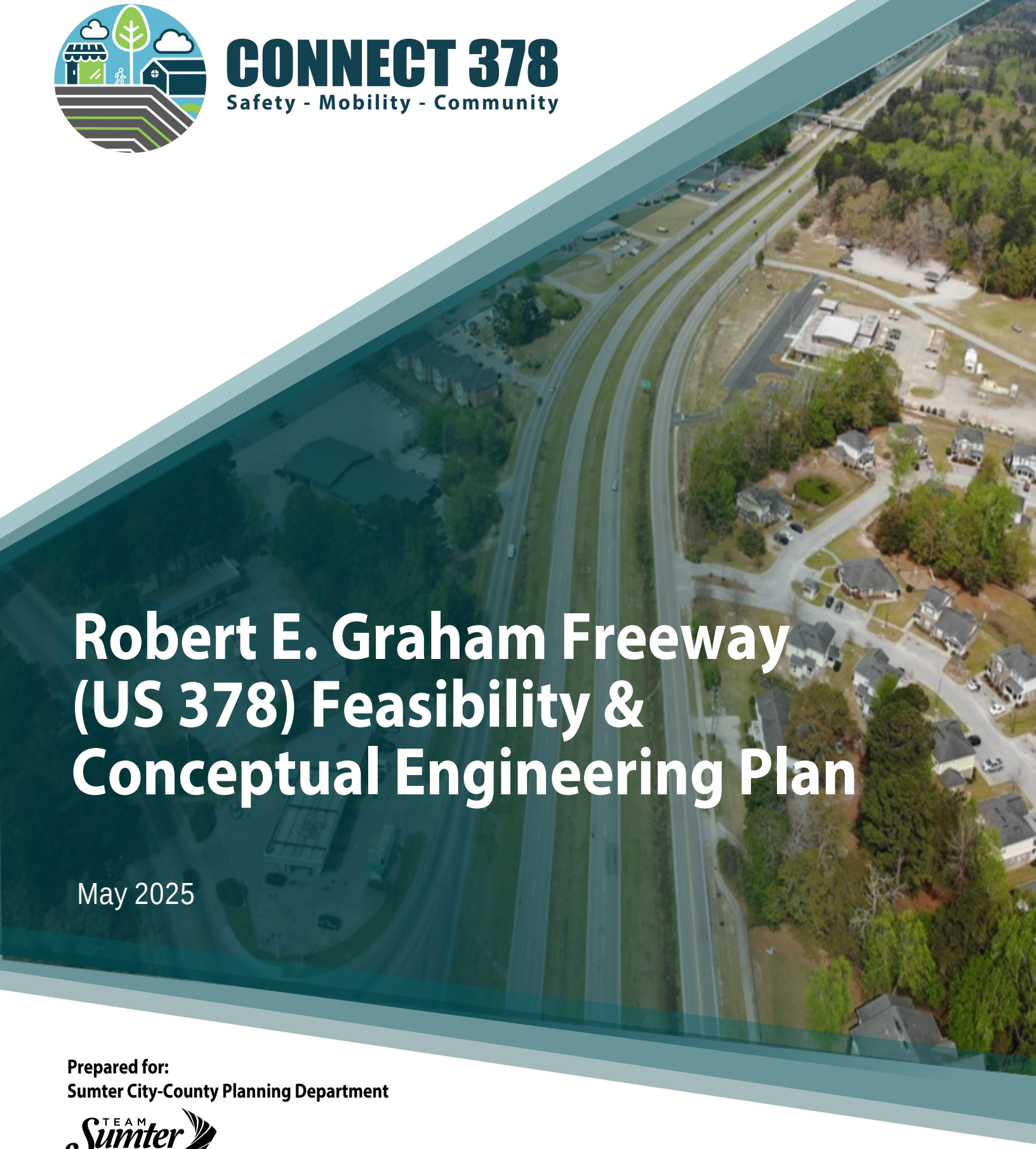
CONNECT 378
Safety - Mobility - Community



Robert E. Graham Freeway (US 378) Feasibility & Conceptual Engineering Plan

May 2025

Prepared for:
Sumter City-County Planning Department

TEAM Sumter

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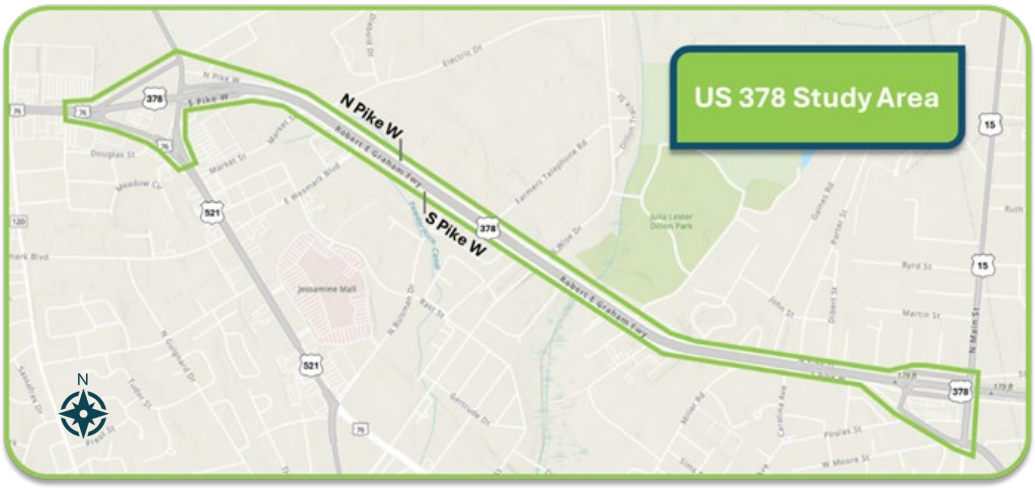


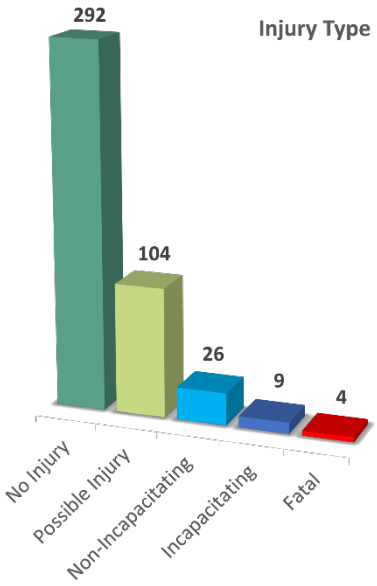
Team Sumter contracted with AECOM to complete a feasibility study and corridor evaluation with conceptual engineering plans for a proposed redesign of 2.6 miles of the Robert E. Graham Freeway (US 378 Bypass) between US 521 (Camden Highway) and US 15 (N. Main Street). Team Sumter is comprised of the City of Sumter, Sumter County, and Sumter Area Transportation Study Metropolitan Planning Organization (SUATS MPO). The project area includes the US 378 Bypass and two frontage roads adjacent and parallel to the bypass known as N Pike West (S-1428) and S Pike West (S-1429). The US 378 Bypass is at the northern boundary of the City of Sumter and provides a freeway-style link between eastern and western Sumter County. It was one of the first bypass freeways built in South Carolina. Land uses along the corridor include a regional commercial center, several multifamily apartment complexes, a county park, and other residential, commercial, and industrial land uses. The project area is poised for future growth and redevelopment as the concentration of high activity uses expands with little resistance from conflicting land uses. The goal of this feasibility study was to evaluate transportation needs and provide conceptual engineering plans for the redesign of the US 378 Bypass to enhance vehicle flow, improve safety, enhance mobility for non-motorized travelers, and expand connectivity between the eastern and western sections of the corridor.

Purpose and Need Statement

The purpose of Connect 378 is to eliminate transportation barriers caused by the US-378/76 Freeway by establishing an accessible and functional network of streets and paths that improve mobility and safety for all users.

As noted in the purpose and need statement, this feasibility study does not focus one location within the study area limits. Connect 378 includes US 378, S Pike W, and N Pike W and how all three of these roadways can be improved to provide a functional, and accessible network of facilities and pathways with the focus of adequate operations and safety for all users.

Traffic volumes were obtained from The South Carolina Department of Transportation's Traffic Analysis and Data Application website for 2022. The US 378 section of the corridor is primarily a four-lane urban principal arterial carrying 13,900 vehicles per day. The N Pike W (S-1428) section of the corridor is primarily a two-lane urban-local state road carrying 6,600 vehicles per day. The S Pike W (S-1429) section of the corridor is primarily a two-lane urban-local state road (west end) and an urban minor arterial (east end) carrying 13,700 vehicles per day. Twenty-six intersections in the project area were evaluated as part of the study analysis.



Crash data captured crashes along the five segments of US 378, N Pike W, S Pike W, US 521 and US 15 from January 1, 2019 to September 30, 2022. A total of 435 crashes were reported during the 3.75-year period. The breakdown per roadway reported S Pike W comprising the most significant crash frequency with 226 crashes (52%). N Pike W reported 38 crashes (9%) and US 378 had 43 crashes (10%). The remaining 128 crashes were listed as "Other" which included crashes occurring along US 15 and US 521 and various other intersections throughout the corridor.

There were four (4) fatalities reported in the study area with 139 crashes (32%) resulting in an injury crash. All four fatalities were reported along US 378 with two involving a pedestrian, one involving a bicycle and one involving a rear end crash. Three of the fatalities occurred on US 378 near Miller Road.

Numerous gatherings were held throughout the duration of the project that included project team meetings, stakeholder meetings, steering committee meetings, South Carolina Department of Transportation (SCDOT) and Federal Highway Administration (FHWA) meetings, public involvement meetings, and a pop-up eSTEAM event. Public comments stressed the need for pedestrian safety improvements and accomodations, specifically near Miller Road. Citizens and community leaders raised awareness of needing a safe connection from N Pike W (residential) and S Pike W (commercial), which plays in a role in the number of pedestrians crossing at this location. Attention was also given to incorporating the Shot Pouch Greenway into each proposed alternative.

The project team assembled an extensive list of short-term safety considerations that were used to develop a range of alternatives. Alternatives took into consideration public input, stakeholder

input, steering committee input, existing conditions, safety, congestion, and future conditions to create a vision for the future and produce outcomes to meet the vision designed to achieve outcomes that meet the project's purpose and needs.

The Range of Alternatives included seven (7) potential solutions that were refined through evaluation and analysis of each individually, against one another, and in coordination with the project team to a condensed list of four (4) alternatives. It was decided that improvements to US 521 would be a necessary addition to any improvements on US 378, so US 521 improvements were considered for implementation with all of the Range of Alternatives.

The Condensed List of Alternatives were developed with enough detail to provide levels of service, delay, growth, safety, benefit cost, and consider public input. The Condensed List of Alternatives included:

- **Alternative 1 – Raise the Road/Roundabouts**
- **Alternative 2 – Boulevard**
- **Alternative 3A – Culvert**
- **Alternative 3B – Miller Double Roundabouts**

The assessment of these alternatives included a determination of the 2050 project traffic volumes along US 378. The US 378 traffic volumes varied by alternative; however, all alternatives are expected to operate within an acceptable corridor level-of-service (LOS) C or better with daily traffic volumes peaking at 30,000.

The following is a summary of the Condensed List of Alternatives. It should be noted each alternative is expected to improve vehicle and pedestrian safety along both US 378 and the Pikes for entire study area limits.

	No-Build	Alternative 1 – Raise the Road/Roundabouts	Alternative 2 – Boulevard	Alternative 3A - Culvert	Alternative 3B – Miller Double Roundabouts
Roadway Facility	Freeway	Freeway	Boulevard	Boulevard / Freeway	Boulevard / Freeway
Miller Road Pedestrian Treatment	-	Roundabout	Signal	Tunnel	Roundabout
Vehicle Safety	Low	Medium	High	Medium	Medium
Pedestrian Safety	Low	High	High	High	High
US 378 Speed Limit	60	60	45	45/60	45/60
Cost	-	$110M	$68.8M	$54.3M	$71.7M

More detail on the alternatives, supporting documentation, and public input has been documented in this report and associated Appendices. The Condensed List of Alternatives may be considered when developing Preliminary Engineering (PE) for the National Environmental Protection Act (NEPA) assessments as they commence. Alternatives 2, 3A, and 3B retain the functional classification of US 378 as an Urban Principal Arterial. The designation would only change from Urban Principal Arterial – "Other Freeways and Expressways" to Urban Principal Arterial – "Other". The designation does not affect the roadways National Highway System (NHS) Priority as a "Basic Non-Interstate". High resolution imagery has been provided in **Appendix I**.

1. Introduction

The purpose of this feasibility study is to provide an analysis in support of a potential corridor improvement project along a 2.6 mile stretch of US 378 (Robert E Graham Freeway) between US 521 (Camden Highway) and US 15 (N Main Street) and its two frontage roads in Sumter, South Carolina. US 378 is a 4-lane limited access principal arterial. It is parallelled by two frontage roads; S-1428 (N Pike W) and S-1429 (S Pike W). The frontage roads are 2-lane urban-local state roads with some portions classifying as minor arterials.

The area is experiencing growth and expansion, which will impact traffic patterns in the area by increasing congestion and compounding safety issues requiring improvements to the roadway infrastructure. This corridor study recognizes the regional and local importance of the corridor and seeks to address issues and concerns related to safety, connectivity, and capacity; and formulate a series of projects and recommendations to address those issues. The purpose is to address roadway deficiencies that will provide a safer and more efficient roadway for motorists, pedestrians, and bicyclists. Improvements will aim to increase safety and connectivity for all roadway users.

AECOM was retained by the Sumter County Planning and Development Department to perform the following tasks along US 378:

- To demonstrate engineering feasibility of the selected alternatives
- To assess how and to what degree Complete Streets goals can be implemented
- To identify public infrastructure that will need to be relocated or otherwise modified in the area of the project
- To identify significant anticipated impacts on parcels abutting the corridor, particularly identifying any parcels that will be uniquely impacted
- To provide the detail needed to prepare an estimate of probable cost to enable accurate projections of capital improvements along the corridor

AECOM was tasked with studying traffic conditions during a typical weekday in the AM, Midday, and PM peak hours alongside the Weekend peak hour for three (3) scenarios:

- Existing 2023: An analysis of existing conditions in the year 2023.
- No-Build 2050: An analysis of future conditions in the year 2050 using historic traffic volume trends in the surrounding area if no changes are implemented.
- Build 2050: An analysis of the future 2050 conditions for each Alternative.

The US 378 Corridor study area is just northwest of downtown Sumter, beginning at the eastbound entrance ramp from US 76 Business (Broad Street) onto Robert Graham Freeway (US 378) and ending north of downtown at the interchange with US 521 (N Main Street). The total corridor length is approximately 2.6 miles. The US 378 section of the corridor is primarily a four-lane urban principal arterial carrying 13,900 vehicles per day. The N Pike W (S-1428) section of the corridor is primarily a two-lane urban-local state road carrying 6,600 vehicles per day. The S Pike W (S-1429) section of the corridor is primarily a two-lane urban-local state road (west end) and an urban minor arterial (east end) carrying 13,700 vehicles per day. Approximately 116 crashes per year occurred within the study area limits over a 3.75-year time frame from January 2019 to September 2022 totaling 435 crashes. 143 (33%) crashes resulted in a serious injury or fatality. Over half of the total crashes occurred on S Pike West.

This study is a culmination of involvement with the community and stakeholders including the City of Sumter, Sumter County Planning and Development, Sumter Area Transportation Study Metropolitan Planning Organization (SUATS MPO), the South Carolina Department of Transportation (SCDOT) and the Federal Highway Administration (FHWA). It includes an analysis of traffic operations, crash history, growth patterns, and access management strategies to improve safety and traffic flow. These efforts will result in the Condensed List of Alternatives that local governments and SCDOT could implement in the future to benefit the corridor.

The project study area studied the following 26 intersections as part of this corridor study:

1. Robert Graham Freeway (US 378) at Jefferson Road (S-53)
2. Broad Street (US 76 Business) at US 378
3. Camden Highway (US 521) at Jefferson Road (S-53)
4. Camden Highway (US 521) at N Pike W (S-1428)
5. Camden Highway (US 521) at US 378 WB Off-Ramp
6. Camden Highway (US 521) at S Pike W (S-1429)
7. Broad Street (US 76 Business) at Camden Highway (US 521)/Hastings Drive (S-410)
8. S Pike W (S-1429) at US 378 EB On-Ramp -
9. Robert Graham Freeway (US 378) at US 378 WB Off-Ramp
10. S Pike W (S-1429) at Market Street (S-1073) -
11. N Pike W (S-1428) at Electric Drive
12. S Pike W (S-1429) at E Wesmark Boulevard (S-1074)
13. S Pike W (S-1429) at Bultman Drive
14. N Pike W (S-1428) at Farmers Telephone Road
15. S Pike W (S-1429) at Hilliard Drive (S-453)
16. N Pike W (S-1428) at Clara Louise Kellogg Drive
17. S Pike W (S-1429) at Wall Street
18. S Pike W (S-1429) at Miller Road (S-55)
19. S Pike W (S-1429) at Carolina Avenue (S-1245)
20. N Pike W (S-1428) at Bordeaux Avenue (S-631)
21. Robert Graham Freeway (US 378) at Bordeaux Avenue
22. S Pike W (S-1429) at Bordeaux Avenue (S-594)
23. Main Street (US 15) at N Pike W (S-1428)/Strange Street
24. Main Street (US 15) at S Pike E (S-1429)
25. Main Street (US 15) at S Pike W (S-1429)/ N Lafeyette Drive (US 15)
26. S Pike W & Brookhollow Place Driveway

Traffic analysis includes a review of the crash history, Level of Service (LOS), queuing, delay, a 7-day pedestrian foot traffic analysis near Miller Road crossing US 378, a 7-day Average Annual Daily Traffic (AADT) analysis of the corridor, and future land use for the Existing 2023, No-Build 2050, and Build 2050 scenarios. Based on these scenarios, the study will compare the No-Build 2050 scenario to the Build 2050 scenarios and provide roadway recommendations to improve traffic operations, safety, and vehicle queuing.

