



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

MEMORANDUM

TO: NCDOT Employees

FROM: James H. Trogdon, III, PE  
Secretary

DATE: August 30, 2019

SUBJECT: Complete Streets Policy Guidance

Attached is the Department's updated Complete Streets Policy, adopted by the Board of Transportation at the August meeting. This policy update is a result of nearly two years of careful analysis, engagement with our partners and collaboration across units to understand and address the challenges of delivering Complete Streets. Updating the Complete Streets Policy has been one of my priorities since returning to the Department, and I am committed to ensuring the Policy is implemented consistently across the state.

As we plan, design and construct the transportation network of the future, this policy update represents the Department's ongoing commitment to safe, multi-modal transportation. The attached Complete Streets Policy and Implementation Guide details my expectations for how Complete Streets will be planned, prioritized, designed, constructed and maintained across the state. My priority is to ensure that as a Department, we construct facilities that our communities want, need and will use.

Effective immediately, Highway Division projects that have not yet completed an Environmental Document will be expected to comply with the updated Policy. As we implement Complete Streets, we will refine our guidance and the Complete Streets Technical Team formed to aid in the development of the Policy update will continue to meet to oversee implementation.

cc: David Howard, Chief Deputy Secretary  
Julie White, Deputy Secretary for Multi-Modal  
Hanna Cockburn, AICP, Director of Integrated Mobility  
Chris Werner, PE, Director of Technical Services, Division of Highways  
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# COMPLETE STREETS

**NCDOT POLICY (#)**

**A.09.0106**

<b>Business Category:</b> Multi-Modal		<b>Business Area:</b> Bicycle & Pedestrian Division	
<b>Approval Date:</b> 8/8/2019	<b>Last Revision Date:</b> N/A	<b>Next Review Date:</b> 8/8/20	
<b>Authority:</b> <b>Select all that apply:</b> <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Requires Board approval <input type="checkbox"/> Requires Federal Highways Administration (FHWA) approval <input type="checkbox"/> Requires other external agency approval: <a href="#">Click here to enter external agency name(s)</a> .		<b>Policy Owner:</b> Bicycle & Pedestrian Division, Division of Highways	
<b>Definitions:</b> <p><a href="#">Complete Streets</a> is North Carolina’s approach to interdependent, multi-modal transportation networks that safely accommodate access and travel for all users.</p>			
<b>Policy:</b> <p>Transportation, quality of life, and economic development are all undeniably connected through well-planned, well-designed, and context-sensitive transportation solutions. To NCDOT, the designations “well-planned”, “well-designed” and “context-sensitive” imply that transportation is an integral part of a comprehensive network that safely supports the needs of communities and the traveling public.</p> <p>The North Carolina Department of Transportation, in its role as steward over the transportation infrastructure, is committed to:</p> <ul style="list-style-type: none"> <li>• Enhancing safety for all transportation modes, in support of <a href="#">Vision Zero</a>, a statewide program which aims to eliminate roadway deaths and injuries using data-driven prevention strategies;</li> <li>• Providing an efficient multi-modal transportation network in North Carolina such that the access, mobility, and safety needs of motorists, transit users, bicyclists, and pedestrians of all ages and abilities are safely accommodated;</li> <li>• Caring for the built and natural environments by promoting sustainable development practices that minimize impacts on natural resources, historic resources, businesses, residents, scenic and other community values, while also recognizing that transportation improvements have significant potential to contribute to local, regional, and statewide quality of life and economic development objectives;</li> <li>• Working in partnership with local government agencies, interest groups, and the public to plan, fund, design, construct, and manage complete street networks that sustain mobility through walking, biking, transit and driving.</li> </ul> <p>This policy requires NCDOT planners and designers consider and incorporate multimodal facilities in the design and improvement of all appropriate transportation projects in North Carolina. Routine maintenance projects may be excluded from this requirement if an appropriate source of funding is not available. Consideration of multimodal elements will begin at the inception of the transportation planning process and the decisions made will be documented.</p>			

The Department recognizes the types of roadway users and the way they interact with the transportation network is evolving as transportation technologies such as ride share, connected and autonomous vehicles, and electric vehicles become more prevalent. The Department will consider these evolving technologies and users in its planning and design guidelines.

This policy sets forth the protocol for the development of transportation networks that encourage non-vehicular travel without compromising the safety, efficiency, or function of the facility. The purpose of this policy is to guide existing decision making and design processes to ensure that all users are included during the planning, design, construction, funding, operation and maintenance of North Carolina's transportation network, and will not create barriers or hazards to the movements of those users.

