

TOWN OF CHAPEL HILL MOBILITY AND CONNECTIVITY PLAN



OCTOBER 2017





Acknowledgements

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Executive Summary

The Chapel Hill Mobility and Connectivity Plan expands the vision for the transportation and recreation system in Chapel Hill, NC as it relates to transit and non-motorized travel. It identifies the next phase of priorities for making bicycle and pedestrian connections within Chapel Hill and to key destinations in Orange County and the greater Triangle area. This effort combines existing planning efforts, resident input, and a fresh look at issues and opportunities. It focuses on leveraging the Town's growing greenway system with an updated design toolkit for on-street networks to create safe and comfortable corridors that link neighborhoods, parks, employment centers, business districts, transit stops, and other destinations.

This plan presents a toolbox of pedestrian, shared-use, and bicycle facility types and their consideration for use in Chapel Hill's transportation network. It examines the feasibility of these facilities, incorporates them into a comprehensive network and develops an implementation strategy for the future. The resulting network is aimed at increasing the combined bicycle, pedestrian, and transit modeshare. It serves as a guide for town staff, stakeholders, and the public interested in the pursuit of creating (1) an integrated transportation system with (2) improved comfort and (3) convenient choices for all citizens and visitors of Chapel Hill, NC. For simplification, the Chapel Hill Mobility and Connectivity Plan is hereinafter referred to as the Mobility Plan.



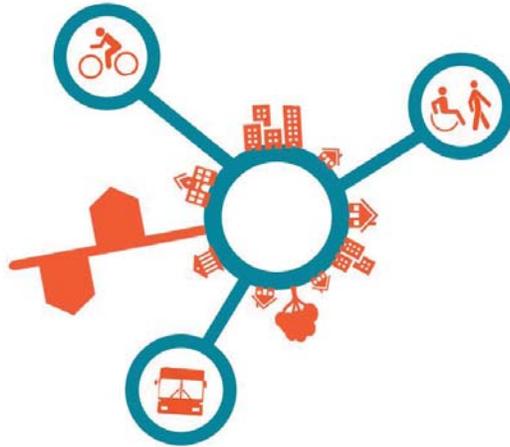
The goal of the Mobility Plan is to achieve a 35% bicycling, walking, and transit commute combined modeshare in Chapel Hill by 2025.

This plan builds on the vision and previous planning efforts with a fresh look at safely getting pedestrians and cyclists to key places in town.

The Mobility Plan extends existing planning work by building on outcomes and recommendations from the 2013 Chapel Hill Greenways Master Plan, the 2014 Chapel Hill Bike Plan, and the 2020 Comprehensive Plan. It integrates bicycle and pedestrian access to transit and considers how to build on recommendations from recent planning efforts. In addition, this plan gives a fresh look at pedestrian-specific mobility, identifying ways to get people of all ages and abilities to key destinations in the town.

Meeting the 35% goal by 2025 is in line with 4% increase in bike/ped/transit modeshare from 2011 to 2015.

23% 27%



Mobility on Major Street Corridors

The Chapel Hill 2020 Plan calls for “a comprehensive transportation system that provides everyone safe and reasonable access to all that the community offers.” Five street corridors—Martin Luther King Jr. Boulevard, E Franklin Street, US 15-501/Fordham Boulevard, US 15/501 South, and Raleigh Road—facilitate most of the Town’s existing auto travel, but none of those corridors are “Complete Streets” that provide better accommodations for pedestrians, cyclists, and transit users.

The five main street corridors all have four lanes or more of traffic and typically lack continuous pedestrian and bike facilities. Each corridor has gaps in the existing network that must be filled in order to achieve Complete Streets. The Mobility Plan recommends short-term improvements to help fill those gaps, to establish bike facilities with some separation from traffic, and to create safe crossing options at major intersections. Long-term recommendations include major road widenings in conjunction with the implementation of bus rapid transit on Martin Luther King Jr. Blvd and US 15-501 South, US 15-501/Fordham Blvd.

Bicycle improvements in the corridors include multi-use paths, buffered bicycle lanes, bike boxes, two-stage left-turn queue boxes, green pavement markings, marked bike lanes through intersections, and improved detection at signals.

