Administrative Action – State Environmental Assessment / Finding of No Significant Impact

Eastern Avenue (S.R. 1770) and N. Old Carriage Road (S.R. 1603) Improvements in Nash County, North Carolina

PREPARED FOR

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04/19/2019

Eastern Avenue and N. Old Carriage Road Improvements
Nash County, North Carolina
WBS Nos. 50214.1.1 and 47133.1.1
STIP Project Nos. R-5720 and U-5996

Administrative Action
State Environmental Assessment/Finding of No Significant Impact
APRIL 2019

DOCUMENT PREPARED BY VHB ENGINEERING NC, P.C.

4/26/2019

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PROJECT COMMITMENTS

Eastern Avenue and N. Old Carriage Road Improvements

Nash County, North Carolina

WBS Nos. 50214.1.1 and 47133.1.1

STIP Project Nos. R-5720 and U-5996

The following special commitments have been agreed to by NCDOT:

Division 4

- A pre-application meeting with the US Army Corps of Engineers (USACE) and NC Department of Water Resources (NCDWR) will be scheduled prior to permit applications being submitted.

Environmental Analysis Unit

- The Biological Surveys Group will conduct surveys to confirm there will be no effects to the Dwarf wedgemussel, Yellow lance, or Atlantic pigtoe.
- The Historic Architecture Team will continue to coordinate with the State Historic Preservation Office to confirm there will be no effects to resources that may be potentially eligible for listing on the National Register of Historic Places.

Geotechnical Engineering Unit

- Field verification of known hazardous waste sites and identification of unknown sites will be performed during final design and prior to right-of-way acquisition.

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Description of Proposed Action

The North Carolina Department of Transportation (NCDOT) Division 4 is proposing two transportation projects that would improve travel between Nashville and Rocky Mount (see Appendix A, Figure 1 – Vicinity Map). The proposed projects, STIP Project Nos. R-5720 and U-5996, are included in the NCDOT 2018-2027 State Transportation Improvement Program (STIP). Both projects are located in Nash County, North Carolina (see Appendix A, Figure 2 – Study Area Map), and funded by State Highway Trust Funds, with right-of-way (ROW), utilities, and construction scheduled to begin in Fiscal Year (FY) 2020.

STIP Project No. R-5720 proposes to widen Eastern Avenue from Red Oak Road to N. Old Carriage Road. The total project length for R-5720 is approximately 2.5 miles. The widened section would consist of a four-lane divided facility with a raised median and paved shoulders, with some sections of curb and gutter. R-5720 also includes the construction of roundabouts at Regency Drive, Kamlar Road, and Old Spring Hope Road; and upgrades to the existing roundabout at Nash Community College's Eastern Avenue driveway. See Appendix B – Preliminary Plans.

STIP Project No. U-5996 proposes to widen N. Old Carriage Road from Eastern Avenue to Reges Store Road / Green Hills Road. The total project length for U-5996 is approximately 1.3 miles. The widened section would consist of a four-lane divided facility with a raised median and curb and gutter through the U.S. 64 interchange, and a three-lane facility with shoulders from the U.S. 64 interchange north to Reges Store Road / Green Hills Road. U-5996 also proposes to replace the existing bridge over U.S. 64, improve the interchange with N. Old Carriage Road, and construct roundabouts at eastbound U.S. 64, westbound U.S. 64, and Green Hills Road / Reges Store Road. See Appendix B – Preliminary Plans.

2

Purpose and Need for the Proposed Projects

Purpose and Need

Eastern Avenue and N. Old Carriage Road are in Nash County, between the Town of Nashville and the City of Rocky Mount, and south of Red Oak. Both roadways, which are classified as Minor Arterials, are highly traversed due to their proximity to these municipalities and their location near I-95 and U.S. 64. Neither Eastern Avenue or N. Old Carriage Road is part of the Strategic Transportation Corridor.

The primary purpose for the proposed improvements to Eastern Avenue and N. Old Carriage Road is to increase capacity and reduce the potential for crashes. Improvements to Eastern Avenue and N. Old Carriage Road are needed to accommodate anticipated growth and development in the growing towns of Rocky Mount, Nashville, and Red Oak. The projects would have an added benefit of improving safety along the corridors.

Traffic Operations

A Traffic Capacity Analysis was approved by NCDOT in April 2018.[1] The 2016 estimated Annual Average Daily Traffic (AADT) volumes along Eastern Avenue range between 7,600 to 13,000 vehicles per day (vpd). The 2016 estimated AADT volumes along N. Old Carriage Road range between 5,700 to 13,000 vpd.

By the design year, 2040, a slight increase in delay and queuing relative to existing conditions is expected due to increased growth. However, some locations on Eastern Avenue and N. Old

[1] 2018. VHB. Traffic Capacity Analysis for STIP U-5996/R-5720, SR 1770 (Eastern Avenue) and SR 1603 (Old Carriage Road) Improvements.

Carriage Road are expected to experience a heavy increase in delay.

The traffic operation analyses for existing conditions were conducted based on current roadway geometrics. Intersection peak hour turning movements were converted from the AADT forecast data using the Intersection Analysis Utility (IAU) program. Currently, all approaches operate at acceptable levels of service (LOS [LOS D or better]).

When analyzing the LOS with the projected volumes for the Design Year (2040) under the No Build scenario, all intersections and merge/diverge segments are projected to experience an increase in delay during the AM and PM peak hours. Multiple intersections and merge/diverge segments are anticipated to operate at LOS E or F during AM and PM peak hours.

Crash Data

Five-year crash data (12/01/2012 – 11/30/2017) was obtained from NCDOT for the two separate corridors in the study area. Crash rates for Eastern Avenue do not exceed their respective critical crash rates (see Table 1). Along N. Old Carriage Road, the total crash rate, non-fatal injury crash rate, and the wet crash rate all exceed the critical crash rate (see Table 2). No fatalities or pedestrian accidents occurred on either corridor. The total crashes for both corridors are presented in Table 3.

Table 1: Eastern Avenue Crash Rates (12/01/2012 – 11/30/2017)

Rate	Crashes	Crashes per 100 MVM	Statewide Rate[2]	Critical Rate[3]
Total	72	164.43	247.39	287.63
Fatal	0	0.00	1.18	5.02
Non-Fatal Injury	23	52.53	76.16	99.00
Night	15	34.26	65.51	86.77
Wet	11	25.12	46.04	64.05

[2] 2013-2015 statewide crash rate for urban 2-lane, undivided for Secondary Routes in North Carolina.

[3] Based on the statewide crash rate (95% level of confidence).

Table 2: N. Old Carriage Road Crash Rates (12/01/2012 – 11/30/2017)

Rate	Crashes	Crashes per 100 MVM	Statewide Rate[4]	Critical Rate[5]
Total	103	**433.47**	247.39	302.57
Fatal	0	0.00	1.18	6.95
Non-Fatal Injury	30	**126.25**	76.16	107.72
Night	19	79.96	65.51	94.93
Wet	23	**96.79**	46.04	71.04

Table 3: Crash Type Summary

Crash Type	Crashes	%
Angle	28	18
Animal	4	3
Backing Up	2	1
Fixed Object	18	11
Head On	2	1
Left Turn	17	11
Movable Object	1	1
Other Non-Collision	3	2
Overturn / Rollover	1	1
Parked Motor Vehicle	1	1
Ran Off Road	2	1
Rear End	65	41
Right Turn	7	4
Sideswipe	7	4

[4] 2013-2015 statewide crash rate for urban 2-lane, undivided for Secondary Routes in North Carolina.

[5] Based on the statewide crash rate (95% level of confidence).

Other Transportation Projects in the Area

There are several transportation projects programmed in the NCDOT 2018-2027 STIP and/or under construction that are located within or near the project study area, (see Appendix A, Figure 3 – STIP Projects Located Within 3 Miles).

- *EB-5852* – Construct sidewalk from Sixth Street/Aviation Avenue, Brake Street/Washington Street to Alston Street/Cuddington Lane in Nashville. (Construction – FY 2025)
- *U-5026* – Convert the existing Sunset Avenue grade separation with I-95 to an interchange, widen Sunset Avenue between N. Old Carriage Road and Halifax Road, and extend the existing collector-distributor along I-95 at U.S. 64 to the south of the proposed Sunset Avenue interchange. (ROW and Construction – FY 2020)
- *I-5934* – Conduct pavement and bridge rehabilitation on I-95 from Sunset Avenue to N. Halifax Road. (Construction – FY 2023)
- *I-5761* – Conduct pavement rehabilitation from Oak Level Road to Sunset Avenue. (Under Construction)
- *I-5725* – Conduct pavement rehabilitation from 1-mile north of NC 58 to Oak Level Road. (Under Construction)

3

Existing Conditions

The following sections describe existing conditions in the study area for both projects. The study area's environmental features are shown in Figure 4 – Environmental Features Map (see Appendix A).

Right-of-Way and Access Control

Eastern Avenue is currently a four-lane divided facility near the intersection with Red Oak Road, and transitions to a two-lane facility near Forest View Drive. The existing ROW on Eastern Avenue is approximately 150 feet at the project's western terminus, and transitions to approximately 60 feet near Eastern Avenue's intersection with Forest View Road. The posted speed limit for most of the corridor is 55 miles per hour (mph).

South of U.S. 64, N. Old Carriage Road is currently a three-lane facility (one travel lane in each direction with a center turn lane). North of the U.S. 64 interchange, N. Old Carriage Road is a two-lane facility. The existing ROW on N. Old Carriage Road varies from approximately 55 feet near Nash Community College to approximately 110 feet near the project's northern terminus. The posted speed limit for N. Old Carriage Road is 45 mph.

Both roadways provide uncontrolled access to commercial, residential, and institutional uses within the study area.

Intersections

There are 15 intersections within the project study area, including six signalized intersections, eight unsignalized intersections, and one roundabout intersection. Two of the unsignalized

intersections are located at the interchange of N. Old Carriage Road and U.S. 64.

Structures

A Preliminary Hydraulic Study was prepared in October 2018.[6] There is one major stream crossing site for each project. Along Eastern Avenue, there is an existing reinforced concrete box culvert (RCBC) at UT to Stoney Creek. This stream crossing has a drainage area of 1.0 square miles, and the current land use for the drainage area of this structure is primarily rural agricultural with some residential and industrial use. Along N. Old Carriage Road, there is an existing 4-span, 181-foot long cored slab bridge at Stoney Creek. Each span is approximately 45-feet long. This stream crossing has a drainage area of 104.0 square miles, and the current land use for the drainage area of this structure is primarily rural agricultural with some urban area near the Town of Nashville.

Utilities

A Preliminary Utility Report[7] was prepared in March 2019. Utilities are available from various providers within the vicinity of the proposed projects. Electricity is provided by Duke Energy Progress, and there are overhead utility lines and power poles along both project corridors. AT&T, Suddenlink, and Century Link provide telecommunications services for the study area. Rocky Mount Public Utilities provides natural gas service to customers in Nash County.

The City of Rocky Mount owns water and sanitary sewer lines located within the project limits. The City of Rocky Mount operates a Sanitary Sewer Lift Station located within the project limits on N. Old Carriage Road south of Reges Store Road.

The Town of Nashville provides water and sewer utilities to all properties within town limits and in certain sections of their extraterritorial jurisdiction. The Town of Nashville operates a water vault/valve station located within the project limits on Eastern Avenue at Kamlar Road.

Multimodal Accommodations

Existing sidewalks within the study area are limited. There are limited pedestrian accommodations in the commercial area near the western terminus of Eastern Avenue. There are no existing bicycle, pedestrian, greenway, or other active transport facilities located in the majority of the study area.

