



ERIE BIKEWAYS PROJECT

- Introductions
- Background
 - Bike Erie Advocacy
 - Long Range Transportation Plan
 - Active Erie and the Low-Stress Bike Network
 - Funding
- Greengarden Boulevard Bikeway
- Relevant Rules and Regulations
- Feedback to Date
- Next Steps

BIKE ERIE BIKE ROUTES

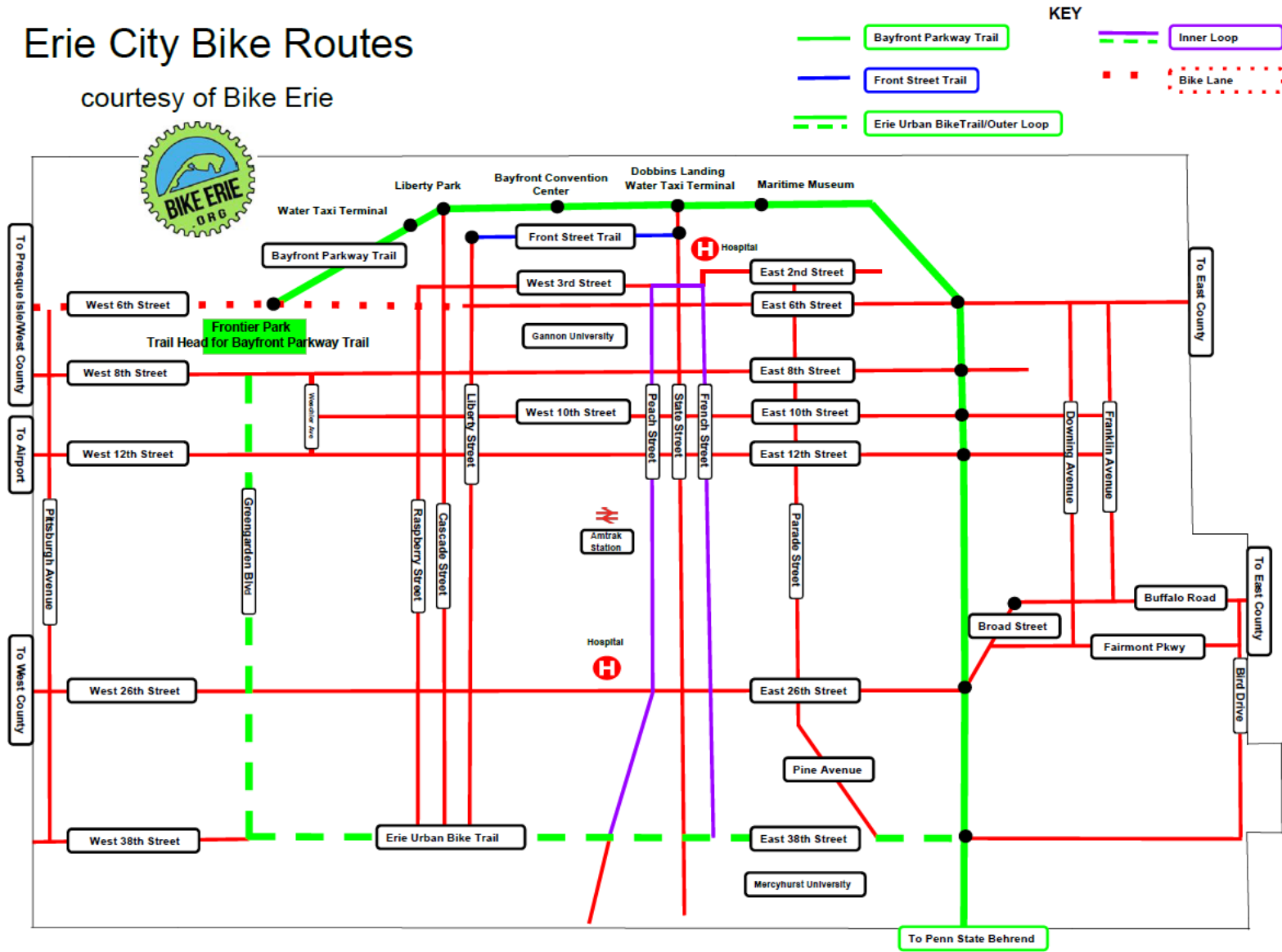
In 2015 a bike lane on Greengarden Boulevard was identified by bikers, especially those in Bike Erie, as a desirable connection for an Erie Urban Bike Loop Trail.



BIKE ERIE BIKE ROUTES

Erie City Bike Routes

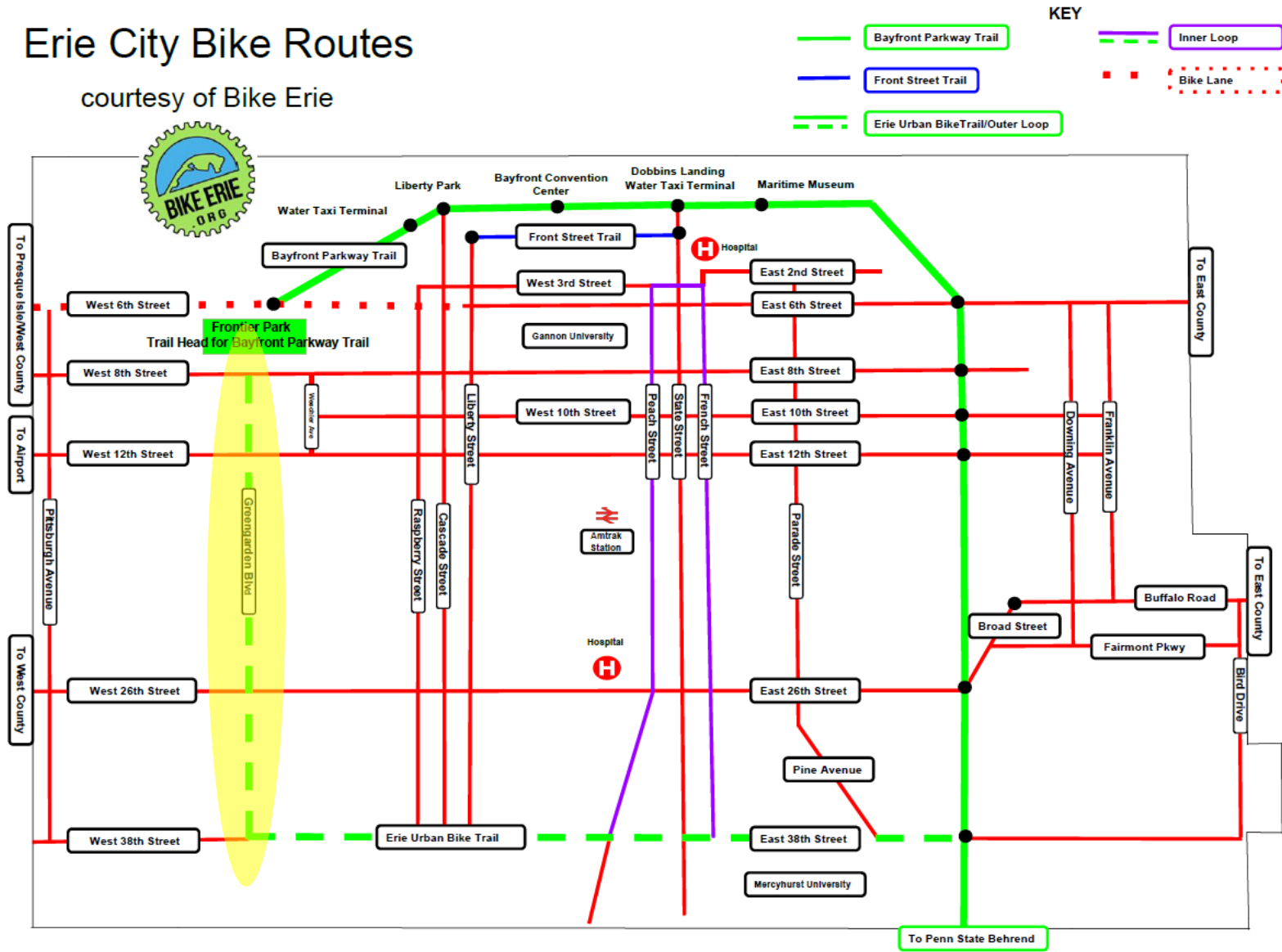
courtesy of Bike Erie



BIKE ERIE BIKE ROUTES

Erie City Bike Routes

courtesy of Bike Erie



ERIE BIKEWAYS PROJECT

The Greengarden branch of the Erie Urban Bike Loop Trail appeared in a public document in 2017 in the MPO's *2042 Long Range Transportation Plan*.



ERIE LONG-RANGE TRANSPORTATION PLAN (2017)

Exhibit 49b – Pedestrian and Bicycle Projects (Descriptions)

ID	Title	Municipality	Description
5b	Erie Loop Bikeway - Greengarden Boulevard	City of Erie	Construct the western limit of the Erie Loop Bikeway through providing bicycle lanes on Greengarden Boulevard to separate cyclists from the general flow of traffic and minimize congestion and improve safety for motorists and cyclists. Restripe the current roadway geometry along Greengarden from 38th Street to Route 5 near Frontier Park. Potential improvements include dedicated bicycle lanes, sharrows, and Share the Road signs where geometry does not allow for exclusive bicycle lanes. Total limits should be approximately 2.5 mile section along Greengarden Boulevard between Route 5 and 38th Street.
5c	Erie Loop Bikeway - French Street	City of Erie	Construct the central trunk of the Erie Loop Bikeway by providing a cycle track to separate cyclists from the general flow of traffic. Minimize congestion and improve safety for motorists and cyclists by restriping one of the three existing travel lanes along French Street. Limits from approximately 38th Street in the south to UPMC and the Bayfront Parkway in the north. French Street is recommended over State Street due to its lower stress nature. The extensive roadway width in this section could accommodate a two-way cycle track with minimal impact to traffic operations; a delineated buffer area between the cycle track and travel lanes could be removed in the wintertime to accommodate snow plowing.

ERIE BIKEWAYS PROJECT

- The southern leg of the Erie Urban Bike Loop trail (38th Street) was marked with sharrows by PennDOT during paving in 2017.
- In 2019, the City of Erie secured funding through the PennDOT via the MPO to study the bicycle and pedestrian transportation needs of the whole city. This led to the creation of the Active Erie Plan in 2020/2021.

