

#### **ACKNOWLEDGMENTS**

We extend our sincere appreciation to the residents, visitors, elected officials, town staff, North Carolina Department of Transportation Integrated Mobility Division (NCDOT IMD) staff, the Wilmington Urban Area Metropolitan Planning Organization (WMPO) staff, and stakeholders who all participated in the planning process and guided the development of this Bicycle and Pedestrian Plan. The time, commitment, and input are all greatly appreciated.

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#### **EXECUTIVE SUMMARY**

#### **Project Overview**

The Wrightsville Beach Bicycle and Pedestrian Plan is a community-driven initiative that establishes the vision for walking and biking in our town. The plan identified the existing needs and challenges to develop tailored recommendations to create a safer, more connected, and accessible transportation network for people of all ages and abilities. The Wrightsville Beach Bicycle and Pedestrian Plan provides guidance on future investments for projects, programs, and policies. The plan provides actionable strategies to make Wrightsville Beach more competitive for future funding opportunities.

### **Background**

The development of the Wrightsville Beach Bicycle and Pedestrian Plan was funded through a grant awarded by the North Carolina Department of Transportation's Integrated Mobility Division (NCDOT IMD). Through the Multimodal Planning Program, NCDOT IMD encourages communities to plan their bicycle and pedestrian network at the local and county levels. To date, more than \$8.1 million has been awarded across the state for bicycle and pedestrian plans.

#### **Plan Process**

The Wrightsville Beach Bicycle and Pedestrian Plan included three key phases: vision and needs, recommendations, and documentation. Throughout the plan's development, public engagement played a critical role in refining the identified recommendations, strategies, and actions.

#### **Engagement**

The plan was built on a strong foundation of community engagement and input. The desire to improve biking and walking in the community led to well-attended public engagement events. The approach to gathering community input revolved around two public workshops and one online survey.

#### Recommendations

The plan recommendations include a comprehensive package of pedestrian and bicycle facility types. The diversity of project types helps create a balanced network that prioritizes safety and connectivity. The recommendations were developed in partnership with the plan's steering committee, public input, and staff feedback.

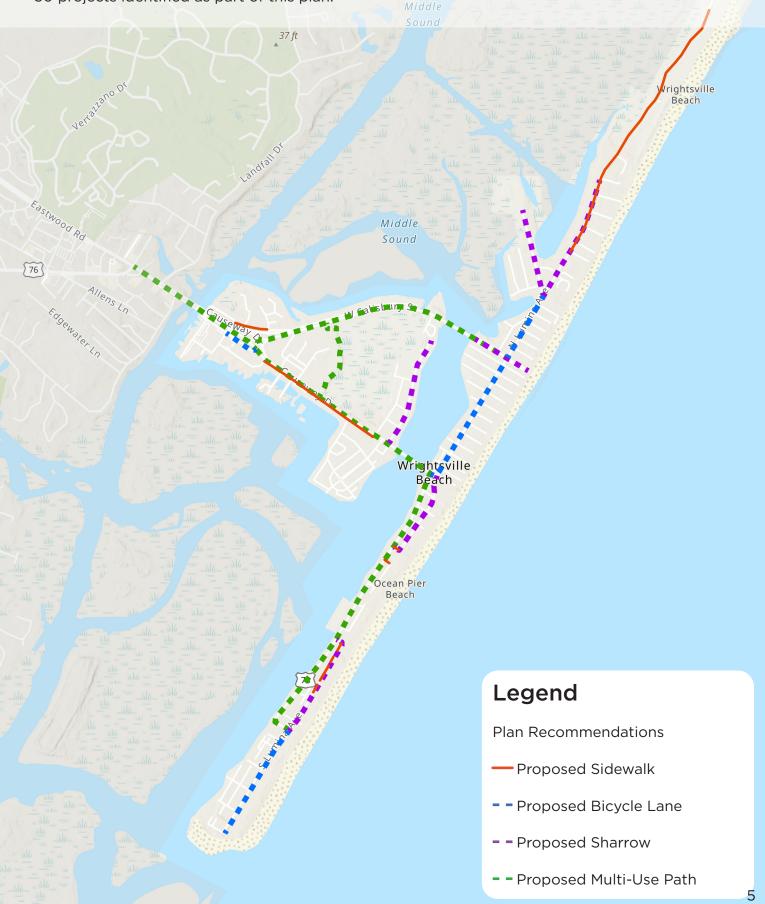
### **Implementation**

The Wrightsville Beach Bicycle and Pedestrian Plan included a robust prioritization process that is consistent with the priorities of NCDOT's Strategic Transportation Prioritization (SPOT) methodology. The projects were grouped into near-, mid-, and long-term priorities. The prioritization is meant to be a dynamic and flexible tool that changes with the priorities of the community. The results of the prioritization reflect the community's current needs and desires.

The plan also provides a variety of programs and policies to support the implementation of project recommendations. With a blend of strategies to enhance mobility, Wrightsville Beach can actively pursue opportunities to fund bicycle and pedestrian projects.

### **Plan Recommendations**

The plan recommendations include a variety of pedestrian and bicycle facilities. There were over 30 projects identified as part of this plan.





## Introduction

#### THE PLAN

The Wrightsville Beach Bicycle and Pedestrian Plan is a community-driven plan to improve biking and walking in our community. The plan identifies the vision for Wrightsville Beach to guide future investments and decisions for bicycle and pedestrian facilities and programs. The Wrightsville Beach Bicycle and Pedestrian Plan includes realistic and tangible strategies to make the town a safer, more accessible, and better connected community.

## THE BACKGROUND

The North Carolina Department of Transportation Integrated Mobility Division (NCDOT IMD) awarded a grant to the Town of Wrightsville Beach to develop a Bicycle and Pedestrian Plan. Through the Multimodal Planning Program, NCDOT IMD encourages the development and maintenance of bicycle, pedestrian, and multimodal network plans at the local and county levels. Over \$8.1 million have been awarded to more than 230 municipalities and six counties across North Carolina for bicycle and pedestrian plans.

#### THE PROCESS

The planning process includes three distinct phases. Throughout the Plan's development, there were key touch points with the public to identify needs, challenges, and opportunities as well as refine recommendations, actions, and strategies.

### Step 1

MARCH 2023 - MAY 2023

The first step in the planning process is to identify the community vision for Wrightsville Beach. The vision should direct each subsequent step of the process and be used to affirm the plan's success. The plan's goals further help define success by highlighting the priorities of the community.

In this phase, a review of the socioeconomic and demographic trends, mobility patterns, and environmental constraints helped establish the planning context to inform future recommendations development.

#### Step 2

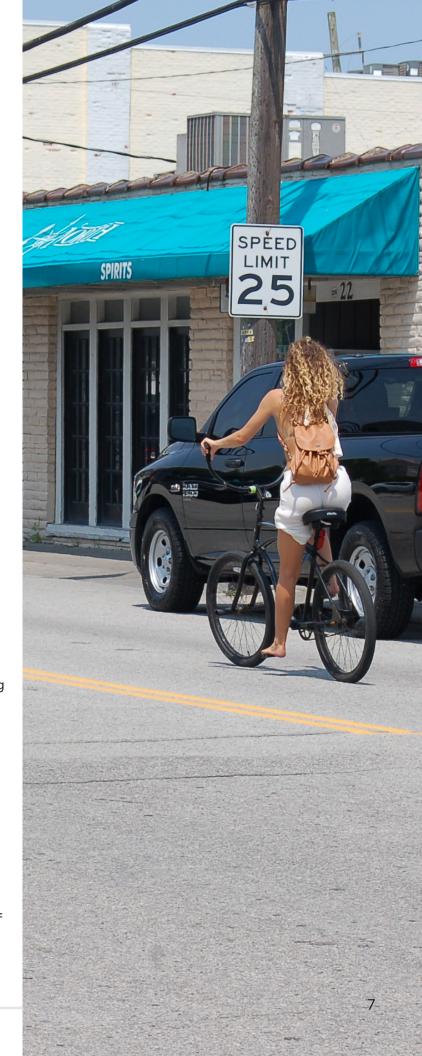
JUNE 2023 - SEPTEMBER 2023

After identifying the needs and challenges in the existing conditions, the draft bicycle, pedestrian, and intersection recommendations were created. The recommendations were reviewed and refined by both the plan's steering committee and members of the public.

#### Step 3

OCTOBER 2023 - JUNE 2024

The final stage of the planning process is plan documentation. This phase includes presenting the draft plan to the steering committee and NCDOT IMD. Both the steering committee and IMD had the opportunity to review and provide comment on the draft plan. After review and revision, the plan was presented to the Board of Aldermen for adoption in June 2024.



#### THE VISION

"Our vision is to create a safe, accessible, and connected bicycle and pedestrian network in and around Wrightsville Beach for people of all ages and abilities. The Wrightsville Beach Bicycle and Pedestrian Plan will consider the unique environmental and geographic challenges and focus on safe connections in the town and broader region."

#### **OUR GOALS**

As part of the visioning process, the steering committee helped identify and establish the plan's goals. The goals were referenced and used to form the development of the project, program, and policy recommendations.

#### Accessibility

Create a network that people of all ages and abilities can use.

#### Connectivity

Ensure that the system connects new and existing facilities.

#### **Economic Development**

Connect people with businesses and opportunities to make the town a more attractive place to invest.

#### **Environment**

Protect existing natural features and provide mindful ways for people to interact with the environment.

#### **Equity**

Seek fairness in mobility to meet the needs of all community members.

#### **Public Health**

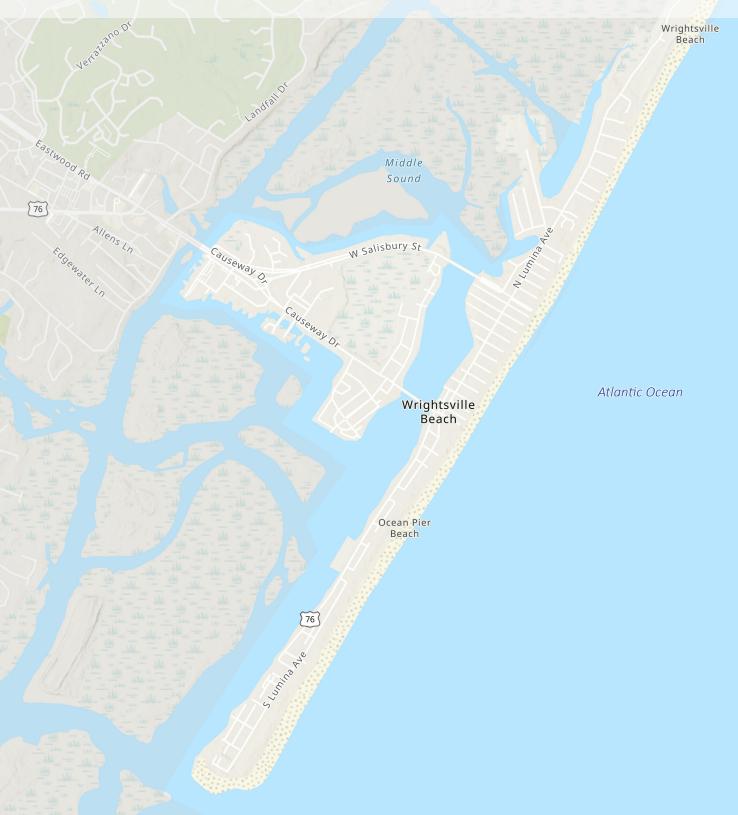
Emphasize how an active transportation contributes to the overall well-being of people who live in, work in, and visit the town.

#### Safety

Promote the safety of everyone, regardless of ability, age, income, or background.

## STUDY AREA

The Town of Wrightsville Beach is located along the eastern seaboard of New Hanover County in southeastern North Carolina. Wrightsville Beach is approximately 4-miles long. In this plan, the "study area" refers to the town's corporate limits of Wrightsville Beach. While the plan considered regional connections, the main focus of this planning effort was concentrated in the town's boundary.



## THE BENEFITS

By providing a quality bicycle and pedestrian network, residents and visitors have an alternative to driving. A well-connected network helps create a safer, healthier, and more vibrant place to live, work, and visit. The Wrightsville Beach Bicycle and Pedestrian plan identifies six benefits, which are a result of a strong active transportation network. These benefits are based on the pillars found in North Carolina's Bicycle and Pedestrian Plan, WalkBikeNC.

#### **Economy**

When safe facilities are provided for pedestrians and bicyclists, people can spend less money on motorized transportation and more money on goods and services. Improving the active transportation network can also increase tourism, property values, retail sales, and promote job creation.

## **Mobility**

Mobility is the equitable and safe availability of transportation options for all people. By investing in a variety of facility types, communities can empower residents and visitors to travel how they want. A quality active transportation network can provide more choices and increase recreation opportunities.

#### **Environment**

To be a steward of the environment means protecting natural resources and integrating strategies to leverage the environment. If more people are using active transportation modes, there will be less noise pollution, lower levels of vehicle emissions, cleaner air, and stronger ecosystems.

### Quality of Life

The bikability and walkability of a community is a strong indicator of livability. In communities where people can be regularly seen biking or walking, there is a sense that the area is a friendly and safe place to live and visit. Providing appropriate facilities can both strengthen community relationships and contribute to a sense of place.

#### Health

Walking and biking are forms of physical activities that residents and visitors can benefit from. Regular practice of these types of exercises are well-known to help prevent or reduce the risk of obesity, heart disease, diabetes, and mental health problems.

## Safety

Safe travel conditions result from effective design, enforcement, and education. While some residents may already feel relatively safe biking or walking, there are opportunities to further improve the safety for the entire community. People of all ages and abilities should be able to safely bike and walk around the town.

