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MEMORANDUM

Date: December 26, 2019

DRAFT

To: Zhanna Badasyan
Management Analyst
Village of Glenview

From: Thomas Adomshick, P.E., PTOE
President

Daniel H. Schoenberg, P.E.
Project Engineer

Re: Sunset Park Neighborhood
Traffic Calming Request
Glenview, Illinois
Job No. 1394.161

Late spring this year the Village of Glenview received several requests for traffic control measures within the Sunset Park Neighborhood located northwest of the intersection of East Lake Avenue and Sunset Ridge Road. The request is based on two concerns. First, speeds along the streets are perceived as too high. Second, there may be cut-through traffic between East Lake and Waukegan Road. The installation of various signs at neighborhood intersections was requested by residents. At the request of the Village, we have performed a review of past and newly collected traffic data to assess the need for traffic control and calming measures within the neighborhood.

Existing Conditions

The neighborhood under review consists of the street loop comprised of Huntington Drive, Plymouth Lane, Evergreen Terrace and London Lane, plus Pendleton Lane. All streets are 20 mph posted local residential streets. There are no posted intersection control signs at any of the internal street intersections.

The neighborhood is served by two full access connections to East Lake Avenue and one full access to Sunset Ridge Road, all of which are under Stop sign control on the approach to the external streets. Huntington Drive extends north to Topp Lane which has a full access to Waukegan Road with Stop sign control on Topp Lane. This large choice of access points diffuses traffic like an old-fashioned grid system of streets. Internal neighborhood traffic leaving to go north on Waukegan Road will likely do so via Huntington and Topp. Internal neighborhood traffic leaving to go west on East Lake or south on Waukegan will likely exit to East Lake via Huntington or Evergreen Terrace. Internal traffic leaving to go east on East Lake likely will prefer to turn right onto Sunset Ridge Road and then left at the traffic signal at East Lake.

No overall analysis of traffic volumes and their distribution within the neighborhood has been performed. There are about 105 single family residences south of Topp Lane within the neighborhood, not counting those dwellings with driveways directly on East Lake or Sunset Ridge Road. Based upon the latest of the Institute of Transportation Engineers Trip Generation Manual, one can expect these residences to generate about 500 trips in and 500 trips out of the study area

daily. Over the years, specific intersections were evaluated. These past “snap-shots” of traffic patterns allow some conclusions. They will be discussed below.

Historic Studies Data

In September 2012 a Stop sign warrant analyses was performed for the intersection of Pendleton Lane with Evergreen Terrace in accordance with the Stop sign installation warranting criteria contained in the Federal Highway Administration’s Manual on Uniform Traffic Control Devices (“MUTCD”). Vehicular volume and speed data was collected on each approach to the intersection and compared to the MUTCD warrants for installing stop signs. **These warrants were not met.**

In April 2016 a Stop sign warrant analyses was performed for the intersection of Pendleton Lane with Huntington Drive in accordance with the MUTCD. Vehicular volume and speed data was collected on each approach to the intersection for three weekdays when school was in session and compared to the MUTCD warrants for installing stop signs. **These warrants were not met.**

This May, the Glenview Police Department collected vehicular volume and speed data over 12 days on westbound Pendleton Drive. We understand that Glenview schools were in session during this period.

The only pavement link for which there is data in all three studies is westbound Pendleton Lane. The 2012 study counted 117 westbound vehicles/day. The 2019 study counted 117 westbound vehicles/day. **This constancy suggests no recent shift in overall traffic patterns.**

Prior studies over the past decade of other neighborhood streets in Glenview have shown that the 85th percentile speeds recorded in the Sunset Park Neighborhood are lower than is typical in Glenview residential neighborhoods.

Measures Identified by Residents

At a neighborhood meeting several traffic control measures were identified and requested by area residents. Some of these measures seek to discourage cut-through traffic through *access control*. Other measures address *speed*. After some general comments, this memo will discuss the identified measures individually.

