

**U.S. 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
Federal Aid Project No. HISP-0070(163)  
WBS Element 50056.1.1  
STIP PROJECT NO. W-5600**



**ADMINISTRATIVE ACTION  
CATEGORICAL EXCLUSION**

**U. S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
AND  
N. C. DEPARTMENT OF TRANSPORTATION**

Submitted pursuant to the National Environmental Policy Act 42 U.S.C. 4332(2)(c)  
and 49 U.S.C. 303

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**Administrative Action  
CATEGORICAL EXCLUSION**

July 2016

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## **PROJECT COMMITMENTS**

**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
Federal Aid Project HISP-0070(163)  
WBS No. 50056.1.1  
STIP Project W-5600**

### **Hydraulics Unit – FEMA Coordination**

NCDOT will coordinate with the NC Floodplain Mapping Program (FMP), to determine the status of the project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent Letter of Map Revision (LOMR).

### **Division 4 Construction-FEMA Coordination**

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying the drainage structure(s) and roadway embankment within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

This Federal Highway Administration (FHWA) Categorical Exclusion (CE) has been prepared for State Transportation Improvement Program (STIP) Project W-5600 in Johnston County. This CE was prepared pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended (42 USC 4321 et seq.); the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500–1508); and the FHWA Environmental Impact and Related Procedures (23 CFR 771).

## 1.0 DESCRIPTION OF PROPOSED ACTION

### 1.1 GENERAL DESCRIPTION

The proposed project involves upgrading US 70 to a freeway from US 70 Business to the Neuse River in Johnston County. The project will construct interchanges at the intersections of US 70 with SR 1501 (Swift Creek Road) and SR 1903 (Wilson's Mills Road). The project will close the remaining at-grade intersections and median openings that provide direct access to US 70 from adjacent properties. Access to properties adjacent to US 70 will be provided via newly constructed service roads. Figure 1 shows the project location.

### 1.2 PROJECT SCHEDULE

The project is included in the 2016-2025 STIP. The following schedule is based on the 2016 – 2025 STIP.

Right-of-way Acquisition: Fiscal Year (FY) 2018

Construction: FY 2020

### 1.3 COST ESTIMATE

The total cost for the project included in the 2016-2025 STIP is \$30,914,000. This includes \$26,008,000 for construction, \$4,380,000 for right of way acquisition and \$526,000 for utility relocations. The current total cost estimate for the project is:

Construction:	\$ 46,050,000
Right-of-Way:	\$ 8,275,000
Utilities Relocation:	\$ 3,830,500
Mitigation	\$ 3,510,000
<b>TOTAL:</b>	<b>\$ 61,665,500</b>

## **2.0 PURPOSE AND NEED OF THE PROPOSED ACTION**

### **2.1 PROJECT PURPOSE**

The purpose of the project is to improve the safety and mobility of vehicular travel along US 70 within the project limits.

### **2.2 PROJECT NEED**

The proposed project is intended to address the following needs.

#### 2.2.1 Safety

Detailed crash data was collected within the project study limits between May 2009 and April 2014. The data indicates 137 crashes occurred within the project limits during this time period. Two of those crashes resulted in fatalities. One other crash resulted in serious injuries to two people. The fatal crash rate for the section of US 70 within the project limits is higher than the statewide average for similar facilities, although it is lower than the critical crash rate. See Section 2.3.6 for more detailed crash data.

The two traffic signals within the project limits are a concern, given the high speed traffic and free-flow nature of adjacent sections of US 70. Drivers, especially after travelling along freeway sections, sometimes do not expect traffic signals on rural four-lane highways such as US 70. Much of the traffic on US 70 in the project area is long distance, intercity traffic. During the summer, US 70 is heavily utilized by travelers destined for the Carteret and Onslow County beaches.

The current section of US 70 in the project area is an expressway with limited control of access, while the portion of the project to the west is a freeway with full control of access. For eastbound traffic on US 70, the traffic signal at Swift Creek Road is the first signal encountered in approximately 19 miles. For westbound traffic on US 70, the traffic signal at Wilson's Mills Road is the first signal encountered in approximately 7.4 miles (this will be the first signal in approximately 13.1 miles following completion of STIP Project W-5107, which is under construction and will convert the next signalized intersection on US 70 east of Wilson's Mills Road to an interchange). Traffic safety studies indicate that closing at-grade intersections and replacing them with interchanges may reduce total crash potential by as much as 42 percent and injury crashes by as much as 57 percent.

#### 2.2.2 Mobility

The existing traffic signals along the section of US 70 within the project limits result in delays to traffic. These conflict points cause the substantial regional through traffic on US 70 to stop or slow down to accommodate vehicles crossing and turning onto US 70, as well as vehicles turning from US 70. The mobility of US 70 will continue to erode as traffic volumes increase on US 70 and intersecting roadways. In addition, the speed limit can only be set to 55 miles per hour (mph) because of the at-grade intersections. The speed limit of the adjoining freeway section of US 70 to the west is 70 mph. In the

year 2035 without construction of the project, it will take an average of approximately six minutes to travel the 4.7 mile section of US 70 within the project limits.

Following construction of the proposed interchanges and removal of at-grade intersections within the project limits, the speed limit can be raised to 70 mph. In the year 2035 with construction of the project, it will only take approximately 4 minutes to travel the 4.7 mile section of US 70 within the project limits. This is an approximately 33 percent reduction in travel time over the no-build alternative.

The latest federal surface transportation reauthorization, entitled Fixing America's Surface Transportation Act or the "FAST Act" was signed into law in December 2015. The law designates US 70 from I-40 to the port at Morehead City as a future Interstate highway. The improvements proposed as part of this project are compatible with this overarching plan to upgrade the US 70 corridor.

## **2.3 DESCRIPTION OF EXISTING CONDITIONS**

US 70 is a major east-west route in eastern North Carolina, connecting Raleigh to the coast at Morehead City and is the primary east-west route in Johnston County. West of the project, US 70 transitions into the full-access controlled Clayton Bypass which connects to I-40. At the western project limit, US 70 also intersects US 70 Business, a four-lane divided arterial that connects Clayton to Smithfield. Approximately 3.5 miles east of the project, US 70 connects to I-95, the principal north-south interstate of the East Coast.

### **2.3.1 Functional Classification**

Within the project limits, US 70 is classified as a Principal Arterial. US 70 is included in the National Highway System.

### **2.3.2 Physical Description of Existing Facility**

#### **2.3.2.1 Roadway Typical Section**

Within the project study area, US 70 is a four-lane divided facility with two 12-foot lanes, 4-foot wide paved outside shoulders, and 2-foot paved shoulders in each direction. The eastbound and westbound lanes are separated by a variable width grassed median ranging from 30 to 46 feet wide.

#### **2.3.2.2 Horizontal and Vertical Alignment**

The existing horizontal and vertical alignment of US 70 is acceptable, although a curve west of the Wilson's Mills Road intersection limits sight distance for eastbound US 70 approaching the intersection. To improve safety, flashing "signal ahead" warning signs were installed in both directions along the approaches to the two intersections to notify travelers when the through-signals are turning red.

### 2.3.2.3 Right-of-Way and Access Control

The existing right-of-way width along US 70 within the project limits is approximately 250 feet. Limited control of access (access from public roads only, no driveways) exists along US 70 within the project limits, with one exception. A driveway providing access to a farm field exists on the north side of US 70 across from the SR 2566 (Sadisco Road) intersection. The remaining accesses onto US 70 are public roads.

### 2.3.2.4 Speed Limit

The posted speed limit along US 70 within the project limits is 55 miles per hour.

### 2.3.2.5 Intersections/Interchanges

Two signalized and six unsignalized intersections are located along US 70 within the project limits. Other than one unsignalized at-grade intersection east of the project limits, these are the only at-grade intersections along US 70 between I-40 and I-95.

The existing signalized intersections are:

- SR 1501 (Swift Creek Road) – Swift Creek Road provides access to the town of Wilson's Mills from US 70 and areas south of the highway, including US 70 Business and the Johnston County Airport.
- SR 1913 (Wilson's Mills Road) – Wilson's Mills Road provides a connection between the town of Wilson's Mills and the western portion of Smithfield to the south of US 70. North of US 70 the roadway is generally parallel to US 70, serving as the only continuous east-west roadway through the town on the south side of the North Carolina Railroad Company's railroad tracks.

From west to east, median openings are located at six unsignalized intersections within the project limits:

- SR 2566 (Sadisco Road) – Located on the south side of US 70, Sadisco Road is an approximately 0.4 mile-long roadway intersecting US 70 Business to the west and terminating at several businesses to the east. On the north side of US 70 at this median opening, there is an unpaved driveway.
- SR 2574 (Uzzle Industrial Drive) – On the south side of US 70, Uzzle Industrial Drive is an approximately 0.2-mile long roadway providing the only access to an industrial park. On the north side of US 70, SR 2580 (Uzzle Drive) is an approximately 0.3-mile long service road that provides access to a nursery business.
- SR 1907 (Strickland Road) – A north-south route, Strickland Road connects Swift Creek Road south of US 70 to Wilson's Mills Road approximately 0.1 mile north of US 70.
- SR 1914 (Bear Farm Road) (west section) – On the south side of US 70, SR 2568 is a service road that provides access to several properties. Bear Farm Road is on the north side of US 70. Bear Farm Road has two intersections with US 70. Bear Farm Road was previously a loop street but a connecting segment of the roadway has

been abandoned. This western section of Bear Farm Road provides a connection to Uzzle's Pond Road/Main Street, which provides the only continuous east-west road through Wilson's Mills on the north side of the North Carolina Railroad Company railroad tracks.

- NCDOT Johnston County Maintenance Yard - At this median opening, the NCDOT facility entrance is on the south side of US 70. The NCDOT facility also has access from Turnage Road to the east. On the north side of US 70, SR 2568 is an approximately 0.1-mile long service road that provides access to several properties.
- SR 1915 (Turnage Road) – Turnage Road intersects US 70 to the south, providing a connection from Wilson's Mills Road approximately 0.9 miles to the southwest. The eastern section of SR 1914 (Bear Farm Road) intersects US 70 to the north.

### 2.3.2.6 Hydraulic Structures

Three existing hydraulic structures exist along US 70 in the project area. These structures are described on Table 1.

**Table 1. Existing Hydraulic Structures**

Culvert No.	Description	Roadway	Stream	Condition
N/A	3 barrel 6'x6' 172' long RCBC	US 70	Little Poplar Creek	Good
513	3 barrel 10'x6' 139' long RCBC	US 70	Poplar Creek	Good
514	2 barrel 7'x7' 74' long RCBC	SR 1501 (Swift Creek Road)	Poplar Creek	Good

### 2.3.3 Utilities

Two high voltage power transmission lines pass through the project study area. The two lines converge at the US 70/Swift Creek Road intersection and continue eastward along the same alignment, crossing over US 70 approximately midway between the Swift Creek and Wilson's Mills Roads intersections.

A 16-inch water main runs along the south side of US 70 between Strickland Road and Swift Creek Road. Between Swift Creek Road and Wilson's Mills Road, a 24-inch water main parallels the north side of US 70. Waterlines cross under US 70 in the vicinity of the Strickland, Swift Creek, and Wilson's Mills Roads intersections.

### 2.3.4 School Bus Usage

Wilson's Mills Elementary School is located approximately 0.4 mile north of US 70 along Wilson's Mills Road. Smithfield Middle School and Smithfield-Selma High School are located approximately two miles southeast of the project study area near Buffalo Road.

According to the Johnston County Schools Transportation Supervisor, approximately 18 school buses per day utilize US 70 within the study area, making a total of 40 trips.

Below is a summary of school bus usage at intersections within the study area:

- Swift Creek Road
  - 18 buses cross over US 70, 14 buses turn onto or from US 70
- Wilson's Mills Road
  - 22 buses cross over US 70, 24 buses turn onto or from US 70
- Turnage Road
  - 3 buses turn onto or from US 70
- Strickland Road
  - 9 buses turn onto or from US 70
- Sadisco Road
  - 7 buses turn onto or from US 70

### 2.3.5 Roadway Capacity

#### 2.3.5.1 Existing Traffic Volumes

The 2012 traffic volumes along US 70 range from 21,800 vehicles per day (vpd) to 24,800 vpd through the project area. The highest volumes are concentrated along the eastern end of the project.

#### 2.3.5.2 Future Traffic Volumes

The 2035 (Design Year) projected traffic volumes along US 70 range from 37,200 vpd to 41,700 vpd.

Figures 4A and 4B show the 2012 and 2035 projected traffic volumes along US 70 and the major intersections in the study area.

#### 2.3.5.3 Existing and Future Levels of Service

The level of service along US 70 is projected to deteriorate slightly from B to C for signalized intersections and for most turning movements at unsignalized intersections. However, level of service for northbound and southbound movements (through, left-turn, and right-turn) at unsignalized intersections is projected to deteriorate to level of service F in most cases.

Tables 2 and 3 compare the 2012 no-build level of service to the projected 2035 no-build level of service for signalized and unsignalized intersections, respectively.

**Table 2. Level of Service and Delay for US 70 Intersections – Signalized**

US 70 Intersection	2012 No Build		2035 No Build	
	LOS	Delay	LOS	Delay
Swift Creek Road	B	15.2	C	24.4
Wilson's Mills Road	B	19.3	C	30.0

**Table 3. Level of Service and Delay for US 70 Intersections – Unsignalized**

US 70 Intersection	2012 No Build		2035 No Build	
	LOS*	Delay*	LOS*	Delay*
Uzzle Industrial Drive	D	25.8	F	126.3
Strickland Road	D	26.3B	F	100.6
Bear Farm Road (west)	D	28.9	F	169.6
Turnage Road	D	28.6	F	160.9

\*Level of service and delay presented are for the worst operating movement, the Highway Capacity Manual does not provide a method to calculate an overall level of service for unsignalized intersections. Note: Due to low volumes on Sadisco Road and at the NCDOT Maintenance Yard, these intersections were not included in the capacity analysis.

### 2.3.6 Crash Data and Safety

Detailed crash data was collected within the project study limits between May 2009 and April 2014. The data indicates 137 crashes occurred within the project limits during this time period. Two of those crashes resulted in fatalities. One other crash resulted in serious injuries to two people. Table 4 provides a comparison of the crash statistics within the project study corridor and similar statewide facilities. The analysis indicates the fatal crash rate for the subject section of US 70 is higher than the statewide average for similar facilities.

**Table 4: US 70 Mainline Crash Rate Comparisons**

Categories	Crashes	Crash Rate	Statewide Average Crash Rate	Critical Crash Rate <sup>1</sup>
Total	137	67.67	123.43	136.53
Fatal	2	0.99	0.93	2.29
Non-Fatal Injury	37	18.28	34.58	41.63
Night	51	25.19	44.35	52.30
Wet	31	15.31	22.83	28.60

<sup>1</sup>The critical crash rate is a statistically derived number that can be used to identify high accident roadway segments.

The crashes are distributed along US 70 throughout the project limits, with clusters of crashes at most intersections. According to overall crash location data for Johnston County, sections of US 70 through the project limits are among the county's highest frequency crash locations. Twenty seven percent of the crashes in the project area resulted in injuries. Rear-end slow or stop crashes were the most common crash type,

accounting for approximately 27 percent of crashes along this section of US 70. Most of these crashes occurred in proximity to the US 70 intersections with Swift Creek Road and Wilson's Mills Road. Rear-end slow or stop crash types are an indicator of congested conditions and/or turning movements and represent the effect such conditions can have on driver behavior. Rear-end accidents typically occur where unexpected traffic queues force sudden stops, at signalized intersections during signal-phase changes, and when drivers are distracted.

Studies indicate converting at-grade intersections to grade-separated interchanges results in significant reductions in crashes. According to the 2012 NCDOT Crash Reduction Factors, replacing an at-grade intersection with an interchange will result in a 42% reduction in total crashes and an estimated 57% reduction in non-fatal injury crashes.

## 2.4 TRANSPORTATION PLANS

### 2.4.1 Johnston County Comprehensive Transportation Plan

The *Johnston County Comprehensive Transportation Plan (CTP)*, adopted in September 2011, recommends US 70 be upgraded to a freeway in conformance with the *US 70 Access Management Study* and indicates proposed interchanges at the US 70 intersections with Swift Creek Road and with Wilson's Mills Road. The highway map also indicates a realignment of Swift Creek Road north of US 70. The plan's pedestrian map proposes sidewalks along Swift Creek Road crossing US 70 and along Wilson's Mills Road north of US 70. Figure 5 shows the Wilson's Mills area recommendations as shown in the Johnston County CTP.

### 2.4.2 US 70 Access Management Study

The *US 70 Access Management Study* (NCDOT July 2005) reinforces the primary function of US 70 for providing mobility between regional destinations. The study evaluated operational characteristics and safety concerns along the corridor and identified preliminary access management recommendations for the 134-mile US 70 corridor east of Raleigh. General access management concepts recommended include median u-turn treatments, traffic signal coordination, on-site traffic circulation, and interchange retrofitting. The *US 70 Access Management Study* notes that "implementation of the treatments over any segment or the entire study area would serve to reduce travel time for motorists traveling on US 70 as well as reducing the number and severity of potential crashes, thereby increasing highway safety."

Within the W-5600 project limits, the study identified the US 70 intersections with Swift Creek Road and with Wilson's Mills Road as "points of concern." Analysis of NCDOT crash data from 2001 to 2004 indicated a cluster of crashes in these locations. The long-term recommendation for the US 70 intersection with Swift Creek Road was to construct a grade-separation. The long-term recommendation for the US 70 intersection with Wilson's Mills Road was to construct an interchange.

#### 2.4.3 US 70 Access Management Handbook

The *US 70 Access Management Handbook* (NCDOT May 2007) is a companion document to the 2005 access management study. The handbook presents a toolkit of access management treatments, other design considerations, and policy guidelines. While the focus of the handbook is on implementation of interim access management strategies, the handbook acknowledges the overall vision of the US 70 corridor is a freeway-type facility with full control of access. Access to properties adjacent to US 70 would be provided via connections to a secondary street system.

#### 2.4.4 US 70 Corridor Commission

The US 70 Corridor Commission is comprised of representatives of state and local jurisdictions with an interest in enhancing the mobility, safety, and economic development potential of US 70 from I-40 to the Morehead City area. The commission was formed to facilitate multi-jurisdictional coordination and establish consistency among the jurisdictions traversed by US 70, including Johnston, Wayne, Lenoir, Jones, Craven, and Carteret counties.

The US 70 Corridor Commission's *Conceptual Freeway Plan* (March 2012) recommends interchanges at the US 70 intersections with Swift Creek Road and with Wilson's Mills Road, as well as the closure of median openings within the W-5600 project limits.

#### 2.4.5 Fixing America's Surface Transportation (FAST) Act

On December 4, 2015, the Fixing America's Surface Transportation (FAST) Act was authorized. The Federal transportation authorization identifies US 70 from I-40 to the Port at Morehead City as a High Priority Corridor on the National Highway System and the future Interstate 42.

Figure 6 highlights the US 70 corridor, the existing freeway segments, and proposed improvements along the US 70 corridor included in the NCDOT 2016 – 2025 STIP.

## 2.5 ADJACENT STIP PROJECTS

Table 5 summarizes projects adjacent to W-5600 and are included in the 2016 – 2025 STIP. Figure 7 shows the location of STIP projects in the vicinity of W-5600.

**Table 5. Adjacent STIP Projects**

STIP Project Number	Project Description	Right-of-Way Acquisition	Construction
R-5718	SR 1003 (Buffalo Road): Widen to three lanes from US 70 to SR 1934 (Old Beulah Road)	FY 2017	FY 2019
R-5722	SR 1913 (Wilson's Mills Road): Intersection improvements from SR 1501 (Swift Creek Road) to east of SR 1908 (Fire Department Road)	FY 2017	FY 2017
U-3334B	SR 1923 (Booker Dairy Road Extension): Construct a two lane road, part on new location from SR 1003 (Buffalo Road) to US 301 (Brightleaf Boulevard)	FY 2016	FY 2018
U-3464	US 301/NC 96: Widen to multi-lanes from NC 96 to SR 1007 (Brogden Road)	FY 2023	FY 2023
U-5726	US 301/NC 39-96: Construct Access management from SR 1623 (Book Dairy Road) to SR 2302 (Ricks Road)	FY 2023	FY 2023
U-5795	SR 2302 (Ricks Road): Widen to three lanes from US 70 to US 301	FY 2017	FY 2018
W-5107	US 70: Safety improvements from SR 2305 (Firetower Road) to SR 2310 (Davis Mill Road/Stevens Chapel Road).	Complete	Under construction

## 2.6 Logical Termini

FHWA regulations (23 CFR 771.111(f)) require that logical termini be established during the development of all highway improvement projects. According to the FHWA, "for projects involving safety improvements, almost any termini (e.g., political jurisdictions, geographical features) can be chosen to correspond to those sections where safety improvements are most needed" (FHWA 1993).

The purpose of the proposed project is to improve the safety and mobility of vehicular travel along US 70 within the project limits. The project limits were selected in order to address safety concerns at two signalized and several unsignalized intersections along US 70. Although the proposed improvements are compatible with and will result in completing a part of an overall long-term plan to upgrade a 134-mile length of US 70, the project is a usable and reasonable improvement, even if no additional transportation improvements are made. In addition, the project will not restrict the consideration of other transportation improvements in the foreseeable future.

### 3.0 PROPOSED IMPROVEMENTS

The proposed improvements are presented in Figures 2A through 2D.

#### 3.1 Roadway Cross-Section and Alignment

Within the study area, US 70 will remain a four-lane divided facility with a variable width median ranging from 30 to 46-feet wide. The project will add 10-foot outside and four-foot wide inside paved shoulders, which is consistent with the 2005 AASHTO *Interstate Standards Policy*. The proposed typical sections of US 70, Swift Creek Road, and Wilson's Mills Road are shown in Figure 3.

The project will widen Swift Creek Road within the interchange area to a four-lane facility with left-turn lanes in each direction to allow access to US 70. Exclusive right-turn lanes are also proposed along the north and southbound approaches to accommodate traffic accessing US 70.

Wilson's Mills Road will be widened to a four-lane facility with exclusive left-turn lanes in each direction allowing access to US 70. Exclusive right-turn lanes are also proposed along the north and southbound approaches to accommodate traffic accessing US 70.

From the western project limit to just west of the Wilson's Mills Road interchange, US 70 will follow its existing alignment. In the vicinity of the proposed Wilson's Mills Road interchange, US 70 will be realigned slightly south of its current alignment to avoid impacts to two businesses in the northeast and northwest quadrants of the interchange.

#### 3.2 Right-of-Way and Access Control

The proposed alignment of US 70 generally follows the existing alignment throughout the project except for in the vicinity of the Wilson's Mills Road Interchange. At the Wilson's Mills Road interchange, US 70 will be realigned to the south to avoid two businesses in the northeast and northwest quadrants. The construction of the two proposed interchanges will require the acquisition of right-of-way beyond the existing 250-foot wide right-of-way. The right-of-way along Swift Creek Road approaching US 70 will be widened from the existing 60 feet to 130 feet to accommodate turn lanes and drainage. In the vicinity of the Wilson's Mills Road interchange, the right-of-way width will be extended a maximum of approximately 320-feet along the south side of US 70 to accommodate the realignment of US 70. The right-of-way width along Wilson's Mills Road will range from 120-feet to 150-feet along the southbound and northbound approaches to US 70, respectively.

The right-of-way widths present the worse-case scenario and it is likely that the right-of-way widths will be reduced once preliminary hydraulic design is completed.

The project will upgrade US 70 to a full freeway throughout the project limits. This will require the implementation of full control of access along US 70 and along Swift Creek and Wilson's Mills Roads within the interchange areas.

### 3.3 Interchanges/Intersections

The intersections of Swift Creek Road and Wilson's Mills Road will be upgraded to interchanges as a part of the project. The Swift Creek Road interchange will be configured as a modified diamond interchange with ramps and loops in the northeast and southwest quadrants at the location of the existing US 70/Swift Creek Road intersection. Swift Creek Road would be carried over US 70 on a new bridge. The Wilson's Mills Road interchange will be configured as a compressed diamond interchange. US 70 will be realigned slightly to the south of the intersection and would be carried over Wilson's Mills Road on new bridges.

All other intersections along US 70 within the project limits will be removed. Service roads will be constructed (see Section 3.4) to provide access to nearby properties.

### 3.4 Service Roads

Service roads will be constructed to replace access lost due to the closing of existing at-grade intersections along US 70 in the project area. Proposed service roads are shown on Figures 2A through 2D and described below.

**Service Road 1**, located on the north side of US 70 near the western project terminus, acts as a western extension of Uzzle Road. Service Road 1 would provide a connection to the east via Uzzle Drive and Service Road 3. (Service Road 3 connects to the western end of Wilson's Mills Road). This service road would provide access to an agricultural property currently accessed directly from US 70 opposite Sadisco Road.

**Service Road 1A**, located on the south side of US 70 provides access to Uzzle Industrial Drive properties, via an extension of Sadisco Road.

**Service Road 2**, located on the south side of US 70 provides access to Uzzle Industrial Drive properties via a connection to Strickland Road to the east.

**Service Road 3** would extend Wilson's Mills Road to the west, providing access to agricultural properties and a nursery/landscape business on the north side of US 70.

**Service Road 4**, located south of US 70, connects Strickland Road to Swift Creek Road and enhances connectivity provided by Service Road 2.

**Service Road 5** would realign the Twin Creek Road intersection with Swift Creek Road, located on the south side of US 70.

**Service Road 6** provides access to properties on the south side of US 70. Service Road 6 would extend from an existing service road west to Wilson's Mills Road.

**Service Roads 7, 8, 9, 10, and 11** would connect the eastern-most segment of Bear Farm Road to Wilson's Mills Road on the north side of US 70. The combination of the service roads ensures access for businesses along Wilson's Mills Road Extension and Bear Farm Road.

### 3.5 Speed Limit and Design Speed

A 60 MPH design speed is proposed for US 70 within the project limits. The posted speed limit for US 70 following completion of the project will be determined prior to completion of construction.

### 3.6 Anticipated Design Exceptions

No design exceptions are anticipated for the project.

### 3.7 Proposed Structures

The recommended alternative will require the construction of three new bridges. Table 7 summarizes preliminary dimensions of the bridges proposed by the recommended alternative.

**Table 6: Proposed Bridges**

Feature Crossed	Length	Width	Facility Carried
US 70	215'	56'	Swift Creek Road
Wilson's Mills Road	160	40	US 70 (eastbound)
Wilson's Mills Road	160	40	US 70 (westbound)

The recommended alternative includes three existing major stream crossings. Section 2.3.2.6 provides detailed descriptions of the existing hydraulic structures within the project study area. Table 8 summarizes the hydraulic recommendations for the proposed major stream crossings.

**Table 7: Proposed Hydraulic Structures**

Stream Crossing	Existing Structure	Recommendation
Little Poplar Creek	Triple Barrel 6' x' 6' RCBC (152')	Extend Upstream 51' and downstream 64'
Poplar Creek	Double Barrel 10' x' 6' RCBC (139')	Extend upstream 27' and downstream 27'
Poplar Creek	Double Barrel 10' x' 6' RCBC (74')	Replace with new culvert

### 3.8 Utilities

Numerous utilities are located within the study area. The project will require the relocation of several power lines, water and sewer lines and a gas line.

### 3.9 Noise Barriers

Noise barriers are not recommended for this project (see Section 5.8).

### 3.10 Work Zone, Traffic Control, and Construction Phasing

Resurfacing, shoulder reconstruction/ widening and other improvements to US 70 along the existing road alignment will be completed with lane closures such that a minimum of one lane of travel will be open in each direction at all times. Similarly, areas where new alignments diverge from existing alignments along both US 70 and intersecting streets, such as Swift Creek Road, will create tie-in areas between the new and old alignments. Tie-ins will also be constructed with lane closures; two-lane roads having tie-ins will be constructed using a flagging operation to reduce the road to a one-lane, two-way pattern. These lane closures will be subject to peak hour restrictions in order to minimize construction-related congestion and to avoid commuter delays.

## 4.0 ALTERNATIVES TO THE PROPOSED ACTION

### 4.1 Preliminary Study Alternatives

#### 4.1.1 Transportation Demand Management (TDM) Alternative

The Transportation Demand Management (TDM) alternative includes walking, bicycling, ride-sharing, teleworking, non-standard work schedules, and the use of public transportation. TDM alternatives would not address the safety concerns at the existing at-grade intersections and would not provide the same level of safety and mobility improvement along US 70 as the proposed interchanges and access control. TDM alternatives would not meet the project purpose and need and were therefore eliminated from further consideration.

#### 4.1.2 Transportation Systems Management (TSM) Alternative

Transportation Systems Management (TSM) alternatives include low-cost improvements designed to maximize the utilization and efficiency of the existing system. TSM improvements involve increasing the available capacity of the facility within the existing right-of-way with minimum capital expenditures. Items such as the addition of turn lanes, striping, signalization, and minor realignments are examples of TSM physical improvements. Traffic law enforcement, speed restrictions, access control and signal timing changes are examples of TSM operational improvements. TSM improvements have previously been made at both the Swift Creek Road and Wilson's Mills Road intersections. "Be Prepared to Stop" warning signs with flashing lights have been installed at both intersections. Despite these measures, crashes including some fatal, have continued to occur. Additional TSM improvements would not provide the same level of safety and mobility improvement along US 70 as the proposed interchanges and access control. TSM improvements would not meet the project purpose and were therefore eliminated from further consideration.

#### 4.1.3 Mass Transit/Multimodal Alternative

GoTriangle Transit provides bus service between points in Johnston County, Raleigh, and the Research Triangle Park. The closest bus stop is located approximately 7.5 miles northwest of the study area in Clayton. The Mass Transit/Multimodal Alternative would not address the safety or mobility concerns associated with US 70 within the study area. Therefore, the Mass Transit/Multimodal Alternative would not meet the project purpose and need and was therefore eliminated from further consideration.

#### 4.1.4 No-Build Alternative

The No-Build Alternative would forego any improvements to US 70 with the exception of routine maintenance. The No-Build Alternative would not improve the safety or mobility of vehicular travel along US 70 and this portion of US 70. The No-Build Alternative was eliminated from further consideration because it would not meet the purpose and need for the project.

#### 4.1.5 Improve Existing Alternatives

The Improve Existing Alternative proposes to upgrade US 70 to a freeway within the project limits. The alternative would construct interchanges at Swift Creek Road and Wilson's Mills Road. The alternative would also remove all at-grade intersections within the project limits and construct service roads to provide access to adjacent properties. Three interchange options were developed for the Swift Creek Road intersection and two interchange options were developed for the Wilson's Mills Road intersection. The interchange options are presented in Figure 8.

##### 4.1.5.1 Swift Creek Road Interchange Options

**Swift Creek Road Option 1 (SC1)** proposes to construct a half-cloverleaf interchange with ramps and loops in the northwest and southwest quadrants along a new location alignment of Swift Creek Road. The proposed interchange would include a new bridge carrying the realigned Swift Creek Road over US 70. The proposed interchange would be located approximately 0.5 mile west of the existing US 70/Swift Creek Road intersection. The new location section of Swift Creek Road will leave the existing alignment just south of the Wilson's Mills Baptist Church and connect to Wilson's Mills Road just east of Pear Tree Lane.

SC1 includes a variation of Service Road 4, which was described in detail in Section 3.4.

**Swift Creek Road Option 2 (SC2)** proposes to construct a modified diamond interchange with ramps and loops in the northeast and southwest quadrants at the existing US 70/Swift Creek Road intersection. The proposed interchange would include a new bridge carrying Swift Creek Road over US 70.

SC2 includes a variation of Service Road 4 and Service Road 5, both of which were described in detail in Section 3.4.

**Swift Creek Road Option 3 (SC3)** proposes to construct a modified diamond interchange with ramps in the northeast, northwest, and southwest quadrants and a loop ramp in the southwest quadrant at the existing US 70/Swift Creek Road intersection. The proposed interchange would include a new bridge carrying Swift Creek Road over US 70.

SC3 includes a variation of Service Road 4 and Service Road 5, both of which were described in detail in Section 3.4.

4.1.5.2 Wilson’s Mills Road Interchange Options

**Wilson’s Mills Road Option A (WMA)**, proposes to construct a compressed diamond interchange at the intersection of US 70 and Wilson’s Mills Road. WMA would realign US 70 slightly to the south of the intersection and would include two bridges carrying US 70 over Wilson’s Mills Road.

WMA includes a variation of Service Road 6, which was described in detail in Section 3.4.

**Wilson’s Mills Road Option B (WMB)**, proposes to construct a modified diamond interchange with ramps and loops in the northeast and southwest quadrants at the intersection of US 70 and Wilson’s Mills Road. The proposed interchange would include a new bridge carrying Wilson’s Mills Road over US 70.

WMB includes a variation of Service Road 6, which was described in detail in Section 3.4.

Jurisdictional impacts of the interchange options are presented in Table 8 below.

**Table 8: Jurisdictional Impacts of Interchange Options**

	Swift Creek Road			Wilson’s Mills Road		Service Roads (not associated w/ interchange Options)
	Option 1	Option 2	Option 3	Option A	Option B	
Streams (linear Feet)	1060	1620	2030	1020	730	660
Wetlands (acres)	5.9	5.8	7.0	1.1	0.8	1.2

Swift Creek Road Option 3 was dropped from further consideration following detailed environmental surveys because it would affect the most wetlands of the Swift Creek Road interchange options.

**4.2 Alternatives Studied in Detail**

The detailed study alternatives are combinations of the Swift Creek Road and the Wilson’s Mills Road interchange options retained for further consideration and the service roads not associated with either interchange option. The alternatives retained for further consideration were:

- **Alternative 1A:** Swift Creek Interchange Option 1 and Wilson’s Mills Interchange

- Option A
- **Alternative 1B:** Swift Creek Interchange Option 1 and Wilson's Mills Interchange Option B
- **Alternative 2A:** Swift Creek Interchange Option 2 and Wilson's Mills Interchange Option A
- **Alternative 2B:** Swift Creek Interchange Option 2 and Wilson's Mills Interchange Option B

The detailed study alternatives are shown in figures 9A and 9B. Table 6 summarizes the impacts of each detailed study alternative.

**Table 9: Alternatives Studied in Detail Comparison**

Resource		Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B
Relocations	Residential	3	5	5	7
	Business	6	9	6	8
	Total	9	14	11	16
Minority / Low Income Populations (Disproportionate Impacts)		No	No	No	No
Historic Resources (Adverse Effects)		No	No	No	No
Community Facilities Impacted*		0	0	1	1
Section 4(f) Impacts		N/A	N/A	N/A	N/A
Prime Farmland (acres)		68.0	73.8	62.0	67.8
Wetlands (acres)		8.8	8.6	8.7	8.5
Streams (linear feet)		3,060	2,770	3,300	3,010
Riparian Buffers (square feet)	Zone 1	74,050	65,340	52,270	43,560
	Zone 2	82,760	77,540	34,850	30,490
	Total	156,810	143,880	87,120	74,050
Floodplain (acres)		0	0	0.1	0.1
Federally Protected Species		No Effect	No Effect	No Effect	No Effect
Right-of-Way Acquisition		\$9,875,000	\$15,800,000	\$10,550,000	\$16,800,000
Utility Relocation		\$894,000	\$997,000	926,000	\$939,000
Mitigation		\$3,780,000	\$3,530,000	\$3,860,000	\$3,630,000
Construction		\$44,900,000	\$39,700,000	\$43,300,000	\$38,100,000
<b>Total</b>		<b>\$ 55,449,000</b>	<b>\$ 60,027,000</b>	<b>\$ 58,636,000</b>	<b>\$ 59,469,000</b>

\*Alternatives 2A and 2B will potentially require the relocation of 45 graves.

### 4.3 NCDOT Recommended Alternative

Alternative 2A has been identified as the preferred alternative by NCDOT because it would best serve the project's purpose and need while balancing environmental concerns and costs with the concerns of the citizens and leaders of the Town of Wilson's Mills.