Figure 1 – Intersection Study Map

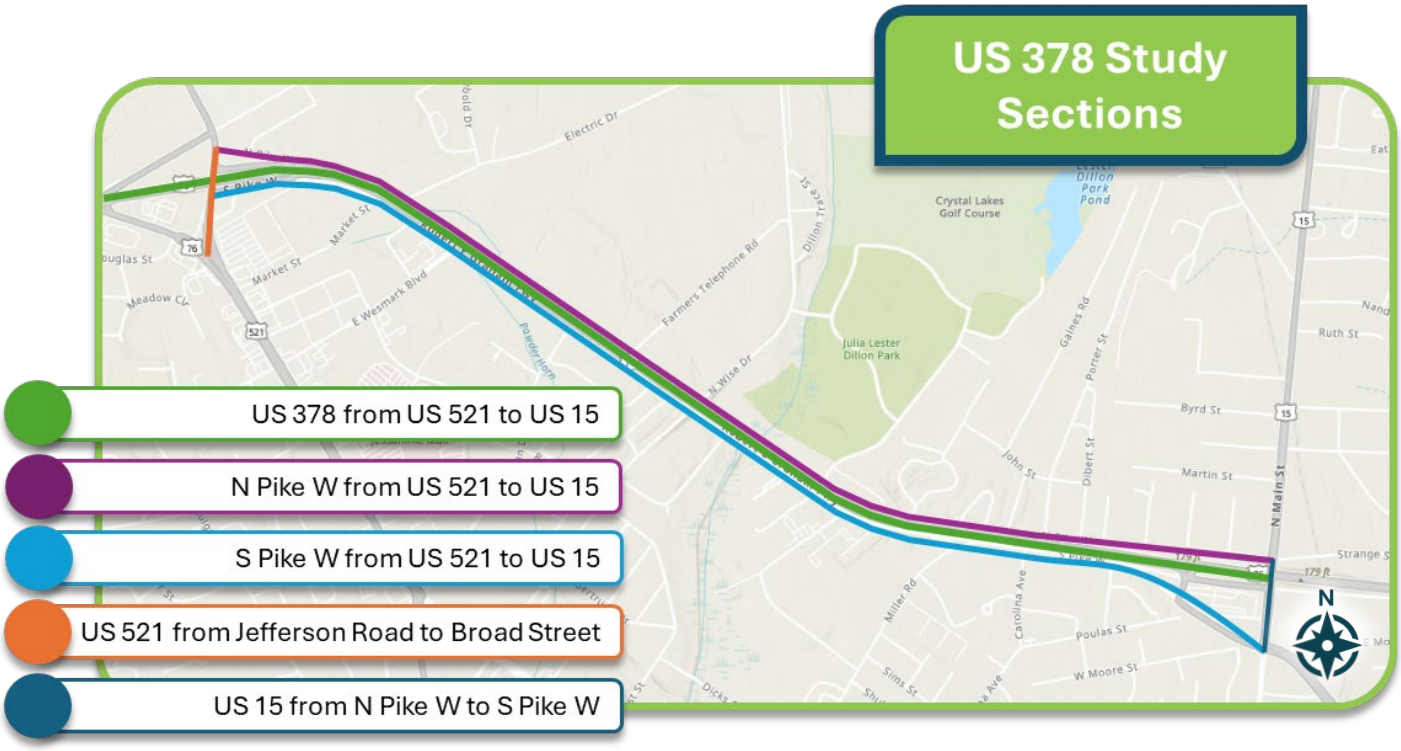
2. Existing Conditions

2.1 Field Review

A field review was conducted for the project corridor on July 9, 2023, to evaluate the existing conditions of the roadway network in the study area. Corridor characteristics were documented and are included in the following sections. As part of this review, crash history was examined to provide recommendations of low-cost / short-term safety improvements that could be considered. A memo and list of these suggested improvements was forwarded from SUATS to SCDOT and is included in **Appendix A** with the field notes by intersection. Overall, the systemic improvements identified include adding dashed edge lines and stop signs at all stop controlled intersections in accordance with Manual on Uniform Traffic Control Device (MUTCD) standards, installing reflective overhead street name signs on all signal spans, reviewing street designation signs for designation and proper alignment, and trim and maintaining vegetative growth throughout the corridor to improve sight distance.

2.2 US 378 Study Area Sections

US 378 is an east/west principal arterial comprised of multimodal users such as commuter, commercial and residential. Within the 2.6-mile-long study area, existing characteristics such as average daily traffic, median, edge of pavement, and land use vary. The main corridor and adjacent network can be divided into the five logical sections described below.



US 378 from US 521 to US 15

US 378 (2.6 miles) is a four-lane divided freeway. Land use along this segment is suburban with primarily residential and commercial development. The average daily traffic is 13,600 vehicles per day during 2023. The posted speed limit is 60 miles per hour (mph).


Eastbound US 378 west of Bultman Drive

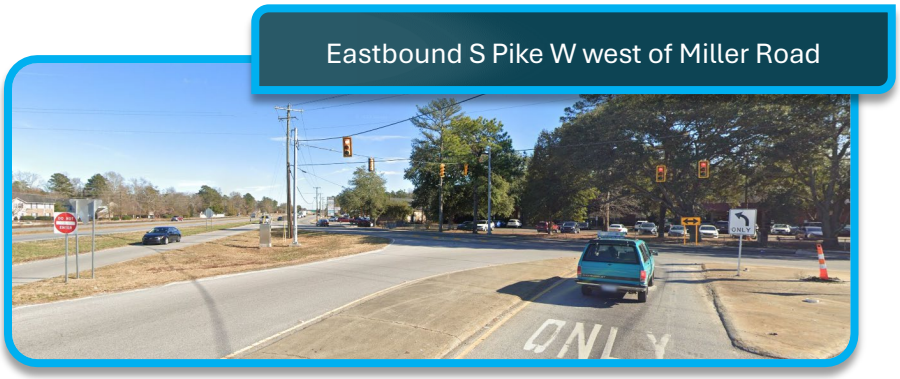
N Pike W (S-1428) from US 521 to US 15

N Pike W (2.6 miles) is a two-lane state road with zero to two-foot paved shoulders. Land use along this segment is generally commercial and undeveloped in the western portion and residential and recreational in the eastern portion. The average daily traffic is 6,600 vehicles per day during 2023. The posted speed limit is 45 mph and changes to 30 mph approaching US 15 at the east end of the study area.


Westbound N Pike W west of Farmers Telephone Road

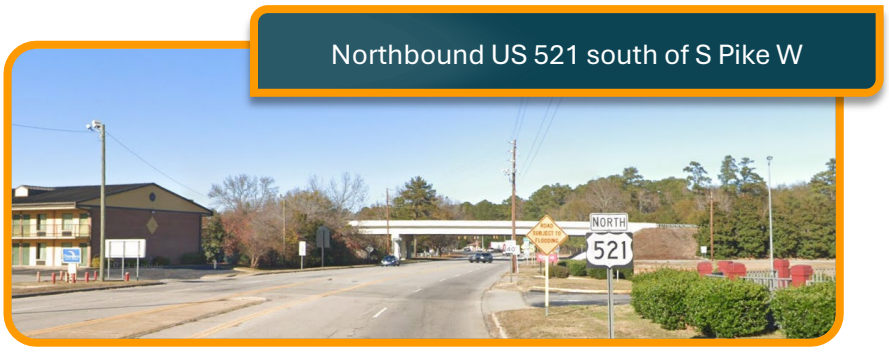
S Pike W (S-1429) from US 521 to US 15

S Pike W (2.6 miles) is a two-lane road with zero to two-foot paved shoulders in the western portion becoming a three-lane road with a variable width striped median in the eastern portion. Land use along this segment is commercial with primarily residential and a few small businesses. The average daily traffic is 13,700 vehicles per day during 2023. The posted speed limit is 45 mph and changes to 30 mph approaching US 15 at the east end of the study area.


Eastbound S Pike W west of Miller Road

US 521 from Jefferson Road to Broad Street

US 521 (0.3 mile) is a four-lane road (two lanes in each direction) separated by a 12-foot striped two-way left-turn lane (TWLTL). Land use along this segment is generally commercial. The average daily traffic is 21,400 vehicles per day during 2023. The posted speed limit is 40 mph.



Northbound US 521 south of S Pike W

US 15 from N Pike W to S Pike W

US 15 (0.2 mile) is a four-lane road (two lanes in each direction) separated by a varying width concrete median with curb and gutter. Land use along this segment is generally commercial and residential. The average daily traffic is 8,300 vehicles per day during 2023. The posted speed limit is 25 mph.

2.3 Study Intersections

Intersection 1: Robert Graham Freeway (US 378) at Jefferson Road (S-53) - Unsignalized

Jefferson Road approaches US 378 from the northeast with only its southbound movement creating a ramp merge intersection onto US 378. Jefferson Road is a two-lane urban major collector with a posted speed limit of 35 mph and has one right-turn merge lane approaching US 378. The speed limit on US 378 in the area is 40 mph. The intersection is controlled by a yield sign on Jefferson Road with free-flow movement on US 378. The land use is generally commercial.

Intersection 2: Broad Street (US 76 Business) at US 378 - Unsignalized

Broad Street is an urban principal arterial with a posted speed limit of 40 mph. It approaches US 378 from the west with two eastbound through lanes, one eastbound left turn lane, a westbound through lane, and a westbound shared through/right turn lane to form a "T" intersection. The southbound approach on US 378 is separated from this intersection while Broad Street's eastbound left turn creates US 378's northbound movement. The speed limit on US 378 in the area is 40 mph. This intersection is unsignalized controlled by yield signs for the eastbound left and westbound right movements with plans from the SCDOT to signalize it in the future. Land use surrounding the intersection is commercial and wooded land.

Intersection 3: Camden Highway (US 521) at Jefferson Road (S-53) - Signalized

Jefferson Road is a two-lane road with a posted speed limit of 35 mph. It intersects US 521 to form a four-leg signalized intersection. Land use in the vicinity is a mix of commercial, undeveloped / wooded land, and agricultural. Both the northbound and southbound approaches on US 521 consist of one left-turn lane and two through lanes. The eastbound approach on Jefferson Road consists of one general purpose lane while the westbound approach consists of one left-turn lane and one shared through /

right-turn lane. Currently the signal provides permissive phasing for all approaches. The speed limit on US 521 in the area is 40 mph.

Intersection 4: Camden Highway (US 521) at N Pike W (S-1428) - Unsignalized

N Pike W approaches US 521 from the east with one general purpose lane. N Pike W has a posted speed limit of 45 mph and is controlled by a stop sign. The southbound approach on US 521 consists of one left-turn lane and two through lanes, and the northbound approach has one through lane, one shared through / right-turn lane, and one center two way left-turn lane. The speed limit on US 521 in the area is 40 mph. Land use surrounding the intersection is generally commercial and wooded land.

Intersection 5: Camden Highway (US 521) at US 378 Westbound Off-Ramp - Unsignalized

US 378 Westbound Off-Ramp approaches US 521 from the east with one general purpose lane which has a channelized right-turn. US 378 Westbound Off-Ramp has a posted speed limit of 40 mph and is controlled by a stop sign. The southbound approach on US 521 consists of two through lanes, and the northbound approach has two through lanes and one center two way left-turn lane. The speed limit on US 521 in the area is 40 mph. Land use surrounding the intersection is generally commercial and wooded land.

Intersection 6: Camden Highway (US 521) at S Pike W (S-1429) - Unsignalized

S Pike W approaches US 521 from the east with one left-turn lane and one right-turn lane. S Pike W has a posted speed limit of 35 mph and is controlled by a stop sign. The southbound approach on US 521 consists of one left-turn lane and two through lanes, and the northbound approach has one through lane, one shared through / right-turn lane, and one center two way left-turn lane. The speed limit on US 521 in the area is 40 mph. Land use surrounding the intersection is generally commercial.

Intersection 7: Broad Street (US 76 Business) at Camden Highway (US 521)/Hastings Drive (S-410) - Signalized

Broad Street (US 76 Bus) is an urban principal arterial that intersects US 521 at a slightly skewed angle. There are two through lanes and one left-turn lane along Broad Street for both approaches with a channelized right-turn lane for the westbound approach and a shared through / right-turn lane the eastbound movement. US 521 is marked with a left turn, shared left through and a

channelized right-turn for the southbound movement, and the northbound approach, Hastings Drive is controlled via right-in / right out. Land use in the vicinity is generally commercial. The speed limits on both Broad Street and US 521 in the area are 40 mph and 25 mph on Hastings Drive. The intersection is signalized with protected lefts for all approaches except for Hastings Drive which is controlled by a stop sign. Land use surrounding the intersection is generally commercial.

Intersection 8: S Pike W (S-1429) at US 378 Eastbound On-Ramp - Unsignalized

S Pike W is an urban state road with a posted speed limit of 35 mph near this intersection. It approaches US 378 Eastbound On-Ramp from the west with one shared through / left-turn lane and from the east with a shared through / right-turn lane to form a "T" intersection. This intersection acts as an on-ramp onto US 378, so there is only a northbound movement leading to US 378. The speed limit on US 378 Eastbound On-Ramp in the area is 35 mph soon after leading into the freeway section of 378 and increasing to the speed limit of 60 mph for the freeway. This intersection is controlled by yield signs for the eastbound left movement. Land use surrounding the intersection is generally commercial.

Intersection 9: Robert Graham Freeway (US 378) at US 378 Westbound Off-Ramp - Unsignalized

US 378 is an urban freeway with a posted speed limit of 40 mph near this intersection. It approaches US 378 Westbound Off-Ramp from the east with one through and one right-turn diverge lane. This intersection acts as an off-ramp from US 378. This intersection is part of an off-ramp for the interchange with US 521. Land use surrounding the intersection is generally commercial and wooded land.

Intersection 10: S Pike W (S-1429) at Market Street (S-1073) - Unsignalized

Market Street is an urban state road that approaches S Pike W from the southwest to form a three-leg intersection. There is a shared through / right-turn lane for the eastbound approach and a shared through / left-turn lane for the westbound approach. The northbound Market Street approach has one left-turn lane and one right-turn lane. The speed limit on S Pike W in the area is 35 mph at this intersection increasing to 45 mph just to the east and 30 mph on Market Street. The intersection is controlled by a stop sign on the side street. Land use is predominantly commercial.

Intersection 11: N Pike W (S-1428) at Electric Drive - Unsignalized

Electric Drive is a local road that intersects N Pike W from northeast at a skewed angle. There is one through lane along N Pike W for both approaches with no turn lanes, and one general purpose lane on Electric Drive. The speed limit on N Pike W in the area is 45 mph and there is no posted speed limit on Electric Drive. The intersection is controlled by a stop sign on Electric Drive. Land use is generally commercial/wooded with limited residential nearby.

Intersection 12: N Pike W (S-1428) at East Westmark Boulevard - Unsignalized

E Wesmark Boulevard is an urban major collector that approaches S Pike W from the southwest to form a three-leg intersection. There is a shared through / right-turn lane for the eastbound approach and a shared through / left-turn lane for the westbound approach. The northbound E Wesmark Boulevard approach has one left-turn lane and one right-turn lane. The speed limit on S Pike W in the area is 45 mph at this intersection and 35 mph on E Wesmark Boulevard. The intersection is controlled by a stop sign on the side street. Land use is predominantly commercial/wooded.

Intersection 13: S Pike W (S-1429) at Bultman Drive - Unsignalized

Bultman Drive is an urban major collector that approaches S Pike W from the southwest to form a three-leg intersection. There is a shared through / right-turn lane for the eastbound approach and a shared through / left-turn lane for the westbound approach. The northbound Bultman Drive approach has one general purpose lane for left and right turns. The speed limit on S Pike W in the area is 45 mph at this intersection and 35 mph on Bultman Drive. The intersection is controlled by a stop sign on Bultman Drive and the land use is predominantly commercial/wooded/residential.

Intersection 14: N Pike W (S-1428) at Farmers Telephone Road - Unsignalized

Farmers Telephone Road is a local road that approaches N Pike W from northeast. There is one through lane along N Pike W for both approaches with no turn lanes, and one general purpose lane on Farmers Telephone Road. The speed limit on N Pike W in the area is 45 mph and there is no posted speed limit on Farmers Telephone Road. The intersection is controlled by a stop sign on Farmers Telephone Road. Land use is generally commercial/wooded.

Intersection 15: S Pike W (S-1429) at Hilliard Drive (S-453) - Unsignalized

Hilliard Drive is an urban state road that approaches S Pike W from the southwest to form a three-leg intersection. There is a shared through / right-turn lane for the eastbound approach and a shared through / left-turn lane for the westbound approach. The northbound Hilliard Drive is a single lane approach. The speed limit on S Pike W in the area is 45 mph at this intersection and 25 mph on Hilliard Drive. The intersection is controlled by a stop sign on the side street. Land use is predominantly commercial/wooded/residential.

Intersection 16: N Pike W (S-1429) at Clara Louise Drive - Unsignalized

Clara Louise Kellogg Drive is a local road that intersects N Pike W from the northeast. There is one through lane along N Pike W for both approaches with no turn lanes, and one general purpose lane on Clara Louise Kellogg Drive. The speed limit on N Pike W in the area is 45 mph and there is no posted speed limit on Clara Louise Kellogg Drive. The intersection is controlled by a stop sign on Clara Louise Kellogg Drive. Land use is generally residential/recreational.

Intersection 17: S Pike W (S-1429) at Wall Street - Unsignalized

Wall Street is a local road that intersects S Pike W from the southwest to form a three-leg intersection. There is a shared through / right-turn lane for the eastbound approach and a shared through / left-turn lane for the westbound approach. The northbound Wall Street approach has one shared left-turn and right-turn lane. The speed limit on S Pike W in the area is 45 mph at this intersection and there is no posted speed limit on Wall Street. The intersection is controlled by a stop sign on the side street. Land use is predominantly residential/medical.

Intersection 18: S Pike W (S-1429) at Miller Road (S-55) - Signalized

Miller Road is an urban minor arterial that approaches S Pike W from the southwest. The eastbound approach of S Pike W intersects with Miller Road and is controlled by a signal with permissive phasing for all movements. The eastbound approach has one left turn lane and one channelized right turn lane at the signalized intersection with Miller Rd under yield control. The westbound approach of S. Pike west has one lane to approach the signalized intersection with Miller Rd and a diverging right turn to continue west on S. Pike. The northbound approach of Miller Road has a left turn and through lane at the signal. The southbound approach of Miller Road has a shared through / right turn lane at the

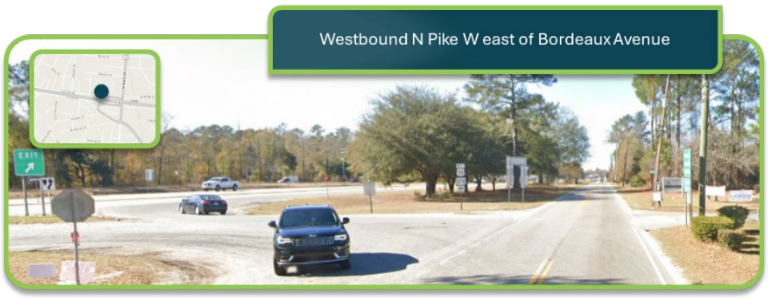
signal. The speed limit on the western side of S Pike W in the area is 45 mph and 30 mph on Miller Road and the eastern side of S Pike W. Land use is predominantly commercial/residential.

Intersection 19: S Pike W (S-1429) at Carolina Avenue (S-1245) - Unsignalized

Carolina Avenue is an urban state road that approaches S Pike W from the south to form a three-leg intersection. There is a shared through / right-turn lane for the eastbound approach and a left-turn lane and through lane for the westbound approach. The northbound Carolina Avenue approach has one general purpose lane. The speed limit on S Pike W in the area is 30 mph at this intersection and there is no posted speed limit on Carolina Avenue. The intersection is controlled by a stop sign on the side street. Land use is predominantly residential/medical.

Intersection 20: N Pike W (S-1428) at Bordeaux Avenue (S-631) - Unsignalized

Bordeaux Avenue is an urban state road that approaches N Pike W from the north and south to form a four-leg intersection. There is one general purpose lane along all approaches with no turn lanes. The speed limit on N Pike W in the area is 30 mph and there is no posted speed limit on Bordeaux Avenue. The intersection is controlled by stop signs on the side street. Land use is mostly residential.



Intersection 21: Robert Graham Freeway (US 378) at Bordeaux Avenue - Unsignalized

Bordeaux Avenue is an urban local road that approaches US 378 from the north and south to form a four-leg intersection which operates as an interchange with nearby US 15 with right-in/right-out free flow lanes that merge into the freeway. There are two through lanes and one right-turn lane for both approaches on US 378, and there is one right-turn lane along both approaches for Bordeaux Avenue. The speed limit on US 378 in the area is 60 mph and there is no posted speed limit on Bordeaux Avenue. Land use is mostly residential.