[6] 2018. MI Engineering. Preliminary Hydraulic Study for TIP Project No's. U-5996 (SR 1603, Old Carriage Rd.) & R-5720 (SR 1770, Eastern Ave.) Division 4, Nash County.

[7] 2019. So-Deep I SAM NC. Preliminary Utility Report for NCDOT TIP R-5720, U-5996, and U-5026 in Nash County.

Transit Facilities

Rocky Mount's Tar River Transit is a public transportation service providing fixed-route bus service throughout the City of Rocky Mount, and rural general public para-transit transportation for Nash and Edgecombe counties. Tar River Transit operates Route 8, the Nash Community College / Little Easonburg Shuttle, Monday – Friday from 7:15 AM to 5:45 PM. Within the study area, Route 8 follows Eastern Avenue and N. Old Carriage Road. Nash Community College serves as Route 8's only stop within the study area.

4

Alternative Development

No Action Alternative

Under the No Action Alternative, NCDOT would not construct roadway improvements on Eastern Avenue or N. Old Carriage Road. The No Action Alternative would include routine maintenance and road repairs to Eastern Avenue and N. Old Carriage Road and account for other projects listed in NCDOT's 2018-2027 STIP. The No Action Alternative would not meet the projects' purpose and need.

Proposed Projects – Eastern Avenue and N. Old Carriage Road Improvements

The proposed projects take into consideration the 2040 future year traffic projections by adding one through lane in each direction to create four-lane, median-divided facilities. The addition of the through lanes provides additional traffic capacity along both corridors. The raised medians help to reduce the potential for left-turn and head on collisions.

A common design theme across both projects is the construction of roundabouts. Roundabouts are circular intersections that require entering traffic to yield the ROW to the traffic already in the intersection. This keeps traffic in the roundabout flowing and prevents traffic backups and delay. There are several reasons why roundabouts can be preferable over conventional intersections. Roundabouts help to address safety and congestion concerns at intersections, and they are designed to promote a continuous, circular flow of traffic. Roundabouts typically operate with shorter vehicle delays than other intersections, especially during non-peak traffic times. At traditional intersections with stop signs or traffic signals, the most serious types of crashes are T-

bone, left-turn, and head-on collisions. With roundabouts, these types of crashes are reduced because vehicles are traveling in the same direction at lower speeds. Drivers must slow down and yield to traffic before entering a roundabout. The collisions that do occur are typically minor.

With roundabouts in place, all vehicles, including trucks, can make U-turns more easily, which is important as many driveways and minor intersections would be converted from full movement to right-in, right-out operations. Through the construction of medians and roundabouts, the proposed projects would improve mobility and safety along the corridors by providing additional capacity and reducing conflict points.

Other Alternatives Considered

A number of other alternatives were considered including Alternative Modes of Transportation, the Travel Demand Management (TDM) Alternative, the Transportation Systems Management (TSM) Alternative, and a conventional intersection design. These preliminary alternatives, which are briefly discussed below, would not address the proposed projects' purpose and need and are therefore not carried forward in this document for detailed evaluation.

Alternative Modes of Transportation

Mass transit (buses and trains) and bicycle and pedestrian accommodations are examples of alternative modes of transportation that may help reduce congestion and delay. As previously indicated, the study area is currently served by Tar River Transit. However, only providing additional accommodations for alternative modes of transportation would not address the purpose and need for the proposed projects.

Travel Demand Management (TDM)

TDM measures, such as carpooling and alternative work schedules are potential ways to reduce congestion and delay. However, these measures are not controlled by NCDOT, and would not address the purpose and need for the proposed projects because they would not provide additional capacity for anticipated development in the study area.

Transportation Systems Management (TSM)

TSM improvements involve increasing the available capacity of a roadway within the existing ROW without reconstruction or installation of additional lanes to the existing road. Physical TSM improvements include striping, signalization, signing, and minor road realignments. Operational TSM improvements include signal timing changes and speed restrictions. TSM improvements

alone would not address the purpose and need for the proposed projects because it would not provide additional capacity for anticipated development in the study area.

Conventional Design

Two intersection design alternatives were considered for Eastern Avenue and N. Old Carriage Road – conventional (traffic signals and stop signs) and roundabouts. During the development of conceptual designs, the intersection design alternatives were presented to stakeholders from local governments. Due to the benefits offered by roundabouts, and the ability for the project corridors to better align with the goals and visions of the growing local municipalities, NCDOT dismissed the conventional design alternative from further consideration, as the roundabout design more fully meets the projects' purpose and need.

Selection of Recommended Alternative

Due to the benefits offered by roundabouts, and the ability for the project corridors to better align with the goals and visions of the local municipalities, the proposed projects were selected as the recommended alternative.

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Proposed Improvements for the Recommended Alternative

Typical Sections

On Eastern Avenue, the predominant typical section includes two 12-foot travel lanes in each direction, 4-foot paved shoulders, and a raised median that varies in width between 17.6-feet and 23-feet. Near the project's western terminus, there is a short segment of curb and gutter.

The typical section for N. Old Carriage Road from Eastern Avenue through the U.S. 64 interchange includes two 12-foot travel lanes in each direction, curb and gutter, a 10-foot berm along the southbound lanes, and an 18-foot berm along the northbound lanes. The 10-foot and 18-foot berm widths allow for the future construction of a sidewalk and multiuse path, respectively as a separate project. The proposed projects do not include pedestrian accommodations. North of the U.S. 64 interchange, the typical section includes one 12-foot travel lane in each direction, a 12-foot center turn lane, and 8-foot shoulders. See Appendix A, Figure 5 – Typical Sections, for each section of the project corridor.

Proposed Right of Way and Access Control

The ROW required for the proposed projects varies throughout both corridors, with the proposed roadway typical sections ranging from approximately 40 to 110 feet. Additional ROW would be needed for utilities and drainage which is likely to exceed the existing ROW; therefore, ROW acquisition would be required for the proposed projects. The amount of ROW acquisition varies throughout the corridor and is based on shifts in the proposed alignments due to existing constraints, such as topography changes, and minimizing impacts to residential and business

properties.

With the exception of the N. Old Carriage Road segment north of the U.S. 64 interchange, the proposed projects include construction of a center median, which would change access along the corridors by limiting left turns. The proposed projects include multiple roundabouts and several breaks in the medians for left turns and U-turns along both corridors.

Intersections

No new intersections are proposed; however, the projects include the construction of several roundabouts. Along Eastern Avenue, roundabouts are proposed at Regency Drive, Kamlar Road, and Old Spring Hope Road. Additionally, the existing roundabout at Nash Community College's Eastern Avenue driveway would be upgraded. Along N. Old Carriage Road, roundabouts are proposed at the Nash Community College entrance, eastbound U.S. 64, westbound U.S. 64, and Green Hills Road / Reges Store Road. See Appendix B – Preliminary Plans.

Structures

The 2018 Preliminary Hydraulic Study recommended that the existing structure at Stoney Creek be retained as currently exists, and the existing structure at UT to Stoney Creek be retained and extended upstream approximately 15-feet and downstream approximately 55-feet. Instead of extending the existing structure at UT to Stoney Creek, NCDOT Division 4 is planning a cast-in-place replacement. Analysis at all the discharge points would be conducted during final hydraulic design because of the expected increase in discharge from the added impervious area associated with the proposed projects.

Traffic Operations

Based on the 2018 Traffic Capacity Analysis, providing additional through lanes would add capacity. The proposed projects would result in improved operations over the No Build conditions, which is projected to result in several intersections and merge/diverge segments operating at LOS E or F. With the proposed projects, all intersections operate at an acceptable level of service (LOS D or better) when compared to the future traffic operations without the improvements in place. Additionally, the increased capacity would reduce expected collision types that are often associated with congested conditions, such as rear-end collisions. Adding a median-divided facility would decrease the potential for head-on and same street left-turn conflicts by providing space between the opposing directions.

Estimated Costs

The cost estimates prepared for the proposed projects in March 2019 identify ROW costs of $4,740,000 and $1,650,000 for N. Old Carriage Road and Eastern Avenue, respectively. Current STIP estimates for the proposed projects are presented in Table 4: Project Cost Estimates

Table 4: Project Cost Estimates

	Prior Year(s)	ROW	Utilities	Construction	Total Cost
R-5720	$1,000,000	$12,252,000	$1,470,000	$16,986,000	$31,708,000
U-5996	$1,000,000	$3,609,000	$1,000,000	$23,940,000	$29,549,000
TOTAL	$2,000,000	$15,861,000	$2,470,000	$40,926,000	$61,257,000

[1] 2018-2027 STIP, December 2018.

6

Environmental Effects

Natural Environment

For NCDOT projects, the evaluation of natural resources includes biotic resources, water resources, wetlands, and federally protected species. This section provides a summary of the 2019 Natural Resources Technical Report[8] for this project. Field investigations were conducted in January and June 2018. A site visit with the United States Army Corps of Engineers (USACE) was conducted in November 2018.

Biotic Resources

Terrestrial Communities

Five terrestrial communities were identified in the study area, including Mesic Mixed Hardwood Forest, Bottomland Hardwood Forest, Dry-Mesic Oak-Hickory Forest, Pine Stand, and Maintained/Disturbed. The acreage of the terrestrial communities is shown in Table 5. Approximately 78 percent of the study area is comprised of maintained/disturbed land. Terrestrial communities in the study area may be impacted by project construction through grading and paving activities associated with the proposed widening.

[8] 2019. VHB. Natural Resources Technical Report for N. Old Carriage Road and Eastern Avenue in Nash County, North Carolina.

Table 5: Terrestrial Communities*

Community	Coverage (acres)
Mesic Mixed Hardwood Forest	3.8
Bottomland Hardwood Forest	2.5
Dry-Mesic Oak Hickory Forest	25.1
Pine Stand	8.2
Maintained/Disturbed	142.0
Total	181.6

* Includes roads and impervious surfaces.

Water Resources

Water resources in the study area are part of the Tar-Pamlico Basin—United States Geological Survey (USGS) Hydrologic Unit 03020101.

Streams

Three streams were identified in the study area (see Table 6 below).

Table 6: Streams within the Study Area

Stream Name	Map ID	NCDWR Index Number	Best Usage Classification	Bank Height (ft)	Bankful width (ft)	Depth (in)
Stony Creek (Bodies Millpond)	Stony Creek	28-68	C; NSW	7	25	48
UT to Stony Creek	SA	28-68	C; NSW	3	3	8
UT to Stony Creek	SB	28-68	C; NSW	3	6	6

C = Aquatic Life, Secondary Recreation, Fresh Water; NSW = Nutrient Sensitive Waters

Surface Waters

Three surface waters were identified in the study area, which are not jurisdictional. The proposed projects would not impact these surface waters.

Water Supply Watersheds

Surface Water Classifications are designations applied to surface water bodies, such as streams, rivers and lakes, which define the best uses to be protected within these waters (for example swimming, fishing, drinking water supply) and carry with them an associated set of water quality standards to protect those uses (North Carolina Department of Environmental Quality [NCDEQ], 2016). There are no Outstanding Resource Waters (ORW), High Quality Waters (HQW), or water supply watersheds (WS-I or WS-II) within or within 1.0 mile downstream of the study area. A

WS-IV watershed (Tar River [Rocky Mount]) is present in the study area on Eastern Avenue near its junction with N. Old Carriage Road.

Post-construction structural Stormwater Control Measures (SCMs) would be designed to provide treatment of stormwater quality as well as control potential increases in peak flow rates caused by added impervious area. Siltation of adjacent areas and streams due to project construction would be minimized with stringent use and maintenance of the standard erosion control measures and devices.