Alternative 2A was selected for the following reasons:

- Based on comments received at the February 2016 public meeting, Alternative 2A was preferred by the public. Over four times as many people who stated a preference selected Alternative 2A over the next most popular alternative (Alternative 1A).
- The Town of Wilson's Mills passed a resolution supporting Alternative 2A.
- Alternative 2A would require less total relocations than two of the other alternatives. The alternative with the least number of relocatees, Alternative 1A, would affect the most wetlands and the most riparian buffers and has the second highest cost.
- Alternative 2A would affect less wetlands than Alternative 1A. Alternative 2A would affect 0.2 acre more wetlands and 13,070 square feet more riparian buffer than Alternative 2B, the alternative with the least impact on either of these resources. However, Alternative 2B would relocate the most homes and businesses of any of the alternatives, and would affect more prime farmland than Alternative 2A.
- Alternative 2A would affect 530 feet more streams than the alternative with the least impact on streams, Alternative 1B. However, Alternative 1B would have more total relocations than Alternative 2A, would affect the most prime farmland of any of the alternatives, had the least support from the public and had the highest total cost of any of the alternatives.
- Alternative 2A would affect less prime farmland than any of the other alternatives.
- Alternative 2A has the least total cost of any of the other alternatives.
- Alternative 2A provides the most direct access to US 70, allowing emergency services to respond faster to incidents that require them to travel east or west along US 70.

On June 15, 2016, the NEPA/Section 404 Merger Team concurred that Alternative 2A was the least environmentally damaging practicable alternative (LEDPA).

The recommended alternative is shown in Figures 2A-2D.

## 5.0 ENVIRONMENTAL EFFECTS OF PROPOSED ACTION

### 5.1 Natural Resources

#### 5.1.1 Physiology and Soils

The study area is located in the Southern Piedmont physiographic region and consists of agricultural land, bottomland hardwood forests, headwater forests, freshwater marshes and ponds. Elevations within the study area range from approximately 180 feet above mean sea level (MSL) to 250 feet above MSL.

The Johnston County Soil Survey identifies 27 soil series within the study area. Table 10 summarizes the soil series within the project study area.

**Table 10. Soils in the Study Area**

Soil Series	Mapping Unit	Drainage Class	Hydric Status
Appling-Marlboro complex	AmB	Well Drained	Non-Hydric
Bibb sandy loam	Bb	Very Poorly Drained	Hydric
Bonneau sand	BoA	Well Drained	Non-Hydric
Cecil loam	CeB	Well Drained	Non-Hydric
Cecil loam	CeC	Well Drained	Non-Hydric
Cowarts loamy sand	CoB	Well Drained	Non-Hydric
Gilead sandy loam	GeB	Moderately Well Drained	Non-Hydric
Goldsboro sandy loam	GoA	Moderately Well Drained	Hydric*
Grantham silt loam	Gr	Poorly Drained	Hydric
Lynchburg sandy loam	Ly	Somewhat Poorly Drained	Hydric*
Marlboro sandy loam	MaA	Well Drained	Non-Hydric
Marlboro sandy loam	MaB	Well Drained	Non-Hydric
Nason silt loam	NnB	Well Drained	Non-Hydric
Nason silt loam	NnD	Well Drained	Non-Hydric
Nason silt loam	NnE	Well Drained	Non-Hydric
Norfolk loamy sand	NoA	Well Drained	Hydric*
Norfolk loamy sand	NoB	Well Drained	Hydric*
Norfolk-Urban land complex	NuA	Well Drained	Non-Hydric
Rains sandy loam	Ra	Poorly Drained	Hydric
Rains-Urban land complex	RbA	Poorly Drained	Hydric
Rion sandy loam	RnF	Well Drained	Non-Hydric
Toisnot loam	Tn	Poorly Drained	Hydric
Uchee loamy coarse sand	UcB	Well Drained	Non-Hydric
Varina loamy sand	VrA	Well Drained	Non-Hydric
Wagram loamy sand	WaB	Well Drained	Hydric*
Wedowee sandy loam	WoB	Well Drained	Non-Hydric

Soil Series	Mapping Unit	Drainage Class	Hydric Status
Appling-Marlboro complex	AmB	Well Drained	Non-Hydric
Bibb sandy loam	Bb	Very Poorly Drained	Hydric
Bonneau sand	BoA	Well Drained	Non-Hydric
Cecil loam	CeB	Well Drained	Non-Hydric
Cecil loam	CeC	Well Drained	Non-Hydric
Cowarts loamy sand	CoB	Well Drained	Non-Hydric
Gilead sandy loam	GeB	Moderately Well Drained	Non-Hydric
Goldsboro sandy loam	GoA	Moderately Well Drained	Hydric*
Grantham silt loam	Gr	Poorly Drained	Hydric
Lynchburg sandy loam	Ly	Somewhat Poorly Drained	Hydric*
Marlboro sandy loam	MaA	Well Drained	Non-Hydric
Marlboro sandy loam	MaB	Well Drained	Non-Hydric
Nason silt loam	NnB	Well Drained	Non-Hydric
Nason silt loam	NnD	Well Drained	Non-Hydric
Nason silt loam	NnE	Well Drained	Non-Hydric
Norfolk loamy sand	NoA	Well Drained	Hydric*
Norfolk loamy sand	NoB	Well Drained	Hydric*
Norfolk-Urban land complex	NuA	Well Drained	Non-Hydric
Wehadkee loam	Wt	Poorly Drained	Hydric

\* Indicates a soil that contains hydric soil inclusions.

## 5.1.2 Biotic Resources

### 5.1.2.1 Terrestrial Communities

Terrestrial communities are classified using “NC WAM User Manual, Version 4.1” and “Classification of the Natural Communities of North Carolina, Third Approximation”. Seven terrestrial communities were identified in the study area: agricultural, maintained/disturbed, headwater forest, piedmont/mountain semi-permanent impoundment, hardwood flat, mesic mixed hardwood forest (piedmont subtype) and non-tidal freshwater marsh. A brief description of each community type and figures showing the location of these terrestrial communities are included in the Natural Resources Technical Report (February 2014). The primary terrestrial communities in the project study area are maintained/disturbed and agricultural.

Table 11 summarizes the terrestrial community impacts resulting from the project.

**Table 11: Terrestrial Community Impacts**

Community	Area within Study Area (acres)	Impacts (acres)
Maintained/Disturbed	438.8	43.27
Agricultural	102.4	27.64
Headwater Forest	44.8	7.8
Piedmont/Mountain Semipermanent Impoundment	1.6	0.2
Hardwood Flat	20.5	0

Mesic Mixed Hardwood Forest (Piedmont Subtype)	87.2	25.0
Non-Tidal Freshwater Marsh	4.3	0.6

#### 5.1.2.2 Terrestrial Wildlife

Wildlife populations within the study area are limited to those species that are adaptable to human impacts and disturbance and habitat fragmentation. The regular logging and agricultural practices are the normal condition within the study area. Avian species exhibited the greatest diversity followed by amphibians and reptiles. Individuals or evidence of a wide variety of animal species were sighted within the study area. Species or evidence of species observed in the study area is indicated with an asterisk (\*).

Many birds utilize wooded and shrubby edge environments for breeding sites and foraging. American robin\*, northern mockingbird\*, turkey vulture\*, mourning dove\*, white throated sparrow\* and eastern bluebird\* are a few of the more common birds that utilize the area. American robin, northern mockingbird, mourning dove, and white throated sparrow are tree nesters commonly observed in residential areas.

A variety of amphibians and reptiles were observed utilizing the streams, wetlands and ponds within the study area. Frogs were the most diverse group of amphibians. Bullfrog\*, gray tree frog\*, upland chorus frog\* and pickerel frogs\* were present in most areas of standing and ponded water. Other amphibian species expected to occur are spring peepers, southern cricket frog, American toad and Fowlers toad. No salamanders were observed. Salamanders expected to occur within the study area are spotted salamander, slimy salamander, and marbled salamander. Reptiles occurring within the study area are expected to include eastern garter snake, northern water snake, king snakes, black rat snake\*, black racer, eastern corn snake and copperhead.

The diversity of mammal species found within the study area is limited due to the disturbances and habitat fragmentation. The recent cutovers and brushy field edge communities provide an excellent combination of food and shelter for many species, while the mature forests and agriculture fields provide good foraging habitat. Evidence of eastern cottontails\* and white-tailed deer\* was readily observed throughout the study area. Other mammals likely to be found in the study area include eastern gray squirrel, muskrat, beaver\*, red fox, raccoon\*, and Virginia opossum\*.

#### Impacts

Temporary fluctuations in the population of animal species that utilize these communities are anticipated during the course of construction. Slow-moving, burrowing, and/or subterranean organisms will be directly impacted by construction activities, while mobile organisms will be displaced to adjacent communities.

### 5.1.2.3 Aquatic Communities

Aquatic communities in the study area consist of both perennial and intermittent streams as well as ponds. The only fish identified in the streams and ponds were mosquito fish. However, the perennial streams are large enough to support various sunfish, salamanders and benthic macroinvertebrates. The intermittent streams, being smaller in size, are expected to support crayfish, amphibians and a suite of benthic macroinvertebrates. There are also ten ponds located within the study area. Eight of the ponds are impoundments of jurisdictional streams or drain to a jurisdictional stream. The remaining two ponds are excavated in upland areas and have enough depth to collect or retain water. The only fish species identified in the ponds were mosquito fish.

Several fish species are expected to be present in the ponds including largemouth bass, bluegill, and crappie. The majority of the reptile and amphibian species were observed in the ponds.

#### Impacts

The aquatic habitat in the project study area will be both directly and indirectly affected by the construction of the project. These impacts include fluctuations in water temperatures, as a result of the loss of riparian vegetation. In consequence, shelter and food resources, both in the aquatic and terrestrial portions of these organisms' life cycles, will be affected by losses in the terrestrial communities. This loss of aquatic plants and animals would affect the terrestrial fauna which rely on them as a food source.

Both temporary and permanent impacts will be inflicted on aquatic organisms residing in the project study area. These impacts may result from increased sedimentation, having the potential to affect fish and other aquatic life in several ways, including the clogging and abrading of gills and other respiratory surfaces, affecting the habitat by scouring and filling of pools and riffles, altering water chemistry, and smothering different life stages. Increased sedimentation may also cause decreased light penetration through an increase in turbidity. The influx of organic materials may also cause dissolved oxygen rates to be lower, and the water temperature to increase. The level of impacts to the aquatic communities will be minimized by adherence to best management practices.

### 5.1.2.4 Invasive Species

Nine species from the NCDOT Invasive Exotic Plant List for North Carolina were found to occur in the study area. The species identified were Chinese privet (Threat), kudzu (Threat), Japanese grass (Threat), multiflora rose (Threat), tree-of-heaven (Threat), princess tree (Threat), lespedeza (Threat), mimosa (Moderate Threat) and Japanese honeysuckle (Moderate Threat). NCDOT will manage invasive plant species as appropriate.

## 5.1.3 Water Resources and Water Quality

## 5.1.3.1 Streams, Rivers, Impoundments

Water resources in the study area are part of the Neuse River Basin [U.S. Geological Survey (USGS) Hydrologic Unit 03020201]. Table 12 lists the surface waters identified in the study area.

**Table 12. Water resources in the study area**

Stream Name	Map ID	NCDWQ Index Number	Best Usage Classification
Reedy Branch, including pond (PA)	Reedy Branch (SA)	27-43-14	C; NSW
Little Poplar Creek	Little Poplar Creek (SB)	27-41-1	WS-IV; NSW
UT to Little Poplar Creek	SC		WS-IV; NSW
UT to Little Poplar Creek	SD		WS-IV; NSW
UT to Little Poplar Creek	SE		WS-IV; NSW
UT to Little Poplar Creek	SF		WS-IV; NSW
UT to Poplar Creek, including ponds (PB and PZZ)	SG		WS-IV; NSW
UT to Poplar Creek	SH		WS-IV; NSW
Poplar Creek	Poplar Creek (SI)	27-41	WS-IV; NSW
UT to Poplar Creek	SJ		WS-IV; NSW
UT to Poplar Creek, including pond (PD)	SL		WS-IV; NSW
UT to Poplar Creek including pond (PH)	SM		WS-IV; NSW
UT to Poplar Creek	SN		WS-IV; NSW
UT to Neuse River	SO		WS-IV; NSW
UT to Poplar Creek	SP		WS-IV; NSW
UT to Neuse River	SQ		WS-IV; NSW
UT to Poplar Creek	SR		WS-IV; NSW
UT to Poplar Creek	SS		WS-IV; NSW
UT to Neuse River	ST		WS-IV; NSW
UT to Neuse River	SU		WS-IV; NSW
UT to Poplar Creek	SZZ		WS-IV; NSW

Table 13 identifies the physical characteristics of each stream identified in the project study area.

**Table 13. Physical characteristics of water resources in the study area**

NRTR Map ID	Bank Height (ft)	Bankful Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity
SA*	1	5-10	6	Sand	Slow	Clear <sup>2</sup>
SB*	2-3	6-10	12	Sand, gravel	Moderate	Clear
SC	0-2	4-6	8	Sand	Moderate	Clear
SD*	0-1	6-8	8	Sand	Moderate	Clear
SE	4-6	4-6	4	Sand	Slow	Clear
SF	2-3	5-10	8	Sand, gravel	Moderate	
SG*	4-5	4-6	6	Sand	Slow	Clear
SH	2-3	4-5	3	Sand	Slow	Clear
SI*	1-2	10-15	12	Sand, gravel	Moderate	Clear
SJ	1-2	2-3	3	Sand	Slow	Clear
SL	2-3	2-3	3	Sand	Moderate	Clear
SM*	2-3	3-4	4	Sand	Moderate	Clear
SN*	3-4	10-15	12	Sand	Slow	Clear
SO	1-2	4-6	3	Sand, silt	Slow	Clear
SP*	1	2-3	8	Sand, gravel	Moderate	Clear
SQ*	2-3	2-3	3	Clay	Moderate	Clear
SR*	1-2	8-10	8	Sand, gravel	Moderate	Clear
SS*	2-3	2-3	2	Clay	Moderate	Clear
ST	1-2	3-4	4	Sand	Slow	Clear
SU	1-2	1-2	2	Clay	Moderate	Clear
SZZ	2-3	3-4	4	Sand, silt	Slow	Clear

\* Water in these streams is tannin stained.

### 5.1.3.2 Water Quality

Water resources in the study area are within the Neuse River Water Supply Watershed protected area and are classified as WS-IV Nutrient Sensitive Waters, with the exception of Reedy Branch which is classified as C. There are no additional water classifications, such as anadromous fish waters or primary nursery areas, associated with the streams in the study area. There are no streams identified in the study area that are listed on the 2012 Final 303(d) list of impaired waters. There are no streams designated as High Quality Waters (HQW), Outstanding Resources Waters (ORW), or water supply watersheds (WS-I or WS-II) located within one mile downstream of the project study area. There is no benthic or fish monitoring data for the streams located within the study area or within one mile downstream of the project study area.

### Impacts

Soil erosion and siltation are the most common water quality impacts associated with highway construction activities. Other potential impacts associated with the project include scouring of streambeds, soil compaction, filling of wetlands, and loss of shading as a result of vegetation removal.

NCDOT's Best Management Practices for Protection of Surface Waters will be strictly enforced during project construction. Under the conditions described herein, permanent impacts to water quality associated with this project would be negligible.

#### 5.1.4 Jurisdictional Issues

##### 5.1.4.1 Streams

Nineteen jurisdictional and one ephemeral streams were identified in the study area (see Table 14). The location of these streams is shown on Figures 10A-B. All jurisdictional streams in the study area have been designated as warm water streams for the purposes of stream mitigation.

**Table 14. Jurisdictional characteristics of water resources in the study area**

Map ID	Classification	Compensatory Mitigation Required	River Basin Buffer Rules	Alt 2A Impacts
SA	Perennial	Yes	Subject	0
SB	Perennial	Yes	Subject	182
SC	Intermittent	Undetermined	Not Subject	91
SD	Intermittent	Undetermined	Subject	138
SE	Intermittent	Undetermined	Not Subject	0
SF	Perennial	Yes	Not Subject	248
SG	Intermittent	Undetermined	Subject	208
SH	Intermittent	Yes	Not Subject	37
SI	Perennial	Yes	Subject	875
SJ	Intermittent	Yes	Not Subject	0
SL	Intermittent	Undetermined	Not Subject	0
SM	Intermittent	Yes	Subject	500
SN	Intermittent	Yes	Subject	0
SO	Intermittent	Undetermined	Not Subject	97
SP	Ephemeral	Undetermined	Subject	0
SQ	Intermittent	Yes	Subject	0
SR	Perennial	Yes	Subject	379
SS	Intermittent	Undetermined	Subject	0
ST	Intermittent	Yes	Not Subject	297
SZZ	Intermittent	Undetermined	Not Subject	0
			Total	3,070

Stream SP was determined to be ephemeral using the NCDWQ Stream Identification Form; however, it is depicted as intermittent on the USGS Selma quadrangle map.

**Table 15. Stream Impacts of Alternatives Studied in Detail**

Stream Name	NRTR Map ID	Length of Impact (feet) by Alternative			
		1A	1B	2A	2B
Reedy Branch, including pond (PA) <sup>1</sup>	SA	0	0	0	0
Little Poplar Creek <sup>1</sup>	SB	182	182	182	182
UT to Little Poplar Creek	SC	91	91	91	91
UT to Little Poplar Creek <sup>1</sup>	SD	138	138	138	138
UT to Little Poplar Creek	SE	0	0		
UT to Little Poplar Creek	SF	248	248	248	248
UT to Poplar Creek, including ponds (PB and PZZ) <sup>1</sup>	SG	990	990	208	208
UT to Poplar Creek	SH	0		37	37
Poplar Creek	SI	20	20	875	875
UT to Poplar Creek <sup>1</sup>	SJ	0	0	0	0
UT to Poplar Creek, including pond (PD)	SL	0	0	0	0
UT to Poplar Creek including pond (PH) <sup>1</sup>	SM	0	0	500	500
UT to Poplar Creek <sup>1</sup>	SN	0			
UT to Neuse River	SO	97	285	97	285
UT to Poplar Creek (ephemeral) <sup>1</sup>	SP	0	0	0	0
UT to Neuse River <sup>1</sup>	SQ	0	0	0	00
UT to Poplar Creek <sup>1</sup>	SR	379	193	379	193
UT to Poplar Creek <sup>1</sup>	SS	297	0	0	0
UT to Neuse River	ST	246	192	297	192
UT to Neuse River	SU	0	57	246	57
UT to Poplar Creek	SZZ	50	50	0	0
Other UT		320	320	0	0
<b>Total</b>		<b>3,060</b>	<b>2,450</b>	<b>3,300</b>	<b>3,010</b>

#### 5.1.4.2 Wetlands

Thirty-nine jurisdictional wetlands were identified within the study area (Figures 10A-B). Wetland classifications are presented in Table 15. All wetlands in the study area are within the Upper Neuse River basin (USGS Hydrologic Unit 03020201).

**Table 16. Jurisdictional characteristics of wetlands in the study area**

Map ID	NCWAM Classification	Hydrologic Classification	NCDWQ Wetland Rating	Area (ac.)	Alt. 2A Impacts
WA	Headwater Forest	Riparian	51	3.12	0
WB	Headwater Forest	Riparian	54	1.02	0.1
WC	Headwater Forest	Riparian	52	1.00	0
WD	Headwater Forest	Riparian	47	4.53	0.42

Map ID	NCWAM Classification	Hydrologic Classification	NCDWQ Wetland Rating	Area (ac.)	Alt. 2A Impacts
WE	Headwater Forest	Riparian	35	0.29	0.17
WF	Non-Tidal Freshwater Marsh	Riparian	19	0.02	0.02
WG	Headwater Forest	Riparian	29	0.75	0.1
WH	Headwater Forest	Riparian	23	0.58	0
WI	Headwater Forest/Non-Tidal Freshwater Marsh	Riparian	35	3.32	0
WJ	Headwater Forest	Riparian	35	1.26	0.01
WK	Hardwood Flat	Non-Riparian	50	5.08	3.92
WL	Headwater Forest	Riparian	44	3.81	0.77
WM	Headwater Forest	Riparian	44	0.03	0.03
WN	Hardwood Flat	Non-Riparian	12	14.81	0
WO	Non-Tidal Freshwater Marsh	Riparian	45	0.46	0
WP	Headwater Forest	Riparian	65	0.51	0
WQ	Headwater Forest	Riparian	49	0.18	0
WR	Headwater Forest	Riparian	46	9.79	0
WS	Hardwood Flat	Non-Riparian	44	0.79	0
WT	Non-Tidal Freshwater Marsh	Riparian	30	0.12	0
WU	Headwater Forest	Riparian	40	0.72	0.43
WV	Headwater Forest	Riparian	33	2.00	0
WX	Headwater Forest	Riparian	65	2.03	0
WY	Headwater Forest	Riparian	31	0.11	0
WZ	Non-Tidal Freshwater Marsh	Riparian	31	0.49	0.65
WAA	Headwater Forest	Riparian	43	0.72	0
WBB	Hardwood Flat	Non-Riparian	19	1.53	0
WCC	Hardwood Flat	Non-Riparian	23	0.64	0
WDD	Headwater Forest	Riparian	38	0.37	0.14
WEE	Hardwood Flat	Non-Riparian	27	0.43	0
WFF	Headwater Forest	Riparian	27	0.09	0
WGG	Headwater Forest/Non-Tidal Freshwater Marsh	Riparian	50	1.54	0.65
WHH	Non-Tidal Freshwater Marsh	Riparian	32	0.17	0
WII	Headwater Forest	Riparian	31	0.73	0.27
WUU	Headwater Forest	Riparian	23	1.29	0
WVV	Headwater Forest	Non-Riparian	32	0.41	0
WXX	Headwater Forest	Riparian	34	0.12	0
WYY	Headwater Forest	Riparian	31	0.43	0
WZZ	Headwater Forest	Riparian	31	0.05	0
<b>Total</b>					<b>7.7</b>

### Impacts

As shown in Tables 15 and 16 above, the project will result in 3,070 linear feet of jurisdictional stream and 7.6 acres of wetland impacts.

#### 5.1.4.3 Clean Water Act Permits

It is anticipated a Section 404 Individual Permit will be required for this project. The Corps of Engineers will determine the applicable permit required to authorize project construction.

A North Carolina Division of Water Resources Section 401 Water Quality Individual Certification will be required prior to issuance of the Section 404 permit. Other required 401 certifications may include a GC 3366 for temporary construction access and dewatering.

#### 5.1.4.4 North Carolina Riparian Buffer Rules

Streamside riparian zones within the study area are protected under provisions of the Neuse River Buffer Rules administered by NCDWQ. Table 14 indicates which streams are subject to buffer rule protection.

### Impacts

The project will result in 43,990 and 28,750 square feet of Zone 1 and Zone 2 riparian buffers, respectively.

#### 5.1.5 Rivers and Harbors Act, Section 10 Navigable Waters

There are no water bodies within the study area designated as Section 10 Navigable Waters.

#### 5.1.6 Avoidance, Minimization, and Mitigation

The proposed project involves improvements to an existing facility. Wetlands and streams are located near existing US 70. Total avoidance of wetlands and streams is not possible.

In order to reduce stream and wetland impacts along the western end of the project, Service Roads 1A and 2 were realigned closer to US 70, utilizing a concrete barrier to provide the separation. These minimization efforts reduced the stream and wetland impacts of the project by 230 feet and 1.0 acres, respectively.

Where practical and safe, steeper slopes (no greater than 3:1) will be utilized along the project. During project design, special consideration will be given to slopes in wetland areas and near streams.

On June, 15, 2016, the interagency team of state and federal resource agencies (NEPA/404 Merger Team) concurred with the avoidance and minimization measures for the proposed project. A copy of the concurrence form is included in Appendix A.

The NCDOT will investigate potential on-site stream and wetland mitigation opportunities, as needed. If on-site mitigation is not feasible, mitigation will be provided by the NC Department of Environmental Quality (NCDEQ) Division of Mitigation Services (DMS).

#### 5.1.7 Federally-Protected Species

As of December 13, 2013, the United States Fish and Wildlife (USFWS) lists four federally protected species for Johnston County (see Table 16).

**Table 17. Federally protected species listed for Johnston County**

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Picoides borealis</i>	Red cockaded woodpecker	E	No	No Effect
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	E	Yes	No Effect
<i>Elliptio steinstansana</i>	Tar River spiny mussel	E	Yes	No Effect
<i>Rhus michauxii</i>	Michaux's sumac	E	Yes	No Effect

Suitable habitat for the red-cockaded woodpecker does not exist within the study area. There are no stands of pine within the project area that have trees of the size and age required for nesting, nor is there appropriate foraging habitat. Additionally, the North Carolina Natural Heritage Program (NCNHP) GIS data files (July 2013) have no records of any populations of this species within a one-mile radius of the study area. It is expected the project will have no effect on the red-cockaded woodpecker.

Sections of Reedy Branch and Little Poplar Creek meet the habitat requirements for the dwarf wedgemussel and Tar River spiny mussel. No individuals of these species were identified during the onsite investigations conducted in July 2014. A review of NCNHP GIS data files (March 2016), indicates no known dwarf wedgemussel or Tar River spiny mussel occurrences within one mile of the study area. Dwarf wedge mussel are known to occur in Swift Creek approximately three miles to the south of the project area. It is expected the project will have no effect on either the dwarf wedgemussel or the Tar River spiny mussel.

Suitable habitat for Michaux's sumac is present in the study area along roadside shoulders and utility easements. Surveys were conducted by biologists throughout areas of suitable habitat during June and July 2013 and October 2013. No individuals of Michaux's sumac were observed. A review of North Carolina Natural Heritage Program (NCNHP) GIS data files (March 2016) indicates no known occurrences within one mile of the study area. It is expected the project will have no effect on Michaux's sumac.

#### 5.1.7.1 Northern Long-eared bat

On October 2, 2013, the U.S. Fish and Wildlife Service (FWS) proposed the northern long-eared bat (*Myotis septentrionalis*) for listing as endangered under the Endangered Species Act (ESA). The northern long-eared bat was officially listed as threatened under the Endangered Species Act April 2, 2015.

The U.S. Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration, the U.S. Army Corps of Engineers and NCDOT for the northern long-eared bat in eastern North Carolina. The PBO provides incidental take coverage for the NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1 through 8, which includes Johnston County. This level of incidental take is authorized from the effective date of a final listing determination through April 30, 2020. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect."

#### 5.1.8 Bald Eagle and Golden Eagle Protection Act

The bald eagle was declared recovered, and removed (de-listed) from the USFWS Federal List of Threatened and Endangered Species effective August 8, 2007. The bald eagle remains federally protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Species Act.

Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within one mile of open water. Mature forests and large dominant trees do not occur within the study area or within a 1.13 mile radius (one mile plus 660 feet). A review of the NCNHP database in March 2016 showed no occurrences of bald eagle within two miles of the study area.

## 5.2 Community Impacts and Land Use

The project study area is located within the southern boundary of the Town of Wilson's Mills. The town of Clayton lies to the west of the study area and the neighboring towns of Smithfield and Selma lie to the immediate east of the project study area. The project study area is rural in nature and is surrounded by a mix of residential, agricultural, institutional/governmental, and commercial/industrial land uses.

### 5.2.1 Population and Land Use

#### 5.2.1.1 Minority/Low-Income Populations

Title VI of the Civil Rights Act of 1964, protects individuals from discrimination on the grounds of race, age, color, religion, disability, sex, and national origin. Executive Order 12898 provides that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high

and adverse human health or environmental effects on minority and low-income populations. Special populations may include the elderly, children, the disabled, low-income areas, American Indians and other minority groups.

Non-white individuals comprise approximately 43 percent of the population of Census Tract 409.01, Block Group 2, compared to approximately 22 percent of the population of Johnston County. These data indicate that an Environmental Justice population is present in the Demographic Study Area. However, the census block group is large and includes areas that are far removed from the US 70 corridor. Wilson's Mills officials noted there may be minority populations in subdivisions in proximity to the proposed Wilson's Mills Road interchange (northwest quadrant).

In Census Tract 409.01, Block Group 2, 28.2 percent of residents were below the poverty level, and 11.8 percent of residents were very poor (incomes less than 50 percent of the poverty level), compared to 16.1 percent and 6.2 percent, respectively, of Johnston County.

During site visits, several additional areas with minority or low-income populations were identified in proximity to the US 70 corridor. The Adelphos mobile home park, with approximately six homes, is on the north side of Sadisco Road. This mobile home park also includes a potential low-income population. The mobile home park would not be directly impacted by closure of the US 70 median opening at Sadisco Road. Access to US 70 for this neighborhood will be provided via US 70 Business and the eastward extension of Sadisco Road, connecting it to the US 70/Swift Creek Road interchange.

A public meeting was held for the project on February 2, 2016. The meeting was advertised in local news media. Newsletters were mailed to property owners and residents in the project area based off of a mailing listed developed from the most recent Johnston County GIS property data.

Based on the public involvement process and studies conducted, the proposed project has been implemented in accordance with Executive Order 12898.

#### 5.2.1.2 Limited English Proficiency Populations

The presence of Limited English Proficiency (LEP) populations in the study area was determined in order to inform the public involvement process. LEP populations are defined as individuals who speak English less than very well. LEP populations within the project study area meet or exceed the U.S. Department of Justice's Safe Harbor Thresholds. As a means to ensure outreach to LEP populations within the study area, the project newsletters distributed in May 2013 and January 2015 consisted of English and Spanish text.

#### 5.2.1.3 Existing Land Use Plans and Regulations

The Town of Wilson's Mills does not have an adopted land use plan. The area surrounding the Town of Wilson's Mills, is considered a "Primary Growth Area" according to the *Johnston County 2030 Comprehensive Plan*, adopted in March 2009. The area is

one of the areas identified as best suited to accommodate development and growth. This is primarily due to the completion of the US 70 Clayton Bypass, which sends travelers around Clayton and ends at the beginning of the subject project. However, substantial development has yet to materialize.

The proposed interchanges are consistent in concept with local plans for the US 70 corridor.

#### 5.2.1.4 Zoning and Future Land Use

The Town developed a new "General Business" (GB) zoning district to apply along the US 70 corridor (within 500 feet). Properties were rezoned to GB based on property owner consent. It is assumed the primary land use along the US 70 corridor will be commercial, while residential land uses will continue to develop behind the commercial uses and along the intersecting roadways.

The project has the potential to influence the location of development along the US 70 corridor. The modification of two signalized intersections to interchanges will create new land use nodes, because the interchanges would be more conducive to non-residential, highway oriented commercial development. There are a number of large tracts adjacent to the proposed interchanges and along the proposed service roads. However, the project is not likely to attract development to the area because of the limited scope of the proposed project.

### 5.2.2 Neighborhoods and Communities

#### 5.2.2.1 Community / Neighborhood Cohesion and Stability

There were no specific signs or indicators of community cohesion observed within the project area. Therefore, the project will not have negative impacts to community cohesion or stability.

#### 5.2.2.2 Impacts to Mobility and Access

Current access to the Town of Wilson's Mills and the properties surrounding US 70 are via direct connections at the at-grade intersections within the project study area. The project will convert US 70 to a freeway, which includes full control of access. Access to US 70 and areas north and south of US 70 will be limited to Swift Creek Road and Wilson's Mills Road and the proposed service roads. The addition of the service roads minimizes the overall access impacts of the project. This will result in minor changes to existing travel patterns throughout the project study area. However, the project will enable Swift Creek Road and Wilson's Mills Road to function as the primary access routes to Wilson's Mills from points south.

#### 5.2.2.3 Economic and Business Resources

The primary commercial resources within the project study area are located in the

vicinity of Uzzle Industrial Drive, along Sadisco Road, and at the Wilson's Mills Road intersection. These areas currently have direct access to US 70 via at-grade intersections. Following construction of the proposed project, access to these commercial areas will change and be via interchanges and service roads, resulting in minor access impacts to businesses. The closure of the at-grade intersections will also result in changes to access to agricultural areas along the north and south sides of US 70. Farmers who must cross US 70 to reach farm fields will now have to travel via service roads and one of the interchanges to cross over US 70. This will result in longer travel times.

The construction of the project will result in the displacement of two businesses.

#### 5.2.2.4 Impacts to Community Safety and Emergency Response

Primary emergency services within the study area are provided by Wilson's Mills Fire Station Number 1, located approximately three-quarters of a mile north of US 70. EMS access to areas north of US 70 will not be impacted by the project. However, EMS access from Wilson's Mills Fire Station Number 1 to the US 70 corridor and areas south of US 70 will be limited to Swift Creek Road and Wilson's Mills Road and the proposed service roads due. The project will have a minor impact on EMS response times.

#### 5.2.2.5 Other Public Facilities and Services

Three churches are located within the project area. Wilson's Mills Baptist Church is located immediately south of US 70 on Swift Creek Road. Wilson's Mills Church of God is located along Wilson's Mills Road, less than a quarter of a mile west of Swift Creek Road. Wilson's Mills Church is located along Wilson's Mills Road, approximately three-quarters of a mile northeast of the US 70/Swift Creek Road intersection. The project will not impact any of these community resources.

Two cemeteries are located within the project area. The Wilson's Mills Cemetery is located approximately 700 feet north of US 70 on the east side of Swift Creek Road and the Lassiter Cemetery is located just opposite of the Wilson's Mills Baptist Church on Swift Creek Road. Additional right-of-way will be required along Swift Creek Road north of US 70. The project will result in the relocation of 45 grave sites within the Wilson's Mills Cemetery. In relocating the grave sites, NCDOT will comply with NC General Statutes Chapter 65, Article 12, Part 4). The project will not impact the Lassiter Cemetery.

#### 5.2.3 Right-of-Way and Relocation Impacts

The project will result in the relocation of four residences and two businesses. None of the homes and businesses are minority-owned or occupied.

The relocation program for the project will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), and/or the North Carolina Relocation Assistance Act (GS-133-5 through 133-18). The NCDOT relocation program is designed to provide assistance to

displaced persons in relocating to a replacement site in which to live or do business. Appendix B contains copies of the relocation reports prepared for the project.

### **5.3 Cultural Resources**

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, 36 CFR Part 800. Section 106 requires federal agencies to take into account the effect of their undertakings (federally-funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council a reasonable opportunity to comment on such undertakings.

#### **5.3.1 Historic Architectural Resources**

Twenty-six architectural resources fifty years in age and older were identified and evaluated within the project's area of potential effect. No National Register of Historic Places (NRHP)-listed or eligible properties are present.

#### **5.3.2 Archaeological Resources**

Eight archaeological resources (one previously recorded site and seven newly identified sites) and three historic cemeteries were documented. None of these sites exhibit the qualities necessary to be recommended as eligible for the National Register of Historic Places per Criteria A through D. Grave locations within one of the historic cemeteries (Wilson's Mills Cemetery [Site 31JT419\*\*]) will be impacted by the proposed project.

### **5.4 Section 4(f) Resources**

Section 4(f) of the Department of Transportation (DOT) Act, as amended, stipulates that publicly owned land from a park, recreation area, wildlife or waterfowl refuge, or land of a significant historic site may be used for federal projects only if there is no feasible and prudent alternative and all possible planning to minimize harm resulting from such use is included in the project.

No properties protected under Section 4(f) of the Department of Transportation Act, as amended will be impacted by the project.

### **5.5 Section 6(f) Resources**

Section 6(f) of the Land and Water Conservation Fund Act of 1965 (LWCF) protects grant-assisted areas from conversion to uses other than the original intended purpose. No public parks or recreation areas funded with LWCF monies were identified in the study area. Therefore, the project will not impact any Section 6(f) resources.

## 5.6 Prime Farmlands

The Farmland Protection Policy Act (FPPA) of 1981 requires all federal agencies or their representatives to consider the impact on prime and important farmland of all construction and land acquisition projects. According to the FPPA, "farmland" includes prime farmland, unique farmland, and farmland that is determined to be of local or statewide importance.

North Carolina Executive Order Number 96 requires all state agencies to consider the impact of land acquisition and construction projects on prime farmland soils, as designated by the US Natural Resources Conservation Service (NRCS). Land which is planned or zoned for urban development is not subject to the same level of preservation afforded other rural, agricultural areas.

Prime and important farmland soils are located in the proposed right-of-way. In accordance with the FHWA Guidelines for Implementing the Final Rule of the Farmland Protection Policy Act for Highway Projects, a preliminary assessment of farmland conversion impacts in the project area has been completed (Part VI of the NRCS Farmland Conversion Impact Rating Form AD 1006) and a score of 46 points out of 160 total was calculated. Because the total site assessment score does not exceed the 60-point threshold established by NRCS, this indicates a notable impact on protected farmland soils is not anticipated as a result of the project.

### Impacts

The project will impact approximately 60.4 acres of prime farmland soils.

No properties participating in Johnston County's Voluntary Agricultural District program were identified in the study area.

## 5.7 Air Quality

Air pollution originates from various sources. Emissions from industry and internal combustion engines are the most prevalent sources. The impact resulting from highway construction ranges from intensifying existing air pollution problems to improving the ambient air quality. Changing traffic patterns are a primary concern when determining the impact of a new highway facility or the improvement of an existing highway facility. Motor vehicles emit carbon monoxide (CO), nitrogen oxide (NO), hydrocarbons (HC), particulate matter, sulfur dioxide (SO<sub>2</sub>), and lead (Pb) (listed in order of decreasing emission rate).

