Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

PREPARED FOR:

DEPARTMENT OF PUBLIC WORKS
ONTARIO COUNTY NY

PREPARED BY:

BARTON & LOGUIDICE, DPC

SEPTEMBER 2018

DISCLAIMERS

Financial assistance for the preparation of this report was provided by the Federal Highway Administration through the Genesee Transportation Council. Ontario County is solely responsible for its content and the views and opinions expressed herein do not necessarily reflect the official views or policy of the U.S. Department of Transportation. The Genesee Transportation Council assures that no person shall, on the grounds of race, color, national origin, disability, age, gender, or income status, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity. GTC further assures every effort will be made to ensure nondiscrimination in all of its programs and activities, whether those programs and activities are federally funded or not.

El Consejo de Transporte de Genesee asegura completa implementación del Título VI de la Ley de Derechos Civiles de 1964, que prohibe la discriminación por motivo de raza, color de piel, origen nacional edad, género, discapacidad, o estado de ingresos, en la provisión de beneficios y servicios que sean resultado de programas y actividades que reciban asistencia financiera federal.

TABLE OF CONTENTS

TABLES

FIGURES

INTRODUCTION

INVENTORY AND ANALYSIS

RECOMMENDATIONS

THIS PAGE LEFT INTENTIONALLY BLANK.

1.0 EXECUTIVE SUMMARY

OVERVIEW

Ontario County Road 16-West Lake Road is primarily a north-south route along the west edge of Canandaigua Lake in the Town of Canandaigua, NY. The study area for this project is an 8.2 mile portion of Ontario County Road 16 from the City of Canandaigua boundary extending south to Seneca Point Road in the Town of Canandaigua.

Ontario County Road 16 runs along the western shoreline of Canandaigua Lake, providing stunning views of the lake. This has attracted vigorous residential growth and activity in the past few decades, increasing the number of pedestrians and bicyclists using the road. Two parks on this road, West Lake Schoolhouse Park and Onanda Park, provide public lake access.

Several conditions along Ontario County Road 16 (CR 16) present challenges for pedestrian and bicyclist safety. These include steep topography, narrow shoulders, and lack of sidewalks. Heavy use and constrained space increase the potential for conflicts between travel modes.

The purpose of this study is to analyze existing conditions along CR 16, investigate the feasibility of potential pedestrian and bicycle accommodations, and provide a plan for improving active transportation capabilities of the roadway. Active transportation describes any form of transportation that involves physical activity, including walking and bicycling. This study's recommendations, when implemented, will help achieve public health, environmental, economic, and quality of life benefits in the Town of Canandaigua through these enhanced accomodations.

ACTIVE TRANSPORTATION BENEFITS

The extensive benefits of active transportation have been documented for this study. These benefits include decreased impact on the environment through reduced motor vehicle usage, health benefits through enhanced physical activity and reduced stress, and economic benefits through expanded tourism and attractiveness for potential home buyers.

INVENTORY & ANALYSIS

This study included an inventory and analysis phase that assessed the existing conditions along Ontario County Road 16. Topography, drainage, wetlands, municipal boundaries, destinations, property ownership, access, circulation, crash history and infrastructure were evaluated. Analysis of existing conditions resulted in a needs assessment based upon the opportunities and constraints of the corridor.

COMMUNITY INPUT

The planning process for this study included outreach to both the general public and to key stakeholders. Representatives from various organizations served on the Project Advisory Committee, providing continuity and oversight. In addition, input from the public was solicited using online surveys and public meetings.

RECOMMENDATIONS

Several roadway improvements were considered. See ***Table 1*** and ***Section 6***. Key recommendations include:

- Frequent maintenance schedule for the roadway
- Additional signing and stop bars at intersections with steep grades
- Shoulder improvements
- Hillcrest warning systems and signing
- West Lake Schoolhouse Park and Beach-Butler Road intersection improvements
- Onanda Park and Canandaigua Yacht Club road crossing improvements
- Education, outreach, and enforcement

IMPLEMENTATION

This section includes information regarding SEQRA documentation, the permitting process, and funding. Appendices are included that provide more detailed information on funding and community input.

Table 1: Project Prioritization

Project Name	Project Description	Priority Level
Frequent Maintenance Schedule	Increase frequency of scheduled maintenance to address issues of pavement shoulder erosion, uneven paving, low visibility, and traffic line fading by routinely sweeping pavement, patching surfaces, and cutting back vegetation.	**Priority**
Multi-Use Paved Shoulder Improvements	Standardize shoulder width at a minimum of 5' to allow multiple usage. Selective shoulder widening should be implemented where right-of-way allows.	**Priority**
Implement Traffic Delineators	Increase use of delineators to separate bicycle and pedestrian facilities in key areas, such as the German Brothers Marina.	**Recommended**
Asymmetrical Shoulders	Widen shoulders on ascents and decrease shoulders on descents to improve bicyclist experience, safety, and comfort.	**Recommended**
Additional Signing	Increase Bicycle/Pedestrian signing along Ontario County Road 16. Additional signing and stop bars should be located at intersections with steep grades.	**Priority**
Hillcrest Warning System & Signing	Implement bicycle detection technology to inform motorists of bicycles at hillcrests where visibility is limited.	**Possible**
Improved Pedestrian Crossings	Install high visibility crosswalks with pedestrian signage at key locations, including, but not limited to, Canandaigua Yacht Club and Onanda Park. Consider raised crosswalk installation to improve traffic calming.	**Priority**
Speed Limit Reduction	Undertake speed study to determine feasibility of speed limit reduction to 30 mph in areas to improve multi-use transportation and transitional speed zones. Increase adherence through traffic calming techniques.	**Possible**
Trails on Private Property	Construct Trail running parallel to Ontario County Road 16 on private property in key areas with property owner consent.	**Possible**
Stormwater Management	Employ green infrastructure practices to treat water from culverts along Ontario County Road 16. Coordinate with upcoming Ontario County DPW culvert improvements.	**Recommended**
Education & Outreach	Connect with local organizations to increase bicycle and pedestrian safety education in Ontario County.	**Recommended**
Zoning & Design Standards Recommendations	Adopt language from Genesee Transportation Council Bicycle and Pedestrian Supportive Code. Update standard details relative to bicycle and pedestrian infrastructure.	**Possible**
Enforcement	Provide traffic law enforcement to ensure safety for all travel modes. Increase enforcement measures during peak use.	**Priority**

THIS PAGE LEFT INTENTIONALLY BLANK.

2.0 INTRODUCTION

2.1 BACKGROUND AND PURPOSE OF STUDY

Ontario County Road 16 runs predominantly north to south along the western edge of Canandaigua Lake in the Town of Canandaigua, NY. The northern terminus of Ontario County Road 16 (CR 16) is the City of Canandaigua boundary where CR 16 becomes West Lake Drive. The southern terminus is NYS Route 21 South in the Town of Canandaigua. CR 16 is also known as West Lake Road.

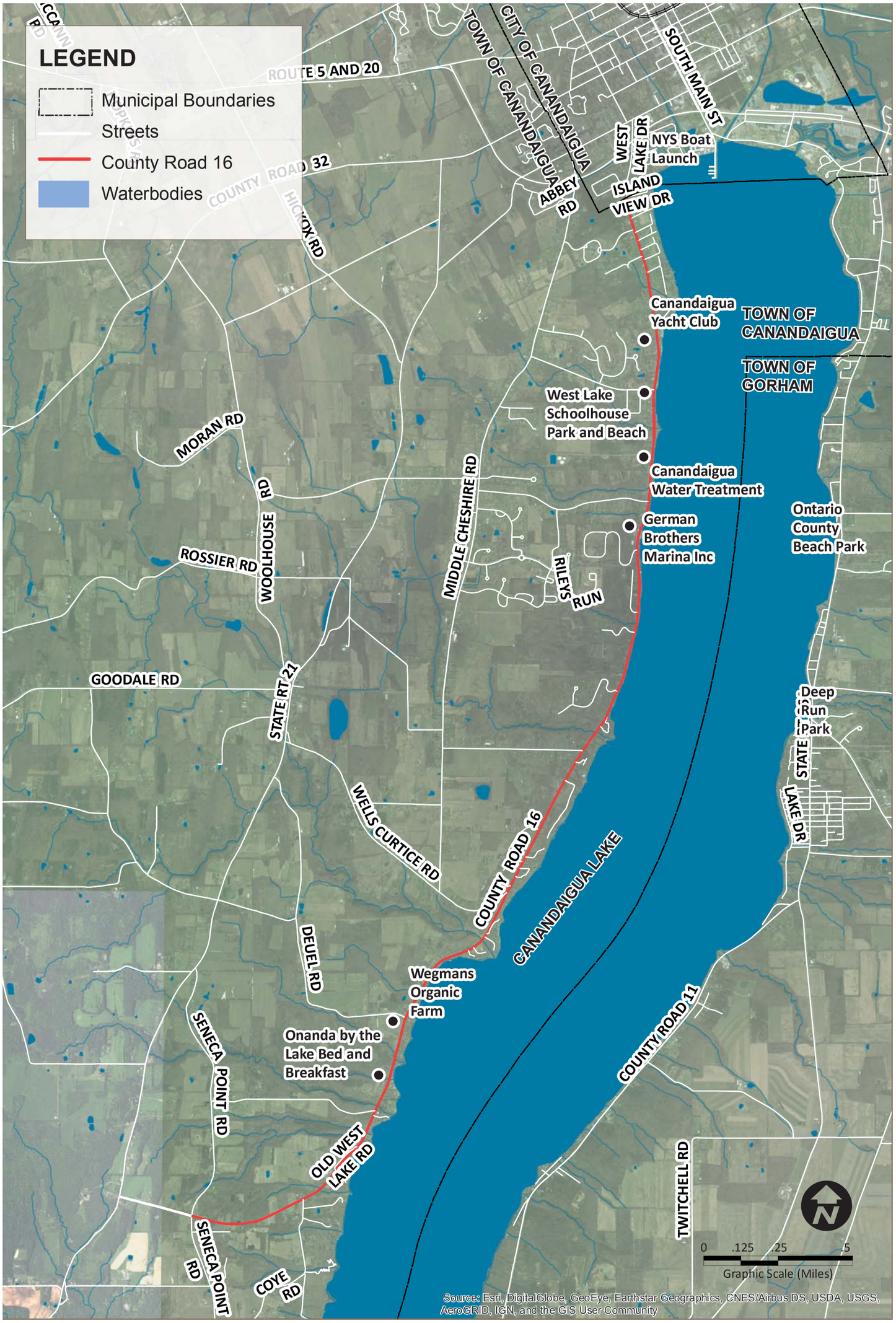
The study area for this project is 8.2 miles long, incorporating the roadway from the City of Canandaigua boundary to Seneca Point Road in the Town of Canandaigua.

CR 16 runs along the shoreline of Canandaigua Lake, connecting two lakeside parks, West Lake Schoolhouse Park and Onanda Park. Public access to these locations, and the stunning view of the lake along the roadway, attract a significant number of active transportation users.

Five new trails, proposed in the Town of Canandaigua Parks and Recreation Master Plan 2018-2023, would create new active transportation corridors between Canandaigua Lake, existing neighborhoods, and existing parks. These corridors would further increase the number of pedestrians and bicyclists along CR 16.

Despite the road's high recreation potential for bicyclists and pedestrians, there are several barriers to successful roadway coordination between users.

> ***"Unfortunately, County Road 16 is not structured as a multi-use corridor and has relatively narrow shoulders that don't safely accommodate bicyclists, joggers or walkers."***
>
> ***- Town of Canandaigua Comprehensive Plan***



Ontario County Road 16 - West Lake Road Pedestrian & Bicycle Study

Department of Public Works - Ontario County, NY

FIGURE 1. LOCATION MAP

August 1, 2018

The last major roadway improvement occurred in the 1930s to accomodate local daily traffic, and CR 16 has been essentially unaltered since that time. Significant roadway conditions include steep topography, narrow shoulders, and a lack of sidewalks. These conditions present significant safety issues for roadway users.

Refer to ***Figure 1*** for more information.

2.2 COMMUNITY INVOLVEMENT

Planning of any kind cannot be done in a vacuum, and must be informed by local residents. New York State has identified principles to guide community planning, which state that planning should be continuous, comprehensive, participatory, and coordinated. Citizen participation is a key component in the process, not just a requirement; it is a critical element of a successful plan. Table 2 chronicles the meetings that were conducted for this project.

Table 2: Chronology of Community Involvement

Date	Meeting Type	Purpose
Sept 20, 2017	Project Kick-Off	Project intentions, goals, and objectives
Oct 12, 2017	Project Advisory Commitee Meeting and Walking Tour	Existing conditions and assessment
Jan 13, 2018	Public Meeting #1	Existing conditions review and input
April 16, 2018	Canandaigua Town Board Meeting	Project presentation
May 8, 2018	Project Advisory Committee Meeting	Alternatives and preliminary recommendations
Aug 8, 2018	Public Meeting #2	Draft recommendations
Sept 26, 2018	Project Advisory Committee Meeting	Review of report

The planning process for this study included outreach to both the general public and key stakeholders. A project advisory committee was comprised of representatives from Ontario County, the Town of Canandaigua and local stakeholders. Committee members, as identified in the following pages, provided study oversight.

PROJECT ADVISORY COMMITTEE

James Fletcher, Town of Canandaigua Highway Supervisor

Saralinda Hooker, Town of Canandaigua Resident

Darin Ramsay, Genesee Transportation Council Program Manager

Gregory Westbrook, Town of Canandaigua Supervisor

William C. Wright, P.E., Ontario County Commissioner of Public Works

Oksana Fuller, Town of Canandaigua Resident

Marion Cassie, Town of Canandaigua Resident

Chris Dombrowski, Town of Canandaigua Resident

ADDITIONAL PROJECT TEAM MEMBERS

Thomas A. Rafferty, P.E., Ontario County Department of Public Works (DPW), Project Manager

Thomas Robinson, RLA, Barton & Loguidice, Consultant

Peyton McLeod, Landis Evans + Partners, Consultant

Theo Petritsch, Landis Evans + Partners, Consultant

ONLINE SURVEY

An online survey was also used to gather information from community members, including current perceptions of safety along CR 16, pedestrian and bicycling patterns, and stakeholder ideas. These responses significantly influenced the focus and direction of this study.

More information about community involvement is included in ***Section 5*** of this report, and in ***Appendix B***.

2.3 RELATIONSHIP TO OTHER PLANS AND STUDIES

The goal of planning is to improve the welfare of people and their communities by creating more convenient, equitable, healthful, efficient, and attractive places for present and future generations (APA, 2011). Planning enables civic leaders, businesses, and citizens to play a meaningful role in creating communities that enrich people's lives. In developing new plans, it is important to refer to plans and studies that have already been completed to evaluate how the new plan relates to existing plans.

The road improvements proposed are compatible with the general principles and specific projects found in the planning documents listed below.

Town of Canandaigua Parks and Recreation Master Plan 2018-2023

Town of Canandaigua Comprehensive Plan Update 2011

Town of Canandaigua Natural Resource Inventory 2011

Finger Lakes Regional Sustainability Plan 2013

Long Range Transportation Plan for the Genesee-Finger Lakes Region 2040

Town of Canandaigua Complete Streets Policy Adoption

**Potential Middle Cheshire Road Active Transportation Study*

**As of this writing, the Town of Canandaigua is pursuing funding to conduct an Active Transportation Study of Middle Cheshire Road. That project would support the complete streets policy of the Town, and create synergy with bicycle and pedestrian improvements along CR 16.*

THIS PAGE LEFT INTENTIONALLY BLANK.

3.0 ACTIVE TRANSPORTATION BENEFITS

This study is part of a regional active transportation effort that will help Ontario County to harvest the long-term economic, environmental, health and social benefits associated with active transportation.

3.1 HEALTH BENEFITS

More than 50% of American adults do not get enough physical activity to provide health benefits (CDC, 2012). With this in mind, opportunities for exercise and healthful outdoor activity are more than expendable extras. Trails and improved roadways provide people of all ages with attractive, accessible, safe, and inexpensive opportunities to enjoy physical activity.

Several studies have shown that access to trails and green spaces increase the amount of physical activity of residents, and increase longevity among elderly community members (Rails-to-Trails Conservancy). Other studies have shown that spending more time walking reduces cognitive decline, increases longevity, lowers risk of heart disease, stroke, type 2 diabetes, depression, and some types of cancer (Center for Disease Control and Prevention, Archives of Internal Medicine).

50% of American adults do not get enough physical exercise to provide health benefits

(Centers for Disease Control and Prevention, 2012)

Bicycling and Walking in the United States: 2016 Benchmarking Report, published by the Center for Disease Control and Prevention and the Alliance for Bicycling and Walking, reports that people in areas with a strong culture of cycling and walking are less likely to be obese.

Step It Up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities recognizes the importance of physical activity for people of all ages and abilities. It calls on Americans to be more physically active through walking and calls on the nation to better support walking and walkability.

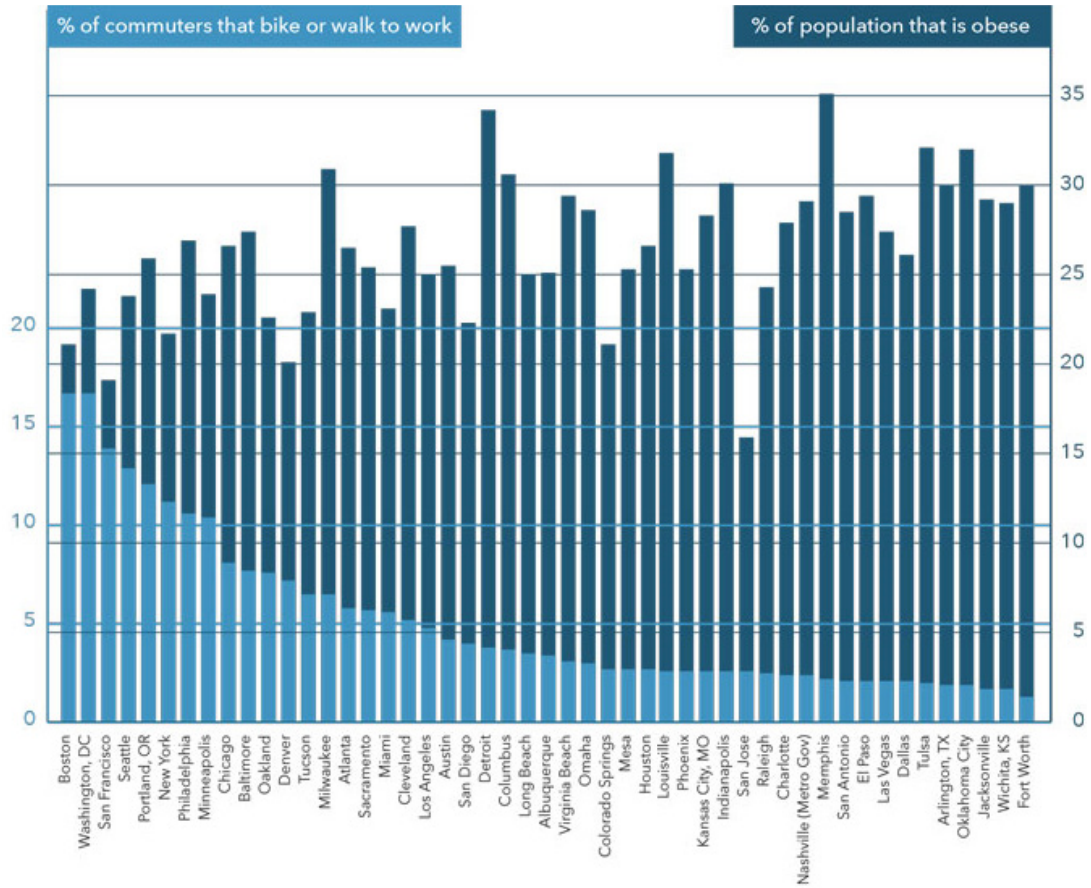
(SurgeonGeneral.Gov)

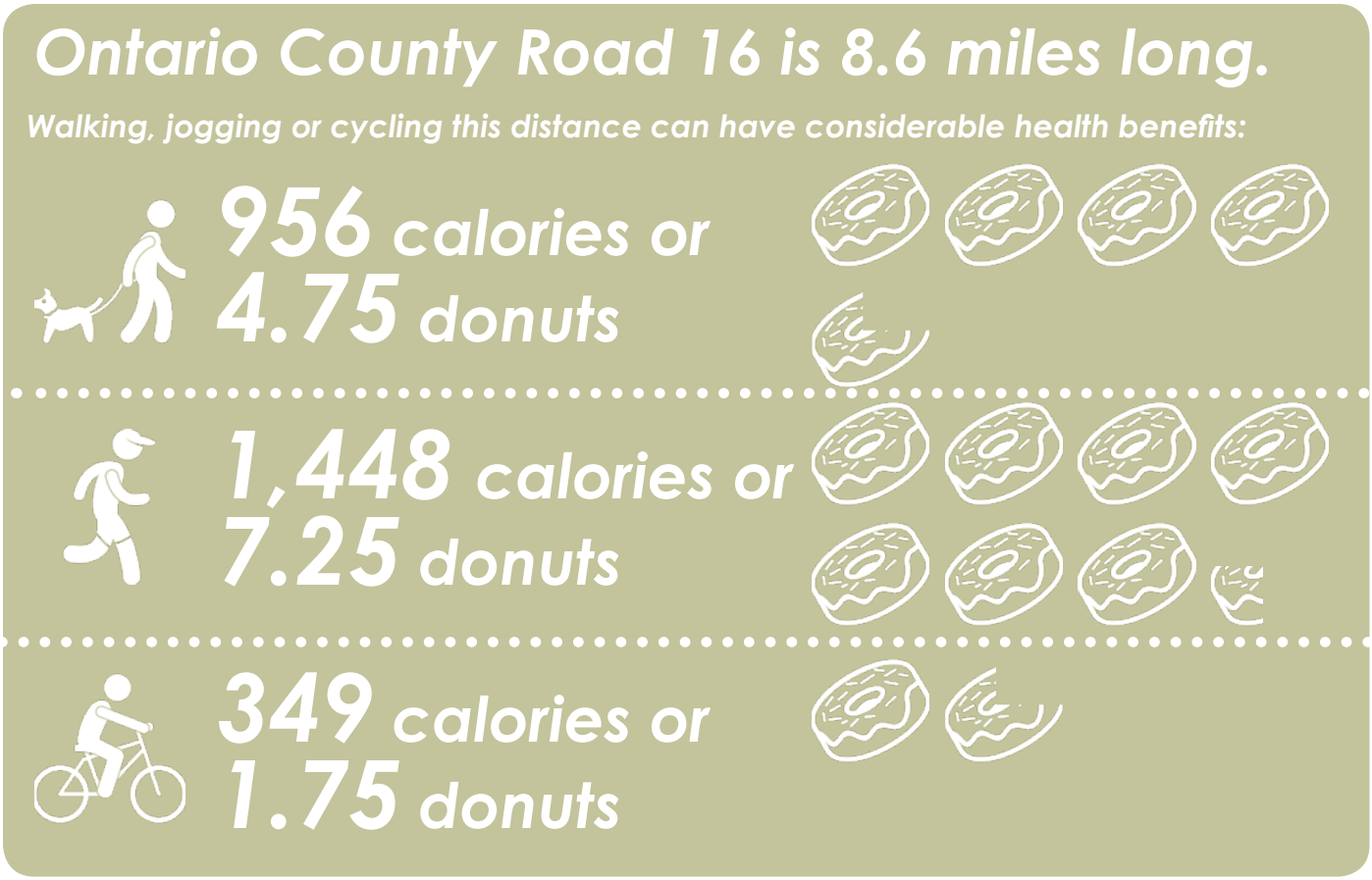
In recognition of these critical facts, government organizations across the country are responding with new bicycling and walking policies to improve health outcomes across America.

In 2016 the Surgeon General published a call to action to promote walkable communities throughout the United States.

36 states, including New York, have set goals to increase bicycling and walking, and 47 of the 50 most populous cities in the US have published goals to increase cycling.

By creating a more pedestrian and bicycling friendly road network, Ontario County is taking part in this national initiative. The County is creating more opportunities for residents to make healthy and enjoyable choices that will benefit residents for generations to come.





3.2 ENVIRONMENTAL BENEFITS

Improved roadways encourage active transportation. This reduces emissions of greenhouse gases and other pollutants that contribute to global warming, smog, and acid rain. Choosing active transportation is an easy way to reduce our environmental impact – bicycling and walking create zero greenhouse gas emissions. Therefore, mode shift will reduce air pollution, minimize traffic congestion, and help to lessen our national dependence on petroleum.

A four mile bicycle trip keeps 15 pounds of pollutants out of the air we breathe

(Worldwatch Institute)

3.3 COMMUNITY BENEFITS

Cultivating better walking and bicycling conditions provides mobility for the one-third of people in the United States who do not have cars. This improves access to jobs, education, and health care.

Bicycling and walking can be appealing for families looking to engage in new recreational opportunities while increasing opportunities for social interaction and contributing to a sense of community. Communities across the county have embraced non-motorized transportation as a popular and beneficial option that residents increasingly expect and visitors actively seek when making choices about where to locate their families. Cities that promote bicycling tend to retain youth, attract young families, and increase social capital.

Active transportation can reduce stress and allow for more community interaction. Riding a bicycle allows a commuter to choose a less busy route and by-pass traffic signals. Walkers and bicyclists see more of their community than stoplights, white lines and car bumpers, and benefit from the stress relief that accompanies physical exercise. It is easier to park a bicycle than a car, which further reduces the stress of commuting. In addition, a culture dependent on cars encourages urban sprawl, disintegrated communities and keeps people isolated from one another.

3.4 ECONOMIC BENEFITS

“Economically, a town or city can benefit from having a more walkable environment. The presence of sidewalks and other walking facilities is shown to increase property value and promote tourism. Sidewalks and connected, well-maintained pedestrian networks allow citizens the ability to safely and conveniently patronize local shops, businesses, and restaurants” (University of Delaware Institute for Public Administration).

The number of people walking and bicycling can be a good indicator of a community’s livability- a factor that has a profound impact on attracting new residents, businesses, workers, and tourists, all of which contribute towards stimulating the economy. By encouraging active transportation, local economies keep shoppers centrally located, resulting in increased community reinvestment.

4.0 INVENTORY AND ANALYSIS

4.1 TOWN CHARACTERISTICS

The Town of Canandaigua is in the center of Ontario County, 30 miles southeast of the City of Rochester. The Town is located on the northwestern section of Canandaigua Lake, with a total area of 63 square miles. As of the United States Census of 2010, there were 10,020 residents.

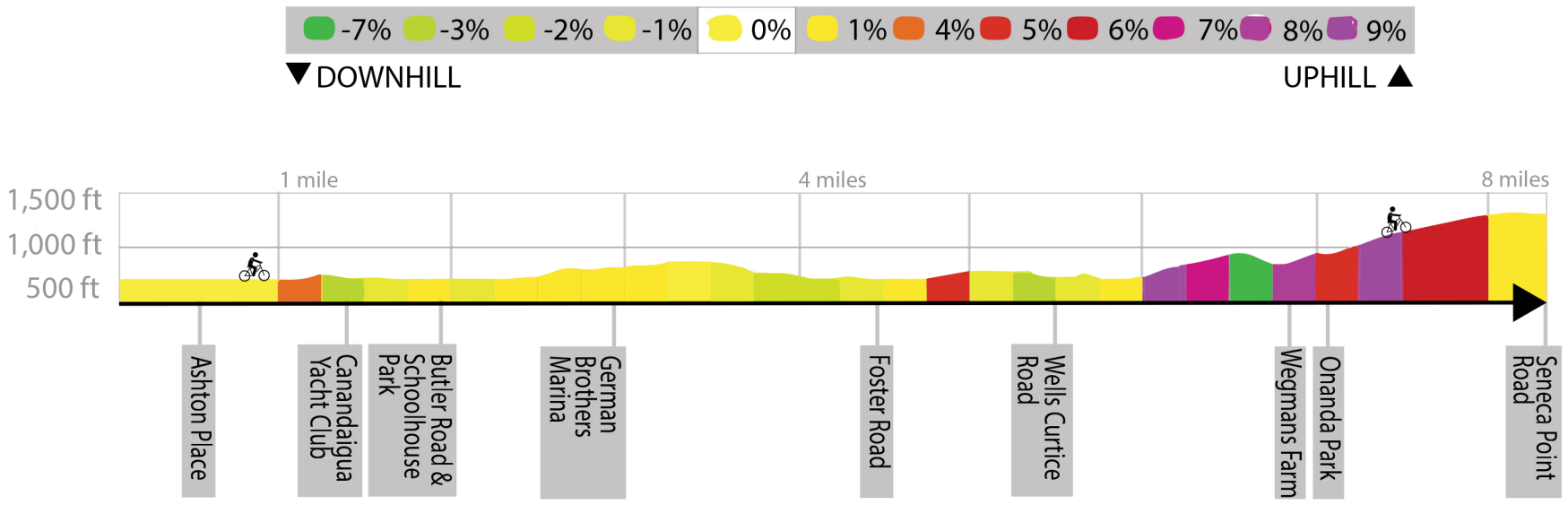
The Town of Canandaigua has many resources that contribute to active transportation including:

- An extensive park network (see Section 4.8 Parks and Trails)
- Scenic views
- Access to Canandaigua Lake
- Proximity to the pedestrian friendly downtown in the City of Canandaigua
- Attractive destinations and businesses

4.2 ROAD CHARACTERISTICS

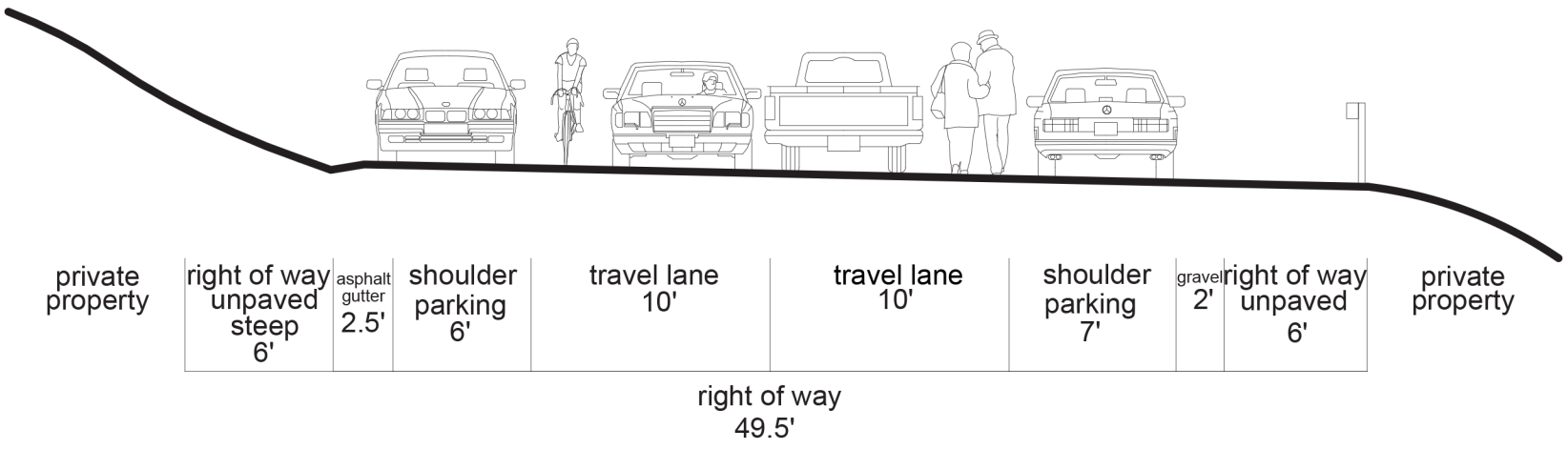
CR 16 is an 8.6 mile road that runs primarily north and south along the western edge of Canandaigua Lake, connecting West Lake Drive in the City of Canandaigua to NYS Route 21 South in the Town of Canandaigua. It is classified as a rural minor collector, with average daily traffic (ADT) at approximately 3,400 vehicles, and posted speeds of primarily 35 mph.

ROAD SLOPE SECTIONS

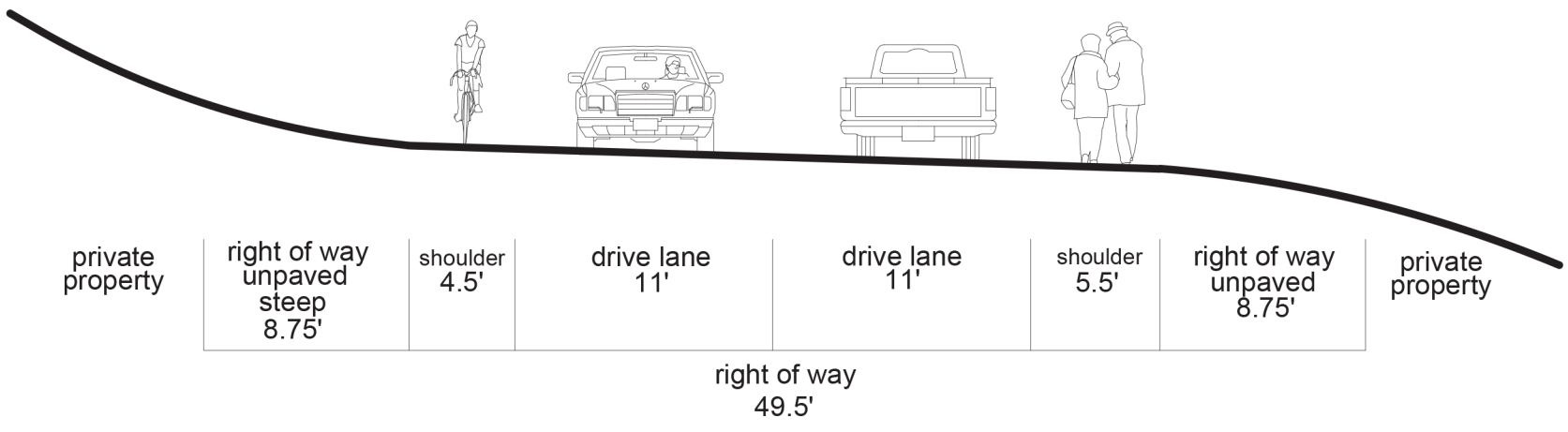


This graph shows average slope for each quarter mile increment heading south from the Canandaigua City Line to Seneca Point Road. Adapted from Map My Ride.

MARINA
existing conditions



ONANDA PARK
existing conditions



These sections display existing roadway conditions along Ontario County Road 16.

The study area for this report includes an 8.2 mile stretch along the 8.6 mile roadway, with boundaries from the City of Canandaigua city line to Seneca Point Road in the Town of Canandaigua.

Bicycle and pedestrian travel occur throughout the corridor. In general, the highest density of pedestrian use occurs along the segment where the roadway is closest to the lake shore, roughly between the Canandaigua Yacht Club and Lake Hill Drive.

CR 16 exhibits several non-standard features due to its piecemeal evolution over time. As a result, guiderails, lane widths, shoulder widths and intersection treatments are inconsistent along the corridor.

Land use along the corridor is primarily single family residential. Notable exceptions include Canandaigua Yacht Club, German Brothers Marina, and Wegmans Organic Farm. Over time, some properties have encroached into the right of way. Encroachments may pose issues for roadway and facility improvements.

4.3 SLOPE AND TOPOGRAPHY

CR 16 is significantly impacted by slope and topography, and is characterized by relatively flat areas interspersed with steep hill conditions.

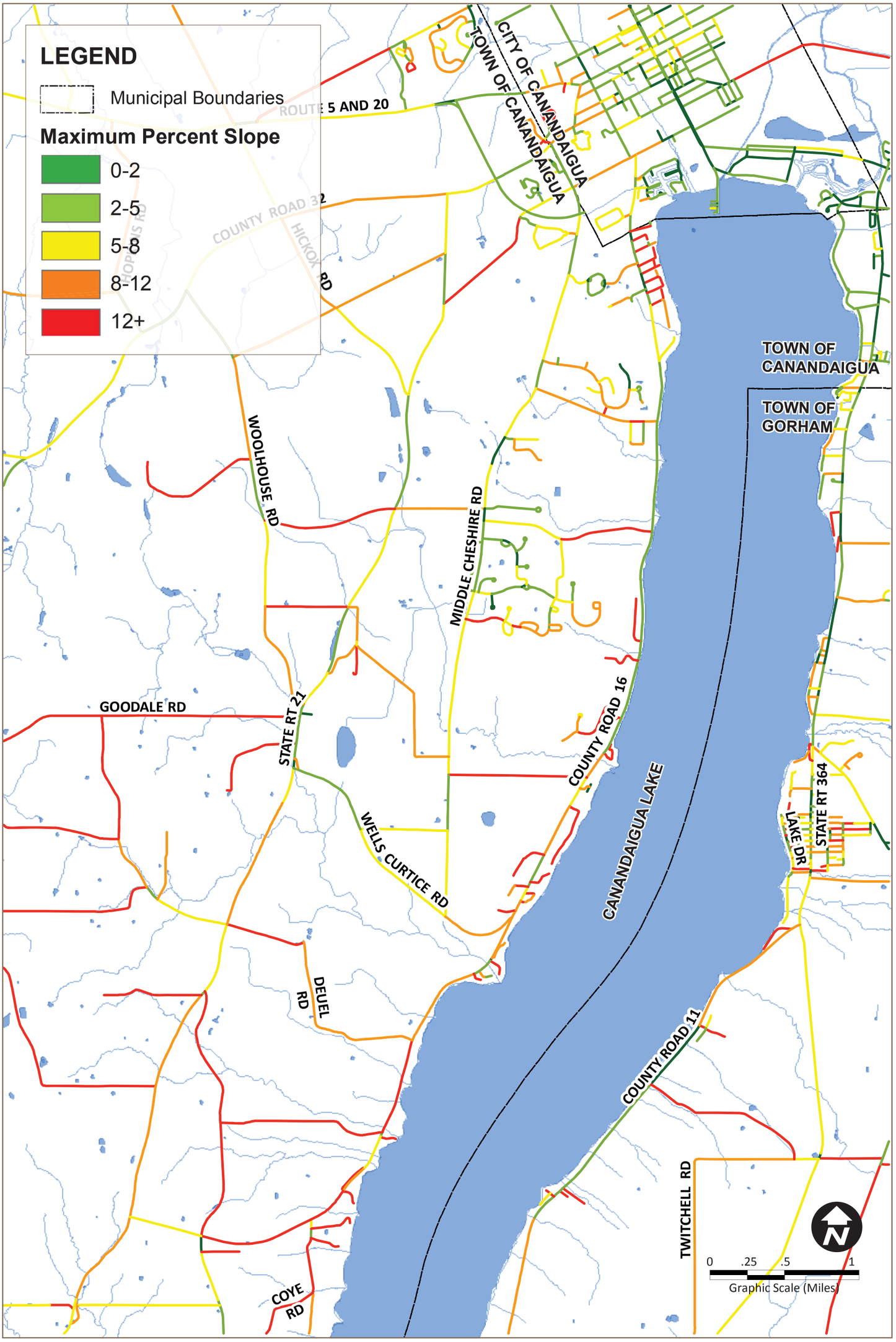
While the average longitudinal slope of CR 16 within the study area is only 3%, one fifth of the road has a slope over 5%. The maximum slope is 19%. The steep segments could be challenging for many pedestrians and bicyclists. To put this in perspective, the maximum continuous slope allowed in an ADA accessible route is 5%, and the maximum slope allowed on an ADA accessible ramp is about 8%.

Vertical alignments in steep segments may limit visibility. Many of the roads that intersect with CR 16 have steep slopes as well. This can create a safety hazard for bicyclists who have gained momentum during a steep descent and must come to an abrupt stop at an intersection. It can also pose an issue for vehicles gaining momentum travelling down a hill, causing increased variability in speed control and awareness.

The following list provides a rough guide of the impact of various gradients on bicyclists:

- 0%: Relatively easy riding.
- 1-3%: Slightly uphill but not particularly challenging; rider will feel some resistance.
- 4-6%: Manageable but can cause bicyclists to more easily fatigue over longer distances.
- 7-9%: Becoming uncomfortable for advanced riders; significantly difficult for novice bicyclists.
- 10%+: Difficult for all bicyclists, especially for prolonged distances.

See ***Figure 2 and 3*** for more information on slope and topography.



Ontario County Road 16 - West Lake Road Pedestrian & Bicycle Study

Department of Public Works - Ontario County, NY

FIGURE 3. ROAD SLOPE

July 19, 2018

4.4 WETLANDS, STREAMS AND DRAINAGE

A review of United States Fish and Wildlife Service, New York State Department of Environmental Conservation or National Wetland Inventory online map resources show there are several riverine wetlands present within, and adjacent to, the study area.

There are 14 mapped streams and channels that flow across CR 16 into Canandaigua Lake. All of these streams are categorized as 'Class C Streams' and are not protected streams under New York State Environmental Conservation Law.

The steep topography causes water to run quickly downhill, increasing surface runoff and erosion that causes sedimentation.

From Lakeview Lane to Lake Hill Drive, the majority of CR 16 is within a FEMA flood zone.

Following many sections of the roadway is a culvert to capture roadway runoff. This infrastructure should be considered on CR 16 for its significant effects on property connections and slope adjacent to the roadway.

Existing roadside stormwater management.

See ***Figure 4*** for a map of existing topography, waterbodies, and drainage.

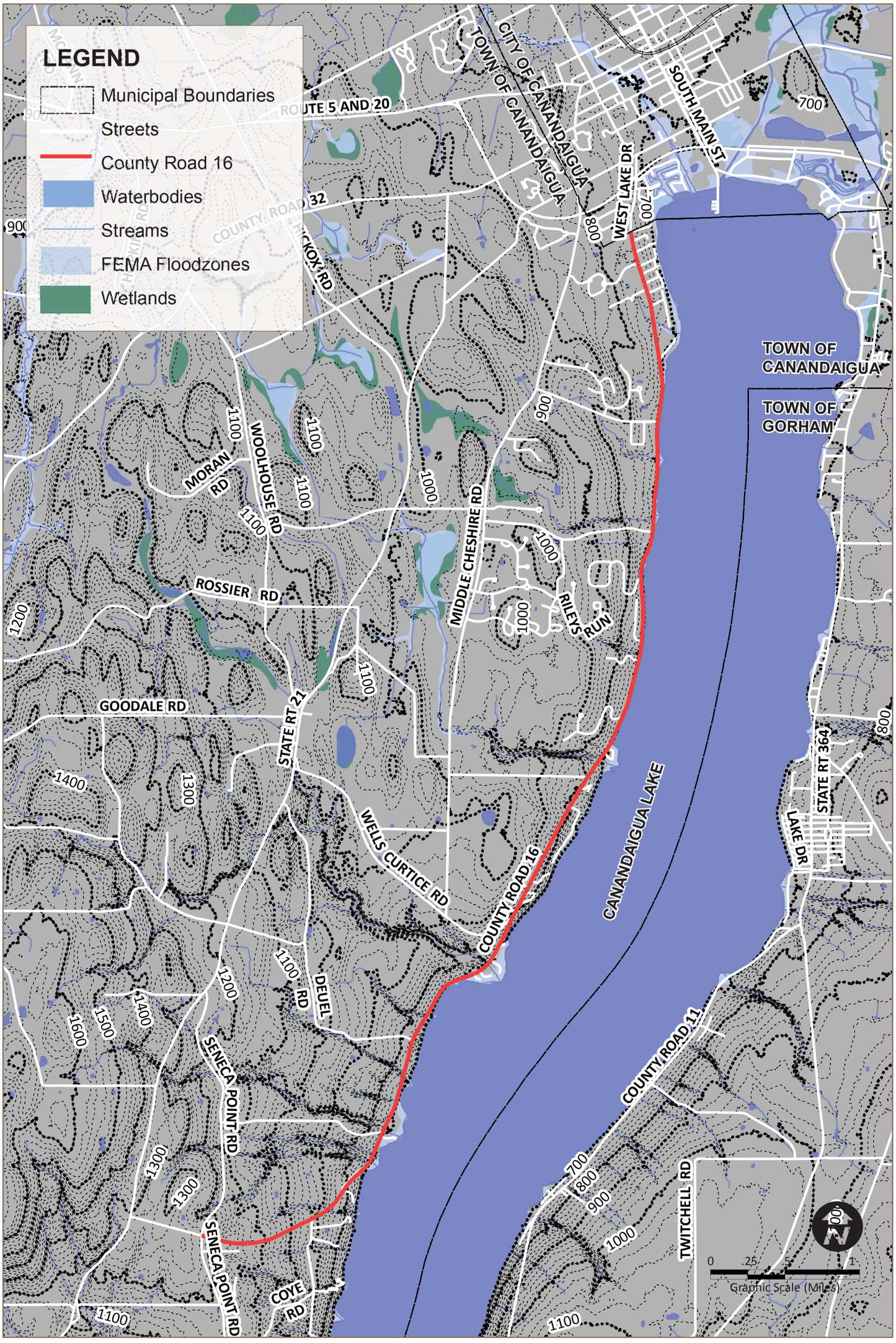
4.5 EXISTING BICYCLE AND PEDESTRIAN CONDITIONS

CR 16 lane widths vary between 10 feet and 11.5 feet. Shoulder widths range from 2.5 feet to 7 feet. The most narrow shoulders occur between Butler Road and the Canandaigua Yacht Club. The most wide shoulders occur in the vicinity of the German Brothers Marina.

There are no sidewalks or designated bicycle lanes along the study corridor. Temporary parking is common along the shoulders. These conditions present mobility and safety challenges for pedestrians and bicyclists.

Usable space for pedestrians is especially restricted where narrow shoulder widths coincide with guardrail installations. Further, locations where vehicles or trailers may be parked, and guardrails line the roadway, cause a hazardous roadway condition by forcing pedestrians into the roadway in order to pass through.

Existing shoulder conditions.



Ontario County Road 16 - West Lake Road Pedestrian & Bicycle Study

Department of Public Works - Ontario County, NY

FIGURE 4. TOPOGRAPHY AND WATERBODIES

July 19, 2018

LEVEL OF SERVICE MODELS

The Bicycle Level of Service (BLOS) Model and Pedestrian Level of Service (PLOS) Model, existing conditions performance measure, are a "supply-side" criterion. The models measure bicycling and walking conditions of a roadway, providing an evaluation of the users' perceived safety and comfort with respect to motor vehicle traffic and roadway conditions.

This nationally adopted and widely used methodology quantifies the quality or level of service (accommodation) for bicyclists and pedestrians that currently exists within the roadway environment.

A major benefit of incorporating the BLOS and PLOS is the indication it provides regarding which network segments have the greatest needs. It uses the same measurable traffic and roadway factors that transportation planners and engineers use for other travel modes. This method is not limited to merely assessing conditions; results can be used to provide a snapshot of existing bicycling and walking conditions to identify roadways that are candidates for reconfiguration of bicycle and pedestrian facility improvements, to conduct a benefits comparison among proposed facilities and roadway cross-sections, and to prioritize and program roadways for such improvements.

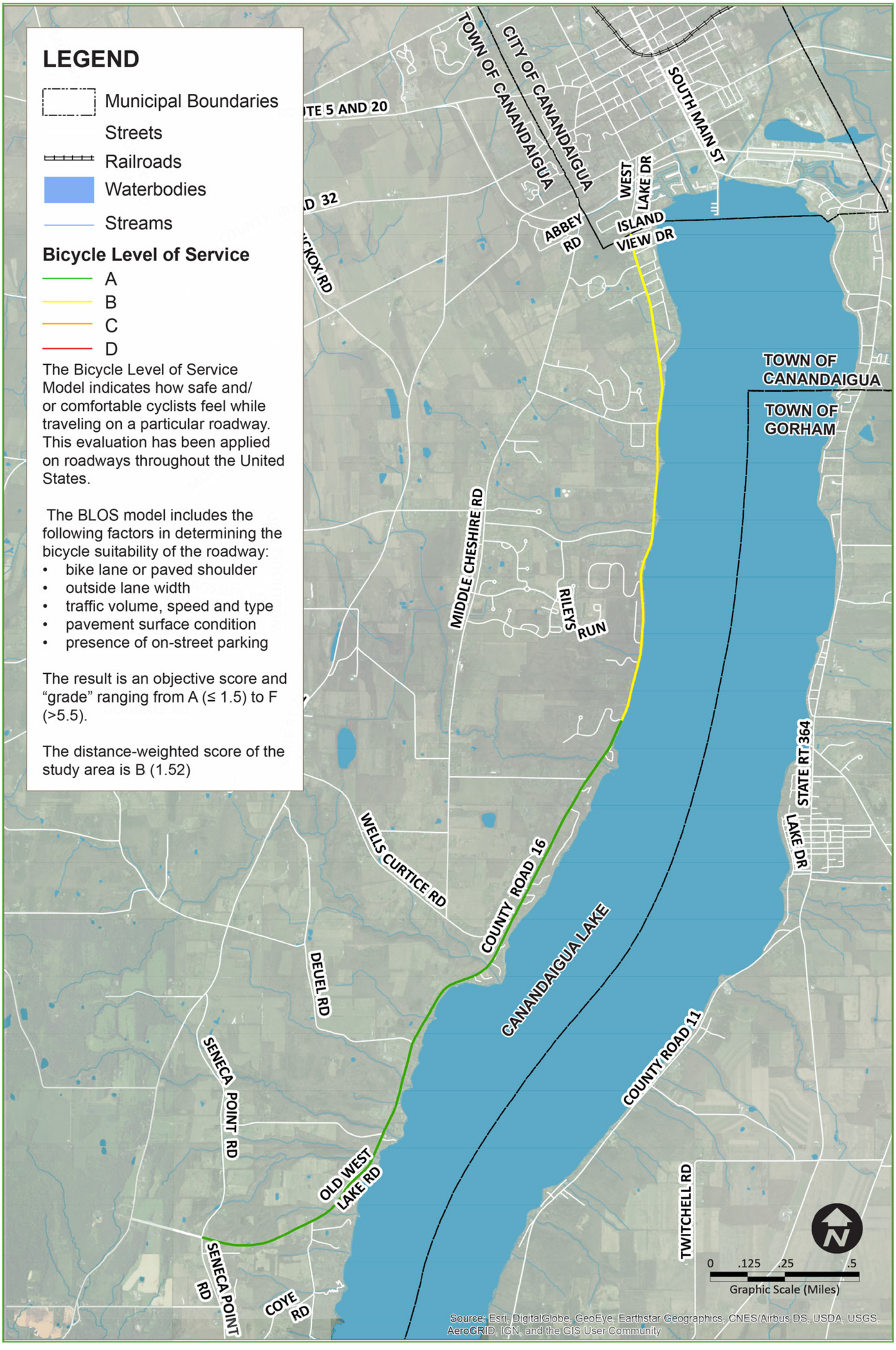
With statistical precision, the BLOS Model clearly reflects the effect on bicycling suitability or "compatibility" due to variations in the following primary factors:

- bike lane or paved shoulder width;
- traffic volume, speed, and type;
- outside lane width;
- presence of on-street parking; and
- pavement surface condition.

The PLOS model reflects the effect on pedestrian suitability or "compatibility" due to variations in the following primary factors:

- sidewalk presence, width;
- roadway width;
- traffic volume, speed, type;
- presence of buffer, width; and
- presence of barriers (on-street parking, street trees).

The level of service analysis produces, for each study network segment, an objective score and "grade" which measures accommodation on that section of roadway. See ***Table 3***.



Ontario County Road 16 - West Lake Road Pedestrian & Bicycle Study

Department of Public Works - Ontario County, NY

FIGURE 5. BICYCLE LEVEL OF SERVICE

September 6, 2018

Table 3: Level of Service

Level of Service	*Numerical Range*
A	≤ 1.5
B	> 1.5 and 2.5 ≤
C	> 2.5 and 3.5 ≤
D	> 3.5 and 4.5 ≤
E	> 4.5 and 5.5 ≤
F	> 5.5

EXISTING CONDITIONS ANALYSIS RESULTS

Pedestrian and bicycle levels of service were analyzed at five locations along CR 16. This includes roadway intersections with Ashton Place, German Brothers, Wells Curtice to north of Foster, Onanda Park, and East of Seneca Point.

CR 16 currently provides a range of bicycling conditions from 0.00 to 2.18, which correspond to bicycle levels of service A to B.

CR 16 currently provides a range of pedestrian conditions from 3.32 to 4.00, which correspond to pedestrian levels of service C to D.

Refer to ***Figures 5 and 6*** for analysis of the levels of service along CR 16. See ***Appendix C*** for additional information and data related to the PLOS and BLOS models.

**Level of Service maps are generated by spot data collection at specific locations, not through a full field inventory of the corridor. These maps are a representation of this data in sections determined by spot locations.*

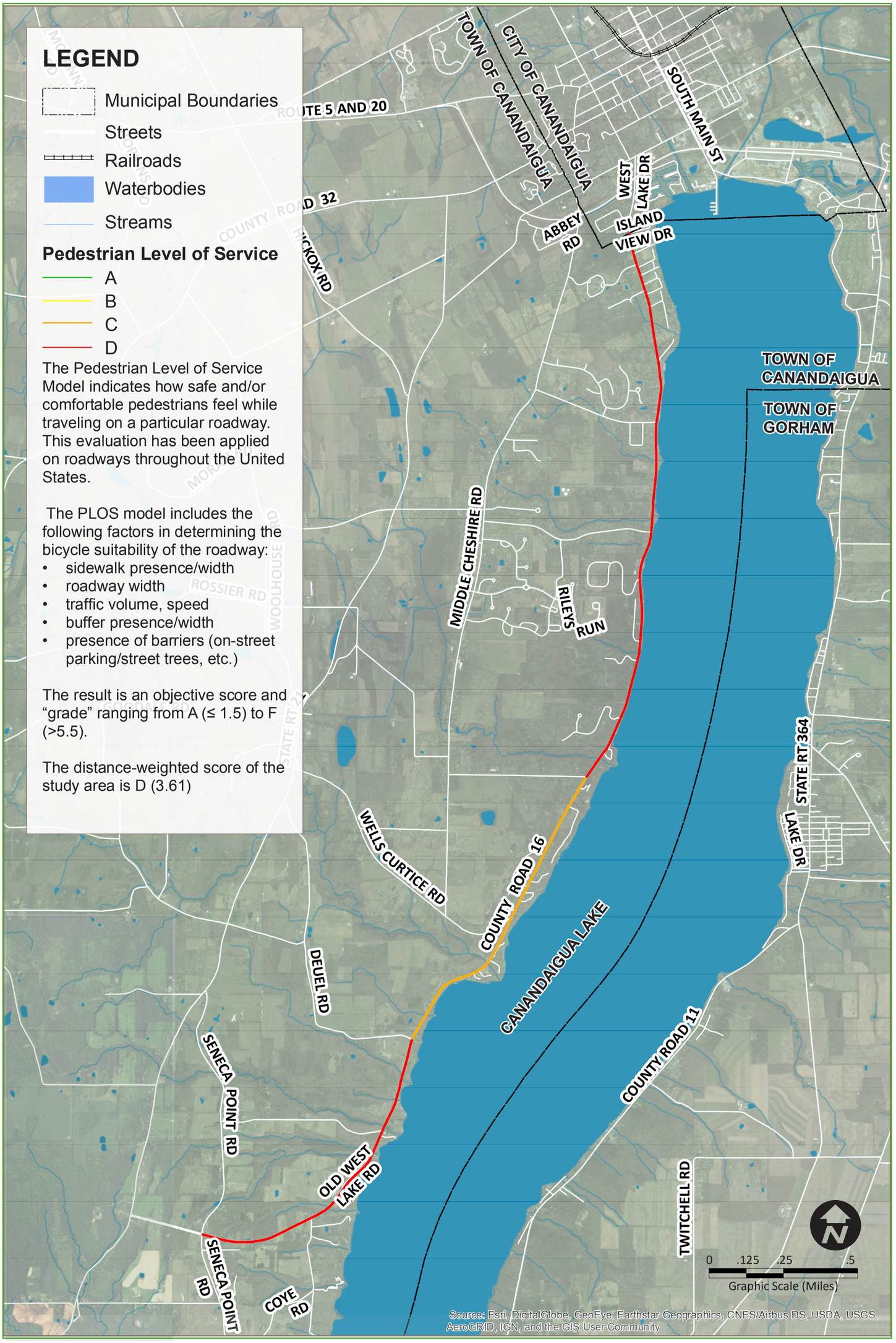
4.6 BICYCLE AND PEDESTRIAN EVENTS

There are several bicycle and pedestrian events along CR 16 that attract local and outside visitors by active transportation. These include:

HIGHLANDER CYCLE TOUR

Highlander Cycle Tour is an annual charity bicycle tour of New York's famous Finger Lakes Wine Country. Courses vary in length, with climbs of up to 10,000 feet of vertical gain on grades up to 23%, within the backdrop of the Finger Lakes wine country. The ride begins and ends at Bristol Mountain Ski Resort, and often travels along the West shore of Canandaigua Lake.

http://highlandercycletour.com/



Ontario County Road 16 - West Lake Road Pedestrian & Bicycle Study

Department of Public Works - Ontario County, NY

FIGURE 6. PEDESTRIAN LEVEL OF SERVICE

September 6, 2018

Ontario County Road 16
West Lake Road Pedestrian & Bicycle Study

TOUR DE THOMPSON

Tour de Thompson is an annual scenic bicycle tour through the Bristol Hills. Participation helps benefit the aftercare program at Thompson Health's Rehabilitation Services, helping individuals with chronic disease maintain their level of function and independence in the community. The ride begins at Onanda Park and all routes include extended sections of CR 16.

https://www.thompsonhealth.com/Foundation/Special-Events/Tour-de-Thompson

4.7 DESTINATIONS

There are several destination points along CR 16 that attract local residents and visitors both by vehicular transportation and active transportation. These include:

Sail boats on the Lake. Source: Canandaigua Yacht Club.

GERMAN BROTHERS MARINA

Owned and operated since 1977, the German Brothers Marina is an important destination along Canandaigua Lake. The business provides a full service marina, with dockside fuel, a boat launch, repair capabilities, storage, rentals and services.

During the summer months, this location becomes filled with trailers and vehicles, with trailer and boat parking within the shoulder of the road and in designated parking and storage areas above.

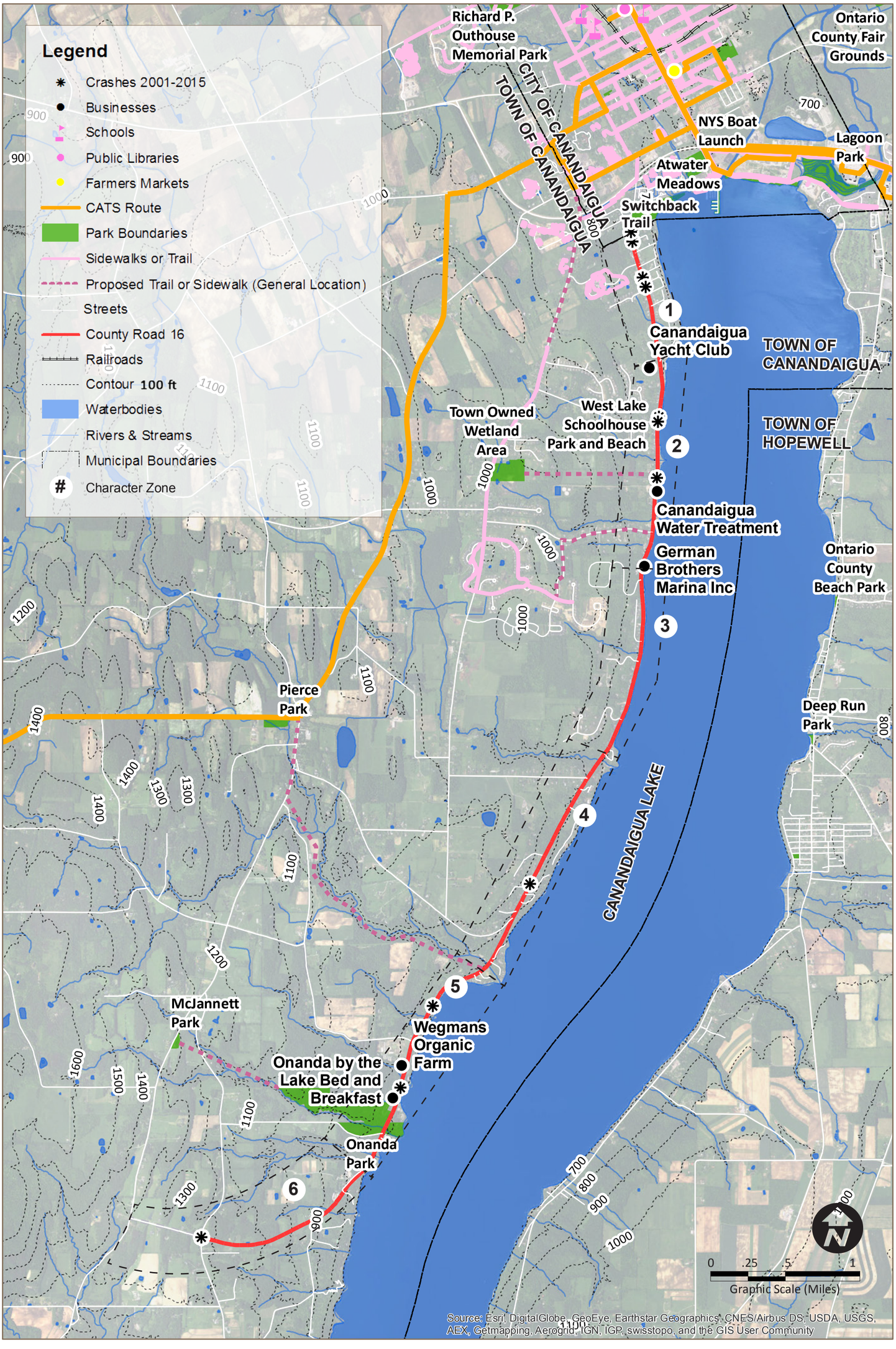
CANANDAIGUA YACHT CLUB

Established in 1891, the Canandaigua Yacht Club is a significant destination along Canandaigua Lake, offering sailing lessons for youth, park facilities and a club house, as well as docks, mooring, and waterfront facilities. It has over 250 members, open from late April until late October.

During the summer months, membership alone generates more than 100 road crossings, with an increase when the Club hosts several race events throughout the summer that are open to the public.

WEGMANS ORGANIC FARM AND ORCHARD

Started in 2007, the Wegmans Organic Farm contributes to the 400 and more local farms that provide organic produce for Wegmans stores throughout New York.



Ontario County Road 16 - West Lake Road Pedestrian & Bicycle Study

Department of Public Works - Ontario County, NY

FIGURE 7. TRANSPORTATION NETWORK

October 9, 2018

4.8 PARKS AND TRAILS

The Town of Canandaigua holds approximately 183 acres of parkland and 85 acres of open space including:

- Blue Heron Park
- Leonard R. Pierce Memorial Park
- McJannett Park
- Middle Cheshire Road Property Wetlands
- Miller Park
- *Onanda Park (mentioned later in this report in more detail)
- Richard P. Outhouse Memorial Park
- *West Lake Schoolhouse Park and Beach (mentioned later in this report in more detail)

**Located within the study area of CR 16.*

Two trail projects are underway within the Town of Canandaigua. These include the Auburn Trail, which is under active development and included in the 2018-19 budget, as well as the Peanut Line Trail, which is not under active development since one of its trail sections is still in the planning phase.

The Town of Canandaigua Parks and Recreation Master Plan 2018-2023 proposes 16 additional trail and walkability projects, including recommending a County Road 16 Walkability Study.

Five of these proposed trails would provide pedestrian and bicycling linkages to CR 16. This includes connections from the City to CR 16, such as proposed trail linkages with the recently constructed Switchback Trail. Trails, parkland, and overall transportation network are shown in ***Figure 7***.

4.9 EXISTING SPEED CONDITIONS

The posted speed limit along CR 16 is 35 mph throughout most of the study area. However, north of the study corridor, the speed limit drops to 30 mph within the City of Canandiagua. To the south of the study corridor, the speed limit increases to 50 mph just before Seneca Point Road.

According to the ***New York State Department of Transportation*** Speed Count Average Weekday Report, the average travel speed is 38 mph, while the 85th percentile is 44 mph, meaning 85% of motorists are travelling below 44 mph. Not represented by this average value is a significant gap, between slightly above the marked speed, and significantly above the marked speed, up to 55 mph.

Another consideration that should be made is that these counts were taken in 2015, concentrated at the north end of the corridor, near Adams Drive, where speeds are lower than they are further south.

See the end of ***Appendix C*** for more information on speed data.

4.10 MIOVISION DATA

Miovision camera and technology.

The Genesee Transportation Council provided a Miovision Scout camera for video traffic data collection. Miovision is an innovative data collection and analysis system that provides information on all modes of travel, including bicycle and pedestrian movements.

Miovision cameras were placed at four locations (Canandaigua Yacht Club, Butler Road Schoolhouse, German Brothers Marina, and Onanda Park) during two timeframes, Fall 2017 and Summer 2018.

Fall 2017 data was collected over a 13-hour period (6:00 a.m. to 7:00 p.m.), while Summer 2018 data was collected over a 10-hour period (6:00 a.m. to 4:00 p.m.).

Time-of-day variation generally follows expected patterns, with lower volumes early in the morning, and peak periods ranging from mid-day to late afternoon. Summer volumes are approximately 40% higher than fall volumes, exhibiting a clear seasonal trend.

The counts were divided into five travel modes: light cars and trucks, heavy vehicles, motorcycles, pedestrians, and bicycles. Across three of the count locations*, the mode split is dominated by light cars and trucks, representing more than 94 percent of overall trips. Non-motorized users account for just over 3 percent of trips along the corridor, with pedestrians outnumbering bicyclists. Across 69 hours of data, 173 pedestrians and 138 bicyclists were observed.

See ***Appendix D*** for more information.

**Data at the German Brothers Marina site was processed differently than the other three locations (as turning movement counts were included rather than exclusively cutline counts), therefore it was excluded from these summary statistics.*

4.11 SAFETY EVALUATION

With consideration of topographic and roadway conditions, a safety evaluation was conducted in the study area using 15 years of historical data from the Genesee Transportation Council through Accident Location Information System Data (ALIS). This includes crash locations along the corridor, which have been identified in point format on ***Figure 7***.

There were 17 total crashes reported during the 15 year period. No pedestrians or bicyclists were involved in these crashes, and there were no fatalities. A few signifant takeaways can be seen below.

- Two of the 17 crashes involved motorcycles, with one overtaking a motorist in a no passing zone, and the other colliding with a fixed object;

- 13 total crashes occurred during daylight versus four during the nighttime; and,
- The calculated crash rate is approximately 50 per 100 million vehicle miles traveled. This is below average.

Identifying and analyzing crash patterns and locations helps to identify potential issues that may impact pedestrians and bicyclists in the future. Identifying these areas and patterns helps to identify gaps between roadway users and needs, and how well the street meets these demands.

4.12 NEEDS ASSESSMENT

Inventory of existing conditions, input from residents, and discussions with County staff highlighted a number of needs relative to pedestrian and bicycle mobility on CR 16. Many different user groups and travel modes are sharing limited space along a relatively narrow lakeshore corridor.

Local and regional development over recent years has increased the density and diversity of use along the corridor. Proximity to the Canandaigua Lake makes CR 16 especially popular with pedestrians and bicyclists.

Priority pedestrian and bicycle needs identified in this study include:

● Shoulder widths vary considerably along the study corridor, and are less than 5' wide in many locations. 5' is a preferred minimum shoulder width to establish along the corridor.

● Paved shoulder space is heavily used by pedestrians and bicyclists. Standard maintenance practices can be increased to keep shoulder pavement and markings in the best possible condition.

● On-street parking is not regulated along CR 16. Shoulder space is particularly congested in the vicinity of German Brothers Marina.

● Parking in the shoulders reduces sight distances, and forces pedestrians to walk in travel lanes.

● Crosswalks and signing are lacking at some high-demand locations such as Onanda Park and the Canandaigua Yacht Club.

●Vertical alignments of the corridor reduce visibility of bicyclists at hillcrest locations.

● Peak usage of the corridor occurs during summer months, especially on weekends. There is a need for additional traffic law enforcement during peak times.

● Stormwater management along the corridor is problematic during heavy rain events.

● Water quality is a prime concern in the Canandaigua Lake watershed.

● Safety is dependent on cooperation and appropriate behavior of all users groups. There is a need for improved outreach, education, and enforcement related to roadway safety.

THIS PAGE LEFT INTENTIONALLY BLANK.

5.0 COMMUNITY INPUT

5.1 COMMUNITY INVOLVEMENT

Planning of any kind cannot be done in a vacuum, and must be informed by local residents. New York State has identified principles to guide community planning, which state that planning should be continuous, comprehensive, participatory, and coordinated. Citizen participation is not just a requirement, but a critical element of a successful plan. See ***Table 2*** for a list of meetings that were a part of this project.

The planning process for this study included outreach to both the general public and key stakeholders. A project advisory committee, comprised of representatives from Ontario County, the Town of Canandaigua and local stakeholders, provided study oversight in addition to public meetings.

Project Advisory Committee Meeting summaries and agendas are provided in ***Appendix A.***

Community input meeting materials and information are provided in ***Appendix B.***

5.2 PUBLIC MEETINGS

PROJECT KICK-OFF MEETING

Location - Canandaigua Town Hall

Date - September 20th, 2017

Time - 2:00 PM

COMPILATION OF INPUT

The first Public Input Workshop launched the planning process for the Ontario County Road 16 Pedestrian & Bicycle Study. The team outlined the project scope and schedule, project objectives, and areas of concern. The team also discussed tools for gathering information. Specific study topics suggested include:

- Lower level interventions and pocket improvements
- Upcoming maintenance roadwork
- Potential collaboration with landowners
- Geographic constraints which result in congestion in the right of way, especially in warmer months with excess of parking, significantly near German Brothers Marina, and substandard road conditions
- Popularity of the roadway for pedestrians and bicyclists in Town of Canandaigua
- Flooding and stormwater management
- Issues crossing the street near the Yacht Club
- Topography, which causes safety issues for bicyclists

PROJECT ADVISORY COMMITTEE MEETING #2

Location - Ontario County Road 16

Date - October 12th, 2017

Time - 2:30 PM

COMPILATION OF COMMITTEE INPUT

The first formal Project Advisory Committee meeting was held to observe existing roadway conditions. Committee members went on a walkabout tour through the project site to gather information for level of service analysis. The team also decided traffic count data was needed to better understand roadway usage.

PUBLIC MEETING #1

Location- West Lake School House

Date- January 13th, 2018

Time- 10:00 AM

COMPILATION OF PUBLIC INPUT

The second Public Input Workshop was held to allow the public to review the project area, inventory, analysis of existing conditions.

PROJECT ADVISORY COMMITTEE MEETING #3

Location - Ontario County Department of Public Works Conference Room

Date - May 8th, 2018

Time - 10:00 AM

COMPILATION OF COMMITTEE INPUT

The second formal Project Advisory Committee Meeting was held to assess the study area extents and right of way, discuss increasing public participation through dropbox, advertisement, and survey, and review the existing conditions inventory and needs assessment.

PUBLIC MEETING #2

Location - Onanda Park

Date - August 8th, 2018

Time - 7:00 PM

COMPILATION OF PUBLIC INPUT

The third Public Input Workshop included a presentation and boards to discuss recommendations in the Ontario County Road 16 Pedestrian & Bicycle Study. General comments included:

- Feasibility of speed limit reduction, or at least Incorporate additional speed recording flashing signs
- Consideration of the size of the roadway for proposed changes

- Need to discuss crashes in more detail, and look to other sources
- Need to regulate parking in the shoulder
- Request for cost estimates and benefits
- Examination of Ashton Place and northern locations for intersection concerns
- Relation to more projects within the Town of Canandaigua

See ***Appendix B*** for more information about public meeting input and attendance.

5.3 ONLINE SURVEYS

As part of this study, community members were surveyed to gather information about current pedestrian and cycling patterns along County Road 16, potential road improvements, and current safety issues.

An online survey was active from January 2018 through August 2018. 332 surveys were completed. The survey consisted of 19 questions, completed at an average of 8.5 mintues total, regarding basic demographic information, current bicycle and pedestrian road use, and issues with the existing infrastructure. See ***Appendix B*** for more information. An independent survey focused on bicycle travelling was also distributed to a local bicycling club.

Survey results show:

81% of the respondents were between 50-79 years old,

81% of respondents reside in the Town of Canandaigua, and

80% of respondents reside within a half mile of Ontario County Road 16.