Jurisdictional Considerations

Surface waters and wetlands fall under the broad category of Waters of the United States, as defined in Section 33 of the Code of Federal Regulations (CFR) Part 328.3. Any action that proposes to dredge or place fill material into surface waters or wetlands falls under the jurisdiction of the USACE under Section 404 of the Clean Water Act.

Streams

All streams identified within the study area were determined to be jurisdictional. Table 7 below provides details on each stream and the anticipated impacts from the proposed projects. Two of the three streams within the study area are anticipated to be impacted, for a combined total of 375 linear feet. All the jurisdictional streams have been designated as warm water streams for the purposes of stream mitigation and are subject to the river basin buffer rules.

Table 7: Jurisdictional Streams in the Study Area

Map ID	Length (ft.)	Classification	Compensatory Mitigation Required	River Basin Buffer	Impacts (ft.) from Proposed Projects[a]
Stony Creek	328.24	Perennial	Yes	Subject	0
SA	161.14	Perennial	Yes	Subject	161
SB	352.24	Perennial	Yes	Subject	214
Total	**841.62**				**375**

[a] Based on preliminary designs of the proposed projects with anticipated ROW (including public utility easements).

Streamside riparian zones within the study area are protected under provisions of the Tar-Pamlico River Basin Buffer Rules administered by North Carolina Department of Water Resources (NCDWR). All streams identified within the study area are subject to buffer rule protection. Potential impacts to protected stream buffers would be determined once a final alignment and design have been determined. A summation of these buffer impacts will be

included in the 404 permitting package.

Wetlands

According to the U.S. Environmental Protection Agency (USEPA) and the USACE, wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Five jurisdictional wetlands were identified within the study area and are part of the Tar-Pamlico River Basin (see Table 8 below). All the wetlands are classified as Bottomland Hardwood Forest under the North Carolina Wetland Assessment Method (NCWAM) and riparian (hydrologic). The total area of wetlands within the study area is 1.90 acres. The NCDEQ wetland ratings range from 73-82. Two wetlands, with a combined amount of approximately 0.16 acres, may be impacted by the proposed projects.

Table 8: Jurisdictional Wetlands in the Study Area

Map ID	NCWAM Classification	NCDWQ Wetland Rating	Hydrologic Classification	Area (ac.)	Impacts (ac.) from Proposed Projects[a]
WA	Bottomland Hardwood Forest	77	Riparian	0.17	0.16
WB	Bottomland Hardwood Forest	82	Riparian	0.57	0.00
WC	Bottomland Hardwood Forest	73	Riparian	0.71	0.00
WD	Bottomland Hardwood Forest	73	Riparian	0.42	0.0014
WE	Bottomland Hardwood Forest	73	Riparian	0.03	0.00
			Total	**1.90**	**0.16**

[a] Based on preliminary designs of the proposed projects with anticipated ROW (including public utility easements).

Federally Protected Species

The Endangered Species Act (ESA; 16 United States Code [U.S.C.] § 1531 et seq.) provides for the conservation of species that are endangered or threatened and is intended to protect and recover these species and the ecosystems on which they depend. The ESA prohibits the take of federally-listed fish and wildlife species.

As of January 7, 2019, the United States Fish and Wildlife Service (USFWS) currently list six federally

protected species under the ESA for Nash County (see Table 9: Federally-Protected Species Listed for Nash County). A brief description of each species' habitat requirements follows, along with the Biological Conclusion rendered based on the survey results of the study area.

Table 9: Federally-Protected Species Listed for Nash County

Name	Federal Status	Habitat Present	Biological Conclusion
Dwarf wedgemussel	E	Yes	MA-NLAA
Red-cockaded woodpecker*	E	Yes	No Effect
Tar River spinymussel	E	Yes	MA-NLAA
Michaux's sumac	E	Yes	No Effect
Yellow lance	T	Yes	MA-NLAA
Atlantic pigtoe	ARS (PT)	Yes	Unresolved

ARS (PT) – At Risk Species (Proposed Threatened)
E – Endangered
MA-NLAA – May Affect, Not Likely to Adversely Affect
T – Threatened
* Historic record (species was last observed in the County more than 50 years ago)

Dwarf wedgemussel

USFWS optimal survey window: year round

Biological Conclusion: May Affect – Not Likely to Adversely Affect

The USFWS has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the USACE, the North Carolina Wildlife Resources Commission (NCWRC), and NCDOT for the dwarf wedgemussel in eastern North Carolina. The PBO covers the following activities in Divisions 1-8: bridge replacements with bridges/repairs/rehabilitations; culvert replacements or extensions; and bridge to culvert replacements. This project falls under the culvert replacement or extension activity and is located within a 12-digit Section 7 HUC but not within 0.25 miles of identified stream reaches or designated critical habitat. The programmatic determination for dwarf wedgemussel under these conditions is May Affect – Not Likely to Adversely Affect. A review of North Carolina Natural Heritage Program (NHP) records on or updated January 2019 indicates no known occurrences within 1.0 mile of the study area.

Red-cockaded woodpecker

USFWS optimal survey window: year round; November-early March (optimal)

Biological Conclusion: No Effect

The red-cockaded woodpecker (RCW) typically occupies open, mature stands of southern pines, particularly longleaf pine (*Pinus palustris*), 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. Pine stands were observed throughout the study area during field surveys on January 11, 2018. All stands were less than thirty years old. There were individual pines that appeared greater than 60 years old within the study area; however, these pines were interspersed within mixed hardwood forests, and therefore would not meet the requirements for a half-mile foraging survey. Additionally, detailed surveys for this species were not required due to its historic status within the County. A review of NHP records updated in January 2019 indicates no known occurrences within 1.0 mile of the study area. Therefore, the projects will have no effect on this species.

Tar River spinymussel

USFWS optimal survey window: year round

Biological Conclusion: May Affect – Not Likely to Adversely Affect

The USFWS has developed a PBO in conjunction with the FHWA, the USACE, the NCWRC, and NCDOT for the Tar River spinymussel in eastern North Carolina. The PBO covers the following activities in Divisions 1-8: bridge replacements with bridges/repairs/rehabilitations; culvert replacements or extensions; and bridge to culvert replacements. This project falls under the culvert replacement or extension activity and is located within a 12-digit Section 7 HUC but not within 0.25 mile of identified stream reaches or designated critical habitat. The programmatic determination for Tar River spinymussel under these conditions is May Affect – Not Likely to Adversely Affect. A review of NHP records on or updated January 2019 indicates no known occurrences within 1.0 mile of the study area.

Michaux's sumac

USFWS optimal survey window: May-October

Biological Conclusion: No Effect

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 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, periodic fire) maintains its open habitat.

A habitat level survey was conducted on January 11, 2018, and detailed surveys were conducted on June 6, 2018. Maintained roadsides, powerlines, and utility rights-of-way are located throughout the study area. Most areas are of marginal habitat; however, eight locations in the northeast portion of the study area were determined to be good habitat for Michaux's sumac. These locations were composed of recently cleared areas that appear to be mowed on an annual or biannual frequency, as evidenced by the size of the existing shrubs and the exclusion of taller vegetation. No Michaux's sumac was found. A review of NHP records, updated January 2019, indicates no known occurrences within 1.0 mile of the study area. Therefore, the projects would have no effect on this species.

Yellow lance

USFWS optimal survey window: year round

Biological Conclusion: May Affect – Not Likely to Adversely Affect

The USFWS has developed a PBO in conjunction with the FHWA, the USACE, the NCWRC, and NCDOT for the yellow lance in eastern North Carolina. The PBO covers the following activities in Divisions 1-8: bridge replacements with bridges/repairs/rehabilitations; culvert replacements or extensions; and bridge to culvert replacements. This project falls under the culvert replacement or extension activity and is located within a 12-digit Section 7 HUC but not within 0.25 mile of identified stream reaches or designated critical habitat. The programmatic determination for Yellow Lance under these conditions is May Affect – Not Likely to Adversely Affect. A review of NHP records on or updated January 2019 indicates no known occurrences within 1.0 mile of the study area.

Atlantic pigtoe

USFWS optimal survey window: year round

Biological Conclusion: Unresolved

This information will be provided by the NCDOT BSG. A review of NHP records in January 2019 indicates no known occurrences within 1.0 mile of the study area.

Bald and Golden Eagle Protection Act

The bald eagle is protected under the Bald and Golden Eagle Protection Act, which is under the regulatory purview of the USFWS. Habitat for the bald eagle primarily consists of mature forests 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 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 December 31, 2017 using color aerial photography. Field scientists identified several water bodies that are large and sufficiently open enough to be considered potential feeding sources for bald eagles. Since foraging habitat was identified within the review area, a survey of the study area and the area within 660 feet of the project limits was conducted on January 11, 2018. No nests were found. The study area is primarily commercial and agricultural, with fragmented patches of early to mid-successional forests, and these conditions do not provide ideal habitat for bald eagles to nest. Only a few stands within the study area contain trees large enough to support a nest. A review of NHP records updated in January 2019 indicates no known occurrences within 1.0 mile of the study area. Due to suboptimal nesting habitat, marginal feeding sources, no known occurrences, and minimal impact anticipated, it has been determined that this project would not affect this species.

Human Environment

The following sections discuss potential impacts to cultural resources, community resources, and air quality, as well as potential impacts from traffic noise.

Cultural Resources

Historical, architectural, archeological, and cultural resources encompass a range of sites, properties, and physical resources relating to human activities, society, and cultural institutions. North Carolina General Statute (NCGS) 121-12 establishes a procedure for the review of state

undertakings that affect historic properties. NCGS 121-12 states that the head of any state agency having direct or indirect jurisdiction over a proposed state or state-assisted undertaking, or the head of any state department, board, commission, or independent agency having authority to build, construct, operate, license, authorize, assist, or approve any state or state-assisted undertaking, shall, prior to approval for the undertaking, take into account the effect of the undertaking on any property listed in the National Register of Historic Places (NRHP) pursuant to Public Law 89-665, 54 United States Code (U.S.C.) 300101 et seq. As the project is state-funded, GS 121-12(a) applies.

Archaeological Resources

An archeological review and survey were completed by the NCDOT Archaeology Group in January 2019. The Area of Potential Effect (APE) is currently agricultural land with open, plowed fields, and likely has been in this state for well over a century. No previously recorded archaeological sites are located inside or immediately adjacent to the APE. Field investigations, which included a multiple-transect surface survey of the plowed APE, yielded three new historic archaeological sites. The artifact fragments are generally unremarkable, typical domestic wares likely associated with residences in the immediate surroundings. Accordingly, the NCDOT Archaeology Group determined there are no National Register listed or eligible archaeological sites present within the projects' APE (see Appendix C – Cultural Resources Correspondence).

Historic Architecture Resources

An initial historic architecture review was completed in January 2019. The projects are subject to review under the Section 106 Programmatic Agreement for Minor Transportation Projects (NCDOT/NCHPO/FHWA/USFS 2015). An NCDOT Architectural Historian conducted preliminary documentary research and a site visit to identify and assess all resources of approximately fifty years of age or more within the APE. One resource, the Bass House and outbuildings at 3033 Eastern Avenue, warranted intensive National Register eligibility evaluation. For purposes of compliance with Section 106 of the NHPA, the Bass House is recommended not eligible for inclusion on the NRHP. NCDOT Architectural Historians determined all other properties and districts are not worthy of further study and evaluation due to lack of historical significance and/or integrity. Therefore, significant impacts to historic architecture are not anticipated with the implementation of the proposed projects (see Appendix C – Cultural Resources Correspondence).

Community Resources

A Short Form Community Impact Assessment[9] (CIA) was completed for this project corridor in January 2019. The existing land use along the project corridors is a mixture of primarily agricultural, light industrial, and single-family residential.

