Poplar Bridge Neighborhood

Neighborhood Traffic Management Project History

Document prepared by Paul Jarvis, Traffic Management Coordinator ,
City of Bloomington Public Works/Engineering

Problem Statement

Congestion has encouraged through traffic to abandon the arterial system (defined by West 84th Street on the north, France Avenue on the east, West 90th Street/ Poplar Bridge Road on the south, and Normandale Boulevard on the west) and seek alternate routes through the neighborhood, raising concerns for pedestrians, motorists and residents. *(Poplar Bridge Study – 2008)*

Poplar Bridge Neighborhood

HISTORY

STANLEY AVENUE AND NINE MILE CREEK PARKWAY

This report summarizes the Poplar Bridge Traffic Management efforts that have occurred between 2004, up until the approval of the installation of the turn restrictions at three neighborhood entrance locations (see separate report for the results of that implementation).

The traffic cut-through problems on both Stanley Avenue and Nine Mile Creek Parkway have been ongoing, with neighborhood concerns documented beginning in the 1980's. In original planning documents for the City, Nine Mile Creek Parkway was identified to be a collector roadway that would extent from its currently alignment between W 90th Street and Stanley Avenue, to the northwest connecting to either Normandale Boulevard or W 84th Street. Given current standards for construction, the option of extending the collector street through the wetland is no longer an option. The partial construction of the collector street (Nine Mile Creek Parkway) resulted in a collector street terminating and leading traffic onto a residential roadway.

Stanley Ave 2004 ADT – 1900

NMCP 2004 ADT - 2100

The current concerns with traffic in this area were brought to the City Council in 2004 with a resident application for traffic calming.

STANLEY AVENUE AND NINE MILE CREEK PARKWAY

Solutions Looked At

- *Remove signal at 84th & Stanley*
- *Remove stop signs on 84th Street*
- *Pair of speed tables on Stanley*
- *Restrict PM turning movements on Stanley*
- *Restrict AM turning movements on NMCP*
- *Entry Treatments on Stanly and NMCP*
- *No truck thru movements*
- *Chokers or Chicanes on Stanley*
- *Cul-de-sac at Intersection of Stanley and NMCP*
- *T-closure south of NMCP and Stanley*
- *Increase speed limit on 84th Street*
- *Modify signal timing at Stanley and 84th street*
- *Striping on Stanley*
- *Corner treatments at intersection of Stanley and NMCP*
- *Reduce posted speed limit on NMCP and Stanley*
- *Closure of NMCP at Oxborough and Poplar Bridge Road*
- *Roundabouts on 84th Street replacing stop signs*
- *Diagonal diverters on Stanley, Rich and Quinn*

At the April 19, 2004 City Council meeting, the Stanley Avenue and Nine Mile Creek Parkway neighborhoods submitted their traffic calming applications to the Council. At the time residents of both streets were concerned more with the speed of traffic rather than the volume of traffic. A trial installation of one temporary speed table was installed in the summer of 2004. Following the trial TTAC along with Engineering Staff recommended the installation of two speed tables located at 8500 and 8440 Stanley Avenue. Part of the program states that 67% percent of the effected residents must agree to be assessed for the project. None of the resident agreed to be assessed. The recommendation at that time was that no speed table project be pursued and the application fee of $335 be refunded. At the September 27, 2004 City Council meeting the Council directed staff to take a more "Holistic" look at the traffic problems in the neighborhood.

Nine Mile Creek Parkway would be striped from 4-lane to 3-lane with shoulder/parking on the North/East side. The stripping change would be accomplished with any scheduled PMP work for Nine Mile Creek Parkway. (Completed in 2005)

2006 Holistic Approach

City Council directed staff to look at the Stanley Avenue Nine Mile Creek Parkway problems as more than just these two roadways. With the understanding that attempts to change traffic patterns on these two roadways will likely have an impact of the traffic patterns in the rest of the neighborhood, the direction was to look at the problem more holistically, and encompass the entire neighborhood in the final solution.

Staff compiled a list (left) of alternatives or suggestions provided by area residents and city staff from various departments including engineering, traffic maintenance, police & fire departments.

In 2007 the City moved forward with a study with a strong neighborhood involvement component, to develop a plan for traffic calming in this neighborhood. SRF was selected as the consultant to assist in the study and The Poplar Bridge Neighborhood Traffic Study kicked-off in October 2007.

2007/2008 Poplar Bridge Neighborhood Study (see appendix A for complete study)

Study Area

The Poplar Bridge neighborhood study area is bounded by West 84th Street, Normandale Boulevard, France Avenue and Poplar Bridge Road/West 90th Street. Public involvement participation also included the neighborhoods north of West 84th Street. Arterial roadways in the area include Normandale Boulevard and France Avenue serving north-south movements and West 84th Street and Poplar Bridge Road/West 90th Street serving east-west movements

Study Advisory Committee

Using a public process that included a heavy involvement with a Stake-holder group, a Study Advisory Committee (SAC) was created to guide and direct the study.

