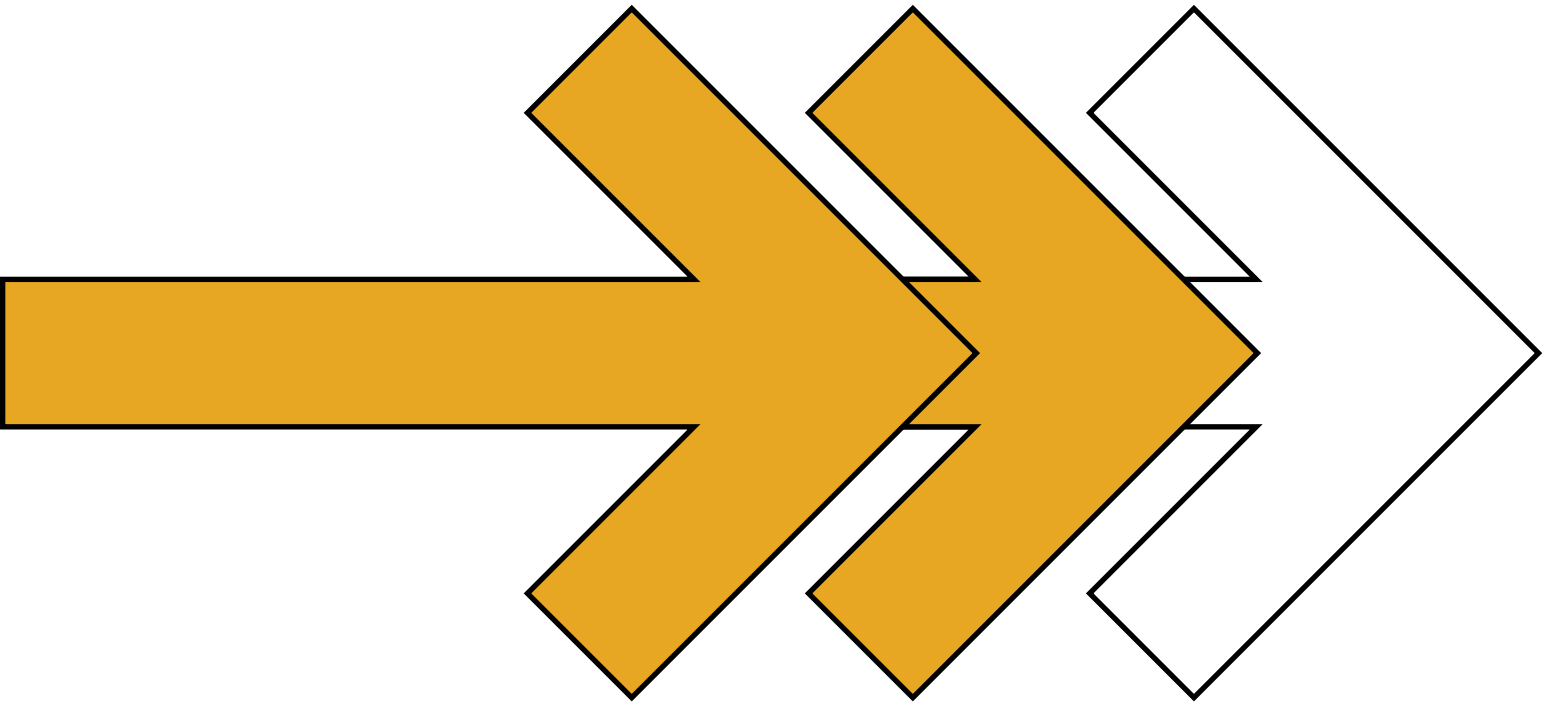
COUNTY OF SIMCOE

TRANSPORTATION MASTER PLAN

Phase II: Transportation Network Development
Roads, Transit and Active Transportation



September 2023
Draft Report

ARCADIS
IBI GROUP

Table of Contents

Table of Contents (continued)

List of Appendices

1 Introduction

The County of Simcoe is updating its Transportation Master Plan (TMP), a long-range strategy that outlines transportation policy directions and identifies transportation infrastructure improvements to support growth through 2051.

This TMP Update is an important opportunity to realign transportation policy and investment directions to best meet the varied and changing transportation needs of residents, businesses, and visitors in the County of Simcoe, considering all modes of travel –walking, cycling, driving, goods movement, and transit.

This report documents Phase II of a four-phase study process. The purpose of this phase is to identify the preferred network alternative, designed to address the needs and opportunities identified in Phase I.

1.1 Background

The County of Simcoe has seen much growth and change since the 2014 TMP Update, which itself was an update of the County's original 2008 TMP:

- Population growth and urbanization are ongoing and are particularly strong in the southern areas of Simcoe County due to development pressures in the adjacent Greater Toronto Area. Seasonal residents and tourists also continue to put pressure on transportation networks.
- Manufacturing, the agri-food industry, construction, tourism, and recreation are among the growing industries serving the County and adjacent municipalities.
- Population demographics are changing, along with the needs of residents and businesses in both rural and urban areas.

The planning landscape is also changing, with updated official plans, development proposals and other initiatives by the County's sixteen lower-tier municipalities (also called local municipalities), as well as new transportation projects and plans from the Ministry of Transportation of Ontario (MTO) and Metrolinx. An increased focus on sustainability, equity, safety, accessibility and environmental protection has also been having a strong influence on transportation policy and planning. There is also a continuing emphasis toward creating an integrated transportation network with focus on transit and active transportation, while goods movement,

"Complete Streets", safety and sustainability continue to be important considerations for the road network.

The ways people work, shop, learn, entertain and travel are also changing rapidly. Working from home, online shopping and on-demand transportation services were already growing trends but have accelerated as a result of the COVID-19 pandemic. New mobility technologies and vehicle electrification have also accelerated considerably since the 2014 TMP Update,

1.2 Report Purpose and Outline

The objective of this Phase II report is to identify the preferred transportation infrastructure recommendations that best address the transportation issues, needs and constraints through the evaluation of transportation network alternatives. Following this introductory section, this report is structured as follows:

- Sections 2, 3 and 4 presents the development of the **preferred road network**, **transit strategies** and **cycling network**, respectively.
- Section 5 presents the **development and evaluation of network alternatives**.
- Section 6 presents the **preferred multi-modal network alternative** encompassing the draft recommended road network, Transit Strategy and cycling network.
- Section 7 provides a **summary of the recommendations** from Phase II and outlines the next steps in the TMP Update study.

1.3 Study Overview

The TMP Update study is being prepared over the following phases:

- Phase I: Multi-Modal Needs and Opportunities
- Phase II: Transportation Network Development
- Phase III: Strategies and Policies to Support the Recommended Network
- Phase IV: TMP Update Report

Public and stakeholder consultation and communication activities are also conducted throughout these four phases.

1.3.1 Planning Horizon Years

A planning horizon is the future point in time a strategy plans for. The following planning horizon years are established to envision and prepare the future transportation network for the County of Simcoe:

- **Short-Term – 2031:** Considers strategies, initiatives or plans that could contribute to the transportation network over the next decade;
- **Medium-Term – 2041:** Medium-range projects or programs that are forecasted over the next 20 years;
- **Long-Term – 2051:** Long-range projects or programs that are forecasted over the next 30 years; and
- **Beyond 2051:** Projects identified in the long-term but not required before 2051.

1.3.2 Municipal Class Environmental Assessment Process

The TMP Update follows the Municipal Class Environmental Assessment (MCEA) planning process for Master Plans under the Environmental Assessment Act. The MCEA process is shown in Exhibit 1.1 for different classes of projects[1] together with consultation requirements.

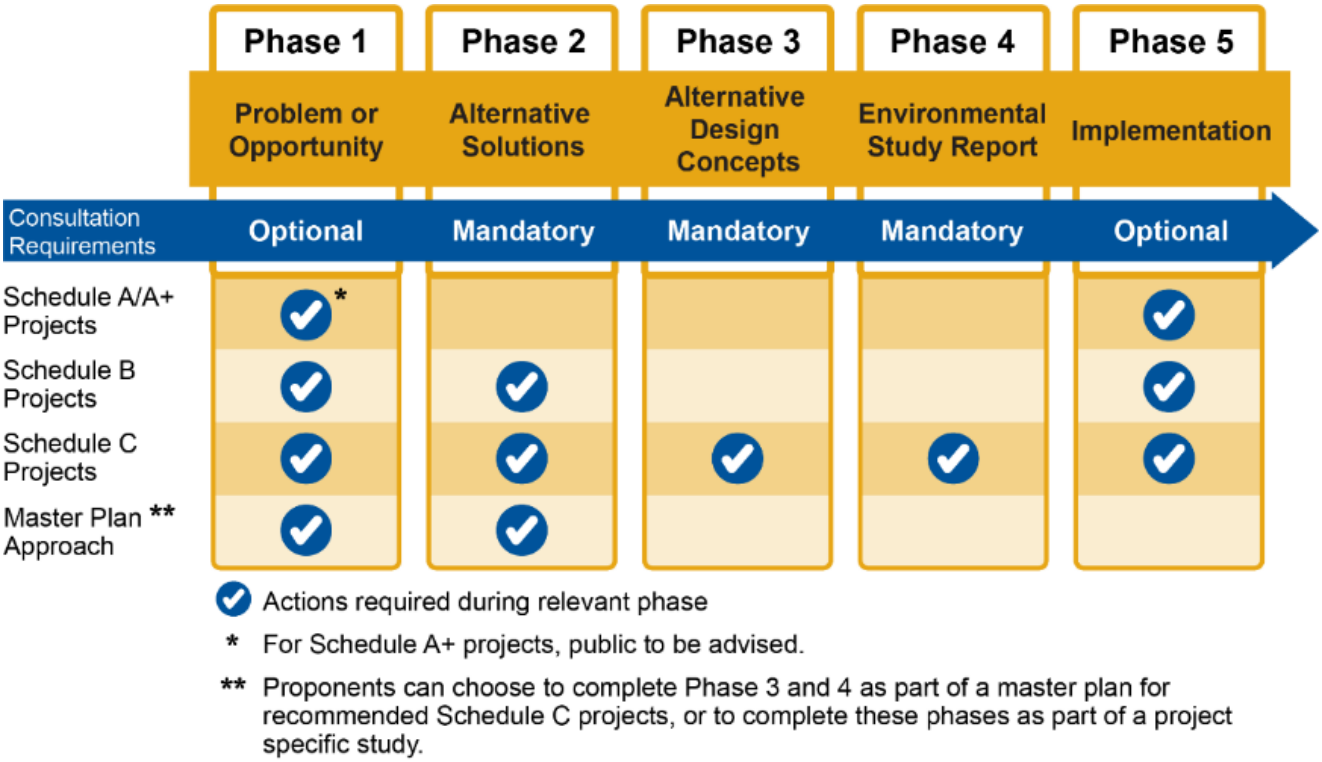
The TMP Update follows the Master Plan Approach involving the completion of the first two phases of the MCEA planning process:

- **MCEA Phase 1**: Identify the problem or opportunity (corresponding to Phase I of the County of Simcoe TMP Update study); and
- **MCEA Phase 2**: Identify and evaluate alternative solutions to address the problem and establish a preferred solution (corresponding to Phases II and III of the County of Simcoe TMP Update).

At the end of MCEA Phase 2, a TMP document will be prepared where the level of investigation, consultation and documentation will be used in support of future analysis for specific Schedule B and C projects identified within it.

[1] Transportation projects and activities are categorized into Schedules A, A+, B and C based on the magnitude of their anticipated environmental impact, with A/A+ having the lowest anticipated impact and C having the highest anticipated impact.

Exhibit 1.1: Municipal Class Environmental Assessment Planning Process



Source: Adapted from Municipal Engineers Association Municipal Class Environmental Assessment (MCEA 2000, as amended to 2015)

2 Road Network

This section summarizes the road network needs and opportunities explored in Phase I, and describes the road network development process, which leads to a set of road network improvements that are carried forward to the preferred network alternative described in Section 6.1 of this report.

2.1 Needs and Opportunities

Transportation needs and opportunities in the County of Simcoe were developed in detail as part of Phase I of this study and documented in the *Phase I: Needs and Opportunities* report.

The first identified need was to **take a multi-modal approach to road network development.** This is considered in developing a multi-modal approach to transportation networks (section 4.2.2 of this report) and considered network-wide as part of Phase III supporting strategies.

The following summary of needs are key considerations for identifying specific candidate County road improvement projects (section 2.2.2):

1. **Respond to growth pressures**, particularly in southern Simcoe.
2. **Adapt to growing seasonal traffic**, particularly along Georgian Bay, as well as in the north of the County.
3. **Respond to changes in the provincial highway network**, including the new 400-404 Link (i.e. Bradford Bypass) and Highway 400 capacity improvements.
4. **Increase connectivity to the Greater Toronto Area (GTA)**.
5. **Address capacity concerns**, i.e. through localized operational modifications or capacity improvements.
6. **Manage traffic through/around settlement areas**, e.g. consider the potential for bypasses as an option to manage traffic.

An additional summary need identified in Phase I was to **review road jurisdiction and identify potential road transfers.** This is addressed through applying a County road rationalization process and ensures that the County network comprises those road segments that primarily serve a County travel purpose vs. a local one.

2.2 Network Development

The road network development process involved using a travel demand model to identify road capacity issues now and into the future, developing a long list of road improvement projects based on travel demand modelling and other study inputs and considerations, evaluating the candidate County road improvement projects through a project evaluation framework, and reviewing the County road rationalization results from the previous TMP as well as new candidate roads for potential jurisdictional transfer.

2.2.1 Travel Demand Forecast

Travel demand modelling for current and future conditions was used to inform the road network needs assessment. The review involved identifying road segments with low levels of service, i.e. high volume-to-capacity (v/c) ratios during AM peak hour to identify capacity constraints and mitigation alternatives.

The TMP Update included an update to the County's prior Travel Demand Model (completed in 2014). The model is in the TransCAD platform and was updated to incorporate 2016 base-year conditions, recent traffic counts, and the Barrie annexation. The 2016 base year was selected due to availability of Transportation Tomorrow Survey data for that year (as well as avoiding Covid-19-related travel impacts). Land use for the base year was drawn from available Transportation Tomorrow Survey and for future years from the Municipal Comprehensive Review process as model inputs, including population age categories and employment categories.

The model uses a four-step process for development of traffic forecasts considering key drivers of transportation demand, as follows:

1. **Trip generation** estimates the number of trips for each trip type using local trip rates stratified by population and employment type.
2. **Trip distribution** links trip origins with trip destinations for various trip types (e.g. school trips, work trips, and other purposes, as well as "chaining" of these trip purposes).
3. **Mode choice** determines the mode of travel used through a policy-based framework (i.e. a fixed percentage transit share).

4. **Road network assignment** determines the travel routing used, with network sensitivity the changes the speed of travel based on traffic volumes, road capacity and speed limits.

The following model updates were undertaken with reference exhibits in Appendix B:

- The model zone system was updated to better reflect the City of Barrie annexation lands, and is illustrated in Appendix B.1. This entailed zone splitting and reconfiguration of centroid connectors to more accurately capture the future land use in south Barrie. The model zone system is provided in Appendix B.
- The road network was updated to reflect changes to the network from a 2011 to the 2016 base year, which includes representation of a new roads across the County. New projects coded in the 2016 base year include the County Road 90 widening to four travel lanes, from County Road 10 to Barrie City Limit, and the County Road 93 widening to four lanes, County Road 25 to Penetanguishene. Centroid connectors (these represent where in each traffic analysis zone trips are most likely to start or end and on which roads) were reviewed and extensively recoded to improve network loading characteristics.
- Model calibration was updated and refined. Available traffic counts were collected for locations across the County along County Roads and provincial highways. External trip matrices were updated to better match new external traffic counts; this significantly changed demand along provincial highways entering and exiting the County, and along County Roads connecting to adjacent municipalities. Road network parameters used in the model's assignment routine were updated to improve calibration, as shown in Exhibit 2.1. below with additional calibration notes following the exhibit. The model output maps in Appendix B reflect the updated network. Screenline locations and validation are shown in Appendix B.2. Base year flow and v/c maps are provided in Appendix B.3.
- New land-use inputs were developed to generate a new 2016 base year for calibration purposes. The 2016 base year was selected due to availability of Transportation Tomorrow Survey data for that year (as well as avoiding Covid-19-related travel impacts). New growth allocations for both population and employment were developed for the 2051 horizon for planning purposes based on final 2022 Municipal Comprehensive Review

(July 2022) allocations at the local municipal level, which were then allocated to the traffic zone level. Municipal-level population and employment allocations based on the MCR are included in Appendix A. 2041 population and employment by zone are illustrated in Appendix B.4 and B.5. Growth from 2016 to 2051 are illustrated in Appendix B.6 and B.7.

- Future transit mode shares were kept constant from the 2014 TMP which applies a 10% reduction to all trips to account for transit. This reduction is potentially high when only considering target transit mode share in the County but was maintained also considering TDM recommendations and work from home trends. The model focus and intent is to capture the longer distance intraregional trips within the County which are served by County Roads and generally do not have existing or proposed frequent transit service. On this basis, the global trip reduction approach was carried forward.

Road network parameters used to adjust modelled travel speeds for the model are presented in Exhibit 2.1.

Exhibit 2.1: Travel Demand Model Road Network Parameters

Road Type	Speed (km/h)	Capacity / Lane (veh/hr)	No. of Lanes (per direction)	Alpha*	Beta*
Expressway	100-120	1800	1-3	0.72	6.14
Highway	60-100	500-1800	1-2	0.507, 0.72	4.00 - 6.14
County Road	40-100	500-1800	1-2	0.15 - 0.72	4.00 - 6.14
Local Road	30-80	400-1000	1-3	0.15 - 0.72	4.00 - 5.87

Note: Alpha and Beta are parameters used in the model's network assignment of traffic to adjust individual road segment speeds to reflect increasing traffic volumes vs. road capacity.

The County's model, dating to the prior TMP, was updated as described above. Screenline validation and spot validation was undertaken along with numerous model refinements in order to improve calibration. Local model refinements included adjustment to link capacity and speed, within the classification and capacity ranges described above, generally focusing on key links that base assignment were over- or under-predicting. Overall it was found to be very challenging to improve model validation with significant errors on a spot location

basis, as shown in Appendix B.3. An origin-destination matrix estimation (ODME) method was adopted to refine base-year calibration to better match available traffic count data. Calibration factors (a differences matrix) were calculated for base year and carried forward to 2051. This resulted in reasonable calibration of base-year demand on the road network, and growth factors for future years also appear reasonable (e.g. in line with local municipal or county-wide growth rates, depending on the corridor). Model results were interpreted with understanding that the model provides a growth analysis and comparison tool.

Based on the efforts to update and recalibrate the model, it is recommended that a more comprehensive model update be undertaken by the County of Simcoe as an outcome of the TMP Update. The current model is aging, having been calibrated to 2011 Transportation Tomorrow Survey. A more comprehensive update following this TMP update will improve accuracy in calibration, allow more extensive zone system refinement to capture new settlement boundary adjustments, and allow more detailed analysis of alternatives. This will also allow more detailed growth allocations within lower-tier municipalities to be incorporated when available. Incorporating goods movement into the model should be considered, and more generally, MTO/SAFO coordination is recommended. Once the model is updated, network recommendations of the TMP should be reviewed and confirmed, and project timing may be adjusted.

General findings from the base year (2016) model include the following:

- Most of the congestion issues (i.e. where the v/c ratio is greater than 1.0) exist on the provincial road network, including Highways 400, 11, 93, 89 and 26 and sections of Highway 12. This results in increased travel on County roads as alternate routes.
- Congestion issues appear on roads such as County Roads 21, 88, 90 and 93, which all indicate segments with a v/c ratio greater than 0.95.

In model development, tables of screenlines (sets of roads in the same general area and orientation) are used to check accuracy for individual roads and for major barrier crossings and corridors. Capacity analysis at a screenline level helps planners to confirm that road widening is truly needed on an area-wide basis and not only locally. Appendix B provides screenline tables for base year calibration and future year capacity analysis.

The model was also run to represent the 2051 horizon year. Screenline flow and volume-to-capacity ratio is illustrated in Appendix B.8. Road segments with a v/c ratio higher than 1.0 were identified as candidates for capacity improvements and

were carried forward for the long list of projects. These segments are listed in Section 2.2.2 below.

Future maps showing both before (2051 base case) and after recommended projects are implemented. (Section 6.1.1 lists recommended road projects to 2051) are provided in Appendix B.9 and B.10 with additional commentary on the project evaluation in the following sections.

2.2.2 Long List of Projects

A number of candidate road network improvement projects were identified based on a variety of factors:

- **Underway or committed:** Road network improvements already underway or planned with committed funding;
- **2014 TMP Update:** Recommended road network improvements proposed as part of the 2014 TMP Update [2];
- **Road network model outputs:** County roads with a 2051 volume-to-capacity ratio greater than 0.9 in the travel demand forecasting results described in Section 2.1 – this includes road segments that would face significant pressure due to major growth areas, such as the Mobility Orbit [3] in Innisfil, and growing seasonal tourist patterns to communities around Georgian Bay;
- **Municipal Advisory Committee:** Suggested road improvements put forward for consideration by members of the Municipal Advisory Committee stakeholder group; and
- **Provincial road network:** Committed changes to the Provincial road network, such as the Highway 400 widening.

The resulting long list of candidate road projects is shown in map form in Exhibit 2.2 and listed in table form in Exhibit 2.3. (Potential road jurisdiction transfers are shown in the map but are listed and discussed in Section 2.2.4.) Project identifiers on the

[2] The following 2014 TMP Update recommended County road network improvement was not carried forward: CR 10 Tottenham bypass (3rd Line to north of 5th Line), New Tecumseth (2014 TMP Update: post-2031 timeframe), as expected improvements to 5th Line are anticipated to sufficiently support future growth without the need for this bypass.

[3] Mobility Orbit is a planned development in the Town of Innisfil centred around a planned GO rail station. The TMP Update supports this project as part of Metrolinx's GO Rail Expansion program.

map correspond to the ID column in the table. The table also indicates the need(s) that the identified road improvement project responds to, as outlined previously in Section 2.1, as well as the recommended timeframe that was indicated in the 2014 TMP Update, where applicable.

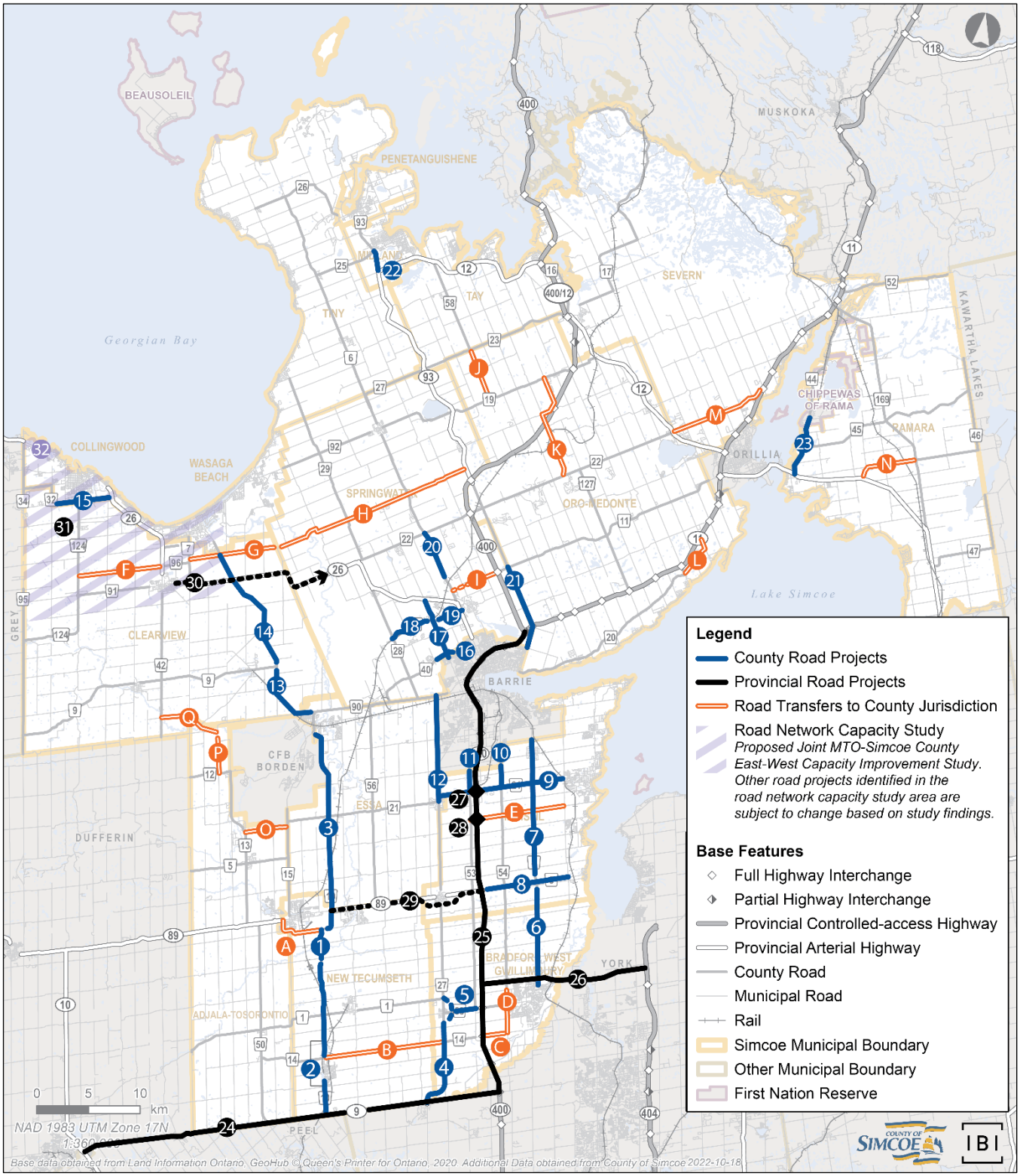
The candidate road projects are organized into the following categories:

- **County road projects:** These identify candidate County road improvement projects.
- **Provincial road projects:** These include committed provincial road projects, provincial road projects planned as outlined in *Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe* (2022)[4], as well as unconfirmed Provincial road projects supported by the County[5].
- **Road jurisdiction changes:** These are local municipal roads recommended for transfer to County jurisdiction and are discussed in Section 2.2.4.
- **Network capacity study:** A new East-West Network Capacity Improvement Study recommended for the Collingwood-Clearview area, recommended as a joint partnership project between the County of Simcoe and the MTO. Other candidate road projects identified within network capacity study area are subject to change and should be considered dependent on the findings of the recommended study. This is considered in the evaluation of candidate projects and reflected in the preferred road network alternative presented in Section 6. In addition, existing corridors in the study area—such as Nottawasaga 33/34 Sideroad—should be examined for jurisdictional suitability.

