Town of Mount Pleasant

Project Acceleration: Implementation Plan















Town of Mount Pleasant Project Acceleration: Implementation Plan

Town of Mount Pleasant, NC

Prepared For: **TOWN OF MOUNT PLEASANT** 8590 Park Drive Mount Pleasant, NC 28124 (704) 436-9803

Prepared By: **Kittelson & Associates, Inc.** 809 W Hill Street, Suite D Charlotte, NC 28208 (443) 524-9413

Project Manager: Caitlin Tobin, PE Project Principal: Josh Hurst, PE

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Section 1
Executive Summary

EXECUTIVE SUMMARY

// A MESSAGE FROM THE TOWN OF MOUNT PLEASANT //

Healthy living, parks, recreation, and walkability within the Town of Mount Pleasant were among the top priorities identified during the Comprehensive Plan process in 2017. Repairing existing sidewalks, building new sidewalk segments, expanding the Carolina Thread Trail, connecting people recreational amenities, and providing safe areas to key themes identified Comprehensive Plan, not only for quality of life aspects but also as a component of economic development. Given the relatively small size of the Town, it was important to develop implementationfocused strategies to improve walkability and connect different areas of interest and recreation assets. In 2019, the Town of Mount Pleasant was awarded a Bicycle and Pedestrian Planning Grant from the North Carolina Department of Transportation to produce a Project Acceleration Plan.



This plan is intended to focus funding for priority pedestrian projects that will connect and enhance the Town sooner rather than later. With the adoption of this plan, the Town of Mount Pleasant is committing to make the funding and construction of sidewalks and trails a priority during the budget planning each fiscal year and to implement the identified projects to the best of its ability.

// THANK YOU //

A sincere Thank You to the people who served on the Project Steering Committee, which guided and supported the development of this Plan.

North Carolina Department of Transportation

John Vine-Hodge, Transportation Program Manager, Bicycle & Pedestrian Division Stuart Basham, Division 10 Planning Engineer

Town of Mount Pleasant

Randy Holloway, Town Manager Crystal Smith, Assistant Town Manager Erin Burris, Planning & Economic Development Director Justin Stallings, Public Works Director William Meadows, Commissioner Whit Moose, Planning & Zoning Board Chair Rick Burleyson, Planning & Zoning Board Member

Cabarrus County

Jason Gilmore, Patrol Supervisor Londa Strong, Active living & Parks Director Susie Morris, Planning & Zoning Manager

Cabarrus Rowan Metropolitan Planning Organization

Phil Conrad, Director

Carolina Thread Trail

Bret Baronak, Carolina Thread Trail Mark Kincaid, Carolina Thread Trail

Town Residents

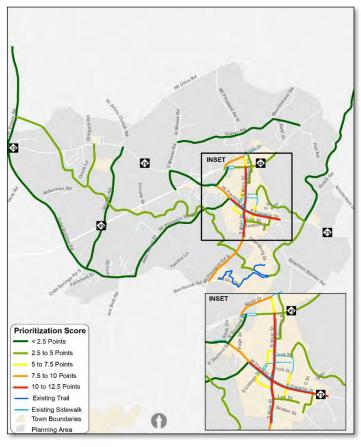
Deneen Jones Georgia Abernethy Kay Beckett

// SUMMARY OF THE PLAN FOR IMPLEMENTATION //

The Town of Mount Pleasant adopted their Comprehensive Plan (CP) in December 2017, which identified key infrastructure projects that would address needs in the Town. The Plan further evaluates the feasibility of the proposed projects in the CP, prioritize the projects for implementation and develop customized implementation plans for the top, prioritized projects.

The prioritization methodology was developed in conjunction with Town Staff and a Project Steering Committee (PSC) made up of Town and County staff and residents. The methodology scored projects based on Safety, Connectivity, Economic, Community and Cost factors. The total scores for each project are mapped in the figure to the right, with projects in red scoring the highest number of points and projects in dark green scoring the lowest number of points.

Upon reviewing the ultimate results of the prioritization methodology, the Town, along with the PSC, identified the top 5 projects that would benefit from a detailed concept and implementation plan. These projects included:



Map of Project Scores based on Prioritization

Methodology

- 1. N. Main Street- NC 49 to Franklin Street
- 2. Franklin Street- Halifax Street to N. Main Street
- 3. Franklin Street: N. Main Street to Blueberry Street
- 4. Franklin Street- Duchess Drive to Halifax Street
- 5. Washington Street- Park street to Lee Street

There was also a second tier of 5 projects that was developed to identify high level implementation strategies focused around funding mechanisms. These projects included:

- 1. S. Main Street- Franklin Street to Oldenburg Drive
- 2. Mount Pleasant Road South- Oldenburg Drive to Malibu Road
- 3. North Drive- NC 49 to N. Main Street
- N. Main Street-North Drive to NC 49
- 5. College Street

Section 2 Existing Conditions

INTRODUCTION

The Town of Mount Pleasant adopted their Comprehensive Plan (CP) in December 2017. The CP outlined key infrastructure projects and policies that would support the Town's current trajectory of growth and address needs in the Town. The Town applied for a North Carolina Department of Transportation (NCDOT) Project Acceleration Planning grant. This grant program provides planning funds for the Town to further evaluate the feasibility of the proposed projects and policies in their CP, prioritize the projects for implementation and develop customized implementation plans for the top, prioritized projects.

This section outlines the existing conditions for the pedestrian and bicycle network as well as summarizes the key elements of the adopted CP. This section also documents the review of eighteen (18) projects in the CP that would introduce improvements and expansions to the existing pedestrian and bicycle network. The review summarizes existing challenges and opportunities for each of the projects to be used to further evaluate the feasibility of each project in the next steps of the study.

COMPREHENSIVE PLAN SUMMARY

The Town of Mount Pleasant has developed and adopted a CP that incorporates previous planning efforts and community stakeholder input to set forth a vision for Mount Pleasant. The plan outlines policies, projects and programs that are important to sustaining and stimulating the Town's growth and the community's vision.

Mount Pleasant is a town in Eastern Cabarrus County, North Carolina, about 30 miles northeast of Charlotte. The planning area for the CP comprises 12,178.73 acres, including the Town's extraterritorial jurisdiction (ETJ) and growth areas along Highways 49 and 73. The Town has also included area that is not in its jurisdiction in the planning area. This area roughly follows the borders of an annexation agreement between the City of Concord and the Town of Mount Pleasant and is such that the Town of Mount Pleasant could provide utility services to the entire area without straining existing infrastructure.

Figure 1 shows a map of the planning area with the Town Limits and Extraterritorial Jurisdiction.

As of the 2010 census, 1,652 people live in Mount Pleasant, with Census Bureau estimates for 2018 showing the town's population at 1,952 people. The town's area is about 2,100 acres with a minimal percentage of that area being waterways. The population density is 592 people per square mile. The Town experienced a 12.8% rate of population growth between 2010 and 2014, while the planning area experienced an 8.8% percent decrease over the same period.

The Town prides itself on its "small-town character and agrarian roots." The areas around the town boast several historical sites and green spaces. The Town's 773 households are mostly families with children, supporting a limited amount of retail. The downtown, defined here as the area centered on the intersection of Main Street and Franklin Street, is walkable, with most streets having a sidewalk on at least one side and many intersections having ramps complete with tactile warning surfaces. The

downtown has several points of interest, including eateries, a park, civic buildings, and local businesses, all connected by the sidewalk network.

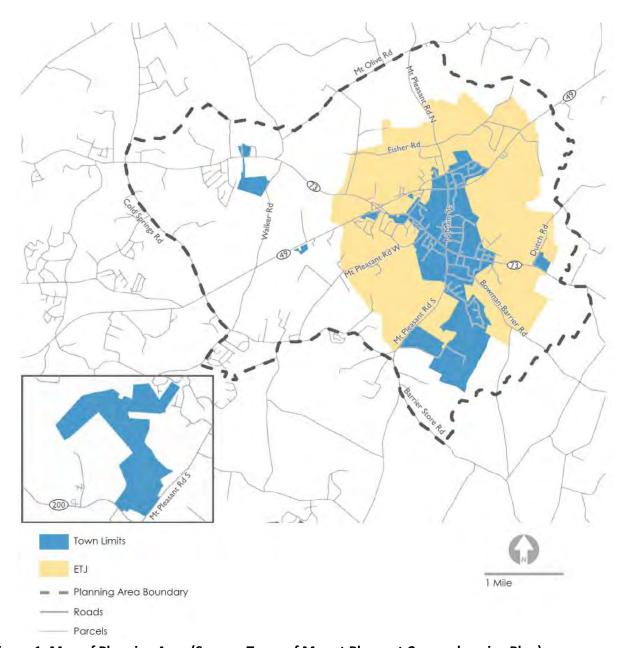


Figure 1. Map of Planning Area (Source: Town of Mount Pleasant Comprehensive Plan)

Public Involvement

The Town solicited community input in the early stages of developing the comprehensive plan through a survey and a public workshop. The community input informed the development of the plan's vision, which is summarized in the plan's vision statement. The vision statement is as follows: "The Town of Mount Pleasant is an attractive, safe, family-oriented community that values its history while highlighting its rural setting and agrarian roots. Its small-town charm is balanced by controlled growth,

sound infrastructure, suitable recreational and athletic facilities, a vibrant downtown, tourism offerings, and a variety of shops and restaurants for residents and visitors."

About 600 residents responded to the survey. To the question, "What do you like most about downtown Mount Pleasant?", survey participants answered "sidewalks and walkability" most often. Residents also expressed a desire for more entertainment, parks and recreation opportunities, commercial development, and parking spaces downtown in the survey. These survey results and a full description of the public engagement to the projects developed are available in Section 2 of the Town's Comprehensive Plan.

Vision

The Town presents its vision for the execution of the comprehensive plan as follows:

- Embracing small-town character through historic preservation
- Preserving surrounding farmland through controlled growth
- Remaining a safe, family-oriented community
- Revitalizing downtown while preserving its historic charm
- Attracting and retaining a variety of small businesses to provide for the needs of the community
- Working collaboratively to provide adequate parks and recreation facilities and athletics programming
- Providing a safe and well-maintained pedestrian network
- Upgrading outdated infrastructure and providing for its long-term maintenance
- Encouraging tourism to help support and diversify the economic base

Goals

The Town breaks down the goals for the plan into six categories:

- Community character (CC)
- Economic development (ED)
- Land use and growth management (LU)
- Downtown (DT)
- Parks and recreation (PR)
- Infrastructure and services (IS)

Table 1 lists the goals from the Comprehensive Plan that are related to the development of a bicycle and pedestrian network.

