

ORDINANCE NO. 2013-__

AN ORDINANCE AMENDING THE ZONING ORDINANCE
TO ESTABLISH A PUD, PLANNED UNIT DEVELOPMENT
DISTRICT AT 7171 FRANCE AVENUE

The City Of Edina Ordains:

Section 1. Subsection 850 is hereby amended to add the following Planned Unit Development (PUD) District:

850.23 Planned Unit Development Districts (PUD)

**Subd. 4. Planned Unit Development District-4 (PUD-4) – 7171
France Avenue (Byerly's)**

A. Legal Description:

Lot 2, Block 7, Yorktown Addition, Hennepin County.

B. Approved Plans. Incorporated herein by reference are the re-development plans received by the City on _____, 2013, except as amended by City Council Resolution No. 2013-____, on file in the Office of the Planning Department under file number 2013-004.13a.

C. Principal Uses:

All principal and conditional uses allowed in the Planned Commercial District-3 (PCD-3)

D. Accessory Uses:

All accessory uses allowed in the Planned Commercial District-3 (PCD-3)

Signs allowed per the Planned Commercial District.

Existing text – XXXX
Stricken text – ~~XXXX~~
Added text – **XXXX**

E. Conditional Uses:

None

F. Development Standards. Development standards per the PCD-3 Zoning District, except the following:

Building Setbacks

Front – France Avenue	50 feet
Front – Hazelton Road	25 feet
Side – East	25 feet
Rear – South	40 feet

Building Height	eight stories or 108 feet
Maximum Floor Area Ratio	72%

Parking Stalls (Residential)	350 enclosed & 33 surface
Parking Stalls (Retail)	314 stalls

Section 3. This ordinance is effective immediately upon its passage and publication.

First Reading:

Second Reading:

Published:

ATTEST:

Debra A. Mangen, City Clerk

James B. Hovland, Mayor

Existing text – XXXX
Stricken text – ~~XXXX~~
Added text – XXXX

AGD

Engineering Department • Phone 952-826-0371
Fax 952-826-0392 • www.CityofEdina.com



Date: February 22, 2013

To: Cary Teague – Community Development Director

From: Wayne Houle – Director of Engineering

Re: Byerly's – France Avenue Re-Development
Dated January 28, 2013

Engineering has reviewed the above stated proposed plan and offer the following comments:

- ⊙ A Nine Mile Creek Watershed permit will be required, along with other agency permits such as Hennepin County Public Works, MNDH, MPCA, MCES.
- ⊙ A developer's agreement will be required for the placement of the public water main and sanitary sewer and for any other public improvements.
- ⊙ Cost participation for the France Avenue improvements, which include the right-in/right-out and also the Hazelton Road improvements will be proposed / determined prior to the final city Council approval.
- ⊙ Comments on the traffic study will be submitted prior to the February 27th Planning Commission Meeting.

Civil Sheet 5:

- Additional stop signs will be required internally.
- The City code for maximum width of an entrance is 30-feet. Therefore, a concrete median will be required for the westerly right-in/right-out at Hazelton Road.

Civil Sheet 9:

- Provide a plan that shows the roof water from the residential buildings to drain easterly towards the Promenade.
- Note on plan which water mains and sanitary sewer is "Private" versus "Public". Redlined drawing to be emailed to engineer.
- Provide descriptions of easements for the "Public" infrastructure.
- Provide all documentation that was required by Nine Mile Creek Watershed District permit, including the maintenance agreement for the Underground Chamber Storage System.

Civil Sheet 10:

- Update all City of Edina details.

Staff will require a more detail review of the Civil Plans if this project is approved by the City Council. Please contact me if you have any questions regarding this review.

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DRAFT

**TRAFFIC IMPACT
ANALYSIS**

for

**Byerly's
France Avenue Redevelopment**

in

Edina, MN

January 16, 2013



RLK Project No. 2012-135-M

Creating extraordinary
Communities

TRAFFIC IMPACT ANALYSIS

Byerly's France Avenue Redevelopment

Edina, MN

January 16, 2013

Prepared For:



The CITY of
EDINA

...For living, learning, raising families & doing business

CITY OF EDINA
4801 W. 50th Street
Edina, MN 55424

Prepared By:



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RLK Project No. 2012-135-M

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A. REPORT LETTER

January 16, 2013

Mr. Wayne Houle
Public Works Director
City of Edina
4801 w. 50th Street
Edina, MN 55424

RE: Traffic Impact Analysis – Byerly’s France Avenue Redevelopment

Dear Mr. Houle:

The attached report details the traffic impact analysis of the Byerly’s France Avenue Redevelopment at southeast corner of France Avenue (County Road 17) and Hazelton Road in Edina. The developer, Anderson-KM Builders, is proposing to redevelop the existing grocery store site into a mixed use development. The proposed redevelopment will encompass a new 52,500 square foot grocery store, an additional 20,950 square feet of retail and 234 units of multi-family housing.

The redevelopment utilizes two full access intersections onto Hazelton Road, as well as a new right-in/right-out intersection on France Avenue. In addition, there is cross-access to be allowed between this site and the Macy’s Furniture Store site to the south.

RLK analyzed two peak times in its analysis – Weekday PM Peak Hour and Weekend Midday Peak. These two peak periods reflected the critical time periods among the three main land uses on the site.

The report found that the Byerly’s France Avenue Redevelopment will result in acceptable levels of service for traffic using these intersections during the tested peak hours. The two access points along Hazelton will adequately serve the trips into and out of the site – especially when the easterly intersection is signalized. The right-in/right-out intersection on France will not adversely affect the northbound operation of France Avenue.

Therefore, it is recommended that the City of Edina accept these findings in their consideration of the Byerly’s France Avenue Redevelopment.

Sincerely,



Stephen J. Manhart, P.E., PTOE, PTP
Senior Traffic Engineer

Attachment

B. PROPOSED DEVELOPMENT AND STUDY AREA

1. Description of Proposed Development

Anderson-KM Builders, LLC plans to redevelop an existing Byerly's Store at 7171 France Avenue South in the City of Edina, Hennepin County, MN. The site is to be redeveloped to replace the existing grocery store with a new 52,500 square foot grocery store and additional 20,950 square feet of retail and 234 units of multi-family housing. It is anticipated that the new grocery would be open mid-August of 2014, and the multi-family housing and additional retail would open in phases between mid-November, 2014 and late 2015.

The purpose of this study is to determine the potential traffic and parking impacts of the proposed redevelopment.

2. Map of Site and Street Network

Figure 1 illustrates the development site and the study area street network. RLK analyzed traffic in the area bounded by France Avenue on the west, Hazelton Road on the north, York Avenue South on the east and 72nd Street on the south. RLK also looked at the interaction of trips between the proposed Byerly's redevelopment site and the Macy's Furniture Store to the south. Figure 2 shows the overall street network to be analyzed in the study area.

3. Intersections and Roadway Segments to be Analyzed

Existing intersections to be analyzed include:

- France Avenue (County State Aid Highway 17) and Hazelton Road
- France Avenue (County State Aid Highway 17) and W. 72nd Street
- York Avenue (County State Aid Highway 31) and Hazelton Road
- Byerly's Main Access and Hazelton Road
- Byerly's Service Access and Hazelton Road

This study will also focus on the following proposed driveway intersections:

- Byerly's new Truck/Secondary Access onto Hazelton Road (unsignalized)
- Byerly's new Main Access onto Hazelton Road (proposed as signalized)
- New Access onto France Avenue (proposed right-in/right-out)

C. EXISTING TRAFFIC CONDITIONS

1. Existing Traffic Statistics

To address the impacts of a development on the surrounding roadway system, it is necessary to first understand the existing traffic conditions prior to the area's redevelopment. The site exists today with a Byerly's grocery store encompassing 59,359 square feet. In addition, there are 448 parking stalls serving the grocery store.

PM peak hour and Saturday Midday peak hour turning movement counts were conducted during November 3 and 7, 2012. The two peak times analyzed – P.M. Peak Hour and Saturday Midday Peak Hour – correspond to the heaviest commercial traffic in the area.

Figure 3 shows an aerial photograph of the existing intersections and driveways serving the Byerly's site. Figure 4 shows the average daily traffic along the routes within the study area. Figure 5 shows the peak hour turning movements at the major intersections within the study area.

AM peak hour counts were previously conducted by Hennepin County at several nearby intersections along France Avenue. The AM peak hour counts were found to be 20% to 25% lower than the PM peak or Saturday peak counts. Therefore, only the PM and Saturday peak hours were analyzed with this study. These counts were used as the existing baseline conditions for the area.

According to recent traffic studies conducted for the City of Edina, it has been found that France Avenue traffic has decreased. In 2009, two-way traffic counts on France Avenue varied from 26,000 vehicles/day to 28,500 vehicles per day. In 2011, it was found that France Avenue daily traffic volumes have decreased to a range between 24,300 vehicles per day to 27,800 vehicles per day.¹

2. Existing Roadway Geometrics

Vehicular access to the site from the development area is expected to occur primarily on two roadways: France Avenue and Hazelton Road. The following text details the specifics of each of these roadways:

- **France Avenue S. (County State Aid Highway 17)** is functionally classified as an A-Minor Arterial-Reliever route. It exists as a six-lane divided roadway with separated left and right turn lanes in an urban cross section which travels primarily north/south through the City of Edina. In the area of the proposed site, France Avenue has a posted speed limit of 40 mph. Average daily traffic (ADT) just south of Gallagher Drive is 28,000 veh/day, as measured in 2011².
- **Hazelton Road** is functionally classified as a collector. It is a four-lane undivided roadway with an urban cross section which travels east/west. Hazelton Road, also classified as Municipal State

¹ PowerPoint presentation from France Avenue TE S.P. 120-020-037 Intersection Enhancements Stakeholders Meeting #1, May 31, 2012.

² 2011 Publication Traffic Volumes Metro Street Series – 4D, Minnesota Department of Transportation, Office of Transportation Data and Analysis, Traffic Volume Program, <http://www.dot.state.mn.us/traffic/data/index.html>

Aid System Route 166, has a posted speed limit of 30 mph. Hazelton has an ADT of 7,600 veh/day just east of the proposed site, as measured in 2009.

- **York Avenue S. (County State Aid Highway 31)** is functionally classified as a Major Collector, and is a four-lane divided County roadway with an urban cross section and 35 mph speeds. ADT on York Avenue south of Hazelton is 15,000 veh/day, as measured in 2011.

