US 701 Bypass
From South of SR 1166 (Pleasant Plains Road)
to North of US 74-76 Bypass in Whiteville
Columbus County
Federal-Aid Project NHS-701(15)
WBS Element 41499.1.1

**STIP Project R-5020**

**ADMINISTRATIVE ACTION**

# ENVIRONMENTAL ASSESSMENT

U. S. Department of Transportation
Federal Highway Administration
and
N. C. Department of Transportation
Division of Highways

Submitted pursuant to 42 U. S. C. 4332(2)(C)

APPROVED:

5/28/15
Date

FOR **Richard W. Hancock, PE, Unit Head**
Project Development & Environmental Analysis Unit

6/3/15
Date

for **John F. Sullivan, III, PE, Division Administrator**
Federal Highway Administration

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**STIP Project R-5020**

# ENVIRONMENTAL ASSESSMENT

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# PROJECT COMMITMENTS

US 701 Bypass
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to North of US 74-76 Bypass in Whiteville
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STIP Project **R-5020**

**Project Development & Environmental Analysis Unit / Roadside Environmental Unit**
In accordance with Section 106 of the National Historic Preservation Act, a landscape plan for the portion of the National Register-eligible Beth Israel/Whiteville Hebrew Center property along US 701 Bypass will be created and implemented in coordination with the property owner.

**Roadway Design Unit/Division 6 Construction**
A temporary construction easement will be required from Leder Park, which is a property protected by Section 4(f) of the USDOT Act of 1966. Orange construction fencing will be placed at the proposed right of way and temporary construction easement lines at Leder Park. Construction equipment will not be allowed onto park property outside of the temporary easement. The land within the temporary construction easement from the park will be fully restored to at least as good a condition as it existed prior to construction of the project.

**Hydraulic Design Unit**
The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), the delegated state agency for administering FEMA's National Flood Insurance Program, to determine the status of the project with regard to applicability of NCDOT's Memorandum of Agreement with FMP (dated April 22, 2013), or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

**Division 6**
This project involves construction activities on or adjacent to FEMA-regulated streams. Therefore, NCDOT Division 6 shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying the drainage structure(s) and roadway embankment located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

**Project Development and Environmental Analysis Unit/Rail Division**
NCDOT will coordinate with RJ Corman Railroad Company and the City of Whiteville as the project progresses regarding the appropriate crossing type (i.e., At-Grade or Grade Separation) for the proposed project at the existing Carolina Southern Railroad tracks and Main Street.

**Roadway Design Unit /Project Development & Environmental Analysis Unit**
Pedestrian and bicycle accommodations are proposed to be constructed as part of this project. Existing sidewalks along US 701 Bypass disturbed by project construction will be replaced with new five-foot-wide sidewalks and new sidewalks can be provided in areas where none currently exist if the City of Whiteville will agree to participate in the construction cost and accept maintenance and liability for the new sidewalks. The preliminary design includes 14-foot-wide outside lanes to accommodate bicycles.

# SUMMARY

Environmental Assessment
Prepared by the
Project Development and Environmental Analysis Unit
North Carolina Department of Transportation

## 1. Type of Action

This is a Federal Highway Administration (FHWA) Action, Environmental Assessment. The North Carolina Department of Transportation, in consultation with FHWA has prepared this Environmental Assessment to evaluate the potential impacts associated with the proposed action. The findings contained within this document and subsequent review of this document shall determine if the action has significant impacts.

## 2. Description of the Proposed Action

The proposed project involves widening US 701 Bypass (James B. White Road/South Madison Street/J.K. Powell Boulevard) in Whiteville to a multi-lane facility from south of SR 1166 (Pleasant Plains Road) to north of US 74-76 Bypass (see Figure 1). The proposed typical section is a four-lane median divided facility with curb and gutter. The project is included in NCDOT's current *2012-2018 State Transportation Improvement Program* (STIP) as Project Number R-5020. The Draft 2016-2025 STIP includes the proposed project construction phasing, schedule, and estimated costs as follows in Table S-1.

**TABLE S-1 DRAFT STIP PROJECT PHASING, SCHEDULE, AND COSTS**

| | Schedule | Cost Estimate |
|---|---|---|
| **R-5020A** – SR 1166 (Pleasant Plains Road) to SR 1437 (Virgil Avenue) | | |
| Right-of-Way Acquisition | Unfunded | $248,000 |
| Utility Relocation | Unfunded | $30,000 |
| Construction | Unfunded | $17,808,000 |
| | | |
| **R-5020B** – SR 1437 (Virgil Avenue) to north of US 74-76 Bypass | | |
| Right-of-Way Acquisition | FY 2018 | $2,307,000 |
| Utility Relocation | FY 2018 | $277,000 |
| Mitigation | FY 2019 | $23,000 |
| Construction | FY 2020 | $6,056,000 |
| **Total Estimated Project Cost** | | $27,049,000 |

## 3. Summary of Purpose and Need

The purpose of the proposed project is to increase the traffic carrying capacity and safety of US 701 Bypass within the project limits.

Improvements to US 701 Bypass are needed to provide adequate capacity for future traffic volumes in the project study area. With no improvements, US 701 Bypass is projected to operate at level of service (LOS) E along the two-lane segments under future (2035) conditions. The proposed four-lane median divided facility would improve the overall mainline operations on US 701 Bypass in the project study area to LOS C with 2035 traffic volumes.

Improvements to US 701 Bypass are also needed to provide increased safety on the roadway in the project study area. The current crash rates on US 701 Bypass exceed the statewide average and critical crash rates for similar facilities for every crash type analyzed, with the exception of the critical fatal crash rate. The project improvements are expected to result in a safer facility for all roadway users, including vehicles, bicycles, and pedestrians.

## 4. Alternatives Considered

The alternatives studied include Travel Demand Management (TDM), Mass Transit, Transportation Systems Management (TSM), the No-Build Alternative, and the Build Alternative. For the Build Alternative, two options were considered for the existing US 701 Bypass grade separation over the Carolina Southern Railroad and Main Street in Whiteville. The At-Grade option (Recommended) would remove the existing structure over Main Street and lower the grade of US 701 Bypass in order to construct an at-grade intersection at Main Street and an at-grade rail crossing. The Grade Separation option would replace the existing structure with two new bridges to carry US 701 Bypass over Main Street and the rail line. The rail line is currently rarely used. Rail operations are restricted because some of the bridges carrying the railroad tracks on the line are in need of repair. However, RJ Corman Railroad Company agreed to purchase the rail line from Carolina Southern in January 2015, and has indicated they intend to upgrade and re-activate the rail line. NCDOT will coordinate with RJ Corman Railroad Company and the City as the project progresses regarding the appropriate crossing type.

NCDOT selected the Build Alternative for detailed study for the proposed project. As discussed in Section III, the other alternatives studied were eliminated from further consideration because they do not meet the purpose and need for the proposed project.

## 5. Summary of Environmental Effects

The proposed project was evaluated for impacts to the human and natural environment. Table S-2 provides a summary of the anticipated impacts for the detailed study alternatives.

**TABLE S-2 SUMMARY OF ANTICIPATED EFFECTS OF PROPOSED PROJECT**

| Feature[1] | | Impacts[2] |
|---|---|---|
| Project Length (miles) | | 5.11 |
| Relocations[3] | Residential | 14 (6) |
| | Business | 20 (3) |
| | Non-Profit | 0 |
| | Total Relocations | 34 (9) |
| Minority / Low Income Populations Disproportionately High & Adverse Impacts | | No |
| Historic Properties (adverse effect) | | None |
| Community Facilities Impacted | | 1 Synagogue<br>Leder Park |
| Section 4(f) Impacts | | *De minimis* impact to<br>Beth Israel Hebrew Center |
| Noise Impacts (impacted properties) | | 47 |
| Prime Farmland (acres) | | 6.2 |
| Forest (acres) | | 10.6 (At-Grade)<br>12.6 (Grade Separation) |
| Wetlands (acres) | | 6.9 (At-Grade)<br>8.7 (Grade Separation) |
| Streams (linear feet) | | 831 |
| Floodplain (acres) | | 11.9 (At-Grade)<br>14.7 (Grade Separation) |
| Federally-Protected Species | | No effect |
| Potential UST/Hazmat Sites (no.) | | 29 |
| Cost | Right-of-Way Cost | $10,500,000 |
| | Utility Relocation Cost | $11,000,000 |
| | Construction Cost | $24,800,000 At Grade<br>$27,400,000 Grade Separation |
| | Total Cost | $46,300,000 At Grade<br>$48,900,000 Grade Separation |

[1] Impact calculations are based on preliminary design slope stake limits plus an additional 25 feet.

[2] Impacts are same for both options for crossing Main Street and Carolina Southern Railroad unless noted.

[3] Numbers in parentheses indicate minority-owned residences or businesses.

## 6. Permits Required

The proposed action will require permits pursuant to Sections 401 and 404 of the Clean Water Act of 1977, as amended. A Section 401 Water Quality Certification from the Water Quality Section of the North Carolina Division of Water Resources (NCDWR) will be needed for fill activity in adjacent wetlands and surface waters. A Section 404 permit issued by the US Army Corps of Engineers (USACE) will be required to discharge and place fill materials into wetlands.

## 7. Coordination

NCDOT has coordinated with appropriate federal, state, and local agencies throughout the project development process. The following agencies were contacted during project studies:

National Oceanic and Atmospheric Administration – National Marine Fisheries Service
US Department of the Army – Corps of Engineers
US Environmental Protection Agency
US Department of the Interior – US Fish and Wildlife Service, Raleigh Field Office
NC Department of Administration – State Clearinghouse
NC Department of Agriculture
NC Department of Cultural Resources, State Historic Preservation Office
NC Department of Environment and Natural Resources (NCDENR)
NCDENR – Division of Air Quality
NCDENR – Division of Coastal Management
NCDENR – Division of Environmental Health
NCDENR – Division of Land Resources
NCDENR – Division of Marine Fisheries
NCDENR – Division of Parks and Recreation
NCDENR – Division of Water Resources
NCDENR – Division of Water Resources, Public Water Supply Section
NCDENR – Natural Heritage Program
NCDENR – Wildlife Resources Commission
NCDENR – Wilmington Regional Office
NC Department of Public Instruction
NC Department of Public Safety – Emergency Management
Cape Fear Rural Planning Organization
Columbus County
City of Whiteville

The Concurrence Point (CP) 2A merger team meeting for the subject project was held on March 17, 2015 at the North Carolina Museum of Natural Science in Whiteville. The purpose of the meeting was to reach concurrence on CP 2A (Bridging Decisions and Alignment Review). The merger team concurred on NCDOT's recommended hydraulic

structure. A copy of the signed March 17, 2015 Bridging Decisions and Alignment Review concurrence form for the US 701 Bypass widening project is included in Appendix C. The agencies represented on the R-5020 NEPA/Section 404 merger team are discussed in Section VI.D.

**8. Contact Information**

The following persons may be contacted for additional information concerning this proposal and statement:

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# US 701 Bypass

**from South of SR 1166 (Pleasant Plains Road)**
**to North of US 74-76 Bypass in Whiteville**

**Columbus County**

**Federal-Aid Project NHS-701(15)**
**WBS Element 41499.1.1**

**STIP Project R-5020**

## I. DESCRIPTION OF PROPOSED ACTION

### A. General Description

The proposed project involves widening US 701 Bypass (James B. White Road/Madison Street/J.K. Powell Boulevard) in Whiteville to a multi-lane facility from south of SR 1166 (Pleasant Plains Road) to north of US 74-76 Bypass (see Figure 1). The proposed typical section is a four-lane median divided facility with curb and gutter and wide outside lanes to accommodate bicyclists. Existing sidewalks along US 701 Bypass disturbed by project construction will be replaced with new five-foot-wide sidewalks and new sidewalks can be provided in areas where none currently exist if the City of Whiteville will agree to participate in the construction cost and accept maintenance and liability for the new sidewalks. Two options are under consideration in the vicinity of the existing US 701 Bypass grade separation over the Carolina Southern Railroad and Main Street. The At-Grade option would remove the existing structure over Main Street and lower the grade of US 701 Bypass in order to construct a new at-grade intersection at Main Street and an at-grade rail crossing. The Grade Separation option would replace the existing structure with two new bridges to carry the proposed four-lane US 701 Bypass over Main Street and the rail line.

The total length of the proposed project is approximately 5.1 miles.

### B. Historical Resume and Project Status

The *Whiteville-Brunswick Thoroughfare Plan Technical Report* (January 1997) recommends US 701 Bypass be widened to a five-lane facility from south of SR 1002 (Old Lumberton Road) to US 74-76 Business (Washington Street) and from West Virgil Street to north of SR 1170 (Prison Camp Road). The report indicates US 701 Bypass should be first priority in the planning area for improvements in order to allow proper movements of through traffic in and out of the planning area as congestion increases.

In 2007, NCDOT prepared a feasibility study (FS-0206A) for the proposed improvements to US 701 Bypass in Whiteville from SR 1166 (Pleasant Plains Road) to US 74-76 Bypass. The study recommended US 701 Bypass be widened from Pleasant Plains Road to US 74-76 Bypass to increase capacity and improve safety. The recommended alternative was a

four-lane divided curb and gutter section with a raised grass median, wide outside lanes to accommodate bicycles, and sidewalks on both sides. The study also noted support for the project from the City of Whiteville, the Columbus County Transportation Committee, and the Cape Fear Rural Planning Organization (RPO).

The project is included in NCDOT's current *2012-2018 State Transportation Improvement Program* (STIP) as Project Number R-5020. The Draft 2016-2025 STIP includes the proposed project construction phasing and schedule as follows:

- **R-5020A** – SR 1166 (Pleasant Plains Road) to SR 1437 (Virgil Avenue). Section A is currently unfunded for right-of-way acquisition and construction.

- **R-5020B** – SR 1437 (Virgil Avenue) to US 74-76 Bypass. The current schedule for Section B includes right-of-way acquisition in Fiscal Year (FY) 2018 and construction in FY 2020.

## C. Cost Estimates

The estimated cost for R-5020 in the Draft 2016-2025 STIP is $26,749,000. This includes $2,555,000 for right-of-way acquisition, $23,000 for mitigation, $307,000 for utilities relocation, and $23,864,000 for construction. Table 1 shows the current cost estimates for the detailed study alternatives.

**TABLE 1 CURRENT COST ESTIMATES**

| | At Grade | Grade Separation |
|---|---|---|
| **Right-of-Way Acquisition** | $10,450,875 | $10,500,000 |
| **Utility Relocation** | $11,009,131 | $11,009,131 |
| **Construction** | $24,800,000 | $27,400,000 |
| **Total** | $46,260,006 | $48,909,131 |

# II. PURPOSE AND NEED FOR PROJECT

## A. Project Purpose

The purpose of the proposed project is to increase the traffic carrying capacity and safety of US 701 Bypass within the project limits.

## B. Need for Project

The proposed widening project addresses insufficient traffic carrying capacity and safety issues along US 701 Bypass.

### Traffic Carrying Capacity

Existing US 701 Bypass does not provide adequate capacity for future traffic volumes in the project study area. The 2012 average annual daily traffic (AADT) volume along US 701 Bypass in the project area ranged from 8,800 to 21,700 vehicles per day (vpd). By the year 2035, traffic volumes along US 701 Bypass in the project area are forecast to range from 12,600 to 31,800 vpd. The mainline capacity analysis indicates all sections of US 701 Bypass within the project area operate at level of service (LOS) D or better for existing (2012) conditions. However, with no improvements, US 701 Bypass is projected to operate at LOS E along the two-lane segments under future (2035) conditions. The proposed four-lane median divided facility would improve the overall mainline operations to LOS C with 2035 traffic volumes.

### Safety Issues

The current crash rates on US 701 Bypass within the study area exceed the statewide average and critical crash rates for similar facilities for every crash type analyzed, with the exception of the critical fatal crash rate (see Section II.B.1.e). The highest percentage of vehicle collisions along US 701 Bypass in the project area over a recent five year period was frontal impact collisions (including angle, head-on, and turning crashes). The existing four- and five-lane sections with a center turn lane, combined with numerous driveway egresses, are contributors to these crash types. The proposed median divided facility would provide better access management by channelizing left turn and side road through movements, and would potentially reduce frontal impact crashes along the corridor. Rear-end collisions were the second most common type of crash. Additional lanes, in conjunction with reduced congestion, will assist in addressing rear-end type crashes.

There were also 14 bicycle and pedestrian crashes that occurred within the study area, including one crash that resulted in a pedestrian fatality. The majority of the pedestrian crashes occurred while the pedestrian was trying to cross the five-lane road section. The wide cross-section without a center island refuge is a hindrance to the safe passage of pedestrians across US 701 Bypass. Removal of the existing center turn lane and installation of a divided median will not only redirect turning vehicular traffic and reduce frontal impact crashes; it will also provide a safe refuge for crossing pedestrians. The preliminary design also includes 14-foot-wide outside lanes to accommodate bicycles. Crash data is included in Section II.B.1.e. (Accident Data) on page 8.

## 1. Description of Existing Conditions

### a. Route Classification

US 701 Bypass through most of the project study area is classified as an Other Principal Arterial according to the NCDOT Functional Classification System. The functional classification of US 701 Bypass to the north of US 74-76 Bypass is Minor Arterial. US 701 Bypass is classified as a Major Thoroughfare in the *Whiteville-Brunswick Thoroughfare Plan Technical Report* (January 1997).

### b. Physical Description of Existing Facility

1. Roadway Typical Section

   The US 701 Bypass existing typical section varies along the length of the project. US 701 Bypass is a two-lane facility with 12-foot lanes and two-foot shoulders from the southern end of the study area to Pleasant Plains Road. Between Pleasant Plains Road and Slippery Log Road, US 701 Bypass transitions from two lanes to four lanes with additional turn lanes at major intersections. US 701 Bypass is a four-lane shoulder facility (12-foot lanes and two-foot shoulders) from Slippery Log Road to Leslie Newsome Avenue, although there are short sections with curb and gutter. Most of this four-lane section is divided by a variable width concrete or grass median (five to 20 feet wide). At Leslie Newsome Avenue, the road transitions to a three-lane section with a two-way center turn lane and shoulders (12-foot lanes and two-foot shoulders). The three-lane section continues to Talbot Street, where US 701 Bypass transitions back to a two-lane facility with 12-foot lanes and two-foot shoulders through Soules Swamp. Because the section of US 701 Bypass between Talbot Street and West Virgil Street is predominantly on fill with narrow shoulders, guardrail is located on both sides of the road. From just to the north of West Virgil Street to Washington Street, US 701 Bypass is a five-lane curb and gutter facility (12-foot lanes) with a two-way center turn lane and sidewalks on both sides. US 701 Bypass then transitions back to a three-lane facility with a two-way center turn lane with 12-foot lanes and two-foot shoulders. The three-lane facility continues to just south of the US 74-76 Bypass interchange, where US 701 Bypass becomes a four-lane divided facility with shoulders through the interchange. US 701 Bypass starts to transition back to a two-lane facility with 12-foot lanes and two-foot shoulders at Campground Road near the northern end of the study area.

2. Horizontal and Vertical Alignment

   The horizontal and vertical alignment of US 701 in the project area are generally meets American Association of State Highway and Transportation Officials (AASHTO) design standards.

3. Right-of-Way and Access Control

   The existing US 701 Bypass right-of-way width within the project study area varies from 60 feet (through Soules Swamp) to 200 feet near the northern and southern project limits, but is 100 feet for most of the existing five-lane section to the north of W. Virgil Street. There is no control of access along most of the project corridor, with the exception of in the vicinity of the US 74-76 Bypass interchange.

4. Speed Limit

   The existing speed limit along US 701 Bypass is 45 mph between SR 1198 (Southwood Road) and the US 74-76 Bypass interchange. North of the US 74-76 Bypass, interchange, the speed limit increases to 55 mph.

5. Intersections

   There are numerous intersections along US 701 Bypass in the project study area, as well as an interchange with US 74-76 Bypass. Eight of the intersections along US 701 Bypass in the project study area are signalized. All of the remaining intersections have stop sign control on the side street. There are also numerous driveways for residential, institutional, and commercial land uses along US 701 Bypass in the project study area.

6. Railroad Crossings

   There are no at-grade railroad crossings along US 701 Bypass in the project study area. US 701 Bypass crosses the Carolina Southern Railroad's Mullins, SC to Whiteville, NC rail line on a bridge (see Figure 2C). The rail line ends in Whiteville, approximately 0.5 mile east of US 701 Bypass in the vicinity of Maultsby Street. The rail line is rarely used (approximately one train per year, only for special events). The Carolina Southern Railroad has not been able to operate because some of the bridges carrying the railroad tracks on the line are in need of repair. However, RJ Corman Railroad Company agreed to purchase the rail line from Carolina Southern in January 2015, and has indicated they intend to upgrade and re-activate the rail line. NCDOT will coordinate with RJ Corman Railroad Company as the project progresses.

7. Structures

   There are two bridges on US 701 Bypass within the study area. These bridges are described in Table 2 below. Both bridges are considered functionally obsolete. During Hurricane Floyd, Bridge No. 19 was overtopped, and the land under Bridge No. 42 was flooded.

**TABLE 2 EXISTING STRUCTURES IN PROJECT AREA**

| Bridge | Carries/Crosses | Clear Roadway Width | Length | Year Built | Sufficiency Rating (Out of 100) |
|---|---|---|---|---|---|
| No. 19 | US 701 Bypass / Soules Swamp | 28 feet | 113 feet | 1955 | 32.89 |
| No. 42 | US 701 Bypass / Carolina Southern RR and West Main Street | 28 feet | 170 feet | 1953 | 48.89 |

8. Bicycle and Pedestrian Facilities/Greenways

   There are no bicycle facilities, designated bicycle routes, or greenways within the project study area. US 701 Bypass between West Virgil Street and Washington

Street has sidewalks on both sides of the road. There is also a pedestrian tunnel consisting of a box culvert that connects the two ends of West Walter Street under US 701 Bypass. There are no sidewalks on either side of West Walter Street adjacent to the pedestrian tunnel, and both entrances to the tunnel consist of grassy areas with no delineated path for pedestrians.

9. Utilities

   There are overhead utilities along US 701 Bypass through most of the project study area. There is also a high voltage power transmission corridor through Soules Swamp that crosses US 701 Bypass at the existing bridge over the swamp. The study area is served by public water and sewer provided by the City of Whiteville.

**c. School Bus Data**

According to the Columbus County School District Transportation Department, there are approximately 14 school bus routes that use US 701 Bypass within the project study area. These routes serve the three public schools located within or adjacent to the study area.

**d. Traffic Carrying Capacity**

Traffic along US 701 Bypass within the project area was analyzed to determine if there is sufficient roadway capacity to meet current (2012) and future (2035) travel demand.

1. Traffic Volumes

   The 2012 average annual daily traffic (AADT) volume along US 701 Bypass in the project area ranged from 8,800 to 21,700 vehicles per day (vpd), while truck traffic ranged from four percent to six percent (see Figures 3A and 3B).

   By the year 2035, traffic volumes along US 701 Bypass in the project area are forecast to range from 12,600 to 31,800 vpd (see Figures 4A and 4B).

2. Levels of Service

   The effectiveness of a roadway to service traffic demand is measured in terms of level of service. Level of service is a qualitative measure describing the ability of a facility to carry traffic and how individual users perceive traffic conditions. It is based on factors of speed, travel time, comfort, maneuverability, interruptions, convenience and safety. Levels of Service range from “A” to “F”, with “A” representing free flow (ideal conditions), and “F” representing forced or breakdown flow (undesirable conditions).

   A transportation facility is considered to be operating at capacity when it is just able to accommodate the traffic demand. Once the traffic demand exceeds the facility’s capacity (LOS E), excessive delays occur.