ACTIVE ERIE TRANSPORTATION PLAN (2021)

- The Active Erie Transportation Plan (www.activeerie.com) creates a blueprint for better walking and bicycling conditions in the City.





What is an Active Transportation Plan?

Transportation plays a critical role in every community. It connects people to places they need to go and people they need to see. Everyone has a right to get to their destination safely, whether traveling by foot, bicycle, bus, or car. Active forms of transportation like walking and biking provide a convenient, healthy, and affordable way to get around Erie.

ACTIVE ERIE STEERING COMMITTEE

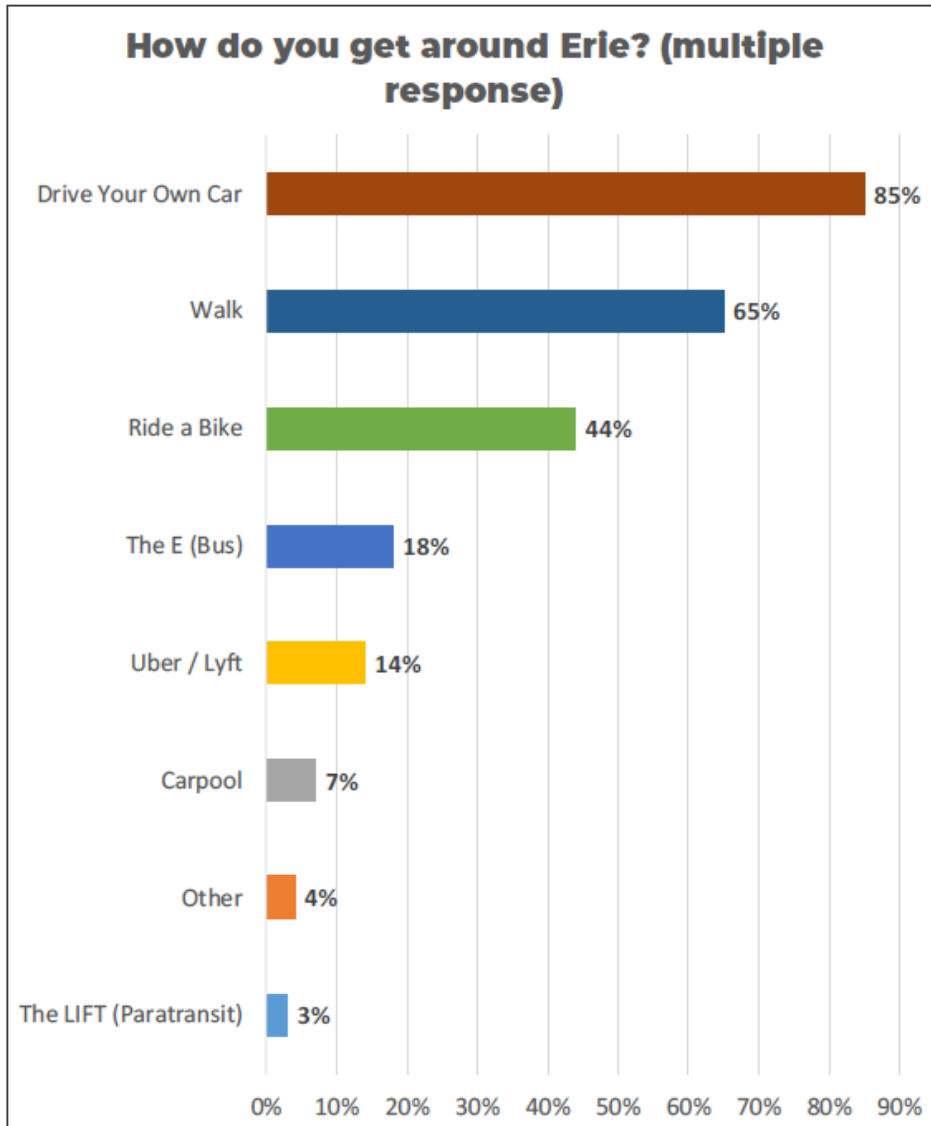
- City of Erie Traffic Engineer
- City of Erie Engineer
- City of Erie Fire
- City of Erie Planning Commission
- City of Erie Planning Director
- Erie Public Schools
- EMTA
- Erie Arts and Culture
- Erie Community Foundation
- Erie Downtown Partnership
- Mayor's Disability Roundtable
- Millcreek Township
- Erie County MPO
- Bike Erie
- Erie County Department of Health
- MCRC – Refugee Representative
- PennDOT District 1

RESPONSE TO COVID-19 & STRATEGY

- COVID-19 impacted our ability to conduct in-person outreach
- Online survey and interactive map were available June 7 - July 31 ***328 responses were received***
- Incentivized participation with gift cards
- Advertised via community email listservs, social media
- Advertised survey in library and on buses to solicit more participation
- Held two online Listening Sessions
- Moving Workshop held on 10/20

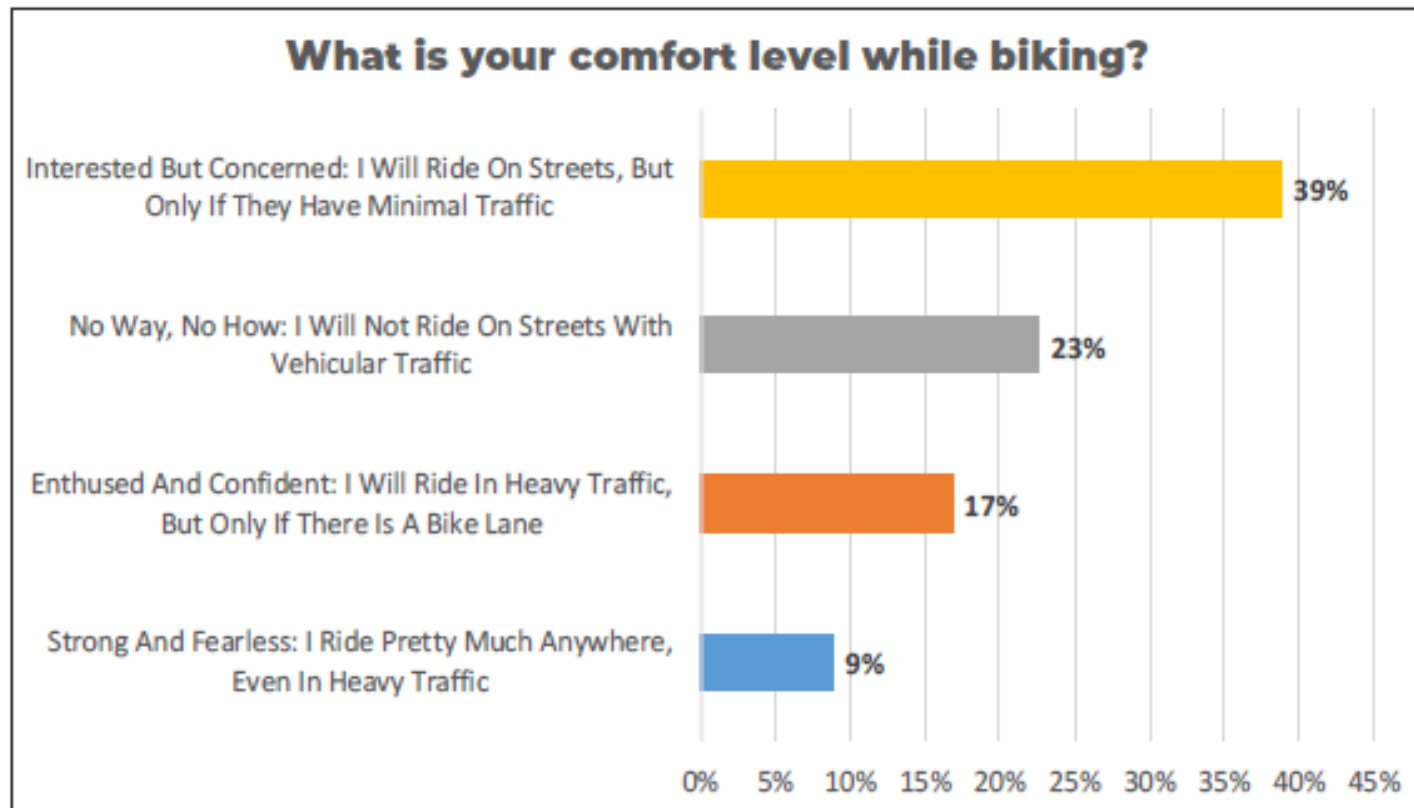
PUBLIC SURVEY RESULTS

Survey was live from June 7 - July 31. 328 responses were received.



