CYCLE LA CROSSE

Economic Impact Analysis of a Better Bikeway Network in La Crosse, WI

PREPARED FOR:

PREPARED BY:

alta PLANNING + DESIGN

the BENEFITS *of* BUILDING BETTER BIKEWAYS

Building La Crosse's proposed bikeway network could provide positive economic benefits for the region. Over a 20-year period, the proposed bikeway network could provide residents with $281 million to $299 million in total economic benefits, including:

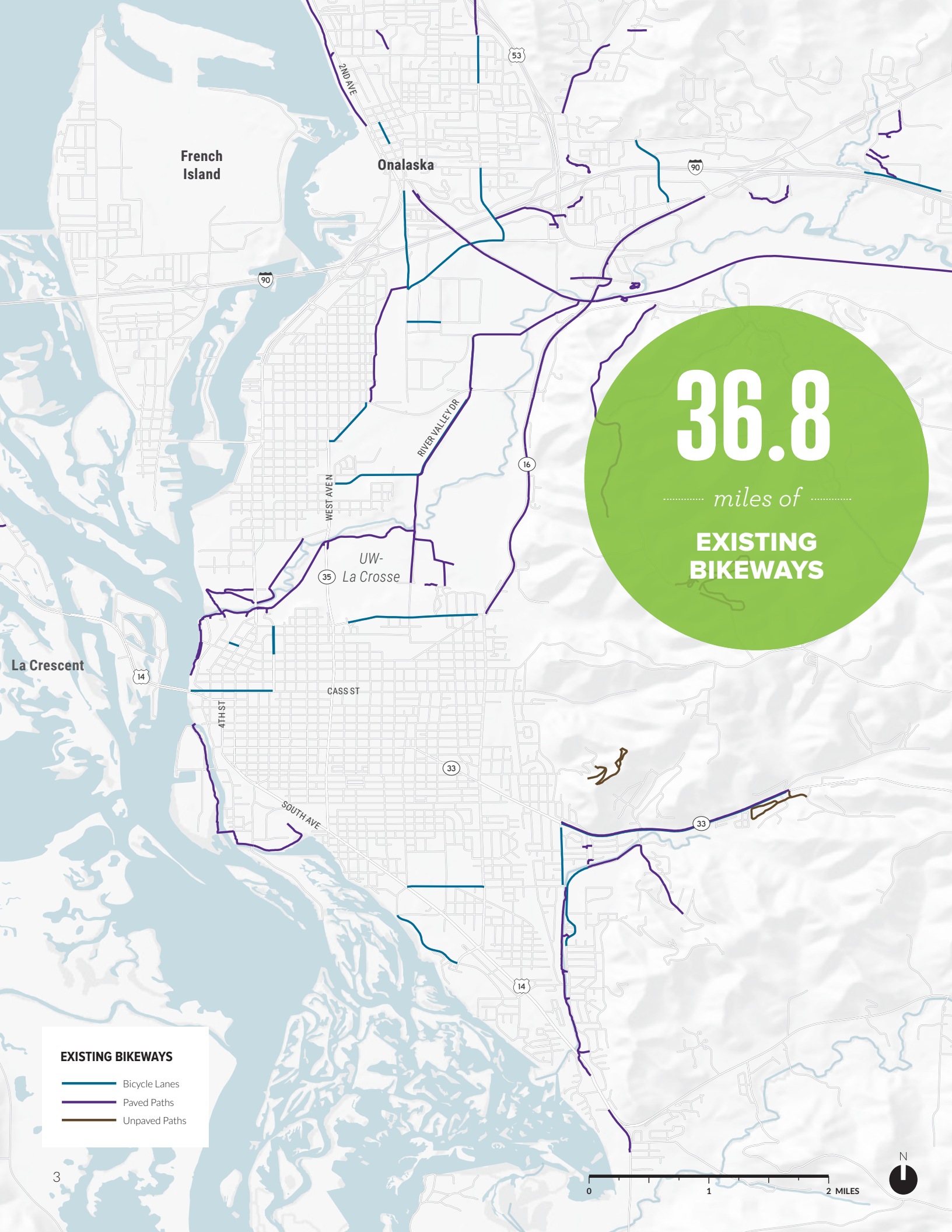
$194-202 MILLION *in* **HEALTH + SAFETY BENEFITS** *over 20 years*

$60-69 MILLION *in* **TRANSIT + AIR QUALITY BENEFITS** *over 20 years*

$27 MILLION *in* **ECONOMIC + PROPERTY BENEFITS** *over 20 years*

Building high-quality bicycle infrastructure impacts La Crosse's bottom line by helping reduce the cost of healthcare, preventing expensive collisions, creating more low-cost travel options, reducing air pollutants, and supporting local businesses. This economic impact analysis quantifies how La Crosse's existing bikeways benefit residents in the region and looks at how a fully built out bikeway network could further contribute to the local economy.

That said, even with extensive primary and secondary research included in this analysis, it is not possible to accurately forecast the exact impacts of all bicycle-related factors. Accordingly, some qualitative benefits of bicycling aren't included, and all estimated benefits are rounded and should be considered rough order of magnitude estimates instead of precise amounts.[1]


French Island
Onalaska
La Crescent
UW-La Crosse
2ND AVE
WEST AVE N
RIVER VALLEY DR
CASS ST
4TH ST
SOUTH AVE
53
90
16
35
14
33
36.8
miles of
EXISTING BIKEWAYS
EXISTING BIKEWAYS
Bicycle Lanes
Paved Paths
Unpaved Paths
0
1
2 MILES
N

EXISTING BIKEWAY NETWORK

La Crosse already boasts the 10th highest bicycle commute mode share of any municipality in Wisconsin,[2] helping the City achieve a silver level Bicycle-Friendly Community award from the League of American Bicyclists.[3] Group interviews conducted during the City's 2012 Bicycle and Pedestrian Master Plan process showed a consensus opinion that La Crosse is well suited for bicycling because it has a flat, compact, and well-connected street grid that makes getting between destinations manageable, as well as a network of off-street paths that connects to a larger regional trail system.[4]