One additional project was identified later in the study as part of the review of the air travel strategy in the County. The interchange that connects Provincial Highway 11 with County Road 127 requires further assessment to identify if changes are needed to ensure consistency with County road standards and improve safety. Coordination with the MTO is required. This is not included in the subsequent maps but is discussed further in the Phase III report and carried forward as a recommended action.

[4] MTO (2022). *Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe.* <https://files.ontario.ca/mto-ggh-transportation-plan-en-2022-03-10.pdf> Accessed October 2022.

Exhibit 2.2: Map of Candidate Road Projects



Note: Project limits are approximate.

Exhibit 2.3: Description of Candidate Road Projects

ID	Corridor	Limits	Municipality	Description	Length	Needs Addressed	2014 TMP Phasing
County Road Projects							
1	CR 10 [6]	Industrial Parkway to 12th Line	New Tecumseth	Widen to 4 lanes	2.8 km	1. Respond to growth pressures 5. Address capacity concerns	By 2031
2	CR 10	12th Line to CR 14 and Pridham Place to Hwy 9	New Tecumseth	Widen to 4 lanes	13.0 km	5. Address capacity concerns	By 2031 north of Tottenham; Post-2031 south of Tottenham
3	CR 10	CR 90 to Hwy 89	Essa	Widen to 4 lanes	17.9 km	5. Address capacity concerns	N/A
4	CR 27	Future Bond Head Bypass to Hwy 9	Bradford West Gwillimbury	Widen to 4 lanes	9.0 km	1. Respond to growth pressures 6. Manage traffic through / around settlements	Post-2031
5	CR 88 and Bond Head Bypass	CR 27 to Hwy 400, including full Bond Head Bypass	Bradford West Gwillimbury	Widen CR 88 to 4 lanes / New 2-lane bypass	5.8 km	1. Respond to growth pressures 3. Respond to changes in the provincial highway network 6. Manage traffic through / around settlements	Post-2031

[6] Widening of County Road 10 between Industrial Parkway and 12th Line is responsive to growth expected in the southern part of Alliston. The limits of this widening are approximate, and future road widening is development driven.

ID	Corridor	Limits	Municipality	Description	Length	Needs Addressed	2014 TMP Phasing
6	CR 4	CR 89 to Line 8	Bradford West Gwillimbury	Widen to 4 lanes	10.0 km	1. Respond to growth pressures 3. Respond to changes in the provincial highway network	By 2031
7	CR 4	Barrie City Limit to CR 89	Innisfil	Widen to 4 lanes	13.9 km	1. Respond to growth pressures 3. Respond to changes in the provincial highway network	By 2031
8	CR 89 and CR 3	Hwy 400 to 20th Sideroad[7]	Innisfil	Widen to 4 lanes	8.3 km	1. Respond to growth pressures	Post-2031
9	CR 21[8]	CR 27 to 20th Sideroad	Innisfil	Widen to 4 lanes	12.1 km	1. Respond to growth pressures 3. Respond to changes in the provincial highway network	By 2031
10	CR 54	Barrie City Limit to CR 21	Innisfil	Widen to 4 lanes	2.1 km	1. Respond to growth pressures	Post-2031
11	CR 53	Barrie City Limit to CR 21	Innisfil	Widen to 4 lanes	2.0 km	1. Respond to growth pressures	By 2031
12	CR 27	CR 90 to CR 21	Essa / Innisfil	Widen to 4 lanes	10.3 km	1. Respond to growth pressures	By 2031

[7] The 2014 TMP Update recommended widening CR 89 / CR 3 from CR 53 to 20th Sideroad.

[8] The Town of Innisfil has identified the need for a grade separated rail crossing at County Road 21 and 20th Sideroad (Newmarket Subdivision, operated by Metrolinx).

ID	Corridor	Limits	Municipality	Description	Length	Needs Addressed	2014 TMP Phasing
13	CR 10	CR 9 to CR 90	Clearview	Widen to 4 lanes	7.3 km	2. Adapt to growing seasonal traffic	By 2031
14	CR 10	Concession 12 Sunnidale Road to CR 9	Clearview	Widen to 4 lanes	12.7 km	2. Adapt to growing seasonal traffic	By 2031
15*	CR 32	Concession 10 N Nottawasaga Road to Hwy 26	Collingwood / Clearview	Widen to 4 lanes	5.8 km	2. Adapt to growing seasonal traffic 5. Address capacity concerns 6. Manage traffic through / around settlements	N/A
16	CR 40	Dobson Rd to Barrie City Limit	Springwater	Widen to 4 lanes	2.2 km	1. Respond to growth pressures	Post-2031
17	CR 53	Hwy 26 to Barrie City Limit	Springwater	Widen to 4 lanes	6.1 km	1. Respond to growth pressures	By 2031
18	CR 43	CR 28 to CR 53	Springwater	Widen to 4 lanes	4.5 km	1. Respond to growth pressures	By 2031
19	CR 43	CR 53 to Hwy 26	Springwater	Widen to 4 lanes	2.8 km	1. Respond to growth pressures	By 2031
20	CR 27[9]	CR 22 to Mills Circle	Springwater	Widen to 4 lanes	5.1 km	2. Adapt to growing seasonal traffic	Post-2031
21	CR 93	CR 11 to Barrie City Limit	Springwater / Oro-Medonte	Widen to 4 lanes	8.3 km	2. Adapt to growing seasonal traffic	By 2031

[9] The 2014 TMP Update recommended widening CR 27 from CR 22 to Highway 26.

ID	Corridor	Limits	Municipality	Description	Length	Needs Addressed	2014 TMP Phasing
22	CR 93	CR 25 to Hwy 12	Midland	Widen to 4 lanes	2.0 km	5. Address capacity concerns	By 2031
23	CR 44	Casino Rama to Hwy 12	Ramara	Widen to 4 lanes	5.5 km	5. Address capacity concerns	By 2031
Provincial Road Projects							
24	Highway 9	Hwy 10 (Dufferin County) to Hwy 400	Adjala-Tosorontio / New Tecumseth / Bradford West Gwillimbury	New capacity expansion	40.0 km	4. Increase connectivity to the GTA	N/A
25	Highway 400	Hwy 11 to Hwy 9	Innisfil / Bradford West Gwillimbury	New capacity expansion	48.0 km	4. Increase connectivity to the GTA	N/A
26	Highway 400-404 Link [10]	Hwy 400 to Hwy 404	Bradford West Gwillimbury	New controlled access highway	16.2 km	4. Increase connectivity to the GTA	N/A
27	Highway 400 / Innisfil Beach Road Overpass	-	Innisfil	New overpass will enable 4-lane cross-section for CR 21	-	4. Increase connectivity to the GTA	N/A
28	Highway 400 / Line 6 Interchange[11]	-	Innisfil	New interchange supported by upload of Line 6	-	4. Increase connectivity to the GTA	N/A

[10] Emergency Detour Routes should be reviewed by the MTO as part of the new Highway 400-404 Link to help manage spillover traffic onto local roads in the event of highway closures.

[11] Mobility Orbit development and proposed Innisfil GO Station may reduce or delay demand for a new interchange.

ID	Corridor	Limits	Municipality	Description	Length	Needs Addressed	2014 TMP Phasing
29	Highway 89 East-West Link Improvement (provincially unfunded County recommendation)	CR 10 to Hwy 400	Essa / New Tecumseth / Innisfil	New bypass around Cookstown	14.6 km	1. Respond to growth pressures 3. Respond to changes in the provincial highway network	N/A
30*	Highway 26 Road Widening (provincially unfunded County recommendation)	-	Clearview / Springwater	Capacity upgrade east of Stayner	-	2. Adapt to growing seasonal traffic	N/A
31*	Highway 26 Collingwood Stayner Bypass (provincially unfunded County recommendation)	-	Collingwood / Clearview	New bypass around Collingwood and Stayner	-	2. Adapt to growing seasonal traffic 6. Manage traffic through / around settlements	N/A

ID	Corridor	Limits	Municipality	Description	Length	Needs Addressed	2014 TMP Phasing
Network Capacity Study							
32	East-West Capacity Improvement Study (provincially unfunded County recommendation)	-	Collingwood / Clearview	MTO-Simcoe County joint study; Grey County and affected local municipalities identified as potential partners [12]	-	2. Adapt to growing seasonal traffic 5. Address capacity concerns 6. Manage traffic through / around settlement areas	N/A

*Note: Timing and need for projects marked by an asterisk may be impacted by findings and recommendations of East-West Capacity Improvement Study (Project 32).

[12] As part of stakeholder consultation, Grey County and the Town of The Blue Mountains have expressed interest to participate in the East-West Capacity Improvement Study, noting important interconnectivity between Grey County and Simcoe County.

2.2.3 County Road Project Evaluation

Framework

The project evaluation framework, used in the 2014 TMP Update and initially developed as part of the 2008 TMP, has been carried forward to the current study with some updates to the scoring system to reflect updated best practices and the TMP vision and goals.

The six evaluation criteria (and accompanying abbreviations) correspond to the six TMP transportation goals: **Goods Movement** (GM), **Connectivity** (CON), **Active Transportation** (AT), **Support for Transit** (TRA), **Environmental Impact** (ENV) and **Cost Effectiveness** ($).The evaluation framework and correspondence to TMP goals is presented in Exhibit 2.4. Scoring is based on the degree of alignment with each criterion, with possible values of 0 points (low alignment), 5 points (medium alignment), and 10 points (high alignment). This retains a similar magnitude of scoring and general consistency with the previous TMP.

The evaluation criteria are also supported by the planning principles (developed as part of Phase I of the TMP Update), notably the following:

- **Establish an efficient and integrated multi-modal transportation network:** The transportation system is interconnected to allow people and goods to move safely throughout the County and beyond with a focus on transportation alternatives including transit, active transportation, and carpooling;
- **Integrate transportation and land use planning:** The transportation system and surrounding land uses are coordinated so that transportation infrastructure is optimized, and environmental impacts are reduced;
- **Protect transportation corridors to accommodate future needs:** Selected road corridors will be identified for long-term projection to be prepared for future growth; and
- **Optimize fiscal spending through responsible stewardship:** The transportation system is a product of responsible investments in infrastructure.

Exhibit 2.4: County Road Improvement Project Evaluation Framework

Criterion	TMP Goal	Inputs/Considerations	Scoring
Goods Movement (GM)	**Efficient Goods Movement:** Support the local economy by enabling efficient movement of goods and commercial vehicles.	Volume of trucks along the existing corridor or along a nearby parallel corridor with high potential to divert to the upgraded route.	Roads with higher truck volumes generate a higher score.
Connectivity (CON)	**Connected Communities:** Provide efficient and safe travel between County communities and to adjacent municipalities via the County road network.	Overall volume of traffic as a function of existing capacity (2051 base case), with a focus on highly congested corridors.	A volume-to-capacity (v/c) ratio of 1.0 or higher scores 10 points. A v/c ratio of 0.85 to 1.0 scores 5 points. A v/c ratio below 0.85 scores zero. Alternatively, if a nearby parallel corridor showed high levels of congestion, the subject corridor would be scored 10 or 5 based on the thresholds above.
Active Transportation (AT)	**Safe and Connected Active Transportation:** Enhance and expand walking, cycling and other active transport-ation facilities and infrastructure to connect and support healthy communities in the County.	Co-location of study corridor with planned or existing on- or off-street cycling routes.	10 points where a priority route is planned, 5 points for other routes, 0 points if no cycling or walking facilities are identified.

Criterion	TMP Goal	Inputs/Considerations	Scoring
Support for Transit (TRA)	**Transit as a Viable Choice for Everyday Travel:** Enhance and support transit as a competitive, effective, and equitable mobility choice for all types of trips between County communities.	Ranking of priority transit corridors.	Corridors with existing County or Provincial transit routes score 10 points. Corridors with local fixed transit routes score 5 points. Routes with no transit score 0 points.
Environmental Impact (ENV)	**Protected Natural Environment:** Mitigate disruption of habitats, waterways, agricultural land, natural heritage, and natural resources while minimizing long-term climate impacts and increasing resilience to potential climate change impacts.	Inputs include Environmentally Sensitive Areas, Oak Ridges Moraine areas, source water protection areas and other key natural features.	Low or few anticipated negative environmental impacts score 10 points, moderate impacts score 5 points, significant impacts (e.g. the route crosses the Oak Ridges Moraine) score 0 points.
Cost Effectiveness ($)	**Responsible, Forward-Looking Stewardship:** Represent responsible investment in infrastructure and operations, targeting high cost-benefit ratios while ensuring the County is prepared for the future.	High-level order-of-magnitude costs.	New roads, bypasses or corridors with extensive grade separation or property needs score 0 points. Corridor widenings (except where other high-cost elements are required) score 5 points. Non-widening upgrades score 10 points.

Evaluation

Only candidate County road projects were individually scored using the framework outlined above. The outcome of this evaluation is presented in Exhibit 2.5, with projects listed in order of decreasing scoring. The scores calculated at this stage are used to identify road projects for the creation of network alternatives to be evaluated collectively towards identifying the preferred transportation networks in Section 4.2.2.

Road rationalization projects (e.g. candidate upload corridors) are discussed separately in Section 2.2.4.

Provincial road projects were not evaluated using this framework.

Exhibit 2.5: Evaluation Scoring of Candidate County Road Projects

ID	Corridor	Limits	Description	GM	CON	AT	TRA	ENV	$	Total
1	CR 10	Industrial Parkway to 12th Line [13]	Widen to 4 lanes	5	10	5	10	10	5	**45**
6	CR 4	CR 89 to Line 8	Widen to 4 lanes	5	10	10	10	5	5	**45**
7	CR 4	Barrie City Limit to CR 89	Widen to 4 lanes	0	10	10	10	10	5	**45**
5	CR 88 and Bond Head Bypass	CR 27 via Future Bond Head Bypass to Hwy 400	Widen CR 88 to 4 lanes / New 2-lane bypass	5	10	5	10	10	0	**40**
9	CR 21	CR 27 to 20th Sideroad	Widen to 4 lanes	5	10	10	0	10	5	**40**
8	CR 89 and CR 3	Hwy 400 to 20th Sideroad	Widen to 4 lanes	5	10	5	0	10	5	**35**
13	CR 10	CR 9 to CR 90	Widen to 4 lanes	5	5	0	10	10	5	**35**
17	CR 53	Hwy 26 to Barrie City Limit	Widen to 4 lanes	5	10	5	0	10	5	**35**
22	CR 93	CR 25 to Hwy 12	Widen to 4 lanes	5	10	0	10	5	5	**35**
10	CR 54	Barrie City Limit to CR 21	Widen to 4 lanes	5	10	0	0	10	5	**30**
11	CR 53	Barrie City Limit to CR 21	Widen to 4 lanes	0	10	5	0	10	5	**30**
12	CR 27	CR 90 to CR 21	Widen to 4 lanes	5	10	5	0	5	5	**30**
15	CR 32	Concession 10 N Nottawasaga Road to Hwy 26	Widen to 4 lanes	0	0	10	5	10	5	**30**
19	CR 43	CR 53 to Hwy 26	Widen to 4 lanes	0	5	10	0	10	5	**30**
2	CR 10	12th Line to CR 14 and Pridham Place to Hwy 9	Widen to 4 lanes	5	5	10	5	0	0	**25**
4	CR 27 and Bond Head Bypass	CR 88 via Future Bond Head Bypass to Hwy 9	Widen to 4 lanes / New 2-lane bypass	5	10	0	0	5	5	**25**

[13] Widening of County Road 10 between Industrial Parkway and 12th Line is responsive to growth expected in the southern part of Alliston. The limits of this widening are approximate, and a future road widening is development driven.

ID	Corridor	Limits	Description	GM	CON	AT	TRA	ENV	$	Total
14	CR 10	Concession 12 Sunnidale Rd to CR 9	Widen to 4 lanes	0	5	5	0	10	5	**25**
18	CR 43	CR 28 to CR 53	Widen to 4 lanes	0	5	10	0	5	5	**25**
20	CR 27	CR 22 to Mills Circle	Widen to 4 lanes	0	5	0	10	10	0	**25**
21	CR 93	CR 11 to Barrie City Limit	Widen to 4 lanes	10	0	0	0	10	5	**25**
16	CR 40	Dobson Rd to Barrie City Limit	Widen to 4 lanes	0	10	0	0	5	5	**20**
23	CR 44	Casino Rama to Hwy 12	Widen to 4 lanes	0	0	10	0	5	5	**20**
3	CR 10	Hwy 89 to CR 90	Widen to 4 lanes.	0	10	5	0	0	5	**20**

2.2.4 Road Rationalization Update

Framework

A road rationalization exercise involves applying a scoring framework to identify the degree to which a road serves a County vs. local travel purpose. Road segments whose framework scoring is greater than a minimum threshold may be recommended to remain as County roads or to be transferred to the County, while road segments with lower scoring may be recommended for ownership by local municipalities. Ultimately, road rationalization helps ensure that the County of Simcoe is better positioned to focus on roads that genuinely serve a County interest (and potentially allow additional resources to be focused on other initiatives such as supporting active transportation connections and transit improvements).

The County of Simcoe Road Rationalization framework was developed for the 2008 TMP and carried forward to the 2014 TMP Update and for the current TMP Update study. The framework is summarized in Exhibit 2.6. Individual road segments with a total score of 6 or more are considered to be of sufficient County interest to consider for inclusion in the County road network.

Candidate Road Jurisdiction Transfers

The 2014 TMP Update identified a number of road segments to transfer to the County Road network; these are listed along with their associated recommended 2014 TMP timing in Exhibit 2.7[14]. The road segment ID corresponds to the map of the long list of projects presented in Exhibit 2.2).

Two road segments – segments C and D – had been identified in the 2008 TMP; they were not considered as part of the 2014 TMP Update but are included in the current update.

The remaining candidate roads were requested for review by local municipal staff or County staff throughout the study process.

[14] The following 2014 TMP Update recommendations have already been implemented:

- Transfer of Line 7, Oro-Medonte (Highway 11 to CR 22) to County
- Transfer of 5th Line, New Tecumseth / Bradford West Gwillimbury (CR 27 to Hwy 400)

Exhibit 2.6: County of Simcoe 2008 TMP Road Rationalization Criteria

Criteria	Weighting
Connects to Municipalities / Population Centres	Yes = 2 No = 0
Connects to a County Road [Upper-Tier/Arterial Road] in Neighbouring Jurisdiction	Yes = 1 No = 0
Connects a Provincial Highway to a Population Centre (greater than 5 km distance)	Primary Connection = 3 Secondary Connection = 1 No Connection = 0
Average Annual Daily Traffic (AADT) Threshold	<1000 = 1 1001 o 3000 = 2 3001 to 5000 = 3 5001 to 10,000 = 4 10,001 to 15,000 = 5 >15,000 = 6
Commercial Goods Corridor	Trucks per day: 100 = 1 1 to 300 = 2 301 to 500 = 3 501 to 1,000 = 4 >1,000 = 5 Plus Connection to: Aggregate area = 2 Industrial area = 3
Connects Major Recreational Centre to Provincial Highway	Major Road Connection = 2 Secondary Road Connection = 1 No Connection = 0
Provides Urban Congestion Relief/ By-Pass	Yes = 2 No = 0
Emergency Detour Routes	Yes = 6 No = 0

Source: County of Simcoe 2014 TMP Update

Exhibit 2.7: Candidate Road Jurisdiction Transfers

ID	Corridor	Limits	Municipality	Length	2014 TMP Phasing
A	Industrial Parkway	Hwy 89 to CR 10	New Tecumseth	2.7 km	By 2031[15]
B	5th Line	CR 10 to CR 27	New Tecumseth	11.7 km	By 2031
C	5th Line	Hwy 400 to 10 Sideroad	Bradford West Gwillimbury	2.4 km	N/A (identified in 2008 TMP only)
D	10 Sideroad	8th Line to 5th Line	Bradford West Gwillimbury	4.2 km	N/A (identified in 2008 TMP only)
E	6th Line[16]	CR 53 to 20th Sideroad	Innisfil	9.2 km	New
F*	Nottawasaga 27/28 Sideroad	CR 124 to Hwy 26	Clearview	8.2 km	Post-2031
G*	Concession 12 Sunnidale Road	CR 7 to Clearview / Springwater Boundary	Clearview	8.6 km	By 2031
H*	Flos Road 4	Clearview / Springwater Boundary to Hwy 93	Springwater	19.7 km	By 2031
I	Forbes Road (alignment to be decided)[17]	CR 27 to Hwy 400	Springwater	4.7 km	New
J	Line 3 North	CR 23 to CR 19	Oro-Medonte	5.2 km	By 2031
K	Line 6 North / Line 7 North	CR 19 to CR 22	Oro-Medonte	10.9 km	By 2031
L	Ridge Road East	CR 20 to 13th Line	Oro-Medonte	4.5 km	New

[15] The 2014 TMP Update identified improvements to Industrial Parkway between Hwy 89 and Tottenham Road, noting a "Best Efforts Agreement" is in place maintaining the potential to transfer a road between the local municipality and the County.

[16] The 2014 TMP Update identified the transfer of 4th Line (CR 53 to CR 39), Innisfil to County jurisdiction for consideration post-2031. 6th Line is now identified instead, for more direct connectivity with the proposed Innisfil GO Station. The eastern limit of 6th Line identified for transfer is subject to future study and will be determined by road function and growth relative to new Mobility Orbit Development in Innisfil.

[17] Future upgrades to Forbes Road (including a new alignment) between CR 27 and Hwy 400 will be built to County road standard and will be assumed as part of the County road network. This segment is not assessed as part of the Road Rationalization Evaluation Scoring. As per an agreement between the Township of Springwater and the MTO, future upgrades required at the Highway 400 and Forbes Road interchange will be at the expense of the municipality.

ID	Corridor	Limits	Municipality	Length	2014 TMP Phasing
M	Division Road	Hwy 12 to Hwy 11	Severn / Oro-Medonte	9.8 km	Post-2031
N	Ramara Township Road 46	Hwy 12 to CR 169	Ramara	5.9 km	New
O	15 Sideroad Tosorontio	CR 13 to CR 15	Adjala-Tosorontio	4.1 km	New
P	Concession Road 3	Webster Road to CR 12	Adjala-Tosorontio	4.0 km	New
Q*	Webster Road and Sideroad 3/4 Nottawasaga	CR 42 to Concession Road 3	Clearview / Adjala-Tosorontio	6.2 km	New

*Note: Timing and need for Projects F, G and H may be impacted by findings and recommendations of East-West Capacity Improvement Study for Northwest Simcoe. Project Q is under consideration together with Project P. An alternative connection to the County Road network in Clearview could be Centreline Road.

An additional road segment not listed above was identified for consideration: **Line 15 / Highway 11 Overpass** from County Road 49 to Jamieson Drive. This road segment was identified for transfer to the Township of Oro-Medonte as part of the 2008 TMP. Other roads that were similarly identified then have since been transferred to the respective local municipalities.

As part of stakeholder consultation conducted as part of the current TMP Update, the Township of Oro-Medonte requested clarification regarding ownership of the Line 15 / Highway 11 Overpass, which could potentially include transfer of some or all of the corridor in the process. The corridor is part of the road network that connects with an atypical partial highway interchange as well as an industrial area just beyond City of Orillia limits within Oro-Medonte. This link has no direct connections to other County roads, a challenge for County road maintenance. For these reasons, it was not considered suitable to assess through the typical road rationalization framework and will instead be subject to separate discussions between the County, Oro-Medonte and Orillia, and potentially the Province.

Evaluation

Only candidate road segments not identified in the 2014 TMP Update were assessed using the County of Simcoe Road Rationalization framework as part of this update. Framework scoring results are summarized in Exhibit 2.8.

