FINAL

AIRPORT SOUTH
ROADWAY INFRASTRUCTURE IMPROVEMENTS

January 25, 2007

Prepared for:
City of Bloomington

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EXECUTIVE SUMMARY

Introduction

SRF Consulting Group has completed the preliminary engineering and cost estimates for the roadway infrastructure improvements necessary to support currently projected future growth in the Airport South Area over the next 25 years. These roadway improvements are consistent with the *Mall of America (MOA) Phase II Traffic Study* final draft report dated March 20, 2006 and the *Bloomington Central Station (BCS) Traffic Study* report dated October 28, 2004. Our work includes the following:

- Comprehensive list of infrastructure improvements for the Airport South Area
- Preliminary engineering for the TH 77 CD roadway connection to/from the current MOA
- Concept sketches, right-of-way needs and preliminary cost estimates for all infrastructure improvements
- Allocation of costs to the appropriate existing and proposed developments based on vehicular trips
- Supplemental operations analyses for the realignment of East Old Shakopee Road and reconstruction of the I-494/34th Avenue interchange

Infrastructure Improvements

With City staff input, SRF developed a comprehensive list of infrastructure improvements for the entire Airport South Area bounded by I-494 on the north, the Minnesota River on the east and south, Old Shakopee Road on the south and TH 77 on the west.

Preliminary Cost Estimates

Costs were developed for each improvement based on preliminary layouts and concept sketches. All cost estimates include construction cost, design engineering, contract administration, and construction engineering (inspection, testing services, etc.), right-of-way and contingency costs. Table Ex-1 includes the roadway infrastructure improvements and associated costs, by location.

Cost Allocations

The purpose of the cost allocation analysis is to allocate future public improvement costs related to full build conditions (year 2030) of the Airport South AUAR area to the appropriate existing and future redevelopments/developments. In addition, consideration was applied to existing volumes currently using the roadway network contributing to the capacity constraints and subsequent need for improvements. Table Ex-2 presents the costs allocated to the various existing and future developments/redevelopments.

Table Ex-1
Airport South Roadway Infrastructure Improvements – Cost Summary

Hi-Mu Improvement	Location	Cost
1	Northbound TH 77 to Eastbound Lindau Lane	See #'s 6 & 7
2	Killebrew Drive and 24th Avenue	$881,104
3	Killebrew Drive and 22nd Avenue (City provided layout)	$848,078
4	Killebrew Drive and 20th Avenue (City provided layout)	$1,860,924
5	Lindau Lane/TH 77 Ramps/IKEA Way	See # 31
6 & 7	TH 77 CD Roadway (near Lindau Lane)	$3,779,513
8	TH 77/I-494 CD Roadway (Interim)	$512,549
9	TH 77/I-494 CD Roadway (Interim)	$759,845
10A	TH 77/I-494 CD Roadway	$1,258,795
10B	TH 77/I-494 CD Roadway	$16,352,940
10C	Thunderbird Road Roundabout	$1,178,231
11	I-494/24th Avenue Single-Point Interchange	$646,121
12A	American Boulevard/24th Avenue	$1,524,296
12B	American Boulevard/24th Avenue	$4,076,987
13	28th Avenue/82nd Street	$2,207,017
14	Old Shakopee Road, Cedar Avenue to Killebrew Drive	$10,295,604
15	American Boulevard	$474,094
16	American Boulevard/34th Avenue	$2,252,575
17	American Boulevard/International Drive/33rd Avenue	$170,138
18	American Boulevard/Metro Drive East	$234,356
19	American Boulevard/30th Avenue	$617,779
20	American Boulevard/28th Avenue	$690,816
20A	28th Ave	$1,676,140
21	34th Avenue	$394,051
22	Old Shakopee Road/33rd Avenue	$300,300
23	Old Shakopee Road/31st Avenue	Under construction
24	Old Shakopee Road/30th Avenue	$2,433,499
25	Old Shakopee Road/28th Avenue	$7,768,665
26	I-494/34th Avenue Interchange	$59,652,091
27	24th Avenue/82nd Street	$96,009
28A	86th Street extension to EOSR to 28th Avenue	$28,261,141
28B	86th Street/Old Shakopee Road	$1,608,896
29	30th Avenue	$1,677,315
30	Wayfinding Signs	$549,600
31	Lowering Lindau Lane	$12,900,000
--	Old Shakopee Road, 24th Avenue to 30th Avenue	See #'s 24 & 25
--	ITS Improvements	$2,500,000
	Total:	**$170,439,471**

Table Ex-2
Development/Redevelopment Cost Allocation Summary

Development	Scenario	
	Weekday (Thursday)	Weekend (Saturday)
Existing		
City of Bloomington	$20,429,651	$22,327,527
MOA	$7,064,048	$10,666,826
IKEA	$191,083	$742,959
Health Partners	$2,973,453	$0
MAC	$7,416,440	$14,057,526
Future		
Proposed MOA II	$31,371,834	$32,875,649
Proposed BCS	$25,874,408	$35,093,766
Proposed AUAR Developments	$58,566,569	$42,154,464
Proposed MAC Terminal Expansion	$11,331,414	$7,632,189
Proposed Park-and-Ride Expansion	$5,220,570	$4,888,565
Total:	**$170,439,471**	**$170,439,471**

INTRODUCTION

The proposed Mall of America Phase II and Bloomington Central Station developments alone will have a significant impact on the City's transportation infrastructure. As requested, we have completed the preliminary engineering and cost estimates for the roadway infrastructure improvements necessary to support currently projected future growth in the Airport South Area over the next 25 years. These roadway improvements are consistent with the *Mall of America (MOA) Phase II Traffic Study* final draft report dated March 20, 2006 and the *Bloomington Central Station (BCS) Traffic Study* report dated October 28, 2004. Our work includes the following:

- Comprehensive list of infrastructure improvements for the Airport South Area
- Preliminary engineering for the TH 77 CD roadway connection to/from the current MOA
- Concept sketches, right-of-way needs and preliminary cost estimates for all infrastructure improvements
- Allocation of costs to the appropriate existing and proposed developments based on vehicular trips
- Supplemental operations analyses for the realignment of East Old Shakopee Road and reconstruction of the I-494/34th Avenue interchange

INFRASTRUCTURE IMPROVEMENTS

As previously stated, the infrastructure improvements were consolidated from the MOA Phase II and BCS Studies. However, it is important to note that other proposed developments contribute to the need for future improvements; i.e. Metropolitan Airports Commission (MAC), Metro Transit Park-and-Ride facilities and various Airport South redevelopments/developments. With City staff input, SRF developed a comprehensive list of infrastructure improvements for the entire Airport South Area bounded by I-494 on the north, the Minnesota River on the east and south, Old Shakopee Road on the south and TH 77 on the west. Attachment A includes Figure 1 (an aerial perspective of each improvement location) and Table 1 (a detailed description of each improvement).

PRELIMINARY ENGINEERING AND CONCEPT SKETCHES

The preliminary engineering portion of the project provides the City with an initial layout for the new access to/from the northbound TH 77 CD roadway to/from the existing MOA. Given the location and complexity of the recommended improvement, the preliminary layout for the new connection to/from the TH 77 CD roadway consists of plan and profile views to check vertical and horizontal clearances, grades and utility clearances.

Previously, a concept layout was developed for the I-494/34th Avenue interchange as part of the MOA Phase II traffic study process. This layout was used to estimate the construction costs and review its feasibility to construct in the field. Additional concept sketches for the remaining improvements were developed on aerials to better tie in the existing curb lines and landmarks (i.e., Thunderbird Hotel and Mall of America, Phase II area improvements).

In preparation of the preliminary layouts and concept sketches, the following issues were addressed and resolved:

TH 77 CD Roadway

- The new access to/from the northbound TH 77 CD roadway to/from the existing MOA required additional field review and surveying in order to determine the specific topography.
- The proposed northbound TH 77 exit ramp and its approach directly into the MOA roundabout maintains the 5 percent grade that exists today at this exit point.
- The bridged connection to the west parking structure of MOA maintains its existing tie-in point.

TH 77/I-494 C-D Roadway

- There were no issues in laying out the new access from the northbound TH 77/eastbound I-494 CD roadway to Thunderbird Road. In addition, there were no problems with the new access from Thunderbird Road to the northbound TH 77/eastbound I-494 CD roadway (interim).
- For the permanent access from Thunderbird Road to the northbound TH 77/eastbound I-494 CD roadway, tunneling under 24th Avenue may cause some traffic control issues during construction. However, construction of this roadway is possible using a Conspan structure to create the tunnel under 24th Avenue. In-construction traffic control will be important in order to maintain roadway operations along 24th Avenue.
- A large retaining wall will be needed east of 24th Avenue. This will require Mn/DOT coordination for construction, as well as coordination with the MAC for right-of-way.

Killebrew Drive and 22nd Avenue

- Based on the MOA Phase II Study, dual southbound left-turn lanes were recommended at this intersection. However, the need for dual eastbound left-turn lanes was raised. Due to intersection constraints, it is not feasible to construct both improvements, dual southbound and eastbound left-turn lanes. Further analysis was completed for the intersection and it was determined that either improvement on its own will improve operations equally. With the close spacing of 20th Avenue and 22nd Avenue, it is recommended to implement improvements on Killebrew Drive. Therefore, the dual eastbound left-turn lanes are included as an improvement in this study.

I-494/24th Avenue Single-Point Interchange

- The westbound triple lefts proposed for this intersection were reviewed to determine their ability to turn within the intersection and not conflict with opposing left-turn movements.
- Review of this operation using Auto-Turn revealed no issues associated with this movement.

I-494/34th Avenue Interchange

- The concept layout developed as part of the MOA Phase II Study was reviewed for its feasibility to construct in the field. This interchange concept with loops in the northwest and southwest quadrants does not present any major issues related to its construction.
- An additional operations analysis was conducted to determine the necessary interchange design if the LRT operations were modified to northbound/southbound green phase or priority operations. The results of the analysis indicate the need for loops in the northwest and southwest quadrants for year 2030 conditions, regardless of the LRT operations. Therefore, the study improvement at the I-494/34th Avenue interchange only includes the original concept layout with loops in the northwest and southwest quadrants. The operations analysis results are summarized later in this document.

86th Street Extension to 28th Avenue

- This improvement requires traversing a deep ravine. Crossing this ravine would require a substantial box culvert with extreme fill or a large bridge structure.
- This area is contained with the fish and wildlife refuge.
- Additional study of this improvement is necessary to determine the overall impacts associated.

PRELIMINARY COST ESTIMATES

Based on the preliminary layouts and concept sketches, costs were developed for each improvement. All cost estimates include construction cost, design engineering, contract administration, and construction engineering (inspection, testing services, etc.), right-of-way and contingency costs. The following processes and assumptions were used to determine the cost estimates:

- Aerial photography was used to determine the existing curb lines, number and length of lanes, and any existing structures that could be used as a guide to determine the placement of the recommended improvements.
- Roadway improvements were drawn on top of the aerial photography to determine the removal quantities and new material quantities needed to complete the improvement.
- A field visit was conducted on February 28, 2006 to review the existing layouts at each improvement location and assess special considerations for computing the cost estimates.

- Based on field visit observations, retaining walls are needed in conjunction with improvements 5, 16 and 25, due to extreme grade changes where widening of the roadway is recommended. In addition, the 86th Street extension to 28th Avenue will need to cross a deep ravine. It was assumed that a bridge will be constructed to cross the ravine. Its cost is reflected in this improvement's estimate (improvement 28A).
- Drainage quantity, cost, and structure type are affected by the specific improvement. These quantities were based on the location of existing structures, located on the aerial photographs. The assumption is that all drainage structures that are being removed or replaced do not lie on the trunk line system and the lateral can be extended outward.
- Right-of-way quantities were based on property right-of-way lines provided by the City. Amounts stated were overtaken by the respective improvement.
- All quantities are based on major construction components. Therefore, a contingency cost was added for all minor items. A 20-percent contingency was added for an improvement that included widening or construction of a lane or roadway. A 15-percent contingency was added if no widening occurred. It should be noted that the I-494/34th Avenue Interchange includes a contingency cost of 25 percent due to the size of this improvement.
- A project delivery cost of 30 percent of total construction cost was typically added (some exceptions are presented).
- Cost estimation item prices are based on average bid prices for Mn/DOT year 2005.
- Quantity assumptions include:
    - All median removals are concrete walk, unless aerial photography shows trees/shrubs.
    - All pavements are bituminous (4" wear and 4" non-wear course mix), except where the existing pavement is concrete (8" depth assumed for new or replacement pavement).
    - Areas under new pavement contain 3'depth subgrade excavation, 10" depth aggregate base class 5, and 1.5' depth select granular borrow.
    - Each pay item has 5 percent added to the total quantity to account for radii and miscellaneous areas of sway in calculations.

Attachment B includes Table 2, which summarizes the cost estimate for each improvement. Attachment B also includes the concept sketches and their associated detailed cost breakdowns. Attachment C contains the preliminary layout for the TH 77 CD roadway connection to/from the current MOA.

COST ALLOCATIONS

The purpose of the cost allocation analysis is to allocate future public improvement costs related to full build conditions (year 2030) of the Airport South AUAR area to the appropriate existing and future redevelopments/developments. The improvements recommended in the MOA Phase II and BCS Studies are a direct result of the proposed developments included in each project. The land use assumptions in both of these studies include additional adjacent developments (i.e., MAC developments, Metro Transit Park-and-Ride facilities and other Airport South area redevelopments/developments). While the future redevelopments and developments use up the available excess capacity of the existing intersection and roadway system, the existing developments in the area use a percentage of its initial capacity. This initial capacity usage was taken into account when allocating future improvement costs.

The following processes and assumptions were used to conduct the analysis:

Existing Traffic Volumes

- Existing traffic volumes include turning movement counts collected April/May 2005.
- Existing traffic volumes were rerouted to account for the one-way American Boulevard improvement between 30th Avenue and 34th Avenue.
- Existing properties that are to be redeveloped by year 2030 were also subtracted from the base traffic volumes.
- Special consideration was given to properties that are currently not producing the amount of trips generated using the ITE Trip Generation handbook.

Future Volumes

- An operations and trip distribution software package (Traffix for Windows) was used to determine the trip allocation percentages by intersection. The Traffix model results provide a detailed breakdown of percent trips at a given intersection based on the trip source (existing trips at an intersection or a particular developments trips passing through the same intersection).
- The base volumes developed were entered into the Traffix model as existing volumes.
- Traffix was used to distribute the trips from future developments/redevelopments. The output includes both the number and percent trips from each future development/redevelopment to each individual intersection.

Cost Allocation

- Improvement costs are to be allocated based on the percent vehicles from each development/redevelopment using the intersection.
- Existing volumes were associated with specific developments where applicable.
- Existing volumes that could not be associated with an existing development are identified as a City cost.

The total improvement costs were allocated for two scenarios, Thursday (weekday) and Saturday (weekend). As a result of the cost allocation analysis, the following breakdowns are provided:

Existing

- City of Bloomington
- MOA
- IKEA
- Health Partners
- MAC

Future

- Proposed MOA II
- Proposed Bloomington Central Station (BCS)
- Proposed AUAR Redevelopments/Developments
- Proposed MAC Terminal Expansion
- Proposed Park-and-Ride Expansion

The following table presents a summary of the costs allocated to each development/ redevelopment:

	Scenario	
Development	**Weekday (Thursday)**	**Weekend (Saturday)**
Existing		
City of Bloomington	$20,429,651	$22,327,527
MOA	$7,064,048	$10,666,826
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Attachment D includes detailed matrices, which display the percent breakdown by existing and future trip percentages, as well as the related costs for each improvement. The first matrix presented is representative of all existing and future developments for the overall Airport South study area. The second matrix displays the existing trip allocations broken down by City responsibilities and existing developments, as well as the future developments grouped by project.

SUPPLEMENTAL OPERATIONS ANALYSIS

East Old Shakopee Road

In the MOA Phase II Study, the extension of 86th Street to 28th Avenue is assumed for future conditions. As requested, an additional operations analysis has been completed to determine the traffic impacts if this extension is not constructed. Based on our analysis results, it was identified that the absence of this improvement will have a direct impact on the intersections of Killebrew Drive/24th Avenue/East Old Shakopee Road and East Old Shakopee Road/ 28th Avenue. This analysis will determine if any additional improvements are needed, or if any previously recommended improvements (from the BCS Study) are no longer needed.

The year 2030 weekday p.m. peak hour traffic model (developed during MOA Phase II Study) was used for this analysis. At this time, a year 2030 weekday a.m. peak hour analysis had not been completed. However, preliminary review of the a.m. peak hour volumes was taken into account when determining the following recommendations:

East Old Shakopee Road from 24th Avenue to 30th Avenue

- Extend the third eastbound through lane from the existing lane drop just east of the Killebrew Drive/24th Avenue/East Old Shakopee Road intersection to 30th Avenue
- Construct a third westbound through lane from 30th Avenue to 28th Avenue

Killebrew Drive/24th Avenue/East Old Shakopee Road

- Eliminate the northbound free right-turn lane
- Convert the right-most through lane into a right-turn lane (dual rights)

East Old Shakopee Road/28th Avenue

- Eliminate the recommended improvements listed in BCS Study*:*
    - One southbound through lane
    - One northbound through lane
    - One northbound right-turn lane

34th Avenue Interchange

In the MOA Phase II Study, the 34th Avenue/I-494 interchange needs to be reconstructed under the year 2012 no build (Thursday) condition. As requested, an additional operations analysis has been completed to determine whether the recommended interchange design would change if LRT operations were modified to northbound/southbound green phase or priority operations. The year 2030 weekday p.m. peak hour traffic model (developed during MOA Phase II Study) was used for this analysis. At this time, a year 2030 weekday a.m. peak hour analysis has not been completed. However, preliminary review of the a.m. peak hour volumes was taken into account when completing this analysis:

Existing Diamond with "All-Red" LRT Operations

- Turn lane improvements
  - SB dual rights at the North Ramp
  - EB and NB dual rights at the South Ramp
- Results
  - North Ramp – Delay = 285 seconds/vehicle LOS F
  - South Ramp – Delay = 80 seconds/vehicle LOS F (traffic spills back from this intersection into adjacent intersections to the south. Delay may actually be worse)

Existing Diamond with "NB/SB Green Phase" LRT Operations

- Turn lane improvements
  - SB dual rights at the North Ramp
  - EB and NB dual rights at the South Ramp
- Results
  - North Ramp – Delay = 90 seconds/vehicle LOS F
  - South Ramp – Delay = 80 seconds/vehicle LOS F (traffic spills back from this intersection into adjacent intersections to the south. Delay may actually be worse, but not as bad as the previous scenario)

Existing Diamond with "Priority" LRT Operations

- Turn lane improvements
  - SB dual rights at the North Ramp
  - EB and NB dual rights at the South Ramp
- Results
  - North Ramp – Delay = 90 seconds/vehicle LOS F
  - South Ramp – Delay = 80 seconds/vehicle LOS F (traffic does **NOT** spill back from this intersection into adjacent intersections to the south.)

The results of this analysis indicate that there is a capacity problem at the south ramp for all three scenarios. The additional analysis was completed assuming a loop in the southwest quadrant of the interchange:

Existing Diamond with Southwest Loop and "All-Red" LRT Operations

- Turn lane improvements
  - SB dual rights at the North Ramp
  - EB and NB dual rights at the South Ramp

- Results
  - North Ramp – Delay = 120 seconds/vehicle LOS F
  - South Ramp – Delay = 30 seconds/vehicle LOS C

Existing Diamond with Southwest Loop and "NB/SB Green Phase" LRT Operations

- Turn lane improvements
  - SB dual rights at the North Ramp
  - EB and NB dual rights at the South Ramp
- Results
  - North Ramp – Delay = 55 seconds/vehicle LOS D/E
  - South Ramp – Delay = 15 seconds/vehicle LOS B

Existing Diamond with Southwest Loop and "Priority" LRT Operations

- Turn lane improvements
  - SB dual rights at the North Ramp
  - EB and NB dual rights at the South Ramp
- Results
  - North Ramp – Delay = 50 seconds/vehicle LOS D
  - South Ramp – Delay = 15 seconds/vehicle LOS B

Assuming "all-red" LRT signal timing, the addition of the loop in the southwest quadrant of the interchange improves the level of service at the south ramp from LOS F to LOS C, however operational problems will still develop at the north intersection. By eliminating the "all-red" LRT signal timing, levels of service at the north ramp will improve from LOS F to LOS D/E.

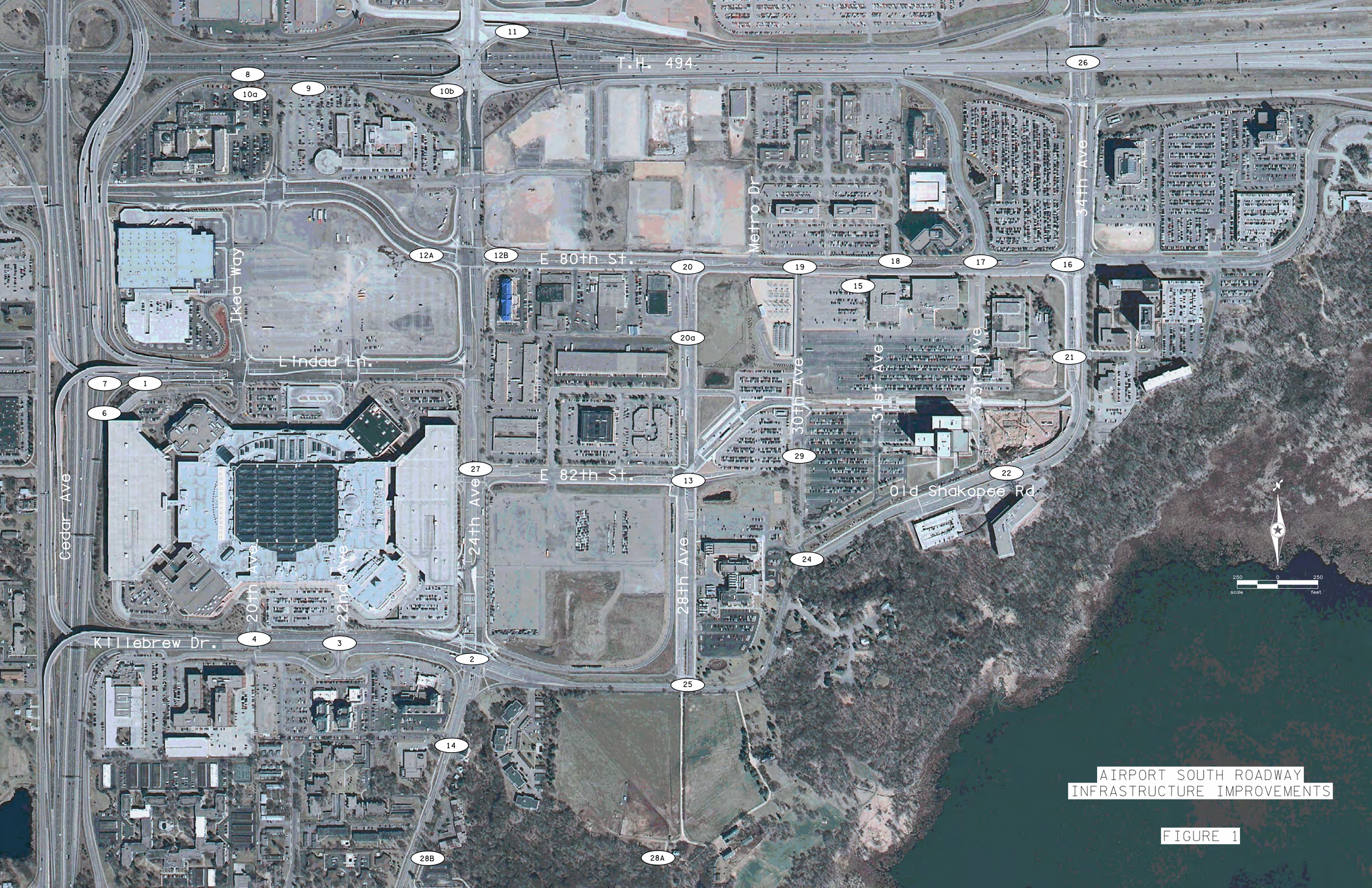
The results of this analysis indicate that the north and south ramp at the I-494/34th Avenue interchange will operate at acceptable levels of service during the weekday p.m. peak hour assuming the following:

- Construction of a loop in the southwest quadrant of the interchange
- Replace the "All-Red" LRT signal timing with "NB/SB Green or Priority" LRT signal operations
- Turn lane improvements
  - SB dual rights at the North Ramp
  - EB and NB dual rights at the South Ramp

It is important to note that at the time of this analysis, a weekday a.m. peak hour traffic model has yet to be completed. Based on our review of the estimated volume and knowledge of the intersection in previous studies, it is expected that the north ramp will not operate at acceptable levels of service without a loop in the northwest quadrant of the interchange.

Attachment A

1/25/2007



AIRPORT SOUTH ROADWAY
INFRASTRUCTURE IMPROVEMENTS

FIGURE 1

Airport South Roadway Infrastructure Improvements
Based on City of Bloomington Staff Review **Table 1**

Hi-Mu Improvement	Location	Improvement
1	**Northbound TH 77 to Eastbound Lindau Lane**	Eliminate northbound TH 77 exit to eastbound Lindau Lane (Estimate included in improvement 6 & 7 cost estimate)
5	**Lindau Lane/TH 77 Ramps/IKEA Way**	Removal of concrete median on the west approach
		Extend the southbound right-turn lane (350 feet) - (Estimate included in Lowering Lindau Lane cost estimate)
6 & 7	**TH 77 CD Roadway**	Construct a new access from northbound TH 77 into current MOA parking lot
		Construct a new access from current MOA parking lot to the northbound TH 77 CD roadway
8	**TH 77/I-494 CD Roadway**	Construct a new access from northbound TH 77/eastbound I-494 CD roadway to Thunderbird Road (Year 2012 interim)
10A	**TH 77/I-494 CD Roadway**	Construct a new access from northbound TH 77/eastbound I-494 CD roadway to Thunderbird Road
10C	**Thunderbird Road Roundabout**	Construct a new roundabout from Thunderbird road to ramp off of TH 77
9	**TH 77/I-494 CD Roadway**	Construct a new access from Thunderbird Road to the eastbound I-494 CD roadway (Year 2012 interim)
10B	**TH 77/I-494 CD Roadway**	Construct a new access from Thunderbird Road to the eastbound I-494 CD roadway (permanent)
		Construct a new CD roadway from Thunderbird Road under 24th Avenue to east of 34th Avenue
2	**Killebrew Drive and 24th Avenue**	Extend the eastbound left-turn lanes (400 feet)
		Extend the westbound left-turn lane (500 feet)
		Extend the third westbound through lane back to the intersection of Old Shakopee Road/28th Avenue
3	**Killebrew Drive and 22nd Avenue**	Construct an additional eastbound left-turn lane (dual lefts)
	(City has provided layout)	North approach may need to be modified to accommodate a hotel development in the future
4	**Killebrew Drive and 20th Avenue**	Construct an additional eastbound left-turn lane (dual lefts)
	(City has provided layout)	
11	**I-494/24th Avenue Single-Point Interchange**	Construct an additional westbound left-turn lane (triple lefts)
12A	**American Boulevard/24th Avenue**	Construct an additional southbound right-turn lane (dual rights). Extend both turn lanes to the I-494 single-point interchange
		Extend the eastbound left-turn lanes (500 feet)
12B	**American Boulevard/24th Avenue**	Extend the southbound outside left-turn lane (500 feet)
		Extend the westbound left-turn lanes (500 feet)
		Construct an additional westbound right-turn lane (triple rights). The westbound approach should have four lanes that begin at 28th Avenue
		Construct an additional eastbound right-turn lane (dual rights)
27	**24th Avenue/82nd Street**	Convert the right-turn/through lane into a trap right-turn lane (dual southbound rights)
16	**American Boulevard/34th Avenue**	Eliminate the southbound free right-turn lane
		Construct southbound dual right-turn lanes that extend from the I-494 South Ramps
		Eliminate the westbound free right-turn lane
		Construct westbound dual right-turn lanes
15	**American Boulevard**	Convert to a westbound one-way (three through lanes) roadway between 30th Avenue and 34th Avenue (Included in Airport South CIP)
17	**American Boulevard/International Drive/33rd Avenue**	Modify the westbound approach to provide a left-turn lane, two through lanes and a right-turn lane (this is with the one-way conversion)
		Modify the southbound approach to a right-turn only (free movement) (this is with the one-way conversion)
21	**34th Avenue**	Construct southbound right-in only into Northeast housing
26	**I-494/34th Avenue Interchange**	Reconstruction of interchange with LRT operations (folded diamond to west)
	I-494/34th Avenue Interchange	Reconstruction of interchange without LRT operations (to be determined) (pre-empt vs. priority)
18	**American Boulevard/Metro Drive East**	Construct a westbound left-turn lane (200 feet)
19	**American Boulevard/30th Avenue**	Install signal
		Convert the eastbound through lanes into dual right-turn lanes
		Modify the westbound approach to provide dual left-turn lanes and two through lanes. The inside through lane will become the outside left-turn lane
		Modify the northbound approach to provide dual left-turn lanes
20	**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
		Construct a southbound left-turn lane
		Replace north/south split phasing with protected left-turn phasing
13	**28th Avenue/82nd Street**	Construct an additional westbound left-turn lane (250 feet) (dual lefts)
		Restripe the eastbound through lane as a second left-turn lane
		Restripe the eastbound right-turn lane as a through/right-turn lane
22	**Old Shakopee Road/33rd Avenue**	Install signal
		Extend westbound right-turn lane to 300'
23	**Old Shakopee Road/31st Avenue**	Construct an eastbound left-turn lane (350 feet)
	(to be consistent with BCS plans)	The southbound approach will provide a shared left-turn/through lane and a right-turn lane
24	**Old Shakopee Road/30th Avenue**	Install signal
	(to be consistent with BCS plans)	Construct dual eastbound left-turn lanes
		The southbound approach will provide dual left-turn lanes and dual right-turn lanes. The inside left-turn lane is 100 feet with a second full-length left-turn lane
25	**Old Shakopee Road/28th Avenue**	Install signal
		The new northbound approach will provide dual left-turn lanes, two through lanes and dual right-turn lanes
		Construct southbound dual left-turn lanes (250 feet)
		Construct an additional southbound right-turn lane (400 feet) (dual rights)
		Construct dual eastbound left-turn lanes (300 feet)
		Construct an eastbound right-turn lane (300 feet)
		Construct a westbound right-turn lane (300 feet)
		Construct an additional westbound left-turn lane (300 feet) (dual lefts)
--	**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 (this improvement is included in improvement #'s 24 & 25)
	(along the original section)	
14	**Old Shakopee Road, Cedar Avenue to Killebrew Drive**	Reconstruct with three through lanes in each direction and a median with left turn lanes
	(south of Killebrew Drive)	* (86th Street to Cedear Avenue was included in the Airport South CIP)
28A	**86th Street extension to EOSR to 28th Avneue**	Costruct two lanes in each direction with a median and left- and right-turn lanes
	(new connection across Kelley Farm)	
28B	**86th Street/Old Shakopee Road**	Modify the westbound approach to provide dual left-turn lanes, two through lanes and a right-turn lane
29	**30th Avenue**	Reconstruct roadway to provide two through lanes in each direction and a median with left-turn lanes (Included in Airport South CIP)
20A	**28th Ave**	Construct a southbound lane between American Boulevard and 82nd Street
--	**ITS Improvements**	Possibly electronic detection (Autoscope or similar technology) and dynamic signing
30	**Wayfinding Signs**	Mall of America Area - Phase II New Signing Only
31	**Lowering Lindau Lane**	**Costs provided by others**
	Improvements Total:	

