2013

County Wide Active Transportation System (CWATS)

TAC- 2013 Sustainable Urban Transportation Award Submission for the Corporation of the County of Essex

1. INTRODUCTION

Working together with local municipalities, and with other Community Groups, the County of Essex has spearheaded a project to improve conditions for pedestrians and cyclists in this rural Southwestern Ontario region, and to help more people recognize active transportation is a valid way to move from place to place. The County Wide Active Transportation Master Plan (CWATS) has developed a comprehensive Active Transportation (walking & cycling) master plan to guide the County and Local area municipalities in implementing a county wide network of cycling and pedestrian facilities over the next 20+ years. The network development process included an inventory of existing conditions, establishing candidate routes and recommending an overall Active Transportation (AT) Network and associated facility types as presented on the following table:

Description		Fast Facts
Network Details	Total Length	705 km
	Multi-Use Trails	114 km
	Bike Lane	11 km
	Paved Shoulder	262 km
	Context Sensitive Solution	26 km
	Signed Route	292 km

The network is proposed to be implemented in three phases: Short Term 1-5 years, Medium Term 6-10 years and Long Term 11-20 years (Attachment 1). The complete recommended Active Transportation network is viewed as a connected system with different facility types that are designed to be comfortable and convenient for both existing and future users. The success of CWATS is dependent on the initial and on-going support of County and Local Municipal Councils. The plan was unanimously adopted by all parties in the fall of 2012.



2. DEVELOP & ENHANCE SUSTAINABLE URBAN TRANSPORTATION

The geography and climate of Essex County is very conducive to active transportation (particularly cycling) for both commuting and recreation/tourism purposes. Over 160km of the network align with the shoreline of the Great Lakes. A key feature of the network is the opportunity for an extensive multi-use trail loop throughout the County by connecting the existing recreational Greenway and the abandoned rail corridors to the Canada Southern (CASO) corridor and would be an exceptional tourism asset for the entire region and a unique feature of the Trans Canada Trail (Attachment 2).

The network also provides connections to the 22km of trails currently being built for the Rt. Hon. Herb Grey Parkway.

2.1. Social

For the individual, active transportation improves overall health, reduces obesity and increases social interaction. Walking & cycling provides an enjoyable, convenient and affordable means of exercise and recreation. It is also a means of transportation that is affordable and accessible. Currently only 4.8% residents walk or cycle to work or school.

The County of Essex, along with Go For Health Windsor Essex and the Windsor Essex County Health Unit (WECHU) developed a survey to promote CWATS and to gauge the resident support. From the surveys completed, over 70% of the responses indicated would use the trail systems for Quality of Life & Health benefits and over 90% would use them for recreational purposes.

2.2. Economic

There is ample evidence that on and off road active transportation facilities provide significant economic benefits for adjacent landowners and local businesses. These facilities can be travel destinations in themselves, encouraging visitors to extend their stay in the area or enhancing business and pleasure visits. Walking and cycling improvements and promotion programs have a direct impact on economic impact by increasing shopping opportunities and tourism activities.

It is a key goal for the County to enhance the areas attraction through substantial commitment by local governments as a means of establishing broad connectivity across the County.

2.3. Environmental

Active Transportation activities are energy efficient, non polluting modes of travel. Given the important role that cycling plays in reducing emissions of air pollutants and greenhouse gases, and fostering good health directly, it is important to create bicycle connectivity that has the potential to create a desirable cycling environment. To support the inclusion of many community design elements (i.e. neighbourhoods and communities that accommodate a cycling network of bike lanes, paved shoulders and multi-use trails) in future development within the County of Essex, local municipalities have incorporated active transportation in their policy initiatives.

