### 3.2.2 Proposed Road Network within Phase 1B Lands

**Figure 3.1** also shows the proposed road network within the Premier Gateway Phase 1B Employment Area lands, which features two collector roads providing access to/within the secondary plan:

- Street A (Proposed Collector 2 on **Figure 3.1**) extends from Steeles Avenue, opposite existing Sixth Line South, to Hornby Road.
- Street B (Proposed Collector 3 on **Figure 3.1**) connects Eighth Line to Steeles Avenue, with an intersection on Trafalgar Road approximately 580 metres north of Steeles Avenue. The new road would intersect Steeles Avenue about 350 metres west of Trafalgar Road.

The following configurations were assumed for the new intersections within the Phase 1B lands:

- Steeles Avenue and Street A (Proposed Collector 2) – Signalized, with the following auxiliary lanes:
  - Eastbound left-turn and right-turn lanes with 30 metres storage each
  - Westbound left-turn and right-turn lanes with 60 metres and 30 metres storage, respectively
  - Northbound left-turn and right-turn lanes, with 30 metres and 100 metres storage, respectively
  - Southbound left-turn lane with 60 metres storage
- Hornby Road and Street A (Proposed Collector 2) – Single lane roundabout
- Steeles Avenue and Street B (Proposed Collector 3) – Signalized, with the following auxiliary lanes:
  - Eastbound left-turn and right-turn lanes with 50 metres and 30 metres storage, respectively
  - Westbound left-turn and right-turn lanes with 60 metres and 30 metres storage, respectively
  - Northbound left-turn and right-turn lanes, with 60 metres and 100 metres storage, respectively
  - Southbound left-turn lane with 30 metres storage

- Trafalgar Road and Street B (Proposed Collector 3) – Signalized, with the following auxiliary lanes:
  - Eastbound and westbound left-turn lanes with 50 metres storage each
  - Northbound left-turn and right-turn lanes with 50 metres storage each
  - Southbound left-turn and right-turn lanes with 50 metres storage each
- Eighth Line and Street B (Proposed Collector 3) – Stop controlled (Street B), with the following lane configuration:
  - Eastbound left-turn lane with 30 metres storage
  - Northbound left-turn lane with 30 metres storage

## 3.3 Trip Generation

Data from the Institute of Transportation Engineers *Trip Generation Manual*[11] (9th Edition) (the ITE Manual) were used to estimate the number of vehicle trips generated by the Premier Gateway Phase 1B Employment Area lands. The trip generation rates presented in the ITE Manual are based primarily on traffic surveys conducted at suburban locations with limited to no access to transit or active transportation modes. In most cases, the vehicle trip estimates derived from these rates can be considered conservative (high).

Trip generation rates for the following land use codes (LUC) were selected from the ITE Manual for the proposed development. The average rates for the peak hour of adjacent street traffic were used as the fitted curve equations provided unsatisfactory $R^2$ values:

- **LUC 130 (Industrial Park)** was used to estimate the trips generated by the lands designated Prestige Industrial. The ITE Manual defines LUC 130 as "contains a number of industrial or related facilities. They are characterized by a mix of manufacturing, service and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities – some with a large number of small businesses and others with one or two dominant industries."
- **LUC 820 (Shopping Centre)** was used to estimate the trips generated by the lands designated Business Commercial. The

[11] Institute of Transportation Engineers, Trip Generation Manual, 9th Edition, 2012, Washington, D.C.



ITE Manual defines LUC 820 as “Integrated group of commercial establishments that is planned, developed, owned and managed as a unit. The composition is related to its market area in terms of size, location and type of store. Provides on-site parking facilities sufficient to serve its own parking demands.”

The gross floor area (GFA) of potential commercial development (in square feet/metres) was estimated by applying a floor space index (FSI) of 40% (or 0.40) to the land area (in acres/hectares). An FSI in this range is typical for development of this nature.

No adjustments were made to the ITE Manual rates to account for non-auto mode use, pass-by trips or internal capture given the suburban location of the lands, the anticipated form of development, the absence of active transportation and transit services nearby, and the nature of the land uses.

**Table 3.2** summarizes the vehicle trip generation for the Premier Gateway Phase 1B Employment Area lands. Overall, the proposed development is forecasted to generate approximately:

- 3,560 trips (2,880 inbound and 680 outbound) during AM peak hour
- 4,680 trips (1,345 inbound and 3,335 outbound) during PM peak hour
- 3,470 trips (1,435 inbound and 2,035 outbound) during Saturday peak hour

It is noted that these trip generation estimates may be conservatively high. The net land area available for development will likely be less than the values assumed for this analysis given natural environmental feature setbacks, public land requirements and other considerations that will impact the ultimate yield.

## TABLE 3.2: ESTIMATED TRIP GENERATION

| Land Use | Size (Units) | AM Peak Hour | | | | PM Peak Hour | | | | Saturday Peak Hour | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Rate | Total | In | Out | Rate | Total | In | Out | Rate | Total | In | Out |
| Industrial Park (LUC 130) | 391.7 (acres) | 8.20 | 3,211 | 2,665 | 546 | 8.53 | 3,340 | 701 | 2,639 | 4.71 | 1,844 | 590 | 1,254 |
| Shopping Centre (LUC 820) | 361.7 (1,000 $ft^2$) | 0.96 | 347 | 215 | 132 | 3.71 | 1,342 | 644 | 698 | 4.5 | 1,628 | 847 | 781 |
| **Total** | | | **3,558** | **2,880** | **678** | | **4,682** | **1,345** | **3,337** | | **3,472** | **1,437** | **2,035** |

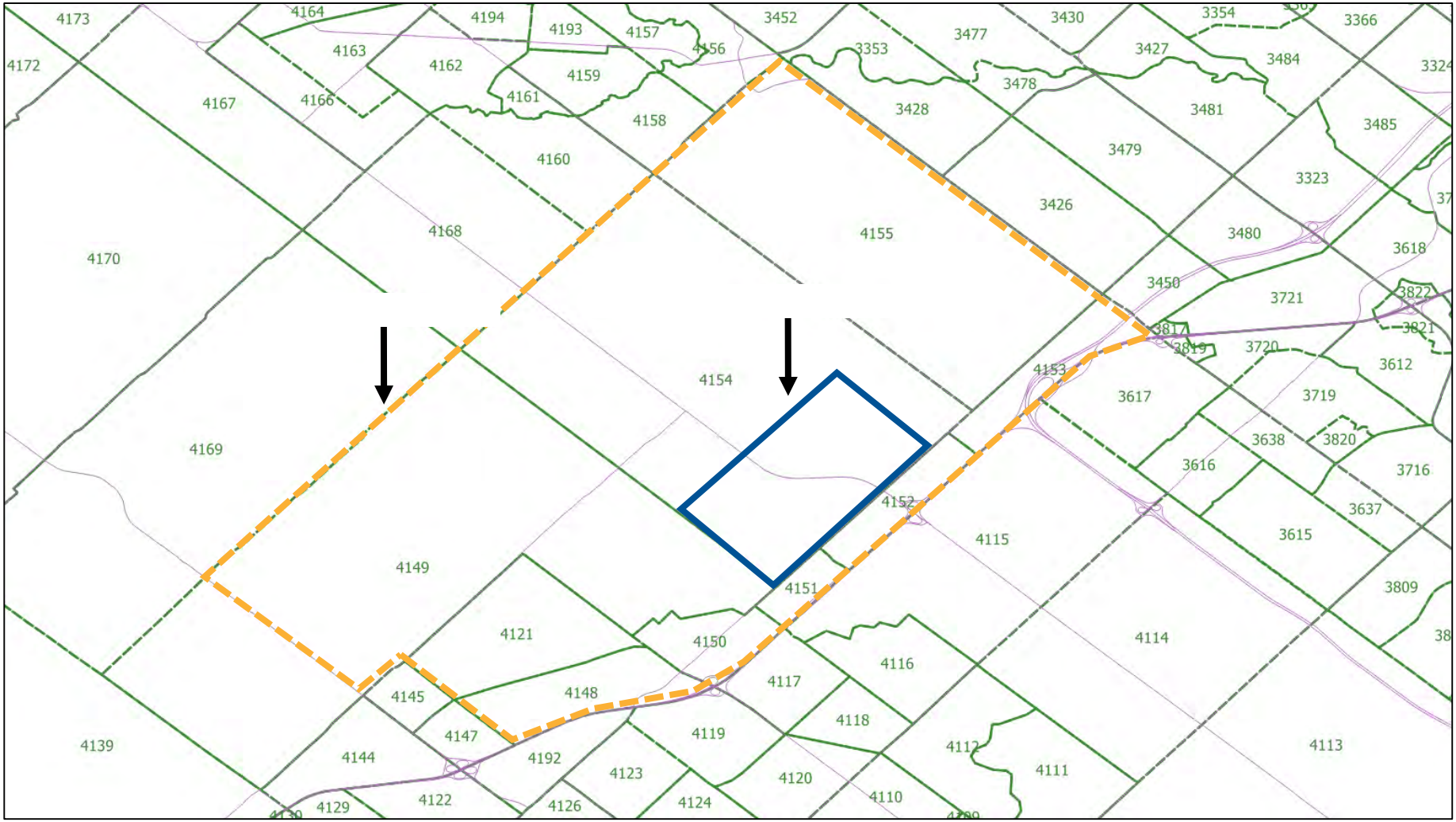
## 3.4 Trip Distribution

Data from the 2011 Transportation Tomorrow Survey (TTS) provided the basis for distributing trips generated by the Premier Gateway Phase 1B lands to the Study Area road network. The TTS database was queried to obtain the AM and PM peak hour trip origin-destination pairings for the traffic zone containing the Premier Gateway Phase 1B Employment Area lands (TTS TZ 4154). Since there is limited development in the area currently, neighbouring zones 4121, 4148, 4149, 4150, 4151, 4152, 4153, and 4155 were also referenced. **Figure 3.3** illustrates the TTS zones used in the analysis.

**Table 3.3** summarizes the trip distribution used to assign trips generated by the Premier Gateway Phase 1B Employment Area lands.

**TABLE 3.3: ESTIMATED TRIP DISTRIBUTION**

| Direction | Percentage |
|---|---|
| North | 25% |
| South | 35% |
| East | 10% |
| West | 30% |

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# TTS Trip Distribution Zones

## 3.5 Background Traffic Growth

### 3.5.1 Generalized Growth

Horizon year peak hour background traffic volumes were estimated by applying growth factors derived from the Halton Region Travel Demand Forecasting Model (the Halton Model). The Halton Model is a macroscopic model developed on the EMME platform that has been calibrated and validated at a screenline level using 2011 TTS data. The model incorporates the final approved Halton Region Best Planning Estimates (BPE) v3.032 land use (approved by Regional Council in July 2011), and the network improvements outlined in the Halton Region Roads Capital Plan 2017-2031. **Appendix D** provides PM peak hour volume plots from the Halton Model for base (2011) and horizon (2016, 2021, 2026 and 2031) years. Plots showing the number of road lanes are also attached.

**Table 3.4** summarizes the growth rate calculations for the Halton Model screenlines closest to the Study Area (#54 for north-south traffic and #15 for east-west traffic) for roads within Halton Hills. **Figure 3.4** shows the screenline locations.

As noted in table, the Halton Model forecasts traffic growth of approximately 1.8% per annum (31% total) between 2016 and 2031 for these two screenlines, in aggregate. Most of this growth is anticipated to occur over the first five years (2016 to 2021).

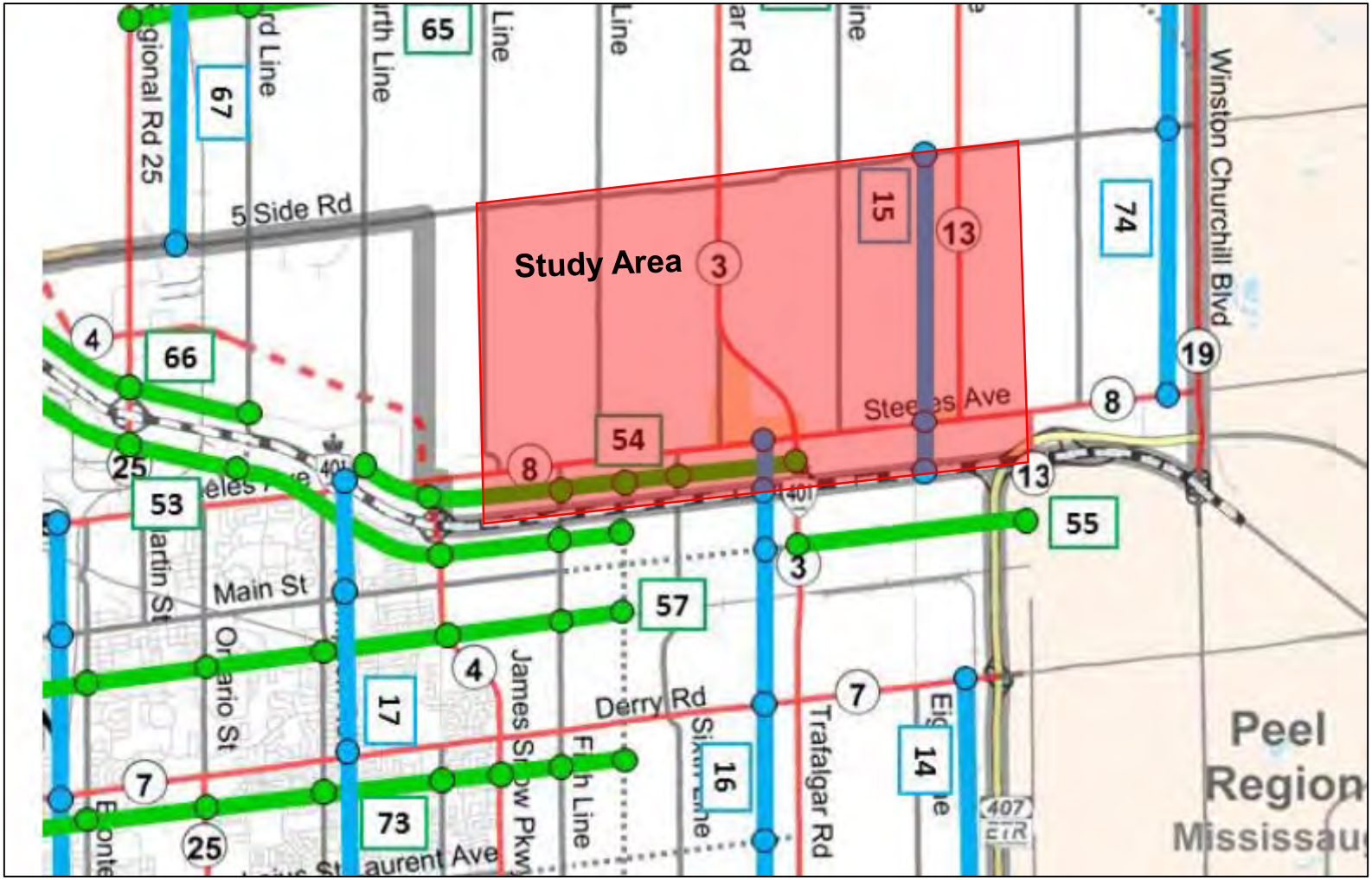
It is noted that the growth rate calculations do not reflect the changes to land use and development phasing assumptions being proposed for the Study Area through the Premier Gateway Phase 1B Employment Area Secondary Plan. The secondary plan proposes to:

- Re-phase the designated employment lands within the Future Employment Area outside of the GTA West Route Planning Study Area (north side of Steeles Avenue, west of the Eighth Line) from the 2021 to 2031 planning horizon to the current 2021 planning horizon to replace the lands frozen to development by the Corridor Protection Area Overlay. **Figure 3.1** identifies these lands as “Phase 1B Employment Area”.
- Re-phase lands within the Premier Gateway Employment Area located within the Corridor Protection Area Overlay (east of the Toronto Premium Outlets) from the 2021 planning horizon to the 2031 planning horizon. **Figure 3.1** identifies these lands as “Phase 2B Employment Area”.



## TABLE 3.4: BACKGROUND TRAFFIC GROWTH CALCULATION

| Intersecting Road | 2016 | | 2021 | | 2026 | | 2031 | |
|---|---|---|---|---|---|---|---|---|
| | NB | SB | NB | SB | NB | SB | NB | SB |
| **Screenline 54 (for north-south traffic)** | | | | | | | | |
| James Snow Parkway | 1,035 | 1,280 | 1,145 | 1,251 | 1,163 | 1,555 | 1,185 | 1,662 |
| Fifth Line | 271 | 550 | 366 | 574 | 413 | 563 | 28 | 332 |
| 5 ½ Line | | | | | | | 654 | 959 |
| Sixth Line | 281 | 279 | 328 | 322 | 389 | 363 | 47 | 85 |
| Trafalgar Road | 1,584 | 1,590 | 1,611 | 1,670 | 1,646 | 1,831 | 1,444 | 1,672 |
| **Total Volume** | **3,171** | **3,699** | **3,450** | **3,817** | **3,611** | **4,312** | **3,358** | **4,710** |
| | **6,870** | | **7,267** | | **7,923** | | **8,068** | |
| **GROWTH** | **2016-2031** | | **2016-2021** | | **2021-2026** | | **2026-2031** | |
| Total | 17.4% | | 5.8% | | 9.0% | | 1.8% | |
| Per Annum | 1.1% | | 1.1% | | 1.7% | | 0.4% | |
| **Screenline 15 (for east-west traffic)** | | | | | | | | |
| 5 Sideroad | 367 | 419 | 440 | 411 | 455 | 452 | 364 | 353 |
| Steeles Avenue | 1,236 | 1,578 | 1,049 | 1,207 | 1,253 | 1,518 | 955 | 1,648 |
| Highway 401 | 5,791 | 7,729 | 8,503 | 11,183 | 8,976 | 10,883 | 9,793 | 10,216 |
| **Total Volume** | **7,394** | **9,726** | **9,992** | **12,801** | **10,684** | **12,853** | **11,112** | **12,217** |
| | **17,120** | | **22,793** | | **23,537** | | **23,329** | |
| **GROWTH** | **2016-2031** | | **2016-2021** | | **2021-2026** | | **2026-2031** | |
| Total | 36.3% | | 33.1% | | 3.3% | | -0.9% | |
| Per Annum | 2.1% | | 5.9% | | 0.6% | | -0.2% | |
| **Screenlines 54 and 15 Combined** | | | | | | | | |
| **GROWTH** | **2016-2031** | | **2016-2021** | | **2021-2026** | | **2026-2031** | |
| Total Volume | 23,990 | | 30,060 | | 31,460 | | 31,397 | |
| Total Growth | 30.9% | | 25.3% | | 4.7% | | -0.2% | |
| Per Annum Growth | 1.8% | | 4.6% | | 0.9% | | 0.0% | |




# Halton Region Travel Demand Forecasting Model Calibration and Validation Screenlines

The re-phasing of the employment lands described above does not entirely replace the employment lands made unavailable for development by the Corridor Protection Area Overlay. As noted in Section 1.1, there is an approximately 75 hectare (185 acres) shortfall of designated employment land due to the development "freeze". The Premier Gateway Phase 1B Employment Area Secondary Plan has proposed the adjacent lands immediately north of the Phase 1B area to accommodate this shortfall.

It is acknowledged that re-phasing the employment lands would alter the land use assumptions in the Halton Model, which would likely have implications for the traffic volume forecasts and resulting growth rates. However, in reviewing the BPEs[12], no employment growth is forecast between 2016 and 2021 for the traffic zone corresponding to the Phase 2B Employment Area (BPE TZ 554) (and also for the Phase 1B lands (BPE TZ 555). As such, the proposed re-phasing of the Premier Gateway Employment Area would not impact the Halton Model forecasts prior to 2021. For the 2021 to 2031 period, the timing of growth would change (earlier growth in the Phase 1B lands, later growth in the Phase 2B lands), which would have a modest bearing on the model forecasts. The magnitude of this change would be difficult to calculate without re-running the model with the revised land use.

At the request of MTO, the growth rates calculated for Highway 401 with the Halton Model were compared to rates estimated using the Province's Greater Golden Horseshoe Model (GGH Model). Based on outputs obtained for the 2011 and 2031 AM and PM peak hour auto assignments, the GGH Model forecasts traffic growth of approximately 2.0% per annum for Highway 401, which is comparable to the 1.8% per annum growth rate derived from the Halton Model.

### 3.5.2 Proposed Toronto Premium Outlets Expansion

The estimated traffic generation for the proposed Toronto Premium Outlets (TPO) expansion was included in the background traffic forecasts. The expansion, which will increase the shopping centre floor space by approximately 40%, is anticipated to be built-out by 2021. Vehicular access to the TPO lands from the adjacent public roadways was assumed to remain unchanged.

*The Toronto Premium Outlets Expansion Transportation Considerations Report*[13] provided the site traffic forecasts for the weekday PM and Saturday peak hour conditions. No site generated

[12] Halton Region, Best Planning Estimates of Population, Occupied Dwelling Units and Employment, 2011-2031, June 2011

[13] BA Group, The Toronto Premium Outlets Expansion Transportation Considerations Report, May 2016

traffic volumes were assumed for the AM peak hour since the use is a shopping centre.

## 3.6 2021 Traffic Conditions

### 3.6.1 Traffic Volume Forecasts

**Figure 3.5** shows the forecasted 2021 AM, PM and Saturday peak hour traffic volumes for the Study Area intersections. The volumes were estimated by adding the 2021 background traffic volumes (per Section 3.5) and the Premier Gateway Phase 1B Employment Area traffic assignments (per Sections 3.3 and 3.4).

### 3.6.2 Traffic Operations with Planned Improvements

Intersection capacity analyses were undertaken to assess 2021 peak hour traffic conditions for the Study Area intersections. The analyses applied the same methodology, parameters and lane configurations used for the existing conditions analysis in Section 2.3 and incorporated the 2021 horizon year road network improvements noted in Section 3.2. Signal timings were optimized within their existing cycle lengths using Synchro.

**Table 3.5**, **Table 3.6** and **Table 3.7** summarize the analysis results for the 2021 AM, PM and Saturday peak hour traffic volumes, respectively. **Appendix E** contains the detailed Synchro output reports.

Overall, the Study Area intersections are projected to continue to operate with satisfactory levels of service (no LOS F) and within capacity (v/c <= 1.0) for all three peak hours analyzed, except for Trafalgar Road and Steeles Avenue during the AM (LOS F, v/c = 1.03) and Saturday (LOS F, v/c = 1.04) peak hours A few approaches experience less than satisfactory levels of service (LOS F) and delay. The following critical movements were identified:

- 5 Sideroad and Eighth Line:
  - The eastbound shared left/through/right movement is projected to operate at LOS E (v/c = 0.84) during the AM peak hour.
  - The westbound shared left/through/right movement is projected to operate at LOS F (v/c = 1.36) during the PM peak hour.
  - The northbound shared left/through/right movement is projected to operate at LOS F (v/c = 0.99) during the PM peak hour.



- The southbound shared left/through/right movement is projected to operate at LOS F (v/c = 1.13) during the AM peak hour.

- 5 Sideroad and Ninth Line:
  - The westbound shared left/through/right movement is projected to operate at LOS F (v/c = 0.92) during the PM peak hour.

- Trafalgar Road and Hornby Road:
  - The eastbound shared left/right movement is projected to operate at LOS F (v/c = 0.38) during the AM peak hour.

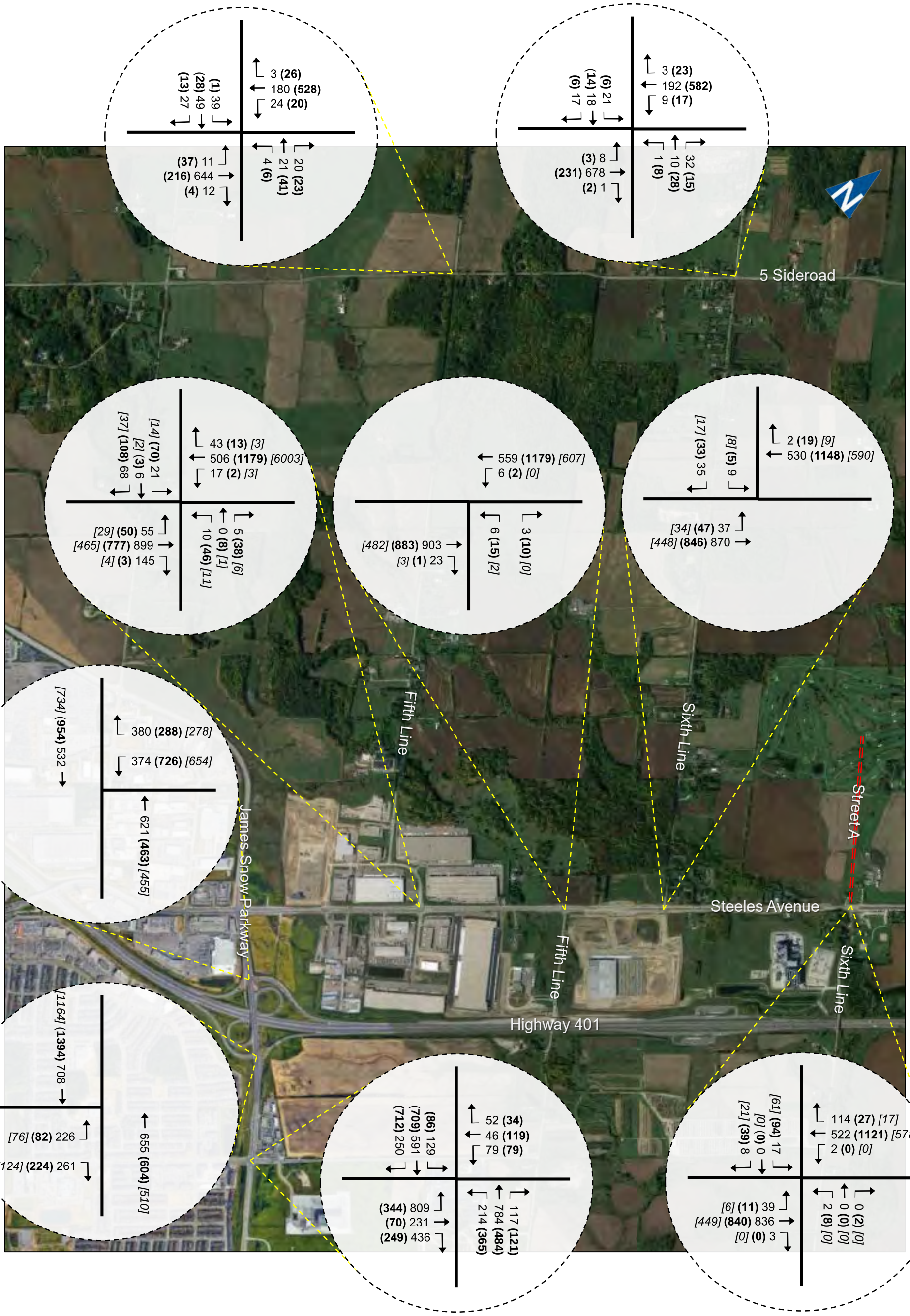
- Steeles Avenue and Trafalgar Road:
  - The westbound left movement is projected to operate at LOS F (v/c = 1.23) during the AM peak hour, LOS F (v/c = 1.02) during the PM peak hour, and LOS F (v/c = 1.33) during the Saturday peak hour.
  - The northbound through movement is projected to operate at LOS E (v/c = 0.88) during the PM peak hour.
  - The northbound right movement is projected to operate at LOS F (v/c = 0.96) during the PM peak hour and at LOS F (v/c = 1.19) during the Saturday peak hour.
  - The southbound shared through/right movement is projected to operate at LOS F (v/c = 1.23) during the AM peak hour.