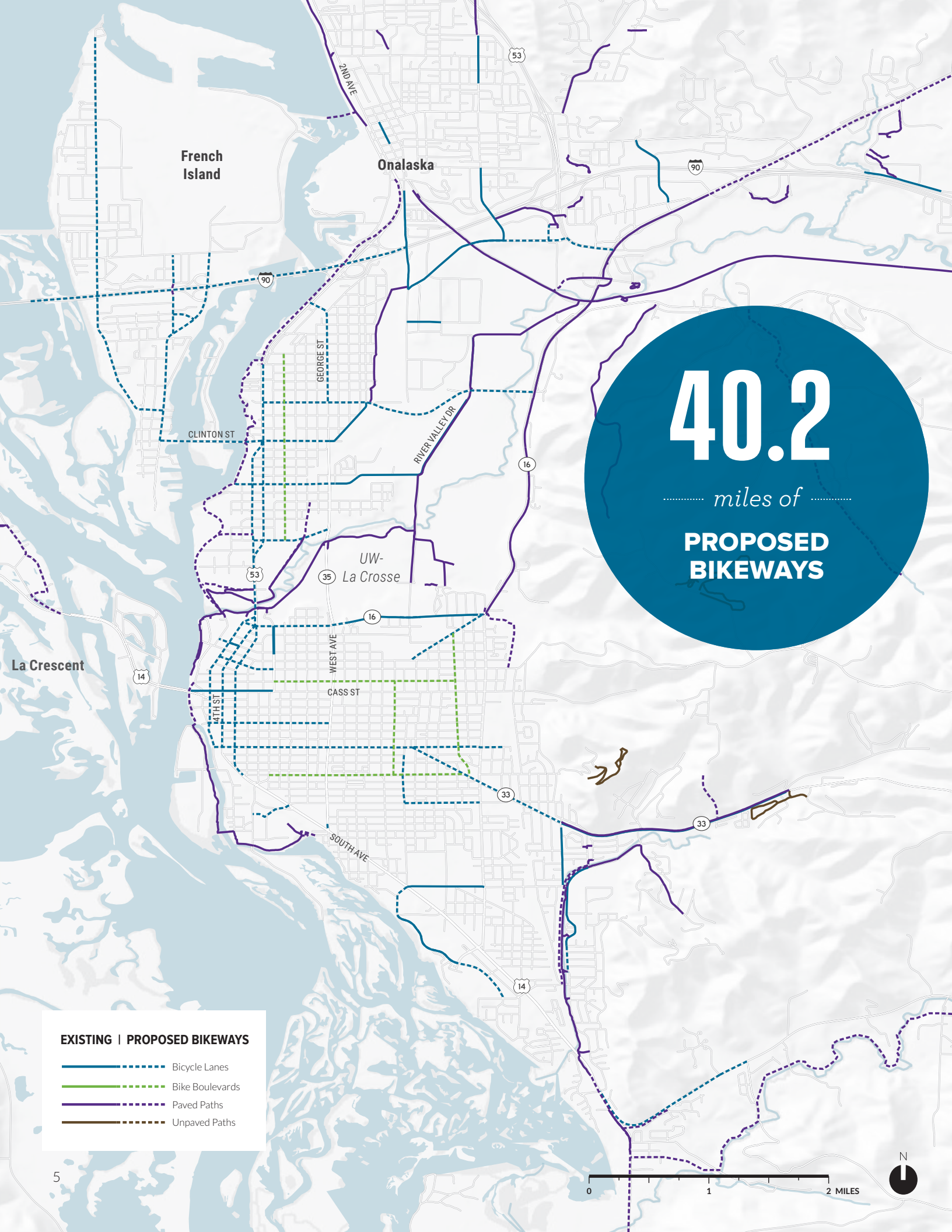
The City also stated in its 2012 plan, a vision of being recognized as a gold level Bicycle-Friendly Community. To reach that award level, the League of American Bicyclists suggests that the City needs to increase its bikeway coverage, pass additional bicycle-friendly ordinances, decrease the number of bicycle-involved collisions, and increase the number of bicycle commuters. Public outreach during the 2012 planning process also identified the need for a more complete, connected network of on-street bikeways.[5]

MILES OF EXISTING BIKEWAYS

7.7 *miles*
BICYCLE LANES

17.1 *miles*
PAVED PATHS

12.0 *miles*
UNPAVED PATHS


40.2
miles of
PROPOSED BIKEWAYS
French Island
Onalaska
La Crescent
UW-La Crosse
2ND AVE
GEORGE ST
CLINTON ST
RIVER VALLEY DR
WEST AVE
CASS ST
4TH ST
SOUTH AVE
53
90
16
35
14
33
EXISTING | PROPOSED BIKEWAYS
Bicycle Lanes
Bike Boulevards
Paved Paths
Unpaved Paths
0
1
2 MILES
N

PROPOSED BIKEWAY NETWORK

La Crosse's proposed bikeway network would help improve connectivity and help the City achieve gold level Bicycle-Friendly Community status. A paved path along the Black River, a series of north-south on-street bikeways through the City's densest employment areas, and a set of east-west bicycle boulevards that connect downtown to residential areas and on-campus housing would create a 75+ mile network of bikeways. Planning-level cost estimates for the network total approximately $5.7 million.[6]

To help distribute the costs over multiple years, the City organized the list of proposed projects into immediate-, near-, and long-term priorities. Immediate-term projects could be built within a year of the plan's adoption and focused on connections to existing bikeways. Near-term projects could be built over a five-year period and build on the immediate-term projects to provide added connectivity. Long-term improvements may take more than five years to build and represent larger ticket items such as bridges or new recreational trails.[7]