Land Use Plans and Transportation Plans

The 2013 *Rocky Mount Urban Area Metropolitan Transportation Plan 2040* (2013 MTP) provides a fiscally constrained, long range plan of projects and processes that the Metropolitan Planning Organization (MPO) plans to fulfill. The vision of the 2013 MTP is to provide the necessary infrastructure for the transportation needs of the region. The widening of Eastern Avenue was identified in the 2013 MTP. In this plan, Eastern Avenue is identified as regionally significant. Eastern Avenue, from Old Carriage Road to just west of Forest View Drive, is not projected to exceed LOS D capacity by 2040. However, this facility is of interest to the Rocky Mount Urban Area MPO due to present and future development in the area. This development is expected to attract residents and businesses.

The *2016 Rocky Mount Urban Area Comprehensive Transportation Plan* (2016 CTP) is a long-range multi-modal plan that covers the needs of Rocky Mount, Nashville, Sharpsburg, and some parts of Nash County and Edgecombe County through 2040. Modes of transportation evaluated as part of this plan include highway, public transportation, rail, bicycle, and pedestrian.

In the 2016 CTP, the proposal is to upgrade Eastern Avenue to a four-lane divided boulevard from N. Old Carriage Road to just west of Forest View Drive. The proposal coincides with the Sunset Avenue CTP proposal which also upgrades Sunset Avenue, from U.S. 64 Business (Buck Leonard Boulevard/Sunset Avenue) to N. Old Carriage Road, to a four-lane divided boulevard. Also recommended on this facility is a multi-use path from N. Old Carriage Road to the Town of Nashville municipal limits and bicycle accommodations from the Town of Nashville municipal limits to Red Oak Road.

The widening of N. Old Carriage Road was also identified in the 2016 CTP. N. Old Carriage Road from Green Hills Road/Reges Store Road to Eastern Avenue/Sunset Avenue is not expected to exceed LOS D capacity by 2040; however, the facility is of interest to the Rocky Mount Urban Area MPO. It serves as a direct route to Future I-495/U.S. 64 from NC 43. N. Old Carriage Road

[9] 2019. VHB. Short Form Community Impact Assessment for U-5996 and R-5720 in Nash County, North Carolina.

also provides access to Nash County Community College. Additionally, a crash assessment performed during the development of the CTP identified the section from the Future I-495/U.S. 64 Interchange to Eastern Avenue/Sunset Avenue as a high frequency crash location. 19 crashes occurred between January 1, 2007 and December 31, 2011.

The 2016 CTP proposal is to upgrade N. Old Carriage Road to a three-lane facility with a continuous two-way left-turn lane (TWLTL). In addition, with the upgrade of Future I-495/U.S. 64 to interstate standards, the CTP proposal also recommends a widening upgrade to the current N. Old Carriage Road interchange. There are also recommendations on N. Old Carriage Road for bicycle and sidewalk accommodations starting at Nash County Community College and continuing south. The upgrade is expected to increase accessibility to the college, improve movement at the Future I-495/U.S. 64 interchange and increase overall capacity.

With the exception of the bicycle and pedestrian accommodations, the proposed projects are consistent with the NCDOT STIP as well as other local planning efforts. While not included in preliminary designs, both projects provide the berm widths necessary for bicycle and pedestrian accommodations to be added in the future.

Population Growth

The Demographic Study Area (DSA) represents all Census Block Groups (BGs) that encompass properties that could be directly affected by the proposed projects (see Appendix A, Figure 6 – Demographic Study Area Map). The demographic data of the DSA's population are analyzed for the proposed projects.

Between 2000 and 2010, Nash County's total population increased by 9.6 percent, at an annualized growth rate of 0.9 percent. As shown in Table 10, population in the projects' DSA has grown rapidly over the same timeframe.

Table 10: Population Change, 2000 to 2010

	DSA Aggregate	Nash County	North Carolina
Total Population (2000)	10,578	87,420	8,049,313
Total Population (2010)	14,907	95,840	9,535,483
Change (%)	40.9	9.6	18.5
Annualized Growth Rate (%)	3.5	0.9	1.7

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

Title VI and Environmental Justice

NCDOT is committed to ensuring that no person shall – on the grounds of race, color, national origin, limited English proficiency (LEP), income status, sex, age, or disability – be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any NCDOT program or activity, as provided by Title VI of the Civil Rights Act of 1964 and other related nondiscrimination laws and authorities.

In accordance with Title VI and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low- Income Populations*, NCDOT is required to achieve environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human or environmental effects – including the interrelated social and economic effects – of its programs, policies, and activities on minority populations and low-income populations.

Additionally, in accordance with Title VI and Executive Order 13166, *Improving Access to Services for Persons with Limited English Proficiency*, NCDOT is required to provide meaningful access to the department's programs, information, and services for LEP populations.

Other applicable nondiscrimination laws include:

- Section 162(a) of the Federal-Aid Highway Act of 1973 (sex or gender)
- Age Discrimination Act of 1975 (age)
- Section 504 of the Rehabilitation Act of 1973 (disability)
- Americans with Disabilities Act of 1990 (disability)
- Fair Housing Act (religion)

Based on the January 2019 CIA, census data indicates a notable presence of low-income populations meeting the criteria for Environmental Justice within the DSA, and low-income communities were observed during the field visit.

No notable adverse community impacts are anticipated with the project; thus, impacts to minority and low-income populations do not appear to be disproportionately high and adverse. Benefits and burdens resulting from the project area anticipated to be equitably distributed throughout the community. No disparate impacts are anticipated under Title VI and related statutes.

Census data does not indicate LEP populations meeting the U.S. Department of Justice LEP Safe Harbor threshold but does indicate a Spanish language-speaking population exceeding 50 persons within the DSA that may require language assistance. Census Tract 111.01, BG 1, located to the northwest of the projects, has a Spanish language-speaking population of 79 individuals. Public outreach materials were provided in both English and Spanish. A Spanish translator was present at the December 2018 public meeting for the proposed projects.

Prime or Unique Agricultural Lands

North Carolina Executive Order Number 96, *Preservation of Prime Agricultural and Forest Lands*, requires all state agencies to consider the impact of land acquisition and construction projects on prime farmland soils, as designated by the U.S. Natural Resources Conservation Service (NRCS). These soils are determined based on criteria such as crop yield and level of input of economic resources. Land that is planned or zoned for urban development is not subject to the same level of preservation as other rural or agricultural areas. As defined in North Carolina General Statute (NCGS) 143B-3, all State agencies under the jurisdiction of the Governor shall ensure that actions taken by those agencies would minimize the loss of prime agricultural and forest lands.

The proposed projects are located in a rural area of Nash County. Several agricultural parcels are located along Eastern Avenue, and they are actively being used or managed for agricultural purposes. One Voluntary Agricultural District (VAD) is located within the Eastern Avenue project footprint, on the southern side of the project corridor, and would be impacted by the proposed project. Pursuant to N.C.G.S. §106-740, no state or local public agency or governmental unit may formally initiate any action to condemn any interest in qualifying farmland within a District until such agency or unit has requested the Advisory Board to hold a public hearing on the proposed condemnation.

Using the projects' preliminary design and assuming slope stakes plus a 25-foot buffer, 80 acres of Farmland Protection Policy Act soils have the potential to be impacted by the proposed projects. Approximately 24 acres of prime farmland, 54 acres of farmland of statewide importance, and 2 acres of prime farmland if drained are expected to be impacted.

Public Lands and Scenic, Recreational, and State Natural Areas

No public lands or scenic, recreational, or state natural areas are located within the study area

for the proposed projects.

Property Relocations

Due to the ROW necessary for the proposed typical sections, property impacts are expected. Most of these impacts are expected to be on agricultural properties along the corridor. Approximately two properties (one residence and one business) and are expected to be relocated based on the preliminary designs. NCDOT will conduct additional coordination during the ROW phase of the project.

Air Quality

The Air Quality Report, approved in January 2019, found no adverse effects on air quality as a result of the proposed projects. The proposed projects are in Nash County which is in maintenance for the 1997 8-hour ozone standard and in attainment for all other NAAQS; therefore, 40 CFR Parts 51 and 93 are not applicable. The Air Quality Report completes the assessment requirements for air quality of the 1990 Clean Air Act Amendments and the SEPA process. No additional reports are necessary.

Traffic Noise

NCDOT defines noise as unwanted or excessive sounds. Sound is created when an object moves, causing vibrations or waves in air molecules. Sound levels are measured in units called decibels (dB). Adjustment for high and low-pitched sounds an average person can hear is called "A-weighted levels" or dBA. Highway traffic noise is assessed using dBA measurements. Noise is further described by its average level over time. In noise abatement studies an "hourly equivalent sound level," or Leq(h), is the constant, average sound level that contains the same amount of sound energy over the time period as does the varying levels of actual traffic noise. (North Carolina Department of Transportation, 2004.)

A Traffic Noise Report[10] was prepared in February 2019. There were 16 predicted traffic noise impacts under the design year (2040) build conditions. Of the 16 impacts, 14 were isolated and are expected to be caused by predicted noise levels that would approach or exceed NCDOT's and FHWA's noise abatement criteria. Two (2) adjacent impacts located outside the construction limits of the proposed projects had noise levels exceeding their noise abatement criteria impact approach thresholds in the Existing and Build condition; it was determined that these impacts

[10] VHB. 2019. Traffic Noise Report for Eastern Avenue and N. Old Carriage Road Widening in Nash County, NC.

were not a result of the proposed projects.

All impacts in the project area are isolated; therefore, noise walls would not be able to meet feasibility criteria which is why noise abatement measures were not considered and installation of traffic noise abatement measures are considered unlikely for these projects.

All reasonable efforts should be made to minimize exposure to constructions noise for noise-sensitive land uses. Such efforts may include, but are not limited to, work-hour limits, equipment exhaust muffler requirements, haul-road locations, elimination of "tail gate banging", ambient-sensitive backup alarms, construction noise complaint mechanisms, and consistent and transparent community communication.

Hazardous Materials and Contaminated Properties

A Phase I Environmental Site Assessment[11] was completed in October 2018. There are six underground storage tank (UST) facilities within the project corridors. Table 11 identifies the potential hazardous facilities located within the vicinity of the proposed projects.

Table 11: Hazardous Material Sites

Site #	Type	Property Name	Location	Anticipated Risk
1	Gas Station	Sheetz Store #504	157 N. Old Carriage Road	Low
2	Gas Station	EP Mart 14130	130 N. Old Carriage Road	Low
3	Gas Station	Murphy Express 8502	1185 Eastern Avenue	Low
4	Former Gas Station	Grahams Grocery	3957 Eastern Avenue	Medium
5	Auto Related	Dennis Auto and J&S	1105 & 1109 Eastern Avenue	Low
6	Former Auto Related	H Hendricks Inc.	2381 Eastern Avenue	Low

The proposed projects would require the acquisition of some ROW along the project corridors. Field verification of the hazardous waste sites and identification of unknown sites should be performed based on the refined preliminary designs prior to ROW acquisition.

Dominion Pipeline (Atlantic Coast Pipeline) has been issued an encroachment agreement for a 36-foot welded steel gas pipeline to be bored under Eastern Avenue. It is approximately 0.18 miles east of SR 1814, Kamlar Road. NCDOT and Dominion Pipeline are conducting ongoing coordination during planning and design efforts.

[11] Falcon Engineering. 2018. Phase I ESA for Eastern Avenue and N. Old Carriage Road.

Flood Hazard Evaluation

The existing 4-span 181-foot long cored slab bridge over Stoney Creek is located in a Detailed Studied Federal Emergency Management Agency (FEMA) flood zone and regulatory floodway. According to the preliminary hydraulic study, to avoid causing an increase in the 100-yeear flood elevation, the existing roadway grade should be maintained in each roadway approach section within the FEMA floodplain. The roadway grade along N. Old Carriage Road at the end of the proposed project should also be maintained.