- Steeles Avenue and Eighth Line/Toronto Premium Outlets Access:
  - The westbound shared through/right movement is projected to operate at LOS D (v/c = 0.93) during the PM peak hour.

- Steeles Avenue and Ninth Line:
  - The westbound through movement is projected to operate at LOS D (v/c = 1.00) during the PM peak hour.
  - The northbound left movement is projected to operate at LOS E (v/c = 0.97) during the PM peak hour.
  - The southbound left movement is projected to operate at LOS D (v/c = 0.92) during the AM peak hour.

- James Snow Parkway and Main Street:
  - The northbound shared through/right movement is projected to operate at LOS D (v/c = 0.94) during the AM peak hour.





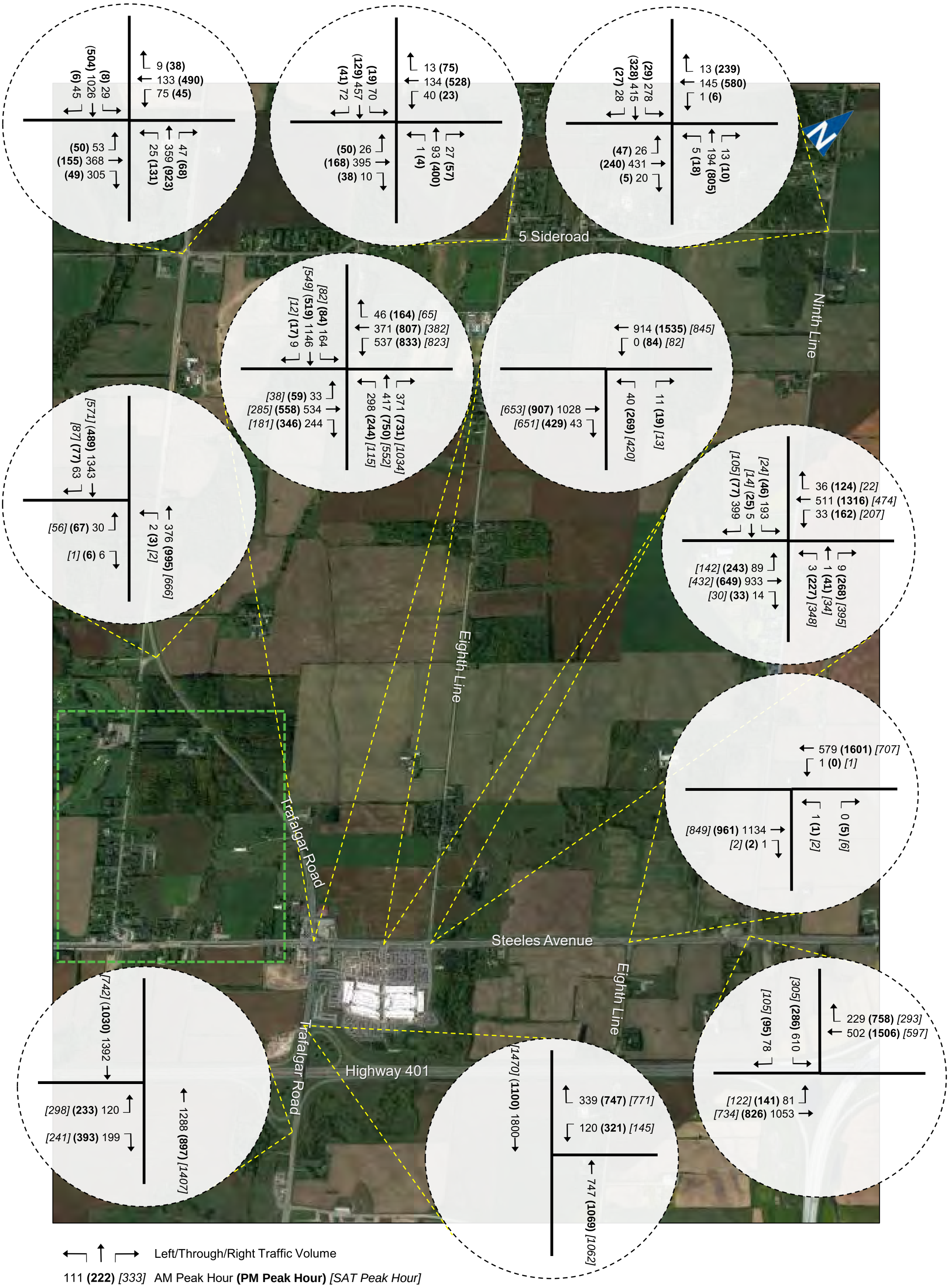

Left/Through/Right Traffic Volume

111 **(222)** *[333]* AM Peak Hour **(PM Peak Hour)** *[SAT Peak Hour]*

# 2021 Traffic Volumes (1/4)

Premier Gateway West Scoped Area Transportation Study
170050

**Figure 3.5**



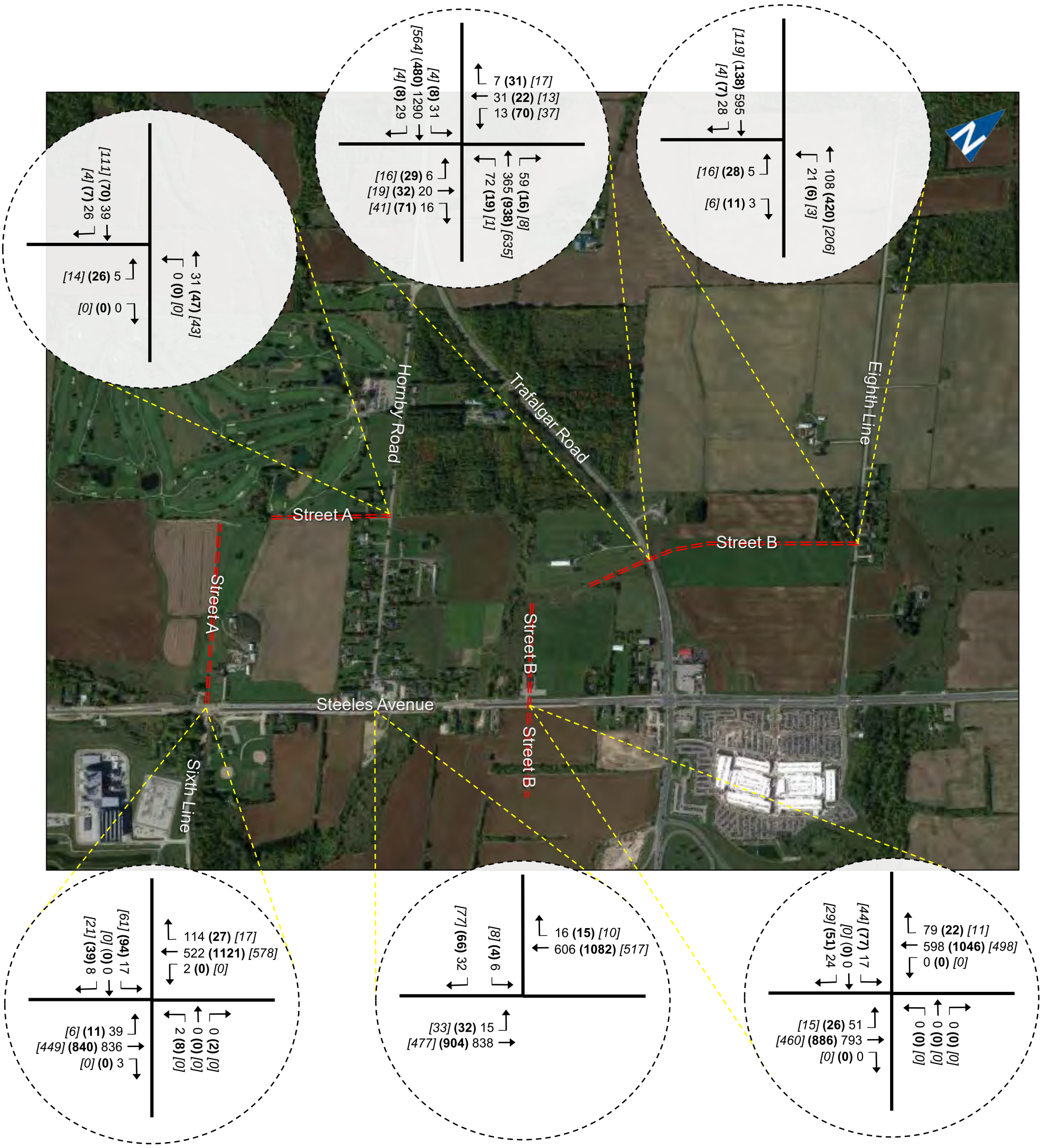

Left/Through/Right Traffic Volume

111 **(222)** *[333]* AM Peak Hour **(PM Peak Hour)** *[SAT Peak Hour]*

# 2021 Traffic Volumes (2/4)

Premier Gateway West Scoped Area Transportation Study
170050

**Figure 3.5**




Left/Through/Right Traffic Volume

111 **(222)** *[333]* AM Peak Hour **(PM Peak Hour)** *[SAT Peak Hour]*

# 2021 Traffic Volumes (3/4)

Premier Gateway West Scoped Area Transportation Study
170050

Figure 3.5


← ↑ → Left/Through/Right Traffic Volume

111 **(222)** *[333]* AM Peak Hour **(PM Peak Hour)** *[SAT Peak Hour]*

# 2021 Traffic Volumes (4/4)

## TABLE 3.5: 2021 TRAFFIC OPERATIONS SUMMARY – AM PEAK HOUR

| Intersection | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **Signalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Trafalgar Rd. | C | 0.70 | C | 22 | B | 20 | B | 14 | C | 22 |
| 5 Sideroad & Ninth Line | B | 0.69 | C | 29 | B | 17 | B | 11 | B | 16 |
| Steeles Ave. & Fifth Line/ Brownridge Rd. | A | 0.42 | A | 5 | A | 5 | C | 28 | C | 28 |
| Steeles Ave. & Fifth Line South | A | 0.40 | A | 3 | A | 2 | D | 43 | - | - |
| Steeles Ave. & Sixth Line | B | 0.39 | B | 15 | B | 12 | - | - | A | 9 |
| Steeles Ave. & Sixth Line South/Street A | B | 0.38 | C | 22 | B | 17 | B | 13 | B | 13 |
| Steeles Ave. & Trafalgar Rd. | **F** | **1.03** | D | 46 | **F** | **113** | D | 43 | **F** | **141** |
| Steeles Ave. & TPO Access | A | 0.40 | A | 6 | A | 6 | D | 37 | - | - |
| Steeles Ave. & Eighth Line/TPO Access | C | 0.59 | C | 24 | C | 22 | C | 31 | D | 37 |
| Steeles Ave. & Ninth Line | C | 0.85 | C | 32 | C | 30 | - | - | C | 30 |
| Steeles Ave. & Ninth Line South | C | 0.81 | C | 29 | C | 20 | D | 36 | - | - |
| James Snow Pkwy. & Highway 401 North Terminal | B | 0.48 | - | - | C | 23 | B | 11 | B | 10 |
| James Snow Pkwy. & Highway 401 South Terminal | B | 0.37 | C | 23 | - | - | A | 7 | A | 7 |
| Trafalgar Rd. & Highway 401 North Terminal | B | 0.69 | - | - | D | 49 | A | 4 | A | 7 |
| Trafalgar Rd. & Highway 401 South Terminal | A | 0.54 | D | 49 | - | - | A | 4 | A | 5 |
| Winston Churchill Blvd. & Highway 401 North Terminal | B | 0.46 | - | - | E | 60 | A | 8 | A | 7 |
| Winston Churchill Blvd. & Highway 401 South Terminal | C | 0.47 | D | 52 | - | - | B | 10 | B | 10 |
| James Snow Pkwy. & Main St. | C | 0.89 | C | 29 | D | 38 | D | 43 | C | 32 |
| Steeles Ave. & Street B | B | 0.33 | B | 15 | B | 13 | - | - | A | 9 |
| Trafalgar Rd. & Street B | B | 0.51 | B | 18 | B | 18 | B | 14 | B | 13 |
| **Unsignalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Fifth Line | | | A | < 1 | A | 1 | C | 20 | D | 29 |
| 5 Sideroad & Sixth Line | | | A | < 1 | A | 1 | C | 17 | C | 21 |
| 5 Sideroad & Eighth Line | | | E | 36 | C | 16 | B | 13 | **F** | **104** |
| Steeles Ave. & Hornby Rd. | | | A | < 1 | A | < 1 | - | - | B | 13 |
| Trafalgar Rd. & Hornby Rd. | | | **F** | **62** | - | - | A | < 1 | A | < 1 |
| Steeles Ave. & Eighth Line South | | | A | < 1 | A | < 1 | E | 36 | - | - |
| Eighth Line & Street B | | | B | 14 | - | - | A | 2 | A | < 1 |

