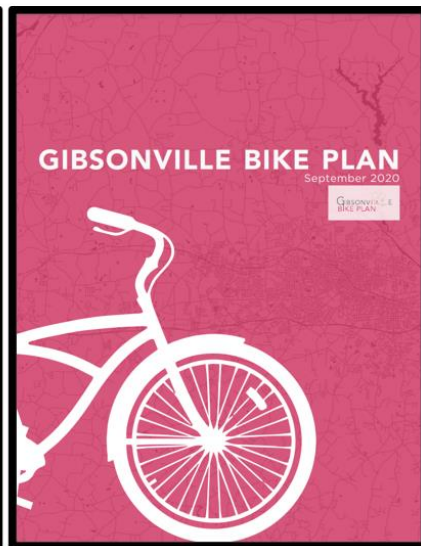
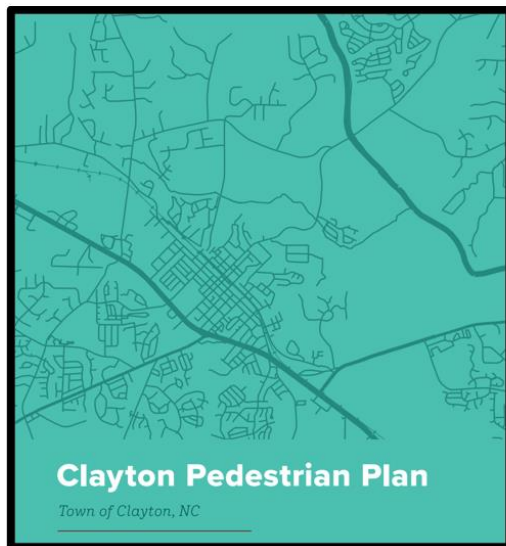
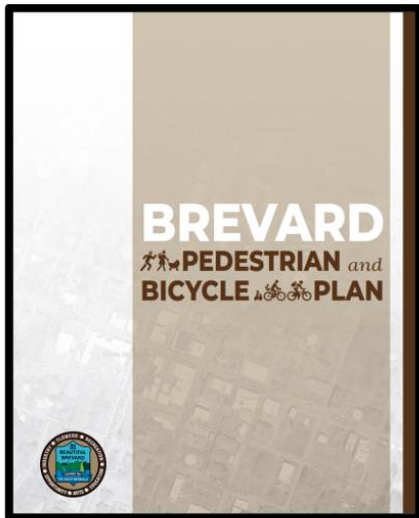


**2023**

Summary Report

# NCDOT

*Measuring Progress of Bicycle and Pedestrian Plans  
in North Carolina*



To fulfill the requirements of NC Article 2, Chapter 36 (736-47.5)



# North Carolina Department of Transportation Measuring Progress of Bicycle and Pedestrian Plans 2023 Summary Report

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*To fulfill the requirements of NC Article 2, Chapter 36 (136-41.5).*

# Table of Contents

<b>Executive Summary</b> .....	<b>4</b>
<b>Introduction</b> .....	<b>5</b>
Legislative Mandate.....	5
About the Planning Grant Program .....	5
Plans Subject to Evaluation.....	5
Evaluation Process.....	5
<b>Background</b> .....	<b>6</b>
<b>Methodology</b> .....	<b>6</b>
<b>Implementation Progress</b> .....	<b>8</b>
<b>Projects Completed or in Development</b> .....	<b>8</b>
High Implementation Progress.....	9
Moderate Implementation Progress.....	10
Low Implementation Progress.....	11
No Progress.....	12
<b>NCDOT Highway Division Breakdown</b> .....	<b>144</b>
<b>Influence of Plan Adoption &amp; Award Date</b> .....	<b>155</b>
<b>Barriers to Implementation</b> .....	<b>155</b>
<b>Programs and Policies</b> .....	<b>166</b>
<b>Additional Considerations</b> .....	<b>177</b>

# Executive Summary

The following report summarizes the implementation successes and challenges to date for bicycle and pedestrian plans adopted since 2013 that were funded by the North Carolina Department of Transportation's Bicycle and Pedestrian Planning Grant Program.