**Bus Rapid Transit
Buffered Bike Lanes
Sidewalk Gaps**

**Bus Rapid Transit
Multi-Use Paths
Intersection Improvement**

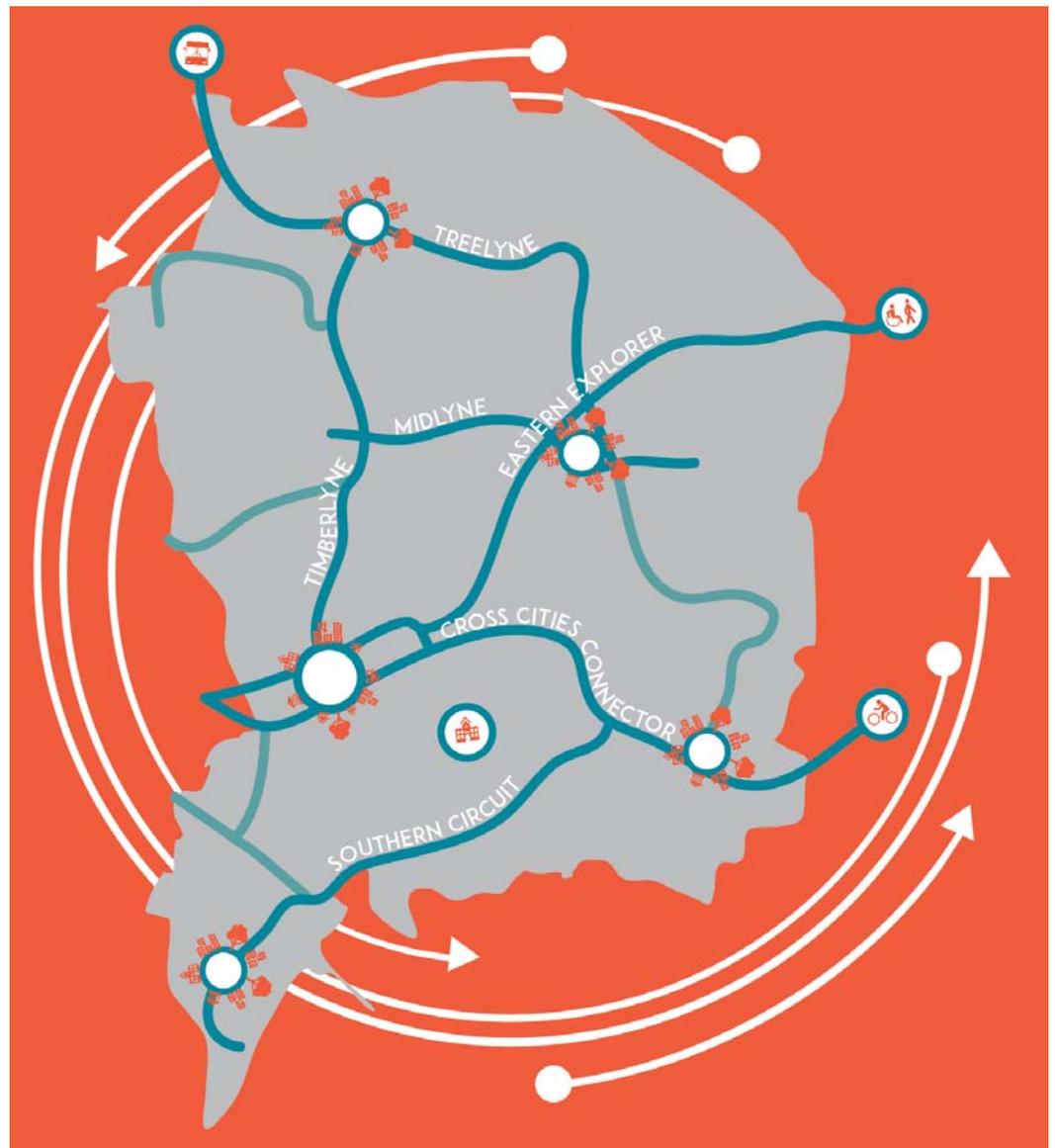
US 15-501

Executive Summary



Developing Priority Non-Motorized Corridors

Presently, the Town of Chapel Hill lacks a comprehensive network for non-motorized transportation. Now is the opportune time to knit together the Town’s numerous greenways, multi-use paths, neighborhood sidewalks, and bikeways to create a network of priority pedestrian and bicycle corridors that serve as a parallel system to on-street facilities. The six priority bike/ped corridors shown below link the key focus areas of the town and will aim to attract users of all ages and abilities who seek alternatives to driving but want to stay away from major street corridors and their traffic. By connecting neighborhoods to destinations, residents will be able to use local street and trail connections to access these priority corridors and travel to the places they live, shop, work, and play.





