

2026-04-02
Project: 260164

Hallman Construction Limited and Brian Domm
c/o Dave Aston
MHBC Planning Limited
540 Bingemans Centre Drive, Suite 200
Kitchener ON N2B 3X9

Dear Mr. Aston:

**RE: WESTWOOD VILLAGE PHASE 2, TOWNSHIP OF NORTH DUMFRIES
TRANSPORTATION IMPACT STUDY ADDENDUM**

Paradigm Transportation Solutions Limited previously completed a Transportation Impact Study¹ in April 2021 for the proposed development located west of the Westwood Village (Phase 1) Community in the Township of North Dumfries, Region of Waterloo. Since the previous study, the development concept has been updated to reflect a new unit count. The purpose of the following letter is to determine whether the conclusions and recommendations from the April 2021 TIS remain valid with the latest development concept.

Development Concept

The April 2021 TIS featured a development concept consisting of up to 382 single-family units and 274 townhouse units for a total of 656 units.

The latest concept shows a higher density consisting of up to 300 single-family units, 319 townhouse units and 240 multiple residential units for a total of up to 859 units. Compared to the previous concept, the latest concept shows an increase of 203 units.

Vehicular access is proposed via Newman Drive which remains unchanged from the previous plan.

Figure 1 illustrates the updated Draft Plan of Subdivision.

¹ Paradigm Transportation Solutions Limited, *Westwood Village Phase 2 Transportation Impact Study*, April 2021.

Trip Generation and Distribution

The April 2021 TIS estimated the trip generation of the proposed development using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition² and Land Use Codes (LUCs) 210 (Single-Family Detached Housing) and 220 (Multifamily Housing (Low-Rise)). The study concluded that the proposed development was forecast to generate up to 361 AM peak hour trips and 462 PM peak hour trips.

The peak hour trip generation forecasts have been updated using the 12th edition of the ITE Trip Generation Manual³ and the same LUCs as the previous study with the addition of LUC 215 (Single-Family Attached Housing) which was not available during the writing of the April 2021 TIS.

A mode share reduction of 10% has also been applied to the trip generation estimates to be consistent with the previous study.

Compared to the April 2021 TIS, the trip generation for the latest Draft Plan will be higher by 68 trips in the AM peak hour and by 43 trips in the PM peak hour.

Table 1 summarizes the forecast number of net new trips generated by the proposed development.

TABLE 1: TRIP GENERATION

| Land Use | Number of Units | AM Peak Hour | | | PM Peak Hour | | | | |
|--|-----------------|------------------|------------|------------|--------------|------------------|------------|------------|------------|
| | | Rate | In | Out | Total | Rate | In | Out | Total |
| LUC 210 - Single-Family Detached Housing | 300 | Eqn ¹ | 56 | 151 | 207 | Eqn ¹ | 164 | 100 | 264 |
| LUC 215 - Single-Family Attached Housing | 319 | Eqn ² | 43 | 130 | 173 | Eqn ² | 99 | 75 | 174 |
| LUC 220 - Multifamily Housing (Low-Rise) | 240 | Eqn ³ | 23 | 74 | 97 | Eqn ³ | 76 | 47 | 123 |
| Total Trip Generation | | | 122 | 355 | 477 | | 339 | 222 | 561 |
| <i>Mode Share Reduction</i> | | 10% | 12 | 36 | 48 | 10% | 34 | 22 | 56 |
| Net Trip Generation | | | 110 | 319 | 429 | | 305 | 200 | 505 |

¹ LUC 210 - AM: $T = 0.67(X) + 5.59$ | PM: $Ln(T) = 0.92Ln(X) + 0.33$

² LUC 215 - AM: $T = 0.59(X) - 15.25$ | PM: $T = 0.57(X) - 7.84$

³ LUC 220 - AM: $T = 0.35(X) + 12.93$ | PM: $T = 0.48(X) + 7.35$

² Institute of Transportation Engineers, *Trip Generation Manual*, 10th ed., (Washington, DC: ITE, 2017).

³ Institute of Transportation Engineers, *Trip Generation Manual*, 12th ed., (Washington, DC: ITE, 2025).



The site trips were distributed following the same distribution used in the April 2021 TIS. **Figure 2** and **Figure 3** illustrate the site-generated traffic volumes for the AM and PM peak hours, respectively.

2031 Total Traffic Volumes

The 2031 total traffic volumes were determined by summing the 2031 background traffic volumes from the previous study with the updated site traffic volumes. **Figure 4** and **Figure 5** illustrate the total traffic volumes for the AM and PM peak hours, respectively.

Signal Warrants

Signal justification warrants, using OTM Book 12 Justification 7⁴, were previously analyzed at the following intersections under 2031 total traffic conditions:

- ▶ Blair Road and George Street North (North Intersection);
- ▶ Roseville Road and Edworthy Side Road;
- ▶ Blenheim Road and Parkwood Drive;
- ▶ Blenheim Road and Blair Road; and
- ▶ Blair Road and George Street North (South Intersection).

The April 2021 TIS found that a signal was not justified at the above intersections, except at Blair Road and George Street North (South Intersection), where the warrant for a signal was marginally met. Since the warrant was marginally met, it was recommended that the Region monitor the intersection to determine whether traffic grows as expected as this will determine whether a signal is needed by 2031.

After the completion of the study in April 2021, OTM Book 12 was updated in July 2024⁵. The signal warrant analysis has therefore been updated using the latest version of OTM Book 12 and the 2031 total traffic volumes in **Figure 4** and **Figure 5**.

The results show that the above intersections are unlikely to warrant a signal (Case 3), except at Blair Road and George Street North (North and South Intersections), where it was found that a signal might be warranted by the 2031 horizon (Case 2).

Since the results indicate that the need for a traffic signal cannot be known for certain at this time, it is recommended that the Region continue to monitor Blair Road and George Street North intersections to assess whether a signal is justified by the 2031 horizon. Therefore, there

⁴ Ontario Ministry of Transportation, *Ontario Traffic Manual Book 12: Traffic Signals*, (Toronto: Queen's Printer for Ontario, 2012).

⁵ Ontario Ministry of Transportation, *Ontario Traffic Manual Book 12: Traffic Signals*, (Toronto: Queen's Printer for Ontario, 2024)



is no change to the recommendations of the April 2021 TIS with respect to Traffic Control Signal Warrants.

Appendix A contains the warrant worksheets.

Left-Turn Lane Warrants

In addition to signal warrants, the April 2021 TIS assessed the need for designated left-turn lanes at the studied unsignalized intersections and concluded the following:

- ▶ **Blair Road and Princess Street:** A northbound left-turn lane is not forecast to be warranted.
- ▶ **Blair Road and Bismark Drive:** A northbound left-turn lane is not forecast to be warranted.
- ▶ **Roseville Road and Edworthy Side Road:** A westbound left-turn lane with 15 metres of storage is forecast to be warranted under both 2031 background and total traffic conditions.
- ▶ **Blenheim Road and Parkwood Drive:** A westbound left-turn lane with 65 metres of storage is forecast to be warranted under background traffic conditions. The addition of site traffic increases the warranted storage by 10 metres.
- ▶ **Blenheim Road and Blair Road:** An eastbound left-turn lane with 50 metres of storage is forecast to be warranted under background traffic conditions. The addition of site traffic increases the warranted storage by 20 metres.

Using the same methodology as the April 2021 TIS and the updated total traffic volumes, the conclusions remain the same as the previous study. Therefore, there is no change to the recommendations of the April 2021 TIS with respect to Left-turn Lane Warrants.

Figure 6 to Figure 10 contain the warrant nomographs.

Conclusions

The main conclusions of this study are as follows:

- ▶ **Trip Generation:** The proposed development is forecast to generate 429 AM peak hour trips and 505 PM peak hour trips, an increase of 68 and 43 trips in the AM and PM peak hours, respectively, when compared to the April 2021 TIS.
- ▶ **Signal Warrants:** Traffic signals were found unlikely to be warranted (Case 3) at Roseville Road and Edworthy Side Road; Blenheim Road and Parkwood Drive; and Blenheim Road and Blair Road. At Blair Road and George Street North (North and South Intersections), a signal might be warranted (Case 2) by the 2031 horizon. No changes to the results from the April 2021 TIS.