REPRESENTATIVE SURVEY QUESTIONS:

Q12: DO YOU HAVE PARTICULAR LOCATIONS ALONG ONTARIO COUNTY ROAD 16 THAT YOU LIKE TO BICYCLE OR WALK TO? ANSWERED: 147

Responses ranged from:

"Entire length of County Road 16" to "no part of the road is safe"

Most frequently mentioned locations:

Butler Road Park (19)

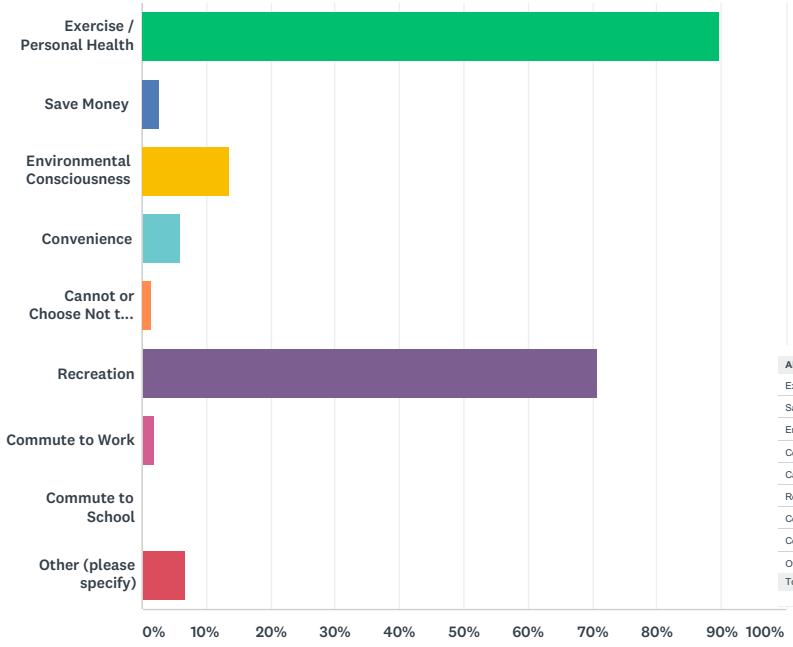
Canandaigua Yacht Club (18)

Onanda Park (10)

Foster Road (8)

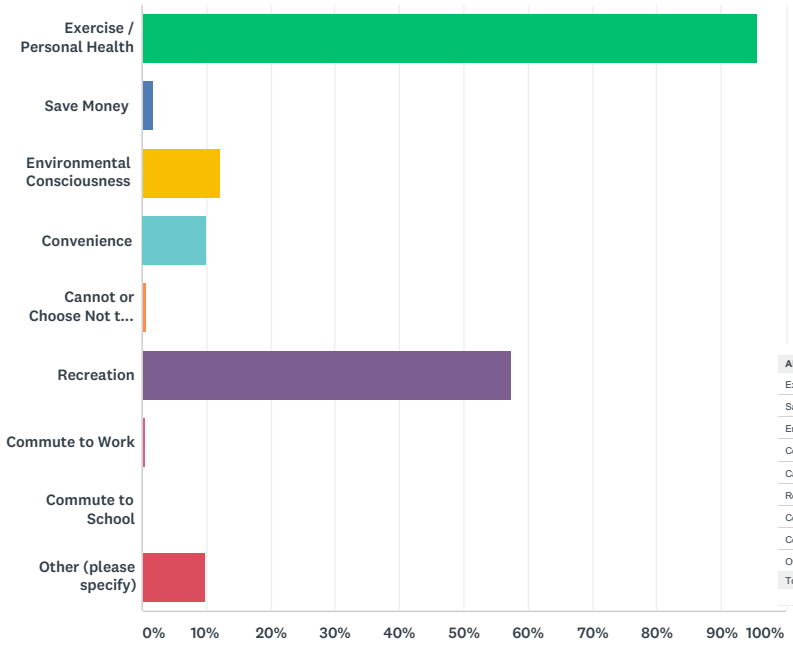
Seneca Point (8)

Q13: FOR WHICH OF THE FOLLOWING REASONS DO YOU DECIDE TO RIDE A BICYCLE? (CHOOSE ALL THAT APPLY) ANSWERED: 256



ANSWER CHOICES	RESPONSES	
Exercise / Personal Health	90%	230
Save Money	3%	7
Environmental Consciousness	14%	35
Convenience	6%	15
Cannot or Choose Not to Drive a Car	2%	4
Recreation	71%	181
Commute to Work	2%	5
Commute to School	0%	0
Other (please specify)	7%	17
Total Respondents: 256		

Q14: FOR WHICH OF THE FOLLOWING REASONS DO YOU CHOOSE TO WALK (CHOOSE ALL THAT APPLY) ANSWERED: 297

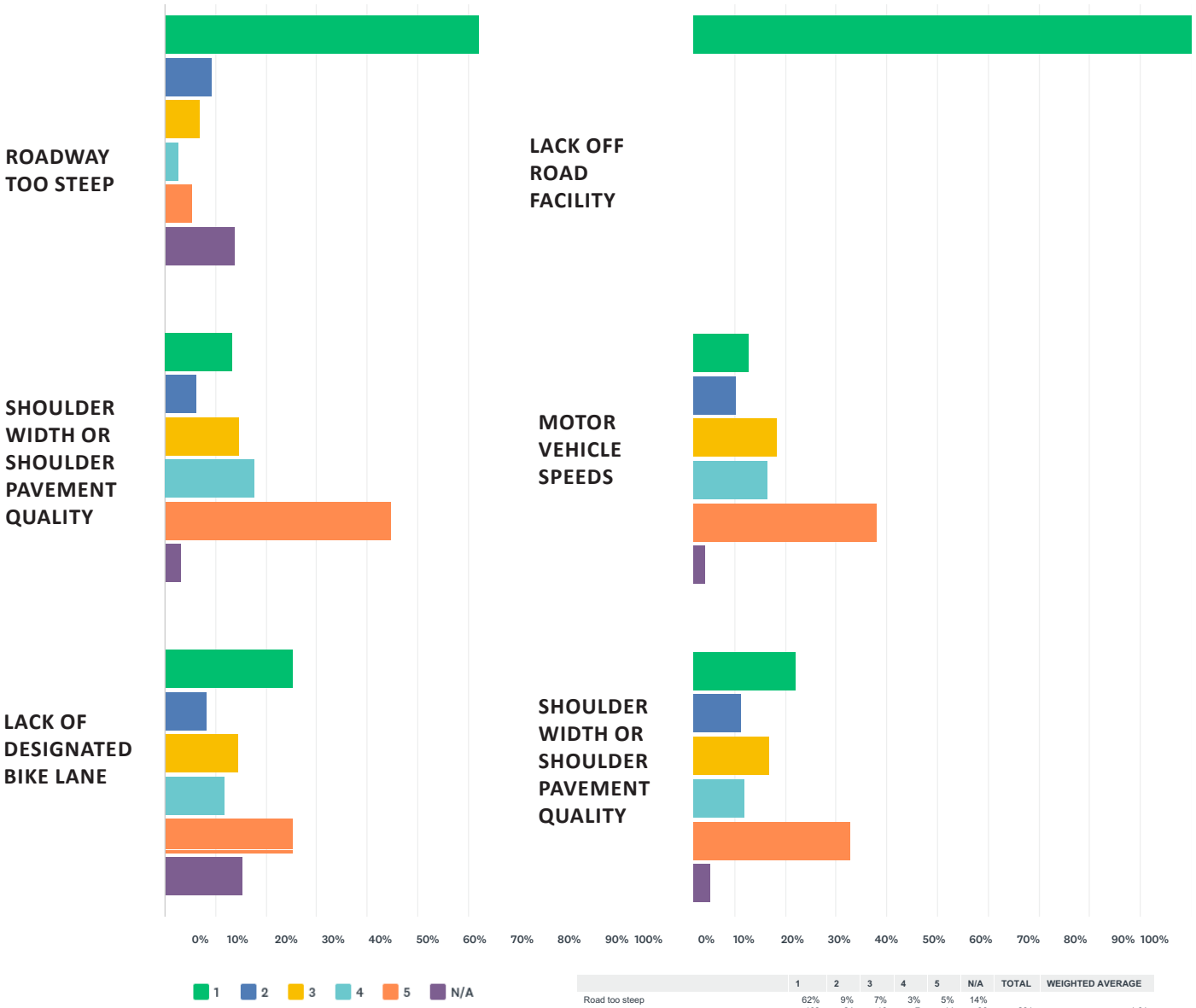


ANSWER CHOICES	RESPONSES	
Exercise / Personal Health	96%	284
Save Money	2%	5
Environmental Consciousness	12%	36
Convenience	10%	30
Cannot or Choose Not to Drive a Car	1%	2
Recreation	57%	170
Commute to Work	0%	1
Commute to School	0%	0
Other (please specify)	10%	29
Total Respondents: 297		

Q15: WHAT DO YOU CONSIDER TO BE THE PRIMARY BARRIERS TO BICYCLING ON ONTARIO COUNTY ROAD 16? ANSWERED: 273

	1	2	3	4	5	N/A	TOTAL	WEIGHTED AVERAGE
Road too steep	44% 110	11% 28	13% 32	7% 18	10% 24	15% 36	248	2.14
Shoulder width or shoulder pavement quality	6% 17	5% 13	10% 26	21% 55	54% 144	4% 11	266	4.16
Lack of designated bike lane	10% 26	7% 17	7% 17	18% 46	54% 138	5% 12	256	4.04
Lack of off road facility	21% 51	10% 24	12% 29	12% 30	29% 70	16% 40	244	3.22
Motor vehicle speeds	12% 32	10% 25	17% 45	16% 41	39% 103	6% 16	262	3.64
Inadequate bike and pedestrian / safety signage	16% 41	9% 22	18% 45	14% 37	35% 89	9% 23	257	3.47

Q16: WHAT DO YOU CONSIDER TO BE THE PRIMARY BARRIERS TO WALKING ON ONTARIO COUNTY ROAD 16? ANSWERED: 290



	1	2	3	4	5	N/A	TOTAL	WEIGHTED AVERAGE
Road too steep	62% 162	9% 24	7% 18	3% 7	5% 14	14% 36	261	1.61
Shoulder width or shoulder pavement quality	13% 38	6% 18	15% 42	18% 51	45% 128	3% 9	286	3.77
Lack of off road facility	25% 65	8% 21	14% 37	12% 30	25% 65	15% 39	257	3.04
Lack of trail	100% 1	0% 0	0% 0	0% 0	0% 0	0% 0	1	1.00
Motor vehicle speeds	13% 36	10% 29	18% 52	17% 47	38% 108	4% 12	284	3.60
Inadequate bike and pedestrian / safety signage	22% 59	11% 30	17% 45	12% 32	33% 88	5% 14	268	3.24

THIS PAGE LEFT INTENTIONALLY BLANK.

6.0 RECOMMENDATIONS

6.1 OVERVIEW

Review and analysis of existing conditions, stakeholder involvement, and extensive public input collectively lead to the development of specific projects that would most improve bicycle and pedestrian accommodations along CR 16 in the Town of Canandaigua.

Project overall recommendations are displayed on the next page. A list of specific recommended improvements and their associated prioritization follows in ***Table 4.***

The projects range from those that can be implemented quickly and at very low costs, to those that would be more costly and long-term because of the need for further study prior to design and implementation.

6.2 PRIORITIZATION

Identification of facilities in this Plan increases the likelihood of implementation as opportunities arise. The established prioritization serves as a general guide in phasing implementation, but does not suggest a specific order in which projects will ultimately be constructed. Recommended improvements, regardless of their established priority, may be tied to capital improvement schedules and specific funding opportunities. See ***Appendix F*** for schematic cost estimates.

Each project varies in priority based on the potential impact of the project and the feasibility of construction and funding. Each project was ranked according to the following prioritization options:

Priority – Highly beneficial projects that are immediately feasible, or will have the most impact and should therefore be addressed first.

Recommended – Beneficial projects that will have a significant impact and should be addressed next.

Possible – Projects that have a less critical time frame, or cannot begin until other projects are completed or issues are addressed.

RECOMMENDATIONS

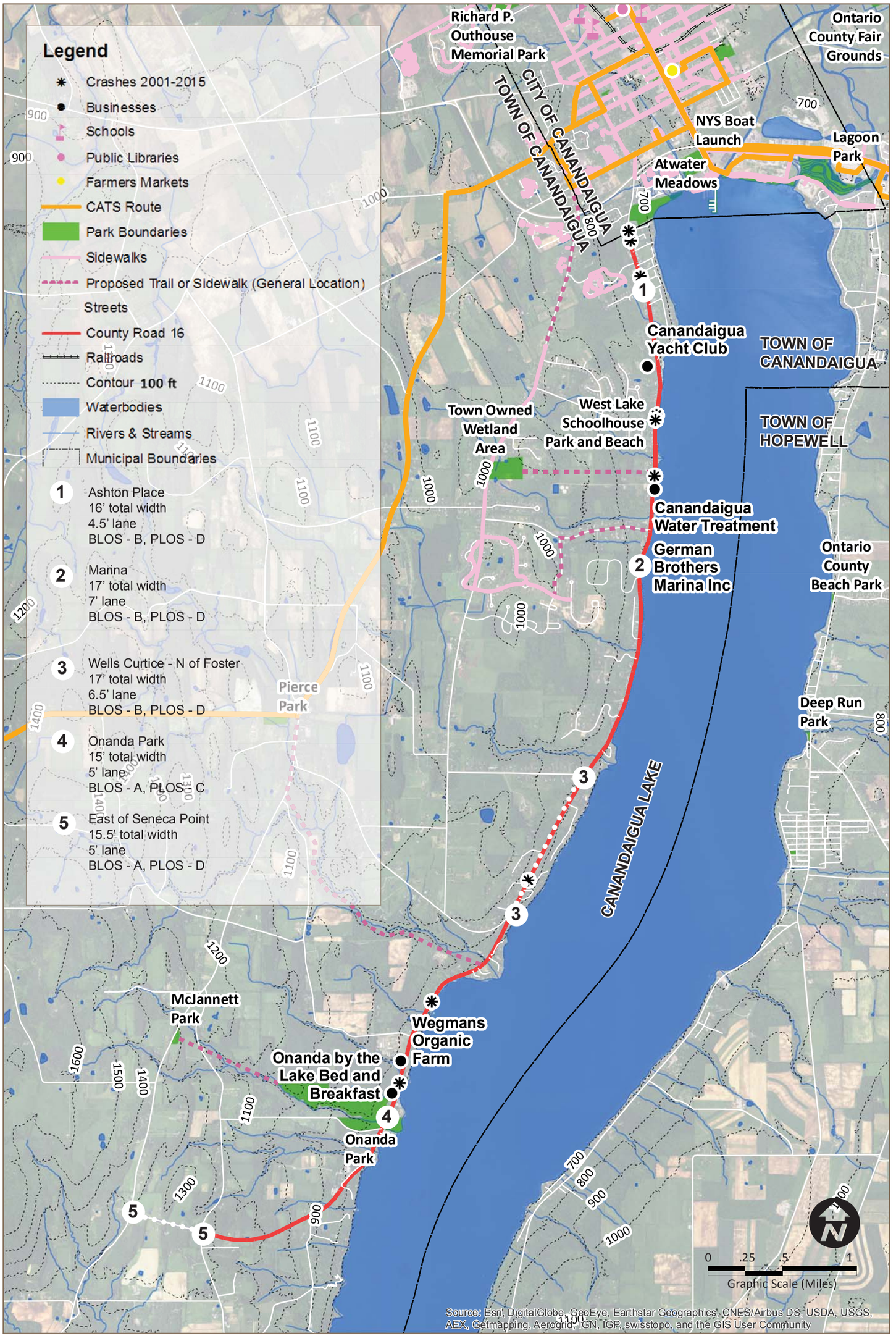
Numerous alternative improvements were considered. Key recommendations include:

- Frequent maintenance schedule
- Additional signing and stop bars at intersections with steep grades
- Shoulder improvements
- Hillcrest warning systems and additional signing
- West Lake Schoolhouse Park and Beach- Butler Road intersection improvements
- Onanda Park and Canandaigua Yacht Club road crossing improvements

See ***Table 4*** for recommendations, and ***Figure 8*** for site improvement locations.

Table 4: Project Prioritization

Project Name	Project Description	Priority Level
Increased Maintenance Schedule	Increase frequency of scheduled maintenance to address issues of pavement shoulder erosion, uneven paving, low visibility, and traffic line fading by routinely sweeping pavement, patching surfaces, and cutting back vegetation.	**Priority**
Multi-Use Paved Shoulder Improvements	Standardize shoulder width at a minimum of 5 feet to allow multi-usage. Selective shoulder widening should be implemented where right-of-way allows.	**Priority**
Implement Traffic Delineators	Increase use of delineators to separate bicycle and pedestrian facilities in key areas, such as at the German Brothers Marina.	**Recommended**
Asymmetrical Shoulders	Widen shoulders on ascents and decrease shoulders on descents to improve bicyclist experience, safety, and comfort.	**Recommended**
Additional Signing	Increase bicycle/pedestrian signing along CR 16. Additional signing and stop bars at intersections with steep grades.	**Priority**
Hillcrest Warning System & Signing	Implement bicycle detection technology to inform motorists of bicycles at hillcrests where visibility is limited.	**Possible**
Improve Pedestrian Crossings	Install high visibility crosswalks with pedestrian signing at key locations, including, but not limited to, Canandaigua Yacht Club and Onanda Park. Consider raised crosswalk installation to improve traffic calming.	**Priority**



Ontario County Road 16 - West Lake Road Pedestrian & Bicycle Study

Department of Public Works - Ontario County, NY

FIGURE 8. PROJECT SITE LOCATIONS

July 19, 2018

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

Project Name	Project Description	Priority Level
Speed Reduction	Undertake speed study to determine feasibility of speed limit reduction to 30 mph in areas to improve multi-use transportation and transitional speed zones. Increase adherence through traffic calming techniques.	**Possible**
Trails on Private Property	Construct trail running parallel to Ontario County Road 16 on private property in key areas with property owner consent.	**Possible**
Stormwater Management	Employ green infrastructure practices to treat water from culverts along Ontario County Road 16. Coordinate with upcoming Ontario County DPW culvert improvements.	**Recommended**
Education & Outreach	Connect with local organizations to increase bicycle and pedestrian safety education in Ontario County.	**Recommended**
Zoning & Design Standards	Adopt language from Genesee Transportation Council Bicycle and Pedestrian Supportive Code. Update standard details relative to bicycle and pedestrian infrastructure.	**Possible**
Enforcement	Provide traffic law enforcement to ensure safety for all travel modes. Increase enforcement measures during peak use.	**Priority**

6.3 FACILITY DESIGN GUIDANCE

The design guidelines contained in this section are intended to support the recommendations presented in this study and to serve as an ongoing reference for CR 16. They reference existing design standards and provide clarification or supplemental information as necessary. They are not intended to be comprehensive design standards. There are six primary sources of bicycle and pedestrian facility design information that were used to develop the guidelines provided in this section.

American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities – This document presents information on how to accommodate bicycle travel and operations in most riding environments. It is the guidance document upon which most state and local design guidelines are based. In many jurisdictions this document is considered when establishing minimum values for bicycle design.

AASHTO Guide for the Planning, Design, and Operations of Pedestrian Facilities – This document presents information on how to accommodate pedestrian travel and operations in (primarily) roadway environments. It is the design guidance upon which most state and local design guidelines are based. In many jurisdictions this document is considered when establishing minimum values for pedestrian design.

NY Department of Transportation Highway Design Manual Chapter 17 Bicycle Facilities Design – This document provides guidance for bicycle facilities that are included in Department of Transportation designs. Because of the scope of this document, its design criterion, while relevant to local projects, are not required for local projects unless Federal Transportation Funds are involved.

NY Department of Transportation Highway Design Manual Chapter 18 Pedestrian Facilities Design – This document provides guidance for pedestrian facilities that are included in Department of Transportation designs. Because of the scope of this document, its design criterion, while relevant to local projects, are not required for local projects unless Federal Transportation Funds are involved.

Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) – The MUTCD is the national standard for signing, markings, signals, and other traffic control devices. New York State has also adopted a supplement to the MUTCD that provides New York specific standards.

Federal Highway Administration Separated Bike Lane Planning and Design Guidance - Outlines planning considerations for separated bike lanes (also sometimes called "cycle tracks" or "protected bike lanes") and provides a menu of design options covering typical one-way and two-way scenarios. To encourage continued development and refinement of techniques, the guide identifies specific data elements to collect before and after implementation to enable future analysis across facilities in different communities. It identifies potential future research, highlights the importance of ongoing peer exchange and capacity building, and emphasizes the need to create holistic ways to evaluate the performance of a separated bike lane.

MULTI-USE PAVED SHOULDERS

In terms of Bicycle Level of Service, designating bike lanes is secondary to simply providing delineated space that can be used by bicyclists. Roads with paved shoulders where no other active transportation facilities exist are shared by more than one type of user (bicyclists, pedestrians, in-line skaters and vehicles for emergency use). Design of new or retrofit of existing paved shoulders should comply with AASHTO standards; "on uncurbed cross sections with no vertical obstructions immediately adjacent to the roadway, paved shoulders be at least 4 feet wide to accommodate bicycle traffic. Shoulder width of 5 feet is recommended from the face of a guardrail, curb, or other roadside barrier to provide additional operating width…" Areas with expected higher bicycle use should have increased shoulder widths as necessary in addition to areas where motor vehicle speeds exceed 50 mph or are used by trucks and buses.

SIGNING ROADWAYS WITH PAVED SHOULDERS

Ontario County may wish to sign CR 16 to either guide bicyclists to a destination or to alert motorists to the presence of bicyclists. The sign would be supplemental to simply providing space for bicyclists within the shoulder. If the subject roadway is along a designated bicycle route, then bike route guidance signs can be used to alert bicyclists to the presence of the interregional or state route.

If the County, or others based on the jurisdiction of the road, determines it is appropriate to warn motorists of the potential presence of bicyclists along a section of roadway with paved shoulders, then special signing, if approved by NYSDOT, would be required. The Bicycle Warning sign (W11-1) alone could be used as its function is to alert road users to locations where unexpected entries into the roadway by bicyclists could be expected.

The NYSDOT MUTCD section 1A.03 Design of Traffic Control Devices states:

Option 03A: Highway agencies may develop word message signs to notify road users of special regulations or to warn road users of a situation that might not be readily apparent. Unlike symbol signs and colors, new word message signs may be used without the need for experimentation.

Standard 03B: Any change to a word message sign that can be considered more than a minor modification (see next Option) shall be approved by the New York State Department of Transportation before it is implemented.

Option 03C: With the exception of symbols and colors, minor modifications in the specific design elements of a device may be made provided the essential appearance characteristics are preserved. Such minor revisions may include making a word plural or singular; changing the hours listed on a sign; word deviations such as "road" for "street" on a sign; etc. Although the standard design of symbol signs cannot be modified, it may be appropriate to change the orientation of the symbol to better reflect the direction of travel.

SHARED LANE MARKINGS

Traffic lanes are often too narrow to be shared side by side by bicyclists and passing motorists. Where parking is present, bicyclists wishing to stay out of the way of motorists often ride too close to parked cars and risk being struck by a suddenly opened car door (being "doored"). Where no parking is present bicyclists wishing to stay out of the way of motorists often ride too close to the roadway edge, where they run the risks of:

- being run off the road;
- being clipped by motorists who do not see them off to the side or misjudge passing clearance; or
- encountering drainage structures, poor pavement, debris, and other hazards.

Shared lane marking in travel lane.

Riding further to the left avoids these problems, and is legally permitted where needed for safety (Consolidated Laws of New York, Vehicles and Traffic, § 1234 (a)). However, this practice can run counter to motorist expectations. A Shared Lane Marking (SLM) is a pavement symbol that indicates it is legal and appropriate for bicyclists to ride away from the right hand edge of the roadway, and cues motorists to pass with sufficient clearance.

Research suggests that SLMs:

- alert motorists to the lateral location bicyclists are likely to occupy within the traveled way;
- encourage safe passing of bicyclists by motorists;
- assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane;
- reduce the incidence of wrong-way bicycling; and

- where on-street parking exists, assist bicyclists with lateral positioning in a shared lane with on-street parallel parking to reduce the chances of a bicyclist impacting the open door of a parked vehicle.

SLMs are not to be used on shoulders or in designated bike lanes. MUTCD guidance suggests SLMs not be placed on roadways that have a speed limit above 35 mph. While this does not preclude the use of SLMs on higher speed roadways, no research is available as yet to suggest how effective they may be on such roadways.

SLMs encourage good lane positioning by bicyclists, and discourage them from riding too close to the pavement edge, curb, or parked cars. Riding away from the road edge allows bicyclists to avoid road edge hazards like drainage structures, poor pavement, and debris. It also places the bicyclist more directly in the motorist's field of vision which, along with proper SLM treatments, encourages the safe passing of bicyclists by motorists.

Consequently, on roadways with on-street parking, the MUTCD requires that SLMs be placed with the centers of the markings at least 11 feet from the face of curb. On other roadways, the centers of the markings are required to be placed at least four feet from the edge of pavement. On December 9, 2013, the New York State Department of Transportation's Office of Traffic Safety & Mobility approved a Shared Lane Marking (SLM) Policy (TSMI 13-07) which requires SLMs to be placed in the middle of the travel lane According to the NYSDOT policy:

- SLMs should only be used to indicate the presence of a narrow lane; a narrow lane is a lane that is less than 14' wide… In a narrow lane, motorists and bicyclists must travel one after the other rather than side by side, and a motorist must leave the lane to safely pass the bicyclist;
- SLMs are sometimes used at the ends of bike lanes or shoulders to inform motorists that bicyclists no longer have a separate space and will be sharing the main travel lane; and
- SLMs should be installed strategically and judiciously to ensure that their value is not reduced by overuse. When used, SLMs should be placed after each intersection and then periodically on spacings not exceeding 250 feet between markings.

The previously referenced NYSDOT Shared Lane Marking (SLM) Policy includes a Narrow Lane sign assembly. It is a Bicycle Warning sign (W11-1) and an "In Lane" plaque (NYW5-32P). When used, the Narrow Lane assembly should be placed with the first SLM, then repeated as deemed appropriate within the section. It is neither necessary nor desirable to supplement every SLM with a sign assembly.

"In Lane" plaque (NYW5-32P).

SIDEWALKS

For the purposes of design, the term sidewalk means a smooth, paved, stable and slip-resistant exterior pathway intended for pedestrian use along a vehicular way.

All sidewalks constructed within the Town of Canandaigua must be compliant with the Americans with Disabilities Act Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (July 26, 2001) or most recent ADA standards for public rights of way. Sidewalks should be provided on both sides of all public roadways.

SIDEWALK SLOPES

ADA requires a maximum sidewalk cross-slope of 2%. New York State Department of Transportation (NYSDOT) prefers a maximum cross-slope of 1.5% to allow for construction tolerances. This maximum cross slope must be maintained across driveways and crosswalks. Sidewalks may follow the grade of the adjacent roadway. However, on new roadways the grade of the sidewalk cannot exceed 5%. If a grade of more than 5% is required on a new roadway, an ADA compliant ramp must be provided.

CURB RAMPS

A curb ramp is a ramp that cuts through or is built up to the curb. A blended transition is a relatively flat area where a sidewalk meets a roadway. Curb ramps and blended transitions are primarily used where a sidewalk meets a roadway or driveway at a pedestrian crossing location. Blended transitions include raised pedestrian street crossings, depressed corners, or similar connections between pedestrian access routes at the level of the sidewalk and the level of the pedestrian street crossing that have a grade of 5% or less.

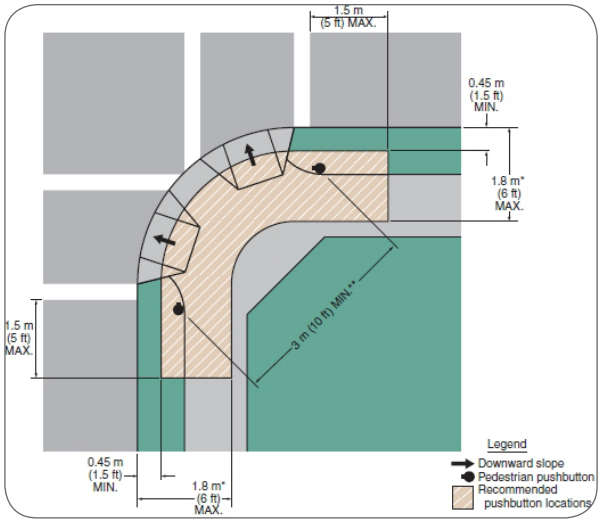
Accessibility requirements for blended transitions serve two primary functions. First, they must alert pedestrians that have vision impairments to the fact that they are entering, or exiting, the vehicular area. Second, they must provide an accessible route for those using wheelchairs or other assistive devices. Ideally, a separate ramp should be provided for each crossing of the roadway.

Whichever is chosen, the standard must be applied in its entirety – no mixing and matching of standards is allowed. This is most important in terms of ramps. The 2010 ADA standards do not provide an exception allowing the running slope to follow the grade of an existing roadway.

PEDESTRIAN APPROACH (SIDEWALK/CURB LINE)

The pedestrian approach is the area near the crossing where pedestrians wait on the side of the roadway and away from traffic until they are able to cross.

It is often part of the sidewalk, if the sidewalk is adjacent to the curb line, or an extension or spur of the sidewalk that provides a path from the sidewalk to the crossing, if the sidewalk is not immediately adjacent to the curb. The pedestrian approach design should accomplish the following:



Curb ramp diagram. Source: MUTCD, Figure 4E-2.

- Encourage pedestrians to cross at the marked crossing. The approach design should discourage pedestrians from crossing away from the marked crossing to the extent possible. The path to the crossing should be as direct and easy to navigate as possible.
- Keep pedestrians visible to approaching drivers and oncoming vehicles visible to pedestrians. On-street parking should be restricted near the crossing so that parked vehicles do not limit sight lines.
- In areas with high volumes of pedestrians, there should be sufficient space for pedestrians to queue as they wait for an appropriate time to cross. Pedestrian storage should be designed to prevent crowds of pedestrians from spilling onto the roadway. Midblock curb extensions are a common and effective treatment at midblock locations and have many benefits.

MOTORIST APPROACH

Care should be taken to avoid locations where horizontal or vertical alignment of the roadway limit drivers' sight distance, view of the pedestrian approach to the crossing, or view of the crossing itself.

Consideration should be given to how trees, shrubs, poles, signs, and other objects along the roadside might limit a driver's view of the crossing. On-street parking should be prohibited near the crossing using either signs and markings or physical barriers such as a curb extension, since a pedestrian who steps out into the road between parked cars can be blocked from the view of oncoming drivers.

Signing and markings on and along the motor vehicle approach to a midblock crossing should be designed in such a way as to make drivers aware of the crossing in time to notice and react to the presence of a pedestrian, and to enhance the visibility of the crossing. Advanced warning signs should indicate any special traffic control used at the pedestrian crossing. Refer to the ***AASHTO Guide for the Development of Bicycle Facilities*** for examples of midblock control treatments for shared use paths.

Traffic calming devices and other measures to prevent high vehicle speeds should be considered along routes with midblock pedestrian crossings. More than 80% of pedestrians die when struck by vehicles traveling at greater than 40 mph versus less than 10% when cars are traveling at 20 mph or slower. In addition, vehicles traveling at lower speeds require less distance to come to a complete stop when braking.

6.4 FREQUENT MAINTENANCE SCHEDULE

Facility improvements do not end at construction. Ongoing maintenance can provide significant benefits for bicyclists and pedestrians at relatively modest additional cost. Identification of maintenance needs and institutionalization of maintenance practices for active transportation facilities are key elements for providing safe bicycle and pedestrian facilities.

Paved shoulders protect the interior roadway, but may degrade more quickly than interior pavement. Bicyclists and pedestrians often use the shoulder to avoid traffic, but this can place them on particularly uneven surfaces. This leads to to difficulty in navigation, especially for individuals using wheelchairs or strollers. Roadside debris can exacerbate these issues, forcing bicyclists to ride erratically, moving on and off the shoulder in an unpredictable manner.

In addition to pavement quality, lane markings are key for safe travel along multiple use roadways. West Lake Road experiences heavy summer traffic, and harsh winters that affect the durability of these markings, causing them to fade. This is a safety concern especially along low visibility turns with side parking and multiple users.

Maintaining a road surface for shared use by motorists, bicyclists and pedestrians requires a slightly different approach than maintaining a road surface for motorists alone. Careful planning and budgeting must meet higher demands to ensure signs, pavement markings, and shared-use paths are in good condition, and adequate sight distance is continuously maintained.

To meet these expectations, is important to obtain outside funding for the original facilities construction than for on-going maintenance, and engage residents and businesses to help with clean-up and snow removal. Starting correctly at the outset will reduce the need for future maintenance solutions and expense.

> ***"[Bi]cyclists tend to be particularly sensitive to maintenance problems. Many bicycles lack suspension systems, and as a result, potholes that motorists would hardly notice can cause serious problems for bicyclists."***
>
> ***"Since bicyclists often ride near the right edge of the road... they use areas that are generally less well maintained than the main traffic lanes. On roads with higher vehicle speeds, air from passing vehicle traffic typically sweeps debris to the right where most bicyclists travel."***
>
> ***- Federal Highway Administration***

The following are key maintenance measures for increasing bicycle and pedestrian safety.

- Paying special attention to roadway edges when sweeping pavement, especially presence of debris, and sweeping pavement more regularly.
- Patching surfaces, including shoulders, as smoothly as possible and in an expeditious manner.
- Overseeing pavement overlay projects to ensure they do not result in linear joints.
- Replacing hazards such as dangerous grate or utility covers as the opportunity arises.
- Routinely cutting back encroaching vegetation.
- Re-painting road lane markings regularily to reduce fading.

6.5 MULTI-USE PAVED SHOULDER IMPROVEMENTS

Ontario County Road 16 has existing paved shoulders. These shoulders vary in width from 2.5 to 7 feet, while drive lane widths vary from 10 to 11.5 feet.

According to the ***American Association of State Highway and Transportation Officials (AASHTO),*** "on uncurbed cross sections with no vertical obstructions immediately adjacent to the roadway, paved shoulders should be at least 4 ft wide to accommodate bicycle traffic... Shoulder width of 5 feet is recommended from the face of a guardrail, curb, or other roadside barrier to provide additional operating width." Shoulder width of 5 ft wide is recommended as a minimum along CR 16 because it is the minimum value for a standard bike lane width.

CR 16 meets these criteria for increasing shoulder widths above 4 feet. Steep topography on both sides of the road presents a roadside barrier that has often been addressed with sections of guiderail, and the road is frequently used by bicycles and trucks.

Restriping to establish consistent 10 foot traffic lanes would result in a standard, expected lane size, and reduction of lane width that would increase shoulder width to 5-7 feet throughout the study area. The reduction in width would also have traffic calming benefits and help control vehicle speeds. See **Section 6.11 Speed Limit Reduction** for additional information.

German Brothers Marina, just south of Wyffels Road, is an established local business and important destination along CR 16. Roadside parking is not restricted on CR 16 and cars and boat trailers are frequently parked in both shoulders around the marina. When the shoulder space is occupied, pedestrians and bicyclists are forced into the travel lanes. Sight distances are reduced by parked vehicles. Peak season for the marina coincides with peak season for walking and biking, which increases the potential for conflicts. The shoulder space is limited, and there is high demand by multiple user groups.

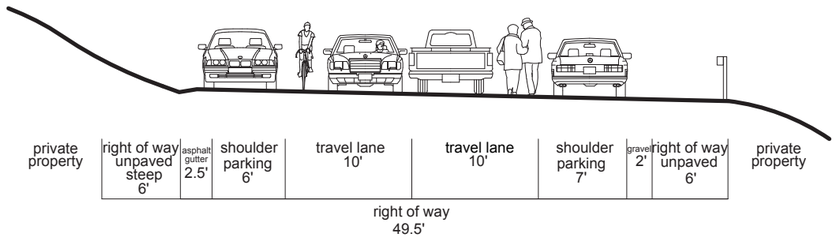
Re-allocation of the existing right of way space presents opportunities for shared use of the roadway in the congested segment around the Marina.

ONTARIO COUNTY ROAD 16
PEDESTRIAN & BICYCLE ACCOMMODATION FEASIBILITY STUDY

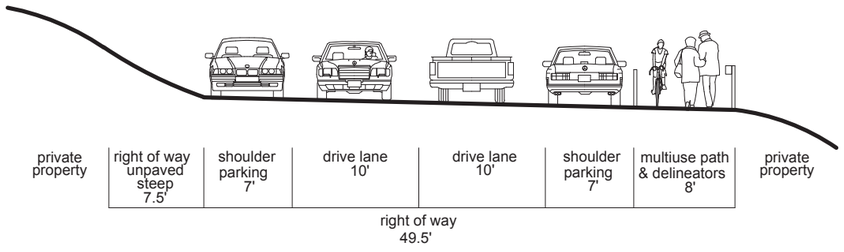
FIGURE 9.

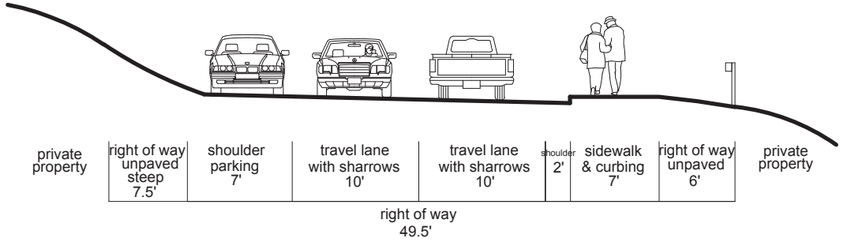
SHOULDER ALTERNATIVES

MARINA
existing conditions

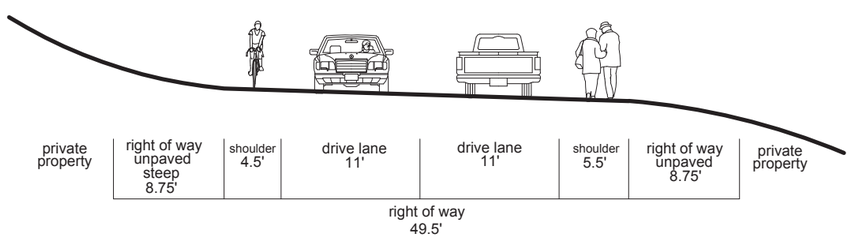


alternatives

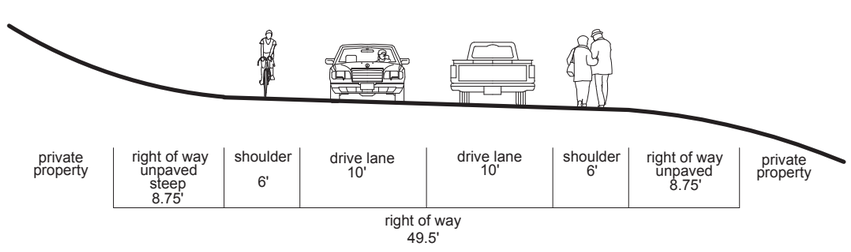


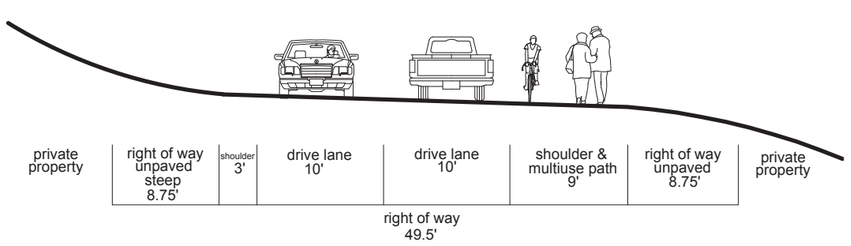


ONANDA PARK
existing conditions



alternatives





Existing Road Details

County Road

Posted Speed= 35mph

Average Speed= 38mph

Functional Class: Rural Minor Collector

ADT= 3,400 +/-

Standard Lane Width= 10’

Required Standard Shoulder Width= 2’; 4’ with barrier, 5’ if high bike demand

NOT TO SCALE

Ontario County Road 16
West Lake Road Pedestrian & Bicycle Study

The shoulders in this area are relatively wide, approximately 7 feet, with an additional 3 feet of space on the west side of the road between the shoulder and the guardrail. If this 3 foot area were paved it would be possible to create a 5 feet bicycle and pedestrian area along the lake front, while still providing 5 feet for parking on either side of the road for the marina.

While not ideal for bicyclists, this would provide a well defined space for pedestrians. By installing curbing, encroachment into the pedestrian space by parking motorists would be better controlled. Some casual bicyclists may choose to use this sidewalk; while this would not be encouraged, it would allow for that cohort to have a more comfortable space to operate. This space could be separated from the parking area with delineators, a change in pavement type, and curbing of the sidewalk to further assert pedestrian priority.

Seasonal delineators in the City of Rochester.

See ***Figure 9*** for Multi-use Paved Shoulder Improvements.

6.6 ASYMMETRICAL SHOULDERS

Bicycles tend to meander when traveling up steep slopes and to travel straight while descending.

Because of the additional effort required for cyclists to climb hills, they typically have a greater sweep width (side to side movement) when climbing under stress than when riding casually on a relatively flat roadway. On severe grades some bicyclists may resort to walking their bikes up hill.

Both of these conditions, in addition to increasing sweep width, also significantly increase the speed differential between the climbing bicyclists and overtaking motorists. Widened bike lanes can significantly improve the safety and comfort of those bicyclists using the shoulder on an uphill grade.

Bicyclists travelling downhill on steep grades also benefit from having more space. However, for downhill cyclists, removal of the bike lane and use of shared lane markings can provide a better facility than marginally widened bike lanes.

As their speed increases, bicyclists benefit from being able to ride futher from the edge of the roadway and being able to use the entirety of the travel lane to avoid debris and pavement irregularities. The fact that they gain speed travelling downhill decreases the speed differential between the bicyclists and the overtaking motorists.

For the above reasons, asymmetrical shoulders, narrowing on the downhill side of a roadway and using the gained space to widen the shoulders on the uphill side, can be an effective method for providing improved bicycling conditions in hilly terrain. As a standard, shoulders should be a minimum of 4’ wide even on the narrower shoulder to accommodate pedestrians, as well.

This would be implemented by restriping the pavement to create wider shoulders for ascents and narrower shoulders for descents to encourage bicyclists to remain separate from motorists in the shoulder. Asymmetrical shoulders would also provide some traffic calming by making the route more curvilinear for motorists.

6.7 ADDITIONAL SIGNING

Additional signing along CR 16 could guide bicyclists and pedestrians to destinations and alert motorists to the presence of pedestrians and bicyclists. The signing would be supplemental to simply providing space for pedestrians and bicyclists within the shoulder.

COMBINED BICYCLE/PEDESTRIAN SIGNING

If the County determines it is appropriate to warn motorists of the potential presence of pedestrians and bicyclists along CR 16, then special signing, if approved by NYSDOT, would be required. The Combined Bicycle/Pedestrian sign (W11-15) alone could be used as it is to alert road users to locations where unexpected entries into the roadway by pedestrians and bicyclists could be expected.

Combined Bicycle/ Pedestrian sign (W11-15).

ADDITIONAL INTERSECTION SIGNING

Where adjacent roads have steep slopes, additional signing could alert bicyclists of oncoming intersections and alert motorists of bicyclists. This would give both motorists and cyclists a reminder to slow down in time to safely navigate intersections. Stop bars on side streets at intersections with County Road 16 would provide an additional safety cue and increase intersection safety.

REGULATIONS

The ***NYSDOT MUTCD section 1A.03 Design of Traffic Control Devices*** states:

Option 03A Highway agencies may develop word message signs to notify road users of special regulations or to warn road users of a situation that might not be readily apparent. Unlike symbol signs and colors, new word message signs may be used without the need for experimentation.

Standard 03B Any change to a word message sign that can be considered more than a minor modification (see Option 03C) shall be approved by the New York State Department of Transportation before it is implemented.

Option 03C With the exception of symbols and colors, minor modifications in the specific design elements of a device may be made provided the essential appearance characteristics are preserved. Such minor revisions may include making a word plural or singular; changing the hours listed on a sign; word deviations such as "road" for "street" on a sign; etc.

Although the standard design of symbol signs cannot be modified, it may be appropriate to change the orientation of the symbol to better reflect the direction of travel.

DYNAMIC SPEED DISPLAY SIGNS (DSDS)

Dynamic speed dispay signs have also been recognized as an effective traffic calming measure, with reductions of up to 9 miles per hour. These devices detect and display a vehicle's speed back to the driver. Some models of DSDS have the ability to record and store speed data for future analysis. In order to maximize effectiveness, these signs must be temporary, and frequently moved to be as drivers become familiar with their appearance along the roadway. (Evaluation of Dynamic Speed Display Signs (DSDS), 2003).

6.8 HILLCREST WARNING SYSTEMS AND SIGNAGE

Visibility can be limited by topography changes on steep roads. A motorist climbing a hill may be unaware of pedestrians ascending from the other side. Innovative technologies can detect bicycles or pedestrians and warn motorists with a signal. This would increase motorist vigilance and lessen the risk of crashes.

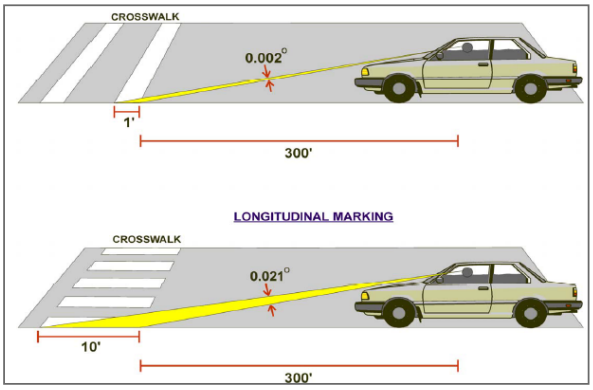
Hillcrest warning systems involve placing a detector prior to the crest of a vertical curve. This detector can be a push button (for pedestrians) or a loop (for bicyclists). When the non-motorized user is detected, a supplemental flasher mounted on a bike or pedestrian warning sign is activated. The duration of the flasher is dependent upon local conditions and is calculated based upon prevailing motorist and unmotorized speeds.

Implementation of these devices will improve coordination between users while approaching crests, and become a traffic calming device to improve safety for all users along the roadway.

Signage and detector.

6.9 ROAD CROSSING IMPROVEMENTS

Crosswalks encourage pedestrians to cross the road in a safe and predictable manner, while alerting motorists to possible pedestrians. However, on a roadway with several blind curves, variation in topography, and tendency to speed, high visibility crosswalks are necessary to ensure maximum warning for vehicles and bicyclists that pedestrians are crossing ahead.



Umbs, R. (2010) Enhanced visibility crossings.

High visibility crosswalks should be implemented in areas where pedestrian crossing is likely. These are predominantly areas where related facilities are on both sides of Ontario County Road 16, including businesses and recreational facilities.

Possible sites for additional road crossing improvements include Onanda Park, Canandaigua Yacht Club, and German Brothers Marina. Improvements at these locations could include traffic calming measures, pedestrian crossing warning signage, and high visibility crosswalks.

Raised intersection at Rochester Institute of Technology.

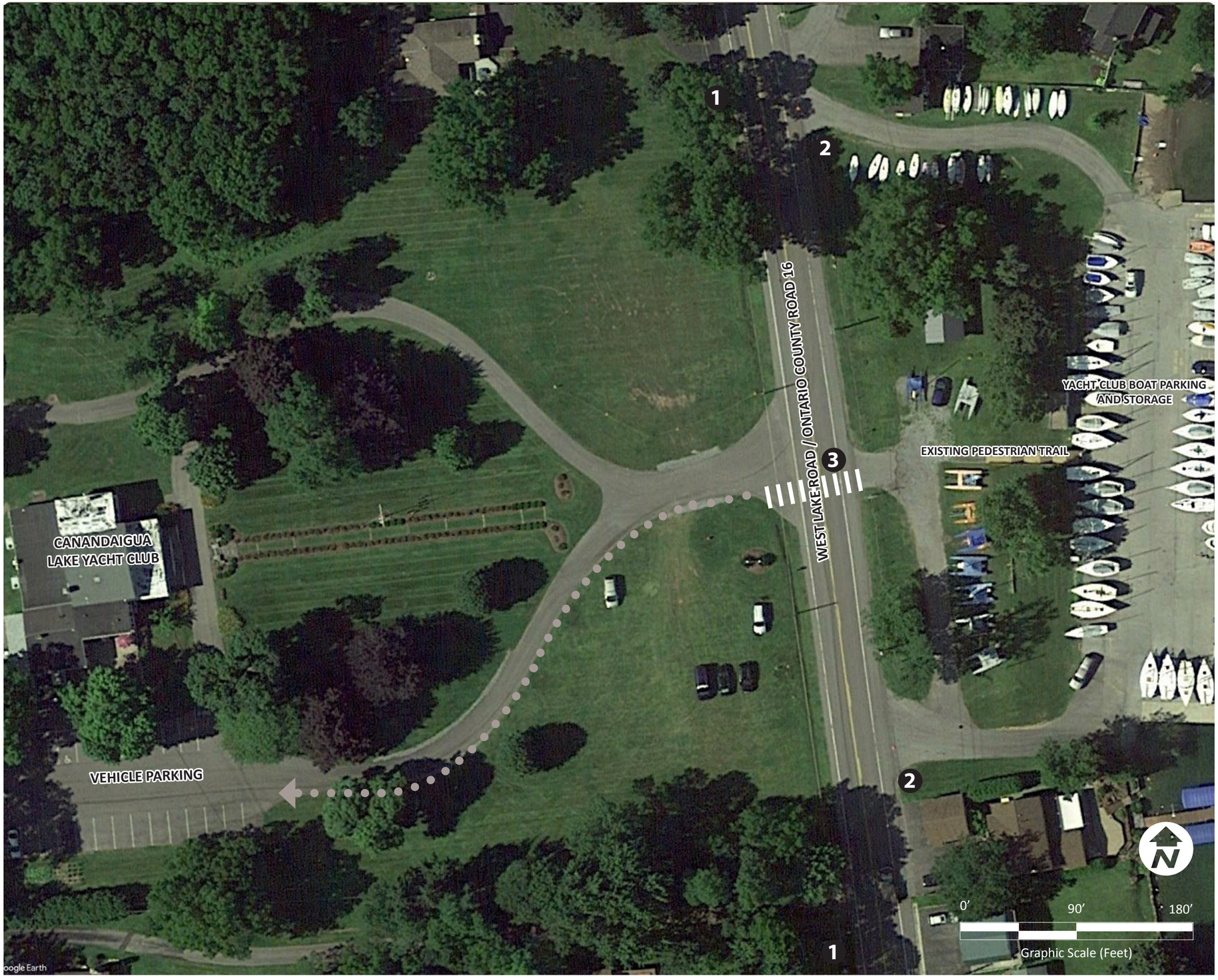
An even more robust solution would be to create a higher visibility crosswalk roadway system is to implement raised crosswalks at regular intervals. These crosswalks are most effective in a series because drivers will have an expectation of these features on the roadway and become accustomed to how to approach these crossings around the lake. Raised crosswalks also promote traffic calming, as vehicles and bicyclists will slow in approaching and passing over them.

See ***Figures 10 and 11*** for Cananadaigua Yacht Club Crossing and Onanda Park Road Improvements.

ONTARIO COUNTY ROAD 16
PEDESTRIAN & BICYCLE ACCOMMODATION FEASIBILITY STUDY

FIGURE 10.

YACHT CLUB PEDESTRIAN CROSSING



PEDESTRIAN & BICYCLE IMPROVEMENTS

1 TRAFFIC CALMING
Traffic calming measures to discourage speeding in proximity of the Yacht Club.

2 YACHT CLUB AHEAD & PEDESTRIAN CROSSING AHEAD SIGNAGE
Advance Yacht Club signing provides wayfinding and alerts motorists of oncoming intersection.
Advance notification of pedestrian intersection alerts motorists and increases pedestrian safety.

3 PEDESTRIAN CROSSWALK IMPROVEMENTS
High visibility striping, a raised speed table, or a pavement treatment would increase motorist awareness of the pedestrian intersection.
A pavement treatment would have additional traffic calming benefits.
Landing areas on either side of crosswalk improve crossing safety.

Vertical reflective strips on all signage increase sign visibility.

Ontario County Road 16
West Lake Road Pedestrian & Bicycle Study

ONTARIO COUNTY ROAD 16
PEDESTRIAN & BICYCLE ACCOMMODATION FEASIBILITY STUDY

FIGURE 11.

ONANDA PARK PEDESTRIAN CROSSING

PEDESTRIAN & BICYCLE IMPROVEMENTS

1. **TRAFFIC CALMING**
   Traffic calming measures to discourage speeding in proximity of Onanda Park.

2. **ONANDA PARK ENTRANCE AHEAD & PEDESTRIAN CROSSING AHEAD SIGNAGE**
   Advance park entrance signing provides wayfinding and alerts motorists of oncoming intersection.
   Advance notification of pedestrian intersection alerts motorists and increases pedestrian safety.

3. **PEDESTRIAN CROSSWALK IMPROVEMENTS**
   High visibility striping or a pavement treatment would increase motorist awareness of the pedestrian intersection.
   A pavement treatment would have additional traffic calming benefits.
   Landing areas on either side of crosswalk improve crossing safety.

   Vertical reflective strips on all signage increase sign visibility.

Ontario County Road 16
West Lake Road Pedestrian & Bicycle Study

6.10 INTERSECTION RECOMMENDATIONS

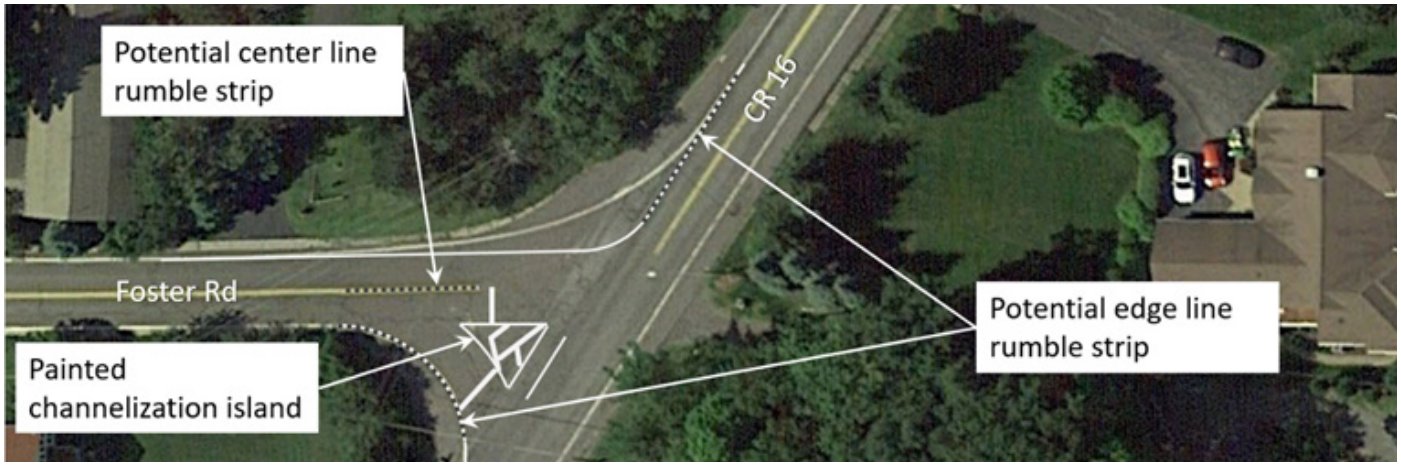
INTRODUCTION

As part of this study, four specific intersections were identified for detailed review:

- CR 16 at Foster Road
- CR 16 at Seneca Point Road
- CR 16 at Wells Curtice Road
- CR 16 and Butler Road

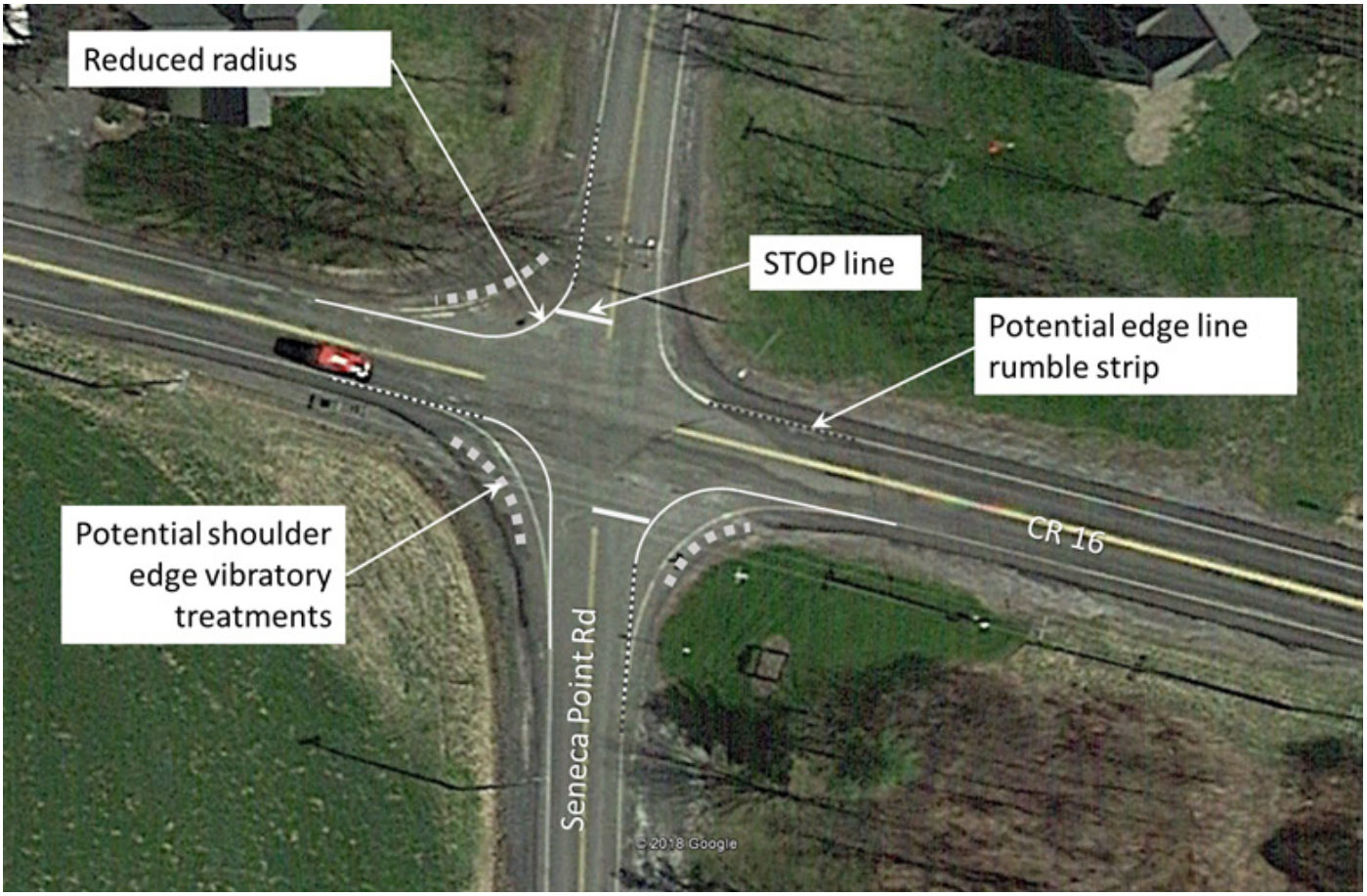
CR 16 AT FOSTER ROAD

- The current southbound to westbound radius is quite large. Consider reducing the radius.
- The eastbound to southbound radius is also large but serves an acute angle and likely provides turning space for motor vehicles with trailers. This radius creates a significant undefined space with in the intersection. Consider striping a right turn channelization island at this location.
- To encourage motorists to use their assigned spaces, consider under-stripe rumble strips for the southbound edge line approach, the southwest corner, and the median.
- Add a STOP line for the eastbound approach.
- If bike lanes can be designated along this corridor, consider dashing the bike lanes across this intersection and enhancing with green paint.



CR 16 AT SENECA POINT ROAD

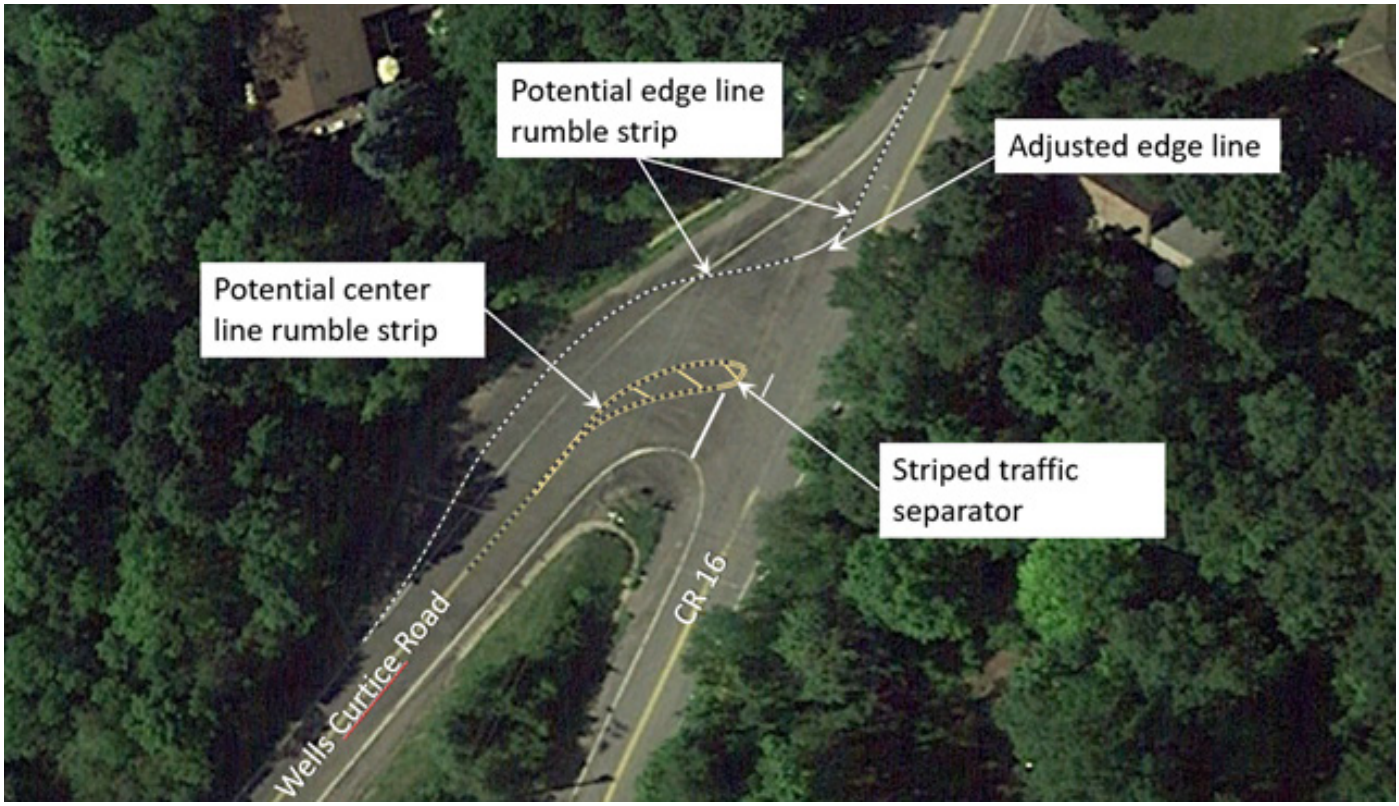
- The northeast corner of this intersection has a striped radius of approximately 30 ft. Consideration should be given to reducing the other three radii to a similar size.
- There appears to be some erosion at the existing pavement radii edges on the larger radii. This suggests attempting to accommodate higher speed turns to prevent shoulder damage is not effective at this location. A vibratory treatment, such as edge line rumble strips, could be used to better channelize motorists. However, a gap in the rumble strips to allow for through cyclists to traverse the intersection without having to negotiate the rumble strips should be provided. This could be accomplished by placing the rumble strips up to the radius point of curvature on each approach. Alternatively, rumble strips near the shoulder edge could be provided to discourage driving too close to the edge of the shoulder. Such a treatment should allow for 5 feet clear of the edge line for bicyclists.
- Add STOP lines to the Seneca Point Road approaches to this intersection.



CR 16 AT WELLS CURTICE ROAD

This intersection is relatively wide (for this roadway) with much undefined asphalt space. The size of the intersection is likely necessary to accommodate northbound to westbound left turns on an acute angle, particularly left turning vehicles with trailers. However, an effort should be made to provide positive guidance through the intersection and better define vehicular movements. The drawing provided at the bottom of this page is, more than others in this document, a concept. Observations of vehicle types and design using turning templates would be required to precisely set the traffic control devices.

- The current southbound to westbound radius is quite large. Consider reducing the radius.
- There is no defined path of travel for motorists turning from Wells Curtice Road onto CR 16, or for northbound CR 16 motorists turning onto Wells Curtice Road. Consider striping a traffic separator to provide positive guidance at this intersection.
- To encourage motorists to use their assigned spaces, consider under-stripe rumble strips for the northwest corner and the median.
- Add a STOP line for the eastbound approach.
- If bike lanes can be designated along this corridor, consider dashing the bike lanes across this intersection and enhancing with green paint.



ONTARIO COUNTY ROAD 16
PEDESTRIAN & BICYCLE ACCOMMODATION FEASIBILITY STUDY

FIGURE 12.

WEST LAKE SCHOOL HOUSE BUTLER ROAD INTERSECTION

1 STOP AHEAD SIGNAGE
Butler Road descends steeply toward the Ontario County Road 16 intersection. This is potentially dangerous for cyclists who increase speed while riding downhill. This signage will increase awareness of the oncoming intersection and encourage lower speeds for cyclists and motorists.

2 WIDE STOP BAR & LARGER STOP SIGN
In a Federal Highway Administration study 12 inch stop bars and 30 inch stop signs decreased the rate of accidents by over 50%.

3 PEDESTRIAN CROSSING AHEAD SIGNAGE
Advance notification of pedestrian intersection alerts motorists and increases pedestrian safety.

4 PATH FROM PARKING TO CROSSWALK
Creating a defined, safe path to the pedestrian crosswalk will increase crosswalk use, and decrease pedestrian crossings at the Butler Road - West Lake Road intersection.

5 ADA ACCESSIBLE RAMPS
Ramps on either side of Ontario County Road 16 for fully inclusive, barrier free design.

6 PEDESTRIAN CROSSWALK IMPROVEMENTS
High visibility striping or a pavement treatment would increase motorist awareness of the pedestrian intersection. A pavement treatment would have additional traffic calming benefits.

7 MODIFIED RADIUS
Reduce radius at intersection.

Ontario County Road 16
West Lake Road Pedestrian & Bicycle Study

CR 16 AT BUTLER ROAD

CR 16 approaches to this intersection include (bicycle) rideable shoulders that appear to be in good repair and greater than 4 feet wide. Butler Road is a two-lane road serving numerous homes and serving as a connector to Middle Cheshire Road.

- There are valley gutters along the curb radii at this intersection. On the southbound shoulder, the valley gutter extends into the rideable shoulder area. Placing a white line on the advance of this encroachment to mark the obstruction for approaching bicyclists should be a consideration.
- The northwest radius at this intersection appears to be approximately 60 feet. This is much larger than the southwest corner radius. It also appears to be larger than those radii at intersections to the north. The size of the radius appears larger than should be needed given that this intersection (in that it is skewed at all) is skewed in to an obtuse angle for the southbound approach. Reducing this radius should be a consideration.
- The eastbound approach to the intersection could be better defined by extending the double yellow line and adding a STOP line.
- Add high visibility crosswalks across Ontario County Road 16 at West Lake Schoolhouse Park and Beach intersection, as well as pedestrian crossing ahead signing on both sides of the crosswalk.

See ***Figure 12*** for more information.

BIKE LANES AT INTERSECTIONS

If (where width allows) the existing paved shoulders were designated as bike lanes, then parking could be restricted from that designated area while still allowing parking on paved areas beyond the bike lane. This would keep the bike lanes clear of parked cars. It would also enable green markings to be placed at these high priority intersections where the bike lanes cross the intersections. Pedestrians, since they are allowed to walk on the roadway in the absence of shoulders, would still be allowed to walk within the bike lanes.

If CR 16 is, or becomes, part of a regional recreational bike route, consideration should be given to providing destination, direction, and distance wayfinding along the route at key intersections.

6.11 SPEED LIMIT REDUCTION

According to the AAA Foundation for Traffic Safety, the likelihood of a pedestrian being killed in a collision with a car going 35 mph is over 30%. The likelihood drops drastically for each 5mph speed reduction. At 30 mph the likelihood is 20% and at 25 mph the chances are only 12%. Reducing car speeds on Ontario County Road by just 5 mph would make a pedestrian 50% more likely to survive a crash.

Reducing lane widths to ten feet would make the road feel narrower, encouraging motorists to obey the speed limit. Other potential traffic calming measures could include:

- contrasting color on road shoulders
- contrasting pavement color on crosswalks
- changing road surface texture in key areas such as near crosswalks
- back in diagonal parking at German Brothers Marina; this would need to be paired with a speed limit reduction to 30 mph in this area
- increased police enforcement

While reducing speed along Ontario County Road 16 would provide several benefits, and is a feasible option, a speed study would need to be undertaken to understand traffic patterns and appropriate implementation of speed reductions.

6.12 TRAILS ON PRIVATE PROPERTY

There is significant undeveloped open space to the west of CR 16, most of it privately owned. An off-road, shared use trail on the west side of CR 16 could be an attractive option for some recreational users. Coordination would be required with numerous property owners, but the option should be considered for future study.

6.13 STORMWATER MANAGEMENT

Roadway safety, stormwater management, and environmental sustainability are closely linked. The topography on both sides of CR 16 is relatively steep, draining east into Canandaigua Lake. Stormwater travels downhill and creates flooding on CR 16 and adjacent properties. Many community members have shared concerns about flooding on or around CR 16, with several complaining of property damage. This fast moving stormwater ends up in Canandaigua Lake, where it contributes to sedimentation, nitrification and other types of pollution.

Narrow right of ways and steep topography make stormwater management improvements along side the road challenging.

If it is not actively addressed, this issue is likely to become more severe over time. Further developments in the steep area west of CR 16 could increase stormwater and flooding issues.

Where possible, Ontario County should work with private owners to install bioretention areas and plantings in riparian areas west of CR 16. A shallow, grassy swale within the right-of-way, on the lake side of the roadway, would encourage drainage and decrease sediment travel into Canandaigua Lake. However, sites with enough room for this type of intervention are fairly limited due to topographic constraints.

One possible large scale improvement would be to replace a section of CR 16 with a pervious asphalt surface. This would allow stormwater management to be incorporated directly into the roadway instead of along the edges. This could be implemented for some or all of the area between Lakeview Lane and Tichenor Point (approximately 2.5 miles), where the road slope is relatively level and runs very close to the lake.

See ***Case Study*** below for more information.

CASE STUDY - BEACH ROAD

Beach Road is a four lane wide, 1 mile long, high-traffic, state owned road along the southern shore of Lake George in Warren County, New York. “The existing roadway originally drained directly into the lake, resulting in the deposition of roadway contaminants such as salt, sediment, and the deleterious particles that are attached to the sediment directly into the lake” (Water Environment and Technology Magazine).

Pervious asphalt was selected for the site because of site constraints such as limited space for stormwater management and proximity to the lake. Pervious asphalt pavement systems cost approximately $11 to $14 per square foot, including excavation and 10” of base stone, which is the adequate amount for well-drained soils.

As part of the project, new specifications for heavy duty porous asphalt were developed, including improved specifications for the asphalt mix design, foundation and reservoir courses, installation procedures, testing and acceptance criteria. Working with NYSDOT, these specifications have become the NYSDOT standards statewide. The procedures and specifications provide the guidance to construct porous asphalt pavement systems suitable for use on northeastern state and county owned and heavily traveled roadways.

The project eliminates direct stormwater discharge into Lake George for storm events of 5 inches or less in a 24-hour time period, markedly reducing the pollutant loading for all but the most severe events.

Lake George had seen a steady rise in chloride levels over the last 40 years. The use of porous asphalt has shown that salt de-icing applications can be reduced by 40 to 70%. Melting snow passes though the pavement and does not have the chance to re-freeze, thereby, significantly reducing “black ice” formation during winter months. This results in less salt being applied to the roadway (estimated at 11,000 pounds per year, a 50% reduction) and an increase in safety.

Sediment and pollutants attached to sediment are trapped by the voids in the asphalt and are either broken down by aerobic organisms or vacuumed and disposed of in a licensed landfill. Petroleum and other hydrocarbons are consumed biologically within the asphalt layer at an expected rate of more than 90% consumption.

Beach Road is the first roadway in New York State and the largest in the northeastern United States to use a HD porous asphalt system. The project has been described as a model project for innovation and environmental awareness.

The project received funding from the New York State Department of Environmental Conservation and the New York State Green Innovation Grant Program. It also won the 2014 ACEC NY Platinum Award for Transportation and 2014 APWA Capital District Branch and NY State Chapter Environmental Project of the Year Awards.

6.14 EDUCATION & OUTREACH

Education and outreach must be targeted toward increased safety for pedestrians and cyclists in Ontario County and the Town of Canandaigua, at the network level.

A successful bicycle and pedestrian network depends on users being able to safely, appropriately and frequently utilize the network. To assist in creating an effective, safe bicycle and pedestrian network, outreach, education, and zoning enhancements will be necessary. Educating roadway users (bicyclists, pedestrians, and motorists) about the rules of the road and safe bicycling and walking behavior is essential as is encouraging more people to get out and walk and ride their bicycles.

The outreach and education recommendations in this section aim to increase the number of bicyclists and pedestrians while improving safe and appropriate behavior by bicyclists, motorists, and pedestrians. Education and outreach programs must consider all of these different user groups.

The 1999 version of AASHTO's Guide for the Development of Bicycle Facilities recommended that an education plan address the following four groups:

- Young bicyclists;
- Adult bicyclists;
- Parents of young bicyclists; and
- Motorists.

IMPORTANT INFORMATION ELEMENTS

It is important to make sure each group is addressed in multiple and suitable ways. For example, programs for young bicyclists should use age-appropriate curriculum and language to explain concepts and issues.

One of the key things to keep in mind when planning outreach and education efforts is not to "reinvent the wheel." Many successful programs, campaigns and resources are available. Locally, there are already many efforts underway. Other communities throughout the U.S. and Canada have already developed tools that can be adapted and modified for Ontario County and the Town of Canandaigua.

This adaptation is important in order to effectively localize the educational campaigns. Locally created campaigns that include materials with a local feel have been shown to have a more noticeable influence on motorist and bicyclist behaviors than generic FHWA-produced materials.

Bike and pedestrian education and outreach are vitally important in light of the growing number of distracted pedestrians. Much attention has rightly been focused on distracted drivers. But a recent National Highway Traffic Safety Administration reported that pedestrian fatalities rose by 4.2 percent in 2010 over the previous year, and injuries were up 19 percent, even though overall traffic deaths declined.

As we look around us every day, pedestrians are being distracted by their handheld devices. Researchers believe that the number of injured pedestrians is actually much higher than these results suggest, since police don't always collect that data. A recent survey by Liberty Mutual suggests 60 percent of 1,000 people surveyed routinely read and send texts and emails, talk on their cell or smartphones, and listen to music while walking. Current trends, such as this, are important factors in designing bicycle/pedestrian safety, education and outreach programs. Several community members expressed concern about this issue in the survey and at public meetings.

PARTNER ORGANIZATIONS

It is important to connect partners to maximize the effectiveness of existing resources, programs, and materials. A list of potential partners has been developed, and their existing programs and partnerships have been inventoried to identify opportunities for new partnerships and enhanced use of resources. Some of these partners are already working together, but there are new partnerships that can be nurtured and developed, and new ways for existing educational materials to be used. Not all of the potential partners are specifically focused on bicycle/pedestrian-related issues, but may still be useful partners because of their ability to communicate with certain parts of the population. Some examples of education and outreach programs are suggested here:

Coordinate safety education with the ***Canandaigua City School District*** (Canandaigua Academy, Canandaigua Middle School, Canandaigua Primary-Elementary School).

Learn from successful outreach and education examples in other ***active transportation-friendly communities***. Many successful programs, campaigns and resources are already available. Other communities throughout the U.S. and Canada have already developed tools that can be adapted and modified for Ontario County.

May is ***National Bike Month***- Recognize those who commute by bike and encourage people to become new bicycle commuters or increase their trips by bike during the season when spring has sprung and new beginnings abound. This program features a month long calendar of events that offers organized rides for different ages and abilities, bike handling skills and maintenance workshops, and a Bike to Work Day Commuter Challenge.

The program is most successful when led by a community-based organization with financial support from the Town and the greater business community.

Bicycle Ambassadors - A team of at least two ambassadors encourages an increase in bicycling by engaging the general public to answer questions about bicycling and teach bicycle skills and rules of the road. Ambassadors attend community-based events throughout peak cycling season to offer helmet fits, route planning, bike rodeos and commuting 101 workshops. Community members also may request an appearance by a team of ambassadors at businesses, schools or a conflict zone location along the bikeway system.