Exhibit 2.8: Road Rationalization Evaluation Scoring

Criterion	(C) 5th Line: Hwy 400 to 10 Sideroad	(D) 10 Sideroad: 8th Line to 5th Line	(L) Ridge Road East: CR 20 to 13th Line	(N) Ramara Road 46: Hwy 12 to CR 169	(O) 15 Sideroad Tosorontio: CR 13 to CR 15	(P) Concession Road 3: Webster Road to CR 12	(Q) Webster Road and Sideroad 3/4 Nottawasaga
1. Connects Municipalities/ Population Centres	2 - Connects southwest Bradford to Tottenham	2 - Connects southwest Bradford to Tottenham	0	0	2 - Fastest connection Alliston to Collingwood	0	0
2. Connects to Adjacent Upper-Tier Road	0	0	0	0	0	0	0
3. Connects a provincial hwy to a pop'n centre	3 - via 5th Line/10 Side-road (5 km)	3 - via 5th Line/10 Side-road (5 km)	0	0	0	0	0
4. AADT	4	4	1	3	2 (AADT 1984)	2 (AADT 2076)	1 (AADT 683)
5. Commercial Goods Corridor	2	2	0	3	0	3	3
6. Connects Major Recre-ational Centre	0	0	0	0	0	0	0
7. Urban Con-gestion Relief	0	0	0	0	2	0	0
8. Emergency Detour Routes	0	0	0	0	0	0	0
Total Score	**11**	**11**	**1**	**6**	**6**	**5**	**4**
County Interest	**Yes**	**Yes**	**No**	**Yes**	**Yes***	**No**	**No**

*Note: Potential transfer to be considered relative to potential County Road 5 improvements.

The current TMP study carries forward the framework scoring results and previous TMP timing of previously identified road jurisdiction transfers.

Based on total framework scoring, the following candidate roads are of County interest, and will be carried forward for consideration in the recommended County road network:

- **(C) 5th Line** and **(D) 10 Sideroad:** Together these two segments form a significant connecting route between a Highway 400 interchange and Bradford West Gwillimbury.
- **(N) Ramara Road 46:** This corridor has sufficient AADT and serves to connect aggregate extraction activity in the vicinity to Orillia. Currently, commercial vehicles are dissuaded from taking the direct, reasonably high-quality route with prohibitory signage.
- **(O) 15 Sideroad Tosorontio:** This local road may be considered for transfer pending further investigation into the multi-modal network implications of a potential transfer.

  The Township of Adjala-Tosorontio noted that Sideroad 15 is part of a route with faster travel times than the current County road network for travel from, for example, Alliston to Collingwood, as it avoids slowing down to 50 km/h through the settlement area of Everett (at County Roads 5 and 13).

  Additionally, Sideroad 15 serves a more direct route than County Road 5 for those travelling between smaller settlement areas east and west of CFB Borden. However, a distance of 3 kilometres from parallel County Road 5 would result in closer than necessary County road network spacing. Consideration could be given to “swapping” County Road 5 for Sideroad 15 east of Sideroad 13. The implications on the long-term active transportation network should also be considered, as Sideroad 15 is identified as part of an on-road cycling route, connects with a planned/informal off-road trail, and has an informal off-road trail along the east of this segment.

Candidate roads not carried forward for potential transfer to the County are as follows:

- **(L) Ridge Road East:** In addition to low framework scoring, it would be very costly to upgrade this road to County road standard due to its narrow right-of-way width and curves.

- **(P) Concession Road 3** together with **(Q) Webster Road and Sideroad 3/4 Nottawasaga:** When considered together, these corridors would complete an alternative County road connection between Clearview and Adjala-Tosorontio.

  Scoring for these roads under Criterion 1 of the framework depends on comparing this route with a current County road route. For instance, the primary upper-tier roadway routing between Alliston and Collingwood is north along County Road 13, west along County Road 12, onto Dufferin County Roads 21 and 18, and north along County Road 42. However, the Township of Adjala-Tosorontio noted that GPS systems instead navigate drivers onto Concession Road 3 and Webster Road. When comparing the Concession Road 3 and Webster Road routing to the County Road routing, travel time differences were not significant, given the need to slow down to 50 km/h through Glencairn on Webster Road. Therefore, Criterion 1 scoring would remain with the higher quality County road route.

  It is noted that there is significant aggregate extraction activity along or in close proximity to these candidate roads, resulting in higher scoring under Criterion 5. However, the total scoring for these segments falls under the threshold of 6.

Potential Road Rationalization Framework Review

The County may consider conducting a network-wide reassessment of the segment-by-segment scoring, which has not been updated since the 2008 TMP. The previous scoring is no longer available in GIS format. (The 2008 TMP includes a table of segment-by-segment scoring, but the segment boundaries are not defined and the data values behind the scoring are also not provided.)

In the process, the framework could be reviewed and potentially updated, given that the County's framework deviates to a greater extent from the Ontario Good Roads Association (OGRA) framework on which it is based; most other municipalities have developed and applied frameworks more closely aligned with OGRA's. The County could consider a review of this framework to ensure that it still adequately represents County interests. For example, the County could consider re-incorporating OGRA criteria for boundary service, road right-of-way width and road surface type; more precisely defining criteria such as population centre connectors; and reviewing traffic criteria scoring (which currently gives each road segment at least a minimum score of 1 regardless of roadway traffic levels).

3 Public Transit

The transit system in the County of Simcoe includes numerous agencies across different levels of government, as follows:

- **Regional and Inter-Regional Transit:** GO Transit, a provincial Crown agency and division of Metrolinx, is the primary regional transit operator responsible for bus and rail service between major transit hubs in the Greater Golden Horseshoe, with service connections to as far north as Barrie, with a connection to the County of Simcoe at Bradford GO Station and a future connection to the proposed Innisfil GO Station. Ontario Northland, an intercity bus service and Crown agency of the province, provides connections to Sudbury and North Bay from Severn. In 2022, the Province of Ontario announced plans for the restoration of passenger rail between Toronto and Northeastern Ontario (last operated in 2012) with a station identified for Washago, with a potential in-service date in the mid-2020s. Finally, VIA Rail, a federal Crown corporation responsible for inter-regional rail travel, services a stop in the community of Washago in Severn.
- **County Transit:** The County of Simcoe operates LINX Transit, a six-route system linking many urban areas across lower-tier municipalities.
- **Local Transit**: Services that are operated by and typically within the lower-tier municipalities of the County of Simcoe, or adjacent municipalities and First Nation reserves.

This section summarizes the needs, opportunities, and development of strategies for public transit. Section 6.2 of this report consolidates the recommendations.

3.1 Needs and Opportunities

Transit needs and opportunities identified as part of Phase I of the TMP Update fall under five key themes, as follows:

1. **Connectivity and coordination:** improved coordination between LINX Transit and the local municipal systems (as well as Barrie Transit and Orillia Transit), better connections by co-locating terminals, and improving scheduling and connections between LINX and GO Transit;

2. **Accessibility**: improved accessibility, such as accessible bus stops for traditional fixed-route transit and expanded specialized transit;
3. **Fare integration:** integration or simplification of fare structures, e.g. using common fare media across the various systems across the County;
4. **Governance, funding and operating models:** stable funding with revenues and demand fluctuating during the pandemic and the reliance on governmental transfers (e.g. the gas tax); and
5. **Sustainable infrastructure and vehicles:** fleet renewal with more efficient and/or electric vehicles.

3.2 Strategy Development

While a full network review was not undertaken as part of the TMP Update, the development of a Transit Strategy was undertaken to identify key considerations and develop key directions to respond to the needs and opportunities outlined above. Ultimately, the strategy takes the form of an action plan consisting of short- and long-term directions (see Section 6.2), based on the considerations and directions identified below, with further consideration to the evaluation and identification of a preferred solution (outlined in Section 4.2.2).

Through the development of these considerations, directions and potential directions, it became apparent that one possible solution to many of the issues would be the amalgamation of the transit systems within the County of Simcoe. This possibility is discussed further in Section 3.2.2 as well as Section 6.2.2.

3.2.1 Considerations and Key Directions

The Transit Strategy is organized into five key themes, responding to the needs and opportunities previously presented. Exhibit 3.1 presents considerations and initial key directions for the strategy, organised under each of the identified themes.

Exhibit 3.1: Transit Key Directions

Considerations	Initial Key Directions
Connectivity and Coordination	
• Service integration between transit service providers including GO Transit, LINX, Ontario Northland and local transit agencies could be improved. • Many potential customer trips are not served by a single route, requiring multiple transfers between transit routes and service providers. • Route terminus points are not located together, limiting the potential for direct and seamless customer transfers. • Transit services that do allow for direct customer transfers do not have synchronized schedules, increasing customer waiting times.	Create a more seamless travel experience to better connect local and regional networks and destinations, including improved or new service to under-served communities.
Accessibility	
• Not all service stops are accessible due to infrastructure constraints. • Daytime-oriented service limits suitability for discretionary trips, especially for seniors and people with disabilities. • Lack of coordinated transfers limits the distance County residents can travel.	Ensure a consistent, quality customer experience and design transit stops to meet the requirements of AODA.
Fare Integration	
• Fare payment media are not consistent across any of the County's different transit operators, as each have their own fare card systems. • Non-aligned fare structure requires customers to pay each fare when transferring between different transit service providers. • Operators may not want to provide fare integration or discounted transfers without participation from higher-order governments due to dependence on fare revenue. • Student and senior fare subsidization should be considered as part of a County-wide transit fare policy.	Create an affordable, equitable and consistent fare system for travel throughout the County and for regional connections.

Considerations	Initial Key Directions
Governance, Funding and Operating Models	
• There is a lack of a regional governance model for transit service in the County, resulting in potential duplication of responsibilities between operators. • Multiple operating contracts are in place. • Ridership that is dispersed between agencies may limit the effectiveness of gas tax funding.	Adopt a governance and operating model that results in a transit system that works as one for the customer across the County.
Sustainable Infrastructure and Vehicles	
• Vehicles are conventional diesel-fueled buses with lack of sustainable energy options such as hybrid, battery-electric, or hydrogen-fueled buses. • Transit facilities do not incorporate energy collection or use emissions-reduction technologies.	Develop a sustainable future through smart investments in zero-emissions vehicles, new technology, and environmentally-friendly infrastructure.

3.2.2 Considerations for Transit Amalgamation

Improved coordination among transit operators is a recurring theme in many of the needs, opportunities and key transit directions identified for the County of Simcoe. To reduce barriers and provide seamless and efficient transit operations throughout the County, studying the feasibility of County-wide transit amalgamation is recommended. Regional amalgamation has been successfully implemented in mixed urban-rural municipalities in Ontario in the past including York Region, Durham Region and Waterloo Region.

The implementation of a County-wide transit system to replace several existing transit providers would involve many benefits visible from the customer perspective, as well as potential risks or trade-offs, as follows:

- **Improved transit service.** Duplication in services could be reduced where regional routes could do the heavy lifting on major corridors, while local routes or other services could be directed to areas of lower demand. By planning and operating the entire system, the County could also ensure that customer connections take place in high-quality and centralized environments where a variety of different transit services are available.

- **Seamless County-wide connectivity.** A County-wide transit system would implement a unified standard, limiting confusion among transit users travelling between settlement areas and across local municipalities. The implementation of a County-wide fare zone system would provide a much more straightforward fare structure. The customer could board a recognizable County bus at a recognizable stop, pay for their trip with a single fare card, transfer at an integrated transit hub if necessary, and reach their destination without the need for several different payments.
- **Protect and leverage local context.** By shifting to a system that encompasses the entire County, the new approach risks losing or compromising some of the local knowledge and context of the existing system operators. If routes are altered substantially, customer trips could also be disrupted.

  Maintaining and prioritizing local services to meet local needs is an important consideration, and consultation with customers and the successful incorporation of existing transit staff would be critical to the development of a unified transit system in the County. This includes the consideration of best practices and lessons learned from local municipal partners, as it would be advantageous to leverage their successes (e.g. the Town of Innisfil noted the benefits of its Uber-partnership that provides on-demand service to meet the context of the Town and could be considered in the future transit model).
- **Increased County responsibility.** A new County transit system would assume the maintenance and liability of the current operating fleet and infrastructure, while operating staff may have to learn new processes and procedures as each individual system may not function in the same way.
- **Engage major outside players.** The provision of a single operator model should include consultation and coordination with key external transit operators, including Metrolinx, Barrie Transit and Orillia Transit. Integration with existing external transit operators is key to coordinating broader regional integration, as well as ensuring alignment with the GGH Transportation Plan which aims to achieve a robust interconnected regional bus network.

4 Active Transportation

Active transportation, or active travel, refers to all forms of human-powered travel (e.g. walking, cycling, skating, using a wheelchair, etc.) or power-assisted travel (e.g. using pedal-assist e-bicycles, e-scooters, mobility devices, etc.). Cycling and walking are the most common modes of active travel.

This section summarizes the active transportation needs, opportunities and network development process. Section 6 of this report consolidates the draft recommended network.

4.1 Needs and Opportunities

Given the longer travel distances required, cycling is the more viable form of active travel between local municipalities in the County of Simcoe compared to walking. For this reason, cycling is a key focus for the TMP Update, including the identification of a cycling network and recommendations for infrastructure implementation.

It is important to note that cycling facilities are open to many other forms of rolling. When “cycling facilities” are referenced, it should be read as being as inclusive as possible to other forms of active travel.

Additionally, given the slower speeds and shorter typical travel distances, walking is more feasible within the boundaries of the County’s local municipalities. Also, it is the responsibility of the local municipality to provide sidewalks alongside both local and County roads. Therefore, the TMP Update takes a more policy-oriented approach to walking infrastructure.

The County’s role in supporting active transportation takes several forms, as follows:

- **Provision of safe and appropriate infrastructure.** The County is responsible for facilitating the safe movement of people travelling between communities, including trips by travel modes besides cars. The County also has the potential to fund and deliver facilities in partnership with local municipalities and can coordinate the implementation of facilities across jurisdictional boundaries. The County can also provide consistent construction and maintenance standards.

- **Support for cycling tourism.** Another related role is encouraging and supporting cycling tourism, and other active travel, as part of the broader economic development strategy.

In this context, the following needs were identified through Phase I of the TMP Update study:

- Safer, dedicated connections along higher-volume County roads between urban settlement areas;
- Better connectivity to the off-road trail network;
- Co-ordinated approach to building active transportation infrastructure, taking advantage of opportunities to complete AT projects simultaneously with other capital projects necessitating road rehabilitation or reconstruction; and
- Continuation and strengthening of a complete streets approach where active transportation facilities are routinely considered throughout the road planning and design process.

At this stage of the TMP Update study, the focus is responding to the first two needs outlined above through the development of a County-wide priority network. The purpose of the **Priority Cycling Network** is as follows:

- Identify routes that form the "spine" of the cycling network and address major gaps in the existing network;
- Prioritize investment over the short-term and medium-term while maintaining the previously proposed network as a long-term vision; and
- Develop a balance between serving cycling trips for transportation and recreation or tourism purposes.

4.2 Network Development

An objective of the current TMP is to identify a Priority Cycling Network, building upon and expanding the overall network plan developed as part of the 2014 TMP Update. The following four steps were applied in the development of the Priority Cycling Network:

1. Consolidate and analyze background information and data on existing active transportation conditions.
2. Identify priority routes.

3. Confirm facility types along priority routes.
4. Prepare priority route and overall network costing.

At this stage of the TMP Update, the first two steps are considered; identifying facility types and costing are considered in later phases. The Priority Route Network may be refined based on facility type feasibility and costing considerations in those phases.

4.2.1 Analysis Factors

In identifying the priority routes, four considerations were used:

- Existing cycling network and proposed routes from the 2014 TMP Update, as well as the Province-Wide Cycling Network;
- Existing cycling demand based on ridership data from Strava and the Transportation Tomorrow Survey;
- Connectivity analysis based on 5-kilometre buffer zones around rural hamlets and connecting to urban settlement areas; and
- Public and stakeholder input.

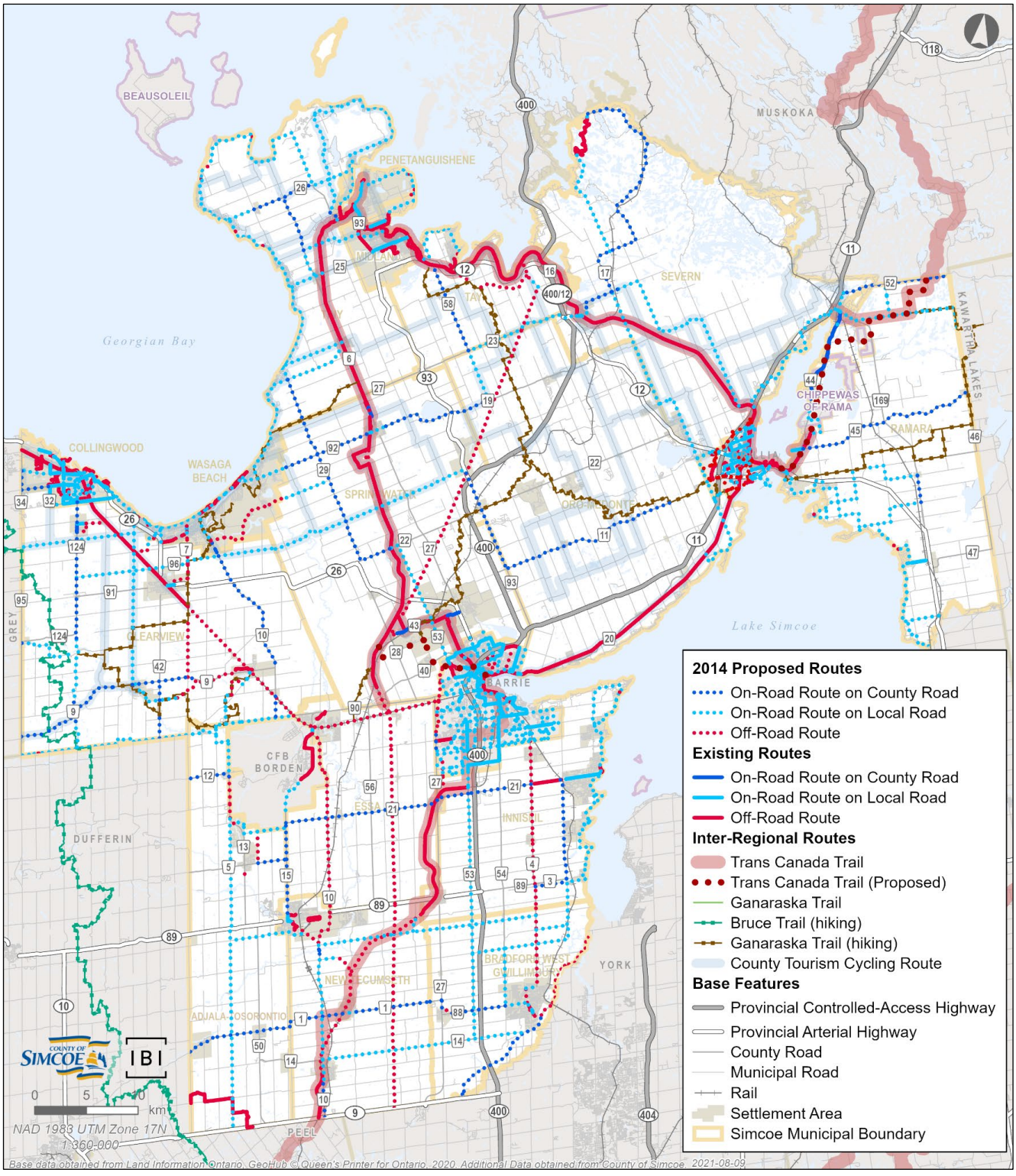
Existing and Proposed Cycling Network

The 2014 TMP Update developed a solid basis for developing a proposed cycling network in the County of Simcoe, shown in Exhibit 4.1 alongside existing cycling facilities and cycling tourism routes.

The existing and proposed routes are categorized into two facility types:

- **On-road:** These routes require cyclists to ride on the same roadway as motor vehicles and include signed rural roads, paved shoulders and buffered paved shoulders.
- **Off-road:** These routes are typically outside the road pavement and include off-road trails and multi-use paths. Off-road routes provide the highest degree of separation between cyclists and motor vehicles. Off-road facilities can accommodate a variety of active uses and users, including pedestrians, ATVs, and snowmobiles.

Exhibit 4.1: 2014 TMP Update Proposed Cycling Routes, Existing Routes, and Cycling Tourism Routes



Ridership Data

Existing ridership data is a useful resource in showing where cycling is occurring today. Two sets of data were used to provide additional layers of analysis into the network development, as follows:

- **Strava** is a smart phone application available to cyclists to track and map the location of their rides. When aggregated, a heat map is generated illustrating where ridership is most concentrated. While useful, Strava data has some limitations. It represents only a subset of cyclists, typically those who are riding for recreation and those who ride more frequently. It does not necessarily capture occasional cyclists or those who prefer not to track their rides and is less likely to capture cyclists who ride as a form of transportation. The Strava data available at the time of analysis was from 2020, which does not necessarily represent a typical year, given COVID-19 pandemic impacts. Nonetheless, it is useful to show some of the locations where ridership is high. The Strava data showing all rides logged in 2020 is presented in Exhibit 4.2.
- **The Transportation Tomorrow Survey (TTS)** is a travel survey of people in various municipalities in Southern Ontario. The latest edition of the survey available was conducted in 2016 and provides origin-destination information for all trips made throughout a typical day in the County of Simcoe[18]. Exhibit 4.3 shows the number of daily cycling trips originating in each TTS traffic zone based on 2016 TTS data. These traffic zones are polygons that the study area is divided into to provide a higher level of disaggregation. Cycling trips are generally concentrated within the urban settlement areas and some rural hamlets. Although TTS data was not available for Grey County and District of Muskoka, cross-boundary connections were reviewed.

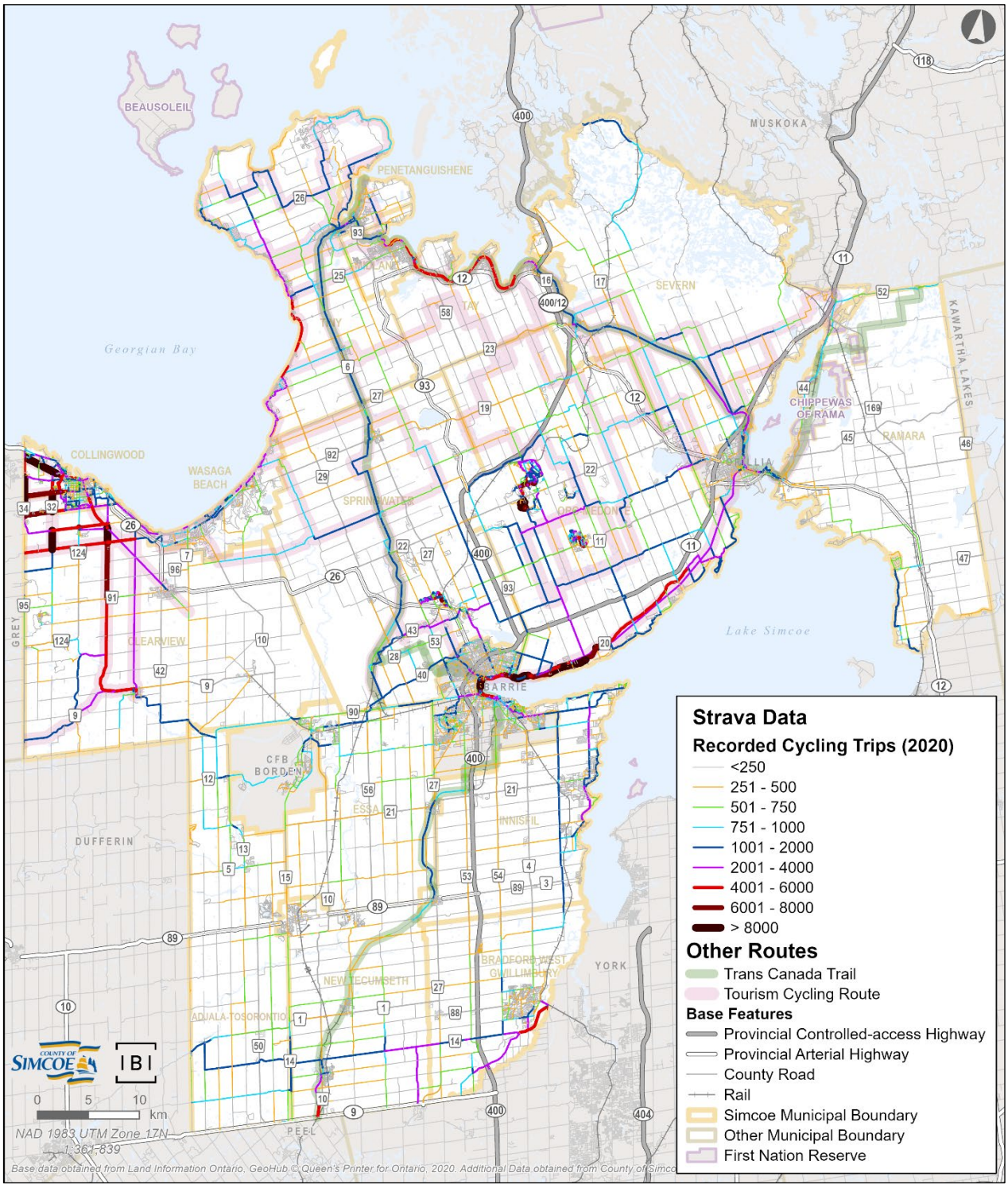
Hubs and Connectivity

A “hub-and-spoke” analysis was conducted to identify possible connections between urban areas and rural settlement areas. Linking denser urban areas (hubs) with rural areas via comfortable and safe cycling corridors (spokes) is an important component of the Priority Cycling Network. The hubs were identified as the numerous urban settlement areas throughout the County of Simcoe. Under the assumption that 3 to 5 kilometres is generally considered a reasonable cycling distance, catchment zones within 5 kilometres of each rural hamlet were identified.