The SAC included:

- Poplar Bridge Neighborhood Representatives (10)
- Poplar Bridge Elementary School Representative
- West 84th Street Resident Representative
- Fire Station #4 Representative
- Business Representative
- City of Bloomington Representatives

STUDY ADVISORY COMMITTEE

Amy Marohn, City Staff

Paul Jarvis, City Staff

Chad Smith, City Staff

Gary Anderson, Business Rep

Brian Garthwaite, Resident

Mary Lechtenberg, Resident

John Gingerich, Resident

Pat Tschohl, Resident

Ken Tenk, Resident

Karen Larson, Resident

Curt Braatz, Resident

Mark Thorson, Resident

Timm Wienke, Resident

Dr. Gail Swor, Principle PBE

Jay Forster, Fire Station #1

Russ Burnison, Resident

Bruce Koke, Resident

2007/2008 Poplar Bridge Neighborhood Study (see appendix A for complete study)

Data Collection Plan

With direction from City staff, the following data collection plan was developed and implemented, focusing on the morning and evening peak hours:

- ***Roadway tube counts:*** Roadway tubes were placed at 16 locations on neighborhood streets in the study area to determine weekday and hourly traffic volumes and peak travel time patterns. Daily volumes were also available for other arterial roadways in the study area.
- ***Speed data:*** Roadway tubes also collected information regarding vehicle speeds, which were compared to posted speeds for each residential street in the study area.
- ***Origin-Destination (O-D) surveys:*** Stations were set up on Nine Mile Creek Parkway/Stanley Avenue between West 84th Street and West 90th Street and on Poplar Bridge Road west of France Avenue to conduct O-D surveys during the morning and evening peak hours. The survey results determined the amount of "through" traffic currently traveling on residential streets in the study area.
- ***Travel time runs:*** Travel time runs were conducted for several routes through the study area during the morning and evening peak travel periods to identify the differences in travel time using residential versus arterial streets.
- ***Peak hour turning movement counts at key intersections: :*** Turning movement counts were conducted at key intersections during the morning and evening peak hours to evaluate the intersection operations and average delay currently experienced by drivers at these intersections.

Study Approach

To address the high volume of cut-through traffic in the neighborhood, a "3-tiered" approach was used to develop alternatives that would encourage through traffic to use regional and arterial routes, and discourage use of residential streets.

Tier 1: Examine potential improvements to I-494 to encourage motorists to stay on the regional facility,

Tier 2: Considered arterial roadway and intersection improvements to encourage through traffic to use arterial routes,

Tier 3: Identify neighborhood improvements to discourage the use of residential streets for through traffic.

2007/2008 Poplar Bridge Neighborhood Study (see appendix A for complete study)

Recommendations

SAC Group

- Improvements to the intersection of W 84th Street and France Avenue.
- Improvements to the intersection of W 90th Street and France Avenue.
- Series of trials should occur within the Poplar Bridge neighborhood in the following order.
    - Turn restrictions and narrowing of the entry points at key points into the neighborhood.
    - One diverter at Nine Mile Creek Parkway/Poplar Bridge Road.
    - Two additional diverters installed, if the one diverter results in traffic diversions in the neighborhood.

Traffic and Transportation Advisory Committee (TTAC)

- Improvements to the intersection of W 84th Street and France Avenue.
- Improvements to the intersection of W 90th Street and France Avenue.
- Series of trials should occur within the Poplar Bridge neighborhood.

City Council

At the City Council public hearing on June 2, 2008 the City Council adopted the following recommendation:

- The City Council approved the SAC and TTAC recommendation plan.
- The Council directed staff to do earlier trials and test in the order presented with entry treatments, turn restrictions and diverters.
- They also directed staff to come back with timing and cost for the W 84th Street/France Avenue intersection improvements as it relates to the planned sewer main replacement in the W 84th Street corridor west of France Avenue.

2008 – Turn Restrictions and Entry Treatment Trial

In the fall of 2008 staff went ahead with turn restriction and entry treatment trial within the Poplar Bridge Neighborhood. The three locations chosen were

- Nine Mile Creek Parkway at W 90th Street
    - AM Turn restrictions (7-9 am)
    - Entry treatment to narrow exit to one lane
- Stanley Avenue at W 84th Street
    - PM Turn restrictions (4-6 PM)
    - Entry treatment to narrow exit to one lane
- Poplar Bridge Road at France Avenue
    - Am Turn restrictions (7-9 am)
    - Entry treatment to narrow exit to one lane

Trial Results

The volume reduction on the corridor showed between a 25-30 percent reduction in daily traffic. Surrounding roadway did see modest increases in daily traffic (see appendix for additional data).

