

2016

Township of Alnwick Haldimand Road Needs Study

Book 1/2 – Report



G.D. Jewell Engineering Inc.

9/23/2016

Report Limitations

The attached Road Needs Study has been prepared by G.D. Jewell Engineering for the Township of Alnwick Haldimand. The conclusions made in this report are based on the condition of the road on the day of the assessment. The exact date on which the assessment was completed will be provided upon request. This information is not reflective of the current conditions of the roads.

The information, data, recommendations and conclusions contained in this study:

- Are subject to the agreement on the scope of work between G.D. Jewell Engineering and the Township of Alnwick Haldimand.
- May be based on information provided to the G.D. Jewell Engineering Inc. by the Township of Alnwick Haldimand which may not have been independently verified.
- Must be read as a whole, and individual sections should not be read independently.
- Was assessed using observations and empirical formulae only.

This report is to be treated as confidential and may only be used by the Township of Alnwick Haldimand, except:

- As agreed by G.D. Jewell Engineering Inc. and the Township of Alnwick Haldimand.
- As required by law.
- For use by governmental reviewing agencies.

Limitations of the Scope of Work

The scope of this report does not include road geometrics or sightlines. This include horizontal and vertical alignment and stopping sight distances. Though comments are provided on the geometrics of some sections, these comments are only based on observations while assessing the roads. In order to accurately determine the geometrics and sightlines of a road, a more detailed investigation would be required.

The assessment of roadside safety measures was not within the scope of this report. An assessment focusing on the roadside safety measures would be required in order to assess these measures.

The assessment of level rail crossings was outside the scope of this report. Any comments made about the condition of a level rail crossing are observations only, and not based on criteria from the Inventory Manual. An assessment of the level rail crossings would need to be completed to accurately determine the condition of the crossings.

Unless directed by the Township, no traffic counts were completed for this report. Unless measured as part of this report, all traffic counts were provided by the Township of Alnwick Haldimand to G.D. Jewell Engineering Inc. As a result, their accuracy is not guaranteed by G.D. Jewell Engineering Inc.

Comments have been provided based on observations made regarding aspects noticed that are outside of the scope of this project. A road section with no additional comments made regarding anything outside the scope of work does not necessarily mean that the measures are adequate. Nor does a comment mean that the current measures are insufficient.

2016 Road Needs Study Updates

New Road Sections

- Added Black Walnut Trail (237)
- Added Jiggs Road (238)
- Added Grills Road (493)
- Added Helen's Lane (544)
- Added Telephone Road (577)
- Added Loughlin Road (581)
- Added Mercer Lane (742)
- Added Ward Lane (751)
- Added Moore Road (1002)
- Added Forget Road (1026)
- Added George Road (1192)
- Added Dibikad Boulevard (1555)
- Added Waaseyaaban Drive (1560)
- Added Megyaak Drive (1565)
- Added Waabooz Road (1570)

Split Sections

- Split Archer Road (30) into 30 and 32
- Split Lakeshore Road (40) into 40 and 48
- Split Gully Road (95) into 95 and 98
- Split Aird Street (170) into 170 and 172
- Split Purdy Road (195) into 195 and 198
- Split Shelter Valley Road (235) into 232 and 235
- Split Lakeport Road (275) into 275 and 277
- Split Danforth Road East (360) into 360 and 362
- Split Northumberland Heights Road (377) into 377 and 378
- Split Community Centre Road (385) into 385, 387, and 389
- Split Bull Road (395) into 395, 396, and 398
- Split Tackaberry Road (400) into 400 and 402
- Split Stewart Road (430) into 430 and 433
- Split McLean Road (470) into 470 and 472
- Split The Scots Line (480) into 478 and 480
- Split The Scots Line (485) into 483 and 485
- Split Massey Road (515) into 512, 515, and 516
- Split Clouston Road (545) into 543, and 545
- Split South Burns Road (547) into 547 and 548
- Split Diemo Road (560) into 560 and 562
- Split Pipeline Road (600) into 600 and 602
- Split Eddystone Road (615) into 617 and 619
- Split Broomfield Road (660) into 660, 662, and 664

- Split Broomfield Road (665) into 664 and 665
- Split Shelter Valley Road (675) into 675 and 678
- Split Telephone Road (690) into 690 and 692
- Split Vernonville Road (695) into 695, 697, and 698
- Split Boyce Road (720) into 720 and 722
- Split Telephone Road (725) into 723 and 725
- Split Turk Road (740) into 740 and 743
- Split Shelter Valley Road (745) into 745 and 747
- Split Shelter Valley Road (750) into 750, 752, and 754
- Split Bomanton Road (855) into 854 and 855
- Split Beagle Club Road (885) into 885, 887 and 889
- Split McDonald Road (941) into 941 and 942
- Split Caradoc Road (990) into 990 and 992
- Split Dunbar Road (1000) into 1000 and 1001
- Split Seasonal Road (1015) into 1012 and 1015
- Split Cowling Road (1130) into 1130 and 1132
- Split Packer Road (1135) into 1135 and 1137
- Split Browns Road (1165) into 1162 and 1165
- Split Noonan Road (1240) into 1240 and 1242
- Split Roseneath Landing (1290) into 1288 and 1290
- Split 1st Line Road (1305) into 1302, 1304, 1305 and 1306
- Split 3rd Line Road (1317) into 1316 and 1317
- Split Shearer Point Road (1320) into 1320, 1323 and 1324
- Split Sandercock Road (1360) into 1360 and 1362
- Split 3rd Line Road (1381) into 1381 and 1383
- Split Minnetonka Road (1375) into 1375 and 1378
- Split 2nd Line Road (1405) into 1405, 1406, 1407, 1408 and 1409
- Split 4th Line Road (1450) into 1450, 1452, 1454
- Split Island View Road (1462) into 1462 and 1463
- Split 7th Line Road (1500) into 1496, 1498 and 1500
- Split Webb Road (1510) into 1510 and 1512

Other

- Combined Canning Factory Road (190 and 192) into 190
- Cheery Hill Road (230) shortened to 0.2km
- Fenton Road (525) extended to 1.3km
- Joice Road (630) changed to Abbey Lane (630)
- Dixon Drive (778) is unassumed and removed from study
- Bates Road (872) is unassumed and removed from study
- McDonald Road (942) changed to 943
- McDonald Road (943) changed to 944
- Bradley Hollow Road (1065) is unassumed and removed from study
- 3rd Line Road (1382) extended to 0.3km

Surface Type

- Plast Road (55) updated from gravel to surface treated
- Station Road (80) updated from surface treated to paved
- Old Danforth Road (187) updated from gravel to surface treated
- Purdy Road (195) updated from gravel to surface treated
- Chapple Road (210) updated from gravel to surface treated
- Old Danforth Road (245) updated from gravel to surface treated
- Tackaberry Road (400) updated from gravel to surface treated
- Baptist Road (405) updated from earth to gravel
- O'Grady Road (445) updated from gravel to surface treated
- Baptist Road (570) updated from earth to gravel
- Joice Road (625) updated from earth to gravel
- Pete's Road (647) updated from earth to gravel
- Telephone (685) updated from gravel to surface treated
- Seasonal Road (777) updated from earth to gravel
- Earl Road (830) updated from gravel to surface treated
- Earl Road (832) updated from earth to gravel
- Woodland Road (910) updated from gravel to surface treated
- McDonald Road (old 942, new 943) updated from gravel to surface treated
- Packer Road (1135) updated from gravel to surface treated
- Browns Road (1155) updated from gravel to surface treated
- Highland Road (1190) updated from gravel to surface treated
- Grandview Drive (1335) updated from surface treated to paved surface
- Grandview Drive (1337) updated from surface treated to paved surface
- Lake Breeze Drive (1340) updated from surface treated to paved surface
- Woodland Drive (1350) corrected from paved surface to surface treated
- Wideview Drive (1355) updated from surface treated to paved surface
- Church Road (1430) updated from gravel to surface treated
- Rolling Banks Road (1480) updated from gravel to surface treated

Executive Summary

The 2016 Township of Alnwick Haldimand Road Needs Study provides a summary of field surveys conducted on the road system during 2016. The study identifies the road needs based on their current condition, anticipated time of need and proposed reconstruction or rehabilitation strategy.

Data collection and road ratings were done generally in accordance with the Ministry of Transportation (MTO) *Inventory Manual for Municipal Roads (1991)* (the “Manual”). This manual replaces the Municipal Roads Appraisal section of the *Municipal Roads and Railway Level Crossings (1988)* manual.

The purpose of the study is to provide an overview of the condition of the road system with each road section being evaluated on several factors which contribute to the overall condition of the system. The physical condition of the road is an empirical evaluation based on structural adequacy, current surface condition and improvement history. Surface condition was evaluated using the Pavement Condition Index (PCI) and included as a prorated value out of 10 for inclusion in the Condition Rating formula of the *Manual*. The total performance of the system also considers drainage, geometrics, road classification, roadside environment and traffic volumes.

The Manual states, “*The identification of a road need does not imply an unsafe condition but is intended to bring to the municipality’s attention the condition of each road, the type and the estimated cost of improvements to eliminate the need. In most cases where a need has been identified, an engineering strategy will be recommended to review, in detail, the extent of deterioration or damage and to more accurately assess the rehabilitation strategies and costs.*”

The recommendations of the study, in terms of the anticipated funding required for the road system, are based on generic reconstruction practices outlined in the *Manual*. These include general items typical of road reconstruction or resurfacing projects and do not necessarily consider the full width of the right-of-way. This is to say, non-typical items not directly related to the reconstruction of the road, such as sidewalks and utility relocations, are not accounted for in the cost estimates. Thus the need for more detailed engineering strategies prior to rehabilitation or reconstruction of road assets.

Two roads in the review had traffic volumes measured in June 2016, while the rest were taken from the 2007 report. Accurate traffic volumes play an important role in classifying the roads and assessing their overall performance and identifying existing deficiencies. It is recommended that the Township implement an annual traffic counting program in order to ensure compliance with Ontario Regulation 239/02 (Minimum Maintenance Standards for Municipal Highways) with respect to patrolling and maintenance requirements.

The *Manual* notes that rural roads with an average annual daily traffic (AADT) volume of less than fifty (50) shall be considered adequate as Low Volume Roads, even if they have an identified need. These roads have been given proposed rehabilitation or reconstruction

strategies, if warranted, for consideration by the Township. However, these deficiencies should be addressed with normal maintenance procedures outside of the annual capital construction program. The road network for the Township of Alnwick Haldimand includes approximately 188.4km of rural road that have an estimated AADT of less than 50 vehicles per day. The road network also includes 34.5 kilometers of rural road with estimated traffic volumes between 40 and 60 AADT. Annual traffic counts will ensure these marginal roads are given the proper classification.

A complete and thorough review of the geometrics of each road section is outside the scope of this project. However, substandard conditions, based on the MTO's Geometric Design Standards for Ontario Highways, were noted during the field surveys. Given the cursory nature of the geometric analysis of each section, geometrics alone were not enough to identify a need within a road section. It should also be noted that estimated costs for reconstruction or rehabilitation are based on improving the road section with its current horizontal and vertical alignment and are exclusive of land acquisition costs that made associated with geometric improvements.

Several road conditions are reviewed and rated in the field. This information is then used to calculate the Condition Rating of each road section and determine the need for rehabilitation or reconstruction. Deficiencies categorize the needs of each road section based on the anticipated time improvements are required; 'Adequate', 'Now', '(1-5)', or '(6-10)'. It is important to recognize that the characteristics of each section are reviewed against the minimum standards set out in the *Manual* which may or may not be similar to the minimum standards of the Township.

Benchmark costs are derived from unit price contracts within and around the Township. Specific items to be included in each rehabilitation or reconstruction strategy were determined from the *Manual*. Unit prices for the reconstruction and resurfacing include allowances for factors that may influence the cost of the project, such as terrain and roadside environment.

The study indicates estimated total cost of improvements to the road network in the amount of \$37,400,000. Of the identified needs, \$4,900,000 is for roads that are already deficient ('NOW'), \$6,500,000 is for roads that are recommended to be repaired, \$9,600,000 is for the 1-5 year horizon, and the remaining \$16,400,000 is for the 6-10 year horizon.

Table of Contents

Introduction	1
Background	1
Report Content and Scope	2
Study Methodology	2
Field Review and Inventory of Current Road System	2
Point Ratings	2
Time of Need (TON)	2
Condition Assessment	3
Drainage	3
Maintenance Demand	3
Capacity and Level of Service	3
Horizontal and Vertical Alignment	4
Road Sections	5
Right-of-Way Width	5
Types of Improvements	5
Road Components	6
Pavement Structure	6
Drainage	7
Service Life and Road Maintenance	7
Maintenance, Preservation and Rehabilitation	8
Maintenance	8
Preservation	9
Rehabilitation	9
Road System Inventory and Classification	10
Roadside Environment	10
Surface Type	11
Road Classifications	12
Road System Time of Need and Adequacy	14
Time of Need	14
System Adequacy	15
Road System Rating and Prioritization	16
Road System Rating	16
Findings	17
Recommendations	23

List of Figures

Figure 1	Ontario Traffic Manual Book Warning Signs	4
Figure 2	Typical Pavement Structure	6
Figure 3	Load Transfer.....	6
Figure 4	Typical Crossfall for Granular Courses	7
Figure 5	Influence of Saturated Granular Base &..... Subgrade on Flexible Pavement Performance	7
Figure 6	Typical Pavement Deterioration	8
	And Timing of Pavement Treatments	
Figure 7	Impact of Proper Maintenance on	9
	Road Service Life	

List of Tables

Table 1	Road Breakdown by Roadside Environment.....	10
Table 2	Road Breakdown by Surface Type.....	11
Table 3	Road Breakdown by <i>Manual</i> Class	12
Table 4	Breakdown by Class Minimum Maintenance	13
	Standards (MMS)	
Table 5	Summary of Costs by Time of Need	14
Table 6	Summary of Costs for Low Volume Roads	15

Appendices

Appendix A	Road Listing by Section
Appendix B	'NOW' Needs (Reconstruction)
Appendix C	'NOW' Needs (Resurfacing)
Appendix D	Recommended Needs (Resurfacing)
Appendix E	'(1-5)' Year Needs (Reconstruction)
Appendix F	'(1-5)' Year Needs (Resurfacing)
Appendix G	'(6-10)' Year Needs (Reconstruction)
Appendix H	'(6-10)' Year Needs (Resurfacing)
Appendix I	Summary of Road Conditions
Appendix J	Road Classifications
Appendix K	Low Volume Roads
Appendix L	Sidewalks

Maps

Map 1A	Township Map South
Map 1B	Township Map North
Map 2A	NOW Reconstruction Needs South
Map 2B	NOW Reconstruction Needs North
Map 3A	(1-5) Reconstruction Needs South
Map 3B	(1-5) Reconstruction Needs North
Map 4A	(6-10) Reconstruction Needs South
Map 4B	(6-10) Reconstruction Needs North
Map 5A	Recommended Needs South
Map 5B	Recommended Needs North

Introduction

The Township of Alnwick Haldimand retained the services of G.D. Jewell Engineering Inc. to carry out a Roads Inventory and Condition Assessment of the municipal road system. This study updates the most recent assessment completed in 2007 in order to provide the Township with a current evaluation of municipal road assets and allow municipal staff to develop short and long term capital and maintenance programs.

All of the Township's roads were reviewed and have been included in this report. The study will assist the Township of Alnwick Haldimand in identifying the physical and financial needs of the Township with respect to the road network road network and recommended improvements for a 10-year horizon.

Background

The municipal road system consists of approximately 430 centerline kilometers of hard topped (asphalt and surface treatment) and gravel roads built and maintained for the purposes of moving traffic, people, goods and services throughout the Township of Alnwick Haldimand.

The primary objectives of this study were to;

1. Provide an overview of the entire municipal road network and the individual sections that make up the system in a form that will allow the Municipality to objectively consider the needs of each section as identified in the assessment
2. Provide an assessment of the condition of the municipal road system through an established rating system and an evaluation of defined parameters for each of the sections of the road system
3. Provide recommended rehabilitation and reconstruction strategies for all road sections based on available information, Minimum Maintenance Standards, Municipal guidelines and standards, and current industry standards and methodologies
4. Provide the Township with options related to the management of the road system and allow municipal staff to develop short (Now), mid (1-5 years) and long (6-10 years) term capital and maintenance programs based on the needs of the road network and in the best interest of public health and safety
5. Provide cost estimates for the required rehabilitation or reconstruction of municipal assets based on appropriate benchmark costs

Traffic volumes for each road section were taken directly or extrapolated from the previous study. It should be noted that discretion should be exercised in using these volumes to establish road classifications under Minimum Maintenance Standards. The Township will assume some risk in classifying roads based on theoretical traffic volumes.

Report Content and Scope

This report was prepared by G.D. Jewell Engineering Inc. for the Township of Alwick Haldimand. Road assessments are based on the criteria prescribed in the Ministry of Transportation Inventory Manual for Municipal Roads (1991).

The scope of the report includes summaries of the data collected along with discussion and analyses of the same.

Study Methodology

The study objectives were met through the completion of the following steps;

- i. Field review and inventory of current road system
- ii. Preparation of preliminary condition assessment
- iii. Identification of the needs of the road system
- iv. Review and update of construction unit prices
- v. Preparation of final condition assessment report

Field Review and Inventory of Current Road System

Field review of the road network is a subjective process and may vary from person to person. Critical characteristics of the road are rated on a numeric scale out of 10, 15 or 25 depending on roadside environment and how important the feature is deemed to be as it relates to the performance of the road. To assist in mitigating the subjective nature of the evaluations, the *Manual* provides ranges for each condition rather than a specific value for a condition.

Point Ratings

The *Manual* uses six (6) categories to determine the timing of the needs of each road section. These include Geometrics, Structural Adequacy, Surface Type, Surface Width, Capacity and Drainage. Considered in conjunction with the field assessment and traffic volumes, these critical components assist in determining when and what strategy is to be implemented for each road section. Timing for rehabilitation or reconstruction strategies identify as 'ADEQ' (Adequate), 'NOW', '(1-5)' or '(6-10)'. For loose top roads, Structural Adequacy only identifies as either 'ADEQ' or 'NOW'.

Although a road section may have an identified need, the *Manual* suggests that rural road sections with an AADT of less than fifty (50) be considered adequate with normal maintenance procedures. For this reason, along with O. Reg 239/02, it is recommended that the Township undertake an annual traffic counting program to ensure roads are properly classified and maintained.

Time of Need (TON)

The identification of a need does not necessarily mean the road is unsafe but it is intended to draw the Municipality's attention to the condition. It should be understood that minimum standards in the *Manual* may not be consistent with minimum standards of the Township.

'ADEQ'

Road sections deemed Adequate have no identified needs. These roads are expected to meet or exceed the minimum tolerable standard for the 10 year study period.

'NOW'

Roads with an identified 'NOW' need essentially represent the municipal road infrastructure deficit. The existing condition is less than the minimum tolerable standard set out in the *Manual*. In theory, these road sections should undergo the suggested improvements immediately.

'(1-5)'

Road sections with an identified need and timing of '(1-5)' are expected to have a need that falls below the minimum tolerable standard within the next 5 years. The proposed improvements should be implemented within the 1 to 5-year horizon.

'(6-10)'

Road sections with an identified need and timing of '(6-10)' are expected to have a need that falls below the minimum tolerable standard within 10 years. The proposed improvements should be implemented within the 6 to 10-year horizon.

Condition Assessment

Drainage

Evaluation of drainage systems is largely based on historical data and the condition of any existing underground infrastructure. For the purpose of evaluation of the drainage systems, it has been assumed that all rural roads are intended to be drained via open ditch regardless of the lack of ditching.

Maintenance Demand

The *Manual* also includes a rating for the maintenance demand for each road section. While some road sections may require less maintenance, it is reasonable to assume all road sections require regular or average levels of maintenance. Therefore, the most points assigned to a road section for maintenance demand in this study is six (6), which is reflective of average maintenance requirements. Lesser points will still be assigned to roads requiring increased levels of maintenance.

Capacity and Level of Service

Capacity and Level of Service are related to the traffic volumes and the design hour volume (DHV). For rural road sections with a DHV of less than 1200, the level of service component is not applicable and the road section is instead reviewed based on the geometrics (horizontal and vertical alignment). Based on available information, there are no rural road sections within the Township network with a DHV greater than 1200.

For semi-urban and urban with a DHV less than 1200, the *Manual* assumes the level of service is adequate. Therefore, road sections meeting this criteria have been given the maximum allowable point rating for Level of Service.

Based on the foregoing, the Township road network is understood to have adequate capacity and the study does not provide further comment on Capacity.

Horizontal and Vertical Alignment

A complete analysis of the horizontal and vertical components of each rural road section is outside the scope of this study. Unless horizontal curves were posted with a recommended maximum speed or it was obvious a curve did not meet the minimum radius, this study includes minimal content on horizontal curves.

Similarly, obvious substandard vertical curves were noted and included in the evaluation for the road sections. Otherwise, little comment has been provided on the vertical alignment of the road sections.



Potentially substandard horizontal curves

To minimize the Township's exposure to risk, road sections with substandard vertical and horizontal alignments should be considered for advanced warning signs.



Figure 1 - Ontario Traffic Manual, Book 6 Warning Signs

Road Sections

Generally, a road network is composed of road sections that are consistent throughout their length based on characteristics such as surface type, roadside environment, or speed limit. Even with consistency in section attributes, it is reasonable to break longer road sections into shorter, more manageable, lengths. Long road sections are difficult to evaluate as the severity and density of distresses in the road can vary widely over a greater distance. Keeping an inventory of long road sections, reconstructed over several years, will result in differential deterioration of the road section. If the road is to be reviewed as one section, it may be deemed to meet minimum requirements when large sections do not. Likewise, a section may be deemed to be below minimum tolerable standards when large sections of the road are in good condition. The former puts the Township at risk while the latter may result in unnecessary expenditures or poor allocation of funds.

Although there is obvious merit in the economy of scale, annual budgetary constraints typically make it unlikely that road sections longer than 2.0 or 2.5km can be constructed over the course of one construction season depending on the complexity of the project. Long sections are usually associated with rural roads as semi-urban and urban sections are most often from intersection to intersection. However, this should be reviewed with each iteration of the study in light of the Township's annual capital budget and funding opportunities that may be available. As part of this study, multiple road sections were broken down into smaller sections to bring them closer to, or under, 2.0km per section. Sections that were split are outlined in the Revisions section.

Right-of-Way Width

Right-of-way width is also a component of the review. Although the width of the existing rights-of-way were not measured, it is noted that several rural road allowances generally appeared to be insufficient, based on fence and utility installations, to accommodate a proper road cross section including roadside drainage. It is recommended that the Township implement a policy of acquiring a road widening as part of any application for consent if not in place already.

Types of Improvements

Determination of improvements to a road section is largely based on the performance of the road as a whole. Consideration must be given to existing drainage and the improvement history, specifically type and timing of recent improvements, of the road section when assessing the structural adequacy of the underlying road base and subbase. For this reason, it is important that the Township maintain accurate records of improvements made to any road section in their network which will assist in future assessments of the road network.

Structural problems would lean toward reconstruction or replacement strategies while age related distresses would be better suited to rehabilitation strategies. Proper assessment of the condition of the road is critical as determination of a suitable rehabilitation or reconstruction will ensure the Township is effectively distributing their financial resources.

Possible **maintenance** suggestions include:

- (SR) - Spot Repair in the Road
- (SD) - Spot Ditching

Possible **resurfacing** improvements include:

- (R1) - Basic Resurfacing, Single Lift of Hot Mix 50mm, Single Surface Treatment
- (R2) - Basic Resurfacing, Double Lift of Hot Mix 100mm, Double Surface Treatment

Possible **reconstruction** improvements include:

- (REC) - Reconstruction (Rural & Semi Urban)

Road Components

Pavement Structure

Roads are layered structures of selected and processed materials which have been designed to resist wear, support wheel loads and provide drainage. The conventional road structure consists of layers of subbase, base, and surface (Figure 2) which are placed on a subgrade to support traffic load and distribute it to the road bed.

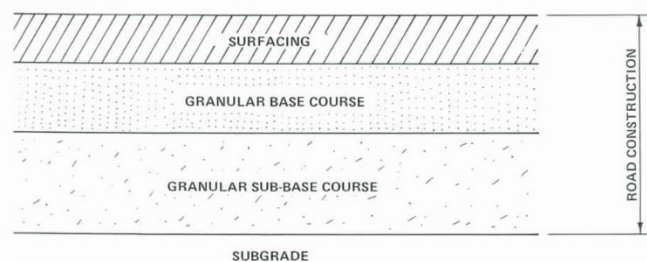


Figure 2 - Typical Pavement Structure (Ministry of Transportation Construction Manual)

The highest loading on a road section occurs at the point where vehicle tires contact the road surface. It is critical that the pavement be designed to effectively transmit the vehicle loads to the road subgrade and that the road subgrade is capable of handling the load being transferred (Figure 3). Therefore materials with greater strength are required higher in the road structure (at the surface) with materials with lesser strength being used deeper (further from the surface) in

the road structure. Extremely poor quality subgrade would require a larger depth of high strength material in the road structure.

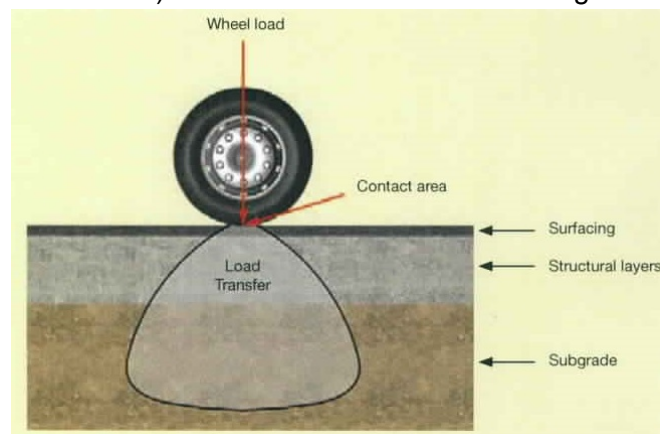


Figure 3 - Load Transfer (Wirtgen Cold Recycling Technology Manual)

Drainage

Road performance is determined, in large part, by drainage, both surface and internal. Surface drainage is influenced by the characteristics of the road such as crossfall and surface permeability. Internal drainage is affected by surface permeability, the granular materials used in the road structure, and crossfall of the subbase and base layers.

The two primary sources of water in a road structure are surface infiltration and groundwater. Surface infiltration occurs through cracks in the road surface as well as through granular shoulders. Groundwater seepage into road subgrade can occur through the combination of a high water table and capillary action. The presence of water in a road structure can influence road performance by reducing the strength and durability of the materials.

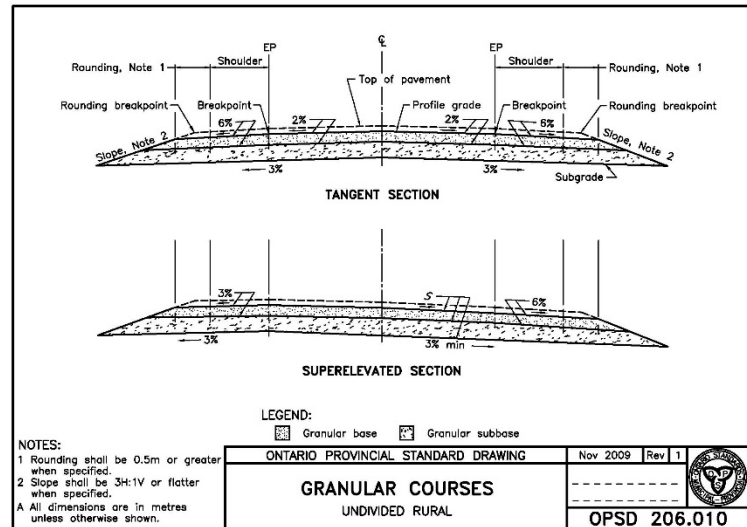


Figure 4 - Typical Crossfall for Granular Courses (Ontario Provincial Standards)

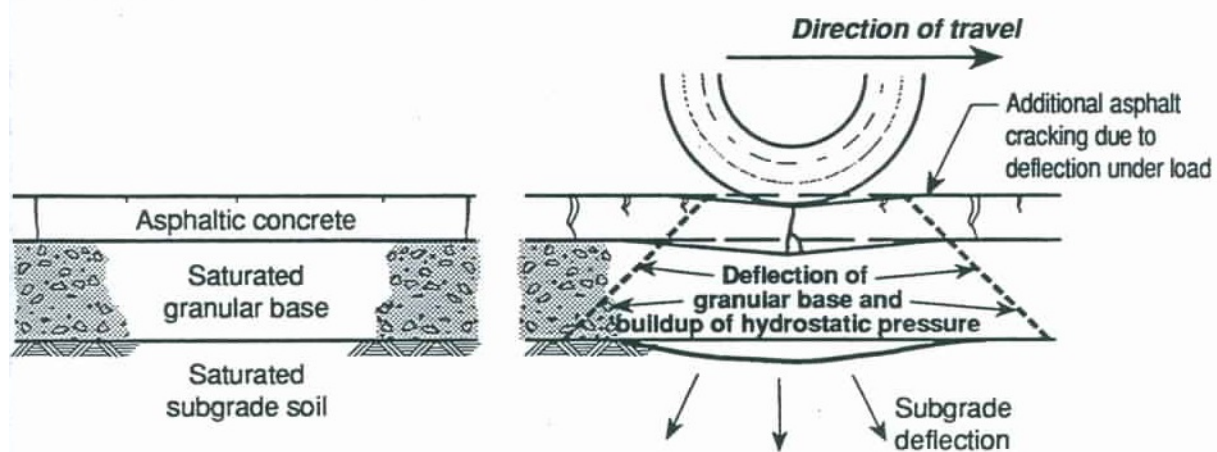


Figure 5- Influence of Saturated Granular Base & Subgrade on Flexible Pavement Performance under Dynamic Loading (Ministry of Transportation Pavement Design and Rehabilitation Manual (1990))

Service Life and Road Maintenance

Every road is designed to last for a specific number of years based on current and future traffic loading. The term 'Pavement Design' can be misleading as it includes more than just asphalt. A Pavement Design includes granular base, subbase, and subgrade. Good pavement designs also considers the average annual daily traffic and the percentage of heavy trucks using the road. Generally, it is accepted that properly constructed roadways, which include adequate base and subbase material, will have a life span of approximately 40 years with intermittent surface

rehabilitation depending on the surface type. High class bitumen (HCB) or asphalt will provide a high riding quality for between 12 and 16 years before needing to be resurfaced. A road surface of Low Class Bitumen (LCB) or surface treatment will provide a high riding quality for 6 to 10 years before needing to be resurfaced.