Other Major Recommendations

New Facilities and Types

- Utilize **on-street greenway connectors** to link greenway trails through priority corridors.
- Construct new **grade-separated crossings** at key locations to facilitate connectivity across busy roadways.
- Require and identify opportunities for **paved connectors/paths** to neighborhoods.
- Develop greenway and multiuse **connections to the regional greenway system** to link Chapel Hill to the extensive network across Triangle.

Programs and Policies

- **Update Sidewalk Priority Ranking criteria** to account for priority corridors, focus areas, and constructability.
- Implement and fund a **sidewalk microgap program** in Town annual capital budget.
- Develop and fund a **bike parking program** to encourage installation of bike racks at existing developments where demand is high.
- Increase **bike parking requirements for transit** stations and stops.
- Investigate regional coordination opportunities with potential implementation of a Town bike share program.

Culture and Mindset

- Develop **mobility performance measures & annual reporting** to track progress on bike/ped mobility and connectivity.
- Establish a **continuous bike/ped count program** to track cycling and pedestrian usage of facilities.
- Become an **affiliate community of National Association of City Transportation Officials (NACTO)** to help with the development of urban street, bike, and transit design standards.
- Employ a **mobility coordinator** to focus on the coordination between bicycle, pedestrian, greenway, and transit accessibility issues.
- Create a **wayfinding and signage** package to raise awareness of routes and orient people to destinations
- **Support and expand 'Active Routes to School' programming** to make walking and biking to schools safer and increase the number of children who do.



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Executive Summary



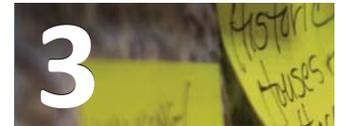
Introduction

Vision, Objectives, and Goal • Biking and Walking Benefits



Developing the Mobility Plan

Plan Process • Public Outreach



Evaluating Existing Conditions

Demographics • Statistics • Existing Plans and Policies •
Planned Improvements • Needs Assessment



System Recommendations

Facility Types • Developing Corridor Mobility • Implementation



Policy/Program Recommendations

Complete Streets Policy Update • Pedestrian Policies, Guidelines, and Standards •
Sidewalk Programs • Bicycle Policy and Programs



Broadening the Culture and Mindset



Glossary Appendices



The four objectives established for Chapel Hill’s Mobility Plan are to integrate the system, remove barriers, reduce stress, and offer attractive transportation choices.

Introduction

Vision, Objectives and Goal

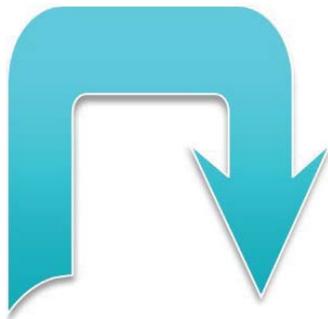
The vision and objectives of the plan guided the technical planning and selection of recommendations. These objectives were set based on the recognition that to achieve overall mobility goals, Chapel Hill needs to grow and integrate the multi-modal infrastructure that it has with an eye toward the future using the best tools available.

Through policies, prioritization and implementation, the Mobility Plan lays the groundwork for building out Chapel Hill’s non-motorized transportation system in a way that achieves the plan’s vision and objectives.

The plan uses the current 27% combined ped/bike/transit mode share as a starting point to track progress over time through a set of defined performance measures.

Integrate System

Expand and link walking, bicycling, and shared-use networks, and enhance connections to transit.



Reduce Stress

Create an environment where people of all ages and abilities feel safe and independently mobile.



Chapel Hill is a community where bicycling, walking, and taking transit are safe and convenient, everyday choices.

Remove Barriers

Improve crossings between networks and to destinations, and integrate land use development.



Offer Attractive Choices

Foster options that are comfortable, affordable and efficient for residents and visitors.