3. DEGREE OF INNOVATION

3.1. Functional Innovation

The implementation of the CWATS master plan will be accomplished through both short term and long term actions and partnerships. The AT Committee established in 2013 includes all local municipal staff representatives, as well as representation from the Essex Region Conservation Authority (ERCA), Go For Health and WECHU, the City of Windsor, the Municipality of Chatham-Kent and the Ministry of Transportation (MTO). Master plans of this nature have been developed across the country but the partnerships that have been established in the development of CWATS are unique.

A highlight of this master plan is that ***Go For Health and WECHU have demonstrated a leadership role early in the process.*** They have designed a public outreach contest to further engage the public. The 'Slogan U Like' Contest was developed to get public input on which slogan they thought would best represent CWATS. The three contest slogans came from the Active Communities Summit that was help in Essex in Fall, 2011.

At the summit, every participant, whether they were an elected official, engineer, planner, cycling advocate or resident created and submitted a suggested slogan. The final three were used in the contest and were promoted daily on local radio, posters, emails, etc. Over 700 ballots were completed and a majority vote selected the following winning slogan:

Walk, Ride County-Wide

Branding CWATS

Establishing a visual brand to help market and promote CWATS is important part of the study and as a result of the contest, a logo was developed to assist with branding the network thought signs and marketing material.

3.2. Technical Innovation

The CWATS master plan has generated innovation in various areas including partnerships, consultation and facility design.

Partnerships

The funding approach identified in this master plan divides Essex County into four broad areas of context (County Rural, County Urban, Local, and off-road trails). Each area has varying levels of density, land uses and function and design criteria was based on available right-of-way width, public concerns, project costs and accommodation of utilities. An interactive application form was developed for use by each of the local municipalities and organizations to support the selection of a CWATS segment, an interim or enhancement to a segment and/or the addition of a new segment or facility.

Consultation

A communication strategy was developed to provide a framework for engaging stakeholders, local committee and agency members and members of the public. The public information centres are intended to give the public an opportunity to comment on the planning and network work completed. Less than desirable attendance at the traditional workshops challenged the committee to pursue other strategies.

The Study Team set up a tent and displayed key information at the Ruthven Apple Festival. Attendees were invited to provide comments and to complete an independent survey created by Go for Health and WECHU. Bringing CWATS information to a public event was successful as more than 400 people attend the booth and provided unprecedented input to the study.

Facility Design

Generally, road sections are defined through standard prescriptive cross sections or through customized context sensitive design approaches (Attachment 3). The context sensitive design approach identified in this study is responsive to public engagement, working within the limited right of ways, balancing of level of service across several mobility modes and compatibility with different land uses along transportation corridors.

3.3. Administrative & Financial Innovation

The CWATS master plan is both an operational and infrastructure plan. It is estimated that the total investment to implement the network and develop outreach and promotional programming is about $52M over the next 20 years. The implementation and funding strategy was refined based on lessons learned from other municipalities with two-tier governments and is based on the principle that the cost to implement the CWATS master plan should be shared by the County and local Municipalities (Attachment 4).

The cost for on-street paved shoulders, bike lanes, multi-use trails designated on the network proposed for County roads in urban areas is to be shared 40% County, 60% Local municipality. CWATS facilities on County Roads in urban areas have a greater benefit to the local municipal residents and businesses in terms of travel within town (i.e. going to school, local destinations, etc.) compared to travel between towns in the County. The 60% funding role confirms a true partnership and gives the local municipality a formal role in ensuring the route and facility design meets their needs.

In order to encourage local municipalities to begin investing in the network, a key partnership program was introduced in this master plan. The County has established a budget to support local active transportation projects and/or outreach programs. The County will consider providing funding up to 50% of the estimated cost of any project and will take a balanced approach for allocating funding.

4. TRANSFERABILITY TO OTHER COMMUNITIES & ORGANIZATIONS

The development of the County Wide Active Transportation Master Plan Study (CWATS) was guided by a Steering Committee chaired by the County of Essex that included representatives from each of the local municipalities as well as MTO and ERCA. A key principle of the network development approach was that it be designed on a county-wide scale, that routes selected are based on the experience of the study team, application of route selection criteria and field investigations in order to select the most appropriate roads and off-road corridors to logically and safely connect urban areas, tourism destinations and existing major trail systems, regardless of who owned the road or corridor.