Table 1. Bicycle and Pedestrian Related Goals of the Comprehensive Plan

ID	Implementation Action
CC2	Improve landscaping, signage, and building design standards for new and expanding development to enhance and be compatible with surrounding development.
CC6	Provide attractive landscaped signage at the Town's gateways and wayfinding signage for the Town's attractions.
LU3	Promote infill residential development to more fully utilize existing infrastructure, with a strong focus on areas within walking distance of the Downtown Core to help support downtown businesses.
DT1	Improve downtown parking availability and quality by constructing a municipal parking lot and working with downtown property owners to make improvements to existing parking.
DT2	Facilitate streetscape improvements including burying or relocating power lines along Main Street and Franklin Street, updating sidewalks, improving on-street parking, and adding planters, pedestrian scale lighting, and benches.
DT5	Fully utilize the Town Hall property and available adjacent properties to include Town government, expanded Fire Station, Cabarrus County Senior Center, Community Center, baseball field, batting cages, updated playground, picnic shelter, farmers market, event space, greenway trailhead, ample parking, and space for future recreation expansion.
PR1	Work with Cabarrus County to provide additional recreational amenities in the vicinity of Mount Pleasant, including a future County district park as recommended in the Cabarrus County Active Living & Parks Department Comprehensive Master Plan.
PR2	Work with the Carolina Thread Trail to expand the trail from the Buffalo Creek Preserve and complete segments identified in the trail master plan. Additionally, facilitate the construction of a greenway spur from Mount Pleasant Community Park to the Carolina Thread Trail along Dutch Buffalo Creek and the former prison site on Dutch Road.

Existing Pedestrian and Bicycle Conditions

At present, the downtown core is the only area of the town with a sidewalk network. Main Street has sidewalks on at least one side between Oldenburg Drive to the south and about 250 feet short of North Carolina State Route 49 to the north. Franklin Street has sidewalks on at least one side between Mt Pleasant Road to the west and B Street to the east. College Street, Walnut Street, and Cook Street also feature sidewalks. Short segments of sidewalk exist elsewhere in the Town. Figure 2 shows the existing sidewalk network in the Town of Mount Pleasant.

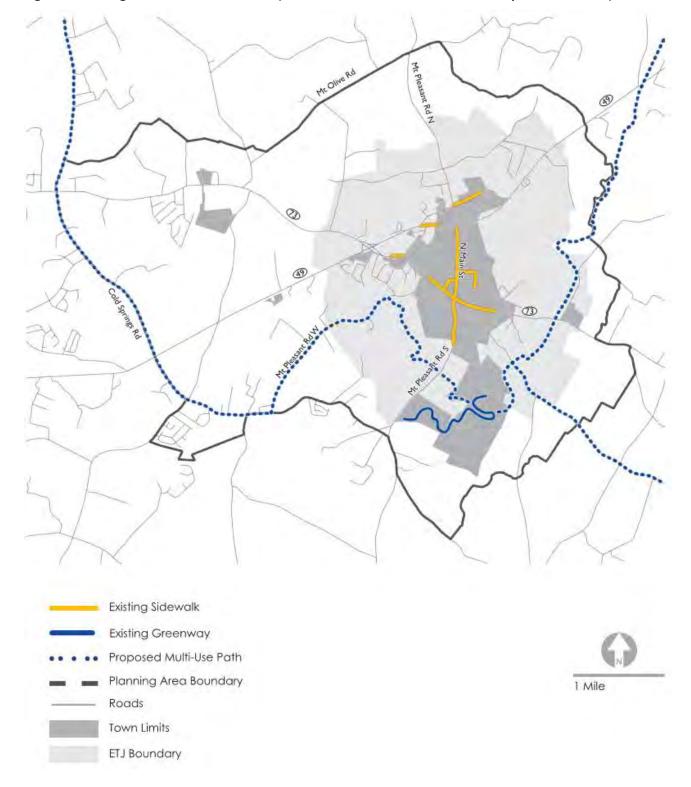


Figure 2. Existing Pedestrian Connections (Source: Town of Mount Pleasant Comprehensive Plan)

Bicycle facilities are not present on any streets in Mount Pleasant. There is one, unpaved recreational facility, a greenway that is a part of the proposed Carolina Thread Trail, exists in the Buffalo Creek Preserve in the southern part of the Town. Figure 3 shows the proposed alignment for the Carolina Thread Trail.

Cabarrus County Carolina Thread Trail Connections

The County Carolina Thread Trail Connections

Mount Pleasant, NC

Profit Connections

Mount Pleasant, NC

- Included Trail Connections

- Included Trail Connections

Mount Pleasant, NC

- Included Trail Connections

Mount Pleasant, NC

- Included Trail Connections

Mount Pleasant, NC

- Included Trail Connections

- Included Trail Co

Figure 3. The Carolina Thread Trail in Cabarrus County (Source: Town of Mount Pleasant Comprehensive Plan)

PROPOSED PROJECTS

In the Town of Mount Pleasant's CP, the Town identifies projects along specific corridors both for roadway improvements and for pedestrian improvements. The roadway improvements table in the Comprehensive Plan does not specifically identify the roadway corridors as opportunities to introduce on-street bicycling infrastructure to the Town of Mount Pleasant. However, some of the preferred cross sections include multi-use side paths. All cross sections propose sidewalks on both sides of the roadway. Table 2 summarizes the proposed roadway projects.

Table 2. Proposed Roadway Improvement Projects

ID	Road Name	Preferred Cross Section Through Mount Pleasant	
1	NC Highway 49	4 lane divided highway with side path	
2	NC Highway 73	4 lane divided highway with side path	
3	Franklin Street	2 lane road with parking and no bike lanes	
4	Main Street	2 lane road with no bike lanes	
5	Cold Springs Road	3 lane road with center left turn and side path	
6	Irish Potato Road	3 lane road with center left turn and side path	
7	Mt Pleasant Road	2 lane road with paved shoulder and side path	
8	St Stephens Church Road	2 lane road with paved shoulder	
9	Walker Road	2 lane road with paved shoulder and side path	

The map in Figure 4 shows the proposed roadway improvements and proposed new roadways the Town would like to build to encourage infill development.

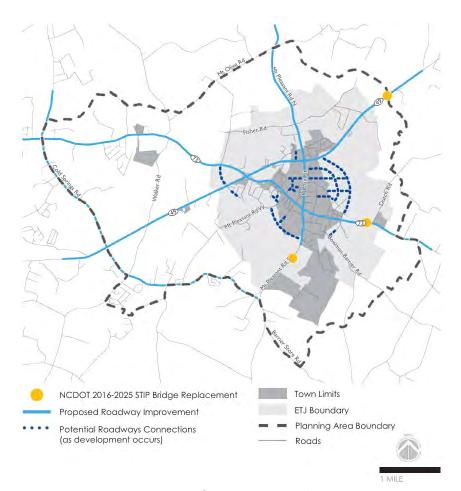


Figure 4. Proposed Roadway Improvements (Source: Town of Mount Pleasant Comprehensive Plan)

In addition to roadway improvements, the Town identified proposed locations for new pedestrian infrastructure. Most of the proposed improvements are 5-foot sidewalks on one side of the roadway, but some corridors include sidewalks on both sides of the road or multi-use side paths. **Table 3** shows the proposed pedestrian improvement corridors and their respective proposed facilities.

Table 3. Proposed Pedestrian Projects

ID	Road Name	Owner	Facility	
1	Franklin Street (NC73)- Moose Road to Eastover Drive/B Street	State	5 ft sidewalk – both sides	
2	Main Street- North drive to Oldenburg Drive	State	5 ft sidewalk – both sides	
3	Washington Street- Park Drive to Lee Street	Town	5 ft sidewalk – one side	
4	NC Highway 49- North drive W to North Drive E	State	5 ft sidewalk – both sides	
5	North Drive E- Parent Drive to NC Highway 49	State	5 ft sidewalk – one side	
6	Mount Pleasant Road S- Oldenburg Drive to Malibu Drive	State	8 ft to 10 ft multi-use path – one side	
7	Lee Street- S Main Street to Eastover Drive	Town / State	5 ft sidewalk – one side	
8	Skyland Drive N	State	5 ft sidewalk – one side	
9	Eastover Drive- Franklin Street to Lee Street	Town	5 ft sidewalk – one side	
10	College Street / Barringer Drive- Franklin Street to S Main Street	Town	5 ft sidewalk – one side	
11	North Drive- NC highway 49 to Crestwood	State	5 ft sidewalk – one side	
12	Jackson Street – North Drive to NC Highway 49	Town	5 ft sidewalk – one side	
13	College Street / Elm Street- Franklin Street to Main Street	Town	5 ft sidewalk – one side	
14	NC Highway 73- Green Acres Circle to Moose Road	State	8 ft to 10 ft multi-use path – one side	
15	Walker Road- NC Highway 49 to Cold Springs Road	State	8 ft to 10 ft multi-use path – one side	
16	Moose Road- NC Highway 73 to Fisher Road	State	8 ft to 10 ft multi-use path – one side	
17	Fisher Road- Moose Road to NC Highway 49	State	8 ft to 10 ft multi-use path – one side	

The map in Figure 5 shows the existing pedestrian infrastructure with the proposed pedestrian infrastructure, illustrating the vision for an extensive sidewalk network.

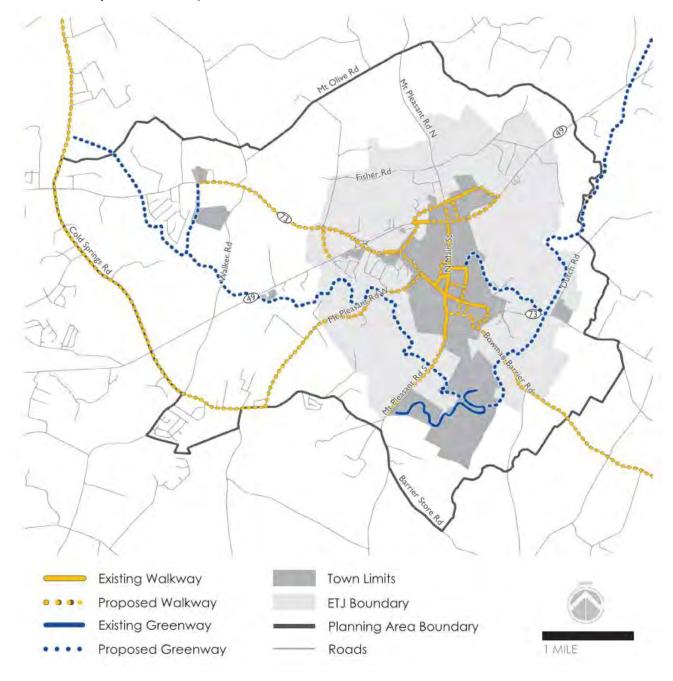


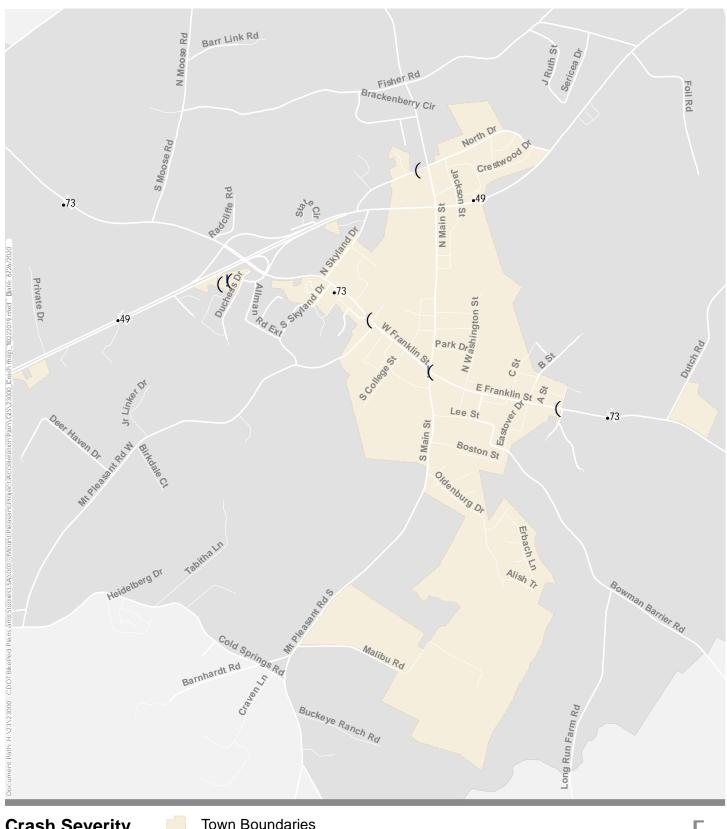
Figure 5. Existing and Proposed Pedestrian Infrastructure (Source: Town of Mount Pleasant Comprehensive Plan)