Vision and Objectives for Chapel Hill Mobility Plan based on Public Input

Multimodal Planning Efforts

2013 Greenway Master Plan
2014 Bike Plan
Durham-Orange Light Rail Transit Project
2016 North-South Corridor Study



Community Inputs

Public Open Houses
Steering Committee
Pop-Up Outreach
Survey
Wiki-Mapping

2017 Chapel Hill Mobility Plan

Pedestrian Assessment

Access to Transit
Accessible Routes
ADA Transition



Town Focus Areas

Downtown
Highway 54
North MLK at I-40
South MLK/Homestead Rd to Estes Dr
North US 15-501
South US 15-501

Comprehensive Inputs to the 2017 Chapel Hill Mobility Plan

Biking and Walking Benefits

Biking and walking interest is growing because these modes provide distinct economic, health, and environmental benefits to people and communities. Active transportation options and facilities can:

- Attract and retain residents, including families who want accessible, fun, friendly activities, and Millennials who are increasingly choosing not to drive.
- Save people money by providing less expensive options to driving
- Offer people flexibility and consistency, since walking and bicycling often have more reliable travel time than driving.
- Lure businesses who are interested in attracting a skilled workforce that is drawn to bikeable, walkable, and amenity rich areas. Many major businesses are choosing areas with more transportation choices than suburban office parks.
- Provide physical activity opportunities for North Carolinians, where more than 65% of the population is overweight or obese.
- Give people access to places where they can be active near their homes.
- Ensure youth have a wide range of options for physical activity so that they may perform better on tasks that demand concentration and avoid childhood obesity.
- Decrease the amount of emissions in urban areas, especially for short trips.

Developing the Mobility Plan

The Town of Chapel Hill maintains an ongoing goal to improve infrastructure for bicyclists and pedestrians. Development of the Mobility Plan focused on this goal through the 18-month plan process. The team evaluated the existing plans, policies, and programs to develop an overarching and binding set of recommendations that are not specific to any one mode, but a comprehensive approach to promoting improved mobility throughout the community.

Project Schedule

	2016						2017						
	SPRING	JUN	JUL	AUG	SEP	WINTER	SPRING	MAY	JUN	JUL	AUG	SEPT	OCT
Kickoff	●												
GIS Analysis	●—●												
Field Work	●—●												
Pop-up Public Meetings	●—●												
Web Survey/Wiki Map		●—●											
Public Meetings			● 6/30/16		● 9/6/16								
Plan Development				●—●				● TCAB, PRGC 5/23/17					
Town Board Reviews								● PC 8/1/17	● TCAB 8/15/17	● HAB 9/15/17	● PGR, PC 9/19/17		
Finalize Plan								●—●					
Plan Adoption													●

Plan Process

The Mobility Plan builds on the existing Town Bike and Greenway Plans to develop a true multimodal network and increase the use of alternate transportation modes. The initial phases of the project involved data collection through both researching existing plans and budgets as well as field work. Those efforts, highlighted in the Existing Conditions chapter, were supplemented by public involvement efforts where residents were able to help identify mobility needs and issues they experience in the everyday lives. Planners then used the facility data and public input to evaluate the existing ped/bike network to identify key corridors and network gaps.

That analysis led to a series of recommendations for both physical improvements and policy changes throughout Chapel Hill and a plan of action to implement those recommendations in the near- and long-term future. With successful implementation, the Town should continue to see increases in non-motorized and transit trips as its neighborhoods, businesses, and institutions become better connected for pedestrians and cyclists.



Public Outreach Methods

The Mobility Plan process offered many opportunities for citizens to provide input and to inform the recommendations. Activities conducted during the study creatively connected with the community and attempted to help gain input from a broader cross-section of the residents.

Steering Committee - Initially, the Town convened a Steering Committee with representatives from UNC, various Town departments, NCDOT, GoTriangle, Town of Carrboro, City of Durham, & DCHC MPO to help inform and review the findings on the plan. After an initial kick-off meeting, the group's duties were transitioned to the Town's Transportation and Connectivity Advisory Board. The TCAB reviewed the project's progress and recommendation throughout the process.

Pop-Up Outreach - The project team developed three pop-up public involvement opportunities to go Chapel Hill residents to get survey input in locations where they typically travel.

