Proposed Widening of SR 1410 and SR 1411 (Bunce Road)
From SR 1400 (Cliffdale Road) to US 401
(Raeford Road), in Fayetteville,
Cumberland County, North Carolina
Federal Aid Project # STPDA-1411(9)
WBS # 34943.1.2
TIP # U-3424

CATEGORICAL EXCLUSION

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

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

APPROVED:

12/18/14 _____
Date For Richard W. Hancock, P.E. – Manager
NCDOT Project Development and Environmental Analysis Unit

12-30-14 _____
Date for John F. Sullivan III, P.E. – Division Administrator
Federal Highway Administration

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CATEGORICAL EXCLUSION

North Carolina Department of Transportation

December 2014

Documentation Prepared in Project Development and Environmental Analysis Unit by:

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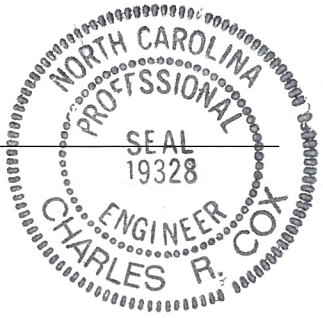

PROJECT COMMITMENTS

Proposed Widening of SR 1410 and SR 1411 (Bunce Road)
from SR 1400 (Cliffdale Road) to US 401
(Raeford Road), in Fayetteville,
Cumberland County, North Carolina
Federal Aid Project # STPDA-1411(9)
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Local Programs Management Unit, Roadway Design Unit

At the request of the City of Fayetteville, NCDOT will enter into a municipal agreement with the city to fund construction of 5-foot sidewalks on both sides of the Bunce Road corridor. The agreement will also include 5-foot by 8-foot concrete pads (this could include the sidewalk) at the 4 existing bus stops along Bunce Road. Under this municipal cost share agreement, the City of Fayetteville will be responsible for 50% of the total cost of these improvements and will be responsible for maintenance of the pedestrian facilities upon completion of the project. The NCDOT will also utilize 14-foot outside travel lanes to accommodate bicycle traffic throughout the corridor.

Bicycle and Pedestrian Division, Roadway Design Unit

The NCDOT will evaluate the appropriate location for pedestrian crosswalks during the right of way acquisition stage of the project. Pedestrian crosswalks across Bunce Road will be included in the final design.

TABLES

FIGURES

APPENDICES

Proposed Widening of SR 1410 and SR 1411 (Bunce Road)
from SR 1400 (Cliffdale Road) to US 401
(Raeford Road), in Fayetteville,
Cumberland County, North Carolina
Federal Aid Project # STPDA-1411(9)
WBS # 34943.1.2
TIP # U-3424

SUMMARY

A. Type of Action

This Categorical Exclusion has been prepared to evaluate the potential impacts of this proposed transportation improvement project. Based on this evaluation, the North Carolina Department of Transportation (NCDOT) and Federal Highway Administration (FHWA) do not anticipate that significant impacts to the environment will occur due to this proposed project; therefore, the proposed project is classified as a Federal "Categorical Exclusion".

B. Project Description

The NCDOT, in consultation with the FHWA, proposes to widen SR 1410 and SR 1411 (Bunce Road) from SR 1400 (Cliffdale Road) to US 401 (Raeford Road), in Fayetteville, Cumberland County (see **Figure 1**). The widening will convert Bunce Road from its current two-lane configuration to a four-lane, median-divided facility.

The proposed facility will have 14-foot outside lanes, 12-foot inside lanes, and a 23-foot raised grass median with curb and gutter (see **Figure 3**). The project will also include the construction of 5-foot sidewalks on both sides of Bunce Road between Cliffdale Road and Raeford Road.

The proposed project also proposes minor improvements along Cliffdale Road at its intersection with Bunce Road. These improvements will be limited to the addition of a second left-turn lane, to accommodate left-turns from westbound Cliffdale Road to Bunce Road, and the installation of concrete monolithic islands. The improvements will require minor widening of Cliffdale Road to accommodate these improvements.

The total length of the proposed project is 1.3 miles.

This project is included in the approved 2012-2018 North Carolina State Transportation Improvement Program (STIP) and the 2013-2023 Draft STIP. The total cost in the STIP is $10,675,000, which includes $4,275,000 for right of way acquisition and $6,400,000 for construction. The current estimated total cost is $17,075,000. Right of way acquisition is currently scheduled for Federal Fiscal Year (FY) 2019, while construction is slated to begin in FY 2021.

C. Summary of Purpose and Need

The purpose of the proposed project is to improve the traffic carrying capacity and safety of Bunce Road, within the project corridor.

D. Alternatives Considered

The alternatives considered for these projects consist of, the No Build alternative and the Best Fit Widening Alternative.

E. NCDOT Recommended Alternative

NCDOT recommends the Best Fit Widening Alternative as the preferred alternative. This alternative best meets the purpose of the project and minimizes impacts to both the human and natural environments. The recommended alternative is shown in **Figure 2 (sheets 1 through 7).**

F. Summary of Environmental Effects

Adverse impacts to the human and natural environment were minimized where possible during the planning and design phases. No adverse effect on the air quality of the surrounding area is anticipated as a result of the project. The proposed project will not impact any properties on or eligible for the National Register of Historic Places. The proposed project will not encroach upon any known archaeological site eligible for listing in the National Register. The project will not require lands from any public recreational areas. Seven federally protected species are listed for Cumberland County; the biological conclusion for all species was "No Effect", with the exception of the American alligator, which did not require a biological conclusion since it is considered "Threatened due to Similarity of Appearance."

Thirty residential and two business relocations are anticipated as a result of the proposed improvements. Fifty eight residences and two churches will be impacted by elevated traffic noise levels. Two potential Underground Storage Tanks (USTs) were identified within the project limits; low monetary and scheduling impacts are anticipated to result from these sites. 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 and no denial of benefit is expected.

Table S-1 gives a summary of the resources and impacts due to the recommended alternative. **Figure 2** shows the recommended alternative.

Table S-1: Summary of Resources and Impacts

Resource		Best Fit Widening Alternative
Project Length (miles)		1.3
Schools		0
Churches		2*
Cemeteries		0
Relocations**	Residential	30
	Businesses	2
Traffic Noise Impacts	Residential	58
	Churches	2
	Businesses	0
Historic Properties (Listed on or Eligible for the National Register)		0
Section 4(f) Properties		0
Forested Impacts (acres)		1.2
Wetland Impacts (acres)		0
Stream Impacts (linear feet)		0
Floodplain (acres)		0
Water Supply Watershed Protected Areas		0
Federally Protected Species within Corridor		0
Hazardous Material Sites		2 / Low Impact
Adverse/Disproportionate Impacts to Minority/Low Income Populations		No Impact
Right of Way Cost		$6,675,000
Utility Relocation Cost		$1,800,000
Construction Cost		$8,600,000
Total Cost		**$17,075,000**

* Church buildings will not be taken

** NCDOT's Relocation Policy and Relocation Report are included in **Appendix B.**

G. Permits Required

No jurisdictional streams or wetlands were identified in the study area. As a result of the lack of 'Waters of the US', no permits are anticipated.

H. Coordination

Federal, state, and local agencies were consulted during the preparation of this Categorical Exclusion. Written comments were received and considered from agencies noted with an asterisk (*) during the preparation of this assessment, although no significant issues were raised.

* U.S. Army Corps of Engineers
* U.S. Environmental Protection Agency
* U.S. Fish and Wildlife Service
National Marine Fisheries Service
N.C. Department of Cultural Resources
N.C. DENR - Division of Environmental Health
N.C. DENR - Division of Forest Resources
N.C. DENR - Division of Parks and Recreation
N.C. DENR - Division of Soils and Water Conservation
* N.C. DENR - Division of Water Resources
N.C. DENR - Natural Heritage Program
N.C. Department of Public Instruction
* N.C. Wildlife Resources Commission
Mid-Carolina Council of Governments
Fayetteville Area Metropolitan Planning Organization
Cumberland County Commissioners
City of Fayetteville
* Cumberland County Schools

I. Contact Information

Additional information concerning the proposal and assessment can be obtained by contacting the following:

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I. DESCRIPTION OF PROPOSED ACTION

A. General Description

The North Carolina Department of Transportation (NCDOT), in consultation with the Federal Highway Administration (FHWA), proposes to widen SR 1410 and SR 1411 (Bunce Road) from SR 1400 (Cliffdale Road) to US 401 (Raeford Road), in Fayetteville, Cumberland County (see **Figure 1**). The widening will convert Bunce Road from its current two-lane configuration to a four-lane, curb and gutter, median-divided facility.

The proposed facility will have 14-foot outside lanes, 12-foot inside lanes, and a 23-foot raised grass median with curb and gutter (see **Figure 3**). The project will also include the construction of 5-foot sidewalks on both sides of Bunce Road between Cliffdale Road and Raeford Road.

The proposed project also proposes minor improvements along Cliffdale Road at its intersection with Bunce Road. These improvements will be limited to the addition of a second left-turn lane on Bunce Road, to accommodate left-turns from westbound Cliffdale Road to Bunce Road, and the installation of concrete monolithic islands. The improvements will require minor widening of Cliffdale Road to accommodate these improvements.

The proposed project will also realign a small section of Old Bunce Road at its intersection with Bunce Road. Old Bunce Road will be shifted slightly to the south to improve sight distance and associated safety concerns at this intersection.

The total length of the proposed project is 1.3 miles.

B. Cost Estimates

This project is included in the approved 2012-2018 North Carolina State Transportation Improvement Program (STIP) and the 2013-2023 Draft STIP. The total cost in the STIP is $10,675,000, which includes $4,275,000 for right of way acquisition and $6,400,000 for construction. The current estimated total cost is $17,075,000. Right of way acquisition is currently scheduled for Federal Fiscal Year (FY) 2019, while construction is slated to begin in FY 2021.

II. PURPOSE AND NEED FOR PROJECT

A. Purpose of Project

The purpose of the proposed project is to improve the traffic carrying capacity and safety of Bunce Road within the project corridor.

B. Need for Project

The need for the proposed project results from anticipated traffic growth that is expected to occur on the Bunce Road corridor. Bunce Road is the northern link in a corridor connecting residential areas south of US 401 and in the Hope Mills vicinity with Cliffdale Road and commercial areas within its vicinity. Bunce Road also provides a needed link between Bingham Drive and Reilly Road, via Cliffdale Road, which provides access to the northeast portion of Cumberland County and to the Fort Bragg Military Base. The proposed project will also address safety concerns along the Bunce Road corridor, where current crash rates exceed the statewide crash rates and critical crash rates in all categories except the fatal category.

C. Description of Existing Conditions

1. Functional Classification

Bunce Road is designated as a Major Collector on the North Carolina Statewide Functional Classification System.

2. Physical Description of Existing Facility

a) Roadway Cross Section

Bunce Road is currently a two-lane facility with 10-foot lanes and 4 to 6-foot shoulders, 2-feet of which are paved.

b) Horizontal and Vertical Alignment

The vertical alignment along existing Bunce Road is suitable for the posted speed limit. However, there are concerns with the horizontal alignment at the intersection of Bunce Road and SR 1410 (Old Bunce Road).

c) Right of Way and Access Control

The existing right of way is 60-feet along Bunce Road. There is currently no control of access.

d) Speed Limit

The posted speed limit along Bunce Road through the project study area is 35 miles per hour (mph).

e) Intersections/Interchanges

There are fourteen intersections along the project length:

- Bunce Road and Cliffdale Road – *signalized*
- Bunce Road and Old Bunce Road – *stop sign controlled*
- Bunce Road and Pleasant Street – *stop sign controlled*
- Bunce Road and Saint Louis Street – *stop sign controlled*
- Bunce Road and Portsmouth Drive – *stop sign controlled*
- Bunce Road and Tarrytown Drive – *stop sign controlled*
- Bunce Road and Distinct Circle – *stop sign controlled*
- Bunce Road and Dessa Ree Lane – *stop sign controlled*
- Bunce Road and Tareyton Road – *stop sign controlled*
- Bunce Road and Sun Valley Drive – *stop sign controlled*
- Bunce Road and Roy Drive – *stop sign controlled*
- Bunce Road and Fredrick Road/ Lagoon Drive – *stop sign controlled*
- Bunce Road and Wilson Avenue – *stop sign controlled*
- Bunce Road and Raeford Road – *signalized*

f) Railroad Crossings

There is no railroad crossing within the project study area.

g) Hydraulic Structures

There are no major hydraulic structures within the project study area.

h) Bicycle and Pedestrian Facilities

There are no existing bicycle or pedestrian facilities within the project study area.

i) Utilities

The following utilities are located within the project corridor: overhead power transmission and distribution lines, water and sewer, overhead cable/telephone communication lines, and gas.

j) School Bus Usage

Currently, there are 23 buses that travel along the project corridor on a daily basis to area schools.

3. Traffic Carrying Capacity

a) Existing Traffic Volumes

A traffic forecast for this project was completed for the years 2011 and 2035. According to the 2011 traffic counts, the existing Average Annual Daily Traffic (AADT) ranged between 9,700 and 10,900 vehicles per day (vpd) on Bunce Road, within the project limits (see **Figure 4)**.

b) Existing Levels of Service

The highway capacity analysis was conducted in accordance with the latest NCDOT Congestion Management Unit's *Capacity Analysis Guidelines for TIP Projects*, dated January 2012. They also were performed based on methodologies from the *Highway Capacity Manual (HCM 2000), Special Report 209*. Traffic modeling software used in the capacity analysis included *Synchro 7.0* and *SimTraffic 7.0, Version 7 (Build 773, Rev 8)*.

Simulations were completed for both the Build and No-Build scenarios using the Base Year (2011) and the Design Year (2035) traffic forecasts. A mainline analysis of Bunce Road projected that under the existing geometry and with No-Build conditions, the mainline operates at Level of Service (LOS) E for the base year (2011). Three (3) key intersections were also evaluated for proposed improvements. Under current traffic conditions, Bunce Road intersections with Cliffdale Road and Raeford Road will operate at LOS D, while the intersection with Old Bunce Road will operate at LOS E.

c) Future Traffic Volumes

According to the 2035 traffic forecast, the design year AADT is projected to range between 16,100 and 17,500 vpd on Bunce Road, within the project limits (see **Figure 4)**.

d) Future Levels of Service

Traffic simulations were performed for the design year (2035) during the AM and PM peak periods for the mainline and three (3) key intersections. A mainline analysis of Bunce Road indicates that without the proposed improvements the existing facility will operate at LOS E in the design year (2035). With the proposed improvements in place, the facility will operate at LOS B in the design year (2035). Without the proposed improvements Bunce Road intersections with Cliffdale Road, Old Bunce Road and Raeford Road will all operate at LOS F during the peak hour for the design year (2035). With the proposed improvements the intersections with Cliffdale Road, Old Bunce Road and Raeford Road will operate at LOS E, C, and F respectively, for the design year (2035). Table 1 details the results of the mainline and intersection analysis.

Table 1: Level of Service Summary

Location	No Build 2-lane Section LOS		Build 4-lane Section LOS
	2011 Traffic	2035 Traffic	2035 Traffic
Bunce Road Mainline:			
Bunce Road (mainline)	E	E	B
Bunce Road Intersection with:			
Cliffdale Road (Signalized)	D	F	E
Old Bunce Road (Unsignalized)	E*	F*	C*
Raeford Road (Signalized)	D	F	F

* Analyzed as Unsignalized Intersection – Highway Capacity Software does not provide an overall LOS for unsignalized intersections. LOS shown is the worst approach/ movement.

e) Crash Data

A Traffic Safety Analysis was conducted for the time period from October 1, 2008 to September 30, 2011 for this section of Bunce Road. A total of 103 crashes were reported. The 2009 AADT has a weighted average of 9,700 vehicles per day, which equates to a total vehicle exposure rate of 15.51 Million Vehicle Miles Traveled (MVMT) for the analysis area. For crash rate purposes this location can be classified as an urban 2-lane, undivided Secondary Route (SR). Table 2 shows the comparison of the combined crash rates for the analyzed sections of Bunce Road versus the 2007-2009 statewide crash rates for a comparable road type and configuration.

