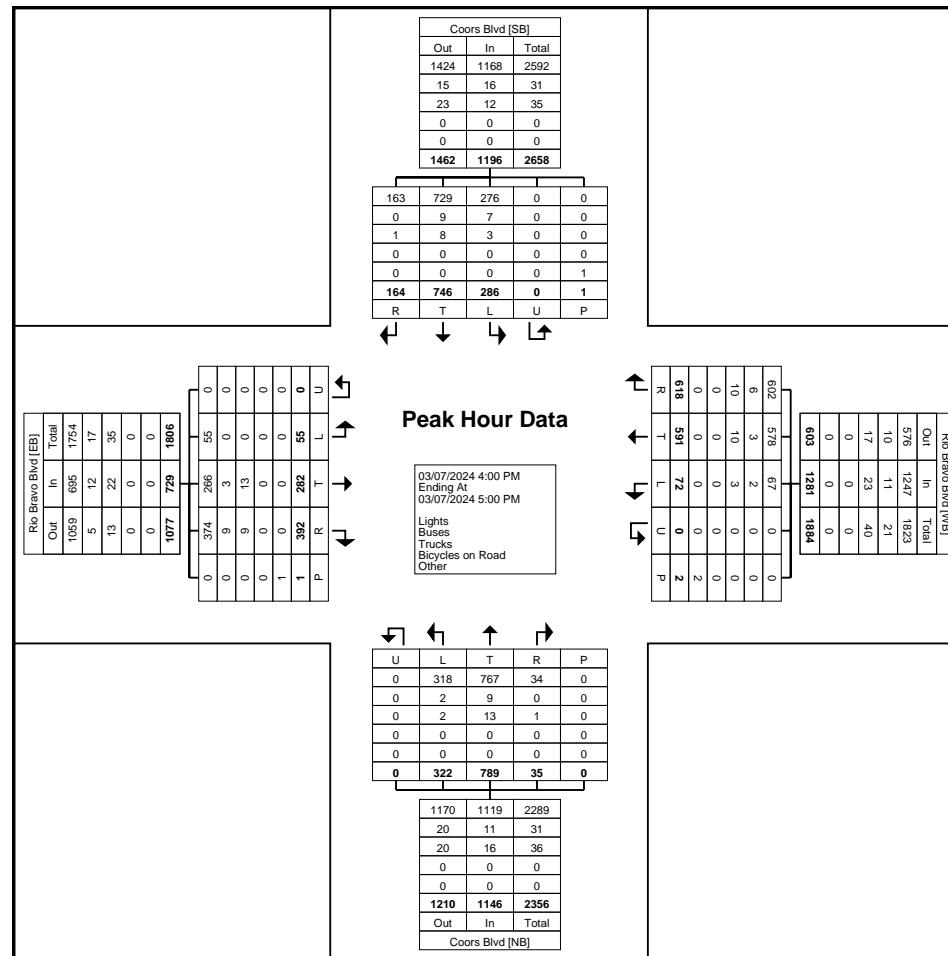
Start Time	Coors Blvd Northbound							Coors Blvd Southbound							Rio Bravo Blvd Eastbound							Rio Bravo Blvd Westbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total			
4:00 PM	0	82	212	5	4	0	303	0	66	207	22	11	0	306	0	18	76	77	1	171	0	30	137	149	1	316	1096		
4:15 PM	0	80	195	3	5	0	283	0	75	190	14	16	1	295	0	10	74	79	0	163	0	16	141	147	1	304	1045		
4:30 PM	0	79	182	4	6	0	271	0	60	167	41	7	0	275	0	10	64	115	0	189	0	15	168	167	0	350	1085		
4:45 PM	0	81	200	4	4	0	289	0	85	182	44	9	0	320	0	17	68	121	0	206	0	11	145	155	0	311	1126		
Total	0	322	789	16	19	0	1146	0	286	746	121	43	1	1196	0	55	282	392	1	729	0	72	591	618	2	1281	4352		
Approach %	0.0	28.1	68.8	1.4	1.7	-	-	0.0	23.9	62.4	10.1	3.6	-	-	0.0	7.5	38.7	53.8	-	-	0.0	5.6	46.1	48.2	-	-	-		
Total %	0.0	7.4	18.1	0.4	0.4	-	26.3	0.0	6.6	17.1	2.8	1.0	-	27.5	0.0	1.3	6.5	9.0	-	16.8	0.0	1.7	13.6	14.2	-	29.4	-		
PHF	0.000	0.982	0.930	0.800	0.792	-	0.946	0.000	0.841	0.901	0.688	0.672	-	0.934	0.000	0.764	0.928	0.810	-	0.885	0.000	0.600	0.879	0.925	-	0.915	0.966		
Lights	0	318	767	15	19	-	1119	0	276	729	120	43	-	1168	0	55	266	374	-	695	0	67	578	602	-	1247	4229		
% Lights	-	98.8	97.2	93.8	100.0	-	97.6	-	96.5	97.7	99.2	100.0	-	97.7	-	100.0	94.3	95.4	-	95.3	-	93.1	97.8	97.4	-	97.3	97.2		
Buses	0	2	9	0	0	-	11	0	7	9	0	0	-	16	0	0	3	9	-	12	0	2	3	6	-	11	50		
% Buses	-	0.6	1.1	0.0	0.0	-	1.0	-	2.4	1.2	0.0	0.0	-	1.3	-	0.0	1.1	2.3	-	1.6	-	2.8	0.5	1.0	-	0.9	1.1		
Trucks	0	2	13	1	0	-	16	0	3	8	1	0	-	12	0	0	13	9	-	22	0	3	10	10	-	23	73		
% Trucks	-	0.6	1.6	6.3	0.0	-	1.4	-	1.0	1.1	0.8	0.0	-	1.0	-	0.0	4.6	2.3	-	3.0	-	4.2	1.7	1.6	-	1.8	1.7		
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	0			
% Bicycles on Road	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0			
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-			
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	0.0	-			
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	2	-			
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	100.0	-			



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Turning Movement Peak Hour Data Plot (4:00 PM)

Appendix B: Signal Timing

Intersection No.:

CENTRAC
1

Intersection Name: Revision Date

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:	N-W	SB	E-N	WB	S-E	NB	W-S	EB
Min Grn:	3	24	3	8	3	24	3	8
Walk:	0	7	0	7	0	7	0	7
Ped Clr:	0	20	0	22	0	19	0	22
Veh Ext:	1.5	4.0	1.5	3.0	2.0	4.0	2.0	3.0
Veh Ext2:	1.5	4.0	1.5	3.0	2.0	4.0	2.0	3.0
Max 1:	16	42	16	24	24	36	20	28
Max 2:	16	42	16	24	28	36	20	28
Max 3:								
Yellow:	3.5	4.5	3.5	5.0	3.5	4.5	3.5	5.0
Red Clr:	1.0	1.5	1.5	1.0	1.0	1.5	1.5	1.0

Recall Data

Locking Memory:								
Vehicle Recall:		X				X		
Ped Recall:								
Recall To Max:								

Flash Mode:

Start Up Mode:	ALL RED
Time:	8 SEC.
First Phases:	2 & 6
Start In:	GREEN

Overlap Phases:

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:	1. Intersection upgraded to 6 phase operation with EB & WB operating as split phasing, also with N-W phase added. NB & SB pedads added. 2. Intersection upgraded to 8 phase operation. 3. Timing sheet updated, 4/17/03. 4. TOD - Step 1 - 6:30 am, 4 & 8 min recall, phase 5 max II. 5. TOD - Step 2 - 9:00 am, 4 & 8 min recall. 6. TOD - Step 3 - 8:00 pm, 4 & 8 min recall off. 7. TOD - Step 4 - 6:30 am, 4 & 8 min recall.
--------	--

- | |
|---|
| 8. TOD - Step 5 - 8:00 pm, 4 & 8 min recall off. |
| 9. Clearance intervals updated to NMDOT standard by BB, 10/14/13. |
| 10. Timing sheet revised to current version of timing sheet, 8/30/16. |

Rio Bravo - Dennis Chavez & Coors**COORDINATOR OPTIONS (MM 3-1)**

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	YES
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

COORDINATION PATTERN 21 (MM 3-2)

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	6,3		
CYCLE	120s	STD (COS)	111
OFFSET VAL	83%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	N-W	SB	E-N	WB	S-E	NB	W-S	EB
SPLITS	22	28	15	35	24	26	15	35

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

COORDINATION PATTERN 23

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	7,2		
CYCLE	100s	STD (COS)	131
OFFSET VAL	62%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	N-W	SB	E-N	WB	S-E	NB	W-S	EB
SPLITS	18	34	12	36	19	33	12	36

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

ASC3 COORDINATION PLAN DATA

7/2/2024 4:42 PM

COORDINATION PATTERN 25							
USE SPLIT PATTERN	25	SPLIT SUM		100%			
TS2 (PAT-OFF)	8,1						
CYCLE	110s	STD (COS)		251			
OFFSET VAL	0%						
ACTUATED COORD	YES	TIMING PLAN		0			
ACT WALK REST	NO	SEQUENCE		0			
PHASE RESRVCE	NO	ACTION PLAN		0			
PHASE	1	2	3	4	5	6	7
DIRECTION	N-W	SB	E-N	WB	S-E	NB	W-S
SPLITS	22	32	12	34	19	35	14
PHASE	1	2	3	4	5	6	7
COORD PHASE		X				X	
VEH RECALL							
MAX RECALL		X				X	

CLOCK / CALENDAR DATA (MM 5-1)			
CURRENT DATE		CURRENT DOW	CURRENT TOD
ENA ACTION PLAN	0		
SYNC REF TIME	00:00	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

ACTION PLAN 21 (MM 5-2)			
PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 23			
PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 25			
PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 100			
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ASC3 COORDINATION PLAN DATA

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PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

<u>DAY PLAN/EVENT 1 (MM 5-3)</u>		
EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	18:30:00 PM
3	0	00:00

<u>DAY PLAN/EVENT 2</u>		
EVENT	ACTION PLAN	START TIME
1	21	6:30
2	21	9:00
3	21	14:00
4	21	18:30
5	100	22:00
6	0	00:00
7	0	00:00

<u>DAY PLAN/EVENT 3</u>		
EVENT	ACTION PLAN	START TIME
1	23	8:00
2	100	19:30
3	0	00:00

<u>SCHEDULE NUMBER 1 (MM 5-4)</u>													
SCEDULE NUMBER		1											
DAY PLAN NO		1											
SELECT ALL MONTHS													
MONTH	J	F	M	A	M	J	J	A	S	O	N	D	
	X	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT						
	X						
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11		
	X	X	X	X	X	X	X	X	X	X	X		
	12	13	14	15	16	17	18	19	20	21	22		
	X	X	X	X	X	X	X	X	X	X	X		
	23	24	25	26	27	28	29	30	31				
	X	X	X	X	X	X	X	X					

<u>SCHEDULE NUMBER 2</u>													
SCEDULE NUMBER		2											
DAY PLAN NO		2											
SELECT ALL MONTHS													
MONTH	J	F	M	A	M	J	J	A	S	O	N	D	
	X	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT						

ASC3 COORDINATION PLAN DATA

7/2/2024 4:42 PM

.	X	X	X	X	X	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

SCHEDULE NUMBER 3

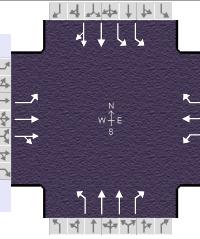
SCHEDULE NUMBER	3											
DAY PLAN NO	3											
SELECT ALL MONTHS							DOW	DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

NOTES:

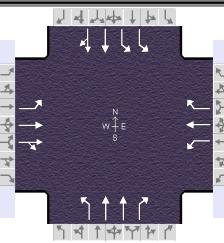
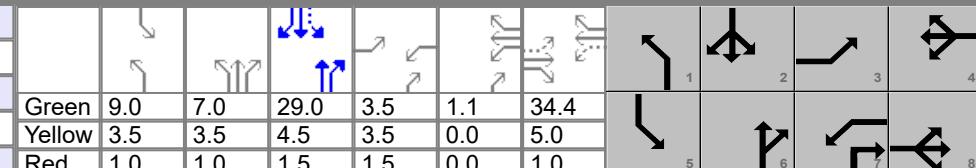
2/28/2018 Coord sheet created. A.F.