#### PREVIOUS PLAN REVIEW

Reviewing previous planning efforts is a critical step in understanding the context of Wrightsville Beach—and the wider region—in order to leverage the recommendations that have already been identified. The following section outlines the several other planning efforts that contain recommendations that were carried forward as part of this plan. All recommendations listed are summarized from their respective documents.

#### Parks, Recreation, and Open Space Master Plan

The goal of the Parks, Recreation, and Open Space Master Plan (2020) is to guide the future efforts of the Town of Wrightsville Beach's Planning and Parks department on how to expand and enhance their park system. The plan's stated goals were to assess the current state of local recreation assets, to stimulate discussion amongst the citizens of Wrightsville Beach and the users of local parks, and to establish a list of recommendations to implement in the next decade.

#### RELEVANT RECOMMENDATIONS

- Establishment of a system of multi-use trails throughout the town
- Improve pedestrian crossings near the Wrightsville Beach Park and town hall
- Creation of the Parks Promendae multi-use trail

#### **Community Transportation Plan**

The Wrightsville Beach Community Transportation Plan (WB-CTP) 2013 is a collaborative effort between the Town of Wrightsville Beach, the Wilmington Urban Area Metropolitan Planning Organization (WMPO) and the NCDOT to create a long-range vision for the area's transportation requirements. A community transportation plan is a long-range planning document that assesses current community needs and provides actionable recommendations. The WB-CTP seeks to blend the needs of pedestrians, bicyclists, motorists, and emergency service providers to create solutions to the transportation needs of the community.

#### RELEVANT RECOMMENDATIONS

- Add multi-use paths along Causeway Drive and Salisbury Street on Harbor Island
- Add a HAWK signal to the East terminus of Pelican Drive
- Provide a bike connection under the Heide Trask Bridge
- Create better pedestrian treatments at the intersection of Waynick Avenue / Lumina Drive
   / Stone Street / Causeway Drive
- Add a multi-use path along Waynick Avenue in South Beach
- Add sharrows to Sunset Avenue and South Lumina Avenue
- Add crosswalks in many different places in South Beach
- Add a multi-use path on North Lumina Avenue in Center Beach

#### Cape Fear Moving Forward 2045

Cape Fear Moving Forward 2045 is a plan to create a fiscally constrained and realistic 25-year transportation plan for the WMPO. Cape Fear Moving Forward 2045 includes recommendations for all modes of transportation including aviation, bicycle and pedestrian, ferry, freight, rail, public transportation, and roadway projects to address the needs of the region. The goals for the WMPO area are to create a safe, realistic, efficient and reliable multimodal network.

#### RELEVANT RECOMMENDATIONS

- Add sharrows on Causeway Drive
- Causeway Drive bicycle and streetscape improvements and street diet
- Add sharrows on Lumina Avenue
- Crosswalk improvements at the intersection of N Lumina Avenue and Causeway Drive
- Realign sidewalks on the Heide Trask Bridge
- Add bicycle lanes on Waynick Boulevard
- Add crosswalk improvements on Causeway Drive and Salisbury Street

#### Pelican Drive & Salisbury Street Bicycle Plan

This bicycle plan was created by the Town of Wrightsville Beach with the collaboration of WMPO in 2009. The town has historically high levels of bicycle and pedestrian travel that is only increasing with the completion of multi-use trails connecting downtown Wilmington to Wrightsville Beach. This plan specifically focuses on solutions to increase the safety of users from the Heide Trask Bridge to the North Beach area of the barrier island in Wrightsville Beach.

#### RELEVANT RECOMMENDATIONS

- Create a multi-use path on the north side of the Heide Trask Bridge
- Place a two-phased mid-block crossing just west of Sea Water Lane
- Make a high visibility crosswalk just west of Kenans Creek Bridge
- Construct standalone bicycle and pedestrian bridges on both the Kenans Creek Bridge and the Banks Channel Bridge

#### **CAMA Land Use Plan**

The Costal Area Management Act (CAMA) of 1974 dictates that all coastal counties create a land use plan that takes into account the sensitive ecosystems that lay on North Carolina's coastline. Additionally, each town and city is required to have a comprehensive plan that is the foundation for zoning ordinances. The CAMA Land Use Plan for Wrightsville Beach satisfies both of those requirements and sets the goals and vison of the town for the future.

#### RELEVANT RECOMMENDATIONS

- Place signage on existing bike routes
- Review current bike plan and seek grants for improvements to the system
- Work with local and state agencies to identify a solution to the overcrowding of the John Nesbitt Loop

#### River to Sea Bikeway Master Plan

The River to Sea Bikeway Master Plan 2013 includes a set of multi-use paths that connect Downtown Wilmington and Wrightsville Beach whose alignment follows the historic Beach Car Line. The plan details the chosen alignment and the recommendations for improvements along it. The plan also includes ideas on how the trail should be implemented and managed.

#### RELEVANT RECOMMENDATIONS

- Add sharrows on Heide Trask Bridge from terminus of recommended Wrightsville Avenue greenway to Keel Street
- Add sharrows under Heide Trask Bridge on east side along Marina Street from Old Causeway Drive to marina
- Add sharrows along West Salisbury Street from eastern-most terminus of Pelican Drive, crossing Kenans Creek Bridge and Banks Channel Bridge
- Add bike lanes along West Salisbury Street from Banks Channel Bridge to terminus at North Lumina Avenue



# **Existing Conditions**

#### THE CONTEXT

The existing conditions chapter is intended to provide a snapshot of the current characteristics, conditions, and mobility considerations for the Town of Wrightsville Beach as they relate to biking and walking. The chapter is divided into three major sections: demographics, mobility, and assets and challenges. Together, this framework provides a strong foundation for understanding the current context of biking and walking around town.

#### THE DATA

As part of the existing conditions, a variety of data sources were used to understand the current community context in order to better plan for future needs. The data in this chapter was provided by the Town of Wrightsville Beach, New Hanover County, the WMPO, NCDOT, and the 2021 American Community Survey (ACS) 5-Year Estimates unless otherwise noted.

#### **DEMOGRAPHICS**

The following pages provide a glimpse into the demographic trends of the Town of Wrightsville Beach including population, race and ethnicity, age, income and poverty, and education attainment.

#### **Population**

The population of Wrightsville Beach has consistently stayed around 2,500 residents since 2010. Since Wrightsville Beach is a coastal community, there are influxes of people during peak, summer seasons. The seasonal population is estimated to around 5,000 people; however, during any given day during the summer, the population could reach nearly 41,000 people. With almost 41,000 people, the number of vehicles, bicycles, and pedestrians will greatly impact the transportation system.







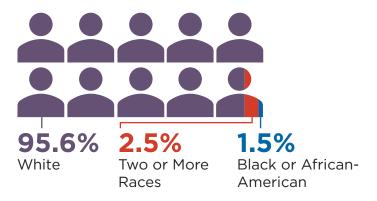


Source: Wrightsville Beach CAMA Plan 2019



#### Race and Ethnicity

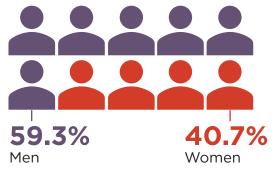
Race and ethnicity help establish the context of the community. Nearly 4% of residents identify with a race other than white.





#### **Gender and Age**

Understanding the relative age of a community can highlight the need for facilities that accommodate younger or older people.
Building a community for people to age in place will make the town more attractive to a wider variety of people.





### **Income and Poverty**

Considering income and poverty during any planning process is essential. The median household income in Wrightsville Beach is higher than in New Hanover County. The percent of households in poverty in Wrightsville Beach is lower than New Hanover County.

# \$72,667

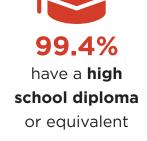
vs **\$66,097** for New Hanover County

Median Household Income



#### **Education**

Education or educational attainment is another interesting data point for any community. In Wrightsville Beach, nearly the entire population has at least a high school diploma or equivalent. More than 50% have a bachelor's degree or higher.





#### **MOBILITY**

The mobility characteristics highlight how people move in and around Wrightsville Beach. The mobility conditions focus on commuting statistics, bicycle and pedestrian crashes, and key destinations in the town. The following sections outline each facet of mobility in greater detail.

#### **Commute Flows**

The following graphic shows the "in-flow, out-flow" of commuters in Wrightsville Beach. Most people commute into Wrightsville Beach for work. Less than 100 people live and work in Wrightsville Beach. This highlights the need for good regional connections to other parts of New Hanover County.



Source: OnTheMap 2020 (All Jobs)

#### **Commute Destinations**

Understanding commuting destinations is equally important as knowing how many people are commuting. The following details provide more insight into where people are commuting for work.

45.5% of residents work in Wilmington

**8.4%**work within
Wrightsville Beach

3.5% work within Murraysville2.4% work within Kings Grant

1.3% work within Leland



- Almost half of all work commutes are to and from Wilmington.
- All work commutes rely on the Heide Trask Drawbridge between Wrightsville Beach and the mainland.

Source: OnTheMap 2020 (All Jobs by Places)

#### **Commute Modes**

Mode split is another important mobility characteristic. More than 80% of residents commute by car, truck, or van. With nearly 826 commuters leaving Wrightsville Beach to go to work, the high number of drivers is unsurprising. A little more than 2% of commuters walk to work. The mode split for commuting is indicative that most people walk or bike for recreation purposes rather than for work trips.



2.1% commute by walking



O.O% commute by bicycle



85.1% commute by car, truck, or van



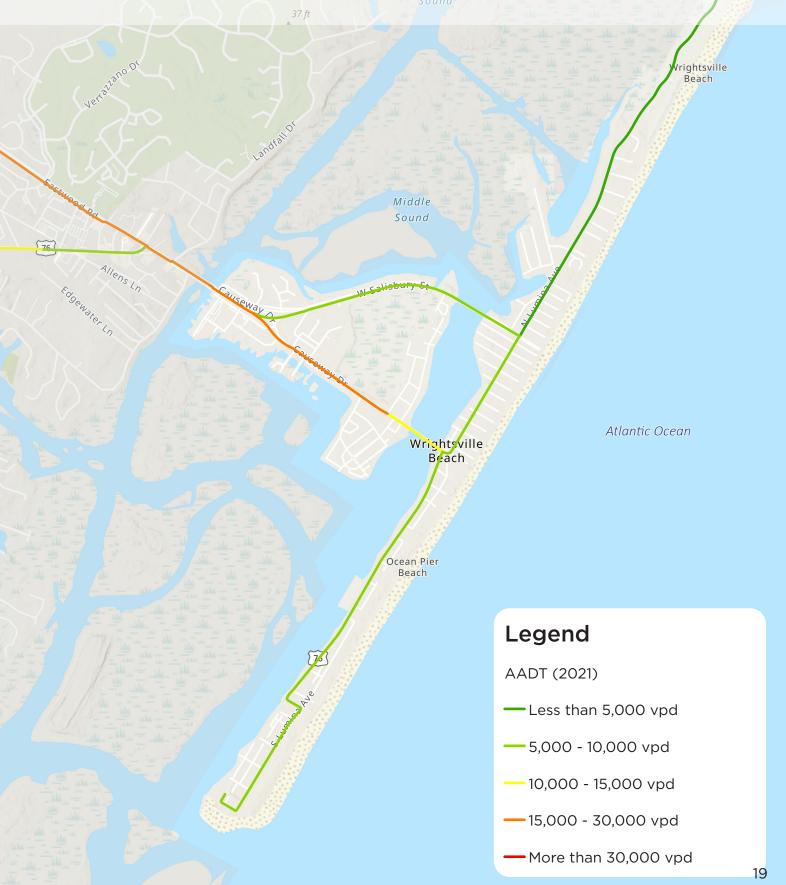
11.9% work from home

- Most people drive to work, but a significant amount walk to work.
- Countywide, only 0.6% commute by walking and 0.5% commute by bicycle.



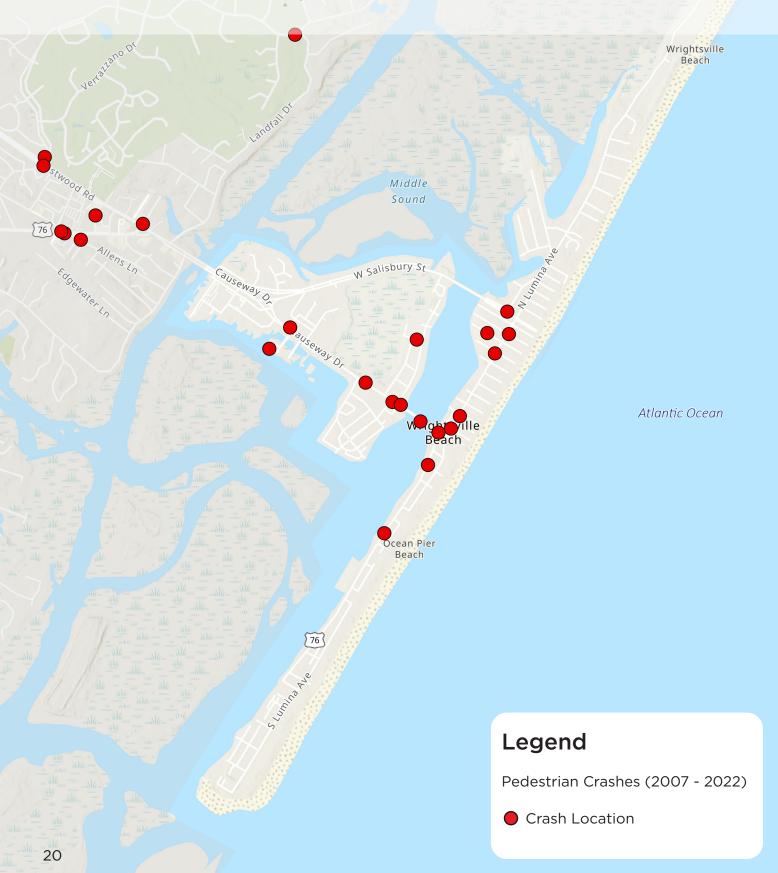
## **Annual Average Daily Traffic**

The annual average daily traffic (AADT) shows the average number of vehicles per day (vpd). The following map shows the AADT in 2021. In Wrightsville Beach, Causeway Drive has the highest volume of traffic with nearly 20,000 vehicles a day.