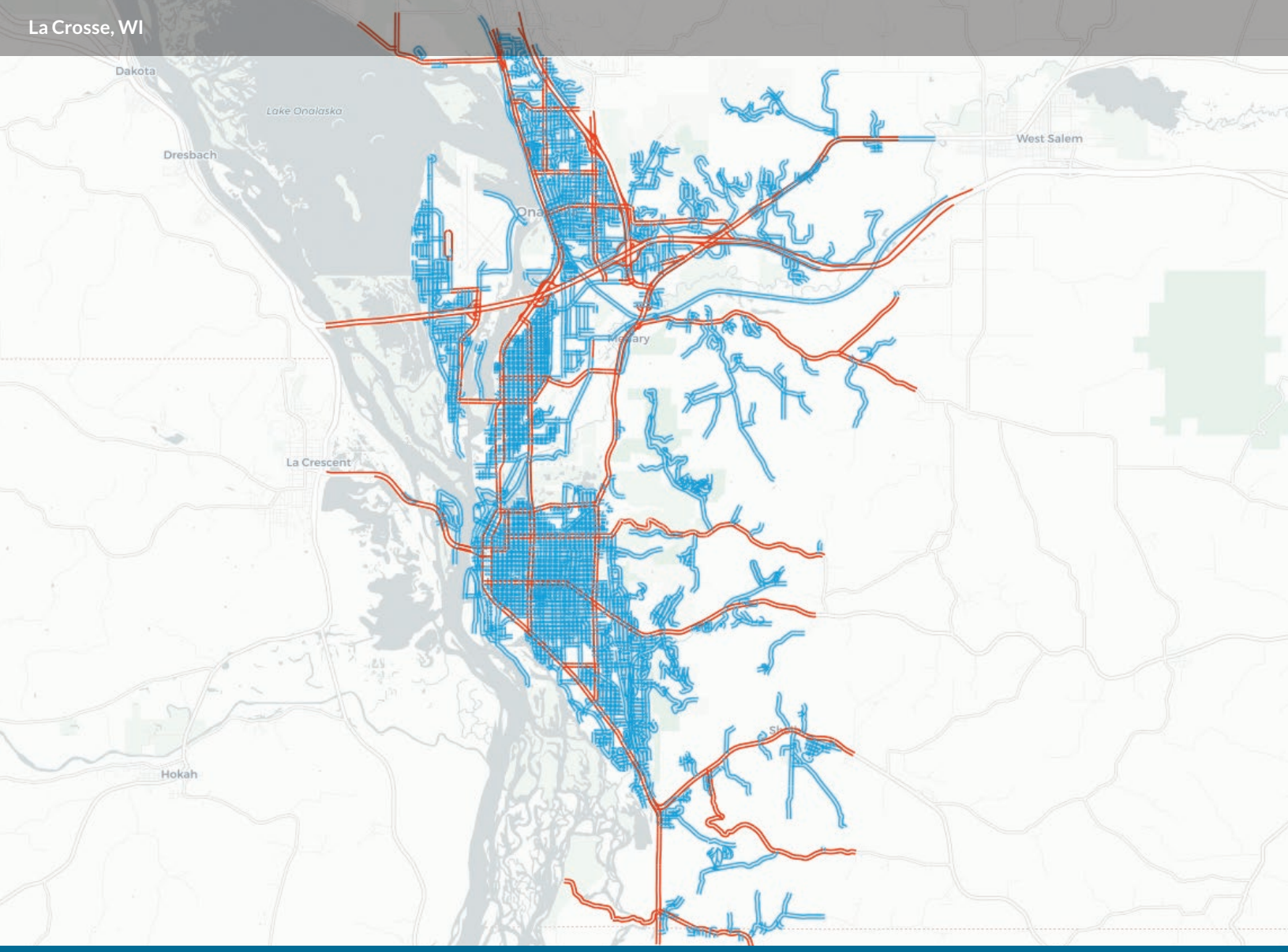
MILES OF TOTAL BIKEWAYS IF NETWORK IS COMPLETED

30.6 *miles*
BICYCLE LANES

6.3 *miles*
BICYCLE BOULEVARDS

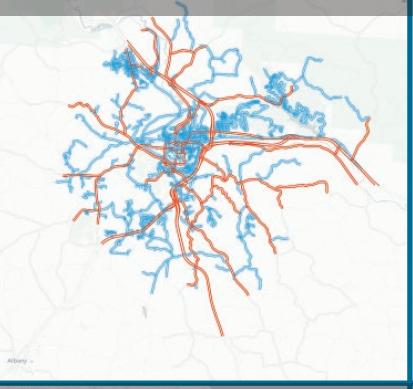
23.1 *miles*
PAVED PATHS

La Crosse, WI

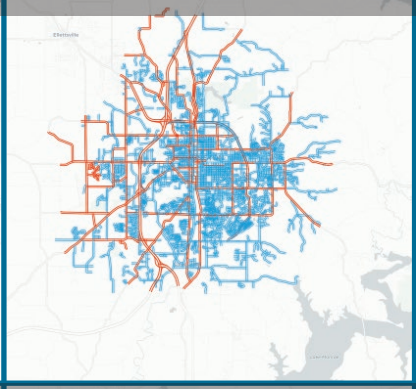


ASPIRATIONAL CITIES

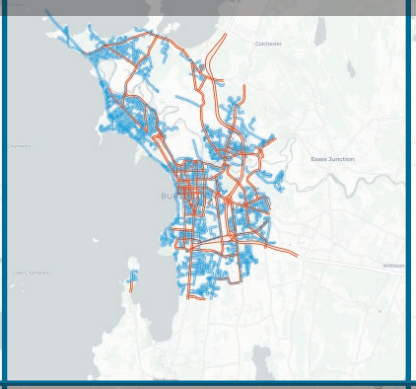
Athens, OH



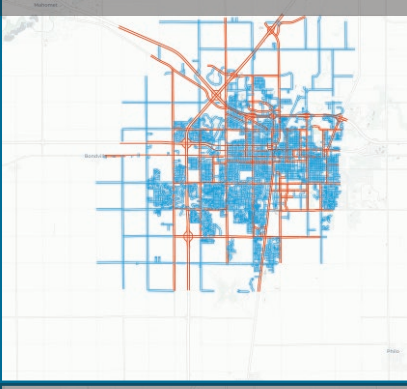
Bloomington, IN



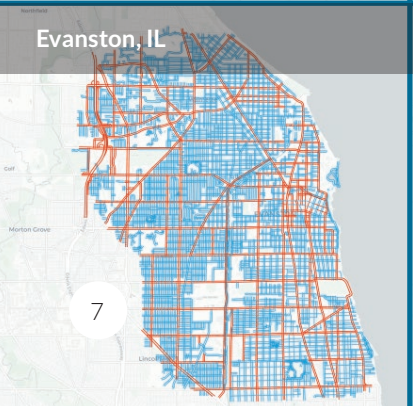
Burlington, VT



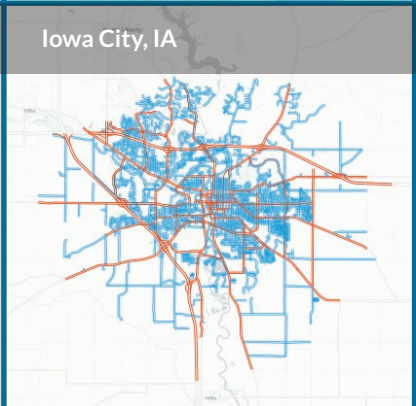
Champaign, IL



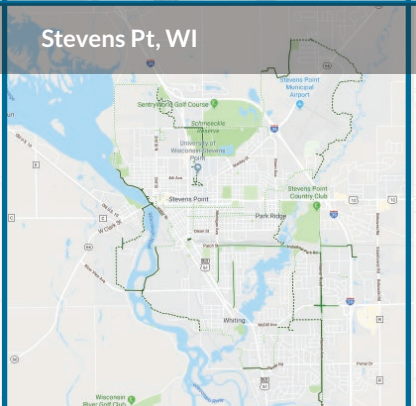
Evanston, IL



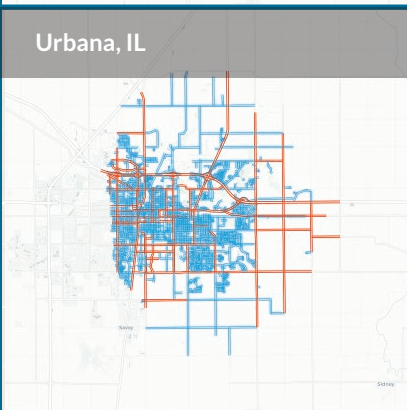
Iowa City, IA



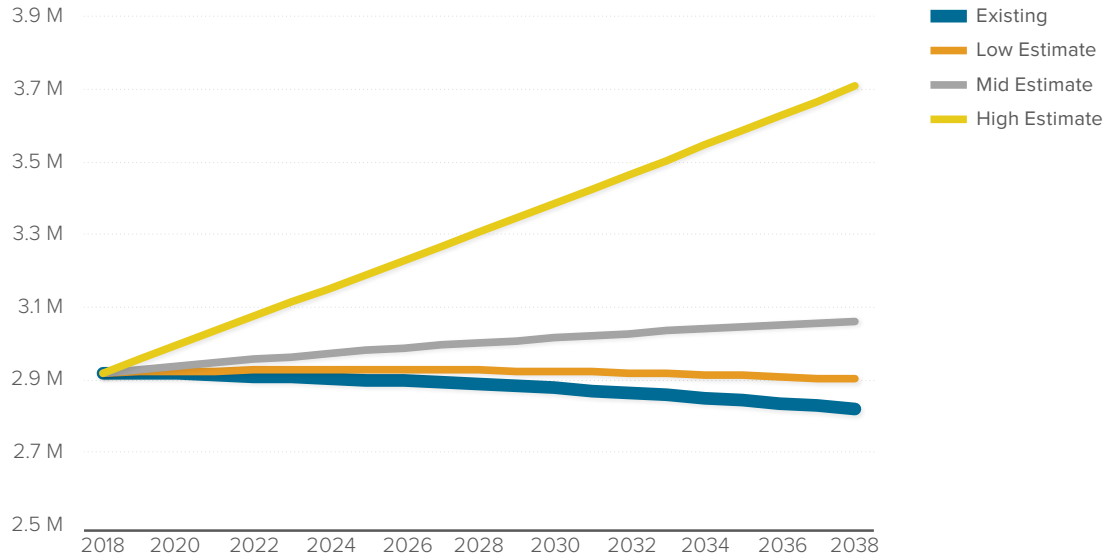
Stevens Pt, WI



Urbana, IL



Estimated
ANNUAL BICYCLE TRIPS



METHOD

To estimate the benefits of the City's proposed bikeway network, La Crosse was compared to a series of eight aspirational cities that have a similar population, built-out transportation network, and proximity to a university. Currently, La Crosse has 1.8 miles of bikeways per square mile of land compared to 3.4 miles per square mile among the aspirational cities. If the City builds out its full bikeway network, La Crosse will be home to 3.6 miles of bikeways per square mile.[8]

DEMAND ESTIMATES