Table 2: Crash Rate Comparison

Crash Type	Crashes	Crashes per 100MVM	Statewide Rate[1]	Critical Rate[2]
Total	103	664.20	250.54	308.55
Fatal	0	0.00	0.91	8.12
Non-Fatal	37	238.60	80.79	121.56
Night	35	225.70	57.71	92.67
Wet	18	116.07	41.10	71.10

1- 2007-2009 statewide crash rate for urban 2-lane undivided Secondary Route (SR)

2- Based on the statewide crash rate (95% level of confidence)

Frontal Impact (including Angle, Head-On and Turning crashes) and **Rear End** crashes accounted for 68% of all crashes within the study area. Factored into this percentage is a large proportion that occurred near Bunce Road intersections with Cliffdale Road and Old Bunce Road. These two intersections accounted for 57% (59 out of 103) of the total crashes within the study area. The majority of crashes along the remaining section of roadway were **Rear End** crashes.

Current crash rates exceed the statewide crash rates and critical crash rates in all categories except the fatal category

f) Airports

There are no public airports within 5 miles of the project corridor.

g) Other Highway Projects in the Area

There are three STIP project located near the project study area. STIP project U-4405, proposes improvements to US 401 (Raeford Road) from west of Hampton Oaks Drive to east of Fairway Drive. It is currently funded for construction in Federal Fiscal Year (FY) 2017. STIP Project U-2519, F ayetteville Outer Loop, is a four-lane, controlled access freeway on new location that will complete the I-295 outer loop to the west of Fayetteville and tie into existing I-95, south of Fayetteville. The U-2519 project is divided into seven segments, the first of which (U-2519DA) is currently under construction and will be followed by R-2519CB, which is scheduled to begin construction in FY 2014. STIP project U-4422, widening of SR 1596 (Glensford Road) from Raeford Road to Cliffdale Road, is also currently under construction. Glensford Road is a parallel corridor to Bunce Road and is located approximately 1.7 miles to the east of Bunce Road.

4. Transportation and Land Use Plans

a) North Carolina Transportation Improvement Program

This project is included in the approved 2012-2018 STIP and Draft 2013-2023 STIP. Right of way acquisition is currently scheduled for Federal Fiscal Year (FY) 2019, while construction is slated to begin in FY 2021.

b) Local Transportation Plans

The latest long range transportation plan is the *Fayetteville Area Metropolitan Planning Organization (FAMPO) 2035 Long Range Transportation Plan Update (2009).* The plan identifies the U-3424 Bunce Road project as a priority one project (those in immediate need for improvement).

c) Land Use Plans

The Cumberland County Land Use Plan was updated in 2010. The project lies within the City of Fayetteville influence area.

D. Benefits of Proposed Project

The proposed improvements to Bunce Road will improve the traffic carrying capacity of this roadway. Th e proposed widening will create a more efficient north-south travel route between Bingham Drive and Reilly Road, via Bunce and Cliffdale Roads. Widening should help with congestion issues that have been causal in the rear-end crashes along this roadway. The proposed inclusion of a raised grass median will help to limit left-turning conflict points. The

addition of sidewalks along each side of Bunce Road will also provide a safer, user friendly facility for pedestrian traffic.

III. ALTERNATIVES

A. Preliminary Study Alternatives

1. No Build Alternative

The No Build Alternative offers no improvements to the project area. This alternative assumes that all other projects currently planned or programmed in the STIP will be constructed in the area as proposed.

This alternative will not allow for the additional capacity needed to efficiently service the projected growth within the project corridor, nor will it provide improved safety conditions along Bunce Road. Level of service along Bunce Road will continue to worsen unless improvements are made. Additionally, this alternative will not reduce congestion for through and local travelers on Bunce Road.

Since the No Build Alternative does not address the purpose and need of the proposed action, it is not recommended. However, it is used as a basis for comparison to other alternatives.

2. Alternative Modes of Transportation

Transit options are currently available in this section of Fayetteville. While improvements to transit options, as well as bicycle and pedestrian accommodations, could aid in reducing congestion in the project area, these options alone do not meet the purpose and need of this project since they do not improve the traffic carrying capacity or improve safety along the Bunce Road corridor.

3. Transportation Systems Management

The Transportation Systems Management (TSM) alternative includes those types of limited construction activities designed to maximize the utilization and energy efficiency of an existing roadway. TSM improvement options considered under this alternative include traffic signal optimization or improvements to existing roadways in the vicinity of the proposed project. Due to the limited number of signals on the project and limited surrounding roadway network, improvements of this type alone will not adequately address the traffic carrying capacity or safety concerns along the Bunce Road corridor.

4. Best Fit Widening Alternative

This alternative begins at Bunce Road intersection with Cliffdale Road and continues south along the existing alignment of Bunce Road until tying into the existing roadway approximately 300 feet north of its intersection with Raeford Road. The improvements will widen Bunce Road from the existing two-lane facility to a four-lane median-divided facility. A "best fit" alignment allows the designer to determine the best location for the proposed widening,

based on anticipated impacts. This alternative best minimizes overall impacts to the human and natural environment.

This alternative also proposes straightening the curved section of Bunce Road and relocating the intersection with Old Bunce Road. This will address design speed and sight distance problems at this intersection (see **Figure 2, sheet 2**). These improvements will require additional impacts to the east side of Bunce Road at this location. Minor improvements will also be made on Cliffdale Road to accommodate turning movements to and from Bunce Road. These improvements will be limited to additional turn lanes, additional storage space for turning movements, and the installation of concrete median islands (see **Figure 2, sheet 1 through 7**).

Widening to one side (east or west) was briefly reviewed, but yielded no reduction to impacts to the residences and businesses, so this alternative was dropped from consideration.

B. Detailed Study Alternative

The Best Fit Widening Alternative was the only alternative carried forward for detailed environmental studies. The impacts associated with this alternative are noted in Table 3.

Table 3: Summary of Resources and Impacts

Resource		Best Fit Widening Alternative
Project Length (miles)		1.3
Schools		0
Churches		2*
Cemeteries		0
Relocations**	Residential	30
	Businesses	2
Traffic Noise Impacts	Residential	58
	Churches	2
	Businesses	0
Historic Properties (Listed on or Eligible for the National Register)		0
Section 4(f) Properties		0
Forested Impacts (acres)		1.2
Wetland Impacts (acres)		0
Stream Impacts (linear feet)		0
Floodplain (acres)		0
Water Supply Watershed Protected Areas		0
Federally Protected Species within Corridor		0
Hazardous Material Sites		2 / Low Impacts
Adverse/Disproportionate Impacts to Minority/Low Income Populations		No Impacts
Right of Way Cost		$6,675,000
Utility Relocation Cost		$1,800,000
Construction Cost		$8,600,000
Total Cost		**$17,075,000**

* Church Building will not be taken.

NCDOT's Relocation Policy and Relocation Report are included in **Appendix B.

C. NCDOT Recommended Alternative

NCDOT recommends the Best Fit Widening Alternative as the preferred alternative. This alternative best meets the purpose of the project and minimizes impacts to both the human and natural environments. The recommended alternative is shown in **Figure 2.**

IV. PROPOSED IMPROVEMENTS

A. Roadway Cross Section and Alignment

The proposed typical section for Bunce Road is a four-lane, median divided roadway, with 14-foot outside lanes and 12-foot inside lanes, and a 23-foot raised grass median with curb and gutter (see **Figure 3**). The project will also include the construction of 5-foot sidewalks on both sides of Bunce Road between Cliffdale Road and Raeford Road.

B. Right of Way and Access Control

The proposed right of way along the Bunce Road corridor is 110 feet. Additional right of way will also be needed at each median U-turn bulb-out to provide the additional space required for U-turn movements and along Cliffdale Road to accommodate additional turning lanes and sidewalks. Full control of access will also be required at each median U-turn bulb-out to prevent driveway conflicts with U-turn movements. All other sections of Bunce Road will have no control of access.

C. Speed Limit and Design Speed

The design speed for Bunce Road through the project study area is 40 mph, with an anticipated posted speed limit of 35 mph.

D. Anticipated Design Exceptions

No design exceptions are anticipated on this project.

E. Intersections/Interchanges

The Bunce Road intersection with Cliffdale Road and Raeford Road will remain full movement, signalized intersections. All other intersections will remain stop sign controlled and be limited to right-in/right-out access, except for the following locations which will receive channelized left-turn access onto the side street (see **Figure 3**):

- Old Bunce Road
- Korean Bethel Presbyterian Church Parking
- Distinct Circle
- Fredrick Road
- Lagoon Drive

F. Service Roads

There are no service roads needed on this project.

G. Railroad Crossings

There are no railroad crossings impacted by this project.

H. Hydraulic Structures

This project does not involve any major stream crossings and as such, no major hydraulic structures are recommended.

I. Bicycle and Pedestrian Facilities

At the request of the City of Fayetteville, NCDOT will enter into a municipal agreement with the city to fund construction of 5-foot sidewalks on both sides of the Bunce Road corridor. The agreement will also include 5-foot by 8-foot concrete pads (this could include the sidewalk) at the 4 existing bus stops along Bunce Road. Under this municipal cost share agreement, the City of Fayetteville will be responsible for 50% of the total cost of these improvements and will be responsible for maintenance of the pedestrian facilities upon completion of the project. The NCDOT will also utilize 14-foot outside travel lanes to accommodate bicycle traffic throughout the corridor.

J. Utilities

The project does not propose improvements to existing utilities in the project study area; however, utilities will be relocated as needed for construction.

K. Noise Barriers

No noise barriers are proposed as part of this project.

L. Work Zone Traffic Control and Construction Phasing

Construction phasing will be utilized to maintain traffic along Bunce Road during construction. All traffic control devices used during the construction of this project will conform to the most current FHWA Manual of Uniform Traffic Control Devices (MUTCD).

V. ENVIRONMENTAL EFFECTS OF PROPOSED ACTION

A. Natural Resources

1. Biotic Resources

a) Terrestrial Communities

Two terrestrial communities were identified in the study area: maintained/disturbed and mixed pine-hardwood forest. **Figure 2, (sheet 1 through 7)** shows the location and extent of these terrestrial communities in the study area. A brief description of each community type follows.

(1) Maintained/Disturbed

Maintained-disturbed areas are scattered throughout the study area in places where the vegetation is periodically mowed, such as roadside shoulders, utility rights-of-way, and residential areas. The vegetation in this community is comprised of low growing grasses and herbs, including bahiagrass, wild onion, fescue, clover, broomsedge and sawtooth blackberry. There are also scattered trees including loblolly pine, sycamore and red maple; and shrubs such as multiflora rose and winged sumac. Vines present include Japanese honeysuckle, poison ivy, muscadine and kudzu.

(2) Mixed Pine-Hardwood Forest

This community is the result of past disturbance and does not match a 'natural' community type. Dominant species include loblolly pine, sycamore, sweetgum, water oak, red maple, Japanese honeysuckle, greenbrier and giant cane. The mixed pine-hardwood community is located throughout the project area.

b) 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 an asterisk*). Generally, the community boundaries are abrupt, with little transitional area between them. Maintained roadsides and residential communities adjacent to forested tracts provide foraging and cover areas and support early successional species. Forested areas provide forage and cover for wildlife dependent on mature forests with mast producing hardwoods. Many opportunistic species use both habitats to satisfy nutritional requirements and shelter. Mammals expected in the study area include white-tailed deer*, gray squirrel*, gray fox, raccoon and Virginia opossum. Reptiles and amphibians expected in this area are eastern box turtle, five-lined skink*, green anole and the black rat snake. Bird species expected in and around the study area include pine warbler, great-crested flycatcher, eastern towhee*, Carolina chickadee*, northern cardinal and Carolina wren.

c) Aquatic Communities

No aquatic communities were identified in the study area.

d) 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 Kudzu, Japanese honeysuckle, and Multiflora rose. Invasive species are categorized into one of three threat levels, Level 1 (Severe Threat), Level 2 (Threat), and Level 3 (Watch List). Threat levels for the observed invasive species are shown in Table 4.

Table 4: Invasive Species Within Project Area

Common Name	Scientific Name	Threat Level
Kudzu	*Pueraria lobata*	2
Japanese honeysuckle	*Lonicera japonica*	2
Multiflora Rose	*Rose multiflora*	2

NCDOT will follow the Department's Best Management Practices (BMPs) for the management of invasive plant species.

e) Summary of Anticipated Effects

Table 5 describes the acreage of terrestrial communities within the project study area as well as anticipated impacts due to construction. Impacts to terrestrial communities associated with construction activities include the removal of vegetation, soil compaction, damaging and/or exposing root systems, as well as potential impacts associated with petroleum spills. Terrestrial community impacts are calculated using proposed right of way limits.

Table 5: Terrestrial Community Impacts

Community	Coverage (Acres)	Impacts (Acres)
Maintained/Disturbed	27.9	12.5
Mixed Pine-Hardwood Forest	2.5	1.2
Total	**30.4**	**13.7**

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

2. Waters of the United States

a) Water Resources

There are no water resources in the study area. Water resources found in the vicinity are part of the Cape Fear River basin [U.S. Geological Survey (USGS) Hydrologic Unit 030300004].

There are no designated High Quality Waters (HQW), Outstanding Resource Waters (ORW), or water supply watersheds (WS-I or WS-II) within 1.0 miles downstream of the study area.

No waters in the project study area are designated as North Carolina Natural or Scenic Rivers, or as National Wild and Scenic Rivers. There are no designated anadromous fish waters on Primary Nursery Areas (PNA) present in the study area. No benthic monitoring stations are within 1.0 miles of the study area.

b) Jurisdictional Issues

No jurisdictional streams or wetlands were identified in the study area.

(1) Clean Water Act Permits

As a result of the lack of 'Waters of the US', no permits are anticipated.

(2) CAMA Areas of Environmental Concern

This project is not located in a Coastal Area Management Act (CAMA) county.

(3) Construction Moratoria

No construction moratoria apply to this project

(4) N.C. River Basin Buffer Rules

This project is not subject to the N.C. River Basin Buffer Rules.

(5) Rivers and Harbors Act Section 10 Navigable Waters

There are no 'Section 10 Waters' identified in the study area.

(6) Wetland and Stream Mitigation

Due to the lack of any wetlands or streams in the project study area, no mitigation will be required.

3. Endangered Species Act Protected Species

a) Federally Protected Species

As of December 26, 2012, the United States Fish and Wildlife Service (USFWS) list seven federally protected species for Cumberland County (Table 6). A brief description of each species' habitat requirements follows, along with the Biological Conclusion rendered based on survey results in the study area. Habitat requirements for each species are based on the current best available information from referenced literature and/or USFWS.

Table 6: Federally Protected Species Listed for Cumberland County

Common Name	Scientific Name	Federal Status	Habitat Present	Biological Conclusion
American alligator	*Alligator mississippienis*	T(S/A)	No	N/A
American chaffseed	*Schwalbea americana*	E	No	No Effect
Michaux's sumac	*Rhus michauxii*	E	No	No Effect
Pondberry	*Lindera melissifolia*	E	No	No Effect
Red-cockaded woodpecker	*Picoides borealis*	E	No	No Effect
Rough-leaved loosestrife	*Lysimachia asperulaefolia*	E	No	No Effect
Saint Francis' satyr butterfly	*Neonympha mitchellii francisci*	E	No	No Effect

E-Endangered
T (S/A) – Threatened due to similarity of appearance

American alligator

USFWS Optimal Survey Window: Year round (only on warm days in winter)

Habitat Description: In North Carolina, alligators have been recorded in nearly every coastal county, and many inland counties to the fall line. The alligator is found in rivers, streams, canals, lakes, swamps, and coastal marshes. Adult animals are highly tolerant of salt water, but the young are apparently more sensitive, with salinities greater than 5 parts per thousand considered harmful.

Biological Conclusion: No Survey Required

Red-cockaded woodpecker

USFWS Optimal Survey Window: Year-round; November-early March

Habitat Description: The red-cockaded woodpecker (RCW) typically occupies open, mature stands of southern pines, particularly longleaf pine, for foraging and nesting/roosting habitat. The RCW excavates cavities for nesting and roosting in living

pine trees, aged 60 years or older, which are contiguous with pine stands at least 30 years of age to provide foraging habitat. The foraging range of the RCW is normally no more than 0.5 mile.