► **Left-Turn Lane Warrants:**

- Roseville Road and Edworthy Side Road: A westbound left-turn lane with 15 metres of storage is forecast to be warranted under 2031 total traffic conditions.
- Blenheim Road and Parkwood Drive: A westbound left-turn lane with 75 metres of storage is forecast to be warranted under 2031 total traffic conditions.
- Blenheim Road and Blair Road: An eastbound left-turn lane with 70 metres of storage is forecast to be warranted under 2031 total traffic conditions.

No changes to the results from the April 2021 TIS.

Recommendations

There are no changes to the recommendations made in the April 2021 TIS.

We trust that the above analysis is satisfactory. Please do not hesitate to contact us if there are any questions.

Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED

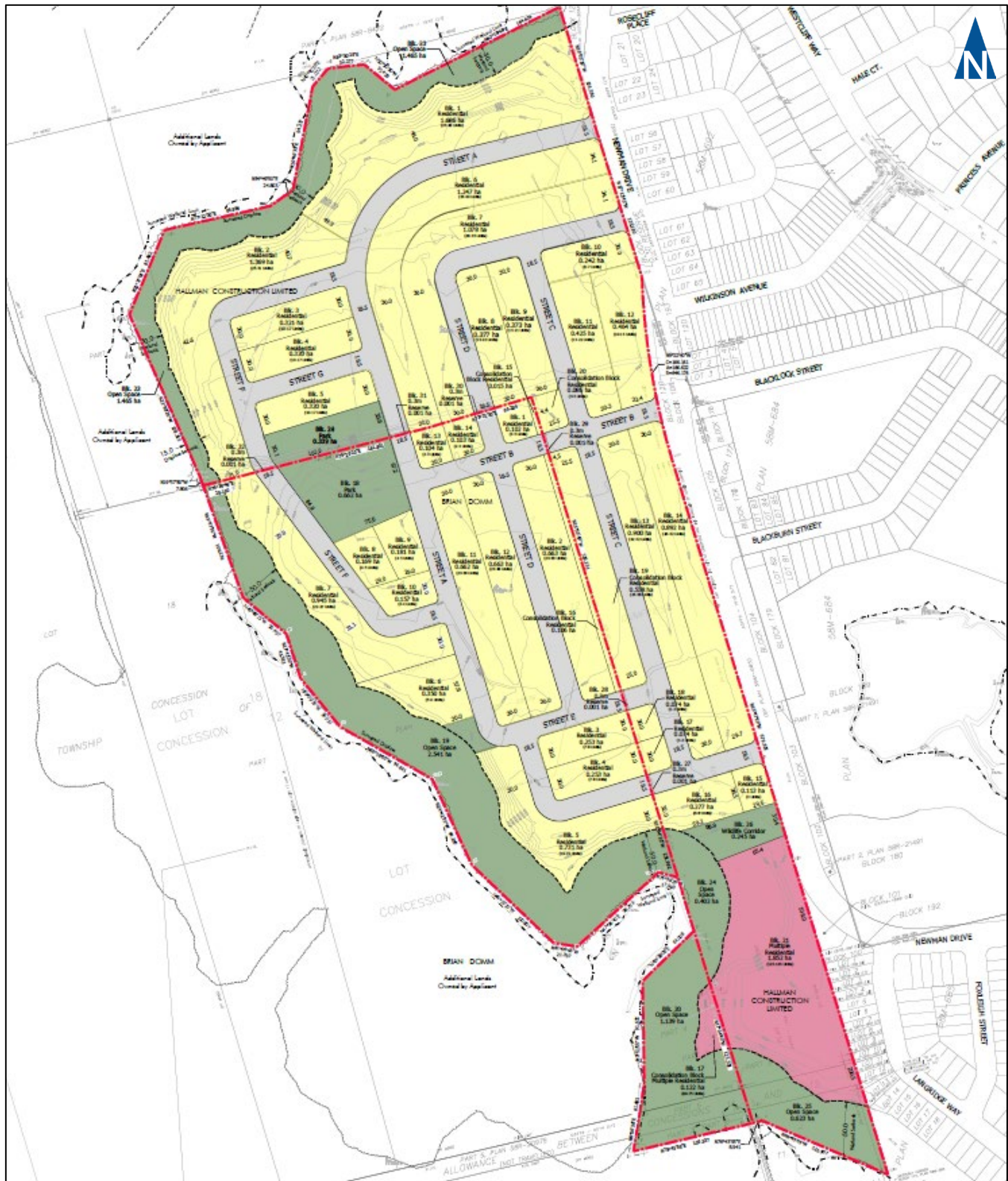


Matt Brouwer

P.Eng.

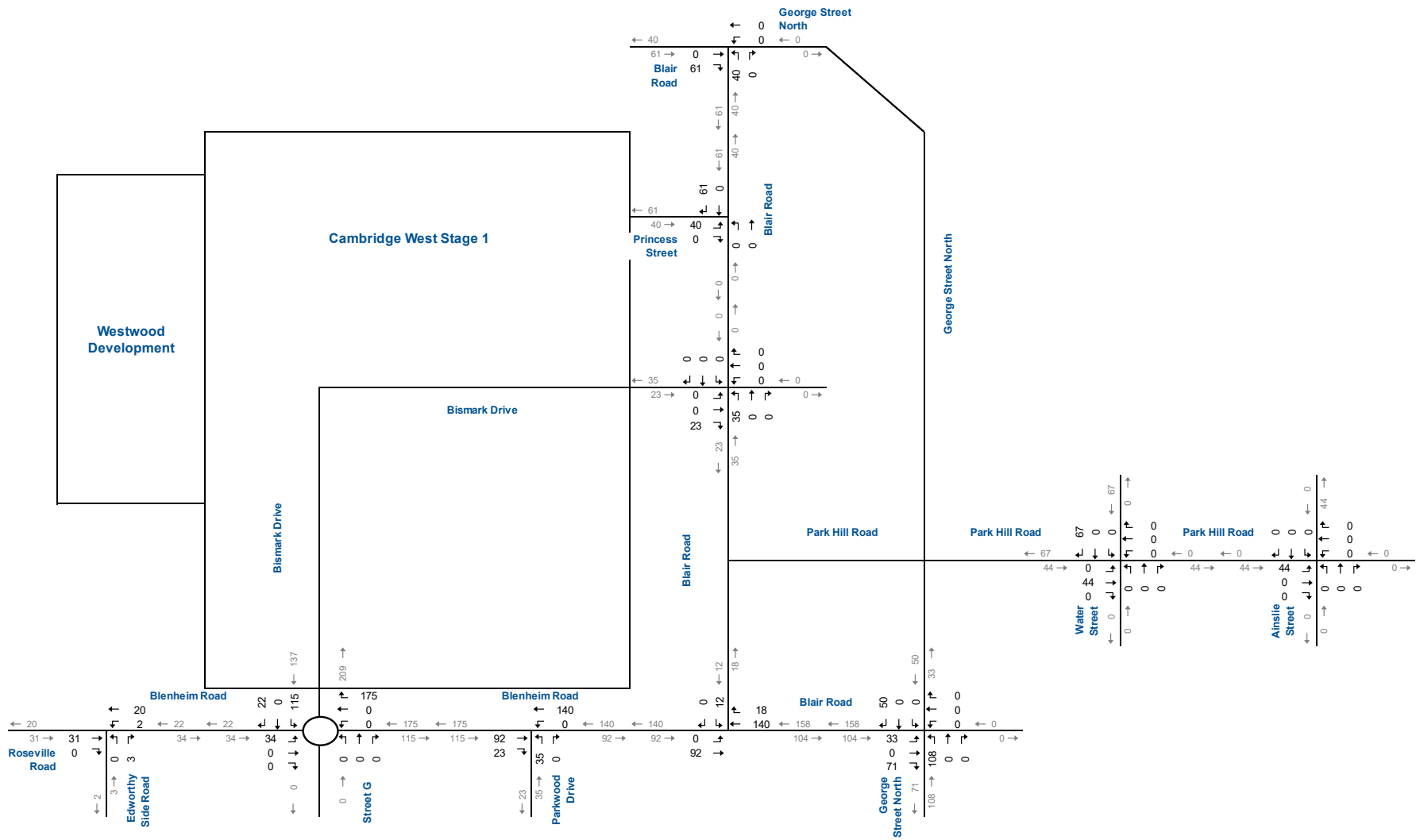
Operations Principal, Technology and Innovation
Senior Project Manager