## Implementation Progress

Local governments have adopted 111 plans since 2013. These plans have generated approximately 249 projects submitted for funding in the State Transportation Improvement Program (STIP) that are evaluated through the Strategic Transportation Investments (STI) program using a data driven approach. An estimated 98 projects recommended through these plans were awarded through the STI process and funded in the 2020-2029 STIP. See below for the status of progress for the 111 adopted plans.

- 36 plans exhibited High implementation progress – indicating ten (10) or more in development or completed projects
- 19 plans exhibited Moderate implementation progress – indicating five (5) to nine (9) in development or completed projects
- 24 plans exhibited Low implementation progress – indicating one (1) to four (4) in development or completed projects
- 32 plans did not show any plan implementation progress, or otherwise have not responded to the survey requests.

In all, 71% of communities reported some level of project implementation (funded, under design, under construction, complete, or partially complete). Of the 32 communities reporting no progress, 53% were communities with newly adopted plans completed in either 2021 or 2022.

## Community Highlights

Communities across the state show measurable positive impacts as a result of the planning grant program.

- The City of High Point received \$35,000 in 2015 to develop a pedestrian master plan. Adopted in 2017, that investment has resulted in \$24.6 million dollars in pedestrian infrastructure investments.
- The Town of Rolesville received \$28,000 in 2011 to develop a bicycle master plan. Adopted in 2013, that investment has resulted in \$7.6 million dollars in bicycle infrastructure investments.
- The Town of Mount Airy received \$22,050 in 2011 to develop a pedestrian plan. Adopted in 2013, that investment has resulted in \$6 million dollars in pedestrian infrastructure investments.
- The City of High Point pedestrian plan supported the successful application for an USDOT RAISE discretionary grant in 2021.
- The Town of Rutherfordton and Town of Spindale bicycle and pedestrian plans supported the successful application for an USDOT RAISE discretionary grant in 2022.

## Barriers to Implementation

The communities participating in this effort identified barriers to project implementation. The most common responses were:

- Lack of funding for project engineering, design and construction, which is particularly burdensome on rural areas of Western and Eastern North Carolina. There is, however, an opportunity to leverage

higher funding levels provided in the Infrastructure Investment and Jobs Act (IIJA) to move more projects forward with implementation.

- Right of way limitations and utility relocation that result in higher project costs that make projects more difficult to advance and deliver.
- Limited staff to manage the project development process required for successful project delivery.

## Introduction

### Legislative Mandate

In 2017, the NC General Assembly passed a provision requiring that NCDOT's Integrated Mobility Division (IMD) submit an "annual report by May 15 on the progress of projects identified in plans (i) submitted to the Division over the 10-year period prior to the report and (ii) funded from Bicycle and Pedestrian Planning Grant funds." This report documents a review of bicycle and pedestrian plans adopted over the last ten years.

### About the Planning Grant Program

In 2004, the department established the Bicycle and Pedestrian Planning Grant Initiative to encourage municipalities to develop comprehensive bicycle and pedestrian transportation plans. To date, approximately \$8.0 million dollars in federal planning and research funds and state planning funds have been used to support the development of 254 plans. IMD awards grants on an annual basis through a call for applications that considers need, project scope, level of local support and geographic distribution.

### Plans Subject to Evaluation

One-hundred and eleven plans that received funding from the Bicycle and Pedestrian Planning Grant program were adopted within the last 10 years. Some communities completed both a pedestrian and bicycle plan, resulting in 105 individual communities developing 111 plans. Of the 111 plans:

- 24 are bicycle plans
- 49 are pedestrian plans
- 38 are combined bicycle and pedestrian plans.

### Evaluation Process

In February-March 2023, IMD asked communities to document progress for each project identified in their adopted plans. Of the 111 adopted plans, IMD received response for 53 plans representing 49 individual communities. For the 56 communities (58 plans) that did not respond to the survey, the department used their responses from previous years' surveys and included in this report, if available (similar surveys occurred in 2018, 2019, 2020, 2021 and 2022). The following is a final breakdown of the adopted plans by community size:

- 80 are in a rural setting (population of 15,000 or less)
- 22 are in a suburban setting (population between 15,000 and 50,000)
- 9 are in an urban setting (population of 50,000 or more)

This year, survey participation rates declined compared to previous years. The department believes the lower

response rate is due to communication challenges brought on by COVID-19 work from home practices, such as the use of personal phone numbers, local staff turnover/departures, survey fatigue and increased difficulty in identifying accurate contact information on municipal websites. When available, data from previous surveys was used as a stand-in for missing community data in the 2023 survey.