Biological Conclusion: No Effect

Suitable habitat for the RCW does not exist in the study area. Forests in the study area are comprised of a closed hardwood canopy and sub-canopy. Where pine trees occur, they are not of sufficient age or density to provide suitable nesting or foraging habitat. A review of N.C. Natural Heritage Program (NHP) records, updated April 2012, indicates known RCW occurrences within 1.0 mile of the study area. However, since there is no suitable habitat in the study area, there will be no effect on this species.

American chaffseed

USFWS Optimal Survey Window: May-August (1-2 months after a fire)

Habitat Description: American chaffseed generally occurs in habitats described as open, moist to dryish Mesic Pine Flatwoods and longleaf pine flatlands, Pine Savannas, Pine/Scrub Oak Sandhills, Sandhill Seeps, and other open grass/sedge-dominated communities. This herb also occurs in the ecotonal areas between peaty wetlands and xeric sandy soils and on the upper ecotones of, or sites close, to Streamhead Pocosins. The species prefers sandy peat or sandy loam, acidic, seasonally moist to dry soils in sunny or partly sunny areas subject to frequent fires in the growing season. The plant is dependent on factors such as fire, mowing, or fluctuating water tables to maintain its required open to partly-open habitat. Most extant populations, and all of the most vigorous populations, are in areas subject to frequent fire. This species is also known to occur on road cuts and power line rights-of-way that experience frequent mowing or clearing. Soil series that it is found on include Blaney, Candor, Gilead, Fuquay, Lakeland, and Vaucluse.

Biological Conclusion: No Effect

Habitat for chaffseed is not present in the study area. A search of the NHP database, updated April 2012, shows no occurrences of chaffseed within 1.0 mile of the project vicinity. Therefore, this project will have no effect on this species.

Michaux's sumac

USFWS Optimal Survey Window: May-October

Habitat Description: Michaux's sumac, endemic to the inner Coastal Plain and lower Piedmont, grows in sandy or rocky, open, upland woods on acidic or circumneutral, well-drained sands or sandy loam soils with low cation exchange capacities. The species is also found on sandy or submesic loamy swales and depressions in the fall line Sandhills

region as well as in openings along the rim of Carolina bays; maintained railroad, roadside, power line, and utility rights-of-way; areas where forest canopies have been opened up by blowdowns and/or storm damage; small wildlife food plots; abandoned building sites; under sparse to moderately dense pine or pine/hardwood canopies; and in and along edges of other artificially maintained clearings undergoing natural succession. In the central Piedmont, it occurs on clayey soils derived from mafic rocks. The plant is shade intolerant and, therefore, grows best where disturbance (e.g., mowing, clearing, grazing, and periodic fire) maintains its open habitat.

Biological Conclusion: No Effect

Open habitat within the study area is intensively maintained by mowing or too grown up to support populations of Michaux's sumac. In addition, the NHP database, updated April 2012, does not show any occurrences of this species within 1.0 mile of the project vicinity. Therefore, this project will have no effect on this species.

Saint Francis' satyr

USFWS Optimal Survey Window: May 5-June 6 and July 26 to August 21

Habitat Description: The Saint Francis' satyr butterfly is only known from the Sandhills of North Carolina, although its historic range may have been much larger. This butterfly is known to inhabit wide, wet meadows dominated by sedges and other wetland graminoids. These wetlands are often relicts of beaver activity and are boggy areas that are acidic and ephemeral. These sites must be continually maintained to persist as open areas. The larval host of the Saint Francis' satyr is thought to be grasses, sedges and rushes.

Biological Conclusion: No Effect

Habitat for the satyr is not present in the study area. A search of NHP database, updated April 2012, shows no occurrences of this species within 1.0 mile of the project vicinity. Therefore, this project will have no effect on the satyr.

Pondberry or southern spicebush

USFWS Optimal Survey Window: February-October

Habitat Description: Pondberry occurs in seasonally flooded wetlands, sandy sinks, pond margins, and swampy depressions. This deciduous, aromatic shrub occurs in bottomland hardwood forests with perched water tables along inland areas of the southeastern United States. In the Coastal Plain of the Carolinas, the species occurs at the margins of limestone sinks and ponds and in undrained, shallow depressions of longleaf pine and pond pine forests. Known populations in North Carolina occur in the Small Depression Pocosin natural community, grow in soils with sandy sediments and high

water table, contain high peat content in the subsurface, and include a prevalence of shrubs due to historically frequent or intense fires. It generally grows in somewhat shaded areas, but can tolerate full sun.

Biological Conclusion: No Effect

Open habitat within the study area contains no wetlands and is intensively maintained by mowing or too grown up to support populations of pondberry. In addition, the NHP database, updated April 2012, does not show any occurrences of sumac within 1.0 mile of the project vicinity. Therefore, this project will have no effect on this species.

Rough-leaved loosestrife

USFWS Optimal Survey Window: mid May-June

Habitat Description: Rough-leaved loosestrife, endemic to the Coastal Plain and Sandhills of North and South Carolina, generally occurs in the ecotones or edges between longleaf pine uplands and pond pine pocosins in dense shrub and vine growth on moist to seasonally saturated sands and on shallow organic soils overlaying sand (spodosolic soils). This perennial herb specifically occurs in the ecotones between the following habitats: longleaf pine savanna and pocosin, longleaf pine flatwood and pocosin, longleaf pine savanna and mixed herb, longleaf pine/pond pine and evergreen shrub, longleaf pine/wiregrass savanna and Carolina bay pocosin, streamhead pocosin and pine/scrub oak sandhill, and sandhill seep and pine/scrub oak sandhill. Occurrences are also found in the following natural habitats: low pocosins, Pocosins, wet pine flatwoods, pine savannas, streamhead pocosins, sandhill seeps, riparian floodplains, boggy seeps and meadows, on deep peat in the middle of the low shrub community of large Carolina bays, and at the peaty margins of ponds and lakes. Occurrences are found in such disturbed habitats as roadside depressions, maintained power and utility line rights-of-way, firebreaks, and trails. The species prefers full sunlight, is shade intolerant, and requires areas of disturbance (e.g., clearing, mowing, and periodic burning) where the overstory is minimal. It however, can persist vegetatively for many years in overgrown, fire-suppressed areas. Blaney, Gilead, Johnston, Kalmia, Leon, Mandarin, Murville, Torhunta, and Vaucluse are some of the soil series that occurrences have been found on.

Biological Conclusion: No Effect

Open habitat within the study area is intensively maintained by mowing or too grown up to support populations of Michaux's sumac. In addition, the NHP database, updated April 2012, does not show any occurrences of this species within 1.0 mile of the project vicinity. Therefore, this project will have no effect on this species.

b) Bald and Golden Eagle Protection Act

Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water.

A desktop-GIS assessment of the project study area, as well as the area within a 1.13-mile radius (1.0 mile plus 660 feet) of the project limits, was performed on May 4, 2013 using 2009 color aerials. 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 project study area and the area within 660 feet of the project limits was not conducted. Additionally, a review of the NCNHP database on December 2012 revealed no known occurrences of this species within 1.0 mile of the project study area. Due to the lack of habitat, known occurrences, and minimal impact anticipated for this project, it has been determined that this project will not affect this species.

c) Endangered Species Act Candidate Species

As of December 26, 2012, the USFWS does not list any Candidate Species for Cumberland County.

d) Essential Fish Habitat

The National Marine Fisheries Service (NMFS) has not identified any Essential Fish Habitat within the project study area.

4. Soils

The Cumberland County Soil Survey identifies 15 soil types within the study area.

Table 7: Soils within Project Study Area

Soil Series	Mapping Unit	Drainage Class	Hydric Status
Blaney loamy sand	BaB	Well-drained	Non-hydric
Blaney loamy sand	BaD	Well-drained	Non-hydric
Candor sand	CaD	Somewhat excessively drained	Non-hydric
Coxville loam	Co	Poorly drained	Hydric
Faceville loamy sand	FaB	Well-drained	Non-hydric
Faceville-Urban land complex	FcB	Well-drained	Non-hydric
Goldsboro loamy sand	GoA	Moderately well-drained	Hydric*
Johnston loam	JT	Very poorly drained	Hydric
Norfolk loamy sand	NoA	Well-drained	Hydric*
Norfolk loamy sand	NoB	Well-drained	Hydric*
Rains sandy loam	Ra	Poorly drained	Hydric
Vaucluse loamy sand	VaD	Well-drained	Hydric*
Vaucluse-Gilead loamy sands	VgE	Well-drained	Non-hydric
Wagram loamy sand	WaB	Well-drained	Hydric*
Wagram-Urban land complex	WgB	Well-drained	Non-hydric

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

B. Cultural Resources

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, 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 and to afford the Advisory Council a reasonable opportunity to comment on such undertakings.

Under a Programmatic Agreement, effective November 5, 2007, the authority for cultural resource reviews for minor transportation projects has been transferred from the North Carolina State Historic Preservation Office (HPO) to the North Carolina Department of Transportation's (NCDOT) cultural resource groups: Archaeology and Historic Architecture and Landscapes in the Human Environment Section (HES).

1. Historic Architectural Resources

As required in the Programmatic Agreement, a historic architectural resources review was completed on June 22, 2012. The finding of the review was that no historic properties are present/affected. A copy of the completed "No Historic Properties Present/Affected" form is included in **Appendix C**.

2. Archaeological Resources

As required in the Programmatic Agreement, an archaeological resources review was completed on May 14, 2012. The finding of the review was no surveys would be required for archaeological resources. A copy of the completed "No Survey Required" form is included in **Appendix C**.

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

Section 4(f) of the USDOT Act of 1966 protects the use of publicly owned parks, recreation areas, wildlife/waterfowl refuges, and historic properties. No Section 4(f) protected properties will be impacted by this project.

Section 6(f) of the Land and Water Conservation Act applies to the conversion of certain recreation lands to non-recreational purposes. The act applies to recreation lands that have received Land and Water Conservation Fund (LWCF) money. Any land conversions on property that has received LWCF money must be approved by the National Park Service. Section 6(f) also requires that any applicable land converted to non-recreational uses must be replaced with land of equal or greater value, location, and usefulness. No Section 6(f) protected properties will be impacted by this project.

D. Farmland

The Direct Community Impact Area (DCIA) defined for this project is located within an urbanized area as defined by US Census Bureau maps, therefore requirements for the identification of potential impacts to prime farmland soils outlined within the Farmland Protection Policy Act do not apply.

E. Social Effects

1. Demographics

The Demographic Study Area (DSA) is the smallest statistical area of the 2010 Census, at block group level, that includes and is derived from the DCIA. The DSA is used to provide approximate demographic characteristics for the community inside the DCIA. The DSA for this project consists of Census Tract 33.02, Block Group 1, and Census Tract 33.07, Block Group 1. These study area boundaries are shown in the Community Impact Assessment (February 2014).

a) Population

The population in Cumberland County experienced an annual growth rate of 0.5% between the 2000 and 2010 decennial censuses, while the population within the DSA grew by approximately 5.6% per year. This growth reflects the construction of several housing complexes in the area during the decade, and is consistent with growth plans for this area.

Table 8: Population Growth Rates

Area	Population			
	2000	2010	Difference	% Change
Demographic Study Area	1,923	3,311	1,388	72.2%
Cumberland County	302,963	319,431	16,468	5.4%
North Carolina	8,049,313	9,535,483	1,486,170	18.5%

Source: US Census Bureau, Census 2010 and Census 2000, Summary File 1 100% Data, Table P1 and P001 "Total Population"

b) Ethnicity

Census data indicates a notable presence of minority populations within the DSA, as was observed within the DCIA during the site visit. Table 9 provides a breakdown of the populations by race within the DSA, as compared to Cumberland County.

Census Tract 33.02, Block Group 1 (CT 33.02, BG 1) covers the project area south of the Bunce Road intersection with Cliffdale Road. This block group covers the majority of the DSA and the DCIA. It has a minority population of 92.6%, compared to 52.2% in Cumberland County (see Table 10).

Table 9: Population by Race

Race and Ethnicity	Demographic Study Area		Cumberland County	
	Pop.	%	Pop.	%
White	702	28.4%	164,825	52.1%
Black or African American	1,613	65.4%	112,692	35.6%
American Indian and Alaska Native	15	0.6%	3,007	1.0%
Asian	12	0.5%	7,278	2.3%
Native Hawaiian and Other Pacific Islander	0	0.0%	1,089	0.3%
Some other race	48	1.9%	10,046	3.2%
Two or more races	78	3.2%	17,541	5.5%
Hispanic or Latino Origin	125	5.1%	29,131	9.2%
Total Population	**2,468**	**100%**	**316,478**	**100%**

Source: US Census Bureau, American Community Survey 5-year Estimates (2007-2011), Table B02001, "Race."

Table 10: Minority Population

Area	Total Population	White, Non-Hispanic		Minority Population*	
		Pop.	%	Pop.	%
CT 33.02, BG 1	1,353	100	7.4%	1,253	92.6%
CT 33.07, BG 1	1,115	536	48.1%	579	51.9%
Demographic Study Area	2,468	636	25.8%	1,832	74.2%
Cumberland County	316,478	151,340	47.8%	165,138	52.2%

*Minority population includes all races that are non-white and Hispanic populations that are also White.
Source: US Census Bureau, American Community Survey 5-year Estimates (2007-2011), Table B03002, "Hispanic or Latin Origin by Race."

c) Income

The census data indicates a notable presence of low income populations within the DSA, as was observed within the DSA during the site visit. The poverty rate of the DSA is higher than that of Cumberland County, 24.5% and 16.6%, respectively (see Table 11).

Table 11: Poverty Rates

Area	Below Poverty Level		Below 50% of Poverty Level		Between 100% and 149% of Poverty Level	
	Pop.	%	Pop.	%	Pop.	%
CT 33.02, BG 1	329	24.5%	182	13.5%	120	8.9%
CT 33.07, BG 1	83	7.5%	37	3.3%	85	7.7%
Demographic Study Area	412	16.8%	219	8.9%	205	8.4%
Cumberland County	50,175	16.6%	22,522	7.5%	33,100	11.0%

Source: US Census Bureau, American Community Survey 5-year Estimates (2007-2011), Table C17002, "Ratio of Income to Poverty Level in the Past 12 Months."

2. Communities

The proposed project is located in the western portion of the City of Fayetteville, in Cumberland County. Bunce Road is primarily an urban residential roadway with limited commercial uses at its northern and southern termini. Single-family residences front the roadway. Three multi-family affordable housing complexes, one of which is a 55+ senior community, are located along the central portion of Bunce Road.

One large and one small cluster of mobile residences are located along the northern portion of the roadway. The dilapidated mobile home park at the north end of the project that was previously documented in the project's Community Characteristics Report (CCR) is now vacant and for sale. Two churches are located along Bunce Road, St. John's Free Will Baptist Church and Korean Bethel Presbyterian Church.

The project area has experienced an increase in residential growth in the last decade with the construction of the three aforementioned multi-family affordable housing complexes. This relatively recent growth is consistent with local area plans that have identified Bunce Road as a priority improvement area.

Community cohesion in the project area is indicated by the shared community resource of the John D. Fuller, Sr. Recreational/Athletic Complex, which in addition to sports and recreation facilities, offers meeting space, hosts events, and provides a computer technology center.

3. Community Impacts

Community cohesion impacts are possible if crosswalks are not included in the final project design to provide safe pedestrian access across Bunce Road. A lack of crosswalks could isolate residents and users on the east side of the road from the community resource of the John D. Fuller, Sr. recreational/Athletic Complex and the St. John's Free Will Baptist Church. NCDOT is considering including these as part of the project.

Communities throughout the Bunce Road corridor will have reduced access to Bunce Road due to the raised grass median; however, the median will also provide safety benefits to motorists and provides refuge for pedestrians crossing Bunce Road. Channelized U-turns will be provided along the project corridor to maintain full access to all driveways and side streets.

