



OCEAN ISLE BEACH

# BICYCLE + PEDESTRIAN PLAN

*Adopted on November 10, 2014*



Prepared for the Town of Ocean Isle Beach & NCDOT  
Prepared by Alta Planning + Design





### ACKNOWLEDGEMENTS

Thanks to the nearly 500 local residents, business leaders, community leaders, and government staff that participated in the development of this plan through meetings, events, comment forms, and plan review. Special thanks to those who participated as steering committee members, listed below.

### PROJECT STEERING COMMITTEE

The Steering Committee is made up of local residents, government staff, and community and business leaders.

- Carolyn Blythe Property Owner, Town of Ocean Isle Beach
- Cherri Cheek Property Owner, Town of Ocean Isle Beach
- Keith Dycus GIS & Codes Planner, Town of Ocean Isle Beach
- George Eckart Asst. Division Traffic Engineer, NCDOT Division 3
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- John Goodwin Police Chief, Town of Ocean Isle Beach
- Ray Harris Business Owner (Sharky's Restaurant), Town of Ocean Isle Beach
- Chad Kimes Division Operations Engineer, NCDOT Division 3
- Fred Michael Deputy Director/Health Promotions, Brunswick County Health Department
- Michael Powell Property Owner, Town of Ocean Isle Beach
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- Wayne Rowell Town Commissioner, Town of Ocean Isle Beach
- Larry Sellers Assistant Town Administrator/Public Utilities Director, Town of Ocean Isle Beach
- John Vine-Hodge NCDOT Division of Bicycle and Pedestrian Transportation
- Justin Whiteside Planning Director, Town of Ocean Isle Beach



Prepared for the Town of Ocean Isle Beach, North Carolina

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# CONTENTS

## INTRODUCTION

- 1-1 Project Background
- 1-1 Planning Process & Public Involvement
- 1-2 Why This Plan is Important

## CURRENT CONDITIONS

- 2-1 Local Context
- 2-4 Current Conditions, Opportunities & Constraints
- 2-12 Existing & Past Programs & Policies
- 2-12 Related Plans & Initiatives
- 2-15 Public Input on Existing Conditions

## NETWORK RECOMMENDATIONS

- 3-1 Overview
- 3-1 Methodology for Network Design
- 3-2 Pedestrian Facility Types
- 3-4 Types of Cyclists
- 3-5 Bicycle Facility Types
- 3-7 Priority Project Cutsheets
- 3-15 Program Recommendations

## IMPLEMENTATION

- 4-1 Overview
- 4-2 Organizational Framework for Implementation
- 4-3 Implementation Action Steps Table
- 4-7 Key Action Step Descriptions
- 4-12 Key Partners in Implementation
- 4-16 Performance Measures (Evaluation and Monitoring)
- 4-16 Facility Development Methods

## APPENDIX

- A-1 Design Guidelines
- B-1 Funding Resources



*Sidewalk on W. First St  
from the traffic circle.*

# 1 INTRODUCTION

## Chapter Contents:

### Project Background

### Planning Process

### Why this Plan is Important

## PROJECT BACKGROUND

The Ocean Isle Beach Bicycle & Pedestrian Plan was made possible by joint funding from the Town of Ocean Isle Beach and the North Carolina Department of Transportation (NCDOT). In 2013, Ocean Isle Beach was awarded a matching grant from the North Carolina Department of Transportation (NCDOT) Bicycle and Pedestrian Planning Grant Initiative. The purpose of the grant is to encourage municipalities to develop comprehensive bicycle plans and pedestrian plans. To date, the initiative has funded planning efforts in more than 130 municipalities across the state. The program is administered through NCDOT's Division of Bicycle and Pedestrian Transportation.

## PLANNING PROCESS

The planning process began with a Kickoff Meeting in early 2014, which was the first of three project Steering Committee meetings. The Steering Committee is made up of a combination of local residents, Town staff and representatives, business owners, health professionals, and regional transportation planners. This Steering Committee guides the plan's development throughout the planning process. Key steps include crafting an overall vision for the plan, communicating existing bicycle and pedestrian conditions to the Town and project consultants, and providing feedback on plan recommendations.

Aside from the Steering Committee input, the planning process includes several other important methods of public outreach and involvement. The project website, public comment form, press releases, and public workshops are all used to gather input for the plan and ask for feedback on the plan draft. The plan and planning process are also promoted through the Town's Facebook page. Key outreach dates in the process included:

- Project Kick-Off Meeting - February 2014
- Public Workshop #1 - April 2014
- Public Workshop #2 - July 2014
- Draft Bicycle and Pedestrian Plan (released online) – August 2014
- Final Plan Public Hearing Presentation - October 2014



## WHY THIS PLAN IS IMPORTANT

Through this plan, the Town of Ocean Isle Beach aims to:

- Improve pedestrian and bicyclist safety;
- Foster better access to community destinations;
- Create opportunities for active and healthy lifestyles; and
- Enhance quality of life.

The following Vision Statement combines input from the Steering Committee, outlining the overall vision for the outcomes of this plan:

## Vision Statement

*“The Town of Ocean Isle Beach is a community where walking and bicycling are **embraced as ways to get around, get fit, see the sights, and have fun.** Residents and visitors alike have access to well-maintained bicycle and pedestrian facilities and programs that enable **safe, convenient, comfortable, and connected walking and bicycling opportunities throughout town.**”*



### Key Benefits of this Plan



*The following sections discuss the many benefits of planning for and creating a walkable community, from traffic safety and health improvements to economic and environmental benefits. Resources to more comprehensive research on each topic area are provided at the end of each section.*



## Safety for Pedestrians and Bicyclists

### Trends and Challenges

According to a survey of 16,000 North Carolina residents for the 2011 North Carolina Bicycle and Pedestrian Safety Summit, the most commonly reported safety issue for walking and bicycling was inadequate infrastructure (75%).<sup>1</sup> A lack of bicycle and pedestrian facilities, such as sidewalks, bike lanes, trails, and safe crossings, lead to unsafe conditions for bicyclists and pedestrians:

- Each year on average (2007-2011), **162 pedestrians and 19 bicyclists are killed** in collisions with motor vehicles on North Carolina roads, while many more are seriously injured.<sup>2</sup>
- North Carolina is ranked as **one of the least safe states** for walking (41st) and bicycling (44th).<sup>3</sup>
- **13% of all traffic fatalities** in North Carolina are bicyclists and pedestrians.
- During the five-year period from 2007 to 2011, a total of **4,700 bicycle-motor vehicle crashes and 12,286 pedestrian-motor vehicle crashes** were reported to North Carolina authorities.<sup>2</sup>
- In Ocean Isle Beach from 2007-2011, there was one crash involving a bicyclist and three involving a pedestrian. **In three of these crashes, a child bicyclist or pedestrian under the age of 12 was involved.**<sup>2</sup>

### Improving Safety

Separate studies conducted by the Federal Highway Administration and the University of North Carolina Highway Safety Research Center demonstrate that installing pedestrian and bicycle facilities directly improves safety by reducing the risk and severity of pedestrian-automobile and bicycle-automobile crashes. For example, installing a sidewalk along a roadway reduces the risk of a pedestrian “walking along roadway” crash by 88 percent. Furthermore, according to the aforementioned survey, 70% of respondents said they would walk or bicycle more if safety issues were addressed, citing a lack of bicycle and pedestrian facilities as the top issues.<sup>1</sup>

Pedestrian Crash Countermeasures	Pedestrian Crash Reduction Factor
• Install pedestrian overpass/underpass	90%
• Install sidewalk (to avoid walking along roadway)	88%
• Provide paved shoulder (of at least 4 feet)	71%
• Install raised median at unsignalized intersection	46%
• Install pedestrian refuge island	36%
• Install pedestrian countdown signal heads	25%

The following web addresses link to more comprehensive research on safety.

- <http://www.ncdot.gov/bikeped/planning/walkbikenc/>
- [http://www.pedbikeinfo.org/data/factsheet\\_crash.cfm](http://www.pedbikeinfo.org/data/factsheet_crash.cfm)



## Health Impacts of Active Transportation

### Trends and Challenges

North Carolina’s transportation system is one of the most important elements of our public environment. Unfortunately, it includes many streets that are unsafe for walking and bicycling, posing barriers to healthy living and active transportation. In 2012, NCDOT’s Board of Transportation revised its mission statement to include “health and well-being” and passed a “Healthy Transportation Policy,” which declares the importance of a transportation system that supports positive health outcomes. Below are some key trends and challenges related to health and transportation in North Carolina (this is the most relevant readily available data within the scope of this planning effort):

- **65% of adults in North Carolina are either overweight or obese.**<sup>5</sup> The state is also ranked **5th worst in the nation** for childhood obesity.<sup>6</sup>
- Recent reports have estimated the **annual direct medical cost of physical inactivity in North Carolina at \$3.67 billion**, plus an additional \$4.71 billion in lost productivity.<sup>7</sup> However, every dollar invested in pedestrian and bicycle trails can result in a savings of nearly \$3 in direct medical expenses.<sup>8</sup>
- Of North Carolinians surveyed, **60% would increase their level of physical activity if they had better access to sidewalks and trails.**<sup>5</sup>
- A Charlotte study found that residents who switched to walking by using light rail for their commute weighed an average of 6.5 pounds less than those who continued to drive to work.<sup>9</sup>

### Better Health through Active Transportation

Using active transportation to and from school, work, parks, restaurants, and other routine destinations is one of the best ways that children and adults can lead measurably healthier lives. Increasing one’s level of physical activity through walking and bicycling reduces the risk and impact of cardiovascular disease, diabetes, chronic disease, and some cancers. It also helps to control weight, improves mood, and reduces the risk of premature death.<sup>10</sup>

### Active Transportation: Pathway to Health



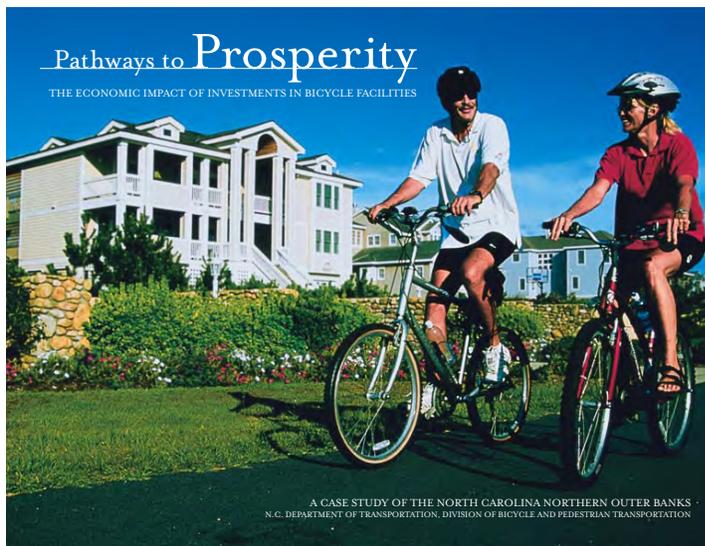
Source: Alta Planning + Design; WalkBikeNC