The residence located at the southeast corner of the N. Old Carriage Road/Green Hills Road intersection is a FEMA buyout property. The proposed projects are not anticipated to impact this property.

Required Permits

The proposed projects would result in construction activities requiring environmental regulatory permits from state and federal agencies. The Clean Water Act (33 U.S.C. § 1251 et seq.) provides the basic structure for regulating quality standards for surface waters and regulating discharges of pollutants into waters of the United States (United States Environmental Protection Agency, 2016c). In accordance with provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344), a permit may be required from the USACE for the discharge of dredged or fill material into "Waters of the United States", including wetlands. The USACE holds the final discretion as to what permit would be required to authorize project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification (WQC) from NCDWR would be needed.

Summary of Environmental Consequences

Table below provides a summary of the environmental consequences anticipated with implementation of the proposed action. The anticipated impacts are based on the preliminary designs with anticipated ROW (including public utility easements) (see Appendix B – Preliminary Plans).

Table 12: Summary of Environmental Impacts

Environmental Resource	Anticipated Impacts[a]
Streams[b]	375 linear feet
Wetlands[b]	0.16 acres
Protected Species	No Effect (pending unresolved survey)

Historic Architecture	No Effect
Archaeological Sites	No Effect
Environmental Justice	Impacts to minority and low-income populations do not appear to be disproportionately high and adverse
Relocations	2
Air Quality	No Adverse Effect
Traffic Noise	14
Hazardous Materials Sites	6

[a] Based on preliminary designs of the proposed action with anticipated ROW (including public utility easements).

[b] Jurisdictional resources.

7

Agency and Public Coordination

Agency Coordination

In lieu of holding an in-person project initiation meeting, NCDOT distributed a project information packet to local, state, and federal agencies on November 27, 2018. As identified in the project information packet, NCDOT screened the proposed projects and determined that the proposed projects would not proceed through the NEPA/Section 404 Merger Process.

In response to the project information packet, comments were received from the following entities:

- United States Environmental Protection Agency (USEPA)
- North Carolina Department of Water Resources (NCDWR)

The project team coordinated with, and sought input from, project stakeholders and agencies throughout the planning and preliminary design phases of the project. Extensive coordination with the Town of Nashville, Nash County, City of Rocky Mount, and Nash Community College was undertaken regarding the proposed projects. Coordination with project stakeholders and agency representatives would continue, as necessary, throughout the remainder of the project. The NCDOT and project team continues to coordinate with these stakeholders regarding design modifications to minimize potential impacts associated with the proposed projects and provide schedule information.

Public Involvement

In early 2018, NCDOT began the public outreach effort through distribution of a landowner notification postcard to property owners along the project corridors. Several comments were

received and responded to over the course of the project development process, most of them were questions about the potential for the proposed projects to impact residential and business properties along the corridors.

A project mailing list that included all property owners in the project study area, as well as community members that requested updates on the proposed projects, was continuously updated throughout the project development process.

December 2018 Local Officials Information Meeting and Public Meeting

In November 2018, NCDOT mailed postcards informing the public of a public meeting scheduled for December 13, 2018. Invitations to the Local Officials Information Meeting (LOIM), also scheduled for December 13, 2018, were sent to local government representatives and stakeholders. Public meeting information was posted on the NCDOT Public Meetings webpage. A Public Meeting Notice was also shared with local newspapers, radio stations, and TV stations, and flyers announcing the meeting were posted at numerous locations in the vicinity of the proposed projects. Public comments were requested through January 14, 2019.

The public meeting was held on Thursday, December 13, 2018 from 4:00 PM to 7:00 PM in the Nash Community College Brown Auditorium located at 522 N. Old Carriage Road in Rocky Mount. 116 citizens signed in at the public meeting. A reporter from the Rocky Mount Telegram attended the meeting and asked questions of the project team and community members. The LOIM was held prior to the public meeting, in which seven local officials attended.

The purpose of the meetings was to introduce the proposed projects to the local community and gain input on existing conditions, concerns, and opinions. A narrated presentation, maps, informational boards, visualizations, simulations, and handouts were shared with the public. The project team and numerous NCDOT staff were available to discuss the projects with the community.

In addition to information about the proposed projects on Eastern Avenue and N. Old Carriage Road, updated designs were also provided for an adjacent project, U-5026. As identified in the 2018-2027 NCDOT STIP, NCDOT is combining R-5720, U-5996, and U-5026 for construction letting (anticipated in FY 2020). NCDOT completed the supporting environmental documentation (Type III Categorical Exclusion [CE]) for U-5026 in October 2017. A consultation is being prepared to determine if the CE remains valid or if additional analysis is required.

Comments Received

The public was encouraged to submit written comments through January 14, 2019. A total of 17 comment submissions were received. Many of the comments received expressed support for the proposed projects. Other comments included those related to:

- Bicycle and pedestrian accommodations
- Roundabout design
- Property impacts
- Property access
- Noise impacts
- Median breaks

NCDOT continues to incorporate this input into the projects' preliminary designs.

8

Basis for Finding of No Significant Impact

NCDOT has determined that the proposed projects would not result in significant adverse impacts on the natural or human environment. This conclusion is based on the environmental assessment conducted for the proposed projects; input received from federal, state, and local agencies; and the input from the public. Therefore, a Finding of No Significant Impact is appropriate for this project, and no further environmental analysis required.

Appendix A – Figures

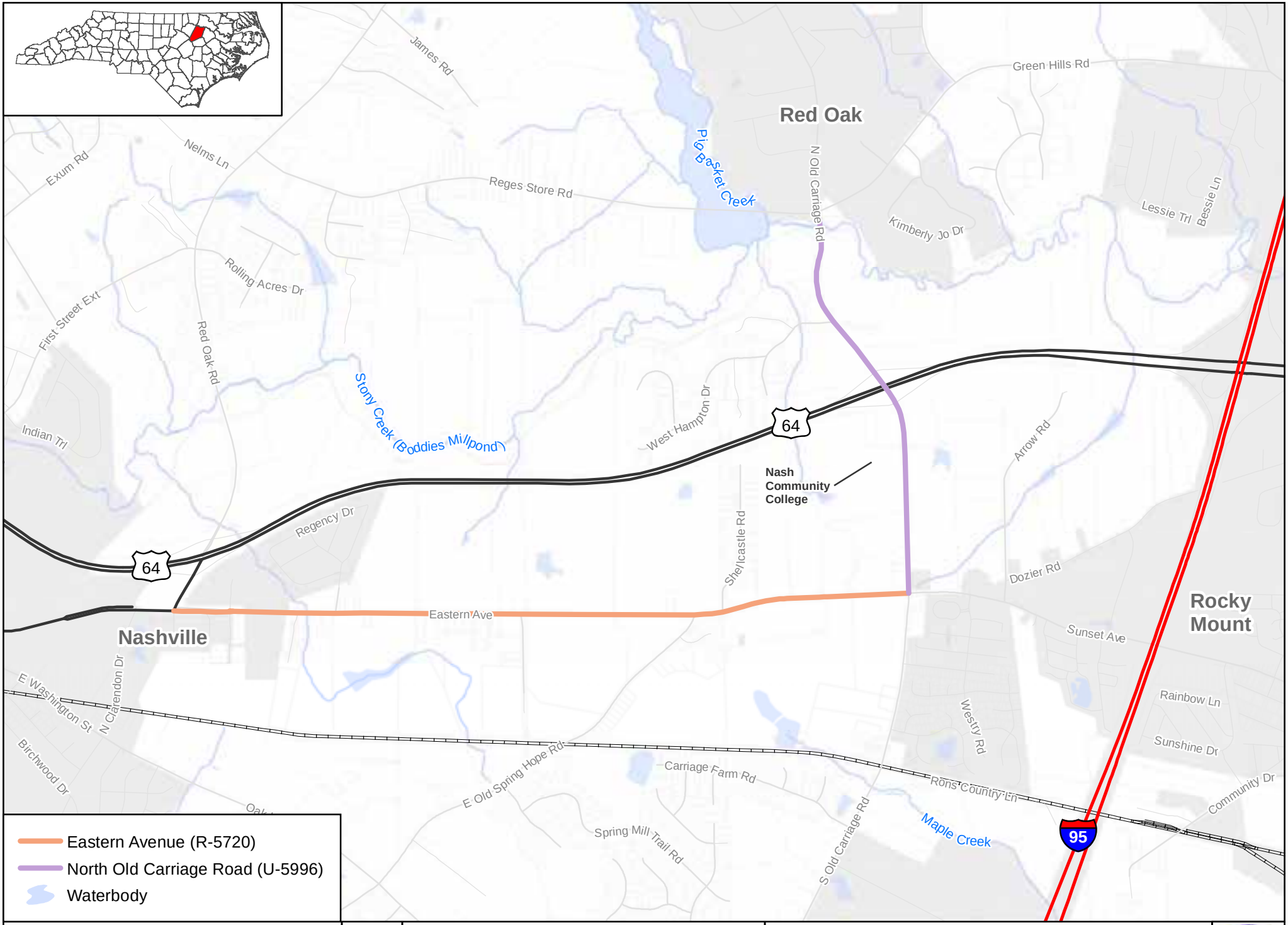


Figure 1: Project Vicinity

Prepared by: VHB Date: March 2019

NCDOT STIP Nos. R-5720 and U-5996
Eastern Avenue and N. Old Carriage Road
Nash County