   Highway capacity analyses were conducted for the project. These analyses indicate US 701 Bypass mainline currently operates at level of service (LOS) D or better in 2012 Mainline capacity analysis results without the proposed project indicate the facility would operate at LOS E along the two-lane segments in 2035.

   Intersection capacity analysis results for the eight signalized intersections and four unsignalized intersections analyzed in the project area for 2012 and 2035 No-Build conditions are presented in Table 3. As shown in Table 3, all of the signalized

intersections currently operate at an acceptable LOS under 2012 No-Build conditions. The unsignalized intersections also currently operate at an acceptable LOS, with the exception of the worst side street movement at the US 701 Bypass/ Flowers-Pridgen Road intersection, which operates at LOS F. However, for unsignalized intersections where the stop controlled approach is below LOS D, operations may still be considered acceptable if the delays and queuing on that approach are not extreme, safety is not an issue, and/or side street volumes do not warrant improved traffic control to aid in the movement of side street traffic.

As shown in Table 3, the eight signalized intersections would continue to operate at an acceptable LOS under 2035 No-Build conditions. However, the worst side street movement at four of the unsignalized intersections would operate at LOS F under 2035 No-Build conditions.

**TABLE 3 INTERSECTION NO-BUILD LEVEL OF SERVICE**

| Intersection | 2012 | 2035 |
|---|---|---|
| US 701 Bypass and Pleasant Plains Road (unsignalized) | C* | F* |
| US 701 Bypass and Slippery Log Road (signalized) | A | B |
| US 701 Bypass and Columbus Corners Drive (signalized) | C | D |
| US 701 Bypass and Love Mill Road (signalized) | B | C |
| US 701 Bypass and Leslie Newsome Avenue (signalized) | B | B |
| US 701 Bypass and W. Virgil Street (signalized) | A | B |
| US 701 Bypass and Burkhead Street (signalized) | A | A |
| US 701 Bypass and NC 130/ Washington Street (US 74-76 Business) (signalized) | C | D |
| US 701 Bypass and Smyrna Road (signalized) | B | C |
| US 701 Bypass and Flowers-Pridgen Road (unsignalized) | F* | F* |
| US 701 Bypass and Eastbound US 74-76 Bypass Ramps (unsignalized) | C* | F* |
| US 701 Bypass and Westbound US 74-76 Bypass Ramps (unsignalized) | D* | F* |

*Highway Capacity Software does not provide overall LOS for unsignalized intersections; worst movement reported.

### e. Accident Data

A crash data analysis was conducted for US 701 Bypass within the project area for the five year period between November 1, 2009 and October 31, 2014. During this time period, there were 480 total reported crashes, including two fatal and 219 injury crashes.

Frontal impact collisions (including angle, head-on, and turning crashes) were the most common type of crash, accounting for approximately 43 percent (207 out of 480) of the total crashes. The existing four and five-lane sections with a center turn lane combined with numerous driveway egresses are contributors to these crash types.

Rear-end collisions were the second most common type of crash, accounting for approximately 34 percent (164 of 480) of the total crashes. The existing pavement condition and/or sight distance issues may contribute to this crash type.

There were also 14 bicycle and pedestrian crashes that occurred within the study area, including one crash that resulted in a pedestrian fatality. US 701 Bypass is within the municipal limits of Whiteville and is surrounded by commercial enterprises. There are sidewalks along portions of the project corridor, but they are not continuous throughout the length of the project. The majority of the pedestrian crashes occurred while the pedestrian was trying to cross the five-lane section of US 701 Bypass.

Table 4 compares the current crash rates along the subject section of US 701 Bypass with the statewide average and the critical crash rates for similar facilities. As shown in Table 4, the current crash rates on US 701 Bypass exceed the statewide average and critical crash rates for every crash type analyzed, with the exception of the critical fatal crash rate.

**TABLE 4 US 701 BYPASS CRASH RATE COMPARISON**

| Crash Type | Crashes | Crash Rate[1] | Statewide Rate[2] | Critical Rate[3] |
|---|---|---|---|---|
| Total | 480 | 379.75 | 300.78 | 326.56 |
| Fatal | 2 | 1.58 | 1.19 | 3.18 |
| Non-Fatal Injury | 219 | 173.26 | 99.21 | 114.18 |
| Night | 88 | 69.62 | 55.31 | 66.59 |
| Wet | 92 | 72.79 | 48.74 | 59.35 |

[1]Crashes per 100 million vehicle miles driven.

[2]2009-2011 statewide average crash rate for roadways with four or more lanes with a continuous left turn lane, urban United States (US) routes.

[3]Based on the statewide crash rate (95 percent level of confidence). The critical crash rate is used to denote statistical significance. It is a statistically derived value against which a calculated rate can be compared to see if the rate is above an average far enough so that something besides chance must be the cause.

### f. Airports

No airports or other aviation facilities are located in the vicinity of the project.

### g. Other Highway Projects in the Area

NCDOT's *Draft 2016-2025 State Transportation Improvement Program* (STIP) lists the following projects in the vicinity of R-5020:

- R-5511 – Resurface 11.8 miles of US 74 from the Robeson County line to US 76. Project is currently under construction.
- R-5749 – Construct an interchange at the intersection of US 74-76 and SR 1001 (Hallsboro Road). Right-of-way acquisition is scheduled for Fiscal Year (FY) 2018 and construction is scheduled to begin in FY 2020.
- W-5518 – Construct an overpass on US 74 at SR 1574 (Old US 74). Right-of-way acquisition is scheduled for FY 2015 and construction is scheduled to begin in FY 2016.
- B-5332 – Replace Bridge Number 130 on SR 1005 (Peacock Road) over Cedar Creek. Right-of-way acquisition is scheduled for FY 2017 and construction is scheduled to begin in FY 2018.

## 2. Transportation and Land Use Plans

### a. Local Transportation and Thoroughfare Plans

The *Whiteville-Brunswick Thoroughfare Plan Technical Report* (January 1997) identifies the US 701 Bypass as a major thoroughfare. It recommends US 701 Bypass be widened to a five-lane facility from south of SR 1002 (Old Lumberton Road) to US 74-76 Business/NC 130 (Washington Street and from West Virgil Street to north of SR 1170 (Prison Camp Road). The report indicates US 701 Bypass should be first priority in the planning area for improvements in order to allow proper movements of through traffic in and out of the planning area as congestion increases. The report also recommends that removal of the bridge over the railroad tracks and Main Street be studied at the time of widening US 701 Bypass.

The *Columbus County Comprehensive Transportation Plan* (CTP) (December 2007) does not include recommendations for the four municipalities that have their own local transportation or thoroughfare plan (Chadbourn, Lake Waccamaw, Tabor City and Whiteville). The Columbus County CTP does not include the proposed project since it is completely within the City of Whiteville's planning jurisdiction, and the CTP refers to the 1997 *Whiteville-Brunswick Thoroughfare Plan Technical Report* for proposed transportation system improvement recommendations in this area. However, the CTP recommends that US 701 outside of Whiteville's planning jurisdiction be widened to a four-lane divided facility with partial control of access through most of Columbus County.

The *City of Whiteville Draft 2014 Pedestrian Master Plan* includes recommendations for future pedestrian facilities intended to create a more connected, comprehensive pedestrian network within the City of Whiteville. The Master Plan identifies the following intersections along the US 701 Bypass Corridor as priority intersections for pedestrian crossing facility improvements (e.g., marked crosswalks, pedestrian

countdown signals, ADA-compliant curb ramps, and advanced warning signage): Smyrna Drive, Washington Street/Jefferson Street, Williamson Street, Burkhead Street, Lewis Street, Virgil Street, Love Mill Road, and Slippery Log Road. The plan also identifies proposed sidewalks along all of US 701 Bypass between Flowers-Pridgen Road and Pleasant Plains Road in areas where there are not already existing sidewalks. The plan also identifies a proposed multi-use trail along US 701 Bypass between Main Street and Sellers Street (just to the south of Love Mill Road). The northern end of the proposed multi-use trail along US 701 Bypass would tie into a proposed multi-use trail along Main Street that would extend in both directions from US 701 Bypass.

**b. Land Use Plans**

The City of Whiteville does not have a comprehensive or future land use plan but does have an adopted Zoning Ordinance.

Columbus County adopted the *Columbus County, North Carolina Comprehensive Land Use Plan* in January 2012. However, the comprehensive plan does not make land use recommendations for land within the project study area because these lands are within the City of Whiteville's planning jurisdiction. The Columbus County plan does reference the recommendation contained in the Columbus County CTP to widen the portions of US 701 outside of the Whiteville planning jurisdiction to a four-lane divided facility with partial control of access.

## C. Benefits of Proposed Project

### 1. Traffic Carrying Capacity

The proposed four-lane median divided facility will increase the traffic carrying capacity of US 701 Bypass in the project area. It is expected that with the proposed improvements, the US 701 Bypass mainline will operate at LOS B with 2012 traffic volumes and LOS C in 2035. As shown in Table 5 below, the intersections along the proposed facility will also operate at an acceptable level of service in the 2035 design year, while also providing spare capacity to handle additional traffic growth.

**TABLE 5 INTERSECTION BUILD LEVEL OF SERVICE**

| Intersection | 2012 | 2035 |
|---|---|---|
| US 701 Bypass and Pleasant Plains Road (unsignalized) | C* | F* |
| US 701 Bypass and Slippery Log Road (signalized) | A | B |
| US 701 Bypass and Columbus Corners Drive (signalized) | C | D |
| US 701 Bypass and Love Mill Road (signalized) | B | C |
| US 701 Bypass and Leslie Newsome Avenue (signalized) | B | B |

**TABLE 5 INTERSECTION BUILD LEVEL OF SERVICE *continued***

| Intersection | 2012 | 2035 |
|---|---|---|
| US 701 Bypass and W. Virgil Street (signalized) | A | A |
| US 701 Bypass and Burkhead Street (signalized) | A | A |
| US 701 Bypass and NC 130/ Washington Street (US 74-76 Business) (signalized) | C | D |
| US 701 Bypass and Smyrna Road (signalized) | B | B |
| US 701 Bypass and Flowers-Pridgen Road (unsignalized) | D* | F* |
| US 701 Bypass and Eastbound US 74-76 Bypass Ramps (unsignalized) | B* | C* |
| US 701 Bypass and Westbound US 74-76 Bypass Ramps (unsignalized) | D* | F* |

*Highway Capacity Software does not provide overall LOS for unsignalized intersections; worst movement reported.

**2. Safety**

The proposed project may potentially reduce certain types of crashes, such as rear-end collisions and frontal impact crashes, by providing a less-congested, more free-flowing facility. A divided facility with a raised median would potentially reduce frontal impact crashes along the corridor by channelizing all left turn and side road through movements, thus providing better access management and control. In addition, closing or combining driveways, if possible, as part of the proposed improvements would help to reduce the number of conflict points, and therefore reduce the incidences of frontal impact crashes. Widening US 701 Bypass to include additional lanes should help with congestion issues that typically contribute to higher incidences of rear-end collisions.

Removal of the existing center turn lane and installation of a divided median will not only redirect turning vehicular traffic and reduce frontal impact crashes; it will also provide a safe refuge for crossing pedestrians. Existing pedestrian crossing facilities (e.g., crosswalks and pedestrian signals) disturbed by project construction will be replaced, if possible, as allowed by the final design. Alternate nearby crossings will be provided for any existing crossing that cannot be replaced. In addition, pedestrian crossing facility improvements will be considered at the priority intersections along US 701 Bypass identified by the *City of Whiteville Draft 2014 Pedestrian Master Plan* (see Section II.B.2.a). The project also includes 14-foot-wide outside lanes to accommodate bicycles.

# III. ALTERNATIVES STUDIED

## A. Travel Demand Management

Travel Demand Management (TDM) involves programs to encourage travelers to use alternatives to driving alone, and, in some cases, to encourage travelers not to travel at all. A major purpose of TDM is to reduce the number of single-occupant vehicles on the road during peak travel periods when roads are most congested. These programs can include van/ car pools, flexible work schedules, telecommuting programs, and park & ride lots.

The proposed project does not include any TDM measures, most of which must be undertaken at the local government level or by the private sector. TDM improvements alone would not increase capacity or improve levels of service enough to prevent the two-lane segments along US 701 Bypass from operating at an undesirable LOS E in the future design year 2035. Therefore, the TDM Alternative does not meet the purpose and need for the proposed project and is eliminated from further consideration.

## B. Mass Transit

Columbus County contracts with a private company, First Group, Inc., to manage and operate the County's Rural Public Transportation System. NCDOT provides state and federal funds to operate the system. There are no fixed routes, but on-demand services are provided for qualifying citizens of the County at low or no cost. On-demand services provided include: general public transportation for any Columbus County citizen to anywhere in the County (available weekdays from 6:00 a.m. to 6:00 p.m. for a fee) and medical transportation either within Columbus County or out of the County.

The project study area is not currently served by mass transit. A mass transit alternative would only minimally address the current traffic flow problems in the study area. In addition, it would not be a reasonable alternative because of dispersed residential areas and employment centers, and diversity of trip origins and destinations. The Mass Transit Alternative does not meet the purpose and need for the proposed project and is eliminated from further consideration.

## C. Transportation Systems Management

Transportation Systems Management (TSM) involves modest physical and operational improvements to enhance traffic performance, safety, and management. These measures can include ramp lengthening, construction of auxiliary lanes, construction of new interchanges, improved signing and lane markings, and improved shoulder illumination. TSM improvements alone would not increase capacity or improve levels of service enough to prevent the two-lane segments along US 701 Bypass from operating at an undesirable LOS E in the future design year 2035. Therefore, the TSM Alternative does not meet the purpose and need for the proposed project and is eliminated from further consideration.

## D. No-Build Alternative

Under the No-Build Alternative, the proposed project would not be constructed, and no transportation improvements would be made on US 701 Bypass in the project study area

beyond routine maintenance. The No-Build Alternative does not provide additional traffic capacity that would improve traffic flow and level of service on US 701 Bypass in the project area. It also does not provide improvements that are expected to enhance the safety of the roadway. The No-Build Alternative would avoid the environmental impacts anticipated to occur as a result of the proposed project, but would not meet the purpose and need for the project. Therefore, the No-Build Alternative has been eliminated from further consideration.

## E. Widen Existing Roadway

One build alternative is under consideration for the proposed US 701 Bypass widening project: widen US 701 Bypass to a four-lane divided facility with a 23-foot-wide raised median. With the Build Alternative, there are two options under consideration in the vicinity of the existing US 701 Bypass grade separation over the Carolina Southern Railroad and Main Street in Whiteville. The At-Grade option would remove the existing structure over Main Street and lower the grade of US 701 Bypass in order to construct an at-grade intersection at Main Street and an at-grade rail crossing. The Grade Separation option would replace the existing structure with two new bridges to carry the proposed four-lane US 701 Bypass over Main Street and the rail line. The rail line is currently rarely used. It has been inoperable because some of the bridges carrying the railroad tracks on the line are in need of repair. However, RJ Corman Railroad Company agreed to purchase the rail line from Carolina Southern in January 2015, and has indicated they intend to upgrade and re-activate the rail line. NCDOT will coordinate with RJ Corman Railroad Company and the City as the project progresses regarding the appropriate crossing type.

## F. NCDOT Recommended Alternative

NCDOT's recommended alternative for the proposed project is the At-Grade option, which would widen existing US 701 Bypass and construct an at-grade intersection at Main Street and the Carolina Southern Railroad crossing. The City of Whiteville also prefers an at-grade rail crossing because it will provide a more direct route to downtown Whiteville via Main Street.

# IV. PROPOSED IMPROVEMENTS

## A. Roadway Cross-Section and Alignment

As shown on Figure 5, the project proposes to improve existing US 701 Bypass to a four-lane median divided facility with curb and gutter. A 23-foot-wide raised grass median is proposed with 12-foot-wide inside lanes and 14-foot-wide outside lanes to accommodate bicyclists. The proposed typical section includes 1.5-foot-wide mountable curb and gutter adjacent to the median and 2.5-foot-wide curb and gutter. Ten-foot-wide berms are proposed in order to accommodate sidewalks.

## B. Right-of-Way and Access Control

The proposed US 701 Bypass right-of-way varies from 110 feet to 200 feet. No control of access is proposed, but the addition of a median will provide better access management and control along the corridor by restricting left-in and left-out access, as well as side road through movements, to designated locations. Several properties along US 701 Bypass will have direct access to their properties altered or removed with the proposed project.

## C. Speed Limit

The speed limit on US 701 Bypass is expected to remain 45 mph. The actual speed limit(s) for the project will be determined during final design.

## D. Design Speed

A 50 mph design speed is proposed for the project, which is consistent with the anticipated 45 mph posted speed limit for US 701 Bypass within the project limits.

## E. Anticipated Design Exceptions

It is anticipated no design exceptions will be required for the project.

## F. Intersections / Interchanges

There are no proposed new interchanges for the proposed project. The existing interchange between US 701 Bypass and US 74-76 Bypass would remain, and most of the existing intersections along the rest of the US 701 Bypass corridor would also remain. However, due to the proximity of the existing Rosemary Street/US 701 Bypass intersection to the Phillips Street/US 701 Bypass intersection, Rosemary Street would be closed at US 701 Bypass. Vehicles seeking to access US 701 Bypass from Rosemary Street would do so via Martin Luther King Avenue to Phillips Street. In addition, several intersections along the project corridor would no longer have full access at US 701 Bypass as a result of the proposed median. There are no new proposed traffic signals, and existing signals would remain.

There would be a new intersection at Main Street with the At-Grade option (Recommended), which would replace the existing structure on US 701 Bypass over Main Street with an at-grade intersection and an at-grade rail crossing. Access from Main Street to US 701 Bypass would be right-in/right-out only. There would be a southbound

channelized left-turn lane from US 701 Bypass to Main Street, but no left turn to Main Street from US 701 Bypass northbound.

## G. Service Roads

There are no existing or proposed service roads in the project study area.

## H. Railroad Crossings

As discussed in Section III.E, NCDOT is considering two options in the vicinity of the existing US 701 Bypass grade separation over the Carolina Southern Railroad and Main Street in Whiteville. With the At-Grade option (Recommended) the existing bridge over Main Street would be removed and the grade of US 701 Bypass would be lowered in order to construct an at-grade intersection at Main Street and an at-grade rail crossing. With the Grade Separation option, the existing structure would be replaced with two new bridges to carry the proposed four-lane US 701 Bypass over Main Street and the rail line.

NCDOT met with representatives of the Carolina Southern Railroad in March 2014 to discuss options for the rail crossing. The rail line has been embargoed since 2007 due to issues with rail bridges along the line; therefore, the railroad cannot operate trains. The following options were provided to the railroad for review and comment following the meeting: 1) At-grade intersection with rail crossing and signal system; 2) At-grade intersection with rail crossing and no signal system; 3) At-grade intersection without rail crossing; and 4) At-grade intersection without rail crossing with agreement to replace (if needed). Meeting participants agreed the grade-separation option is not preferred.

The railroad has not provided any further input regarding the options. Since the meeting, another company has expressed interest in purchasing the Carolina Southern.

## I. Structures

Proposed structures are listed in Table 6.

**TABLE 6 PROPOSED STRUCTURES**

| Carries / Crosses | Recommended Structure |
|---|---|
| US 701 Bypass / Soules Swamp | Dual bridges,<br>145 feet long x 36-foot clear roadway width<br>(both At-Grade and Grade Separation options) |
| US 701 Bypass / Carolina Southern Railroad and Main Street | Dual bridges,<br>176 feet long x 36-foot clear roadway width<br>(Grade Separation option) |
| US 701 Bypass / Pedestrian Path | Extension of existing pedestrian culvert<br>(Grade Separation option) |

The At-Grade option (Recommended) would remove the existing structure over Main Street and lower the grade of US 701 Bypass in order to construct an at-grade intersection at Main Street and an at-grade rail crossing. The existing pedestrian culvert would also be removed with this option. If a new rail grade separation is built, the pedestrian culvert would be extended.

### J. Bicycle and Pedestrian Facilities/Greenways

Pedestrian and bicycle accommodations are proposed to be constructed as part of this project. As discussed in Section IV.A, the preliminary design includes 14-foot-wide outside lanes to accommodate bicycles. Existing sidewalks along US 701 Bypass disturbed by project construction will be replaced with new five-foot-wide sidewalks and new sidewalks can be provided in areas where none currently exist if the City of Whiteville will agree to participate in the construction cost and accept maintenance and liability for the new sidewalks. Existing pedestrian crossing facilities (e.g., crosswalks and pedestrian signals) disturbed by project construction will also be replaced, if possible, as allowed by the final design. Alternate nearby crossings will be provided for any existing crossing that cannot be replaced. In addition, pedestrian crossing facility improvements will be considered at the priority intersections along US 701 Bypass identified by the *City of Whiteville Draft 2014 Pedestrian Master Plan* (see Section II.B.2.a).

With the At-Grade option (Recommended) US 701 Bypass would be lowered to the existing grade on both sides of the road between Main Street and Virgil Street, so the pedestrian tunnel connecting the two ends of West Walter Street under US 701 Bypass would be removed.

With the Grade Separation option, US 701 Bypass would remain on fill between Main Street and Virgil Street, so the pedestrian tunnel would be extended under the new northbound lanes for the widened Bypass.

### K. Utilities

The proposed project is expected to have a medium to high level of utility impacts. Utilities along the project will be relocated prior to construction. Care will be taken to prevent damage to water lines and fiber-optic cables in the area.

### L. Landscaping

No special landscaping is proposed for most of the project. However, to mitigate impacts to the National Register-eligible Beth Israel/Whiteville Hebrew Center, a landscape plan for the portion of the property along US 701 Bypass will be created and implemented in coordination with the property owner (see Section V.B.1). Disturbed areas along the project will be reseeded with grass.

### M. Noise Barriers

No noise barriers are proposed for the proposed project (see Section V.I.4).

## N. Work Zone, Traffic Control and Construction Phasing

Traffic (vehicular, bicycle, and pedestrian) will be maintained on-site while the new lanes are constructed. Traffic may be shifted onto the new lanes while the existing lanes are resurfaced. NCDOT's *Policy on Accommodating Pedestrians and Bicyclists within Work Zones* will be followed during project construction in order to maintain pedestrian and bicycle accessibility to the maximum extent possible.

Temporary detours may be necessary to construct portions of the project. For example, with At-Grade traffic would be shifted to a temporary detour (see Figure 2C) while the existing bridge over Main Street and the railroad tracks is removed and the new at-grade intersection is constructed. The temporary detour would be removed once the traffic is shifted to the new at-grade crossing. Existing structures will be removed in accordance with NCDOT's Best Management Practices (BMP) for bridge demolition and removal.

# V. ENVIRONMENTAL EFFECTS OF PROPOSED ACTION

## A. Natural Resources

Field investigations were conducted by qualified biologists between June 11, 2013 and October 29, 2013 to assess the existing natural environment within the study area. Details of the methodology and investigations supporting the information provided in this section are provided in the Natural Resources Technical Report (NRTR) completed in January 2014, appended by reference.

### 1. Biotic Resources

#### a. Terrestrial Communities

Five terrestrial communities (see Table 7) were identified in the study area: maintained/disturbed, mesic mixed hardwood forest (coastal plain subtype), brownwater bottomland hardwoods (high subtype), brownwater bottomland hardwoods (swamp transition subtype), and cypress-gum swamp (brownwater subtype). Table 7 also shows the anticipated impacts to terrestrial communities for the proposed project.

