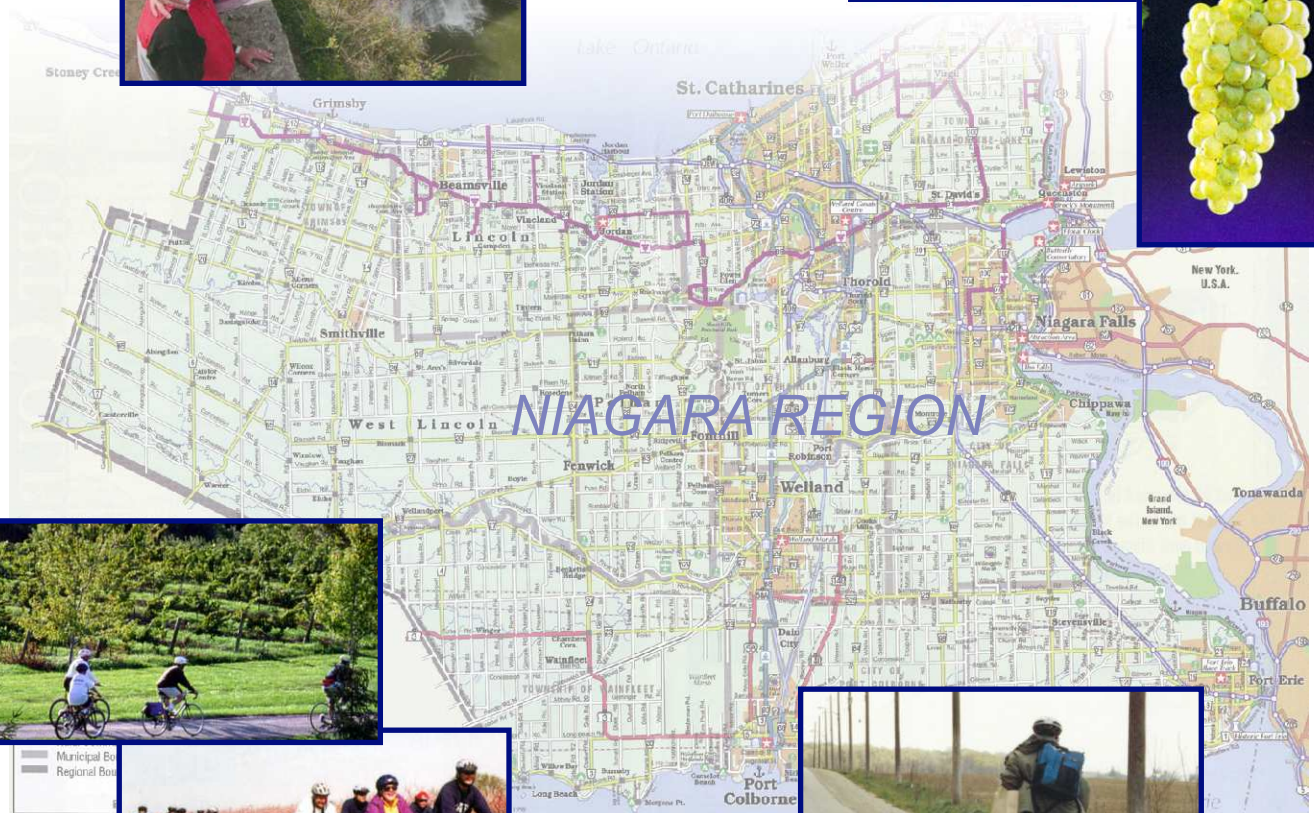
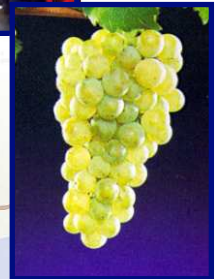