Intersection 22: S Pike W (S-1429) at Bordeaux Avenue (S-594) - Unsignalized

Bordeaux Avenue is an urban state road that approaches S Pike W from the north to form a three-leg intersection. For the eastbound movement, there is one left-turn lane and one through lane, and the westbound movement has one shared through / right-turn lane. Bordeaux Avenue has one left-turn lane and one right-turn lane. The speed limit on S Pike W in the

area is 30 mph and there is no posted speed limit on Bordeaux Avenue. The intersection is controlled by stop signs on the side street. Land use is mostly commercial/residential.

Intersection 23: Main Street (US 15) at N Pike W (S-1428)/Strange Street - Signalized

US 15 is an urban principal arterial that approaches N Pike W from the north and south to form a four-leg intersection. There are two through lanes, with one of them being a shared through / right-turn lane, and one left-turn lane for both approaches on US 15, and there is one shared through / left-turn lane and one right-turn lane for the eastbound movement along N Pike W while the westbound movement of Strange Street has a general-purpose lane. The speed limit on US 15 in the area is 25 mph and 30 mph on both N Pike W and Strange Street. The intersection is signalized with permissive phasing for all left turns except for US 15's northbound left turn to coincide with N Pike W's right-turn overlap signal. Land use is mostly commercial/residential.

Intersection 24: Main Street (US 15) at S Pike E (S-1429) - Signalized

S Pike E is an urban major collector that approaches US 15 from the west and east to form a four-leg intersection. It is worth noting that there was a recent project that relocated S Pike W further to the south to a new signal leaving the west end of this intersection as a dead end about 800 feet west. There are two through lanes, with one of them being a shared through / right-turn lane, and one left-turn lane for both approaches on US 15, and there is one shared through / right-turn lane and one left-turn lane for both approaches along S Pike E. The speed limit on US 15 in the area is 25 mph and 30 mph on both S Pike E. The intersection is signalized with permissive phasing for all left turns except for the US 15 northbound left turn which has protected/permissive phasing. Land use is mostly commercial.

Intersection 25: Main Street (US 15) at S Pike W (S-1429)/ N Lafayette Drive (US 15) – Signalized

S Pike W is an urban minor arterial that was relocated to the south meeting with urban principal arterial N Lafayette Drive (US 15). Both S Pike W and N Lafayette Drive approach N Main Street (which is also US 15 for the southbound movement) from the west and east respectively to form a four-leg intersection. For northbound US 15 approach, there are two through lanes, with one of them being a shared through / right-turn lane, and one left-turn lane, and the southbound movement has two left-turn lanes, one through lane, and one right-turn lane. For S Pike W's eastbound movement, there is one shared through / right-turn lane, one through lane, and one left-turn lane, and N Lafayette Drive has one left-turn lane, one through lane, and one right-turn lane. The speed limit on N Main Street in the area is 25 mph, 30 mph on S Pike W, and 25 mph on N Lafayette Drive. The intersection is

signalized with protected left-turn only phasing on Main Street and projected permissive left-turn phasing on the S Pike W / N Lafayette Drive approaches. Land use is mostly commercial.

Intersection 26: S Pike W & Brookhollow Place Driveway - Unsignalized

Brookhollow Place Driveway is a local road that approaches S Pike W from the southwest to form a three-leg intersection. There is a shared through / right-turn lane for the eastbound approach and a through lane for the westbound approach. The northbound Brookhollow Place Driveway approach and is a right-turn only lane. The speed limit on S Pike W in the area is 45 mph at this intersection and there is no posted speed limit on Brookhollow Place Driveway. The intersection is controlled by a stop sign on the side street. Land use is predominantly residential.

2.4 Traffic Counts

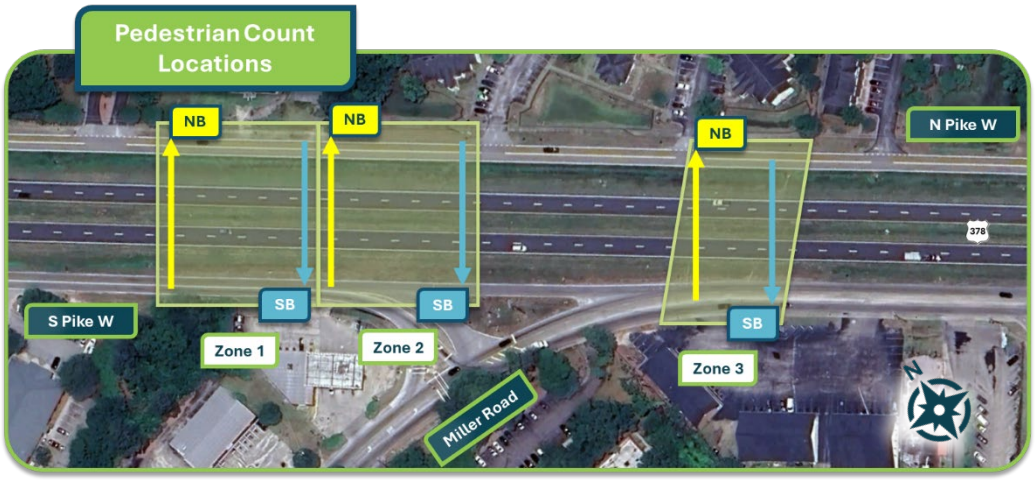
Peak hour turning movement counts were collected in March 2023 for Weekday AM, Midday, PM and Weekend peak hours for each of the study intersections. The weekday peak hours for AM, Midday and PM were collected between 7:00 AM to 9:00 AM, 11:00 AM to 2:00 PM, and 4:00 PM to 6:00 PM respectively. The weekend peak hour counts were collected between 11:00 AM to 3:00 PM. Count dates were Saturday, March 18, 2023, and Tuesday, March 21, 2023. Traffic counts can be found in **Appendix B** with 2023 Existing Volumes in **Appendix C.**

The AM, Midday, PM, and weekend peak hours varied along the study corridor between each intersection. Since weekday Midday and weekend peak hours traffic volumes were less than weekday AM and PM peak hours, they were not used in the analysis. Traffic volumes observed during the peak hours of each individual intersection were utilized to conduct the traffic analysis. The observed peak hour factors and heavy vehicle percentage for these intersections are reflected in the analysis. In addition, 7-day (24 hour) counts were also collected along US 378, S Pike W, and N Pike W, and N Wise Dr at key locations to determine how many vehicles per day (VPD) traveled those routes. **Table 1** summarizes the daily traffic volumes on given day between Saturday March 18th to Friday March 24th, 2023.

Table 1 – US 378 Daily Traffic Volumes

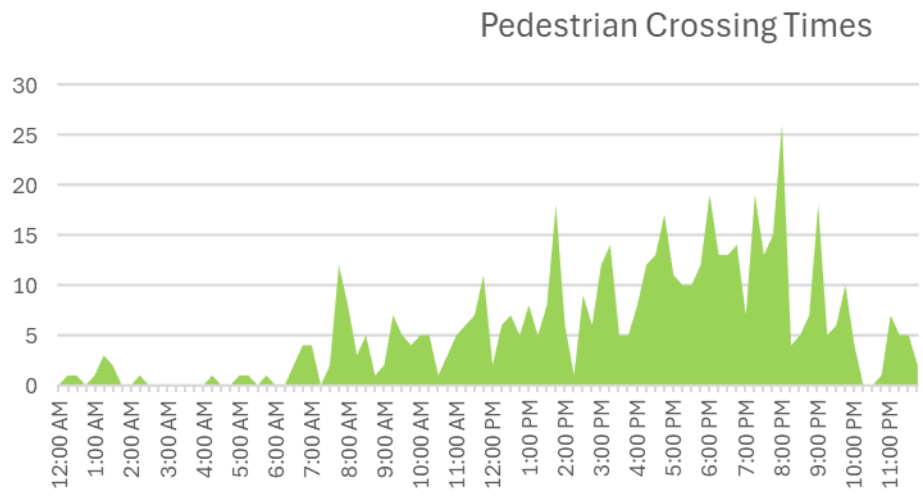
Count Location:	Saturday (VPD)	Sunday (VPD)	Monday (VPD)	Tuesday (VPD)	Wednesday (VPD)	Thursday (VPD)	Friday (VPD)
S Pike W between Camden Hwy and N Wise Dr	5,944	4,465	7,497	7,546	7,276	7,883	8,403
N Pike W between Camden Hwy and N Wise Dr	2,490	2,183	3,408	3,502	3,425	3,838	3,587
S Pike W between N Wise Dr and N Main St	3,275	2,439	3,998	4,024	3,943	4,299	4,574
N Pike W between N Wise Dr and N Main St	3,054	2,621	4,096	4,192	4,001	4,516	4,271
N Wise Dr between N Pike W and Dillon Park	5,494	5,558	5,995	5,716	3,666	3,114	5,732
US 378 EB between Camden Hwy and N Main St	6,884	7,168	7,117	7,894	5,737	5,169	6,618
US 378 WB between Camden Hwy and N Main St	7,718	7,877	8,119	8,390	6,226	6,136	7,643

2.5 Pedestrian Counts



Seven day counts for pedestrians crossing US 378 near Miller Road were analyzed and summarized. Counts were collected from Thursday April 13, 2023, to Wednesday April 19, 2023 for a full 24 hours per day. It should be noted the grade school was on Spring Break between Thursday April 13th to Sunday April 16th. Count locations were separated into three zones to capture an area where pedestrians may cross US 378 and the frontage roads. Pedestrians crossing within these zones were classified by the direction of travel and the time of the crossing. Data illustrates a significant number of crossings during the study timeframe with the highest peak during the daylight hours, but nighttime and early morning crossing was still an observed behavior. Zone 3 had the highest number of pedestrian crossings in both directions by nearly double the other zones combined. Pedestrian counts can be found in **Appendix D**.

	Zone 1		Zone 2		Zone 3		Total
Date	NB	SB	NB	SB	NB	SB	
4/13/2023	2	1	1	4	31	34	**73**
4/14/2023	8	18	4	7	35	38	**110**
4/15/2023	1	4	3	4	29	29	**70**
4/16/2023	1	8	4	2	21	23	**59**
4/17/2023	6	7	9	9	16	30	**77**
4/18/2023	6	6	2	5	33	39	**91**
4/19/2023	3	2	2	3	25	28	**63**
Total	**27**	**46**	**25**	**34**	**190**	**221**	**543**

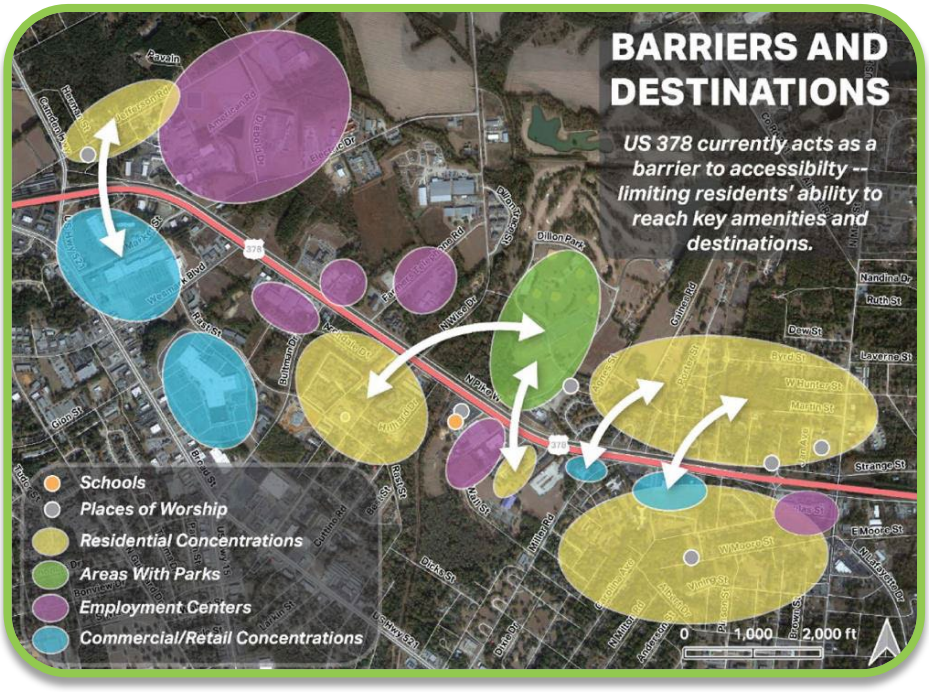


2.6 Multimodal Review

The Connect 378 project was prompted primarily due to the pedestrian fatalities, including children, at the intersection of Miller Road and US 378. During the public comment period, the Sumter community expressed a strong desire to create a safe crossing across US 378, specifically at the intersection of Miller Road.

US 378 currently acts as a barrier between residential hubs to basic amenities, religious centers, parks and open space. Bicycle and pedestrian connectivity and accessibility were key points of focus in the project scope. All alternatives that were analyzed utilized complete streets policies and principles while looking at how to increase safety and connectivity for all road users, including pedestrians, bicyclists, transit, users, and motorists.

While vehicular traffic volumes are the predominant mode choice on this segment of US 378, opportunities to connect communities with bicycle and pedestrian facilities is important with future development and land use ordinances. Zero-vehicle households and others depend on sidewalks, multi-use paths, and adequate connectivity to access grocery stores, employment centers, recreational facilities, places of worship, and more. A review of the of the multi-modal needs of the US 378 Corridor was performed and though the eastern section of the project area (east of N Wise Drive) has a residential character, there are opportunities to provide pedestrian crossings across US 378. Crossings are proposed at the existing intersections of Clara Louise Kellogg Drive and Miller Road. The western section of the project area (west of N Wise Drive) is more commercial and equipped but could further benefit by fully connecting the missing pedestrian facilities at E Wesmark Boulevard. A thorough Bicycle/Pedestrian Plan and a zoning code that enforces installation of recommended facilities is essential to optimizing performance within a transportation system.



The community surrounding US 378 has expressed interest in the feasibility of bicycle and pedestrian accommodations in the study area to include a multi-use path. Project stakeholders pinpointed a barrier-separated multi-use path as the desired bicycle/pedestrian facility to implement on as much of the corridor as existing build-out and right-of-way will allow. American Association of State Highway and Transportation Officials (AASHTO) recommends a minimum path width of 8 feet with the ideal width being between 10–14 feet. The western section (Broad Street) and the eastern section (S Pike W east of Miller Road & N Main Street) of the

corridor have some existing sidewalks but it lacks connectivity. The community noted that bicycle racks are available on buses.

Santee Wateree Regional Transportation Authority

The Santee Wateree Regional Transportation Authority (SWRTA) is the public transportation provider offering fixed routes and ADA Paratransit Services in the City of Sumter. This includes Route 40, which services US 378 and the surrounding area. As of the agency's September 2023 reporting data, SWRTA's fixed route ridership within the SUATS MPO was 3,452 passenger trips. Additionally, SWRTA provides ADA demand response (Paratransit service) to residents, offering accessible transportation options on a space available basis as a cash passenger. During the same period, the agency's paratransit ridership within the SUATS MPO was 1,325 passenger trips per month. Normal hours of operation are from 5:30 a.m. - 7:00 p.m. The SWRTA Route 40 map is shown below.

SWRTA, like most transit providers, considers the demographic makeup of an area when determining locations that should have transit service. Demographics are used to identify locations with a higher likelihood of transit use as compared to other areas. These factors often include variables such as households with no vehicles, minority populations, low income, disability status, and persons over age 65.

Any proposed recommendations and changes to the US 378 corridor could affect the coverage and frequency of transit service within the study area. Therefore, SWRTA must continue to analyze its network and identify transit service needs that reflect the study area corridor's existing and anticipated future travel demands and patterns. It will be vital for the transit network to be accessible and promote continuous direct routes and convenient connections between destinations such as homes, schools, shopping areas, public services, nearby neighborhoods, and recreational opportunities.

2.7 Demographics and Land Use

An assessment of land uses adjacent to the project area was developed to ascertain relevant data and projections from the 2045 future land use plan from the SUATS Long Range Transportation Plan. Data from the US Census Bureau from 2019 was tabulated to highlight the population, employment, and group quarter populations in the study area by Traffic Analysis Zone (TAZ). Group quarter population is a count of the number of people living in group quarters. The following maps and tables summarize those findings.

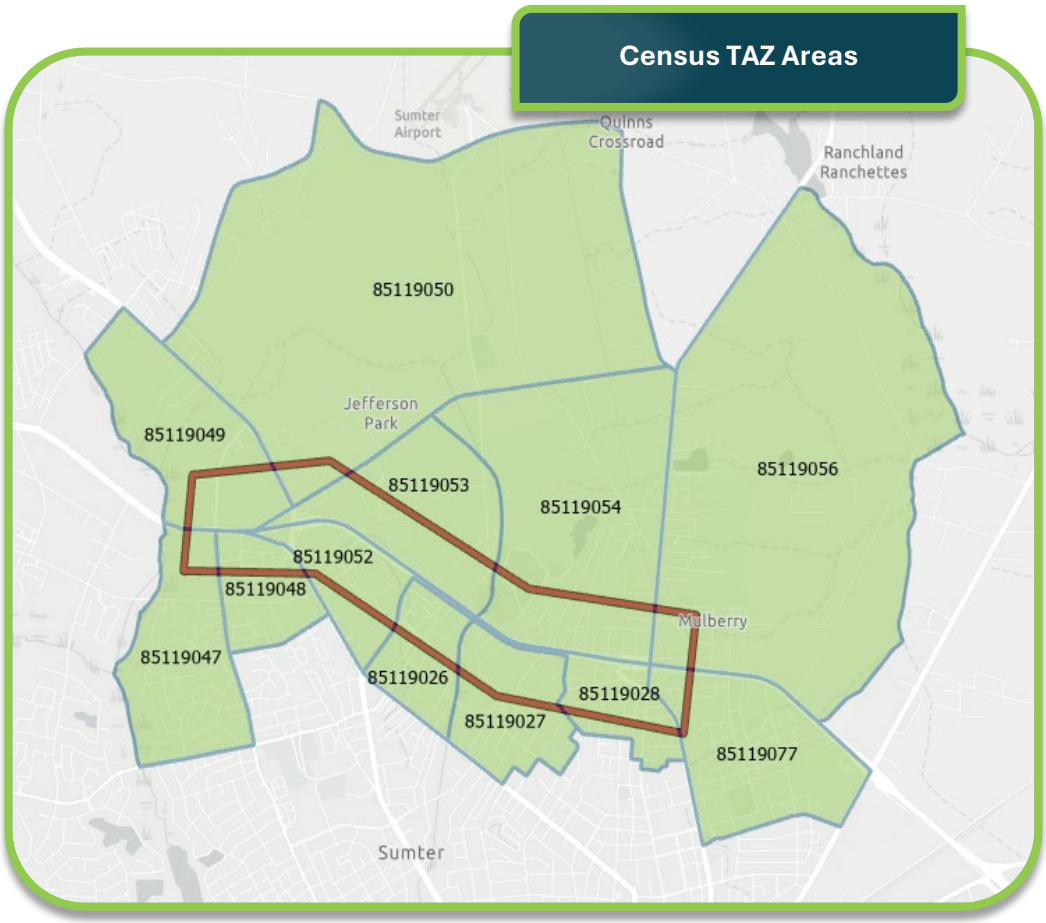


Table 2 – SUATS 2019 Demographics

TAZ ID	AREA	Total Population		Household Population		Group Quarter Population		Total Households		Total Employment	
		2019	2050	2019	2050	2019	2050	2019	2050	2019	2050
85119027	0.48	1655	1655	1508	1508	147	147	625	625	16	19.2
85119026	0.31	985	985	981	981	4	4	545	545	203	243.8
85119052	0.37	157	157	156	156	1	1	108	108	32	38.4
85119028	0.31	709	709	449	449	260	260	281	281	467	560.9
85119077	0.8	1629	1629	1619	1619	10	10	674	674	865	1039
85119047	0.71	1177	1177	1177	1177	0	0	483	483	65	78.1
85119048	0.32	404	404	404	404	0	0	163	163	20	24
85119049	0.77	738	738	738	738	0	0	271	271	1340	1609.6
85119050	4.03	527	527	527	527	0	0	195	195	65	78.1
85119054	1.65	1066	1066	1066	1066	0	0	493	493	120	144.1
85119053	0.74	140	140	139	139	1	1	79	79	252	302.7
85119056	3.62	665	665	606	606	59	59	243	243	448	538.1
Totals	**14.11**	**9852**	**9852**	**9370**	**9370**	**482**	**482**	**4160**	**4160**	**3893**	**4676**

The land use element of the study compared current and future land use and zoning in the immediate study area to identify any changes that may be impacted by a project. There were no changes to the zoning class or area identified in the 20-year horizon. An outline of the project area zoning with descriptions and regulations associated with each has been provided in Table 3.