**TABLE 7 TERRESTRIAL COMMUNITY TYPES**

| Community Type[1] | Total Acres in Study Area | Percentage of Study Area | Anticipated Impacts (acres)[2] | |
|---|---|---|---|---|
| | | | At-Grade | Grade Separation |
| Maintained / Disturbed | 300.8 | 85.2 | 109.7 | 110.3 |
| Mesic Mixed Hardwood Forest (Coastal Plain Subtype) | 11.2 | 3.2 | 1.5 | |
| Brownwater Bottomland Hardwoods (High Subtype) | 7.6 | 2.2 | 0.7 | |
| Brownwater Bottomland Hardwoods (Swamp Transition Subtype) | 5.3 | 1.5 | 0.9 | 1.0 |
| Cypress-Gum Swamp (Brownwater Subtype) | 28.0 | 7.9 | 7.5 | 9.4 |
| **Total** | **352.9** | **100.0** | **120.3** | **122.9** |

[1] Impact calculations are based on preliminary design slope stake limits plus an additional 25 feet.

[2] Impacts are the same for both options for crossing Main Street and the Carolina Southern Railroad unless otherwise noted.

Maintained/Disturbed

Maintained/disturbed areas are scattered throughout the study area in places where the vegetation is periodically mowed, such as roadside shoulders, residential yards, commercial lots, agricultural fields and overhead utility corridors. Canopy species in this community are usually maintained or planted as ornamentals and consist of loblolly pine, sweetgum, red maple and mimosa. Herbaceous vegetation in this community is comprised of low growing grasses and herbs, including fescue, clover, wild onion, broomsedge, blackberry and Japanese honeysuckle. Included within this community are small closed depressions classified as basin wetlands and segmented tracts adjacent to perennial streams classified as bottomland hardwood forest using the North Carolina Wetland Assessment Method (NCWAM) classification.

Mesic Mixed Hardwood Forest (Coastal Plain Subtype)

The mesic mixed hardwood forest occurs in small tracts throughout the study area. Areas of this community type in the study area consist of historically disturbed tracts that were developed and then abandoned, or have been isolated by adjacent development. Tulip poplar, loblolly pine, sweetgum and red maple dominate the overstory canopy, while Chinese privet, red maple, sweetgum and loblolly pine occur in the understory. Vine species are limited to greenbriar, grapevine, poison ivy and Japanese honeysuckle.

Brownwater Bottomland Hardwoods (High Subtype)

The brownwater bottomland hardwood (high subtype) forest is found on slight hillslopes and flats with little topographic relief and is often segmented by developed areas. A large tract of this community is present at the northern end of the study area and appears to have been clear cut within the past 20 years. The dominant canopy species in this community include swamp chestnut oak, laurel oak, sweetgum, loblolly pine, red maple, tulip poplar and water oak. The understory is dominated by American holly, loblolly pine, red maple, sweetgum and blackberry. Vine species observed were limited to greenbriar, grapevine, poison ivy and Japanese honeysuckle. This community includes multiple headwater wetlands along intermittent and first order streams classified as headwater forests and tracts of wetlands along higher order perennial streams classified as bottomland hardwood forest using the NCWAM classification.

Brownwater Bottomland Hardwoods (Swamp Transition Subtype)

The brownwater bottomland hardwood forest (swamp transition subtype) is found in a few small tracts through the project study area that have been isolated from larger swamp systems by development or roadway construction. In most cases, the hydrologic disconnection has resulted in a drier forest community with infrequent inundation. Hardwood species such as laurel oak, tulip poplar, bald cypress, red maple and sweetgum dominate the canopy layer. The understory is dominated by red maple, American holly and water oak. Herbaceous and vine species observed were limited to lizard’s tail, netted chain fern, greenbriar, grapevine and Japanese honeysuckle. This community includes multiple wetland systems, including headwater forests, bottomland hardwood forests and riverine swamp forests using the NCWAM classification.

Cypress-Gum Swamp (Brownwater Subtype)

The central part of the study area crosses Soules Swamp, a large riverine swamp system that drains to White Marsh east of the project study area. These areas are likely permanently inundated and dominant canopy species observed include bald cypress, black gum, American holly and tulip poplar. The understory was light, and consisted of American holly, bald cypress and red maple. Herbaceous and vine species observed were limited to lizard's tail, cattail and greenbriar. A small tract of cypress-gum swamp is also present at the southern end of the project study area where overbank flow from a small stream, as well as groundwater seepage from an adjacent constructed pond, maintain the hydrologic regime required by cypress-gum swamp communities. This community type includes large wetland systems classified as riverine swamp forest using the NCWAM classification.

Terrestrial Wildlife

Terrestrial communities in the study area are comprised of both natural and disturbed habitats that may support a diversity of wildlife species (those species actually observed are indicated with *). Mammal species that commonly exploit forested habitats and stream corridors found within the study area include common mouse, gray squirrel*, eastern cottontail*, raccoon, Virginia opossum and white-tailed deer*. Birds that commonly use forest and forest edge habitats include the red-shouldered hawk, American crow*, eastern meadowlark, yellow-bellied sapsucker, pileated woodpecker*, Carolina chickadee and tufted titmouse. Birds that may use the open habitat or water bodies within the study area include American kestrel, belted kingfisher, great blue heron and great egret*. Reptile and amphibian species that may use terrestrial communities located in the study area include the cottonmouth*, eastern ribbon snake, copperhead, green snake, corn snake, black rat snake, black racer*, eastern box turtle*, snapping turtle*, American toad*, spring peeper*, eastern fence lizard and five-lined skink*.

**b. Aquatic Communities**

Aquatic communities in the study area consist of both perennial and intermittent coastal streams. The perennial streams in the study area could support bluegill and redbreast sunfish. Intermittent streams in the study area are relatively small in size and would support aquatic communities of spring peeper, crayfish and various benthic macroinvertebrates, such as amphipods and isopods.

**c. Summary of Anticipated Effects**

Effects on Terrestrial Communities

Terrestrial communities in the study area may be impacted by project construction as a result of grading and paving of portions of the study area.

Effects on Aquatic Communities

Impacts to aquatic communities are likely to result from the physical disturbance (e.g., substrate and water quality) of aquatic habitats and watersheds. These impacts are likely to be greatest at stream crossings. Disturbance of aquatic habitats has a

detrimental effect on aquatic community composition by reducing species diversity and the overall quality of aquatic habitats.

Physical alterations to aquatic habitats can result in the following impacts to aquatic communities:

- Inhibition of plant growth.
- Clogging of feeding structures of filter feeding organisms and gills of fish.
- Burial of benthic organisms.
- Algal blooms resulting from increased nutrient concentrations, which deplete dissolved oxygen supplies.
- Loss of benthic macroinvertebrates through scouring resulting from an increased sediment load.
- Increased water temperatures due to removal of riparian canopy.

## 2. Waters of the United States

Section 404 of the Clean Water Act requires regulation of discharges into "Waters of the United States." The US Environmental Protection Agency is the principal administrative agency of the Clean Water Act; however, the US Army Corps of Engineers (USACE) has the responsibility for implementation, permitting, and enforcement of the provisions of the Act.

Surface waters (lakes, rivers, and streams) and wetlands are subject to jurisdictional consideration under the Section 404 program. Any action that proposes to place fill into these areas falls under the jurisdiction of USACE under Section 404 of the Clean Water Act (33 USC 1344).

Section 401 of the Clean Water Act grants authority to individual states for regulation of discharges into "Waters of the United States." Under North Carolina General Statutes, 113A "Pollution Control and Environment" and codified in NCAC 15A, the NC Division of Water Resources (NCDWR) has the responsibility for implementation, permitting and enforcement of the provisions of the Act.

Water resources in the study area are part of the Lumber River Basin (U.S. Geological Survey Hydrologic Unit 03040206). There are nine streams, one pond, and 23 wetlands in the study area (see Figure 2).

### a. Streams, Rivers, and Impoundments

The physical characteristics of the nine streams identified in the study area are summarized in Table 8, along with anticipated streams impacts for the preliminary design. As shown in the table, the proposed project would impact seven streams for a total of 831 linear feet.

**TABLE 8 PHYSICAL CHARACTERISTICS OF STUDY AREA STREAMS**

| Stream Name, Map ID (Figure No.)[1] | Bank Height (feet) | Bankfull Width (feet) | Water Depth (inches) | Stream Type | Length in Study Area (linear ft) | Anticipated Impacts (linear ft)[2] |
|---|---|---|---|---|---|---|
| UT to Deep Branch, SA (2A) | 1.5 | 8 | 12 | Perennial | 434 | 92 |
| UT to Richardson Swamp, SB (2B) | 3.5 | 6 | 6 | Intermittent | 223 | 49 |
| UT to Richardson Swamp, SC (2B) | 4 | 7 | 6 | Perennial | 225 | 82 |
| UT to Richardson Swamp, SD (2B) | 2 | 8 | 12 | Perennial | 207 | 52 |
| UT to Mollie Branch, SU (2E) | 5 | 8 | 12 | Intermittent | 186 | 18 |
| UT to Richardson Swamp, SV (2B) | 4 | 8 | 12 | Intermittent | 180 | 25 |
| UT to Deep Branch, SX (2A) | 1 | 3 | 6 | Intermittent | 339 | 0 |
| UT to Deep Branch, SY (2A) | 2 | 5 | 6 | Intermittent | 865 | 513 |
| Soules Swamp (2C) | 12 | 100 | 72 | Perennial | 558 | 0 |
| | | | | **Total** | **3,217** | **831** |

[1]Impact calculations are based on preliminary design slope stake limits plus an additional 25 feet.
[2]Stream impacts are the same for both options for crossing Main Street and the Carolina Southern Railroad.

One pond (PZ) is located in the study area (see Figure 2A). This pond consists of an artificially excavated pit that is sustained by high groundwater levels. It has no surface water connection to any jurisdictional stream features. The proposed project would not impact this pond.

There are no designated High Quality Waters (HQW) or water supply watersheds (WS-I or WS-II) within one mile downstream of the study area. All of the streams within the study area have a best usage classification of C; Sw. No streams within the study area, or within one mile downstream of the study area, are identified on the North Carolina 2014 Final 303(d) list of impaired waters. In addition, there are no designated anadromous fish waters or Primary Nursery Areas present in the study area.

No benthic sampling stations or fish monitoring data is available for any streams in the study area or within one mile of the study area.

**b. Wetlands**

Twenty-three jurisdictional wetlands were identified within the study area. Wetland classification and quality rating data are presented in Table 9, along with anticipated wetland impacts for the preliminary design. As shown in the table, the proposed project would impact 12 wetlands with the At-Grade option (6.9 acres) and 11 wetlands with the Grade Separation option 2 (8.7 acres). The temporary detour with

the At-Grade option would also impact 1.4 acres of wetland WL. All wetlands in the study area are within the Lumber River Basin (USGS Hydrologic Unit 03040206).

**TABLE 9 JURISDICTIONAL WETLANDS IN STUDY AREA**

| Wetland ID (Figure No.)[1] | NCWAM Classification | Hydrologic Classification | NCDWR Wetland Rating | Area (acres) | Anticipated Impacts (acres)[2] | |
|---|---|---|---|---|---|---|
| | | | | | At-Grade | Grade Separation |
| WA (2A) | Bottomland Hardwood Forest | Riparian | 62 | 0.5 | 0.1 | |
| WB (2A) | Bottomland Hardwood Forest | Riparian | 58 | 0.2 | <0.1 | |
| WBB (2E) | Headwater Forest | Riparian | 50 | 0.2 | 0.0 | |
| WC (2A) | Bottomland Hardwood Forest | Riparian | 58 | 0.3 | 0.1 | |
| WCC (2E) | Headwater Forest | Riparian | 50 | 0.2 | 0.0 | |
| WDD (2E) | Headwater Forest | Riparian | 50 | 0.4 | 0.0 | |
| WF (2B) | Bottomland Hardwood Forest | Riparian | 60 | 0.3 | 0.0 | |
| WG (2B) | Basin Wetland | Riparian | 16 | 0.1 | 0.0 | |
| WH (2B) | Headwater Forest | Riparian | 31 | 0.1 | <0.1 | |
| WI (2B) | Bottomland Hardwood Forest | Riparian | 58 | 0.3 | 0.2 | |
| WJ (2B) | Basin Wetland | Non-Riparian | 16 | 0.3 | 0.3 | |
| WL (2C) | Riverine Swamp Forest | Riparian | 78 | 23.6 | 5.8[3] | 7.6 |
| WN (2E) | Headwater Forest | Riparian | 34 | 1.2 | 0.0 | |
| WO (2C) | Riverine Swamp Forest | Riparian | 48 | 0.8 | <0.1 | 0.0 |
| WP (2C) | Riverine Swamp Forest | Riparian | 59 | 0.3 | 0.0 | |
| WS (2B) | Headwater Forest | Riparian | 16 | 0.1 | 0.0 | |
| WU (2B) | Riverine Swamp Forest | Riparian | 62 | 0.1 | 0.0 | |

**TABLE 9 JURISDICTIONAL WETLANDS IN STUDY AREA *continued***

| Wetland ID (Figure No.)[1] | NCWAM Classification | Hydrologic Classification | NCDWR Wetland Rating | Area (acres) | Anticipated Impacts (acres)[2] | |
|---|---|---|---|---|---|---|
| | | | | | At-Grade | Grade Separation |
| WV (2B) | Riverine Swamp Forest | Riparian | 52 | 0.3 | 0.1 | |
| WW (2A) | Bottomland Hardwood Forest | Riparian | 54 | 0.1 | 0.0 | |
| WX (2A) | Bottomland Hardwood Forest | Riparian | 54 | 0.2 | <0.1 | |
| WY (2A) | Headwater Forest | Riparian | 12 | 0.1 | 0.0 | |
| WZ (2A) | Riverine Swamp Forest | Riparian | 70 | 0.5 | 0.3 | |
| WZZ (2B) | Bottomland Hardwood Forest | Riparian | 16 | 0.4 | <0.1 | |
| | | | **Total** | **30.6** | **6.9** | **8.7** |

[1]Impact calculations are based on preliminary design slope stake limits plus an additional 25 feet.
[2]Impacts are the same for both options for crossing Main Street and the Railroad unless otherwise noted.
[3]Impacts to wetland WL for At-Grade option do not include 1.4 acres of temporary impacts associated with detour.

**c. Avoidance, Minimization and Mitigation**

During the development of the preliminary design, efforts were made to avoid and minimize impacts to wetlands and streams wherever practicable. The proposed curb and gutter was extended to avoid impacts to a cemetery adjacent to the existing road (see Figure 2A), which also reduced impacts to wetlands in this area.

Final decisions regarding wetland and stream mitigation requirements will be made by USACE and NCDWR. On-site mitigation will be used as much as possible. The N.C. Division of Mitigation Services will be used for remaining mitigation requirements beyond what can be satisfied by on-site mitigation.

**d. Anticipated Permit Requirements**

In accordance with provisions of Section 404 of the Clean Water Act, a permit will be required from USACE for the discharge of dredged or fill material into "Waters of the United States".

Due to expected project impacts on jurisdictional streams, an individual Section 404 permit will likely be required. USACE holds the final discretion as to what permit(s) will be required prior to project construction.

In addition to the 404 permit, other required permits include the corresponding Section 401 Water Quality Certification from NCDWR.

### 3. Rare and Protected Species

#### a. Federally-Protected Species

Plants and animals with Federal classifications of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under the provisions of Sections 7 and 9 of the Endangered Species Act (ESA) of 1973, as amended. As of March 9, 2015, the US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) Fisheries lists eight federally-protected species for Columbus County (see Table 10). A brief description of each species' habitat requirements follows, along with the Biological Conclusion rendered based on survey results in the project study area. Habitat requirements for each species are based on the current best available information from referenced literature and/or USFWS.

**TABLE 10 FEDERALLY-PROTECTED SPECIES LISTED FOR COLUMBUS COUNTY**

| Common Name | Scientific Name | Federal Status | Habitat Present | Biological Conclusion |
|---|---|---|---|---|
| American alligator | *Alligator mississippiensis* | T(S/A) | Yes | Not Required |
| Atlantic sturgeon | *Acipenser oxyrinchus oxyrinchus* | E | No | No Effect |
| Shortnose sturgeon | *Acipenser brevirostrum* | E | No | No Effect |
| Waccamaw silverside | *Menidia extensa* | T | No | No Effect |
| Red-cockaded woodpecker | *Picoides borealis* | E | No | No Effect |
| Wood stork | *Mycteria americana* | T | Yes | No Effect |
| Cooley's meadowrue | *Thalictrum cooleyi* | E | Yes | No Effect |
| Rough-leaved loosestrife | *Lysimachia asperulaefolia* | E | Yes | No Effect |

E – Endangered; T – Threatened; T(S/A) – Threatened due to Similarity of Appearance

The American alligator remains on the protected species list due to its similarity in appearance to the Endangered American crocodile. Species listed as threatened due to similarity of appearance do not require Section 7 consultation with USFWS. However, suitable habitat for the American alligator is present within the study area. A review of North Carolina Natural Heritage Program (NCNHP) records, updated November 2014, indicates no known American alligator occurrences within one mile of the study area.

Suitable habitat for Atlantic sturgeon, shortnose sturgeon, Waccamaw silverside and red-cockaded woodpecker does not exist within the study area. A review of NCNHP records, updated November 2014, indicates no known occurrences of these species within one mile of the study area. Due to the lack of habitat and known occurrences, it has been determined this project will not affect these species.

Suitable foraging habitat for wood stork is present in Soules Swamp in the central portion of the study area. However, a review of NCNHP records, updated November 2014, indicated no known occurrences of wood storks within one mile of the project area. No wood stork individuals were observed during the course of field work. As a result, it has been determined this project will not affect this species.

Suitable habitat for Cooley's meadowrue exists within the study area in powerline rights-of-way, roadside ditches, and woodland clearings that are spread throughout the study area. However, a review of NCNHP records, updated November 2014, indicated no known occurrences of Cooley's meadowrue within one mile of the study area. In addition, no individuals of Cooley's meadowrue were found during pedestrian surveys of the study area conducted on June 26, 2013. Due to lack of recorded occurrences and lack of observed individuals in the project study area, the biological conclusion is the proposed project will have No Effect on this species.

Suitable habitat for rough-leaved loosestrife is present within the study area in the roadside ditches, powerline rights-of-way, and disturbed edges near the forested wetlands throughout the study area. However, a review of NCNHP records, updated November 2014, found no known occurrences of rough-leaved loosestrife within one mile of the study area. In addition, no individuals of rough-leaved loosestrife were found during pedestrian surveys of the study area conducted on June 26, 2013. Due to lack of recorded occurrences and lack of observed individuals in the project study area, the biological conclusion is the proposed project will have No Effect on this species.

**b. Bald Eagle and Golden Eagle Protection Act**

The bald eagle was declared recovered, and removed (de-listed) from the 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 (Eagle Act) (16 U.S.C. 668-668d). The Eagle Act prohibits take of bald and golden eagles and provides a statutory definition of "take" that includes "disturb".

Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large dominant trees are used for nesting sites, typically within one mile of open water.

An assessment of the study area, as well as the area within a 1.13-mile radius (one mile plus 660 feet) of the project limits, was performed on November 5, 2013, using 2012 color aerial photography. No water bodies large enough or sufficiently open to be considered potential feeding sources were identified. Since there was no foraging habitat within the review area, a survey of the study area and the area within 660 feet of the project limits was not conducted. Additionally, a review of NCNHP records, updated November 2014, revealed no known occurrences of this species within one mile of the study area. Due to the lack of habitat and known occurrences, as well as the minimal impact anticipated for the proposed project, impacts to bald eagles are not expected.

**c. Northern Long-Eared Bat**

USFWS has developed a programmatic biological opinion (PBO) in conjunction with FHWA, USACE, and NCDOT for the northern long-eared bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is "May Affect, Likely to Adversely Affect". The PBO provides incidental take coverage for 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 1-8, which includes Columbus County, where TIP R-5020 is located.

**4. Soils**

The Columbus County Soil Survey identifies fourteen soil types within the study area (Table 11).

**TABLE 11 SOILS IN STUDY AREA**

| Soil Series | Mapping Unit | Drainage Class | Hydric Status |
|---|---|---|---|
| Coxville loam | Co | Poorly drained | Hydric |
| Foreston loamy fine sand | Fo | Moderately well drained | Hydric* |
| Goldsboro fine sandy loam (0-2 percent slopes) | GoA | Moderately well drained | Hydric* |
| Johnston loam (frequently flooded) | Js | Very poorly drained | Hydric |
| Lynchburg fine sandy loam | Ly | Somewhat poorly drained | Hydric* |
| Meggett fine sandy loam (frequently flooded) | Me | Poorly drained | Hydric |
| Norfolk loamy fine sand (0-2 percent slopes) | NoA | Well drained | Hydric* |
| Norfolk loamy fine sand (2-6 percent slopes) | NoB | Well drained | Hydric* |
| Norfolk-Urban land complex (0-6 percent slopes) | NuB | Well drained | Nonhydric |
| Rains fine sandy loam | Ra | Poorly drained | Hydric |
| Rains-Urban land complex | Ru | Poorly drained | Hydric |
| Torhunta fine sandy loam | To | Very poorly drained | Hydric* |
| Udorthents, loamy | Ud | Variable | Nonhydric |
| Wagram loamy fine sand (0-6 percent slopes) | WaB | Well drained | Nonhydric |

*Soils which are primarily nonhydric, but which may contain hydric inclusions.

**5. Invasive Species**

Three 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), mimosa (Moderate Threat) and Japanese honeysuckle (Moderate Threat). NCDOT will manage invasive plant species as appropriate.

## B. Cultural Resources

The proposed project is subject to 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, codified as 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.

### 1. Historic Architectural Resources

NCDOT conducted reconnaissance surveys of the Area of Potential Effects (APE) for the proposed project in July and August 2013, and identified 115 resources 50 years of age or older. Two properties, the Beth Israel/Whiteville Hebrew Center and the Williamson House, were recommended as eligible for listing in the NRHP. The State Historic Preservation Office (HPO) concurred the Beth Israel/Whiteville Hebrew Center and the Williamson House are eligible for listing in the NRHP in a memorandum dated March 25, 2014 (see Appendix A).

#### a. Historic Properties

**Beth Israel / Whiteville Hebrew Center** (see aerial photograph below) – This property is located at the southeast corner of the intersection of West Frink Street and US 701 Bypass (North J.K. Powell Boulevard). Built in 1959, the Beth Israel/ Whiteville Hebrew Center is a one-story, flat-roofed concrete block building with brick veneer and modest Modernist styling. The building sits approximately 75 feet away from the road and faces West Frink Street. The Center is recommended eligible for the NRHP under Criterion A for associations with the history of the religious community in Whiteville, and Criteria Consideration A (religious properties) as it derives its significance from architectural and historical importance.


*National Register Boundary for the Beth Israel/Whiteville Hebrew Center*

**Williamson House** (see aerial photograph below) – This property is located on the south side of Washington Street, approximately 380 feet west of the intersection with US 701 Bypass (North J.K. Powell Boulevard). Built around 1954, the Williamson House is a one-story, flat-roofed, dwelling with an irregular footprint and modest modernist detailing. A secondary dwelling, pool, and swing set are also located on the property. The Williamson House is recommended eligible for the NRHP under Criterion C for design and construction as a modernist house.


*National Register Boundary for the Williamson House*

**b. Project Effects**

The proposed project widens existing US 701 Bypass to the west in the vicinity of the Beth Israel/Whiteville Hebrew Center in order to minimize impacts to the historic property. However, approximately 0.05 acre of new right-of-way will be required from the historic property. This new right-of-way will not affect the building, but will require the removal of several small trees. As a result, it was determined the project would have no adverse effect on this property, if a landscape plan is prepared and implemented in coordination with the property owner.