## Background

In 2017, the NC General Assembly passed a provision requiring that NCDOT's Integrated Mobility Division (IMD) submit an "annual report by May 15 on the progress of projects identified in plans (i) submitted to the Division over the 10-year period prior to the report and (ii) funded from Bicycle and Pedestrian Planning Grant funds."

While this report's primary purpose is to meet legislative requirements, the process has helped NCDOT effectively monitor project implementation, identify opportunities for program refinement, and categorize barriers that inhibit project implementation.

There were 111 adopted plans within the last 10 years that received funding from the Bicycle and Pedestrian Planning Grant program. Of these 111 plans, 24 are bicycle plans, 49 are pedestrian plans and 38 are combined bicycle and pedestrian plans. Since some communities completed both a pedestrian and bicycle plan in different award years, 105 individual communities developed these 111 plans.

## Methodology

In February 2023, NCDOT contacted each of the 105 communities to inform them of the project and schedule. The department asked each community to complete an online survey and provided each a project list consisting of priority projects noted in the adopted plan. Respondents identified project implementation status (funded, under design, under construction, complete or partially complete), non-infrastructure progress, funding strategies and barriers to implementation.

NCDOT staff made multiple communication efforts to each of the 105 communities between February and March including email correspondence and phone calls. MPO/RPO staff assisted in outreach and communication to communities.

Of the 111 adopted plans, 54 individual communities completed 59 surveys.