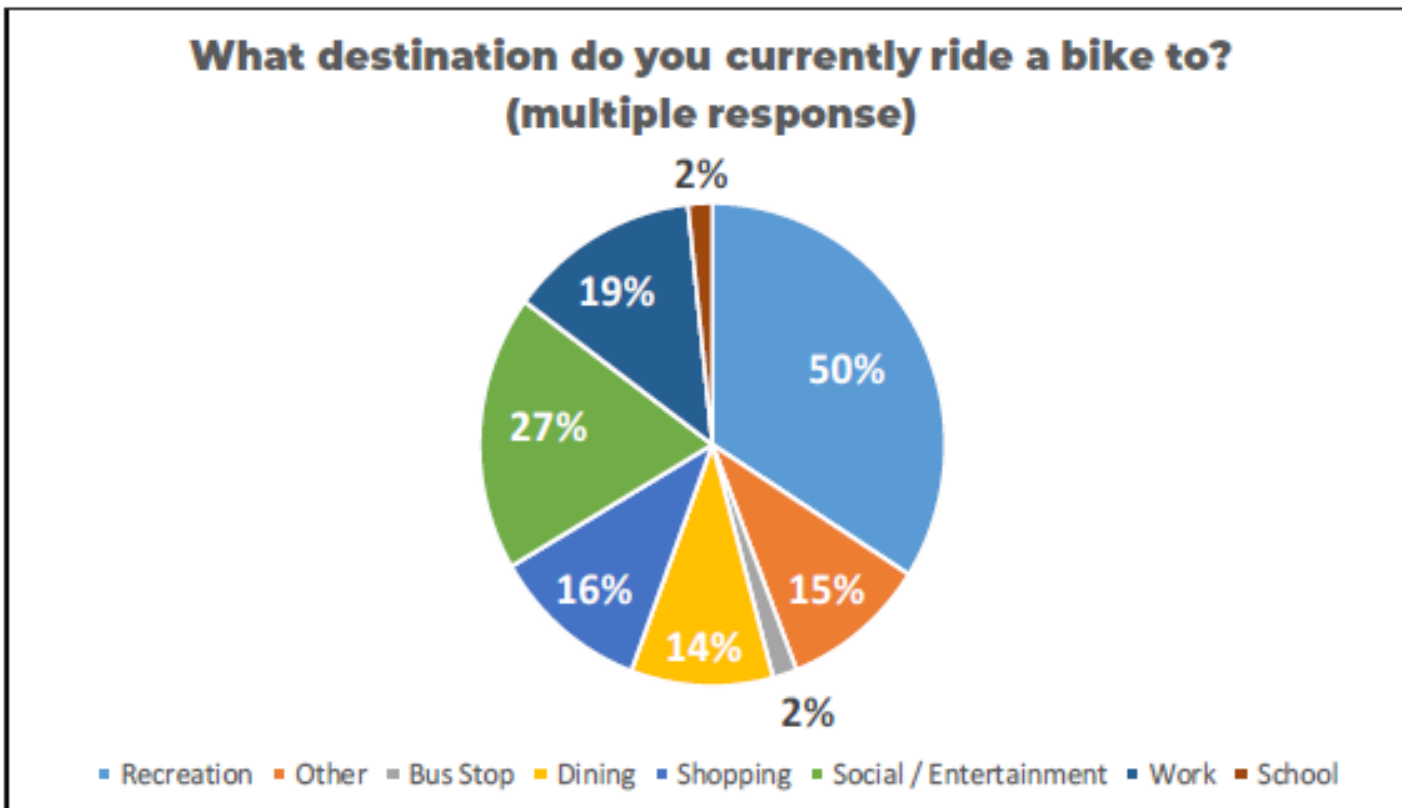
PUBLIC SURVEY RESULTS - PEOPLE WHO BIKE

Survey was live from June 7 - July 31. 328 responses were received.



PUBLIC SURVEY RESULTS - PEOPLE WHO BIKE

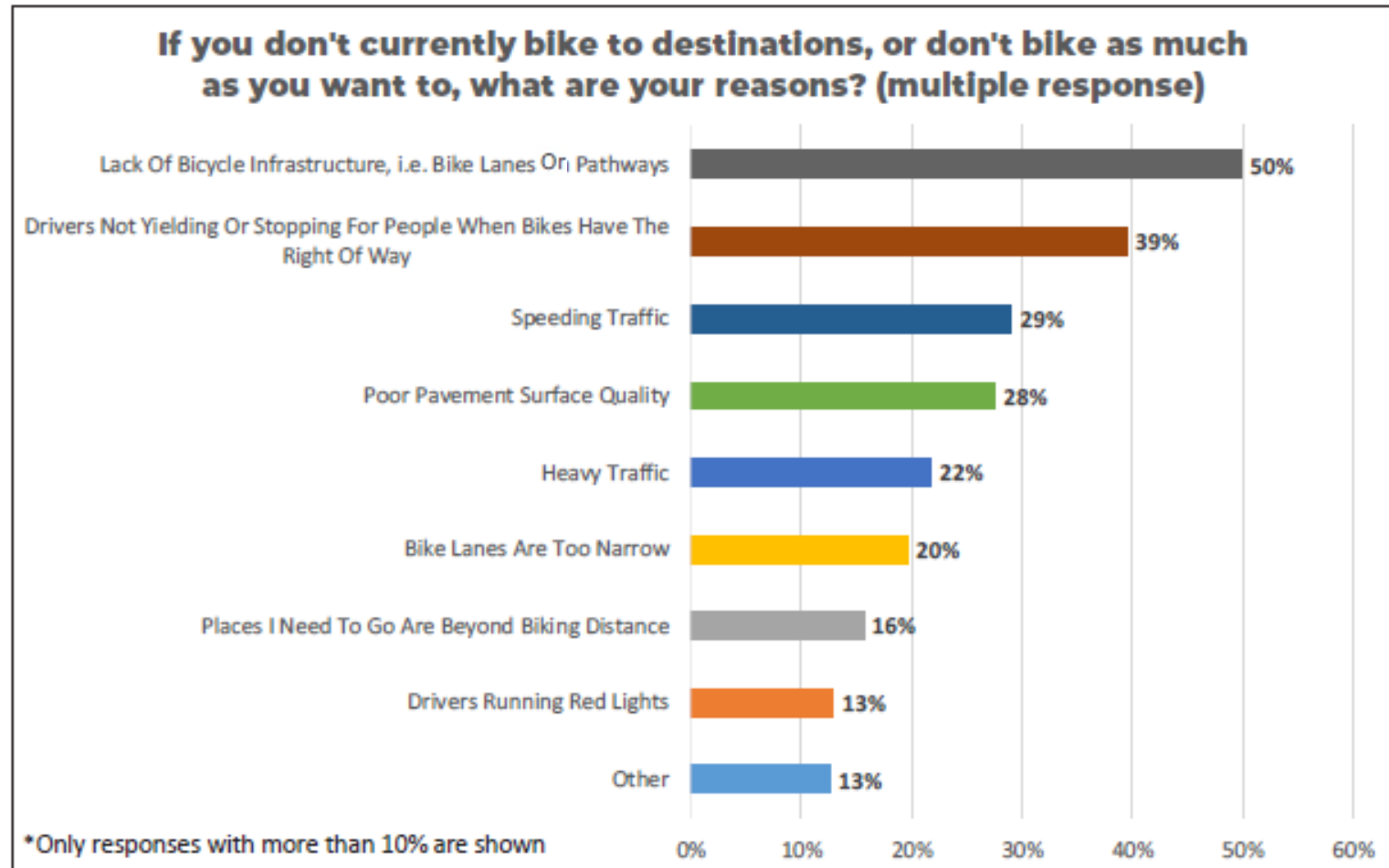
Survey was live from June 7 - July 31. 328 responses were received.



Public Outreach Approach

PUBLIC SURVEY RESULTS - PEOPLE WHO BIKE

Survey was live from June 7 - July 31. 328 responses were received.



Existing Conditions Analysis

LEVEL OF TRAFFIC STRESS

- Developed in 2012 by the Mineta Transportation Institute and San Jose State University
- Methodology continues to be refined by Dr. Peter Furth at Northeastern University, one of the original study authors

1	Safe for children to use; Usually completely separated from auto traffic	 Photo by Bob Patten
2	Tolerated by most mainstream adult populations of cyclists; Roads with low volume and low speed auto traffic	
3	Tolerated by riders who are enthused and confident; Heavy traffic with separated bike facility	
4	Only tolerated by strong and fearless riders; cyclists must interact with high volumes or speeds of auto traffic.	

Existing Conditions Analysis

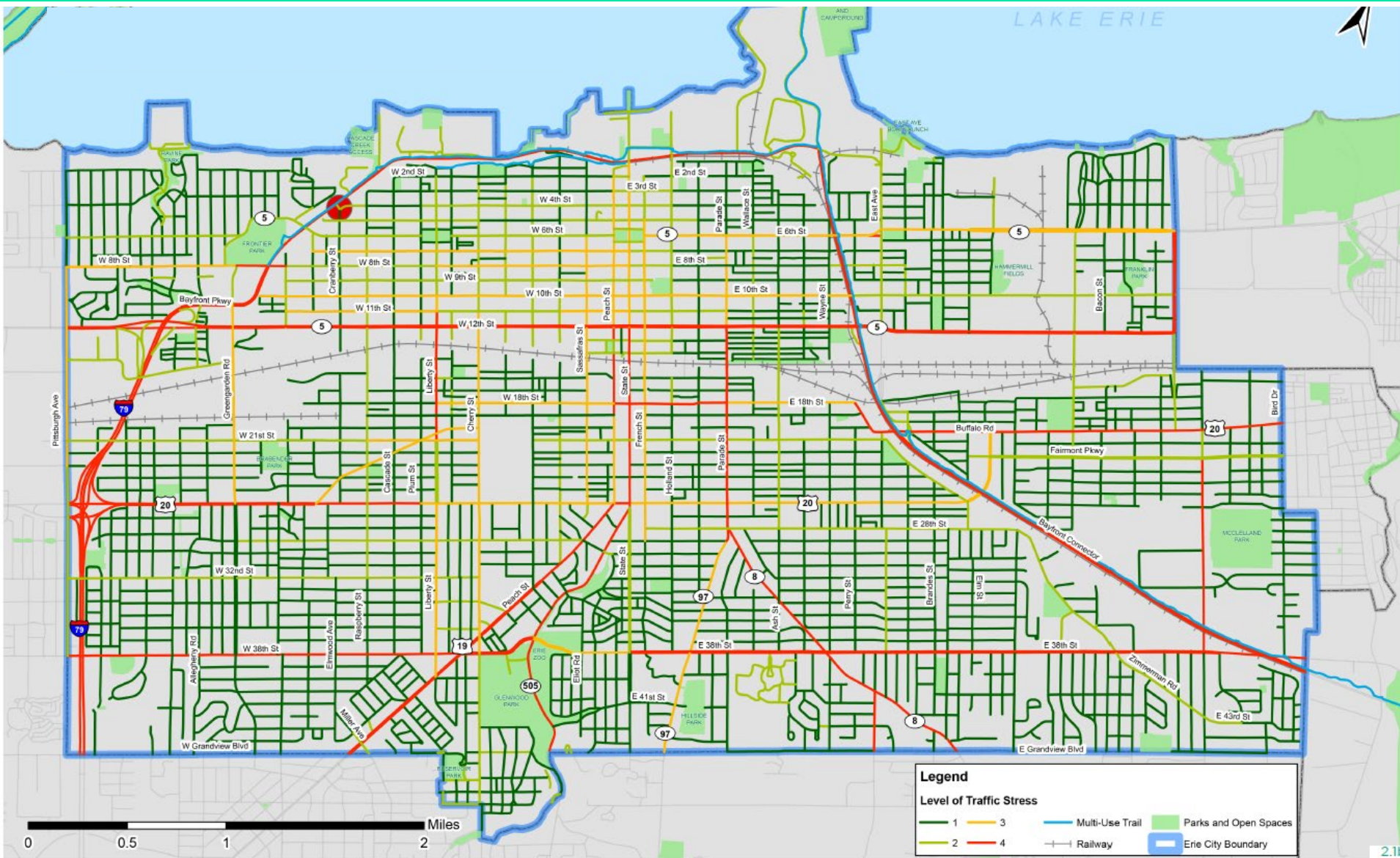
LEVEL OF TRAFFIC STRESS

- Most of Erie's streets do not have any bicycle infrastructure
- They were analyzed using the below Mixed Traffic Criteria for bikes riding with traffic

