

Killebrew Drive/22nd Avenue

- Construct an additional eastbound left-turn lane to provide dual left-turn lanes

III. YEAR 2012 NO BUILD CONDITIONS

Future traffic operations analyses were conducted for the year 2012 no build conditions. The land use, street network assumptions, and operations results are discussed in this section of the report.

A. Assumed Land Use

The year 2012 no build condition assumes that there will be no development associated with Mall of America Phase II. It does, however, assume that adjacent growth and development identified as part of the *Bloomington Central Station Traffic Study*, the *Airport South AUAR*, and the Minneapolis/St. Paul International Airport expansion has occurred (see Figure 6: Adjacent Development Locations). For specific details on the amount of development occurring on adjacent land, please refer to Appendix A (Table A-1).

B. Assumed Roadway Improvements for Existing Conditions

Based on the existing conditions analysis, the following improvements are assumed in the year 2012 no build analysis:

Lindau Lane/TH 77 Ramps/IKEA Way

- Eliminate access from northbound TH 77 to eastbound Lindau Lane
- Remove concrete median on the west approach to allow southbound TH 77 traffic to make an eastbound right-turn movement on Lindau Lane to the existing MOA near Nordstrom's

Killebrew Drive/22nd Avenue

- Construct an additional eastbound left-turn lane to provide dual left-turn lanes

C. Assumed Roadway Improvements listed in the Bloomington Central Station Traffic Study

As a result of the *Bloomington Central Station Traffic Study*, the following improvements are assumed in the year 2012 no build analysis:

American Boulevard

- American Boulevard will operate as a westbound one-way roadway between West Road and 34th Avenue with three through lanes

Figure 6

American Boulevard/28th Avenue

- Construct an eastbound right-turn lane (250 feet)
- Restripe the northbound inside through lane to a left-turn lane
- Extend the northbound left-turn lane to 200 feet
- Replace north-south split phasing with protected left-turn phasing

American Boulevard/West Road (30th Avenue)

- Installation of a traffic signal
- Convert the eastbound through lanes into dual right-turn lanes
- The east approach will include dual left-turn lanes and two through lanes. The inside through lane will end and become the outside left-turn lane at this intersection.
- The south approach will include dual left-turn lanes

American Boulevard/Metro Drive East

- Construct a westbound left-turn lane (200 feet)

American Boulevard/International Drive/East Road (33rd Avenue)

- Convert to a right-in/right-out/eastbound left-in access

Old Shakopee Road/East Road (33rd Avenue)

- Installation of a traffic signal
- The north approach will include a left-turn lane, a shared left-turn/through lane and a right-turn lane.
- Construct a westbound right-turn lane (300 feet)

Old Shakopee Road/West Road (30th Avenue)

- Installation of a traffic signal
- Construct an eastbound left-turn lane (350 feet)
- The north approach will include dual left-turn lanes and a right-turn lane. This approach was modeled with what is shown on the proposed site plan, an inside left-turn lane of approximately 100 feet and a second full-length left-turn lane.

Old Shakopee Road/28th Avenue

- Restripe the southbound left-turn lane to a through lane
- Construct a southbound left-turn lane (250 feet)
- Construct an eastbound left-turn lane (300 feet)
- Construct an eastbound right-turn lane (300 feet)
- Construct an additional westbound left-turn lane (300 feet)

D. Assumed Roadway Improvements listed in the Airport South CIP

The following improvements listed in the City's Airport South CIP are assumed in the year 2012 no build analysis:

Killebrew Avenue at 20th Avenue

- Construct an additional eastbound left-turn lane to provide dual left-turn lanes

Old Shakopee Road, 24th Avenue to 30th Avenue

- Reconstruct with two through lanes in each direction, and a median with left- and right-turn lanes

Old Shakopee Road, 86th Street to Cedar Avenue

- Reconstruct with two through lanes in each direction, and a median with left- and right-turn lanes

American Boulevard

- Reconstruct with an additional westbound through lane (three through lanes) from 28th Avenue to 34th Avenue, and a median with left-turn lanes

American Boulevard at 24th Avenue

- Construct an additional westbound right-turn lane to provide dual westbound right-turn lanes

E. Year 2012 No Build Traffic Operations Analysis – Saturday

To determine how well the existing and assumed roadway improvements listed above will accommodate year 2012 no build traffic forecasts (see Figures 7 and 8), an operations analysis was conducted for Saturday peak conditions (3:00 – 4:00 p.m.). A background growth rate of one percent per year was assumed for all traffic that passes through the study area. Results of the analysis shown in Table 4 indicate that all intersections operate at acceptable levels of service during the Saturday peak hour.