## Economic Impacts of Active Transportation

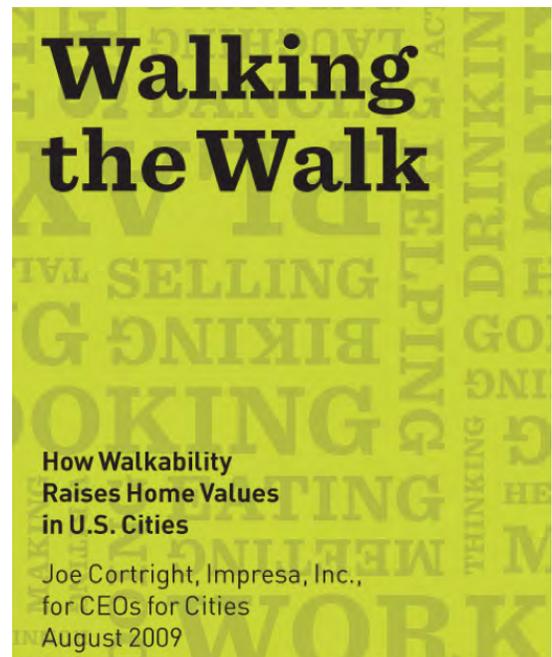
### Economic Trends in North Carolina

Bicycle and pedestrian facilities generate economic returns by raising property values, supporting local businesses and jobs, and attracting visitors. Below are some key economic trends related to walking and bicycling in North Carolina:

- North Carolina is the 6th most visited state in the United States and visitors spend as much as **\$18 billion a year**, many of whom partake in activities related to walking or biking.<sup>11</sup>
- In North Carolina's Outer Banks alone, bicycling is **estimated to have an annual economic impact of \$60 million and 1,407 jobs supported from the 40,800 visitors for whom bicycling was an important reason for choosing to vacation in the area.**<sup>12</sup>
- The annual return to local businesses and state and local governments on bicycle facility development in the Outer Banks is **approximately nine times higher than the initial investment.**<sup>12</sup>
- Walking and biking are also economically efficient transportation modes. Many North Carolinians cannot afford to own a vehicle and are dependent on walking and biking for transportation (6.7% of occupied housing units in North Carolina do not own a vehicle).<sup>13</sup>
- The report, *Walking the Walk: How Walkability Raises Housing Values in U.S. Cities*, analyzed data from 94,000 real estate transactions in 15 major markets provided by ZipRealty and found that **in 13 of the 15 markets, higher levels of walkability, as measured by Walk Score, were directly linked to higher home values.**



Download the full report at:  
[www.ncdot.gov/bikeped/researchreports](http://www.ncdot.gov/bikeped/researchreports)



Download the full report at:  
[www.ceosforcities.org/research/walking-the-walk/](http://www.ceosforcities.org/research/walking-the-walk/)



## Mobility and Accessibility Benefits of Walking and Biking

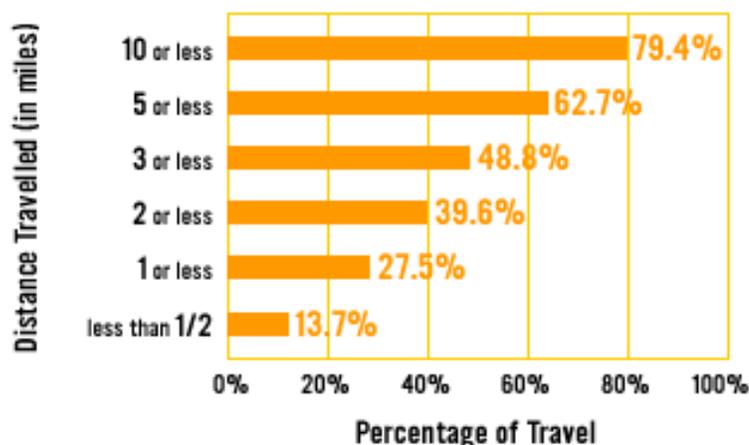
### Opportunity to Increase Walking and Bicycling Rates

According to the 2011 Bicycle and Pedestrian Safety Survey, **at least 70 percent of North Carolinians would walk or bike more for daily trips if walking and bicycling conditions were improved.** With appropriate accommodations, walking and bicycling can provide alternatives to driving for commuting to work, running errands, or making other short trips.

Commute rates for walking and bicycling in North Carolina currently fall below the national average, with just 0.2% of North Carolina commuters bicycling to work and 1.8% walking to work, compared to 0.6% bicycling and 2.9% walking nationwide. This places North Carolina 42nd for walking commute rates and 41st for bicycling commute rates in nationwide state rankings.<sup>3</sup> The charts in Chapter 2 (pages 2-2 to 2-3) show national model communities for walking and biking rates, model communities in North Carolina, and peer beach communities.

An estimated 40% of all trips (commute and non-commute) taken by Americans each day are less than two miles, equivalent to a bike ride of 10 minutes or less; however, just 13% of all trips are made by walking or bicycling nationwide.<sup>3</sup> To put these numbers into perspective, **34% of all trips are made by walking or bicycling in Denmark and Germany, and 51% of all trips in the Netherlands are by foot or by bike.**<sup>17</sup> Germany, Denmark, and the Netherlands are wealthy countries with high rates of automobile ownership, just like the United States. Yet, an emphasis has been placed on providing quality walking and bicycling environments which has alleviated the reliance on motor vehicles for short trips.

Daily Trip Distances of Americans



Most driving trips are for a distance of five miles or less. Chart from the Bicycle and Pedestrian Information Center website, [www.pedbikeinfo.org](http://www.pedbikeinfo.org)



## Reduced Vehicle Miles Traveled (VMT) & Congestion

Taking short trips by foot or by bike can help to greatly reduce motor vehicle miles driven and traffic congestion. Under the Nonmotorized Transportation Pilot Program, **walking and bicycling investments averted an estimated 32 million driving miles in four pilot communities between 2007 and 2010.**<sup>18</sup> These individual changes in travel behavior can add up to produce significant societal benefits. Traffic on arterials and other streets can be mitigated as people use sidewalks, bike lanes, paths, and other alternatives to get around. Parking lots can also be made less congested by reducing crowding, circling, and waiting for open spots.

The following web addresses link to more comprehensive research on transportation efficiency.

- <http://www.ncdot.gov/bikeped/planning/walkbikenc/>
- [http://www.pedbikeinfo.org/data/factsheet\\_general.cfm](http://www.pedbikeinfo.org/data/factsheet_general.cfm)

## Stewardship Benefits of Active Transportation

Stewardship addresses the impact that transportation decisions (both at the government/policy level and individual level) can have on the land, water and air that Ocean Isle Beach residents and visitors enjoy.

Providing safe accommodations for walking and bicycling can help to reduce automobile dependency, which in turn leads to a reduction in vehicle emissions – a benefit for residents and visitors and the surrounding environment. As of 2003, **27 percent of U.S. greenhouse gas emissions are attributed to the transportation sector, and personal vehicles account for almost two-thirds (62 percent) of all transportation emissions.**<sup>19</sup> Primary emissions that pose potential health and environmental risks are carbon dioxide, carbon monoxide, volatile organic compounds, (VOCs), nitrous oxides (NOx), and benzene. Children and senior citizens are particularly sensitive to the harmful affects of air pollution, as are individuals with heart or other respiratory illnesses. Increased health risks such as asthma and heart problems are associated with vehicle emissions.<sup>20</sup>

Below are some key trends and challenges related to stewardship and transportation in North Carolina:

- Even a modest increase in walking and bicycling trips (in place of motor vehicle trips) can have significant positive impacts. For example, replacing two miles of driving each day with walking or bicycling will, in one year, prevent 730 pounds of carbon dioxide from entering the atmosphere.<sup>21</sup>
- According to the National Association of Realtors and Transportation for America, **89% of Americans believe that transportation investments should support the goal of reducing energy use.**<sup>22</sup>
- North Carolina's 2009-2013 Statewide Comprehensive Outdoor Recreation Plan (SCORP) found **"walking for pleasure" to be the most common outdoor recreational activity, enjoyed by 82% of respondents, and bicycling by 31% of respondents.**<sup>23</sup>



- The natural buffer zones that occur along greenways protect streams, rivers, and lakes, preventing soil erosion and filtering pollution caused by agricultural and roadway runoff.<sup>2</sup>

The following web addresses link to more comprehensive research on active transportation and stewardship.

- <http://www.ncdot.gov/bikeped/planning/walkbikenc/>
- [http://www.pedbikeinfo.org/data/factsheet\\_environmental.cfm](http://www.pedbikeinfo.org/data/factsheet_environmental.cfm)

## References

1. NCDOT DBPT and the Institute of Transportation Research and Education. (2011). 2011 Bicycle and Pedestrian Safety Summit Report.
2. 2007-2011 Bicycle and Pedestrian Crash Data. (2013). NCDOT Division of Bicycle and Pedestrian Transportation.
3. Alliance for Biking and Walking. (2012). *Biking and Walking in the United States: 2012 benchmarking report*.
4. *Traffic Safety Facts North Carolina 2006-2010*. USDOT, National Highway Traffic Safety Administration
5. North Carolina State Center for Health Statistics. (2007). *Behavioral Risk Factor Surveillance System, 2007 Results*. [www.schs.state.nc.us/SCHS/brfss/2010/index.html](http://www.schs.state.nc.us/SCHS/brfss/2010/index.html)
6. North Carolina DHHS, Physical Activity and Nutrition Branch, Eat Smart, Move More NC. *The Obesity Epidemic in North Carolina*. [www.eatsmartmovemorenc.com/ObesityInNC/ObesityInNC.html](http://www.eatsmartmovemorenc.com/ObesityInNC/ObesityInNC.html).
7. *Be Active North Carolina*. (2012). *Tipping the Scales: The High Cost of Unhealthy Behavior in North Carolina*.
8. Chenoweth, David. (2012). "Economics, Physical Activity, and Community Design." *North Carolina Medical Journal* 73(4): 293-294.
9. MacDonald, J.M., Stokes, R.J., Cohen, D.A., Kofner, A., & G.K. Ridgeway. (2010). *The effect of light rail transit on body mass index and physical activity*. *American Journal of Preventive Medicine* 39(2): 105-112.
10. National Prevention Council. (2011). *National Prevention Strategy: America's plan for better health and wellness*. <http://www.healthcare.gov/prevention/nphpphc/strategy/report.pdf>
11. *The North Carolina Department of Commerce reported 37 million visitors to the State in 2011, of which 63 percent came from outside the State*. [www.visitnc.com](http://www.visitnc.com)
12. Institute of Transportation Research and Education. (2004). "The Economic Impact of Investments in Bicycle Facilities: A Case Study of the Northern Outer Banks."
13. U.S. Census Bureau. 2011. ACS 2007-2011 5-year data.
14. *Bikes Belong. Gas Prices and Bicycling*. <http://www.bikesbelong.org/resources/GasPrices.pdf>
15. Moritz. (1997). *Survey of North American bicycle commuters: Design and aggregate results*. *Transportation Research Record*.
16. NCDOT. <http://www.nccommerce.com/cd/urban-development/main-street-program/success-stories>



17. Pucher, J. and R. Buehler. (2010). *Walking and Cycling for Healthy Cities*. *Built Environment* 36(5): 391-414.
18. Federal Highway Administration. (2012). *Report to the U.S. Congress on the Outcomes of the Nonmotorized Transportation Pilot Program SAFETEA-LU Section 1807*. Retrieved from [http://www.fhwa.dot.gov/environment/bicycle\\_pedestrian/nntp/2012\\_report/page00.cfm](http://www.fhwa.dot.gov/environment/bicycle_pedestrian/nntp/2012_report/page00.cfm)
19. Office of Transportation and Air Quality, Environmental Protection Agency. (2006). *Greenhouse Gas Emissions from the U.S. Transportation Sector: 1990-2003*. Report number EPA 420 R 06 003
20. Health Effects Institute (2010). *Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects*. Special Report 17.
21. FHWA. (1992). *Benefits of bicycling and walking to health*.
22. National Association of Realtors and Transportation for America. (2009). *2009 Growth and Transportation Survey*.
23. Division of Parks and Recreation, NC Department of Environment and Natural Resources. (2008). *2009-2013 North Carolina Statewide Comprehensive Outdoor Recreation Plan*.
24. Arendt, R. (1994). *Rural by Design*. American Planning Association, Chicago, Illinois.