CRASH ANALYSIS

A crash analysis focused on the pedestrian and bicycle crashes in the Town of Mount Pleasant was completed and compared against the proposed projects. The crash data provided was a combination of crash data provided by NCDOT and the County Sheriff's office. There were 6 pedestrian crashes between 2013 and 2018 and no recorded bicycle crashes in either data set. A summary of each of the crashes is provided below:

- Two (2) of the crashes occurred at night/dusk in the Food Lion Parking lot. These crashes were related to cars either backing out of a parking stall or circulating the parking lot and hitting a pedestrian walking to/from the Food Lion entrance. These crashes occurred on September 12, 2018 and November 21, 2018.
- A crash occurred on March 31, 2014 at 9:21pm. A pedestrian was walking along W Franklin Street eastbound towards S Halifax Street when a vehicle passed the pedestrian and the vehicle's side view mirror hit the pedestrian's arm. The crash report noted the pedestrian was walking along a stretch of road with poor lighting and there was no evident injury to the pedestrian. Sidewalks are not present at the location of the crash.
- A crash occurred on June 16, 2016 at 5:00pm. The vehicle hit a pedestrian while attempting to enter the Marathon Gas Station (9100 E Franklin Street).
- A crash occurred on May 17, 2017 at 4:15pm. The Vehicle was travelling eastbound on North Drive when the pedestrian was hit crossing the street. The police report noted the pedestrian failed to use the "designated" pedestrian crosswalk. Both the driver and pedestrian stated their view was blocked by a passing school bus.
- A crash occurred on February 15, 2018 at 6:53pm. A vehicle was turning left out of a driveway on the North side of Franklin Street at 1457 N Main Street (200 ft east of the N Main Street/Franklin Street Intersection) when it hit two (2) pedestrians crossing the street. One of the pedestrians was injured and transported to the hospital.

A map of the crashes described above, and their severity is provided in Figure 6. Pedestrian Crashes, 2013-2019.





Town Boundaries

Planning Area

No Injury

Possible Injury

Evident Injury



Figure 6. Pedestrian Crashes, 2013-2018 Mt Pleasant, NC

Town of Mount Pleasant Project Acceleration: Implementation Plan

PROJECT ASSESMENT: POTENTIAL OPPORTUNITIES & CHALLENGES

The Town's CP identifies a list of eighteen (18) projects identified in the planning process as critical infrastructure to making the Town more walkable and bikeable. Each project was evaluated for opportunities and challenges for implementation and summarized in Table 4 below. This information will be used to guide the feasibility and prioritization analysis in the next steps of the Study.

Table 4. Summary of Proposed Project's Opportunities & Challenges

Road name	Project	Opportunities	Challenges
Franklin Street	5 ft sidewalk – both sides	 Potential to connect residential area to core downtown area Wide travel lanes, reallocate roadway space to sidewalks Coordinate with roadway improvement project to consider pedestrian and bicycles throughout project development process 	 Limited Right-of-way Grade challenges up to the curb (certain sections require retaining wall) Coordination with adjacent property owners. Tree and utility impacts along the corridor
Main Street	5 ft sidewalk – both sides	 Upcoming resurfacing planned in 2 years Opportunity to coordinate with Duke Energy to move utility poles back and create ROW for sidewalk Potential to connect residential area to core downtown area Coordinate with roadway improvement project to consider pedestrian and bicycles throughout project development process 	 Limited Right-of-way Grade challenges up to the curb (certain sections require retraining wall) Coordination with adjacent property owners. Tree impacts along the corridor
Washington Street	5 ft sidewalk – one side	 Potential to connect residential area to core downtown area Potential to create new pedestrian connection to Town Park and Town Hall 	 Limited Right-of-way Coordination with adjacent property owners Tree and utility impacts along the corridor Possible grade challenges
NC Highway 49	5 ft sidewalk – both sides	 Wide travel lanes and shoulders, reallocate roadway space to sidewalks Pedestrian connection on roadway of regional importance Coordinate with NCDOT roadway improvement project to consider pedestrian and bicycles throughout project development process 	 Utility impacts along the corridor Possible grading and drainage challenges Possible challenges with providing safe crossings at intersections
North Drive	5 ft sidewalk – one side	 Opportunity to extend existing sidewalk and connect to rest of pedestrian network Potential to connect residential area to Parks, Church and Mount Pleasant Elementary School 	 Limited Right-of-way Coordination with adjacent property owners Tree and utility impacts along the corridor
Mount Pleasant Road	8 ft to 10 ft multi-use path – one side	Potential to connect outlying areas to rest of pedestrian and bicycle network	Utility impacts at some points on corridor
Lee Street	5 ft sidewalk – one side	 Potential to connect residential areas to core downtown area (along with main Street sidewalk project) Potential to provide new pedestrian connections to the First Baptist church 	 Limited Right-of-way Coordination with adjacent property owners Tree and utility impacts along the corridor Grade challenges on the North side of the street
Skyland Drive	5 ft sidewalk – one side	Potential to connect multiple residential areas	 Limited Right-of-way Coordination with adjacent property owners Tree and utility impacts along the corridor
Eastover Drive	5 ft sidewalk – one side	Potential to connect residential areas to commercial amenities on Franklin Street	 Coordination with adjacent property owners Tree impacts along the corridor Possible drainage challenges
College Street / Barringer Drive	5 ft sidewalk – one side	 Potential to fill gaps in pedestrian network in downtown core Potential to connect residential areas to commercial/downtown area Potential to create new pedestrian connection to US Post Office, places of worship, and places of cultural and historical importance 	 Limited Right-of-way Coordination with adjacent property owners Tree and utility impacts along the corridor Possible drainage challenges
Jackson Street	5 ft sidewalk – one side	Potential to connect residential areas to White Owl Antique Mall	 Limited Right-of-way Grade issues (By White Owl Antique Mall) Coordination with adjacent property owners Tree and utility impacts along the corridor

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Road name	Project	Opportunities	Challenges
College Street / Elm Street	5 ft sidewalk – one side	 Potential to fill gaps in pedestrian network in downtown core Opportunity to extend existing sidewalk Potential to connect residential areas with downtown area 	 Limited Right-of-way Coordination with adjacent property owners Tree impacts along the corridor Buildings directly abutting roadway Possible drainage and grading challenges
NC Highway 73	8 ft to 10 ft multi-use path – one side	 Pedestrian and bicycle connection on roadway of regional importance Recreational trail for the community Coordinate with roadway improvement project to consider pedestrians and bicycles throughout project development process Potential to connect residential and commercial areas to downtown area 	 Tree and utility impacts along the corridor Coordination with adjacent property owners Possible drainage and grading challenges
Walker Road	8 ft to 10 ft multi-use path – one side	 Pedestrian/Bicycle connection to Mt Pleasant High School Coordinate with roadway improvement project Recreational trail for the community 	 Tree and utility impacts along the corridor Drainage ditch along the edge of the roadway
Moose Road	8 ft to 10 ft multi-use path – one side	 Recreational trail for the community Pedestrian/Bicycle Connections for residential areas 	 Tree impacts along the corridor Coordination with adjacent property owners
Fisher Road	8 ft to 10 ft multi-use path – one side	 Potential to connect multiple residential areas Recreational trail for the community 	 Coordination with adjacent property owners Grade challenges adjacent to the roadway
Cold Springs Road	8 ft to 10 ft multi-use path – one side	 Coordinate with roadway improvement project Wide travel lanes, reallocate roadway space to sidewalks Potential to connect multiple residential areas Recreational trail for the community Pedestrian and bicycle connection on roadway of regional importance 	 Coordination with adjacent property owners Possible challenges with providing safe crossings at intersections
N/A	Carolina Thread Trail Greenway	Potential to connect Town with state-wide and regional trail network	Coordination with state and county stakeholders

Town of Mount Pleasant Project Acceleration: Implementation Plan	
	Section 3
	Project Prioritization Methodology

INTRODUCTION

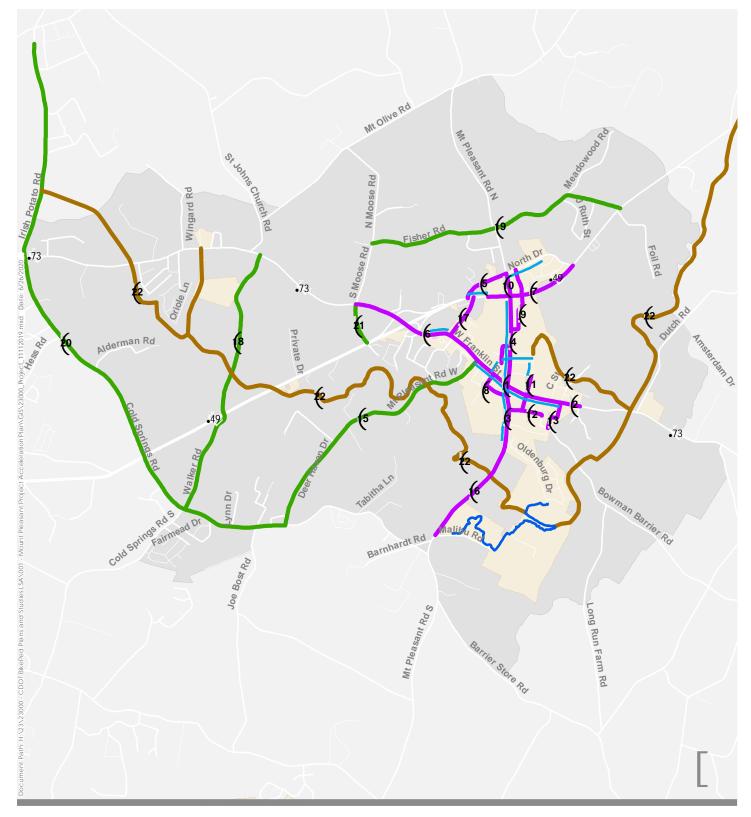
This section outlines the projects identified for prioritization in the existing conditions assessment, the methodology used to prioritize the projects. The development of the prioritization methodology was created in collaboration with the Town and project stakeholders assembled to guide and advise the project prioritization and plan development. The methodology developed ultimately ranks the projects identified in the existing conditions assessment and informs the projects selected for developing the concepts and detailed implementation plans.

