

2018

Summary Report

NCDOT

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



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



North Carolina Department of Transportation Measuring Progress of Bicycle and Pedestrian Plans 2018 Summary Report

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Executive Summary

The following report summarizes the implementation successes and challenges to date for bicycle and pedestrian plans adopted since 2008 that were funded by the North Carolina Department of Transportation's Bicycle and Pedestrian Planning Grant Program.

Implementation Progress

123 plans have been adopted since 2008. These plans have generated 500 projects submitted for funding in the State Transportation Improvement Program (STIP), which are evaluated through the Strategic Transportation Investments (STI) program using a data driven approach. 39 projects funded in the 2018-2027 STIP were identified through one of these plans.

- 24 communities exhibited High implementation progress – indicating ten (10) or more completed projects
- 37 communities exhibited Moderate implementation progress – indicating five (5) to nine (9) completed projects
- 30 communities exhibited Low implementation progress – indicating one (1) to four (4) completed projects
- 13 communities did not show any plan implementation progress

Community Highlights

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

- The City of Marion received \$32,000 in 2014 to develop a bicycle master plan. That investment has resulted in \$2 million dollars in bicycle infrastructure investments.
- The City of Charlotte adopted a bicycle plan in 2007 that supported the implementation of 26 road diets on 11.6 miles of roadway, with an additional 25 miles of road diets planned.
- The Town of Duck received \$24,800 to develop a pedestrian plan in 2012. That investment has resulted in \$3 million dollars in pedestrian infrastructure investments.

Barriers to Implementation

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

- lack of funding
- limited staff and resources
- limited right-of-way
- Plan adoption year

Other barriers identified include: lack of coordination with partner agencies, low priority in plan and of policy-makers, feasibility of project scope, and environmental constraints.

Introduction

Legislative Mandate

In 2017, the NC General Assembly passed a provision requiring that NCDOT's Bicycle and Pedestrian Division 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 Bicycle and Pedestrian Planning Grant Initiative was established by the Bicycle and Pedestrian Transportation Division and the Transportation Planning Branch to encourage municipalities to develop comprehensive bicycle and pedestrian transportation plans.

To date, approximately \$5.5 million dollars in Federal planning and research funds have been used to support the development of 193 plans. Grants are awarded on an annually basis through a call for applications that considers need, project scope, level of local support and geographic distribution.

Plans Subject to Evaluation

There were 123 adopted plans within the last ten (10) years that received funding from the Bicycle and Pedestrian Planning Grant program. Some communities completed both a pedestrian and bicycle plan, resulting in 123 plans developed by 112 individual communities across the state. Of the 123 plans:

- 33 are bicycle plans
- 77 are pedestrian plans and
- 13 are combined bicycle and pedestrian plans.

Evaluation Process

A solicitation effort was initiated in January 2018 asking communities to complete a customized spreadsheet documenting implementation progress for each project identified in their adopted plans. Follow-up communication occurred through February 2018. Of the 123 adopted plans, responses were received for 104 plans representing 95 individual communities. The following is a breakdown by community size:

- 7 are in an urban setting (population of 50,000 or more)
- 13 are in a suburban setting (population between 15,000 and 50,000)
- 75 are in a rural setting (population of 15,000 or less)

Background

In 2017, the NC General Assembly passed a provision requiring that NCDOT's Bicycle and Pedestrian Division 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 assignment's primary purpose is to meet legislative requirements, the opportunity exists to help NCDOT more effectively monitor project implementation and, more specifically, identify opportunities for project implementation, as well as certain barriers that may be inhibiting project implementation.

There were 123 adopted plans within the last ten (10) years that received funding from the Bicycle and Pedestrian Planning Grant program. Of the 123 plans, 33 are bicycle plans, 77 are pedestrian plans and 13 are combined bicycle and pedestrian plans. Since some communities completed both a pedestrian and bicycle plan, the 123 plans were developed by 112 individual communities across the state.