Access to Bunce Road from driveways and neighborhood streets will be limited to right-turns only. Channelized left-turns will be provided at Old Bunce Road, Korean Bethel Presbyterian Church, Distinct Circle, Fredrick Road, and Lagoon Drive. In addition to reduced access, St. John's Free Will Baptist Church will also be impacted by a reduction in the parking lot size.

Impacts to businesses along the corridor will include limited access due to the proposed raised grass median, reduced parking, and the relocation of three businesses due to right of way impacts.

While minority and low income populations are present in the DCIA, 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 and no denial of benefit is expected.

4. Relocation of Residences and Businesses

Thirty residential and two business relocations will result from the proposed project. Please see **Appendix B** for a copy of the Relocation Report and the NCDOT's Policies regarding relocations.

5. Bicycle & Pedestrian Facilities

There are currently no bicycle or pedestrian facilities along Bunce Road; however, heavy pedestrian activity is indicated by worn paths on both sides of Bunce Road. Census data also indicates a high percentage of zero-car households within the DSA. The proposed project will have a positive impact by providing 5-foot sidewalks on each side of Bunce Road throughout the corridor. The proposed project will also provide 14-foot outside lanes to accommodate bicycles. The provision of sidewalks is contingent on a municipal agreement with the City of Fayetteville.

6. Recreational Facilities

The John D. Fuller, Sr. Recreational/Athletic Complex is located off of Old Bunce Road in the northern portion of the project area. It is a private, multi-functional, year-round community facility designed to accommodate a myriad of local, regional, and even national events and activities. With over 36,000 square feet of space, the amenities include a state-of-the-art health and wellness center, a full-sized multi-functional gymnasium, indoor walking track, locker rooms, multi-purpose rooms and classrooms, on-site catering services, a supervised children's play center, computer technology center, as well as on -site public safety officers. Outdoor facilities include a concession stand, athletic fields, sheltered picnic areas, outdoor playgrounds and sports courts.

The facility serves as a community center, providing meeting space and activities for a number of functions including business, corporate, social, educational, recreational, and trade events. Athletic sports leagues (ages 5 to adult) and summer camps for children are also offered at the facility.

The project will have no direct impact to the recreational complex. Access from Bunce Road to the facility will not be affected.

7. Environmental Justice

Title VI of the Civil Rights Act of 1964, protects individuals from discrimination on the grounds of race, age, color, religion, disability, sex, and national origin. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" provides that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations. Special populations may include the elderly, children, the disabled, low-income areas, American Indians and other minority groups.

Executive Order 12898 requires that Environmental Justice principles be incorporated into all transportation studies, programs, policies, and activities. The three environmental justice principals are: 1) to ensure the full and fair participation of all potentially affected communities in the transportation decision-making process, 2) to avoid, minimize or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority or low income populations, and 3) to fully evaluate the benefits and burdens of transportation programs, policies, and activities upon low-income and minority populations.

Census data indicates a notable presence of minority and low income populations meeting the criteria for Environmental Justice within the DSA and minority and low income communities were observed within the DCIA during the site visit. Additionally the Serenity Services center, located at the north end of the project area, serves a population of mentally handicapped adults. The center provides day services to adults who have difficulty with everyday tasks. Program participants engage in weekly outings, which may include walking to the John D. Fuller, Sr. Recreational Complex. Although Serenity Therapeutic Services also manages housing services for this population at other locations, the site on Bunce Road is non-residential.

While minority and low income populations are present in the DCIA, no notable 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 and no denial of benefit is expected. Public involvement efforts have not indicated any concerns related to Environmental Justice Communities. Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the community.

F. Land Use

1. Existing Land Use

The proposed project is located within the City of Fayetteville city limits. The Bunce Road corridor is primarily zoned as a residential district; however, properties at the intersection with Cliffdale Road and Raeford Road are zoned as commercial properties.

a) FAMPO Bicycle and Pedestrian Plan

The *FAMPO Bicycle and Pedestrian Plan* (2009) provides guidelines for Cumberland County to provide a safe and attractive environment needed to promote bicycling and walking as a transportation mode. Under this plan, Bunce Road is proposed as a portion of a bicycle route proposed for STIP inclusion (Route 2). The proposed Route 2 continues south on Bingham Road (recently improved as STIP project U-3311). The plan provides examples of bicycle facilities, both shared and exclusive, that can be combined to form bike routes.

b) FAMPO Bicycle and Pedestrian Connectivity Study

The *FAMPO Bicycle and Pedestrian Connectivity Study* (2011) is a comprehensive analysis of opportunities, barriers, and deficiencies in the bicycle and pedestrian transportation network within Cumberland County and the FAMPO Study Area. The goal of the Connectivity Study is to identify and prioritize existing and proposed routes, facilities, improvements, and issues which will establish a safe and effective bicycle and pedestrian network. This plan identified Bunce Road as a neighborhood corridor, which includes improvements such as sidewalks, signage, and intersection/street crossing improvements along the route in an effort to safely accommodate travel by both foot and non-motorized vehicles.

2. Future Land Use

The project is consistent with local area plans. The proposed typical section includes a 14-foot outside lane, which is consistent with bicycle-friendly cross-sections presented in the *FAMPO Bicycle and Pedestrian Plan (2009), and the FAMPO Bicycle and Pedestrian Connectivity Study (2011).* This project is also consistent with the *FAMPO 2035 Long Range Transportation Plan Update* (2009), which identified U-3424 as a project in need of immediate improvement. Inclusion of sidewalks along the entirety of Bunce Road, proposed as part of the project, is consistent with recommendations in the FAMPO *Bicycle and Pedestrian Connectivity Study.*

The City of Fayetteville is considering developing the site of the former Oaks Trailer Park near the intersection of Bunce Road and Old Bunce Road into a single family low-income housing development with approximately 50 units. If developed, City planning staff indicates that a sidewalk and a bus stop pad for bench and possible shelter would be required at the existing bus stop location near that site. Access points to the development would be from Old Bunce Road and Bunce Road.

The widening of Bunce Road from a two-lane undivided facility to a four-lane divided facility will have visual changes for this corridor. The right-of-way will nearly double in width, from approximately 60 feet to 110 feet. The character of the resulting road will be of an urban thoroughfare rather than a minor thoroughfare or neighborhood collector.

3. Project Compatibility with Local Plans

The proposed project is consistent with local and regional development goals and plans, such as the FMPAO 2035 Long Range Transportation Plan Update (2009). Project U-3424 was

identified as Priority One project.

G. Indirect and Cumulative Effects

The potential for indirect and cumulative effects with this project is low because Bunce Road already exists in the project area and much of the ongoing development has been incorporated into local plans for the area. No substantial changes to travel times and patterns, nor the creation of a transportation or land use node are anticipated. While the implementation of a median will alter entrance and exit patterns, this reduction in access will not result in indirect or cumulative effects. The project will not influence nearby land use nor stimulate growth. Therefore, a detailed indirect and cumulative effects study will not be necessary for this project.

H. Flood Hazard Evaluation

Cumberland County is currently participating in the National Flood Insurance Regular Program. The proposed project will not involve construction activities on or adjacent to Federal Emergency Management Agency (FEMA) regulated streams. NCDOT's Hydraulics Unit will coordinate with the FEMA and local authorities to ensure compliance with applicable floodplain ordinances. The project does not involve any construction within a designated 100-year floodplain.

I. Traffic Noise Analysis

1. Introduction

In accordance with Title 23 Code of Federal Regulations Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise (Title 23 CFR 772) and the North Carolina Department of Transportation Traffic Noise Abatement Policy, each Type I highway project must be analyzed for predicted traffic noise impacts. In general, Type I projects are proposed Federal or Federal-aid highway projects for construction of a highway or interchange on new location, improvements of an existing highway that significantly changes the horizontal or vertical alignment or increases the vehicle capacity, or projects that involve new construction or substantial alteration of transportation facilities such as weigh stations, rest stops, ride-share lots or toll plazas.

Traffic noise impacts are determined through implementing the current Traffic Noise Model (TNM®) approved by the Federal Highway Administration and by following procedures detailed in Title 23 CFR 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 entitled *SR 1410/1411 (Old Bunce Road/Bunce Road) from US 401 (Raeford Road) to SR 1400 (Cliffdale Road)* can be

viewed in the Project Development & Environmental Analysis Unit, Century Center Building A, 1000 Birch Ridge Drive, Raleigh.

2. Traffic Noise Impacts and Noise Contours

The maximum number of receptors in each project alternative predicted to become impacted by future traffic noise is shown in table 12. 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- dB(A) noise level contours measured from the center of the proposed roadway is less than 50 feet and 100 feet, respectively.

Table 12: Predicted Traffic Noise Impacts by Alternative*

Alternatives	Traffic Noise Impacts			
	Residential (NAC B)	Churches/Schools, etc. (NAC C&D)	Businesses (NAC E)	Total Impacts
Existing	0	0	0	0
No-Build	5	0	0	5
Build	58	2	0	60

*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, 5 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 the best fit 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.

5. Noise Barriers

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 that 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.

6. 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 Title 23 CFR Part 772. No additional noise analysis will be performed for this project unless warranted by a major change in the project scope, vehicle capacity or alignment.

In accordance with NCDOT Traffic Noise Abatement Policy, the Federal/State governments are not responsible for providing noise abatement measures for new development for which building permits are issued after the Date of Public Knowledge. The Date of Public Knowledge of the proposed highway project will be the approval date of the Categorical Exclusion (CE). For development occurring after this date, local governing bodies are responsible to insure 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 entitled Air Quality Analysis, dated January 22, 2014 can be viewed at the Project Development & Environmental Analysis Unit, Century Center Building A, 1000 Birch Ridge Drive, Raleigh.

2. Attainment Status

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

3. Mobile Source Air Toxics (MSAT)

a) NEPA Context

The NEPA requires, to the fullest extent possible, that the policies, regulations, and laws of the Federal Government be interpreted and administered in accordance with its environmental protection goals. The NEPA also requires Federal agencies to use an interdisciplinary approach in planning and decision-making for any action that adversely impacts the environment. The NEPA requires, and FHWA is committed to, the examination and avoidance of potential impacts to the natural and human environment when considering approval of proposed transportation projects. In addition to evaluating the potential environmental effects, we must also take into account the need for safe and efficient transportation in reaching a decision that is in the best overall public interest. The FHWA policies and procedures for implementing NEPA are contained in regulation at 23 CFR Part 771.

b) Consideration of MSAT In NEPA Documents

The FHWA developed a tiered approach with three categories for analyzing MSAT in NEPA documents, depending on specific project circumstances:

1. No analysis for projects with no potential for meaningful MSAT effects;
2. Qualitative analysis for projects with low potential MSAT effects; or
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

For projects warranting MSAT analysis, the seven priority MSAT should be analyzed.

This project falls under Category (2) because it is intended to improve the operations of a highway, transit or freight without adding substantial new capacity or without creating a facility

that is likely to meaningfully increase emissions, and the Design Year traffic is not projected to meet or exceed the 140,000 to 150,000 AADT criterion.

c) Qualitative MSAT Analysis

For the preferred alternative in this CE, the amount of MSAT emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for the alternative. Because VMTs estimated for the No Build alternative are the same for the Build alternative, higher levels of MSAT are not expected from the Build Alternative compared to the No Build.

In addition, because the estimated VMT under the Build and No Build Alternative is the same, it is expected there would not be an appreciable difference in overall MSAT emissions. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 80 percent from 2010 to 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations.

The additional travel lanes contemplated as part of the project build alternative will have the effect of moving some traffic closer to nearby homes, and businesses. These localized increases in MSAT concentrations would likely occur throughout the length of the project where the proposed lanes move closer to receptors. However, the magnitude and the duration of these potential increases compared to the No-Build alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. In sum, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

In summary, under the Build Alternative in the design year it is expected there would be reduced MSAT emissions in the immediate area of the project due to EPA's MSAT reduction programs.

4. Project-Specific MSAT

a) Health Impacts 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.

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

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

5. MSAT Conclusion

What we know about mobile source air toxics is still evolving. As the science progresses FHWA will continue to revise and update this 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.

6. Summary

The project is located in Cumberland County, which complies with the National Ambient Air Quality Standards. This project will not add substantial new capacity or create a facility that is likely to meaningfully increase emissions. Therefore, it is not anticipated to create any adverse effects on the air quality of this attainment area. 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 Material

Two sites presently or formerly containing underground storage tanks (USTs) were identified within the project limits. The sites are described in Table 13.

Table 13: Known GeoEnvironmental Impact Sites

Property Location	Property Owner	UST Owner	Facility ID #
500 Bunce Road, Fayetteville, NC 28314	The Pantry Inc.	The Pantry Inc.	0-029301
The Pantry is an active convenience store and gas station located at the intersection of Bunce Road and Cliffdale Road. This site contains 3 active tanks. **This site will present low geoenvironmental impact to the project.**			
Property Location	**Property Owner**	**UST Owner**	**Facility ID #**
777 Bunce Road, Fayetteville, NC 28314	Quick Stop Food Mart Inc.	Quick Stop Food Mart Inc.	0-011297
The Quick Stop Food Mart is a former convenience store and gas station located at the corner of Bunce Road and Beaver Lake Road. This site has 2 tanks that were closed in 1988. **This site will present low geoenvironmental impact to the project.**			

VI. COMMENTS AND COORDINATION

A. Citizens Informational Workshop

A Citizens Informational Workshop was held on October 14, 2013 at the John D. Fuller, Sr. Recreation Center in Fayetteville, NC. The purpose of the workshop was to introduce the project to the community, present preliminary designs, inform stakeholders of the planning process, gather public feedback, and answer questions. The meeting was advertised through local media announcements and a newsletter mailed to citizen households. There were approximately 60 attendees.

Comments, both verbal and written, were received at the workshop. The comment period was open until November 13th, 2013, although any comment sheets received after that date were collected and included in the workshop summary. Comments included concerns regarding access, a need for traffic calming, sidewalks and pedestrian facilities (especially for small children), bicycle accommodations, median width, emergency response, the effect of project improvements to adjacent property values, the cost and funding of project improvements, and the general effectiveness of proposed improvements.

B. Other Agency Coordination

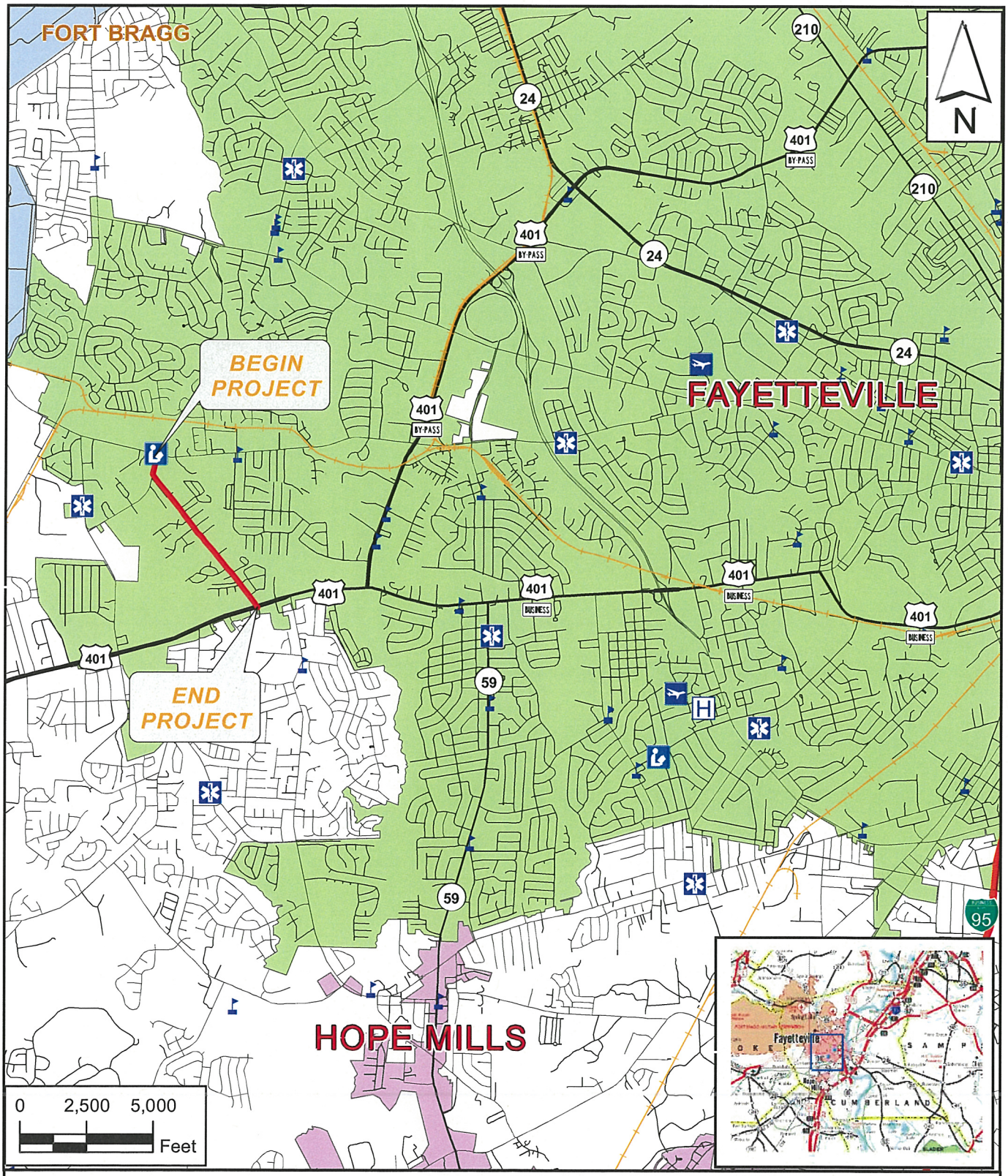
Federal, state, and local agencies were consulted during the preparation of this Categorical Exclusion. Written comments were received and considered from agencies noted with an asterisk (*) during the preparation of this assessment, although no significant issues were raised.