Appendix C: HCM Analysis Output Sheets

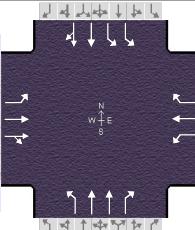
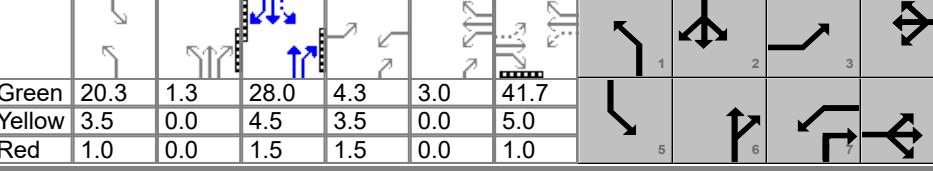
HCS Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	Lee Engineering			Duration, h		1.000									
Analyst	ES		Analysis Date	May 28, 2024			Area Type	Other							
Jurisdiction	NMDOT		Time Period	AM			PHF	1.00							
Urban Street	Coors Boulevard			Analysis Year	2024		Analysis Period	1> 7:00							
Intersection	Coors & Rio Bravo Blvd			File Name	1 2024 Coors & Rio Bravo Existing AM.xus										
Project Description	Existing AM 2024														
Demand Information				EB		WB		NB		SB					
Approach Movement			L	T	R	L	T	R	L	T	R				
Demand (v), veh/h			63	851	490	117	278	233	360	837	201				
Signal Information															
Cycle, s	120.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	15.9	1.1	28.0	4.2	2.9	41.9					
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	4.5	3.5	0.0	5.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.5	1.5	0.0	1.0					
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				3	8	7	4	1	6	5	2				
Case Number				1.1	4.0	1.1	3.0	2.0	3.0	1.1	4.0				
Phase Duration, s				9.2	47.9	12.1	50.8	26.0	39.6	20.4	34.0				
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0				
Max Allow Headway (MAH), s				2.5	4.1	3.0	4.1	2.6	0.0	3.1	0.0				
Queue Clearance Time (g _s), s				4.7	43.9	7.2	15.4	23.6		15.0					
Green Extension Time (g _e), s				0.0	0.0	0.1	9.2	0.0	0.0	0.9	0.0				
Phase Call Probability				0.88	1.00	0.98	1.00	1.00		1.00					
Max Out Probability				0.00	1.00	0.03	0.15	1.00		0.01					
Movement Group Results				EB		WB		NB		SB					
Approach Movement			L	T	R	L	T	R	L	T	R				
Assigned Movement			3	8	18	7	4	14	1	6	16				
Adjusted Flow Rate (v), veh/h			63	709	632	117	278	233	360	837	121				
Adjusted Saturation Flow Rate (s), veh/h/ln			1781	1856		1725	1841		1753	1738	1521				
Queue Service Time (g _s), s			2.7	41.9		5.2	13.4		21.6	27.4	6.9				
Cycle Queue Clearance Time (g _c), s			2.7	41.9		5.2	13.4		21.6	27.4	6.9				
Green Ratio (g/C)			0.38	0.35		0.41	0.37		0.18	0.28	0.34				
Capacity (c), veh/h			392	648		162	688		315	973	516				
Volume-to-Capacity Ratio (X)			0.161	1.094		0.722	0.404		1.143	0.860	0.235				
Back of Queue (Q), ft/ln (95 th percentile)			51	1787.	7	100.5	249.5		1247.	487.8	124				
Back of Queue (Q), veh/ln (95 th percentile)			2.0	69.8		3.8	9.7		48.3	18.8	4.7				
Queue Storage Ratio (RQ) (95 th percentile)			0.14	0.00		0.19	0.00		4.99	0.00	0.50				
Uniform Delay (d ₁), s/veh			24.3	39.1		29.9	27.7		49.2	41.0	28.5				
Incremental Delay (d ₂), s/veh			0.1	196.8		2.3	0.4		297.6	10.9	1.1				
Initial Queue Delay (d ₃), s/veh			0.0	0.0		0.0	0.0		0.0	0.0	0.0				
Control Delay (d), s/veh			24.4	235.9	0.0	32.2	28.1	0.0	346.8	51.9	29.5				
Level of Service (LOS)			C	F	A	C	C	A	F	D	C				
Approach Delay, s/veh / LOS			120.1	F		18.4	B		130.4	F					
Intersection Delay, s/veh / LOS			90.3						F						
Multimodal Results				EB		WB		NB		SB					
Pedestrian LOS Score / LOS			2.55	C		2.46	B		2.30	B					
Bicycle LOS Score / LOS			1.65	B		1.52	B		1.57	B					

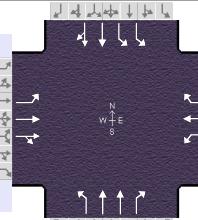
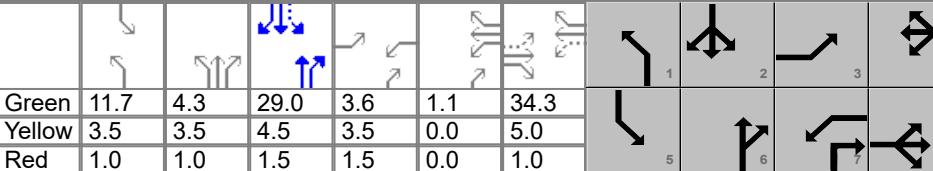
HCS Signalized Intersection Results Summary

General Information							Intersection Information								
Agency	Lee Engineering			Duration, h			1.000								
Analyst	ES		Analysis Date	5/24/2024		Area Type		Other							
Jurisdiction	NMDOT		Time Period	PM		PHF		1.00							
Urban Street	Coors Boulevard		Analysis Year	2024		Analysis Period		1 > 4:00							
Intersection	Coors & Rio Bravo Blvd		File Name	2 2024 Coors & Rio Bravo Existing PM.xus											
Project Description	Existing PM 2024														
Demand Information			EB		WB		NB		SB						
Approach Movement			L	T	R	L	T	R	L	T	R				
Demand (v), veh/h			55	282	392	72	591	618	322	789	35	286	746	164	
Signal Information															
Cycle, s	110.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	9.0	7.0	29.0	3.5	1.1	34.4	1	2	3	4	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	4.5	3.5	0.0	5.0	5	6	7	8	
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.5	1.5	0.0	1.0					
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				3	8	7	4	1	6	5	2				
Case Number				1.1	4.0	1.1	3.0	2.0	3.0	1.1	4.0				
Phase Duration, s				8.5	40.4	9.6	41.5	25.0	46.5	13.5	35.0				
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0				
Max Allow Headway (MAH), s				2.5	4.1	3.0	4.1	2.6	0.0	3.1	0.0				
Queue Clearance Time (g _s), s				4.3	28.0	5.1	37.5	21.6		8.6					
Green Extension Time (g _e), s				0.0	4.1	0.0	0.0	0.0	0.0	0.4	0.0				
Phase Call Probability				0.81	1.00	0.89	1.00	1.00		1.00					
Max Out Probability				0.09	0.85	0.06	1.00	1.00		0.01					
Movement Group Results				EB		WB		NB		SB					
Approach Movement				L	T	R	L	T	R	L	T	R			
Assigned Movement				3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h				55	282	392	72	591	618	322	789	35	286	470	440
Adjusted Saturation Flow Rate (s), veh/h/ln				1810	1811		1711	1870		1795	1766	1535	1716	1870	1751
Queue Service Time (g _s), s				2.3	13.9		3.1	34.4		19.6	20.0	1.5	6.6	27.2	27.2
Cycle Queue Clearance Time (g _c), s				2.3	13.9		3.1	34.4		19.6	20.0	1.5	6.6	27.2	27.2
Green Ratio (g/C)				0.34	0.31		0.35	0.32		0.19	0.37	0.41	0.34	0.26	0.26
Capacity (c), veh/h				123	567		193	604		335	1302	630	641	493	461
Volume-to-Capacity Ratio (X)				0.448	0.498		0.373	0.979		0.961	0.606	0.056	0.446	0.954	0.954
Back of Queue (Q), ft/ln (95 th percentile)				43.4	259.6		58.7	811.9		520.2	339.4	26.1	120.5	651.4	615.5
Back of Queue (Q), veh/ln (95 th percentile)				1.7	9.9		2.2	32.0		20.6	13.3	1.0	4.7	25.6	24.6
Queue Storage Ratio (RQ) (95 th percentile)				0.12	0.00		0.11	0.00		2.08	0.00	0.10	0.56	0.00	0.00
Uniform Delay (d ₁), s/veh				29.8	30.8		27.3	36.9		44.3	28.2	19.6	26.4	39.9	39.9
Incremental Delay (d ₂), s/veh				1.0	0.7		0.4	54.5		64.2	2.1	0.2	0.2	47.8	50.3
Initial Queue Delay (d ₃), s/veh				0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh				30.7	31.4	0.0	27.8	91.4	0.0	108.5	30.4	19.8	26.5	87.7	90.1
Level of Service (LOS)				C	C	A	C	F	A	F	C	B	C	F	F
Approach Delay, s/veh / LOS				14.5	B		43.7	D		52.0	D		74.0	E	
Intersection Delay, s/veh / LOS				49.3						D					
Multimodal Results				EB		WB		NB		SB					
Pedestrian LOS Score / LOS				2.44	B		2.44	B		2.28	B		2.12	B	
Bicycle LOS Score / LOS				1.09	A		2.60	C		1.43	A		1.47	A	