- **Tuesday, June 21, 2016**- Active outreach at Plaza 140 to collect survey input
- **Wednesday, June 22, 2016** - Team rides various transit routes throughout the day in Chapel Hill to collect survey input; followed by event at Performance Bike
- **Thursday, June 23, 2016**- Active outreach at East Gate Shopping Center and Chapel Hill Main Library to collect survey input
- **Friday August 26th, 2016**- Active outreach at Cyclicious event at UNC-Chapel Hill



Bicycling enthusiasts at the Cyclicious event at UNC-Chapel Hill



In-Person Surveys and Pop Up Events

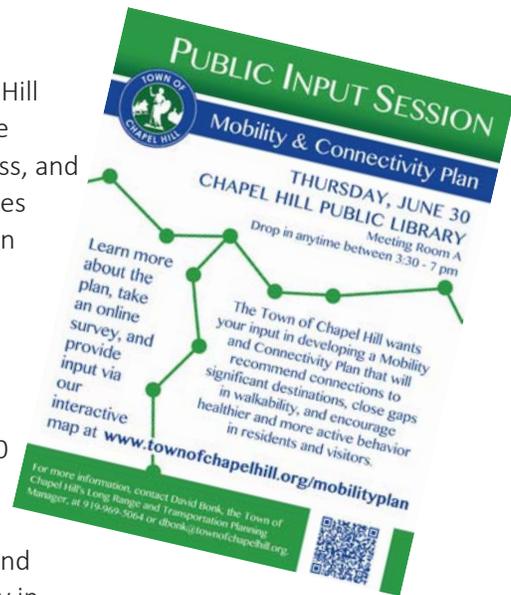
These outreach activities expanded the reach of the Mobility Plan to get input from people where they were.

Public Open Houses - Two public open houses were held at the Chapel Hill Public Library. The drop-in style open houses had a variety of interactive boards and a presentation to introduce residents to the planning process, and get feedback on the following: vision and goals of the plan; current issues with bicycling, walking, and access to transit; and voting on prioritization of projects. Both open houses also took open-ended feedback for consideration in the plan.

- Thursday, June 30, 2016- Drop-in session between 3:30 and 7:00 PM at the Chapel Hill Public Library: 39 attendees
• Tuesday, September 6, 2016- Drop-in session between 4 and 7:00 PM at the Chapel Hill Public Library: 43 attendees

Comments and inputs based on existing conditions and opportunities and project prioritization were worked into the public involvement summary in Chapter 4 and Appendix A.

Survey - With guidance from Town staff, the project team developed a survey intended to gain insights from a variety of users about current pedestrian, cycling, and transit destinations; connectivity issues; and suggestions for improvements. The survey was open from mid-June until mid-September 2016.



Commute Modeshare

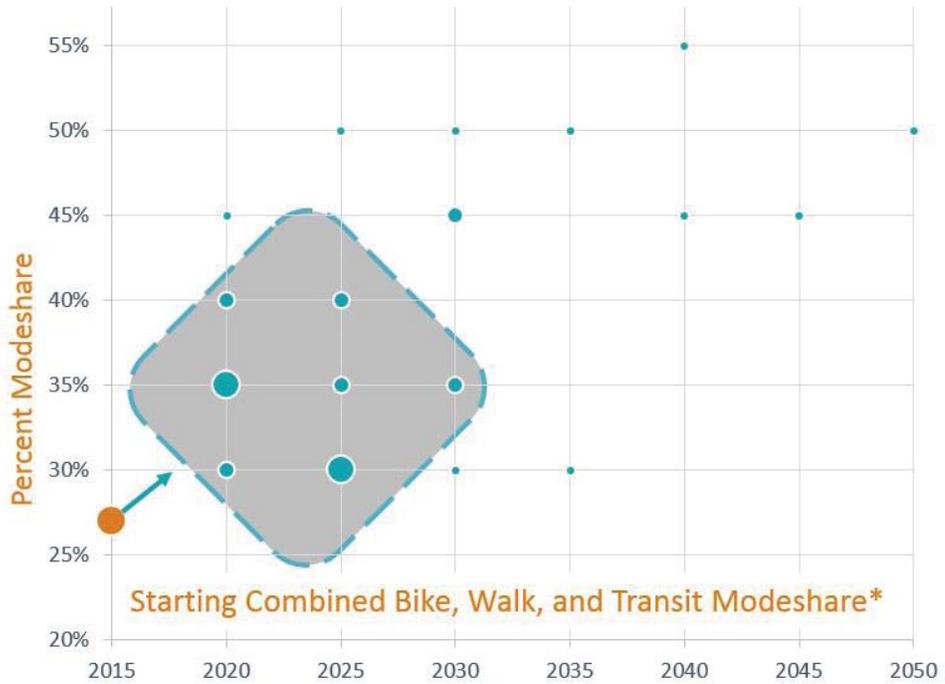
 Most participants wanted to see big gains in bicycling, walking, and transit commuting in relatively short time horizon.