Current and Future Land Use

Table 3 – Land Use - Zoning Class, Description, Regulation, and Total Area

Zone Class	Zone Description	Zone Regulation	Total Area (Acres)
AC	Agricultural Conservation	This district is to protect and preserve areas of the county which are presently rural or agricultural in character and use.	93
GC	General Commercial	This district is to accommodate the broadest possible range of commercial uses, determined principally by market conditions, while protecting the environment from potentially objectionable uses.	276
GR	General Residential	This district is to accommodate higher density residential development and a variety of housing types on small lots.	89
HI	Heavy Industrial	This district is to concentrate heavy industrial uses in areas where they will flourish without adversely affecting adjacent, less intensive uses, and to preserve prime industrial lands for future industrial development.	22
LC	Limited Commercial	This district is intended to accommodate commercial development along major streets, while promoting land use compatibility by limiting the type and conditions of development.	3
LI-W	Limited Industrial-Warehouse	This district is to accommodate wholesaling, distribution, storage, processing, and light manufacturing in an environment suited to such uses and operations while promoting land use compatibility both within and beyond the boundaries of such districts.	113
NC	Neighborhood Commercial	This district is intended to meet the commercial and service needs generated by nearby residential development.	1
PD	Planned Development	This district is to encourage flexibility in the development of land to promote its appropriate use. The principal feature of a Planned Development (PU) is to accommodate mixed use types.	20
PO	Professional Office	This district is to accommodate offices, institutional uses and residential uses in areas whose character is neither commercial nor exclusively residential in nature. It is intended principally for areas along major streets.	22
R-15	Residential-15	This district is to recognize the essential suburban living character where low and medium density single-family residential development is the predominant living environment of the existing and future population.	27
R-6	Residential-6	This district is to provide for a variety of single-family housing on small lots to meet market demands for smaller lot developments. It is also the intent of this district to balance higher densities with common open space.	65
R-9	Residential-9	This district is to recognize the essential suburban living character where low and medium density single-family residential development is the predominant living environment of the existing and future population.	57
RMF	Residential Multi-Family	This district is to accommodate multi-family development within areas appropriately suited and compatible with surrounding development.	49

2.8 Environmental Impacts

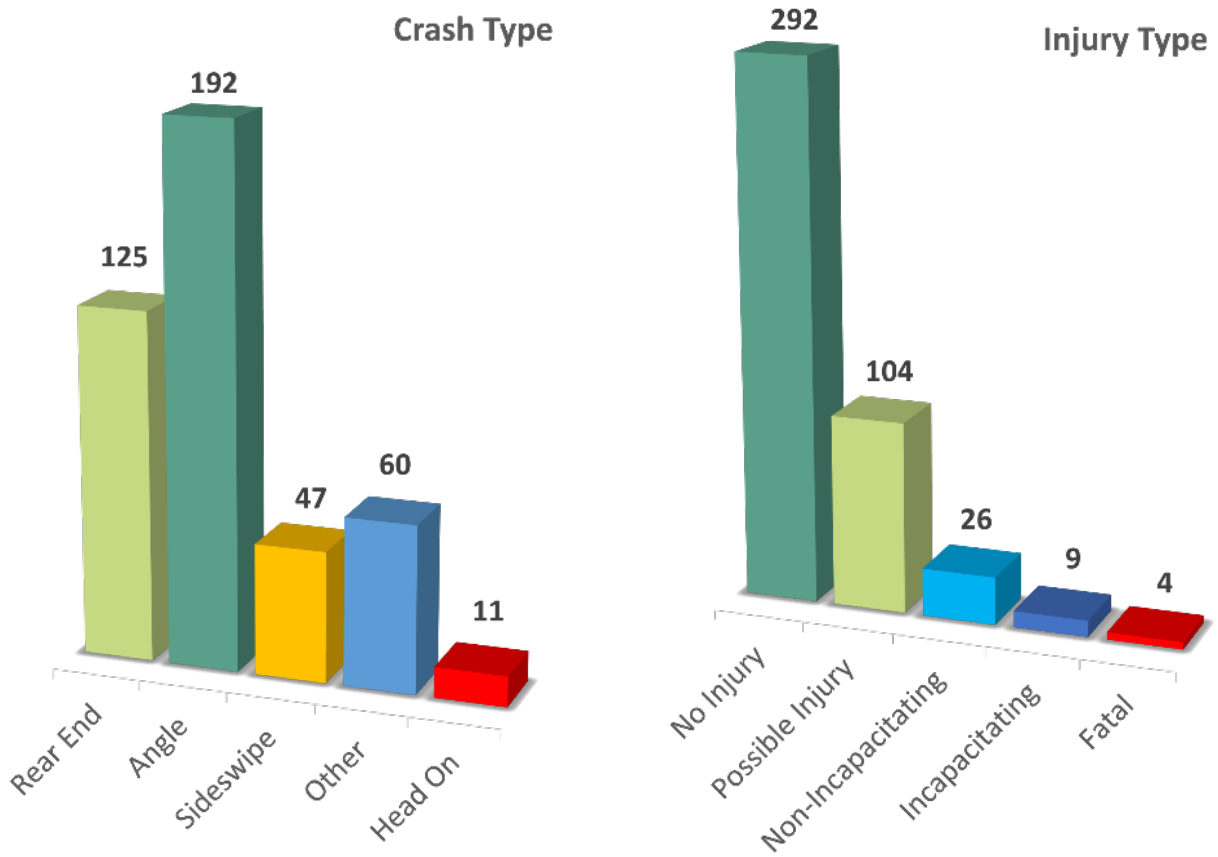
The Condensed List of Alternatives may be considered when developing Preliminary Engineering (PE) for the National Environmental Protection Act (NEPA) assessments as they commence but does not preclude a thorough environmental review for NEPA compliance. The alignment and configuration of the alternatives presented remain within the footprint of the existing roadway network, so significant adverse impacts are not anticipated.

2.9 Crash Data

Crash data was provided by the South Carolina Department of Transportation (SCDOT) for the corridor study limits between January 1, 2019 to September 30, 2022. The data captured crashes along the five segments along US 378, N. Pike, S. Pike, US 521 and US 15. A total of 435 crashes were reported along the 2.6 mile section during this 3.75-year period.

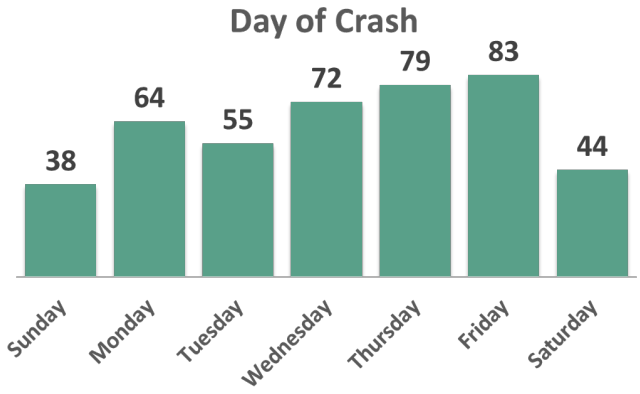
The breakdown per roadway reported South Pike comprising the most significant crash frequency with 226 crashes (52%). N. Pike reported 38 crashes (9%) and US 378 had 43 crashes (10%). The remaining 128 crashes were listed as "Other" which included crashes occurring along US 15 and US 521 and various other intersections throughout the corridor.

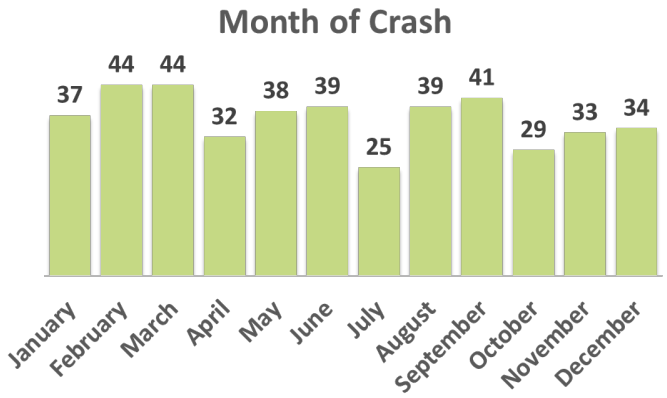
There were 4 fatalities reported in the study area with 139 crashes (32%) resulting in an injury crash. All four fatalities were reported along US 378 with two involving a pedestrian, one involving a bicycle and one involving a rear end crash. Three of the fatalities occurred on US 378 near Miller Road.

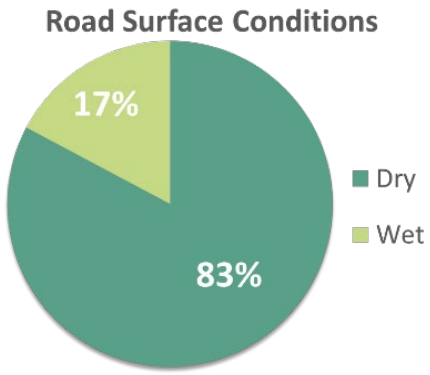


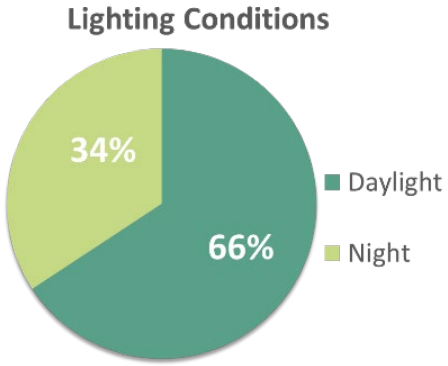
The predominant manner of collision was angle crashes with 192 crashes (44%) followed by rear-end crashes at 125 (29%). There were 5 crashes involving pedestrians and 2 crashes involving bicycles. Out of the 7 pedestrian/bicycle related crashes, only one did not result in an injury crash.

Of the 435 crashes, 149 (34%) occurred during dark conditions which is higher than the statewide average. Seventeen percent (17%) of the crashes were reported during wet conditions. A heat map can be found in **Figure 2**. Additional crash data can be found in **Appendix E**.









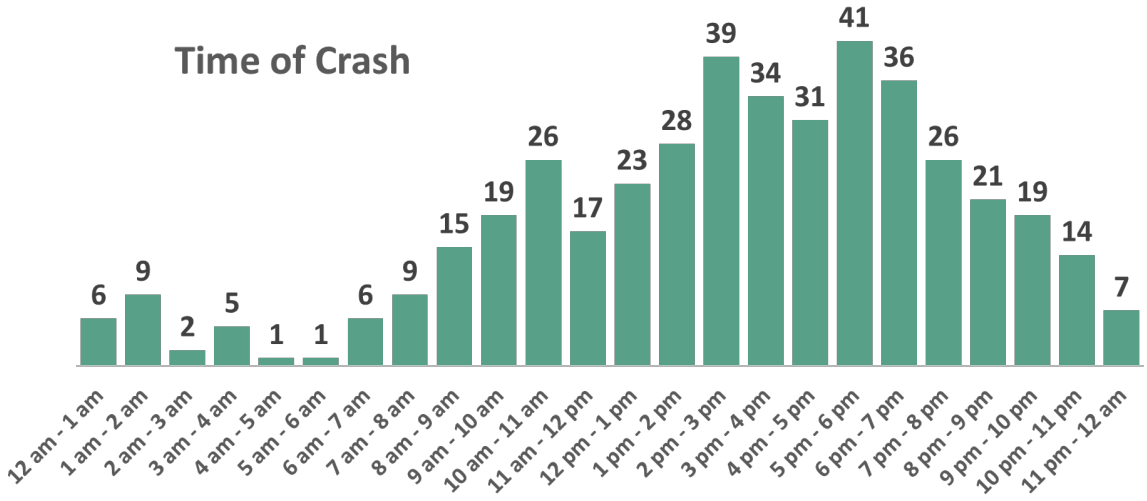


Figure 2 – Crash Hotspot Map

2.10 Travel Demand Model

To determine an annual traffic growth rate along US 378 and both the Pikes, the regional travel demand model prepared for the Sumter Area Transportation Study (SUATS) Metropolitan Planning Organization (MPO) and the SCDOT historic annual average daily traffic (AADT) volume data were both reviewed. Findings from these two sources are summarized below.

SUATS Model

Annual average growth rate for links within the study area were projected based on comparing the 2015 Base model and the 2045 No-Build Model. **Table 4** provides a summary of the 2015 and 2045 model volumes and the calculated annual average growth rate based on the SUATS model. As shown in Table 4, the annual average growth rate ranges from 0.23% along US 378 Eastbound to 0.85% along US 521.

Table 4 - SUATS Model Projection

Segments	2015 Base Model AADT	2045 Projection AADT	Annual Average Growth
Segment 1 (US 521)	15,403	20,606	0.85%
Segment 2 (US 76 Business)	15,403	20,606	0.66%
Segment 3 (S Pike W)	12,117	17,400	0.28%
Segment 4 (N Pike W)	12,117	17,400	0.76%
Segment 5 (US 15)	12,518	18,304	0.31%
Segment 7: (US 378 Eastbound)	9,478	14,579	0.23%
Segment 7: (US 378 Westbound)	9,478	14,579	0.35%

The 2015 and 2045 SUATS model projection information are included in **Appendix F.**

Average Annual Daily Traffic

AECOM reviewed the historic Annual Average Daily Traffic (AADT) data from the South Carolina Department of Transportation (SCDOT). SCDOT showed an overall increase at a weighted annual average rate of 0.42%. The following trends of the future growths of the roads are listed as:

- US 76 Business shows an annual decline of -2.25%,
- US 521 shows an annual increase of 4.81%,
- US 15 shows no significant change in growth,
- S Pike W shows an overall annual decline of -0.87%,
- N Pike W shows an overall annual decline of -0.63%
- US 378 shows an overall annual increase of 1.61%.

Table 5 shows the AADT from 2014 to 2022.

Table 5 - AADT from 2014 to 2022

Route	Station	2014	2015	2016	2017	2018	2019	2020	2021	2022	Growth %
US 76 Business (Broad Street)	43-0185	26400	27700	29000	27500	28800	28500	26500	28200	22000	**-2.25%**
US 521 (Camden Highway)	43-0226	14700	14900	18200	19200	20100	19900	21300	22600	21400	**4.81%**
US 15 (N Main Street)	43-0117	8000	8600	8300	9400	9400	9300	9600	9100	8000	**0.00%**
S-1429 (S Pike W)	43-0531	6600	6300	6300	6900	9200	8800	8700	8100	6800	**0.37%**
	43-0533	5900	5700	6000	7000	7800	7500	7400	6900	6600	**1.41%**
	43-0535	10900	10500	9100	9300	9200	8800	8700	8100	7700	**-4.25%**
	43-0547	14400	14600	14600	13000	14400	14200	12500	13300	12100	**-2.15%**
	43-0545	13400	13600	13100	13300	14600	14400	12700	13500	13700	**0.28%**
S-1428 (N Pike W)	43-0515	4000	3800	4100	4100	4500	4300	4300	4000	4200	**0.61%**
	43-0517	3200	3000	3200	3300	3500	3300	3300	3100	3400	**0.76%**
	43-0519	4800	4700	5100	4900	5300	5100	5000	4700	4200	**-1.66%**
	43-0521	7900	7600	8500	8300	8700	8300	8200	7600	6600	**-2.22%**
	43-0151	25500	26400	28400	27200	28500	28200	27400	29100	29600	**1.88%**
	43-0153	12500	12200	13200	13300	13800	15800	12800	13400	13900	**1.34%**

Based on the development potential and what was provided by Team Sumter, the zoning and planned future developments in the area and engineering judgement, the annual average growth rate of 1.0% is considered appropriate and is expected to represent the future growth in the area. It should be noted that on top of this 1.0% annual growth, traffic volumes generated from a projected 800,000 s.f. manufacturing, 450,000 s.f. Discount Club, 30,000 s.f. of restaurants, 150,000 s.f. of General Office, and a 180 room Hotel were dispersed through the network near the Wesmark Blvd area. This development is estimated to generate approximately 29,000 daily trips. This added traffic volume translated to a 1.3% annual growth rate on US 521 and 1.9% annual growth rate on US 378 much higher than the based 1.0% annual growth rate. The projected No-Build 2050 peak hour traffic volumes are shown in **Appendix G.**

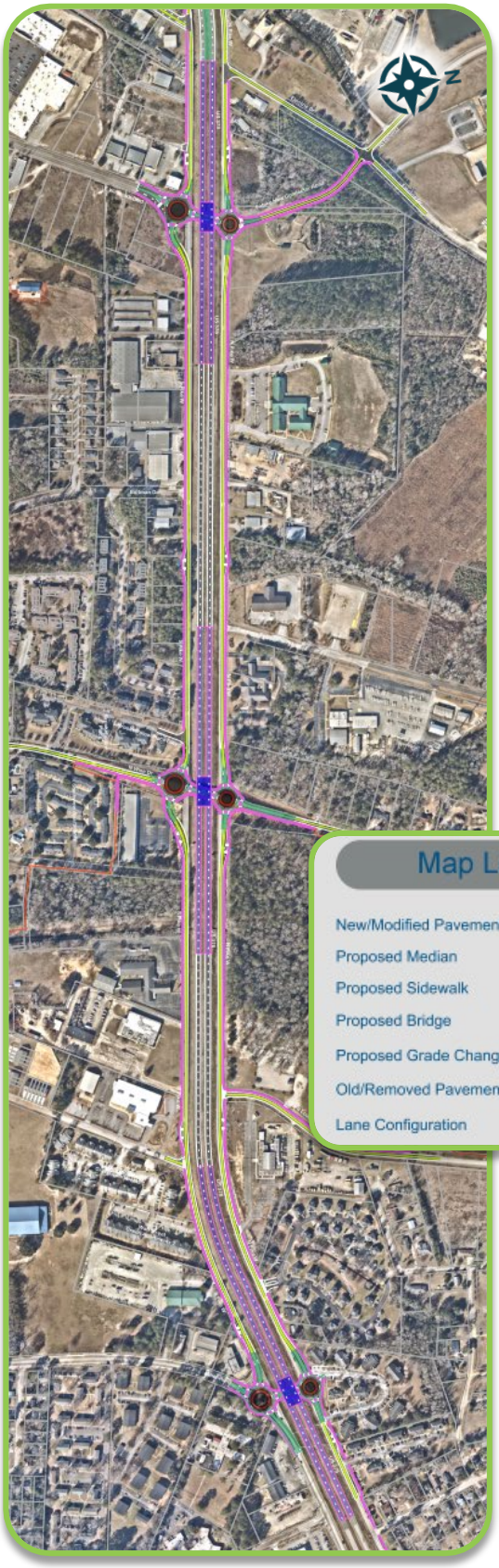
The SCDOT historic AADT information are included in **Appendix H.**

3. Range of Alternatives

A range of alternatives were developed following the collection of information from field reviews, examination of existing conditions, review of travel demand model, incorporating planned projects, and stakeholder, steering committee, and public input. Input from the stakeholders, steering committee, and public was gathered throughout the project development process. More information about this can be found in the **Public Involvement** section of this report. The following range of alternatives were developed for the first round of potential solutions. High resolution images of the Range of Alternatives can be found in **Appendix I**.