#### **Pedestrian Crashes**

The pedestrian crashes map shows the crashes involving a pedestrian based on police-reported collisions from 2007 to 2022. There were 16 reported crashes involving a pedestrian. The majority of the crashes resulted in a suspected minor injury or possible injury. The majority of pedestrian crashes are along Causeway Drive or North Lumina Avenue.



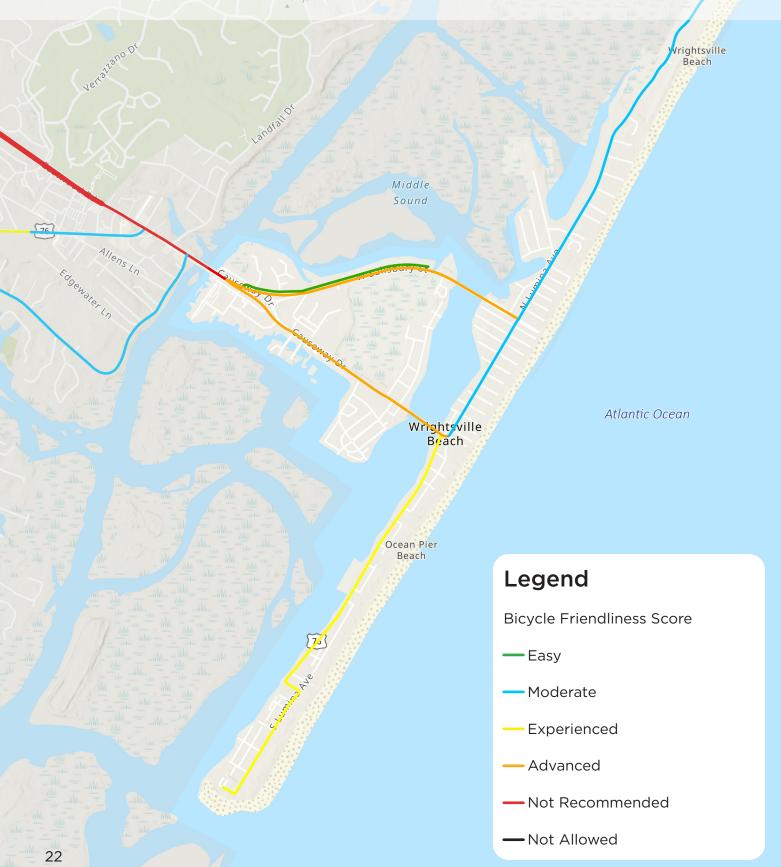
## Bicycle Crashes

The bicycle crashes map shows the crashes involving a cyclist based on police-reported collisions from 2007 to 2022. There were 27 reported crashes involving a cyclist. The majority of the crashes resulted in a suspected minor injury or possible injury. The majority of crashes occur along North Lumina Avenue. Other corridors with a high number of crashes include Waynick Boulevard and Causeway Drive.



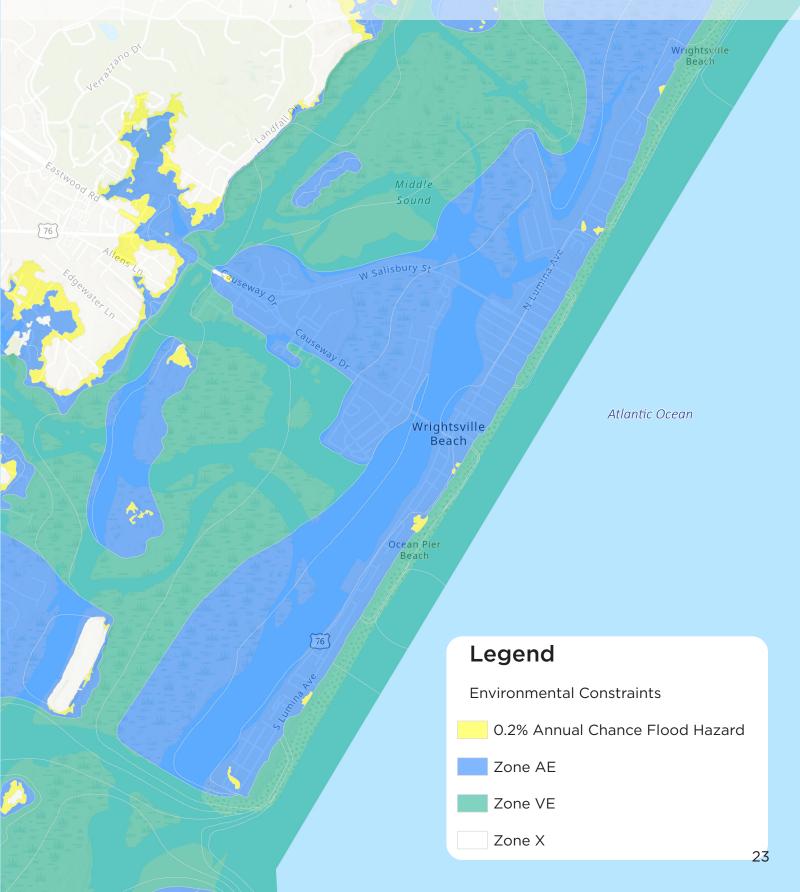
## **Bicycle Suitability**

The WMPO scored roadway segments for "bicycle friendliness." These scores apply to cyclists who are experienced in operating on the roadway network with motorized vehicles. While all bicyclists must use their own judgment to determine what route is best for them, the scores provide valuable insight into the bicycle friendliness, of the town overall.



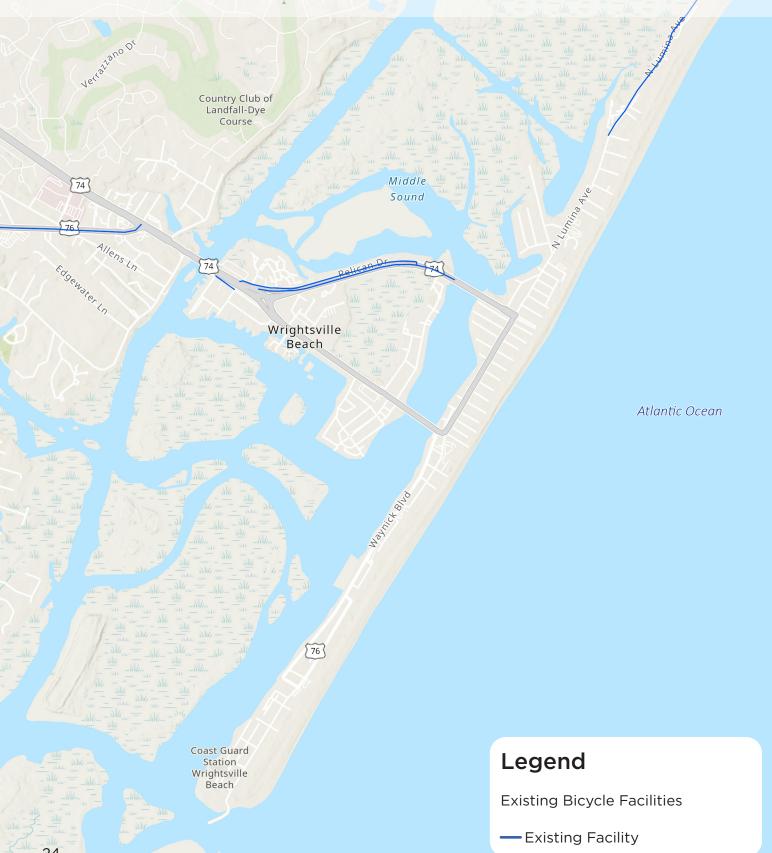
## **Environmental Features**

Wrightsville Beach is a coastal community, which creates a unique environment that the town must consider in the planning and programming of transportation projects and land use decisions. This map uses the North Carolina Flood Risk Information System (FRIS) to understand the unique risks and constraints that the town faces when balancing competing interests.



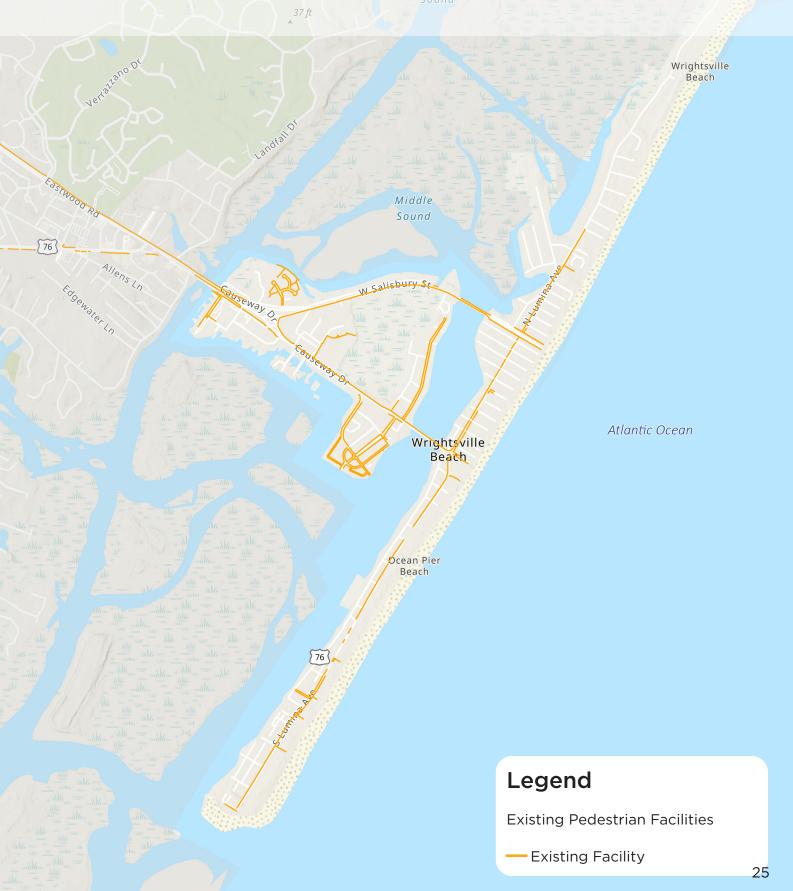
## **Existing Bicycle Facilities**

Currently, the Town of Wrightsville Beach has only a few bicycle facilities. Pelican Drive is the only corridor that has shared lane markings. On West Salisbury Street and North Lumina Avenue there are paved shoulders. In Wrightsville Beach, there are approximately 2.5 miles of existing bicycle facilities.



## **Existing Pedestrian Facilities**

Wrightsville Beach has an impressive existing pedestrian network. With pedestrian facilities along the major corridors, the existing network is fairly well-connected. In Wrightsville Beach, there are a little more than 11 miles of existing pedestrian facilities (including sidewalks on private property).



#### **ASSETS AND OPPORTUNITIES**

A crucial component of the planning process involves identifying opportunities and assets to drive the development of recommendations. Similarly, associated challenges facing the community should also be assessed to consider the unique limitations of the town. The following characteristics were identified through a review of existing conditions, input from the public and steering committee, and guidance from the town staff.

#### **Assets**

In Wrightsville Beach, the strengths of the existing bicycle and pedestrian network include the existing, well-maintained infrastructure that is already in place.

A unique asset is the John T. Nesbitt Loop or "The Loop" around Harbor Island. The 2.5-mile path circles the heart of town. The Loop is popular primarily with walkers or runners. As a key community feature, The Loop provides a strong foundation for the pedestrian network.



#### COMMUNITY ASSETS

- A scenic environment and features of a coastal community
- An active biking and walking community
- A robust pedestrian or sidewalk network

#### COMMUNITY DESTINATIONS

- "The Loop"
- Wrightsville Beach Park
- Wrightsville Beach Farmers' Market
- Wrightsville Beach Elementary School
- Wrightsville Beach Municipal Complex
- Wrightsville Beach Shoreline
- Wrightsville Beach Museum of History





#### **Opportunities**

The Town of Wrightsville Beach faces a unique blend of challenges. The opportunities to improve the bicycle and pedestrian network depends heavily on the associated tradeoffs between vehicular and other modes of transportation including biking and walking. The following constraints identified reflect the current challenges.

#### **CHALLENGES**

- Balancing the space for vehicular traffic and bicycle and pedestrian facilities
- Accounting for the influx of people during peak, summer seasons
- Creating a variety of shared and dedicated facilities
- Providing safe crossing opportunities for pedestrians and bicyclists
- Considering the removal of vehicular parking for the creation of bicycle and/or pedestrian facilities
- Maintaining existing bicycle and pedestrian facilities and signage
- Connecting gaps between existing facilities
- Enforcing the proper use of facilities
- Considering the use of facilities by people of all ages and abilities especially children going to and from school
- Considering the differences between a traditional bike and an electric-bike when planning facilities









## **Public Outreach**

#### THE APPROACH

The Wrightsville Beach Bicycle and Pedestrian Plan is a community-oriented planning effort dependent on the feedback gathered throughout the planning process. The plan is tailored to fulfill the needs and desires of the community by enhancing bicycle and pedestrian facilities in the Town of Wrightsville Beach. The approach to gathering community input included two major in-person outreach events. The first focused on identifying opportunities and challenges. The second focused on gathering feedback on the draft bicycle, pedestrian, and multi-use path recommendations. In addition to the in-person workshops, a public survey was launched in between the workshops to provide community members an opportunity to virtually engage.