* U.S. Army Corps of Engineers
* U.S. Environmental Protection Agency
* U.S. Fish and Wildlife Service
  National Marine Fisheries Service
  N.C. Department of Cultural Resources
  N.C. DENR - Division of Environmental Health
  N.C. DENR - Division of Forest Resources
  N.C. DENR - Division of Parks and Recreation
  N.C. DENR - Division of Soils and Water Conservation
* N.C. DENR - Division of Water Resources
  N.C. DENR - Natural Heritage Program
  N.C. Department of Public Instruction
* N.C. Wildlife Resources Commission
  Mid-Carolina Council of Governments
  Fayetteville Area Metropolitan Planning Organization
  Cumberland County Commissioners
  City of Fayetteville
* Cumberland County Schools

These comments and related issues, included in **Appendix A**, have been addressed in this document.

VII. CONCLUSION

Based on the studies performed for the proposed project, it is concluded that the project will not result in significant social, economic, or environmental impacts. Therefore, the project is considered to be a Federal Categorical Exclusion, as defined in 40 CFR 1508.4 and 23 CFR 771.117, due to its limited scope and lack of substantial environmental consequences.

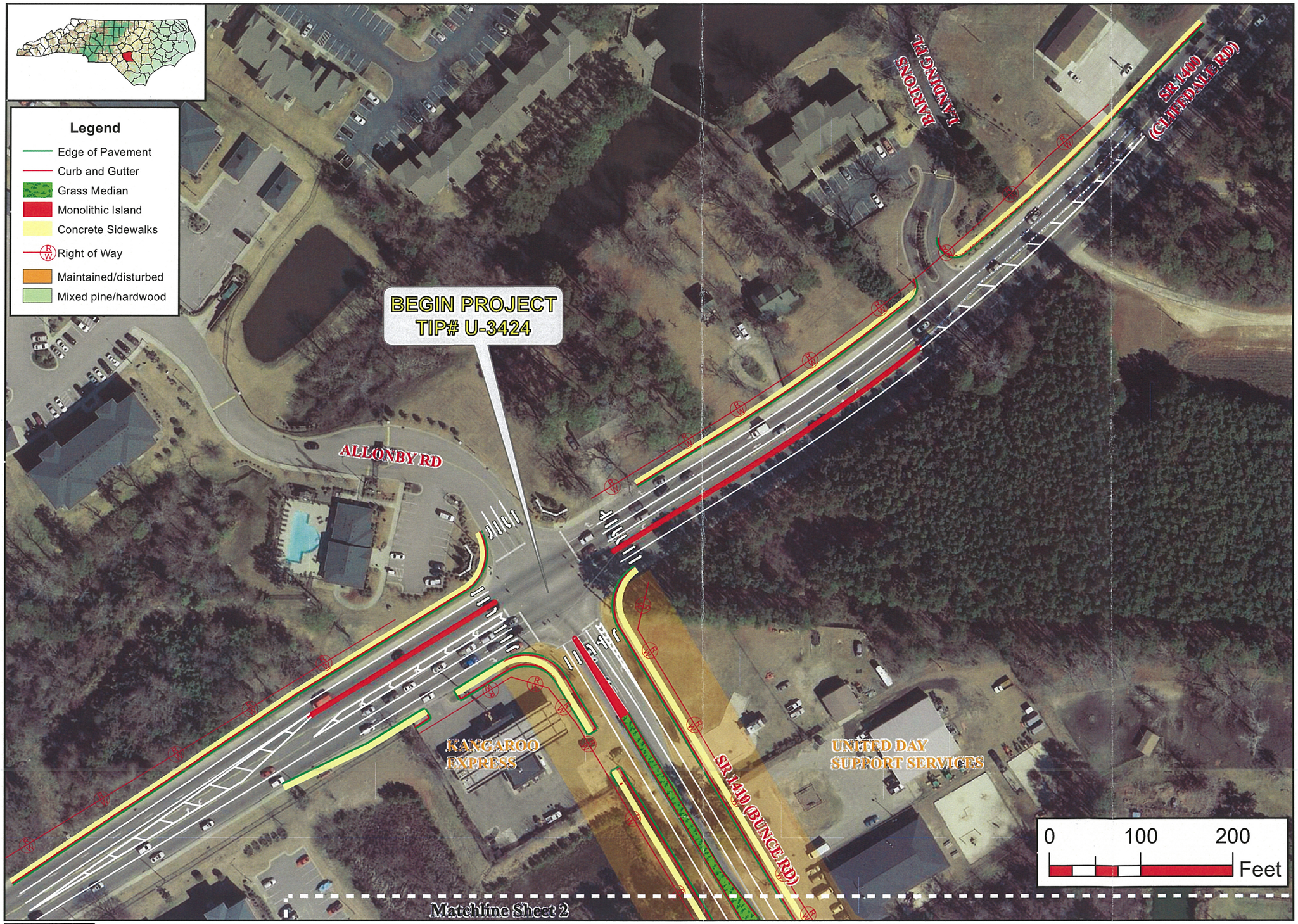


NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

VICINITY MAP
SR 1410/SR 1411 (BUNCE ROAD)
FROM SR 1400 (CLIFFDALE ROAD)
TO US 401 (RAEFORD ROAD)
FAYETTEVILLE
CUMBERLAND COUNTY
TIP PROJECT U-3424

County:	CUMBERLAND
Div: 6	TIP# U-3424
WBS:	34943.1.2
Date:	APRIL 2014

Figure 1



BY: J.Tortorella

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

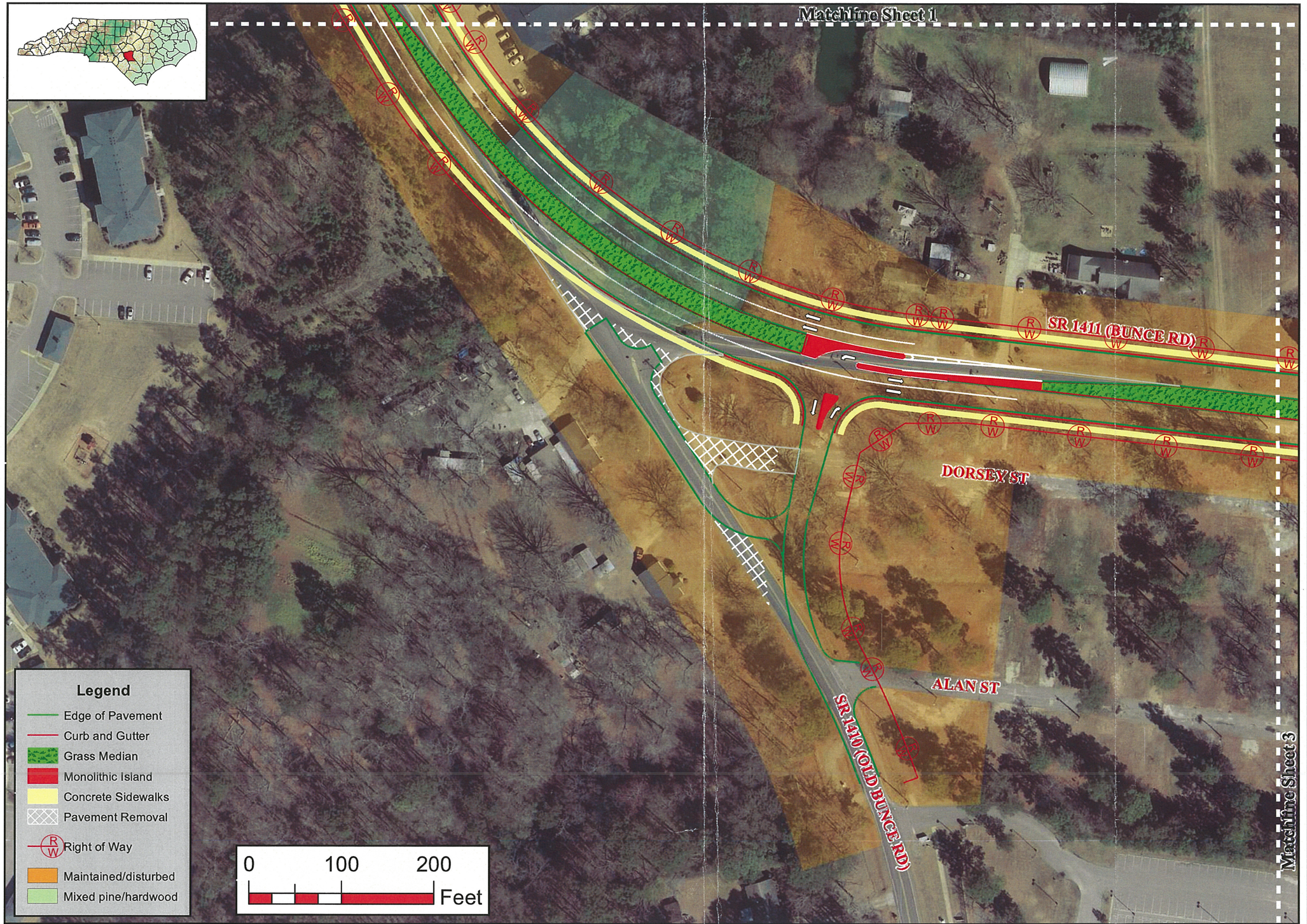
PROJECT FEATURES MAP
WIDENING OF SR 1410/1411 (BUNCE RD) FROM SR 1400 (CLIFFDALE RD) TO US 401 (RAEFORD ROAD)

CUMBERLAND COUNTY
TIP PROJECT U-3424

N

County: CUMBERLAND	
Div: 6	TIP# U-3424
WBS: 34943.1.2	
Date: April 2014	

Figure 2 Sheet 1



BY: J.Tortorella

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

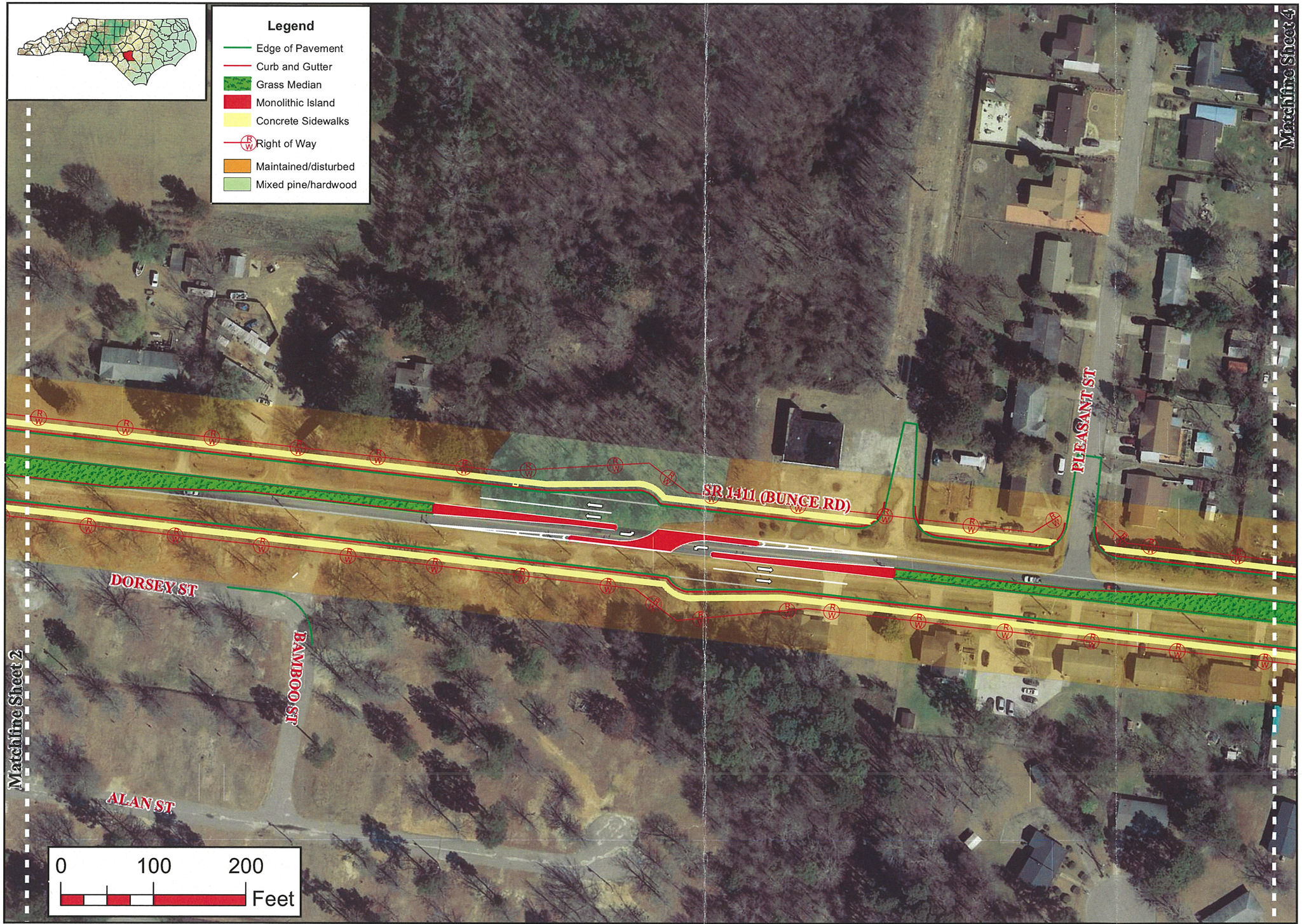
PROJECT FEATURES MAP
WIDENING OF SR 1410/1411 (BUNCE RD)
FROM SR 1400 (CLIFFDALE RD)
TO US 401 (RAEFORD ROAD)