The Williamson House is located several hundred feet away from US 701 Bypass. No right-of-way or easements will be required from the Williamson House property, and no construction is proposed adjacent to the property. The proposed project will have no effect on the Williamson House.

On January 13, 2015, HPO concurred with the effect determinations for the NRHP eligible properties (see Appendix A). HPO concurred with the no adverse effect determination for the Beth Israel/Whiteville Hebrew Center based on the condition that a landscape plan for the portion of the property along US 701 Bypass is created and implemented in coordination with the property owner.

**2. Archaeological Resources**

The State Historic Preservation Office has reviewed the project for archaeological resources. In a letter dated May 15, 2012, HPO indicated no known archaeological sites exist within the project study area and recommended no archaeological survey be conducted for the project (Appendix A).

## C. Section 4(f)/6(f) Resources

Section 4(f) of the US Department of Transportation (USDOT) Act of 1966, as amended, specifies that publicly owned land from a public park, recreation area, wildlife and waterfowl refuge, and all historic sites of national, state, and local significance may be used for federal projects only if there is no feasible and prudent alternative to the use of such land and the project includes all possible planning to minimize harm to 4(f) lands resulting from such use.

Section 6009(a) of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amended Section 4(f) legislation to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). This revision provides that if a transportation use of Section 4(f) property results in a *de minimis* impact on that property, analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete.

Three properties protected by Section 4(f) exist in the project area: the National Register-eligible Beth Israel/Whiteville Hebrew Center; the National Register-eligible Williamson House; and Leder Park (see Figure 2). The proposed project will require the use of land from two of these properties. The proposed project will require a temporary construction easement from Leder Park and permanent right-of-way from the Beth Israel/Whiteville Hebrew Center.

The temporary easement required from Leder Park is considered a temporary occupancy of the property, and is not considered a Section 4(f) use. This temporary occupancy will be less than the time needed to construct the project and there will be no change in ownership of the property. The scope of the work on the property will be minor, the temporary easement will provide room for equipment to work, but no actual construction is expected to occur on park property. There are no anticipated permanent or temporary adverse physical impacts to Leder Park or expected to be any interference with activities, features and attributes of the park. Orange construction fencing will be placed at the proposed right of way and temporary construction easement lines at Leder Park. Construction equipment will not be allowed onto park property outside of the temporary easement. The land used will be fully restored in at least as good a condition as it existed prior to the project. In a letter dated March 17, 2015, the Whiteville Parks and Recreation Director stated the impacts as a result of the proposed project will not affect the recreational activities, features, or attributes of Leder Park (Appendix A).

As discussed in Section V.B.1.b, it was determined the project would have no adverse effect on the Beth Israel/Whiteville Hebrew Center. In accordance with Section 6009(a) of SAFETEA-LU, a no adverse effect determination for a historic site is considered a *de minimis* impact and no further evaluation is required under Section 4(f).

Section 6(f) of the Land and Water Conservation Fund Act of 1965 stipulates that property acquired or developed with the assistance of the Fund may not be converted to a use other than public recreation unless suitable replacement property is provided. No properties acquired or developed with the assistance of the Land and Water Conservation Fund exist in the project area.

## D. Social Effects

### 1. Neighborhoods/Communities

The proposed project is not expected to separate or isolate existing neighborhoods, isolate portions of the community, create a barrier between residents and community facilities, or cause interruption in community cohesion or interaction. However, right-of-way requirements for the widening will result in property reductions to residences and businesses along US 701 Bypass. In addition, as discussed below in Section V.D.2, some residential and business relocations will be required with the proposed US 701 Bypass widening project.

### 2. Relocation of Residences and Businesses

The proposed project will require the relocation of residences and businesses. All relocations will be carried out in accordance with federal and state laws and regulations. NCDOT's Relocation Assistance Program will be used to assist in finding replacement property for those relocated by the project. Table 12 presents the anticipated number of residences and businesses that would be relocated by the proposed project. Appendix B includes information on NCDOT's relocation assistance program, as well as the relocation reports for the project.

**TABLE 12 RELOCATIONS**

| Residences | Businesses |
|---|---|
| 14 (6) | 20 (3) |

Numbers in parentheses ( ) indicate minority-owned residences or businesses.

Twenty businesses are expected to be relocated as a result of this project, nine of which were identified as tenants. Relocation assistance will be provided to all businesses to be relocated. The relocation of businesses is not expected to have an adverse effect on the community because suitable business sites are available in the area for relocation of these businesses. No housing or property shortages are expected, and no schools or churches will be relocated by this project.

### 3. Environmental Justice

Title VI and Environmental Justice considerations promote the fair treatment and involvement of all people, regardless of race, color, national origin, or income with respect to development, implementation, and enforcement of environmental laws and regulations. Executive Order 12898 requires each federal agency, to the greatest extent allowed by law, to administer and implement its programs, policies and activities that affect human health or the environment so as to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations.

In order to assess social aspects associated with the proposed project, site visits were conducted in June 2012 and May 2013. In addition, a review of demographic information available through the US Census Bureau was performed. The demographics of the Census Tract Block Groups in which the project corridor is located (Demographic Study Area) were obtained, as were the demographics of Columbus County and North Carolina.

Census data indicate a notable presence of both minority and low-income populations, and minority and low income communities were observed within the study area during the site visits. However, the percentage of minority individuals within the demographic study area (DSA) (46.4 percent) is only slightly greater than that of Columbus County (38.5 percent). The percentage of persons below the poverty level within the DSA (32.6 percent) is also greater than for the county (23.0 percent). Many of the neighborhoods on the west side of the US 701 Bypass corridor are low income and/or minority communities.

While minority and low income populations are present, no notably adverse community impacts are anticipated with this project; thus, impacts to minority and low income populations do not appear to be disproportionately high and adverse. Of the 14 anticipated residential relocations, only six are minority-owned. In addition, of the 20 anticipated business relocations, only three are minority-owned. Benefits and burdens resulting from the project are expected to be equitably distributed throughout the community, and no denial of benefit is expected. However, if temporary accommodations for pedestrians and bicyclists are not provided during construction, then potential impacts to minority or low income populations could occur since these populations comprise the majority of pedestrians and cyclists in the area. NCDOT's *Policy on Accommodating Pedestrians and Bicyclists within Work Zones* will be followed during project construction in order to maintain pedestrian and bicycle accessibility to the maximum extent possible. Existing sidewalks along US 701 Bypass disturbed by project construction will be replaced with new five-foot-wide sidewalks and new sidewalks can be provided in areas where none currently exist if the City of Whiteville will agree to participate in the construction cost and accept maintenance and liability for the new sidewalks. Existing crosswalks and pedestrian signals along the project corridor will also be replaced. The preliminary design also includes 14-foot-wide outside lanes to accommodate bicycles. Overall non-motorized mobility and access within the project area should be enhanced with the proposed project in comparison to existing conditions.

Public involvement and outreach activities have provided for full and fair participation of all potentially affected communities in the transportation decision-making process. Through the public involvement program, coordination with local officials, and accommodation of local development plans, the public has been kept informed of the proposed project.

There are no Limited English Proficiency (LEP) populations meeting the U.S. Department of Justice LEP Safe Harbor threshold. However, Census data indicates a Spanish-speaking population exceeding 50 persons within the DSA. This population was considered for language assistance.

### 4. Recreational Facilities

Leder Park is the only public park within the project study area. The park is located on US 701 Bypass adjacent to the northern end of Whiteville High School on land owned by the Whiteville City Board of Education.

Some of the recreational facilities at Whiteville High School, including the gymnasium, track, and baseball field, are located adjacent to US 701 Bypass within the project study area. Central Middle School and Whiteville Primary School, both located just west of the project study area, also include recreational lands and facilities on their properties. However, there are no known agreements with the City to make the facilities at these three schools available to the public.

The proposed project will widen existing US 701 Bypass to the west in the vicinity of Whiteville High School and Leder Park to avoid impacts to the recreational facilities adjacent to US 701 Bypass at the school and the park. However, the project will require a temporary construction easement from Leder Park, which is protected by Section 4(f) of the USDOT Act of 1966, as amended (see Section V.C). In a letter dated March 17, 2015, the Whiteville Parks and Recreation Director stated the proposed project will not affect the recreational activities, features, or attributes of the park (Appendix A).

### 5. Other Public Facilities and Services

There are three public schools within or adjacent to the study area: Whiteville Primary School, Central Middle School and Whiteville High School. Whiteville High School is located on US 701 Bypass; however, its ingress/egress is located off of N. Lee Street. The preliminary design for the proposed project widens existing US 701 Bypass to the west in the vicinity of Whiteville High School to avoid impacts to the school.

The Carolyn T. High Memorial Library is also located on US 701 Bypass across the road from Whiteville High School. Based on the preliminary design for the proposed project, additional right-of-way would be required along US 701 Bypass from the library property.

Other community facilities within or adjacent to the study area include four churches: Friendship Missionary Baptist Church, Saint James A.M.E. Church of West Whiteville, First Saint Paul Missionary Baptist Church, and Diamond Branch Missionary Baptist Church. Based on the preliminary design for the proposed project, a small amount of additional right-of-way would be required along US 701 Bypass from Diamond Branch Missionary Church and Saint James A.M.E. Church of West Whiteville, but the church buildings will not be affected.

### 6. Economic Effects

As discussed above in Section V.D.2, the proposed project will result in the relocation of 13 businesses. However, the relocation of businesses is not expected to have an adverse effect on the community because suitable sites are available in the area for relocation of these businesses. The addition of a median will limit some businesses to right-in/right-out access, but the proposed median will improve safety for traffic accessing the businesses.

## E. Farmland

It is anticipated the proposed project will impact soils recognized as important farmlands by the US Department of Agriculture, Natural Resources Conservation Service (NRCS).

Important farmlands include three categories of soils: prime farmlands, unique farmlands, and farmlands of statewide importance. State construction projects that receive funding from federal sources are directed to consider impacts to important farmlands under the Farmland Protection Policy Act (FPPA) of 1981. State agencies are directed to consider impacts to farmlands under North Carolina Executive Order 96, *Conservation of Prime Agricultural and Forest Lands*.

There are prime soils, soils of statewide importance, and soils of unique importance within the project study area. Primarily, these soils are along the western edge of the study area, within the Soules Swamp portion of the study area, and in the southern portion of the study area. As is required by the FPPA, a preliminary screening of potential farmland impacts was completed. Part VI of NRCS Form CPA-106 was completed according to FHWA guidelines. The total point value of the screening was 20 points, which falls well below the NRCS minimal criteria (60 points) for completion of Form CPA-106, and the project will not be evaluated further for farmland impacts. Impacts to FPPA eligible soils are estimated to be 6.2 acres for the preliminary design.

Columbus County adopted a Voluntary Agricultural Districts Ordinance on November 3, 2008. There are no Voluntary Agricultural Districts in the project study area.

## F. Land Use

### 1. Existing Land Use and Zoning

The project study area is located within the municipal boundary and extraterritorial jurisdiction of the City of Whiteville. Most of US 701 Bypass through the project area is lined with individual businesses and shopping centers, with neighborhoods located behind the businesses. The major shopping centers along the project corridor are located in the southern portion of the project study area in the vicinity of the US 701 Bypass intersections with Love Mill Road and West Hay Street. These shopping centers include Columbus Corners, which is anchored by Walmart, White's Crossing Plaza, Whiteville Town Centre, Whiteville Plaza, and Hill Plaza – The Market Place (see Figure 2B).

US 701 Business parallels US 701 Bypass a short distance to the east for most of the length of the project corridor. US 701 Business goes through the Whiteville Central Business District. The Columbus County Courthouse, Whiteville City Hall, and the Whiteville police and fire departments are all located along or adjacent to US 701 Business just to the east of the project study area (see Figures 2C and 2D).

The central portion of the project corridor is largely open space where US 701 Bypass crosses Soules Swamp (see Figure 2C).

The City of Whiteville has a zoning ordinance and the majority of the project corridor is zoned B-3, Highway Serving Business District. This district is a commercial zone for retail uses aimed at serving passing motorists. Small areas along the corridor are also zoned for residential, office and institutional, open space, or industrial uses. The open space zone includes thoroughfare right-of-way preservation among its intended uses.

The Columbus County Land Use Regulation Ordinance was adopted in July 2014. The Land Use Regulation Ordinance applies to all areas of unincorporated Columbus County not within the extraterritorial planning jurisdiction of any municipalities. The ordinance established zoning districts within all areas of the County's planning jurisdiction that were not already zoned at the date the ordinance was adopted. The County's ordinance

does not apply to the subject project which is completely within the City of Whiteville's planning jurisdiction.

**2. Future Land Use**

The City of Whiteville does not have a comprehensive or future land use plan.

Columbus County adopted the *Columbus County, North Carolina Comprehensive Land Use Plan* in January 2012. However, the comprehensive plan does not make land use recommendations for land within the project study area because these lands are within the City of Whiteville's planning jurisdiction. The Columbus County plan does reference the recommendation contained in the Columbus County CTP to widen the portions of US 701 outside of the Whiteville planning jurisdiction to a four-lane divided facility with partial control of access.

There are no known plans for development in the project study area.

**3. Project Compatibility with Local Plans**

The proposed US 701 Bypass widening project is located within the planning jurisdiction for the City of Whiteville, which does not have a comprehensive or future land use plan. However, the proposed project is consistent with the recommendations made in the thoroughfare plan for the project study area, the 1997 *Whiteville-Brunswick Thoroughfare Plan Technical Report*.

## G. Indirect/Cumulative Effects

The North Carolina Department of Environment and Natural Resources, in 15A NCAC 1C.0101 *Conformity with North Carolina Environmental Policy Act, Statement of Purpose, Policy and Scope,* defines "Cumulative Effects" as those effects resulting "from the incremental impact of the proposed activity when added to other past, present, and reasonably foreseeable future activities regardless of what entities undertake such other activities." Cumulative effects can result when activities taking place over time are collectively significant, even when individually those activities are minor. The Code defines "Indirect Effects" as those effects "caused by and resulting from the proposed activity although they are later in time or further removed in distance, but they are still reasonably foreseeable."

With minimal transportation impact-causing activities, it is not expected the proposed project will influence nearby land uses or stimulate growth. Therefore, it was determined a detailed indirect and cumulative effects study is not necessary.

## H. Flood Hazard Evaluation

The City of Whiteville and Columbus County are both participants in the National Flood Insurance Regulatory Program. There are two major stream crossings for the proposed project. Table 13 shows the anticipated floodplain impacts for the proposed project.

**TABLE 13 FLOODPLAIN IMPACTS**

| | Build Alternative | |
|---|---|---|
| | **At-Grade** | **Grade Separation** |
| **100-Year Floodplain Impacts (acres)[1]** | 11.9 | 14.7 (0.9 temporary) |

[1]Impact calculations are based on preliminary design slope stake limits plus an additional 25 feet.

In accordance with Executive Order 11988, the Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), the delegated state agency for administering FEMA's National Flood Insurance Program, to determine the status of the project with regard to applicability of NCDOT's Memorandum of Agreement with FMP (dated April 22, 2013), or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

This project involves construction activities on or adjacent to FEMA-regulated streams. Therefore, NCDOT Division 6 shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying the drainage structure(s) and roadway embankment located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

## I. Traffic Noise Analysis

### 1. Introduction

Traffic noise impacts are determined through implementing the current Traffic Noise Model (TNM®) approved by FHWA and by following procedures detailed in 23 CFR Part 772 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 specifications.

A copy of the unabridged version of the full technical report titled *Traffic Noise Analysis, US 701 from South of SR 1661 (Pleasant Plains Road) to North of the US 74/76 Bypass in Whiteville* (July 31, 2013) can be viewed at the Project Development & Environmental Analysis Unit, Century Center Building A, 1010 Birch Ridge Drive, Raleigh.

### 2. Traffic Noise Impacts and Noise Contours

The maximum number of receptors predicted to be impacted by future traffic noise from the Build Alternative is shown in Table 14. The table includes those receptors expected to experience traffic noise impacts by either approaching or exceeding the FHWA Noise Abatement Criteria (NAC), or by a substantial increase in exterior noise levels as defined in the NCDOT *Traffic Noise Abatement Policy*.

The maximum extent of the 71- and 66-dBA noise level contours measured from the center of the proposed roadway are 74 feet and 145 feet, respectively.

**TABLE 14 PREDICTED TRAFFIC NOISE IMPACTS BY ALTERNATIVE***

| Alternative | Traffic Noise Impacts | | | |
|---|---|---|---|---|
| | **Residential (NAC B)** | **Churches/School, etc. (NAC C & D)** | **Businesses (NAC E)** | **Total** |
| Build | 42 | 3 | 2 | **47** |

*Per TNM®2.5 and in accordance with 23 CFR Part 772.

### 3. No-Build Alternative

The Traffic Noise Analysis also considered traffic noise impacts for the No-Build Alternative. If the proposed project does not occur, 56 receptors are predicted to experience traffic noise impacts and the future traffic noise levels will increase by approximately 2 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.

### 4. 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 allowable abatement measure quantity (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 quantity value of $37,500 per benefited receptor, causing this abatement measure to be unreasonable.

Noise barriers include two basic types: earthen berms and noise walls. These structures act to diffract, absorb, and reflect highway traffic noise.

This project will maintain uncontrolled right-of-way access, meaning that most noise-sensitive land uses will have direct access connections to the proposed project, and most intersections will adjoin the project at grade. The traffic noise analysis for this project confirmed the physical breaks in potential noise barriers that would occur due to the uncontrolled right-of-way access would prohibit any noise barrier from providing the minimum required traffic noise level reductions at all predicted traffic noise impacts, as defined by the noise abatement measure feasibility criteria of the NCDOT *Traffic Noise Abatement Policy*.

### 5. Summary

Based on this preliminary study, traffic noise abatement is not recommended, and no noise abatement measures are proposed. This evaluation completes the highway traffic noise requirements of 23 CFR Part 772. No additional noise analysis will be performed for this project unless warranted by a significant change in the project scope, vehicle capacity, or alignment.

In accordance with the 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 will be the approval date of the Finding of No Significant Impact (FONSI). For development occurring after this date, local governing bodies are responsible to ensure that noise compatible designs are utilized along the proposed facility.

## J. Air Quality Analysis

### 1. Introduction

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.

The Federal Clean Air Act of 1970 established the National Ambient Air Quality Standards (NAAQS). These standards were established to protect the public from known or anticipated effects of air pollutants. The most recent amendments to the NAAQS contain criteria for sulfur dioxide ($SO_2$), particulate matter (PM), carbon monoxide (CO), nitrogen dioxide ($NO_2$), ozone ($O_3$), and lead (Pb).

The primary pollutants from motor vehicles are unburned hydrocarbons, nitrous oxides, carbon monoxide, and particulates. Hydrocarbons and nitrogen oxides can combine in a complex series of reactions catalyzed by sunlight to produce photochemical oxidants such as ozone and $NO_2$. 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.

A project-level qualitative air quality analysis was prepared for this project. A copy of the unabridged version of the full technical report titled *Air Quality Analysis, Widening US 701 Bypass, Columbus County* (July 16, 2013) can be viewed at the Project Development & Environmental Analysis Unit, Century Center Building A, 1010 Birch Ridge Drive, Raleigh.

### 2. Attainment Status

The project is located in Columbus County, which complies with the National Ambient Air Quality Standards. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

## 3. Mobile Source Air Toxics (MSAT)

### a. Background

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 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-butidiene, 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 MOBILE6.2 model, even if vehicle activity (vehicle-miles travelled, VMT) increases by 145 percent as assumed, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050.

MSAT analyses are intended to capture the net change in emissions within the transportation network affected by the project. The affected environment for MSATs may be different than the affected environment 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 when 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.

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/). 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, especially given that some of the information needed is unavailable. This would require determining the amount of time people are actually exposed at a specific location and to establish the extent attributable to a proposed action.

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) 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 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.

**b. MSAT Conclusion**

The science of mobile source air toxics is still evolving. As the science progresses, FHWA will continue to revise and update their guidance. FHWA is working with stakeholders, EPA and others to better understand the strengths and weaknesses of developing analysis tools and the applicability on the project level decision documentation process.

**4. Construction Air Quality**

Air quality impacts resulting from roadway construction activities are typically not a concern when contractors utilize appropriate control measures. During construction of the proposed project, all materials resulting from clearing and grubbing, demolition, or other operations will be removed from the project, burned, or otherwise disposed of by the Contractor. Any burning will be performed in accordance with applicable local laws and ordinances and regulations of the North Carolina State Implementation Plan (SIP) for air quality in compliance with 15 NCAC 2D.0520. Care will be taken to ensure burning will be done at the greatest distance practical from dwellings and not when atmospheric conditions are such as to create a hazard to the public. Operational agreements that reduce or redirect work or shift times to avoid community exposures can have positive benefits. Burning will be performed under constant surveillance. Also during construction, measures will be taken to reduce the dust generated by construction when the control of dust is necessary for the protection and comfort of motorists or area residents.

**5. 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. Substantial progress has been made in reducing criteria pollutant emissions from motor vehicles and improving air quality, even as vehicle travel has increased. This evaluation completes the assessment requirements for air quality of the 1990 Clean Air Act Amendments and the NEPA process, and no additional reports are necessary.

## K. Hazardous Materials

A geo-environmental impact evaluation was conducted to identify properties within the study area that may be contaminated and might result in increased project costs and future environmental liability if acquired. Hazardous materials are generally defined as material or a combination of materials that present a potential hazard to human health or the environment. Properties of concern include, but are not limited to, properties with active and abandoned underground storage tanks (USTs), hazardous waste sites, regulated landfills, and unregulated dumpsites. The geo-environmental impact evaluation included a review of Geographic Information System (GIS) data and a field reconnaissance of the study area.

The geo-environmental impact evaluation identified a total of 29 known and potential hazardous materials sites within the study area (see Figure 2), including 23 sites that may currently contain, or formerly contained, petroleum USTs and six auto repair facilities. No hazardous waste sites and no landfills were identified within the study area. In addition, no potential Resource Conservation and Recovery Act (RCRA) or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites were identified within the study area.

Table 15 lists these 29 known and potential hazardous materials sites, as well as the anticipated level of geo-environmental impact potential for each site. The level of geo-environmental impact potential refers to the potential for future environmental liability if the property is acquired, as well as the anticipated risk of a substantial increase in project costs and/or delays associated with affecting the site. Sites with low geo-environmental impact potential are anticipated to have little to no impacts with respect to these issues. All 29 sites listed in Table 15 are anticipated to have low geo-environmental impact potential on the proposed project. The discovery of additional sites not included in the GIS database and not reasonably discernible during the field reconnaissance could occur later in project development.