Figure 7

Figure 8

Table 4
Year 2012 No Build Peak Hour Capacity Analysis - Saturday
Level of Service Results

Intersection	Level of Service
	Saturday Peak
Lindau Lane/TH 77 Ramps/IKEA Way	C
Lindau Lane/22nd Avenue	C
Lindau Lane/24th Avenue	B
Killebrew Drive/TH 77 Ramps/20th Avenue	C
Killebrew Drive/22nd Avenue	C
Killebrew Drive/24th Avenue	D
24th Avenue/I-494 Single-Point Interchange	D
24th Avenue/82nd Street	B
American Boulevard/IKEA Driveway *	A/B
American Boulevard/Thunderbird Road	B
American Boulevard/24th Avenue	C
American Boulevard/28th Avenue	A
American Boulevard/34th Avenue	B
34th Avenue/I-494 North Ramps	D
34th Avenue/I-494 South Ramps	D
28th Avenue/82nd Street	D
Old Shakopee Road/86th Street	A
Old Shakopee Road/TH 77 East Ramp	B

* Indicates an unsignalized intersection. The overall LOS is shown followed by the worst approach LOS.

Queuing at all freeway ramp terminal intersections was reviewed for year 2012 no build conditions. Based on the traffic analysis, queuing problems will not develop during the Saturday p.m. peak hour.

F. Year 2012 No Build Traffic Operations Analysis – Thursday

To determine how well the existing and assumed roadway improvements listed above will accommodate year 2012 no build traffic forecasts (see Figures 9 and 10), an operations analysis was conducted for Thursday peak conditions (4:30 – 5:30 p.m). A background growth rate of one percent per year was assumed for all traffic that passes through the study area. Results of the analysis shown in Table 5 indicate that the intersection of 34th Avenue/I-494 North Ramps will operate at unacceptable levels of service during the Thursday peak hour.

Figure 9

Figure 10

Table 5
Year 2012 No Build Peak Hour Capacity Analysis - Thursday
Level of Service Results

Intersection	Level of Service
	Thursday Peak
Lindau Lane/TH 77 Ramps/IKEA Way	C
Lindau Lane/22nd Avenue	C
Lindau Lane/24th Avenue	B
Killebrew Drive/TH 77 Ramps/20th Avenue	B
Killebrew Drive/22nd Avenue	B
Killebrew Drive/24th Avenue	D
24th Avenue/I-494 Single-Point Interchange	D
24th Avenue/82nd Street	B
American Boulevard/IKEA Driveway *	A/B
American Boulevard/Thunderbird Road	B
American Boulevard/24th Avenue	D
American Boulevard/28th Avenue	A
American Boulevard/34th Avenue	C (B)
34th Avenue/I-494 North Ramps	F ⁽¹⁾ (D)
34th Avenue/I-494 South Ramps	F ⁽¹⁾ (D)
28th Avenue/82nd Street	D
Old Shakopee Road/86th Street	B
Old Shakopee Road/TH 77 East Ramp	D

* Indicates an unsignalized intersection. The overall LOS is shown followed by the worst approach LOS.

⁽¹⁾ Average vehicle delay of 80 seconds

Note: Parentheses indicate LOS with assumed improvements listed below.

As displayed in Table 5, operational problems are expected at the 34th Avenue/I-494 ramp intersections during the Thursday p.m. peak hour. Unacceptable vehicle delays and significant queues will develop with the existing interchange design, intersection geometrics and signal phasing/timing by year 2012. Currently, LRT operations have a significant impact on the operations of the 34th Avenue I-494 interchange, largely due to the delay created by the “all red” traffic phase with each LRT crossing. To address these operational problems during the Thursday p.m. peak hour, the “all red” traffic phase with each LRT train crossing needs to be converted to a northbound/southbound “green” phase. This modification to the LRT operations for year 2012 no build conditions will improve operations and eliminate any potential queuing problems at the freeway ramp intersections during the Thursday p.m. peak hour. As indicated by year 2030 operational problems discussed further in the report, this modification is only an interim solution until funding for major interchange improvements is identified.