REGIONAL NIAGARA BIKEWAYS MASTER PLAN



Prepared by:



and



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TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....A-I
EXECUTIVE SUMMARYE-I
1.0 INTRODUCTION..... 1-1
1.1 About Niagara Region..... 1-2
1.2 Why a Bikeways Master Plan 1-3
2.0 DIRECTION..... 2-1
2.1 Vision, Goals and Objectives 2-1
2.2 Study Purpose..... 2-2
2.3 Study Approach..... 2-2
2.4 Public Stakeholder Consultation 2-4
2.5 RNBP Organization..... 2-7
3.0 CONTEXT 3-1
3.1 North American Cycling Perspective 3-1
3.1.1 Transportation Efficiency Benefits 3-2
3.1.2 Recreation, Health and Fitness Benefits 3-3
3.1.3 Environmental Benefits 3-4
3.1.4 Economic Benefits 3-4
3.2 Previous Regional Initiatives..... 3-6
3.2.1 Regional Niagara Policy Plan..... 3-6
3.2.2 Regional Bicycling Study..... 3-7
3.2.3 Try-cycle 3-7
3.2.4 Smart Growth in Niagara 3-8
3.2.5 Interim Retrofitting Cycling Guide For the Niagara Region 3-8
3.2.6 Niagara’s Transportation Strategy. 3-8
3.3 Local Initiatives..... 3-9
4.0 CYCLING IN NIAGARA REGION4-1
4.1 Public Attitude Survey 4-1
4.2 Toronto Bike Show Survey 4-6
4.3 User Survey 4-7
4.4 Tourism and Market Assessment 4-8
4.5 Risk Management - Cycling Safety and Liability Issues..... 4-12
5.0 NETWORK 5-1
5.1 Facility Types 5-1
5.1.1 Class 1-Multi-Use-Trail..... 5-1
5.1.2 Class 2-Paved Shoulder/Bike Lane5-2
5.1.3 Class 3-Signed Route 5-2
5.2 Route Selection..... 5-3
5.3 Network Development Approach..... 5-5
5.3.1 Review and Update Inventory of Existing Conditions..... 5-6
5.3.2 Identify Major Attractions and Destinations..... 5-6
5.3.3 Barriers to Cycling 5-7
5.3.4 Touring/Recreational Routes 5-7
5.3.5 Candidate Routes 5-9
5.4 Proposed Bikeways Network 5.9
6.0 REGIONAL NIAGARA PLANNING AND DESIGN GUIDELINES 6-1
6.1 Types of Cyclists 6-1
6.1.1 Age 6-2
6.1.2 Skill Level 6-2
6.1.3 Trip Purpose 6-3



REGIONAL NIAGARA Bikeways Master Plan

6.2	Bikeway Facility Types.....	6-3	6.8.1	Current Bridge Standards	6-44
6.3	Bicycle Characteristics and Design Considerations	6-3	6.8.2	Multi-Use Trail Bridges	6-48
6.3.1	Gradients	6-6	6.8.3	Freeway Overpasses	6-50
6.3.2	Design Speed for Cyclists	6-9	6.9	Bikeways Crossing Through Tunnels	6-51
6.3.3	Sight Distance.....	6-9	6.10	Welland Canal Ferry Crossing at Port Robinson	6-52
6.4	Alignment Elements	6-11	6.11	Bicycle Friendly Catchbasin Covers	6-53
6.4.1	Horizontal Alignment.....	6-11	6.12	Accommodating Bicycles in Construction Zones.....	6-54
6.4.2	Vertical Alignment.....	6-13	6.13	Support Facilities.....	6-55
6.4.3	Cross Slope.....	6-15	6.13.1	Bicycle Parking Facilities.....	6-55
6.5	Width Considerations	6-15	6.13.2	Rest and Staging Areas.....	6-56
6.5.1	Class 1-Multi-Use Trail.....	6-15	6.13.3	End-Of-Trip-Facilities for Commuters	6-57
6.5.2	Class 2-Paved Shoulder/ Bike Lanes	6-16	6.14	Bikeway Signing	6-58
6.5.3	Bike Lanes with On-Street Parking.....	6-22	6.14.1	Signage Formats	6-59
6.5.4	Class 3-Signed Routes.....	6-23	6.14.2	Bikeway Pavement Markings.....	6-60
6.5.5	Motor Vehicle Travel Lane and Paved Shoulder Widths	6-26	6.14.3	Gateways	6-64
6.5.6	Summary-Off-Road Facilities	6-27	6.15	Maintenance	6-65
6.5.7	Summary-On-Road Facilities.....	6-28	6.15.1	Maintenance Issues Effecting On / Off-Road Bikeways	6-66
6.6	Retrofitting Regional Roads	6-28	6.15.2	Primary References	6-68
6.7	Other Design Elements.....	6-33	6.15.3	The Need for Flexibility	6-68
6.7.1	Boulevard Trails	6-33	7.0	OUTREACH.....	7-1
6.7.2	Paved Shoulders/Bike Lanes at Intersections	6-34	7.1	Education.....	7-1
6.7.3	Mid-Block Crossings.....	6-37	7.2	Encouragement	7-6
6.7.4	Railway Crossings.....	6-41	7.3	Enforcement.....	7-10
6.7.5	Cyclists Crossing at Traffic Signals	6-42			
6.7.6	Barriers	6-42			
6.8	On-Road Cycling Facilities On Bridge Structures.....	6-43			