Bike Light Campaign - With shorter days, when it gets dark before commuters head home from the office, fall is a good time of year to remind cyclists that proper equipment is required when riding at night. A bike light campaign also offers the opportunity to introduce cyclists to bicycle shops and strengthen partnerships between the City, Town, and retailers. This program could offer discounts on bicycle headlights and rear red reflectors and lights. It is recommended that the campaign be rolled out in September with the return of university as well as K-12 students to school. The campaign should expire before peak holiday season when bike shops are busy and less interested in offering discounts.

League of American Bicyclists: Bicycle Friendly Community status - ***The Bicycle Friendly Community (BFC)*** program created by the League of American Bicyclists (LAB) offers the opportunity to be recognized for achievements in supporting bicycling for transportation and recreation. It also serves as a benchmark to identify improvements yet to be made.

League Certified Instructor training course scholarships- The League of American Bicyclists offers certification courses to train those interested in teaching others to ride their bike safely and legally as a form of transportation. ***League Certified Instructors (LCIs)*** are a valuable asset to the community and can offer a variety of workshops for adults lacking confidence to ride in traffic as well as children learning to ride for the first time. LCI training courses require a two and a half day commitment and are offered through the LAB. To facilitate a cadre of cyclists to become LCIs, this program coordinates with the LAB to schedule training course offerings in the community and provide scholarships.

Conduct ***public safety announcements*** on following the rules of the road. For motorists, this campaign could address the need to look left prior to turning right, and provide clear passing space. For bicyclists, this campaign could address bicycle lights and lack of visibility when not riding in the road, and laws about bicycling including mandatory bicycle bells. For pedestrians, this campaign could address crossing at designated crossing facilities, and walking on the sidewalk in all seasons.

Walk Friendly Communities is a national recognition program developed to encourage towns and cities across the U.S. to establish or recommit to a high priority for supporting safer walking environments. The WFC program will recognize communities that are working to improve a wide range of conditions related to walking, including safety, mobility, access, and comfort. *www.walkfriendly.org/*

Distribute a ***Bike Map*** – The Genesee Transportation Council has created a regional bike map that includes bicycle suitability ratings, extensive safety information for bicyclists, a listing of area bicycle shops and repair services, location of bicycle lockers and how to obtain access to use them, information about how to use the bike racks that are provided on all RTS buses, and a listing of multi-use trails in the region. The map is free and can be provided upon request. This map could be used as a model for an Ontario County bike map. Another excellent example is the map and info guide produced by the City of Vancouver, British Columbia that illustrates bicycle and pedestrian routes in the city, and utilizes a compact, folded-into-wallet-size (Z-card) format.

Create an ***active transportation wayfinding*** program that includes identification of routes and signing plans (destination, distance, direction) as well as assessments of potential improvements along the proposed routes.

Monroe County Pedestrian Safety videos review the rules of pedestrian safety utilizing age appropriate videos for PreK-1, Grade 2-3, Grade 3-6 and three adult safety review videos. These videos could be incorporated into school district curriculum and shown at City or Town events, or serve as models for Ontario County specific videos. *www2.monroecounty.gov/safety-trafficsafety.php.*

Adapt Oregon program ***"Bike Wheels to Steering Wheels."*** The program helps youth better understand the relationship between bicycle-pedestrian safety and motion, and ultimately gives students a better understanding of safety when traveling by all modes of transportation, in which the laws of physics are applied without exception. The concepts are learned through normal math, science, or physics curriculum in schools.

OTHER POSSIBLE EXAMPLES:

Commuter of the Year Contest - This contest recognizes those who choose to bike, walk, or ride transit. An aim is to encourage others to reduce their drive alone motor vehicle trips. Nominated by their peers, contestants may be employees, residents, or students in the community and could be asked to provide an inspirational story about their transportation choice and habits. Based on nominations, categories could recognize Youth, Student, Senior, and Family Commuters. Winners also should be encouraged to serve as role models and participate in events throughout the year to mentor others and help them set goals to reduce their drive alone trips.

Business Pool Bike Program - Offering employees the opportunity to check out and ride a bike to meetings, lunch or run errands is a great benefit. Pool bikes are a form of bike sharing where an employer manages a fleet of bikes for this purpose. This program offers subsidies for the purchase and on-going maintenance of bikes as part of an agreement to track use and achieve the goal of reducing vehicle miles traveled and greenhouse gases. Employees sign up, make reservations and log their trips using a web-based management tool.

Conduct ***pedestrian and bicycle counts*** on a seasonal basis to track whether there is an increase in pedestrian and bicycle activity, exploring new methods as suggested by the public, FHWA, and the League of American Bicyclists. Refer to Miovision data in ***Figure 6*** of this plan as baseline information for Ontario County Road 16.

Bicycle Rodeo Kits- Children learning to ride should be confident with their bike-handling skills before riding in traffic. A Bike Rodeo is an interactive and controlled environment where cyclists practice a new skill at a series of stations. The number and difficulty of skills can be tailored based on attendance and number of instructors available to staff the event. This initiative will create a self-service bicycle rodeo kit that can be reserved by League Cycling Instructors (LCIs), Bike Ambassadors and community members. It contains instructions, diagrams and props necessary to host a bike rodeo. A programmatic collaboration with Ontario County Traffic Safety should be explored.

> ***"Bicyclists and motorists together must better learn to Share the Road, to operate defensively, to understand each other's behaviors, and to be alert to any unanticipated actions or movements. By working together, we can achieve the joint goals to increase bicycle ridership while reducing the number of bicycle crashes, injuries and fatalities."***
>
> ***- New York State Department of Transportation (NYSDOT)***

Participate in an ***annual meeting of all bicycle/pedestrian planners and engineers in the region***. An annual meeting should be held to allow local communities and organizations to communicate their plans and programs, as well as share best practice information. Note: County officials may not want to facilitate such a meeting, but it would be useful to participate if some other entity were to organize the event.

AARP Network of Age-Friendly Communities Toolkit can be adapted by municipal and local governments, non-profit organizations, community partners and volunteers to guide and support age-friendly initiatives that make 'Livable Communities" great places for all ages. ***www.aarp.org/livable-communities/network-age-friendly-communities***

Identify proper ***enhanced visibility clothing*** for bicyclists and pedestrians, and advise the local active transportation community of the associated safety benefits. As part of a larger roadway safety campaign, develop an educational campaign to eliminate bicycle and pedestrian fatalities. In Minnesota, ***"Toward Zero Deaths"*** is a statewide partnership involving federal, state, county and academic partners.

The mission is to create a culture in which traffic fatalities and serious injuries are no longer acceptable through the integrated application of education, engineering, enforcement, and emergency medical and trauma services.

PUBLIC ENGAGEMENT

Appoint a public bicycle/pedestrian committee to promote non-motorized transportation and to actively engage with citizens, planning committees, and boards to expand commuting and recreational paths for walkers and bicyclists. Such a committee could:

- Promote safe routes to school, greenways and connected corridors with adjacent towns,
- Publish and maintain cycling and walking maps,
- Review proposed development for active transportation considerations,
- Recommend amenities to enhance safe walking and cycling.

The 5 E's: Essential elements for communities to become great places for bicycling:

Engineering: Creating safe and convenient places to ride and park

Education: Giving people of all ages and abilities the skills and confidence to ride

Encouragement: Creating a strong bike culture that welcomes and celebrates bicycling

Enforcement: Ensuring safe roads for all users

Evaluation & Planning: Planning for bicycling as a safe and viable transportation option

(The League of American Bicyclists)

PROGRAM EFFECTIVENESS MEASURES

Program effectiveness measures can be used to determine if the recommended strategies meet their objectives, discover any areas that need change, justify funding, and provide guidance for similar programs. Baseline data is required prior to implementing recommendations. The County and Town could observe the outcomes or contract with a consultant to measure effectiveness on their behalf.

Observable outcomes include: number of crashes, injuries, and fatalities; behaviors; number of citations issued; number of people walking or bicycling; knowledge, opinions and attitudes; changes in organizational activity; traffic volumes; and traffic speeds. The effort to enforce the traffic laws as they relate to bicycle and pedestrian safety should be addressed in an overall, county wide, coordinated enforcement campaign. Targeted enforcement initiatives result in everyone following the rules of the road.

6.15 ZONING & DESIGN STANDARDS RECOMMENDATIONS

Ontario County Zoning and Regulations have been inventoried as part of the Ontario County Road 16 Pedestrian & Bicycle Study. Zoning and design standards relevant to bicycle and pedestrian travel are fairly minimal. Relevant sections from zoning code and planning documents included on ***Table 5***.

TOWN OF CANANDAIGUA COMPREHENSIVE PLAN 2011 UPDATE

Land Use and Regulations – Scenic, Cultural and Recreational Resources – Transportation – Roadway System:

"The Town has experienced residential growth south of Routes 5 & 20, which has generated vehicular as well as pedestrian traffic on County Road 16.

Unfortunately County Road 16 is not structured as a multi-use corridor and has relatively narrow shoulders that don't safely accommodate bikers, joggers or walkers. Higher levels of traffic near residential development along Middle Cheshire Road has created pedestrian/vehicle conflicts and raised concerns over safety and levels of service at key intersections. Though the Town has worked to address these issues additional planning may be needed to safely accommodate continued development."

Goals – Transportation Network and Services:

"Consider the needs of pedestrians and bicyclists during transportation planning."

COMPREHENSIVE PLAN UPDATE: IMPLEMENTATION PLAN (2017)

- Transportation Network and Services:
- Complete Streets Team created to set goals to create Complete Streets Policy (Feb 2017)
- Town highway department developing restriping schedule to determine time-line for installing bike lanes (Aug 2016)
- Team created to update Design Standards and Criteria (Feb 2017)

SITE DESIGN AND DEVELOPMENT CRITERIA (2012)

- Article II – Design and Construction Standards, Section 2.14, sets sidewalk specifications
- Article IV. – Installation of Improvements, Section 4.10, expands on those specifications
- Appendices E-1 and E-2 provide Typical Road Cross Sections
- Appendix O-1 provides a Sidewalk Detail

The Genesee Transportation Council has prepared recommendations for supporting cyclists and pedestrians through zoning code. Adopting some of these recommendations would increase the safety and comfort of bicyclists and pedestrians in Ontario County. See ***Appendix E*** for Bicycle and Pedestrian Supportive Code Language.

6.16 ENFORCEMENT

Law enforcement departments can take a leading role in involving public awareness of existing traffic laws and ordinances for motorists, pedestrians and bicyclists.

TABLE 5: EXISTING ACTIVE TRANSPORTATION EDUCATION AND OUTREACH PROGRAMS AND PARTNERSHIPS

	Existing Programs					Existing Partnerships					Highlights
Partner Name	**Bicycle Safety**	**Community Health**	**Environmental Concerns**	**Transportation Equity**	**Neighborhood Livability**	**Bicycle Safety**	**Community Health**	**Environmental Concerns**	**Transportation Equity**	**Neighborhood Livability**	**Programs or Partnerships of Note**
AARP		✚			✚						Age Friendly Communities programs.
Common Ground Health		✚									Various health and wellness initiatives.
Genesee Land Trust			✚		✚		✚	✚		✚	
Genesee Regional Off-Road Cyclists (GROC)	✚	✚				✚	✚				Singletrack Academy to teach bicycle handling skills.
Southern Tier Bicycle League	✚	✚				✚	✚				Dedicated to promoting cycling for health and well being.
Genesee Transportation Council	✚	✚	✚	✚	✚	✚	✚	✚	✚	✚	Funds studies addressing key issues. Helmet brochure, bike map.
Injury Free Coalition for Kids	✚	✚									Kohl's Pedal Patrol provides bike rodeos and helmets.
UR Thompson Hospital		✚			✚	✚	✚				
Ontario County Public Health Department		✚			✚		✚				
Ontario County Traffic Safety Board	✚					✚					
Ontario County Planning Department			✚	✚	✚			✚	✚	✚	
Ontario County/ Canandaigua Public Libraries					✚						Venue for education/outreach programs and distribution of materials.
Canandaigua YMCA	✚	✚			✚	✚	✚			✚	
Regional Transit Service									✚		
Fingerlakes Cycling Club	✚			✚					✚		Dedicated to promoting cycling for health and well being.
Canandaigua City School District		✚	✚			✚	✚	✚			
Wegmans	✚	✚	✚	✚	✚	✚	✚	✚	✚	✚	Passport to Wellness.

Information provided for motorists should pertain to obeying speed limits, yielding to pedestrians when turning, traffic signal compliance, and obeying drunk-driving laws. Many local law enforcement agencies have instituted annual pedestrian awareness weeks where they issue tickets to motorists who disregard pedestrian laws and warn pedestrians to follow the law. This includes doubling fines for violations within identified pedestrian zones.

R2-6AP fines doubled mutcd sign.

Information directed to pedestrians should include topics such as crossing the street at legal crossings and obeying signals.

Bicyclists should be made aware of the law in regards to riding at night with lights, obeying traffic signals, avoiding the sidewalk, and riding with the flow of traffic on the roadway. A campaign should be designed keeping in mind the League of American Bicyclists' recommendation that communities make connections between the bicycling community and law enforcement.

Another way to address the need to educate bicyclists, pedestrians, and motorists is to target training of law enforcement, if appropriate.

Some questions that could be covered in this training include:

- When is it acceptable for bicyclists to 'claim the lane?'
- What width constitutes 'traffic lanes too narrow for a bicycle and a vehicle to travel safely side-by side within the lane?'
- Why is it important for a bicyclist to use headlamps and tail lamps?
- Why is riding against traffic, walking with traffic, or not obeying traffic signals such a problem?

By answering these and other similar questions, and discussing what infractions are most likely to lead to bike crashes, law enforcement can help promote bike, pedestrian, and motorist safety by targeting those behaviors most likely to result in crashes. Some communities educate local law enforcement through the enforcement agency's standing roll-call meetings, while others send officers to traffic skills courses.

Sporadic enforcement will not result in significant improvements to pedestrian, bicyclist, or motorist behavior and will likely result in resentment of law enforcement personnel. To make law enforcement increasively effective, it is important to coordinate an ongoing public information, education, and enforcement campaign regarding safe sharing of the roadways for all users.

Educational training course.

7.0 IMPLEMENTATION

7.1 FUNDING

This section identifies and discusses the numerous sources which can be used to provide monetary assistance for bicycle and pedestrian facilities. Some programs are more appropriate than others for funding CR 16 improvements, but this list has not been edited in order to provide a range of funding solutions.

Many of these funding sources are available on the federal level, as dictated in the new transportation legislation, Fixing America's Surface Transportation Act, or the "FAST" Act. Many of these federal programs are administered by the New York State Department of Transportation (NYSDOT). Additionally, there are other state and regional funding sources which can be used to help achieve the goals and objectives of this Plan. Finally, a number of private funding sources exist which can be used by local governments to implement bicycle and pedestrian-related programs.

Table 6 on the following pages includes several options for funding sources.

Table 6: Funding Sources

Funding Source	Category	Relevant Project Types
National Highway Performance Program	Federal	Bicycle transportation facilities and pedestrian walkways adjacent to highways in the National Highway System, including interstates (Section 207)
Highway Safety Improvement Program	Federal	Intersection safety improvement, pavement and shoulder widening; bicycle/pedestrian/disabled person safety improvements; traffic calming; installation of yellow-green signs at pedestrian and bicycle crossings and in school zones; transportation safety planning; road safety audits; improvements consistent with FHWA publication "Highway Design Handbook for Older Drivers and Pedestrians"; safety improvements for publicly owned bicycle and pedestrian pathway or trail
Congestion Mitigation and Air Quality (CMAQ)	Federal	Funding to reduce vehicle emissions and traffic congestion in areas where air quality does not meet National Ambient Air Quality Standards. Eligible projects include bicycle and pedestrian facility improvements; transit improvements; ride-share programs; alternative fueling facilities/clean vehicle deployment
Transportation Alternatives	Federal funding administered by NYS DOT	On and off road bicycle and pedestrian facilities; projects that improve non-driver safety, access to transportation and enhanced mobility; conversion of abandoned railroad corridors into non-motorized trails; projects that enable/encourage children to walk/bike to school (Safe Routes to School); construction of turnouts, overlooks and viewing areas; planning, designing or constructing boulevards in former divided highway right-of-ways

Funding Source	Category	Relevant Project Types
Recreational Trails Program	Federal funding administered by NYS OPRHP	Develop and maintain trails for both motorized and non-motorized uses, including hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or other off-road motorized vehicles; develop trailhead facilities; purchase/lease of maintenance equipment; acquisition of easements/property
Highway Safety Section 402 Grants	Federal	Federal Safety-related programs and projects (Section 402)
Urbanized Area Formula Grants, Capital Investment Grants and Loans, and Formula Program for Other than Urbanized Area	Federal (FTA)	Bicycle access to public transportation facilities, shelters and parking facilities, bus bicycle racks
HUD Community Development Block Grant (CDBG)	Federal Funding Administered by NYS OHCR	Public facilities and improvements, such as streets, sidewalks, sewers, water systems, community and senior citizen centers, recreational facilities, and greenways
CHIPS (Consolidated Local, State, and Highway Improvement Program) *www.dot.ny.gov/programs/chips*	State	Bike lanes and wide curb lanes; sidewalks
Market NY Empire State Development Grant	State	Marketing, promotion and signage
Local Waterfront Revitalization Program NYSDOS	State	Planning, development, and signage for communities along designated inland waterways
OPRHP-Environmental Protection Fund Grant Program for Parks, Preservation, and Heritage	State	Municipal grant program offers funding for trail planning and development

Funding Source	Category	Relevant Project Types
The Green Innovation Grant Program GIGP *http://www.efc.ny.gov/*	State	Projects that improve water quality and demonstrate green stormwater infrastructure in New York State
The Greater Rochester Health Foundation	Regional	Community health and prevention projects and programs
Bikes Belong Coalition *www.bikesbelong.org/grants*	Private	Bicycle facilities; end-of-trip facilities; trails; advocacy projects such as Ciclovias
National Trails Fund *www.americanhiking.org/our-work/national-trails-fund*	Private	Hiking trails
Global ReLeaf Program *www.americanforests.org/our-programs/global-releaf-projects/global-releaf-grant-application/global-releaf-project-criteria*	Private	Tree planting
Robert Wood Johnson Foundation (general) *www.rwjf.org/grants*	Private	Various
The Conservation Alliance Fund *www.conservationalliance.com/grants/grant_criteria*	Private	Land Use
Surdna Environment/ Community Revitalization *www.surdna.org/grants/grants-overview.html*	Private	Community revitalization and environment

7.2 SEQRA

Project implementation may involve potentially significant impacts to the environment from construction activities. The following is a framework to comply with applicable State and Federal permitting requirements.

The Ontario County Road 16 Pedestrian and Bicycle Accommodations Feasibility Study is subject to State Environmental Quality Review Act (SEQRA) review because the actions proposed may potentially impact the environment. The Ontario County Road 16 Pedestrian and Bicycle Study is a Type I Action because the construction of the improved roadway and walkway is an action that will involve the physical alteration of 10 acres or more. The SEQRA process for this project will involve a coordinated review as follows:

The Project Sponsor will complete Part I of a Full Environmental Assessment Form (FEAF), identify all other involved agencies and transmit the FEAF to the involved agencies along with a notice that a lead agency must be agreed upon within 30 calendar days of the date the FEAF was transmitted to them.

The lead agency will complete Part 2 and if needed, Part 3 of the FEAF.

The lead agency will determine the significance of the environmental impact within 20 calendar days of its establishment as lead agency, or within 20 calendar days of its receipt of all information it may reasonably need to make a determination of significance, whichever is later.

The lead agency must immediately prepare, file, publish and distribute the determination of significance in accordance with 6 CRR-NY Part 617.12.

Detailed instructions for each step of the SEQRA review process can be found on the New York State Department of Environmental Conservation website: *http://www.dec.ny.gov/permits/357.html*

7.3 FOLLOW ON ACTIVITIES

Follow-on activities are future endeavors that will help advance the overall objectives of this study. These issues should be considered as the proposed improvements move into the next phase of development. The following issues need to be considered:

1. Environmental permitting is outlined in this report, and will be a critical undertaking to advance projects recommended in this study. An archaeological investigation may be necessary for some projects, but was not part of this study.

2. To get recommended projects constructed, the following steps will be necessary:

    a. Secure funding for design and construction

    b. SEQRA and permitting

    c. Envrionmental testing as required

d. Design development

e. Construction documents

f. Bidding

g. Construction

h. Acceptance by client

i. Management and maintenance plan

j. Programming and community involvement

k. Identify possible community partners

7.4 CONCLUSION

The key to developing a safe and supportive environment for active transportation lies in the synergy between engineering, education, and enforcement. The improvements recommended for CR 16 include on-road improvements, off-road improvements, programs, and policies. Space limitations in the corridor restrict the range of feasible alternatives, but there are a number of viable improvement options.

The recommendations in this study cover a wide range of project costs, from relatively low cost increases to maintenance budgets, to significant construction projects.

Implementation can be phased in over time, and should be coordinated with long-term planning for roadway and drainage work along CR 16. A combination of modest improvements can meaningfully enhance comfort and safety for all travel modes along the roadway. This study can be reviewed and updated, with possible project limit extension, over time as best practices for active transportation continue to evolve.

The limits of the corridor study area were established during the grant application process. The City of Canandaigua line was established as the northern project limit, and Seneca Point Road was established as the southern project limit.

As part of a future study update, it would be desirable to extend the corridor study to the south as far as State Route 21, and to the north as far as Parrish Road in the City of Canandaigua.

It is recommended that this study be updated every 3-5 years to keep track of changing conditions, development trends and implementation of improvements.

APPENDIX A
PROJECT ADVISORY COMMITTEE MEETING AGENDAS

PROJECT PHASE	KEY MEETINGS	TIMING
1. Study Coordination	Kickoff - County, Town, GTC and PAC	October - December 2017
2. Inventory of Existing and Planned Conditions	County Staff, as needed PAC meeting #1	November 2017 - January 2018
3. Needs Assessment	Count Staff, as needed PAC Meeting #2	December 2017 - February 2018
4. Public Meeting # 1		January 2018
5. Alternatives & Recommendations	County Staff, as needed PC Meeting #3	May 2018
6. Draft Report	County Staff, as needed PC Meeting #4	June - July 2018
7. Public Meeting # 2		August 2018
8. Final Report and Follow On Activities		September - December 2018

County Road 16 Inter-Modal Study
Steering/Advisory Committee
Meeting Agenda

September 20, 2017
2:00 P.M.

Type of Meeting: Project Kick-Off

Meeting Facilitator: Thomas A. Rafferty, P.E., Ontario County DPW, Project Manager

Invitees: Thomas Robinson, RLA, Barton & Loguidice, Consultant
Peyton McLeod, Sprinkle Consulting, Sub-Consultant

I. Call to order

II. Roll call William C. Wright, P.E., Ontario County Commissioner of Public Works
Gregory Westbrook, Town of Canandaigua Supervisor
James Fletcher, Town of Canandaigua Highway Supervisor
Darin Ramsay, Genesee Transportation Council Program Manager
Saralinda Hooker, Town of Canandaigua Resident

III. Approval of minutes from last meeting: N/A – 1st Meeting

IV. Open issues N/A – 1st Meeting

V. New business

a) **Robinson/McLeod:** Outline of the project scope and schedule

b) **Robinson/McLeod:** Definition of the project objectives

c) **S/A Committee Members:** Priority needs and specific areas of concern

d) **Ramsay:** Demonstration of Miovision traffic counting camera

VI. Adjournment

County Road 16 Inter-Modal Study
Steering/Advisory Committee
Kickoff Meeting Minutes

Opening

The kickoff meeting of the County Road 16 Steering/Advisory Committee was called to order at 2:00 PM on September 20, 2017 in the Canandaigua Town Hall downstairs conference room by Thomas A. Rafferty, the Ontario County Department of Public Works, Project Manager.

Committee Members Present

William C. Wright, P.E., Ontario County Commissioner of Public Works
Gregory Westbrook, Town of Canandaigua Supervisor
Darin Ramsay, Genesee Transportation Council Program Manager

Committee Members Necessarily Absent

James Fletcher, Town of Canandaigua Highway Supervisor
Saralinda Hooker, Town of Canandaigua Resident

Others Present

Thomas A. Rafferty, P.E., Ontario County DPW, Project Manager
Thomas Robinson, RLA, Barton & Loguidice, Consultant
(Peyton McLeod, Sprinkle Consulting, attended via teleconference from Lutz, Florida)

Approval of Agenda

The agenda was unanimously approved as distributed.

Approval of Minutes

This was the first committee meeting. There were no minutes of previous minutes.

Open Issues

This was the first committee meeting. There were no issues from previous meetings.

New Business

1. Project scope and schedule: Mr. Wright said that due to geographic constraints, doing nothing may be a viable alternative but there may also be a suite of lower level interventions and pocket improvements that could significantly improve the comfort level of bike riders and pedestrians. Mr. Wright said that the County anticipates doing maintenance roadwork before long, so this study's recommendations could become part of that planned construction. For example, the DPW could lengthen culverts in places to allow for a bikepath behind the guiderails. He also suggested that some landowners along the route may be willing to allow an off-road pathway around congested areas of the route. Mr

Westbrook said that Individual meetings with key business owners along West Lake Road are recommended. Mr. Rafferty said that the next step in the process should be a public meeting to collect input from residents. Mr. Robinson said he would prefer to do a walkabout through the project limits with the committee members and Mr. McLeod of Sprinkle Consultants as part of a Level of Service Analysis. Mr. Robinson said that the committee members and he could discuss a plan for the public meeting at that time. Mr. Wright, Mr. Westbrook and Mr. Ramsay agreed. Mr Robinson said that after receiving input from the public meeting, he would complete a preliminary Needs Assessment.

Action Items:

Mr. Robinson will schedule a Walkabout for the last week in September.

2. Definition of the project objectives: Mr. Robinson asked Mr. Wright and Mr. Westbrook why they wanted this study. Mr. Wright said that CR 16 has substandard road features due to geographic constraints which results in congestion in the right of way. Mr. Westbrook added that this is especially true in the high season. Mr. Rafferty asked Mr. Westbrook when the high season was. Mr. Westbrook said it said it was from Memorial Day to Labor Day. Mr. Wright said that People park all over the place in the summer. Mr. Westbrook said that CR 16 was the heaviest biked and walked street in town and he hoped to make it fundamentally safe in order to protect lives. He also said that flooding is an issue along West Lake Road (CR 16) and stormwater management should be considered in the study,

   Action Items:

   Mr. Robinson will visit the Ontario County "ONCOR" website for GPS data

   Mr. Robinson will come to the DPW offices to obtain Right of Way drawings.

   Mr. Robinson will create a "Dropbox" sharesite to obtain accident data from Mr. Ramsay and Past Traffic Studies (if any) from Mr. Rafferty.

3. Priority needs and specific areas of concern: Mr. Westbrook said that there were multiple yacht owners who owned homes across the street from the Yacht Club. He said that crossing 16 is a somewhat larger safety concern than traveling along it. Mr. Westbrook also said that around German Brother's Marina, many boats end up being parked on the side of the street leaving no room for bikes or pedestrians. Mr. Wright said that the hills in the road may have slopes too steep for bikes to safely stop.

   Action Items: None

4. Demonstration of Miovision traffic counting camera: Mr. Ramsay said that the camera could be used during the upcoming weekend. Mr. Robinson suggested that Mr. Rafferty, Mr. Ramsay and he select a location after the meeting. Mr. Rafferty and Mr. Ramsay agreed.
   Action Items:
   Mr. Robinson, Mr. Rafferty and Mr. Ramsay will select a location for the traffic counting camera after the meeting.
   Mr. Ramsay shall install the camera on Friday, September 22 and remove it on Monday, September 25th.

Agenda for Next Meeting

The next meeting will be a walkabout through the project site during the last week of September. The agenda will be to gather information for the Level of Service Analysis and plan the public meeting.

Adjournment

Meeting was adjourned at 3:00 P.M by Thomas A. Rafferty, the Ontario County Department of Public Works, Project Manager.

Minutes submitted by: Thomas A. Rafferty, P.E.

Approved by: William C. Wright, P.E.

County Road 16 (CR16) Inter-Modal Study
Steering/Advisory (S/A) Committee
"Walkabout" Meeting Minutes

Opening
The "Walkabout" meeting of the CR16 S/A Committee was called to order at 2:30 PM on **October 12, 2017** in the Ontario County Department of Public Works (OCDPW) conference room by Thomas A. Rafferty, P.E., OCDPW Project Manager.

Committee Members Present
William C. Wright, P.E., Ontario County Commissioner of Public Works
Saralinda Hooker, Town of Canandaigua Resident
Darin Ramsay, Genesee Transportation Council Program Manager
Committee Members Necessarily Absent
Gregory Westbrook, Town of Canandaigua Supervisor
James Fletcher, Town of Canandaigua Highway Supervisor
Others Present
Thomas A. Rafferty, P.E., Ontario County DPW, Project Manager
Thomas Robinson, RLA, Barton & Loguidice, Consultant
Peyton McLeod, Landis Evans Partners, Project Planner
Theo Petritsch, P.E., PTOE, Landis Evans Partners, Director of Transportation Services

Approval of Agenda
The agenda was unanimously approved as distributed.

Approval of Minutes
The minutes of the Kickoff meeting on September 20, 2017 were unanimously approved as distributed.

Open Issues
1. From Kickoff Meeting minutes New Business Item 1: "Mr. Robinson will schedule a Walkabout for the last week in September." The walkabout is scheduled during this meeting. This issue is now closed.

2. From Kickoff Meeting minutes New Business Item 2: "Mr. Robinson will visit the Ontario County "ONCOR" website for GPS data." Mr. Robinson said he has familiarized himself with the ONCOR site. This issue is now closed.

3. From Kickoff Meeting minutes New Business Item 2: "Mr. Robinson will come to the DPW offices to obtain Right of Way drawings." Mr. Wright said that the road was a three-rod (49.5 feet) right-of-way and encouraged Mr. Robinson to

consult the limits shown on the ONCOR site for locations where paper plans are not available, if any. **This issue is still open.**

4. From Kickoff Meeting minutes New Business Item 2: "Mr. Robinson will create a "Dropbox" sharesite…" **This issue is still open.**

5. From Kickoff Meeting minutes New Business Item 2: "Mr. Robinson will… obtain accident data from Mr. Ramsay…" Mr. Robinson said he had received the data. Mr. Ramsay said the term "Crash Data" has replaced "Accident Data" because the former term implied that there is no fault in the crashes. This issue is now closed.

6. From Kickoff Meeting minutes New Business Item 2: "Mr. Robinson will… obtain…Past Traffic Studies (if any) from Mr. Rafferty." **This issue is still open.**

7. From Kickoff Meeting minutes New Business Item 4: "Mr. Robinson, Mr. Rafferty and Mr. Ramsay will select a location for the traffic counting camera after the meeting." The three men drove the length of the study area and selected a site across the street from German Brother's Marina. This issue is now closed.

8. From Kickoff Meeting minutes New Business Item 4: "Mr. Ramsay shall install the camera on Friday, September 22 and remove it on Monday, September 25th." After Mr. Rafferty notified the management of German Brother's Marina, Mr. Ramsay installed and removed the camera on the dates indicated. Mr. Ramsay said the data collected included daily totals of approximately 3,000 cars and 300 pedestrians including 100 crossers. This issue is now closed.

New Business

1. Mr. Robinson said that he had met with the owners of German Brother's Marina on Tuesday, 10/11/17 to discuss the study. He told the owners that there would be no design proposals.
   Action Items: None

2. During the Walkabout, Mr. Robinson asked for the Miovision camera to collect data at three new locations along the study corridor. Mr. Robinson asked if there were someone in the OCDPW who he could teach to move and set up the equipment. Mr. Wright said he would make Mr. Rafferty available for that task and Mr. Rafferty agreed.
   Action Items: Mr. Ramsay will bring the Miovision equipment to the OCDPW during the week of 10/16/17-10/20/17 and teach Mr. Rafferty to

operate it. Mr. Rafferty will use it to collect data at three different locations in the study corridor that week.

3. Following the walkabout, Mr. Rafferty asked Mr. Robinson when the first public meeting should happen. Mr. Robinson said he must complete an Existing Conditions Inventory and Needs Assessment first. He suggested that the first public meeting be held in early January 2018. Ms. Hooker pointed out that many homeowners along the study corridor are seasonal residents who would likely be away at that time. She suggested that some way be found to allow input from them, possibly through the internet.
   Action Items: Mr. Robinson will research on-line options for public participation.

Agenda for Next Meeting
The next meeting will be a review of the Existing Conditions Inventory and Needs Assessment and plan the public meeting.

Adjournment
Meeting was adjourned at 5:00 P.M by Thomas A. Rafferty, P.E., OCDPW Project Manager.

Minutes submitted by: Thomas A. Rafferty, P.E.

Approved by: William C. Wright, P.E.

County Road 16 (CR16) Inter-Modal Study
Steering/Advisory (S/A) Committee
Third Meeting Minutes

Opening

The third meeting of the CR16 S/A Committee was called to order at 10:00 AM on **May 8, 2018** in the Ontario County Department of Public Works (OCDPW) conference room by Thomas A. Rafferty, P.E., OCDPW Project Manager.

Committee Members Present

Saralinda Hooker, Town of Canandaigua Resident
Oksana Fuller, Town of Canandaigua Resident
Marion Cassie, Town of Canandaigua Resident
Chris Dombrowski, Town of Canandaigua Resident
Gregory Westbrook, Town of Canandaigua Supervisor
William C. Wright, P.E., Ontario County Commissioner of Public Works
Darin Ramsay, Genesee Transportation Council Program Manager

Committee Members Necessarily Absent

James Fletcher, Town of Canandaigua Highway Supervisor

Others Present

Thomas A. Rafferty, P.E., Ontario County DPW, Project Manager
Thomas Robinson, RLA, Barton & Loguidice, Consultant
Douglas Finch, Town of Canandaigua Town Manager

Teleconference Attendee

Theo Petritsch, P.E., PTOE, Landis Evans Partners, Director of Transportation Services

Approval of Agenda

The agenda was unanimously approved as distributed.

Approval of Minutes

The minutes of the Walkabout meeting on October 12, 2017 were unanimously approved as distributed.

Open Issues

1. From Kickoff Meeting minutes New Business Item 2: "Mr. Robinson will come to the DPW offices to obtain Right of Way drawings." Mr. Robinson said he has confirmed that almost the whole study area is a three-rod (49.5 feet) right-of-way. Mr. Wright said that he estimated that every fourth property in the study area encroaches on that right-of-way. This issue is now closed.

2. From Kickoff Meeting minutes New Business Item 2: "Mr. Robinson will create a "Dropbox" sharesite…" The site was created on October 20, 2017. Mr. Westbrook said that the public should have access to the Dropbox. Mr. Robinson said that that he will post links to the Dropbox on Town and County websites. **This issue is still open.**

3. From Kickoff Meeting minutes New Business Item 2: "Mr. Robinson will… obtain…Past Traffic Studies (if any) from Mr. Rafferty." Mr. Robinson said he has the historic traffic and crash data. This issue is now closed.

4. From Walkabout Meeting New Business Item 2: "Mr. Robinson asked for the Miovision camera to collect data at three new locations along the study corridor." Mr. Ramsay taught Mr. Rafferty how to set up the Miovision Camera and data was collected during September and October of 2017. This issue relates to New Business Item 1.

5. From Walkabout Meeting New Business Item 3: "Mr. Rafferty asked Mr. Robinson when the first public meeting should happen…Mr. Robinson will research on-line options for public participation." Mr. Robinson set up an on-line survey on October 20, 2017 which has had over 150 responses to date. Mr. Robinson also created a flyer on December 19, 2017 soliciting input for the on-line survey and announcing Public Meeting #1 and posted the flyer to the Town and County websites. Mr. Rafferty mailed the flyer on January 3, 2018 to every property owner in the study area. Mr. Rafferty also posted 28 blown-up laminated color copies of the flyer on utility poles along the study area on January 4, 2018. Mr. Robinson hosted Public Meeting #1 on January 13, 2018 at the West Lake School House at 10:00 AM. Mr. Rafferty also made a public presentation on April 16, 2018 at the Canandaigua Town Hall at 5:00 P.M. This issue relates to New Business Item 2.

New Business

1. Ms. Fuller said that the next Miovision data collection should be during July. Mr. Ramsay said that collecting data on Independence Day itself would not be representative. Mr. Wright said that data collection should be done in Mid-July. **Action Items: Mr. Rafferty will borrow the Miovision camera from Mr. Ramsay when it is available in Mid-July for the final data collection.**

2. There was a general discussion about increasing public participation. Mr. Wright said there would be a second mailing before Public Meeting # 2. Mr. Dombrowski said he could direct members of his bicycle club to the on-line survey. Ms. Hooker suggested that a summary of the on-line survey results and

the Draft Report be available to the public for review before Public Meeting #2 so people can prepare comments. Mr. Robinson said the Draft Report should be reviewed by the S/A Committee before being made public and, because it will be so large, that only the recommendations should be made public. Mr. Finch offered a larger venue for Public Meeting #2 at Onanda Park with plenty of parking. Mr. Westbrook asked for links to the "Dropbox" sharesite to be posted on the various Town internet pages.

Action Items:

a) **Mr. Dombrowski will encourage his club members to take the survey.**

b) **Mr. Robinson will submit the Draft Report for the S/A Committee to review by July 20, 2018.**

c) **Mr. Rafferty will send out a second mailing including a summary of the survey, information directing residents to where they can review the recommendations in the Draft Report and an announcement of Public Meeting #2.**

d) **Mr. Finch will reserve a meeting hall at Onanda Park for an evening in the week on August 6 – 10, 2018.**

3. Ms. Cassie asked if the possibility of future sewer construction south of Foster Road should be considered before recommending any surface construction there. Mr. Rafferty said that was outside the scope of this project. Mr. Westbrook said that he didn't want to hold-up this project because of a longer range issue. Mr. Wright said that if the County would not be deterred from installing a sewer sewer somewhere because it already installed a multi-use trail at a location.
   Action Items: None.

4. Ms. Fuller asked if a sidewalk from Parrish could be a recommendation in the report. Mr. Rafferty said that study area ends at the border of the Town and City of Canandaigua, so the tee-intersection with Parish Street within the City is excluded. Ms. Fuller said it wasn't very far from the north end of County Road 16 to Parish Street. Mr. Ramsay said that the County and City could partner on a future grant application so that future work, if any, could reach Parish Street. Ms. Cassie said that one sentence could be included in the report about that potential partnership. Likewise, Ms. Cassie said that another one sentence note could be included in the report noting that it is a similar short distance from the south end of the study area to the tee-intersection with County Road 21.
   Action Items: Mr. Robinson will include mentions of the short distances from the north and south boundaries of the study area to the to the intersections with Parish Street and County Road 21.

5. Mr. Rafferty said that although any member of the public can give input to the S/A Committee on the study, only committee members will decide what changes, if any, will be made to the Draft Report to make it final. Therefore, if the committee membership is to be expanded, it should be done at this meeting. Ms. Fuller, Ms. Cassie and Mr. Dombrowski volunteered to serve on the committee. There were no objections. Mr. Dombrowski said that this project could make Ontario County and the Town of Canandaigua a model to other area counties and towns on how to accommodate bicyclists and pedestrians.
   Action Items:

   a) **Ms. Fuller, Ms. Cassie and Mr. Dombrowski are now members of the Steering/Advisory Committee**

   b) **Mr. Rafferty will send the new committee members all documents previously sent to other committee members.**

Agenda for Next Meeting
The next meeting will be a held after Public Meeting # 2 to assess whether any revisions to the Draft Report are necessary before it is made final.

Adjournment
Meeting was adjourned at 11:10 A.M. by Thomas A. Rafferty, P.E., OCDPW Project Manager.

Minutes submitted by: Thomas A. Rafferty, P.E.

Approved by: William C. Wright, P.E.

Canandaigua Town Board Presentation
April 16, 2018

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

Prepared for:

Department of Public Works
Ontario County NY

Prepared by:

Barton & Loguidice, DPC

March 16, 2018

DRAFT

County Road 16 (West Lake Road) Pedestrian & Bicycle Study

BACKGROUND

The last major improvement of County Road 16 occurred in the 1930s. It was designed to accommodate rural local traffic of the day. The two lane roadway geometry has remained largely unaltered.

In the past few decades areas along the western shoreline of Canandaigua Lake have experienced intensive development pressures. The hills and lands to the west of the lake, with their scenic vistas, likewise have attracted vigorous residential growth.

As development and growth have occurred within and adjacent to the study area, there has been an increased demand to accommodate pedestrians, bicyclists, and motorists. There is limited accommodation of non-motorized modes of transportation. Narrow travel lanes and shoulders provide minimal separation or buffer for pedestrians and bicycles.

The Town of Canandaigua Comprehensive Plan notes ***"the Town has experienced residential growth south of Routes 5 & 20, which has generated vehicular as well as pedestrian traffic on County Road 16. Unfortunately, County Road 16 is not structured as a multi-use corridor and has relatively narrow shoulders that don't safely accommodate bikers, joggers or walkers."***

With the many narrow lots, high lot coverages, and limited availability of off-street parking, vehicles are forced to park on the shoulders. On-street parking reduces buffering and increases the potential for conflicts.

The County has experimented with repainting edge lines on County Road 16 to reallocate roadway space and integrate alternative modes and parking. Electronic driver speed feedback signs have been placed at certain locations in an effort to calm traffic. These measures have had limited effect on improving safety and comfort for pedestrians and bicyclists.

A number of residents living along County Road 16 and a Citizens' Implementation Committee, an active group comprised of current and former board members, have increasingly called for improvements to County Road 16 to more safely accommodate pedestrian traffic.

County Road 16 Bike/Pedestrian Study
Town Hall Presentation 4/16/18

Name	Address	Phone	Email
Thom [illegible]	Ont. Co. DPW	585-396-4824	thomas.m[illegible]@co.ontario.ny.us
JOAN LaMendola	CountyRd 16	585-734-5540	JrLaMen[illegible]yahoo.com
Linda Dworaczyk	County Rd 16	5857661176	ldworaczyk@townofcanandaigua.org
Kathy & Jeff Page	Co. Rd 16	585-261-1517	wjpagemd@hotmail.com
Dave Sanders	Co Rd 32	704-7235	
Lynne McCoy	east Lake Rd	396-1053	
Rhonda Tubbs	3971 Co. Rd 16	259-4458	LFFEMC@RIT.EDU
MARION CASSIE	4735 W. LAKE Rd	585-394-1135	4MARION.CASSIE@GMAIL.COM
Jeff Twombly	4341 Tichenor Point Dr	507-0540	jtwombly@rochester.rr.com
Susan Foose	3420 West Lake Rd Cty	585-905-0727	SBFOOSE@ROCHESTER.RR.COM
Lois Golbeck	4280 Lake Hill Dr.	585-905-3198	Loisneuringer@gmail.com
DIANA SHERRY	3678 E. Saddleback Rd	585 394-1055	
GARY HUMES	4960 Hillcrest Dr.	202-570-0648	gdhumes@rochester.rr.com
Suzanne Wallace	4525 Middle Cheshire Rd	585-764-4252	suwalla@frontier.com

Karen Dworaczyk 3904 Acorn Hill 585-820-7761

County Road 16 Bike/Pedestrian Study
Town Hall Presentation 4/16/18

Name	Address	Phone	Email
BROOKS LYON	Box 621 14424	585-3969257	BROOKSLYON45@YAH.COM
Chris Dombrowski	3638 E Ridge Rum 14424	737.1923	tnmc2@rochester.rr.com
C. Hilarski	3351 County Rd 16 14424	585-330-9956	hilarsc@buffalostate.edu
C.S. Hilarski	3351 County Rd 16 14424	585-330-9956	cshilarsk@gmail.com
Joyce Matthatter	5990 CR 32		
Dick McGovern	4335 Tichenor Pl	585 329 7088	rmcgover@rochester.rr.com
Mary Phillips	4536 West Lake Rd	315 521-8840	maryphillips144@gmail.com
Brian Phillips	4536 West Lake Rd.	585 750-3813	brian@whatibuild.com
F.L. Straub	4095 Dunalinda	396-0242	krausengr@earthlink.net

Thomas M. Robinson

From: Rafferty, Thomas A <Thomas.Rafferty@co.ontario.ny.us>
Sent: Tuesday, April 17, 2018 10:16 AM
To: Wright, Bill C; Saralinda Hooker; Darin Ramsay; gwestbrook@townofcanandaigua.org; jfletcher@townofcanandaigua.org; Thomas M. Robinson; Peyton Mcleod; Greg Westbrook
Subject: County Road 16 Bicycle/Pedestrian Study
Attachments: Canandaigua Town Board Presentation Sign In_041618.pdf

S/A Committee,

Yesterday, I made a presentation about the CR 16 Bicycle/Pedestrian Study at the Canandaigua Town Hall. Although only 23 residents signed in (see attached sheets), my sense was that there were more than 23 present.

Some of the public input offered is paraphrased (except where quoted) below:

- The January 13th Open House shouldn't count due to the snow and there should be a re-do.
- The future Miovision data collection should be moved from May-June to July-August to capture the school vacation crowds.
- The consultant and S/A Committee should tour locations where bicycle/pedestrian accommodations have been successful (Austin, TX?).
- Public awareness is the key to a successful multi-use corridor. "It takes a community."
- Contractor parking along the route is a hazard and shouldn't be legal.
- A public safety flyer specific to County Road 16 should be produced detailing what the rules actually are.
- The speed limit is not being enforced. "Only the bicycles are going 35 mph."
- There was vocal support for the null alternative. One resident referred to a sidewalk as a "worst-case scenario."
- When one resident asked how many present actually walked or biked along the road, at least three quarters of the room, a silent majority, raised their hands.
- County Road 16 will never be safe for bicyclists or pedestrians until something is done to get the boats by German Brothers Marina out of the street.
- One resident volunteered to serve on the Steering/Advisory committee.

The last meeting of the Steering/Advisory Committee was the "Walkabout" meeting on 10/12/17.
The minutes for that meeting concluded with:

"Agenda for Next Meeting
The next meeting will be a review of the Existing Conditions Inventory and Needs Assessment and plan the public meeting."

According to "Architect/Engineer Invoice Summary" dated 3/31/18, the Existing Conditions Inventory is 57% complete and the Needs Assessment is 90% complete.
Perhaps it is possible to prioritize the completion of the Needs Assessment and have an S/A meeting to review that piece and discuss public input to date.
Please let me know what you all think of that idea.

Thomas A. Rafferty, P.E.

APPENDIX B
COMMUNITY INPUT

Ontario County Road 16 - West Lake Road

Pedestrian & Bicycle Accommodations Feasibility Study

Department of Public Works - Ontario County, NY

OPEN HOUSE :: SATURDAY JANUARY 13TH FROM 10AM-12PM

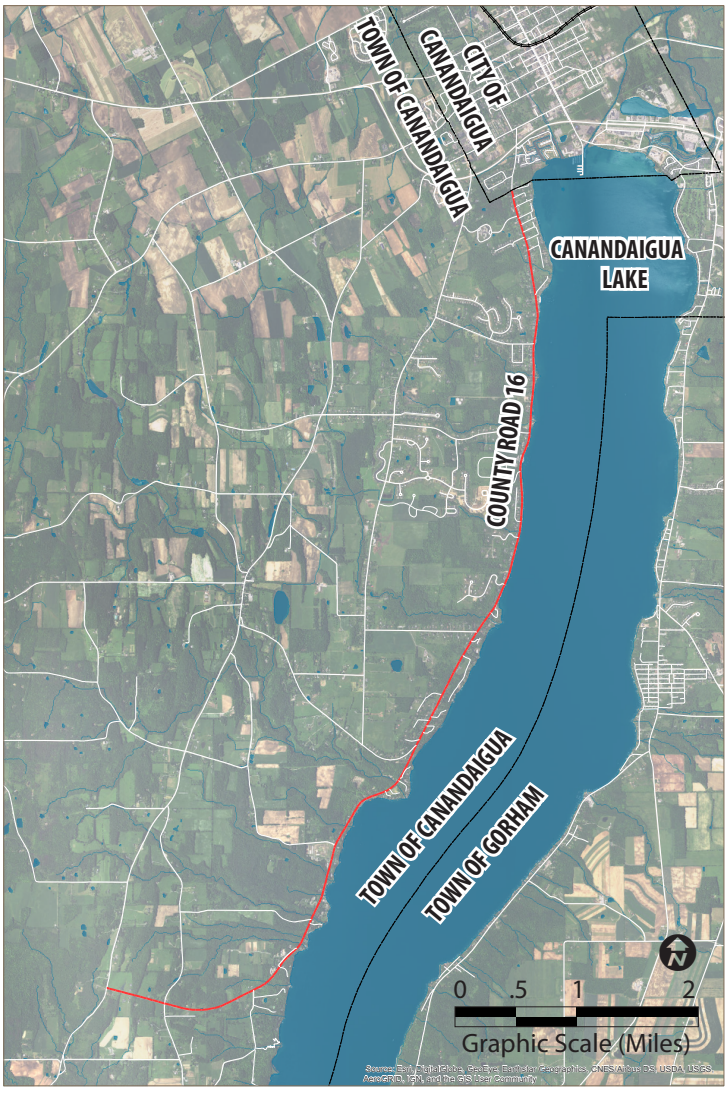
West Lake School House - 3660 West Lake Road, Canandaigua, NY 14424

Ontario County Road 16 winds along the shore of Canandaigua Lake, providing unparalleled lake views and attracting a large number of pedestrians and cyclists.

Providing opportunities for walking and cycling can have positive community wide impacts including health benefits, environmental benefits and economic benefits.

The purpose of this study is to make Ontario County Road 16 safer and more attractive for pedestrians and cyclists, while improving safety for all users.

This feasibility study will support the continued development of safe, functional and attractive facilities for biking and walking in Ontario County.



Ontario County Road 16

WE NEED YOUR INPUT!

For more information, please contact:

Thomas A Rafferty, P.E.
Ontario County DPW
thomas.rafferty@co.ontario.ny.us

PLEASE TAKE OUR ONLINE SURVEY

https://www.surveymonkey.com/r/M8D3FWR

Thank you for helping to shape Ontario County's efforts to increase active transportation.

Funding provided by Genesee Transportation Council

Prepared by Barton & Loguidice, DPC

PUBLIC MEETING #1

Saturday January 13, 2018 from 10:00am-12:00 pm

West Lake School House - 3660 West Lake Road, Canandaigua, NY 14424

Meeting Notes:

- There are drainage issues along County Road 16. Flooding occurs 3-4 times per year.
- Ponding on the road creates icing problems in the winter.
- The road has lost its crown over the years, which contributes to the drainage problems.
- The roadway is subject to heavy seasonal use
- Bicycling and running events occur on OC 16 and should be considered in the plan
- Dog walkers are a prevalent user group on the study corridor.
- Sight distances are limited by boat trailers parked on the shoulder.
- Construction vehicles create congestion and unsafe conditions
- Consider an alternate route for bicyclists using Middle Cheshire Road
- Be sure to provide adequate notification for public meetings. Direct mailings to nearby residents would be good.
- Speeding on the corridor is a concern. Need better enforcement
- County snow plows sometimes drive too fast in the winter
- Butler Park has no ADA access and is not kid-friendly
- Need to clearly delineate public and private properties.
- Trucks going to Wegmans Farm should use RT 21.
- Information and education is important.

Welcome

Barton&Loguidice

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

Barton & Loguidice, DPC

THOMAS ROBINSON, ASLA, LEED®AP
Project Manager, Landscape Architect

HANNA QUIGLEY
Project Designer

Landis Evans + Partners

PEYTON MCLEOD
Project Planner

THEO PETRITSCH, PE, PTOE
Project Engineer

Funding provided by Genesee Transportation Council, Unified Planning Work Program

Project Team

Barton&Loguidice

Barton & Loguidice, D.P.C.

Active transportation planning
Complete Streets
Community master plans and land use
Green infrastructure
Low Impact Development
Site/civil, and environmental engineering
Environmental regulatory permitting
GIS mapping and analysis
Visual communication and graphic design
NYSDOT Region IV LDSA Firm

Landis Evans + Partners

Nationwide Studies
AASHTO Bicycle Facilities Design Guidelines
AASHTO Pedestrian Design Guidelines
NHI Bicycle / Pedestrian Design Guidelines
DOT Green Book
Operation of Shared Use Pathways
Pedestrian Level of Service
Bicycle Level of Service
Roundabout Design Guide
Evaluation of Pedestrian Safety Campaigns
Pedestrian ITS Evaluations

Overview

Barton&Loguidice

Study Purpose: *Analyze existing conditions along Ontario County Road 16, investigate the feasibility of various potential pedestrian and bicycle accommodations, and provide a plan for enhanced active transportation.*

Existing Conditions Inventory ● Community Input ● Needs Assessment
Draft Recommendations ● Next Steps

Existing Conditions

Barton&Loguidice

- TOWN CHARACTERISTICS
- SLOPE AND TOPOGRAPHY
- HYDROLOGY AND DRAINAGE
- ROADWAY CHARACTERISTICS
- CORRIDOR DESTINATIONS
- PARKS AND TRAILS
- BICYCLE AND PEDESTRIAN EVENTS
- SAFETY EVALUATION
- EXISTING BICYCLING AND PEDESTRIAN CONDITIONS

Existing Conditions

Barton&Loguidice

Level of Service Models

- Nationally adopted and widely used pedestrian and bicyclist models
- Evaluation of user's perceived safety and comfort with respect to motor vehicle traffic and roadway conditions, A ≤ 0.00 to F >5.5
- Analyzed at Ashton Place, German Brothers Marina, Wells Curtice to north of Foster, Onanda Park, and East of Seneca Point

PEDESTRIAN: 3.32-4.00 (C-D)

BICYCLIST: 0.00-2.18 (A-B)

PEDESTRIAN LEVEL OF SERVICE MAP

BICYCLE LEVEL OF SERVICE MAP

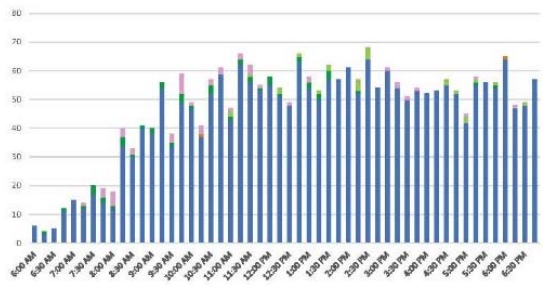
Existing Conditions

Barton&Loguidice

Miovision Data

- Provided by the Genesee Transportation Council for video traffic data collection
- Placed at 4 locations: Canandaigua Yacht Club, Butler Road Schoolhouse, German Brothers Marina, and Onanda Park
- Fall 2017 and Summer 2018 counts over a 13 hour period
- 5 travel modes: Light cars and trucks, heavy vehicles, motorcycles, pedestrians, and bicycles
- Non-motorized users account for just over 3 percent of trips along the corridor, with pedestrians outnumbering bicycles.

Across 69 hours of data, 173 pedestrians and 138 bicyclists were observed.



Existing Conditions

Barton&Loguidice

Speed and Traffic

- Ontario County Road 16 is classified as a rural minor collector with average daily traffic of 3,400 vehicles.
- Posted speeds range from 35-50 mph from north to south. According to the NYSDOT Speed Count Average Weekday Report, the average travel speed is 38 mph.
- The 85th percentile is 44 mph, meaning 85% of motorists are travelling below 44 mph.
- Safety evaluations conducted over 15 years by the GTC indicate that in this period, 11 crashes were reported, none in which pedestrians or cyclists have been involved.

Community Input

Barton&Loguidice

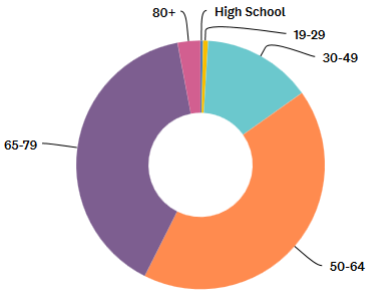
Date	Meeting Type	Purpose
Sept 20, 2017	Kick-Off	Project intentions, goals, and objectives
Oct 12, 2017	Project Advisory Commitee Meeting and Walking Tour	Existing conditions and assessment
Jan 13, 2018	Public Meeting #1	Existing conditions review and input
April 16, 2018	Canandaigua Town Board Meeting	Project Presentation
May 8, 2018	Project Advisory Committee Meeting	Alternatives and Preliminary recommendations
Aug 8, 2018	Public Meeting #2	Draft Recommendations

Community Input

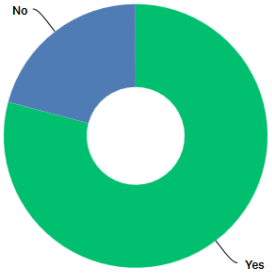
Barton&Loguidice

Online Survey

- January 2018 through August 2018
- 19 questions
- 9 minutes average completion time
- Over 300 surveys completed
- comments/write-in responses



Age Groups



Living on, or within ½ mile of West Lake Road

Online Survey

Barton&Loguidice

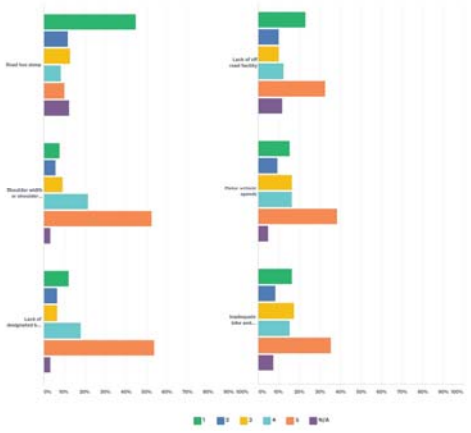
Survey Highlights

12: DO YOU HAVE PARTICULAR LOCATIONS ALONG ONTARIO COUNTY ROAD 16 THAT YOU LIKE TO BICYCLE OR WALK TO?

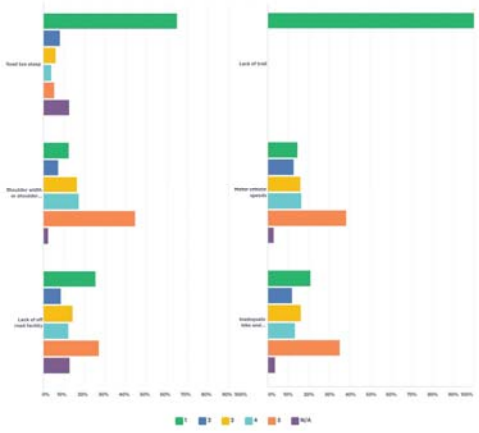
Responses ranged from:
"Entire length of County Road 16" to "no part of the road is safe"

Most frequently mentioned locations:
Butler Road Park (19)
Canandaigua Yacht Club (18)
Onanda Park (10)
Foster Road (8)
Seneca Park (8)

15: WHAT DO YOU CONSIDER TO BE THE PRIMARY BARRIERS TO BICYCLING ON ONTARIO COUNTY ROAD 16?



16: WHAT DO YOU CONSIDER TO BE THE PRIMARY BARRIERS TO WALKING ON ONTARIO COUNTY ROAD 16?



Needs Assessment

Barton&Loguidice

Summary of Main Concerns

- Variation in shoulder width
- Shoulder erosion and fading pavement markings
- Parking in the shoulder, especially at the Marina
- Reduced visibility
- Peak summer usage and enforcement needs
- Stormwater management
- Safety and education
- Crosswalks and signage

Recommendations

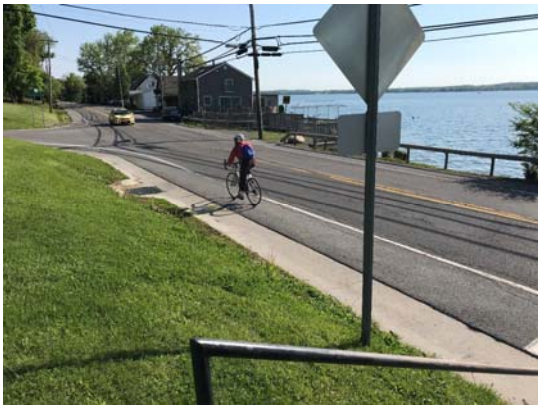
Barton&Loguidice

- On-road improvements
- Off-road improvements
- Programs & Policies

- Engineering

- Education

- Enforcement



National Level of Design Guidance

Barton&Loguidice

Design Guidelines recommended in the study reference existing, recognized design standards and provide clarification or supplemental information as necessary.

American Association of State Highway and Transportation Officials (AASHTO)

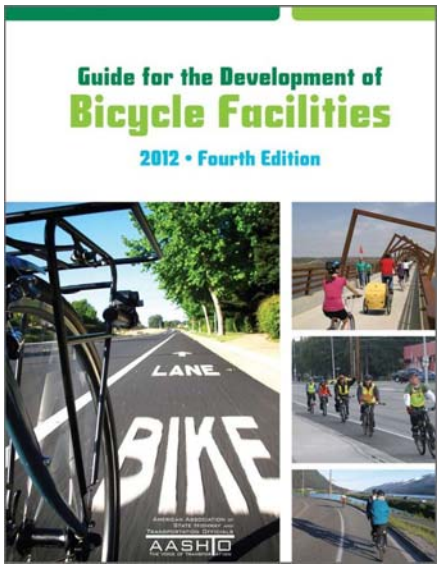
- Guide for Development of Bicycle Facilities
- Guide for Planning, Design, and Operations of Pedestrian Facilities

NY Department of Transportation

- Design Manual Chapter 17 Bicycle Facilities Design
- Design Manual Chapter 18 Pedestrian Facilities Design

Federal Highway Administration

- Manual on Uniform Traffic Control Devices (MUTCD)
- Separated Bike Lane Planning and Design Guidance



Recommendations

Barton&Loguidice

Key Recommendations

- More frequent maintenance schedule
- Additional signing and stop bars at intersections with steep grade
- Asymmetrical shoulders
- Hillcrest warning systems and signing
- West Lake Schoolhouse Park and Beach – Butler Road intersection improvements
- Shoulder improvements
- Onanda Park and Canandaigua Yacht Club road crossing improvements

Priority

Barton&Loguidice

Impact, Feasibility, Construction

Priority – Highly beneficial projects that are immediately feasible, or will have the most impact and should therefore be addressed first

Recommended – Beneficial projects that will have a significant impact and should be addressed next

Possible – Projects that have a less critical time frame, or cannot begin until other projects are completed or issues are addressed

Project Name	Project Description	Priority Level
Increased Maintenance Schedule	Increase maintenance schedule to address issues of pavement shoulder erosion, uneven paving, low visibility, and traffic line fading by routinely sweeping pavement, patching surfaces, and cutting back vegetation.	Priority
Multi-Use Paved Shoulder Improvements	Standardize shoulder width at a minimum of 5' to allow multiple usage. Selective shoulder widening should be implemented where right-of-way allows.	Priority
Implement Traffic Delineators	Increase use of delineators to separate bicycle and pedestrian facilities in key areas, such as the German Brothers Marina.	Recommended
Asymmetrical Shoulders	Widen shoulders on ascents and decrease shoulders on descents to improve cyclist experience, safety, and comfort.	Recommended
Additional Signing	Bicycle/Pedestrian signing along Ontario County Road 16. Additional signing and stop bars at intersections with steep grades.	Priority
Hillcrest Warning System & Signing	Implement bicycle detection technology to inform motorists of bicycles at hillcrests where visibility is limited.	Possible
Improve Pedestrian Crossings	Install high visibility crosswalks with pedestrian signing at key locations, including, but not limited to, Canandaigua Yacht Club and Onanda Park. Consider raised crosswalk installation to improve traffic calming.	Priority
Speed Reduction	Undertake speed study to determine feasibility of speed limit reduction to 30 mph in areas to improve multi-use transportation and transitional speed zones. Increase adherence through traffic calming techniques.	Possible
Trails on Private Property	Trail running parallel to Ontario County Road 16 on private property in key areas with property owner consent.	Possible
Stormwater Management	Green infrastructure practices to treat water from culverts along Ontario County Road 16. Coordinate with upcoming Ontario County DPW culvert improvements.	Recommended
Education & Outreach	Connect with local organizations to increase bicycle and pedestrian safety education in Ontario County.	Recommended
Zoning & Design Standards Recommendations	Adopt language from Genesee Transportation Council Bicycle and Pedestrian Supportive Code. Update standard details relative to bicycle and pedestrian infrastructure.	Possible
Enforcement	Provide traffic law enforcement to ensure safety for all travel modes. Increase enforcement measures during peak use.	Recommended

Intersections & Crossings

Barton&Loguidice

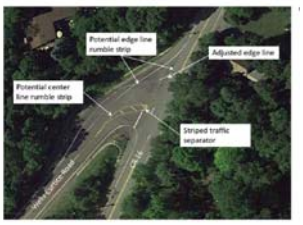
Signing, Pavement Markings, Crosswalk Improvements, ADA Accessibility, Rumble Strips, Directive and Connective Pathways, Road Adjustments at:

Seneca Point Road

Wells Curtice Road

Foster Road

Butler Road



Onanda Park

German Brothers Marina

Canandaigua Yacht Club

Safety + Sustainability

Vertical Alignment Approaches

Barton&Loguidice

Asymmetrical Shoulders

Narrowing on the uphill side of a roadway and using the gained space to widen the shoulders on the downhill side. Minimum of 4' wide even on narrower shoulder.

Hillcrest Warning System and Signing

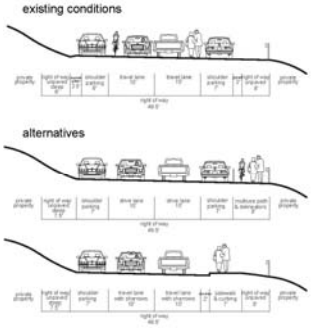
Innovative technology that can detect bicycles or pedestrians to warn motorists with a signal in areas of limited visibility due to topography changes.

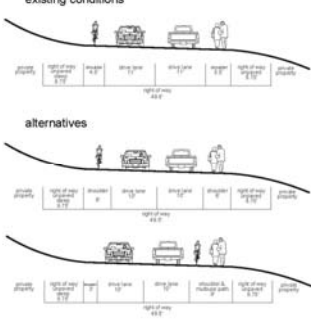
Addressing Needs

Barton&Loguidice

Linear Improvements

Identification of facilities in this plan increases the likelihood of implementation as opportunities arise. The established prioritization serves as a guide to implementation, tied to capital improvement schedules and specific funding opportunities.





Corridor • Site-Specific • General

Case Study Precedent

Barton&Loguidice

Beach Road

Four lane wide, 1 mile long, high-traffic, state-owned road along the southern shore of Lake George in Warren County, New York. New specifications for heavy duty porous asphalt were developed, eliminating stormwater discharge into the lake for storm events 5" or less in a 24 hour time period. Beach Road is the first roadway in New York State and the largest in the northeastern United States, to use a HD porous system. The project has been described as a model for innovation and environmental awareness.

Education and Outreach

Barton&Loguidice

Building a Successful Active Transportation Network

Goal:

A successful bicycle and pedestrian network depends on users being able to safely, appropriately, and frequently utilize the network.

Action Items:

Inform and address each group with local campaigns.
Connect with partner organizations.
Engage the public.
Coordinate an enforcement campaign.
Measure effectiveness of programs to determine if any areas need change.
Update zoning code accordingly.

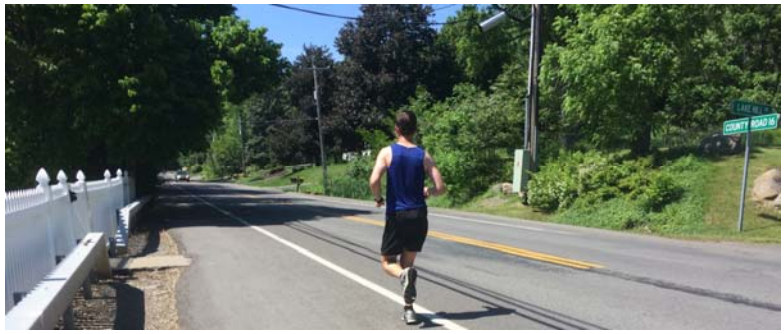
Education ● Outreach ● Enforcement ● Zoning

Next Steps…

Barton&Loguidice

- Open House & Discussion:

- Public Comments until 8/17/18
- Online Survey until 8/17/18
- Submit Final Study 9/14/2018



PUBLIC MEETING SIGN IN

Saturday January 13, 2018 from 10:00am-12:00 pm

West Lake School House - 3660 West Lake Road, Canandaigua, NY 14424

NAME	ORGANIZATION	EMAIL
Thom RaSSenty	Ont. Co. DPW, Engineering	thomas.rassenty@co.ontario.ny.us
Scott Hill	N/A	——— GEOHILL@GMAIL.COM
Tom Robinson	B&L	
Hayden King	B&L	
Bill Wright	Ontario City	
Nancy.Gastel@att.net		
Marilyn DeRuyter	3619 Co Rd 16 Cdga	MDERUYTE@Rochester.RR.com
Keith + Sue Turner	5985 County Rd 16	seturner@frontiernet.net Keithhil@ ↑
Charlie Brown	3670 County Rd 16	
Sandra Hoke	3414 W. Lake Blvd.	

Barton & Loguidice

Julie
Stan

Scott Hall:
* Drainage Bad
3-4 times / year
No storm in Rd.
= 1 cuz.
upstream development?
extreme storm events
(south of German Bros)
most often =
Drainage Quality

@ Wyffels Rd:
more Flooding

Dr. Chip Saylor:
Resident, Town Zoning Board

* Heavy seasonal use
* Bike & Running events

Barton & Loguidice

* Dog walkers
* German Bros (problem)
sight-line issue,
going North
Pete & Rick German

alternate: Bike Peds
on middle closing Rd
- Publicize, Post, etc.
* Signage for Bikes

* meeting notification:
websites. 11x17 Flyer
on corridor
Direct mailing of Flyer
to residents (Home owners)

Barton & Loguidice

(J'T) ? Nancy

Drainage problem:
culvert @ Hause
Bill ____: RD does
not meet County drain
standards: ____

* Carey : "dangerous @
night"

Marylin : Drainage problem
(next to park)
Concerned about Driving
35 mph, people speeding,
Summer weekend nights
are worst.
Owing "no parking" area
30 minute response time
from County Sheriff

www.bartonandloguidice.com

Barton & Loguidice

? 15 years
on W.L. Rd
3614 W-Lake Rd.
Marylin: entrance
scary to walk Doey.
Problem with County
snow plower: Too fast
Duck Hunting on
Boat launch.
Canada Geese:
Kill the grass, water
Quality
#1 problem: traffic
construction vehicle

? MUO Version: speed Data?
OC County Hwy Flyer:
stoner any Data?

? Citizen speed drive?

Need public/private
signage

www.bartonandloguidice.com

Barton & Loguidice

3' rule ; For Biker:
Park : no ADA access
Not "Kid Friendly"

Keith & Sue :
Need to reduce speed
limit @ Summer use -
Stroller - South end -
treating @ Wegmans
Should we RB 2!
information / education
is important.

5

Ontario County Road 16 - West Lake Road

Pedestrian & Bicycle Accommodations Feasibility Study

Department of Public Works - Ontario County, NY

PUBLIC MEETING :: WEDNESDAY, AUGUST 8TH FROM 7PM-9PM

Onanda Park - Crouch Hall, 4965 West Lake Road, Canandaigua, NY 14424

Ontario County Road 16 winds along the shore of Canandaigua Lake, providing unparalleded lake views and attracting a large number of pedestrians and cyclists.

Providing opportunities for walking and cycling can have positive community wide impacts including health benefits, environmental benefits and economic benefits.

The purpose of this study is to make Ontario County Road 16 safer and more attractive for pedestrians and cyclists, while improving the safety for all users.

Please join us in reviewing a draft of the feasibility study, which will support the continued development of safe, functional, and attractive facilities for biking and walking in Ontario County.

Pedestrian jogging in shoulder along Ontario County Road 16.

Bicyclist riding in shoulder along Ontario County Road 16.

WE NEED YOUR INPUT!

For more information, please contact:

Thomas A Rafferty, P.E.
Ontario County DPW
thomas.rafferty@co.ontario.ny.us

PLEASE TAKE OUR ONLINE SURVEY

https://www.surveymonkey.com/r/M8D3FWR

Thank you for helping to shape Ontario County's efforts to increase active transportation.

Funding provided by Genesee Transportation Council

Prepared by Barton & Loguidice, DPC

Ontario County Road 16 West Lake Road Pedestrian & Bicyclist Study

Public Meeting Agenda

August 8th, 2018 at Onanda Park from 7:00 PM – 9:00 PM

Agenda

7:00-7:30 **Meet & Greet**

7:30-8:00 **Presentation of Draft Study**

- Inventory & Analysis
- Public Input
- Draft Recommendations

8:00-9:00 **Open House**

- Discussion
- Project Poster Boards

For more information, please contact:

Thomas A. Rafferty, P.E.

Ontario County Department of Public Works

Thomas.rafferty@co.ontario.ny.us

Thank you for helping to shape active transportation in Ontario County. If you have not already, **PLEASE TAKE OUR ONLINE SURVEY** at http://www.surveymonkey.com/r/M8D3FWR

Funding provided by the Genesee Transportation Council

Prepared by Barton & Loguidice, DPC

Welcome

Barton & Loguidice

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

Barton & Loguidice, DPC

THOMAS ROBINSON, ASLA, LEED®AP
Project Manager, Landscape Architect

HANNA QUIGLEY
Project Designer

Landis Evans + Partners

PEYTON MCLEOD
Project Planner

THEO PETRITSCH, PE, PTOE
Project Engineer

Funding provided by Genesee Transportation Council, Unified Planning Work Program

Project Team

Barton & Loguidice

Barton & Loguidice, D.P.C.