**TABLE 15 KNOWN & POTENTIAL HAZARDOUS MATERIALS SITES**

| Site Name | Address | Status | Geo-Environmental Impact Potential |
|---|---|---|---|
| Southeast Farm Equipment | 3897 James B. White Highway South | Former V & M Supply site; 2 USTs were closed and removed in 1993; GWI # 11604 and #12149. | Low |
| Trade Wilco #1907 | 2001 S. Madison St. | Currently operates as a convenience store and gas station; 4 USTs are currently in use at this site. | Low |
| Whiteville Janitorial Supply | 1942 S. Madison St. | Former Gabby's service station. USTs are possible, removed in 2000. | Low |
| Ronald's Tire and Brake Service | 1936 S. Madison St. | Auto repair shop. | Low |

**TABLE 15 KNOWN & POTENTIAL HAZARDOUS MATERIALS SITES *continued***

| Site Name | Address | Status | Geo-Environmental Impact Potential |
|---|---|---|---|
| Automotive Electric | 1933 S. Madison St. | Auto repair shop. | Low |
| Tyree Upholstery | 1930 S. Madison St. | Auto and furniture upholstery. | Low |
| D&F Paint and Body | 1926 S. Madison St. | Auto paint and body shop. | Low |
| Signs and Designs | 1917 S. Madison St. | Formerly Whiteville Auto Glass. Possibly an old convenience store/gas station. | Low |
| Discount Tire Mart | 1863 S. Madison St. | Auto repair and tire shop. | Low |
| T & E Auto Sales | 1833 S. Madison St. | Currently a used car lot. | Low |
| M&M Ceramic Tile | 1823 S. Madison St. | Currently a ceramic tile shop. Possibly an old convenience store/gas station. | Low |
| Shell Rapid Lube | 4 Whites Crossing Ln. | Auto oil change facility. | Low |
| Kangaroo Express | 1730 S. J.K. Powell Blvd. | Currently operates as a convenience store and gas station; 3 USTs are currently in use at this site. | Low |
| SE Cain Machine and Welding | 1724 S. J.K. Powell Blvd. | Possibly an old gas station. | Low |
| Campbell Oil and Gas | 1476 S. J.K. Powell Blvd. | Campbell Oil Bank Facility. GWI #32298 (heating oil). | Low |
| Tint Wizard | 1400 S. J.K. Powell Blvd. | Former Elliotte Implement Co. GWI #19918. One 550 gal tank closed in 1991. | Low |
| Industrial Warehouse | 300 Magnolia St. | Possible former Location of Moore's Building Supply. One 500 gal tank, temporarily closed. | Low |
| DBA Laundry Center | 419 S. J.K. Powell Blvd. | Laundry. Old convenience store/gas station. | Low |
| Home Run Food Store #2 | 416 S. J.K. Powell Blvd. | Currently operates as a convenience store and gas station; 3 USTs are currently in use at this site. | Low |

**TABLE 15 KNOWN & POTENTIAL HAZARDOUS MATERIALS SITES *continued***

| Site Name | Address | Status | Geo-Environmental Impact Potential |
|---|---|---|---|
| Franklin Baking Co. | 410 S. J.K. Powell Blvd. | One tank closed in 1994. GWI #13072. | Low |
| 701 Auto Sales | 106 S. J.K. Powell Blvd. | Closed gas station. | Low |
| Pigsfords Restaurant | 103 S. J.K. Powell Blvd. | Possible location of former Whiteville Washerette. Four USTs were closed in 1996. | Low |
| Waccamaw Bank | 110 N. J.K. Powell Blvd. | Former location of Coca Cola Bottling Co. GWI #10486 and #15751. Closed in place 1988. | Low |
| Trade Wilco #1874 | 207 N. J.K. Powell Blvd. | Currently operates as a convenience store and gas station; 4 USTs are currently in use at this site. | Low |
| Crossroads Amoco | 709 N. J.K. Powell Blvd. | Four tanks closed in 1987. One tank closed in 1988. Three tanks closed in 2004. GWI #32173. | Low |
| Hardees | 265 Washington St. | Location of former Dawsey's Exxon. Two tanks closed in 1994. GWI #32173. | Low |
| Time Saver 1 | 802 N. J.K. Powell Blvd. | Currently operates as a convenience store/gas station; 5 USTs are currently in use. | Low |
| Walgreens | 803 N. J.K. Powell Blvd. | Former location of Pantry #439. Currently a Walgreens drug store. 3 USTs closed in 2004. GWI #5381 and #32153. | Low |
| Minuteman #20 Food Mart | 1105 N. J.K. Powell Blvd. | Currently operates as a convenience store/gas station; 4 USTs are currently in use. | Low |

Because the 29 known and potential hazardous materials sites are located along existing US 701 Bypass, the roadway widening associated with the preliminary design for the Build Alternative would impact all 29 sites. Preliminary site assessments to identify the nature and extent of any contamination will be performed on any hazardous materials sites impacted prior to right-of-way acquisition.

# VI. COMMENTS AND COORDINATION

## A. Citizens Informational Workshop

A citizens informational workshop was held on December 3, 2012, at the Whiteville City Schools Administration Building. The purpose of the workshop was to introduce citizens to the project and receive their comments and concerns. A total of 37 citizens signed in at the workshop, which was also attended by NCDOT and Cape Fear Council of Governments representatives. The workshop was advertised through local newspapers and flyers were sent to property owners and citizens in the project area.

An aerial map of the study area for the proposed project was presented at the workshop. The majority of those attending supported the project. Some citizens expressed concerns about project effects on their property, but agreed with the need for the project. A few citizens opposed the project entirely. Two citizens submitted written comments during the comment period following the workshop. Both citizens suggested the existing bypass bridge over the railroad tracks and Main Street be removed and an at-grade intersection be constructed at the US 701 Bypass/Main Street intersection because it would provide needed direct access from the Bypass to downtown Whiteville.

## B. Public Officials Meeting

A public officials meeting was held on May 7, 2012, in the Board Room of the North Carolina Museum of Forestry in Whiteville. The purpose of the meeting was to introduce the project to local public officials and receive their comments and concerns.

## C. Public Hearing

A public hearing for this project will be held following approval of this document and prior to right-of-way acquisition. The proposed project design will be presented to the public for their comments at the hearing. Citizen comments will be taken into consideration as project design continues.

## D. Other Agency Coordination

NCDOT has coordinated with appropriate federal, state, and local agencies throughout the project development process. A project scoping letter announcing the start of the project development study was sent to federal, state and local agencies in May 2012. Comments on the project were requested from the agencies listed below. An asterisk (*) next to the agency name indicates a written response was received in response to the scoping letter. Copies of this and other agency correspondence are included in Appendix A.

National Oceanic and Atmospheric Administration – National Marine Fisheries Service
* US Department of the Army – Corps of Engineers
* US Environmental Protection Agency
* US Department of the Interior – US Fish and Wildlife Service, Raleigh Field Office
NC Department of Administration – State Clearinghouse
NC Department of Agriculture
* NC Department of Cultural Resources, State Historic Preservation Office
* NC Department of Environment and Natural Resources (NCDENR)

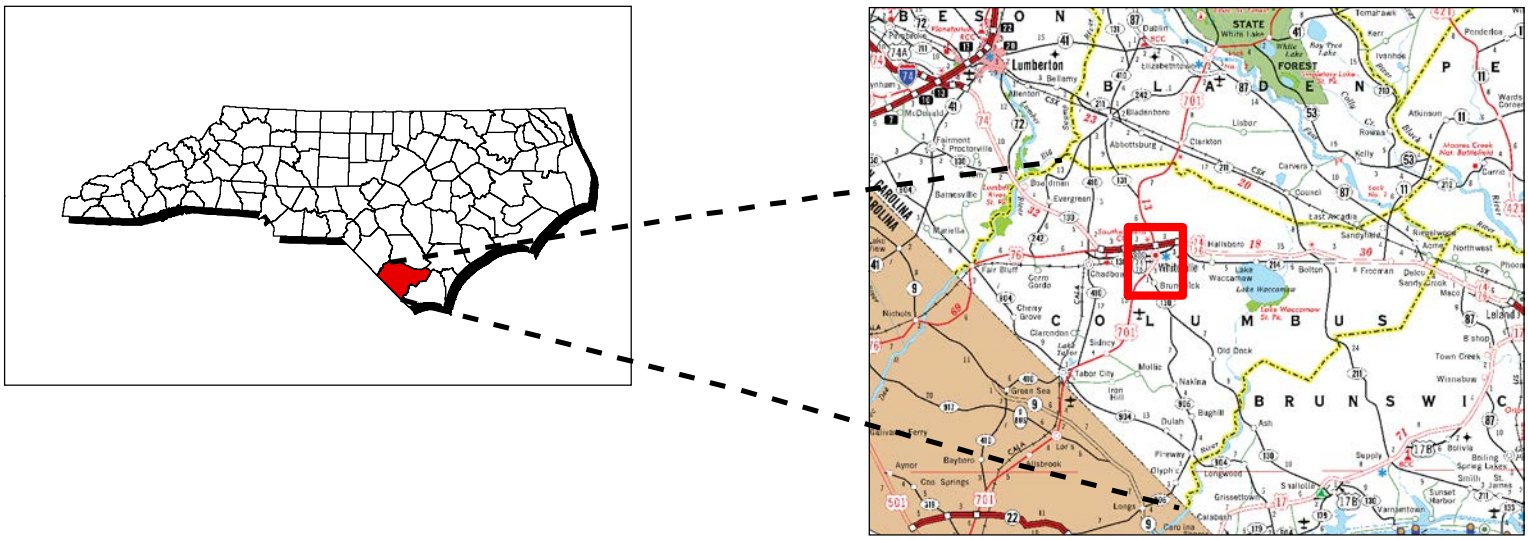
NCDENR – Division of Air Quality
NCDENR – Division of Coastal Management
NCDENR – Division of Environmental Health
NCDENR – Division of Land Resources
NCDENR – Division of Marine Fisheries
NCDENR – Division of Parks and Recreation
* NCDENR – Division of Water Resources
* NCDENR – Division of Water Resources, Public Water Supply Section
NCDENR – Natural Heritage Program
* NCDENR – Wildlife Resources Commission
* NCDENR – Wilmington Regional Office
NC Department of Public Instruction
* NC Department of Public Safety – Emergency Management
Cape Fear Rural Planning Organization
Columbus County
* City of Whiteville

A project scoping meeting was held on August 16, 2012. The purpose of the meeting was to begin early coordination between federal, state, and local agency project stakeholders through the discussion of known information about the project and project area. Representatives from NCDOT, FHWA, USACE, USEPA, the US Fish and Wildlife Service, NCDENR-DWR, the NC Wildlife Resources Commission and the Cape Fear Rural Planning Organization attended the project scoping meeting.

The National Environmental Policy Act (NEPA)/Section 404 merger process is an interagency procedure integrating the regulatory requirements of Section 404 of the Clean Water Act into the NEPA decision-making process. The Concurrence Point (CP) 2A merger team meeting for the subject project was held on March 17, 2015 at the North Carolina Museum of Natural Science in Whiteville. The purpose of the meeting was to reach concurrence on CP 2A (Bridging Decisions and Alignment Review). The merger team concurred on NCDOT's recommended hydraulic structure. A copy of the signed March 17, 2015 Bridging Decisions and Alignment Review concurrence form for the US 701 Bypass widening project is included in Appendix C.

The agencies represented on the R-5020 NEPA/Section 404 merger team are:

- Federal Highway Administration
- US Environmental Protection Agency
- US Army Corps of Engineers
- US Fish and Wildlife Service
- NC Department of Transportation
- NC Wildlife Resources Commission
- NC Department of Environment and Natural Resources, Division of Water Resources
- NC Department of Cultural Resources, State Historic Preservation Office
- Cape Fear Rural Planning Organization




1 0.5 0 1

Miles

**North Carolina Department of Transportation**
**Project Development and Environmental Analysis Unit**

US 701 Bypass from South of SR 1166 (Pleasant Plains Road) to North of US 74-76 Bypass in Whiteville

Columbus County

TIP Project **R-5020**

**Figure 1**

## Legend

- PROPOSED EDGE OF PAVEMENT
- PROPOSED CUT OR FILL
- PROPOSED EASEMENT
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY LINE
- JURISDICTIONAL STREAM
- TRIBUTARIES TO WATERS OF THE U.S.
- DELINEATED WETLAND
- DELINEATED POND
- RAILROAD
- 100 YEAR FLOODPLAIN
- LIBRARY
- HISTORIC PROPERTY BOUNDARY
- STUDY AREA
- SCHOOL
- CHURCH
- CEMETERY
- HAZARDOUS MATERIAL SITE
- BUSINESS
- PARK
- BRUNSWICK TOWN LIMITS
- WHITEVILLE CITY LIMITS


2,000 1,000 0 2,000 Feet

***Preliminary Design- Subject to Change***

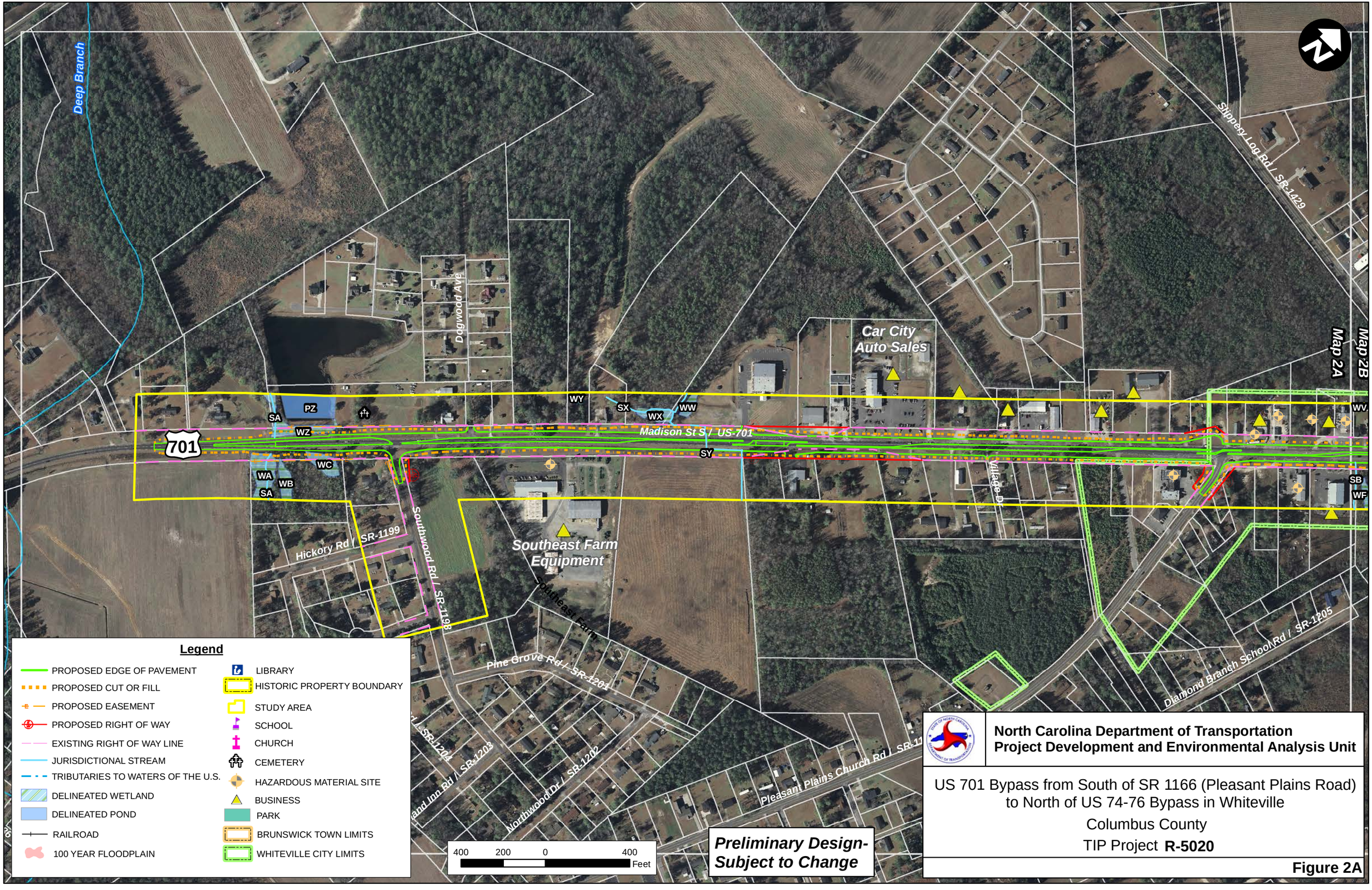
**North Carolina Department of Transportation**
**Project Development and Environmental Analysis Unit**

US 701 Bypass from South of SR 1166 (Pleasant Plains Road) to North of US 74-76 Bypass in Whiteville

Columbus County

TIP Project **R-5020**

**Figure 2**




## Legend

- PROPOSED EDGE OF PAVEMENT
- PROPOSED CUT OR FILL
- PROPOSED EASEMENT
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY LINE
- JURISDICTIONAL STREAM
- TRIBUTARIES TO WATERS OF THE U.S.
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- DELINEATED POND
- RAILROAD
- 100 YEAR FLOODPLAIN
- LIBRARY
- HISTORIC PROPERTY BOUNDARY
- STUDY AREA
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- CHURCH
- CEMETERY
- HAZARDOUS MATERIAL SITE
- BUSINESS
- PARK
- BRUNSWICK TOWN LIMITS
- WHITEVILLE CITY LIMITS

**North Carolina Department of Transportation**
**Project Development and Environmental Analysis Unit**

US 701 Bypass from South of SR 1166 (Pleasant Plains Road) to North of US 74-76 Bypass in Whiteville

Columbus County

TIP Project **R-5020**

**Figure 2A**

Walmart
Whites Crossing Plaza
Food Lion
Hills
Lowe's Home Improvement
Whiteville Plaza
Hill Plaza
The Market Place
Cherry Grove Cemetery
W Hay St / SR-1433
W Love Mill Rd / SR-1432
E Love Mill Rd / NC-130
Slippery Log Rd / SR-1429
S JK Powell Blvd / US-701 Bypass
S Madison St / US-701 BUS
Leslie Newsome Ave
Radio Station Rd
Oak St
Sunnyside St
Quality
W Hay St
E Hay St
Map 2A
Map 2B
Map 2B
Map 2C
WS
WI
WJ
SC
WU
SV
WH
WG
WV
SD
SB
WF
WZZ

## Legend

- PROPOSED EDGE OF PAVEMENT
- PROPOSED CUT OR FILL
- PROPOSED EASEMENT
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY LINE
- JURISDICTIONAL STREAM
- TRIBUTARIES TO WATERS OF THE U.S.
- DELINEATED WETLAND
- DELINEATED POND
- RAILROAD
- 100 YEAR FLOODPLAIN
- LIBRARY
- HISTORIC PROPERTY BOUNDARY
- STUDY AREA
- SCHOOL
- CHURCH
- CEMETERY
- HAZARDOUS MATERIAL SITE
- BUSINESS
- PARK
- BRUNSWICK TOWN LIMITS
- WHITEVILLE CITY LIMITS

400 200 0 400 Feet

***Preliminary Design- Subject to Change***

**North Carolina Department of Transportation**
**Project Development and Environmental Analysis Unit**

US 701 Bypass from South of SR 1166 (Pleasant Plains Road) to North of US 74-76 Bypass in Whiteville

Columbus County

TIP Project **R-5020**

**Figure 2B**

West Whiteville Park

Mollie Branch

Soules Swamp

Carolina Southern Railroad

Central Middle School

W Columbus St

S Martin L King Blvd

Sunnyside St

WP

W Main St

Walter St

W Virgil St / SR-1437

WO

McGill St

At-Grade Intersection at Main Street

Hill Plaza
e Market Place

Quality St

S JK Powell Blvd / US-701 Bypass

WL

Talbot St

Map 2R

Map 2C

Hydraulic Site 1
Proposed Dual Bridges
145' x 36'

Soules Swamp

Temporary Detour

Laurel St

Lee St / SR-1916

Eiazier St

Pecan St / SR-1916

W Commerce St

E Commerce St

Madison St / US-701 BUS.

S Franklin St / SR-1916

Phillip St

S Lee St / SR-1916

E Columbus St

Whiteville Police Dept.

Whiteville City Hall

S Madison St / US-701 BUS.

Map 2C

Map 2D

**Legend**

- PROPOSED EDGE OF PAVEMENT
- PROPOSED CUT OR FILL
- PROPOSED EASEMENT
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY LINE
- JURISDICTIONAL STREAM
- TRIBUTARIES TO WATERS OF THE U.S.
- DELINEATED WETLAND
- DELINEATED POND
- RAILROAD
- 100 YEAR FLOODPLAIN
- LIBRARY
- HISTORIC PROPERTY BOUNDARY
- STUDY AREA
- SCHOOL
- CHURCH
- CEMETERY
- HAZARDOUS MATERIAL SITE
- BUSINESS
- PARK
- BRUNSWICK TOWN LIMITS
- WHITEVILLE CITY LIMITS

400 200 0 400 Feet

***Preliminary Design-Subject to Change***

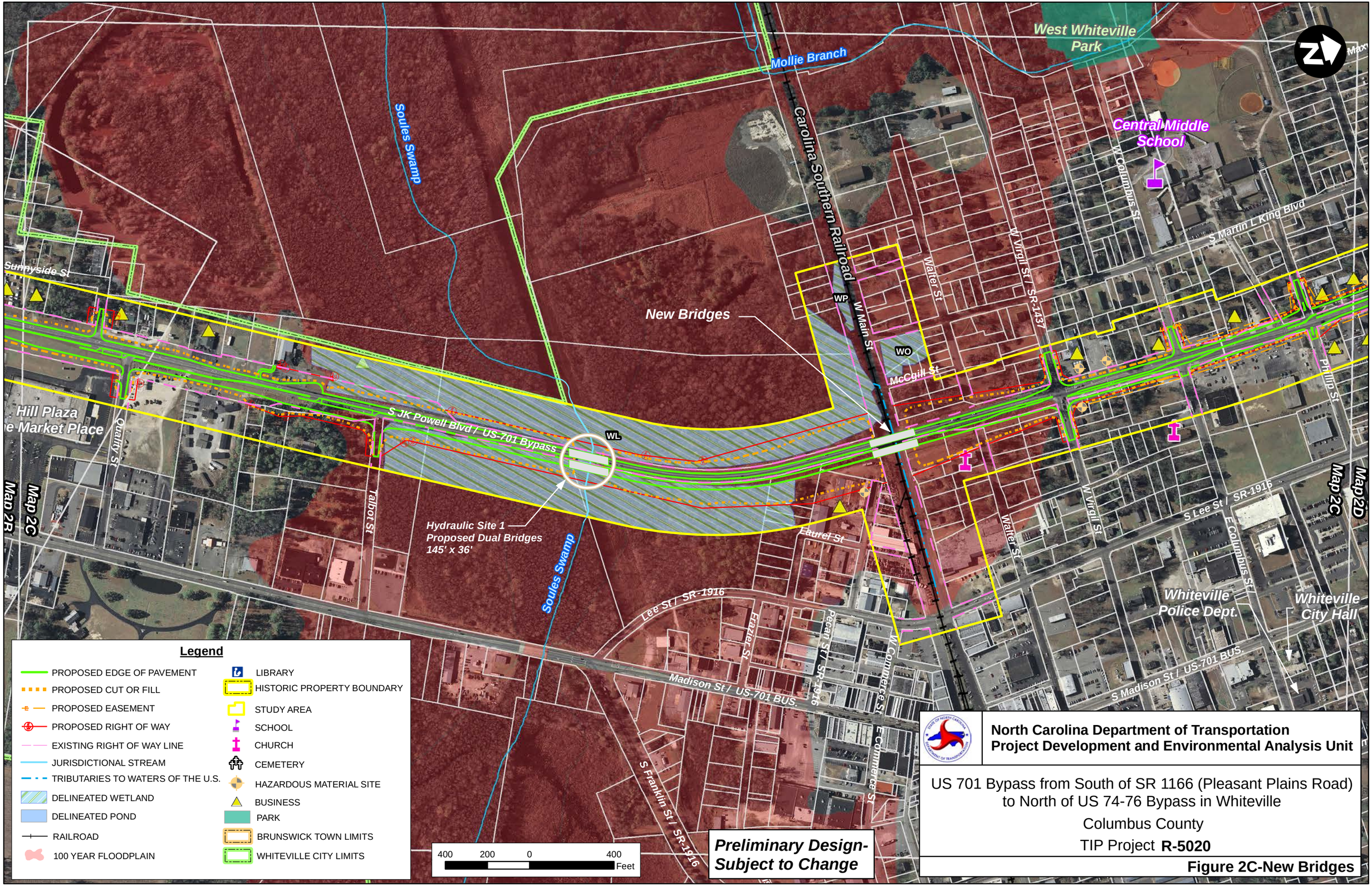
**North Carolina Department of Transportation**
**Project Development and Environmental Analysis Unit**