The performance of LCB and HCB pavement types depends greatly on the traffic loading to which the roads are subjected. Road deterioration, pavement deterioration in particular, begins at a relatively slow pace for a newly constructed road. Over time, as the road is subjected to vehicular loading, distresses begin to manifest in the road surface. Distress in the road surface accelerates the deterioration as surface water penetrates more readily into the road base and subbase as shown in *Figure 5*.

Maintenance, Preservation and Rehabilitation

Road maintenance begins immediately after a road is constructed and takes one of three forms; preventive, routine or corrective. Figure 6 shows the typical deterioration of a pavement over its service life.

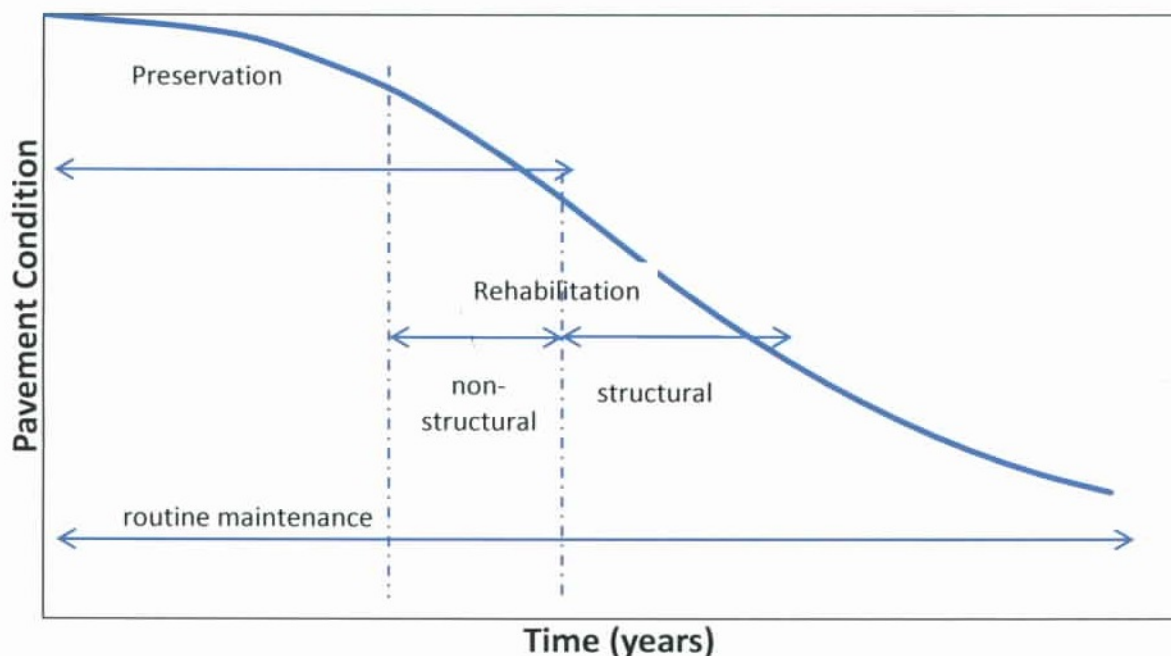


Figure 6 - Typical Pavement Deterioration and Timing of Pavement Treatments (Transportation Association of Canada Pavement Asset Design and Management Guide)

Maintenance

General roadway maintenance considers road components with the right-of-way and includes activities such as shoulder grading, roadside mowing and erosion control. Completion of these tasks improve the performance of the pavement. Ideally, these activities are completed proactively in order to prevent problems from occurring.

Routine maintenance is generally considered a reactive process that includes inexpensive, localized work that can be completed by municipal forces. This would include such tasks as pothole repairs, drainage improvements, and shallow patching.

Preservation

Preservation activities include work such as crack sealing, functional milling and resurfacing, and microsurfacing and are generally expected to service the road for anywhere from five to ten years.

Rehabilitation

Rehabilitation strategies are required when additional preservation measures are no longer cost effective due to the pavement condition. These activities include resurfacing, cold in-place recycling and full depth reclamation.

Figure 6 illustrates the effectiveness of timely maintenance, preservation and rehabilitation to ensure road sections reach their maximum service life prior to needing a full depth reconstruction. It is also important to recognize that the service life (Time/Traffic) would be much shorter for an improperly constructed road as a result of accelerated deterioration due to an inadequate pavement design.

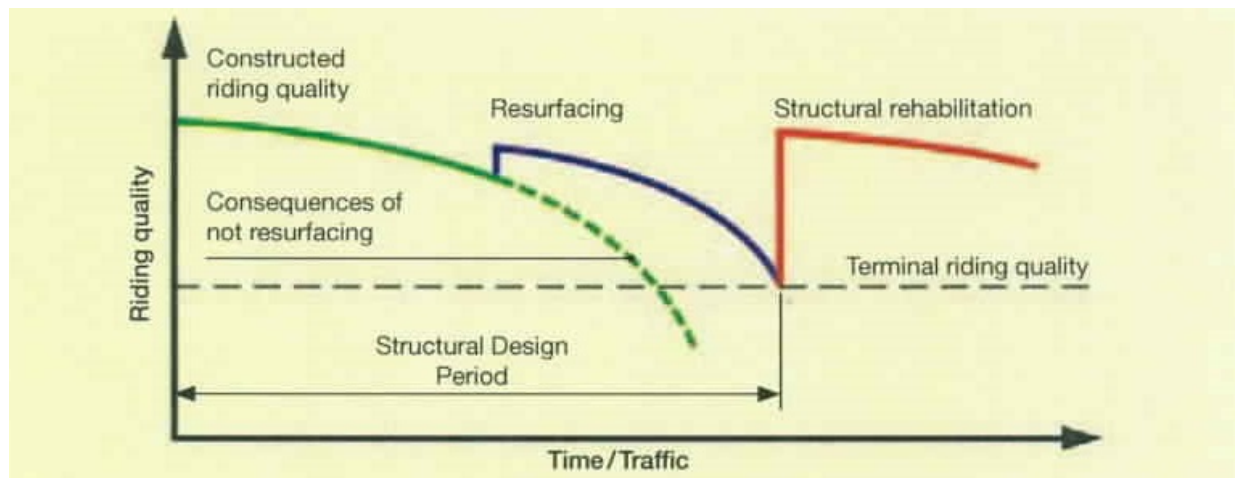


Figure 7 - Impact of Proper Maintenance on Road Service Life (Wirtgen Cold Recycling Technology Manual)

Road System Inventory and Classification

Roadside Environment

The road network within the Township of Alwick Haldimand is considered a Semi-Urban and Rural lower tier road system. The Manual includes the following definitions for roadside environment;

Rural – Areas with sparse development or where development is less than 50% of the frontage, including developed areas extending less than 300 meters on one side or 200 meters on both sides and no curb and gutter.

Semi-Urban (Suburban) – Development exceeds 50% of the frontage for a minimum of 300 meters on one side or 200 meters on both sides

AND

No curbs and gutters, with or without storm/combination sewers or curb and gutter on one side only without storm/combination sewers

or

For subdivisions, the majority of the lot frontages are 30 meters or greater and the roads comply with minimum road standards.

The vast majority of roads within the road network are considered as having a Rural roadside environment.

Table 1 identifies the length of road by Roadside Environment.

Table 1 – Road Breakdown by Roadside Environment

Roadside Environment	Length (km)	Percentage of System
Rural (R)	402.90	93.82%
Semi-Urban (S)	26.55	6.18%
Total	429.45	100.00%

Surface Type

Road needs are also evaluated based on the surface type. Minimum tolerable standards are based on the traffic volume which serves as additional support for an annual traffic counting program. Roads with an AADT of less than 50 need only have an earth surface, a gravel or loose top surface is adequate for roads with an AADT between 50 and 399 and finally roads with an AADT equal to or greater than 400 should be LCB or better.

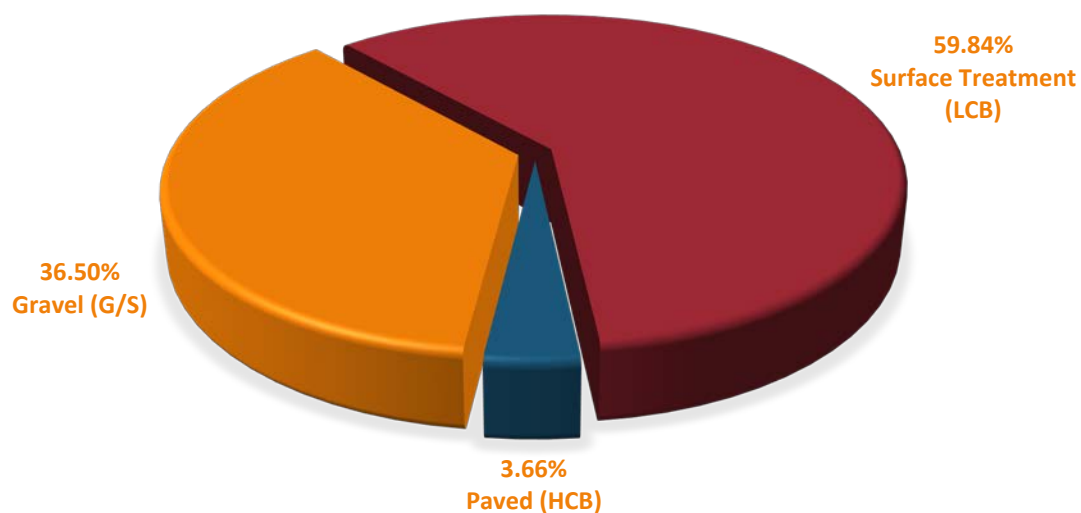
Many of the roads within the Township's road network exceed the minimum standard for road surface. Municipal surface types are commonly of a higher type than what the *Manual* recommends as a minimum. Rehabilitation or reconstruction costs are based on reinstatement to the current surface type and not the minimum requirements.

Table 2 breaks the road network into lengths by surface type.

Table 2 – Road Breakdown by Surface Type

Surface Type	Length (km)	Percentage of System
Gravel (G/S)	156.75	36.50%
Low Class Bituminous (LCB) (Surface Treated)	257.00	59.84%
HCB	15.70	3.66%
Total	429.45	100.00%

SURFACE TYPES



Road Classifications

Road classifications by the *'Manual'* are based on the traffic volumes and the roadside environment for each road section. Rural roads are classified on traffic volumes while semi-urban and urban roads are classified on their primary function.

Rural		Semi-Urban (Considers Roadside Environment, NOT AADT)	Urban (Considers Roadside Environment, NOT AADT)
Average Annual Daily Traffic (AADT)	Classification		
1-49	100	ALL (Alleyway)	ALL (Alleyway)
50-199	200	L/R (Local Residential)	L/R (Local Residential)
200-399	300	LCI (Local Commercial or Industrial)	LCI (Local Commercial or Industrial)
400-999	400		C/R (Collector Residential)
1000-1999	500	C/R (Collector Residential)	CCI (Collector Commercial or Industrial)
2000-2999	600		
3000-3999	700	CCI (Collector Commercial or Industrial)	ART (Arterial)
>4000	800		
4 or more lanes	4LN	ART (Arterial)	EXP (Expressway)
Rural Expressways	EXP		

Table 3 breaks the network into road classifications under the *Manual*.

Table 3 – Road Breakdown by Manual Class

Road Classification	Roadside Environment (CL km)			Total Length (CL km)	Percentage of System
	Rural	Semi-Urban	Urban		
100	188.55	0.50	0.00	189.05	44.02%
200	65.90	0.00	0.00	65.90	15.35%
300	84.55	0.00	0.00	84.55	19.69%
400	59.60	1.30	0.00	60.90	14.18%
500	4.30	0.00	0.00	4.30	1.00
L/R	0.00	24.05	0.00	24.05	5.60%
C/R	0.00	0.70	0.00	0.70	0.16
Total	402.90	26.55	0.00	429.45	100.00%

Most municipalities base their capital and maintenance operations on O. Reg 239/02, Minimum Maintenance Standards for Municipal Highways (MMS), which uses traffic volumes as well as the speed limit to classify each road section.

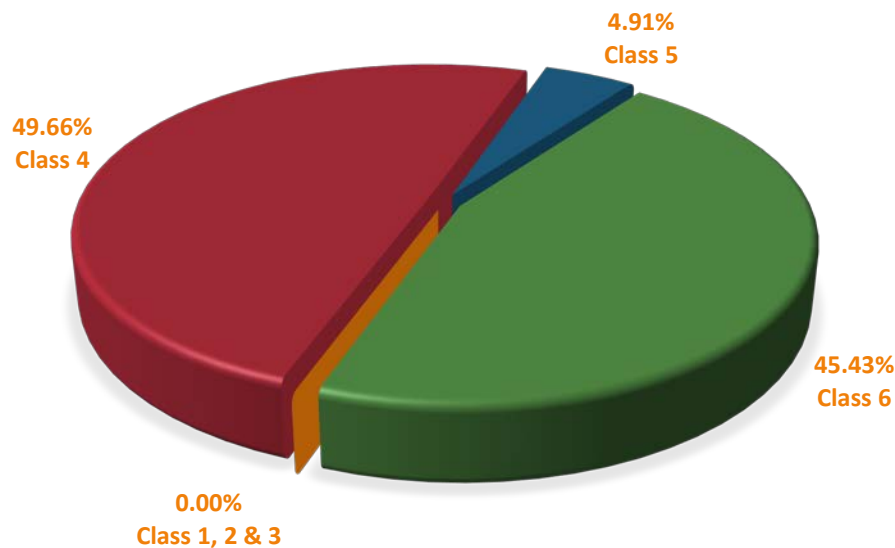
Average Annual Daily Traffic (number of motor vehicles)	Posted or Statutory Speed Limit (kilometers per hour)						
	91 - 100	81 - 90	71 - 80	61 - 70	51 - 60	41 - 50	1 - 40
15,000 or more	1	1	1	2	2	2	2
12,000 - 14,999	1	1	1	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	3	3
5,000 - 5,999	1	2	2	3	3	3	3
4,000 - 4,999	1	2	3	3	3	3	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	4	4
1,000 - 1,999	1	3	3	3	4	4	5
500 - 999	1	3	4	4	4	4	5
200 - 499	1	3	4	4	5	5	5
50 - 199	1	3	4	5	5	5	5
0 - 49	1	3	6	6	6	6	6

Table 4 breaks the network into road classifications under the MMS.

Table 4 – Road Breakdown by Class Minimum Maintenance Standards (MMS)

Road Classification	Length (km)	Percentage of System
1	0.00	0.00%
2	0.00	0.00%
3	0.00	0.00%
4	213.25	49.66%
5	21.10	4.91%
6	195.10	45.43%
Total	429.45	100.00%

NETWORK ROAD CLASSIFICATIONS - MMS



Road System Time of Need and Adequacy

Time of Need (TON)

The system adequacy is a reflection of the current state of the road network and serves as a benchmark on which to base future evaluations. Road sections with a rehabilitation or reconstruction strategy with a 'NOW' need are a representation of work that is currently required on the road system to address the existing needs of the system. Similarly, '1-5' and '6-10' represent the anticipated horizon that the needs of the road must be addressed.

Table 5 – Summary of Costs by Time of Need

Item	NOW	1-5	6-10	Recommended	Total
Construction Needs	\$3,893,684.74	\$9,490,693.94	\$16,338,955.32	\$0	\$29,723,334.00
Resurfacing Needs	\$964,029.01	\$150,092.70	\$95,086.61	\$6,456,944.62	\$7,666,152.94
Total	\$4,857,713.75	\$9,640,786.64	\$16,434,041.93	\$6,456,944.62	\$37,389,486.94

The 'Manual' states that low volume rural roads with an AADT less than 50 shall be considered adequate with normal maintenance procedures. The Township road network currently includes 188.55km of rural road with an AADT less than 50, of which all 188.55km have an identified need.

Low volume roads with identified needs have been excluded in the capital cost forecast but a summary of the costs to address the identified needs of these roads is provided in Table 6.

Table 6 – Summary of Costs for Low Volume Roads (AADT<50)

Item	Total
Construction Needs	\$18,407,269.20
Resurfacing Needs	\$2,525,845.77
Total	\$20,933,114.97

System Adequacy

System adequacy is a comparison between the length of the road network without an identified 'NOW' need and the length of the entire network resulting in a rating out of 100. The road system adequacy is calculated as follows;

$$\text{System Adequacy} = \frac{\text{Total Length of Road (km)} - \text{Length of NOW Deficiencies}}{\text{Total Length of Road (km)}} \times 100$$

It should be noted that this calculation uses the total length of road within the network, including rural roads with an AADT<50. However, the low volume rural roads are not considered in capital funding allocations. Using the length of low volume roads in the system adequacy calculation without considering their condition could be seen as a distortion of the overall system rating. Discretion should be exercised in the interpretation of this rating.

It is reasonable to consider a decrease in system adequacy over time would indicate that inappropriate strategies are being implemented and/or adequate funds are not being directed to the road network. Therefore, a review of historical system adequacy figures is a good indicator of the overall performance of the road program.

Based on the 2016 evaluation, the Township of Alnwick Haldimand road network has a System Adequacy of 96.55%. It is generally accepted that a lower tier municipality has a target of 60% system adequacy.

Road System Rating and Prioritization

Road System Rating

Road System Ratings are a basic measure of the importance of a road section relative to its condition and the traffic it serves. These are only two factors and many other factors need to be considered when rating the importance of one road section over another. However, the rating provides the Township with some insight into the importance of each road section. The evaluation for each road section includes a Priority Rating with a higher number representing a road considered to be of higher importance.

Findings

As indicated by the System Adequacy rating, the Township road network is generally not in adequate condition. Some of the gravel roads have been recently resurfaced.

There were several needs that were consistent throughout the road network including;

- Minimal to no ditching
- Low shoulders against the edge of the travelled surface (hard topped roads)
- Very low shoulders on the inside of horizontal curves
- High shoulders against the ditch foreslope
- Narrow platform and surface widths
- Frost boils on the travelled surface

Ditching

The terrain and soil type throughout the Township can be classified as non-rocky and rolling. The cost of proper ditching is assumed to be the major reason there is minimal to no ditching on many rural road sections. Alligator cracking in hard topped roads is a good indication of movement in the road base, most likely as a result of poor drainage.



Photo 1 & 1A - Inadequate Roadside Ditching

Low Shoulders Against the Travelled Edge (Hard Topped Roads)

Many hard topped roads throughout the road network had low shoulders against the travelled surface frequently or throughout the road section. This situation allows surface water to more readily infiltrate the road base and subbase, weakening the pavement structure, leading to edge break. While edge break is not considered to be a significant deficiency, if left unchecked, it can migrate into the travelled surface and accelerate the deterioration of the road.



Photo 2 - Low Shoulders Against the Travelled Surface



Photo 2A - Low Shoulders Leading to Edge Break



Photo 2B - Low Shoulders Leading to Edge Break

Very Low Shoulders on the Inside of Horizontal Curves

Several road sections have sharp horizontal curves. The driver's tendency is to track to the inside of a horizontal curve. This can lead to significantly lower shoulders in many horizontal curves leading to more severe edge break and moderate severity potholing in the shoulder of these areas.



Photo 3 - Low Shoulders Inside Horizontal Curve Leading to Edge Break

High Shoulders (Shoulder Berm) Against the Ditch Foreslope

Although there are minimal ditches throughout the road system some road sections are built up from their surroundings which provides some grade to assist with surface drainage. Due to build-up of winter sand and the growth of vegetation in the shoulders, surface water is stopped from draining away from the road. This situation further compounds the low shoulder condition against the travelled edge as water from the shoulder is actually directed back towards the driving surface.



Photo 4&4A - High Shoulders Preventing Surface Water Runoff

Narrow Platform and Surface Widths

Many of the road sections were found to have insufficient platform and surface widths. These roads were generally Class 6 roads, as well as being low volume roads, and are not necessarily subject to minimum standards. The Township should review the needs of each road section in order to identify the deficiency. Surface and platform widths are reviewed based on the minimum standards set out in the *Manual*.



Photo 5 & 5A- Narrow Surface and Platform Widths

In some cases, roads were found to have a platform that was too narrow for the hard topped surface based on the minimum standards set out in the *Manual*. This situation results in minimal shoulders which, in turn, minimizes support for the road.



Photo 5B - Narrow Platform Width

Frost Boils and Heaves

With many of the roads in the Township being gravel roads, a key indicator for structural adequacy is the presence of frost boils and evidence of frost heave. Frost boils occur when there is improper drainage within the saturated roadbed. As the frosts thaw, the water in the roadbed has nowhere to go, creating a heavily saturated driving surface. As vehicles travel over the road, excess moisture is pumped up through towards the surface by the tires. The freeze/thaw cycle in the spring causes some of the trapped water to freeze, expanding it, and pushing up to the surface. The inadequate surface drainage further compounds this problem by not directing water away from the roadbed.



Photo 6 & 6A- Frost bringing wood through surface and frost boils deteriorating road

Recommendations

Based on the road inventory and condition assessment, G.D. Jewell Engineering Inc. puts forth the following recommendations for consideration by the Township;

1. Implement an annual traffic counting program. Accurate traffic volumes ensure roads are classified, constructed and maintained properly. This will also assist in prioritizing needs and preparing capital and maintenance programs.
2. Review existing and/or prepare and implement a shoulder grading program (maintenance) to address surface water drainage deficiencies. This will allow proper drainage, reduce surface water infiltration into the road structure and prevent accelerated deterioration of road sections.
3. Review existing and/or prepare and implement a resurfacing program to ensure road assets, particularly recently reconstructed roads, reach their maximum service life.
4. Include curve widenings for horizontal curves on all future reconstruction and rehabilitation projects. This will minimize erosion of the shoulder and assist in reducing edge break on the inside of the curves, prolonging the surface life.
5. All horizontal curves should be demarcated with edge and centerline markings with the intention of providing increased direction for to users. This will assist in reducing shoulder loss and edge break.
6. Review substandard horizontal and vertical alignments with respect to existing warning signs, need for additional signage and possibly reduced speed limits.
7. Reconstruction projects should consider improvements to substandard horizontal and vertical alignments where possible.
8. Road sections should be kept to lengths less than 2.5km. It will give a more accurate representation of the condition of the road through the longer sections.

It is important that the Township develop, fund and implement programs that will encourage preservation of existing roads assets. These programs would be separate from capital projects and could include LCB resurfacing, crack sealing and chip or slurry sealing. Preservation programs such as these will renew the road network and assist in ensuring the maximum service life of the system is reached. Similarly, any road reconstruction projects should be designed in a manner conducive to rehabilitation.

APPENDIX A
ROAD LISTING BY SECTION



Township of Alnwick Haldimand Roads (By Section Number)

Section No.	Name	From	To
5	Heritage Road	County Road 2	South End
10	Carruthers Road	County Road 2	1.3km North of County Road 2
15	Brookside Road	County Road 2	South End
20	Brookside Road	County Road 2	Danforth Road
25	Ron Harnden Rd	Danforth Rd	North End
30	Archer Road	County Road 2	0.8km North of Lakeshore Road
32	Archer Road	0.8km North of Lakeshore Road	Lakeshore Road
35	Lakeshore Road	Archer Road	West End
40	Lakeshore Road	Archer Road	0.05km East of Killdeer Crescent
45	Fox Run Road	Lakeshore Road	Killdeer Crescent
48	Lakeshore Road	0.05km East of Killdeer Crescent	Station Road
50	Killdeer Cres	Lakeshore Road (West)	Lakeshore Road (East)
55	Plast Road	Lakeshore Road	North End
57	Plast Road	Lakeshore Road	South End
60	Keewatin Dr	Keewatin Drive	South End
65	Nawantin Dr	Lakeshore Road	South End
70	Shawano Dr	West End	East End
75	Kanata Dr	Lakeshore Road	Shawano Drive
80	Station Road	Old Danforth Road	0.6km South of Old Danforth Road
81	Station Road	0.6km South of Old Danforth Road	Lakeshore Road
82	Station Road	Lakeshore Road	Chub Point Road
85	Hare Road	County Road 2	North End
87	Hare Road	County Road 2	South End
90	Old Kingston Road	County Road 2	East End
95	Gully Road	County Road 2	Highway 401
98	Gully Road	Highway 401	Massey Road
100	Driver's Rest Rd	County Road 2 (West)	County Road 2 (East)
105	Hillcrest Rd	Drivers Rest Road	South End
110	Barnum House Road	County Road 2	North End
115	Barnum House Road	County Road 2	South End
120	Brimley Road North	County Road 2	North End

Section No.	Name	From	To
125	Brimley Road South	County Road 2	0.9km South of County Road 2
127	Brimley Road South	0.9km South of County Road 2	1.3km South of County Road 2
128	Brimley Road South	1.3km South of County Road 2	Station Road
130	Johnston Court	Brimley Road South	South End
135	St. Andrews Drive	Brimley Road South	Station Road
140	St. Marys Court	St. Andrews Drive	South End
145	St. George's Court	St. Andrews Drive	South End
150	Bowman Court South	St. Andrews Drive	South End
155	Bowman Court North	St. Andrews Drive	North End
160	Old Danforth Road	County Road 2	Station Road
165	Lyle Street South	County Road 2	Old Danforth Road
170	Aird Street	0.4km North of County Road 2	Lyle Street North
172	Aird Street	County Road 2	0.4km North of County Road 2
175	Charolette Street	Aird Street	Lyle Street North
180	Harnden Drive	Aird Street	West End
185	Old Danforth Road	Station Road	0.3km East of Station Road
187	Old Danforth Road	0.3km East of Station Road	0.8km East of Station Road
189	Old Danforth Road	0.8km East of Station Road	Benlock Road
190	Canning Factory Road	Station Road	Purdy Road
195	Purdy Road	0.3km North of McMaster Road	Old Danforth Road
198	Purdy Road	McMaster Road	0.3km North of McMaster Road
200	McMaster Road	Station Road	Purdy Road
205	Orchard Grove Road	Station Road	Wicklow Beach Road
210	Chapple Road	Orchard Grove Road	North End
212	North Shore Road	Station Road	West End
215	Chub Point Road	Station Road	Ruttan Road
220	Ruttan Road	Chub Point Road	East End
225	Clithroe Road	County Road 2	North End
230	Cherry Hill Road	County Road 2	North End
232	Shelter Valley Road	County Road 2	Jiggs Road
235	Shelter Valley Road	Jiggs Road	Telephone Road
237	Black Walnut Trail	Shelter Valley Road	North End
238	Jiggs Road	Shelter Valley Road	North End

Section No.	Name	From	To
240	Benlock Road	County Road 2	Calnan Road
245	Old Danforth Road	0.1km West of Benlock Road	Benlock Road
250	Beauchamp Road	Benlock Road	South End
255	Calnan Road	County Road 2	South End
260	Wicklow Road	County Road 2	Skyview Road
265	Skyview Road	Shelter Valley Road	Wicklow Road
270	Wicklow Beach Road	County Road 2	Lakeport Road
275	Lakeport Road	Wicklow Beach Road	McGlennon Road
277	Lakeport Road	McGlennon Road	0.3km West of Ontario Street
280	McGlennon Road	Lakeport Road	South End
285	Thomas Road	County Road 2	Lakeport Road
287	MacKenzie Lane	County Road 2	Dudley Street
290	Ontario Street	County Road 31	Front Street
295	Spring Street	Ontario Street	Front Street
297	Mill Street	Ontario Street	Front Street
300	Cedar Street	Ontario Street	Front Street
305	Front Street	County Road 31	Ontario Street
310	Old Wharf Road	County Road 31	South End
315	Town Line Road	County Road 31	County Road 2
320	Knights Road	County Road 2	South End
325	Hilltop Road	County Road 2	North End
330	Kernaghan Road	County Road 2	South End
335	Vernonville Road	County Road 2	Dudley Road
340	Herron Road	County Road 2	South End
345	Herron Road	County Road 2	Dudley Road
350	Usborne Road	County Road 2	North End
355	Dudley Road	Vernonville Road	Herron Road
357	Dudley Road	Herron Road	Cramahe Township Boundary
360	Danforth Road East	Ron Harnden Road	Northumberland Heights Road
362	Danforth Road East	Northumberland Heights Road	Hoskin Road
365	Northumberland Heights Road	Danforth Road	2.2km West of Danforth Road
367	Craig Road	Northumberland Heights Road	North End