Attachment B

1/25/2007

Airport South Roadway Infrastructure Improvements **SRF No. 0065622**

Based on City of Bloomington Staff Review **Table 2**

Hi-Mu Improvement	Location	Improvement	Total
1	**Northbound TH 77 to Eastbound Lindau Lane**	Eliminate northbound TH 77 exit to eastbound Lindau Lane (Estimate included in improvement 6 & 7 cost estimate)	see #'s 6 & 7
5	**Lindau Lane/TH 77 Ramps/IKEA Way**	Removal of concrete median on the west approach	see #31
		Extend the southbound right-turn lane (350 feet) - (Estimate included in Lowering Lindau Lane cost estimate)	
6 & 7	**TH 77 CD Roadway**	Construct a new access from northbound TH 77 into current MOA parking lot	$3,779,513
		Construct a new access from current MOA parking lot to the northbound TH 77 CD roadway	
8	**TH 77/I-494 CD Roadway**	Construct a new access from northbound TH 77/eastbound I-494 CD roadway to Thunderbird Road (Year 2012 interim)	$512,549
10A	**TH 77/I-494 CD Roadway**	Construct a new access from northbound TH 77/eastbound I-494 CD roadway to Thunderbird Road (includes roundabout cost)	$1,258,795
10C	**Thunderbird Road Roundabout**	Construct a new roundabout from Thunderbird road to ramp off of TH 77	$1,178,231
9	**TH 77/I-494 CD Roadway**	Construct a new access from Thunderbird Road to the eastbound I-494 CD roadway (Year 2012 interim)	$759,845
10B	**TH 77/I-494 CD Roadway**	Construct a new access from Thunderbird Road to the eastbound I-494 CD roadway (permanent)	$16,352,940
		Construct a new CD roadway from Thunderbird Road under 24th Avenue to east of 34th Avenue	
2	**Killebrew Drive and 24th Avenue**	Extend the eastbound left-turn lanes (400 feet)	$881,104
		Extend the westbound left-turn lane (500 feet)	
		Extend the third westbound through lane back to the intersection of Old Shakopee Road/28th Avenue	
3	**Killebrew Drive and 22nd Avenue**	Construct an additional eastbound left-turn lane (dual lefts)	$848,078
	(City has provided layout)	North approach may need to be modified to accommodate a hotel development in the future	
4	**Killebrew Drive and 20th Avenue**	Construct an additional eastbound left-turn lane (dual lefts)	$1,860,924
	(City has provided layout)		
11	**I-494/24th Avenue Single-Point Interchange**	Construct an additional westbound left-turn lane (triple lefts)	$646,121
12A	**American Boulevard/24th Avenue**	Construct an additional southbound right-turn lane (dual rights). Extend both turn lanes to the I-494 single-point interchange	$1,524,296
		Extend the eastbound left-turn lanes (500 feet)	
12B	**American Boulevard/24th Avenue**	Extend the southbound outside left-turn lane (500 feet)	$4,076,987
		Extend the westbound left-turn lanes (500 feet)	
		Construct an additional westbound right-turn lane (triple rights). The westbound approach should have four lanes that begin at 28th Avenue	
		Construct an additional eastbound right-turn lane (dual rights)	
27	**24th Avenue/82nd Street**	Convert the right-turn/through lane into a trap right-turn lane (dual southbound rights)	$96,009
16	**American Boulevard/34th Avenue**	Eliminate the southbound free right-turn lane	$2,252,575
		Construct southbound dual right-turn lanes that extend from the I-494 South Ramps	
		Eliminate the westbound free right-turn lane	
		Construct westbound dual right-turn lanes	
15	**American Boulevard**	Convert to a westbound one-way (three through lanes) roadway between 30th Avenue and 34th Avenue (Included in Airport South CIP)	$474,094
17	**American Boulevard/International Drive/33rd Avenue**	Modify the westbound approach to provide a left-turn lane, two through lanes and a right-turn lane (this is with the one-way conversion)	$170,138
		Modify the southbound approach to a right-turn only (free movement) (this is with the one-way conversion)	
21	**34th Avenue**	Construct southbound right-in only into Northeast housing	$394,051
26	**I-494/34th Avenue Interchange**	Reconstruction of interchange with LRT operations (folded diamond to west)	$59,652,091
	I-494/34th Avenue Interchange	Reconstruction of interchange without LRT operations (to be determined) (pre-empt vs. priority)	
18	**American Boulevard/Metro Drive East**	Construct a westbound left-turn lane (200 feet)	$234,356
19	**American Boulevard/30th Avenue**	Install signal	$617,779
		Convert the eastbound through lanes into dual right-turn lanes	
		Modify the westbound approach to provide dual left-turn lanes and two through lanes. The inside through lane will become the outside left-turn lane	
		Modify the northbound approach to provide dual left-turn lanes	
20	**American Boulevard/28th Avenue**	Construct an eastbound right-turn lane (250 feet)	$690,816
		Restripe the northbound inside through lane to a left-turn lane	
		Extend the northbound left-turn lane to 200 feet	
		Construct a southbound left-turn lane	
		Replace north/south split phasing with protected left-turn phasing	
13	**28th Avenue/82nd Street**	Construct an additional westbound left-turn lane (250 feet) (dual lefts)	$2,207,017
		Restripe the eastbound through lane as a second left-turn lane	
		Restripe the eastbound right-turn lane as a through/right-turn lane	
22	**Old Shakopee Road/33rd Avenue**	Install signal	$300,300
		Extend westbound right-turn lane to 300'	
23	**Old Shakopee Road/31st Avenue**	Construct an eastbound left-turn lane (350 feet)	under construction w/ BCS
	(to be consistent with BCS plans)	The southbound approach will provide a shared left-turn/through lane and a right-turn lane	
24	**Old Shakopee Road/30th Avenue**	Install signal	$2,433,499
	(to be consistent with BCS plans)	Construct dual eastbound left-turn lanes	
		The southbound approach will provide dual left-turn lanes and dual right-turn lanes. The inside left-turn lane is 100 feet with a second full-length left-turn lane	
25	**Old Shakopee Road/28th Avenue**	Install signal	$7,768,665
		The new northbound approach will provide dual left-turn lanes, two through lanes and dual right-turn lanes	
		Construct southbound dual left-turn lanes (250 feet)	
		Construct an additional southbound right-turn lane (400 feet) (dual rights)	
		Construct dual eastbound left-turn lanes (300 feet)	
		Construct an eastbound right-turn lane (300 feet)	
		Construct a westbound right-turn lane (300 feet)	
		Construct an additional westbound left-turn lane (300 feet) (dual lefts)	
--	**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 (this improvement is included in improvement #'s 24 & 25)	see #'s 24 & 25
	(along the original section)		
14	**Old Shakopee Road, Cedar Avenue to Killebrew Drive**	Reconstruct with three through lanes in each direction and a median with left turn lanes	$10,295,604
	(south of Killebrew Drive)	* (86th Street to Cedar Avenue was included in the Airport South CIP)	
28A	**86th Street extension to EOSR to 28th Avenue**	Construct two lanes in each direction with a median and left- and right-turn lanes	$28,261,141
	(new connection across Kelley Farm)		
28B	**86th Street/Old Shakopee Road**	Modify the westbound approach to provide dual left-turn lanes, two through lanes and a right-turn lane	$1,608,896
29	**30th Avenue**	Reconstruct roadway to provide two through lanes in each direction and a median with left-turn lanes (Included in Airport South CIP)	$1,677,315
20A	**28th Ave**	Construct a southbound lane between American Boulevard and 82nd Street	$1,676,140
--	**ITS Improvements**	Possibly electronic detection (Autoscope or similar technology) and dynamic signing	$2,500,000
30	**Wayfinding Signs**	Mall of America Area - Phase II New Signing Only	$549,600
31	**Lowering Lindau Lane**	**Costs provided by others**	$12,900,000
	Improvements Total:		**$170,439,471**

Improvement 2

1. Turn lane improvements at Killebrew Drive / 24th Avenue
(Extend the eastbound left-turn lanes to 400 feet)
(Extend the westbound left-turn lanes to 500 feet)
(Extend the third westbound through lane back to the intersection of Old Shakopee Road/28th Ave)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$25,000.00	1	$25,000.00
Remove Curb & Gutter	LIN FT	$5.00	780	$3,900.00
Mill Pavement	SQ YD	$3.00	12570	$37,710.00
Wearing Course Mix	TON	$50.00	1840	$92,000.00
Non-Wearing Course Mix	TON	$45.00	240	$10,800.00
Subgrade Excavation	CU YD	$12.00	980	$11,760.00
Aggregate Base (CV) Class 5	CU YD	$18.00	280	$5,040.00
Select Granular Borrow (CV)	CU YD	$10.00	490	$4,900.00
Curb & Gutter	LIN FT	$10.00	720	$7,200.00
Drainage	LUMP SUM	$140,000.00	1	$140,000.00
Traffic Control	LUMP SUM	$15,000.00	1	$15,000.00
Turf Establishment	LUMP SUM	$4,000.00	1	$4,000.00
Signal Modification	LUMP SUM	$150,000.00	1	$150,000.00
Street Lighting Modification	LUMP SUM	$50,000.00	1	$50,000.00
Signing & Striping	LUMP SUM	$7,500.00	1	$7,500.00
Subtotal				$564,810.00
Contingency & Minor Items (assume 20%)				$112,962.00
Total Construction Cost				$677,772.00
Project Delivery (assume 30% construction cost)				$203,331.60
Total Improvement Cost				**$881,103.60**

Improvement 3

1. Turn lane improvements at Killebrew Drive / 22nd Avenue
(Quantities are based on the Killebrew layout that was provided by the City)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$23,000.00	1	$23,000.00
Remove Curb & Gutter	LIN FT	$5.00	1740	$8,700.00
Remove Concrete Walk	SQ FT	$1.00	2910	$2,910.00
Remove Pavement	SQ YD	$2.00	630	$1,260.00
Mill Pavement	SQ YD	$3.00	6160	$18,480.00
Subgrade Excavation	CU YD	$12.00	1120	$13,440.00
Aggregate Base (CV) Class 5	CU YD	$18.00	320	$5,760.00
Select Granular Borrow (CV)	CU YD	$10.00	560	$5,600.00
Wearing Course Mix	TON	$50.00	1060	$53,000.00
Non-Wearing Course Mix	TON	$45.00	270	$12,150.00
Curb & Gutter	LIN FT	$10.00	1580	$15,800.00
Concrete Walk	SQ FT	$2.50	1680	$4,200.00
Truncated Dome	SQ FT	$60.00	64	$3,840.00
Drainage	LUMP SUM	$135,000.00	1	$135,000.00
Traffic Control	LUMP SUM	$13,500.00	1	$13,500.00
Turf Establishment	LUMP SUM	$4,000.00	1	$4,000.00
Signal Modification	LUMP SUM	$195,000.00	1	$195,000.00
Street Lighting Modification	LUMP SUM	$20,000.00	1	$20,000.00
Signing & Striping	LUMP SUM	$8,000.00	1	$8,000.00
Subtotal				$543,640.00
Contingency & Minor Items (assume 20%)				$108,728.00
Total Construction Cost				$652,368.00
Project Delivery (assume 30% construction cost)				$195,710.40
Total Improvement Cost				**$848,078.40**

Improvement 4

1. Turn lane, striping, and signal phasing improvements at Killebrew Drive / 20th Avenue

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$50,000.00	1	$50,000.00
Remove Curb & Gutter	LIN FT	$5.00	1180	$5,900.00
Remove Curb & Gutter (Frontage Road)	LIN FT	$5.00	1050	$5,250.00
Mill Pavement	SQ YD	$3.00	2720	$8,160.00
Subgrade Excavation	CU YD	$12.00	1540	$18,480.00
Aggregate Base (CV) Class 5	CU YD	$18.00	430	$7,740.00
Select Granular Borrow (CV)	CU YD	$10.00	770	$7,700.00
Wearing Course Mix	TON	$50.00	740	$37,000.00
Non-Wearing Course Mix	TON	$45.00	370	$16,650.00
Curb & Gutter	LIN FT	$10.00	1560	$15,600.00
Truncated Dome	SQ FT	$60.00	32	$1,920.00
Drainage	LUMP SUM	$295,000.00	1	$295,000.00
Traffic Signal Phasing	EACH	$10,000.00	1	$10,000.00
Traffic Control	LUMP SUM	$30,000.00	1	$30,000.00
Signal Modification	LUMP SUM	$125,000.00	1	$125,000.00
Street Lighting Modification	LUMP SUM	$38,500.00	1	$38,500.00
Frontage Road	LIN FT	$150.00	1200	$180,000.00
Sanitary Sewer Casing	LIN FT	$300.00	1100	$330,000.00
Turf Establishment	LUMP SUM	$4,000.00	1	$4,000.00
Signing & Striping	LUMP SUM	$6,000.00	1	$6,000.00
Subtotal				$1,192,900.00
Contingency & Minor Items (assume 20%)				$238,580.00
Total Construction Cost				$1,431,480.00
Project Delivery (assume 30% construction cost)				$429,444.00
Total Improvement Cost				**$1,860,924.00**

Improvements 1, 6, & 7

1. Eliminate northbound TH 77 exit to eastbound Lindau Lane
2. New access from northbound TH 77 CD roadway to current MOA
3. New access from existing MOA parking ramp to the northbound TH77 CD roadway

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$100,000.00	1	$100,000.00
Clearing & Grubbing	ACRE	$6,000.00	1	$6,000.00
Remove Curb & Gutter	LIN FT	$5.00	5100	$25,500.00
Remove Concrete Walk	SQ FT	$1.00	4780	$4,780.00
Remove Pavement	SQ YD	$2.00	12750	$25,500.00
Remove Retaining Wall	LIN FT	$8.00	690	$5,520.00
Concrete Walk	SQ FT	$2.50	11890	$29,725.00
Curb & Gutter	LIN FT	$10.00	6350	$63,500.00
8" Concrete Pavement	SQ YD	$4.00	3680	$14,720.00
Structural Concrete	CU YD	$63.00	820	$51,660.00
Wearing Course Mix	TON	$50.00	1320	$66,000.00
Non-Wearing Course Mix	TON	$45.00	1320	$59,400.00
Common Excavation	CU YD	$12.00	10980	$131,760.00
Subgrade Excavation	CU YD	$12.00	10250	$123,000.00
Aggregate Base (CV) Class 5	CU YD	$18.00	2850	$51,300.00
Select Granular Borrow	CU YD	$10.00	5130	$51,300.00
Bridge - Pre-Cast Concrete	SQ FT	$120.00	5000	$600,000.00
CIP Retaining Wall	SQ FT	$40.00	4800	$192,000.00
Modular Block Retaining Wall	SQ FT	$20.00	1630	$32,600.00
Drainage	LUMP SUM	$600,000.00	1	$600,000.00
Traffic Control	LUMP SUM	$60,000.00	1	$60,000.00
Street Lighting Modification	LUMP SUM	$73,500.00	1	$73,500.00
Turf Establishment	LUMP SUM	$25,000.00	1	$25,000.00
Signing & Striping	LUMP SUM	$30,000.00	1	$30,000.00
Subtotal				$2,422,765.00
Contingency & Minor Items (assume 20%)				$484,553.00
Total Construction Cost				$2,907,318.00
Project Delivery (assume 30% construction cost)				$872,195.40
Total Improvement Cost				**$3,779,513.40**

Improvement 8

1. New access from to northbound TH 77 to eastbound I-494 CD roadway to Thunderbird Road (interim)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$7,000.00	1	$7,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.1	$600.00
Remove Curb & Gutter	LIN FT	$5.00	940	$4,700.00
Remove Pavement	SQ YD	$2.00	1750	$3,500.00
Concrete Walk	SQ FT	$2.50	1130	$2,825.00
Curb & Gutter	LIN FT	$10.00	960	$9,600.00
Wearing Course Mix	TON	$50.00	180	$9,000.00
Non-Wearing Course Mix	TON	$45.00	180	$8,100.00
Common Excavation	CU YD	$12.00	1440	$17,280.00
Subgrade Excavation	CU YD	$12.00	1080	$12,960.00
Aggregate Base (CV) Class 5	CU YD	$18.00	300	$5,400.00
Select Granular Borrow (CV)	CU YD	$10.00	540	$5,400.00
CD Roadway Lighting	LUMP SUM	$26,500.00	1	$26,500.00
Drainage	LUMP SUM	$42,500.00	1	$42,500.00
Erosion Control	LUMP SUM	$4,000.00	1	$4,000.00
Traffic Control	LUMP SUM	$5,000.00	1	$5,000.00
Turf Establishment	LUMP SUM	$2,500.00	1	$2,500.00
Signing & Striping	LUMP SUM	$4,000.00	1	$4,000.00
Subtotal				$170,865.00
Contingency & Minor Items (assume 20%)				$34,173.00
Total Construction Cost				$205,038.00
Project Delivery (assume 30% construction cost)				$61,511.40
Right of Way Cost	SQ FT	$40.00	6150	$246,000.00
Total Improvement Cost				**$512,549.40**

Improvement 9

1. New access from Thunderbird Road to northbound TH 77 to eastbound I-494 CD roadway (interim)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$9,500.00	1	$9,500.00
Remove Curb & Gutter	LIN FT	$5.00	1380	$6,900.00
Remove Pavement	SQ YD	$2.00	3500	$7,000.00
Concrete Walk	SQ FT	$2.50	4310	$10,775.00
Curb & Gutter	LIN FT	$10.00	1790	$17,900.00
Wearing Course Mix	TON	$50.00	370	$18,500.00
Non-Wearing Course Mix	TON	$45.00	370	$16,650.00
Common Excavation	CU YD	$12.00	500	$6,000.00
Subgrade Excavation	CU YD	$12.00	2540	$30,480.00
Aggregate Base (CV) Class 5	CU YD	$18.00	710	$12,780.00
Select Granular Borrow (CV)	CU YD	$10.00	1280	$12,800.00
CD Roadway Lighting	LUMP SUM	$10,000.00	1	$10,000.00
Drainage	LUMP SUM	$60,000.00	1	$60,000.00
Erosion Control	LUMP SUM	$2,500.00	1	$2,500.00
Traffic Control	LUMP SUM	$6,000.00	1	$6,000.00
Turf Establishment	LUMP SUM	$2,500.00	1	$2,500.00
Signing & Striping	LUMP SUM	$5,000.00	1	$5,000.00
Subtotal				$235,285.00
Contingency & Minor Items (assume 20%)				$47,057.00
Total Construction Cost				$282,342.00
Project Delivery (assume 30% construction cost)				$84,702.60
Right of Way Cost	SQ FT	$40.00	9820	$392,800.00
Total Improvement Cost				**$759,844.60**

Improvement 10A

1. New access from northbound TH77 to eastbound I-494 CD roadway to Thunderbird Road
(Construct new ramp from northbound TH77 to eastbound I-494 CD roadway to Thunderbird Road)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$10,000.00	1	$10,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.5	$3,000.00
Remove Curb & Gutter	LIN FT	$5.00	900	$4,500.00
Remove Pavement	SQ YD	$2.00	3090	$6,180.00
Concrete Walk	SQ FT	$2.50	12390	$30,975.00
Curb & Gutter	LIN FT	$10.00	3180	$31,800.00
8" Concrete Pavement (Ramp)	SQ YD	$4.00	1410	$5,640.00
Structural Concrete	CU YD	$63.00	310	$19,530.00
Subgrade Excavation	CU YD	$12.00	2290	$27,480.00
Aggregate Base (CV) Class 5	CU YD	$18.00	640	$11,520.00
Select Granular Borrow	CU YD	$10.00	1150	$11,500.00
Street Lighting Modification	LUMP SUM	$28,000.00	1	$28,000.00
Traffic Control	LUMP SUM	$9,000.00	1	$9,000.00
Turf Establishment	LUMP SUM	$6,000.00	1	$6,000.00
Drainage	LUMP SUM	$70,000.00	1	$70,000.00
Subtotal				$275,125.00
Contingency & Minor Items (assume 20%)				$55,025.00
Total Construction Cost				$330,150.00
Project Delivery (assume 30% construction cost)				$99,045.00
Right of Way Cost[1]	SQ FT	$40.00	20740	$829,600.00
Total Improvement Cost				**$1,258,795.00**

1. Right of Way quantity does not include area of proposed Mn/DOT roadway for TH77. Assumed that roadway was completed.

Improvement 10B

1. New access from Thunderbird Road to northbound TH 77 to eastbound I-494 CD roadway (permanent)
(Construct a new ramp from Thunderbird Road to the northbound TH77 to the eastbound I-494 roadway)
2. Construction of a new CD roadway under 24th Avenue to east of 34th Avenue

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$360,000.00	1	$360,000.00
Clearing & Grubbing	ACRE	$6,000.00	1.8	$10,800.00
Remove Curb & Gutter	LIN FT	$5.00	1590	$7,950.00
Remove Pavement	SQ YD	$2.00	8060	$16,120.00
Concrete Walk	SQ FT	$2.50	4330	$10,825.00
Curb & Gutter	LIN FT	$10.00	6700	$67,000.00
8" Concrete Pavement (Ramp)	SQ YD	$4.00	4790	$19,160.00
Structural Concrete	CU YD	$63.00	1060	$66,780.00
Common Excavation	CU YD	$12.00	42180	$506,160.00
Subgrade Excavation	CU YD	$12.00	8070	$96,840.00
Aggregate Base (CV) Class 5	CU YD	$18.00	2240	$40,320.00
Select Granular Borrow (CV)	CU YD	$10.00	4040	$40,400.00
Wearing Course Mix	TON	$50.00	500	$25,000.00
Non-Wearing Course Mix	TON	$45.00	500	$22,500.00
Bridge/Tunnel (Conspan 3-sided Structure)	SQ FT	$250.00	9000	$2,250,000.00
Steel Sheet Piling (temporary)	SQ FT	$20.00	32140	$642,800.00
Sheet Piling Anchors	EACH	$2,000.00	80	$160,000.00
CIP Retaining Wall	SQ FT	$40.00	28200	$1,128,000.00
MAC LIGHT SUPPORT BRIDGE OVER I-494[3]	LUMP SUM	$500,000.00	1	$500,000.00
Traffic Barrier	LUMP SUM	$7,500.00	1	$7,500.00
CD Tunnel Lighting	LUMP SUM	$50,000.00	1	$50,000.00
CD Roadway Lighting	LUMP SUM	$90,000.00	1	$90,000.00
Drainage	LUMP SUM	$2,200,000.00	1	$2,200,000.00
Erosion Control	LUMP SUM	$90,000.00	1	$90,000.00
Staging & Traffic Control	LUMP SUM	$400,000.00	1	$400,000.00
Turf Establishment	LUMP SUM	$60,000.00	1	$60,000.00
Signing & Striping	LUMP SUM	$100,000.00	1	$100,000.00
Subtotal				$8,968,155.00
Contingency & Minor Items (assume 20%)				$1,793,631.00
Total Construction Cost				$10,761,786.00
Project Delivery (assume 31% construction cost)[1]				$3,336,153.66
Easement	SQ FT	$20.00	20780	$415,600.00
Right of Way Cost[2]	SQ FT	$40.00	45985	$1,839,400.00
Total Improvement Cost				**$16,352,939.66**

1. Additional cost to account for coordinating & permitting with Mn/DOT and FHWA.
2. Right of Way quantity does not include area of proposed Mn/DOT roadway for TH77. Assumed that roadway was completed.
3. Subject to FAA & Mn/DOT Aeronautics approval. Price includes bridge and lighting components.

Improvement 10C

1. Thunderbird Road Roundabout

(Construct a new roundabout from Thunderbird road to ramp off of TH 77)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$8,000.00	1	$8,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.1	$600.00
Remove Curb & Gutter	LIN FT	$5.00	630	$3,150.00
Remove Pavement	SQ YD	$2.00	3250	$6,500.00
Concrete Walk	SQ FT	$2.50	7660	$19,150.00
Curb & Gutter	LIN FT	$10.00	1420	$14,200.00
Subgrade Excavation	CU YD	$12.00	2250	$27,000.00
Aggregate Base (CV) Class 5	CU YD	$18.00	560	$10,080.00
Select Granular Borrow	CU YD	$10.00	1130	$11,300.00
Wearing Course Mix	TON	$50.00	510	$25,500.00
Non-Wearing Course Mix	TON	$45.00	510	$22,950.00
Traffic Control	LUMP SUM	$2,000.00	1	$2,000.00
Turf Establishment	LUMP SUM	$1,000.00	1	$1,000.00
Drainage	LUMP SUM	$35,000.00	1	$35,000.00
Subtotal				$186,430.00
Contingency & Minor Items (assume 20%)				$37,286.00
Total Construction Cost				$223,716.00
Project Delivery (assume 30% construction cost)				$67,114.80
Right of Way Cost	SQ FT	$40.00	22185	$887,400.00
Total Improvement Cost				**$1,178,230.80**

Improvement 11

1. Westbound I-494 to the southbound 24th Avenue, triple left-turn lane
(Construct an additional westbound left-turn lane (triple lefts))

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$18,000.00	1	$18,000.00
Remove Curb & Gutter	LIN FT	$5.00	1760	$8,800.00
Remove Concrete Walk	SQ FT	$1.00	21740	$21,740.00
Remove Pavement	SQ YD	$2.00	560	$1,120.00
Curb & Gutter	LIN FT	$10.00	1460	$14,600.00
Concrete Walk	SQ FT	$2.50	9020	$22,550.00
8" Concrete Pavement (Ramp)	SQ YD	$4.00	1540	$6,160.00
Structural Concrete	CU YD	$63.00	350	$22,050.00
Common Excavation	CU YD	$12.00	2000	$24,000.00
Subgrade Excavation	CU YD	$12.00	1000	$12,000.00
Aggregate Base Class 5 (CV)	CU YD	$18.00	600	$10,800.00
Select Granular Borrow (CV)	CU YD	$10.00	700	$7,000.00
Truncated Dome	SQ FT	$60.00	96	$5,760.00
Chain Link Fence	LIN FT	$10.00	460	$4,600.00
Drainage	LUMP SUM	$105,000.00	1	$105,000.00
Signal Modification	LUMP SUM	$75,000.00	1	$75,000.00
Street Lighting Modification	LUMP SUM	$20,000.00	1	$20,000.00
Erosion Control	LUMP SUM	$9,000.00	1	$9,000.00
Traffic Control	LUMP SUM	$11,000.00	1	$11,000.00
Turf Establishment	LUMP SUM	$5,000.00	1	$5,000.00
Signing & Striping	LUMP SUM	$10,000.00	1	$10,000.00
Subtotal				$414,180.00
Contingency & Minor Items (assume 20%)				$82,836.00
Total Construction Cost				$497,016.00
Project Delivery (assume 30% construction cost)				$149,104.80
Total Improvement Cost				**$646,120.80**

Improvement 12 A

1. Turn lane and signal improvements at American Boulevard/24th Avenue (West of 24th Avenue)
(Extend the eastbound left-turn lanes to 500 feet)
(Construct an additional southbound right-turn lane. Extend both turn lanes to the I-494 single-point interchange)
(Construct an additional eastbound right-turn lane. (Dual Rights))

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$34,000.00	1	$34,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.3	$1,800.00
Remove Curb & Gutter	LIN FT	$5.00	1790	$8,950.00
Remove Concrete Walk	SQ FT	$1.00	13860	$13,860.00
Mill Pavement	SQ YD	$3.00	8280	$24,840.00
Remove Pavement	SQ YD	$2.00	290	$580.00
Curb & Gutter	LIN FT	$10.00	2330	$23,300.00
Concrete Walk	SQ FT	$2.50	22280	$55,700.00
Wearing Course Mix	TON	$50.00	1350	$67,500.00
Non-Wearing Course Mix	TON	$45.00	490	$22,050.00
Common Excavation	CU YD	$12.00	1800	$21,600.00
Subgrade Excavation	CU YD	$12.00	3040	$36,480.00
Aggregate Base (CV) Class 5	CU YD	$18.00	1050	$18,900.00
Select Granular Base (CV)	CU YD	$10.00	1520	$15,200.00
Truncated Dome	SQ FT	$60.00	64	$3,840.00
Drainage	LUMP SUM	$205,000.00	1	$205,000.00
Signal Modification	LUMP SUM	$140,000.00	1	$140,000.00
Street Lighting Modification	LUMP SUM	$63,000.00	1	$63,000.00
Traffic Control	LUMP SUM	$20,000.00	1	$20,000.00
Signing & Striping	LUMP SUM	$10,000.00	1	$10,000.00
Turf Establishment	LUMP SUM	$10,000.00	1	$10,000.00
Traffic Signal Phasing	EACH	$5,000.00	1	$5,000.00
Subtotal				$801,600.00
Contingency & Minor Items (assume 20%)				$160,320.00
Total Construction Cost				$961,920.00
Project Delivery (assume 30% construction cost)				$288,576.00
Right of Way Cost	SQ FT	$40.00	6845	$273,800.00
Total Improvement Cost				**$1,524,296.00**

Improvement 12 B

1. Turn lane and signal improvements at American Boulevard/24th Avenue (East of 24th Avenue)
(Extend the southbound left most left-turn lane to 500 feet)
(Extend the westbound left-turn lanes to 500 feet)
(Construct an additional westbound right-turn lane to provide three westbound right-turn lanes)
(The westbound approach should have four approach lanes that begin at 28th Avenue)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$50,000.00	1	$50,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.2	$1,200.00
Remove Curb & Gutter	LIN FT	$5.00	3460	$17,300.00
Remove Concrete Walk	SQ FT	$1.00	25170	$25,170.00
Mill Pavement	SQ YD	$3.00	7420	$22,260.00
Remove Pavement	SQ YD	$2.00	260	$520.00
Curb & Gutter	LIN FT	$10.00	4920	$49,200.00
Concrete Walk	SQ FT	$2.50	43110	$107,775.00
Wearing Course Mix	TON	$50.00	2480	$124,000.00
Non-Wearing Course Mix	TON	$45.00	1460	$65,700.00
Common Excavation	CU YD	$12.00	4800	$57,600.00
Subgrade Excavation	CU YD	$12.00	4670	$56,040.00
Aggregate Base (CV) Class 5	CU YD	$18.00	1500	$27,000.00
Select Granular Base (CV)	CU YD	$10.00	2330	$23,300.00
Truncated Dome	SQ FT	$60.00	96	$5,760.00
Drainage	LUMP SUM	$295,000.00	1	$295,000.00
Signal Modification	LUMP SUM	$140,000.00	1	$140,000.00
Street Lighting Modification	LUMP SUM	$45,500.00	1	$45,500.00
Traffic Control	LUMP SUM	$30,000.00	1	$30,000.00
Signing & Striping	LUMP SUM	$15,000.00	1	$15,000.00
Turf Establishment	LUMP SUM	$10,000.00	1	$10,000.00
Traffic Signal Phasing	EACH	$5,000.00	1	$5,000.00
Subtotal				$1,173,325.00
Contingency & Minor Items (assume 20%)				$234,665.00
Total Construction Cost				$1,407,990.00
Project Delivery (assume 30% construction cost)				$422,397.00
Right of Way Cost	SQ FT	$40.00	56165	$2,246,600.00
Total Improvement Cost				**$4,076,987.00**

Improvement 13 ***

1. Turn lane improvements at 28th Avenue/82nd Street
(Construct an additional westbound left-turn lane)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$21,000.00	1	$21,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.7	$4,200.00
Remove Bituminous Pavement	SQ YD	$2.00	1220	$2,440.00
Remove Curb & Gutter	LIN FT	$5.00	2090	$10,450.00
Remove Concrete Walk	SQ FT	$1.00	1720	$1,720.00
Mill Bituminous Pavement	SQ YD	$1.65	1080	$1,782.00
Wearing Course Mix	TON	$50.00	970	$48,500.00
Non-Wearing Course Mix	TON	$45.00	970	$43,650.00
Curb & Gutter	LIN FT	$10.00	2840	$28,400.00
Subgrade Excavation	CU YD	$12.00	2740	$32,880.00
Aggregate Base (CV) Class 5	CU YD	$18.00	800	$14,400.00
Select Granular Borrow	CU YD	$10.00	1370	$13,700.00
Truncated Dome	SQ FT	$60.00	64	$3,840.00
Drainage	LUMP SUM	$105,000.00	1	$105,000.00
Signing & Striping	LUMP SUM	$4,000.00	1	$4,000.00
Signal Modification	LUMP SUM	$135,000.00	1	$135,000.00
Traffic Control	LUMP SUM	$13,000.00	1	$13,000.00
Turf Establishment	LUMP SUM	$3,500.00	1	$3,500.00
Concrete Walk	SQ FT	$2.50	3420	$8,550.00
Subtotal				$496,012.00
Contingency & Minor Items (assume 15%)				$74,401.80
Total Construction Cost				$570,413.80
Project Delivery (assume 25% construction cost)				$142,603.45
Right of Way Cost	SQ FT	$40.00	37350	$1,494,000.00
Total Improvement Cost				**$2,207,017.25**

*** Cost for Improvement 13 is anticipated to be fully funded by Metro Transit.

Improvement 14

1. Old Shakopee Road improvements between Killebrew Drive and TH77
(Reconstruct with three through lanes in each direction and a median with left-turn lanes)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$120,000.00	1	$120,000.00
Remove Curb & Gutter	LIN FT	$5.00	6830	$34,150.00
Mill Pavement	SQ YD	$3.00	19720	$59,160.00
Subgrade Excavation	CU YD	$12.00	36400	$436,800.00
Aggregate Base (CV) Class 5	CU YD	$18.00	10120	$182,160.00
Select Granular Borrow	CU YD	$10.00	18200	$182,000.00
Curb & Gutter	LIN FT	$10.00	6830	$68,300.00
Wearing Course Mix	TON	$50.00	6520	$326,000.00
Non-Wearing Course Mix	TON	$45.00	4010	$180,450.00
Signal Modification	LUMP SUM	$220,000.00	1	$220,000.00
Street Lighting Modification	LUMP SUM	$250,000.00	1	$250,000.00
Truncated Dome	SQ FT	$60.00	448	$26,880.00
Traffic Control	LUMP SUM	$75,000.00	1	$75,000.00
Turf Establishment	LUMP SUM	$35,000.00	1	$35,000.00
Drainage[1]	LUMP SUM	$750,000.00	1	$750,000.00
Subtotal				$2,945,900.00
Contingency & Minor Items (assume 20%)				$589,180.00
Total Construction Cost				$3,535,080.00
Project Delivery (assume 30% construction cost)				$1,060,524.00
Right of Way Cost[2, 3]	LUMP SUM	$5,700,000.00	1	$5,700,000.00
Total Improvement Cost				**$10,295,604.00**

1. Do not have graphics for improvement. Assumed drainage structures to be installed every 300' along each side of roadway including median.
2. ROW width assumed to be 96' (48' both sides from centerline of existing roadway)
3. Assume total takes. The cost of Right of Way was supplied by the City of Bloomington.