US 701 Bypass from South of SR 1166 (Pleasant Plains Road) to North of US 74-76 Bypass in Whiteville

Columbus County

TIP Project **R-5020**

**Figure 2C-At-Grade**


West Whiteville Park
Mollie Branch
Soules Swamp
Carolina Southern Railroad
Central Middle School
W Columbus St
S Martin L King Blvd
Sunnyside St
New Bridges
WP
W Main St
Walter St
W Virgil St / SR-1437
WO
McCgill St
Phillip St
Hill Plaza
e Market Place
Quality St
S JK Powell Blvd / US-701 Bypass
WL
Talbot St
Hydraulic Site 1
Proposed Dual Bridges
145' x 36'
Laurel St
Lee St / SR-1916
Madison St / US-701 BUS.
Frazier St
Pecan St / SR-1916
W Commerce St
E Commerce St
S Franklin St / SR-1916
S Lee St / SR-1916
E Columbus St
Whiteville Police Dept.
Whiteville City Hall
S Madison St / US-701 BUS.
Map 2R
Map 2C
Map 2C
Map 2D
Legend
PROPOSED EDGE OF PAVEMENT
PROPOSED CUT OR FILL
PROPOSED EASEMENT
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY LINE
JURISDICTIONAL STREAM
TRIBUTARIES TO WATERS OF THE U.S.
DELINEATED WETLAND
DELINEATED POND
RAILROAD
100 YEAR FLOODPLAIN
LIBRARY
HISTORIC PROPERTY BOUNDARY
STUDY AREA
SCHOOL
CHURCH
CEMETERY
HAZARDOUS MATERIAL SITE
BUSINESS
PARK
BRUNSWICK TOWN LIMITS
WHITEVILLE CITY LIMITS
400 200 0 400
Feet
Preliminary Design-
Subject to Change
North Carolina Department of Transportation
Project Development and Environmental Analysis Unit
US 701 Bypass from South of SR 1166 (Pleasant Plains Road)
to North of US 74-76 Bypass in Whiteville
Columbus County
TIP Project R-5020
Figure 2C-New Bridges

Maultsby Dr
Mollie Branch
West Whiteville Park
Stanley St
Hunt St
Bob White Ln
Bryce St
Whiteville Primary School
Washington St
Barbcrest Ave / SR-1567
GardenView Dr
Patio Place Dr
Central Middle School
Maxwell St
Burkhead St
W Williamson St
W College St
Grove St
Memory St
Mission St
S Martin L King Blvd
W Calhoun St
Carolyn T. High Memorial Library
Williamson House
Smyrna Dr / SR 1552
N J K Powell Blvd /
N JK Powell Blvd / US-701 Bypass
Beth Israel / Whiteville Hebrew Center
W Frink St
W Oliver St
Leder Park
Whiteville High School
N Lee St / SR-1916
James St
Map 2C
Map 2D
Map 2E
Phillip St
1916
W College St
W Wyche St
W Smith St
US 74/76 BUS
N Lee St
N Madison St / US-701 BUS
E Williamson
Columbus County Courthouse
Jeffe

## Legend

- PROPOSED EDGE OF PAVEMENT
- PROPOSED CUT OR FILL
- PROPOSED EASEMENT
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY LINE
- JURISDICTIONAL STREAM
- TRIBUTARIES TO WATERS OF THE U.S.
- DELINEATED WETLAND
- DELINEATED POND
- RAILROAD
- 100 YEAR FLOODPLAIN
- LIBRARY
- HISTORIC PROPERTY BOUNDARY
- STUDY AREA
- SCHOOL
- CHURCH
- CEMETERY
- HAZARDOUS MATERIAL SITE
- BUSINESS
- PARK
- BRUNSWICK TOWN LIMITS
- WHITEVILLE CITY LIMITS

400 200 0 400 Feet

**Preliminary Design- Subject to Change**

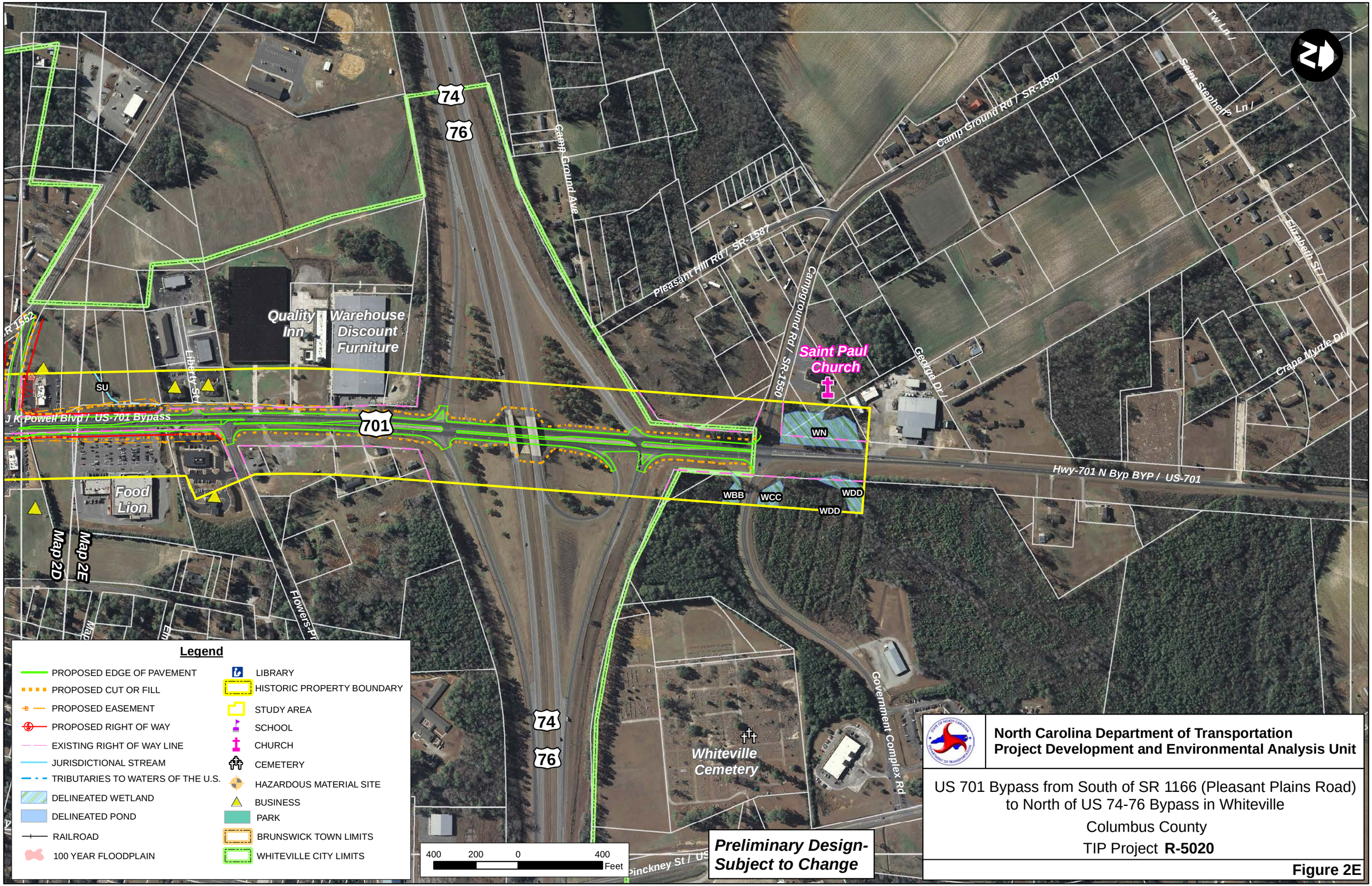
**North Carolina Department of Transportation**
**Project Development and Environmental Analysis Unit**

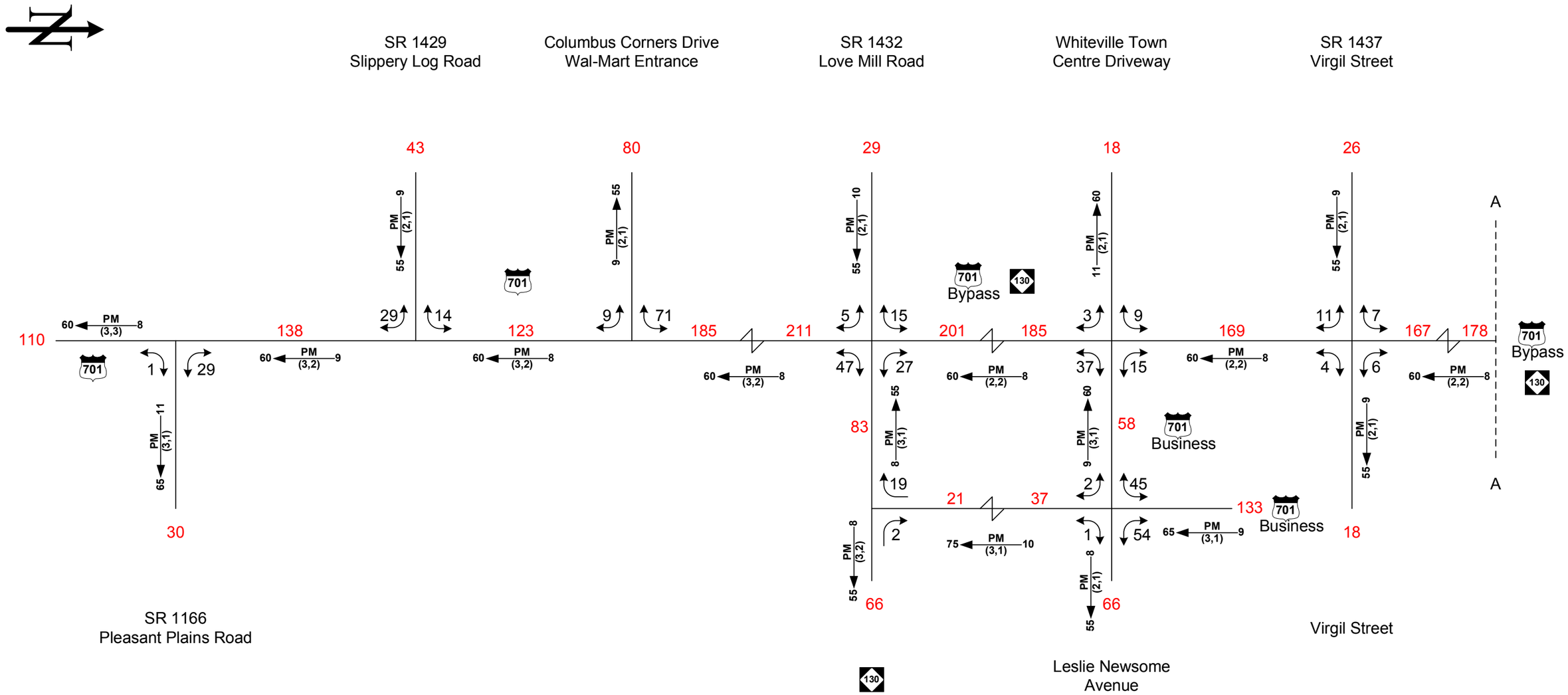
US 701 Bypass from South of SR 1166 (Pleasant Plains Road) to North of US 74-76 Bypass in Whiteville

Columbus County

TIP Project **R-5020**

**Figure 2D**


74
76
701
Camp Ground Ave
Camp Ground Rd / SR-1550
Pleasant Hill Rd / SR-1587
Campground Rd / SR-1550
Saint Stephen's Ln /
Elizabeth St /
Crape Myrtle Dr
Georgia Dr /
Twr Ln /
Quality Inn
Warehouse Discount Furniture
Liberty St
SU
J K Powell Blvd / US-701 Bypass
Saint Paul Church
WN
Hwy-701 N Byp BYP / US-701
WBB
WCC
WDD
WDD
Food Lion
Map 2D
Map 2E
Flowers-Pr
Whiteville Cemetery
Government Complex Rd
74
76
Pinckney St / US
Legend
PROPOSED EDGE OF PAVEMENT
PROPOSED CUT OR FILL
PROPOSED EASEMENT
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY LINE
JURISDICTIONAL STREAM
TRIBUTARIES TO WATERS OF THE U.S.
DELINEATED WETLAND
DELINEATED POND
RAILROAD
100 YEAR FLOODPLAIN
LIBRARY
HISTORIC PROPERTY BOUNDARY
STUDY AREA
SCHOOL
CHURCH
CEMETERY
HAZARDOUS MATERIAL SITE
BUSINESS
PARK
BRUNSWICK TOWN LIMITS
WHITEVILLE CITY LIMITS
400 200 0 400
Feet
Preliminary Design- Subject to Change
North Carolina Department of Transportation
Project Development and Environmental Analysis Unit
US 701 Bypass from South of SR 1166 (Pleasant Plains Road) to North of US 74-76 Bypass in Whiteville
Columbus County
TIP Project R-5020
Figure 2E

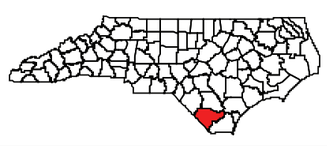



## L E G E N D

K PM (d, t) D

| | | | |
|---|---|---|---|
| ### | No. of Vehicles Per Day (VPD) in 100s | K | Design Hour Factor (%) |
| 1- | Less than 50 VPD | PM | PM Peak Period |
| X | Movement Prohibited | D | Peak Hour Directional Split |
| ..... | Proposed Roadway | → | Indicates Direction of D |
| | | ( d, t ) | Duals, TT-STs (%) |

Prepared for:



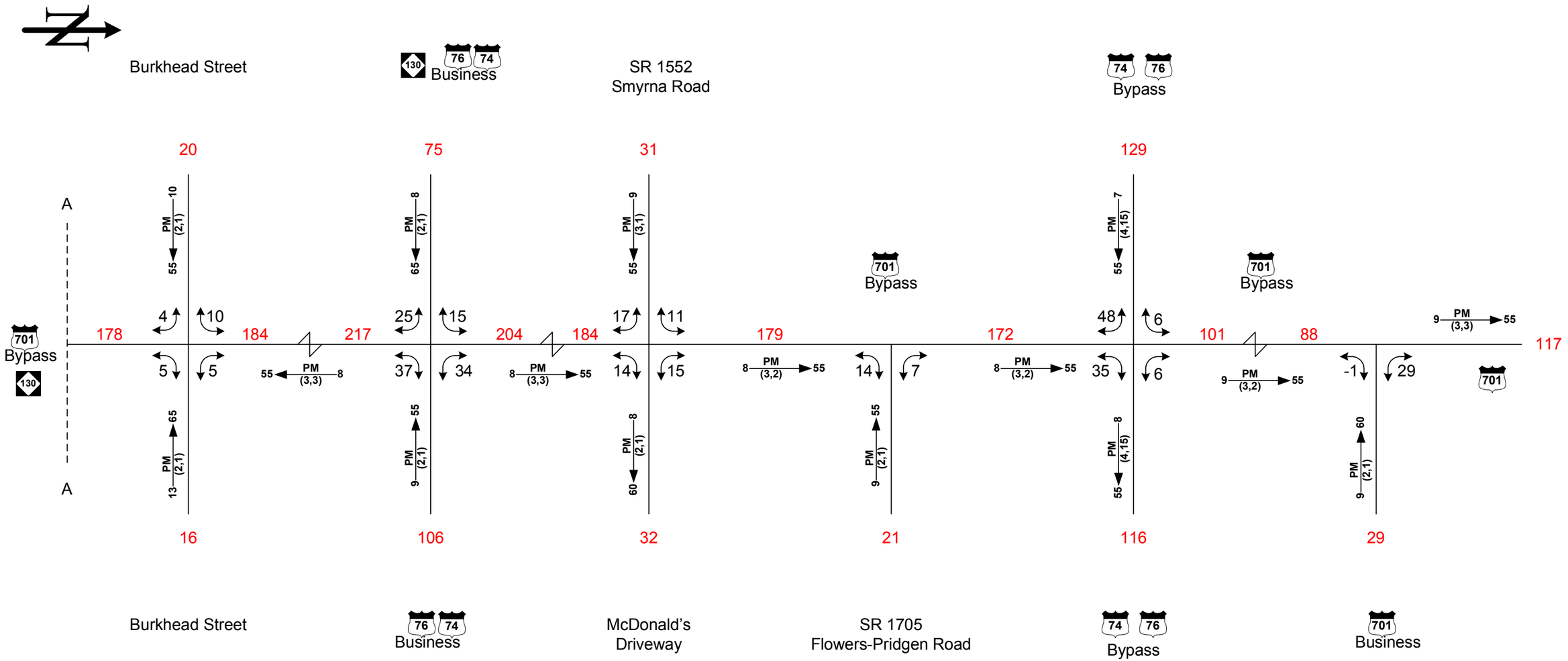
**2012 No-Build Average Annual Daily Traffic**
US 701 Bypass Widening
NCDOT STIP Project No. R-5020
Columbus County, NC

***Not to Scale***

Figure Prepared 11/13/2014

**Figure No.**

**3A**

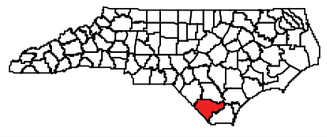



## LEGEND

K PM (d, t) D

| | | | |
|---|---|---|---|
| ### | No. of Vehicles Per Day (VPD) in 100s | K | Design Hour Factor (%) |
| 1- | Less than 50 VPD | PM | PM Peak Period |
| X | Movement Prohibited | D | Peak Hour Directional Split |
| ..... | Proposed Roadway | → | Indicates Direction of D |
| | | ( d, t ) | Duals, TT-STs (%) |

Prepared for:



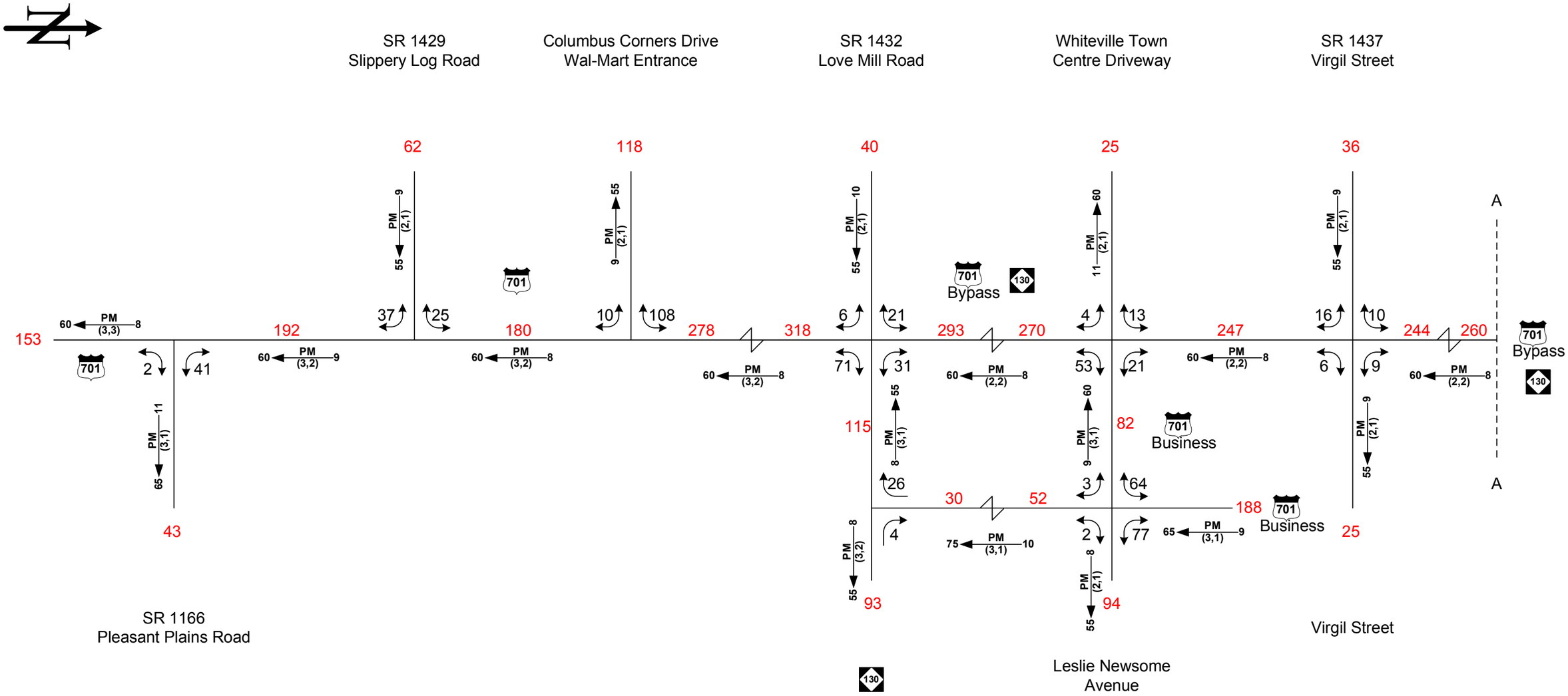
**2012 No-Build Average Annual Daily Traffic**
US 701 Bypass Widening
NCDOT STIP Project No. R-5020
Columbus County, NC

***Not to Scale***

Figure Prepared 11/13/2014

**Figure No.**

**3B**

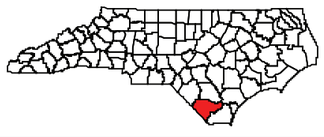



## L E G E N D

K PM (d, t) D

| | | | |
|---|---|---|---|
| ### | No. of Vehicles Per Day (VPD) in 100s | K | Design Hour Factor (%) |
| 1- | Less than 50 VPD | PM | PM Peak Period |
| X | Movement Prohibited | D | Peak Hour Directional Split |
| ..... | Proposed Roadway | → | Indicates Direction of D |
| | | ( d, t ) | Duals, TT-STs (%) |

Prepared for:



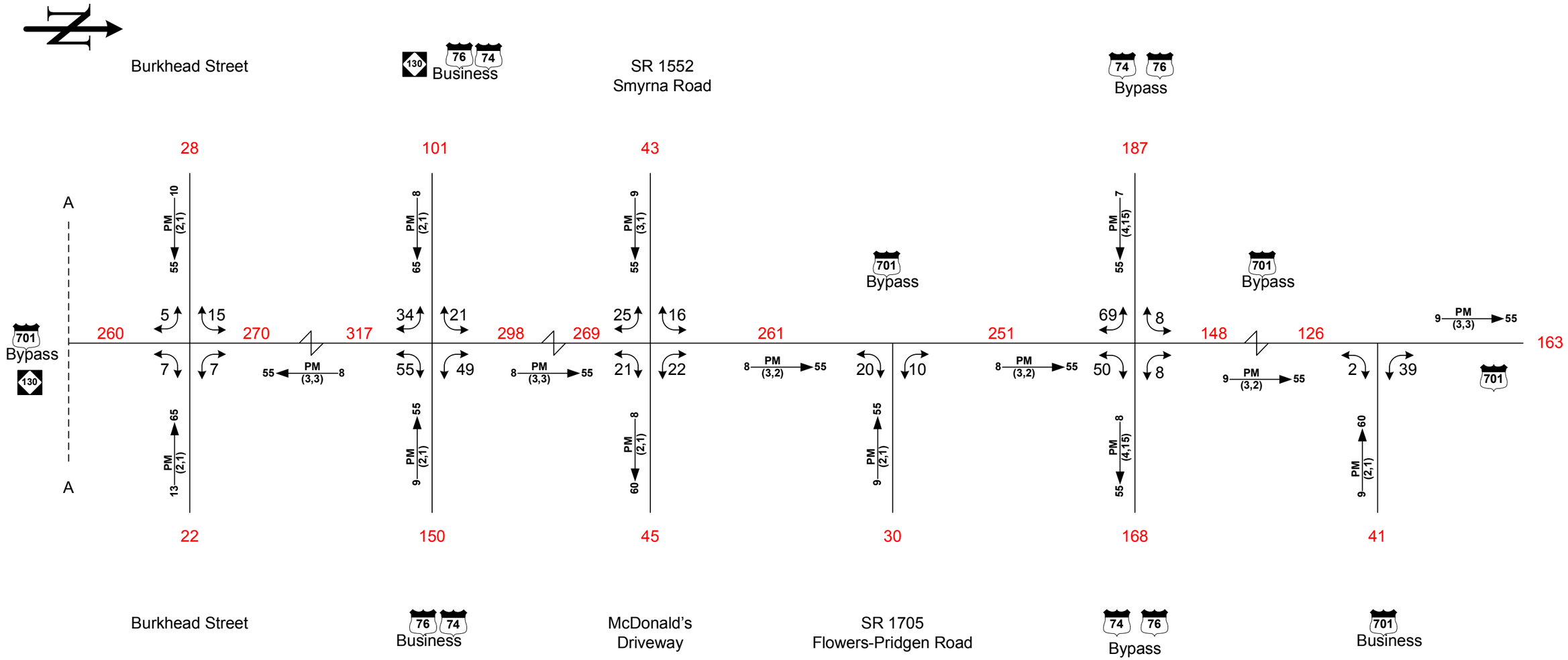
**2035 Build Average Annual Daily Traffic**
US 701 Bypass Widening
NCDOT STIP Project No. R-5020
Columbus County, NC

***Not to Scale***

Figure Prepared 11/13/2014

**Figure No.**

**4A**

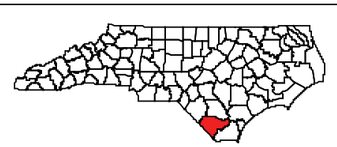



## LEGEND

K PM (d, t) D

| | | | |
|---|---|---|---|
| ### | No. of Vehicles Per Day (VPD) in 100s | K | Design Hour Factor (%) |
| 1- | Less than 50 VPD | PM | PM Peak Period |
| X | Movement Prohibited | D | Peak Hour Directional Split |
| ..... | Proposed Roadway | → | Indicates Direction of D |
| | | ( d, t ) | Duals, TT-STs (%) |

Prepared for:



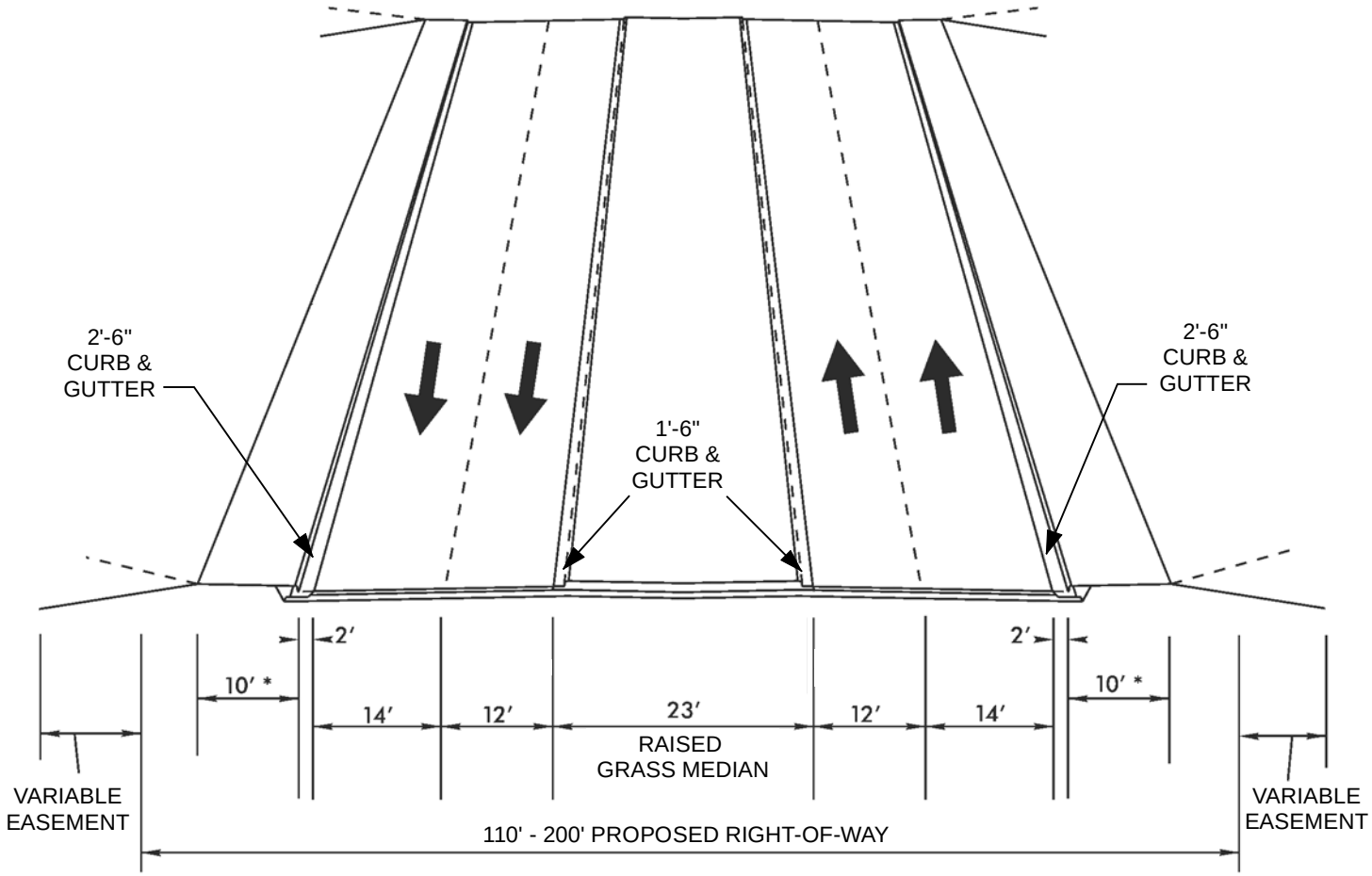
**2035 Build Average Annual Daily Traffic**
US 701 Bypass Widening
NCDOT STIP Project No. R-5020
Columbus County, NC

***Not to Scale***

Figure Prepared 11/13/2014

**Figure No.**

**4B**




**Proposed 10-foot berm will accommodate sidewalks. Any existing sidewalks affected by the project will be replaced. New sidewalks can be provided if the City of Whiteville agrees to participate in the cost and accept maintenance and liability.*

**Proposed Typical Section**

US 701 Bypass from South of SR 1166
(Pleasant Plains Road) to North of US 74-76 Bypass
in Whiteville
Columbus County
TIP Project R-5020

Prepared for:
North Carolina Department
of Transporatation

Note: Not to Scale

**Figure No.**

**5**

# APPENDIX A

# AGENCY CORRESPONDENCE

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726



May 8, 2012

Gregory J. Thorpe, Ph.D.
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

This letter is in response to your request for comments from the U.S. Fish and Wildlife Service (Service) on the potential environmental effects of the proposed widening of US 701 Bypass from SR 1166 (Pleasant Plains Road) to the US 74-76 Bypass in Whiteville, Columbus County, North Carolina (TIP No. R-5020). These comments provide information in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543).

For road improvement projects such as widening, realignment, bridge replacement and culvert replacement, the Service recommends the following general conservation measures to avoid or minimize impacts to fish and wildlife resources:

1. Wetland, forest and designated riparian buffer impacts should be avoided and minimized to the maximum extent practical. Areas exhibiting high biodiversity or ecological value important to the watershed or region should be avoided. Highway projects should be aligned along or adjacent to existing roadways, utility corridors or other previously disturbed areas in order to minimize habitat loss and fragmentation. Highway shoulder and median widths should be reduced through wetland areas;

2. If unavoidable wetland or stream impacts are proposed, a plan for compensatory mitigation to offset unavoidable impacts should be provided early in the planning process;

3. Crossings of streams and associated wetland systems should use existing crossings and/or occur on a bridge structure wherever feasible. Bridges should be long enough to allow for sufficient wildlife passage along stream corridors. Where bridging is not feasible, culvert structures that maintain natural water flow and hydraulic regimes without scouring or impeding fish and wildlife passage should be employed;

4. Off-site detours should be used rather than construction of temporary, on-site bridges. For projects requiring an on-site detour in wetlands or open water, such detours should be aligned along the side of the existing structure which has the least and/or least quality of fish and wildlife habitat. At the completion of construction, the detour area should be entirely removed and the impacted areas be replanted with appropriate tree species;

5. In streams utilized by anadromous fish, the NCDOT policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage" should be implemented;

6. On each side of the stream bank underneath bridges, at least 10 feet of the bank should remain clear of riprap;

7. "Best Management Practices (BMP) for Construction and Maintenance Activities" should be implemented;

8. Bridge designs should include provisions for roadbed and deck drainage to flow through a vegetated buffer prior to reaching the affected stream. This buffer should be large enough to alleviate any potential effects from run-off of storm water and pollutants;

9. Bridge designs should not alter the natural stream and stream-bank morphology or impede fish passage. To the extent possible, piers and bents should be placed outside the bank-full width of the stream; and

10. Bridges and approaches should be designed to avoid any fill that will result in damming or constriction of the channel or flood plain. If spanning the flood plain is not feasible, culverts should be installed in the flood plain portion of the approach to restore some of the hydrological functions of the flood plain and reduce high velocities of flood waters within the affected area.

Section 7(a)(2) of the Endangered Species Act requires that all federal action agencies (or their designated non-federal representatives), in consultation with the Service, insure that any action federally authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally threatened or endangered species. To assist you, a county-by-county list of federally protected species known to occur in North Carolina and information on their life histories and habitats can be found on our web page at http://www.fws.gov/nc-es/es/countyfr.html .

Although the North Carolina Natural Heritage Program (NCNHP) database does not indicate any known occurrences of listed species near the project vicinity, use of the NCNHP data should not be substituted for actual field surveys if suitable habitat occurs near the project site. The NCNHP database only indicates the presence of known occurrences of listed species and does not necessarily mean that such species are not present. It may simply mean that the area has not been surveyed. If suitable habitat occurs within the project vicinity for any listed species, surveys should be conducted to determine presence or absence of the species.

If you determine that the proposed action may affect (i.e. likely to adversely affect or not likely to adversely affect) a listed species, you should notify this office with your determination, the

results of your surveys, survey methodologies and an analysis of the effects of the action on listed species, including consideration of direct, indirect and cumulative effects, before conducting any activities that might affect the species. If you determine that the proposed action will have no effect (i.e. no beneficial or adverse, direct or indirect effect) on listed species, then you are not required to contact our office for concurrence.

The Service appreciates the opportunity to comment on this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,

for Pete Benjamin
Field Supervisor

# North Carolina
# Department of Administration

Beverly Eaves Perdue, Governor

Moses Carey, Jr., Secretary

June 5, 2012

Mr. John Richards
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

**Re: SCH File # 12-E-4220-0291; SCOPING; Proposed project is for the widening of US 701 Bypass from SR 1166-Pleasant Plains Road to the US 74-76 Bypass in Whiteville. TIP # R-5020**

Dear Mr. Richards:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act. Attached to this letter for your consideration are the comments made by agencies in the course of this review.

If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

Should you have any questions, please do not hesitate to call.

Sincerely,

William E. H. Creech

Attachments

cc: Region O

*Mailing Address:*
1301 Mail Service Center
Raleigh, NC 27699-1301

*Telephone: (919)807-2425*
Fax (919)733-9571
State Courier #51-01-00
*e-mail state.clearinghouse@doa.nc.gov*

*Location Address:*
116 West Jones Street
Raleigh, North Carolina

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: COLUMBUS

F02: HIGHWAYS AND ROADS

STATE NUMBER: 12-E-4220-0291
DATE RECEIVED: 05/04/2012
AGENCY RESPONSE: 05/30/2012
REVIEW CLOSED: 06/04/2012

MS CAROLYN PENNY
CLEARINGHOUSE COORDINATOR
CC&PS - DIV OF EMERGENCY MANAGEMENT
FLOODPLAIN MANAGEMENT PROGRAM
MSC # 4719
RALEIGH NC


RECEIVED
MAY 3 2012

**REVIEW DISTRIBUTION**

CAPE FEAR COG
CC&PS - DIV OF EMERGENCY MANAGEMENT
DENR - COASTAL MGT
DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION

**PROJECT INFORMATION**

APPLICANT: NCDOT
TYPE: National Environmental Policy Act
Scoping

DESC: Proposed project is for the widening of US 701 Bypass from SR 1166-Pleasant Plains Road to the US 74-76 Bypass in Whiteville. TIP R-5020

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: ☐ NO COMMENT ☒ COMMENTS ATTACHED

SIGNED BY: Jennifer W. Haber DATE: 5/29/2012

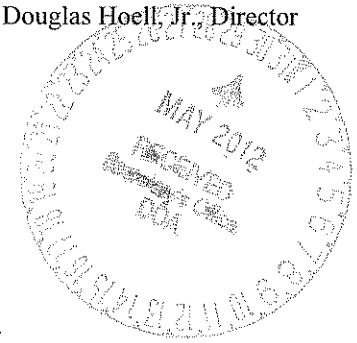
Soules Swamp
0280

# North Carolina Department of Public Safety

**Emergency Management**
**Geospatial & Technology Management Office**

Beverly Eaves Perdue, Governor
Reuben F. Young, Secretary

H. Douglas Hoell, Jr., Director




May 25, 2012

State Clearinghouse
N.C. Department of Administration
1301 Mail Service Center
Raleigh, North Carolina 27699-1301

Subject: Intergovernmental Review State Number: 12-E-4220-0291
US 701 Bypass Widening, City of Whiteville, Columbus County

As requested by the North Carolina State Clearinghouse, the North Carolina Department of Crime Control and Public Safety Division of Emergency Management Office of Geospatial and Technology Management (GTM) reviewed the proposed project listed above and offer the following comments:

1) The North Carolina Executive Order 123 directs NCDOT to coordinate with and follow the FHWA floodplain management requirements which are found in the Federal Executive Order 11988. To ensure NCDOT compliance with EO 11988 and the 44 CFR the NCDOT Hydraulics Section and the NC Floodplain Mapping Program have a Memorandum of Agreement (MOA). Please coordinate with Mr. David Chang, NCDOT Hydraulics, to coordinate the elements of this project which fall within the MOA.

2) The proposed project crosses the regulatory special flood hazard area (SFHA) of Soules Swamp. Please see Flood Insurance Rate Map panel 0280. A hydraulic analysis is required for any new, replacement or modification to an existing hydraulic structure that is within the regulatory floodway or non-encroachment area of the SFHA. This includes US 701 Bypass over Soules Swamp.

3) New or replacement structures that do not cause an increase in the Base Flood Elevation (BFE) would be reviewed under the MOA. New or replacement structures that cause an increase in the Base Flood Elevation (BFE) will require approval of a Conditional Letter of Map Revision prior to construction.

Thank you for your cooperation and consideration. If you have any questions concerning the above comments, please contact Dan Brubaker, P.E., CFM, the NC NFIP Engineer at (919) 715-5711, by email at dan.brubaker@ncdps.gov or at the address shown on the footer of this documents.

Sincerely,

Kenneth W. Ashe, P.E., CFM
Assistant Director
Geospatial and Technology Management Office

cc: John Gerber, NFIP State Coordinator
Dan Brubaker, NFIP Engineer

**MAILING ADDRESS:**
4719 Mail Service Center
Raleigh NC 27699-4719
www.ncfloodmaps.com

**OFFICE LOCATION:**
1812 Tillery Place
Raleigh, NC 27604
Telephone: (919) 715-5711
Fax: (919) 715-0408

*An Equal Opportunity Employer*

*Federal Aid #:* NHS-701(15) *TIP #:* **R-5020** *County*: Columbus

**CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS**

*Project Description*: Widen US 701 Bypass (Madison Street- Powell Boulevard) from south of SR 1166 (Pleasant Plains Road) to North of US 74-76 Bypass, Whiteville, Columbus County

On December 17, 2014 , representatives of the

- [X] North Carolina Department of Transportation (NCDOT)
- [X] Federal Highway Administration (FHWA)
- [X] North Carolina State Historic Preservation Office (HPO)
- [ ] Other

Reviewed the subject project and agreed on the effects findings listed within the table on the reverse of this signature page.

Signed:

Katie Hustead — 1/13/2015
Representative, NCDOT — Date

[signature] — 1-13-15
FHWA, for the Division Administrator, or other Federal Agency — Date

Renee Gledhill-Earley — 1-13-15
Representative, HPO — Date

| Property and Status | Alternative | Effect Finding | Reasons |
|---|---|---|---|
| Property No. 13<br>**Beth Israel/Whiteville Hebrew Center**<br>Determined Eligible | N/A | **No Adverse Effect** | There will be no adverse effect on the property with the condition that a landscape plan for the portion of the property along the US 701 Bypass is created and implemented in coordination with the property owner. |
| Property No. 14<br>**Williamson House**<br>Determined Eligible | N/A | **No Effect** | The Williamson House will not be affected by this project based on proposed plans. |



Initialed: NCDOT KLH FHWA DB HPO
FHWA Intends to use the SHPO's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):

# 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

March 25, 2014

MEMORANDUM

TO: Kate Husband
Office of Human Environment
NCDOT Division of Highways

FROM: Ramona M. Bartos RMB for Ramona M. Bartos

SUBJECT: Historic Structures Survey Report, Improve US 701 Bypass in Whiteville, R-5020, Columbus County, ER 12-0739

Thank you for your March 14, 2014 transmittal of the above-referenced Historic Structures Survey Report, prepared by Coastal Carolina Research. We have reviewed the report and offer the following comments.

We concur that the **Beth Isereal/Whiteville Hebrew Center (CB0203) is eligible for listing in the National Register of Historic Places** under Criterion C for Architecture as a good example of mid-century modernist architecture rather than under Criterion A for its use as a synagogue. The Criterion A argument for the settlement of the Jewish community is not well supported. The boundaries as described appear appropriate.

We concur that the **Williamson House (CB0204) is eligible for listing in the National Register of Historic Places** under Criterion C for Architecture as a modest, yet unique early example of mid-twentieth century modern design and construction in a small rural community. The boundaries as described appear appropriate.

We concur that the **Whiteville High School (CB0205) is not eligible for listing in the National Register of Historic Places** due to losses of historic buildings and other changes over time.

There are several typographical errors in the report, including in the end of the secondary dwelling description on page 26 and in the property description of the school. An additional proof reading would be beneficial to the finished product.

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 renee.gledhill-earley@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT

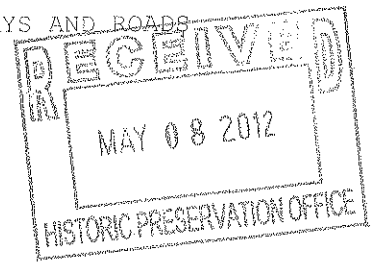


**Location**: 109 East Jones Street, Raleigh NC 27601 **Mailing Address**: 4617 Mail Service Center, Raleigh NC 27699-4617 **Telephone/Fax**: (919) 807-6570/807-6599

**NORTH CAROLINA STATE CLEARINGHOUSE**
**DEPARTMENT OF ADMINISTRATION**
**INTERGOVERNMENTAL REVIEW**

COUNTY: COLUMBUS

F02: HIGHWAYS AND ROADS




STATE NUMBER: 12-E-4220-0291
DATE RECEIVED: 05/04/2012
AGENCY RESPONSE: 05/30/2012
REVIEW CLOSED: 06/04/2012

MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORDINATOR
DEPT OF CULTURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
MSC 4617 - ARCHIVES BUILDING
RALEIGH NC


E 12-0739

A - NC 5/7/12 JCS/CRS

**REVIEW DISTRIBUTION**

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DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION

<- See Letter JDK 5/14/12

**PROJECT INFORMATION**

Due 5/16/12

APPLICANT: NCDOT
TYPE: National Environmental Policy Act Scoping

DESC: Proposed project is for the widening of US 701 Bypass from SR 1166-Pleasant Plains Road to the US 74-76 Bypass in Whiteville. TIP R-5020

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

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AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: ☐ NO COMMENT ☒ COMMENTS ATTACHED

SIGNED BY: Renee Gledhill-Earley DATE: 5.17.12

# North Carolina Department of Cultural Resources

**State Historic Preservation Office**

Ramona M. Bartos, Administrator

Beverly Eaves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director


May 15, 2012

MEMORANDUM

TO: Greg Thorpe, Ph.D., Director
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: Ramona M. Bartos RSE for Ramona M. Bartos

SUBJECT: Widening US 701 Bypass from SR 1166 to US 74-76 Bypass, Whiteville, R-5020, Columbus County, ER 12-0739

Thank you for your memorandum of May 1, 2012, concerning the above project.

There are no known archaeological sites within the proposed project area. Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

We have conducted a search of our maps and files and located the following structures of historical or architectural importance within the general area of this project:

- **Columbus County Courthouse** (CB 0001), listed in the National Register;
- **Prevatte House** (CB 0033), placed on the State Study List in 1999;
- **Bank of Whiteville** (CB 0145), placed on the State Study List in 2001;
- **Oscar High House (**CB 0138), placed on the State Study List in 1993;
- **White-Baldwin House** (CB 0141), placed on the State Study List in 2001; and,
- **Whiteville Depot** (CB 0142), placed on the State Study List in 1994.

The only architectural survey of Columbus County is a 1998 reconnaissance survey by Edward Turberg. We recommend that a Department of Transportation architectural historian identify and evaluate any structures over fifty (50) years of age within the project area, and report the findings to us.

The locations of these properties are available on our GIS website: http://gis.ncdcr.gov/hpoweb/.

cc: Mary Pope Furr, NCDOT, mfurr@ncdot.gov
Matt Wilkerson, NCDOT
State Clearinghouse

North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

MEMORANDUM

TO: Zeke Creech
State Clearinghouse

FROM: Melba McGee
Environmental Review

RE: 12-0291 Scoping-Proposed Widening of US 701 Bypass in Whiteville, Columbus County

DATE: June 4, 2012

The Department of Environment and Natural Resources has reviewed the proposed project. The attached comments are for the applicant's consideration. More specific comments will be provided during the environmental review process.

Thank you for the opportunity to comment.

Attachments

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-707-8600 \ Internet: http://portal.ncdenr.org

North Carolina Department of Environment and Natural Resources
Division of Water Quality
Charles Wakild, P.E
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

May 29, 2012

**MEMORANDUM**

To: Gregory J. Thorpe, Ph.D., Manager, Project Development and Environmental Analysis Unit, North Carolina Department of Transportation

From: Mason Herndon, NC Division of Water Quality, Fayetteville Regional Office

Subject: Scoping comments on proposed widening of US 701 Bypass from SR 1166 (Pleasant Plains Road) to the US 74-76 Bypass in Whiteville, Columbus County, Federal Aid Project No. NHS-701(15), State Project No. 41499.1.1, TIP R-5020, State Clearinghouse Project No. 12-0291.