Figure 1: Map of Planning Grant Recipients – Implementation Rate

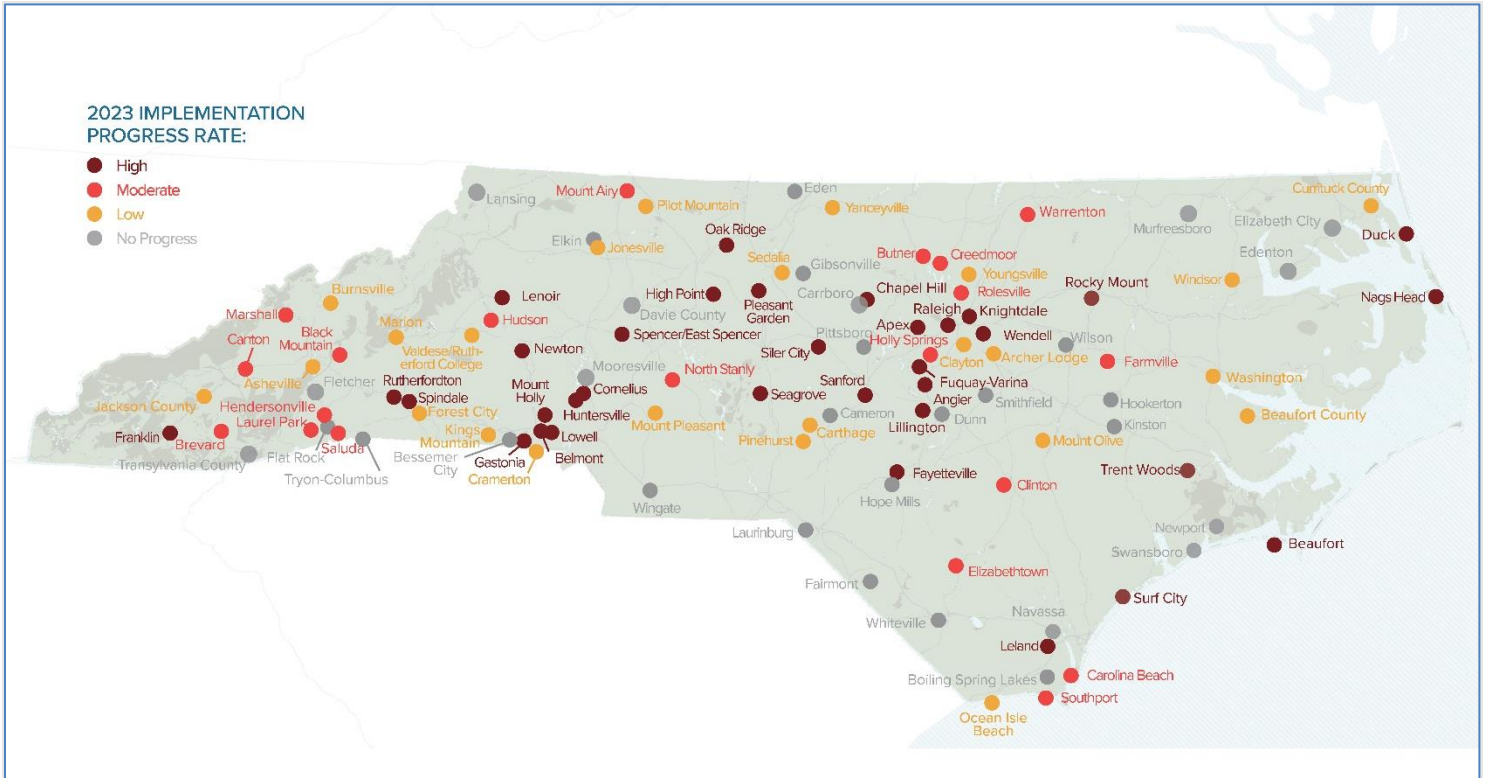


Figure 1

## Implementation Progress

IMD determined implementation by totaling the number of projects documented in adopted plans reported to be under development (demonstrating implementation progress). IMD defined any project identified as funded, under design, under construction, complete, or partially complete as having implementation progress for this analysis. The division assigned a level of implementation progress to each of the 111 adopted plans using the following scale:

- High Implementation Progress includes 10 or more projects under development
- Moderate Implementation Progress includes 5 to 9 projects under development
- Low Implementation Progress includes 1 to 4 projects under development
- No Progress includes any plan that identified every project as unfunded

## Projects Completed or In Development

This study identified 1,520 bicycle and pedestrian projects with implementation progress in 75 communities (derived from 79 plans) across the state that come directly from an adopted plan funded through the Bicycle and Pedestrian Planning Grant Initiative program. Types of projects vary, but generally fall within the following categories:

- Intersection improvements (crosswalks, pedestrian signals and ADA compliant curb ramps)
- New sidewalks
- Sidewalk repairs
- Shared use paths
- Bicycle lanes

The total number of recommended projects in each plan vary drastically with some having as few as 6 recommendations and others having more than 200. The scope of recommendations also varies significantly from plan to plan. Together these factors impact the level of implementation progress. For instance,

- Chapel Hill's Bicycle Plan has 18 high-level project and comprehensive recommendations (bicycle lanes, shared use path corridors, intersection improvements, etc.), with 16 having recorded progress.
- Raleigh's Pedestrian Plan has 226 itemized project recommendations (crosswalk installation, curb ramp improvements, etc.), with 166 having recorded progress.



## High Implementation Progress

Thirty-six plans achieved a high level of implementation progress. Plans are shown in alphabetical order.

Table I: Communities with High Implementation Progress (10 or more projects)