Combined together, the American Community Survey's rolling five-year estimates of how many people bicycle to work and the National Household Travel Survey's estimate of how many other bicycle trips take place for every one commute trip, provide a high-level look at how many bicycle trips might take place in La Crosse at it's current bicycle mode share and if the City increased its mode share to the median of the eight aspirational cities. For the full method and year-by-year estimates, request this report's corresponding technical memorandum from the City of La Crosse.

BICYCLE COMMUTE MODE SHARE AVERAGE[9]

La Crosse, WI	3.5%
Aspirational Cities	3.6% LOW ESTIMATE *(25th percentile)*
	3.8% MID ESTIMATE *(50th percentile)*
	4.6% HIGH ESTIMATE *(75th percentile)*


French Island
Onalaska
UW-La Crosse
La Crescent
53
90
16
35
14
33
On average,
19 PREVENTABLE BIKE COLLISIONS
OCCUR IN LA CROSSE EVERY YEAR
PROPOSED BIKEWAYS
Bicycle Lanes
Bike Boulevards
Paved Paths
BICYCLE-INVOLVED COLLISIONS
(2011-2015)
0
1
2 MILES
N

OBESITY is a **LARGE CONTRIBUTING FACTOR** to La Crosse's **high healthcare costs** & **chronic disease**

Nationally

OBESE ADULTS SPEND

42% MORE ON DIRECT HEALTHCARE COSTS

THAN ADULTS WHO ARE A HEALTHY WEIGHT[21]