Active transportation planning
Complete Streets
Community master plans and land use
Green infrastructure
Low Impact Development
Site/civil, and environmental engineering
Environmental regulatory permitting
GIS mapping and analysis
Visual communication and graphic design
NYSDOT Region IV LDSA Firm

Landis Evans + Partners

Nationwide Studies
AASHTO Bicycle Facilities Design Guidelines
AASHTO Pedestrian Design Guidelines
NHI Bicycle / Pedestrian Design Guidelines
DOT Green Book
Operation of Shared Use Pathways
Pedestrian Level of Service
Bicycle Level of Service
Roundabout Design Guide
Evaluation of Pedestrian Safety Campaigns
Pedestrian ITS Evaluations

Overview

Barton&Loguidice

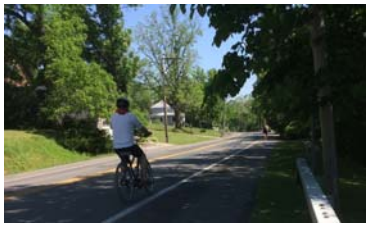
Study Purpose: *Analyze existing conditions along Ontario County Road 16, investigate the feasibility of various potential pedestrian and bicycle accommodations, and provide a plan for enhanced active transportation.*

Existing Conditions Inventory ● Community Input ● Needs Assessment
Draft Recommendations ● Next Steps

Existing Conditions

Barton&Loguidice

- LAND USE
- PROPERTY OWNERSHIP
- SLOPE AND TOPOGRAPHY
- HYDROLOGY AND DRAINAGE
- ROADWAY CHARACTERISTICS
- CORRIDOR DESTINATIONS
- PARKS AND TRAILS
- BICYCLE AND PEDESTRIAN EVENTS
- SAFETY EVALUATION
- EXISTING BICYCLING AND PEDESTRIAN CONDITIONS



Existing Conditions

Barton&Loguidice

Level of Service Models

- Nationally adopted and widely used pedestrian and bicyclist models
- Evaluation of user's perceived safety and comfort with respect to motor vehicle traffic and roadway conditions, A ≤ 0.00 to F >5.5
- Analyzed at Ashton Place, German Brothers Marina, Wells Curtice to north of Foster, Onanda Park, and East of Seneca Point

PEDESTRIAN: 3.32-4.00 (C-D)

BICYCLIST: 0.00-2.18 (A-B)

PEDESTRIAN LEVEL OF SERVICE MAP

BICYCLE LEVEL OF SERVICE MAP

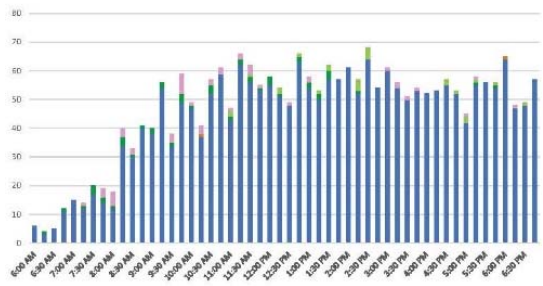
Existing Conditions

Barton&Loguidice

Miovision Data

- Provided by the Genesee Transportation Council for video traffic data collection
- Placed at 4 locations: Canandaigua Yacht Club, Butler Road Schoolhouse, German Brothers Marina, and Onanda Park
- Fall 2017 and Summer 2018 counts over a 13 hour period
- 5 travel modes: Light cars and trucks, heavy vehicles, motorcycles, pedestrians, and bicycles
- Non-motorized users account for just over 3 percent of trips along the corridor, with pedestrians outnumbering bicycles.

Across 69 hours of data, 173 pedestrians and 138 bicyclists were observed.



Existing Conditions

Barton&Loguidice

Speed and Traffic

- Ontario County Road 16 is classified as a rural minor collector with average daily traffic of 3,400 vehicles.
- Posted speeds range from 35-50 mph from north to south. According to the NYSDOT Speed Count Average Weekday Report, the average travel speed is 38 mph.
- The 85th percentile is 44 mph, meaning 85% of motorists are travelling below 44 mph.
- Safety evaluations conducted over 15 years by the GTC indicate that in this period, 11 crashes were reported, none in which pedestrians or cyclists have been involved.

Community Input

Barton&Loguidice

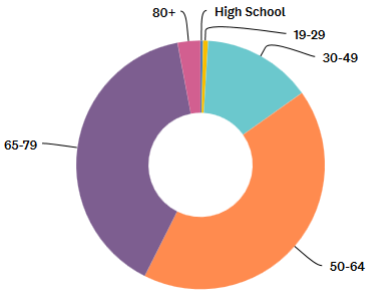
Date	Meeting Type	Purpose
Sept 20, 2017	Kick-Off	Project intentions, goals, and objectives
Oct 12, 2017	Project Advisory Commitee Meeting and Walking Tour	Existing conditions and assessment
Jan 13, 2018	Public Meeting #1	Existing conditions review and input
April 16, 2018	Canandaigua Town Board Meeting	Project Presentation
May 8, 2018	Project Advisory Committee Meeting	Alternatives and Preliminary recommendations
Aug 8, 2018	Public Meeting #2	Draft Recommendations

Community Input

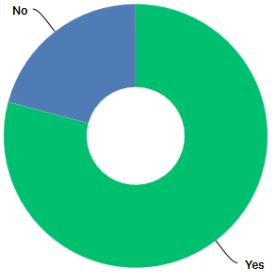
Barton&Loguidice

Online Survey

- January 2018 through August 2018
- 19 questions
- 9 minutes average completion time
- Over 300 surveys completed
- comments/write-in responses



Age Groups



Living on, or within ½ mile of West Lake Road

Online Survey

Barton&Loguidice

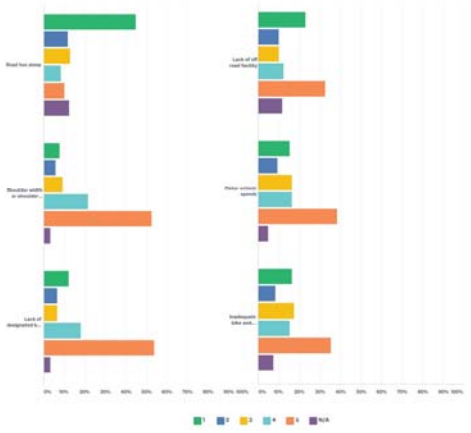
Survey Highlights

12: DO YOU HAVE PARTICULAR LOCATIONS ALONG ONTARIO COUNTY ROAD 16 THAT YOU LIKE TO BICYCLE OR WALK TO?

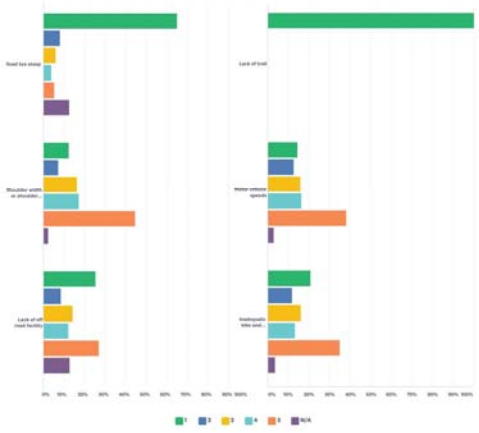
Responses ranged from:
"Entire length of County Road 16" to "no part of the road is safe"

Most frequently mentioned locations:
Butler Road Park (19)
Canandaigua Yacht Club (18)
Onanda Park (10)
Foster Road (8)
Seneca Park (8)

15: WHAT DO YOU CONSIDER TO BE THE PRIMARY BARRIERS TO BICYCLING ON ONTARIO COUNTY ROAD 16?



16: WHAT DO YOU CONSIDER TO BE THE PRIMARY BARRIERS TO WALKING ON ONTARIO COUNTY ROAD 16?



Needs Assessment

Barton&Loguidice

Summary of Main Concerns

- Variation in shoulder width
- Shoulder erosion and fading pavement markings
- Parking in the shoulder, especially at the Marina
- Reduced visibility
- Peak summer usage and enforcement needs
- Stormwater management
- Safety and education
- Crosswalks and signage

Recommendations

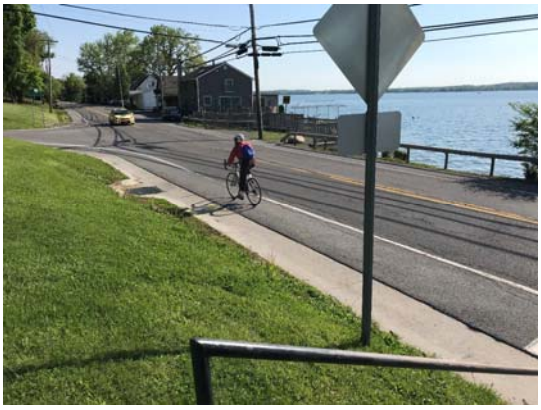
Barton&Loguidice

- On-road improvements
- Off-road improvements
- Programs & Policies

- Engineering

- Education

- Enforcement



National Level of Design Guidance

Barton&Loguidice

Design Guidelines recommended in the study reference existing, recognized design standards and provide clarification or supplemental information as necessary.

American Association of State Highway and Transportation Officials (AASHTO)

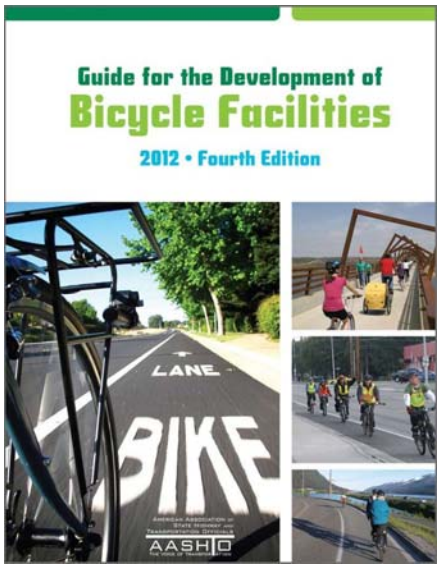
- Guide for Development of Bicycle Facilities
- Guide for Planning, Design, and Operations of Pedestrian Facilities

NY Department of Transportation

- Design Manual Chapter 17 Bicycle Facilities Design
- Design Manual Chapter 18 Pedestrian Facilities Design

Federal Highway Administration

- Manual on Uniform Traffic Control Devices (MUTCD)
- Separated Bike Lane Planning and Design Guidance



Recommendations

Barton&Loguidice

Key Recommendations

- Shoulder improvements
- More frequent maintenance schedule
- Additional signing and stop bars at intersections with steep grade
- Asymmetrical shoulders
- Hillcrest warning systems and signing
- West Lake Schoolhouse Park and Beach – Butler Road intersection improvements
- Onanda Park and Canandaigua Yacht Club road crossing improvements

Priority

Barton&Loguidice

Impact, Feasibility, Construction

Priority – Highly beneficial projects that are immediately feasible, or will have the most impact and should therefore be addressed first

Recommended – Beneficial projects that will have a significant impact and should be addressed next

Possible – Projects that have a less critical time frame, or cannot begin until other projects are completed or issues are addressed

Project Name	Project Description	Priority Level
Increased Maintenance Schedule	Increase maintenance schedule to address issues of pavement shoulder erosion, uneven paving, low visibility, and traffic line fading by routinely sweeping pavement, patching surfaces, and cutting back vegetation.	Priority
Multi-Use Paved Shoulder Improvements	Standardize shoulder width at a minimum of 5' to allow multiple usage. Selective shoulder widening should be implemented where right-of-way allows.	Priority
Implement Traffic Delineators	Increase use of delineators to separate bicycle and pedestrian facilities in key areas, such as the German Brothers Marina.	Recommended
Asymmetrical Shoulders	Widen shoulders on ascents and decrease shoulders on descents to improve cyclist experience, safety, and comfort.	Recommended
Additional Signing	Bicycle/Pedestrian signing along Ontario County Road 16. Additional signing and stop bars at intersections with steep grades.	Priority
Hillcrest Warning System & Signing	Implement bicycle detection technology to inform motorists of bicycles at hillcrests where visibility is limited.	Possible
Improve Pedestrian Crossings	Install high visibility crosswalks with pedestrian signing at key locations, including, but not limited to, Canandaigua Yacht Club and Onanda Park. Consider raised crosswalk installation to improve traffic calming.	Priority
Speed Reduction	Undertake speed study to determine feasibility of speed limit reduction to 30 mph in areas to improve multi-use transportation and transitional speed zones. Increase adherence through traffic calming techniques.	Possible
Trails on Private Property	Trail running parallel to Ontario County Road 16 on private property in key areas with property owner consent.	Possible
Stormwater Management	Green infrastructure practices to treat water from culverts along Ontario County Road 16. Coordinate with upcoming Ontario County DPW culvert improvements.	Recommended
Education & Outreach	Connect with local organizations to increase bicycle and pedestrian safety education in Ontario County.	Recommended
Zoning & Design Standards Recommendations	Adopt language from Genesee Transportation Council Bicycle and Pedestrian Supportive Code. Update standard details relative to bicycle and pedestrian infrastructure.	Possible
Enforcement	Provide traffic law enforcement to ensure safety for all travel modes. Increase enforcement measures during peak use.	Recommended

Intersections & Crossings

Barton&Loguidice

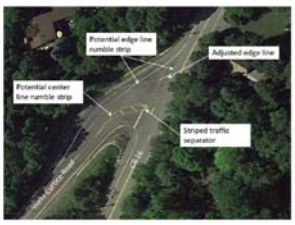
Signing, Pavement Markings, Crosswalk Improvements, ADA Accessibility, Rumble Strips, Directive and Connective Pathways, Road Adjustments at:

Seneca Point Road

Wells Curtice Road

Foster Road

Butler Road



Onanda Park

German Brothers Marina

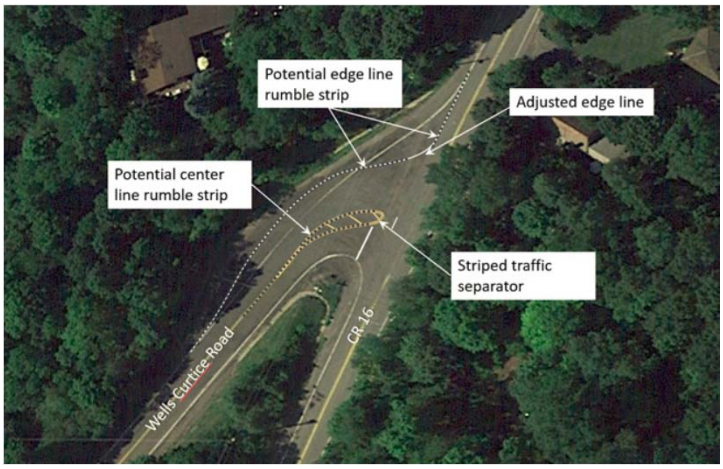
Canandaigua Yacht Club

Safety + Sustainability

Intersections & Crossings

Barton&Loguidice

- The current southbound to westbound radius is quite large. Consider reducing the radius.
- There is no defined path of travel for motorists turning from Wells Curtice Road onto CR 16, or for northbound CR 16 motorists turning onto Wells Curtice Road. Consider striping a traffic separator to provide positive guidance at this intersection.
- To encourage motorists to use their assigned spaces, consider under-stripe rumble strips for the northwest corner and the median.
- Add a STOP line for the eastbound approach.
- If bike lanes can be designated along this corridor, consider dashing the bike lanes across this intersection and enhancing with green paint.



CR 16 AT WELLS CURTICE ROAD

Vertical Alignment Approaches

Barton&Loguidice

Asymmetrical Shoulders

Narrowing on the uphill side of a roadway and using the gained space to widen the shoulders on the downhill side. Minimum of 4' wide even on narrower shoulder.

Hillcrest Warning System and Signing

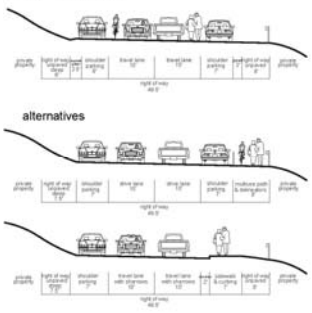
Innovative technology that can detect bicycles or pedestrians to warn motorists with a signal in areas of limited visibility due to topography changes.

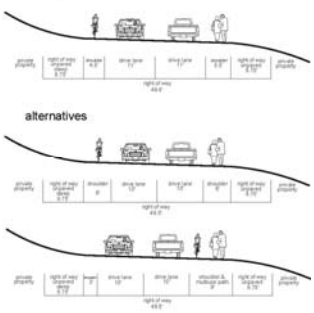
Addressing Needs

Barton&Loguidice

Linear Improvements

Identification of facilities in this plan increases the likelihood of implementation as opportunities arise. The established prioritization serves as a guide to implementation, tied to capital improvement schedules and specific funding opportunities.





Corridor • Site-Specific • General

Case Study Precedent

Barton&Loguidice

Beach Road

Four lane wide, 1 mile long, high-traffic, state-owned road along the southern shore of Lake George in Warren County, New York. New specifications for heavy duty porous asphalt were developed, eliminating stormwater discharge into the lake for storm events 5" or less in a 24 hour time period. Beach Road is the first roadway in New York State and the largest in the northeastern United States, to use a HD porous system. The project has been described as a model for innovation and environmental awareness.

Education and Outreach

Barton&Loguidice

Building a Successful Active Transportation Network

Goal:

A successful bicycle and pedestrian network depends on users being able to safely, appropriately, and frequently utilize the network.

Action Items:

Inform and address each group with local campaigns.
Connect with partner organizations.
Engage the public.
Coordinate an enforcement campaign.
Measure effectiveness of programs to determine if any areas need change.
Update zoning code accordingly.

Education ● Outreach ● Enforcement ● Zoning

Next Steps…

Barton&Loguidice

- **Open House & Discussion:**

- **Public Comments until 8/17/18**
- **Online Survey until 8/17/18**
- **Submit Final Study 9/14/2018**

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

ONTARIO COUNTY ROAD 16 Pedestrian and Bicycle Study

PUBLIC MEETING :: WEDNESDAY AUGUST 8TH FROM 7:00PM-9:00PM

ONANDA PARK - Crouch Hall, 4965 West Lake Road, Canandaigua, NY 14424

NAME	ORGANIZATION	EMAIL
Thom Rafferty	Ontario County D.P.W.	thomas.rafferty@co.ontario.ny.us
MARION CASSIE	Resident Co Rd 16	4MARION.CASSIE@Gmail.com
T3, 11 FOOSE	3420 CTY RD 16	S.B FOOSE@ROCHESTER RR.com
JOSEPH TORRES	3344 W. Lake Rd cty 16	
Beth Torres	3344 W. Lake cty 16	
TOM LUNN	3609 W Lake Road	
Joyce Marthaler	5990 CR 32	
Kathy Connor	Resident	irnartistic@gmail
Arlene + Sherwood Quick	Resident	Arlenequick3@gmail.com
Carole Francis	Resident	cturtle5@hotmail.com

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

ONTARIO COUNTY ROAD 16 Pedestrian and Bicycle Study

PUBLIC MEETING :: WEDNESDAY AUGUST 8TH FROM 7:00PM-9:00PM

ONANDA PARK - Crouch Hall, 4965 West Lake Road, Canandaigua, NY 14424

NAME	ORGANIZATION	EMAIL
Jim & Christine Spengler	Home Owners	jspengler3209@gmail.com
Tom + Kristine Sullivan	Home Owners	KSULL26@gmail.com
Brendan Brady		brady.bc@gmail.
Tina Bloom	Town of Canandaigua	TBloom@TownofCanandaigua.org
Dawn & Steve Stanziano	Home Owners	dstanziano3@gmail.com
DONNA TORRENS	Home	Mamabutton3@gmail.com
Ted Brewer	self	—
Mark MacNeil	Town of Canandaigua Parks + Rec.	macneilm@frontiernet.net.
Ansley Sikora	Resident	Ansley.m.sikora@gmail.com
Phillip Brown	Resident	pbrown26b@g.cwu.edu

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

ONTARIO COUNTY ROAD 16 Pedestrian and Bicycle Study

PUBLIC MEETING :: WEDNESDAY AUGUST 8TH FROM 7:00PM-9:00PM

ONANDA PARK - Crouch Hall, 4965 West Lake Road, Canandaigua, NY 14424

SIGN-IN ~~COMMENTS~~

NAME	ORGANIZATION	EMAIL
[illegible]	33977 CTY RT 16	02188 A Rochester RR Co
Suzanne Russell	homeowners	skrussell13a@gmail.com
Linda Bell	" "	Kona4835@gmail.com

Additional comments may be sent to:
Thomas A. Rafferty, P.E.
Ontario County Department of Public Works
Thomas.rafferty@co.ontario.ny.us

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

ONTARIO COUNTY ROAD 16 Pedestrian and Bicycle Study

PUBLIC MEETING :: WEDNESDAY AUGUST 8TH FROM 7:00PM-9:00PM

ONANDA PARK - Crouch Hall, 4965 West Lake Road, Canandaigua, NY 14424

NAME	ORGANIZATION	EMAIL
Tom + Carol Ledgerwood	Home owner	Tledgerwood2@gmail.com
Kevin + Judy Simpson	Home Owner	ksimpson@twc.com
SCOTT KREHEL	HOME OWNER	SCOTT@KREHELEGGS.NET
John + Christina Casey	" "	johntcaseyjr@gmail.com
Roy + Nancy Beecher	Home owner	rnbeecher@gmail.com
Leslie Chambers + Todd Fichtenbaum	homeowners	leslicc4446@gmail.com
Dan + Laurie Hoffend	home owner	lhoffend@sbcglobal.net
Robert V. T	home owner	RRV4303@Yahoo.com
MIKE MOOR	RESIDENT	M MOOR 48@YAHOO.COM
KATHY MOOR	RESIDENT	ABIEQUITE2004@

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

ONTARIO COUNTY ROAD 16 Pedestrian and Bicycle Study

PUBLIC MEETING :: WEDNESDAY AUGUST 8TH FROM 7:00PM-9:00PM

ONANDA PARK - Crouch Hall, 4965 West Lake Road, Canandaigua, NY 14424

NAME	ORGANIZATION	EMAIL
MARC VAIL	HOMEOWNER	mdvail@gmail.com
KRIS VAIL	HOMEOWNER	
CHRIS HILARSKI	"	cshilarsk@gmail.com
CAROL HILARSKI	"	
Betty Stahlbrodt	"	bettystahlbrodt@hotmail.com
Jeff Twombly	"	jtwombly@rochester.rr.com
Mary Sayre	"	sfsayre@aol.com.
Steve Sayre	"	
Diana SHERRY	Resident/home owner	dianaw9999@aol.com
Ed Jeffries	homeowner	eJeffrJr@gmail.com
KEN BELL	HOMEOWNER	TROUT5040@aol.com 5040

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

ONTARIO COUNTY ROAD 16 Pedestrian and Bicycle Study

PUBLIC MEETING :: WEDNESDAY AUGUST 8TH FROM 7:00PM-9:00PM

ONANDA PARK - Crouch Hall, 4965 West Lake Road, Canandaigua, NY 14424

NAME	ORGANIZATION	EMAIL
Gary Francis	Resident	garyafrancis@gmail.com
Richard McClurg	Resident	richard71@rochester.rr.com
Dave Hudson	"	dhudson2@Rochester.rr.com
April Dawson	"	dddawson0404@Gmail.com
Mary Lou Havens	"	mlhavens101@msn.com
Betsy Carew	"	
Ray Hasenauer	"	rayjayh3@gmail.com
Rebecca Von Rhedey		rebecca@cesdtraining.com
Szczepkowski	"	eric@leonards express.com
Michael Wilson	"	mjawilson394@gmail.com

ONTARIO COUNTY ROAD 16 Pedestrian and Bicycle Study

PUBLIC MEETING :: WEDNESDAY AUGUST 8TH FROM 7:00PM-9:00PM

ONANDA PARK - Crouch Hall, 4965 West Lake Road, Canandaigua, NY 14424

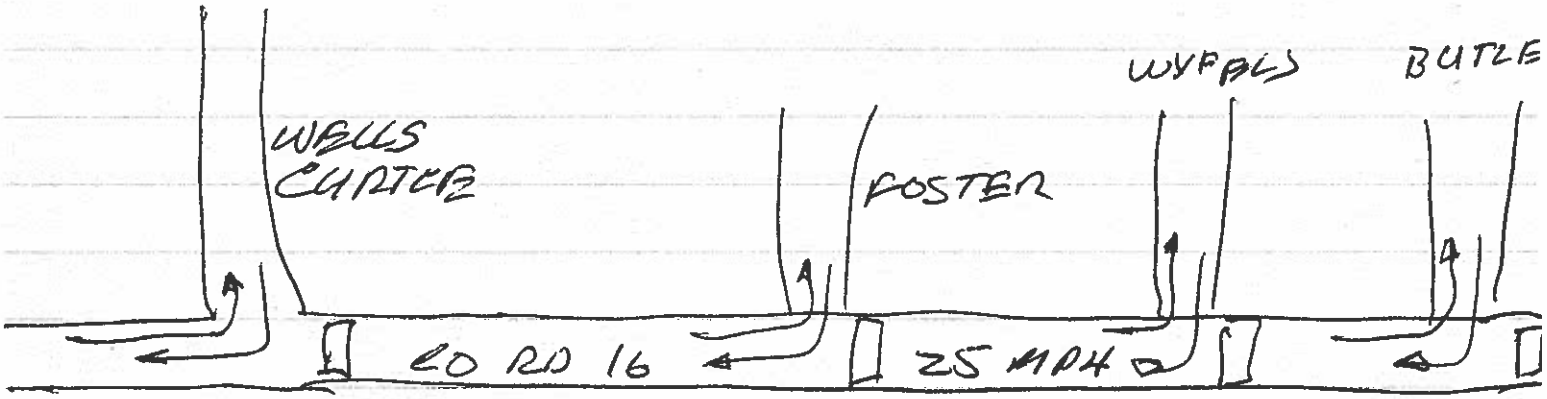
NAME	ORGANIZATION	EMAIL
CARL REED	SELF	CAR394@AOL.COM
GEORGE T BRADDON		georgebradda.11@gmail.com
PAUL MESSINA	SELF	plmssn8@gmail.com

SAFETY PLAN Co Rd 16

1. BLOCK NORTH SIDE OF INTERSECTION
   WELLS CURTICE
   FOSTER
   WYFELS
   BUTLER

   ALL TRAFFIC WILL BE DIVERTED TO MIDDLE CHESHIRE RD OR RT 21

   ONLY LOCAL TRAFFIC WILL BE ON Co Rd 16 BETWEEN BLOCKED INTERSECTIONS



   BLOCK

2. SET 25 MPH LIMIT ON ALL 3 SECTIONS OF Co Rd 16

3. Co 16 CAN BE LOCAL TRAFFIC AND BIKE RIDING, JOGGING AND WALKING

Ontario County Road 16

West Lake Road Pedestrian & Bicycle Study

ONTARIO COUNTY ROAD 16 Pedestrian and Bicycle Study

PUBLIC MEETING :: WEDNESDAY AUGUST 8TH FROM 7:00PM-9:00PM

ONANDA PARK - Crouch Hall, 4965 West Lake Road, Canandaigua, NY 14424

COMMENTS

(1) I noticed pavement painted green for some of the bike/ped lanes in some of the pictures. Is that being considered?

(2) Trucks of landscaping companies are a problem because they don't pull all onto shoulder. Nor do they park in their clients' driveways.

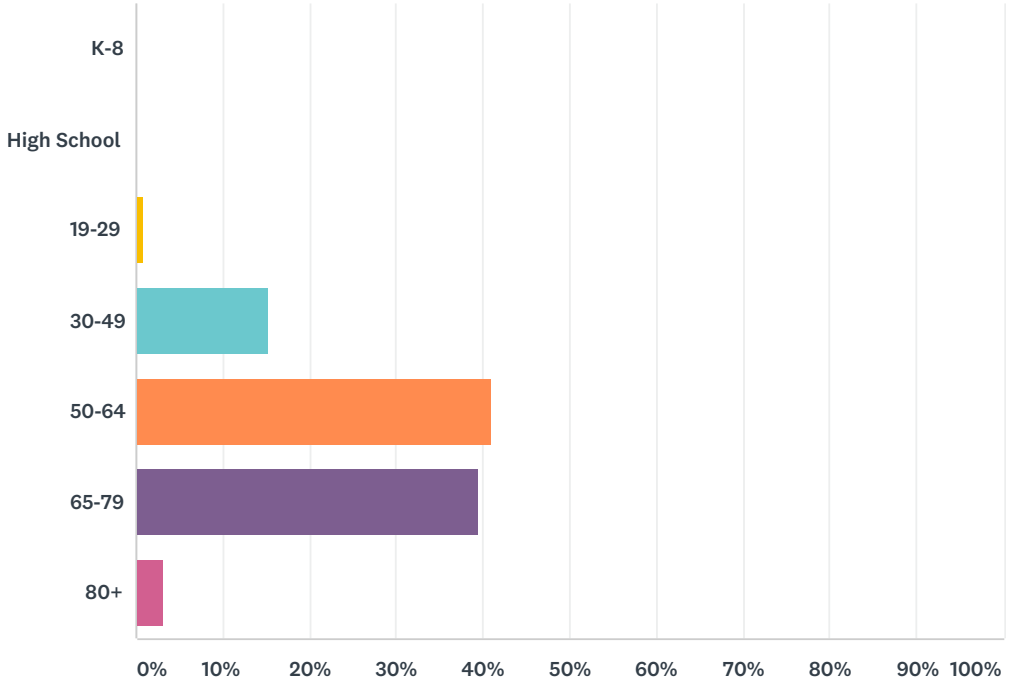
(3) Potential extention of sewers should be considered at same time so as not to rip up the road twice. Include this in study!

Additional comments may be sent to:

Thomas A. Rafferty, P.E.
Ontario County Department of Public Works
Thomas.rafferty@co.ontario.ny.us

Q1 Age Group (select one)

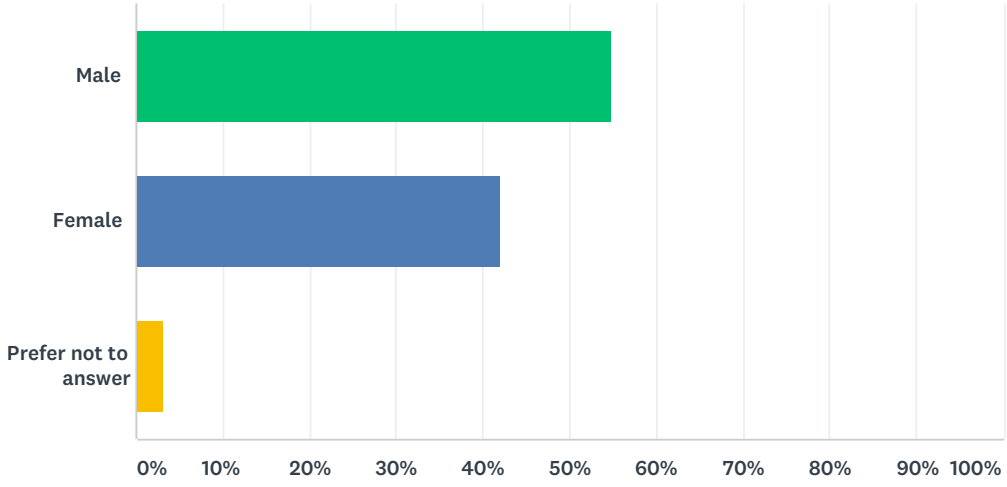
Answered: 329 Skipped: 3



ANSWER CHOICES	RESPONSES	
K-8	0%	0
High School	0%	1
19-29	1%	3
30-49	15%	50
50-64	41%	135
65-79	40%	130
80+	3%	10
TOTAL		329

Q2 Gender

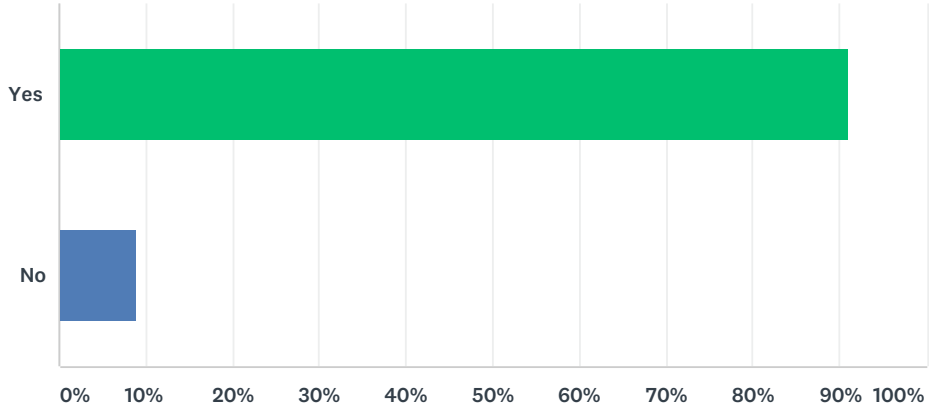
Answered: 328 Skipped: 4



ANSWER CHOICES	RESPONSES	
Male	55%	180
Female	42%	138
Prefer not to answer	3%	10
TOTAL		328

Q3 Are you an Ontario County resident?

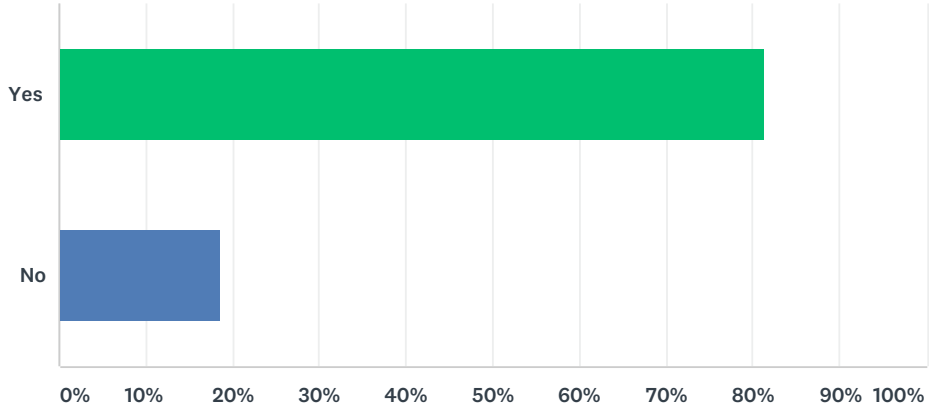
Answered: 330 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	91%	300
No	9%	30
TOTAL		330

Q4 Are you a Town of Canandaigua resident?

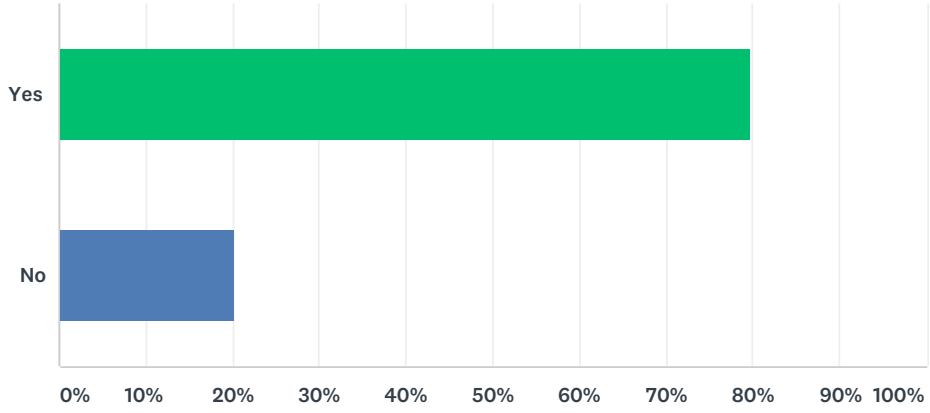
Answered: 327 Skipped: 5



ANSWER CHOICES	RESPONSES	
Yes	81%	266
No	19%	61
TOTAL		327

Q5 Do you live on or within 1/2 mile of West Lake Road?

Answered: 329 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	80%	262
No	20%	67
TOTAL		329

Q6 Email address (if you would like to be informed of upcoming plan meetings and other activities):

Answered: 186 Skipped: 146

ANSWER CHOICES	RESPONSES	
Name	0%	0
Company	0%	0
Address	0%	0
Address 2	0%	0
City/Town	0%	0
State/Province	0%	0
ZIP/Postal Code	0%	0
Country	0%	0
Email Address	100%	186
Phone Number	0%	0

#	NAME	DATE
	There are no responses.	

#	COMPANY	DATE
	There are no responses.	

#	ADDRESS	DATE
	There are no responses.	

#	ADDRESS 2	DATE
	There are no responses.	

#	CITY/TOWN	DATE
	There are no responses.	

#	STATE/PROVINCE	DATE
	There are no responses.	

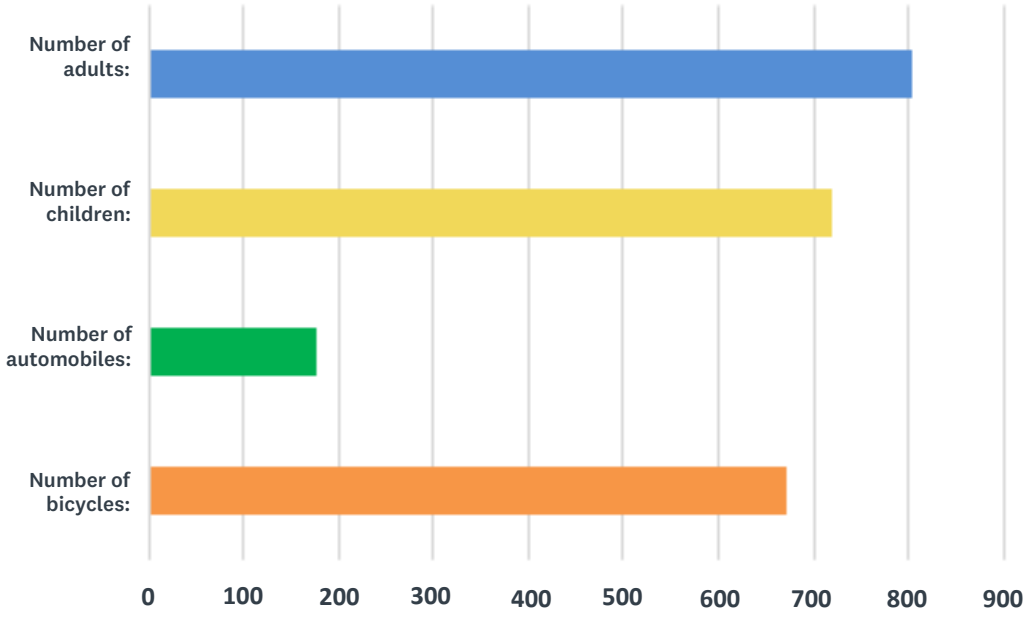
#	ZIP/POSTAL CODE	DATE
	There are no responses.	

#	COUNTRY	DATE
	There are no responses.	

#	EMAIL ADDRESS	DATE

Q7 Please tell us about your household:

Answered: 321 Skipped: 11



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Number of adults:	2	673	320
Number of children:	1	176	253
Number of automobiles:	2	719	302
Number of bicycles:	3	803	303
Total Respondents: 321			

#	NUMBER OF ADULTS:	DATE
1	2	8/16/2018 3:32 PM
2	2	8/15/2018 4:26 PM
3	2	8/13/2018 3:21 PM
4	2	8/13/2018 1:35 PM
5	2	8/13/2018 11:37 AM
6	4	8/13/2018 11:14 AM
7	2	8/13/2018 9:47 AM
8	4	8/13/2018 7:24 AM
9	2	8/12/2018 7:51 PM
10	2	8/11/2018 3:32 PM
11	2	8/10/2018 9:40 AM
12	2	8/10/2018 8:15 AM
13	1	8/9/2018 9:55 PM

14	2	8/9/2018 4:25 PM
15	2	8/9/2018 10:08 AM
16	2	8/9/2018 8:04 AM
17	2	8/9/2018 7:00 AM
18	1	8/8/2018 10:12 PM
19	2	8/8/2018 8:50 PM
20	2	8/8/2018 8:40 PM
21	2	8/8/2018 3:47 PM
22	2	8/8/2018 11:28 AM
23	2	8/8/2018 11:07 AM
24	2	8/8/2018 10:36 AM
25	2	8/8/2018 9:54 AM
26	1	8/7/2018 9:18 PM
27	2	8/7/2018 9:09 PM
28	3	8/7/2018 6:01 PM
29	2	8/7/2018 4:43 PM
30	2	8/7/2018 12:34 PM
31	2	8/7/2018 11:49 AM
32	2	8/7/2018 11:27 AM
33	3	8/7/2018 11:18 AM
34	2	8/7/2018 5:52 AM
35	2	8/6/2018 8:52 PM
36	1	8/6/2018 8:34 PM
37	2	8/6/2018 7:21 PM
38	2	8/6/2018 6:11 PM
39	2	8/6/2018 4:33 PM
40	2	8/6/2018 3:21 PM
41	2	8/6/2018 1:17 PM
42	1	8/6/2018 12:15 PM
43	2	8/6/2018 10:14 AM
44	2	8/6/2018 9:27 AM
45	2	8/6/2018 9:08 AM
46	2	8/5/2018 8:07 PM
47	2	8/5/2018 3:47 PM
48	2	8/5/2018 2:08 PM
49	3	8/5/2018 12:19 PM
50	1	8/5/2018 8:15 AM
51	2	8/5/2018 7:59 AM
52	2	8/5/2018 7:48 AM
53	2	8/5/2018 7:38 AM
54	2	8/5/2018 5:39 AM

55	3	8/4/2018 7:59 PM
56	2	8/4/2018 7:04 PM
57	2	8/4/2018 6:36 PM
58	2	8/4/2018 6:03 PM
59	2	8/4/2018 5:56 PM
60	2	8/4/2018 2:32 PM
61	1	8/3/2018 7:24 PM
62	2	8/3/2018 4:38 PM
63	2	8/3/2018 1:16 PM
64	2	8/3/2018 10:15 AM
65	2	8/3/2018 9:46 AM
66	2	8/3/2018 5:47 AM
67	2	8/2/2018 5:32 PM
68	3	8/2/2018 5:25 PM
69	2	8/2/2018 4:06 PM
70	2	8/2/2018 3:46 PM
71	2	8/2/2018 3:05 PM
72	2	8/2/2018 2:56 PM
73	3	8/2/2018 2:33 PM
74	2	8/2/2018 2:26 PM
75	2	8/2/2018 2:20 PM
76	2	8/2/2018 2:09 PM
77	2	8/2/2018 1:26 PM
78	2	8/2/2018 12:26 PM
79	2	8/2/2018 12:19 PM
80	4	8/2/2018 11:59 AM
81	3	8/2/2018 11:57 AM
82	1	8/2/2018 11:36 AM
83	3	8/2/2018 10:59 AM
84	2	8/1/2018 2:25 PM
85	3	7/31/2018 10:17 PM
86	2	7/31/2018 9:10 AM
87	2	7/30/2018 7:47 PM
88	2	7/30/2018 6:18 PM
89	2	7/30/2018 2:55 PM
90	6	7/30/2018 9:31 AM
91	2	7/30/2018 8:09 AM
92	3	7/29/2018 7:36 PM
93	2	7/29/2018 7:12 PM
94	2	7/29/2018 5:53 PM
95	2	7/29/2018 9:18 AM

96	2	7/28/2018 5:08 PM
97	2	7/28/2018 1:51 PM
98	2	7/28/2018 1:47 PM
99	2	7/27/2018 6:27 PM
100	2	7/27/2018 6:25 PM
101	2	7/27/2018 6:20 PM
102	1	7/27/2018 5:04 PM
103	2	7/27/2018 3:55 PM
104	2	7/27/2018 1:16 PM
105	2	7/27/2018 1:02 PM
106	2	7/27/2018 8:16 AM
107	2	7/26/2018 3:53 PM
108	3	7/25/2018 7:20 PM
109	1	7/24/2018 8:16 AM
110	2	7/23/2018 6:26 PM
111	4	7/23/2018 2:33 PM
112	2	7/23/2018 12:21 PM
113	2	7/22/2018 1:52 PM
114	2	7/22/2018 10:35 AM
115	4	7/22/2018 9:33 AM
116	1	7/21/2018 12:24 PM
117	2	7/21/2018 9:13 AM
118	2	7/21/2018 7:30 AM
119	2	7/21/2018 6:28 AM
120	2	7/20/2018 10:38 PM
121	2	7/20/2018 10:35 PM
122	2	7/20/2018 8:28 PM
123	2	7/20/2018 6:09 PM
124	2	7/20/2018 4:26 PM
125	2	7/20/2018 4:02 PM
126	2	7/20/2018 3:18 PM
127	1	7/20/2018 2:34 PM
128	2	7/20/2018 1:49 PM
129	2	7/20/2018 12:48 PM
130	1	7/20/2018 12:41 PM
131	2	7/20/2018 11:54 AM
132	2	7/20/2018 11:38 AM
133	2	7/20/2018 11:34 AM
134	2	7/20/2018 10:50 AM
135	2	7/20/2018 10:35 AM
136	2	7/20/2018 10:30 AM

137	2	7/19/2018 10:28 AM
138	2	7/15/2018 6:20 PM
139	4	7/15/2018 4:37 PM
140	1	6/1/2018 10:57 AM
141	2	5/30/2018 4:07 PM
142	3	5/20/2018 6:03 PM
143	1	5/16/2018 9:13 PM
144	2	5/16/2018 2:41 PM
145	2	5/13/2018 9:19 PM
146	1	5/13/2018 4:42 PM
147	2	5/13/2018 12:02 AM
148	3	5/12/2018 11:22 PM
149	2	5/12/2018 11:18 AM
150	2	5/12/2018 10:41 AM
151	2	5/12/2018 7:28 AM
152	2	5/12/2018 7:15 AM
153	2	5/11/2018 12:21 PM
154	2	5/11/2018 11:46 AM
155	2	5/11/2018 10:54 AM
156	2	5/11/2018 6:42 AM
157	2	5/10/2018 6:47 PM
158	2	5/10/2018 2:30 PM
159	2	5/10/2018 2:17 PM
160	2	5/10/2018 1:48 PM
161	2	5/10/2018 12:21 PM
162	2	5/10/2018 12:16 PM
163	2	5/10/2018 11:10 AM
164	2	5/10/2018 10:18 AM
165	2	5/10/2018 10:09 AM
166	3	5/10/2018 9:49 AM
167	2	5/10/2018 9:45 AM
168	2	5/10/2018 9:38 AM
169	2	5/10/2018 9:27 AM
170	3	4/17/2018 11:09 AM
171	2	4/16/2018 10:31 AM
172	2	4/12/2018 4:37 PM
173	2	4/10/2018 1:13 PM
174	5	4/8/2018 9:18 AM
175	1	3/3/2018 3:18 PM
176	2	2/22/2018 4:50 PM
177	2	2/14/2018 5:04 PM

178	1	2/10/2018 5:27 PM
179	2	2/9/2018 6:11 PM
180	2	1/29/2018 1:12 PM
181	2	1/29/2018 11:12 AM
182	2	1/26/2018 11:50 AM
183	2	1/25/2018 5:32 PM
184	3	1/25/2018 12:35 PM
185	2	1/22/2018 12:10 PM
186	2	1/22/2018 7:42 AM
187	2	1/18/2018 3:21 PM
188	2	1/16/2018 10:39 AM
189	2	1/15/2018 3:56 PM
190	2	1/15/2018 3:28 PM
191	2	1/15/2018 11:47 AM
192	1	1/15/2018 11:43 AM
193	2	1/14/2018 4:36 PM
194	2	1/14/2018 3:45 PM
195	2	1/14/2018 12:12 PM
196	2	1/14/2018 10:04 AM
197	2	1/13/2018 7:14 PM
198	2	1/13/2018 5:11 PM
199	1	1/13/2018 10:19 AM
200	1	1/12/2018 5:37 PM
201	2	1/12/2018 5:26 PM
202	2	1/12/2018 4:58 PM
203	2	1/12/2018 4:19 PM
204	2	1/12/2018 11:18 AM
205	5	1/11/2018 9:09 PM
206	2	1/11/2018 5:34 PM
207	1	1/11/2018 3:36 PM
208	2	1/11/2018 3:14 PM
209	3	1/11/2018 1:18 PM
210	2	1/11/2018 11:02 AM
211	3	1/11/2018 8:56 AM
212	2	1/10/2018 10:48 PM
213	2	1/10/2018 8:17 PM
214	2	1/10/2018 6:57 PM
215	2	1/10/2018 5:43 PM
216	2	1/10/2018 4:49 PM
217	2	1/10/2018 4:27 PM
218	2	1/10/2018 11:09 AM

219	2	1/10/2018 10:10 AM
220	2	1/10/2018 9:56 AM
221	2	1/10/2018 9:35 AM
222	1	1/10/2018 8:12 AM
223	2	1/9/2018 9:51 PM
224	1	1/9/2018 5:52 PM
225	2	1/9/2018 5:07 PM
226	1	1/9/2018 4:48 PM
227	2	1/9/2018 4:37 PM
228	2	1/9/2018 3:35 PM
229	1	1/9/2018 3:29 PM
230	2	1/9/2018 3:28 PM
231	2	1/9/2018 3:04 PM
232	2	1/9/2018 12:53 PM
233	2	1/9/2018 12:52 PM
234	2	1/9/2018 12:48 PM
235	1	1/9/2018 12:47 PM
236	2	1/9/2018 12:24 PM
237	1	1/9/2018 11:58 AM
238	2	1/9/2018 11:44 AM
239	2	1/9/2018 11:21 AM
240	2	1/9/2018 11:18 AM
241	2	1/9/2018 11:11 AM
242	2	1/9/2018 11:07 AM
243	1	1/9/2018 11:06 AM
244	2	1/9/2018 11:05 AM
245	10	1/9/2018 11:04 AM
246	2	1/9/2018 10:51 AM
247	2	1/9/2018 10:38 AM
248	2	1/8/2018 8:30 PM
249	2	1/8/2018 7:28 PM
250	2	1/8/2018 7:02 PM
251	2	1/8/2018 5:39 PM
252	2	1/8/2018 5:03 PM
253	2	1/8/2018 4:28 PM
254	2	1/8/2018 4:06 PM
255	3	1/8/2018 3:13 PM
256	2	1/8/2018 1:08 PM
257	2	1/8/2018 12:38 PM
258	1	1/8/2018 10:43 AM
259	2	1/8/2018 7:44 AM

260	2	1/8/2018 7:35 AM
261	2	1/7/2018 10:12 PM
262	2	1/7/2018 9:10 PM
263	2	1/7/2018 8:12 PM
264	4	1/7/2018 8:01 PM
265	2	1/7/2018 8:00 PM
266	3	1/7/2018 6:49 PM
267	2	1/7/2018 4:53 PM
268	2	1/7/2018 4:19 PM
269	2	1/7/2018 3:58 PM
270	1	1/7/2018 3:10 PM
271	2	1/7/2018 3:02 PM
272	2	1/7/2018 2:54 PM
273	1	1/7/2018 2:24 PM
274	3	1/7/2018 2:20 PM
275	2	1/7/2018 1:33 PM
276	2	1/7/2018 12:27 PM
277	2	1/7/2018 12:18 PM
278	2	1/7/2018 11:07 AM
279	2	1/7/2018 10:24 AM
280	4	1/7/2018 8:47 AM
281	2	1/6/2018 8:23 PM
282	2	1/6/2018 7:52 PM
283	2	1/6/2018 5:34 PM
284	3	1/6/2018 4:10 PM
285	2	1/6/2018 4:03 PM
286	2	1/6/2018 3:22 PM
287	2	1/6/2018 3:11 PM
288	2	1/6/2018 2:14 PM
289	2	1/6/2018 1:45 PM
290	3	1/6/2018 12:46 PM
291	2	1/6/2018 11:59 AM
292	2	1/6/2018 11:12 AM
293	2	1/6/2018 10:28 AM
294	2	1/6/2018 9:35 AM
295	3	1/6/2018 8:52 AM
296	2	1/6/2018 8:23 AM
297	2	1/5/2018 7:40 PM
298	6	1/5/2018 6:13 PM
299	2	1/5/2018 5:49 PM
300	2	1/5/2018 5:44 PM

301	2	1/5/2018 4:39 PM
302	2	1/5/2018 4:17 PM
303	2	1/5/2018 3:46 PM
304	2	1/5/2018 2:54 PM
305	3	1/5/2018 12:03 PM
306	2	1/4/2018 3:34 PM
307	2	1/3/2018 10:35 PM
308	2	1/3/2018 2:46 PM
309	2	1/2/2018 4:49 PM
310	2	1/1/2018 5:51 PM
311	2	12/31/2017 10:22 AM
312	3	12/27/2017 1:56 PM
313	3	12/27/2017 1:35 PM
314	2	12/27/2017 12:06 PM
315	2	12/27/2017 10:23 AM
316	2	12/27/2017 9:53 AM
317	2	12/22/2017 11:50 AM
318	2	12/21/2017 6:10 PM
319	2	12/19/2017 12:57 PM
320	2	12/14/2017 6:00 PM

#	NUMBER OF CHILDREN:	DATE
1	0	8/16/2018 3:32 PM
2	0	8/15/2018 4:26 PM
3	0	8/13/2018 3:21 PM
4	3	8/13/2018 11:37 AM
5	0	8/13/2018 11:14 AM
6	0	8/13/2018 9:47 AM
7	5	8/13/2018 7:24 AM
8	2	8/12/2018 7:51 PM
9	3	8/11/2018 3:32 PM
10	0	8/10/2018 9:40 AM
11	2	8/10/2018 8:15 AM
12	0	8/9/2018 4:25 PM
13	0	8/9/2018 10:08 AM
14	0	8/9/2018 7:00 AM
15	0	8/8/2018 10:12 PM
16	2	8/8/2018 8:40 PM
17	1	8/8/2018 3:47 PM
18	0	8/8/2018 11:28 AM
19	0	8/8/2018 11:07 AM
20	0	8/8/2018 10:36 AM

21	0	8/8/2018 9:54 AM
22	0	8/7/2018 9:18 PM
23	3	8/7/2018 9:09 PM
24	0	8/7/2018 6:01 PM
25	3	8/7/2018 4:43 PM
26	0	8/7/2018 12:34 PM
27	3	8/7/2018 11:49 AM
28	2	8/7/2018 11:27 AM
29	2	8/7/2018 11:18 AM
30	0	8/7/2018 5:52 AM
31	1	8/6/2018 8:52 PM
32	0	8/6/2018 8:34 PM
33	0	8/6/2018 7:21 PM
34	0	8/6/2018 6:11 PM
35	0	8/6/2018 4:33 PM
36	1	8/6/2018 3:21 PM
37	0	8/6/2018 1:17 PM
38	0	8/6/2018 12:15 PM
39	2	8/6/2018 10:14 AM
40	2	8/6/2018 9:27 AM
41	0	8/6/2018 9:08 AM
42	2	8/5/2018 8:07 PM
43	0	8/5/2018 2:08 PM
44	1	8/5/2018 7:59 AM
45	0	8/5/2018 7:48 AM
46	0	8/5/2018 7:38 AM
47	0	8/5/2018 5:39 AM
48	2	8/4/2018 7:04 PM
49	0	8/4/2018 6:36 PM
50	0	8/4/2018 6:03 PM
51	0	8/4/2018 2:32 PM
52	0	8/3/2018 7:24 PM
53	3	8/3/2018 4:38 PM
54	0	8/3/2018 1:16 PM
55	4	8/3/2018 10:15 AM
56	2	8/3/2018 9:46 AM
57	1	8/2/2018 5:25 PM
58	2	8/2/2018 4:06 PM
59	0	8/2/2018 3:46 PM
60	1	8/2/2018 2:56 PM
61	0	8/2/2018 2:26 PM

62	2	8/2/2018 2:20 PM
63	0	8/2/2018 2:09 PM
64	3	8/2/2018 1:26 PM
65	0	8/2/2018 12:26 PM
66	0	8/2/2018 12:19 PM
67	0	8/2/2018 11:59 AM
68	0	8/2/2018 11:57 AM
69	0	8/2/2018 10:59 AM
70	2	8/1/2018 2:25 PM
71	1	7/31/2018 10:17 PM
72	0	7/31/2018 9:10 AM
73	2	7/30/2018 7:47 PM
74	0	7/30/2018 6:18 PM
75	2	7/30/2018 2:55 PM
76	0	7/30/2018 8:09 AM
77	2	7/29/2018 7:12 PM
78	1	7/29/2018 5:53 PM
79	2	7/29/2018 9:18 AM
80	0	7/28/2018 5:08 PM
81	0	7/28/2018 1:51 PM
82	2	7/28/2018 1:47 PM
83	0	7/27/2018 6:27 PM
84	0	7/27/2018 6:20 PM
85	3	7/27/2018 5:04 PM
86	0	7/27/2018 1:02 PM
87	0	7/27/2018 8:16 AM
88	0	7/24/2018 8:16 AM
89	0	7/23/2018 6:26 PM
90	1	7/23/2018 2:33 PM
91	2	7/23/2018 12:21 PM
92	0	7/22/2018 1:52 PM
93	0	7/22/2018 10:35 AM
94	0	7/22/2018 9:33 AM
95	0	7/21/2018 12:24 PM
96	0	7/21/2018 9:13 AM
97	0	7/21/2018 7:30 AM
98	3	7/21/2018 6:28 AM
99	4	7/20/2018 10:38 PM
100	0	7/20/2018 8:28 PM
101	1	7/20/2018 6:09 PM
102	0	7/20/2018 2:34 PM

103	0	7/20/2018 1:49 PM
104	0	7/20/2018 12:48 PM
105	0	7/20/2018 11:54 AM
106	0	7/20/2018 11:34 AM
107	0	7/20/2018 10:50 AM
108	0	7/20/2018 10:35 AM
109	1	7/20/2018 10:30 AM
110	0	7/19/2018 10:28 AM
111	0	7/15/2018 6:20 PM
112	0	5/30/2018 4:07 PM
113	0	5/20/2018 6:03 PM
114	0	5/16/2018 9:13 PM
115	2	5/16/2018 2:41 PM
116	0	5/13/2018 9:19 PM
117	0	5/13/2018 4:42 PM
118	0	5/13/2018 12:02 AM
119	1	5/12/2018 11:22 PM
120	2	5/12/2018 11:18 AM
121	0	5/12/2018 10:41 AM
122	0	5/12/2018 7:15 AM
123	0	5/11/2018 12:21 PM
124	0	5/11/2018 10:54 AM
125	0	5/11/2018 6:42 AM
126	3	5/10/2018 2:30 PM
127	2	5/10/2018 2:17 PM
128	0	5/10/2018 1:48 PM
129	0	5/10/2018 12:21 PM
130	0	5/10/2018 11:10 AM
131	0	5/10/2018 10:18 AM
132	0	5/10/2018 9:49 AM
133	2	5/10/2018 9:45 AM
134	2	5/10/2018 9:38 AM
135	2	5/10/2018 9:27 AM
136	1	4/17/2018 11:09 AM
137	0	4/16/2018 10:31 AM
138	0	4/12/2018 4:37 PM
139	2	4/10/2018 1:13 PM
140	3	3/3/2018 3:18 PM
141	0	2/22/2018 4:50 PM
142	2	2/14/2018 5:04 PM
143	0	2/9/2018 6:11 PM

144	0	1/29/2018 1:12 PM
145	3	1/29/2018 11:12 AM
146	0	1/25/2018 5:32 PM
147	0	1/22/2018 12:10 PM
148	0	1/18/2018 3:21 PM
149	1	1/16/2018 10:39 AM
150	3	1/15/2018 3:56 PM
151	1	1/15/2018 11:47 AM
152	0	1/15/2018 11:43 AM
153	0	1/14/2018 4:36 PM
154	5	1/14/2018 3:45 PM
155	3	1/14/2018 12:12 PM
156	0	1/13/2018 7:14 PM
157	0	1/13/2018 5:11 PM
158	0	1/13/2018 10:19 AM
159	0	1/12/2018 5:37 PM
160	0	1/12/2018 5:26 PM
161	1	1/12/2018 11:18 AM
162	0	1/11/2018 9:09 PM
163	0	1/11/2018 5:34 PM
164	0	1/11/2018 3:36 PM
165	0	1/11/2018 3:14 PM
166	1	1/11/2018 1:18 PM
167	0	1/11/2018 8:56 AM
168	2	1/10/2018 6:57 PM
169	0	1/10/2018 4:27 PM
170	0	1/10/2018 11:09 AM
171	0	1/10/2018 9:35 AM
172	0	1/9/2018 9:51 PM
173	0	1/9/2018 5:52 PM
174	0	1/9/2018 4:48 PM
175	0	1/9/2018 4:37 PM
176	0	1/9/2018 3:35 PM
177	0	1/9/2018 3:29 PM
178	0	1/9/2018 3:28 PM
179	0	1/9/2018 3:04 PM
180	2	1/9/2018 12:52 PM
181	0	1/9/2018 12:48 PM
182	2	1/9/2018 12:24 PM
183	0	1/9/2018 11:58 AM
184	0	1/9/2018 11:44 AM

185	3	1/9/2018 11:21 AM
186	0	1/9/2018 11:18 AM
187	0	1/9/2018 11:11 AM
188	0	1/9/2018 11:06 AM
189	2	1/9/2018 11:05 AM
190	0	1/9/2018 11:04 AM
191	0	1/9/2018 10:51 AM
192	0	1/9/2018 10:38 AM
193	0	1/8/2018 8:30 PM
194	1	1/8/2018 7:28 PM
195	0	1/8/2018 7:02 PM
196	0	1/8/2018 5:03 PM
197	2	1/8/2018 4:06 PM
198	0	1/8/2018 1:08 PM
199	3	1/8/2018 12:38 PM
200	0	1/8/2018 7:44 AM
201	2	1/8/2018 7:35 AM
202	0	1/7/2018 9:10 PM
203	2	1/7/2018 8:12 PM
204	0	1/7/2018 8:01 PM
205	0	1/7/2018 8:00 PM
206	0	1/7/2018 6:49 PM
207	0	1/7/2018 4:53 PM
208	0	1/7/2018 4:19 PM
209	2	1/7/2018 3:58 PM
210	0	1/7/2018 3:10 PM
211	3	1/7/2018 3:02 PM
212	0	1/7/2018 2:54 PM
213	0	1/7/2018 2:24 PM
214	0	1/7/2018 2:20 PM
215	0	1/7/2018 1:33 PM
216	0	1/7/2018 12:27 PM
217	0	1/7/2018 12:18 PM
218	0	1/7/2018 11:07 AM
219	0	1/7/2018 10:24 AM
220	2	1/6/2018 8:23 PM
221	0	1/6/2018 7:52 PM
222	0	1/6/2018 5:34 PM
223	0	1/6/2018 4:03 PM
224	0	1/6/2018 3:22 PM
225	0	1/6/2018 3:11 PM

226	2	1/6/2018 2:14 PM
227	0	1/6/2018 12:46 PM
228	0	1/6/2018 11:59 AM
229	0	1/6/2018 11:12 AM
230	0	1/6/2018 10:28 AM
231	0	1/6/2018 9:35 AM
232	0	1/6/2018 8:52 AM
233	0	1/6/2018 8:23 AM
234	0	1/5/2018 7:40 PM
235	0	1/5/2018 6:13 PM
236	2	1/5/2018 5:44 PM
237	2	1/5/2018 4:39 PM
238	0	1/5/2018 4:17 PM
239	0	1/5/2018 3:46 PM
240	0	1/5/2018 2:54 PM
241	3	1/4/2018 3:34 PM
242	0	1/3/2018 10:35 PM
243	0	1/3/2018 2:46 PM
244	2	1/2/2018 4:49 PM
245	0	1/1/2018 5:51 PM
246	0	12/31/2017 10:22 AM
247	0	12/27/2017 1:56 PM
248	0	12/27/2017 1:35 PM
249	1	12/27/2017 12:06 PM
250	0	12/27/2017 10:23 AM
251	2	12/27/2017 9:53 AM
252	0	12/21/2017 6:10 PM
253	3	12/19/2017 12:57 PM

#	NUMBER OF AUTOMOBILES:	DATE
1	2	8/16/2018 3:32 PM
2	2	8/15/2018 4:26 PM
3	3	8/13/2018 3:21 PM
4	2	8/13/2018 1:35 PM
5	4	8/13/2018 11:37 AM
6	4	8/13/2018 11:14 AM
7	2	8/13/2018 9:47 AM
8	4	8/13/2018 7:24 AM
9	4	8/12/2018 7:51 PM
10	4	8/11/2018 3:32 PM
11	2	8/10/2018 9:40 AM
12	2	8/10/2018 8:15 AM

13	1	8/9/2018 9:55 PM
14	2	8/9/2018 4:25 PM
15	2	8/9/2018 10:08 AM
16	2	8/9/2018 8:04 AM
17	1	8/9/2018 7:00 AM
18		8/8/2018 10:12 PM
19	2	8/8/2018 8:50 PM
20	3	8/8/2018 8:40 PM
21	3	8/8/2018 3:47 PM
22		8/8/2018 11:28 AM
23	2	8/8/2018 11:07 AM
24	3	8/8/2018 10:36 AM
25	2	8/8/2018 9:54 AM
26		8/7/2018 9:18 PM
27	2	8/7/2018 9:09 PM
28	3	8/7/2018 6:01 PM
29		8/7/2018 4:43 PM
30	2	8/7/2018 12:34 PM
31		8/7/2018 11:49 AM
32	3	8/7/2018 11:18 AM
33	2	8/7/2018 5:52 AM
34	2	8/6/2018 8:52 PM
35	1	8/6/2018 8:34 PM
36	2	8/6/2018 7:21 PM
37	2	8/6/2018 6:11 PM
38	3	8/6/2018 4:33 PM
39	3	8/6/2018 3:21 PM
40	2	8/6/2018 1:17 PM
41	2	8/6/2018 12:15 PM
42	2	8/6/2018 10:14 AM
43	2	8/6/2018 9:27 AM
44	2	8/6/2018 9:08 AM
45	2	8/5/2018 8:07 PM
46	2	8/5/2018 3:47 PM
47	2	8/5/2018 2:08 PM
48	3	8/5/2018 12:19 PM
49	1	8/5/2018 8:15 AM
50	4	8/5/2018 7:59 AM
51	2	8/5/2018 7:48 AM
52	2	8/5/2018 7:38 AM
53	2	8/5/2018 5:39 AM

54	3	8/4/2018 7:59 PM
55	2	8/4/2018 7:04 PM
56	3	8/4/2018 6:36 PM
57	2	8/4/2018 6:03 PM
58	3	8/4/2018 5:56 PM
59	2	8/4/2018 2:32 PM
60	1	8/3/2018 7:24 PM
61	3	8/3/2018 4:38 PM
62	2	8/3/2018 1:16 PM
63	3	8/3/2018 10:15 AM
64	2	8/3/2018 9:46 AM
65	2	8/3/2018 5:47 AM
66	3	8/2/2018 5:25 PM
67	2	8/2/2018 4:06 PM
68	2	8/2/2018 3:46 PM
69	2	8/2/2018 3:05 PM
70	3	8/2/2018 2:56 PM
71	2	8/2/2018 2:26 PM
72	8	8/2/2018 2:20 PM
73	2	8/2/2018 2:09 PM
74	3	8/2/2018 1:26 PM
75	3	8/2/2018 12:26 PM
76	2	8/2/2018 12:19 PM
77	4	8/2/2018 11:59 AM
78	3	8/2/2018 11:57 AM
79	1	8/2/2018 11:36 AM
80	2	8/2/2018 10:59 AM
81	4	8/1/2018 2:25 PM
82	3	7/31/2018 10:17 PM
83	2	7/31/2018 9:10 AM
84	3	7/30/2018 7:47 PM
85	2	7/30/2018 6:18 PM
86	2	7/30/2018 2:55 PM
87	6	7/30/2018 9:31 AM
88	2	7/30/2018 8:09 AM
89	4	7/29/2018 7:12 PM
90	2	7/29/2018 5:53 PM
91	4	7/29/2018 9:18 AM
92	3	7/28/2018 5:08 PM
93	2	7/28/2018 1:51 PM
94	2	7/28/2018 1:47 PM

95	2	7/27/2018 6:27 PM
96	2	7/27/2018 6:25 PM
97	2	7/27/2018 6:20 PM
98		7/27/2018 5:04 PM
99	2	7/27/2018 3:55 PM
100	2	7/27/2018 1:16 PM
101		7/27/2018 1:02 PM
102	4	7/27/2018 8:16 AM
103	2	7/26/2018 3:53 PM
104	3	7/25/2018 7:20 PM
105	1	7/24/2018 8:16 AM
106	2	7/23/2018 6:26 PM
107	4	7/23/2018 2:33 PM
108	2	7/23/2018 12:21 PM
109	2	7/22/2018 1:52 PM
110	4	7/22/2018 10:35 AM
111	4	7/22/2018 9:33 AM
112	3	7/21/2018 12:24 PM
113	2	7/21/2018 9:13 AM
114	2	7/21/2018 7:30 AM
115	3	7/21/2018 6:28 AM
116	2	7/20/2018 10:38 PM
117	2	7/20/2018 10:35 PM
118	2	7/20/2018 8:28 PM
119	4	7/20/2018 6:09 PM
120	2	7/20/2018 4:26 PM
121	3	7/20/2018 3:18 PM
122	2	7/20/2018 2:34 PM
123	2	7/20/2018 1:49 PM
124	3	7/20/2018 12:48 PM
125	1	7/20/2018 12:41 PM
126	2	7/20/2018 11:54 AM
127	2	7/20/2018 11:38 AM
128	2	7/20/2018 11:34 AM
129	2	7/20/2018 10:50 AM
130	2	7/20/2018 10:35 AM
131	3	7/20/2018 10:30 AM
132	3	7/19/2018 10:28 AM
133	3	7/15/2018 6:20 PM
134	4	7/15/2018 4:37 PM
135	1	6/1/2018 10:57 AM

136	2	5/30/2018 4:07 PM
137	3	5/20/2018 6:03 PM
138	3	5/16/2018 9:13 PM
139	3	5/16/2018 2:41 PM
140	2	5/13/2018 9:19 PM
141	2	5/13/2018 4:42 PM
142	2	5/13/2018 12:02 AM
143	3	5/12/2018 11:22 PM
144	2	5/12/2018 11:18 AM
145	2	5/12/2018 10:41 AM
146	2	5/12/2018 7:28 AM
147	2	5/12/2018 7:15 AM
148	2	5/11/2018 12:21 PM
149	1	5/11/2018 11:46 AM
150	3	5/11/2018 10:54 AM
151	2	5/11/2018 6:42 AM
152	2	5/10/2018 6:47 PM
153	2	5/10/2018 2:30 PM
154	2	5/10/2018 2:17 PM
155	3	5/10/2018 1:48 PM
156	3	5/10/2018 12:21 PM
157	4	5/10/2018 12:16 PM
158	2	5/10/2018 11:10 AM
159	1	5/10/2018 10:18 AM
160	2	5/10/2018 10:09 AM
161	3	5/10/2018 9:49 AM
162	4	5/10/2018 9:45 AM
163	3	5/10/2018 9:38 AM
164	2	5/10/2018 9:27 AM
165	3	4/17/2018 11:09 AM
166	2	4/16/2018 10:31 AM
167	2	4/12/2018 4:37 PM
168	2	4/10/2018 1:13 PM
169	5	4/8/2018 9:18 AM
170		3/3/2018 3:18 PM
171	2	2/22/2018 4:50 PM
172	3	2/14/2018 5:04 PM
173	1	2/10/2018 5:27 PM
174	3	2/9/2018 6:11 PM
175	2	1/29/2018 1:12 PM
176	3	1/29/2018 11:12 AM

177	2	1/26/2018 11:50 AM
178	2	1/25/2018 5:32 PM
179	3	1/25/2018 12:35 PM
180	3	1/22/2018 12:10 PM
181	2	1/22/2018 7:42 AM
182	2	1/18/2018 3:21 PM
183	2	1/16/2018 10:39 AM
184	3	1/15/2018 3:56 PM
185	3	1/15/2018 3:28 PM
186	2	1/15/2018 11:47 AM
187	1	1/15/2018 11:43 AM
188	2	1/14/2018 4:36 PM
189	5	1/14/2018 3:45 PM
190	2	1/14/2018 12:12 PM
191	3	1/14/2018 10:04 AM
192	3	1/13/2018 7:14 PM
193	2	1/13/2018 5:11 PM
194	1	1/13/2018 10:19 AM
195	1	1/12/2018 5:37 PM
196	3	1/12/2018 5:26 PM
197	3	1/12/2018 4:58 PM
198	3	1/12/2018 4:19 PM
199	3	1/12/2018 11:18 AM
200	5	1/11/2018 9:09 PM
201		1/11/2018 5:34 PM
202	1	1/11/2018 3:36 PM
203	2	1/11/2018 3:14 PM
204	2	1/11/2018 1:18 PM
205	3	1/11/2018 8:56 AM
206		1/10/2018 10:48 PM
207	2	1/10/2018 8:17 PM
208	2	1/10/2018 6:57 PM
209	3	1/10/2018 5:43 PM
210	2	1/10/2018 4:49 PM
211	3	1/10/2018 4:27 PM
212	2	1/10/2018 11:09 AM
213		1/10/2018 10:10 AM
214	2	1/10/2018 9:56 AM
215	3	1/10/2018 9:35 AM
216	1	1/10/2018 8:12 AM
217	2	1/9/2018 9:51 PM

218	1	1/9/2018 5:52 PM
219	3	1/9/2018 5:07 PM
220	1	1/9/2018 4:48 PM
221	2	1/9/2018 4:37 PM
222	2	1/9/2018 3:35 PM
223	2	1/9/2018 3:29 PM
224	2	1/9/2018 3:28 PM
225	3	1/9/2018 3:04 PM
226	2	1/9/2018 12:53 PM
227	3	1/9/2018 12:52 PM
228	1	1/9/2018 12:48 PM
229	1	1/9/2018 12:47 PM
230	3	1/9/2018 12:24 PM
231	1	1/9/2018 11:58 AM
232	2	1/9/2018 11:44 AM
233	4	1/9/2018 11:21 AM
234	2	1/9/2018 11:18 AM
235	2	1/9/2018 11:11 AM
236	2	1/9/2018 11:07 AM
237	1	1/9/2018 11:06 AM
238	2	1/9/2018 11:05 AM
239	1	1/9/2018 11:04 AM
240	2	1/9/2018 10:51 AM
241		1/9/2018 10:38 AM
242	2	1/8/2018 8:30 PM
243	5	1/8/2018 7:28 PM
244	2	1/8/2018 7:02 PM
245	1	1/8/2018 5:39 PM
246	2	1/8/2018 5:03 PM
247	1	1/8/2018 4:28 PM
248	2	1/8/2018 4:06 PM
249	2	1/8/2018 3:13 PM
250	2	1/8/2018 1:08 PM
251	4	1/8/2018 12:38 PM
252	1	1/8/2018 10:43 AM
253	2	1/8/2018 7:44 AM
254	2	1/8/2018 7:35 AM
255	2	1/7/2018 10:12 PM
256	2	1/7/2018 9:10 PM
257	3	1/7/2018 8:12 PM
258	5	1/7/2018 8:01 PM

259	3	1/7/2018 8:00 PM
260	3	1/7/2018 6:49 PM
261	2	1/7/2018 4:53 PM
262	3	1/7/2018 4:19 PM
263	3	1/7/2018 3:58 PM
264	1	1/7/2018 3:10 PM
265	1	1/7/2018 3:02 PM
266	2	1/7/2018 2:54 PM
267	1	1/7/2018 2:24 PM
268	3	1/7/2018 2:20 PM
269	2	1/7/2018 1:33 PM
270	2	1/7/2018 12:27 PM
271	2	1/7/2018 12:18 PM
272	2	1/7/2018 11:07 AM
273	3	1/7/2018 10:24 AM
274	4	1/7/2018 8:47 AM
275	2	1/6/2018 8:23 PM
276	2	1/6/2018 7:52 PM
277	2	1/6/2018 5:34 PM
278	2	1/6/2018 4:03 PM
279	2	1/6/2018 3:22 PM
280	1	1/6/2018 3:11 PM
281	3	1/6/2018 2:14 PM
282	2	1/6/2018 1:45 PM
283	3	1/6/2018 12:46 PM
284	3	1/6/2018 11:59 AM
285	2	1/6/2018 11:12 AM
286	2	1/6/2018 10:28 AM
287	1	1/6/2018 9:35 AM
288	3	1/6/2018 8:52 AM
289	2	1/6/2018 8:23 AM
290	4	1/5/2018 7:40 PM
291	6	1/5/2018 6:13 PM
292	2	1/5/2018 5:49 PM
293	2	1/5/2018 5:44 PM
294	2	1/5/2018 4:39 PM
295		1/5/2018 4:17 PM
296	2	1/5/2018 3:46 PM
297	2	1/5/2018 2:54 PM
298	3	1/5/2018 12:03 PM
299	2	1/4/2018 3:34 PM