The Federal Clean Air Act of 1970 established the NAAQS. These were established in order to protect public health, safety, and welfare from known or anticipated effects of air pollutants. The most recent amendments to the NAAQS contain criteria for sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub>, 10-micron and smaller, PM<sub>2.5</sub>, 2.5 micron and smaller), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), and lead (Pb).

The primary pollutants from motor vehicles are unburned hydrocarbons, NO<sub>x</sub>, CO, and particulates. Hydrocarbons (HC) and Nitrogen oxides (NO<sub>x</sub>) can combine in a complex series of reactions catalyzed by sunlight to produce photochemical oxidants such as ozone and NO<sub>2</sub>. Because these reactions take place over a period of several hours, maximum concentrations of photochemical oxidants are often found far downwind of the precursor sources. These pollutants are regional problems.

A project-level air quality analysis was prepared for this project. A copy of the unabridged version of the full technical report entitled Air Quality Analysis, "US 70 Improvements From West of SR 2565 (Sadisco Road) to West of SR 1915 (Turnage Road)" dated April 2016 is available for viewing at the Project Development and Environmental Analysis Unit, Century Center Building A, 1010 Birch Ridge Drive, Raleigh .

#### Mobile Source Air Toxics (MSAT)

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The

EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (<http://www.epa.gov/iris/>). In addition, EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA) (<http://www.epa.gov/ttn/atw/nata1999/>). These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules. The 2007 EPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOVES2010b model, even if vehicle activity (vehicle-miles travelled, VMT) increases by 102 percent as assumed, from 2010 to 2050, a combined reduction of 83 percent in the total annual emissions for the priority MSAT is projected for the same time period.

MSAT analyses are intended to capture the net change in emissions within an affected environment, defined as the transportation network affected by the project. The affected environment for MSATs may be different than the affected environment defined in the NEPA document for other environmental effects, such as noise or wetlands. Analyzing MSATs only within a geographically-defined "study area" will not capture the emissions effects of changes in traffic on roadways outside of that area, which is particularly important where the project creates an alternative route or diverts traffic from one roadway class to another. At the other extreme, analyzing a metropolitan area's entire roadway network will result in emissions estimates for many roadway links not affected by the project, diluting the results of the analysis.

### Incomplete or Unavailable Information for Project Specific MSAT Health Impact Analysis

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, [www.epa.gov/iris/](http://www.epa.gov/iris/)). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are; cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, <http://pubs.healtheffects.org/view.php?id=282>) or in the future as vehicle emissions substantially decrease (HEI, <http://pubs.healtheffects.org/view.php?id=306>).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed

action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (<http://pubs.healtheffects.org/view.php?id=282>). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA ([www.epa.gov/risk/basicinformation.htm#g](http://www.epa.gov/risk/basicinformation.htm#g)) and the HEI (<http://pubs.healtheffects.org/getfile.php?u=395>) have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

### Conclusion

Based on the qualitative analysis completed, for all detailed study alternatives in the design year it is expected there would be slightly higher MSAT emissions in the study area relative to the No Build Alternative due to the increased VMT. However, in considering the entire project study area, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause area-wide MSAT levels to be significantly lower than today. In comparing the

detailed study alternatives, MSAT levels could be higher in some locations than others, but current tools and science are not adequate to quantify them. However, in considering the entire project study area, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause area-wide MSAT levels to be significantly lower than today.

### Summary

Vehicles are a major contributor to decreased air quality because they emit a variety of pollutants into the air. Changing traffic patterns are a primary concern when determining the impact of a new highway facility or the improvement of an existing highway facility. New highways or the widening of existing highways increase localized levels of vehicle emissions, but these increases could be offset due to increases in speeds from reductions in congestion and because vehicle emissions will decrease in areas where traffic shifts to the new roadway. Significant progress has been made in reducing criteria pollutant emissions from motor vehicles and improving air quality, even as vehicle travel has increased rapidly.

The project is located in Johnston County, which has been determined to comply with the National Ambient Air Quality Standards. The proposed project is located in attainment areas for CO; therefore, 40 CFR Parts 51 and 93 are not applicable. This project is not anticipated to create any adverse effects on the air quality of these attainment areas.

## **5.8 Noise**

This section summarizes information contained in the *Noise Impacts Analysis Report* prepared for the proposed US 70 Improvements.<sup>1</sup> In accordance with Title 23 Code of Federal Regulations Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise (Title 23 CFR 772) and the North Carolina Department of Transportation Traffic Noise Abatement Policy, each Type I highway project must be analyzed for predicted traffic noise impacts. In general, Type I projects are proposed State or Federal highway projects for construction of a highway or interchange on new location, improvements of an existing highway which substantially changes the horizontal or vertical alignment or increases the vehicle capacity, or projects that involve new construction or substantial alteration of transportation facilities such as weigh stations, rest stops, ride-share lots or toll plazas.

Traffic noise impacts are determined through implementing the current Traffic Noise Model (TNM) approved by the Federal Highway Administration (FHWA) and following procedures detailed in Title 23 CFR 772, the NCDOT Traffic Noise Abatement Policy and the NCDOT Traffic Noise Analysis and Abatement Manual. When traffic noise impacts are predicted, examination and evaluation of alternative noise abatement measures must be considered for reducing or eliminating these impacts. Temporary and localized noise impacts will likely occur as a result of project construction activities. Construction noise control measures will be incorporated into the project plans and

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<sup>1</sup> Traffic Noise Analysis for the proposed US 70 Improvements. Prepared by Stantec Consulting Services Inc. June 2016.

specifications.

A copy of the unabridged version of the full technical report entitled *Traffic Noise Analysis-US 70 Improvements from west of SR 2565 (Sadisco Road) to West of SR 1915 (Turnage Road)-June 2016* can be viewed in the Project Development & Environmental Analysis Unit, Century Center Building A, 1000 Birch Ridge Drive, Raleigh.

#### Traffic Noise Impacts and Noise Contours

The maximum number of receptors in each project alternative predicted to become impacted by future traffic noise is shown in Table 18. The table includes those receptors expected to experience traffic noise impacts by either approaching or exceeding the FHWA Noise Abatement Criteria or by a substantial increase in exterior noise levels.

The maximum extent of the 71- and 66- dB(A) noise level contours measured from the center of the proposed roadway is approximately 150 feet and 250 feet, respectively.

**Table 18. Predicted Traffic Noise Impacts**

Alternative Description	Approximate # Of Impacted Receptors Approaching Or Exceeding Fhwa Nac <sup>2</sup>							Subst'l Noise Level Incr. <sup>3</sup>	Impacts Due To Both Criteria <sup>4</sup>	Total Impacts Per 23 Cfr 772
	A	B	C	D	E	F	G			
Existing	0	4	0	0	0	0	0	N/A	N/A	4 <sup>5</sup>
No-Build	0	5	0	0	0	0	0	0	0	5 <sup>5</sup>
Build Alternative 1A	0	14	0	0	0	0	0	1	1	14 <sup>5</sup>
Build Alternative 1B	0	14	0	0	0	0	0	1	1	14 <sup>5</sup>
Build Alternative 2A	0	14	0	0	0	0	0	1	1	14 <sup>5</sup>
Build Alternative 2B	0	14	0	0	0	0	0	1	1	14 <sup>5</sup>

<sup>1</sup>This table presents the number of build condition traffic noise impacts as predicted for the build condition alternatives and the no-build alternative presently under consideration. Refer to Appendix B of the TNA for a detailed analysis of traffic noise impacts at each noise sensitive receptor location.

<sup>2</sup> Predicted traffic noise level impact due to approaching or exceeding NAC.

<sup>3</sup> Predicted "substantial increase" traffic noise level impact.

<sup>4</sup> Predicted traffic noise level impact due to exceeding NAC and "substantial increase" in build condition noise levels.

<sup>5</sup> The total number of predicted impacts is not duplicated if receptors are predicted to be impacted by more than one criterion.

**No Build Alternative** – The Traffic Noise Analysis also considered traffic noise impacts for the "no-build" alternative. If the proposed project does not occur, five receptors are predicted to experience traffic noise impacts and the future traffic noise levels will increase by approximately one dBA.

Based upon research, humans barely detect noise level changes of 2-3 dBA. A 5-dBA change is more readily noticeable. Therefore, most people working and living near the roadway will not notice this predicted increase.

#### Traffic Noise Abatement Measures

Measures for reducing or eliminating the traffic noise impacts were considered for all impacted receptors in each alternative. The primary noise abatement measures

evaluated for highway projects include highway alignment changes, traffic system management measures, establishment of buffer zones, noise barriers and noise insulation (NAC D only). For each of these measures, benefits versus costs (reasonableness), engineering feasibility, effectiveness and practicability and other factors were included in the noise abatement considerations.

Substantially changing the highway alignment to minimize noise impacts is not considered to be a viable option for this project due to engineering and/or environmental factors. Traffic system management measures are not considered viable for noise abatement due to the negative impact they would have on the capacity and level of service of the proposed roadway. Costs to acquire buffer zones for impacted receptors will exceed the NCDOT base dollar value of \$37,500 plus an incremental increase of \$210 (as defined in the NCDOT Policy) per benefited receptor, causing this abatement measure to be unreasonable.

**Noise Barriers** – Noise barriers include two basic types: earthen berms and noise walls. These structures act to diffract, absorb and reflect highway traffic noise. For this project, earthen berms are not found to be a viable abatement measure because the additional right of way, materials and construction costs are estimated to exceed the NCDOT maximum allowable base quantity of 7,000 cubic yards, plus an incremental increase of 100 cubic yards per benefited receptor, as defined in the NCDOT Policy.

A noise barrier evaluation was conducted for this project utilizing the Traffic Noise Model (TNM 2.5) software developed by the FHWA. Table 19 summarizes the results of the evaluation.

The first potential barrier location evaluated is north of US 70, south of Wilson's Mills Road and west of Strickland Road. Based upon criteria defined in the NCDOT Traffic Noise Abatement Policy, a barrier at this location is not preliminarily justified and is not recommended for construction, contingent upon completion of the project design.

The second potential barrier location evaluated is south of US 70 and east of Swift Creek Road at Twin Creek Drive. Based upon criteria defined in the NCDOT Traffic Noise Abatement Policy, a barrier at this location is not preliminarily justified and is not recommended for construction, contingent upon completion of the project design.

The third potential barrier location evaluated is south of US 70 along Bear Farm Road. Based upon criteria defined in the NCDOT Traffic Noise Abatement Policy, a barrier at this location is not preliminarily justified and is not recommended for construction, contingent upon completion of the project design.

**Table 19. Preliminary Noise Barrier Evaluation Results**

Alternative (Noise Barrier Location)	Length / Height (feet)	Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Recommended for Construction <sup>1</sup>
NSA-1/-NW1- Alts. 1A, 1B, 2A, and 2B	2,580/14- 18	44,481	4	11,120/2,544	No
NSA-2/-NW2- Alts. 1A, 1B, 2A, and 2B	1,660/10- 12	19,841	5	3,968/2,556	No
NSA-3/-NW3- Alts. 1A, 1B, 2A, and 2B	1,840	33,123	4	8,280/2,549	No

Summary

A preliminary noise evaluation was performed and no noise barriers were identified that meet preliminary feasible and reasonable criteria found in the NCDOT Traffic Noise Abatement Policy. A more detailed analysis will be completed during project final design. Noise barriers found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis due to changes in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that were not considered feasible and reasonable may meet the established criteria and be recommended for construction. This evaluation completes the highway traffic noise requirements of Title 23 CFR Part 772.

In accordance with NCDOT Traffic Noise Abatement Policy, the Federal/State governments are not responsible for providing noise abatement measures for new development for which building permits are issued after the Date of Public Knowledge. The Date of Public Knowledge of the proposed highway project is the approval date of this Categorical Exclusion. For development occurring after this date, local governing bodies are responsible to insure that noise compatible designs are utilized along the proposed facility.

**5.9 Hazardous Materials and Geotechnical Impacts**

A hazardous material evaluation identified one underground storage tank (UST) facility within the study area and one likely UST site. The confirmed UST site (ID# 0-036319) is located at the Handy Mart at 3657 Wilson's Mills Road. The other potential UST site is located in the vicinity of the eastern end of Sadisco Road. The project is not likely to impact either site.

**5.10 Floodplains**

Johnston County is a participant in the National Flood Insurance Program. According to the Effective Flood Insurance Study and Digital Flood Insurance Rate Map obtained from the North Carolina Floodplain Mapping Program, Little Poplar Creek and Poplar

Creek are currently located in Federal Emergency Management Agency Detailed Study Areas. NCDOT will coordinate with the NC Floodplain Mapping Program, to determine the status of the project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent Letter of Map Revision (LOMR).

### **5.11 Indirect and Cumulative Effects**

The project is expected to improve mobility through the area, and cumulatively with other US 70 corridor projects, would contribute to improved mobility for the 134-mile US 70 corridor between I-40 and the Port of Morehead City, which is designated as the future Interstate 42.

The project has the potential to influence the specific location of development along the US 70 corridor, as the proposed interchange locations would be more conducive to non-residential, highway oriented commercial development. However, the project is not likely to attract development to the area.

When considered in combination with the US 70 Clayton Bypass, the project could play a role in influencing development in the area and into eastern Johnston County. However, the Johnston County 2030 Comprehensive Plan acknowledges development at the terminus of the Clayton Bypass, a freeway facility, will likely extend east of I-95, with or without the project. The contribution of the project to cumulative impacts resulting from future development is expected to be negligible.

### **5.12 Geodetic Markers**

NCDOT will coordinate with the N.C. Geodetic Survey prior to construction to identify any geodetic survey markers which will be impacted by the project. Any affected markers will be relocated before construction.

**5.13 Summary of Environmental Effects**

Table 20 provides a summary of the environmental effects of the NCDOT-recommended Alternative.

**Table 20: Summary of Environmental Effects**

Project Length (miles)		4.7
Relocations	Residential	4
	Business/non-profit	2
	Total Relocations	6
Minority/Low Income Populations - Disproportionate Impacts		No
Historic Architectural Properties (adverse effect)		No
Archaeological Resources		No
Community Facilities Impacted		1
Section 4(f) Impacts		N/A
Noise Impacts (impacted receptors)		14
Prime and Unique Farmlands (acres)		64.4
Wetland Impacts (acres)		7.7
Stream Impacts (linear feet)		3,070
Floodplain (acres)		0.1
Riparian Buffers (square feet)		72,740
Federally Protected Species		May Affect, likely to Adversely Effect
Cost	Right-of-Way Cost	\$8,275,000
	Utilities Cost	\$3,830,500
	Mitigation Cost	\$3,510,000
	Construction Cost	\$46,050,000
	Total Cost	\$61,665,500

+ Wilson's Mills Cemetery (45 grave sites impacted)

## 6.0 COMMENTS AND COORDINATION

### 6.1 Comments Received from Federal, State, and Local Agencies

In a scoping letter dated November 16, 2012, NCDOT requested input from the federal, state, and local agencies listed below. Written comments were received from agencies noted with an asterisk (\*). These comments are provided in Appendix A.

U.S. Army Corps of Engineers

U.S. Department of Agriculture – Forest Service

U.S. Department of Interior – Fish and Wildlife Service

U.S. Environmental Protection Agency

Federal Highway Administration

N.C. Department of Administration – State Clearinghouse

N.C. Department of Agriculture and Consumer Services – Agricultural Services

N.C. Department of Natural and Cultural Resources – Division of Archives and History

N.C. Department of Cultural Resources – State Historic Preservation Office

N.C. Department of Environmental Quality Natural Heritage Program

N.C. Department of Environmental Division of Water Resources\*

N.C. Division of Parks and Recreation

N.C. Wildlife Resources Commission\*

Johnston County

### 6.2 Local Officials Meeting and Public Involvement

A Local Officials Meeting was held at the Wilson's Mills Town Hall on February 2, 2016. NCDOT presented maps of each of the four detailed study alternatives. Based off of the impacts to businesses in the vicinity of the proposed Wilson's Mills Road interchange and concerns about connectivity and access along Swift Creek Road, on February 16, 2016, the Wilson's Mills Town Council passed a resolution in favor of Alternative 2A.

A Public Informational Meeting was held on February 2, 2016 at the Wilson's Mills Elementary School. Approximately 180 citizens attended the meeting. Alternatives 1A, 1B, 2A, and 2B were presented at the meeting. All of the meeting attendees were provided a meeting handout providing a description of each interchange option, impacts and costs of each alternative, project mapping and a comment sheet.

Seventy-seven comment forms were either submitted at the meeting or received via email or mail after the meeting. Table 21 provides a summary of the alternative preferences on the comment sheets received.

**Table 21: Public Meeting Alternative Preference Summary**

Alternative 1 A	Alternative 1B	Alternative 2A	Alternative 2B	No Preference
12	2	58	8	5

The primary concerns noted at the meeting and on the comment sheets are summarized below. Other concerns not listed included future land use changes and property values.

- Property Impacts/Relocations: Twelve comment forms noted concerns due to property impacts and relocations. Of primary concern was the potential impact of Wilson's Mills Interchange Option B, which is a component of Alternatives 1B and 2B, on the Handy Mart/White Swan restaurant and the Family Dollar store. Also, of concern was the potential relocation of elderly community members due to new location alignments. Citizens noting concern for the project's impact to businesses generally preferred either Alternative 1A or 2A.
- EMS Access and Response Times: Eleven comments were received expressing concern about EMS access and response times. Members of the Wilson's Mills Fire Department, including the Fire Chief, and citizens in attendance noted the project would have impacts to EMS routing and response times. The Wilson's Mills Fire Station is located north of US 70 and closing the at-grade crossings of US 70 would limit EMS routing to incidents south of US 70 to the new interchanges and the service roads. Most attendees noting concerns about EMS access selected Alternative 2A as their preference due to its use of existing Swift Creek Road.
- Access: Fourteen comment forms noted concern about changes to access. Citizens and business owners stated the project would have a direct impact on daily routines and access to and from businesses, schools, and other community resources. Attendees noted that Swift Creek Option 1, a component of Alternatives 1A and 1B, resulted in a much longer route for travel between the community resources on opposite sides of US 70. The single access proposed by the project to the Uzzle Industrial Park also gave concern. Business owners and community leaders noted additional travel time and transportation costs associated with single access to the industrial park could result in business closures or relocations. Comments received also expressed concerns related to extended travel times for farm equipment due to the removal of the at-grade intersections and new routing via service roads.

### **6.3 NEPA/404 MERGER PROCESS**

The NEPA/404 Merger Process is an interagency procedure integrating the regulatory requirements of Section 404 of the Clean Water Act into the National Environmental Policy Act decision making process. The merger process allows federal and state environmental regulatory and resource agencies to participate in the transportation decision making process. The NEPA/404 Merger Process is structured with milestones called "concurrence points" occurring at key decision points in the NEPA process.

The project is being developed through the NEPA/404 Merger Process. A merger screening meeting was conducted on July 17, 2014 and it was determined the project would enter the Merger Process at Concurrence Point 2A (bridging decisions). Concurrence Point 2A was reached on November 18, 2015.

The merger team concurred on Concurrence Point 3 (least environmentally damaging practicable alternative) and Concurrence Point 4A (avoidance and minimization measures) at a meeting held on June 15, 2016.

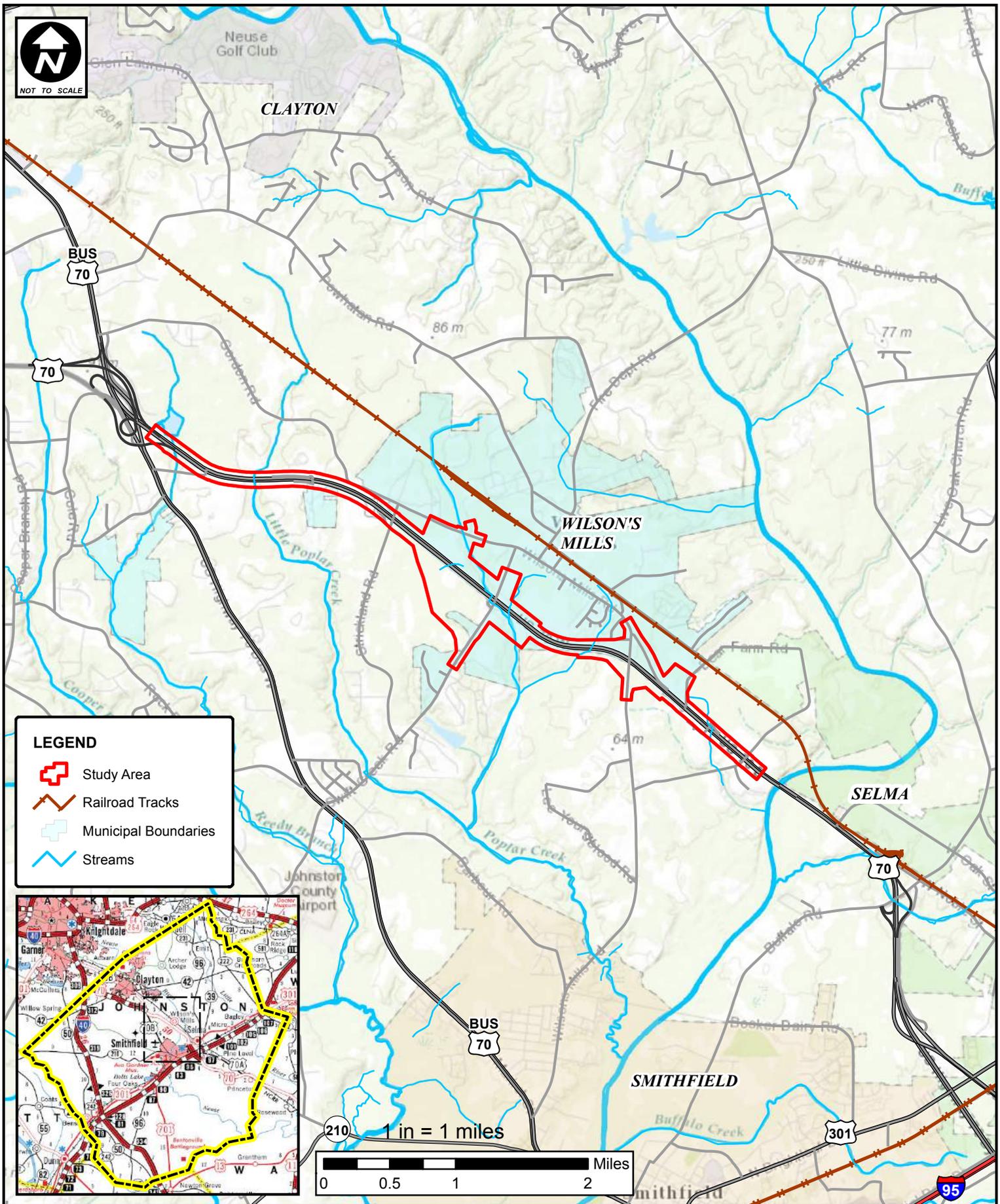
Copies of concurrence forms are included in Appendix A.

### **7.0 BASIS FOR CATEGORICAL EXCLUSION**

Based on the studies performed, it is concluded the proposed project will not result in significant social, economic or environmental impacts and the categorical exclusion classification, as defined in 40 CFR 1508.4 and 23 CFR 771.117, is appropriate.

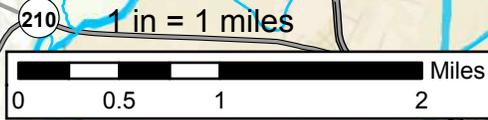
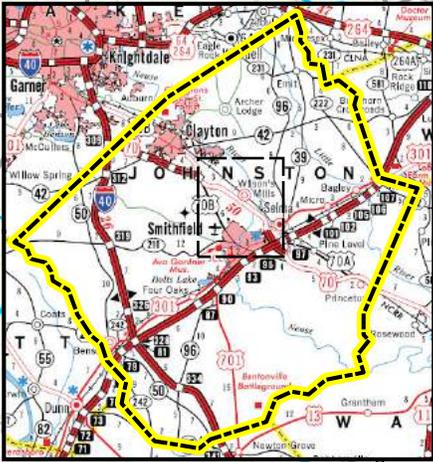


# Figures



**LEGEND**

- Study Area
- Railroad Tracks
- Municipal Boundaries
- Streams

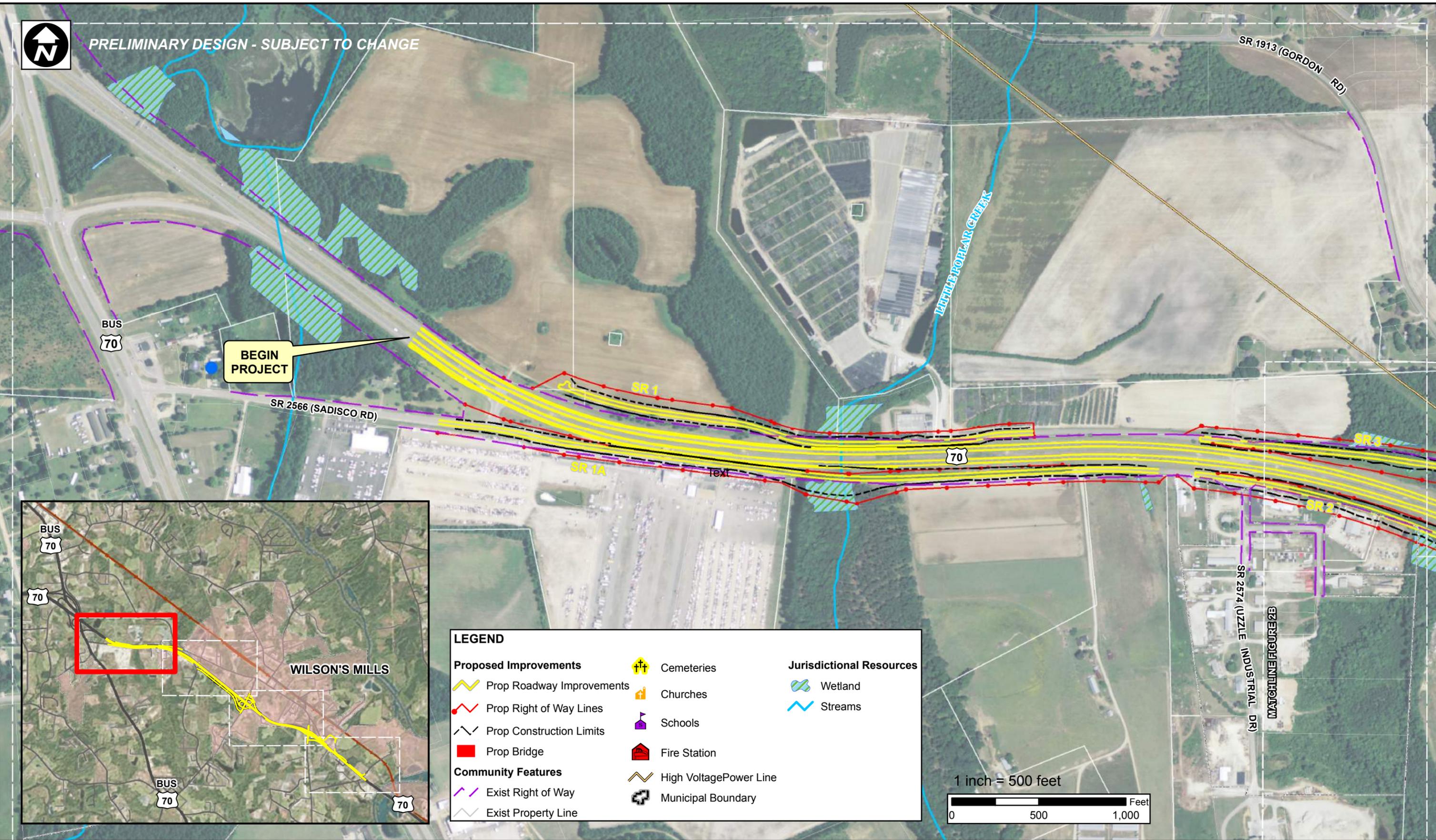


**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
**Johnston County**  
**TIP W-5600**

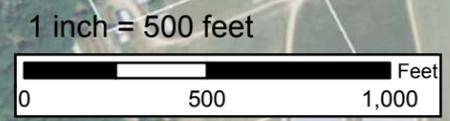
Figure 1  
Vicinity Map



PRELIMINARY DESIGN - SUBJECT TO CHANGE



LEGEND		
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	
Prop Bridge	Fire Station	
Exist Right of Way	High Voltage Power Line	
Exist Property Line	Municipal Boundary	



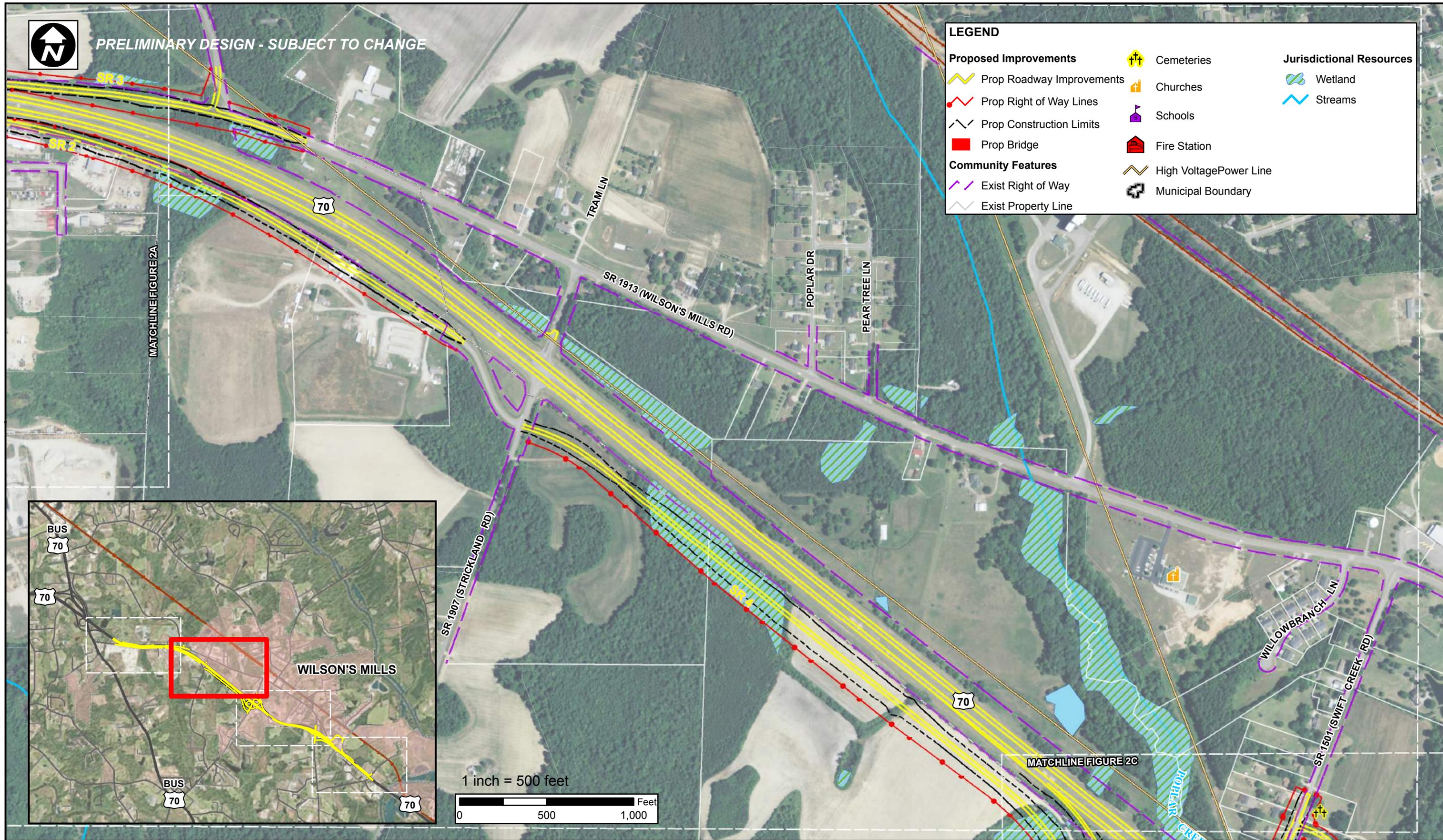
**US 70 Improvements**  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600

Figure 2A  
Proposed Improvements



PRELIMINARY DESIGN - SUBJECT TO CHANGE

LEGEND	
<b>Proposed Improvements</b>	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Wetland
Prop Right of Way Lines	Streams
Prop Construction Limits	Cemeteries
Prop Bridge	Churches
<b>Community Features</b>	Schools
Exist Right of Way	Fire Station
Exist Property Line	High Voltage Power Line
	Municipal Boundary



**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

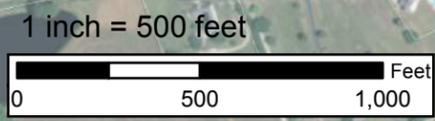
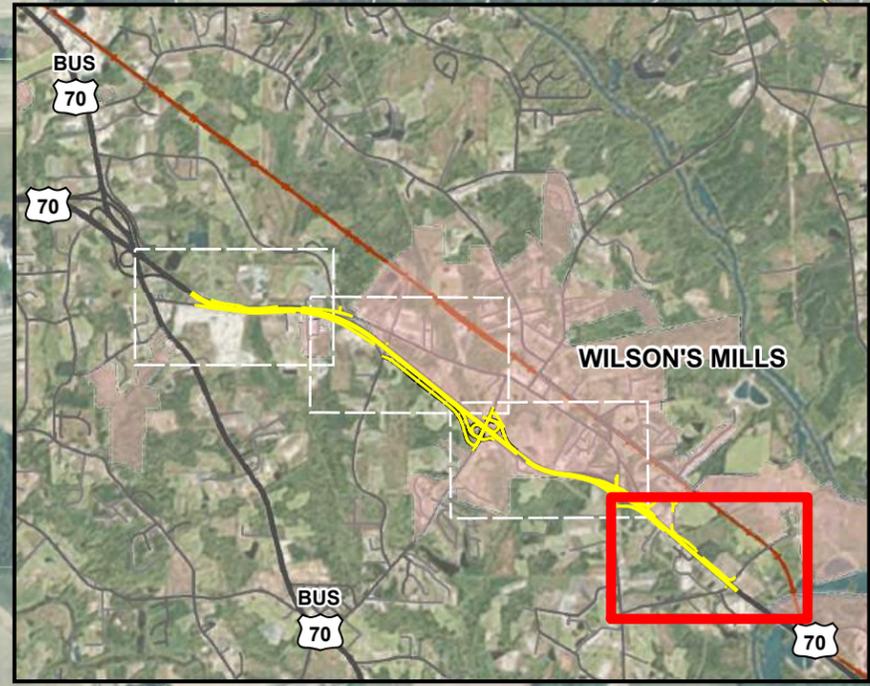
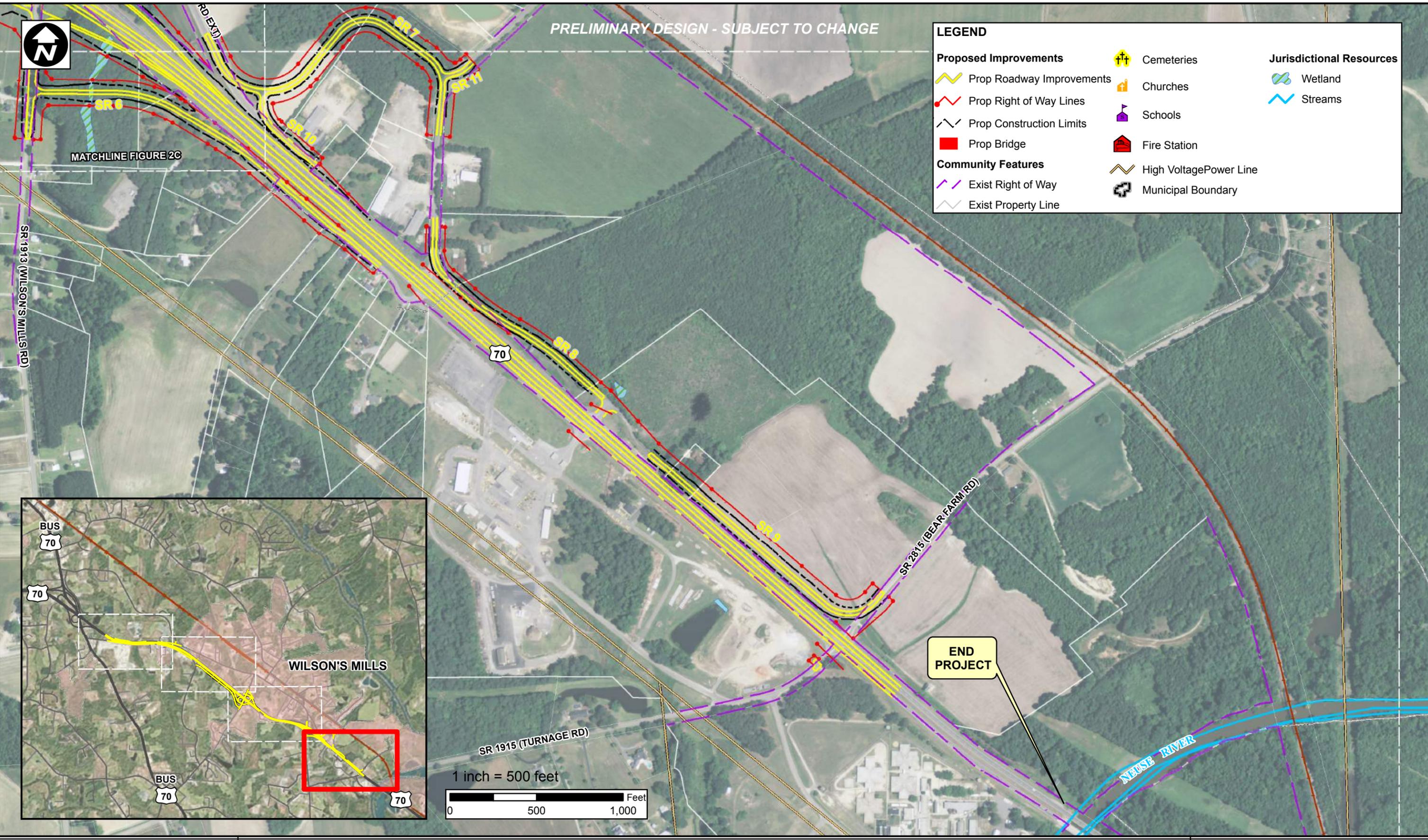
Figure 2B  
Proposed Improvements