## TABLE 3.6: 2021 TRAFFIC OPERATIONS SUMMARY – PM PEAK HOUR

| Intersection | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **Signalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Trafalgar Rd. | C | 0.74 | C | 21 | C | 34 | B | 20 | B | 19 |
| 5 Sideroad & Ninth Line | C | 0.87 | B | 12 | C | 32 | C | 29 | C | 22 |
| Steeles Ave. & Fifth Line/ Brownridge Rd. | A | 0.53 | A | 5 | A | 7 | C | 31 | C | 33 |
| Steeles Ave. & Fifth Line South | A | 0.47 | A | 3 | A | 4 | D | 41 | - | - |
| Steeles Ave. & Sixth Line | B | 0.45 | B | 12 | B | 15 | - | - | B | 12 |
| Steeles Ave. & Sixth Line South/Street A | B | 0.56 | B | 12 | B | 15 | B | 13 | B | 14 |
| Steeles Ave. & Trafalgar Rd. | E | 0.93 | D | 48 | D | 52 | E | 68 | E | 56 |
| Steeles Ave. & TPO Access | B | 0.65 | B | 11 | A | 9 | D | 40 | - | - |
| Steeles Ave. & Eighth Line/TPO Access | D | 0.87 | C | 28 | D | 37 | D | 49 | E | 63 |
| Steeles Ave. & Ninth Line | C | 0.84 | B | 14 | C | 27 | - | - | D | 42 |
| Steeles Ave. & Ninth Line South | D | 1.04 | C | 30 | D | 43 | D | 50 | - | - |
| James Snow Pkwy. & Highway 401 North Terminal | B | 0.68 | - | - | C | 25 | B | 13 | B | 17 |
| James Snow Pkwy. & Highway 401 South Terminal | A | 0.56 | C | 27 | - | - | A | 5 | A | 8 |
| Trafalgar Rd. & Highway 401 North Terminal | C | 0.66 | - | - | D | 38 | B | 14 | B | 15 |
| Trafalgar Rd. & Highway 401 South Terminal | B | 0.49 | D | 42 | - | - | A | 6 | A | 7 |
| Winston Churchill Blvd. & Highway 401 North Terminal | C | 0.55 | - | - | D | 52 | B | 13 | B | 12 |
| Winston Churchill Blvd. & Highway 401 South Terminal | B | 0.56 | E | 62 | - | - | A | 9 | A | 8 |
| James Snow Pkwy. & Main St. | C | 0.87 | D | 37 | C | 35 | C | 26 | D | 38 |
| Steeles Ave. & Street B | B | 0.51 | B | 14 | B | 16 | - | - | B | 12 |
| Trafalgar Rd. & Street B | B | 0.46 | A | 10 | B | 10 | B | 16 | B | 11 |
| **Unsignalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Fifth Line | | | A | 2 | A | < 1 | C | 20 | C | 19 |
| 5 Sideroad & Sixth Line | | | A | < 1 | A | < 1 | C | 18 | C | 19 |
| 5 Sideroad & Eighth Line | | | C | 23 | **F** | **198** | **F** | **66** | C | 19 |
| Steeles Ave. & Hornby Rd. | | | A | < 1 | A | < 1 | - | - | C | 17 |
| Trafalgar Rd. & Hornby Rd. | | | D | 29 | - | - | A | < 1 | A | < 1 |
| Steeles Ave. & Eighth Line South | | | A | < 1 | A | < 1 | C | 20 | - | - |
| Eighth Line & Street B | | | B | 12 | - | - | A | < 1 | A | < 1 |

## TABLE 3.7: 2021 TRAFFIC OPERATIONS SUMMARY – SATURDAY PEAK HOUR

| Intersection | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **Signalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Trafalgar Rd. | Not Analyzed for Saturday Peak Hour | | | | | | | | | |
| 5 Sideroad & Ninth Line | | | | | | | | | | |
| Steeles Ave. & Fifth Line/ Brownridge Rd. | A | 0.24 | A | 3 | A | 3 | C | 34 | C | 34 |
| Steeles Ave. & Fifth Line South | A | 0.22 | A | 2 | A | 2 | D | 40 | - | - |
| Steeles Ave. & Sixth Line | B | 0.24 | B | 13 | B | 14 | - | - | A | 6 |
| Steeles Ave. & Sixth Line South/Street A | B | 0.31 | B | 15 | B | 17 | A | < 1 | A | 8 |
| Steeles Ave. & Trafalgar Rd. | **F** | **1.04** | D | 47 | **F** | **148** | **F** | **97** | C | 31 |
| Steeles Ave. & TPO Access | B | 0.45 | B | 15 | A | 10 | C | 34 | - | - |
| Steeles Ave. & Eighth Line/TPO Access | C | 0.48 | C | 30 | C | 28 | C | 31 | D | 35 |
| Steeles Ave. & Ninth Line | C | 0.49 | B | 19 | C | 27 | - | - | C | 23 |
| Steeles Ave. & Ninth Line South | C | 0.54 | C | 25 | B | 15 | B | 19 | - | - |
| James Snow Pkwy. & Highway 401 North Terminal | B | 0.57 | - | - | C | 22 | B | 12 | B | 14 |
| James Snow Pkwy. & Highway 401 South Terminal | A | 0.44 | C | 29 | - | - | A | 4 | A | 6 |
| Trafalgar Rd. & Highway 401 North Terminal | C | 0.74 | - | - | D | 42 | B | 13 | B | 16 |
| Trafalgar Rd. & Highway 401 South Terminal | B | 0.62 | D | 46 | - | - | A | 8 | A | 5 |
| Winston Churchill Blvd. & Highway 401 North Terminal | C | 0.54 | - | - | D | 45 | B | 11 | B | 12 |
| Winston Churchill Blvd. & Highway 401 South Terminal | B | 0.35 | D | 47 | - | - | A | 4 | A | 5 |
| James Snow Pkwy. & Main St. | Not Analyzed for Saturday Peak Hour | | | | | | | | | |
| Steeles Ave. & Street B | B | 0.27 | B | 13 | B | 14 | - | - | A | 7 |
| Trafalgar Rd. & Street B | B | 0.30 | A | 8 | A | 8 | B | 14 | B | 14 |
| **Unsignalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Fifth Line | Not Analyzed for Saturday Peak Hour | | | | | | | | | |
| 5 Sideroad & Sixth Line | | | | | | | | | | |
| 5 Sideroad & Eighth Line | | | | | | | | | | |
| Steeles Ave. & Hornby Rd. | | | A | 1 | A | < 1 | - | - | B | 11 |
| Trafalgar Rd. & Hornby Rd. | | | C | 24 | - | - | A | < 1 | A | < 1 |
| Steeles Ave. & Eighth Line South | | | A | < 1 | A | < 1 | C | 16 | - | - |
| Eighth Line & Street B | | | B | 10 | - | - | A | < 1 | A | < 1 |

### 3.6.3 Traffic Operations with Remedial Measures

The need for traffic control signals was assessed at the seven existing unsignalized intersections within the Study Area based on the warrants set out in Ontario Traffic Manual Book 12 (Traffic Signals)[14]. None met the criteria to justify signals by the year 2021. **Appendix E** provides the signal warrant calculations for the intersections.

The operational analyses projected critical movements (v/c > 1.0) at the Trafalgar Road and Steeles Avenue and 5 Sideroad and Eighth Line intersections with 2021 traffic volumes. Improvements investigated to address these concerns are noted as follows:

Trafalgar Road and Steeles Avenue

Per Section 3.2.1, Halton Region already intends to improve Trafalgar Road and Steeles Avenue through planned road widening projects. Further steps to improve the intersection operation, such as extending auxiliary lanes and signal timing optimization, should be explored through project development. It is also noted that the overall intersection is projected to just exceed capacity by 2021 with v/c ratios slightly over 1.0 forecasted, suggesting conditions will not be critical. But with traffic operations at the intersection expected to continue to deteriorate over time with growth, a longer-term solution should be pursued. The subsequent sections of the report discuss this concern in further detail.

5 Sideroad and Eighth Line

The 5 Sideroad and Eighth Line intersection is currently unsignalized with all-way Stop control. Providing turn lanes is not recommended as multi-lane approaches operating under all-way Stop control can result in driver confusion and visibility challenges, posing safety concerns.

Traffic control signals are not justified with 2021 traffic volumes (as noted above) but are projected to be justified by 2031 (see Section 3.7.3). **Table 3.8** summarizes the intersection operations for the 2021 AM, PM and Saturday peak hour traffic volumes with signals in place. The table illustrates that advancing installation would remedy the over-capacity movements for the existing lane configuration (shared left/through/right on all approaches). All movements would operate at LOS B and within capacity. **Appendix F** contains the detailed Synchro output reports.

[14] Queen's Printer for Ontario, Ontario Traffic Manual Book 12 (Traffic Signals), March 2012



## TABLE 3.8: 2021 TRAFFIC OPERATIONS SUMMARY WITH REMEDIAL MEASURES

| Peak Hour | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **5 Sideroad and Eighth Line** | | | | | | | | | | |
| AM | B | 0.73 | B | 19 | B | 13 | A | 8 | B | 18 |
| PM | B | 0.75 | B | 11 | B | 19 | B | 20 | B | 12 |
| Saturday | Not Analyzed for Saturday Peak Hour | | | | | | | | | |

## 3.7 2031 Traffic Conditions

### 3.7.1 Traffic Volume Forecasts

**Figure 3.6** shows the forecasted 2031 AM, PM and Saturday peak hour traffic volumes for the Study Area intersections. The volumes were estimated by adding the 2031 background traffic volumes (per Section 3.5) and the Premier Gateway Phase 1B Employment Area traffic assignments (per Sections 3.3 and 3.4).

### 3.7.2 Traffic Operations with Planned Improvements

Intersection capacity analyses were undertaken to assess 2031 peak hour traffic conditions for the Study Area intersections. The analyses applied the same methodology, parameters and lane configurations used for the existing conditions analysis in Section 2.3 and incorporated the 2021 and 2031 horizon year road network improvements noted in Section 3.2. Signal timings were optimized within their existing cycle lengths using Synchro.

**Table 3.9**, **Table 3.10** and **Table 3.11** summarize the analysis results for the 2031 AM, PM and Saturday peak hour traffic volumes, respectively. **Appendix G** contains the detailed Synchro output reports.

Overall, the Study Area intersections are projected to continue to operate with satisfactory, albeit diminished, levels of service (no LOS F) and within capacity (v/c <= 1.0) for all three peak hours analyzed, except for Trafalgar Road and Steeles Avenue (LOS F and v/c >= 1.25 for all peak hours). A few more approaches experience less than satisfactory levels of service (LOS F) and delay than in 2021. The following critical movements were identified:

- 5 Sideroad and Fifth Line:
  - The southbound shared left/through/right movement is projected to operate at LOS F (v/c = 0.97) during the AM peak hour.
- 5 Sideroad and Trafalgar Road:
  - The westbound shared through/right movement is projected to operate at LOS D (v/c = 0.94) during the PM peak hour.
- 5 Sideroad and Ninth Line:
  - The eastbound shared left/through/right movement is projected to operate at LOS C (v/c = 0.91) during the AM peak hour.