CUMBERLAND COUNTY
TIP PROJECT U-3424

N

County: CUMBERLAND	
Div: 6	TIP# U-3424
WBS: 34943.1.2	
Date: April 2014	

Figure
2
Sheet 2



BY: J.Tortorella

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

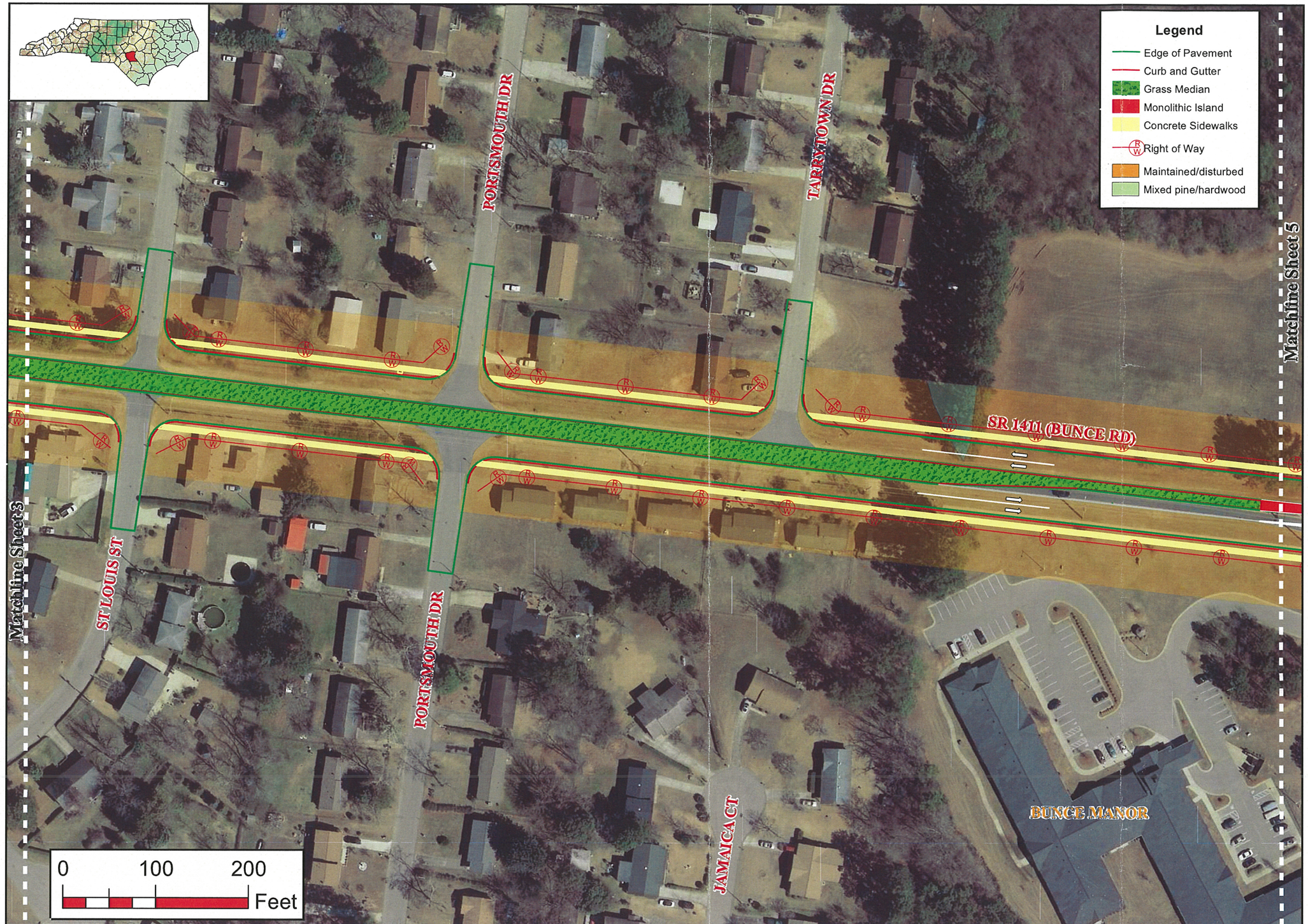
PROJECT FEATURES MAP
WIDENING OF SR 1410/1411 (BUNCE RD) FROM SR 1400 (CLIFFDALE RD) TO US 401 (RAEFORD ROAD)

CUMBERLAND COUNTY
TIP PROJECT U-3424

N

County: CUMBERLAND	
Div: 6	TIP# U-3424
WBS: 34943.1.2	
Date: April 2014	

Figure 2 Sheet 3



BY: J.Tortorella

PROJECT FEATURES MAP
WIDENING OF SR 1411/1410/1411 (BUNCE RD)
FROM SR 1400 (CLIFFDALE RD) TO US 401 (RAEFORD ROAD)

CUMBERLAND COUNTY
TIP PROJECT U-3424

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

N

County: CUMBERLAND

Div: 6 | TIP# U-3424

WBS: 34943.1.2

Date: April 2014

Figure 2 Sheet 4

Legend

- Edge of Pavement
- Curb and Gutter
- Grass Median
- Monolithic Island
- Concrete Sidewalks
- Right of Way
- Maintained/disturbed
- Mixed pine/hardwood

BY: J.Tortorella

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

PROJECT FEATURES MAP
WIDENING OF SR 1410/1411 (BUNCE RD)
FROM SR 1400 (CLIFFDALE RD)
TO US 401 (RAEFORD ROAD)

CUMBERLAND COUNTY
TIP PROJECT U-3424

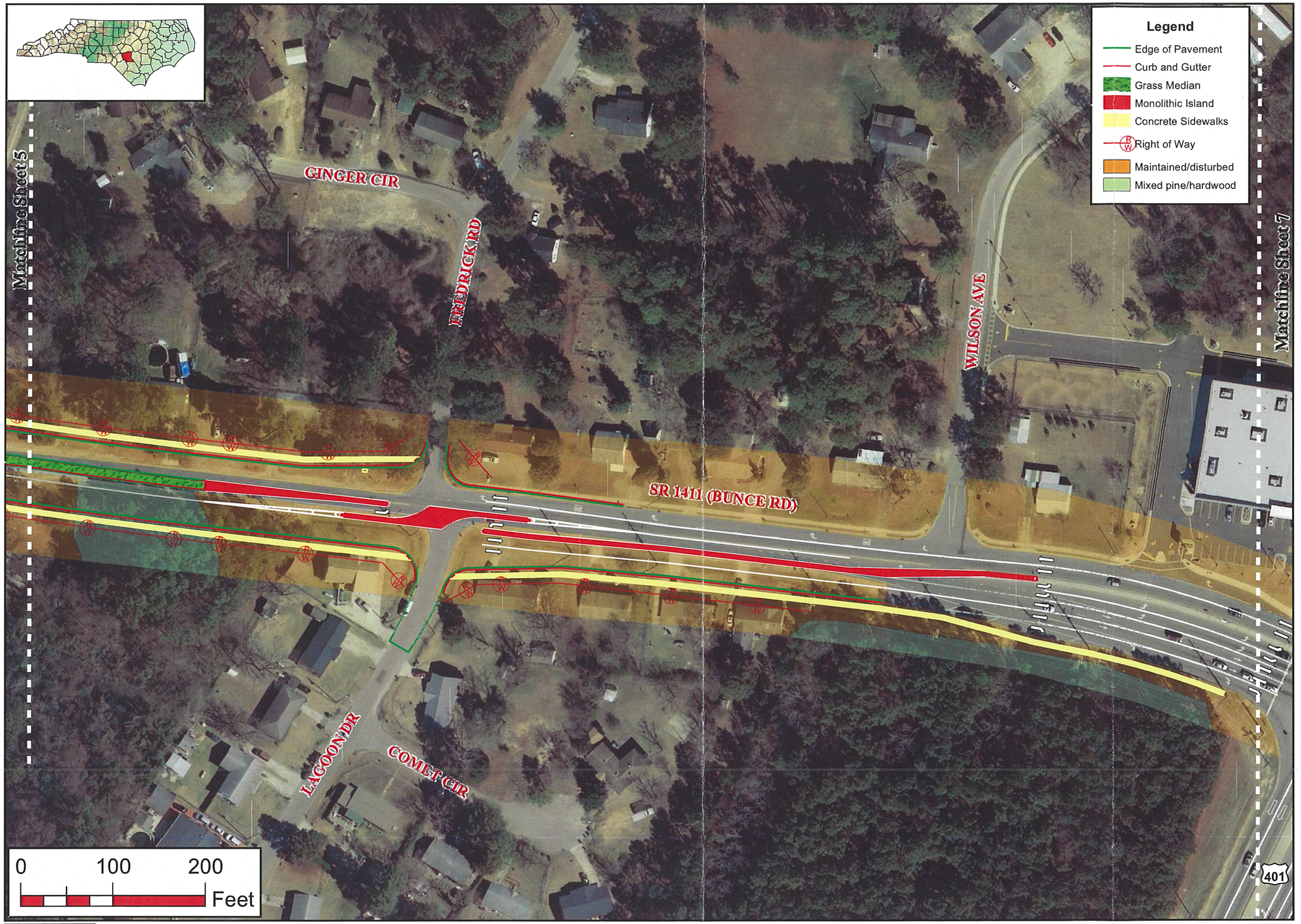
County: CUMBERLAND

Div: 6 | TIP# U-3424

WBS: 34943.1.2

Date: April 2014

Figure 2 Sheet 5



BY: J.Tortorella

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

PROJECT FEATURES MAP
WIDENING OF SR 1410/1411 (BUNCE RD)
FROM SR 1400 (CLIFFDALE RD)
TO US 401 (RAEFORD ROAD)

CUMBERLAND COUNTY
TIP PROJECT U-3424

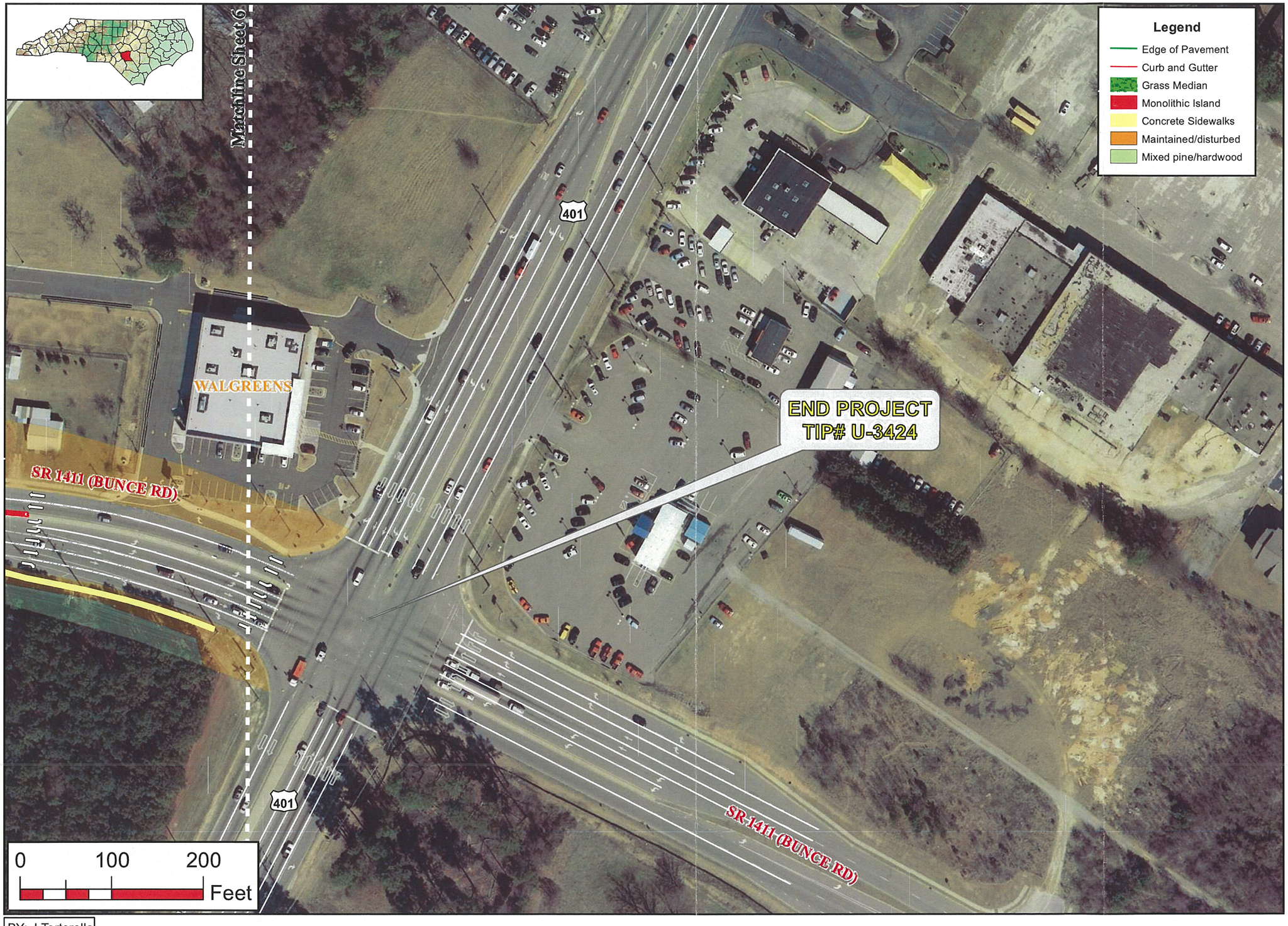
County: CUMBERLAND

Div: 6 | TIP# U-3424

WBS: 34943.1.2

Date: April 2014

Figure 2 Sheet 6



BY: J.Tortorella

PROJECT FEATURES MAP
WIDENING OF SR 1410/1411 (BUNCE RD)
FROM SR 1400 (CLIFFDALE RD)
TO US 401 (RAEFORD ROAD)