The following summary lists the numbers of lanes and types of traffic control at intersections, as well as posted speeds, no parking zones in the area:

- France Avenue at Hazelton Road - Traffic Signal control; On-Street Parking prohibited; Speed Limit 40 mph on France; Speed Limit 30 mph on Hazelton.
 - SB France Ave approaching Hazelton – one shared through/right, two through, one left;
 - NB France Ave approaching Hazelton – one free right, three through, one left;
 - EB Hazelton approaching France Ave – one shared left/through/right lane;
 - WB Hazelton approaching France Ave – one free right, one through, one left.
- Hazelton Road at westerly Byerly's Site Entrance – Side Street Stop Sign control; On-Street Parking prohibited; Speed Limit 30 mph on Hazelton.
 - SB Development Driveway (Rue de France) approaching Hazelton Road – one shared right/through/left lane;
 - NB Byerly's westerly driveway approaching Hazelton Road – one right lane, one shared through/lane;
 - WB Hazelton Road approaching westerly Byerly's Site Entrance – one shared through/right lane, one shared through/left lane;
 - EB Hazelton Road approaching westerly Byerly's Site Entrance – one shared through/right lane, one shared through/left lane
- Hazelton Road at easterly Byerly's Site Entrance – Side Street Stop Sign control; On-Street Parking prohibited; Speed Limit 30 mph on Hazelton.
 - SB Development Driveway (Rue De France) approaching Hazelton Road – one shared right/through/left lane;
 - NB Byerly's westerly driveway approaching Hazelton Road – one shared right/through/left lane (widened for truck movements);
 - WB Hazelton Road approaching westerly Byerly's Site Entrance – one shared through/right lane, one shared through/left lane;
 - EB Hazelton Road approaching westerly Byerly's Site Entrance – one shared through/right lane, one shared through/left lane
- York Avenue at Hazelton Road – Traffic Signal control; On-Street Parking prohibited; Speed Limit 35 mph on York; Speed Limit 30 mph on Hazelton.
 - SB York Ave approaching Hazelton – one right, two through, one left lane;
 - NB York Ave approaching Hazelton – one left, one through, one shared through/right;
 - EB Hazelton approaching York Ave – one left/through, one right;

- WB Development Driveway approaching York Ave – one shared left/through/right lane.
- France Avenue at 72nd Street – Side Street Stop Sign control; On-Street Parking prohibited; Speed Limit 40 mph on France; Speed Limit 30 mph on 72nd Street.
 - SB France Ave approaching 72nd St – one through/right, two through;
 - NB France Ave approaching 72nd St – three through lanes;
 - EB 72nd St approaching France Ave – one shared left/through/right lane.
- France Avenue at Gallagher Drive – Traffic Signal control; On-Street Parking prohibited; Speed Limit 40 mph on France; Speed Limit 30 mph on Gallagher.
 - EB Gallagher Drive approaching France Avenue – one through/right, one left;
 - WB Gallagher Drive approaching France Avenue – one through/right, one left;
 - SB France Avenue approaching Gallagher Drive – one shared through/right, two through, one left lane
 - NB France Avenue approaching Gallagher Drive – one shared through/right, two through, one left lane

Sidewalks are currently provided on one side of France Avenue in this study area. A six-foot wide sidewalk exists adjacent to the curb along the west side of France Avenue between 66th Street to 76th Street. On the east side of France, there is no sidewalk between Hazelton Road and Gallagher Drive. There are six-foot sidewalks along the north and south sides of Hazelton Road from France Avenue to York Avenue.

Metro Transit bus routes 6 and 587 currently serve this area. Bus stops are currently located along the both sides of France Avenue at Hazelton and at 72nd Street, as well as one located on the west side of France at Gallagher Drive. Along Hazelton, there are bus stops located on the north and south side of the street just west of the Target Store and just east of the Edina Promenade.

Existing rights-of-way vary within the study area. From Hazelton Road south to 72nd Street, the half-street right-of-way narrows from 75 to 63 feet (for the right turn lane). The westerly half-street right-of-way of France Avenue in this segment is 50 feet. On Hazelton Road, the half-street right-of-way on the south half of the street is 36 feet, while the north half street right-of-way varies from 36 to 44 feet (again for the right turn lane).

3. Operational Analysis Methodology

Operational analyses were conducted at the study intersections per the 2000 Highway Capacity Manual (HCM), which reports a level of service based on the delay experienced by vehicles at a particular intersection. The level of service concept indicates a measure of average operating conditions at intersections during an hour. Service levels range from A through F with each level defined by a range of control delay per vehicle. Table 1 lists the level of service criteria used to determine acceptable traffic operation.

Traffic operations for peak hour conditions within the study area were analyzed using the industry-standard Synchro/SimTraffic software package, which uses the data and methodology contained in the

HCM, published by the Transportation Research Board. The software model was calibrated using existing conditions before being used to assess future conditions.

The operating conditions of transportation facilities, such as traffic signals and stop-controlled intersections, are evaluated based on the relationship of the theoretical capacity of a facility to the actual traffic volumes on that facility. Various factors affect capacity, including travel speed, roadway geometry, grade, number and width of travel lanes, and intersection control. The current standards for evaluating capacity and operating conditions are contained in the HCM. The procedures describe operating conditions in terms of a Level of Service (LOS). Facilities are given letter designations from “A,” representing the best operating conditions, to “F,” representing the worst. Generally, Level of Service “D” represents the threshold for acceptable overall intersection operating conditions during a peak hour.

Table 1. LOS Criteria

Signalized Intersections		AWSC & TWSC Intersections	
LOS	Control Delay (sec/Veh)	LOS	Control Delay (sec/Veh)
A	≤ 10	A	0 - 10
B	> 10 - 20	B	> 10 - 15
C	> 20 - 35	C	> 15 - 25
D	> 35 - 55	D	> 25 - 35
E	> 55 - 80	E	> 35 - 50
F	> 80	F	> 50

Source: Highway Capacity Manual 2000³

The acceptable threshold for a particular movement at an intersection depends on both the priority assigned to that movement and its traffic volume. In general, the higher the priority and the higher the traffic volume, the more stringent the acceptable threshold will be. For example, the acceptable threshold for a high-priority/high-volume suburban movement might be “D,” while LOS “F” on a low-priority/low-volume urban movement might be appropriate.

For side-street stop-controlled intersections, a key measure of operational effectiveness is the side-street LOS. Long delays and poor LOS can sometimes result on the side street, even if the overall intersection is functioning well, making it a valuable design criterion. Again, depending on priority and traffic volume, acceptable side-street LOS can range from “D” to “F.”

A final fundamental component of operational analyses is a study of vehicular queuing, or the lineup of vehicles waiting to pass through an intersection. An intersection can operate with an acceptable level of service, but if queues from the intersection extend back to block entrances to turn lanes or accesses to adjacent land uses, unsafe operating conditions could result. The 95th percentile queue, or the length of queue with a 5% chance of occurring during the peak hour, is considered the standard for design purposes.

For the purposes of this analysis, however, LOS “D” or “E” or better is considered acceptable for low-volume movements at certain intersections.

For this analysis, the industry-standard Synchro and SimTraffic software packages were used to analyze intersection operation. All operational and queue reports are found in the Appendices of this report.

³ Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington D.C

4. Existing Trip Generation

Based on the trip generation rates found in the Institute of Transportation Engineers' Trip Generation Manual, 9th Edition, this supermarket will generate just over 6,000 vehicular trips each weekday and more than 10,500 trips on a Saturday (See Table 2).

Table 2. Trip Generation Estimates¹ – Existing Byerly's Site

Land Use	Size	Weekday PM		Daily	Saturday Midday		Saturday Daily
		Enter	Exit		Enter	Exit	
Supermarket	59,359 sq. ft.	258	239	6,069	322	310	10,542
Total Existing Trips		258	239	6,069	322	310	10,542
		497			632		

1. Per the data and methodologies in Trip Generation, 9th Edition, published by ITE.

Table 3, below, summarizes the existing LOS at the primary intersections in the study area based on the current lane geometry, traffic control and traffic volumes. The table shows that all intersection are operating at an overall LOS D or better during both the weekday PM and Saturday peak hours with most movements operating at LOS E or better. The northbound left turn from the westerly Byerly's intersection has significant delay in the Saturday midday period, while the eastbound left turn from the unsignalized intersection of 72nd to northbound France Avenue shows significant delay during both study periods (despite minimal volumes). Full reports showing detailed LOS and delays by approach are included in the Appendix.

Table 3 - Existing Level of Service

Intersection	PM Peak Hour		Saturday Midday Peak Hour	
	LOS	Int. Delay (sec/veh)	LOS	Int. Delay (Sec/veh)
France Ave & Hazelton Rd.	B (D)	18	C (D)	22
Hazelton Rd. & Westerly Byerly's Drive	a (e)	7	a (f)	22
Hazelton Rd. & Easterly Byerly's Drive	a (c)	1	a (c)	1
Hazelton Rd. & York Ave.	C (D)	24	C (D)	30
France Ave. & 72 nd St.	a (f)	2	a (f)	1
France Ave. & Gallagher Dr.	B (C)	20	B (D)	16

NOTES: a. Upper Case letters reflect LOS at signalized intersections; Lower case letter reflect LOS at unsignalized intersection.

b. First letter reflects Intersection LOS; letter inside parentheses reflects LOS of worst movement.

c. Int. Delay reflects overall average intersection delay, not necessarily worst movement delay.

5. Existing Queue Lengths

RLK conducted a study of the existing traffic conditions for P.M. Peak Hour and Saturday Midday traffic conditions. A queuing analysis was conducted for the main intersections/driveways for the P.M. Peak Hour. Traffic engineers use a measure called 95th percentile queue. The measurement defines the queue length (in feet) that has only a 5-percent probability of being exceeded during the analysis time period. If the 95th percentile queue length approaches or exceeds the segment length, mediation may be required. Results are shown in Tables 4a and 4b:

**Table 4a. Selected 95th Percentile Queue Lengths – Weekday P.M. Peak Hour
– Existing Byerly’s Site**

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	162
Northbound Through France at Hazelton	402	420
Eastbound Left Hazelton at Byerly’s Driveway	256	43
Northbound Byerly’s Driveway at Hazelton	500	110

**Table 4b. Selected 95th Percentile Queue Lengths – Saturday Midday Peak Hour
– Existing Byerly’s Site**

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	196
Northbound Through France at Hazelton	402	302
Eastbound Left Hazelton at Byerly’s Driveway	256	74
Northbound Byerly’s Driveway at Hazelton	500	154

Westbound Hazelton approach has available capacity. Northbound France Avenue has a queue length that at times extends back through the 72nd Street intersection during the p.m. peak hour. Other critical movements have available capacity at intersections.

D. FUTURE PROJECTED TRAFFIC CONDITIONS WITHOUT DEVELOPMENT

In the testing of the future projected traffic conditions without the development (i.e., the “No-Build” condition), an annual growth rate of 1% was assumed for background traffic. Under this scenario, it is assumed that the Byerly’s site remains as-is. Therefore, traffic volumes are projected to be constant for traffic entering and exiting the Byerly’s site.

The Byerly’s France Avenue Redevelopment project has a completion date for the final phase in 2014. Therefore, the typical date for traffic analysis is one year after completion, so as to assess the traffic once the pattern for drivers has sufficiently developed in the area.

To accurately assess traffic conditions with or without the development, traffic conditions will be assessed for the year 2015 without the development, but with the normal background growth on the street system.

1. Changes in Road Network

The City of Edina was successful in securing Federal Transportation Enhancement funding for the construction of Pedestrian / Intersection Enhancements along France Avenue (CSAH 17) at 76th Street, 70th Street and 66th Street. While not finalized, the recommended improvements include:

- Reducing the vehicle lanes to the minimum State Aid requirements on northbound France Avenue the entire length from 76th Street to 66th Street and on southbound France Avenue and the side streets only through the intersections at 66th Street, 70th Street and 76th Street.
- Removing and relocation of the France Avenue northbound outside curb from 76th Street to 66th Street and southbound outside curb at the intersections of 66th Street, 70th Street and 76th Street.
- Removing free right turn islands in all quadrants at 76th Street, in the southeast quadrant at 70th Street, in the southeast quadrant at 69th Street, in the southeast quadrant of the Southdale entrance, in the northeast quadrant of the Southdale exit and in the southeast, southwest and northeast quadrants at 66th Street.
- Widening the center median on France Avenue and the side streets to a 10 foot width only at the intersections of 66th Street, 70th Street and 76th Street.
- Providing an 8 foot landscaped boulevard on the eastside of France Avenue from 76th Street to 66th Street.
- Providing an 8 foot sidewalk on the eastside of France Avenue from 76th Street to 66th Street and on the west side of France Avenue only at the intersections of 66th Street, 70th Street and 76th Street.

- Providing a minimum 6 foot landscaped boulevard on the side streets at 66th Street, 70th Street and 76th Street.
- Providing a 6 foot sidewalk on the side streets where sidewalks currently exist at 66th Street, 70th Street and 76th Street.
- Either a 5 foot on-street bike lane or a shared lane with “Sharrows” eastbound and westbound on 66th Street, 70th Street and 76th Street through France Avenue.
- ADA compliant pedestrian ramps at all intersections and driveways on the eastside of France Avenue from 76th Street to 66th Street and on the west side of France Avenue at 66th Street, 70th Street and 76th Street.
- Revised traffic signal systems at 66th Street, 70th Street and 76th Street including APS pedestrian push buttons, countdown pedestrian signal timers, median refuge island pedestrian push buttons and new vehicle and bicycle detection systems.
- Urban design feature including, landscaping, monuments, planter boxes, bollards and colored or stamped concrete at the intersection of 66th Street, 70th Street and 76th Street.

