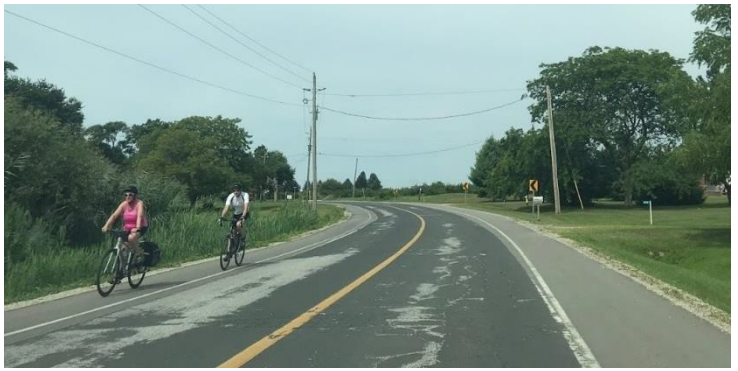
Understanding the Facility Types

There are a number of facility types that already exists or proposed to be included in the updated CWATS network. The following section provides an overview of these facility types. For additional design guidance and information regarding application and design of each facility type including typical signage and pavement markings, the County and its partners should refer to OTM Book 18: Cycling Facilities (2021 edition).

Signed route

Description:	A signed route is a shared facility that is formally marked by a CWATS Network sign and sometimes painted line markings. Signed routes should only be implemented on roads that have low motor vehicle operating speeds, traffic volumes and truck volumes. Bicycle Route Marker signs are typically placed once every 2.0 km on a rural roadway, and once every 400 to 800 metres on an urban road in a built-up area. Supplementary signage and pavement markings can be used such as the Share the Road sign and supplementary tab sign (Wc-19 and Wc-19t, OTM). Within Essex County, a signed bike route is typically marked with the CWATS branded signage.
Location:	Rural and Urban / Suburban
Road Volume:	Low
Road Speed:	Low
Minimum width:	Not applicable – cyclists shared the same space with motor vehicles
Example(s):	 *Figure 65: Existing signed route on County Road 50, Amherstburg* *Source: WSP Canada*  *Figure 66: Existing signed route on County Road 21, Lakeshore* *Source: WSP Canada*

Paved shoulder including buffers

Description:	Paved shoulders provide a designated space along the edge of the road for stopped and emergency vehicles, pedestrians and cyclists. Paved shoulders are typically found on rural roads and used by cyclists and pedestrians as it provides users with an area that is adjacent to but separate from the motor vehicular travel portion of the roadway. The route should be signed as a bike route with supplementary markings and signage to denote other users such as pedestrians may use the paved shoulder. On roads that have higher traffic volumes and operating speeds, a buffer can be implemented to provide greater separation between the shoulder and the adjacent motor vehicle traffic lane. A buffer consists of two edge lines with or without diagonal hatching or with a rumble strip. As per the Highway Traffic Act, cyclists must travel in the same direction as the motor vehicle traffic immediately adjacent to the paved shoulder and pedestrians must travel facing the direction of travel adjacent to the paved shoulder. Paved shoulders should be applied on roads with medium motor vehicle operating speed and traffic volumes. Paved shoulders are not ideal on roads with high volumes of truck traffic.
Location:	Rural
Road Volume:	Moderate to High
Road Speed:	Moderate to High
Minimum width:	1.5 metres + 0.5 metre buffer area
Example(s):	 *Figure 67: Existing paved shoulder on County Road 34, Kingsville* *Source: WSP Canada*  *Figure 68: Existing paved shoulder on County Road 50, Essex* *Source: WSP Canada*