Experience has demonstrated that cyclist, pedestrians and other AT and trail users are less concerned about who "owns" the road or corridor but rather that the network is planned and designed logically and meet their needs. In developing the recommended funding strategy the study team discussed models with County staff as well as the CWATS steering committee and also considered a review of various upper-tier active transportation plans to identify what types of funding mechanisms and cost-sharing arrangements were currently in use in Ontario and lessons learned.

5. ADDED VALUE

The development of the County Wide Active Transportation Master Plan Study (CWATS) has been supported by local and County Council since its inception. County Council has prioritized this plan in the face of a number of other competing interests and have committed to an annual budget of $1.2M to support active transportation. Engagement, partnerships and communication have been key elements to its early success. Public policy and planning decisions level of community support and integration with other transport and land use policies are simplified with this master plan.

6. LESSONS LEARNED

ESTABLISH GOOD INTERNAL COMMUNICATION. The County owes much of its success to the strong support County and Local Council has given to sustainable planning and transportation initiatives.

SOLICIT SUPPORT FROM ALL LEVELS OF GOVERNMENT. The Technical Steering Committee consisted of members from the regional, local and provincial ministries whom provided advice and support throughout the planning process.

CAPITALIZE ON PUBLIC INTEREST. The project revealed a desire for change and a citizen demand for the municipality to take a leadership role in these areas. This interest has sparked a community-wide planning process, which will focus on the County as a whole, and was demonstrated though innovative public outreach initiatives.

HAVE A CONTINGENCY PLAN. The CWATS master plan can only be successful if funding and staff resources are committed by County and Local Municipal Councils on an annual basis.