PRELIMINARY DESIGN - SUBJECT TO CHANGE



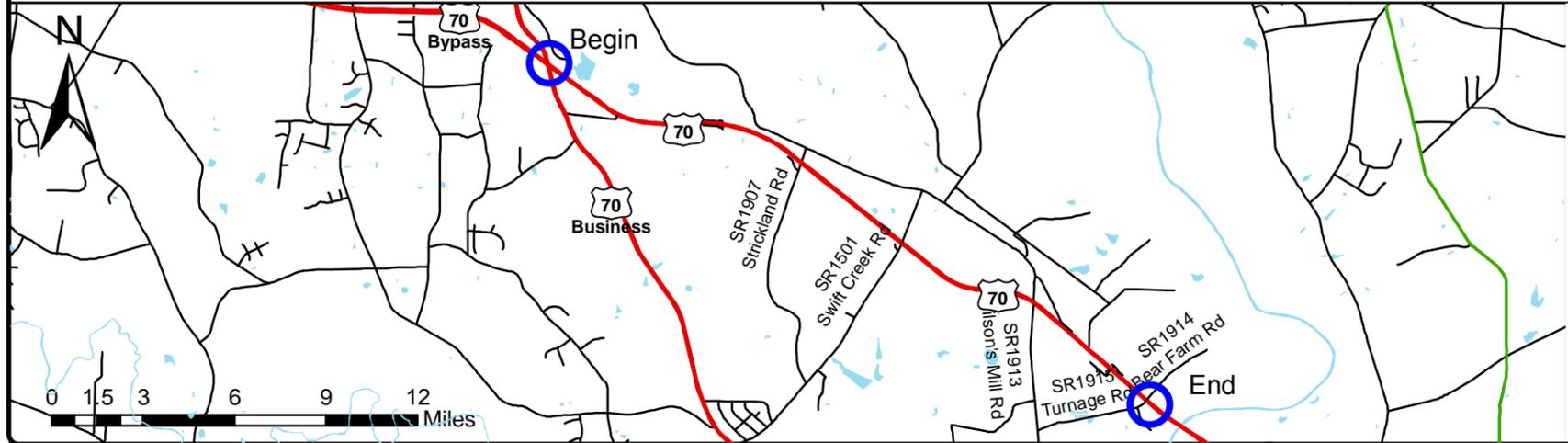
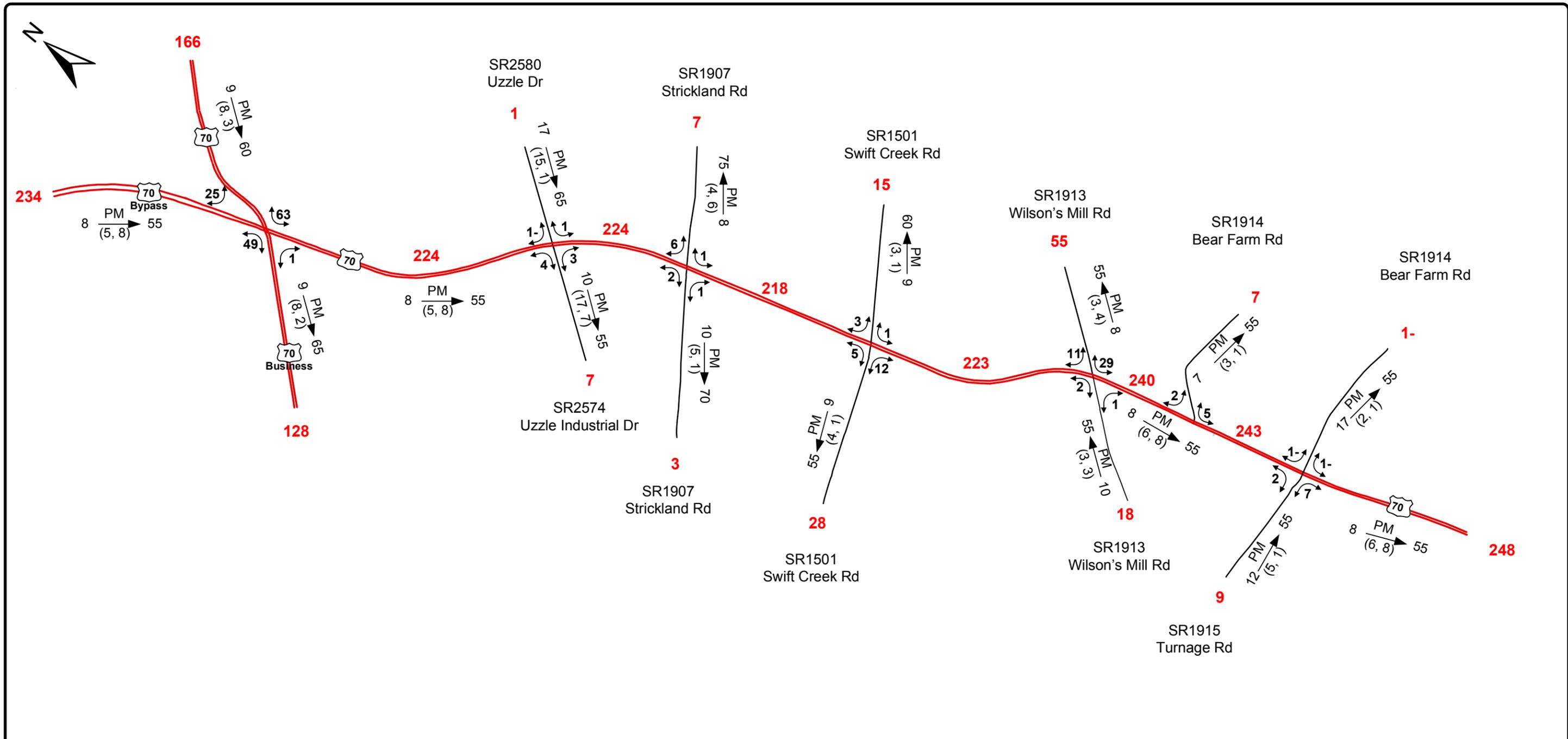
LEGEND	
<b>Proposed Improvements</b>	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries
Prop Right of Way Lines	Churches
Prop Construction Limits	Schools
Prop Bridge	Fire Station
<b>Community Features</b>	High Voltage Power Line
Exist Right of Way	Municipal Boundary
Exist Property Line	Wetland
	Streams



**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
**Johnston County**  
**TIP W-5600**

Figure 2D  
 Proposed Improvements





**2012** AVERAGE ANNUAL DAILY TRAFFIC **NO BUILD** **SHEET 1 OF 2**

**LEGEND**

### No. of Vehicles Per Day (VPD) in 100s  
 1- Less than 50 VPD  
 X Movement Prohibited  
 ..... Proposed Roadway

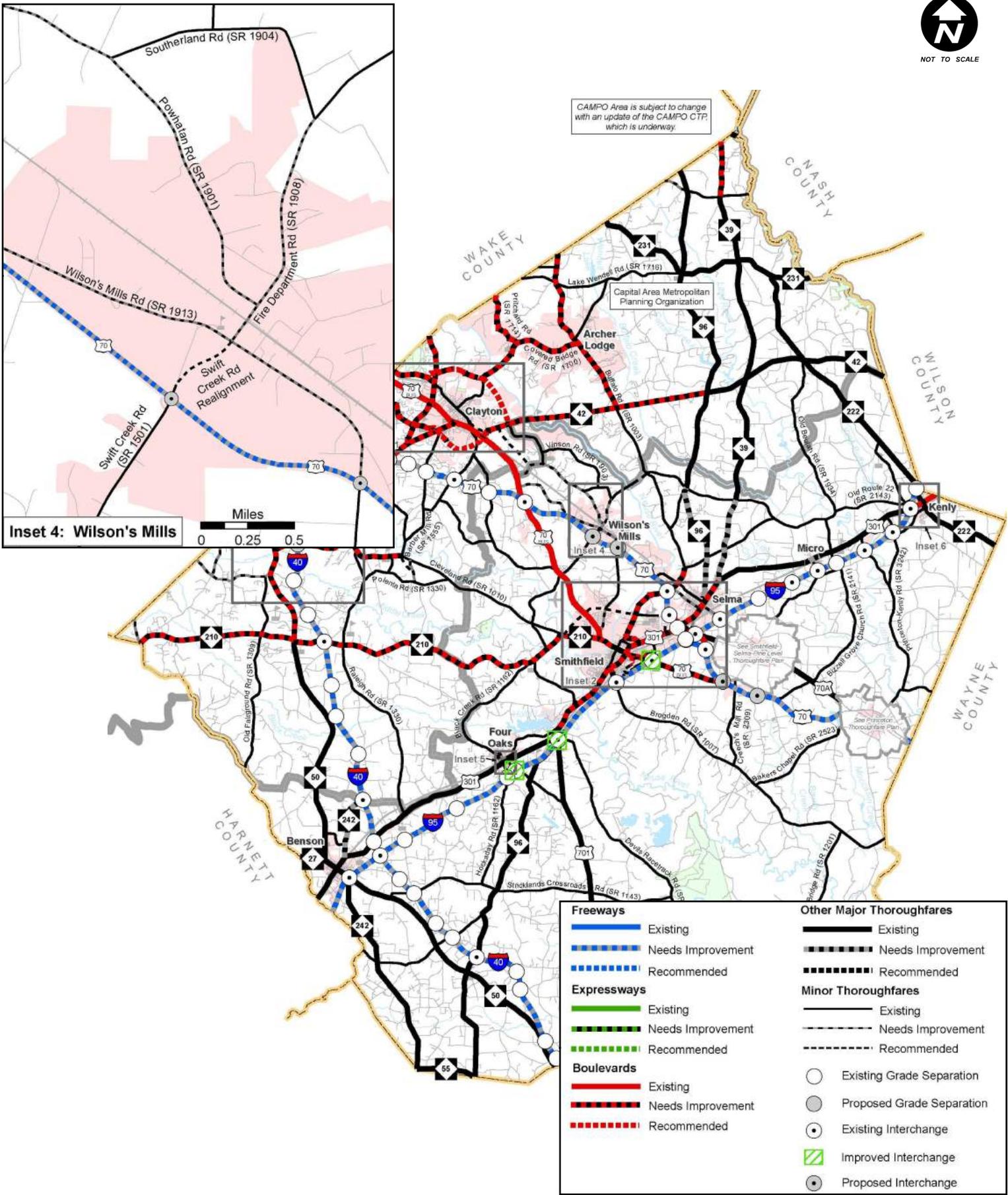
K (d, t) → D  
 K Design Hour Factor (%)  
 PM PM Peak Period  
 D Peak Hour Directional Split  
 → Indicates Direction of D  
 (d, t) Duals, TT-STs (%)

TIP: W-5600	WBS: 50056.1.1
COUNTY: Johnston	DIVISION: 4
DATE: 10-2-12	
PREPARED BY: Jamie Moore	
LOCATION: US70 from US70 Business the Neuse River Bridge	
PROJECT: US70 Improvements Figure 4A	



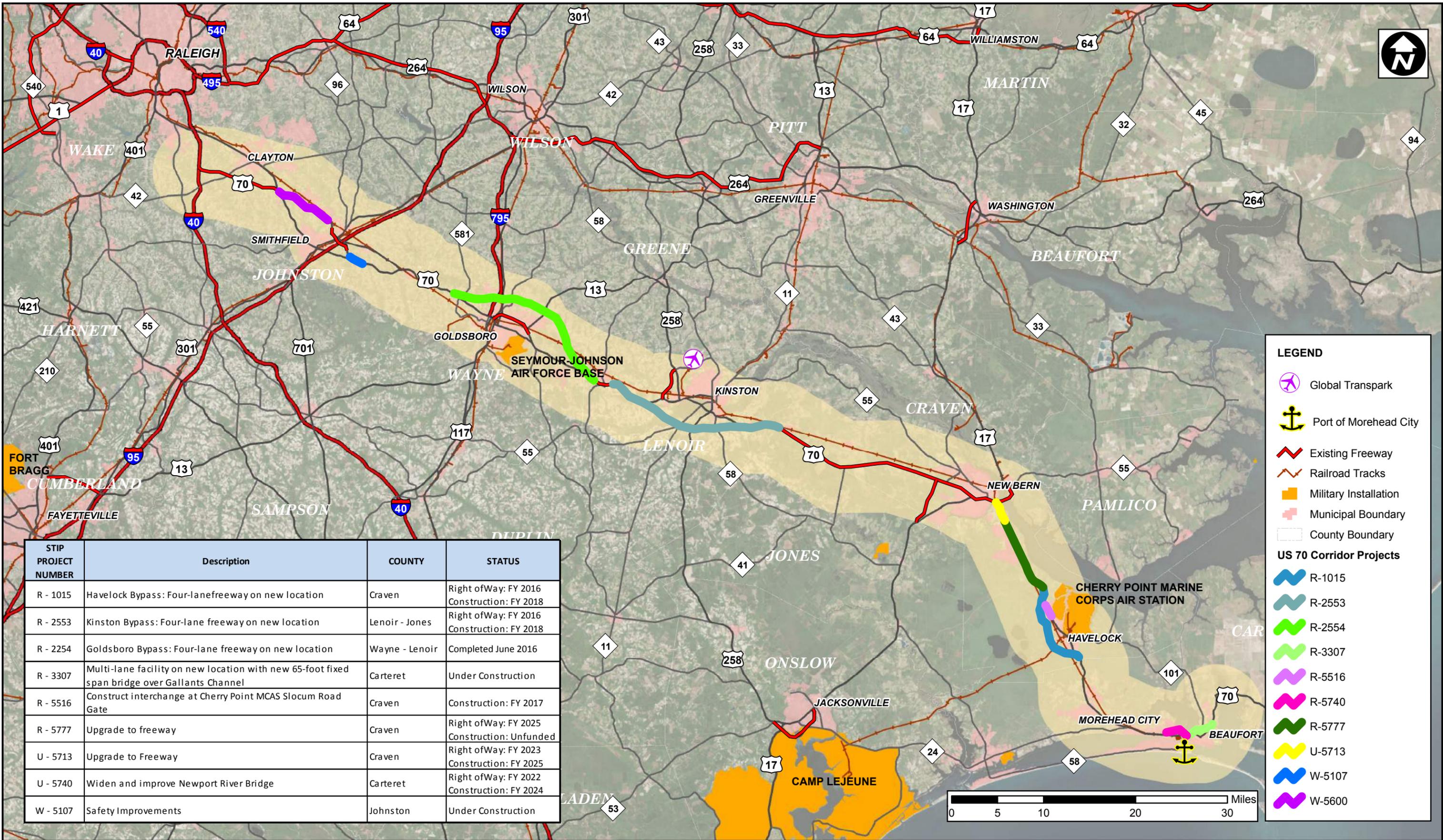


NOT TO SCALE



**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

**Figure 5  
Johnston County CTP**

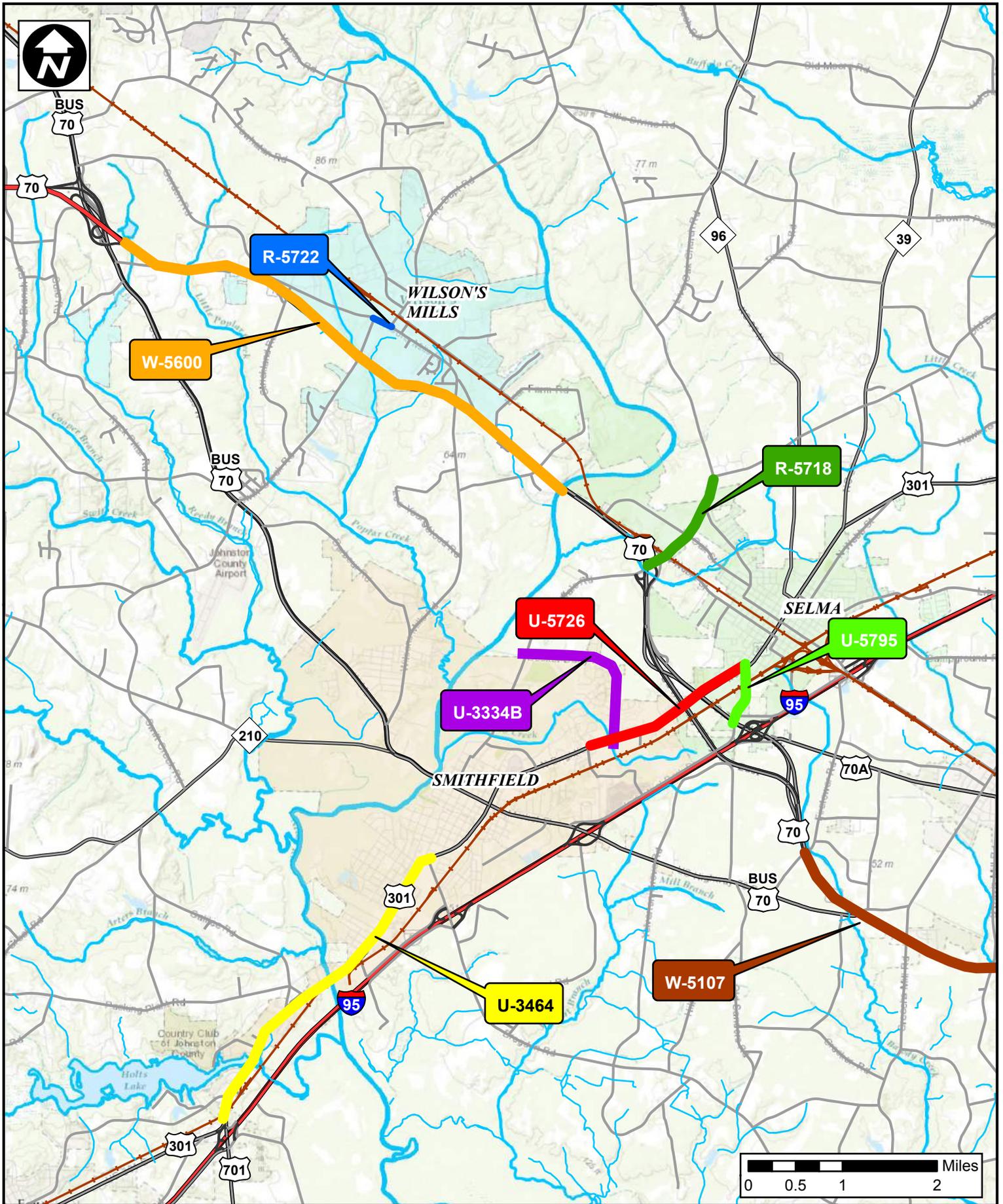


STIP PROJECT NUMBER	Description	COUNTY	STATUS
R - 1015	Havelock Bypass: Four-lane freeway on new location	Craven	Right of Way: FY 2016 Construction: FY 2018
R - 2553	Kinston Bypass: Four-lane freeway on new location	Lenoir - Jones	Right of Way: FY 2016 Construction: FY 2018
R - 2254	Goldsboro Bypass: Four-lane freeway on new location	Wayne - Lenoir	Completed June 2016
R - 3307	Multi-lane facility on new location with new 65-foot fixed span bridge over Gallants Channel	Carteret	Under Construction
R - 5516	Construct interchange at Cherry Point MCAS Slocum Road Gate	Craven	Construction: FY 2017
R - 5777	Upgrade to freeway	Craven	Right of Way: FY 2025 Construction: Unfunded
U - 5713	Upgrade to Freeway	Craven	Right of Way: FY 2023 Construction: FY 2025
U - 5740	Widen and improve Newport River Bridge	Carteret	Right of Way: FY 2022 Construction: FY 2024
W - 5107	Safety Improvements	Johnston	Under Construction

**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

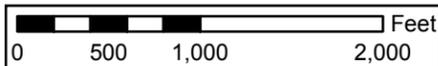
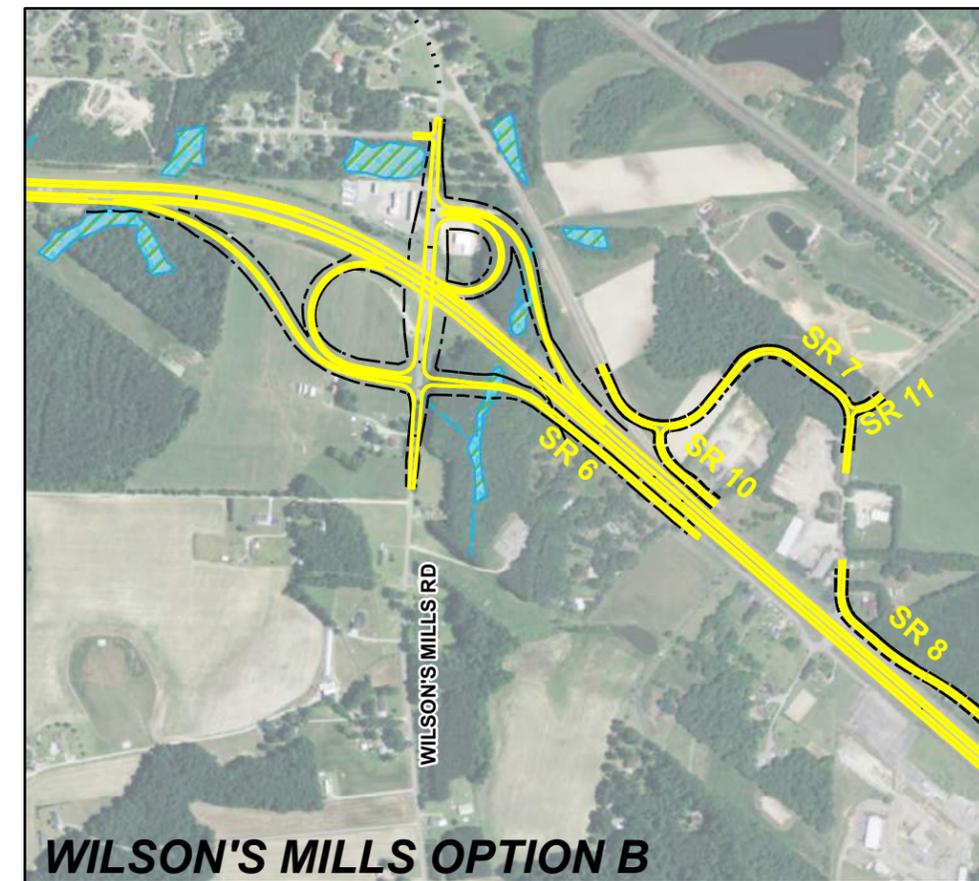
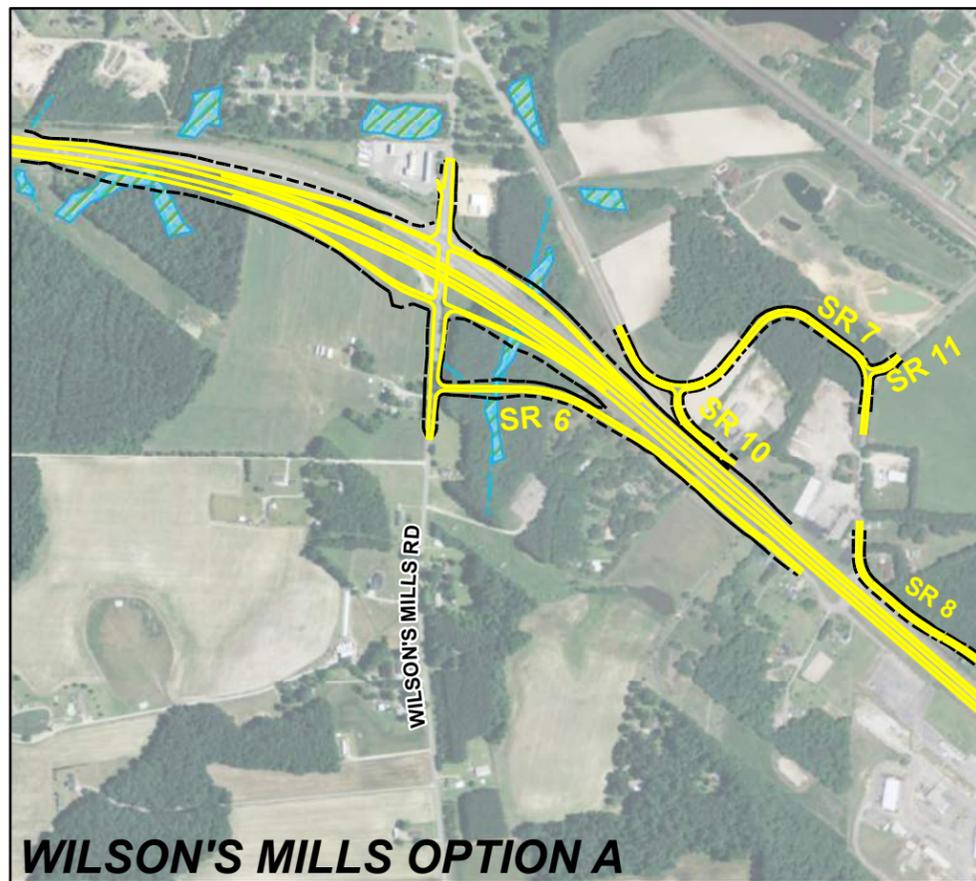
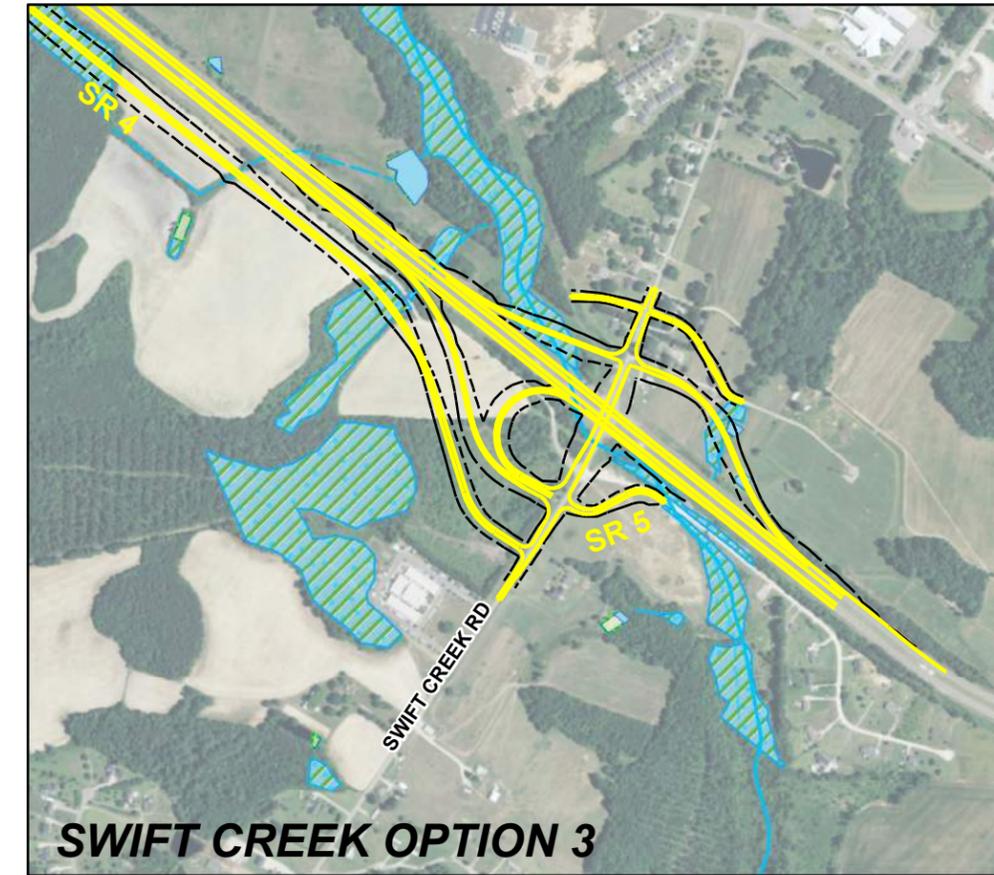
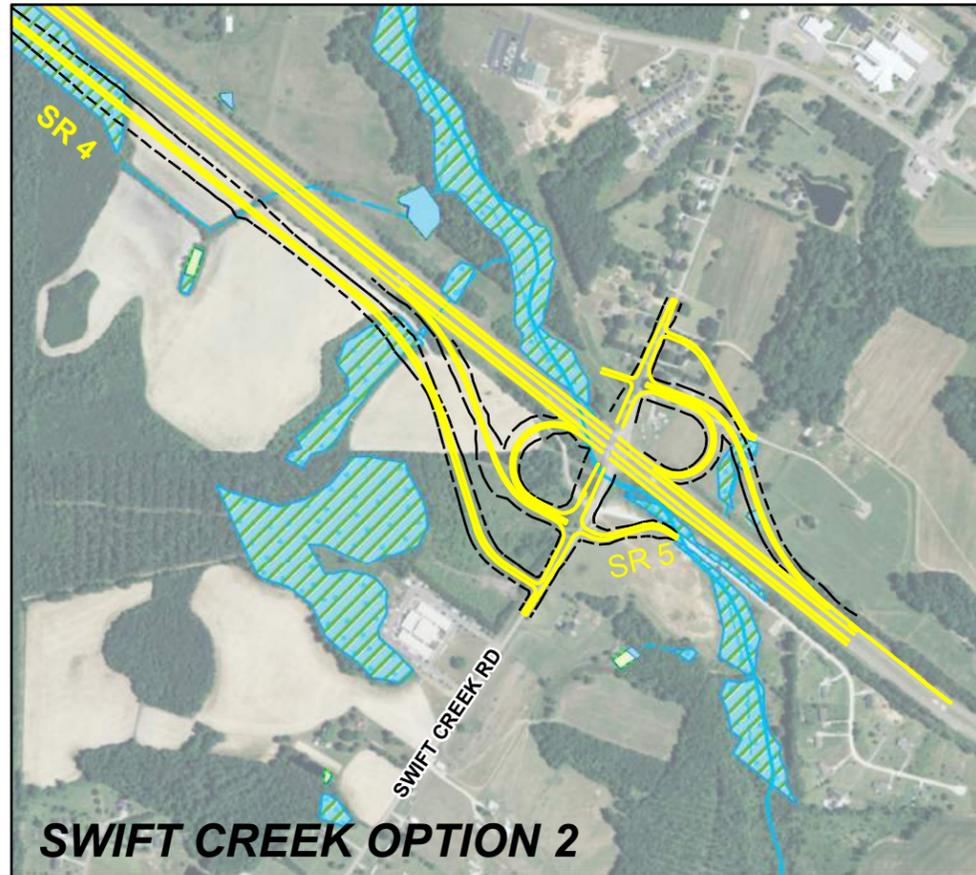
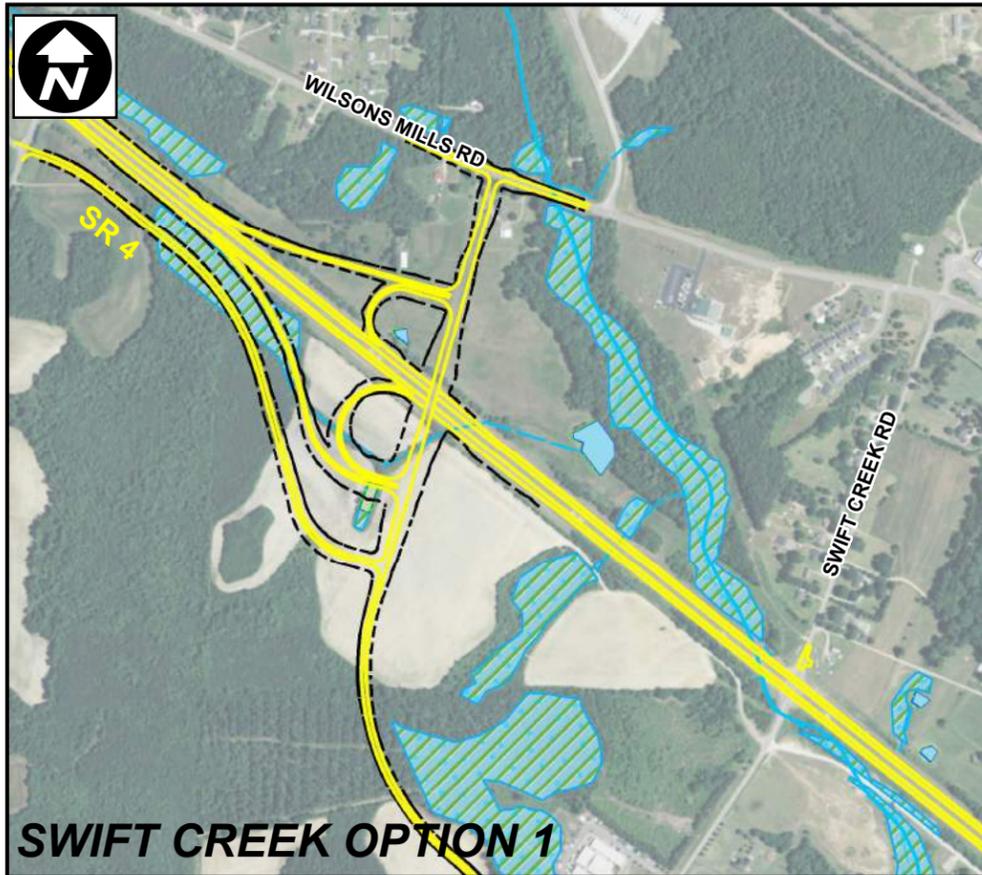
Figure 6  
US 70 Corridor Improvement Projects