PROJECT DEVELOPMENT

Through the review of the Town's CP and discussions with the Town staff and stakeholders, a list of sidewalk and shared use path projects was developed. This process took the projects identified in the CP and further broke down any projects that could logically be done in phases. This mainly included breaking the sidewalk project along Franklin Street and Main Street into three (3) projects, each. This process identified new project limits based on connectivity to other facilities and community amenities. The full list of projects is provided in Table 5 and these projects are also mapped in Figure 7.

Table 5 Pedestrian and Bicycle Projects, 2019

Project ID#	Roadway	Project Extents	Facility Type
1	Franklin Street	College Street to Washington Street	Sidewalk - one side
2	Franklin Street	Washington Street to Blueberry Street	Sidewalk - both sides
3	Main Street	NC 49 to Franklin Street	Sidewalk - one side
4	Main Street	Franklin Street to Oldenburg Drive	Sidewalk - one side
5	North Drive	NC 49 to N Main Street	Sidewalk - one side
6	Franklin Street	Moose Road to College Street	Sidewalk - both sides
7	NC Highway 49	North Drive W to North Drive E	Sidewalk - both sides
8	College Street / Barringer Drive	Franklin Street to S Main Street	Sidewalk - one side
9	Jackson Street	North Drive to NC 49	Sidewalk - one side
10	Main Street	North Drive to NC 49	Sidewalk - both sides
11	Washington Street	Park Drive to Lee Street	Sidewalk - one side
12	Lee Street	S Main Street to Eastover Street	Sidewalk - one side
13	Eastover Street	Franklin Street to Lee Street	Sidewalk - one side
14	College Street / Elm Street	Franklin Street to N Main Street	Sidewalk - one side
14	NC Highway 73	Green Acres Circle to Moose Road	Multi-Use Path
15	Mount Pleasant Road	Cold Spring Road to W Franklin Street	Multi-Use Path
16	Mount Pleasant Road S	Oldenburg Drive to Malibu Road	Multi-Use Path
17	Skyland Drive	Entire length	Sidewalk - one side
18	Walker Road	NC 73 to Cold Springs Road	Multi-Use Path
19	Fisher Road	Moose Road to NC 49	Multi-Use Path
20	Cold Springs Road	Mt Pleasant Road to NC 73	Multi-Use Path
21	Moose Road	NC 73 to Fisher	Multi-Use Path
22	Carolina Thread Trail	N/A	Multi-Use Path



Proposed Projects

Figure 7. Pedestrian & Bicycle Projects, 2019
Mt Pleasant, NC

Greenway

Multi-Use Path

Existing Sidewalk (One side of the Street)

Sidewalk

Existing Greenway

Project ID Number

Town Boundaries
Planning Area



PRIORITIZATION METHODOLOGY

The projects listed in the previous section represent a comprehensive snapshot of the pedestrian and bicycle infrastructure needed to serve the existing demand. These prioritization criteria and methodology developed further prioritizes these projects for implementation. The methodology includes leveraging the CP's goals and vision, stakeholder priorities and Town staff's input on factors necessary for implementation. The methodology sought to score the projects based on important factors to the community and balance factors relevant to implementation.

In the first Project Steering Committee, stakeholders discussed priorities for their community and identified the top five (5) factors they would like considered for prioritization. They indicated the following factors, listed from most important to stakeholders to least important to stakeholders, should be used for prioritization:

- 1. Safety
- 2. Connectivity to existing facilities
- 3. Economic opportunity
- 4. Community connections
- Cost/funding potential

Based on this input, specific metrics were developed for each factor and assigned a score. The scoring is summarized in Table 6.

Table 6. Summary of Prioritization Factors and Scoring Metrics

Factor	Metric	Score	Maximum points
Safety	Did a bicycle or pedestrian crash occur in the past 5 years?	Yes= 4 Points No= 0 Points	4
Connectivity	Does the project connect to one or more pedestrian and/or bicycle facilities?	Yes= 3 Points No= 0 Points	3
Economic	Is there business frontage along the existing project limits?	Yes= 2 Points No= 0 Points	2
Community	How many schools, parks, places of worship and libraries does this segment connect?	1 point per place	Unlimited
Cost/Funding Potential	What is the project cost (planning level estimate)?	<\$50k = 1 point \$50k - \$250k= 0.5 Points >\$250k = 0 points	1

The first 3 metrics are scored based on a "yes" or "no" answer to the question, where the project only receives points if it is a "yes" answer. The Funding Potential factor receives points based on a sliding scale of cost thresholds. These thresholds were developed based on the following logic:

- < \$50k A project that is less than \$50k can be funded entirely through the Town's annual revenue stream dedicated to infrastructure improvements.
- \$50k \$250k- A project that is over \$50k but under \$250k can be completed by using the \$50k funding stream described above as a 20 percent cash match for a state or federal grant.

• > \$250k - Projects that are over \$250k would require substantial federal, state or grant assistance or may be opportunities to achieve through redevelopment.

Once the projects were scored, projects that have been submitted to NCDOT by the Town were flagged to further facilitate discussion with the project steering committee on priorities. The new NCDOT Complete Street's Policy, adopted in 2019, states that any pedestrian and/or bicycle projects identified in a local or state adopted plan, NCDOT will include the implementation of the facility as part of the roadway project.

A summary of the scores for each project is provided in 7 and the projects are mapped by the final prioritization scores in Figure 8.

Town of Mount Pleasant Project Acceleration: Implementation Plan

Table 7. Summary of Project Scores, 2019

Roadway	Project Extents	Project Type	Distance (mi)	Safety: Has a pedestrian or bicycle crash occurred of is the corridor a perceived safety challenge?	Connectivity: Will the new facility connect to an existing facility? (3 points)	Economic: Is business frontage present or is the segment in a commercial area? (2 Points)	Community: How many community destinations (schools, parks, places of worship, post office, Town Hall, and libraries) does this segment connect? (1 point per place)	Cost: Is the project a low, medium or high cost project? (Low = 1 Point, Medium= 0.5 Point, High= 0 Points)	Total Points
N. Main Street*	NC 49 to Franklin Street	Sidewalk - one side	0.7	Yes	Yes	Yes	3	Medium	12.5
S. Main Street	Franklin Street to Oldenburg Drive	Sidewalk - one side	0.5	Yes	Yes	Yes	3	Medium	12.5
Franklin Street	Halifax Street to N. Main Street	Sidewalk - both sides	0.35	Yes	Yes	Yes	2	Medium	11.5
Franklin Street	Washington Street to Blueberry Street	Sidewalk - one side	0.5	Yes	Yes	Yes	1	Medium	10.5
Franklin Street	Duchess Drive to Halifax Street	Sidewalk - both sides	0.6	Yes	Yes	Yes	1	High	10
Franklin Street	N. Main Street to Washington Street	Sidewalk - one side	0.18	Yes	Yes	Yes	0	Medium	9.5
North Drive	NC 49 to N. Main Street	Sidewalk - one side	0.4	Yes	Yes	No	1	Medium	8.5
Mount Pleasant Road S*	Oldenburg Drive to Malibu Road	Shared use path	1.1	Yes	Yes	No	1	High	8
Washington Street	Park Drive to Lee Street	Sidewalk - one side	0.3	No	Yes	No	3	Medium	6.5
N. Main Street	North Drive to NC 49	Sidewalk - both sides	0.2	No	Yes	No	2	Medium	5.5
College Street / Barringer Drive	Franklin Street to S Main Street	Sidewalk - one side	0.3	No	Yes	No	2	Medium	5.5
College Street / Elm Street	Franklin Street to N Main Street	Sidewalk - one side	0.2	No	Yes	No	2	Medium	5.5
NC Highway 49*	North Drive W to North Drive E	Sidewalk - both sides	1	No	Yes	Yes	0	High	5
NC Highway 73	Green Acres Circle to Moose Road	Shared use path	1.4	No	Yes	Yes	0	High	5
North Drive	Parent Drive to NC 49	Sidewalk - both sides	0.3	No	Yes	No	1	Medium	4.5
Lee Street	S. Main Street to Eastover Street	Sidewalk - one side	0.5	No	Yes	No	1	Medium	4.5
Carolina Thread Trail	Town Loop	Shared use path	3.7	No	Yes	N/A	1	High	4
Eastover Street	Franklin Street to Lee Street	Sidewalk - one side	0.3	No	Yes	No	0	Medium	3.5
Jackson Street	North Drive to NC 49	Sidewalk - one side	0.2	No	Yes	No	0	Medium	3.5
Carolina Thread Trail	Westside	Shared use path	5.8	No	No	N/A	3	High	3
Walker Road	NC 73 to Cold Springs Road	Shared use path	2.5	No	No	No	2	High	2
Cold Springs Road	Mt Pleasant Road to NC 73	Shared use path	3.7	No	No	No	2	High	2
Franklin Street	Moose Road to Duchess Drive	Sidewalk - one side	0.5	No	No	No	0	Medium	0.5
Skyland Drive	Entire length	Sidewalk - one side	0.4	No	No	No	0	Medium	0.5
Carolina Thread Trail	Eastside	Shared use path	3.7	No	No	N/A	0	High	0
Moose Road	NC 73 to Fisher	Shared use path	0.6	No	No	No	0	High	0
Fisher Road	Moose Road to NC 49	Shared use path	2.4	No	No	No	0	High	0

^{*}Projects submitted to NCDOT-SPOT for Prioritization.