[18] The County is awaiting results from the 2021 TTS, which was delayed to 2022 due to the COVID-19 pandemic.

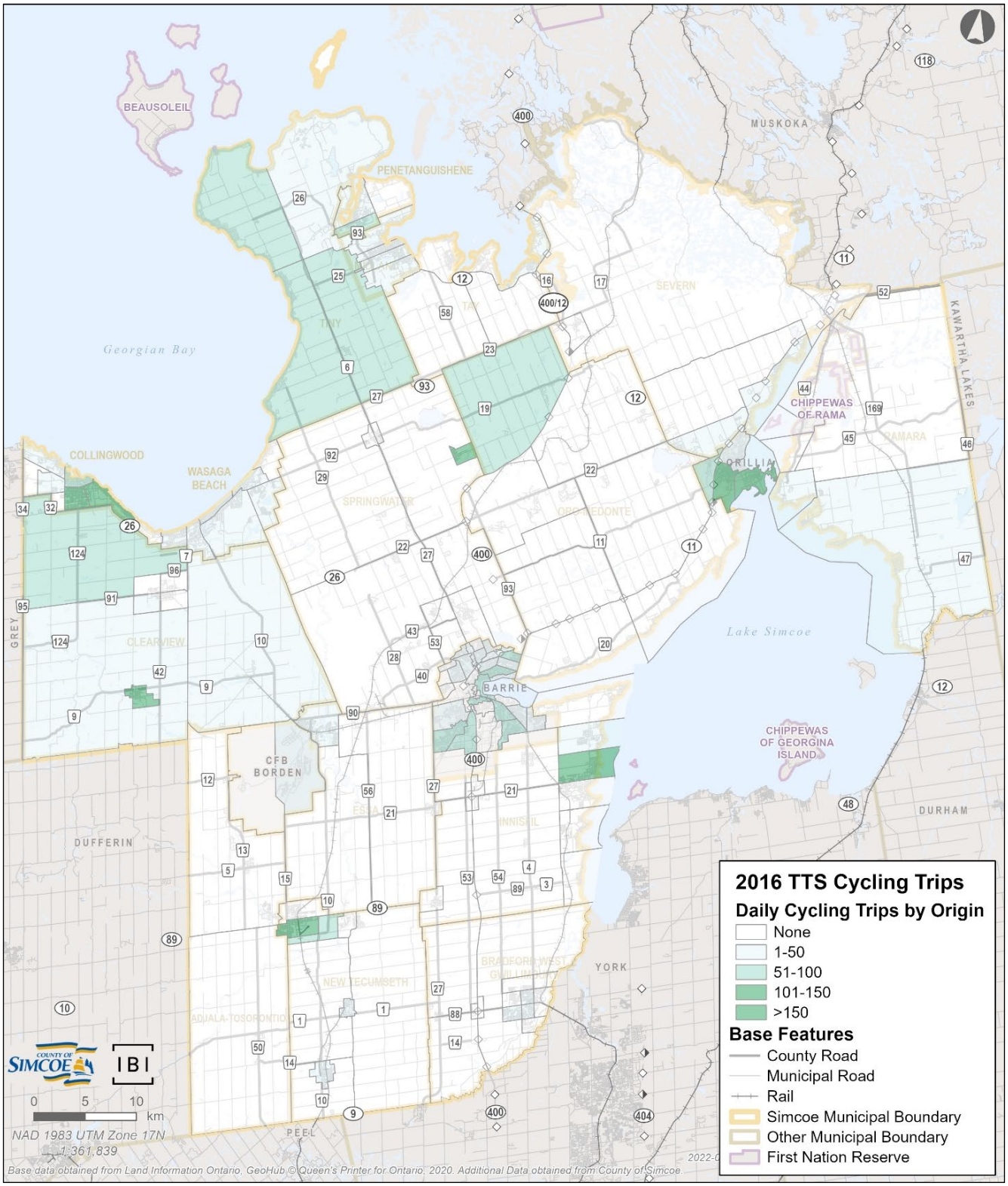
Exhibit 4.4 shows these catchment zones, which help to identify corridors that can serve multiple connections between rural settlement areas and the urban hubs.

Exhibit 4.2: 2020 Strava Ridership Data



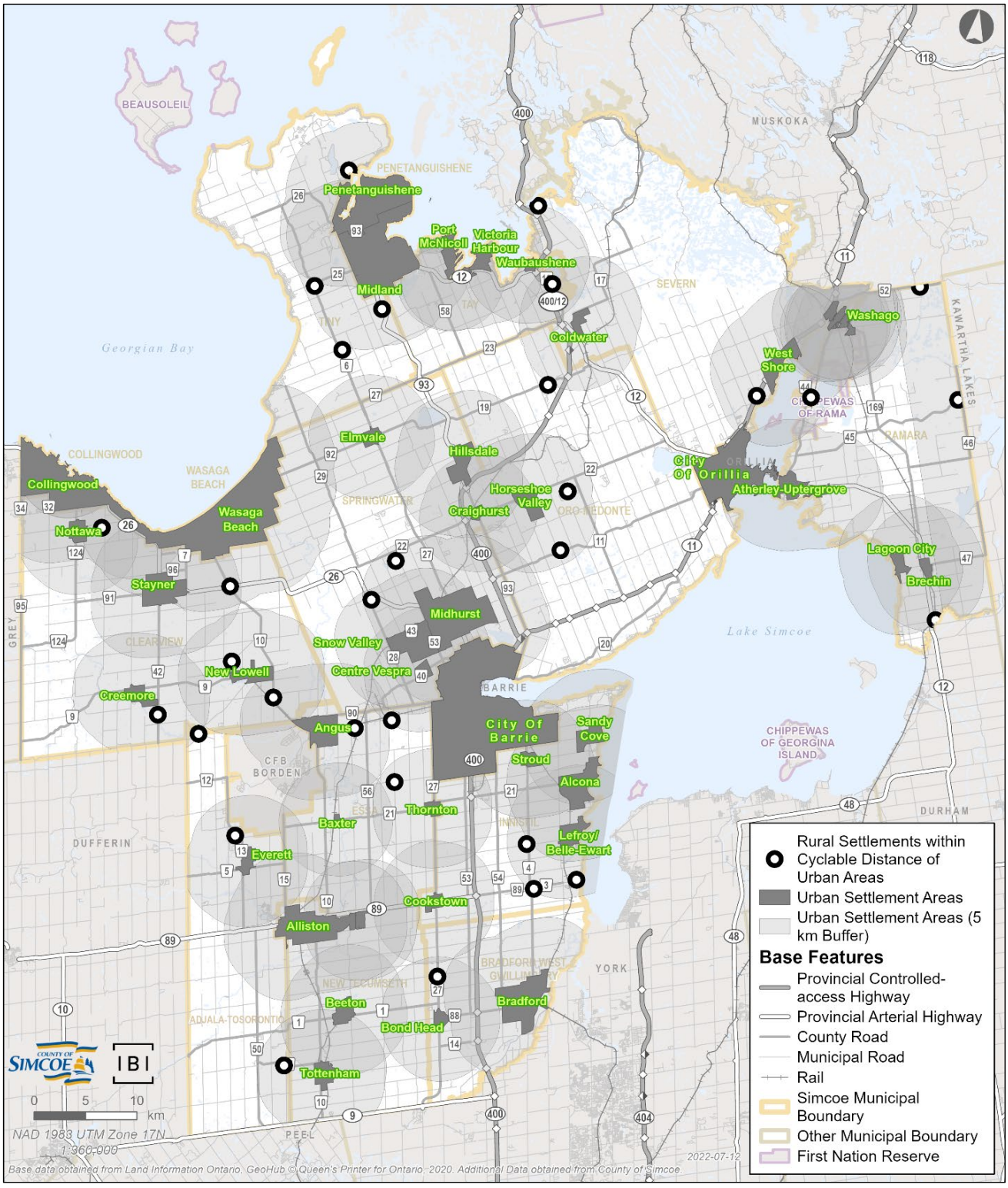
Data Source: Strava (2020)

Exhibit 4.3: 2016 Transportation Tomorrow Survey Daily Cycling Trips by Zone of Origin



Data Source: Transportation Tomorrow Survey (2016)

Exhibit 4.4: Catchment Zones Surrounding Major Urban Areas



Public and Stakeholder Input

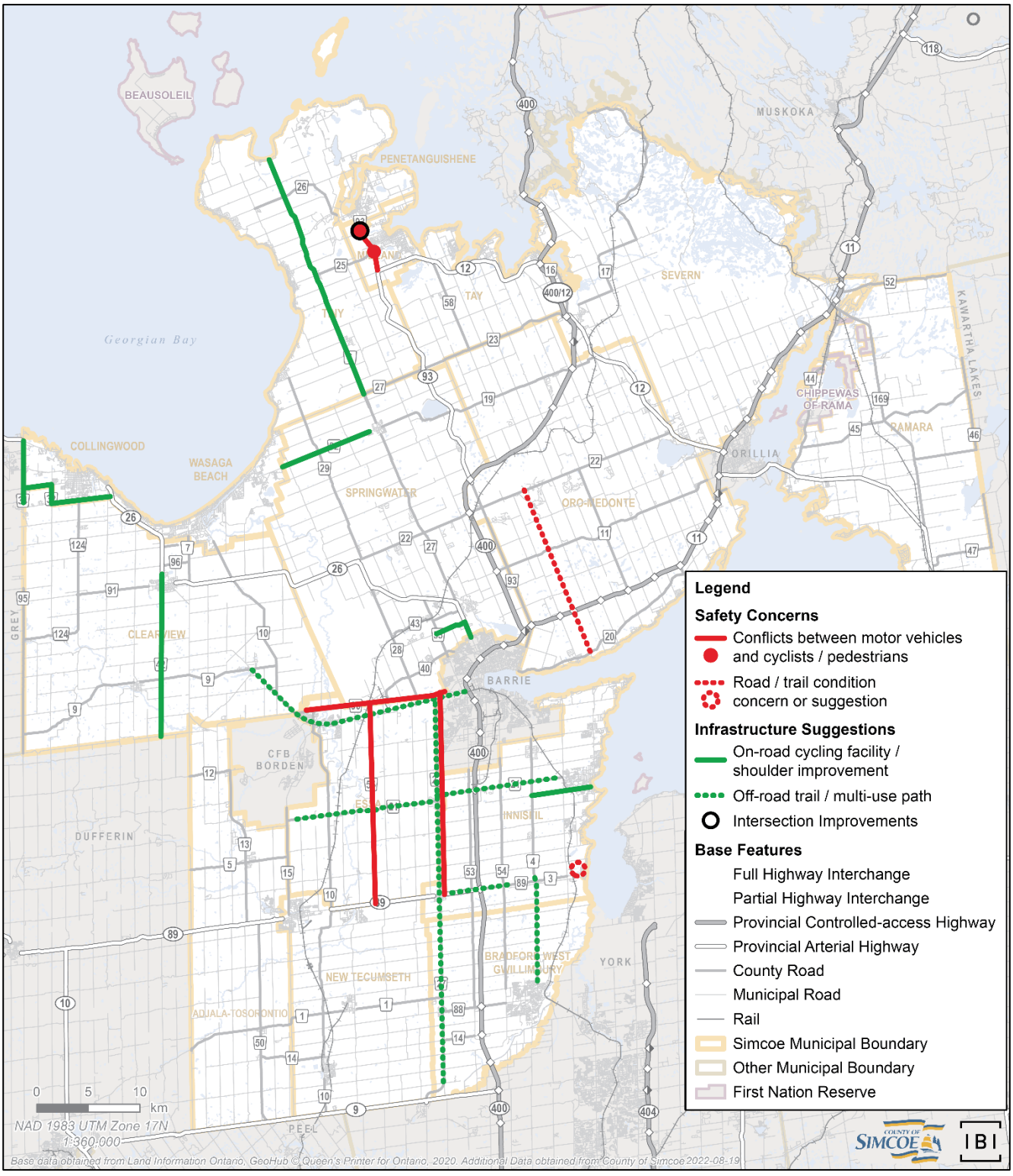
Outreach was conducted with representatives from each of the local municipalities. Common themes included the need for more paved shoulders and separated cycling facilities, concerns about vehicle speeds and cyclist safety. A summary of selected input received from the local municipalities is outlined in Exhibit 4.5.

Feedback was also collected from the public and other stakeholders. Recurring themes included the need for more cycling facilities and a need for improved street crossings. A selection of the comments received is presented in Exhibit 4.6.

Exhibit 4.5: Summary of Selected Input by Local Municipality

Local Municipality	Comment Summary
Town of Bradford West Gwillimbury	• Add paved shoulders for cyclists • More trails needed
Town of Innisfil	• Cycling paths should connect to adjacent communities • More separated facilities are needed
Town of Midland	• Safety of pedestrians and cyclists is a major issue • Physical separation on major arteries is needed to keep cyclists/pedestrians safe • Make shoulders safer for cyclists
Town of New Tecumseth	• Concern with lack of physical separation from cyclists • More cycling connections to trails would be a benefit • Add more paved shoulders on County roads for safety
Town of Penetanguishene	• Frequent speeding puts cyclists at risk
Township of Adjala-Tosorontio	• Add more bike paths • Speeding motorists and trucks put cyclists at risks
Township of Clearview	• Add more separated bike lanes
Township of Essa	• Add more separated cycling facilities on main streets • Add more amenities (e.g. benches, lighting) on pathways/sidewalks
Township of Oro-Medonte	• Add more cycling lanes
Township of Ramara	• Add wider paved shoulders • Designated or separated cycling facilities are preferred
Township of Tay	• Separated cycling facilities are preferred. • More rest areas and amenities needed on trails. • Lower speed limits.

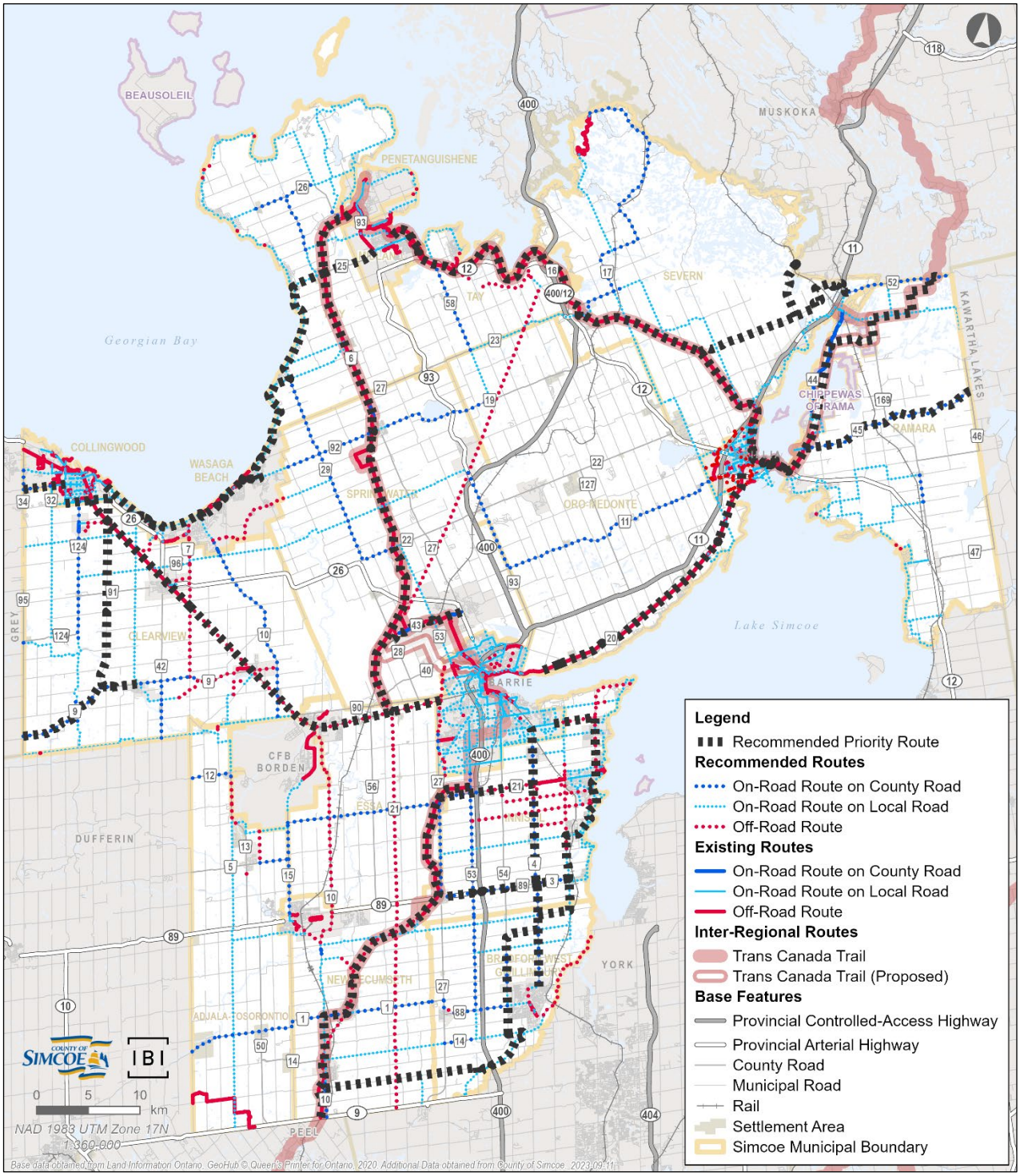
Exhibit 4.6: Selected Public Comments on Cycling



4.2.2 Draft Priority Cycling Network

A draft priority cycling network identified based on the analysis factors described in Section 4.2.1 is shown as Exhibit 4.7.

Exhibit 4.7: Existing, Proposed and Draft Priority Cycling Networks



5 Network Alternatives

5.1 Development of Alternatives

A key step in the Municipal Class Environmental Assessment Master Plan process is to identify and evaluate network alternatives. These alternatives represent differing variations of projects and strategies that aim to address the stated problems. The base case plus two network alternatives were identified for the TMP Update: a Trend Scenario and a Higher-Sustainability alternative. These are summarized in Exhibit 5.1 along with a description of the road network, transit and active transportation elements included in each alternative.

5.2 Evaluation of Alternatives

5.2.1 Evaluation Approach

The objective of this process is to identify the alternatives that best respond to the stated transportation Goals for the County of Simcoe. These were developed through Phase I of the TMP Update study, building on existing strategic directions and updated with feedback from public and stakeholder consultation. For reference, the Goals are as follows:

- **Connected Communities:** Provide efficient and safe travel between County communities and to adjacent municipalities via the County road network.
- **Efficient Goods Movement:** Support the local economy by enabling efficient movement of goods and commercial vehicles.
- **Transit as a Viable Choice for Everyday Travel:** Enhance and support transit as a competitive, effective, and equitable mobility choice for all types of trips between County communities.
- **Safe and Connected Active Transportation:** Enhance and expand walking, cycling and other active transportation facilities and infrastructure to connect and support healthy communities in the County.
- **Responsible, Forward-Looking Stewardship:** Represent responsible investment in infrastructure and operations, targeting high cost-benefit ratios while ensuring the County is prepared for the future.

- **Protected Natural Environment**: Mitigate disruption of habitats, waterways, agricultural land, natural heritage, and natural resources while minimizing long-term climate impacts and increasing resilience to potential climate change impacts.

Exhibit 5.1: Description and Elements of the Network Alternatives

Network Alternative	Overview Description	Road Network Elements	Transit Elements	Active Transportation Elements
1. Base Case	Represents the baseline scenario and consists only of committed and funded projects.	Only under construction or funded road projects are included.	Transit system continues to operate as if it is business-as-usual, with no additional investment planned.	Only under construction or funded AT projects are included.
2. Trend Scenario	Continues transportation planning in the same manner as the previous ten years, with an emphasis on increasing road capacity to meet new travel demand.	Road network projects scoring 10 points or higher (see Section 2.2.2).	Ongoing transit operations and planned expansion or investment is maintained.	On-road and off-road routes identified in the previous TMP (see Section 4.2.1).
3. Higher Sustainability	Rebalances focus toward more-sustainable modes (e.g. AT, transit) while recognizing the importance of selected road network improve-ments (priority score 30 or higher).	Higher impact road network projects scoring 30 points or higher (see Section 2.2.2).	Transit service is optimized for maximum efficiency through the integration of all local services and the County service (see Section 3.2).	Key active transportation routes are identified and prioritized for shorter-term implementation with higher-order facilities (see Section 4.2).

5.2.2 Evaluation Results

The base case and the two network alternatives were evaluated against each other as to how effective each alternative is at meeting the TMP goals. The outcome of this process is summarized in Exhibit 5.2. The table's cell colouring (light red, yellow and green) corresponds to the evaluation results.

Exhibit 5.2: Evaluation of Network Alternatives

Goal	1. Base Case	2. Trend Scenario	3. Higher Sustainability
Connected Communities	**Somewhat effective** – Existing road network continues to link Simcoe's communities together, though congestion would be expected to increase.	**Somewhat effective** – Expanded road network would provide excellent access to drivers, however residents and visitors relying on transit and active transportation are left behind.	**HIGHLY EFFECTIVE** – The most impactful road network projects, improvements to the transit system and a focused priority cycling network will allow all residents and visitors to connect between communities efficiently.
Efficient Goods Movement	**Limited effectiveness** – Existing road network continues to provide routes for moving goods; however, increased congestion would reduce efficiency significantly.	**HIGHLY EFFECTIVE** – Expanded road network is expected to meet the demand for road capacity, allowing for efficient movement of goods to, from and within Simcoe.	**HIGHLY EFFECTIVE** – – Key bottlenecks are addressed near truck and goods movement generators, providing efficient access to the provincial highway system.
Transit as a Viable Choice for Everyday Travel	**Limited effectiveness** – Transit would continue as independent operators service smaller areas with limited investment in growth or improved service.	**Somewhat effective** – Though this alternative allows for the continued expansion of the transit system, it does not meet the needs of residents due to the continued operation as indep-endent transit systems.	**HIGHLY EFFECTIVE** - The integration of Simcoe's numerous transit operators will create operational efficiencies and improve the user experience.

Goal	1. Base Case	2. Trend Scenario	3. Higher Sustainability
Safe and Connected Active Transportation	**Limited effectiveness** – The existing active transportation network remains incomplete and inadequate.	**Somewhat effective** – Though an extensive network is planned, there is a high reliance on on-road routes.	**HIGHLY EFFECTIVE** – Improves upon the previously-planned network by implementing a priority network of connected and safe routes.
Responsible, Forward-Looking Stewardship	**Limited effectiveness** – While construction costs may be low, without acting on opportunities to encourage non-car modes of travel, this does not represent strong forward-looking stewardship.	**Limited effectiveness** – A heavy focus on the road network and the high costs associated with construction does not represent respon-sible, forward-looking stewardship.	**HIGHLY EFFECTIVE** – Balances the need for road network expansion with fiscal responsibility and represents a progressive, multi-modal approach.
Protected Natural Environment	**Somewhat effective** – With very few new or widened roads being built, there is little impact on environmental areas.	**Limited effectiveness** – Extensive road widen-ings and new roads will have negative impacts on environmental systems in Simcoe, while increased vehicle reliance will increase emissions.	**Somewhat effective** – Road network expansion will continue to impact environmental lands, but a significant number of projects are deferred to beyond 2051.
Overall Effectiveness	**Limited effectiveness**	**Somewhat effective**	**HIGHLY EFFECTIVE**

Note: Table cell shading reflects assessment results: light red – Limited effectiveness, yellow – Somewhat effective, green – Highly effective.

The **base case network alternative** considers forecasted future conditions without major mitigating measures being taken. The base case is used to compare against future scenarios where different improvements have been considered and factored into the model.

In the **trend scenario network alternative**, the County of Simcoe will take a traditional transportation planning approach, focusing on new and widened corridors along the road network. This approach will meet travel demand largely by

supplying road space for automobiles and other vehicles. The trend scenario continues to invest in both transit and active transportation. Transit operations continue and new investment continues at a similar rate to recent years, meaning new routes would be added and services improved as feasible. Meanwhile, the extensive cycling network from the 2014 TMP Update is carried forward, generally implementing lower-cost on-road projects more quickly than off-road routes.

The **higher-sustainability network alternative** represents a different way to meet the mobility needs in Simcoe. Where the trend scenario continues the focus on the road network, the higher-sustainability alternative places increased emphasis on improving active transportation and transit. Road network improvements are more selectively focused on the highest impact projects, recognizing the reality that the County is a large geographic area with large rural areas and many distinct population centres. County-wide transportation will continue to be reliant on private vehicles, but increased attention to transit and active transportation will encourage more people to choose these options for the trips.