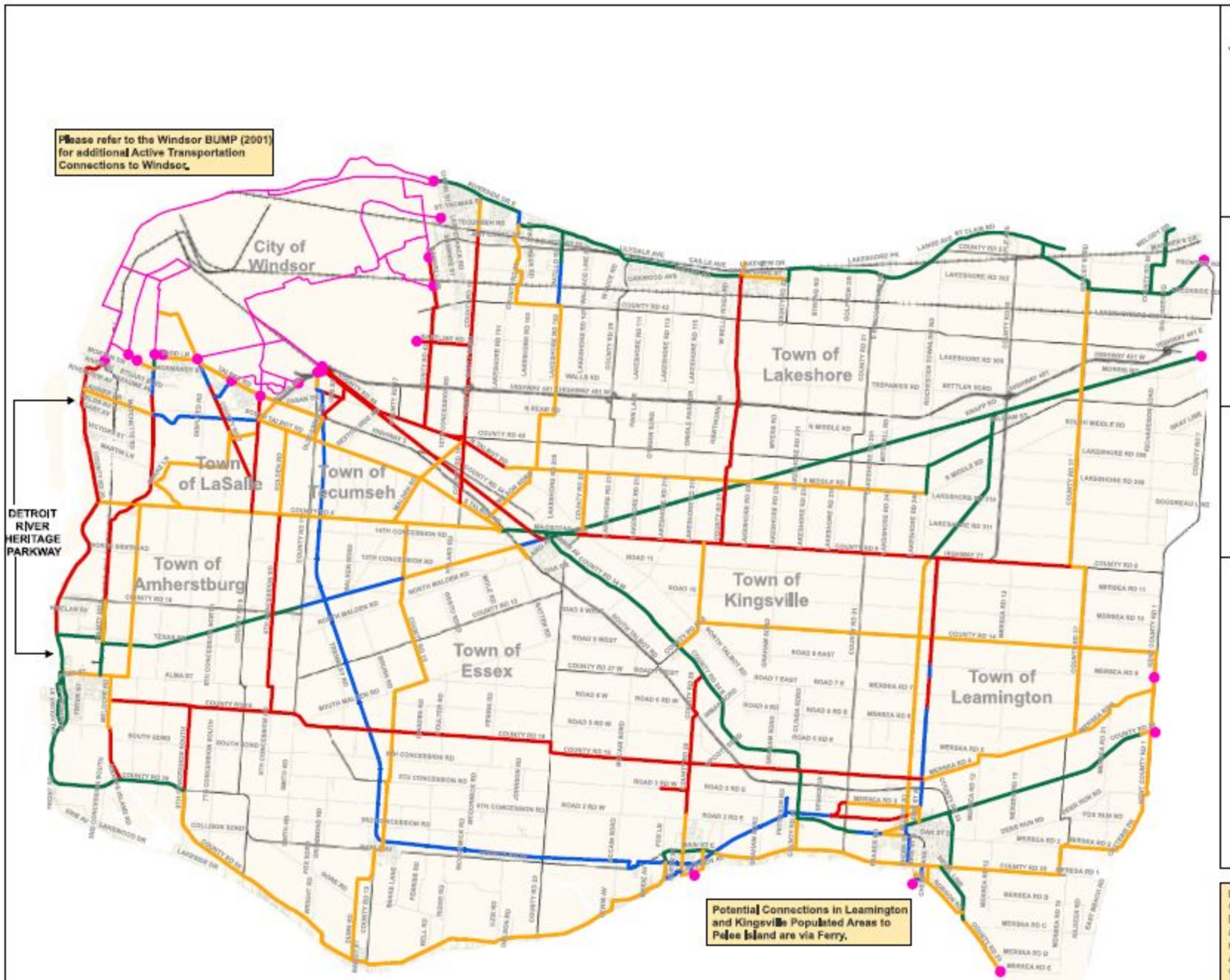
USE AN INTEGRATED DESIGN APPROACH. By planning the entire project at the beginning with the local municipalities and keeping all stakeholders apprised of developments, the team was able to meet the needs of the County as a region.

APPENDIX

COUNTY WIDE ACTIVE TRANSPORTATION STUDY (CWATS)

FIGURE 7 - 3A

CWATS NETWORK PHASING



SEPTEMBER 2012

LEGEND

DRAFT CWATS PHASING

- Existing
- Phase 1 (0 - 5 Years)
- Phase 2 (6 - 10 Years)
- Phase 3 (11 – 20+ Years)

OTHER CWATS INFORMATION

- Key Active Transportation Connections through the City of Windsor (as identified in the Windsor BUMP - 2001)
- Potential Connection to Adjacent Muncipialities

OTHER

- Highway / Freeway
- County Road
- Local Road
- Rivers and Creeks
- Railway

GIS Source Data from: County of Essex, Town of Amherstburg, Town of Essex, Town of Kingsville, Town of Lakeshore, Town of LaSalle, Town of Tecumseh, Town of Leamington, Essex Region Conservation Authority, 2010.

Please refer to the Chatham-Kent Trails Master Plan (2009) for additional information regarding potential Active Transportation connections to Chatham Kent.

N W E S

4 2 0 4 Kilometres


City of Windsor
Winery
Conservation Areas
Recreation Areas
CASO Opportunity
Greenway Trail
Municipal Boundary
RECREATIONAL OPPORTUNITY
February 1, 2013

Typical Cycling Facility Types Matrix

Ontario Ministry of Transportation | MMM GROUP | MRC McCORMICK RANKIN CORPORATION | alta PLANNING + DESIGN

least separation → **more separation** → **most separation**

Shared Bicycle Facility

Segregated Bike Facility

In-Boulevard Bicycle Facility

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Signed Bike Route	Narrow Travel Lane: SLM	Wide Curb Lane: Signed	Wide Curb Lane: SLM	Paved Shoulder	Conventional Bicycle Lane	Wide Bicycle Lane	Buffered Bicycle Lane	Buffered Bicycle Lane with Flex Bollards	Cycle Track: protected, with parking	Cycle Track: protected with barrier	Cycle Track: raised and curb separated	Two Way Cycle Track	One Way Cycle Track with sidewalk	Two Way Cycle Track with sidewalk	Multi-Use Boulevard Trail	Off-Road Multi-Use Trail
																