The Range of Alternatives developed for this study include:

- **Alternative A – Raise the Road/Roundabouts**
- **Alternative B – Pedestrian Bridge**
- **Alternative C – Three Roadways to Two**
- **Alternative D – Boulevard**
- **Alternative E – Boulevard Super Street**
- **Alternative F – Raise the Road and Construct a Pedestrian Culvert**

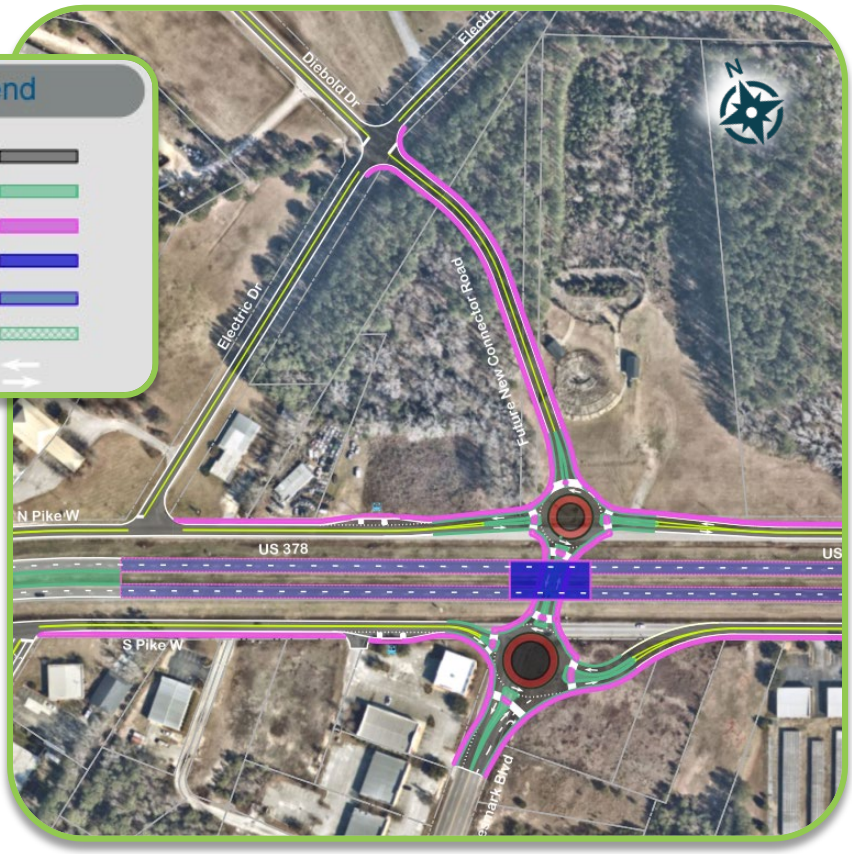


3.1 Alternative A – Raise the Road/Roundabouts

Alternative A was developed to retain US 378 as an access-controlled highway while adding new connections between the Pikes at E Wesmark Boulevard, N Wise Drive, and Miller Road via grade separation. US 378 would be raised at the Pike W connectors and roundabouts will be constructed to induce slower speeds along the Pikes improving safety for all modes of traffic.

The following list of improvements are included in Alternative A:

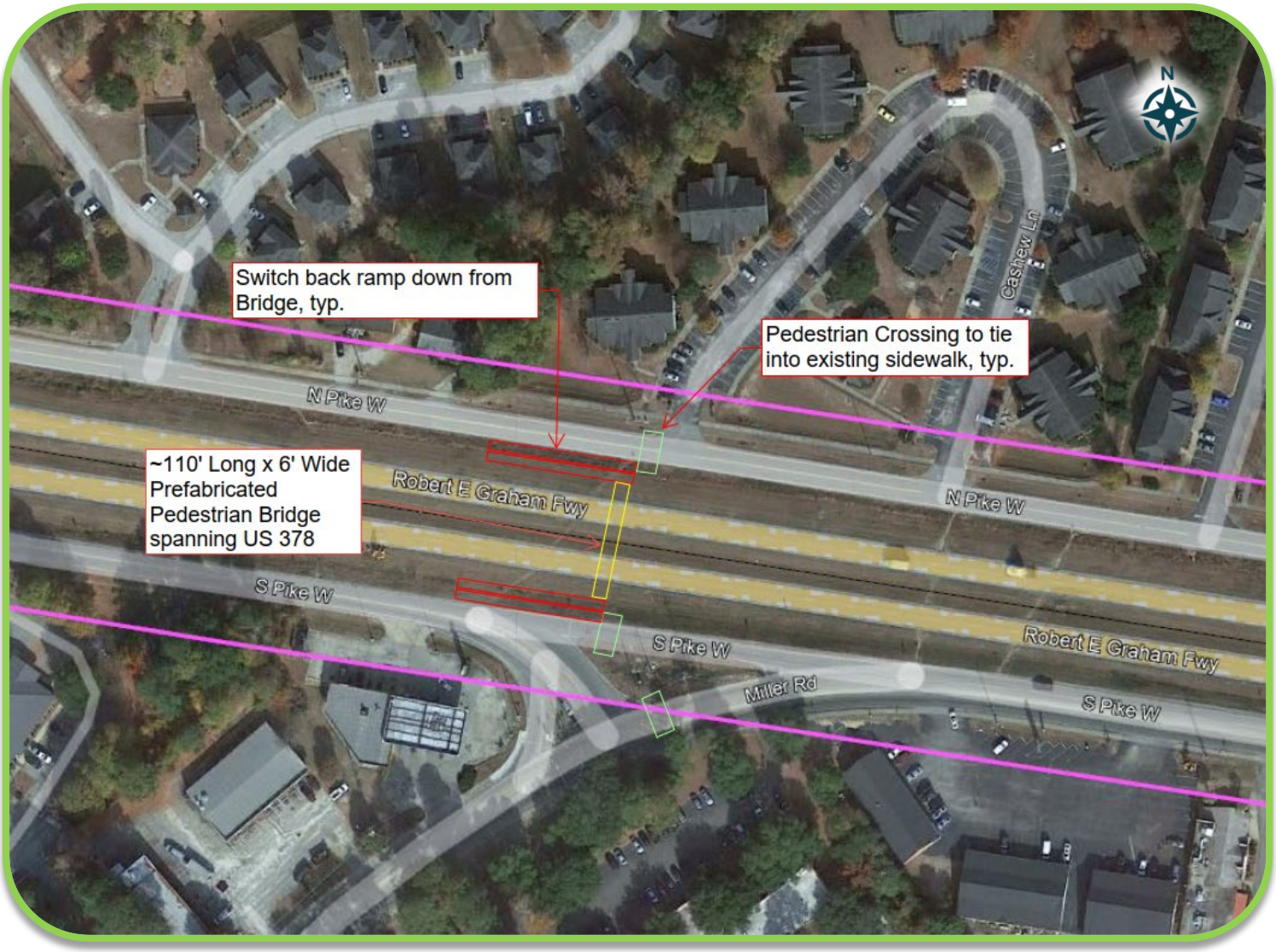
- Raise US 378 and construct three bridges over E Wesmark Boulevard, N Wise Drive, and Miller Road.
- Construct six roundabouts (three on each Pike) at the intersections of E Wesmark Boulevard, N Wise Drive, and Miller Road with short connector roads between each roundabout.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive.
  Construct a new sidewalk along N Pike W and S Pike W for entire project extent.



3.2 Alternative B – Pedestrian Bridge

To address community concerns about pedestrian safety noting the visible foot paths and frequency of pedestrian crossings both day and night, an alternative was developed to evaluate various pedestrian crossing structures and solutions.

The community has indicated the area to the north of N Pike W is primarily residential, where there are no accessible grocery stores, convenience stores, or restaurants located on S Pike W. The community in the area north of Miller Road is crossing both frontage roads and US 378 to access those resources closest to Miller Road. While signage has been posted, it has not deterred crossings at these locations. The foot paths can be seen in the aerial photography utilized to develop the concepts for the construction of a pedestrian bridge in this area.

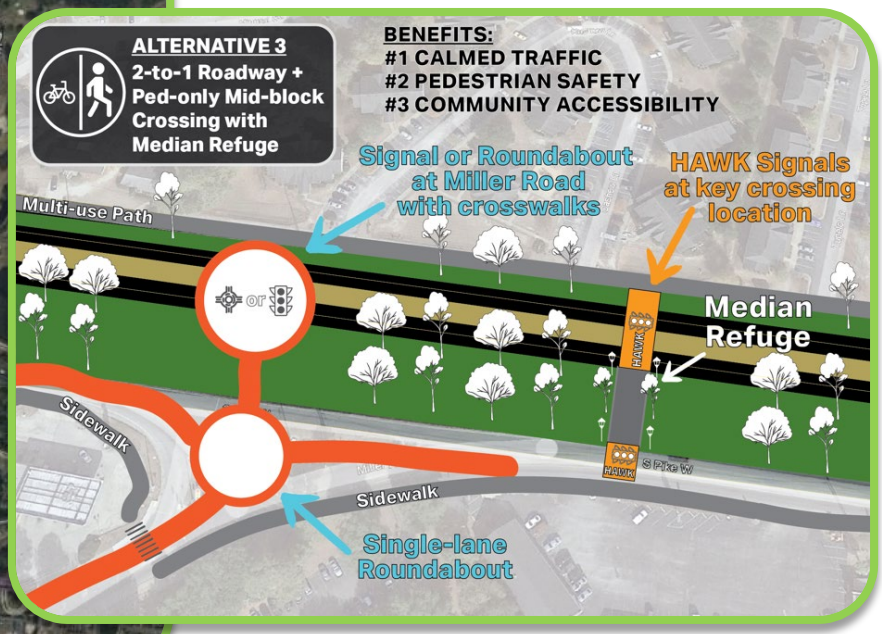



N
Tupelo Ln
Cashew Ln
E Graham Fwy
N Pike W
S Pike W
Robert E Graham Fwy
Miller Rd
S Pike W
Carolina Ave
Switch back ramp down from Bridge
~125' x 6' Wide Prefabricated Pedestrian Bridges
2 Spans with Pier in Median of US 378
Switch back ramp down from Bridge

3.3 Alternative C – Three Roadways to Two

Alternative C was proposed as a roadway reduction that would alter the cross-section of US 378 and the two frontage roads.

- Utilize existing right-of-way to shift US 378 northward where existing N Pike W aligns between US 521 at Miller Road.
- S Pike W would be retained as the primary frontage road with new roundabouts at Market Street and E Wesmark Boulevard with connecting segments to US 378.
- N Pike W would be removed but still have access to US 378 via intersections as Electric Drive and N Wise Drive.
- S Pike W would continue along its existing footprint to a point beyond Wall Street where it would dead end.
- S Pike W would also connect with US 378 at Miller Road via roundabout or signal.
- Access to US 378 from S Pike W would also have a segment from US 15 to Carolina Avenue with minor changes at a new intersection near Poulas Street.
- N Pike W would remain adjacent to US 378 from US 15 and dead end at Miller Road.



3.4 Alternative D – Boulevard

Alternative D was developed to explore a conversion of US 378 from a freeway to a boulevard which will slow vehicle speeds and promote safety and more opportunities for multimodal travel. This is a multi-faceted approach and is summarized in segments below.

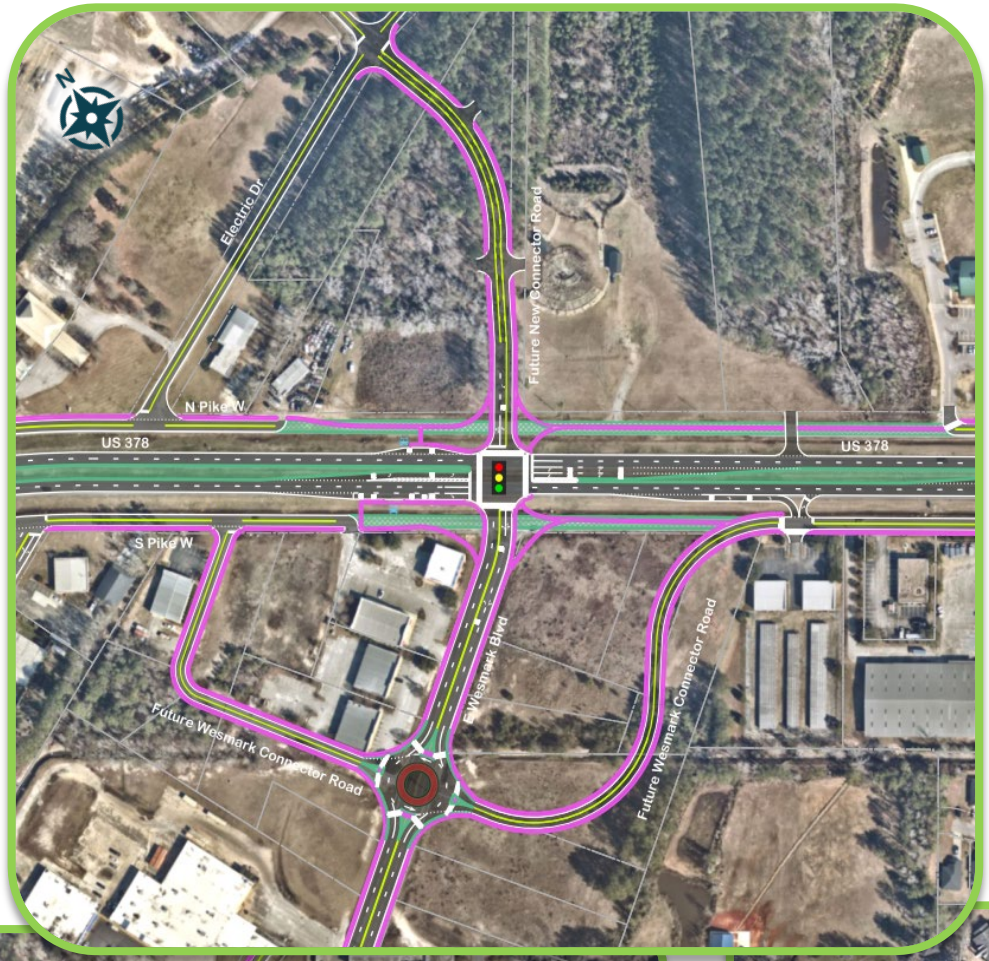
General Improvements:

- Widen the N Wise Drive Bridge for the Shot Pouch Greenway. The bridge would be enhanced with a lightweight cantilever addition to the existing bridge structure for approximately $950,000.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive.

US 378 Improvements:

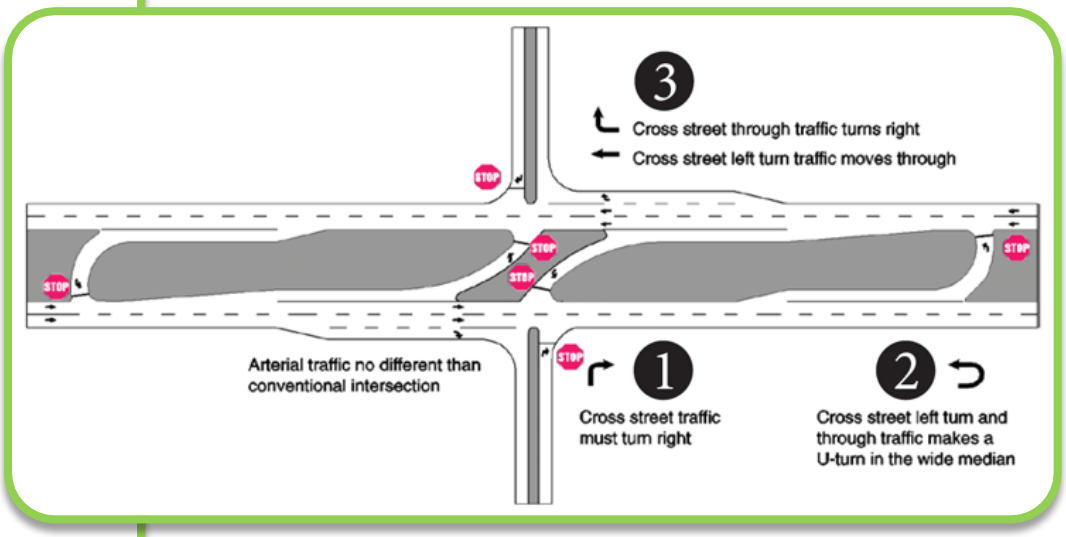
- Convert US 378 from a freeway to a boulevard from E Wesmark Boulevard to Miller Road and lower the speed limit to 45 mph.
- Provide access to and extend the following driveways and roads respectively to US 378 and control access with unsignalized Reduced Conflict Intersections (RCIs) at Palmetto Square Driveway, Santee-Wateree Center Driveway, Bultman Drive, Safelite AutoGlass, Brookhollow Place Driveway, Farmers Telephone Road, Hilliard Drive, and Carolina Avenue.

- Provide right-in/right-out access to Wall Street Connector Driveway and N Pike W at Mineral Circle.
- Construct an unsignalized eastbound U-Turn on US 378 near Hilliard Drive.
- Construct a new signalized intersection between US 378 and E Wesmark Boulevard/New Wesmark Connector Road.
- Construct a new signalized intersection between US 378 and Clara Louise Kellogg Drive
- Realign Miller Road northward towards US 378 and signalize.
- N Pike W and S Pike W frontage roads will be reconfigured creating dead-ends but will still serve as access roads for the existing driveways.
- Construct a new sidewalk along both N Pike W and S Pike W.



3.5 Alternative E – Boulevard Super Street

Another boulevard alternative was evaluated using the Superstreet configuration. A Superstreet would transform US 378 from a freeway to a boulevard which is expected to slow vehicle speeds along US 378 and promote safety with fewer conflict points and more opportunities for multimodal travel. A Super Street has intersections that prohibit the minor street crossings from going straight through or left at a divided highway intersection. Minor cross street traffic must turn right and then utilize a U-turn in the median to ultimately make a left in the desired direction of travel. Super Streets can increase safety by reducing the number of conflict points from an intersection and removing left turns from the immediate crossing location. The Super Street concept would alter the frontage road configurations creating dead-ends but still serve as access roads for the existing driveways.



3.6 Alternative F – Raise the Road and Construct a Pedestrian Crossing Culvert

Alternative F was developed to convert the western portion of US 378 to a boulevard but retain the free flow, access-controlled facility on the eastern portion near Miller Road. Both Pikes will be closed on the western side of the project to redirect traffic along US 378, but they will remain open on the eastern end. This alternative includes raising US 378 with a pedestrian culvert near Miller Road for pedestrians to traverse at grade.