Where applicable, these enhancements have been incorporated into the proposed future-year conditions and models for France Avenue (-- both No-Build and Build scenarios).

2. Background Development Traffic Growth

Despite recent decreases in traffic volumes, future traffic growth must be assumed. This background growth must be included in future year traffic forecasts. In order to account for some background growth in traffic, a traffic growth projection factor of 1.0 was used to project traffic to the 2015 and 2016 study years.

In addition to the regional background traffic, other specific none development related traffic was determined and included with the overall background traffic.

- Southdale Residential Apartment Development - Based on information received from WSB & Associates, Inc., a 232-unit 10-story apartment development is proposed for the southeast corner of the Southdale Center property. The apartment building would be constructed in the northwest corner of the intersection of York Street and 69th Street. The analysis assumes that all units will be occupied by 2015 and that the background trip generation will be included in the background of the 2015 and 2016 analysis.
- Future Southdale Restaurant Development – The analysis of the Southdale Residential Development included the analysis of a future restaurant that is proposed in northeast quadrant of France Avenue and 69th Street in the Southdale Center Parking lot. The restaurant was assumed to be 8,000 s.f. in size with approximately 300 seats. The analysis assumes the restaurant will be developed by 2014 and that the background trip generation for the restaurant will be the same for the 2015 and 2016 analysis scenarios.

- Centennial Lakes Coffee Shop -- Based on information received from WSB & Associates, Inc., a free-standing 1,750 square foot coffee shop building is proposed in the southeast quadrant of the intersection of France Avenue and Plaza Drive. The site has other potential uses (fast food restaurant, bank, pharmacy, specialty retail, etc.), but the primary analysis of the site assumed a coffee shop. The analysis assumes that all units will be occupied by 2015 and that the background trip generation will be included in the background of the 2015 and 2016 analysis.
- Proposed Restaurant/Retail Site -- A proposed restaurant or retail site is being proposed for the site of the former Szechuan Star restaurant to the east side of the Byerly's redevelopment property site. This site will be added to the long-term background traffic impacts.

In each case, RLK looked at the traffic studies prepared for each development and compared the added trips to the background traffic for each study scenario. In the short-term build alternates of the Southdale Residential Project, the 2014 Build Alternate 1 traffic on northbound France Avenue was 53 fewer trips in the P.M. Peak Hour than in the 2014 No-Build scenario for the project.⁴ The 2014 Build Alternate generated 20 more trips on northbound York Avenue for the Saturday Midday peak hour than in the 2014 No-build scenario for the project.

In the Centennial Lakes Plaza Coffee Shop Traffic Study, 21 trips were added to northbound and southbound lanes of France Avenue north of Plaza Drive in the P.M. Peak Hour.⁵ Similarly, 32 trips were added to northbound France Avenue in the Saturday Midday Peak Hour, and 30 trip were added to the southbound approach on France Avenue at Plaza Drive.

In each development case, the associated trips were added (or subtracted, as the case may be) to either France Avenue or York Avenue through movements in the Byerly's redevelopment analysis to represent these changes to the background developments.

3. No-Build Trip Distribution

If the No-Build scenario were to occur, all site traffic will continue to enter from and exit onto Hazelton Road at the two access driveways. The westerly driveway will continue to be the primary driveway serving the site, while the easterly driveway will continue as the delivery driveway. It is assumed that the existing trip distribution pattern will remain.

Site-generated trips will be unchanged from the existing trip distribution patterns.

⁴ Southdale Residential Traffic and Parking Study, prepared for the City of Edina by WSB & Associates, 09/04/12.

⁵ Centennial Lakes Coffee Shop Traffic Study, prepared for the City of Edina by WSB & Associates, 06/18/12.

4. Projected No-Build Traffic Volumes

To accurately project No-Build traffic volumes in the study area, it is assumed the existing Byerly's traffic volumes will not change while the background traffic will increase by the annual growth rate. To model this scenario, the trip generation for the existing grocery store was calculated and stripped from the existing traffic pattern based on percentages at each intersection. The remaining traffic is considered the Background Traffic.

The Background Traffic volumes were then increased by the overall growth rate (1% annually) and the additional development background trips (described above) were added. Finally, the existing grocery trips were added back in to reflect the No-Build scenario.

Figure 5 shows the 2015 No-Build turning movement volumes for the PM Peak Hour and for the Saturday Midday Peak Hour.

5. 2015 No-Build Traffic Operations

Traffic operations were tested for the 2015 No-Build Scenario assuming the roadway enhancements along France Avenue have been implemented. In addition, the following geometric improvements are assumed along Hazelton:

- France Avenue at Hazelton Road - Traffic Signal control; On-Street Parking prohibited; Speed Limit 40 mph on France; Speed Limit 30 mph on Hazelton.
 - SB France Ave approaching Hazelton – one shared through/right, two through, one left;
 - NB France Ave approaching Hazelton – one free right, three through, one left;
 - EB Hazelton approaching France Ave – one shared left/through/right lane;
 - WB Hazelton approaching France Ave – one free right, one through, one left.

- Hazelton Road at westerly Byerly's Site Entrance – Side Street Stop Sign control; On-Street Parking prohibited; Speed Limit 30 mph on Hazelton. (Note: Modification to ¾ access not assumed under No-Build scenario.)
 - SB Development Driveway (Rue de France) approaching Hazelton Road – one shared right/through/left lane;
 - NB Byerly's westerly driveway approaching Hazelton Road – one right lane, one shared through/lane;
 - WB Hazelton Road approaching westerly Byerly's Site Entrance – one shared through/right lane, one left lane;
 - EB Hazelton Road approaching westerly Byerly's Site Entrance – one shared through/right lane, one left lane serving as the west end of the Two-Way Left Turn Lane (TWLTL).

- Hazelton Road at easterly Byerly's Site Entrance – Side Street Stop Sign control; On-Street Parking prohibited; Speed Limit 30 mph on Hazelton.
 - SB Development Driveway (Rue De France) approaching Hazelton Road – one shared right/through/left lane;

- NB Byerly’s westerly driveway approaching Hazelton Road –one shared right/through/left lane (widened for truck movements);
 - WB Hazelton Road approaching westerly Byerly’s Site Entrance – one shared through/right lane, left turn opportunity in the TWLTL;
 - EB Hazelton Road approaching westerly Byerly’s Site Entrance – one shared through/right lane, left turn opportunity in the TWLTL
- York Avenue at Hazelton Road – Traffic Signal control; On-Street Parking prohibited; Speed Limit 35 mph on York; Speed Limit 30 mph on Hazelton.
 - SB York Ave approaching Hazelton – one right, two through, one left lane;
 - NB York Ave approaching Hazelton – one left, one through, one shared through/right;
 - EB Hazelton approaching York Ave – (Note: TWLTL assumed to end prior to York Avenue) one left/through, one right;
 - WB Development Driveway approaching York Ave – one shared left/through/right lane.

The levels of service for the study intersections are shown on Table 5.

**Table 5. Projected Levels of Service – 2015 No-Build Condition
(Assumes France Avenue Enhancements)**

Intersection	PM Peak Hour		Saturday Midday Peak Hour	
	LOS	Int. Delay (sec/veh)	LOS	Int. Delay (Sec/veh)
France Ave & Hazelton Rd.	B (F-SBLt)	17.7	C (F-SBLt)	33.3
Hazelton Rd. & Westerly Byerly’s Drive	a (d)	5.4	b (f-NBLt)	53.9
Hazelton Rd. & Easterly Byerly’s Drive (Signalized or unsignalized)	N.A.	N.A.	N.A.	N.A.
	a (c)	1.0	a (c)	1.7
Hazelton Rd. & York Ave.	C (F-NBLt)	31.6	C (F-NBLt)	31.4
France Ave. & 72 nd St.	a (f-EB)	2.0	a (f)	1.5
France Ave. & Gallagher Dr.	B (F-SBLt)	19.4	B (F-SBLt)	18.6

NOTES: a. Upper Case letters reflect LOS at signalized intersections; Lower case letter reflect LOS at unsignalized intersection.
 b. First letter reflects Intersection LOS; letter inside parentheses reflects LOS of worst movement.
 c. Int. Delay reflects overall average intersection delay, not necessarily worst movement delay.

The associated 95th percentile queue lengths for the 2015 No-Build condition are listed on Tables 6a and 6b.

**Table 6a. Selected 95th Percentile Queue Lengths – Weekday P.M. Peak Hour
– 2015 No-Build Conditions**

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	139
Southbound Left France at Hazelton	360	419
Northbound Right France at Hazelton	315	99
Westbound Right France at Hazelton	150	125
Eastbound Left Hazelton at Byerly's Driveway	259	41
Northbound Byerly's Driveway at Hazelton	270	78
Northbound Left York at Hazelton	160	181
Westbound Left Turn Gallagher at France	120	79
Southbound Left Turn France at Gallagher	230	171

**Table 6b. Selected 95th Percentile Queue Lengths – Saturday Midday Peak Hour
– 2015 No-Build Conditions**

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	201
Southbound Left France at Hazelton	360	394
Northbound Right France at Hazelton	315	119
Westbound Right France at Hazelton	150	114
Eastbound Left Hazelton at Byerly's Driveway	259	46
Northbound Byerly's Driveway at Hazelton	270	156
Northbound Left York at Hazelton	160	185
Westbound Left Turn Gallagher at France	120	105
Southbound Left Turn France at Gallagher	230	268

F. FUTURE PROJECTED TRAFFIC CONDITIONS WITH DEVELOPMENT

1. Proposed Development Phases

There are several phases proposed for the Byerly's Redevelopment Project:

- A. Construction of a new 52,500 square-foot grocery store – completed by mid-August 2014;
- B. Construction of a new 109-unit mid-rise apartment building – completed by mid-November 2014;
- C. Construction of a new 77-unit mid-rise apartment building with 10,450 square feet of retail space on the ground floor – completed by mid- to late-2015.
- D. Construction of a new 48-unit mid-rise apartment building with 10,500 square feet of retail space on the ground floor – completed by mid- to late-2015.

The staging of these phases is such as to allow the existing grocery store to remain open until the new store is completed, then the old store will close and the remaining apartment and retail will be constructed.

Therefore, two Build scenarios are to be tested:

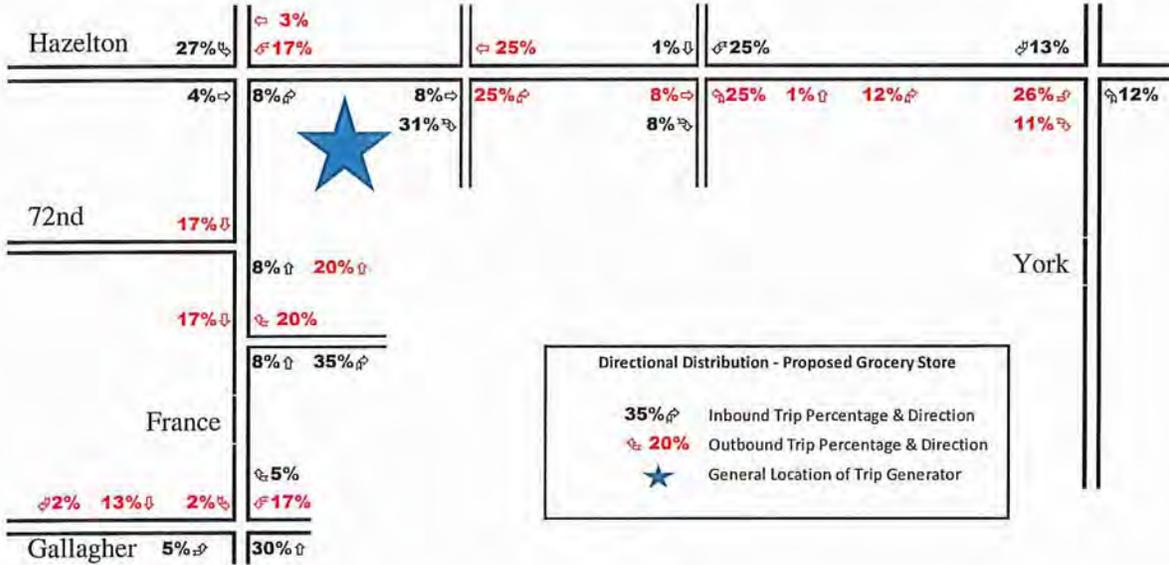
- 2015 Build – incorporating the new grocery store and the 109-unit mid-rise apartment building;
- 2016 Build – incorporating the 2015 Build land uses with the two remaining mid-rise apartments and ground floor retail.