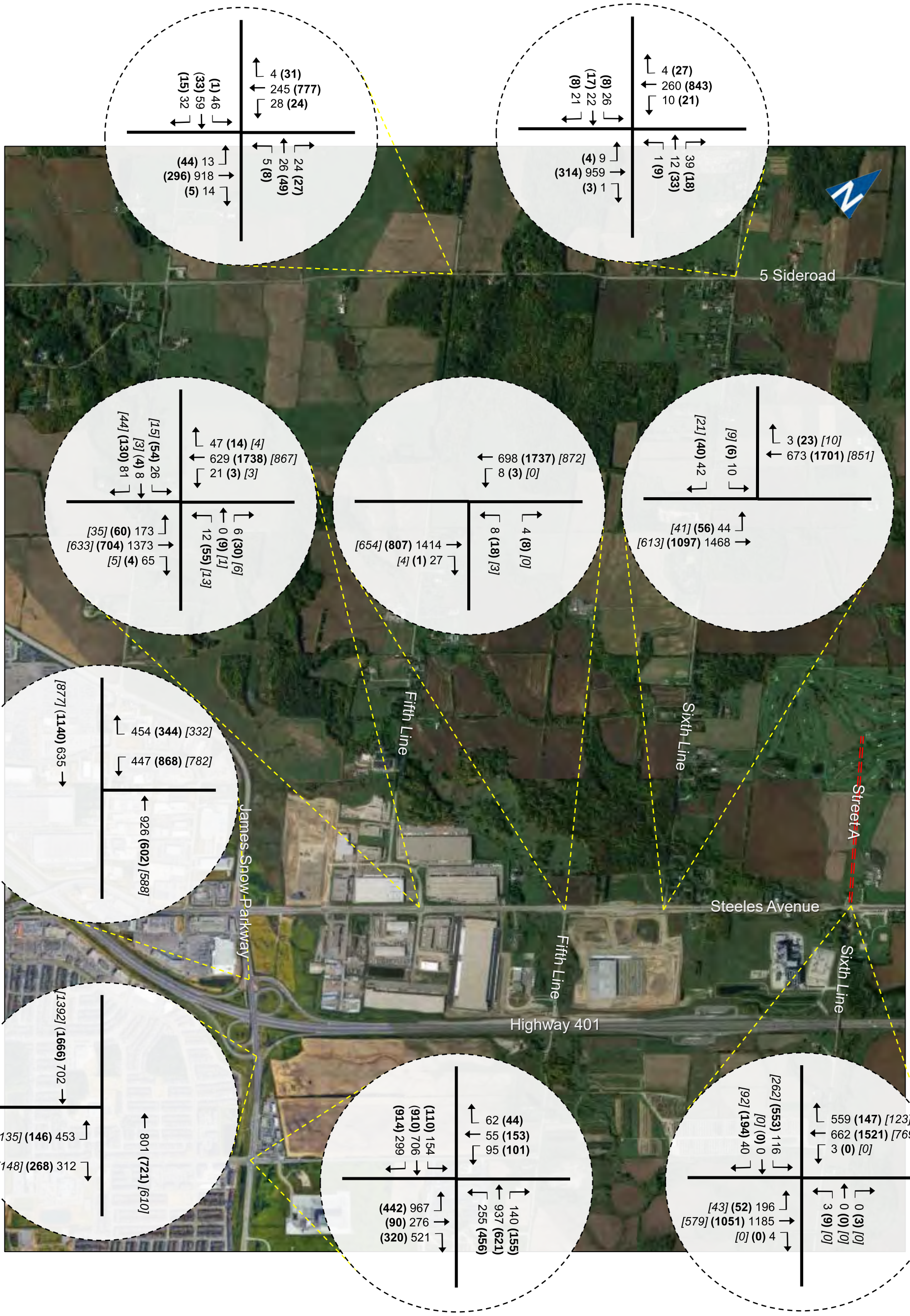


- The westbound shared left/through/right movement is projected to operate at LOS E (v/c = 1.05) during the PM peak hour.
- The northbound shared left/through/right movement is projected to operate at LOS E (v/c = 0.97) during PM peak hour.
- The southbound shared left/through/right movement is projected to operate at LOS C (v/c = 0.87) during the AM peak hour.

- Trafalgar Road and Hornby Road:
  - The eastbound shared left/right movement is projected to operate at LOS F during both the AM and PM peak hours (v/c = 1.74 and 1.10, respectively).
- Steeles Avenue and Trafalgar Road:
  - The eastbound right movement is projected to operate at LOS F (v/c = 1.69) during the PM peak hour and LOS F (v/c = 0.94) during the Saturday peak hour.
  - The westbound left movement is projected to operate at LOS F (v/c = 1.53) during the AM peak hour, LOS F (v/c = 1.84) during the PM peak hour, and LOS F (v/c = 1.47) during the Saturday peak hour.
  - The northbound left movement is projected to operate at LOS F (v/c = 1.43) during the AM peak hour and LOS F (v/c = 1.54) during the PM peak hour.
  - The northbound right movement is projected to operate at LOS F (v/c = 1.69) during the PM peak hour and at LOS F (v/c = 1.63) during the Saturday peak hour.
  - The southbound left movement is projected to operate at LOS F (v/c = 0.97) during the PM peak hour.
  - The southbound shared through/right movement is projected to operate at LOS F (v/c = 1.34) during the AM peak hour and LOS F (v/c = 1.28) during the PM peak hour.
- Steeles Avenue and Eighth Line/Toronto Premium Outlets Access:
  - The eastbound left movement is projected to operate at LOS E (v/c = 0.96) during the PM peak hour.
  - The westbound shared through/right movement is projected to operate at LOS E (v/c = 0.97) during the PM peak hour.

- Steeles Avenue and Ninth Line South:
  - The eastbound through movement is projected to operate at LOS C (v/c = 0.89) during the AM peak hour and LOS E (v/c = 0.95) during the PM peak hour.
  - The westbound left movement is projected to operate at LOS D (v/c = 0.90) during the AM peak hour and LOS E (v/c = 0.97) during the PM peak hour.
  - The northbound left movement is projected to operate at LOS D (v/c = 0.91) during the PM peak hour.
- Winston Churchill Boulevard and Highway 401 (North Ramp Terminal):
  - The westbound left-left/right movement is projected to operate at LOS D (v/c = 0.91) during the Saturday peak hour.
- James Snow Parkway and Main Street:
  - The eastbound left movement is projected to operate at LOS F (v/c = 0.95) during the PM peak hour.
  - The northbound left movement is projected to operate at LOS E (v/c = 0.92) during the AM peak hour and LOS D (v/c = 0.96) during the PM peak hour.
  - The northbound shared through/right movement is projected to operate at LOS D (v/c = 0.86) during the AM peak hour.
  - The southbound left movement is projected to operate at LOS C (v/c = 0.86) during the AM peak hour.
  - The southbound right movement is projected to operate at LOS E (v/c = 1.00) during the PM peak hour.
- Steeles Avenue and Street B:
  - The westbound through movement is projected to operate at LOS E (v/c = 0.92) during the PM peak hour.
  - The southbound left movement is projected to operate at LOS D (v/c = 0.86) during the PM peak hour.
- Trafalgar Road and Street B:
  - The eastbound shared through/right movement is projected to operate at LOS F (v/c = 1.08) during the PM peak hour.
  - The westbound left movement is projected to operate at LOS E (v/c = 1.03) during the PM peak hour.

- The northbound left movement is projected to operate at LOS D (v/c = 0.90) during the AM peak hour.
- The northbound through movement is projected to operate at LOS D (v/c = 0.92) during the PM peak hour.
- The southbound through movement is projected to operate at LOS D (v/c = 0.93) during the AM peak hour.