The two latter scenarios represent plausible multi-modal solutions to the transportation needs in the County of Simcoe. However, some shortcomings have been identified with the trend scenario. With updated land use assumptions and updated transportation demand modelling, and a new planning horizon to 2051, the TMP Update has not identified the need for such a vast array of road widening or new road projects. In terms of active transportation, the previously planned network, though extensive, may have more ad hoc implementation and relies heavily on on-road routes, which can be less effective in drawing new riders. For transit, it continues the status quo where numerous transit systems operate with limited interactivity, supported by the County's regional transit system.

The higher-sustainability alternative, meanwhile, has been adapted from the trend scenario to respond to the County's updated transportation and community-building objectives. This alternative scales back road network capacity improvements to the most effective projects, focusing investment where it is most needed. It also augments the planned active transportation network by focusing on a smaller, but higher-order network identified for shorter-term implementation. Finally, this alternative recommends the integration of all transit in the County into a single, unified system. This should improve operations across the County, create more efficient delivery, and improve service for riders.

6 Preferred Network Alternative

Though both network alternatives – trend scenario and higher sustainability – represent plausible solutions, it is the higher sustainability network alternative that has been identified as the most effective approach to addressing the County's transportation needs and meeting its six TMP goals.

As outlined previously in Exhibit 5.1, the higher-sustainability network alternative consists of the following elements:

- Higher-impact road network projects scoring 30 points or higher for;
- Transit service optimized for maximum efficiency through the integration of all local services and the County service; and
- Priority active transportation routes identified for shorter-term implementation with higher-order facilities.

Based on these, the following sections present the draft recommended road network, Transit Strategy and cycling network.

6.1 Recommended Road Network

This section categorizes road network recommendations for the preferred network as follows:

- Recommended road projects (including widenings, new construction, jurisdictional transfers, and a future road network capacity study) identified for implementation by 2051 based on project prioritization scoring (Section 2.2.3);
- Projects identified for consideration beyond 2051; and
- Provincial road projects supported by the County of Simcoe.

6.1.1 Recommended Road Projects by 2051

Candidate County road projects (i.e. capacity improvements) that generated a total score of 30 points or greater as part of the project evaluation process were identified for implementation by the TMP Update horizon year of 2051, with implementation phasing (i.e. short-term, medium-term, and long-term) to be determined as part of Phase III of the TMP Update, with project timing to coincide with scoring (i.e. a higher score indicates greater urgency and relevance).

The recommended road network, including capacity improvements and road transfers, are shown in Exhibit 6.1. Project identifiers on the map correspond to the ID column in the recommended road network projects table outlined in Exhibit 6.2. The following project details are important to note:

- **Project 32 – East-West Capacity Improvement Study for Northwest Simcoe:** A network capacity study is recommended for Northwest Simcoe County in partnership with the MTO, with the County of Grey and affected local municipalities in the area identified as potential partners.

  The East-West Capacity Improvement Study is identified as an opportunity to properly assess, identify and respond to the issues and needs regarding road network capacity in the greater Collingwood-Clearview region. Seasonal tourism, congestion, road user safety and through traffic in settlement areas (e.g. Stayner) has prompted the need for a comprehensive study separate to the TMP Update.

  The recommendations of the study may alter the need, timing and scope of other road network projects identified in this area, including the widening of County Road 32 and the transfer of Nottawasaga 27/28 Sideroad to County jurisdiction.

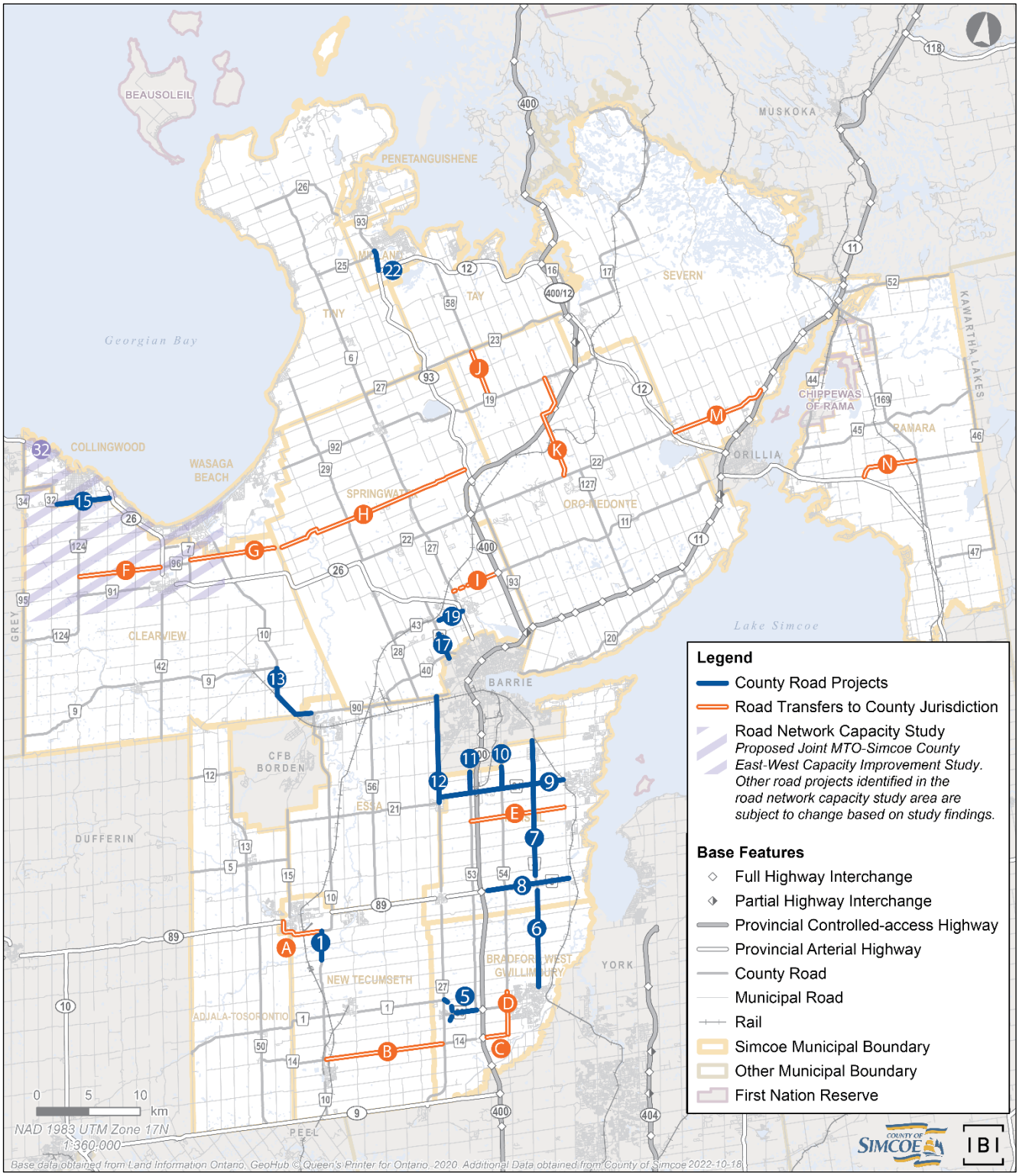
- **Project 17 – County Road 53:** This road widening project was initially identified between Highway 26 and the Barrie city limit. However, travel demand modelling determined that capacity improvements are only needed along County Road 53 south of Carson Road due to the Midhurst development. As such, only this shorted segment was carried forward as a recommended project by 2051. County Road 53 between Highway 26 and Carson Road has been included as a road project beyond 2051.

- **Project O – 15 Sideroad Tosorontio:** Although project scoring of the candidate road transfer corridor identified County interest, this project was ultimately not carried forward for recommendation. Consideration should be given to potentially swapping this corridor for improvements to County Road 5. Consideration should also be given to implications on the multi-modal network, noting the off-road trail connection to Sideroad 15.

- **Project B – 5th Line:** The Town of Bradford West Gwillimbury Is undertaking improvements east of Highway 400, creating a South West Arterial Road (Sideroad 10 from CR 88 to Line 5, and Line 5 from Sideroad 10 to Coffey Road). The timing of the upload of 5th Line to the County is dependent on the completion of this work.

- **All road network projects**: All recommended road network projects in the TMP are subject to the Municipal Class Environmental Assessment (MCEA) process. The MCEA process will include an evaluation of alternatives, including alternatives with and without unconfirmed provincial road projects.

Exhibit 6.1: Recommended Road Projects by 2051



Note: Project limits are approximate.

Exhibit 6.2: Recommended Road Network Projects

ID	Corridor	Limits	Municipality	Length	Recommendation
Recommended County Road Projects					
1	CR 10 [19]	Industrial Parkway to 12th Line	New Tecumseth	2.8 km	Widen to 4 lanes
5	CR 88 and Bond Head Bypass	CR 27 to Hwy 400, including full Bond Head Bypass	Bradford West Gwillimbury	5.8 km	Widen CR 88 to 4 lanes; New 2-lane bypass around Bond Head
6*	CR 4	CR 89 to Line 8	Bradford West Gwillimbury	10.0 km	Widen to 4 lanes
7*	CR 4	Barrie City Limit to CR 89	Innisfil	13.9 km	Widen to 4 lanes
8	CR 89 and CR 3	Hwy 400 to 20th Sideroad	Innisfil	8.3 km	Widen to 4 lanes
9*	CR 21	CR 27 to 20th Sideroad	Innisfil	12.1 km	Widen to 4 lanes
10	CR 54	Barrie City Limit to CR 21	Innisfil	2.1 km	Widen to 4 lanes
11*	CR 53	Barrie City Limit to CR 21	Innisfil	2.0 km	Widen to 4 lanes
12*	CR 27	CR 90 to CR 21	Essa / Innisfil	10.3 km	Widen to 4 lanes
13	CR 10	CR 9 to CR 90	Clearview	7.2 km	Widen to 4 lanes
15*	CR 32	Concession 10 N Nottawasaga Road to Hwy 26	Collingwood / Clearview	5.8 km	Widen to 4 lanes
17	CR 53	Carson Road to Barrie City Limit (see *additional project details above*)	Springwater	2.5 km	Widen to 4 lanes (development driven)
19	CR 43	CR 53 to Hwy 26	Springwater	2.8 km	Widen to 4 lanes
22	CR 93	CR 25 to Hwy 12	Midland	2.0 km	Widen to 4 lanes

[19] Widening of County Road 10 between Industrial Parkway and 12th Line is responsive to growth expected in the southern part of Alliston. The limits of this widening are approximate, and a future road widening is development driven.

ID	Corridor	Limits	Municipality	Length	Recommendation
Recommended Network Capacity Study					
32	East-West Capacity Improvement Study	-	Collingwood / Clearview	-	Joint MTO-Simcoe County partnership network capacity study for Northwest Simcoe, with the County of Grey and affected local municipalities in the area identified as potential partners
Recommended Road Jurisdiction Transfers					
A	Industrial Parkway	Hwy 89 to CR 10	New Tecumseth	2.7 km	Transfer to County
B	5th Line	CR 10 to CR 27	New Tecumseth	11.7 km	Transfer to County
C	5th Line	Hwy 400 to 10 Sideroad	Bradford West Gwillimbury	2.4 km	Transfer to County
D	10 Sideroad	8th Line to 5th Line	Bradford West Gwillimbury	4.2 km	Transfer to County
E	6th Line	CR 53 to 20th Sideroad [20]	Innisfil	9.2 km	Transfer to County
F*	Nottawasaga 27/28 Sideroad	CR 124 to Hwy 26	Clearview	8.2 km	Transfer to County
G*	Concession 12 Sunnidale Road	CR 7 to Clearview / Springwater Boundary	Clearview	8.6 km	Transfer to County
H*	Flos Road 4	Clearview / Springwater Boundary to Hwy 93	Springwater	19.7 km	Transfer to County
I	Forbes Road (alignment to be decided)	CR 27 to Hwy 400	Springwater	4.7 km	Transfer to County

[20] Eastern limit of 6th Line identified for upload is approximate and subject to future study. It will be determined by road function and growth relative to new Mobility Orbit Development in Innisfil.

ID	Corridor	Limits	Municipality	Length	Recommendation
J	Line 3 North	CR 23 to CR 19	Oro-Medonte	5.2 km	Transfer to County
K	Line 6 North / Line 7 North	CR 19 to CR 22	Oro-Medonte	10.9 km	Transfer to County
M	Division Road	Hwy 12 to Hwy 11	Severn / Oro-Medonte	9.8 km	Transfer to County
N	Ramara Township Road 46	Hwy 12 to CR 169	Ramara	5.9 km	Transfer to County

*Note: Projects 6, 7, 9, 11 and 12 are already in various stages of assessment or construction. Timing and need for Projects 15, F, G and H may be impacted by findings and recommendations of East-West Capacity Improvement Study for Northwest Simcoe.

The travel demand model was run for the year 2051 with both the base case scenario and a scenario with the recommended projects coded into the mode. This output is provided in Appendix B.9 and B.10 respectively. With the inclusion of the collection of recommended road projects, the following improvements are noted:

- East-west capacity deficiencies east of Stayner are improved. Further improvements west through and/or around Collingwood should be expected as an outcome of the recommended East-West Capacity Improvement Study for Northwest Simcoe.
- North-south capacity deficiencies are improved both west and east of Highway 400 including parallel routes between Innisfil and Bradford West Gwillimbury.
- East-west capacity deficiencies are improved in South Simcoe.
- East-west capacity deficiencies are improved west of Barrie.

Additionally, it is also noted that there are still locations within the County that show in the model output as being congested by 2051. These include:

- CR 10 north of Highway 89 and south of CR 90;
- Provincial Highways 11, 89, and 93;
- Roads in the vicinity of the planned Mobility Orbit development in Innisfil; and
- Other accesses to Highway 400.

The TMP does not seek to address all areas where congestion may be present but rather, does seek to prioritize improvements through 2051 while aiming to achieve the multi-modal objectives of the TMP. In the case of CR 10 north of Highway 89, it is carried forward as a project beyond the 2051 horizon and thus would be re-evaluated in future TMP updates.

In the case of the roads surrounding the Mobility Orbit development, other mobility objectives take precedence with the area being planned and promoted as a dense, mixed-use, multi-modal community anchored around the proposed Innisfil GO rail station. While select road projects are recommended in this area (CR 4 widening and 6th Line upload), proposing to widen all streets in response to potential traffic congestion could undermine the goals of higher transit and active travel use in the area.

6.1.2 Road Projects Beyond 2051

Candidate road projects that did not meet the minimum threshold score are deferred to the beyond 2051 timeframe. These corridors are identified for protection for future study, are listed in Exhibit 6.3, and shown in map form in Exhibit 6.4 with the same project identifiers. As development applications are received, the County will ensure built infrastructure accounts for future potential right-of-way needs, as required.

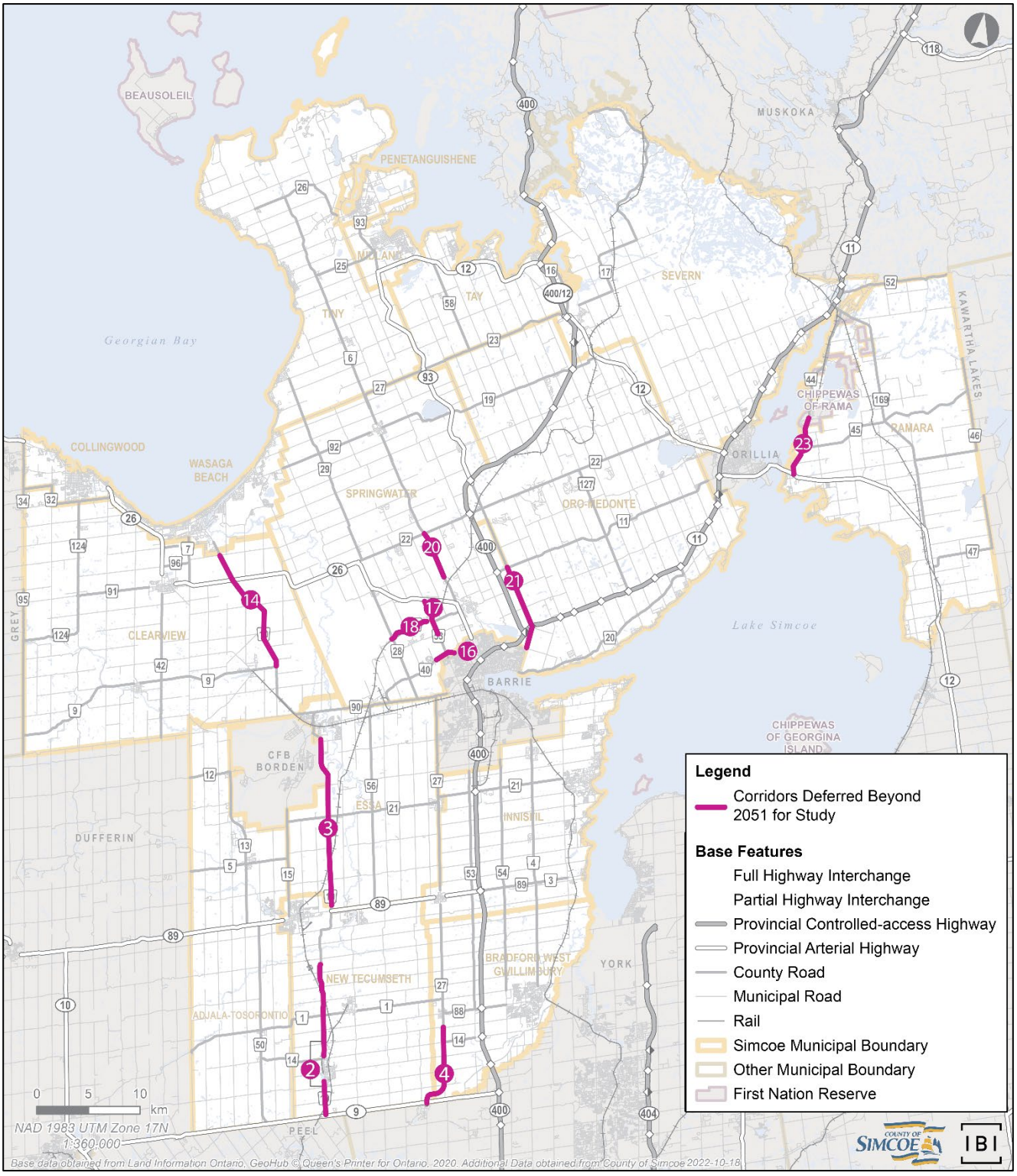
It is noted that major changes in underlying conditions, development patterns or rates of growth in the areas of these corridors could necessitate a re-evaluation of the need and timing of these projects in future TMP updates.

Exhibit 6.3: Right-of-Way Corridors Identified for Protection Beyond 2051

ID	Corridor	Limits	Municipality	Length
2	CR 10	12th Line to CR 14 and Pridham Place to Hwy 9	New Tecumseth	13.0 km
3	CR 10	CR 90 to Hwy 89	Essa	17.9 km
4	CR 27	Future Bond Head Bypass to Hwy 9	Bradford West Gwillimbury	10.5 km
14	CR 10	Concession 12 Sunnidale Road to CR 9	Clearview	12.7 km
16	CR 40	Dobson Road to Barrie City Limit	Springwater	2.2 km
17	CR 53	Highway 26 to Carson Road	Springwater	3.6 km
18	CR 43	CR 28 to CR 53	Springwater	4.5 km
20	CR 27	CR 22 to Mills Circle	Springwater	5.1 km
21	CR 93	CR 11 to Barrie City Limit	Springwater / Oro-Medonte	8.3 km
23	CR 44 [21]	Casino Rama to Hwy 12	Ramara	5.5 km

[21] While traffic is approaching capacity of a two-lane road along County Road 44 toward Highway 12, traffic growth and development have slowed. If demand is increased by potential new developments, the southern-most portion of the roadway may warrant widening prior to the 2051 horizon.

Exhibit 6.4: Corridors Under County Protection Post-2051



Note: Project limits are approximate.

6.1.3 Provincial Road Projects

Considerations for provincial projects is an important component in identifying the future road network in the County of Simcoe. A map of provincial road projects in the County was shown previously in Exhibit 2.2. These provincial projects are important to supporting the efficient and reliable movement of residents, visitors and goods throughout Simcoe County and beyond and respond to existing mobility needs.

The road network analysis considered selected provincial road projects identified through the following:

- **Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe 2051 (MTO, 2021):** Includes current, planned and conceptual future provincial road infrastructure;
- **Ontario's Highway Programs:** Includes road expansion and rehabilitation plans in Southern Ontario, including highway projects in the planning stages beyond 2021 (MTO Southern Highway's Program 2017-2021); and
- **Other sources:** Includes provincial projects identified in *Highway 26 Transportation Study Needs Assessment Report (MTO, 2015),* as well as provincial projects identified in municipal plans (e.g. 2018 Innisfil TMP).

In addition to the committed road projects currently confirmed by the Province, the County of Simcoe supports all provincial road projects previously outlined, as follows:

- Highway 9 capacity expansion (committed);
- Highway 400 capacity expansion (committed);
- Highway 400-404 Link (committed);
- Highway 400 / Innisfil Beach Road overpass (committed);
- Highway 400 / Line 6 interchange (committed);
- Highway 89 East-West Link Improvement (unconfirmed);
- Highway 26 road widening capacity expansion (unconfirmed); and
- Highway 26 Collingwood Stayner Bypass (unconfirmed).

The TMP Update recommends a network capacity study for Northwest Simcoe County in partnership with the MTO, as discussed previously in Section 6.1.1. The East-West Capacity Improvement Study is needed to properly assess, identify, and

respond to the issues and needs regarding road capacity in the greater Collingwood-Clearview region. This study impacts the provincial road projects identified in the region, and solutions recommended by the study may alter the need and scope of these projects.

It is noted that further study of base and future year traffic operations is needed for the provincial coordination projects.

6.2 Recommended Transit Strategy

Following from the needs and initial key directions, specific actions under each theme were identified for the short-term (within five years) and long-term (within ten years). The recommended directions are presented in Section 6.2.1 and preliminary recommendations regarding amalgamation of transit operations is discussed in Section 6.2.2.

6.2.1 Short- and Long-Term Directions

Directions have been developed to address the needs and key directions identified in Section 3. These are presented in Exhibit 6.5.

Exhibit 6.5: Recommended Short- and Long-Term Transit Directions

Theme	Short-Term Directions	Long-Term Directions
Connectivity and Coordination	• Complete a review of transit terminal facilities, bus transfer locations and future transit hubs (e.g. proposed Innisfil GO Station) to allow for better connections in urban areas • Expand transit service periods with late-evening and weekend service trials, focusing on post-secondary and shift-work demand in evenings, as well as users with diverse travel patterns • Study the feasibility of amalgamating transit services in Simcoe County into a single County-wide system to improve the customer experience and service connectivity	• Identify and prioritize infrastructure improvements at key transit connection points in conjunction with service coordination, and improve or add new service to under-served communities • Review and leverage opportunities for County-wide transit service coordination on key corridors • Work with the Province to expand and connect to travel options outside of the County, including increased train service to Bradford, Innisfil and Barrie, and potential future GO service expansion to Bolton and Alliston
Accessibility	• Engage transit users to determine most-needed improvements for accessibility and specialized transit • Create a design standards framework for transit stops to standardize amenities and responsibilities with other municipalities • Commit to investing in customer amenities over time to improve comfort at transit stops • Create standards for transfer points between specialized transit and conventional transit services	• Implement design standards framework for bus stops • Continue investing in customer waiting amenities at transit stops throughout the County • Ensure that transit services in Simcoe County comply with or exceed AODA standards

Theme	Short-Term Directions	Long-Term Directions
Fare Integration	• Initiate review of County-wide transit fare policy and develop County-wide fare zone system • Explore technologies and products that would accommodate inter-agency fares • Establish a framework for discounted fares for customers transferring between different transit operators, including LINX, as well as students, seniors and people living with a low income.	• Implement regional fare and zone strategy recommendations developed from short-term directions • Monitor best practices at peer agencies for continuous improvement • Work with the Province to enhance fare integration between County and regional/provincial transportation services, such as GO and Ontario Northland
Governance, Funding and Operating Models	• Begin studying a County-wide transit service model as part of future Transit Strategy Update, in-line with the GGH Transportation Plan which aims to achieve a robust interconnected regional bus network – apply a 10-Year Transit Vision and a 5-Year Implementation Strategy • Review service delivery needs and opportunities, including investigating use of on-demand and micro-transit (ODMT), as well as leveraging the local knowledge and successes of local municipal partners • Improve coordination of transit vision, planning and strategy in the County of Simcoe • Monitor all potential future funding opportunities for transit and sustainable transportation from higher levels of government	• Implement County-wide transit service model, following Transit Strategy Update • Continue to refine and improve regionally integrated transit service, including connections to expanded GO Transit and intercity services • Create and implement a five-year transit plan and long-term transit vision in alignment with the GGH Transportation Plan (and associated transit actions) to support the development of a broader regional system that provides seamless connections across the County and the broader region

Theme	Short-Term Directions	Long-Term Directions
Sustainable Infrastructure and Vehicles	• Investigate funding opportunities to purchase, operate and maintain zero-emissions buses • Conduct review of other transit agencies' sustainable zero-emissions infrastructure in areas such as bus stops, bus terminals and transit garages	• Transition to a zero-emissions bus fleet with garage and/or terminal infrastructure as technology advances to support longer ranges, and to support new and emerging technologies • Support the efforts of other regional transit agencies to green their operations

6.2.2 Amalgamation of Regional Public Transit

Two key directions identified previously represent major steps for transit in the County of Simcoe, and relate directly to the potential amalgamation of regional public transit, as follows:

- **Short-term:** Begin studying a County-wide transit service model with local partners; and
- **Long-term:** Implement County-wide transit service model.