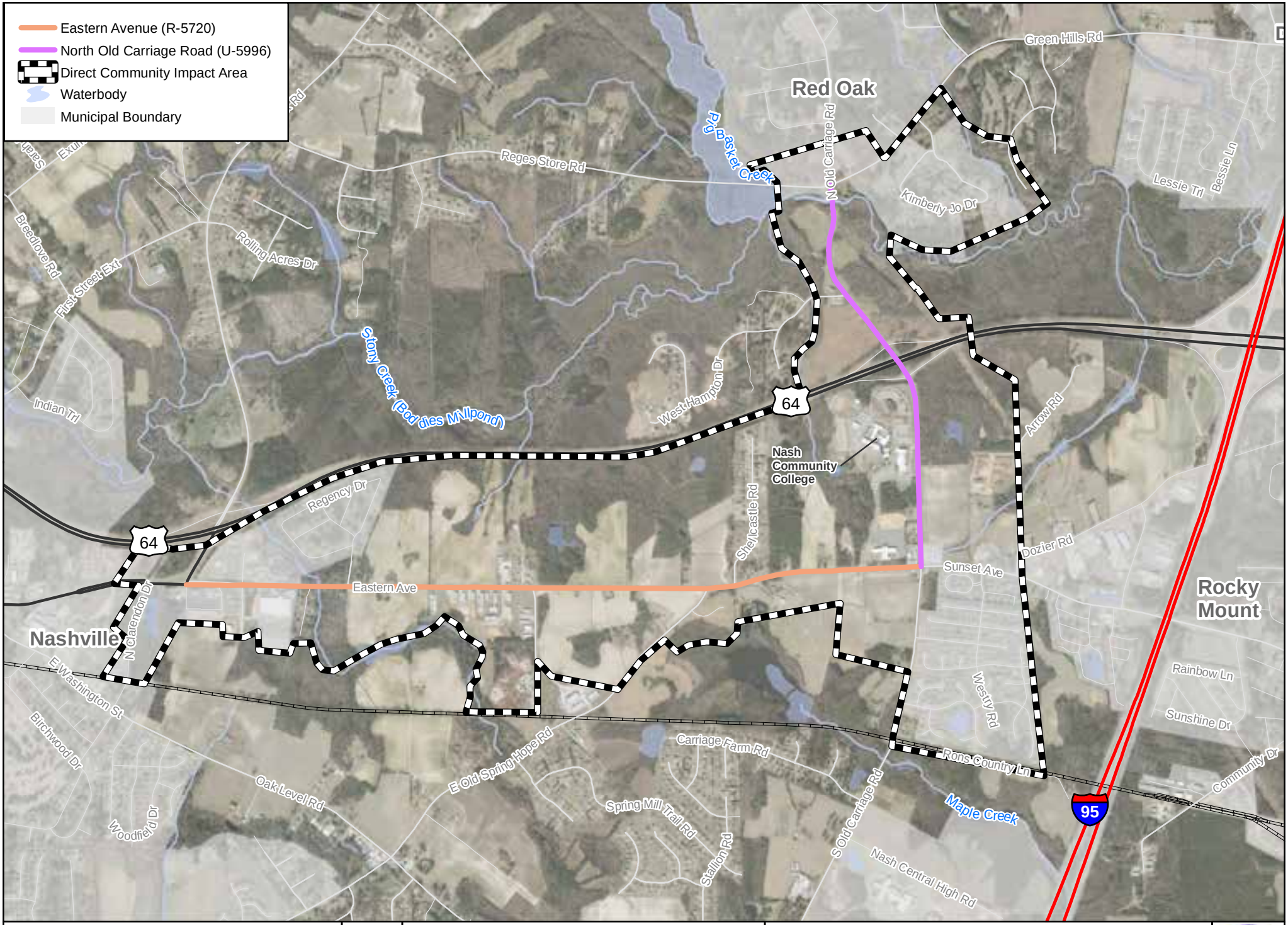
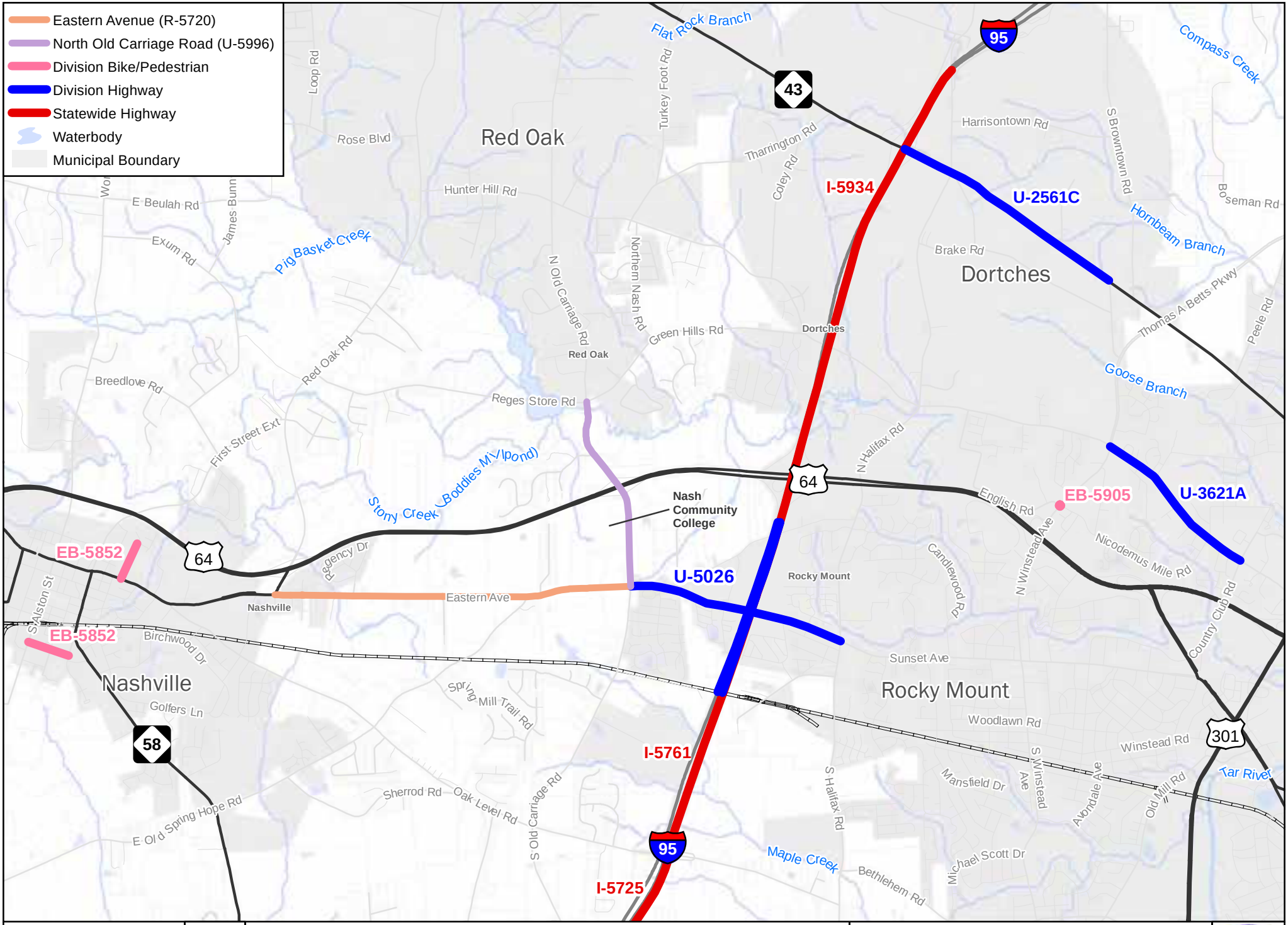


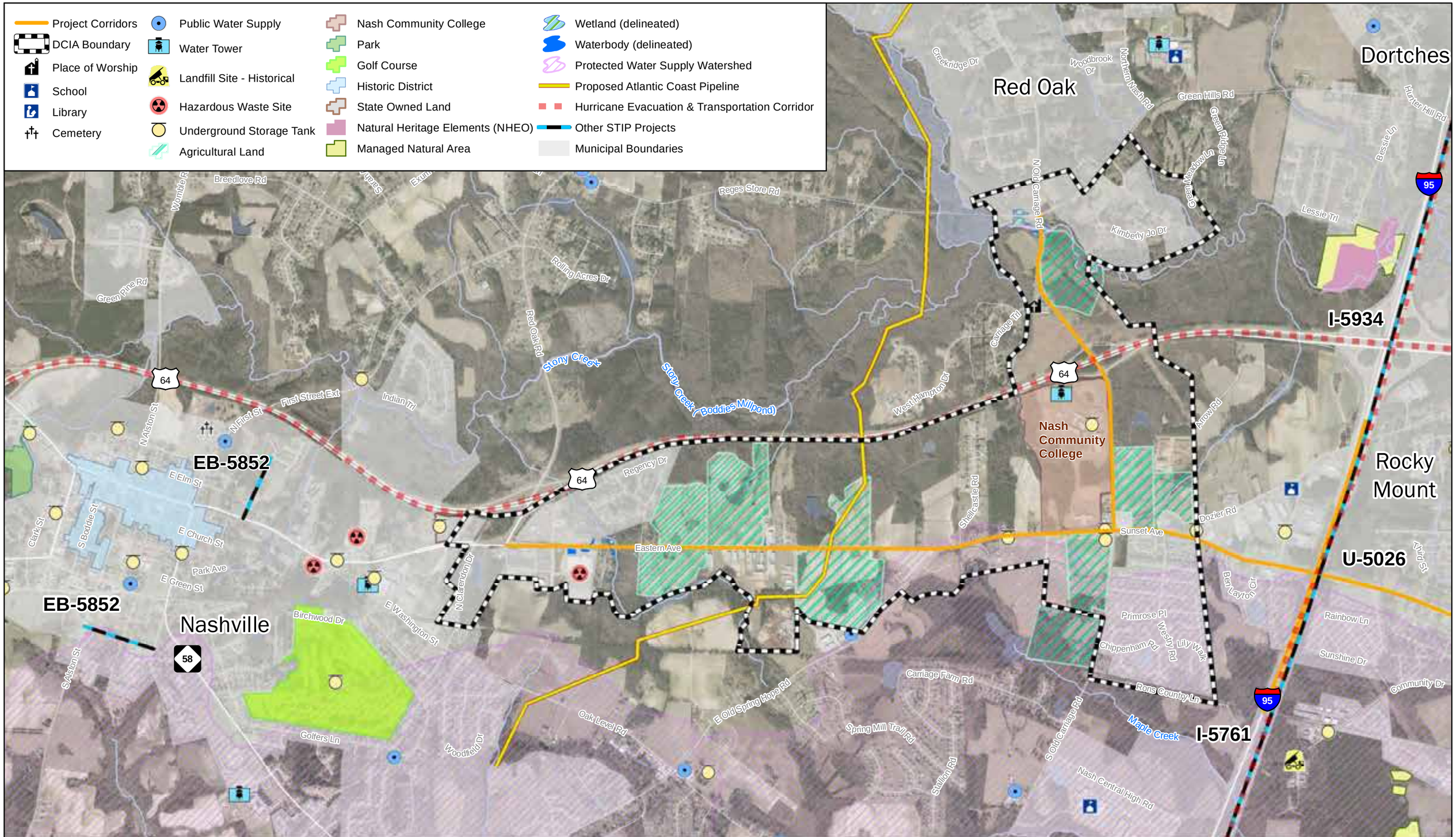
Figure 2: Study Area

Prepared by: VHB Date: March 2019

NCDOT STIP Nos. R-5720 and U-5996
Eastern Avenue and N. Old Carriage Road
Nash County


Eastern Avenue (R-5720)
North Old Carriage Road (U-5996)
Division Bike/Pedestrian
Division Highway
Statewide Highway
Waterbody
Municipal Boundary
Red Oak
Dortches
Nashville
Rocky Mount
Nash Community College
I-5934
I-5761
I-5725
U-2561C
U-3621A
U-5026
EB-5852
EB-5905
Eastern Ave
Flat Rock Branch
Compass Creek
Hornbeam Branch
Goose Branch
Pig Basket Creek
Stony Creek (Boddies Mill Pond)
Maple Creek
Tar River
Loop Rd
Rose Blvd
Turkey Foot Rd
Harrisontown Rd
S Browntown Rd
Boseman Rd
Tharrington Rd
Coley Rd
Hunter Hill Rd
E Beulah Rd
James Bunn
Exum Rd
N Old Carriage Rd
Northern Nash Rd
Green Hills Rd
Brake Rd
Thomas A Betts Pkwy
Peele Rd
Red Oak Rd
Breedlove Rd
Reges Store Rd
First Street Ext
N Halifax Rd
English Rd
Nicodemus Mile Rd
N Winstead Ave
Candlewood Rd
Country Club Rd
Sunset Ave
Woodlawn Rd
Winstead Rd
Mansfield Dr
Avondale Ave
Old Mill Rd
S Halifax Rd
S Old Carriage Rd
Sherrod Rd
Oak Level Rd
E Old Spring Hope Rd
Spring Mill Trail Rd
Golfers Ln
Birchwood Dr
S Alston St
Michael Scott Dr
Bethlehem Rd
Agency Dr E
43
95
64
58
301
0
0.5
1
Miles
Figure 3: STIP Projects Located Within 3 Miles
Prepared by: VHB
Date: March 2019
NCDOT STIP Nos. R-5720 and U-5996
Eastern Avenue and N. Old Carriage Road
Nash County