*Stanley existing ADT – **1800***

Stanley Ave Trial ADT - 1300

*NMCP 2008 ADT – **2100***

NMCP Trial ADT - 1600

Conclusion

The trial face heavy opposition from residents in the south east corner of the neighborhood. Residents in that area felt that traffic was turning at other entrances to the area namely Harrison Road, Kell Avenue, and Morris Road. Volume numbers for those streets did not rise significantly during the trial and subsequent volume data has remained constant.

Staff Recommendation

- Not to move forward with turn restrictions and entry treatment
- Pursue intersection improvements at 84th and France and 90th and France

TTAC Recommendation

- No permanent installations of the turn restriction
- Original study recommendations be followed, with the recommended intersection improvements being completed before any additional neighborhood trials

2008 – Turn Restrictions and Entry Treatment Trial

City Council

At the November 24, 2008 Council Study Session the City Council reviewed all the data collected and considered the TTAC and Staff Recommendation and concurred with staff.

The recommendations from the Poplar Bridge Neighborhood Study to improve the intersection of 84th Street and France Avenue was designed and constructed. The Improvements to the intersection are:

- Modification of the west approach to provide an exclusive left-turn lane. The two existing east-bound through lanes would remain. However, the westbound through lanes departing from the intersection would be reduced from two lanes to one, widen again west of the intersection.
- Modification of the east approach to provide an exclusive left-turn lane. Installation of an exclusive right-turn lane.
- Upgrades to the traffic signal to remove the "split phasing" improving how the signal operates.

2009 – Intersection Improvements W 84th Street and France Avenue

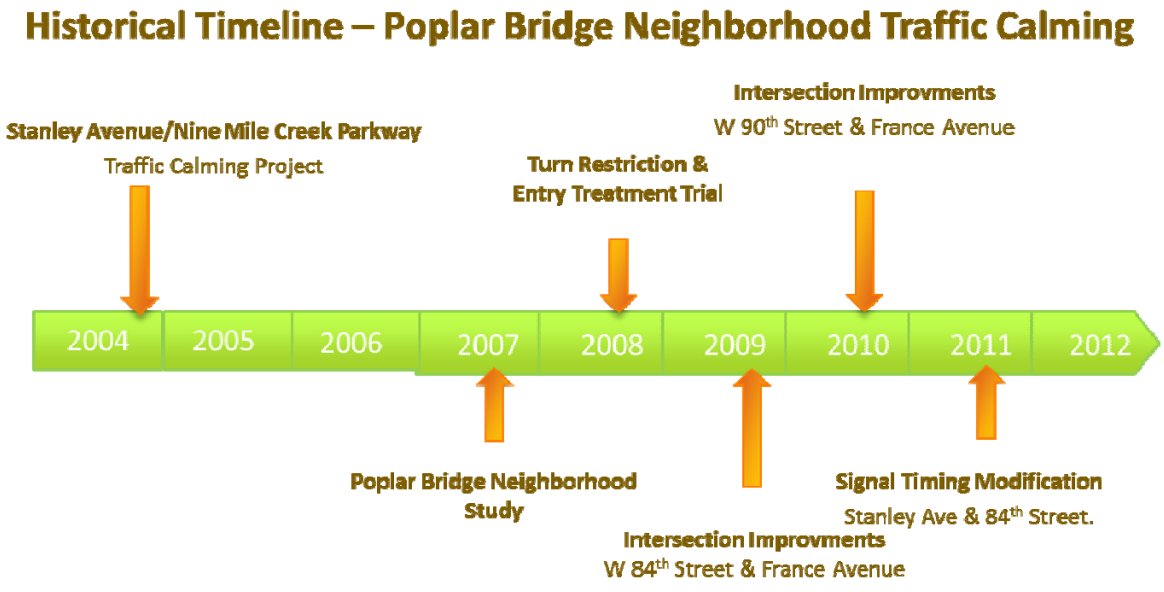
The recommendations from the Poplar Bridge Neighborhood Study to improve the intersection of 84th Street and France Avenue was designed and constructed. The Improvements to the intersection are:

- Modification of the west approach to provide an exclusive left-turn lane. The two existing eastbound through lanes would remain. However, the westbound through lanes departing from the intersection would be reduced from two lanes to one, widen again west of the intersection.
- Modification of the east approach to provide an exclusive left-turn lane. Installation of an exclusive right-turn lane.
- Upgrades to the traffic signal to remove the "split phasing" improving how the signal operates.

2010 – Intersection Improvements W 90th Street and France Avenue

The recommendations from the Poplar Bridge Neighborhood Study to improve the intersection of 90th Street and France Avenue was designed and constructed. The existing conditions showed a heavy westbound volume traveling through this intersection, continuing through the neighborhood during the morning peak hour. A reverse eastbound movement exists in the evening peak hour, to a lesser extent. The main purpose of the improvements is to narrow down the west approach of the intersection to be less inviting. In addition, it was important to make the W 90th Street to France Avenue route in the morning and the reverse route in the evening more attractive.