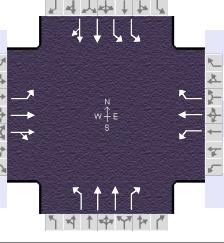
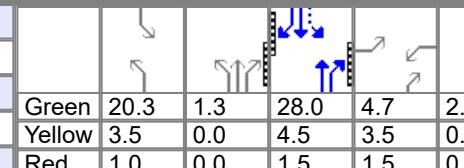
HCS Signalized Intersection Results Summary

General Information				Intersection Information									
Agency		Lee Engineering		Duration, h		1.000							
Analyst		ES		Analysis Date		May 28, 2024							
Jurisdiction		NMDOT		Time Period		AM							
Urban Street		Coors Boulevard		Analysis Year		2024							
Intersection		Coors & Rio Bravo Blvd		File Name		3 2027 Coors & Rio Bravo Build out Background...							
Project Description		Build Out Background AM 2027											
Demand Information				EB		WB		NB		SB			
Approach Movement			L	T	R	L	T	R	L	T			
Demand (v), veh/h			65	896	510	121	306	240	372	968	211		
Signal Information													
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	20.3	1.3	28.0	4.3	3.0	41.7			
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0	4.5	3.5	0.0	5.0			
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.5	1.5	0.0	1.0			
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Assigned Phase				3	8	7	4	1	6	5	2		
Case Number				1.1	4.0	1.1	3.0	2.0	3.0	1.1	4.0		
Phase Duration, s				9.3	47.7	12.3	50.7	26.0	35.2	24.8	34.0		
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0		
Max Allow Headway (MAH), s				2.5	4.1	3.0	4.1	2.6	0.0	3.1	0.0		
Queue Clearance Time (g _s), s				4.8	43.7	7.4	17.0	23.6		19.4			
Green Extension Time (g _e), s				0.0	0.0	0.1	9.8	0.0	0.0	0.9	0.0		
Phase Call Probability				0.89	1.00	0.98	1.00	1.00		1.00			
Max Out Probability				0.00	1.00	0.03	0.21	1.00		0.30			
Movement Group Results				EB		WB		NB		SB			
Approach Movement			L	T	R	L	T	R	L	T			
Assigned Movement			3	8	18	7	4	14	1	6	16		
Adjusted Flow Rate (v), veh/h			65	740	666	121	306	240	372	968	106		
Adjusted Saturation Flow Rate (s), veh/h/ln			1781	1856		1725	1841		1753	1738	1520		
Queue Service Time (g _s), s			2.8	41.7		5.4	15.0		21.6	29.2	6.3		
Cycle Queue Clearance Time (g _c), s			2.8	41.7		5.4	15.0		21.6	29.2	6.3		
Green Ratio (g/C)			0.38	0.35		0.41	0.37		0.18	0.24	0.30		
Capacity (c), veh/h			371	645		165	686		315	847	463		
Volume-to-Capacity Ratio (X)			0.175	1.148		0.733	0.446		1.182	1.143	0.229		
Back of Queue (Q), ft/ln (95 th percentile)			52.8	2341		103.9	273.7		1443.	1557.	114.4		
									8	8			
Back of Queue (Q), veh/ln (95 th percentile)			2.1	91.4		4.0	10.6		56.0	59.9	4.3		
Queue Storage Ratio (RQ) (95 th percentile)			0.15	0.00		0.20	0.00		5.78	0.00	0.46		
Uniform Delay (d ₁), s/veh			24.6	39.2		29.8	28.3		49.2	45.4	31.2		
Incremental Delay (d ₂), s/veh			0.1	286.8		2.4	0.5		360.5	272.8	1.2		
Initial Queue Delay (d ₃), s/veh			0.0	0.0		0.0	0.0		0.0	0.0	0.0		
Control Delay (d), s/veh			24.7	325.9	0.0	32.2	28.8	0.0	409.8	318.1	32.3		
Level of Service (LOS)			C	F	A	C	C	A	F	F	C		
Approach Delay, s/veh / LOS			165.1	F		19.1	B		320.8	F			
Intersection Delay, s/veh / LOS						161.7					F		
Multimodal Results				EB		WB		NB		SB			
Pedestrian LOS Score / LOS			2.59	C		2.47	B		2.30	B			
Bicycle LOS Score / LOS			1.70	B		1.59	B		1.68	B			

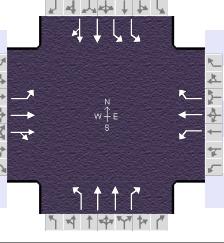
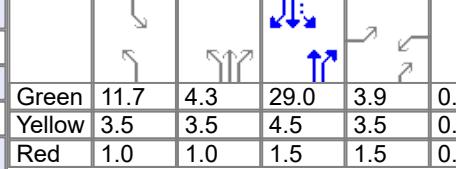
HCS Signalized Intersection Results Summary

General Information				Intersection Information									
Agency	Lee Engineering			Duration, h		1.000							
Analyst	ES		Analysis Date	5/24/2024			Area Type	Other					
Jurisdiction	NMDOT		Time Period	PM			PHF	1.00					
Urban Street	Coors Boulevard		Analysis Year	2024			Analysis Period	1> 4:00					
Intersection	Coors & Rio Bravo Blvd		File Name	4 2027 Coors & Rio Bravo Build out Background...									
Project Description	Build Out Background PM 2027												
Demand Information				EB		WB		NB		SB			
Approach Movement			L	T	R	L	T	R	L	T	R		
Demand (v), veh/h			57	308	408	74	629	637	333	922	40		
Signal Information													
Cycle, s	110.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	11.7	4.3	29.0	3.6	1.1	34.3			
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	4.5	3.5	0.0	5.0			
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.5	1.5	0.0	1.0			
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Assigned Phase				3	8	7	4	1	6	5	2		
Case Number				1.1	4.0	1.1	3.0	2.0	3.0	1.1	4.0		
Phase Duration, s				8.6	40.3	9.7	41.4	25.0	43.8	16.2	35.0		
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0		
Max Allow Headway (MAH), s				2.5	4.1	3.0	4.1	2.6	0.0	3.1	0.0		
Queue Clearance Time (g _s), s				4.3	29.4	5.2	37.4	22.4		11.2			
Green Extension Time (g _e), s				0.0	3.4	0.0	0.0	0.0	0.0	0.5	0.0		
Phase Call Probability				0.82	1.00	0.90	1.00	1.00		1.00			
Max Out Probability				0.11	0.95	0.07	1.00	1.00		0.17			
Movement Group Results				EB		WB		NB		SB			
Approach Movement			L	T	R	L	T	R	L	T	R		
Assigned Movement			3	8	18	7	4	14	1	6	16		
Adjusted Flow Rate (v), veh/h			57	308	408	74	629	637	333	922	20		
Adjusted Saturation Flow Rate (s), veh/h/ln			1810	1811		1711	1870		1795	1766	1535		
Queue Service Time (g _s), s			2.3	15.5		3.2	35.4		20.4	25.5	0.9		
Cycle Queue Clearance Time (g _c), s			2.3	15.5		3.2	35.4		20.4	25.5	0.9		
Green Ratio (g _e)			0.34	0.31		0.35	0.32		0.19	0.34	0.39		
Capacity (c), veh/h			125	565		182	602		335	1213	593		
Volume-to-Capacity Ratio (X)			0.458	0.545		0.406	1.045		0.994	0.760	0.034		
Back of Queue (Q), ft/ln (95 th percentile)			45.1	285.3		60.7	1208.5		609.4	427.4	15.5		
Back of Queue (Q), veh/ln (95 th percentile)			1.8	10.9		2.3	47.6		24.2	16.7	0.6		
Queue Storage Ratio (RQ) (95 th percentile)			0.13	0.00		0.12	0.00		2.44	0.00	0.06		
Uniform Delay (d ₁), s/veh			29.8	31.4		27.8	37.3		44.7	32.1	21.0		
Incremental Delay (d ₂), s/veh			1.0	1.1		0.5	125.7		92.0	4.6	0.1		
Initial Queue Delay (d ₃), s/veh			0.0	0.0		0.0	0.0		0.0	0.0	0.0		
Control Delay (d), s/veh			30.7	32.5	0.0	28.3	163.0	0.0	136.7	36.7	21.1		
Level of Service (LOS)			C	C	A	C	F	A	F	D	C		
Approach Delay, s/veh / LOS			15.2	B		78.1	E		62.6	E			
Intersection Delay, s/veh / LOS			56.5						E				
Multimodal Results				EB		WB		NB		SB			
Pedestrian LOS Score / LOS			2.47	B		2.56	C		2.28	B			
Bicycle LOS Score / LOS			1.13	A		2.70	C		1.54	B			