## THE RESULTS

The number of responses and quality of engagement was largely credited to the Wrightsville Beach staff and steering committee members who encouraged participation throughout the planning process. The outreach results—both in-person and virtually—demonstrated the excitement around active transportation facilities to enhance saftey and improve the overall quality of life for residents and visitors alike.

#### **PUBLIC WORKSHOPS**

There were two public workshops held to gather information from the community. The following section provides an overview of the input collected from each workshop.

### Workshop #1

On May 17, 2023, the Wrightsville Beach Bicycle and Pedestrian Plan's planning process was introduced to the public at a workshop-style public meeting. The event featured a combination of information and activity-based stations designed to educate attendees on the bicycle and pedestrian planning process, engage in interactive activities, and gather tangible feedback to guide the plan's development.

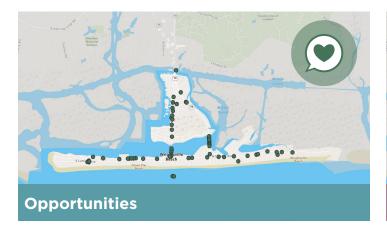






#### MAPPING ACTIVITY

At the workshop, participants were asked to provide feedback on a mapping activity. The activity prompted participants to identify areas where there are opportunities and challenges associated with biking or walking around town. The following summary outlines the input received on the mapping activity.



The opportunities identified focused on creating new facilities to address safety concerns. The following bullets highlight the key takeaways:

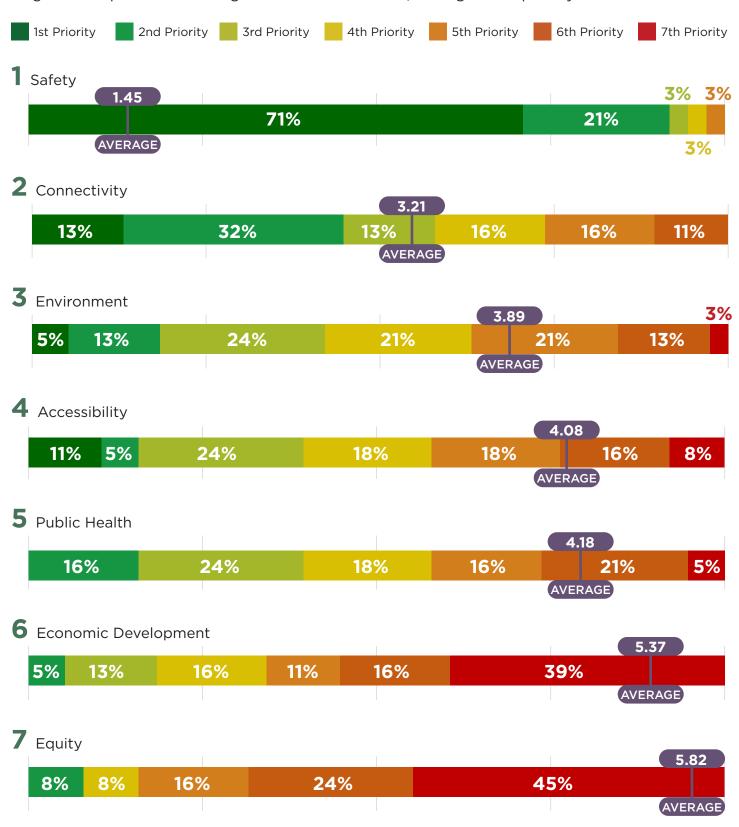
- Eliminate parking to make room for bicycle or pedestrian infrastructure
- Create high visibility crosswalks or bike boxes to increase visibility of pedestrians or cyclists
- Use current right-of-way to install dedicated bicycle lanes or multi-use pathways



The challenges identified focused on enforcement and safety issues. The following bullets highlight the key takeaways:

- Existing facilities are too narrow for people to walk and bike side by side
- There are no buffers between bicycles and vehicles
- Speed limits are too high

A component of the workshop included a priority setting exercise. Participants were asked to prioritize the plan's goals on a scale of one to seven (with one being the highest priority). The Town of Wrightsville Beach recognizes that all of the plan's goals are important; however, understanding the communities priorities helps refine and evaluate the recommendations in later stages of the plan. If the average score is closer to one, the higher the priority.



#### Workshop #2

On August 23, 2023, the second public workshop was held for the Wrightsville Beach Bicycle and Pedestrian Plan. This workshop focused on participants identifying their top three facility recommendations and rating the entire collection of projects based on how well they address the needs and concerns identified in the first workshop. The workshop participants were also invited to share any additional ideas or concerns about the plan.







**20**+
Comments

#### RECOMMENDATIONS

The draft sidewalk, bicycle, and multi-use path recommendations were presented to the public for review. The workshop participants were prompted to answer a series of questions about each type of recommendation and given the opportunity to identify additional needs.

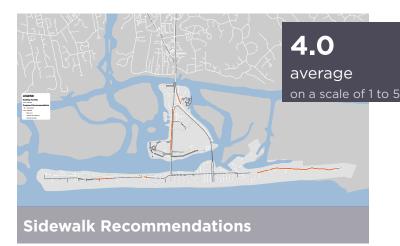
#### **SIDEWALK**

Sidewalks are paved pathways for pedestrians on the side of a roadway. The sidewalk recommendations focused on connections on one or both sides of existing roadways based on the environmental constraints and right-of-way availability.

Workshop participants were asked to rate the sidewalk recommendations on a scale of one to five based on how well the proposed recommendations address biking and walking issues, with one being "not at all" and five being "completely." The average rating was 4.0.

The participants were also asked to identify their top three priority projects. The top three sidewalk projects include:

- North Lumina Avenue from Moore's Inlet to Beach Public Access #2
- Causeway Drive from Secreast Drive to Coral Drive
- Gaps along South Lumina Avenue from Iula Street to Sprunt Street





#### **BICYCLE**

There are several bicycle facility types. The bicycle facilities in this plan, primarily focus on bicycle lanes and sharrows. The bicycle recommendations focused on connections on one or both sides of existing roadways based on the environmental constraints and right-of-way availability.

Workshop participants were asked to rate the recommendations on a scale of one to five based on how well the proposed recommendations address biking and walking issues. The average rating was 4.1.

The participants were also asked to identify their top three priority projects. The top three bicycle projects include:

- North Lumina Avenue from Causeway Drive and West Salisbury Street
- North Lumina Avenue from West Salisbury Street and Parmele Boulevard
- West Salisbury Street from the West Salisbury Street Bridge to Public Beach Access #16

#### MULTI-USE PATH

A multi-use pathway is a facility that may be used by bicyclists, pedestrians, and non-motorized users. The multi-use path recommendations focused on providing safe, dedication facilities for people of all ages and abilities.

Workshop participants were asked to rate the recommendations on a scale of one to five based on how well the proposed recommendations address biking and walking issues. The average rating was 3.5.

The participants were also asked to identify their top three priority projects. The top three multi-use path projects include:

- Waynick Boulevard from South Lumina Avenue to Causeway Drive
- Causeway Drive from Wrightsville Avenue to Old Causeway Drive
- Additional facilities on The Loop





#### ONLINE SURVEY

The Wrightsville Beach Bicycle and Pedestrian Plan launched an online, public survey between July 28, 2023 and August 31, 2023. The online survey blended questions from the first and second public workshops in order to gather more input on the community's vision and priorities. Survey participants were also asked to identify opportunities or challenges associated with biking or walking in Wrightsville Beach.







To start the survey, participants were asked to identify their affiliation with Wrightsville Beach. Survey participants could identify as many affiliations as applicable. This question was used to gauge who was reached as part of the engagement effort. Of those who took the survey, 85% of all participants either live (full- or part-time), work, or own a business in Wrightsville Beach. The other 15% of participants identified as either not working or living in Wrightsville Beach. There were two participants that skipped the question.

At the onset of the survey, participants were asked how often they currently walk or bike in Wrightsville Beach. This question established a base level for understanding how many people actively bike or walk in the town. This question helped validate assumptions about how often people are walking or biking for a trip not related to a commute.



What is your affiliation with Wrightsville Beach?

ic	100	How	often	do y	ou/	walk	or	bike	in
	OPO	Wrig	htsvill	е Ве	ach	1?			

Bike a few times a week or daily

47%	I'm a	full-time	resident	here
-----	-------	-----------	----------	------

**34%** I'm a part-time resident here

3% I work here

2% I own a business here

15% Bike every day

**57%** 

42% Bike a few times a week

92% Walk a few times a week or daily

54% Walk every day

**38%** Walk a few times a week

85%

of survey participants live (full- or part-time), work, or own a business

#### **Level of Comfort**

As part of the survey, participants were asked how comfortable they feel walking or biking around Wrightsville Beach. This question helped establish a baseline for how the community perceives the existing infrastructure. It also highlighted areas for improvement regarding safety, comfort, and accessibility. The results are summarized below.



#### Walking level of comfort

20% Fearless

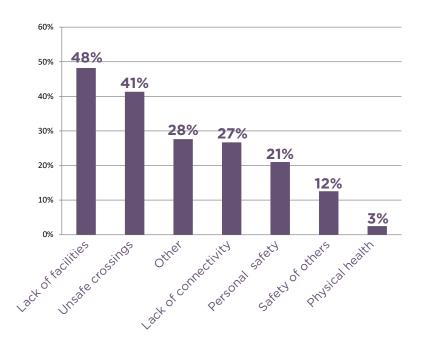
**67%** Confident

13% Interested, but concerned

>1% Uninterested

87% of survey participants feel fearless or confident walking around Wrightsville Beach. This indicates that the existing sidewalk infrastructure is supportive of people who would like to walk.

What existing obstacles prevent you from **walking** in Wrightsville Beach?





#### **Biking level of comfort**

**8%** Fearless

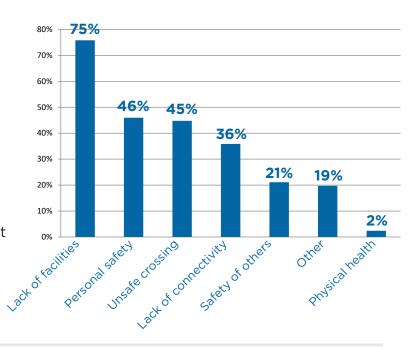
**36%** Confident

49% Interested, but concerned

**7%** Uninterested

49% of survey participants were interested, but concerned about biking in Wrightsville Beach. 75% of survey participants indicated that the lack of dedicated bicycle facilities is a major obstacle to biking around the town.

## What existing obstacles prevent you from **biking** in Wrightsville Beach?



#### STEERING COMMITTEE

The plan's steering committee acted as a decision-making body and provided guidance at critical milestones of the planning process. The committee consisted of the Wrightsville Beach Parks & Recreation Advisory Committee, Wrightsville Beach town staff, and NCDOT IMD. The WMPO also provided input and support during the plan's development process. The roles of the steering committee included:

- Acting as a conduit for community organizations and members to provide a voice during the planning process
- Assisting with the development of the Wrightsville Beach Bicycle and Pedestrian Plan
- Giving feedback on the plan's elements and recommendations
- Providing local insight and local context to refine the plan

#### **Meeting Overviews**

The plan's steering committee met four times over the course of the plan's development.

The project kickoff meeting was held on April 3, 2023. The purpose of the meeting was to provide the steering committee with an overview of the project development process and anticipated timeline of the planning process. The committee members provided input through an interactive activity to identify strengths, challenges, opportunities, risks, and expectations (SCORE). This discussion set the tone for the overall planning process.

The second steering committee meeting was held on May 15, 2023. The committee members crafted a vision statement and priorities for the Wrightsville Beach Bicycle and Pedestrian Plan. A high-level review of existing conditions was presented. The existing conditions outlined the socioeconomic conditions, demographic factors, and transportation considerations.

The third steering committee meeting was held on July 17, 2023. During this meeting, the committee reviewed the public workshop summary and draft recommendations. The steering committee members provided initial feedback on the draft recommendations, which were ultimately refined to incorporate their input.

The final steering committee meeting was held on October 2, 2023. The final meeting reviewed the online survey summary, the second public workshop results, and the draft prioritization criteria. This meeting was the last meeting before a draft of the plan was released to Wrightsville Beach town staff for review.

## Recommendations

### THE DEVELOPMENT

The following chapter highlights the recommended corridor improvements, including sidewalks, bicycle facilities, multi-use pathways, and intersection projects. After the recommendations were developed, the public vetted and provided input on the draft recommendations. The recommendations identified in this chapter represent the culmination of all outreach efforts including the findings from the existing conditions analysis, and the feedbaack from town staff and the plan's steering committee. In the recommendations chapter, each facility type includes a description, unique features, and general design characteristics.

## **FACILITY TYPES**

The following recommendations are divided into four facility types: dedicated pedestrian facilities, dedicated bicycle facilities, multi-use pathways, and intersection improvements. On the following pages, each of the facility types has a dedicated section that includes a project table and a map.