# 2 CURRENT CONDITIONS

## Chapter Contents:

### Local Context

### Current Conditions, Opportunities, and Constraints

### Existing and Past Programs and Policies

### Related Plans and Initiatives

## LOCAL CONTEXT

The Town of Ocean Isle Beach is located on a coastal barrier island along the Atlantic Ocean on the southern coastline of Brunswick County. The majority of the Town's jurisdiction is located on the island, with the remaining area covering a one-quarter mile stretch on the mainland along NC Highway 904. The two portions of town are connected by a mid-rise bridge over the Atlantic Intracoastal Waterway and make up a total land area of **3.4 square miles**. As of the 2012 U.S. Census estimate, Ocean Isle Beach is home to **567 permanent residents**. During the summer vacation months, the local population increases to 40 times that size, with the peak **summertime population reaching approximately 25,000**. The town is a popular destination for vacationers who come to enjoy the beach, its natural scenic views, and outdoor activities like sunbathing, kayaking, golf on mainland courses, and fishing. Vacationers are normally families who come for a week and rent a cottage, or come for the weekend and stay in short term rentals or in their second homes.

The street pattern of Ocean Isle Beach is mostly a grid, with a few east-west streets running along the length of the **6-mile long island**. NC Highway 904/Causeway Drive is the main commercial corridor and runs north-south, linking the island to the mainland. A series of residential canal streets, each one-half mile long with an average of 50 homes, run north-south along the island. These **side streets become intensely crowded during the summer months** with pedestrians, bicycles, golf carts, automobiles, and trailers. The Ocean Isle Beach Pier and Arcade, Museum of Coastal Carolina, and many beach accesses, surf and fishing shops, and restaurants are popular local destinations.

Table 2-1 provides a comparison of demographic data for Ocean Isle Beach, Brunswick County, and the State of North Carolina. The **median age of permanent residents of the Town of Ocean Isle Beach is 58.9 years**, far above the state average of 37.4 years. Ocean Isle Beach continues to attract retirees as full-time residents. This **aging population** creates the need for more sidewalks and bikeways that allow residents to safely exercise, stay in good health, visit neighbors, and run errands. With Ocean Isle Beach being a family vacation destination, the town also needs safe sidewalks, bikeways, and crossings to help prevent crashes involving cars and pedestrians or bicyclists.



Table 2-1. Demographic Comparison

	OCEAN ISLE BEACH	BRUNSWICK COUNTY	NORTH CAROLINA
Population <sup>1</sup>	567	112,257	9,752,073
Median Age <sup>2</sup>	58.9	47.4	37.4
Median Household Income <sup>3</sup>	57,411	46,490	46,450
% Households without a Vehicle <sup>3</sup>	1.8%	5.1%	6.5%
% Walk to Work <sup>3</sup>	0.0%	0.9%	1.8%
% Bike to Work <sup>3</sup>	1.0%	<0.1%	0.2%

During the summer vacation months, the local population increases by 40 times its normal size, with the peak summertime population reaching approximately **25,000**.

<sup>1</sup> US Census Bureau, 2012 Population Estimates

<sup>2</sup> US Census Bureau, 2010 Demographic Profile Data

<sup>3</sup> US Census Bureau, 2008-2012 American Community Survey 5-Year Estimates

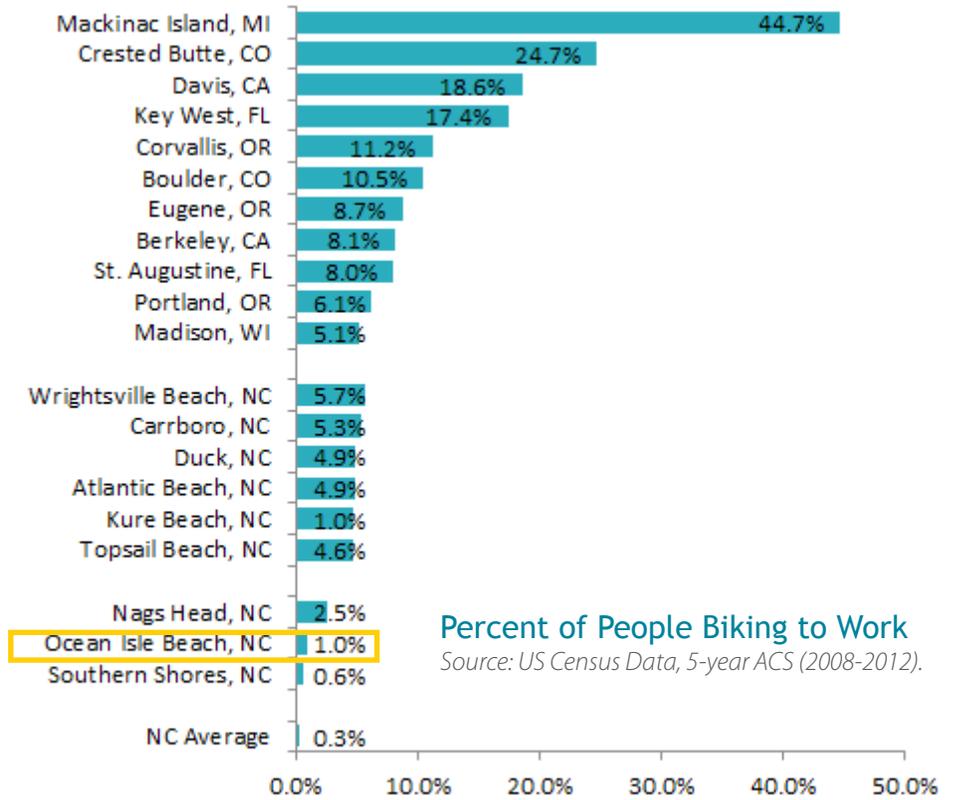
### Bicycling and Walking Rates

In many communities, walking and biking commute rates are used as an indicator of overall walking and biking. Currently, only one percent of Ocean Isle Beach residents bike to work, and zero residents walk to work. Note that these rates (shown on the following page) are for commuting only and do not reflect Ocean Isle Beach’s large seasonal tourist population and their vacation travel behavior. Still, for those who do live and work in Ocean Isle Beach, there is room for improvement as compared to other communities statewide and nationally, especially with homes and businesses being situated close together on the island.

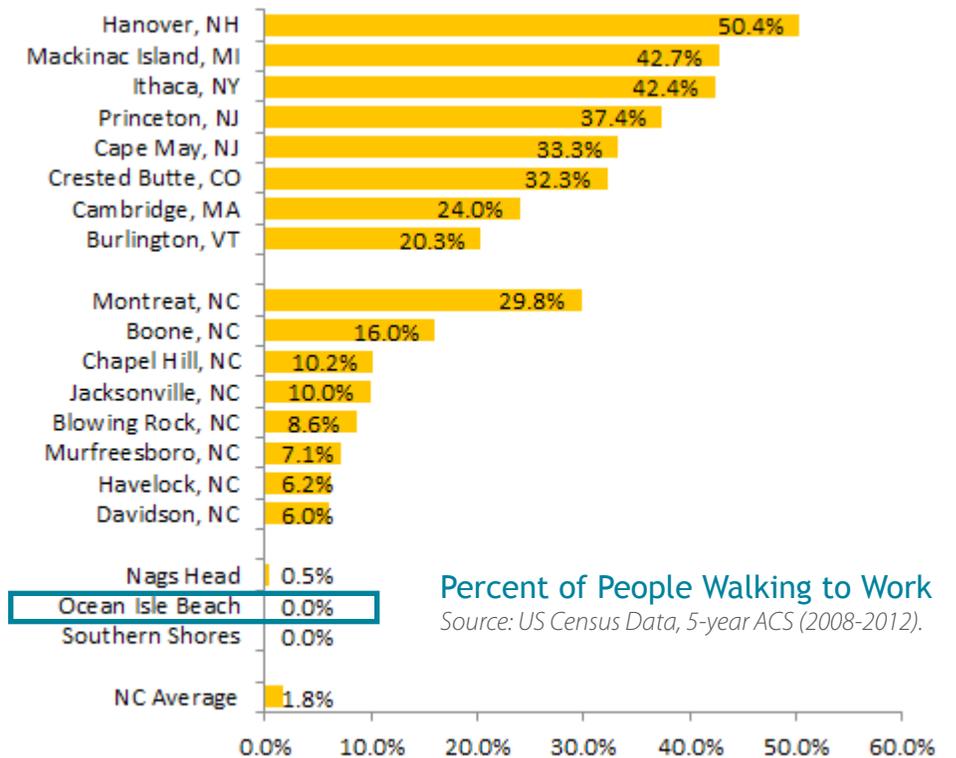
The charts on the following page also provide bicycle- and walk-to-work rates for model communities across the country, model communities in North Carolina, and peer communities for Ocean Isle Beach. These numbers show that, with some effort to improve infrastructure, policies, and programs, high rates of walking and bicycling to work are possible in communities of all sizes. In the short-term, Ocean Isle Beach should strive to match the bike- and walk-to-work rates of the Town of Nags Head, which is a similarly sized beach community both in terms of land area and population. As bicycling and walking become more popular, the Town should work toward even higher rates to match model North Carolina communities like Wrightsville Beach, Carrboro, and Duck, and eventually rates seen in the national peer communities.



“Ocean Isle Beach should strive to match the bike- and walk-to-work rates of the Town of Nags Head, which is a similarly sized beach community both in terms of land area and population.”



Percent of People Biking to Work  
Source: US Census Data, 5-year ACS (2008-2012).



Percent of People Walking to Work  
Source: US Census Data, 5-year ACS (2008-2012).



## CURRENT CONDITIONS, OPPORTUNITIES & CONSTRAINTS

Ocean Isle Beach has **19 miles of streets** within its town limits. Town-owned streets make up 12.5 miles of the street network, with an additional 6.6 miles owned and maintained by the North Carolina Department of Transportation (NCDOT). The pedestrian network consists of **8.9 miles of sidewalks and 0.9 miles of multi-use paths**. The bulk of these sidewalks are located along NCDOT streets, such as First Street, Second Street, and Causeway Drive. Public beach access paths are located roughly every 500 feet along the island, primarily along First Street. Three marked crosswalks on First Street, located at Monroe Street, Beaufort Street, and Private Drive, help to connect pedestrians to the beach accesses. Other walkways, beach accesses, and boardwalks are privately owned and maintained and are currently off-limits to the public. The on-road bicycle network is limited to **0.45 miles of paved shoulders striped on West Third Street**.

### Opportunities

The existing facilities in Ocean Isle Beach provide the beginnings of a bicycle and pedestrian network and are shown on Map 2-1 on the following page. Some strengths of the system include:

- **Existing Sidewalk:** The Town has nearly 9 miles of existing sidewalk along public streets.
- **Frequent Beach Access:** Public beach access points are located every 500 feet along the island.
- **Sidewalk Maintenance:** The Town routinely surveys and maintains existing sidewalks.
- **Bicycling and Walking Activity:** Local residents and thousands of visitors each year walk or ride around town.
- **Speed Limits:** The majority of streets are signed with speed limits of 35 miles per hour or lower.
- **Local Support:** The town has funding support for pedestrian and bicycle facilities from the Board of Commissioners, support from the Ocean Isle Beach Property Owners Association and the Ocean Isle Beach Land Conservancy, and support from this plan's steering committee.



