

BIKE

FRIENDLY

PLATTSBURGH



2021



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Section I: Why “Bike Friendly”?



1.0 Introduction

The benefits of bicycling are endless. Numerous studies have shown that bicycling creates safer streets, helps fight against climate change, creates more vibrant neighborhoods, and limits the negative health effects and health care costs related to lack of exercise. Cycling is also a viable, affordable and equitable transportation option in support of inclusive design. Cycling and the infrastructure that supports it is an investment that the City of Plattsburgh and the greater Adirondack Coast economy will benefit from now and long into the future. Creating a bike friendly downtown will be a catalyst that helps the City of Plattsburgh continue to be a special place to **live, work, and recreate.**

The City of Plattsburgh is the social and economic hub of the North Country with roughly 11 miles of bike infrastructure including shared roadways (sharrows), dedicated bike lanes, multi-use paths, and regional and statewide bike trails such as the Saranac River Trail and the NY State Empire State Trail.



The City's many assets provide a number of bicycle friendly opportunities for both recreation and destination based trips, including our waterfront district along the shores of Lake Champlain and the Saranac River, our historic downtown, SUNY Plattsburgh, and the Oval and Museum campus, and our many parks and distinctive neighborhoods. The benefits of cycling coupled with the City's assets and regional recreation opportunities support a comprehensive review of the City's infrastructure to create safe, accessible active transportation routes.

Investment in bicycle infrastructure has been shown to result in direct and indirect positive economic returns in regards to health and transportation cost savings, an increase in tourism dollars, improved retail sales, and an improvement in lowering commercial vacancy. Investing in bicycle infrastructure that connects to recreation and retail spaces, bike repair stations, bike lanes, wide and pedestrian-friendly sidewalks, as well as walkable communities will create a community that draws people in – therefore drawing in new businesses, events, development and a growing tax base.

The increase in usage of pedestrian modes of transportation also results in a reduction of transportation costs. A recent labor shed study within a half mile of downtown shows a workforce population of 3,850 employees in a diverse range of age and earnings. This group, along with the local resident population, includes people that are likely to pass by the downtown on a daily basis. In addition, SUNY Plattsburgh

resides within the core of downtown and hosts approximately 5,000 students who live, work, and play within our downtown contributing greatly to the local economy.

US Census data shows that from 2000 to 2016, the mode share of people walking and bicycling to work has increased by 13%. The increased usage of pedestrian modes of transportation have been estimated in feasibility studies to have annual healthcare savings in Clinton County as a result of the increased annual hours of physical activity.

Increased bicycle infrastructure has also been shown to improve tourism. The tourism industry contributes to a large portion of Clinton County’s economy and has a significant impact on the City of Plattsburgh as the social and economic center of the region. Although it is difficult to accurately forecast the exact impact on tourism spending resulting from the implementation of bike infrastructure, it can be assumed that a significant portion of spending would occur within the City’s boundaries, thus providing an economic benefit to the City.

The development of a comprehensive bike network will provide a positive economic impact to public health, wellbeing, conservation efforts, and recreation tourism.

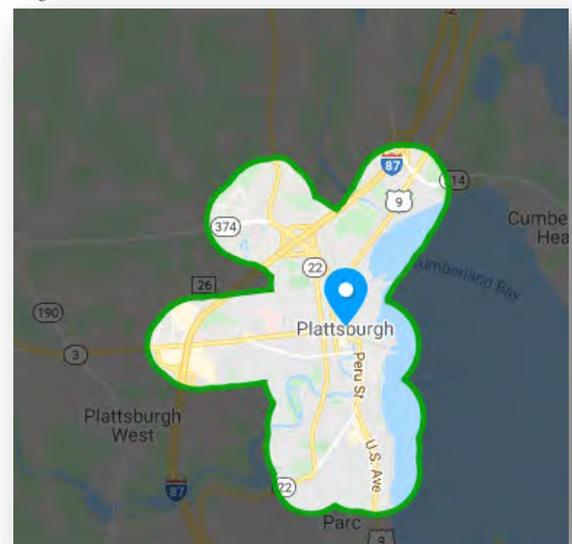
1.1 Project Overview

The City of Plattsburgh has developed a bike infrastructure report to map existing bicycle infrastructure and identify a bikeway network with the vision to connect people of all ages and abilities in a safe and equitable way. The City of Plattsburgh is approximately 5 square miles with a population of approximately 19,000 that supports the rural North Country region and a large student population. At only 5 square miles, a **well-designed bike network** will connect every corner of the City within a 30 minute bike ride (average 6 min mile). A complete multi-modal transportation system supports the City’s desire to become a clean energy community, a recreation tourism destination, and to become a sustainable and inclusive City.

Outdoor recreation opportunities continue to grow in demand and the City is seeking ways to create additional opportunities for walking and biking for recreation as well as daily travel.

This report provides a high-level analysis of existing conditions, data from community outreach, and best practices to guide the development of future projects and serve as an implementation strategy to further

Figure 1-1: 15 minute bike radius



develop a high-quality bikeway network in support of a **high-quality community**. The recommended network of bike facilities will improve the City’s livability by providing low stress and safe connections via a mix of sharrows(shared road markings), dedicated bike lanes, and bike boulevards to connect people to where they want to go. As stated in *Walkable City Rules*, “A proper cycling network will likely contain a variety of facilities as well as a large number of local roads in which bikes simply mix with low-speed traffic.” The recommendations herein are provided as a phased approach to develop a variety of bike facilities to achieve a comprehensive bikeway network.

1.2 Guiding Policies

Luckily, the City does not have to reinvent the wheel (bike pun intended) to envision a plan for a bike friendly city. The Federal Highway Administration (FHWA), National Association of City Transportation Officials (NACTO) and NYSDOT have developed a body of literature and urban planning best practices which the City has utilized as guides to ensure the balance of accessibility, equity, safety, connectivity, and convenience.

National Guiding Policies and Plans

- NYS SCORP Outdoor Recreation Master Plan (2020)
- Walkable City Rules (2018)
- Small Town and Rural Multi-Modal Networks (2016)
- NYS Complete Streets Policy (2014)
- NACTO Urban Bikeway Design Guide (2013)
- The American Association of State Highway and Transportation Officials' (AASHTO) Guide for the Development of Bicycle Facilities (2012)
- NYS Transportation Strategic Master Plan(2005-2030)
- FHWA-Implementing Bicycle Improvements at the Local Level (1998)
- NYS DOT Bike and Pedestrian Plan (1997)
- DOT Highway Design Manual (Chapter 17)
- FHWA Accommodating Pedestrian and Bicycle Travel

Figure 1-2: Small Town and Rural Multi-Modal Networks



1.3 Local and Regional Planning

Outdoor recreation is an integral part of the City and the Champlain Valley region’s identity. On the Adirondack coast nestled between Lake Champlain and the Adirondacks, the “Lake City” boasts approximately 5 miles of lakeshore and 8.5 miles of shoreline along the Saranac River. The City’s

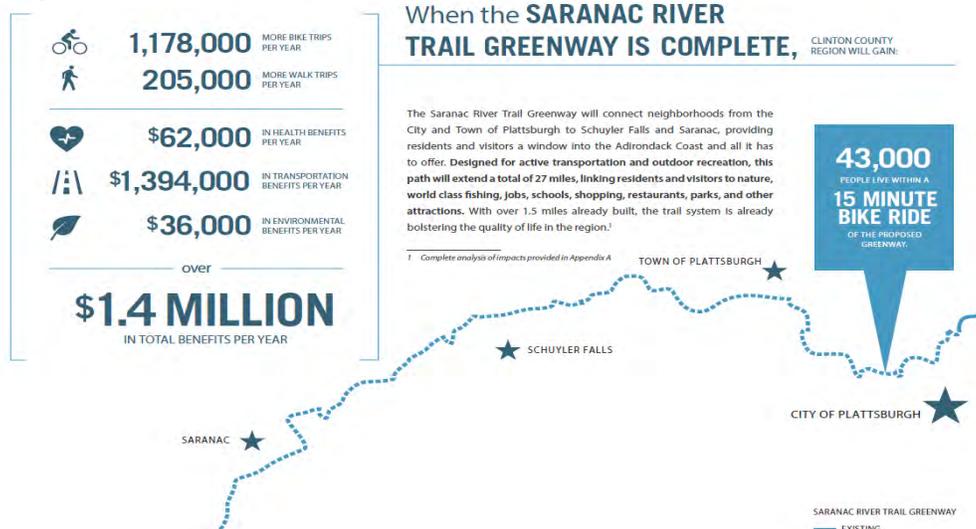
In 2013, a group of residents and business owners presented a plan to the City for the placement of bike lanes between the intersection of Margaret Street and Boynton Avenue to the city line north of Scotion Creek. That effort was buoyed by letters of support from businesses, housing developments, and petitions.

abundant natural resources and key location make it a cultural and economic hub of the region. Numerous studies and plans have been completed in the last 20 years focusing on the City’s assets and vision to become a world class Micropolitan City. A number of studies support the development of a multi-modal network including the City’s Local Waterfront Revitalization Plan, the recent adoption of a Complete Streets model of infrastructure planning, and the regional SRTG Feasibility Study. The number of local and regional plans addressing outdoor recreation and economic development clearly shows strong public support for a comprehensive plan for bike infrastructure. The time to act is now.

Local and Regional Plans

- City of Plattsburgh Complete Streets Resolution (2021)
- Clinton County Health Department Community Health Improvement Plan (2019)
- TOP Smart Growth Plan (2019)
- Downtown Streetscapes Walkability Analysis (2018)
- City of Plattsburgh Draft LWRP (2016)
- SRTG Feasibility Study (2016)
- DRI Strategic Investment Plan (2016)
- Adirondack Coast Destination Master Plan

Figure 1-3: SRTG Feasibility Study 2016





Section II: City of Plattsburgh Bike Friendly Streets



2.0 Project Scope

The Community Development department has conducted a study to analyze the feasibility of an interconnected bicycle transportation network that allows people of all ages and abilities safe access to their destination(s) within the City and beyond. The City of Plattsburgh is a historic City built to accommodate automobile mobility, therefore identifying safe and direct multi-modal routes is not without its challenges. Yet, according to the Rural and Small-Town Multimodal Networks Report (FHWA 2016), “A connected network is not developed by a single trail, sidewalk, or bike lane but is comprised of many facilities that support walking and bicycling throughout the community.” This report leverages the City’s assets and grid street pattern to propose a phased plan for a complete network of bikeways.

The network has been identified utilizing DOT and field data, community input, and best practices. Phase I implementation includes opportunities for retrofitting existing infrastructure with dedicated 5’ bike lanes, sharrows and signage to connect people safely to key traffic generator destinations. Phase II implementation includes opportunities for reconstruction of key arterial routes that provide direct linkage to downtown and other traffic generator destinations. Phase III includes larger reconstruction projects that will require extensive engineering and possible changes in automobile patterns to safely accommodate multi-modal means of transportation.

Whether during Phase I, II, or III, striping lanes and adding sharrows is just the first step to creating a safe bicycle network—increasing awareness with signage, implementing traffic calming measures, and continued bike safety education are key to a complete and safe multi-modal network.

Bike Infrastructure Planning



2.1 Goals and Objectives

The City of Plattsburgh has developed a bike infrastructure plan to identify affordable, convenient, and safe transportation options to connect our distinct neighborhoods, waterfront and cultural assets, and provide additional recreation opportunities for both residents and visitors.

The goals of this plan are in line with the City’s pursuit to provide affordable and convenient transportation options to create an **equitable transportation system** and support a healthy, sustainable community.

