

Memo

To: City of Marysville
From: Land Development Consultants, LLC
CC:
Date: March 25, 2022
Re: Marysville 10 Degrees (PA 21-039) Intersection Spacing Analysis

Following are the findings in our review of the Marysville 10 degrees project in association with proposed intersection spacing designed at less than 150' and how traffic operations in these areas might be affected. Refer to the summary below for an analysis of how each proposed intersection with less than 150' spacing will function with expected traffic flows from the developed site.

Proposed Traffic Circulation

With the exception of proposed Drive C, access to all proposed lots/units can be accessed by at least 2 different traffic routes throughout the internal road network proposed for the site. As such, any minor traffic operations through the site accessing each lot can be mitigated by future homeowner's using less impactful routes without significantly increasing travel distances. Additionally, the majority of the intersections with less than 150' spacing are primarily limited to alley access roads adjacent to new internal plat road with the individual alley access generally only serving about 100 to 270 ADT worth of trips. Refer to the analysis below for expected traffic operations at each proposed intersection designed with less than 150' spacing.

Road/Drive Aisle Intersections

Ingress and egress in each of the following intersections is forecasted to consist of access to/from 19th Ave NE.

Access to and from Drive A

Though Drive A has less than a 150' spacing from Road F, all traffic to/from Drive A is expected to be limited to the south of Drive A most likely coming off of Road E. In addition, very minimum traffic on Road G or E from Road F is expected resulting in little to no concerns regarding traffic operations adjacent to Drive A connections to Road E and G. Note that the majority of traffic entering the site from 19th Ave NE is expected to enter the site from the most northerly access point proposed off of 19th Ave NE.

Access to and from Drive D

Drive D is current designed with a 132' intersection spacing from Road B at it's west end and 90.98' spacing from its east end. Due to the majority of access to Drive D expected to come up Road E, Left turn queuing issues to enter into Drive D is not expected. Additionally, with minimal traffic expected on Road E, left turns to Road E from Drive D are not expected to cause significant traffic issues. Any access to and from Drive D from Road G is expected to be minor and most likely only consist of use by 3 or 4 lots. Note that the majority of traffic entering the site from 19th Ave NE is expected to enter the site from the most northerly access point proposed off of 19th Ave NE.

Road B, D, E and G intersection

Road D is current designed with less than a 150' intersection spacing from Road E and Road D. Though this may be the case, traffic flows and turning near these intersections will be less than typical due to internal plat roads looping through the site as opposed to thru streets that navigate traffic in and out of the development. Cars entering the site from 19th Ave on Road B will either be turning left on to Road E, right on Road D, left on to Road G or continuing straight on Road B. Any left turns on to Road E from Road B will be clearly see from Road D traffic so left turn crossings do not appear to be an issue. There is a potential for left turns onto Road G from Road B that could result in backing up traffic on Road B blocking the Road D intersection but is highly unlikely due to the minimal amount of units being access from Road G. Left turn queuing on Road B traveling west bound is not expected due to there not being much need to turn left onto Road D from Road B. Traffic from Road D, E and G are not expected to frequently turn east onto Road B also limiting traffic issues and concerns.

Access to and from Drive E

Drive E is current designed with less than a 150' spacing from Road G and D. Traffic to Drive E is expected to be right turns into Drive E from Road B and left turns into Drive E from Road H. Right turns into Drive E from Road B are not expected to cause any traffic issues. Left turns into Drive E from Road H could be impacted by cars queuing up on Road H trying to turn on to Road D but is not expected due to the minimal amount of traffic expected to be headed west bound on Road H. Traffic concerns for left turns from Drive E onto Road B are not expected due to a vary low frequency of cars expected to turn right from Road D onto Road B. Additionally, Cars leaving Drive E will be closely aligned with Cars turning right from Road G resulting in clear sight between cars entering roadway. Cars leaving Drive E onto Road H will generally be turning right resulting in little to no traffic concerns near the intersection of Road H and Road D.

Access to and from Drive I

Drive E is current designed with less than a 150' spacing from Road C. The majority of traffic entering onto Drive I from the south end is expected to mainly come from Road C and not Road H. As such, left turns into Drive I are not expected to back up and block left hand turns onto Road C from Road H. Left hand turns from Drive I onto Road H are not expected as it's the longest route to leave the site. No other intersection or left turn concerns are aware of.

Access to and from Drive J

Though Drive J has less than a 150' spacing from Road I, all traffic to/from Drive J is expected to be limited coming/going west of Drive J off of Road B and H. Left turns into Drive J from Road H and left turns from Drive J to Road B are not expected to cause traffic issues since turns onto Road H from Road I will be very limited an infrequent. Any right turns into and out of Drive J are not expected to cause any issues with surrounding streets.

Access to and from Drive L

Drive L is current designed with less than a 150' spacing from Road H. The majority of traffic entering onto Drive L is expected to be left turns from Road C, right turns from Road D and left turns from Road D. Left turns into Drive L and not expected to be an issue due to the limited amount of traffic that will be turning onto Road C from Road H. Left turns onto Drive L from Road D could potentially back up traffic on Road D blocking the Road D/H intersection but is not likely to be very frequent due to the minimal amount of traffic using Drive L and dual access being available for Drive L. Cars exiting from Drive L are expected to turn left and right onto Road D and primarily turn right onto Road C. Cars turning right on to Road C do not appear to be an issue due to limited traffic expected from Road H turning onto Road C. Cars turning right onto Road D could potentially affect cars turning left from Road H but it is not expected to be very frequent. Additionally, Road H and Drive L are expected to more of controlled intersections so Cars leaving Road H or Drive L entering onto Road D are expected to be slow moving. Cars turning left on to Road D from Drive L do not appear to have any negative impact on surrounding traffic or intersections.

Access to and from Drive O

Drive O is located slightly less than 150' from Road D and only provides access to 3 units. Due to the minimum number of units and a high likelihood of Cars more turning left down Road D and right onto Drive O, as opposed to turning left onto Drive O from Road C, intersection spacing and traffic operations adjacent to the Drive O/Road C intersection is not expected.

Access to and from Drive P

Drive P is located less than 150' from Road D. Traffic to and from Drive P is mainly expected to mainly be from the Southerly site entrance off of 19th Ave. As such, access onto Drive P is expected to mainly be right turns from Road C. Traffic leaving Drive P is mainly expected to turn left onto Road C. Left turns from Drive P are not expected to impact right turns from Road D onto Road C due to limited traffic from Drive L and clear sight distance being available from both cars entering on to Road C from Road D and Drive P. No other intersection or left turn concerns are aware of.

Summary

Though some designed intersections for the project result in less than 150' spacing to other intersections, we do not believe they are of a great concern to future traffic operations due to the minimal amount of traffic being expected near most of these intersections along with the fact that generally there are at least two different and reasonable vehicle paths to each lot more likely resulting in future homeowner's altering their routes to and from their homes based on routes of least resistance. Please use this letter in conjunction with the 1st Preliminary Plat Review Comment Response letter. Let me know if there's any questions regarding this analysis.

Sincerely,

LDC, Inc.

Jesse Jarrell

Jesse Jarrell, PE
Project Manager
HQ Office