### **Pedestrian Facilities**

A sidewalk is a paved pathway for pedestrians, on one or both sides of an existing roadway. The following characteristics are typical or advantageous of pedestrian facilities:

- Creating a continuous pathway at both sides of an intersection
- Filling gaps to provide connectivity between key destinations
- Building off of the existing pedestrian network

The following design characteristics were considered:

• The standard sidewalk is at least 6 feet wide



## **Multi-Use Pathways**

A multi-use pathway—also referred to as a shared-use pathway—is a facility that may be used by bicyclists, pedestrians, and other non-motorized users. They are separated from the roadway by a physical barrier or open space. The following characteristics are typical or advantageous of multi-use pathways:

- Buffering bicyclists, pedestrians, or other non-motorized users from vehicular traffic
- Creating facilities for people of all ages and abilities
- Sharing space between a variety of non-motorized users

The following design characteristics were considered:

• The standard multi-use path is between 10 to 12 feet wide



## **Bicycle Facilities**

There are a variety of bicycle facility types. To create a complete bicycle network, the types of users and different facilities must be considered. A combination of facilities should be used to complement various skill levels.

#### SKILL LEVEL



- Child Cyclist. These users typically have little to no experience on the road.
- Basic Adult Cyclist. These users are typically less secure about riding in traffic without dedicated bicycle facilities.
- Advanced Cyclist. These users are the most experienced and confident on the road.

#### **BICYCLE LANE**

A bicycle lane is a marked travel lane along a portion of the roadway that has been designated for exclusive use for bicyclists. The following characteristics are typical or unique about a standard bicycle lane:

- Considering during design phase of roadway projects to add buffered or protected lanes
- Creating a dedicated space for bicyclists to create separation between vehicles
- Increasing predictability of bicyclists, pedestrians, and motorists interactions

The following design characteristics were considered:

- The standard bicycle lane is at least 5 feet wide
- The standard buffer width for a buffered bicycle lane is at least 2 feet wide

# o Fo

#### SHARED LANE MARKING (SHARROW)

A shared lane marking is a street marking denoting where a bicyclist may use the entire lane with vehicles. The following characteristics are typical or unique about a sharrow:

- Considering the addition of other signage to alert other roadway users of the potential presence of a bicyclist
- Considering that no additional right-of-way acquisition is necessary



## **Intersection and Crossings**

An intersection or crossing improvement is dependent on the surrounding context. Improving an intersection or crossing can be a cost-effective solution to promote connectivity and safety. The following improvements should be considered:

#### PEDESTRIAN CROSSING IMPROVEMENT

A pedestrian crossing improvement could include highvisibility crosswalks, ADA ramps, curb extensions, and pedestrian refuge island.

#### SIGNAL IMPROVEMENTS

A signal improvement could include infrastructure to support crossing or reconfiguring existing infrastructure. New infrastructure could include pedestrian pushbuttons, pedestrian countdowns, or audible signals. The re-timing or reconfiguring of existing infrastructure could include pedestrian signal timing, concurrent signal timing, or right-turn-on-red restrictions.

#### **BICYCLE BOX**

A bicycle box is a designated, painted area in front of a traffic lane with a signalized intersection that provides bicyclists a visible and safe way to get in front of traffic during a red light.

## Supportive Infrastructure

To create a complete active transportation network, other supportive infrastructure should be considered. This could include the following:

- Benches
- Bicycle parking and storage
- Signage and wayfinding
- Water fountains
- Bicycle repair stations
- Placemaking features including street trees, murals or public art, or other streetscape measures











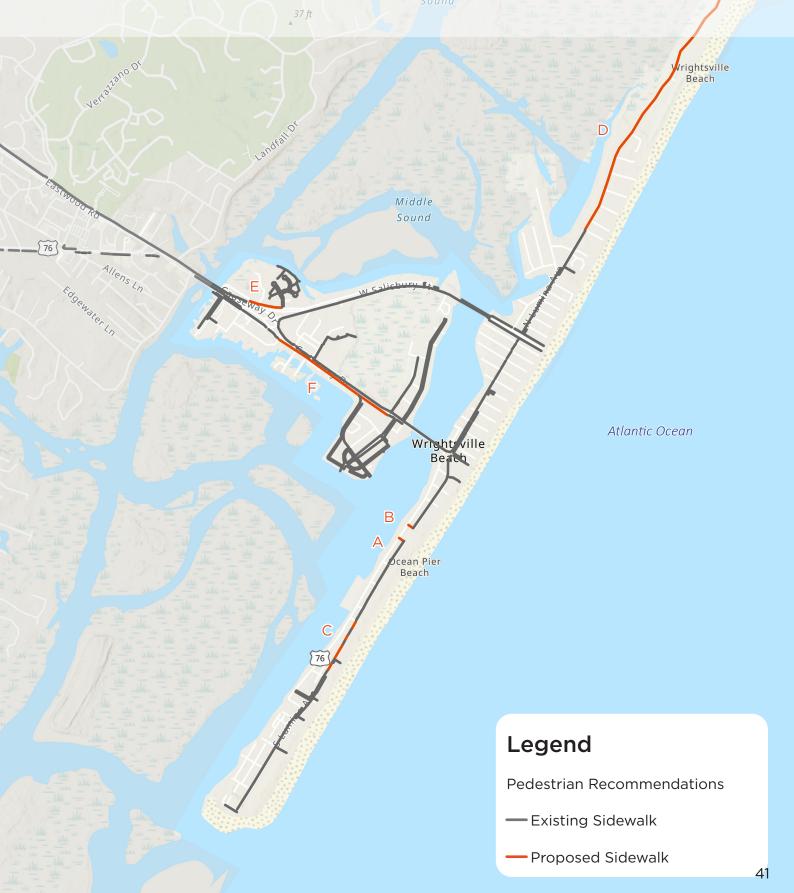
## **Proposed Pedestrian Facility List**

The following table highlights the proposed pedestrian facilities recommended as part of this plan.

ID	Name	Facility	From	То	Length (miles)
Α	Seashore Street	Safe Crossing	Waynick Boulevard	S Lumina Avenue	0.02
В	<b>B</b> Snyder Street Safe Crossin		Waynick Boulevard	S Lumina Avenue	0.02
С	S Lumina Avenue	Sidewalk	Iula Street	Sprunt Street	0.16
D	N Lumina Avenue	Sidewalk	Moore's Inlet	Beach Public Access #2	1.13
E	Pelican Drive	Sidewalk	Driftwood Court	Keel Street	0.13
F	Causeway Drive	Sidewalk	Seacrest Drive	Coral Drive	0.53

## **Proposed Pedestrian Facilities**

The proposed pedestrian recommendations focus on closing the existing gaps in the sidewalk network. By connecting key portions of the network, pedestrians can safely access all areas of the town. The new facilities should be complimented by safe crossing opportunities.



## **Proposed Bicycle Facility List**

The following table highlights the proposed bicycle facilities recommended as part of this plan. The map on the following page also includes the committed projects that NCDOT is actively funding.

ID	Name	Facility	From	То	Length (miles)
Α	N Lumina Avenue	Bike Lane	Causeway Drive	W Salisbury Street	0.58
В	W Salisbury Street	Sharrow	W Salisbury Street Bridge	Public Beach Access #16	0.25
С	N Lumina Avenue	Bike Lane	W Salisbury Street Parmele Boulev		0.29
D	N Lumina Avenue	Sharrow	Parmele Boulevard	S Ridge Lane	0.52
E	Old Causeway Drive	Bike Lane	Keel Street	Causeway Drive	0.14
F	S Lumina Avenue	Bike Lane	Jack Parker Boulevard	Sunset Avenue	0.49
G	S Lumina Avenue	Sharrow	Sunset Avenue	Sprunt Street	0.44
Н	S Lumina Avenue	Sharrow	Snyder Street	Causeway Drive	0.39
ı	N Channel Drive	Sharrow	Causeway Drive	End of Street	0.45
J	Parmele Boulevard	Sharrow	N Lumina Avenue	End of Street	0.35

#### COMMITTED STIP PROJECT

The current <u>State Transportation Improvement Plan</u> (STIP) 2024 - 2033 identifies the transportation projects that will receive funding. The funding for BL-0075 was awarded by the WMPO through it's annual direct attributable program. In Wrightsville Beach, there is currently one bicycle and pedestrian project that is already in construction and assumed to be committed.

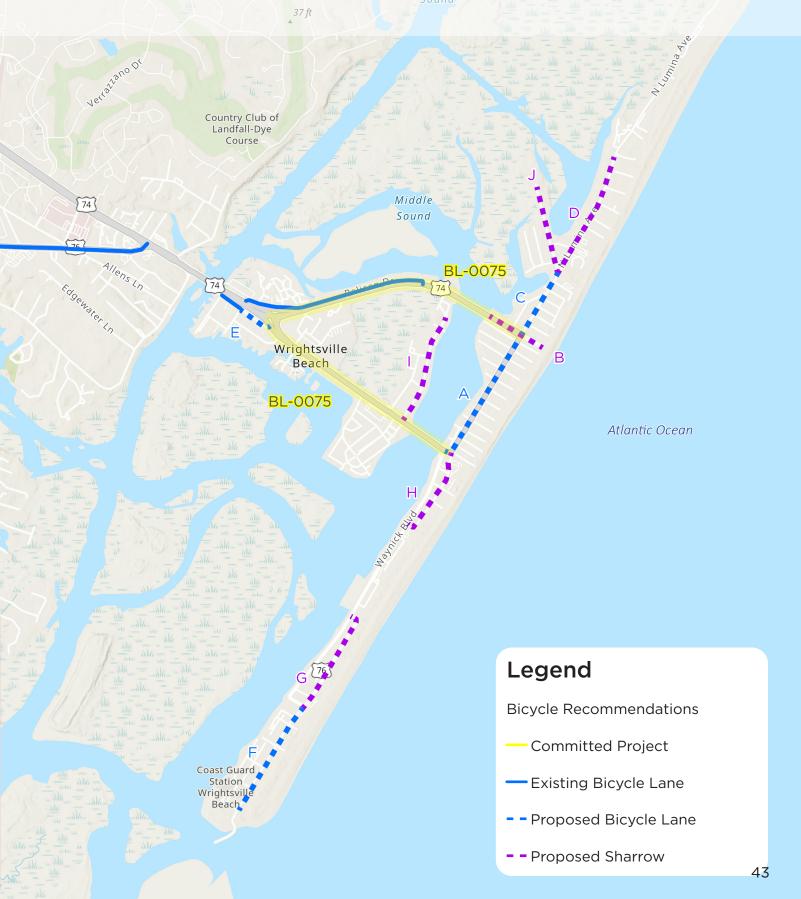
**STIP ID**: BL-0075

Construction Year: 2024

**Description**: Installation of on-street bicycle lanes and pedestrian crosswalks along US 76 (Causeway Drive) and US 74 (West Salisbury Street) in Wrightsville Beach.

## **Proposed Bicycle Facilities**

The proposed bicycle recommendations aim to create safe, connected facilities for residents and visitors alike. The proposed facilities reinforce the desire of the community to have dedicated bicycle facilities separated from vehicles and pedestrians.



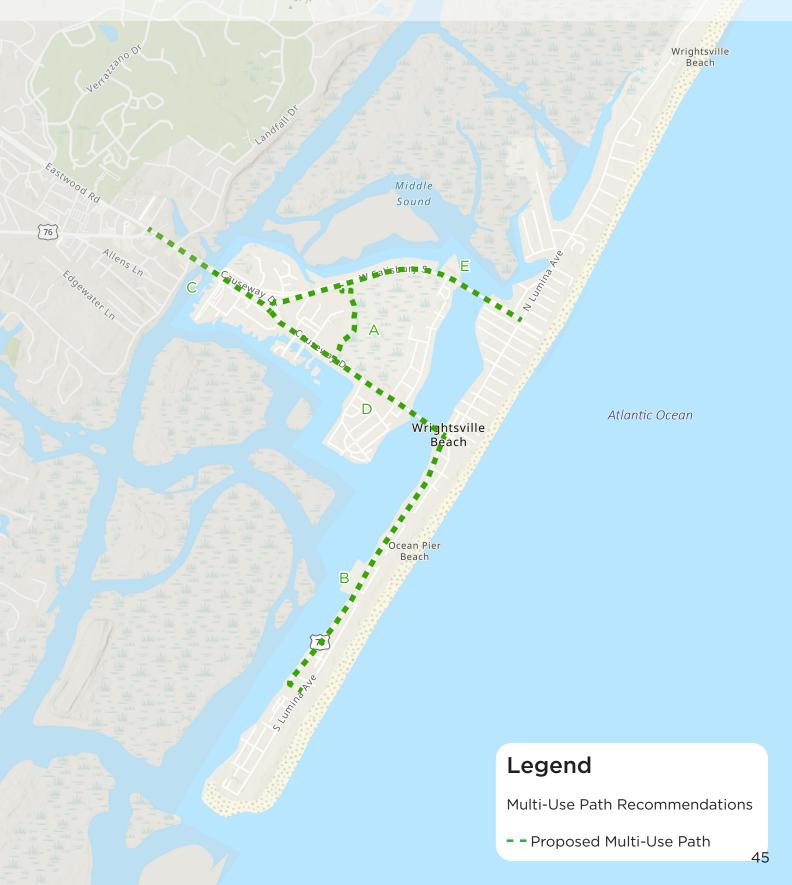
## **Proposed Multi-Use Path Facility List**

The following table highlights the proposed multi-use pathway (MUP) facilities recommended as part of this plan.

ID	Name	Facility	From	То	Length (miles)
Α	Harbor Island Loop	MUP	Causeway Drive	W Salisbury Street	0.37
В	Waynick Boulevard	MUP	Sunset Avenue	Causeway Drive	1.24
С	Causeway Drive	MUP	Wrightsville Avenue	Old Causeway Drive	0.59
D	Causeway Drive	MUP	W Salisbury Street	Waynick Boulevard	0.90
E	W Salisbury Street	MUP	Causeway Drive	N Lumina Ave	1.07

## Proposed Multi-Use Path Facilities

The proposed multi-use pathway recommendations reinforce the need for wider facilities for both pedestrians and bicyclists. While there are currently plans to create a bicycle lane on Causeway Drive, the long-term vision for the community is a wide multi-use path over both bridges to the beach.