Number of Lanes	Average Daily Traffic	<25 mph	30 mph	35 mph	40 mph	45 mph	50+ mph
2-way street (no centerline)	0-750	LTS 1	LTS 2	LTS 2	LTS 3	LTS 3	LTS 4
	751-2000	LTS 1	LTS 2	LTS 3	LTS 3	LTS 4	LTS 4
	2001-3000	LTS 1	LTS 2	LTS 3	LTS 4	LTS 4	LTS 4
	3001+	LTS 2	LTS 2	LTS 3	LTS 4	LTS 4	LTS 4
1 through lane per direction (1-way street or 2-way street with centerline)	0-750	LTS 1	LTS 2	LTS 2	LTS 3	LTS 3	LTS 4
	751-2000	LTS 1	LTS 2	LTS 3	LTS 3	LTS 4	LTS 4
	2001-6000	LTS 2	LTS 3	LTS 4	LTS 4	LTS 4	LTS 4
	6001+	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4	LTS 4
2 through lanes per direction	0-6000	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4
	6001+	LTS 3	LTS 4	LTS 4	LTS 4	LTS 4	LTS 4
3+ through lanes per direction	any ADT	LTS 3	LTS 4	LTS 4	LTS 4	LTS 4	LTS 4

Existing Conditions Analysis

EFFECTIVE LEVEL OF TRAFFIC STRESS



BIKE NETWORK DESIGN

Seven Principles of Bicycle Network Design



Safety

The frequency and severity of crashes are minimized and conflicts with motor vehicles are limited



Comfort

Conditions do not deter bicycling due to stress, anxiety, or concerns over safety



Connectivity

All destinations can be accessed using the bicycling network and there are no gaps or missing links



Directness

Bicycling distances and trip times are minimized



Cohesion

Distances between parallel and intersecting bike routes are minimized



Attractiveness

Routes direct bicyclists through lively areas and personal safety is prioritized

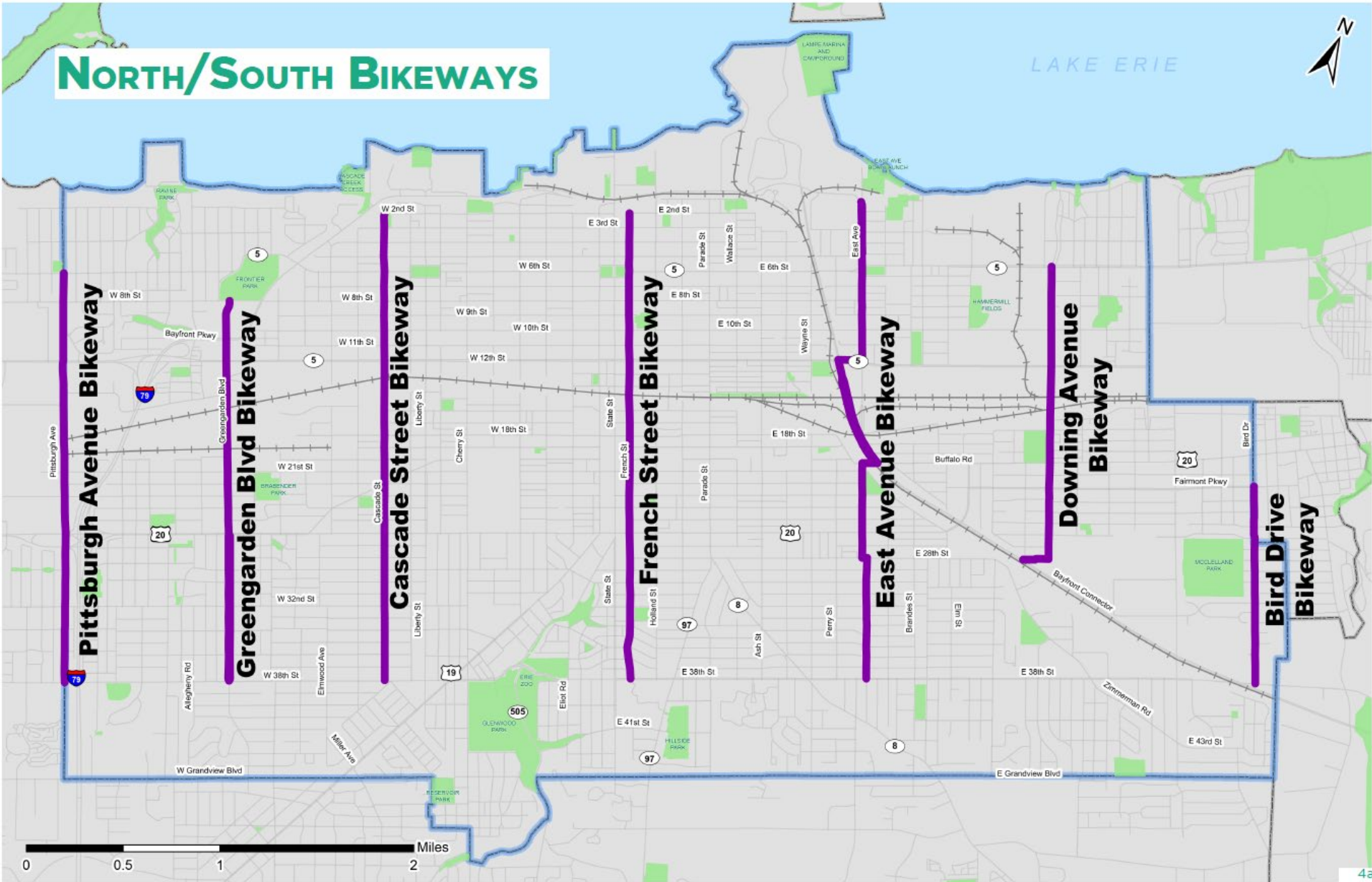


Unbroken Flow

Stops, such as long waits at traffic lights, are limited and street lighting is consistent

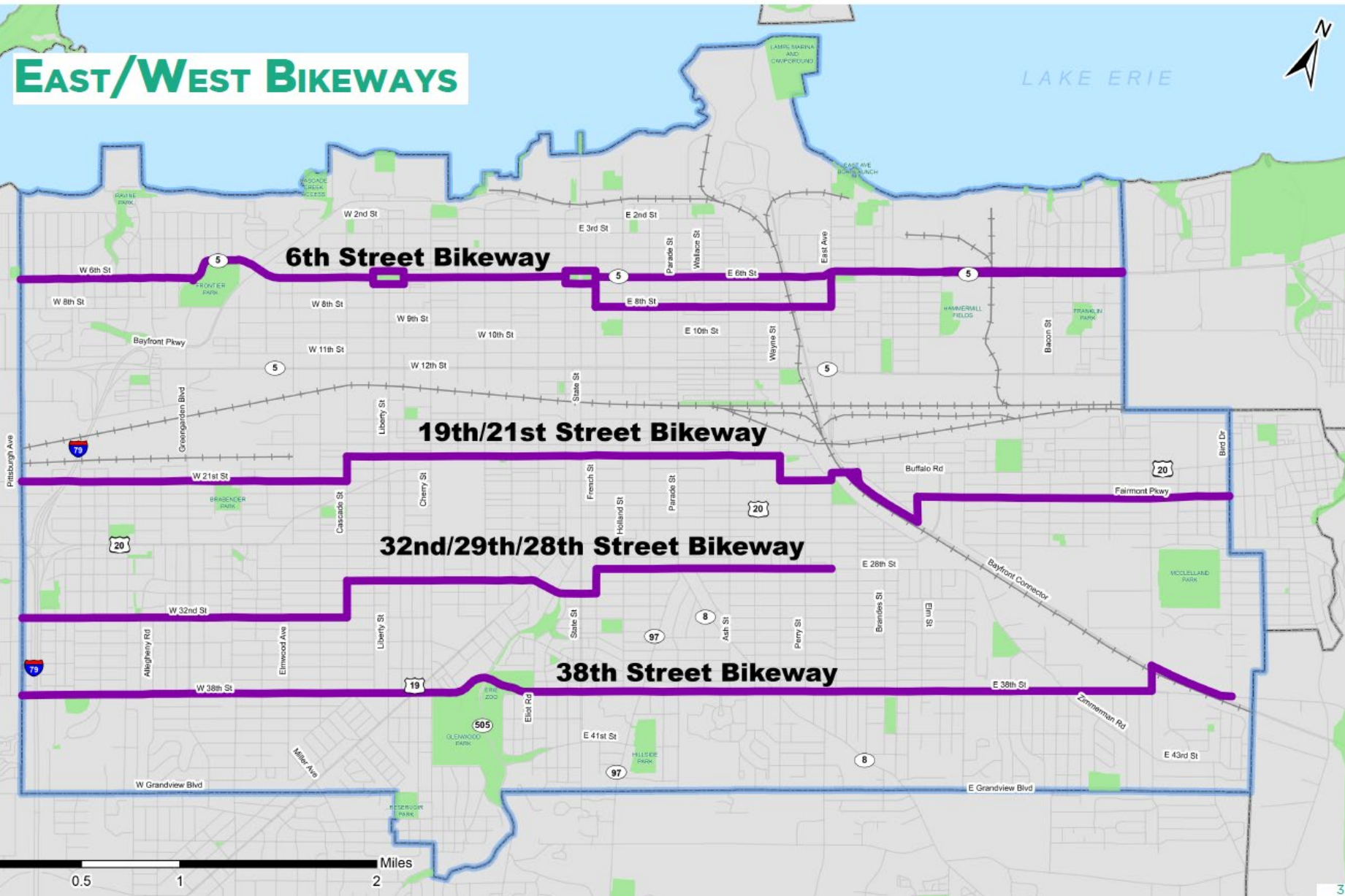
Source: Federal Highway Administration, *Separated Bike Lane Planning and Design Guide*