Figure 1-4: Goals & Objectives

Goal 1: Identify Safe Routes		
<i>Objective</i>	<i>Output</i>	<i>Outcome</i>
Identify and improve the connectivity and safety of the bicycle network for all users	Bike Friendly Infrastructure Plan	10 miles of new bike infrastructure identified for Phase I. Connectivity Index dataset for continued tracking.
Goal 2: Implement Phased Approach		
<i>Objective</i>	<i>Output</i>	<i>Outcome</i>
Identify Phase I, II, and III bicycle network	Connectivity Index	10 miles of new bike infrastructure implemented by 2022 (Phase I).
Goal 3: Market Convenience and Recreation Bicycle Opportunities		
<i>Objective</i>	<i>Output</i>	<i>Outcome</i>
Promote the use of the bicycle network for short to medium term trips, recreation use, and as a tourist attraction	“Bike City” Map	Accessible routes, increased ridership, additional bike events and awareness

2.2 What *are* Bike Friendly Streets?

There is no one-size fits all solution for implementing bike infrastructure. The City of Plattsburgh is a historic City with varying street widths built to move people in automobiles. Yet, a number of opportunities exist to retrofit streets to make them safer and more user friendly for the everyday cyclist.

The City’s goal is to develop “bike friendly” streets to provide safe and equitable movement of people of all abilities via a network of sharrows, bike lanes, bike boulevards, multi-use paths all connected to move people where they need to go within a reasonable distance.



The American Association of State Highway and Transportation Officials' (AASHTO) Guide for the Development of Bicycle Facilities (2012) discusses bicycle user type in terms of comfort and rider skill level:

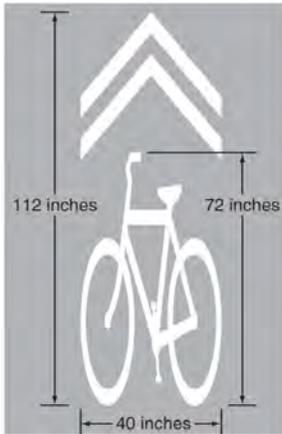
- 1) Experienced and Confident*
- 2) Casual and Less Confident.*

Casual riders are often not comfortable traveling in traffic on busy roads, and prefer low-traffic conditions, or paths separated from busy roads. It is noted that most riders are “casual” riders.

2.3 Bike Facilities

Below is a short description and depiction of the variety of bicycle infrastructure improvements that will be utilized to create a safer mode of travel for cyclists of all abilities. *Imagery and Guidance Credit: “NACTO Urban Bikeway Design Guide”*

Shared Bicycle Lane or “Sharrows”



Sharrows are large white bike symbols on the roadway that remind drivers that bicyclists may use the full lane. A bicycle shared lane marking (or ‘sharrow’) make motorists aware of bicycles potentially traveling in their lane, show bicyclists the appropriate direction of travel, and remind bicyclists to bike further from parked cars to prevent “dooring” collisions.

The shared lane marking stencil is used:

- Where lanes are too narrow for striping bike lanes (less than 14’)
- Where the speed limit does not exceed 35 MPH

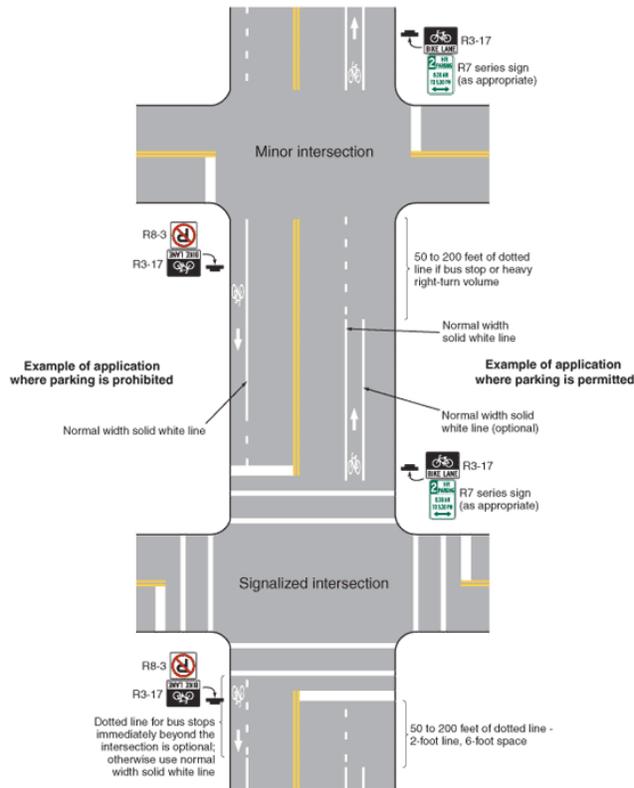
Installation Guidance

- *If used in a shared lane with on-street parallel parking, Shared Lane Markings should be placed so that the centers of the markings are at least 11 feet from the face of the curb, or from the edge of the pavement where there is no curb.*
- *If used on a street without on-street parking that has an outside travel lane that is less than 14 feet wide, the centers of the Shared Lane Markings should be at least 4 feet from the face of the curb, or from the edge of the pavement where there is no curb.*
- *If used, the Shared Lane Marking should be placed immediately after an intersection and spaced at intervals not greater than 250 feet thereafter.*



Bicycle Lane

Figure 9C-6. Example of Pavement Markings for Bicycle Lanes on a Two-Way Street



A bicycle lane is a portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential and exclusive use of bicyclists. Bicycle lanes are located on both sides of the road, except one way streets, and carry bicyclists in the same direction as adjacent motor vehicle traffic.

Installation Guidance

- **Recommended bicycle lane width: 6' from the curb face when a gutter pan is present (or 4' from the edge of the gutter pan); 4' from the curb face when no gutter pan is present.**
- **As speed and volume increase, greater width is preferred. Per the AASHTO Guidebook, a width of 5 feet or greater is preferable and additional widths as desirable where substantive truck traffic is present, or where motor vehicle speeds exceed 50 mph.**
- **Should be used on roadways with average daily traffic (ADT) counts of 3,000 or more**
- **Not suitable where there are a high number of commercial driveways**
- **Suitable for 2-lane facilities and 4-lane divided facilities**

Protected Bike Lane (Cycle Track)



On-street bike lanes with a physical barrier separating the bike lane from motor vehicle traffic. The barrier can include flower planters, concrete curbs, plastic bollards, jersey barriers, and parked cars. Protected bike lanes can be either one-way or two-way.

Installation Guidance

- *The minimum desired width for a cycle track should be 5 feet. In areas with high bicyclist volumes or uphill sections, the minimum desired width should be 7 feet to allow for bicyclists passing each other.*
- *Three feet is the desired width for a parking buffer to allow for passenger loading and to prevent door collisions.*
- *Bicycle lane word, symbol, and/or arrow markings (MUTCD Figure 9C-3) shall be placed at the beginning of a cycle track and at periodic intervals along the facility based on engineering judgment.*
- *When using a parking protected pavement marking buffer, desired parking lane and buffer combined width is 11 feet to discourage motor vehicle encroachment into the cycle track.*
- *In the absence of a raised median or curb, the minimum desired width of the painted buffer is 3 ft. The buffer space should be used to locate bollards, planters, signs or other forms of physical protection.*
- *If pavement markings are used to separate motor vehicle parking lanes from the preferential bicycle lane, solid white lane line markings shall be used. Diagonal crosshatch markings may be placed in the neutral area for special emphasis. See MUTCD Section 3B.24. Raised medians or other barriers can also provide physical separation to the cycle track.*

Multi Use Path



A multi-use pathway is physically separated from motor vehicle traffic, and can be either within the highway right-of-way or within an independent right-of-way. Multi-use pathways include bicycle paths, rail-trails or other facilities built for bicycle and pedestrian traffic. There should be a clearly defined origin and destination.

Installation Guidance

- *Minimum paved width of a shared use path is 10 feet, although 12 to 14 feet (or more) is preferred especially if the use is expected to be moderate to heavy (AASHTO).*

- *Two feet of additional clearance should be provided on either side of the path.*
- *An 8 foot path may be appropriate under some circumstances (bicycle and pedestrian use is expected to be consistently low, the alignment allows for safe and frequent passing opportunities, and maintenance vehicles are not expected to drive on the path which would could subject the pavement edges to damage).*
- *Markings to separate bicyclists from pedestrians on a shared use path are not necessary, but a centerline marking to separate two-way traffic is appropriate on pathways with heavy peak or seasonal volumes.*
- *The surface should be asphalt to accommodate all types of non-motorized users*

Bike Boulevard



Bicycle boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle Boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets.

Installation Guidance

- *Center line stripes (if present) shall be removed or not repainted, except for short sections on intersection approaches that have a stop line or traffic circle. Drivers have an easier time passing bicyclists on roads that do not have centerline stripes. If vehicles cannot easily pass each other using the full width of the street, it is likely that there is too much traffic for the street to be a successful bicycle boulevard.*
- *Pavement markings should be large enough to be visible to all road users; 112 inches by 40 inches (the standard size of a shared lane marking) is the minimum recommended size.*
- *Bicycle wayfinding signage and pavement markings shall be included on bicycle boulevards. Pavement markings and identification/wayfinding signs provide a strong visual identity for the street and designate the corridor as a bicycle route.*
- *Where the bicycle boulevard turns or jogs onto another street, signs and/or markings shall be provided to indicate how users can remain on the route.*
- *On narrow local streets where it can be difficult for cars traveling in opposite directions to pass, pavement markings should be applied in closer intervals near the center of the travel lane.*

Colorized Bike Lane



Colored pavement is used for bicycle lanes in areas that tend to have a higher likelihood for vehicle conflicts. Examples of such locations are freeway on- and off-ramps and where a motorist may cross a bicycle lane to move into a right turn pocket. Studies after implementation showed more motorists slowing or stopping at colored lanes and more motorists using their turn signals near colored

lanes. Green is the recommended color. Note: Thermoplastic paint is the most common material and lasts approximately 15 months.

Installation Guidance

- Recommended for spot treatment and short cycle track corridors only

Bike Box



Green-painted rectangles (with a white outline) at intersections that provide a safe refuge for bicyclists to either cue ahead of cars or to make a two-stage turn. Bike boxes help increase safety for bicyclists by reducing right-hand hooks by cars and by helping bicyclists navigate tricky intersections, such as where there are streetcar tracks.

Installation Guidance

- A box formed by transverse lines shall be used to hold queuing bicyclists, typically 10-16 feet deep. Deeper boxes show less encroachment by motor vehicles
Stop lines shall be used to indicate the point behind which motor vehicles are required to stop in compliance with a traffic control signal. See MUTCD 3B.16.
- Pavement markings shall be used and centered between the crosswalk line and the stop line to designate the space as a bike box. The marking may be a Bike Symbol (MUTCD 9C-3A) or Helmeted Bicyclist Symbol (MUTCD 9c-3B.)

- In cities that permit right turns on red signal indications, a “No Turn on Red” sign shall be installed overhead to prevent vehicles from entering the Bike Box.

Wayfinding Signs

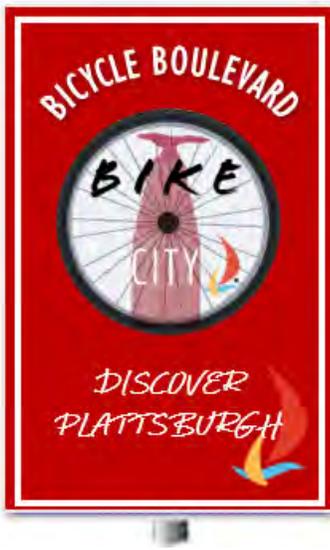


A bicycle wayfinding system consists of comprehensive signing and/or pavement markings to guide bicyclists to their destinations along preferred bicycle routes. Signs are typically placed at decision points along bicycle routes – typically at the intersection of two or more bikeways and at other key locations leading to and along bicycle routes.