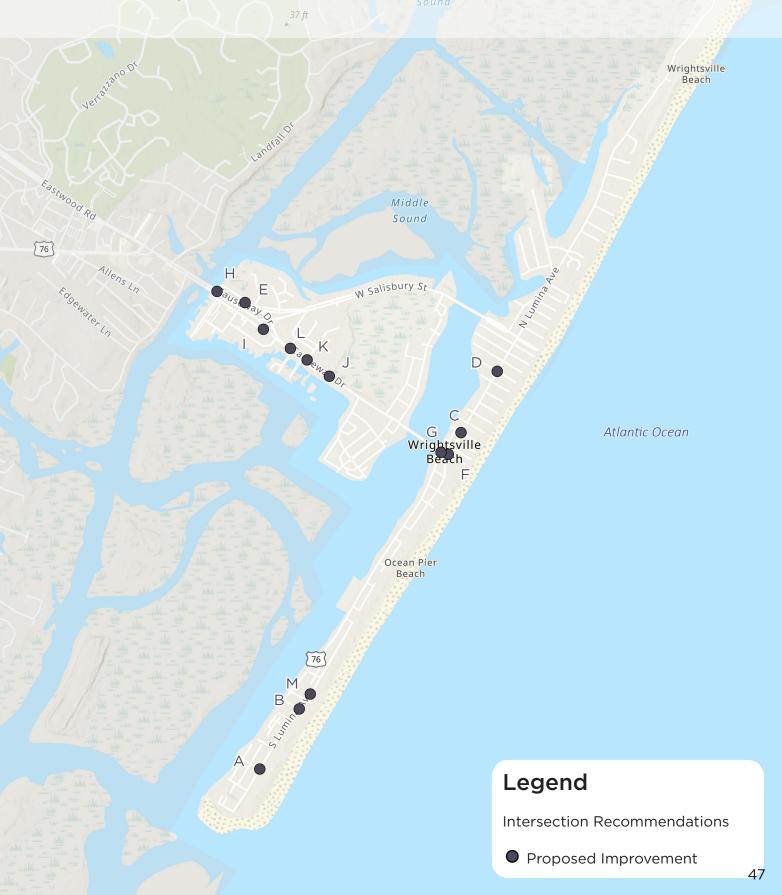
## **Proposed Intersection Recommendations List**

The following table highlights the proposed intersection recommendations that are a part of this plan.

ID	Location
Α	Albright Street at S Lumina Avenue
В	Sunset Avenue at S Lumina Avenue
С	W Columbia Street at N Lumina Avenue
D	W Fayetteville St/E Fayetteville St at N Lumina Avenue
E	River to Sea Bikeway at Pelican Drive
F	Stone Street at Lumina Avenue
G	Causeway Drive at Waynick Boulevard
Н	Causeway Drive at Marina Street
ı	Old Causeway Drive
J	Causeway Drive near Island Drive
K	Causeway Drive at Bob Sawyer Drive
L	Causeway Drive at George Antley Drive (Seawater Lane)
М	Public Beach Access #36 at S Lumina Avenue

## **Proposed Intersection Recommendations**

The proposed intersection recommendations would allow bicycles and pedestrians to safely cross a corridor. The recommendations should consider NCDOT's best practices and design guidelines for intersection improvements.



## **DEMONSTRATION CORRIDORS**

The following demonstration corridors are projects that are analyzed in greater detail. These projects were identified as high-priority projects that are critical to achieving the vision of the Bicycle and Pedestrian Plan for Wrightsville Beach.

#### **COST ESTIMATE**

The planning-level cost estimates listed for each corridor were developed using the 2019 NCDOT Bicycle-Pedestrian Cost Estimation Tool. The cost shown below are inflated to current year dollars. The tool considers a variety of factors and characteristics to generate a cost estimate that includes design, right-of-way acquisition, utilities, and construction. During the preliminary engineering phase of a project, a more accurate cost estimate should be created.

## **Causeway Drive**

SEACREST DRIVE TO CORAL DRIVE

#### **EXISTING CONDITIONS**

Causeway Drive is the main corridor through Wrightsville Beach. Currently, Causeway Drive is a four-lane cross-section with a two-way turn lane until it reaches the Banks Channel Bridge. On Harbor Island, there are numerous key destinations including the Wrightsville Beach Loop. On the channel side, there are no existing sidewalks. Other existing conditions include:

• AADT\*: 15,500

• Speed Limit: 35 mph

Right-of-Way: 70 feet

#### RECOMMENDATION

The identified project segment would add sidewalks along the channel side and recommend providing safe crossing opportunities from one side of Causeway Drive to the other.



FACILITY	Sidewalk
PROJECT ID	F
COST ESTIMATE	\$1,759,000
LENGTH	0.53 miles

#### **Preferred Cross-Section**



#### N Lumina Avenue

MOORE'S INLET TO PUBLIC BEACH ACCESS #2

#### **EXISTING CONDITIONS**

North Lumina Avenue is a two-lane corridor that is heavily traveled by pedestrians, bicyclists, and vehicles. There are pockets of existing parking along this section of North Lumina Avenue. This corridor connects many residential areas to the central part of the island with shopping and retail opportunities. Other existing conditions include:

• AADT: 5,000

Speed Limit: 25 mphRight-of-Way: 30 feet

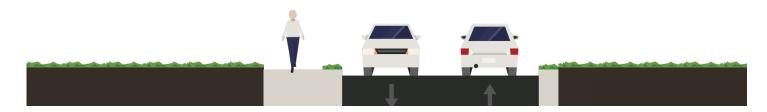
#### RECOMMENDATION

The identified project segment would add sidewalks along North Lumina Avenue. It would connect to existing sidewalk at the beach access point #8. The available parking may have to be reduced to accommodate the sidewalk. The connection would allow pedestrians to safely travel to and from the north part of the island.



FACILITY	Sidewalk
PROJECT ID	D
COST ESTIMATE	\$1,628,000
LENGTH	1.13 miles

#### **Preferred Cross-Section**



#### N Lumina Avenue

CAUSEWAY DRIVE TO W SALISBURY STREET

#### **EXISTING CONDITIONS**

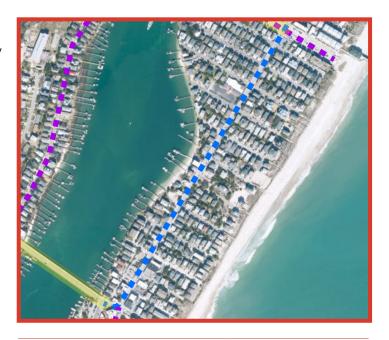
This section of North Lumina Avenue is a heavily traveled corridor for pedestrians, bicyclists, and vehicles. Between Causeway Drive and West Salisbury Street, North Lumina Avenue is a two-lane cross section with parking on both sides. This section of North Lumina has restaurants, hotels, a grocery store, and public parking lots. Other existing conditions include:

• AADT: 5,100

Speed Limit: 25 mphRight-of-Way: 45 feet

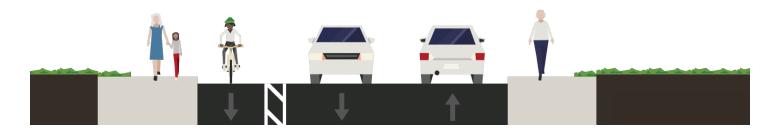
#### RECOMMENDATION

The identified project segment would add a bicycle lane on one side of the street. Currently, the north side parking is closed on weekends and holidays allowing for bicycles and pedestrians on the loop. The addition of a bicycle lane on this section would require the removal of on-street parking along the corridor. A dedicated bicycle facility should be supplemented by adequate signage, markings, and bicycle parking. During public engagement, this particular section of North Lumina Avenue was heavily cited by residents as a top priority corridor.



FACILITY	Bicycle Lane
PROJECT ID	А
COST ESTIMATE	\$1,444,000
LENGTH	0.58 miles

#### **Preferred Cross-Section**



#### N Lumina Avenue

W SALISBURY STREET TO PARMELE BOULEVARD

#### **EXISTING CONDITIONS**

This section of North Lumina Avenue is a twolane corridor with dedicated right-turn lanes at West Salisbury Street. There is on-street parking and sidewalks on both sides of the corridor. This section of North Lumina Avenue connects the north side of the island to Harbor Island via West Salisbury Street. Other existing conditions include:

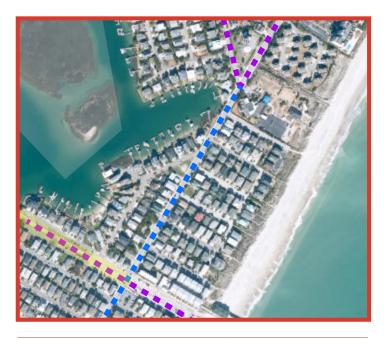
• AADT: 5,000

• Speed Limit: 25 mph

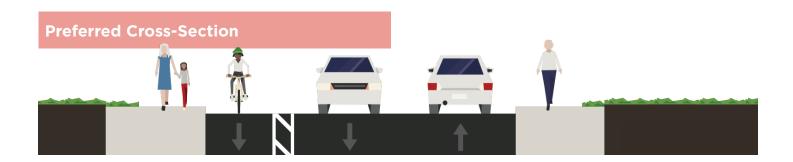
• Right-of-Way: 30 - 50 feet

#### RECOMMENDATION

The identified project segment would add a bicycle lane on one side of the street. The addition of a bicycle lane would require the removal of on-street parking along the corridor. At West Salisbury Street, a bike-box may be required to allow bicyclists to safely make a left turn at the signalized intersection. During public engagement, this section of North Lumina Avenue was a priority for many residents.



FACILITY	Bicycle Lane
PROJECT ID	С
COST ESTIMATE	\$2,133,000
LENGTH	0.29 miles



## **Waynick Boulevard**

SUNSET AVENUE TO CAUSEWAY DRIVE

#### **EXISTING CONDITIONS**

Waynick Boulevard is a primary corridor on the Banks Channel side. Waynick Boulevard is a four-lane cross-section with parking on one side of the street. There are several marked crosswalks across Waynick Boulevard that connect the channel with the beach. Other existing conditions include:

• AADT: 8,600

• Speed Limit: 35 mph

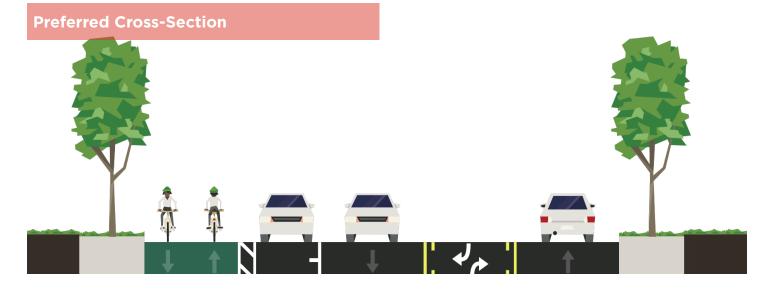
• Right-of-Way: 65 feet

#### RECOMMENDATION

The identified project segment would add a multi-use pathway between Sunset and Causeway Drive. This multi-use pathway would be used by both pedestrians and bicyclists. The addition of a multi-use pathway would require a road diet, meaning a vehicle travel lane would be removed. The proposed cross-section is shown below. A multi-use pathway on Waynick Boulevard would provide a safe connection for both pedestrians and bicycles.



FACILITY	Multi-Use Path
PROJECT ID	В
COST ESTIMATE	\$3,631,000
LENGTH	1.24 miles



## **Causeway Drive**

W SALISBURY STREET TO WAYNICK BOULEVARD

#### **EXISTING CONDITIONS**

Causeway Drive is the main corridor through Wrightsville Beach. Currently, Causeway Drive is a four-lane cross-section with a two-way turn lane until it reaches the Banks Channel Bridge. On Harbor Island, there are numerous key destinations including the Wrightsville Beach Loop. There is a sidewalk on one side of Causeway Drive. There are currently plans to add a bicycle lane on this section of Causeway Drive. Other existing conditions include:

• AADT: 15,500

• Speed Limit: 35 mph

• Right-of-Way: 55 - 70 feet



FACILITY	Multi-Use Path
PROJECT ID	D
COST ESTIMATE	\$3,250,000
LENGTH	0.90 miles

#### **RECOMMENDATION**

The identified project segment would add a multi-use pathway on Causeway Drive. This project reflects the long-term vision of the community. While there is already a project to add bicycle lanes on this portion of Causeway Drive, a more protected facility is desired by the community.

#### **Preferred Cross-Section**

The following cross-sections are preliminary designs from NCDOT (September 2023). The town should continue to coordinate with NCDOT during the development and finalization of these plans.

Causeway Drive - Banks Channel Bridge



Causeway Drive - Banks Channel Bridge Approach



# Implementation

## THE FOUNDATION

The early engagement opportunities and existing conditions helped create the foundation for the facility recommendations. In order to help prioritize the recommended projects, a quantitative process was created to identify a path forward. The goal of the prioritization process is to provide the town with a guide to plan for future investments. The prioritization is meant to be a dynamic process that changes with community values over time.

The prioritization for the Wrightsville Beach Bicycle and Pedestrian was initially developed using the priorities of the state as a starting point. This will make the town's projects more competitive in the future to receive state funding. The prioritization will help establish the foundation for the town to begin building a complete, accessible active transportation network.