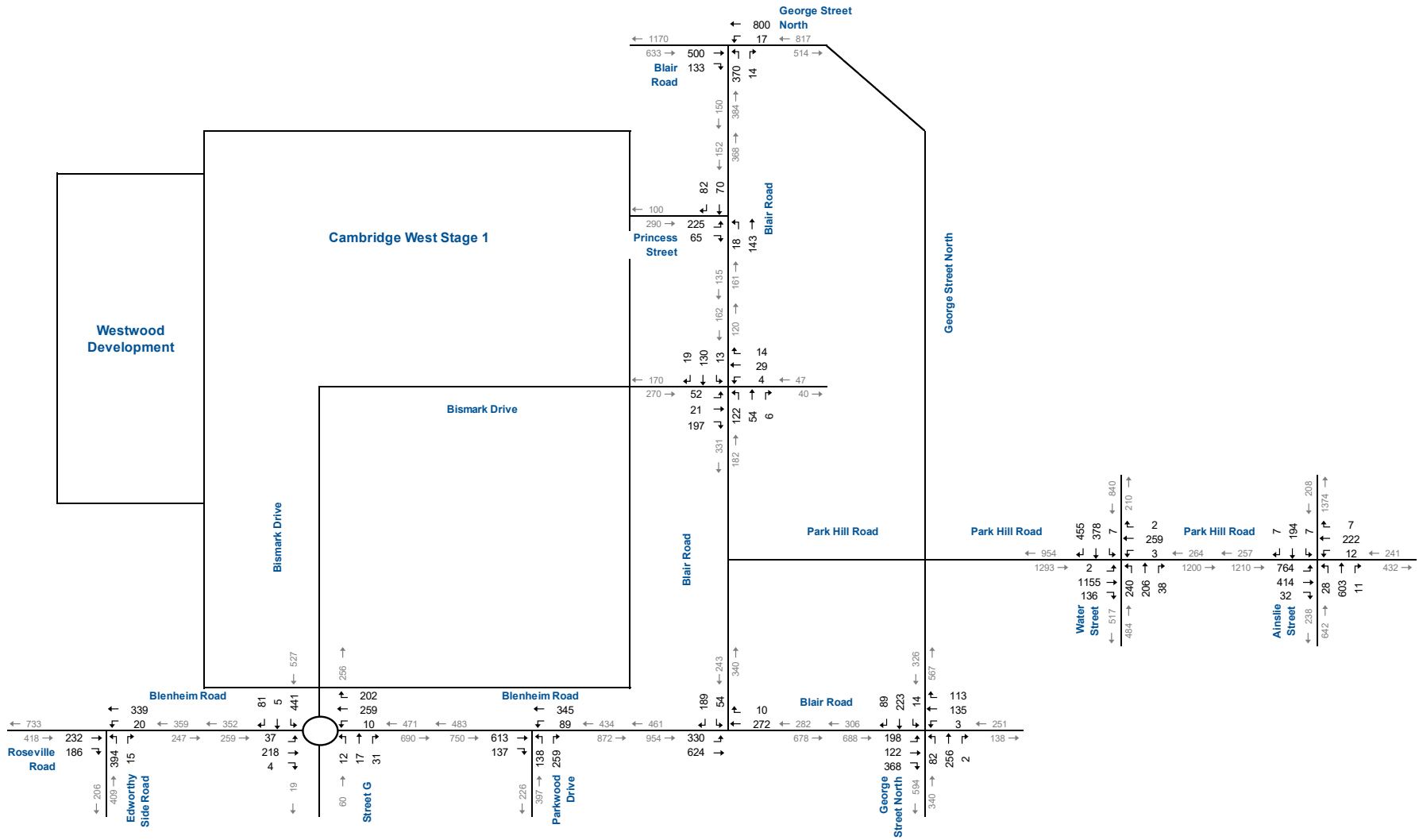
Draft Plan of Subdivision

PM Peak Hour

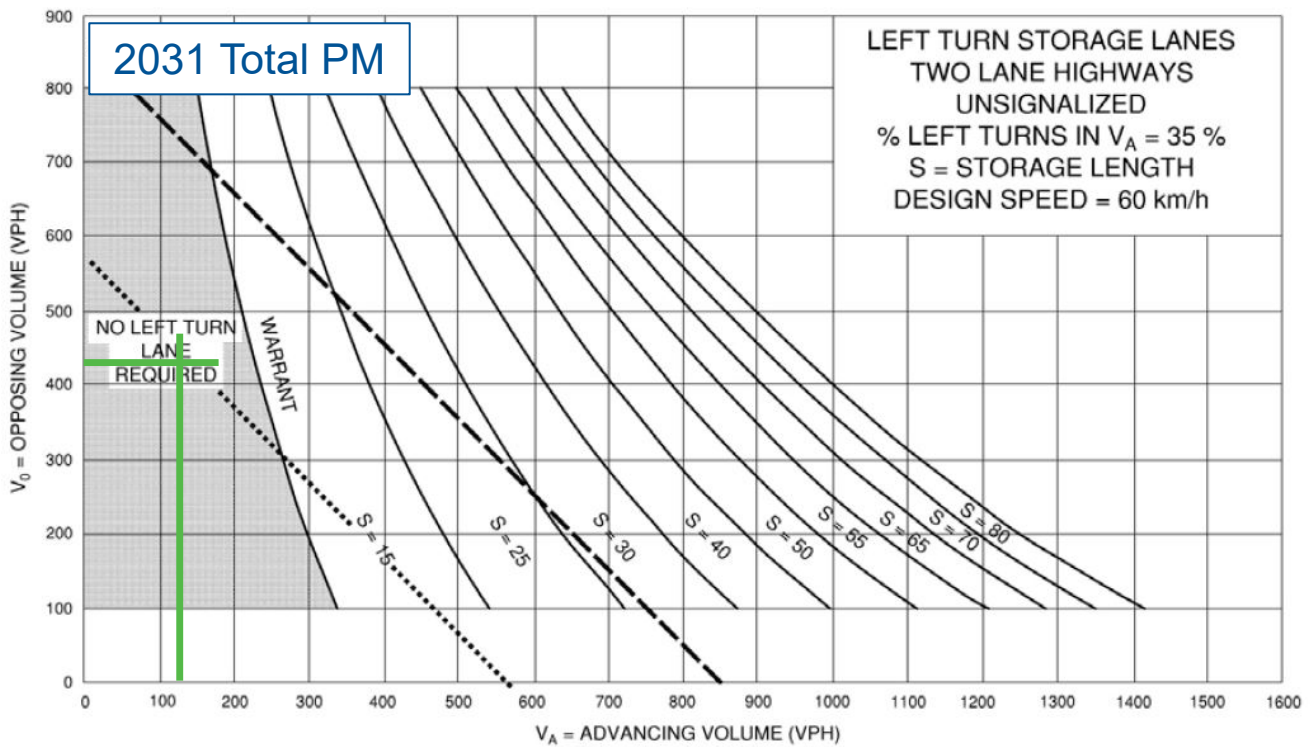
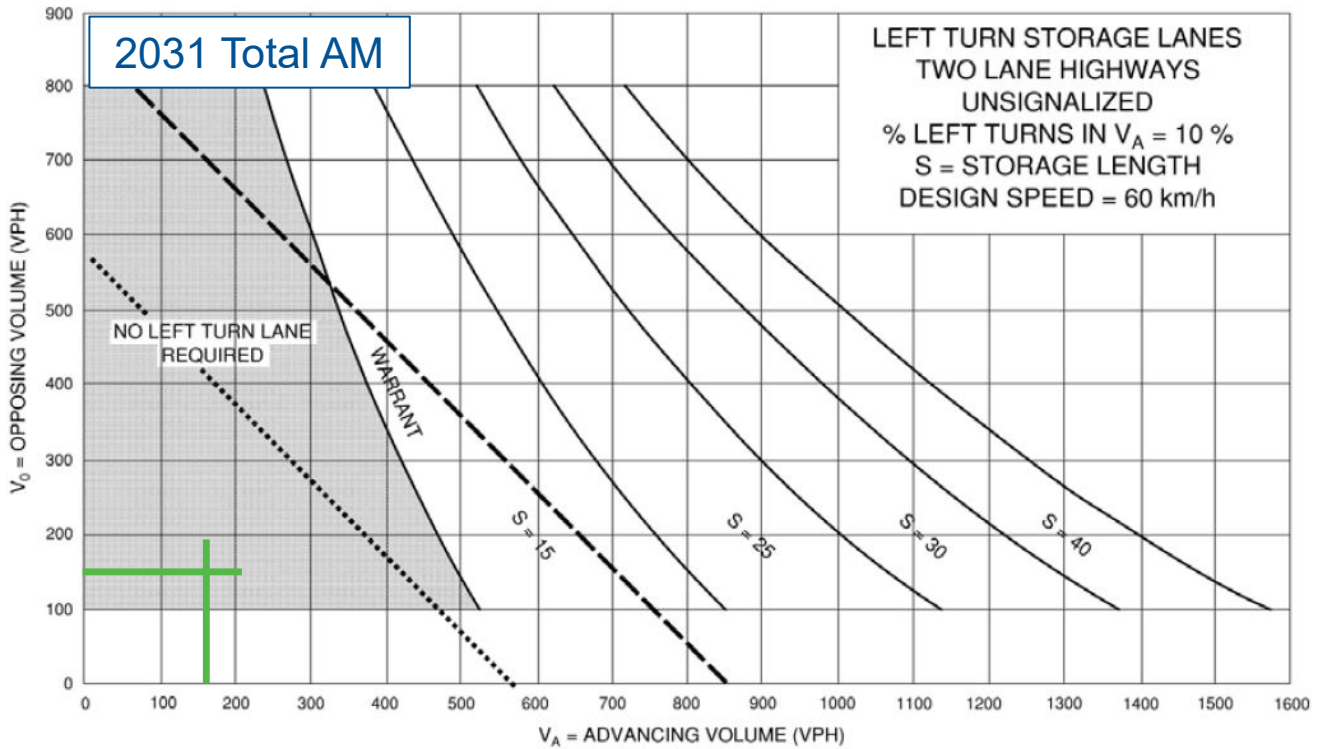