Section No.	Name	From	To
370	Northumberland Heights Road	2.2km West of Danforth Road	2.8km West of Danforth Road
375	Northumberland Heights Road	2.8km West of Danforth Road	1.9km South of Community Centre Road
377	Northumberland Heights Road	1.9km South of Community Centre Road	0.5km South of Community Centre Road
378	Northumberland Heights Road	0.5km South of Community Centre Road	Community Centre Road
380	Les Davey Road	Community Centre Road	South End
385	Community Centre Road	Les Davey Road	O'Grady Road
387	Community Centre Road	O'Grady Road	Stephen Road
389	Community Centre Road	Stephen Road	Stewart Road
390	McMann Road	Hamilton Township Boundary	East End
395	Bull Road	0.7km East of Tackaberry Road	Stephen Road
396	Bull Road	Tackaberry Road	0.7km East of Tackaberry Road
398	Bull Road	County Road 45	Tackaberry Road
400	Tackaberry Road	Bull Road	0.4km South of Bull Road
402	Tackaberry Road	0.4km South of Bull Road	South End
405	Baptist Road	Bull Road	0.5km West of Stewart Road
410	Stephen Road	Community Centre Road	Baptist Road
415	Nelson Road	Baptist Road	0.3km South of County Road 22
420	Nelson Road	0.3km South of County Road 22	County Road 22
425	Baptist Road	0.5km West of Stewart Road	Stewart Road
430	Stewart Road	Community Centre Road	Baptist Road
433	Stewart Road	Baptist Road	County Road 22
435	Speechley Road	The Scots Line	Community Centre Road
437	Speechley Road	The Scots Line	South End
440	Jackson Road	Stewart Road	0.2km East of Stewart Road
445	O'Grady Road	Community Centre Road	Noble Road
450	Noble Road	O'Grady Road	Wilson Drive
452	Noble Road	Wilson Drive	The Scots Line
455	Wilson Drive	Noble Road	0.2km South of Noble Road
460	Wilson Drive	0.2km South of Noble Road	0.7km North of McLean Road

Section No.	Name	From	To
465	Wilson Drive	0.7km North of McLean Road	McLean Road
470	McLean Road	West End	0.1km West of Hoskin Road
472	McLean Road	0.1km West of Hoskin Road	Hoskin Road
475	Bevan Ridge Road	The Scots Line	East End
478	The Scots Line	Hoskin Road	Bevan Ridge Road
480	The Scots Line	Bevan Ridge Road	Noble Road
483	The Scots Line	Noble Road	Speechley Road
485	The Scots Line	Speechley Road	Grills Road
490	Grills Road	The Scots Line	South Burns Road
493	Grills Road	Intersection	North End
495	Hoskin Road	Gully Road	McLean Road
500	Finley Road	Hoskin Road	0.6km West of Massey Road
502	Finley Road	0.km West of Massey Road	0.3km West of Massey Road
503	Finley Road	0.4km West of Massey Road	0.15km West of Massey Road
504	Finley Road	0.15km West of Massey Road	Massey Road
505	Gully Road	Hoskin Road	Old Gully Road
510	Old Gully Road	Gully Road	Finley Road
512	Massey Road	Gully Road	Finley Road / West Road
515	Massey Road	Finley Road / West Road	Clouston Road
516	Massey Road	Clouston Road	1.0km West of County Road 23
517	Massey Road	1.0km West of County Road 23	County Road 23
520	West Road	Massey Road	Fenton Road
525	Fenton Road	West Road	North End
530	Edwardson Road	County Road 23	0.4km South of Cranberry Lake Road
532	Edwardson Road	0.4km South of Cranberry Lake Road	Cranberry Lake Road
535	Cranberry Lake Road	County Road 23	0.3km East of Edwardson Road
537	Cranberry Lake Road	0.9km West of County Road 23	Fenton Road
540	Academy Hill Road	County Road 23	Massey Road
543	Clouston Road	Boomerang Road	Grills Road
544	Helen's Lane	Clouston Road	South End
545	Clouston Road	Massey Road	Boomerang Road
547	South Burns Road	Grills Road	Diemo Road
548	South Burns Road	Diemo Road	County Road 22

Section No.	Name	From	To
550	Boomerang Road	Clouston Road	County Road 23
555	Collin Road	Boomerang Road	North End
560	Diemo Road	0.35km East of Newton Rd.	South Burns Road
562	Diemo Road	Newton Road	0.35km East of Newton Rd.
565	Newton Road	Baptist Road	County Road 22
570	Baptist Road	Stewart Road	Newton Road
575	Telephone Road	County Road 23	Loughlin Road
577	Telephone Road	0.3km West of Shelter Valley Road	Loguhlin Road
580	Loughlin Road	Telephone Road	0.4km North of Telephone Road
581	Loughlin Road	0.4km North of Telephone Road	North End
585	Boyle Road	County Road 23	0.8km West of King Road
590	Boyle Road	0.8km West of King Road	King Road
595	King Road	Pipeline Road	Shelter Valley Road
600	Pipeline Road	County Road 23	King Road
602	Pipeline Road	King Road	Broomfield Road
605	Locke Road	Pipeline Road	Joice Road
610	Seasonal	Pipeline Road	Joice Road
615	Eddystone Road	Pete's Road	Broomfield Road
617	Eddystone Road	Joice Road	Pete's Road
619	Eddystone Road	County Road 23	Joice Road
620	Joice Road	Eddystone Road	Locke Road
625	Joice Road	Locke Road	East End
630	Abbey Lane	Broomfield Road	West End
635	Bradley Hollow Road	Eddystone Road	1.3km South of County Road 22
640	Bradley Hollow Road	1.3km South of County Road 22	County Road 22
645	Pete's Road	County Road 23	0.2km East of County Road 23
647	Pete's Road	0.2km East of County Road 23	0.2km North of Eddystone Road
648	Pete's Road	0.2km North of Eddystone Road	Eddystone Road
650	Thompson Road	County Road 23	West End
655	Casteels Road	Eddystone Road	County Road 22
660	Broomfield Road	Eddystone Road	County Road 22
662	Broomfield Road	Joice Road	Eddystone Road
664	Broomfield Road	Pipeline Road	Joice Road

Section No.	Name	From	To
665	Broomfield Road	Shelter Valley Road	Pipeline Road
667	Drumlin Lane	Broomfield Road	West End
670	Boeve Lane	Broomfield Road	0.7km East of Broomfield Road
672	Boeve Lane	0.7km East of Broomfield Road	Dixon Drive
675	Shelter Valley Road	Boyle Road	0.05km West of Broomfield Road
678	Shelter Valley Road	Telephone Road	Boyle Road
680	Cooney Lane	Shelter Valley Road	0.8km South of Shelter Valley Road
685	Telephone Road	Shelter Valley Road	0.3km West of Shelter Valley Road
690	Telephone Road	Shelter Valley Road	0.5km East of Shelter Valley Road
692	Telephone Road	0.5km East of Shelter Valley Road	Vernonville Road
695	Vernonville Road	Dudley Road	Telephone Road S.
697	Vernonville Road	Telephone Road S.	Deviney Lane
698	Vernonville Road	Deviney Lane	Shelter Valley Road
700	Rutherford Road	Vernonville Road	1.2km East of Vernonville Road
702	Rutherford Road	1.2km East of Vernonville Road	1.5km East of Vernonville Road
705	Telephone Road	Vernonville Road	Hofer Road
707	Telephone Road	Hofer Road	Boyce Road
710	Highland View Drive	Telephone Road	North End
715	Hofer Road	Telephone Road	North End
720	Boyce Road	0.9km South of Telephone Road	Telephone Road
722	Boyce Road	Dudley Road	0.9km South of Telephone Road
723	Telephone Road	Boyce Road	0.25km West of McGregor Lane
725	Telephone Road	0.25km West of McGregor Lane	Cramahe Township Boundary
730	McGregor Lane	Telephone Road	South End
735	Deviney Lane	Vernonville Road	East End
740	Turk Road	Vernonville Road	Mercer Lane
742	Mercer Lane	West End	Turk Road
743	Turk Road	Mercer Lane	Neil McGregor Road
745	Shelter Valley Road	0.15km West of Vernonville Road	0.05km East of Vernonville Road
747	Shelter Valley Road	0.05km West of Broomfield Road	0.15km West of Vernonville Road
750	Shelter Valley Road	0.05km East of Vernonville Road	Dixon Drive
751	Ward Lane	Shelter Valley Road	North End
752	Shelter Valley Road	Dixon Drive	Inglis Road

Section No.	Name	From	To
754	Shelter Valley Road	Inglis Road	Neil McGregor Road
755	North Street	Albert Street	Shelter Valley Road
757	North Street	Shelter Valley Road	Victoria Street
760	Albert Street	North Street	Vernonville Road
765	Victoria Street	North Street	St. George Street
770	St. George Street	Shelter Valley Road	Victoria Street
775	Dixon Drive	Shelter Valley Road	1.2km North of Shelter Valley Road
776	Gleason Corner Road	Dixon Road	County Road 22
777	Seasonal	Broomfield Road	Dixon Drive
778	Dixon Drive	Shelter Valley Road	Seasonal
780	Inglis Road	Shelter Valley Road	0.6km North of Shelter Valley Road
785	Inglis Road	0.6km North of Shelter Valley Road	0.2km South of Old Mill Road
790	Inglis Road	0.2km South of Old Mill Road	Cramahe Township Boundary
795	Old Mill Road	Inglis Road	West End
800	Neil McGregor Road	Shelter Valley Road	0.9km South of Shelter Valley Road
805	Fisher Road	County Road 22	South End
810	Day Road	County Road 22	South End
812	Day Road	County Road 22	North End
815	Landon Road	Inglis Road	0.7km North of Inglis Road
817	Landon Rd	0.7km North of Inglis Road	0.5km South of County Road 22
819	Landon Rd	0.5km South of County Road 22	County Road 22
820	Park Road	County Road 22	0.6km South of County Road 22
825	Pioneer Road	County Road 45	North End
830	Earl Road	County Road 45	0.3km East of Kraumanis Road
832	Earl Road	0.3km East of Kraumanis Road	Kraumanis Road
835	Brooks Lane	County Road 45	North End
840	Kraumanis Road	Hickerson Road	0.4km West of Hickerson Road
845	Hickerson Road	Kraumanis Road	0.7km South of Bowmanton Road
847	Hickerson Road	0.7km South of Bowmanton Road	Bowmanton Road
850	Bowmanton Road	Hickerson Road	1.3km South of Beaver Meadow Road
852	Bowmanton Road	1.3km South of Beaver Meadow Road	Beaver Meadow Road
854	Bowmanton Road	Beaver Meadow Road	Bates Road
855	Bowmanton Road	Bates Road	Beagle Club Road

Section No.	Name	From	To
857	Bowmanton Road	Beagle Club Road	County Road 9
860	Beaver Meadow Road	Bowmanton Road	Hamilton Township Boundary
865	Beaver Meadow Road	0.9km West of Bowmanton Road	1.1km West of Bowmanton Road
870	Bates Road	County Road 9	0.5km South of County Road 9
872	Bates Road	Bowmanton Road	0.5km North of Bowmanton Road
875	Isaac Road	County Road 9	Bowmanton Road
880	Dunbar Road	Bowmanton Road	County Road 45
885	Beagle Club Road	County Road 9	Bowmanton Road
887	Beagle Club Road	Bowmanton Road	Dunbar Road
889	Beagle Club Road	Dunbar Road	County Road 45
890	Morris Road	County Road 45	0.1km West of County Road 45
895	Bull's Mill Road	County Road 45 (South)	County Road 45 (North)
900	Rolph Road	Bull's Mill Road	0.2km West of Bull's Mill Road
905	Elder Road	County Road 45	1.0km North of County Road 45
910	Woodland Road	County Road 45	North End
915	Simpson Hill Road	County Road 9	County Road 45
920	Dunbar Road	County Road 45	McDonald Road
925	Nichol Road	County Road 22	0.7km North of County Road 22
930	North Burns Road	County Road 22	North End
935	McBride Road	County Road 22	North End
940	McDonald Road	County Road 22	0.5km North of County Road 22
941	McDonald Road	0.5km North of County Road 22	Silver Maple Road
942	McDonald Road	Silver Maple Road	Dunbar Road
943	McDonald Road	Dunbar Road	Caradoc Road
944	McDonald Road	Caradoc Road	County Road 29
945	Tranquility Lane	McDonald Road	North End
950	Victor Road	McDonald Road	Jewell Road
955	Davis Road	County Road 45	County Road 29
960	Jewell Road	County Road 29	0.8km South of County Road 29
962	Jewell Road	0.8km South of County Road 29	Victor Road
964	Jewell Road	Victor Road	McDonald Road
965	Silver Maple Road	McDonald Road	Tucker Road
970	Silver Maple Road	Tucker Road	Dunbar Road

Section No.	Name	From	To
975	Tucker Road	Silver Maple Road	0.6km South of Dunbar Road
980	Tucker Road	0.6km South of Dunbar Road	Dunbar Road
985	Dunbar Road	McDonald Road	Tucker Road
990	Caradoc Road	0.6km South of McDonald Road	McDonald Road
992	Caradoc Road	Dunbar Road	0.6km South of McDonald Road
995	Dunbar Road	Tucker Road	Pratt Road
997	Dunbar Road	Pratt Road	2.6km West of Cramahe Township Boundary
1000	Dunbar Road	Covert Hill Road	Cramahe Township Boundary
1001	Dunbar Road	0.9km West of Russ Creek Rd	Covert Hill Road
1002	Moore Road	West End	0.2km West of Riley Road
1005	Moore Road	0.2km West of Riley Road	Riley Road
1010	Riley Road	Moore Road	South End
1012	Seasonal	Gleasons Corners Road	Pratt Road
1015	Seasonal	Pratt Road	Cramahe Township Boundary
1020	Wolfram Road	County Road 22	Seasonal
1025	Forget Road	County Road 22	0.4km North of County Road 22
1026	Forget Road	0.4km North of County Road 22	0.9km North of County Road 22
1030	Gleasons Corner Road	County Road 22	0.8km North of County Road 22
1035	Carmel Road	County Road 22	Gleasons Corner Road
1040	Pratt Road	Seasonal	County Road 29
1042	Pratt Road	Dunbar Road	Dunbar Road
1045	Pinnacle Hill Road	County Road 22	0.05km North of Whitehead Road
1047	Pinnacle Hill Road	0.05km North of Whitehead Road	North End
1050	Whitehead Road	County Road 22	Pinnacle Hill Road
1055	Milgate Road	County Road 22	North End
1060	Prettie Road	County Road 22	Milgate Road
1065	Bradley Hollow Road	County Road 22	Silver Maple Road
1070	Russ Creek Road	Dunbar Road	Covert Hill Road
1075	Covert Hill Road	Dunbar Road	0.2km North of Dunbar Road
1077	Covert Hill Road	0.2km North of Dunbar Road	0.2km South of Clarkson Road
1080	Covert Hill Road	0.2km South of Clarkson Road	Clarkson Road
1085	Clarkson Road	Covert Hill Road	Cramahe Township Boundary
1090	Hogan Road	Covert Hill Road	0.4km West of Covert Hill Road

Section No.	Name	From	To
1095	Pratt Road	County Road 29	2.0km West of County Road 29
1100	Covert Hill Road	Clarkson Road	County Road 29
1105	Goose Creek Road	County Road 18	North End
1110	North Bethesda Road	County Road 9	0.3km North of County Road 9
1111	North Bethesda Road	0.3km North of County Road 9	0.3km South of County Road 18
1112	North Bethesda Road	0.3km South of County Road 18	County Road 18
1115	North Bethesda Road	County Road 18	0.2km North of County Road 18
1120	Lilac Valley Road	County Road 9	County Road 18
1125	Savory Road	Lilac Valley Road	0.5km East of Lilac Valley Road
1127	Savory Road	0.5km East of Lilac Valley Road	Cowling Road
1128	Marriot Road	County Road 9	North End
1130	Cowling Road	County Road 9	Savory Road
1132	Cowling Road	Savory Road	1st Line Road
1135	Packer Road	County Road 9	1.1km North of County Road 9
1137	Packer Road	1.1km North of County Road 9	1.0km South of 1st Line Road
1140	Packer Road	1.0km South of 1st Line Road	0.5km South of 1st Line Road
1145	Packer Road	0.5km South of 1st Line Road	1st Line Road
1150	Bowmanton Road	County Road 9	County Road 45
1152	Waldie Lane	County Road 45	West End
1155	Browns Road	County Road 45	Rae Lane
1157	Duncan Road	Waldie Lane	County Road 45
1160	Rae Lane	Browns Road	South End
1162	Browns Road	Rae Lane	0.25km East of Rae Lane
1165	Browns Road	0.25km East of Rae Lane	Montgomery Road
1170	Montgomery Road	County Road 29	1.1km North of County Road 29
1175	Montgomery Road	1.1km North of County Road 29	Browns Road
1180	Harper Road	Leach Road	West End
1185	Leach Road	County Road 29	1.0km North of County Road 29
1187	Leach Road	1.0km North of County Road 29	George Road
1190	George Road	0.25km West of Leach Road	Macklin Road
1192	George Road	Montgomery Road	0.25km West of Leach Road
1195	Macklin Road	County Road 29	Fanning Road
1197	Macklin Road	Fanning Road	2nd Line Road

Section No.	Name	From	To
1200	Fanning Road	Macklin Road	0.8km East of Macklin Road
1205	Slade Road	County Road 29	South End
1210	Whitney Road	County Road 29	East End
1215	Bright Road	County Road 29	North End
1220	Ferguson Road	County Road 29	0.9km North of County Road 29
1224	Ferguson Road	0.9km North of County Road 29	0.4km South of Burnley Road
1226	Ferguson Road	0.4km South of Burnley Road	Burnley Road
1228	Ferguson Road	Burnley Road	Noonan Road
1230	Porter Road	County Road 29	Consession Road 2 West
1235	Community Hall Road	County Road 29	Noonan Road
1240	Noonan Road	County Road 29	Taylor Road
1242	Noonan Road	Taylor Road	Trent Hills Boundary
1245	Burnley Road	Noonan Road	Ferguson Road
1250	Taylor Road	Noonan Road	West End
1255	Lockhart Road	Taylor Road	1st Line Road
1260	Masters Road	Noonan Road	1.0km North of Noonan Road
1265	Masters Road	1.0km North of Noonan Road	2nd Line Road
1270	Hall Road	1st Line Road	2nd Line Road
1272	1st Line Road	Hall Road	Lockhart Road
1275	Macklin Road	2nd Line Road	1.8km South of 2nd Line Road
1280	Lean Road	County Road 45	South End
1285	Lonsberry Road	County Road 45	South End
1288	Roseneath Landing Road	County Road 45	1st Line Road
1290	Roseneath Landing Road	1st Line Road	County Road 18
1292	Roseneath Landing Road	County Road 18	3rd Line Road
1295	Brook Road	1st Line Road	County Road 18
1300	Davidson Road	1st Line Road	North End
1302	1st Line Road	County Road 45	Roseneath Landing Road
1304	1st Line Road	Roseneath Landing Road	Packer Road
1305	1st Line Road	Packer Road	Cowling Road
1306	1st Line Road	Cowling Road	West End

Section No.	Name	From	To
1310	Curtis Point Road	County Road 18	1.9km North of County Road 18
1312	Curtis Point Road	1.9km North of County Road 18	North End
1315	3rd Line Road	Curtis Point Road	Shearer Point Road
1316	3rd Line Road	Shearer Point Road	1.3km West of Roseneath Landing Road
1317	3rd Line Road	1.3km West of Roseneath Landing Road	Roseneath Landing Road
1318	3rd Line Road	Roseneath Landing Road	Sandercock Road
1320	Shearer Point Road	County Road 18	3rd Line Road
1322	Shearer Point Road	Ingham Road	0.2km North of Ingham Road
1323	Shearer Point Road	3rd Line Road	Ingham Road
1324	Shearer Point Road	0.2km North of Ingham Road	Norh End
1325	Ingham Road	Shearer Point Road	East End
1330	Edgewater Drive	3rd Line Road	Grandview Drive
1335	Grandview Drive	3rd Line Road	Edgewater Drive
1337	Grandview Drive	Edgewater Drive	East End
1340	Lake Breeze Drive	Grandview Drive	East End
1345	Sunset Crescent	Grandview Drive (South)	Grandview Drive (North)
1350	Woodland Drive	Sunset Crescent	West End
1355	Wideview Avenue	Grandview Drive	East End
1360	Sandercock Road	County Road 18	Dunnette Landing Road
1362	Sandercock Road	Dunnette Landing Road	4th Line Road
1365	Dunnette Landing Road	Sandercock Road	1.2km West of Sandercock Road
1370	Minnetonka Road	County Road 45	County Road 18
1375	Minnetonka Road	County Road 18	3rd Line Road
1378	Minnetonka Road	3rd Line Road	4th Line Road
1380	3rd Line Road	Minnetonka Road	0.6km East of Minnetonka Road
1381	3rd Line Road	0.6km East of Minnetonka Road	0.4km West of Division Street
1382	3rd Line Road	Division Street	County Road 45
1383	3rd Line Road	0.4km West of Division Street	Division Street
1385	Division Street	County Road 45	3rd Line Road
1390	Bess Drive	Division Street	East End
1395	Division Street	County Road 45	2nd Line Road
1400	2nd Line Road	County Road 45	2nd Line Road

Section No.	Name	From	To
1402	Marsden Lane	Second Line Road	East End
1405	2nd Line Road	Glenron Road	Trent Hills Boundary
1406	2nd Line Road	Hall Road	Glenron Road
1407	2nd Line Road	0.35km South of Marsden Road	Hall Road
1408	2nd Line Road	0.15km South of Marsden Road	0.35km South of Marsden Road
1409	2nd Line Road	Marsden Road	0.15km South of Marsden Road
1410	Glenron Road	2nd Line Road	0.1km South of County Road 24
1415	Glenron Road	0.1km South of County Road 24	County Road 24
1420	Drope Road	County Road 24	0.4km South of County Road 45
1425	Drope Road	0.4km South of County Road 45	County Road 45
1430	Church Road	County Road 45 (West)	County Road 45 (East)
1432	Crosby Road	County Road 45	North End
1435	Lewis Road	County Road 24	County Road 45
1440	School House Road	County Road 45	Lewis Road
1445	Halstead Road	County Road 45	4th Line Road
1450	4th Line Road	Campbell Road	County Road 45
1452	4th Line Road	Island View Road	Campbell Road
1454	4th Line Road	Sandercock Road	Island View Road
1455	Campbell Road	4th Line Road	5th Line Road
1460	Island View Road	4th Line Road	1.0km North of 4th Line Road
1462	Island View Road	1.0km North of 4th Line Road	1.8km North of 4th Line Road
1463	Island View Road	1.8km North of 4th Line Road	West End
1465	5th Line Road	Cook Road	West End
1466	5th Line Road	Cook Road	Campbell Road
1467	5th Line Road	Campbell Road	0.5km East of Campbell Road
1468	5th Line Road	0.5km East of Campbell Road	Merrill Road
1469	5th Line Road	Merrill Road	Coyle Road
1470	Cook Road	5th Line Road	Robins Road
1472	Cook Road	Robin's Road	North End
1475	Robins Road	Cook Road	Rolling Banks Road
1480	Rolling Banks Road	Robins Road	0.4km South of Robins Road
1485	Highland Road	Merrill Road	North End
1490	Highland Road	7th Line Road	South End

Section No.	Name	From	To
1492	Langs Road	Seventh Line Road	McCracken Road
1494	Langs Road	McCracken Road	McCracken Road
1495	McCracken Road	7th Line Road	West End
1496	7th Line Road	Lang Road	0.2km West of Langs Road
1498	7th Line Road	0.2km West of Langs Road	Merrill Road
1500	7th Line Road	Merrill Road	Coyle Road
1505	Merrill Road	7th Line Road	North End
1510	Webb Road	Coyle Road	Trent Hills Boundary
1512	Webb Road	County Road 33	Coyle Road
1515	Coyle Road	County Road 45	Webb Road
1517	Coyle Road	Webb Road	7th Line Road
1520	Clark Road	Coyle Road	East End
1525	Baxter Road	County Road 45	Webb Road
1530	Baxter Road	Webb Road	1.6km North of Webb Road
1532	Baxter Road	1.6km North of Webb Road	Sandy Bay Road
1535	Sandy Bay Road	Baxter Road	West End
1537	Sandy Bay Road	Baxter Road	0.1km West of Baxter Road
1540	East Court	Sandy Bay Road	North End
1545	West Court	Sandy Bay Road	North End
1550	Baxter Road	Sandy Bay Road	North End
1555	Dibikad Boulevard	1st Line Road	North End
1560	Waaseyaaban Drive	Dibikad Boulevard	East End
1565	Megyaak Drive	Dibikad Boulevard	East End
1570	Waabooz Road	Megyaak Drive	South End
2000	County Road 2	County Road 23	Clitheroe Road
2005	County Road 2	County Road 23	Aird Street
2010	County Road 2	Aird Street	Brimley Road North
23000	County Road 23	County Road 2	Aird Street
24000	County Road 24	County Road 45	Lewis Road
45000	County Road 45	Division Street	County Road 24
45005	County Road 45	County Road 24	Schoolhouse Road

APPENDIX B
'NOW' NEEDS (RECONSTRUCTION)



NOW Reconstruction Needs - All Roads

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
125	Brimley Road South	County Road 2	0.9km South of County Road 2	0.900	HCB	REC	NOW	\$519,931.72
130	Johnston Court	Brimley Road South	South End	0.500	HCB	REC	NOW	\$288,850.95
398	Bull Road	County Road 45	Tackaberry Road	1.100	LCB	REC	NOW	\$540,667.45
930	North Burns Road	County Road 22	North End	1.000	LCB	REC	NOW	\$491,515.87
1525	Baxter Road	County Road 45	Webb Road	2.400	G/S	REC	NOW	\$1,179,638.08
1530	Baxter Road	Webb Road	1.6km North of Webb Road	1.600	G/S	REC	NOW	\$786,425.39
1540	East Court	Sandy Bay Road	North End	0.150	G/S	REC	NOW	\$86,655.29
				<hr/> 7.650				<hr/> \$3,893,684.74

APPENDIX C
'NOW' NEEDS (RESURFACING)



NOW Resurfacing Needs - All Roads

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
45	Fox Run Road	Lakeshore Road	Killdeer Crescent	0.400	HCB	R1	NOW	\$54,871.91
50	Killdeer Cres	Lakeshore Road (West)	Lakeshore Road (East)	0.600	HCB	R1	NOW	\$82,307.87
65	Nawantin Dr	Lakeshore Road	South End	1.100	HCB	R1	NOW	\$150,897.76
70	Shawano Dr	West End	East End	0.700	HCB	R1	NOW	\$96,025.85
150	Bowman Court South	St. Andrews Drive	South End	0.200	HCB	R1	NOW	\$27,435.96
155	Bowman Court North	St. Andrews Drive	North End	0.100	HCB	R1	NOW	\$13,717.98
297	Mill Street	Ontario Street	Front Street	0.200	LCB	R1	NOW	\$13,962.61
530	Edwardson Road	County Road 23	0.4km South of Cranberry Lake Road	1.400	HCB	R2	NOW	\$148,967.56
1330	Edgewater Drive	3rd Line Road	Grandview Drive	1.400	HCB	R1	NOW	\$192,051.70
1462	Island View Road	1.0km North of 4th Line Road	1.8km North of 4th Line Road	0.700	LCB	R1	NOW	\$31,695.54
1494	Langs Road	McCracken Road	McCracken Road	0.150	LCB	R1	NOW	\$20,576.97
1495	McCracken Road	7th Line Road	West End	0.200	LCB	R1	NOW	\$27,435.96
				7.150				\$859,947.67

APPENDIX D
'RECOMMENDED' NEEDS (RESURFACING)



Recommended Resurfacing Needs All Roads

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
80	Station Road	Old Danforth Road	0.6km South of Old Danforth Road	0.600	LCB	R1	Recommended	\$41,887.83
81	Station Road	0.6km South of Old Danforth Road	Lakeshore Road	1.100	LCB	R2	Recommended	\$117,045.94
82	Station Road	Lakeshore Road	Chub Point Road	1.300	LCB	R1	Recommended	\$58,863.14
98	Gully Road	Highway 401	Massey Road	0.150	LCB	R1	Recommended	\$6,791.90
175	Charolette Street	Aird Street	Lyle Street North	0.150	LCB	R1	Recommended	\$10,471.96
212	North Shore Road	Station Road	West End	0.400	LCB	R1	Recommended	\$27,925.22
220	Ruttan Road	Chub Point Road	East End	0.400	LCB	R1	Recommended	\$27,925.22
225	Clithroe Road	County Road 2	North End	0.900	LCB	R1	Recommended	\$62,831.75
270	Wicklow Beach Road	County Road 2	Lakeport Road	2.500	LCB	R2	Recommended	\$266,013.50
285	Thomas Road	County Road 2	Lakeport Road	3.200	LCB	R2	Recommended	\$340,497.28
290	Ontario Street	County Road 31	Front Street	0.700	LCB	R1	Recommended	\$48,869.14
300	Cedar Street	Ontario Street	Front Street	0.200	LCB	R1	Recommended	\$13,962.61
315	Town Line Road	County Road 31	County Road 2	2.400	LCB	R2	Recommended	\$255,372.96
335	Vernonville Road	County Road 2	Dudley Road	0.900	LCB	R2	Recommended	\$95,764.86
355	Dudley Road	Vernonville Road	Herron Road	1.600	LCB	R2	Recommended	\$170,248.64