Minimum Design Specifications																	
	Travel lane widths (TAC Standards): o Minor arterial: 3.5 m o Collector (residential): 3.0 m o Collector (industrial/ commercial): 3.7 m.	Travel lane widths (TAC Standards): Where travel lane less than 4.0 m and the posted speed limit is 50 km/h or less, the stencils should be placed in the centre of the travel lane to allow single file bicycle and vehicle operations.	Travel lane widths: o 3.75 m o greater than 3,000 ADT/lane o less than 60km/h o 6-12% trucks	Markings should be placed 1.0 m from face of curb (or shoulder edge) on streets without on-street parking.	Minimum width: 1.2 m	Recommended width: 1.5 m	Speeds > 70 km/h: 1.8 m	Guidelines for buffer width varies: o 80 cm (London and Brussels) o 50-75 cm (CROW Guide) o 183 cm (Portland, OR)	Guidelines for buffer width varies: o 80 cm (London and Brussels) o 50-75 cm (CROW Guide) o 183 cm (Portland, OR)	2.0 m minimum width to allow for passing 0.6-1.0 m buffer zone width	2.0 m minimum width to allow for passing 1.5 m buffer zone width	2.0 m minimum width to allow for passing 0.6-1.0 m buffer zone width	3.0 m minimum width to allow for passing Striped centre line to separate traffic	2.0 m minimum width to allow for passing Shy distance of 5.0 cm suggested between cycle track and sidewalk	3.0 m is the minimum desired standard in most situations. Should be separated from the roadway with a 1.5 m buffer or a physical barrier	4.0 m is the minimum desired standard in most situations. Should be separated from the roadway with a 1.5 m buffer or a physical barrier	3.0 m is the minimum desired standard for bi-directional travel. Should be separated from the roadway with a 1.5 m buffer or a physical barrier
Preferred Design Specifications																	
	Travel lane widths (TAC Standards): o Minor arterial: 3.7 m. o Collector (residential): 3.7 m. o Collector (industrial/ commercial): 3.7 m.	Should not be placed on roadways with a speed limit over 50 km/h for single file applications. "Shared Use Lane Single File" sign should be used when the travel lane is less than 4.0 m.	Travel lane widths: o 4.25 m o less than 3,000 ADT/lane o less than 60km/h o less than 6% trucks	Should not be placed on roadways with a speed limit over 60 km/h for side-by-side applications. "Share The Road" signs should be provided.	The preferred minimum width is 1.5 m wide. "Share The Road" signs should be provided. Increase width based on speed and vehicle composition: o 2.0 m for a posted speed > 70 km/h and 5,000 ADT	Increase width based on speed and vehicle composition: o Over 6,000 ADT, or if trucks > 10% of traffic volumes: 2.5 m o Speeds > 100 km/h: 2.5 m	Lanes should not exceed 2.0 m where speeds > 70 km/h. Wider lanes allow 2-way bicycle travel and encourages vehicle parking in the lane.	Guidelines for buffer width varies: o 80 cm (London and Brussels) o 50-75 cm (CROW Guide) o 183 cm (Portland, OR)	Guidelines for buffer width varies: o 80 cm (London and Brussels) o 50-75 cm (CROW Guide) o 183 cm (Portland, OR)	2.5 m width	2.5 m width Innovative bicycle-friendly design needed at intersections to reduce conflicts between turning motorists and cyclists.	2.5 m width Innovative bicycle-friendly design needed at intersections to reduce conflicts between turning motorists and cyclists.	4.3 m recommended width (New York City) Innovative bicycle-friendly design needed at intersections to reduce conflicts between turning motorists and cyclists. Pavement markings should indicate direction	3.0 m width Innovative bicycle-friendly design needed at intersections to reduce conflicts between turning motorists and cyclists.	4.0 m or greater - recommended for heavy use situations with high concentrations of users.	6.0 m or greater - recommended for heavy use situations with high concentrations of multiple users.	4.0 m or greater- recommended for heavy use situations with high concentrations of multiple users.