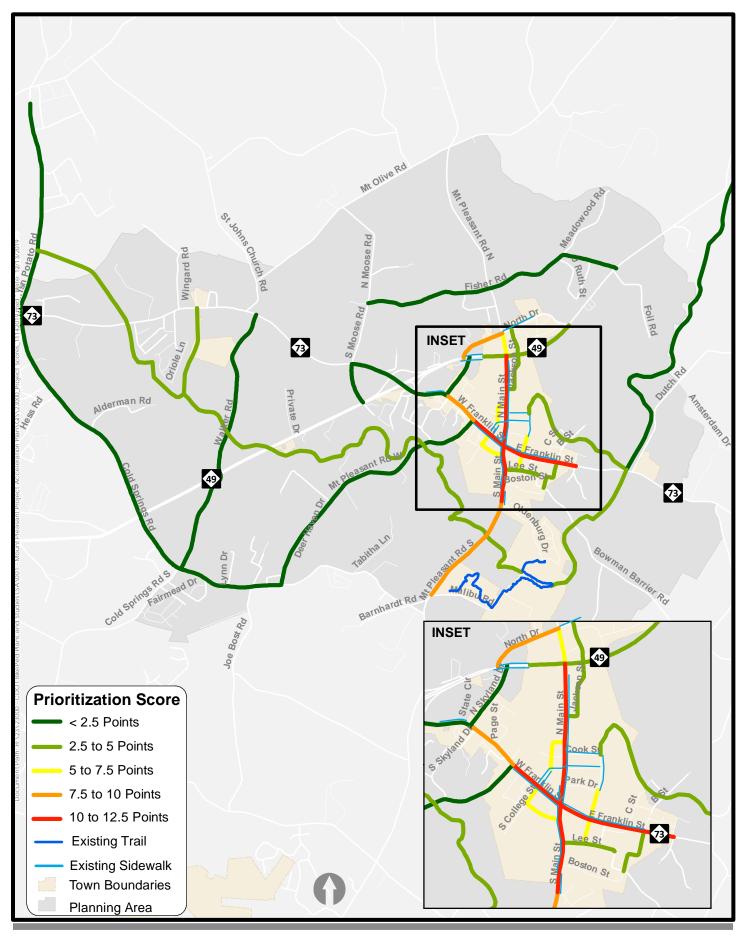




Figure 8. Prioritization Score for Pedestrian & Bicycle Projects Mt. Pleasant, NC, 2019

PRIORITIZED PROJECTS FOR IMPLEMENTATION

Upon reviewing the ultimate results of the prioritization methodology, the Town, along with the PSC, identified the top 5 projects that would benefit from a detailed concept and implementation plan. These projects included:

- 1. N. Main Street- NC 49 to Franklin Street
- 2. Franklin Street- Halifax Street to N. Main Street
- 3. Franklin Street: N. Main Street to Blueberry Street
- 4. Franklin Street- Duchess Drive to Halifax Street
- 5. Washington Street- Park street to Lee Street

Note, the Washington Street project was elevated in priority due to its status as a downtown catalyst project in the Comprehensive Plan and its long-term importance as an alternative/parallel route to Main Street. The concept designs and implementation strategy are summarized in implementation cut sheets provided in the following section.

There was also a second tier of 5 projects that was developed to identify high level implementation strategies focused around funding mechanisms. These projects included:

- 1. S. Main Street- Franklin Street to Oldenburg Drive
- 2. Mount Pleasant Road South- Oldenburg Drive to Malibu Road
- 3. North Drive- NC 49 to N. Main Street
- 4. N. Main Street-North Drive to NC 49
- 5. College Street

Note, the segment along North Drive was reduced in priority due to its location adjacent to an identified redevelopment area for which developers would be required to install sidewalk as part of the project.

Town of Mount Pleasant Project Acceleration: Implementation Plan Resources
Section 4
Project Implementation Plan
Project implementation Flan

IMPLEMENTATION CUT SHEET DEVELOPMENT

As discussed in the previous section, implementation cut sheets were developed to summarize the concept designs and implementation strategies for the top 5 projects prioritized by the Town. The implementation plan includes a detailed concept for each of the sidewalk projects, key elements of the design that require further engineering and considerations and guidance for further evaluation of the placement and treatments for new crosswalk locations. The implementation cut sheets are included in the following pages of this section and a table of content guide for the cut sheets are provided below in Table 8.

Table 8. Implementation Cut Sheet Table of Contents

Project ID	Project Location	Implementation Cut Sheets (page #)
Α	N. Main Street- NC Highway 49 to Franklin Street	Pages 25-28
В	Franklin Street- Halifax Street to Main Street	Pages 29-30
С	Franklin Street- Main Street to Blueberry Street	Pages 31-33
D	Franklin Street- Duchess Drive to Halifax Street	Page 34-36
E	Washington Street- Park Drive to Lee Street	Pages 37-39

TIER 2 IMPLEMENTATION STRATEGIES

A set of five "Tier 2" projects were also identified in the prioritization process. These are projects that scored high in terms of need but are anticipated to have longer term implementation schedules. Potential funding strategies and structures were identified for each of the projects. This is summarized in Table 9, below.

Table 9. Funding Strategies and Mechanisms for Tier 2 Projects

Project Location	Funding Strategy
S. Main Street- Franklin Street to Oldenburg Drive	Main Source: TIP Potential Match: Transportation CIP Reserves
Mount Pleasant Road South- Oldenburg Drive to Malibu Road	Main Source: TIP Potential Match: NC Recreational & Adopt-a-Trail Grant, Transportation CIP Reserves
North Drive-NC 49 to N. Main Street	Implement sidewalk as part of adjacent development project
N. Main Street-North Drive to NC 49	Implement sidewalk as part of adjacent development project
College Street	Powell Bill Funds and Transportation CIP Reserves

PROPOSED PROJECT: NEW CONSTRUCTION

- Extension of sidewalk along west side of street from 1424 N. Main Street to intersection with NC 49
- Extension of sidewalk along east side of street 300' to intersection with NC 49
- Widen existing sidewalk along the east side of the street.

CORRIDOR CHARACTERISTICS

- 0.7-mile-long segment
- 50' right-of-way (no acquisition required)
- Two-lane, two-way roadway
- 6' to 8' wide shoulders along most of the corridor
- Speed limit is 35 MPH, decreasing to 20 MPH 500' from the intersection with Franklin Street
- Residential uses for most of corridor, commercial uses at NC 49 and Franklin Street intersections

PROJECT OBSERVATIONS

Opportunities

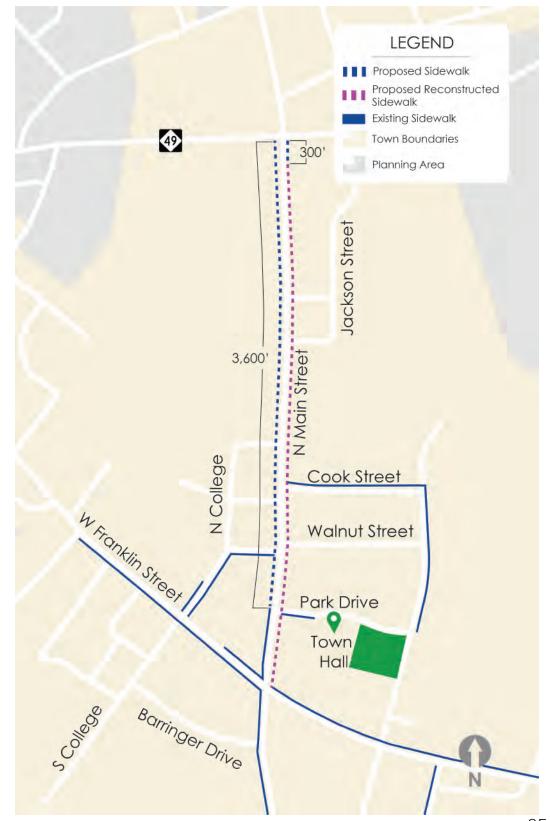
- One existing crosswalk at Franklin Street intersection
- No crosswalk for pedestrians to cross over when sidewalk drops off on western side

Constraints

- Trees and shrubs within 5' of roadway's edge
- Western edge of roadway abuts steep slope at several locations along corridor
- Utility pole location on the east side of N. Main Street

PRIORITIZATION SCORE OVERVIEW

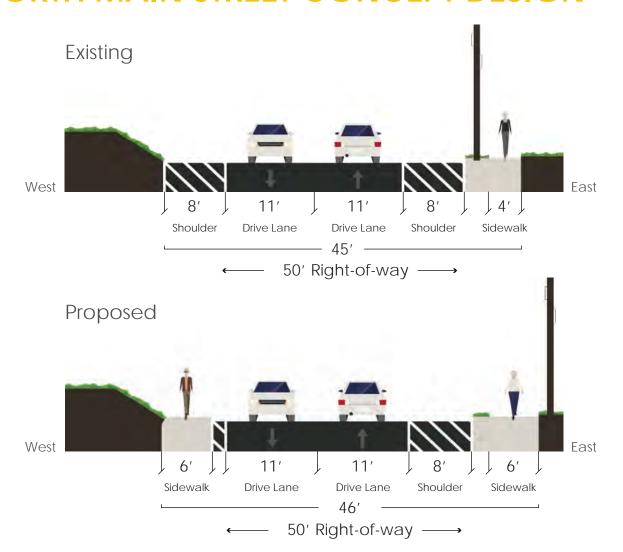
- A pedestrian crash has occurred on this corridor at the intersection with Franklin Street.
- The proposed facility will connect to the existing sidewalk network.
- Business frontage is present along this corridor.
- This corridor connects 3 community destinations.
- The proposed project cost (design + construction) is estimated at \$955,000 for Phase 1 and \$1,370,000 for Phase 2.



KEY DESIGN CONSIDERATIONS

- At the N. Main Street / NC 49 intersection, add a crosswalk across N. Main Street or identify other logical terminus of the sidewalks.
- For improved pedestrian safety and access management, the property at the southwest corner of the N. Main Street / NC 49 intersection should have well-defined entrances along N. Main Street instead of the 250 feet of asphalt that is flush with N. Main Street.
- New sidewalk will need to work around existing utility poles and may require adjustment of utility appurtenances.
- Cost of Phase 2 utility pole relocation may be cost prohibitive.

NORTH MAIN STREET CONCEPT DESIGN







PHASE 1 CONCEPT DESIGN AT EASTERN CABARRUS HISTORICAL SOCIETY MUSEUM



IMPLEMENTATION STRATEGY

Phase 1: Build 3,600' of sidewalk on existing shoulder on the west side of N. Main Street. Phase 2: Connect the sidewalk on the east side of N. Main Street to the intersection with NC 49 and recontruct the existing sidewalk to relocate the utility poles to the back of the sidewalk and expand the sidewalk to 6' + 2' buffer.

FUNDING

Phase	Design Cost	Construction Costs	Total Costs	Funding Strategies	Project Type
Phase I	\$175,000	\$780,000	\$955,000	 Surface Transportation Block Grant (STBG) Grants (DOE) Powell Funds Map-21 Safe Routes to School TIP 	New Construction
Phase II	\$250,000	\$1,120,000	\$1,370,000	TIPPowell Bill Funds	New Construction & Retrofit

^{*}All cost estimates are planning level estimates based on the NCDOT Bicycle-Pedestrian Cost Estimating Tool.



B. FRANKLIN STREET - HALIFAX STREET TO MAIN STREET

PROPOSED PROJECT: NEW CONSTRUCTION/RETROFIT

- Sidewalk extension along north side of the street 1,500 feet to intersection with N Halifax Street
- Sidewalk extension along south side of the street 150 feet to intersection with N Halifax Street

CORRIDOR CHARACTERISTICS

- 0.5-mile-long segment
- 60' right-of-way (no acquisition required)
- Two lane, two-way roadway
- No striped shoulder for most of the corridor, but wide travel lanes
- Speed limit is 35 MPH, decreasing to 20 MPH 500' from the intersection with Main Street
- Wide variety of land uses along corridor, mostly commercial and industrial

PROJECT OBSERVATIONS

Opportunities

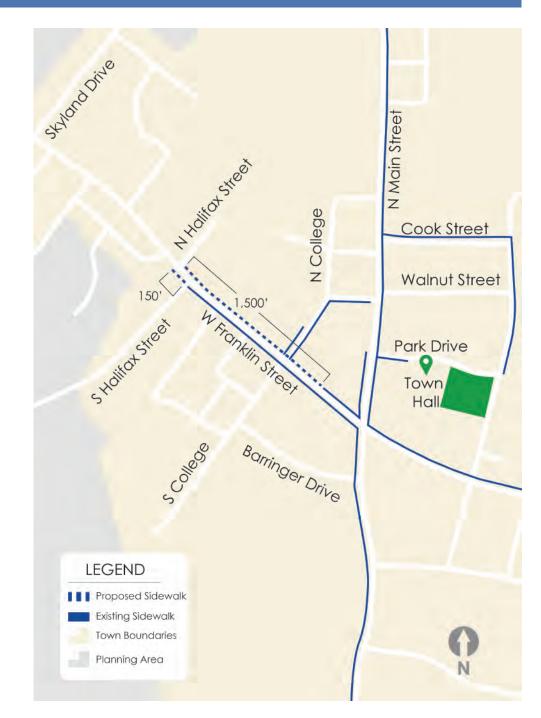
- Improved pedestrian access to destinations on the north side of W Franklin Street
- Improved pedestrian access for employees to Kindley Mill businesses
- Improved ADA access along W Franklin Street

Constraints

- Steep cut slopes and fill slopes near the roadway may require retaining walls and/or reduced vegetated buffers between the sidewalk and the curb.
- Existing trees, retaining wall, stairs, and utility appurtenances are within the desired sidewalk location.
- Dead end sidewalks on west end are not at the best location for a crosswalk across W Franklin Street.
- Long stretches of valley gutter entrances impede pedestrian access.