Access control is a zero-sum exercise for internal traffic. If access is blocked for internal resident access, traffic volumes will decrease on some streets and rise on other streets. Too much restriction creates a hierarchy of streets for traffic. Today, the grid-like configuration diffuses traffic volumes as widely as possible.

In order to discourage cut-through traffic, one approach is to make local streets less attractive to through traffic. Another approach is to make the external streets more attractive. Today, there are times of the day when the Waukegan/East Lake intersection has long delays and queuing on the intersection approaches. During these times some drivers will leave the arterial streets and travel on local neighborhood streets to circumvent the congestion, especially westbound motorists wishing to travel north on Waukegan.

We understand that the Village is planning to improve the Waukegan/East Lake intersection to improve efficiency and reduce delays, and has been working to obtain funding for the intersection

improvement. Similar cut-through traffic in residential neighborhoods near the Greenwood Road/Glenview Road intersection was considerably reduced in 2011 when capacity improvements to the intersection were completed. Due to the resulting reduction in congestion and delay, the neighborhood streets became a less attractive route for motorists than external streets.

The following is a summary of the resident measures, and comments on impacts of such measures and recommendations.

1. **Install Gates (cut-through):** The purpose of gates would be to prevent cut-through traffic primarily between East Lake Avenue and Waukegan Road. We have no data on the amount of cut-through traffic passing through Sunset Park. Road closures such as gates affect existing traffic patterns and can relocate existing traffic elsewhere.
 - a. Placing a gate on one street such as Huntington north of East Lake may result in relocation of traffic to Evergreen or Pendleton
 - b. Gates hamper emergency vehicle access and complicate snow removal.
 - c. If gates are closed only some times of the day or week, advance warning of the times of operation are needed.
 - d. A permanent closure like a cul-de-sac is easier for visitors to understand and easier to snow plow, but traffic displacements and reduced emergency access are made permanent.

Gates should be discouraged due to the negative impacts to neighborhood circulation, emergency access and snow removal. **This technique is not recommended by the Traffic Consultant or by the Traffic Committee.**

2. **Pavement striping (cut-through):** There are existing double yellow centerline pavement markings on Huntington Drive from East Lake Avenue to Pendleton Lane. Residents ask if additional centerline pavement striping will affect traffic. Pavement striping by itself does not impact traffic volumes or speeds. Moreover, a double yellow centerline conveys a message that the marked pavement is a higher order street. **This technique is not recommended by the Traffic Consultant or by the Traffic Committee.**
3. **Peak hour turn restrictions from East Lake to the neighborhood (cut-through):** Signed right turn restrictions at Huntington and at Evergreen could reduce the number of cut-through trips on Huntington and Evergreen south of Pendleton, but may result in the re-routing of cut-through trips to Pendleton via Sunset Ridge Road. Residents traveling during the restricted periods will be inconvenienced by timed turn restrictions, and some may ignore the restrictions due to the inconvenience. Non-residents observing neighborhood residents violating the restrictions will be more likely to disregard the restrictions themselves. Turn restrictions and usually are not used due to inconvenience imposed on neighborhood residents. Turn restrictions require enforcement to be effective, increasing the burden of enforcing traffic regulations on the Police Department. **This technique is not recommended by the Traffic Consultant or by the Traffic Committee.**
4. **One way Streets (cut-through):** Typically one way streets are paired to maintain access options. If Huntington Drive between London Lane and East Lake Street becomes one-way north, then Evergreen between London Lane and East Lake should be one-way southbound. Pairing streets equalizes the volumes of the streets paired. If Huntington has more traffic than Evergreen today, a one-way pair would increase Evergreen traffic totals.