REGIONAL NIAGARA Bikeways Master Plan

8.0 IMPLEMENTATION 8-1

8.1 The Implementation Strategy 8-1

8.2 Network Priorities 8-1

8.3 Administering the Plan 8-5

 8.3.1 The Current Structure 8-5

8.4 The Role of the RNBC 8-6

 8.4.1 RNBC Mandate 8-7

 8.4.2 RNBC Membership 8-8

 8.4.3 RNBC Reporting Mechanism 8-10

 8.4.4 RNBC Funding Mechanism 8-10

8.5 The Role of the Region 8-11

 8.5.1 Establish a Sustainable Transportation Co-ordinator (STC) 8-11

 8.5.2 Sustainable Transportation Staff Co-ordinating Committee (STCC) 8-11

 8.5.3 Establish a Bikeway Inter-Municipal Working Group 8-12

8.6 Implementation Reporting Structure 8-13

8.7 The Implementation Process Tool .. 8-14

8.8 Funding the Plan (Network and Program) 8-19

 8.8.1 How Much Will it Cost? 8-19

 8.8.2 Where Will the Money Come From? 8-20

8.9 Monitoring 8-21

8.10 Next Steps 8-23

9.0 GUIDELINES, RECOMMENDATIONS AND POLICIES 9-1

9.1 Guidelines 9-1

9.2 Recommendations 9-5

9.3 Policies 9-11

 9.3.1 Amendment Text 9-11

LIST OF FIGURES

On or Following Page

1-1 Study Area 1-3

1-2 1995 Proposed Regional Bicycling Network 1-4

1-3 Welland Canal Trail Master Plan 1-4

3-1 Estimated Savings Per Bicycle Mile Travelled, Minnesota DOT 3-6

4-1 Household with Bicycles 4-1

4-2 Cyclist Profile by Age and Type 4-2

4-3 Seasonal Cycling Incidence 4-3

4-4 Changes That Would Improve Niagara Region Cycling 4-4

4-5 Top Five Cycling Destinations in Niagara Region 4-8

4-6 Cycling Growth by Type (2000 to 2020) 4-9

4-7 Selected Canadian Cycling Statistics 4-13

5-1 Existing Bikeway Inventory 5-6

5-2 Attractions & Destinations 5-6

5-3 Major Barriers 5-8

5-4 Scenic Touring Routes Identified by



REGIONAL NIAGARA Bikeways Master Plan

5-5	The RNBC	5-8	6-18c	Skewed Railroad Crossing Restricted Right-of-Way Width with Gate.....	6-41
5-6	Greater Niagara Circle Route	5-8	6-18d	Skewed Railroad Crossing Unrestricted Right-of-Way Width with Gate.....	6-41
5-7	Cycling Tour Routes	5-8	6-19	Example of Bicycle Signal	6-42
5-8	Candidate Routes.....	5-10	6-20	TAC Standard-Bikeway Crossing Freeway On-ramp.....	6-50
5-8	Regional Bikeways Network.....	5-10	6-21	TAC Standard- Bikeway Crossing Freeway Exit Ramp	6-51
5-9	Network Facility Types By Route Segment	5-10	6-22	Millennium Trail Staging Area-City of Niagara Falls	6-57
6-1	Operating Envelop for Cyclists	6-5	6-23	MTO Guidelines for Bicycle Lanes..	6-61
6-2	No Passing Sign	6-7	6-24	San Francisco Shared Lane Bikeway Symbol	6-63