Bikeway Recommendations



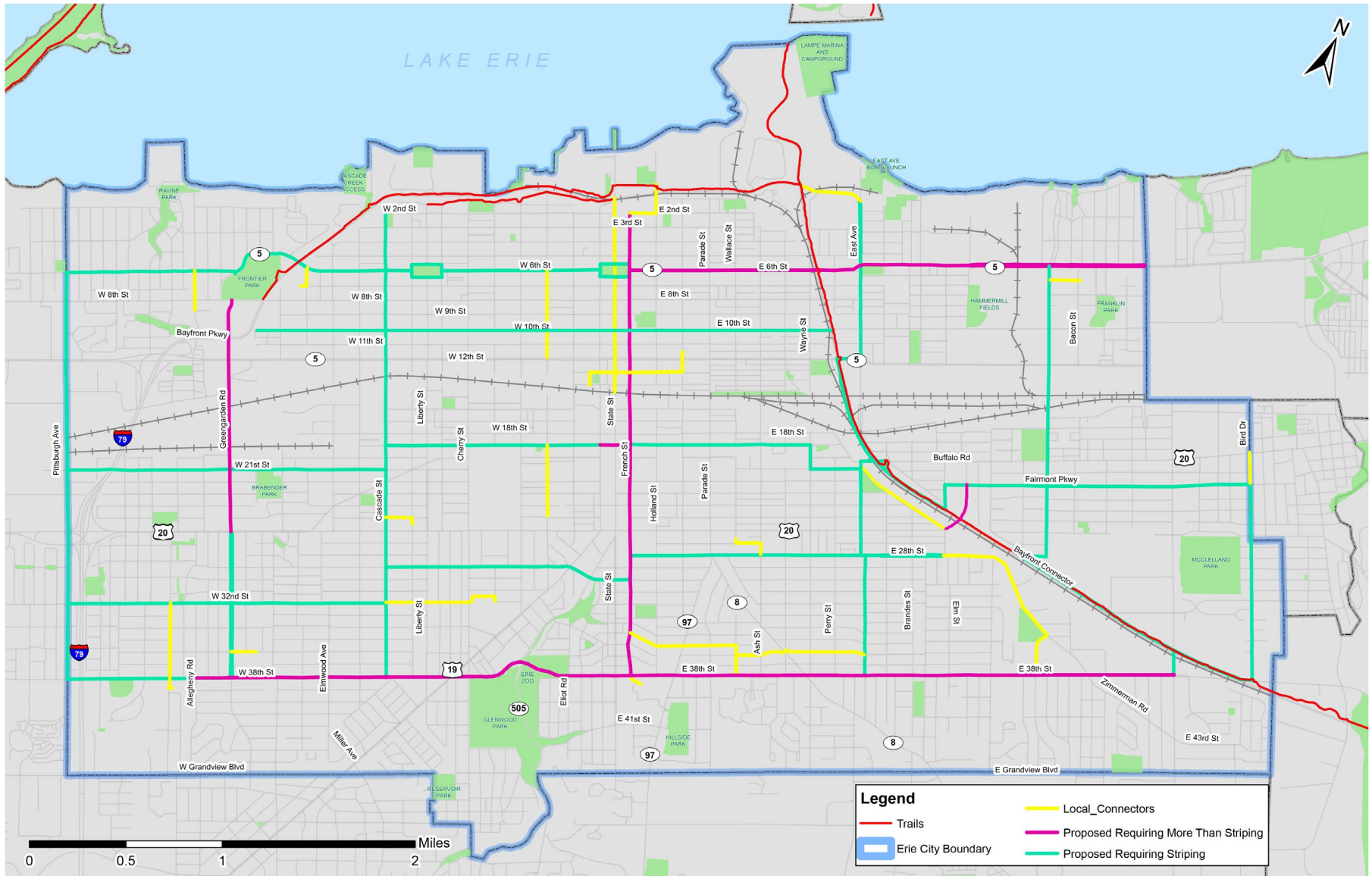
Bikeway Recommendations

EAST/WEST BIKEWAYS



LOW-STRESS BIKEWAY NETWORK

- Grid of bikeways running east-west and north-south across the City (**aspirational**, but **realistic**)
- Designed for use by any adult cyclist, regardless of skill level, as well as some older children (LTS 1 or 2)
- Three types of improvements:
 - Bikeways along existing low-stress streets, which will rely mostly on signs and pavement markings with some additional traffic controls at crossings
 - Bikeways requiring more significant construction
 - Local connections, mostly along existing low-stress streets
- Bicycle facilities should also be considered as part of other transportation projects



GREENGARDEN BOULEVARD BIKEWAY

West 6th Street to West 38th Street

Destinations along the Greengarden Boulevard Bikeway include Frontier Park, employment centers, retail opportunities, and Grover Cleveland Elementary School. Crossing improvements may be necessary at 6th Street. All other high-stress crossings are currently signalized. It may also be desirable to provide a shared use path connection through Frontier Park to directly link the north end of the Greengarden Boulevard Bikeway with the 6th Street Bikeway.

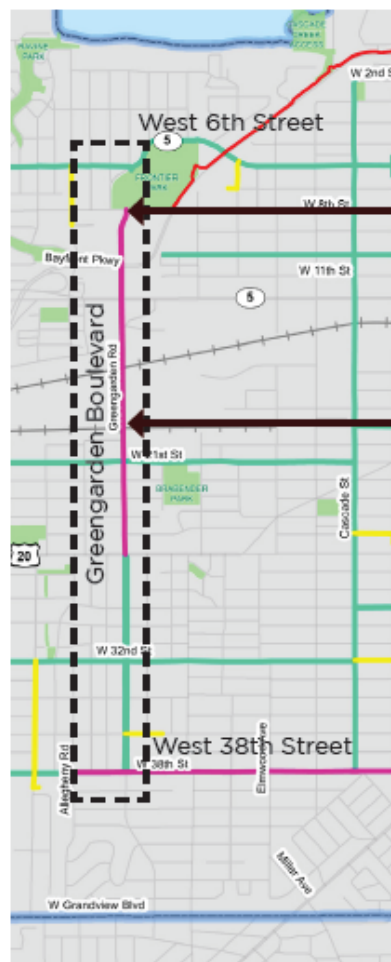


Figure 41. Potential recommendation for Greengarden Boulevard, West 6th Street to West 8th Street



Figure 42. Potential recommendation for Greengarden Boulevard, West 16th Street to West 26th Street

Bikeway Section	Curb to Curb Width	Existing	Potential Recommendations
West 8th Street to Bayfront Parkway	30'	One travel lane each way	Convert existing sidewalk into shared use path; extend path into Frontier Park to connect to 6th Street bikeway
Bayfront Parkway to West 16th Street	40'	Two lanes each way with some additional designated turn lanes at intersections	Road diet; Take one lane each way to make on-street buffered bike lanes
West 16th Street to West 26th Street	30'	One travel lane each way	10' travel lanes; 5' bike lanes
West 26th Street to West 38th Street	60'	One travel lane each way with striped shoulders; 20' grass median	Convert shoulders to bike lanes; Add striping

ERIE BIKEWAYS PROJECT

- Funding for the Greengarden and French Street bikeways was allocated by the MPO on the 2021-2024 Transportation Improvement Program.
 - Greengarden Boulevard was selected for funding first because it had been identified so early on as the east branch of the Erie Urban Bike Loop Trail as well as in the Active Erie plan.
 - MPO funding can't be used on Cascade because the street is not eligible for federal aid.
 - Pittsburgh Avenue is eligible, but would be much more expensive due to the right-of-way acquisition needed, even if bike lanes were just stripped in. It is a longer-term project.

ERIE BIKEWAYS PROJECT

- In 2022 the MPO's 2050 Long Range Transportation Plan recommended funding for other bike lanes on federal aid routes identified in the Active Erie plan.



ENVIRONMENTAL REVIEW PROCESS

- Required by National Environmental Policy Act (NEPA)/ Section 4(f) for any projects funded by or requiring approval by the U.S. Department of Transportation
- Requires an assessment of the proposed project's impact on:
 - Park and recreational lands
 - Wildlife and waterfowl refuges
 - Historic sites
- Because both proposed projects consist of pavement markings and signal improvements, it was found that there are no adverse impacts
- If you have concerns about any impacts to parks or historic sites, please note your concerns via the online survey or comment form available at <https://cityof.erie.pa.us/bikeway/>

Greengarden Boulevard Bikeway

BAYFRONT PARKWAY TO 38TH STREET

Destinations along the Greengarden Boulevard Bikeway include employment centers, retail opportunities, and Grover Cleveland Elementary School.

This project includes:

- Funding for pavement markings
 - Shared lane markings (sharrows) between Bayfront Parkway and 12th Street
 - Buffered bike lanes between 12th Street and 16th Street
 - Standard bike lanes between 16th Street and 25th Street
 - Shared lane markings (sharrows) between 25th Street and 26th Street
 - Buffered bike lanes between 26th Street and 38th Street
- Bike facilities will be accommodated via lane narrowing and removal of on-street parking