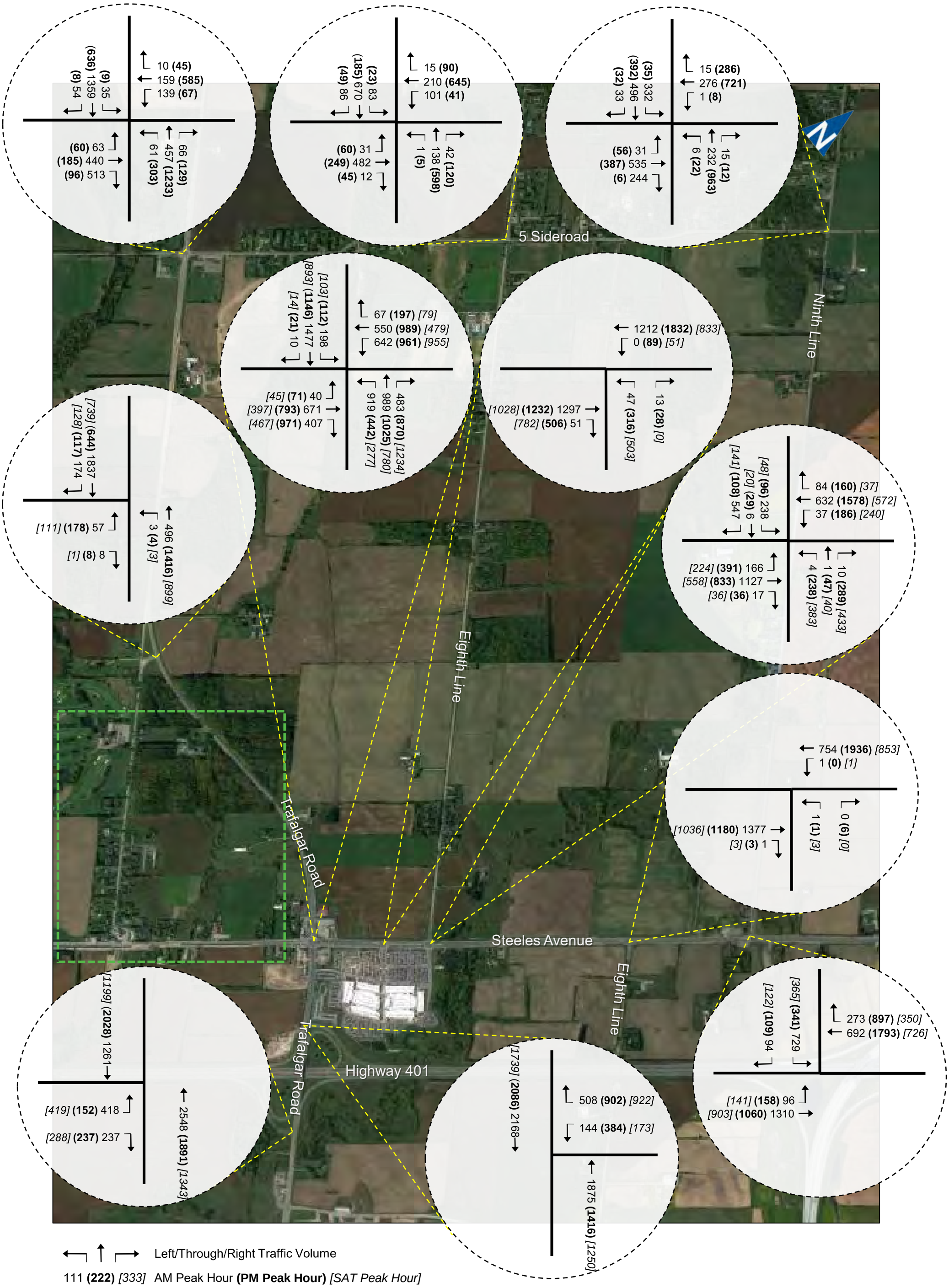

← ↑ → Left/Through/Right Traffic Volume

111 **(222)** *[333]* AM Peak Hour **(PM Peak Hour)** *[SAT Peak Hour]*

# 2031 Traffic Volumes (1/4)

Premier Gateway West Scoped Area Transportation Study
170050

**Figure 3.6**



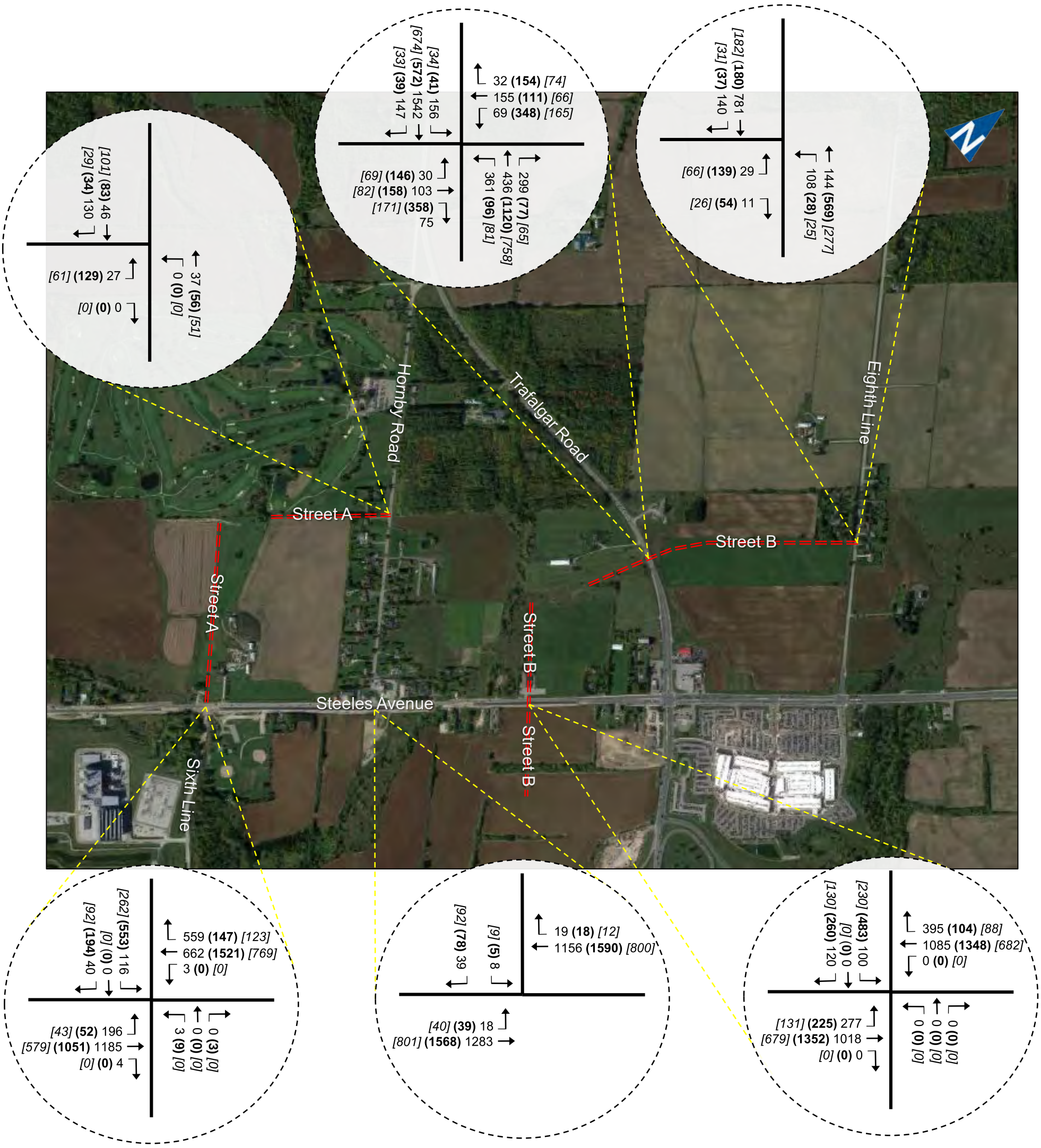

Left/Through/Right Traffic Volume

111 **(222)** *[333]* AM Peak Hour **(PM Peak Hour)** *[SAT Peak Hour]*

# 2031 Traffic Volumes (2/4)

Premier Gateway West Scoped Area Transportation Study
170050

Figure 3.6




Left/Through/Right Traffic Volume

111 **(222)** *[333]* AM Peak Hour **(PM Peak Hour)** *[SAT Peak Hour]*

# 2031 Traffic Volumes (3/4)

Premier Gateway West Scoped Area Transportation Study
170050

Figure 3.6


←┐ ↑ ┌→ Left/Through/Right Traffic Volume

111 **(222)** *[333]* AM Peak Hour **(PM Peak Hour)** *[SAT Peak Hour]*

# 2031 Traffic Volumes (4/4)

Premier Gateway West Scoped Area Transportation Study
170050

**Figure 3.6**

## TABLE 3.9: 2031 TRAFFIC OPERATIONS SUMMARY – AM PEAK HOUR

| Intersection | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **Signalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Trafalgar Rd. | C | 0.77 | C | 29 | D | 36 | B | 17 | C | 25 |
| 5 Sideroad & Eighth Line | B | 0.74 | B | 15 | B | 14 | A | 9 | B | 14 |
| 5 Sideroad & Ninth Line | C | 0.89 | C | 33 | B | 14 | B | 12 | C | 26 |
| Steeles Ave. & Fifth Line/ Brownridge Rd. | A | 0.47 | A | 7 | A | 5 | C | 25 | C | 25 |
| Steeles Ave. & Fifth Line South | A | 0.46 | A | 3 | A | 3 | C | 33 | - | - |
| Steeles Ave. & Sixth Line | B | 0.45 | B | 13 | A | 9 | - | - | B | 13 |
| Steeles Ave. & Sixth Line South/Street A | C | 0.52 | B | 20 | C | 26 | B | 19 | C | 22 |
| Steeles Ave. & Trafalgar Rd. | **F** | **1.25** | E | 58 | **F** | **179** | **F** | **121** | **F** | **193** |
| Steeles Ave. & TPO Access | A | 0.41 | A | 7 | A | 7 | B | 20 | - | - |
| Steeles Ave. & Eighth Line/TPO Access | C | 0.68 | C | 23 | C | 25 | C | 23 | C | 29 |
| Steeles Ave. & Ninth Line | C | 0.90 | C | 31 | C | 33 | - | - | C | 30 |
| Steeles Ave. & Ninth Line South | C | 0.85 | C | 29 | B | 20 | C | 33 | - | - |
| James Snow Pkwy. & Highway 401 North Terminal | B | 0.58 | - | - | C | 23 | B | 14 | B | 12 |
| James Snow Pkwy. & Highway 401 South Terminal | B | 0.45 | C | 21 | - | - | A | 9 | A | 9 |
| Trafalgar Rd. & Highway 401 North Terminal | C | 0.79 | - | - | D | 46 | B | 15 | B | 16 |
| Trafalgar Rd. & Highway 401 South Terminal | B | 0.80 | D | 51 | - | - | B | 14 | A | 8 |
| Winston Churchill Blvd. & Highway 401 North Terminal | C | 0.74 | - | - | E | 65 | B | 16 | B | 15 |
| Winston Churchill Blvd. & Highway 401 South Terminal | C | 0.57 | D | 52 | - | - | B | 14 | B | 14 |
| James Snow Pkwy. & Main St. | D | 0.87 | C | 34 | D | 53 | D | 46 | D | 43 |
| Steeles Ave. & Street B | C | 0.67 | B | 12 | C | 28 | - | - | C | 27 |
| Trafalgar Rd. & Street B | C | 0.85 | C | 35 | D | 37 | C | 24 | C | 34 |
| **Unsignalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Fifth Line | | | A | < 1 | A | 2 | E | 38 | **F** | **126** |
| 5 Sideroad & Sixth Line | | | A | < 1 | A | 1 | D | 26 | E | 47 |
| Steeles Ave. & Hornby Rd. | | | A | < 1 | A | < 1 | - | - | C | 20 |
| Trafalgar Rd. & Hornby Rd. | | | **F** | **585** | - | - | A | < 1 | A | < 1 |
| Steeles Ave. & Eighth Line South | | | A | < 1 | A | < 1 | E | 48 | - | - |
| Eighth Line & Street B | | | E | 35 | - | - | B | 5 | A | < 1 |

## TABLE 3.10: 2031 TRAFFIC OPERATIONS SUMMARY – PM PEAK HOUR

| Intersection | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **Signalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Trafalgar Rd. | C | 0.89 | C | 27 | D | 45 | C | 22 | C | 22 |
| 5 Sideroad & Eighth Line | B | 0.82 | A | 8 | B | 19 | B | 20 | B | 14 |
| 5 Sideroad & Ninth Line | **D** | **1.02** | B | 16 | E | 64 | E | 56 | C | 34 |
| Steeles Ave. & Fifth Line/ Brownridge Rd. | A | 0.56 | A | 6 | A | 7 | C | 25 | C | 25 |
| Steeles Ave. & Fifth Line South | A | 0.51 | A | 3 | A | 4 | C | 31 | - | - |
| Steeles Ave. & Sixth Line | B | 0.47 | A | 9 | B | 11 | - | - | B | 16 |
| Steeles Ave. & Sixth Line South/Street A | D | 0.90 | C | 28 | D | 46 | E | 58 | D | 45 |
| Steeles Ave. & Trafalgar Rd. | **F** | **1.74** | **F** | **210** | **F** | **213** | **F** | **226** | **F** | **187** |
| Steeles Ave. & TPO Access | B | 0.66 | B | 13 | A | 9 | C | 23 | - | - |
| Steeles Ave. & Eighth Line/TPO Access | D | 0.95 | D | 38 | D | 53 | E | 66 | E | 70 |
| Steeles Ave. & Ninth Line | C | 0.80 | B | 16 | C | 29 | - | - | D | 35 |
| Steeles Ave. & Ninth Line South | D | 0.97 | E | 58 | D | 45 | D | 43 | - | - |
| James Snow Pkwy. & Highway 401 North Terminal | B | 0.68 | - | - | C | 22 | B | 15 | B | 18 |
| James Snow Pkwy. & Highway 401 South Terminal | B | 0.52 | C | 28 | - | - | A | 6 | A | 8 |
| Trafalgar Rd. & Highway 401 North Terminal | C | 0.86 | - | - | D | 43 | B | 18 | C | 25 |
| Trafalgar Rd. & Highway 401 South Terminal | B | 0.65 | D | 50 | - | - | A | 6 | A | 7 |
| Winston Churchill Blvd. & Highway 401 North Terminal | C | 0.84 | - | - | D | 54 | C | 26 | C | 23 |
| Winston Churchill Blvd. & Highway 401 South Terminal | C | 0.60 | E | 64 | - | - | B | 10 | B | 11 |
| James Snow Pkwy. & Main St. | D | 0.96 | E | 68 | E | 71 | C | 31 | D | 51 |
| Steeles Ave. & Street B | D | 0.90 | C | 33 | E | 56 | - | - | D | 40 |
| Trafalgar Rd. & Street B | **D** | **1.02** | E | 77 | D | 52 | D | 36 | C | 24 |
| **Unsignalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Fifth Line | | | A | 2 | A | 1 | E | 39 | D | 32 |
| 5 Sideroad & Sixth Line | | | A | < 1 | A | 1 | D | 31 | D | 32 |
| Steeles Ave. & Hornby Rd. | | | A | < 1 | A | < 1 | - | - | D | 25 |
| Trafalgar Rd. & Hornby Rd. | | | **F** | **153** | - | - | A | < 1 | A | < 1 |
| Steeles Ave. & Eighth Line South | | | A | < 1 | A | < 1 | C | 19 | - | - |
| Eighth Line & Street B | | | C | 15 | - | - | A | < 1 | A | < 1 |

## TABLE 3.11: 2031 TRAFFIC OPERATIONS SUMMARY – SATURDAY PEAK HOUR

| Intersection | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **Signalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Trafalgar Rd. | Not Analyzed for Saturday Peak Hour | | | | | | | | | |
| 5 Sideroad & Eighth Line | | | | | | | | | | |
| 5 Sideroad & Ninth Line | | | | | | | | | | |
| Steeles Ave. & Fifth Line/ Brownridge Rd. | A | 0.27 | A | 4 | A | 5 | C | 22 | C | 22 |
| Steeles Ave. & Fifth Line South | A | 0.25 | A | 3 | A | 3 | C | 27 | - | - |
| Steeles Ave. & Sixth Line | B | 0.24 | B | 13 | B | 14 | - | - | A | 6 |
| Steeles Ave. & Sixth Line South/Street A | B | 0.54 | B | 19 | C | 20 | A | < 1 | A | 8 |
| Steeles Ave. & Trafalgar Rd. | **F** | **1.38** | E | 69 | **F** | **187** | **F** | **202** | D | 48 |
| Steeles Ave. & TPO Access | B | 0.56 | B | 12 | A | 6 | C | 28 | - | - |
| Steeles Ave. & Eighth Line/TPO Access | C | 0.59 | C | 21 | C | 21 | C | 28 | C | 34 |
| Steeles Ave. & Ninth Line | B | 0.57 | A | 9 | B | 15 | - | - | C | 35 |
| Steeles Ave. & Ninth Line South | B | 0.57 | B | 18 | B | 10 | B | 19 | - | - |
| James Snow Pkwy. & Highway 401 North Terminal | B | 0.57 | - | - | C | 21 | B | 14 | B | 15 |
| James Snow Pkwy. & Highway 401 South Terminal | A | 0.40 | C | 28 | - | - | A | 5 | A | 6 |
| Trafalgar Rd. & Highway 401 North Terminal | C | 0.76 | - | - | D | 35 | B | 17 | B | 20 |
| Trafalgar Rd. & Highway 401 South Terminal | B | 0.51 | D | 40 | - | - | A | 8 | A | 8 |
| Winston Churchill Blvd. & Highway 401 North Terminal | C | 0.65 | - | - | D | 50 | B | 14 | B | 15 |
| Winston Churchill Blvd. & Highway 401 South Terminal | B | 0.45 | D | 48 | - | - | A | 6 | A | 7 |
| James Snow Pkwy. & Main St. | Not Analyzed for Saturday Peak Hour | | | | | | | | | |
| Steeles Ave. & Street B | B | 0.57 | B | 17 | C | 24 | - | - | B | 11 |
| Trafalgar Rd. & Street B | C | 0.51 | B | 19 | B | 15 | C | 21 | C | 23 |
| **Unsignalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Fifth Line | Not Analyzed for Saturday Peak Hour | | | | | | | | | |
| 5 Sideroad & Sixth Line | | | | | | | | | | |
| Steeles Ave. & Hornby Rd. | | | A | 1 | A | < 1 | - | - | B | 13 |
| Trafalgar Rd. & Hornby Rd. | | | E | 49 | - | - | A | < 1 | A | < 1 |
| Steeles Ave. & Eighth Line South | | | A | < 1 | A | < 1 | D | 34 | - | - |
| Eighth Line & Street B | | | B | 12 | - | - | A | 1 | A | < 1 |

### 3.7.3 Traffic Operations with Remedial Measures

The need for traffic control signals was assessed at the seven existing unsignalized intersections within the Study Area based on the warrants set out in Ontario Traffic Manual Book 12 (Traffic Signals)[15]. The 5 Sideroad and Eighth Line intersection was the only location that met the criteria to justify signals by the year 2031. **Appendix F** provides the signal warrant calculations for the intersections.

The operational analyses projected critical movements (v/c > 1.0) at several Study Area intersections with 2031 traffic volumes. Improvements investigated to address these concerns are noted as follows:

Trafalgar Road and Steeles Avenue

As noted in Section 3.6.3, Halton Region already intends to improve Trafalgar Road and Steeles Avenue through planned road widening projects. But even with these improvements, the intersection is projected to operate with unsatisfactory levels of service (LOS F) and over capacity (v/c > 1.0) for all three peak hours analyzed. With traffic operations expected to continue to deteriorate over time with growth, a longer-term solution should be pursued. The subsequent sections of the report discuss this concern in further detail.

5 Sideroad and Ninth Line

Several movements at the 5 Sideroad and Ninth Line intersection are projected to operate over capacity (v/c > 1.0) with 2031 peak hour traffic volumes. Suggested improvements to address these concerns include:

- Addition of eastbound and westbound left-turn lanes with 30 metres storage each, respectively
- Addition of a westbound right turn lane with 60 metres storage

The provision of these auxiliary lanes should be explored through the planned Ninth Line widening project if not already identified.

Trafalgar Road and Street B

Several movements at the 5 Sideroad and Ninth Line intersection are projected to operate over capacity (v/c > 1.0) with 2031 peak hour traffic volumes. Suggested improvements to address these concerns

[15] Queen's Printer for Ontario, Ontario Traffic Manual Book 12 (Traffic Signals), March 2012

include the addition of eastbound and westbound right-turn lanes with 50 metres storage each, respectively.

