TATHAM ENGINEERING

645 Veterans Drive, Unit D
Barrie, Ontario L4N 9H8

**T** 705-733-9037
**E** info@tathameng.com
**tathameng.com**

File 422480

November 28, 2025

Eric Challenger
37 Northeys Bay Road
Woodview, Ontario K0L 3E0

Re: Woodview Golf Subdivision, Township of North Kawartha
Transportation Impact Study - Response to Peer Review Comments

Dear Eric:

We have prepared this letter in response to comments received from the County of Peterborough (correspondence dated September 24, 2025 as prepared by the County's peer reviewer, Stantec Consulting Ltd.) with respect to their review of the *Woodview Golf Subdivision Transportation Impact Study*. Our responses to the peer reviewer's comments are set out in this letter. For ease of reference, the peer review reference number and comments have been included below.

## GENERAL COMMENTS

**Comment #1***: As the TIS was prepared in 2023, the horizon years should be updated to reflect applicable scenarios in 2025. The full build-out year was assumed to be 2025; this along with existing, +5, and +10 year horizons should be revised accordingly.*

**Tatham Response:** Given the relatively low traffic volumes on the road network and the limited year over year growth anticipated for the area and further noting that the operations assessment indicates excellent operations through the 2035 horizon, updating the TIS to adjust the study horizons by 2 years will have no impact on the findings of the TIS. Nonetheless, to illustrate that the road network operations will not be impacted, the critical horizon (2035 total traffic) has been updated to reflect 2037 conditions. The resulting analysis is presented in response to Comment #6 below, and considers other volume adjustments requested by the peer reviewer.

**Comment #2:** *A default Peak Hour Factor (PHF) value of 0.92 was used in operational analyses. We recommend calculating and utilizing existing PHF values for available turning movements. Use of PHF = 0.92 for future movements is acceptable.*

**Tatham Response:** The intersection PHF has been updated to reflect the values calculated from the traffic counts (0.96 during the AM peak hour and 0.83 during the PM peak hour). The intersection assessment considered in response to Comment #6 reflects the revised PHF values.

### SECTION 2.1.1 – ROAD SECTIONS

**Comment #3:** *The study assumes planning capacity of 750 vphpl for Northeys Bay Road and 1,000 for Highway 28. It is unclear how these capacity values were applied in subsequent sections. Clarification is requested.*

**Tatham Response:** The capacity values were presented in the report for information purposes and simply demonstrate the typical lane capacity of the adjacent road network in comparison to the actual peak hour volumes on the road network. Having said that, the assessment of the road network focused on the intersection operations, recognizing that the intersections reflect the pinch points in the network.

### SECTION 2.2 – TRAFFIC VOLUMES

**Comment #4:** *Turning movement counts were collected on Tuesday, September 20, 2022. Review of Highway 28 AADT and SADT volumes (Table 2) indicates that summer traffic volumes are considerably higher than average (AADT is 27% to 47% lower than SADT). Please provide justification for using September data or adjust the collected volumes to account for seasonal variation.*

**Tatham Response:** While we acknowledge that there will be seasonal variations the provincial highway network, such variations in daily volumes do not necessarily correspond to an equivalent increase in the peak hour traffic. Summer volumes may be greater over the course of the day but with less commuter traffic and no school related traffic on the network, the peak hours may not experience the same increased. It is further noted that seasonal variations on the local road network are less pronounced than on the provincial highway system. Seasonal data for Northeys Road for the year 2021 (as provided by the County) suggests a variation of 16% or less as compared to the nearly 50% observed on Highway 28. Given the relatively low volumes on Northeys Bay Road, an increase of 15% will result in a nominal increase that will have no material impact on the operations of the road network.

Notwithstanding the above, a seasonal factor of 1.5 has been applied to the volumes on the road network to consider the potential impact of seasonal fluctuations. The intersection assessment provided in response to Comment #6 consider the seasonal adjustment.