HEALTH + SAFETY NEEDS

PUBLIC HEALTH ISSUES

Obesity is a large contributing factor to La Crosse's high healthcare costs. The obesity rate among La Crosse County adults increased 22% between 2004 and 2013 (from 23% to 28%).[10] The State of Obesity, a policy initiative from the Robert Wood Johnson Foundation, states that obesity is one of the biggest drivers of preventable chronic disease and healthcare costs,[11] with obese adults spending 42% more on direct healthcare costs than adults who are a healthy weight.[12]

Increasing levels of physical activity is a proven method of reducing obesity rates and healthcare costs. A 2015 study found that 11% of healthcare expenditures were associated with inadequate physical activity,[13] and a 2008 study found that for every $1 invested in community-based health programs, there was a $5.6 return in healthcare costs.[14] With approximately 20% of La Crosse County adults reporting no leisure-time physical activity and 10% not having access to exercise opportunities,[15] development of better bicycle infrastructure may help encourage more routine, daily exercise among La Crosse residents and thereby reduce obesity rates and associated healthcare costs.[16,17]

SAFETY ISSUES

In addition to physical activity, roadway safety presents a major public health issue for La Crosse residents. According to data from the Wisconsin Traffic Operations & Safety Laboratory, 199 collisions involving a bicycle took place in La Crosse between 2011 and 2015 (96 of which were identified as "preventable" through improved infrastructure).[18] A study completed by the La Crosse Area Planning Committee found that the City of La Crosse had the highest bicycle/pedestrian crash rate per capita of any municipality in the region, with over 6 crashes per 1,000 residents (almost double the regional average).[19] Bicycle lanes and off-street paths are proven safety countermeasures shown to reduce the number of bicycle-involved collisions and injuries.[20]

If La Crosse builds its proposed bikeway network, it could see

$6.8 MILLION

in additional **HEALTH + SAFETY BENEFITS** *per year*

3 PREMATURE **DEATHS PREVENTED**[24, 25]

that's over

26,000

HOURS

that could be spent **exploring Wisconsin's natural resources**

$6.7 MILLION

in additional

COLLISION COST SAVINGS

After only 6 years, that's enough to

BUY **EVERY** LA CROSSE RESIDENT **A NEW BIKE**[22]

90 **MORE RESIDENTS** GETTING ENOUGH DAILY EXERCISE

That's

90 MORE NEW YEAR'S RESOLUTIONS **GETTING FULFILLED**

82,000

MORE HOURS *of* PHYSICAL ACTIVITY

That's enough time for

50 PEOPLE TO FLOAT THE **FULL LENGTH** OF THE MISSISSIPPI RIVER[23]

> THE MOST ANNOYING ARE THOSE PEOPLE IN EXCEPTIONALLY GOOD SHAPE AT THE GYM. I'M LIKE "WHAT ARE YOU DOING HERE? YOU'RE DONE."[26]
>
> *Jim Gaffigan, comedian*

$2.5 MILLION

in additional

HEALTHCARE COST SAVINGS

That's the equivalent of

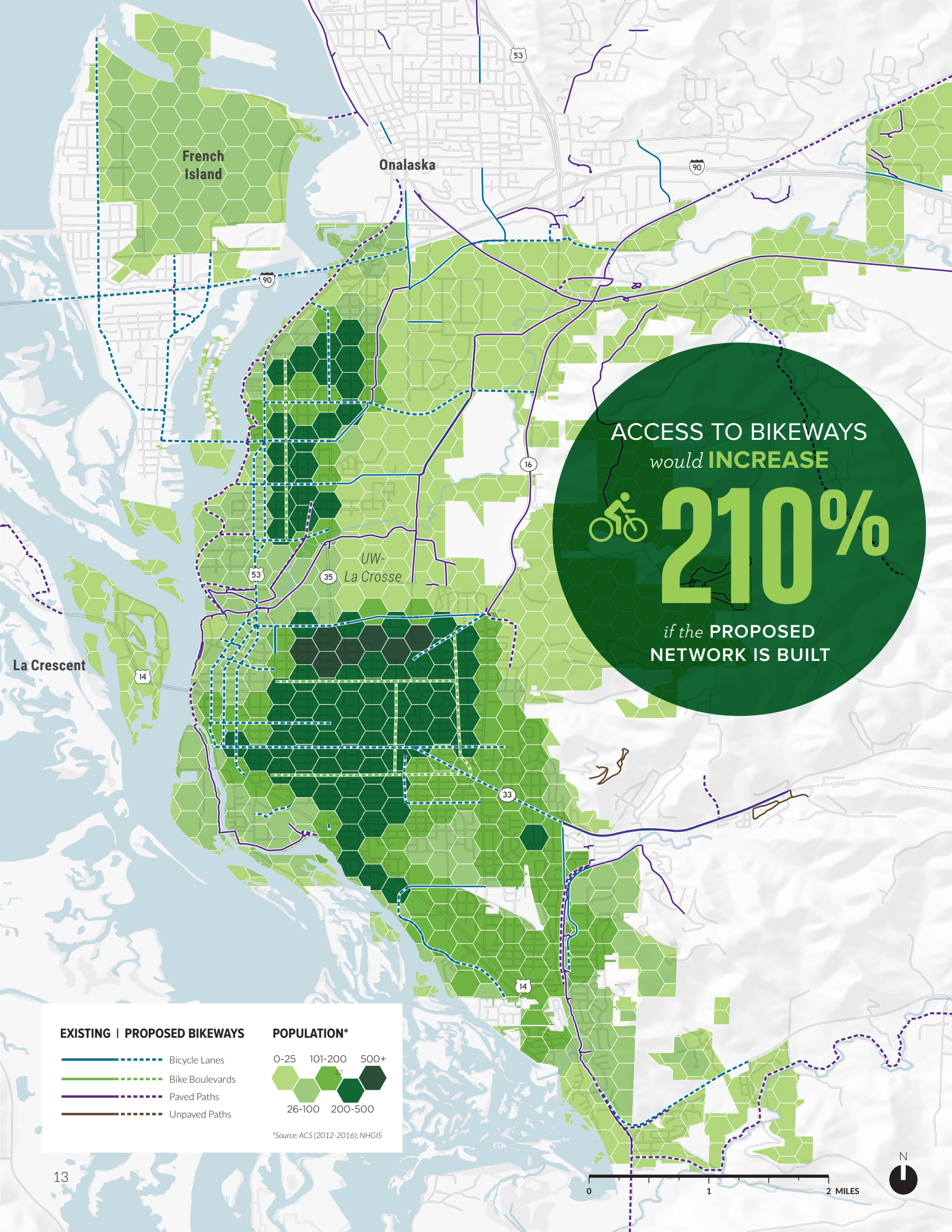
BUYING
GREEN BAY PACKERS SEASON TICKETS
FOR YOU AND

1,800 OF YOUR **CLOSEST FRIENDS**[31]