6-3	Multi-Use Trail.....	6-15	8-1	Short Term Priorities	8-2
6-4	Class 2- Paved shoulder	6-16	8-2	Ultimate Facility Type for Interim Solutions	8-4
6-5	Shoulder Component of Typical road Platform (no bike)	6-17	8-3	Long Term Priorities	8-4
6-6	Example of An Urban Road Cross Section with 1.5m Bike Lanes.....	6-20	8-4	RNBP Implementation Reporting Structure.....	8-14
6-7	Example of an Rural Section with 1.5m Paved Shoulder Lanes	6-21	8-5	Bikeway Network Implementation Process	8-16
6-8	Typical Bike Lane with On-Street Parking.....	6-22	8-6	RNBP Implementation Priorities and Associated Costs.....	8-20
6-9	Class 3 Signed Route.....	6-24			
6-10	Bikeway Facility Types.....	6-25			
6-11	Typical Pavement Markings for Bicycle Lane at Right Turning Roadway	6-35			
6-12	Bicycle Lane Adjacent to Through/Right Turn Lane	6-35			
6-13	Bicycle Lane Adjacent to Introduction Right Turn Lane.....	6-36			
6-14	Left Turn Bicycle Lane	6-36			
6-15	Elements of Trail Crossings of Roadways	6-38			
6-16	Minimum sight Distance for Bike Path Crossing.....	6-39			
6-17	Raised Crosswalk Design.....	6-40			
6-18a	Skewed Railroad Crossing Restricted Right-of-Way Width	6-41			
6-18b	Skewed Railroad Crossing Restricted Right-of-Way Width	6-41			

LIST OF TABLES

		On or Following Page
EX.1	Network Implementation Strategy..	EX-5
5.1	Route Selection Criteria.....	5-4
6.1	Minimum Motor Vehicle Stopping Sight Distance on Wet Pavement	6-10



REGIONAL NIAGARA Bikeways Master Plan

6.2 Minimum Stopping Sight Distance
for Bicycles..... 6-11

6.3 Minimum Radii for Paved Trails..... 6-12

6.4 Widening of the Riding Surface
on Curves..... 6-13

6.5 Crest Vertical Curve Lengths 6-14

6.6 Sag Vertical Curve for Bicycles 6-14

6.7 Extra Trail Width Required
On Grades..... 6-14

6.8 Typical Cross Slope..... 6-15

6.9 Shoulder width for Undivided
King’s Highway and Secondary
Highways..... 6-18

6.10 Retrofitting Urban Roads for
Bikeways in Niagara Region..... 6-31

6.11 Retrofitting Rural Roads for
Bikeways in Niagara 6-32

6.12 Minimum Sight Distance for
Mid-Block Crossing
(Bike Path Crossing) 6-39

6.13 Minimum Side Clearance at Bridges
..... 6-46

6.14 Design Standards for Bikeways
Crossing Freeway Entrance
Ramps..... 6-51

8.1 Proposed Length of Bikeway
Network by Facility Type 8-4

8.2 RNBP Cost by Jurisdiction 8- 20

APPENDICES

APPENDIX A

- Newsletters

APPENDIX B

- Bikeway Segment Lengths and Costs by Implementation Phase
- Bikeway Implementation Unit Prices