2. Proposed Directional Distribution

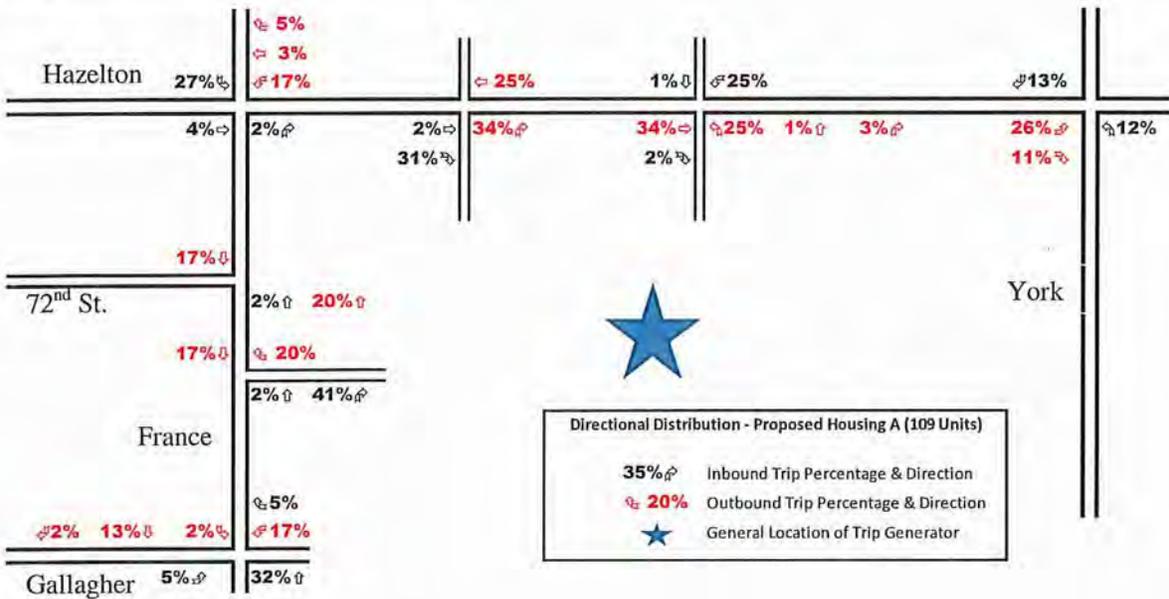
Because of the proposed site layout, access to the various buildings will be possible from more than one driveway. In addition, some of these driveways will be full access while others will have limited access. Generally, trips to and from most access points were distributed 80/20 with the closer access getting the majority of the entering/exiting traffic. Exiting traffic intending to head northbound on France from the grocery or from the apartments was split 50/50 between the new RI/RO access onto France and the Hazelton signal. Some traffic headed southbound is split between the Hazelton easterly intersection or down to Gallagher intersection.

The following diagrams illustrate the directional distribution of ingress and egress traffic into and out of each land use of the redevelopment project:

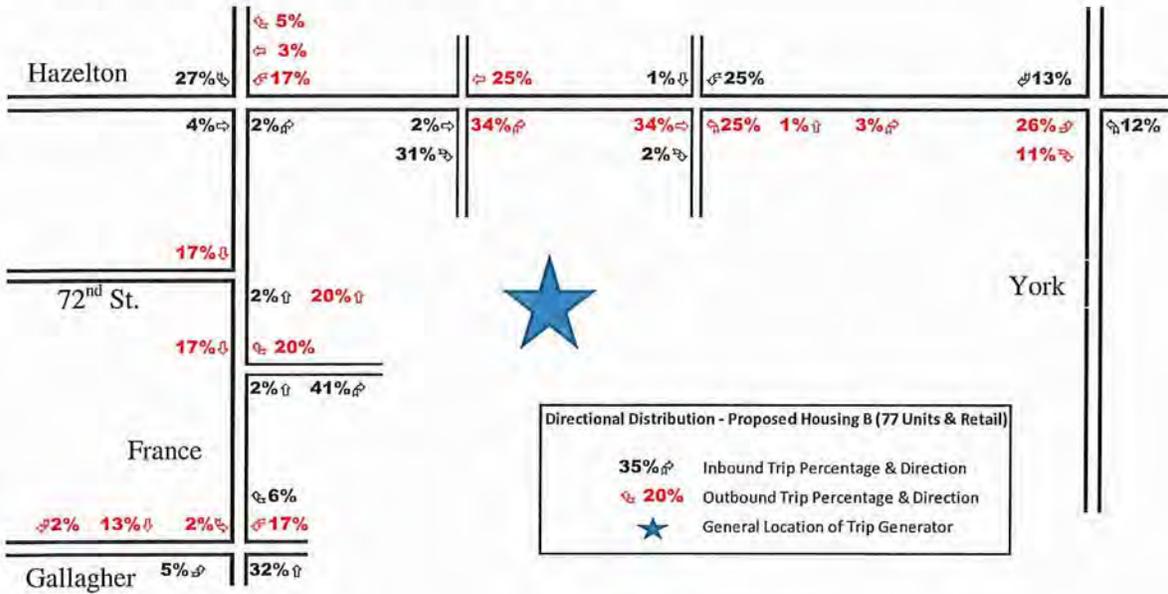
Grocery Store Traffic:



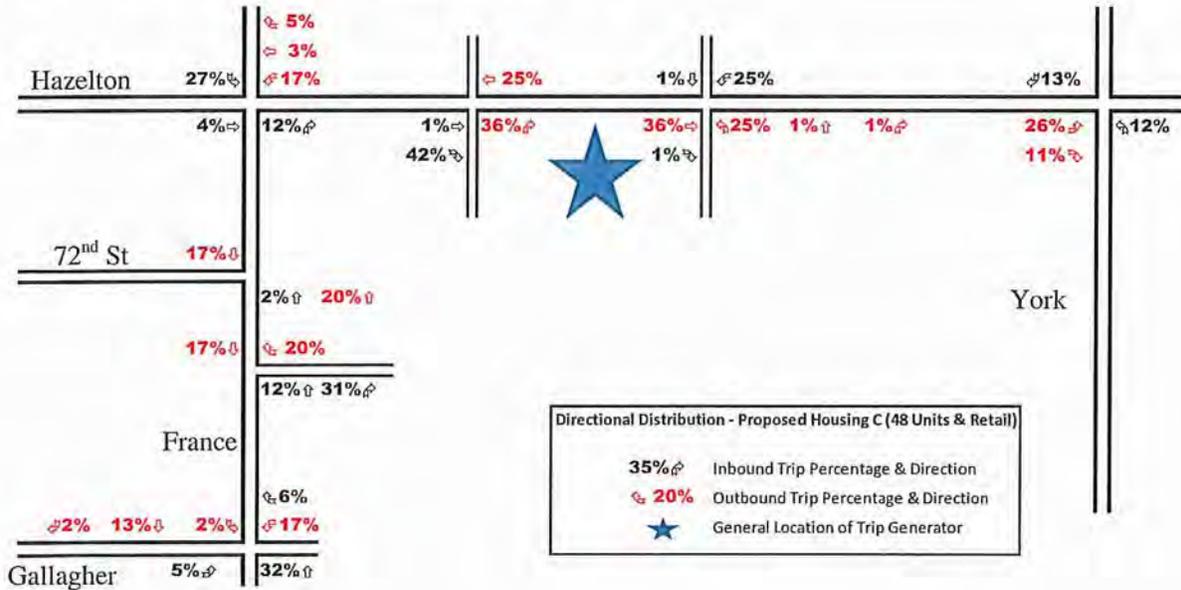
Proposed Housing A (109 Units):



Proposed Housing B (77 Units & 10,450 sq. ft. Retail):



Proposed Housing C (48 Units & 10,500 sq. ft. Retail):



3. Proposed Build Trip Generations

Tables 7 and 8 show the proposed trip generation estimates for each phase of the development – the 2015 Build (encompassing the new Byerly’s store and Housing A), and the 2016 Build (which adds the trip generation of Housing B and C to the trip generation from the 2015 Build analysis). Each is based on the trip generation rates found in the Institute of Transportation Engineers’ Trip Generation Manual, 9th Edition.

It should be noted that each scenario is adjusted to reflect shared trips and pass-by trips. According to the ITE Trip Generation Handbook, “Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion.” Further, “Pass-by trips are only applicable to trips that enter or exit the site, not internal trips.”⁶

According to Table 5.10 of the Handbook, the average pass-by trips percentage for supermarkets is 36%, which was used in this study.

The ITE Trip Generation Manual also outlines a procedure for calculating internal capture rates for trip origins within a multi-use development (aka, “Shared Trips”). The total Shared Trip assumption for this study was 20%.

Table 7. 2015 Build - Trip Generation Estimates¹ – Proposed Site

Land Use	Size	Weekday PM		Daily	Saturday Midday		Saturday Daily
		Enter	Exit		Enter	Exit	
Supermarket	52,500 sq. ft.	254	244	5,368	285	274	9,323
Apartments (Building A)	109 Units	44	24	725	28	28	697
Total - Gross		298	268	6,093	313	302	8,626
		566			615		
Shared Trips		56	56	1,211	85	82	2,710
		112			167		
Pass-By Trips		72	72		0	0	
		144			0		
Total Proposed Trips		170	140	4,882	228	220	5,916
		310			448		

2. Per the data and methodologies in Trip Generation, 9th Edition, published by ITE.

⁶ Trip Generation Manual, 9th Edition, Volume 1: User’s Guide and Handbook, Institute of Transportation Engineers, Washington, DC, 2012.

Table 8. 2016 Build - Trip Generation Estimates¹ – Proposed Site

Land Use	Size	Weekday PM		Daily	Saturday Midday		Saturday Daily
		Enter	Exit		Enter	Exit	
Supermarket	52,500 sq. ft.	254	244	5,368	285	274	9,323
Apartment (Building A)	109 Units	44	24	725	28	28	697
Apartment (Building B)	77 Units	31	17	512	20	20	492
Specialty Retail	10,450 sq. ft.	19	20	449	26	26	522
Apartment (Building C)	48 Units	19	10	319	12	12	307
Specialty Retail	10,500 sq. ft.	19	20	451	26	26	525
Total - Gross		386	335	7,824	397	386	11,866
		721			783		
Shared Trips		73	73	1,576	105	102	3,134
		146			207		
Pass-By Trips		82	82		10	10	
		164			20		
Total Proposed Trips		231	180	6,248	282	274	8,732
		411			556		

3. Per the data and methodologies in Trip Generation, 9th Edition, published by ITE.

4. Projected Traffic Operations – 2015 Build

Table 9 summarizes the projected levels of service for the 2015 Build Condition. This reflects the traffic operation of the new Byerly’s Grocery Store and the first building of apartment units (aka, “Housing A”).

This analysis assumes the intersection enhancements along France Avenue. In addition, this analysis assumes that Hazelton has been reconfigured from a four-lane roadway (two lanes in each direction) to a three-lane roadway (one lane in each direction with a center Two-Way Left Turn Lane – a “TWLTL”). Further, the westerly driveway intersection along Hazelton between the Byerly’s redevelopment site and Rue de France shopping center has been configured into a three-quarter access – that is, eastbound Hazelton traffic can make left turns, make right turns or proceed straight, while westbound traffic can only turn right or proceed straight. No movement can make a left turn except the eastbound movement. That means that from the Byerly’s property, northbound movements can only turn right (eastbound) at Hazelton.

Full access is possible from the Byerly’s property easterly intersection with Hazelton. This intersection has been tested with either signalized or unsignalized operation. Both resulting levels of service are shown in the table below. Both operate acceptably.