Methodology

NCDOT contracted with Alta Planning + Design to complete this project. In December 2017, Alta contacted each of the 112 communities to inform them of the project and schedule. In January 2018, each community was asked to complete a **Project Status Tracker** consisting of a customized spreadsheet of priority projects identified in the adopted plan. Respondents were asked to identify the project status (funded, under design, under construction, other) and barriers to implementation.

Alta and NCDOT staff made multiple communication efforts to each of the 112 communities between January 12th through February 16th including email correspondence, phone calls, and MPO/RPO staff support.

Of the 123 adopted plans, 104 project status trackers were completed by 95 individual communities with the following breakdown by community size:

- 7 are in an **urban** setting (population of 50,000 or more)
- 13 are in a **suburban** setting (population between 15,000 and 50,000)
- 75 are in a **rural** setting (population of 15,000 or less)

The City of Charlotte supplied a supplementary summary report in lieu of a completed status tracker because their adopted plan did not include individual project recommendations but instead focused on comprehensive policy reform.

The following sections highlight the project information received from the 104 submitted project status trackers.

Implementation Progress

Implementation progress was determined by totaling the number of completed projects that were documented in adopted plans. Any project that was identified as funded, under design, under construction, complete, or partially complete is defined as implementation progress for this analysis. A level of implementation progress was assigned to each of the 104 adopted plans using the following scale:

- High Implementation Progress includes ten (10) or more completed projects
- Moderate Implementation Progress includes five (5) to nine (9) completed projects
- Low Implementation Progress includes one (1) to four (4) completed projects
- No Progress includes any plan that identified every project as unfunded

Completed Projects

This study identified 1,005 bicycle and pedestrian projects completed in 83 communities 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 Repair
- Shared Use Paths
- Bicycle Lanes

The total number of recommended projects in each plan vary drastically with some having as little as six (6) recommendations and others having 200+. In addition, the scope of recommendations is significantly different from plan to plan. This can have a substantial impact on the level of implementation progress. For instance,

- Chapel Hill's Bicycle Plan has 18 project high-level and comprehensive recommendations (greenway corridors, intersection improvements, etc.), with 16 having recorded progress.
- Wilmington's Pedestrian Plan has 474 itemized project recommendations (crosswalk installation, curb ramp improvements, etc.), with 165 having recorded progress.

“We have received funding for one project through SPOT 4.0, hopefully it will be constructed as part of a larger roadway improvement project.”

- Town of Marshall

High Implementation Progress

24 plans achieved a high level of implementation progress:

Table 1: Communities with High Implementation Progress (10 or more projects complete)

HIGH IMPLEMENTATION				
Community Name	Plan Type	Plan Adoption Date	# of Projects Recommended	# of Projects Completed
Atlantic Beach	Bicycle	2012	58	15
Beaufort	Bicycle	2009	36	17
Belmont	Pedestrian	2009	26	10
Boone	Pedestrian	2014	67	23
Carrboro	Bicycle	2009	45	36
Chapel Hill	Bicycle	2014	18	16
Charlotte	Bicycle	2008	*	26
Cornelius	Pedestrian	2012	98	49
Davidson	Bicycle	2008	63	11
Duck	Pedestrian	2014	13	10
Eastern Band of Cherokee Indians	Pedestrian	2010	70	20
Fuquay-Varina	Pedestrian	2013	116	10
Gastonia	Pedestrian	2014	186	46
Indian Trail	Pedestrian	2009	272	16
Marshville	Pedestrian	2010	50	11
Mint Hill	Pedestrian	2011	164	27
Newton	Pedestrian	2017	143	12
North Wilkesboro	Pedestrian	2009	20	10
Pittsboro	Pedestrian	2009	46	16
Raleigh	Bicycle	2009	27	15
Raleigh	Pedestrian	2013	216	82
Sanford	Pedestrian	2010	105	32
Stallings	Pedestrian	2008	37	12
Wilmington	Pedestrian	2009	474	165

*The City of Charlotte's adopted plan did include a comprehensive project list, only a total number of completed projects.