Installation Guidance

- Primary destinations (such as the downtown area) may be included on signage up to five miles away.
- Secondary destinations (such as a transit station) may be included on signage up to two miles away.
- Tertiary destinations (such as a park) are more local in nature and may be included on signage up to one mile away.

Confirmation Signs



Indicates bicyclists are on a designated bikeway and makes motorists aware of the bicycle route.

Turn Signs



Indicates where a bikeway turns from one street onto another street. Can be used with pavement markings

Decision Signs



Marks the junction of two or more bikeways and informs cyclists of designated bike routes and key destinations.



Section III: On the Ground and In the Street

3.0 The Truth is in the Data

In order for the recommendations to be of value, a variety of data was collected to understand the existing conditions and identify opportunities to improve existing infrastructure to increase the connectivity of the City.

Information was collected from the NYS DOT street inventory and traffic data viewer, census data, the Plattsburgh City School District, SUNY Plattsburgh, City of Plattsburgh Police Department, and local and national plans and policies. The City also conducted a public survey and outreach to stakeholders to help ensure the plan recommendations are a reflection of the Community’s vision for a bike friendly Plattsburgh.

The data collected was used to contextualize, visualize, and understand the limitations and opportunities for a complete bike network. A connectivity index was developed to guide the efforts to design a bike network that is based on a phased implementation approach utilizing a prioritization scale that measures safety, connectivity, equity, and ridership.

US Census

According to the US Census, only **.6%** of the City of Plattsburgh population rode a bike to work, yet the average travel time to work for 42.5% of the population is **less than 10 minutes**. It is the expectation that building bike infrastructure will promote and support the use of bicycles as a primary means of transportation for almost ½ of the City’s population that has a 10 minute or less commute. An improved bicycle network, increased safety and awareness, and marketing will encourage the use of alternative means of transportation.

Means of Transportation to Work	
Drove Alone	72.90%
Carpooled	10.30%
Public Transportation	1.20%
Walked	8.70%
Bicycle	0.60%
Taxicab	4.00%
Worked from home	2.20%

Travel Time to Work	
Less than 10 minutes	42.50%
10 to 14 minutes	24.20%
15 to 19 minutes	14.10%
20 to 29 minutes	9.40%
30 to 44 minutes	3.10%
45 to 59 minutes	1.80%
60 or more minutes	4.90%

Bike infrastructure promotes equity— the City of Plattsburgh has a population with a median income of \$49,065, which is approximately 20% less than the New York and national median income of \$68,486 and \$62,843, respectively. In consideration of this factor, there is an obvious need to create an equitable transportation system within our City. On a more global scale, a need exists to provide alternative means of transportation in support of being a climate smart community.

Plattsburgh City School District (PCSD)

The Plattsburgh City School District does not provide bus services to the general student population, therefore it is estimated that almost 20% of students walk or ride bikes to school every day. With 3 elementary schools, a middle school and high school, there is a large population of students that rely on safe routes to school. Providing both sidewalks and bike infrastructure is necessary to provide safe and equitable transportation for our student population.

Figure 1-5. Data estimate from PCSD administration May 2021

Total PCSD population	1,800
Total # of students who walk to school	360
Total % of students who walk to school (est.)	20%

SUNY Plattsburgh (PSU)

SUNY Plattsburgh provides a variety of indirect and direct economic benefits to the City of Plattsburgh. A 2016-2017 Regional Economic Impact Study found that the college's total economic impact was more than \$307 million dollars across the counties of the North Country. Understanding the economic role the college plays in our community coupled with the estimate that only 34% of students registered a vehicle for on-campus parking, highlights the importance of providing a bike network to connect this population of users. Improved connectivity will increase the population of recreational users, downtown retail consumers, and provide opportunities to retain a skilled work force—creating a more vibrant community with an influx of new ideas and cultural vibrancy that will continue to contribute to the growth and success of the City.

Figure 1-6. Data estimate from PSU administration May 2021

Total SUNY population (May 2021)	4,978
Total # of students with on-campus vehicle registration (May 2021)	1,700
Total % of students with on-campus vehicle registration	34%

City of Plattsburgh Police Department (PD)

Safety is a crucial component of the bike infrastructure plan and the City has the aspiration to reach zero pedestrian and bicyclist accidents annually. Bicycle crash data was collected from the PD and a total of 53 accidents were reported from 2016-2021. The data shows that the highest number of vehicle/bicycle accidents occurred on South Catherine Street, which is a major arterial connection to South Plattsburgh.

High traffic volumes, wide-open lanes, speed issues, and lack of awareness are the assumed leading causes of these accidents. Improved bicycle infrastructure will create a safer environment for new and existing users. It is recommended that bicycle crash data be collected 2 years post implementation of each recommended Phase of improvement.

Figure 1-7: PD Bicycle Accident Data

Bicycle Accident Data 2016-2021	
BEEKMAN	1
BOYNTON	3
BRIDGE	2
BROAD	1
CHAMPLAIN	2
CORNELIA	4
COUCH	2
COURT	1
CUMBERLAND	1
ELIZABETH	1
ELM	3
JOHNSON	1
KENNEDY	1
MARGARET	2
MILLER	1
OAK	3
PINE	1
PROSPECT	3
S CATHERINE	8
S PERU	4
SHARRON	1
SAILLY	1
S PLATT	1
STETSON	2
UNDERWOOD	1
WALL	1
WILLIAM	1

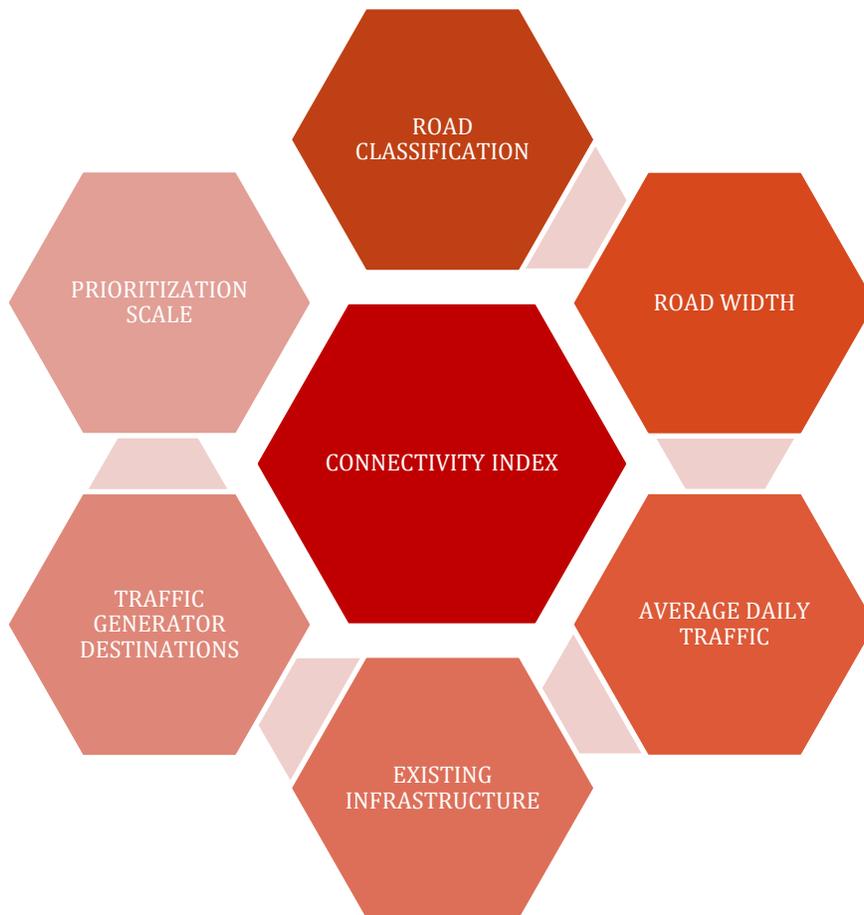
Figure 1-8: City of Plattsburgh Bicycle Accident Map



3.1 Connectivity Index

A connectivity index was developed to create a dataset in support of a feasible bike network. City of Plattsburgh streets were identified as feasible north/south and east/west connectors and the dataset includes; street name, travel direction, number of lanes, road width, street classification, on street parking, sidewalk infrastructure, average daily traffic, and existing bike infrastructure. Additional data was collected including traffic generator destinations and a prioritization scale was developed in support of a phased implementation plan. See *Appendix A* for complete connectivity index data.

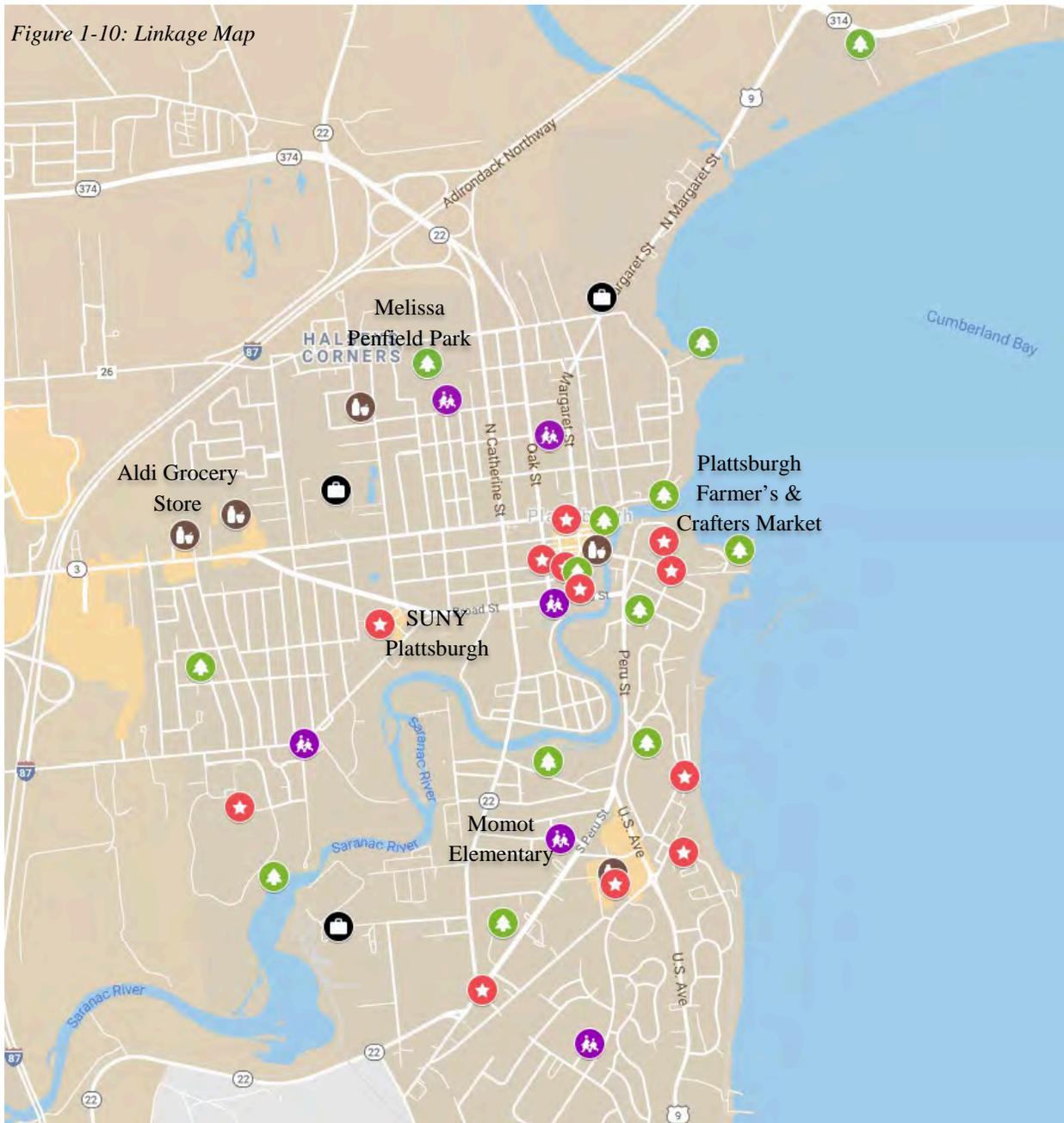
Figure 1-9: Connectivity Index 2021



3.2 Linkages and Traffic Generator Destinations

Corridors used by bicyclists and pedestrians typically link major traffic generators and activity centers. Schools and recreational facilities serve as destinations for a large number of bicyclists and pedestrians in the City of Plattsburgh. It is imperative that bicycle facilities link not only recreation destinations, but our distinct neighborhoods, large employers, social services, and areas of retail concentration. A number of key destinations have been identified including the City’s parks, University of Vermont CVPH, SUNY Plattsburgh, PCSD, Plattsburgh Housing Authority, Clinton County Social Services, Clinton County Government Center, the City Marina, the City Beach, and grocery and other essential services and retail destinations within the Central Business District. Providing direct connections to key destinations within the City will promote and support bicycling as a primary means of transportation.