Improvement 15

1. American Boulevard conversion to a westbound one-way between 30th Ave. and 34th Avenue with three through lanes

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$13,000.00	1	$13,000.00
Remove Curb & Gutter	LIN FT	$5.00	2680	$13,400.00
Remove Concrete Walk	SQ FT	$1.00	2100	$2,100.00
Remove Pavement	SQ YD	$2.00	6210	$12,420.00
Curb & Gutter	LIN FT	$10.00	470	$4,700.00
Topsoil Borrow	CU YD	$14.00	4000	$56,000.00
Turf Establishment	LUMP SUM	$5,000.00	1	$5,000.00
Traffic Control	LUMP SUM	$8,000.00	1	$8,000.00
Signal Modification	LUMP SUM	$75,000.00	1	$75,000.00
Street Lighting Modification	LUMP SUM	$50,000.00	1	$50,000.00
Turf Establishment	LUMP SUM	$1,500.00	1	$1,500.00
Drainage	LUMP SUM	$76,000.00	1	$76,000.00
Subtotal				$317,120.00
Contingency & Minor Items (assume 15%)				$47,568.00
Total Construction Cost				$364,688.00
Project Delivery (assume 30% construction cost)				$109,406.40
Total Improvement Cost				**$474,094.40**

Improvement 16

1. Turn lane improvements at American Boulevard/34th Avenue (listed in Bloomington Central Station Traffic Study)
(Eliminate the southbound free right-turn lane)
(Construct southbound dual right-turn lanes that extend from the I-494 South Ramps)
(Eliminate the westbound free right-turn lane)
(Construct westbound dual right-turn lanes)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$40,000.00	1	$40,000.00
Remove Concrete Walk	SQ FT	$1.00	19780	$19,780.00
Mill Pavement	SQ YD	$3.00	8040	$24,120.00
Remove Curb & Gutter	LIN FT	$5.00	2770	$13,850.00
Remove Pavement	SQ YD	$2.00	560	$1,120.00
Curb & Gutter	LIN FT	$10.00	2080	$20,800.00
Wearing Course Mix	TON	$50.00	1700	$85,000.00
Non-Wearing Course Mix	TON	$45.00	670	$30,150.00
Subgrade Excavation	CU YD	$12.00	3260	$39,120.00
Aggregate Base (CV) Class 5	CU YD	$18.00	910	$16,380.00
Select Granular Borrow	CU YD	$10.00	1630	$16,300.00
Concrete Walk	SQ FT	$2.50	9030	$22,575.00
Signal Modification	LUMP SUM	$220,000.00	1	$220,000.00
Street Lighting Modification	LUMP SUM	$60,000.00	1	$60,000.00
Truncated Dome	SQ FT	$60.00	144	$8,640.00
Modular Block Retaining Wall	SQ FT	$20.00	3810	$76,200.00
Drainage	LUMP SUM	$250,000.00	1	$250,000.00
Traffic Control	LUMP SUM	$25,000.00	1	$25,000.00
Turf Establishment	LUMP SUM	$8,000.00	1	$8,000.00
Signing & Striping	LUMP SUM	$10,000.00	1	$10,000.00
Subtotal				$987,035.00
Contingency & Minor Items (assume 20%)				$197,407.00
Total Construction Cost				$1,184,442.00
Project Delivery (assume 30% construction cost)				$355,332.60
Right of Way Cost	SQ FT	$40.00	17820	$712,800.00
Total Improvement Cost				**$2,252,574.60**

Improvement 17

1. Turn lane improvements at American Boulevard/ International Drive/ 33rd Avenue
(The westbound approach will include a left-turn lane, two through lanes and a right-turn lane)
(The southbound approach will be a right-turn only (free movement))
(Convert to a right-in/right-out/eastbound left-in access)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$2,500.00	1	$2,500.00
Remove Pavement	SQ YD	$2.00	360	$720.00
Remove Concrete Walk	SQ FT	$1.00	2170	$2,170.00
Remove Curb & Gutter	LIN FT	$5.00	690	$3,450.00
Concrete Walk	SQ FT	$2.50	8490	$21,225.00
Truncated Dome	SQ FT	$60.00	64	$3,840.00
Traffic Control	LUMP SUM	$1,500.00	1	$1,500.00
Drainage	LUMP SUM	$70,000.00	1	$70,000.00
Turf Establishment	LUMP SUM	$1,000.00	1	$1,000.00
Curb & Gutter	LIN FT	$10.00	740	$7,400.00
Subtotal				$113,805.00
Contingency & Minor Items (assume 15%)				$17,070.75
Total Construction Cost				$130,875.75
Project Delivery (assume 30% construction cost)				$39,262.73
Total Improvement Cost				**$170,138.48**

Improvement 18

1. Turn lane improvements at American Boulevard/ Metro Drive East
(Construct a westbound left-turn lane (200 feet))
(The westbound approach will include a left-turn lane, three through lanes and a right-turn lane)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$6,500.00	1	$6,500.00
Clearing & Grubbing	ACRE	$6,000.00	0.3	$1,800.00
Mill Pavement	SQ YD	$3.00	2490	$7,470.00
Remove Curb & Gutter	LIN FT	$5.00	1050	$5,250.00
Curb & Gutter	LIN FT	$10.00	470	$4,700.00
Wearing Course Mix	TON	$50.00	820	$41,000.00
Non-Wearing Course Mix	TON	$45.00	240	$10,800.00
Subgrade Excavation	CU YD	$12.00	1260	$15,120.00
Aggregate Base (CV) Class 5	CU YD	$18.00	350	$6,300.00
Select Granular Borrow (CV)	CU YD	$10.00	640	$6,400.00
Truncated Dome	SQ FT	$60.00	32	$1,920.00
Drainage	LUMP SUM	$40,000.00	1	$40,000.00
Traffic Control	LUMP SUM	$4,000.00	1	$4,000.00
Turf Establishment	LUMP SUM	$2,500.00	1	$2,500.00
Signing & Striping	LUMP SUM	$3,000.00	1	$3,000.00
Subtotal				$156,760.00
Contingency & Minor Items (assume 15%)				$23,514.00
Total Construction Cost				$180,274.00
Project Delivery (assume 30% construction cost)				$54,082.20
Total Improvement Cost				**$234,356.20**

Improvement 19

1. New traffic signal and turn lane improvements at American Boulevard/30th Avenue
(Installation of a traffic signal)
(Convert the eastbound through lanes into dual right-turn lanes)
(The westbound 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 northbound approach will include dual left-turn lanes)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$17,000.00	1	$17,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.3	$1,800.00
Remove Pavement	SQ YD	$2.00	250	$500.00
Remove Curb & Gutter	LIN FT	$5.00	600	$3,000.00
Mill Pavement	SQ YD	$3.00	1900	$5,700.00
Concrete Walk	SQ FT	$1.00	1510	$1,510.00
Curb & Gutter	LIN FT	$10.00	1010	$10,100.00
Wearing Course Mix	TON	$50.00	430	$21,500.00
Non-Wearing Course Mix	TON	$45.00	180	$8,100.00
Subgrade Excavation	CU YD	$12.00	1030	$12,360.00
Aggregate Base (CV) Class 5	CU YD	$18.00	290	$5,220.00
Select Granular Borrow	CU YD	$10.00	510	$5,100.00
Truncated Dome	SQ FT	$60.00	64	$3,840.00
Drainage	LUMP SUM	$100,000.00	1	$100,000.00
Signing & Striping	LUMP SUM	$1,500.00	1	$1,500.00
Traffic Control	LUMP SUM	$10,000.00	1	$10,000.00
Turf Establishment	LUMP SUM	$6,000.00	1	$6,000.00
Traffic Signal	EACH	$200,000.00	1	$200,000.00
Subtotal				$413,230.00
Contingency & Minor Items (assume 15%)				$61,984.50
Total Construction Cost				$475,214.50
Project Delivery (assume 30% construction cost)				$142,564.35
Total Improvement Cost				**$617,778.85**

Improvement 20

1. Turn lane, striping, and signal phasing improvements at American Boulevard/ 28th Avenue
(Construct an eastbound right-turn lane (250 feet))
(Restripe the northbound inside through lane to a left-turn/through lane)
(Extend the northbound left-turn lane to 200 feet)
(Convert the northbound left-turn/through lane into a left-turn lane)
(Construct a southbound left-turn lane)
(Replace north-south split phasing with protected left-turn phasing)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$16,000.00	1	$16,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.1	$600.00
Remove Curb & Gutter	LIN FT	$5.00	460	$2,300.00
Remove Concrete Walk	SQ FT	$1.00	5800	$5,800.00
Mill Pavement	SQ YD	$3.00	7510	$22,530.00
Wearing Course Mix	TON	$50.00	1030	$51,500.00
Non-Wearing Course Mix	TON	$45.00	70	$3,150.00
Subgrade Excavation	CU YD	$12.00	910	$10,920.00
Aggregate Base (CV) Class 5	CU YD	$18.00	260	$4,680.00
Select Granular Borrow (CV)	CU YD	$10.00	460	$4,600.00
Curb & Gutter	LIN FT	$10.00	540	$5,400.00
Concrete Walk	SQ FT	$2.50	5430	$13,575.00
Truncated Dome	SQ FT	$60.00	64	$3,840.00
Drainage	LUMP SUM	$95,000.00	1	$95,000.00
Signing & Striping	LUMP SUM	$3,000.00	1	$3,000.00
Signal Modification	LUMP SUM	$100,000.00	1	$100,000.00
Street Lighting Modification	LUMP SUM	$20,000.00	1	$20,000.00
Traffic Control	LUMP SUM	$10,000.00	1	$10,000.00
Turf Establishment	LUMP SUM	$2,500.00	1	$2,500.00
Traffic Signal Phasing	EACH	$10,000.00	1	$10,000.00
Subtotal				$385,395.00
Contingency & Minor Items (assume 20%)				$77,079.00
Total Construction Cost				$462,474.00
Project Delivery (assume 30% construction cost)				$138,742.20
Right of Way Cost	SQ FT	$40.00	2240	$89,600.00
Total Improvement Cost				**$690,816.20**

Improvement 20A

On 28th Ave, add SB lane from American Blvd to 82nd St

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$19,000.00	1	$19,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.3	$1,800.00
Remove Curb & Gutter	LIN FT	$5.00	1640	$8,200.00
Remove Concrete Walk	SQ FT	$1.00	15850	$15,850.00
Mill Pavement	SQ YD	$3.00	5030	$15,090.00
Common Excavation	CU YD	$12.00	2060	$24,720.00
Subgrade Excavation	CU YD	$12.00	2500	$30,000.00
Aggregate Base (CV) Class 5	CU YD	$18.00	700	$12,600.00
Select Granular Borrow	CU YD	$10.00	1250	$12,500.00
Curb & Gutter	LIN FT	$10.00	1690	$16,900.00
Concrete Walk	SQ FT	$2.50	14070	$35,175.00
Wearing Course Mix	TON	$50.00	1060	$53,000.00
Non-Wearing Course Mix	TON	$45.00	460	$20,700.00
Truncated Dome	SQ FT	$60.00	96	$5,760.00
Drainage	LUMP SUM	$120,000.00	1	$120,000.00
Signing & Striping	LUMP SUM	$5,000.00	1	$5,000.00
Street Lighting Modification	LUMP SUM	$45,000.00	1	$45,000.00
Traffic Control	LUMP SUM	$11,000.00	1	$11,000.00
Turf Establishment	LUMP SUM	$6,000.00	1	$6,000.00
Subtotal				$458,295.00
Contingency & Minor Items (assume 20%)				$91,659.00
Total Construction Cost				$549,954.00
Project Delivery (assume 30% construction cost)				$164,986.20
Right of Way Cost	SQ FT	$40.00	24030	$961,200.00
Total Improvement Cost				**$1,676,140.20**

Improvement 21

1. Southbound right in on 34th Avenue into the Northeast housing

(Construct a southbound right-in access to serve the Northeast Housing residents)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$7,000.00	1	$7,000.00
Clearing & Grubbing	ACRE	$6,000.00	0.3	$1,800.00
Remove Curb & Gutter	LIN FT	$5.00	290	$1,450.00
Remove Concrete Walk	SQ FT	$1.00	2840	$2,840.00
Mill Pavement	SQ YD	$3.00	2100	$6,300.00
Concrete Walk	SQ FT	$2.50	3570	$8,925.00
Wearing Course Mix	TON	$50.00	350	$17,500.00
Non-wearing Course Mix	TON	$45.00	80	$3,600.00
Curb & Gutter	LIN FT	$10.00	400	$4,000.00
Subgrade Excavation	CU YD	$12.00	410	$4,920.00
Aggregate Base (CV) Class 5	CU YD	$18.00	120	$2,160.00
Select Granular Base	CU YD	$10.00	140	$1,400.00
Truncated Dome	SQ FT	$60.00	32	$1,920.00
Drainage	LUMP SUM	$40,000.00	1	$40,000.00
Traffic Control	LUMP SUM	$4,000.00	1	$4,000.00
Signal Modification	LUMP SUM	$50,000.00	1	$50,000.00
Turf Establishment	LUMP SUM	$1,500.00	1	$1,500.00
Signing & Striping	LUMP SUM	$2,000.00	1	$2,000.00
Subtotal				$161,315.00
Contingency & Minor Items (assume 20%)				$32,263.00
Total Construction Cost				$193,578.00
Project Delivery (assume 30% construction cost)				$58,073.40
Right of Way Cost	SQ FT	$40.00	3560	$142,400.00
Total Improvement Cost				**$394,051.40**

Improvement 22

1. New traffic signal and turn lane improvements at Old Shakopee Road/ 33rd Avenue

(Installation of a traffic signal)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$13,000.00	1	$13,000.00
Traffic Signal	EACH	$220,000.00	1	$220,000.00
Subtotal				$220,000.00
Contingency & Minor Items (assume 5%)				$11,000.00
Total Construction Cost				$231,000.00
Project Delivery (assume 30% construction cost)				$69,300.00
Total Improvement Cost				**$300,300.00**

Improvement 24

1. New traffic signal and turn lane improvements at Old Shakopee Road/ 30th Avenue
(Installation of a traffic signal)
(Construct an eastbound left-turn lane (350 feet))
(The southbound approach will include dual left-turn lanes and dual right-turn lanes (300 ft). 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.)
(The southbound approach will include dual left-turn lanes and dual right-turn lanes (300 ft). However, full-length dual left-turn lanes should be provided with a short right-turn lane.)
(Construct an additional eastbound left-turn lane (350 feet))

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$50,000.00	1	$50,000.00
Clearing & Grubbing	ACRE	$6,000.00	1.7	$10,200.00
Remove Curb & Gutter	LIN FT	$5.00	1870	$9,350.00
Remove Pavement	SQ YD	$2.00	490	$980.00
Mill Pavement	SQ YD	$3.00	3740	$11,220.00
Curb & Gutter	LIN FT	$10.00	4450	$44,500.00
Concrete Walk	SQ FT	$2.50	10200	$25,500.00
Wearing Course Mix	TON	$50.00	2050	$102,500.00
Non-Wearing Course Mix	TON	$45.00	1570	$70,650.00
Subgrade Excavation	CU YD	$12.00	6380	$76,560.00
Aggregate Base (CV) Class 5	CU YD	$18.00	1780	$32,040.00
Select Granular Borrow (CV)	CU YD	$10.00	3190	$31,900.00
Retaining Wall	SQ FT	$40.00	2850	$114,000.00
Truncated Dome	SQ FT	$60.00	32	$1,920.00
Drainage	LUMP SUM	$300,000.00	1	$300,000.00
Signing & Striping	LUMP SUM	$10,000.00	1	$10,000.00
Traffic Control	LUMP SUM	$30,000.00	1	$30,000.00
Street Lighting Modification	LUMP SUM	$50,000.00	1	$50,000.00
Turf Establishment	LUMP SUM	$9,000.00	1	$9,000.00
Traffic Signal	EACH	$220,000.00	1	$220,000.00
Subtotal				$1,200,320.00
Contingency & Minor Items (assume 20%)				$240,064.00
Total Construction Cost				$1,440,384.00
Project Delivery (assume 30% construction cost)				$432,115.20
Right of Way Cost	SQ FT	$40.00	14025	$561,000.00
Total Improvement Cost				**$2,433,499.20**

Improvement 25

1. New traffic signal and turn lane improvements at Old Shakopee Road/ 28th Avenue
(Installation of a traffic signal)
(The new northbound approach will include dual left-turn lanes, two through lanes and a right-turn lane)
(Construct an eastbound left-turn lane (300 feet) and a right-turn lane (300 feet))
(Construct dual westbound left-turn lanes (300 feet))
(Restripe the southbound left-turn lane to a through lane)
(Construct a southbound left-turn lane (250 feet))
(Construct an additional eastbound left-turn lane (300 feet))
(Construct a westbound right-turn lane (300 feet))
(Construct an additional southbound right-turn lane (400 feet))
(Construct an additional southbound left-turn lane (250 feet))
(Construct an additional northbound right-turn lane (300 feet))

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$90,000.00	1	$90,000.00
Clearing & Grubbing	ACRE	$6,000.00	3	$18,000.00
Remove Curb & Gutter	LIN FT	$5.00	4700	$23,500.00
Remove Pavement	SQ YD	$2.00	1880	$3,760.00
Mill Pavement	SQ YD	$3.00	9870	$29,610.00
Concrete Walk	SQ FT	$2.50	23170	$57,925.00
Wearing Course Mix	TON	$50.00	4520	$226,000.00
Non-Wearing Course Mix	TON	$45.00	3260	$146,700.00
Curb & Gutter	LIN FT	$10.00	9660	$96,600.00
Subgrade Excavation	CU YD	$12.00	13620	$163,440.00
Aggregate Base (CV) Class 5	CU YD	$18.00	3790	$68,220.00
Select Granular Borrow (CV)	CU YD	$10.00	6810	$68,100.00
Truncated Dome	SQ FT	$60.00	192	$11,520.00
Drainage	LUMP SUM	$540,000.00	1	$540,000.00
Retaining Wall	SQ FT	$40.00	2700	$108,000.00
Erosion Control & Turf Establishment	LUMP SUM	$50,000.00	1	$50,000.00
Signing & Striping	LUMP SUM	$26,000.00	1	$26,000.00
Street Lighting Modification	LUMP SUM	$115,000.00	1	$115,000.00
Traffic Control	LUMP SUM	$54,000.00	1	$54,000.00
Turf Establishment	LUMP SUM	$22,000.00	1	$22,000.00
Traffic Signal	EACH	$255,000.00	1	$255,000.00
Subtotal				$2,173,375.00
Contingency & Minor Items (assume 20%)				$434,675.00
Total Construction Cost				$2,608,050.00
Project Delivery (assume 30% of construction cost)				$782,415.00
Right of Way Cost	SQ FT	$40.00	109455	$4,378,200.00
Total Improvement Cost				**$7,768,665.00**

Improvement 26

1. Reconstruction of I-494/34th Avenue interchange (with LRT)
2. Reconstruction of I-494/34th Avenue interchange (without LRT)

(Reconstruct the interchange to include loops in the northwest and southwest quadrants
(see Figure 11: Proposed Roadway Concept, I-494/34th Avenue)
These improvements will eliminate two major traffic conflicts with LRT operations, the westbound to southbound movement, and the southbound to eastbound movement. Improvements at the 34th Avenue/I-494 Ramps are a result of increased traffic volumes due to background growth and adjacent developments.)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$1,200,000.00	1	$1,200,000.00
Clearing & Grubbing	ACRE	$6,000.00	4	$24,000.00
Remove Curb & Gutter	LIN FT	$5.00	22290	$111,450.00
Remove Pavement	SQ YD	$2.00	36750	$73,500.00
Mill Pavement	SQ YD	$3.00	29390	$88,170.00
Concrete Walk	SQ FT	$2.50	115310	$288,275.00
8" Concrete Pavement (Ramps)	SQ YD	$4.00	53930	$215,720.00
Structural Concrete	CU YD	$63.00	11990	$755,370.00
Wearing Course Mix (34th Ave and Shoulders)	TON	$50.00	4350	$217,500.00
Non-Wearing Course Mix (34th Ave & Shoulders)	TON	$45.00	1700	$76,500.00
Curb & Gutter	LIN FT	$10.00	53620	$536,200.00
Common Embankment	CU YD	$1.50	130270	$195,405.00
Subgrade Excavation	CU YD	$12.00	72660	$871,920.00
Aggregate Base (CV) Class 5	CU YD	$18.00	20200	$363,600.00
Select Granular Borrow	CU YD	$10.00	36330	$363,300.00
Truncated Dome	SQ FT	$60.00	160	$9,600.00
Steel Bridges (5)	SQ FT	$150.00	33000	$4,950,000.00
Pre-Cast Concrete Bridges (5)	SQ FT	$120.00	41000	$4,920,000.00
Overhead Sign Structure	LUMP SUM	$120,000.00	1	$120,000.00
MSE Retaining Wall	SQ FT	$45.00	66060	$2,972,700.00
Drainage	LUMP SUM	$7,000,000.00	1	$7,000,000.00
Erosion Control	LUMP SUM	$100,000.00	1	$100,000.00
Lighting	LUMP SUM	$50,000.00	1	$50,000.00
Signal Modification	LUMP SUM	$480,000.00	1	$480,000.00
Lighting	LUMP SUM	$245,000.00	1	$245,000.00
Traffic Control	LUMP SUM	$700,000.00	1	$700,000.00
Turf Establishment	LUMP SUM	$250,000.00	1	$250,000.00
Signing & Striping	LUMP SUM	$300,000.00	1	$300,000.00
Subtotal				$27,478,210.00
Contingency & Minor Items (assume 25%)				$6,869,552.50
Total Construction Cost				$34,347,762.50
Project Delivery (assume 30% construction cost)				$10,304,328.75
Right of Way Cost[1]	LUMP SUM	$15,000,000.00	1	$15,000,000.00
Total Improvement Cost				**$59,652,091.25**

1. The cost of Right of Way is supplied by the City of Bloomington.

Improvement 27

1. 24th Avenue/82nd Street

(On the north approach, convert the right/through lane into a trap dual right-turn lane. This improvement will create better lane utilization upstream at the single-point interchange)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$3,400.00	1	$3,400.00
Remove Curb & Gutter	LIN FT	$5.00	80	$400.00
Concrete Walk	SQ FT	$2.50	1480	$3,700.00
Curb & Gutter	LIN FT	$10.00	160	$1,600.00
Truncated Dome	SQ FT	$60.00	32	$1,920.00
Signal Modification	LUMP SUM	$50,000.00	1	$50,000.00
Traffic Control	LUMP SUM	$2,200.00	1	$2,200.00
Signing & Striping	LUMP SUM	$1,000.00	1	$1,000.00
Subtotal				$64,220.00
Contingency & Minor Items (assume 15%)				$9,633.00
Total Construction Cost				$73,853.00
Project Delivery (assume 30% construction cost)				$22,155.90
Total Improvement Cost				**$96,008.90**

Improvement 28A

1. 86th Street Extension to EOSR to 28th Ave

(Construct two lanes in each direction with a median and left and right-turn lanes)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$580,000.00	1	$580,000.00
Clearing and Grubbing	ACRE	$6,000.00	4	$24,000.00
Remove Curb & Gutter	LIN FT	$5.00	1160	$5,800.00
Remove Pavement	SQ YD	$2.00	4590	$9,180.00
Subgrade Excavation	CU YD	$12.00	13540	$162,480.00
Aggregate Base (CV) Class 5	CU YD	$18.00	3770	$67,860.00
Select Granular Borrow	CU YD	$10.00	6770	$67,700.00
Curb & Gutter	LIN FT	$10.00	6650	$66,500.00
Wearing Course Mix	TON	$50.00	3250	$162,500.00
Non-Wearing Course Mix	TON	$45.00	3250	$146,250.00
Drainage[1]	LUMP SUM	$3,500,000.00	1	$3,500,000.00
Bridge	SQ FT	$150.00	55200	$8,280,000.00
Retaining Wall	SQ FT	$40.00	7500	$300,000.00
Erosion Control	LUMP SUM	$100,000.00	1	$100,000.00
Traffic Control	LUMP SUM	$350,000.00	1	$350,000.00
Lighting	LUMP SUM	$120,000.00	1	$120,000.00
Turf Establishment	LUMP SUM	$65,000.00	1	$65,000.00
Signing & Striping	LUMP SUM	$80,000.00	1	$80,000.00
Subtotal				$14,087,270.00
Contingency & Minor Items (assume 20%)				$2,817,454.00
Total Construction Cost				$16,904,724.00
Project Delivery (assume 30% construction cost)				$5,071,417.20
Right of Way Cost	SQ FT	$40.00	157125	$6,285,000.00
Total Improvement Cost				**$28,261,141.20**

1. Assumed drainage structures to be installed every 300' along each side of roadway including median.

Improvement 28B

1. 86th Street and Old Shakopee Road

(Modify the westbound approach to provide dual left-turns, two through lanes, and a right-turn lane)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$32,000.00	1	$32,000.00
Curb & Gutter	LIN FT	$10.00	1000	$10,000.00
Subgrade Excavation	CU YD	$12.00	5800	$69,600.00
Aggregate Base (CV) Class 5	CU YD	$18.00	1620	$29,160.00
Select Granular Borrow	CU YD	$10.00	2900	$29,000.00
Wearing Course Mix	TON	$50.00	1400	$70,000.00
Non-Wearing Course Mix	TON	$45.00	1400	$63,000.00
Truncated Dome	SQ FT	$60.00	64	$3,840.00
Lighting	LUMP SUM	$30,000.00	1	$30,000.00
Drainage[1]	LUMP SUM	$190,000.00	1	$190,000.00
Traffic Control	LUMP SUM	$19,000.00	1	$19,000.00
Traffic Signal	EACH	$210,000.00	1	$210,000.00
Turf Establishment	LUMP SUM	$5,000.00	1	$5,000.00
Signing & Striping	LUMP SUM	$6,000.00	1	$6,000.00
Subtotal				$766,600.00
Contingency & Minor Items (assume 20%)				$153,320.00
Total Construction Cost				$919,920.00
Project Delivery (assume 30% construction cost)				$275,976.00
Right of Way Cost	SQ FT	$40.00	10325	$413,000.00
Total Improvement Cost				**$1,608,896.00**

1. Assumed drainage structures to be installed every 300' along each side of roadway including median.

Improvement 29

1. 30th Ave

(Reconstruct roadway to provide two through lanes in each direction and a median with left-turn lanes)

Item Description	Unit	Unit Cost	Total Quantities	Total Amount
Mobilization	LUMP SUM	$45,000.00	1	$45,000.00
Remove Curb & Gutter	LIN FT	$5.00	3310	$16,550.00
Remove Pavement	SQ YD	$2.00	9560	$19,120.00
Subgrade Excavation	CU YD	$12.00	11400	$136,800.00
Aggregate Base (CV) Class 5	CU YD	$18.00	3170	$57,060.00
Select Granular Borrow	CU YD	$10.00	5700	$57,000.00
Curb & Gutter	LIN FT	$10.00	4960	$49,600.00
Wearing Course Mix	TON	$50.00	2740	$137,000.00
Non-Wearing Course Mix	TON	$45.00	2740	$123,300.00
Lighting	LUMP SUM	$100,000.00	1	$100,000.00
Truncated Dome	SQ FT	$60.00	192	$11,520.00
Drainage[1]	LUMP SUM	$270,000.00	1	$270,000.00
Traffic Control	LUMP SUM	$27,000.00	1	$27,000.00
Light Rail Signaling	LUMP SUM	$50,000.00	1	$50,000.00
Turf Establishment	LUMP SUM	$10,000.00	1	$10,000.00
Signing & Striping	LUMP SUM	$12,000.00	1	$12,000.00
Subtotal				$1,121,950.00
Contingency & Minor Items (assume 15%)				$168,292.50
Total Construction Cost				$1,290,242.50
Project Delivery (assume 30% construction cost)				$387,072.75
Total Improvement Cost				**$1,677,315.25**

1. Do not have graphics for improvement. Assumed drainage structures to be installed every 300' along each side of roadway including median.

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SRF Consulting Group, Inc.