“We appreciate this program and look forward to continuing to work with NCDOT to implement complete streets in the Charlotte area. Thanks for being such a great partner.”

~ City of Charlotte

Moderate Implementation Progress

37 plans ranked as having moderate implementation progress:

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

MODERATE IMPLEMENTATION				
Community Name	Plan Type	Plan Adoption Date	# of Projects Recommended	# of Projects Completed
Aberdeen	Pedestrian	2011	13	6
Albemarle	Bicycle	2010	51	5
Angier	Pedestrian	2014	23	6
Belmont	Bicycle	2013	78	9
Boone	Bicycle	2014	12	5
Black Mountain	Pedestrian	2008	36	8
Carolina Beach	Bicycle	2011	54	6
Clinton	Pedestrian	2012	92	9
Conover	Pedestrian	2008	89	7
Creedmoor	Pedestrian	2011	46	8
Dunn	Pedestrian	2008	71	7
Eden	Pedestrian	2010	57	6
Elizabethtown	Pedestrian	2013	38	8
Farmville	Pedestrian	2014	32	5
Franklin	Bicycle and Pedestrian	2017	22	9
Jamestown	Pedestrian	2010	20	6
Jefferson	Pedestrian	2008	66	8
Knightdale	Pedestrian	2013	40	7
Leland	Bicycle	2008	17	9
Locust	Pedestrian	2010	36	7
Marshall	Pedestrian	2013	22	6
Mount Holly	Pedestrian	2013	88	8
Nags Head	Pedestrian	2014	23	6
New Bern	Pedestrian	2009	86	6
Oak Ridge	Pedestrian	2013	30	5
Old Fort	Pedestrian	2011	16	6
Pine Knoll Shores	Pedestrian	2010	22	6
Rutherfordton	Bicycle and Pedestrian	2017	12	6
Salisbury	Bicycle	2009	78	8
Sanford	Bicycle	2014	31	9
Siler City	Pedestrian	2013	15	6
Southern Pines	Bicycle	2010	24	7
Sylva	Pedestrian	2011	24	9
Wake Forest	Bicycle	2008	20	5
Waxhaw	Pedestrian	2012	26	6
Wingate	Pedestrian	2013	76	8
Yadkinville	Pedestrian	2010	23	5

Low Implementation Progress

30 plans ranked as having low implementation progress:

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

LOW IMPLEMENTATION				
Community Name	Plan Type	Plan Adoption Date	# of Projects Recommended	# of Projects Completed
Banner Elk	Pedestrian	2009	23	1
Bessemer City	Pedestrian	2010	95	1
Black Mountain	Bicycle	2016	21	4
Butner	Pedestrian	2011	18	3
Clinton	Bicycle	2015	27	2
Edenton	Pedestrian	2009	8	4
Elizabethtown	Bicycle	2015	24	3
Fairmont	Bicycle and Pedestrian	2017	24	2
Granite Falls	Pedestrian	2011	32	2
High Point	Pedestrian	2017	179	1
Hookerton	Bicycle and Pedestrian	2015	67	2
Indian Trail	Bicycle	2011	125	3
Jonesville	Pedestrian	2015	42	1
Marion	Bicycle	2016	22	4
Mooreville	Bicycle	2008	16	2
Mount Airy	Pedestrian	2013	58	3
Newport	Bicycle and Pedestrian	2017	17	1
Oxford	Pedestrian	2012	38	2
Pembroke	Pedestrian	2010	12	2
Pilot Mountain	Pedestrian	2013	43	2
Pinehurst	Bicycle	2015	10	1
Pleasant Garden	Bicycle and Pedestrian	2015	34	2
Sedalia	Bicycle and Pedestrian	2015	38	1
Southport	Pedestrian	2014	25	2
Valdese/Rutherford College	Pedestrian	2016	20	1
West Jefferson	Pedestrian	2010	41	4
White Lake	Pedestrian	2010	14	2
Whiteville	Pedestrian	2014	87	4
Wilson	Bicycle	2008	49	2
Yanceyville	Pedestrian	2011	6	1

No Progress

13 plans have not had any projects implemented since their adoption. However, eight of these communities submitted projects through the State’s strategic prioritization process (STI), including 13 projects submitted in the current round of prioritization.