**Scope:**

This policy generally applies to all projects undertaken by NCDOT throughout the state.

There are many factors that must be considered when implementing the policy, e.g., number of lanes, design speeds, intersection spacing, medians, curb parking, etc. The applicability of this policy should not be construed as conclusive. Each facility must be evaluated for proper applicability. Notwithstanding the exceptions stated herein, all transportation facilities funded by or through NCDOT, and planned, designed, or constructed on state-maintained facilities, must adhere to this policy.

**Approach:**

The Department is committed to collaborate with cities, towns, and communities to ensure pedestrian, bicycle, transit and evolving transportation technology options are included as an integral part of their total transportation vision. As a partner in the development and realization of their visions, the Department desires to assist localities, through the facilitation of long-range planning, to optimize connectivity, network interdependence, context sensitive options, and multimodal alternatives. During the Comprehensive Transportation Planning process, bicycle, pedestrian, transit, and other multimodal usage shall be presumed to exist along and across certain corridors (e.g. between residential developments, schools, businesses and recreational areas).

It is the policy of the Department of Transportation to fully replace existing Complete Streets facilities disturbed as a result of a highway improvement project.

**Planning and Design Guidelines:**

The Complete Streets Planning and Design Guidelines were developed in 2012 to provide planners, designers and decision-makers with a framework for evaluating and incorporating various design elements into the planning, design, construction, and maintenance of the Department's transportation projects. The guidelines describe the planning and project development procedures, including required documentation, to support the Complete Streets policy. In addition, the guidelines describe how all roadway users will share the right of way safely and provide special design elements and traffic management strategies to address unique circumstances.

Planning, implementation and design guidelines will be updated periodically to address changes in Departmental policies and procedures and to reflect new transportation technologies and innovations.

The NCDOT Roadway Design Manual is intended to serve as the authoritative reference for Complete Streets design in accordance with adopted guidelines of the American Association of State Highway and Transportation Officials and other adopted or approved State and Federal guidelines and standards.

**Exceptions to Policy:**

It is the Department's expectation that suitable multimodal facilities will be incorporated in all appropriate new and improved infrastructure projects. Exceptions to this policy will be considered where exceptional circumstances that prohibit adherence to this policy exist. Such exceptions include, but are not limited to:

- Facilities that prohibit specific users by law;
- Areas in which the population and employment densities or level of transit service around the facility does not justify the incorporation of a multimodal facilities;
- Emergency repairs that require immediate attention.

As exceptions to policy requests are unique in nature, each will be considered on a case-by- case basis. Each exception must be approved by the Complete Streets Review Team consisting of the following or their designees:

- Complete Streets Program Administrator,
- State Traffic Engineer,
- State Roadway Engineer,
- Integrated Mobility Division Director, and
- Division Planning Engineer/Corridor Development Engineer.

Routine maintenance projects may be excluded from this requirement if an appropriate source of funding is not available.

**Policy Distribution:**

It is the responsibility of all employees to comply with Departmental policies. Therefore, every business unit and appropriate private service provider will be required to maintain a complete set of these policies. The Department shall periodically update departmental guidance to ensure that accurate and up-to-date information is maintained and housed in a policy management system.

**Related Documents:**

This policy builds on current practices and encourages creativity for considering and providing multi-modal options within transportation projects, while achieving safety and efficiency. Specific procedural guidance includes:

- Highway Landscape Planting Policy (dated 6/10/1988)
- Pedestrian Policy Guidelines – Sidewalk Location (Memo from Larry Goode, 2/15/1995)
- Board of Transportation Resolution: Bicycling & Walking in North Carolina, A Critical Part of the Transportation System (adopted 9/8/2000)
- Bridge Policy (2000)
- Pedestrian Policy Guidelines (effective 10/1/2000, Memo from Len Hill, 9/28/2000)
- NCDOT Context Sensitive Solutions Goals and Working Guidelines (updated 9/8/2003)
- Aesthetics Guidance Manual (2015)

Revision History		
Revision Date	Revision Number	Description
8/8/19	0	Approved

RESOLUTION

North Carolina Department of Transportation

**RESOLUTION FOR THE BOARD OF TRANSPORTATION IN SUPPORT OF IMPLEMENTATION FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION COMPLETE STREETS POLICY THAT WILL ENHANCE SAFETY AND PROVIDE AN EFFICIENT NETWORK OF ALL TRANSPORTATION MODES**

**WHEREAS,** The North Carolina Department of Transportation is a state agency created in Article 8 of Chapter 143B of the North Carolina General Statutes; and