APPENDIX C

- Regional Niagara Policy Plan

FINAL Report: August 26, 2003



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EXECUTIVE SUMMARY

The Regional Niagara Bikeways Master Plan (RNBP) establishes a long-term vision and strategy to provide programs and infrastructure to support recreational, tourism and utilitarian cycling. Central to the Plan is a proposed Region-wide network of on and off-road bikeway facilities that will build on the existing system and serve to connect the Region and its local communities as well as key tourist destinations. This Master Plan provides a set of comprehensive planning and design guidelines as well as a strategy to improve co-ordination among jurisdictions who are partners and/or responsible for providing and promoting bikeway facilities in the Region. The Plan also sets out an improved administrative process to guide bikeway facility development in the Region.

In 1995, the Regional Bicycling Study introduced Niagara to the concept of cycling as a viable alternative mode of transportation. Since then other studies have been completed which focused on how to retrofit Regional Roads to accommodate bikeways into the existing network. The RNBP set out in this report builds upon the work of these previous studies. The Plan provides a 20-year strategy, identifying network priorities and sets out the implementation tools necessary to develop a Region-wide on and off-road bikeways network.

VISION

The vision of the RNBP is to develop an integrated system of bikeways across Niagara, which provides the necessary linkages for

residents to travel by bicycle for leisure, fitness, and utilitarian (commuting) purposes, while providing the same opportunities to tourists visiting Niagara Region. The RNBP is a long-term strategy that provides both the planning and implementation tools to ensure that a successful bikeway network is implemented over the next 20 years.

GOALS

Two key goals were established to guide the development of the Plan and to ensure that a successful and practical strategy would emerge from its development. These are:

1. To develop a visible and connected cycling network in Niagara Region that is easily accessible and actively used by all types of cyclists; and
2. To connect, integrate, enhance, and expand the existing on and off-road cycling network as a means of facilitating the use of bicycles for leisure, tourism and utilitarian purposes.

These goals provided a set of guiding elements that gave direction to the Project Team in developing the RNBP.

APPROACH

During the initial stages of the study, a Technical Steering Committee (TSC) was formed to both guide the consultant team and to provide input to the development of each individual component of the project. The TSC consisted of staff from Regional Niagara, as



REGIONAL NIAGARA Bikeways Master Plan

well as representatives from Local Municipalities and the Niagara Parks Commission.

The approach that led to the development of the “Regional Niagara Bikeways Master Plan” included five phases: understanding cycling in Niagara Region, assessing existing conditions, developing an appropriate bikeway network, establishing an implementation strategy, and preparing and documenting the Master Plan. Using this framework, the project team was able to develop a comprehensive bikeway network that could be enjoyed by all citizens and tourists in Niagara.

CYCLING IN NIAGARA REGION

Cycling has become a practical, cost effective, environmentally sensitive and healthy mode of transportation for both recreational and utilitarian purposes in communities across North America. As a result, the demand for cycling and walking facilities is increasing. This is most certainly the trend being reflected in Niagara Region.

A statistically valid public attitude survey was conducted over the phone to a random sample of households in the Region in order to gauge cycling behaviour and attitudes. Key findings in the survey include:

- 52% of residents over the age of 15 are cyclists;
- 70% of households own a bicycle;
- Cyclists in Niagara make more than 475,000 trips per week; and

- 50% of the population ride for leisure or fitness, including over 300,000 recreational trips per week;
- 25% of utilitarian and 9% of recreational cyclists ride in the winter, the highest rate observed by the consulting team for any community.

The results of a bicycle tourism and market assessment undertaken as part of this study revealed that there is a substantial economic value associated with cycling tourism in Niagara Region. Data was taken from the Traveller Activities and Motivation Survey completed by Tourism Ontario and the Canadian Tourism Commission, as well as the Domestic Travel Markets and International Travel Markets reports completed by the Ontario Ministry of Tourism. The findings revealed that:

- Niagara Region hosted over 2 million cycling tourists in 2000. This represents approximately 15 percent of all of the tourism visitors to the Region;
- Direct expenditures from cycling tourists represent approximately \$164 million in 2002, or 12% of the total tourism expenditures in the Region; and
- A total of 4,900 direct and indirect jobs in the Region in 2002 are due to the expenditures of cycling tourists.