General Improvements:

- Construct a new signalized intersection between US 378 and E Wesmark Boulevard/New Wesmark Connector Road.
- Close N Pike W between B&D Auto Driveway and the western Santee-Wateree Mental Health Center Driveway
- Close S Pike W between Wesmark Place II Driveway and Palmetto Square Driveway
- Construct a bridge on US 378 and a pedestrian culvert underneath for crossing
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive
- Construct a new sidewalk along N Pike W and S Pike W.
- Widen the N Wise Drive Bridge for the Shot Pouch Greenway

3.7 Evaluation of the Range of Alternatives

Team Sumter, the Steering Committee, and AECOM had ongoing discussions regarding the development of the Range of Alternatives taking existing and projected conditions into account and public engagement feedback:

- **Alternative A – Raise the Road/Roundabouts**
- **Alternative B – Pedestrian Bridge**
- **Alternative C – Three Roadways to Two**
- **Alternative D – Boulevard**
- **Alternative E – Boulevard Super Street**
- **Alternative F – Raise the Road and Construct a Pedestrian Culvert**

Alternatives were discussed with Team Sumter following analysis and public feedback. The pedestrian crossing element was a focal point for the Team. The pedestrian bridge, Alternative B, would provide a safe crossing, but likely would not prevent individuals from crossing on the road as it adds distance to the trip for pedestrians. Alternative C – Three Roadways to Two would provide signalized crossing locations for pedestrians and median crossings, but the HAWK signal (a pedestrian activated mid-block signalized crossing) would potentially create other safety concerns that are not present for the other alternatives. The Super Street concept, Alternative E, does not provide a protected crossing option for pedestrians and did not adequately address this concern.

In consideration of these scenarios, Alternative D – Boulevard, Alternative F – Raise the Road and Construct a Pedestrian Culvert, and Alt A - Raise the Road/Roundabouts were selected for advancement. Team Sumter agreed to move forward with the top 3; however, a new alternative was developed by combining Alterative A and Alternative F (Called 3B below). The refined list will be referred to as the Condensed List of Alternatives:

- **Alternative 1 – Raise the Roads/Roundabouts**
- **Alternative 2 – Boulevard**
- **Alternative 3A – Culvert**
- **Alternative 3B – Miller Double Roundabouts**

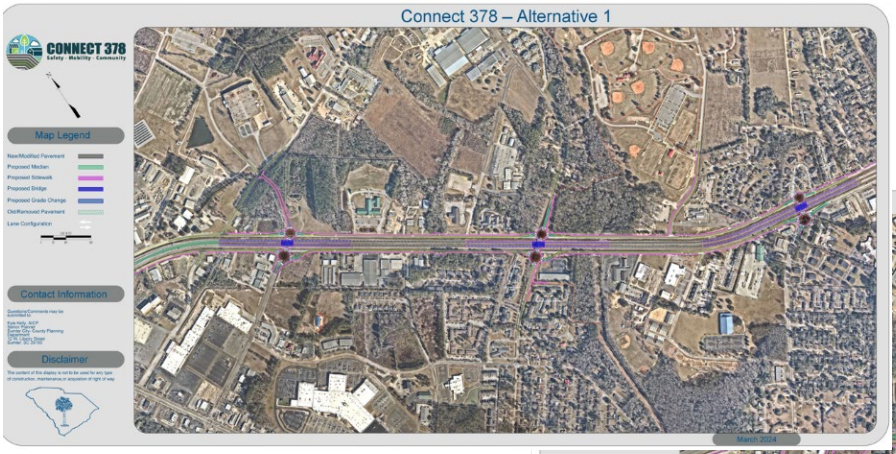
It should be noted that improvements to US 521 have also been developed as part of this study. The improvements to US 521 shown in later sections should be considered with each alternative.

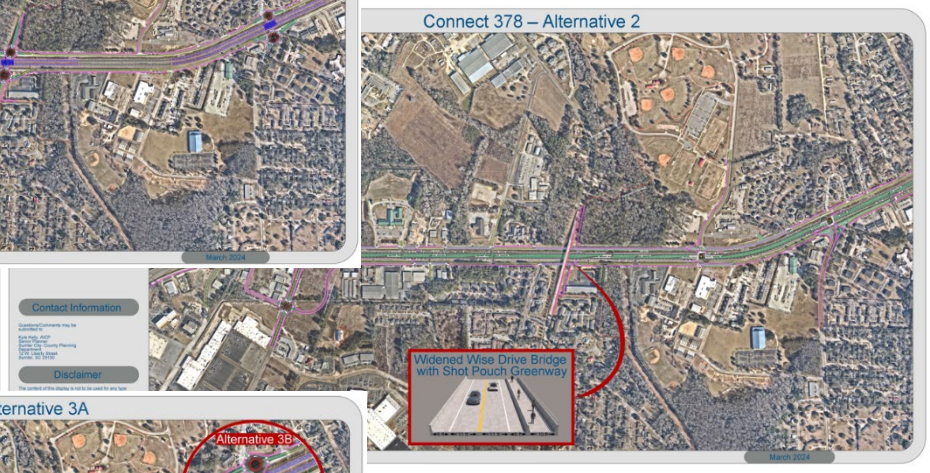
4. Condensed List of Alternatives

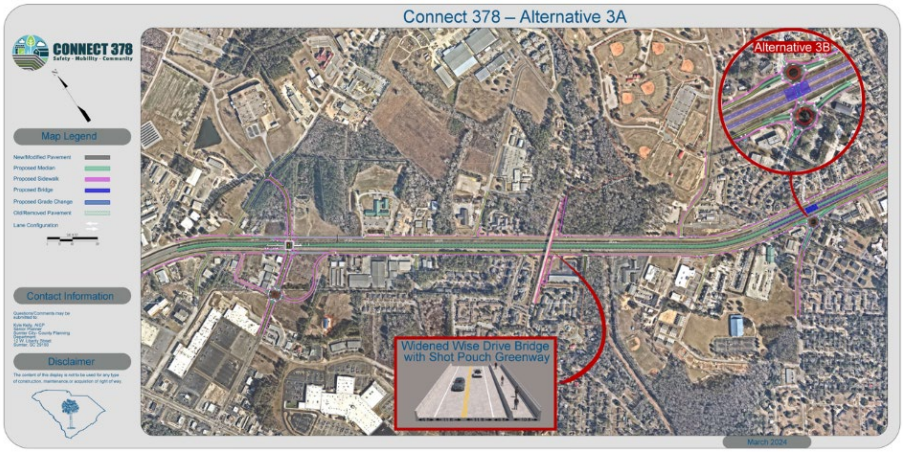
The four (4) alternatives in the refined list were further developed by establishing the 2023 existing and 2050 No-Build conditions and comparing the performance of each alternative against those scenarios regarding capacity and safety analyses. The US 521 Improvements described in the preliminary alternative section have been analyzed with each alternative as these improvements are important for overall acceptable operations. Larger images of the alternatives can be found in **Appendix I**.

The Condensed List of Alternatives in no particular order along with US 521 improvements include:

- **Alternative 1 – Raise the Road/Roundabouts**
- **Alternative 2 – Boulevard**
- **Alternative 3A – Culvert**
- **Alternative 3B – Miller Double Roundabouts**







4.1 US 521 Improvements

Improvements to US 521 are planned for implementation with any of the alternatives. The purpose of these improvements is to begin closing portions of both Pikes starting with the western end of the project while retaining traffic flow in preparations for the chosen alternative to be built.

US 521 will receive the following list of improvements:

- Intersection of US 521 & S Pike W will be signalized due to increased number of southbound left-turns from US 521 onto US 378 Eastbound On-Ramp and designated for right turns only from S Pike W.
- US 378 Westbound Off-Ramp will be striped to improve lane delineation.
- N Pike W will be closed between US 521 and SUI, Inc. Lineman School Driveway.
- Floride Street will end at a cul-de-sac at the current intersection with N Pike W.
- S Pike W will be closed for a short distance between the US 378 Eastbound On-Ramp and the rear driveway of the Crossing at Camden Highway, which will redirect all S Pike W traffic to a dedicated US 378 Eastbound On-ramp.

4.2 Alternative 1 – Raise the Road/Roundabouts

Alternative 1 raises US 378 at E Wesmark Boulevard, N Wise Drive, and Miller Road and connects the Pikes underneath a raised US 378 at grade. These modifications include the construction of roundabouts at the Pike W connectors. These modifications are anticipated to reduce speeds along the frontage roads and improve safety for all modes of traffic navigating the corridor. This alternative is expected to provide lower vehicle speeds along the Pikes along with new sidewalks; therefore, increasing the safety at pedestrian crossings. Detailed concept designs were developed to further the examination of this alternative. The following list of improvements are included in Alternative 1:

- Raise US 378 to construct three (3) bridges near E Wesmark Boulevard, N Wise Drive, and Miller Road.
- Remove existing bridge at N Wise Drive and lower road to ground level with new US 378 overpass.
- Construct six (6) roundabouts on both Pikes at the intersections of E Wesmark Boulevard, N Wise Drive, and Miller Road along with three (3) short roads connecting them.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive
- Construct new sidewalks along N Pike W and S Pike W along entire project extent.

4.3 Alternative 2 – Boulevard

Alternative 2 is a conversion of US 378 from a freeway to a boulevard which is expected to slow vehicular speeds; therefore, increasing overall safety and promoting opportunities for multimodal travel. This alternative would retain the functional classification as an Urban Principal Arterial. The designation would only change from Urban Principal Arterial – "Other Freeways and Expressways" to Urban Principal Arterial – "Other". The designation does not affect the roadways NHS Priority as a "Basic Non-Interstate". In addition, this alternative transforms the Pikes from a major parallel highway to short roadway segments serving primarily residential and business driveways. This alternative encourages vehicular traffic to use US 378 and creates a pedestrian facility using the existing Pikes. This is a multi-faceted approach and is summarized in segments below. Detailed concept designs were developed to further the examination of this alternative. The following list of improvements are included in Alternative 2:

General Improvements:

- Widen the N Wise Drive Bridge for the Shot Pouch Greenway. The bridge would be enhanced with a lightweight cantilever addition to the existing bridge structure for approximately $950,000.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive

US 378 Improvements:

- Convert US 378 from a freeway to a boulevard from E Wesmark Boulevard to Miller Road and lower the speed limit to 45 mph
- Provide access to and extend the following driveways and roads respectively to US 378 and control access with unsignalized RCIs:
  - Palmetto Square Driveway
  - Santee-Wateree Center Driveway
  - Bultman Drive
  - Safelite AutoGlass
  - Brookhollow Place Driveway
  - Farmers Telephone Road
  - Hilliard Drive
  - Carolina Avenue

- Provide right-in/right-out access to Wall Street Connector Driveway and N Pike W at Mineral Circle
- Construct an unsignalized eastbound U-Turn on US 378 near Hilliard Drive
- Provide right-in/right-out access to Wall Street Connector Driveway and N Pike W at Mineral Circle.
- Construct an unsignalized eastbound U-Turn on US 378 near Hilliard Drive.
- Construct a new signalized intersection between US 378 and E Wesmark Boulevard/New Wesmark Connector Road.
- Construct a new signalized intersection between US 378 and Clara Louise Kellogg Drive
- Realign Miller Road northward towards US 378 and signalize.
- N Pike W and S Pike W frontage roads will be reconfigured creating dead-ends but will still serve as access roads for the existing driveways.
- Construct a new sidewalk along both N Pike W and S Pike W.

4.4 Alternative 3A – Culvert

Alternative 3A was developed to retain the free-flow movement along US 378 in the eastern portion of the project but converts it to a boulevard in the western portion. This alternative would retain the functional classification as an Urban Principal Arterial. The designation would only change from Urban Principal Arterial – "Other Freeways and Expressways" to Urban Principal Arterial – "Other". The designation does not affect the roadways NHS Priority as a "Basic Non-Interstate". Both Pikes will be closed on the western side of the project to redirect traffic along US 378, but they will remain open on the eastern end. This alternative includes raising US 378 over a pedestrian culvert near Miller Road.

General Improvements:

- Construct a new signalized intersection between US 378 and E Wesmark Boulevard/New Wesmark Connector Road.
- Close N Pike W between B&D Auto Driveway and the western Santee-Wateree Mental Health Center Driveway.
- Close S Pike W between Wesmark Place II Driveway and Palmetto Square Driveway.
- Relocate S Pike W south along existing driveway and construct new roadway to reconnect S Pike near Palmetto Square Driveway.
- Construct a new dual-lane roundabout between relocated S Pike W and E Wesmark Boulevard south of the new signalized intersection between US 378 & E Wesmark Boulevard.
- Construct a bridge along US 378 and a pedestrian culvert underneath for crossing.
- Construct a roundabout at the intersection of S Pike W and Miller Road.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive
- Construct a new sidewalk along N Pike W from Electric Drive to US 15.
- Construct a new sidewalk along S Pike W from US 521 to Miller Road.
- Widen the N Wise Drive Bridge for the Shot Pouch Greenway.

4.5 Alternative 3B – Miller Double Roundabouts

Similar to Alternative 3A, Alternative 3B raises US 378 but allows pedestrians and vehicles to cross from one frontage road to the other with roundabouts similar to the layout of Alternative 1. Alternative 3B retains the free-flow movement along US 378 in the eastern portion of the project but converts it to a boulevard in the western portion. This alternative would retain the functional classification as an Urban Principal Arterial. The designation would only change from Urban Principal Arterial – "Other Freeways and Expressways" to Urban Principal Arterial – "Other". The designation does not affect the roadways NHS Priority as a "Basic Non-Interstate". Both Pikes will be closed on the western side of the project to redirect traffic along US 378, but they will remain open on the eastern end. This alternative includes raising US 378 near Miller Road for an at grade pedestrian access.

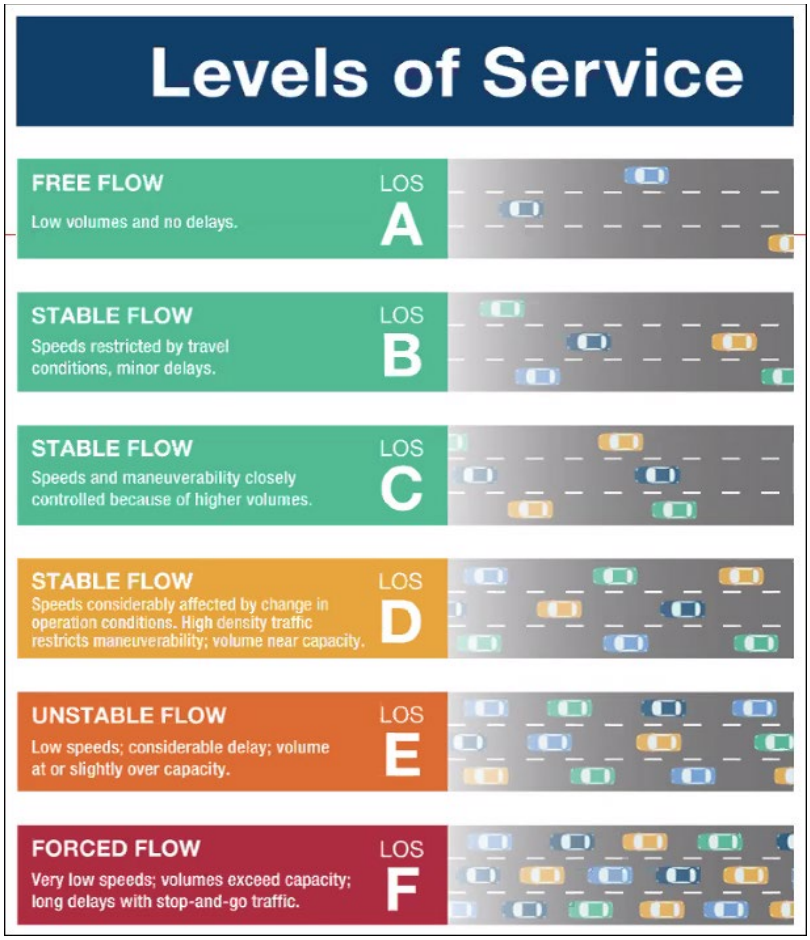
General Improvements:

- Construct a new signalized intersection between US 378 and E Wesmark Boulevard / New Wesmark Connector Road.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive
- Close N Pike W between B&D Auto Driveway and the western Santee-Wateree Mental Health Center Driveway.
- Close S Pike W between Wesmark Place II Driveway and Palmetto Square Driveway.
- Relocate S Pike W south along existing driveway and construct new roadway to reconnect S Pike near Palmetto Square Driveway.
- Construct a new dual-lane roundabout between relocated S Pike W and E Wesmark Boulevard south of the new signalized intersection between US 378 & E Wesmark Boulevard
- Construct a bridge along US 378 near Miller Road and a new connector road underneath to connect both Pikes.
- Construct 2 roundabouts at the intersection of S Pike W and Miller Road similar to Alternative 1.
- Construct a new sidewalk along N Pike W from Electric Drive to US 15.
- Construct a new sidewalk along S Pike W from US 521 to Miller Road.
- Widen the N Wise Drive Bridge for the Shot Pouch Greenway.

The double roundabouts Alternative 3B acts similar to the pedestrian culvert Alternative 3A with the only difference vehicles are permitted cross US 378 near Miller Road.

5. Capacity Analysis

The traffic carrying ability of an uninterrupted flow roadway is described by levels-of-service (LOS) that range from LOS A to LOS F. LOS A represents unrestricted maneuverability and operating speeds. LOS B represents reduced maneuverability and operating speeds. LOS C represents restricted maneuverability and operating speeds closer to the speed limit. LOS D represents severely restricted maneuverability and unstable, low operating speeds. LOS E represents operating conditions at or near the capacity level. LOS F represents breakdown conditions characterized by stop and go travel. A visual representation of each LOS is shown below.



Source: https://t4america.org/community-connectors/what-they-mean/level-of-service/

The Highway Capacity Manual (HCM) 6 also defines LOS at an unsignalized intersection by average control delay per vehicle, which includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled delay for unsignalized intersections, such as availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue. Volume to capacity ratios is a metric used for unsignalized intersections because many stop controlled intersection may have a poor LOS, but do not warrant a traffic signal. Once the volume to capacity ratio exceeds 0.8, long delays and queuing are present.

The Highway Capacity Manual explains that drivers perceive that a signalized intersection is designed to carry higher traffic volumes and therefore expect to experience greater delays at signalized intersections. Unsignalized intersections are assigned a LOS for each minor movement. Typically, LOS D is considered the minimum acceptable level of service at an intersection. **Table 6** defines the traffic flow conditions and approximate driver comfort level at each level of service.

Table 6 – Level of Service (LOS) Index

LOS	Traffic Flow Conditions	Delay (seconds) Signalized Intersections	Delay (seconds) Unsignalized Intersections
A	Progression is extremely favorable and most vehicles do not stop at all.	0-10	0-10
B	Good progression, some delay.	10-20	10-15
C	Fair progression, higher delay.	20-35	15-25
D	Unfavorable progression, congestion becomes apparent.	35-55	25-35
E	Unfavorable progression, congestion becomes apparent.	55-80	35-50
F	Poor progression, significant delay.	>80	>50

The intersection LOS for each of the project study intersections was calculated for existing and future conditions. The intersections were analyzed using Highway Capacity 6th Edition software and Synchro 11.1 (build 1, Rev 6) software. The Existing 2023, No-Build 2050, and Build 2050 traffic projections for the AM and PM peak hours were analyzed.

To determine the necessary roadway improvements required for future development, a LOS "D" or better was the target value. Turn lane storage recommendations were developed using of 95th percentile queuing from the Sim Traffic reports.

Existing signal plans for the signalized study intersections were obtained. Signal phasing, timing, minimum green, and clearance times for the analysis are based on the existing signal plans as shown in **Appendix J.**

5.1 2023 Existing Conditions Analysis

The Existing 2023 traffic conditions during the AM and PM peak hours were analyzed at each study intersection. The results are summarized at the end of this section of the report in **Table 7**. The Synchro outputs from this analysis can be found in **Appendix K**. The 2023 existing volumes can be found in **Appendix C**.