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
357	Dudley Road	Herron Road	Cramahe Township Boundary	2.600	LCB	R2	Recommended	\$276,654.04
370	Northumberland Heights Road	2.2km West of Danforth Road	2.8km West of Danforth Road	0.600	LCB	R1	Recommended	\$27,167.60
433	Stewart Road	Baptist Road	County Road 22	1.900	LCB	R1	Recommended	\$86,030.74
516	Massey Road	Clouston Road	1.0km West of County Road 23	0.700	LCB	R2	Recommended	\$74,483.78
543	Clouston Road	Boomerang Road	Grills Road	1.200	LCB	R1	Recommended	\$54,335.20
547	South Burns Road	Grills Road	Diemo Road	2.200	LCB	R1	Recommended	\$99,614.54
600	Pipeline Road	County Road 23	King Road	0.900	LCB	R1	Recommended	\$40,751.40
602	Pipeline Road	King Road	Broomfield Road	2.000	LCB	R1	Recommended	\$90,558.67
615	Eddystone Road	Pete's Road	Broomfield Road	1.800	LCB	R1	Recommended	\$81,502.81
617	Eddystone Road	Joice Road	Pete's Road	1.700	LCB	R1	Recommended	\$76,974.87
619	Eddystone Road	County Road 23	Joice Road	1.000	LCB	R1	Recommended	\$45,279.34
660	Broomfield Road	Eddystone Road	County Road 22	1.000	LCB	R1	Recommended	\$45,279.34
664	Broomfield Road	Pipeline Road	Joice Road	1.250	LCB	R1	Recommended	\$56,599.17
665	Broomfield Road	Shelter Valley Road	Pipeline Road	1.000	LCB	R1	Recommended	\$45,279.34
675	Shelter Valley Road	Boyle Road	0.05km West of Broomfield Road	1.000	LCB	R1	Recommended	\$45,279.34
678	Shelter Valley Road	Telephone Road	Boyle Road	2.400	LCB	R1	Recommended	\$108,670.41
720	Boyce Road	0.9km South of Telephone Road	Telephone Road	0.800	LCB	R1	Recommended	\$36,223.47

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
740	Turk Road	Vernonville Road	Mercer Lane	3.100	LCB	R2	Recommended	\$338,535.87
745	Shelter Valley Road	0.15km West of Vernonville Road	0.05km East of Vernonville Road	0.200	LCB	R1	Recommended	\$29,524.60
747	Shelter Valley Road	0.05km West of Broomfield Road	0.15km West of Vernonville Road	0.300	LCB	R1	Recommended	\$44,286.91
750	Shelter Valley Road	0.05km East of Vernonville Road	Dixon Drive	1.900	LCB	R2	Recommended	\$202,170.26
752	Shelter Valley Road	Dixon Drive	Inglis Road	2.000	LCB	R2	Recommended	\$212,810.80
754	Shelter Valley Road	Inglis Road	Neil McGregor Road	1.200	LCB	R2	Recommended	\$127,686.48
855	Bowmanton Road	Bates Road	Beagle Club Road	2.000	LCB	R1	Recommended	\$90,558.67
885	Beagle Club Road	County Road 9	Bowmanton Road	0.700	LCB	R2	Recommended	\$74,483.78
940	McDonald Road	County Road 22	0.5km North of County Road 22	0.500	LCB	R1	Recommended	\$34,906.53
941	McDonald Road	0.5km North of County Road 22	Silver Maple Road	0.500	LCB	R1	Recommended	\$22,639.67
943	McDonald Road	Dunbar Road	Caradoc Road	1.300	LCB	R1	Recommended	\$58,863.14
944	McDonald Road	Caradoc Road	County Road 29	2.400	LCB	R1	Recommended	\$108,670.41
965	Silver Maple Road	McDonald Road	Tucker Road	1.800	LCB	R1	Recommended	\$81,502.81
1045	Pinnacle Hill Road	County Road 22	0.05km North of Whitehead Road	0.200	LCB	R1	Recommended	\$9,055.87
1130	Cowling Road	County Road 9	Savory Road	2.300	LCB	R1	Recommended	\$104,142.48

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
1150	Bowmanton Road	County Road 9	County Road 45	2.700	LCB	R2	Recommended	\$398,582.15
1152	Waldie Lane	County Road 45	West End	0.100	LCB	R1	Recommended	\$6,981.31
1195	Macklin Road	County Road 29	Fanning Road	1.900	LCB	R1	Recommended	\$86,030.74
1197	Macklin Road	Fanning Road	2nd Line Road	1.000	LCB	R1	Recommended	\$45,279.34
1255	Lockhart Road	Taylor Road	1st Line Road	1.100	LCB	R1	Recommended	\$49,807.27
1270	Hall Road	1st Line Road	2nd Line Road	0.900	LCB	R1	Recommended	\$40,751.40
1272	1st Line Road	Hall Road	Lockhart Road	1.000	LCB	R1	Recommended	\$45,279.34
1275	Macklin Road	2nd Line Road	1.8km South of 2nd Line Road	1.800	LCB	R1	Recommended	\$81,502.81
1305	1st Line Road	Packer Road	Cowling Road	1.400	LCB	R1	Recommended	\$63,391.07
1320	Shearer Point Road	County Road 18	3rd Line Road	1.000	LCB	R1	Recommended	\$45,279.34
1322	Shearer Point Road	Ingham Road	0.2km North of Ingham Road	0.200	LCB	R1	Recommended	\$27,435.96
1370	Minnetonka Road	County Road 45	County Road 18	1.300	LCB	R1	Recommended	\$58,863.14
1375	Minnetonka Road	County Road 18	3rd Line Road	1.000	LCB	R1	Recommended	\$45,279.34
1390	Bess Drive	Division Street	East End	0.100	LCB	R1	Recommended	\$6,981.31
1395	Division Street	County Road 45	2nd Line Road	0.600	LCB	R1	Recommended	\$27,167.60
1405	2nd Line Road	Glenron Road	Trent Hills Boundary	1.800	LCB	R1	Recommended	\$81,502.81
1406	2nd Line Road	Hall Road	Glenron Road	1.800	LCB	R1	Recommended	\$81,502.81
1407	2nd Line Road	0.35km South of Marsden Road	Hall Road	1.600	LCB	R1	Recommended	\$72,446.94

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
1466	5th Line Road	Cook Road	Campbell Road	0.100	LCB	R1	Recommended	\$4,527.93
1532	Baxter Road	1.6km North of Webb Road	Sandy Bay Road	0.600	LCB	R1	Recommended	\$27,167.60
1537	Sandy Bay Road	Baxter Road	0.1km West of Baxter Road	0.100	LCB	R1	Recommended	\$4,527.93
				83.050				\$5,675,282.41

APPENDIX E
'(1-5)' YEAR NEEDS (RECONSTRUCTION)



(1-5) Year Reconstruction Needs - All Roads

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
20	Brookside Road	County Road 2	Danforth Road	2.000	LCB	REC	(1-5)	\$983,031.73
120	Brimley Road North	County Road 2	North End	1.100	LCB	REC	(1-5)	\$540,667.45
172	Aird Street	County Road 2	0.4km North of County Road 2	0.400	LCB	REC	(1-5)	\$231,080.76
387	Community Centre Road	O'Grady Road	Stephen Road	1.300	LCB	REC	(1-5)	\$903,320.23
490	Grills Road	The Scots Line	South Burns Road	1.500	LCB	REC	(1-5)	\$1,042,292.57
577	Telephone Road	0.3km West of Shelter Valley Road	Loguhlin Road	0.850	G/S	REC	(1-5)	\$417,788.49
705	Telephone Road	Vernonville Road	Hofer Road	1.800	LCB	REC	(1-5)	\$1,250,751.09
1240	Noonan Road	County Road 29	Taylor Road	1.600	LCB	REC	(1-5)	\$1,111,778.74
1292	Roseneath Landing Road	County Road 18	3rd Line Road	0.900	LCB	REC	(1-5)	\$442,364.28
1382	3rd Line Road	Division Street	County Road 45	0.300	LCB	REC	(1-5)	\$147,454.76
1385	Division Street	County Road 45	3rd Line Road	0.400	LCB	REC	(1-5)	\$196,606.35
1510	Webb Road	Coyle Road	Trent Hills Boundary	1.900	LCB	REC	(1-5)	\$1,320,237.26
				14.050				\$8,587,373.71

APPENDIX F
'(1-5)' YEAR NEEDS (RESURFACING)



(1-5) Year Resurfacing Needs - All Roads

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
160	Old Danforth Road	County Road 2	Station Road	0.300	HCB	R1	(1-5)	\$41,153.94
165	Lyle Street South	County Road 2	Old Danforth Road	0.200	HCB	R1	(1-5)	\$27,435.96
545	Clouston Road	Massey Road	Boomerang Road	1.800	LCB	R1	(1-5)	\$81,502.81
				<hr/> 2.300				<hr/> \$150,092.70

APPENDIX G
'(6-10)' YEAR NEEDS (RECONSTRUCTION)



(6-10) Year Reconstruction Needs - All Roads

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
170	Aird Street	0.4km North of County Road 2	Lyle Street North	0.300	LCB	REC	(6-10)	\$173,310.57
345	Herron Road	County Road 2	Dudley Road	0.800	LCB	REC	(6-10)	\$555,889.37
365	Northumberland Heights Road	Danforth Road	2.2km West of Danforth Road	2.200	LCB	REC	(6-10)	\$1,528,695.77
375	Northumberland Heights Road	2.8km West of Danforth Road	1.9km South of Community Centre Road	0.900	LCB	REC	(6-10)	\$442,364.28
389	Community Centre Road	Stephen Road	Stewart Road	1.900	LCB	REC	(6-10)	\$1,320,237.26
485	The Scots Line	Speechley Road	Grills Road	0.850	LCB	REC	(6-10)	\$590,632.46
695	Vernonville Road	Dudley Road	Telephone Road S.	1.500	LCB	REC	(6-10)	\$1,042,292.57
697	Vernonville Road	Telephone Road S.	Deviney Lane	1.500	LCB	REC	(6-10)	\$1,042,292.57
722	Boyce Road	Dudley Road	0.9km South of Telephone Road	1.200	LCB	REC	(6-10)	\$589,819.04
723	Telephone Road	Boyce Road	0.25km West of McGregor Lane	1.000	LCB	REC	(6-10)	\$694,861.71
905	Elder Road	County Road 45	1.0km North of County Road 45	1.000	LCB	REC	(6-10)	\$908,845.39
942	McDonald Road	Silver Maple Road	Dunbar Road	2.000	LCB	REC	(6-10)	\$1,389,723.43
975	Tucker Road	Silver Maple Road	0.6km South of Dunbar Road	1.100	LCB	REC	(6-10)	\$635,472.10

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
1120	Lilac Valley Road	County Road 9	County Road 18	2.400	LCB	REC	(6-10)	\$1,179,638.08
1310	Curtis Point Road	County Road 18	1.9km North of County Road 18	1.900	LCB	REC	(6-10)	\$1,726,806.24
1312	Curtis Point Road	1.9km North of County Road 18	North End	0.300	LCB	REC	(6-10)	\$272,653.62
1345	Sunset Crescent	Grandview Drive (South)	Grandview Drive (North)	0.700	LCB	REC	(6-10)	\$404,391.33
1350	Woodland Drive	Sunset Crescent	West End	0.200	LCB	REC	(6-10)	\$115,540.38
1400	2nd Line Road	County Road 45	2nd Line Road	0.900	LCB	REC	(6-10)	\$442,364.28
1445	Halstead Road	County Road 45	4th Line Road	1.200	LCB	REC	(6-10)	\$54,335.20
1455	Campbell Road	4th Line Road	5th Line Road	1.500	LCB	REC	(6-10)	\$737,273.80
1475	Robins Road	Cook Road	Rolling Banks Road	1.000	LCB	REC	(6-10)	\$491,515.87
				26.350				\$16,338,955.32

APPENDIX H
'(6-10)' YEAR NEEDS (RESURFACING)



(6-10) Year Resurfacing Needs All Roads

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>Surf</i>	<i>Type of Improvement</i>	<i>Time of Improvement</i>	<i>Total Cost</i>
1360	Sandercock Road	County Road 18	Dunnette Landing Road	1.600	LCB	R1	(6-10)	\$72,446.94
1470	Cook Road	5th Line Road	Robins Road	0.500	LCB	R1	(6-10)	\$22,639.67
				<u>2.100</u>				<u>\$95,086.61</u>