**WHEREAS,** the general purpose of the Department of Transportation is to provide for the necessary planning, construction, maintenance and operation of an integrated statewide transportation system for the economical and safe transportation of people and goods provided by the law; and

**WHEREAS,** the Department of Transportation Complete Streets Policy evaluation focuses on process improvements that ensures consideration and implementation of an integrated statewide transportation system; and

**WHEREAS,** the Department of Transportation’s 2009 Complete Street Policy has been updated to reflect this intent and purpose; and

**WHEREAS,** the Department of Transportation’s Complete Street Policy focuses on actions to strengthen institutional support;

**NOW, THEREFORE, BE IT RESOLVED:**

That the North Carolina Board of Transportation hereby adopts the 2019 amendments to the Complete Streets Policy.

*Michael S. Fox*

Chairman

August 8, 2019

Date

*Janet Spivey*

Secretary of Transportation

August 8, 2019

Date



## North Carolina Department of Transportation Complete Streets Implementation Guide

**The North Carolina Department of Transportation (NCDOT) Complete Streets Implementation Guide (Guide) is designed to assist NCDOT staff engineers, project managers and designers in implementing the Complete Streets Policy as adopted by the NCDOT Board of Transportation. This document provides comprehensive guidance for incorporating a complete streets approach into NCDOT's planning, programming, design, and maintenance processes.**

The prime elements of this Guide are the following:

- 1 Planning**
- 2 Project Development**
- 3 Resurfacing and Maintenance Activities**
- 4 Work Zone Accommodations**
- 5 Related Policies**
- 6 Cost Share**
- 7 Design Guidance**
- 8 Administration**

This Guide will be updated periodically as processes and procedures are refined, with a comprehensive review and update every five years, beginning in August 2024.

### **1 Planning**

This section outlines the approach for ensuring Complete Streets elements are evaluated as a roadway project is planned, prioritized and programmed. Each roadway project will include the preparation of a Complete Streets Project Sheet as detailed below. The Project Sheet will identify planned multi-modal facilities and document any exceptions considered in the course of project development.

#### **1.1 Complete Streets Project Sheet (Prioritization 6.0)**

For projects where a project sheet has yet to be developed as part of the CTP process, a Complete Streets Project Sheet will be used to document the types of pedestrian, bicycle, public transit, and other multimodal facilities to be evaluated in each highway project. This sheet will be submitted during the Strategic Prioritization submittal process in conjunction with the needs statement required for

Prioritization. The Complete Streets Project Sheet will carry forward as a key document in the Project Advancing Transportation through Linkages, Automation, and Screening (ATLAS) workbench, allowing any personnel to access the project later in development.

### **1.2 Complete Streets Project Sheet (within the CTP)**

Comprehensive Transportation Plans (CTP) developed through NCDOT's Transportation Planning Division identify projects to address network deficiencies for motorists, pedestrians, bicyclists, and transit users. Complete Streets Project Sheets are being introduced into the CTP process. The Project Sheet outlines the recommended improvement, propose a typical cross-section for highway projects, explains the identified need for the project, provide current and projected traffic volume and capacity, identify high-level environmental constraints and provides Complete Street recommendations. These sheets lay the foundation for Complete Streets facilities and serve as a starting point for projects selected for Strategic Prioritization submittal and carry forward as a key document in the project development phase.

### **1.3 Exceptions to Policy**

The Complete Streets Project Sheet will capture requests and approvals of any exceptions to the Complete Streets Policy. Documentation of exceptions will reference the reason for such action, including, unique site constraints, prohibition of pedestrians or bicyclists on the facility or a lack of existing or planned public transit service. Exceptions may be requested and considered any time throughout the process through the Complete Streets Program Administrator in the Integrated Mobility Division. Exceptions are automatically granted if requested by the local government.

A multi-disciplinary Complete Streets Review Team will review all requests for exceptions to the Complete Streets Policy. The Review Team will consider the justification for the proposed exception as detailed on the Complete Streets Project Sheet and decide whether to recommend approval of the exception.

If the exception is not approved, the Review Team will initiate additional discussion with relevant parties, including the Project Manager, to explore options and alternatives for including appropriate multi-modal elements in the project. If necessary, the decision will be elevated to the Chief Deputy Secretary and/or Secretary for a final decision.

The Complete Streets Review Team will consist of:

- Complete Streets Program Administrator,
- State Traffic Engineer or designee,
- State Roadway Engineer or designee,
- Integrated Mobility Division Director or designee, and
- Division Planning Engineer/Corridor Development Engineer or designee.

## 2 Project Development

The project development phase carries a project from concept to the specific street design to be constructed.