Community Name	Plan Type	Year Adopted	# Recommended Projects	# of Projects Completed or Under Development
Angier	Pedestrian	2014	23	13
Apex	Bicycle	2019	51	63
Beaufort*	Bicycle and Pedestrian	2018	78	19
Belmont*	Bicycle	2013	78	13
Chapel Hill	Bicycle	2014	18	13
Cornelius*	Pedestrian	2017	154	129
Duck*	Pedestrian	2014	13	11
Fayetteville	Pedestrian	2020	180	52
Fayetteville	Bicycle	2018	180	88
Franklin	Bicycle and Pedestrian	2017	22	11
Fuquay-Varina	Pedestrian	2013	116	67
Gastonia*	Pedestrian	2014	186	60
High Point	Pedestrian	2017	179	23
Huntersville	Bicycle	2021	10	24
Knightdale	Pedestrian	2013	40	14
Leland	Pedestrian	2016	86	11
Lenoir	Pedestrian	2018	84	48
Lillington*	Bicycle and Pedestrian	2020	77	20
Lowell	Bicycle and Pedestrian	2020	12	48
Mount Holly	Pedestrian	2019	88	38
Mount Holly	Bicycle	2013	88	38
Nags Head*	Pedestrian	2014	23	26
Newton	Pedestrian	2017	143	12
Oak Ridge	Pedestrian	2013	30	10
Pleasant Garden*	Bicycle and Pedestrian	2015	35	37
Raleigh*	Pedestrian	2013	226	166
Rocky Mount*	Bicycle	2018	116	18
Rutherfordton	Bicycle and Pedestrian	2017	12	13
Sanford	Bicycle	2014	31	57
Seagrove	Pedestrian	2019	31	36
Siler City	Pedestrian	2013	22	24
Spencer/East Spencer	Bicycle and Pedestrian	2016	105	19
Spindale	Bicycle and Pedestrian	2019	40	11
Surf City	Bicycle and Pedestrian	2016	85	40
Trent Woods	Pedestrian	2014	36	24
Wendell	Pedestrian	2018	94	41

\*Community did not response to survey in 2023. This data point is based on historic reporting from the community.

## Moderate Implementation Progress

Nineteen plans achieved a moderate level of implementation progress. Plans are shown in alphabetical order.

Table 2: Communities with Moderate Implementation Progress (5-9 Projects)

Community Name	Plan Type	Year Adopted	# Recommended Projects	# of Projects Completed or Under Development
<b>Black Mountain</b>	Bicycle	<b>2016</b>	21	7
<b>Brevard</b>	Bicycle and Pedestrian	<b>2022</b>	199	7
<b>Canton</b>	Bicycle and Pedestrian	<b>2019</b>	68	8
<b>Carolina Beach*</b>	Pedestrian	<b>2018</b>	54	5
<b>Clinton*</b>	Pedestrian	<b>2015</b>	92	8
<b>Elizabethtown†*</b>	Pedestrian	<b>2015</b>	38	8
<b>Elizabethtown†*</b>	Bicycle	<b>2013</b>	38	8
<b>Farmville*</b>	Pedestrian	<b>2014</b>	32	5
<b>Hendersonville</b>	Bicycle	<b>2017</b>	14	5
<b>Hudson</b>	Bicycle and Pedestrian	<b>2020</b>	35	8
<b>Laurel Park</b>	Bicycle and Pedestrian	<b>2018</b>	10	6
<b>Marshall*</b>	Pedestrian	<b>2013</b>	22	7
<b>Mount Airy*</b>	Pedestrian	<b>2013</b>	58	5
<b>Newport</b>	Bicycle and Pedestrian	<b>2017</b>	17	5
<b>North Stanley*</b>	Bicycle and Pedestrian	<b>2018</b>	12	7
<b>Rolesville</b>	Bicycle	<b>2013</b>	17	7
<b>Saluda</b>	Bicycle and Pedestrian	<b>2016</b>	34	6
<b>Southport*</b>	Pedestrian	<b>2014</b>	25	5
<b>Warrenton*</b>	Pedestrian	<b>2020</b>	47	5

\*Community did not response to survey in 2023. This data point is based on historic reporting from the community.

†Community completed one survey for two funded plans.

## Low Implementation Progress

Twenty-four plans achieved a low level of implementation progress. Plans are shown in alphabetical order.