Table 9. Projected Levels of Service – 2015 Build Condition

Intersection	PM Peak Hour		Saturday Midday Peak Hour	
	LOS	Int. Delay (sec/veh)	LOS	Int. Delay (Sec/veh)
France Ave & Hazelton Rd.	B (F-SBLt)	17.3	C (F-SBLt)	31.4
Hazelton Rd. & Westerly Byerly's Drive	a (b)	2.1	b (b)	2.4
Hazelton Rd. & Easterly Byerly's Drive (Signalized or unsignalized)	B (B)	11.3	B (B)	11.6
	a (c)	2.1	a (c)	3.2
Hazelton Rd. & York Ave.	C (F-NBLt)	28.8	C (F-NBLt)	31.5
France Ave. & 72 nd St.	a (f-EB)	1.8	a (f-EB)	2
France Ave. & Gallagher Dr.	C (F-SBLt)	18.0	C (F-SBLt)	20.4
France Ave. & Byerly's Driveway	a (a)	n/a	a (a)	n/a

NOTES: a. Upper Case letters reflect LOS at signalized intersections; Lower case letter reflect LOS at unsignalized intersection.
 b. First letter reflects Intersection LOS; letter inside parentheses reflects LOS of worst movement.
 c. Int. Delay reflects overall average intersection delay, not necessarily worst movement delay.

Queue lengths for the 2015 Build conditions are listed on Tables 10a and 10b.

Table 10a. Selected 95th Percentile Queue Lengths – Weekday P.M. Peak Hour – 2015 Build Conditions

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	162
Southbound Left France at Hazelton	360	434
Northbound Right France at Hazelton	315	147
Westbound Right France at Hazelton	150	90
Eastbound Left Hazelton at Byerly's Driveway	259	45
Northbound Byerly's Driveway at Hazelton	270	43
Northbound Left York at Hazelton	160	182
Westbound Left Turn Gallagher at France	120	71
Southbound Left Turn France at Gallagher	230	196

Table 10b. Selected 95th Percentile Queue Lengths – Saturday Midday Peak Hour – 2015 Build Conditions

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	180
Southbound Left France at Hazelton	360	478
Northbound Right France at Hazelton	315	44
Westbound Right France at Hazelton	150	73
Eastbound Left Hazelton at Byerly's Driveway	259	55
Northbound Byerly's Driveway at Hazelton	270	37
Northbound Left York at Hazelton	160	186
Westbound Left Turn Gallagher at France	120	90
Southbound Left Turn France at Gallagher	230	318

5. Projected Traffic Operations – 2016 Build

Table 11 summarizes the projected levels of service for the 2016 Build Condition. This reflects the traffic operation of the 2015 Build conditions combined with the two additional apartment buildings (aka, “Housing B and C”), and ground floor retail uses. (NOTE: This level of analysis did not include the proposed restaurant use to the east of the Byerly’s redevelopment site.)

This analysis assumes the same intersection enhancements along France Avenue, as well as the geometric and traffic control changes along Hazelton described under 2015 Build. Full access is again possible from the Byerly’s property easterly intersection with Hazelton. This intersection has been tested with either signalized or unsignalized operation. Both resulting levels of service are shown in the table below. Both continue to operate acceptably.

**Table 11. Projected Levels of Service – 2016 Build Condition
(Without Impact of Parcel to the East)**

Intersection	PM Peak Hour		Saturday Midday Peak Hour	
	LOS	Int. Delay (sec/veh)	LOS	Int. Delay (Sec/veh)
France Ave & Hazelton Rd.	C (F-SBLt)	20.9	D (F-SBLt)	36.4
Hazelton Rd. & Westerly Byerly’s Drive	a (b)	2.2	b (b)	2.5
Hazelton Rd. & Easterly Byerly’s Drive (Signalized or unsignalized)	B (B)	13.0	B (C)	13.3
	a (c)	2.5	a (d)	3.6
Hazelton Rd. & York Ave.	C (F-NBLt)	32.4	C (F-NBLt)	33.3
France Ave. & 72 nd St.	a (c)	0.5	a (d)	0.6
France Ave. & Gallagher Dr.	B (F-SBLt)	19.2	B (F-SBLt)	18.3
France Ave. & Byerly’s Driveway	a (a)	n/a	a (a)	n/a

NOTES: a. Upper Case letters reflect LOS at signalized intersections; Lower case letter reflect LOS at unsignalized intersection.
b. First letter reflects Intersection LOS; letter inside parentheses reflects LOS of worst movement.
c. Int. Delay reflects overall average intersection delay, not necessarily worst movement delay.

**Table 12a. Selected 95th Percentile Queue Lengths – Weekday P.M. Peak Hour
– 2016 Build Conditions**

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	136
Southbound Left France at Hazelton	360	480
Northbound Right France at Hazelton	315	67
Westbound Right France at Hazelton	150	100
Eastbound Left Hazelton at Byerly’s Driveway	259	41
Northbound Byerly’s Driveway at Hazelton	270	41
Northbound Left York at Hazelton	160	176
Westbound Left Turn Gallagher at France	120	93
Southbound Left Turn France at Gallagher	230	146

**Table 12b. Selected 95th Percentile Queue Lengths – Saturday Midday Peak Hour
– 2016 Build Conditions**

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	177
Southbound Left France at Hazelton	360	440
Northbound Right France at Hazelton	315	89
Westbound Right France at Hazelton	150	92
Eastbound Left Hazelton at Byerly's Driveway	259	91
Northbound Byerly's Driveway at Hazelton	270	49
Northbound Left York at Hazelton	160	187
Westbound Left Turn Gallagher at France	120	124
Southbound Left Turn France at Gallagher	230	176

6. Projected Traffic Operations – 2016 Build with Restaurant Development to the East

Table 13 illustrates the trip generation added by the restaurant development to the east of the Byerly's Redevelopment. Applying these trip estimates, Table 14 summarizes the projected levels of service for the 2016 Build Condition assuming an outside developer were to develop the former Szechuan Star into another restaurant. Traffic operation of the 2016 Build conditions have been combined with the impacts of a possible 8,000 square foot quality sit-down restaurant that may be in operation at or after the completion of the 2016 Build scenario.

This analysis assumes the same intersection enhancements along France Avenue, as well as the geometric and traffic control changes along Hazelton described under 2015 Build. Full access is again possible from the Byerly's property easterly intersection with Hazelton. This intersection has been tested with either signalized or unsignalized operation. Both resulting levels of service are shown in the table below. Both continue to operate acceptably.

Table 13. 2016 Build with Impacts to the East - Trip Generation Estimates¹ – Proposed Site

Land Use	Size	Weekday PM		Daily	Saturday Midday		Saturday Daily
		Enter	Exit		Enter	Exit	
Supermarket	52,500 sq. ft.	254	244	5,368	285	274	9,323
Apartment (Building A)	109 Units	44	24	725	28	28	697
Apartment (Building B)	77 Units	31	17	512	20	20	492
Specialty Retail	10,450 sq. ft.	19	20	449	26	26	522
Apartment (Building C)	48 Units	19	10	319	12	12	307
Specialty Retail	10,500 sq. ft.	19	20	451	26	26	525
Quality Restaurant	8,000 sq. ft.	40	20	720	51	35	755
Total - Gross		426	354	8,544	448	421	11,621
		780			869		
Shared Trips		77	77	1,676	119	112	3,350
		154			231		
Pass-By Trips		93	93		10	10	
		186			20		
Total Proposed Trips		231	180	6,868	319	299	9,271
		411			618		

¹Per the data and methodologies in Trip Generation, 9th Edition, published by ITE.

**Table 14. Projected Levels of Service – 2016 Build Condition
(With Impact of Parcel to the East)**

Intersection	PM Peak Hour		Saturday Midday Peak Hour	
	LOS	Int. Delay (sec/veh)	LOS	Int. Delay (Sec/veh)
France Ave & Hazelton Rd.	C (F-SBLt)	21.9	D (F-SBLt)	39.6
Hazelton Rd. & Westerly Byerly's Drive	a (b)	2.2	b (b)	2.7
Hazelton Rd. & Easterly Byerly's Drive (Signalized or unsignalized)	B (B)	13.0	B (C)	13.4
	a (c)	2.7	a (d)	4.4
Hazelton Rd. & York Ave.	C (F-NBLt)	33.0	C (F-NBLt)	34.5
France Ave. & 72 nd St.	a (c)	0.5	a (d)	0.7
France Ave. & Gallagher Dr.	B (F-SBLt)	19.3	B (F-SBLt)	18.7
France Ave. & Byerly's Driveway	a (a)	n/a	a (a)	n/a

NOTES: a. Upper Case letters reflect LOS at signalized intersections; Lower case letter reflect LOS at unsignalized intersection.
b. First letter reflects Intersection LOS; letter inside parentheses reflects LOS of worst movement.
c. Int. Delay reflects overall average intersection delay, not necessarily worst movement delay.

Queuing is also assessed for this condition, and is listed in Tables 15a and 15b.

**Table 15a. Selected 95th Percentile Queue Lengths' – Weekday P.M. Peak Hour
– 2016 Build Conditions w/restaurant**

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	175
Southbound Left France at Hazelton	360	381
Northbound Right France at Hazelton	315	84
Westbound Right France at Hazelton	150	69
Eastbound Left Hazelton at Byerly's Driveway	259	68
Northbound Byerly's Driveway at Hazelton	270	54
Northbound Left York at Hazelton	160	185
Westbound Left Turn Gallagher at France	120	90
Southbound Left Turn France at Gallagher	230	161

**Table 15b. Selected 95th Percentile Queue Lengths' – Saturday Midday Peak Hour
– 2016 Build Conditions w/restaurant**

Segment	Segment Length (ft.)	95 th Percentile Queue Length (ft.)
Westbound Left Turn Hazelton at France	256	93
Southbound Left France at Hazelton	360	442
Northbound Right France at Hazelton	315	90
Westbound Right France at Hazelton	150	93
Eastbound Left Hazelton at Byerly's Driveway	259	78
Northbound Byerly's Driveway at Hazelton	270	58
Northbound Left York at Hazelton	160	185
Westbound Left Turn Gallagher at France	120	119
Southbound Left Turn France at Gallagher	230	230

G. TRAFFIC SIGNAL WARRANT ANALYSIS

As part of the Edina Redevelopment Project, consideration has been given whether the easterly driveway intersection at Hazelton will be warranted for signalization as a result of this project. RLK has used the following methodology to assess the likelihood of signalization at the intersection.

The Minnesota Department of Transportation has prepared a document “Metro Traffic Signal Justification Report Methodology”, to assist in determining whether an intersection is justified for signalization.⁷ The document outlines the current methodology in determining whether criteria are met for a signal to be considered justified at a particular intersection.

For a specific intersection to be considered for a traffic signal installation one of the following criteria must be met:

1. The intersection meets Warrant 1A, 1B or 7 of the current MN MUTCD.
2. Current traffic volumes do not meet Warrant 1A or 1B, but development in the area will occur such that the warrants will be met in a reasonable period of time and state funds are not used for construction.
4. Current traffic volumes do not meet Warrant 1A or 1B, but a significant crash problem exists (an average of at least three correctable crashes per year (any 12-month period) over the most recent 3-year period) and traffic volumes are likely to meet warrants within a reasonable period.
5. The intersection has significant amounts of pedestrian traffic, which can be documented.

A summary of the analysis of Warrants 1A and 1B are as follows:

Number of lanes for moving traffic on each approach:

- For Major Street = 2 (left turn lane is shared), Vehicles per hour on major street (total of both approaches) must be ≥ 600 for Condition A, 900 for Condition B
- For Minor Street = 2 (left lane + shared through/right lane), Vehicle per hour on higher-volume minor street approach (one direction only) must be ≥ 200 for Condition A, 100 for Condition B

For Condition A, the 2016 Build (with restaurant) Major Street approach = 679 trips per hour in PM Peak Hour; and 911 trips per hour in Saturday Midday Peak Hour. The Minor Street approach traffic = 64 trips

⁷ “Metro Traffic Signal Justification Report Methodology”, as part of Minnesota Department of Transportation Engineering Services Technical Memorandum No. 07-02-T-01, Intersection Control Evaluation (ICE), March 20, 2007.

per hour (one direction only) in PM Peak Hour; = 97 trips per hour in Saturday Midday Peak Hour. Warrant 1A is not met.