Improvement 2

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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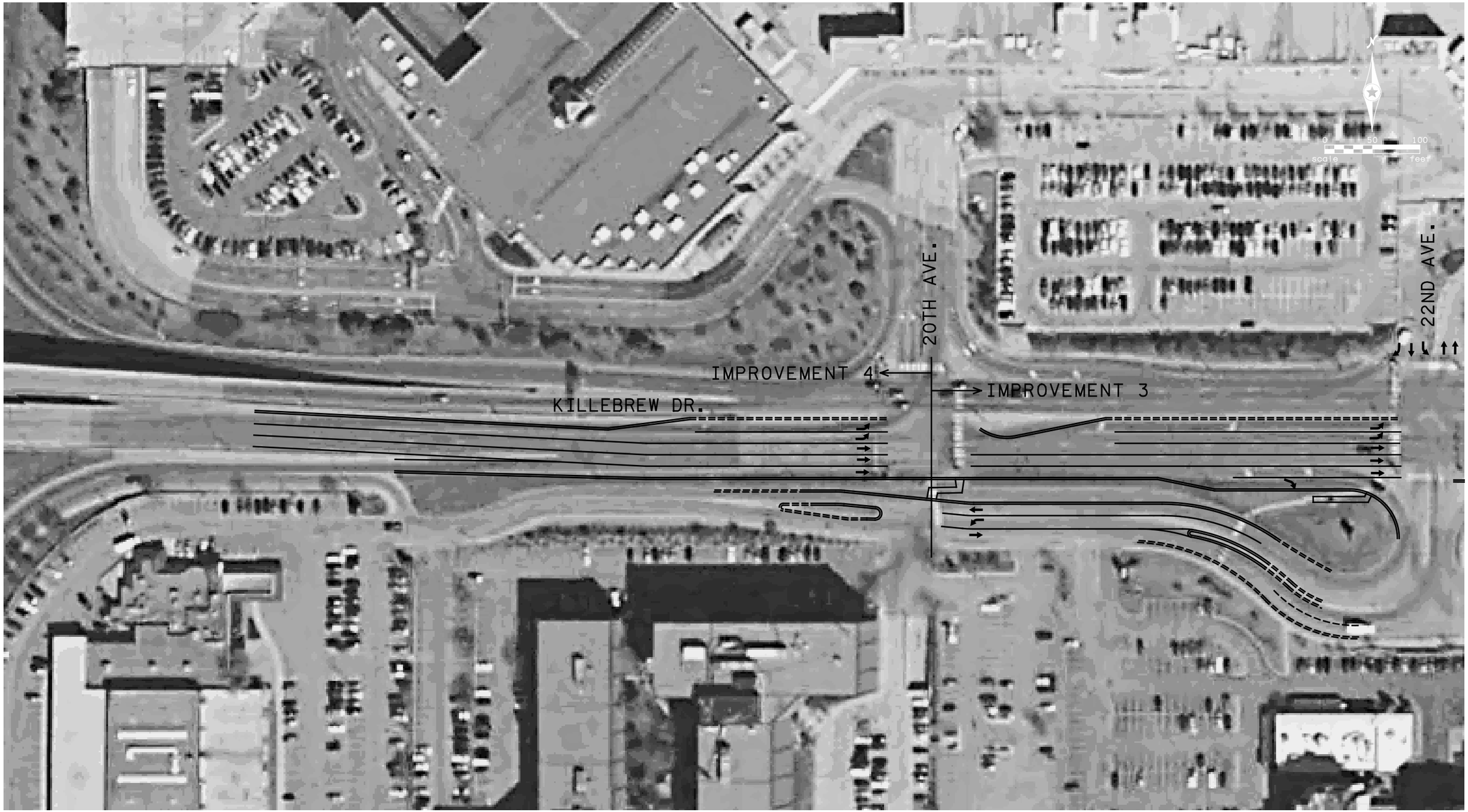
SRF CONSULTING GROUP, INC.

Improvement 3

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012



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SRF CONSULTING GROUP, INC.

Improvement 4

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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Improvements 1, 6, and 7

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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SRF Consulting Group, Inc.

Improvement 8

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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SRF Consulting Group, Inc.

Improvement 9

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

T.H. 494

T.H. 494

IMPROVEMENT 10a

IMPROVEMENT 10b

IMPROVEMENT 10c

THUNDERBIRD RD.

N

0 50 100

scale feet

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SRF CONSULTING GROUP, INC.

Improvement 10a

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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SRF CONSULTING GROUP, INC.

Improvement 10b (1)

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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SRF Consulting Group, Inc.

Improvement 10b (2)

Airport South Roadway Infrastructure Improvements
City of Bloomington

~~5622X~~
5/11/2012

T.H. 494

T.H. 494

IMPROVEMENT 10a

IMPROVEMENT 10b

IMPROVEMENT 10c

RETAINING WALL

THUNDERBIRD RD.

0 50 100

scale feet

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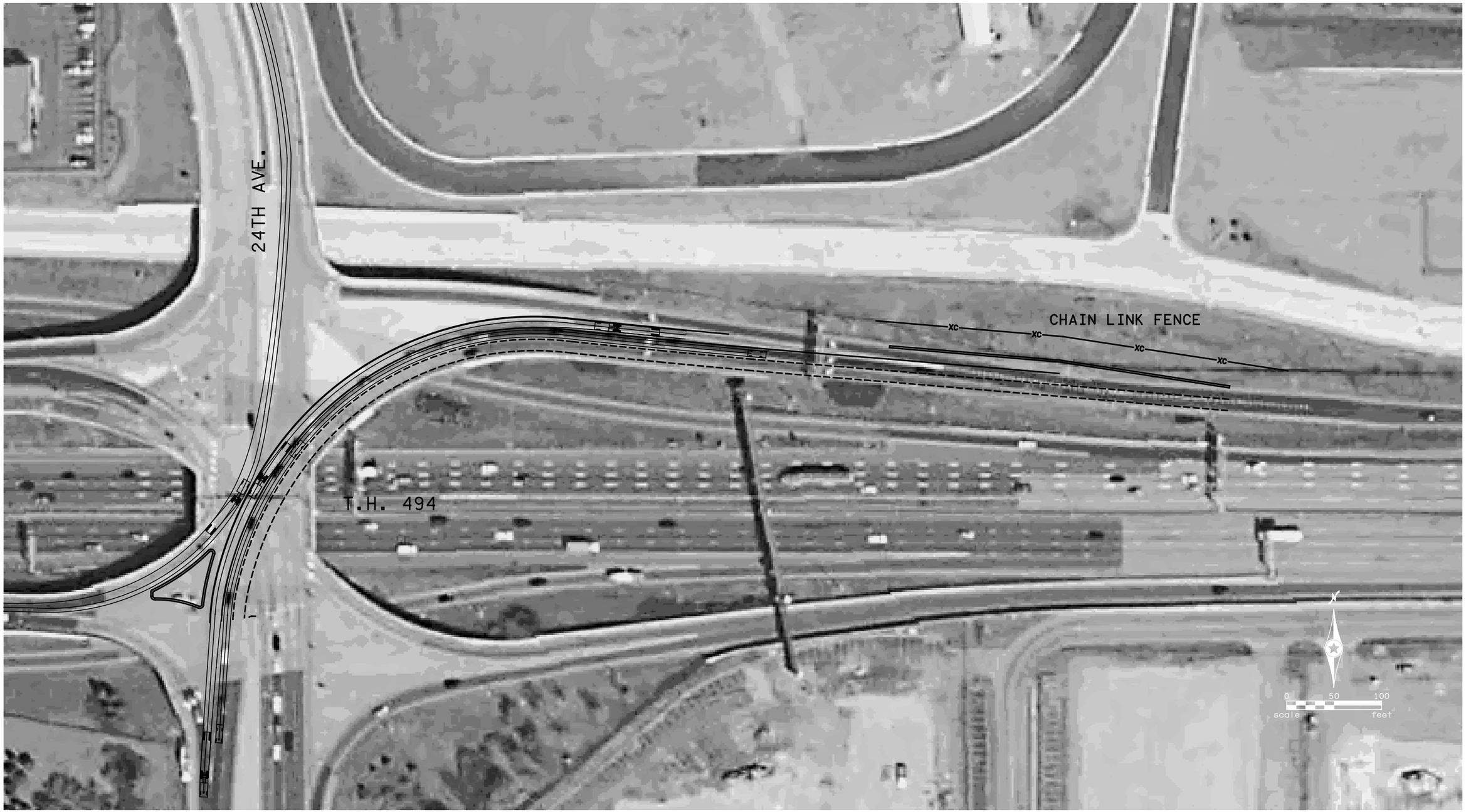
SRF CONSULTING GROUP, INC.

Improvement 10c

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012



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Improvement 11

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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SRF Consulting Group, Inc.

Improvement 12 A

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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SRF Consulting Group, Inc.

Improvement 12 B

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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Improvement 13

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

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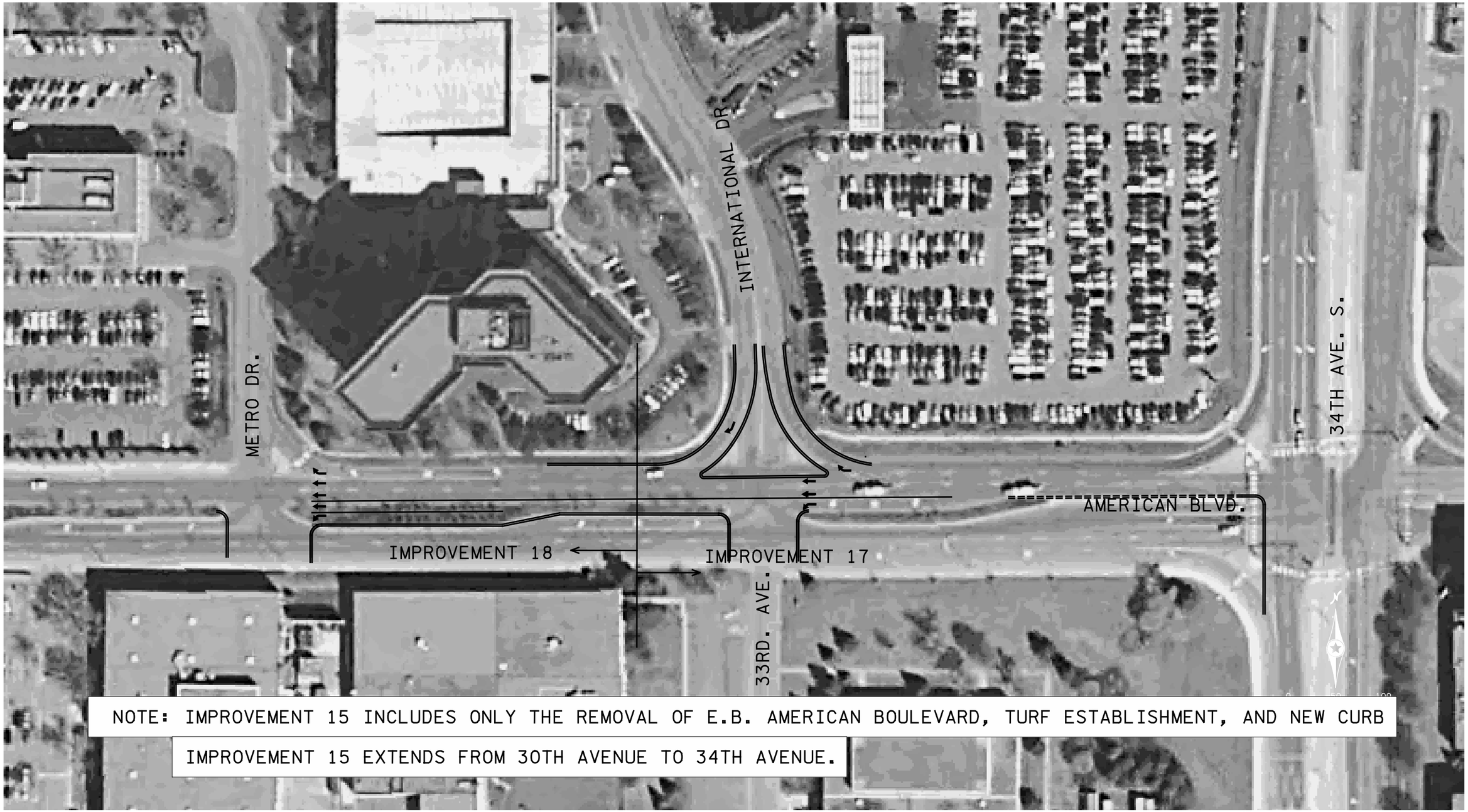
Improvement 16

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012



NOTE: IMPROVEMENT 15 INCLUDES ONLY THE REMOVAL OF E.B. AMERICAN BOULEVARD, TURF ESTABLISHMENT, AND NEW CURB

IMPROVEMENT 15 EXTENDS FROM 30TH AVENUE TO 34TH AVENUE.

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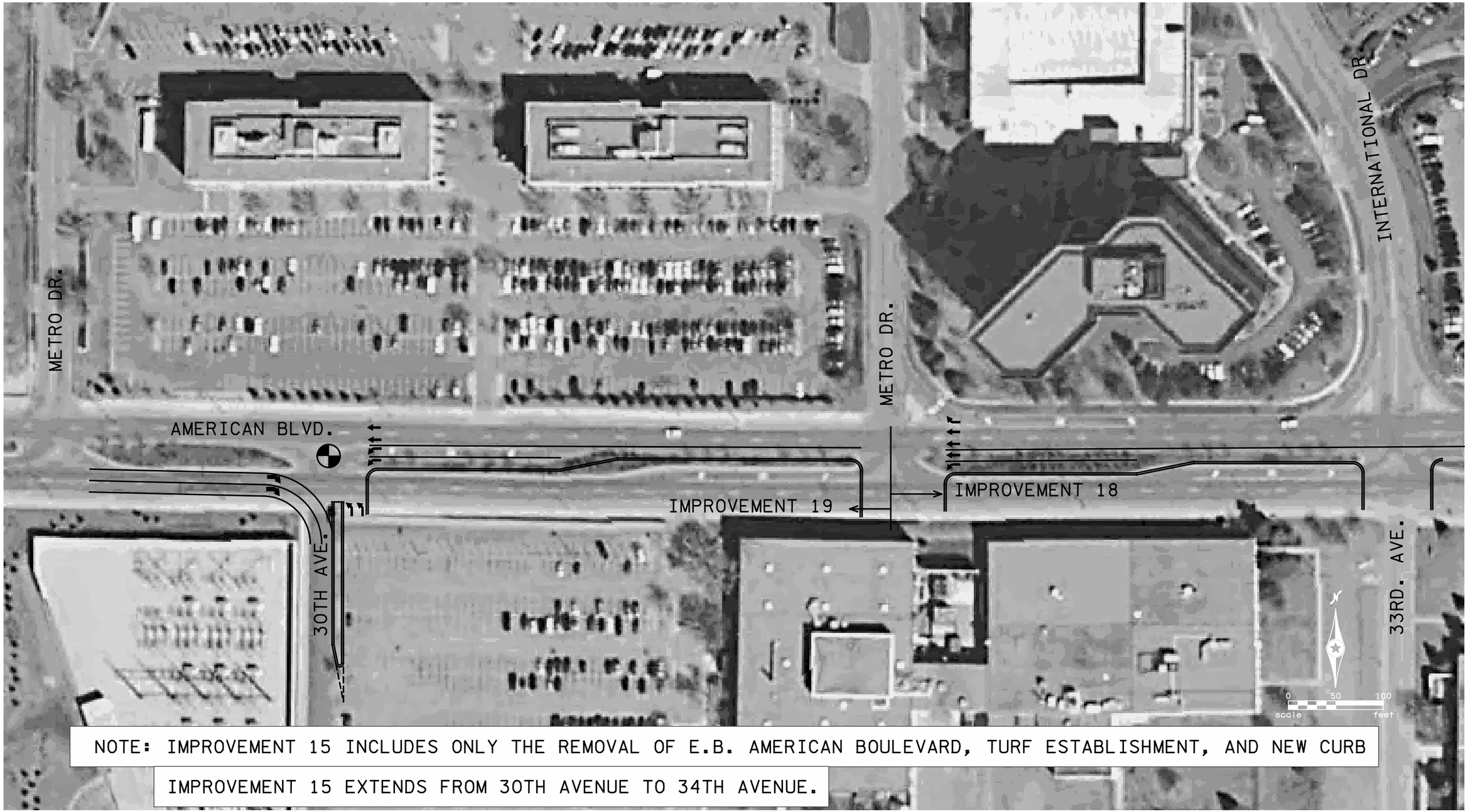
SRF Consulting Group, Inc.

Improvements 15, 17, and 18

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012



NOTE: IMPROVEMENT 15 INCLUDES ONLY THE REMOVAL OF E.B. AMERICAN BOULEVARD, TURF ESTABLISHMENT, AND NEW CURB

IMPROVEMENT 15 EXTENDS FROM 30TH AVENUE TO 34TH AVENUE.

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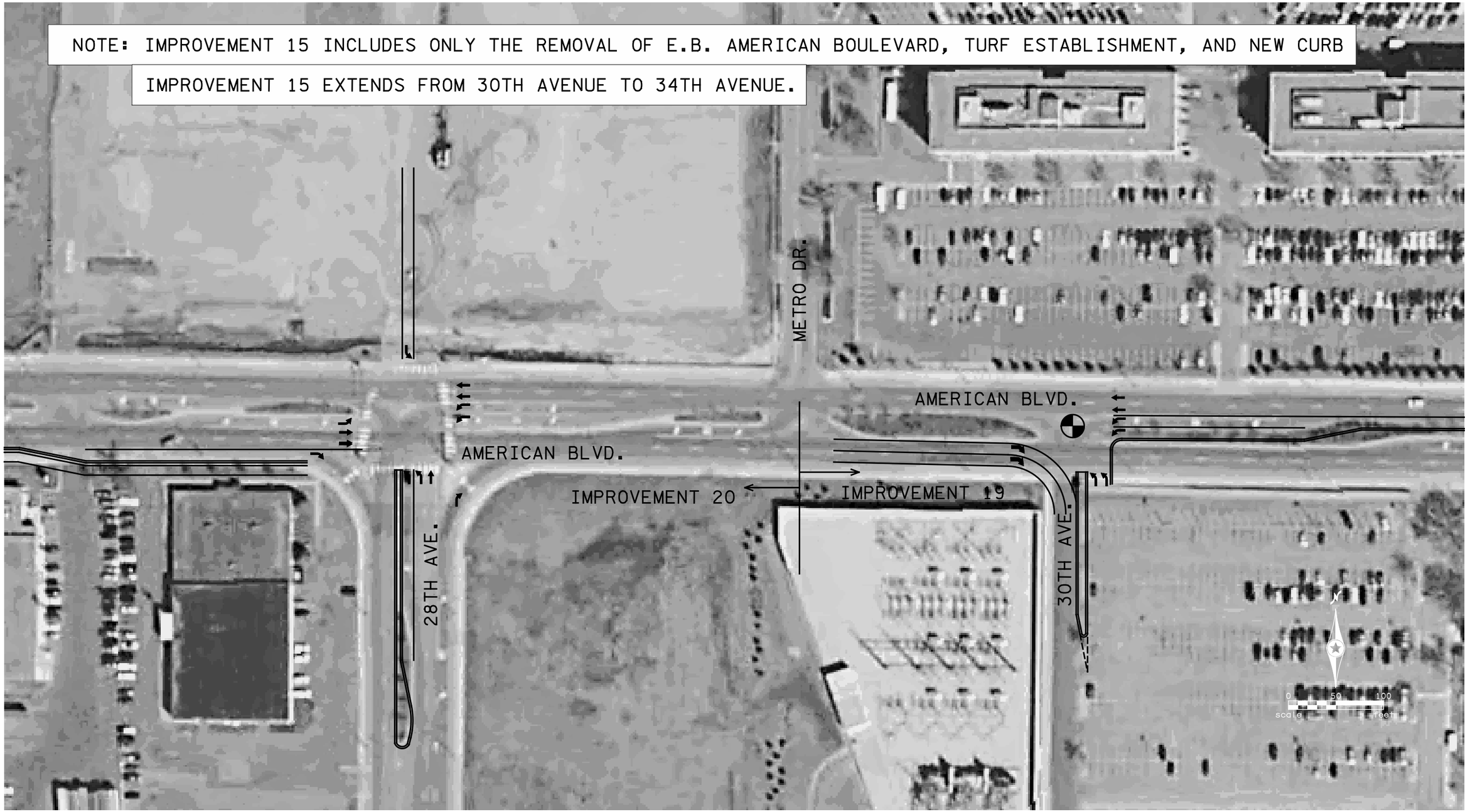
Improvements 15,18 and 19

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

NOTE: IMPROVEMENT 15 INCLUDES ONLY THE REMOVAL OF E.B. AMERICAN BOULEVARD, TURF ESTABLISHMENT, AND NEW CURB

IMPROVEMENT 15 EXTENDS FROM 30TH AVENUE TO 34TH AVENUE.



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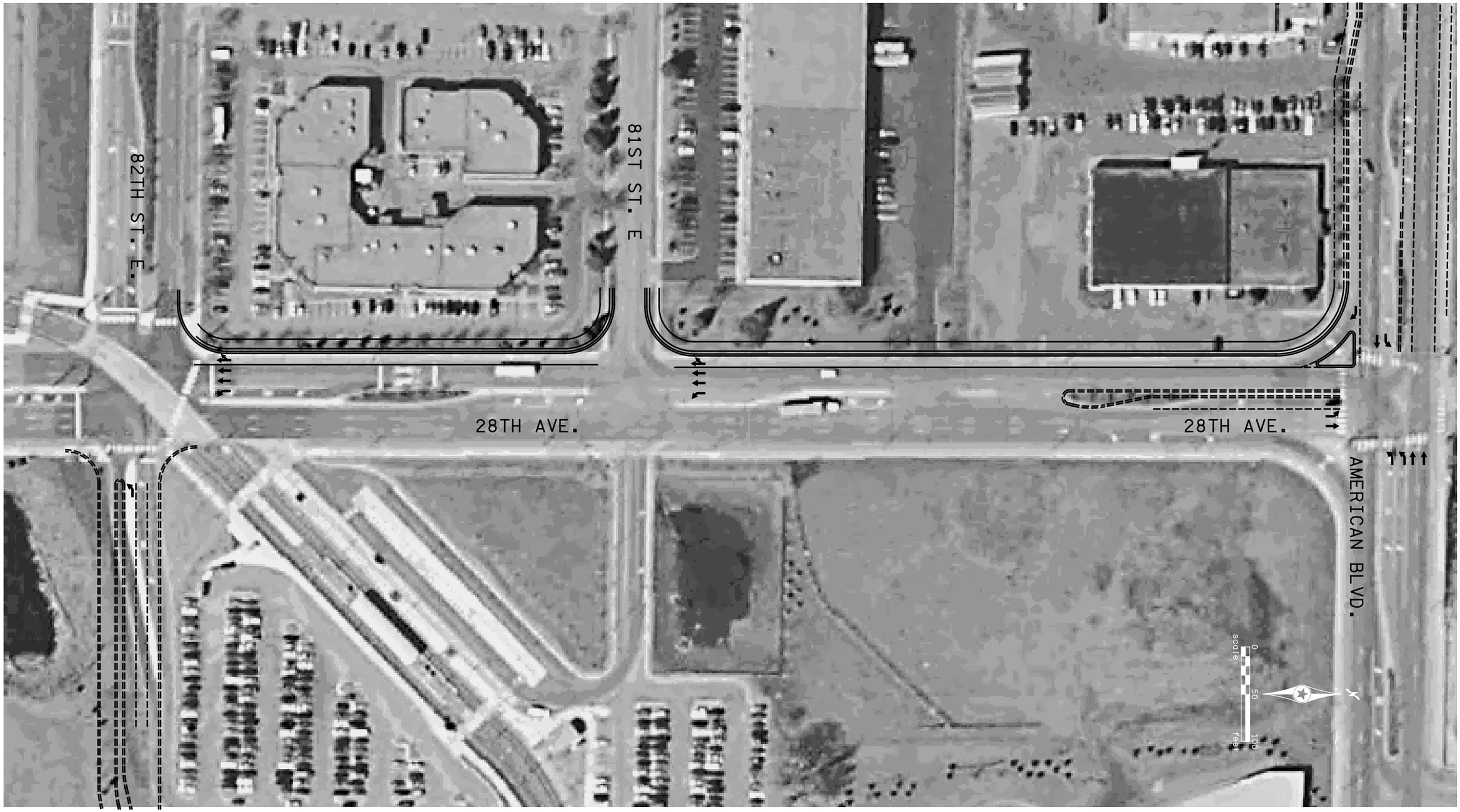
5/11/2012

Improvements 15,19 and 20

Airport South Roadway Infrastructure Improvements
City of Bloomington



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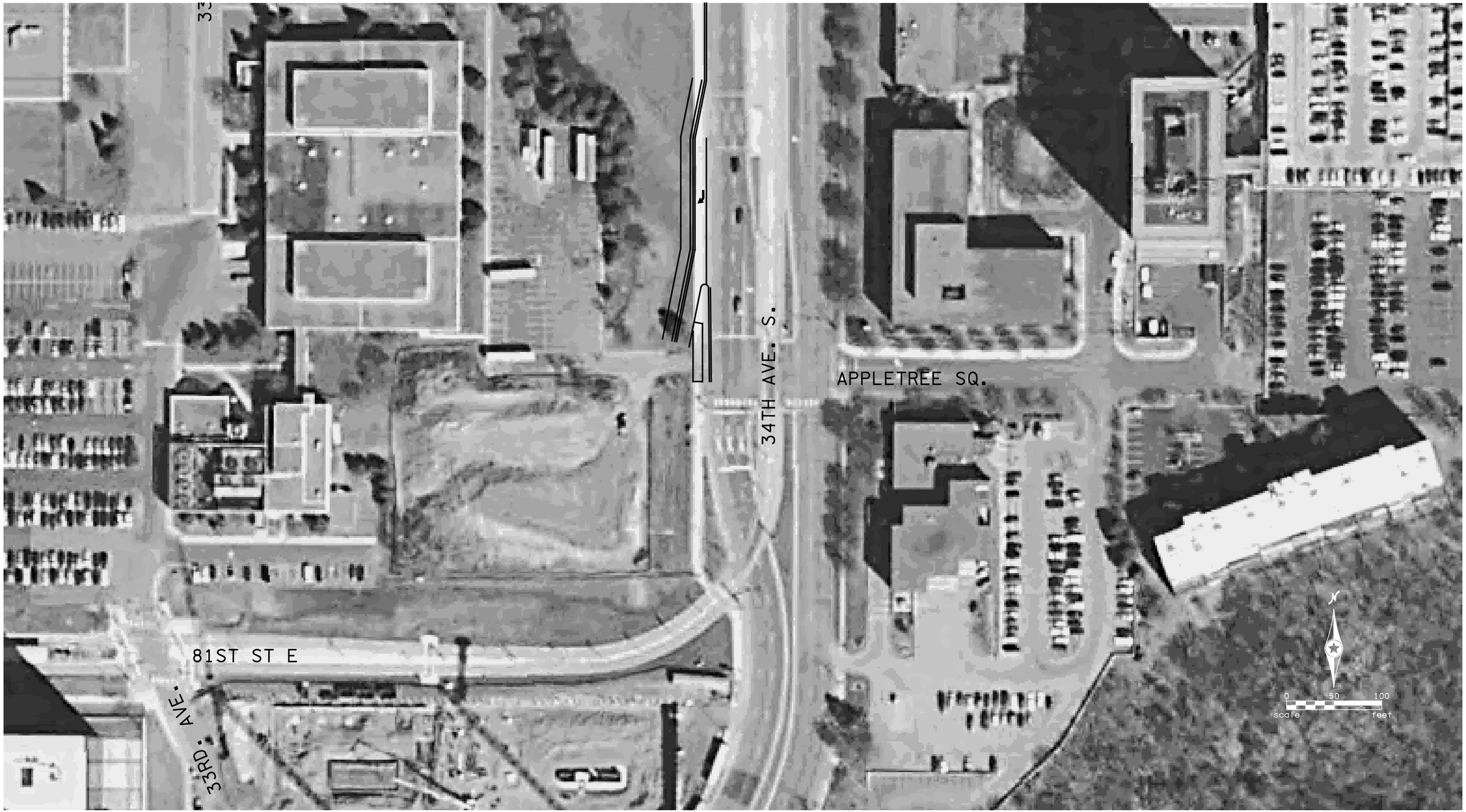
5/11/2012

Improvement 20a

Airport South Roadway Infrastructure Improvements
City of Bloomington



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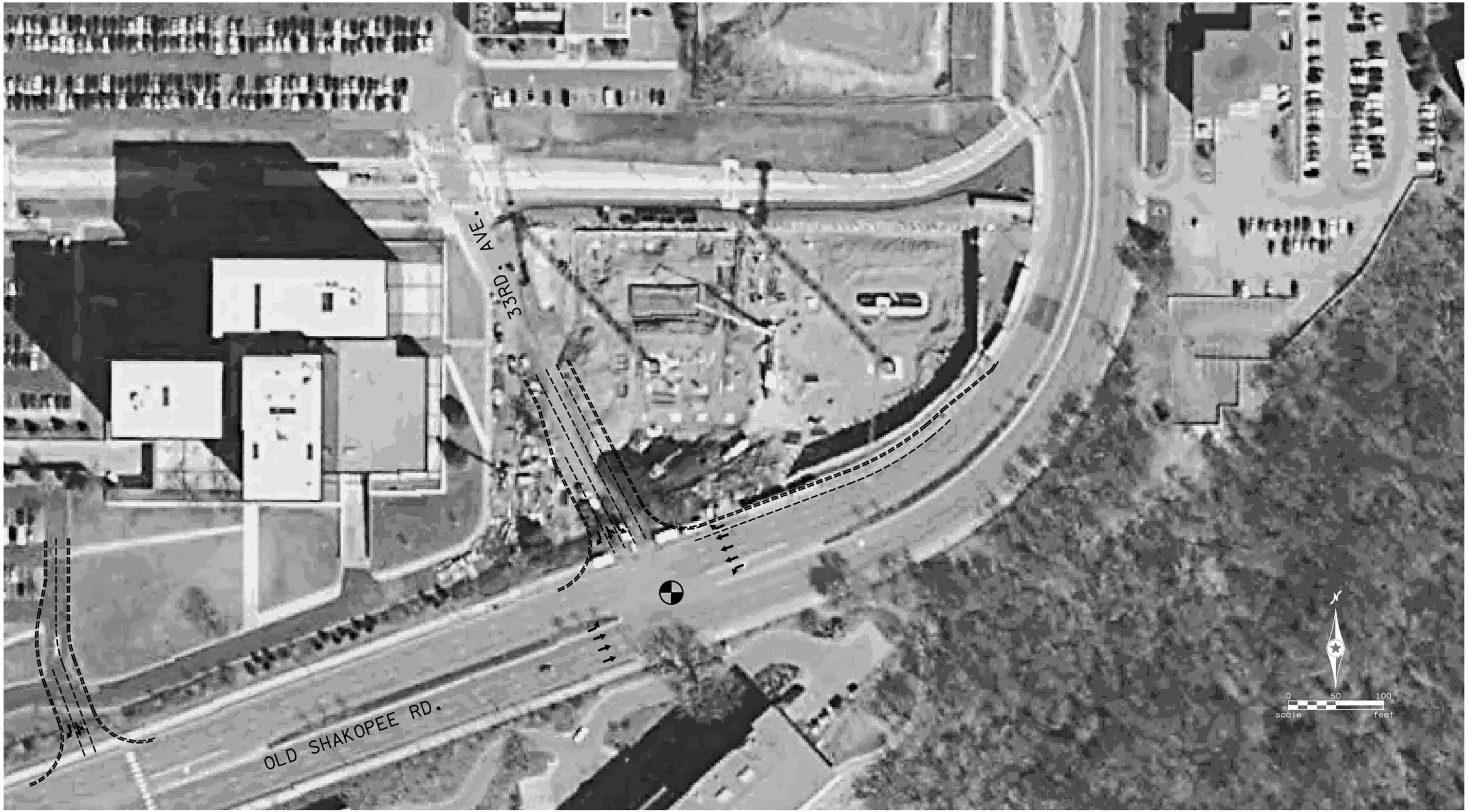
Improvement 21

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012



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SRF
CONSULTING GROUP, INC.