Table3: Communities with Low Implementation Progress (1-4 Projects)

Community Name	Plan Type	Year Adopted	# Recommended Projects	# of Projects Completed or Under Development
<b>Archer Lodge*</b>	Bicycle and Pedestrian	<b>2020</b>	7	2
<b>Asheville*</b>	Bicycle and Pedestrian	<b>2020</b>	7	4
<b>Beaufort County</b>	Bicycle	<b>2020</b>	73	1
<b>Burnsville</b>	Bicycle and Pedestrian	<b>2022</b>	53	1
<b>Carthage*</b>	Bicycle and Pedestrian	<b>2019</b>	35	2
<b>Clayton</b>	Pedestrian	<b>2022</b>	63	4
<b>Cramerton</b>	Bicycle	<b>2018</b>	12	4
<b>Currituck County*</b>	Pedestrian	<b>2018</b>	104	3
<b>Forest City*</b>	Pedestrian	<b>2016</b>	39	4
<b>Jackson County</b>	Pedestrian	<b>2021</b>	10	1
<b>Jonesville</b>	Pedestrian	<b>2015</b>	42	4
<b>Kings Mountain*</b>	Pedestrian	<b>2014</b>	153	3
<b>Marion*</b>	Bicycle	<b>2016</b>	22	2
<b>Mount Olive*</b>	Bicycle and Pedestrian	<b>2019</b>	57	2
<b>Mount Pleasant</b>	Bicycle and Pedestrian	<b>2020</b>	17	2
<b>Ocean Isle Beach</b>	Bicycle and Pedestrian	<b>2014</b>	16	4
<b>Pilot Mountain*</b>	Pedestrian	<b>2013</b>	43	2
<b>Pinehurst*</b>	Bicycle	<b>2015</b>	12	1
<b>Rolesville</b>	Bicycle	<b>2022</b>	35	4
<b>Sedalia</b>	Bicycle and Pedestrian	<b>2015</b>	38	1
<b>Valdese/Rutherford College</b>	Pedestrian	<b>2016</b>	20	4
<b>Washington*</b>	Bicycle	<b>2014</b>	32	2
<b>Windsor*</b>	Bicycle and Pedestrian	<b>2018</b>	84	2
<b>Youngsville*</b>	Bicycle and Pedestrian	<b>2015</b>	16	2

\*Community did not response to survey in 2023. This data point is based on historic reporting from the community.

## No Progress

Thirty-two plans have not had any projects implemented since their adoption. Fifteen of these communities have submitted projects through the State's strategic prioritization process (STI), including 40 projects submitted in the most recent round of prioritization (P6.0). Plans are shown in alphabetical order.

Table 4: Communities with No Implementation Progress (0 Projects)

Community Name	Plan Type	Year Adopted	# Recommended Projects	# of Projects Completed or Under Development
<b>Bessemer City*</b>	Pedestrian	<b>2022</b>	64	0
<b>Boiling Spring Lakes</b>	Pedestrian	<b>2020</b>	14	0
<b>Cameron</b>	Bicycle and Pedestrian	<b>2022</b>	6	0
<b>Carrboro*</b>	Bicycle	<b>2020</b>	165	0
<b>Davie County*</b>	Bicycle and Pedestrian	<b>2021</b>	10	0
<b>Dunn*</b>	Pedestrian	<b>2022</b>	213	0
<b>Eden*</b>	Pedestrian	<b>2022</b>		0
<b>Edenton*</b>	Bicycle and Pedestrian	<b>2022</b>	60	0
<b>Elizabeth City*</b>	Pedestrian	<b>2021</b>	65	0
<b>Elkin*</b>	Bicycle and Pedestrian	<b>2020</b>	19	0
<b>Fairmont*</b>	Bicycle and Pedestrian	<b>2017</b>	24	0
<b>Flat Rock</b>	Bicycle and Pedestrian	<b>2020</b>	10	0
<b>Fletcher*</b>	Bicycle and Pedestrian	<b>2020</b>	14	0
<b>Fuquay-Varina</b>	Pedestrian	<b>2022</b>	41	0
<b>Gibsonville</b>	Bicycle	<b>2020</b>	26	0
<b>Hookerton*</b>	Bicycle and Pedestrian	<b>2015</b>	67	0
<b>Hope Mills*</b>	Pedestrian	<b>2022</b>	15	0
<b>Kinston*</b>	Pedestrian	<b>2022</b>	129	0
<b>Lansing*</b>	Bicycle and Pedestrian	<b>2021</b>	14	0
<b>Laurinburg†*</b>	Bicycle	<b>2022</b>	72	0
<b>Laurinburg†*</b>	Pedestrian	<b>2015</b>	106	0
<b>Martin County*</b>	Bicycle	<b>2022</b>		0
<b>Moorseville*</b>	Bicycle	<b>2022</b>	207	0
<b>Murfreesboro*</b>	Pedestrian	<b>2022</b>	14	0
<b>Navassa*</b>	Bicycle and Pedestrian	<b>2022</b>	10	0
<b>Pittsboro</b>	Bicycle and Pedestrian	<b>2020</b>	12	0
<b>Smithfield</b>	Pedestrian	<b>2022</b>	59	0
<b>Transylvania County*</b>	Bicycle	<b>2019</b>	16	0
<b>Tryon/Columbus*</b>	Bicycle and Pedestrian	<b>2020</b>	43	0
<b>Whiteville*</b>	Pedestrian	<b>2014</b>	87	0