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

NO IMPLEMENTATION				
Community Name	Plan Type	Plan Adoption Date	# of Projects Recommended	STI Project Submittals
Forest City	Pedestrian	2016	39	1
Hendersonville	Bicycle	2017	14	2
Hildebran	Pedestrian	2010	32	0
Kings Mountain	Pedestrian	2014	91	1
Kings Mountain	Bicycle	2012	153	0
Ocean Isle Beach	Bicycle and Pedestrian	2014	16	1
Saluda	Bicycle and Pedestrian	2016	34	6
Southern Shores	Bicycle and Pedestrian	Not Adopted	10	0
Surf City	Bicycle and Pedestrian	2016	11	0
Swansboro	Bicycle	2011	10	8
Thomasville	Bicycle	2009	48	0
Trent Woods	Pedestrian	2014	36	4
Williamston	Pedestrian	2012	56	1

“It would be wonderful if there were funds available to jurisdictions to implement recommendations from the plans once complete.”

~Town of Chapel Hill

Return on Investment

Detailed project costs weren’t provided for every project implemented in each community. The examples below highlight return on investment for a couple of communities.

- In 2014, the City of Marion received \$32,000 to develop a bicycle master plan that has since resulted in an investment of approximately \$2 million in bicycle facility implementation.
- In 2012, Town of Duck received \$24,800 to develop a comprehensive pedestrian plan that has since resulted in an investment of approximately \$3 million in pedestrian improvements.

The average NCDOT financial contribution for the 123 bicycle and pedestrian plans subject to this study are as follows:

- \$55,000 for a plan in an urban setting
- \$30,000 for a plan in a suburban setting
- \$25,000 for a plan in a rural setting