Greengarden Boulevard Bikeway

DESIGN GUIDANCE

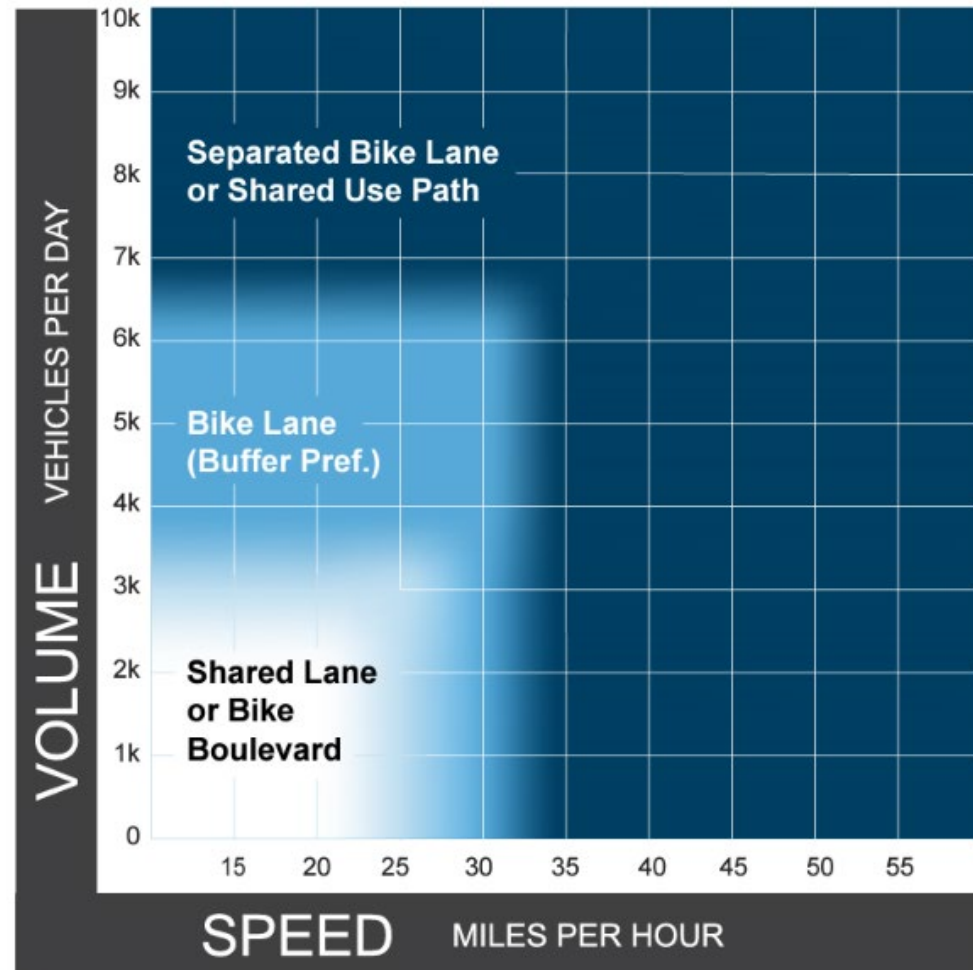
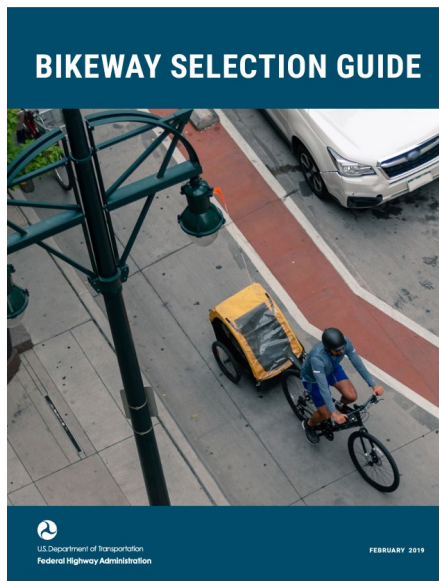
- PennDOT [Design Manual Part 2, Contextual Roadway Design](#), 2021
- AASHTO [Guide for the Development of Bicycle Facilities](#), 2012
- NACTO [Urban Bikeway Design Guide](#)
- Federal Highway Administration [Bikeway Selection Guide](#), 2019
- Federal Highway Administration [Separated Bike Lane Planning and Design Guide](#), 2015



Greengarden Boulevard Bikeway

DESIGN GUIDANCE

- Federal Highway Administration [Bikeway Selection Guide](#), 2019



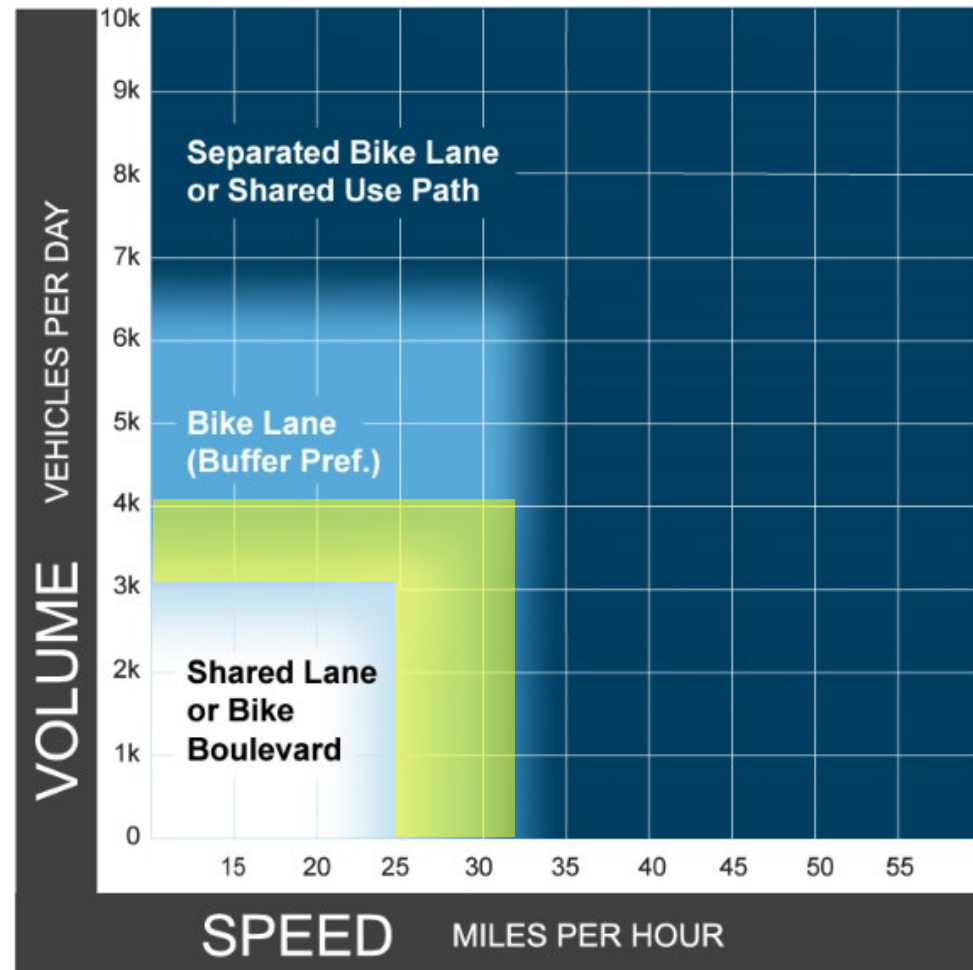
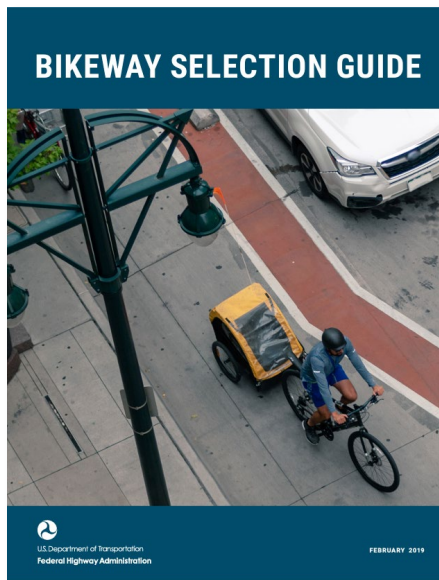
Notes

- 1 Chart assumes operating speeds are similar to posted speeds. If they differ, use operating speed rather than posted speed.
- 2 Advisory bike lanes may be an option where traffic volume is <3K ADT.
- 3 See page 32 for a discussion of alternatives if the preferred bikeway type is not feasible.

Greengarden Boulevard Bikeway

DESIGN GUIDANCE

- Federal Highway Administration [Bikeway Selection Guide, 2019](#)



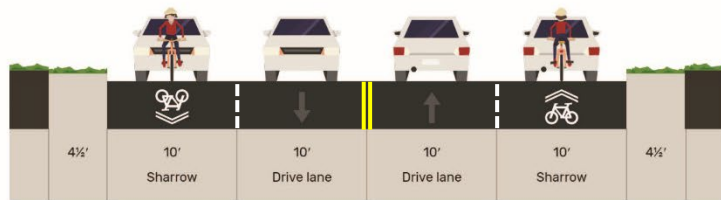
Notes

- Chart assumes operating speeds are similar to posted speeds. If they differ, use operating speed rather than posted speed.
- Advisory bike lanes may be an option where traffic volume is <3K ADT.
- See page 32 for a discussion of alternatives if the preferred bikeway type is not feasible.

Greengarden Boulevard Bikeway

TYPICAL SECTION

Greengarden Blvd - Bayfront Parkway to West 12th Street



Interim treatment - Sharrowrows

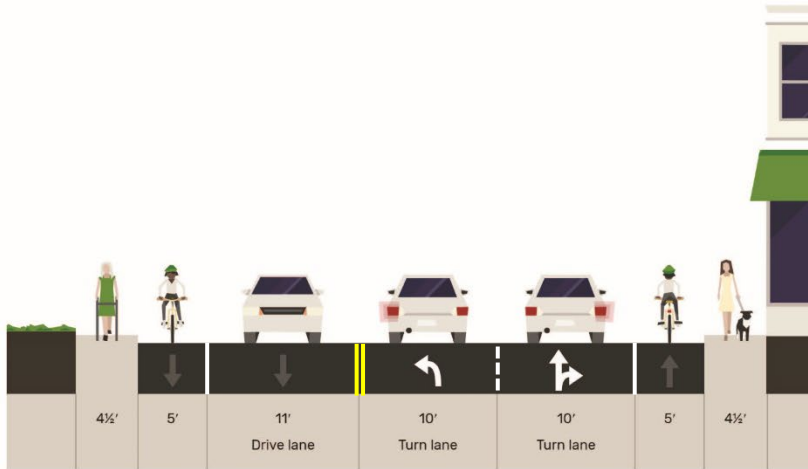


Existing Accessible Pedestrian Signal (APS)