300	1	1/3/2018 10:35 PM
301	2	1/3/2018 2:46 PM
302	2	1/2/2018 4:49 PM
303	2	1/1/2018 5:51 PM
304	2	12/31/2017 10:22 AM
305	4	12/27/2017 1:56 PM
306	3	12/27/2017 1:35 PM
307	4	12/27/2017 12:06 PM
308	2	12/27/2017 10:23 AM
309	2	12/27/2017 9:53 AM
310	2	12/22/2017 11:50 AM
311	3	12/21/2017 6:10 PM
312	2	12/19/2017 12:57 PM
313	2	12/14/2017 6:00 PM

#	NUMBER OF BICYCLES:	DATE
1	4	8/16/2018 3:32 PM
2	2	8/15/2018 4:26 PM
3	4	8/13/2018 3:21 PM
4	2	8/13/2018 1:35 PM
5	5	8/13/2018 11:37 AM
6	5	8/13/2018 11:14 AM
7	0	8/13/2018 9:47 AM
8	2	8/13/2018 7:24 AM
9	5	8/12/2018 7:51 PM
10	5	8/11/2018 3:32 PM
11	2	8/10/2018 9:40 AM
12	4	8/10/2018 8:15 AM
13	1	8/9/2018 9:55 PM
14	4	8/9/2018 4:25 PM
15	2	8/9/2018 10:08 AM
16	2	8/9/2018 8:04 AM
17	2	8/9/2018 7:00 AM
18	0	8/8/2018 10:12 PM
19	4	8/8/2018 8:40 PM
20	0	8/8/2018 3:47 PM
21	2	8/8/2018 11:28 AM
22	2	8/8/2018 11:07 AM
23	4	8/8/2018 10:36 AM
24	4	8/8/2018 9:54 AM
25	1	8/7/2018 9:18 PM
26	5	8/7/2018 9:09 PM

27	4	8/7/2018 6:01 PM
28	15	8/7/2018 4:43 PM
29	3	8/7/2018 12:34 PM
30	14	8/7/2018 11:49 AM
31	7	8/7/2018 11:18 AM
32	3	8/7/2018 5:52 AM
33	0	8/6/2018 8:34 PM
34	2	8/6/2018 7:21 PM
35	4	8/6/2018 6:11 PM
36	2	8/6/2018 4:33 PM
37	1	8/6/2018 3:21 PM
38	5	8/6/2018 1:17 PM
39	1	8/6/2018 12:15 PM
40	7	8/6/2018 10:14 AM
41	7	8/6/2018 9:27 AM
42	2	8/6/2018 9:08 AM
43	2	8/5/2018 8:07 PM
44	0	8/5/2018 2:08 PM
45	3	8/5/2018 12:19 PM
46	3	8/5/2018 8:15 AM
47	2	8/5/2018 7:59 AM
48	2	8/5/2018 7:48 AM
49	2	8/5/2018 7:38 AM
50	2	8/5/2018 5:39 AM
51	3	8/4/2018 7:59 PM
52	4	8/4/2018 7:04 PM
53	6	8/4/2018 6:36 PM
54	2	8/4/2018 6:03 PM
55	1	8/4/2018 5:56 PM
56	0	8/4/2018 2:32 PM
57	2	8/3/2018 7:24 PM
58	6	8/3/2018 4:38 PM
59	0	8/3/2018 1:16 PM
60	4	8/3/2018 10:15 AM
61	4	8/3/2018 9:46 AM
62	2	8/3/2018 5:47 AM
63	5	8/2/2018 5:25 PM
64	4	8/2/2018 4:06 PM
65	2	8/2/2018 3:46 PM
66	2	8/2/2018 3:05 PM
67	5	8/2/2018 2:56 PM

68	2	8/2/2018 2:26 PM
69	4	8/2/2018 2:20 PM
70	2	8/2/2018 2:09 PM
71	3	8/2/2018 1:26 PM
72	2	8/2/2018 12:26 PM
73	2	8/2/2018 12:19 PM
74	2	8/2/2018 11:59 AM
75	2	8/2/2018 11:57 AM
76	1	8/2/2018 11:36 AM
77	0	8/2/2018 10:59 AM
78	2	8/1/2018 2:25 PM
79	0	7/31/2018 10:17 PM
80	6	7/31/2018 9:10 AM
81	3	7/30/2018 7:47 PM
82	2	7/30/2018 6:18 PM
83	6	7/30/2018 2:55 PM
84	13	7/30/2018 9:31 AM
85	2	7/30/2018 8:09 AM
86	3	7/29/2018 7:36 PM
87	6	7/29/2018 7:12 PM
88	1	7/29/2018 5:53 PM
89	4	7/29/2018 9:18 AM
90	2	7/28/2018 5:08 PM
91	0	7/28/2018 1:51 PM
92	4	7/28/2018 1:47 PM
93	1	7/27/2018 6:27 PM
94	1	7/27/2018 6:25 PM
95	0	7/27/2018 6:20 PM
96	5	7/27/2018 5:04 PM
97	1	7/27/2018 3:55 PM
98	3	7/27/2018 1:16 PM
99	2	7/27/2018 1:02 PM
100	2	7/27/2018 8:16 AM
101	2	7/26/2018 3:53 PM
102	2	7/25/2018 7:20 PM
103	0	7/24/2018 8:16 AM
104	2	7/23/2018 6:26 PM
105	4	7/23/2018 2:33 PM
106	4	7/23/2018 12:21 PM
107	0	7/22/2018 1:52 PM
108	5	7/22/2018 10:35 AM

109	6	7/22/2018 9:33 AM
110	1	7/21/2018 12:24 PM
111	1	7/21/2018 9:13 AM
112	2	7/21/2018 7:30 AM
113	2	7/21/2018 6:28 AM
114	6	7/20/2018 10:38 PM
115	4	7/20/2018 10:35 PM
116	0	7/20/2018 8:28 PM
117	4	7/20/2018 6:09 PM
118	4	7/20/2018 4:26 PM
119	1	7/20/2018 2:34 PM
120	2	7/20/2018 1:49 PM
121	2	7/20/2018 12:48 PM
122	1	7/20/2018 12:41 PM
123	2	7/20/2018 11:54 AM
124	1	7/20/2018 11:38 AM
125	0	7/20/2018 11:34 AM
126	2	7/20/2018 10:50 AM
127	2	7/20/2018 10:35 AM
128	3	7/20/2018 10:30 AM
129	0	7/19/2018 10:28 AM
130	0	7/15/2018 6:20 PM
131	5	7/15/2018 4:37 PM
132	1	6/1/2018 10:57 AM
133	2	5/30/2018 4:07 PM
134	1	5/20/2018 6:03 PM
135	0	5/16/2018 9:13 PM
136	6	5/16/2018 2:41 PM
137	0	5/13/2018 9:19 PM
138	1	5/13/2018 4:42 PM
139	2	5/12/2018 11:22 PM
140	4	5/12/2018 11:18 AM
141	0	5/12/2018 10:41 AM
142	2	5/12/2018 7:28 AM
143	0	5/12/2018 7:15 AM
144	2	5/11/2018 12:21 PM
145	2	5/11/2018 11:46 AM
146	3	5/11/2018 10:54 AM
147	1	5/11/2018 6:42 AM
148	1	5/10/2018 6:47 PM
149	5	5/10/2018 2:30 PM

150	4	5/10/2018 2:17 PM
151	0	5/10/2018 1:48 PM
152	2	5/10/2018 12:21 PM
153	5	5/10/2018 12:16 PM
154	12	5/10/2018 11:10 AM
155	0	5/10/2018 10:18 AM
156	2	5/10/2018 10:09 AM
157	4	5/10/2018 9:49 AM
158	4	5/10/2018 9:45 AM
159	3	5/10/2018 9:38 AM
160	5	5/10/2018 9:27 AM
161	6	4/17/2018 11:09 AM
162	2	4/16/2018 10:31 AM
163	3	4/12/2018 4:37 PM
164	4	4/10/2018 1:13 PM
165	6	4/8/2018 9:18 AM
166	1	3/3/2018 3:18 PM
167	4	2/22/2018 4:50 PM
168	4	2/14/2018 5:04 PM
169	0	2/9/2018 6:11 PM
170	0	1/29/2018 1:12 PM
171	5	1/29/2018 11:12 AM
172	2	1/26/2018 11:50 AM
173	2	1/25/2018 5:32 PM
174	2	1/25/2018 12:35 PM
175	2	1/22/2018 12:10 PM
176	2	1/22/2018 7:42 AM
177	0	1/18/2018 3:21 PM
178	3	1/16/2018 10:39 AM
179	4	1/15/2018 3:56 PM
180	2	1/15/2018 3:28 PM
181	3	1/15/2018 11:47 AM
182	1	1/15/2018 11:43 AM
183	3	1/14/2018 4:36 PM
184	9	1/14/2018 3:45 PM
185	1	1/14/2018 12:12 PM
186	2	1/14/2018 10:04 AM
187	2	1/13/2018 7:14 PM
188	0	1/13/2018 5:11 PM
189	1	1/13/2018 10:19 AM
190	1	1/12/2018 5:37 PM

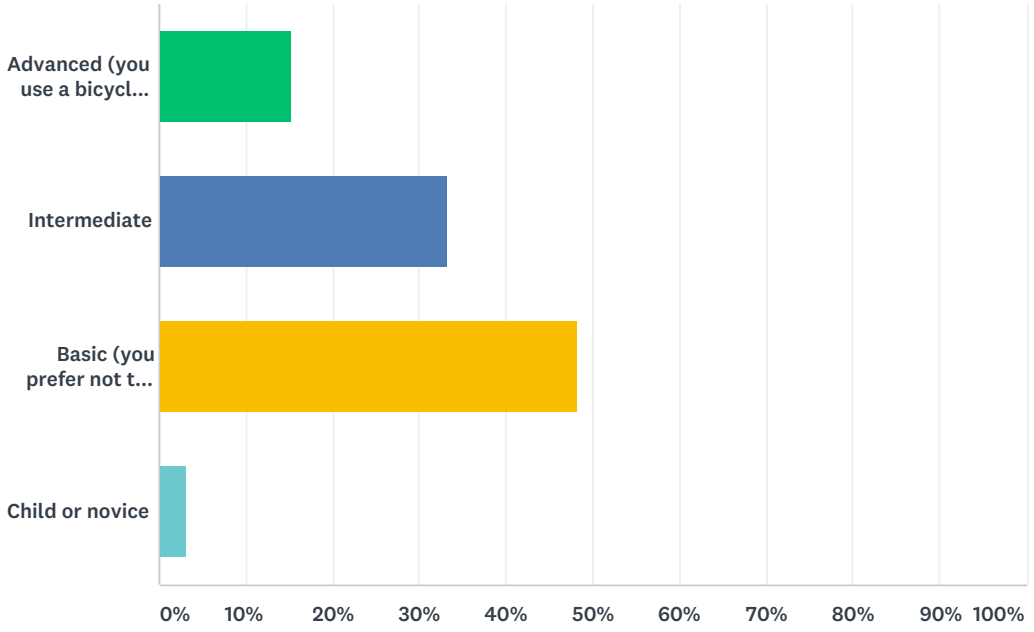
191	3	1/12/2018 5:26 PM
192	1	1/12/2018 4:58 PM
193	2	1/12/2018 4:19 PM
194	1	1/12/2018 11:18 AM
195	5	1/11/2018 9:09 PM
196	2	1/11/2018 3:36 PM
197	4	1/11/2018 3:14 PM
198	1	1/11/2018 1:18 PM
199	2	1/11/2018 11:02 AM
200	4	1/11/2018 8:56 AM
201	2	1/10/2018 10:48 PM
202	2	1/10/2018 10:25 PM
203	2	1/10/2018 8:17 PM
204	4	1/10/2018 6:57 PM
205	0	1/10/2018 5:43 PM
206	1	1/10/2018 4:27 PM
207	0	1/10/2018 11:09 AM
208	2	1/10/2018 10:10 AM
209	0	1/10/2018 9:56 AM
210	2	1/10/2018 9:35 AM
211	1	1/10/2018 8:12 AM
212	2	1/9/2018 9:51 PM
213	1	1/9/2018 5:52 PM
214	2	1/9/2018 5:07 PM
215	0	1/9/2018 4:48 PM
216	0	1/9/2018 4:37 PM
217	4	1/9/2018 3:35 PM
218	2	1/9/2018 3:29 PM
219	2	1/9/2018 3:28 PM
220	2	1/9/2018 3:04 PM
221	3	1/9/2018 12:53 PM
222	4	1/9/2018 12:52 PM
223	1	1/9/2018 12:48 PM
224	1	1/9/2018 12:24 PM
225	0	1/9/2018 11:58 AM
226	1	1/9/2018 11:44 AM
227	2	1/9/2018 11:21 AM
228	1	1/9/2018 11:18 AM
229	2	1/9/2018 11:11 AM
230	2	1/9/2018 11:07 AM
231	1	1/9/2018 11:06 AM

232	6	1/9/2018 11:05 AM
233	0	1/9/2018 11:04 AM
234	2	1/9/2018 10:51 AM
235	1	1/9/2018 10:38 AM
236	2	1/8/2018 8:30 PM
237	10	1/8/2018 7:28 PM
238	2	1/8/2018 7:02 PM
239	1	1/8/2018 5:39 PM
240	1	1/8/2018 5:03 PM
241	4	1/8/2018 4:06 PM
242	2	1/8/2018 3:13 PM
243	2	1/8/2018 1:08 PM
244	5	1/8/2018 12:38 PM
245	1	1/8/2018 10:43 AM
246	0	1/8/2018 7:44 AM
247	8	1/8/2018 7:35 AM
248	1	1/7/2018 9:10 PM
249	2	1/7/2018 8:12 PM
250	2	1/7/2018 8:01 PM
251	0	1/7/2018 8:00 PM
252	3	1/7/2018 6:49 PM
253	1	1/7/2018 4:53 PM
254	5	1/7/2018 4:19 PM
255	15	1/7/2018 3:58 PM
256	1	1/7/2018 3:10 PM
257	4	1/7/2018 3:02 PM
258	2	1/7/2018 2:54 PM
259	0	1/7/2018 2:24 PM
260	4	1/7/2018 2:20 PM
261	6	1/7/2018 1:33 PM
262	2	1/7/2018 12:27 PM
263	1	1/7/2018 12:18 PM
264	2	1/7/2018 11:07 AM
265	2	1/7/2018 10:24 AM
266	2	1/7/2018 8:47 AM
267	6	1/6/2018 8:23 PM
268	2	1/6/2018 7:52 PM
269	7	1/6/2018 5:34 PM
270	0	1/6/2018 4:03 PM
271	0	1/6/2018 3:22 PM
272	0	1/6/2018 3:11 PM

273	2	1/6/2018 2:14 PM
274	4	1/6/2018 12:46 PM
275	1	1/6/2018 11:59 AM
276	0	1/6/2018 11:12 AM
277	0	1/6/2018 10:28 AM
278	0	1/6/2018 9:35 AM
279	4	1/6/2018 8:52 AM
280	2	1/6/2018 8:23 AM
281	0	1/5/2018 7:40 PM
282	10	1/5/2018 6:13 PM
283	0	1/5/2018 5:44 PM
284	10	1/5/2018 4:39 PM
285	2	1/5/2018 4:17 PM
286	2	1/5/2018 3:46 PM
287	0	1/5/2018 2:54 PM
288	3	1/5/2018 12:03 PM
289	3	1/4/2018 3:34 PM
290	1	1/3/2018 10:35 PM
291	5	1/3/2018 2:46 PM
292	6	1/2/2018 4:49 PM
293	2	1/1/2018 5:51 PM
294	2	12/31/2017 10:22 AM
295	4	12/27/2017 1:56 PM
296	3	12/27/2017 1:35 PM
297	4	12/27/2017 12:06 PM
298	1	12/27/2017 10:23 AM
299	2	12/27/2017 9:53 AM
300	2	12/22/2017 11:50 AM
301	2	12/21/2017 6:10 PM
302	5	12/19/2017 12:57 PM
303	2	12/14/2017 6:00 PM

Q8 Indicate which of the following best describes your personal bicycling experience level:

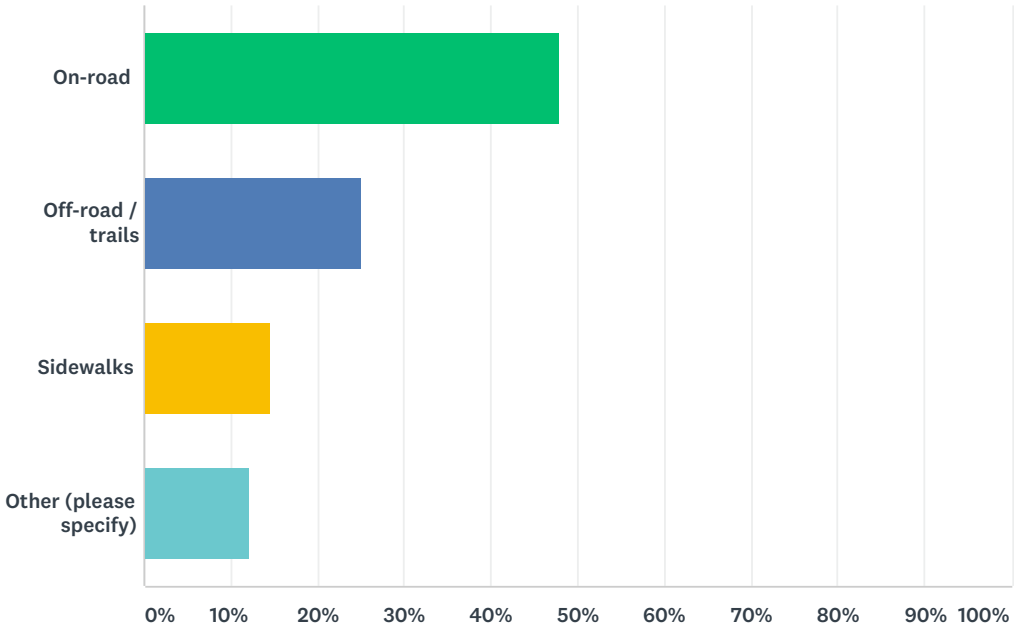
Answered: 288 Skipped: 44



ANSWER CHOICES	RESPONSES	
Advanced (you use a bicycle as you would a motor vehicle)	15%	44
Intermediate	33%	96
Basic (you prefer not to ride on roads with busy and fast motor vehicle traffic)	48%	139
Child or novice	3%	9
TOTAL		288

Q9 What is your current preferred bicycling facility?

Answered: 278 Skipped: 54



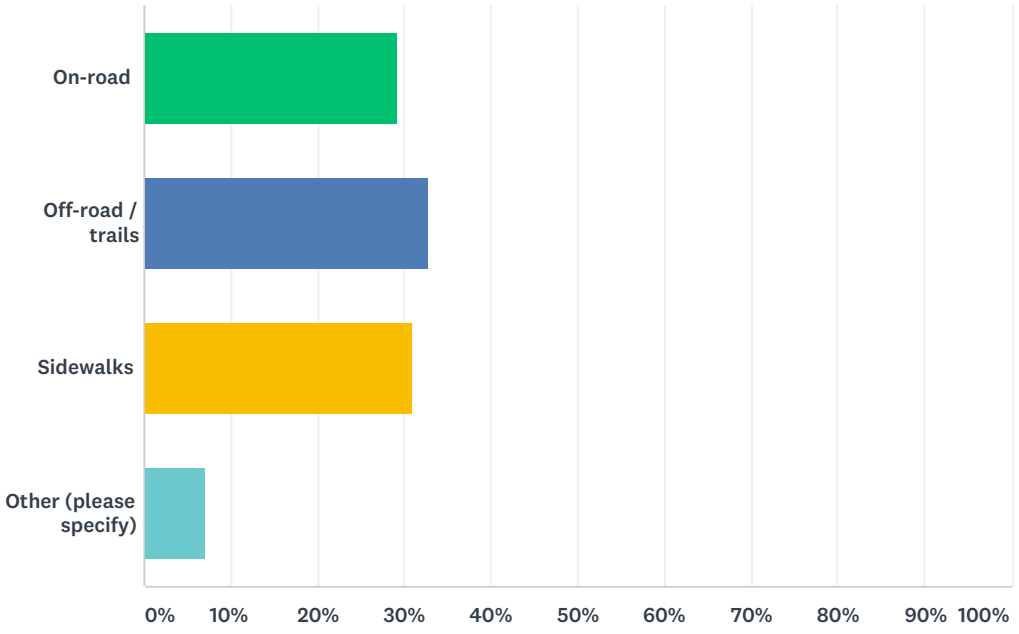
ANSWER CHOICES	RESPONSES	
On-road	48%	133
Off-road / trails	25%	70
Sidewalks	15%	41
Other (please specify)	12%	34
TOTAL		278

#	OTHER (PLEASE SPECIFY)	DATE
1	on-road if safe	8/16/2018 3:35 PM
2	triathlon training	8/12/2018 7:53 PM
3	Erie Canal	8/10/2018 8:17 AM
4	Erie Canal	8/9/2018 10:09 AM
5	Bike Path	8/8/2018 11:08 AM
6	none	8/7/2018 9:19 PM
7	Bike path - Erie Canal	8/6/2018 9:09 AM
8	Woodlawn cemetery, Ontario Pathway	8/5/2018 5:43 AM
9	canal trail	8/4/2018 7:04 PM
10	on roads with shoulders for safe cycling	8/3/2018 5:52 AM
11	on road side trail	7/28/2018 1:52 PM
12	N/A	7/22/2018 1:55 PM
13	neighborhood	7/20/2018 11:39 AM

14	None	7/15/2018 6:22 PM
15	Stationary	5/20/2018 6:03 PM
16	indoors	5/16/2018 9:18 PM
17	I've become afraid to bicycle due to distracted drivers	5/13/2018 4:44 PM
18	Neighborhood	5/12/2018 7:16 AM
19	On and off road	5/10/2018 9:51 AM
20	Towpath	4/16/2018 10:33 AM
21	Mix of all	4/10/2018 1:25 PM
22	Mix of roads and trails	4/8/2018 9:20 AM
23	Private road	1/13/2018 10:21 AM
24	NA	1/10/2018 5:46 PM
25	Sidewalks in Florida	1/10/2018 11:12 AM
26	prefer not	1/9/2018 4:50 PM
27	Canal path	1/9/2018 3:30 PM
28	Both roads and trails	1/9/2018 12:56 PM
29	former cyclist	1/6/2018 3:13 PM
30	erie canal path	1/6/2018 8:58 AM
31	to busy working, to make money to pay the taxes for driving on the highways	1/5/2018 7:43 PM
32	NA	1/5/2018 2:56 PM
33	seperated bike lanes are great	1/2/2018 4:51 PM
34	would like sidewalks but none avail	12/27/2017 1:57 PM

Q10 What is your current preferred walking facility?

Answered: 311 Skipped: 21



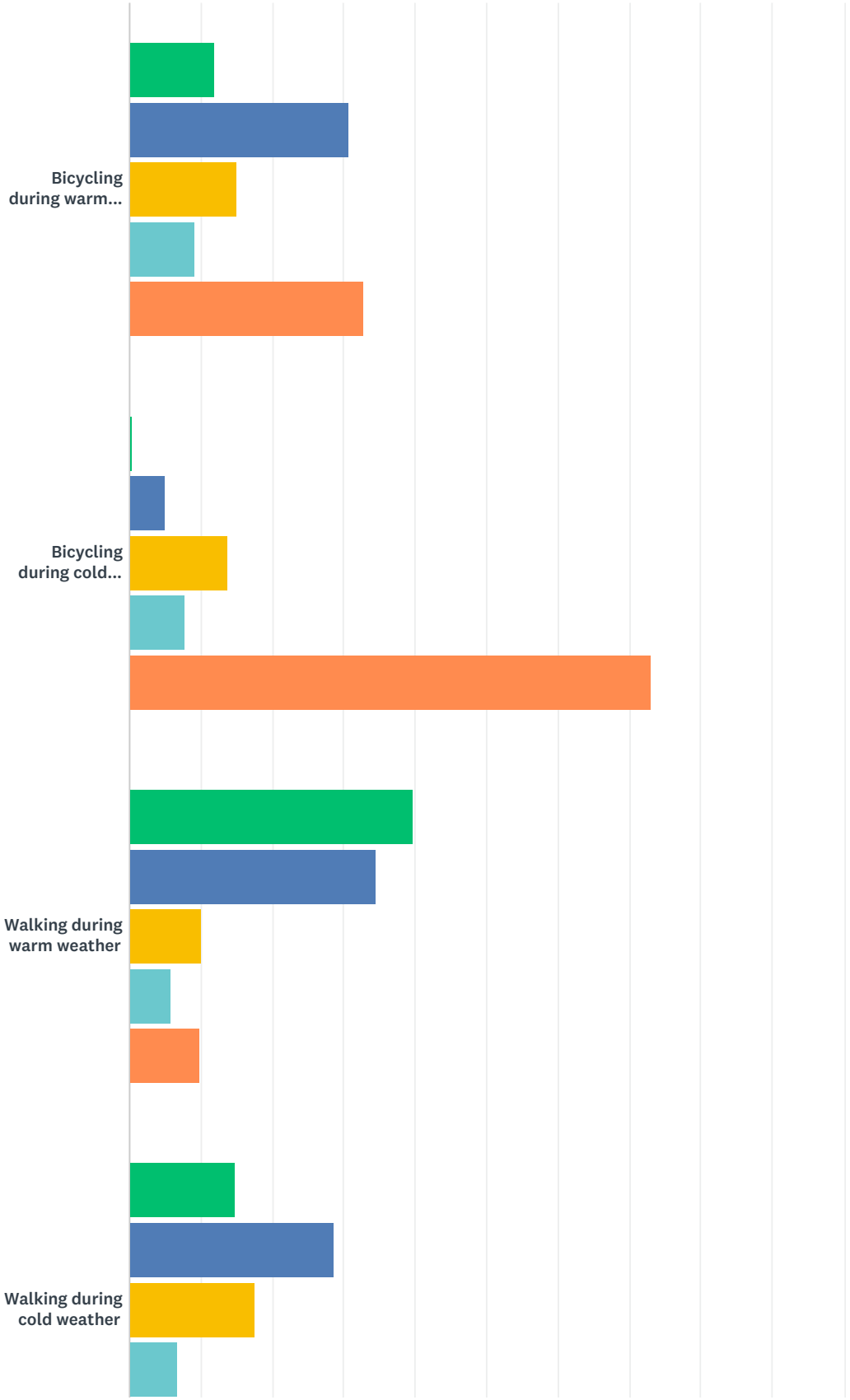
ANSWER CHOICES	RESPONSES	
On-road	29%	91
Off-road / trails	33%	102
Sidewalks	31%	96
Other (please specify)	7%	22
TOTAL		311

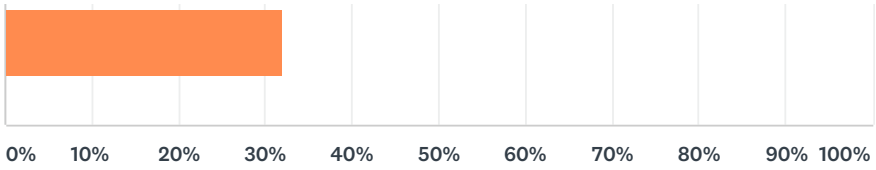
#	OTHER (PLEASE SPECIFY)	DATE
1	VA	8/20/2018 8:22 PM
2	all of the above	8/16/2018 3:35 PM
3	Kershaw park	8/8/2018 8:52 PM
4	Bike Path - Erie Canal	8/6/2018 9:09 AM
5	all of the above	8/3/2018 5:52 AM
6	suburban streetst	5/16/2018 9:18 PM
7	anywhere I can	5/11/2018 12:22 PM
8	All of the above	5/10/2018 9:51 AM
9	Mix of roads and trails	4/8/2018 9:20 AM
10	Trails in woods	1/15/2018 11:48 AM
11	both road and trails	1/11/2018 11:06 AM
12	Dog walking every day	1/9/2018 5:09 PM
13	Ontario co. Pathways trails	1/9/2018 3:30 PM

14	off road or other safe places	1/9/2018 12:49 PM
15	Run on riad as well, but always prefer sidewalks	1/7/2018 3:09 PM
16	Both on-road and Off-road	1/7/2018 12:20 PM
17	Trails or sidewalks are preferred but also walk along road.	1/7/2018 8:49 AM
18	Mall	1/6/2018 9:36 AM
19	do not walk for recreational purposes	1/5/2018 7:43 PM
20	sidewalks with buffers and street trees for shade	1/2/2018 4:51 PM
21	parks/hiking	12/27/2017 1:57 PM
22	Either Sidewalks or Trails depending on circumstance	12/27/2017 1:37 PM

Q11 How often do you walk or ride a bicycle on Ontario County Road 16?

Answered: 310 Skipped: 22





Daily Weekly Monthly Yearly Never

	DAILY	WEEKLY	MONTHLY	YEARLY	NEVER	TOTAL	WEIGHTED AVERAGE
Bicycling during warm weather	12% 35	31% 90	15% 44	9% 27	33% 96	292	1.80
Bicycling during cold weather	0% 1	5% 14	14% 38	8% 21	73% 200	274	0.52
Walking during warm weather	40% 122	35% 106	10% 31	6% 18	10% 30	307	2.89
Walking during cold weather	15% 44	29% 85	18% 52	7% 20	32% 95	296	1.88

Q12 Do you have particular locations along Ontario County Road 16 that you like to bicycle or walk to? Please list below:

Answered: 203 Skipped: 129

ANSWER CHOICES	RESPONSES	
1.	100%	203
2.	33%	67
3.	16%	33
4.	6%	12
5.	2%	5

#	1.	DATE
1	Stretch between Foster and Seneca Point road	8/16/2018 3:35 PM
2	Tichenor Creek to Parrish Rd	8/15/2018 4:28 PM
3	Walk: Foster Road to Millers Hill	8/13/2018 3:23 PM
4	Adams through Davidson Landing	8/13/2018 11:45 AM
5	Entire Length	8/13/2018 11:16 AM
6	between foster rd and wells curtics	8/13/2018 9:49 AM
7	from WLR to City pier	8/12/2018 7:53 PM
8	From west lake Blvd. to Tiechnors point	8/11/2018 3:34 PM
9	schoolhouse beach	8/10/2018 8:17 AM
10	Onanda Park to German Brothers Marina	8/9/2018 4:27 PM
11	Deerfield Dr. to Wyffels Rd.	8/9/2018 1:25 PM
12	from Parrish Street to Onanda Park	8/9/2018 10:09 AM
13	Lakewood Meadows	8/9/2018 8:05 AM
14	South of Onanda	8/8/2018 10:13 PM
15	Kershaw park	8/8/2018 8:52 PM
16	Parrish St to Wyfles	8/8/2018 8:41 PM
17	Between Foster Road and Butler Road	8/8/2018 11:29 AM
18	school house beach	8/8/2018 11:08 AM
19	Bike the entire County Rd 16	8/8/2018 9:55 AM
20	First 5 miles	8/7/2018 9:10 PM
21	Parrish to school house.	8/7/2018 6:03 PM
22	Butler Rd to Parrish	8/7/2018 4:45 PM
23	Start at Schoolhouse Park on Butler	8/7/2018 11:50 AM
24	Lake Hill Dr to the WaterPlant	8/7/2018 11:22 AM
25	use it to ride circle the Lake on bicycle 1-2 x year.	8/7/2018 5:53 AM
26	Wyffels to Butler	8/6/2018 8:36 PM
27	North End to Deerfield	8/6/2018 6:12 PM

28	From Lake Hill Dr to Onnalinda	8/6/2018 3:23 PM
29	Entire length	8/6/2018 1:18 PM
30	From Onanda to the end of W.Lake Road	8/6/2018 12:17 PM
31	Canandaigua Yacht Club	8/6/2018 10:15 AM
32	Between Ashton Pl. and Foster Rd	8/5/2018 3:50 PM
33	Marinas	8/5/2018 8:01 AM
34	Onanda	8/5/2018 7:40 AM
35	City to Coy Road and back	8/4/2018 6:37 PM
36	Seneca Point to Barnes Road	8/4/2018 6:05 PM
37	no	8/4/2018 5:57 PM
38	Past the marina to Foster Rd.	8/4/2018 2:34 PM
39	Parrish to Wells Curtis ride	8/3/2018 7:27 PM
40	from parish to foster	8/3/2018 4:39 PM
41	Foster Road	8/3/2018 1:18 PM
42	I stop before German Bros. Too busy/not safe	8/3/2018 10:16 AM
43	Very dangerous for pedestrians anywhere from Parrish St. to Duel Rd or beyond.	8/3/2018 9:50 AM
44	from Parrish St to Onanda Park	8/3/2018 5:52 AM
45	Near Foster Rd	8/2/2018 5:33 PM
46	Wells Curtice to Onanda Park	8/2/2018 5:26 PM
47	Between Foster Rd & German Bros	8/2/2018 4:08 PM
48	Butler rd beach head	8/2/2018 3:49 PM
49	full length, from Parrish st to Rt 21 cycling	8/2/2018 2:59 PM
50	From Wells Curtis to Butler Road	8/2/2018 2:23 PM
51	Near Onanda Park	8/2/2018 2:11 PM
52	entire road	8/2/2018 1:27 PM
53	Butler road to Wyffels	8/2/2018 1:06 PM
54	Entire length	8/2/2018 12:28 PM
55	Butler to wells curtice	8/2/2018 12:00 PM
56	Between Butler Rd and Wells Curtis	8/2/2018 11:03 AM
57	Miller's Hill	7/31/2018 9:11 AM
58	Butler Road to pump house	7/30/2018 6:20 PM
59	Between Butler road and Barns Road	7/30/2018 2:58 PM
60	Often Walk and ride north into canandaigua from home	7/30/2018 9:36 AM
61	Deerfield	7/29/2018 7:40 PM
62	I loke to bike the entire length up and back	7/29/2018 7:13 PM
63	By onondaga park	7/29/2018 5:55 PM
64	Foster Rd to German Bros marina	7/28/2018 1:55 PM
65	county road 16 between mile 1-10	7/28/2018 1:52 PM
66	South of Butler Road	7/27/2018 6:28 PM
67	Camp Ononda area	7/27/2018 6:22 PM
68	Canandaigua Yacht Club to cross lake Road	7/27/2018 3:56 PM

69	From Davidson's Landing to flat area past Onanada Park	7/27/2018 1:06 PM
70	to pump house	7/24/2018 8:18 AM
71	Canandaigua Yacht Club	7/23/2018 12:22 PM
72	Canandaigua Yacht Club, 3524 West Lake Road	7/22/2018 1:55 PM
73	Canandaigua yacht club	7/22/2018 10:36 AM
74	Yacht club area	7/22/2018 9:34 AM
75	From my house south or north in the city of Canandaigua	7/21/2018 12:26 PM
76	Canandaigua Yacht Club road crossing	7/21/2018 9:15 AM
77	CanandaiguaYacht Club	7/21/2018 7:31 AM
78	Onnalinda Drive area north & south	7/21/2018 6:30 AM
79	By the Canadaigua Yacht Club	7/20/2018 10:41 PM
80	parrish st to foster rd	7/20/2018 10:37 PM
81	Between Butler Rd and Deerfield	7/20/2018 8:30 PM
82	Yacht Club	7/20/2018 3:19 PM
83	From the city line to German Bros marina	7/20/2018 1:50 PM
84	CYC	7/20/2018 11:35 AM
85	Parish St to Canandaigua Yacht Club	7/20/2018 10:51 AM
86	Canandaigua Yacht Club needs cross work to water	7/20/2018 10:37 AM
87	Canandaigua Yacht Club	7/20/2018 10:31 AM
88	Canandaigua Yacht Club	7/15/2018 6:22 PM
89	North End	7/15/2018 4:39 PM
90	From Parrish St to Foster Road	5/30/2018 4:09 PM
91	Butler Rd Schoolhouse from Saddleback Rd	5/16/2018 9:18 PM
92	from holiday harbor to seneca point	5/16/2018 2:43 PM
93	On County Rd. 16	5/13/2018 4:44 PM
94	Butler Rd Park	5/12/2018 11:19 AM
95	Cycling from Parish St to Route 21	5/11/2018 10:55 AM
96	Start of County Road 16 to Onanda Park	5/11/2018 6:43 AM
97	All, it's not a complete street if it isn't all complete.	5/10/2018 8:34 PM
98	Onanda Park	5/10/2018 6:49 PM
99	Parrish to Seneca pt road	5/10/2018 11:11 AM
100	Homes	5/10/2018 10:32 AM
101	Bike: City town line to T point	5/10/2018 10:11 AM
102	Yacht Club	5/10/2018 9:28 AM
103	City of Canandaigua	4/17/2018 11:11 AM
104	Atwater Park	4/16/2018 10:33 AM
105	We ride around the whole lake annually	4/12/2018 4:39 PM
106	Onanda Park	4/10/2018 1:25 PM
107	Onanda	4/8/2018 9:20 AM
108	3457 west lake road to Butler Beach or beyond	2/22/2018 4:52 PM
109	From 3456 CR16 to German Brothers and back	2/14/2018 5:06 PM

110	Northern 2-3 miles	2/9/2018 6:12 PM
111	My neighborhood, about 1 mile south of City limits	1/29/2018 1:14 PM
112	Wells curtice to Seneca Point	1/29/2018 11:14 AM
113	to Foster Road	1/26/2018 11:52 AM
114	From Tichner Point to the North (2 miles)	1/25/2018 5:33 PM
115	city line to butler road	1/22/2018 12:13 PM
116	From German Brothers to Foster Rd	1/18/2018 3:22 PM
117	Parrish St to German Brothers Marina	1/16/2018 10:41 AM
118	The entire road	1/15/2018 3:56 PM
119	seneca point road to coye road	1/15/2018 3:29 PM
120	Onanda Park	1/15/2018 11:45 AM
121	Length of road from Parrish to Well Curtice	1/14/2018 4:38 PM
122	Between Parrish street and Ontario County Park	1/14/2018 3:46 PM
123	along the areas with water views	1/14/2018 10:05 AM
124	To the City of Canandaigua	1/13/2018 7:16 PM
125	Butler Road to Onalinda Drive	1/13/2018 5:13 PM
126	Menteith Point to Coye Rd	1/12/2018 5:38 PM
127	Foster road to city pier/ did millers hill for many years, became to dangerous forme	1/12/2018 5:29 PM
128	Foster Road to German Bros or Wyffels Road	1/12/2018 5:00 PM
129	I live on Butler Rd., so Butler to Wyffels	1/11/2018 5:35 PM
130	Between route 21 & wells curtice	1/11/2018 3:37 PM
131	All of it	1/11/2018 3:16 PM
132	Butler Rd Park	1/11/2018 11:06 AM
133	I often bike from my home near Duell Rd. into Canandaigua and back for transportation.	1/11/2018 9:00 AM
134	Butler Road to Seneca Pt.	1/10/2018 10:53 PM
135	Cty16 up Butler	1/10/2018 10:28 PM
136	NA	1/10/2018 5:46 PM
137	From Yacht Club to Tichenors Point	1/10/2018 4:51 PM
138	Canandaigua yacht club to Parrish street	1/10/2018 4:37 PM
139	Foster Rd. To Wyffeks Rd.	1/10/2018 11:12 AM
140	Tichenor Point to Camp Ononda	1/10/2018 10:13 AM
141	northwest end of lake area Wyffles to the north	1/10/2018 9:38 AM
142	Butler Rd to Parrish St.	1/10/2018 8:17 AM
143	home to Parish street	1/9/2018 5:57 PM
144	Near statue	1/9/2018 5:09 PM
145	between Tischner Point and Seneca Pt Road	1/9/2018 4:50 PM
146	County Park	1/9/2018 4:38 PM
147	I use the entire length for circling the lake by bike	1/9/2018 3:37 PM
148	City to onanda	1/9/2018 3:30 PM
149	From town to Wyffels Rd	1/9/2018 3:29 PM
150	Entire length of County Road 16	1/9/2018 12:54 PM

151	Between Foster and Butler	1/9/2018 12:49 PM
152	From Parrish Street to Wyffels road	1/9/2018 12:26 PM
153	Bristol Harbor Golf	1/9/2018 11:28 AM
154	City line to Hillcrest Drive	1/9/2018 11:10 AM
155	Pumping station	1/9/2018 11:07 AM
156	Deerfield to Schoolhouse	1/9/2018 11:06 AM
157	Wells Curtice to Canandaigua city limits	1/9/2018 10:43 AM
158	None	1/8/2018 8:35 PM
159	Camp Onanda	1/8/2018 7:29 PM
160	Bicycling between Holiday harbor and Foster Road	1/8/2018 7:12 PM
161	To and from w Lake school house for camp from my home	1/8/2018 4:09 PM
162	Butler road to Wyfells	1/8/2018 3:15 PM
163	5-6 miles south of the Parrish Street intersection	1/8/2018 1:10 PM
164	parrish to foster for walking/running	1/8/2018 12:40 PM
165	Parish St to Foster Rd	1/8/2018 11:04 AM
166	Trail between WLRd and MiddleCheshire Rd along 5&20	1/8/2018 7:41 AM
167	Parrish Street	1/7/2018 9:11 PM
168	Between Wyfles Rd and Foster Rd	1/7/2018 8:03 PM
169	Parrish to Seneca Point Road	1/7/2018 6:50 PM
170	no part of the road is safe	1/7/2018 4:55 PM
171	From Seneca Point Road all the way to town and back	1/7/2018 4:20 PM
172	Miller hill	1/7/2018 4:00 PM
173	Park on Barnes Rd/County Rd 16	1/7/2018 3:09 PM
174	between Butler Road and Wyffels Road	1/7/2018 2:25 PM
175	From Wells Curtice area north to Parrish St.	1/7/2018 2:22 PM
176	The entire stretch from Cdgua to Route 21	1/7/2018 1:36 PM
177	Between Parrish Rd and Foster Rd	1/7/2018 12:30 PM
178	Parrish St to Seneca Point Rd	1/7/2018 12:20 PM
179	Well Curtis and north to Parrish - biking	1/7/2018 10:26 AM
180	Between Wells Curtis and Duel Road	1/7/2018 8:49 AM
181	Onanda Park	1/6/2018 8:25 PM
182	North of the yacht club	1/6/2018 7:54 PM
183	Parrish Street	1/6/2018 5:38 PM
184	Do not prefer to walk on this dangerous road	1/6/2018 4:05 PM
185	First 3 miles from city limits	1/6/2018 3:24 PM
186	Seneca Point Road	1/6/2018 3:13 PM
187	Butler Park	1/6/2018 12:47 PM
188	Wells curtis rd to old millers nursery. and back	1/6/2018 11:15 AM
189	Onanda	1/6/2018 10:29 AM
190	walk Foster Rd. to/from Onanda park	1/6/2018 8:58 AM
191	Onadoga park	1/6/2018 8:25 AM

192	we live at 3894 west lake and go both ways from there	1/5/2018 6:15 PM
193	Wyffels Rd to Yacht Club	1/5/2018 5:51 PM
194	City Line To Seneca Point Road	1/5/2018 5:48 PM
195	Duel road to Parrish Street	1/5/2018 4:44 PM
196	Yacht Club	1/5/2018 2:56 PM
197	Wells Curtice to Duel Rd.	1/3/2018 2:48 PM
198	by the schoolhouse	1/2/2018 4:51 PM
199	The entire way from Parrish to Naples would be great	12/27/2017 1:57 PM
200	Butler Beach / West Lake Road Schoolhouse	12/27/2017 1:37 PM
201	Parrish rd (north end) to Naples	12/27/2017 12:11 PM
202	City line to Tietnor point	12/22/2017 11:52 AM
203	Butler road	12/21/2017 6:18 PM

#	2.	DATE
1	Bicycle: entire distance	8/13/2018 3:23 PM
2	German Bros (who use the shoulder as their personal parking lot)	8/12/2018 7:53 PM
3	onanda park	8/10/2018 8:17 AM
4	onanda park	8/8/2018 11:08 AM
5	Wells Curtis to start of Millers Hill.	8/7/2018 6:03 PM
6	Butler Rd to Deuel Rd	8/7/2018 4:45 PM
7	Ride all the way till I run out of energy	8/7/2018 11:50 AM
8	Lake Hill Dr to Butler	8/7/2018 11:22 AM
9	Butler to Ferris Hills	8/6/2018 8:36 PM
10	Up Bulter Rd through Fox Rodge	8/4/2018 2:34 PM
11	Parrish to Foster Road walk	8/3/2018 7:27 PM
12	German Brothers - Very dangerous with traffic/pedestrians/workers	8/3/2018 9:50 AM
13	Wells Curtice to Wyffels	8/2/2018 5:26 PM
14	Onanda Park	8/2/2018 4:08 PM
15	walking from Onanda to Foster Rd	8/2/2018 2:59 PM
16	Homes of family members	7/31/2018 9:11 AM
17	Often Walk and ride south past German Brothers	7/30/2018 9:36 AM
18	Butler	7/29/2018 7:40 PM
19	by wells Curtis road	7/29/2018 5:55 PM
20	squaw island park	7/28/2018 1:52 PM
21	to yacht club	7/24/2018 8:18 AM
22	Ferris Hills	7/15/2018 6:22 PM
23	Atwater Park	5/12/2018 11:19 AM
24	Running from Parish St to Foster Road	5/11/2018 10:55 AM
25	Exercise	5/10/2018 10:32 AM
26	Walk: Butler Rd to German Bros Marina	5/10/2018 10:11 AM
27	Butler Road	5/10/2018 9:28 AM
28	Onanada Park	4/17/2018 11:11 AM

29	Rayburn Drive	4/16/2018 10:33 AM
30	The west side from our home to Miller hill	4/12/2018 4:39 PM
31	Deerfield to Candaigua Country Club and around the city in the winter	1/29/2018 11:14 AM
32	to the Pump House	1/26/2018 11:52 AM
33	foster road to butler road	1/15/2018 3:29 PM
34	The stretch between German Bros and Bristol Harbour	1/15/2018 11:45 AM
35	Beach near Butler Rd.	1/13/2018 7:16 PM
36	Foster road to 21 via 16, to Cheshire, To foster rd and 16	1/12/2018 5:29 PM
37	Onanda Park	1/11/2018 11:06 AM
38	Foster to Onanda Pk	1/10/2018 10:53 PM
39	Canandaigua yacht club to butler rd. to middle Cheshire rd.	1/10/2018 4:37 PM
40	Tichenor Point to Yacht Club	1/10/2018 10:13 AM
41	home to German Brothers Marina	1/9/2018 5:57 PM
42	All side roads off of the above	1/9/2018 4:50 PM
43	Butler rd park	1/9/2018 3:30 PM
44	Seneca Point	1/9/2018 11:28 AM
45	Turnoff to Notre Dame	1/9/2018 11:07 AM
46	Ontario pathways is perfect for walking and biking!	1/8/2018 8:35 PM
47	Walking between Wells Curtis and the Yacht Club	1/8/2018 7:12 PM
48	To/from butler rd beach from my home	1/8/2018 4:09 PM
49	entire length for cycling	1/8/2018 12:40 PM
50	Foster Rd	1/8/2018 7:41 AM
51	Foster Road	1/7/2018 9:11 PM
52	To Parrish	1/7/2018 4:00 PM
53	Wegmans farm	1/7/2018 3:09 PM
54	Wells Curtis and north to German Brothers - walking	1/7/2018 10:26 AM
55	Wells Curtiss to German Brothers	1/7/2018 8:49 AM
56	Schoolhouse Beach	1/6/2018 8:25 PM
57	North of German Brothers	1/6/2018 7:54 PM
58	State Route 21	1/6/2018 5:38 PM
59	Onanda Park	1/6/2018 12:47 PM
60	bike to/from Vista View to/frm Pier & Kershaw park	1/6/2018 8:58 AM
61	Duel Road to Route 21	1/5/2018 4:44 PM
62	Small Swimming Area	1/5/2018 2:56 PM
63	Wells Curtice to Foster Rd.	1/3/2018 2:48 PM
64	by Onanda Park	1/2/2018 4:51 PM
65	Onanda Park	12/27/2017 1:37 PM
66	Onandaga Park	12/27/2017 12:11 PM
67	Seneca point	12/21/2017 6:18 PM

#	3.	DATE
1	yacht club	8/12/2018 7:53 PM

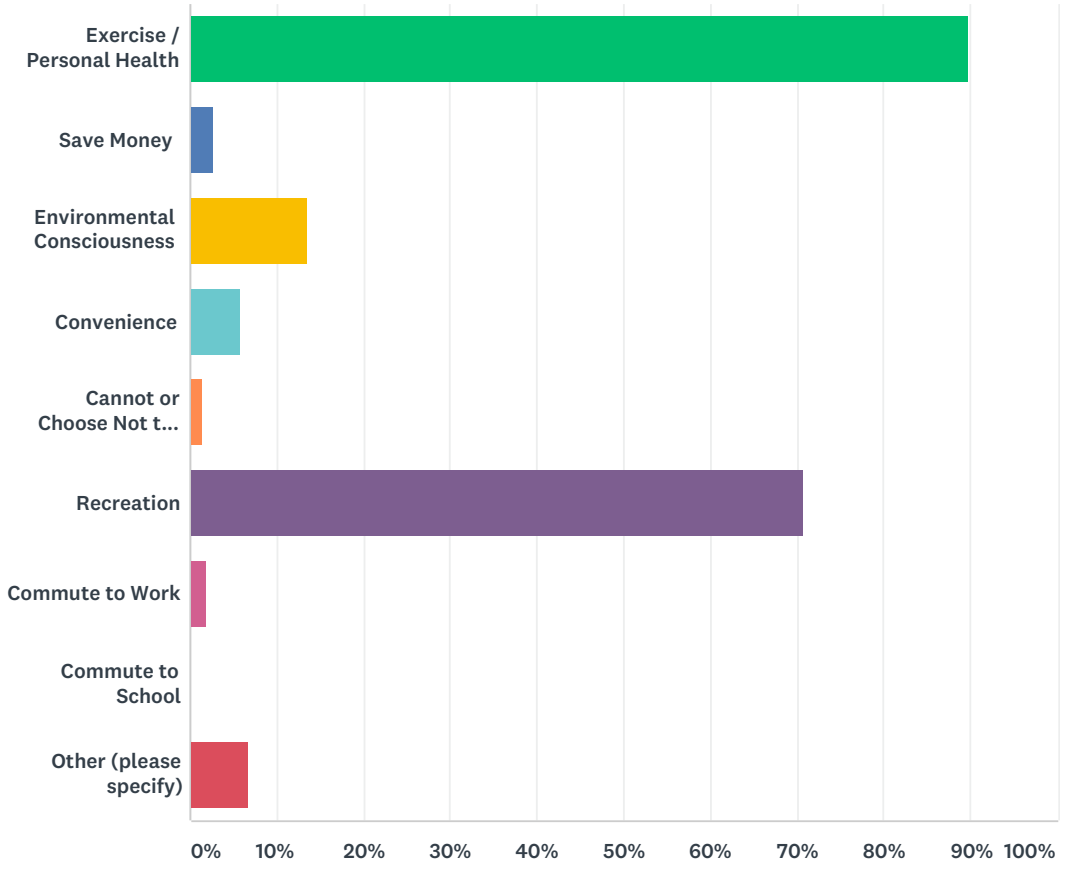
2	kershaw park / lakeshore drive	8/10/2018 8:17 AM
3	overlook	8/8/2018 11:08 AM
4	Lake Hill to Deuel Road	8/7/2018 11:22 AM
5	From Marina to town	8/4/2018 2:34 PM
6	5 Miles out between Foster and Wells Curtice - Dangerous w/hills and bicycles	8/3/2018 9:50 AM
7	Occasionally Bike ride completely around canandaigua lake	7/30/2018 9:36 AM
8	Path by bi pass	7/29/2018 7:40 PM
9	by German brothers marina (awful place to run/walk/bike)	7/29/2018 5:55 PM
10	onanda park	7/28/2018 1:52 PM
11	Parish Street	7/15/2018 6:22 PM
12	Water Treatment	5/12/2018 11:19 AM
13	Butler Road Park	4/17/2018 11:11 AM
14	Shore Line of Canandaigua Lake	4/16/2018 10:33 AM
15	Island View to German Brothers	1/29/2018 11:14 AM
16	to Butler Road	1/26/2018 11:52 AM
17	butler road to parrish st	1/15/2018 3:29 PM
18	Onanda park	1/13/2018 7:16 PM
19	walk/ride from North end to Barnes Rd	1/11/2018 11:06 AM
20	Foster to Butler	1/10/2018 10:53 PM
21	Canandaigua yacht club to wells curtice rd.	1/10/2018 4:37 PM
22	Butler Rd. To Foster Rd or beyond	1/10/2018 8:17 AM
23	Coye Road	1/9/2018 11:28 AM
24	Onanda park to wegmans farm	1/8/2018 4:09 PM
25	Duell Rd	1/8/2018 7:41 AM
26	German Brothers Marina	1/7/2018 3:09 PM
27	Well Curtis and south to Wegman's Farm - walking	1/7/2018 10:26 AM
28	Coye Road	1/6/2018 5:38 PM
29	Duel Road to Foster Road	1/5/2018 4:44 PM
30	Wells Curtice Middle Chesire to Wyffels to Cty Rd 16	1/3/2018 2:48 PM
31	bike by Wegmans Farm	1/2/2018 4:51 PM
32	Kershaw Park	12/27/2017 12:11 PM
33	Near Yacht club.	12/21/2017 6:18 PM

#	4.	DATE
1	Naples	8/12/2018 7:53 PM
2	Lake Hill to Onanda	8/7/2018 11:22 AM
3	Park trails	8/4/2018 2:34 PM
4	butler park	7/28/2018 1:52 PM
5	Deerfield Drive	7/15/2018 6:22 PM
6	German Brothers Marina	4/17/2018 11:11 AM
7	Island view, up Butler, down M Cheshire and back down the path by 5/20	1/29/2018 11:14 AM
8	Heron Hill Winery	1/13/2018 7:16 PM

9	Seneca Pt Rd	1/8/2018 7:41 AM
10	Canandaigua Yacht Club	1/6/2018 5:38 PM
11	Duel Road to Coye Road	1/5/2018 4:44 PM
12	Wells Curtice to Seneca Point Rd.	1/3/2018 2:48 PM
#	**5.**	**DATE**
1	Seneca Point	8/4/2018 2:34 PM
2	Wyffles to Wells Curtice	1/29/2018 11:14 AM
3	Wells- Curtice Rd	1/8/2018 7:41 AM
4	Camp Onanda	1/6/2018 5:38 PM
5	Duel Road to Seneca Point Road	1/5/2018 4:44 PM

Q13 For which of the following reasons do you choose to ride a bicycle (choose all that apply):

Answered: 256 Skipped: 76



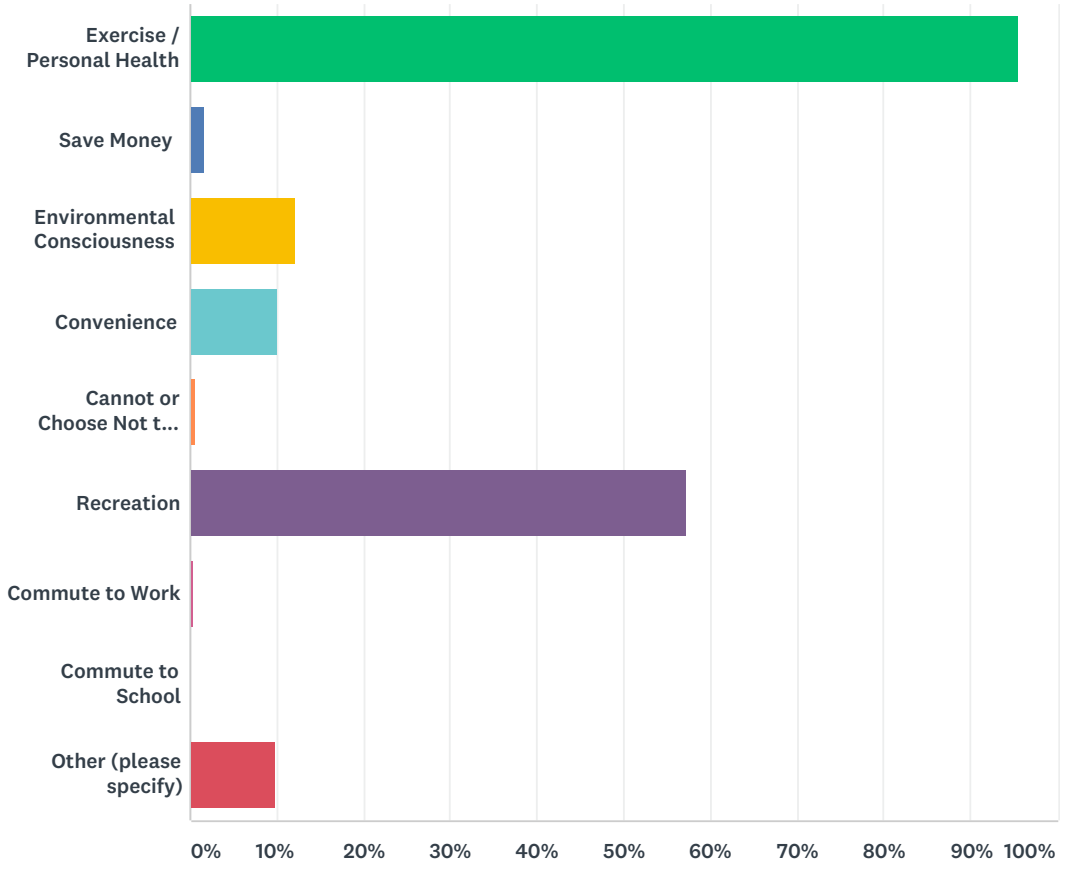
ANSWER CHOICES	RESPONSES	
Exercise / Personal Health	90%	230
Save Money	3%	7
Environmental Consciousness	14%	35
Convenience	6%	15
Cannot or Choose Not to Drive a Car	2%	4
Recreation	71%	181
Commute to Work	2%	5
Commute to School	0%	0
Other (please specify)	7%	17
Total Respondents: 256		

#	OTHER (PLEASE SPECIFY)	DATE
1	Not ride bike	8/8/2018 9:00 PM

2	Training for Cycling Racing	8/7/2018 11:55 AM
3	My kids ride their bikes, but not safe enough down by German Bros	8/3/2018 10:19 AM
4	Shuttle to North Shore boat launch	8/2/2018 4:15 PM
5	Don’t currently bike	8/2/2018 11:11 AM
6	Crossing Rd at CYC	7/22/2018 2:00 PM
7	Travel to Destination	4/17/2018 11:16 AM
8	Choose not to because it’s not safe.	1/10/2018 11:21 AM
9	n/a	1/9/2018 4:54 PM
10	For fun	1/9/2018 3:37 PM
11	Don't use bike	1/9/2018 12:52 PM
12	commute to beach	1/7/2018 4:24 PM
13	It's FUN!	1/6/2018 5:42 PM
14	not applicable	1/6/2018 3:20 PM
15	training for triathalons	1/5/2018 6:20 PM
16	Wellness	1/5/2018 4:50 PM
17	trips of 7 miles or leass	1/2/2018 4:54 PM

Q14 For which of the following reasons do you choose to walk (choose all that apply):

Answered: 297 Skipped: 35



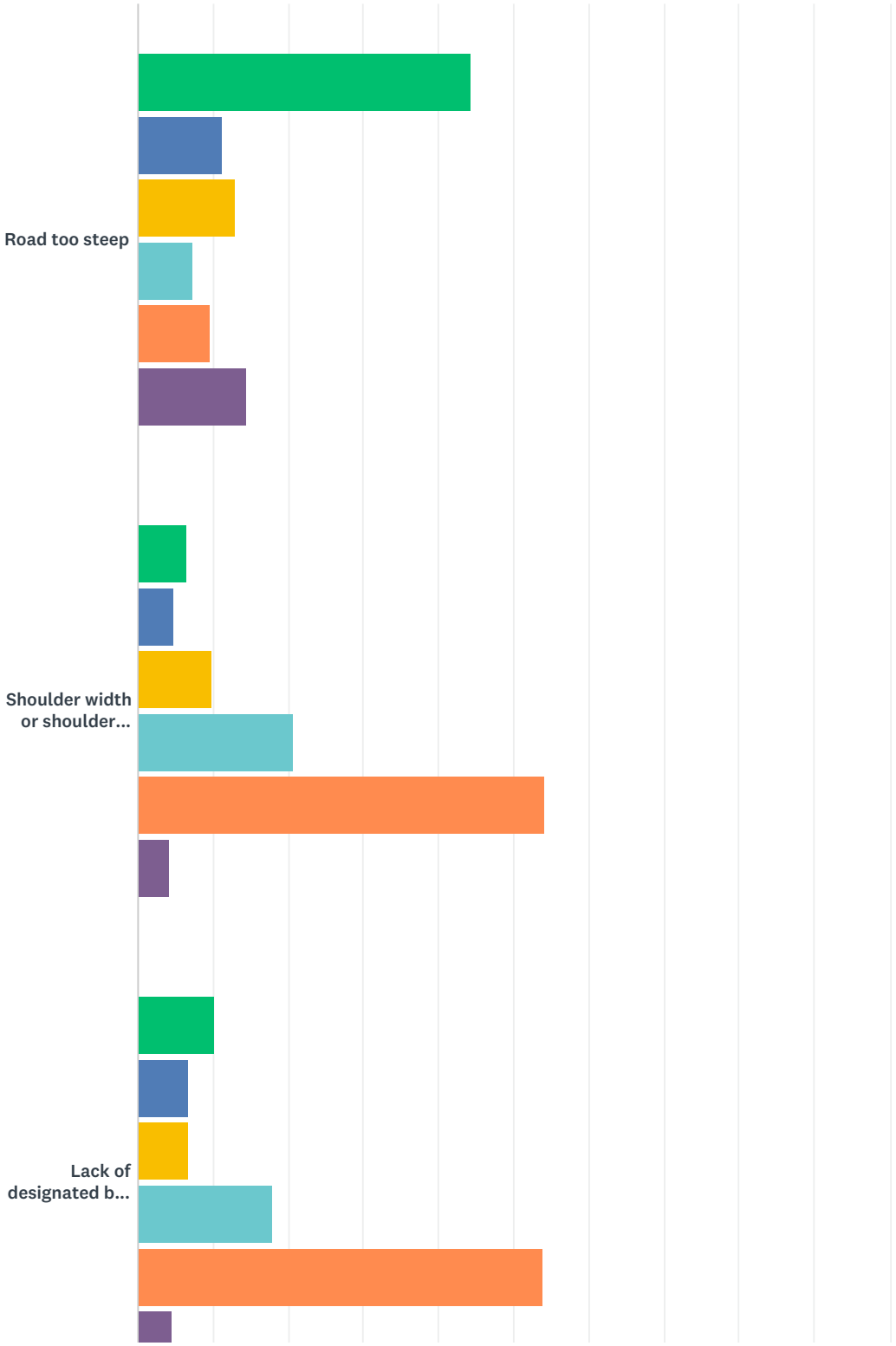
ANSWER CHOICES	RESPONSES	
Exercise / Personal Health	96%	284
Save Money	2%	5
Environmental Consciousness	12%	36
Convenience	10%	30
Cannot or Choose Not to Drive a Car	1%	2
Recreation	57%	170
Commute to Work	0%	1
Commute to School	0%	0
Other (please specify)	10%	29
Total Respondents: 297		

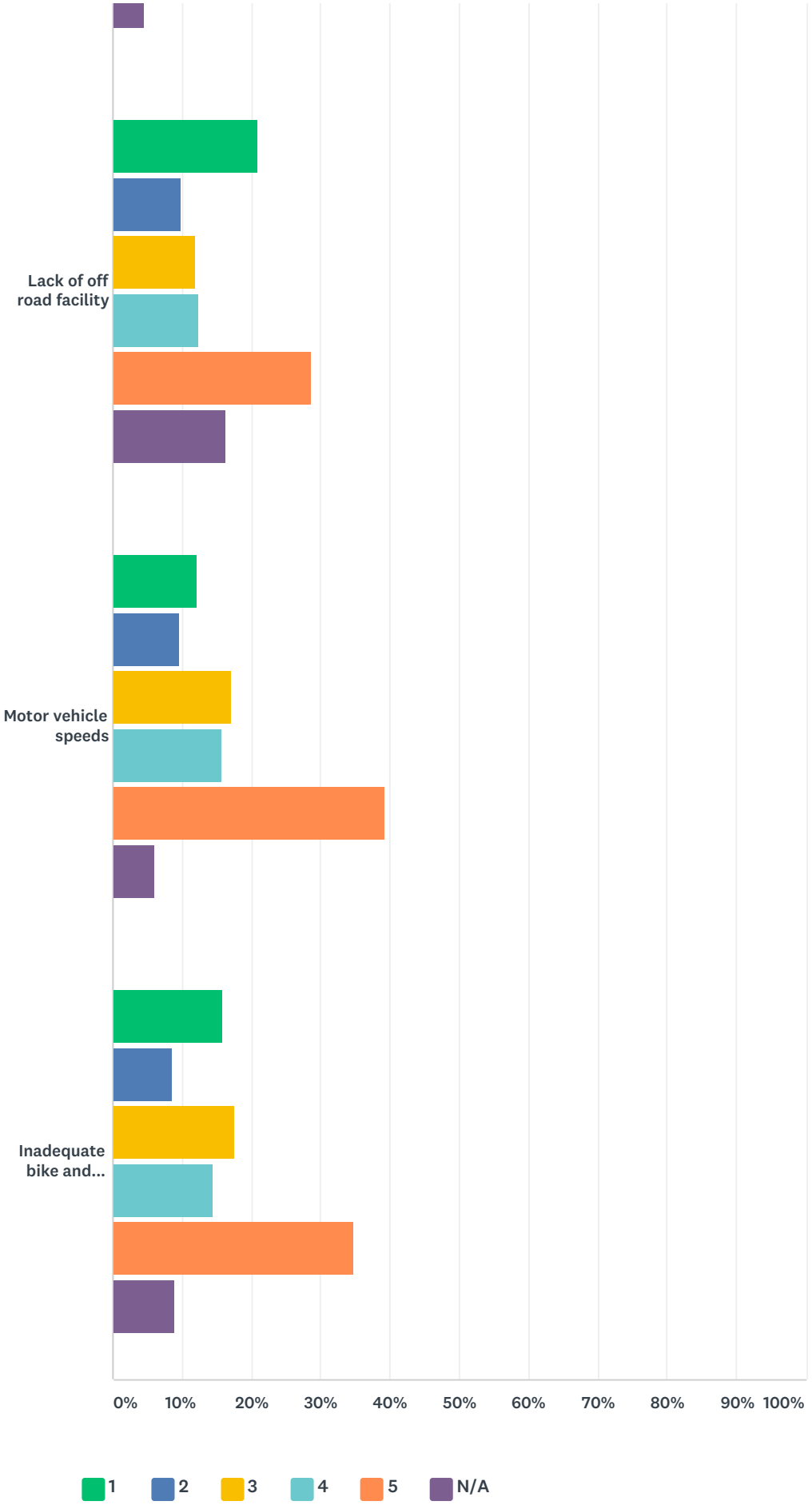
#	OTHER (PLEASE SPECIFY)	DATE
1	visit neighbors	8/13/2018 3:31 PM

2	Friends	8/4/2018 2:39 PM
3	Get my mail	8/3/2018 9:53 AM
4	Give misdirected mail to neighbors	8/2/2018 4:15 PM
5	Walk dog	8/2/2018 11:11 AM
6	to cross Lake road from CYC parking area to waterfront	7/27/2018 3:59 PM
7	Crossing Rd at CYC	7/22/2018 2:00 PM
8	socialization	7/20/2018 3:21 PM
9	cross walk at CYC	7/20/2018 11:37 AM
10	walk my dogs	5/16/2018 9:31 PM
11	Walk dog	5/10/2018 10:13 AM
12	Trvel to Destination or visit friends	4/17/2018 11:16 AM
13	Daily Drag with Dog	4/16/2018 10:38 AM
14	Dogs demand walks	1/11/2018 9:17 AM
15	Dog walking	1/9/2018 5:12 PM
16	Recreation nice to ride along lake	1/9/2018 3:37 PM
17	Walking dogs	1/9/2018 11:28 AM
18	socializing	1/9/2018 10:47 AM
19	walk the dog	1/8/2018 1:13 PM
20	dog walks	1/8/2018 7:48 AM
21	Dog Walking	1/7/2018 8:06 PM
22	visit neighbors	1/7/2018 4:24 PM
23	Walk the dog	1/6/2018 5:42 PM
24	Dog	1/6/2018 4:13 PM
25	Dog	1/6/2018 8:30 AM
26	Wellness	1/5/2018 4:50 PM
27	trips of 1 mile or less	1/2/2018 4:54 PM
28	Commute to Bars	12/27/2017 1:42 PM
29	Walk dog	12/22/2017 11:54 AM

Q15 What do you consider to be the primary barriers to bicycling on Ontario County Road 16?On a scale of 1 to 5, with 1 meaning no barrier and 5 meaning significant barrier, rate the following issues that could affect your ability and / or willingness to bike on Ontario County Road 16?