PRIORITIZATION SCORE OVERVIEW

- A pedestrian crash has occurred on this corridor at the intersection with Main Street.
- The proposed facility will connect to the existing sidewalk network.
- Business frontage is present along this corridor.
- This corridor connects 3 community destinations.
- The proposed project's cost is \$540,000 (design + construction).



FUNDING & IMPLEMENTATION STRATEGY

Since the sidewalk improvements are on a state-maintained roadway, funding will be pursued through state maintenance, retrofit, and/or new construction project funding.

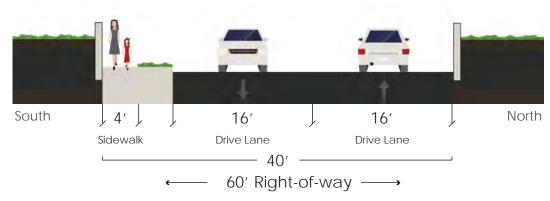
B. FRANKLIN STREET - HALIFAX STREET TO MAIN STREET

KEY DESIGN CONSIDERATIONS

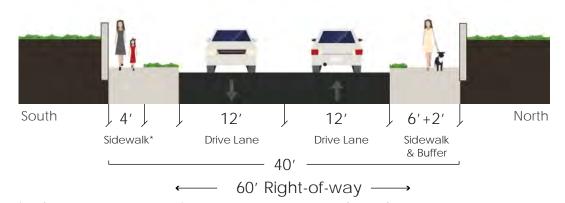
- For improved pedestrian safety and access management, the valley gutter frontage in front of the Mt Pleasant Smoke House, JC Auto, and Mt. Pleasant Animal Hospital should have well-defined entrances with sidewalks between the entrances.
- Steep existing sideslopes on the northeast side of W Franklin Street will require new retaining walls and/or a tighter typical section in order to accommodate a new sidewalk.

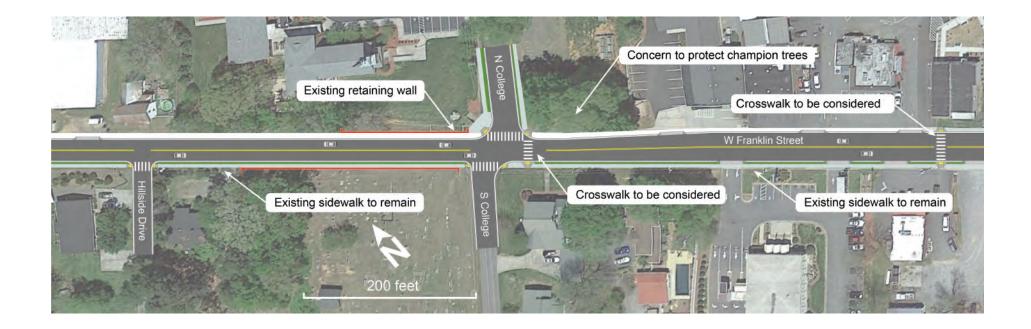
W FRANKLIN STREET CONCEPT DESIGN

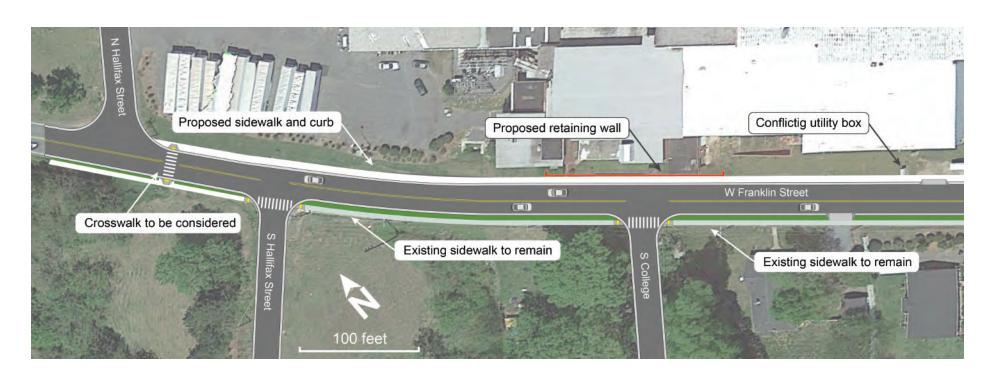
Existing











^{*}Prefer sidewalk widened to 6', however, was not prioritized for the fiscally constrained project implementation plan.

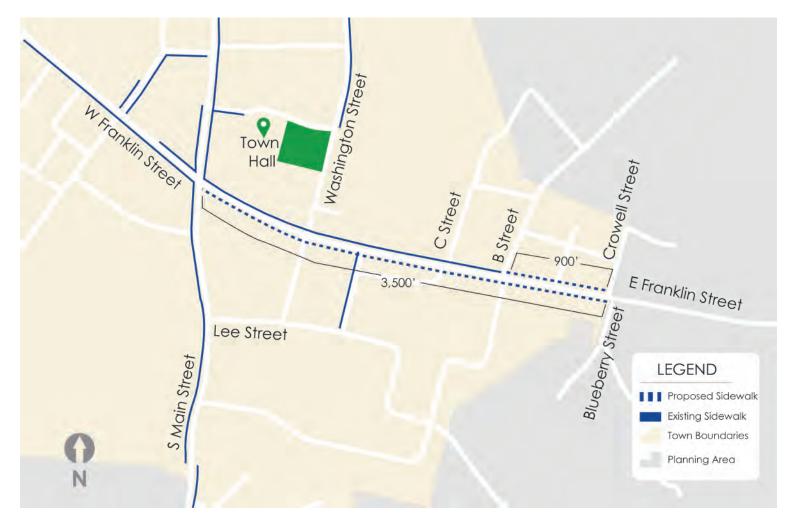
C. FRANKLIN STREET - MAIN STREET TO BLUEBERRY STREET

PROPOSED PROJECT: NEW CONSTRUCTION

- Extension of sidewalk along north side of street from B Street to intersection with Crowell Street
- Extension of sidewalk along south side of street from Main Street to Blueberry Street

CORRIDOR CHARACTERISTICS

- 0.7-mile-long segment
- 60' right-of-way (no acquisition required)
- Two lane, two-way roadway
- No side stripes but shallow curb throughout most of the corridor.
- From Main Street, speed limit is 20 MPH for 300', then increases to 35 MPH.
- A mix of land uses, including residential, commercial and industrial.



PROJECT OBSERVATIONS

Opportunities

- Provides pedestrian connection to downtown Mount Pleasant
- Provides pedestrian connectivity from residential to a variety of retail, institutional, and employment land uses
- Improves ADA access along W. Franklin Street

Constraints

- Long stretches of valley gutter entrances make safe pedestrian access difficult to navigate
- Dead end sidewalks on east end are not at a desired location for a crosswalk across W. Franklin Street

PRIORITIZATION SCORE OVERVIEW

- A pedestrian crash **has** occurred on this corridor at the intersection with Main Street.
- The proposed facility will connect to the existing sidewalk network.
- Business frontage is present along this corridor.
- This corridor connects 1 community destination.
- The proposed project cost is \$1,415,000 (design + construction).

FUNDING & IMPLEMENTATION STRATEGY

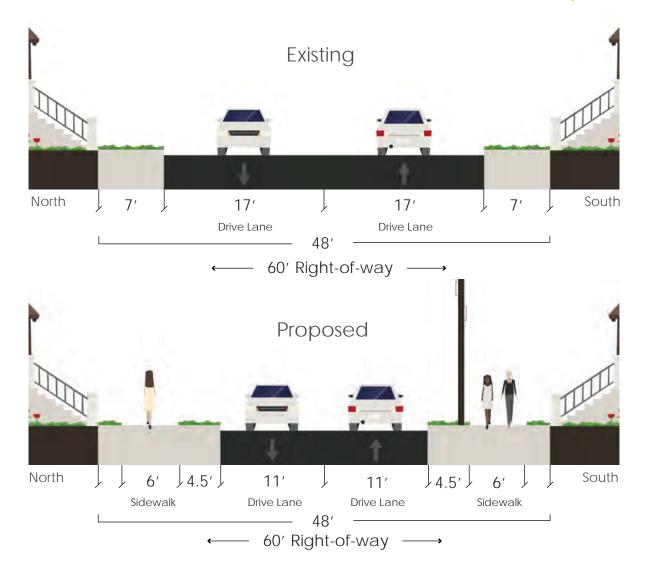
Since the sidewalk improvements are on a state-maintained roadway, funding will be pursued through state maintenance, retrofit, and/or new construction project funding.

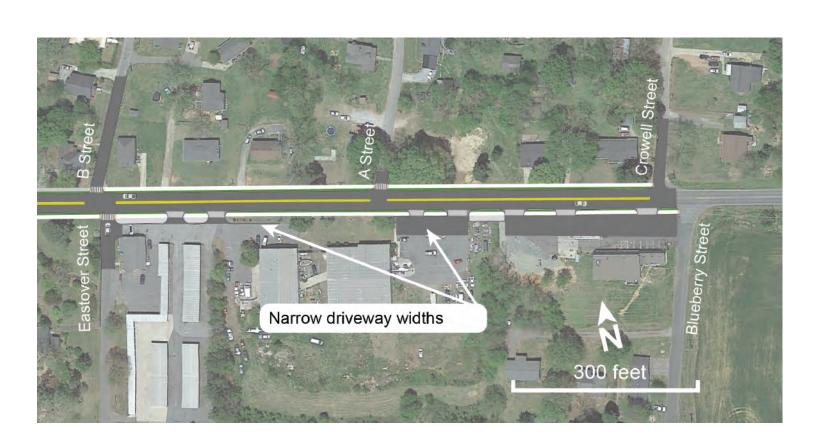
C. FRANKLIN STREET - MAIN STREET TO BLUEBERRY STREET

KEY DESIGN CONSIDERATIONS

- For improved pedestrian safety and access management, the extended stretches of private property pavement that is flush with the roadway edge of pavement should be replaced with well-defined entrances and sidewalk between the entrances.
- Steep existing sideslopes on the south side of E. Franklin Street will require short retaining walls and/or a cut slope in order to accommodate a new sidewalk on the south side of the road.
- With pedestrian accommodations now provided at the southeast corner of the E. Franklin Street and S. Main Street intersection, additional crosswalk(s) and traffic signal modifications will be needed at the intersection in order to provide safe pedestrian access.
- Utility pole location varies along corridor, utility pole and sidewalk location to be determined in future design phase.