**Comment #5:** *As the turning movement counts are over three years old, we recommend conducting a new set of counts.*

**Tatham Response:** While we acknowledge that traffic data should typically be no older than 2 to 3 years, data recency is more critical in areas that experience high year over year growth or are subject to significant development growth in the immediate area. This is not the case for the study area. Historical volume data for Highway 28 indicates nominal year over year growth in AADT (less than 1% per annum), with SADT volumes actually indicating negative growth. Furthermore, the Township's Official Plan projects minimal population growth through 2051 (0.8% per annum). The TIS applied a conservative background growth rate of 2% per annum, which outstrips historical and projected growth. The collection

of new traffic data will not impact the findings of the TIS which, as noted, considered a conservative approach with respect to growth. In this respect, new traffic counts are not considered necessary.

### SECTION 4.4.2 – TRIP GENERATION

**Comment #6:** *The trip generation rates reported for ITE LUC 210 – Single Family Detached Housing are incorrect. The rates used appear to be from ITE LUC 215 – Single-Family Attached Housing, which are lower than appropriate. All content and analysis for the proposed site and future scenarios should be updated accordingly.*

**Tatham Response:** The trip generation rates and resulting trip estimates have been updated to reflect the single-family detached land-use (ITE LUC 210). The updated trip rates and trip estimates are presented in Table 1.

**Table 1: Trip Generation – Single-Family Detached Units**

| TRIP RATES | VARIABLE/ ESTIMATE | WEEKDAY AM PEAK HOUR | | | WEEKDAY PM PEAK HOUR | | |
|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total |
| single-family detached (ITE 210) | unit | 0.18 | 0.53 | 0.71 | 0.59 | 0.35 | 0.94 |
| | 58 units | 10 | 31 | 41 | 34 | 20 | 55 |

The updated site traffic assigned to the road network is illustrated in Figure 1, including the trips associated with the commercial uses which remain unchanged from that considered in the TIS.

Figure 2 illustrates the traffic volumes for the ultimate horizon, adjusted to reflect the various peer review comments noted above. Namely, the volumes in Figure 2 reflect the following:

- Comment #1 – 2-year adjustment to consider 2037 conditions;
- Comment #4 – seasonal adjustment factor of 1.5; and
- Comment #8 – revised trip generation estimates for the residential units.

The site access and intersection operations were re-assessed to consider the revised traffic volumes, in addition to the revised Peak Hour Factor (as per Comment #2). The results of the re-assessment are presented in Table 2, with detailed worksheets provided in Appendix A.

As indicated, the study area intersection is expected to provide good operations (LOS C or better) through the 2037 horizon based on the revised total volumes. The proposed site access is expected to provide excellent operations (LOS A). As such, the findings contained in the TIS remain valid.

**Table 2: Intersection Operations - 2037 Total Conditions**

| INTERSECTION, CONTROL & MOVEMENT | | | WEEKDAY AM PEAK HOUR | | | WEEKDAY PM PEAK HOUR | | |
|---|---|---|---|---|---|---|---|---|
| | | | Delay | LOS | V/C | Delay | LOS | V/C |
| Highway 28 & Northeys Bay Road | free | WB L | 8 | A | 0.01 | 9 | A | 0.01 |
| | stop | NB LR | 15 | B | 0.24 | 25 | C | 0.49 |
| Northeys Bay Road & Site Access | stop | WB LR | 9 | A | 0.04 | 9 | A | 0.06 |
| | free | SB LT | 2 | A | 0.02 | 3 | A | 0.04 |

L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right

## SECTION 5.3 – TURN LANE REQUIREMENT

**Comment #7:** *Turn lane requirements should be updated based on revised horizon years, updated trip generation calculations, and adjusted turning movement volumes to reflect potential summer traffic increases.*

**Tatham Response:** The revised left turn monographs are provided in Appendix B and are reflective of 2037 total traffic conditions volumes considered herein. As noted, a left turn lane on Northeys Bay Road at the site access is not warranted. Nor is a northbound right turn lane warranted given the limited volume of right turning traffic accessing the site.