For Condition B, the 2016 Build (with restaurant) conditions are not met for PM Peak Hour conditions, but are very close to being met for the Saturday Midday Peak Hour.

The methodology also states that a combination of Conditions A and B may be used after adequate trial of other remedial measures is made. This allows for a reduction to levels that are 80% of the previous minimums for warrants to be made. Therefore:

- For Major Street = 1 (left turn lane is shared), Vehicles per hour on major street (total of both approaches) must be ≥ 480 for Condition A, 720 for Condition B
- For Minor Street = 2 (left lane + shared through/right lane), Vehicle per hour on higher-volume minor street approach (one direction only) must be ≥ 160 for Condition A, 80 for Condition B

Under these 80% conditions, the Saturday Midday Peak Hour does not meet Condition A but does meet Condition B.

The nearby pedestrian crossing of Hazelton at the Edina Promenade may be documented to provide additional justification to the signalization of this intersection.

H. PARKING IMPACT ANALYSIS

The Byerly's redevelopment has proposed the following on-site parking for each parcel of development:

Byerly's Store:	46,700 sq. ft. ground floor; therefore, at 5 stalls per 1000 sq. ft., = 235 stalls required; 236 stalls provided to south of store.
Housing A and B:	At 2.0 stalls/unit; 186 units x 2.0 stalls = 372 stalls, per code At 1.5 stalls/unit; 186 units x 1.5 stalls = 279 stalls Parking User Rate = 1 stall per bedroom (except 3 br) = 263 stalls 286 stalls provided in garage; 25 surface stalls = 311 stalls total
Housing C:	At 2.0 stalls/unit; 48 units x 2.0 stalls = 96 stalls, per code At 1.5 stalls/unit; 48 units x 1.5 stalls = 72 stalls Parking User Rate = 1 stall per bedroom (except 3 br) = 64 stalls 72 stalls provided in garage; 9 surface stalls = 81 stalls total

Overall Parking Summary for Housing/Retail Buildings

Parking at 2 stalls per unit	468
Parking at 1.5 stalls per unit	351
Parking User Rate	327
Garage Parking Provided	358
Surface Parking Provided	34
Total Provided	392

I. CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis documents in this study, RLK Incorporated has drawn the following conclusions and recommendations:

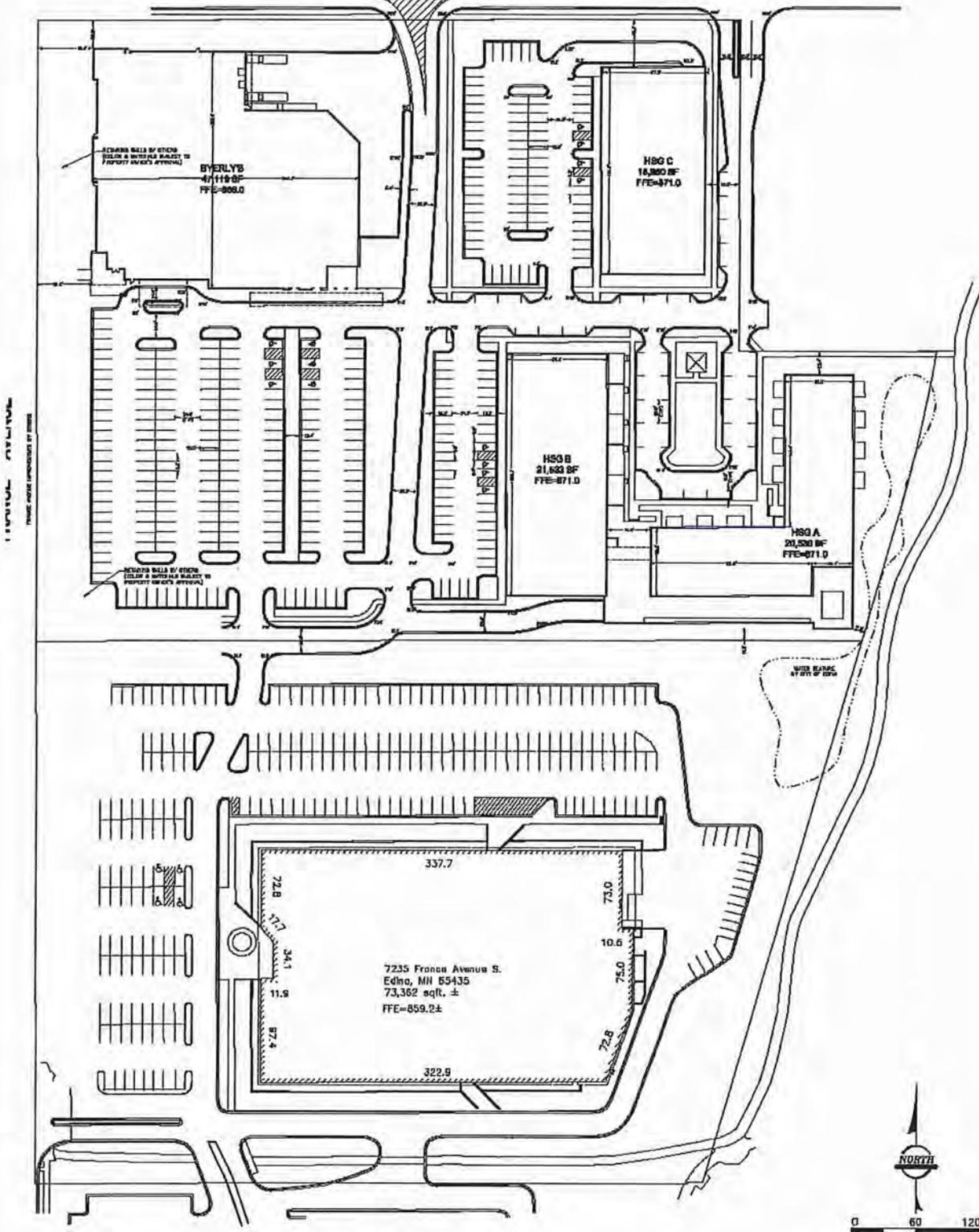
- The three-lane configuration of Hazelton appears to work well in both scenarios.
- The westerly Byerly's driveway operates well (LOS-A) as a right-in/right-out at Hazelton.
- At this point, the easterly driveway operates equally well as either a signalized or side street stop sign intersection (both LOS-A, with signal operating slightly better, especially for northbound movements). Left turn 95th percentile queues at the intersection are less than 100 feet in each approach. As a signal, the average control delay is 7.2 sec/veh. As an unsignalized intersection, the average delay is 4.1 sec/veh (due to free flow along Hazelton). Signal warrants may be met with further analysis outside the scope of this report.
- The right-in/right-out onto France operates well, and does not interfere with northbound traffic or weaving traffic approaching the right turn lane at Hazelton.
- The additional access points into and out of the development disperse the trips throughout the development, and thus reduce the overall traffic impacts onto the surrounding system.
- There is a reduction in overall traffic on the westbound approach of Hazelton at France. This is due to the redistribution of trips resulting from the alternate access points (right-in/right-out at France; cross access to Gallagher via the Macy's Furniture Store access, etc.). Westbound 95th percentile queues on Hazelton at France Avenue extend to the east 183 feet (total length to westerly driveway is approx. 260 feet).
- There are some queuing issues with the northbound left turn movement at York, the southbound left turn from France to eastbound Hazelton, and southbound France at Gallagher. These conditions seem to exist under the No-Build as well as the Build Conditions, and seem to be attributable to other development in the area (especially Target and Yorktown Square impacts at the York intersection).
- Off-street parking supply is met when considered at a 1.5 stall per unit or a parking user rate is considered. The mixed use development and availability of nearby transit may allow the parking supply to meet these lower rates.

It is clear that the additional access points to and from the Byerly's redevelopment site greatly benefit the traffic operations despite there being more trips generated than in the current configuration. As a result, there are no queuing impacts directly associated with the redevelopment, even with the "roadway diet" from four lanes on Hazelton to three. While a signal is not explicitly warranted based on traffic volumes, a case can be made that signalizing the easterly Byerly's intersection will facilitate the pedestrian crossing at the Promenade to the east (subject to further engineering study).

FIGURES

- Figure 1 Project Site
- Figure 2 Existing Geometrics
- Figure 3 Aerial Photo of Existing Conditions
- Figure 4 Existing Peak Hour Turning Movements
- Figure 5 2015 No-Build Peak Hour Turning Movements
- Figure 6 Proposed Geometrics
- Figure 7 2015 Build Peak Hour Turning Movements
- Figure 8 2016 Build Peak Hour Turning Movements
- Figure 9 2016 Build with Restaurant to the East Peak Hour Turning Movements

HAZELTON ROAD



3821 Colagher Drive
Edina, MN 55435
Miner Investment Group LP

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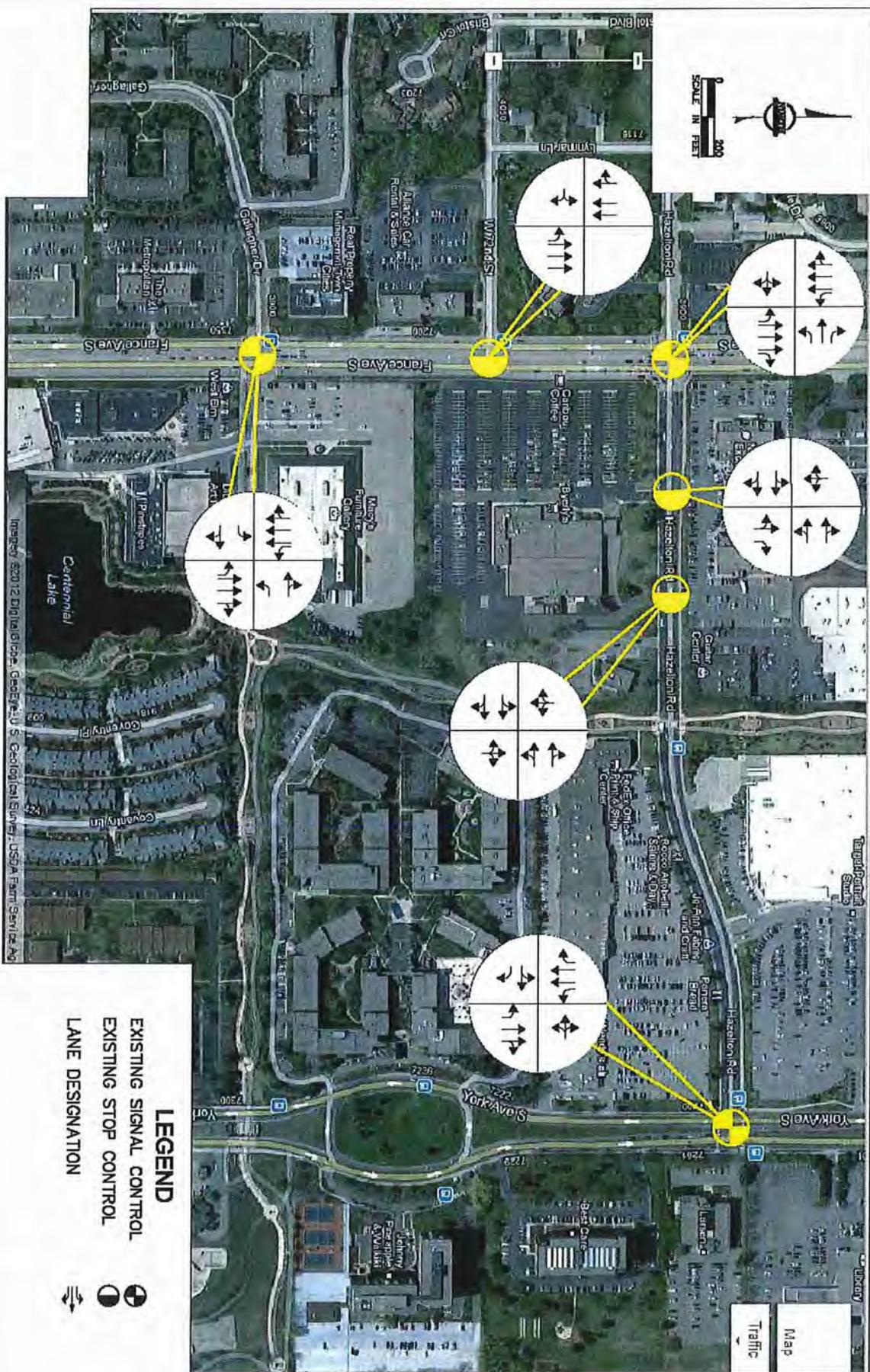