Reference your correspondence dated May 1, 2012 in which you requested comments for the referenced project. Preliminary analysis of the project reveals the potential for multiple impacts to streams and jurisdictional wetlands in the project area. More specifically, impacts to:

| Stream Name | River Basin | Stream Classification(s) | Stream Index Number | 303(d) Listing |
|---|---|---|---|---|
| UT Mollie Branch | Lumber | C;Sw | 15-4-8-8 | N/A |
| Soules Swamp (Benson Millpond) | Lumber | C;Sw | 15-4-8 | N/A |
| UT Richardson Swamp | Lumber | C;Sw | 15-4-9 | N/A |

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. DWQ cannot comment on permit requirements with the limited information provided. A detailed delineation is required to determine the presence or absence of jurisdictional resources within the project limits. In addition, NCDOT must provide an estimate of impacts to any resources located within the construction limits of the alternatives before we can specifically comment on DWQ permit eligibility. 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.

225 Green St., Suite 714, Fayetteville, NC 28301-5043
Phone: 910-433-3300 \ FAX: 910-486-0707
Internet: www.ncwaterquality.org

**General Project Comments:**

2. 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.

3. 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.

4. 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 2H.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.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.*

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13. Sediment and erosion control measures should not be placed in wetlands or streams.

14. 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.

15. 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.

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 streamsshall 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 3883/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 me at (910) 308-4021 or mason.herndon@ncdenr.gov.

cc: Clarence Coleman, Federal Highway Administration
Greg Burns, PE, Division 6 Engineer
William D. Gilmore, PE, Ecosystem Enhancement Program
File Copy

ec: Ronnie Smith, US Army Corps of Engineers, Wilmington Field Office
Jim Rerko, Division 6 Environmental Officer
Chris Militscher, Environmental Protection Agency
Travis Wilson, NC Wildlife Resources Commission
Belinda Henson, DWQ Fayetteville Regional Office
Sonia Carrillo, DWQ Central Office

# DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
# DIVISION OF WATER RESOURCES
# PUBLIC WATER SUPPLY SECTION

| Project Number |
| --- |
| **12-0291** |
| County |
| **Columbus** |

Inter-Agency Project Review Response

Project Name NC-DOT

Type of Project Scoping - Proposed project is for widening of US 701 Bypass from SR 1166-Pleasant Plains Rd to US 74-76 Bypass in Whiteville, TIP R-5020

☐ The applicant should be advised that plans and specifications for all water system improvements must be approved by the Division of Water Resources/Public Water Supply Section prior to the award of a contract or the initiation of construction (as required by 15A NCAC 18C .0300et. seq.). For information, contact the Public Water Supply Section, (919) 733-2321.

☐ This project will be classified as a non-community public water supply and must comply with state and federal drinking water monitoring requirements. For more information the applicant should contact the Public Water Supply Section, (919) 733-2321.

☒ If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Water Resources, Public Water Supply Section, Technical Services Branch, 1634 Mail Service Center, Raleigh, North Carolina 27699-1634, (919) 733-2321.

☒ For Regional and Central Office comments, see the reverse side of this form.

| Rebecca Sadosky | PWSS | 05/10/2012 |
| --- | --- | --- |
| Review Coordinator | Section/Branch | Date |

# DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
# DIVISION OF WATER RESOURCES
# PUBLIC WATER SUPPLY SECTION

Inter-Agency Project Review Response

Project Number **12-0291**

County **Columbus**

RECEIVED
MAY 16 2012
NCDOT

Project Name NC-DOT

Type of Project Scoping - Proposed project is for widening of US 701 Bypass from SR-1166-Pleasant Plains Rd to US 74-76 Bypass in Whiteville. TIP R-5020

RECEIVED
MAY 14 2012

Comments provided by:

☐ Regional Program Person

☒ Regional Supervisor for Public Water Supply Section

☐ Central Office program person

5/14/12

Byron Reaves

Name ~~Debra Benoy–Wilmington RO~~ Date 05/10/2012

Telephone number: 910-796-7288

Program within Division of Water Resources:

☑ Public Water Supply

☐ Other, Name of Program: _____

Response (check all applicable):

☐ No objection to project as proposed

☐ No comment

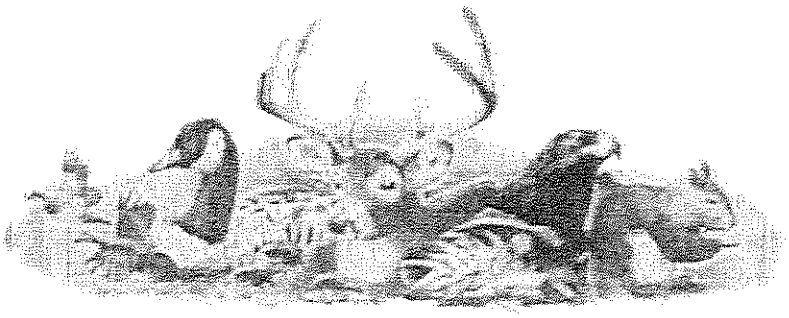
☐ Insufficient information to complete review

☐ Comments attached

☒ See comments below

If existing water lines are relocated during construction, plans for the water line relocation must be submitted to PWS Plan Review Section.

**Return to:**
Public Water Supply Section
Environmental Review Coordinator for the
Division of Water Resources



# North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

MEMORANDUM

TO: Melba McGee
Office of Legislative and Intergovernmental Affairs, DENR

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: May 22, 2012

SUBJECT: Response to the start of study notification regarding fish and wildlife concerns for the proposed widening of US 701 Bypass in Whiteville, Columbus County, North Carolina. TIP No. R-5020, SCH Project No. 12-0291.

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

   and,

**Mailing Address:** Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
**Telephone:** (919) 707-0220 • **Fax:** (919) 707-0028

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 (USACE). If the USACE 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.

State of North Carolina
Department of Environment and Natural Resources

Reviewing Office: Wilmington Regional Office Wilro

## INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

Project Number: 12-0291 Due Date: 5/30/12

After review of this project it has been determined that the ENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

| | PERMITS | SPECIAL APPLICATION PROCEDURES or REQUIREMENTS | Normal Process Time (statutory time limit) |
|---|---|---|---|
| ☐ | Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters. | Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual. | 30 days (90 days) |
| ☐ | NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters. | Application 180 days before begin activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later. | 90-120 days (N/A) |
| ☐ | Water Use Permit | Pre-application technical conference usually necessary | 30 days (N/A) |
| ☐ | Well Construction Permit | Complete application must be received and permit issued prior to the installation of a well. | 7 days (15 days) |
| ☐ | Dredge and Fill Permit | Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit. | 55 days (90 days) |
| ☐ | Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100 thru 2Q.0300) | Application must be submitted and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113). | 90 days |
| ☐ | Permit to construct & operate Transportation Facility as per 15 A NCAC (2D.0800, 2Q.0601) | Application must be submitted at least 90 days prior to construction or modification of the source. | 90 days |
| ☒ | Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900 | N/A | 60 days (90 days) |
| ☐ | Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950. | | |
| ☐ | Complex Source Permit required under 15 A NCAC 2D.0800 | | |
| ☐ | The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (Land Quality Section) At least 30 days before beginning activity. A fee of $65 for the first acre or any part of an acre. An express review option is available with additional fees. | | 20 days (30 days) |
| ☒ | Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets. | | (30 days) |
| ☐ | Mining Permit | On-site inspection usual. Surety bond filed with ENR Bond amount varies with type mine and number of acres of affected land. Any arc mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued. | 30 days (60 days) |
| ☐ | North Carolina Burning permit | On-site inspection by N.C. Division Forest Resources if permit exceeds 4 days | 1 day (N/A) |
| ☐ | Special Ground Clearance Burning Permit - 22 counties in coastal N.C. with organic soils | On-site inspection by N.C. Division Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned." | 1 day (N/A) |
| ☐ | Oil Refining Facilities | N/A | 90-120 days (N/A) |
| ☐ | Dam Safety Permit | If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, certify construction is according to ENR approved plans. May also require permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of $200.00 must accompany the application An additional processing fee based on a percentage or the total project cost will be required upon completion. | 30 days (60 days) |

| | PERMITS | SPECIAL APPLICATION PROCEDURES or REQUIREMENTS | Normal Process Time (statutory time limit) |
|---|---|---|---|
| ☐ | Permit to drill exploratory oil or gas well | File surety bond of $5,000 with ENR running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to ENR rules and regulations. | 10 days N/A |
| ☐ | Geophysical Exploration Permit | Application filed with ENR at least 10 days prior to issue of permit. Application by letter. No standard application form. | 10 days N/A |
| ☐ | State Lakes Construction Permit | Application fees based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property. | 15-20 days N/A |
| ☒ | 401 Water Quality Certification | N/A | 60 days (130 days) |
| ☐ | CAMA Permit for MAJOR development | $250.00 fee must accompany application | 55 days (150 days) |
| ☐ | CAMA Permit for MINOR development | $50.00 fee must accompany application | 22 days (25 days) |
| ☐ | Several geodetic monuments are located in or near the project area. If any monument needs to be moved or destroyed, please notify: N.C. Geodetic Survey, Box 27687 Raleigh, NC 27611 | | |
| ☐ | Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100. | | |
| ☐ | Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation. | | |
| ☐ | Compliance with 15A NCAC 2H 1000 (Coastal Stormwater Rules) is required. | | 45 days (N/A) |
| ☐ | Tar Pamlico or Neuse Riparian Buffer Rules required. | | |

★ Other comments (attach additional pages as necessary, being certain to cite comment authority)

## REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

☐ **Asheville Regional Office**
2090 US Highway 70
Swannanoa, NC 28778
(828) 296-4500

☐ **Fayetteville Regional Office**
225 North Green Street, Suite 714
Fayetteville, NC 28301-5043
(910) 433-3300

☐ **Mooresville Regional Office**
610 East Center Avenue, Suite 301
Mooresville, NC 28115
(704) 663-1699

☐ **Raleigh Regional Office**
3800 Barrett Drive, Suite 101
Raleigh, NC 27609
(919) 791-4200

☐ **Washington Regional Office**
943 Washington Square Mall
Washington, NC 27889
(252) 946-6481

☒ **Wilmington Regional Office**
127 Cardinal Drive Extension
Wilmington, NC 28405
(910) 796-7215

☐ **Winston-Salem Regional Office**
585 Waughtown Street
Winston-Salem, NC 27107
(336) 771-5000

*Darren Currie*
*City Manager*
*317 S. Madison Street*
*PO Box 607*
*Whiteville, NC 28472*
*910-642-8046*

# City of Whiteville



March 17, 2015

Mr. Joseph Qubain,
Project Development Engineer
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

**REF: Project R-5020 (701 By-Pass at Leder Park)**

Mr. Qubain:

The City of Whiteville is in receipt of your request regarding Project R-5020. It is my understanding that Project R-5020 proposes widening Powell Boulevard to a multi-lanes facility. The construction of the project will require a temporary construction easement on a small corner of Leder Park.

As the official having specific jurisdiction over Leder Park, I hereby acknowledge that the project is acceptable and consistent with the designated use of the property and that all possible planning to minimize harm has been accomplished in the location and design of the road. There will be no adverse effect from this on the park. I request, on behalf of the City, that if damages occur to the park, NCDOT will repair those damages.

If any changes are made to the original design of the project that concerns Leder Park, I am requesting the City be notified and have an opportunity to review the plans for additional impacts to Leder Park. We look forward to working with you on this project.

Sincerely,

Darren L. Currie
City Manager

Cc: Leder Park File

# APPENDIX B

# NCDOT RELOCATION ASSISTANCE PROGRAM/ RELOCATION REPORTS

# DIVISION OF HIGHWAYS RELOCATION PROGRAM

The relocation program for the proposed action will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Public Law 91-646), and/or the North Carolina Relocation Assistance Act (GS-133-5 through 133-18). The program is designed to provide assistance to displaced persons in relocating to a replacement site in which to live or do business. At least one relocation agent is assigned to each highway project for this purpose.

The relocation agent will determine the needs of displaced families, individuals, businesses, non-profit organizations, and farm operations for relocation assistance advisory services without regard to race, color, religion, sex or national origin. The NCDOT will schedule its work to allow ample time, prior to displacement, for negotiations and possession of replacement housing which meets decent, safe, and sanitary standards.

The displacees are given a 90 Day Letter of Assurance after the initiation of negotiations, or in the case of residential displacees, only after a comparable replacement dwelling has been offered to the displacee. This letter assures that that displacee will have at least 90 days from the date of the letter to move. Once the claim has been closed or condemnation has begun, a 30 Day Notice to Vacate letter will be sent to the displacee with the final date to vacate indicated. At no time will the final vacate date be less than the 90 days assured to the displacee.

**For Residential Displacees:**

It is the policy of NCDOT to ensure comparable replacement housing will be available prior to construction of state and federally-assisted projects. No person will be displaced by NCDOT's State or Federally-assisted construction projects unless and until comparable replacement housing has been offered or provided for each displacee within a reasonable period of time prior to displacement. All attempts will be made to find decent, safe, and sanitary replacement dwellings within the financial means of the residential displacee. NCDOT offers the following relocation assistance to residential displacees:

- Replacement Housing Payment for Owner-Occupant displacees
- Rent Supplement Payment for Tenant Displacees
- Relocation Moving Payments
- Advisory Services

Last Resort Housing is a program used when comparable replacement housing is not available, or when it is unavailable within the displacee's financial means, and the replacement payment exceeds the federal/state legal limitation. The purpose of the program is to allow broad latitude in methods of implementation by the State so that decent, safe, and sanitary replacement housing can be provided.

**Non-Residential Displacees:**

Displaced Businesses, Farms, and Non-Profit Organizations are eligible for the following relocation assistance:

- Relocation Moving Expenses
- Reestablishment Reimbursement up to the maximum Federal amount
- Searching expenses up to the maximum Federal amount
- Business Fixed Payment up to the Federal maximum (in lieu of the items above)
- Advisory Services

No relocation payment received will be considered as income for the purposes of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under Social Security Act or any federal law.

These relocation benefits are only available to persons lawfully present in the United States.

# EIS RELOCATION REPORT

**North Carolina Department of Transportation**
**RELOCATION ASSISTANCE PROGRAM**

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

| | | | | | |
|---|---|---|---|---|---|
| WBS ELEMENT: | R-5020 | COUNTY | Columbus | Alternate 1 of 2 Alternate | |
| T.I.P. NO.: | | | | | |
| DESCRIPTION OF PROJECT: | From SR 1166 ( Pleasant Plains Rd.) to the US 74/76 Bypass | | | | |

## ESTIMATED DISPLACEES

| Type of Displacees | Owners | Tenants | Total | Minorities |
|---|---|---|---|---|
| Residential | 8 | 6 | 14 | 6 |
| Businesses | 11 | 9 | 20 | 3 |
| Farms | 0 | 0 | 0 | 0 |
| Non-Profit | 0 | 0 | 0 | 0 |

## INCOME LEVEL

| 0-15M | 15-25M | 25-35M | 35-50M | 50 UP |
|---|---|---|---|---|
| 0 | 0 | 8 | 5 | 1 |

## VALUE OF DWELLING / DSS DWELLING AVAILABLE

| Owners | | Tenants | | For Sale | | For Rent | |
|---|---|---|---|---|---|---|---|
| 0-20M | 0 | $ 0-150 | 0 | 0-20M | 0 | $ 0-150 | 0 |
| 20-40M | 0 | 150-250 | 0 | 20-40M | 0 | 150-250 | 0 |
| 40-70M | 4 | 250-400 | 0 | 40-70M | 35 | 250-400 | 0 |
| 70-100M | 3 | 400-600 | 6 | 70-100M | 14 | 400-600 | 6 |
| 100 UP | 1 | 600 UP | 0 | 100 UP | 78 | 600 UP | 8 |
| TOTAL | 8 | | 6 | | 127 | | 14 |

## 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? |
| | | 6. | Source for available housing (list). Multiple listing Service, local survey, Internet searches. |
| | 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 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? **18 to 24 Months** |

## REMARKS (Respond by number)

3) Business Services will remain available as much of the project area is commercial/industrial

4) Please see attached spreadsheet for business relocatees

8) Last Resort Housing should be a consideration. Where warranted, Last Resort housing will be applied in accordance with the Uniform Relocation Act.

11) Public housing is available through local agencies.

12) Based on the availability of DSS housing available on the market, it is not felt there will be a shortage of DSS housing

* Any deficiency in housing not within financial means will be addressed within the guidelines of the Last Resort Housing Section of the Uniform Act.

6 &14) Based on local survey and current real estate listings suitable business sites and residential properties will be available.

Note: There were three vacant businesses that were not included in this study 1) LTC Enterprises 2) Laundry Business 3) NC Produce.

Note: Family Cemetery Orr/Conduit Approx. 11 graves Located southern end of project west side of 701 Past Southwood Drive

| | | | |
|---|---|---|---|
| Bradley D Bowers | 12/15/14 | | 12/17/14 |
| Right of Way Agent | Date | Relocation Coordinator | Date |

R-5020 Non. Res.
Alt. 1

| NO. | T | O | NAME | EMPLOYEES | P | TYPE | M |
|---|---|---|---|---|---|---|---|
| 1 (5) | | X | Whiteville Janitorial Supply | 3 | 2 | Janitor Supplies/Retail | |
| 2 (6) | X | | Carquest Auto | 2 | 1 | Auto Service/Tires | |
| 3 (7) | | X | Discount Tire Mart | 2 | 1 | Tire Sales | |
| 4 (8) | | X | Rent to Own-Sheds Decks | 1 | | Sheds/deck sales installation | |
| 5(10) | X | | Total Hair and Body Works | 1 | 1 | Tanning/massage | |
| 6(13) | X | | Rockefellers Food and Spirits | 3 | 2 | Restaurant/ Possibly out of business | |
| 7(14) | X | | Tint Wizard | 3 | 1 | Window Tinting/ Auto Detail (1/2 Vacant) | |
| 8(19) | X | | Final Touch Beauty Salon | 2 | | Hair Salon | X |
| 9(20) | X | | In Tha Cut Barbershop | 3 | | Barbershop | X |
| 10(22) | | X | ABC Store | 5 | 2 | ABC Store | |
| 11(23) | X | | Unique Cuts barbershop | 3 | | Barbershop | X |
| 12(30) | | X | Signet Healthcare | 5 | | Dr. Office | |
| 13(31) | | X | Signet healthcare #2 | 5 | | Dr. Office #2 | |
| 14(32) | | X | Norris Heating and Air | 5 | 3 | Heating and Air Service/ Installation | |
| 15(33) | | X | Trade Wilco | 4 | 2 | Gas/C Store 13 pumps | |
| 16(34) | | X | Sledge Masters | 2 | | Unknown Business Office | |
| 17(35) | X | | R.C. Blanchard & Associates | 2 | | Forestry Consultants | |
| 18(36) | | X | Washtubs Laundrymat | 2 | | Laundry | |
| 19(37) | X | | 701 Drive In and Restaurant | 4 | 2 | Restaurant | |
| 20(38) | | X | East Wind Chinese Restaurant | 4 | 2 | Restaurant | |
| | | | | | | | |
| | | | Note: Numerous on premise signs | | | | |
| | | | Note: 3 vacant businesses not counted | | | | |
| | | | LTC Enterprises | | | | |
| | | | Laundry | | | | |
| | | | NC produce | | | | |
| | | | NOTE: Cemetery West Side of 701 | | | | |
| | | | Beginning of Proj. Past Southwood Dr. | | | | |
| | | | Orr/Conduit Family Graves 11 | | | | |
| 20 | 9 | 11 | | | | | 3 |

T=Tenant
O=Owner
F=Full time
P=Part time
M=Minority

# EIS RELOCATION REPORT

**North Carolina Department of Transportation**
**RELOCATION ASSISTANCE PROGRAM**

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

| | | | | | |
|---|---|---|---|---|---|
| WBS ELEMENT: | R-5020 | COUNTY | Columbus | Alternate 2 of 2 Alternate | |
| T.I.P. NO.: | | | | | |
| DESCRIPTION OF PROJECT: | From SR 1166 ( Pleasant Plains Rd.) to the US 74/76 Bypass | | | | |

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| TOTAL | 8 | | 6 | | 127 | | 14 |

## ANSWER ALL QUESTIONS

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| | 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 housing available during relocation period? |
| | X * | 13. Will there be a problem of housing within financial means? |
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Note: Family Cemetery Orr/Conduit Approx. 11 graves Located southern end of project west side of 701 Past Southwood Drive

| | | | |
|---|---|---|---|
| Bradley D Bowers | 12/15/14 | | 12/17/14 |
| Right of Way Agent | Date | Relocation Coordinator | Date |

R-5020 Non. Res.
Alt. 2

| NO. | T | O | NAME | EMPLOYEES | P | TYPE | M |
|---|---|---|---|---|---|---|---|
| 1 (5) | | X | Whiteville Janitorial Supply | 3 | 2 | Janitor Supplies/Retail | |
| 2 (6) | X | | Carquest Auto | 2 | 1 | Auto Service/Tires | |
| 3 (7) | | X | Discount Tire Mart | 2 | 1 | Tire Sales | |
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| 6(13) | X | | Rockefellers Food and Spirits | 3 | 2 | Restaurant/ Possibly out of business | |
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| 9(20) | X | | In Tha Cut Barbershop | 3 | | Barbershop | X |
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| 11(23) | X | | Unique Cuts barbershop | 3 | | Barbershop | X |
| 12(30) | | X | Signet Healthcare | 5 | | Dr. Office | |
| 13(31) | | X | Signet healthcare #2 | 5 | | Dr. Office #2 | |
| 14(32) | | X | Norris Heating and Air | 5 | 3 | Heating and Air Service/ Installation | |
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| | | | LTC Enterprises | | | | |
| | | | Laundry | | | | |
| | | | NC produce | | | | |
| | | | NOTE: Cemetery West Side of 701 | | | | |
| | | | Beginning of Proj. Past Southwood Dr. | | | | |
| | | | Orr/Conduit Family Graves 11 | | | | |
| 20 | 9 | 11 | | | | | 3 |

T=Tenant
O=Owner
F=Full time
P=Part time
M=Minority

# APPENDIX C

# NEPA/SECTION 404 CONCURRENCE FORMS

## NEPA / Section 404 Interagency Agreement
## Concurrence Point No. 2A
## Bridging Decisions and Alignment Review

**Project Title and Project Numbers:**

US 701 Bypass, from south of SR 1166 (Pleasant Plains Road) to north of US 74-76 Bypass in Whiteville, Columbus County; TIP Project R-5020; Federal-Aid Project NHS-701(15); WBS Element 41499.1.1.

**Project Description:**

The proposed project involves widening US 701 Bypass (James B. White Road/South Madison Street/J.K. Powell Boulevard) in Whiteville to a multi-lane facility from south of SR 1166 (Pleasant Plains Road) to north of US 74-US 76 Bypass. The proposed typical section is a four-lane median divided facility with curb and gutter

**Hydraulic Recommendations:**

| Site | Option | Stream / Wetland I.D. | Recommended Hydraulic Structure |
|---|---|---|---|
| 1 | 1,2 | Soules Swamp/WL | Replace existing with dual bridges 145 feet long |

**The project team has concurred on the major hydraulic structures and sizes for the R-5020 proposed project as listed above.**

| Name | Agency | Date |
|---|---|---|
| | USACE | 3/17/2015 |
| Gunther F. Van Der Weide | USEPA | 3.17.2015 |
| Gary Jordan | USFWS | 3/17/2015 |
| Rodd Bolen | FHWA | 3/17/2015 |
| Mason Herndon | NCDWR | 3/17/2015 |
| | NCHPO | |
| | NCWRC | 3-17-2015 |
| | NCDOT | 3-17-2015 |
| | Cape Fear RPO | 3/17/2015 |