*Frequent beach access points*



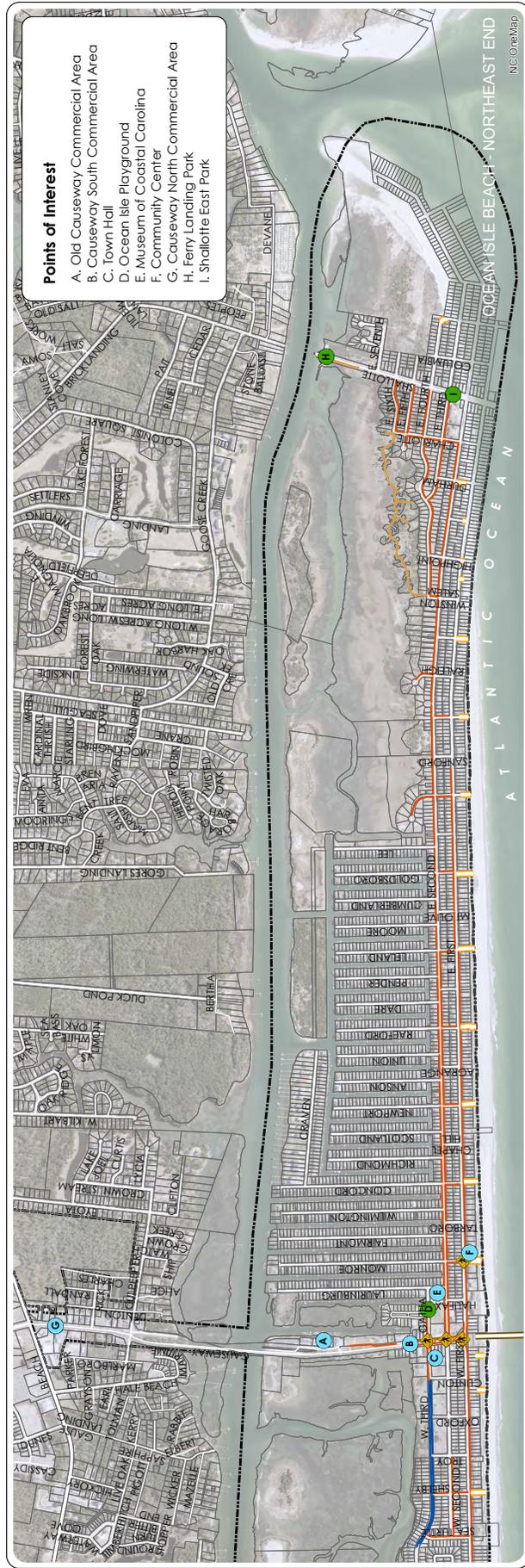
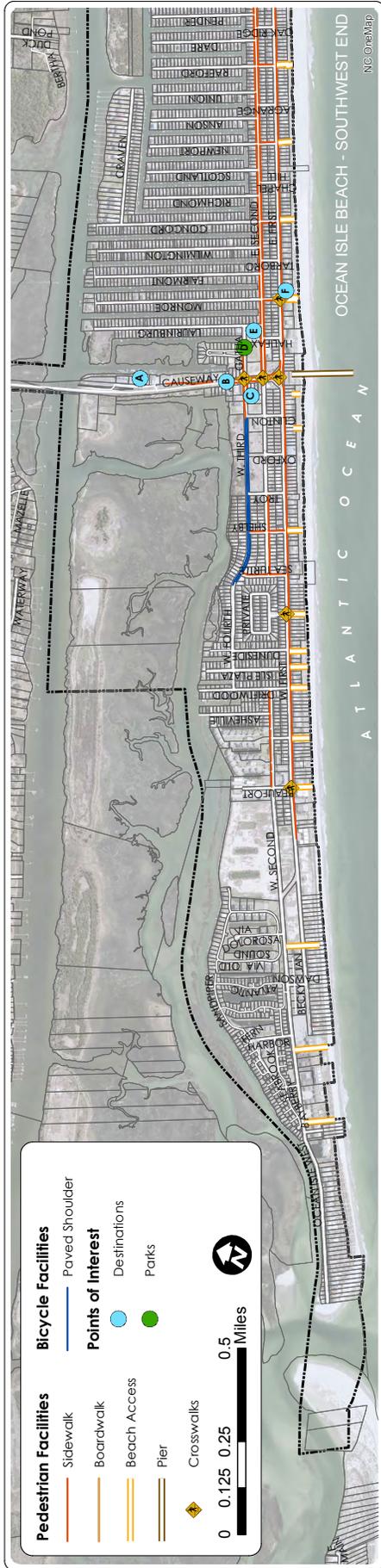
*Low speed limit (20 MPH) on Goldsboro St (typical of many of the north-south streets north of E. Second St.)*



*Left & right above: Bicyclists and pedestrians on W. First St.*



# MAP 2.1: EXISTING CONDITIONS





# TABLE 2.1: CORRIDOR INVENTORY

Road	From	To	Approximate Lane Widths (to edge of pavement)	Existing Road Configuration	Existing Sidewalk (one/both sides)	Curb/Gutter (Y/N)	Shoulder (Y/N)	Speed Limit	Nearby Destinations
E First	Causeway	Leland	10 / 10	2 lane	one side (south)	N	10' gravel (south)	35	Ocean Isle Beach Pier, Community Center, restaurants, shopping
E First	Leland	Sanford	10 / 10	2 lane	one side (north)	N	N	35	Residential, beach access
E First	Sanford	Winston Salem	10 / 10	2 lane	N	N	N	35	Residential, beach access
E First	Winston Salem	High Point (end)	24'	Dirt road	N	N	N	20	Residential, beach access
E Fourth	Winston Salem	Charlotte	20'	No striping	one side (south)	Y	N	20	Residential
E Third	Charlotte	Shallotte	20'	No striping	one side (south)	N	N	20	Residential
E Third	Shallotte	Columbia	18'	No striping	N	N	N	20	Residential
Shallotte	E Seventh	E Third	14   30   14	2 lane w/ grassy median	N	N	N	?	Ferry Landing Park, Shallotte East Park, beach access, residential
E Second	Charlotte	Leland	10 / 10	2 lane	one side (north)	N	N		Residential, beach access
Goldsboro	E Second	end	18'	No striping	N	N	N	20	Residential
E Second	Leland	Halifax	10 / 10	2 lane	both sides	N	N	?	Museum of Coastal Carolina, restaurants, shopping, playground, entertainment
E Second	Halifax	Causeway		2 lane + CTL	both sides			?	Museum of Coastal Carolina, restaurants, shopping, playground, entertainment
Causeway	E Second	Bridge	10.5 / 11 / 10.5	2 lane + CTL	one side (east)	Y	N	35	Restaurants, shopping, entertainment, boat launch
Odell Williamson Bridge	Bridge	Bridge	3 / 12 / 12   3	2 lane + shoulders	N	Y	Y	?	Restaurants, shopping, entertainment, boat launch
W Third	Clinton	Sea Turtle	4.5 / 9.5 / 9.5 / 5 (south)	2 lane + shoulders	N	N	Y	20	Town Hall, Police Station, residential
W Third	Causeway	Clinton	11   12   11	2 lane + Left turn lane (eastbound)	both sides	N	N	20	Town Hall, Police Station, restaurants, shopping, entertainment
W First	Causeway	750 ft W of Beaufort	10 / 10	2 lane	one side (south)	N	N	35	Ocean Isle Beach Pier, beach access, shopping, entertainment, residential
W Second	750 ft W of Beaufort	West End Peninsula complex	18-19'	2 lane	N	N	N	?	Residential
W Second	Driftwood	Dead end	17'	No striping	one side (north)	N	N	20	Residential
Isle Plaza	W Fourth	W First	10 / 20 / 10	2 lane	N	N	N	20	Residential
Duneside	W Fourth	W First	18'	No striping	N	N	N	20	Residential
Driftwood	end	W First	17-18'	No striping	N	N	N	20	Residential
Sea Turtle	W First	W Third	20'	No striping	one side (east)	N	N	20	Residential
W Second	Sea Turtle	Troy	19'	No striping	one side (south)	N	N	20	Residential
Shelby	W First	W Third	19'	No striping	one side (east)	N	N	20	Residential, beach access
Troy	W First	W Third	18'	No striping	N	N	N	20	Residential, beach access
Clinton	W First	W Third	9 / 9	2 lane	N	N	N	20	Residential, Ocean Isle Beach Pier, beach access
W Second	Clinton	Causeway	9 / 9	2 lane	N	N	N	20	Residential
Causeway	Beach Dr	Odell Williamson Bridge	11 / 10 / 11	2 lane + CTL	N	Y	N	35	Restaurants, shopping, entertainment

## Constraints

The following list is an overview of key issues of the existing bicycle and pedestrian network in Ocean Isle Beach. These observations are based on input from the Steering Committee, general public, field review, and available data.

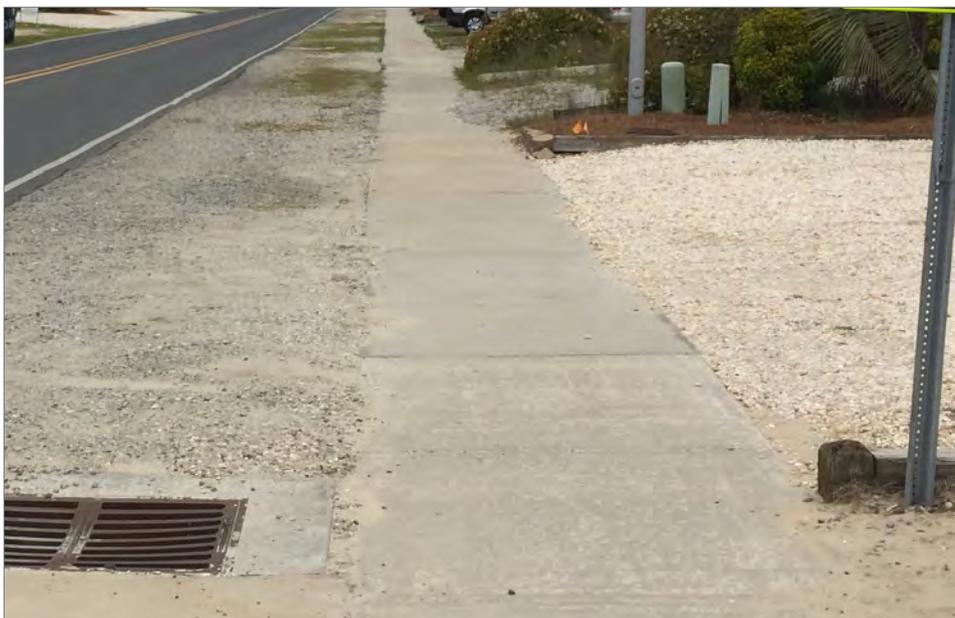
- **Lack of Connectivity:** There is a lack of connectivity between the east-west thoroughfares on the island and the north-south side canal streets. Few side streets currently have sidewalks and the ones that do have few crosswalks. Other key components of connectivity in Ocean Isle Beach that can be improved include:
  - Access to beach access paths
  - Access to commercial areas and attractions
  - Residential circulation
- **Lack of bicycle facilities:** Bike lanes and paths are limited and do not connect to one another. Bicyclists currently have to choose between riding in mixed traffic with large numbers of automobiles and golf carts, or riding on narrow sidewalks with pedestrians.
- **Bridge access:** The Odell Williamson Bridge does not include sidewalks, paths, or bike lanes, has a limited sight distance, and has high automobile traffic volumes and speeds that make it a dangerous crossing for pedestrians and bicyclists. The lack of safe bridge access cuts island walking and bicycling opportunities off from the mainland, and vice versa.
- **High traffic volumes:** During the summer vacation season, the population of Ocean Isle Beach reaches 25,000 people, or more than 40 times its permanent size. This huge increase in population creates intense traffic congestion on the island that can constrain bicycle and pedestrian travel.