Improvement 22

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

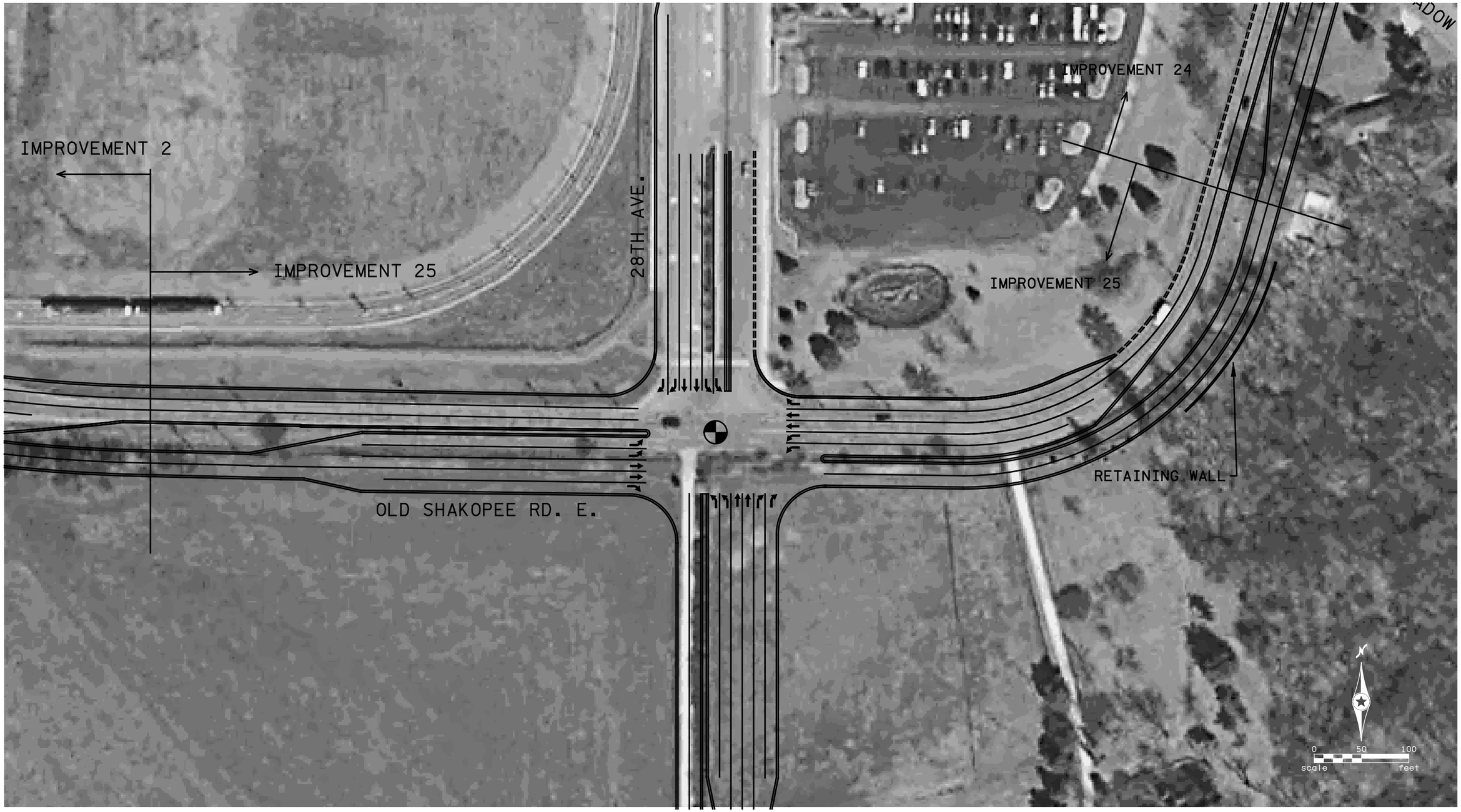
H:\Projects\5622\VM-mu\Graphics\2019\GR_24.dgn

SRF Consulting Group, Inc.

Improvement 24

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012



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SRF CONSULTING GROUP, INC.

Improvement 25

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

H:\Projects\5622\VH-mxGraphics\2030\GR_27.dgn

SRF CONSULTING GROUP, INC.

Improvement 27

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

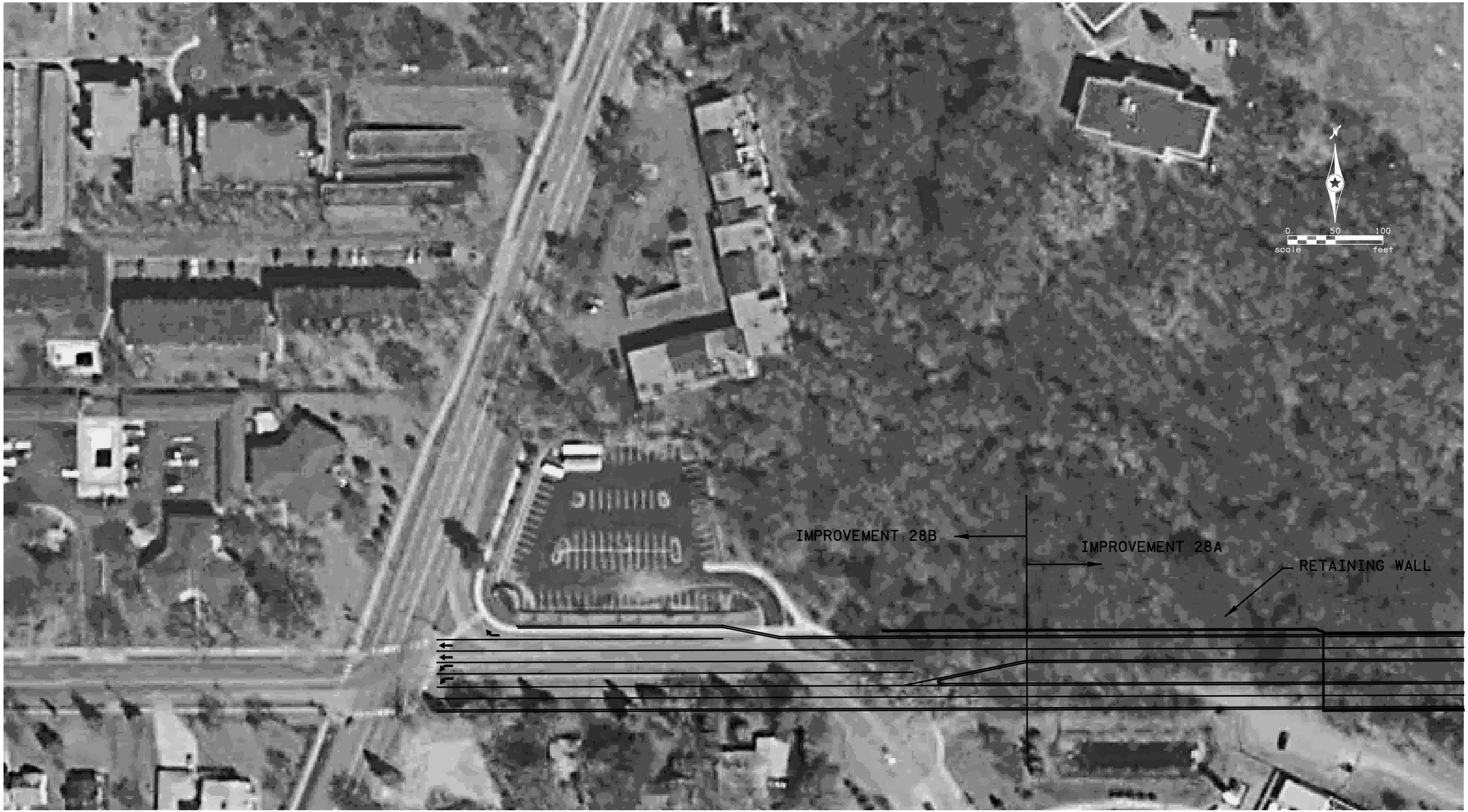
H:\Projects\5622\NH-mu\Graphics\2030\GR_28 A.dgn

SRF CONSULTING GROUP, INC.

Improvement 28A

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012



H:\Projects\5622\Vt-mu\Graphics\2030\GR_28 B.dgn

SRF Consulting Group, Inc.

Improvement 28B

Airport South Roadway Infrastructure Improvements
City of Bloomington

5622
5/11/2012

Attachment C

1/25/2007

LINDAU LANE

FILL UP AGAINST EXISTING RETAINING WALL

NO PARKING WILL BE POSSIBLE

℄ RAMP B

℄ 20TH ST

℄ ROUND-A-BOUT

℄ WALK

GRADES TIE TO LOWERED LINDAU LANE AND WILL WORK FOR EXISTING CONDITION AS WELL

NO ACCESS FROM STREET TO DOOR

℄ RAMP A

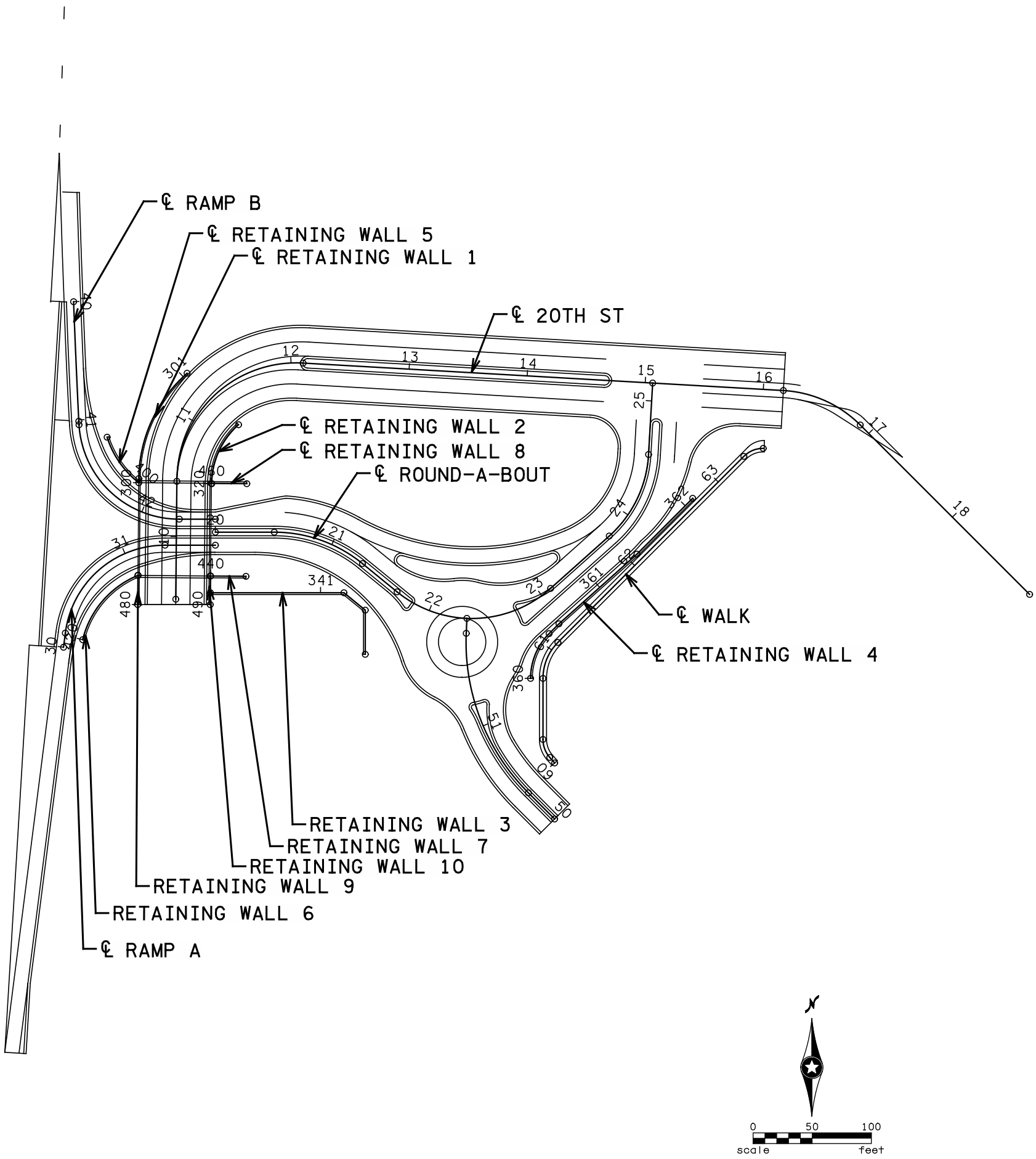
T.H. 77

ACCESS REMOVED TO FIRST FLOOR OF RAMP

5% GRADE MATCHES EXISTING RAMP

0 50 100
scale feet

TH 77 CONNECTION TO LINDAU LANE



SRF Consulting Group, Inc.

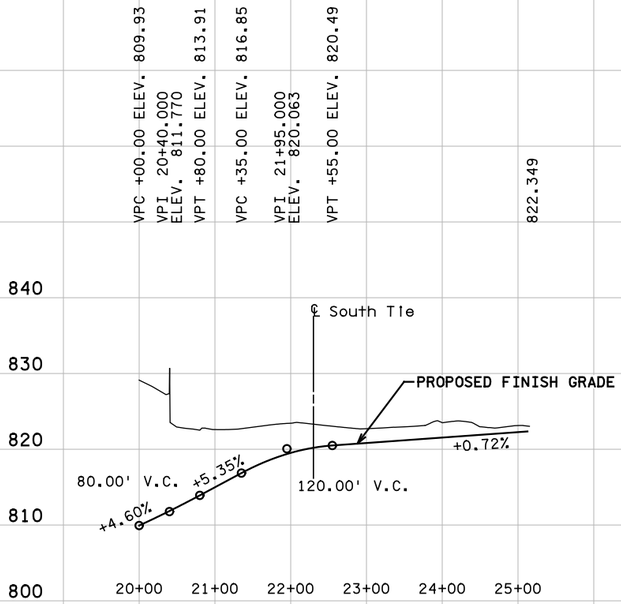
TH 77 Connection to Lindau Lane Wall Locations

Airport South Roadway Infrastructure Improvements
City of Bloomington

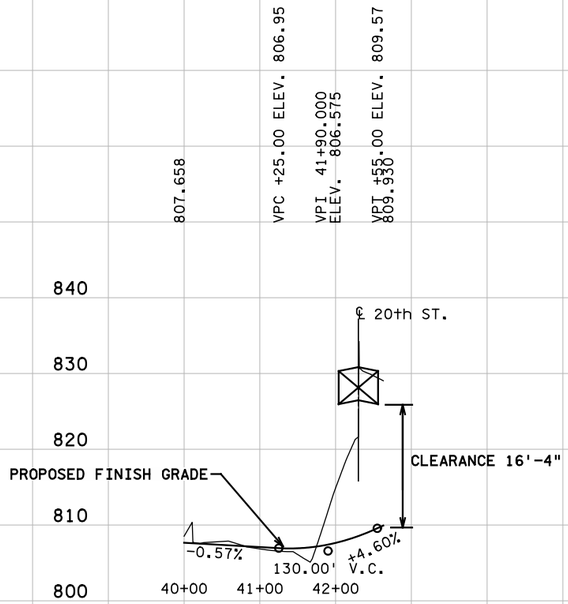
5622
3-22-2006

H:\Projects\5622\lt-mu\5622WALL_lyl.dgn

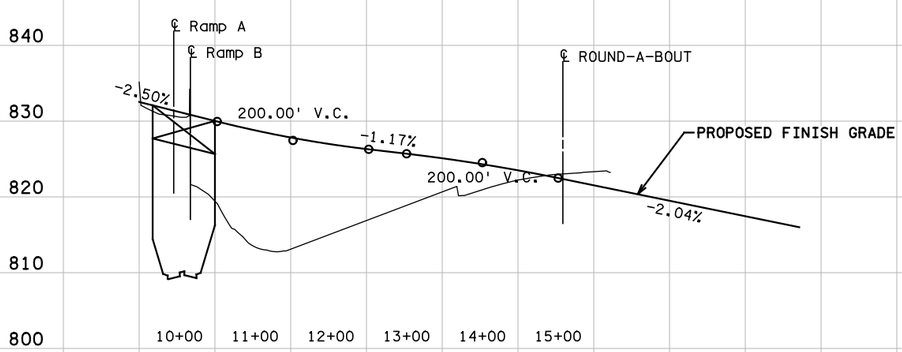
ROUND-A-BOUT



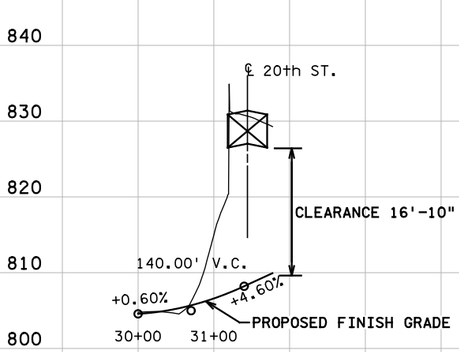
RAMP B



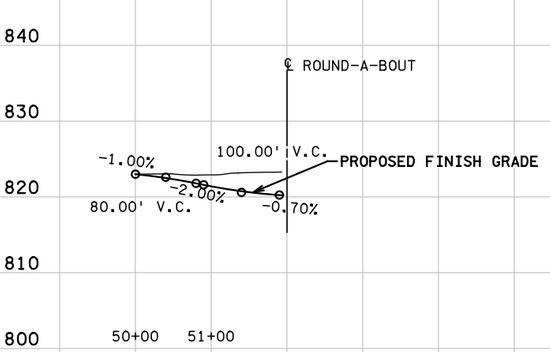
20TH ST



RAMP A



SOUTH TIE



Roadway Profiles

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5/11/2012
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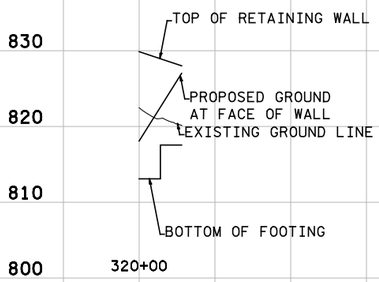
RETAINING WALL 2



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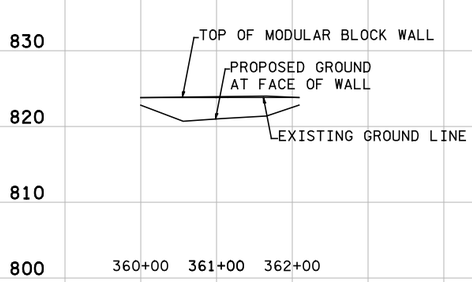

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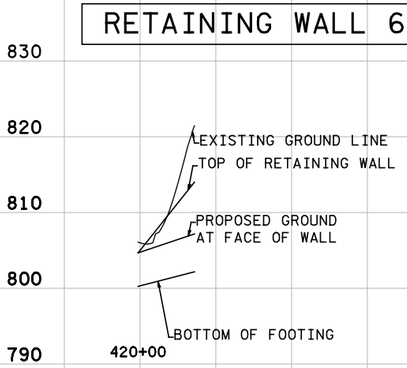
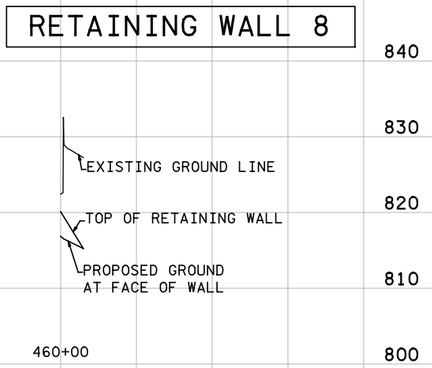
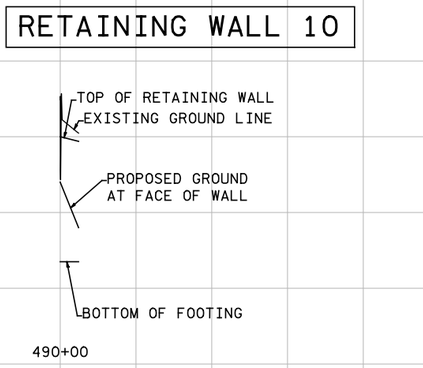


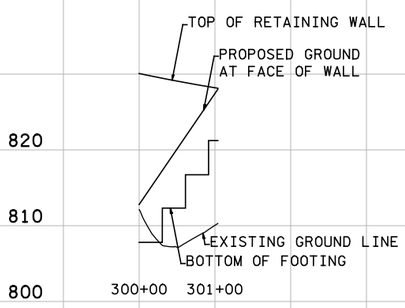
RETAINING WALL 8



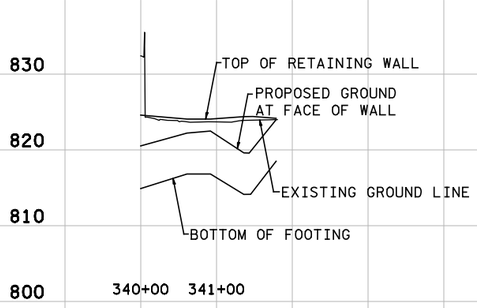
RETAINING WALL 10



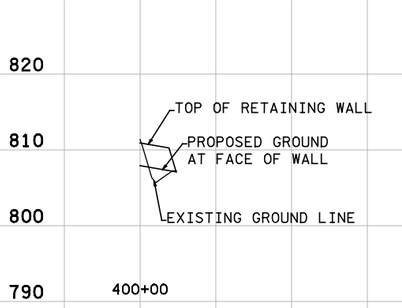
RETAINING WALL 1



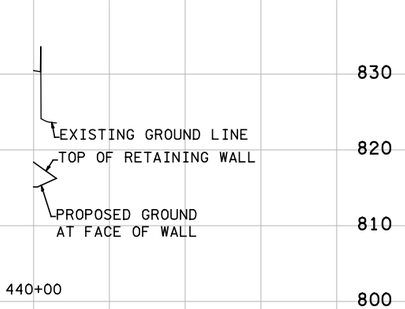
RETAINING WALL 3



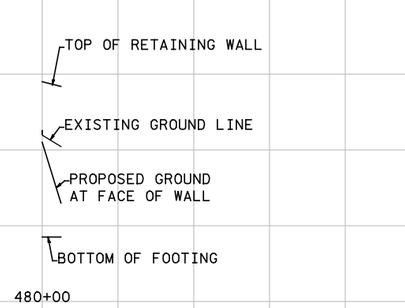
RETAINING WALL 5



RETAINING WALL 7



RETAINING WALL 9



Retaining Wall Profiles

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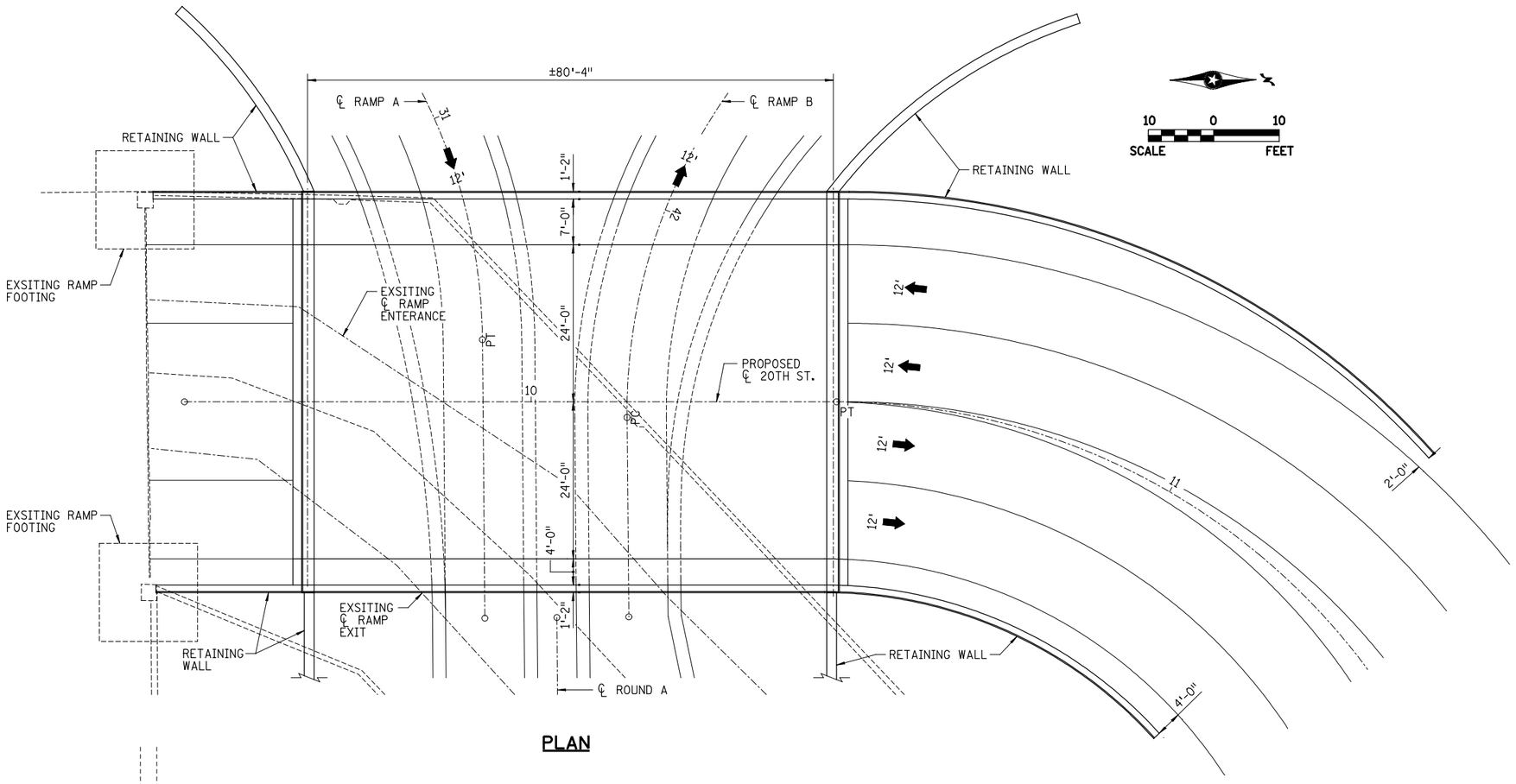
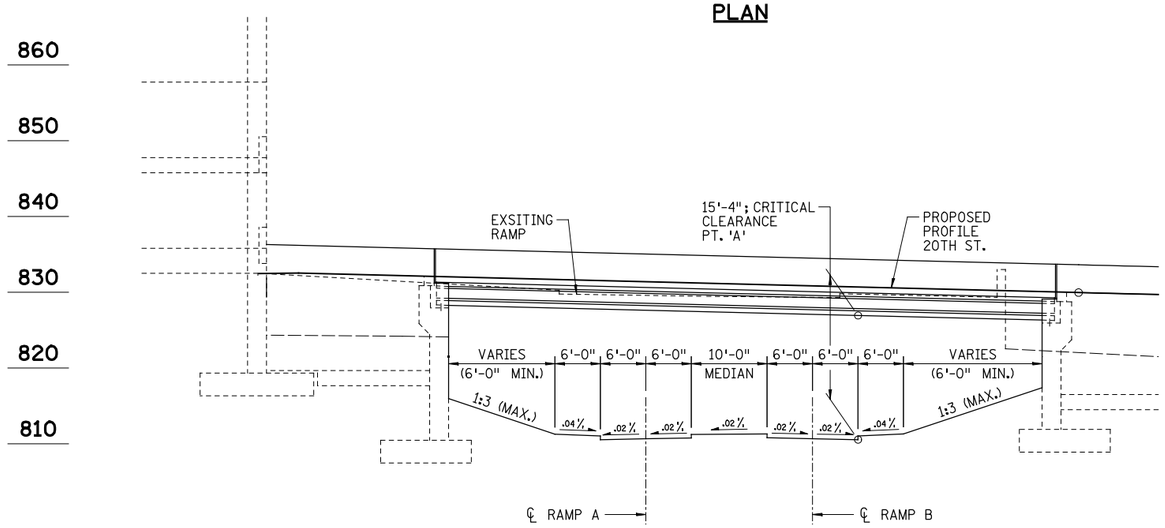
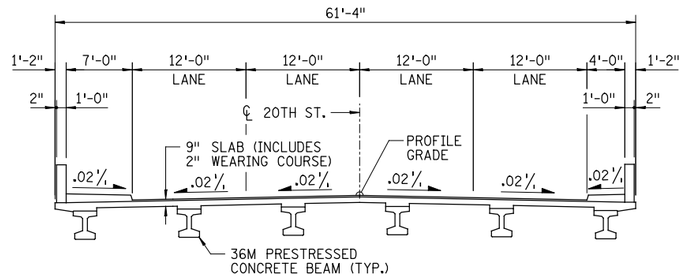


PLAN



SOUTH ABUTMENT NORTH ABUTMENT

ELEVATION



TYPICAL SECTION

NO	DATE	BY	CKD	APPR	REVISION

\$TIME\$ \$DATE\$ \$DGN\$
\$FILEA\$

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Print Name: LARRY A. ERICKSON
Date _____ License # 14546

DRAWN BY E. JOHNSON DATE X/XX
DESIGNED BY K. SWEHLA X/XX
CHECKED BY L. ERICKSON X/XX
COMM. NO.
COMM. NO.

SRF CONSULTING GROUP, INC.

CITY OF BLOOMINGTON
20TH STREET OVER RAMPS A & B
BRIDGE CONCEPT PLAN

SHEET X OF XX

Fed. Proj. No.

℄ 20TH ST.
11+35.00
812.82 828.07

1:4 1:4

℄ 20TH ST.
11+00.00
813.39 828.79

RETAINING WALL 1:25 1:25 RETAINING WALL
1:3 1:3

℄ 20TH ST.
10+50.00
819.13 829.95

RETAINING WALL 1:25 1:25 RETAINING WALL
M/L

℄ Ramp B
41+48.45
806.20 807.34

1:4 1:3 1:3

℄ 20TH ST.
9+60.00
831.54 832.20

RETAINING WALL 1:25 RETAINING WALL
M/L
1:25

℄ Ramp A
30+58.59
804.88 805.63

1:4 RETAINING WALL 1:3

850 840 830 820 810 800

150 100 50 0 50 100 150

20 TH ST
STA. 9+60.00 - 11+35.00

1:57:58 PM
3/16/2006
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State Proj. No.

Sheet No. X1 of X10 Sheets

Fed. Proj. No.