Site Generated Traffic Volumes PM Peak Hour

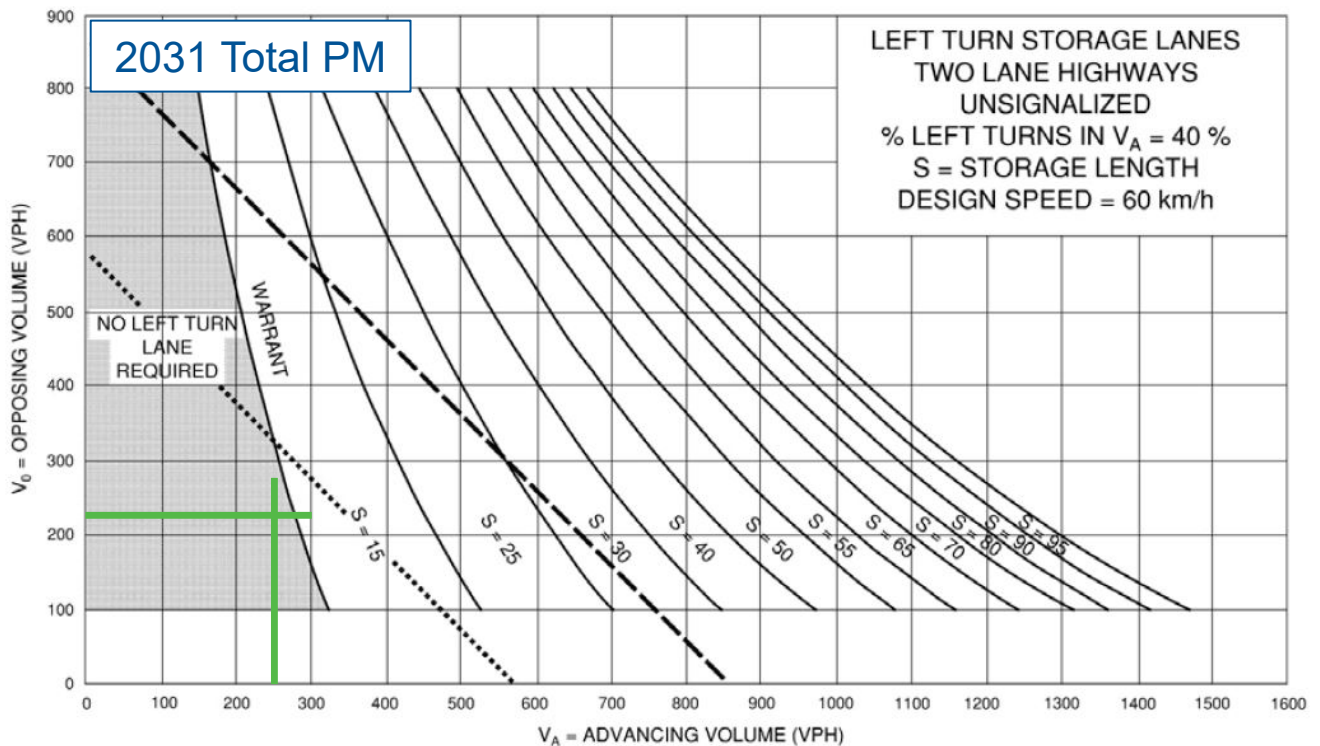
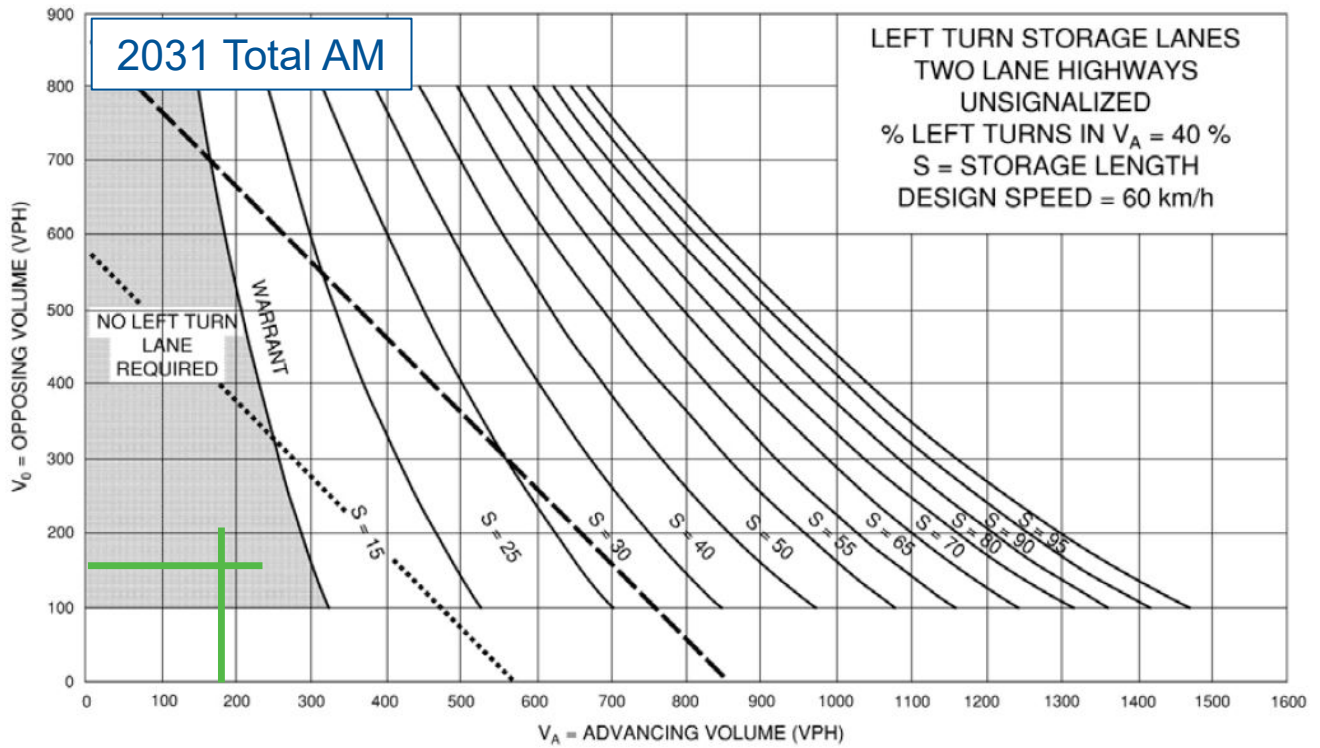
AM Peak Hour