Typical Criteria																	
	Travel lane minimum width: 3.0 m for low volume streets (less than 3,000 ADT) with little or no truck or bus traffic. "Share the Lane" signs are recommended	These markings are often used on streets where dedicated bicycle lanes are desirable but are not possible due to physical or other constraints.	3.75 - 4.0 m wide lanes Lanes should be sufficiently wide to allow motor vehicles to pass cyclists without encroaching on an adjacent travel lane	These markings are often used on streets where dedicated bicycle lanes are desirable but are not possible due to physical or other constraints.	Shoulder bikeways are appropriate bicycle facilities on rural roads with a large shoulder and where there is no curb and gutter. Facilities are typically used by experienced commuters rather than inexperienced riders.	Most appropriate on urban arterial and collector streets where higher traffic volumes and speeds warrant user separation.	Reserved bicycle lane signs should be provided either directly above or adjacent to the bicycle lane after each intersection and spaced at least every 200 m.	Designed to increase the space between the bicycle lanes and the travel lane or parked cars. Appropriate where bike lanes are located on streets with high speeds (>50 km/h).	Designed to increase the space between the bicycle lanes and the travel lane or parked cars. Appropriate where bike lanes are located on streets with high speeds (>50 km/h).	Use along roadways with high motor vehicle volumes and/or speeds (>50 km/h). Best on streets with parking lanes with a high occupancy rate	Use along roadways with high motor vehicle volumes and/or speeds (>50 km/h). Best on streets with long blocks and few driveways or mid-block access points for vehicles.	Use along roadways with high motor vehicle volumes and/or speeds (>50 km/h). Where cyclists may enter/leave , or where motorists cross at a driveway, the curb should be rolled with a small 45 degree ramp	Desirable when there are more destinations on one side of a street or if the cycle track will connect to a shared-use path or bicycle facility on one side of the street.	Use along roadways with high motor vehicle volumes and/or speeds Where cyclists may enter/leave , or where motorists cross at a driveway, the curb should be mountable with a small 45 degree ramp	Recommended for areas with high volumes of pedestrian and bicycle traffic to reduce conflict.	Ideal for families and recreational users. Suggested when on-road improvements are not feasible along roadways, and when ample ROW is available.	Ideal for families and recreational users. Suggested when on-road improvements are not feasible along roadways, and when ample ROW is available.
References																	
	TAC Geometric Design Guide for Canadian Roads Chapter 3: Bicycles; Section 3.4.3.1. Widths are discussed in section 3.4.6.2.	TAC Geometric Design Guide for the Design and Application of Bikeway Pavement Markings AASHTO Guide for the Development of Bicycle Facilities	TAC Geometric Design Guide for Canadian Roads Chapter 3: Bicycles; Section 3.4.3.1. Widths are discussed in section 3.4.6.2.	TAC Geometric Design Guide for the Design and Application of Bikeway Pavement Markings AASHTO Guide for the Development of Bicycle Facilities	TAC Geometric Design Guide for the Design and Application of Bikeway Pavement Markings AASHTO Guide for the Development of Bicycle Facilities	TAC Geometric Design Guide for the Design and Application of Bikeway Pavement Markings	TAC Geometric Design Guide for the Design and Application of Bikeway Pavement Markings AASHTO Guide for the Development of Bicycle Facilities	City of Portland, OR. (2010). Bicycle Master Plan for 2030 Bikeway Design Best Practices.	