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EDINA BYERLY'S PROJECT SITE PLAN

Figure #
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LEGEND

EXISTING SIGNAL CONTROL

EXISTING STOP CONTROL

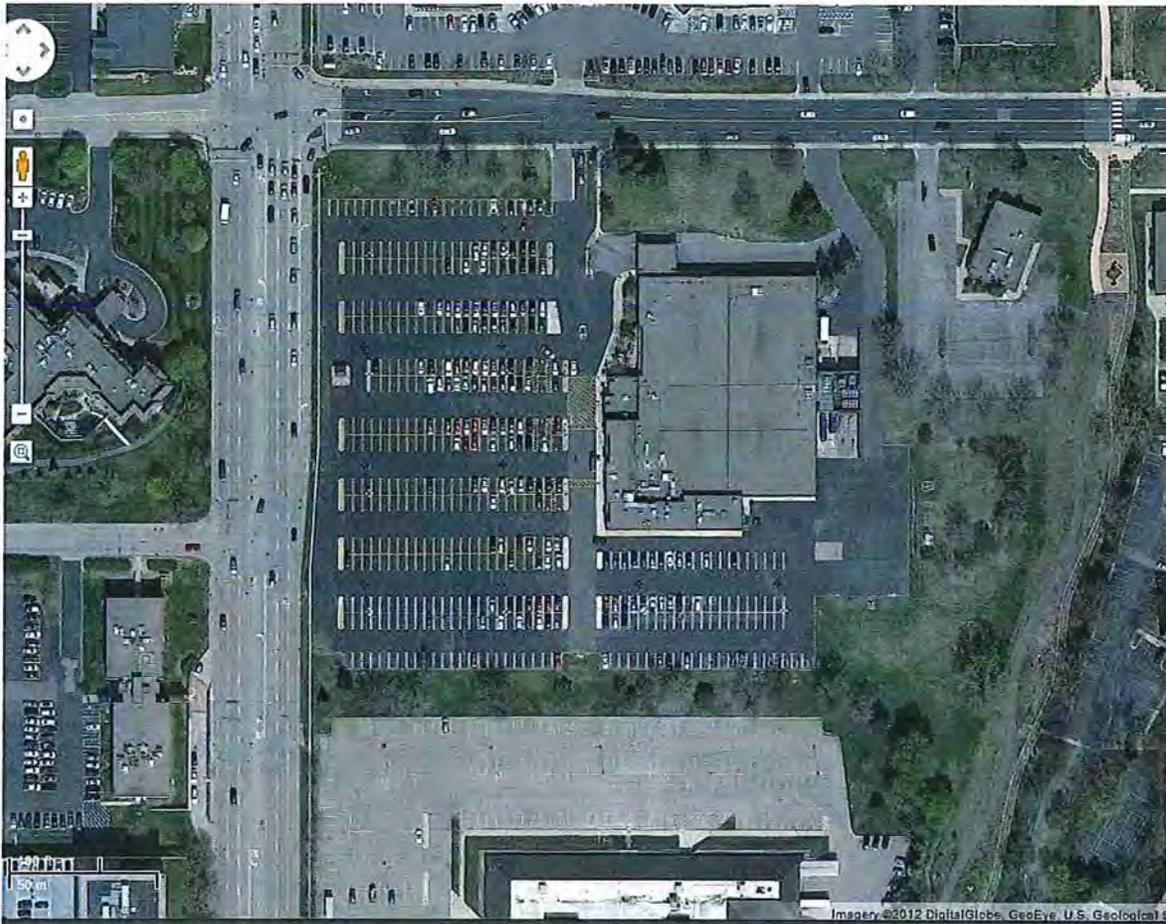
LANE DESIGNATION

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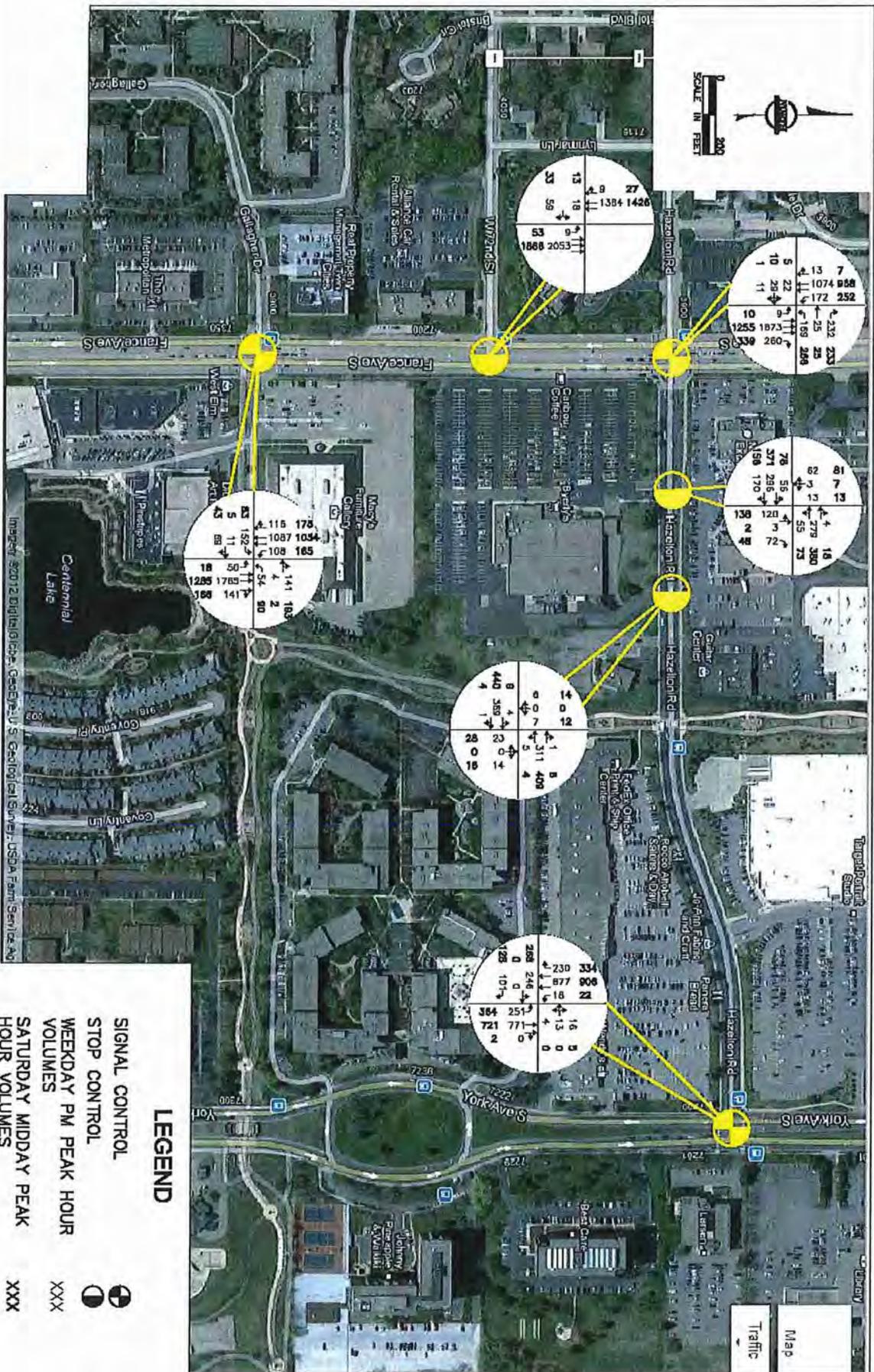
**EDINA BYERLY'S
EXISTING GEOMETRICS**