Together, these form the recommendation to begin the process towards a more seamless and regionally integrated transit system. To achieve this, it is recommended that the County of Simcoe begin studying the potential amalgamation of transit service providers into a single County-wide system. This has been successfully implemented by neighbouring regional governments in the past and could serve to break down barriers between existing jurisdictions in the County.

The amalgamation of regional public transit will be further explored as the TMP Update progresses by identifying key considerations for recommended study. Next steps, separate to this TMP Update study, include a Simcoe Area transit plan based on a robust analysis of local transit needs, concerns and impacts, as well as an analysis of costs and benefits of County-wide transit amalgamation.

6.3 Recommended Cycling Networks

6.3.1 Priority Cycling Network

Following the network development process, with direction from the analysis outlined in Section 4.2, the recommended **Priority Cycling Network** was identified. The priority routes comprise the major trail spine network serving connections between rural communities and settlement areas, and largely align with the Province-Wide Cycling Network. The Priority Cycling Network map is shown in Exhibit 6.7. In future phases of the TMP Update study, identified priority routes will be grouped into a phased implementation plan.

Facility Class and Implementation

For proposed on-road routes, facility class is identified by implementing the guidance found in Ontario Traffic Manual (OTM) Book 18 – Cycling Facilities. The preferred minimum facility class identified by plotting the posted speed limit and average daily traffic volume on the nomographs provided in the Manual. Exhibit 6.6 presents the nomographs for rural contexts and urban / suburban contexts as presented in OTM Book 18.

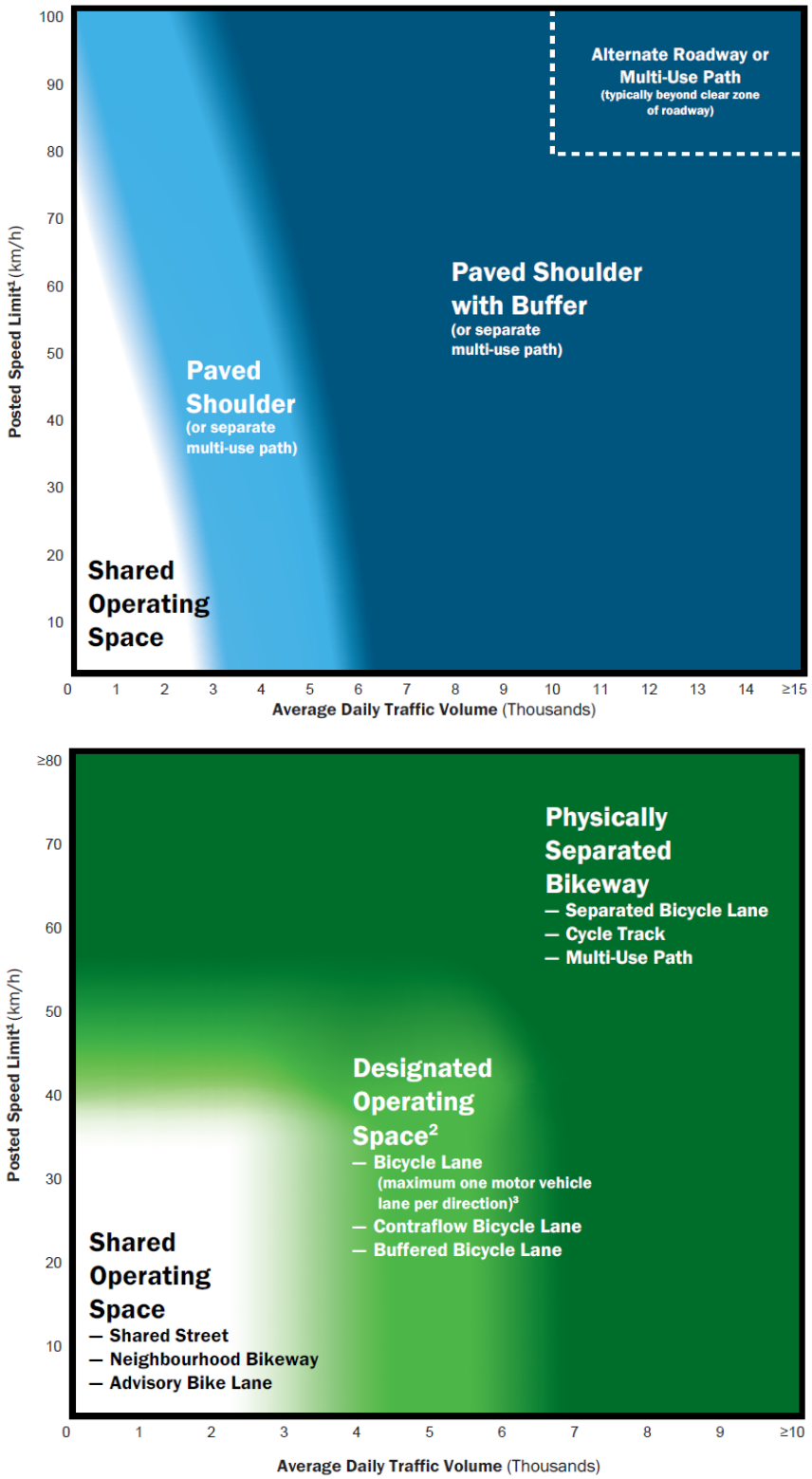
The rural nomograph separates potential facilities into four classes:

- Shared operating space;
- Paved shoulder;
- Paved shoulder with buffer; and
- Alternate roadway or multi-use path.

Also note that the guide allows for separated multi-use paths to be substituted for paved shoulders where desired.

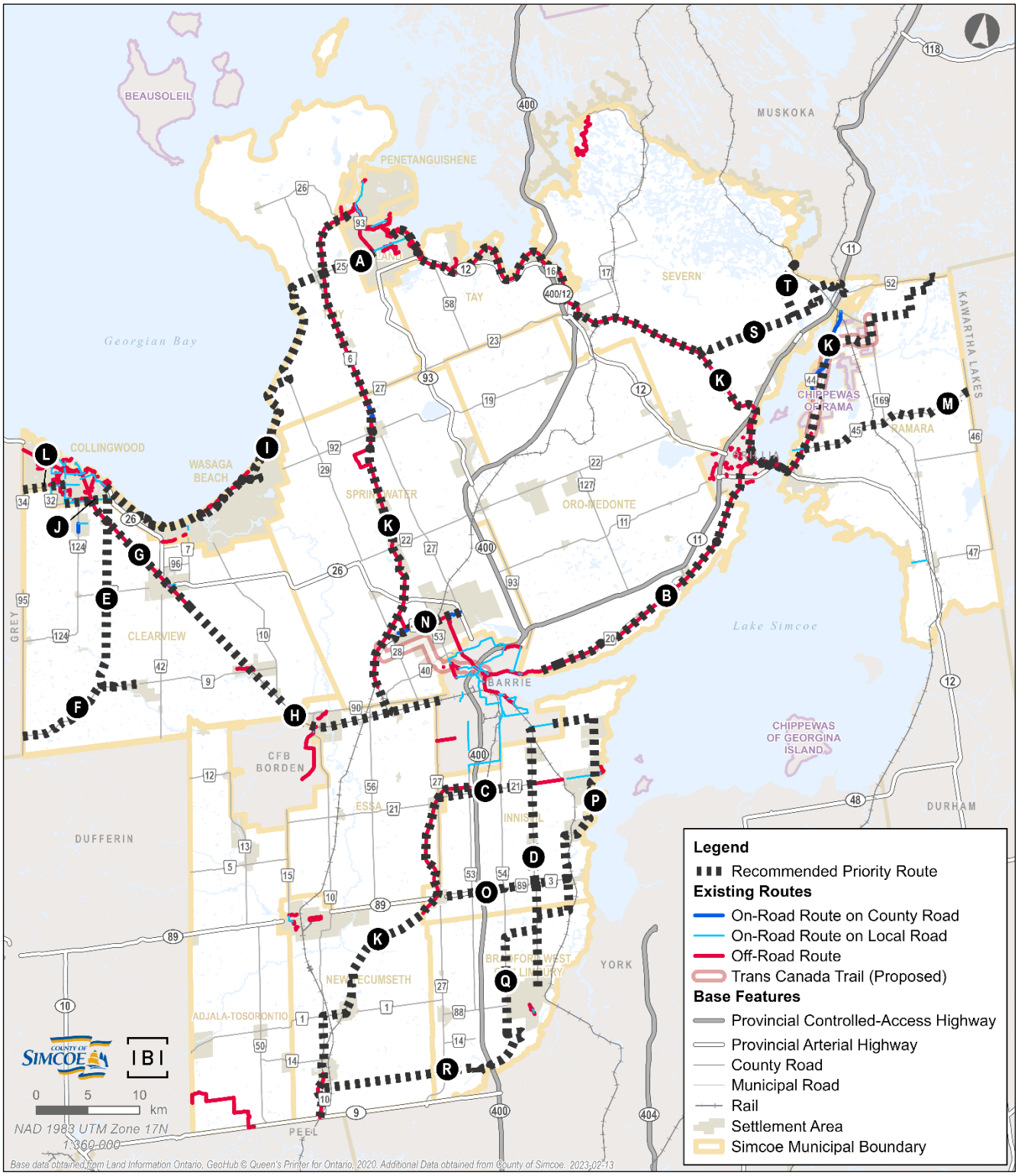
Additional factors were also reviewed, including road cross-section, pavement width and road classification to help identify the preferred implementation for each priority route. The Priority Cycling Network corridors are listed in Exhibit 6.8, along with recommended facility classes and implementation notes from the feasibility analysis. Further study for implementing priority routes may be required, including confirmation of vehicle volumes to determine appropriate cycling infrastructure as outlined in OTM Book 18.

Exhibit 6.6: OTM Book 18 – Rural and Urban Cycling Faciliy Nomographs



Source: Ontario Traffic Manual Book 18 – Cycling Facilities

Exhibit 6.7: Recommended Priority Cycling Network Map



Note: Project limits are approximate.

Exhibit 6.8: Recommended Priority Cycling Network Corridors

ID	Priority Corridor	Local / External Municipality	Facility Class	Implementation Notes
A	CR 25 – Trans Canada Trail to CR 93	Tiny / Midland	Paved shoulder with buffer	Convert existing wide gravel shoulders to buffered paved shoulders
B*	Oro-Medonte Rail Trail – 1 Line S to James St W	Oro-Medonte / Orillia	Off-road trail	Upgrade existing off-road trail surface (where needed), crossings, wayfinding, and pavement markings
C	CR 21 – CR 27 to CR 4	Innisfil	Alternative roadway or multi-use path	Build new multi-use path or buffered paved shoulders; note challenges associated with crossing Highway 400
D*	CR 4: Mapleview Dr (Barrie) to 8th Line	Innisfil / Bradford West Gwillimbury / Barrie	Alternative roadway or multi-use path	Build new multi-use path within road right-of-way, or consider buffered paved shoulders
E	Concession Road 6 – CR 32 to CR 9	Clearview	Shared operating space	Implement signage and pavement markings to indicate a shared cycling route
F	County Rd 9 – Fairgrounds Rd to Grey Rd 124	Clearview	Paved shoulder	Due to limited road surface, implement paved shoulders on one side of road (uphill direction) as interim treatment, with paved shoulders implemented on both sides of the road if road reconstruction becomes feasible
G	Clearview Collingwood Train Trail – CR 32 to Centre Line Rd	Clearview	Off-road trail	Upgrade existing off-road trail crossing at roadway intersections, wayfinding, and pavement markings

ID	Priority Corridor	Local / External Municipality	Facility Class	Implementation Notes
H	Clearview Collingwood Train Trail Extension – Centre Line Rd to CR 27	Clearview / Essa	Off-road trail	Build new multi-use trail, new trail crossings, wayfinding, and pavement markings
I	Georgian Bay Cycling Route – Poplar Sideroad to Balm Beach Rd via Beachwood Road, Shore Lane, River Road, and Tiny Beaches Road	Wasaga Beach / Tiny	Shared operating space (urban contexts); paved shoulder with buffer (rural contexts)	Implement signage and pavement markings to indicate a shared cycling route along Tiny Beaches Road, and consider traffic calming to reduce car speeds; build buffered paved shoulders during road reconstruction along routing in Wasaga Beach, as needed
J	CR 32 – High St to Concession Road 6	Collingwood / Clearview	Paved shoulder with buffer (or separate multi-use path)	Build asphalt multi-use path (subject to future development, to be incorporated into future development charges study)
K*	Trans Canada Trail Improvements and Extension [23]	Various local municipalities / Orillia	Off-road trail	Upgrade existing off-road trail surface, build new asphalt multi-use trail, update trail crossings, and add wayfinding and pavement markings
L	CR 32 / Sixth Street – Grey Road 19 to High Street	Collingwood	Paved shoulder with buffer	Widen existing paved shoulders to add buffers, or upgrade and extend multi-use path
M	CR 45 – CR 44 to CR 46	Ramara	Paved shoulder with buffer	Build buffered paved shoulders during road reconstruction
N	CR 43 – CR 28 to Hwy 26	Springwater	Paved shoulder with buffer	Build buffered paved shoulders during road reconstruction

[23] Township of Ramara is working with Rama First Nation to develop an off-road trail connection adjacent to Casino Rama, connecting north to Airport Road. A part of Priority Route K can be implemented off-road to utilise the future trail.

ID	Priority Corridor	Local / External Municipality	Facility Class	Implementation Notes
O	Hwy 89 / CR 89 / CR 3 – Trans Canada Trail to 20th Sideroad	Innisfil	Alternate roadway or multi-use path	Build multi-use path on south side of roadway; implementation to be coordinated with capital road works to widen road along CR 89 and CR 3; further study and coordination with MTO required for route along provincial highway; note challenges associated with crossing Highway 400
P*	Lake Simcoe Route – Mapleview Dr / 25th Sideroad / Lakelands Ave / Adams Rd / Simcoe Blvd / 7th Line / St John's Rd / Maple Rd / Ewart St / Killarney Beach Rd / 20th Sideroad / Line 13 / CR 4	Innisfil / Bradford West Gwillimbury / Barrie	TBD – feasibility analysis to be conducted	County to help provide funding, coordination, and support to conduct feasibility study to identify on-road cycling facility needs
Q	10 Sideroad – Canal Road via 5th Line to CR 4 via Line 12	Bradford West Gwillimbury	Paved shoulder with buffer	Build buffered paved shoulders with rumble strips
R	3rd Line / 5th Sideroad / Canal Road: Trans Canada Trail to 5th Line	New Tecumseth / Bradford West Gwillimbury	Paved shoulder	Implement signage and pavement markings to indicate a shared cycling route. Vehicle speeds volumes to be confirmed prior to implementation to ensure shared operating space is feasible.

ID	Priority Corridor	Local / External Municipality	Facility Class	Implementation Notes
S	Cambrian Rd / Boyd Rd / Canal Rd / Brady Dr / Cooper Falls Rd – Uhthoff Trail to Severn River	Severn	TBD – feasibility analysis to be conducted	On-road facility identified by stakeholders (i.e. MTO), subject to further feasibility review
T	South Sparrow Lake Rd: Severn River to Cambrian Rd	Severn	Shared operating space	On-road facility identified by stakeholders (i.e. MTO), subject to further feasibility review

*Note: City of Barrie and City of Orillia are external municipalities identified as potential partners; connections along external roads or trails are subject to external municipal coordination and study.

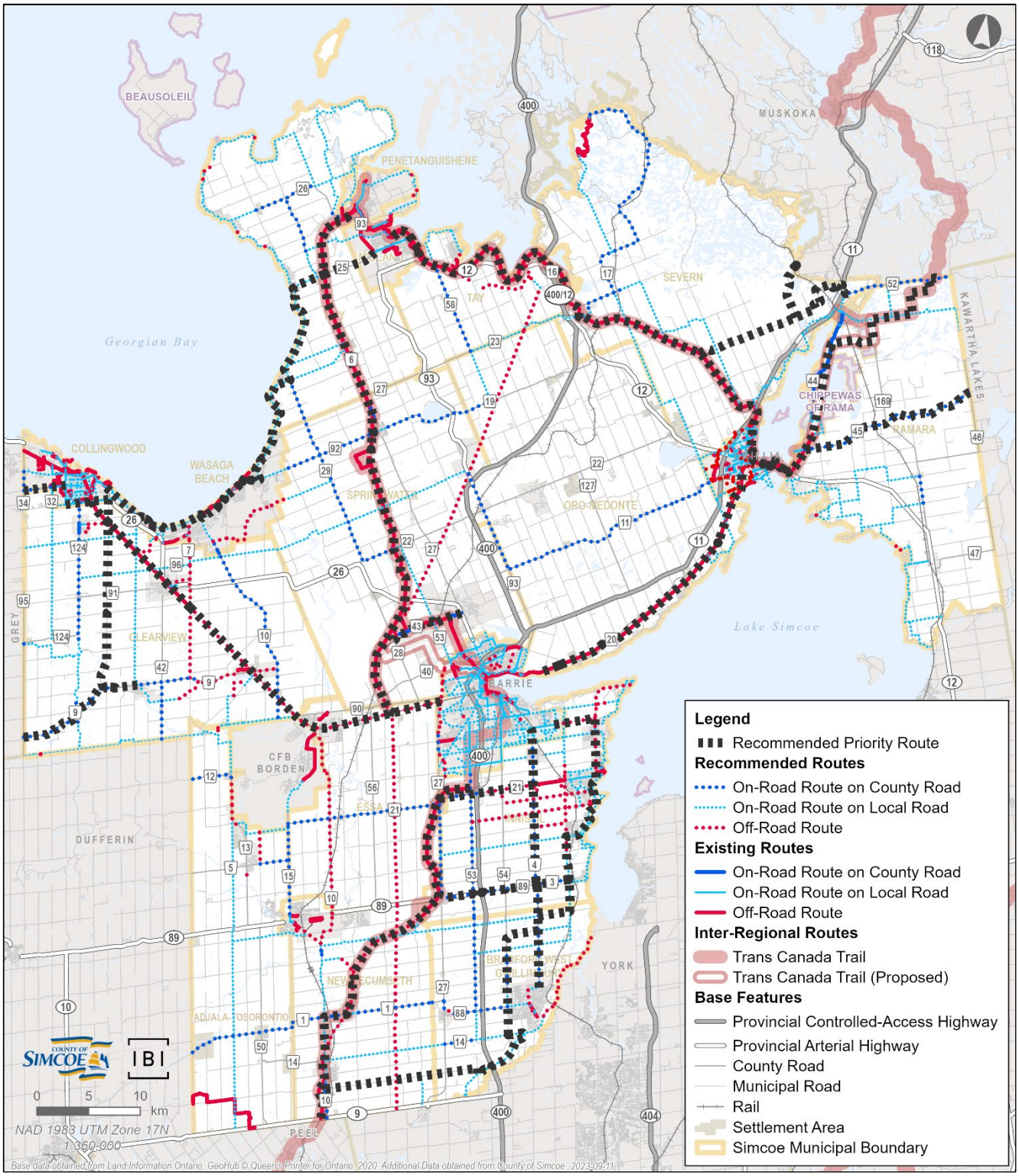
6.3.2 Ultimate Cycling Network

The **Ultimate Cycling Network** is shown in Exhibit 6.9, based on previously proposed cycling routes carried forward from the 2014 TMP Update, as well as from input from stakeholders and members of the public. The Ultimate Cycling Network addresses key gaps between priority routes and is comprised of the following:

- On-road routes on County roads;
- On-road routes on local municipal roads; and
- Off-road routes.

The focus for the TMP Update is developing a Priority Cycling Network to help guide delivery of the Ultimate Cycling Network. It is recognized that not all rights-of-way identified in the cycling networks are under County of Simcoe jurisdiction. For projects that fall within the County right-of-way, the County will assume cost and construction. For projects within the local municipal right-of-way or off-road, it is recommended that the local municipality build the project with potential financial support from the County determined on a case-by-case basis.

Exhibit 6.9: Recommended Ultimate Cycling Network Map



Note: Project limits are approximate. It is acknowledged that select recommended active transportation projects may pass through or located adjacent to TRCA-owned land, and may be subject to further investigation, as well as avoidance or mitigation measures.

7 Summary and Next Steps

The second phase of the County of Simcoe Transportation Master Plan Update included a mode-by-mode review of transportation solutions, as follows:

- A review of the road recommendations of the 2014 TMP Update, as well as the identification of new candidate road improvement projects (i.e. capacity improvements) arising from technical analysis, new growth assumptions, and public and stakeholder input. Potential road jurisdiction transfers were also assessed.
- The identification of a Transit Strategy aimed at improving County-wide transit connectivity and integration.
- The development of County-wide Priority Cycling Network focused on a network of key routes to help lead the County towards its Ultimate Cycling Network.

The development of the multimodal transportation network involved an assessment of three identified network alternatives that outlined possible outcomes against the TMP Update goals. The preferred network alternative is the higher-sustainability alternative that invests strategically in all modes of travel to meet mobility needs and accommodate growth while supporting a significant pivot in the County's focus on transit, active transportation and safety-first infrastructure.

Draft recommendations for the road network, Transit Strategy and active transportation network are summarized in the following sections.

7.1 Road Network

The draft recommended 2051 transportation network includes road network capacity expansion projects but scaled back from the 2014 TMP Update with a focus on growth-related needs. This road network was developed by first identifying and then assessing a long list of potential projects that were identified by the 2014 TMP Update, through public and stakeholder consultation, and through the identification of future congestion points.

The candidate road widening projects were assessed through the application of an evaluation framework that was tailored to reflect the Goals of the TMP Update, as developed in Phase I. Projects scoring above the threshold of 30 points were carried forward and recommended for inclusion in 2051 horizon. Projects scoring

below the threshold are not anticipated to be needed by 2051, but corridors are recommended for protection for future study. Project timing is based on scoring and provided in the Phase III report.

Candidate road transfers to County jurisdiction were assessed through the Road Rationalization framework carried forward from the 2014 TMP Update. Road segments with a total score of 6 or more were considered to be of sufficient County interest to consider for inclusion in the County road network.

In summary, road network recommendations include the following:

- **Capacity improvement projects** (e.g. widening to 4 lanes) by 2051: The majority of recommended road widening projects are located in southeast Simcoe where impacts of growth will be strongest. Implementation phasing will be developed as part of Phase III of the study.
- **Road jurisdiction changes** (i.e. road transfer to County): Recommendations for several road segment transfers identified in previous TMPs but not yet implemented are carried over to the current TMP update, along with Ramara Road 46.
- **Support for provincial road projects:** Identified Provincial road projects that would provide better service for interregional flows in Simcoe County and are supported by the TMP update include Highway 9 capacity expansion, Highway 400 capacity expansion, the Highway 400-404 Link, a Highway 400 / Innisfil Beach Road overpass, a Highway 400 / Line 6 interchange, Highway 89 East-West Link improvements, Highway 26 capacity expansion and a Highway 26 Collingwood Stayner Bypass.
- **East-West Capacity Improvement Study**: A joint study by the County, Province and other affected municipalities to study coordinated capacity improvements through the greater Collingwood-Clearview region. The County of Grey and affected local municipalities in the area are also identified as potential partners. The results of this study may impact other road projects identified within the study area.

7.2 Transit

The recommended Transit Strategy identifies key short- and long-term directions towards improving the efficiency and integration of the County's LINX Transit service and local municipal services. These directions will help move public transit in the County towards the ultimate recommendation of beginning the process to

implement an integrated County-wide transit system. This will enable a much more seamless user experience across the County compared to current conditions and support future growth and expansion of the transit system.

The short-term directions are organized into five key topic areas, as follows:

- **Connectivity and coordination:** Consolidate transit operations into a single system, review transit terminals, and implement weekend and late-night service.
- **Accessibility:** Engage transit users to prioritize improvements, create design standards for stops and transfer points.
- **Fare integration:** Initiate a review of County-wide transit fare policy and explore technologies and products to accommodate inter-agency fares.
- **Governance funding and operating models:** Implement County-wide transit model, review delivery needs and opportunities, and improve coordination of transit vision, planning and strategy.
- **Sustainable infrastructure and vehicles:** Investigate opportunities to operate zero-emissions buses and conduct sustainable technologies peer review.

Next steps—not part of this current TMP Update study—include a preparing a robust analysis of local transit needs, concerns and impacts, as well as an analysis of costs and benefits of County-wide transit amalgamation.

7.3 Active Transportation

Active transportation, comprising walking, cycling and rolling, will play a bigger role in the County's transportation network moving forward. The County's vast size means that active travel outside of settlement areas are often recreational trips rather than work or school-related trips, but the network can provide an important linkage between settlement areas for travellers. Recreational facilities also support tourism, improve livability of the County, and improve health of residents and visitors.