A growing body of research links trail and bikeways to increased physical activity, lowered risk of chronic disease, greater weight management,[27] increased mental fitness,[28] decreased risk of Type II diabetes,[29] and decreased healthcare costs.[30]

Physical activity levels on La Crosse's existing bikeway network help prevent $2.9 million per year in healthcare and productivity-related expenses, and building out the City's proposed network could help save an additional $2.5 million per year.

Additionally, the safety benefits from separating bicyclists from motor vehicle traffic could help prevent $6.7 million in collision and injury costs.


French Island
Onalaska
UW-La Crosse
La Crescent
ACCESS TO BIKEWAYS
would INCREASE
210%
if the PROPOSED NETWORK IS BUILT
EXISTING | PROPOSED BIKEWAYS
Bicycle Lanes
Bike Boulevards
Paved Paths
Unpaved Paths
POPULATION*
0-25
26-100
101-200
200-500
500+
*Source: ACS (2012-2016); NHGIS
0
1
2 MILES
N

The typical La Crosse household spends approximately **$11,355 PER YEAR ON TRANSPORTATION**[33]

TRANSPORT + AIR QUALITY

NEEDS

HOUSEHOLD TRANSPORTATION COSTS

La Crosse is one of the most affordable places to get around, but it's still not cheap. La Crosse households spend approximately the same amount on transportation as they do housing (22 percent and 23 percent, respectively). The typical La Crosse household spends approximately $11,355 per year on transportation, with motor vehicle ownership costs making up three-fourths of total transportation costs ($8,553).[34] By comparison, average annual bicycle ownership costs approximately $350.[35] For the 8.3 percent of La Crosse households that do not have access to a motor vehicle,[36] maintaining and improving the bicycle network will help encourage low-cost bicycle trips which can help keep overall household transportation costs down.

ROADWAY MAINTENANCE COSTS

While it doesn't directly impact an individual's pocketbook like household transportation costs, roadway maintenance can represent a large portion of a municipality's budget. According to the City of La Crosse's Capital Improvement Budget, approximately 69% of the City's infrastructure budget is dedicated to roadway maintenance.[37] One of the best ways to deal with ongoing roadway maintenance costs is to prevent the deterioration of roadways. Bicycle trips have been shown to cause less damage to roadways, helping to maintain roadway conditions. According to Kitamura, et al., for every one-mile motor vehicle trip that's prevented, a municipality saves $0.15.[38]

TRAFFIC CONGESTION COSTS

In addition to expenses related to household transportation and roadway maintenance costs, costs associated with traffic congestion can add up over time. A 2011 study for the American Automobile Association found that delays from traffic congestion in small cities (less than 500,000 people) cost people $0.06 per vehicle-mile traveled.[39] The City approved a forward-looking vision of its transportation network in 2015, which commits La Crosse to forgoing new, expensive-to-maintain highways in place of dedicated bike paths.[40]

La Crosse has some of the cleanest air in the country, with no "high pollution days" for three years according to a report from the American Lung Association.[41] That said, La Crosse County has higher than average particulate matter emissions than the state as a whole. According to the La Crosse County Environmental Health Profile, particulate matter (PM2.5) "is so tiny that it can settle in a person's lungs or bloodstream after being inhaled" and has been linked to heart attacks and asthma attacks.[42] Exposure to PM2.5 is more common near busy roadways. Additionally, a typical household in La Crosse generates about 7.8 metric tons of greenhouse gas emissions per year.[43] Fortunately, reducing car trips through increased bicycle usage may help reduce dangerous greenhouse gas and particulate matter emissions.[44]

If La Crosse builds its proposed bikeway network, it could see

$2.7 MILLION

in additional TRANSPORTATION + AIR QUALITY

$1.7 MILLION

in additional

HOUSEHOLD TRANSPORTATION COST SAVINGS

That's enough for

300 **WEEK LONG TRIPS TO PARIS** OVER 20 YEARS[45]

$200,000

in

EMISSION MITIGATION COST SAVINGS

That's enough to

PLANT 2,500

NEW TREES OVER 20 YEARS[47]

$0.2 MILLION

IN CONGESTION COST SAVINGS

That's enough to see

42,000 MOVIES

at Rivoli Theatre over 20 years[46]