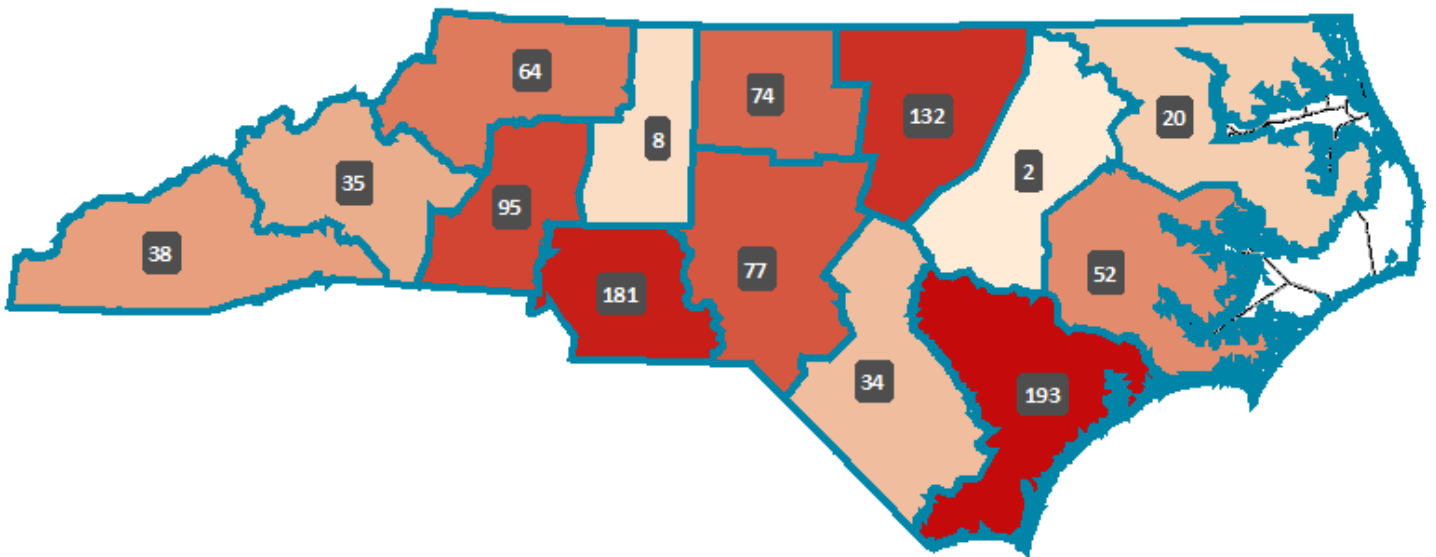
NCDOT Highway Division Breakdown

Below is a breakdown of how many bicycle and/or pedestrian plans were completed in each NCDOT Highway Division, along with the number of projects implemented.

Table 5: NCDOT Highway Divisions –Projects Completed

NCDOT Division	Total Number of Plans Completed	Total Number of Projects Completed
1	5	20
2	8	52
3	9	193
4	1	2
5	8	132
6	8	34
7	8	74
8	7	77
9	1	8
10	10	181
11	11	64
12	10	95
13	9	35
14	5	38

Figure 1: NCDOT Highway Divisions – Projects Completed



Plan Adoption & Award Date

Since the plans under review were adopted over a ten (10) year span, the following details highlight how timeframe may impact implementation progress:

- The average plan adoption date for plans with High and Moderate implementation progress is 2011. The average plan adoption date for plans with Low and No implementation progress is 2013.
- Plans awarded funds between 2007 and 2010 have a higher number of projects completed.
- Plans awarded before 2010 may have project recommendations that are irrelevant to today's standards.
- Plans awarded after 2010 may have not had enough time to process funding requests, both locally and with the respective MPO/RPO.

*“The planning process was well run, positively received, and produced good outcomes.
The same cannot be said for implementation.”*

~ City of Creedmoor

Barriers to Implementation

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

The following primary barriers were identified and are listed in order of importance:

- Lack of Funding
- Limited Staff
- Limited Right-of-Way
- Difficulty in Coordinating with Partner Agencies
- Low Priority in Plan and of Policy-Makers
- Feasibility of Project Scope
- Environmental Constraints

*“In North Wilkesboro, our topography is a major challenge to
ADA accessibility and pedestrian projects.”*

~ Town of Wilkesboro

Additional Considerations

- This analysis does not include implementation progress information from 19 communities with adopted plans that did not respond to this evaluation effort.
- Communities implement bicycle and pedestrian improvements through a range of development activities, resurfacing projects, and other incidental opportunities that are not tracked or referenced in their adopted plans. This makes it difficult to judge implementation progress on plan recommendations alone.
- The plans offer non-infrastructure recommendations. These include programs (education, enforcement and encouragement) and policy components that are instrumental in developing a comprehensive and responsive bicycle and pedestrian network. Non-infrastructure implementation is not accounted for in this report.
- The bicycle and pedestrian industry has changed drastically over the past decade, with a particular trend toward action-oriented planning documents. This provides an opportunity for more focused planning documents that may result in higher implementation rates moving forward.
- There may be an opportunity to streamline NCDOT's Bike/Pedestrian Plan template and develop a different approach based on community size, roadway maintenance, past implementation progress, and population density. For instance, plans in smaller, rural communities could focus on identifying key recommended projects versus a network development approach.

“The hard part is getting these recommendations to come to fruition with all of the other infrastructure woes we are dealing with. I hope that in the future, we can get more consistent bike/ped funding established.”

~ City of Southport