**Comment #8:** *Left and right turn lane requirements should also be provided for the intersection of Highway 28 and Northeys Bay Road.*

**Tatham Response:** Exclusive turning lanes are already provided on Highway 28 at its intersection with Northeys Bay Road. No comments regarding the intersection have been received from MTO to date (recognizing that the intersection is an MTO intersection and under their jurisdiction).

## SECTION 5.4 – SIGHT LINE ANALYSIS

**Comment #9:** *Please provide further information on how the available sight distances in Table 11 were calculated. Given the vertical alignment of the road and a review of the site access location via Google Street View, the available sight line may be less than 120 meters reported.*

**Tatham Response:** The original sight distances were measured and photographed in the field in accordance with *Schedule "A"* of *By-Law 2024-25* (2012-26 previously*)* and therefore provide a more accurate representation than Google Street View. Regardless, a supplementary site visit was conducted to re-affirm the available sight distances along Northeys Bay Road at the site access. The sight distances

were assessed in accordance with *By-law 2024-25*. For a posted speed limit of 60 km/h, the required minimum sight distance is 130 m.

Based on the field assessment, the available sight distance to/from the north is 137 metres; whereas the sight lines to/from the south are approximately 136 metres. Photographs from the field visit are provided in Figure 3.

Based on the field measurements, the sight lines at the proposed access are appropriate, satisfying the County's sight distance requirements in all instances.

## CLOSING

We trust that the above adequately addresses the peer review comments. Should you have any questions or comments regarding the responses above, please do not hesitate to contact us.