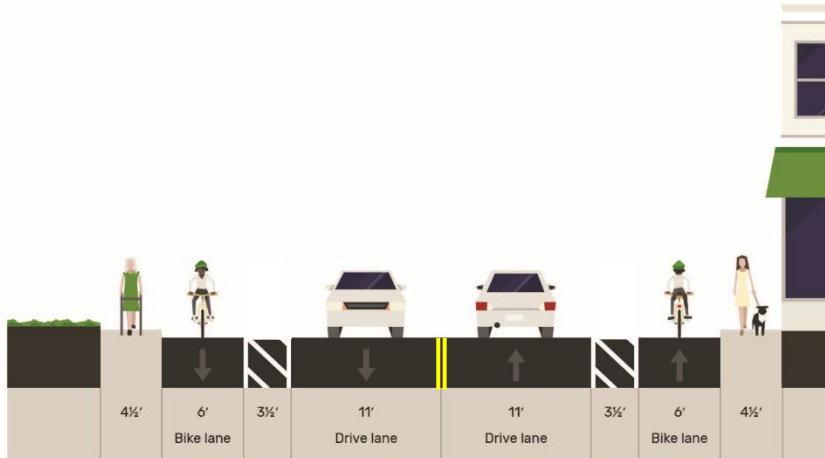
Greengarden Boulevard Bikeway

TYPICAL SECTION

Greengarden Blvd - West 12th Street to West 16th Street



Intersection with left turn lane and bike lanes



One travel lane each way with buffered bike lanes



Existing Accessible Pedestrian Signal (APS)



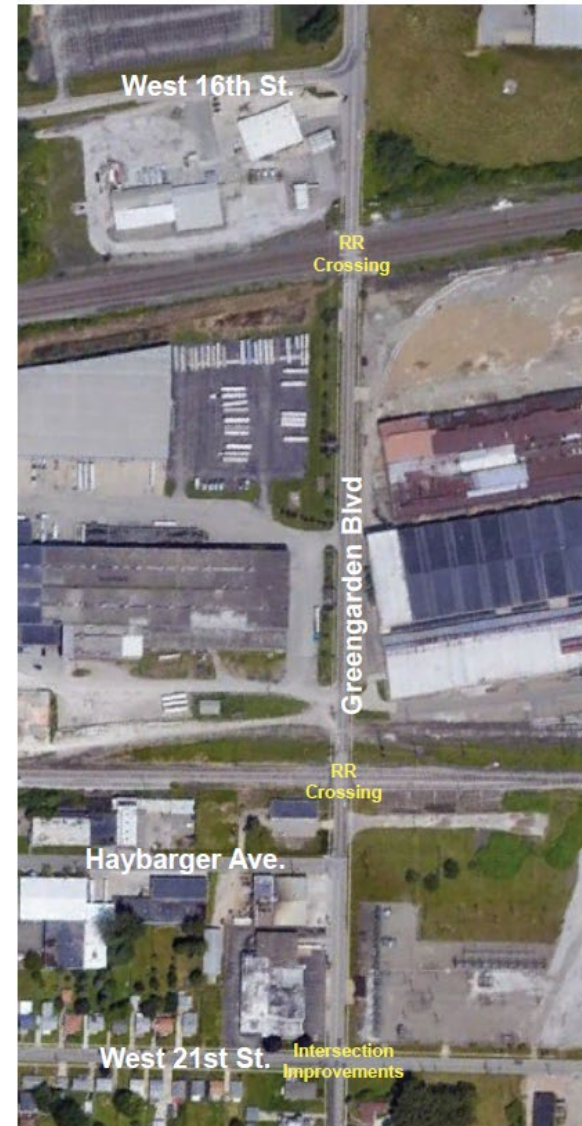
Greengarden Boulevard Bikeway

TYPICAL SECTION

Greengarden Blvd - West 16th Street to West 21st Street



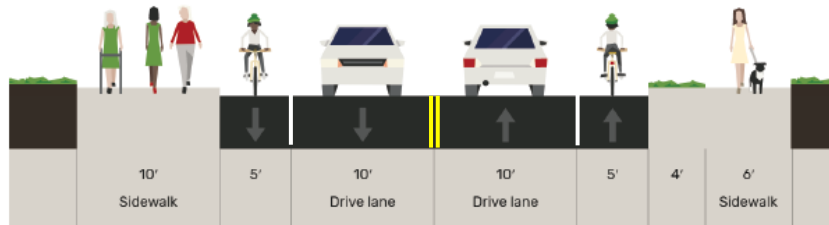
One travel lane each way with bike lanes



Greengarden Boulevard Bikeway

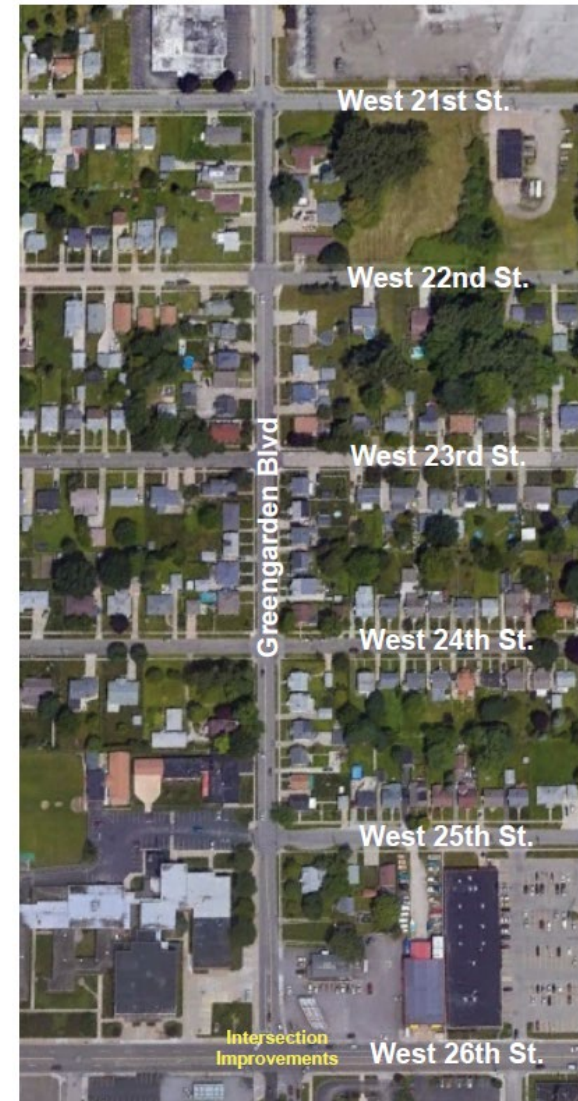
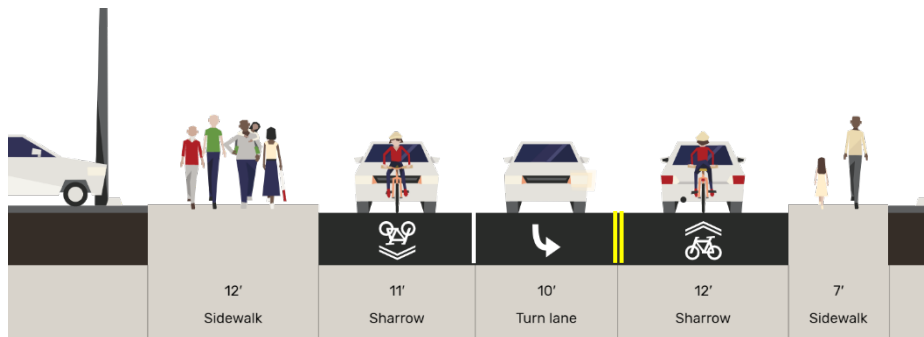
TYPICAL SECTION

Greengarden Blvd – West 21st Street to West 25th Street



One travel lane each way with bike lanes

Greengarden Blvd – West 25th Street to West 26th Street



Greengarden Boulevard Bikeway

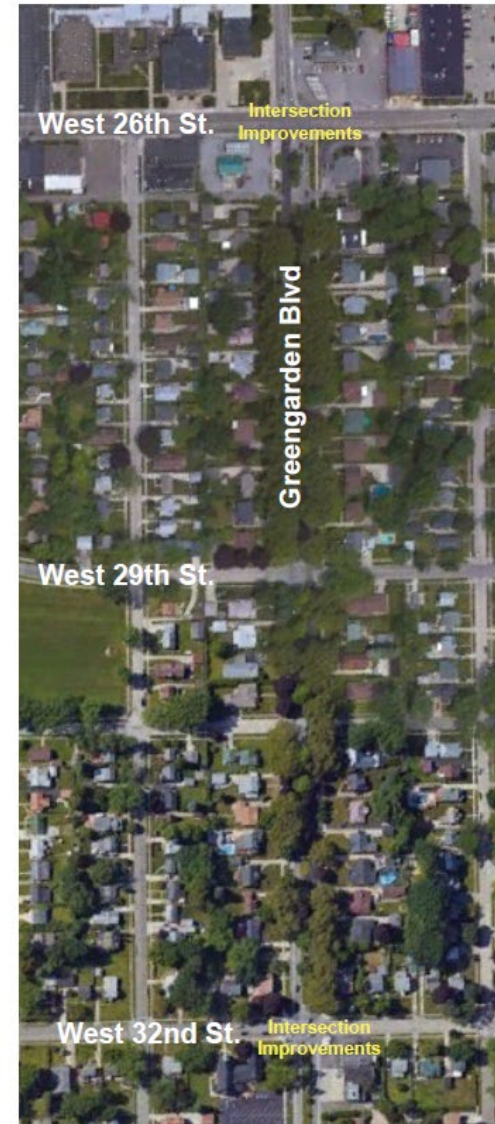
TYPICAL SECTION

Greengarden Blvd - West 26th Street to West 32nd Street



One travel lane each way with buffered bike lanes

These blocks will now have buffered bike lanes instead of on-street parking.