● Votes

 *American Community Survey, 2014 Journey to Work Statistics



Setting Goals for Future Modeshift to Bicycling, Walking and Taking Transit.

Map-Based Online Input - The Town of Chapel Hill used an online tool called WikiMaps to complement to the survey. This tool allowed community members to provide visual, map-based input about desired walking and bicycling corridors and network problem areas, as well as comments about various subjects such as transit stops, intersections, maintenance, and destinations currently difficult or impossible to access using alternative modes of transportation.

Wiki-Mapping

Citizens input concerns, identified locations and indicated desired routes using an online map tool.

Map-based reporting for bicycle and pedestrian issues in the Town was available to citizens online throughout the public input period for the Mobility Plan

Summary of Public Involvement Activities

Pop-Up Outreach

Three targeted pop-up events to get survey input in locations where residents travel – Chapel Hill Transit, Eastgate Shopping Center, and UNC Chapel Hill

Survey

Question emphasis on pedestrian mobility, walkability, and accessibility to address pedestrian planning inputs. Questions also targeted specifically at Ephesus Fordham District.

Public Open Houses

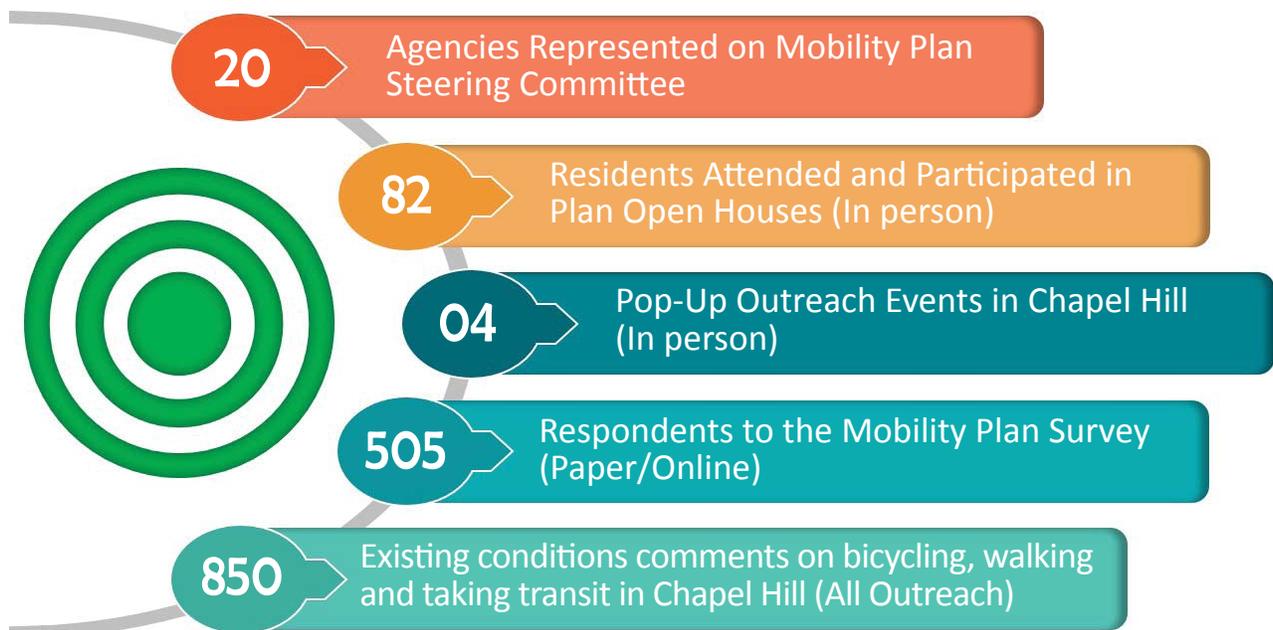
Two public open houses at Chapel Hill Public Library with opportunities to evaluate existing conditions and prioritize projects.

Steering Committee

Kick off meeting and updates given to steering committee throughout the project. Committee assisted with outreach on Public Input.



Opportunities for stakeholder and public input to provide guidance to Chapel Hill Mobility Plan



Breakdown of the key inputs to the Mobility Plan