Figure 1-10: Linkage Map

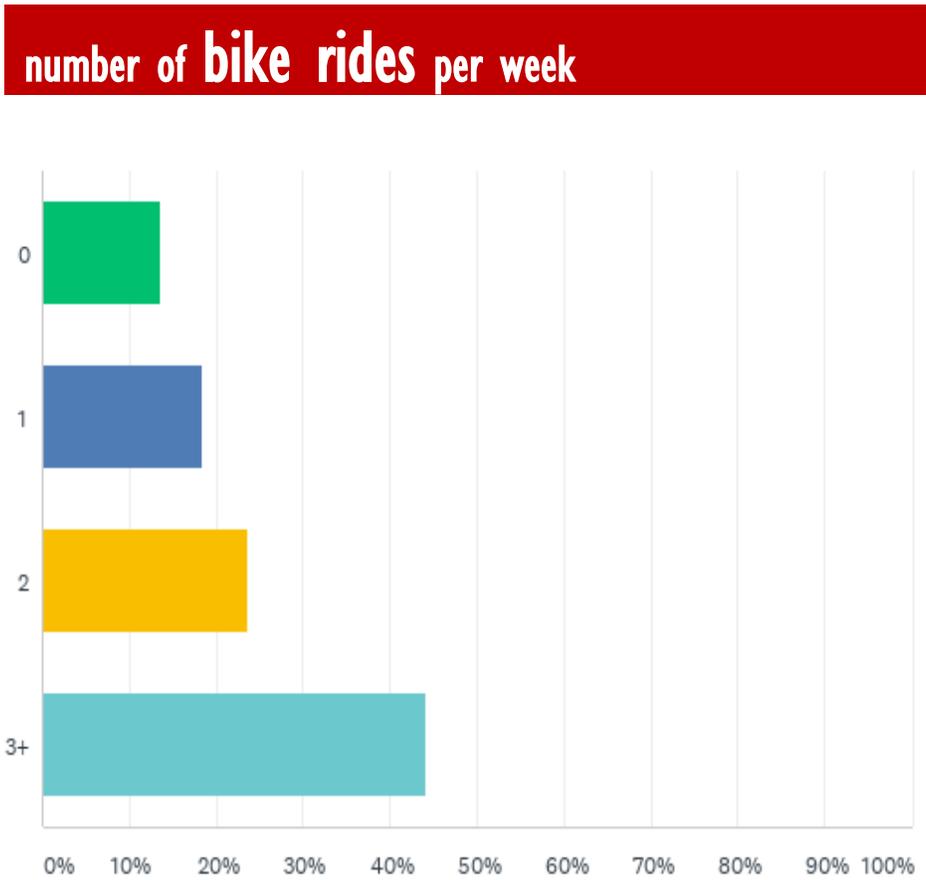


3.3 Community Outreach

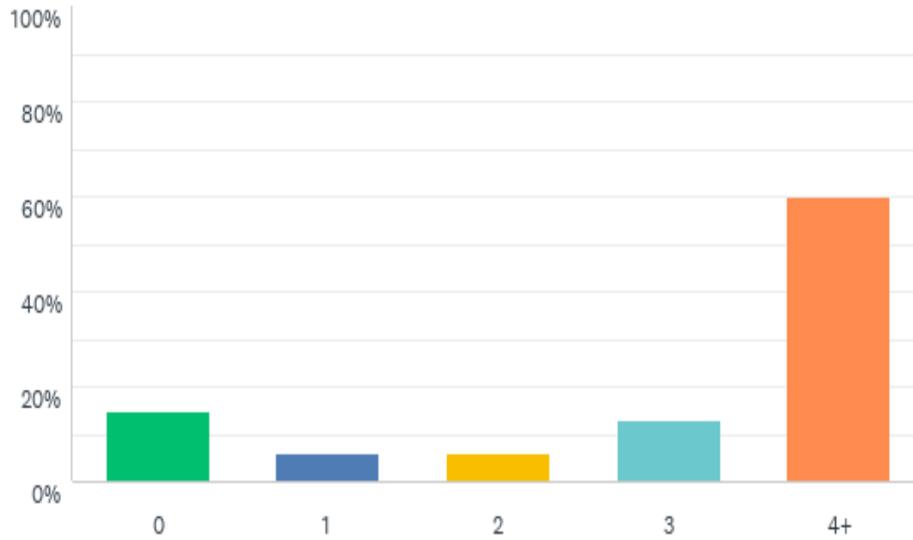
Understanding the benefits of bike infrastructure and identifying feasible routes is only one piece of the puzzle—knowing where people are going and where they want to go is the key. Therefore, an online community survey was conducted in May 2021 to gather information from stakeholders and residents of the City. Stakeholders included; SUNY Plattsburgh, PCSD, JCEO, Maui North, CVPH, CC HUD, Senior Citizens Council, Veteran’s Office, CCHD, ADK Cycle Club, SRTG, Public Library, Town of Plattsburgh, Clinton County Planning Department, Chamber of Commerce and Lake Champlain Bikeways. Almost 400 (380) responses to the survey were received. The data collected is a representative sampling of the City of Plattsburgh community and is the basis for the overall bicycle network.

Overall, the community data set shows there is an interest in expanding bike infrastructure with an emphasis on connectivity and safety. Key bike routes with the highest ridership and those needing improvements were identified, which supports the phased bike network identified in this plan. Below is a summary of the key data collected from the community survey. See *Appendix B* for complete survey data.

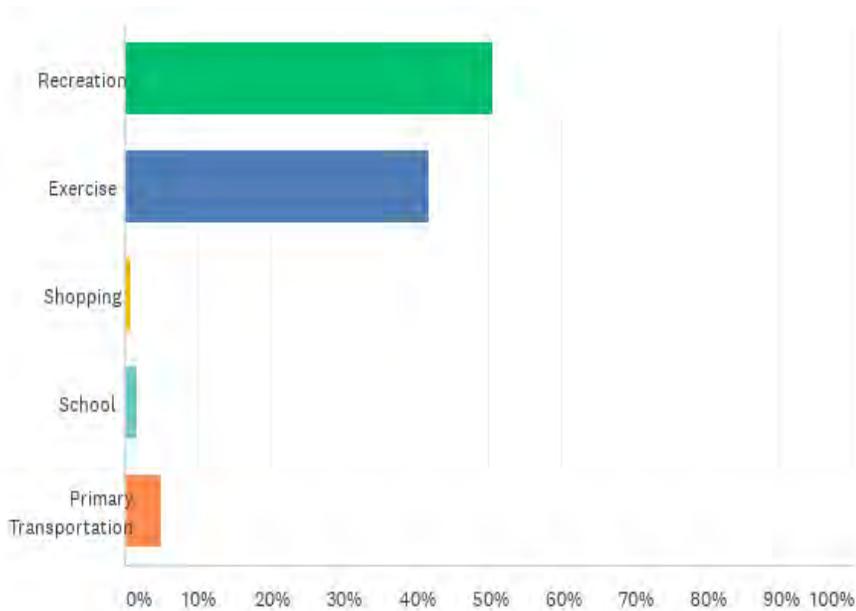
Community Survey “Snapshot”



miles traveled per week



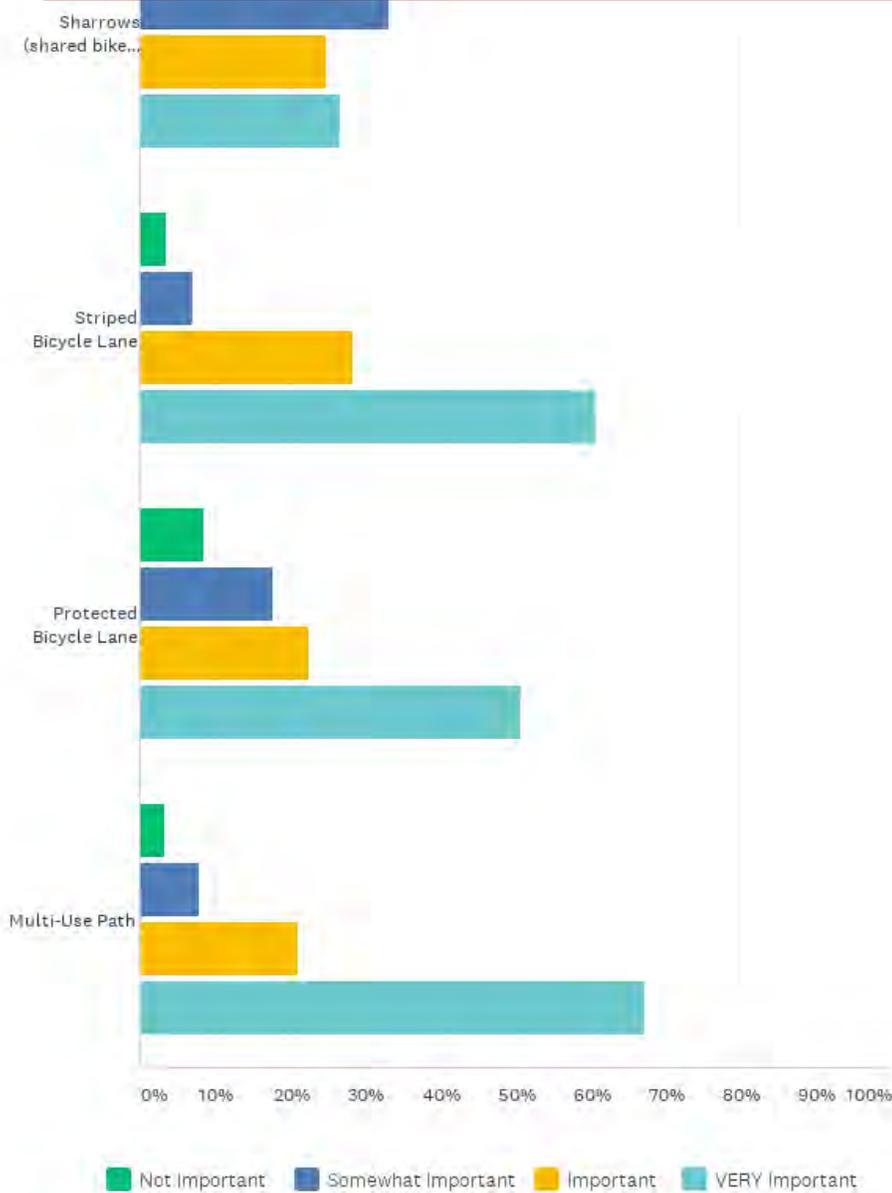
types of trips



top 5 streets with the highest ridership

Cumberland Ave N Boynton Ave Hamilton Boynton US Peru St Miller
Broad Street South Rugar Prospect Avenue Ave Route
Margaret Bridge Street Cornelia North Catherine
St Bridge Street Tom Miller Prospect Catherine
South Catherine Bailey Broad Court Brinkerhoff North
Rugar Street Cogan Peru Street US Oval Avenue
Peru us ave Court Rt Prospect Boynton Avenue South Catherine
South Peru Beekman Brinkerhoff Cornelia Oak St
Boynton Ave Street Catherine Broad North Margaret
Route Rugar Monty Ave Cumberland Avenue Boynton Tom Miller Road Bridge
Avenue

essential infrastructure identified for improvements



3.4 Data Summary

The data collected and analyzed tells a convincing story of the desire for improved connectivity, a concern for safety, and the challenges our current infrastructure presents. 90% of survey respondents stated they would be more likely to ride a bike if there were more dedicated bike lanes or sharrows, which supports implementation of the bike infrastructure plan to create a bikeway network within the City. With this data in tow, the City can begin pedaling toward a more bike friendly Plattsburgh!