Bike lane

Description:	A bike lane is the portion of a roadway that is designated by pavement markings and signage for exclusive use by cyclists. Motor vehicles are typically not permitted to enter the bike lane except if a dashed line is used, such as a driveway entrance. In addition, motor vehicles are not permitted to park in bike lanes. Bike lanes are typically implemented on roads where motor vehicle traffic volume and speeds are higher than the threshold values for shared space routes. In some cases, additional consideration may be given to incorporating green pavement markings at key intersections or at high volume conflict points such as overpasses. A Reserved Bicycle Lane sign must be used to designate a bike lane. Practitioners can use OTM signs or signs found in the TAC Bikeway Traffic Control Guidelines for Canada.
Context:	Urban / Suburban
Road Volume:	Moderate
Road Speed:	Moderate
Minimum width:	1.5 metres
Example(s):	 *Figure 69: Existing bike lanes on Erie Street North, Leamington* *Source: WSP Canada*  *Figure 70: Existing bike lanes on Lesperance Road, Tecumseh* *Source: WSP Canada*

Separated bike lane

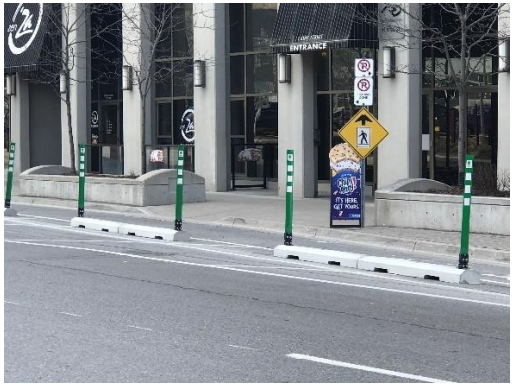
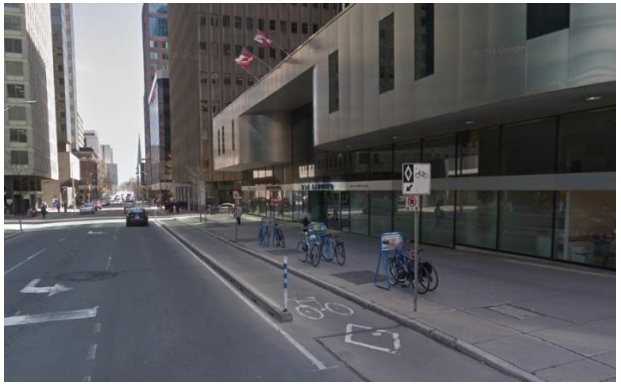
Description:	A separated bike lane provides additional space between the cyclist and motor vehicles and can include different separation alternatives ranging from a spatial separation all the way to a physical separation. Separation techniques will vary depending on the context of the roadway and the width that is available. Table 10 outlines the various physical separation techniques and advantages / disadvantages for each. The different physical separation techniques are placed within the buffer (painted) area that is between the motor vehicle lane and the bike lane. A separated bike lane is typically implemented along urban roadways including arterial and collectors with high motor vehicle volumes and / or speeds where increased separation is required. This facility could also be implemented on roadways with on-street parking and high parking turnover where double parking is an issue or major corridors that provide direct and convenient access to key destination points (i.e., corridors with heavy cycle traffic) or in front of schools.
Context:	Urban / Suburban
Road Volume:	Moderate to High
Road Speed:	Moderate to High
Minimum width:	1.5 metres + 0.3 metres to 0.9 metres for buffer zone
Example(s):	 *Figure 71: Example of existing separated bike lanes with flex bollards in London, ON* *Source: WSP Canada*  *Figure 72: Example of existing separated bike lanes with pre-cast concrete curbs on Laurier Avenue, Ottawa* *Source: WSP Canada*

Table 10: Overview of Separation Types for Separated Bike Lanes

Roll Curb / Mountable Curb +: bicycle movement and turning movement, durability, greater flexibility for maintenance and minimal collision -: may be less effective at deterring motor vehicle parking, may be expensive to install	Rubber Delineator +: may be used in conjunction with bollards to add extra separation in specific locations -: less durable than concrete requiring more maintenance and may have greater exposure to damage from snow clearing	Flex Bollards +: high visibility, bollards spacing may accommodate bicycle movement, waste collection, driveways, etc. comparatively easy to install, minimal safety risk -: not as durable, may not always discourage encroachment if there is a lot of separation, minimal aesthetic appeal
Concrete Barrier +: very effective at preventing encroachment, low cost to maintain, high visibility, mounted planters increase aesthetics -: may have a negative impact on drainage, may reduce visibility of cyclists	Small Scale Concrete Barrier +: very effective at preventing encroachment, low cost to maintain, does not reduce cyclist visibility -: may have negative impacts on drainage, bicycle maneuverability, waste collection and transit	Conventional Bollards (Flex) +: high visibility through seasons, bollard spacing may accommodate bicycle maneuverability, waste collection, driveways, etc. -: potential safety risk to cyclists, may not always discourage parking
Planters +: aesthetic appeal, flexible spacing, high visibility -: may reduce visibility, may need to be removed and stored in winter	Buffer Zone +: inexpensive to implement, can be combined with strategic planters and / or flex bollards -: need to update markings, no physical separation	