The TMP recommends a new Priority Cycling Network to help lead the County toward its Ultimate Cycling Network. Building on existing routes, plugging gaps, improving safety, and providing new facilities to serve key destinations and settlements, the Priority Cycling Network will improve opportunities for work, school and other trips while doubling down on the County's role as a destination for

recreational cycling. The network improves connections to the local active transportation networks of the local municipalities to allow more trips to be made by active modes. Facility types for the cycling priority routes are provided in the Phase III report.

7.4 Next Steps

The draft transportation networks and strategies were presented as part of the second round of public and stakeholder engagement. As part of Phase III of the TMP Update, prioritization, timing, phasing and planning-level costing for the draft recommendations will be provided. Additionally, the network recommendations will be accompanied by a suite of supporting strategies to form the overall Transportation Master Plan.

Appendix A: Population and Employment Forecasts

PHASE II: NETWORK ALTERNATIVES

County of Simcoe Transportation Master Plan Update

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Population Growth Estimates (2022 MCR Estimates, 2016 to 2051)

Municipality	2016 Pop.	2051 Pop.	Urban Pop. Growth	Rural Pop. Growth	Total Pop. Growth
Adjala-Tosorontio	11,270	11,970	-	700	700
Bradford West Gwillimbury	36,560	83,470	42,219	4,691	46,910
Clearview	14,530	21,820	5,832	1,458	7,290
Collingwood	22,370	42,690	20,320	-	20,320
Essa	21,820	34,740	11,628	1,292	12,920
Innisfil	37,850	84,450	45,202	1,398	46,600
Midland	17,290	24,290	7,000	-	7,000
New Tecumseth	35,440	80,590	44,699	451	45,150
Oro-Medonte	21,560	26,230	-	4,670	4,670
Penetanguishene	9,190	14,390	5,200	-	5,200
Ramara	9,730	12,870	1,256	1,884	3,140
Severn	13,820	17,790	3,176	794	3,970
Springwater	19,560	32,490	10,344	2,586	12,930
Tay	10,290	13,130	2,698	142	2,840
Tiny	12,080	16,010	-	3,930	3,930
Wasaga Beach	21,220	38,090	16,870	-	16,870
Total	**314,580**	**555,020**	**216,444**	**23,996**	**240,440**

Employment Growth Estimates (2022 MCR Estimates, 2016 to 2051)

Municipality	2016 Emp.	2051 Emp.	Major Office and Emp. Lands Growth	Population-Related Emp. Growth	Rural Emp. Growth	Total Emp. Growth
Adjala-Tosorontio	2,150	2,490	110	90	150	350
Bradford West Gwillimbury	10,680	30,900	10,150	9,960	110	20,220
Clearview	4,280	6,470	970	890	330	2,190
Collingwood	11,620	18,530	3,190	3,580	140	6,910
Essa	9,160	13,350	860	2,970	370	4,200
Innisfil	8,680	30,270	9,460	11,990	140	21,590
Midland	10,710	13,170	1,230	1,230	-	2,460
New Tecumseth	19,600	31,610*	4,350	7,550	110	12,010
Oro-Medonte	5,700	9,310	2,130	720	760	3,610
Penetanguishene	4,830	6,100	260	1,010	-	1,270
Ramara	5,270	7,420	960	530	660	2,150
Severn	3,950	5,640	1,060	630	-	1,690
Springwater	6,390	9,190	1,110	1,580	110	2,800
Tay	1,450	2,610	220	500	430	1,150
Tiny	1,430	2,390	-	620	330	950
Wasaga Beach	4,220	8,510	1,120	3,160	-	4,280
Total	**110,120**	**198,000**	**37,160**	**46,970**	**3,640**	**87,830**

* Note: Model used 31,550 jobs in 2051 for New Tecumseth as it was the latest data at the time of calibration. COPA#7 updated employment numbers following the completion of this work. No other data were changed.

Appendix B: Travel Demand Model Outputs

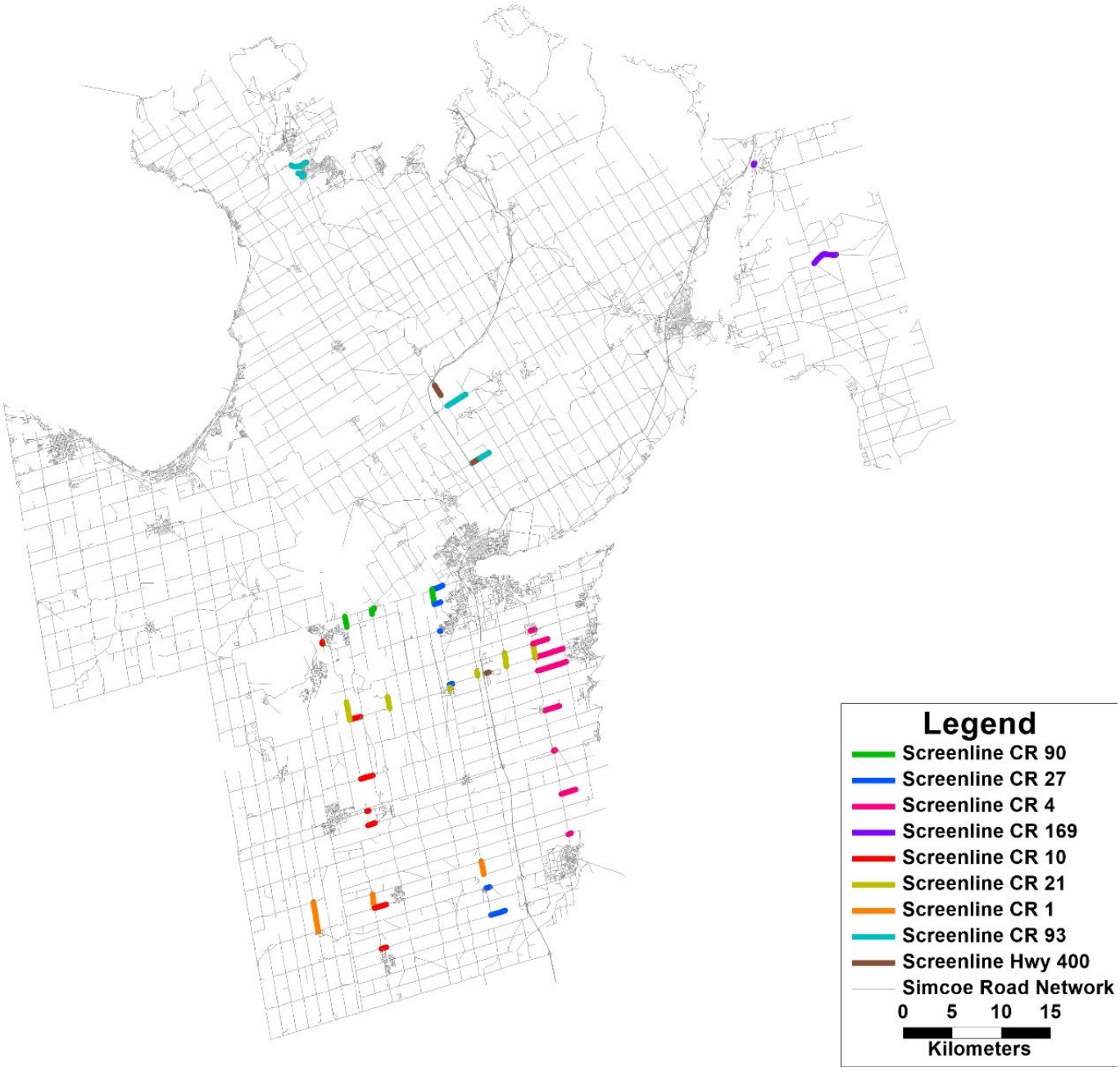
PHASE II: NETWORK ALTERNATIVES
County of Simcoe Transportation Master Plan Update

Appendix B: Travel Demand Model Outputs – Table of Contents

1. 2016 Zone System and Road Network

2. 2016 Screenline Validation

Screenline Location



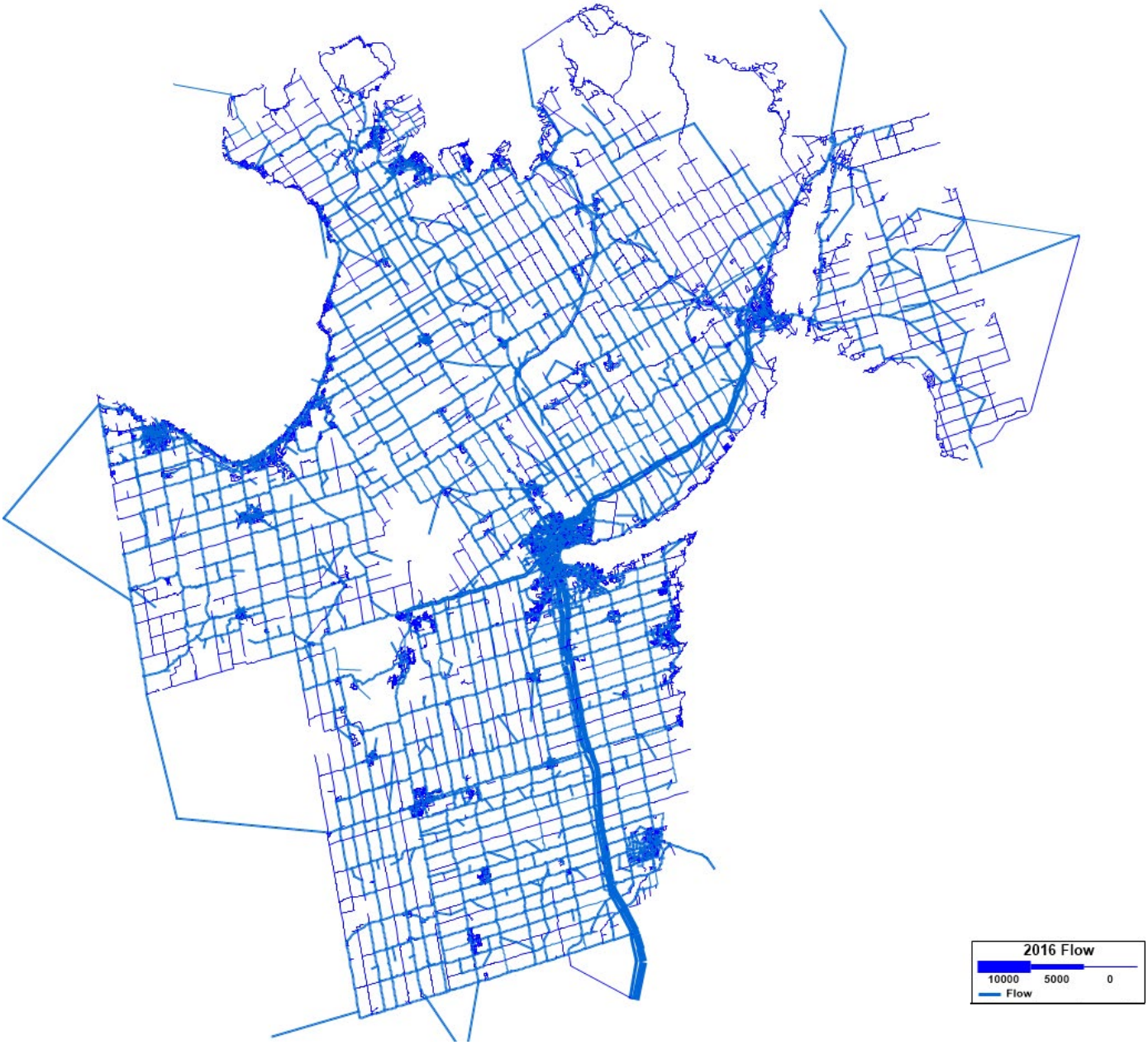
2016 AM Peak Hour Screenline Validation Summary

Location	Link ID	NB/EB	SB/WB	Counts (cars)		Assigned		Difference		% Difference	
				NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Screenline CR 90											
CR 10	16663	BA	AB	213	289	223	280	10	-9	5%	-3%
Line 5	13372	AB	BA	147	78	176	110	29	32	20%	41%
CR 56	12427	AB	BA	103	75	202	130	99	55	96%	73%
CR 27	12661	AB	BA	255	305	349	497	94	192	37%	63%
Total				**718**	**747**	**949**	**1017**	**231**	**270**	**32%**	**36%**
Screenline CR 27											
CR 90	12140	BA	AB	622	339	786	629	164	290	26%	86%
Ardagh Rd	37123	BA	AB	157	144	177	143	20	-1	13%	0%
Mapleview Dr W	13465	BA	AB	398	256	468	286	70	30	18%	12%
CR 21	14254	BA	AB	357	155	306	199	-51	44	-14%	29%
CR 88	15891	BA	AB	160	131	226	132	66	1	41%	1%
5th Line	15188	BA	AB	96	58	141	152	45	94	47%	163%
Total				**1790**	**1083**	**2104**	**1542**	**314**	**459**	**18%**	**42%**
Screenline CR 4											
Victoria St	13391	BA	AB	37	124	48	136	11	12	29%	10%
9 Line	13850	BA	AB	89	219	0	55	-89	-164	-100%	-75%
CR 21	13977	BA	AB	301	477	287	714	-14	237	-5%	50%
7th Line	14123	BA	AB	85	222	0	112	-85	-110	-100%	-49%
Killarney Beach Rd	14383	BA	AB	35	71	35	73	0	2	1%	3%
CR 3	14692	BA	AB	72	259	62	290	-10	31	-14%	12%
12th Line	14879	BA	AB	13	29	0	0	-13	-29	-100%	-100%
9th Line	15409	BA	AB	60	25	0	25	-60	0	-100%	0%
Total				**692**	**1426**	**432**	**1406**	**-260**	**-20**	**-38%**	**-1%**
Screenline CR 169											
CR 45	4150	BA	AB	36	61	52	82	16	21	45%	34%
Muskoka St	1711	BA	AB	37	50	0	67	-37	17	-100%	33%
Total				**73**	**111**	**52**	**149**	**-21**	**38**	**-28%**	**34%**
Screenline CR 10											
CR 90	17779	BA	AB	197	475	253	418	56	-57	28%	-12%
CR 21	14556	AB	BA	168	124	204	153	36	29	21%	23%
5th Side Rd	12973	BA	AB	117	144	96	117	-21	-27	-18%	-19%
MacKenzie Pioneer Rd	35716	BA	AB	76	53	80	0	4	-53	5%	-100%
14 Line	18283	AB	BA	96	49	86	48	-10	-1	-11%	-2%
CR 1	35714	BA	AB	88	87	137	109	49	22	56%	26%
Nolan Rd	16093	AB	BA	137	96	168	125	31	29	22%	30%
Total				**879**	**1028**	**1023**	**970**	**144**	**-58**	**16%**	**-6%**
Screenline CR 21											
CR 10	14557	AB	BA	75	177	125	235	50	58	67%	33%
CR 56	14389	AB	BA	68	95	89	115	21	20	32%	21%
CR 27	14285	BA	AB	269	213	364	254	95	41	35%	19%
CR 53	14182	AB	BA	244	155	291	182	47	27	19%	17%
CR 54	14112	AB	BA	156	182	199	254	43	72	28%	40%

Location	Link ID	NB/EB	SB/WB	Counts (cars)		Assigned		Difference		% Difference	
				NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
CR 4	13978	AB	BA	299	367	527	433	228	66	76%	18%
Total				**1111**	**1189**	**1595**	**1472**	**484**	**283**	**44%**	**24%**
Screenline CR 1											
CR 50	16041	AB	BA	101	242	108	263	7	21	7%	9%
CR 10	14991	AB	BA	149	182	199	263	50	81	34%	45%
CR 27	15767	AB	BA	64	154	62	134	-2	-20	-4%	-13%
Total				**314**	**578**	**369**	**661**	**55**	**83**	**18%**	**14%**
Screenline CR 93											
Vindin St	2090	BA	AB	188	180	0	185	-188	5	-100%	3%
Georgian Bay General Hospital Entrance	2843	BA	AB	52	11	3	12	-49	1	-93%	9%
Hugel Ave	2945	BA	AB	291	237	320	208	29	-29	10%	-12%
Yonge St	2984	BA	AB	302	234	350	281	48	47	16%	20%
CR 22	6172	BA	AB	140	224	197	269	57	45	41%	20%
CR 11	8351	BA	AB	83	93	99	104	16	11	19%	12%
Total				**1056**	**979**	**969**	**1059**	**-87**	**80**	**-8%**	**8%**
Screenline Hwy 400											
CR 93	6173	AB	BA	75	119	116	160	41	41	55%	34%
CR 11	8134	AB	BA	93	146	98	152	5	6	6%	4%
CR 21	16657	BA	AB	366	614	678	1005	312	391	85%	64%
Total				**534**	**879**	**893**	**1317**	**359**	**438**	**67%**	**50%**
Stayner (Hwy 26)											
To Stayner from north	8444	AB	BA	-	500	461	607		107		21%
To Stayner from east	8443	BA	AB		400	707	429		29		7%
Schomberg (Hwy 400)											
north of Hwy 9	27118	AB		3000		3001		1		0%	
Schomberg (Hwy 9)											
West of Hwy 400	33560	BA	AB	900	1050	900	1009	0	-41	0%	-4%
Forest Home (Hwy 11)											
South of 14th Line	38314	AB		2000		1995		-5		0%	
North of 14th Line	35830		AB		1700		1684		-16		-1%
Cookstown (Hwy 89)											
West of 53	14402	BA	AB	580	590	563	613	-17	23	-3%	4%
Brechin (Hwy 12)											
South of CR 169	6527	AB	BA	400	480	396	457	-4	-23	-1%	-5%
North of CR 169	6248	AB	BA	300	360	304	381	4	21	1%	6%

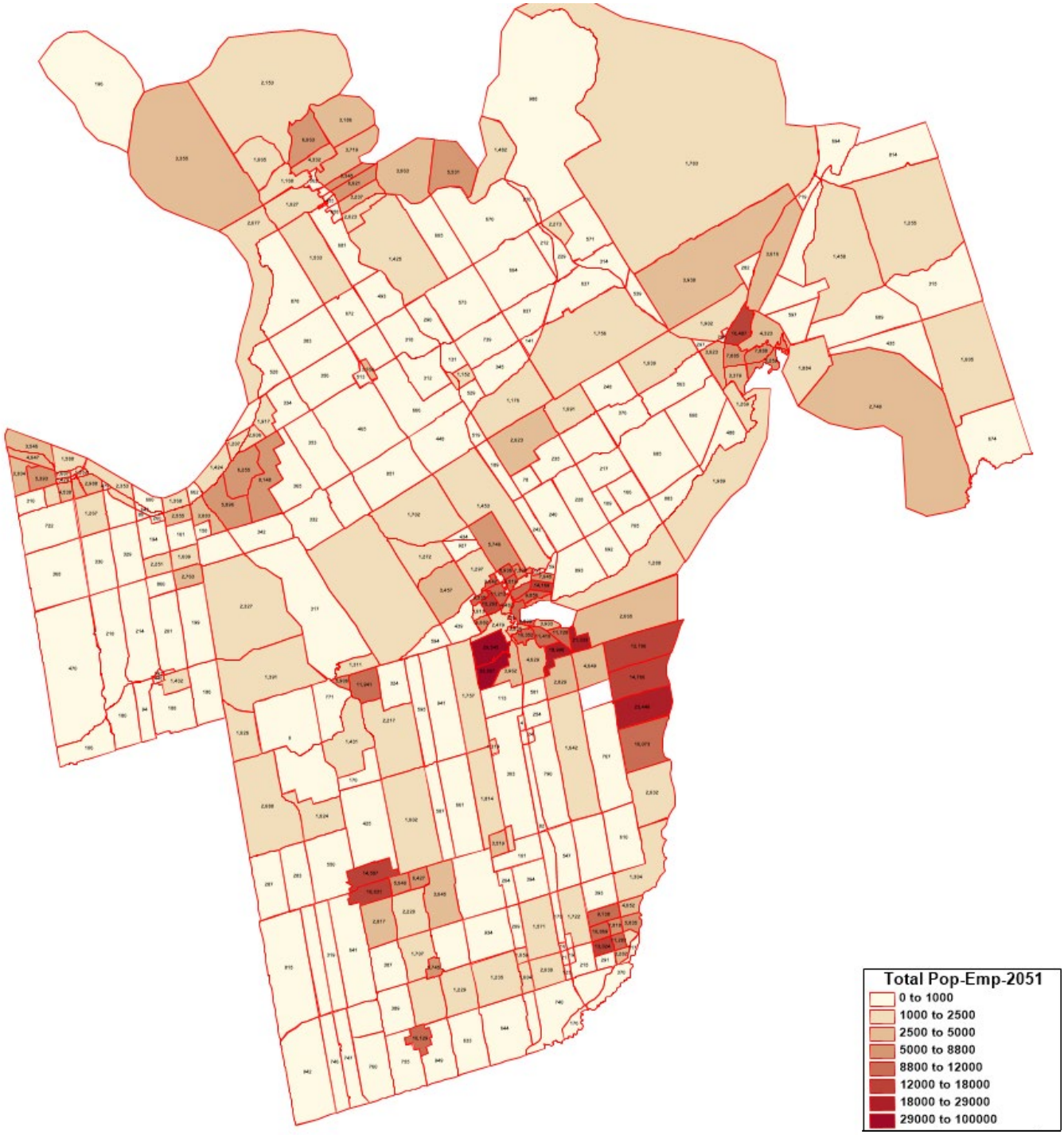
3. 2016 AM Peak Hour Base Case Flow and Volume-to-Capacity Ratio

