

City of Rochester Hills
Department of Public Services
Traffic Engineering Division

**Traffic Study Summary
Thornridge Subdivision – Section 06**

September 21, 2021

CHARLWOOD & OLYMPIA DR TRAFFIC STUDY (Between Adams Rd & Tienken Rd)

Background

The Thornridge Homeowner's Association (HOA) requested the CITY to perform a traffic study along Olympia Dr and Charlwood Dr. Three (3) automatic traffic counters were placed during the week of September 6, 2021. The first was placed 375 feet south of Burhaven Dr, the second 450 feet west of Arbor Creek Dr, and the third 400 feet west of Whitehouse Ct.

The following is a summary of the crash, speed and traffic volume data:

Olympia Drive & Charlwood Dr – Speed and Volume Data

The speed limit for Olympia Dr and Charlwood Dr is signed and posted for residential prima facie speed limit of 25 MPH. All three (3) speed studies were conducted during the week of September 6, 2021 from Wednesday through Thursday during dry weather conditions, and while school was in session.

The results of the speed studies are as follows for the 2021 & 2013 Study:

2021 Results:

Speed Study #1: 375 feet South of Burhaven Dr – Count ID: #1601

Average Speed = 24 MPH

85th % Speed = 29 MPH (SB = 29 MPH, NB = 30 MPH)

Annual Average Daily Traffic (AADT) = 933 Vehicles Per Day (VPD) (NB = 496, SB = 437)

Speed Study #2: 450 feet West of Arbor Creek Dr – Count ID: #1602

Average Speed = 21 MPH

85th % Speed = 26 MPH

AADT = 735 VPD (EB = 397, WB = 338)

Speed Study #3: 400 feet West of Whitehouse Ct – Count ID: #1603

Average Speed = 25 MPH

85th % Speed = 29 MPH (EB = 30 MPH, WB = 29)

AADT = 1333 VPD (EB = 728 VPD, WB = 605 VPD)

2013 Results:

Speed Study Results #1: Olympia Dr – 375 feet South of Burhaven:

Average Speed = 23 MPH

85th % Speed = 30 MPH (SB=30 MPH, NB=31 MPH)

AADT = 1023 VPD (SB=530, NB=491)

Speed Study Results #2: Charlwood Dr – 450 feet West of Arbor Creek:

Average Speed = 20 MPH

85th % Speed = 29 MPH (EB=27 MPH, WB=30 MPH)

AADT = 804 VPD (EB=382, WB=421)

Speed Study Results #3: Charlwood Dr – 400 feet West of Whitehouse Ct:

Average Speed = 24 MPH

85th % Speed = **31 MPH** (EB=32 MPH, WB=30 MPH)

AADT = 1,288 VPD (EB=639, WB=650)

*Annual Average Daily Traffic (AADT)

**Vehicles Per Day (VPD)

A potential speeding concern exists when the 85th percentile speed is 31 MPH or greater. As depicted above, the 2021 Thornridge subdivision speed study didn't record any that were 31 MPH or greater. In comparison, the 2013 #3 study was recorded at 31 & 32 MPH, which represents a reduction in speed since the initial study.

City residential streets having a chronic speeding issue usually have average speeds of 27 MPH and 85th percentile speeds at 31 MPH or greater. The highest speeds are typically during the morning peaks hour periods from 7-8 AM & 4:30-5:30 PM afternoon. Both Olympia Dr & Charlwood Dr are considered collector roadway's, which carry higher traffic volumes (over 1000 ADT) than that of a local street.

Crash History Data Summary

Transportation Improvement Association (TIA) crash data report attached.

- 2017 – 1 (Failed to yield)
- 2018 – 1 (Snow & parked vehicle)
- 2018 – 1 (Failed to yield)
- 2019 – 1 (Wet & parked vehicle)
- 2020 – 1 (Parked vehicle)

A traffic crash concern may exist if there are three (3) or more crashes at a spot location within a 12-month period, or if there are five (5) or more crashes within a two (2) year period. Weather related and parked vehicle crashes do not contribute to this total, as they are the result of improper backing, or in

collision with a stationary object such as a signpost, or mailbox. In addition, the recorded crashes did not result in a known injury. Based upon the traffic crash data, there is nothing that would suggest a need for additional or modified signage.

Conclusion / Recommendations

At this time, Olympia and Charwood Dr do not meet the minimum threshold to have speed humps installed. The results of this study are valid for three (3) years prior to another requested study being conducted. Alternate measures that may be taken include sending HOA notifications to residents reminding them to be mindful of their speeds and requesting a speed cart be placed by the Oakland County Sheriff's Office (OCSO).

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