Yours truly,
**Tatham Engineering Limited**

Karolina Kukielka C.E.T., EIT, rcsi
Engineering Intern

David Perks M.Sc., PTP
Transportation Planner

KK/DP: dp

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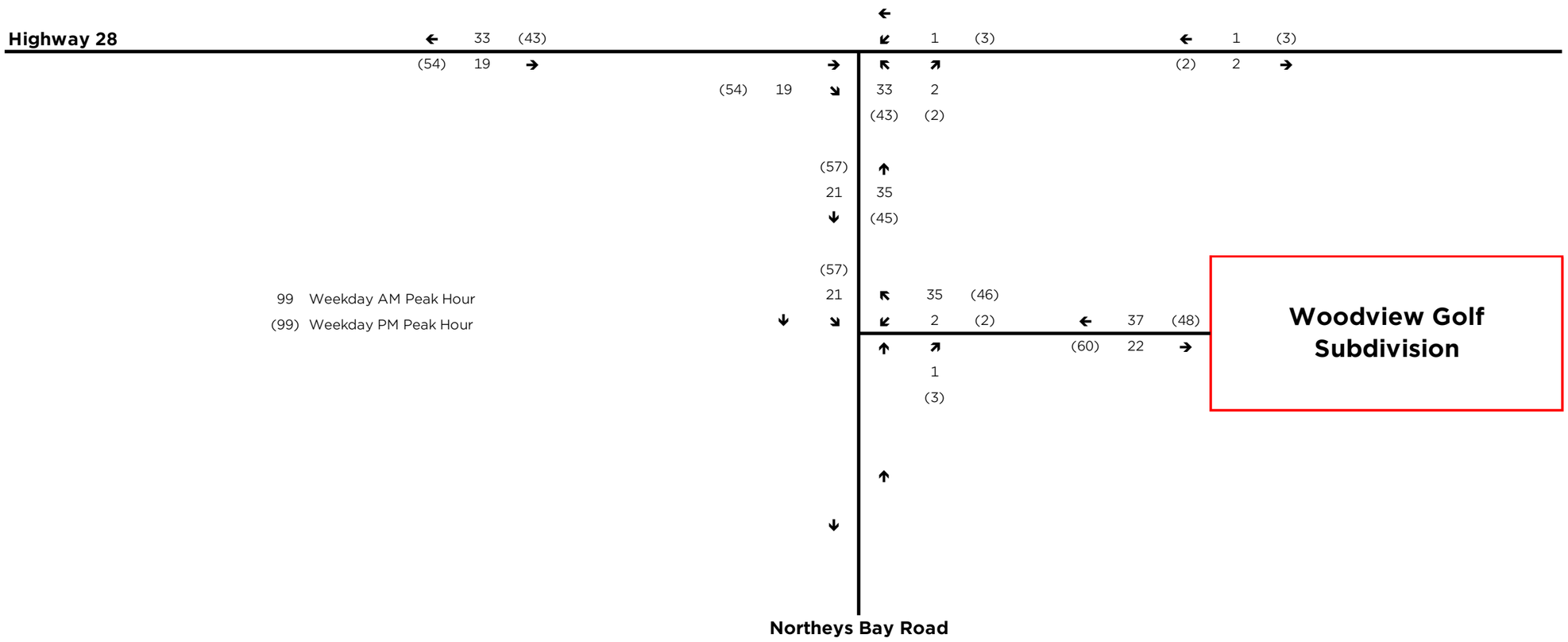
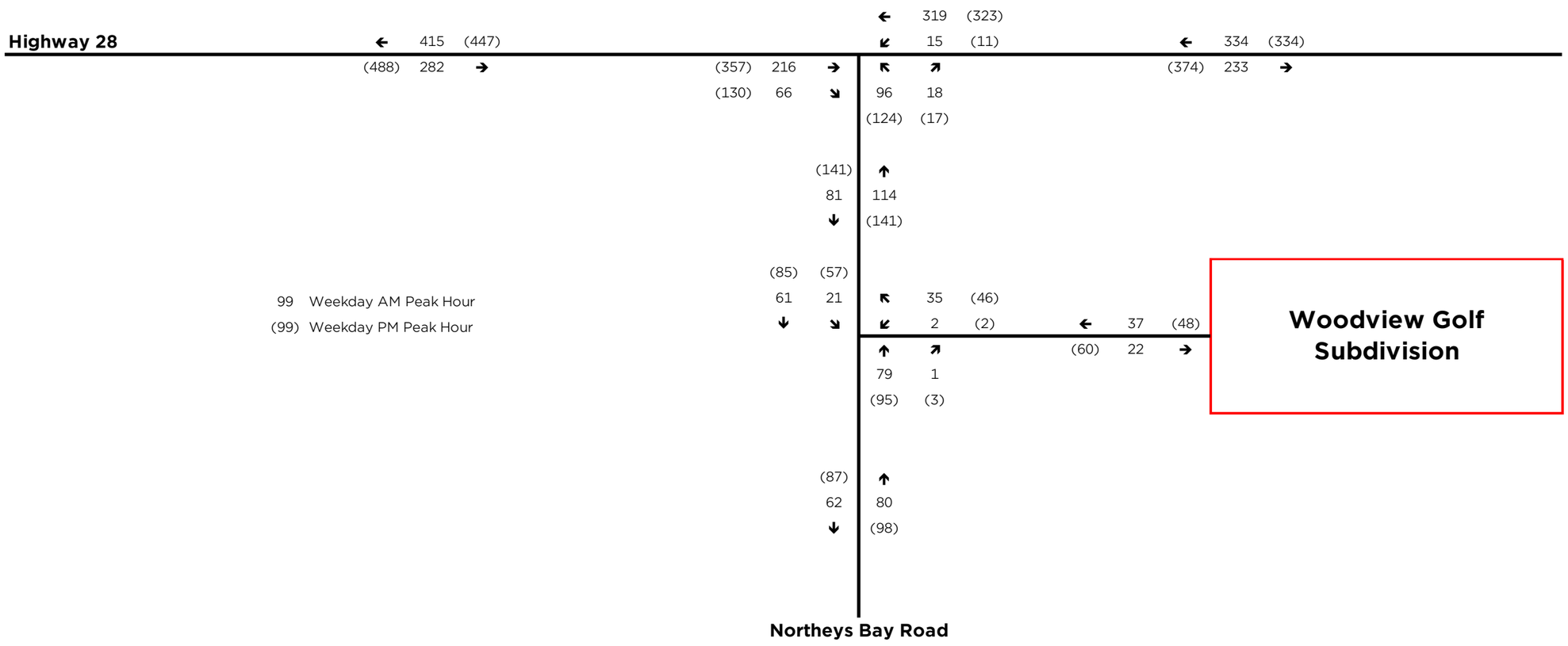