One-Way Cycle Track

Description:	A one-way cycle track is a physically separated bikeway that is horizontally and vertically separated from the travelled portion of the roadway by a curb. Cycle tracks are often located parallel to a sidewalk but are designated exclusively for use by people riding bicycles. One-way raised cycle tracks should be provided for cyclists travelling in each direction to ensure continuity and connectivity. If it is not possible to implement a one-way cycle track on both sides of the road, then an alternate bicycle facility should be provided on a parallel street instead. Within the County of Essex, there are locations where there is an existing cycle track and no sidewalk. In these locations, pedestrians are typically permitted to use the cycle track. These one-way cycle tracks are supplemented with signage and pavement markings to clearly denote the intended user and users.
Context:	Rural (select locations) and Urban / Suburban
Road Volume:	Moderate to High
Road Speed:	Moderate to High
Minimum width:	1.5 to 2.0 metres
Example(s):	 *Figure 73: Existing one-way cycle track on County Road 20, Leamington / Kingsville* *Source: WSP Canada*  *Figure 74: Existing one-way cycle track on County Road 20, Leamington / Kingsville* *Source: WSP Canada*

Two-Way Multi-Use Path

Description:	A two-way multi-use path is horizontally and vertically separated from motor vehicle traffic by a curb and could have a strip of grass (often referred to as a "boulevard" or "verge") or paved 'splash strip' between the facility and the motor vehicle travel lane. This facility is shared by pedestrians, cyclists and other active transportation users. An in-boulevard path is typically 3.0 to 4.0 metres wide. If there are significant constraints such as utilities or major natural features, a two-way shared path may be narrowed down to 2.4 metres. To increase the sense of safety and comfort for path users, a wide separation can be provided between the path and the roadway. The minimum recommended space is 1.5 metres measured from the face of the curb or the edge of the travelled portion of the road. This space can also be used for landscaping, snow storage, and the installation of fixed objects such as signs and signal poles.
Context:	Rural (select locations) and Urban / Suburban
Road Volume:	Moderate to High
Road Speed:	Moderate to High
Minimum width:	3.0 to 4.0 metres
Example(s):	 *Figure 75: Existing two-way cycle multi-use path on Fairview Avenue, Essex* *Source: County of Essex*  *Figure 76: Existing two-way multi-use path on County Road 21, Lakeshore* *Source: WSP Canada*

Off-Road Multi-Use Trail

Description:	Off-road multi-use trails are located outside of a road right-of-way and typically found within hydro corridors, rail corridors, forest tracts and parks. These connections function as recreational facilities or convenient connections between core active transportation routes. Similar to a two-way cycle track (and in some locations a one-way cycle track) an off-road trail is intended to be used by pedestrians, cyclists, and other non-motorized users. Natural surfaces or crushed limestone are typically considered appropriate surface types in rural areas. If the demand for trail usage is high or if the trail forms part of a larger trail system, consideration could be given to pave the trail. In the planning and design of off-road trails, due diligence should be completed to ensure AODA compliance and environmental impacts are analyzed and mitigated.
Context:	Rural and Urban / Suburban
Road Volume:	Not applicable
Road Speed:	Not applicable
Minimum width:	3.0 to 4.0 metres
Example(s):	 *Figure 77: Existing Chrysler Canada Greenway, Harrow* *Source: WSP Canada*  *Figure 78: Existing Chrysler Canada Greenway at County Road 18, Essex* *Source: WSP Canada*