**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
**Johnston County TIP**  
**W-5600**

Figure 7  
 Adjacent STIP Projects



**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

Figure 8  
Interchange Options



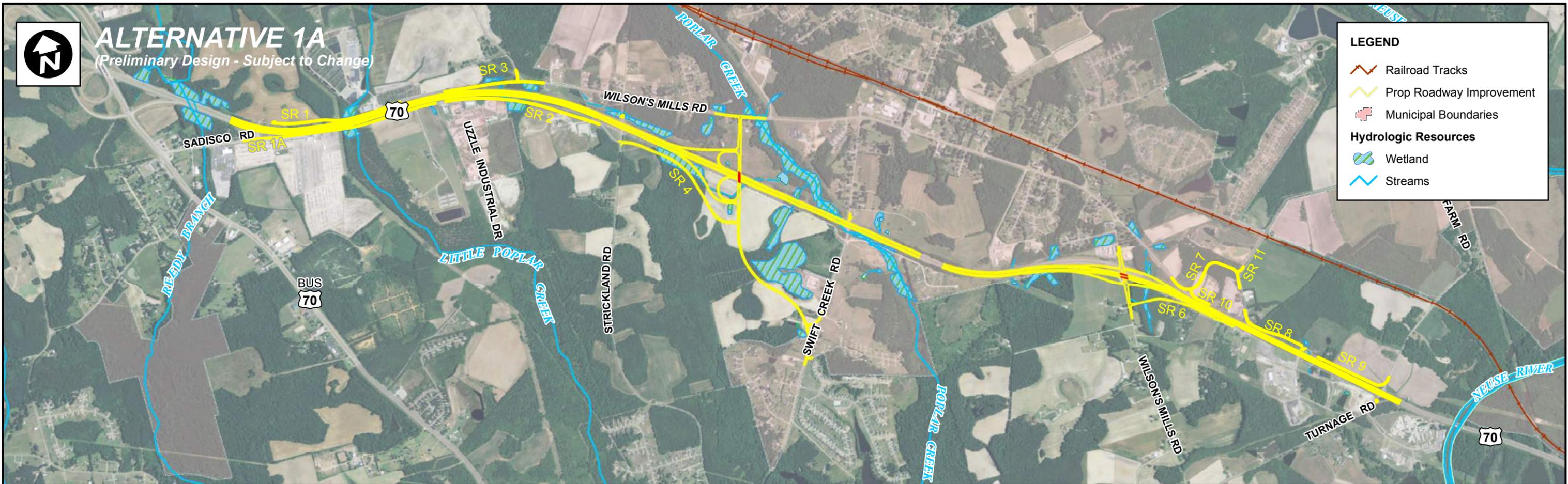
**ALTERNATIVE 1A**  
(Preliminary Design - Subject to Change)

**LEGEND**

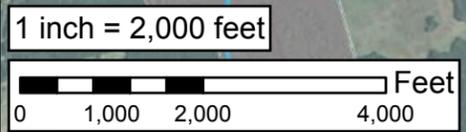
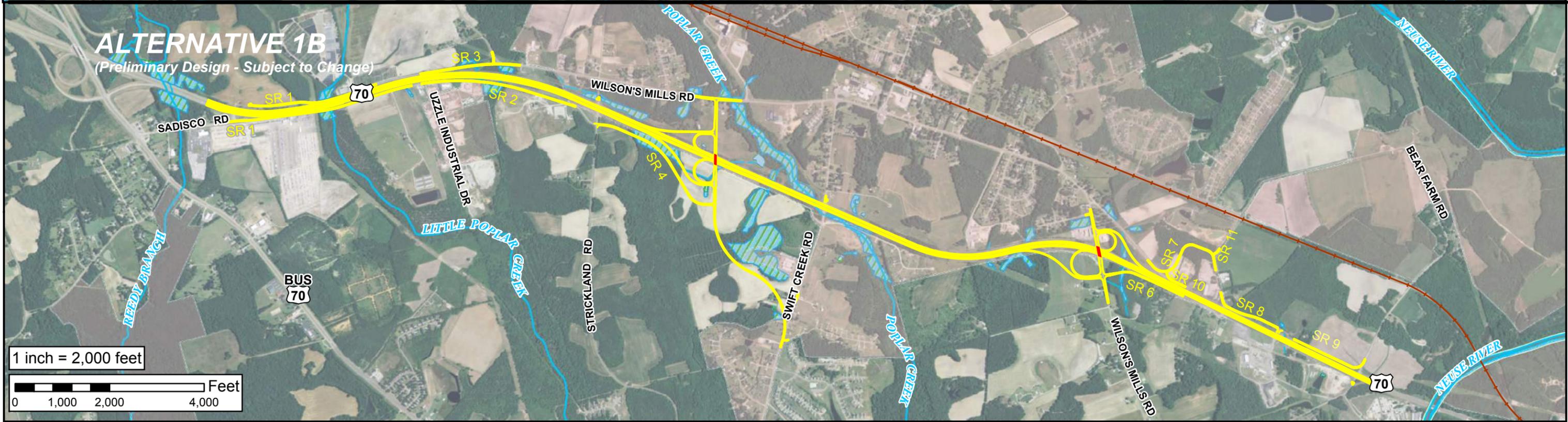
- Railroad Tracks
- Prop Roadway Improvement
- Municipal Boundaries

**Hydrologic Resources**

- Wetland
- Streams



**ALTERNATIVE 1B**  
(Preliminary Design - Subject to Change)



**US 70 Improvements**  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600

Figure 9A  
Detailed Study Alternatives 1A and 1B



# ALTERNATIVE 2A

(Preliminary Design - Subject to Change)

**LEGEND**

- Railroad Tracks
- Swift Creek Option A
- Municipal Boundaries

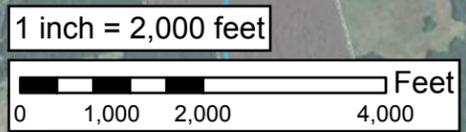
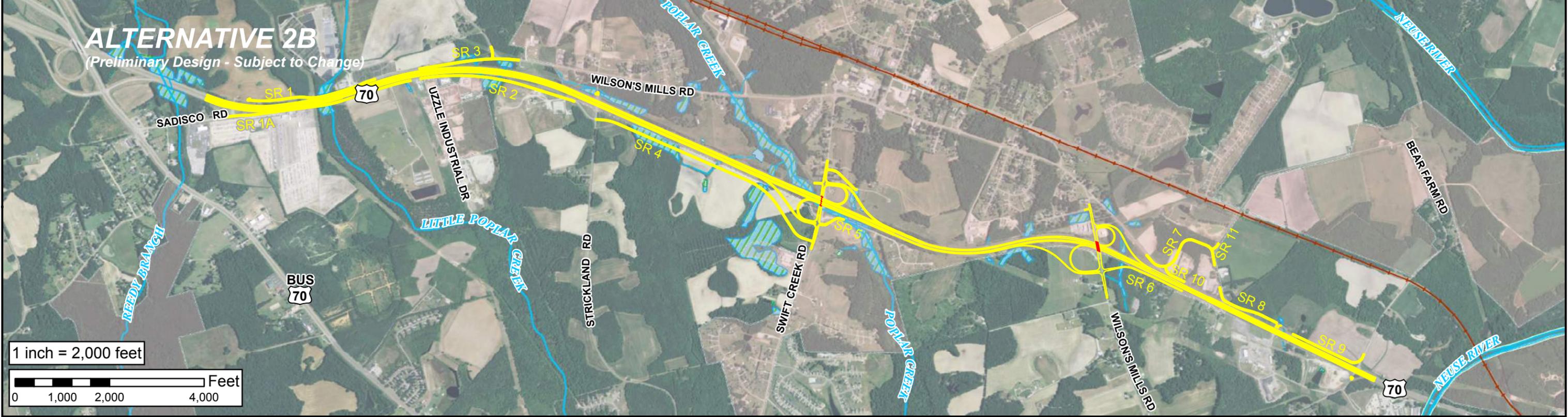
**Hydrologic Resources**

- Wetland
- Streams



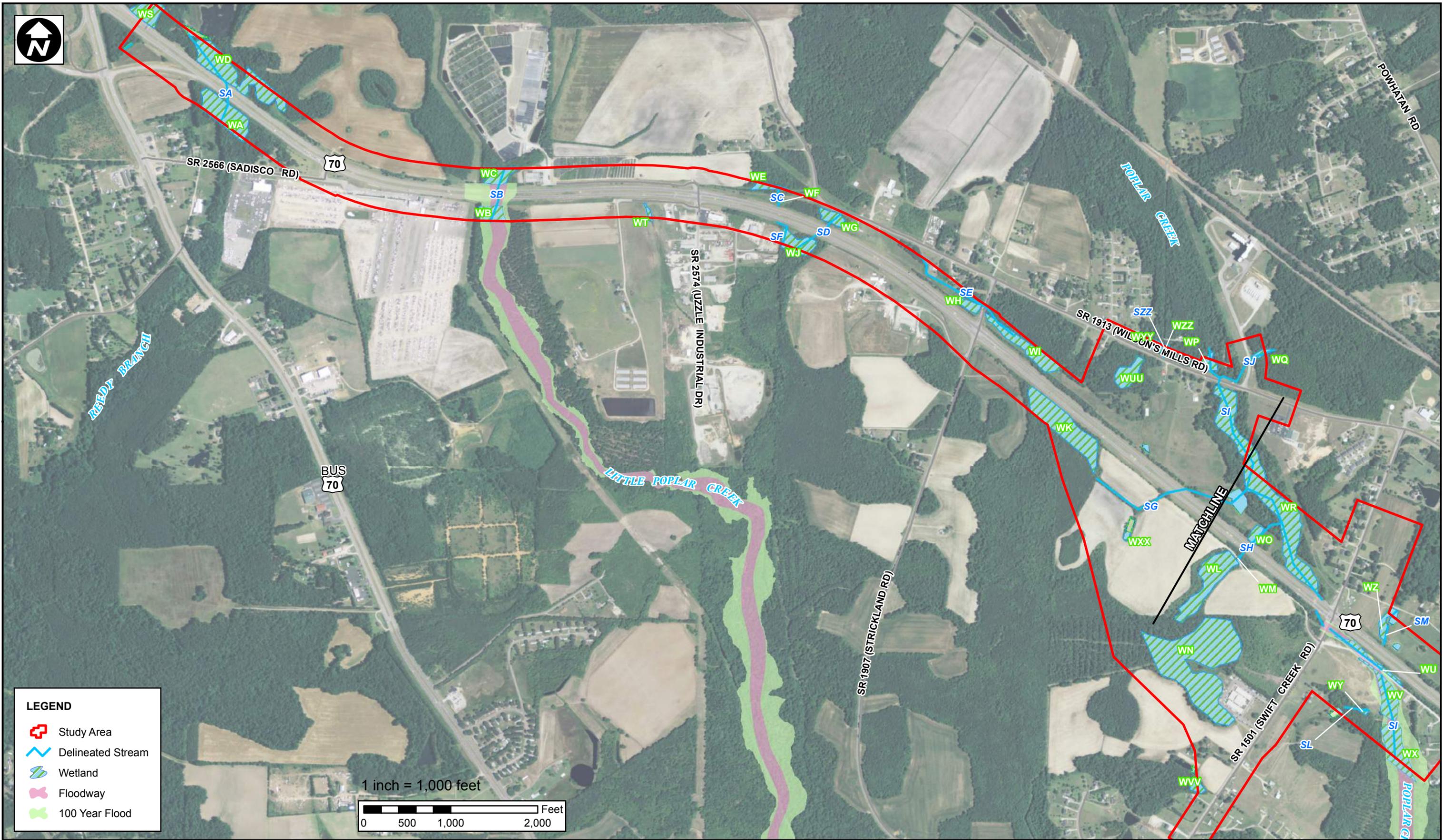
# ALTERNATIVE 2B

(Preliminary Design - Subject to Change)



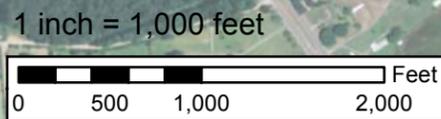
**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
**Johnston County**  
**TIP W-5600**

Figure 9B  
 Detailed Study Alternatives 2A and 2B



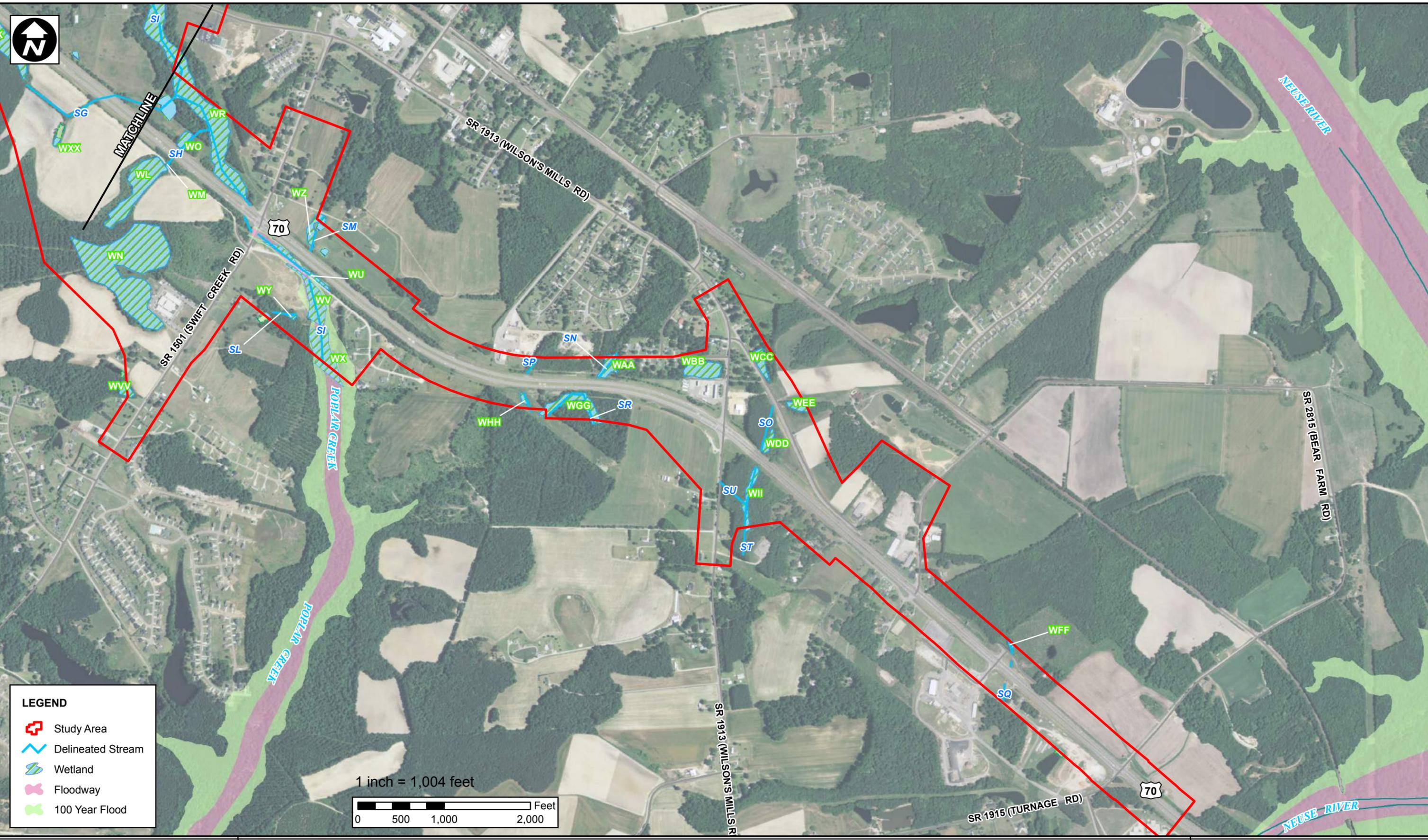
**LEGEND**

-  Study Area
-  Delineated Stream
-  Wetland
-  Floodway
-  100 Year Flood



**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

Figure 10A  
Jurisdictional Features



**LEGEND**

-  Study Area
-  Delineated Stream
-  Wetland
-  Floodway
-  100 Year Flood

1 inch = 1,004 feet

0 500 1,000 2,000 Feet



**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

Figure 10B  
Jurisdictional Features



# Appendix A

## Agency Coordination



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Charles Wakild, P.E
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

December 17, 2012

MEMORANDUM

To: Kim Gillespie, NCDOT PDEA

From: Rob Ridings, NC Division of Water Quality, Transportation Permitting Unit

RR (handwritten signature)

Subject: Scoping comments on proposed improvements to US 70 in Johnston County, Federal Aid Project No. HSIP-0070(163), State Project No. 50056.1.1, TIP No. W-5600

Reference your correspondence received November 26, 2012 in which you requested comments for the referenced project. Preliminary analysis of the project reveals the potential for impacts to streams and/or jurisdictional wetlands in the project area. More specifically, impacts to:

Table with 5 columns: Stream Name, River Basin & Subbasin, Stream Classifications, Stream Index Number, 303(d) Listing?. Rows include Reedy Branch, Poplar Creek, and UT Neuse River.

Further investigations at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Quality requests that NCDOT consider the following environmental issues for the proposed project:

Project Specific Comments:

- 1. These streams are NSW waters of the State. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to these waters. NCDWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ's Stormwater Best Management Practices.
2. This project is within the Neuse Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 15A NCAC 2B.0233. New development activities located in the protected 50-foot wide riparian areas within the basin shall be limited to "uses" identified within and constructed in accordance with 15A NCAC 2B.0233. Buffer mitigation may be required for buffer impacts resulting from activities classified as "allowable with mitigation" within the "Table of Uses" section of the Buffer Rules or require a variance under the Buffer Rules. A buffer mitigation plan, including use of the NC Ecosystem Enhancement Program, must be provided to NCDWQ prior to

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1617
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6492
Internet: www.ncwaterquality.org



approval of the Water Quality Certification. Buffer mitigation may be required for buffer impacts resulting from activities classified as “allowable with mitigation” within the “Table of Uses” section of the Buffer Rules or require a variance under the Buffer Rules. A buffer mitigation plan, including use of the NC Ecosystem Enhancement Program, must be provided to NCDWQ prior to approval of the Water Quality Certification.

#### **General Project Comments:**

1. The environmental document should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.
2. Environmental impact statement alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ’s *Stormwater Best Management Practices Manual*, July 2007, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.
3. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the NCDOT is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission’s Rules {15A NCAC 21I.0506(h)}, mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.
4. In accordance with the Environmental Management Commission’s Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 150 linear feet to any single stream. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.
5. Future documentation, including the 401 Water Quality Certification Application, shall continue to include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.
6. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
7. An analysis of cumulative and secondary impacts anticipated as a result of this project is required. The type and detail of analysis shall conform to the NC Division of Water Quality Policy on the assessment of secondary and cumulative impacts dated April 10, 2004.
8. NCDOT is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, and rip rap to jurisdictional wetlands, streams, and riparian buffers need to be included in the final impact calculations. These impacts, in addition to any construction impacts, temporary or otherwise, also need to be included as part of the 401 Water Quality Certification Application.

9. Where streams must be crossed, NCDWQ prefers bridges be used in lieu of culverts. However, we realize that economic considerations often require the use of culverts. Please be advised that culverts should be countersunk to allow unimpeded passage by fish and other aquatic organisms. Moreover, in areas where high quality wetlands or streams are impacted, a bridge may prove preferable. When applicable, NCDOT should not install the bridge bents in the creek, to the maximum extent practicable.
10. Whenever possible, NCDWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters shall not be blocked. Bridge supports (bents) should not be placed in the stream when possible.
11. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NCDWQ's *Stormwater Best Management Practices*.
12. Sediment and erosion control measures should not be placed in wetlands or streams.
13. Borrow/waste areas should avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas will need to be presented in the 401 Water Quality Certification and could precipitate compensatory mitigation.
14. The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater shall not be permitted to discharge directly into streams or surface waters.
15. Based on the information presented in the document, the magnitude of impacts to wetlands and streams may require an Nationwide Permit application to the Corps of Engineers and corresponding 401 Water Quality Certification. Please be advised that a 401 Water Quality Certification requires satisfactory protection of water quality to ensure that water quality standards are met and no wetland or stream uses are lost. Final permit authorization will require the submittal of a formal application by the NCDOT and written concurrence from NCDWQ. Please be aware that any approval will be contingent on appropriate avoidance and minimization of wetland and stream impacts to the maximum extent practical, the development of an acceptable stormwater management plan, and the inclusion of appropriate mitigation plans where appropriate.
16. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
17. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.

18. Unless otherwise authorized, placement of culverts and other structures in waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
19. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
20. If foundation test borings are necessary; it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3687/Nationwide Permit No. 6 for Survey Activities.
21. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
22. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
23. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.
24. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
25. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
26. Riparian vegetation (native trees and shrubs) shall be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

Thank you for requesting our input at this time. NCDOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Rob Ridings at 919-791-8716

cc: Tom Steffens, US Army Corps of Engineers, Washington Field Office  
Chad Coggins, Division 4 Environmental Officer  
File Copy

**12-08-0007****ARCHAEOLOGICAL SURVEY REQUIRED FORM**

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

**PROJECT INFORMATION**

Project No: **W-5600** County: **Johnston**  
 WBS No: **50056.1.1** Document: **Categorical Exclusion**  
 F.A. No: **HSIP-0070(163)** Funding:  State  Federal

Federal Permit Required?  Yes  No Permit Type: **To Be Determined**

**Project Description** The proposed project is described as US 70 Improvements from West of SR 2565 (Sadisco Road) to West of SR 1915 (Turnage Road), in Johnston County. The Purpose Need for the project is described as: "Improve the safety of US 70 within the project area." Otherwise known as US 70 Improvements at Wilson's Mills, the proposed project is part of the US 70 Corridor Plan, which intends to upgrade US 70 to a freeway facility from the Clayton Bypass to Morehead City. Potential improvements include grade-separated interchanges with US 70 at Swift Creek Road and Wilson's Mills Road. The project will also explore access management techniques for the corridor, and consider median modifications and service roads within the project limits. Project length measures about 5.5 miles (29,040 feet). Permanent easements as well as additional ROW will be required. The Area of Potential Effects (APE) requiring archaeological field investigations cannot be sufficiently determined until preliminary design plans have been prepared and reviewed.

**SUMMARY OF ARCHAEOLOGICAL RESOURCES REVIEW: SURVEY REQUIRED****Brief description of the site, its location, and condition**

A map review and site file search was first conducted at the Office of State Archaeology (OSA) on Friday, August 10, 2012. Comprehensive archaeological surveys have been conducted in various locales along the US 70 corridor, resulting in numerous archaeological sites having been recorded. Digital copies of HPO's maps (Powhatan and Selma quadrangles) as well as the HPOWEB GIS Service (<http://gis.ncdcr.gov/hpweb/>) were last reviewed on Friday, June 14, 2013. At this time, there are no known historic architectural resources located within the project area that may have intact archaeological deposits within the footprint of the proposed project. In addition, topographic maps, historic maps (NCMaps website), USDA soil survey maps, and historic orthophotography were utilized and inspected to gauge environmental factors that may have contributed to historic or prehistoric settlement within the project limits, and to assess the level of modern, slope, agricultural, hydrological, and other erosive-type disturbances within and surrounding the archaeological APE.

Federal funds are to be spent on this project, which may also require Federal permits. Permanent easements and additional ROW may be necessary as well; however, their locations are not known at this time. From an environmental perspective, the APE consists of relatively level to gently undulating terrain, drained by the Neuse River and its tributaries. Based on the overall length of the project, soils along the corridor fall within three (3) different soil associations: 1) Cecil-Pacolet-Nason, 2) Rains-Oldsboro-Lynchburg, and 3) Norfolk-Oldsboro-Rains. Descriptions of soil types within these associations range from well-drained to poorly drained and occur on the nearly level to moderately steep terrain of the Uplands of the Piedmont and Coastal Plain. Much of the previous archaeological work





Figure 1: Powhatan, NC (US S 1964 PR1981) and Selma, NC (US S 1964 PR1973, PI1988).



Figure 2: 2010 Aerial Photography, showing the Extent of the Proposed Project.

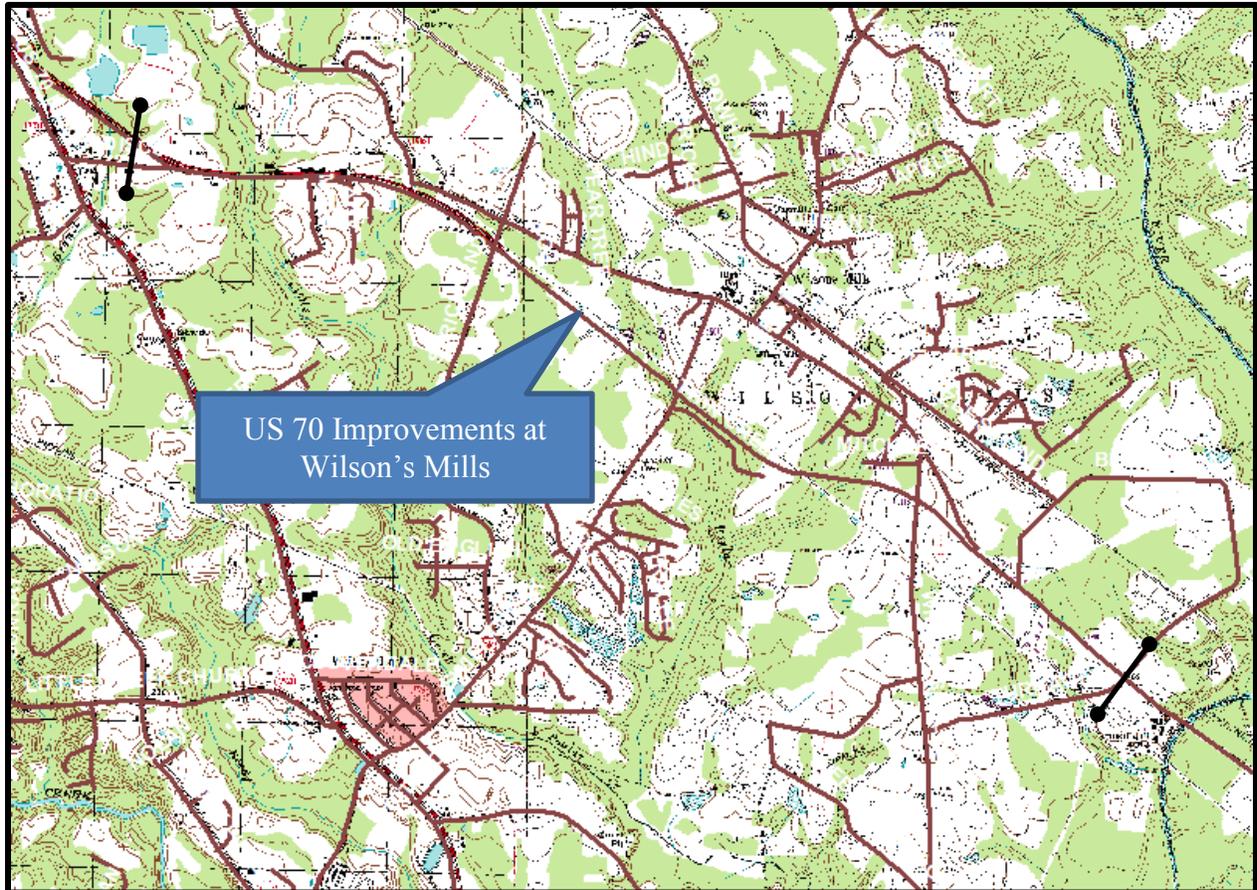
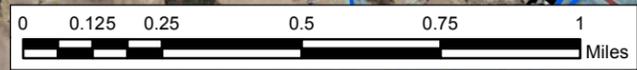


Figure 3: Current US 70 Alignment superimposed on Powhatan, NC (US S 1964 PR1981) and Selma, NC (US S 1964 PR1973, PI1988).



**W-5600 (PA 12-08-0007)**  
**US 70 Improvements at**  
**Wilson's Mills, Johnston County**  
**(showing current conditions)**

- Project Study Area
- Named\_streams
- Unnamed Tributaries
- Streets
- mapfldhazar



**12-08-0007**

**NO NATIONAL REGISTER OF HISTORIC PLACES  
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES  
PRESENT OR AFFECTED FORM**



This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

**PROJECT INFORMATION**

*Project No:* **W-5600** *County:* **Johnston**  
*WBS No:* **50056.1.1** *Document:* **Categorical Exclusion**  
*F.A. No:* **HSIP-0070(163)** *Funding:*  State  Federal

*Federal Permit Required?*  Yes  No *Permit Type:* **To Be Determined**

**Project Description** The proposed project is described as US 70 Improvements from West of SR 2565 (Sadisco Road) to West of SR 1915 (Turnage Road), in Johnston County. The Purpose Need for the project is described as: "Improve the safety of US 70 within the project area." Otherwise known as US 70 Improvements at Wilson's Mills, the proposed project is part of the US 70 Corridor Plan, which intends to upgrade US 70 to a freeway facility from the Clayton Bypass to Morehead City. Potential improvements include grade-separated interchanges with US 70 at Swift Creek Road and Wilson's Mills Road. The project will also explore access management techniques for the corridor, and consider median modifications and service roads within the project limits. Project length measures about 5.5 miles (29,040 feet). Permanent easements as well as additional ROW will be required. The Area of Potential Effects (APE) requiring archaeological field investigations cannot be sufficiently determined until preliminary design plans have been prepared and reviewed.

**SUMMARY OF ARCHAEOLOGICAL FINDINGS**

**The North Carolina Department of Transportation (NCDOT) Archaeologist reviewed the project and determined:**

- There are no National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects.
- No subsurface archaeological investigations were required for this project.
- Subsurface investigations did not reveal the presence of any archaeological resources.
- Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.
- All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and 25 CFR 121-12(a) has been completed for this project.
- There are no National Register Eligible or Listed ARCHAEOLOGICAL SITES present or affected by this project. (Attach any notes or documents as needed)

**Brief description of the activities referred to and conclusions**

A map review and site file search was first conducted at the Office of State Archaeology (OSA) on Friday, August 10, 2012. Comprehensive archaeological surveys have been conducted in various locales along the US 70 corridor, resulting in numerous archaeological sites having been recorded. Digital copies of HPO's maps (Powhatan and Selma quadrangles) as well as the HPOWEB GIS Service (<http://gis.ncdcr.gov/hpweb/>) were last reviewed on Friday, June 14, 2013. At this time, there are no known historic architectural resources located within the project area that may have intact archaeological deposits within the footprint of the proposed project. In addition, topographic maps, historic maps (NCMaps website), USDA soil survey maps, and historic orthophotography were utilized and inspected to gauge environmental factors that may have contributed to historic or prehistoric settlement within the project limits, and to assess the level of modern, slope, agricultural, hydrological, and other erosive-type disturbances within and surrounding the archaeological APE.

As stated in the Survey Required Form for this project, "Federal funds are to be spent on this project, which may also require Federal permits. Permanent easements and additional ROW may be necessary as well—however, their locations are not known at this time. From an environmental perspective, the APE consists of relatively level to gently undulating terrain, drained by the Neuse River and its tributaries. Based on the overall length of the project, soils along the corridor fall within three (3) different soil associations: 1) Cecil-Pacolet-Nason, 2) Rains-Oldsboro-Lynchburg, and 3) Norfolk-Oldsboro-Rains. Descriptions of soil types within these associations range from well-drained to poorly drained and occur on the nearly level to moderately steep terrain of the Uplands of the Piedmont and Coastal Plain. Much of the previous archaeological work (1981) conducted in the vicinity was a result of what was known at the time as the US 70 Bypass of Smithfield, which was eventually constructed by the early 1990s. Various archaeological sites were recorded on the upland flats and slopes overlooking tributaries of Poplar and Little Poplar Creeks as well as those creeks themselves. However, despite the previous archaeological survey and the disturbances such new location construction causes, it cannot be determined what has and has not been previously surveyed until preliminary design plans have been prepared and reviewed for the current limits of the Proposed Study Area may be greater than what is actually to be acquired and/or impacted. It is known that much of the area for any proposed interchange location may not have been previously surveyed since interchanges were not a component of the early US 70 improvements. It should also be noted, too, that historic cemetery locations were not adequately taken into account either. Based on the information provided, an archaeological survey is recommended for the proposed project contingent upon review of preliminary design plans when they are made available. Once preliminary design plans have been reviewed and the potential need for an archaeological survey is determined, a visual inspection of the Area of Potential Effects (APE) should be conducted, followed then by systematic archaeological excavations within areas of moderate to high archaeological probability. Should the description of this project change, additional consultation regarding archaeology will be required."

URS Corporation (URS) conducted terrestrial archaeological Phase I Identification and Phase II Evaluation for an approximately 5-mile section of US 70 from just west of Sadisco Road (SR 2565) to just west of Turnage Road (SR 1915) in the vicinity of Wilson's Mills, Johnston County. Much of the existing US 70 facility was subjected to archaeological survey in December 1980 prior to its construction in the early 1980s—therefore, the current project consisted of selective survey in areas where specific project enhancements (e.g. new service roads, grade-separated interchange ramps) were planned and where the earlier 1980 survey had not covered. Fieldwork was conducted during June and July 2014, and primarily consisted of shovel test pit excavation and/or surface inspection of agricultural fields. The Area of Potential Effects (APE) for the project covers about 520 acres—however, survey coverage was not complete in all areas based on the selective survey coverage.

As a result, eight (8) archaeological resources were encountered—the location of 31T193/193\*\* was re-established, with seven (7) other sites newly identified and assigned the following site numbers:

*"NO NATIONAL REGISTER ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT OR AFFECTED  
form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.*

**12-08-0007**

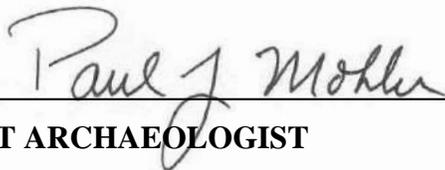
31T411/411\*\*, 31T412/412\*\*, and 31T413 through 31T417. In addition, three historic cemeteries were documented and assigned the following site numbers: 31T418\*\* through 31HT420\*\*. None of the eight archaeological sites exhibit the qualities necessary to be considered eligible for the National Register of Historic Places (NRHP). Erosion and agricultural practices have severely impacted these sites that they no longer retain any clarity or integrity to their deposits. No subsurface cultural features were identified during the project. The artifact assemblages generally lack both variety as well as quantity. Therefore, additional work at any of the sites would not substantially add to our understanding of prehistoric or historic cultures and lifeways. As such, URS recommended that none of the eight archaeological sites are eligible for inclusion in the NRHP, and that no additional archaeological work be required in conjunction with the project. The three historic cemeteries fall just outside the project's APE, and do not exhibit the qualities necessary to be considered eligible for the NRHP. As planned, the current project will not adversely impact these cemeteries. Should project plans change to potentially impact the cemeteries, then the NCDOT will need to comply with State laws governing the treatment of cemeteries.

## RECOMMENDATION

An archaeological investigation of the Area of Potential Effects (APE) for the US 70 Improvements in Johnston County was conducted by URS Corporation (URS) in the summer of 2014. During the course of the survey, eight (8) archaeological resources were encountered, with one being the location of the previously-recorded 31T193/193\*\* along with seven newly-identified sites. Three (3) historic cemeteries were also documented during the project. None of the eleven (11) resources (eight (8) archaeological sites and three (3) cemeteries) exhibit the qualities necessary to be considered eligible for the National Register of Historic Places (NRHP) per Criteria A through D and applicable Criteria Considerations. No further archaeological investigations are required. Based on the information provided by URS, I concur with these recommendations since the proposed improvements will not impact any significant archaeological resources. A finding of "no historic properties" is considered appropriate in association with the proposed US 70 improvements. Should the description of this project or design plans change prior to construction, then additional consultation regarding archaeology will be required. Should project plans change to potentially impact the cemeteries, the NCDOT will need to comply with State laws governing the treatment of cemeteries.

## SUPPORT DOCUMENTATION

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence  
Signed:



November 24, 2014

NCDOT ARCHAEOLOGIST

Date



Figure 1: Powhatan, NC (US 1964 PR1981) and Selma, NC (US 1964 PR1973, PI1988).