- Project Corridors
- DCIA Boundary
- Place of Worship
- School
- Library
- Cemetery
- Public Water Supply
- Water Tower
- Landfill Site - Historical
- Hazardous Waste Site
- Underground Storage Tank
- Agricultural Land
- Nash Community College
- Park
- Golf Course
- Historic District
- State Owned Land
- Natural Heritage Elements (NHEO)
- Managed Natural Area
- Wetland (delineated)
- Waterbody (delineated)
- Protected Water Supply Watershed
- Proposed Atlantic Coast Pipeline
- Hurricane Evacuation & Transportation Corridor
- Other STIP Projects
- Municipal Boundaries



0 0.25 0.5 0.75
Miles

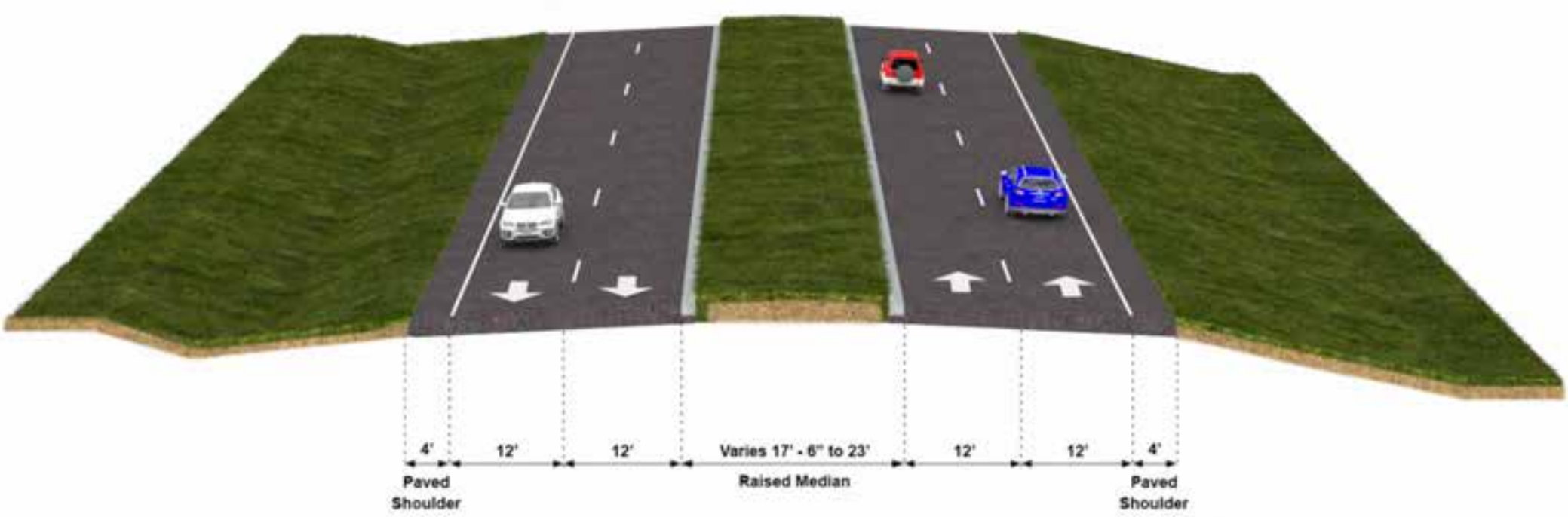
Figure 4: Environmental Features

Prepared by: VHB Date: March 2019

NCDOT STIP Nos. R-5720 and U-5996

Eastern Avenue and N. Old Carriage Road

Nash County



EASTERN AVENUE TYPICAL SECTION

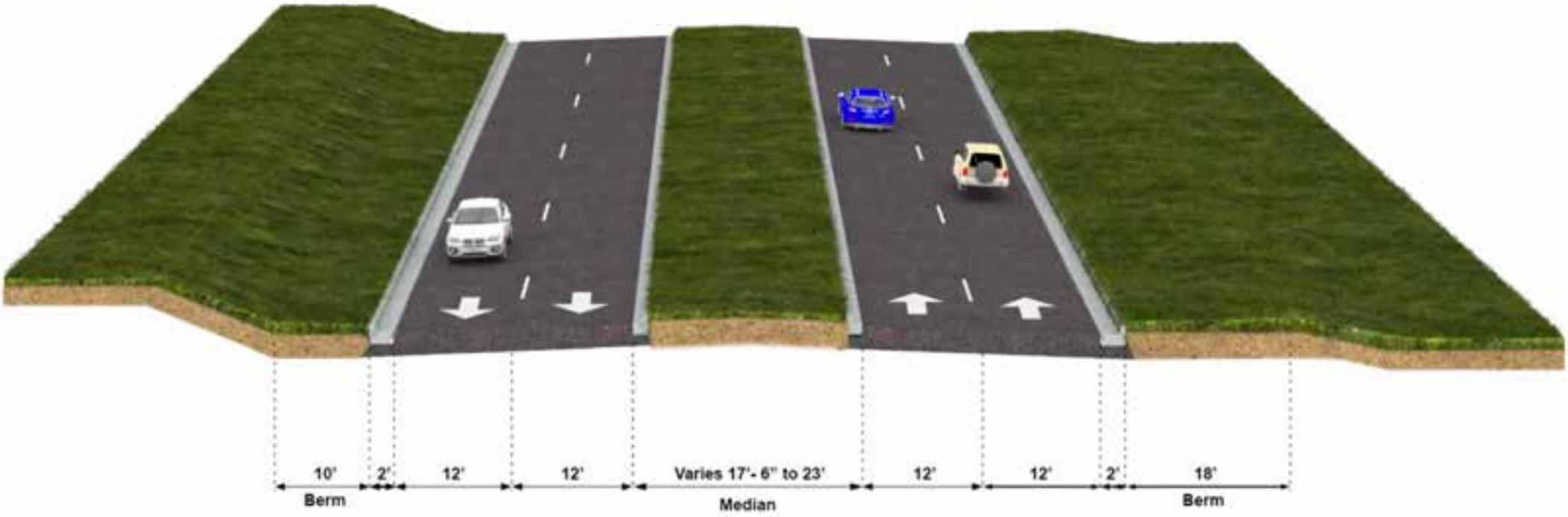
Figure 5-1: Eastern Avenue Typical Section

Prepared by: VHB Date: March 2019

STIP Nos. R-5720 and U-5996

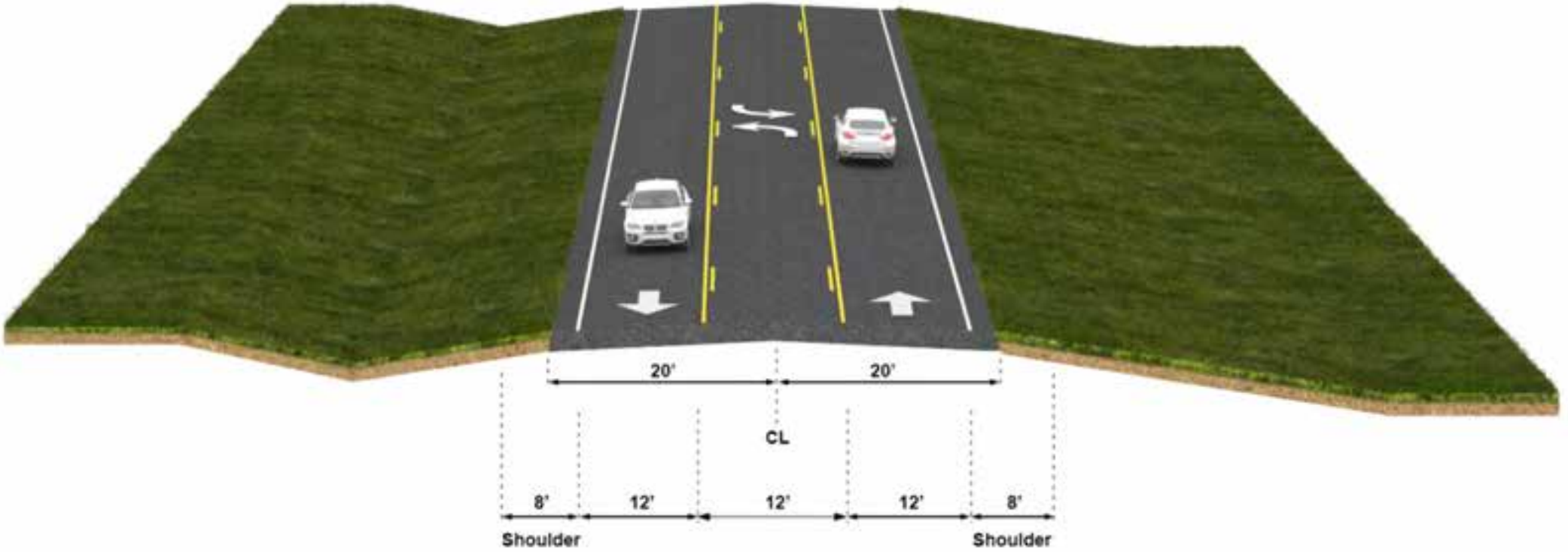
Eastern Avenue and N. Old Carriage Road

Nash County



N. OLD CARRIAGE ROAD TYPICAL SECTION
(South of US 64)

Figure 5-2: N. Old Carriage Road (South U.S. 64) Typical Section Prepared by: VHB Date: March 2019	**STIP Nos. R-5720 and U-5996** Eastern Avenue and N. Old Carriage Road Nash County	



N. OLD CARRIAGE ROAD TYPICAL SECTION
(North of US 64)

Figure 5-3: N. Old Carriage Road (North U.S. 64) Typical Section Prepared by: VHB Date: March 2019	**STIP Nos. R-5720 and U-5996** Eastern Avenue and N. Old Carriage Road Nash County	