SECTION IV: Get on Your Bike and Ride!

4.0 A Plan for Friendlier Streets

Utilizing existing infrastructure data, destination and key linkage sites, community feedback, and best practices a total of **31 streets** have been identified as a feasible bike routes throughout the City of Plattsburgh via a phased approach to increased connectivity.

Phase I consists of arterial routes including Prospect and Beekman Street that will provide direct connectivity to key destinations and have a road width that can accommodate 5' wide bike lanes. Phase I also includes a “bike boulevard” on Park Avenue West as a dedicated alternative north/south route. In addition, the City’s one-way streets including Court Street, Brinkerhoff Street, Oak Street, and North Catherine Street have been identified as important connector routes—that are overbuilt for the average daily traffic volume and can accommodate a shared roadway via the use of sharrows, which designates a bike route and increases driver awareness. The one-way streets that have been identified as shared routes in Phase I have also been identified in Phase II to include protected bike lanes and in Phase III as reconfigured 2-way streets with 5' dedicated bike lanes with the elimination of on-street parking. It is noted that any future reconstruction of these streets should include the consideration of conversion to 2-way traffic with 5' wide bike lanes.

Phase II consists of arterial routes including Margaret Street, Peru Street, Rugar Street, New York Road, and South Catherine Street that are key to connectivity, but road width and traffic volume prohibit the construction of dedicated bike lanes or use of sharrows without some reconstruction, signage, and other safety improvements. It is noted that Margaret Street north to the City beach has sufficient and safe bike infrastructure and bike lanes may be extended south to Elm street with the elimination of some on-street parking. In addition, Margaret Street within the Special Assessment District(SAD) downtown has been slated for reconstruction within the next 2 years with a complete streets model of planning to be implemented.

New York Road is an important route to consider infrastructure improvements within the next 2 years as the Town of Plattsburgh is currently seeking funding to implement a “road diet” from 4 lanes to 2 with new bicycle and green infrastructure. This provides the City and the Town with an opportunity for a fluid transition between municipal borders. It is recommended the City implement a similar upgrade to New York Road including a road diet, bike lanes, and improved infrastructure.

Phase III consists of arterial routes including Boynton Avenue, Broad Street, and Cornelia Street that are main thoroughfares with high traffic volumes and will require major reconstruction, road diets, and other safety and pedestrian accommodations to make bike infrastructure feasible. It is noted that Broad Street is an important **Town and Gown** SUNY Plattsburgh connection, and it is recommended that road reconstruction be considered within the next 5 years.

4.1 Prioritization

The phased implementation plan outlined above is further supported by the development of a prioritization scale, which was utilized to consider safety, connectivity, equity, and ridership of each street identified. The prioritization within each phase will help guide capital improvement planning and budgeting for future phases.

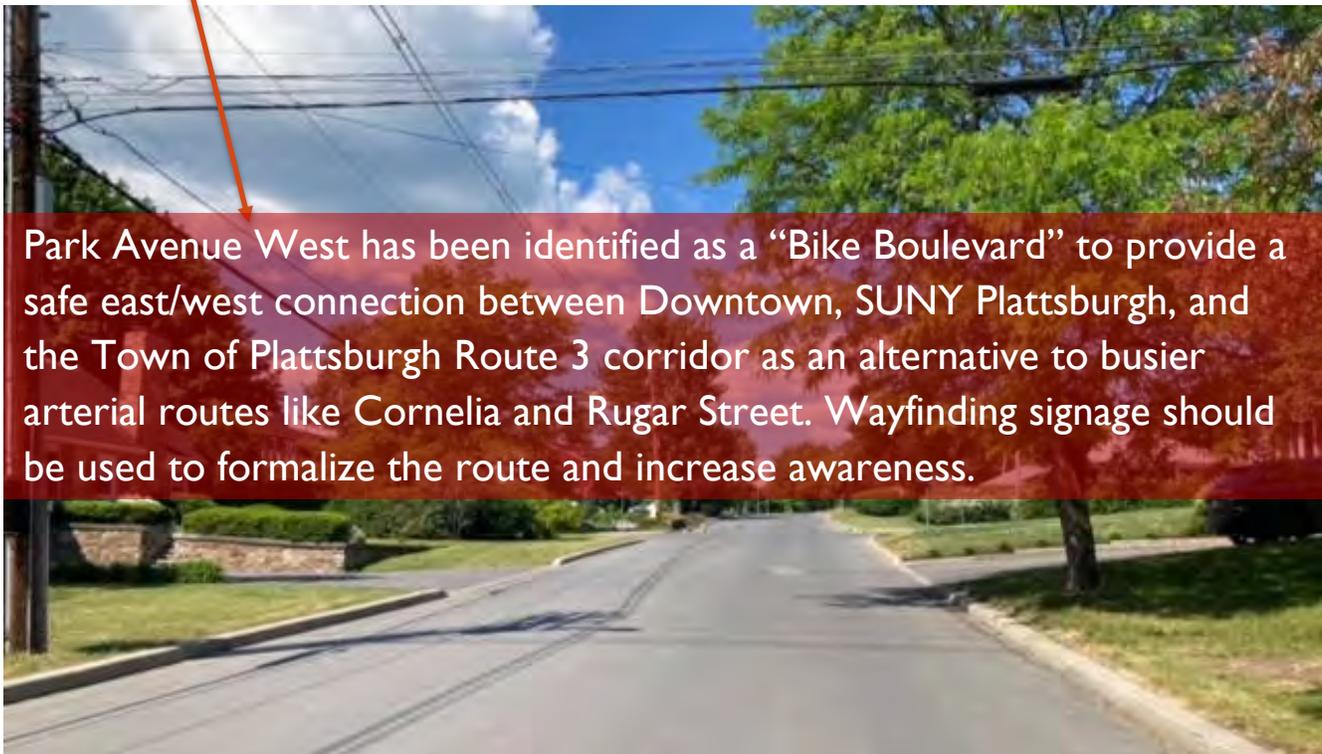
Figure 1-11: Prioritization Scale

Prioritization Scale			
Points	1	2	3
Safety	Traffic Volume < 3,000 AADT and ROW for Bike Lane	Traffic Volume 3,000-7,000 AADT	Traffic Volume 7,000-15,000
Connectivity	Directly connected to traffic generator destinations, i.e. grocery, library, park, existing bike infrastructure	Semi connected to traffic generator destinations	Connectivity requires use of other routes
Equity	Equitable	Semi-equitable	Not accessible
Ridership	Identified as Top 10 utilized route*	Medium ridership (outside top 10)	Not identified by Community
*Bike Friendly Plattsburgh Survey-May 2021			

4.2 Phase I

Phase I: Data Table “Snapshot”

City of Plattsburgh CONNECTIVITY INDEX 2021														
Implementation Phase I-III	Road/Street Name	Start Of Section	End Of Section	Existing Bike Infrastructure	Proposed Bike Infrastructure	Prioritization Scale	Travel Direction	No. of Lanes	Road Width	Road Width Field Measurement	Local Street Classification	NYS DOT Street Classification	AA DT	
Phase 1	COURT ST	OAK ST	BEEKMAN ST	None	Sharrows	1	East/West	2	37		Collector	Local	NA	
Phase 1	DOCK ST	BRIDGE ST	RR TRACKS	None	Sharrows	2	East/West	2	25		Not Listed	Local		
Phase 1	DOCK ST	RR TRACKS	END	None	Sharrows	2	East/West	2	25		Not Listed	Local	1108	
Phase 1	DRAPER ST	BROAD ST	PARK AVE W	None	Sharrows	2	North/South	2	28	28'	Not Listed	Local	NA	
Phase 1	ELIZABETH ST	S PLATT ST	S CATHERINE ST	None	Sharrows	2	East/West	2	30		Not Listed	Local	NA	
Phase 1	GEORGE ANGELL DR	RUGAR ST	DEAD END	None	Sharrows	1	East/West	2	36		Collector	Local	NA	
Phase 1	GREEN ST	BRIDGE ST	DEAD END	None	Sharrows	2	North/South	2	20		Not Listed	Local	353	
Phase 1	LEBLANC ST	WATERHOUSE	S CATHERINE ST	None	Sharrows	2	East/West	2	25		Not Listed	Local	NA	
Phase 1	MARGARET ST	CORNELIA ST NY3	MILLER ST	None	5' Bike Lanes	1	North/South	2	28	18.5 BOTH SIDES	Collector	Principal Arterial	4731	
Phase 1	MARGARET ST			None	5' Bike Lanes	1	North/South	2	28	17 NB / 16 SB	Collector	Principal Arterial	NA	
Phase 1	MARGARET ST	RILEY AVE	BOYNTON AVE	None	5' Bike Lanes	1	North/South	2	36		Collector	Principal Arterial	4332	
Phase 1	NO CATHERINE ST	BROAD ST	BOYNTON AVE	None	Sharrows	2	North/South	2	34		Minor	Minor Arterial	4770	
Phase 1	NO CATHERINE ST	BOYNTON AVE	CORP LINE	None	Sharrows	2	North/South	2	34		Minor	Minor Arterial	7588	
Phase 1	OAK ST	BROAD ST	BOYNTON AVE	None	Sharrows	1	North/South	4	67		Major	Minor Arterial	8701	
Phase 1	Park Ave West	TREMBLAY AVE	DRAPER AVE	None	5' Bike Lanes	2	East/West	2	36		Collector	Local	NA	
Phase 1	Park Ave West	LEIN AVE	TREMBLAY AVE	None	5' Bike Lanes	2	East/West	2	36		Collector	Local	NA	
Phase 1	PROSPECT AVE	RUGAR ST	PARK AVE WEST	Incomplete Bike Lane	5' Bike Lanes	2	North/South	2	36	18 BOTH SIDES	Collector	Major Collector	7425	
Phase 1	PROSPECT AVE	PARK AVE WEST	BROAD ST	Incomplete Bike Lane	5' Bike Lanes	2	North/South	2	36	18 BOTH SIDES	Collector	Major Collector	7425	



Park Avenue West has been identified as a “Bike Boulevard” to provide a safe east/west connection between Downtown, SUNY Plattsburgh, and the Town of Plattsburgh Route 3 corridor as an alternative to busier arterial routes like Cornelia and Rugar Street. Wayfinding signage should be used to formalize the route and increase awareness.

Phase I: Existing Conditions “Snapshot”

BAILEY AVENUE



36' Road Width (RW). No striping. AADT-N/A. Bailey Ave School/Melissa Penfield Park connector.

PROSPECT AVE.



36' RW. AADT-7,000. SUNY/CVPH/TOP Connector.

BRINKERHOFF ST



40' RW. One-Way. AADT-1,200. CBD, Library, SUNY connector.

PARK AVE WEST



36' RW. No striping. AADT-N/A. SUNY/TOP Connector.