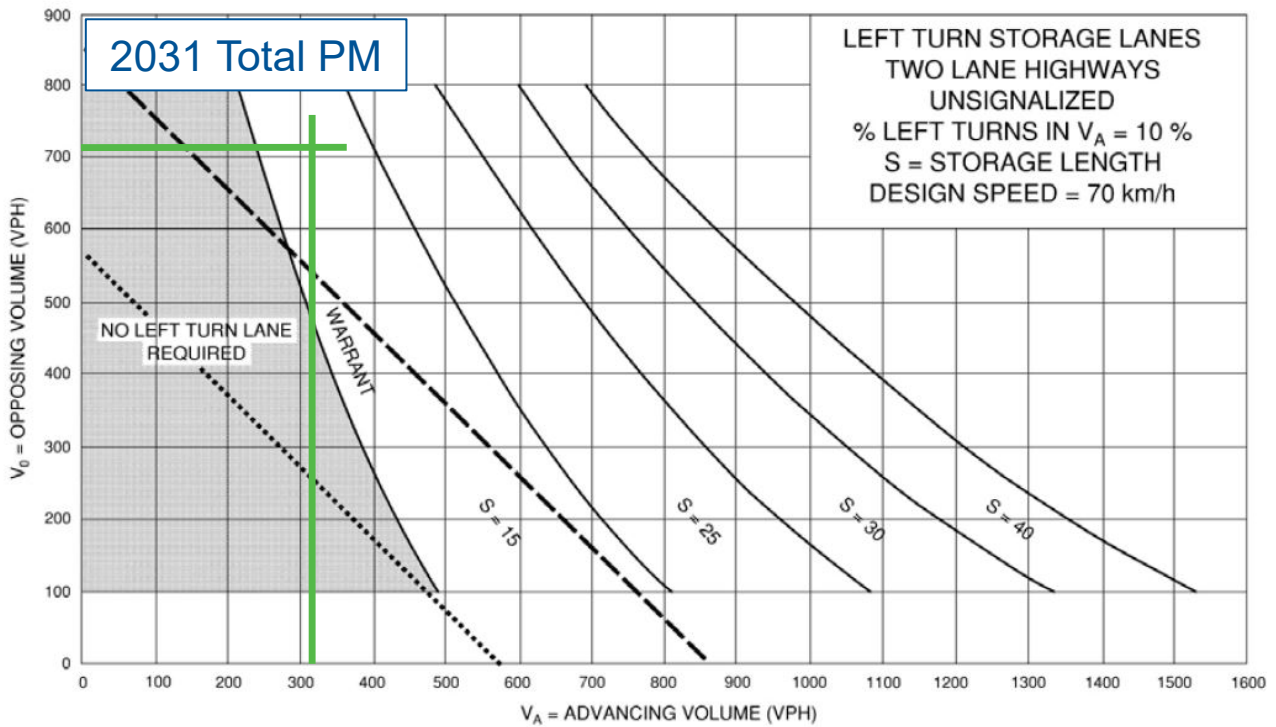
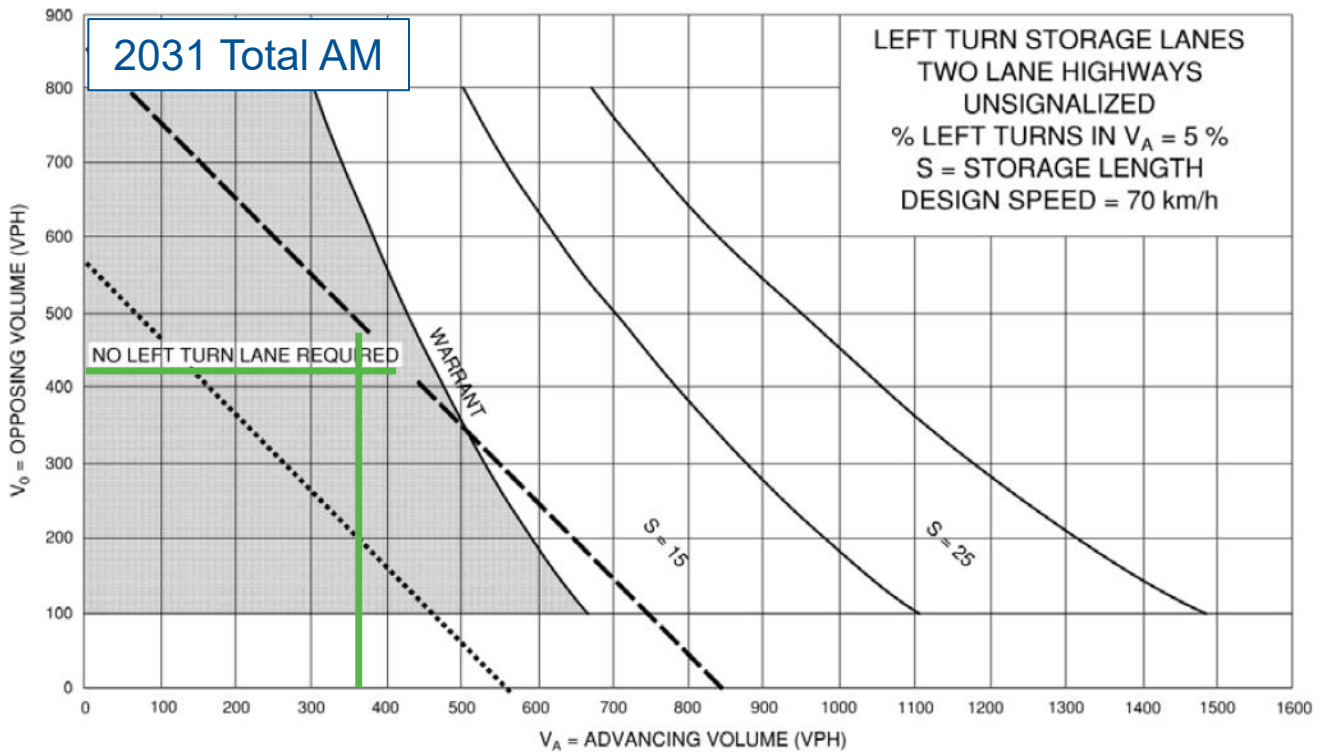
**2031 Total Traffic Volumes
AM Peak Hour**