BENEFITS *per year*

$600,000

in

ROADWAY MAINTENANCE COST SAVINGS

That's enough to fill

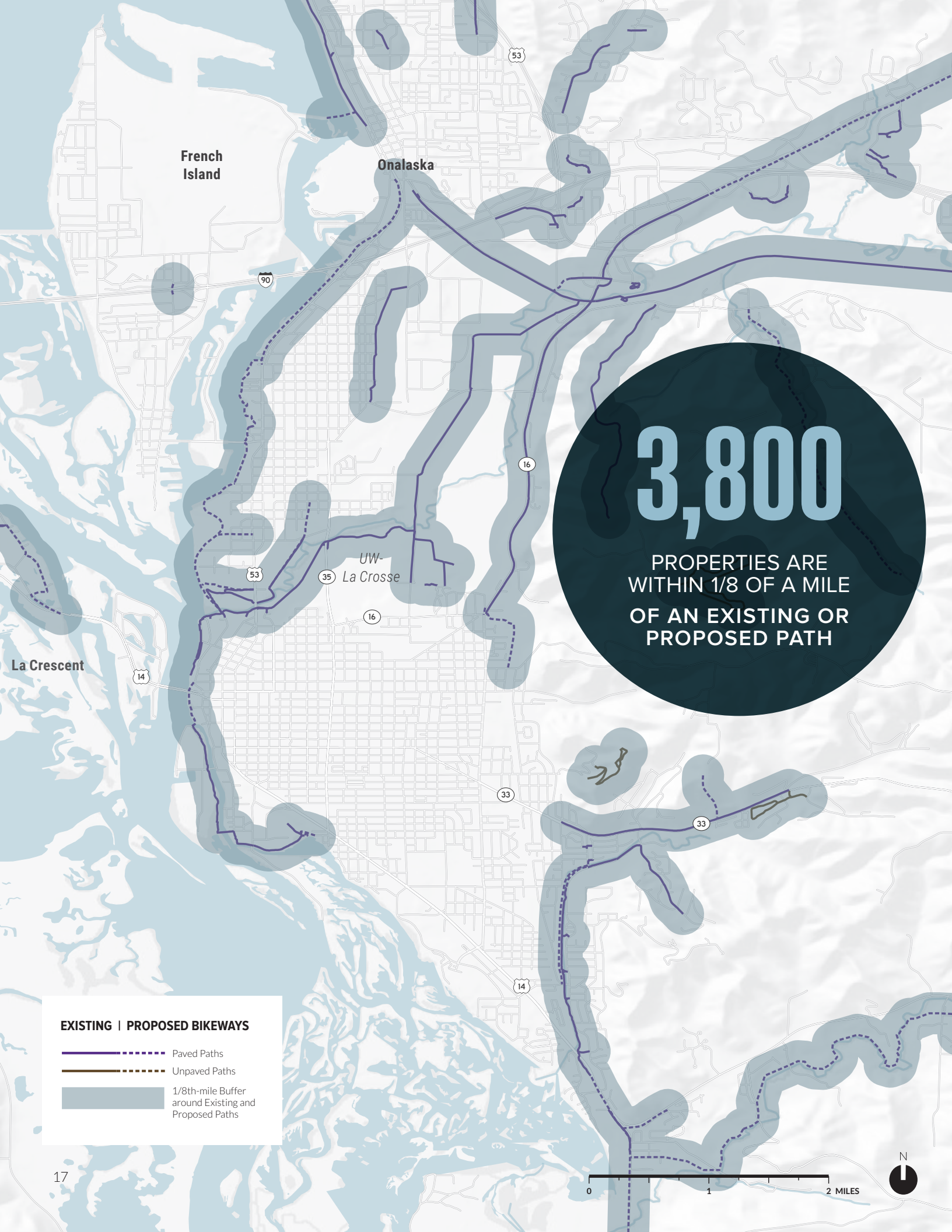
3,000

POTHOLES

OVER 20 YEARS[48]

> STUDY NATURE, LOVE NATURE, STAY CLOSE TO NATURE. IT WILL NEVER FAIL YOU.[49]
>
> *Frank Lloyd Wright, Wisconsin native*

The ability for the proposed bikeway network to help encourage more bicycle trips and fewer short auto trips could lead to approximately $50,000 per year in additional roadway maintenance cost savings, $100,000 per year in additional household transportation cost savings, $20,000 per year in additional traffic congestion cost savings, and $10,000 per year in additional greenhouse gas emission mitigation. And, while not included in this analysis, additional benefits from maintaining wildlife habitat and wetlands from reduced roadway development may be realized through the proposed bikeway network.


French Island
Onalaska
La Crescent
UW-La Crosse
53
90
16
35
14
33
3,800
PROPERTIES ARE WITHIN 1/8 OF A MILE
OF AN EXISTING OR PROPOSED PATH
EXISTING | PROPOSED BIKEWAYS
Paved Paths
Unpaved Paths
1/8th-mile Buffer around Existing and Proposed Paths
0
1
2 MILES
N

HOSPITALITY
in La Crosse

brings in over

$230 MILLION
IN TOURISM SPENDING
PER YEAR

which supports over

4,000 JOBS[52]

ECONOMIC + PROPERTY NEEDS

The hospitality industry represents a major part of La Crosse's economy, helping to capture over $230 million in tourism spending per year and helping to support over 4,000 jobs.[50] The region's thriving downtown, geographic features, festivals, and events make the La Crosse area a prime location for vacationers, but it exists in a competitive market. University of Wisconsin — La Crosse professor Taggert Brooks suggests that in place of trying to find ways to outcompete neighboring jurisdictions for tourism dollars,
La Crosse can find opportunities to create amenities that will improve the quality of life of its residents which, in turn, will help attract visitors and impact property values.[51]

If La Crosse builds its proposed bikeway network, it could see

$900,000

in additional ECONOMIC + PROPERTY BENEFITS

12 **DIRECT FULL-TIME JOBS**

from just

LOCAL SPENDING

on

BICYCLE RELATED EQUIPMENT

each year

$500,000

in

TOURISM-RELATED SPENDING

FROM **BICYCLE EVENTS** PER YEAR

$400,000

in

LOCAL SPENDING

ON BICYCLE RELATED EQUIPMENT EACH YEAR

per year

$2.3 MILLION

one-time estimated

PROPERTY VALUE INCREASE

from

PROPOSED PATHS

WHAT IS GOOD FOR TOURISM IS USUALLY ALSO WHAT IS GOOD FOR THE LOCAL QUALITY OF LIFE.[53]

AJ Frels, University of Wisconsin professor and director of the UW-L Tourism Research Institute[I]

La Crosse currently experiences $9.3 million in bicycle-related tourism spending over the 20 year period, $8.8 million in local bicycle-related spending over the 20 year period, and $6.8 million in cumulative property value benefits from proximity to trails.