Phase I: Proposed Improvements “Snapshot”

BAILEY AVENUE



“Bike Boulevard” with 5’ wide bike lanes and wayfinding signage.

PROSPECT AVE.



5’ Bike Lanes on Prospect Ave south of Cornelia. Sharrows from Cornelia to Bovnton.

BRINKERHOFF ST



Right Lane Sharrows

PARK AVE WEST

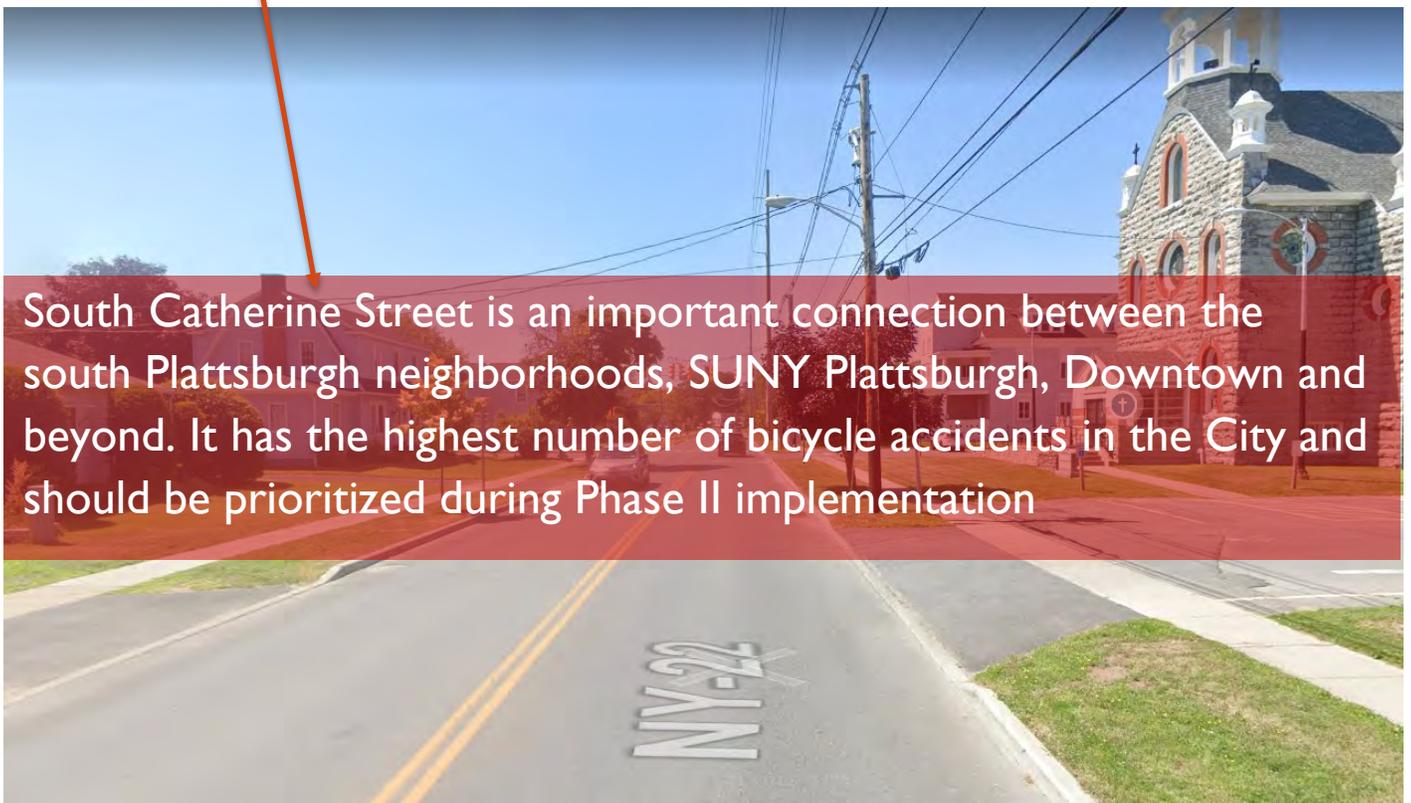


“Bike Boulevard” with 5’ wide bike lanes and signage

4.3 Phase II

Phase II: Data Table “Snapshot”

City of Plattsburgh CONNECTIVITY INDEX 2021									
Implementation Phase I-III	Road/Street Name	Start of Section	End Of Section	Existing Bike Infrastructure	Proposed Bike Infrastructure	Prioritization Scale	Travel Direction	No. of Lanes	Road Width
Phase 2	NEW YORK RD	US AVE	OHIO AVE	None	5' Bike Lanes	2	North/South	2	46
Phase 2	PERU ST	ELIZABETH ST	BROAD	None	TBD	1	North/South	2	26
Phase 2	PERU ST	BROAD	BRIDGE ST	None	TBD	1	North/South	2	32
Phase 2	RUGAR ST	CITY LINE	SANBORN AVE	Incomplete Bike Lane	Sharrows	2	East/West	2	28-30
Phase 2	RUGAR ST	SANBORN AVE	BROAD ST	Bike Lanes	5' Bike Lanes	2	East/West	2	28-30
Phase 2	SO CATHERINE ST	S PERU ST		None	5' Bike Lanes	1	North/South	2	24
Phase 2	SO CATHERINE ST		SOUTH PLATT ST	None	5' Bike Lanes	1	North/South	2	30
Phase 2	SO CATHERINE ST	SOUTH PLATT ST		None	5' Bike Lanes	1	North/South	2	32
Phase 2	SO CATHERINE ST		BATTERY ST	None	5' Bike Lanes	1	North/South	2	32
Phase 2	SO CATHERINE ST	BATTERY ST	S CATHERINE/BRO	None	Sharrows	1	North/South	2	32
Phase 2	SO PERU ST	TOWN LINE	SR22	None	TBD	2	North/South	2	32
Phase 2	SR22-SO PERU ST	SR22	S CATHERINE ST	None	TBD	2	North/South	2	24
Phase 2	SO PERU ST	S CATHERINE ST	SHERIDAN AVE	None	TBD	2	North/South	2	32
Phase 2	SO PERU ST	SHERIDAN AVE	IIS AVE IIS9	None	TBD	2	North/South	2	28



South Catherine Street is an important connection between the south Plattsburgh neighborhoods, SUNY Plattsburgh, Downtown and beyond. It has the highest number of bicycle accidents in the City and should be prioritized during Phase II implementation

Phase II: Existing Conditions “Snapshot”

NEW YORK ROAD



44' RW. AADT-N/A. South Plattsburgh, Bike Path, Seton Central School. TOP Connector.

DURKEE ST



36' RW. On-street parking. AADT-N/A. CBD, Arts Park/Riverwalk, Arts Corridor connector. .

S. CATHERINE ST



24-32' RW. Some on-street parking. AADT-9,000-13,000. PHA, CBD connector.

Phase II: Proposed Improvements “Snapshot”

NEW YORK ROAD



2 lanes of traffic with 5’ wide bike lanes

DURKEE ST



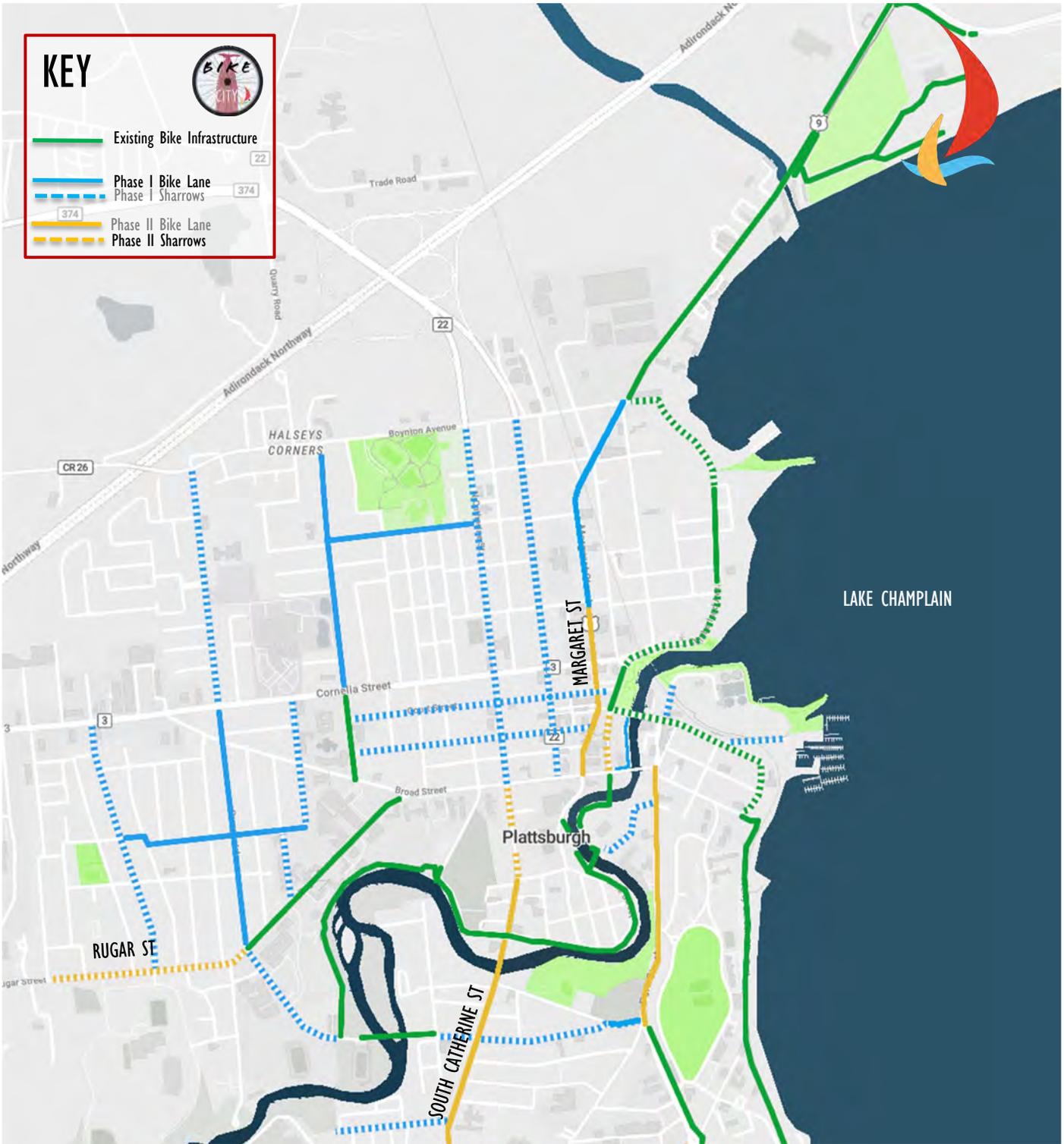
Sharrows and signage.

S. CATHERINE ST



5’ wide bike lanes and sharrows. Reconstruction to include 5’ wide bike lanes.