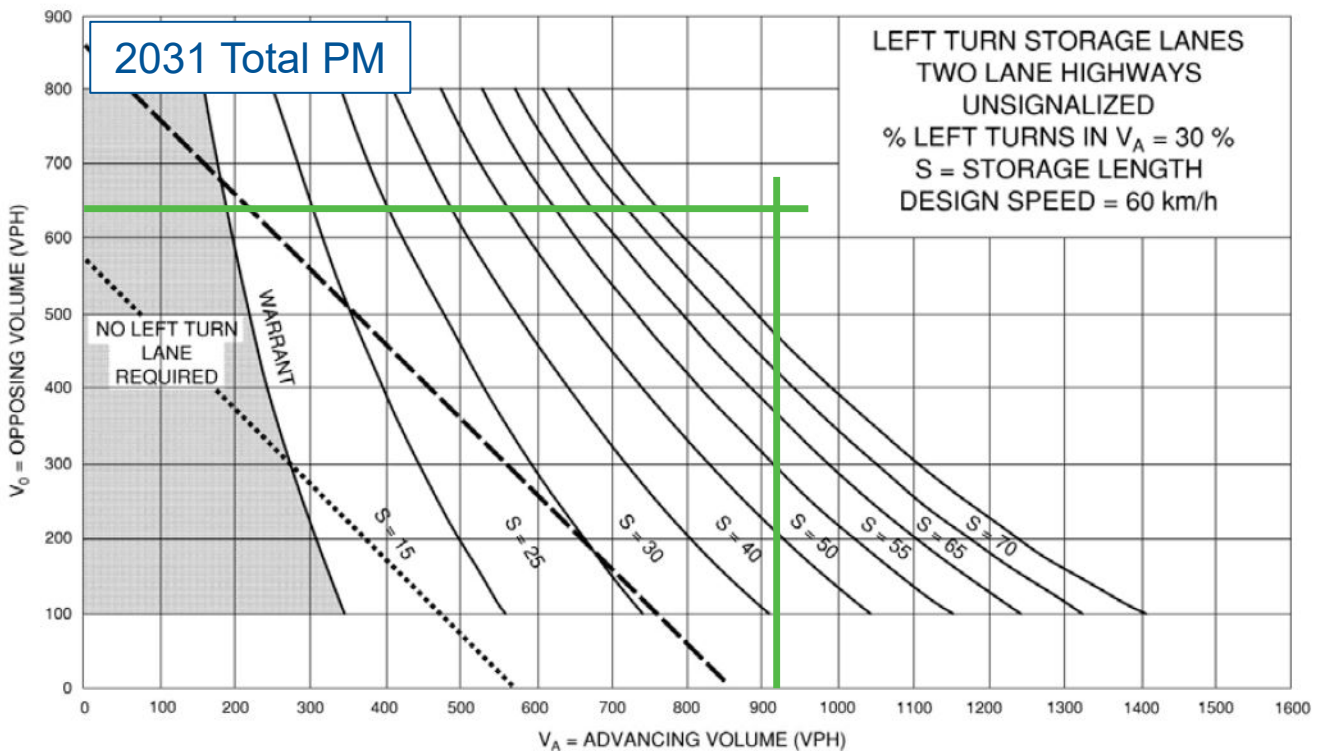
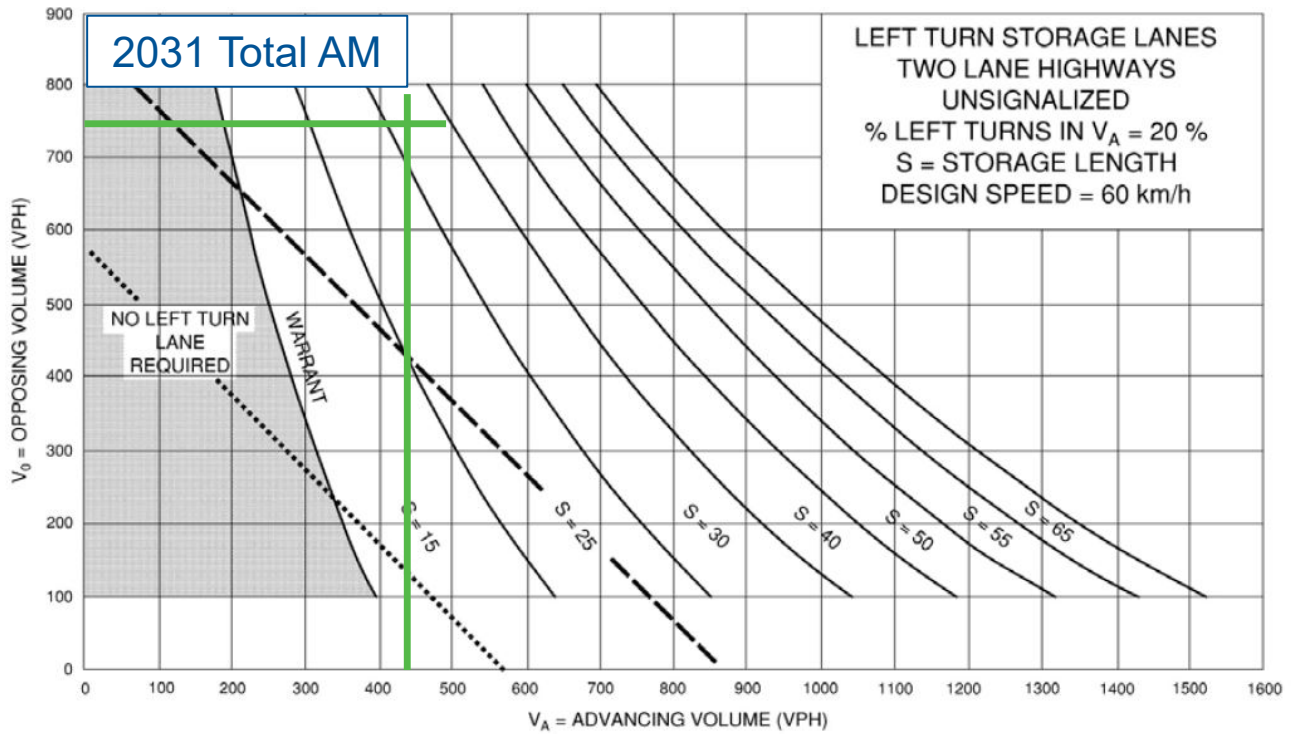
Northbound Left-Turn Lane Warrants Blair Road & Princess Street