APPENDIX I
SUMMARY OF ROAD CONDITIONS



Township of Alnwick Haldimand Current (2016) Road Conditions

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
1st Line Road	Hall Road	Lockhart Road	Adeq	Adeq	Adeq	Adeq	(6-10)
1st Line Road	County Road 45	Roseneath Landing Road	Adeq	Adeq	Adeq	Adeq	(6-10)
1st Line Road	Roseneath Landing Road	Packer Road	Adeq	Adeq	Adeq	Adeq	(6-10)
1st Line Road	Packer Road	Cowling Road	Adeq	Adeq	Adeq	Adeq	(6-10)
1st Line Road	Cowling Road	West End	Adeq	Adeq	NOW	Adeq	(6-10)
2nd Line Road	0.15km South of Marsden Road	0.35km South of Marsden Road	Adeq	Adeq	Adeq	Adeq	(6-10)
2nd Line Road	0.35km South of Marsden Road	Hall Road	Adeq	Adeq	Adeq	Adeq	(6-10)
2nd Line Road	Hall Road	Glenron Road	Adeq	Adeq	Adeq	Adeq	(6-10)
2nd Line Road	Glenron Road	Trent Hills Boundary	Adeq	Adeq	Adeq	Adeq	(6-10)
2nd Line Road	Marsden Road	0.15km South of Marsden Road	NOW	Adeq	Adeq	Adeq	(6-10)
2nd Line Road	County Road 45	2nd Line Road	Adeq	Adeq	Adeq	(6-10)	(6-10)
3rd Line Road	1.3km West of Roseneath Landing Road	Roseneath Landing Road	Adeq	Adeq	Adeq	Adeq	(6-10)
3rd Line Road	0.4km West of Division Street	Division Street	Adeq	Adeq	Adeq	Adeq	(6-10)
3rd Line Road	Roseneath Landing Road	Sandercock Road	Adeq	Adeq	Adeq	Adeq	(6-10)
3rd Line Road	Division Street	County Road 45	Adeq	Adeq	Adeq	Adeq	(1-5)
3rd Line Road	Shearer Point Road	1.3km West of Roseneath Landing Road	Adeq	Adeq	Adeq	Adeq	(6-10)
3rd Line Road	Curtis Point Road	Shearer Point Road	Adeq	Adeq	Adeq	Adeq	(1-5)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
3rd Line Road	0.6km East of Minnetonka Road	0.4km West of Division Street	Adeq	Adeq	Adeq	Adeq	(1-5)
3rd Line Road	Minnetonka Road	0.6km East of Minnetonka Road	Adeq	Adeq	Adeq	Adeq	(6-10)
4th Line Road	Campbell Road	County Road 45	Adeq	Adeq	Adeq	Adeq	(6-10)
4th Line Road	Island View Road	Campbell Road	Adeq	NOW	Adeq	Adeq	(6-10)
4th Line Road	Sandercock Road	Island View Road	Adeq	NOW	Adeq	Adeq	(6-10)
5th Line Road	0.5km East of Campbell Road	Merrill Road	Adeq	Adeq	Adeq	Adeq	(6-10)
5th Line Road	Cook Road	West End	Adeq	Adeq	NOW	Adeq	(6-10)
5th Line Road	Campbell Road	0.5km East of Campbell Road	Adeq	Adeq	Adeq	Adeq	(6-10)
5th Line Road	Merrill Road	Coyle Road	Adeq	Adeq	Adeq	Adeq	(6-10)
5th Line Road	Cook Road	Campbell Road	Adeq	Adeq	Adeq	Adeq	(6-10)
7th Line Road	0.2km West of Langs Road	Merrill Road	Adeq	Adeq	Adeq	Adeq	(6-10)
7th Line Road	Lang Road	0.2km West of Langs Road	Adeq	Adeq	Adeq	Adeq	(6-10)
7th Line Road	Merrill Road	Coyle Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Abbey Lane	Broomfield Road	West End	Adeq	Adeq	NOW	Adeq	(6-10)
Academy Hill Road	County Road 23	Massey Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Aird Street	0.4km North of County Road 2	Lyle Street North	Adeq	Adeq	Adeq	Adeq	(6-10)
Aird Street	County Road 2	0.4km North of County Road 2	Adeq	Adeq	Adeq	Adeq	(1-5)
Albert Street	North Street	Vernonville Road	Adeq	Adeq	NOW	Adeq	(1-5)
Archer Road	County Road 2	0.8km North of Lakeshore Road	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Archer Road	0.8km North of Lakeshore Road	Lakeshore Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Baptist Road	0.5km West of Stewart Road	Stewart Road	Adeq	Adeq	NOW	Adeq	(1-5)
Baptist Road	Stewart Road	Newton Road	Adeq	Adeq	NOW	Adeq	(1-5)
Baptist Road	Bull Road	0.5km West of Stewart Road	Adeq	Adeq	NOW	Adeq	(1-5)
Barnum House Road	County Road 2	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Barnum House Road	County Road 2	South End	Adeq	Adeq	Adeq	Adeq	(6-10)
Bates Road	County Road 9	0.5km South of County Road 9	Adeq	Adeq	NOW	Adeq	(6-10)
Bates Road	Bowmanton Road	0.5km North of Bowmanton Road	Adeq	Adeq	Adeq	(6-10)	(6-10)
Baxter Road	Webb Road	1.6km North of Webb Road	Adeq	Adeq	Adeq	NOW	NOW
Baxter Road	County Road 45	Webb Road	Adeq	Adeq	Adeq	NOW	(6-10)
Baxter Road	Sandy Bay Road	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Baxter Road	1.6km North of Webb Road	Sandy Bay Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Beagle Club Road	Dunbar Road	County Road 45	Adeq	Adeq	Adeq	Adeq	(6-10)
Beagle Club Road	Bowmanton Road	Dunbar Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Beagle Club Road	County Road 9	Bowmanton Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Beauchamp Road	Benlock Road	South End	Adeq	Adeq	Adeq	Adeq	(1-5)
Beaver Meadow Road	0.9km West of Bowmanton Road	1.1km West of Bowmanton Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Beaver Meadow Road	Bowmanton Road	Hamilton Township Boundary	Adeq	Adeq	Adeq	Adeq	(6-10)
Benlock Road	County Road 2	Calnan Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Bess Drive	Division Street	East End	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Bevan Ridge Road	The Scots Line	East End	Adeq	Adeq	Adeq	Adeq	(1-5)
Black Walnut Trail	Shelter Valley Road	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Boeve Lane	0.7km East of Broomfield Road	Dixon Drive	Adeq	Adeq	NOW	Adeq	(1-5)
Boeve Lane	Broomfield Road	0.7km East of Broomfield Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Boomerang Road	Clouston Road	County Road 23	Adeq	Adeq	Adeq	Adeq	(6-10)
Bowman Court North	St. Andrews Drive	North End	Adeq	Adeq	Adeq	NOW	(1-5)
Bowman Court South	St. Andrews Drive	South End	Adeq	Adeq	Adeq	NOW	(6-10)
Bowmanton Road	Hickerson Road	1.3km South of Beaver Meadow Road	Adeq	Adeq	NOW	Adeq	(1-5)
Bowmanton Road	Bates Road	Beagle Club Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Bowmanton Road	County Road 9	County Road 45	Adeq	Adeq	Adeq	Adeq	(6-10)
Bowmanton Road	Beaver Meadow Road	Bates Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Bowmanton Road	1.3km South of Beaver Meadow Road	Beaver Meadow Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Bowmanton Road	Beagle Club Road	County Road 9	Adeq	Adeq	Adeq	Adeq	(1-5)
Boyce Road	Dudley Road	0.9km South of Telephone Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Boyce Road	0.9km South of Telephone Road	Telephone Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Boyle Road	County Road 23	0.8km West of King Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Boyle Road	0.8km West of King Road	King Road	Adeq	Adeq	NOW	Adeq	(1-5)
Bradley Hollow Road	County Road 22	Silver Maple Road	Adeq	NOW	NOW	NOW	(6-10)
Bradley Hollow Road	1.3km South of County Road 22	County Road 22	Adeq	Adeq	NOW	Adeq	(1-5)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Bradley Hollow Road	Eddystone Road	1.3km South of County Road 22	Adeq	Adeq	NOW	Adeq	(6-10)
Bright Road	County Road 29	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Brimley Road North	County Road 2	North End	Adeq	Adeq	Adeq	(1-5)	(6-10)
Brimley Road South	County Road 2	0.9km South of County Road 2	Adeq	Adeq	Adeq	NOW	(6-10)
Brimley Road South	0.9km South of County Road 2	1.3km South of County Road 2	Adeq	Adeq	Adeq	Adeq	(6-10)
Brimley Road South	1.3km South of County Road 2	Station Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Brook Road	1st Line Road	County Road 18	Adeq	Adeq	NOW	Adeq	(6-10)
Brooks Lane	County Road 45	North End	Adeq	Adeq	NOW	Adeq	(6-10)
Brookside Road	County Road 2	Danforth Road	Adeq	Adeq	Adeq	(6-10)	(1-5)
Brookside Road	County Road 2	South End	Adeq	Adeq	Adeq	Adeq	(6-10)
Broomfield Road	Shelter Valley Road	Pipeline Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Broomfield Road	Pipeline Road	Joice Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Broomfield Road	Eddystone Road	County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
Broomfield Road	Joice Road	Eddystone Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Browns Road	Rae Lane	0.25km East of Rae Lane	Adeq	Adeq	Adeq	Adeq	(1-5)
Browns Road	County Road 45	Rae Lane	Adeq	Adeq	Adeq	Adeq	(6-10)
Browns Road	0.25km East of Rae Lane	Montgomery Road	Adeq	Adeq	NOW	Adeq	(1-5)
Bull Road	0.7km East of Tackaberry Road	Stephen Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Bull Road	Tackaberry Road	0.7km East of Tackaberry Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Bull Road	County Road 45	Tackaberry Road	Adeq	Adeq	NOW	(1-5)	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Bull's Mill Road	County Road 45 (South)	County Road 45 (North)	Adeq	Adeq	Adeq	Adeq	(6-10)
Burnley Road	Noonan Road	Ferguson Road	Adeq	Adeq	NOW	Adeq	(6-10)
Calnan Road	County Road 2	South End	Adeq	Adeq	Adeq	Adeq	(1-5)
Campbell Road	4th Line Road	5th Line Road	Adeq	Adeq	Adeq	(6-10)	(6-10)
Canning Factory Road	Station Road	Purdy Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Caradoc Road	Dunbar Road	0.6km South of McDonald Road	Adeq	Adeq	NOW	Adeq	(1-5)
Caradoc Road	0.6km South of McDonald Road	McDonald Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Carmel Road	County Road 22	Gleasons Corner Road	Adeq	Adeq	Adeq	(6-10)	(6-10)
Carruthers Road	County Road 2	1.3km North of County Road 2	Adeq	Adeq	NOW	Adeq	(6-10)
Casteels Road	Eddystone Road	County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
Cedar Street	Ontario Street	Front Street	Adeq	Adeq	Adeq	Adeq	(6-10)
Chapple Road	Orchard Grove Road	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Charolette Street	Aird Street	Lyle Street North	Adeq	Adeq	Adeq	Adeq	(1-5)
Cherry Hill Road	County Road 2	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Chub Point Road	Station Road	Ruttan Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Church Road	County Road 45 (West)	County Road 45 (East)	Adeq	Adeq	Adeq	Adeq	(6-10)
Clark Road	Coyle Road	East End	Adeq	Adeq	NOW	Adeq	(6-10)
Clarkson Road	Covert Hill Road	Cramahe Township Boundary	Adeq	Adeq	Adeq	Adeq	(6-10)
Clithroe Road	County Road 2	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Clouston Road	Boomerang Road	Grills Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Clouston Road	Massey Road	Boomerang Road	Adeq	Adeq	Adeq	(6-10)	(1-5)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Collin Road	Boomerang Road	North End	Adeq	Adeq	Adeq	Adeq	(1-5)
Community Centre Road	Les Davey Road	O'Grady Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Community Centre Road	O'Grady Road	Stephen Road	Adeq	Adeq	Adeq	(1-5)	(1-5)
Community Centre Road	Stephen Road	Stewart Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Community Hall Road	County Road 29	Noonan Road	Adeq	Adeq	NOW	Adeq	(6-10)
Cook Road	5th Line Road	Robins Road	Adeq	Adeq	Adeq	(6-10)	(6-10)
Cook Road	Robin's Road	North End	Adeq	Adeq	NOW	Adeq	(6-10)
Cooney Lane	Shelter Valley Road	0.8km South of Shelter Valley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Covert Hill Road	Clarkson Road	County Road 29	Adeq	Adeq	Adeq	Adeq	(6-10)
Covert Hill Road	0.2km South of Clarkson Road	Clarkson Road	Adeq	Adeq	NOW	Adeq	(1-5)
Covert Hill Road	Dunbar Road	0.2km North of Dunbar Road	Adeq	Adeq	NOW	Adeq	(6-10)
Covert Hill Road	0.2km North of Dunbar Road	0.2km South of Clarkson Road	Adeq	Adeq	NOW	Adeq	(1-5)
Cowling Road	Savory Road	1st Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Cowling Road	County Road 9	Savory Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Coyle Road	County Road 45	Webb Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Coyle Road	Webb Road	7th Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Craig Road	Northumberland Heights Road	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Cranberry Lake Road	0.9km West of County Road 23	Fenton Road	Adeq	Adeq	NOW	Adeq	(1-5)
Cranberry Lake Road	County Road 23	0.3km East of Edwardson Road	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Crosby Road	County Road 45	North End	Adeq	Adeq	NOW	Adeq	(6-10)
Curtis Point Road	1.9km North of County Road 18	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Curtis Point Road	County Road 18	1.9km North of County Road 18	Adeq	Adeq	Adeq	Adeq	(6-10)
Danforth Road East	Northumberland Heights Road	Hoskin Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Danforth Road East	Ron Harnden Road	Northumberland Heights Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Davidson Road	1st Line Road	North End	Adeq	Adeq	NOW	Adeq	(6-10)
Davis Road	County Road 45	County Road 29	Adeq	Adeq	Adeq	NOW	(6-10)
Day Road	County Road 22	South End	Adeq	Adeq	Adeq	Adeq	(6-10)
Day Road	County Road 22	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Deviney Lane	Vernonville Road	East End	Adeq	Adeq	NOW	Adeq	(6-10)
Dibikad Boulevard	1st Line Road	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Diemo Road	Newton Road	0.35km East of Newton Rd.	Adeq	Adeq	Adeq	(6-10)	(6-10)
Diemo Road	0.35km East of Newton Rd.	South Burns Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Division Street	County Road 45	3rd Line Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Division Street	County Road 45	2nd Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Dixon Drive	Shelter Valley Road	Seasonal	Adeq	Adeq	NOW	NOW	Adeq
Dixon Drive	Shelter Valley Road	1.2km North of Shelter Valley Road	Adeq	Adeq	NOW	Adeq	(6-10)
Driver's Rest Rd	County Road 2 (West)	County Road 2 (East)	Adeq	Adeq	Adeq	Adeq	(1-5)
Drope Road	0.4km South of County Road 45	County Road 45	Adeq	Adeq	NOW	NOW	(1-5)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Drope Road	County Road 24	0.4km South of County Road 45	Adeq	Adeq	NOW	Adeq	Adeq
Drumlin Lane	Broomfield Road	West End	Adeq	Adeq	NOW	Adeq	(6-10)
Dudley Road	Vernonville Road	Herron Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Dudley Road	Herron Road	Cramahe Township Boundary	Adeq	Adeq	Adeq	Adeq	(6-10)
Dunbar Road	McDonald Road	Tucker Road	NOW	Adeq	NOW	NOW	NOW
Dunbar Road	Tucker Road	Pratt Road	Adeq	Adeq	NOW	Adeq	NOW
Dunbar Road	Pratt Road	2.6km West of Cramahe Township Boundary	Adeq	Adeq	NOW	Adeq	(1-5)
Dunbar Road	0.9km West of Russ Creek Rd	Covert Hill Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Dunbar Road	Covert Hill Road	Cramahe Township Boundary	Adeq	Adeq	Adeq	NOW	(6-10)
Dunbar Road	Bowmanton Road	County Road 45	NOW	Adeq	NOW	NOW	Adeq
Dunbar Road	County Road 45	McDonald Road	NOW	Adeq	NOW	NOW	Adeq
Duncan Road	Waldie Lane	County Road 45	Adeq	Adeq	Adeq	Adeq	(6-10)
Dunnette Landing Road	Sandercock Road	1.2km West of Sandercock Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Earl Road	0.3km East of Kraumanis Road	Kraumanis Road	Adeq	Adeq	NOW	Adeq	(1-5)
Earl Road	County Road 45	0.3km East of Kraumanis Road	Adeq	Adeq	Adeq	Adeq	(6-10)
East Court	Sandy Bay Road	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Eddystone Road	Joice Road	Pete's Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Eddystone Road	Pete's Road	Broomfield Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Eddystone Road	County Road 23	Joice Road	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Edgewater Drive	3rd Line Road	Grandview Drive	Adeq	Adeq	Adeq	NOW	(6-10)
Edwardson Road	County Road 23	0.4km South of Cranberry Lake Road	Adeq	Adeq	Adeq	NOW	(1-5)
Edwardson Road	0.4km South of Cranberry Lake Road	Cranberry Lake Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Elder Road	County Road 45	1.0km North of County Road 45	Adeq	Adeq	Adeq	(6-10)	(6-10)
Fanning Road	Macklin Road	0.8km East of Macklin Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Fenton Road	West Road	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Ferguson Road	0.4km South of Burnley Road	Burnley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Ferguson Road	Burnley Road	Noonan Road	Adeq	Adeq	NOW	Adeq	(1-5)
Ferguson Road	County Road 29	0.9km North of County Road 29	Adeq	Adeq	Adeq	Adeq	(6-10)
Ferguson Road	0.9km North of County Road 29	0.4km South of Burnley Road	Adeq	Adeq	NOW	Adeq	(1-5)
Finley Road	0.km West of Massey Road	0.3km West of Massey Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Finley Road	0.15km West of Massey Road	Massey Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Finley Road	0.4km West of Massey Road	0.15km West of Massey Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Finley Road	Hoskin Road	0.6km West of Massey Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Fisher Road	County Road 22	South End	Adeq	Adeq	Adeq	Adeq	(6-10)
Forget Road	County Road 22	0.4km North of County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
Forget Road	0.4km North of County Road 22	0.9km North of County Road 22	Adeq	Adeq	NOW	Adeq	(1-5)
Fox Run Road	Lakeshore Road	Killdeer Crescent	Adeq	Adeq	Adeq	NOW	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Front Street	County Road 31	Ontario Street	Adeq	Adeq	Adeq	Adeq	(6-10)
George Road	Montgomery Road	0.25km West of Leach Road	Adeq	Adeq	NOW	Adeq	(1-5)
George Road	0.25km West of Leach Road	Macklin Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Gleason Corner Road	Dixon Road	County Road 22	Adeq	Adeq	NOW	Adeq	(1-5)
Gleasons Corner Road	County Road 22	0.8km North of County Road 22	Adeq	Adeq	Adeq	Adeq	(1-5)
Glenron Road	2nd Line Road	0.1km South of County Road 24	Adeq	Adeq	NOW	Adeq	(1-5)
Glenron Road	0.1km South of County Road 24	County Road 24	Adeq	Adeq	NOW	Adeq	(6-10)
Goose Creek Road	County Road 18	North End	Adeq	Adeq	NOW	(6-10)	(6-10)
Grandview Drive	Edgewater Drive	East End	Adeq	Adeq	Adeq	(1-5)	(6-10)
Grandview Drive	3rd Line Road	Edgewater Drive	Adeq	Adeq	Adeq	(1-5)	(6-10)
Grills Road	The Scots Line	South Burns Road	Adeq	Adeq	Adeq	(1-5)	(6-10)
Grills Road	Intersection	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Gully Road	Highway 401	Massey Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Gully Road	Hoskin Road	Old Gully Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Gully Road	County Road 2	Highway 401	Adeq	Adeq	Adeq	Adeq	(6-10)
Hall Road	1st Line Road	2nd Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Halstead Road	County Road 45	4th Line Road	Adeq	Adeq	Adeq	(6-10)	(6-10)
Hare Road	County Road 2	South End	Adeq	Adeq	Adeq	Adeq	(6-10)
Hare Road	County Road 2	North End	Adeq	Adeq	Adeq	Adeq	(1-5)
Harnden Drive	Aird Street	West End	Adeq	Adeq	Adeq	Adeq	(6-10)
Harper Road	Leach Road	West End	Adeq	Adeq	Adeq	Adeq	(6-10)
Helen's Lane	Clouston Road	South End	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Heritage Road	County Road 2	South End	Adeq	Adeq	Adeq	Adeq	(6-10)
Herron Road	County Road 2	South End	Adeq	Adeq	Adeq	Adeq	(1-5)
Herron Road	County Road 2	Dudley Road	Adeq	Adeq	Adeq	(6-10)	(6-10)
Hickerson Road	0.7km South of Bowmanton Road	Bowmanton Road	Adeq	Adeq	NOW	Adeq	NOW
Hickerson Road	Kraumanis Road	0.7km South of Bowmanton Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Highland Road	Merrill Road	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Highland Road	7th Line Road	South End	Adeq	Adeq	NOW	Adeq	(1-5)
Highland View Drive	Telephone Road	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Hillcrest Rd	Drivers Rest Road	South End	Adeq	Adeq	Adeq	Adeq	(1-5)
Hilltop Road	County Road 2	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Hofer Road	Telephone Road	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Hogan Road	Covert Hill Road	0.4km West of Covert Hill Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Hoskin Road	Gully Road	McLean Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Ingham Road	Shearer Point Road	East End	Adeq	Adeq	NOW	Adeq	(1-5)
Inglis Road	Shelter Valley Road	0.6km North of Shelter Valley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Inglis Road	0.6km North of Shelter Valley Road	0.2km South of Old Mill Road	Adeq	Adeq	NOW	Adeq	(6-10)
Inglis Road	0.2km South of Old Mill Road	Cramahe Township Boundary	Adeq	Adeq	Adeq	Adeq	(6-10)
Isaac Road	County Road 9	Bowmanton Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Island View Road	1.8km North of 4th Line Road	West End	Adeq	NOW	NOW	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Island View Road	4th Line Road	1.0km North of 4th Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Island View Road	1.0km North of 4th Line Road	1.8km North of 4th Line Road	Adeq	Adeq	NOW	Adeq	(6-10)
Jackson Road	Stewart Road	0.2km East of Stewart Road	Adeq	Adeq	NOW	Adeq	(1-5)
Jewell Road	0.8km South of County Road 29	Victor Road	Adeq	Adeq	NOW	Adeq	(1-5)
Jewell Road	Victor Road	McDonald Road	Adeq	Adeq	NOW	Adeq	(6-10)
Jewell Road	County Road 29	0.8km South of County Road 29	Adeq	Adeq	NOW	Adeq	(6-10)
Jiggs Road	Shelter Valley Road	North End	Adeq	Adeq	Adeq	Adeq	(1-5)
Johnston Court	Brimley Road South	South End	Adeq	Adeq	Adeq	NOW	(6-10)
Joice Road	Eddystone Road	Locke Road	Adeq	Adeq	NOW	Adeq	(6-10)
Joice Road	Locke Road	East End	Adeq	Adeq	NOW	Adeq	(1-5)
Kanata Dr	Lakeshore Road	Shawano Drive	Adeq	Adeq	Adeq	(1-5)	(6-10)
Keewatin Dr	Keewatin Drive	South End	Adeq	Adeq	Adeq	(1-5)	(6-10)
Kernaghan Road	County Road 2	South End	Adeq	Adeq	NOW	Adeq	(1-5)
Killdeer Cres	Lakeshore Road (West)	Lakeshore Road (East)	Adeq	Adeq	Adeq	NOW	(6-10)
King Road	Pipeline Road	Shelter Valley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Knights Road	County Road 2	South End	Adeq	Adeq	Adeq	NOW	(6-10)
Kraumanis Road	Hickerson Road	0.4km West of Hickerson Road	Adeq	Adeq	NOW	Adeq	(1-5)
Lake Breeze Drive	Grandview Drive	East End	Adeq	Adeq	Adeq	(1-5)	(6-10)
Lakeport Road	Wicklow Beach Road	McGlennon Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Lakeport Road	McGlennon Road	0.3km West of Ontario Street	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Lakeshore Road	Archer Road	West End	Adeq	Adeq	Adeq	Adeq	(6-10)
Lakeshore Road	0.05km East of Killdeer Crescent	Station Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Lakeshore Road	Archer Road	0.05km East of Killdeer Crescent	Adeq	Adeq	Adeq	Adeq	(6-10)
Landon Rd	0.7km North of Inglis Road	0.5km South of County Road 22	Adeq	Adeq	NOW	Adeq	(1-5)
Landon Rd	0.5km South of County Road 22	County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
Landon Road	Inglis Road	0.7km North of Inglis Road	Adeq	Adeq	NOW	Adeq	(1-5)
Langs Road	Seventh Line Road	McCracken Road	Adeq	Adeq	NOW	Adeq	(6-10)
Langs Road	McCracken Road	McCracken Road	Adeq	Adeq	NOW	Adeq	(6-10)
Leach Road	County Road 29	1.0km North of County Road 29	Adeq	Adeq	Adeq	Adeq	(6-10)
Leach Road	1.0km North of County Road 29	George Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Lean Road	County Road 45	South End	Adeq	Adeq	NOW	Adeq	(6-10)
Les Davey Road	Community Centre Road	South End	Adeq	Adeq	Adeq	Adeq	(1-5)
Lewis Road	County Road 24	County Road 45	Adeq	Adeq	Adeq	Adeq	(6-10)
Lilac Valley Road	County Road 9	County Road 18	Adeq	Adeq	Adeq	(6-10)	(6-10)
Locke Road	Pipeline Road	Joice Road	Adeq	Adeq	NOW	Adeq	(6-10)
Lockhart Road	Taylor Road	1st Line Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Lonsberry Road	County Road 45	South End	Adeq	Adeq	Adeq	Adeq	(6-10)
Loughlin Road	Telephone Road	0.4km North of Telephone Road	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Loughlin Road	0.4km North of Telephone Road	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Lyle Street South	County Road 2	Old Danforth Road	Adeq	Adeq	Adeq	(1-5)	(6-10)
MacKenzie Lane	County Road 2	Dudley Street	Adeq	Adeq	NOW	Adeq	(1-5)
Macklin Road	County Road 29	Fanning Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Macklin Road	Fanning Road	2nd Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Macklin Road	2nd Line Road	1.8km South of 2nd Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Marriot Road	County Road 9	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Marsden Lane	Second Line Road	East End	Adeq	Adeq	NOW	Adeq	(1-5)
Massey Road	Finley Road / West Road	Clouston Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Massey Road	Clouston Road	1.0km West of County Road 23	Adeq	Adeq	Adeq	Adeq	(1-5)
Massey Road	Gully Road	Finley Road / West Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Massey Road	1.0km West of County Road 23	County Road 23	Adeq	NOW	NOW	Adeq	(6-10)
Masters Road	Noonan Road	1.0km North of Noonan Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Masters Road	1.0km North of Noonan Road	2nd Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
McBride Road	County Road 22	North End	Adeq	Adeq	NOW	Adeq	(6-10)
McCracken Road	7th Line Road	West End	Adeq	Adeq	NOW	Adeq	(6-10)
McDonald Road	County Road 22	0.5km North of County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
McDonald Road	0.5km North of County Road 22	Silver Maple Road	Adeq	Adeq	Adeq	Adeq	(6-10)
McDonald Road	Silver Maple Road	Dunbar Road	Adeq	Adeq	Adeq	(6-10)	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
McDonald Road	Dunbar Road	Caradoc Road	Adeq	Adeq	Adeq	Adeq	(6-10)
McDonald Road	Caradoc Road	County Road 29	Adeq	Adeq	Adeq	Adeq	(6-10)
McGlennon Road	Lakeport Road	South End	Adeq	Adeq	NOW	Adeq	(1-5)
McGregor Lane	Telephone Road	South End	Adeq	Adeq	NOW	Adeq	(6-10)
McLean Road	0.1km West of Hoskin Road	Hoskin Road	Adeq	Adeq	Adeq	Adeq	(6-10)
McLean Road	West End	0.1km West of Hoskin Road	Adeq	Adeq	Adeq	Adeq	(1-5)
McMann Road	Hamilton Township Boundary	East End	Adeq	Adeq	NOW	Adeq	(1-5)
McMaster Road	Station Road	Purdy Road	Adeq	Adeq	Adeq	Adeq	NOW
Megyaak Drive	Dibikad Boulevard	East End	Adeq	Adeq	Adeq	Adeq	(6-10)
Mercer Lane	West End	Turk Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Merrill Road	7th Line Road	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Milgate Road	County Road 22	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Mill Street	Ontario Street	Front Street	Adeq	Adeq	NOW	Adeq	(6-10)
Minnetonka Road	3rd Line Road	4th Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Minnetonka Road	County Road 45	County Road 18	Adeq	Adeq	Adeq	Adeq	(6-10)
Minnetonka Road	County Road 18	3rd Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Montgomery Road	1.1km North of County Road 29	Browns Road	Adeq	Adeq	NOW	Adeq	(1-5)
Montgomery Road	County Road 29	1.1km North of County Road 29	Adeq	Adeq	Adeq	Adeq	(1-5)
Moore Road	West End	0.2km West of Riley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Moore Road	0.2km West of Riley Road	Riley Road	Adeq	Adeq	NOW	Adeq	(6-10)
Morris Road	County Road 45	0.1km West of County Road 45	Adeq	Adeq	Adeq	Adeq	(1-5)
Nawantin Dr	Lakeshore Road	South End	Adeq	Adeq	Adeq	NOW	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Neil McGregor Road	Shelter Valley Road	0.9km South of Shelter Valley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Nelson Road	0.3km South of County Road 22	County Road 22	Adeq	Adeq	Adeq	Adeq	(1-5)
Nelson Road	Baptist Road	0.3km South of County Road 22	Adeq	Adeq	NOW	Adeq	(1-5)
Newton Road	Baptist Road	County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
Nichol Road	County Road 22	0.7km North of County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
Noble Road	O'Grady Road	Wilson Drive	Adeq	Adeq	Adeq	Adeq	(1-5)
Noble Road	Wilson Drive	The Scots Line	Adeq	Adeq	NOW	Adeq	(1-5)
Noonan Road	Taylor Road	Trent Hills Boundary	Adeq	Adeq	Adeq	(1-5)	(6-10)
Noonan Road	County Road 29	Taylor Road	Adeq	Adeq	Adeq	(1-5)	(1-5)
North Bethasda Road	County Road 9	0.3km North of County Road 9	Adeq	Adeq	Adeq	Adeq	(6-10)
North Bethesada Road	0.3km South of County Road 18	County Road 18	Adeq	Adeq	Adeq	Adeq	(6-10)
North Bethesada Road	County Road 18	0.2km North of County Road 18	Adeq	Adeq	NOW	Adeq	(6-10)
North Bethesda Road	0.3km North of County Road 9	0.3km South of County Road 18	Adeq	Adeq	NOW	Adeq	(1-5)
North Burns Road	County Road 22	North End	Adeq	Adeq	NOW	(6-10)	(6-10)
North Shore Road	Station Road	West End	Adeq	Adeq	Adeq	Adeq	(6-10)
North Street	Albert Street	Shelter Valley Road	Adeq	Adeq	NOW	Adeq	(6-10)
North Street	Shelter Valley Road	Victoria Street	Adeq	Adeq	NOW	Adeq	(6-10)
Northumberland Heights Road	1.9km South of Community Centre Road	0.5km South of Community Centre Road	Adeq	Adeq	Adeq	Adeq	(1-5)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Northumberland Heights Road	Danforth Road	2.2km West of Danforth Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Northumberland Heights Road	0.5km South of Community Centre Road	Community Centre Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Northumberland Heights Road	2.2km West of Danforth Road	2.8km West of Danforth Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Northumberland Heights Road	2.8km West of Danforth Road	1.9km South of Community Centre Road	Adeq	Adeq	Adeq	Adeq	(6-10)
O'Grady Road	Community Centre Road	Noble Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Old Danforth Road	0.1km West of Benlock Road	Benlock Road	Adeq	Adeq	NOW	Adeq	(1-5)
Old Danforth Road	County Road 2	Station Road	Adeq	Adeq	Adeq	(1-5)	(6-10)
Old Danforth Road	0.8km East of Station Road	Benlock Road	Adeq	Adeq	NOW	Adeq	Adeq
Old Danforth Road	0.3km East of Station Road	0.8km East of Station Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Old Danforth Road	Station Road	0.3km East of Station Road	Adeq	Adeq	Adeq	(1-5)	(6-10)
Old Gully Road	Gully Road	Finley Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Old Kingston Road	County Road 2	East End	Adeq	Adeq	Adeq	Adeq	(6-10)
Old Mill Road	Inglis Road	West End	Adeq	Adeq	Adeq	Adeq	(6-10)
Old Wharf Road	County Road 31	South End	Adeq	Adeq	NOW	Adeq	(6-10)
Ontario Street	County Road 31	Front Street	Adeq	Adeq	Adeq	Adeq	(6-10)
Orchard Grove Road	Station Road	Wicklow Beach Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Packer Road	1.1km North of County Road 9	1.0km South of 1st Line Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Packer Road	1.0km South of 1st Line Road	0.5km South of 1st Line Road	Adeq	Adeq	NOW	Adeq	(1-5)
Packer Road	0.5km South of 1st Line Road	1st Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Packer Road	County Road 9	1.1km North of County Road 9	Adeq	Adeq	Adeq	Adeq	(6-10)
Park Road	County Road 22	0.6km South of County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
Pete's Road	0.2km North of Eddystone Road	Eddystone Road	Adeq	Adeq	NOW	Adeq	(1-5)
Pete's Road	County Road 23	0.2km East of County Road 23	Adeq	Adeq	Adeq	Adeq	(6-10)
Pete's Road	0.2km East of County Road 23	0.2km North of Eddystone Road	Adeq	Adeq	NOW	Adeq	(6-10)
Pinnacle Hill Road	0.05km North of Whitehead Road	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Pinnacle Hill Road	County Road 22	0.05km North of Whitehead Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Pioneer Road	County Road 45	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Pipeline Road	King Road	Broomfield Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Pipeline Road	County Road 23	King Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Plast Road	Lakeshore Road	South End	Adeq	Adeq	NOW	Adeq	(6-10)
Plast Road	Lakeshore Road	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Porter Road	County Road 29	Consession Road 2 West	Adeq	Adeq	Adeq	Adeq	(6-10)
Pratt Road	County Road 29	2.0km West of County Road 29	Adeq	Adeq	Adeq	Adeq	(1-5)
Pratt Road	Dunbar Road	Dunbar Road	Adeq	Adeq	NOW	Adeq	(1-5)
Pratt Road	Seasonal	County Road 29	Adeq	Adeq	NOW	Adeq	Adeq
Prettie Road	County Road 22	Milgate Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Purdy Road	McMaster Road	0.3km North of McMaster Road	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Purdy Road	0.3km North of McMaster Road	Old Danforth Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Rae Lane	Browns Road	South End	Adeq	Adeq	NOW	Adeq	(1-5)
Riley Road	Moore Road	South End	Adeq	Adeq	NOW	Adeq	(6-10)
Robins Road	Cook Road	Rolling Banks Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Rolling Banks Road	Robins Road	0.4km South of Robins Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Rolph Road	Bull's Mill Road	0.2km West of Bull's Mill Road	Adeq	Adeq	NOW	Adeq	(1-5)
Ron Harnden Rd	Danforth Rd	North End	Adeq	Adeq	Adeq	Adeq	(1-5)
Roseneath Landing Road	County Road 45	1st Line Road	Adeq	Adeq	Adeq	(1-5)	(6-10)
Roseneath Landing Road	1st Line Road	County Road 18	Adeq	Adeq	Adeq	(1-5)	(6-10)
Roseneath Landing Road	County Road 18	3rd Line Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Russ Creek Road	Dunbar Road	Covert Hill Road	NOW	Adeq	NOW	NOW	Adeq
Rutherford Road	Vernonville Road	1.2km East of Vernonville Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Rutherford Road	1.2km East of Vernonville Road	1.5km East of Vernonville Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Ruttan Road	Chub Point Road	East End	Adeq	Adeq	Adeq	Adeq	(1-5)
Sandercock Road	County Road 18	Dunnette Landing Road	Adeq	Adeq	Adeq	(6-10)	Adeq
Sandercock Road	Dunnette Landing Road	4th Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Sandy Bay Road	Baxter Road	0.1km West of Baxter Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Sandy Bay Road	Baxter Road	West End	Adeq	Adeq	Adeq	Adeq	(1-5)
Savory Road	Lilac Valley Road	0.5km East of Lilac Valley Road	Adeq	Adeq	NOW	Adeq	(1-5)
Savory Road	0.5km East of Lilac Valley Road	Cowling Road	Adeq	Adeq	NOW	Adeq	(1-5)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
School House Road	County Road 45	Lewis Road	Adeq	Adeq	NOW	Adeq	(6-10)
Seasonal	Broomfield Road	Dixon Drive	Adeq	Adeq	NOW	Adeq	NOW
Seasonal	Pratt Road	Cramahe Township Boundary	NOW	Adeq	NOW	NOW	(6-10)
Seasonal	Gleasons Corners Road	Pratt Road	Adeq	Adeq	NOW	Adeq	(1-5)
Seasonal	Pipeline Road	Joice Road	Adeq	Adeq	NOW	Adeq	NOW
Shawano Dr	West End	East End	Adeq	Adeq	Adeq	NOW	(6-10)
Shearer Point Road	County Road 18	3rd Line Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shearer Point Road	3rd Line Road	Ingham Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shearer Point Road	0.2km North of Ingham Road	Norh End	Adeq	Adeq	Adeq	Adeq	(6-10)
Shearer Point Road	Ingham Road	0.2km North of Ingham Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shelter Valley Road	County Road 2	Jiggs Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shelter Valley Road	0.05km West of Broomfield Road	0.15km West of Vernonville Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shelter Valley Road	Boyle Road	0.05km West of Broomfield Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shelter Valley Road	Dixon Drive	Inglis Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shelter Valley Road	Inglis Road	Neil McGregor Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shelter Valley Road	0.15km West of Vernonville Road	0.05km East of Vernonville Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shelter Valley Road	Jiggs Road	Telephone Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Shelter Valley Road	0.05km East of Vernonville Road	Dixon Drive	Adeq	Adeq	Adeq	Adeq	(6-10)
Shelter Valley Road	Telephone Road	Boyle Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Silver Maple Road	McDonald Road	Tucker Road	Adeq	Adeq	Adeq	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Silver Maple Road	Tucker Road	Dunbar Road	Adeq	Adeq	NOW	Adeq	(6-10)
Simpson Hill Road	County Road 9	County Road 45	Adeq	Adeq	Adeq	NOW	(1-5)
Skyview Road	Shelter Valley Road	Wicklow Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Slade Road	County Road 29	South End	Adeq	Adeq	NOW	Adeq	(6-10)
South Burns Road	Diemo Road	County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
South Burns Road	Grills Road	Diemo Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Speechley Road	The Scots Line	Community Centre Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Speechley Road	The Scots Line	South End	Adeq	Adeq	NOW	Adeq	(1-5)
Spring Street	Ontario Street	Front Street	Adeq	Adeq	Adeq	Adeq	(6-10)
St. Andrews Drive	Brimley Road South	Station Road	Adeq	Adeq	Adeq	(1-5)	(6-10)
St. George Street	Shelter Valley Road	Victoria Street	Adeq	Adeq	Adeq	Adeq	(6-10)
St. George's Court	St. Andrews Drive	South End	Adeq	Adeq	Adeq	(1-5)	(6-10)
St. Marys Court	St. Andrews Drive	South End	Adeq	Adeq	Adeq	NOW	(6-10)
Station Road	0.6km South of Old Danforth Road	Lakeshore Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Station Road	Lakeshore Road	Chub Point Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Station Road	Old Danforth Road	0.6km South of Old Danforth Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Stephen Road	Community Centre Road	Baptist Road	Adeq	Adeq	NOW	Adeq	(1-5)
Stewart Road	Community Centre Road	Baptist Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Stewart Road	Baptist Road	County Road 22	Adeq	Adeq	Adeq	Adeq	(6-10)
Sunset Crescent	Grandview Drive (South)	Grandview Drive (North)	Adeq	Adeq	Adeq	Adeq	(6-10)
Tackaberry Road	Bull Road	0.4km South of Bull Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Tackaberry Road	0.4km South of Bull Road	South End	Adeq	Adeq	Adeq	Adeq	(1-5)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Taylor Road	Noonan Road	West End	Adeq	Adeq	Adeq	Adeq	(6-10)
Telephone Road	0.3km West of Shelter Valley Road	Loguhlin Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Telephone Road	Hofer Road	Boyce Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Telephone Road	Boyce Road	0.25km West of McGregor Lane	Adeq	Adeq	Adeq	(6-10)	(6-10)
Telephone Road	Vernonville Road	Hofer Road	Adeq	Adeq	Adeq	(6-10)	(1-5)
Telephone Road	0.25km West of McGregor Lane	Cramahe Township Boundary	Adeq	Adeq	Adeq	Adeq	(6-10)
Telephone Road	Shelter Valley Road	0.5km East of Shelter Valley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Telephone Road	Shelter Valley Road	0.3km West of Shelter Valley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Telephone Road	County Road 23	Loughlin Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Telephone Road	0.5km East of Shelter Valley Road	Vernonville Road	Adeq	Adeq	Adeq	Adeq	(6-10)
The Scots Line	Speechley Road	Grills Road	Adeq	Adeq	Adeq	Adeq	(6-10)
The Scots Line	Noble Road	Speechley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
The Scots Line	Bevan Ridge Road	Noble Road	Adeq	Adeq	Adeq	Adeq	(6-10)
The Scots Line	Hoskin Road	Bevan Ridge Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Thomas Road	County Road 2	Lakeport Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Thompson Road	County Road 23	West End	Adeq	Adeq	NOW	Adeq	(6-10)
Town Line Road	County Road 31	County Road 2	Adeq	Adeq	Adeq	Adeq	(6-10)
Tranquility Lane	McDonald Road	North End	Adeq	Adeq	Adeq	Adeq	(1-5)
Tucker Road	0.6km South of Dunbar Road	Dunbar Road	Adeq	Adeq	NOW	Adeq	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Tucker Road	Silver Maple Road	0.6km South of Dunbar Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Turk Road	Vernonville Road	Mercer Lane	Adeq	Adeq	Adeq	Adeq	(6-10)
Turk Road	Mercer Lane	Neil McGregor Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Usborne Road	County Road 2	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
Vernonville Road	Deviney Lane	Shelter Valley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Vernonville Road	Telephone Road S.	Deviney Lane	Adeq	Adeq	Adeq	Adeq	(6-10)
Vernonville Road	County Road 2	Dudley Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Vernonville Road	Dudley Road	Telephone Road S.	Adeq	Adeq	Adeq	(6-10)	(6-10)
Victor Road	McDonald Road	Jewell Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Victoria Street	North Street	St. George Street	Adeq	Adeq	Adeq	Adeq	(1-5)
Waabooz Road	Megyaak Drive	South End	Adeq	Adeq	NOW	Adeq	(6-10)
Waaseyaaban Drive	Dibikad Boulevard	East End	Adeq	Adeq	Adeq	Adeq	(6-10)
Waldie Lane	County Road 45	West End	Adeq	Adeq	Adeq	Adeq	(1-5)
Ward Lane	Shelter Valley Road	North End	Adeq	Adeq	NOW	Adeq	(1-5)
Webb Road	Coyle Road	Trent Hills Boundary	Adeq	Adeq	Adeq	(1-5)	(1-5)
Webb Road	County Road 33	Coyle Road	Adeq	Adeq	Adeq	Adeq	(6-10)
West Court	Sandy Bay Road	North End	Adeq	Adeq	Adeq	Adeq	(6-10)
West Road	Massey Road	Fenton Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Whitehead Road	County Road 22	Pinnacle Hill Road	Adeq	Adeq	Adeq	(1-5)	(6-10)
Whitney Road	County Road 29	East End	Adeq	Adeq	NOW	Adeq	(6-10)
Wicklow Beach Road	County Road 2	Lakeport Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Wicklow Road	County Road 2	Skyview Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Wideview Avenue	Grandview Drive	East End	Adeq	Adeq	Adeq	(1-5)	(6-10)

Name	From	To	Geometrics (Rural Only, Operating Speed Only)	Surface Type	Surface Width (AADT)	Structural Adequacy	Drainage
Wilson Drive	0.7km North of McLean Road	McLean Road	Adeq	Adeq	Adeq	Adeq	(1-5)
Wilson Drive	0.2km South of Noble Road	0.7km North of McLean Road	Adeq	Adeq	NOW	Adeq	(1-5)
Wilson Drive	Noble Road	0.2km South of Noble Road	Adeq	Adeq	Adeq	Adeq	(6-10)
Wolfram Road	County Road 22	Seasonal	Adeq	Adeq	Adeq	Adeq	(6-10)
Woodland Drive	Sunset Crescent	West End	Adeq	Adeq	Adeq	Adeq	(6-10)
Woodland Road	County Road 45	North End	Adeq	Adeq	Adeq	Adeq	(6-10)

476

APPENDIX J
ROAD CLASSIFICATIONS



Township of Alnwick Haldimand - Road Classification - MMS

Section_Number	Name	Existing Class (MMS)	Length
5	Heritage Road	6	0.1
10	Carruthers Road	6	1.3
15	Brookside Road	4	0.7
20	Brookside Road	4	2
25	Ron Harnden Rd	6	0.7
30	Archer Road	4	0.6
32	Archer Road	4	0.8
35	Lakeshore Road	4	0.4
40	Lakeshore Road	4	1.3
45	Fox Run Road	6	0.4
48	Lakeshore Road	4	2.5
50	Killdeer Cres	6	0.6
55	Plast Road	6	0.3
57	Plast Road	6	0.2
60	Keewatin Dr	5	0.4
65	Nawantin Dr	5	1.1
70	Shawano Dr	6	0.7
75	Kanata Dr	5	0.4
80	Station Road	5	0.6
81	Station Road	4	1.1
82	Station Road	4	1.3
85	Hare Road	6	0.2
87	Hare Road	6	0.3
90	Old Kingston Road	6	0.05
95	Gully Road	5	1.35
98	Gully Road	5	0.15
100	Driver's Rest Rd	6	0.6
105	Hillcrest Rd	6	0.2
110	Barnum House Road	6	0.45
115	Barnum House Road	6	1.4
120	Brimley Road North	4	1.1