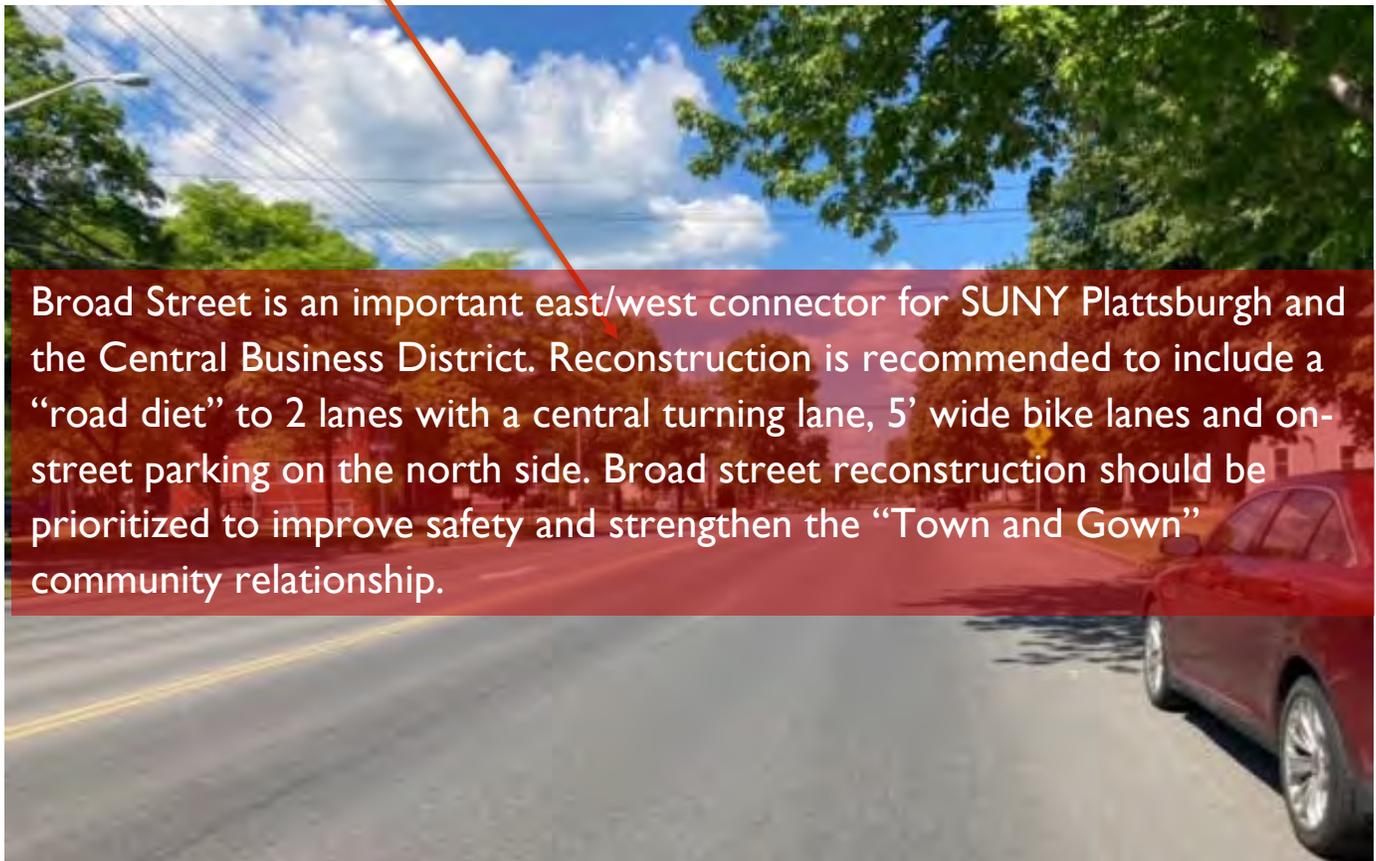
Phase II: "Bike Friendly Plattsburgh" Map



4.4 Phase III

Phase III: Data Table “Snapshot”

City of Plattsburgh CONNECTIVITY INDEX 2021					
Implementation Phase I-III	Road/Street Name	Start of Section	End Of Section	Existing Bike Infrastructure	Proposed Bike Infrastructure
Phase 3	BOYNTON AVE	HALSEY CT	N CATHERINE ST	None	TBD
Phase 3	BOYNTON AVE	N CATHERINE ST	WEED ST	None	TBD
Phase 3	BOYNTON AVE	WEED ST	MARGARET ST	None	TBD
Phase 3	BROAD ST	CORNELIA ST	PROSPECT AVE	None	Physically Protected Bike Lane
Phase 3	BROAD ST	PROSPECT AVE	BEEKMAN ST	None	Physically Protected Bike Lane
Phase 3	BROAD ST	BEEKMAN ST	SO CATHERINE S	None	Physically Protected Bike Lane
Phase 3	BROAD ST	SO CATHERINE S	OAK ST	None	Physically Protected Bike Lane
Phase 3	BROAD ST	OAK ST	MARGARET ST	None	Physically Protected Bike Lane
Phase 3	BROAD ST	MARGARET ST	DURKEE ST	None	Sharrows
Phase 3	BROAD ST	DURKEE ST	PERU ST	None	5' Bike Lanes
Phase 3	CORNELIA ST	CHURCHILL ST	BROAD ST	None	TBD
Phase 3	CORNELIA ST	BROAD ST	NY 22 NB/OAK ST	None	TBD
Phase 3	CORNELIA ST	NY 22 NB/OAK ST	RT 9	None	TBD
Phase 3	CORNELIA ST	RT 9	MILLER/CORNELIA	None	TBD
Phase 3	CORNELIA ST	MILLER/CORNELIA	DEAD END/RR BR	None	TBD



Broad Street is an important east/west connector for SUNY Plattsburgh and the Central Business District. Reconstruction is recommended to include a “road diet” to 2 lanes with a central turning lane, 5’ wide bike lanes and on-street parking on the north side. Broad street reconstruction should be prioritized to improve safety and strengthen the “Town and Gown” community relationship.

Phase III: Existing Conditions “Snapshot”

BOYNTON AVE



20-32' RW. Some on-street parking. AADT-5,000-10,000.
Park and TOP connector

BROAD STREET



46'-60' RW. Some on-street parking. AADT-5,000-11,000.
CBD/SUNY connector.

CORNELIA ST.



24'-44' RW. Some on-street parking. AADT-4,000-23,000.
CBD, SUNY, CVPH, TOP connector.

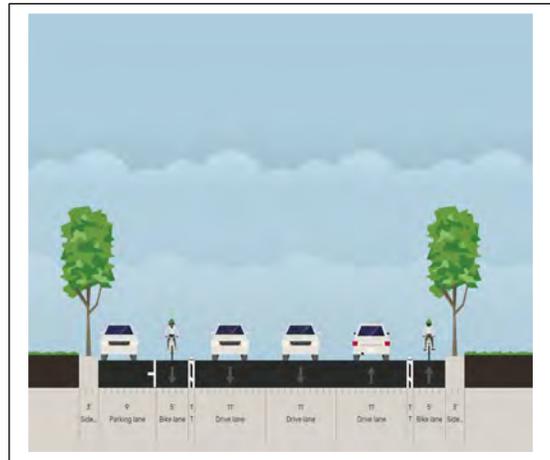
Phase III: Proposed Improvements “Snapshot”

BOYNTON AVE



5' wide bike lanes and sharrows.

BROAD STREET



5' wide bike lanes, colored markings, and signage

CORNELIA ST.



5' wide bike lanes and sharrows. Reconstruction to include 5' wide bike lanes.



Section V: Next Steps

5.0 Implementation

It is recommended the City implement the proposed bike infrastructure based on the phased approach provided in the Connectivity Index database. Phase I should be constructed within the next 1-2 years to provide north/south and east/west connectivity to traffic generator destinations within the City. Retrofitting streets by adding sharrows, bike lanes, and signage will increase bicycle activity and further the goals of the City. Phase II and Phase III should be considered during capital improvement planning and grant cycle review and completed within the next 5-10 years.

5.1 Cost Matrix

Figure 1-11: Cost Matrix

Estimated Material Cost		
Infrastructure	Avg Cost	Notes
5' Bike Lane	\$0.20	per linear foot
Sharrow	\$80.00	per pavement marking (includes labor and prep). To be placed every 250' and after each intersection. \$80 per year per sharrow for maintenance.
Protected Bike Lane	\$135,000.00	per mile
Multi-Use Path	\$250,000.00	per mile
Bicycle Box	\$6,000.00	Replaced every 1-10 years depending on wear pattern
Green Paint	\$5-\$15	per sq ft.
Wayfinding	\$25 per sign	Plus pole cost (\$25). Every 2-3 blocks.
Other Signage	110 per sign	Bike In Lane (plus pole cost \$25)

Phase I Cost Estimate

Figure 1-12: Phase I Cost Estimate

PHASE I									
Street	Reg Section	End Section	Proposed Improvement	Road Length ft.	Cost per	# of Sharrows (every 250' and @ Intersections)	Intersection Considerations	Total Cost	Notes
BAILEY AVE	BEEKMAN ST	OAK ST	S' Bike Lanes	2798.4	0.2	N/A		\$1,119.36	
BEEKMAN ST	BROAD ST	CORNELIA ST	S' Bike Lanes						
BEEKMAN ST	CORNELIA ST	BAILEY ST	S' Bike Lanes	3431				\$1,372.80	
BEEKMAN ST	BAILEY ST	BOYNTON ST	S' Bike Lanes		0.2	N/A			
BEEKMAN ST	BEEKMAN ST	OAK ST	Sharrows						
BRINKERHOFF ST	OAK ST	MARGARET ST	Sharrows	2748.6	80	10,982.4	4	\$2,397.18	
CAROLINE ST	DEAD END	SARANAC ST	Sharrows	800	80	3.2	0	\$512.00	
COGAN AVE	CORNELIA ST	PARK AVE W	Sharrows						
COGAN AVE	PARK AVE W	DENNIS AVE	Sharrows						
COGAN AVE	DENNIS AVE	RUGAR ST	Sharrows	N/A	80	N/A	N/A	\$6.00	Reopen in 2021
COURT ST	CITY HALL PL	MARGARET ST	Sharrows						
COURT ST	MARGARET ST	OAK ST	Sharrows						
COURT ST	OAK ST	BEEKMAN ST	Sharrows	2583.4	80	11,693.6	4	\$2,820.88	
DOCK ST	BRIDGE ST	RR TRACKS	Sharrows						
DOCK ST	RR TRACKS	END	Sharrows	822	80	3,288	1	\$666.08	
DRAPER ST	BROAD ST	PARK AVE W	Sharrows	1848	80	7,392	2	\$1,502.72	
ELIZABETH ST	S PLATT ST	S CATHERINE ET	Sharrows	1900.8	80	7,603.2	2	\$1,536.51	
GEORGE ANGELL DR	RUGAR ST	DEAD END	Sharrows	1900.8	80	7,603.2	1	\$1,376.51	
GREEN ST	BRIDGE ST	DEAD END	Sharrows	725	80	2.9	1	\$630.40	
LEBLANC ST	WATERHOUSE	S CATHERINE ST	Sharrows	520	80	2.08	1	\$469.60	
MARGARET ST	CORNELIA ST	MILLER ST	S' Bike Lanes						
MARGARET ST			S' Bike Lanes						
MARGARET ST	RILEY AVE	BOYNTON AVE	S' Bike Lanes	2956.8	0.2	N/A		\$1,182.72	
NO-CATHERINE ST	BROAD ST	BOYNTON AVE	Sharrows						
NO-CATHERINE ST	BOYNTON AVE	CORP LINE	Sharrows	5280	80	21.12	8	\$1,319.20	
OAK ST	BROAD ST	BOYNTON AVE	Sharrows	5280	80	21.12	8	\$1,319.20	
Park Ave West	TREMBLAY AVE	DRAPER AVE	S' Bike Lanes						Plus signage
Park Ave West	EMM AVE	TREMBLAY AVE	S' Bike Lanes	2745.6	0.2	N/A		\$1,098.24	
PROSPECT AVE	RUGAR ST	PARK AVE WEST	S' Bike Lanes						
PROSPECT AVE	PARK AVE WEST	BROAD ST	S' Bike Lanes						
PROSPECT AVE	BROAD ST	CORNELIA ST	S' Bike Lanes	3432	0.2	N/A	0	\$1,372.80	
PROSPECT AVE	CORNELIA ST	BOYNTON AVE	Sharrows	3320.8	80	13,283.2	2	\$2,781.36	Bike Box at Boynton?
SANBORN EXTENSIO	PARK AVE	PARK AVE WEST	Sharrows	1000	80	4	2	\$950.00	
SARANAC ST	CAROLINE ST	PERU ST	Sharrows	311	80	1,244	1	\$168.04	
S PLATTSPURGH ST	ELIZABETH ST	US HWY / US R	S' Bike Lanes	376	0.2	N/A	0	\$150.40	
UNDERWOOD AVE	SD-CATHERINE	DEAD END	Sharrows	211.2	80	8.448	1	\$1,511.68	Low on list
Phase I Cost (Estimated)								\$32,151.94	

5.2 Funding Opportunities

Bicycle infrastructure and a comprehensive bicycle network has numerous benefits, but it's not free. Cost was considered during the planning process and Phase I includes the most cost effective approach to expanding the City's bicycle network.