The provision of these auxiliary lanes should be explored through the planned Trafalgar Road widening project if not already identified.

Trafalgar Road and Hornby Road

The Trafalgar Road and Hornby Road intersection is currently unsignalized with two-way Stop control on Hornby Road. Providing turn lanes is not recommended as multi-lane approaches operating under Stop control can result in driver confusion and visibility challenges, posing safety concerns.

The eastbound minor street approach is forecasted to operate over capacity. With the high volume of traffic anticipated along Trafalgar Road there are limited gaps in the traffic stream for vehicles to turn left or right out from Hornby Road. Although traffic control signals are not justified with 2031 traffic volumes (as noted above), signalization should be reconsidered in the future if operational concerns manifest with development of the Premier Gateway Employment Area.

**Table 3.12** summarizes the intersection operations for the 2031 AM, PM and Saturday peak hour traffic volumes with the noted improvements for the 5 Sideroad and Ninth Line and Trafalgar Road and Street B intersections in place. The table illustrates that these improvements would remedy the over-capacity movements. All movements would operate at LOS B or C and within capacity.



## TABLE 3.12: 2031 TRAFFIC OPERATIONS SUMMARY WITH REMEDIAL MEASURES

| Peak Hour | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **5 Sideroad and Ninth Line** | | | | | | | | | | |
| AM | C | 0.85 | C | 27 | B | 14 | B | 11 | C | 24 |
| PM | C | 0.83 | B | 19 | C | 28 | C | 26 | B | 20 |
| Saturday | Not Analyzed for Saturday Peak Hour | | | | | | | | | |
| **Trafalgar Road and Street B** | | | | | | | | | | |
| AM | C | 0.82 | C | 30 | C | 33 | C | 24 | C | 34 |
| PM | C | 0.80 | C | 25 | B | 18 | C | 30 | C | 24 |
| Saturday | B | 0.46 | B | 17 | B | 15 | C | 20 | C | 23 |

### 3.7.4 Traffic Operations with Proposed 5½ Line

The traffic operations implications of implementing the proposed 5½ Line arterial road corridor with a Highway 401 interchange were assessed for the 2031 horizon year. The traffic volumes shown in **Figure 3.6** were manually reassigned to account for the new road using outputs from the Halton Model for scenarios with and without 5½ Line. **Appendix I** provides the adjusted traffic volume forecasts.

The analyses assumed the 5½ Line project would:

- Be constructed as a six-lane arterial road from Britannia Road to Steeles Avenue (per the Halton Region Transportation Master Plan and recent capital budgets)
- Connect to Sixth Line north of Steeles Avenue to provide a continuous alignment
- Provide auxiliary lanes at the Steeles Avenue and 5½ Line/Sixth Line North intersection with the following configuration:
  - Eastbound left-turn lane
  - Westbound dual left-turn lanes
  - Northbound left-turn and right-turn lanes
  - Southbound left-turn lane
- Feature a Parclo A4 interchange configuration

The analyses also assumed the other planned road improvements noted in Section 3.2 and applied the same methodology and parameters used for the existing conditions analysis in Section 2.3. Signal timings were optimized within their existing cycle lengths using Synchro.

**Table 3.13**, **Table 3.14** and **Table 3.15** summarize the analysis results for the 2031 AM, PM and Saturday peak hour traffic volumes with 5½ Line in place, respectively. **Appendix I** also contains the detailed Synchro output reports.

Overall, the Study Area intersections are projected to operate with satisfactory levels of service (no LOS F) and within capacity (v/c <= 1.0) for all three peak hours analyzed except for Trafalgar Road and Steeles Avenue (LOS F and v/c >= 1.19 for all peak hours). Other than Trafalgar Road and Steeles Avenue and Trafalgar Road and Hornby Road, the approaches for all other intersections are expected to operate satisfactorily (not LOS F).

The tables also compare traffic operations with and without 5½ Line on an intersection by intersection basis. The green highlighted cells in the



tables denote intersections projected to experience improved levels of service, delay and/or volume to capacity (v/c) ratios with 5½ Line in place. Intersections with cells highlighted in red are expected to operate worse.

With 5½ Line implemented, the Study Area intersections are forecasted to continue operating with satisfactory levels of service overall, with intersections in the James Snow Parkway corridor experiencing the greatest operational benefit. Some intersections would experience improved traffic operations, while others would degrade but still function with satisfactory levels of service and within capacity. Only the Trafalgar Road and Hornby Road intersection would require remedial improvements. The eastbound approach movements would operate with higher delays and the previously identified over-capacity issues would be further exacerbated due to the anticipated changes in travel patterns.

The results suggest that constructing 5½ Line and an interchange with Highway 401 would benefit traffic operations at the Trafalgar Road and Steeles Avenue intersection for the 2031 horizon year but not sufficiently to alleviate projected level of service and capacity deficiencies. With minimal change to eastbound and westbound volumes along Steeles Avenue at Trafalgar Road, traffic operations for the intersection do not change significantly with 5½ Line in place. This can be attributed to the absence of alternative travel routes to and from the Premier Gateway Phase 1B Employment Area Employment lands and other development within the Study Area.

Further solutions to the projected level of service and capacity concerns at the Trafalgar Road and Steeles Avenue intersection should be explored. The Premier Gateway Phase 1B Employment Lands development should proceed in phases subject to the provision of required infrastructure improvements to support the planned phase of development.

## TABLE 3.13: 2031 TRAFFIC OPERATIONS SUMMARY WITH 5 ½ LINE – AM PEAK HOUR

| Intersection | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **Signalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Trafalgar Rd. | | | | | | | | | | |
| 5 Sideroad & Eighth Line | | | | | | | | | | |
| 5 Sideroad & Ninth Line | | | | | | | | | | |
| Steeles Ave. & Fifth Line/ Brownridge Rd. | A | 0.57 | A | 7 | A | 5 | C | 25 | C | 25 |
| Steeles Ave. & Fifth Line South | A | 0.55 | A | 4 | A | 2 | C | 33 | - | - |
| Steeles Ave. & Sixth Line/5 ½ Line | C | 0.71 | C | 22 | C | 21 | C | 30 | C | 27 |
| Steeles Ave. & Sixth Line South/Street A | C | 0.52 | B | 19 | C | 25 | B | 20 | C | 22 |
| Steeles Ave. & Trafalgar Rd. | **F** | **1.19** | E | 58 | **F** | **146** | **F** | **103** | **F** | **162** |
| Steeles Ave. & TPO Access | A | 0.41 | A | 7 | A | 7 | B | 20 | - | - |
| Steeles Ave. & Eighth Line/TPO Access | C | 0.67 | C | 23 | C | 25 | C | 23 | C | 29 |
| Steeles Ave. & Ninth Line | C | 0.89 | C | 31 | C | 33 | - | - | C | 30 |
| Steeles Ave. & Ninth Line South | C | 0.85 | C | 28 | B | 20 | C | 33 | - | - |
| James Snow Pkwy. & Highway 401 North Terminal | B | 0.51 | - | - | C | 23 | B | 11 | A | 10 |
| James Snow Pkwy. & Highway 401 South Terminal | B | 0.36 | C | 22 | - | - | A | 7 | A | 7 |
| Trafalgar Rd. & Highway 401 North Terminal | B | 0.79 | - | - | D | 46 | B | 14 | B | 17 |
| Trafalgar Rd. & Highway 401 South Terminal | B | 0.60 | D | 46 | - | - | A | 9 | A | 9 |
| Winston Churchill Blvd. & Highway 401 North Terminal | C | 0.74 | - | - | E | 65 | B | 16 | B | 14 |
| Winston Churchill Blvd. & Highway 401 South Terminal | C | 0.56 | D | 52 | - | - | B | 13 | B | 14 |
| James Snow Pkwy. & Main St. | C | 0.75 | C | 32 | D | 52 | D | 37 | C | 34 |
| Steeles Ave. & Street B | B | 0.63 | B | 11 | C | 26 | - | - | C | 26 |
| Trafalgar Rd. & Street B | C | 0.84 | C | 35 | D | 37 | C | 23 | C | 29 |
| **Unsignalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Fifth Line | | | | | | | | | | |
| 5 Sideroad & Sixth Line | | | | | | | | | | |
| Steeles Ave. & Hornby Rd. | | | A | 1 | A | < 1 | - | - | C | 19 |
| Trafalgar Rd. & Hornby Rd. | | | **F** | **> 250** | - | - | A | < 1 | A | < 1 |
| Steeles Ave. & Eighth Line South | | | A | < 1 | A | < 1 | E | 49 | - | - |
| Eighth Line & Street B | | | E | 35 | - | - | A | 5 | A | < 1 |

## TABLE 3.14: 2031 TRAFFIC OPERATIONS SUMMARY WITH 5 ½ LINE – PM PEAK HOUR

| Intersection | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **Signalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Trafalgar Rd. | | | | | | | | | | |
| 5 Sideroad & Eighth Line | | | | | | | | | | |
| 5 Sideroad & Ninth Line | | | | | | | | | | |
| Steeles Ave. & Fifth Line/ Brownridge Rd. | A | 0.54 | A | 7 | A | 7 | C | 24 | C | 26 |
| Steeles Ave. & Fifth Line South | A | 0.46 | A | 4 | A | 4 | C | 30 | - | - |
| Steeles Ave. & Sixth Line/5 ½ Line | B | 0.76 | C | 21 | B | 17 | B | 19 | B | 17 |
| Steeles Ave. & Sixth Line South/Street A | D | 0.85 | C | 27 | D | 44 | D | 55 | D | 38 |
| Steeles Ave. & Trafalgar Rd. | **F** | **1.62** | **F** | **210** | **F** | **196** | **F** | **175** | **F** | **151** |
| Steeles Ave. & TPO Access | B | 0.66 | B | 13 | A | 9 | C | 23 | - | - |
| Steeles Ave. & Eighth Line/TPO Access | D | 0.88 | C | 34 | D | 43 | D | 54 | E | 65 |
| Steeles Ave. & Ninth Line | C | 0.80 | B | 17 | C | 29 | - | - | D | 35 |
| Steeles Ave. & Ninth Line South | D | 0.97 | E | 63 | D | 47 | D | 42 | - | - |
| James Snow Pkwy. & Highway 401 North Terminal | B | 0.51 | - | - | C | 22 | B | 11 | B | 12 |
| James Snow Pkwy. & Highway 401 South Terminal | A | 0.30 | C | 29 | - | - | A | 4 | A | 4 |
| Trafalgar Rd. & Highway 401 North Terminal | C | 0.82 | - | - | D | 40 | B | 17 | C | 23 |
| Trafalgar Rd. & Highway 401 South Terminal | B | 0.64 | D | 43 | - | - | A | 9 | B | 12 |
| Winston Churchill Blvd. & Highway 401 North Terminal | C | 0.84 | - | - | D | 54 | C | 26 | C | 23 |
| Winston Churchill Blvd. & Highway 401 South Terminal | C | 0.67 | E | 64 | - | - | B | 13 | B | 11 |
| James Snow Pkwy. & Main St. | D | 0.84 | E | 60 | E | 71 | B | 17 | D | 37 |
| Steeles Ave. & Street B | D | 0.79 | C | 31 | D | 50 | - | - | C | 29 |
| Trafalgar Rd. & Street B | D | 0.96 | E | 64 | D | 48 | C | 28 | C | 24 |
| **Unsignalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Fifth Line | | | | | | | | | | |
| 5 Sideroad & Sixth Line | | | | | | | | | | |
| Steeles Ave. & Hornby Rd. | | | A | 2 | A | < 1 | - | - | E | 49 |
| Trafalgar Rd. & Hornby Rd. | | | **F** | **224** | - | - | A | < 1 | A | < 1 |
| Steeles Ave. & Eighth Line South | | | A | < 1 | A | < 1 | C | 20 | - | - |
| Eighth Line & Street B | | | B | 15 | - | - | A | < 1 | A | < 1 |