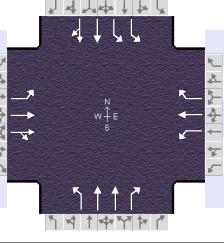
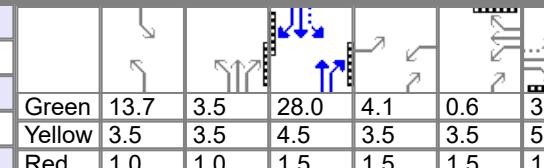
HCS Signalized Intersection Results Summary

General Information								Intersection Information				
Agency	Lee Engineering					Duration, h		1.000				
Analyst	ES	Analysis Date		May 28, 2024		Area Type		Other				
Jurisdiction	NMDOT	Time Period		AM		PHF		1.00				
Urban Street	Coors Boulevard		Analysis Year		2024		Analysis Period		1 > 7:00			
Intersection	Coors & Rio Bravo Blvd		File Name		5 2027 Coors & Rio Bravo Build out Total AM.xus							
Project Description	Build OutTotal AM 2027											
Demand Information				EB		WB		NB		SB		
Approach Movement				L	T	R	L	T	R	L	T	R
Demand (v), veh/h				72	1028	639	121	350	240	415	968	211
				625	629	49						
Signal Information												
Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	20.3	1.3	28.0	4.7	2.6	41.7		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0	4.5	3.5	0.0	5.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.5	1.5	0.0	1.0		
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Assigned Phase				3	8	7	4	1	6	5	2	
Case Number				1.1	4.0	1.1	3.0	2.0	3.0	1.1	4.0	
Phase Duration, s				9.7	47.7	12.3	50.3	26.0	35.2	24.8	34.0	
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0	
Max Allow Headway (MAH), s				2.5	4.1	3.0	4.1	2.6	0.0	3.1	0.0	
Queue Clearance Time (g _s), s				5.1	43.7	7.4	19.8	23.6		19.4		
Green Extension Time (g _e), s				0.0	0.0	0.1	11.8	0.0	0.0	0.9	0.0	
Phase Call Probability				0.91	1.00	0.98	1.00	1.00		1.00		
Max Out Probability				0.00	1.00	0.03	0.40	1.00		0.30		
Movement Group Results				EB		WB		NB		SB		
Approach Movement				L	T	R	L	T	R	L	T	R
Assigned Movement				3	8	18	7	4	14	1	6	16
Adjusted Flow Rate (v), veh/h				72	862	805	121	350	240	415	968	106
Adjusted Saturation Flow Rate (s), veh/h/ln				1781	1856		1725	1841		1753	1738	1520
Queue Service Time (g _s), s				3.1	41.7		5.4	17.8		21.6	29.2	6.3
Cycle Queue Clearance Time (g _c), s				3.1	41.7		5.4	17.8		21.6	29.2	6.3
Green Ratio (g/C)				0.39	0.35		0.41	0.37		0.18	0.24	0.30
Capacity (c), veh/h				340	645		165	680		315	847	463
Volume-to-Capacity Ratio (X)				0.212	1.337		0.733	0.515		1.318	1.143	0.229
Back of Queue (Q), ft/ln (95 th percentile)				58.4	4539.6		104.1	315.1		2197.8	1557.8	114.4
Back of Queue (Q), veh/ln (95 th percentile)				2.3	177.3		4.0	12.2		85.2	59.9	4.3
Queue Storage Ratio (RQ) (95 th percentile)				0.16	0.00		0.20	0.00		8.79	0.00	0.46
Uniform Delay (d ₁), s/veh				24.9	39.2		29.8	29.5		49.2	45.4	31.2
Incremental Delay (d ₂), s/veh				0.1	618.1		2.4	0.7		595.5	272.8	1.2
Initial Queue Delay (d ₃), s/veh				0.0	0.0		0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh				25.0	657.2	0.0	32.2	30.1	0.0	644.7	318.1	32.3
Level of Service (LOS)				C	F	A	C	C	A	F	F	C
Approach Delay, s/veh / LOS				326.8	F		20.3	C		388.8	F	
Intersection Delay, s/veh / LOS				235.4						F		
Multimodal Results				EB		WB		NB		SB		
Pedestrian LOS Score / LOS				2.59	C		2.47	B		2.30	B	
Bicycle LOS Score / LOS				1.92	B		1.66	B		1.72	B	

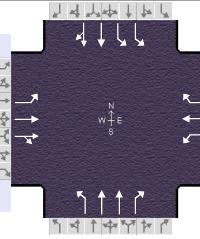
HCS Signalized Intersection Results Summary