Section_Number	Name	Existing Class (MMS)	Length
125	Brimley Road South	4	0.9
127	Brimley Road South	6	0.4
128	Brimley Road South	6	0.9
130	Johnston Court	5	0.5
135	St. Andrews Drive	5	0.9
140	St. Marys Court	6	0.2
145	St. George's Court	6	0.2
150	Bowman Court South	6	0.2
155	Bowman Court North	6	0.1
160	Old Danforth Road	5	0.3
165	Lyle Street South	5	0.2
170	Aird Street	5	0.3
172	Aird Street	5	0.4
175	Charolette Street	6	0.15
180	Harnden Drive	6	0.25
185	Old Danforth Road	6	0.3
187	Old Danforth Road	6	0.5
189	Old Danforth Road	6	1.1
190	Canning Factory Road	6	0.4
195	Purdy Road	6	0.65
198	Purdy Road	6	0.3
200	McMaster Road	6	0.35
205	Orchard Grove Road	4	3.9
210	Chapple Road	6	0.4
212	North Shore Road	5	0.4
215	Chub Point Road	5	0.6
220	Ruttan Road	5	0.4
225	Clithroe Road	5	0.9
230	Cherry Hill Road	6	0.2
232	Shelter Valley Road	4	2
235	Shelter Valley Road	4	1.5
237	Black Walnut Trail	6	0.3
238	Jiggs Road	6	0.2
240	Benlock Road	4	1.5

Section_Number	Name	Existing Class (MMS)	Length
245	Old Danforth Road	6	0.1
250	Beauchamp Road	6	1
255	Calnan Road	6	1
260	Wicklow Road	6	1.5
265	Skyview Road	6	0.3
270	Wicklow Beach Road	4	2.5
275	Lakeport Road	4	2.4
277	Lakeport Road	4	2.5
280	McGlennon Road	6	0.9
285	Thomas Road	4	3.2
287	MacKenzie Lane	6	0.8
290	Ontario Street	5	0.7
295	Spring Street	5	0.3
297	Mill Street	6	0.2
300	Cedar Street	6	0.2
305	Front Street	5	0.6
310	Old Wharf Road	6	0.4
315	Town Line Road	4	2.4
320	Knights Road	6	0.3
325	Hilltop Road	6	0.5
330	Kernaghan Road	6	0.9
335	Vernonville Road	4	0.9
340	Herron Road	6	0.1
345	Herron Road	4	0.8
350	Usborne Road	6	0.15
355	Dudley Road	4	1.6
357	Dudley Road	4	2.6
360	Danforth Road East	4	1.7
362	Danforth Road East	4	0.5
365	Northumberland Heights Road	4	2.2
367	Craig Road	6	0.7
370	Northumberland Heights Road	4	0.6
375	Northumberland Heights Road	4	0.9
377	Northumberland Heights Road	6	1.4

Section_Number	Name	Existing Class (MMS)	Length
378	Northumberland Heights Road	6	0.5
380	Les Davey Road	6	0.8
385	Community Centre Road	4	1.2
387	Community Centre Road	4	1.3
389	Community Centre Road	4	1.9
390	McMann Road	6	0.1
395	Bull Road	6	0.6
396	Bull Road	6	0.6
398	Bull Road	4	1.1
400	Tackaberry Road	6	0.4
402	Tackaberry Road	6	0.3
405	Baptist Road	6	1.7
410	Stephen Road	6	1.1
415	Nelson Road	6	1.8
420	Nelson Road	6	0.3
425	Baptist Road	6	0.5
430	Stewart Road	4	1.1
433	Stewart Road	4	1.9
435	Speechley Road	6	1.1
437	Speechley Road	6	0.5
440	Jackson Road	6	0.2
445	O'Grady Road	6	0.5
450	Noble Road	6	0.8
452	Noble Road	6	1
455	Wilson Drive	6	0.2
460	Wilson Drive	6	1
465	Wilson Drive	6	0.7
470	McLean Road	6	0.2
472	McLean Road	6	0.1
475	Bevan Ridge Road	6	0.4
478	The Scots Line	4	0.3
480	The Scots Line	4	2
483	The Scots Line	4	0.85
485	The Scots Line	4	0.85

Section_Number	Name	Existing Class (MMS)	Length
490	Grills Road	4	1.5
493	Grills Road	6	0.25
495	Hoskin Road	4	2.2
500	Finley Road	6	1
502	Finley Road	6	0.3
503	Finley Road	6	0.1
504	Finley Road	6	0.2
505	Gully Road	4	0.8
510	Old Gully Road	6	0.3
512	Massey Road	4	1.1
515	Massey Road	4	3.3
516	Massey Road	4	0.7
517	Massey Road	4	1
520	West Road	6	0.4
525	Fenton Road	6	1.3
530	Edwardson Road	4	1.4
532	Edwardson Road	6	0.4
535	Cranberry Lake Road	6	0.9
537	Cranberry Lake Road	6	0.9
540	Academy Hill Road	4	1.5
543	Clouston Road	4	1.2
544	Helen's Lane	6	0.25
545	Clouston Road	4	1.8
547	South Burns Road	4	2.2
548	South Burns Road	4	0.9
550	Boomerang Road	4	1.6
555	Collin Road	6	0.3
560	Diemo Road	6	0.4
562	Diemo Road	6	0.35
565	Newton Road	6	2
570	Baptist Road	6	0.9
575	Telephone Road	6	2.1
577	Telephone Road	4	0.85
580	Loughlin Road	6	0.4

Section_Number	Name	Existing Class (MMS)	Length
581	Loughlin Road	6	0.4
585	Boyle Road	6	1.3
590	Boyle Road	6	0.8
595	King Road	6	2.1
600	Pipeline Road	4	0.9
602	Pipeline Road	4	2
605	Locke Road	6	1.1
610	Seasonal	6	0.8
615	Eddystone Road	4	1.8
617	Eddystone Road	4	1.7
619	Eddystone Road	4	1
620	Joice Road	6	1.1
625	Joice Road	6	0.4
630	Abbey Lane	6	0.2
635	Bradley Hollow Road	6	0.7
640	Bradley Hollow Road	6	1.3
645	Pete's Road	6	0.2
647	Pete's Road	6	0.6
648	Pete's Road	6	0.2
650	Thompson Road	6	0.6
655	Casteels Road	6	1.4
660	Broomfield Road	4	1
662	Broomfield Road	4	1.75
664	Broomfield Road	4	1.25
665	Broomfield Road	4	1
667	Drumlin Lane	6	0.6
670	Boeve Lane	6	0.7
672	Boeve Lane	6	0.7
675	Shelter Valley Road	5	1
678	Shelter Valley Road	5	2.4
680	Cooney Lane	6	0.8
685	Telephone Road	6	0.25
690	Telephone Road	6	0.5
692	Telephone Road	6	0.75

Section_Number	Name	Existing Class (MMS)	Length
695	Vernonville Road	4	1.5
697	Vernonville Road	4	1.5
698	Vernonville Road	4	1.3
700	Rutherford Road	6	1.2
702	Rutherford Road	6	0.3
705	Telephone Road	4	1.8
707	Telephone Road	4	0.9
710	Highland View Drive	6	0.7
715	Hofer Road	6	0.5
720	Boyce Road	4	0.8
722	Boyce Road	4	1.2
723	Telephone Road	4	1
725	Telephone Road	4	1.1
730	McGregor Lane	6	0.7
735	Deviney Lane	6	0.3
740	Turk Road	4	3.1
742	Mercer Lane	6	0.4
743	Turk Road	4	1.2
745	Shelter Valley Road	4	0.2
747	Shelter Valley Road	4	0.3
750	Shelter Valley Road	4	1.9
751	Ward Lane	6	0.3
752	Shelter Valley Road	4	2
754	Shelter Valley Road	4	1.2
755	North Street	6	0.15
757	North Street	6	0.1
760	Albert Street	6	0.2
765	Victoria Street	6	0.2
770	St. George Street	6	0.1
775	Dixon Drive	6	1.2
776	Gleason Corner Road	6	2.9
777	Seasonal	6	0.8
778	Dixon Drive	6	1.8
780	Inglis Road	6	0.6

Section_Number	Name	Existing Class (MMS)	Length
785	Inglis Road	6	0.4
790	Inglis Road	6	1.5
795	Old Mill Road	6	0.3
800	Neil McGregor Road	4	0.9
805	Fisher Road	6	0.3
810	Day Road	6	0.5
812	Day Road	6	1
815	Landon Road	6	0.7
817	Landon Rd	6	0.6
819	Landon Rd	6	0.5
820	Park Road	4	0.6
825	Pioneer Road	6	1
830	Earl Road	4	1.5
832	Earl Road	6	0.3
835	Brooks Lane	6	0.6
840	Kraumanis Road	6	0.4
845	Hickerson Road	6	0.8
847	Hickerson Road	6	0.7
850	Bowmanton Road	6	1.5
852	Bowmanton Road	6	1.3
854	Bowmanton Road	4	0.6
855	Bowmanton Road	4	2
857	Bowmanton Road	6	1.4
860	Beaver Meadow Road	6	0.9
865	Beaver Meadow Road	6	0.2
870	Bates Road	6	0.5
872	Bates Road	6	0.5
875	Isaac Road	6	1.3
880	Dunbar Road	6	3
885	Beagle Club Road	4	0.7
887	Beagle Club Road	4	1.8
889	Beagle Club Road	4	1.4
890	Morris Road	6	0.1
895	Bull's Mill Road	6	1.2

Section_Number	Name	Existing Class (MMS)	Length
900	Rolph Road	6	0.2
905	Elder Road	4	1
910	Woodland Road	6	0.6
915	Simpson Hill Road	6	0.4
920	Dunbar Road	6	3.7
925	Nichol Road	6	0.7
930	North Burns Road	4	1
935	McBride Road	6	0.9
940	McDonald Road	5	0.5
941	McDonald Road	4	0.5
942	McDonald Road	4	2
943	McDonald Road	4	1.3
944	McDonald Road	4	2.4
945	Tranquility Lane	6	0.1
950	Victor Road	6	0.2
955	Davis Road	6	0.7
960	Jewell Road	6	0.8
962	Jewell Road	6	1.7
964	Jewell Road	6	0.2
965	Silver Maple Road	4	1.8
970	Silver Maple Road	6	1.6
975	Tucker Road	4	1.1
980	Tucker Road	6	0.6
985	Dunbar Road	6	1.4
990	Caradoc Road	6	0.6
992	Caradoc Road	6	0.4
995	Dunbar Road	6	2.6
997	Dunbar Road	6	0.7
1000	Dunbar Road	6	1
1001	Dunbar Road	6	1.6
1002	Moore Road	6	0.5
1005	Moore Road	6	0.2
1010	Riley Road	6	0.3
1012	Seasonal	6	0.5

Section_Number	Name	Existing Class (MMS)	Length
1015	Seasonal	6	3.4
1020	Wolfram Road	6	0.1
1025	Forget Road	6	0.4
1026	Forget Road	6	0.5
1030	Gleasons Corner Road	6	0.8
1035	Carmel Road	6	0.8
1040	Pratt Road	6	2.9
1042	Pratt Road	6	0.9
1045	Pinnacle Hill Road	4	0.2
1047	Pinnacle Hill Road	6	0.5
1050	Whitehead Road	6	0.6
1055	Milgate Road	6	1.2
1060	Prettie Road	6	0.7
1065	Bradley Hollow Road	4	0.9
1070	Russ Creek Road	6	1.1
1075	Covert Hill Road	6	0.2
1077	Covert Hill Road	6	0.7
1080	Covert Hill Road	6	0.2
1085	Clarkson Road	4	0.9
1090	Hogan Road	6	0.4
1095	Pratt Road	6	2
1100	Covert Hill Road	4	1.4
1105	Goose Creek Road	6	0.5
1110	North Bethasda Road	4	0.3
1111	North Bethesda Road	6	1.3
1112	North Bethesada Road	6	0.3
1115	North Bethesada Road	6	0.2
1120	Lilac Valley Road	4	2.4
1125	Savory Road	6	0.5
1127	Savory Road	6	1.3
1128	Marriot Road	6	0.3
1130	Cowling Road	4	2.3
1132	Cowling Road	4	1.2
1135	Packer Road	6	1.1

Section_Number	Name	Existing Class (MMS)	Length
1137	Packer Road	6	1.8
1140	Packer Road	6	0.5
1145	Packer Road	6	0.5
1150	Bowmanton Road	4	2.7
1152	Waldie Lane	6	0.1
1155	Browns Road	6	0.3
1157	Duncan Road	6	0.3
1160	Rae Lane	6	0.2
1162	Browns Road	6	0.2
1165	Browns Road	6	0.6
1170	Montgomery Road	6	1.1
1175	Montgomery Road	6	1
1180	Harper Road	6	0.2
1185	Leach Road	6	1
1187	Leach Road	6	1
1190	George Road	6	1.1
1192	George Road	6	0.6
1195	Macklin Road	4	1.9
1197	Macklin Road	4	1
1200	Fanning Road	6	0.8
1205	Slade Road	6	0.4
1210	Whitney Road	6	0.6
1215	Bright Road	6	1
1220	Ferguson Road	6	0.9
1224	Ferguson Road	6	0.7
1226	Ferguson Road	6	0.4
1228	Ferguson Road	6	1.1
1230	Porter Road	6	1.6
1235	Community Hall Road	6	0.2
1240	Noonan Road	4	1.6
1242	Noonan Road	4	1.3
1245	Burnley Road	6	0.8
1250	Taylor Road	6	1.5
1255	Lockhart Road	4	1.1

Section_Number	Name	Existing Class (MMS)	Length
1260	Masters Road	6	1
1265	Masters Road	6	1
1270	Hall Road	4	0.9
1272	1st Line Road	4	1
1275	Macklin Road	4	1.8
1280	Lean Road	6	0.2
1285	Lonsberry Road	6	0.1
1288	Roseneath Landing Road	4	0.6
1290	Roseneath Landing Road	4	1.6
1292	Roseneath Landing Road	4	0.9
1295	Brook Road	6	1.4
1300	Davidson Road	6	1
1302	1st Line Road	4	0.7
1304	1st Line Road	4	1.7
1305	1st Line Road	4	1.4
1306	1st Line Road	6	0.2
1310	Curtis Point Road	4	1.9
1312	Curtis Point Road	5	0.3
1315	3rd Line Road	4	1.1
1316	3rd Line Road	4	0.9
1317	3rd Line Road	4	1.3
1318	3rd Line Road	4	0.8
1320	Shearer Point Road	4	1
1322	Shearer Point Road	5	0.2
1323	Shearer Point Road	4	1.3
1324	Shearer Point Road	4	0.5
1325	Ingham Road	6	0.9
1330	Edgewater Drive	5	1.4
1335	Grandview Drive	5	1.1
1337	Grandview Drive	6	0.2
1340	Lake Breeze Drive	5	0.4
1345	Sunset Crescent	5	0.7
1350	Woodland Drive	5	0.2
1355	Wideview Avenue	5	0.2

Section_Number	Name	Existing Class (MMS)	Length
1360	Sandercock Road	4	1.6
1362	Sandercock Road	4	0.6
1365	Dunnette Landing Road	4	1.2
1370	Minnetonka Road	4	1.3
1375	Minnetonka Road	4	1
1378	Minnetonka Road	4	1.6
1380	3rd Line Road	4	0.6
1381	3rd Line Road	4	0.7
1382	3rd Line Road	5	0.3
1383	3rd Line Road	4	0.4
1385	Division Street	5	0.4
1390	Bess Drive	5	0.1
1395	Division Street	5	0.6
1400	2nd Line Road	4	0.9
1402	Marsden Lane	6	0.3
1405	2nd Line Road	4	1.8
1406	2nd Line Road	4	1.8
1407	2nd Line Road	4	1.6
1408	2nd Line Road	4	0.2
1409	2nd Line Road	4	0.15
1410	Glenron Road	6	1.8
1415	Glenron Road	6	0.1
1420	Drope Road	6	1.7
1425	Drope Road	6	0.4
1430	Church Road	6	0.4
1432	Crosby Road	6	0.8
1435	Lewis Road	6	1.1
1440	School House Road	6	0.8
1445	Halstead Road	4	1.2
1450	4th Line Road	4	1.2
1452	4th Line Road	4	1.3
1454	4th Line Road	4	1.4
1455	Campbell Road	4	1.5
1460	Island View Road	4	1

Section_Number	Name	Existing Class (MMS)	Length
1462	Island View Road	4	0.7
1463	Island View Road	4	0.9
1465	5th Line Road	6	0.8
1466	5th Line Road	4	0.1
1467	5th Line Road	4	0.5
1468	5th Line Road	6	0.8
1469	5th Line Road	6	1.8
1470	Cook Road	4	0.5
1472	Cook Road	6	1.1
1475	Robins Road	4	1
1480	Rolling Banks Road	6	0.5
1485	Highland Road	6	0.7
1490	Highland Road	6	0.4
1492	Langs Road	4	0.2
1494	Langs Road	6	0.15
1495	McCracken Road	6	0.2
1496	7th Line Road	4	0.2
1498	7th Line Road	4	1.3
1500	7th Line Road	4	0.7
1505	Merrill Road	4	0.8
1510	Webb Road	4	1.9
1512	Webb Road	4	0.85
1515	Coyle Road	6	3.1
1517	Coyle Road	4	0.7
1520	Clark Road	6	0.6
1525	Baxter Road	4	2.4
1530	Baxter Road	4	1.6
1532	Baxter Road	4	0.6
1535	Sandy Bay Road	4	1.6
1537	Sandy Bay Road	4	0.1
1540	East Court	6	0.15
1545	West Court	6	0.1
1550	Baxter Road	6	0.3
1555	Dibikad Boulevard	5	0.8

Section_Number	Name	Existing Class (MMS)	Length
1560	Waaseyaaban Drive	6	0.25
1565	Megyaak Drive	6	0.2
1570	Waabooz Road	6	0.3

APPENDIX K
LOW VOLUME ROADS



Township of Alnwick Haldimand - Low Volume Roads

Section Number	Name	From	To	Length
5	Heritage Road	County Road 2	South End	0.100
10	Carruthers Road	County Road 2	1.3km North of County Road 2	1.300
15	Brookside Road	County Road 2	South End	0.700
25	Ron Harnden Rd	Danforth Rd	North End	0.700
55	Plast Road	Lakeshore Road	North End	0.300
57	Plast Road	Lakeshore Road	South End	0.200
85	Hare Road	County Road 2	North End	0.200
87	Hare Road	County Road 2	South End	0.300
90	Old Kingston Road	County Road 2	East End	0.050
100	Driver's Rest Rd	County Road 2 (West)	County Road 2 (East)	0.600
105	Hillcrest Rd	Drivers Rest Road	South End	0.200
110	Barnum House Road	County Road 2	North End	0.450
115	Barnum House Road	County Road 2	South End	1.400
127	Brimley Road South	0.9km South of County Road 2	1.3km South of County Road 2	0.400
180	Harnden Drive	Aird Street	West End	0.250
185	Old Danforth Road	Station Road	0.3km East of Station Road	0.300
187	Old Danforth Road	0.3km East of Station Road	0.8km East of Station Road	0.500
189	Old Danforth Road	0.8km East of Station Road	Benlock Road	1.100
195	Purdy Road	0.3km North of McMaster Road	Old Danforth Road	0.650
198	Purdy Road	McMaster Road	0.3km North of McMaster Road	0.300
200	McMaster Road	Station Road	Purdy Road	0.350
210	Chapple Road	Orchard Grove Road	North End	0.400

Section Number	Name	From	To	Length
230	Cherry Hill Road	County Road 2	North End	0.200
237	Black Walnut Trail	Shelter Valley Road	North End	0.300
238	Jiggs Road	Shelter Valley Road	North End	0.200
245	Old Danforth Road	0.1km West of Benlock Road	Benlock Road	0.100
250	Beauchamp Road	Benlock Road	South End	1.000
255	Calnan Road	County Road 2	South End	1.000
260	Wicklow Road	County Road 2	Skyview Road	1.500
265	Skyview Road	Shelter Valley Road	Wicklow Road	0.300
280	McGlennon Road	Lakeport Road	South End	0.900
287	MacKenzie Lane	County Road 2	Dudley Street	0.800
310	Old Wharf Road	County Road 31	South End	0.400
320	Knights Road	County Road 2	South End	0.300
325	Hilltop Road	County Road 2	North End	0.500
330	Kernaghan Road	County Road 2	South End	0.900
350	Usborne Road	County Road 2	North End	0.150
367	Craig Road	Northumberland Heights Road	North End	0.700
377	Northumberland Heights Road	1.9km South of Community Centre Road	0.5km South of Community Centre Road	1.400
378	Northumberland Heights Road	0.5km South of Community Centre Road	Community Centre Road	0.500
380	Les Davey Road	Community Centre Road	South End	0.800
390	McMann Road	Hamilton Township Boundary	East End	0.100
395	Bull Road	0.7km East of Tackaberry Road	Stephen Road	0.600
396	Bull Road	Tackaberry Road	0.7km East of Tackaberry Road	0.600
400	Tackaberry Road	Bull Road	0.4km South of Bull Road	0.400
402	Tackaberry Road	0.4km South of Bull Road	South End	0.300

Section Number	Name	From	To	Length
405	Baptist Road	Bull Road	0.5km West of Stewart Road	1.700
410	Stephen Road	Community Centre Road	Baptist Road	1.100
415	Nelson Road	Baptist Road	0.3km South of County Road 22	1.800
420	Nelson Road	0.3km South of County Road 22	County Road 22	0.300
425	Baptist Road	0.5km West of Stewart Road	Stewart Road	0.500
435	Speechley Road	The Scots Line	Community Centre Road	1.100
437	Speechley Road	The Scots Line	South End	0.500
440	Jackson Road	Stewart Road	0.2km East of Stewart Road	0.200
445	O'Grady Road	Community Centre Road	Noble Road	0.500
450	Noble Road	O'Grady Road	Wilson Drive	0.800
452	Noble Road	Wilson Drive	The Scots Line	1.000
455	Wilson Drive	Noble Road	0.2km South of Noble Road	0.200
460	Wilson Drive	0.2km South of Noble Road	0.7km North of McLean Road	1.000
465	Wilson Drive	0.7km North of McLean Road	McLean Road	0.700
470	McLean Road	West End	0.1km West of Hoskin Road	0.200
472	McLean Road	0.1km West of Hoskin Road	Hoskin Road	0.100
475	Bevan Ridge Road	The Scots Line	East End	0.400
493	Grills Road	Intersection	North End	0.250
500	Finley Road	Hoskin Road	0.6km West of Massey Road	1.000
502	Finley Road	0.km West of Massey Road	0.3km West of Massey Road	0.300
503	Finley Road	0.4km West of Massey Road	0.15km West of Massey Road	0.100
504	Finley Road	0.15km West of Massey Road	Massey Road	0.200
510	Old Gully Road	Gully Road	Finley Road	0.300
520	West Road	Massey Road	Fenton Road	0.400
525	Fenton Road	West Road	North End	1.300

Section Number	Name	From	To	Length
532	Edwardson Road	0.4km South of Cranberry Lake Road	Cranberry Lake Road	0.400
535	Cranberry Lake Road	County Road 23	0.3km East of Edwardson Road	0.900
537	Cranberry Lake Road	0.9km West of County Road 23	Fenton Road	0.900
544	Helen's Lane	Clouston Road	South End	0.250
555	Collin Road	Boomerang Road	North End	0.300
560	Diemo Road	0.35km East of Newton Rd.	South Burns Road	0.400
562	Diemo Road	Newton Road	0.35km East of Newton Rd.	0.350
565	Newton Road	Baptist Road	County Road 22	2.000
570	Baptist Road	Stewart Road	Newton Road	0.900
575	Telephone Road	County Road 23	Loughlin Road	2.100
580	Loughlin Road	Telephone Road	0.4km North of Telephone Road	0.400
581	Loughlin Road	0.4km North of Telephone Road	North End	0.400
585	Boyle Road	County Road 23	0.8km West of King Road	1.300
590	Boyle Road	0.8km West of King Road	King Road	0.800
595	King Road	Pipeline Road	Shelter Valley Road	2.100
605	Locke Road	Pipeline Road	Joice Road	1.100
610	Seasonal	Pipeline Road	Joice Road	0.800
620	Joice Road	Eddystone Road	Locke Road	1.100
625	Joice Road	Locke Road	East End	0.400
630	Abbey Lane	Broomfield Road	West End	0.200
635	Bradley Hollow Road	Eddystone Road	1.3km South of County Road 22	0.700
640	Bradley Hollow Road	1.3km South of County Road 22	County Road 22	1.300
645	Pete's Road	County Road 23	0.2km East of County Road 23	0.200
647	Pete's Road	0.2km East of County Road 23	0.2km North of Eddystone Road	0.600

Section Number	Name	From	To	Length
648	Pete's Road	0.2km North of Eddystone Road	Eddystone Road	0.200
650	Thompson Road	County Road 23	West End	0.600
655	Casteels Road	Eddystone Road	County Road 22	1.400
667	Drumlin Lane	Broomfield Road	West End	0.600
670	Boeve Lane	Broomfield Road	0.7km East of Broomfield Road	0.700
672	Boeve Lane	0.7km East of Broomfield Road	Dixon Drive	0.700
680	Cooney Lane	Shelter Valley Road	0.8km South of Shelter Valley Road	0.800
685	Telephone Road	Shelter Valley Road	0.3km West of Shelter Valley Road	0.250
690	Telephone Road	Shelter Valley Road	0.5km East of Shelter Valley Road	0.500
692	Telephone Road	0.5km East of Shelter Valley Road	Vernonville Road	0.750
700	Rutherford Road	Vernonville Road	1.2km East of Vernonvile Road	1.200
702	Rutherford Road	1.2km East of Vernonvile Road	1.5km East of Vernonvile Road	0.300
710	Highland View Drive	Telephone Road	North End	0.700
715	Hofer Road	Telephone Road	North End	0.500
730	McGregor Lane	Telephone Road	South End	0.700
735	Deviney Lane	Vernonville Road	East End	0.300
742	Mercer Lane	West End	Turk Road	0.400
751	Ward Lane	Shelter Valley Road	North End	0.300
757	North Street	Shelter Valley Road	Victoria Street	0.100
775	Dixon Drive	Shelter Valley Road	1.2km North of Shelter Valley Road	1.200
776	Gleason Corner Road	Dixon Road	County Road 22	2.900
777	Seasonal	Broomfield Road	Dixon Drive	0.800
778	Dixon Drive	Shelter Valley Road	Seasonal	1.800
780	Inglis Road	Shelter Valley Road	0.6km North of Shelter Valley Road	0.600
785	Inglis Road	0.6km North of Shelter Valley Road	0.2km South of Old Mill Road	0.400

Section Number	Name	From	To	Length
790	Inglis Road	0.2km South of Old Mill Road	Cramahe Township Boundary	1.500
795	Old Mill Road	Inglis Road	West End	0.300
805	Fisher Road	County Road 22	South End	0.300
812	Day Road	County Road 22	North End	1.000
815	Landon Road	Inglis Road	0.7km North of Inglis Road	0.700
817	Landon Rd	0.7km North of Inglis Road	0.5km South of County Road 22	0.600
819	Landon Rd	0.5km South of County Road 22	County Road 22	0.500
825	Pioneer Road	County Road 45	North End	1.000
832	Earl Road	0.3km East of Kraumanis Road	Kraumanis Road	0.300
835	Brooks Lane	County Road 45	North End	0.600
840	Kraumanis Road	Hickerson Road	0.4km West of Hickerson Road	0.400
845	Hickerson Road	Kraumanis Road	0.7km South of Bowmanton Road	0.800
847	Hickerson Road	0.7km South of Bowmanton Road	Bowmanton Road	0.700
850	Bowmanton Road	Hickerson Road	1.3km South of Beaver Meadow Road	1.500
852	Bowmanton Road	1.3km South of Beaver Meadow Road	Beaver Meadow Road	1.300
857	Bowmanton Road	Beagle Club Road	County Road 9	1.400
860	Beaver Meadow Road	Bowmanton Road	Hamilton Township Boundary	0.900
865	Beaver Meadow Road	0.9km West of Bowmanton Road	1.1km West of Bowmanton Road	0.200
870	Bates Road	County Road 9	0.5km South of County Road 9	0.500
872	Bates Road	Bowmanton Road	0.5km North of Bowmanton Road	0.500
875	Isaac Road	County Road 9	Bowmanton Road	1.300
880	Dunbar Road	Bowmanton Road	County Road 45	3.000
890	Morris Road	County Road 45	0.1km West of County Road 45	0.100
895	Bull's Mill Road	County Road 45 (South)	County Road 45 (North)	1.200

Section Number	Name	From	To	Length
900	Rolph Road	Bull's Mill Road	0.2km West of Bull's Mill Road	0.200
910	Woodland Road	County Road 45	North End	0.600
915	Simpson Hill Road	County Road 9	County Road 45	0.400
920	Dunbar Road	County Road 45	McDonald Road	3.700
925	Nichol Road	County Road 22	0.7km North of County Road 22	0.700
935	McBride Road	County Road 22	North End	0.900
950	Victor Road	McDonald Road	Jewell Road	0.200
955	Davis Road	County Road 45	County Road 29	0.700
960	Jewell Road	County Road 29	0.8km South of County Road 29	0.800
962	Jewell Road	0.8km South of County Road 29	Victor Road	1.700
964	Jewell Road	Victor Road	McDonald Road	0.200
970	Silver Maple Road	Tucker Road	Dunbar Road	1.600
980	Tucker Road	0.6km South of Dunbar Road	Dunbar Road	0.600
985	Dunbar Road	McDonald Road	Tucker Road	1.400
990	Caradoc Road	0.6km South of McDonald Road	McDonald Road	0.600
992	Caradoc Road	Dunbar Road	0.6km South of McDonald Road	0.400
995	Dunbar Road	Tucker Road	Pratt Road	2.600
997	Dunbar Road	Pratt Road	2.6km West of Cramahe Township Boundary	0.700
1000	Dunbar Road	Covert Hill Road	Cramahe Township Boundary	1.000
1001	Dunbar Road	0.9km West of Russ Creek Rd	Covert Hill Road	1.600
1002	Moore Road	West End	0.2km West of Riley Road	0.500
1005	Moore Road	0.2km West of Riley Road	Riley Road	0.200
1010	Riley Road	Moore Road	South End	0.300
1012	Seasonal	Gleasons Corners Road	Pratt Road	0.500