**WOODVIEW GOLF SUBDIVISION**

Figure 1: Traffic Volumes - Site




**WOODVIEW GOLF SUBDIVISION**

Figure 2: Traffic Volumes – 2037 Total


Looking north along Northeys Bay Road from site access

Looking south along Northeys Bay Road from site access

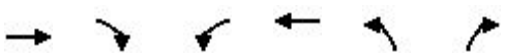

Looking south along Northeys Bay Road towards site access


Looking north along Northeys Bay Road towards site access

**WOODVIEW GOLF SUBDIVISION**

**Figure 3: Available Sightlines**

## APPENDIX A: TRAFFIC OPERATIONS – 2037 TOTAL



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 216 | 66 | 15 | 319 | 96 | 18 |
| Future Volume (Veh/h) | 216 | 66 | 15 | 319 | 96 | 18 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Hourly flow rate (vph) | 225 | 69 | 16 | 332 | 100 | 19 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 294 | | 589 | 225 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 294 | | 589 | 225 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 78 | 98 |
| cM capacity (veh/h) | | | 1268 | | 465 | 814 |

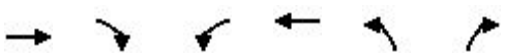
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 |
|---|---|---|---|---|---|
| Volume Total | 225 | 69 | 16 | 332 | 119 |
| Volume Left | 0 | 0 | 16 | 0 | 100 |
| Volume Right | 0 | 69 | 0 | 0 | 19 |
| cSH | 1700 | 1700 | 1268 | 1700 | 499 |
| Volume to Capacity | 0.13 | 0.04 | 0.01 | 0.20 | 0.24 |
| Queue Length 95th (m) | 0.0 | 0.0 | 0.3 | 0.0 | 7.0 |
| Control Delay (s) | 0.0 | 0.0 | 7.9 | 0.0 | 14.5 |
| Lane LOS | | | A | | B |
| Approach Delay (s) | 0.0 | | 0.4 | | 14.5 |
| Approach LOS | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.4 | | |
| Intersection Capacity Utilization | 29.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 2 | 35 | 79 | 1 | 21 | 61 |
| Future Volume (Veh/h) | 2 | 35 | 79 | 1 | 21 | 61 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 2 | 38 | 86 | 1 | 23 | 66 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 198 | 86 | | | 87 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 198 | 86 | | | 87 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 100 | 96 | | | 98 | |
| cM capacity (veh/h) | 778 | 972 | | | 1509 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 40 | 87 | 89 |
| Volume Left | 2 | 0 | 23 |
| Volume Right | 38 | 1 | 0 |
| cSH | 960 | 1700 | 1509 |
| Volume to Capacity | 0.04 | 0.05 | 0.02 |
| Queue Length 95th (m) | 1.0 | 0.0 | 0.4 |
| Control Delay (s) | 8.9 | 0.0 | 2.0 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.9 | 0.0 | 2.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.5 | | |
| Intersection Capacity Utilization | 21.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 357 | 130 | 11 | 323 | 124 | 17 |
| Future Volume (Veh/h) | 357 | 130 | 11 | 323 | 124 | 17 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Hourly flow rate (vph) | 430 | 157 | 13 | 389 | 149 | 20 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 587 | | 845 | 430 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 587 | | 845 | 430 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 55 | 97 |
| cM capacity (veh/h) | | | 988 | | 329 | 625 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 |
|---|---|---|---|---|---|
| Volume Total | 430 | 157 | 13 | 389 | 169 |
| Volume Left | 0 | 0 | 13 | 0 | 149 |
| Volume Right | 0 | 157 | 0 | 0 | 20 |
| cSH | 1700 | 1700 | 988 | 1700 | 348 |
| Volume to Capacity | 0.25 | 0.09 | 0.01 | 0.23 | 0.49 |
| Queue Length 95th (m) | 0.0 | 0.0 | 0.3 | 0.0 | 19.3 |
| Control Delay (s) | 0.0 | 0.0 | 8.7 | 0.0 | 24.7 |
| Lane LOS | | | A | | C |
| Approach Delay (s) | 0.0 | | 0.3 | | 24.7 |
| Approach LOS | | | | | C |