City of Portland, OR. (2010). Bicycle Master Plan for 2030 Bikeway Design Best Practices.	CROW Design Manual for Bicycle Traffic Alta Planning + Design. Cycle Tracks: Lessons Learned.	CROW Design Manual for Bicycle Traffic Alta Planning + Design. Cycle Tracks: Lessons Learned. Velo Quebec. (2003). Technical Handbook of Bikeway Design.	CROW Design Manual for Bicycle Traffic Alta Planning + Design. Cycle Tracks: Lessons Learned. Velo Quebec. (2003). Technical Handbook of Bikeway Design.	CROW Design Manual for Bicycle Traffic Alta Planning + Design. Cycle Tracks: Lessons Learned. Velo Quebec. (2003). Technical Handbook of Bikeway Design.	London Cycling Design Standards Alta Planning + Design. Cycle Tracks: Lessons Learned. Velo Quebec. (2003). Technical Handbook of Bikeway Design.	FHWA. Designing Sidewalks and Trails for Access. AASHTO Guide for the Development of Bicycle Facilities	FHWA. Designing Sidewalks and Trails for Access. York Region Pedestrian and Cycling Master Plan Planning and Design Guidelines Version 1.3 AASHTO Guide for the Development of Bicycle Facilities	York Region Pedestrian and Cycling Master Plan Planning and Design Guidelines Version 1.3
In Constrained Corridors																	
	Alert motorists to the presence of cyclists.	Encourage bicyclists to ride an appropriate distance away from the "door zone" on streets with parking.	"Share the Road" signs can be added to increase driver awareness.	Markings can be as little as 0.75 m from the curb on streets without on-street parking.	If available width is less than 50% of the desirable bicycle lane width AASHTO allows striping the shoulder in lieu of bike lanes.	1.2 m acceptable where road width is limited; not suitable for roads with high ADT's and commercial vehicles.	Bicycle lane widths less than 1.8 m makes it challenging for bicyclists to pass each other without leaving the bicycle lane.	1.2 m bike lane is acceptable.	1.2 m bike lane is acceptable.	1.5 m bike lane is acceptable.	Width should never be taken from the pedestrian zone to make room for a cycle track.	Change in level clearly demarcates space for different users and reduces conflicts between bicyclists and pedestrians.	Parking should be banned on the side of the street with the cycle track to ensure adequate site distances for motorists crossing the path.	Change in level and planted buffer clearly demarcates space for different users and reduces conflicts between bicyclists and vehicles.	3.0 m is the minimum allowed for a two-way shared-use facility and is only recommended for low traffic situations.	3.0 m is the minimum allowed for a two-way shared-use facility and is only recommended for low traffic situations.	Typically incorporated into parkland and valley land. Cyclists may choose to remain in the roadway.

This document is for information purposes only.

Table 7-3: Active Transportation Facilities – Implementation Budget Cost Sharing Options			
Facility Type	**County of Essex Share**	**Local Municipality Share**	**ERCA Share**
On Street Bike Lanes / Paved Shoulder / Context Sensitive Solution / Signed Routes - on a County Road, Rural Area	100%	0%	0%
On Street Bike Lanes / Paved Shoulder / Multi-Use Trail with or without separation / County Connecting Links / Context Sensitive Solution / Signage - on a County Road within an Built Up Urban Area and Settlement Area**	40%	60%	0%
On-Street Bike Lanes / Paved Shoulder / Multi-Use Trails / Signed Routes with or without separation / Context Sensitive Solution- on a Local Road anywhere	0%	100%	0%
Sidewalks – anywhere on the network	0%	100%	0%
Multi-Use Trails – outside of County and/or Local Right-of-way	0%	0%	100%
Multi-Use Trails – outside of County and/or Local Right-of-way and owned by Municipality	0%	100%	0%