Analysis indicates that all the study intersections currently operate at acceptable levels of service except the following locations where capacity issues are noted:

- *#4 - US 521 at N Pike W*, vehicles exiting the westbound approach on N Pike W currently operate at a failing condition LOS F in the PM Peak hour.
- *#6 - US 521 at S Pike W*, vehicles exiting the westbound approach on S Pike W and the southbound lefts on US 521 currently experience excessive delays and operate at failing condition LOS F during the AM peak hour.
- *#19 – S Pike W at Carolina Avenue,* vehicles exiting the northbound approach on Carolina Avenue currently operate at LOS E in the PM Peak hour.
- *#22 - S Pike W at Bordeaux Avenue*, vehicles exiting the southbound approach on Bordeaux Avenue currently operate at a failing condition LOS F in both the AM and PM Peak hours.

5.2 2050 No-Build Analysis

The projected 2050 No-Build traffic conditions during the AM and PM peak hours at each study intersection were analyzed. The No-Build condition assumes all geometry and traffic control remain the same as the current 2023 condition. SCDOT currently has a project that will signalize the Broad Street and US 378 Eastbound On-Ramp intersection. The 2050 No-Build analysis assumes this project is completed.

Table 7 contains a summary of the LOS and delay for the 2050 No-Build conditions. As shown with the estimated growth rate of 1.0% per year plus the added trip generation growth from upcoming developments, most study intersections are expected to operate at acceptable levels of services except for the following locations where capacity issues are noted:

- *#4 - US 521 at N Pike W*, vehicles exiting the westbound approach on N Pike W are expected to continue to operate at a failing condition LOS F in the PM Peak hour.
- *#5 - US 521 at US 378 Westbound Off-Ramp*, vehicles exiting the westbound approach on 378 Off Ramp are expected to experience excessive delays and operate at near failing condition LOS E in the AM peak hour and failing condition LOS F during the PM peak hour.

- *#6 -US 521 at S Pike W*, vehicles exiting the westbound approach on S Pike W and the southbound lefts on US 521 are expected to continue to experience excessive delays and operate at failing condition LOS F during the AM and PM peak hours.
- *#10 - S Pike W at Market Street*, vehicles exiting the northbound approach on Market Stret are expected to operate at LOS E in the PM Peak hour.
- *#12 - S Pike W at E Wesmark Boulevard*, vehicles exiting the northbound approach on E Wesmark Boulevard are expected to operate at a failing condition LOS F in the PM Peak hour.
- *#13 - S Pike W at Bultman Drive*, vehicles exiting the northbound approach on Bultman Drive are expected to operate at a failing condition LOS F in the PM Peak hour.
- *#17 - S Pike W at Wall Street*, vehicles exiting the northbound approach on Wall Street are expected to operate at a failing condition LOS F in the PM Peak hour.
- *#19 - S Pike W at Carolina Avenue*, vehicles exiting the northbound approach on Carolina Avenue and the westbound lefts on S Pike W are expected to operate at a failing condition LOS F in the PM Peak hour.
- *#20 - N Pike W at Bordeaux Avenue*, vehicles exiting the northbound approach on Bordeaux Avenue and the westbound lefts on N Pike W are expected to operate at a failing condition LOS F in both the AM and PM Peak hours.
- *#22 - S Pike W at Bordeaux Avenue*, vehicles exiting the southbound approach Bordeaux Avenue are expected to operate at a failing condition LOS F in both the AM and PM Peak hours.
- *#23 - US 15 at N Pike W*, the signal is expected to operate at a failing condition LOS F in the PM Peak hour.
- *#25 - US 15 at S Pike W*, the signal is expected to operate at a failing condition LOS F in the PM Peak hour.

With the planned traffic signal installation, the intersection of Broad Street and US 378 Eastbound On-Ramp is expected to operate at an acceptable level of service under the 2050 No Build conditions. The Synchro outputs for the 2050 No Build conditions analysis are included in **Appendix L**. The 2050 No Build volumes can be found in **Appendix G**.

5.3 2050 Build Analysis for Alternative 1- Raise the Road/Roundabouts

The Build 2050 Alternative 1 traffic conditions during the AM and PM peak hours at was analyzed for each of the study intersections. As indicated, some of the study intersections are expected to operate at failing or near failing conditions in 2050 even with the following improvements are constructed in **Table 7**.

General Improvements:

- Raise US 378 and construct three bridges near E Wesmark Boulevard, N Wise Drive, and Miller Road.
- Construct six roundabouts (three on each Pike) at the intersections of E Wesmark Boulevard, N Wise Drive, and Miller Road with short connector roads between each roundabout.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive.

With the installation of the roundabouts, vehicles entering and exiting the intersection of S Pike W and Miller Road are expected to operate at LOS E in the PM peak hour due to the increased traffic that will be able to cross over from N Pike W southward. It should be noted that with the installation of the roundabouts and the new intersections, the overall vehicle delay is expected to be reduced compared with the No Build condition. Analysis indicates that all the study intersections are expected to operate at acceptable levels of service except the following locations where capacity issues are noted:

- *#7 – Broad Street at US 521* the signal is expected to operate at a failing condition LOS F in the AM Peak hour
- *#10 - S Pike W at Market Street*, vehicles exiting the northbound approach on Market Stret are expected to continue to operate at a near failing condition LOS E in the PM Peak hour.
- *#13 - S Pike W at Bultman Drive*, vehicles exiting the northbound approach on Bultman Drive are expected to continue to operate at a failing condition LOS F in the PM Peak hour.
- *#17 - S Pike W at Wall Street*, vehicles exiting the northbound approach on Wall Street are expected to operate at a failing condition LOS E in the PM Peak hour.
- *#18 – S Pike W at Miller Road,* the roundabout is expected to operate at LOS E in the PM Peak hour
- *#19 - S Pike W at Carolina Avenue*, vehicles exiting the northbound approach on Carolina Avenue and the westbound lefts on S Pike W are expected to continue to operate at LOS F in the PM Peak hour.
- *#20 - N Pike W at Bordeaux Avenue*, vehicles exiting the northbound approach on Bordeaux Avenue and the westbound lefts on N Pike W are expected to continue to operate at a failing condition LOS F in both the AM and PM Peak hours.

The Synchro outputs for the 2050 Build conditions analysis are included in **Appendix M**. The 2050 Build volumes can be found in **Appendix N.**

5.4 2050 Build Analysis for Alternative 2 - Boulevard

The Build 2050 Alternative 2 traffic conditions during the AM and PM peak hours were analyzed at each of the study intersections. As indicated, some of the study intersections are expected to operate at failing or near failing conditions in 2050 even if the following improvements are constructed as shown in **Table 7**.

General Improvements:

- Convert US 378 from a freeway to a boulevard from E Wesmark Boulevard to Miller Road and lower the speed limit to 45 mph.
- Provide access to and extend the following driveways and roads respectively to US 378 and control access with unsignalized RCIs:
  - Palmetto Square Driveway
  - Santee-Wateree Center Driveway
  - Bultman Drive
  - Safelite AutoGlass
  - Brookhollow Place Driveway
  - Farmers Telephone Road
  - Hilliard Drive
  - Carolina Avenue
- Provide right-in/right-out access to Wall Street Connector Driveway and N Pike W at Mineral Circle.
- Construct an unsignalized eastbound U-Turn on US 378 near Hilliard Drive.
- Construct a new signalized intersection at US 378 and E Wesmark Boulevard / New Wesmark Connector Road.
- Construct a new signalized intersection at US 378 and Clara Louise Kellogg Drive.
- Construct a new signalized intersection at US 378 and Miller Road.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive.
- Reconfigure Pikes to transfer traffic to US 378 by converting the Pikes into shorter segments that reduce free flow movements.

With the installation of Alternative 2, analysis indicates that all the study intersections are expected to operate at acceptable levels of service except the following locations where capacity issues are noted:

- *#5 - US 521 at US 378 Westbound Off-Ramp*, vehicles exiting the westbound approach on 378 Off Ramp are expected to experience excessive delays and operate at failing condition LOS F during the PM peak hour.
- *#20 - N Pike W at Bordeaux Avenue*, vehicles exiting the northbound approach on Bordeaux Avenue and the westbound lefts on N Pike W are expected to continue to operate at a failing condition LOS F in both the AM and PM Peak hours.
- *#22 - S Pike W at Bordeaux Avenue*, vehicles exiting the southbound approach Bordeaux Avenue are expected to continue to operate at a failing condition LOS F in both the AM and PM Peak hours.
- *#25 - US 15 at S Pike W*, the signal is expected to continue to operate at a failing condition LOS F in the PM Peak hour.

Synchro outputs for the 2050 Build conditions analysis are included in **Appendix M**. The 2050 Build volumes can be found in **Appendix N.**

5.5 2050 Build Analysis for Alternative 3A - Culvert

AECOM analyzed the Build 2050 Alternative 3A traffic conditions during the AM and PM peak hours at each of the study intersections. As indicated, some of the study intersections are expected to operate at failing or near failing conditions in 2050 even if the following improvements are constructed in **Table 7**.

General Improvements:

- Construct a new signalized intersection at US 378 and E Wesmark Boulevard/New Wesmark Connector Road.
- Close N Pike W between B&D Auto Driveway and the western Santee-Wateree Mental Health Center Driveway.
- Close S Pike W between Wesmark Place II Driveway and Palmetto Square Driveway.
- Relocate S Pike W south along existing driveway and construct new roadway to reconnect S Pike near Palmetto Square Driveway.
- Construct a new dual lane roundabout between relocated S Pike W and E Wesmark Boulevard south of the new signalized intersection between US 378 & E Wesmark Boulevard.
- Construct a bridge along US 378 and a pedestrian culvert underneath for crossing.
- Construct a roundabout at the intersection of S Pike W and Miller Road.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive.
- Construct a new sidewalk along N Pike W from Electric Drive to US 15.
- Construct a new sidewalk along S Pike W from US 521 to Miller Road.
- Widen the N Wise Drive Bridge for the Shot Pouch Greenway.

With the installation of Alternative 3A, analysis indicates that all the study intersections are expected to operate at acceptable levels of service except the following locations where capacity issues are noted:

- *#5 - US 521 at US 378 Westbound Off-Ramp*, vehicles exiting the westbound approach on 378 Off Ramp are expected to experience excessive delays and operate at failing condition LOS F during the PM peak hour.

- *#20 - N Pike W at Bordeaux Avenue*, vehicles exiting the northbound approach on Bordeaux Avenue and the westbound lefts on N Pike W are expected to continue to operate at a failing condition LOS F in both the AM and PM Peak hours.
- *#22 - S Pike W at Bordeaux Avenue*, vehicles exiting the southbound approach Bordeaux Avenue are expected to continue to operate at a failing condition LOS F in both the AM and PM Peak hours.
- *#23 - US 15 at N Pike W*, the signal is expected to operate at a near failing condition LOS E in the PM Peak hour.
- *#25 - US 15 at S Pike W*, the signal is expected to operate at a near failing condition LOS E in the PM Peak hour.

The Synchro outputs for the 2050 Build conditions analysis are included in **Appendix M**. The 2050 Build volumes can be found in **Appendix N.**

5.6 2050 Build Analysis for Alternative 3B - Miller Double Roundabouts

AECOM analyzed the Build 2050 traffic conditions during the AM and PM peak hours at each of the study intersections. As indicated, some of the study intersections are expected to operate at failing or near failing conditions in 2050 even with the following improvements are constructed in **Table 7**.

General Improvements:

- Construct a new signalized intersection between US 378 and E Wesmark Boulevard/New Wesmark Connector Road.
- Close N Pike W between B&D Auto Driveway and the western Santee-Wateree Mental Health Center Driveway.
- Close S Pike W between Wesmark Place II Driveway and Palmetto Square Driveway.
- Relocate S Pike W south along existing driveway and construct new roadway to reconnect S Pike near Palmetto Square Driveway.
- Construct a new dual lane roundabout between relocated S Pike W and E Wesmark Boulevard south of the new signalized intersection between US 378 & E Wesmark Boulevard.
- Construct two roundabouts at the intersection of S Pike W and Miller Road similar to Alternative 1.
- Construct a new connector road between the new intersection between N Pike and E Wesmark Boulevard to the intersection of Electric Drive and Diebold Drive.
- Construct a new sidewalk along N Pike W from Electric Drive to US 15.
- Construct a new sidewalk along S Pike W from US 521 to Miller Road.
- Widen the N Wise Drive Bridge for the Shot Pouch Greenway multi-use path.

As shown, the study intersections are expected to operate at an acceptable level of service during 2050 with the improvements outlined, except for the following:

- *#5 - US 521 at US 378 Westbound Off-Ramp*, vehicles exiting the westbound approach on 378 Off Ramp are expected to experience excessive delays and operate at failing condition LOS F during the PM peak hour.
- *#19 - S Pike W at Carolina Avenue*, vehicles exiting the northbound approach on Carolina Avenue and the westbound lefts on S Pike W are expected to continue to operate at a failing condition LOS F in the PM Peak hour.

- *#20 - N Pike W at Bordeaux Avenue*, vehicles exiting the northbound approach on Bordeaux Avenue and the westbound lefts on N Pike W are expected to continue to operate at a failing condition LOS F in both the AM and PM Peak hours.
- *#22 - S Pike W at Bordeaux Avenue*, vehicles exiting the southbound approach Bordeaux Avenue are expected to continue to operate at a failing condition LOS F in both the AM and PM Peak hours.

With the installation of the Roundabout at S Pike W and Miller Road, vehicles are expected to operate at LOS C or better. This is mostly due to the rerouted traffic either to other streets in the surrounding area or US 378. The Synchro outputs for the 2050 Build conditions analysis are included in **Appendix M**. The 2050 Build volumes can be found in **Appendix N.**

Table 7 – Intersection LOS Comparison

Intersection	2023 Existing AM	2023 Existing PM	2050 No Build AM	2050 No Build PM	2050 Alt 1 AM	2050 Alt 1 PM	2050 Alt 2 AM	2050 Alt 2 PM	2050 Alt 3A AM	2050 Alt 3A PM	2050 Alt 3B AM	2050 Alt 3B PM
1. US 378 at Jefferson Rd	-	-	-	-	-	-	-	-	-	-	-	-
2. Broad St at US 378	-	-	-	-	A	C	A	C	A	C	A	C
3. US 521 at Jefferson Rd	A	A	B	B	C	D	C	D	C	D	C	D
4. US 521 at N Pike W	C	F	F	F	-	-	-	-	-	-	-	-
5. US 521 at US 378 Westbound Off-Ramp	B	B	E	F	D	D	C	F	C	F	C	F
6. US 521 at S Pike W	F	D	F	F	A	C	A	B	B	B	B	B
7. Broad St at US 521	C	C	D	D	F	D	C	D	D	D	D	D
8. S Pike W at US 378 Eastbound On-Ramp	-	-	-	-	-	-	-	-	-	-	-	-
9. US 378 at US 378 Westbound Off-Ramp	-	-	-	-	-	-	-	-	-	-	-	-
10. S Pike W at Market St	B	B	C	E	D	E	B	B	C	C	C	C
11. N Pike W at Electric Dr	B	B	B	C	A	A	A	A	A	A	A	A
12. S Pike W at E Wesmark Blvd	C	C	D	F	A (RAB)	A (RAB)	A (RAB)	A (RAB	A (RAB)	A (RAB)	A (RAB)	A (RAB
13. S Pike W/US 378 at Bultman Dr	B	C	C	F	C	F	C	D	C	C	C	C
14. N Pike W/US 378 at Farmers Telephone Rd	B	B	B	C	B	B	C	C	B	B	B	B
15. S Pike W/US 378 at Hillard Dr	B	B	C	D	C	D	C	D	B	C	B	C
16. N Pike W/US 378 at Clara Louise Kellogg Dr	B	B	B	C	B	C	A	A	B	B	B	B
17. S Pike W/US 378 at Wall St	B	C	C	F	C	E	C	D	C	C	C	C
18. S Pike W/US 378 at Miller Rd	B	B	B	B	A (RAB)	E (RAB)	B	D	A (RAB)	A (RAB)	A (RAB)	C (RAB)

Intersection	2023 Existing AM	2023 Existing PM	2050 No Build AM	2050 No Build PM	2050 Alt 1 AM	2050 Alt 1 PM	2050 Alt 2 AM	2050 Alt 2 PM	2050 Alt 3A AM	2050 Alt 3A PM	2050 Alt 3B AM	2050 Alt 3B PM
19. S Pike W/US 378 at Carolina Ave	C	E	C	F	C	F	B	C	C	D	C	E
20. N Pike W at Bordeaux Ave	C	D	F	F	F	F	F	F	F	F	F	F
21. US 378 at Bordeaux Ave	-	-	-	-	-	-	-	-	-	-	-	-
22. S Pike W at Bordeaux Ave	F	F	F	F	F	F	F	F	F	F	F	F
23. US 15 at N Pike W	B	B	C	F	C	D	B	D	B	E	B	C
24. US 15 at S Pike E	B	B	B	C	B	C	B	B	B	B	B	B
25. US 15 at S Pike W	C	C	D	F	C	D	D	F	D	E	D	D
26. S Pike W at Brookhollow Place Dwy	B	B	C	D	C	D	-	-	B	B	B	B
27. N Pike W/US 378 at E Wesmark Blvd	-	-	-	-	A (RAB)	A (RAB)	C	D	C	C	C	C
28. S Pike W at N Wise Dr	-	-	-	-	A (RAB)	A (RAB)	-	-	-	-	-	-
29. N Pike W at N Wise Dr	-	-	-	-	A (RAB)	A (RAB)	-	-	-	-	-	-
30. N Pike W/US 378 at Cashew Ln/Mineral Cir	-	-	-	-	A (RAB)	A (RAB)	C	D	B	B	A (RAB)	A (RAB)

(RAB) = Roundabout

6. Benefit Cost Analysis

An evaluation of the Condensed List of Alternatives using an economic analysis to determine the benefit cost (B/C) ratio was performed to compare the four (4) alternatives. The purpose of the benefit / cost ratio is to analyze the cost benefit associated with reducing crashes upon installation of the considerations. The greater the B/C ratio, the greater the benefits and cost savings are expected to be in the future. The benefits of implementing the alternatives include reducing the number of crashes and their severity. The costs occur in the design, implementation, operation, and maintenance of the alternatives. Since each crash is associated with a cost based on its severity, any reduction in crashes provides monetary savings. The type of crash and its associated cost are determined by using property losses and monetary value of lost quality of life. Utilizing a spreadsheet developed by SCDOT, AECOM determined the annual cost and annual cost benefit for each alternative. To develop these values, AECOM used the following costs in relation to the severity level of each crash: PDO = $14,300, Injury 1 = $150,600, Injury 2 = $238,000, Injury 3 = $785,300, and Fatal = $13,500,000.

AECOM developed preliminary cost estimates for construction of the four (4) alternatives presented in this report. SCDOT pay items and estimated current cost of these items were utilized in developing the cost estimations. The estimated cost for each alternative is presented below:

- Alternative 1 – Raise the Road/Roundabouts = $110,776,000
- Alternative 2 – Boulevard = $68,784,000
- Alternative 3A – Culvert = $54,291,000
- Alternative 3B – Miller Double Roundabouts = $71,720,000

Using crash modification factors (CMFs) from the Crash Modification Clearinghouse and Highway Safety Manual, safety benefits for each alternative were evaluated. Crash costs were computed based on crash modification factors for all alternatives. Based on a 20-year service life with an interest rate of 4%, total crash costs were calculated from the crash history for a 3.75-year period from 1/1/2019 to 9/30/2022. During this period, there were 435 reported crashes with following severity levels of 292 (property damage only), 104 (Injury 1), 26 (Injury 2), 9 (Injury 3) and 4 (fatalities). The cost of these crashes over the 20-year service life computes to $315,635,148.16. The annual cost of these crashes is $23,857,153. The Total Crash Cost, Crash Savings and Annual Crash Benefit of each alternative is shown in **Table 8** below.