The Complete Streets Project Sheet will carry forward with a project through the project development phase. Project managers will use the Complete Streets Project Sheet early in project development to assist with determining facilities to be included in preliminary project design alternatives.

The Complete Streets Project Sheet will be a 'key document' in the Project Advancing Transportation through Linkages, Automation, and Screening (ATLAS) workbench, allowing all personnel working on the project throughout the development process to refer to the information. Project ATLAS features a workbench tool to organize technical reports and data needed during project delivery. As part of the Workbench structure, the Project Manager will be responsible for documenting how complete street elements are reflected in the project design.

### 2.1 Project Scoping

The Project Engineer shall coordinate with NCDOT's Integrated Mobility Division (IMD) on all programmed highway projects. The Integrated Mobility Division will participate in scoping meetings and provide a written summary memo identifying facility recommendations and design guidance as appropriate.

### 2.2 Bridge Projects

The Complete Streets Project Sheet will be integrated into the Structures Management Planning Process for bridge replacements and refurbishments. Until that step is complete, project managers will communicate with the Integrated Mobility Division through scoping requests to incorporate complete streets elements in bridge designs. This will occur for each bridge replacement project undertaken by NCDOT.

Due to the long useful life of bridges, on bridges with shoulder approach sections, where:

- a pedestrian need is identified through an adopted plan, sufficient deck space will be made available on the replacement bridge for future construction of sidewalks.
- a bicycle need is identified through an adopted plan, sufficient width for bike facilities will be provided.
- a multi-use path or sidepath need is identified through an adopted plan, sufficient width for the appropriate facility will be provided on and/or below the structure.

### 2.3 Equal or Better Performance of Facility

Conditions often change between the time a project is added to the STIP and the when the project development process begins that may support the incorporation of a different type of bicycle or pedestrian improvement than shown in an adopted plan. NCDOT will review an alternative facility to the bicycle and/or pedestrian facility type proposed in the adopted plan upon the written request of the local representatives. An alternative facility will be evaluated by the Complete Streets Review Team based on:

- purpose and need of the proposed facilities
- current or anticipated land use context of the project area
- traffic count data
- design speed
- crash history
- topographic and geometric features of the roadway
- safety

Project Managers will consult with the Complete Streets Program Administrator to request evaluation of an alternative facility. The decision of the Complete Streets Review Team will be documented in the Complete Streets Project Sheet.

### **3 Resurfacing and Maintenance Activities**

#### **3.1 Scheduled Resurfacing**

Each year, a county-level resurfacing schedule is developed within each NCDOT Division. NCDOT Division staff will meet with local agencies to review the scheduled roadways and identify locations to evaluate Complete Streets improvements. These may include striping, markings and associated signage.

The following process shall be followed to review resurfacing projects for complete street improvements:

- The Operations Program Management Unit will coordinate with the Integrated Mobility Division to identify planned facilities within the project limits suitable for implementation in conjunction with maintenance activities.
- Identified locations for Complete Streets improvements will be noted on the resurfacing list distributed to each unit of local government.
- The local government concurrence with recommended Complete Streets improvements will be provided to the local NCDOT Division in writing.
- Completed improvements will be incorporated into the Pedestrian and Bicycle Infrastructure Network (PBIN) and ATLAS upon completion.

#### **3.2 Addition of Rumble Strips**

Rumble strips (raised traffic bars), asphalt concrete dikes, reflectors, and other such surface alterations, where installed on roadways without full access control, will be placed in a manner as not to present hazards to bicyclists or interfere with existing on-road bicycle facilities. Rumble strips shall not be extended across the shoulder of the roadway or other areas intended for bicycle travel.

### **4 Work Zone Accommodations**

The continuity of existing bicycle and pedestrian facilities will be maintained during construction and maintenance activities. During the construction phase of a roadway project, NCDOT's [Guidelines for the Level of Pedestrian Accommodation in Work Zones](#) will be followed.

## 5 Policy References

### 5.1 Eliminated Policies

The following policy documents are superseded by the Complete Streets Policy (2019):

- *Complete Streets Policy* (2009) and *Complete Streets Planning and Design Guidelines* (2012)
- *Bicycle Policy* (2009, update)
- *Pedestrian Policy Guidelines* (2001)
- *Administrative Action to Include Local Adopted Greenway Plans in the NCDOT Highway Planning Process* (1994)

### 5.2 Related Policies

The following policy documents include elements related to Complete Streets implementation:

- *Traditional Neighborhood Development Manual* (2000)
- *Bridge Policy* (2000)
- *Policy on Street and Driveway Access to North Carolina Highways* (2003)
- *Exceptions to Maintenance Responsibilities on State Highway System Streets in Municipalities* (2003)
- *Subdivision Roads: Minimum Construction Standards* (2010, updated May 2016)
- *Guidelines for Inclusion of Greenway Accommodation Underneath a Bridge as Part of a NCDOT Project* (2015)

## 6 Cost Share

### 6.1 Complete Street Cost Share

The table below illustrates the funding responsibilities for Complete Streets incorporating bicycle and pedestrian and roadway public transportation facilities.