*There is a lack of safe crossings for pedestrians and bicyclists.*



- **Mix of traffic types:** Pedestrians, bicyclists, golf carts, and automobiles all occupy the roads during the summer months. The limited sidewalk network, particularly on side streets, forces pedestrians to walk in the street in many places. A lack of designated space and signage for pedestrians and bicyclists contributes to unsafe and unpredictable traffic behavior and confusion between all road users.
- **Lack of safe crossings:** Several side streets and beach access paths are not linked with safe crossings. A lack of marked crosswalks and signage makes it difficult for pedestrians to safely and comfortably cross streets in town.
- **Narrow roads and utilities:** Many roadways in town do not contain enough space within the existing pavement to add shoulders or other facilities for bicycling and walking. Utilities further constrain the available space for new and/or wider pathways.
- **Lack of signage:** There is an overall lack of traffic and wayfinding signage for pedestrians and bicyclists. More signage is needed to make drivers aware of pedestrian and bicycle traffic, direct pedestrians and bicyclists to safe routes and crossings, and provide directions between popular destinations.
- **Lack of programs:** The town does not have any active, recurring programs for pedestrians and bicyclists. Programs that educate all road users on bicycle and pedestrian safety, encourage walking and bicycling in town, and enforce traffic laws and safe traffic behavior could all contribute to a safer and more attractive environment for walking and bicycling.



*Pedestrians, bicyclists, golf carts, and automobiles all occupy the roads during the summer months (W. First St shown above).*



*Utilities such as the drainage system shown above constrain the ability to easily expand the sidewalk on the south side of W. First St to a wider multi-use path.*

### NCDOT-Reported Pedestrian and Bicycle Crashes

Map 2-2 on page 2-10 shows pedestrian and bicycle crashes in Ocean Isle Beach that were reported to the NCDOT between 2007 and 2011. During this period, four crashes involving a bicyclist or pedestrian were recorded. **Three of these crashes involved a child bicyclist or pedestrian under the age of 12**, all of which occurred between June and September during the summer tourist season.

### Roadway Jurisdictions

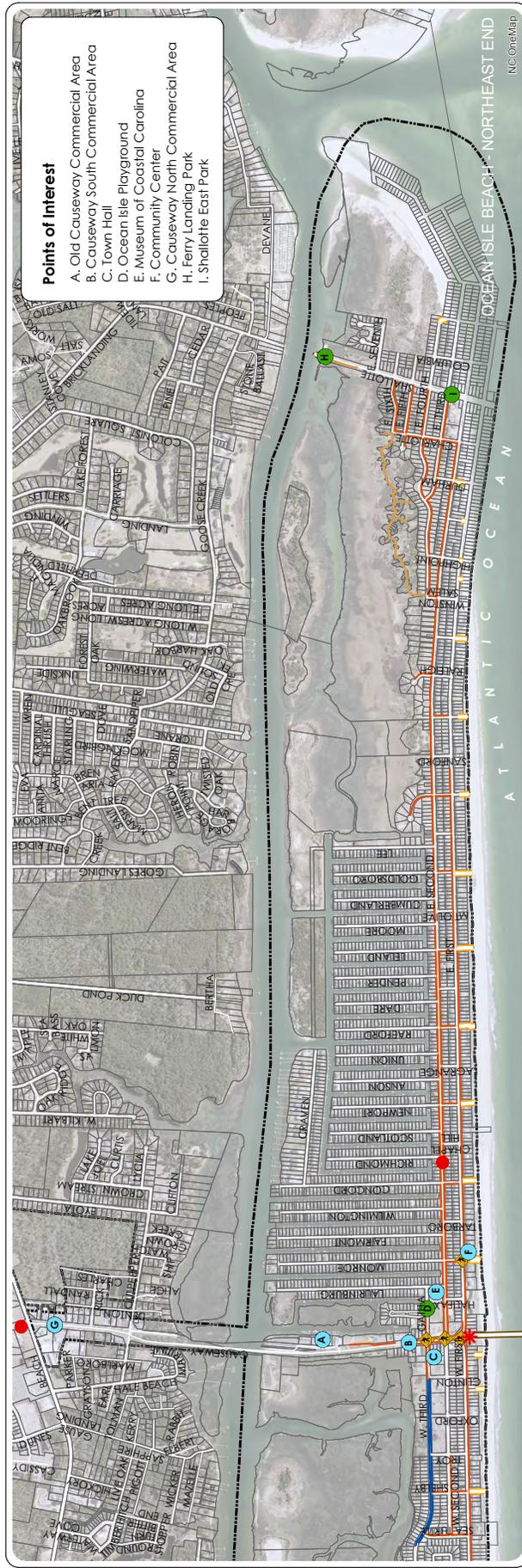
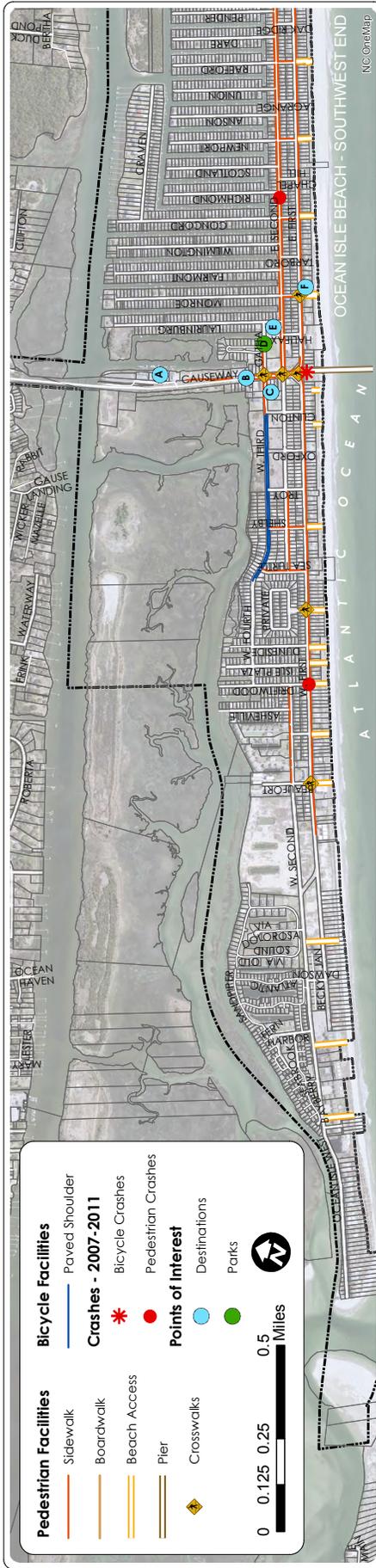
The roadway network in Ocean Isle Beach is a combination of town-owned, state-owned, and privately-owned roads. Knowledge of roadway ownership is important for determining the types of facilities that can be recommended along a roadway, the agency in charge of maintaining the roadway and implementing bicycle and pedestrian recommendations, and how improvements are scheduled, funded, and constructed.

Map 2-3 on page 2-11 shows which roadways in Ocean Isle Beach are state-, local-, or privately-owned. NCDOT-owned roadways make up roughly one-third of all roads in Ocean Isle Beach. These include Causeway Drive and most of First Street and Second Street. The town will need to coordinate with NCDOT Division 3 and the Division of Bicycle and Pedestrian Transportation to implement this plan's recommended improvements along these roadways.



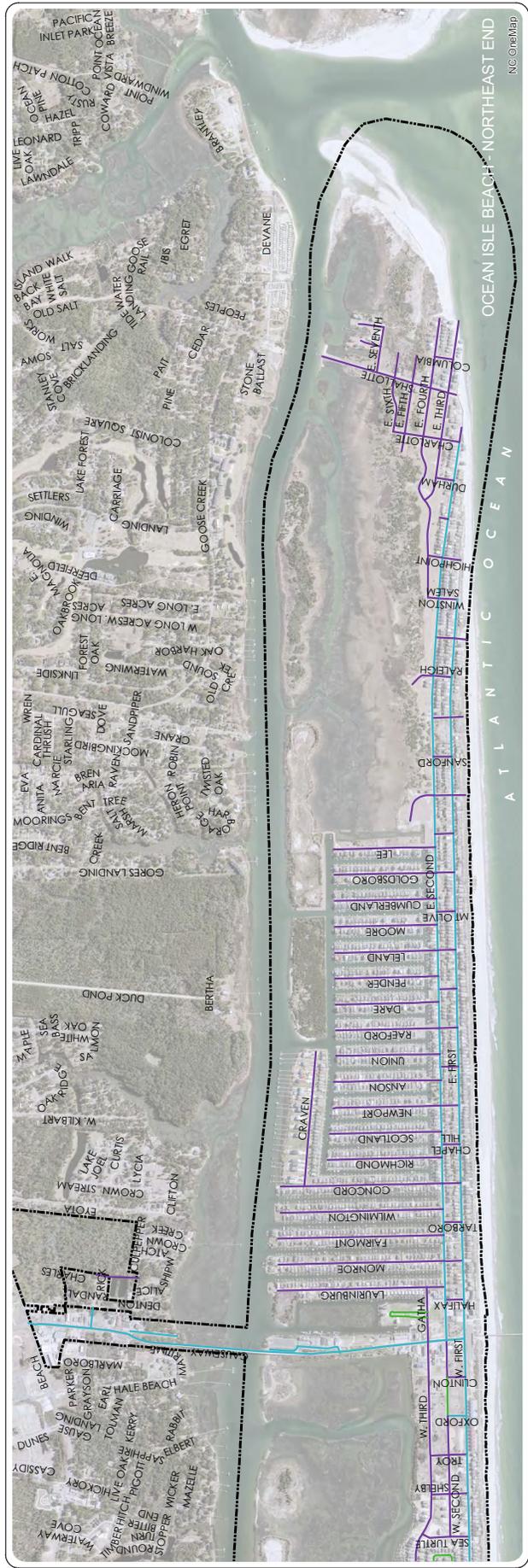
# MAP 2.2: CRASHES INVOLVING PEDESTRIANS AND BICYCLISTS

(As reported by NCDOT, 2007-2011)





# MAP 2.3: ROADWAY OWNERSHIP





## EXISTING AND PAST PROGRAMS AND POLICIES

### Leprechaun 5K Race

In March 2014, Ocean Isle Beach hosted the Brunswick County Lucky Leprechaun 5K Race. This event was open to runners and walkers of all ages, and awards were given to the fastest runners in each age group. Proceeds from the race were used to fund fitness and health programs for underserved Brunswick County residents.