The Regional Niagara Bicycling Committee (RNBC) conducted a formal survey at the 2002 Toronto Bike Show to gather information from attendees regarding cycling in Niagara Region. Some of the key findings from the Bike Show Survey include:



REGIONAL NIAGARA Bikeways Master Plan

- 25 of 86 respondents or 29% of those surveyed indicated they had taken a cycling vacation or holiday in Niagara Region in the last year; and
- When asked how much money they spent on a cycling related holiday in the last year, 87% indicated they spent \$150 or more, including meals, accommodation and other purchases.

The responses from the Bike Show Survey are consistent with the findings of the Tourism and Market Assessment. It is clear that cycling has substantial economic value associated with tourism in Niagara Region. Marketing and promotion of cycling as a healthy and efficient means to travel along with identification of the benefits that the bicycle tourism industry can provide Niagara are key to the long-term viability and success of the RBNP.

The study team also conducted a user survey to understand residents' and tourists' opinions on cycling related issues specific to Niagara Region. Based on all the respondents interviewed, the number of tourists cycling (49%) almost equalled the number of residents cycling (51%).

More bike lanes on major streets (28%) and better signage and information available along cycling routes (26%) were two key areas of improvements noted by respondents. Other notable improvement suggestions include: safer routes (12%), more interesting routes (10%), more off-road routes (10%) and more bicycle parking (14%).

Recognizing the important role of cycling in supporting Niagara Region's tourism industry, this Plan provides a set of recommendations that build on this success.

NETWORK DEVELOPMENT APPROACH

The selection of bikeway facility types and corresponding routes is a key component in developing the Plan. As such, three types of facilities have been identified, each having their own set of minimum design parameters:

- Class 1 – Multi-Use Trail
- Class 2 – Paved Shoulder/Bike Lane
- Class 3 – Signed Route

Several guiding principles were used to evaluate the existing network and recommend new routes to ensure that the bikeway network developed is attractive, connected, accessible, accommodating, safe and bicycle friendly. Readers are directed to individual chapters for a complete discussion and rationale for each component.

Our approach to developing the Bikeways Master Plan network involved a number of critical steps. Refinement of the route selection criteria and principles by the Technical Steering Committee and from input received through public and stakeholder consultation was key. This was followed by a comprehensive review of the existing inventory and conditions in order to identify major destinations and attractions, any barriers to cycling, and the development of possible touring and recreational routes. As a result of our review and the input received from stakeholders and through the public consultation



REGIONAL NIAGARA Bikeways Master Plan

process, a series of candidate routes were identified. Each route was evaluated through a four-step process:

1. *Travel all or segments of each candidate route* (ground-proof) by cycling it, or by driving it in a motor vehicle;
2. *Assess each route* using the route selection criteria identified in **Section 5.2**, as well as the results of the ground-proofing together with the technical expertise of the study team plus any public input;
3. Accept or reject each candidate route based on Steps 1 and 2; and
4. Determine an appropriate bikeway type for each accepted route based on the results of Steps 1 through 3.

PLANNING & DESIGN

The Planning and Design Guidelines set out in this study are intended to assist the Regional Municipality of Niagara as well as the 12 local municipalities and the Niagara Parks Commission in developing a Regional bikeway network. There are two major components involved in developing a successful bikeway network.

- **Planning** – Consideration should be given to such things as the various types, ages, skill level, and trip purposes of cyclists; and
- **Design** – In conjunction with designing for users as stated above, consideration should be given to the physical elements of design. For example, signage type and size, pavement markings, pavement width, depth,

and material, gradient, intersection crossings, and sight distance.