## **PRIORITIZATION**

#### **Prioritization Criteria**

By using a quantitative methodology, the project recommendations were sorted into three prioritization tiers: near-, mid-, and long-term. Typically, near-term projects are identified to be initiated or completed prior to the mid- and long-term projects; however, the prioritization should be flexible to allow for implementation due to changes in available resources, public priorities, or time.

NCDOT priorities for Strategic Transportation Prioritization (SPOT) methodology was the initial starting point to identify the prioritization criteria used in the Wrightsville Beach Bicycle and Pedestrian Plan. With guidance from the plan's steering committee, the prioritization criteria and weights were modified to reflect public sentiment. By using a framework that is similar to NCDOT, Wrightsville Beach can actively pursue state funding, as these projects actively demonstrate the alignment with state priorities.

30%

#### **SAFETY**

This criteria created a composite score by analyzing the number of crashes, crash severity, and incidents involving a bicycle or pedestrian. The projects along more dangerous corridors received a higher score.

25%

#### ACCESSIBILITY AND CONNECTIVITY

This criteria identified the geographic proximity to key destinations and connectivity to the existing active transportation network. The projects that connected to existing sidewalks or bicycle facilities within a specified proximity received a higher score.

25%

#### **PUBLIC INPUT**

This criteria combined all the public feedback collected during public engagement to identify project priorities. The projects identified as higher priority receive a higher score.

15%

#### COST EFFECTIVENESS

This criteria used the NCDOT 2019 cost estimation tool to create a planning-level cost estimate. The combined total score of all prioritization criteria was divided by the cost estimate. The higher the benefit relative to the cost, the higher the score.

5%

#### **DEMAND AND DENSITY**

This criteria used a spatial analysis of demographic groups within a specified distance from the project location. The projects that impacted the most people received a higher score.

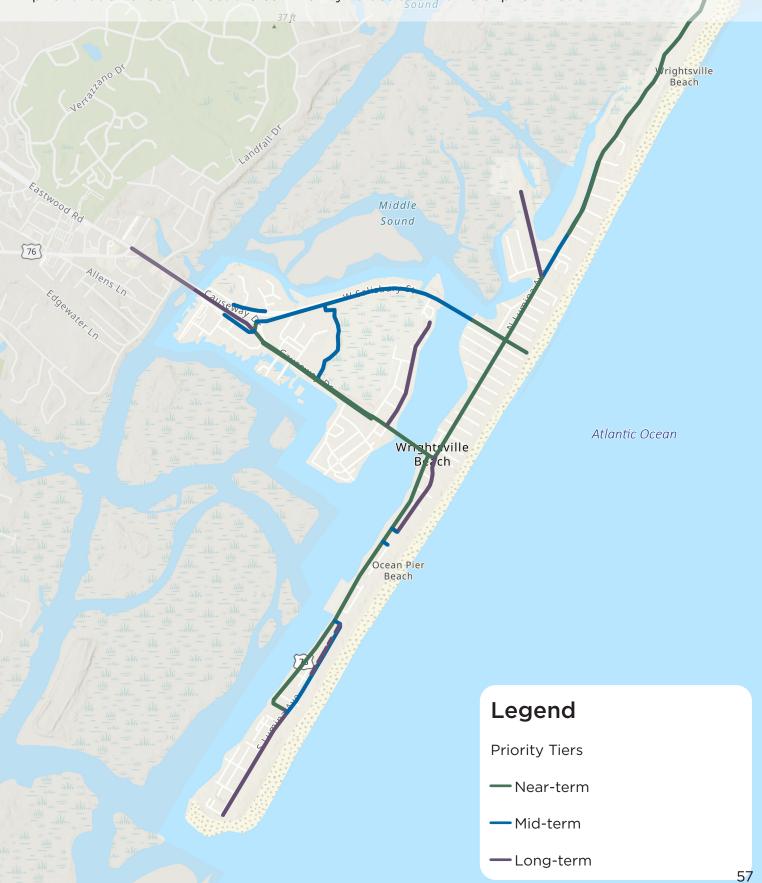
## **Project Results**

The table below shows the pedestrian, bicycle, and multi-use pathway corridor recommendations in priority tiers. The projects were prioritized based on the evaluation criteria described on the preceding page.

	Туре	ID & Name	From	То
NEAR-TERM	Pedestrian	(D) N Lumina Avenue	Moore's Inlet	Public Beach Access #2
	Pedestrian	(F) Causeway Drive	Seacrest Drive	Coral Drive
	Bicycle	(A) N Lumina Avenue	Causeway Drive	W Salisbury Street
	Bicycle	(B) W Salisbury Street	Salisbury Street Bridge	Public Beach Access #16
NEA	Bicycle	(C) N Lumina Avenue	W Salisbury Street	Parmele Boulevard
	MUP	(D) Causeway Drive	W Salisbury Street	Waynick Boulevard
	MUP	(B) Waynick Boulevard	Sunset Avenue	Causeway Drive
	Pedestrian	(A) Seashore Street	Waynick Boulevard	S Lumina Avenue
	Pedestrian	(B) Snyder Street	Waynick Boulevard	S Lumina Avenue
Ω Σ	Bicycle	(E) Old Causeway Drive	Keel Street	Causeway Drive
MID-TERM	Bicycle	(G) S Lumina Avenue	Sunset Avenue	Sprunt Street
Σ	Bicycle	(D) N Lumina Avenue	Parmele Boulevard	S Ridge Lane
	MUP	(A) Harbor Island Loop	Causeway Drive	W Salisbury Street
	MUP	(E) W Salisbury Street	Causeway Drive	N Lumina Avenue
	Pedestrian	(C) S Lumina Avenue	Iula Street	Sprunt Street
	Pedestrian	(E) Pelican Drive	Driftwood Court	Keel Street
ONG-TERM	Bicycle	(F) S Lumina Avenue	Jack Parker Boulevard	Sunset Avenue
G-TI	Bicycle	(H) S Lumina Avenue	Snyder Street	Causeway Drive
0 0	Bicycle	(I) N Channel Drive	Causeway Drive	End of Street
	Bicycle	(J) Parmele Boulevard	N Lumina Avenue	End of Street
	MUP	(C) Causeway Drive	Wrighstsville Avenue	Old Causeway Drive

## **Prioritized Recommendations**

The project prioritization led to the identification of near-, mid-, and long-term recommendations. This prioritization process is meant to be dynamic and flexible. Future iterations of the project prioritization should reflect the community values at the time of prioritization.



## **PROGRAMS**

To compliment the identification of linear project recommendations, encouraging the town to consider programs that support bicycle and pedestrian culture within the community is equally important. Investments in these programs in coordination with infrastructure improvements, will further safety, education, and awareness.

## Education

The following programs are primarily focused on educational opportunities to promote biking and walking.

#### BE A LOOKER

"Be a Looker" is a program of Go Coast, WMPO's Transportation Demand Management program. Like the statewide program, Watch for Me NC, "Be a Looker" educates the public on best practices and laws related to bicycle and pedestrian safety and aims to foster a safe and respectful culture around walking and biking. The materials may be requested through Go Coast, which provides alternative and sustainable transportation options to those who live, work, and play in the region.

https://www.gocoastnc.org/bealooker/

#### LET'S GO NC!

Let's Go NC! is a program designed to assist instructors in encouraging and teaching safe pedestrian and bicycle behaviors. The curriculum helps children develop skills to promote active transportation choices. The all-in-one package of lesson plans, materials, activities, and instructional videos will help encourage children to develop safe behaviors to be carried into adulthood. Let's Go Walking! and Let's Go Biking! cover five target areas each. The skills and concepts are created for various developmental levels of children.

https://connect.ncdot.gov/projects/BikePed/Pages/LetsGoNC.aspx

#### SAFE ROUTES TO SCHOOL

Safe Routes to School (SRTS) program focuses on making walking or biking to school safer and more accessible for children, especially children with a disability. The SRTS program can improve the overall quality of children's health, mitigate traffic congestion near schools, and improve the environment and air quality.

http://guide.saferoutesinfo.org/introduction/index.cfm

#### WATCH FOR ME NC

The Watch for Me NC program aims to reduce bicycle and pedestrian crashes through a comprehensive approach that blends public education, community engagement, and law enforcement. The program is scalable to communities based on the size and geographic context. The program builds local capacity through training, planning workshops, and exchanging information with peers.

## **Encouragement**

The following programs and events are primarily focused on encouraging biking and walking through supportive measures. These programs should be considered in tandem with implementing the project recommendations identified in this plan. The Town of Wrightsville Beach should consider the following encouragement programs. The town's dedication and passion for a community approach was heavily relayed at each meeting for the Wrightsville Beach Bicycle and Pedestrian Plan.

#### **BICYCLE PARKING**

Parking for bicycles is a critical strategy for promoting and encouraging bicycling in any community. By providing convenient, secure bicycle parking, people could be more likely to replace car trips with bicycle trips. Not only does providing bicycle parking encourage people to bike, it also establishes the town as a bicycle-friendly community. Guidance on bike parking, including site planning for short and long-term parking, rack selection, and placement can be found in the Association of Pedestrian and Bicycle Professionals (APBP) Essentials of Bike Parking.

https://www.apbp.org/assets/docs/EssentialsofBikeParking FINA.pdf

#### BIKE FRIENDLY COMMUNITY DESIGNATION

The Bicycle Friendly Community program provides guidance to make communities more vibrant destinations to bike and walk. Sponsored by the League of American Bicyclists, the Bicycle Friendly Community has a checklist for current and aspiring bicycle-friendly communities. The Town of Wrightsville Beach should consider assessing the criteria and work towards submitting an application.

https://bikeleague.org/bfa/community/

#### MICROMOBILITY OR BIKE SHARE

Shared micromobility or "bike share" are an emerging transportation option that can increase walking and biking. Establishing a bike share program could bolster the safety, livability, and sustainability of the community without the personal investment in a bicycle. While micromobility solutions may be more applicable in a denser, urban area, the Town of Wrightsville Beach could consider exploring a bicycle share in the future if there is community desire.

#### **OPEN STREETS EVENTS**

Open streets initiatives temporarily close streets to automobile traffic, so that people may use them for other activities, such as walking, jogging, bicycling, skating, and dancing. Inspired by the "Ciclovias" in Central and South America, open streets events are designed to encourage residents to rethink public spaces, understanding that our streets can have a multitude of uses.

https://openstreetsproject.org/

#### THEMED BIKING EVENTS

Biking events encourage active transportation and present opportunities for residents to socialize over shared experiences. Local advocacy groups and/or the Town can promote biking by hosting themed bike rides. Events can be centered around holidays, local festivals, or coincide with national events such as Earth Day and National Trails Day. For many communities, these events lead to regularly scheduled bike rides.

#### WALK OR BIKE TO SCHOOL

A walk or bike to school day are events that encourage students and parents to walk or bike to school together. Typically, these events highlight the environmental and health benefits associated with walking or biking to school. NCDOT's Bicycle Helmet Initiative is a program that helps local governments, nonprofits, schools, law enforcement, etc. distribute free helmets to low-income children as well as provide an educational component for safety in preparation for National Bike or Walk to School Day. National Bike to School Day occurs in May as part of Bike Month (also in May). Walk to School Day occurs in October.

#### WAYFINDING SIGNAGE

Another important aspect of a complete transportation network is wayfinding signage for both bicycles and pedestrians. Creating a wayfinding system that consists of signage or pavement markings to help guide bikers or walkers to their destination is crucial. For bicycles, signs are typically placed at decision points along a bicycle route or other key locations that lead to a designated, safe route.

#### **Evaluation**

The following program is primarily focused on evaluating biking and walking. This program is important to understand and quantify the existing demand or to understand how facility recommendations are changing behaviors in Wrightsville Beach.

#### COUNT PROGRAM

A pedestrian or bicycle count program provides non-motorized travel information along roadways. A count program helps communities understand how much existing bicycle or pedestrian traffic there is. Communities that show clear evidence of high-activity are more likely to receive funding for projects. The Town of Wrightsville Beach should coordinate with regional and state partners to explore pedestrian or bicycle counting programs.

## **POLICIES**

Similar to program recommendations, policy recommendations will help address other aspects of promoting walking or biking in Wrightsville Beach. A policy typically determines how the physical space is allocated between public and private entities. The policy recommendations are tangible actions that the town can take to create safer opportunities to walk or bike. The following policies will help align the community sentiment for safer, more-accessible spaces.

## **Complete Streets Policy**

North Carolina's <u>"Complete Streets" Policy</u> directs NCDOT to consider various modes of transportation when building new projects or improving existing infrastructure. Understanding the evaluation methodology will set up the town to successfully coordinate with partners and communicate community-needs within the Complete Streets elements. The <u>Complete Streets Implementation Guide</u> provides a comprehensive approach for incorporating Complete Streets into planning, design, programming, and maintenance.

https://connect.ncdot.gov/projects/BikePed/Pages/Complete-Streets.aspx

#### **NACTO**

The <u>National Association of City Transportation Officials</u> (NACTO) is an association of 100 American cities and transit agencies that exchanges ideas and best practices to collectively approach transportation issues. NACTO publishes resources for transportation practitioners, policy-makers, and advocates. The design guides help address the multitude of applications for bicycle, pedestrian, and transit facilities. The Town should reference the NACTO publications—particularly the Designing for All Ages & Abilities, Don't Give Up at the Intersection, Urban Bikeway Design—for best practices as they relate to Wrightsville Beach.

https://nacto.org/publications/#design-guides-design-guidance

#### **Code of Ordinances**

The Wrightsville Beach <u>Code of Ordinances</u> are local laws that are enforced by local governments. They are enacted by vote, typically by a council. The town should review its' ordinance to define and encourage standards as they relate to walking or biking. The review should consider the following elements:

- Add bicycle parking to policies and design standards
- Require the addition of sidewalks into private site development
- Consider adding language to promote the connectivity between sidewalk and bicycle facilities
- Include specific language on sidewalk requirements in street design
- Include specific language on bicycle lane requirements in street design

https://codelibrary.amlegal.com/codes/wrightsvillebeach/latest/overview

More design guidelines can be found in the Plan's Appendix.