2016 Base Case Flow

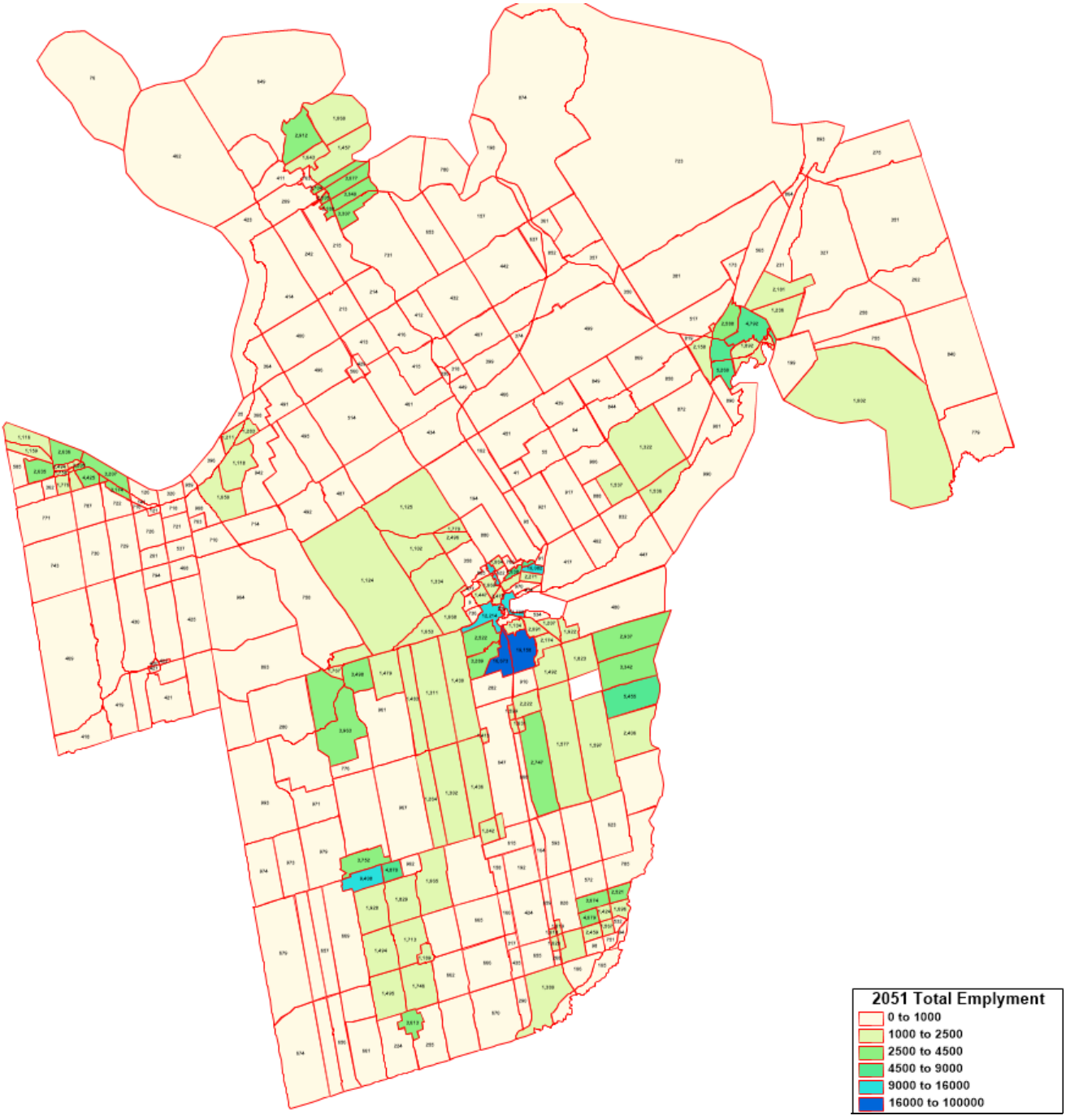


2016 AM Peak Hour Base Case Volume-to-Capacity Ratio

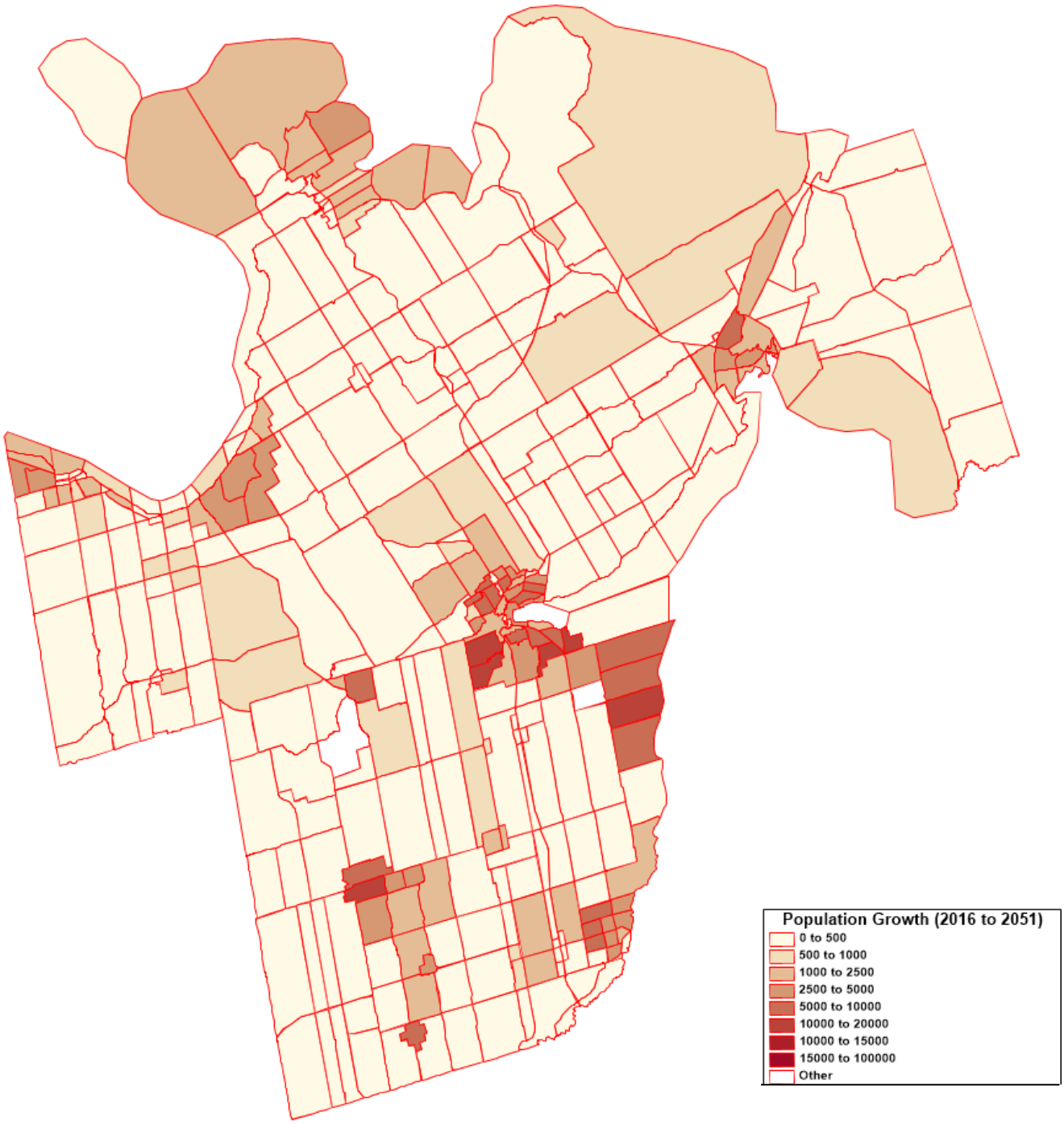
4. 2051 Population by Traffic Zone



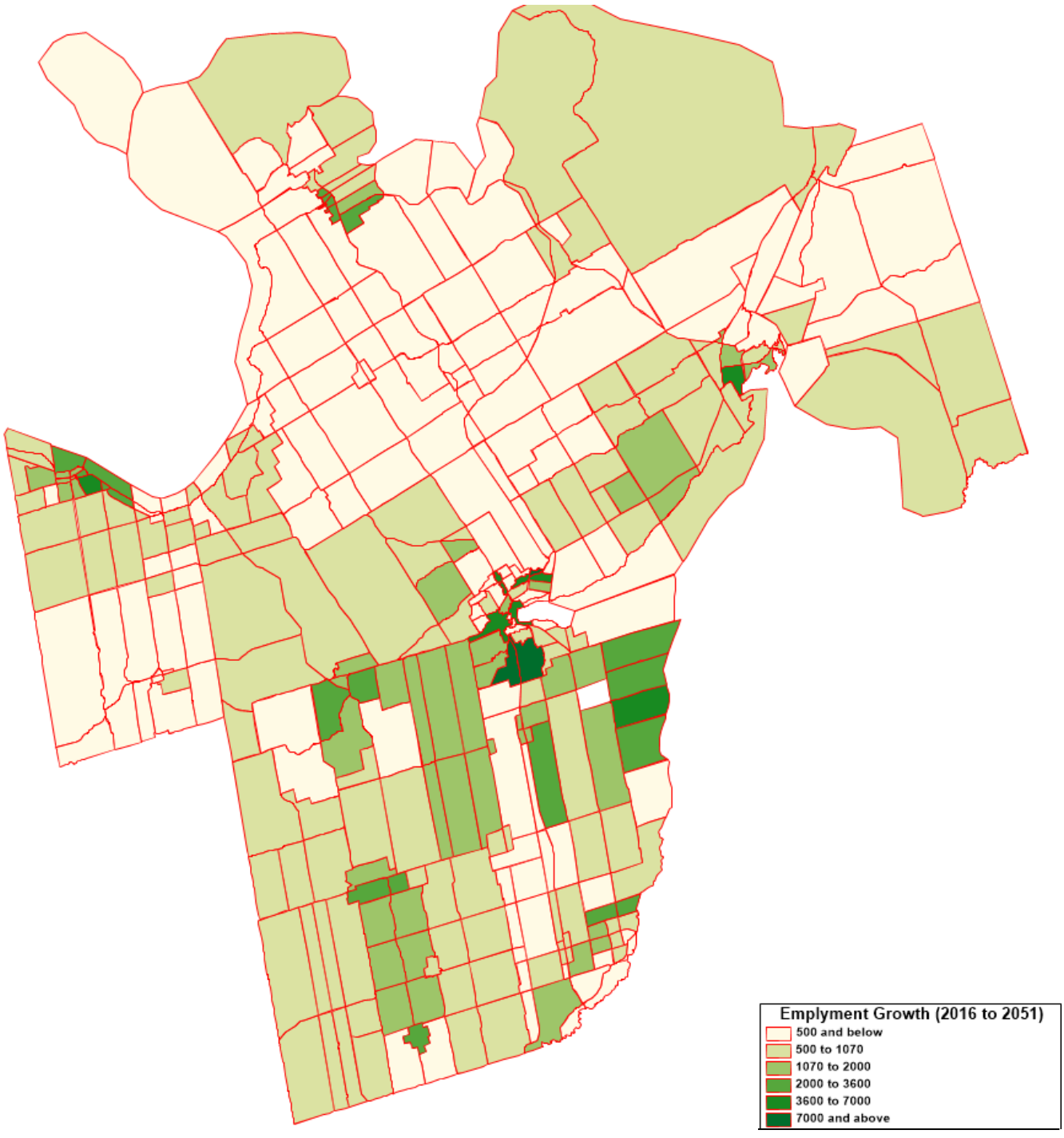
5. 2051 Employment by Traffic Zone



6. 2016 to 2051 Population Growth



7. 2016 to 2051 Employment Growth



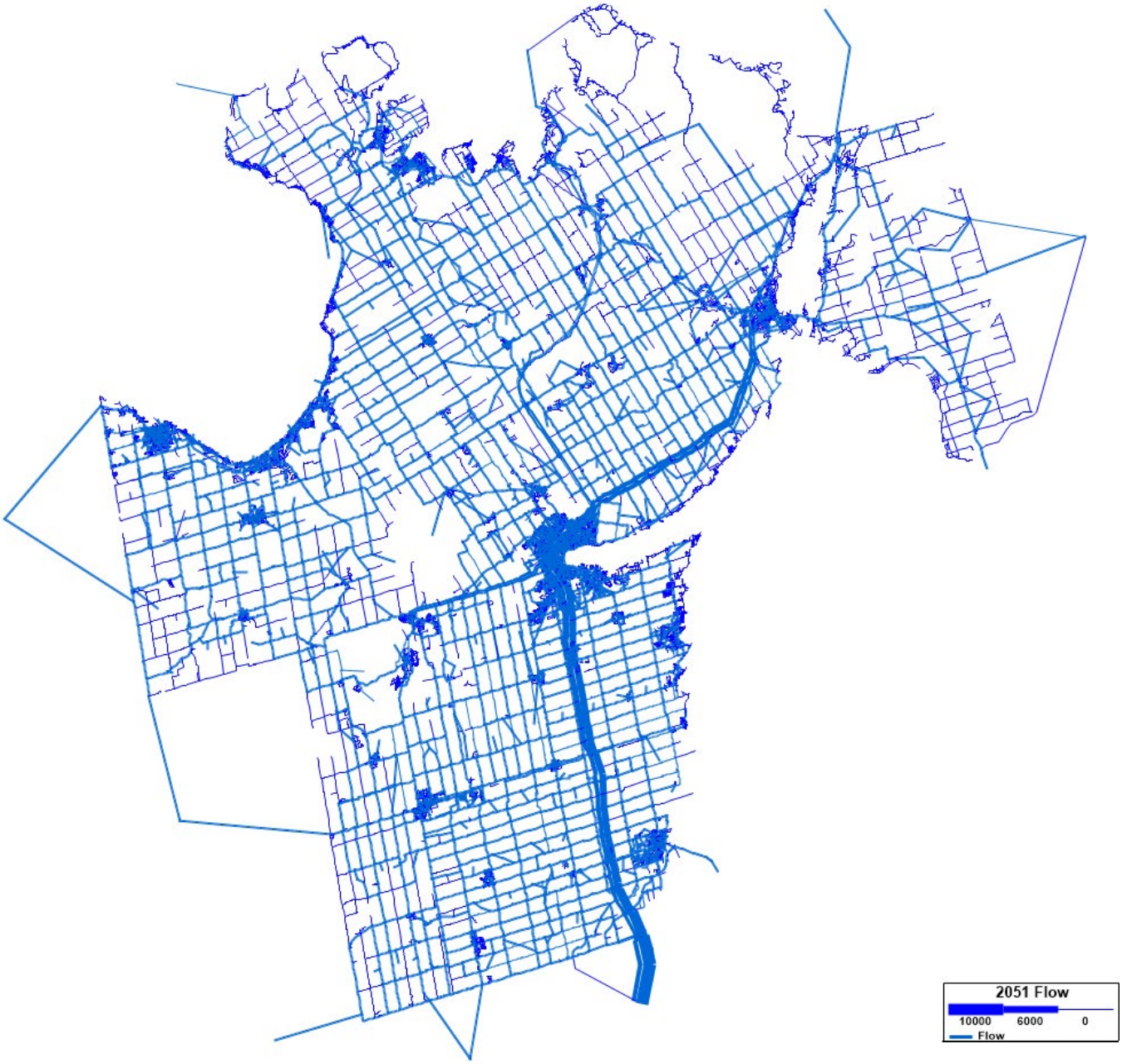
8. 2051 AM Peak Hour Screenline and Volume-to-Capacity Ratio

Location	Counts		2051 Improved Road Network				2051 Base Case Road Network			
			2051 Assigned Volume		2051 V/C		2051 Assigned Volume		2051 V/C	
	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Screenline CR 90										
CR 10	213	289	244	599	0.2	0.6	616	849	0.6	0.8
Line 5	147	78	296	349	0.6	0.7	262	324	0.5	0.6
CR 56	103	75	612	681	0.6	0.7	996	1006	1.0	1.0
CR 27	255	305	1469	1903	0.7	1.0	1245	1469	1.2	1.5
Total	718	747	2621	3531			3120	3647		
Screenline CR 27										
CR 90	622	339	1950	2241	1.0	1.1	2451	2582	1.2	1.3
Ardagh Rd	157	144	784	507	1.6	1.0	816	593	1.6	1.2
Mapleview Dr W	398	256	847	689	1.7	1.4	842	713	1.7	1.4
CR 21	357	155	813	826	0.7	0.7	593	614	1.0	1.0
CR 88	160	131	1042	917	0.7	0.6	860	857	1.1	1.1
5th Line	96	58	551	563	1.1	1.1	350	461	0.7	0.9
Total	1790	1083	5987	5743			5911	5819		
Screenline CR 4										
Victoria St	37	124	428	214	0.9	0.4	413	290	0.8	0.6
9 Line	89	219	524	24	1.0	0.0	547	78	1.1	0.2
CR 21	301	477	1606	1193	0.8	0.6	1107	1008	1.1	1.0
7th Line	85	222	236	0	0.5	0.0	422	60	0.8	0.1
Killarney Beach Rd	35	71	89	12	0.2	0.0	232	16	0.5	0.0
CR 3	72	259	978	50	0.6	0.0	838	220	1.0	0.3
12th Line	13	29	0	0	0.0	0.0	2	0	0.0	0.0
9th Line	60	25	0	2	0.0	0.0	359	22	0.7	0.0
Total	692	1426	3860	1494			3920	1695		
Screenline CR 169										
CR 45	36	61	26	24	0.0	0.0	26	24	0.0	0.0
Muskoka St	37	50	0	7	0.0	0.0	0	8	0.0	0.0
Total	73	111	26	31			26	32		
Screenline CR 10										
CR 90	197	475	1136	409	0.6	0.2	1446	761	0.7	0.4
CR 21	168	124	794	481	1.1	0.7	858	510	1.2	0.7
5th Side Rd	117	144	379	26	0.8	0.1	564	145	1.1	0.3
MacKenzie Pioneer Rd	76	53	2434	4	4.9	0.0	2421	18	4.8	0.0
14 Line	96	49	342	521	0.7	1.0	510	619	1.0	1.2
CR 1	88	87	691	521	0.7	0.5	755	706	0.8	0.7
Nolan Rd	137	96	499	426	1.0	0.9	16	102	0.0	0.2
Total	879	1028	6274	2387			6569	2860		
Screenline CR 21										
CR 10	75	177	1079	384	1.1	0.4	1270	724	1.3	0.7
CR 56	68	95	1002	395	1.0	0.4	1115	775	1.1	0.8
CR 27	269	213	564	439	0.9	0.7	514	553	0.9	0.9
CR 53	244	155	746	445	0.4	0.2	998	798	1.0	0.8

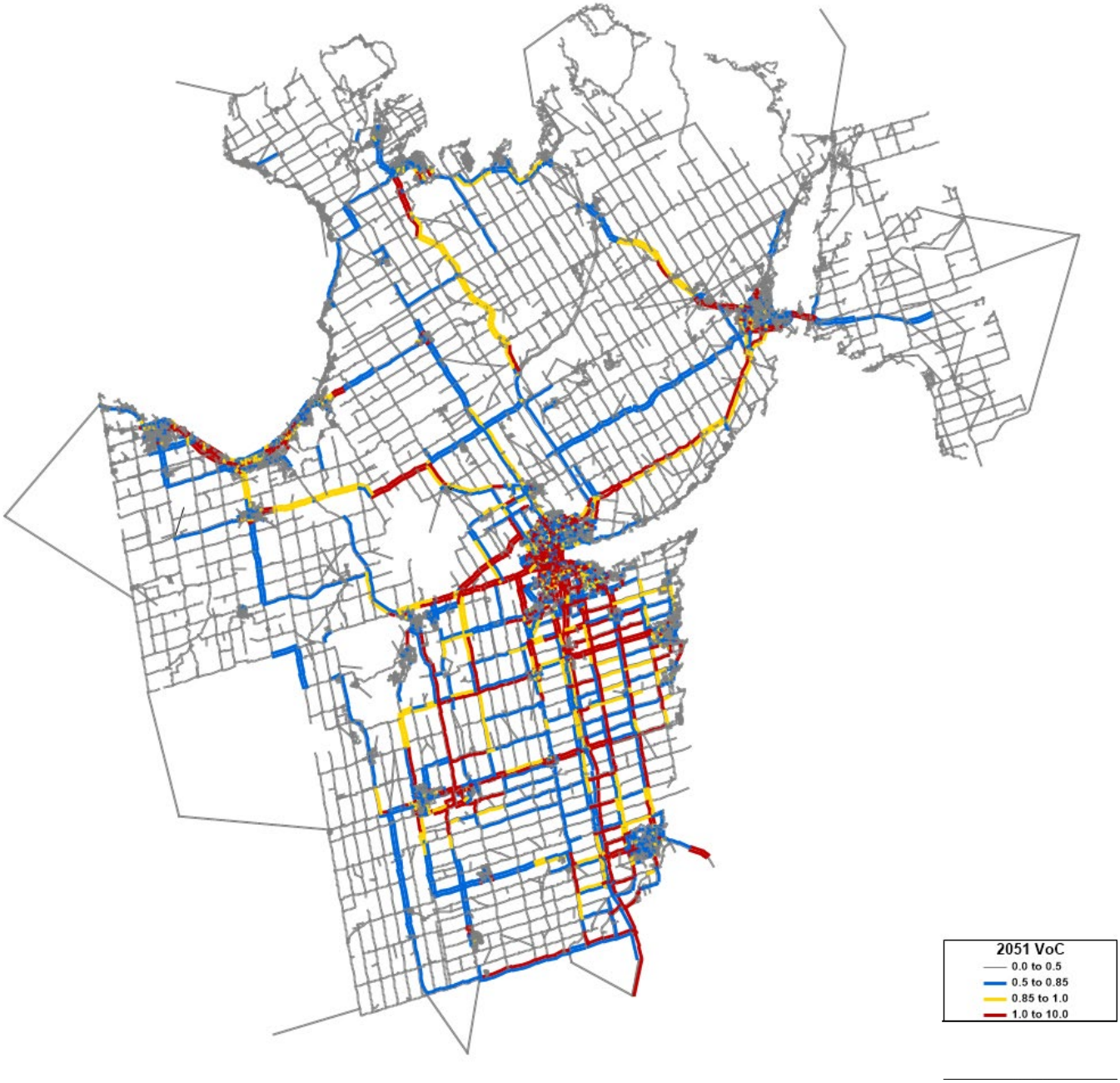
Location	Counts		2051 Improved Road Network				2051 Base Case Road Network			
			2051 Assigned Volume		2051 V/C		2051 Assigned Volume		2051 V/C	
	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
CR 54	156	182	1413	880	0.7	0.4	1088	883	1.1	0.9
CR 4	299	367	2241	967	1.1	0.5	1263	741	1.3	0.7
Total	1111	1189	7045	3509			6247	4474		
Screenline CR 1										
CR 50	101	242	490	312	0.5	0.3	775	587	0.8	0.6
CR 10	149	182	632	923	0.6	0.9	506	620	0.5	0.6
CR 27	64	154	288	403	0.3	0.4	847	318	0.8	0.3
Total	314	578	1409	1637			2128	1525		
Screenline CR 93										
Vindin St	188	180	0	20	0.0	0.0	0	20	0.0	0.0
Georgian Bay General Hospital Entrance	52	11	56	164	0.1	0.3	29	145	0.1	0.3
Hugel Ave	291	237	102	204	0.2	0.4	224	280	0.4	0.6
Yonge St	302	234	664	785	1.3	1.6	509	723	1.0	1.4
CR 22	140	224	512	394	0.5	0.4	537	400	0.5	0.4
CR 11	83	93	451	618	0.6	0.8	460	608	0.6	0.8
Total	1056	979	1786	2185			1759	2177		
Screenline Hwy 400										
CR 93	75	119	95	103	0.1	0.1	152	103	0.2	0.1
CR 11	93	146	677	555	0.8	0.7	551	422	0.7	0.5
CR 21	366	614	2713	1877	1.4	0.9	1973	1352	2.0	1.4
Total	534	879	3485	2535			2677	1878		
Stayner (Hwy 26)										
To Stayner from north		500	706	657	0.8	0.7	660	600	0.7	0.7
To Stayner from east		400	709	679	0.8	0.8	720	668	0.8	0.7
Schomberg (Hwy 400)										
north of Hwy 9	3000		3641		0.4		3398		0.6	
Schomberg (Hwy 9)										
West of Hwy 400	900	1050	367	1021	0.4	1.0	543	1574	0.5	1.6
Forest Home (Hwy 11)										
South of 14th Line	2000		3354		0.9		3327		0.9	
North of 14th Line		1700		3955		1.1		3926		1.1
Cookstown (Hwy 89)										
West of 53	580	590	2116	1766	1.1	0.9	1086	1054	1.1	1.1
Brechin (Hwy 12)										
South of CR 169	400	480	134	314	0.1	0.3	168	381	0.2	0.4
North of CR 169	300	360	103	259	0.1	0.3	136	326	0.1	0.3

9. 2051 AM Peak Hour Base Case Flow and Volume-to-Capacity Ratio

2051 Base Case Flow

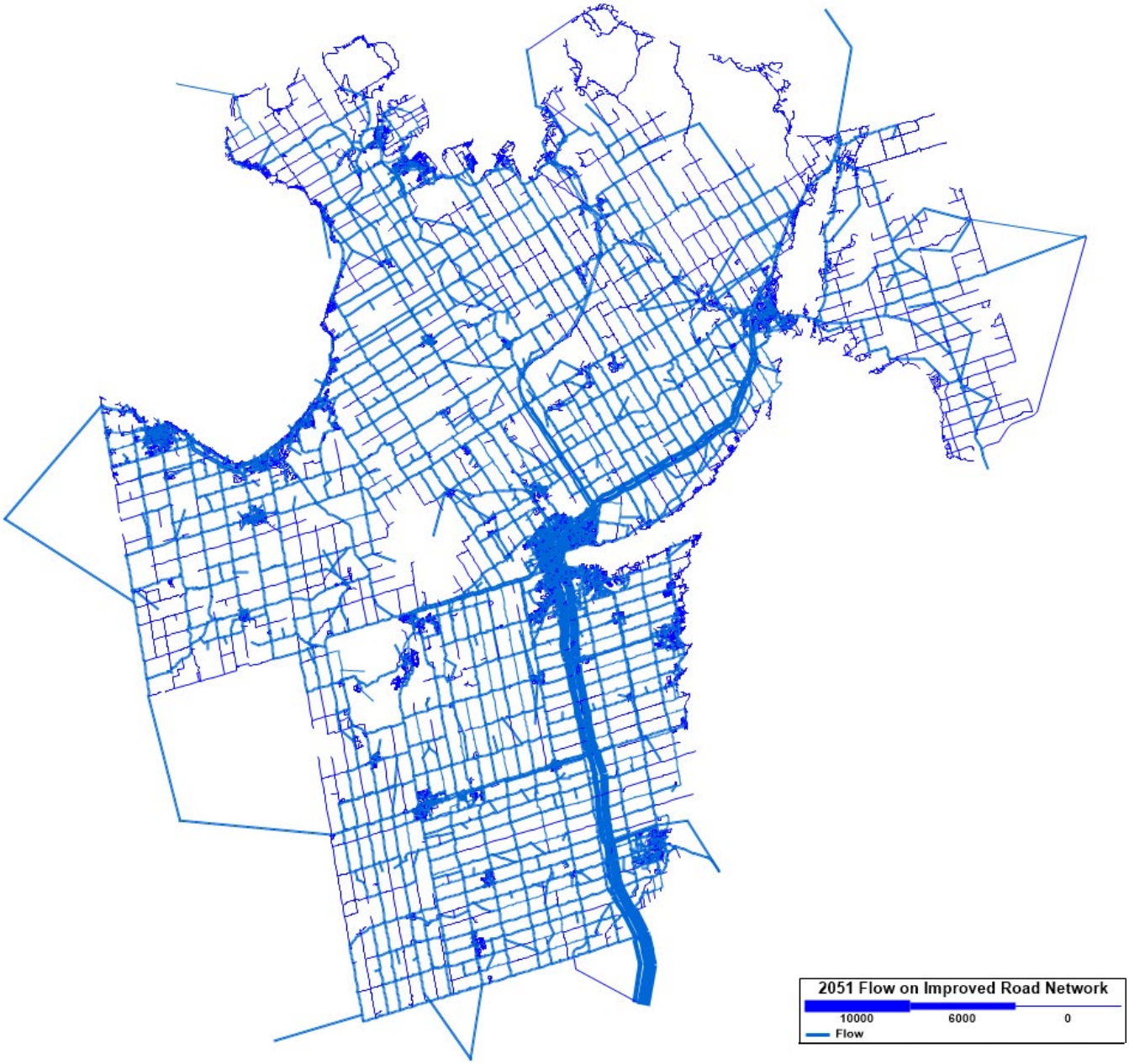


2051 AM Peak Hour Base Case Volume-to-Capacity Ratio



10. 2051 AM Peak Hour Recommended Network Flow and V/C Ratio

2051 Recommended Improvements Case Flow



2051 AM Peak Hour Recommended Improvements Volume-to-Capacity Ratio