- Modified the west approach to provide a left-turn land and a shared through/right turn lane. The westbound through lanes departing from the intersection were reduced from two lanes to one.
- Modified the each approach to provide a left-turn lane, a through lane and an exclusive right-turn lane
- Adjusted signal timing to provide more green time to the north and south approaches, while increasing delay to the east and west approaches
- Added bicycle lanes through the east and west bound approaches



2012 – Neighborhood Diverter Trial (Cancelled)

- The next recommendations from the Poplar Bridge Neighborhood Study was to implement a series of traffic diverters within the Poplar Bridge Neighborhood. In the Fall of 2012 Staff proposed to do a trial of the traffic diverters. The plan called for closing Nine Mile Creek Parkway at Poplar Bridge Road and Oxborough Ave forcing all traffic on Nine Mile Creek Parkway to turn into the neighborhood. Other Diverters were to be located on Poplar Bridge Road adding further delay for commuter traffic. Neighborhood opposition to this trial and solution was considerable. **The City Council decided not to move forward with this trial and instead went with installation of permanent turn restrictions. (The same as the 2008 trial).**

Pros:

- *Eliminates travel on Nine Mile Creek Parkway*
- *Does not completely cut off resident access through the neighborhood*
- *Low Maintenance*
- *No active police enforcement needed*
- *Engineered to maintain emergency vehicle access*

Cons:

- *Will force both neighborhood and commuter traffic to surrounding roadways*
- *Will cause longer travel time for area residents*
- *Could cause confusion for visitors to the neighborhood*

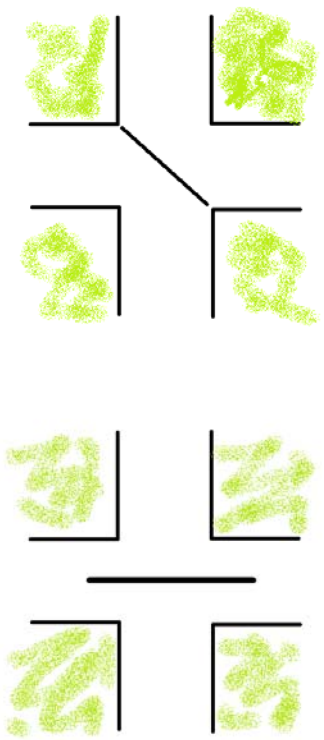
Final Design Cost – 50k to 100k

Curb, landscaping, driveway extension, emergency access control

Trial Feasibility: Yes

Multiple Diverters

The multiple diverters would be placed on Nine Mile Creek Parkway and on Poplar Bridge Road



DATA COLLECTION SYNOPSIS

Historical AADT Volumes for the Poplar Bridge Neighborhood

Street	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT	2007 AADT	2008 Trial	2011 AADT	2011 post timing	2012 ADDT
Stanley Ave		2,100			1900			1800	1300	1800	1700	2,100
Rich Ave	300				200			200	300	200	200	200
Quinn Ave	400				500			300	300	300	300	300
Morris Ave	500				300			300	300	300	300	300
Kell Ave								300	400	400		400
Nine Mile Creek Pkwy (W)					2100		1800	1900	1400	1800		1,800
Nine Mile Creek Pkwy (E)	1800							2100	1600	2000		2,100
Poplar Bridge Rd					400			300	300	300		300
Poplar Bridge Rd					1000			700	700	700		800
Poplar Bridge Rd								5200	6000	5000		6,200
W 90th St								6100	6000	6300		7,000
W 90th St		4700		4900	6400	6300		4700	5000	4800		5,300
W 91st St								100	100	100		100
W 92nd St					100		100	100	200	200		200
Palmer Ave	900							800	900	400		400
Harrison Ave								200	300			300
W 85th St								300	300			400
W 86th St								300	300			200
Toledo Rd								100	200			200
W 84th St		8800		8100		8000	7100	7400	8200	6,400	7,200	7,200
Little Rd												100
Morris Road		400						300	300	300		200
Poplar Bridge Curve												200
W 86th St												200
Oxborouhg Ave												200
Kell Ave												100

Historical Speed Data for Stanley Avenue and Nine Mile Creek Parkway

Street	2007		2008 Trial		2009		20011		2012	
	Avg Speed	85th % Speed	Avg Speed	85th % Speed	Avg Speed	85th % Speed	Avg Speed	85th % Speed	Avg Speed	85th % Speed
Stanley Ave	29.2	33.1	28.6	32.6	29.8		29.8	33.7	28.6	33.7
NMCP	32.3	35.8	32.4	36.2	37.9		37.9	42.7	32	35.2