Greengarden Boulevard Bikeway

TYPICAL SECTION

Greengarden Blvd - West 32nd Street to West 38th Street



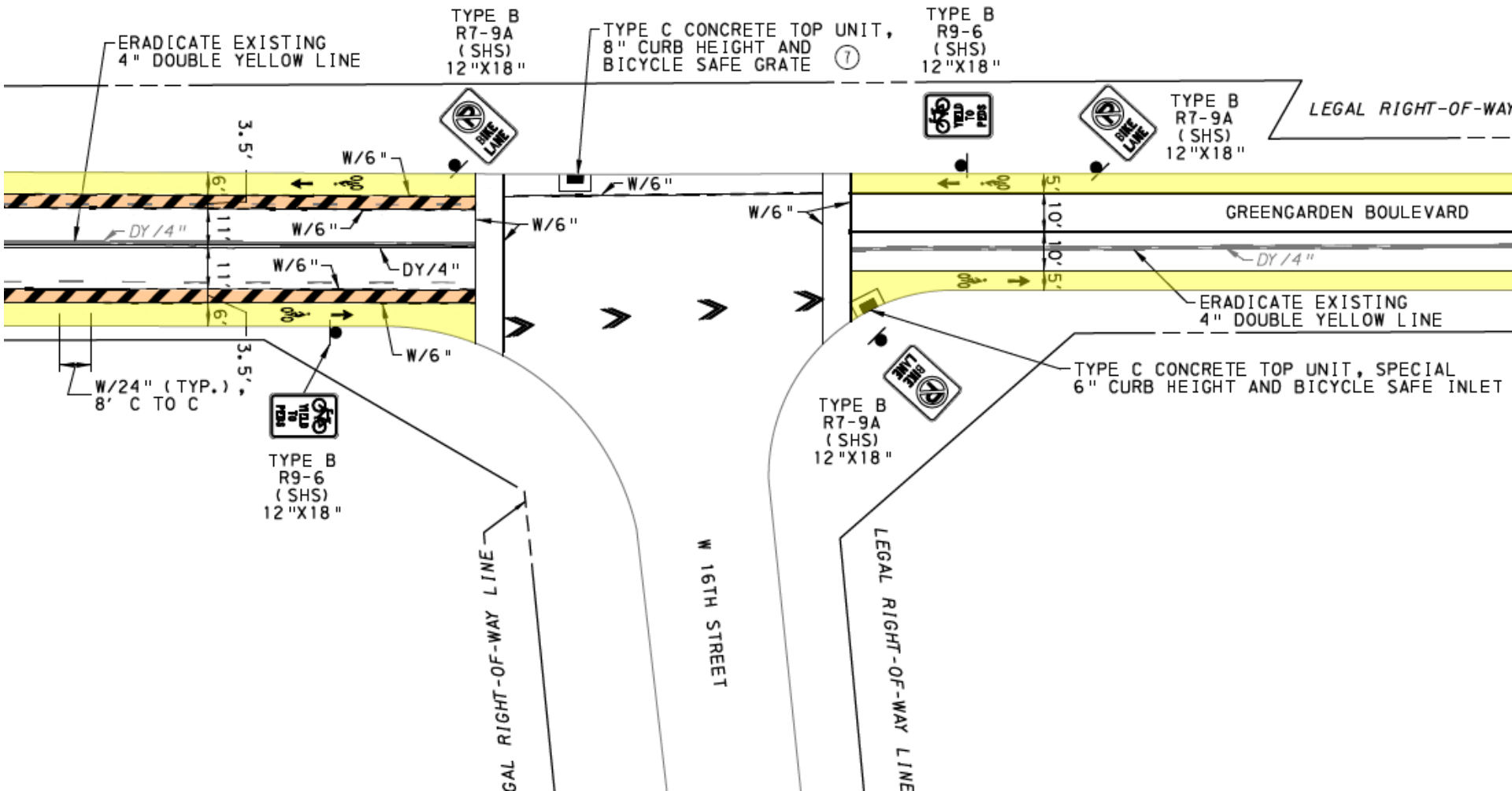
One travel lane each way with buffered bike lanes

These blocks will now have buffered bike lanes instead of on-street parking.



Greengarden Boulevard Bikeway

FULL PLAN SETS AVAILABLE FOR REVIEW ONLINE



Visit <https://cityof.erie.pa.us/bikeway/>

CITY OF ERIE CODE

§ 533.04. Traffic laws apply to persons riding bicycles.

[Ord. 51-1964 § 5, passed 9-30-1964]

Every person riding a bicycle upon a roadway shall be granted all of the rights and shall be subject to all of the duties applicable to a driver of a vehicle by the laws of this Commonwealth or by the Traffic Code of the City applicable to the driver of a vehicle, except as to those provisions of law or ordinance which by their nature can have no application.

CITY OF ERIE CODE

§ 533.05. Operation of bicycles and obedience to traffic control devices. [Ord.51-1964 § 6, passed 9-30-1964]

- a) Any person operating a bicycle shall obey the instructions of official traffic control signals, signs and other control devices applicable to vehicles, unless otherwise directed by a police officer.
- b) No person shall ride or operate a bicycle in the City on any sidewalk, except as herein specifically permitted.
- c) Persons under the age of 16 years may ride and operate their bicycles on the sidewalks, except such sidewalks as are adjacent to school buildings or located within a business district.
- d) Whenever a person is riding a bicycle upon a sidewalk or street, such person shall yield the right of way to any pedestrian, and shall give an audible signal before attempting to overtake and pass a pedestrian or another bicycle. This audible signal must be given only by a bell or other warning device capable of giving an audible signal and shall be given at such a distance and in such a manner as not to startle the person being overtaken and passed.

Relevant Rules & Regulations

CITY OF ERIE CODE

§ 533.05. Operation of bicycles and obedience to traffic control devices. [Ord.51-1964 § 6, passed 9-30-1964]

- p) The operator of a bicycle emerging from an alley, driveway or building shall, upon approaching a sidewalk or the sidewalk area extending across an alley or driveway, yield the right of way to all pedestrians approaching on such sidewalk area, and upon entering the street shall yield the right of way to all vehicles approaching on such street.
- r) No person shall operate a bicycle upon any street, roadway or sidewalk in such a manner as to interfere with any pedestrian who is exercising due care thereon.

Article 533, Bicycle Licensing and Operation is available in its entirety here: <https://ecode360.com/33835947>

Relevant Rules & Regulations

STREET VS. SIDEWALK RIDING AND SAFETY

According to the National Highway Traffic Safety Administration:

- By biking predictably, motorists get a sense of what you intend to do and can react to avoid a crash
- Bike where you are expected to be seen, travel in the same direction as traffic and signal and look over your shoulder before changing lane position or turning
- Avoid or minimize sidewalk riding
 - Cars don't expect to see moving traffic on a sidewalk and don't look for you when backing out of a driveway or turning
 - Sidewalks sometimes end unexpectedly, forcing the bicyclist into a road when a car isn't expecting to look for a bicyclist

Relevant Rules & Regulations

PENNSYLVANIA AND ERIE CODE

Both [Pennsylvania Vehicle Code](#) and [City of Erie Code](#) require people operating a bicycle to use hand and arm signals to communicate their turning movements.

*More information about Bicycle Safety and Pennsylvania Laws is available if you search for **bike safety PennDOT** in your internet browser.*

BICYCLE HAND AND ARM SIGNALS

- To signal a left turn, extend the left hand and arm horizontally.
- To signal a right turn, extend the right hand and arm horizontally, or extend your left hand and arm upward.
- To signal a stop or decrease in speed, extend the left hand and arm downward.



**LEFT TURN STOPPING RIGHT TURN ALTERNATE
RIGHT TURN**

Learn more at www.PennDOT.gov/TravelInPA/RideaBike



pennsylvania
DEPARTMENT OF TRANSPORTATION

Relevant Rules & Regulations

PENNSYLVANIA CODE

According to Pennsylvania Vehicle Code:

- Motor vehicles must allow 4 feet of distance when overtaking a bicycle and travel at a careful and prudent speed. It is the motorist's responsibility to provide this distance, not that of the cyclist.

PLEASE, DON'T SQUEEZE.



Relevant Rules & Regulations

PENNSYLVANIA CODE

According to Pennsylvania Vehicle Code:

- No person shall open any door on a motor vehicle unless and until it is reasonably safe to do so and can be done without interfering with traffic flow.
- Cyclists may be injured or killed when a door is opened in their line of travel (dooring). Therefore, a distance of 4 feet should be kept between parked motor vehicles and the line of travel when riding along parked vehicles.

Open vehicle doors pose a serious threat to bicyclists. When opening a vehicle door, drivers and passengers should:

1 Check your **REAR-VIEW** mirror.

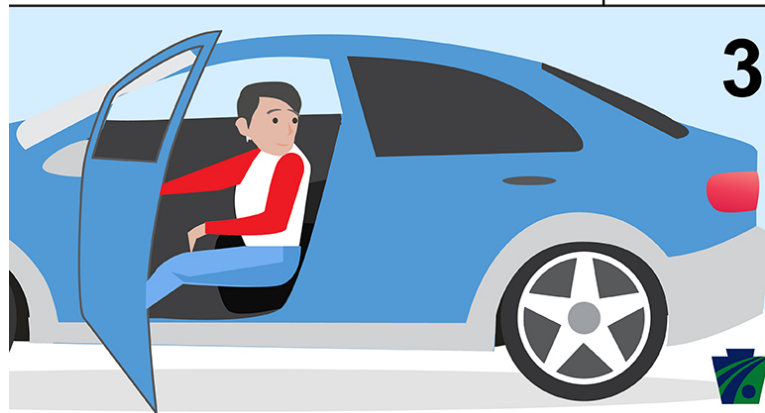


2 Check your **SIDE-VIEW** mirrors.



3 **OPEN** the **DOOR** with the **HAND FARTHEST** from the door.

It forces your body to turn, which allows you to see approaching bicyclists.



ERIE BIKEWAYS PROJECT

The public comment period for the Greengarden and French Street Bikeway Project was announced via press release on January 18, 2023

A letter and press release was sent to all residents along the Greengarden and French Street corridor.

The Active Erie website was updated with the following materials:

- Video recording of a presentation
- PDF of the presentation slides
- Plans for improvements along Greengarden Boulevard between Bayfront Parkway and 38th Street
- Plans for improvements along French Street between 6th Street and 38th Street
- Online survey form
- Downloadable comment form

Hard copies of the presentation, plans, and comment form were also available in the lobby of Erie City Hall at 626 State St., Erie, PA 16501.



ERIE BIKEWAYS PROJECT – FEEDBACK TO DATE

- The online survey was open through Friday, February 3 and 127 survey responses were received
- Due to the interest in the project, we have left the surveys open to collect additional feedback
- The City and County also received feedback during the following meetings:
 - Wednesday, February 1 City Council Meeting
 - Wednesday, February 8 MPO Meeting
- A petition “to reconsider the removal of on-street parking for tax-paying residents to accommodate a proposed bike path on Greengarden Blvd from 26th to 38th” is currently circulating and as of February 8 had 61 signatures
- Questions received during the initial public comment period will receive responses by Friday, February 17
- Feedback received during this meeting is being documented



ERIE BIKEWAYS PROJECT

You may review this presentation, additional resources, and provide feedback by visiting www.activeerie.com/bikeway/

You may also provide feedback by contacting:

Bill Heiden

City of Erie Project Engineer

wheiden@erie.pa.us or 814-870-1395.