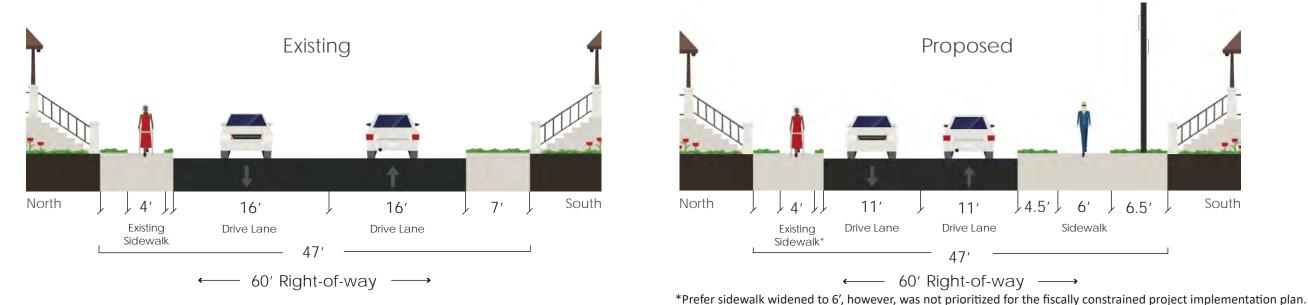
E FRANKLIN STREET CONCEPT DESIGN (EAST OF B STREET)





C. FRANKLIN STREET - MAIN STREET TO BLUEBERRY STREET

E FRANKLIN STREET CONCEPT DESIGN (WEST OF B STREET)





D. FRANKLIN STREET - DUCHESS DRIVE TO HALIFAX STREET

PROPOSED PROJECT: NEW CONSTRUCTION

- Extension of sidewalk along north side of street for 1,800'.
- Extension of sidewalk along south side of street for 1,600' from the intersection with Duchess Drive and for 1,800' from the intersection with S Halifax Street.

PROJECT OBSERVATIONS

Opportunities

- Provides pedestrian connectivity between residential and several retail locations.
- Provides improved pedestrian access for employees to Kindly Mill.
- Provides pedestrian connection to downtown Mount Pleasant, in coordination with another priority pedestrian project Segment on W. Franklin Street.
- Improves ADA access along W. Franklin Street.

Constraints

- Adding sidewalk along the steep cut slopes on the south side of the road could have increased project costs and significant property impacts.
- Long stretches of valley gutter entrances make safe pedestrian access difficult to navigate.

PRIORITIZATION SCORE OVERVIEW

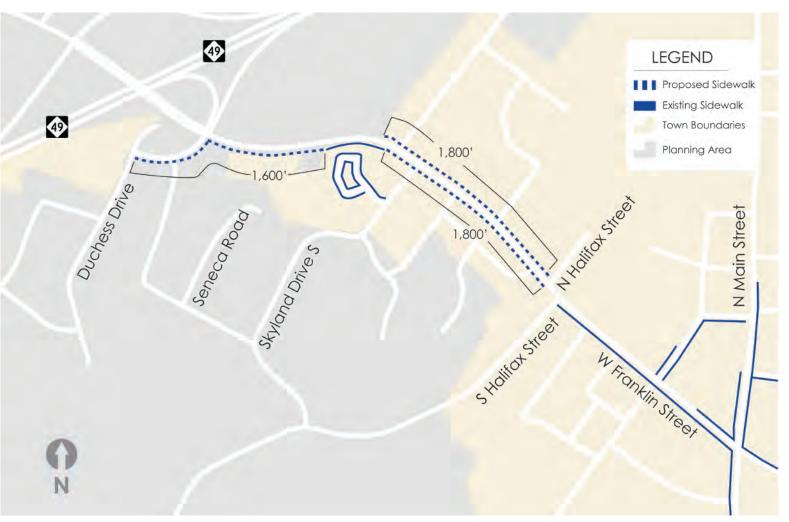
- A pedestrian crash **has** occurred on this corridor at the intersection with N Halifax Street.
- The proposed facility will connect to the existing sidewalk network.
- Business frontage is present along this corridor.
- This corridor connects 1 community destination.
- The proposed project's cost is \$1,225,000 (design + construction).

CORRIDOR CHARACTERISTICS

- 0.6-mile-long segment
- 60' 145' right-of-way (no acquistion required)
- Four lane at the intersection with Duchess Drive, then two lane, two-way.
- Speed limit is 45 MPH, decreasing to 35 MPH 500' from the intersection with Duchess Drive.
- Wide variety of land uses along corridor, mostly commercial and residential.

FUNDING & IMPLEMENTATION STRATEGY

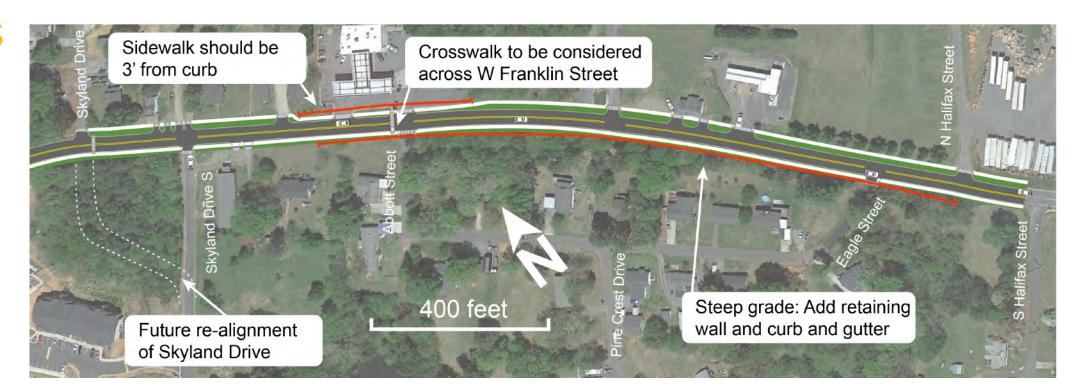
Since the sidewalk improvements are on a state-maintained roadway, funding will be pursued through state maintenance, retrofit, and/or new construction project funding.



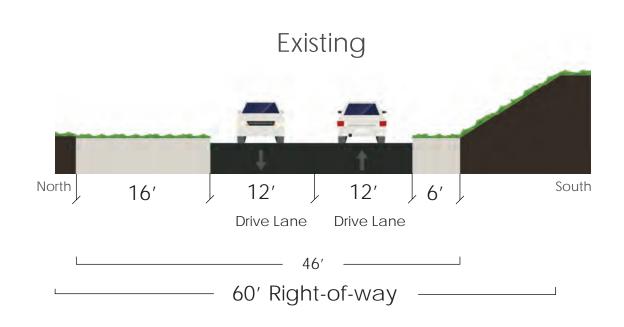
D. FRANKLIN STREET - DUCHESS DRIVE TO HALIFAX STREET

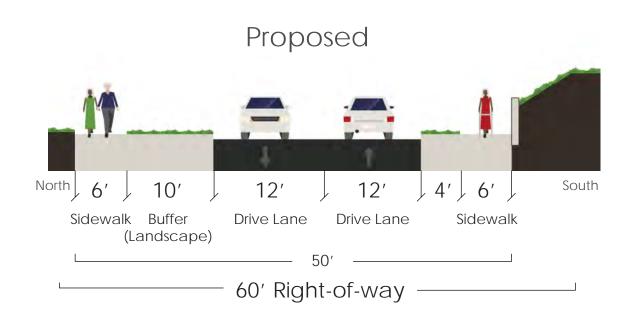
KEY DESIGN CONSIDERATIONS

- Pedestrian access across W Franklin Street will require implementing countermeasures consistent with the FHWA <u>Guide for Improving Pedestrian</u> <u>Safety at Uncontrolled Crossing Locations</u>.
- For improved pedestrian safety and access management, the extended stretches of private property pavement that is flush with the roadway edge of pavement should be replaced with well-defined entrances and sidewalk between the entrances.
- Steep existing sideslopes on the south side of W Franklin Street will require new retaining walls and/or a tighter typical section in order to limit the impacts of a new sidewalk on the south side of the road.



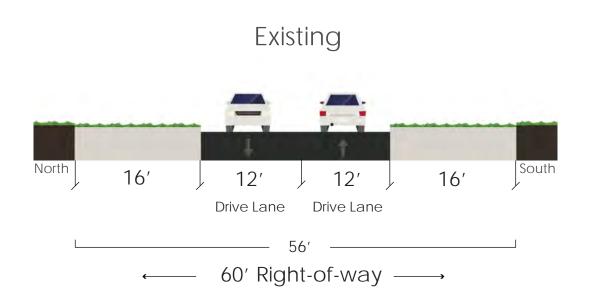
W FRANKLIN STREET CONCEPT DESIGN (EAST OF SKYLAND DRIVE)

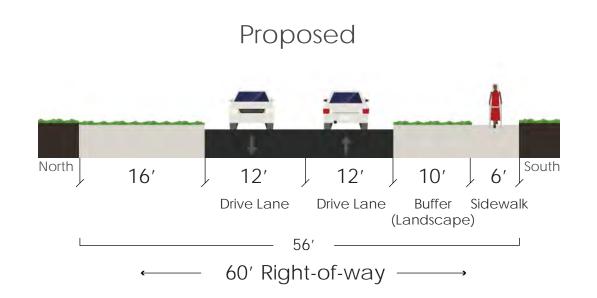


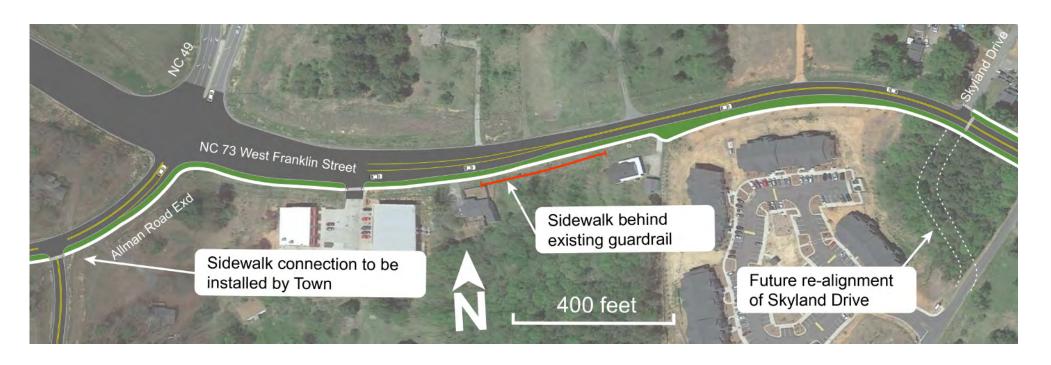


D. FRANKLIN STREET - DUCHESS DRIVE TO HALIFAX STREET

W FRANKLIN STREET CONCEPT DESIGN (WEST OF SKYLAND DRIVE)







E. WASHINGTON STREET - PARK DRIVE TO LEE STREET

PROPOSED PROJECT: NEW CONSTRUCTION

• Construction of new sidewalk along the west side of the street for the entire corridor.