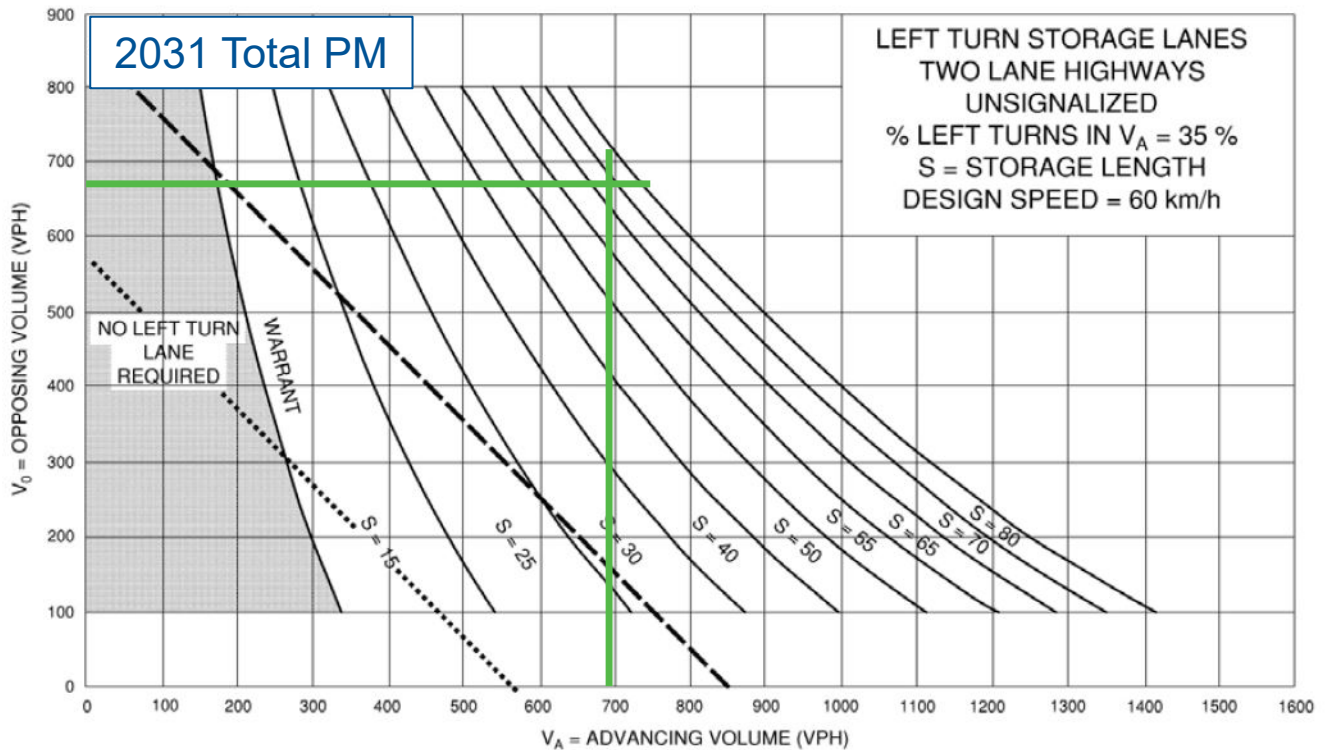
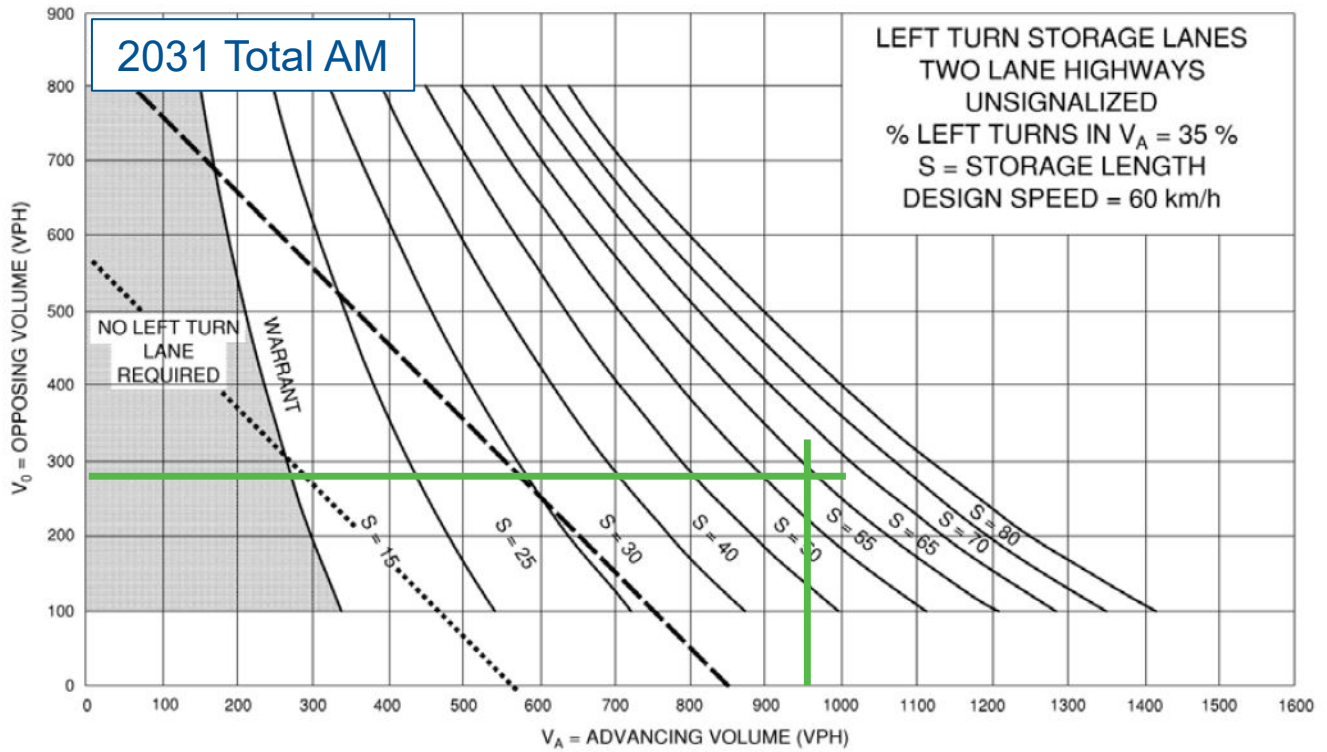
Northbound Left-Turn Lane Warrants Blair Road & Bismark Drive



Westbound Left-Turn Lane Warrants Rosesville Road & Edworthy Side Road



Westbound Left-Turn Lane Warrants Blenheim Road & Parkwood Drive



Eastbound Left-Turn Lane Warrants Blenheim Road & Blair Road

Appendix A – Signal Warrants



Signal Justification Calculation for Forecast Volumes (OTM Book 12 - Justification 7)



Horizon Year: 2031 Project number: 260164
 Municipality: Township of North Dumfries
 Major Street: George Street North (South Inter: North/South?: Y
 Minor Street: Blair Road

Number of Approach Lanes: 1
 Tee Intersection?: N
 Flow Conditions: Restricted
 PM Forecast Only? N

| Warrant Results | | |
|-----------------|-----|---|
| 200% Satisfied | No | Case 1: Signal is undoubtedly warranted |
| 100% Satisfied | Yes | Case 2: Signal might be warranted |
| | | Case 3: Signal warrant is unlikely |

| Time Period | Major Street | | | | | | Minor Street | | | | | | Peds Crossing |
|-----------------------|--|---------|-------|------------|---------|-------|--------------|---------|-------|-----------|---------|-------|---------------|
| | George Street North (South Intersection) | | | | | | Blair Road | | | | | | |
| | Northbound | | | Southbound | | | Eastbound | | | Westbound | | | |
| | Left | Through | Right | Left | Through | Right | Left | Through | Right | Left | Through | Right | |
| AM Peak Hour | 82 | 256 | 2 | 14 | 223 | 89 | 198 | 122 | 368 | 3 | 135 | 113 | 0 |
| PM Peak Hour | 161 | 204 | 5 | 11 | 391 | 207 | 143 | 97 | 267 | 5 | 308 | 131 | 0 |
| Average Hourly Volume | 61 | 115 | 2 | 6 | 154 | 74 | 85 | 55 | 159 | 2 | 111 | 61 | 0 |

| Warrant | AHV |
|------------|-----|
| 1A - All | 884 |
| 1B - Minor | 473 |
| 2A - Major | 411 |
| 2B - Cross | 198 |

Warrant 1 - Minimum Vehicular Volume

| 1A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-----------------|-------------|------------|-----------|------------|-----------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | All Approaches | 480 | 720 | 600 | 900 | 884 |
| | | % Fulfilled | | | | 122.7% |

| 1B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------|-------------|------------|-----------|------------|-----------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Minor Street Approaches | 120 | 170 | 120 | 170 | 473 |
| | | % Fulfilled | | | | 277.9% |

Warrant 2 - Delay To Cross Traffic

| 2A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------|-------------|------------|-----------|------------|-----------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Major Street Approaches | 480 | 720 | 600 | 900 | 411 |
| | | % Fulfilled | | | | 57.1% |

| 2B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------------|-------------|------------|-----------|------------|-----------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Traffic Crossing Major Street | 50 | 75 | 50 | 75 | 198 |
| | | % Fulfilled | | | | 264.0% |

Signal Justification Calculation for Forecast Volumes (OTM Book 12 - Justification 7)



Horizon Year: 2031 Project number: 260164
 Municipality: Township of North Dumfries
 Major Street: George Street North (North Inter North/South?: N
 Minor Street: Blair Road

Number of Approach Lanes: 1
 Tee Intersection?: Y
 Flow Conditions: Restricted
 PM Forecast Only? N

| Warrant Results | | |
|-----------------|-----|---|
| 200% Satisfied | No | Case 1: Signal is undoubtedly warranted |
| 100% Satisfied | Yes | Case 2: Signal might be warranted |
| | | Case 3: Signal warrant is unlikely |

| Time Period | Major Street | | | | | | Minor Street | | | | | | Peds Crossing |
|-----------------------|--|---------|-------|-----------|---------|-------|--------------|---------|-------|------------|---------|-------|---------------|
| | George Street North (North Intersection) | | | | | | Blair Road | | | | | | |
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| | Left | Through | Right | Left | Through | Right | Left | Through | Right | Left | Through | Right | |
| AM Peak Hour | | 500 | 133 | 17 | 800 | | 370 | | 14 | | | | 0 |
| PM Peak Hour | | 748 | 411 | 39 | 700 | | 181 | | 13 | | | | 0 |
| Average Hourly Volume | 0 | 312 | 136 | 14 | 375 | 0 | 138 | 0 | 7 | 0 | 0 | 0 | 0 |

| Warrant | AHV |
|------------|-----|
| 1A - All | 982 |
| 1B - Minor | 145 |
| 2A - Major | 837 |
| 2B - Cross | 138 |

Warrant 1 - Minimum Vehicular Volume

| 1A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-----------------|-------------|------------|-----------|------------|-----------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | All Approaches | 480 | 720 | 600 | 900 | |
| | | % Fulfilled | | | | 136.3% |

| 1B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------|-------------|------------|-----------|------------|-----------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Minor Street Approaches | 180 | 255 | 180 | 255 | |
| | | % Fulfilled | | | | 56.7% |