Specific planning and design guidelines were developed regarding the various types of bikeway facilities including: transition areas between trails and roadway crossings; on and off-road bikeways; railway crossings; tunnels; bridge and overpass linkages; regional and local gateways; as well as supporting facilities such as rest and staging areas plus parking facilities.

IMPLEMENTATION

As with any other planning document, its success is measured by its implementation. The implementation strategy employed in the RNBPN was created with the intent that the goals, objectives, policies and designs that are recommended are attainable. The strategy for implementing this plan is guided using five criteria:

- *The quality and clarity of the Plan.* Its vision, principles and goals will guide it, and the set of recommendations provide the strategy to achieve the Plan. For example, the Bikeways Network should be implemented in two phases;
- *A practical strategy.* This identifies and sets out a recommended approach to implement the Plan, and also addresses priorities and phasing. For example, prioritizing the type of facilities and timeframe that these facilities should be developed, as the following table illustrates:



REGIONAL NIAGARA Bikeways Master Plan

Table EX.1: Network Implementation Strategy

Facility Type	Distance (km)			
	Existing	Proposed		
		Phase 1 2003-2013	Phase 2 2013-2023	Ultimate
Class 1: Off-Road Bikeways	116.6	77.8	84.1	278.5
Class 2: Paved Shoulders / Bike Lanes	101.6	259.3	329.4	690.3
Class 3: Signed Routes	18.6	375.7	1.3	236.3*
TOTAL	236.8	712.8	414.8	1205.1*

* Reflects the conversion of some Phase 1 Signed Routes (Class 3) to Phase 2 Paved Shoulder/Bike Lanes (Class 2). Therefore, the total distance for the Ultimate network will not equal the sum of Phases 1 and 2, as shown in the Table.

- *An administrative structure.* This is the organization responsible for implementing all components of the Plan, as well as for co-ordinating multi-departmental and jurisdictional resources, including funding commitments. For example, restructuring of the RNBC, establishing a full-time position of sustainable transportation co-ordinator in the Public Works – Transportation Services Division to champion the plan and other sustainable transportation projects and will serve as a liaison between the RNBC and other Regional departments;
- *Funding.* Regional and Local Councils and their partners must pay for the entire Plan within a 20 year timeframe. The Bikeways Master Plan is estimated to cost **\$71.6 million** over 20 years, exclusive of any land acquisition costs. The specific amount allocated per budget year may fluctuate depending on the applicable Public Works Department projects, which would allow new bikeway facilities to be incorporated into the Regional roadway network. The majority of RNBP capital costs related to the proposed on-road facilities will be identified and included as component costs within planned roadway reconstruction or resurfacing projects, or other Regional public works projects; and
- *Monitoring.* Assess implementation results and to serve as feedback to refine on-going implementation of the Plan. Preparation of an annual report by the RNBC will help Regional staff identify priorities. Other examples involve the inclusion of cycling and bikeway data collection in the Department’s current traffic data collection program. As well, the Region with assistance from the RNBC should conduct Bikeway User Surveys every two years and a statistically valid Public Attitude Survey at least every five years.



REGIONAL NIAGARA *Bikeways Master Plan*

Finally, several themes have been identified as being key to the successful implementation of the RBNP:

- Safety & Education
- Encouragement
- Enforcement
- Facilities
- Organizational Structure
- Monitoring
- Funding
- Policies

Readers are directed to the individual chapters for a complete discussion and rationale for the recommendations involving each theme.

In time, the RBNP will develop into a network that will provide over 1,100 kilometres of bikeway facilities for Niagara. This will be a complimentary asset for the Niagara Region which is recognized by the citizens of Ontario, Canada and North America as being amenity rich.

The Regional Niagara Bikeway Master Plan set out in this document is a product of extensive study and consultation. This plan provides a strong direction and framework that should ensure the development of a comprehensive and efficient bikeway network. More importantly, this plan also provides the means to implement a bikeway network that can be enjoyed by all residents and tourists in Niagara Region.