ENDNOTES

1 *All monetary estimates are presented in undiscounted 2017 inflation-adjusted dollars.*

2 *American Community Survey (2012-2016), Table B08301: Means of Transportation to Work; Top 10 Bicycle Commute Mode Shares: Diaperville (13.0%), Shorewood Hills (12.4%), Cable (8.1%), Madison (5.2%), Lake Delton (4.8%), Elcho (4.3%), Pepin (4.3%), Lake Tomahawk (4.1%), Stevens Point (3.6%), and La Crosse (3.5%)*

3 *Bicycle Friendly America, Award Database, The League of American Bicyclists, accessed 10/9/2018, <https://bikeleague.org/bfa/awards#community>*

4 *City of La Crosse, Bicycle and Pedestrian Master Plan, 2012, <https://www.cityoflacrosse.org/filestorage/593/844/3606/5145/Bicycle_and_Pedestrian_Master_Plan_(2012).pdf>*

5 *Ibid.*

6 *Ibid.*

7 *Ibid.*

8 *Bike Network Analysis, PeopleForBikes, accessed October 2018. <https://bna.peopleforbikes.org/#/>*

9 *American Community Survey (2012-2016), Table B08301: Means of Transportation to Work.*

10 *Obesity Prevalence, County Data Indicators. Centers for Disease Control and Prevention. <https://www.cdc.gov/diabetes/data/countydata/countydataindicators.html>*

11 *The Healthcare Costs of Obesity, The State of Obesity. The Robert Wood Johnson Foundation. <https://stateofobesity.org/healthcare-costs-obesity/>*

12 *Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual Medical Spending Attributable to Obesity: Payer-and Service-Specific Estimates. Health Affairs, 28(5): w822-831, 2009.*

13 *Carlson, SA, Fulton, JE., Pratt, M, Yang, Z, and EK Adams. Indagate Physical Activity and Healthcare Expenditures in the United States. Progress in Cardiovascular Diseases 57 (2015). 315-323. <https://www.cdc.gov/nccdphp/dnpao/docs/carlson-physical-activity-and-healthcare-expenditures-final-508tagged.pdf>*

14 *Trust for America's Health. Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities. Washington, D.C.: Trust for America's Health, 2008. (accessed April 2013).*

15 *County Health Rankings & Roadmaps (2017). Robert Wood Johnson Foundation. <http://www.countyhealthrankings.org/app/wisconsin/2017/rankings/la-crosse/county/outcomes/overall/snapshot>*

16 *Von Huth Smith, L., Broch-Johnsen, K., Jorgensen, T. Commuting physical activity is favourably associated with biological risk factors for cardiovascular disease. European Journal of Epidemiology. November 2007, 22:771. <https://link.springer.com/article/10.1007/s10654-007-9177-3?LI=true#page-1>*

17 *Sugiyama, T. Ding, D, and N. Owen. Commuting by Car. American Journal of Preventative Medicine. February 2013. 14(2): 169-173. <https://www.ajpmonline.org/article/S0749-3797(12)00776-3/abstract>*

18 *Data excludes alcohol-related collisions.*

19 *Bicycle and Pedestrian Safety Study (2011-2015). La Crosse Area Planning Committee. 2017. <http://www.lapc.org/Content/Plans/Plan%20documents/Safety%20Study/Bicycle%20and%20Pedestrian%20Safety%20Study_Final.pdf>*

20 *Crash Modification Factors Clearinghouse. U.S. Department of Transportation Federal Highway Administration and University of North Carolina Highway Safety Research Center. <http://www.cmfclearinghouse.org/results.cfm>*

21 *Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual Medical Spending Attributable to Obesity: Payer-and Service-Specific Estimates. Health Affairs, 28(5): w822-831, 2009.*

22 *Assuming approximately $750 as the average cost of a new bicycle.*

23 *At a rate of 67 days per person.*

24 *Health Economic Assessment Tool (v4.1), World Health Organization, <http://www.heatwalkingcycling.org/>*

25 *Carlson, et al. Percentage of Deaths Associated with Inadequate Physical Activity in the United States. Preventing Chronic Disease, Centers for Disease Control and Prevention. March 29, 2018. Volume 15. <https://www.cdc.gov/pcd/issues/2018/17_0354.htm>*

26 *Jim Gaffigan, Mr. Universe, "Three Moments When You Realize You Have to Go to the Gym", Published March 12, 2018. https://www.youtube.com/watch?v=nJiusZUIQQI*

27 *The Power of Trails for Promoting Physical Activity in Communities. Active Living Research, San Diego, CA. 2011. <http://activelivingresearch.org/files/aLR_Biref_PowerofTrails_0.pdf>*

28 *K. Yaffe, et al. 2001. Archives of Internal Medicine. <http://www.americantrails.org/resources/benefits/VAcognitive.html>*

29 *"A Step in the Right Direction: The Health Benefits of Hiking and Trails." American Hiking Society, Silver Spring, MD. <http://atfiles.org/files/pdf/AHSheatlthben.pdf>*

30 *S. Carlson, et al. "In adequate Physical Activity and Health Care Expenditures in the United States." 2015. Progress in Cardiovascular Diseases. 57(4): 315-323. <http://dx.doi.org/10.1016/j.pcad.2014.08.002>*

31 *Assumes an average ticket price of $138 per game.*

32 *Longitudinal Employer-Household Dynamics, US Census, 2015. https://lehd.ces.census.gov/applications/help/onthemap.html#!what_is_onthemap 33 Housing and Transportation Affordability Index (2018), Center for Neighborhood Technology, <https://htaindex.cnt.org>*

34 *Housing and Transportation Affordability Index (2018), Center for Neighborhood Technology, <https://htaindex.cnt.org>*

35 *Alter, Lloyd. How Much Does it Cost to Commute by Bike? (May 26, 2011), TreeHugger, <https://www.treehugger.com/bikes/how-much-does-it-cost-to-commute-by-bike.html>*

36 *American Community Survey (2012-2016), Table B08201: Household Size by Vehicles Available.*

37 *2019-2023 Capital Improvement Budget: Project Details. City of La Crosse. <http://www.cityoflacrosse.org/filestorage/593/844/1584/1586/1588/CIP_-_Final_Project_Details_-_Adopted_by_CC.pdf>*

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46 *Assumes an average adult ticket price of $5.75*

47 *Assumes an average tree sapling cost of $70.*

48 *Assumes an average cost of to fix a pothole of $200 per SealMaster: https://sealmaster.net/faq/much-cost-fix-pothole/*

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alta
PLANNING + DESIGN

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