### Town Ordinances

The Town of Ocean Isle Beach does not currently run any recurring bicycle and pedestrian programs, though some town ordinances and activities do benefit bicyclists and pedestrians. The Town ordinance prohibits vehicles from being parked on the sidewalks and blocking pedestrian traffic, which is especially a problem during the crowded summer months. This ordinance is strictly enforced by the Ocean Isle Beach Police Department.

The Town Subdivision Ordinance requires new developments on the island to incorporate sidewalks and/or bike paths and walkways into their development plans. These developments are required to set aside 15 percent of the gross area developed as greenspace to be used for the enjoyment of the residents of the community. Internal walkways and nature walks are incorporated into these developments to improve connectivity and provide recreation opportunities. These requirements make the developments more desirable to potential homeowners.

### Coordination with NCDOT

NCDOT has installed signage at the beginning of East and West First Streets and along East Second Street that notifies the public of upcoming pedestrian crossings on these streets. At the request of the Town, NCDOT also installed a marked pedestrian crosswalk at one of the Town's most frequented beach access paths. Town staff use maps, census data, and housing data to identify potential crosswalk sites. In conjunction with NCDOT, the Town is in the process of installing mile markers along NCDOT streets to inform pedestrians of their location and how far they have traveled. Ocean Isle Beach is also in the process of reviewing the requirements to become a *North Carolina Fit Community*.

## RELATED PLANS & INITIATIVES

The following local and regional plans are relevant to bicycle and pedestrian planning in Ocean Isle Beach. Links to more information and online versions of these plans are provided below.

### 2009 Ocean Isle Beach Coastal Area Management Act (CAMA) Land Use Plan

The 2009 CAMA Land Use Plan is the town's leading document for maintaining its coastal lands and guiding future growth and development. The town identifies an increased need for greater pedestrian and bicycle access along the island to help alleviate traffic congestion and to improve public access to the shoreline.



In its policies, the plan supports bicycling and walking and calls for bicycle and pedestrian access improvements, including:

- Supporting the use of bicycles as a functional means of reducing automobile traffic and parking demands at the beach
- Constructing additional sidewalks, walkways, and bike lanes at strategic locations on the island
- Widening the existing bridge to accommodate a pedestrian and bicycle path
- Pursuing federal and state grant funding to help construct new sidewalks, walkways, and bike lanes

The plan is available online at: [http://www.oibgov.com/userfiles/File/CAMA\\_Land\\_Use\\_Plan.pdf](http://www.oibgov.com/userfiles/File/CAMA_Land_Use_Plan.pdf)

### **2010 Brunswick County Comprehensive Transportation Plan (CTP)**

The Brunswick County CTP assesses the current and future transportation needs of the region and recommends improvements to meet those needs. While the plan is primarily oriented to addressing automobile travel, it does contain a small bicycle component. The plan recommends that bicycle improvements be made to NC Highway 179/Beach Drive along the northern edge of the Ocean Isle Beach town limits. This corridor is part of the state-designated NC Bicycle Route 3: Ports of Call, which stretches along the North Carolina coast from South Carolina to Virginia. A bicycle facility along Highway 179/Beach Drive would connect Ocean Isle Beach bicyclists to the nearby communities of Shallotte, Sunset Beach, and Calabash. There is no pedestrian element included in this plan.

The plan is available online at:

[https://connect.ncdot.gov/projects/planning/TPBCTP/Brunswick%20County/Brunswick\\_Report\\_online.pdf](https://connect.ncdot.gov/projects/planning/TPBCTP/Brunswick%20County/Brunswick_Report_online.pdf)

### **2009 Brunswick County Comprehensive Parks and Recreation Master Plan**

This plan outlines the projected growth of the Brunswick County population, the anticipated increase in demand for recreation, and a plan for maintaining and expanding the county's collection of parks, recreational facilities, and programs. The plan was reviewed for relevant content, but it does not include any recommendations for the Town of Ocean Isle Beach.

The plan is available online at:

[www.brunswickcountync.gov/portals/0/parksandrec/master%20plan.pdf](http://www.brunswickcountync.gov/portals/0/parksandrec/master%20plan.pdf)



## PUBLIC INPUT ON EXISTING CONDITIONS

Public input for this plan was collected through the project website, public comment form, and public workshops. Generally, the feedback from residents, visitors, and property owners is that they feel the current **walking conditions are fair (58%) to excellent (35%)** and that **improving them is very important (65%)**. Bicycling conditions were rated much lower on average; survey respondents feel the current **bicycling conditions in Ocean Isle Beach are fair (61%) to poor (34%)** and that **improving them is very important (68%)**. Safety, opportunities for recreation and exercise, and connectivity were the main topics identified by the steering committee as being important for this plan to address.

These issues were reflected in the public comments received about connecting the west and east ends of the island to restaurants and shops in the center of town, the desire for continuous bicycling and walking facilities along 1st and 2nd Streets, the lack of a safe connection over the Odell Williamson Bridge to the mainland, and the need for residents to have safer walking access and crossings from canal streets to the beach. Below are some highlights of direct quotes from the public:

*"There are no paths in the western part of Ocean Isle Beach for bikes or pedestrians and **there is no safe lane to ride or walk toward the center of town.**"*

*"Beach access crosswalks - **cars need to stop for pedestrians.**" | "Beach access street crossings - need signs that the law requires that vehicles stop for pedestrians in the crosswalk."*

*"**Need an east to west trail along the whole island.**"*

*"I would like to be able to **walk or bike across the bridge** like Sunset Beach bridge." | "Safe bicycle lane over the bridge."  
"The bridge - would love to have a lane for biking and walking!"*

*"Keeping parked cars off of sidewalks on 1st and 2nd."*

*"Widened sidewalks throughout the island."*

*"Crossing Causeway is difficult and dangerous." | "Need a safer way to cross Causeway at 1st and 2nd Streets."*

*"Improved crossing conditions at traffic circle." | "Traffic circle is not safe for bicycling."*

*"Need a way to slow down traffic on the main streets of the island."*

*"**Bike lanes along 1st and 2nd Streets.**" | "**Both main streets need a bike lane.**"*

*"All new construction should be required to install sidewalk/bike lanes."*

*"More parking at the beach for bikes (bigger, cleaner, cleared spaces)."*

*"**Making it easier to walk and bike will get cars off the road!**"*

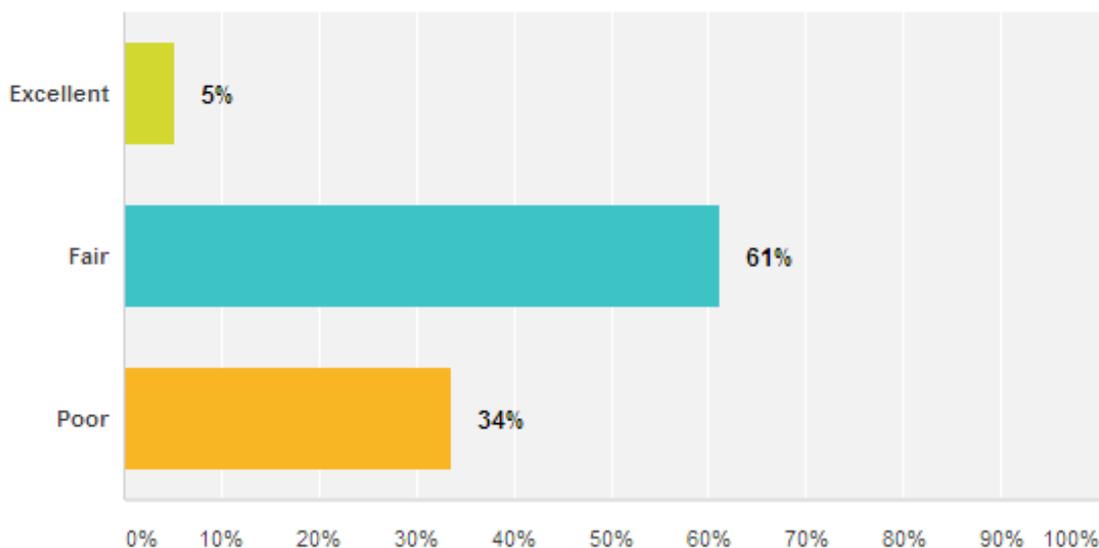


### Public Comment Form Results

The charts below summarize public input collected during this planning process in Spring 2014. Over 450 local residents, property owners, employees, and visitors contributed their input.

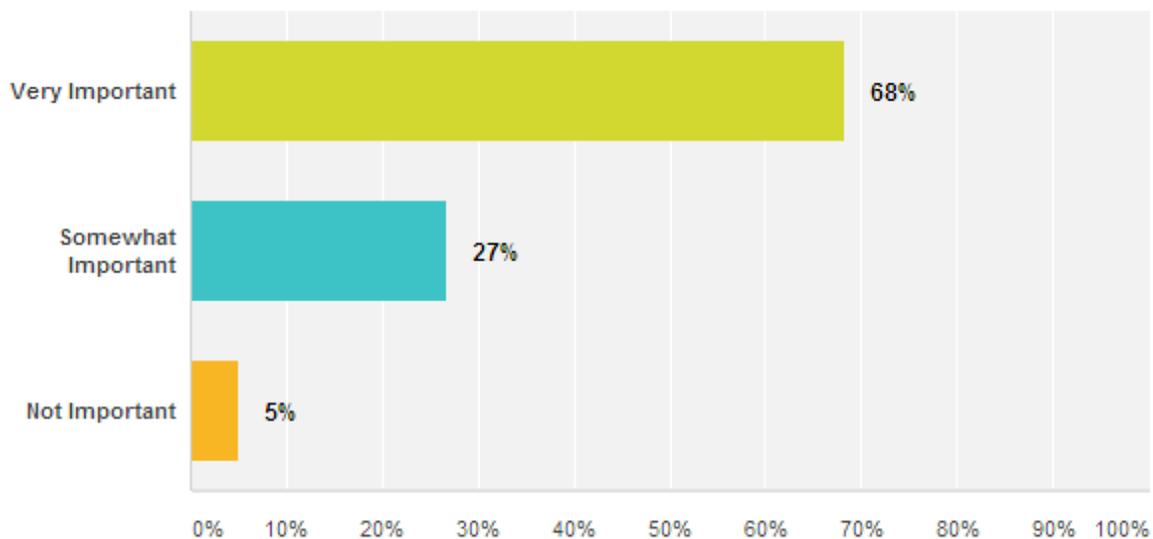
## How do you rate present bicycling conditions in Ocean Isle Beach?