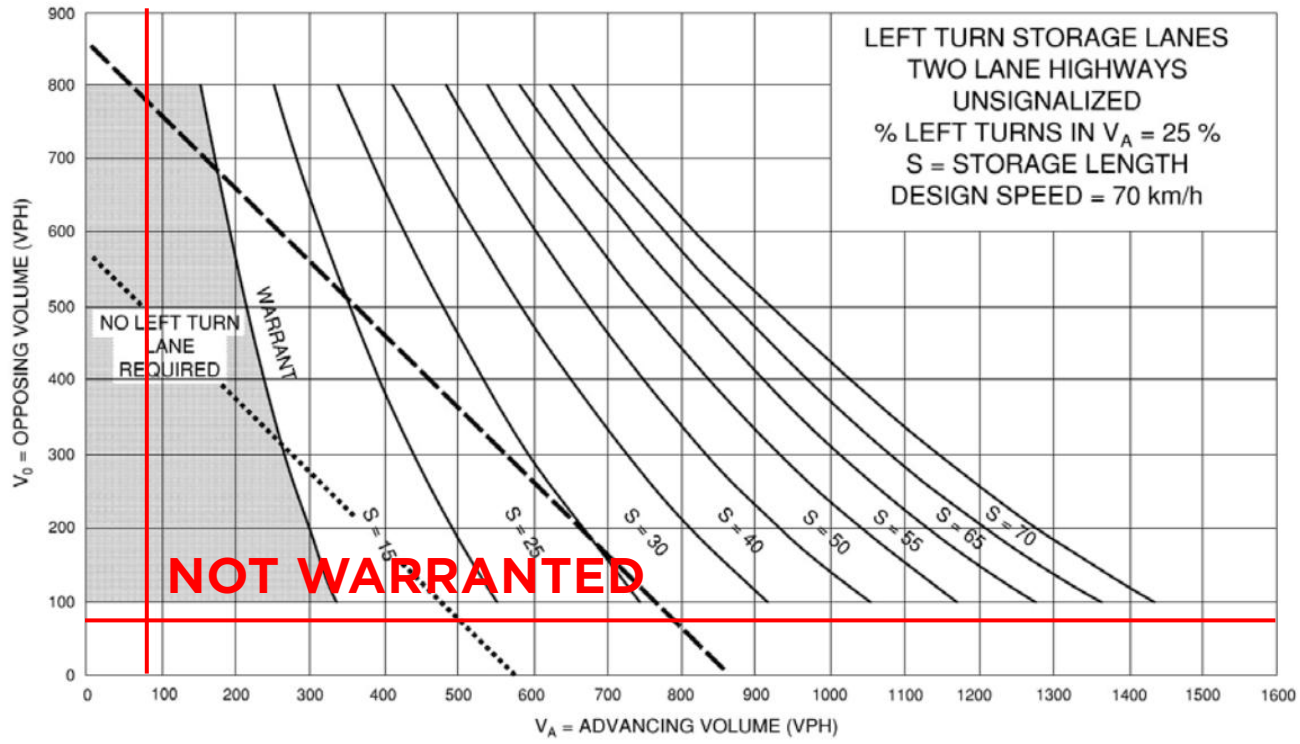
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.7 | | |
| Intersection Capacity Utilization | 33.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 2 | 46 | 95 | 3 | 57 | 85 |
| Future Volume (Veh/h) | 2 | 46 | 95 | 3 | 57 | 85 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 2 | 50 | 103 | 3 | 62 | 92 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 320 | 104 | | | 106 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 320 | 104 | | | 106 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 100 | 95 | | | 96 | |
| cM capacity (veh/h) | 645 | 950 | | | 1485 | |