General Information						Intersection Information						
Agency	Lee Engineering			Duration, h			1.000					
Analyst	ES		Analysis Date	5/24/2024		Area Type		Other				
Jurisdiction	NMDOT		Time Period	PM		PHF		1.00				
Urban Street	Coors Boulevard		Analysis Year	2024		Analysis Period		1 > 4:00				
Intersection	Coors & Rio Bravo Blvd		File Name	6 2027 Coors & Rio Bravo Build out Total PM.xus								
Project Description	Build Out Total PM 2027											
Demand Information			EB		WB		NB		SB			
Approach Movement			L	T	R	L	T	R	L			
Demand (v), veh/h			62	395	494	74	775	637	479			
Signal Information												
Cycle, s	110.0	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	11.7	4.3	29.0	3.9	0.8	34.3		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	4.5	3.5	0.0	5.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.5	1.5	0.0	1.0		
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Assigned Phase				3	8	7	4	1	6	5	2	
Case Number				1.1	4.0	1.1	3.0	2.0	3.0	1.1	4.0	
Phase Duration, s				8.9	40.3	9.7	41.1	25.0	43.8	16.2	35.0	
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0	
Max Allow Headway (MAH), s				2.5	4.1	3.0	4.1	2.6	0.0	3.1	0.0	
Queue Clearance Time (g _s), s				4.5	36.3	5.2	37.1	22.5		11.2		
Green Extension Time (g _e), s				0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	
Phase Call Probability				0.85	1.00	0.90	1.00	1.00		1.00		
Max Out Probability				0.16	1.00	0.07	1.00	1.00		0.17		
Movement Group Results				EB		WB		NB		SB		
Approach Movement				L	T	R	L	T	R	L	T	R
Assigned Movement				3	8	18	7	4	14	1	6	16
Adjusted Flow Rate (v), veh/h				62	395	494	74	775	637	479	922	20
Adjusted Saturation Flow Rate (s), veh/h/ln				1810	1811		1711	1870		1795	1766	1535
Queue Service Time (g _s), s				2.5	21.1		3.2	35.1		20.5	25.5	0.9
Cycle Queue Clearance Time (g _c), s				2.5	21.1		3.2	35.1		20.5	25.5	0.9
Green Ratio (g/C)				0.35	0.31		0.35	0.32		0.19	0.34	0.39
Capacity (c), veh/h				129	565		139	597		335	1213	593
Volume-to-Capacity Ratio (X)				0.480	0.700		0.534	1.298		1.430	0.760	0.034
Back of Queue (Q), ft/ln (95 th percentile)				48.9	379.1		61.6	3687.6		2917.9	427.4	15.5
Back of Queue (Q), veh/ln (95 th percentile)				2.0	14.5		2.3	145.2		115.8	16.7	0.6
Queue Storage Ratio (RQ) (95 th percentile)				0.14	0.00		0.12	0.00		11.67	0.00	0.06
Uniform Delay (d ₁), s/veh				29.6	33.3		29.3	37.4		44.7	32.1	21.0
Incremental Delay (d ₂), s/veh				1.0	3.9		1.2	549.0		790.7	4.6	0.1
Initial Queue Delay (d ₃), s/veh				0.0	0.0		0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh				30.7	37.2	0.0	30.5	586.4	0.0	835.5	36.7	21.1
Level of Service (LOS)				C	D	A	C	F	A	F	D	C
Approach Delay, s/veh / LOS				17.5	B		307.4	F		305.8	F	
Intersection Delay, s/veh / LOS				190.5						F		
Multimodal Results				EB		WB		NB		SB		
Pedestrian LOS Score / LOS				2.47	B		2.56	C		2.28	B	
Bicycle LOS Score / LOS				1.27	A		2.94	C		1.66	B	

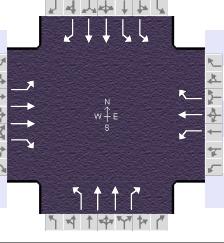
HCS Signalized Intersection Results Summary

General Information								Intersection Information											
Agency	Lee Engineering							Duration, h	1.000										
Analyst				Analysis Date	May 28, 2024		Area Type	Other											
Jurisdiction	NMDOT			Time Period	AM		PHF	1.00											
Urban Street	Coors Boulevard			Analysis Year	2027		Analysis Period	1 > 7:00											
Intersection	Coors & Rio Bravo Blvd			File Name	7 2027Prev Coors & Rio Bravo Build out Total AM...														
Project Description	Previous Build Out Total AM 2027																		
Demand Information				EB		WB		NB		SB									
Approach Movement				L	T	R	L	T	R	L	T	R							
Demand (v), veh/h				60	902	444	114	310	192	358	519	237							
Signal Information																			
Cycle, s	120.0	Reference Phase	2																
Offset, s	0	Reference Point	End	Green	13.7	3.5	28.0	4.1	0.6	39.2									
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	4.5	3.5	3.5	5.0									
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.5	1.5	1.5	1.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT								
Assigned Phase				3	8	7	4	1	6	5	2								
Case Number				1.1	4.0	2.0	3.0	2.0	3.0	1.1	4.0								
Phase Duration, s				9.1	45.2	14.6	50.8	26.1	42.0	18.2	34.0								
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0								
Max Allow Headway (MAH), s				2.5	4.0	3.0	4.0	2.6	0.0	3.1	0.0								
Queue Clearance Time (g _s), s				4.7	39.0	9.8	17.2	23.6		12.9									
Green Extension Time (g _e), s				0.0	0.3	0.0	6.6	0.0	0.0	0.8	0.0								
Phase Call Probability				0.86	1.00	0.98	1.00	1.00		1.00									
Max Out Probability				0.00	1.00	0.80	0.07	1.00		0.00									
Movement Group Results				EB		WB		NB		SB									
Approach Movement				L	T	R	L	T	R	L	T	R							
Assigned Movement				3	8	18	7	4	14	1	6	16							
Adjusted Flow Rate (v), veh/h				60	581	543	114	310	96	358	519	119							
Adjusted Saturation Flow Rate (s), veh/h/ln				1781	1856		1725	1841		1753	1738	1522							
Queue Service Time (g _s), s				2.7	36.9		7.8	15.2		21.6	14.7	6.3							
Cycle Queue Clearance Time (g _c), s				2.7	36.9		7.8	15.2		21.6	14.7	6.3							
Green Ratio (g/C)				0.36	0.33		0.08	0.37		0.18	0.30	0.38							
Capacity (c), veh/h				366	607		138	687		316	1042	578							
Volume-to-Capacity Ratio (X)				0.164	0.958		0.823	0.451		1.133	0.498	0.206							
Back of Queue (Q), ft/ln (95 th percentile)				50.7	787.2		185.5	276.9		1197.	272.7	112.3							
										4									
Back of Queue (Q), veh/ln (95 th percentile)				2.0	30.7		7.1	10.7		46.4	10.5	4.3							
Queue Storage Ratio (RQ) (95 th percentile)				0.14	0.00		0.36	0.00		4.79	0.00	0.45							
Uniform Delay (d ₁), s/veh				26.0	39.6		54.3	28.3		49.2	34.6	25.0							
Incremental Delay (d ₂), s/veh				0.1	41.1		16.3	0.5		280.0	1.7	0.8							
Initial Queue Delay (d ₃), s/veh				0.0	0.0		0.0	0.0		0.0	0.0	0.0							
Control Delay (d), s/veh				26.0	80.7	0.0	70.6	28.8	0.0	329.2	36.3	25.8							
Level of Service (LOS)				C	F	A	E	C	A	F	D	C							
Approach Delay, s/veh / LOS				40.9	D		32.6	C		140.3	F								
Intersection Delay, s/veh / LOS				66.8						E									
Multimodal Results				EB		WB		NB		SB									
Pedestrian LOS Score / LOS				2.61	C		2.48	B		2.43	B	2.45							
Bicycle LOS Score / LOS				1.46	A		1.35	A		1.31	A	1.19							