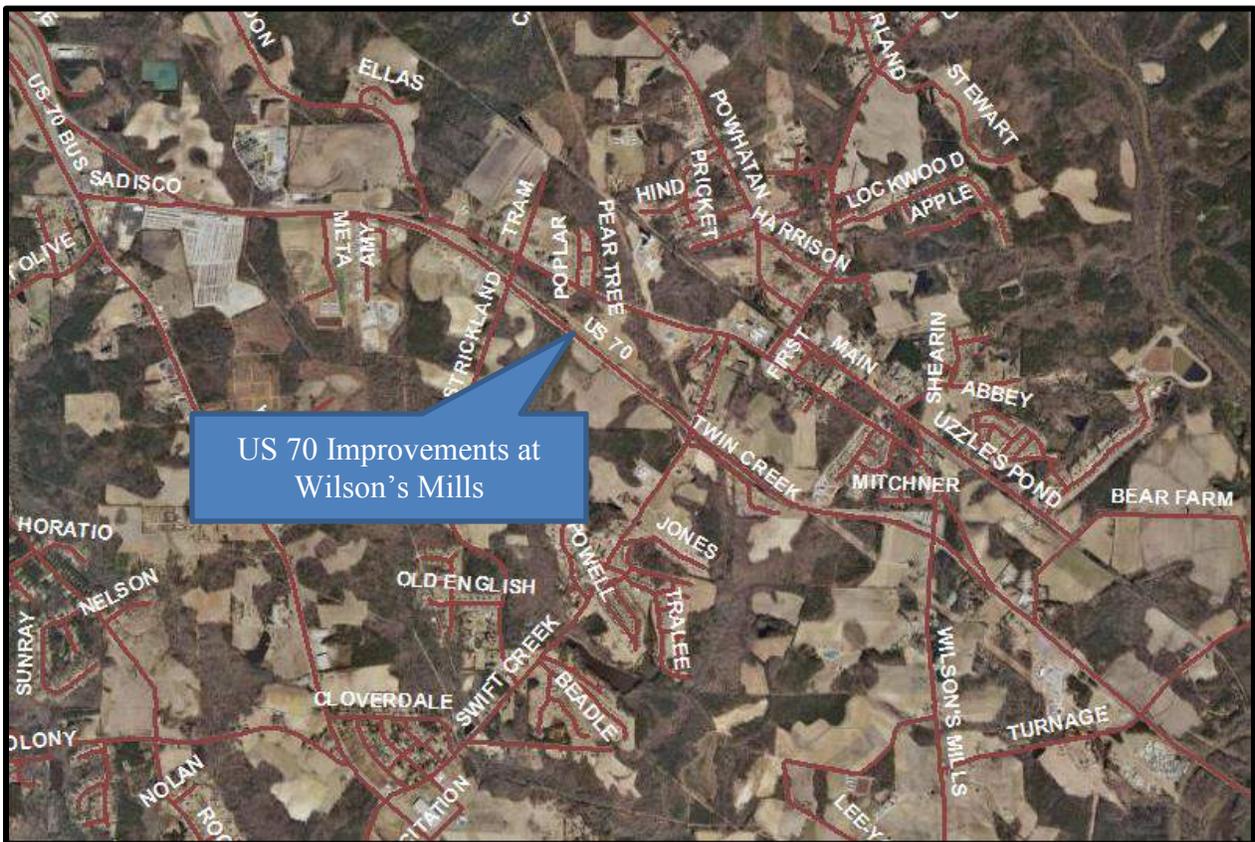


Figure 2: 2010 Aerial Photography, showing the Extent of the Proposed Project.

*"NO NATIONAL REGISTER ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT OR AFFECTED  
form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.*

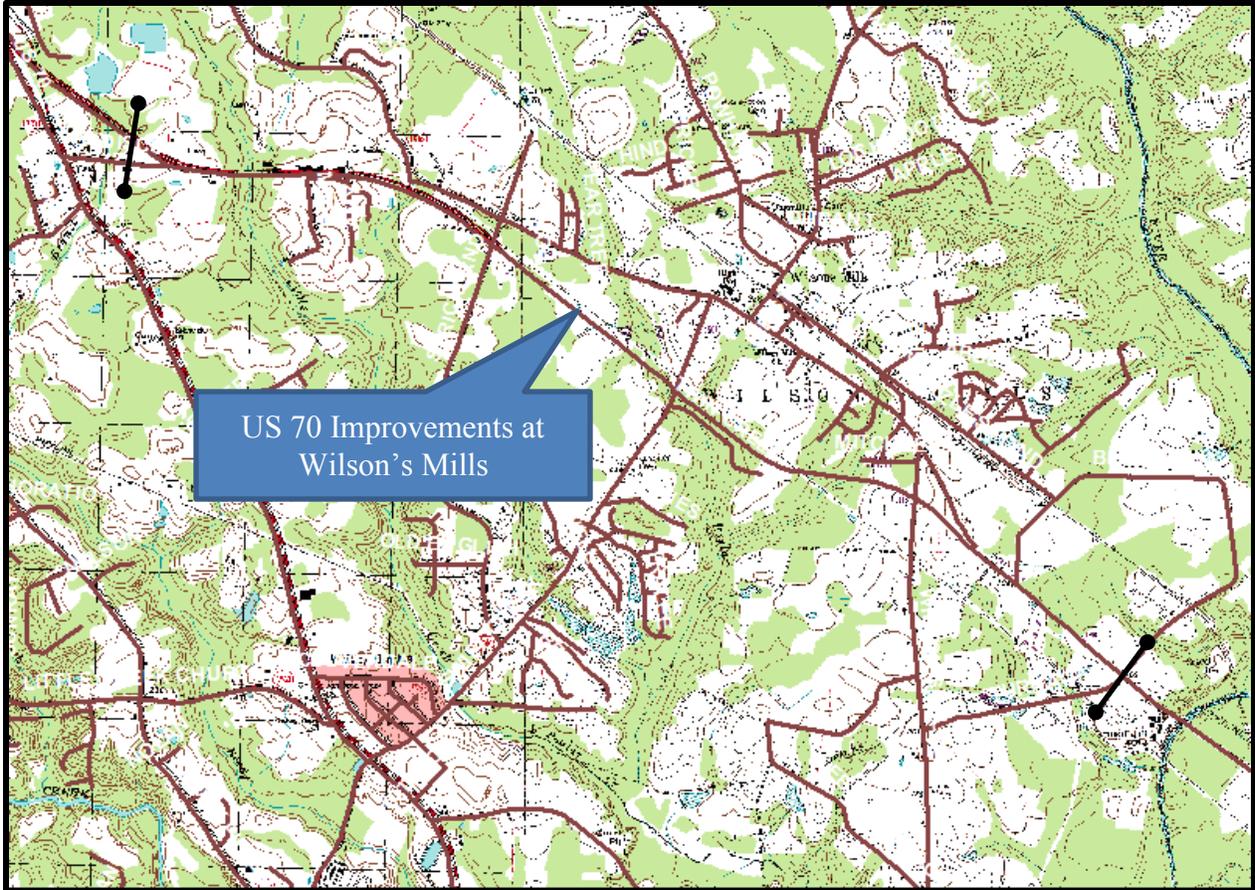
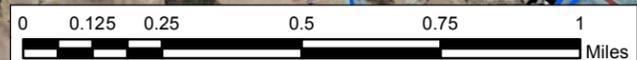


Figure 3: Current US 70 Alignment superimposed on Powhatan, NC (US S 1964 PR1981) and Selma, NC (US S 1964 PR1973, PI1988).



**W-5600 (PA 12-08-0007)  
US 70 Improvements at  
Wilson's Mills, Johnston County  
(showing current conditions)**

- Project Study Area
- Named\_streams
- Unnamed Tributaries
- Streets
- mapfldhazar





North Carolina Department of Cultural Resources  
State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Pat McCrory  
Secretary Susan Kluttz

Office of Archives and History  
Deputy Secretary Kevin Cherry

October 23, 2014

MEMORANDUM

TO: Vanessa Patrick  
Human Environment Unit  
NC Department of Transportation

FROM: Renee Gledhill-Earley *Renee Gledhill-Earley*  
Environmental Review Coordinator

SUBJECT: Historic Structures Survey Report for the US 70 Improvements from West of SR 2566  
To West of SR 1915, W-5600, Johnston County, ER 14-2332

Thank you for your memorandum of October 7, 2014, transmitting the above referenced report, CDs, and Historic Property Field Data Forms. We have reviewed the submitted materials and offer the following comments.

**We concur that the Parrish Farms (JT1877), Jones House and Barn (JT1878), Langston House and Outbuildings (JT1879), and Lassiter Cemetery (JT1880) are not eligible for listing in the National Register of Historic Places.**

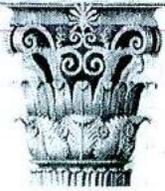
Further, we **do not concur that the Jones House (JT1876) is eligible for listing in the National Register.** While it is true that the one-story (not one-and-one-half-story) house appears to retain most of its historic fabric on the exterior, the house is in only fair condition and there is no information about the interior. If the only potential area of significance is architecture, we must know that the interior retains good integrity for the house to be eligible. There is nothing architecturally outstanding about the building. While one-story, one-room-deep frame houses with triple-A rooflines are slowly disappearing from the landscape, there are still many left in Johnston County. The fact that this one retains decorative features of standard late 19<sup>th</sup>-century millwork that might have come from the Wilson & Waddell lumber company does not raise it to the level of significance necessary for National Register eligibility. Were the house eligible, an appropriate boundary would not be restricted to the building footprint.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or [environmental.review@ncdcr.gov](mailto:environmental.review@ncdcr.gov). In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT/PDEA/HES

[mfurr@ncdot.gov](mailto:mfurr@ncdot.gov)



## HISTORIC ARCHITECTURE AND LANDSCAPES ELIGIBILITY EVALUATION FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

### PROJECT INFORMATION

<i>Project No:</i>	W-5600	<i>County:</i>	Johnston
<i>WBS No.:</i>	50056.1.1	<i>Document Type:</i>	CE
<i>Fed. Aid No.:</i>	HSIP-0070(163)	<i>Funding:</i>	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
<i>Federal Permit(s):</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Assumed; not specified in review request	<i>Permit Type(s):</i>	Not specified in review request
<i>Project Description:</i> Improvements to US 70 from west of SR 2566 (Sadisco Road) to west of SR 1915 (Turnage Road)			

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- X There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- X The following properties within the area of potential effects have been evaluated for eligibility in the attached documentation:

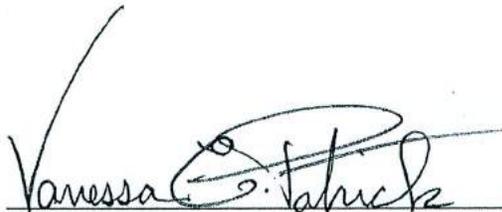
### SUPPORT DOCUMENTATION

X Map(s)     Previous Survey Info.     Photos    X Correspondence    X Report

### EVALUATION BY NCDOT ARCHITECTURAL HISTORIAN

<i>Property Name:</i>	Jones House (part of Jones Farm)	<i>Evaluation:</i>	<input checked="" type="checkbox"/> Eligible <input type="checkbox"/> Not Eligible
<i>Survey Site No.:</i>	JT1876	<i>Criterion:</i>	C

**See attached report.** Five properties are evaluated in the technical report for National Register eligibility: Jones Farm (JT1876, PIN: 168600-94-1187), Parrish Farms (JT1877, PIN: 169614-33-5125), Jones House and Barn (JT1878, PIN: 168600-83-3722), Langston House and Outbuildings (JT1879, PIN: 168600-74-2405), and the Lassiter Cemetery (JT1880, PIN: 168600-84-3292). Only one of the five, the circa-1890 dwelling house of the Jones Farm, is recommended as eligible for the National Register under Criterion C as a good representative of its type incorporating architectural elements produced by the locally prominent Wilson and Waddell millworks. HPO disagrees with eligibility for historic architecture, citing the existence of many similar buildings in the county and the Wilson and Waddell connection as insufficiently significant (see attached correspondence). **For purposes of the W-5600 project NCDOT agrees to proceed with non-eligibility of the resource for historic architecture** (see attached correspondence). The project complies with both GS 121-12(A) and Section 106 for historic architecture.

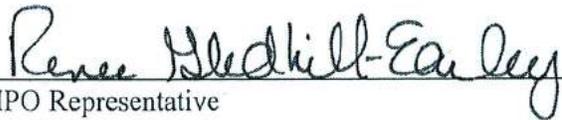


NCDOT Architectural Historian

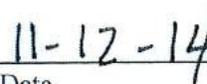


Date

**REVIEW BY STATE HISTORIC PRESERVATION OFFICE**



HPO Representative



Date

*HPO Comments:*



## ◊ North Carolina Wildlife Resources Commission ◊

---

□ Gordon Myers, Executive Director

### MEMORANDUM

**TO:** Kim □illespie  
Project Development and Environmental Analysis, NCDOT

**FROM:** Travis Wilson, Highway Project Coordinator  
Habitat Conservation Program

**DATE:** December 19, 2012

**SUBJECT:** Response to the start of study notification from the N. C. Department of Transportation (NCDOT) regarding fish and wildlife concerns for the proposed improvements to US 70 from west of SR 2566 to west of SR 1915, □ohnston County, North Carolina. TIP No. W-5600.

This memorandum responds to a request from NCDOT for our concerns regarding impacts on fish and wildlife resources resulting from the subject project. Biologists on the staff of the N. C. Wildlife Resources Commission (NCWRC) have reviewed the proposed improvements. Our comments are provided in accordance with certain provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended □ 16 U.S.C. 661-667d).

At this time we do not have any specific concerns related to this project □ however, to help facilitate document preparation and the review process our general informational needs are outlined below:

1. Description of fishery and wildlife resources within the project area, including a listing of federally or state designated threatened, endangered, or special concern species. Potential borrow areas to be used for project construction should be included in the inventories. A listing of designated plant species can be developed through consultation with:

NC Natural Heritage Program  
Dept. of Environment □ Natural Resources  
1601 Mail Service Center  
Raleigh, NC 27699-1601.  
[WWW.ncnhp.org](http://WWW.ncnhp.org)

and,

NCDA Plant Conservation Program

P. O. Box 27647  
Raleigh, N. C. 27611  
(919) 733-3610

2. Description of any streams or wetlands affected by the project. The need for channelizing or relocating portions of streams crossed and the extent of such activities.
3. Cover type maps showing wetland acreages impacted by the project. Wetland acreages should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (COE). If the COE is not consulted, the person delineating wetlands should be identified and criteria listed.
4. Cover type maps showing acreages of upland wildlife habitat impacted by the proposed project. Potential borrow sites should be included.
5. The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).
6. Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.
7. A cumulative impact assessment section which analyzes the environmental effects of highway construction and quantifies the contribution of this individual project to environmental degradation.
8. A discussion of the probable impacts on natural resources which will result from secondary development facilitated by the improved road access.
9. If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects should be included in the environmental document, and all project sponsors should be identified.

Thank you for the opportunity to provide input in the early planning stages for this project. If we can further assist your office, please contact me at (919) 528-9886.

**A RESOLUTION IN FAVOR OF  
NCDOT ALTERNATIVE 2A FOR STIP PROJECT W-5600**

**WHEREAS**, the Town of Wilson's Mills Town Council recognizes the efforts of the North Carolina Department of Transportation, the US Highway 70 Corridor Commission, and numerous other planning agencies involved with the STIP Project: W-5600 – Proposed improvements along U.S. 70 west of S.R. 2565 (Sadisco Road) to west of S.R. 1915 (Turnage Road); and

**WHEREAS**, the Town of Wilson's Mills Town Council understands the importance of the mobility and connectivity along the U.S. 70 corridor not only in Wilson's Mills but in Johnston County and across the state as well; and

**WHEREAS**, the Town of Wilson's Mills Town Council believes the proposed interchanges are important to the future planning, development, and success of the Town; and

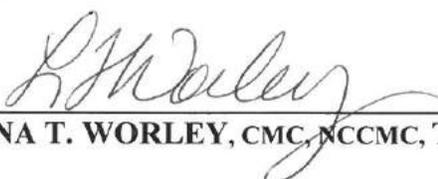
**WHEREAS**, the Town of Wilson's Mills Town Council believes that the different proposals create new and unique challenges to the Town.

**NOW, THEREFORE, BE IT RESOLVED** by the Wilson's Mills Town Council that the Town Council voted unanimously in favor of Alternative 2A in which Swift Creek Road remains open and Wilson's Mills Road is diverted south to avoid any adverse effects on local businesses off of US Highway 70 and Wilson's Mills Rd.

**ADOPTED THIS 16<sup>th</sup> DAY OF FEBRUARY 2016**



  
\_\_\_\_\_  
**PHILIP R. WRIGHT, Mayor**

  
\_\_\_\_\_  
**LEIGHANNA T. WORLEY, CMC, NCCMC, Town Clerk**

12-08-0007



## HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

### PROJECT INFORMATION

<b>Project No:</b>	W-5600	<b>County:</b>	Johnston
<b>WBS No.:</b>	50056.1.1	<b>Document Type:</b>	
<b>Fed. Aid No:</b>	HSIP-0070(163)	<b>Funding:</b>	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Permit Type(s):</b>	
<b>Project Description:</b> Establish grade-separated interchanges with US 70 at SR 1501 (Swift Creek Road) and Wilson's Mills Road, and possible median modifications, service roads, and Y-line improvements along US 70 from west of SR 2566 (Sadisco Road) to west of SR 1915 (Turnage Road); some ROW acquisition anticipated, need for off-site detour currently unknown.			

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

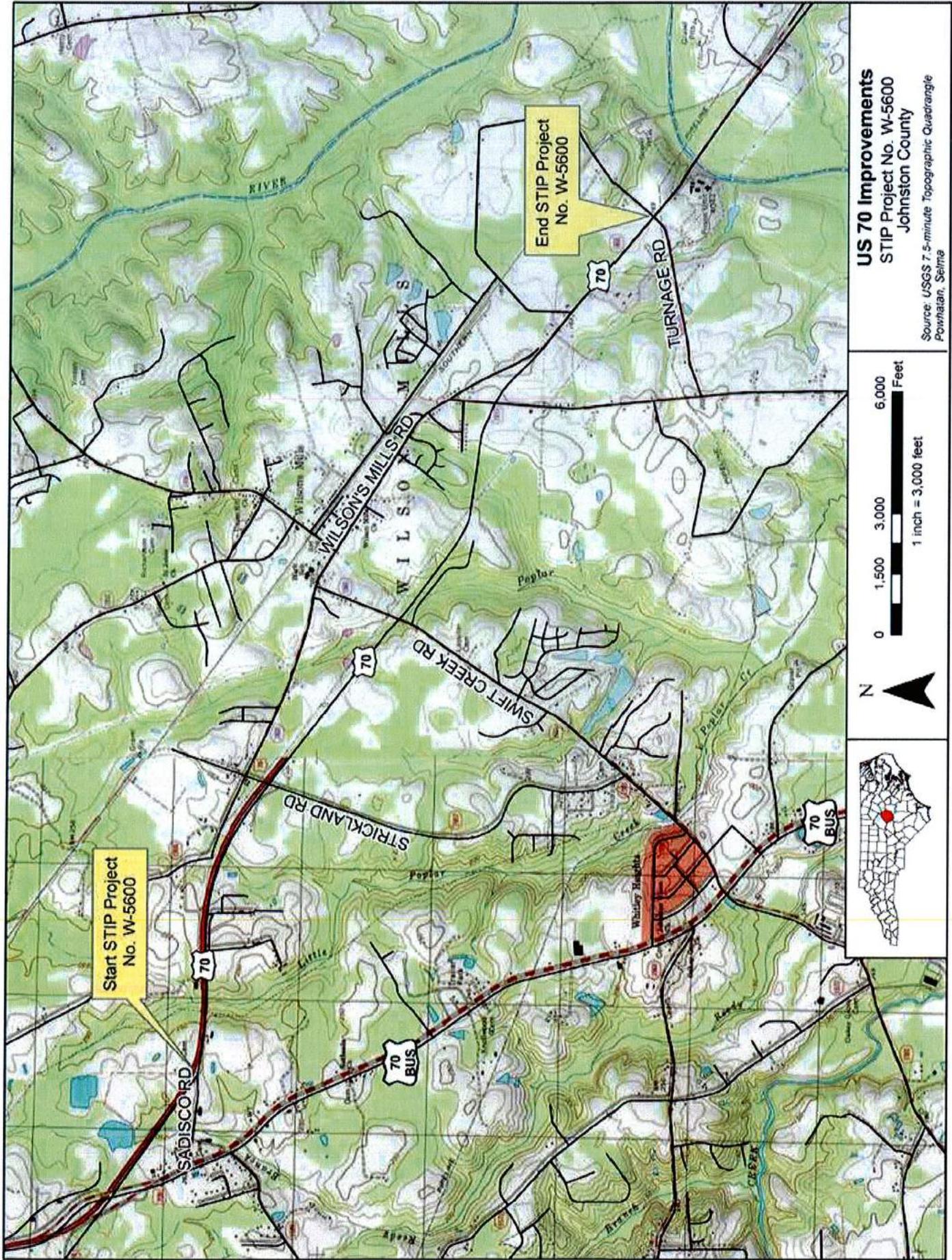
- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no properties within the project's area of potential effects.
- There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- There are no historic properties present or **affected** by this project. (Attach any notes or documents as needed.)

**Date of field visit: February 27, 2013**

**Description of review activities, results, and conclusions:** HPOWeb reviewed on 22 August 2012 (revisited 26 February 2013) and yielded no NR, SL, DOE, SS, or LD properties in the project area. Johnston County current GIS mapping, aerial photography, and tax information identified multiple properties containing pre-1960 resources (viewed 22-23 August 2012) in the Area of Potential Effects (APE). APE established as extending 1000 feet to either end of the proposed 5.5-mile project length and 1000 feet to either side of the existing US 70 centerline to encompass all proposed construction activities as currently defined. Available imagery proved insufficient to accurately assess the pre-1960 properties and possibly other resources in the APE, indicating the field survey carried out on 27 February 2013

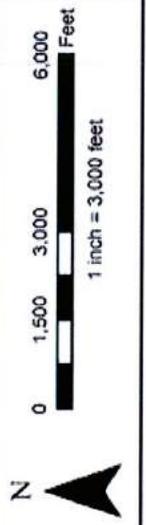
Field survey recorded eight unexceptional domestic properties (two including agricultural buildings) dating to the early- and mid-twentieth century in construction and alteration. None are likely to be adversely affected by the proposed construction. Similarly removed from probable impacts are four cemeteries: two on the north side of US 70 near the western end of the project area (PINs: 167700-91-7947 and 167700-81-3262), the Lassiter Cemetery (PIN: 168600-84-3292) located on the Jones Farm





**US 70 Improvements**  
 STIP Project No. W-5600  
 Johnston County

Source: USGS 7.5-minute Topographic Quadrangle  
 Powhatan, Selma



Tracking No. 12-08-0007

## MEETING SUMMARY

**Subject:**

**US 70, From West of SR 2566 (Sadisco Road) to  
West of SR 1915 (Turnage Road)  
Johnston County  
STIP Project No. W-5600**



ARCADIS Project No.:  
NC609005.0403

**Place/Date of Meeting:**

**Century Center, Building A  
10:00 p.m., Thursday, July 17, 2014**

**Issue Date:**

**12/23/14 Final  
(no comments received on draft)**

**Meeting Summary by:**

**Roy Currin**



**Team Participants:**

**Kim Gillespie, NCDOT-PDEA  
Jay McInnis, NCDOT-PDEA  
Steve Smallwood, ARCADIS  
Roy Currin, ARCADIS  
Tom Steffens, USACE  
Jerry Page, NCDOT Division 4  
Rob Hanson, NCDOT-PDEA  
James Salmons, Upper Coastal Plain Rural Planning  
Organization (UCPRPO)**

**Rob Ridings, NC DWR  
Cynthia Van Der Wiele, USEPA  
Travis Wilson, NCWRC  
Gary Jordan, USFWS  
Chad Coggins, NCDOT DEO  
Gordon Cashin, PDEA-NES  
Ron Lucas, FHWA**

**Copies:**

**Parrish Strickland, ARCADIS**

**Meeting Overview:** The purpose of the meeting was to review the proposed project, decide if it should go through the merger process, and if so, decide the appropriate placement in the merger process. A handout was provided including the project description, preliminary alternatives, purpose and need, technical reports to date, potential impacts, and figures showing the project vicinity, study area, and preliminary alternatives.

The following was presented by NCDOT:

- Kim Gillespie of PDEA presented an overview of the project and preliminary alternatives, possible median closures, and service roads. The recommended facility type is a freeway with interchanges at Swift Creek Road and Wilson's Mill Road. The existing facility type of US 70 to the west and east of this project is a freeway. Each of the six preliminary alternatives were presented and discussed.
- Ms. Gillespie and Rob Hanson of PDEA discussed the US 70 strategic corridor, on-going projects along the corridor, and how this project fits into the overall US 70 Strategic Highway Corridor.
- Ms. Gillespie discussed the purpose and need and work completed to date. Jerry Page of Division 4 discussed the history of the project, accident history and, public involvement to date. Mr. Page

## ARCADIS

mentioned there was recently a fatality at the Swift Creek Road intersection. A car failed to stop for the traffic signal and rear-ended another vehicle stopped at the light.

The following discussions took place following the presentation of the preliminary alternatives:

- Tom Steffens of the Corps of Engineers mentioned it was not clear from the tables which service roads went with each alternative. He asked the table be updated to provide this information. Table 1 from the meeting handout has been revised and is attached.
- Mr. Steffens also said service roads 7, 8 & 9 were mentioned in the handout but were not shown in the handout figures and not included in the impact tables. Information regarding these service roads is included on the attached updates to Tables 1, 3, 4, and 5 of the meeting handout and the attached figures.
- The hydraulic recommendations have not been completed yet. There are two existing box culverts at the Swift Creek intersection. There is a severe skew between the two boxes and it is not known at this time how these boxes will be impacted.
- Cynthia Van Der Wiele of the USEPA asked if the Town of Wilson Mill's had been contacted about the project and if they had a land use plan. Mr. Page and James Salmon of UCPRPO stated that they had coordinated with the Town of Wilson Mill's planning staff and that the town has a land use plan.
- Depending on funding, the project could be implemented in phases.

All of the participants agreed the project should go through the merger process and will enter the merger process at Concurrence Point 2A. The following steps will be performed moving forward:

- Complete the preliminary designs.
- Hold a public workshop in the fall.
- Hold the CP 2A merger meeting by the end of the year.

**Table 1. Alternatives\***

Alternatives	Interchange Options	
	Swift Creek Road	Wilson’s Mills Road
1A	Half-cloverleaf ramps loops in NW and SW quadrants – shifted west – Includes Service Roads 1, 2, 3, 4, 6, 7, 8, & 9	Tight diamond
1B	Half cloverleaf ramps/loops in NW and SW quadrants – shifted west – Includes Service Roads 1, 2, 3, 4, 6, 7, 8, & 9	Ramps/loops in NE and SW quadrants
2A	Ramps/loops in NE and SW quadrants – Includes Service Roads 1, 2, 3, 4A, 5, 6, 7, 8, & 9	Tight diamond
2B	Ramps/loops in NE and SW quadrants – Includes Service Roads quadrants – Includes Service Roads 1, 2, 3, 4A, 5, 6, 7, 8, & 9	Ramps/loops in NE and SW quadrants
3A	Ramps in NW and NE quadrants, ramp/loop in SW quadrant quadrants – Includes Service Roads 1, 2, 3, 4A, 5, 6, 7, 8, & 9	Tight diamond
3B	Ramps in NW and NE quadrants, ramp/loop in SW quadrant quadrants – Includes Service Roads 1, 2, 3, 4A, 5, 6, 7, 8, & 9	Ramps/loops in NE and SW quadrants

\*Service roads are similar for all alternatives, with the exception of Service Road 4.

**Table 3. Potential Impacts (DRAFT – Subject to Change)**

Resource		Alternative					
		1A	1B	2A	2B	3A	3B
Relocations*	Residential	4 (3)	4 (3)	6 (3)	6 (3)	7 (3)	7 (3)
	Business	7	8	8	9	8	9
	Total	11 (3)	12 (3)	14 (3)	15 (3)	15 (3)	16 (3)
Section 4(f) DOT Act resources		0	0	0	0	0	0
Section 6(f) LWCF Act resources		0	0	0	0	0	0
Wetlands (acres)		12.29	12.31	5.63	5.65	6.76	6.78
Streams (linear feet)		2,278	2,389	1,397	1,508	1,686	1,797
Riparian buffers		Yes**	Yes**	Yes**	Yes**	Yes**	Yes**
Water supply watershed – critical area		No	No	No	No	No	No
Federally protected species		TBD***	TBD***	TBD***	TBD***	TBD***	TBD***

\*Numbers in parentheses ( ) indicate low-income and/or minority-owned or occupied homes or businesses.

\*\*Streamside riparian zones within the study area are protected under provisions of the Neuse River Buffer Rules administered by NCDWR. Table 5 indicates which streams are subject to buffer rule protection.

\*\*\*To Be Determined - Sections of Reedy Branch and Little Poplar Creek meet the habitat requirement of the dwarf wedge mussel and the Tar River spiny mussel. No dwarf wedge mussels or Tar River spiny mussels were identified during the site investigations. However, detailed surveys were not conducted. Surveys will be conducted by NCDOT Biological Survey staff to determine presence or absence of dwarf wedge mussels and/or Tar River spiny mussels.

Note: Wetland and stream impacts were calculated using a 75 foot offset from the edge of pavement. Slope stake lines are not known at this time.

**Table 4. Potential Stream and Wetland Impacts by Option**

	Option	Stream Impacts (feet)	Wetland impacts (acres)
<b>Swift Creek Road interchange</b>	1 Modified cloverleaf – shifted west, realigned Swift Creek Road	1,205	5.07
	2 Ramps/loops in NE and SW quadrants	264	0.37
	3 Ramps in NW and NE quadrants, ramp/loop in SW quadrant	553	1.5
<b>Wilson’s Mills Road interchange</b>	A Tight diamond	201	0.35
	B Ramps/loops in NE and SW quadrants	312	0.37
<b>Service Road</b>	1 All Alternatives	105	0.52
	2 All Alternatives	420	0.57
	3 All Alternatives	0	0
	4 Alternatives 1A, 1B	100	5.59
	4A Alternatives 2A, 2B, 3A, 3B	160	3.63
	5 Alternatives 2A, 2B, 3A, 3B	0	0
	6 All Alternatives	165	0.19
	7 All Alternatives	0	0
	8 All Alternatives	82	0
	9 All Alternatives	0	0

**Table 5. Potential Stream Impacts by Alternative**

Stream Name	Map ID	Figure No.	Length of Impact (feet)					
			1A	1B	2A	2B	3A	3B
*Reedy Branch, including pond (PA)	SA	2A	0	0	0	0	0	0
*Little Poplar Creek	SB	2A	105	105	105	105	105	105
UT to Little Poplar Creek	SC	2A	0	0	0	0	0	0
*UT to Little Poplar Creek	SD	2A	175	175	175	175	175	175
UT to Little Poplar Creek	SE	2A	0	0	0	0	0	0
UT to Little Poplar Creek	SF	2A	245	245	245	245	245	245
*UT to Poplar Creek, including ponds (PB and PZZ)	SG	2A/2B	1,305	1,305	160	160	160	160
UT to Poplar Creek	SH	2A/2B	0	0	100	100	100	100
*Poplar Creek	SI	2A/2B	0	0	0	0	325	325
UT to Poplar Creek	SJ	2A	0	0	0	0	0	0
UT to Poplar Creek, including pond (PD)	SL	2A/2B	0	0	0	0	0	0
*UT to Poplar Creek including pond (PH)	SM	2A/2B	0	0	164	164	128	128
*UT to Poplar Creek	SN	2B	0	0	0	0	0	0
UT to Neuse River	SO	2B	95	312	95	312	95	312
*UT to Poplar Creek (ephemeral)	SP	2B	0	0	0	0	0	0
*UT to Neuse River	SQ	2B	82	82	82	82	82	82
*UT to Poplar Creek	SR	2B	0	0	0	0	0	0
*UT to Poplar Creek	SS	2B	0	0	0	0	0	0
UT to Neuse River	ST	2B	271	165	271	165	271	165
UT to Neuse River	SU	2B	0	0	0	0	0	0
UT to Poplar Creek	SZZ	2A	0	0	0	0	0	0
<b>Total</b>			<b>2,278</b>	<b>2,389</b>	<b>1,397</b>	<b>1,508</b>	<b>1,686</b>	<b>1,797</b>

\*Stream is subject to Neuse River Buffer Rule protection.

**NEPA/404 MERGER TEAM MEETING AGREEMENT**

**Concurrence Point No. 2A: Bridging Decisions and Alignment Review**

**PROJECT NO./TIP NO./ NAME/DESCRIPTION:**

State Project Number: WBS Element 50056.1.1

TIP Project Number: W-5600

TIP Description: US 70 Improvements from west of SR 2565 (Sadisco Road) to west of SR 1915 (Turnage Road)

Site ID	Stream	Alternative	Existing Structure Dimensions	Structural Recommendations
1	Little Poplar Creek	ALL	3 @ 6'x6' RCBC (152')	3 @ 6' x 6' RBC (extend 20' upstream)
2	Poplar Creek	Swift Creek Option 1	2 @ 7' X 6' RCBC (97')	2 @ 7' x 6' RCBC (extend 9' downstream/10' upstream)
4	Poplar Creek	Swift Creek Option 2	2 @ 10' x 6' RCBC (138')	2 @ 10' x 6' RCBC (extend 27' upstream / 27' downstream)
5	Poplar Creek	Swift Creek Option 2	2 @ 7'x7' RCBC (74')	2 @ 7' x 7' RCBC (new 241' - bury inverts 1')

(Site 3 was a crossing of Swift Creek Option 3, which was eliminated from consideration.)

FHWA \_\_\_\_\_ DocuSigned by: Ronald Lucas, Jr.  
 STEFFENS.THOMAS.ANCRUM.1284706273  
 USACE 284706273 Digitally signed by STEFFENS.THOMAS.ANCRUM.1284706273  
 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA,  
 cn=STEFFENS.THOMAS.ANCRUM.1284706273  
 Date: 2015.12.08 14:11:29 -0500

USEPA Cynthia F. Van Der Wiele 12/11/2015  
DocuSigned by:

USFWS \_\_\_\_\_ Gary Jordan  
DocuSigned by: 501FA11677C42452

NCWRC \_\_\_\_\_ Travis Wilson  
DocuSigned by: 3158A00186871436

SHPO \_\_\_\_\_ Renee Bledhill-Earley  
DocuSigned by: C2FA1111A275A64

NCDWQ \_\_\_\_\_ Rod Ridings  
DocuSigned by:

NCDOT \_\_\_\_\_ Kim Gillespie  
DocuSigned by: 17A0A001E2671EE

Upper Coastal Plain RPO \_\_\_\_\_ James Salmons  
DocuSigned by: 0A701E00E27A091

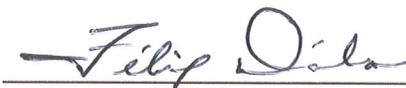
NEPA/404 MERGER TEAM MEETING AGREEMENT

Concurrence Point No. 3: Least Environmentally Damaging and Practicable Alternative

TIP Description: US 70 Improvements from US 70 Business to the Neuse River  
Federal-Aid Project: HISP-007(163)  
TIP Project: W-5600  
WBS Number: 50056.1.1

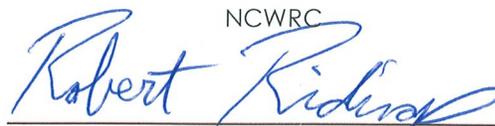
- \_\_\_ - Alternative 1A: Swift Creek Option 1, Wilson's Mills Option A
- \_\_\_ - Alternative 1B: Swift Creek Option 1, Wilson's Mills Option B
- ✓ - Alternative 2A: Swift Creek Option 2, Wilson's Mills Option A
- \_\_\_ - Alternative 2B: Swift Creek Option 2, Wilson's Mills Option B

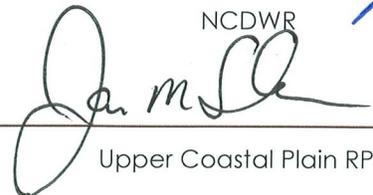
The Merger Team has concurred on this date of June 15, 2016 with the selection of the Least Environmentally Damaging and Practicable Alternative as stated above, as indicated by the signatures below.

  
\_\_\_\_\_  
FHWA

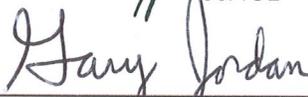
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7/1/2016  
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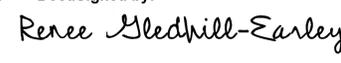
\_\_\_\_\_  
USEPA

  
\_\_\_\_\_  
NCWRC

  
\_\_\_\_\_  
NCDWR  
Upper Coastal Plain RPO

  
\_\_\_\_\_  
USACE

  
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USFWS

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\_\_\_\_\_  
HPO

  
\_\_\_\_\_  
NCDOT

**NEPA/Section 404 MERGER TEAM AGREEMENT  
Concurrence Point No. 4A: Avoidance and Minimization**

**TIP Description:** US 70 Improvements from US 70 Business to the Neuse River  
**Federal-Aid Project:** HISP-007(163)  
**TIP Project :** W-5600  
**WBS Number:** 50056.1.1

Section 404 Resources

- In order to reduce stream and wetland impacts along the western end of the project, Service Roads 1A and 2 will be realigned closer to US 70, utilizing a concrete barrier to provide the separation. **These minimization measures reduced stream and wetland impacts by 230 feet and 0.5 acre, respectively.**
- Where practical and safe, steeper slopes (no greater than 3:1) will be utilized. During project design, special consideration will be given to slopes in wetland areas and near streams.