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14+50.00
822.28 823.46
1:4

℄ 20TH ST.
14+00.00
820.94 824.31
1:4

℄ 20TH ST.
12+00.00
926.36 826.95
1:4

℄ 20TH ST.
11+50.00
927.24 827.79
1:4

20 TH ST
STA. 11+50.00 - 14+50.00

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3/16/2006
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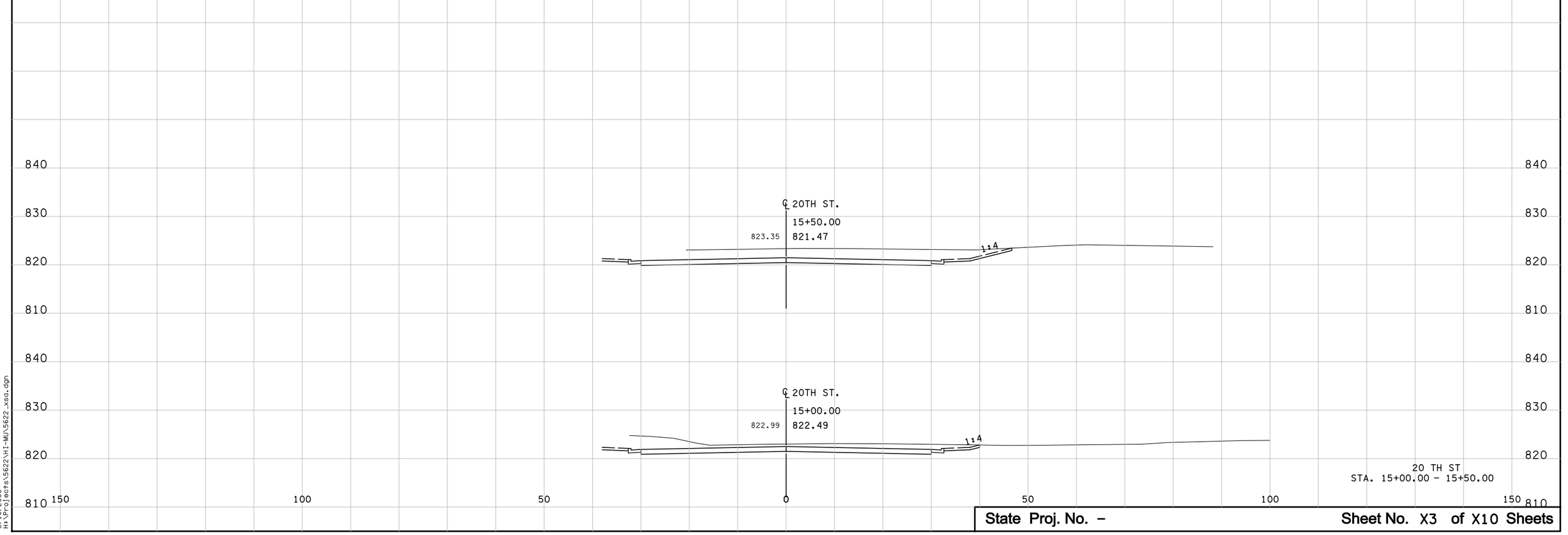

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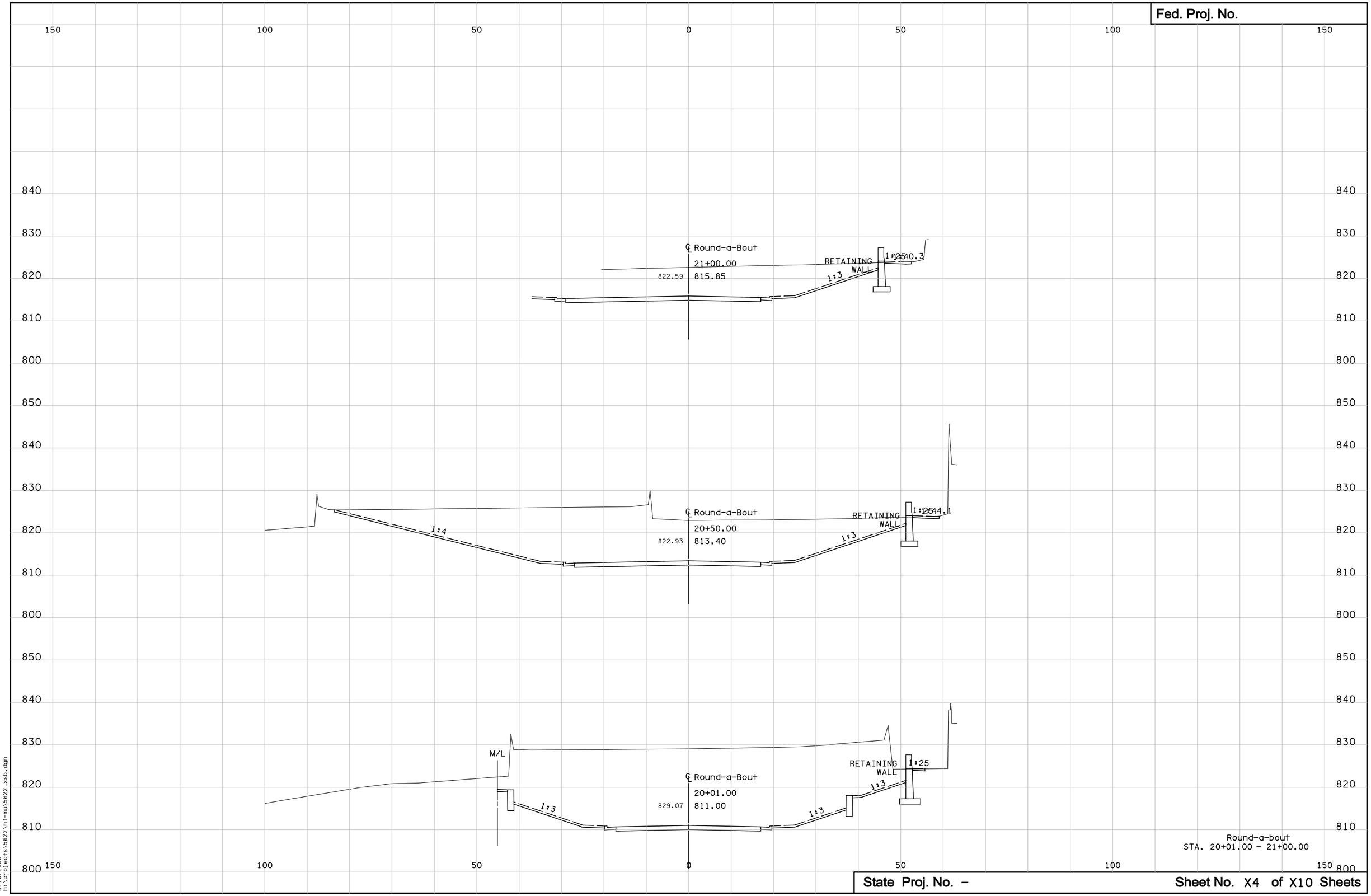

Round-a-bout
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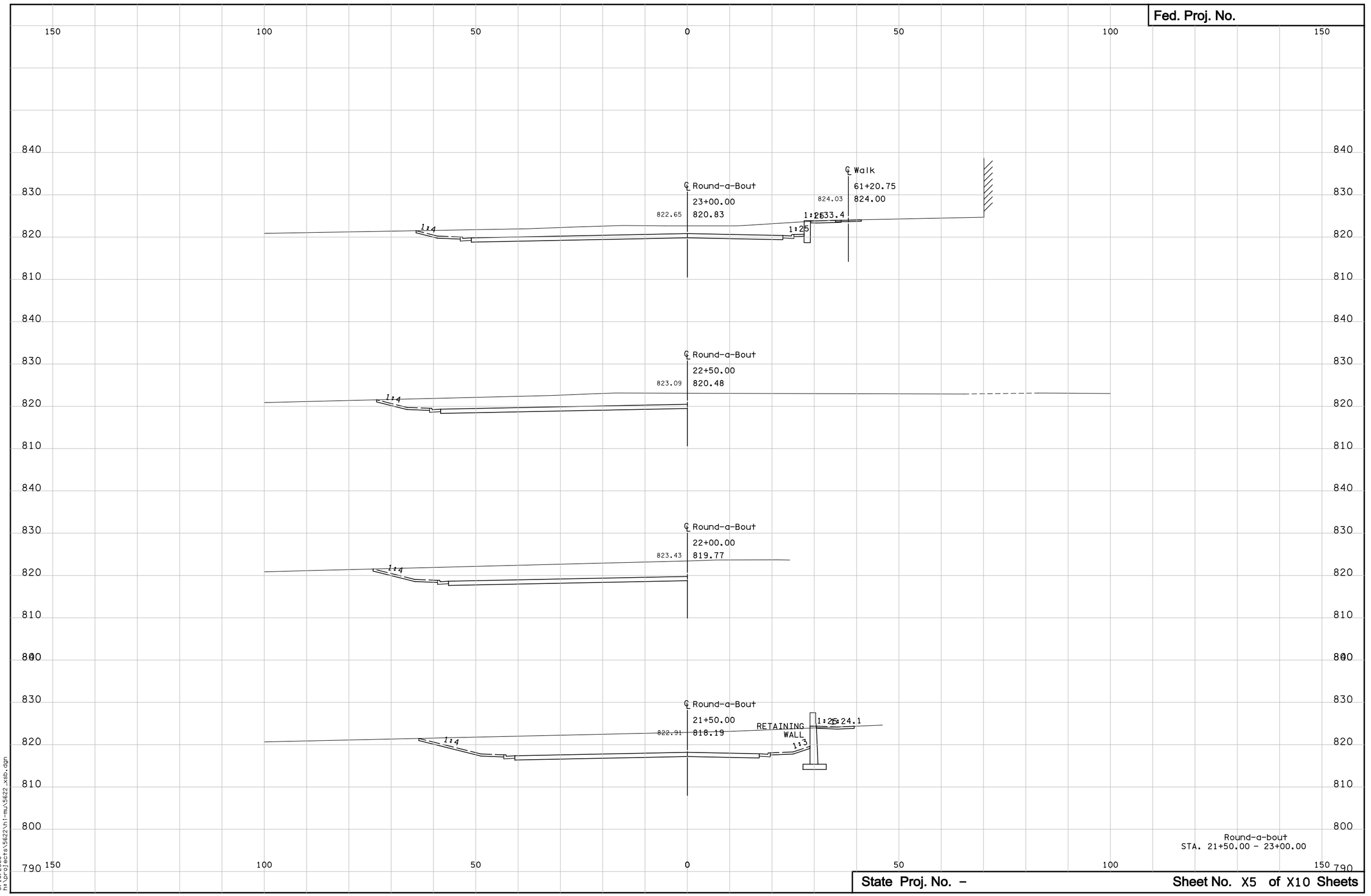

Round-a-bout
STA. 21+50.00 - 23+00.00

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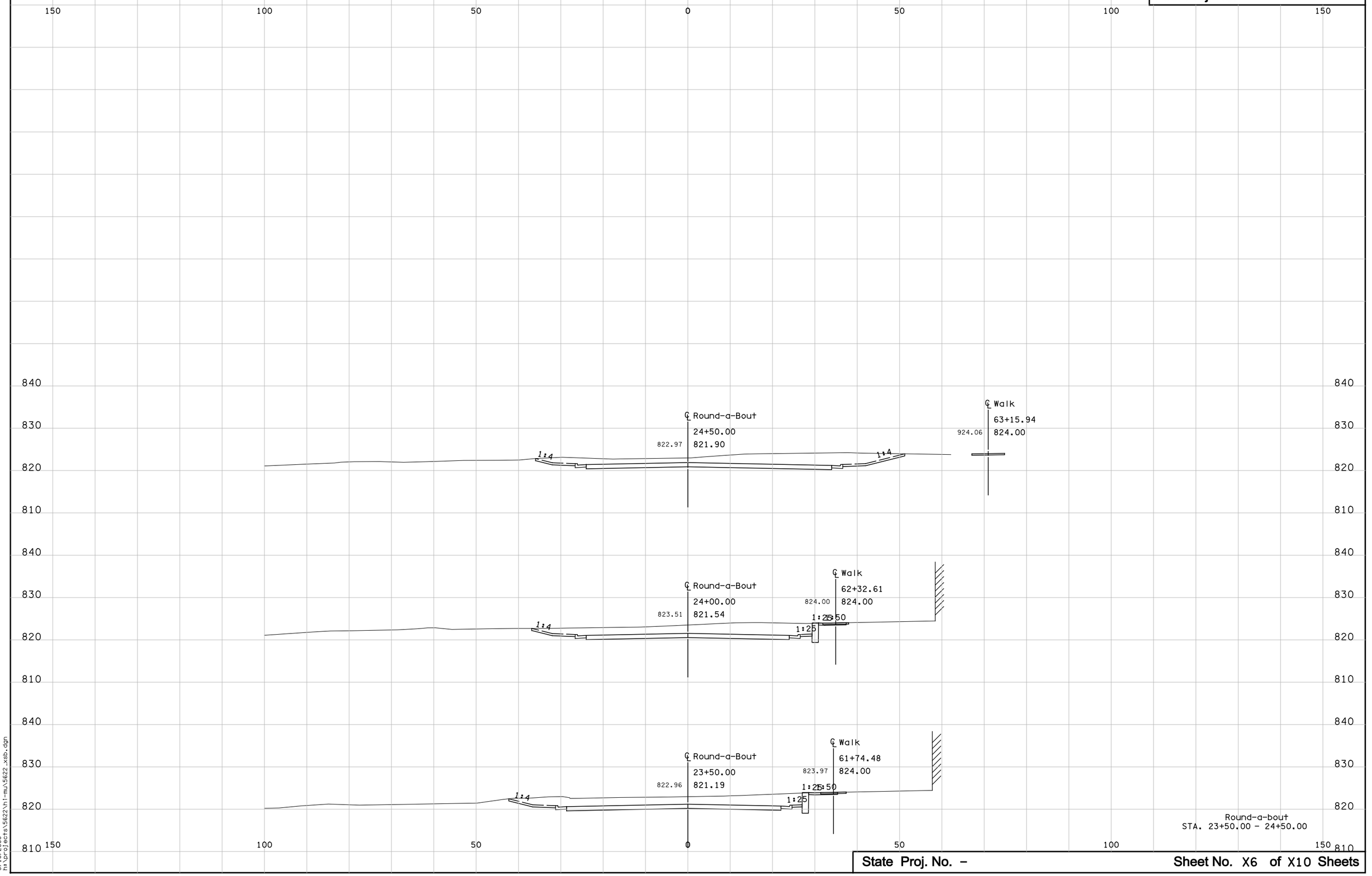

Round-a-bout
STA. 23+50.00 - 24+50.00

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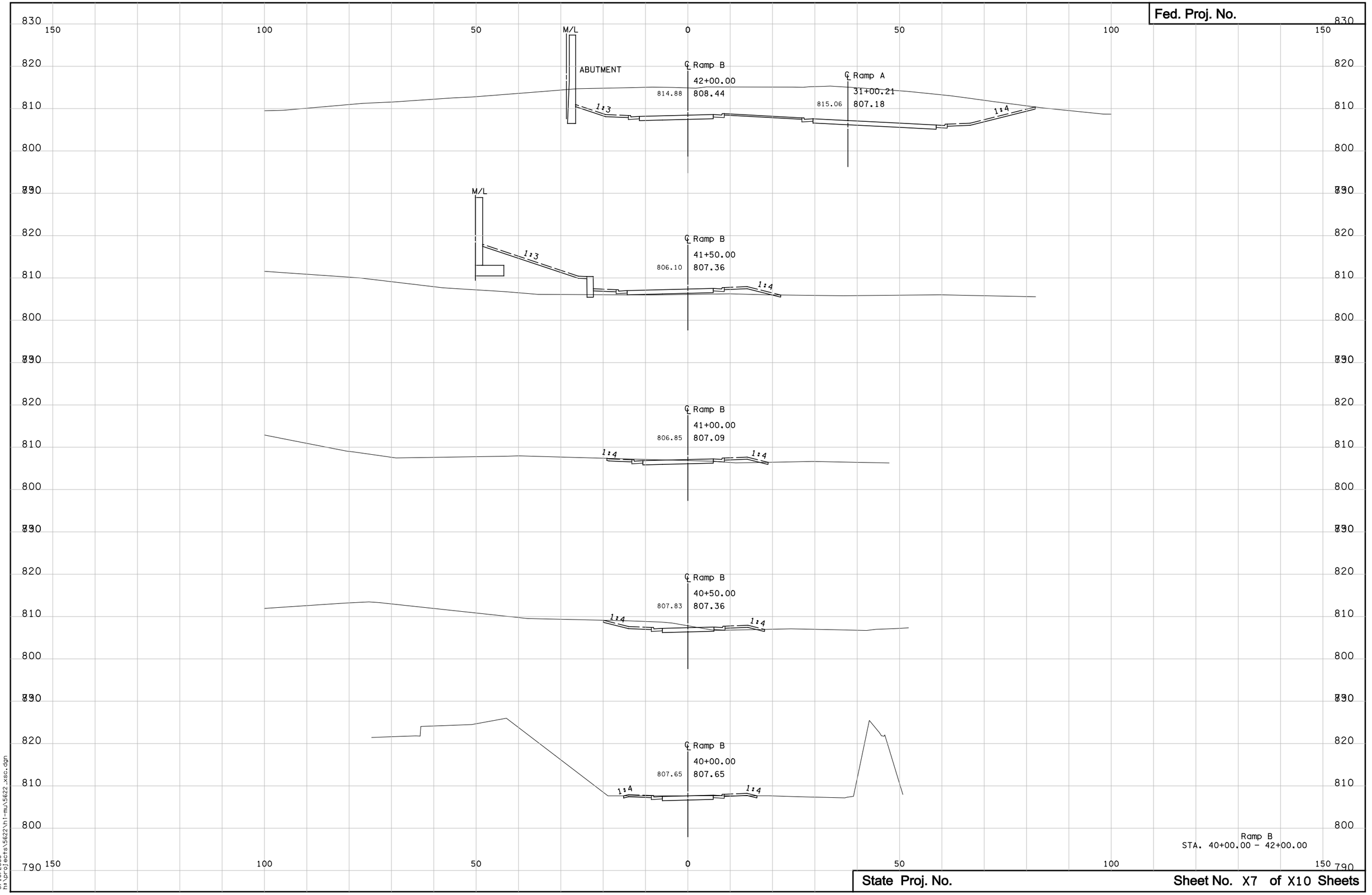

Ramp B
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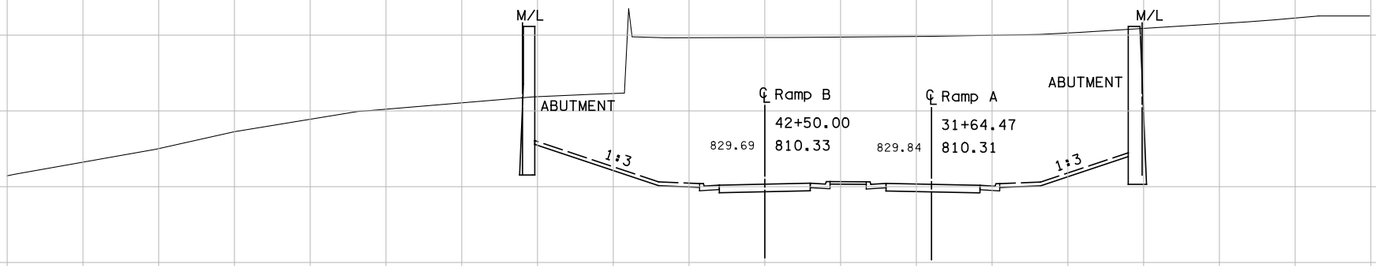

Ramp B
STA. 42+50.00 - 42+50.00

State Proj. No.

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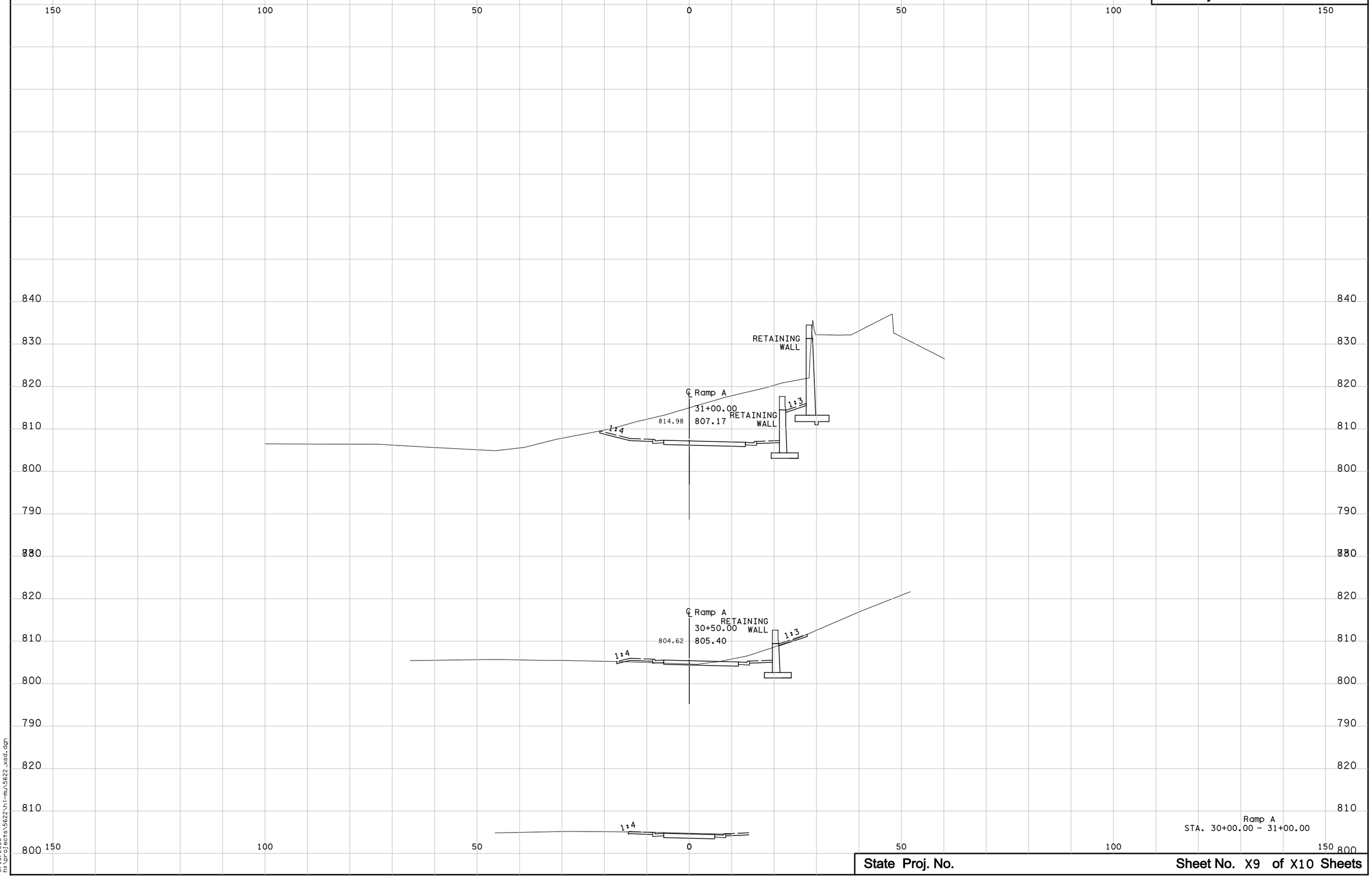

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Sheet No. X9 of X10 Sheets

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℄ South Tie
51+00.00
822.91 | 821.40
1:4 1:4

℄ South Tie
50+50.00
823.03 | 822.34
1:4 1:4

℄ South Tie
50+01.00
823.03 | 822.98
1:4 1:4

South Tie
STA. 50+01.00 - 51+00.00

State Proj. No.

Sheet No. X10 of X10 Sheets

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3/16/2006
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Attachment D

1/25/2007

AIRPORT SOUTH ROADWAY
INFRASTRUCTURE IMPROVEMENTS
DEVELOPMENT AND TAZ LOCATIONS
FIGURE 2

2030 Weekday PM Peak Hour Full Build Scenario - Individual Site Breakdown

Development	Intersection Location	New NB TH 77 Access to Existing MOA (Roundabout)	Killebrew Drive / 24th Avenue	Killebrew Drive / 22nd Avenue	Killebrew Drive / TH 77 Ramps / 20th Avenue	2012 Interim Access from CD Roadway/TH 77 to Thunderbird Rd	2012 Interim Access from Thunderbird Rd to Eastbound I-494 CD Road	Permanent Access from CD Roadway/TH 77 to Thunderbird Rd	Permanent Access and CD Roadway from Thunderbird Rd to East of 34th Ave
	Improvement #	1, 6, 7	2	3	4	8	9	10A	10B
Development	**Improvement Costs**	**$3,779,513**	**$881,104**	**$848,078**	**$1,860,924**	**$512,549**	**$759,845**	**$1,258,795**	**$16,352,940**
Existing	% Trips at Intersection	100%	39%	49%	56%	3%	18%	0%	12%
	Trips	575	1898	1781	2365	15	117	0	82
	Cost per Development	$3,779,513	$344,102	$412,572	$1,036,769	$15,224	$138,476	$0	$1,918,371
1 BCS - Northwest Office - (472D)	% Trips at Intersection	0%	1%	1%	1%	0%	0%	0%	0%
	Trips	0	71	51	51	0	0	0	0
	Cost per Development	$0	$12,872	$11,814	$22,357	$0	$0	$0	$0
2 BCS - SW Office - (472D)	% Trips at Intersection	0%	3%	3%	2%	0%	0%	0%	0%
	Trips	0	141	101	101	0	0	0	0
	Cost per Development	$0	$25,563	$23,397	$44,276	$0	$0	$0	$0
3 BCS - Central Park - (472D)	% Trips at Intersection	0%	3%	3%	3%	0%	0%	0%	0%
	Trips	0	154	110	110	0	0	0	0
	Cost per Development	$0	$27,920	$25,482	$48,222	$0	$0	$0	$0
4 BCS - Hotel - (472D)	% Trips at Intersection	0%	1%	1%	1%	0%	0%	0%	0%
	Trips	0	31	22	22	0	0	0	0
	Cost per Development	$0	$5,620	$5,096	$9,644	$0	$0	$0	$0
6 BCS - NE Housing - (472D)	% Trips at Intersection	0%	3%	2%	2%	0%	0%	0%	0%
	Trips	0	122	87	87	0	0	0	0
	Cost per Development	$0	$22,118	$20,154	$38,139	$0	$0	$0	$0
7 BCS - SE Housing - (472D)	% Trips at Intersection	0%	1%	1%	1%	0%	0%	0%	0%
	Trips	0	34	25	25	0	0	0	0
	Cost per Development	$0	$6,164	$5,791	$10,960	$0	$0	$0	$0
8 BCS - Health Partners Expansion - (472D)	% Trips at Intersection	0%	1%	1%	1%	0%	0%	0%	0%
	Trips	0	48	35	35	0	0	0	0
	Cost per Development	$0	$8,702	$8,108	$15,343	$0	$0	$0	$0
9 Park and Ride - (472E)	% Trips at Intersection	0%	5%	2%	1%	0%	0%	0%	0%
	Trips	0	246	58	58	0	0	0	0
	Cost per Development	$0	$44,599	$13,436	$25,426	$0	$0	$0	$0
10 BCS - Retail/Grocery - (472E)	% Trips at Intersection	0%	2%	2%	1%	0%	0%	0%	0%
	Trips	0	86	61	61	0	0	0	0
	Cost per Development	$0	$15,592	$14,131	$26,741	$0	$0	$0	$0
11 BCS - West Office - (472D)	% Trips at Intersection	0%	3%	3%	2%	0%	0%	0%	0%
	Trips	0	132	94	94	0	0	0	0
	Cost per Development	$0	$23,931	$21,775	$41,208	$0	$0	$0	$0
12 AUAR - (472C)	% Trips at Intersection	0%	1%	1%	1%	0%	0%	0%	0%
	Trips	0	62	34	34	0	0	0	0
	Cost per Development	$0	$11,240	$7,876	$14,905	$0	$0	$0	$0
14 AUAR - (471B)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	19	11	11	0	0	0	0
	Cost per Development	$0	$3,445	$2,548	$4,822	$0	$0	$0	$0
15 AUAR - Kelly Farms - (471C)	% Trips at Intersection	0%	12%	12%	10%	0%	0%	0%	0%
	Trips	0	591	440	440	0	0	0	0
	Cost per Development	$0	$107,147	$101,927	$192,887	$0	$0	$0	$0
16 AUAR - (471D)	% Trips at Intersection	0%	6%	6%	5%	0%	0%	0%	0%
	Trips	0	296	231	231	0	0	0	0
	Cost per Development	$0	$53,664	$53,512	$101,266	$0	$0	$0	$0
17 AUAR - (471E)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	2	0	0	0	0	0	0
	Cost per Development	$0	$363	$0	$0	$0	$0	$0	$0
18 AUAR - (471F)	% Trips at Intersection	0%	1%	0%	0%	0%	0%	0%	0%

Development	Intersection Location	Thunderbird Road Roundabout	24th Ave / I-494 Single-Point Interchange	American Boulevard / 24th Avenue (West)	American Boulevard / 24th Avenue (East)	28th Avenue / 82nd Street	Old Shakopee Road, Cedar Avenue to Killebrew Drive	American Blvd One-way Conversion (30th to 34th)	American Boulevard / 34th Avenue	American Boulevard / International Drive	American Boulevard / Metro Drive (East)
	Improvement #	10C	11	12A	12B	13	14	15	16	17	18
Development	**Improvement Costs**	**$1,178,231**	**$646,121**	**$1,524,296**	**$4,076,987**	**$2,207,017**	**$10,295,604**	**$474,094**	**$2,252,575**	**$170,138**	**$234,356**
Existing	% Trips at Intersection	5%	27%	28%	28%	12%	39%	5%	24%	7%	6%
	Trips	82	1945	2323	2323	204	1349	98	1296	98	88
	Cost per Development	$55,272	$174,035	$427,598	$1,143,683	$273,199	$4,009,460	$23,608	$531,658	$11,709	$14,382
1 BCS - Northwest Office - (472D)	% Trips at Intersection	0%	2%	2%	2%	0%	1%	7%	2%	1%	1%
	Trips	0	122	131	131	0	40	128	114	19	20
	Cost per Development	$0	$10,916	$24,113	$64,495	$0	$118,887	$30,835	$46,766	$2,270	$3,269
2 BCS - SW Office - (472D)	% Trips at Intersection	0%	3%	3%	3%	8%	2%	0%	4%	0%	0%
	Trips	0	241	262	262	134	80	0	228	0	0
	Cost per Development	$0	$21,564	$48,227	$128,991	$179,454	$237,774	$0	$93,533	$0	$0
3 BCS - Central Park - (472D)	% Trips at Intersection	0%	3%	3%	3%	0%	3%	13%	5%	4%	14%
	Trips	0	219	241	241	0	88	251	292	58	194
	Cost per Development	$0	$19,596	$44,361	$118,652	$0	$261,551	$60,466	$119,787	$6,930	$31,705
4 BCS - Hotel - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	1%	3%	1%	5%	2%
	Trips	0	27	32	32	0	18	68	72	68	22
	Cost per Development	$0	$2,416	$5,890	$15,755	$0	$53,499	$16,381	$29,537	$8,125	$3,595
6 BCS - NE Housing - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	2%	3%	7%	4%	0%
	Trips	0	0	17	17	0	70	57	407	57	6
	Cost per Development	$0	$0	$3,129	$8,370	$0	$208,052	$13,731	$166,964	$6,810	$981
7 BCS - SE Housing - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	1%	0%	2%	0%	0%
	Trips	0	0	5	5	0	18	2	114	2	2
	Cost per Development	$0	$0	$920	$2,462	$0	$53,499	$482	$46,766	$239	$327
8 BCS - Health Partners Expansion - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	1%	0%	3%	0%	0%
	Trips	0	0	7	7	0	26	6	160	0	6
	Cost per Development	$0	$0	$1,289	$3,446	$0	$77,276	$1,445	$65,637	$0	$981
9 Park and Ride - (472E)	% Trips at Intersection	0%	0%	1%	1%	21%	11%	0%	0%	0%	0%
	Trips	0	0	48	48	338	376	0	0	0	0
	Cost per Development	$0	$0	$8,835	$23,632	$452,653	$1,117,537	$0	$0	$0	$0
10 BCS - Retail/Grocery - (472E)	% Trips at Intersection	0%	2%	2%	2%	18%	1%	1%	2%	2%	2%
	Trips	0	163	176	176	290	50	27	122	27	27
	Cost per Development	$0	$14,585	$32,397	$86,650	$388,371	$148,609	$6,504	$50,048	$3,226	$4,413
11 BCS - West Office - (472D)	% Trips at Intersection	0%	3%	3%	3%	0%	2%	2%	4%	3%	3%
	Trips	0	219	238	238	0	76	40	217	40	40
	Cost per Development	$0	$19,596	$43,809	$117,175	$0	$225,885	$9,636	$89,020	$4,779	$6,537
12 AUAR - (472C)	% Trips at Intersection	0%	5%	5%	5%	3%	2%	42%	6%	57%	39%
	Trips	0	333	427	427	53	56	817	345	817	555
	Cost per Development	$0	$29,796	$78,599	$210,225	$70,978	$166,442	$196,817	$141,529	$97,615	$90,703
14 AUAR - (471B)	% Trips at Intersection	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
	Trips	0	6	7	7	0	34	0	15	0	0
	Cost per Development	$0	$537	$1,289	$3,446	$0	$101,054	$0	$6,153	$0	$0
15 AUAR - Kelly Farms - (471C)	% Trips at Intersection	0%	2%	2%	2%	0%	11%	0%	8%	0%	0%
	Trips	0	110	151	151	0	371	0	412	0	0
	Cost per Development	$0	$9,843	$27,795	$74,342	$0	$1,102,676	$0	$169,015	$0	$0
16 AUAR - (471D)	% Trips at Intersection	0%	1%	1%	1%	0%	2%	0%	3%	0%	0%
	Trips	0	52	64	64	0	62	0	154	0	0
	Cost per Development	$0	$4,653	$11,781	$31,509	$0	$184,275	$0	$63,175	$0	$0
17 AUAR - (471E)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%
	Trips	0	0	5	5	1	16	3	113	3	3
	Cost per Development	$0	$0	$920	$2,462	$1,339	$47,555	$723	$46,356	$358	$490
18 AUAR - (471F)	% Trips at Intersection	0%	0%	1%	1%	0%	4%	3%	15%	4%	4%