## **ACTION PLAN**

The key to successful implementation is the continuous dedication of and partnership between town staff and elected officials, NCDOT, and other regional planning partners like WMPO. Through partnerships, Wrightsville Beach can pursue programmatic efforts to further improve the active transportation network. The following action table helps establish a framework to move the recommendations in this plan into design, construction, and implementation. The list of actions is extensive but not fully comprehensive. The Town of Wrightsville Beach should consider new opportunities as they arise.

#### **Characteristics**

Actions require different levels of resource allocation, including time and cost. While some actions have greater impact on further active transportation, they might be more expensive or take longer to implement or fully realize. For each program or policy, the time, cost, and impact are identified. This exercise illustrates the variety of tradeoffs that could be made.

#### **COST**

How much will it cost to initiate and maintain this action?







Less Cost

More Cost

#### TIME

How much time will be required to execute this action?







Less Time

More Time

#### **IMPACT**

How likely will this action make the town more walkable and bikeable?







Less Impact

More Impact

Action	Cost	Time	Impact
Adopt the Wrightsville Beach Bicycle and Pedestrian Plan	\$	Ö	
Apply for state and federal grants to fund installation of bicycle and pedestrian facilities	\$	Ö	
Ensure future roadway improvements include suitable bicycle and pedestrian facilities	\$	Ŏ	
Establish a data-driven process for determining priority projects every year	\$\$	Ö	

Action	Cost	Time	Impact
Conduct a bicycle or walk audit to determine high-risk areas along existing facilities	\$\$		
Identify intersections where low-cost improvements would provide the most benefit	\$	Ö	
Establish dedicated funding in the Capital Investment Program (CIP) for bicycle and pedestrian facilities	\$\$\$	Ŏ	
Establish a bicycle and pedestrian facility maintenance plan	\$		
Implement signal detection for bicyclists at signalized intersections	\$\$\$		
Reduce the Town-wide speed limit to 25 miles per hour	\$	Ŏ	
Review and update the Code of Ordinances to outline the standards for biking and walking in Wrightsville Beach	\$\$	Ŏ	
Adopt a local Complete Streets and Traffic Calming policy	\$	Ŏ	
Establish a Safe Routes to School (SRTS) task force	\$		
Become a Watch for Me NC partner community	\$	Ŏ	
Partner with safety campaigns and enforcement programs to increase awareness through Watch for Me NC	\$\$	Ŏ	
Organize events that encourage biking or walking throughout the Town	\$\$	Ŏ	
Include wayfinding signage to show destinations accessible by foot or bike	\$\$	Ŏ	
Coordinate with WMPO to include recommendations in the Metropolitan Transportation Plan	\$	Ö	
Coordinate with NCDOT IMD to participate in the Bicycle and Pedestrian Count Program	\$\$	Ö	
Coordinate with NCDOT Division 3 on roadway resurfacing schedule	\$	Ö	

## **FUNDING**

To fully implement the plan, leveraging all available funding opportunities will be essential. The following section outlines the local, state, federal, or private funding sources that Wrightsville Beach can pursue or better leverage. The categories of funding are outlined below.





# Active Transportation Infrastructure Investment Program

The <u>Active Transportation Infrastructure Investment Program</u> (ATIIP) is a new competitive grant program through the Infrastructure Investment and Jobs Act (IIJA). There are two types of grants: Planning and Design grants and Construction grants. The goal of the program is to integrate active transportation facilities with transit service, where appropriate, to improve access to public transportation.

https://www.fhwa.dot.gov/environment/bicycle\_pedestrian/atiip/



## **Community Development Block Grant**

The <u>Community Development Block Grant</u> (CDBG) Program provides annual grants on a formula basis to states, cities, and counties to develop viable communities by providing decent housing, suitable living environments, and expanding economic opportunities for low- and moderate-income persons. The state CDBG funds are provided by the U.S. Department of Housing and Urban Development (HUD). The CDBG Program infrastructure funds are administered by the North Carolina Department of Environmental Quality.

https://www.commerce.nc.gov/grants-incentives/public-infrastructure-funds/infrastructure-federal-cdbg-economic-development



## **Capital Investment Program**

The town's annual budget in fiscal year (FY) 2022 - 2023 was nearly \$14.4 million. The projects and programs described in this plan can be included as a separate allocation in future years to create a dedicated, local funding source for active transportation projects. While the town's budget is limited, explicitly including a source of funding for bicycle and pedestrian projects will create a dedicated funding source for the Town of Wrightsville Beach.

https://www.townofwrightsvillebeach.com/DocumentCenter/View/6434/Town-of-Wrightsville-Beach---FY-2022-ACFR?bidId=



#### **Powell Bill Funds**

The North Carolina State Street-Aid Program (Powell Bill) provides funding for eligible municipalities based on the number and mileage of locally-maintained roadways. For FY 2023 - 2024, the Town of Wrightsville Beach estimates receiving \$71,482 in Powell Bill Funding. While the primary function of the Powell Bill is to assist in funding local street resurfacing projects, these funds could also be used for the planning, maintenance, or construction of sidewalks, bicycle facilities, and multiuse pathways. The Powell Bill funds may be pursued as a match for future iterations of this plan.

https://connect.ncdot.gov/municipalities/State-Street-Aid/pages/default.aspx



## **Highway Maintenance Improvement Program**

The <u>Highway Maintenance Improvement Program</u> (HMIP) contains NCDOT's 5-year maintenance plan for pavement road rehabilitation and resurfacing projects. The roadways scheduled for improvements under the HMIP are prime candidates for the additional bicycle or pedestrian improvements, if they are not already included. The Town of Wrightsville Beach can monitor projects on the HMIP and coordinate with regional NCDOT staff to coordinate on specific improvements.

https://connect.ncdot.gov/resources/Asset-Management/HMIP/Pages/default.aspx



#### Infrastructure Investment and Jobs Act

The federal <u>Infrastructure Investment and Jobs Act</u> (IIJA) infrastructure package was signed into law in November 2021. It provides \$550 billion dollars over FY 2022 - 2026. The IIJA also known as the Bipartisan Infrastructure Law (BIL) authorizes transportation funding for highway, transit, rail, bicycle and pedestrian, and safety programs and infrastructure. The IIJA is administered jointly by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). FWHA distributes funding to both NCDOT and directly to MPOs through a variety of grant programs.

https://www.fhwa.dot.gov/bipartisan-infrastructure-law/metro\_planning.cfm



#### National Endowment for the Arts

The <u>National Endowment for the Arts</u>' (NEA) "Our Towns" is a creative place-making grant program. While these grants require a partnership component, grant awards range between \$25,000 to \$150,000. A focus area for FY 2024 will be in arts, culture, or design projects that address health, transportation, or infrastructure within a community. The Town should coordinate with New Hanover County, WMPO, or NCDOT IMD to identify eligible projects.

https://www.arts.gov/grants/our-town



## **Nonprofit Organizations**

Nonprofit organizations could also be a source of funding for bicycle and pedestrian facilities. By working with nonprofits, Wrightsville Beach can build lasting local, regional, and national partnerships while also identifying new funding opportunities. In some communities, these partnerships have led to the completion of small-scale projects including wayfinding, bicycle rack installation, or improvements to existing facilities. These organizations could include Blue Cross Blue Shield of North Carolina, the North Carolina Community Foundation, or local nonprofits.



## **Private Development**

The Town should consider updating its Comprehensive Plan or Coastal Area Management Act of 1974 (CAMA) Plan to encourage private developers to include pedestrian or bicycle infrastructure during the development of site plans. This will allow the town to build the active transportation network by coordinating with new, local developments. The infrastructure requirements could specify the inclusion of both on- and off-street facilities, pedestrian benches, bicycle racks, or lighting. This funding strategy could alleviate constraints on the town's limited local funding sources.



#### Parks and Recreation Trust Fund

The North Carolina Parks and Recreation Trust Fund (PARTF) matches grants to local governments for local parks, state park improvements, and public beach access. The grant requires a 50% match from the applicant. A local government can request a maximum of \$500,000 with each application. The PARTF funds can be used to improve or build facilities for public use or to acquire land for public parks. These funds can also be used to improve the accessibility of existing facilities, which includes bringing them in compliance with current ADA standards.

https://www.ncparks.gov/about-us/grants/parks-and-recreation-trust-fund



## **RAISE Grant**

The Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant will award more than \$1.5 billion in grant projects in FY 2023. Projects eligible for a RAISE Grant include capital and planning projects. A capital project includes multimodal projects, roads or bridges, public transportation, or passenger rail and freight rail. Planning projects include the planning, preparation, or design of eligible surface transportation projects. If projects are located in rural areas, up to 100% of the project cost may be funded by the grant. The town should coordinate with New Hanover County, WMPO, and NCDOT IMD to identify eligible planning or construction projects and submit a formal application.

https://www.transportation.gov/RAISEgrants



## **Recreational Trails Program Grant**

The <u>Recreational Trails Program</u> (RTP) Grant is a federal grant program intended to help fund trails and trail-related recreational needs. This grant cannot be used to build or maintain sidewalks. The maximum grant amount is \$100,0000 and there is a 25% match. The application should be for a project that is construction ready or "shovel-ready" projects. For FY 2023, the RTP Grant awarded \$1.49 million.

https://trails.nc.gov/trail-grants/apply-grant



## Rivers, Tails, and Conservation Assistance Program

The National Parks Service (NPS) <u>Rivers, Trails and Conservation Assistance</u>

<u>Program</u> supports community-led natural resource conservation and outdoor recreation projects across the nation. Although RTCA is not a traditional funding program, NPS staff provide planning, design and technical expertise for trails and outdoor recreation projects. Depending on the project scale, RTCA can invest up to four years of planning and project development assistance.

https://www.nps.gov/orgs/rtca/apply.htm



## Safe Routes to School Program

The <u>Safe Routes to School</u> (SRTS) Non-Infrastructure Program uses federal funds to fund projects from one to three years. The purpose of the program is to encourage children to walk or bike to school, make walking or biking safer, and facilitate the implementation of projects that benefit the environment around schools. The awards range from \$50,000 to \$500,000 per project. This funding may be used to support community-wide, regional, or statewide programs. While NCDOT IMD may fund projects at 100%, a local match may be required if there is significant demand for available funds.

https://connect.ncdot.gov/projects/BikePed/Pages/Non-Infrastructure-Alternatives-Program.aspx



## Safe Streets and Roads for All Grant Program

The <u>Safe Streets and Roads for All (SS4A)</u> Grant Program is a discretionary program established under the IIJA. Between FY 2022 - 2026, the SS4A Grant Program will award \$5 billion in funds. The SS4A program funds local, regional, and Tribal initiatives through grants to prevent serious injuries and deaths on roadways. There are two types of grants communities can apply for: planning and demonstration grants or implementation grants. Planning and demonstration grants can be used to develop or create an action plan or conduct activities that will inform an action plan. The implementation grants fund projects identified in an action plan that addresses roadway safety problems.

https://www.transportation.gov/grants/SS4A



## Strategic Mobility Formula

The <u>Strategic Transportation Investment Law</u> (2013) allocates funding using the Strategic Mobility Formula. The formula is a data-driven, performance-based process that prioritizes projects for state and federal funding. The formula is used to create NCDOT's State Transportation Improvement Plan (STIP). The STIP is updated every 2 years. The town should coordinate with regional and state partners to submit bicycle and pedestrian projects for prioritization and funding.

https://www.ncdot.gov/initiatives-policies/Transportation/stip/Pages/stip-resources.aspx



## **Spot Safety Program**

The Spot Safety Program is funded with state funding sources to address safety, operational, and potential safety issues. The Safety Oversight Committee (SOC) uses a set of safety-related criteria to review and recommend projects to the Board of Transportation (BOT) for approval and funding.

https://connect.ncdot.gov/resources/safety/pages/nc-highway-safety-program-and-projects.aspx



## **Surface Transportation Block Grant Program**

The <u>Surface Transportation Block Grant Program</u> (STBGP) provides funding on highway, bridge and tunnel, bicycle and pedestrian, and transit projects. The Surface Transportation Block Grant Program Direct Attributable (STBGP-DA) and Transportation Alternative Set Aside Direct Attributable (TASA-DA) are federal funding sources distributed by the WMPO. The member jurisdictions of the WMPO are eligible to apply for these funds through a competitive funding process that prioritizes locally administered projects in the region. Wrightsville Beach has successfully secured funding through this program before and should continue to partner with the WMPO on active transportation projects. This grant program requires a minimum 20% local match.

https://www.wmpo.org/%20stp-datap-da/



## **Transportation Bonds**

A transportation bond generates revenue from a tax increase on property values. In the state of North Carolina, a bond referendum must be approved by local council and then voted on by residents. The funds generated from the transportation bond can be used towards sidewalks, bicycle facilities, or roadway projects.

## CONCLUSION

By completing this plan, the Town of Wrightsville Beach is prioritizing the importance of providing safe, connected, and accessible bicycle and pedestrian facilities in the community. The recommendations outlined in the plan provide residents and visitors alike with connections to community features and destinations throughout the town. The Town of Wrightsville Beach should continue to invest in the active transportation network to create a more vibrant community. Through the commitment and dedication of town staff and community members, this plan will act as a guide for the town to create a transportation network for people of all ages and abilities.