CUMBERLAND COUNTY
TIP PROJECT U-3424

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS UNIT

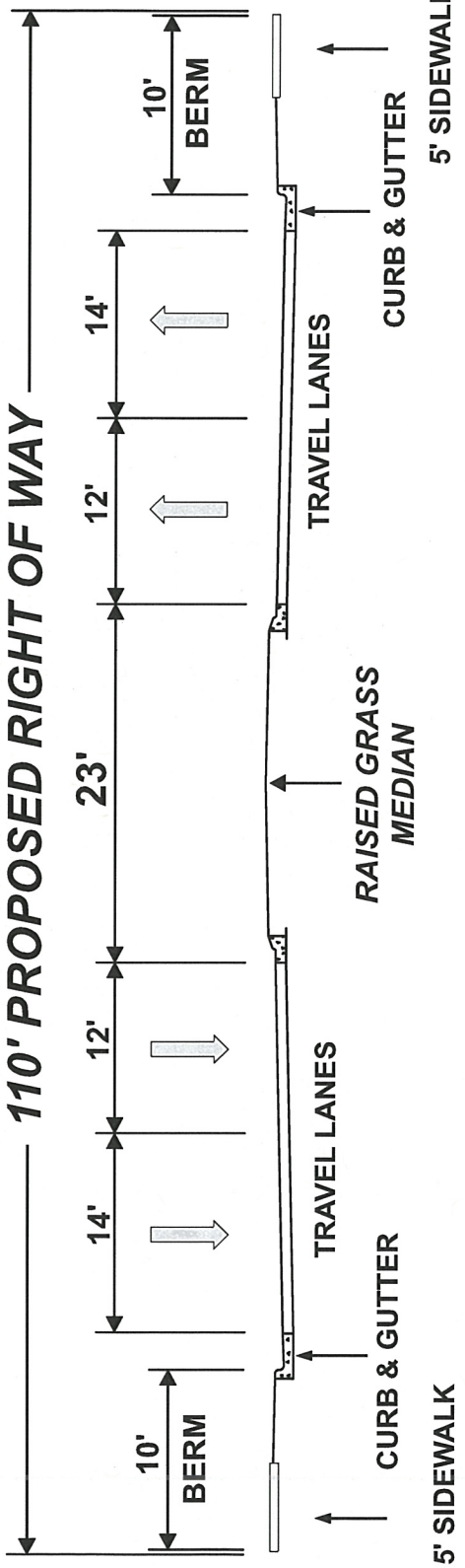
County: CUMBERLAND

Div: 6 | TIP# U-3424

WBS: 34943.1.2

Date: April 2014

Figure
2
Sheet 7



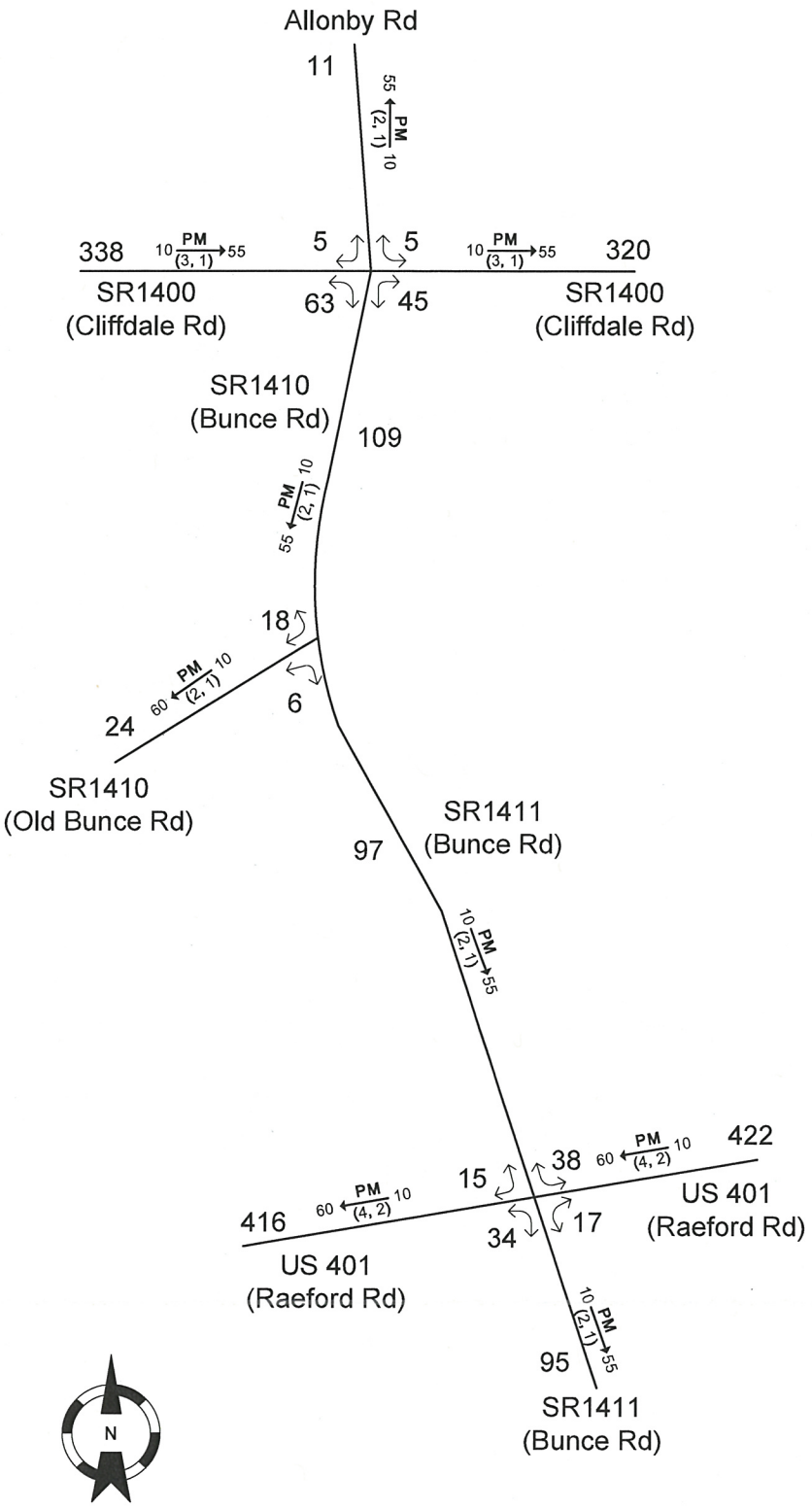
NOT TO SCALE

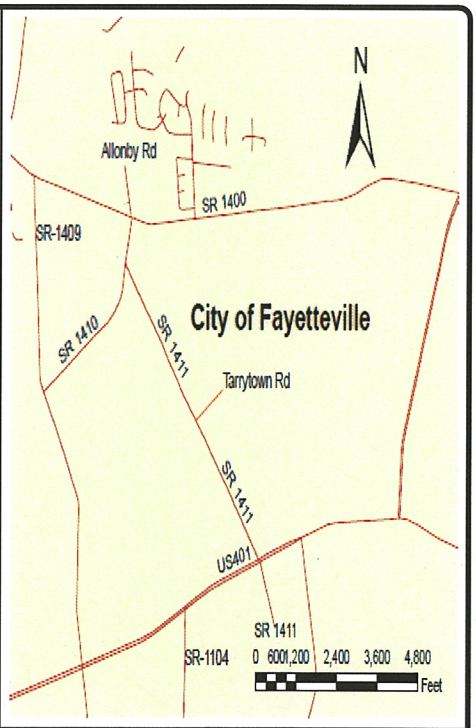
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

PROPOSED TYPICAL SECTION
SR 1410/1411 (BUNCE ROAD) FROM SR 1400 (CLIFFDALE RD) TO US 401 (RAEFORD ROAD)
CUMBERLAND COUNTY
TIP PROJECT U-3424

County:	CUMBERLAND
Div: 6	TIP# U-3424
WBS:	34943.1.2
Date:	APRIL 2014

Figure 3





2011 ANNUAL AVERAGE DAILY TRAFFIC

No Build

SHEET 1 OF 2

L E G E N D

K PM (d, t) D

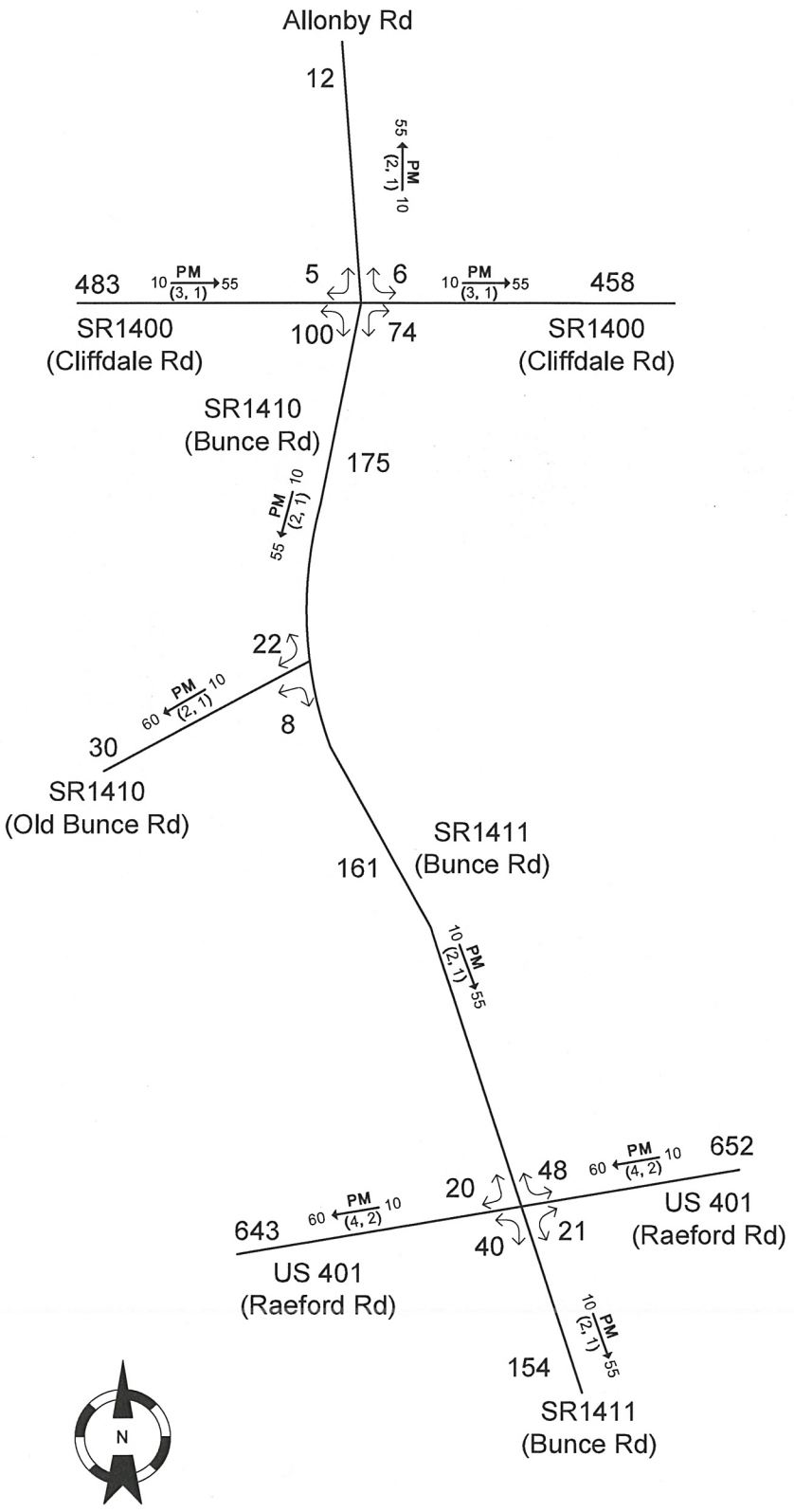
###	No. of Vehicles Per Day (VPD) in 100s
1-	Less than 50 VPD
X	Movement Prohibited
-------	Proposed Roadway
K	Design Hour Factor (%)
PM	PM Peak Period
D	Peak Hour Directional Split
→	Indicates Direction of D
(d,t)	Duals, TT-STs (%)

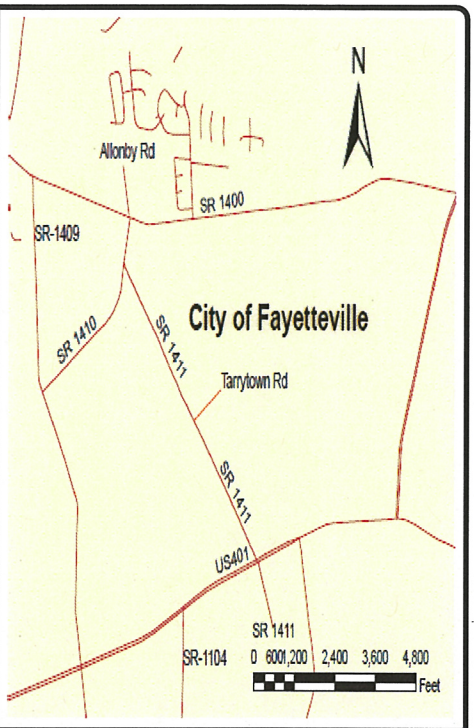
TIP: U-3424 | **WBS:** 34943.1.2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

TRAFFIC FORECAST MAP
2011 ESTIMATED AADT
WIDENING OF SR 1410/1411 (BUNCE RD)
FROM SR 1400 (CLIFFDALE RD)
TO US 401 (RAEFORD ROAD)
CUMBERLAND COUNTY
TIP PROJECT U-3424

APRIL 2014 **FIGURE 4**





2035 ANNUAL AVERAGE DAILY TRAFFIC

Build / No Build

SHEET 2 OF 2

L E G E N D

K PM (d, t) D

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

TIP: U-3424 | **WBS:** 34943.1.2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

TRAFFIC FORECAST MAP
2035 ESTIMATED AADT
WIDENING OF SR 1410/1411 (BUNCE RD)
FROM SR 1400 (CLIFFDALE RD)
TO US 401 (RAEFORD ROAD)
CUMBERLAND COUNTY
TIP PROJECT U-3424

APRIL 2014 **FIGURE 4**

APPENDIX A

AGENCY COMMENTS

United States Department of the Interior

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

September 8, 2011

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 SR 1410 and SR 1411 (Bunce Road) from US 401(Raeford Road) to SR 1400 (Cliffdale Road) in Fayetteville, Cumberland County, North Carolina (TIP No. U-3424). 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).

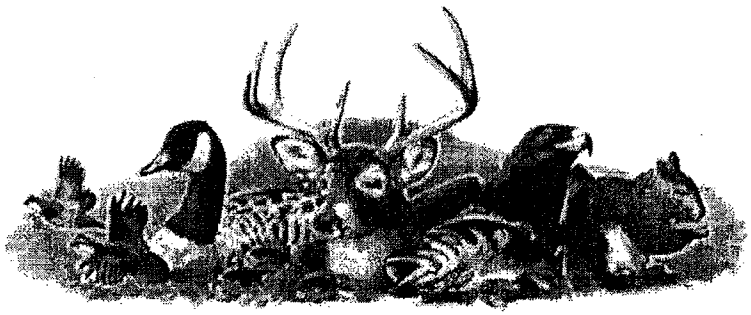
Given the urban/suburban and previously disturbed nature of the project area, the Service does not have any specific concerns for this project. Impacts to fish and wildlife resources should be minimal. It is unlikely that any suitable habitat for federally threatened or endangered species occurs within the project area. 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,

Gary Jordan

for Pete Benjamin
Field Supervisor

cc: Chris Militscher, USEPA, Raleigh, NC



North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

MEMORANDUM

TO: Matthew Potter, PE
Project Development Engineer, NCDOT

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: October 12, 2011

SUBJECT: Response to the start of study notification from the N. C. Department of Transportation (NCDOT) regarding fish and wildlife concerns for the proposed widening of SR 1410 and SR 1411 in Fayetteville, Cumberland County, North Carolina. TIP No. U-3424

This memorandum responds to a request from the 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. 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 (COE). If the COE is not consulted, the person delineating wetlands should be identified and criteria listed.

4. Cover type maps showing acreages of upland wildlife habitat impacted by the proposed project. Potential borrow sites should be included.

5. The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).

6. Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.

7. A cumulative impact assessment section which analyzes the environmental effects of highway construction and quantifies the contribution of this individual project to environmental degradation.

8. A discussion of the probable impacts on natural resources which will result from secondary development facilitated by the improved road access.

9. If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects should be included in the environmental document, and all project sponsors should be identified.

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

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

REPLY TO
ATTENTION OF:

September 22, 2011

Regulatory Division

Action ID No. SAW-1997-7798; U-3424, Cumberland County

Dr. Gregory J. Thorpe, Ph.D.
Environmental Management Director
North Carolina Department of Transportation
Project Development & Environmental Analysis
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Dr. Thorpe:

Reference is made to your letter of September 1, 2011, regarding the proposed widening of SR1410 and SR1411 (Bunce Road) from US 401 (Raeford Road) to SR 1400 (Clifdale Road) in Fayetteville, Cumberland County, North Carolina. The letter requested information and comments to assist in evaluating potential environmental impacts of the project.

We have reviewed our records and the subject documents and determined that the construction of this project may impact streams and/or wetlands within the work corridor. A Federal Finding of No Significant Impact, dated August 10, 2000, was completed for this project and its states that the project would impact 0.3 acres of wetlands. Please be aware that impacts associated with the discharge of fill material into jurisdictional waters of the United States are subject to our regulatory authority pursuant to Section 404 of the Clean Water Act. Any discharge of excavated or fill material into waters of the United States and/or any adjacent wetlands would require Department of the Army (DA) permit authorization. The type of DA authorization required (i.e., general or individual permit) will be determined by the location, type, and extent of jurisdictional area impacted by the project, and by the project design and construction limits.

Until additional data is furnished which details the extent of the construction limits of the proposed project, and an onsite inspection is completed with regard to determinations of the presence of jurisdictional waters in the project area, we are unable to provide specific comments concerning DA permit requirements or a recommendation of alternatives. To assist you with determining permitting requirements, we recommend that you perform a detailed delineation of the streams and/or wetlands present on the project site. When this information becomes available, it should be forwarded to our office for review and comment, as well as a determination of DA permit eligibility.

Should you have any further questions related to DA permits for this project, please contact me at (910) 251-4829.