## TABLE 3.15: 2031 TRAFFIC OPERATIONS SUMMARY WITH 5 ½ LINE – SATURDAY PEAK HOUR

| Intersection | Overall | | Intersection Approach | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | EB | | WB | | NB | | SB | |
| | LOS | v/c | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| **Signalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Trafalgar Rd. | | | | | | | | | | |
| 5 Sideroad & Eighth Line | | | | | | | | | | |
| 5 Sideroad & Ninth Line | | | | | | | | | | |
| Steeles Ave. & Fifth Line/ Brownridge Rd. | A | 0.27 | A | 5 | A | 5 | C | 22 | C | 22 |
| Steeles Ave. & Fifth Line South | A | 0.26 | A | 3 | A | 3 | C | 27 | - | - |
| Steeles Ave. & Sixth Line/5 ½ Line | B | 0.43 | B | 18 | B | 15 | B | 16 | B | 15 |
| Steeles Ave. & Sixth Line South/Street A | B | 0.51 | B | 19 | C | 20 | A | < 1 | A | 8 |
| Steeles Ave. & Trafalgar Rd. | **F** | **1.33** | **F** | **101** | C | 34 | **F** | **164** | **F** | **108** |
| Steeles Ave. & TPO Access | B | 0.55 | B | 14 | A | 7 | C | 26 | - | - |
| Steeles Ave. & Eighth Line/TPO Access | C | 0.59 | C | 21 | C | 21 | C | 28 | C | 34 |
| Steeles Ave. & Ninth Line | B | 0.57 | A | 9 | B | 15 | - | - | C | 35 |
| Steeles Ave. & Ninth Line South | B | 0.57 | B | 18 | B | 10 | B | 19 | - | - |
| James Snow Pkwy. & Highway 401 North Terminal | B | 0.47 | - | - | C | 22 | B | 11 | B | 11 |
| James Snow Pkwy. & Highway 401 South Terminal | A | 0.23 | C | 29 | - | - | A | 4 | A | 4 |
| Trafalgar Rd. & Highway 401 North Terminal | C | 0.76 | - | - | D | 35 | B | 17 | B | 20 |
| Trafalgar Rd. & Highway 401 South Terminal | B | 0.51 | D | 40 | - | - | A | 8 | A | 8 |
| Winston Churchill Blvd. & Highway 401 North Terminal | C | 0.65 | - | - | D | 50 | B | 14 | B | 15 |
| Winston Churchill Blvd. & Highway 401 South Terminal | B | 0.45 | D | 48 | - | - | A | 6 | A | 7 |
| James Snow Pkwy. & Main St. | | | | | | | | | | |
| Steeles Ave. & Street B | B | 0.51 | B | 16 | C | 24 | - | - | B | 11 |
| Trafalgar Rd. & Street B | B | 0.46 | B | 19 | B | 14 | B | 20 | C | 22 |
| **Unsignalized Intersections** | | | | | | | | | | |
| 5 Sideroad & Fifth Line | | | | | | | | | | |
| 5 Sideroad & Sixth Line | | | | | | | | | | |
| Steeles Ave. & Hornby Rd. | | | A | 1 | A | < 1 | - | - | B | 13 |
| Trafalgar Rd. & Hornby Rd. | | | **F** | **103** | - | - | A | < 1 | A | < 1 |
| Steeles Ave. & Eighth Line South | | | A | < 1 | A | < 1 | C | 17 | - | - |
| Eighth Line & Street B | | | B | 11 | - | - | A | 1 | A | < 1 |

# 4 Transportation Analysis of Infrastructure and Land Use Scenarios

This chapter will identify and assess the implications of other infrastructure improvements or changes that could benefit traffic operations within the Study Area, specifically for the Trafalgar Road and Steeles Avenue intersection. The impact of changing land use assumptions will also be examined.

The analyses will be completed for the next version of the report.

## 4.1 Implications of Other Infrastructure Improvements or Changes

## 4.2 Impact of Changing Land Use Assumptions

### 4.2.1 Land Use Scenarios

Two land use scenarios have been identified for analysis:

- Proposed UPS Development at Trafalgar Road and Steeles Avenue
  - Generic development-generated vehicle traffic assignments estimated for the lands will be replaced with assumptions specific to the proposed UPS development
- Proposed Development of P.A.Z. and Gellert Lands
  - Traffic generated by the P.A.Z. and Gellert Land will be added on top of existing traffic assignments. No offsetting allowance in the background traffic growth is proposed.



# 5 Other Travel Modes

## 5.1 Transit

There is currently no transit service to the Study Area. With the area being developed as a large employment area, the Premier Gateway Phase 1B Employment Area lands have the potential to a significant generator of transit ridership. The secondary plan should include policies supporting the future provision of transit service to this important node.

The development should be designed to allow for well-connected, efficient transit to the area once service is available, offering individuals more choice in transportation modes and helping to reduce dependence on personal vehicle travel. This includes incorporating a greater range of uses and designing the development to minimize walking distances and enhance conditions for pedestrians and cyclists to access the service. Further guidance on transit-supportive land use design for office parks and industrial/employment areas is provided in several references, including the Ministry of Transportation Transit-Supportive Guidelines[16], and outlined further in Section 5.4 below.

Future transit routes servicing the Premier Gateway Phase 1B Employment Area lands should connect with major stops at nearby population centres (Milton, Georgetown, and Mississauga), as well as adjacent GO transit hubs (Milton and Lisgar). Routes within the area should be coordinated with development and designed to serve key origin-destination pairings to ensure the service will be effective and well-utilized.

## 5.2 Active Transportation

Per Section 1.3, the Town of Halton Hills and Halton Region active transportation plans identify future cycling lanes along Steeles Avenue and a multi-use trail along Trafalgar Road. These facilities will form the backbone for the active transportation network serving the Premier Gateway Phase 1B Employment Area lands.

Like transit, the development should be designed to facilitate (and not preclude) the use of active transportation modes. New roads within the secondary plan area should be designed to include cycling and pedestrian facilities. Individual developments should provide bicycle parking, building entrances along street-frontages and additional amenities further described in Section 5.4.

[16] Queen's Printer for Ontario, Transit-Supportive Guidelines, 2012



## 5.3 Transportation Demand Management

Transportation Demand Management (TDM) uses policies, programs, services and products to influence whether, why, when, where and how people travel. TDM measures help shape the economic and social factors behind personal travel decisions. These actions are intended to encourage the use of more sustainable modes of transportation and minimize single-occupant vehicle trips as part of an overall transportation management strategy.

**Table 5.1** outlines a range of TDM measures intended to influence site design, offer travel choices and promote sustainable travel options. These measures should be pursued through future development within the Premier Gateway Phase 1B Employment Area lands as applicable. With the area comprising mostly new development, an opportunity exists to incorporate site design features and encourage travel behaviour that can reduce single-occupant vehicle trips and minimize vehicular traffic generation.



## TABLE 5.1: POTENTIAL TDM MEASURES

| TDM Measure | Land Use | |
|---|---|---|
| | Commercial | Employment |
| **Site Design** | | |
| Provide a clearly visible "wayfinding system" suitable for all users. Features may include textured surfaces, coloured lines and patterns, lights, raised letters, large lettering and other clearly understandable directional cues. | ● | ● |
| Locate signs indicating entrances, amenities such as showers, lockers, transit stations/stops and transportation information kiosk strategically throughout the site | ● | ● |
| Provide signs indicating clear direction from transit to public facilities and service centres | ● | ● |
| Provide adequate wayfinding signs at main entrances to all facilities or amenities such as showers, lockers, information/transit ticket purchase service | | ● |
| Provide a permanent TDM booth at main entrances of all buildings and facilities to display transportation information including a monitor with transit schedules for the nearest transit station/stop | | ● |
| Provide direct access to transit facilities from the lobby of major buildings located along a transit route | ● | ● |
| **Ridesharing** | | |
| Promote carpooling initiatives and investigate partnerships with private ride matching services | | ● |
| Provide ample carpool stalls to meet or exceed requirements | | ● |
| Locate carpool parking stalls near the main entrance of the building | | ● |
| Clearly mark carpool parking stalls as reserved for carpool vehicles | | ● |
| Direct carpoolers to reserved areas with clear and intuitive signage | | ● |
| Promote participation in Smart Commute Halton | ● | ● |

## TABLE 5.1: POTENTIAL TDM MEASURES (cont'd)

| TDM Measure | Land Use | |
|---|---|---|
| | Commercial | Employment |
| **Active Transportation** | | |
| Provide the most direct, convenient and shortest connections from buildings to public sidewalks, to off-site pedestrian paths, and to transit stops as well as direct connections between buildings on-site. Ensure sidewalks are paved and maintained in winter. | ● | ● |
| Ensure main entrances of new buildings front directly onto and are clearly visible from the public street | ● | ● |
| Ensure pedestrian circulation is well-defined with safe and convenient connections to parking areas (both auto and bike parking) and off-site pedestrian facilities, and that pedestrian specific lighting is provided on sidewalks and pathways | ● | ● |
| Ensure continuous and barrier-free sidewalks 2.0 metres wide to accommodate simultaneous passage of a pedestrian and a wheelchair | ● | ● |
| Construct multi-use pathways 3.0 to 4.5 metres in width with 1.0 metre "clear zones" on either side | ● | ● |
| Design sidewalks and pathways to ensure personal security and safety through adequate lighting, unobstructed sign lines and provision of at-grade facilities | ● | ● |
| Provide bicycle parking facilities in public and/or private locations close to building entrances | ● | ● |
| Provide bicycle repair stations, including air pump, basic tools, and links to instructional online videos | ● | ● |
| **Transit** | | |
| Ensure that transit services are provided to new development at an early stage, with support from developer funding | ● | ● |
| Promote awareness of available transit services | ● | ● |
| Develop and encourage the use of employer transit pass programs | | ● |
| Provide covered shelters at transit stations and key bus stop locations with adequate seating and lighting | ● | ● |

# 6 Findings and Conclusions

This chapter summarizes the findings and conclusions drawn from the analyses completed for the Premier Gateway West Scoped Area Transportation Study for the **interim report**:

- The existing road network serving the Premier Gateway Phase 1B Employment Area lands is currently operating at satisfactory levels of service and within capacity, expect for a few critical movements.
- The Premier Gateway Phase 1B Employment Area lands are forecasted to generate approximately 3,560 trips during the AM peak hour, 4,680 trips during the PM peak hour and 3,470 trips during the Saturday peak hour at build-out. When combined with background traffic growth, the existing road network will need expansion to serve projected demands.
- Several road improvement projects are already planned within the Study Area to serve forecasted growth, including:
  - Trafalgar Road (Halton Regional Road 3) widening from 2 to 4 lanes between Steeles Avenue and 10 Sideroad (2018)
  - Ninth Line (Halton Regional Road 13) widening from 2 to 4 lanes between Steeles Avenue and 10 Sideroad (2020)
  - Steeles Avenue (Halton Regional Road 8) widening from 4 to 6 lanes between Regional Road 25 and Trafalgar Road (2024)
  - Steeles Avenue (Halton Regional Road 8) widening from 4 to 6 lanes (with Reserved Bus Lanes) between Trafalgar Road and Winston Churchill Boulevard (2028)
  - Trafalgar Road (Halton Regional Road 3) widening from 4 to 6 lanes between Britannia Road and Steeles Avenue (2030)
  - Highway 401 widening from 6 to 10 lanes between Winston Churchill Boulevard and the Highway 407 ETR/Highway 401 interchange and from 6 to 12 lanes between the Highway 407 ETR/Highway 401 interchange and James Snow Parkway
  - Construction of new 6-lane 5½ Line between Britannia Road and Steeles Avenue (likely beyond 2031)

  The Regional Road projects are already programmed in the 2018-2031 Halton Region Transportation Capital Forecast.
- With the planned improvements, most Study Area intersections are projected to continue to operate at satisfactory levels of



service and within capacity under 2021 AM, PM and Saturday peak hour traffic volumes. The exceptions include:

- Trafalgar Road and Steeles Avenue, where the overall intersection and several movements are expected to operate over capacity. It is noted that the overall intersection is projected to just exceed capacity by 2021 with v/c ratios slightly over 1.0 forecasted, suggesting conditions will not be critical with the planned road improvements. With traffic operations at the intersection expected to continue to deteriorate over time with growth, a longer-term solution should be pursued.
- 5 Sideroad and Eighth Line, where several movements are expected to operate over-capacity. Although traffic control signals are not warranted under 2021 traffic conditions, signalization of this intersection would provide the most optimal solution. Provision of auxiliary turn lanes, resulting in multi-lane approaches operating under all-way Stop control, can cause driver confusion and visibility challenges, posing safety concerns. Under traffic signal control the intersection would operate at satisfactory levels of service with all movements within capacity.

- With the planned improvements, most Study Area intersections are projected to continue to operate at satisfactory levels of service and within capacity under 2031 AM, PM and Saturday peak hour traffic volumes. The exceptions include:
  - Trafalgar Road and Steeles Avenue, where the intersection is projected to operate with unsatisfactory levels of service (LOS F) and over capacity (v/c > 1.0) for all three peak hours analyzed. There are no further practical remedial measures that can be implemented at this intersection to mitigate the impacts. A longer-term solution should be pursued.
  - 5 Sideroad and Ninth Line, where several movements are projected to operate over capacity. The provision of eastbound and westbound left-turn lanes and a westbound right-turn lane would mitigate the capacity concerns. The provision of these auxiliary turn lanes should be explored through the planned Ninth Line widening project if not already identified.
  - Trafalgar Road and Street B, where several movements are projected to operate over capacity. The provision of eastbound and westbound right-turn lanes would address the capacity concerns. The provision of these auxiliary turn lanes should be explored through the planned Trafalgar Road widening project if not already identified.



  - Trafalgar Road and Hornby Road, where the eastbound minor street approach functioning under Stop control is forecasted to operate over capacity. Although traffic control signals are not justified with 2031 traffic volumes, signalization should be reconsidered in the future if operational concerns manifest with development of the Premier Gateway Employment Area.

- Implementing proposed 5½ Line and its interchange with Highway 401 would benefit traffic operations at the Trafalgar Road and Steeles Avenue intersection for the 2031 horizon year but not sufficiently to alleviate projected level of service and capacity deficiencies. A few intersections would experience improved traffic operations, while others would degrade but still function with satisfactory levels of service and within capacity. Only the Trafalgar Road and Hornby Road intersection would require remedial improvements.
- Further solutions to the projected level of service and capacity concerns at the Trafalgar Road and Steeles Avenue intersection should be explored. The Premier Gateway Phase 1B Employment Lands development should proceed in phases subject to the provision of required infrastructure improvements to support the planned phase of development.
- The Study Area is not well served by non-auto modes currently. Targeted measures will be needed to facilitate and preserve the opportunity for use of more sustainable transportation options in the future. Developments in the Study Area should provide Transportation Demand Management (TDM) plans to encourage use of more sustainable travel modes and minimize vehicular traffic generation and demands on the road system. The Town, Halton Region and MTO should also continue to explore opportunities to enhance the range and viability of travel choices serving the area.