HCS Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	Lee Engineering			Duration, h		1.000									
Analyst	ES		Analysis Date	5/24/2024			Area Type	Other							
Jurisdiction	NMDOT		Time Period	PM			PHF	1.00							
Urban Street	Coors Boulevard			Analysis Year	2024		Analysis Period	1 > 16:00							
Intersection	Coors & Rio Bravo Blvd			File Name	8 2027Prev Coors & Rio Bravo Build out Total PM...										
Project Description	Previous Build Out Total PM 2027														
Demand Information				EB		WB		NB		SB					
Approach Movement			L	T	R	L	T	R	L	T	R				
Demand (v), veh/h			65	345	603	208	716	420	395	706	138				
Signal Information															
Cycle, s	110.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	8.9	7.1	29.0	4.2	0.8	29.0					
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	4.5	3.5	3.5	5.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.5	1.5	1.5	1.0					
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				3	8	7	4	1	6	5	2				
Case Number				1.1	4.0	2.0	3.0	2.0	3.0	1.1	4.0				
Phase Duration, s				9.2	35.0	15.0	40.8	25.0	46.6	13.4	35.0				
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0				
Max Allow Headway (MAH), s				2.5	4.1	3.0	4.1	2.6	0.0	3.1	0.0				
Queue Clearance Time (g _s), s				4.9	21.8	12.0	36.8	22.5		8.5					
Green Extension Time (g _e), s				0.0	4.2	0.0	0.0	0.0	0.0	0.4	0.0				
Phase Call Probability				0.86	1.00	1.00	1.00	1.00		1.00					
Max Out Probability				0.31	0.78	1.00	1.00	1.00			0.01				
Movement Group Results				EB		WB		NB		SB					
Approach Movement			L	T	R	L	T	R	L	T	R				
Assigned Movement			3	8	18	7	4	14	1	6	16				
Adjusted Flow Rate (v), veh/h			65	345	302	208	716	420	395	706	69				
Adjusted Saturation Flow Rate (s), veh/h/ln			1810	1811		1711	1870		1795	1766	1535				
Queue Service Time (g _s), s			2.9	19.1		10.0	34.8		20.5	17.3	2.8				
Cycle Queue Clearance Time (g _c), s			2.9	19.1		10.0	34.8		20.5	17.3	2.8				
Green Ratio (g _e)			0.30	0.26		0.09	0.32		0.19	0.37	0.46				
Capacity (c), veh/h			135	477		156	592		335	1304	706				
Volume-to-Capacity Ratio (X)			0.483	0.723		1.337	1.210		1.179	0.541	0.098				
Back of Queue (Q), ft/ln (95 th percentile)			55.5	358.3		1224.	2726.		1445.	300.8	47.3				
Back of Queue (Q), veh/ln (95 th percentile)			2.2	13.7		46.4	107.3		57.4	11.8	1.8				
Queue Storage Ratio (RQ) (95 th percentile)			0.15	0.00		2.35	0.00		5.78	0.00	0.19				
Uniform Delay (d ₁), s/veh			31.6	36.8		50.0	37.6		44.7	27.4	16.8				
Incremental Delay (d ₂), s/veh			1.0	5.5		650.3	395.5		354.7	1.6	0.3				
Initial Queue Delay (d ₃), s/veh			0.0	0.0		0.0	0.0		0.0	0.0	0.0				
Control Delay (d), s/veh			32.6	42.3	0.0	700.3	433.1	0.0	399.4	29.0	17.1				
Level of Service (LOS)			C	D	A	F	F	A	F	C	B				
Approach Delay, s/veh / LOS			23.5	C		339.1	F		153.3	F					
Intersection Delay, s/veh / LOS			163.6						F						
Multimodal Results				EB		WB		NB		SB					
Pedestrian LOS Score / LOS			2.54	C		2.57	C		2.28	B					
Bicycle LOS Score / LOS			1.08	A		2.71	C		1.45	A					

HCS Signalized Intersection Results Summary

General Information								Intersection Information						
Agency	Lee Engineering							Duration, h	1.000					
Analyst				Analysis Date	May 28, 2024		Area Type	Other						
Jurisdiction	NMDOT		Time Period	AM		PHF	1.00							
Urban Street	Coors Boulevard		Analysis Year	2027		Analysis Period	1 > 7:00							
Intersection	Coors & Rio Bravo Blvd		File Name	9 Coors & Rio Bravo Build out Total AM Mitigation...										
Project Description	Build OutTotal AM 2027 Mitigated													
Demand Information				EB		WB		NB		SB				
Approach Movement				L	T	R	L	T	R	L	T			
Demand (v), veh/h				72	1028	639	121	350	240	415	968			
				211			211			625	629			
										49				
Signal Information														
Cycle, s	120.0	Reference Phase	2											
Offset, s	0	Reference Point	End	Green	20.6	0.8	28.0	4.8	1.2	38.6				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	4.5	3.5	0.0	5.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.5	1.5	0.0	1.0				
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT			
Assigned Phase				3	8	7	4	1	6	5	2			
Case Number				1.1	3.0	1.1	3.0	2.0	3.0	1.1	3.0			
Phase Duration, s				9.8	44.6	11.0	45.8	30.4	39.3	25.1	34.0			
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0			
Max Allow Headway (MAH), s				2.5	4.0	3.0	4.0	2.6	0.0	3.1	0.0			
Queue Clearance Time (g _s), s				5.2	35.4	7.7	20.8	27.9		19.3				
Green Extension Time (g _e), s				0.0	3.2	0.0	8.7	0.0	0.0	1.2	0.0			
Phase Call Probability				0.91	1.00	0.98	1.00	1.00		1.00				
Max Out Probability				0.00	0.96	1.00	0.28	1.00		0.01				
Movement Group Results				EB		WB		NB		SB				
Approach Movement				L	T	R	L	T	R	L	T			
Assigned Movement				3	8	18	7	4	14	1	6			
Adjusted Flow Rate (v), veh/h				72	1028	417	121	350	144	415	968			
Adjusted Saturation Flow Rate (s), veh/h/ln				1781	1766	1610	1725	1841		1753	1738			
Queue Service Time (g _s), s				3.2	33.4	28.4	5.7	18.8		25.9	33.3			
Cycle Queue Clearance Time (g _c), s				3.2	33.4	28.4	5.7	18.8		25.9	33.3			
Green Ratio (g/C)				0.36	0.32	0.32	0.37	0.33		0.22	0.28			
Capacity (c), veh/h				294	1136	518	169	611		378	965			
Volume-to-Capacity Ratio (X)				0.245	0.905	0.805	0.715	0.573		1.097	1.003			
Back of Queue (Q), ft/ln (95 th percentile)				61.2	564.8	442.8	133.8	335.7		1182.	774.1			
									9	95.1	314.4			
										374.3	18.2			
Back of Queue (Q), veh/ln (95 th percentile)				2.4	22.1	17.7	5.1	13.0		45.8	29.8			
Queue Storage Ratio (RQ) (95 th percentile)				0.12	0.00	0.89	0.19	0.00		2.96	0.00			
Uniform Delay (d ₁), s/veh				27.2	38.9	37.3	31.2	33.1		47.1	43.3			
Incremental Delay (d ₂), s/veh				0.2	11.3	9.1	12.4	1.2		217.5	61.0			
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0		0.0	0.0			
Control Delay (d), s/veh				27.4	50.2	46.4	43.6	34.3	0.0	264.6	104.3			
Level of Service (LOS)				C	D	D	D	C	A	F	F			
Approach Delay, s/veh / LOS				48.1		D	28.1		C	144.7	F			
										45.4	D			
Intersection Delay, s/veh / LOS							74.1			E				
Multimodal Results				EB		WB		NB		SB				
Pedestrian LOS Score / LOS				2.61	C	2.63	C	2.43	B	2.62	C			
Bicycle LOS Score / LOS				1.74	B	1.50	B	1.71	B	1.54	B			