Warrant 2 - Delay To Cross Traffic

| 2A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------|-------------|------------|-----------|------------|-----------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Major Street Approaches | 480 | 720 | 600 | 900 | |
| | | % Fulfilled | | | | 116.3% |

| 2B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------------|-------------|------------|-----------|------------|-----------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Traffic Crossing Major Street | 50 | 75 | 50 | 75 | |
| | | % Fulfilled | | | | 183.7% |

Signal Justification Calculation for Forecast Volumes (OTM Book 12 - Justification 7)



Horizon Year: 2031
Municipality: Township of North Dumfries

Project number: 260164

Major Street: Roseville Road
Minor Street: Edworthy Side Road

North/South?: N

Number of Approach Lanes: 1
Tee Intersection?: Y
Flow Conditions: Free

PM Forecast Only? N

| Warrant Results | | |
|------------------------------------|----|---|
| 200% Satisfied | No | Case 1: Signal is undoubtedly warranted |
| 100% Satisfied | No | Case 2: Signal might be warranted |
| Case 3: Signal warrant is unlikely | | |

| Time Period | Major Street Roseville Road | | | | | | Minor Street Edworthy Side Road | | | | | | Peds Crossing |
|-----------------------|--------------------------------|---------|-------|-----------|---------|-------|------------------------------------|---------|-------|------------|---------|-------|------------------|
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| | Left | Through | Right | Left | Through | Right | Left | Through | Right | Left | Through | Right | |
| AM Peak Hour | | 232 | 186 | 20 | 339 | | 394 | | 15 | | | | 0 |
| PM Peak Hour | | 331 | 381 | 24 | 289 | | 226 | | 26 | | | | 0 |
| Average Hourly Volume | 0 | 141 | 142 | 11 | 157 | 0 | 155 | 0 | 10 | 0 | 0 | 0 | 0 |

| Warrant | AHV |
|------------|-----|
| 1A - All | 616 |
| 1B - Minor | 165 |
| 2A - Major | 451 |
| 2B - Cross | 155 |

Warrant 1 - Minimum Vehicular Volume

| 1A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume | |
|----|-----------------|------|------------|-----------|------------|-----------------------------|--------|
| | Flow Conditions | Free | Restricted | Free | Restricted | | |
| | All Approaches | X | | | | | 616 |
| | | | | | | % Fulfilled | 128.3% |

| 1B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume | |
|----|-------------------------|------|------------|-----------|------------|-----------------------------|-------|
| | Flow Conditions | Free | Restricted | Free | Restricted | | |
| | Minor Street Approaches | X | | | | | 165 |
| | | | | | | % Fulfilled | 91.8% |

Warrant 2 - Delay To Cross Traffic

| 2A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume | |
|----|-------------------------|------|------------|-----------|------------|-----------------------------|-------|
| | Flow Conditions | Free | Restricted | Free | Restricted | | |
| | Major Street Approaches | X | | | | | 451 |
| | | | | | | % Fulfilled | 93.9% |

| 2B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume | |
|----|-------------------------------|------|------------|-----------|------------|-----------------------------|--------|
| | Flow Conditions | Free | Restricted | Free | Restricted | | |
| | Traffic Crossing Major Street | X | | | | | 155 |
| | | | | | | % Fulfilled | 310.0% |

Signal Justification Calculation for Forecast Volumes (OTM Book 12 - Justification 7)



Horizon Year: 2031
Municipality: Township of North Dumfries

Project number: 260164

Major Street: Blenheim Road
Minor Street: Parkwood Drive

North/South?: N

Number of Approach Lanes: 1
Tee Intersection?: Y
Flow Conditions: Restricted

PM Forecast Only? N

| Warrant Results | | |
|------------------------------------|----|---|
| 200% Satisfied | No | Case 1: Signal is undoubtedly warranted |
| 100% Satisfied | No | Case 2: Signal might be warranted |
| Case 3: Signal warrant is unlikely | | |

| Time Period | Major Street Blenheim Road | | | | | | Minor Street Parkwood Drive | | | | | | Peds Crossing |
|-----------------------|-------------------------------|---------|-------|-----------|---------|-------|--------------------------------|---------|-------|------------|---------|-------|------------------|
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| | Left | Through | Right | Left | Through | Right | Left | Through | Right | Left | Through | Right | |
| AM Peak Hour | | 613 | 137 | 89 | 345 | | 138 | | 259 | | | | 0 |
| PM Peak Hour | | 481 | 151 | 267 | 648 | | 143 | | 154 | | | | 0 |
| Average Hourly Volume | 0 | 274 | 72 | 89 | 248 | 0 | 70 | 0 | 103 | 0 | 0 | 0 | 0 |

| Warrant | AHV |
|------------|-----|
| 1A - All | 856 |
| 1B - Minor | 174 |
| 2A - Major | 683 |
| 2B - Cross | 70 |

Warrant 1 - Minimum Vehicular Volume

| 1A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-----------------|------|------------|-----------|------------|-----------------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | All Approaches | 480 | 720 | 600 | 900 | 856 |

| 1B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------|------|------------|-----------|------------|-----------------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Minor Street Approaches | 180 | 255 | 180 | 255 | 174 |

Warrant 2 - Delay To Cross Traffic

| 2A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------|------|------------|-----------|------------|-----------------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Major Street Approaches | 480 | 720 | 600 | 900 | 683 |

| 2B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------------|------|------------|-----------|------------|-----------------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Traffic Crossing Major Street | 50 | 75 | 50 | 75 | 70 |

Signal Justification Calculation for Forecast Volumes (OTM Book 12 - Justification 7)



Horizon Year: 2031 Project number: 260164
 Municipality: Township of North Dumfries
 Major Street: Blenheim Road North/South?: N
 Minor Street: Blair Road

Number of Approach Lanes: 1
 Tee Intersection?: Y
 Flow Conditions: Restricted
 PM Forecast Only?: N

| Warrant Results | | |
|------------------------------------|----|---|
| 200% Satisfied | No | Case 1: Signal is undoubtedly warranted |
| 100% Satisfied | No | Case 2: Signal might be warranted |
| Case 3: Signal warrant is unlikely | | |

| Time Period | Major Street Blenheim Road | | | | | | Minor Street Blair Road | | | | | | Peds Crossing | |
|-----------------------|-------------------------------|---------|-------|-----------|---------|-------|----------------------------|---------|-------|------------|---------|-------|------------------|---|
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | | |
| | Left | Through | Right | Left | Through | Right | Left | Through | Right | Left | Through | Right | | |
| AM Peak Hour | 330 | 624 | | | 272 | 10 | | | | | 54 | | 189 | 0 |
| PM Peak Hour | 227 | 468 | | | 637 | 32 | | | | | 47 | | 381 | 0 |
| Average Hourly Volume | 139 | 273 | 0 | 0 | 227 | 11 | 0 | 0 | 0 | 0 | 25 | 0 | 143 | 0 |

| Warrant | AHV |
|------------|-----|
| 1A - All | 818 |
| 1B - Minor | 168 |
| 2A - Major | 650 |
| 2B - Cross | 25 |

Warrant 1 - Minimum Vehicular Volume

| 1A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-----------------|------|------------|-----------|-------------|-----------------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | All Approaches | 480 | 720 | 600 | 900 | |
| | | | | | % Fulfilled | 113.6% |

| 1B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------|------|------------|-----------|-------------|-----------------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Minor Street Approaches | 180 | 255 | 180 | 255 | |
| | | | | | % Fulfilled | 65.8% |

Warrant 2 - Delay To Cross Traffic

| 2A | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------|------|------------|-----------|-------------|-----------------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Major Street Approaches | 480 | 720 | 600 | 900 | |
| | | | | | % Fulfilled | 90.3% |

| 2B | Approach Lanes | 1 | | 2 or more | | Average Hourly Volume |
|----|-------------------------------|------|------------|-----------|-------------|-----------------------------|
| | Flow Conditions | Free | Restricted | Free | Restricted | |
| | Traffic Crossing Major Street | 50 | 75 | 50 | 75 | |
| | | | | | % Fulfilled | 33.7% |