Answered: 449 Skipped: 6



## How important to you is improving bicycling conditions in Ocean Isle Beach?

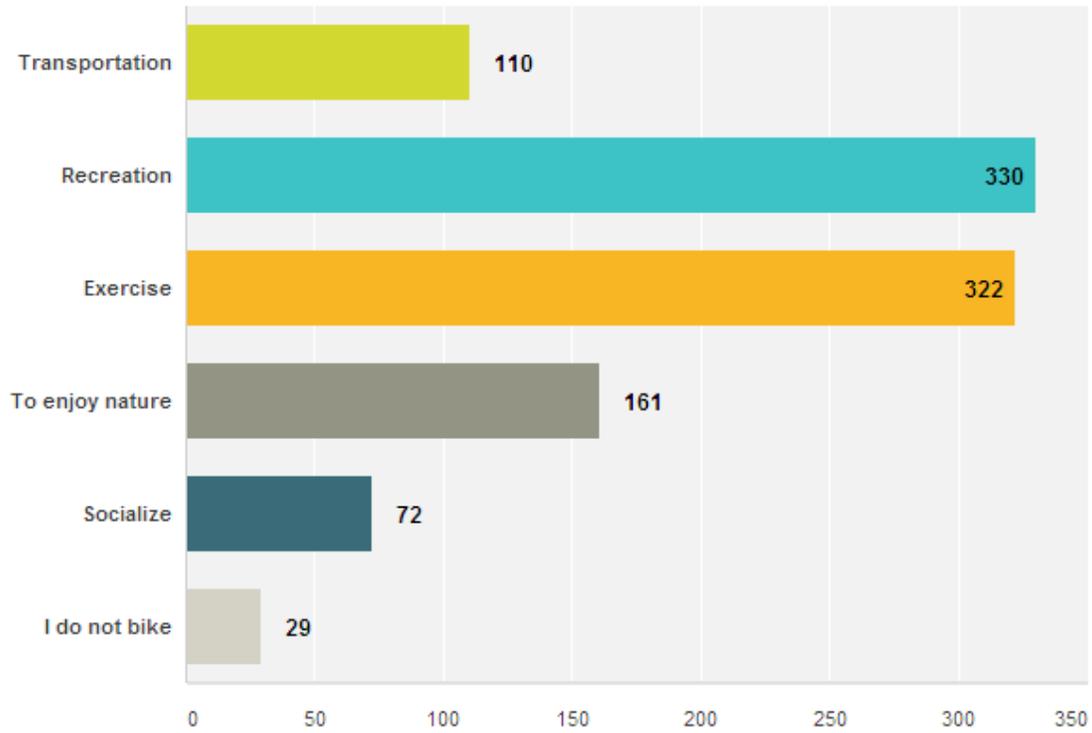
Answered: 450 Skipped: 5





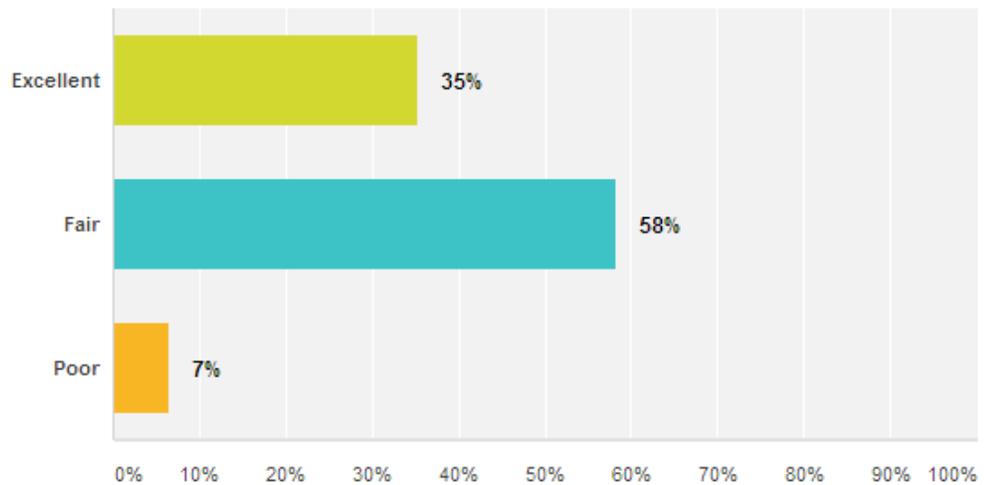
### When you ride your bicycle in Ocean Isle Beach, what is the primary purpose of your trip? (check all that apply)

Answered: 448 Skipped: 7



### How do you rate present walking conditions in Ocean Isle Beach?

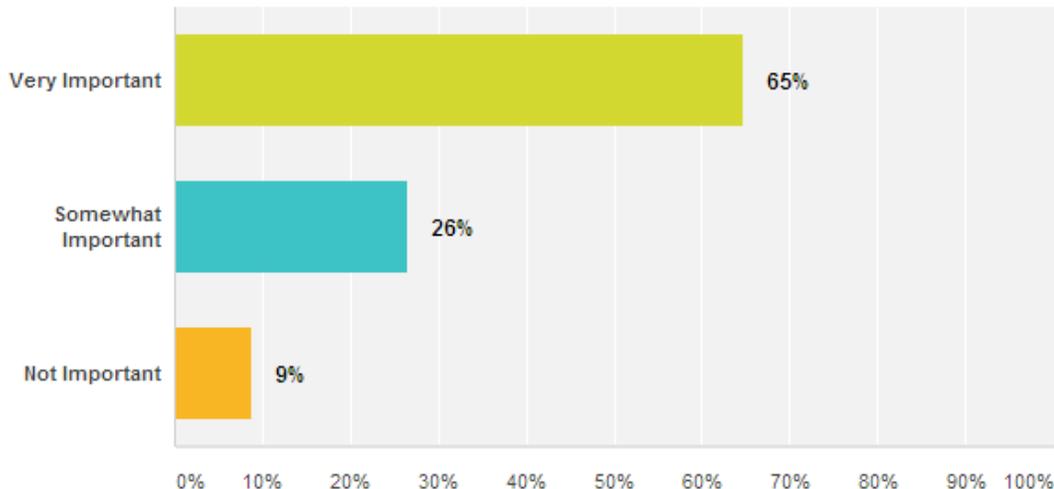
Answered: 443 Skipped: 12





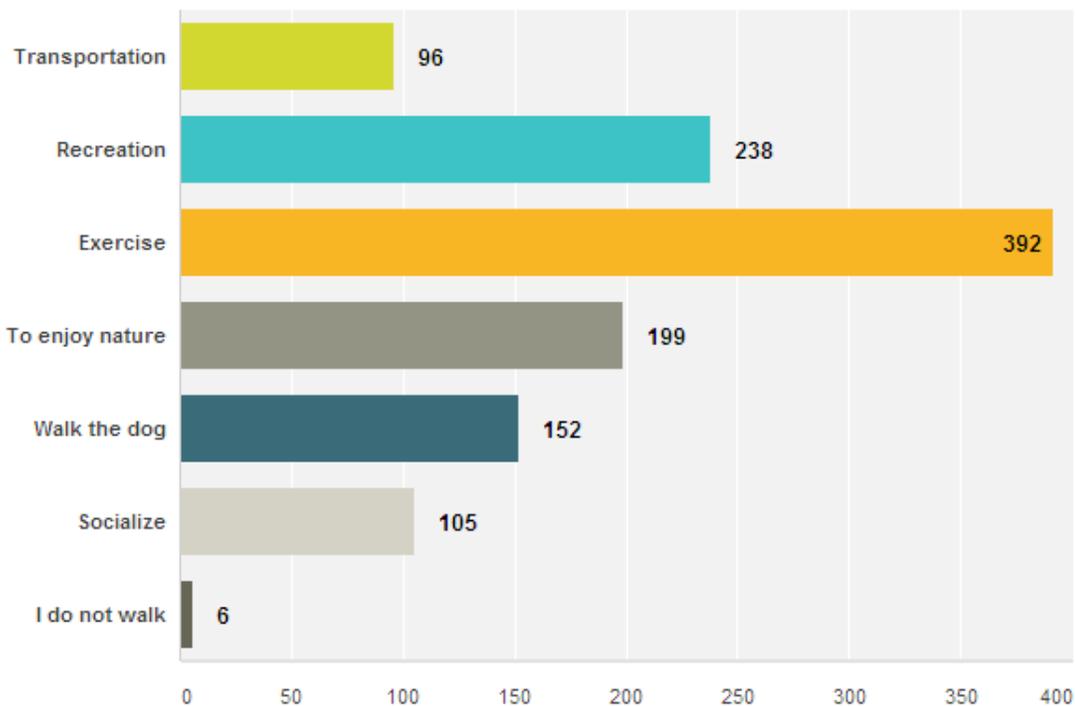
### How important to you is improving walking conditions in Ocean Isle Beach?