Answered: 273 Skipped: 59




Lack of off road facility
Motor vehicle speeds
Inadequate bike and...
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
1
2
3
4
5
N/A

	1	2	3	4	5	N/A	TOTAL	WEIGHTED AVERAGE
Road too steep	44% 110	11% 28	13% 32	7% 18	10% 24	15% 36	248	2.14
Shoulder width or shoulder pavement quality	6% 17	5% 13	10% 26	21% 55	54% 144	4% 11	266	4.16
Lack of designated bike lane	10% 26	7% 17	7% 17	18% 46	54% 138	5% 12	256	4.04
Lack of off road facility	21% 51	10% 24	12% 29	12% 30	29% 70	16% 40	244	3.22
Motor vehicle speeds	12% 32	10% 25	17% 45	16% 41	39% 103	6% 16	262	3.64
Inadequate bike and pedestrian / safety signage	16% 41	9% 22	18% 45	14% 37	35% 89	9% 23	257	3.47

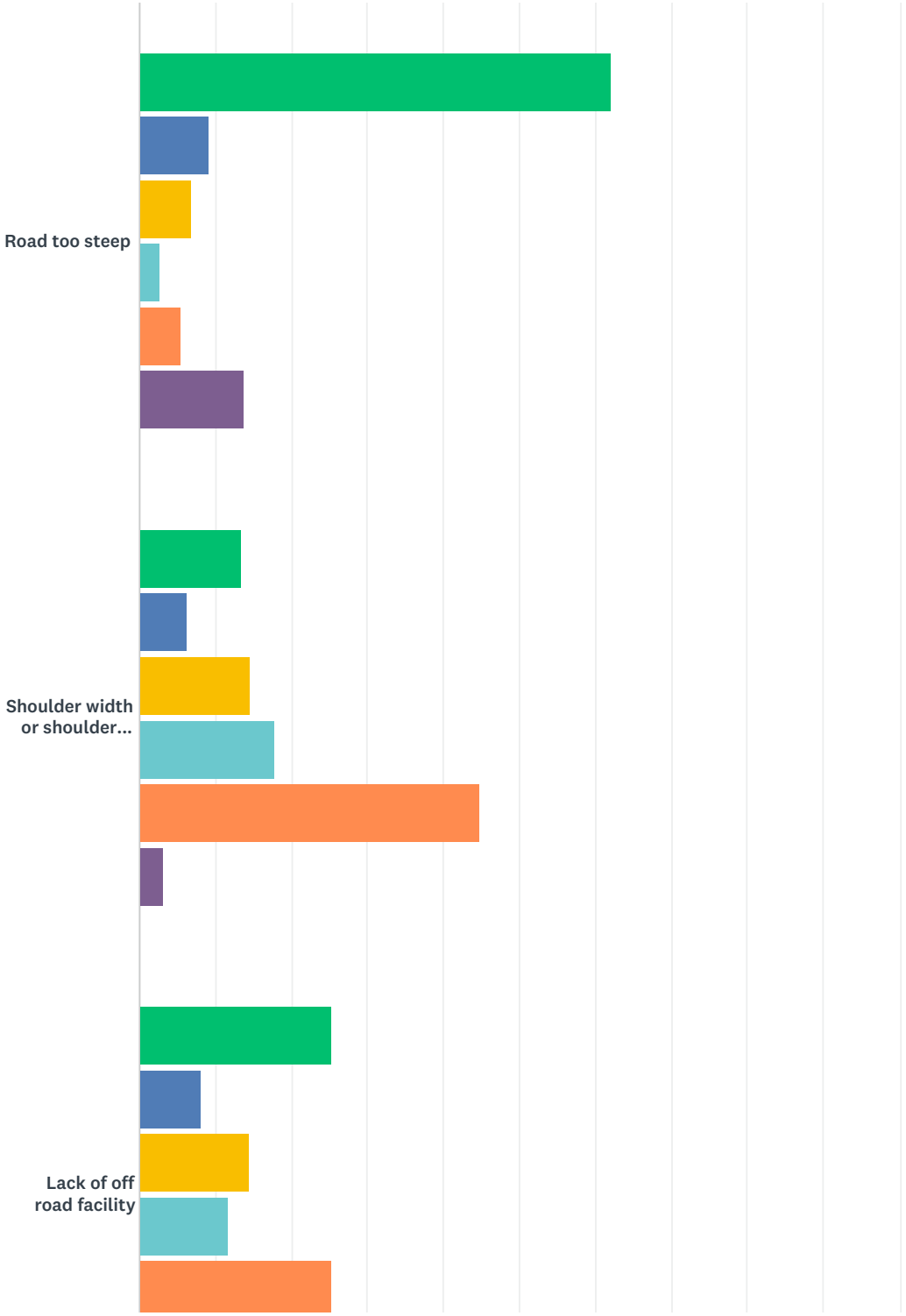
#	OTHER (PLEASE SPECIFY)	DATE
1	have had one car hit on the inside of white line. Have had one vehicle totaled in the driveway. Across road 3 mailboxes taken out and car was in ditch and bent pipe under driveway and totaled.	8/20/2018 8:52 PM
2	lack of shoulder parking pushes cars into street, water line access covers are 5-7" down into holes and dangerous	8/13/2018 3:31 PM
3	better and places to ride	8/13/2018 1:39 PM
4	Vehicles parked on county owned right of way/weeds,grass, brush left untrimmed along shoulder	8/13/2018 11:24 AM
5	people who park on road in addiction to the general lack of knowledge of right of way and legal yield to people	8/12/2018 7:56 PM
6	Landscaping trucks, other service trucks parked along the road are a huge barrier along the road.	8/8/2018 11:34 AM
7	Lakeside residence house parking too close the the road or in the road and take up too much of he shoulder	8/7/2018 11:55 AM
8	Enforce the speed limit	8/6/2018 1:21 PM
9	The road and shoulders in general is in bad shape	8/5/2018 7:44 AM
10	Drivers are the primary danger on West Lake Road. The speed limit is fine and the road is OK, but there are too many cars that ignor the limits or don't know how to interact with cyclists. A concentrated campaign with officers on bikes who can observe driver behavior might go a long way toward improving conditions for cyclists.	8/4/2018 6:41 PM
11	Don't understand "Lack of off road facility"	8/3/2018 5:57 AM
12	disrepair of shoulder pavement - crumbling	8/2/2018 5:37 PM
13	Dogs charging off property + Cars parked at German Bros	8/2/2018 4:15 PM
14	I'm baffled by this project. I am an avid runner and bicyclist, and I enjoy riding and running along CR 16. It's mostly 35mph and there is plenty of space to hug the fog line. If anything, pavement grind and resurface project is due, along with drainage. But a bike path? Sounds like the County Board of Supervisors are getting social engineered by the left liberal church goers again. Talk to people like me who are running that road every day. I noticed your survey doesn't even consider runners, just walking. CR 16 is a wonderful experience for walking and running and riding. Please don't ruin it with some over priced prevailing wage capital project that ruins everyone's properties. The current pavement patching project is poorly done with untrained County personnel as well.	8/2/2018 2:31 PM
15	German brothers marina	8/2/2018 12:02 PM
16	Speaking as a car driver also!!	8/2/2018 11:11 AM
17	I don't feel that there is significant difficulty biking or walking other than steep roads.	7/30/2018 7:54 PM
18	A few areas have very narrow shoulders and some hedges force you out into the road.	7/30/2018 6:25 PM
19	Road very narrow in places	7/30/2018 9:45 AM

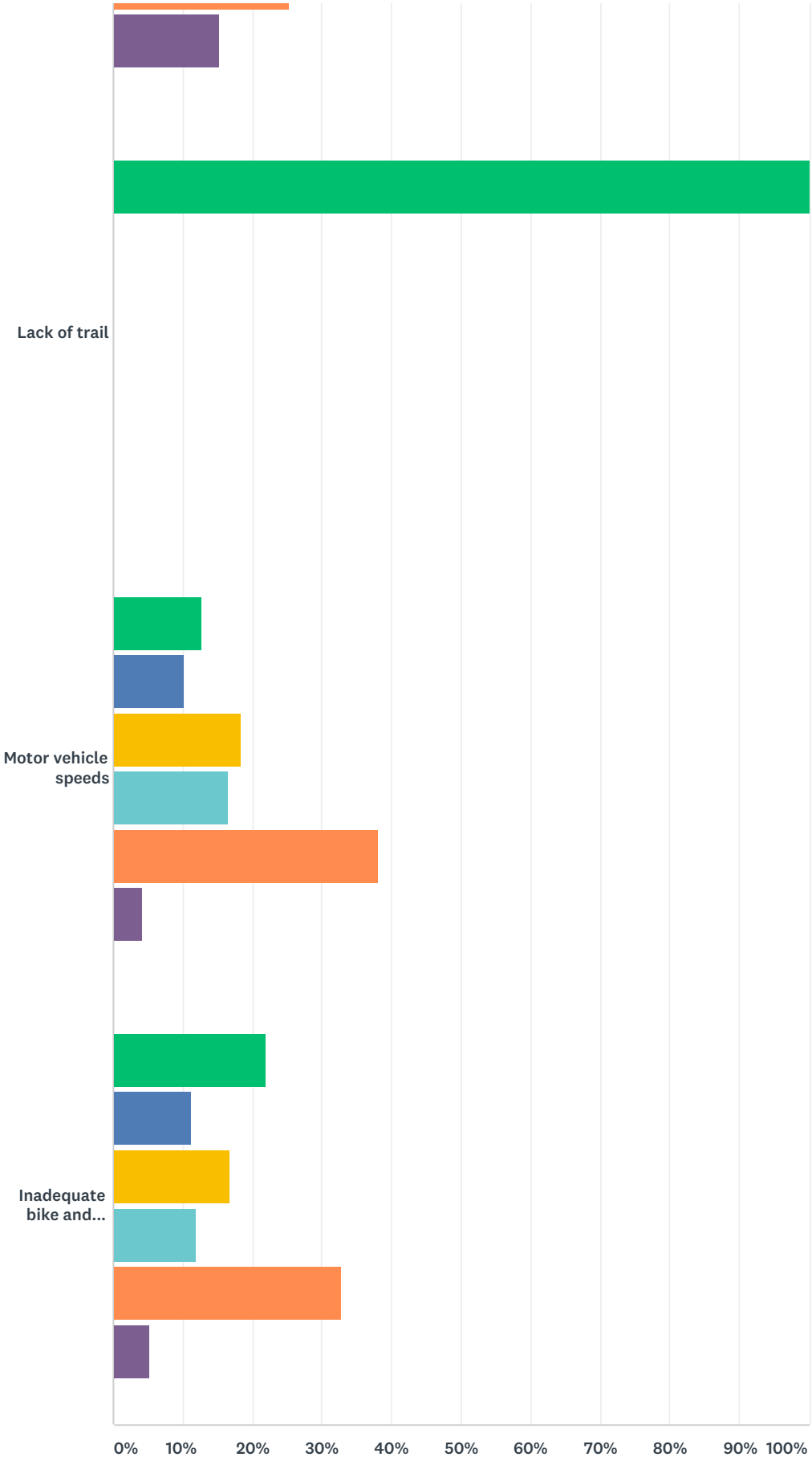
20	The shoulder is so narrow on both sides	5/30/2018 4:13 PM
21	variety & heavy traffic, Snow/ice 5	5/16/2018 9:31 PM
22	Drivers come to close to me and they don't slow down, many speed. There are many construction trucks.	5/13/2018 4:50 PM
23	Parked vehicles and construction/maintenance vehicles obstructing passage	5/10/2018 8:38 PM
24	The road is simply not wide enough, and with all the hiils and curves, it is too blind to support both bikes and cars.	5/10/2018 7:05 PM
25	Vehicle (Big Truck) Traffic	4/17/2018 11:16 AM
26	Truck Traffic, Out of Town Visitors	4/16/2018 10:38 AM
27	Cars and boat trailers parked on shoulder of road forces bikes into roadway	4/8/2018 9:26 AM
28	cars dont want to share the road	2/10/2018 5:32 PM
29	parking of landscaping trucks and equipment on both sides of the road. Parking of boats on both sides of the road at German Brothers marina.	1/26/2018 12:18 PM
30	distracted driving - cell phone	1/15/2018 3:32 PM
31	This road is too narrow, with too many blind driveways and curves, particularly heading south before German Bros marina to walk, much less bicycle safely, paricularly in the summer months when the population swells with tourists.	1/15/2018 11:59 AM
32	Rad faciltiy?	1/14/2018 3:50 PM
33	Shoulder with too narrow and autos don't move over when they can.	1/13/2018 7:22 PM
34	Activity increase. Summer speeders	1/12/2018 5:33 PM
35	Biggest barrier-Parked cars and boat trailers	1/11/2018 9:18 PM
36	drivers using cell phoes	1/11/2018 5:38 PM
37	General Safety	1/9/2018 4:40 PM
38	Dangerous	1/9/2018 3:37 PM
39	Drivers texting and not paying attention	1/9/2018 12:29 PM
40	The biggest barrier to safe riding along West Lake Road is the lack of a wide enough designated bike lane especially around German Brothers Marina and other private homes that park cars along the road. German Brothers often have cars and boats parked on both sides of the road causing a cyclist to have to swerve into the road and traffic to avoid hitting pedestrians and vehicles putting our own safety in jeopardy. I designated bike lane that is enforced would really be helpful and improve safety along the road.	1/8/2018 7:29 PM
41	Car drivers too fast	1/8/2018 4:13 PM
42	I already DO bike on the road, but would much prefer it to be safer and thus, more enjoyable.	1/7/2018 2:27 PM
43	Unfortunately the speed limit is not respected and the shoulder is not very wide.	1/7/2018 8:53 AM
44	Unsafe drivers	1/6/2018 8:31 PM
45	The pavement is getting beat up	1/6/2018 5:42 PM
46	Motor vehicle speed limit on County Road 16 needs to be reduced!	1/6/2018 3:20 PM
47	too much fast moving thru-traffic	1/6/2018 9:08 AM
48	Road too busy with large trucks and summer traffic is heavy.	1/6/2018 8:30 AM
49	why not create a trail away from CR 16	1/5/2018 3:53 PM
50	Cars-Trucks speed or pass eachother	1/5/2018 3:00 PM
51	Too many people speeding and texting	1/3/2018 2:51 PM
52	obstacles in the shoulder	1/2/2018 4:54 PM

53	I think it's sad how there is NO priority for bikers-the walkers don't like bikes and the cars don't respect them so you are essentially trying to follow rules and ride within what the town has for you which currently on 16 is nothing :-(	12/27/2017 1:59 PM
54	There are probably particular areas along the road where shoulder width and car speeds are most dangerous. Eg. Crests of hills and sharper turns. Also having more places to go along Co.Rd16 would help.	12/27/2017 1:42 PM
55	Prime walking/biking season is also lawn cutting season. The large trailers completely block the shoulder and view	12/27/2017 10:30 AM
56	vehicles parked in cycling lane	12/14/2017 6:07 PM

Q16 What do you consider to be the primary barriers to walking on Ontario County Road 16?On a scale of 1 to 5, with 1 meaning no barrier and 5 meaning significant barrier, rate the following issues that could affect your ability and / or willingness to walk on Ontario County Road 16?

Answered: 290 Skipped: 42




Lack of trail
Motor vehicle speeds
Inadequate bike and...
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

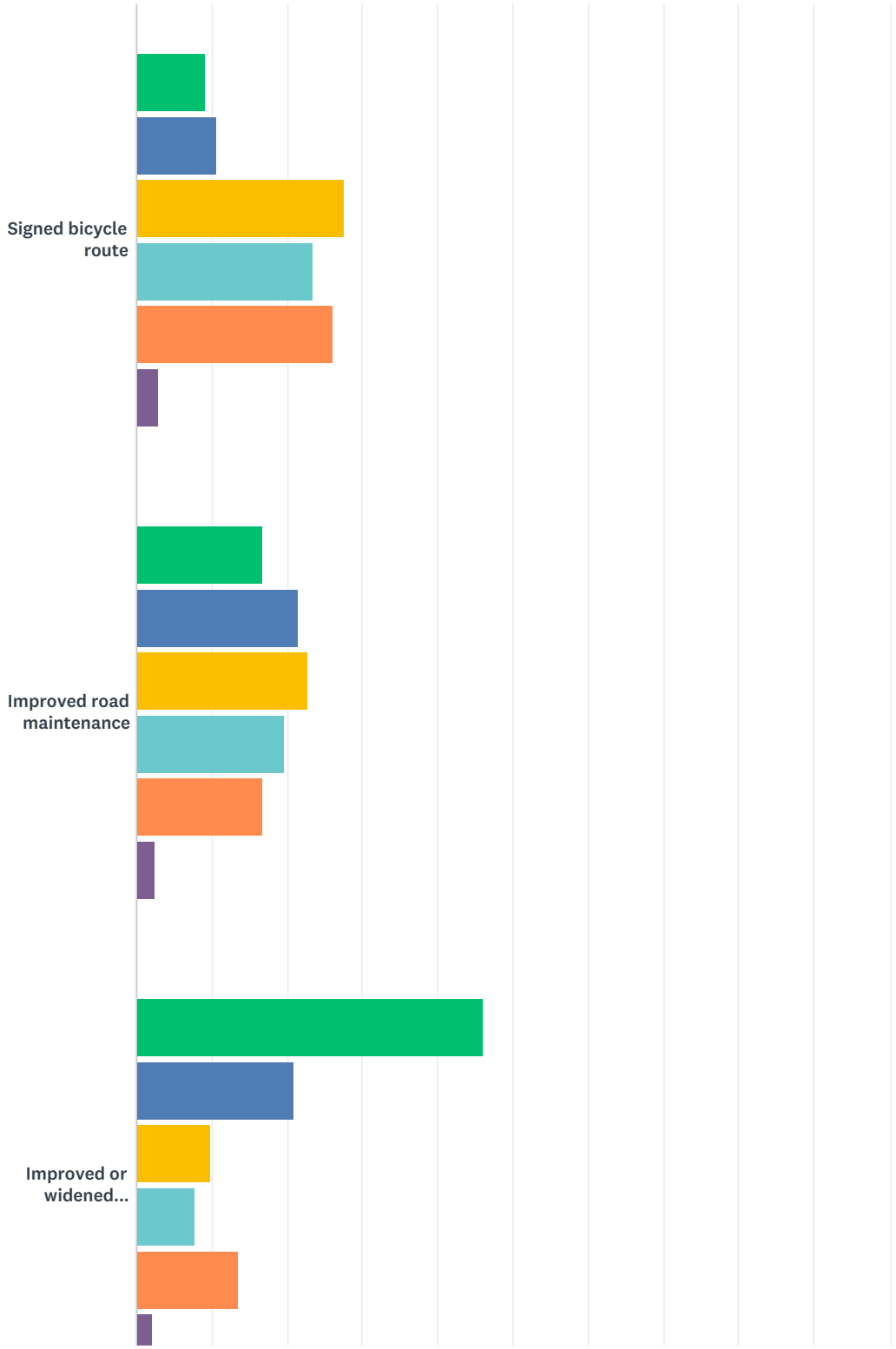
	1	2	3	4	5	N/A	TOTAL	WEIGHTED AVERAGE
Road too steep	62% 162	9% 24	7% 18	3% 7	5% 14	14% 36	261	1.61
Shoulder width or shoulder pavement quality	13% 38	6% 18	15% 42	18% 51	45% 128	3% 9	286	3.77
Lack of off road facility	25% 65	8% 21	14% 37	12% 30	25% 65	15% 39	257	3.04
Lack of trail	100% 1	0% 0	0% 0	0% 0	0% 0	0% 0	1	1.00
Motor vehicle speeds	13% 36	10% 29	18% 52	17% 47	38% 108	4% 12	284	3.60
Inadequate bike and pedestrian / safety signage	22% 59	11% 30	17% 45	12% 32	33% 88	5% 14	268	3.24

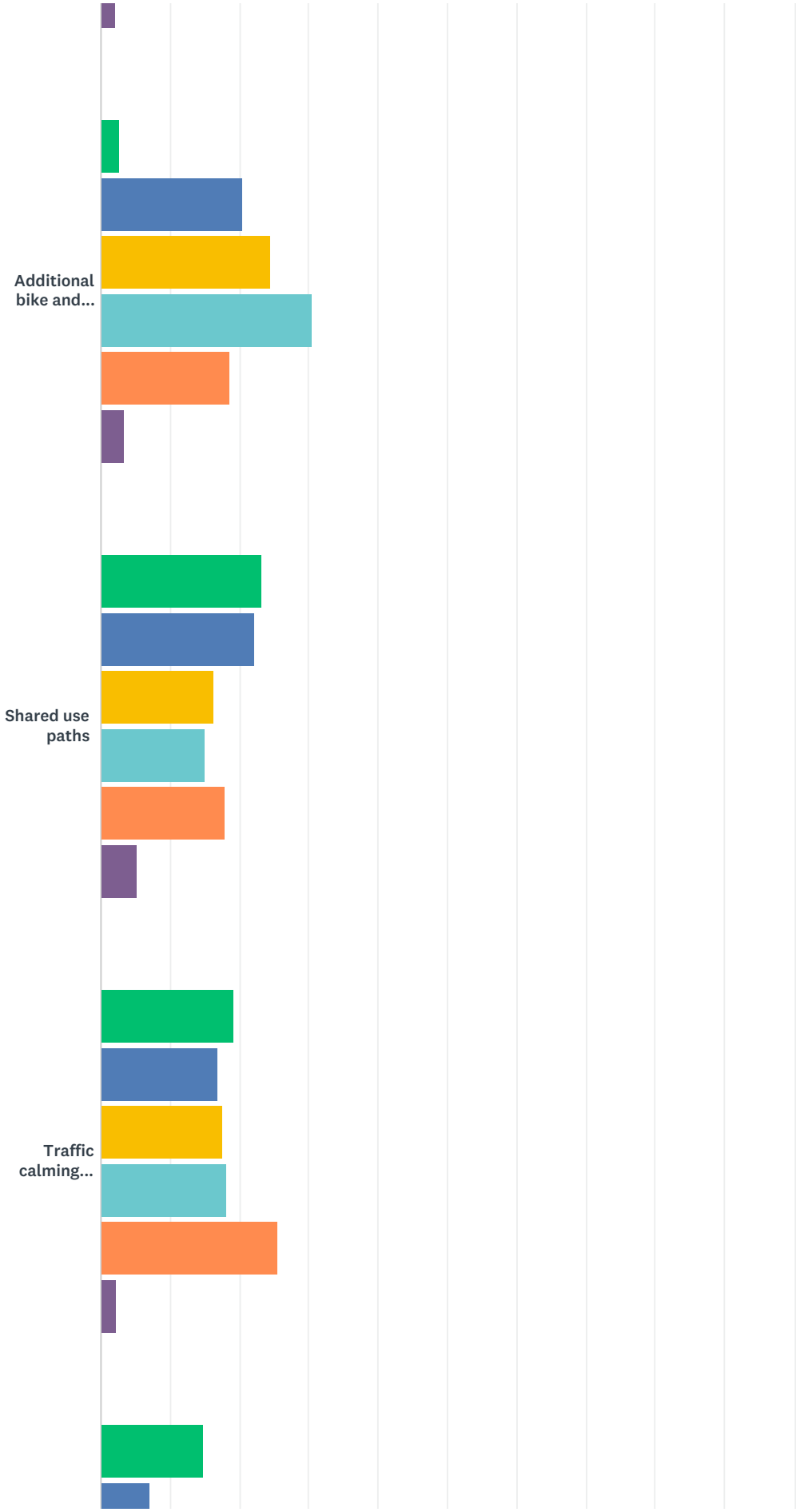
#	OTHER (PLEASE SPECIFY)	DATE
1	there is not enough safe space for all of this.	8/20/2018 8:52 PM
2	need signs asking drivers to move away from pedestrians	8/13/2018 3:31 PM
3	road not designed for bicycles	8/13/2018 1:39 PM
4	Vehicles parked on county owned right of way/weeds,grass brush left unmoved along shoulder	8/13/2018 11:24 AM
5	Posted speed limit is fine, actual motor vehicle speed is typically faster	8/9/2018 1:28 PM
6	Landscaping trucks, other service trucks parked along the road are a huge barrier	8/8/2018 11:34 AM
7	Cars drive way to fast and do not respect Walkers, Runner or Cyclisit	8/7/2018 11:55 AM
8	After being forced off the road or into the ditch while walking , it is unfortunately much safer to walk elsewhere.. This is such a shame as the lake etc. is so beautiful/relaxing.	8/5/2018 3:56 PM
9	disrepair of shoulder (crumbling edges)	8/2/2018 5:37 PM
10	No sidewalk	8/2/2018 5:35 PM
11	Dogs charging off property + Cars parked at German Bros	8/2/2018 4:15 PM
12	German brothers marina	8/2/2018 12:02 PM
13	Car speed is fine if walk way was wider/safer.	8/2/2018 11:11 AM
14	I don't feel that there is significant difficulty biking or walking other than steep roads.	7/30/2018 7:54 PM
15	A few areas have very narrow shoulders and some hedges force you out into the road.	7/30/2018 6:25 PM
16	A safe sidewalk would be nice to have	7/30/2018 9:45 AM
17	None, fine the way it is	7/27/2018 6:23 PM
18	Simply vehicle traffic	7/27/2018 3:59 PM
19	heavy & varied traffic, snow/ice 5	5/16/2018 9:31 PM
20	Glass or questionable materials for my dog to walk on, uneven surface that can easily cause me to stumble. Not enough room to feel safe with cars flying right next to me.	5/13/2018 4:50 PM
21	Parked vehicles and construction/maintenance vehicles obstructing passage	5/10/2018 8:38 PM
22	Crazy Drivers	4/17/2018 11:16 AM
23	Truck Traffic, Speeding Cars	4/16/2018 10:38 AM
24	Cars and boat trailers parked on the shoulder of the road. Forces walkers to move out into the roadway.	4/8/2018 9:26 AM
25	people in cars dont care	2/10/2018 5:32 PM

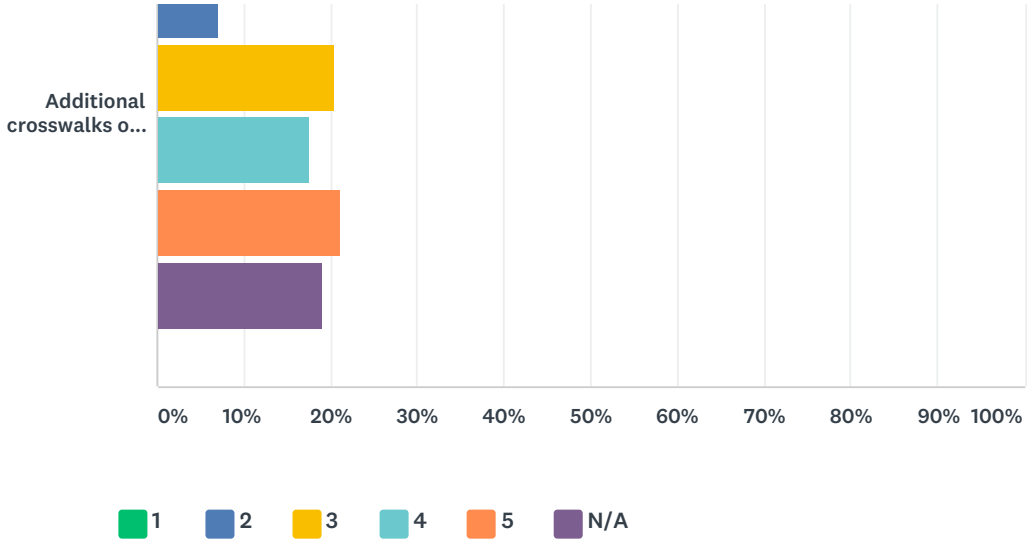
26	Provide access to lake shore drive along south side of 5 and 20 below road grade	1/29/2018 11:44 AM
27	Too many landscape vehicles on both sides of road. Dangerous conditions at German Brothers Marina. Do they really need both sides of the road for all those boats?	1/26/2018 12:18 PM
28	The road is too narrow, with too many blind spots, too much car traffic and too many people, particularly in the summer to walk on safely. There is virtually no place to park service vehicles like tricks or delivery vans or landscape flatbeds safely by the side of the road and there is zero margin for error if there is an obstruction like a boat in the road when you come around a blind curve. Those of us that live here know you have to drive slowky and be prepared to stop at a moments notice. The terrain is steep aling most of the road, with drainage dirches and steep hills to the west in resudent's front lawns (swere pipes too) and the lake on the east side of the road. Where is there room for a bicycle lane and who is going to pay for the infrastructure that would all have to be moved?	1/15/2018 11:59 AM
29	Road facility?	1/14/2018 3:50 PM
30	Same as above.	1/13/2018 7:22 PM
31	Lack of Sheriff enforcement of speed	1/13/2018 5:27 PM
32	Parked cars and boat trailers	1/11/2018 9:18 PM
33	drivers using cell phones	1/11/2018 5:38 PM
34	restroom facilities would be helpful	1/11/2018 11:10 AM
35	I run/jog with no major issues	1/9/2018 12:52 PM
36	Same as above.	1/8/2018 7:29 PM
37	large speeding	1/7/2018 3:01 PM
38	Again, I already do walk on the road, but would like it to be safer and thus, more enjoyable.	1/7/2018 2:27 PM
39	Stupid drivers	1/6/2018 8:31 PM
40	Cars parked,bicycles riding 2+side by side	1/6/2018 4:13 PM
41	Construction vehicles traveling at high speeds!	1/6/2018 3:20 PM
42	constant construction vehicles	1/6/2018 1:50 PM
43	after Foster vehicle speeds > 60-65 mph	1/6/2018 9:08 AM
44	Lack of sheriff patrol for speeding and/or distracted motorists.	1/5/2018 5:54 PM
45	Cars & Trucks speed or pass eachother	1/5/2018 3:00 PM
46	obstacles in the shoulder	1/2/2018 4:54 PM
47	Again, places to go would be nice. Unsure what "off-road facility" refers to? Off-road trail or business?	12/27/2017 1:42 PM
48	Prime walking/biking season is also lawn cutting season. The large trailers completely block the shoulder and view	12/27/2017 10:30 AM
49	Steepness a factor only at Millers Hill, shoulder width only a factor in a few places	12/14/2017 6:07 PM

Q17 Of the following facilities or amenities, which would most likely improve the experience of someoneone biking and / or walking on Ontario County Road 16. Select and rank your top 5, with 1 representing the most desired.

Answered: 286 Skipped: 46




Additional bike and...
Shared use paths
Traffic calming...



	1	2	3	4	5	N/A	TOTAL	WEIGHTED AVERAGE
Signed bicycle route	9% 13	11% 15	28% 39	23% 33	26% 37	3% 4	141	3.48
Improved road maintenance	17% 27	22% 35	23% 37	20% 32	17% 27	2% 4	162	2.98
Improved or widened shoulders	46% 108	21% 49	10% 23	8% 18	14% 32	2% 5	235	2.20
Additional bike and pedestrian / safety signage	3% 4	21% 31	25% 37	30% 46	19% 28	3% 5	151	3.43
Shared use paths	23% 40	22% 38	16% 28	15% 26	18% 31	5% 9	172	2.82
Traffic calming measures	19% 34	17% 30	18% 31	18% 32	26% 45	2% 4	176	3.14
Additional crosswalks or improvements at existing crosswalks	15% 21	7% 10	20% 29	18% 25	21% 30	19% 27	142	3.29

#	OTHER (PLEASE SPECIFY)	DATE
1	I walk every day with no problems	8/16/2018 3:38 PM
2	Shoulders free of parked vehicles.	8/13/2018 11:24 AM
3	Require property owners to prune shrubs, bushes and trees so not to push me into road.	8/11/2018 3:38 PM
4	Add safety cones at busy locations during busy times.	8/9/2018 4:32 PM
5	With the widened shoulders or path should be a colored bike/walk/run/pedestrian lane like the "Green Lane" in Rochester	8/7/2018 4:49 PM
6	Maybe paint the bike lane a universal "green" bike lane like most big cities do.	8/7/2018 11:55 AM
7	May not apply but a sidewalk connecting Deerfield Dr. to existing sidewalk on West Lake Rd..	8/5/2018 5:50 AM
8	Dog leash/fencing guidelines	8/2/2018 4:15 PM
9	Stop German brothers from parking on the shoulder	8/2/2018 12:02 PM
10	I think that if bikers and walkers use the white line as a guideline, the roads are safe to use. No additional signage or changes are needed	7/30/2018 7:54 PM
11	Above for crosswalk at CYC	7/27/2018 3:59 PM
12	Need crosswalk in front of CYC	7/22/2018 2:00 PM

13	less traffic	5/16/2018 9:31 PM
14	I think we need a sidewalk or a wide paved area for pedestrians and bicycles.	5/13/2018 4:50 PM
15	The only thing that would make walking, and particularly biking, safer, would be to widen the shoulders, which I can't see happening, because there just isn't space enough, and I DON'T believe in eminent domain.	5/10/2018 7:05 PM
16	Separated designated Bike/Walk Path	4/17/2018 11:16 AM
17	No parking of boat trailers and cars on shoulder of road.	4/8/2018 9:26 AM
18	Additional improvements at existing crosswalks, And shared used paths.	2/14/2018 5:10 PM
19	don't do it	2/10/2018 5:32 PM
20	provide access to lake shore drive along south side of 5 and 20 to red jacket park	1/29/2018 11:44 AM
21	Safety signage, improved road maintenance, shared use paths	1/26/2018 12:18 PM
22	These are great ideas but given the topography and the proximity of the Lake to the road I cannot envusion how this is feasible. A narrow unpritected bile lane will get people killed. I live here and do not walk or bike on this road.	1/15/2018 11:59 AM
23	Better speed enforcement	1/13/2018 5:27 PM
24	Marina area hazardous	1/12/2018 11:22 AM
25	Eliminate parking on shoulder of road. Forces foot and bike traffic out into traffic.	1/11/2018 9:18 PM
26	Ditches are treacherous	1/10/2018 4:49 PM
27	no additional signs	1/9/2018 6:07 PM
28	none of the above	1/9/2018 4:54 PM
29	Connection to Middle Cheshire Road path and connection to walking path along 5 & 20 behind Deerfield drive.	1/9/2018 11:09 AM
30	This is not an easy fix.	1/6/2018 4:13 PM
31	Increased sheriff patrol	1/5/2018 5:54 PM
32	Patrol for speeding and texting	1/3/2018 2:51 PM
33	A bike lane that's well lit and on the side of the road by the lake-more driveways are on the side OFF the lake so you see cars on that side more often coming in and out of driveways	12/27/2017 1:59 PM

Q18 Please list up to five specific locations on Ontario County Road 16 where a spot-specific improvement (intersection improvement, mid-block crossing, maintenance issue, hazard, etc.) is needed to improve bicycling and/or walking conditions and specify the needed improvement type.

Answered: 173 Skipped: 159

ANSWER CHOICES	RESPONSES	
1.	100%	173
2.	61%	105
3.	31%	54
4.	19%	33
5.	11%	19

#	1.	DATE
1	Keeping a bike/walking lane open by German Brothes Marina.	8/15/2018 4:46 PM
2	new driveway on West side of road 1/8 mile south of Wells Curtice Rd over blind rise is dangerous	8/13/2018 3:38 PM
3	yacht club	8/13/2018 1:50 PM
4	German Brothers	8/13/2018 11:53 AM
5	German brothers	8/13/2018 11:35 AM
6	all intersections	8/13/2018 9:54 AM
7	German Brothers	8/13/2018 7:29 AM
8	German brothers	8/12/2018 8:04 PM
9	German Brothers Marina. Boat trailers need to be moved off the right-of-way. Where they are parked now forces pedestrians and bicyclists to move into the traffic lanes to get around them.	8/10/2018 10:26 AM
10	Yacht Club	8/10/2018 8:22 AM
11	German Bros. Marina crosswalk & traffic cones	8/9/2018 7:13 AM
12	Intersection at Foster Rd / steep hill crest	8/8/2018 10:21 PM
13	Yach Club to Wyffle Road intersection (toward South)- narrow shoulder on the right side	8/8/2018 10:18 PM
14	Butler Rd	8/8/2018 8:45 PM
15	The area around German Brother's Marina	8/8/2018 11:35 AM
16	Butler Rd / Schoolhouse beach	8/8/2018 11:12 AM
17	German BRothers Marina	8/7/2018 9:25 PM
18	Slow speed limit for first 5 miles	8/7/2018 9:18 PM
19	Turn just South of Yatch Club	8/7/2018 6:08 PM
20	The area between Butler and Parrish- cars park along road, go to fast and very narrow shoulder	8/7/2018 4:51 PM
21	need wider shoulder south of yacht club to Foster Rd.	8/7/2018 12:39 PM
22	Put a bike rack (specific bike parking area) in place at Butler School house parking lot	8/7/2018 12:05 PM
23	German Brother Marina	8/7/2018 11:40 AM
24	German Brothers Marina - Shoulder too narrow	8/6/2018 6:21 PM

25	Fill in craters on rd caused by paveovers	8/6/2018 1:23 PM
26	German Brothers Marine Area	8/5/2018 12:26 PM
27	Butler park	8/5/2018 8:08 AM
28	German brothers (get boats off road)	8/5/2018 7:51 AM
29	Visibility in both directions is poor exiting Deerfield Dr. Remove shrubs planted in right away on south side of entrance,. Not sure how to improve visibility to the north, treetrunks and angle of road are issue.	8/5/2018 6:09 AM
30	Between the yacht club and Wyffells Road, on both sides the shoulders are narrow	8/4/2018 6:48 PM
31	the road needs one thing, increased police presence	8/4/2018 6:03 PM
32	German Brothers Marina road is too narrow and not enough parking for customers. It is a one lane road in the summer.	8/4/2018 2:48 PM
33	school house area	8/3/2018 7:32 PM
34	german brothers	8/3/2018 4:43 PM
35	German Marina	8/3/2018 1:22 PM
36	German Bros	8/3/2018 10:19 AM
37	German Brothers Marina - people trying to get to and from their boats	8/3/2018 10:04 AM
38	around German Bros Marina	8/3/2018 6:05 AM
39	Near Foster Rd	8/2/2018 5:35 PM
40	German Brothers (parking/obstruction)	8/2/2018 4:20 PM
41	None needed	8/2/2018 2:33 PM
42	Near the marina	8/2/2018 2:14 PM
43	Butler to Wyffels wider shoulders with specific markings for bicycle and pedestrian lane	8/2/2018 1:15 PM
44	German brothers marina	8/2/2018 12:03 PM
45	German Brothers Marina is a walking hazard	8/2/2018 11:16 AM
46	Onanda Park-need crossing signs	7/31/2018 1:06 PM
47	Wells-Curtice Rd. intersection -- stop markings for bicycles.	7/31/2018 9:21 AM
48	Side of roads inside the white line could be cleaned much more than they are.	7/30/2018 8:14 PM
49	narrow shoulder and deep ditches just south of 3700 CR 16 on west side	7/30/2018 6:29 PM
50	Widen walk areas At bridge areas north of German brothers	7/30/2018 9:55 AM
51	Stone on side of road.	7/29/2018 7:53 PM
52	German Brothers	7/29/2018 7:17 PM
53	by German brother marinas	7/29/2018 6:01 PM
54	from lake front to onanda park	7/28/2018 2:04 PM
55	German Bros. Marina- very dangerous , narrow for cars and no room for bikes/walkers. Flashing caution light needed.	7/28/2018 2:03 PM
56	Crosswalk at Canandaigua Yacht Club - mid block crossing is needed.	7/28/2018 8:43 AM
57	CYC	7/27/2018 6:39 PM
58	german brothers parking is a joke	7/27/2018 5:13 PM
59	Canandaigua Yacht Club	7/27/2018 4:00 PM
60	Butler road intersection w West leaked rd	7/26/2018 3:58 PM
61	crosswalk at yacht club	7/24/2018 8:22 AM
62	West Lake Rd (Co. Rte 16)	7/23/2018 12:27 PM

63	3524 CYC: Crosswalk Needed	7/22/2018 2:02 PM
64	Canandaigua yacht club	7/22/2018 10:39 AM
65	Canandaigua yacht club	7/22/2018 9:37 AM
66	Canandaigua Yacht Club crossing	7/21/2018 12:35 PM
67	Canandaigua Yacht Club pedestrian road crossing	7/21/2018 9:20 AM
68	Canandaigua Yacht Club crosswalk	7/21/2018 7:36 AM
69	Cdga Yacht Club	7/21/2018 6:36 AM
70	yacht club needs crosswalk	7/20/2018 10:46 PM
71	Cross walk at Canandaigua Yacht Club	7/20/2018 6:18 PM
72	Canandaigua Yacht Club from club house to waterfront	7/20/2018 4:34 PM
73	Yacht Club should have a marked crosswalk to the lake	7/20/2018 3:23 PM
74	Canandaigua Yacht Club needs crosswalk	7/20/2018 11:44 AM
75	CYC	7/20/2018 11:37 AM
76	crossing walk at Canandaigua Yacht Club	7/20/2018 10:54 AM
77	crossing at Canandaigua Yacht Club to waterfront	7/20/2018 10:39 AM
78	Canandaigua Yacht Club - crosswalk	7/20/2018 10:35 AM
79	Cross walk at Canandaigua Yacht Club	7/20/2018 9:34 AM
80	wider shoulders or side walk between Deerfield Dr. and Parrish St.	7/19/2018 10:33 AM
81	Need crosswalk at Canandaigua Yacht Club	7/15/2018 6:27 PM
82	Cross walk at Canandaigua Yacht Club	7/15/2018 4:45 PM
83	Every blind curve on the road	5/30/2018 4:16 PM
84	German Bros use of shoulders	5/20/2018 6:07 PM
85	Canandaigua Yacht Club crosswalk	5/16/2018 9:45 PM
86	slight / bumpy turn past yacht club going south on 16 is very dangerous	5/16/2018 4:06 PM
87	maintenance/speed controls from fostertoparrrish...	5/13/2018 9:31 PM
88	From Parrish Street in the City as far south as the Town can manage, we need sidewalks or wider shoulders.	5/13/2018 4:58 PM
89	Ononda Park Crossing	5/12/2018 11:30 AM
90	Butler Road	5/11/2018 6:45 AM
91	Signage	5/10/2018 11:16 AM
92	Shoulders of roads	5/10/2018 10:37 AM
93	Yacht Club to Butler Rd	5/10/2018 10:16 AM
94	NO CROSSWALKS never ever.	5/10/2018 9:49 AM
95	Cars blocking the shoulder	5/10/2018 9:33 AM
96	CR 16 and Parrish Street. A Nightmare.	4/17/2018 11:26 AM
97	Sidewalk from Parrish to end of Co. Rd. 16 (West Side)	4/16/2018 10:42 AM
98	Need a lane coming up the hill from Parish St	4/12/2018 4:46 PM
99	Yacht Club	4/10/2018 1:30 PM
100	Boat trailers blocking shoulder at marina	4/8/2018 9:32 AM
101	speed limit to 30 mph from city border to The water utility.	2/14/2018 5:15 PM
102	City portion of west lake needs a side walk/bike path	1/29/2018 11:47 AM

103	German Brothers Marina...if boat parking on both sides cannot be eliminated, then center line cones need to be placed for cars to stay in their lanes. Also client parking along both sides of the road is another safety hazard. german Brothers has upland "land" that should be used for client parking.	1/26/2018 12:31 PM
104	Intersection of Foster Road down the hill to the north to the German Bros. Marina	1/25/2018 5:43 PM
105	All west lake road	1/25/2018 12:42 PM
106	sholder width needs to be increased	1/22/2018 12:19 PM
107	Shoulders are particularly narrow between the Yacht Club and Butler Road (also high traffic from new housing developments on Middle Chesire)	1/15/2018 4:00 PM
108	Bend in the road heading North toward German Bros. is dangerous. There needs to be an overhead crosswalk of some kind there for pedestrians to get from their cars to the lakefront safely. There are constantly boats in the road being moved and boats along the side of the road on both sides. People walk out from between the boats into the road, leave coolers on the side of the road dticking into the driving lane, children dart into the road. German's has been here forever and provides a needed service to the community. There is no room for a bike lane without a major construction project involving moving drainsge and sewer lines snd taking property by eminent domain and widening the road.	1/15/2018 12:24 PM
109	need wider shoulder south of yacht club to Foster Rd.	1/14/2018 4:45 PM
110	German Bros marina- shouldn't allow boats/ trailers park on the side of the road during the summer. Children jump out of cars whil trucks speed through. VERY dangerous!	1/13/2018 7:30 PM
111	Improved and wider shoulders in most areas	1/13/2018 5:43 PM
112	Wells Curtice intersection	1/12/2018 5:45 PM
113	German bros marina, reduce speed to 5mph	1/12/2018 5:37 PM
114	The entire road is too narrow for safe travel of bikes or walkers	1/12/2018 5:07 PM
115	German Brothers Marina	1/12/2018 11:23 AM
116	Any spot where cars and boat trailers are parked on shoulder.	1/11/2018 9:25 PM
117	Butler Rd. to Wyffels Rd.	1/11/2018 5:40 PM
118	Wells curtice	1/11/2018 3:46 PM
119	Foster rd hill	1/11/2018 3:20 PM
120	Butler Rd Park crosswalk	1/11/2018 11:23 AM
121	Foster to Onanda- better control of vehicle speed excess-harzardous	1/10/2018 11:03 PM
122	Foster rd and west lake rd	1/10/2018 7:02 PM
123	Any open ditches are treacherous	1/10/2018 5:06 PM
124	German Brotgers Marina	1/10/2018 11:22 AM
125	Signage at Foster RD	1/10/2018 10:32 AM
126	4700 block of co Rd 16 - reduce car speed & passing	1/10/2018 10:08 AM
127	Boats and various vehicles parked all the time along road	1/10/2018 8:25 AM
128	Near Foster Rd	1/9/2018 5:13 PM
129	German Brothers Marina	1/9/2018 4:43 PM
130	REMOVE ALL BOATS FROM THE ROADS AT GREMAN BROTHERS MARINE,	1/9/2018 1:03 PM
131	Blind curve just south of yach club	1/9/2018 1:00 PM
132	Yacht Club pedestrian crossing signage	1/9/2018 11:27 AM
133	Just north of Schoolhouse...open ditches on West side of road, resident parking and tight shoulders on east side. Maybe hard pipe the open ditches to significantly widen the shoulder on the west side of the road?	1/9/2018 11:14 AM
134	Foster Rd intersection speed control, stop sign placement	1/9/2018 10:50 AM

135	A designated wide path in front of German Brothers that is enforced that people cannot park cars or boats in the path..	1/8/2018 7:33 PM
136	Shoulder non existent before butler rd-south bound	1/8/2018 4:16 PM
137	Butler Road	1/8/2018 3:20 PM
138	The congestion during the summer at German Brothers Marine	1/8/2018 1:15 PM
139	designated bike/pedestrian lane	1/8/2018 12:44 PM
140	Butler to City line- better wider shoulder	1/8/2018 7:47 AM
141	4 ft added lanes just for walking or bicycling	1/7/2018 5:07 PM
142	Intersection of Parrish and West lake cyclist area	1/7/2018 4:26 PM
143	Wyffeks	1/7/2018 4:02 PM
144	Wells Curtis/County Rd 16	1/7/2018 3:27 PM
145	Butler Road schoolhouse crossing	1/7/2018 3:05 PM
146	between Butler Road and Wyffels road	1/7/2018 2:30 PM
147	Foot of Foster Rd - smooth the east side shoulders going north and south	1/7/2018 1:55 PM
148	low visibility at the turn in the road near tichenor point	1/7/2018 12:33 PM
149	north of Foster - shoulder on Hill is pretty rough and not wide enough	1/7/2018 10:33 AM
150	Speed limit not respected especially between Foster Road and Wells Curtis.	1/7/2018 8:54 AM
151	There should be a biking/hiking shoulder along the entire length of West Lake Rd.	1/6/2018 8:42 PM
152	Parish intersection	1/6/2018 8:01 PM
153	German Brothers Marina - hazard signage	1/6/2018 5:46 PM
154	Butler Rd	1/6/2018 4:18 PM
155	German Brothers	1/6/2018 3:40 PM
156	South of the County Road 16 and Foster Road intersection	1/6/2018 3:24 PM
157	Butler Park Crosswalk needs speed bump	1/6/2018 12:56 PM
158	between Wyfells and Foster/slightly wider shoulders	1/6/2018 10:35 AM
159	Foster to CR 21- narrow CR 16 as its current width screams: "65 mph"	1/6/2018 10:09 AM
160	Butler rd intersection is narrow and dangerous to ALL	1/6/2018 9:58 AM
161	3300 hundred block / vehicle speeds	1/6/2018 8:38 AM
162	Foster Road / Signage at intersection	1/5/2018 4:57 PM
163	4248 County Rd 16	1/3/2018 10:41 PM
164	Hill from Red Fox south-those speed detecting machines	1/3/2018 2:55 PM
165	crossing at Onanda Park	1/2/2018 4:57 PM
166	The area around German Brother's Marina	1/1/2018 5:57 PM
167	fixing the shoulders	12/31/2017 10:31 AM
168	The crossroads-Butler and Wyfells	12/27/2017 2:02 PM
169	Foster Road Intersection (Crest) - Shoulder Width	12/27/2017 1:52 PM
170	Widen shoulder and mark as bike lane entire west lake	12/27/2017 12:20 PM
171	Ononda Park	12/27/2017 10:04 AM
172	Yacht Club to water Company needs wider shoulder for safety	12/22/2017 11:57 AM
173	German Brothers - cars parked along shoulder impede safety for walkers and cyclists	12/14/2017 6:15 PM
#	**2.**	**DATE**

1	Ticketing lawn maintenance and other construction vehicles that park in bike lanes	8/15/2018 4:46 PM
2	raise water line access covers to same grade as road....mostly north of pump house	8/13/2018 3:38 PM
3	German Bros.	8/13/2018 1:50 PM
4	Butler Road intersection	8/13/2018 11:53 AM
5	Anywhere encroachments have been made on county owned right of way	8/13/2018 11:35 AM
6	Hill coming from Parish Street	8/13/2018 7:29 AM
7	Ashton	8/12/2018 8:04 PM
8	Between the yatch club and Butler Rd. The shoulders are too narrow to safely walk or ride a bicycle on.	8/10/2018 10:26 AM
9	Butler Rd	8/10/2018 8:22 AM
10	All bridges - guardrail side to side too narrow	8/9/2018 7:13 AM
11	Curve south of Yacht Club	8/8/2018 10:21 PM
12	Wyffels	8/8/2018 8:45 PM
13	Intersection of Foster Road and County Road 16	8/8/2018 11:35 AM
14	Near Sutters Marina	8/8/2018 11:12 AM
15	Enforce and ticket speeding autos	8/7/2018 9:18 PM
16	North of Foster Rd.	8/7/2018 6:08 PM
17	By the boat marina down past Wyffels	8/7/2018 4:51 PM
18	Crosswalk at YACHT CLUB	8/7/2018 12:39 PM
19	The boats at the German Brothers Marina are always in the way for cyclist and cars do not give room to ride	8/7/2018 12:05 PM
20	Area north of Wyffels Road to Butler - Narrow	8/6/2018 6:21 PM
21	School House Area	8/5/2018 12:26 PM
22	Canandaigua yacht club	8/5/2018 8:08 AM
23	Narrow shoulders near city limits	8/5/2018 7:51 AM
24	German Brothers, when boats are parked. Not that I want to interfere with their busines, but some signage or flashing lights might help.	8/4/2018 6:48 PM
25	traffic moves at a rate of speed well above speed limit	8/4/2018 6:03 PM
26	Speed is a huge factor on entire road	8/4/2018 2:48 PM
27	widened shoulders	8/3/2018 4:43 PM
28	from Yacht Club to Butler Park	8/3/2018 6:05 AM
29	Just North of Foster Rd (speed)	8/2/2018 4:20 PM
30	consistent easement surfaces along road. raise man hole covers	8/2/2018 1:15 PM
31	German brothers marina	8/2/2018 12:03 PM
32	Canandaigua Yacht Club	7/31/2018 1:06 PM
33	Keep parked cars off shoulders, designated paths good idea	7/30/2018 9:55 AM
34	Onanda Park	7/29/2018 7:17 PM
35	by onondaga park	7/29/2018 6:01 PM
36	loops with middle Cheshire road at butler rd	7/28/2018 2:04 PM
37	Pavement shoulders need maintenance - not repaired from snow plow damage	7/28/2018 2:03 PM
38	Butler Park	7/27/2018 6:39 PM
39	In front of Yacht club on west lake road	7/26/2018 3:58 PM

40	German Brothers	7/22/2018 10:39 AM
41	More traffic slowing measures at Butler Beach	7/21/2018 12:35 PM
42	Bulter Rd Park and Beach	7/21/2018 6:36 AM
43	butler road beach crossing dangerous	7/20/2018 10:46 PM
44	Intersection of Butler Road and County Rd 16	7/20/2018 4:34 PM
45	need wider shoulders Deerfield and Parish	7/15/2018 6:27 PM
46	Many areas where lawns come to road edge	5/20/2018 6:07 PM
47	german brothers marina is a major nuisance	5/16/2018 4:06 PM
48	double solid lines from parrish tofosterroad...at minimum !	5/13/2018 9:31 PM
49	Speed monitoring and enforcement from Yacht Club north to Parrish Street. Monitors and lic plate cameras - mail them a ticket.	5/13/2018 4:58 PM
50	Yacht Club	5/11/2018 6:45 AM
51	Bike Route between Westlake and resort area	5/10/2018 10:37 AM
52	Butler Rd to Water Companyspeed Control	5/10/2018 10:16 AM
53	German Brothers blocking both shoulders in the summer	5/10/2018 9:33 AM
54	CR16 and German Brothers Marina,	4/17/2018 11:26 AM
55	Need a way to get around boats at the marina	4/12/2018 4:46 PM
56	Onanda Park	4/10/2018 1:30 PM
57	Private boat trailers left on shoulder	4/8/2018 9:32 AM
58	Year around maintenance and utilization of the solar powered speed limit sensor located across from the Best's property	2/14/2018 5:15 PM
59	Access along 5 and 20 from west lake to lake shore drive, extend current nature trail down and create a biking/walking bridge into the boat launch	1/29/2018 11:47 AM
60	Foster Road and 16...cannot see traffic coming from the south.	1/26/2018 12:31 PM
61	Cars go to fast no police presence	1/25/2018 12:42 PM
62	German Brothers Marina	1/15/2018 4:00 PM
63	Today, bicyclists is large groups swarm the road in the spring, summer and fall. Many are polite and will change position into single file but many are not. I have no issue with driving slowly but it is frightening to come around a turn and be confronted with a mass of bicycles in the road.	1/15/2018 12:24 PM
64	Crosswalk at YACHT CLUB	1/14/2018 4:45 PM
65	Very narrow shoulders between German Bros and Foster Rd.	1/13/2018 7:30 PM
66	Better shoulder maintenance in most areas	1/13/2018 5:43 PM
67	Butler rd, blinking light when beach is open /reduce speed to 5 mph	1/12/2018 5:37 PM
68	Spots where grass brush and weeds are allowed to overhang guard rails onto shoulder.	1/11/2018 9:25 PM
69	Parrish Rd. to Butler Rd.	1/11/2018 5:40 PM
70	Foster road	1/11/2018 3:46 PM
71	street sweep near construction sites more often	1/11/2018 11:23 AM
72	Foster to Butler- narrow shoulders-bikers/walkers too close to vehicles	1/10/2018 11:03 PM
73	Can't be specific. It's a dangerous road, period!	1/10/2018 5:06 PM
74	Crosswalk at Wells Curtiss	1/10/2018 10:32 AM
75	By German Brothers Marina!!, unbelievable!!,!!!	1/10/2018 8:25 AM
76	CR 16 and Foster improved intersection visibility	1/9/2018 11:27 AM

77	Between the end of the sidewalk under 5 & 20 and the top of the hill even with Deerfield Drive. No connectivity to city sidewalk system...tight shoulders for walking or biking. Seems like there is an opportunity to widen the shoulder on either side here.	1/9/2018 11:14 AM
78	Up the hill to foster road	1/8/2018 7:33 PM
79	Yacht club cross walk	1/8/2018 4:16 PM
80	Wyfels road	1/8/2018 3:20 PM
81	Wyffels to Foster road and shoulder condition	1/8/2018 7:47 AM
82	Along 16 in general - widen or limit parked cars on shoulders	1/7/2018 4:26 PM
83	Areas where lake house are close to road	1/7/2018 3:27 PM
84	between city limits and yacht club	1/7/2018 2:30 PM
85	The boats parked on the shoulders at German Bros Marina are a hazard	1/7/2018 1:55 PM
86	crossing at the schoolhouse	1/7/2018 12:33 PM
87	wherever there are blind hills and turns - wider shoulders would be great	1/7/2018 10:33 AM
88	South of German Brothers	1/6/2018 8:01 PM
89	The base of Miller Hill - speed enforcement	1/6/2018 5:46 PM
90	Curve between yacht club and pump house	1/6/2018 3:40 PM
91	German Brothers needs widening and speed bump	1/6/2018 12:56 PM
92	Foster to CR 21 - a barriored bike/walk trail (could be single lane & narrow).	1/6/2018 10:09 AM
93	Area where boats (german brothers marina) are parked along the road is congested	1/6/2018 9:58 AM
94	No sidewalk same block. Place on west side of road.	1/6/2018 8:38 AM
95	Wells Curtis Road / Signage at intersection	1/5/2018 4:57 PM
96	Onanda Park	1/3/2018 10:41 PM
97	Between Wells Curtice and Duell Rd-police spped traps	1/3/2018 2:55 PM
98	protected bike space at Marina	1/2/2018 4:57 PM
99	Intersection of Foster Road and County Road 16	1/1/2018 5:57 PM
100	crosswalks across roads coming into CR 16. ie: Butler, Whiffles	12/31/2017 10:31 AM
101	We need lanes designated for bikes/walkers. We don't seem to be a priority	12/27/2017 2:02 PM
102	Deuel Road Intersection (Crest) - Shoulder Width	12/27/2017 1:52 PM
103	fix pot holes and recessed access covers west lake	12/27/2017 12:20 PM
104	Flooding between Foster and Butler Roads	12/27/2017 10:04 AM
105	Yacht Club - better conditions for crossing needed	12/14/2017 6:15 PM

#	3.	DATE
1	A wider bike lane painted with "bike/walk lane only" clearly marked	8/15/2018 4:46 PM
2	widen shoulders....many places	8/13/2018 3:38 PM
3	Schoolhouse Rd.	8/13/2018 1:50 PM
4	Foster Road intersection	8/13/2018 11:53 AM
5	Yacht Club	8/13/2018 7:29 AM
6	Yacht Club	8/12/2018 8:04 PM
7	Onanda Park	8/10/2018 8:22 AM
8	Lower intersection of Old West Lake Rd (on curve)	8/8/2018 10:21 PM
9	South of Foster Rd to Misty Hill Dr.	8/7/2018 6:08 PM

10	Foster Road - poor visibility (over hill)	8/6/2018 6:21 PM
11	Deerfield Drive Area	8/5/2018 12:26 PM
12	German brothers marine	8/5/2018 8:08 AM
13	Turn around area for business at German Brothers not neighbors and private homes	8/4/2018 2:48 PM
14	anywhere where there is inadequate space between parked cars and traffic	8/3/2018 6:05 AM
15	!st study road surface drainage and incorporate in the plan	8/2/2018 1:15 PM
16	German brothers marina	8/2/2018 12:03 PM
17	Wyffels Rd.	7/29/2018 7:17 PM
18	loops with middle Cheshire road at butler waffles	7/28/2018 2:04 PM
19	German Bros Marina	7/27/2018 6:39 PM
20	Warning sign going north just past Ferris Hills to watch out for turning vehicles	7/21/2018 12:35 PM
21	Weffles Rd and Cty Rd 16	7/21/2018 6:36 AM
22	cars parked along road blocking shoulder for walkers and riders	7/20/2018 10:46 PM
23	Intersection of Wyfels Road and County Rd 16	7/20/2018 4:34 PM
24	overall road is too narrow from holiday harbor to seneca point	5/16/2018 4:06 PM
25	Please ask the city to put a thick white line at the Parrish St. stop light so that cars going north and turning west onto Parrish St. stop back a ways from the intersection. Some people pull their cars forward and sit there turned into the intersection? When you are going West and turning South on West Lake you cannot see the make the turn and over shoot it, nearly coming out into the big bushes by the nearby property.	5/13/2018 4:58 PM
26	Wyffels Road	5/11/2018 6:45 AM
27	German Brother's Marina	5/10/2018 10:37 AM
28	CR 16 and passing zone around 3400. Traffic Too Fast.	4/17/2018 11:26 AM
29	Very narrow shoulders when the road is near the lake	4/12/2018 4:46 PM
30	Wells Curtice Road	4/10/2018 1:30 PM
31	Unmoved weeds growing over shoulder	4/8/2018 9:32 AM
32	Texturized crosswalk at Butler beach Crossing.	2/14/2018 5:15 PM
33	Clean up the state highway facility. They added a chain link fence for no reason - site is very unsightly!!!	1/29/2018 11:47 AM
34	Butler Road School House beach crossing...needs to be safer.	1/26/2018 12:31 PM
35	ENFORCE speed limit	1/25/2018 12:42 PM
36	The shoulders are all too narrow	1/15/2018 12:24 PM
37	Take out the traffic signal at Parrish Rd and County Rd 16. Or at least make it triggered by approaching cars so you don't sit there for 3 minutes at 11 at night when there is no one around.	1/13/2018 7:30 PM
38	In some areas the shoulder is less than 2 feet	1/13/2018 5:43 PM
39	Onanda park, reduce speed to 10 mph	1/12/2018 5:37 PM
40	Why can some people request do not mow on county right of way?	1/11/2018 9:25 PM
41	Dedicated crosswalk at Parrish St	1/10/2018 10:32 AM
42	German Brothers Marina needs designated walking path due to increased parked vehicles and high traffic.	1/9/2018 11:27 AM
43	Giant work trucks accessing the construction at Wegmans' and Sands' homes taking Co Rd 16 the entire way rather than using Rt 21 and side roads	1/7/2018 1:55 PM
44	County road 16 and Route 21	1/6/2018 8:01 PM
45	Camp Onanda - pavement repair	1/6/2018 5:46 PM

46	City line to Foster - three-way stop signs @ Butler & Wyffels roads.	1/6/2018 10:09 AM
47	Raised walking path entire proposed length, with curbing.	1/5/2018 4:57 PM
48	German Bros. Marina	1/3/2018 10:41 PM
49	seasonal traffic calming during sumeer peak	1/2/2018 4:57 PM
50	any blind driveway (Hillside/Lake Hill, Onnalinda, etc)-all the way up and down W. Lake Road	12/27/2017 2:02 PM
51	Menteth Creek - Rest Station	12/27/2017 1:52 PM
52	put up more biking caution signs entire west lake	12/27/2017 12:20 PM
53	Road crown improvement from Parrish to CR21	12/27/2017 10:04 AM
54	Foster Road - poor visibility due to hill to the south	12/14/2017 6:15 PM

#	4.	DATE
1	Signage that clearly states "no parking" in the bike/walk lane	8/15/2018 4:46 PM
2	section just south of Yacht Club has very narrow shoulders and vehicles push bikers/peds into road	8/13/2018 3:38 PM
3	Onanda	8/13/2018 1:50 PM
4	Wyffles Road Intersection	8/13/2018 11:53 AM
5	Old School house	8/12/2018 8:04 PM
6	School House beach crossing	8/7/2018 6:08 PM
7	Foster Rd Area	8/5/2018 12:26 PM
8	Whyffle road intersection	8/5/2018 8:08 AM
9	Road is very narrow by Yatch Club. Crossing the road is a hazard	8/4/2018 2:48 PM
10	drainage and undergrowth need to be corrected	8/2/2018 1:15 PM
11	German brothers marina	8/2/2018 12:03 PM
12	loops with middle Cheshire road at butler wells Curtis road	7/28/2018 2:04 PM
13	Onanda Park	7/27/2018 6:39 PM
14	People fly over the blind hill heading north near 3305 West Lake	7/21/2018 12:35 PM
15	Area around German Bros in summer	7/21/2018 6:36 AM
16	German Brothers Marina parked cars take up shoulder of road	7/20/2018 10:46 PM
17	dedicated pedestrian / bike lane in at least one direction is needed	5/16/2018 4:06 PM
18	CR16 and Butler Road, again, congestion.	4/17/2018 11:26 AM
19	Cars parked on shoulder	4/8/2018 9:32 AM
20	County maintenance of the swales that line the road.	2/14/2018 5:15 PM
21	Prevent parking along roadway where it is already tight and congested.	1/29/2018 11:47 AM
22	The whole length of the road with landscaping vehicles, driveway paving trucks that do not have workers directing traffic.	1/26/2018 12:31 PM
23	There are drainage problems with rain storms near German Brios with continual washouts abd mudslides every year. There is at least one dirt lane to a cottage used for dick hunting that washes out aeveral times a year. All the drainage ditches need to be cleaned out along the road.	1/15/2018 12:24 PM
24	MOST IMPORTANT: Better speed enforcement	1/13/2018 5:43 PM
25	Yacht club, reduce speed to 15mph	1/12/2018 5:37 PM
26	Signage & crosswalk at Wyffels	1/10/2018 10:32 AM
27	Several spots that have NO shoulder north of the water treatment plant up to Parrish St	1/7/2018 1:55 PM
28	City line to Foster - signage "speed strictly enforced" "local traffic only. Thru-traffic use State Rte 21"	1/6/2018 10:09 AM

29	Yacht Club	1/3/2018 10:41 PM
30	German Brothers Marina - Boats Parked in Road	12/27/2017 1:52 PM
31	Better maintained trails Onandaga Park/Plant Trees	12/27/2017 12:20 PM
32	Drainage improvement	12/27/2017 10:04 AM
33	Shoulders between Bulter Road and Yacht Club are too narrow, especially on the west side.	12/14/2017 6:15 PM
#	**5.**	**DATE**
1	Wyffles	8/13/2018 1:50 PM
2	Mail boxes placed to close and into shoulder of road	8/7/2018 6:08 PM
3	Onanda Area	8/5/2018 12:26 PM
4	Foster road intersection	8/5/2018 8:08 AM
5	A miracle that no person has been killed or severely injured because of the noted thoughts on County Rd. 16	8/4/2018 2:48 PM
6	German brothers marina	8/2/2018 12:03 PM
7	Set speed traps and write tickets	7/21/2018 12:35 PM
8	Foster Rd and Cty Rd 16	7/21/2018 6:36 AM
9	wish there was a sidewalk for walking on lake road	7/20/2018 10:46 PM
10	need a wider road and should use eminent domain to do so	5/16/2018 4:06 PM
11	Landside ditches could be buried culvert pipe to widen shoulder.	4/17/2018 11:26 AM
12	Signage and enforcement of littering laws	2/14/2018 5:15 PM
13	If RSM will build, their driveway will be a sight problem for cars, bikes and pedestrians.	1/26/2018 12:31 PM
14	There needs to be an emevated crosswalk at School House Beach, German Bros and the Yacht club.	1/15/2018 12:24 PM
15	Wider shoulders everywhere h	1/10/2018 10:32 AM
16	City line to Foster - lower limit to 25 mph w/ strict elec. enforcement. You speed, you pay.	1/6/2018 10:09 AM
17	City of Cdga Water Treatment Facility - Rest Station, Uphills Trails/Lookout, Lake Access	12/27/2017 1:52 PM
18	Open Onandaga Park later than 9pm.	12/27/2017 12:20 PM
19	less salt usage	12/27/2017 10:04 AM

Q19 Other Comments Please use the space below to provide any other comments you may have regarding bicycling and walking along Ontario County Road 16.

Answered: 169 Skipped: 163

#	RESPONSES	DATE
1	I would look at a different road. Perhaps Middle Cheshire. We have been here 95 years.	8/20/2018 8:56 PM
2	Creating this bike/hike lane would be a great idea both for the safety of anyone who uses the lane and also for the economic boost to the town of Canandaigua. Many people who use a bike lane also want to have lunch in restaurants in town and others stay in hotel rooms and make biking a vacation. I think this project will be great for the area for above reasons.	8/15/2018 4:46 PM
3	signs stating move over for bicyclists would help	8/13/2018 3:38 PM
4	Beyond very minimal safety improvements at the currently prioritized intersections, money should not be spent to make Co. Rd. 16 a "destination" for walkers or bicyclists. Instead, Ontario Co. Pathways features 25 miles of trails in Ontario County. Do not try to retro-fit County Road 16 to accommodate a select group. Each driveway that faces out into the targeted corridor represents an uncontrolled intersection. With approximately 400 homes in the corridor, this makes for a very dangerous situation for bicyclists, walkers and drivers alike.	8/13/2018 1:50 PM
5	add sidewalks and bike lanes need to limit parking on co rd. 16 need to limit boat and vehicle parking near german brothers marina. have sheriff set up more speed traps owners need to prune shrubs along road protruding into shoulder	8/13/2018 11:53 AM
6	Bicyclists and pedestrians have the same right to use the County Owned right of way along Ct.Rd 16 as any Ct.Rd. 16 resident. Residential parking does not supersede the rights of all County residents to use and enjoy the County Owned right of way along CR 16.	8/13/2018 11:35 AM
7	cars travel way over safe speeds - only "speed" bumps will slow them down!	8/13/2018 9:54 AM
8	The road should not be considered a destination for waling and biking. There are too many driveways and roads on it to allow for heavy use	8/13/2018 7:29 AM
9	Please do not widen the road or make this road a 'destination road. What people who don't live here or use the road don't know is that increased bike traffic will only results in more issues. Each driveway (some are blind) is, in reality, an intersection. There are over 21 miles of trails in Ontario Co. so there is no need for more 'designated' places for people to ride. What really needs to happen is an increased knowledge of the law when it comes to bikes and people; drivers hardly know or chose to follow the rules. Increased patrols and enforcement of the speed limit and other traffic laws will one of the few variables, in combination with signage, that make the road safer. Consider the ped crossing on the way into Victor from Ganadagon; that crossing lights up when activated by the workers who cross there in addition to being well marked. I do not know the data but I would guess there are few if any accidents there with cars and people....wouldn't the co, be better off putting in those first before throwing my tax money into widening the road for people? Start with the least impact and collect data then make decisions as necessary.	8/12/2018 8:04 PM
10	Weekends are quite busy. Walkers, runners, bikers, people walking dogs, people pushing baby strollers. People walk on incorrect side of road. How about a bike lane or sidewalks? I see Canandaigua city police but rarely Ontario sheriff in town slowing vehicular traffic. As I mentioned earlier important to have property owners cut back trees. Also what are parking rules? Lots of cars extend into shoulder and road. Houses don’t appear to have enough parking but maybe some restrictions on WLR would help. Lots of cars and boats blocking shoulder forcing me into road around German brothers. A sidewalk and separate bike lane would be most welcome.	8/11/2018 3:49 PM

11	Additional speed enforcement is needed. The speed sensing and display signs seem to encourage some drivers and bicyclists to see how fast they can go when they see the sign. Raised cross walks can create problems for people using wheel chairs and scooters where they might tip over if they can't navigate to the crown of the raised area. This is particularly true for someone who might be blind in one eye or have limited vision. Increased maintenance of the right-of-way is needed. Particularly in areas such as our neighbor's "hay field" when the grass gets so tall that we can't see oncoming traffic, including bicyclists, when we try to pull out of our driveway. The number is bicyclists using CR 16 is significantly higher during the numerous bike rallys held during the year. Education may be needed to prevent participants from riding 3, 4, or 5 abreast during these events which create significant traffic hazards.	8/10/2018 10:26 AM
12	I'd recommend that the shared use path be entirely separate and distinct from the road so its clear to motorists and bicyclists	8/10/2018 8:22 AM
13	This study seems impossible with the structure of WLR and the physical placement of homes/cottages. Not sure why this is happening. Have no reason to approve or disapprove accept that there will surely be a new assessment for us all. Possibly a tax levy. Most important to present walking/cycling are the massive construction trucks barreling down the road on the way to million $$ construction projects. The speed limit is already extremely low for a 12 mi. county rd. 35mph is more than appropriate but nobody abides especially the construction trucks that could blow a person off the road. Walkers/Bikers if careful and responsible can safely navigate the road most times because traffic is generally reasonable. During summer holidays the 2 weekers in the $$$$ homes add to the danger and should be considered when walking or biking. In conclusion this entire project seems unnecessary and frivolous...is someone looking to tax the WLR's even more than we are now burdened with?	8/9/2018 10:14 PM
14	Given the results of safety evaluation (no pedestrian or cyclist accidents in 15 years), I feel additional costs to improve this area would not be money well spent. I walk approx 6 miles/day, 3 days/week during 7:00 am and 9:00 am (busy travel times for local workers). Most are respectful of me as a pedestrian, pulling into the opposite lane and slowing down when passing me.	8/9/2018 4:37 PM
15	The shared use path should be a raised higher than road to ensure bike/walker safety	8/9/2018 10:12 AM
16	I do not think significant expenditures are warranted. Incremental improvements are all that are justified.	8/9/2018 7:13 AM
17	Drivers slow down! Walkers FACE traffic, Enforce parking under No-parking signs !!	8/8/2018 10:21 PM
18	My young teen often rides his bike to friend’s houses on W. Lake and the narrow shoulder and speeding cars/distracted drivers makes me very nervous	8/8/2018 8:45 PM
19	Increased law enforcement presence on Rt 16	8/8/2018 10:41 AM
20	Before I became ill I biked every morning during summer months beginning at 5:30 to avoid commuter traffic. Now contractors are allowed to park on shoulder/road. Often there is no one to flag traffic and I am unable to see around the vehicles. Sheriffs used to take care of this, but now I rarely see a sheriff patroling West Lake Road.	8/7/2018 9:25 PM
21	People drive way too fast, 45 -55mph is normal. Most people don’t slow down or move over if biking or walking. I wear reflective clothes and basically move over off the pavement for safety.	8/7/2018 9:18 PM
22	The biggest thing as a Bicycle Shop owner and town of Canandaigua resident is traffic speed and lack of a true safe bike lane on West Lake Rd. Every day I see Cyclist, Runners and Walkers using the road and the lack of care or knowledge of the NYS Cycling laws or use of proper speed and passing is disturbing. I personally have been cut off while cycling on West Lake Rd by people who live on the West Lake Rd in too much of a hurry to get in their driveway or turn up Bulter Rd, Wyfels Rd, Wells Curtice rd. Any improvement over what we have now would be appreciated.	8/7/2018 12:05 PM
23	1.) Put in a designated walking/biking path on BOTH sides of West Lake Road AND DO NOT ALLOW ANY PARKING ON ANY PART OF THE WALKING PATH. Too many cars park on or barely beyond white lane marker and forces walkers/bikers into road. Many lawn companies park their truck with box trailer across the walking path and into the road, at blind corners, forcing walking into extremely danger. Ticket violators... 2.) I would like to see seasonal speed bumps to slow traffic down. 3.) Need maintenance on shoulders and clearing brush that is extending across walking shoulder. Though road improvements are going on NOW, the white edge of driving lane marking are being covered up with pavement and that is causing an EXTREMELY dangerous situation as drivers are driving well over the covered white line into the "old" walking path as they can not judge the actual lane. 4.) Crosswalk with flashing (solar) signs (similar to what the city has on main street) particularly at the BUTLER Rd school house for public lake access.	8/7/2018 11:40 AM

24	I have crossed the US from ocean to ocean on bike four times...the lakes of our region are treasures that attract cyclists from all over the world. A safer road is a must.	8/7/2018 5:59 AM
25	Strict enforcement of speed limit would create safer conditions. Every lawn service drives 50 or more to hurry to next job and block rd with equipment	8/6/2018 1:23 PM
26	I am against improvements that would widen Co Rd 16 to accommodate bicyclists or walkers. Widening the road will only encourage increasing vehicular speeds which would adversely affect pedestrian safety.	8/5/2018 2:13 PM
27	Mandatory bicycle registration.It befuddles me that the vehicles demand full access to automobile lanes, burglary no fees to use the roads. Many bikers are arrogant and refuse to yield.	8/5/2018 7:56 AM
28	Pet peeve is German brothers should not be allowed to park boats, trailers etc on a public highway shoulder. Very dangerous area!	8/5/2018 7:51 AM
29	Any improvements should take into consideraction the stretch of road that is within city limits and extends to Deerfield Dr. It's a very busy area for pedestrian traffic and everyone must use a very narrow, unsafe shoulder of the road to reach the sidewalk at the north end of West Lake Rd.	8/5/2018 6:09 AM
30	Overall, West Lake Road is actually a good place to ride. With the lower speed limit and some local awareness that people will be walking, with babies and dogs, or riding their bikes, the road is actually a preferred riding venue. I'd like to see the same speed limits on East Lake Road, which is much more dangerous than County Road 16. Overall, I'd simply like to see wider shoulders, better pavement, and some enforcement of the rules for drivers, which would make riding safer and more enjoyable.	8/4/2018 6:48 PM
31	Senaca Point road shoulders are terrible!!!, no maintenance is ever done, very dangerous	8/4/2018 6:08 PM
32	instead of embarking on a new project let's first enforce those rules and laws on the books! Slow down traffic and we walkers and bikers will be fine.	8/4/2018 6:03 PM
33	The folks that bicycle or walk are very conscious of their space. This road is a constant flow of people and cars that are trying to coexist.	8/4/2018 2:48 PM
34	A wider shoulder is required for bikes and walkers	8/3/2018 1:22 PM
35	People walking or people walking with their pets halfway in the road... you cannot see them at night. Very dangerous. The tractors and staff at German Brothers are constantly in the roadway. Very dangerous.	8/3/2018 10:04 AM
36	The only time I feel safe walking or biking West Lake Rd is before 8am on Sunday morning when traffic is light. Making W Lake Rd more pedestrian/bicycle friendly would be a tremendous asset to our community.	8/3/2018 6:05 AM
37	Pavement "stacks"/crumbling, and unevenness @4627 West Lake Rd., Falling off of shoulder. Similar in other areas from Foster to Duel on both East and West Sides	8/2/2018 5:38 PM
38	The whole point of walking there is to soak in the view. Rest stops along Route 16 are consistent with this stance. Benches/seating, drinking water access, emergency phone, toilet facilities at Pump Station, Onanda Park, ...	8/2/2018 4:20 PM
39	Bicyclists like pet owners, can be very irresponsible at times as far as wandering into someone else’s space. I’m not sure West Lake rd can be widened enough to accommodate walkers and bikes. My vote would be for walking sidewalks only.	8/2/2018 4:02 PM
40	Please don't create an unnecessary monstrousity of a project. This seems like something that is being created by non-runners and non-bikers.	8/2/2018 2:33 PM
41	Grading/ crowning is ineffective at preventing drainage on to lake side of many properties	8/2/2018 1:15 PM
42	Biggest hazard is allowing German brothers marina to park boats in vehicles on the right of way and on the shoulder of the road. Very dangerous situation.	8/2/2018 12:03 PM
43	I don’t believe we need any crosswalks or signage. Widen the shoulders so we can walk safely and away from traffic. Living on County Rd 16, I don’t want to stop frequently. German Brothers Marina should have off road parking as it is dangerous to walk during the summer.	8/2/2018 11:16 AM
44	I have walked along the side of the road for 30 years, with no problems.Only problems are construction trucks parked at the side of the road where houses are being constructed., and speeders.Other suggested improvements not necessary.	7/31/2018 1:06 PM