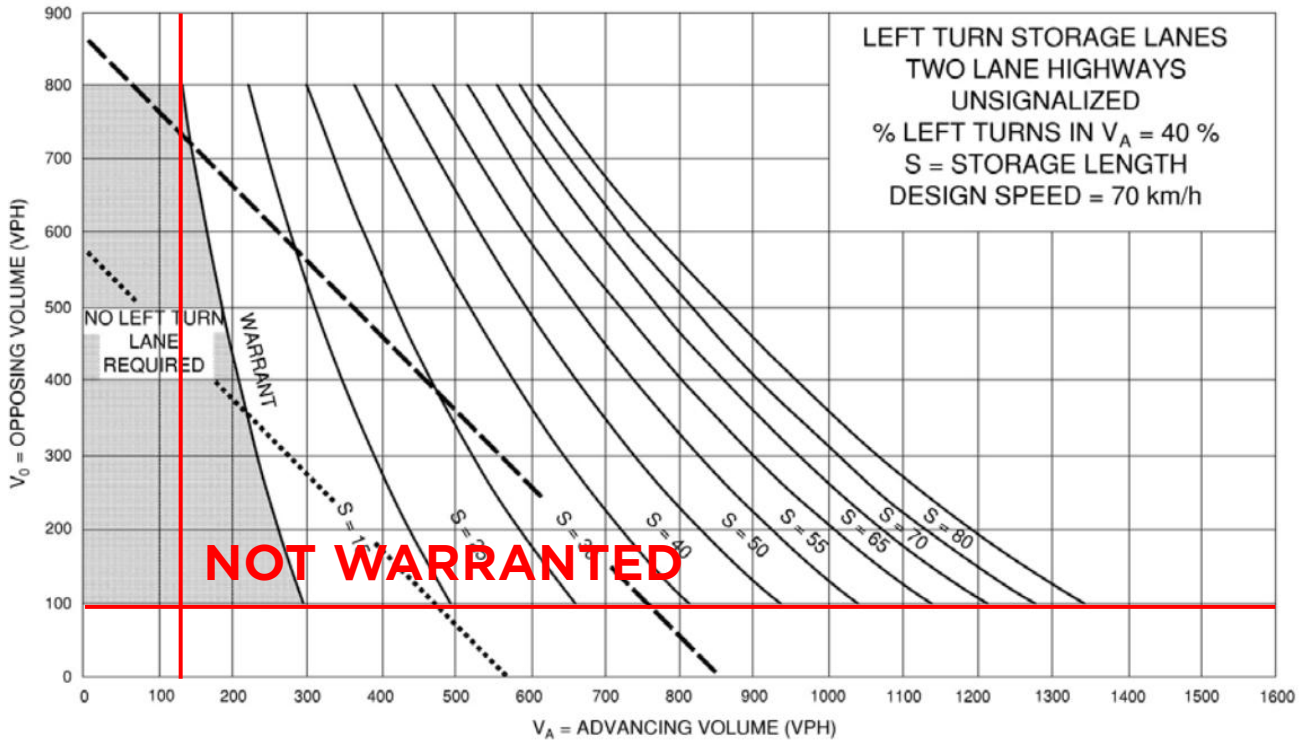
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 52 | 106 | 154 |
| Volume Left | 2 | 0 | 62 |
| Volume Right | 50 | 3 | 0 |
| cSH | 933 | 1700 | 1485 |
| Volume to Capacity | 0.06 | 0.06 | 0.04 |
| Queue Length 95th (m) | 1.3 | 0.0 | 1.0 |
| Control Delay (s) | 9.1 | 0.0 | 3.2 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.1 | 0.0 | 3.2 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 3.1 | |
| Intersection Capacity Utilization | | 24.3% | ICU Level of Service A |
| Analysis Period (min) | | 15 | |

## APPENDIX B: LEFT TURN NOMOGRAPHS




2037 Total Traffic – AM Peak Hour




2037 Total Traffic – PM Peak Hour