Figure 3 – Aerial Photo of Existing Conditions



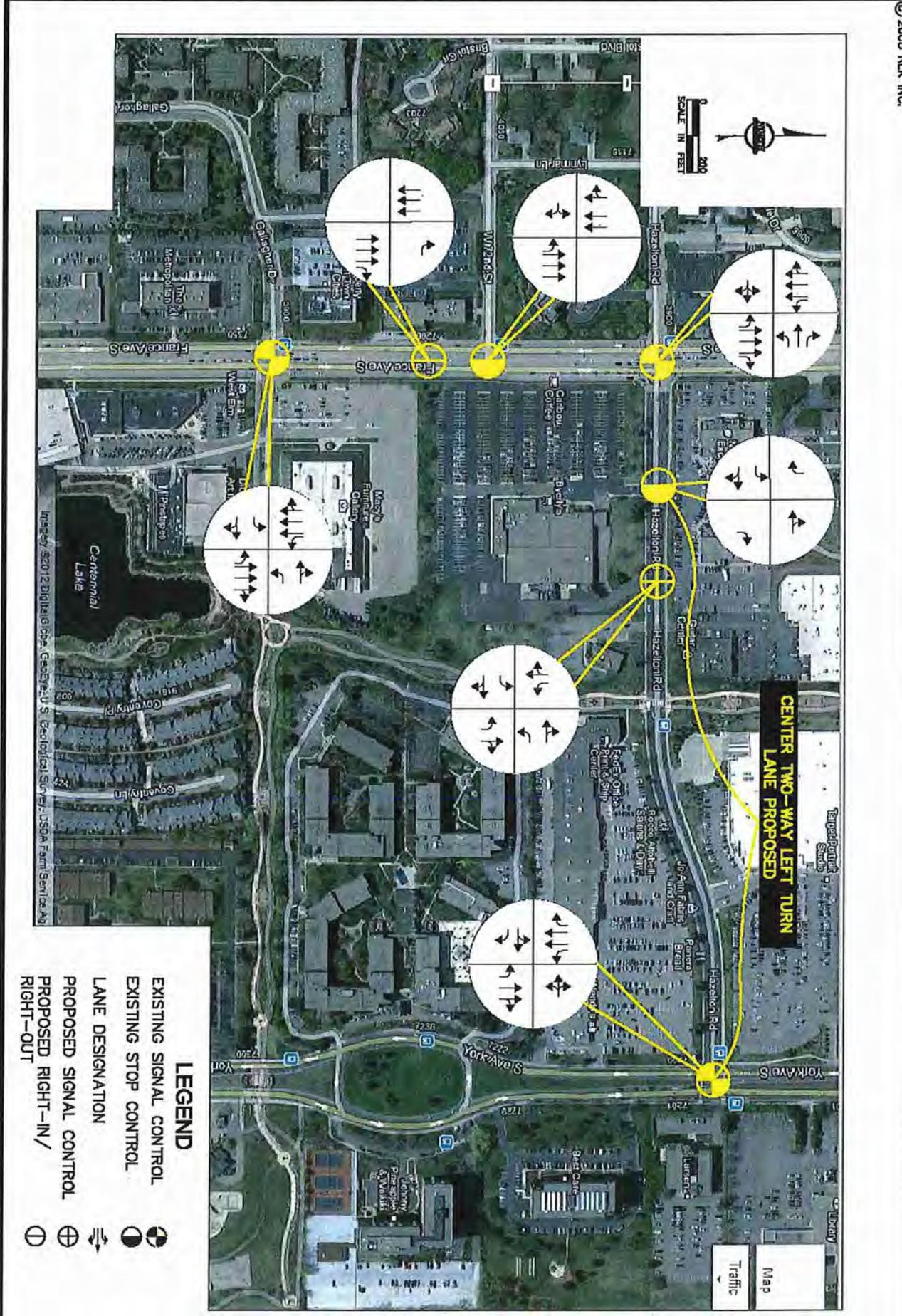


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EDINA BYERLY'S

2015 NO-BUILD PEAK HOUR TURN MOVEMENTS



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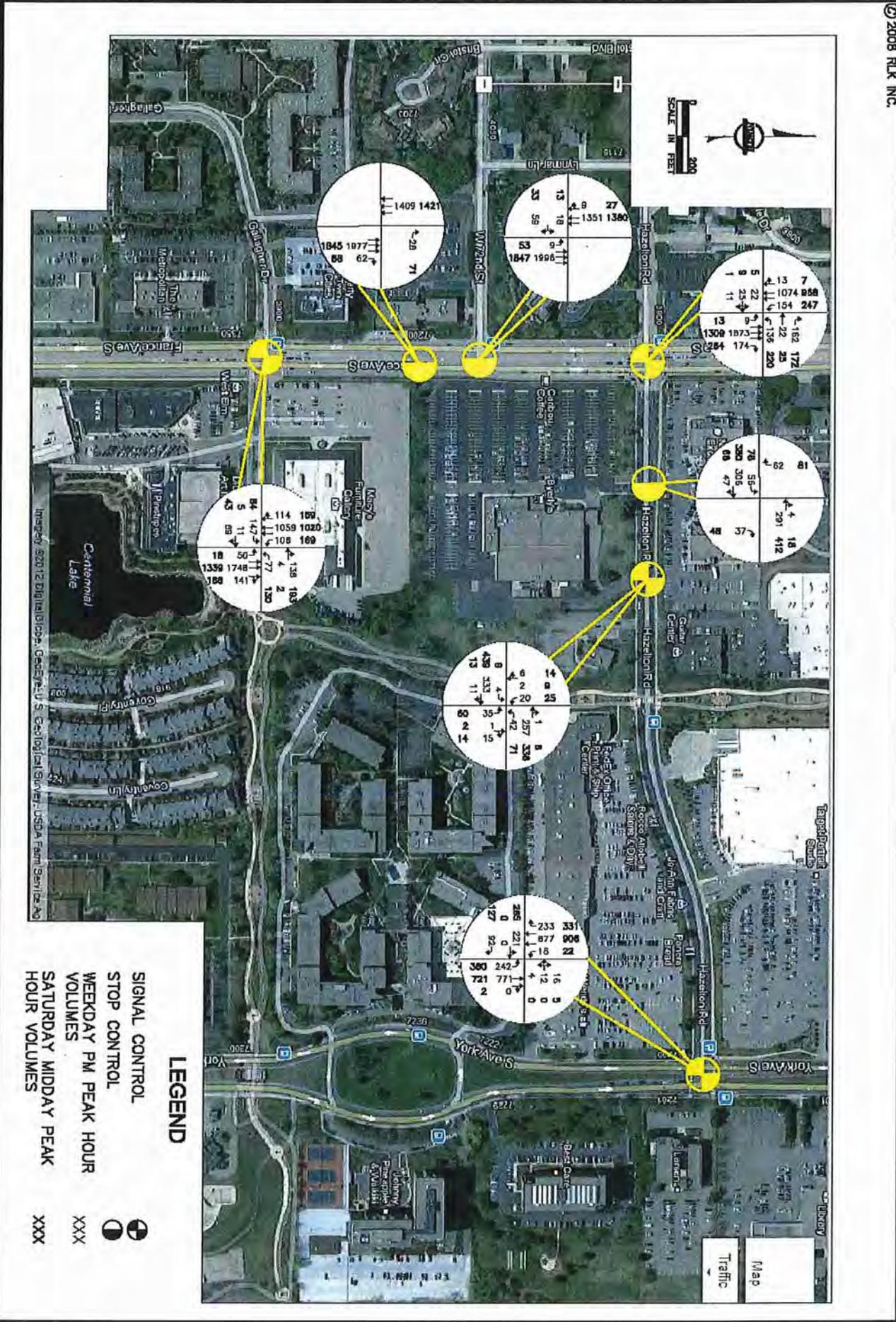
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EDINA BYERLY'S
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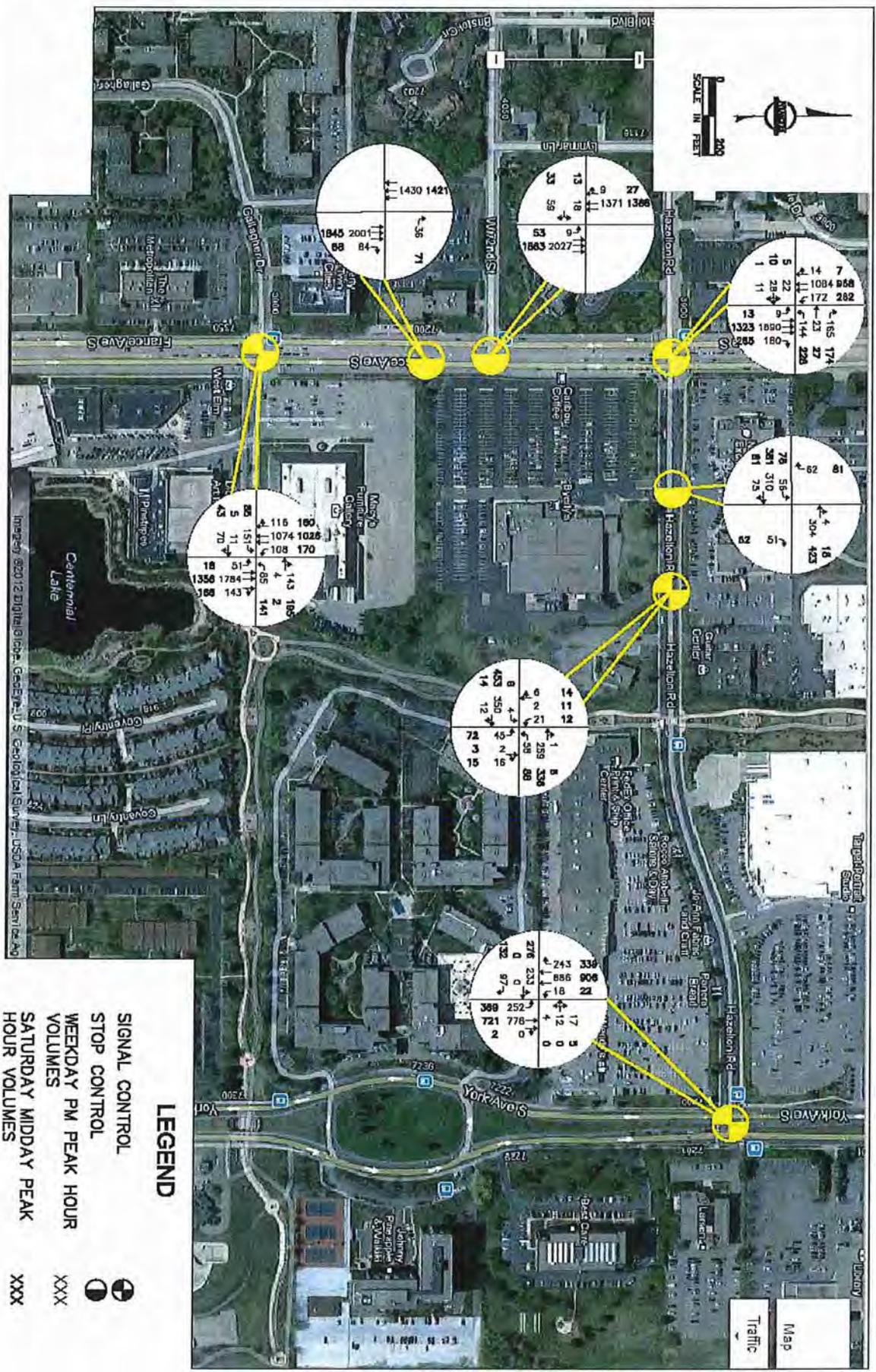


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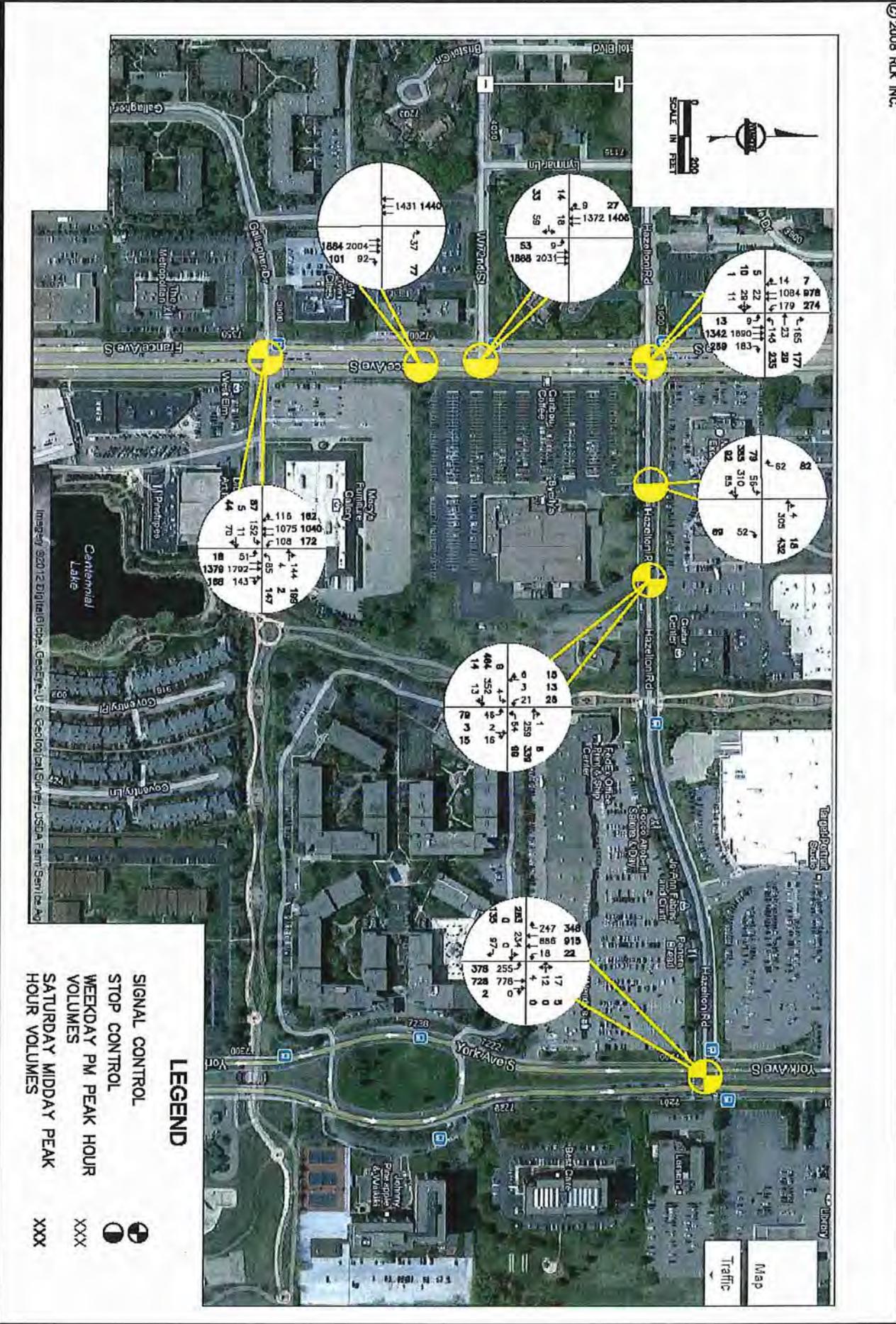
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2016 BUILD PEAK HOUR TURN MOVEMENTS

Figures
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EDINA BYERLY'S

2016 BUILD PEAK HOUR TURN MOVEMENTS - WITH RESTAURANT

APPENDICES

See Technical Appendices (bound separately) for Intersection LOS for signalized and unsignalized intersection operational performance reports and queuing analyses for each scenario.