Section Number	Name	From	To	Length
1015	Seasonal	Pratt Road	Cramahe Township Boundary	3.400
1020	Wolfram Road	County Road 22	Seasonal	0.100
1025	Forget Road	County Road 22	0.4km North of County Road 22	0.400
1026	Forget Road	0.4km North of County Road 22	0.9km North of County Road 22	0.500
1030	Gleasons Corner Road	County Road 22	0.8km North of County Road 22	0.800
1035	Carmel Road	County Road 22	Gleasons Corner Road	0.800
1040	Pratt Road	Seasonal	County Road 29	2.900
1042	Pratt Road	Dunbar Road	Dunbar Road	0.900
1047	Pinnacle Hill Road	0.05km North of Whitehead Road	North End	0.500
1050	Whitehead Road	County Road 22	Pinnacle Hill Road	0.600
1055	Milgate Road	County Road 22	North End	1.200
1060	Prettie Road	County Road 22	Milgate Road	0.700
1070	Russ Creek Road	Dunbar Road	Covert Hill Road	1.100
1075	Covert Hill Road	Dunbar Road	0.2km North of Dunbar Road	0.200
1077	Covert Hill Road	0.2km North of Dunbar Road	0.2km South of Clarkson Road	0.700
1080	Covert Hill Road	0.2km South of Clarkson Road	Clarkson Road	0.200
1090	Hogan Road	Covert Hill Road	0.4km West of Covert Hill Road	0.400
1095	Pratt Road	County Road 29	2.0km West of County Road 29	2.000
1105	Goose Creek Road	County Road 18	North End	0.500
1110	North Bethesda Road	County Road 9	0.3km North of County Road 9	0.300
1111	North Bethesda Road	0.3km North of County Road 9	0.3km South of County Road 18	1.300
1112	North Bethesda Road	0.3km South of County Road 18	County Road 18	0.300
1115	North Bethesda Road	County Road 18	0.2km North of County Road 18	0.200
1125	Savory Road	Lilac Valley Road	0.5km East of Lilac Valley Road	0.500
1127	Savory Road	0.5km East of Lilac Valley Road	Cowling Road	1.300

Section Number	Name	From	To	Length
1128	Marriot Road	County Road 9	North End	0.300
1135	Packer Road	County Road 9	1.1km North of County Road 9	1.100
1137	Packer Road	1.1km North of County Road 9	1.0km South of 1st Line Road	1.800
1140	Packer Road	1.0km South of 1st Line Road	0.5km South of 1st Line Road	0.500
1145	Packer Road	0.5km South of 1st Line Road	1st Line Road	0.500
1155	Browns Road	County Road 45	Rae Lane	0.300
1157	Duncan Road	Waldie Lane	County Road 45	0.300
1160	Rae Lane	Browns Road	South End	0.200
1162	Browns Road	Rae Lane	0.25km East of Rae Lane	0.200
1165	Browns Road	0.25km East of Rae Lane	Montgomery Road	0.600
1170	Montgomery Road	County Road 29	1.1km North of County Road 29	1.100
1175	Montgomery Road	1.1km North of County Road 29	Browns Road	1.000
1180	Harper Road	Leach Road	West End	0.200
1185	Leach Road	County Road 29	1.0km North of County Road 29	1.000
1187	Leach Road	1.0km North of County Road 29	George Road	1.000
1190	George Road	0.25km West of Leach Road	Macklin Road	1.100
1192	George Road	Montgomery Road	0.25km West of Leach Road	0.600
1200	Fanning Road	Macklin Road	0.8km East of Macklin Road	0.800
1205	Slade Road	County Road 29	South End	0.400
1210	Whitney Road	County Road 29	East End	0.600
1215	Bright Road	County Road 29	North End	1.000
1220	Ferguson Road	County Road 29	0.9km North of County Road 29	0.900
1224	Ferguson Road	0.9km North of County Road 29	0.4km South of Burnley Road	0.700
1226	Ferguson Road	0.4km South of Burnley Road	Burnley Road	0.400
1228	Ferguson Road	Burnley Road	Noonan Road	1.100

Section Number	Name	From	To	Length
1230	Porter Road	County Road 29	Consession Road 2 West	1.600
1235	Community Hall Road	County Road 29	Noonan Road	0.200
1245	Burnley Road	Noonan Road	Ferguson Road	0.800
1250	Taylor Road	Noonan Road	West End	1.500
1260	Masters Road	Noonan Road	1.0km North of Noonan Road	1.000
1265	Masters Road	1.0km North of Noonan Road	2nd Line Road	1.000
1280	Lean Road	County Road 45	South End	0.200
1285	Lonsberry Road	County Road 45	South End	0.100
1295	Brook Road	1st Line Road	County Road 18	1.400
1300	Davidson Road	1st Line Road	North End	1.000
1306	1st Line Road	Cowling Road	West End	0.200
1325	Ingham Road	Shearer Point Road	East End	0.900
1402	Marsden Lane	Second Line Road	East End	0.300
1410	Glenron Road	2nd Line Road	0.1km South of County Road 24	1.800
1415	Glenron Road	0.1km South of County Road 24	County Road 24	0.100
1420	Drope Road	County Road 24	0.4km South of County Road 45	1.700
1425	Drope Road	0.4km South of County Road 45	County Road 45	0.400
1430	Church Road	County Road 45 (West)	County Road 45 (East)	0.400
1432	Crosby Road	County Road 45	North End	0.800
1435	Lewis Road	County Road 24	County Road 45	1.100
1440	School House Road	County Road 45	Lewis Road	0.800
1465	5th Line Road	Cook Road	West End	0.800
1468	5th Line Road	0.5km East of Campbell Road	Merrill Road	0.800
1469	5th Line Road	Merrill Road	Coyle Road	1.800
1472	Cook Road	Robin's Road	North End	1.100

Section Number	Name	From	To	Length
1480	Rolling Banks Road	Robins Road	0.4km South of Robins Road	0.500
1485	Highland Road	Merrill Road	North End	0.700
1490	Highland Road	7th Line Road	South End	0.400
1515	Coyle Road	County Road 45	Webb Road	3.100
1520	Clark Road	Coyle Road	East End	0.600
<hr/>				<hr/>
248				188.550

APPENDIX L
SIDEWALKS

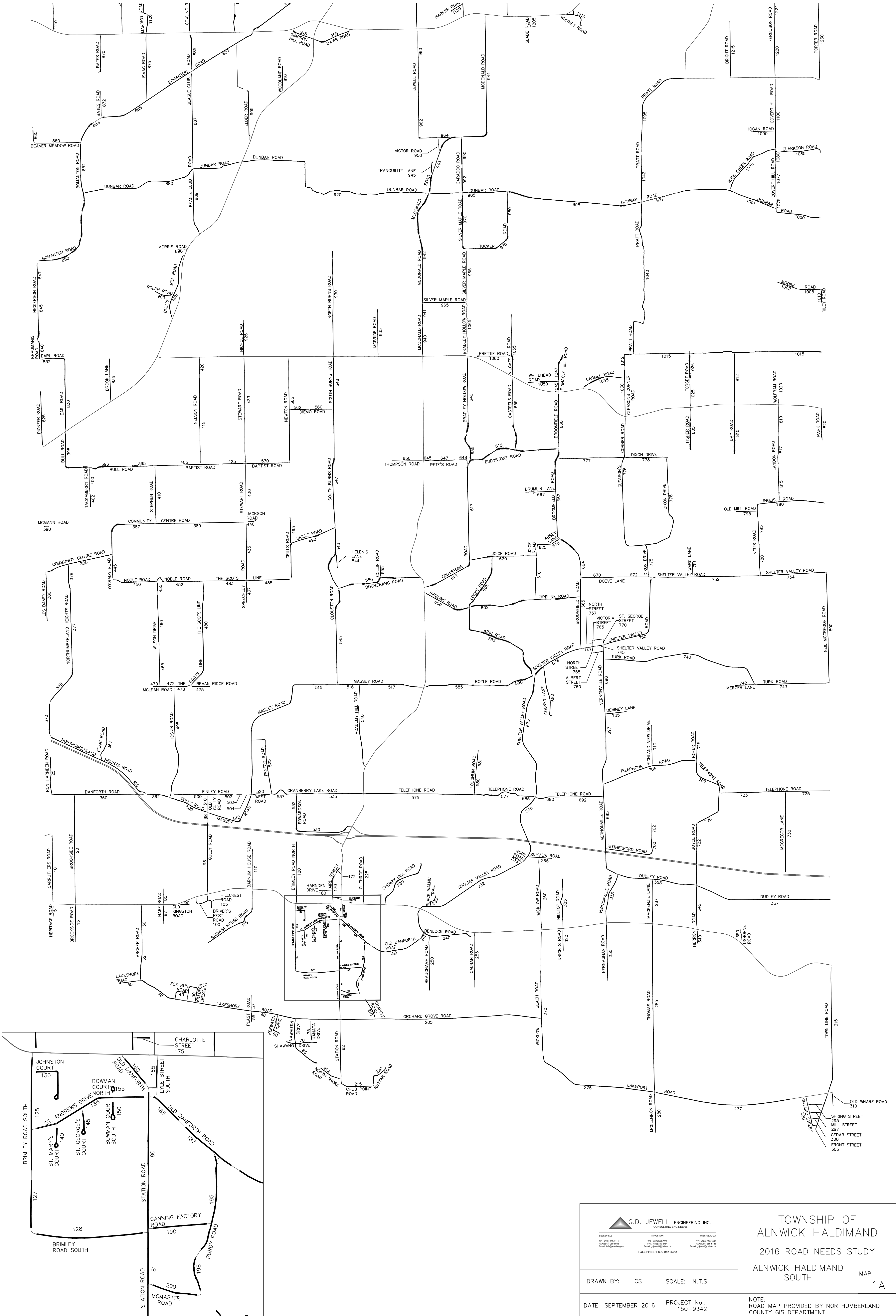



Township of Alnwick Haldimand Sidewalks

Section Number	Name	From	To	Sidewalk Present	Side	Length (m)	Number of Tripping Hazards	Number of Cracks	Length of Asphalt Sidewalk (m)	Number of Tripping Hazards in Asphalt
80	Station Road	Old Danforth Road	0.6km South of Old Danforth Road	One Side	West	0	0	0	282	0
						0	0	0	0	0
160	Old Danforth Road	County Road 2	Station Road	One Side	East	279.4	0	9	0	0
						0	0	0	0	0
172	Aird Street	County Road 2	0.4km North of County Road 2	One Side	West	85	0	12	0	0
						0	0	0	0	0
2000	County Road 2	County Road 23	Clitheroe Road	One Side	North	6.5	0	1	0	0
						0	0	0	0	0
2005	County Road 2	County Road 23	Aird Street	One Side	North	138	0	5	0	0
						0	0	0	0	0
2010	County Road 2	Aird Street	Brimley Road North	Both Sides	North	102.5	0	4	0	0
					South	493.7	0	37	0	0
23000	County Road 23	County Road 2	Aird Street	One Side	West	91.8	0	7	0	0
						0	0	0	0	0
24000	County Road 24	County Road 45	Lewis Road	Both Sides	North	461	0	34	0	0
					South	352.5	0	23	0	0
45000	County Road 45	Division Street	County Road 24	One Side	East	29.3	0	0	0	0
						0	0	0	0	0

Section Number	Name	From	To	Sidewalk Present	Side	Length (m)	Number of Tripping Hazards	Number of Cracks	Length of Asphalt Sidewalk (m)	Number of Tripping Hazards in Asphalt
45005	County Road 45	County Road 24	Schoolhouse Road	One Side	East	113.5	0	9	0	0
					0	0	0	0	0	0
						2153.2	0	141	282	0

MAPS



 <p>G.D. JEWELL ENGINEERING INC. CONSULTING ENGINEERS</p> <p>TEL: (905) 886-1111 FAX: (905) 886-0888 TEL: (905) 886-1111 FAX: (905) 886-0888 E-MAIL: gje@jewelleng.com</p> <p>TOLL FREE 1-800-966-4338</p>		<p>TOWNSHIP OF ALNICK HALDIMAND</p> <p>2016 ROAD NEEDS STUDY</p> <p>ALNICK HALDIMAND SOUTH</p>	
<p>DRAWN BY: CS</p>	<p>SCALE: N.T.S.</p>	<p>MAP 1A</p>	
<p>DATE: SEPTEMBER 2016</p>	<p>PROJECT No.: 150-9342</p>	<p>NOTE: ROAD MAP PROVIDED BY NORTHUMBERLAND COUNTY GIS DEPARTMENT</p>	

TOWNSHIP OF
ALNWICK HALDIMAND

2016 ROAD NEEDS STUDY

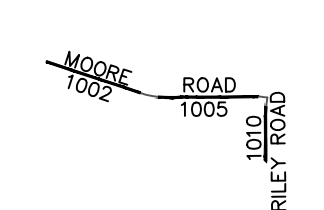
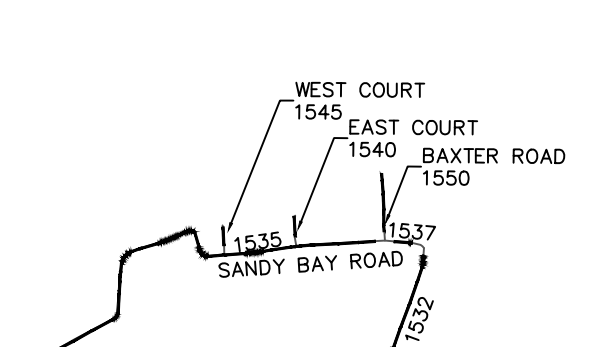
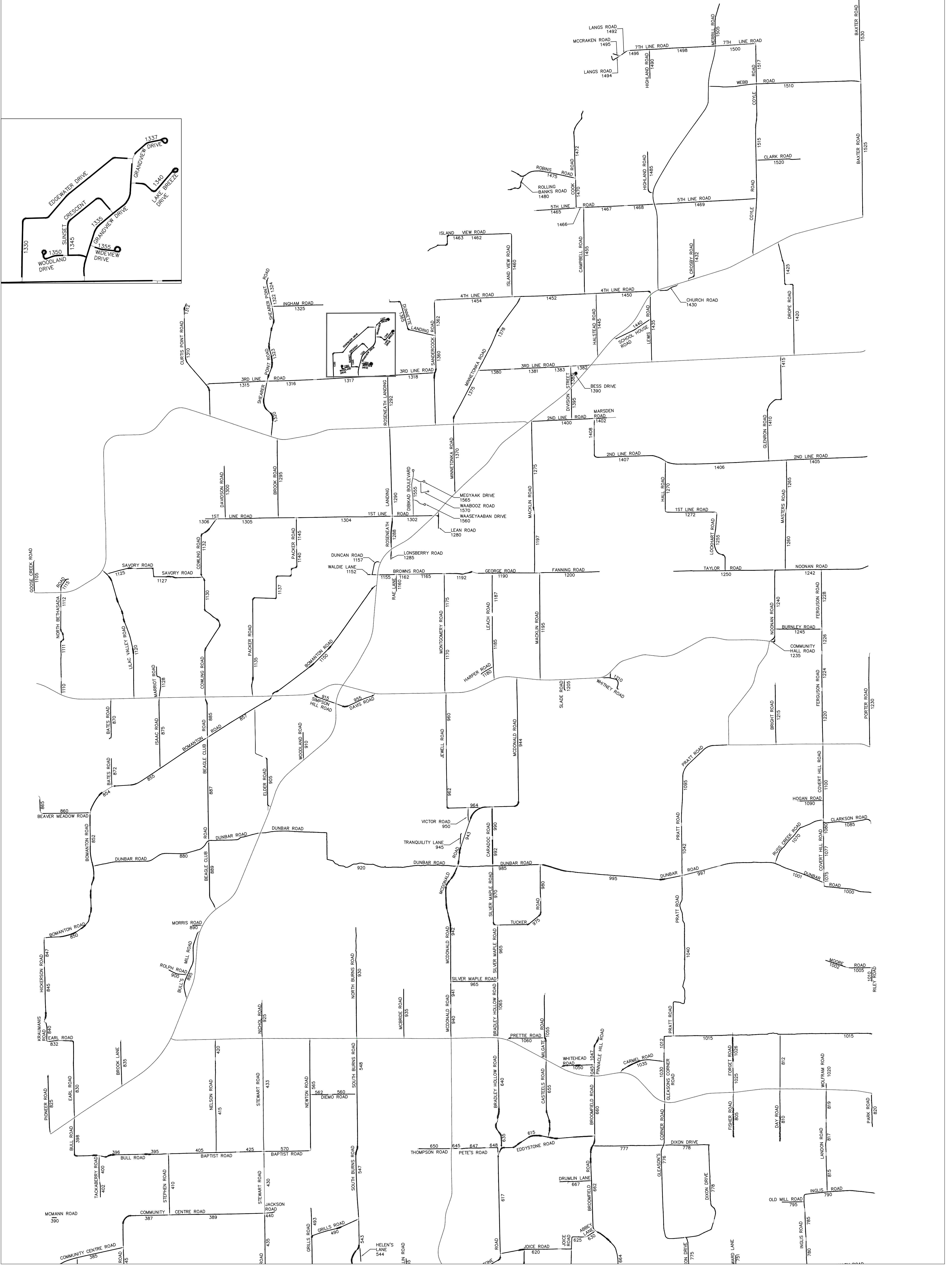
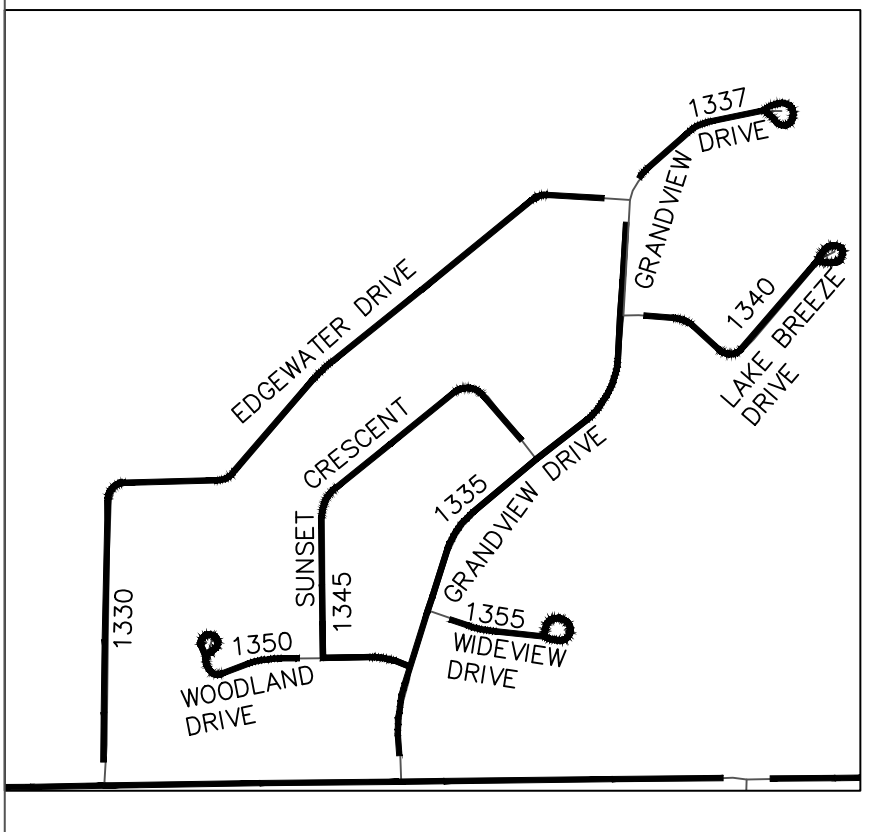
ALNWICK HALDIMAND
SOUTH

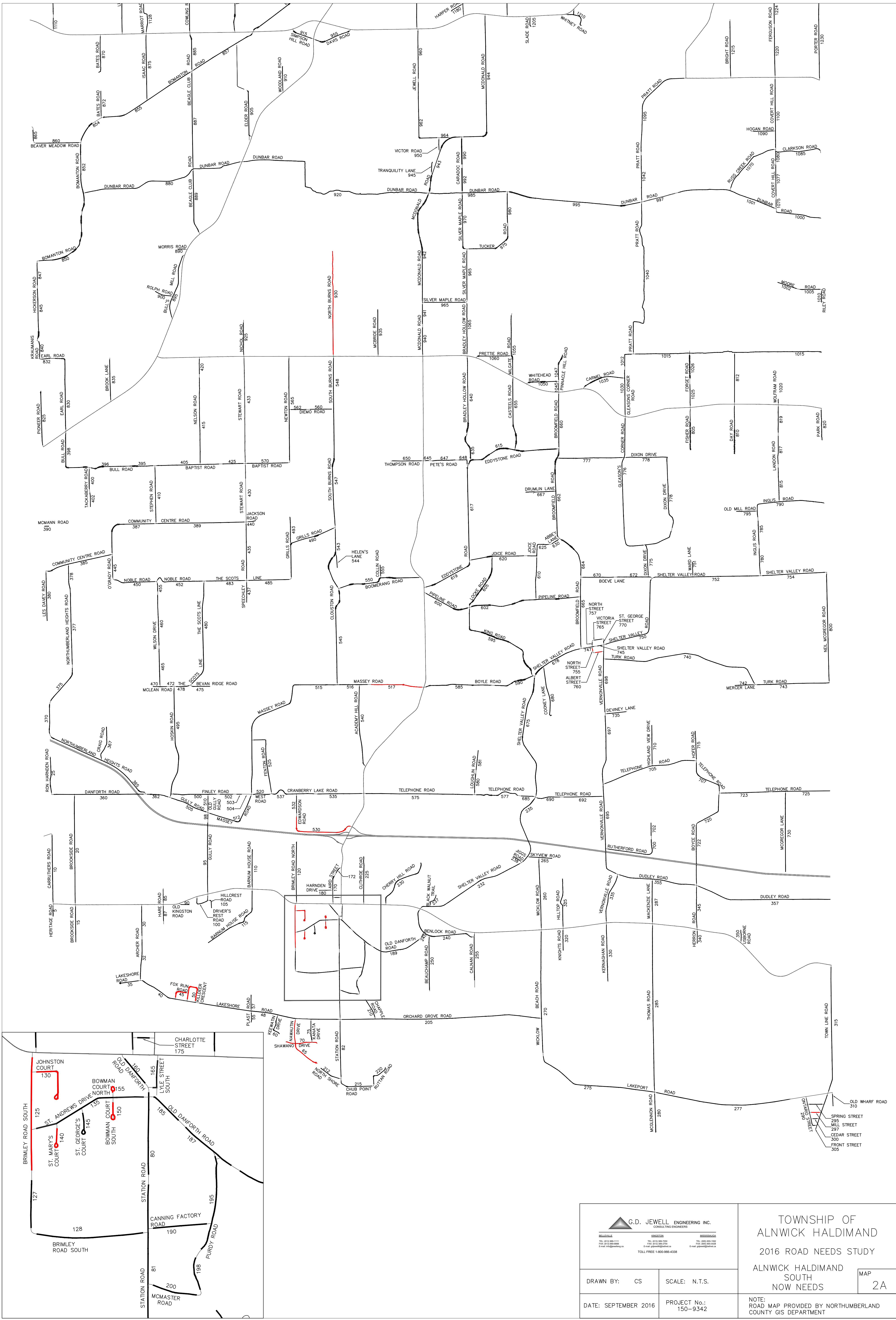
DRAWN BY: CS SCALE: N.T.S.


DATE: SEPTEMBER 2016 PROJECT No.: 150-9342

NOTE:
ROAD MAP PROVIDED BY NORTHUMBERLAND
COUNTY GIS DEPARTMENT

MAP
1B





 <p>G.D. JEWELL ENGINEERING INC. CONSULTING ENGINEERS</p> <p>TEL: (905) 886-1111 FAX: (905) 886-0888 TEL: (905) 886-1111 FAX: (905) 886-0888 E-MAIL: gje@jewelleng.com</p> <p>TOLL FREE 1-800-966-4338</p>		<p>TOWNSHIP OF ALNICK HALDIMAND</p> <p>2016 ROAD NEEDS STUDY</p> <p>ALNICK HALDIMAND SOUTH NOW NEEDS</p>	
<p>DRAWN BY: CS</p>	<p>SCALE: N.T.S.</p>	<p>MAP 2A</p>	<p>NOTE: ROAD MAP PROVIDED BY NORTHUMBERLAND COUNTY GIS DEPARTMENT</p>
<p>DATE: SEPTEMBER 2016</p>	<p>PROJECT No.: 150-9342</p>		

TOWNSHIP OF
ALNWICK HALDIMAND

2016 ROAD NEEDS STUDY

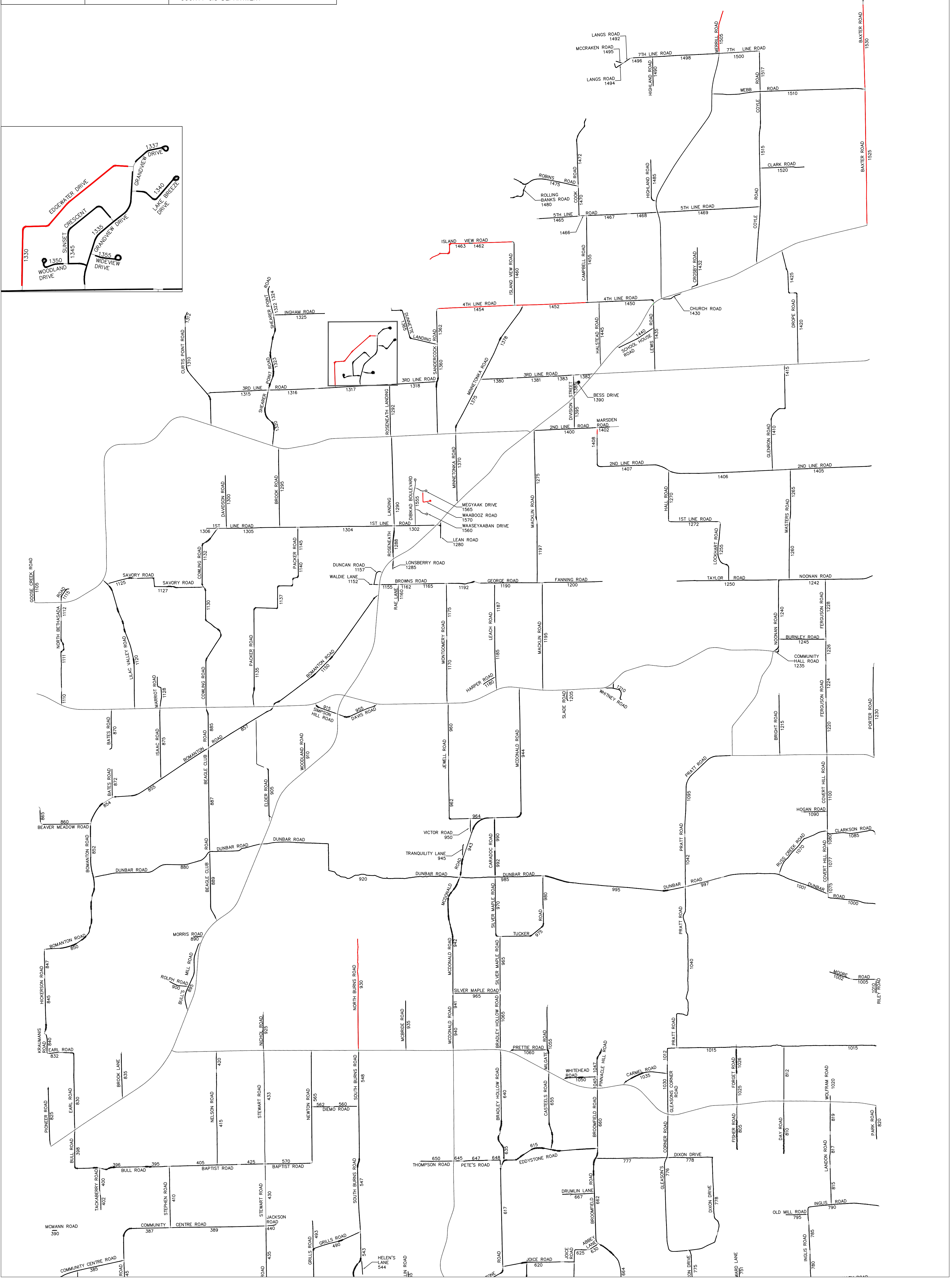
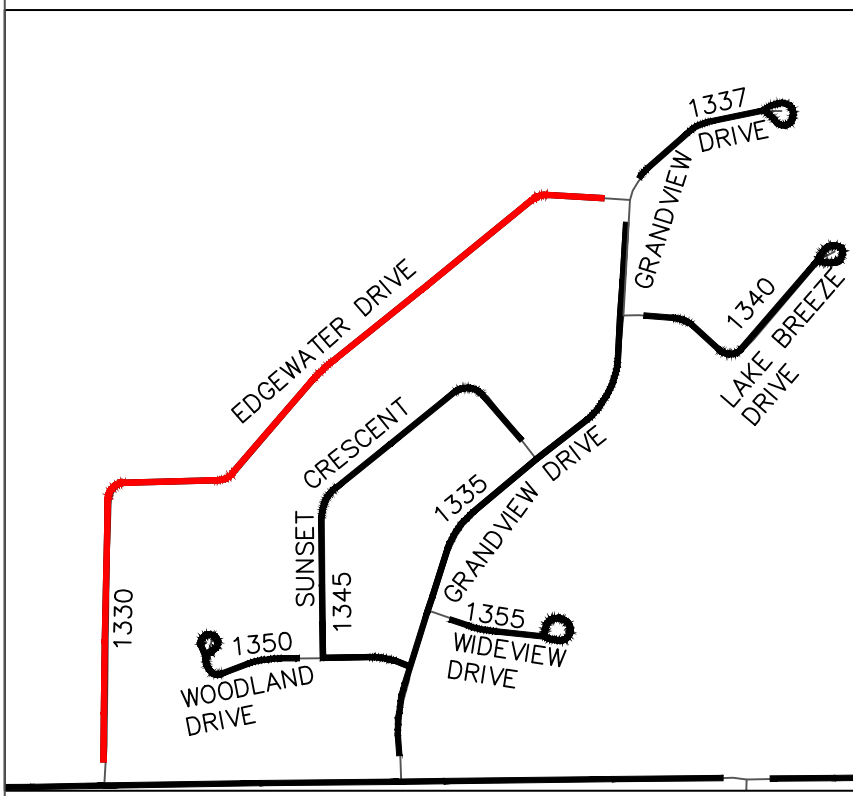
ALNWICK HALDIMAND
NORTH
NOW NEEDS

DRAWN BY: CS SCALE: N.T.S.