Human Environment

- In order to minimize impacts on the Wilson's Mills Cemetery, the proposed right of way along the eastern side of Swift Creek Road, adjacent to the cemetery was reduced by 20'.
- In response to concerns regarding reduced access to businesses along Uzzle Industrial Drive, Service Road 1A, which extends Sadisco Road eastward to Uzzle Industrial Drive, was added.
- In order to minimize the impacts on businesses along the western end of the project, Service Roads 1A and 2 will be realigned closer to US 70, utilizing a concrete barrier to provide separation. **These minimization measures will reduce the number of relocates by three businesses.**

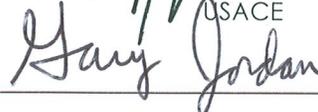
The Merger Team has concurred on this date of June 15, 2016 with the avoidance and minimization measures as stated above, as indicated by the signatures below.



FHWA



USACE



USFWS

USEPA



NCWRC



NCDWR



Upper Coastal Plain RPO

HPO



NCDOT



# Appendix B

## Relocation Reports

# EIS RELOCATION REPORT

North Carolina Department of Transportation  
RELOCATION ASSISTANCE PROGRAM

E.I.S.       CORRIDOR       DESIGN

WBS ELEMENT:	50056.1.1	COUNTY	Johnston	Alternate	A	of	2	Alternate
T.I.P. No.:	W-5600	*Revised to account for proposed Sadisco service road						
DESCRIPTION OF PROJECT:	US-70 Improvements from west of SR 2565 (Sadisco Rd.) to west of SR 1915 (Turnage Rd.)							

ESTIMATED DISPLACED					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	4	0	4	0				2	2
Businesses	2	0	2	0					
Farms									
Non-Profit									

ANSWER ALL QUESTIONS									
Yes	No	Explain all "YES" answers.							
X		1. Will special relocation services be necessary?							
	X	2. Will schools or churches be affected by displacement?							
X		3. Will business services still be available after project?							
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.							
	X	5. Will relocation cause a housing shortage?							
	X	6. Source for available housing (list).							
	X	7. Will additional housing programs be needed?							
X		8. Should Last Resort Housing be considered?							
	X	9. Are there large, disabled, elderly, etc. families?							
	X	10. Will public housing be needed for project?							
X		11. Is public housing available?							
X		12. Is it felt there will be adequate DSS housing available during relocation period?							
	X	13. Will there be a problem of housing within financial means?							
X		14. Are suitable business sites available (list source).							
		15. Number months estimated to complete RELOCATION? <span style="border: 1px solid black; padding: 2px;">12 months</span>							

VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Owners		Tenants		For Sale		For Rent	
0-20M		\$ 0-150		0-20M	0	\$ 0-150	0
20-40M		150-250		20-40M	3	150-250	5
40-70M		250-400		40-70M	17	250-400	15
70-100M	2	400-600		70-100M	13	400-600	30
100 UP	2	600 UP		100 UP	400+	600 UP	50
TOTAL	4		0		433+		100

**REMARKS (Respond by Number)**

1.) **Wilson's Mill Cemetery** - This option would require appx. 45 graves to be displaced, with the possibility of additional, unmarked graves also being present.

Additionally, there will be appx. 10 billboards displaced

4.) Please see addendum or follow link [W-5600 - Option 2-A - Sadisco Service Road.xls](#)

6.) Multiple Listing Services, Local Realtors, Etc

8.) As required

14.) Multiple Listing Services, Local Realtors, Etc.

**Extra Notes:**  
 -There may be additional relocatees due to lack of suitable repair area and/or perkable soil.  
 -Potential miscellaneous move on parcel 034-Parrish Family Trust.  
 -Miscellaneous move on parcel 002-Automotive Recovery Services

 C. James Coughlin Right of Way Agent	02/29/2016 Date	_____ Relocation Coordinator	_____ Date
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# EIS RELOCATION REPORT

North Carolina Department of Transportation  
RELOCATION ASSISTANCE PROGRAM

E.I.S.       CORRIDOR       DESIGN

WBS ELEMENT:	50056.1.1	COUNTY	Johnston	Alternate	A	of	2	Alternate
T.I.P. No.:	W-5600							
DESCRIPTION OF PROJECT:	US-70 Improvements from west of SR 2565 (Sadisco Rd.) to west of SR 1915 (Turnage Rd.)							

ESTIMATED DISPLACEDS					INCOME LEVEL							
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP			
Residential	4	1	5	0	0	0	1	2	2			
Businesses	5	0	5	0	VALUE OF DWELLING      DSS DWELLING AVAILABLE							
Farms	0	0	0	0	Owners		Tenants		For Sale      For Rent			
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0
ANSWER ALL QUESTIONS					20-40M	0	150-250	0	20-40M	3	150-250	5
Yes	No	<i>Explain all "YES" answers.</i>										

X	X	1. Will special relocation services be necessary?
X	X	2. Will schools or churches be affected by displacement?
X	X	3. Will business services still be available after project?
X	X	4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
X	X	5. Will relocation cause a housing shortage?
X	X	6. Source for available housing (list).
X	X	7. Will additional housing programs be needed?
X	X	8. Should Last Resort Housing be considered?
X	X	9. Are there large, disabled, elderly, etc. families?
X	X	10. Will public housing be needed for project?
X	X	11. Is public housing available?
X	X	12. Is it felt there will be adequate DSS housing available during relocation period?
X	X	13. Will there be a problem of housing within financial means?
X	X	14. Are suitable business sites available (list source).
X	X	15. Number months estimated to complete RELOCATION? <b>12 months</b>

**REMARKS (Respond by number)**

1.) Wilson's Mill Cemetery - This option would require appx. 45 graves to be displaced, with the possibility of additional, unmarked graves also being present.

Additionally, there will be appx. 10 billboards displaced

3.) Businesses are still available

4.) Please see addendum or follow link [W-5600 - Option 2-A.xls](#)

6.) Multiple Listing Services, Local Realtors, Etc

8.) As mandated by law

11.) Public housing is available

12.) There is adequate DSS Housing.

14.) Multiple Listing Services, Local Realtors, Etc.

**Extra Notes:**  
 -There may be additional relocatees due to lack of suitable repair area and/or perkable soil.  
 -Potential miscellaneous move on parcel 034-Parrish Family Trust.

<p>C. James Coughlin Right of Way Agent</p>	02/19/2016	<p>Relocation Coordinator</p>	3/1/16
Date		Date	

# EIS RELOCATION REPORT

North Carolina Department of Transportation  
RELOCATION ASSISTANCE PROGRAM

E.I.S.       CORRIDOR       DESIGN

WBS ELEMENT:	50056.1.1	COUNTY	Johnston	Alternate	A	of	2	Alternate
T.I.P. No.:	W-5600	*Revised to account for proposed Sadisco service road						
DESCRIPTION OF PROJECT:	US-70 Improvements from west of SR 2565 (Sadisco Rd.) to west of SR 1915 (Turnage Rd.)							

ESTIMATED DISPLACEDS					INCOME LEVEL							
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP			
Residential	4	0	4	0	0	0	0	2	2			
Businesses	2	0	2	0	VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Farms	0	0	0	0	Owners		Tenants		For Sale		For Rent	
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0
<b>ANSWER ALL QUESTIONS</b>					20-40M	0	150-250	0	20-40M	3	150-250	5
Yes	No	<b>Explain all "YES" answers.</b>										

X		1. Will special relocation services be necessary?
	X	2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? <b>12 months</b>

**REMARKS (Respond by number)**

1.) Wilson's Mill Cemetery - This option would require appx. 45 graves to be displaced, with the possibility of additional, unmarked graves also being present.

Additionally, there will be appx. 10 billboards displaced

3.) Businesses are still available

4.) Please see addendum or follow link [W-5600 - Option 2-A - Sadisco Service Road.xls](#)

6.) Multiple Listing Services, Local Realtors, Etc

8.) As required

11.) Public housing is available

12.) Adequate DSS housing is available

14.) Multiple Listing Services, Local Realtors, Etc.

**Extra Notes:**

- There may be additional relocatees due to lack of suitable repair area and/or perkable soil.
- Potential miscellaneous move on parcel 034-Parrish Family Trust.
- Miscellaneous move on parcel 002-Automotive Recovery Services

<p>C. James Coughlin Right of Way Agent</p>	02/29/2016		<p>Relocation Coordinator</p>	3/1/16
Date			Date	



# Appendix C

## Public Involvement



# U.S. 70 Improvements

North Carolina Department of Transportation  
Project Development and Environmental Analysis Branch  
Attn: Kim Gillespie, PE  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548



# U.S. 70 Improvements

Transportation Improvement Program Project No. W-5600



### THIS ISSUE

- Project Introduction p. 1
- Notice to Property Owners p. 2
- Project Map p. 2
- Introducción del Proyecto p. 3
- Notificación al los Dueños de Propiedad p. 3
- Project Contacts / Equipo de Contacto p. 4

### Contact Us!

## US 70 Study Team Contacts

## Equipo de Contacto US 70

**Jerry Page, PE**  
NCDOT Division 4  
Project Manager  
jpage@ncdot.gov  
(252) 237-6164, ext. 3551

**Kim Gillespie, PE**  
NCDOT  
Project Development Engineer  
kigillespie@ncdot.gov  
(919) 707-6023

**Robin Pugh, AICP**  
ARCADIS  
Senior Planner  
robin.pugh@arcadis-us.com  
(919) 854-1282

**Public involvement is an important part of the planning process.** The NCDOT encourages citizen involvement on transportation projects and is committed to ensuring that citizen's concerns are considered and addressed.

**La participación del público es muy importante para el proceso de planificación.** El Departamento de Transportación de Carolina del Norte anima a los ciudadanos involucrarse en los proyectos de transportación y están comprometidos en asegurar a los ciudadanos que se dirigirá y considerara contestar las inquietudes del público. 1-800-481-6494

### Project Assistance Hotline!

If you have transportation questions on other projects, call our Customer Service Center toll-free at 1-877-DOT-4YOU, or visit the NCDOT website at [www.ncdot.org](http://www.ncdot.org).

### Línea de Asistencia de Proyecto

Si tiene alguna pregunta sobre la transportación y sus otros proyectos, llame al Departamento de Servicios al cliente al 1-800-481-6494, o visite la página de internet del NCDOT al [www.ncdot.org](http://www.ncdot.org).

## Project Introduction

The North Carolina Department of Transportation (NCDOT) proposes improvements to US 70 east of the US 70 Clayton Bypass through Wilson's Mills. In accordance with the National Environmental Policy Act (NEPA), a planning, environmental, and engineering study is under way for the proposed project.

- SR 1915 (Turnage Road)/ SR 2815 (Bear Farm Road)

It has not been determined which median openings would be closed or modified. Service roads along US 70 will also be considered.

### Current Project Activities

This project is in the early planning stage of project development. As part of the process to develop the project's environmental document (Categorical Exclusion), the NCDOT must identify and document environmental resources so that they can be avoided or impacts reduced. Streams and wetlands are two of the resources to be identified during the review process. If you own property within approximately 250 feet of US 70, representatives of the NCDOT will need to perform field investigations on your property.

### Why Is This Project Needed?

The purpose of the project is to improve safety and mobility along the US 70 corridor in Johnston County.

### What Improvements are Proposed?

The project proposes to convert two intersections to interchanges and close or modify median openings. The project begins west of SR 2565 (Sadisco Road) and ends west of SR 1915 (Turnage Road). Interchanges are proposed at the following intersections with US 70:

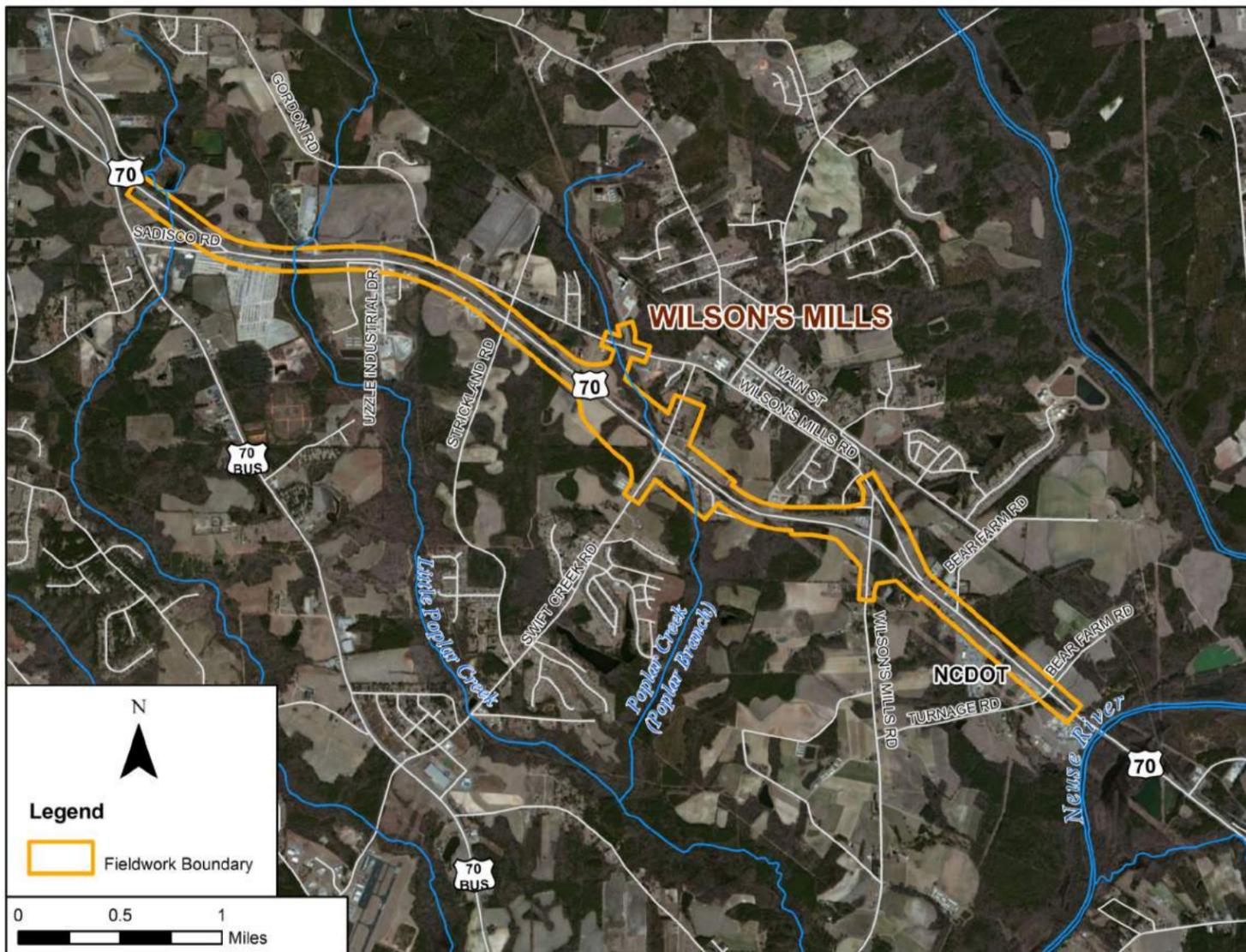
- SR 1501 (Swift Creek Road)
- SR 1913 (Wilson's Mills Road)

Median opening modifications or closures will be studied at the following locations along US 70:

- SR 2565 (Sadisco Road)
- SR 2574 (Uzzle Industrial Drive)
- SR 1907 (Strickland Road)
- SR 1914 (Bear Farm Road)
- SR 2569 (NCDOT Maintenance Facility)

### What are the next steps?

After existing conditions information is collected, engineers will begin developing interchange designs and evaluating median openings and service roads. This will include evaluating several interchange concepts already developed by NCDOT. A public meeting will be held to provide the public an opportunity to comment on the preliminary designs. A date for the public meeting will be announced in the next project newsletter.



## Notice to Property Owners Along the US 70 Corridor

Over the next several weeks, representatives of the NCDOT, as well as the US Army Corps of Engineers, may be present on your property for the purposes of conducting or verifying the limits of waters and wetlands pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. These representatives will wear orange safety vests, have picture ID badges, and will hang pink and black flagging, or ribbons, on trees and shrubs to identify the limits of streams and wetlands, if present, on the property. This flagging **does not** indicate the location of a proposed transportation project, but it is very important in our environmental review process. Please do not disturb this flagging.

Please note: If you are aware that the US Army Corps of Engineers has issued a Jurisdictional Determination on your property, determining the presence of streams and/or wetlands, contact the NCDOT Natural Environment Section at (919) 707-6162 to inform us as soon as possible. This will avoid potential duplication of effort. When you call, please mention the NCDOT project number W-5600.

For general questions about the project, please contact NCDOT Project Planning Engineer, Kim Gillespie, PE at 1548 Mail Service Center, Raleigh, NC 27699-1548, phone (919) 707-6023 or via email [klgillespie@ncdot.gov](mailto:klgillespie@ncdot.gov).

Thank you for your cooperation.

## Introducción del Proyecto

El Departamento de Transportación de Carolina del Norte (NCDOT) propone mejoramientos a la carretera US 70 al este de la carretera de circunvalación US 70 Clayton que pasa por Wilson's Mills. De acuerdo con La Ley de Política de Ambiente Nacional (NEPA), un estudio de planeación ambiental, e ingeniería ya está en camino para este propuesto proyecto.

### ¿Cual es la propuesta de mejoramiento?

El proyecto propone de convertir dos intersecciones a intercambios y cerrar o modificar aperturas medianas. El proyecto empieza al Oeste del SR 2565 (Sadisco Road) y termina al Oeste del SR 1915 (Turnage Road). Intercambios se proponen para las siguientes intersecciones con el US 70:

- SR 1501 (Swift Creek Road)
- SR 1913 (Wilson's Mills Road)

Modificaciones de las aperturas medianas serán estudiadas en los siguientes lugares a lo largo del US 70:

- SR 2565 (Sadisco Road)
- SR 2574 (Uzzle Industrial Drive)
- SR 1907 (Strickland Road)
- SR 1914 (Bear Farm Road)
- SR 2569/NCDOT Maintenance Facility
- SR 1915 (Turnage Road)/SR 2815 (Bear Farm Road)

Todavía no se ha determinado cuales aperturas medianas serán cerrados o modificadas. La construcción de calles de servicio a lo largo del US 70 también serán consideradas. Serán consideradas en un esfuerzo por mejorar el acceso de las propiedades impactadas.

### ¿Por qué se necesita este proyecto?

El propósito de este proyecto es para mejorar la seguridad y movilidad a lo largo del corredor del US 70 en el condado de Johnston.

### Actividades Actuales del Proyecto

Este proyecto está en la planificación inicial del desarrollo de proyecto. Como parte del proceso del desarrollo de este proyecto ambiental, el Departamento de Transportación de Carolina del Norte deberá identificar y documentar recursos ambientales para que puedan ser evadidos o reducir el impacto del proyecto en su ambiente. Corrientes y patones serán dos de los recursos que se identificaran en el proceso de revisión. Si usted es dueño de su propiedad dentro de 250 pies del US 70, representantes del Departamento de Transportación de Carolina del Norte tendrá que efectuar investigaciones sobre su propiedad.

### ¿Cuáles son los siguientes pasos?

Después que la información existentes es coleccionada, los ingenieros empezaran desarrollando diseños intercambiables y evaluaran aperturas medianas y calles de servicio. Esto incluirá la evaluación de varios conceptos intercambiables ya desarrollados por el Departamento de Transportación de Carolina del Norte, NCDOT. Una reunión publica será efectuada para proveerle al público una oportunidad para comentar sobre los diseños preliminares. Una fecha de esta reunión publica será anunciada en el siguiente boletín del proyecto.

## Notificación al los Dueños de Propiedad a lo largo del corredor del US 70

A través de las siguientes semanas, representantes del Departamento de Transportación de Carolina del Norte, además de Los Ingenieros del US Army Corps, pueden estar presentes en sus propiedades con el propósito de conducir o verificar los limites de agua y pantanos consiguiente a la Sección 404 de la Ley de Agua Limpia y/o Sección 10 de la Ley de Ríos y Puertos de 1899. Estos representantes estarán uniformados en chalecos anaranjados, portando insignias de tarjeta de identidad, y colgaran banderitas de negro y rosa, o listones, en los arboles o arbustos para identificare limites de corrientes y patones, si están presentes, en la propiedad. Estas banderitas no indican el lugar donde se está proponiendo un proyecto de transportación, pero si es muy importante para el proceso de revisión ambiental. Por favor no toque las banderitas.

Por favor tome nota: Si usted está enterado que ya los Ingenieros del US Army ha publicado una Determinación Jurisdiccional de su propiedad, el poder determinar la presencia de corrientes y/o patones, deberá contactar al Departamento de Transportación de Carolina del Norte Sección Ambiente Natural al 1-800-481-6494 para informarnos lo mas pronto posible. Esto evitara el potencial de trabajo duplicado. Cuando llame, por favor menciones el número de proyecto W-5600.

Para preguntas generales acerca de este proyecto, póngase en contacto con nosotros en el mismo número de teléfono.

Gracias por su cooperación.



## US 70 IMPROVEMENT PROJECT

North Carolina Department of Transportation  
Project Development and Environmental Analysis Unit  
Attn: Kim Gillespie, P.E.  
1548 Mail Service Center  
Raleigh, NC 27699-1548



## US 70 Improvement Project

State Transportation Improvement Program (STIP) No. W-5600  
West of SR 2565 (Sadisco Road) to west of SR 1915 (Turnage Road)

*NCDOT Mission: Connecting people, products, and places safely and efficiently, with customer focus, accountability and environmental sensitivity to enhance the economy and vitality*

### Project Description

The North Carolina Department of Transportation (NCDOT), is proposing to upgrade US 70 from west of SR 2565 (Sadisco Road), east of the Clayton Bypass to west of SR 1915 (Turnage Road). The project will remove the existing signalized, at-grade intersections at SR 1501 (Swift Creek Road) and SR 1913 (Wilson's Mills Road) and replace them with interchanges. Other at-grade intersections and median openings will be removed. Service roads will be constructed to provide access to properties along US 70.

### Proposed Improvements

#### Swift Creek Road Interchange

##### Option 1

Swift Creek Road will be moved west of its existing location. The ramps for the proposed interchange will be constructed on the west side of the relocated Swift Creek Road. Swift Creek road will be bridged over US 70.

##### Option 2

Swift Creek would remain on its existing alignment. The proposed ramps would be constructed in the northeast and southwest quadrants of the Swift Creek Road crossing of US 70. Swift Creek Road would be bridged over US 70.

#### Wilson's Mills Road Interchange

##### Option A

Interchange ramps will be constructed in all four quadrants. US 70 would be bridged over Wilson's Mills Road.

##### Option B

Interchange ramps would be constructed in the northeast and southwest quadrants. US 70 will be bridged over Wilson's Mills Road.

#### Service Roads

Access to US 70 from adjacent properties will be provided via service roads connected to the Swift Creek and Wilson's Mills Road interchanges.

### PUBLIC INFORMATIONAL MEETING

TUESDAY, FEBRUARY 2, 2016

4:00 PM TO 7:00 PM

Wilson's Mills Elementary School Cafeteria

4654 Wilson's Mills Road

Wilson's Mills, NC

NCDOT will hold a public meeting regarding the proposed improvements along US 70 west of SR 2565 (Sadisco Road) to west of SR 1915 (Turnage Road). The primary purpose of the project is to improve mobility and connectivity of the US 70 corridor in Johnston County.

Interested citizens may attend at any time between 4 and 7 pm. The maps available at the meeting will include an explanation of the location and design of the proposed alternatives. NCDOT representatives will be available at the open-house to answer questions and receive comments regarding the project. Written comments can be submitted either at the meeting or later by mail or email through February 16, 2016.

For additional information, contact Kim Gillespie, Project Planning Engineer, by email at [kgillespie@ncdot.gov](mailto:kgillespie@ncdot.gov), by mail at NCDOT 1548 Mail Service Center, Raleigh, 27699-1548, or via phone at (919) 707-6023.

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to participate in this hearing. Anyone requiring special services should contact Ms. Anamika Ladd at (919) 707-6072 as early as possible so that arrangements can be made.

### What Happens Next

NCDOT is completing a Categorical Exclusion (CE), which will document the environmental impacts of the preferred alternative. Comments received from the public will also be included in the CE. The CE will be submitted to the Federal Highway Administration for approval.

### Schedule

- Categorical Exclusion Approval.....April 2016
- Begin Right of Way Acquisition.....2018
- Begin Construction..... 2020

## US 70 Improvements Team Contacts

**Jerry Page, P.E.**  
NCDOT Division 4  
Project Manager  
[jpage@ncdot.gov](mailto:jpage@ncdot.gov)  
(252) 237-6164, ext. 3551

**Kim Gillespie, P.E.**  
NCDOT  
Project Planning Engineer  
[kgillespie@ncdot.gov](mailto:kgillespie@ncdot.gov)  
(919) 707-6023

**Ryan L. White, P.E.**  
Stantec Consulting  
Senior Transportation Engineer  
[Ryan.white@stantec.com](mailto:Ryan.white@stantec.com)  
(919) 865-7374

Public involvement is an important part of the planning process. If you have transportation questions on other projects, call our Customer Service Center toll-free at 1-877-DOT-4YOU, or visit the NCDOT website at [www.ncdot.org](http://www.ncdot.org).

La participación del público es muy importante para el proceso de planificación. El Departamento de Transportación de Carolina del Norte anima a los ciudadanos involucrarse en los proyectos de transportación y están comprometidos en asegurar a los ciudadanos que se dirigirá y considerara contestar las inquietudes del público. 1-800-481-6494



# US 70 Improvement Project

State Transportation Improvement Program (STIP) No. W-5600  
SR 2565 (Sadisco Road) to SR 1915 (Turnage Road)

## Descripción del Proyecto

El Departamento de Transporte de Carolina del Norte (NCDOT), propone actualizar US 70 desde el oeste de SR 2565 (Sadisco Road), al este del Clayton Bypass hasta el oeste de SR 1915 (Turnage Road). El proyecto eliminará las intersecciones señalizadas existentes por SR 1501 (Swift Creek Road) y SR 1913 (Wilson's Mills Road) y las reemplazarán con intercambios. Otras intersecciones a nivel y aperturas medianas serán eliminadas completamente. Calles de servicio serán construidos para proporcionar acceso a las propiedades a lo largo de US 70.

## Propuesta de Mejoramiento

### Swift Creek Road Intercambio

#### Opción 1

Se moverán Swift Creek Road al oeste de su ubicación presente. Las rampas del intercambio propuesto se construirán en el lado oeste de la reubicado Swift Creek Road. Vehículos viajando por Swift Creek Road pasaran el US 70 por medio de un puente.

#### Opción 2

Se mantendría en su alineación presente. Las rampas propuestas se construirán en los cuadrantes del noreste y suroeste de la intersección de Swift Creek Road ay US 70. del cruce de Swift Creek Road de US 70. Vehículos viajando por Swift Creek Road pasaran el US 70 por medio de un puente.

### Wilson's Mills Road Intercambio

#### Opción A

Se construirán las rampas del intercambio en los cuatro cuadrantes. Vehículos viajando por US 70 pasaran Wilsons Mills Road por medio de un puente.

#### Opción B

Se construirán las rampas del intercambio en los cuadrantes del noreste y sudoeste. Vehículos viajando por US 70 pasaran Wilsons Mills Road por medio de un puente.

### Calles de Servicio

El acceso propuesto a US 70 de las propiedades al lado de la carretera será por medio de calles de servicio conectados a los intercambios de Swift Creek y Wilson's Mills Road.

## AUDIENCIA PÚBLICA Y SESIÓN INFORMATIVA

MARTES, 2 DE FEBRERO, 2016

5:00 PM A 7:00 PM

Wilson's Mills Elementary School

Wilson's Mills, NC

NCDOT tendrá una audiencia pública sobre la propuesta del mejoramiento de US 70 al oeste de SR 2565 (Sadisco por carretera) a al oeste de SR 1915 (Turnage Road). El objetivo principal del proyecto es mejorar la movilidad y la conectividad del corredor de US 70 en el Condado de Johnston.

Las personas interesadas pueden asistir a cualquier hora entre las 4 y las 7 de la tarde. Los mapas disponibles en la reunión incluirán una explicación sobre la ubicación y el diseño de las alternativas propuestas. Representantes de NCDOT estarán disponibles en la jornada de puertas abiertas para responder a preguntas y apuntar comentarios sobre el proyecto. Los comentarios escritos pueden ser presentados ya sea en la reunión o después por correo o por correo electrónico hasta el 16 de febrero 2016.

Para obtener información adicional, comuníquese con Kim Gillespie, Ingeniero de Proyectos de Planificación, por correo electrónico a [kgillespie@ncdot.gov](mailto:kgillespie@ncdot.gov), por correo a NCDOT 1548 Mail Service Center, Raleigh, 27699-1548, o por teléfono al (919) 707-6023.

NCDOT proporcionará ayuda y servicios auxiliares bajo el Acto sobre Ciudadanos con Discapacidades para personas con discapacidad que deseen participar en esta audiencia. Cualquier persona que requiera servicios especiales debe comunicarse con la Sra Anamika Ladd al (919) 707-6072 lo antes posible de manera que se pueden hacer arreglos.

## ¿Cuales son los siguientes pasos?

NCDOT está realizando una Exclusión Categórica (CE por sus siglas en Inglés) que documentará los impactos ambientales de la alternativa preferida. Comentarios recibidos del público sobre los diferentes alternativas estarán incluidos en la CE. La CE será entregada a la Administración Federal de Carreteras por aprobación.

## Schedule

- Aprobación de la Exclusión Categórica .....Abril 2016
- Inicio de Adquisición de Derecho de Vía.....2018
- Inicio de Construcción.....2020

## Project Study Area



US 70 west approaching Wilson's Mills Road intersection



US 70 east approaching Sadisco Road intersection

# North Carolina Department of Transportation

## PUBLIC INFORMATIONAL MEETING



PROPOSED UPGRADE OF US 70 FROM WEST OF SR 2565 (SADISCO ROAD), EAST OF  
THE CLAYTON BYPASS TO WEST OF SR 1915 (TURNAGE ROAD)

**STIP PROJECT W-5600**



FEBRUARY 2, 2016



## PROJECT DESCRIPTION AND BACKGROUND

The North Carolina Department of Transportation (NCDOT), is proposing to upgrade US 70 from west of SR 2565 (Sadisco Road), east of the Clayton Bypass to west of SR 1915 (Turnage Road) to a freeway. The project will remove the existing signalized, at-grade intersections at SR 1501 (Swift Creek Road) and SR 1913 (Wilson's Mills Road) and replace them with interchanges. Other at-grade intersections and median openings will be removed. Service roads will be constructed to provide access to properties along US 70.

The purpose of the proposed project is to improve safety and mobility of vehicular travel along US 70 within the project limits. The proposed project is intended to address the following needs:

- The fatal crash rate for the subject section of US 70 is higher than the statewide average for similar facilities (although it is slightly lower than the critical rate).
- The existing signalized intersections within the project limits present concerns regarding driver expectancy given the rural, high-speed and free-flow nature of the adjoining sections of US 70.
- The existing signalized intersections within the project limits result in delay to traffic along this section of US 70.

## DESCRIPTION OF ALTERNATIVES, IMPACTS, AND COSTS

### *Swift Creek Road Interchange Options*

**Swift Creek Road Option 1:** Swift Creek Road will be moved west of its existing location. The ramps for the proposed interchange will be constructed on the west side of the relocated Swift Creek Road. Swift Creek road will be bridged over US 70.

**Swift Creek Road Option 2:** Swift Creek Road would remain on its existing alignment. The proposed ramps would be constructed in the northeast and southwest quadrants of the Swift Creek Road crossing of US 70. Swift Creek Road would be bridged over US 70.

### *Wilson's Mills Road Interchange Options*

**Wilson's Mills Road Option A:** Interchange ramps will be constructed in all four quadrants. US 70 would be bridged over Wilson's Mills Road.

**Wilson's Mills Road Option B:** Interchange ramps would be constructed in the northeast and southwest quadrants. Wilson's Mills Road will be bridged over US 70.

### *Service Roads*

Access to US 70 from adjacent properties will be provided via service roads connected to the Swift Creek Road and Wilson's Mills Road interchanges.

**Alternative Impacts and Cost:**

	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B
Stream Impacts (linear feet)	2,060	1,840	1,460	1,240
Wetland Impacts (acres)	6.3	6.0	7.4	7.0
Farmland Impacts (acres)	50.2	55.8	30.1	35.7
Residential Relocations	4	4	6	6
Business Relocations	3	5	4	6
Estimated Construction Cost	<b>\$33,950,000</b>	<b>\$32,850,000</b>	<b>\$28,700,000</b>	<b>\$27,600,000</b>

\* Impact and relocation quantities are estimates. Final numbers will not be known until designs are further developed for right of way acquisition and construction.