Sincerely,

Ronnie Smith
NCDOT, Project Manager
Wilmington Regulatory Field Office

Copies Furnished:

Mr. Matthew Potter
North Carolina Department of Transportation
Project Development & Environmental Analysis
1548 Mail Service Center
Raleigh, NC 27699-1598

Mr. Mason Herndon
NCDENR-DWQ
225 Green Street, Suite 214
Fayetteville, NC 28301-5094

Mr. Jim Rerko
Division Environmental Officer, Division 6
North Carolina Department of Transportation
Post Office Box 1150
Fayetteville, NC 28302

Mr. Chris Militcher
United States Environmental Protection Agency
c/o Federal Highway Administration
310 New Bern Avenue, Room 206
Raleigh, NC 27601

CESAW-RG-L/Dale Beter
CESAW-RG/Scott McLendon

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

September 26, 2011

MEMORANDUM

To: Gregory J Thorpe, Ph.D., NCDOT

From: Belinda Henson, NC Division of Water Quality, Fayetteville Regional Office Belinda H. Henson

Subject: Scoping comments on proposed widening of SR 1410 and SR 1411 (Bunce Rd) from US 401 (Raeford Rd) to SR 1400 (Cliffdale Rd) in Fayetteville, Cumberland County, Federal Aid Project No. STP-1411(9), WBS No.34943, TIP U-3424.

Reference your correspondence dated September 1, 2011 in which you requested comments for the referenced project. Preliminary analysis of the project reveals the potential 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 to Beaver Creek	Cape Fear	C	18-31-24-5	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. The proposed project is located within the jurisdictional limits of the Phase II NPDES Stormwater Program. Development of a stormwater management plan shall be coordinated with NCDWQ and the local delegated authority.

General Project Comments:

2. The environmental document shall 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 assessment 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 *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.

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

4. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, 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. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.

7. If a bridge is being replaced with a hydraulic conveyance other than another bridge, NCDWQ believes the use of a Nationwide Permit may be required. Please contact the US Army Corp of Engineers to determine the required permit(s).

8. If the old bridge is removed, no discharge of bridge material into surface waters is allowed unless otherwise authorized by the US ACOE. Strict adherence to the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.

9. 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) shall not be placed in the stream when possible.

10. 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.*

11. 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.

12. 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 should 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.

13. Placement of culverts and other structures in waters, streams, and wetlands shall be 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.

14. 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 shall 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.

15. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3624/Nationwide Permit No. 6 for Survey Activities.

16. 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.

17. All work in or adjacent to stream waters shall be conducted in a dry work area unless otherwise approved by NCDWQ. 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 should be used to prevent excavation in flowing water.

18. Sediment and erosion control measures shall not be placed in wetlands and streams.

19. Borrow/waste areas shall avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas could precipitate compensatory mitigation.

20. 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.

21. Heavy equipment shall 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.

22. In most cases, NCDWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure shall be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed and restored to the natural ground elevation. The area shall be stabilized with grass and planted with native tree species. Tall fescue shall not be used in riparian areas.

23. 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.

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 Mason Herndon at (910) 308-4021.

cc: Ronnie Smith, US Army Corps of Engineers, Wilmington Field Office (electronic copy only)
Clarence Coleman, Federal Highway Administration
Greg Burns, PE, Division 6 Engineer
Jim Rerko, Division 6 Environmental Officer (electronic copy only)
Chris Militscher, Environmental Protection Agency (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission (electronic copy only)
Mike Lawyer, NCDWQ Fayetteville Regional Office (electronic copy only)
Sonia Carrillo, NCDWQ Central Regional Office (electronic copy only)
File Copy

APPENDIX B

NCDOT RELOCATION ASSISTANCE PROGRAM/ RELOCATION REPORTS

DIVISION OF HIGHWAYS RELOCATION PROGRAMS

It is the policy of NCDOT to ensure comparable replacement housing will be available prior to construction of state and federally-assisted projects. Furthermore, the North Carolina Board of Transportation has the following three programs to minimize the inconvenience of relocation:

- Relocation Assistance
- Relocation Moving Payments
- Relocation Replacement Housing Payments or Rent Supplement

As part of the Relocation Assistance Program, experienced NCDOT staff will be available to assist displacees with information such as availability and prices of homes, apartments, or businesses for sale or rent and financing or other housing programs. The Relocation Moving Payments Program provides for payment of actual moving expenses encountered in relocation. Where displacement will force an owner or tenant to purchase or rent property of higher cost or to lose a favorable financing arrangement (in case of ownership), the Relocation Replacement Housing Payments or Rent Supplement Program will compensate up to $22,500 to owners who are eligible and qualify and up to $5,250 to tenants who are eligible and qualify.

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 (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 officer is assigned to each highway project for this purpose.

The relocation officer 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 at least a 90-day written notice after NCDOT purchases the property. Relocation of displaced persons will be offered in areas not generally less desirable in regard to public utilities and commercial facilities. Rent and sale prices of replacement property will be within the financial means of the families and individuals displaced and will be reasonably accessible to their places of employment. The relocation officer will also assist owners of displaced businesses, non-profit organizations and farm operations in searching for and moving to replacement property.

All tenant and owner residential occupants who may be displaced will receive an explanation regarding all available options, such as (1) purchase of replacement housing, (2) rental of replacement housing, either private or public, or (3) moving existing owner-occupant

housing to another site (if possible). The relocation officer will also supply information concerning other state and federal programs offering assistance to displaced persons and will provide other advisory services as needed in order to minimize hardships to displaced persons in adjusting to a new location.

The Moving Expense Payments Program is designed to compensate the displacee for the costs of moving personal property from homes, businesses, non-profit organizations and farm operations acquired for a highway project. Under the Replacement Program for Owners, NCDOT will participate in reasonable incidental purchase payments for replacement dwellings such as attorney's fees, surveys, appraisals, and other closing costs and, if applicable, make a payment for any increased interest expenses for replacement dwellings. Reimbursement to owner-occupants for replacement housing payments, increased interest payments and incidental purchase expenses may not exceed $22,500 (combined total), except under the Last Resort Housing provision.

A displaced tenant may be eligible to receive a payment, not to exceed $5,250, to rent a replacement dwelling or to make a down payment, including incidental expenses, on the purchase of a replacement dwelling. The down payment is based upon what the state determines is required when the rent supplement exceeds $5,250.

It is a policy of the State that 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. 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 the Social Security Act or any other federal law.

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. It is not believed this program will be necessary on the project, since there appear to be adequate opportunities for relocation within the area.

EIS RELOCATION REPORT

North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S. ☐ CORRIDOR ☐ DESIGN

WBS ELEMENT:	34943.1.2	COUNTY	Cumberland	Alternate 1 of 1 Alternate
T.I.P. NO.:	U-3424			
DESCRIPTION OF PROJECT:	Proposed widening of SR 1411 (Bunce Rd) from SR 1400 (Cliffdale Rd) to US 401 (Raeford Rd)			

ESTIMATED DISPLACEES

Type of Displacees	Owners	Tenants	Total	Minorities
Residential	12	18	30	10
Businesses	1	1	2	2
Farms	0	0	0	0
Non-Profit	0			

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).
	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? **18-24 Months**

INCOME LEVEL

0-15M	15-25M	25-35M	35-50M	50 UP
0	0	15	15	0

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	0	250-400	0	40-70M	0	250-400	0
70-100M	12	400-600	0	70-100M	100+	400-600	0
100 UP	0	600 UP	18	100 UP	0	600 UP	50+
TOTAL	12		18		100+		50+

REMARKS (Respond by Number)

1. Will be needed if the gas station/ convenience store has to be relocated

3. Other gas stations in the area will continue to provide service

4. 1400 Sq. Ft hair Salon with appx 4 employees; All minorities
*See Notes Below pertaing to the Gas Station, as the USTs will have to be relocated, if not the entire business

6. Realtor.com shows multiple homes for sale in theprice range for this area.

8. Due to the probability of elderly or low income displacees

9. Elderly / Handicapped

11. Cumberland county has public housing.

12. Realtor.com lists multiple homes and apartments in the price range for this area.

13. Probability of low income or fixed income displacees

14. Realtor.com. one of the businesses listed above is in a house not a purpose built building.

Notes Continued Below:

	19 Aug 13			8/30/13
R. A. Marshall Division Right of Way Agent	Date		Relocation Coordinator	Date

FRM15-E

Note:

1. If the TCE cannot be removed from the apartment buildings between Stations 55+00 and 60+00, Left, then add 16 more tenant displaces to the total above.

2. The Kangaroo Gas Station / convenience store is a potential relocate. The R/W and PUE do not hit the building but they hit the underground starage tanks. The tanks may or may not be able to be relocated. Four (4) employees work at the Gas Station, and there are eight (8) Gas pumps to service vehicles.

3. Four (4) Employees work at the Beauty Salon.

APPENDIX C

CULTURAL RESOURCES REVIEW

Project Tracking No. (Internal Use)

12-05-0002

NO SURVEY REQUIRED FORM

PROJECT INFORMATION

Project No:	**U-3424**	*County:*	Cumberland
WBS No:	34943.1.2	*Document:*	CE
F.A. No:	STPDA-1411(9)	*Funding:*	☐ State ☒ Federal

Federal (USACE) Permit Required? ☐ Yes ☐ No *Permit Type:* Unknown as of yet

Project Description:

The project calls for the proposed widening of SR 1411 (Bunce Road) and a small portion of SR 1410 (Old Bunce Road) from U.S. 401 (Raeford Road) to SR 1400 (Cliffdale Road) in Fayetteville, Cumberland County. The archaeological Area of Potential Effects (APE) for the project is defined as a 1.34-mile (2.16 km) long corridor running northwest to southeast. The corridor is typically 200 feet (60.96 m) wide extending 100 feet (30.48 m) on either side of the road from its present center. The APE also encompasses 600 feet of SR 1410 heading south from its junction with SR 1411. The corridor widens in this area to the east of SR 1410 and joins with the APE corridor along SR 1411.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

SR 1411 situated in the western portion of Fayetteville and just southeast of the Fort Bragg Army Base in Cumberland County, North Carolina. The project area is plotted on the western edge of the Fayetteville USGS 7.5' topographic quadrangle and along the eastern edge of the Clifdale quadrangle (Figure 1).

A map review and site file search was conducted at the Office of State Archaeology (OSA) on May 8, 2012. It was found that the project area was previously reviewed and cleared by OSA in 1997, 1998, and in 2000 (ER 97-9029). OSA recommended no further archaeological work along SR 1411. However due to the time lapse, changes in design criteria, and changes in the project area, a new environmental and cultural study was recommended. An archaeological reconnaissance survey of the project area was carried out on May 10, 2012. No previously recorded archaeological sites have been identified within or adjacent to the APE. In addition, no existing National Register of Historic Places (NRHP), State Study List (SL), Locally Designated (LD), Determined Eligible (DE), or Surveyed Site (SS) properties are within or adjacent to the APE.

Inspection of the project area revealed that the entire APE is heavy disturbed by development mostly from residential properties (Figure 2). Utility corridors and wide drainage ditches also run along both sides of SR 1411 and 1410 encompassing much of the project area. The few wooded lots show signs of ground disturbance with large push piles and ditches throughout them. These lots appear to have been once partially cleared for homes in the recent past. Although soils appear well drained from the USDA soil map, the extensive ground disturbance makes it very unlikely intact and significant deposits will be present within the APE. Also, no natural streams are crossed with freshwater between 100 m and 200 m away.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The project area was last reviewed and cleared by OSA in 2000. Since this time, no new archaeological sites have been identified within the area. The current review encompassed the new project limits and found that ground disturbance was severe. Due to impacts from past development, it is very unlikely for significant cultural resources to be affected by the current project. If construction should affect subsurface areas beyond the defined APE, further archaeological consultation might be necessary. No further archaeological work is recommended for the proposed widening of SR 1411 and a small portion of SR 1410 in Cumberland County.

SUPPORT DOCUMENTATION

See attached: Map(s), Previous Survey Info, Photos, Correspondence, Photocopy of notes from county survey.

FINDING BY NCDOT CULTURAL RESOURCES PROFESSIONAL NO SURVEY REQUIRED

ARCHAEOLOGY HISTORIC ARCHITECTURE (CIRCLE ONE)

5/14/11

NCDOT Cultural Resources Specialist Date

Project Tracking No. (Internal Use)

12-05-0002

NO HISTORIC PROPERTIES PRESENT/AFFECTED FORM

PROJECT INFORMATION

Project No:	U-3424	*County:*	Cumberland
WBS No:	34942.1.2	*Document:*	CC
F.A. No:	STPDA-1441(9)	*Funding:*	☐ State ☒ Federal

Federal (USACE) Permit Required? ☐ Yes ☒ No *Permit Type:*

Project Description:

Proposed widening of SR 1411 (Bunce Road) from US 401 (Raeford Rd) to SR 1400 (Cliffdale Rd) in Fayetteville. Right-of-way will be increased from 60 feet to 110 feet and the speed limit will increase from 35 mph to 45 mph. Project length is 1.34 miles.

SUMMARY OF FINDINGS

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

Historic Architecture/Landscapes

☐ There are no properties over fifty years old within the project's area of potential effects

☒ There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.

☒ There are no proper National Register-listed or Study Listed properties within the project's area of potential effects

☒ All properties greater than 50 years of age located in the APE have been considered and all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

☒ There are no historic properties present or affected by this project.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:
Review of HPO quad maps, HPOweb GIS mapping, historic designations roster and indexes was conducted on 5/3/12. Based on this review, there are no existing NR, SL, DE, LD or SS properties in the Area of Potential Effects (APE). According to Cumberland County GIS property records, however, there are multiple properties within the APE that are over the age of fifty years old or just reaching the age of fifty years old that have not been previously recorded. Thus, a survey was required to assess these properties for eligibility and potential effects.

A field survey was conducted on 6/21/12. During the field survey, all pre-1962 properties within the APE along Bunce Road were surveyed and assessed. Numbering approximately twelve with the oldest dating to 1947, these properties primarily consisted of one-story ranch-style houses, none of which were architecturally or historically significant enough to merit consideration for eligibility to the National Register of Historic Places (NRHP). Several of the ranch houses are included in subdivisions planned just off of Bunce Road, such as "Marlboro." No commercial properties or churches on Bunce Road were over the age of fifty years old and thus did not need to be assessed. The survey yielded nothing of architectural or historical interest to be considered eligible for the NRHP; therefore NCDOT makes a finding of "No Historic Properties Present/Affected."

SUPPORT DOCUMENTATION

See attached: Map(s), Photos.

Signed:

Megan Privette 6/22/12

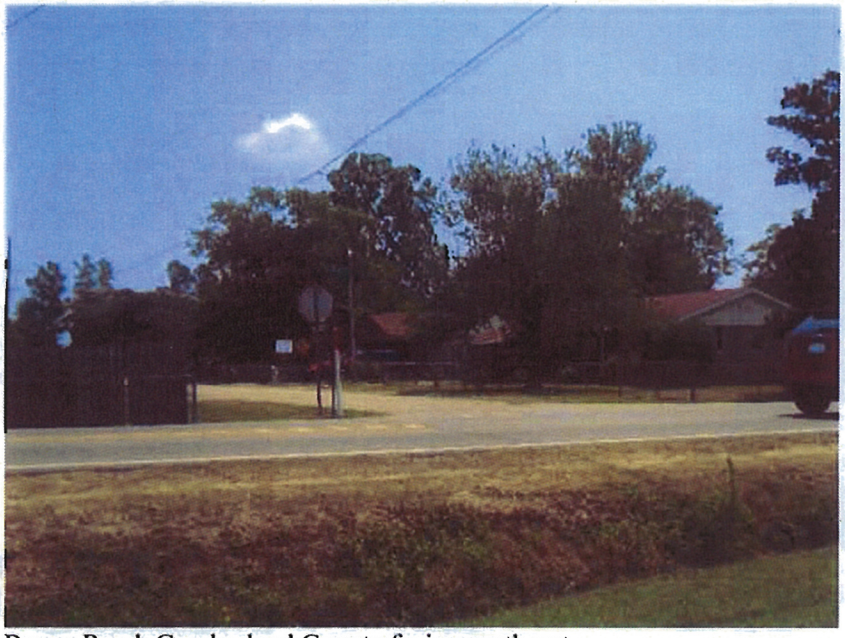
Cultural Resources Specialist, NCDOT Date

Bunce Road, Cumberland County, facing south.

Ranch house (ca. 1955), Bunce Road, Cumberland County, facing south.

Bunce Road, Cumberland County, facing north.

Bunce Road, Cumberland County, facing south.



Bunce Road, Cumberland County facing northeast.