45	The situation around German Brothers Marine, where there are always boats parked along the road, seems very hazardous to cyclists and pedestrians. The boats take up the entire shoulder. This is an accident waiting to happen, if it hasn't already happened.	7/31/2018 9:21 AM
46	Three different households, all family, live on County Road 16. All of us feel that the road cannot be widened for extra bike lanes, etc. Several reasons for this are the existing properties and obstacles such as mailboxes, driveways, etc. Also, this widening for additional lanes would take up the space that would be needed for people park their cars on the side of the road for various reasons, thus negating the benefits of a dedicated bike lane. Potential sidewalks would necessitate the home owner to maintain that in all seasons. Creating an extra dedicated bike lane would narrow the lanes for automobiles creating a more dangerous environment for passenger vehicles. More signage ruins the view that people came to the lakeside road for. More lighted signage creates more accidents because people depend on others to obey lights and carelessly walk into traffic that doesn't stop. This is evident at the Main Street/ Byrne Dairy crosswalk. The Marina will be negatively impacted which is an important business to hundreds that use their services. Will we get a tax reduction for the potential loss of property taken up by widening the roads? A better use of resources is to encourage all(bikers, auto, and walkers) to better learn to share the road through other campaigns. Biking groups that ride 2, 3, 4 and 5 wide are very dangerous and should be discouraged. Groups like that then just accost the drivers as they attempt to maneuver around.	7/30/2018 8:14 PM
47	I think speed needs to be enforced better south of Butler Road. Perhaps the speed limit could be raised in areas north of Foster Road where there is less chance of people crossing the road to get to beaches. Drivers might be more inclined to go slowly in beach neighborhoods if they didn't have to go 35 mph the whole length of the road.	7/30/2018 6:29 PM
48	In my opinion there are numerous areas needing spot specific improvement but these do not relate to crosswalks. What is needed are wider shoulders were needed and resurfaced and/or improved road surfaces. The Foster Road hill on West Lake Road is plenty wide and this width on the entire length of West Lake Road is desirable. Sections of West Lake Road including the crumbling, cracked, patched and stone debris areas of the shoulder should also be repaired and maintained. The section near Onanda Park that has been resurfaced so far looks good although lines have not been marked so it is unclear if a wide enough shoulder will be part of this plan. Resurfacing the entire length of West Lake Road to this level with wide shoulders would greatly improve biking and walking on WLR.	7/30/2018 3:17 PM
49	More bicycle and pedestrian warning signs needed. Slow traffic way down to incourage local traffic only on County Rd 16!	7/30/2018 9:55 AM
50	West Lake Rd is busy enough without additional bicycle traffic. I strongly oppose this endeavor.	7/30/2018 8:13 AM
51	Here are just a few concern... 1)If and when the path is widened the issue is the stones that build up along the side. Cyclists move to the road to avoid popping a tire. Walkers move to the road to avoid twisting an ankle. This is a safety concern that should be included when widening the road. Meaning that stone sweeping should be considered. Another concern that has been a concern for years the aggression of motorist towards cyclist. Motorists not moving over or slowing down when passing a cyclist as well as a walker. Someone could slip and fall.	7/29/2018 7:53 PM
52	Please be aware that the safest way for pedestrians to walk on roadways is against traffic and the safest way for bicycles to ride on roads is with traffic. That could produce a problem if there’s a shared path.	7/29/2018 7:17 PM
53	As a resident of this specific community I 100% support this effort in including any potential property lose do to road expansion	7/28/2018 2:04 PM
54	Middle Cheshire Road already has designated bike lanes. Many locations on Cty Road 16 are too narrow to accommodate additional lanes/shoulders/sidewalks.	7/27/2018 6:39 PM
55	Walking along west lake road is fine the way it is. There is not room for side walks or paths without tearing up everyone's yards. Most people who drive this route know that there are walkers and riders and are cautious. I do not know of a auto pedestrian or bike accident in all the years I have lived here.	7/27/2018 6:28 PM
56	its a road . cars and trucks use roads . walk or bike in the woods . i live on west lake . i walk and bike west lake . , but its a road . walk and bike at own risk . german brothers and others who park all over the place are a hazzard	7/27/2018 5:13 PM
57	Better Road Conditions with larger margins would help everyone.	7/25/2018 7:24 PM
58	Crosswalk needed at Yacht Club and German Bro Marina	7/23/2018 6:31 PM

59	Crosswalk and signage needed to protect folks going from CYC parking and clubhouse to waterfront.	7/22/2018 2:02 PM
60	You can put the police car in my driveway at 3305 and write tickets on people flying past	7/21/2018 12:35 PM
61	Speed needs to be enforced.	7/21/2018 6:36 AM
62	Thank you for looking into making necessary improvements for safer travel on west lake road.	7/20/2018 10:46 PM
63	Having safe place to cross the road at major "T" intersections would help make walking and riding on any of these county roads.	7/20/2018 4:34 PM
64	Perhaps there should be signage (much like high risk areas for deer) that alert motorists: "watch for pedestrians and bicyclists next X miles". Maybe even a 'targeted enforcement zone' like on Rte 15 in PA. Higher fines for speeding and failure to yield.	7/20/2018 3:23 PM
65	A crosswalk at the Canandaigua will improve safety for pedestrians crossing from the clubhouse to the waterfront	7/20/2018 2:20 PM
66	Cross walk and signage at Canandaigua Yacht Club	7/20/2018 12:00 PM
67	Needs Cross Walk	7/20/2018 11:37 AM
68	My family crosses the road at CYC multiple times a day in the summer and a crosswalk would be very helpful, as most cars do not slow down. Thank you!	7/20/2018 10:35 AM
69	When two cars/trucks are passing each other in opposite directions, a pedestrian or biker at that spot where the cars pass by each other is an accident waiting to happen.	5/30/2018 4:16 PM
70	Only portions of this road should have improvements where it has least disturbance to the natural landscape, existing long, established trees, culverts and utility poles. The fewer signs the better as they are a visual pollutant to the lake views . Consideration for the needs of landscapers, construction vehicles and other commerce that occurs along the road should not be impeded. The town has already developed several biking and walking trails and it would be a shame to ruin the historic, rural charm of West Lake Road for primary walk/bike use during 6 months of the year.	5/16/2018 9:45 PM
71	16 is the gold coast of Ontario County, if not the Finger lakes region -- and the crappy asphalt road conditions and inadequate road space for the people who live here is not conducive to an active lifestyle and is not in line with a BlueZone environment. Please widen and improve our road! Use eminent domain if you must but it must be improved -- where's our sidewalk???	5/16/2018 4:06 PM
72	I worry about myself and others who use County Rd. 16 for walking and bicycling. There is not enough safe space for us and the cars routinely speed. With distracted driving it's dangerous.	5/13/2018 4:58 PM
73	Can you include in your transportation study feasibility of a bike ferry between city pier and German Brother Marina.	5/12/2018 11:30 AM
74	I own a summer home at Bristol Harbour and would love to walk or ride along West Lake Road but it’s too dangerous now	5/12/2018 7:32 AM
75	I think the speed limit should be lowered on co rd 16 or add more mobile speed limit scanners to remind motorists	5/12/2018 7:24 AM
76	It's not a complete street until it's ALL complete all the way to Parish St in the City	5/10/2018 8:39 PM
77	I have often walked along 16 without issue; however, I can't see this road supporting bicycle traffic. The shoulders are too narrow, and the road is too hilly and curvy, causing unsafe blind spots. When driving a vehicle, one is often stuck behind a bicyclist for long periods of time, because it is too blind to safely pull around. Since I don't believe in eminent domain, I don't see how 16 can be reconfigured to support bicycle traffic safely.	5/10/2018 7:10 PM
78	Road is not wide enough for cars, bikers and walkers. And the drivers on that road drive way too fast for me to feel comfortable biking or walking on with my family (unfortunately).	5/10/2018 2:27 PM
79	You need to enforce parking in the shoulder where people rid and walk. I am moved into traffic because it is not clear Do not use a combination walk bike lane where cycles are riding heading onto traffic	5/10/2018 11:16 AM
80	My main concern is the speed of traffic. Hardly ever is the speedlimit observed as I watch cars flying by my house.	5/10/2018 10:25 AM
81	Speed control for Cars Inattentive drivers Lack of sidewalk or bike lane.	5/10/2018 10:16 AM

82	CR 16 is vastly more safe than SR 364; however there is certainly room for improvement. More consistent shoulder widths and signage would be a great first step.	5/10/2018 9:33 AM
83	Move centerline of CR 16 4 or more feet to the west (land side). Create Designated bi-directional exercise path on East side (Lake Side). There are too many driveways on the Land Side to accommodate safe bike travel. Connect North End of Bike Trail to Southern Easement of Route 5 and 20. There is a large green space here that can accommodate a path. Build a pedestrian bridge across Sucker Brook on this Easement, and this path would enter directly into to green space of The State Marine Park. This would make an excellent alternative to connecting to very busy Parrish Street.	4/17/2018 11:26 AM
84	Speeding Cars and Construction Vehicles are the major problems. Next are the Motorcycle Rallies.	4/16/2018 10:42 AM
85	I would give up 4 feet of land in front of my house (3337 W Lake) for a designated lane. Of course mailboxes and power poles are an issue here.	4/12/2018 4:46 PM
86	Worst part of biking or walking along County Road 16 is the need to move over into the traffic lane to avoid parked boat trailers and parked cars. It is also often an issue when driving. Drivers also need to swerve to avoid cars and trailers left parked on the shoulder of the road.	4/8/2018 9:32 AM
87	Thank you	2/14/2018 5:15 PM
88	I would suggest, using the high roads . Roads with at least some width and less traffic. Roads that sort of run parallel to 16. Still with views and country.	2/10/2018 5:37 PM
89	If the road had been wider in the beginning if would have been feasible to have a walk/cycle path. If the road is widened NOW, it will destroy the trees, lawns, home ambiance for way too many residents. SPEED of traffic is the biggest issue with much illegal passing and way higher speeds than posted signs allow.	1/29/2018 1:20 PM
90	We walk 5 miles per day on West Lake. We see lots of different folks enjoying the road and it has become increasingly dangerous due to distracted driving. I am really glad the county is looking to improve the safety and use of the area!!!	1/29/2018 11:47 AM
91	mentioned most.	1/26/2018 12:31 PM
92	I have been calling regarding the conditions of the Road shoulders for four years. The section of Cty. Road from Foster Road to the the German Bros. Marina has been in needed repair for years. The potholes and uneven surfaces present a significant hazard to both walkers and bicyclists...especially bicyclists. I have personally spoken to bicyclists in front of my house who have experienced these issues.	1/25/2018 5:43 PM
93	I would not like to see this road widened . The road itself could be better if they would grade the road better when they do pave it . There is next to no traffic on this road in the winter . I think you should encourage bicycle riders to use the East Lake Road as it has a better capability of being widened	1/18/2018 3:30 PM
94	I would love to see a lower speed limit (30?) in summer (Memorial Day to Labor Day) and higher speed limit (45?) in off season. The road doesn't seem like it would have the room for sidewalks or bike paths but that would be ideal. The additional traffic from the housing off Middle Chesire has created an enormous additional volume of traffic north of Butler and a fair amount of traffic north of Wyffels.	1/15/2018 4:00 PM
95	It is too dangerous to bicycle on West Lake Road. There is no room and someone straying a few inches out of the narrow shoulders into the road risks getting killed. Last summer a group of people including a woman with a baby carriage were standing be the side of the road, spilling into the road, by a blind curve. Traveling at 30 mph coming around the curve, I had to cross the double yellow line to avoid them. If a car were coming in the opposite direction it would have been ugly. This stretch of road is too intensively used and too narrow for bicycles unless you are going to move all the infrastructure and widen the road and put up a safety fence along the bikepath like they do in Europe.	1/15/2018 12:24 PM
96	A separate path, like on Middle Cheshire, would be a a big plus	1/14/2018 4:45 PM
97	More than anything you need to enforce the speed limit. Although 35 mph is good, many go much faster especially in the summer when we have more visitors. Perhaps they don't know we are 35 mph for most of West Lake. Providing better conditions for the sides of the road would help.	1/14/2018 10:13 AM
98	Not specific to biking but there should be deer warning signs along the road as deer have become a significant problem especially at dusk.	1/13/2018 7:30 PM

99	I walk County Road 16 almost every day during the summer and fall and I have almost never seen a Sheriff enforcing the speed limit. It should be enforced like Main St. in the city.	1/13/2018 5:43 PM
100	Don’t widen the road too much north of Foster. At that point folks are on their own for the most part. As a walker, I have found most vehicles to be quite accommodating as they move to the center of the road	1/12/2018 5:45 PM
101	Monitor parking and eliminate overhanging into existing recreational lane	1/12/2018 5:37 PM
102	The traffic along County Rd 16, especially in summer, is too fast and too heavy, meaning heavy trucks. I think we all bike or walk along this road at our own risk; but, there could be more speed control and prohibiting of heavy, large trucks that continually travel this road, especially in the summer.	1/12/2018 5:07 PM
103	There is no space to add a bicycle/pedestrian lane. It is hard enough to get down the road in your car w/out adding add'l pedestrian and bike traffic.	1/12/2018 4:25 PM
104	Shoulder width an issue. Marina uses road and shoulders as work area	1/12/2018 11:23 AM
105	The worst part of biking and walking on CR 16 is veering into traffic to avoid cars and boat trailers parked on the shoulder of the road. There are spots where same boat trailer creates hazard for the entire summer. Often times parking extends into the traffic lane as well. It is much safer to walk and ride in the spring and fall. If adding a shoulder for bike lane or walking there must be enforcement of no parking rules.	1/11/2018 9:25 PM
106	glad to see this but I cannot see how CR 16 could be widened. That possibility existed about 100 years ago.	1/11/2018 5:40 PM
107	You build it and they will come	1/11/2018 3:20 PM
108	1) better patrolling; people speed WAY too much, especially further south 2) education; people think bikes need to be on shoulder, but shoulders often have too much gravel/debris. They honk or brush you even if you are riding the white line. They also do not stay behind until they can safely pass, they run cars off the road that are coming in opposite direction. 3) need street sweeper much more often to clean gravel from shoulder. Construction areas need to be cleaned frequently, they make a HUGE mess on the roads for MONTHS. I ride 3-4 X week during warmer months; even though it is 35mph, I often feel unsafe with speed(ing) and closeness of cars. Even walking, if with another person, feel the need to drop back to single file even on the shoulder, as cars are speeding and often don't move over much. Some big hills that sometimes ruin the thought to take a nice ride after work when you're a bit tired or just don't want to work quite so hard! It would be nice if they weren't quite so steep:) thank you!	1/11/2018 11:23 AM
109	bikers/walkers on both sides of road with traffic at same time presents extremely dangerous safety issues for everyone	1/10/2018 11:03 PM
110	Can't believe that you would want more bike traffic on this road which is a truck /car expressway. This would become a more dangerous road for all.	1/10/2018 10:41 PM
111	A sidewalk would be nice, but good luck getting easements from the NIMBYS!	1/10/2018 7:02 PM
112	Too much bike riding on West Lake Road. It’s dangerous and presents risks to residents. I think bikes using public roads should be required to be licensed. The road is too narrow and already has enough parking problems. Those who bike in groups ride 3 and 4 abreast and feel they should be primary to road usage. What ever the case they should be charged for Road use	1/10/2018 5:52 PM
113	Thanks for the survey! Avid walking and biking. Speeding a problem! A wider road to accommodate b&w. Ditches quite treacherous in many areas.	1/10/2018 5:06 PM
114	Enforcing speed limits particularly coming down the hill near Foster Rd & Tichenor Point	1/10/2018 10:32 AM
115	It is not really a problem except for the speeders.	1/10/2018 10:08 AM
116	See above . Amazed this is allowed and someone hasn’t been killed!!	1/10/2018 8:25 AM
117	Would love to be able to walk and bicycle safely on County Rd 16	1/9/2018 5:13 PM
118	Expensive pedestrian lanes installed on MCR have not attracted more than a handful of users at any given time. Speed & texting laws should be enforced on CR16. People shouldn't walk 3 and more abreast	1/9/2018 4:59 PM
119	There is a high level of safety concern with adding more bicycle and walking traffic on County Road #16. When the residents return in warm weather from Florida driving on that road is hazardous, let alone bicycling or walking.	1/9/2018 4:43 PM

120	CR 16 is part of a route to bicycle the entire Lake. At present cyclists are at the mercy of vehicles to move over. it's the most dangerous portion of the 40-50 mile route.	1/9/2018 3:41 PM
121	I run/jog Wed. and Sat. mornings and it seems pretty safe. If I were to bike I would probably get up to Middle Cheshire or Rte. 21 for safety.	1/9/2018 12:55 PM
122	I have always thought Canandaigua could use a bike and walking path. Unfortunately, we can't depend on drivers to drive safely so we need a designated space.	1/9/2018 12:31 PM
123	I have relatives who walk on WLR. I would appreciate any and all improvements.	1/9/2018 12:01 PM
124	Many drivers are distracted by phones, activities as they drive on CR 16 and do not slow or provide increased space for walkers or bicyclists.	1/9/2018 11:27 AM
125	When adding for bicycling and walking, please improve drainage. Our house has been flooded twice during recent storms due to water flowing down the hills on the west side and flowing across West Lake Road rather than being diverted into culverts or storm drains.	1/9/2018 11:17 AM
126	We often see people riding their bikes or walking the Deerfield Drive loop for exercise. I assume they are using West Lake Road as well. If there were some public access somehow to the new trail on 5 & 20, that could be another solution for access to the city sidewalk system and the walking biking trail on Middle Cheshire Road.	1/9/2018 11:14 AM
127	Cars are moving too fast and there doesn't appear to ever be any speed limit enforcement.	1/8/2018 7:33 PM
128	I commend the folks who are trying to make this improvement. It is a much needed improvement for everyone's quality of life.	1/8/2018 7:33 PM
129	You may not be able to do anything about the hills.	1/8/2018 5:06 PM
130	Single greatest issue is the width and marking of any bicycle route	1/8/2018 3:20 PM
131	I am surprised that there have not been more car/pedestrian and car/bicycle accidents during the spring, summer and fall seasons.	1/8/2018 1:15 PM
132	Automobile traffic speeds (cars not obeying posted speeds) and space to walk/ride with greater safety would be VERY helpful	1/8/2018 11:09 AM
133	I strongly believe that cyclists should have to be licensed just the same as ANY other type of person using the roadways, except walkers.	1/8/2018 7:50 AM
134	Beautiful area to walk and/or bike. I'm new to the area and really haven't had time yet to enjoy either of these very much.	1/7/2018 10:17 PM
135	Not a good place to do it nor should it. Bikes have a lot of other more rural areas to do it. Walking can be done in town on existing sidewalks. Don't widen West Lake Road. It will impact properties too much.	1/7/2018 8:08 PM
136	Speed limits don’t help (people will not follow the signs) Extra space is needed – I don’t believe there is any other solution!	1/7/2018 5:07 PM
137	It is so beautiful it would be great if it was safer for all. Thank you.	1/7/2018 4:26 PM
138	Basic need is to have a specific lane added to County Rd 16 for bikers and walkers. It would be such an improvement for this area, and would promote this type of exercise due to the safety of a designated area for recreation.	1/7/2018 3:27 PM
139	Speeding traffic and huge trucks are a danger. More police patrols are needed.	1/7/2018 3:05 PM
140	Don't think you can do anything about the hills, but Foster hill and Miller hill are a bit steeper than I would wish for!	1/7/2018 2:30 PM
141	The ideal improvement for walking would be a sidewalk. For biking, a designated bike lane. Generally, for both walking and biking, a wider shoulder/designated lane and slower traffic would be great. Thanks for soliciting input and for looking at this issue. West Lake Road is a beautiful place for walking and biking but the lack of space and traffic are problems. In my experience, the speed of traffic a greater danger than the amount of traffic.	1/7/2018 12:27 PM
142	wider shoulders in general would take care of 90% of the improvements	1/7/2018 10:33 AM
143	West Lake Rd would be a really good place to bike the way that it is if we could just get the cars to slow down. More signage, speed bumps, and/or increased police patrols might help.	1/6/2018 8:42 PM

144	I regularly ride County Road 16. Most drivers are courteous. The exceptions are the issue. Lately I've taken to riding Middle Cheshire Road to avoid traffic on 16. A wider shoulder would help.	1/6/2018 5:46 PM
145	Signs are not going to do anything but distract appearance. Look at Main St,Canandaigua. Can't create space that doesn't exist. Bicyclist and pedestrian education is best you can provide.	1/6/2018 4:18 PM
146	One side of the road has to have No Parking. No bike/walk lane will work without addressing Parking issue and widening shoulder.	1/6/2018 3:40 PM
147	The most efficient and effective method to improving the walking experience is to reduce the speed limit and strictly enforced the lowered speed limit.	1/6/2018 3:24 PM
148	keep bicycles off the road to the right of the white lines provided. Bicycling is a menace on west lake road. Bicycle riders think the road is for them , and them alone	1/6/2018 1:57 PM
149	Make County Road 16 not a through road eliminating traffic from Canandaigua to Bristol Harbor then enforcing the 35 mph speed limit with speed bumps.	1/6/2018 12:56 PM
150	There is need to enforce the speed limits some people obey it some don't maybe even lower it to 30 mpn	1/6/2018 11:21 AM
151	prefer not to increase bike traffic in front of our residence	1/6/2018 10:35 AM
152	Over the past thirty years I have seen CR 16 change from a place to catch the lake breezes into an expressway. Today, when I see people walk their dogs or children here, my heart drops to my stomach. They have no idea!!! I've experienced tractor trailers barrelling over the hill at Notre Dame at - no less, but could be more - than 55 - 60 mph. Who in their right mind would walk or bike on Interstate 90?? I've biked my entire life in city traffic & would never bike CR 16. I walk only to go from house to lake access. For recreation, State Rte 21 or the Erie canal trail are more pleasant options & feel safer.	1/6/2018 10:09 AM
153	While we do not bike or walk on the road much we do see people going by our house and fear for their safety. Especially in the summer with moms and kids walking or dads riding bikes with kids. The road does not present well for added space on the sides but special routes or designated areas may be helpful. The speed limit should be enforced more as we see cars 'flying' by our house on a regular basis. Also with deer frequently crossing it is not safe to drive fast. West Lake and Ashton Place being a frequent deer crossing area. I see them cross daily from my livingroom and pray for their safety as well as the drivers.	1/6/2018 9:58 AM
154	Too much traffic to be safety used. Perhaps reintroduce the use of the old Lower West lake road to be used by bikes and predestrins. Take a lesson from the Erie canal towpath. Never mind trying to change road, too many issues.	1/6/2018 8:38 AM
155	why limit this to just cty rd 16, every bicycle should be licensed, as they ride on the highways. arrest those riding bikes who do not follow traffic safety. Pedestrians also need to respect traffic laws, and walk into traffic like the law states. the taxpayers have payed to buy the railroad beds for walking and biking, let the residents use the facilities already established! W. Randolph Warner please feel free to use my name!	1/5/2018 8:12 PM
156	our family is extremely athletic and several of my adult children bike all of cr.16 multiple times weekly , a bike lane would be a big improvement, shoulder is too narrow now to even safely walk our dogs on.	1/5/2018 6:24 PM
157	Traffic enforcement is the number one priority! It has declined in recent years based on my observations while walking 3 miles 200-250 days each year. Try this before making significant capital expenditures on physical changes.	1/5/2018 6:01 PM
158	n/a	1/5/2018 4:57 PM
159	If possible widen the road and police need to monitor the speeding and passing of cars and trucks.	1/5/2018 3:01 PM
160	We live on this road and use it frequently for exercise and recreation.	1/3/2018 10:41 PM
161	It's a great place to walk and bike but drivers are not as attentive as they should be. Speeding is a daily hazard but in 18 years I have never seen a patrol car along the stretch between Wells Curtice and Duell. Thank you for asking.	1/3/2018 2:55 PM
162	We need better speed enforcement on County Road 16, not only in the summer, but also the winter. I don't think we need a lower speed, just need more to adhere to speed limits.	1/1/2018 5:57 PM
163	We do not need a designated bike path. Improving and maintaining the shoulders will suffice	12/31/2017 10:31 AM

164	We see bikers from all over the world here-cycling and practicing for professional races. We love to ride and would love to see Canandaigua be forward thinking and make bike riders a priority here!	12/27/2017 2:02 PM
165	It is a fantastic resource to have, and I hope that through this we can open up Co. Rd. 16 to more active, environmental friendly recreation/travel.	12/27/2017 1:52 PM
166	Any and all improvements to facilitate biking especially, and walking/hiking would be welcomed!	12/27/2017 12:20 PM
167	I think the road/shoulder, as it is, is adequate, BUT demands the patience and cooperation of cars. It is a learning process, just as the crosswalks are.	12/27/2017 10:35 AM
168	Wider shoulders for walking and biking	12/22/2017 11:57 AM
169	Despite need for improvement in a few areas, West Lake Road is a great place for walking and cycling on the whole. The 35 mph speed limit makes it a much better place than other area roads with 55 mph limits, and the proximity to the lake is a great amenity. There is some speeding however - better enforcement of the 35 mph limit would be good. The portable speed indicators are helpful.	12/14/2017 6:15 PM

Thomas M. Robinson

From: Chris Dombrowski <cdombrowski@clearcovesystems.com>
Sent: Thursday, July 05, 2018 2:27 PM
To: Thomas M. Robinson
Subject: RE: Ontario County Road 16 Pedestrian and Bicycle Study

Tom,
I received two responses from my club members to the survey I created below. I'm not sure if any of them responded to the on-line survey.

My survey:

Following up on what I mentioned at a previous post. I'm on a committee which is involved with conducting a biking and walking study for West Lake Road (CR 16). There was a survey (attached) sent to residents along the road and on neighboring side locations. At our last CR16 committee meeting, I offered up our club's input as we all ride or have ridden this road and can provide good information. So, if you would, access and complete the survey via the link on the attached. Also, please provide short answers to the following questions. Once the survey is completed, it will be sent directly to the "owner" of the study. I'll compile responses to the questions below and provide to the committee. Thanks.

1. What do you like the MOST about riding on WLR?
2. What do you like the LEAST about riding on WLR?
3. To make biking WLR safer, what is your #1 recommended improvement?
4. Do you think that "simply" repaving WLR and painting very visible road lines and markings would suffice as an improvement?

Response 1:

1. Scenery
2. Narrow shoulders and parked cars
3. Widen shoulder in the narrowest spots
4. Would help-but not be sufficient

Response 2:

1). I most like the lake views and the *generally* wide and well maintained shoulders.
2). I least like all the blockage of the shoulders by cars, landscaping and construction vehicles, boat trailers, etc. all of which peaks during the warm months when biking, walking, running, etc. are most enjoyable. Anything that can be done to restrict this blockage would help, but I would anticipate massive resistance by residents, landscapers, and construction firms.
3). Widen the shoulders more, particularly in those places where they are currently narrowed.
Just as important is educating the public on bicycle and motor courtesy and the law regarding bike/ motorized vehicle interaction on public roads. If WLR receives any special designation as a multi-use path for walking, running, and biking, there should be education and conspicuous signage regarding this.
4). I don't think things would suffice, but it would be a great start.
Widening shoulders, education and signage would also help

I hope this helps a bit.

PUBLIC INPUT AND CORRESPONDANCE

- "The Town of Canandaigua has not yet made application (it is my understanding the window hasn't opened yet). Essentially the grant application will be to study Middle Cheshire Road in the Town of Canandaigua from an active transportation perspective including the uses of the roadway by both motorists and pedestrians. We know the road is actively used by vehicles, bicyclists, runners, walkers, and people with scooters. There are a number of housing developments that connect directly to Middle Cheshire Road, and also about four roadways that connect County Road 16 to Middle Cheshire Road. Middle Cheshire Road has more ability to do something relative to complete streets, and the Town has adopted a complete streets policy." -8/30/18
- "On a road in PA something along the lines of "fines doubled in pedestrian zone". Is that possible to have something like that on CR16, or are those types of ideas being explored as part of the CR16 feasibility study?""First, the Town of Canandaigua would have to pass an ordinance defining the length of the pedestrian zone, and probably another to define a pedestrian zone. Then they would have to pass an ordinance raising the fine for ped zones. Then the signs could be posted." -8/16/18
- "I attended the meeting last night to hear about the study of West Lake Road. I had a thought after I got back home on how to help eliminate the "Pinch" point at German Brothers. I'm sure you're are aware of the failed attempt of a developer to build many homes above German Brothers and use the marina as their private dockage. Well, why not restart the idea, not the homes, but allow the marina to build a large new dock that would accommodate floating docks so that most of the boats would be in the water and not stored and placed on the shoulders. It may just help reduce the congestion. Pelican Point on the east side has just what German Brothers should have. I'm sure there will be problems to solve, but this study may help in the update for the marina to take off and get permission. Thanks for your ear." -8/9/18
- "She said that she is travelling today and cannot attend tonight's meeting. She claims she's lived in her current address since 1972. She used to bike and walk on CR 16 but gave it up because it was too dangerous. She said the shoulders are too narrow. Now she goes to Kershaw Park on the north shore. She said that there are numerous other places people should go to walk and bike. She said encouraging anyone, especially families, to bike or walk on CR 16 is a bad idea. She claimed people have been injured and killed by vehicles running over them." -8/8/18
- "Currently, cars park on both sides of Rt.16 during peak hours at German Brothers. This forces walkers and bikers into the road. A solution might be to bench cut a trail on the slope on the west side of Rt.16. (Underneath the power lines). A rock retaining wall, or a crib wall such as in Fig.76 in https://www.fs.fed.us/t-d/pubs/htmlpubs/htm07232806/page12.htm could support a trail allowing pedestrians to safely bypass parked cars." -8/5/18
- "I wanted to tell you this is the best news I've heard in my 4 years of living in this beautiful place. As a cyclist, I've imagined how amazing it would be to ride on a safe path along West Lake Rd., so hearing this news is pretty much a dream come true. I strongly support the idea of this path for a myriad of reasons, but I thought I'd share just a few of them with you. First, the current walking and cycling conditions on County Road 16 are unsafe and present an unreasonable risk of an injury or death. Anytime you're walking or cycling down West Lake Rd., you constantly need to be looking over your shoulder to make sure a vehicle doesn't hit you from behind. Second, this path will bring tourism to the area which will benefit our local economy. When people travel here to ride, walk or run on the path, they will also likely spend money at local restaurants, breweries, downtown shops etc. Third, a safe walking/cycling path along County Road 16 will truly be a one-of-a-kind, unlike any other path in the area. It's no secret the views of Canandaigua Lake along West Lake Road are awesome." -8/3/18
- "I think any activity that promotes non-motorized recreation on and around the lake is in principle a very good thing. Our own main impediment to enjoyment on & off the water is speeding. Motor vehicles approaching from the South have a natural tendency (hill) to pick up speed, and maintain speed, as they

leave Foster Rd behind them. My input is that any plan that promotes non-motorized traffic is accompanied by measures that enforce the 35mph speed limit on 16." -8/5/18

- "Dear Mr. Rafferty, Thank you for sending the information that I requested. Could you please tell me approximately how many homes face out into County Road 16 in the targeted corridor? -8/3/18 "There are approximately 400 property owners in the study area. Whether their homes face the road, face the lake or face somewhere else, I do not know. Also, there are still some properties with no homes at all, yet." -8/8/18
- 1. Replacing roadside trenches with storm sewers and catch basins would provide space for sidewalks/bike paths. 2. Better speed limit enforcement would make the road safer for everyone. 3. The greatest hazard is construction equipment parked in the roadway." -7/31/18
- "On page 62 is a graphic which sows existing conditions and alternatives in two locations, labeled Marina and Ashton Place. I realize the section has a vertical exaggeration, but it does not reflect the actual section at Ashton Place at all. There is not a steep or even a mild slope down heading into the intersection from Ashton Place - in fact there is a slight rise. It would be better to relabel that drawing as Butler Road, Foster Road or Wyffels Road, all of which have a section much closer to what's shown. Otherwise this looks like a reasonable start to me. I'm glad to see that they have acknowledged that widening the shoulder to 5', or at least to a minimum of 4' is an important step, though I would prefer to see it as "Priority" rather than "Recommended", even if it probably can't be accomplished uniformly." -7/22/18
- "West Lake Road is dangerous for walkers and cyclists because it is very narrow in some spots and much of the vehicle traffic regularly exceeds the 35 mph speed limit. There have been accidents including fatalities. In general, encouraging more biking and walking on County Road 16 for sight-seeing purposes would be a bad idea. Find safer roads or locations other than County Road 16 to encourage these activities." -6/27/18
- "The shoulder width is well below 4.5' in many places, especially within a mile or so north and south of Foster Road. Speaking from walking and cycling experience, these narrow shoulder areas are among the most hazardous feeling parts of CR16, and I believe that a key recommendation should be to increase the shoulder to at least 4' everywhere, if not 4.5'. I hope the final report will have a more extensive discussion of the feasibility of alternatives such as a dedicated pedestrian/bike lane and the steps that would need to happen to make that a reality." -5/24/18
- "Even though all of us on County Road 16 realize the same issues/problems/constraints, it was intriguing to read one comment...moving the whole road 4 Ft. to the west and making the east side a dedicated walking/biking path. Is that even feasible?" -5/15/18
- "I would like to be informed as to what may be the changes that are proposed for West Lake Road. We live at the corner of Waters Edge and West Lake Road #3351. We have all sorts of traffic all year long and have become sensitive to all the types we experience. We have lots of stories if you want to listen. That said, Monday evening can be difficult to attend especially at 5PM. Is there some document you could forward so that we could at least know what is proposed? Even something in the mail would be fine. I could even stop by the Town Hall and pick something up. Just let me know..... I had one idea that I was going to suggest for the Meeting that was held in January, and wanted to attend, but that Large Snow storm put a damper on even making it the meeting. The idea was to have the trail start at Atwater Meadows Park and follow the sewer right of way to the Yacht Club. (Sewer District 39, G1, Area 1) No traffic, a nice view of the lake and peaceful. Allot of the homeowners around here do just that, as well as joggers, dog walkers and vacationers. Thanks for letting me email you." -4/15/18

APPENDIX C
LEVEL OF SERVICE RESULTS

APPENDIX C: PEDESTRIAN AND BICYCLE LEVEL OF SERVICE MODELS

Bicycle Level of Service Model. The statistically-calibrated mathematical equation entitled the *Bicycle Level of Service*[1] *Model (Version 2.0)* was used as the foundation of Ontario County Road 16's existing bicycling conditions evaluation. This *Model* is the most accurate method of evaluating the bicycling conditions of shared roadway environments. It uses the same measurable traffic and roadway factors that transportation planners and engineers use for other travel modes. With statistical precision, the *Model* clearly reflects the effect on bicycling suitability or "compatibility" due to factors such as roadway width, bike lane widths and striping combinations, traffic volume, pavement surface conditions, motor vehicles speed and type, and on-street parking.

The *Bicycle LOS Model* is based on the proven research documented in *Transportation Research Record 1578* published by the Transportation Research Board of the National Academy of Sciences. It was developed with a background of over 100,000 miles of evaluated urban, suburban, and rural roads and streets across North America. It now forms the basis for the bicycle level of service methodology contained in the *Highway Capacity Manual*. Many urbanized area planning agencies and state highway departments are using this established method of evaluating their roadway networks. These include metropolitan areas across North America such as Atlanta GA, Baltimore MD, Birmingham AL, Philadelphia PA, San Antonio TX, Houston TX, Buffalo NY, Anchorage AK, Lexington KY, and Tampa FL as well as state departments of transportation such as, Delaware Department of Transportation (DelDOT), New York State Department of Transportation (NYDOT), Maine Department of Transportation (MeDOT) and others.

---

[1] Landis, Bruce W. "Real-Time Human Perceptions: Toward a Bicycle Level of Service" *Transportation Research Record 1578*, Transportation Research Board, Washington DC 1997

Widespread application of the original form of the *Bicycle LOS Model* has provided several refinements. Application of the *Bicycle LOS Model* in the metropolitan area of Philadelphia resulted in the final definition of the three effective width cases for evaluating roadways with on-street parking. Application of the *Bicycle LOS Model* in the rural areas surrounding the greater Buffalo region resulted in refinements to the "low traffic volume roadway width adjustment". A 1997 statistical enhancement to the *Model* (during statewide application in Delaware) resulted in better quantification of the effects of high-speed truck traffic [see the $SP_t(1+10.38HV)^2$ term]. As a result, *Version 2.0* (now with FDOT-approved truck volume adjustment factor included) has the highest correlation coefficient ($R^2 = 0.77$) of any form of the *Bicycle LOS Model*.

Version 2.0 of the *Bicycle LOS Model* has been employed to evaluate the roads and streets that comprise the TPO's study network. Its form is shown below:

$$\text{Bicycle LOS} = a_1 \ln (Vol_{15}/L_n) + a_2 SP_t(1+10.38HV)^2 + a_3(1/PR_5)^2 + a_4 (W_e)^2 + C$$

Where:

Vol_{15} = Volume of directional traffic in 15 minute time period

$$Vol_{15} = (ADT \times D \times K_d) / (4 \times PHF)$$

where:
ADT = Average Daily Traffic on the segment or link
D = Directional Factor
K_d = Peak to Daily Factor
PHF = Peak Hour Factor

L_n = Total number of directional *through* lanes

SP_t = Effective speed limit

$$SP_t = 1.1199 \ln(SP_p - 20) + 0.8103$$

where:
SP_p = Posted speed limit (a surrogate for average running speed)

HV = percentage of heavy vehicles (as defined in the *Highway Capacity Manual*)

PR_5 = FHWA's five point pavement surface condition rating

W_e = Average effective width of outside through lane:

where:

$W_e = W_v$ - (10 ft x % OSPA) and $W_l = 0$

$W_e = W_v + W_l$ (1 - 2 x % OSPA) and $W_l > 0$ & $W_{ps} = 0$

$W_e = W_v + W_l$ - 2 (10 x % OSPA) and $W_l > 0$ & $W_{ps} > 0$ and a bikelane exists

where:

W_t = total width of outside lane (and shoulder) pavement

OSPA = percentage of segment with occupied on-street parking

W_l = width of paving between the outside lane stripe and the edge of pavement

W_{ps} = width of pavement striped for on-street parking

W_v = Effective width as a function of traffic volume

and:

$W_v = W_t$ if ADT > 4,000veh/day

$W_v = W_t$(2-0.00025 x ADT) if ADT $\leq$ 4,000veh/day, and if the street/road is undivided and unstriped

a_1: 0.507 a_2: 0.199 a_3: 7.066 a_4: - 0.005 C: 0.760

(a_1 - a_4) are coefficients established by multi-variate regression analysis.

The *Bicycle LOS* score resulting from the final equation is stratified into service categories A, B, C, D, E, and F (according to the ranges shown in Table D1) to reflect users' perception of the road segment's level of service for bicycle travel.

TABLE D1 Bicycle Level of Service Categories

LEVEL OF SERVICE	BLOS SCORE
A	≤ 1.5
B	> 1.5 and ≤ 2.5
C	> 2.5 and ≤ 3.5
D	> 3.5 and ≤ 4.5
E	> 4.5 and ≤ 5.5
F	> 5.5

This stratification is in accordance with the linear scale established during the referenced research (i.e., the research project bicycle participants' aggregate response to roadway and traffic stimuli).

Data Collection/Inventory Guidelines

Following is the list of data required for computation of the *Bicycle LOS* scores as well as the associated guidelines for their collection and compilation into the programmed database.

Average Daily Traffic (ADT)

ADT is the average daily traffic volume on the segment or link. The programmed database will convert these volumes to Vol_{15} (volume of directional traffic every fifteen minutes) using the Directional Factor (D), Peak to Daily Factor (K_d) and Peak Hour Factor (PHF) for the road segment.

Percent Heavy Vehicles (HV)

Percent HV is the percentage of heavy vehicles (as defined in the *Highway Capacity Manual*).

Number of lanes of traffic (L)

L reflects the total number of *through* traffic lanes of the road segment and its configuration (D = Divided, U = Undivided, OW = One-Way, S = Two-Way Left Turn Lane). The programmed database converts these lanes into directional lanes.

Posted Speed Limit (S_p)

S_p is recorded as posted.

W_t - Total width of pavement

W_t is measured from the center of the road, yellow stripe, or (in the case of a multilane configuration) the lane separation striping to the edge of pavement or to the gutter pan of the curb.

W_l - Width of pavement between the outside lane stripe and the edge of pavement

W_l is measured from the outside lane stripe to the edge of pavement or to the gutter pan of the curb. When there is angled parking adjacent to the outside lane, W_l is measured from the outside lane stripe to the traffic-side end of the parking stall stripes.

Width of pavement is the pavement striped for on-street parking (W_{ps})

W_{ps} is recorded only if there is parking to the right of a striped bike lane (not if the striped parking area is immediately adjacent to the outside lane).

OSPA %

OSPA% is the estimated percentage of the segment (excluding driveways) along which there is occupied on-street parking at the time of survey.

Pavement Condition (PC)

PC is the pavement condition of the motor vehicle travel lane according to the FHWA's five-point pavement surface condition rating shown below in Figure D1.

Designated Bike Lane

A "Y" is coded if there is a signed and marked bike lane on the segment; otherwise "N" is entered.

RATING	PAVEMENT CONDITION
5.0 (Very Good)	Only new or nearly new pavements are likely to be smooth enough and free of cracks and patches to qualify for this category.
4.0 (Good)	Pavement, although not as smooth as described above, gives a first class ride and exhibits signs of surface deterioration
3.0 (Fair)	Riding qualities are noticeably inferior to those above; may be barely tolerable for high-speed traffic. Defects may include rutting, map cracking, and extensive patching.
2.0 (Poor)	Pavements have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement has distress over 50 percent or more of the surface. Rigid pavement distress includes joint spalling, patching, etc.
1.0 (Very Poor)	Pavements that are in an extremely deteriorated condition. Distress occurs over 75 percent or more of the surface.

Source: U.S. Department of Transportation. Highway Performance Monitoring System-Field Manual. Federal Highway Administration. Washington, DC, 1987.

Figure D1 Pavement Condition Descriptions

The *Pedestrian Level of Service (Pedestrian LOS) Model*[1] will be used for the evaluation of walking conditions. This model is the most accurate method of evaluating the walking conditions within shared roadway environments. It uses the same measurable traffic and roadway factors that transportation planners and engineers use for other travel modes. With statistical precision, the *Model* clearly reflects the effect on walking suitability or "compatibility" due to factors such as roadway width, presence of sidewalks and intervening buffers, barriers within those buffers, traffic volume, motor vehicles speed, and on-street parking. The form of the *Pedestrian Level of Service Model*, and the definition of its terms are as follows:

$$\text{Ped LOS} = -1.2276 \ln (W_{ol} + W_l + f_p \times \%OSP + f_b \times W_b + f_{sw} \times W_s) + 0.0091 (Vol_{15}/L) + 0.0004 SPD^2 + 6.0468$$

Where:

W_{ol} = Width of outside lane (feet)

W_l = Width of shoulder or bike lane (feet)

f_p = On-street parking effect coefficient (=0.20)

%OSP = Percent of segment with on-street parking

f_b = Buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)

W_b = Buffer width (distance between edge of pavement and sidewalk, feet)

f_{sw} = Sidewalk presence coefficient
$= 6 - 0.3W_s$

W_s = Width of sidewalk (feet)

Vol_{15} = average traffic during a fifteen (15) minute period

L = total number of (through) lanes (for road or street)

SPD = Average running speed of motor vehicle traffic (mi/hr)

The Pedestrian LOS score resulting from the final equation is pre-stratified into service categories "A, B, C, D, E, and F", according to the ranges shown below, which reflect users' perception of the road segments level of service for pedestrian travel. This stratification is in accordance with the linear scale established during the research (i.e., the research project participants' aggregate response to roadway and traffic stimuli).

[1] Landis, B.W., V.R. Vattikitti, R.M. Ottenberg, D.S. McLeod, M. Guttenplan, Modeling the Roadside Walking Environment: Pedestrian LOS, *Transportation Research Record 1773*, Transportation Research Board, National Research Council, Washington, DC, 2001.

Pedestrian Level-of-Service Categories

LEVEL-OF-SERVICE	Pedestrian LOS Score
A	≤ 1.5
B	> 1.5 and ≤ 2.5
C	> 2.5 and ≤ 3.5
D	> 3.5 and ≤ 4.5
E	> 4.5 and ≤ 5.5
F	> 5.5

The *Pedestrian LOS Model* is used by planners and engineers throughout the United States in a variety of planning and design applications. The *Pedestrian LOS Model* can be used to conduct a benefits comparison among proposed sidewalk/roadway cross-sections, identify roadways that are candidates for reconfiguration for sidewalk improvements, and to prioritize and program roadways for sidewalk improvements.

Additional Data Collection and Inventory Guidelines

Following is the additional list of data used in the computation of the Pedestrian LOS scores (beyond those previously described for the bicycle mode). Also described are the associated guidelines for their collection and compilation into the database.

Width of Buffer (W_b) – is the width of a grass buffer. The width of the buffer is measured from the edge of pavement or back of curb to the beginning edge of the sidewalk. If a sidewalk has trees planted within its surface, then the horizontal width of the sidewalk occupied by the trees is considered the buffer width.

Width of Sidewalk (W_s) – is the width of the sidewalk, measured from either the edge of pavement, if a grass buffer is not present. If a grass buffer is present, the width is measured from the edge of the buffer to the back side of the sidewalk.

Sidewalk Percentage – is the percentage of sidewalk coverage (estimated in increments of 25%) of the segment; this is to be collected directionally

Tree Spacing in Buffer – is the spacing of trees within a buffer, measured from the center (width of spacing between trees). Trees can either be in a grass buffer or in sidewalk islands.

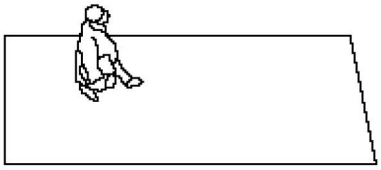
Cross-section – a "C" is recorded if there is a curb and gutter on the segment, an "S" if there is an open shoulder. Note: Indicate any ditches or swales adjacent to the edge of pavement of the segment in the comments field.

Roadside Profile Condition – This data item is collected to assist in determining the lateral area available for bicycle lane or paved shoulder and sidewalk construction. It is the area between the outside edge of the pavement and the right-of-way line. The profile condition assists in determining the type of facility, hence its cost [i.e., bicycle lane or paved shoulder or bike path]. Roadside profiles were classified as one of the three types illustrated below. Condition 1, buildable shoulder, is defined as an area adjoining the edge of pavement with a minimum width of seven feet and a maximum cross-slope of 6%. Condition 2 is a swale. Condition 3 is a ditch or canal. The ARC is to provide total right-of-way width.

Exhibit 18-2 Pedestrian Level-of-Service

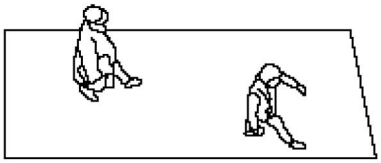
LOS A
Pedestrian Space >5.6 m^2/p *Flow Rate* ≤16 p/min/m

At a walkway LOS A, pedestrians move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.



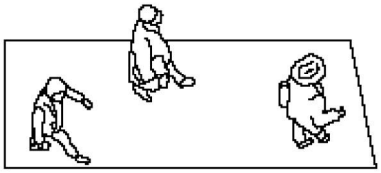
LOS B
Pedestrian Space >3.7-5.6 m^2/p *Flow Rate* >16-23 p/min/m

At LOS B, there is sufficient area for pedestrians to select walking speeds freely, to bypass other pedestrians, and to avoid crossing conflicts. At this level, pedestrians begin to be aware of other pedestrians, and to respond to their presence when selecting a walking path.



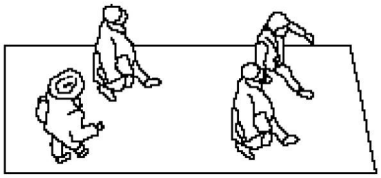
LOS C
Pedestrian Space >2.2-3.7 m^2/p *Flow Rate* >23-33 p/min/m

At LOS C, space is sufficient for normal walking speeds, and for bypassing other pedestrians in primarily unidirectional streams. Reverse-direction or crossing movements can cause minor conflicts, and speeds and flow rate are somewhat lower.



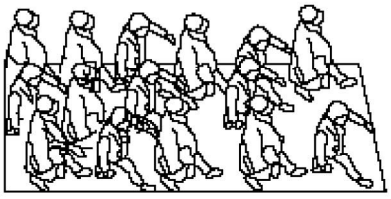
LOS D
Pedestrian Space >1.1-2.2 m^2/p *Flow Rate* >33-49 p/min/m

At LOS D, freedom to select individual walking speed and to bypass other pedestrians is restricted. Crossing or reverse-flow movements face a high probability of conflict, requiring frequent changes in speed and positions. The LOS provides reasonably fluid flow, but friction and interaction between pedestrians is likely.



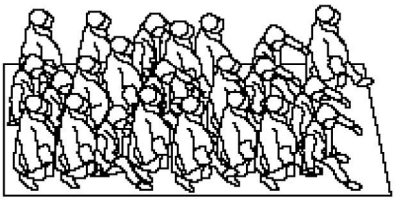
LOS E
Pedestrian Space > 0.75-1.4 m^2/p *Flow Rate* >49-75 p/min/m

At LOS E, virtually all pedestrians restrict their normal walking speed, frequently adjusting their gait. At the lower range, forward movement is possible only by shuffling. Space is not sufficient for passing slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity, with stoppages and interruptions to flow.



LOS F
Pedestrian Space ≤0.75 m^2/p *Flow Rate* varies p/min/m

At LOS F, all walking speeds are severely restricted, forward progress is made only by shuffling. There is frequent, unavoidable contact with other pedestrians. Cross and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.



Ontario County Road 16 Bicycle and Pedestrian Level of Service Sampling Results

Road Name	At	Lanes (L)		ADT	Tks. (HV) (%)	Post. Spd. (SP_p) mph	Width of Pavement			Occ. Park. (OSPA) (%)	Pavecon		Buff. Width (BW) (ft)	Tree Spcg. in Buffer (ft/ctr)	% with Sidewalk	Swalk Width (Ws) (ft)	Bicycle LOS		Pedestrian LOS	
		Th #	Con				W_t (ft)	W_l (ft)	W_{ps} (ft)		PC_t (1..5)	PC_l (1..5)					Score (0...7)	Grade (A...F)	Value (0...7)	Grade (A...F)
County Road 16	Ashton Place	2	U	3,445	*4*	35	16.0	4.5	0.0	0	4.0	4.0	0.0	0	0	0.0	1.97	B	3.58	D
County Road 16	German Brothers	2	U	3,445	*4*	35	17.0	7.0	0.0	20	3.0	3.0	0.0	0	0	0.0	2.18	B	3.51	D
County Road 16	Wells Curtice to N of Foster	2	U	3,445	*4*	35	17.0	6.5	0.0	0	3.0	3.0	0.0	0	0	0.0	1.61	B	3.51	D
County Road 16	Onanda Park	2	U	828	*4*	35	15.0	5.0	0.0	0	3.0	3.0	0.0	0	0	0.0	0.00	A	3.32	C
County Road 16	East of Seneca Point	2	U	828	*4*	55	15.5	5.0	0.0	0	3.5	3.5	0.0	0	0	0.0	0.00	A	4.00	D
Sampling Average																	1.15	A	2.78	C

New York State Department of Transportation
Speed Count Average Weekday Report

Station: 441005
Road #: CR CR16 Road name: WEST LAKE RD
From: WYFFELS RD
To: CANANDAIGUA CL
Direction: North

Start date: Mon 04/27/2015 06:00
End date: Thu 04/30/2015 12:45
County: Ontario
Town:
Speed limit: 35
LION#:

Count duration: 79 hours
Functional class: 17
Factor group: 60
Batch ID: DOT-R04 WW18a Class
Count taken by: Org: TTG Init: MJ
Processed by: Org: DOT Init: JLB

Speeds, mph

Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	37.5	37.6	39.3	1
2:00	0	0	0	0	0	0	1	0	0	0	0	0	0	100.0	0.0	0.0	0.0	0.0	47.5	47.6	49.3	1
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
5:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	42.5	42.6	44.3	2
6:00	0	0	0	1	4	7	1	1	0	0	0	0	0	14.3	7.1	0.0	0.0	0.0	40.9	41.5	45.0	14
7:00	1	1	3	10	24	22	6	1	1	0	0	0	0	11.6	2.9	1.4	0.0	0.0	37.2	39.1	44.5	69
8:00	0	1	0	13	50	62	13	4	1	0	0	0	0	12.5	3.5	0.7	0.0	0.0	40.0	40.7	44.8	144
9:00	3	2	2	17	42	36	12	2	0	0	0	0	0	12.1	1.7	0.0	0.0	0.0	36.6	39.1	44.6	116
10:00	0	0	1	11	34	28	8	1	0	0	0	0	0	10.8	1.2	0.0	0.0	0.0	39.0	39.4	44.4	83
11:00	1	0	2	10	36	26	6	1	0	0	0	0	0	8.5	1.2	0.0	0.0	0.0	37.7	38.9	44.0	82
12:00	1	2	2	13	34	31	6	0	0	0	0	0	0	6.7	0.0	0.0	0.0	0.0	37.1	38.9	43.9	89
13:00	0	2	2	13	39	26	5	0	0	0	0	0	0	5.7	0.0	0.0	0.0	0.0	37.5	38.4	43.5	87
14:00	1	1	3	17	31	33	4	0	0	0	0	0	0	4.4	0.0	0.0	0.0	0.0	36.9	38.8	43.6	90
15:00	2	1	2	11	37	23	5	1	0	0	0	0	0	7.3	1.2	0.0	0.0	0.0	36.3	38.4	43.7	82
16:00	1	4	2	18	45	29	9	1	0	0	0	0	0	9.2	0.9	0.0	0.0	0.0	36.7	38.3	44.0	109
17:00	2	1	4	19	45	30	9	2	0	0	0	0	0	9.8	1.8	0.0	0.0	0.0	36.6	38.4	44.1	112
18:00	1	1	1	6	38	30	8	0	0	0	0	0	0	9.4	0.0	0.0	0.0	0.0	38.1	39.5	44.3	85
19:00	1	1	1	5	26	27	5	1	0	0	0	0	0	9.0	1.5	0.0	0.0	0.0	38.0	40.0	44.3	67
20:00	0	1	0	8	20	14	3	1	0	0	0	0	0	8.5	2.1	0.0	0.0	0.0	38.0	38.7	44.0	47
21:00	0	0	1	3	12	8	3	0	0	0	0	0	0	11.1	0.0	0.0	0.0	0.0	38.6	39.0	44.4	27
22:00	0	0	1	3	4	4	3	0	0	0	0	0	0	20.0	0.0	0.0	0.0	0.0	38.2	39.4	46.3	15
23:00	0	0	0	1	3	2	1	0	0	0	0	0	0	14.3	0.0	0.0	0.0	0.0	39.1	39.2	44.9	7
24:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	37.1	37.6	42.8	3
Avg. Daily Total	14	18	27	180	526	441	108	16	2	0	0	0	0	9.5	1.4	0.2	0.0	0.0	37.6	39.1	44.2	1332
Percent	1.1%	1.4%	2.0%	13.5%	39.5%	33.1%	8.1%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	1.1%	2.4%	4.4%	17.9%	57.4%	90.5%	98.6%	99.8%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	1	1	1	8	22	18	4	1	0	0	0	0	0									56

	Avg. Speed	50th% Speed	85th% Speed
North	37.6	39.1	44.2
South	38.0	39.2	44.2

Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	8	144	A.M.	8	196
South	18	145	P.M.	17	239

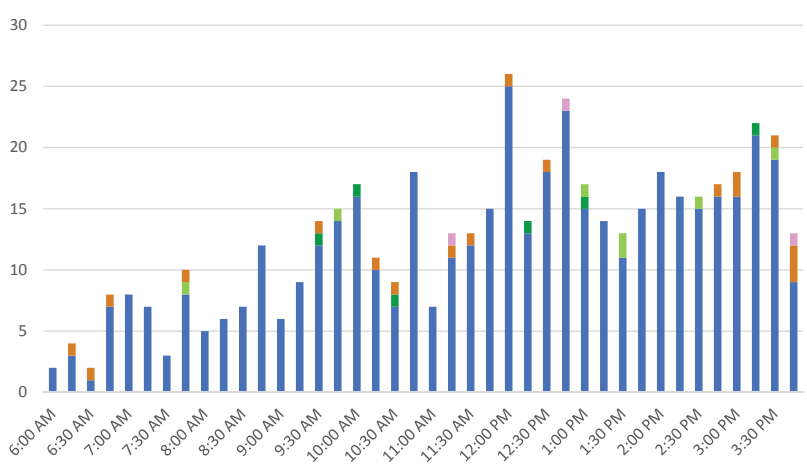
TRAFFIC FLOW BY DIRECTION

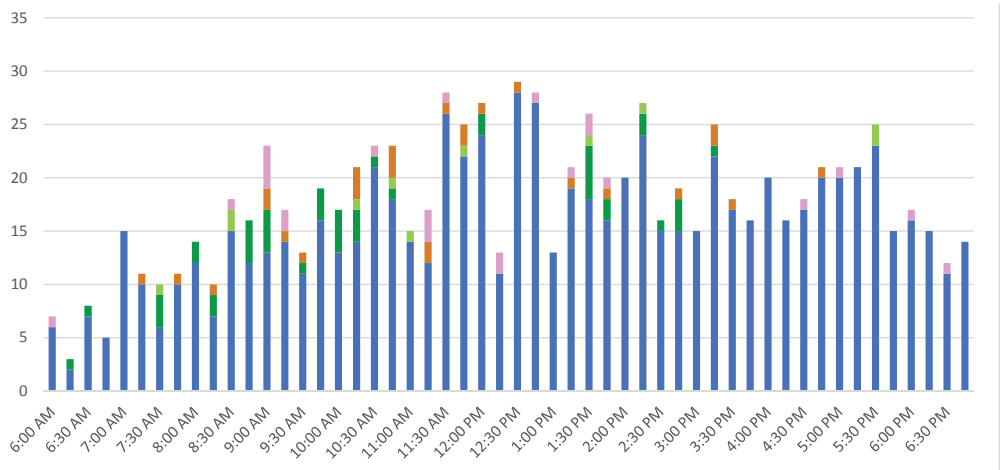
APPENDIX D
MIOVISION DATA

Fall 2017 Miovision Counts
October, 2017

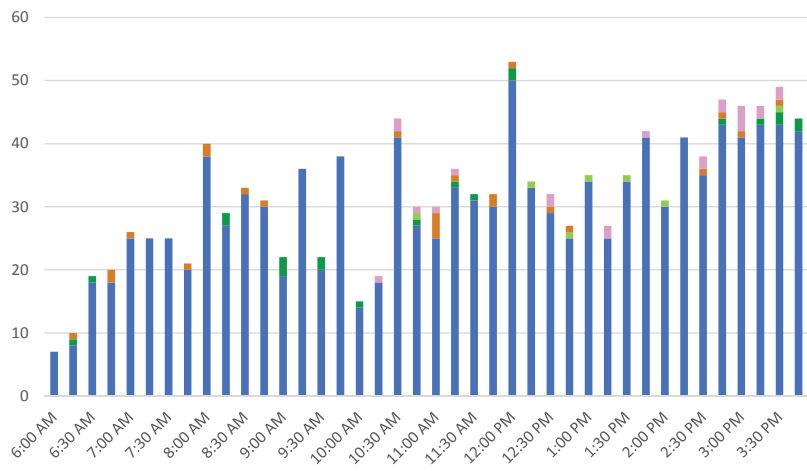
Summer 2018 Miovision Counts
July, 2018

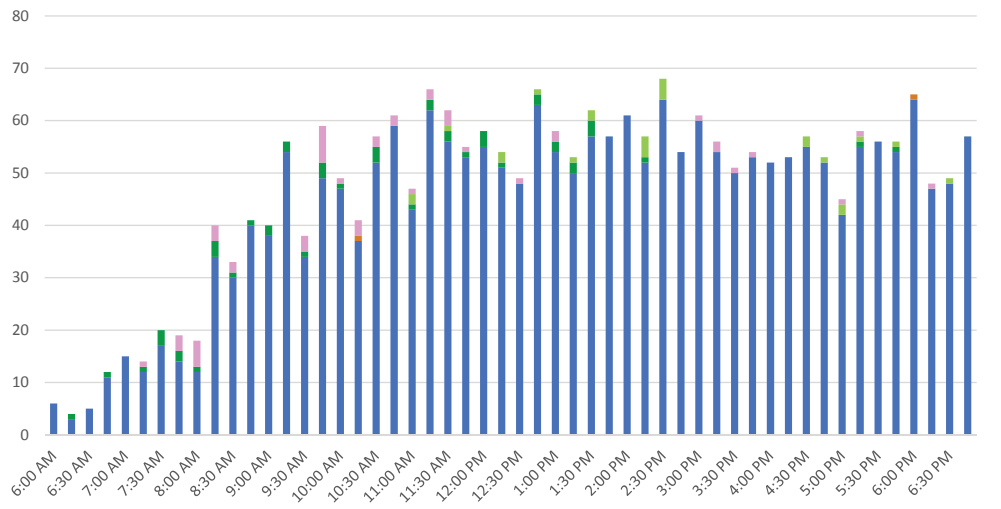
Onanda Park



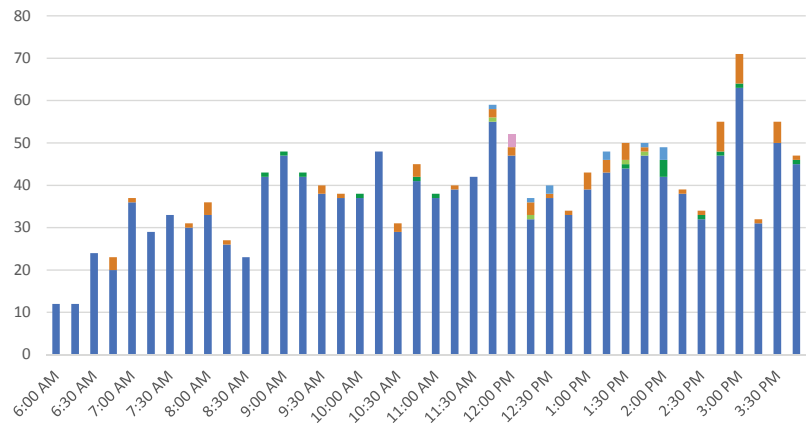


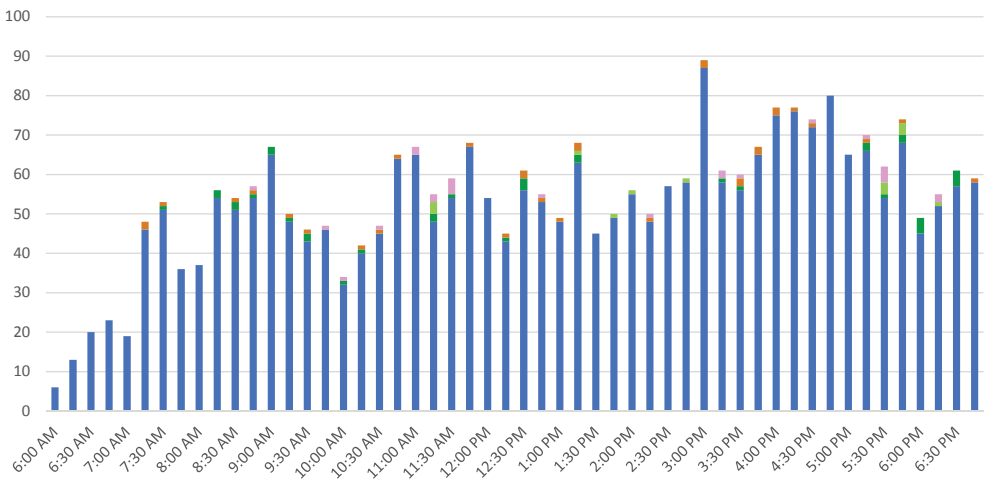
Butler Road Schoolhouse





Yacht Club





LEGEND: Cars and light trucks | Pedestrians | Motorcycles | Heavy Vehicles | Bicycles

Ontario County Road 16 - West Lake Road Pedestrian & Bicycle Study

Department of Public Works - Ontario County, NY

MIOVISION DATA

August 1, 2018

APPENDIX E
BICYCLE AND PEDESTRIAN SUPPORTIVE CODE LANGUAGE

Introduction

Local zoning codes, community design guidelines, and site planning requirements (local codes) can significantly affect the accessibility, safety, and attractiveness of development for bicyclists and pedestrians. Site plan elements, presence of sidewalks, building orientation, parking supply, and parking layout can affect the attractiveness of bicycling and walking as modes of travel. Likewise, connectivity between adjacent properties can also be influenced through local code requirements.

The objective of the Bicycle and Pedestrian Supportive Code Language project was to develop information on and identify examples of noteworthy zoning code and site planning language and guidance that enhances accessibility and safety for bicyclists and pedestrians. The project is a joint effort between the Genesee Transportation Council (GTC) and the Genesee/Finger Lakes Regional Planning Council (G/FLRPC). Staff researched and assessed materials previously compiled by G/FLRPC including, but not limited to, comprehensive plans, zoning regulations, and site planning guidance. Project research also assessed codes and associated materials available from national- and state-level agencies and associations such as the Federal Highway Administration, New York State Department of State, the American Planning Association, and municipalities located within New York State.

Project Methodology

GTC staff surveyed county planning departments in the nine-county Genesee-Finger Lakes region to identify those topics related to supporting bicyclists and pedestrians that could be addressed within the scope of the project. The survey identified the following key areas: 1) sidewalk requirements adjacent to new and existing development, 2) bicycle parking requirements, and 3) automobile parking design. Within the identified key areas, research was conducted and relevant codes obtained through the G/FLRPC library and internet-based resources. Fact sheets and presentation materials were developed to provide examples that may be considered by jurisdictions that seek to improve bicycle and pedestrian safety, access, and attractiveness within the community.

Background

In New York State, land use is regulated predominantly at the local level pursuant to the State's Consolidated Laws. These include the General City Law, General Municipal Law, Municipal Home Rule Law, Town Law, and Village Law. The Consolidated Laws provides a wide variety of tools

that local governments can utilize to improve the transportation system for pedestrians and bicyclists.

The study scope is limited to code language such as local zoning ordinances, site plan review guidelines, and subdivision ordinances. Many communities include bicycle and pedestrian related policies within local comprehensive plans; however, specific code examples are less often available although essential to implementing policy. One town's formally-adopted sidewalk policy has been included because it provides a direct link between exemplary policy and the implementing code. Study examples are limited to New York State jurisdictions to ensure consistency with the enabling provisions included in the State's Consolidated Laws. The study is not presented as legal analysis however; it is instead intended to provide a resource for communities that may wish to assess suitability toward local conditions and needs.

Key Findings

Based on the survey results and project research, five key findings emerge as areas where communities might consider revisions to land use codes to support bicycle and pedestrian travel. These include:

- Require that developers include sidewalks within residential subdivisions;
- Work to infill gaps in the existing sidewalk network within each community;
- Ensure that bicycle parking is provided within new commercial development;
- Improve the integration of pedestrian facilities within automobile parking lots; and
- Locate buildings to the front of lot lines and parking toward the rear in order to support pedestrian access to the site.

None of the measures are a panacea, and few if any of the communities studied include all the measures throughout their land use regulations. However, each approach has been used by municipalities within New York State and the implementation of one or all of the measures described below could provide tangible benefits to local communities seeking to improve conditions for motorists, bicyclists, and pedestrians.

A. Sidewalks Adjacent to New Residential Development

1. Background

   Every trip begins and ends with a walking trip. Providing sidewalks adjacent to new development is one way that communities can improve mobility for all users including the elderly, the young, people with disabilities, and others without access to an automobile. Sidewalks can improve pedestrian safety and convenience by providing a firm, stable, and slip resistant surface separate from the roadway.

   The determination of whether or not sidewalks should be provided adjacent to new development depends on the roadway classification and the proposed land use which influences the number of pedestrian trips that will occur. The Federal Highway Administration (FHWA) recommendations range from paved shoulders (typically, three-foot minimum width for rural highways with less than 400 average daily vehicle trips) to sidewalks on both sides of the street (typically, five-foot minimum width) for commercial urban streets.

FHWA guidelines represent standard practice where high intensity land use warrants sidewalks as a safety measure and in low density rural areas where paved roadway shoulders comprise adequate facilities. However, at medium residential densities near FHWA's threshold of four dwelling units per acre there appear to be opportunities for communities that may wish to improve local pedestrian facilities by requiring that sidewalks be provided adjacent to new residential development regardless of roadway classification and the proposed land use.

Residential subdivisions comprise a significant land use in many communities and have the potential to generate a considerable number of pedestrian trips. In addition to improved pedestrian safety, providing sidewalks to serve residential neighborhoods facilitates access to nearby parks, schools, and commercial activity centers and promotes public health through daily physical activity.

2. How it's done

Communities that seek to provide sidewalks adjacent to new residential development can utilize several approaches, including:

- Sidewalk requirements based on residential density (i.e., per FHWA Guidelines);
- Requirements based on the roadway's functional classification;
- Sidewalk requirements based on adjacent land use; and
- Policy-based requirements.

3. Examples

Requirements based on residential density: the Town of Malta (Code Chapter 143-13.1, Subdivision of Land) requires sidewalks to be provided within all new residential and commercial projects within the Town. The code specifies that the sidewalk shall have a minimum width of five feet and be constructed of concrete designed to serve pedestrians. The code's requirements go on to state that for residential development with more than four units per acre sidewalks shall be required on both sides of the roadway and are required on one side only when the density of development is less than four units per acre. These density-based requirements are consistent with FHWA guidelines.

Requirements based on the roadway's functional classification: the Town of Rhinebeck (Land Subdivision Regulations Article VI, Section 2, Subdivision Design Standards) requires that all streets designated as through roads shall be provided a pedestrian path, sidewalk, or bikeway on at least one side of the street. Sidewalks, if provided, must include a four-foot buffer between the sidewalk and the street. Bikeways (combined bicyclist/pedestrian paths) must also meet this buffer requirement and be at least four-feet in width. Similar requirements apply within the Town of Bethel (applicable to collectors and arterial roads). Sidewalks can also be required based on the ownership of the road. This approach is followed by the Town of Guilderland which requires sidewalks on both sides of all state and county roads wherever properties abutting such roads have access to municipal waterlines (unless adjacent to agriculturally zoned property).

Sidewalk requirements based on nearby land use: the Town of Perinton (Code Section 208-28) requires that sidewalks or pedestrian ways shall be constructed along lands fronting both sides of collector or arterial street(s), within Pedestrian (PED) Zones as shown on the

Town of Perinton's Official PED Map. A "PED Zone" is defined as land within a 4,000-foot radius of the central point of a public school, public park, or active commercial area.

Policy-based requirements: the Town of Penfield has adopted a Sidewalk Policy that requires all new development approved by the Town to include sidewalks along both sides of all local roads. Developers may seek a waiver from the policy subject to the payment of a $500 per dwelling unit fee placed in the sidewalk capital account specifically for the installation of sidewalks in locations identified by the Town Board.

4. Summary

There are several options available to communities that wish to provide sidewalks adjacent to new residential development and/or support the development of "complete streets" within these areas. Code language linked to roadway classification and adjacent land use may support pedestrian travel between neighborhoods (along collector roads to and from schools and local shopping centers, etc.) but is unlikely to support improved pedestrian facilities along local streets unless local streets are included in the requirements.

Two options that might also be considered by jurisdictions seeking to improve pedestrian accessibility include providing between-lot pedestrian easements to connect residences with parks, schools, neighborhood shopping facilities, and similar destinations and limiting the length of cul-de-sacs to provide more direct pedestrian access between destinations.

B. Sidewalks Adjacent to Existing Development

1. Background

In many communities there are gaps within the existing sidewalk network. These result when new development includes sidewalks but the development site is not located adjacent to the existing sidewalk network with the number of gaps increasing over time. Communities have several options to consider if they wish to complete the existing sidewalk network for residents and visitors.

2. How it's done

Local communities can provide sidewalks adjacent to existing development using the following techniques:

- Sidewalks constructed at the property owner's expense;
- Sidewalks constructed at the municipality's expense;
- Sidewalks constructed following petition by the affected property owners; and
- Comprehensive sidewalk policy.

3. Examples

Sidewalks constructed at the property owner's expense: the Town of Ithaca (Code Section 230-8, Streets & Sidewalks) provides that the Town Board may require that sidewalks be constructed along streets and highways at the owner's expense. The code includes language to authorize the Town to construct the facility and then to assess the owner for the cost, plus any interest. The code allows but does not require the Town to pay some portion of the cost pursuant to an adopted local law.

Sidewalks constructed at the municipality's expense: the Town of Mamaroneck (Code Section 187-2, Streets & Sidewalks) authorizes the Town Board to direct the Town

Superintendent to construct sidewalks along county roads and state highways (with permission from county or state officials) at Town expense. Sidewalks along town roads are the responsibility of, and must be voluntarily constructed by, the property owner at their own expense.

Sidewalks constructed following petition by affected property owners: the Town of Union (Code Chapter 178-1, Streets and Sidewalks) adopted a regulation in 1946 that creates a mechanism for property owners to request sidewalks along their side of the street. When 51 percent of the property owners request the sidewalk, its construction becomes mandatory. The Town acts as agent for the construction and the property owners are required to pay all costs.

Comprehensive sidewalk policy: The Town of Penfield Sidewalk Policy applies to new development and also to existing development. This policy articulates the Town's intent to "Install sidewalks along all Minor Arterial, Major Collector and Minor Collector roads to develop safe pedestrian mobility and enjoyment." These roadways comprise what is referred to as the primary sidewalk system. The installation of sidewalks along the primary sidewalk system is supported by the allocation of funds from the Town's General Fund, by grants, and by the sidewalk waiver fees paid when an exemption to the sidewalk requirement for new development is granted.

This policy is further supported by an officially adopted "Primary Sidewalk System Map" that identifies the improvements that will be made on an annual basis, as resources permit.

4. Summary

Local jurisdictions may wish to consider developing specific codes and/or policies that address the process and financial details that will apply if they seek to improve the existing sidewalk system.

Mandating that property owners pay for the installation of sidewalks may not be well received, and even a petition-based process could create hard feelings between neighbors depending on individual positions on the issue.

For these reasons, a policy-based approach that identifies and funds specific sidewalk improvements adjacent to existing development linked to a requirement that new development provide sidewalks or pay a fee that can be allocated for the construction of sidewalks adjacent to existing development (such as the Penfield example cited above) may represent a workable approach to improving the existing sidewalk system.

C. Bicycle Parking

1. Background

Bicyclists need places to park and secure their bicycles upon reaching their destination. Lacking designated facilities, bicyclists will use trees, utility poles, parking meters, railings, and street furniture to secure their bicycles. Doing so may cause damage to the bike or to the ad-hoc bike racks and may also result in inconvenience and potential danger (such as tripping hazards) to non-cyclists. Lack of bicycle parking facilities discourages bicycling by cyclists who may feel uncomfortable locking bicycles to non-designated facilities.

In order to avoid the undesirable effects associated with ad-hoc bike racks, bicycle parking facilities can be provided at activity centers that are accessible by bike. Bicycle parking facilities should be convenient, safe, secure, and protected from inclement weather. At a

minimum, well-designed racks should be provided and, depending on the need, enclosed bike lockers located within covered parking structures may be considered.

2. How it's done

Communities can provide adequate bicycle parking in the following ways:

- Allocate an identified percentage of off-street parking for bicycle parking;
- Incorporate general bicycle parking provisions in the off-street parking regulations; and
- Implement flexible bicycle parking requirements via the Planning Board.