It is important to note that although there is an upfront cost, bicycle paths and complete sidewalks are comparatively less expensive than building new roadway infrastructure. While still a large investment, their narrower widths and retrofit options make them a much smaller price tag per linear foot.

These lower cost efforts provide immeasurable comfort for people walking, biking and driving. Specifically, sharrows can be added at relatively low cost to existing streets to encourage drivers to travel at slower speeds by narrowing their lanes.

A number of funding opportunities exist to supplement costs associated with physical improvements, maintenance and bike safety awareness and education. Below is a table of available local, state, and federal resources the City can pursue to assist with the build-out of the bike network.

Local and Regional Funding Sources

- Clinton County Health Department
- CVPH Health Foundation
- Northern Border Regional Commission

State Funding Sources*

- NYSDOT
- CHIPS
- LWRP
- NY Main Street Program

*Additional state resources administered through the Federal Highway Administration

Federal Funding Sources

Figure 1-12: US DOT Funding Sources

Pedestrian and Bicycle Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds Updated January 21, 2021

This table indicates potential eligibility for pedestrian and bicycle projects under U.S. Department of Transportation surface transportation funding programs. Additional restrictions may apply. See notes and basic program requirements below, and see program guidance for detailed requirements. Project sponsors should fully integrate nonmotorized accommodation into surface transportation projects. Section 1404 of the Fixing America's Surface Transportation (FAST) Act modified 23 U.S.C. 109 to require federally-funded projects on the National Highway System to consider access for other modes of transportation, and provides greater design flexibility to do so.

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Highway, and Safety Funds																
Key: \$ = Funds may be used for this activity (restrictions may apply). -\$ = Eligible, but not competitive unless part of a larger project. \$* = See program-specific notes for restrictions.																
Activity or Project Type	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTP
Access enhancements to public transportation (includes benches, bus pads)	\$	-\$	\$	\$	\$	\$		\$	\$	\$						\$
ADA/504 Self Evaluation / Transition Plan									\$	\$	\$	\$	\$			\$
Bicycle plans				\$					\$	\$		\$	\$			\$
Bicycle helmets (project or training related)									\$	SSRTS		\$		\$*		
Bicycle helmets (safety promotion)									\$	SSRTS		\$				
Bicycle lanes on road	\$	-\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$			\$
Bicycle parking	-\$	-\$	-\$	\$	\$	\$		\$	\$	\$	\$	\$	\$			\$
Bike racks on transit	\$	-\$	\$	\$	\$	\$			\$	\$						\$
Bicycle repair station (air pump, simple tools)	-\$	-\$	-\$	\$	\$	\$			\$	\$						\$
Bicycle share (capital and equipment; not operations)	\$	-\$	\$	\$	\$	\$		\$	\$	\$						\$
Bicycle storage or service centers (example: at transit hubs)	-\$	-\$	-\$	\$	\$	\$			\$	\$						\$
Bridges / overcrossings for pedestrians and/or bicyclists	\$	-\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$	\$			\$
Bus shelters and benches	\$	-\$	\$	\$	\$	\$		\$	\$	\$						\$
Coordinator positions (State or local)						\$ 1 per State			\$	SSRTS		\$				
Crosswalks (new or retrofit)	\$	-\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$	\$			\$
Curb cuts and ramps	\$	-\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$	\$			\$
Counting equipment				\$	\$		\$	\$	\$	\$	\$	\$	\$*			\$
Data collection and monitoring for pedestrians and/or bicyclists				\$	\$		\$	\$	\$	\$	\$	\$	\$*			\$
Historic preservation (pedestrian and bicycle and transit facilities)	\$	-\$	\$	\$	\$				\$	\$						\$
Landscaping, streetscaping (pedestrian and/or bicycle route; transit access); related amenities (benches, water fountains); generally as part of a larger project	-\$	-\$	-\$	\$	\$			\$	\$	\$						\$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	\$	-\$	\$	\$	\$		\$	\$	\$	\$	\$	\$				\$
Maps (for pedestrians and/or bicyclists)				\$	\$	\$			\$	\$		\$	\$*			\$
Paved shoulders for pedestrian and/or bicyclist use	\$	-\$	\$			\$*	\$	\$	\$	\$	\$	\$				\$
Pedestrian plans				\$					\$	\$		\$	\$			\$
Recreational trails	-\$	-\$	-\$						\$	\$	\$	\$				\$
Road Diets (pedestrian and bicycle portions)	\$	-\$	\$				\$	\$	\$	\$						\$
Road Safety Assessment for pedestrians and bicyclists							\$		\$	\$			\$			\$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike safety									SSRTS	SSRTS		\$	\$*	\$*	\$*	
Safety education positions									SSRTS	SSRTS		\$		\$*		

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Highway, and Safety Funds																
Key: \$ = Funds may be used for this activity (restrictions may apply). -\$ = Eligible, but not competitive unless part of a larger project. \$* = See program-specific notes for restrictions.																
Activity or Project Type	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTP
Safety enforcement (including police patrols)									SSRTS	SSRTS		\$		\$*	\$*	
Safety program technical assessment (for peds/bicyclists)									SSRTS	SSRTS		\$	\$*			
Separated bicycle lanes	\$	-\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$			\$
Shared use paths / transportation trails	\$	-\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$	\$			\$
Sidewalks (new or retrofit)	\$	-\$	\$	\$	\$	\$			\$	\$	\$	\$	\$			\$
Signs / signals / signal improvements (including accessible pedestrian signals)	\$	-\$	\$	\$	\$	\$	\$	\$	\$	\$		\$				\$
Signed pedestrian or bicycle routes	\$	-\$	\$	\$	\$	\$			\$	\$	\$	\$	\$			\$
Spot improvement programs	\$	-\$	\$	\$	\$		\$	\$	\$	\$	\$	\$	\$			\$
Stormwater impacts related to pedestrian and bicycle projects	\$	-\$	\$	\$	\$		\$	\$	\$	\$	\$	\$	\$			\$
Traffic calming	\$	-\$	\$	\$	\$		\$	\$	\$	\$	\$	\$	\$			\$
Trail bridges	\$	-\$	\$			\$*	\$	\$	\$	\$	\$	\$	\$			\$
Trail construction and maintenance equipment									SRTS	SRTS	\$					
Trail/highway crossings and intersections	\$	-\$	\$			\$*	\$	\$	\$	\$	\$	\$	\$			\$
Trailside and trailhead facilities (includes restrooms and water, but not general park amenities; see program guidance)	-\$*	-\$*	-\$*						\$*	\$*	\$*					\$
Training						\$	\$		\$	\$	\$	\$	\$*	\$*		
Training for law enforcement on ped/bicyclist safety laws									SSRTS	SSRTS		\$			\$*	
Tunnels / undercrossings for pedestrians and/or bicyclists	\$	-\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$	\$			\$

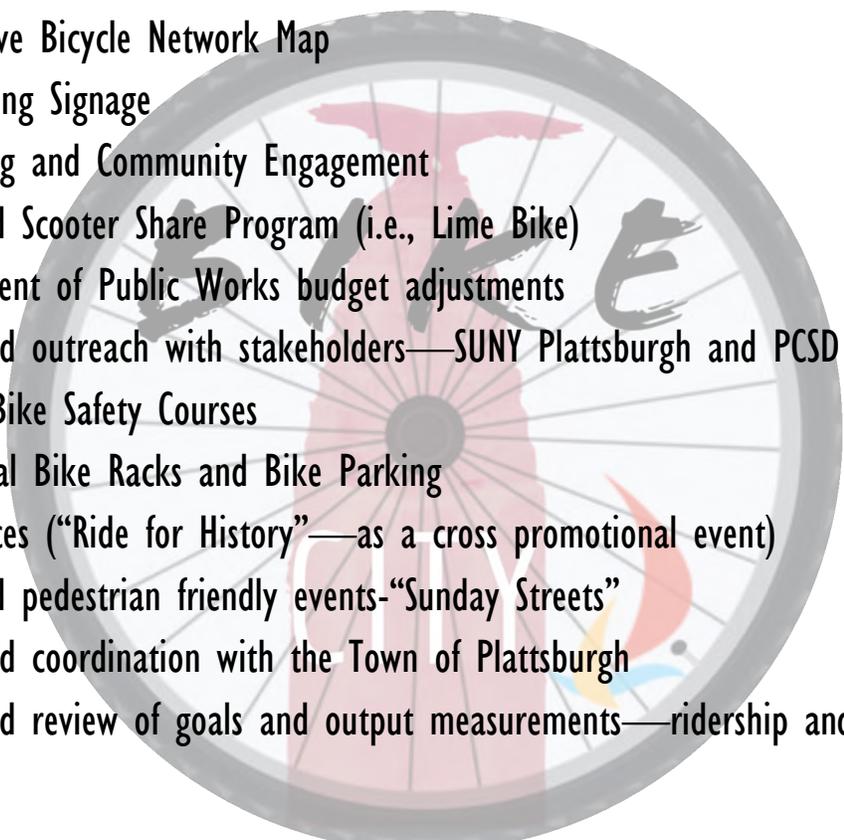
Abbreviations

ADA/504: Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973
BUILD: Better Utilizing Investments to Leverage Development Transportation Discretionary Grants
INFRA: Infrastructure for Rebuilding America Discretionary Grant Program
TIFIA: Transportation Infrastructure Finance and Innovation Act (loans)
FTA: Federal Transit Administration Capital Funds
ATI: Associated Transit Improvement (1% set-aside of FTA)
CMAQ: Congestion Mitigation and Air Quality Improvement Program
HSIP: Highway Safety Improvement Program
NHPP: National Highway Performance Program
STBG: Surface Transportation Block Grant Program

TA: Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)
RTP: Recreational Trails Program
SRTS: Safe Routes to School Program / Activities
PLAN: Statewide Planning and Research (SPR) or Metropolitan Planning funds
NHTSA 402: State and Community Highway Safety Grant Program
NHTSA 405: National Priority Safety Programs (Nonmotorized safety)
FLTP: Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)

5.3 Ongoing Strategies

Identifying a bicycle network is the first step to creating a “friendlier” community, but there needs to be the will of the people and the will of administration to commit time and resources for implementation and ongoing maintenance. In addition, a commitment to a healthier more inclusive community includes not just physical improvements, but an on-going strategy to support and sustain an active multi-modal transportation system. Below is a list of on-going strategies in support of a successful bicycle infrastructure plan:

- 
-  Interactive Bicycle Network Map
 -  Wayfinding Signage
 -  Marketing and Community Engagement
 -  Bike and Scooter Share Program (i.e., Lime Bike)
 -  Department of Public Works budget adjustments
 -  Continued outreach with stakeholders—SUNY Plattsburgh and PCSD
 -  Annual Bike Safety Courses
 -  Additional Bike Racks and Bike Parking
 -  Bike Races (“Ride for History”—as a cross promotional event)
 -  Bike and pedestrian friendly events-“Sunday Streets”
 -  Continued coordination with the Town of Plattsburgh
 -  Continued review of goals and output measurements—ridership and crash data

LET’S GET ROLLING!