**PROJECT SCHEDULE**

**Alternative Selection**.....March 2016  
**Environmental Document Approval**.....April 2016  
**Right of Way Acquisition**.....2018  
**Construction**.....2020

**ADDITIONAL PROJECT INFORMATION**

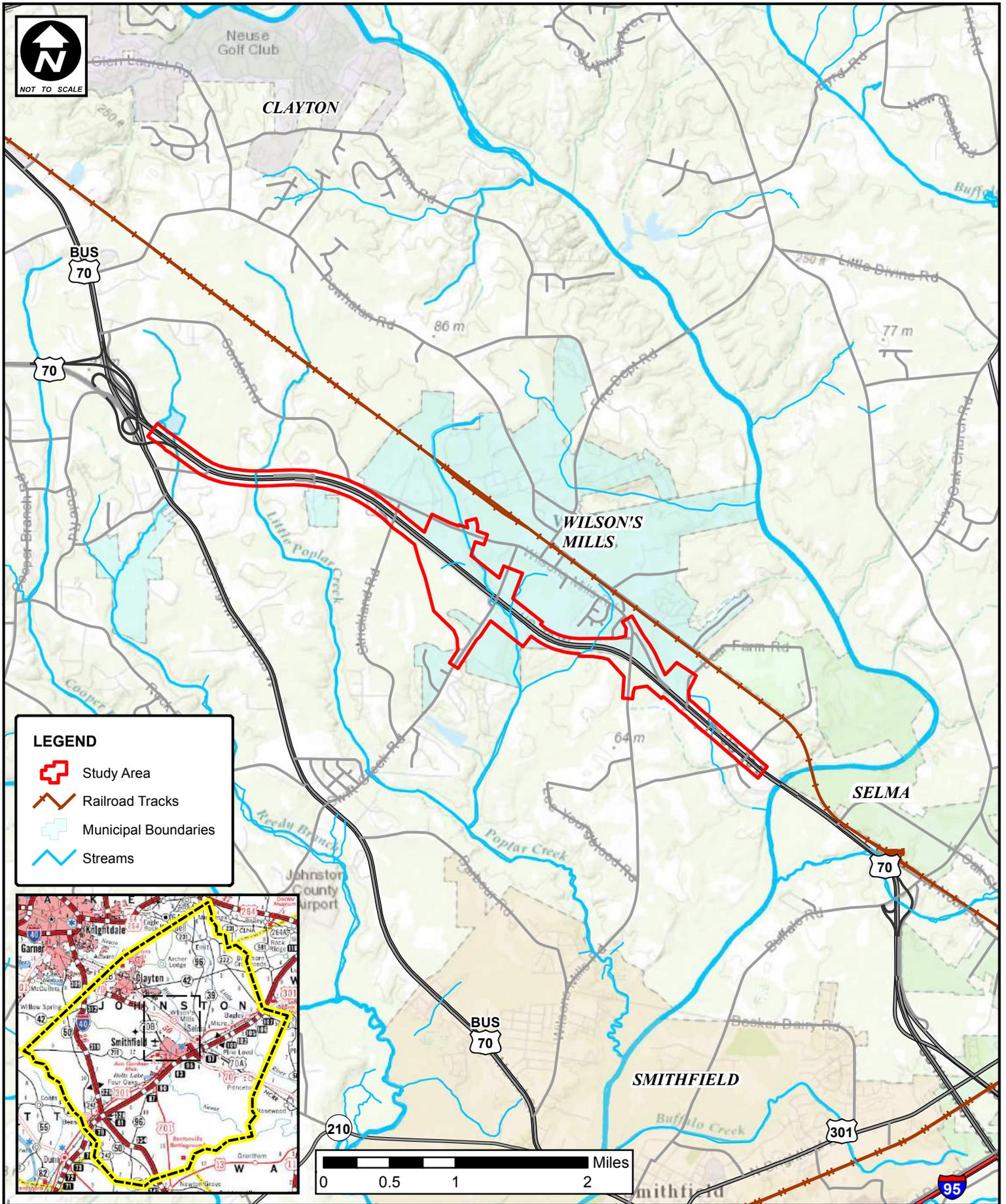
**US 70 Improvements Team Members**

Jerry Page, P.E.  
 NCDOT Division 4  
 Project Manager  
[jpage@ncdot.gov](mailto:jpage@ncdot.gov)  
 (252) 237-6164, ext. 3551

Kim Gillespie, P.E.  
 NCDOT  
 Project Development Engineer  
[kgillespie@ndot.gov](mailto:kgillespie@ndot.gov)  
 (919) 707-6023

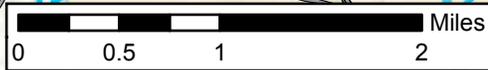
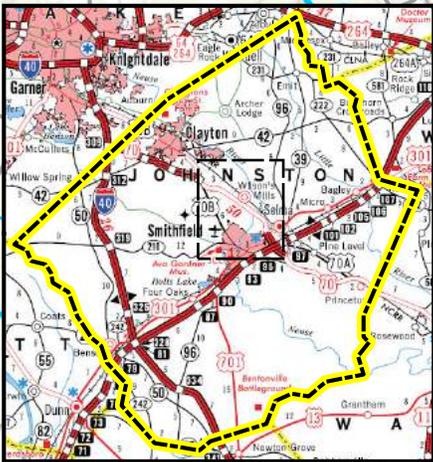
Ryan L. White, P.E.  
 Stantec Consulting  
 Senior Transportation Engineer  
[ryan.white@stantec.com](mailto:ryan.white@stantec.com)  
 (919) 865-7374

More detailed project maps can be viewed and downloaded on the NCDOT Public Meetings website at the following link: <http://www.ncdot.gov/projects/publicmeetings/>



**LEGEND**

- Study Area
- Railroad Tracks
- Municipal Boundaries
- Streams



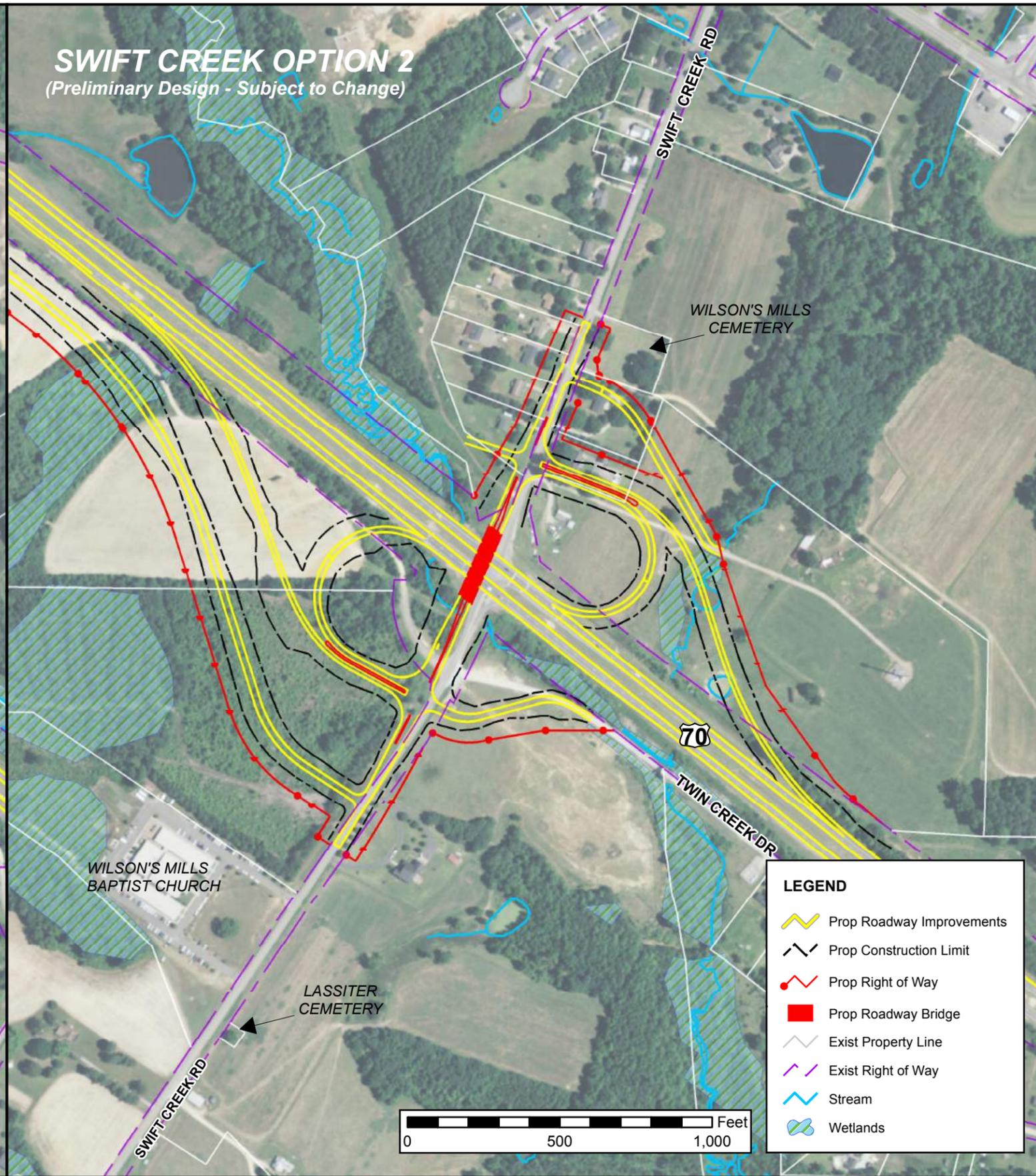
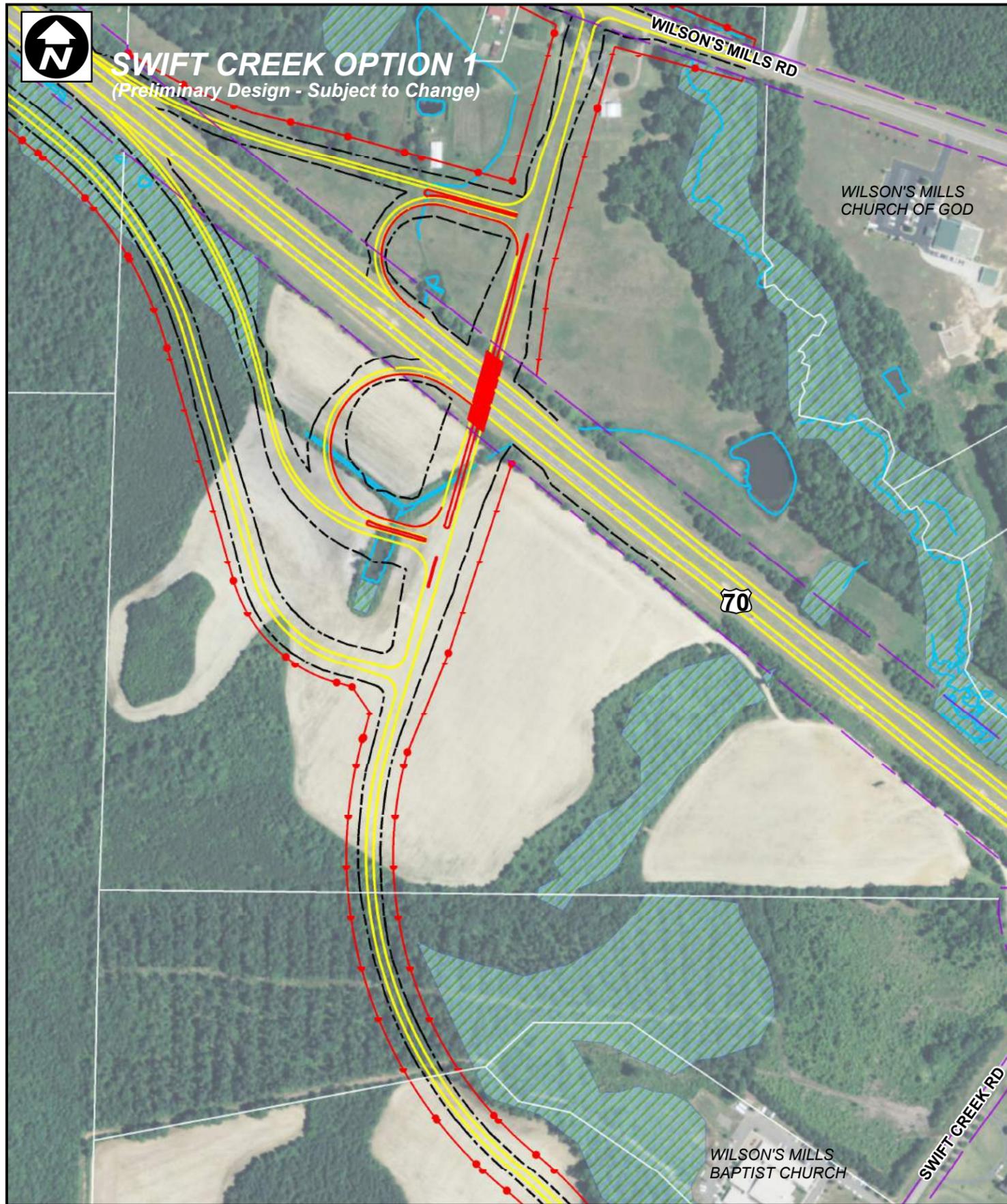
**US 70 Improvements**  
**From west of SR 2565 (Sadisco Road) to west of**  
**SR 1915 (Turnage Road) in Johnston County TIP**  
**W-5600**

Exhibit 1  
 Project Vicinity Map



**SWIFT CREEK OPTION 1**  
(Preliminary Design - Subject to Change)

**SWIFT CREEK OPTION 2**  
(Preliminary Design - Subject to Change)



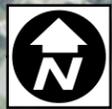
**LEGEND**

- Prop Roadway Improvements
- Prop Construction Limit
- Prop Right of Way
- Prop Roadway Bridge
- Exist Property Line
- Exist Right of Way
- Stream
- Wetlands

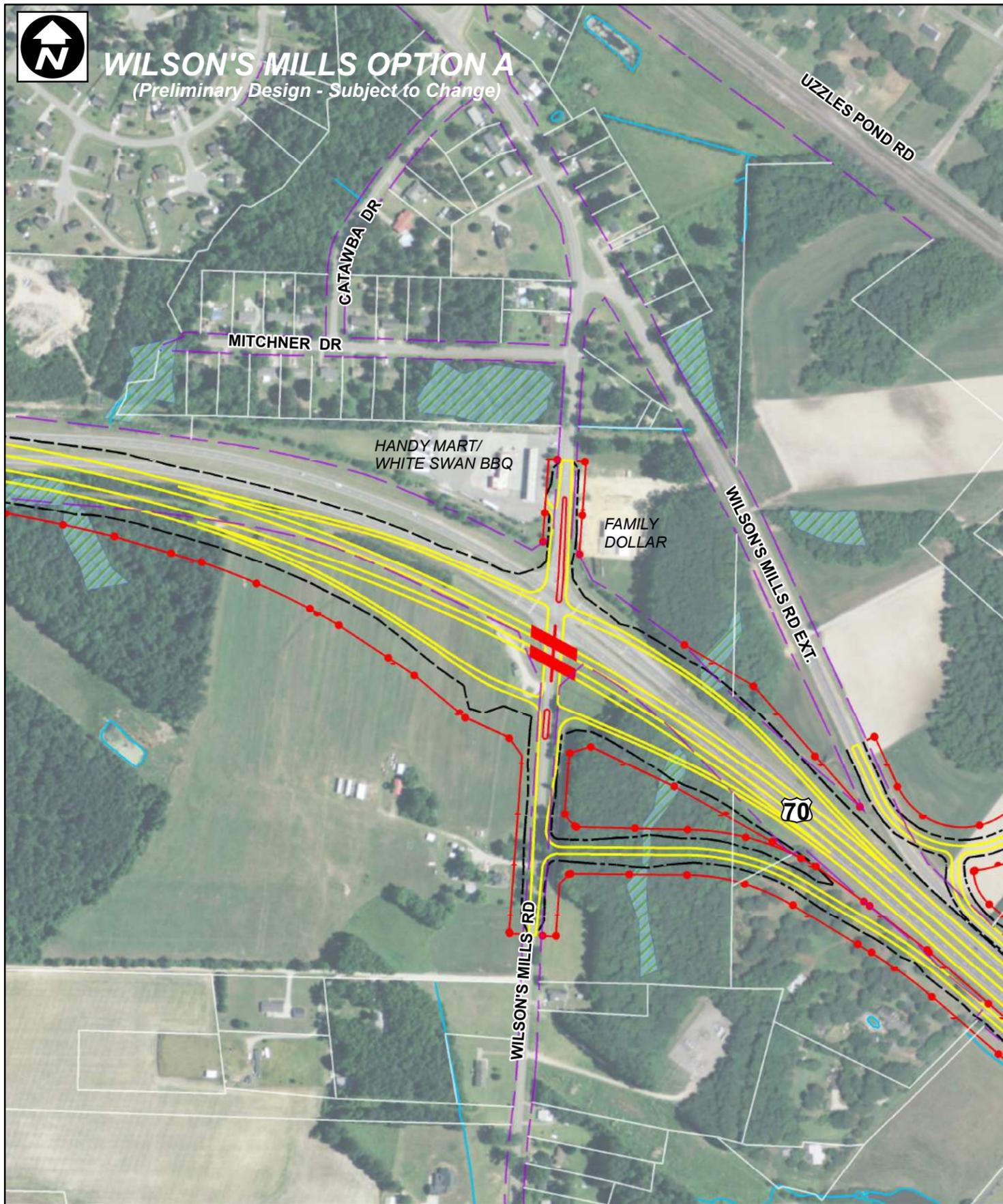


**US 70 Improvements**  
From west of SR 2565 (Sadisco Road) to west of SR 1915 (Turnage Road) in Johnston County  
TIP W-5600

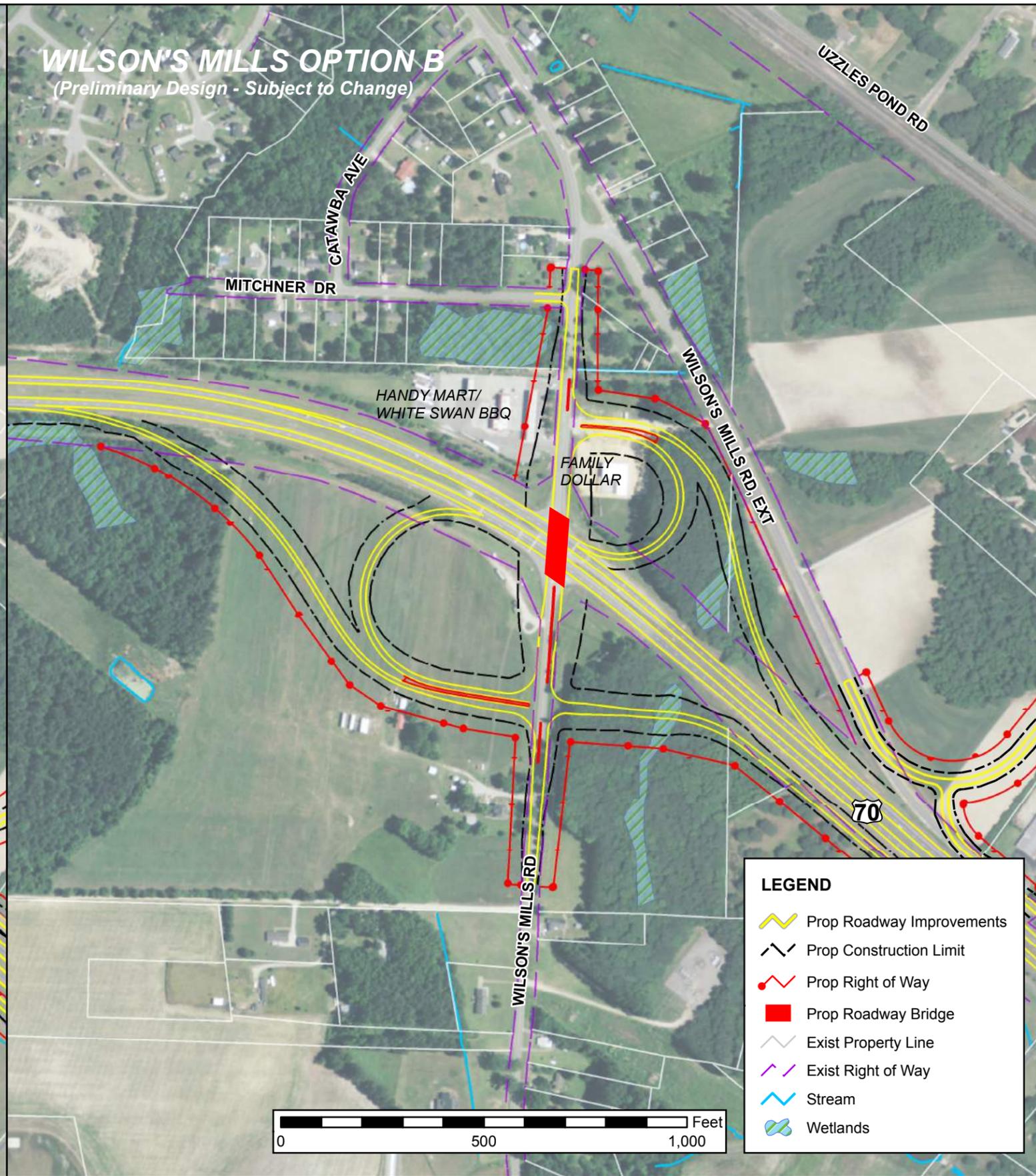
Exhibit 2A  
Interchange Options



**WILSON'S MILLS OPTION A**  
(Preliminary Design - Subject to Change)

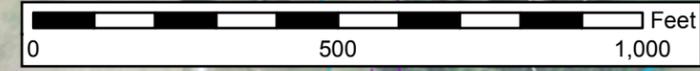


**WILSON'S MILLS OPTION B**  
(Preliminary Design - Subject to Change)



**LEGEND**

- Prop Roadway Improvements
- Prop Construction Limit
- Prop Right of Way
- Prop Roadway Bridge
- Exist Property Line
- Exist Right of Way
- Stream
- Wetlands



**US 70 Improvements**  
From west of SR 2565 (Sadisco Road) to west of SR 1915 (Turnage Road) In Johnston County  
TIP W-5600

Exhibit 2B  
Interchange Options



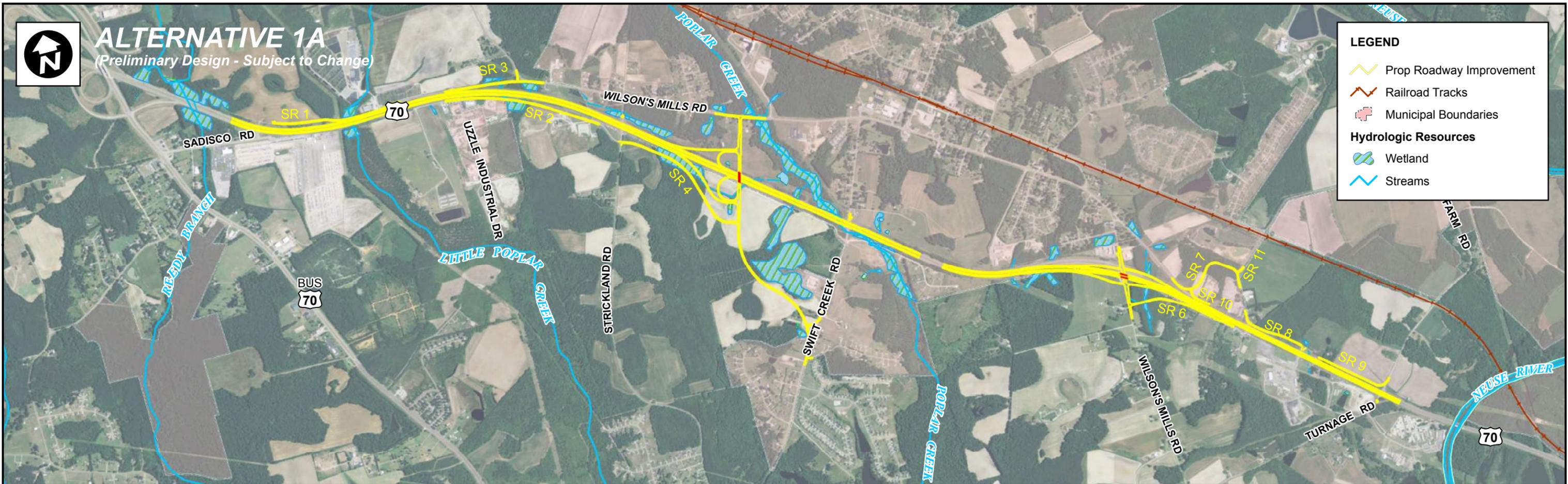
**ALTERNATIVE 1A**  
(Preliminary Design - Subject to Change)

**LEGEND**

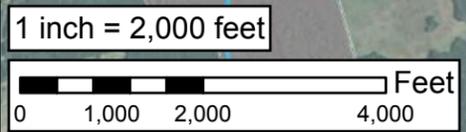
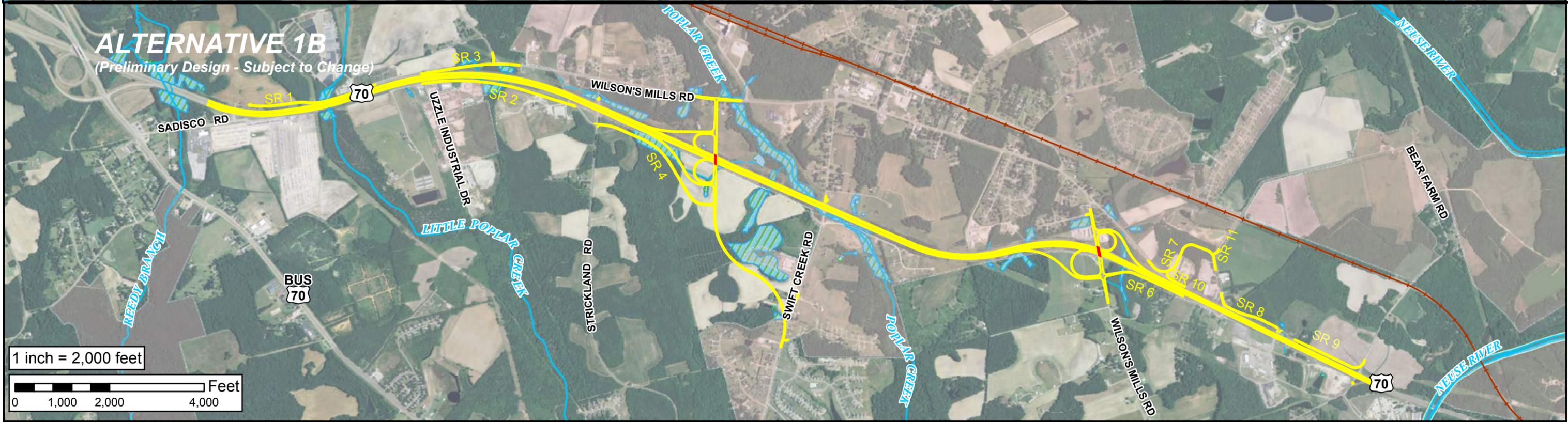
- Prop Roadway Improvement
- Railroad Tracks
- Municipal Boundaries

**Hydrologic Resources**

- Wetland
- Streams



**ALTERNATIVE 1B**  
(Preliminary Design - Subject to Change)



**US 70 Improvements**  
From west of SR 2565 (Sadisco Road) to west of SR 1915 (Turnage Road) in Johnston County  
TIP W-5600

Exhibit 3A  
Alternatives 1A and 1B



# ALTERNATIVE 2A

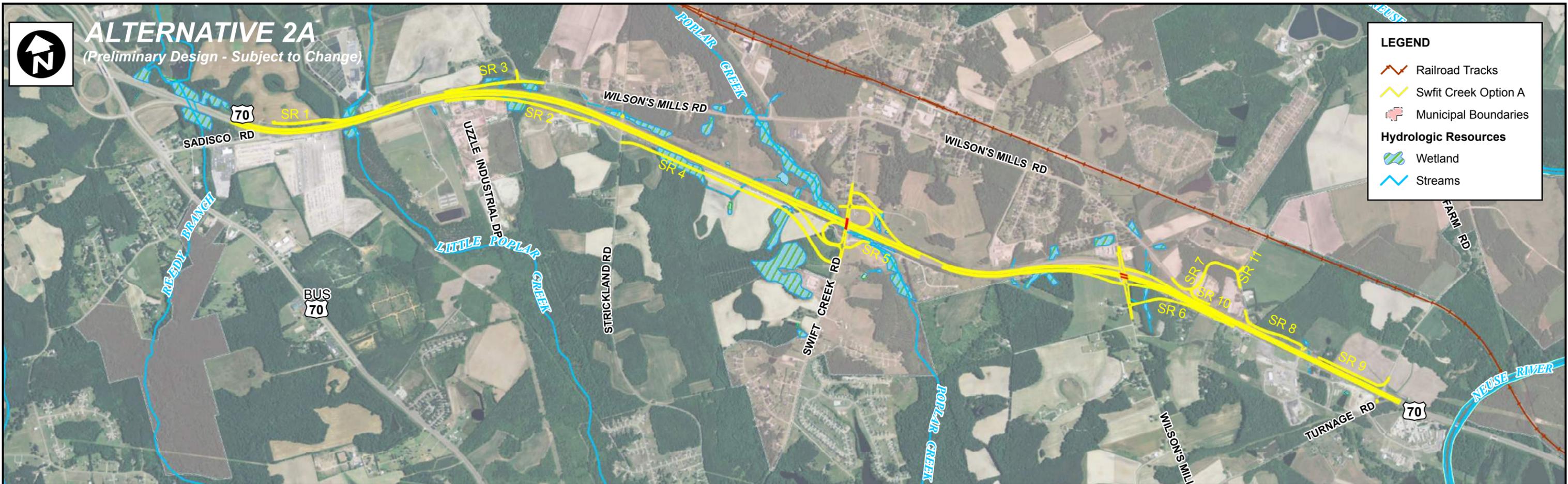
(Preliminary Design - Subject to Change)

**LEGEND**

- Railroad Tracks
- Swift Creek Option A
- Municipal Boundaries

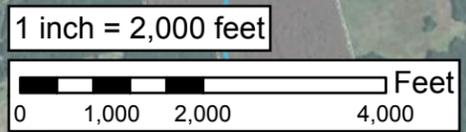
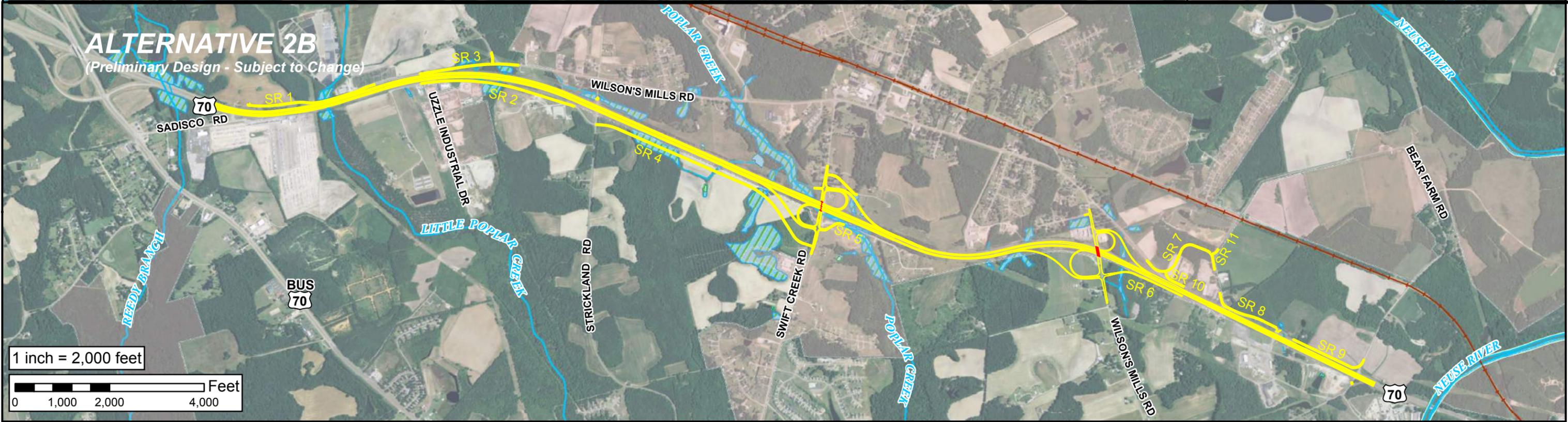
**Hydrologic Resources**

- Wetland
- Streams



# ALTERNATIVE 2B

(Preliminary Design - Subject to Change)



**US 70 Improvements**  
**From west of SR 2565 (Sadisco Road) to west of SR 1915 (Turnage Road) in Johnston County**  
**TIP W-5600**

Exhibit 3B  
 Alternatives 2A and 2B



**To help improve our public involvement process, we would appreciate your responses to the following questions. The following questions relate to today's workshop:**

Was the project adequately explained to you? Yes No

Were NCDOT representatives understandable and clear in their explanations? Yes No

Please explain \_\_\_\_\_  
\_\_\_\_\_

Were NCDOT representatives courteous and helpful? Yes No

Please explain \_\_\_\_\_  
\_\_\_\_\_

Were display maps and handouts easy to read and understand? Yes No

Please explain \_\_\_\_\_  
\_\_\_\_\_

How might we better present proposed projects and address citizen's concerns in future informational workshops?

\_\_\_\_\_  
\_\_\_\_\_

How did you hear about this meeting? \_\_\_\_\_

Do you feel that the workshop was adequately publicized? Yes No

Please explain \_\_\_\_\_  
\_\_\_\_\_

Do you have any additional comments or suggestions regarding our public involvement process?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please leave your comments with NCDOT representatives at the workshop or mail them to:

Ms. Kim L. Gillespie, Project Planning Engineer  
NCDOT, Project Development and Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

# TITLE VI PUBLIC INVOLVEMENT FORM

Completing this form is **completely** voluntary. You are not required to provide the information requested in order to participate in this meeting.

<b>Meeting Type:</b> Public Informational Meeting	<b>Date:</b> February 2, 2016
<b>Location:</b> Wilson's Mills Elementary School	
<b>TIP No.:</b> W-5600	
<b>Project Description:</b> Upgrade US 70 to a freeway from Sadisco Road to west of Turnage Road	

In accordance with Title VI of the Civil Rights Act of 1964 and related authorities, the North Carolina Department of Transportation (NCDOT) assures that no person(s) shall be excluded from participation in, denied the benefits of, or subjected to discrimination under any of the Department's programs, policies, or activities, based on their race, color, national origin, disability, age, income, or gender.

**Completing this form helps meet our data collection and public involvement obligations under Title VI and NEPA, and will improve how we serve the public.** Please place the completed form in the designated box on the sign-in table, hand it to an NCDOT official or mail it to the NCDOT Office of Civil Rights, Title VI Section at 1511 Mail Service Center, Raleigh, NC 27699-1511.

All forms will remain on file at the NCDOT as part of the public record.

<b>Zip Code:</b> _____	<b>Gender:</b> <input type="checkbox"/> Male <input type="checkbox"/> Female
<b>Street Name:</b> (i.e. Main Street) _____	<b>Age:</b> <input type="checkbox"/> Less than 18 <input type="checkbox"/> 45-64 <input type="checkbox"/> 18-29 <input type="checkbox"/> 65 and older <input type="checkbox"/> 30-44
<b>Total Household Income:</b> <input type="checkbox"/> Less than \$12,000 <input type="checkbox"/> \$47,000 – \$69,999 <input type="checkbox"/> \$12,000 – \$19,999 <input type="checkbox"/> \$70,000 – \$93,999 <input type="checkbox"/> \$20,000 – \$30,999 <input type="checkbox"/> \$94,000 – \$117,999 <input type="checkbox"/> \$31,000 – \$46,999 <input type="checkbox"/> \$118,000 or greater	<b>Have a Disability:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Race/Ethnicity:</b> <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Native Hawaiian/Pacific Islander <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Other (please specify): _____	<b>National Origin:</b> (if born outside the U.S.) <input type="checkbox"/> Mexican <input type="checkbox"/> Central American: _____ <input type="checkbox"/> South American: _____ <input type="checkbox"/> Puerto Rican <input type="checkbox"/> Chinese <input type="checkbox"/> Vietnamese <input type="checkbox"/> Korean <input type="checkbox"/> Other (please specify): _____

For more information regarding Title VI or this request, please contact the NCDOT Title VI Section at (919) 508-1808 or toll free at 1-800-522-0453, or by email at [slipscomb@ncdot.gov](mailto:slipscomb@ncdot.gov).

Thank you for your participation!



PAT McCRORY  
Governor

NICHOLAS J. TENNYSON  
Secretary

MEMORANDUM TO: File

FROM: Kim Gillespie, P.E., Project Planning Engineer

SUBJECT: STIP Project No. W-5600, Public Information Meeting Summary

On February 2, 2016 at 4 pm, a Public Information Meeting was conducted for STIP Project W-5600, at the Wilson's Mills Elementary School cafeteria. The following project team members were in attendance:

Tim Little, P.E.:	Division 4 Engineer
Wendi Johnson, P.E.:	Division 4 Construction Engineer
Jerry Page, P.E.:	Division 4 Operations Engineer
Jiles Harrell, P.E.:	District Engineer
Jay McInnis, P.E.:	Project Engineer
Kim Gillespie, P.E.:	Project Planning Engineer
Steve Smallwood, P.E.:	Stantec Consulting
Ryan White, P.E.:	Stantec Consulting

Per the attached sign-in sheet, 184 citizens attended the meeting. Meeting handouts were made available to all attendees as they entered the cafeteria. The meeting handout consisted of background information, a description of each interchange option, impacts and costs of each alternative, a project schedule, project mapping, a comment sheet, and a Title VI survey form.

The comment form provided meeting attendees the opportunity leave specific comments and to note which alternative they preferred or to note if they had no preference. Seventy-seven (77) comment forms were either submitted at the meeting or received via email or mail after the meeting concluded. Below is a summary of the alternative preferences and primary concerns noted on the comment sheets received:

Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No Preference
12	2	58	8	5

- Property Impacts/Relocations: Meeting attendees were generally concerned with how the proposed alternatives would impact businesses and residences within the community. Twelve comment forms noted concerns regarding property impacts and relocations. Of primary concern was the potential impact of Wilson's Mills Interchange Option B, which is a component of Alternatives 1B and 2B, on the Handy Mart/White Swan restaurant and the Family Dollar store. Also, of concern was the potential relocation of elderly community members due to new location alignments. Citizens noting concern for the project's impact to businesses generally preferred either Alternative 1A or 2A as Wilson's Mills Interchange Option A avoided impacts that would require the relocation of the Handy Mart/White Swan and the Family Dollar.



- EMS Access and Response: Eleven comments were received expressing concern about EMS access and response times. Members of the Wilson's Mills Fire Department, including the Fire Chief, and citizens in attendance noted that the project would have impacts to EMS routing and response times. The Wilson's Mills Fire Station is located north of US 70 and closing the at-grade crossings of US 70 would limit EMS routing to incidents south of US 70 to the new interchanges and the service roads. Most attendees noting concerns about EMS access selected Alternative 2A as their preference due to its use of the existing Swift Creek Road.
- Access: Fourteen comment forms noted concern about changes to access. Citizens and business owners stated that the project would have a direct impact on daily routines and access to and from businesses, schools, and other community resources. Of particular concern is the single access proposed by the project to the Uzzle Industrial Park. Business owners and community leaders noted that additional travel time and transportation costs associated with single access to the industrial park could result in business closures or relocations. They stated that additional access could be provided via an extension of Sadisco Road. Comments received also expressed concerns related to extended travel times for farm equipment due to the removal of the at-grade intersections and new routing via service roads.
- Future Land Use: Two comments submitted noted a solar energy farm proposed on farmland east of Strickland Road. Alternatives 1A and 1B would have direct impacts on the land that would be used for the proposed solar farm.
- Property Values: Two comments submitted questioned how the project would impact property values of residences and businesses. In particular, there was concern that single access to the Uzzle Industrial Park would devalue properties.

**Corrections and Omissions:** This summary is the writer's interpretation of the events, discussions, and transactions that took place during the meeting. If there are any questions and/or corrections, please inform Kim Gillespie at 919-707-6023 or at [kgillespie@ncdot.gov](mailto:kgillespie@ncdot.gov).

Attachments:  
Meeting Sign-in Sheet