Answered: 443 Skipped: 12



### When you walk in Ocean Isle Beach, what is the primary purpose of your trip? (check all that apply)

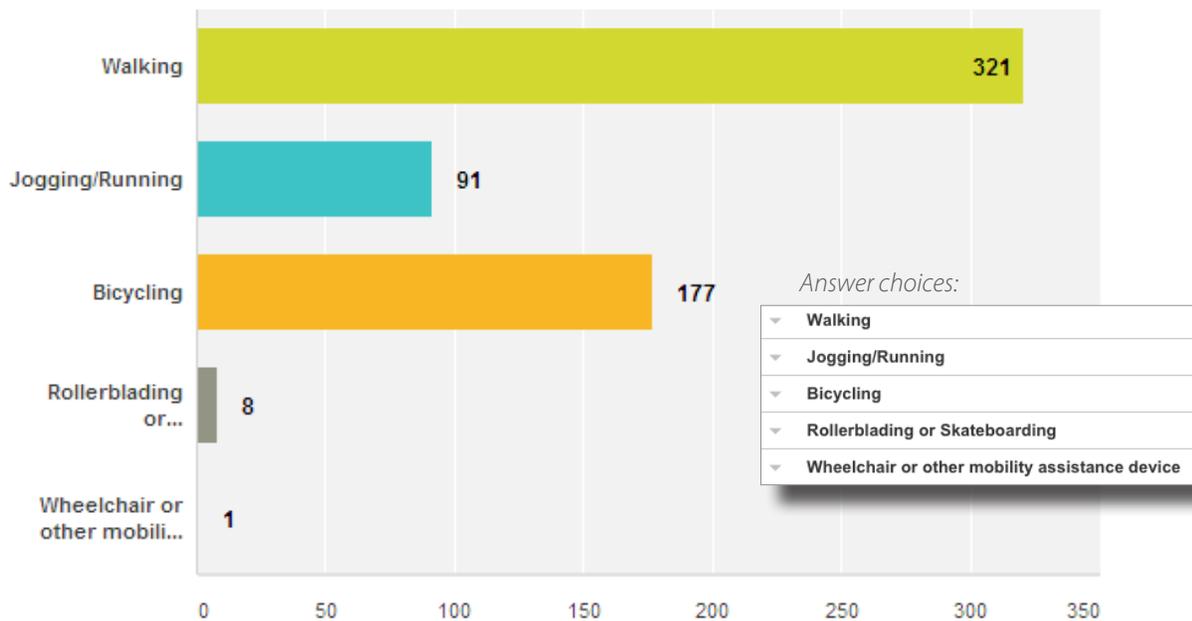
Answered: 446 Skipped: 9





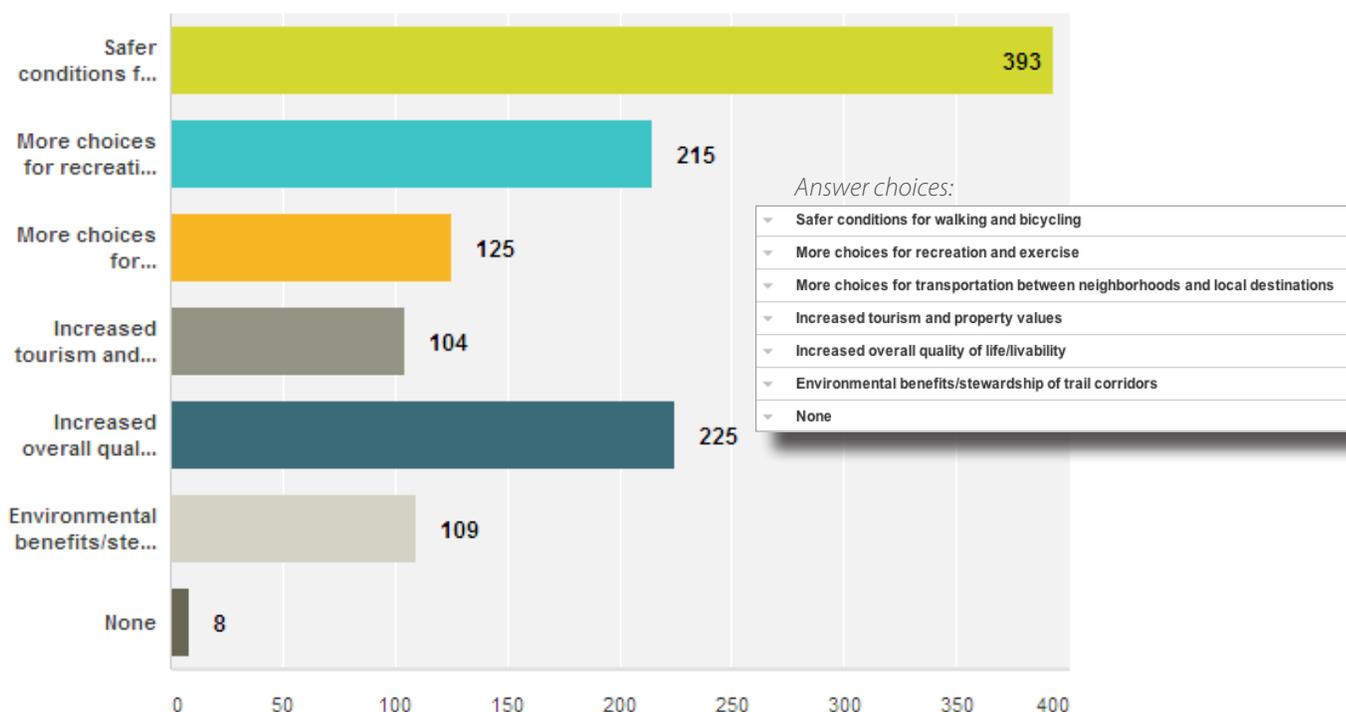
### How do you most often use trails? (check all that apply)

Answered: 371 Skipped: 84



### What should be the most important goals and outcomes of this plan? (check all the apply)

Answered: 436 Skipped: 19



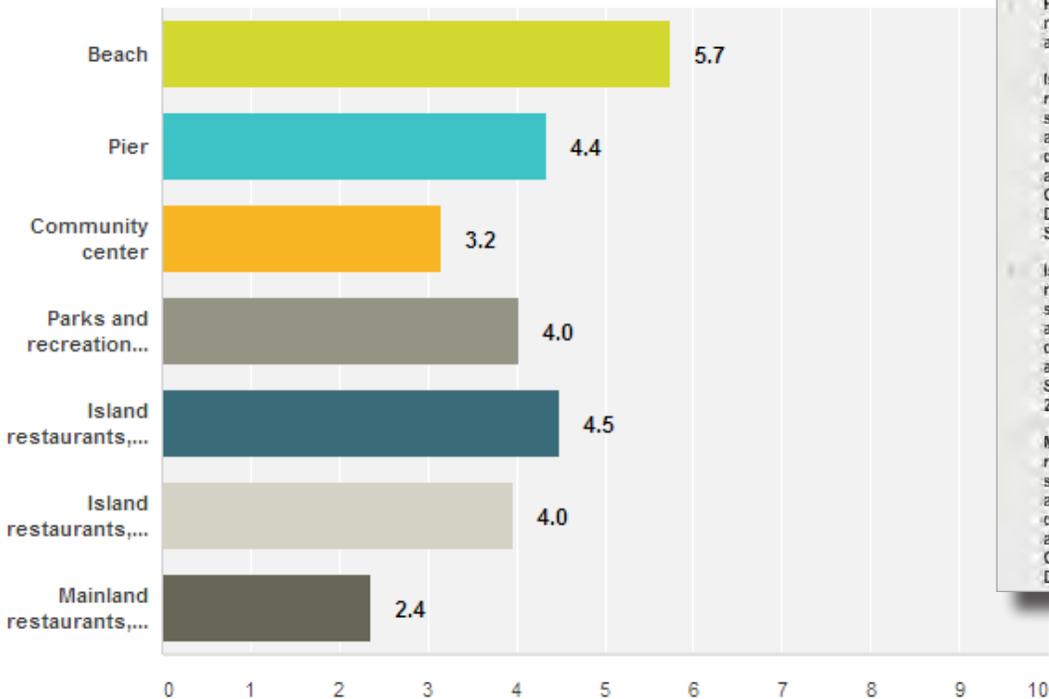


### What destinations would you most like to be able to reach by bicycling or walking? Please rank (1 = most like to reach, 9 = least like to reach)

Answer choices:

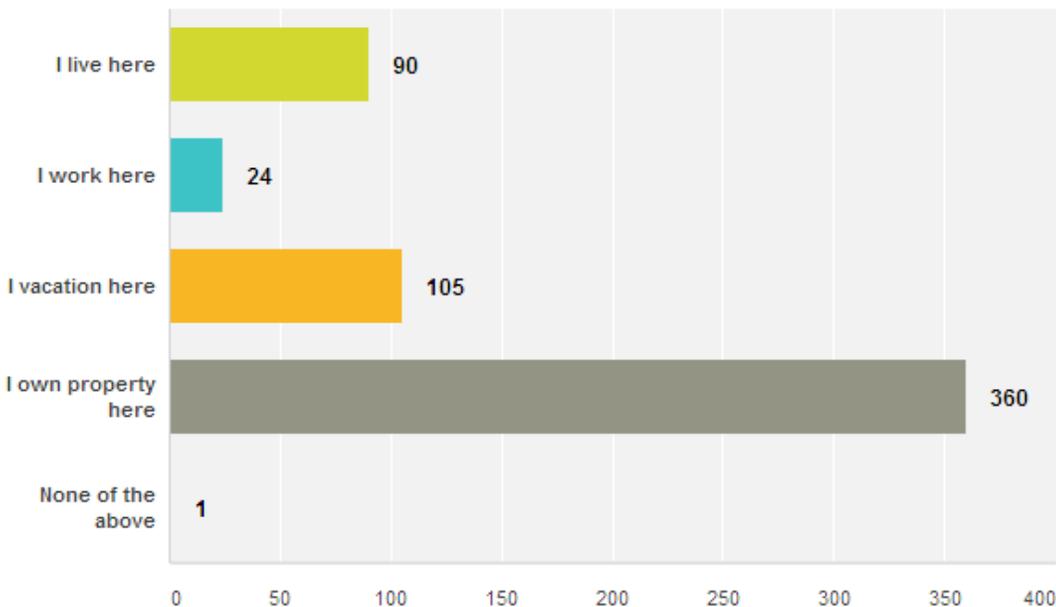
- Beach
- Pier
- Community center
- Parks and recreation areas
- Island restaurants, shopping, and other destinations along Causeway Drive (e.g., Sharky's)
- Island restaurants, shopping, and other destinations along 1st Street and 2nd Street
- Mainland restaurants, shopping, and other destinations along Causeway Drive

Answered: 416 Skipped: 39



### What is your relationship to Ocean Isle Beach?

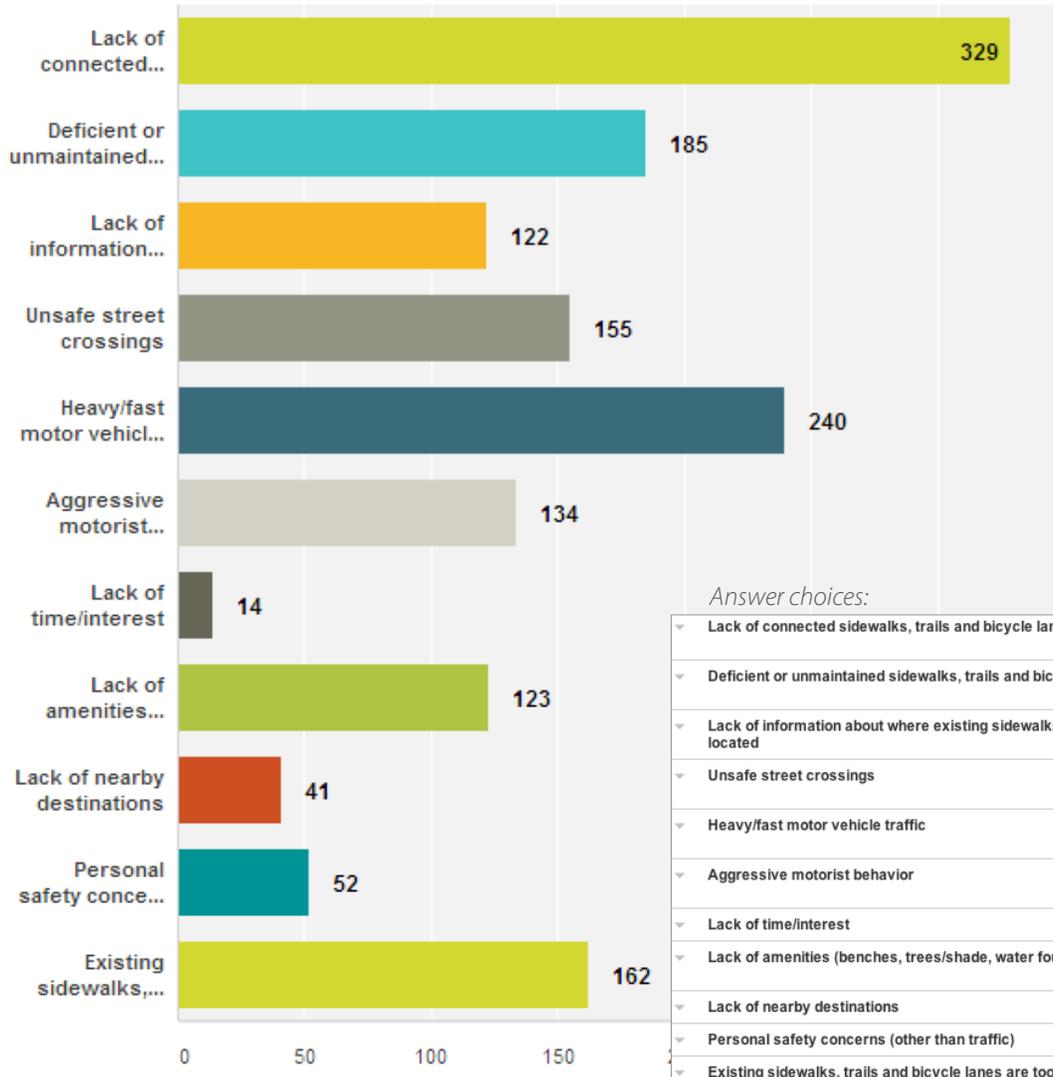
Answered: 425 Skipped: 30





# What do you think are the factors that most DISCOURAGE bicycling or walking in Ocean Isle Beach? Please select up to five factors.

Answered: 424 Skipped: 31





**What are the top three locations for improving conditions for walking and bicycling in Ocean Isle Beach? Examples include locations where we need a new or improved sidewalk, trail, bicycle lane or intersection/street crossing.**

Answered: 319 Skipped: 136

**#1 Top Response:  
First Street (with 123 responses)**

**#2 Top Response:  
Causeway Drive (with 88 responses)\***

**#3 Top Response:  
Second Street (with 86 responses)**

*\*There were an additional 25 responses for "the bridge".*