This project was unique in its potential conversion from a freeway segment to an arterial for Alternatives 2, 3A and 3B. There is very limited national or local safety research to develop reliable and applicable crash modification factors for this scenario. Therefore, it was assumed that the three fatalities near Miller Road would be mitigated for all alternatives where they eliminated the illegal pedestrian crossings on a high-speed freeway segment with no form of traffic control. The CMF for Alternative 2 was selected from various speed management studies within the CMF Clearinghouse and determined to be the highest rated CMF that provided a reasonable comparison. Additional details on the CMF selection, crash modifications and notes can be found in **Appendix O**.

In the No-Build scenario, no changes are made to the existing roadway configuration. The corridor is expected to continue operating with the existing conditions and the safety performance of US 378 and both Pikes would remain relatively consistent. Crash costs were computed for this scenario and compared with the safety performance of the alternatives.

Alternative 1 (Raise the Road) is expected to mitigate the 3 pedestrian fatalities by connecting the Pikes at Wesmark Blvd, N Wise Drive, and Miller Road with roundabouts. Alternative 2 (Boulevard) is expected to have the greatest safety benefits as it lowers the speed on US 378 to from 60 mph to 45 mph, provides signalized pedestrian crossings

to address the 3 fatalities, and breaks up the Pikes which currently have the most crashes. Alternative 3A (Culvert) and Alternative 3B (Miller Double Roundabout) provide similar safety benefits as both provide at grade options for pedestrians to cross US 378; however, the Pikes are only broken up on half the corridor which decreases the overall crash reduction.

Table 8 - Crash Cost and Annual Crash Benefit

Alternative	Total Crash Cost (20 year)	Crash Savings (Present value)	Annual Crash Benefit
US 378 No-Build	$ 315,635,148	$ -	$ -
Alternative 1 - Raise the Road/Roundabouts	$168,082,257	$147,552,891	$10,859,700
Alternative 2 - Boulevard	$111,770,069	$203,865,079	$15,003,249
Alternative 3A - Culvert	$166,945,381	$148,689,767	$10,943,353
Alternative 3B - Miller Double Roundabouts	$166,945,381	$148,689,767	$10,943,353

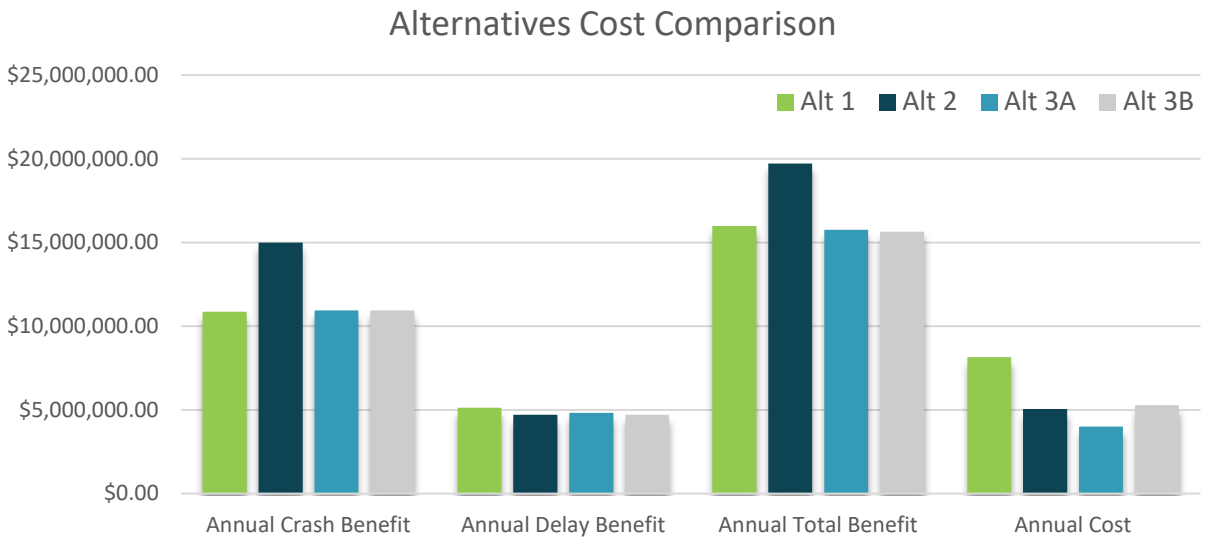
In addition to the calculated crash benefits, Synchro was utilized to determine an Annual Delay Benefit. The delay was calculated based on the summation of the AM and PM peak hours and multiplied by the number of working days (260) and the Sumter County per Capita Income ($12.38/hr) to determine an Annual Delay Benefit for each alternative. Further details explaining the methodology for evaluation of travel time and delay for each alternative can be found in **Appendix O**. The Annual Delay Benefit was added with the Annual Crash Benefit to derive the Annual Total Benefit. The Annual Benefit was then divided by the Annual Cost to compute the Benefit Cost Ratio as shown in **Table 9** below.

Table 9 - Alternatives Benefit Cost Ratio

Alternative	Annual Crash Benefit	Annual Delay Benefit	Annual Total Benefit	Annual Cost	B/C Ratio
Alternative 1 - Raise the Road/Roundabouts	$10,859,700	$5,131,411	$15,991,111	$8,153,592	**1.96**
Alternative 2 - Boulevard	$15,003,249	$4,706,207	$19,709,456	$5,063,747	**3.89**
Alternative 3A - Culvert	$10,943,353	$4,823,050	$15,766,403	$3,997,327	**3.94**
Alternative 3B - Miller Double Roundabouts	$10,943,353	$4,710,714	$15,654,067	$5,279,783	**2.96**

A comparison of each alternative based on the Annual Crash Benefit, Delay Benefit, Total Benefit and Cost is further detailed in **Table 10** below.

Table 10 – Alternatives Cost Comparison



Alternative 2 and 3A reported the highest Benefit Cost Ratios at 3.89 and 3.94 respectively. Detailed cost benefit analysis for each alternative is presented in **Appendix O**. Cost estimates for each alternative are in **Appendix P.**

7. Public Involvement

Public involvement is vital in identifying the concerns, needs, and priorities of transportation projects. Conducting a substantive and well-planned public outreach effort is also essential in determining and developing those priorities. Steering Committee, Stakeholder Committee and public information meetings at key decision making points engaged all three groups and provided a forum to solicit opinions and feedback.

As the US 378 Corridor Feasibility Study was initiated, a four-pronged public involvement approach was utilized with several specified goals. These included:

- To engage a Steering Committee for input during the study.
- To engage a Stakeholder Committee for input during the study.
- To engage the public for input through public information meetings.
- To provide information through a project website.

All meeting materials and public notices were published in English and Spanish.

7.1 Steering Committee

The project team conducted several meetings with the Steering Committee throughout the project. The committee was comprised of technical staff and officials from the following entities:

- Sumter County
- City of Sumter
- SUATS MPO
- SCDOT
- FHWA
- AECOM

The group held a kickoff meeting on March 9, 2023, for an interactive meeting with members of the project team presenting information about project specifics including purpose and schedule. Equally important, these meetings allowed the project team to receive vital input and feedback during discussions with members of the Steering Committee.

The Steering Committee continued to provide input for the duration of the study and conducted three additional meetings on June 15, 2023, March 6, 2024, and May 28, 2024. The purpose of these meetings was for the project team to present and discuss traffic and land use data, other findings, and project recommendations. An additional meeting with SCDOT and FHWA was held at the AECOM Columbia office on February 6, 2024 to discuss the project status and present draft recommendations. This meeting also was crucial in helping to identify any concerns or issues the agencies may have with the proposed improvements along the corridor.

7.2 Stakeholder Committee

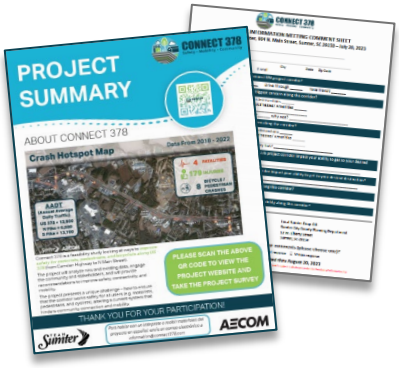
Working with SUATS staff, the project team prepared a list of affected stakeholders for the corridor study. Over 25 different stakeholders were invited to attend several meetings held throughout the study. The Stakeholder Committee was comprised of staff and officials from the following organizations:

- Sumter County
- City of Sumter
- Sumter County School District
- SUATS MPO
- Santee-Lynches COG
- SCDOT
- FHWA
- Santee-Wateree RTA
- Sumter Economic Development
- Sumter Utilities, Inc.
- Tandem Health
- Sumter Chamber of Commerce
- Santee-Wateree Mental Health
- Trinity Missionary Baptist Church
- 7th Day Adventist Church
- Black River Electric Cooperative
- AECOM

The group first met on July 20, 2023, for an interactive in-person meeting with members of the project team presenting information about project, purpose, specifics, as well as to gather input from the stakeholders. The Stakeholder Committee continued to provide input for the duration of the study and conducted an additional meeting on March 14, 2024. The purpose of this meeting was for the project team to present and discuss traffic and land use data, other pertinent findings, and project recommendations.

Equally important, these meetings allowed the project team to receive vital input and feedback during discussions with members of the Stakeholder Committee.

7.3 Public Information Meeting – July 20, 2023



During the fall and winter of 2023, the project team ran the traffic models and began formulating recommendations which included input gained from previous Stakeholder Committee, Steering Committee and public information meetings. On July 20, 2023, from 5:00 pm to 7:00 pm the project team held a drop-in style public information meeting at the North HOPE Center located at 904 N. Main Street in Sumter. The purpose of this meeting was to provide an overview of the study as well as receive public input and comments. A press release was created announcing the details of the meeting. The press release was shared with local municipalities within the region for inclusion on their websites and social media outlets. In addition, 4,910 postcards were mailed to citizens and businesses within a defined perimeter of the project corridor. The Project Team also worked with the Santee-Wateree RTA to provide free shuttle transportation to the public meeting for residents along the North Pike side of the project. In all, approximately 21 citizens and community members attended the public meeting to receive information about the traffic study, including a project overview, study area boundary, existing land use, existing traffic counts, and crash data maps. During this meeting members of the project team were stationed at display boards around the room and had one on one conversations with property owners, residents, and business owners. This also provided the project team an opportunity to hear comments, concerns, and obtain feedback from residents who frequently drive the corridor.

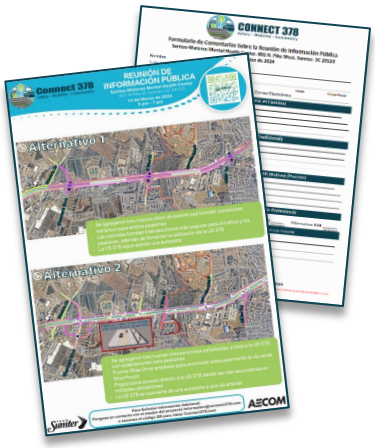
During the Public Information Meeting, attendees were also given the opportunity to provide written comments. Approximately 20 comments were received from the public meeting and were considered in the development of the proposed recommendations. Each comment form was reviewed and included in a tabulated summary of comments which provided an overall understanding of issues and concerns of the respondents.

Attendees at the meeting were also asked to place dots on study area maps indicating "Where Are Your Concerns". The questions were as follows:

1. Where you would like to cross US 378 (as a pedestrian)
2. Place you feel unsafe as a driver
3. Place you would like to get to by walking/biking
4. Dangerous intersection (for vehicles or pedestrians)

7.4 Public Information Meeting – March 14, 2024

During the fall and winter of 2023, the project team ran the traffic models and began formulating recommendations which included input gained from previous Stakeholder Committee, Steering Committee and public information meetings. On March 14, 2024, from 5:00 pm to 7:00 pm the project team held a drop-in style public information meeting at the Santee-Wateree Mental Health Center located at 801 N Pike Street in Sumter. The purpose of this meeting was to present project recommendations from the study as well as receive public input and comments. The date, time and place of this meeting was shared through social media outlets, media press releases and on the project website. Additionally, 4,910 postcards were mailed to citizens and businesses approximate to the defined perimeter of the project corridor as in the initial meeting.



During this meeting members of the project team were stationed at three information stations located throughout the room with a combination of presentation display boards and a PowerPoint presentation including various information on the project. During the second meeting approximately 24 members of the community were in attendance to obtain information about the traffic study, project recommendations, and provide important feedback. Approximately 15 comment forms were received from this public meeting. As was the case after the first meeting, each comment form was reviewed and included in a tabulated summary of comments which provided an overall understanding of issues and concerns of the respondents.

The Public Information Meeting attendance lists, handouts, display boards, press releases, flyers, postcards as well as comments received during the public comment periods from both meetings can be found in **Appendix Q**.

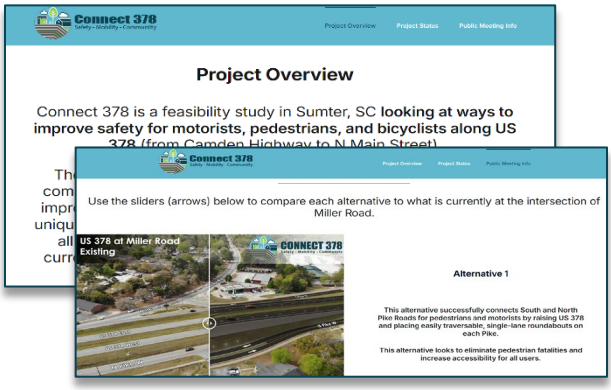
7.5 eSTEAM Festival Pop-Up Event - October 7, 2023

On October 7, 2023, the AECOM Team participated as an exhibitor in the eSTEAM Sumter Festival. eSTEAM Sumter is a family festival celebrating and bringing together enthusiasts in Science, Technology, Engineering, Arts, and Math. The purpose is to expose festival participants to advances and opportunities in these ever-growing areas through interactive exhibits, fun filled displays and hands-on activities. Our team designed a transportation-oriented activity for the participants while using the opportunity to also bring awareness to the Connect 378 Feasibility Study to everyone in attendance. Throughout the day our team was able to discuss the project with a large number of people while providing project handouts, comment forms as well as a few transportation related goodies for the kids. The festival proved to be a great way to engage the Sumter community on the specifics of the study as well as acquire additional public input.

7.6 Project Website, Branding and Social Media

CONNECT 378
Safety - Mobility - Community

As soon as the project team was engaged, efforts were made to "brand" the feasibility study. A project logo was developed and to further ensure constant information exchange, a project website was created to highlight study information including a study description, study area map, schedule, progress, and contacts for more information. Additionally, the website allowed visitors to take a survey, or provide comments. The website was live through the duration of the study providing status updates and providing additional information. In all, approximately 49 comments were received from the project website during the duration of the study and were also considered in the development of the proposed recommendations.



https://connect378.com/

Additional electronic communications included email blasts and social media posts on The City of Sumter website, Facebook, and Instagram accounts to publicize public information meetings, surveys and other project updates. Given the significant Hispanic/Latino population located within the study area, handouts and comment forms were translated into Spanish to capture input from potentially non-English speaking populations.

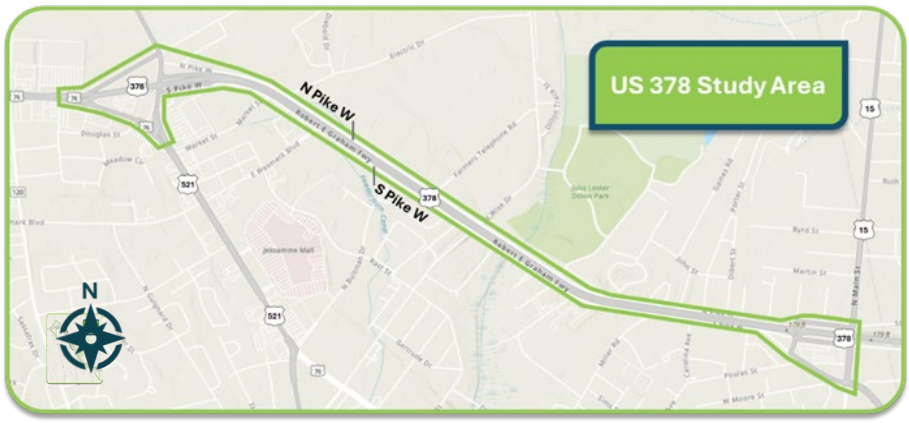
The project team also worked with several community resources to ensure that the public process could be as inclusive as possible by providing Santee-Wateree RTA bus transportation to and from the first public information meeting since it was located on the south side of the study.

7.7 Flyer Blitz, Yard Signs and Media Coverage

Additional public involvement efforts included the project team distributing flyers to businesses along North and South Pike two weeks prior to the March 14, 2024, public information meeting as well as placing yard signs near the study corridor in an effort to make the community aware of the upcoming public meeting as well as providing a link to the project website. Directional yard signs were also placed around the meeting venues on the day of both public information meetings.

Media coverage was also noted on the day of and days leading up to the public information meetings on WLTX Television, WIS Television as well as The Sumter Item newspaper.

8. Conclusion



This report documents the process and progress for project development, physical and environmental conditions analysis, alternatives development, conceptual engineering plans, and cost estimates for the proposed redesign of 2.6 miles of the Robert E. Graham Freeway (US 378 Bypass) between US 521 (Camden Highway) and US 15 (N. Main Street). The aim of the project was to eliminate transportation barriers caused by the US-378/76 Freeway by establishing an accessible and functional network of streets and paths that improve mobility and safety for all users. Team Sumter worked with the public, stakeholders, and project team to arrive at a solution to address the project purpose while considering safety, operations, project benefit, and project cost leading to the selection of the potential solutions for this corridor, 26 intersections, two frontage roads, and two interchanges included in the study.

A range of seven (7) alternatives was developed and refined through several iterations to establish the data necessary to evaluate them.

- **Alternative A – Raise the Road/Roundabouts**
- **Alternative B – Pedestrian Bridge**
- **Alternative C – Three Roadways to Two**
- **Alternative D – Boulevard**
- **Alternative E – Boulevard Super Street**
- **Alternative F – Raise the Road and Construct a Pedestrian Culvert**

The filtration of the alternatives through the study process led to the identification of a condensed list of four (4) alternatives to be considered in addition to improvements to US 521 that would best improve safety, operations, pedestrian access, and future growth.

- **Alternative 1 – Raise the Roads/Roundabouts**
- **Alternative 2 – Boulevard**
- **Alternative 3A – Culvert**
- **Alternative 3B – Miller Double Roundabouts**

These four (4) alternatives may be considered when developing Preliminary Engineering (PE) for the National Environmental Protection Act (NEPA) assessments as they commence but do not preclude a thorough environmental review for NEPA compliance. The alignment and configuration of the alternatives presented remain within the footprint of the existing roadway network, so significant adverse impacts are not anticipated. Alternatives 2, 3A, and 3B retain the functional classification of US 378 as an Urban Principal Arterial. The designation would only change from Urban Principal Arterial – “Other Freeways and Expressways” to Urban Principal Arterial – “Other”. The designation does not affect the roadways National Highway System (NHS) Priority as a “Basic Non-Interstate”.

AECOM

About AECOM

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