CORRIDOR CHARACTERISTICS

- 0.3-mile-long segment
- 29' 40' right-of-way (no acquisition required)
- Two lane, two-way roadway
- Roadway has no sidewalks on either side
- No striped shoulder for most of corridor, and narrow travel lanes
- No posted speed limit
- Land uses along corridor include mostly residential and institutional

PROJECT OBSERVATIONS

Opportunities

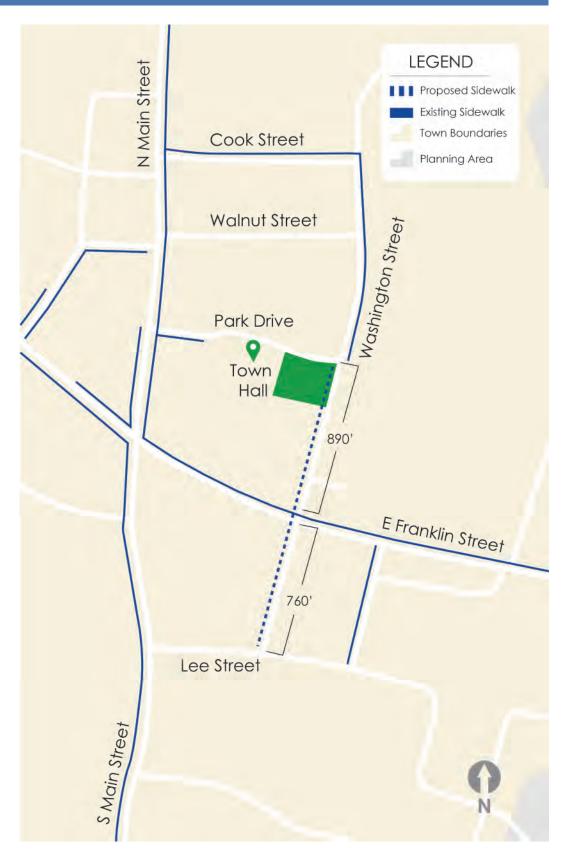
- Provides pedestrian connection to E. Franklin Street and to downtown Mount Pleasant.
- Improves the Town's pedestrian network by filling in gaps between existing sidewalks.
- Provides pedestrian connectivity between residential and several retail, recreational, and institutional locations.

Constraints

• Existing trees, retaining wall, and utility appurtenances are located at the desired sidewalk location.

PRIORITIZATION SCORE OVERVIEW

- A pedestrian crash has not occurred on this corridor.
- The proposed facility will connect to the existing sidewalk network.
- Business frontage is present along this corridor.
- This corridor connects 3 community destinations.
- The proposed project's cost is \$555,000 (design + construction).

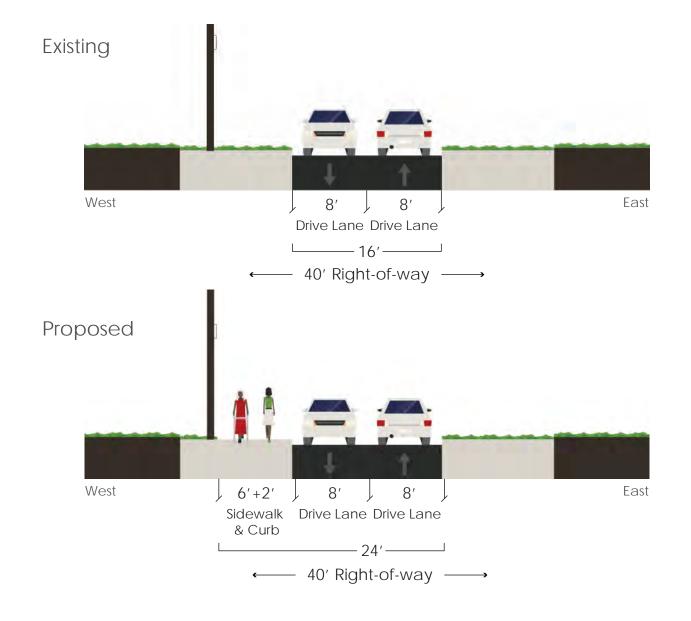


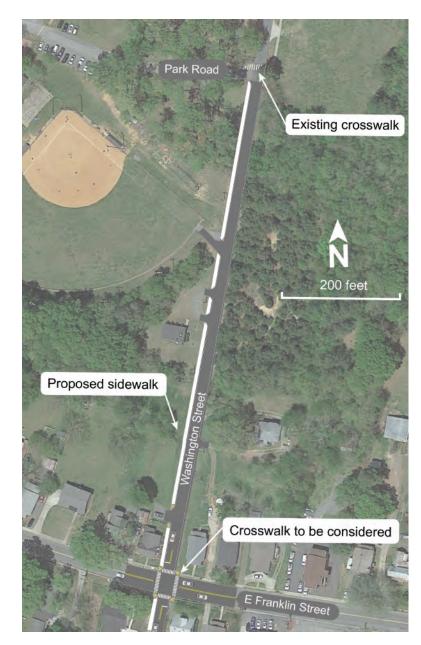
E. WASHINGTON STREET - PARK DRIVE TO LEE STREET

KEY DESIGN CONSIDERATIONS

- Pedestrian access across E. Franklin Street will need to be restricted, or will require implementing countermeasures consistent with the FHWA <u>Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations</u> if connectivity across E. Franklin Street is desired at the Washington Street intersection.
- Pedestrian access across Washington Street at the north and south ends of the Segment will require implementing countermeasures consistent with the FHWA <u>Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations</u>.
- Existing buildings close to the roadway will require adding curb and gutter along portions of the Segment instead of a shoulder and ditch typical section.

WASHINGTON STREET CONCEPT DESIGN







E. WASHINGTON STREET - PARK DRIVE TO LEE STREET

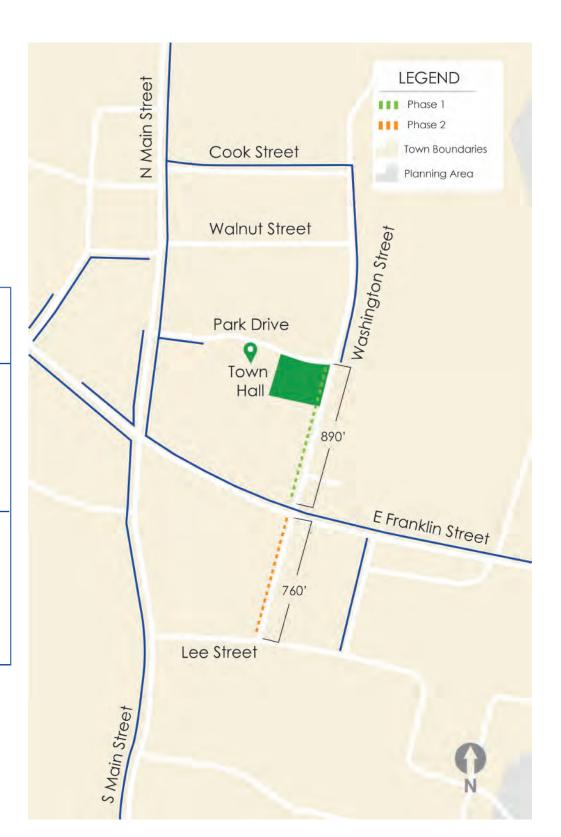
IMPLEMENTATION STRATEGY

Phase I: Install sidewalk on west side of Washington Street from Park Drive to E Franklin Street. Phase II: Install sidewalk on west side of Washington Street from E Franklin Street to Lee Street.

FUNDING

Phase	Design Cost	Construction Costs	Total Costs	Funding Strategies	Project Type
Phase I	\$115,000	\$175,000	\$290,000	Grants (DOE) Powell Funds Map-21	New Construction
Phase II	\$110,000	\$155,000	\$265,000	Grants (DOE) Powell Funds Map-21	New Construction

^{*}All cost estimates are planning level estimates based on the NCDOT Bicycle-Pedestrian Cost Estimating Tool.





DESIGN GUIDANCE RESOURCES

The below resources are provided for planners and engineers as state and national standard and guidelines for advancing the projects recommended in this plan.

NATIONAL GUIDELINES

National Association of City Transportation Officials (NACTO):

- / Urban Streets Design Guide. https://nacto.org/publication/urbanstreet-design-guide/
- / Urban Bikeway Design Guide. https://nacto.org/publication/urbanstreet-design-guide/

The Federal Highway Administration (FHWA):

- / Accessibility Guidance
- / Separated Bike lane Design Guide (2015).
 https://www.fhwa.dot.gov/environment/
 bicycle_pedestrian/publications/separate
 d_bikelane_pdg/separatedbikelane_pdg.p
 df
- / Achieving Multimodal Networks (2016)
 https://www.fhwa.dot.gov/environment/
 bicycle_pedestrian/publications/multimod
 al_networks/
- Separated Bike Lane Planning and Design Guide (2015). https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/separate d bikelane pdg/page00.cfm
- / Incorporating On-Road Bicycle Networks into Resurfacing Projects (2016) https://www.fhwa.dot.gov/environment/bicycle-pedestrian/publications/resurfacing/
- / Small Town and Rural Multimodal Network Design Guide (2017) http://ruraldesignguide.com/

Manual on Uniform Traffic Control Devices (MUTCD):

- / 2009 NC Supplement to MUTCD
- / Part 4E: Pedestrian Control Features
- / Part 7: Traffic Controls for School Areas

/ Part 9: Traffic Controls for Bicycle Facilities

American Association of State Highway and Transportation Officials (AASHTO):

- A Policy on Geometric Design of Highways and Streets.
- Guide for the Development of Bicycle Facilities.

Rails-to-Trails Conservancy:

Rails-with-Trails: A Preliminary
 Assessment of Safety and Grade Crossings.
 2005.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT)

- / WalkBikeNC: The Statewide Pedestrian and Bicycle Plan
- Glossary of North Carolina Terminology for Active Transportation.
- NCDOT Complete Streets, including the Complete Streets Planning and Design Guidelines
- / Evaluating Temporary Accommodations for Pedestrians
- / NC Local Programs Handbook
- Traditional Neighborhood Development Guidelines

ADA & PEDESTRIAN DESIGN GUIDANCE

- United States Access Board. Public Rights of-Way Accessibility Guidelines (PROWAG).
- USDOJ. ADA Standards for Accessible Design.
- / AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities.

SAFE ROUTES TO SCHOOL

- / National Center for Safe Routes to School. <u>HTTP://WWW.SAFEROUTESINFO.ORG/</u>
- / National Partnership for Safe Routes to School.
 - http://www.saferoutespartnership.org/