HCS Signalized Intersection Results Summary

General Information								Intersection Information					
Agency	Lee Engineering			Duration, h			1.000						
Analyst	ES		Analysis Date	5/24/2024			Area Type						
Jurisdiction	NMDOT		Time Period	PM			PHF						
Urban Street	Coors Boulevard		Analysis Year	2024			Analysis Period						
Intersection	Coors & Rio Bravo Blvd		File Name	10 Coors & Rio Bravo Build out Total PM Mitigatio...									
Project Description	Build OutTotal PM 2027 Mitigated												
Demand Information				EB		WB		NB		SB			
Approach Movement				L	T	R	L	T	R	L	T	R	
Demand (v), veh/h				62	395	494	74	775	637	479	922	40	
Signal Information													
Cycle, s	110.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Assigned Phase				3	8	7	4	1	6	5	2		
Case Number				1.1	3.0	1.1	3.0	2.0	3.0	1.1	3.0		
Phase Duration, s				8.9	40.2	9.7	41.1	25.0	43.7	16.3	35.0		
Change Period, (Y+R _c), s				5.0	6.0	5.0	6.0	4.5	6.0	4.5	6.0		
Max Allow Headway (MAH), s				2.5	4.1	3.0	4.1	2.6	0.0	3.1	0.0		
Queue Clearance Time (g _s), s				4.6	22.0	5.2	37.1	22.5		11.2			
Green Extension Time (g _e), s				0.0	7.4	0.1	0.0	0.0	0.0	0.6	0.0		
Phase Call Probability				0.85	1.00	0.90	1.00	1.00		1.00			
Max Out Probability				0.02	0.64	0.00	1.00	1.00		0.03			
Movement Group Results				EB		WB		NB		SB			
Approach Movement				L	T	R	L	T	R	L	T	R	
Assigned Movement				3	8	18	7	4	14	1	6	16	
Adjusted Flow Rate (v), veh/h				62	395	336	74	775	637	479	922	20	
Adjusted Saturation Flow Rate (s), veh/h/ln				1810	1724	1610	1711	1870		1795	1766	1535	
Queue Service Time (g _s), s				2.6	9.8	20.0	3.2	35.1		20.5	25.5	0.9	
Cycle Queue Clearance Time (g _c), s				2.6	9.8	20.0	3.2	35.1		20.5	25.5	0.9	
Green Ratio (g/C)				0.35	0.31	0.31	0.35	0.32		0.19	0.34	0.39	
Capacity (c), veh/h				129	1073	501	350	597		335	1210	592	
Volume-to-Capacity Ratio (X)				0.480	0.368	0.670	0.211	1.298		1.429	0.762	0.034	
Back of Queue (Q), ft/ln (95 th percentile)				48.9	185.2	313.2	59.8	3689.5		2913.7	428.5	15.5	
Back of Queue (Q), veh/ln (95 th percentile)				2.0	7.1	12.5	2.3	145.3		115.6	16.7	0.6	
Queue Storage Ratio (RQ) (95 th percentile)				0.10	0.00	0.63	0.09	0.00		7.28	0.00	0.06	
Uniform Delay (d ₁), s/veh				29.6	29.5	33.0	24.4	37.4		44.7	32.2	21.0	
Incremental Delay (d ₂), s/veh				1.0	0.2	3.5	0.1	549.5		788.9	4.7	0.1	
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Control Delay (d), s/veh				30.7	29.7	36.5	24.5	587.0	0.0	833.7	36.9	21.1	
Level of Service (LOS)				C	C	D	C	F	A	F	D	C	
Approach Delay, s/veh / LOS				32.6		C	307.3		F	305.2		F	
Intersection Delay, s/veh / LOS				194.6						F			
Multimodal Results				EB		WB		NB		SB			
Pedestrian LOS Score / LOS				2.47	B	2.70	C	2.28	B	2.52	C		
Bicycle LOS Score / LOS				1.14	A	2.94	C	1.66	B	1.53	B		

Appendix D: NMDOT Comments and Comment Response



Date: October 15, 2024

TO: Jon Kruse, Lee Engineering

FROM: Margaret Haynes, NMDOT Assistant District 3 Traffic Engineer

SUBJECT: Aspire Traffic Study Update
Southeast quadrant of 118th Street and Amole Mesa Ave, North of NM 500
Albuquerque, Bernalillo County, New Mexico

The NMDOT received the DRAFT TIS dated July 2024. District Three's comments are below.

General comments:

Acceptable turn lanes are those that include queue plus deceleration, if it only includes the queue length, then it is not SAMM compliant.

Please include recommendations from the previous report at all other study intersections.

Report Comments:

Page 4 – Correct development name is “Ceja Vista”

Page 6 – Can you explain what is meant when a Through lane does not accommodate 95th queue lengths?

Page 7 – Please provide existing turn lane storage by lengths including taper.

Page 8 – Please include MRCOG’s HFIN map as a part of your Crash Summary.

Page 9 – Can you explain Crash Type: Pedestrian – 6?

Page 11 – Please maximize the NBL at NM 500 and NM 45, by limiting the SBL deceleration lane at NM 45/Las LaMonica to 400-feet including taper. There is about 940 feet of storage total.

CC:

Keith Thompson, NMDOT

Curtis Churne, COA

Julie Luna, BC

REVIEW COMMENTS

Project:	NM383.02 - Anderson Heights TIS Update		PDE:			
Review:				Reviewer:		
Date:	10/15/2024			Margaret Haynes (NMDOT)		
#	PAGE	SECTION	COMMENT	AUTHOR	STATUS	RESPONSE
1	ALL	ALL	Acceptable turn lanes are those that include queue plus deceleration, if it only includes the queue length, then it is not SAMM compliant.	MH	Noted	
2	ALL	ALL	Please include recommendations from the previous report at all other study intersections.	MH	Agree	Added recommendations to report.
3	4	Adjacent Developments	Correct development name is Ceja Vista	MH	Agree	Corrected development name.
4	6	Capacity and Queueing Analysis	Can you explain what is meant when a Through lane does not accommodate 95th queue lengths?	MH	Agree	95th percentile queue lengths calculated by HCS exceed measured turn lane lengths.
5	7	Capacity and Queueing Analysis	Please provide existing turn lane storage by lengths including taper.	MH	Agree	Added to tables
6	8	Crash Summary	Please include MRCOG's HFIN map as a part of your Crash Summary.	MH	Agree	Updated to include an image of the HFIN
7	9	Crash Summary	Can you explain Crash Type: Pedestrian - 6	MH	Agree	Corrected number of ped involved crashes. 6 drivers reported "Pedestrian" for a total of 3 crashes.
8	11	Conclusions and Recommendations	Please maximize the NBL at NM 500 and NM 45, by limiting the SBL deceleration lane at NM 45/Las LaMonica to 400-feet including taper. There is about 940 feet of storage total.	MH	Agree	Updated to include recommendation