Development	Intersection Location	American Boulevard / 30th Avenue	American Boulevard / 28th Avenue	28th Avenue	34th Avenue Driveway	Old Shakopee Rd / 33rd Avenue	Old Shakopee Rd / 31st Avenue	Old Shakopee Rd / 30th Avenue	Old Shakopee Road / 28th Avenue	34th Avenue / I-494 North Ramps	34th Avenue / I-494 South Ramps
	Improvement #	19	20	20A	21	22	23	24	25	26	26
Development	**Improvement Costs**	**$617,779**	**$690,816**	**$1,676,140**	**$394,051**	**$300,300**	**$0**	**$2,433,499**	**$7,768,665**	**$29,826,046**	**$29,826,046**
Existing	% Trips at Intersection	10%	11%	20%	0%	18%	23%	23%	23%	34%	26%
	Trips	205	286	97	0	611	705	941	1059	1314	1585
	Cost per Development	$59,766	$73,447	$327,794	$0	$54,738	$0	$558,790	$1,788,871	$10,028,512	$7,753,696
1 BCS - Northwest Office - (472D)	% Trips at Intersection	6%	5%	0%	0%	3%	3%	5%	2%	1%	2%
	Trips	131	131	0	0	95	95	185	91	28	114
	Cost per Development	$38,192	$33,642	$0	$0	$8,511	$0	$109,858	$153,718	$213,697	$557,679
2 BCS - SW Office - (472D)	% Trips at Intersection	6%	5%	0%	0%	7%	7%	8%	4%	1%	4%
	Trips	127	127	0	0	228	229	331	181	57	228
	Cost per Development	$37,026	$32,615	$0	$0	$20,426	$0	$196,556	$305,747	$435,027	$1,115,358
3 BCS - Central Park - (472D)	% Trips at Intersection	11%	9%	0%	0%	7%	6%	5%	4%	3%	5%
	Trips	241	241	0	0	234	197	197	197	102	292
	Cost per Development	$70,262	$61,891	$0	$0	$20,964	$0	$116,984	$332,774	$778,469	$1,428,441
4 BCS - Hotel - (472D)	% Trips at Intersection	2%	1%	0%	0%	2%	1%	1%	1%	1%	1%
	Trips	32	32	0	0	65	39	39	39	30	73
	Cost per Development	$9,329	$8,218	$0	$0	$5,823	$0	$23,159	$65,879	$228,961	$357,110
6 BCS - NE Housing - (472D)	% Trips at Intersection	1%	1%	0%	100%	9%	5%	4%	3%	5%	7%
	Trips	17	17	0	205	308	157	157	157	196	407
	Cost per Development	$4,956	$4,366	$0	$394,051	$27,593	$0	$93,231	$265,206	$1,495,882	$1,991,012
7 BCS - SE Housing - (472D)	% Trips at Intersection	0%	0%	0%	0%	5%	1%	1%	1%	1%	2%
	Trips	5	5	0	0	157	43	43	43	55	114
	Cost per Development	$1,458	$1,284	$0	$0	$14,065	$0	$25,535	$72,636	$419,763	$557,679
8 BCS - Health Partners Expansion - (472D)	% Trips at Intersection	0%	0%	0%	0%	5%	3%	2%	1%	2%	3%
	Trips	7	7	0	0	160	106	62	61	88	161
	Cost per Development	$2,041	$1,798	$0	$0	$14,334	$0	$36,817	$103,042	$671,620	$787,599
9 Park and Ride - (472E)	% Trips at Intersection	1%	2%	1%	0%	0%	0%	3%	9%	0%	0%
	Trips	24	48	4	0	0	0	120	434	0	0
	Cost per Development	$6,997	$12,327	$13,517	$0	$0	$0	$71,259	$733,116	$0	$0
10 BCS - Retail/Grocery - (472E)	% Trips at Intersection	2%	4%	10%	0%	3%	3%	2%	2%	1%	2%
	Trips	33	104	49	0	95	95	95	111	54	122
	Cost per Development	$9,621	$26,708	$165,586	$0	$8,511	$0	$56,413	$187,502	$412,131	$596,814
11 BCS - West Office - (472D)	% Trips at Intersection	12%	9%	0%	0%	5%	6%	8%	4%	1%	4%
	Trips	262	239	0	0	177	177	346	169	58	216
	Cost per Development	$76,384	$61,377	$0	$0	$15,857	$0	$205,464	$285,476	$442,659	$1,056,655
12 AUAR - (472C)	% Trips at Intersection	27%	18%	11%	0%	4%	4%	3%	2%	2%	5%
	Trips	563	480	53	0	129	129	129	90	79	300
	Cost per Development	$164,139	$123,268	$179,104	$0	$11,557	$0	$76,604	$152,029	$602,932	$1,467,576
14 AUAR - (471B)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	15	15	15	15	2	15
	Cost per Development	$0	$0	$0	$0	$1,344	$0	$8,907	$25,338	$15,264	$73,379
15 AUAR - Kelly Farms - (471C)	% Trips at Intersection	0%	0%	0%	0%	12%	13%	10%	22%	2%	7%
	Trips	0	0	0	0	412	412	412	1003	70	412
	Cost per Development	$0	$0	$0	$0	$36,910	$0	$244,656	$1,694,275	$534,243	$2,015,472
16 AUAR - (471D)	% Trips at Intersection	2%	1%	0%	0%	5%	5%	13%	7%	1%	3%
	Trips	34	34	0	0	154	154	514	327	26	154
	Cost per Development	$9,912	$8,732	$0	$0	$13,797	$0	$305,227	$552,371	$198,433	$753,356
17 AUAR - (471E)	% Trips at Intersection	0%	0%	0%	0%	0%	1%	0%	0%	1%	2%
	Trips	4	5	1	0	16	16	16	15	42	93
	Cost per Development	$1,166	$1,284	$3,379	$0	$1,433	$0	$9,501	$25,338	$320,546	$454,949
18 AUAR - (471F)	% Trips at Intersection	3%	2%	1%	0%	3%	3%	2%	2%	10%	11%

Development	Intersection Location	24th Avenue / 82nd Street	86th Street Extension from EOSR to 28th Avenue	Old Shakopee Road / 86th Street	30th Avenue	Wayfinding Signs	Lindau Lane Improvements (Lowering / TH 77 Ramps / IKEA Way)	Intelligent Transportation Systems (ITS) Improvements
	Improvement #	27	28A	28B	29	30	31, 5	-
Development	**Improvement Costs**	**$96,009**	**$28,261,141**	**$1,608,896**	**$1,677,315**	**$549,600**	**$12,900,000**	**$2,500,000**
Existing	% Trips at Intersection	46%	3%	40%	23%	0%	0%	50%
	Trips	1656	62	1379	551	0	0	1
	Cost per Development	$44,005	$798,628	$639,939	$386,857	$0	$0	$1,250,000
1 BCS - Northwest Office - (472D)	% Trips at Intersection	0%	1%	1%	9%	0%	0%	0%
	Trips	0	20	40	207	0	0	0
	Cost per Development	$0	$257,622	$18,562	$145,335	$0	$0	$0
2 BCS - SW Office - (472D)	% Trips at Intersection	4%	2%	2%	19%	0%	0%	0%
	Trips	134	40	80	458	0	0	0
	Cost per Development	$3,561	$515,244	$37,125	$321,561	$0	$0	$0
3 BCS - Central Park - (472D)	% Trips at Intersection	0%	2%	3%	2%	0%	0%	0%
	Trips	0	44	88	48	0	0	0
	Cost per Development	$0	$566,769	$40,837	$33,701	$0	$0	$0
4 BCS - Hotel - (472D)	% Trips at Intersection	0%	0%	1%	0%	0%	0%	0%
	Trips	0	9	18	10	0	0	0
	Cost per Development	$0	$115,930	$8,353	$7,021	$0	$0	$0
6 BCS - NE Housing - (472D)	% Trips at Intersection	0%	2%	2%	0%	0%	0%	0%
	Trips	0	35	70	11	0	0	0
	Cost per Development	$0	$450,839	$32,484	$7,723	$0	$0	$0
7 BCS - SE Housing - (472D)	% Trips at Intersection	0%	0%	1%	0%	0%	0%	0%
	Trips	0	9	18	3	0	0	0
	Cost per Development	$0	$115,930	$8,353	$2,106	$0	$0	$0
8 BCS - Health Partners Expansion - (472D)	% Trips at Intersection	0%	1%	1%	0%	0%	0%	0%
	Trips	0	13	26	1	0	0	0
	Cost per Development	$0	$167,454	$12,066	$702	$0	$0	$0
9 Park and Ride - (472E)	% Trips at Intersection	0%	9%	11%	6%	0%	0%	0%
	Trips	0	188	376	144	0	0	0
	Cost per Development	$0	$2,421,647	$174,487	$101,102	$0	$0	$0
10 BCS - Retail/Grocery - (472E)	% Trips at Intersection	2%	1%	1%	5%	0%	0%	0%
	Trips	82	25	50	117	0	0	0
	Cost per Development	$2,179	$322,028	$23,203	$82,146	$0	$0	$0
11 BCS - West Office - (472D)	% Trips at Intersection	0%	2%	2%	25%	0%	0%	0%
	Trips	0	38	76	608	0	0	0
	Cost per Development	$0	$489,482	$35,269	$426,876	$0	$0	$0
12 AUAR - (472C)	% Trips at Intersection	0%	1%	2%	4%	0%	0%	0%
	Trips	0	28	56	91	0	0	0
	Cost per Development	$0	$360,671	$25,987	$63,891	$0	$0	$0
14 AUAR - (471B)	% Trips at Intersection	0%	2%	1%	0%	0%	0%	0%
	Trips	8	49	34	0	0	0	0
	Cost per Development	$213	$631,174	$15,778	$0	$0	$0	$0
15 AUAR - Kelly Farms - (471C)	% Trips at Intersection	4%	63%	11%	0%	0%	0%	0%
	Trips	151	1374	371	0	0	0	0
	Cost per Development	$4,013	$17,698,636	$172,166	$0	$0	$0	$0
16 AUAR - (471D)	% Trips at Intersection	1%	1%	2%	1%	0%	0%	0%
	Trips	34	31	62	34	0	0	0
	Cost per Development	$903	$399,314	$28,772	$23,871	$0	$0	$0
17 AUAR - (471E)	% Trips at Intersection	0%	1%	0%	0%	0%	0%	0%
	Trips	2	14	16	1	0	0	0
	Cost per Development	$53	$180,335	$7,425	$702	$0	$0	$0
18 AUAR - (471F)	% Trips at Intersection	1%	4%	4%	0%	0%	0%	0%

Development	Intersection Location	Lindau Lane / TH 77 Ramps / IKEA Way	American Boulevard / IKEA Driveway	American Boulevard / Thunderbird Road	American Boulevard / Metro Drive (West)	Lindau Lane / 22nd Avenue	Lindau Lane / 24th Avenue	34th Avenue / Appletree Square	TOTAL
	Improvement #								
Development	**Improvement Costs**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$170,439,471**
Existing	% Trips at Intersection	41%	57%	21%	8%	48%	45%	22%	**28%**
	Trips	1782	725	793	200	1442	1879	720	**34,632**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$38,074,675**
1 BCS - Northwest Office - (472D)	% Trips at Intersection	0%	1%	0%	5%	0%	0%	3%	**2%**
	Trips	0	10	10	131	0	0	95	**2,261**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$1,885,412**
2 BCS - SW Office - (472D)	% Trips at Intersection	0%	2%	1%	5%	0%	3%	7%	**3%**
	Trips	0	21	21	127	0	134	228	**4,301**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$3,823,024**
3 BCS - Central Park - (472D)	% Trips at Intersection	0%	2%	1%	10%	0%	0%	7%	**4%**
	Trips	0	22	22	241	0	0	234	**4,358**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$4,215,762**
4 BCS - Hotel - (472D)	% Trips at Intersection	0%	0%	0%	1%	0%	0%	1%	**1%**
	Trips	0	4	4	32	0	0	26	**866**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$985,343**
6 BCS - NE Housing - (472D)	% Trips at Intersection	0%	1%	0%	1%	0%	0%	5%	**2%**
	Trips	0	17	17	17	0	0	151	**2,866**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$5,255,790**
7 BCS - SE Housing - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	4%	**1%**
	Trips	0	5	5	5	0	0	114	**856**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$1,346,418**
8 BCS - Health Partners Expansion - (472D)	% Trips at Intersection	0%	1%	0%	0%	0%	0%	5%	**1%**
	Trips	0	7	7	7	0	0	160	**1,203**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$1,979,701**
9 Park and Ride - (472E)	% Trips at Intersection	0%	4%	1%	1%	0%	0%	0%	**2%**
	Trips	0	48	48	24	0	0	0	**2,630**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$5,220,570**
10 BCS - Retail/Grocery - (472E)	% Trips at Intersection	0%	1%	0%	1%	0%	2%	3%	**2%**
	Trips	0	12	12	17	0	82	95	**2,516**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$2,684,108**
11 BCS - West Office - (472D)	% Trips at Intersection	0%	1%	0%	10%	0%	0%	5%	**3%**
	Trips	0	18	18	239	0	0	177	**4,246**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$3,698,850**
12 AUAR - (472C)	% Trips at Intersection	2%	2%	1%	20%	2%	2%	4%	**6%**
	Trips	69	25	25	480	69	69	129	**6,953**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$4,344,482**
14 AUAR - (471B)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	**0%**
	Trips	0	1	1	0	0	8	15	**303**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$894,691**
15 AUAR - Kelly Farms - (471C)	% Trips at Intersection	0%	3%	1%	0%	0%	4%	13%	**6%**
	Trips	0	41	41	0	0	151	412	**7,928**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$24,186,003**
16 AUAR - (471D)	% Trips at Intersection	0%	1%	0%	1%	0%	1%	5%	**2%**
	Trips	0	16	16	34	0	34	154	**2,966**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$2,798,522**
17 AUAR - (471E)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	**0%**
	Trips	0	3	3	4	0	2	16	**420**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	**$1,106,679**
18 AUAR - (471F)	% Trips at Intersection	0%	2%	1%	2%	0%	1%	3%	**3%**

2030 Weekday PM Peak Hour Full Build Scenario - Future Development Breakdown

Weekday Future Development Breakdown

Development	Intersection Location	New NB TH 77 Access to Existing MOA (Roundabout)	Killebrew Drive / 24th Avenue	Killebrew Drive / 22nd Avenue	Killebrew Drive / TH 77 Ramps / 20th Avenue	2012 Interim Access from CD Roadway/TH 77 to Thunderbird Rd	2012 Interim Access from Thunderbird Rd to Eastbound I-494 CD Road	Permanent Access from CD Roadway/TH 77 to Thunderbird Rd	Permanent Access and CD Roadway from Thunderbird Rd to East of 34th Ave	Thunderbird Road Roundabout	24th Ave / I-494 Single-Point Interchange	American Boulevard / 24th Avenue (West)	American Boulevard / 24th Avenue (East)	28th Avenue / 82nd Street	Old Shakopee Road, Cedar Avenue to Killebrew Drive	American Blvd One-way Conversion (30th to 34th)
	Improvement #	1, 6, 7	2	3	4	8	9	10A	10B	10C	11	12A	12B	13	14	15
Development	**Improvement Costs**	**$3,779,513**	**$881,104**	**$848,078**	**$1,860,924**	**$512,549**	**$759,845**	**$1,258,795**	**$16,352,940**	**$1,178,231**	**$646,121**	**$1,524,296**	**$4,076,987**	**$2,207,017**	**$10,295,604**	**$474,094**
Existing traffic - City of Bloomington	% Trips at Intersection	0%	19%	16%	9%	3%	18%	0%	12%	5%	11%	9%	9%	12%	25%	4%
	Trips	0	910	603	381	15	117	0	82	82	809	771	771	204	856	83
	Cost per Development	$0	$164,980	$139,686	$167,023	$15,224	$138,476	$0	$1,918,371	$55,272	$72,388	$141,919	$379,587	$273,199	$2,544,179	$19,995
Mall of America	% Trips at Intersection	100%	15%	30%	45%	0%	0%	0%	0%	0%	13%	15%	15%	0%	9%	0%
	Trips	575	728	1091	1897	0	0	0	0	0	973	1256	1256	0	320	0
	Cost per Development	$3,779,513	$131,984	$252,732	$831,607	$0	$0	$0	$0	$0	$87,062	$231,194	$618,367	$0	$951,095	$0
IKEA	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%	0%	0%	0%
	Trips	0	13	0	0	0	0	0	0	0	132	195	195	0	13	0
	Cost per Development	$0	$2,357	$0	$0	$0	$0	$0	$0	$0	$11,811	$35,894	$96,004	$0	$38,638	$0
Health Partners	% Trips at Intersection	0%	5%	2%	2%	0%	0%	0%	0%	0%	0%	1%	1%	0%	5%	1%
	Trips	0	247	87	87	0	0	0	0	0	31	101	101	0	160	15
	Cost per Development	$0	$44,780	$20,154	$38,139	$0	$0	$0	$0	$0	$2,774	$18,591	$49,725	$0	$475,548	$3,614
MAC	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Mall of America Phase II	% Trips at Intersection	0%	2%	0%	0%	97%	82%	85%	75%	58%	22%	19%	19%	0%	2%	0%
	Trips	0	84	0	0	490	525	490	525	1015	1581	1580	1580	0	84	0
	Cost per Development	$0	$15,229	$0	$0	$497,325	$621,368	$1,070,850	$12,282,251	$684,156	$141,465	$290,833	$777,882	$0	$249,662	$0
Bloomington Central Station	% Trips at Intersection	0%	17%	16%	14%	0%	0%	0%	0%	0%	14%	13%	13%	26%	13%	29%
(BCS)	Trips	0	819	586	586	0	0	0	0	0	991	1109	1109	424	466	579
	Cost per Development	$0	$148,482	$135,748	$256,891	$0	$0	$0	$0	$0	$88,673	$204,135	$545,994	$567,825	$1,385,032	$139,482
AUAR Developments	% Trips at Intersection	0%	37%	34%	29%	0%	0%	15%	13%	37%	37%	39%	39%	41%	34%	66%
	Trips	0	1813	1236	1236	0	0	86	92	651	2704	3221	3221	682	1189	1291
	Cost per Development	$0	$328,692	$286,322	$541,838	$0	$0	$187,945	$2,152,318	$438,803	$241,949	$592,894	$1,585,796	$913,341	$3,533,913	$311,004
MAC Terminal Expansion	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Park and Ride Expansion	% Trips at Intersection	0%	5%	2%	1%	0%	0%	0%	0%	0%	0%	1%	1%	21%	11%	0%
	Trips	0	246	58	58	0	0	0	0	0	0	48	48	338	376	0
	Cost per Development	$0	$44,599	$13,436	$25,426	$0	$0	$0	$0	$0	$0	$8,835	$23,632	$452,653	$1,117,537	$0
TOTAL	**% Trips**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Trips	**575**	**4860**	**3661**	**4245**	**505**	**642**	**576**	**699**	**1748**	**7221**	**8281**	**8281**	**1648**	**3464**	**1968**
	Cost per Development	**$3,779,513**	**$881,104**	**$848,078**	**$1,860,924**	**$512,549**	**$759,845**	**$1,258,795**	**$16,352,940**	**$1,178,231**	**$646,121**	**$1,524,296**	**$4,076,987**	**$2,207,017**	**$10,295,604**	**$474,094**

Development	Intersection Location	American Boulevard / 34th Avenue	American Boulevard / International Drive	American Boulevard / Metro Drive (East)	American Boulevard / 30th Avenue	American Boulevard / 28th Avenue	28th Avenue	34th Avenue Driveway	Old Shakopee Rd / 33rd Avenue	Old Shakopee Rd / 31st Avenue	Old Shakopee Rd / 30th Avenue	Old Shakopee Road / 28th Avenue	34th Avenue / I-494 North Ramps	34th Avenue / I-494 South Ramps	24th Avenue / 82nd Street	86th Street Extension from EOSR to 28th Avenue
	Improvement #	16	17	18	19	20	20A	21	22	23	24	25	26	26	27	28A
Development	**Improvement Costs**	**$2,252,575**	**$170,138**	**$234,356**	**$617,779**	**$690,816**	**$1,676,140**	**$394,051**	**$300,300**	**$0**	**$2,433,499**	**$7,768,665**	**$29,826,046**	**$29,826,046**	**$96,009**	**$28,261,141**
Existing traffic - City of Bloomington	% Trips at Intersection	21%	6%	6%	5%	7%	20%	0%	14%	19%	14%	18%	13%	18%	12%	3%
	Trips	1148	83	83	99	185	97	0	478	572	559	812	520	1077	439	62
	Cost per Development	$470,944	$9,917	$13,565	$28,863	$47,510	$327,794	$0	$42,823	$0	$331,949	$1,371,636	$3,968,665	$5,268,599	$11,666	$798,628
Mall of America	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	1204	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$31,994	$0
IKEA	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$345	$0
Health Partners	% Trips at Intersection	3%	1%	0%	5%	4%	0%	0%	4%	4%	9%	5%	1%	2%	0%	0%
	Trips	148	15	5	106	101	0	0	133	133	382	247	53	148	0	0
	Cost per Development	$60,714	$1,792	$817	$30,904	$25,938	$0	$0	$11,915	$0	$226,842	$417,234	$404,499	$724,004	$0	$0
MAC	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	19%	6%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0	0	741	360	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,655,348	$1,761,092	$0	$0
Mall of America Phase II	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	84	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,232	$0
Bloomington Central Station	% Trips at Intersection	31%	19%	22%	40%	34%	10%	100%	45%	37%	36%	23%	17%	28%	6%	11%
(BCS)	Trips	1726	271	317	855	903	49	205	1519	1138	1455	1049	668	1727	216	233
	Cost per Development	$708,058	$32,379	$51,807	$249,269	$231,899	$165,586	$394,051	$136,085	$0	$864,017	$1,771,979	$5,098,208	$8,448,348	$5,740	$3,001,297
AUAR Developments	% Trips at Intersection	45%	74%	72%	49%	54%	70%	0%	36%	40%	39%	45%	20%	37%	46%	78%
	Trips	2469	1055	1029	1035	1453	346	0	1222	1222	1582	2057	781	2255	1657	1711
	Cost per Development	$1,012,859	$126,051	$168,168	$301,747	$373,143	$1,169,243	$0	$109,477	$0	$939,433	$3,474,700	$5,960,630	$11,031,283	$44,032	$22,039,568
MAC Terminal Expansion	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	9%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0	0	1145	530	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,738,696	$2,592,718	$0	$0
Park and Ride Expansion	% Trips at Intersection	0%	0%	0%	1%	2%	1%	0%	0%	0%	3%	9%	0%	0%	0%	9%
	Trips	0	0	0	24	48	4	0	0	0	120	434	0	0	0	188
	Cost per Development	$0	$0	$0	$6,997	$12,327	$13,517	$0	$0	$0	$71,259	$733,116	$0	$0	$0	$2,421,647
TOTAL	**% Trips**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Trips	**5491**	**1424**	**1434**	**2119**	**2690**	**496**	**205**	**3352**	**3065**	**4098**	**4599**	**3908**	**6097**	**3613**	**2194**
	Cost per Development	**$2,252,575**	**$170,138**	**$234,356**	**$617,779**	**$690,816**	**$1,676,140**	**$394,051**	**$300,300**	**$0**	**$2,433,499**	**$7,768,665**	**$29,826,046**	**$29,826,046**	**$96,009**	**$28,261,141**

Development	Intersection Location	Old Shakopee Road / 86th Street	30th Avenue	Wayfinding Signs	Lindau Lane Improvements (Lowering / TH 77 Ramps / IKEA Way)	Intelligent Transportation Systems (ITS) Improvements	Lindau Lane / TH 77 Ramps / IKEA Way	American Boulevard / IKEA Driveway	American Boulevard / Thunderbird Road	American Boulevard / Metro Drive (West)	Lindau Lane / 22nd Avenue	Lindau Lane / 24th Avenue	34th Avenue / Appletree Square	TOTAL
	Improvement #	28B	29	30	31, 5	-								
Development	**Improvement Costs**	**$1,608,896**	**$1,677,315**	**$549,600**	**$12,900,000**	**$2,500,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$170,439,471**
Existing traffic - City of Bloomington	% Trips at Intersection	26%	3%	0%	0%	50%	3%	29%	10%	4%	4%	11%	18%	**12%**
	Trips	886	65	0	0	1	121	363	363	99	121	464	587	**14968**
	Cost per Development	$411,157	$45,636	$0	$0	$1,250,000	$0	$0	$0	$0	$0	$0	$0	**$20,429,651**
Mall of America	% Trips at Intersection	9%	0%	0%	0%	0%	30%	11%	4%	0%	41%	32%	0%	**11%**
	Trips	320	0	0	0	0	1291	133	133	0	1252	1346	0	**13775**
	Cost per Development	$148,499	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$7,064,048**
IKEA	% Trips at Intersection	0%	0%	0%	0%	0%	9%	13%	6%	0%	2%	2%	0%	**1%**
	Trips	13	0	0	0	0	370	159	227	0	69	69	0	**1468**
	Cost per Development	$6,033	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$191,083**
Health Partners	% Trips at Intersection	5%	20%	0%	0%	0%	0%	6%	2%	4%	0%	0%	4%	**3%**
	Trips	160	486	0	0	0	0	70	70	101	0	0	133	**3320**
	Cost per Development	$74,250	$341,220	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,973,453**
MAC	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**1%**
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	**1101**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$7,416,440**
Mall of America Phase II	% Trips at Intersection	2%	0%	100%	100%	50%	46%	10%	51%	0%	33%	9%	0%	**13%**
	Trips	84	0	1	2280	1	1987	126	1906	0	1006	356	0	**15785**
	Cost per Development	$38,981	$0	$549,600	$12,900,000	$1,250,000	$0	$0	$0	$0	$0	$0	$0	**$31,371,834**
Bloomington Central Station	% Trips at Intersection	13%	61%	0%	0%	0%	0%	9%	3%	34%	0%	5%	40%	**19%**
(BCS)	Trips	466	1463	0	0	0	0	116	116	816	0	216	1280	**23473**
	Cost per Development	$216,252	$1,027,171	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$25,874,408**
AUAR Developments	% Trips at Intersection	34%	10%	0%	0%	0%	13%	20%	23%	57%	19%	41%	38%	**37%**
	Trips	1162	231	0	0	0	575	247	839	1384	575	1736	1222	**45267**
	Cost per Development	$539,238	$162,185	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$58,566,569**
MAC Terminal Expansion	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**1%**
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	**1675**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$11,331,414**
Park and Ride Expansion	% Trips at Intersection	11%	6%	0%	0%	0%	0%	4%	1%	1%	0%	0%	0%	**2%**
	Trips	376	144	0	0	0	0	48	48	24	0	0	0	**2630**
	Cost per Development	$174,487	$101,102	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$5,220,570**
TOTAL	**% Trips**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Trips	**3467**	**2389**	**1**	**2280**	**2**	**4344**	**1262**	**3702**	**2424**	**3023**	**4187**	**3222**	**123462**
	Cost per Development	**$1,608,896**	**$1,677,315**	**$549,600**	**$12,900,000**	**$2,500,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$170,439,471**

Indicates an improvement at the intersection

Indicates a segment of roadway that is being improved

Indicates an improvement for a specific development

Indacates there are no improvements associated at the intersection

Indacates an improvement currently under construction

1/25/2007

2030 Saturday Peak Hour Full Build Scenario - Individual Site Breakdown

Development	Intersection Location	New NB TH 77 Access to Existing MOA (Roundabout)	Killebrew Drive / 24th Avenue	Killebrew Drive / 22nd Avenue	Killebrew Drive / TH 77 Ramps / 20th Avenue	2012 Interim Access from CD Roadway/TH 77 to Thunderbird Rd	2012 Interim Access from Thunderbird Rd to Eastbound I-494 CD Road	Permanent Access from CD Roadway/TH 77 to Thunderbird Rd
	Improvement #	1, 6, 7	2	3	4	8	9	10A
Development	Improvement Costs	$3,779,513	$881,104	$848,078	$1,860,924	$512,549	$759,845	$1,258,795
Existing	% Trips at Intersection	100%	56%	77%	82%	8%	8%	5%
	Trips	750	1590	2515	3362	44	39	29
	Cost per Development	$3,779,513	$491,046	$656,484	$1,527,448	$41,079	$58,914	$56,861
1 BCS - Northwest Office - (472D)	% Trips at Intersection	0%	1%	0%	0%	0%	0%	0%
	Trips	0	16	11	11	0	0	0
	Cost per Development	$0	$4,941	$2,871	$4,998	$0	$0	$0
2 BCS - SW Office - (472D)	% Trips at Intersection	0%	1%	1%	1%	0%	0%	0%
	Trips	0	32	23	23	0	0	0
	Cost per Development	$0	$9,883	$6,004	$10,450	$0	$0	$0
3 BCS - Central Park - (472D)	% Trips at Intersection	0%	2%	1%	1%	0%	0%	0%
	Trips	0	44	32	32	0	0	0
	Cost per Development	$0	$13,589	$8,353	$14,538	$0	$0	$0
4 BCS - Hotel - (472D)	% Trips at Intersection	0%	1%	1%	1%	0%	0%	0%
	Trips	0	41	29	29	0	0	0
	Cost per Development	$0	$12,662	$7,570	$13,175	$0	$0	$0
6 BCS - NE Housing - (472D)	% Trips at Intersection	0%	4%	2%	2%	0%	0%	0%
	Trips	0	112	80	80	0	0	0
	Cost per Development	$0	$34,589	$20,882	$36,346	$0	$0	$0
7 BCS - SE Housing - (472D)	% Trips at Intersection	0%	1%	1%	0%	0%	0%	0%
	Trips	0	28	20	20	0	0	0
	Cost per Development	$0	$8,647	$5,221	$9,087	$0	$0	$0
8 BCS - Health Partners Expansion - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%
	Trips	0	10	7	7	0	0	0
	Cost per Development	$0	$3,088	$1,827	$3,180	$0	$0	$0
9 Park and Ride - (472E)	% Trips at Intersection	0%	2%	0%	0%	0%	0%	0%
	Trips	0	54	13	13	0	0	0
	Cost per Development	$0	$16,677	$3,393	$5,906	$0	$0	$0
10 BCS - Retail/Grocery - (472E)	% Trips at Intersection	0%	3%	2%	1%	0%	0%	0%
	Trips	0	81	58	58	0	0	0
	Cost per Development	$0	$25,016	$15,140	$26,351	$0	$0	$0
11 BCS - West Office - (472D)	% Trips at Intersection	0%	1%	1%	1%	0%	0%	0%
	Trips	0	35	25	25	0	0	0
	Cost per Development	$0	$10,809	$6,526	$11,358	$0	$0	$0
12 AUAR - (472C)	% Trips at Intersection	0%	1%	0%	0%	0%	0%	0%
	Trips	0	22	13	13	0	0	0
	Cost per Development	$0	$6,794	$3,393	$5,906	$0	$0	$0
14 AUAR - (471B)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%
	Trips	0	9	5	5	0	0	0
	Cost per Development	$0	$2,780	$1,305	$2,272	$0	$0	$0
15 AUAR - Kelly Farms - (471C)	% Trips at Intersection	0%	1%	1%	1%	0%	0%	0%
	Trips	0	41	30	30	0	0	0
	Cost per Development	$0	$12,662	$7,831	$13,630	$0	$0	$0
16 AUAR - (471D)	% Trips at Intersection	0%	1%	0%	0%	0%	0%	0%
	Trips	0	19	15	15	0	0	0
	Cost per Development	$0	$5,868	$3,915	$6,815	$0	$0	$0
17 AUAR - (471E)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%
	Trips	0	4	0	0	0	0	0
	Cost per Development	$0	$1,235	$0	$0	$0	$0	$0
18 AUAR - (471F)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%
	Trips	0	8	0	0	0	0	0
	Cost per Development	$0	$2,471	$0	$0	$0	$0	$0
19 AUAR - (472A and 472B)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%
	Trips	0	6	4	4	0	0	0