DATE: SEPTEMBER 2016 PROJECT No.: 150-9342

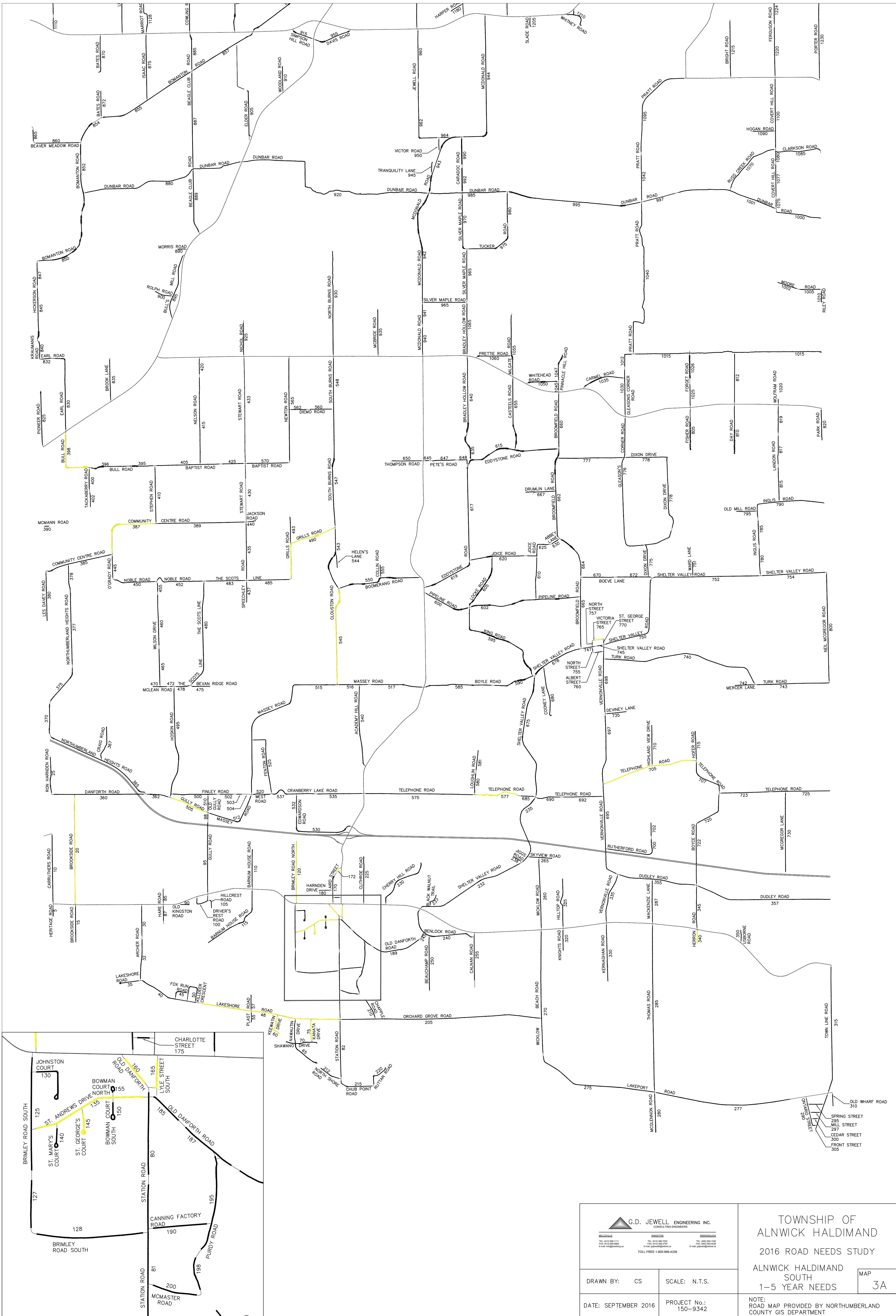
NOTE:
ROAD MAP PROVIDED BY NORTHUMBERLAND
COUNTY GIS DEPARTMENT


MAP
2B



WEST COURT 1545
EAST COURT 1540
BAXTER ROAD 1550
SANDY BAY ROAD 1537
BAXTER ROAD 1532

MCCRE ROAD 1005
MCCRE ROAD 1010
MCCRE ROAD 1015
RILEY ROAD 820



 <p>G.D. JEWELL ENGINEERING INC. CONSULTING ENGINEERS</p> <p>TEL: (905) 886-1111 FAX: (905) 886-0888 TEL: (905) 886-0200 FAX: (905) 886-0200 E-MAIL: gje@jewelleng.com</p> <p>TOLL FREE 1-800-966-4338</p>		<p>TOWNSHIP OF ALNICK HALDIMAND</p> <p>2016 ROAD NEEDS STUDY</p> <p>ALNICK HALDIMAND SOUTH</p> <p>1-5 YEAR NEEDS</p>	
<p>DRAWN BY: CS</p>	<p>SCALE: N.T.S.</p>	<p>MAP 3A</p>	<p>NOTE: ROAD MAP PROVIDED BY NORTHUMBERLAND COUNTY GIS DEPARTMENT</p>
<p>DATE: SEPTEMBER 2016</p>	<p>PROJECT No.: 150-9342</p>		

**TOWNSHIP OF
ALNWICK HALDIMAND**

2016 ROAD NEEDS STUDY

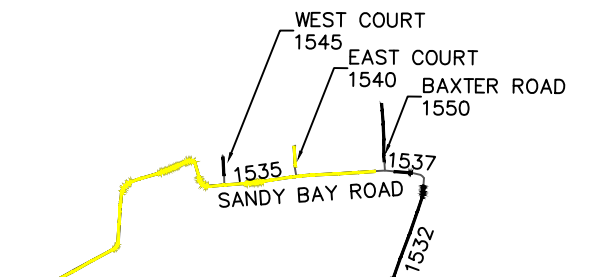
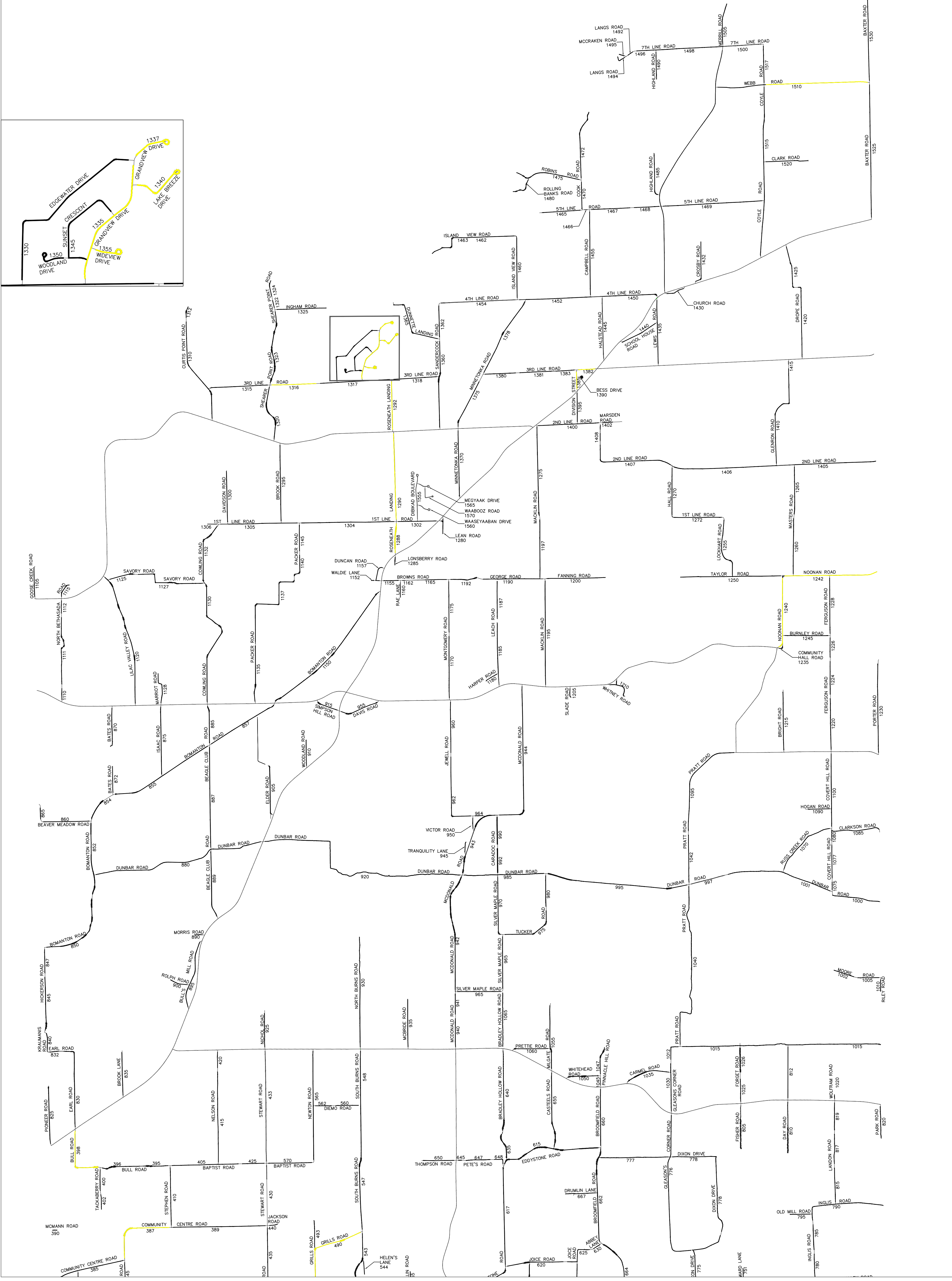
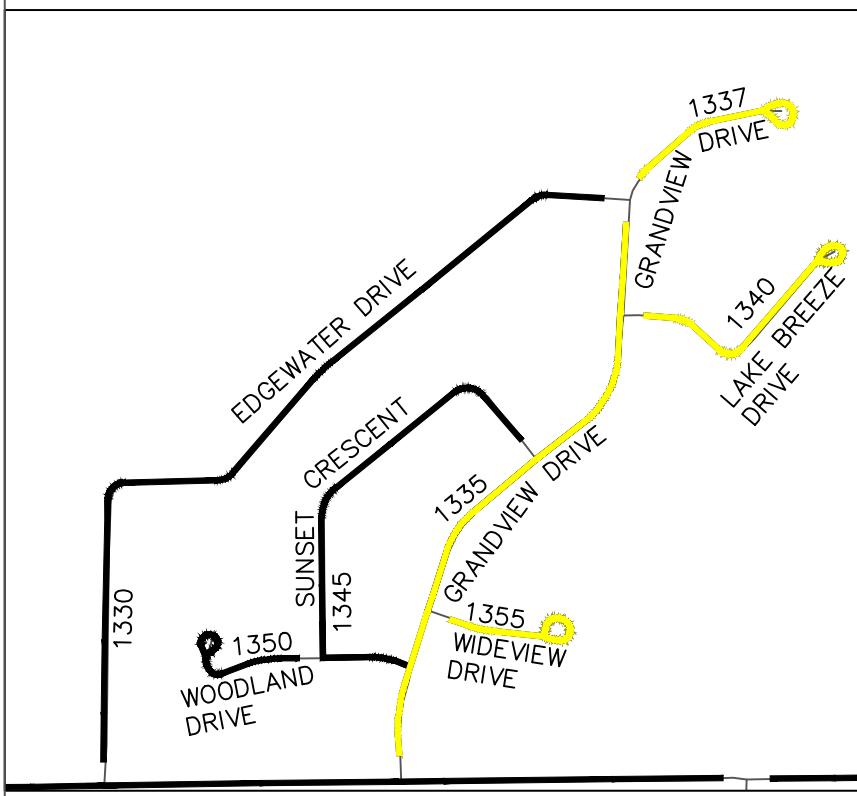
**ALNWICK HALDIMAND
NORTH
1-5 YEAR NEEDS**

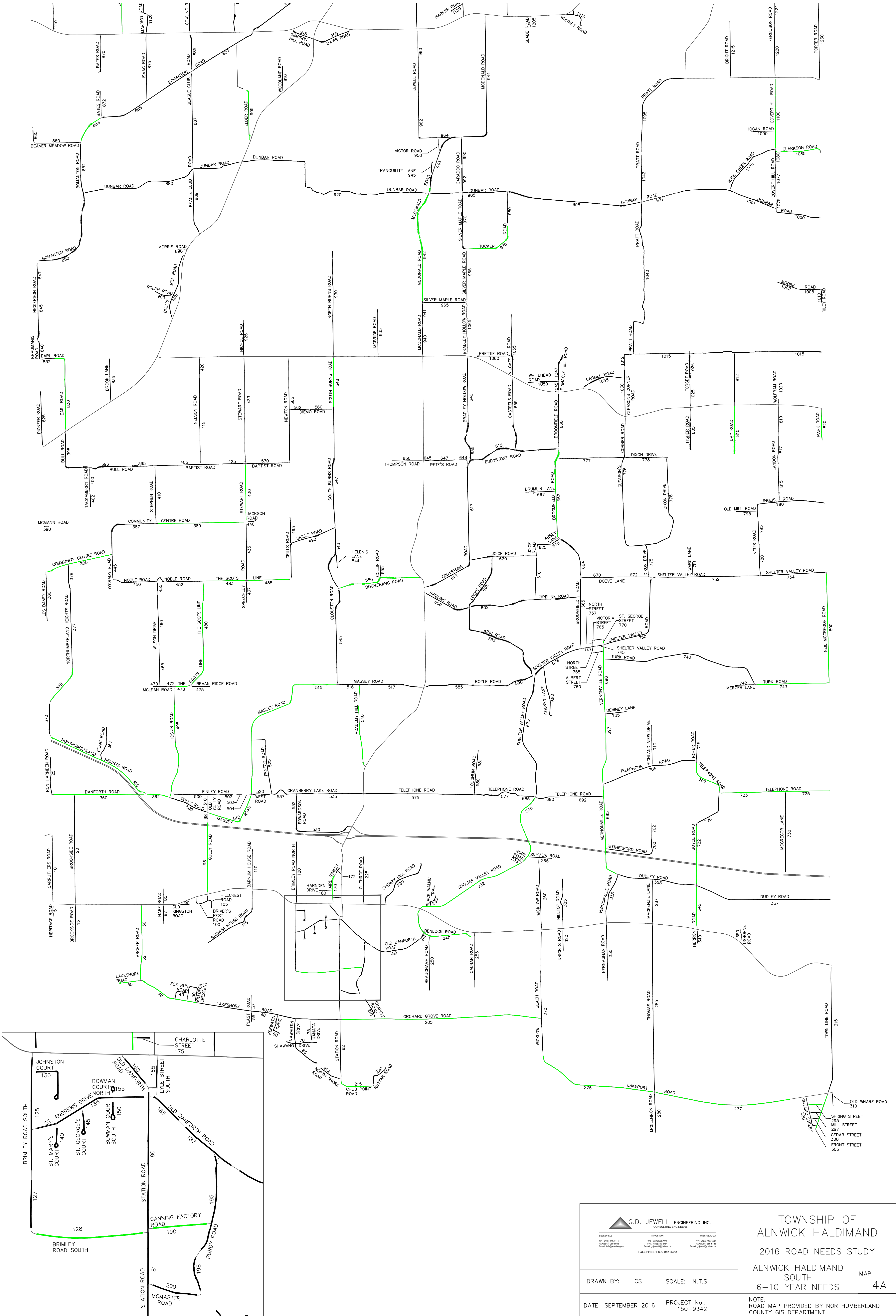
MAP
3B


DRAWN BY: CS SCALE: N.T.S.

DATE: SEPTEMBER 2016 PROJECT No.: 150-9342

NOTE:
ROAD MAP PROVIDED BY NORTHUMBERLAND
COUNTY GIS DEPARTMENT





 <p>G.D. JEWELL ENGINEERING INC. CONSULTING ENGINEERS</p> <p>TEL: (905) 886-1111 FAX: (905) 886-0888 TEL: (905) 886-1111 FAX: (905) 886-0888 E-MAIL: gje@jewelleng.com</p> <p>TOLL FREE 1-800-966-4338</p>		<p>TOWNSHIP OF ALNICK HALDIMAND</p> <p>2016 ROAD NEEDS STUDY</p> <p>ALNICK HALDIMAND SOUTH 6-10 YEAR NEEDS</p>	
<p>DRAWN BY: CS</p>	<p>SCALE: N.T.S.</p>	<p>MAP 4A</p>	
<p>DATE: SEPTEMBER 2016</p>	<p>PROJECT No.: 150-9342</p>	<p>NOTE: ROAD MAP PROVIDED BY NORTHUMBERLAND COUNTY GIS DEPARTMENT</p>	

TOWNSHIP OF
ALNWICK HALDIMAND

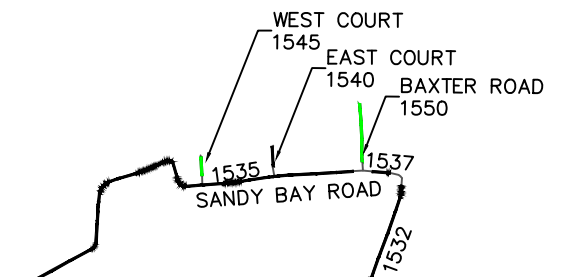
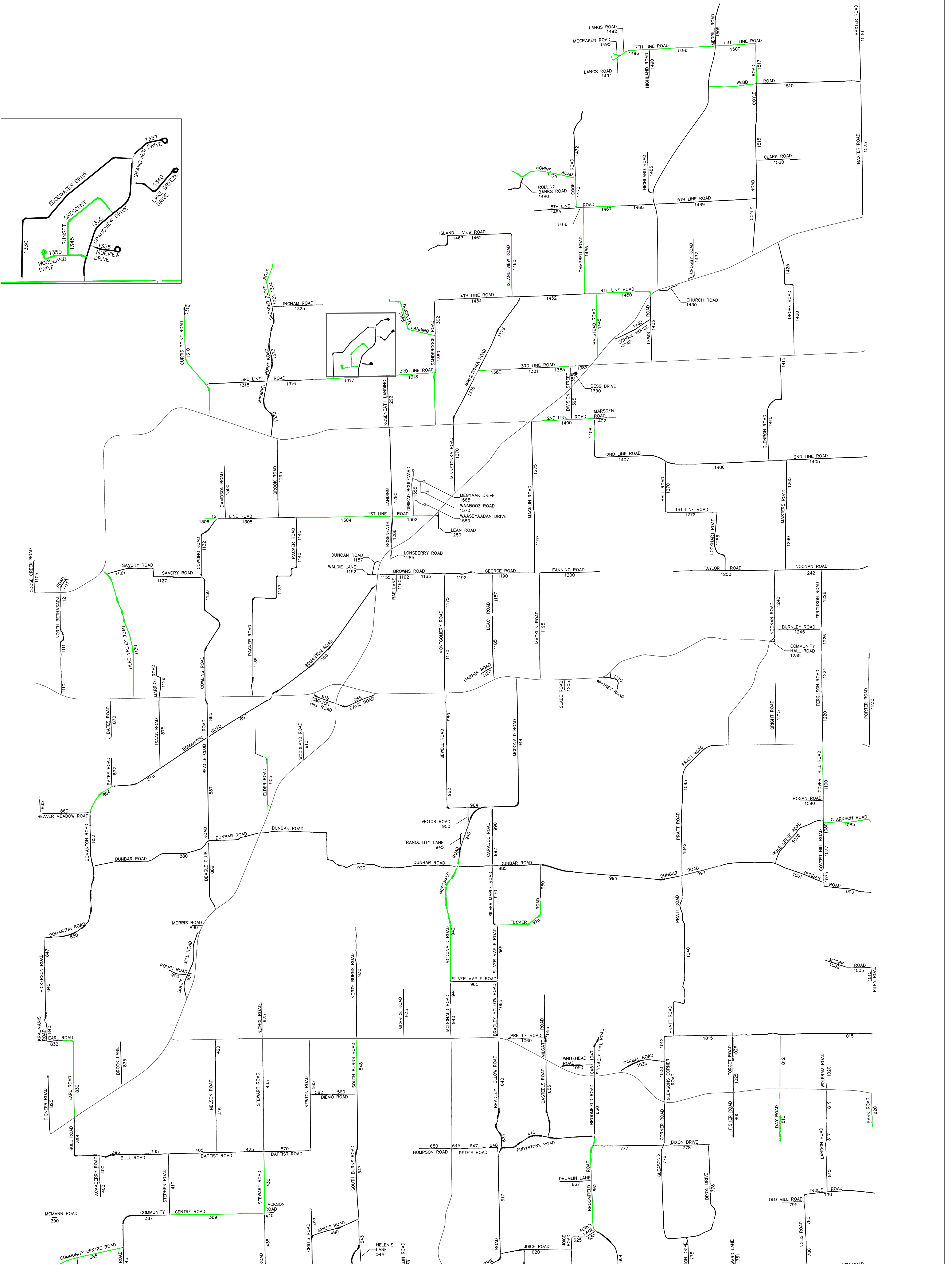
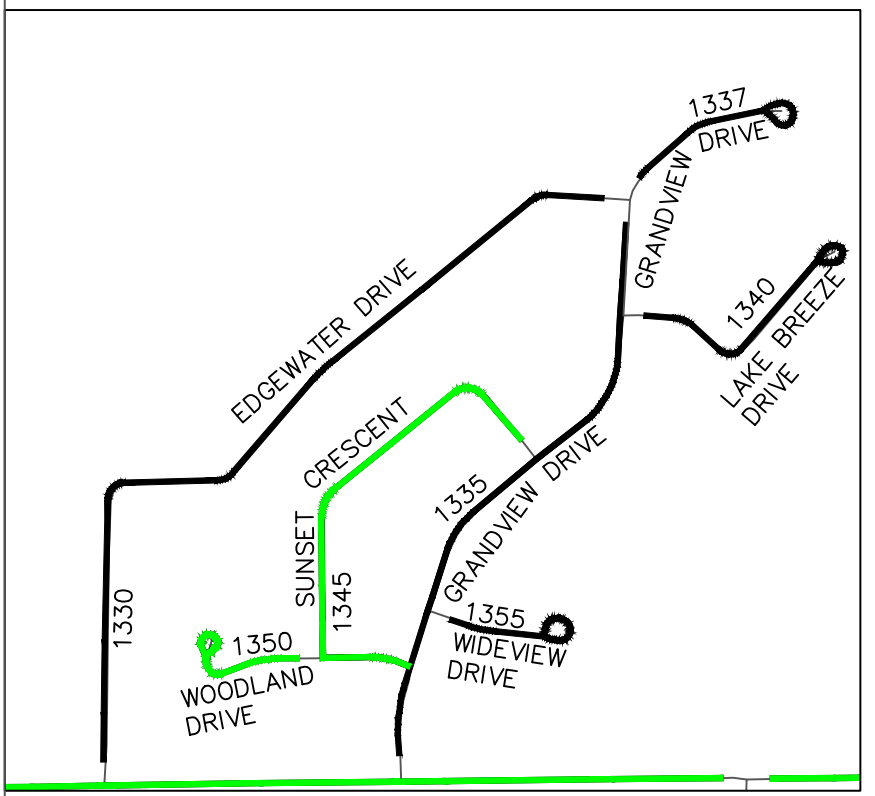
2016 ROAD NEEDS STUDY

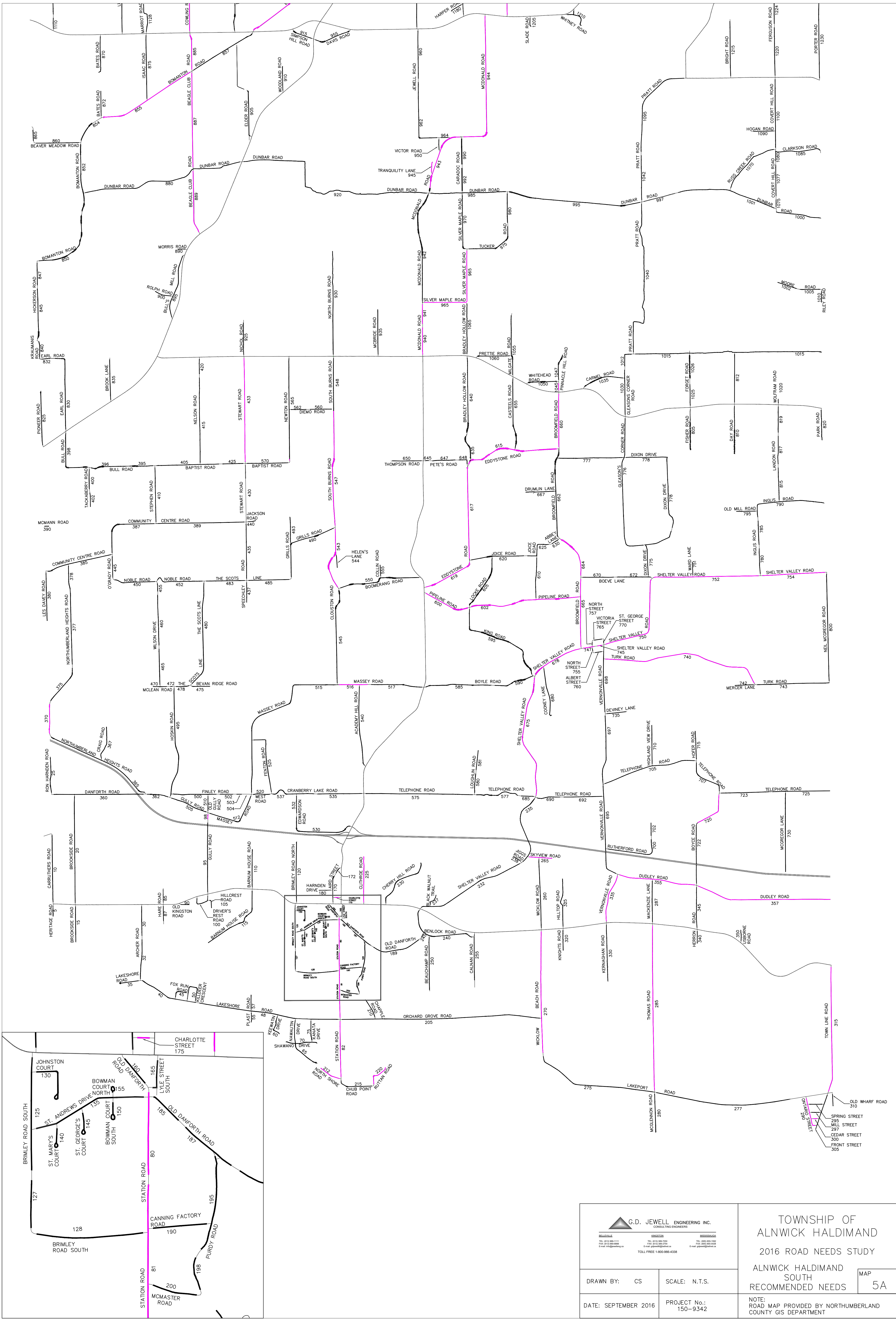
ALNWICK HALDIMAND
NORTH

6-10 YEAR NEEDS

DRAWN BY: CS	SCALE: N.T.S.
DATE: SEPTEMBER 2016	PROJECT No.: 150-9342

MAP 4B
NOTE: ROAD MAP PROVIDED BY NORTHUMBERLAND COUNTY GIS DEPARTMENT





G.D. JEWELL ENGINEERING INC.
CONSULTING ENGINEERS

TEL: (905) 886-1111 FAX: (905) 886-0888
TEL: (905) 886-0200 FAX: (905) 886-0200
TEL: (905) 886-0200 FAX: (905) 886-0200
E-MAIL: gje@jewelleng.com

TOLL FREE 1-800-966-4338

TOWNSHIP OF
ALNICK HALDIMAND

2016 ROAD NEEDS STUDY

ALNICK HALDIMAND
SOUTH
RECOMMENDED NEEDS

MAP
5A

NOTE:
ROAD MAP PROVIDED BY NORTHUMBERLAND
COUNTY GIS DEPARTMENT

DRAWN BY: CS SCALE: N.T.S.

DATE: SEPTEMBER 2016 PROJECT No.: 150-9342

