Kmart Site Redevelopment Project
(Indian School Rd. / Carlisle Blvd.)
Traffic Impact Study

Executive Summary

The purpose of this study is to evaluate the transportation conditions before and after implementation of the proposed KMart Site Redevelopment Project, determine the impact of the development on the adjacent transportation system and recommend mitigation measures where necessary. This study is prepared to meet the requirements of the City of Albuquerque Transportation Development Section, Planning Department and the New Mexico Department of Transportation (NMDOT), District 3 Office associated with their review of this project.

The proposed development is located at the northeast corner of Indian School Rd. / Carlisle Blvd. The study area includes the intersections of Indian School Rd. / Girard Ct., I-40 N. Ramp / Carlisle Blvd., I-40 S. Ramp / Carlisle Blvd., Indian School Rd. / Carlisle Blvd., Indian School Rd. / Washington St., Constitution Ave. / Carlisle Blvd., I-40 S. Ramp / San Mateo Blvd., I-40 N. Ramp / San Mateo Blvd. and three existing driveways for the project.

The proposed project is to be developed as a 50,000 S.F. supermarket, a 2,200 S.F. fast-food restaurant w/ drive-thru window and a 67,710 S.F. retail commercial uses. The anticipated implementation year for this site is the year 2021 and the horizon year is 2031. According to the Institute of Traffic Engineers' (ITE) trip generation rates (10th Edition), the weekday AM Peak Hour period is projected to be approximately 275 entering trips and 190 exiting trips. During the weekday PM Peak Hour period, it is anticipated that it will generate approximately 352 new entering trips and new 355 exiting trips. A PM pass-by trip rate of 25% was applied to this project.

There old Kmart site was accessed via the following driveways:

1) Main Driveway on Carlisle (Driveway "A") – a full access unsignalized driveway.
2) Secondary Driveway on Carlisle (Driveway "B") – a right-in, right-out driveway north of Indian School Rd. and south of Driveway "A"
3) Main Driveway on Indian School Rd. (Driveway "C") – a full access unsignalized driveway.
4) Burger King exit only driveway – an unsignalized right turn exit only driveway located on the north side of the existing Burger King fast food restaurant just north of Driveway "A". The Burger King exit only driveway will not be allowed by the New Mexico Department of Transportation and, therefore, will be closed. Burger King drive-thru traffic will exit directly into the new Kmart Redevelopment Site parking lot.

The new development will be accessed via three existing driveways (Driveways “A”, “B”, and “C”) See the Appendix, Pg. A-3 for more details. The proposed driveways will likely need to be reconstructed to bring them up to current design standards for commercial driveways as well as handicap access standards. The first driveway on Carlisle Blvd. (Driveway “A”) is the unsignalized full access drive located approximately 515 feet north of Indian School Rd. (centerline to centerline). The second driveway on Carlisle Blvd. (Driveway “B”) is the a right-in / right-out, unsignalized driveway located approximately 210 feet north of Indian School Rd. (centerline to centerline). The third driveway on Indian School Rd. is the unsignalized full access driveway (Driveway “C”) located approximately 350 feet east of Carlisle Blvd. (centerline to centerline). Additionally, there is a new service vehicle / delivery vehicle driveway on Indian School Rd. at the extreme southeast corner of the site which will be restricted to westbound right turn in only movements. This driveway is called the Service Driveway and has no other designation in this report. Being a right-in only driveway, there will be no analysis in this Study. The right turn in volumes at this driveway are expected to be minimal.

Analysis results by analysis year are included in the following table:

Executive Summary Resutls Table

			2021 Conditions		2031 Conditions	
Intersection No. / Name	**Signalization**	**Case**	**AM Peak**	**PM Peak**	**AM Peak**	**PM Peak**
1 - Indian School Rd. / Girard Ct.	Signalized	NO BUILD	A - 9.9	A - 5.5	B - 10.3	A - 5.2
		BUILD	A - 9.9	A - 5.5	B - 10.3	A - 5.3
2 - I-40 N. Ramp / Carlisle Blvd.	Signalized	NO BUILD	C - 23.5	C - 23.3	C - 26.0	C - 27.1
		BUILD	C - 23.5	C - 23.5	C - 26.0	C - 27.7
		MIT.	C - 22.3	C - 21.9	C - 23.9	C - 25.0
3 - I-40 S. Ramp / Carlisle Blvd.	Signalized	NO BUILD	B - 18.1	B - 16.9	C - 20.7	C - 23.8
		BUILD	B - 17.5	C - 20.8	C - 20.2	C - 26.9
4 - Indian School Rd. / Carlisle Blvd.	Signalized	NO BUILD	C - 30.7	D - 35.4	D - 44.9	E - 65.0
		BUILD	C - 28.4	D - 39.1	D - 43.2	F - 80.7
		MIT.	C - 24.2	C - 31.1	D - 35.9	E - 58.6
5 - Indian School Rd. / Washington St.	Signalized	NO BUILD	C - 24.2	C - 30.1	C - 23.5	C - 32.5
		BUILD	C - 24.1	C - 30.3	C - 23.3	C - 33.2
6 - Constitution Ave. / Carliele Blvd.	Signalized	NO BUILD	B - 12.6	B - 16.4	B - 13.3	B - 17.3
		BUILD	B - 12.2	B - 15.8	B - 12.9	B - 17.0
7 - I-40 S. Ramp / San Mateo Blvd.	Signalized	NO BUILD	C - 34.6	D - 43.4	E - 63.9	D - 49.1
		BUILD	C - 34.5	D - 43.3	E - 63.5	D - 48.9
		MIT.	C - 28.5	C - 27.0	D - 48.4	C - 31.0
8 - I-40 N. Ramp / San Mateo Blvd.	Signalized	NO BUILD	C - 26.0	C - 32.3	D - 43.3	D - 38.8
		BUILD	C - 25.7	C - 32.3	D - 42.8	D - 38.8
		MIT.	C - 22.5	C - 23.0	D - 35.5	C - 31.0
9 - Driveway "A" / Carlisle Blvd.	Unsignalized	NO BUILD	N/A	N/A	N/A	N/A
		BUILD	C - 19.7	D - 27.7	C - 23.7	F - 53.5
10. Driveway "B" / Carlisle Blvd.	Unsignalized	NO BUILD	N/A	N/A	N/A	N/A
		BUILD	B - 10.9	B - 12.9	B - 11.9	C - 15.3
11. Indian School Rd. / Driveway "C"	Unsignalized	NO BUILD	N/A	N/A	N/A	N/A
		BUILD	B - 14.0	C - 24.5	B - 13.4	D - 26.1

Even though the above table generally reports acceptable intersection levels-of-service and delays for all cases associated with the 2021 Implementation Year Conditions, there are some individual turning movements that experience longer delays than desirable. Those include the westbound right turn movement at the I-40 North Ramp / Carlisle Blvd. during the AM and PM Peak Hour, the eastbound left turn movement and the westbound right turn movement at Indian School Rd. / Carlisle Blvd. during the AM and PM Peak Hour, the eastbound right turn movement and the southbound left turn movement at the intersection of the I-40 South Ramp / San Mateo Blvd., and the westbound right turn movement at the I-40 North Ramp / San Mateo Blvd. during the AM and PM Peak Hour periods. Most all of those specific turning movements are already stressed for the implementation year NO BUILD conditions.

In summary, the proposed development does have a minor adverse impact to the intersections of the I-40 N. Ramp / Carlisle Blvd, the I-40 S. Ramp / San Mateo Blvd., and the I-40 N. Ramp /

San Mateo Blvd., and a moderately significant impact to the intersection of Indian School Rd. / Carlisle Blvd. The minimal to moderate impact to the transportation system can be mitigated by the recommended measures described in this Study. In summary, the recommendations of this study are:

Recommendations:

- **I-40 North Ramp** / **Carlisle Blvd.** – Re-stripe the westbound ramp to re-designate the existing center lane from a thru / left turn lane to a thru / left / right turn lane. This project does not contribute any traffic to the westbound right turn movement.
- **Indian School Rd.** / **Carlisle Blvd.** – Construct a new westbound right turn lane on Indian School Rd. at Carlisle Blvd. The length of the new westbound right turn lane will be restricted due to an existing major steel transmission line pole. It is estimated that the westbound right turn lane can be constructed to a length of approximately 100 feet plus transition.
- **I-40 South Ramp** / **San Mateo Blvd.** – The volumes of traffic generated by the proposed Kmart Redevelopment project through the I-40 / San Mateo ramps are very minor. Thus, the impact to the interchange ramps is insignificant. The analysis of the I-40 South Ramp / San Mateo Blvd. does reveal a couple of stressed turning movements for both the AM Peak Hour and the PM Peak Hour. The eastbound right turn movement shows long delays during the AM Peak Hour and the southbound left turn movement shows long delays during the PM Peak Hour. The long delays for these turning movements exist for both the NO BUILD as well as the BUILD conditions since this proposed project does not contribute traffic to either of the two turning movements. Also, the overall intersection levels-of-service and associated delays seem to indicate that the issue can be remedied by modifying the traffic signal timing splits at the intersection for both the AM and PM Peak Hour periods. However, this Study cannot make that recommendation conclusively since this analysis is limited and does not evaluate the San Mateo Blvd. signalized coordinated corridor. The signal timing sheets for this intersection furnished by the City of Albuquerque indicate that the signal timing has not been adjusted for more than five years. Based on the results of this analysis and the fact that the signal timing has not been adjusted for more than five years, this Study recommends that the City of Albuquerque and / or the New Mexico Department of Transportation revisit the signal timing for this portion of the San Mateo Blvd. corridor. It appears from this analysis that the levels-of-service / delays / queueing issues at the I-40 S. Ramp / San Mateo Blvd. may be resolved with modifications to the signal timing / coordination plan that currently exists.
- **I-40 North Ramp** / **San Mateo Blvd.** – The volumes of traffic generated by the proposed Kmart Redevelopment project through the I-40 / San Mateo ramps are very minor. Thus, the impact to the interchange ramps is insignificant. The analysis of the I-40 North

Ramp / San Mateo Blvd. does reveal a stressed turning movement for both the AM Peak Hour and the PM Peak Hour. The westbound right turn movement shows long delays during the AM and the PM Peak Hour periods. The long delays for these turning movements exist for both the NO BUILD as well as the BUILD conditions and this proposed project does not contribute traffic to that turning movement. Also, the overall intersection levels-of-service and associated delays seem to indicate that the issue can be remedied by modifying the traffic signal timing splits at the intersection for both the AM and PM Peak Hour periods. However, this Study cannot make that recommendation conclusively since this analysis is limited and does not evaluate the San Mateo Blvd. signalized coordinated corridor. The signal timing sheets for this intersection furnished by the City of Albuquerque indicate that the signal timing has not been adjusted for more than five years. Based on the results of this analysis and the fact that the signal timing has not been adjusted for more than five years, this Study recommends that the City of Albuquerque and / or the New Mexico Department of Transportation revisit the signal timing for this portion of the San Mateo Blvd. corridor. It appears from this analysis that the levels-of-service / delays / queueing issues at the I-40 N. Ramp / San Mateo Blvd. may be resolved with modifications to the signal timing / coordination plan that currently exists.

- **Access** – Access to the proposed Kmart Redevelopment Project should be via three unsignalized driveways plus a service driveway at the extreme southeast corner of the site. The main driveway on Carlisle Blvd. (Driveway "A") is proposed as an unsignalized full access driveway located approximately 510 feet north of Indian School Rd. (centerline to centerline). The southern driveway on Carlisle Blvd. (Driveway "B") is proposed to be a right-in, right-out only access unsignalized driveway located approximately 210 feet north of Indian School Rd. (centerline to centerline). The main driveway on Indian School Rd. is proposed as an unsignalized full access driveway (Driveway "C") located approximately 350 feet east of Carlisle Blvd. (centerline to centerline).
- Driveway "A" on Carlisle Blvd. shall be designed and constructed with two exiting and one entering lane minimum. Driveway "B" on Carlisle Blvd. shall be designed and constructed with one exiting and one entering lane minimum. Driveway "C" on Indian School Rd. shall be designed and constructed with one exiting and one entering lane minimum.
- All driveways for this development shall be constructed utilizing 30 feet curb return radii or larger if required to accommodate the design delivery vehicles.
- All proposed driveways associated with this project are subject to being reconstructed to bring them to current standards for retail commercial driveways and for handicap access.
- All design and construction associated with this development shall maintain adequate site distances at intersections and driveways to the extent feasible.