<b>Wilson*</b>	Pedestrian	<b>2020</b>	45	0
<b>Wingate*</b>	Pedestrian	<b>2013</b>	76	0

*\*Community did not response to survey in 2023. This data point is based on historic reporting from the community, if available.*

*†Community completed one survey for two funded plans.*

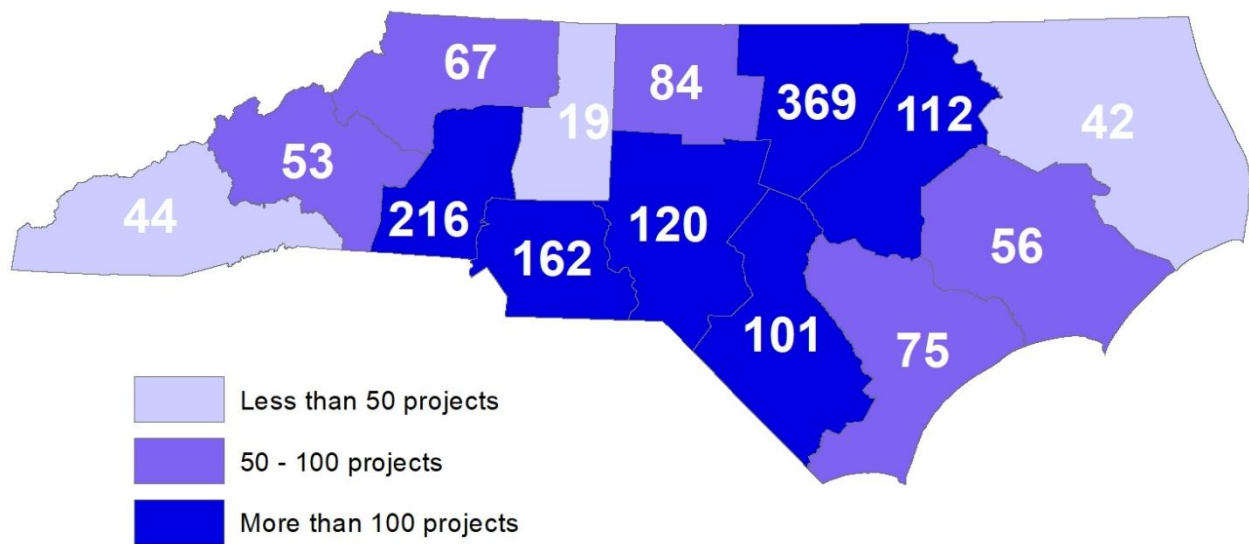
# NCDOT Highway Division Breakdown

Below is a breakdown of the number of bicycle and/or pedestrian plans under development in each NCDOT Highway Division, along with the number of projects implemented. The map below illustrates the data by division.