Implementation of one-way streets will increase travel distance for any resident on a one-way street. Driver will have to leave and return home from opposite directions which will increase travel distance each round trip. The Sunset Park neighborhood street layout does not lend itself to one-way operations. **This technique is not recommended by the Traffic Consultant or by the Traffic Committee.**

5. **Speed bumps (speed):** Speed bumps are abrupt bumps introduced into a roadway. While sometimes used in shopping center or private parking lots, they are not recommended for use on public streets. Speed bumps on public streets where speeds are higher than in most parking lots present safety issues for drivers of all vehicles including bicyclists, and can damage vehicles crossing at higher speeds. **We do not recommend use of speed bumps.**

Properly designed Speed humps are similar to but not as severe as speed bumps and can reduce speeds. The Village of Glenview Traffic Calming Pilot Project included a trial use of a Speed hump. The majority of neighborhood residents wanted it to be removed and stated that they disliked the speed hump due to discomfort when crossing and noise from vehicles crossing the hump. Speed humps also impact emergency response vehicles and snow plowing operations. The Village Board of Trustees determined that Speed humps are not an acceptable traffic calming measure and are not permitted on Glenview streets. **This technique is not recommended by the Traffic Consultant or by the Traffic Committee.**

6. **Stop signs (speed):** The addition of stop signs is determined by the criteria established in the MUTCD. The majority of the criteria are based upon traffic volumes and accident history. The volumes seen in recent analyses suggest the volume warrants will not be met. Stop signs do nothing to affect corridor speed. In fact the MUTCD prohibits the use of stop signs for speed control. Unwarranted stop signs don't work, are frequently violated, are detrimental to safety and can actually increase speeds between Stop signs as drivers accelerates to compensate for the time they lost by stopping. **This technique is not recommended by the Traffic Consultant or by the Traffic Committee.**

7. **Speed boards (speed):** Speed boards are electronic signs mounted on a post adjacent to a roadway. The signs provide positive feedback to drivers by displaying the speed a vehicle is traveling as it approaches the sign. The display flashes when drivers exceed the speed limit. Speed boards can result in some reductions in speed. Recorded speeds in the Sunset Park neighborhood are low compared to most Glenview neighborhoods that have been previously studied.

The use of a speed trailer on a temporary basis can also result in improved speed compliance, but speeds may creep back to current levels after removal. **We understand the periodic placement of a speed trailer in 2020 is being considered.**

8. **Selective enforcement (speed):** Police presence during select periods does improve speed limit compliance. However, the affect is not long-lasting and must be repeated from time to time. The recorded speeds in the neighborhood tend to be closer to the posted speed limit than several enforcement hot spot locations in Glenview, suggesting a lower priority for a limited asset. **We understand revolving enforcement may be considered.**
9. **Pavement narrowing (speed):** Narrowed pavement widths depress speeds in corridors. However, narrower pavements may adversely effect on-street parking. The existing pavement widths in Sunset Park are about 26 feet from back to back of curb (23 feet edge to edge of pavement). **This technique could be evaluated as part of a scheduled street reconstruction now tentatively scheduled 2025-2029, but may necessitate limiting parking to a single side.**

Findings and Conclusions

The neighborhood travel patterns appear well-established and constant. No additional traffic controls are warranted based upon speed or traffic volumes. The ability to travel to and from this neighborhood in many directions is a benefit to the residents. We see how outside motorists could use this access to cut through the neighborhood, but the bypass route is not obvious. A quantification of confirmed cut through trips has not been performed. Limiting outside access to the neighborhood inevitably displaces traffic patterns within the neighborhood. Some pavement links will see more traffic and others will see fewer trips. The distance taken by neighborhoods residents to enter or leave their homes could increase depending upon the limitation imposed.

The most effective means of reducing cut-through trips on neighborhood streets is to reduce congestion at the Waukegan/East Lake intersection improvements. This would encourage network motorists to stay on arterial streets without sacrificing internal access. This would be the most effective means of reducing cut through trips in the neighborhood.

We have found selective enforcement of the speed limit to be effective, but speeds sometimes creep back up after enforcement ceases. Enforcement that returns periodically can help extend the speed suppressing impact of enforcement. When the pavement is reconstructed in the future, there should be a neighborhood discussion of appropriate pavement widths.

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