3. Examples

Allocate an identified percentage of off-street parking for bicycle parking: the City of Rochester Charter and Code (Chapter 120-173, Off-Street Parking) requires that bicycle parking equal to 10 percent of the vehicle parking requirements for the property (for a minimum of two bicycles) be provided at all multifamily housing (over 10 units), commercial, and industrial uses. An additional requirement is that bicycle parking be located and clearly designated in a safe and convenient location, at least as convenient as the majority of auto spaces provided and that facilities are designed to accommodate U-shaped locking devices and support bicycles in a stable position without damage to wheels, frame, or other components. The facilities are required to be securely anchored and of sufficient strength to resist vandalism and theft.

Incorporate general bicycle parking provisions in the off-street parking regulations: the Town of Warwick (Zoning Ordinance Section 164.43.2, Off-Street Parking and Loading Requirements) requires that pedestrian and bicycle amenities such as benches, shade, human-scale lighting, and bicycle racks be provided for parking lots meeting specific requirements.

Implement flexible requirements via the Planning Board: the Town of Red Hook (Zoning Ordinance Section 143-116) includes a provision in its site plan design criteria that facilities be provided, where deemed applicable by the Planning Board, for the short-term parking of bicycles.

4. Summary

In communities with ongoing commercial, multi-family, and industrial development, a percentage-based approach could be considered to ensure that bicycle accommodations are provided for new development. Those communities that prefer additional flexibility or wish to defer the decision to the Planning Board and/or site plan review process may want to consider more general code language that would allow but not require the provision of bicycle facilities on a case-by-case basis.

D. Automobile Parking to Include Pedestrian Accommodations

1. Background

Providing convenient parking for motorists adjacent to retail and other establishments is typically addressed through a municipality's off-street parking requirements. These requirements, within the zoning code, provide dimensions for automobile parking spaces and specify the number of automobile parking spaces required for each land use. In some

cases, a general acknowledgement that pedestrians be considered during the design review for the parking facility is included within the off-street parking requirements. In other cases, however, pedestrians are not considered during the design review for parking lots and the resulting facilities are difficult to cross, creating barriers to pedestrian travel that could be resolved with improved design.

2. How it's done

Local jurisdictions may consider the following options if they wish to include pedestrian accommodations within off-street parking facilities:

- Specific requirements within off-street parking code language; and
- Flexible requirements based on the Planning Board's determination.

3. Examples

Specific requirements within off-street parking code language: the Town of Warwick (Zoning Ordinance Section 164.43.2, Off-Street Parking and Loading Requirements) includes specific requirements for parking lot design that improve the environment for pedestrians by: 1) breaking up large parking lots into smaller parking groves and parking courts with a significant number of shade trees and surrounded by low hedges, stone walls, or attractive fencing; 2) encouraging designs that avoid placing more than 15 parking spaces in a continuous row and more than 60 spaces in any single parking area as defined by landscaping; 3) promoting landscaping that delineates vehicular and pedestrian patterns; 4) providing clear and legible signs, different color and texture paving materials, raised or inverted areas, and other techniques to direct the flow of both vehicular and pedestrian traffic within the lot; and 5) providing separate pedestrian walkways in large parking lots to allow safe movement within the lots.

Additional design criteria specify that: 1) One walkway can serve as a collector for up to four bays of parked cars; 2) the walkway should be a minimum of four-feet wide, allowing an additional 30 inches on each side for overhanging of automobiles; 3) all walkways should be raised to a standard sidewalk height and should be constructed of different paving material than the parking lot; and 4) pedestrian and bicycle amenities such as benches, shade, human-scale lighting, and bicycle racks should be provided.

Flexible requirements based on the Planning Board's determination: the Town of Malta (Zoning Ordinance Chapter 167, Site Plan) provides that the Planning Board shall consider the maximum adequacy of interior circulation in parking and loading facilities with particular attention to vehicular and pedestrian safety.

4. Summary

Communities that wish to promote pedestrian and bicycle-sensitive parking lot design can do so by including the desired design elements within their off-street parking code language. Doing so will provide developers with examples of expected design features at an early stage in the site planning process. For communities that prefer a more flexible approach, the Planning Board can be directed and/or authorized to consider pedestrian safety within the design/site plan review process.

E. Automobile Parking Site Location

1. Background

The location of automobile parking facilities with respect to buildings on a commercial development site can have a significant effect on the viability of pedestrian access to and from the site. When the buildings are located near the rear lot line and the parking facilities are located between the front of the building and the street, pedestrians may be forced to walk through the parking lot to access the buildings from the public right of way. This creates a potential for conflict between motorists and pedestrians that can be reduced by locating parking lots to the rear of buildings and locating buildings adjacent to the street with minimal setback.

Additionally, locating buildings near the street provides a sense of enclosure to the streetscape and provides merchants the opportunity for exposure to passersby that is lost when buildings are set behind parking facilities.

2. How it's done

The location of parking facilities on a site can be controlled directly by:

- Parking to the side or rear of the primary use included within design criteria; and
- Parking to the side or rear of the primary use and on the same lot.

3. Example

Parking to the side or rear of the primary use included within design criteria: the City of Batavia (Code Section 190-39, Parking requirements) "seeks to balance the need for adequate parking with the need to minimize harm resulting from the provision of parking and to avoid the negative impacts of excessive parking requirements." In seeking that balance, the code requires that all off-street parking be located behind or to the side of the principal building. In order to provide limited amounts of parking in front of buildings, a maximum of two rows of parking may be located in the front of a principal building in a C-2 District. The code language also specifies that parking areas shall be designed and landscaped to avoid long, uninterrupted rows of vehicles.

Parking to the side or rear of the primary use and on the same lot: the City of Lackawanna (Code Section 230-36, Parking, loading and stacking) requires that off-street parking be located on the same lot as the building to which it is an accessory use. The code further requires that all off-street parking facilities shall be located to the side or rear of the principal use building except in the Central Business District, where off-street parking shall be restricted to the rear yard.

4. Summary

Communities can direct parking to the rear of development sites and thereby support pedestrian utilization of commercial facilities located within their jurisdiction. Since parking lot and building location are closely interrelated, jurisdictions could also address this issue by revised building setback requirements. However, including the location criteria for the parking lot within the parking regulations allows a more unified approach to managing the

facilities by including criteria related to parking lot internal design within the same section of the zoning ordinance as parking lot location criteria.

Summary and Conclusion

This report shows that within New York State and the Genesee-Finger Lakes Region there are numerous examples of noteworthy zoning code and site planning language and guidance that enhance accessibility and safety for bicyclists and pedestrians. Exemplary codes and policies demonstrate that:

- Sidewalks can be provided adjacent to new residential developments utilizing a code-based approach (within the jurisdiction's subdivision regulations) or based on a comprehensive sidewalk policy that guides the implementation of the subdivision, site planning, and zoning ordinance.
- Providing sidewalks adjacent to existing development is challenging due to the cost and the difficulty in obtaining consensus from the affected parties. An approach based on a comprehensive sidewalk policy supported by an officially-adopted Sidewalk System Map, including a dedicated funding source and prioritization strategy, may be preferable to mandated construction at the property owners' expense adjacent to existing development.
- Bicycle facilities can be provided by including the requirements to do so within the jurisdiction's off-street parking requirements. A ratio of required automobile parking can be used, and the ordinance should include appropriate design criteria to ensure that damage to bicycles does not occur and that bicycle parking is properly located on the site.
- Designing parking lots to incorporate pedestrian-friendly features can be accomplished by "breaking up" the lot with bays and islands and by providing identifiable separation between vehicles and pedestrians on the site. These strategies should be combined with appropriate location on the site (parking lots located to the rear of the site) and can be addressed within the jurisdictions off-street parking requirements.
- The siting of parking lots toward the rear of the development site can be controlled within a jurisdiction's off-street parking requirements and should be combined with requirements to include pedestrian-friendly features within the lot to maximize the quality of the site design.

Resources:

1. Federal Highway Administration, Pedestrian Facilities Users Guide, FHWA-RD-01-102, March 2002.

2. New York State Department of State, Creating the Community You Want: Municipal Options for Land Use Control, June 1998.

3. Office of the New York State Comptroller, Division of Local Government Services & Economic Development, Smart Growth in New York State: A Discussion Paper, May 2004.

4. The Rockefeller Institute of Government, Local Governments in New York State, May 2003.

5. State of New York, Local Government Handbook, 5th Edition, January 2000.

6. Codes and Policies.

Bicycle and Pedestrian Supportive Codes and Policies
Representative Examples

Sidewalks Adjacent to New Development

1. Town of Malta, New York, Code Chapter 143-13.1, Subdivision of Land:

   Sidewalks.

   A. General. Sidewalks shall be provided within all new residential and commercial projects within the Town.

   B. Definitions. As used in this section, the following terms shall have the meanings indicated: SIDEWALK — A walking surface with a minimum width of five feet and constructed of concrete designed to service pedestrians. C. Requirements. (1) Sidewalks shall be required within all residential and commercial projects within the Downtown District (as defined herein) and all residential and commercial Planned Development Districts. "Downtown" shall be defined as … (2) Sidewalks shall be installed within all residential projects under the following criteria: (a) Residential development with more than four units per acre: sidewalks shall be required on both sides of the roadway.
   (b) Residential developments with fewer than four units per acre: sidewalks shall be required on one side of the roadways.

2. Town of Rhinebeck, New York, Land Subdivision Regulations Article VI, Section 2, Subdivision Design Standards:

   Pedestrian Ways: Adequate provision shall be made for convenient and safe movement of pedestrians and bicyclists in any subdivision of land for residential purposes throughout the Town of Rhinebeck. All streets designated as through roads shall have an improved pedestrian path, sidewalk or bikeway provided on at least one (1) side of the street. Any such sidewalk or pedestrian path shall be so placed that there will be a distance of not less than four (4) feet between the sidewalk and the street pavement. A bikeway, or combined bicyclist/pedestrian path, not less than four (4) feet in width, may be alternatively situated adjacent the street pavement and be visually separated there from by striping on both its inner and outer edges.

   To the extent considered practicable by the Planning Board, and in consideration of Public Health, safety and convenience, the Planning Board may require that additional or alternatively-located pedestrian ways be provided within a residential subdivision to provide access to parks or public spaces, school sites, neighborhood shopping facilities, or similar destination. Any such pedestrian way may be situated within either a public right-of-way or established within a suitable easement.

3. Town of Bethel, New York, Land Subdivision Regulations Chapter 116-11, Design Standards, Streets:

   Streets shall be graded and improved with pavements in accordance with the minimum road specifications of the Town of Bethel, New York, as amended. Curbs and provision for sidewalks shall be required for all arterial and collector streets in accordance with the graphic standards included in this chapter.

4. Town of Guilderland, New York, Code Chapter 227-2, Sidewalks:

   Required sidewalk locations.

A. Sidewalks shall be required on both sides of all state and county roads wherever properties abutting such roads have access to municipal water lines, except such roads abutting agricultural zoned property, and shall be required on any other Town road, or part thereof, by resolution of the Town Board after a public hearing, or by provision of state law.

B. On all roads other than those enumerated in § 227-2A, the Planning Board and the Zoning Board of Appeals are authorized, in their discretion, to require the installation of sidewalks, bike paths, or other pedestrian facilities as a condition of approval for property under review. The Planning Board and the Zoning Board of Appeals shall consider sidewalks, bike paths, or other pedestrian facilities as a condition of approval for property under review when said property is in proximity to schools, parks, businesses, religious institutions, existing neighborhoods, undeveloped land zoned for residential or commercial construction, existing sidewalks, or roads with the potential for high traffic volumes.

5. Town of Perinton, New York, Code Section 208-28:

   Sidewalks.

   A. Intent. The Town of Perinton recognizes the need to encourage and facilitate the development of a system of sidewalks for the safety of its residents along its collector and arterial streets.

   B. Requirements. Sidewalks or pedestrian ways shall be constructed and an easement for maintenance of such shall be provided along lands fronting both sides of collector or arterial street(s), as defined in Chapter 182, Subdivision of Land, within Pedestrian (PED) Zones as shown on the Town of Perinton's Official PED Map, adopted July 8, 1981, and as amended. A "PED Zone" is defined as land within a four-thousand-foot radius of the central point of a public school, public park or active commercial area. The central point shall be determined by the intersection of two roads or a driveway and a road. If the four-thousand-foot radius intersects any portion of a given property, then that lot in total becomes subject to sidewalk installation. Pedestrian zones may also be linear, with the bounds of the zones set forth on the Official Town of Perinton PED Map.

   The Planning Board may require the construction of sidewalks along streets not within PED Zones at its discretion, after considering the policies set forth in § 182-6 of this Code. Sidewalks defined under this section shall be constructed in conformance with the Design Criteria of the Town of Perinton. In cases where a sidewalk has been previously constructed by the Town, county or state along frontage proposed for development or subdivision approval, the applicant shall be required to make a contribution to the Sidewalk Fund as described in § 208-28E. The Planning Board may require a sidewalk contribution in lieu of construction when it determines that a constructed sidewalk will not connect with an existing sidewalk and that the contribution may be used to link or extend existing sidewalks within the Town. [Amended 6-8-1994 by L.L. No. 2-1994; 6-27-2001 by L.L. No. 5-2001]

6. Town of Penfield, New York, Sidewalk Policy:

   All new development approved by the Town of Penfield is required to install sidewalks along both sides of all local roads.

Sidewalks Adjacent to Existing Development

1. Town of Ithaca, New York, Code Section 230-8, Streets & Sidewalks:

   Duty to construct and maintain sidewalks. The Town Board may adopt orders from time to time, directing the owners of the respective lots and parcels of land abutting on any Town street or highway, or, with the consent of the County Superintendent of Highways or the State Commissioner of Transportation, as the case may be, abutting on a county or state highway within the Town of Ithaca, along which it is desired that sidewalks be built, relaid or repaired, to

construct the same to conform the terms of this article, and specifying the time within which the same shall be done…

Notwithstanding the foregoing, the Town Board may adopt a local law apportioning the expense of building, relaying or repairing any sidewalk within such Town between the Town and owners of the respective lots and parcels of land abutting any street or county or state highway within the Town along which it is desired that sidewalks be built, relaid or repaired.

2. Town of Mamaroneck, New York, Code Section 187-2, Streets & Sidewalks:

Construction of sidewalks along county roads or state highways.

A. The Town Board of the Town of Mamaroneck may, by resolution, direct the Town Superintendent to construct a sidewalk along a described portion of any county road or state highway in the manner and not exceeding an expense to be specified in the resolution, and the expense of constructing such sidewalk shall be a town charge and shall be paid in the same manner as other town charges.

B. No such sidewalks shall be built along any state highway until the State Superintendent of Public Works shall have given his consent thereto, pursuant to § 54 of the Highway Law, and no such sidewalk shall be built along any county road until the County Superintendent of Highways shall have given his consent thereto, pursuant to § 136 of the Highway Law.

§ 187-3. Construction of sidewalks by property owner. Editor's Note: Amended at time of adoption of Code; see Ch. 1, General Provisions, Art. I.

Any property owner, after applying for and receiving a permit, may construct a sidewalk or curb on town property or may build a drain from any structure, enclosure or lot of ground at his own expense. Before the owner may proceed with the work, the Town Engineer shall establish proper grades and the same shall be followed in laying such sidewalk, curb or drain. The width, materials and construction of such sidewalks, curbs and drains shall fully conform to standard specifications for such work. No drainage piping shall be allowed to discharge onto the surface of any public right-of-way.

3. Town of Union, New York, Code Chapter 178-1, Streets and Sidewalks:

Sidewalk Construction Rules and regulations. All sidewalks constructed within the Town of Union outside the corporate limits of the Villages of Endicott and Johnson City shall be constructed in accordance with the following rules and regulations:

A. All sidewalks shall be built in accordance with standard sidewalk specifications, copies of which are on file with the Town Clerk and Director of Planning at the Town Office Building, 3111 East Main Street, Endwell, New York.

B. Any property owner may request a sidewalk along his premises.

C. When 51% of the property owners on the same side of the street request sidewalks, the construction of sidewalks for the entire block shall be mandatory. When requested, the Town shall act as agent for this construction, supplying the specifications, engineering and inspection services, engaging the contractor and acting as the collecting and remitting agent, which services may be chargeable to the property owners.

D. Engineering and inspection services relative to any new sidewalk construction shall be mandatory and such services shall be furnished by the Town of Union, which service may be chargeable to the property owner.

E. All requests for engineering service shall be in writing to the Town Board at least 10 days previous to the anticipated starting date, and in special cases where a complete block of sidewalk is being constructed the request for construction should be filed with the Town Clerk previous to May 1.

F. Property owners shall engage only responsible contractors who have the necessary machinery and equipment for such purpose.

G. Inspection during construction shall be made by the Town Engineer.

H. Payment shall be made by the property owner direct to the contractor, except in special cases the Town may act as receiving agent for the contractor.

4. Town of Penfield, New York, Sidewalk Policy:

   It is the intent of the Town of Penfield to install sidewalks along all Minor Arterial, Major Collector and Minor Collector roads to develop safe pedestrian mobility and enjoyment. This policy encourages the installation of sidewalks along all local streets, including but not limited to new subdivisions. This network of sidewalks is intended to provide a safe linkage of major residential developments to commercial, civic, recreational, educational, and employment centers for residents and visitors.

Bicycle Parking

1. City of Rochester, New York, Charter and Code Chapter 120-173, Zoning, Off-Street Parking:

   C. (3) Bicycle parking. Bicycle parking shall be provided equal to 10% of the vehicle parking requirements for the property, for a minimum of two bicycles, for all multifamily housing (over 10 units), commercial and industrial uses. [Amended 7-27-2004 by Ord. No. 2004-240]

   G. Design of bicycle parking. (1) Bicycle parking shall be located and clearly designated in a safe and convenient location, at least as convenient as the majority of auto spaces provided. (2) Facilities shall be designed to accommodate U-shaped locking devices and shall support bicycles in a stable position without damage to wheels, frame or other components and shall be securely anchored and of sufficient strength to resist vandalism and theft.

2. Town of Warwick, New York, Zoning Ordinance Section 164.43.2, Off-Street Parking and Loading Requirements:

   [Requirements for large parking lots] Provide pedestrian and bicycle amenities, such as benches, shade, human-scale lighting, and bicycle racks.

3. Town of Red Hook, New York, Zoning Ordinance Section 143-116:

   Site plan design criteria.

   (L)(3) Facilities shall be provided, where deemed applicable by the Planning Board, for bicycle travel within the site and to adjacent areas and for the short-term parking of bicycles.

Automobile Parking to Include Pedestrian Accommodations

1. Town of Malta, New York, Zoning Ordinance Chapter 167, Site Plan:

   The Planning Board may approve, approve with modifications or disapprove such site plan review application and, in doing so, shall consider the following objectives: … (c) The maximum adequacy of interior circulation in parking and loading facilities with particular attention to vehicular and pedestrian safety.

2. Town of Warwick, New York, Zoning Ordinance Section 164.43.2, Off-Street Parking and Loading Requirements:

   Reduce visual impacts by breaking up large parking lots into smaller parking groves and parking courts with a significant number of shade trees and surrounded by low hedges, stone walls, or attractive fencing. Avoid more than 15 parking spaces in a continuous row and more than 60

spaces in any single parking area defined by landscaping…(i) Landscaping should be used to delineate vehicular and pedestrian patterns. Clear and legible signs, different color and texture paving materials, raised or inverted areas, and other techniques should be used to further direct the flow of both vehicular and pedestrian traffic within the lot… (n) In large parking lots, separate pedestrian walkways should be provided to allow safe movement within the lots. These facilities should generally be oriented perpendicular to and between parking bays. Adjacent to the walks, trees should be planted. Coordinate pedestrian walkways with access for public transit if available or planned. The following walkway guidelines also apply: [1] One walkway can serve as a collector for up to four bays of parked cars. [2] The walkway should be a minimum of four feet wide, allowing an additional 30 inches on each side for overhanging of automobiles. [3] All walkways should be raised to a standard sidewalk height and should be constructed of different paving material than the parking lot. [4] Provide pedestrian and bicycle amenities, such as benches, shade, human-scale lighting, and bicycle racks.

Automobile Parking Site Location

1. City of Batavia, New York, Code Section 190-39, Parking requirements:

   Purpose: The City finds that large and highly visible parking areas represent one of the most objectionable aspects of commercial development. Such parking lots may damage the historic layout and architectural fabric of historic areas, harm the natural environment and visual character of the community, interfere with pedestrian safety and accessibility and reduce the quality of life in developed areas, as measured by the City's Visual Preference Survey™. However, the City also recognizes that inadequate parking can diminish quality of life by creating traffic congestion, safety hazards and inconvenience. The City therefore seeks to balance the need for adequate parking with the need to minimize harm resulting from the provision of parking and to avoid the negative impacts of excessive parking requirements….

   Design, layout and construction of parking areas.

   (1) Location and screening. (a) All off-street parking shall be located behind or to the side of the principal building. Parking spaces located in a side yard shall, if possible, be screened from public view. Adjoining parking areas shall be connected directly to one another or to a service road or alley wherever feasible to reduce turning movements onto roads. (b) Within the C-2 District only, a maximum of two rows of parking may be located in the front of the principal building. Such parking shall be set back from the front lot line by a landscaped buffer at least 10 feet in width. Any green space or landscaping can be included in the percentage calculation of § 190-34, Landscaping and buffering, of this chapter. (c) Parking areas shall be designed and landscaped to avoid long, uninterrupted rows of vehicles.

2. City of Lackawanna, New York, Code Section 230-36, Parking, loading and stacking:

   Location.

   (1) Required off-street parking shall be located on the same lot as the building to which it is an accessory use, except as herein provided.

   (2) All off-street parking facilities shall be located to the side or rear of the principal use building except in the Central Business District, where off-street parking shall be restricted to the rear yard.

   (3) Off-street parking facilities shall not be located within the required setback areas.

   (4) Permanent front and rear yard parking areas in residential zones, other than driveways accessing a garage or designated parking area, are prohibited.

Bicycle and Pedestrian Supportive Code Language

Sidewalks Adjacent to New Residential Development

Providing sidewalks adjacent to new residential development is one way that communities can improve mobility for all users including the elderly, the young, people with disabilities, and others without access to an automobile. Sidewalks improve pedestrian safety and convenience by providing a firm, stable, and slip resistant surface separate from the roadway.

Benefits of Providing Sidewalks

In addition to improved pedestrian safety, providing sidewalks to serve residential neighborhoods facilitates access to nearby parks, schools, and commercial activity centers and promotes public health through daily physical activity.

How It's Done

Communities that seek to provide sidewalks adjacent to new residential development can utilize several approaches, including:

- Requirements based on residential density.
- Requirements based on the roadway's functional classification.
- Sidewalk requirements based on nearby land use.
- Policy-based requirements.

Examples

Requirements based on residential density

The Town of Malta, New York requires sidewalks to be provided within all new residential and commercial projects within the Town. The code specifies that the sidewalk shall have a minimum width of five feet and be constructed of concrete designed to serve pedestrians.

For residential development with more than four dwelling units per acre sidewalks are required on both sides of the roadway. Sidewalks are required on one side only when the density of development is less than four units per acre.

Sidewalks in new developments can improve safety, mobility, and convenience for all users.

Requirements based on the roadway's functional classification

The Town of Rhinebeck, New York requires that all streets designated as through roads shall be provided a pedestrian path, sidewalk, or bikeway on at least one side of the street.

Sidewalks must include a four-foot buffer between the sidewalk and the street. Bikeways (combined bicyclist/pedestrian paths) must also meet this buffer requirement and be at least four feet in width.

Sidewalks can also be required based on the ownership of the road. This approach is followed by the Town of Guilderland, New York which requires sidewalks on both sides of all state and county roads wherever properties abutting such roads have access to municipal waterlines (unless adjacent to agriculturally zoned property).

Sidewalk requirements based on nearby land use

The Town of Perinton, New York requires that sidewalks or pedestrian ways be constructed along

Sidewalks Adjacent to New Residential Development

lands fronting both sides of collector or arterial street(s), within Pedestrian (PED) Zones as shown on the Town's Official PED Map.

A "PED Zone" is defined as land within a 4,000-foot radius of the central point of a public school, public park, or active commercial area.

Policy-based requirements

The Town of Penfield, New York Sidewalk Policy requires all new development approved by the Town to include sidewalks along both sides of all local roads.

Developers may seek a waiver from the policy subject to the payment of a $500 per dwelling unit fee placed in the sidewalk capital account specifically for the installation of sidewalks in locations identified by the Town Board.

Summary

There are several options available to communities that wish to provide sidewalks adjacent to new residential development and/or support the development of "complete streets" within these areas.

Code language linked to roadway classification and adjacent land use may support pedestrian travel between neighborhoods (along collector roads to and from schools and local shopping centers, etc.) but is unlikely to support improved pedestrian facilities along local streets unless local streets are included in the requirements.

Two options that might also be considered by jurisdictions seeking to improve pedestrian accessibility include providing between-lot pedestrian easements to connect residences with parks, schools, neighborhood shopping facilities, and similar destinations and limiting the length of cul-de-sacs to provide more direct pedestrian access between destinations.

Resources

Federal Highway Administration, *Pedestrian Facilities Users Guide*, FHWA-RD-01-102, March 2002.

New York State Department of State, *Creating the Community You Want: Municipal Options for Land Use Control*, June 1998.

Office of the New York State Comptroller, Division of Local Government Services & Economic Development, *Smart Growth in New York State: A Discussion Paper*, May 2004.

The Rockefeller Institute of Government, *Local Governments in New York State*, May 2003.

State of New York, *Local Government Handbook*, 5th Edition, January 2000.

About the Project

The objective of the Bicycle and Pedestrian Supportive Code Language project was to develop information on and identify examples of noteworthy zoning code and site planning language and guidance that enhance access and safety for bicyclists and pedestrians.

The project is a joint effort between the Genesee Transportation Council (GTC) and the Genesee/ Finger Lakes Regional Planning Council (G/FLRPC).

GTC staff surveyed county planning departments in the nine-county GTC region to identify those topics related to supporting bicyclists and pedestrians that could be addressed within the scope of the project. The survey identified the following key areas: (1) sidewalk requirements adjacent to new and existing development; (2) bicycle parking requirements; and (3) automobile parking design.

Within the identified key areas, research was conducted and relevant codes obtained through the G/FLRPC library and internet-based resources. Fact sheets and presentation materials were developed to provide examples that may be considered by jurisdictions that seek to improve bicycle and pedestrian safety, accessibility, and attractiveness within the community.

- Genesee Transportation Council - August 2007

FACT SHEET FACT SHEET FACT SHEET FACT SHEET

Bicycle and Pedestrian Supportive Code Language

Sidewalks Adjacent to Existing Development

In many communities there are gaps within the existing sidewalk network. These result when new development includes sidewalks but the development site is not located adjacent to the existing sidewalk network with the number of gaps increasing over time. Communities have several options to consider if they wish to complete the existing sidewalk network for residents and visitors.

Benefits of Providing Sidewalks

In addition to improved pedestrian safety, providing sidewalks adjacent to existing development facilitates access between residential neighborhoods, parks, schools, and commercial activity centers and promotes public health through daily physical activity.

How It's Done

Local communities can provide sidewalks adjacent to existing development using the following techniques:

- Sidewalks constructed at the property owner's expense.
- Sidewalks constructed at the municipality's expense.
- Sidewalks constructed following petition by the affected property owners.
- Comprehensive sidewalk policy.

Examples

Sidewalks constructed at the property owner's expense

The Town of Ithaca, New York provides that the Town Board may require that sidewalks be constructed along streets and highways at the owner's expense. The code includes language to authorize the Town to construct the facility and then to assess the owner for the cost, plus any interest. The code allows but does not require the Town to pay some portion of the cost pursuant to an adopted local law.

A complete sidewalk network benefits individuals and communities.

Sidewalks constructed at the municipality's expense

The Town of Mamaroneck, New York authorizes the Town Board to direct the Town Superintendent to construct sidewalks along county roads and state highways (with permission) at Town expense. Sidewalks along town roads are the responsibility of, and must be voluntarily constructed by, the property owner at their own expense.

Sidewalks constructed following petition by the affected property owners

The Town of Union, New York adopted a regulation in 1946 that creates a mechanism for property owners to request sidewalks along their side of the street. When 51 percent of the property owners request the sidewalk, its construction becomes mandatory. The Town acts as agent for the construction and the property owners are required to pay all costs.

Comprehensive sidewalk policy

The Town of Penfield, New York's Sidewalk Policy applies to new development and also to existing development. This policy articulates the Town's intent to "Install sidewalks along all Minor Arterial, Major Collector and Minor Collector roads to develop safe pedestrian mobility and enjoyment."

Sidewalks Adjacent to Existing Development

These roadways comprise what is referred to as the primary sidewalk system.

The installation of sidewalks along the primary sidewalk system is supported by the allocation of funds from the Town's General Fund, by grants, and by the sidewalk waiver fees paid when an exemption to the sidewalk requirement for new development is granted.

This policy is further supported by an officially adopted "Primary Sidewalk System Map" that identifies the improvements that will be made on an annual basis, as resources permit.

Summary

Local jurisdictions may wish to consider developing specific codes and/or policies that address the process and financial details that will apply if they seek to improve the existing sidewalk system.

Mandating that property owners pay for the installation of sidewalks may not be well received, and even a petition-based process could create hard feelings between neighbors depending on individual positions on the issue.

For these reasons, a policy-based approach that identifies and funds specific sidewalk improvements adjacent to existing development linked to a requirement that new development provide sidewalks or pay a fee that can be allocated for the construction of sidewalks adjacent to existing development (such as the Penfield example cited above) may represent a workable approach to improving the existing sidewalk system.

Resources

Federal Highway Administration, *Pedestrian Facilities Users Guide*, FHWA-RD-01-102, March 2002.

New York State Department of State, *Creating the Community You Want: Municipal Options for Land Use Control*, June 1998.

Office of the New York State Comptroller, Division of Local Government Services & Economic Development, *Smart Growth in New York State: A Discussion Paper*, May 2004.

The Rockefeller Institute of Government, *Local Governments in New York State*, May 2003.

State of New York, *Local Government Handbook*, 5th Edition, January 2000.

About the Project

The objective of the Bicycle and Pedestrian Supportive Code Language project was to develop information on and identify examples of noteworthy zoning code and site planning language and guidance that enhance access and safety for bicyclists and pedestrians.

The project is a joint effort between the Genesee Transportation Council (GTC) and the Genesee/ Finger Lakes Regional Planning Council (G/FLRPC).

GTC staff surveyed county planning departments in the nine-county GTC region to identify those topics related to supporting bicyclists and pedestrians that could be addressed within the scope of the project. The survey identified the following key areas: (1) sidewalk requirements adjacent to new and existing development; (2) bicycle parking requirements; and (3) automobile parking design.

Within the identified key areas, research was conducted and relevant codes obtained through the G/FLRPC library and internet-based resources. Fact sheets and presentation materials were developed to provide examples that may be considered by jurisdictions that seek to improve bicycle and pedestrian safety, accessibility, and attractiveness within the community.

- Genesee Transportation Council - August 2007

Bicycle and Pedestrian Supportive Code Language

Bicycle Parking

FACT SHEET FACT SHEET FACT SHEET FACT SHEET

Bicyclists need places to park and secure their bicycles upon reaching their destination. Lacking designated facilities, bicyclists will use trees, utility poles, parking meters, railings, and street furniture to secure their bicycles.

Doing so may cause damage to the bike or to the ad-hoc bike racks and may also result in inconvenience and potential danger (such as tripping hazards) to non-cyclists. Lack of bicycle parking facilities discourages bicycling by cyclists who may feel uncomfortable locking bicycles to non-designated facilities.

In order to avoid the undesirable effects associated with ad-hoc bike racks, bicycle parking facilities can be provided at activity centers that are accessible by bike. Bicycle parking facilities should be convenient, safe, secure, and protected from inclement weather.

At a minimum, well-designed racks should be provided and, depending on the need, enclosed bike lockers located within covered parking structures may be considered.

Benefits of Providing Bicycle Parking

Bicycle parking provides an assurance that convenient, safe, and secure parking will be available to cyclists at their preferred destination. In addition, bicycle parking reduces the potential that damage will occur to the bicycle and/or the trees, poles, or other fixtures that the bicycle would otherwise be locked to. Finally, providing bicycle parking can improve safety by reducing the likelihood that bicycles will be locked in such a way that they impede pedestrians creating tripping hazards.

How It's Done

Communities can provide adequate bicycle parking in the following ways:

- Allocate an identified percentage of off-street parking for bicycle parking.

Bicycle parking helps create a safe environment for bicyclists and pedestrians.

• Incorporate general bicycle parking provisions in the off-street parking regulations.

• Implement flexible bicycle parking requirements via the Planning Board.

Examples

<u>Allocate an identified percentage of off-street parking for bicycle parking</u>

The City of Rochester, New York requires that bicycle parking equal to 10 percent of the vehicle parking requirements for the property (for a minimum of two bicycles) be provided at all multifamily housing (over 10 units), commercial, and industrial uses.

An additional requirement is that bicycle parking be located and clearly designated in a safe and convenient location, at least as convenient as the majority of auto spaces provided and that facilities are designed to accommodate U-shaped locking devices and support bicycles in a stable position without damage to wheels, frame, or other components.

The facilities are required to be securely anchored and of sufficient strength to resist vandalism and theft.

Bicycle Parking

Incorporate general bicycle parking provisions in the off-street parking regulations

The Town of Warwick, New York requires that pedestrian and bicycle amenities such as benches, shade, human-scale lighting, and bicycle racks be provided for parking lots meeting specified requirements.

Implement flexible bicycle parking requirements via the Planning Board

The Town of Red Hook, New York includes a provision in its site plan design criteria that facilities be provided, where deemed applicable by the Planning Board, for the short-term parking of bicycles.

Summary

In communities with ongoing commercial, multi-family, and industrial development, a percentage-based approach could be considered to ensure that bicycle accommodations are provided for new development.

Those communities that prefer additional flexibility or to defer the decision to the Planning Board and/or site plan review process may wish to consider more general code language that would allow but not require the provision of bicycle facilities on a case-by-case basis.

Resources

Federal Highway Administration, *Pedestrian Facilities Users Guide*, FHWA-RD-01-102, March 2002.

New York State Department of State, *Creating the Community You Want: Municipal Options for Land Use Control*, June 1998.

Office of the New York State Comptroller, Division of Local Government Services & Economic Development, *Smart Growth in New York State: A Discussion Paper*, May 2004.

The Rockefeller Institute of Government, *Local Governments in New York State*, May 2003.

State of New York, *Local Government Handbook*, 5th Edition, January 2000.

About the Project

The objective of the Bicycle and Pedestrian Supportive Code Language project was to develop information on and identify examples of noteworthy zoning code and site planning language and guidance that enhance access and safety for bicyclists and pedestrians.

The project is a joint effort between the Genesee Transportation Council (GTC) and the Genesee/Finger Lakes Regional Planning Council (G/FLRPC).

GTC staff surveyed county planning departments in the nine-county GTC region to identify those topics related to supporting bicyclists and pedestrians that could be addressed within the scope of the project. The survey identified the following key areas: (1) sidewalk requirements adjacent to new and existing development; (2) bicycle parking requirements; and (3) automobile parking design.

Within the identified key areas, research was conducted and relevant codes obtained through the G/FLRPC library and internet-based resources. Fact sheets and presentation materials were developed to provide examples that may be considered by jurisdictions that seek to improve bicycle and pedestrian safety, accessibility, and attractiveness within the community.

- Genesee Transportation Council - August 2007

FACT SHEET FACT SHEET FACT SHEET

Bicycle and Pedestrian Supportive Code Language

Automobile Parking to Include Pedestrian Accommodations

Providing convenient parking for motorists adjacent to retail and other establishments is typically addressed through a municipality's off-street parking requirements.

These requirements, within the zoning code, provide dimensions for automobile parking spaces and specify the number of automobile parking spaces required for each land use.

In some cases, a general acknowledgement that pedestrians be considered during the design review for the parking facility is included within the off-street parking requirements.

In other cases, however, pedestrians appear not to be considered during the design review for parking lots and the resulting facilities are difficult to cross, creating barriers to pedestrian travel that could be resolved with improved design.

Benefits of Designing Automobile Parking to Include Pedestrian Accommodations

In addition to improved pedestrian safety, providing pedestrian accommodations within automobile parking facilities can provide increased aesthetic value to the site.

How It's Done

Local jurisdictions may consider the following options if they wish to include pedestrian accommodations within off-street parking facilities:

• Specific requirements within off-street parking code language.

• Flexible requirements based on the Planning Board's determination.

Off-street parking lots can be designed with pedestrians and aesthetics in mind.

Examples

Specific requirements within off-street parking code language

The Town of Warwick, New York includes specific requirement for parking lot design that improve the environment for pedestrians by: 1) breaking up large parking lots into smaller parking groves and parking courts with a significant number of shade trees surrounded by low hedges, stone walls, or attractive fencing; 2) encouraging designs that avoid placing more than 15 parking spaces in a continuous row and more than 60 spaces in any single parking area as defined by landscaping; 3) promoting landscaping that delineates vehicular and pedestrian patterns; 4) providing clear and legible signs, different color and texture paving materials, raised or inverted areas, and other techniques to direct the flow of both vehicular and pedestrian traffic within the lot; and 5) providing separate pedestrian walkways in large parking lots to allow safe movement within the lots.

Genesee Transportation Council · 50 West Main Street · Suite 8112 · Rochester, New York 14614
Phone: 585-232-6240 · Fax: 585-262-3106 · Website: www.gtcmpo.org

Automobile Parking to Include Pedestrian Accommodations

Additional design criteria specify that: 1) One walkway can serve as a collector for up to four bays of parked cars; 2) the walkway should be a minimum of four-feet wide, allowing an additional 30 inches on each side for overhanging of automobiles; 3) all walkways should be raised to a standard sidewalk height and should be constructed of different paving material than the parking lot; and 4) pedestrian and bicycle amenities such as benches, shade, human-scale lighting, and bicycle racks should be provided.

Flexible requirements based on the Planning Board's determination

The Town of Malta, New York provides that the Planning Board shall consider the maximum adequacy of interior circulation in parking and loading facilities with particular attention to vehicular and pedestrian safety.

Summary

Communities that wish to promote pedestrian and bicycle-sensitive parking lot design can do so by including the desired design elements within their off-street parking code language. Doing so will provide developers with examples of expected design features at an early stage in the site planning process.

For communities that prefer a more flexible approach, the Planning Board can be directed and/or authorized to consider pedestrian safety within the design/site plan review process.

Resources

Federal Highway Administration, *Pedestrian Facilities Users Guide*, FHWA-RD-01-102, March 2002.

New York State Department of State, *Creating the Community You Want: Municipal Options for Land Use Control*, June 1998.

The Rockefeller Institute of Government, *Local Governments in New York State*, May 2003.

Office of the New York State Comptroller, Division of Local Government Services & Economic Development, *Smart Growth in New York State: A Discussion Paper*, May 2004.

State of New York, *Local Government Handbook*, 5th Edition, January 2000.

About the Project

The objective of the Bicycle and Pedestrian Supportive Code Language project was to develop information on and identify examples of noteworthy zoning code and site planning language and guidance that enhance access and safety for bicyclists and pedestrians.

The project is a joint effort between the Genesee Transportation Council (GTC) and the Genesee/ Finger Lakes Regional Planning Council (G/LRPC).

GTC staff surveyed county planning departments in the nine-county GTC region to identify those topics related to supporting bicyclists and pedestrians that could be addressed within the scope of the project. The survey identified the following key areas: (1) sidewalk requirements adjacent to new and existing development; (2) bicycle parking requirements; and (3) automobile parking design.

Within the identified key areas, research was conducted and relevant codes obtained through the G/FLRPC library and internet-based resources. Fact sheets and presentation materials were developed to provide examples that may be considered by jurisdictions that seek to improve bicycle and pedestrian safety, accessibility, and attractiveness within the community.

- Genesee Transportation Council - August 2007

FACT SHEET FACT SHEET FACT SHEET FACT SHEET

Bicycle and Pedestrian Supportive Code Language

Automobile Parking Site Location

The location of automobile parking facilities with respect to buildings on a commercial development site can have a significant effect on the viability of pedestrian access to and from the site.

When the buildings are located near the rear lot line and the parking facilities are located between the front of the building and the street, pedestrians may be forced to walk through the parking lot to access the buildings from the public right of way.

This creates a potential for conflict between motorists and pedestrians that can be reduced by locating parking lots to the rear of buildings and locating buildings adjacent to the street with minimal setback.

Additionally, locating buildings near the street provides a sense of enclosure to the street-scape and provides merchants the opportunity for exposure to passersby that is lost when buildings are set behind parking facilities.

Benefits of Pedestrian-Friendly Automobile Parking Site Location

In addition to improved pedestrian safety, locating buildings near the street can provide improved urban design and increase pedestrian traffic at local businesses.

How It's Done

The location of parking facilities on a site can be controlled directly by:

Buildings can serve both drivers and pedestrians when facades are close to the sidewalk and onsight parking is located at the sides or rear—and possibly supplemented with on-street parking.

• Parking to the side or rear of the primary use included within design criteria.

• Parking to the side or rear of the primary use and on the same lot.

<u>Parking to the side or rear of the primary use included within design criteria</u>

The City of Batavia, New York "seeks to balance the need for adequate parking with the need to minimize harm resulting from the provision of parking and to avoid the negative impacts of excessive parking requirements."

In seeking that balance, the code requires that all off-street parking be located behind or to the side of the principal building. In order to provide limited amounts of parking in front of buildings, a maximum of two rows of parking may be located in the front of a principal building in a C-2 District.

Automobile Parking Site Location

The code language also specifies that parking areas shall be designed and landscaped to avoid long, uninterrupted rows of vehicles.

Parking to the side or rear of the primary use and on the same lot

The City of Lackawanna, New York requires off-street parking to be located on the same lot as the building to which it is an accessory use and that all off-street parking facilities be located to the side or rear of the principal use building.

Summary

Communities can direct parking to the rear of development sites and thereby support pedestrian utilization of commercial facilities located within their jurisdiction. Since parking lot and building location are closely interrelated, jurisdictions could also address this issue by revised building setback requirements.

However, including the location criteria for the parking lot within the parking regulations allows a more unified approach to managing the facilities by including criteria related to parking lot internal design within the same section of the zoning ordinance as parking lot location criteria.

Resources

Federal Highway Administration, *Pedestrian Facilities Users Guide*, FHWA-RD-01-102, March 2002.

New York State Department of State, *Creating the Community You Want: Municipal Options for Land Use Control*, June 1998.

Office of the New York State Comptroller, Division of Local Government Services & Economic Development, *Smart Growth in New York State: A Discussion Paper*, May 2004.

The Rockefeller Institute of Government, *Local Governments in New York State*, May 2003.

State of New York, *Local Government Handbook*, 5th Edition, January 2000.

About the Project

The objective of the Bicycle and Pedestrian Supportive Code Language project was to develop information on and identify examples of noteworthy zoning code and site planning language and guidance that enhance access and safety for bicyclists and pedestrians.

The project is a joint effort between the Genesee Transportation Council (GTC) and the Genesee/ Finger Lakes Regional Planning Council (G/LRPC).

GTC staff surveyed county planning departments in the nine-county GTC region to identify those topics related to supporting bicyclists and pedestrians that could be addressed within the scope of the project. The survey identified the following key areas: (1) sidewalk requirements adjacent to new and existing development; (2) bicycle parking requirements; and (3) automobile parking design.

Within the identified key areas, research was conducted and relevant codes obtained through the G/FLRPC library and internet-based resources. Fact sheets and presentation materials were developed to provide examples that may be considered by jurisdictions that seek to improve bicycle and pedestrian safety, accessibility, and attractiveness within the community.

- Genesee Transportation Council - August 2007

APPENDIX F
SCHEMATIC COST ESTIMATES

Costs for Pedestrian and Bicyclist Infrastructure Improvements

A Resource for Researchers, Engineers, Planners, and the General Public

Authors: Max A. Bushell, Bryan W. Poole, Charles V. Zegeer, Daniel A. Rodriguez

UNC Highway Safety Research Center

Prepared for the Federal Highway Administration and supported by the Robert Wood Johnson Foundation through its Active Living Research program

October, 2013

Acknowledgements

This project was made possible through funding from the Federal Highway Administration (FHWA), the Robert Wood Johnson Foundation, through its Active Living Research program and the University of North Carolina Highway Safety Research Center (UNC HSRC). The authors would like to particularly acknowledge the support of Gabe Rousseau and Tamara Redmon of FHWA and James Sallis, the Program Director of Active Living Research at UCSD, as well as David Harkey of UNC HSRC. Ann McGrane, a graduate student in the Department of City and Regional Planning at The University of North Carolina at Chapel Hill, and Dan Gelinne, a Program Associate with the Pedestrian and Bicycle Information Center (PBIC), also contributed to this project.

Authors

Max A. Bushell was a Research Assistant and Junior Pedestrian and Bicycle Professional for the FHWA-sponsored Pedestrian and Bicycle Information Center (PBIC) at the time that this paper was originally written. He is now Transportation Planner at Stantec Consulting Services, Ltd. He holds a Bachelor's Degree from Cornell University and a Master's Degree in City and Regional Planning from the University of North Carolina at Chapel Hill. At the PBIC, Mr. Bushell has provided project support to the development of the Pedestrian Safety Strategic Plan and Strategic Plan Background Report, updated the Highway Safety Manual to include Pedestrian and Bicycle research, performed ArcGIS analysis work, been involved in data collection work, drafted sections to update the PEDSAFE Countermeasure Selection System tool, served as a Walk Friendly Communities Reviewer, and worked as a Project Manager for the development of a Bike to Work Event Website.

Bryan W. Poole is a current graduate student at the Department of City and Regional Planning at the University of North Carolina at Chapel Hill and is also a Graduate Research Assistant with the PBIC and HSRC. He holds a Bachelor's Degree from Point Loma Nazarene University and a graduate degree from Duke Divinity School. Mr. Poole has previously drafted description and cost information updates to PEDSAFE, assisted with the Watch For Me NC Campaign, and recently completed a paper on the implications of automated enforcement systems for pedestrian and bicycle safety.

Charlie V. Zegeer is the Associate Director of Engineering and Planning for HSRC, where he has worked from 1986 to present. He is also currently the Director of the Pedestrian and Bicycle Information Center (PBIC), the existing FHWA-sponsored National Bicycle and Pedestrian Clearinghouse. In all, he has authored more than 150 reports and publications, mostly dealing with pedestrian and bicyclist safety. He has also received several international awards, including those from Transportation Research Board (TRB) and Institute of Transportation Engineers (ITE). Mr. Zegeer is a registered Professional Engineer and an Emeritus Member of the TRB Pedestrian Committee. He received his Bachelor's Degree in Civil Engineering (Virginia Tech) in 1972 and a Master's Degree in Civil Engineering (Transportation) from the University of Kentucky in 1974.

Daniel A. Rodríguez is Director of the Carolina Transportation Program (ctp.unc.edu), Associate Professor in City and Regional Planning and Adjunct Associate Professor of Epidemiology at University of North Carolina, Chapel Hill. Dr. Rodríguez received a Master's Degree in Transportation from MIT and a Ph.D. in Urban, Technological, and Environmental Planning from The University of Michigan in 2000. Dr. Rodriguez's research focuses on the reciprocal relationship between the built environment, including bus rapid transit, and the behavior of travelers. He is the author of more than 60-peer reviewed publications and a co-author of the book *Urban Land Use Planning* (University of Illinois Press). Dr.

Rodríguez's research has been funded by the National Institutes of Health, the Environmental Protection Agency, and the Robert Wood Johnson Foundation, among others.

The Highway Safety Research Center

The University of North Carolina at Chapel Hill's Highway Safety Research Center has been a leading research institute that has helped shape the field of transportation safety. The Center's mission is to improve the safety, security, access, and efficiency of all surface transportation modes through a balanced, interdisciplinary program of research, evaluation and information dissemination.

Today, HSRC research stretches across multiple disciplines, from social and behavioral sciences to engineering and planning, and addresses many of the new challenging concerns of the North Carolina and American public. Among other things, HSRC researchers are exploring ways of making roads safer for pedestrians and bicyclists, researching the effects of aging on driver performance, studying how driver distractions such as cell phone use affect transportation safety, researching how fatigue and sleep-deprivation affect driver performance, and examining how changes in roadway design and traffic operations can make travel safer for all road users.

Cover Page Photo Credits

- www.pedbikeimages.org / Dan Burden

Executive Summary

Costs for pedestrian and bicycle safety infrastructure often vary greatly from city to city and state to state. This document (and associated database) is intended to provide meaningful estimates of infrastructure costs by collecting up-to-date cost information for pedestrian and bicycle treatments from states and cities across the country. Using this information, researchers, engineers, planners, and the general public can better understand the cost of pedestrian and bicycle treatments in their communities and make informed decisions about which infrastructure enhancements are best suited for implementation. By collecting countrywide cost information, this database should contain useful information for any state or city, even if costs from that particular state or city are not included for a given treatment.

A better understanding of pedestrian and bicycle infrastructure costs will hopefully ensure that funding is allocated to pedestrian and bicycle improvements more efficiently. The goal is to encourage more communities to enhance facilities for non-motorized users and increase the safety of those choosing to walk and bike. Building a new roadway for automobiles can cost tens of millions of dollars to construct, and many of the pedestrian and bicycle infrastructure projects and facilities are extremely low-cost in comparison. This infrastructure can also serve to improve safety for all road users, while also promoting healthier lifestyles through more bicycling and walking. The tables provided in this document provide general estimates and cost ranges for 77 pedestrian and bicycle facilities using more than 1,700 cost observations, and are presented with a median and average price, the minimum and maximum cost, and the number of sources. By making more informed decisions about the costs of pedestrian and bicycle infrastructure treatments, decision-makers will be able to dedicate funds to those treatments secure in the knowledge that these investments are often affordable as well as determine which treatment is the most cost-effective.

It must be noted that costs can vary widely from state to state and also from site to site. Therefore, the cost information contained in this report should be used only for estimating purposes and not necessarily for determining actual bid prices for a specific infrastructure project.

Making the Case for Pedestrian and Bicycle Infrastructure

Walking and bicycling have both been frequently overlooked as city, state, and federal governments focus their effort and funds on building sophisticated transportation systems. Yet there are a growing percentage of people that want to change the common notion of transportation and mobility. They want livable communities where they can commute to work, socialize and recreate by foot and bicycle.

Recent socio-economic and cultural trends highlight the desire for walkable and bikeable communities. The 15-Year Report on Walking and Biking determined that 12 percent of all trips are now made by bicycle or foot in 2009, a 25 percent increase from 2001, even though there are often not adequate facilities for safe walking or bicycling. Bicyclists and pedestrians make up 14 percent of traffic fatalities, although federal funding for biking and walking projects is approximately 2 percent of the federal transportation budget.[1]

While new national initiatives, such as Complete Streets and Safe Routes to School, are examples of programs that support pedestrian facility development, problems persist. In 2010, 4,280 pedestrians and 618 bicyclists were killed and roughly 59,000 pedestrians and 52,000 bicyclists were injured.[2,3] Though these totals have decreased somewhat in recent years, pedestrian and bicyclist safety is an ongoing problem that should continue to be comprehensively addressed at all levels of government.

Creating a walkable and bikeable community starts with the built environment: having destinations close to each other; siting schools, parks, and public spaces appropriately; allowing mixed-use developments; having sufficient densities to support transit; creating commercial districts that people can access by bicycle, foot and wheelchair; etc. Most walking trips are less than .5 mi (0.8 km), so having a compact environment is essential. Similarly, while half of all household trips are three miles or less, fewer than 2 percent of those trips are made by bicycle.[4] Finally, a recent study found bicyclists will go out of their way to use bicycle infrastructure, highlighting the importance of having sufficient facilities.[5] The connection between land-use planning and transportation planning is critical to safely and effectively accommodate trips by foot and bicycle.

Developing pedestrian and bicycle infrastructure has economic benefits also. Studies have found that bicycle infrastructure improvements can have a positive overall impact on business, and that people who walk or bike to a commercial area spend more money per month than those who accessed the area by automobile.[6] The removal of on-street parking is often thought to negatively impact business, but reports show adding facilities such as bicycle racks and bicycle lanes can actually increase economic activity, and also help create a buffer from moving traffic that aides both pedestrian and bicyclist activity.[7] Finally, improving bicycle and pedestrian infrastructure can lead to positively impacting real estate values. Homes near bicycle paths have been found to support higher sales prices, and areas that facilitate walkability and attract pedestrians sustain higher rents, revenues and resale values.[8]

Pedestrian and bicycle- specific infrastructure improvements can also improve conditions for all road users. The 2011 Sustainable Streets Index, published by New York City's Department of Transportation, found that improvements such as pedestrian islands and bicycle paths led to an overall reduction in motorist crashes as well as injury crashes, a decrease in speeding, and an increase in pedestrian and bicycle activities.[9]

Finally, new roadway projects can cost tens of millions of dollars to construct, depending on location and type of road. Many of the pedestrian and bicycle infrastructure projects and facilities highlighted in this paper are extremely low-cost in comparison.

Walking/Bicycling and Public Health

The health benefits of walking and bicycling have been well-documented by public health and medical professionals. Current CDC recommendations suggest that adults ages 18 and up should get 150 minutes of moderate-intensity exercise throughout the week to experience the health benefits of physical activity. Brisk 10 minute walks or short trips by bicycle to work can both help contribute to this overall goal. Health benefits of undertaking these activities include weight management, increased bone and muscle strength, improved mental health and mood, and increased coordination. As the focus of healthcare transitions from focusing on the treatment to the prevention of disease, walking and biking are being promoted as an accessible and easy way to improve both our current and future well-being.

As a result, urban planners, engineers, and public health professionals are increasingly working together to create pedestrian- and bicycle-friendly environments that promote these activities for both leisure and transportation purposes. Researchers who study the effect of the built environment on walking and biking have discovered that numerous variables affect such decisions. The proximity of destinations, the presence and quality of sidewalks or bicycle lanes, perceptions of safety and security, the steepness of grades, the presence of other people, separation from traffic, and aesthetics are all factors that can encourage or discourage people from walking or biking. Policies and roadway features can also help promote active transportation, such as the use of wayfinding signage and pedestrian and bicyclist-oriented crossing signals. Studies have shown that facilities such as separated paths, bike boxes, sidewalks and benches are associated with enhanced safety and/or activity.[10] Through the design or redesign of environments to make walking and biking safer or more pleasant, planners and engineers can help people of all ages get the exercise they need to live longer, healthier lives. The infrastructure costs summarized in this document are intended to aide and encourage improvements to these environments.

Methodology

Highway Safety Research Center (HSRC) staff began work on a database of general engineering in late 2011. Using this as a basis and with additional support from the Federal Highway Administration and Active Living Research, HSRC researchers developed a pedestrian and bicycle infrastructure cost database for use by planners, engineers, and others. A summary of costs from that database is provided herein with a direct link to the full infrastructure cost database.

Beginning with bid-letting summaries or price indices from states across the country, infrastructure costs were identified and entered into a database. Bid-letting sheets were usually available from State Departments of Transportation web sites, which contain a range of costs based on local contractor bids. In some cases, however, only one bid – or an average of all bids – is listed. In this situation, either the range of bids or the single bid is included in the database. While staff attempted to use the most up-to-date bid-letting and pricing sheets available, the availability of bid-letting summaries varies from state to state. As such, some information in the database dates from 2009 or earlier. Most of the costs, however, are from 2010, 2011, or 2012. All costs have been updated to 2012 US Dollar equivalents using the United States Consumer Price Index published by the Bureau of Labor Statistics.[11]

HSRC researchers also subscribed to the Bid Express service, an online resource that facilitates secure online project bidding for city and state agencies and contractors. Using Bid Tabulation sheets downloaded from the website with the permission of the service and relevant agencies, Bid Express cost

data were added into the database. Data from the Bid Express service is mostly from 2011, but may also include 2010 information.[12] Special approval was obtained from Bid Express for inclusion of cost information from selected states to be used in the database and this report.

For some treatments, particularly newer innovative treatments, cost information was not included in bid-letting sheets. To ensure that costs were included for as many treatments as possible, HSRC researchers also conducted targeted searches of selected infrastructure measures, using conventional search engines as well as searching state and city websites. The source of data as well as a hyperlink is included in each of the more than 1,700 cost entries in the database. Drawing from city plans, manufacturer pricing information, and other sources, these targeted searches provided information that was otherwise unavailable from other sources. By using search terms such as "pedestrian", "bicycle", "sidewalk", "bike lane", and many others and by conducting a general scan of each document, costs pertaining specifically to pedestrian and bicyclist-related infrastructure improvements were identified, entered into the database, and included in the following cost summaries.

After costs were compiled, interviews were conducted with Department of Transportation employees in various states to validate the cost averages. HSRC researchers contacted the safety, engineering, or construction divisions of State Departments of Transportation (DOT) in North Carolina, Tennessee, Florida, Nebraska, Wyoming, Ohio, and California to determine what information is included in the costs. According to these State DOTs, the costs found in Bid Letting or Bid Tabulation Sheets include labor, materials, mobilization costs (though mobilization costs were often bid separately as well), and contractor profits, effectively making the treatment cost a complete "in the ground" cost.

The database includes the following categories of information for each cost item:

- Infrastructure Name – the title of the treatment (e.g. Sidewalk)
- Infrastructure Description – the details of the treatment (e.g. Portland Cement)
    - Specifics/Classes – specific identifying details (e.g. 4 inch patterned)
- Initial (Total) Cost – if a total cost is provided, it is included here
- Revised Cost – the costs modified to the standard unit
- Revised Unit – the unit of infrastructure treatment, if it was modified
- Information Source Year – the year of the cost information
- Inflation Year – the year used to calculate the inflation factor
- Cost with Inflation – the cost indexed to 2012 dollars
- Annual (Maintenance) Cost – if provided, how much the treatment costs to maintain, usually per year
- Low Cost– if a range of costs is provided, the lowest cost
- Revised Low – the unit of infrastructure treatment, if it was modified
- Low with Inflation – the low cost indexed to 2012 dollars
- High Cost Estimate – if a range of costs is provided, the highest cost
- Revised High – the unit of infrastructure treatment, if it was modified
- High with Inflation – the high cost indexed to 2012 dollars
- Cost Unit – the unit to which the cost is linked (e.g. lump sum, each, per mile, per linear foot, per square yard, etc.)
- State Name – the state name in postal code format
- Information Source Citation – the title of the information source, usually a bid-letting sheet or specific research paper

- Page Number within Document – the page within the information source that contains this cost
- Sample Size – the number of bids and/or instances of treatment implementation
- Link to Source – the reference URL for the source of the treatment cost
- Notes – Any other relevant information or caveats that are important to consider in relation to the specific cost

Only infrastructure costs that are specifically pedestrian or bicycle related are entered into the database. Other documents containing infrastructure cost information such as spot safety evaluations, city plans, government agency reports, guidebooks, and cost reports among others are also included in this database. In order to present a useable database, costs were eliminated if they were extreme outliers, that is, generally greater or less than two standard deviations away from the mean cost.[i] Costs were also removed if they did not appear to include complete cost information (i.e. only the cost of the unit without the cost to install).

Database users should understand that these costs were taken from various sources across the country and that costs may vary between states and also by the quantity purchased. Generally, costs per unit (square yard, linear foot, each, etc.) may vary widely depending on the size of the order, with larger quantities usually leading to lower per unit costs.

Also, there are non-geographic factors that influence variability of costs, and which could not be adequately addressed in this database due to the lack of information in the source data. One of these is the issue of economies of scale and resulting non-linearity of costs. A small project may require a fixed cost such as access to a cement truck or engineering services. The costs of these services unsurprisingly would decline with increasing project scale. Another limitation is related to economies of scope, as it would be more cost effective to add a bicycle lane along with a sidewalk rather than doing both projects separately. There can also be price differences if the project is for a new development versus a retrofit project, with retrofit projects often having higher costs. Finally, differences in contracts and negotiations over the length of time a project will take can also influence cost information. Faster completion times can lower the inconvenience to non-active commuters, but can also raise the price of installation. All of these issues inevitably influence the costs captured in this database. The assumption, however, is that the range of costs will help mitigate these factors and allows for a useful database. In order to obtain a more detailed estimate, however, both geographic and non-geographic factors must be considered.

Key Assumptions

In order to provide cost estimates for some treatments, HSRC researchers made certain assumptions, given in the bulleted list below.

- General assumptions:
    - If cost information included multiple years, i.e. 2002-2003, the earliest year was used for the purposes of determining the inflation factor.
    - All costs are updated to 2012 dollars.

[i] Due to large cost variances and insufficient data, judgment had to be made concerning certain treatments apart from the standard deviation criteria.

    - Costs are assumed to include engineering, design, mobilization, and furnish and installation costs.
- Specific assumptions for estimating purposes (where linear length of sidewalk, bikeway, bike lane, etc. are used):
    - All bike lanes are five feet in width.
    - Wide curb lanes are four feet in width.
    - Separated bikeways are eight feet in width.
    - Multi-use paths, whether paved or unpaved are eight feet in width.
    - All sidewalks are five feet in width and have a thickness of four inches.

Sources

This database is based mostly on bid letting sheets and costs summaries from State Departments of Transportation. As a result, the potential exists that the cost information is skewed toward state-funded transportation projects rather than local jurisdictions. In order to offset this factor, information was obtained through targeted searches, yielding data from research reports, pedestrian/bicycle guides, and city and county websites. While some states have available and easily obtainable information, others do not have any easily accessible information for specific treatments or do not provide this information publicly. As such, some state information sources supplied a large amount of information to this database, while for others, little or no data has been included. If no cost information was available for a certain state, however, efforts were made to include information from a nearby state or a city within that state. In total, 1,747 costs were obtained from 40 states to create this database. The states with the most cost information include Ohio (161), California (146), Minnesota (115), Massachusetts (104), and Wisconsin (101). The states for which no information was included in the database are Delaware, the District of Columbia, Hawaii, Mississippi, Nevada, Pennsylvania, South Dakota, Tennessee, Utah, and West Virginia. For a complete listing of cost frequency by state, see Appendix D.

It is useful to note that while these infrastructure costs constitute, in most cases, the most up-to-date information available, these are cost estimates. The capricious nature of estimating infrastructure costs means that these data only provide a general idea of what any treatment may cost for a specific location.

Infrastructure Cost Tables

The following tables summarize information from the larger database of infrastructure costs. The average cost, median cost, and the absolute low and high cost ranges are provided to create both a price estimate and price range for each infrastructure element. The median and average infrastructure treatment costs are both presented since the “average” cost value may be misleading (i.e. it may be influenced heavily by one or two outliers). The tables only include cost information with a minimum of four sources.

The paragraphs under each subheading provide information regarding what is included in the table and any caveats associated with using this cost information, while the tables provide the finalized cost estimates and ranges. For some treatments, there was not enough information to create a table. In these cases, cost information is provided in the paragraphs. In terms of units, some treatments were presented in different units, such as “each” and “per square feet”. If there were four or more treatment

Appendix D - Complete Table of Infrastructure Costs

The tables presented in this paper are summarized in the table below.

Infrastructure	Description	Median	Average	Minimum Low	Maximum High	Cost Unit	Number of Sources (Observations)
Bicycle Parking	Bicycle Locker	$2,140	$2,090	$1,280	$2,680	Each	4 (5)
Bicycle Parking	Bicycle Rack	$540	$660	$64	$3,610	Each	19 (21)
Bikeway	Bicycle Lane	$89,470	$133,170	$5,360	$536,680	Mile	6 (6)
Bikeway	Concrete Bicycle Path	$182,870	$179,340	$91,420	$343,700	Mile	2 (6)
Bikeway	Signed Bicycle Route	$27,240	$25,070	$5,360	$64,330	Mile	3 (6)
Bikeway	Signed Bicycle Route with Improvements	$241,230	$239,440	$42,890	$536,070	Mile	1 (6)
Bollard	Bollard	$650	$730	$62	$4,130	Each	28 (42)
Chicanes	Chicane	$8,050	$9,960	$2,140	$25,730	Each	8 (9)
Crosswalk	High Visibility Crosswalk	$3,070	$2,540	$600	$5,710	Each	4(4)
Crosswalk	Striped Crosswalk	$340	$770	$110	$2,090	Each	8 (8)
Crosswalk	Striped Crosswalk	$5.87	$8.51	$1.03	$26	Linear Foot	12 (48)
Crosswalk	Striped Crosswalk	$6.32	$7.38	$1.06	$31	Square Foot	5 (15)
Curb/Gutter	Curb	$18	$21	$1.05	$110	Linear Foot	16 (68)
Curb/Gutter	Curb and Gutter	$20	$21	$1.05	$120	Linear Foot	16 (108)
Curb/Gutter	Gutter	$23	$23	$10	$78	Linear Foot	4 (4)
Curb Extension	Curb Extension/ Choker/ Bulb-Out	$10,150	$13,000	$1,070	$41,170	Each	19(28)
Curb Ramp	Truncated Dome/Detectable Warning	$37	$42	$6.18	$260	Square Foot	9 (15)
Curb Ramp	Wheelchair Ramp	$740	$810	$89	$3,600	Each	16 (31)
Curb Ramp	Wheelchair Ramp	$12	$12	$3.37	$76	Square Foot	10 (43)
Diverter	Diverter	$22,790	$26,040	$10,000	$51,460	Each	5 (6)
Diverter	Partial/Semi Diverter	$15,000	$15,060	$5,000	$35,000	Each	3 (4)
Fence/Gate	Fence	$120	$130	$17	$370	Linear Foot	7 (7)
Fence/Gate	Gate	$510	$910	$330	$1,710	Each	5 (5)
Flashing Beacon	Flashing Beacon	$5,170	$10,010	$360	$59,100	Each	16 (25)
Flashing Beacon	RRFB	$14,160	$22,250	$4,520	$52,310	Each	3 (4)
Gateway	Gateway Sign	$350	$340	$130	$520	Each	3 (4)
Gateway	Structure	$15,350	$22,750	$5,000	$64,330	Each	5 (6)
Pedestrian Hybrid Beacon	Pedestrian Hybrid Beacon	$51,460	$57,680	$21,440	$128,660	Each	9 (9)
Island	Median Island	$10,460	$13,520	$2,140	$41,170	Each	17 (19)

Infrastructure	Description	Median	Average	Minimum Low	Maximum High	Cost Unit	Number of Sources (Observations)
Island	Median Island	$9.80	$10	$2.28	$26	Square Foot	6 (15)
Lighting	In-pavement Lighting	$18,250	$17,620	$6,480	$40,000	Total	4 (4)
Lighting	Streetlight	$3,600	$4,880	$310	$13,900	Each	12 (17)
Median	Median	$6.00	$7.26	$1.86	$44	Square Foot	9 (30)
Overpass/ Underpass	Wooden Bridge	$122,610	$124,670	$91,010	$165,710	Each	1 (8)
Overpass/ Underpass	Pre-Fab Steel Bridge	$191,400	$206,290	$41,850	$653,840	Each	5 (5)
Path	Boardwalk	$1,957,040	$2,219,470	$789,390	$4,288,520	Mile	5 (5)
Path	Multi-Use Trail - Paved	$261,000	$481,140	$64,710	$4,288,520	Mile	11 (42)
Path	Multi-Use Trail - Unpaved	$83,870	$121,390	$29,520	$412,720	Mile	3 (7)
Pavement Marking	Advance Stop/Yield Line	$380	$320	$77	$570	Each	3 (5)
Pavement Marking	Advance Stop/Yield Line	$10	$10	$4.46	$100	Square Foot	1 (4)
Pavement Marking	Island Marking	$1.49	$1.94	$0.41	$11	Square Foot	1 (4)
Pavement Marking	Painted Curb/Sidewalk	$1.21	$3.40	$0.44	$12	Square Foot	4 (5)
Pavement Marking	Painted Curb/Sidewalk	$2.57	$3.06	$1.05	$10	Linear Foot	2 (5)
Pavement Marking Symbol	Pedestrian Crossing	$310	$360	$240	$1,240	Each	4 (6)
Pavement Marking Symbol	Shared Lane/Bicycle Marking	$160	$180	$22	$600	Each	15 (39)
Pavement Marking Symbol	School Crossing	$520	$470	$100	$1,150	Each	4 (18)
Signal	Audible Pedestrian Signal	$810	$800	$550	$990	Each	4 (4)
Signal	Countdown Timer Module	$600	$740	$190	$1,930	Each	14 (18)
Signal	Pedestrian Signal	$980	$1,480	$130	$10,000	Each	22 (33)
Signal	Signal Face	$490	$430	$130	$800	Each	3 (6)
Signal	Signal Head	$570	$550	$100	$1,450	Each	12 (26)
Signal	Signal Pedestal	$640	$800	$490	$1,160	Each	3 (5)
Pedestrian/Bike Detection	Furnish and Install Pedestrian Detector	$180	$390	$68	$1,330	Each	7 (14)
Pedestrian/Bike Detection	Push Button	$230	$350	$61	$2,510	Each	22 (34)
Railing	Pedestrian Rail	$95	$100	$7.20	$690	Linear Foot	29 (83)
Raised Crossing	Raised Crosswalk	$7,110	$8,170	$1,290	$30,880	Each	14 (14)

Infrastructure	Description	Median	Average	Minimum Low	Maximum High	Cost Unit	Number of Sources (Observations)
Raised Crossing	Raised Intersection	$59,160	$50,540	$12,500	$114,150	Each	5 (5)
Roundabout/ Traffic Circle	Roundabout/ Traffic Circle	$27,190	$85,370	$5,000	$523,080	Each	11 (14)
Sidewalk	Asphalt Paved Shoulder	$5.81	$5.56	$2.96	$7.65	Square Foot	1 (4)
Sidewalk	Asphalt Sidewalk	$16	$35	$6.02	$150	Linear Foot	7 (11)
Sidewalk	Brick Sidewalk	$60	$60	$12	$160	Linear Foot	9 (9)
Sidewalk	Concrete Paved Shoulder	$6.10	$6.64	$2.79	$58	Square Foot	1 (11)
Sidewalk	Concrete Sidewalk	$27	$32	$2.09	$410	Linear Foot	46 (164)
Sidewalk	Concrete Sidewalk - Patterned	$38	$36	$11	$170	Linear Foot	4 (5)
Sidewalk	Concrete Sidewalk - Stamped	$45	$45	$4.66	$160	Linear Foot	12 (17)
Sidewalk	Concrete Sidewalk + Curb	$170	$150	$23	$230	Linear Foot	4 (7)
Sidewalk	Sidewalk	$34	$45	$14	$150	Linear Foot	17 (24)
Sidewalk	Sidewalk Pavers	$70	$80	$54	$200	Linear Foot	3 (4)
Sign	Stop/Yield Signs	$220	$300	$210	$560	Each	4 (4)
Speed Trailer	Speed Trailer	$9,480	$9,510	$7,000	$12,410	Each	6 (6)
Speed Bump/Hump /Cushion/Table	Speed Hump	$2,130	$2,640	$690	$6,860	Each	14 (14)
Speed Bump/Hump /Cushion/Table	Speed Bump	$1,670	$1,550	$540	$2,300	Each	4 (4)
Speed Bump/Hump /Cushion/Table	Speed Table	$2,090	$2,400	$2,000	$4,180	Each	5 (5)
Street Furniture	Street Trees	$460	$430	$54	$940	Each	7(7)
Street Furniture	Bench	$1,660	$1,550	$220	$5,750	Each	15 (17)
Street Furniture	Bus Shelter	$11,490	$11,560	$5,230	$41,850	Each	4 (4)
Street Furniture	Trash/Recycling Receptacle	$1,330	$1,420	$310	$3,220	Each	12 (13)

Other Resources

1. Federal Highway Administration. (2011). *2009 National Household Travel Survey*. Retrieved from http://nhts.ornl.gov. Accessed May 7, 2013.
2. Federal Highway Administration. (2004). *PEDSAFE: Pedestrian Safety Guide and Countermeasures Selection System*. (FHWA-SA-04-003). Washington D.C.: U.S. Government Printing Office.
3. Federal Highway Administration. (2010). *Safety Effectiveness of the HAWK Pedestrian Crossing Treatment*. Washington D.C.: U.S. Government Printing Office.
4. Federal Highway Administration. (2012). *Traffic Management: Diverters*. Retrieved from http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/36.htm. Accessed August 10, 2012.

Endnotes

[1] Pedestrian and Bicycle Information Center. (2010). National Bicycling and Walking Study: 15 Year Status Report. Washington D.C.: Federal Highway Administration.
[2] National Highway Traffic Safety Administration. (2012). *Traffic Safety Facts 2010 Data: Bicyclists and Other Cyclists*. (DOT-HS-811-624). Washington D.C.: NHTSA's National Center for Statistics and Analysis
[3] National Highway Traffic Safety Administration. (2012). *Traffic Safety Facts 2010 Data: Pedestrians*. (DOT-HS-811-625). Washington D.C.: NHTSA's National Center for Statistics and Analysis.
[4] U.S. Department of Transportation, Federal Highway Administration. (2009). 2009 National Household Travel Survey. Retrieved from http://nhts.ornl.gov. Accessed May 15, 2013.
[5] Dill, Jennifer. (2009). *Bicycling for Transportation and Health: The Role of Infrastructure*. Journal of Public Health Policy 30, pp. S95-S110.
[6] Flusche, Darren. (2012). *Bicycling Means Business: The Economic Benefits of Bicycle Infrastructure.* League of American Bicyclists; Alliance for Biking & Walking.
[7] Clifton, Kelly; Morrissey, Sara; Ritter, Chloe. (2012). *Business Cycles: Catering to the Bicycling Market*. TR News 280, pp. 26-32.
[8] Lindsey, Greg; Man, Joyce; Payton, Seth; Dickson, Kelly. (2004). "Property Values, Recreation Values, and Urban Greenways." *Journal of Park and Recreation Administration* V22(3), pp.69-90.
[9] New York City Department of Transportation. (2011). *2011 Sustainable Streets Index*. Retrieved from http://www.nyc.gov/html/dot/html/about/ssi.shtml. Accessed May 12, 2013.
[10] Sandt, Laura; Pullen-Seufert, Nancy; Lajeunesse, Seth; Gelinne, Dan. (2012). "Leveraging the Health Benefits of Active Transportation: Creating an Actionable Agenda for Transportation Professionals." *TR News 280,* pp. 18-25.
[11] Bureau of Labor Statistics. (2012). *Consumer Price Index – All Urban Consumers* [Data File]. Retrieved from http://www.bls.gov/cpi/home.htm#data. Accessed July 20, 2012
[12] Bid Express Secure Internet Bidding. (2012). *Bid Tabulation Sheets* [Data File]. Retrieved from https://www.bidx.com/. Accessed June 15, 2012.
[13] Federal Highway Administration. (2006). *BIKESAFE: Bicycle Safety Guide and Countermeasures Selection System*. (FHWA-SA-05-006). Washington D.C.: U.S. Government Printing Office.