Table 5: NCDOT Highway Divisions –Projects Under Development

NCDOT Highway Divisions	# of Plans Adopted	# of Total Projects with Implementation Progress
1	8	42
2	8	56
3	9	75
4	6	112
5	10	369
6	9	101
7	8	84
8	9	120
9	2	19
10	5	162
11	7	67
12	11	216
13	9	53
14	11	44

Figure 2: NCDOT Highway Divisions – Projects Under Development



## Influence of Plan Adoption & Award Date

Plans reviewed for this report were adopted over a ten 10-year span. The timeframe of plan award and adoption impact implementation progress:

- Plans adopted between 2013 and 2016 generally have higher rates of implementation progress than plans adopted between 2017 and 2022.
- The average plan adoption date for plans with High and Moderate implementation progress is 2016. The average plan adoption date for plans with No implementation progress is 2020.
- Plans awarded after 2017 may have not had enough time to process specific project funding requests, both locally and with the respective MPO/RPO.
- According to survey responses, the COVID-19 pandemic has negatively impacted community's communication and collaboration with their respective MPOs /RPOs in settings such as board meetings, public forums, etc.

## Barriers to Implementation

Communities were asked to identify barriers to implementation for each unfunded recommendation to better understand why some adopted recommendations have not been implemented.

The following are the primary barriers identified:

- Lack of funding for project engineering, design and construction, which is particularly burdensome on rural areas of Western and Eastern North Carolina.
- Right of way limitations and utility relocation that result in higher project costs make projects more difficult to advance and deliver.
- Additional project constraints such as environmental concerns and project complexity that challenge project feasibility.
- Limited staff to manage the steps in project development – including management of processes to evaluate project feasibility, pursue funding and facilitate final project delivery.

In addition to implementation barriers, a few communities noted some important successes:

- “A CIP document has been created as suggested in this plan to identify what existing sidewalks need upgraded first.” – Town of Franklin
- “The results following the plan have been greater than we imagined!” – Siler City
- “In addition to implementing the projects outlined in the Pedestrian Plan, the Town is systematically completing other sidewalk and multi-use path improvements as well.” - Town of Nags Head

## Programs and Policies

Communities were asked to identify programs and policies implemented from plan recommendations. Over 80 communities implemented bicycle and pedestrian programs, and bicycle and pedestrian-focused policies were implemented by over 85 communities.

Types of programs implemented vary, but generally fall within the following categories:

- Other responsive programs
- Safe Routes to School Program
- Bicycle and Pedestrian Wayfinding and Maps
- Watch for Me NC
- Walk to School Day
- NCDOT Bike Helmet Initiative
- Bicycle & Pedestrian Advisory Committee
- Bike Rodeos
- Traffic Enforcement
- Bike to School Day
- Bike Month Activities
- Open Streets Events
- Bicycle and Pedestrian Safety Education/Let's Go NC! Curriculum
- Bike Share Program
- Bicycle Friendly Community Designation

The most frequently adopted policies identified in plan recommendations are:

- Land Use Development Policies that Encourage Walkability and/or Bikeability
- Comprehensive Plan Update
- Unified Development Ordinances Updates for Bicycle and Pedestrian Facilities
- Bicycle & Pedestrian Design Guidelines and/or Design Manual Revisions
- Other
- Complete Streets Policy



## Additional Considerations

Communities implement bicycle and pedestrian improvements through a range of project types, including resurfacing projects and other incidental opportunities that are not always captured in adopted plans. This makes it difficult to judge progress toward implementing bicycle and pedestrian facilities solely on plan recommendations.

Industry standards for bicycle and pedestrian planning have evolved over the past decade, with trends toward more action-oriented planning documents. In response, IMD recently launched Project Acceleration Plans that are likely to result in higher implementation rates moving forward. Smaller, rural communities will especially benefit from these plans that focus on prioritizing projects and identifying resources to assist with delivery.

Lack of funding continues to be the primary barrier to project implementation, and funding constraints disproportionately impact rural communities. Rural communities often have limited financial capacity to match federal dollars and are more heavily reliant upon the NCDOT STIP and Powell Bill Program to fund bicycle and pedestrian infrastructure. Without the ability to use state transportation funds to match federal funds for bicycle and pedestrian projects, rural communities that have less local funding available naturally struggle more than urban areas to fund and advance projects. As demonstrated in this report, areas with the highest rates of implementation tend to be urban communities, and communities with the lowest implementation rates are those in rural areas.

Transportation Alternatives Program (TAP) funding is the common funding source for bicycle and pedestrian projects programmed in the NCDOT STIP. NCDOT is currently working with local partners to improve TAP project delivery to have more bicycle and pedestrian projects implemented.