<b>Complete Street Cost Share</b>			
<b>Facility Type</b>	<b>In Plan</b>	<b>Not in Plan, but Need Identified</b>	<b>Betterment</b>
Pedestrian Facility	NCDOT pays full	Cost Share	Local
Bicycle Facility	NCDOT pays full	NCDOT pays full	Local
Side Path	NCDOT pays full	Cost Share	Local
Greenway Crossing	NCDOT pays full	Cost Share	Local
Bus Pull Out	NCDOT pays full	Cost Share	Local
Bus Stop (pad only)	NCDOT pays full	Cost Share	Local

Bicycle and pedestrian and public transportation facilities that appear in a state, regional or locally adopted transportation plan will be included as part of the proposed roadway project. NCDOT will fully fund the cost of designing, acquiring right of way, and constructing the identified facilities.

Bridges will not be included in the total project construction cost for cost-sharing purposes. NCDOT is responsible for the full cost of bridges.

Where an alternative facility requiring equal or lesser right-of-way is deemed to perform on an equal or better basis with concurrence by the Integrated Mobility Division, NCDOT shall construct the alternative facilities no cost share by the local jurisdiction.

## **6.2 Maintenance**

Bicycle and pedestrian improvements within a municipal boundary are subject to local maintenance. A local maintenance agreement will be executed prior to the completion of a construction project.

In instances where a local maintenance agreement is not executed to maintain a bicycle or pedestrian facility, NCDOT will maintain the facility after construction if the bicycle or pedestrian facility lies within NCDOT right-of-way.

## **6.3 Betterment**

A roadway project betterment is defined as:

- A requested bicycle, pedestrian or public transportation improvement that exceeds the recommendations appearing in a state or locally adopted plan requiring additional roadway width and/or right-of-way
- Aesthetic materials and treatments, if this cost is determined to exceed the cost of standard construction materials
- Landscaping in excess of standard treatments
- Lighting in excess of standard treatments

The additional costs associated with inclusion of these elements in a roadway project are the responsibility of the local jurisdiction, executed through a local agreement.

## **6.4 Betterment Cost Share Formula**

Bicycle and pedestrian facilities incidental to a roadway project where a need has been identified through the project scoping process but not identified in a locally adopted plan may be included in the project. Inclusion of these incidental facilities requires the local jurisdiction to share the incremental cost of constructing the identified improvements.

NCDOT will estimate the incremental cost of proposed improvements. The percentage of the total cost share for these improvements will be based on the table below according to the population of the jurisdiction in the most recent [annual certified estimated of population](#) as determined by the state demographer, and executed through a local agreement.

Betterment Cost Share		
Municipal Population	Cost Participation	
	NCDOT	Local
> 100,000	80%	20%
50,000 to 100,000	85%	15%
10,000 to 50,000	90%	10%
< 10,000	95%	5%

## 7 Design Guidance

The NCDOT **Roadway Design Manual** will serve as the authoritative reference for Complete Streets design. Cross-sections from the Manual will be used in stages of project planning, prioritization and development.

American Association of State Highway Transportation Officials (**AASHTO**) guides will serve as authoritative references for street design and will be used in coordination with the NCDOT Roadway Design Manual.

National Association of City Transportation Officials (**NACTO**) guides will serve as supplemental references for street design and will be used in coordination with the NCDOT Roadway Design Manual and AASHTO guides.

## 8 Administration of the Policy

The Complete Streets Core Technical Team (CTT) will meet quarterly to oversee the implementation of Complete Streets. The primary role of the CTT will be to review and maintain the Implementation Guide, recommend updates and process improvements and establish performance metrics for implementation. The CTT will direct the implementation of recommendations contained within the NCDOT Complete Streets 2.0 Recommendations document.

The CTT is comprised of the following units.

- ADA/Title VI Office
- Integrated Mobility Division
- Chief Deputy Secretary's Office
- Division of Highways
- Environmental Policy Unit
- Mobility & Safety
- Planning & Programming
- Rail Division
- Roadway Design Unit
- Technical Services
- Transportation Planning Division