Development	Intersection Location	Permanent Access and CD Roadway from Thunderbird Rd to East of 34th Ave	Thunderbird Road Roundabout	24th Ave / I-494 Single-Point Interchange	American Boulevard / 24th Avenue (West)	American Boulevard / 24th Avenue (East)	28th Avenue / 82nd Street	Old Shakopee Road, Cedar Avenue to Killebrew Drive	American Blvd One-way Conversion (30th to 34th)	American Boulevard / 34th Avenue	American Boulevard / International Drive	American Boulevard / Metro Drive (East)	American Boulevard / 30th Avenue	American Boulevard / 28th Avenue	28th Avenue
	Improvement #	10B	10C	11	12A	12B	13	14	15	16	17	18	19	20	20A
Development	Improvement Costs	$16,352,940	$1,178,231	$646,121	$1,524,296	$4,076,987	$2,207,017	$10,295,604	$474,094	$2,252,575	$170,138	$234,356	$617,779	$690,816	$1,676,140
Existing	% Trips at Intersection	4%	3%	42%	41%	41%	18%	43%	21%	28%	13%	18%	15%	23%	30%
	Trips	24	53	2600	2770	2770	141	694	201	717	103	100	110	205	85
	Cost per Development	$665,204	$34,886	$269,433	$629,067	$1,682,547	$388,987	$4,446,266	$101,809	$639,136	$22,438	$43,319	$94,910	$160,382	$494,694
1 BCS - Northwest Office - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	1%	3%	1%	2%	3%	4%	3%	0%
	Trips	0	0	28	30	30	0	10	28	26	14	14	30	30	0
	Cost per Development	$0	$0	$2,902	$6,813	$18,223	$0	$64,067	$14,182	$23,176	$3,050	$6,065	$25,885	$23,471	$0
2 BCS - SW Office - (472D)	% Trips at Intersection	0%	0%	1%	1%	1%	4%	1%	0%	2%	0%	0%	4%	3%	0%
	Trips	0	0	55	58	58	30	18	0	52	0	0	28	28	0
	Cost per Development	$0	$0	$5,700	$13,172	$35,230	$82,763	$115,321	$0	$46,353	$0	$0	$24,159	$21,906	$0
3 BCS - Central Park - (472D)	% Trips at Intersection	0%	0%	1%	1%	1%	0%	1%	8%	3%	6%	6%	10%	8%	0%
	Trips	0	0	64	69	69	0	24	76	84	43	34	69	69	0
	Cost per Development	$0	$0	$6,632	$15,670	$41,912	$0	$153,761	$38,495	$74,878	$9,367	$14,728	$59,535	$53,982	$0
4 BCS - Hotel - (472D)	% Trips at Intersection	0%	0%	1%	1%	1%	0%	1%	10%	4%	12%	5%	6%	5%	0%
	Trips	0	0	35	40	40	0	24	93	99	93	26	40	40	0
	Cost per Development	$0	$0	$3,627	$9,084	$24,297	$0	$153,761	$47,106	$88,249	$20,260	$11,263	$34,513	$31,294	$0
6 BCS - NE Housing - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	4%	5%	15%	7%	1%	2%	2%	0%
	Trips	0	0	0	16	16	0	64	51	375	51	7	16	16	0
	Cost per Development	$0	$0	$0	$3,634	$9,719	$0	$410,030	$25,832	$334,276	$11,110	$3,032	$13,805	$12,518	$0
7 BCS - SE Housing - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	1%	0%	4%	0%	0%	1%	0%	0%
	Trips	0	0	0	4	4	0	16	2	95	2	2	4	4	0
	Cost per Development	$0	$0	$0	$908	$2,430	$0	$102,508	$1,013	$84,683	$436	$866	$3,451	$3,129	$0
8 BCS - Health Partners Expansion - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
	Trips	0	0	0	2	2	0	6	1	33	0	1	2	2	0
	Cost per Development	$0	$0	$0	$454	$1,215	$0	$38,440	$507	$29,416	$0	$433	$1,726	$1,565	$0
9 Park and Ride - (472E)	% Trips at Intersection	0%	0%	0%	0%	0%	9%	5%	0%	0%	0%	0%	1%	1%	1%
	Trips	0	0	0	11	11	73	82	0	0	0	0	5	10	2
	Cost per Development	$0	$0	$0	$2,498	$6,682	$201,390	$525,351	$0	$0	$0	$0	$4,314	$7,824	$11,640
10 BCS - Retail/Grocery - (472E)	% Trips at Intersection	0%	0%	2%	2%	2%	34%	3%	3%	5%	3%	5%	4%	11%	16%
	Trips	0	0	154	165	165	274	46	26	117	26	26	31	99	47
	Cost per Development	$0	$0	$15,959	$37,472	$100,224	$755,903	$294,709	$13,169	$104,294	$5,664	$11,263	$26,747	$77,453	$273,537
11 BCS - West Office - (472D)	% Trips at Intersection	0%	0%	1%	1%	1%	0%	1%	3%	2%	4%	6%	11%	7%	0%
	Trips	0	0	57	62	62	0	20	29	56	29	30	78	61	0
	Cost per Development	$0	$0	$5,907	$14,080	$37,660	$0	$128,134	$14,689	$49,919	$6,318	$12,996	$67,300	$47,723	$0
12 AUAR - (472C)	% Trips at Intersection	0%	0%	1%	2%	2%	2%	1%	28%	6%	33%	24%	19%	13%	4%
	Trips	0	0	79	102	102	12	18	258	147	257	130	135	114	12
	Cost per Development	$0	$0	$8,187	$23,164	$61,957	$33,105	$115,321	$130,680	$131,036	$55,987	$56,315	$116,481	$89,188	$69,839
14 AUAR - (471B)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	2	2	2	0	14	0	6	0	0	0	0	0
	Cost per Development	$0	$0	$207	$454	$1,215	$0	$89,694	$0	$5,348	$0	$0	$0	$0	$0
15 AUAR - Kelly Farms - (471C)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	2%	0%	1%	0%	0%	0%	0%	0%
	Trips	0	0	7	11	11	0	26	0	28	0	0	0	0	0
	Cost per Development	$0	$0	$725	$2,498	$6,682	$0	$166,575	$0	$24,959	$0	$0	$0	$0	$0
16 AUAR - (471D)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	4	4	4	0	4	0	10	0	0	2	2	0
	Cost per Development	$0	$0	$415	$908	$2,430	$0	$25,627	$0	$8,914	$0	$0	$1,726	$1,565	$0
17 AUAR - (471E)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	1%	1%	6%	1%	1%	1%	1%	0%
	Trips	0	0	0	8	8	1	20	6	140	6	6	7	8	1
	Cost per Development	$0	$0	$0	$1,817	$4,859	$2,759	$128,134	$3,039	$124,796	$1,307	$2,599	$6,040	$6,259	$5,820
18 AUAR - (471F)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	2%	1%	11%	2%	2%	2%	2%	1%
	Trips	0	0	0	16	16	2	39	12	271	12	12	14	16	2
	Cost per Development	$0	$0	$0	$3,634	$9,719	$5,518	$249,862	$6,078	$241,570	$2,614	$5,198	$12,079	$12,518	$11,640
19 AUAR - (472A and 472B)	% Trips at Intersection	0%	0%	0%	0%	0%	1%	0%	2%	0%	1%	3%	1%	4%	1%
	Trips	0	0	24	32	32	7	4	16	11	8	16	8	39	3

Development	Intersection Location	34th Avenue Driveway	Old Shakopee Rd / 33rd Avenue	Old Shakopee Rd / 31st Avenue	Old Shakopee Rd / 30th Avenue	Old Shakopee Road / 28th Avenue	34th Avenue / I-494 North Ramps	34th Avenue / I-494 South Ramps	24th Avenue / 82nd Street	86th Street Extension from EOSR to 28th Avenue	Old Shakopee Road / 86th Street	30th Avenue	Wayfinding Signs
	Improvement #	21	22	23	24	25	26	26	27	28A	28B	29	30
Development	Improvement Costs	$394,051	$300,300	$0	$2,433,499	$7,768,665	$29,826,046	$29,826,046	$96,009	$28,261,141	$1,608,896	$1,677,315	$549,600
Existing	% Trips at Intersection	0%	27%	34%	31%	31%	49%	35%	59%	3%	44%	4%	0%
	Trips	0	383	383	397	411	1244	1062	1953	12	680	21	0
	Cost per Development	$0	$80,996	$0	$757,131	$2,397,088	$14,671,254	$10,558,420	$56,751	$971,730	$703,117	$63,927	$0
1 BCS - Northwest Office - (472D)	% Trips at Intersection	0%	1%	1%	3%	2%	1%	1%	0%	1%	1%	9%	0%
	Trips	0	12	12	32	21	14	27	0	5	10	48	0
	Cost per Development	$0	$2,538	$0	$61,028	$122,479	$165,111	$268,434	$0	$404,887	$10,340	$146,118	$0
2 BCS - SW Office - (472D)	% Trips at Intersection	0%	4%	4%	5%	3%	1%	2%	1%	3%	1%	18%	0%
	Trips	0	52	51	69	41	27	51	30	9	18	97	0
	Cost per Development	$0	$10,997	$0	$131,592	$239,126	$318,428	$507,043	$872	$728,797	$18,612	$295,281	$0
3 BCS - Central Park - (472D)	% Trips at Intersection	0%	3%	5%	4%	4%	2%	3%	0%	3%	2%	6%	0%
	Trips	0	42	57	57	56	42	84	0	12	24	35	0
	Cost per Development	$0	$8,882	$0	$108,706	$326,611	$495,332	$835,129	$0	$971,730	$24,816	$106,545	$0
4 BCS - Hotel - (472D)	% Trips at Intersection	0%	6%	5%	4%	4%	2%	3%	0%	3%	2%	3%	0%
	Trips	0	84	52	52	52	41	98	0	12	24	14	0
	Cost per Development	$0	$17,764	$0	$99,171	$303,281	$483,538	$974,317	$0	$971,730	$24,816	$42,618	$0
6 BCS - NE Housing - (472D)	% Trips at Intersection	100%	21%	13%	11%	11%	7%	13%	0%	9%	4%	2%	0%
	Trips	46	298	144	144	144	183	375	0	32	64	9	0
	Cost per Development	$394,051	$63,021	$0	$274,627	$839,856	$2,158,231	$3,728,256	$0	$2,591,279	$66,176	$27,397	$0
7 BCS - SE Housing - (472D)	% Trips at Intersection	0%	9%	3%	3%	3%	2%	3%	0%	2%	1%	0%	0%
	Trips	0	132	37	37	36	47	96	0	8	16	2	0
	Cost per Development	$0	$27,915	$0	$70,564	$209,964	$554,300	$954,433	$0	$647,820	$16,544	$6,088	$0
8 BCS - Health Partners Expansion - (472D)	% Trips at Intersection	0%	2%	2%	1%	1%	1%	1%	0%	1%	0%	0%	0%
	Trips	0	34	24	13	13	17	34	0	3	6	1	0
	Cost per Development	$0	$7,190	$0	$24,793	$75,820	$200,491	$338,029	$0	$242,932	$6,204	$3,044	$0
9 Park and Ride - (472E)	% Trips at Intersection	0%	0%	0%	2%	7%	0%	0%	0%	12%	5%	6%	0%
	Trips	0	0	0	26	95	0	0	0	41	82	31	0
	Cost per Development	$0	$0	$0	$49,585	$554,071	$0	$0	$0	$3,320,077	$84,788	$94,368	$0
10 BCS - Retail/Grocery - (472E)	% Trips at Intersection	0%	6%	8%	7%	8%	2%	4%	2%	7%	3%	20%	0%
	Trips	0	91	91	91	104	51	116	77	23	46	112	0
	Cost per Development	$0	$19,245	$0	$173,549	$606,562	$601,474	$1,153,274	$2,237	$1,862,482	$47,564	$340,942	$0
11 BCS - West Office - (472D)	% Trips at Intersection	0%	2%	2%	6%	3%	1%	2%	0%	3%	1%	27%	0%
	Trips	0	27	27	71	44	29	56	0	10	20	149	0
	Cost per Development	$0	$5,710	$0	$135,406	$256,623	$342,015	$556,753	$0	$809,775	$20,680	$453,575	$0
12 AUAR - (472C)	% Trips at Intersection	0%	3%	4%	3%	2%	2%	4%	0%	3%	1%	4%	0%
	Trips	0	42	42	41	31	38	125	0	9	18	24	0
	Cost per Development	$0	$8,882	$0	$78,192	$180,802	$448,157	$1,242,752	$0	$728,797	$18,612	$73,059	$0
14 AUAR - (471B)	% Trips at Intersection	0%	0%	1%	0%	0%	0%	0%	0%	6%	1%	0%	0%
	Trips	0	6	6	6	6	3	6	4	20	14	0	0
	Cost per Development	$0	$1,269	$0	$11,443	$34,994	$35,381	$59,652	$116	$1,619,550	$14,476	$0	$0
15 AUAR - Kelly Farms - (471C)	% Trips at Intersection	0%	2%	2%	2%	5%	1%	1%	0%	27%	2%	0%	0%
	Trips	0	28	28	28	69	15	28	11	95	26	0	0
	Cost per Development	$0	$5,921	$0	$53,400	$402,431	$176,904	$278,376	$320	$7,692,861	$26,884	$0	$0
16 AUAR - (471D)	% Trips at Intersection	0%	1%	1%	3%	2%	0%	0%	0%	1%	0%	0%	0%
	Trips	0	10	10	33	21	5	10	2	2	4	2	0
	Cost per Development	$0	$2,115	$0	$62,935	$122,479	$58,968	$99,420	$58	$161,955	$4,136	$6,088	$0
17 AUAR - (471E)	% Trips at Intersection	0%	1%	2%	1%	1%	2%	4%	0%	5%	1%	0%	0%
	Trips	0	18	18	18	17	57	116	4	16	20	1	0
	Cost per Development	$0	$3,807	$0	$34,328	$99,150	$672,236	$1,153,274	$116	$1,295,640	$20,680	$3,044	$0
18 AUAR - (471F)	% Trips at Intersection	0%	2%	3%	3%	2%	4%	7%	0%	9%	3%	1%	0%
	Trips	0	35	35	35	33	111	223	8	31	39	3	0
	Cost per Development	$0	$7,402	$0	$66,750	$192,467	$1,309,091	$2,217,069	$232	$2,510,302	$40,326	$9,132	$0
19 AUAR - (472A and 472B)	% Trips at Intersection	0%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%
	Trips	0	3	3	3	8	8	11	0	2	4	2	0

Development	Intersection Location	Lindau Lane Improvements (Lowering / TH 77 Ramps / IKEA Way)	Intelligent Transportation Systems (ITS) Improvements	Lindau Lane / TH 77 Ramps / IKEA Way	American Boulevard / IKEA Driveway	American Boulevard / Thunderbird Road	American Boulevard / Metro Drive (West)	Lindau Lane / 22nd Avenue	Lindau Lane / 24th Avenue	34th Avenue / Appletree Square	TOTAL
	Improvement #	31, 5	-								
Development	Improvement Costs	$12,900,000	$2,500,000	$0	$0	$0	$0	$0	$0	$0	$170,439,471
Existing	% Trips at Intersection	0%	50%	53%	64%	19%	17%	59%	61%	33%	42%
	Trips	0	1	3046	565	725	119	2268	2687	403	35262
	Cost per Development	$0	$1,250,000	$0	$0	$0	$0	$0	$0	$0	$47,794,838
1 BCS - Northwest Office - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	4%	0%	0%	1%	1%
	Trips	0	0	0	2	2	30	0	0	12	505
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,381,578
2 BCS - SW Office - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	4%	0%	1%	4%	1%
	Trips	0	0	0	4	4	28	0	30	52	968
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,621,686
3 BCS - Central Park - (472D)	% Trips at Intersection	0%	0%	0%	1%	0%	10%	0%	0%	3%	1%
	Trips	0	0	0	6	6	69	0	0	42	1241
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,383,191
4 BCS - Hotel - (472D)	% Trips at Intersection	0%	0%	0%	1%	0%	6%	0%	0%	3%	1%
	Trips	0	0	0	5	5	40	0	0	32	1140
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,374,096
6 BCS - NE Housing - (472D)	% Trips at Intersection	0%	0%	0%	2%	0%	2%	0%	0%	13%	3%
	Trips	0	0	0	16	16	16	0	0	154	2525
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,058,667
7 BCS - SE Housing - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	1%	0%	0%	8%	1%
	Trips	0	0	0	4	4	4	0	0	95	719
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,710,007
8 BCS - Health Partners Expansion - (472D)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%
	Trips	0	0	0	2	2	2	0	0	33	257
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$980,355
9 Park and Ride - (472E)	% Trips at Intersection	0%	0%	0%	1%	0%	1%	0%	0%	0%	1%
	Trips	0	0	0	11	11	5	0	0	0	576
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,888,565
10 BCS - Retail/Grocery - (472E)	% Trips at Intersection	0%	0%	0%	1%	0%	2%	0%	2%	8%	3%
	Trips	0	0	0	11	11	16	0	77	91	2381
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,590,230
11 BCS - West Office - (472D)	% Trips at Intersection	0%	0%	0%	1%	0%	9%	0%	0%	2%	1%
	Trips	0	0	0	5	5	61	0	0	27	1100
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,993,955
12 AUAR - (472C)	% Trips at Intersection	0%	0%	0%	1%	0%	16%	0%	0%	3%	2%
	Trips	0	0	16	8	8	115	16	16	42	2005
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,686,607
14 AUAR - (471B)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	4	6	126
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,880,155
15 AUAR - Kelly Farms - (471C)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%
	Trips	0	0	0	3	3	0	0	11	28	557
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,872,659
16 AUAR - (471D)	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
	Trips	0	0	0	1	1	2	0	2	10	194
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$576,337
17 AUAR - (471E)	% Trips at Intersection	0%	0%	0%	0%	0%	1%	0%	0%	1%	1%
	Trips	0	0	0	4	4	7	0	4	18	537
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,570,939
18 AUAR - (471F)	% Trips at Intersection	0%	0%	0%	1%	0%	2%	0%	0%	3%	1%
	Trips	0	0	0	8	8	14	0	8	35	1046
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,915,672
19 AUAR - (472A and 472B)	% Trips at Intersection	0%	0%	0%	0%	0%	6%	0%	0%	0%	0%
	Trips	0	0	2	2	6	40	2	2	3	315

2030 Saturday Peak Hour Full Build Scenario - Future Development Breakdown

Development	Intersection Location	New NB TH 77 Access to Existing MOA (Roundabout)	Killebrew Drive / 24th Avenue	Killebrew Drive / 22nd Avenue	Killebrew Drive / TH 77 Ramps / 20th Avenue	2012 Interim Access from CD Roadway/TH 77 to Thunderbird Rd	2012 Interim Access from Thunderbird Rd to Eastbound I-494 CD Road	Permanent Access from CD Roadway/TH 77 to Thunderbird Rd	Permanent Access and CD Roadway from Thunderbird Rd to East of 34th Ave	Thunderbird Road Roundabout	24th Ave / I-494 Single-Point Interchange
	Improvement #	1, 6, 7	2	3	4	8	9	10A	10B	10C	11
Development	**Improvement Costs**	**$3,779,513**	**$881,104**	**$848,078**	**$1,860,924**	**$512,549**	**$759,845**	**$1,258,795**	**$16,352,940**	**$1,178,231**	**$646,121**
Existing traffic - City of Bloomington	% Trips at Intersection	0%	13%	11%	5%	8%	8%	5%	4%	3%	7%
	Trips	0	357	357	218	44	39	29	24	53	441
	Cost per Development	$0	$110,254	$93,187	$99,043	$41,079	$58,914	$56,861	$665,204	$34,886	$45,700
Mall of America	% Trips at Intersection	100%	42%	66%	77%	0%	0%	0%	0%	0%	29%
	Trips	750	1188	2158	3144	0	0	0	0	0	1780
	Cost per Development	$3,779,513	$366,895	$563,297	$1,428,405	$0	$0	$0	$0	$0	$184,458
IKEA	% Trips at Intersection	0%	2%	0%	0%	0%	0%	0%	0%	0%	6%
	Trips	0	45	0	0	0	0	0	0	0	379
	Cost per Development	$0	$13,898	$0	$0	$0	$0	$0	$0	$0	$39,275
Health Partners	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MAC	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Mall of America Phase II	% Trips at Intersection	0%	3%	0%	0%	92%	92%	79%	79%	54%	30%
	Trips	0	99	0	0	505	464	505	464	969	1860
	Cost per Development	$0	$30,575	$0	$0	$471,471	$700,930	$990,174	$12,860,617	$637,824	$192,748
Bloomington Central Station	% Trips at Intersection	0%	14%	9%	7%	0%	0%	0%	0%	0%	6%
(BCS)	Trips	0	399	285	285	0	0	0	0	0	393
	Cost per Development	$0	$123,225	$74,393	$129,483	$0	$0	$0	$0	$0	$40,726
AUAR Developments	% Trips at Intersection	0%	25%	13%	11%	0%	0%	17%	17%	43%	22%
	Trips	0	711	436	436	0	0	108	102	768	1382
	Cost per Development	$0	$219,581	$113,808	$198,087	$0	$0	$211,760	$2,827,118	$505,520	$143,214
MAC Terminal Expansion	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Park and Ride Expansion	% Trips at Intersection	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	54	13	13	0	0	0	0	0	0
	Cost per Development	$0	$16,677	$3,393	$5,906	$0	$0	$0	$0	$0	$0
TOTAL	**% Trips**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Trips	**750**	**2853**	**3249**	**4096**	**549**	**503**	**642**	**590**	**1790**	**6235**
	Cost per Development	**$3,779,513**	**$881,104**	**$848,078**	**$1,860,924**	**$512,549**	**$759,845**	**$1,258,795**	**$16,352,940**	**$1,178,231**	**$646,121**

Development	Intersection Location	American Boulevard / 24th Avenue (West)	American Boulevard / 24th Avenue (East)	28th Avenue / 82nd Street	Old Shakopee Road, Cedar Avenue to Killebrew Drive	American Blvd One-way Conversion (30th to 34th)	American Boulevard / 34th Avenue	American Boulevard / International Drive	American Boulevard / Metro Drive (East)	American Boulevard / 30th Avenue	American Boulevard / 28th Avenue
	Improvement #	12A	12B	13	14	15	16	17	18	19	20
Development	**Improvement Costs**	**$1,524,296**	**$4,076,987**	**$2,207,017**	**$10,295,604**	**$474,094**	**$2,252,575**	**$170,138**	**$234,356**	**$617,779**	**$690,816**
Existing traffic - City of Bloomington	% Trips at Intersection	4%	4%	18%	19%	21%	28%	13%	18%	15%	23%
	Trips	289	289	141	301	201	717	103	100	110	205
	Cost per Development	$65,632	$175,544	$388,987	$1,928,424	$101,809	$639,136	$22,438	$43,319	$94,910	$160,382
Mall of America	% Trips at Intersection	30%	30%	0%	22%	0%	0%	0%	0%	0%	0%
	Trips	2028	2028	0	351	0	0	0	0	0	0
	Cost per Development	$460,559	$1,231,843	$0	$2,248,760	$0	$0	$0	$0	$0	$0
IKEA	% Trips at Intersection	7%	7%	0%	3%	0%	0%	0%	0%	0%	0%
	Trips	453	453	0	42	0	0	0	0	0	0
	Cost per Development	$102,876	$275,160	$0	$269,082	$0	$0	$0	$0	$0	$0
Health Partners	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MAC	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips			0	0	0	0	0	0	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Mall of America Phase II	% Trips at Intersection	28%	28%	0%	6%	0%	0%	0%	0%	0%	0%
	Trips	1860	1860	0	99	0	0	0	0	0	0
	Cost per Development	$422,406	$1,129,797	$0	$634,266	$0	$0	$0	$0	$0	$0
Bloomington Central Station	% Trips at Intersection	7%	7%	38%	14%	33%	37%	33%	26%	42%	40%
(BCS)	Trips	446	446	304	228	306	937	258	140	298	349
	Cost per Development	$101,287	$270,908	$838,667	$1,460,733	$154,992	$835,244	$56,205	$60,647	$257,120	$273,041
AUAR Developments	% Trips at Intersection	24%	24%	35%	31%	46%	35%	54%	56%	42%	36%
	Trips	1625	1625	282	504	429	873	420	301	303	319
	Cost per Development	$369,038	$987,054	$777,974	$3,228,988	$217,293	$778,195	$91,496	$130,390	$261,434	$249,570
MAC Terminal Expansion	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Park and Ride Expansion	% Trips at Intersection	0%	0%	9%	5%	0%	0%	0%	0%	1%	1%
	Trips	11	11	73	82	0	0	0	0	5	10
	Cost per Development	$2,498	$6,682	$201,390	$525,351	$0	$0	$0	$0	$4,314	$7,824
TOTAL	**% Trips**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Trips	**6712**	**6712**	**800**	**1607**	**936**	**2527**	**781**	**541**	**716**	**883**
	Cost per Development	**$1,524,296**	**$4,076,987**	**$2,207,017**	**$10,295,604**	**$474,094**	**$2,252,575**	**$170,138**	**$234,356**	**$617,779**	**$690,816**

Development	Intersection Location	28th Avenue	34th Avenue Driveway	Old Shakopee Rd / 33rd Avenue	Old Shakopee Rd / 31st Avenue	Old Shakopee Rd / 30th Avenue	Old Shakopee Road / 28th Avenue	34th Avenue / I-494 North Ramps	34th Avenue / I-494 South Ramps	24th Avenue / 82nd Street	86th Street Extension from EOSR to 28th Avenue
	Improvement #	20A	21	22	23	24	25	26	26	27	28A
Development	**Improvement Costs**	**$1,676,140**	**$394,051**	**$300,300**	**$0**	**$2,433,499**	**$7,768,665**	**$29,826,046**	**$29,826,046**	**$96,009**	**$28,261,141**
Existing traffic - City of Bloomington	% Trips at Intersection	30%	0%	27%	34%	31%	31%	16%	21%	5%	3%
	Trips	85	0	383	383	397	411	412	635	170	12
	Cost per Development	$494,694	$0	$80,996	$0	$757,131	$2,397,088	$4,858,968	$6,313,180	$4,940	$971,730
Mall of America	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	53%	0%
	Trips	0	0	0	0	0	0	0	0	1738	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$50,503	$0
IKEA	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
	Trips	0	0	0	0	0	0	0	0	45	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$1,308	$0
Health Partners	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Trips	0	0	0	0	0	0	0	0	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MAC	% Trips at Intersection	0%	0%	0%	0%	0%	0%	33%	14%	0%	0%
	Trips	0	0	0	0	0	0	832	427	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$9,812,285	$4,245,240	$0	$0
Mall of America Phase II	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%
	Trips	0	0	0	0	0	0	0	0	99	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$2,877	$0
Bloomington Central Station	% Trips at Intersection	16%	100%	54%	43%	44%	38%	18%	31%	3%	33%
(BCS)	Trips	47	46	772	495	566	511	451	937	107	114
	Cost per Development	$273,537	$394,051	$163,262	$0	$1,079,436	$2,980,321	$5,318,919	$9,315,668	$3,109	$9,231,433
AUAR Developments	% Trips at Intersection	53%	0%	19%	23%	22%	24%	15%	26%	35%	52%
	Trips	154	0	265	265	287	315	374	779	1145	182
	Cost per Development	$896,269	$0	$56,042	$0	$547,347	$1,837,184	$4,410,811	$7,744,830	$33,272	$14,737,902
MAC Terminal Expansion	% Trips at Intersection	0%	0%	0%	0%	0%	0%	18%	7%	0%	0%
	Trips	0	0	0	0	0	0	460	222	0	0
	Cost per Development	$0	$0	$0	$0	$0	$0	$5,425,062	$2,207,127	$0	$0
Park and Ride Expansion	% Trips at Intersection	1%	0%	0%	0%	2%	7%	0%	0%	0%	12%
	Trips	2	0	0	0	26	95	0	0	0	41
	Cost per Development	$11,640	$0	$0	$0	$49,585	$554,071	$0	$0	$0	$3,320,077
TOTAL	**% Trips**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Trips	**288**	**46**	**1420**	**1143**	**1276**	**1332**	**2529**	**3000**	**3304**	**349**
	Cost per Development	**$1,676,140**	**$394,051**	**$300,300**	**$0**	**$2,433,499**	**$7,768,665**	**$29,826,046**	**$29,826,046**	**$96,009**	**$28,261,141**

Development	Intersection Location	Old Shakopee Road / 86th Street	30th Avenue	Wayfinding Signs	Lindau Lane Improvements (Lowering / TH 77 Ramps / IKEA Way)	Intelligent Transportation Systems (ITS) Improvements	Lindau Lane / TH 77 Ramps / IKEA Way	American Boulevard / IKEA Driveway	American Boulevard / Thunderbird Road	American Boulevard / Metro Drive (West)	Lindau Lane / 22nd Avenue	Lindau Lane / 24th Avenue	34th Avenue / Appletree Square	TOTAL
	Improvement #	28B	29	30	31, 5	-								
Development	**Improvement Costs**	**$1,608,896**	**$1,677,315**	**$549,600**	**$12,900,000**	**$2,500,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$170,439,471**
Existing traffic - City of Bloomington	% Trips at Intersection	19%	4%	0%	0%	50%	2%	11%	3%	17%	3%	5%	33%	**10%**
	Trips	299	21	0	0	1	115	99	99	119	115	221	403	**8398**
	Cost per Development	$309,164	$63,927	$0	$0	$1,250,000	$0	$0	$0	$0	$0	$0	$0	**$22,327,527**
Mall of America	% Trips at Intersection	22%	0%	0%	0%	0%	38%	16%	4%	0%	52%	52%	0%	**27%**
	Trips	341	0	0	0	0	2186	142	142	0	2006	2319	0	**22301**
	Cost per Development	$352,592	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$10,666,826**
IKEA	% Trips at Intersection	3%	0%	0%	0%	0%	13%	36%	13%	0%	4%	3%	0%	**4%**
	Trips	40	0	0	0	0	745	324	484	0	147	147	0	**3304**
	Cost per Development	$41,360	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$742,959**
Health Partners	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**0%**
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	**0**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
MAC	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**2%**
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	**1259**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$14,057,526**
Mall of America Phase II	% Trips at Intersection	6%	0%	100%	100%	50%	40%	17%	59%	0%	31%	9%	0%	**21%**
	Trips	99	0	1	2644	1	2299	148	2284	0	1171	419	0	**17850**
	Cost per Development	$102,365	$0	$549,600	$12,900,000	$1,250,000	$0	$0	$0	$0	$0	$0	$0	**$32,875,649**
Bloomington Central Station	% Trips at Intersection	15%	85%	0%	0%	0%	0%	6%	1%	38%	0%	2%	45%	**13%**
(BCS)	Trips	228	467	0	0	0	0	55	55	266	0	107	538	**10836**
	Cost per Development	$235,751	$1,421,608	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$35,093,766**
AUAR Developments	% Trips at Intersection	30%	6%	0%	0%	0%	7%	12%	20%	45%	10%	28%	22%	**22%**
	Trips	467	32	0	0	0	387	109	775	315	387	1225	265	**18352**
	Cost per Development	$482,876	$97,412	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$42,154,464**
MAC Terminal Expansion	% Trips at Intersection	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**1%**
	Trips	0	0	0	0	0	0	0	0	0	0	0	0	**682**
	Cost per Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$7,632,189**
Park and Ride Expansion	% Trips at Intersection	5%	6%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	**1%**
	Trips	82	31	0	0	0	0	11	11	5	0	0	0	**576**
	Cost per Development	$84,788	$94,368	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,888,565**
TOTAL	**% Trips**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Trips	**1556**	**551**	**1**	**2644**	**2**	**5732**	**888**	**3850**	**705**	**3826**	**4438**	**1206**	**83558**
	Cost per Development	**$1,608,896**	**$1,677,315**	**$549,600**	**$12,900,000**	**$2,500,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$170,439,471**

Indicates an improvement at the intersection

Indicates a segment of roadway that is being improved

Indicates an improvement for a specific development

Indacates there are no improvements associated at the intersection

Indacates an improvement currently under construction

SRF Consulting Group, Inc.

1/25/2007