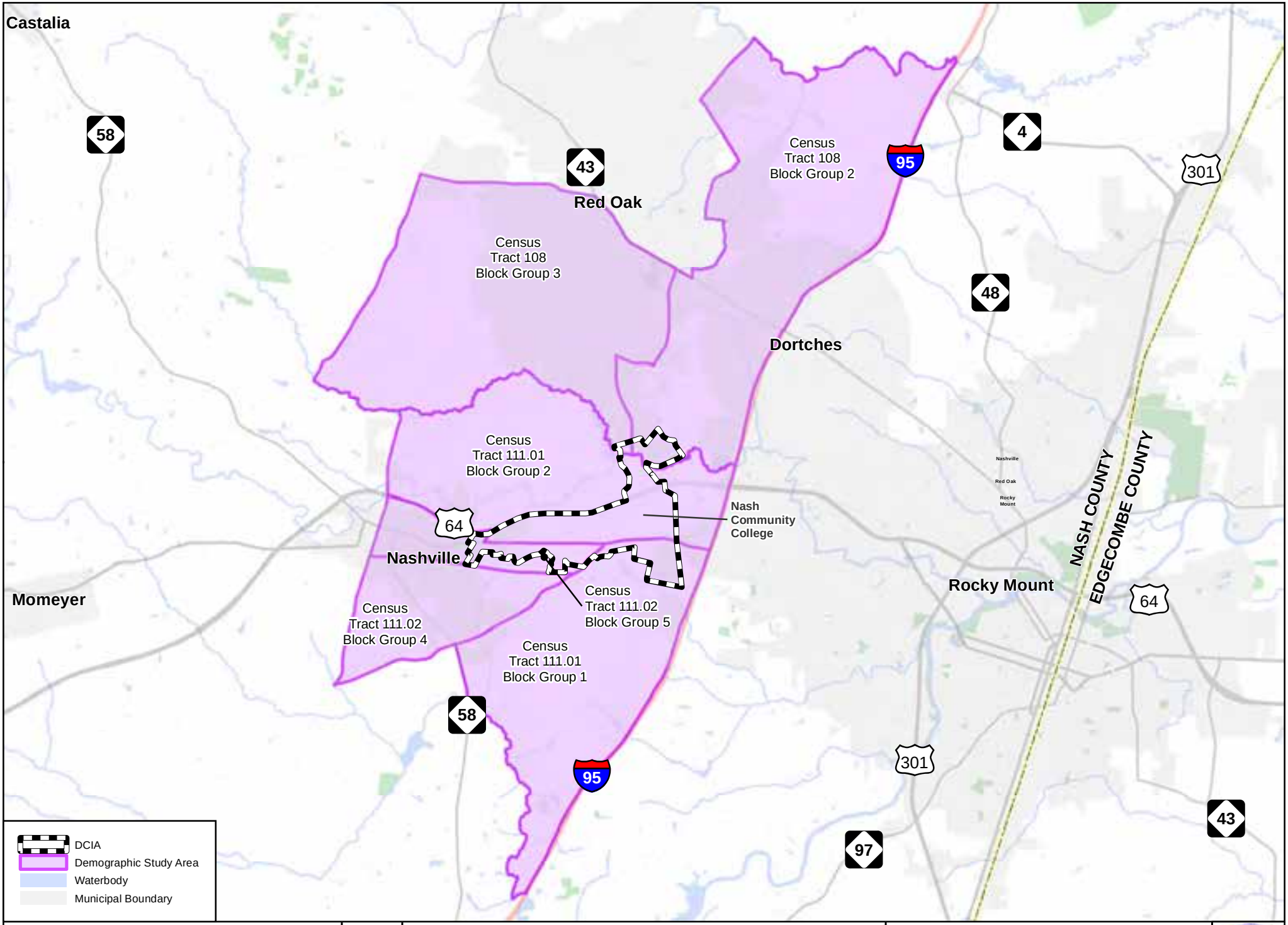


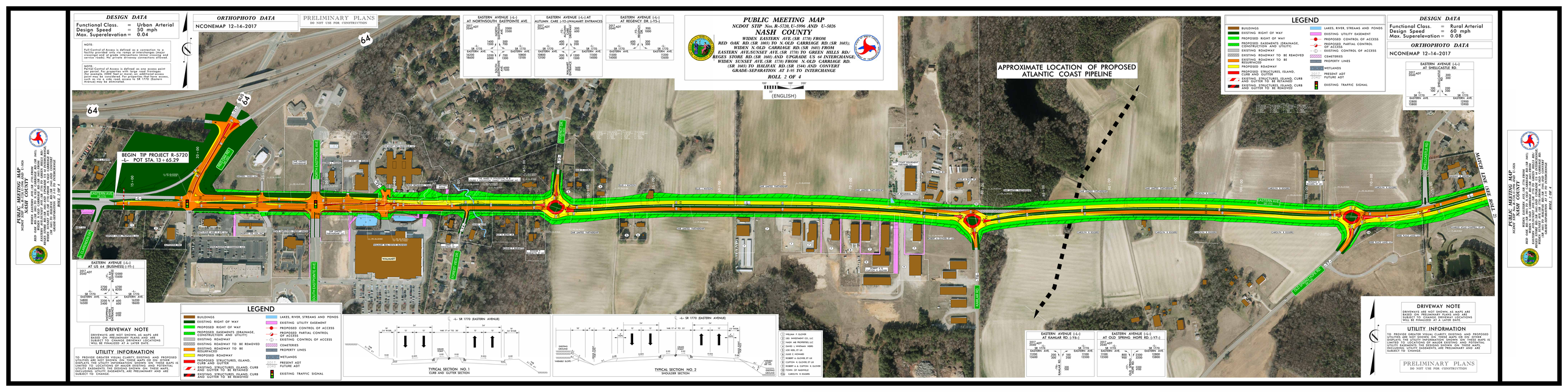
Figure 6: Demographic Study Area

Prepared by: VHB

Date: March 2019

NCDOT STIP Nos. R-5720 and U-5996
Eastern Avenue and Old Carriage Road
Nash County

Appendix B – Preliminary Plans


PUBLIC MEETING MAP
NCDOT STIP Nos. R-5720, U-5906 AND U-5026
NASH COUNTY
WIDEN EASTERN AVE.(SR 1770) FROM RED OAK RD.(SR 1003) TO N.OLD CARRIAGE RD.(SR 1603); WIDEN N.OLD CARRIAGE RD.(SR 1603) FROM EASTERN AVE/SUNSET AVE.(SR 1770) TO GREEN HILLS RD./ REGES STORE RD.(SR 1603) AND UPGRADE US 64 INTERCHANGE; WIDEN SUNSET AVE.(SR 1770) FROM N.OLD CARRIAGE RD. (SR 1603) TO HALIFAX RD.(SR 1546) AND CONVERT GRADE-SEPARATION AT I-95 TO INTERCHANGE
ROLL 2 OF 4
DESIGN DATA
Functional Class. = Urban Arterial
Design Speed = 50 mph
Max. Superelevation = 0.04
NOTE: Full Control of Access is defined as a connection to a facility provided only via ramps at interchanges (major crossroads, 2050 feet or more, at-grade intersections with service roads). No private driveway connections allowed.
NOTE: Partial Control of Access is defined as one access point per property (for example, 2050 feet or more, at-grade intersections with service roads). Additional access connections, such as via a side road, access to SR 1770 (Eastern Avenue) may be eliminated.
ORTHOPHOTO DATA
NCONEMAP 12-14-2017
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
EASTERN AVENUE (-L-) AT NORTHSOUTH EASTPOINTE AVE.
EASTERN AVENUE (-L-) AT AUTUMN CARE (-Y5-)/WALMART ENTRANCES
EASTERN AVENUE (-L-) AT REGENCY DR. (-Y5-)
EASTERN AVENUE (-L-) AT SHELLCASTLE RD.
EASTERN AVENUE (-L-) AT US 64 (BUSINESS) (-Y1-)
EASTERN AVENUE (-L-) AT KANUKA RD. (-Y6-)
EASTERN AVENUE (-L-) AT OLD SPRING HOPE RD. (-Y7-)
BEGIN TIP PROJECT R-5720 -L- POT STA. 13+65.29
APPROXIMATE LOCATION OF PROPOSED ATLANTIC COAST PIPELINE
LEGEND
BUILDINGS
EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY
PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION AND UTILITY)
EXISTING ROADWAY
EXISTING ROADWAY TO BE REMOVED
EXISTING ROADWAY TO BE RESURFACED
PROPOSED ROADWAY
PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
LAKES, RIVER, STREAMS AND PONDS
EXISTING UTILITY EASEMENT
PROPOSED CONTROL OF ACCESS
PROPOSED PARTIAL CONTROL OF ACCESS (NO UTILITY)
EXISTING CONTROL OF ACCESS
CEMETERIES
PROPERTY LINES
WETLANDS
PRESENT ADT
FUTURE ADT
EXISTING TRAFFIC SIGNAL
DRIVEWAY NOTE
DRIVEWAYS ARE NOT SHOWN, AS MAPS ARE BASED ON PRELIMINARY PLANS AND ARE SUBJECT TO CHANGE. DRIVEWAY LOCATIONS WILL BE FINALIZED AT A LATER DATE.
UTILITY INFORMATION
TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITIES ARE NOT SHOWN ON THESE MAPS OR ON OTHER DISPLAYS THE UTILITY INFORMATION SHOWN ON THESE MAPS IS LIMITED TO LOCATIONS OF MAJOR EXISTING AND POTENTIAL UTILITY EASEMENTS. THE DESIGNS SHOWN ON THESE MAPS, INCLUDING UTILITY EASEMENTS, ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.
TYPICAL SECTION NO. 1 CURB AND GUTTER SECTION
TYPICAL SECTION NO. 2 SHOULDER SECTION
WILLIAM P. GLOVER
JDD INVESTMENT CO., LLC
NASH 148 PROPERTIES, LLC
DAVID L. WHITMAN HEIRS
JOE KIEL ET UX
JUNE C. HOWARD
ROBERT A. GLOVER, ET UX
ROBERT A. GLOVER, ET UX
ROBERT A. & CLIFTON T. GLOVER
TOWN OF NASHVILLE
CAROLYN H. ROGERS
PUBLIC MEETING MAP
NCDOT STIP Nos. R-5720, U-5906 AND U-5026
NASH COUNTY
WIDEN EASTERN AVE.(SR 1770) FROM RED OAK RD.(SR 1003) TO N.OLD CARRIAGE RD.(SR 1603); WIDEN N.OLD CARRIAGE RD.(SR 1603) FROM EASTERN AVE/SUNSET AVE.(SR 1770) TO GREEN HILLS RD./ REGES STORE RD.(SR 1603) AND UPGRADE US 64 INTERCHANGE; WIDEN SUNSET AVE.(SR 1770) FROM N.OLD CARRIAGE RD. (SR 1603) TO HALIFAX RD.(SR 1546) AND CONVERT GRADE-SEPARATION AT I-95 TO INTERCHANGE
ROLL 3 OF 4
DESIGN DATA
Functional Class. = Rural Arterial
Design Speed = 60 mph
Max. Superelevation = 0.08
ORTHOPHOTO DATA
NCONEMAP 12-14-2017
DRIVEWAY NOTE
DRIVEWAYS ARE NOT SHOWN, AS MAPS ARE BASED ON PRELIMINARY PLANS AND ARE SUBJECT TO CHANGE. DRIVEWAY LOCATIONS WILL BE FINALIZED AT A LATER DATE.
UTILITY INFORMATION
TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITIES ARE NOT SHOWN ON THESE MAPS OR ON OTHER DISPLAYS THE UTILITY INFORMATION SHOWN ON THESE MAPS IS LIMITED TO LOCATIONS OF MAJOR EXISTING AND POTENTIAL UTILITY EASEMENTS. THE DESIGNS SHOWN ON THESE MAPS, INCLUDING UTILITY EASEMENTS, ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
PUBLIC MEETING MAP
NCDOT STIP Nos. R-5720, U-5906 AND U-5026
NASH COUNTY
WIDEN EASTERN AVE.(SR 1770) FROM RED OAK RD.(SR 1003) TO N.OLD CARRIAGE RD.(SR 1603); WIDEN N.OLD CARRIAGE RD.(SR 1603) FROM EASTERN AVE/SUNSET AVE.(SR 1770) TO GREEN HILLS RD./ REGES STORE RD.(SR 1603) AND UPGRADE US 64 INTERCHANGE; WIDEN SUNSET AVE.(SR 1770) FROM N.OLD CARRIAGE RD. (SR 1603) TO HALIFAX RD.(SR 1546) AND CONVERT GRADE-SEPARATION AT I-95 TO INTERCHANGE
ROLL 4 OF 4

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DESIGN DATA

Functional Class.	=	Urban Arterial
Design Speed	=	50 mph
Max. Superelevation	=	0.04

ORTHOPHOTO DATA

NCONEMAP 12-14-2017

100' 0' 100' 200'
(ENGLISH)

UTILITY INFORMATION

TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITIES ARE NOT SHOWN ON THESE MAPS OR ON OTHER MAPS IN THIS PLANSET. THE UTILITY INFORMATION SHOWN ON THESE MAPS IS LIMITED TO LOCATIONS OF MAJOR EXISTING AND POTENTIAL UTILITY EASEMENTS. THE DESIGNS SHOWN ON THESE MAPS, INCLUDING UTILITY EASEMENTS, ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.

DRIVEWAY NOTE

DRIVEWAYS ARE NOT SHOWN, AS MAPS ARE PRELIMINARY. DRIVEWAY LOCATIONS ARE SUBJECT TO CHANGE. DRIVEWAY LOCATIONS WILL BE FINALIZED AT A LATER DATE.

EASTERN AVENUE (-L-)
AT NASH COMMUNITY COLLEGE
SOUTH ENTRANCE (-Y5-)

2017 ADT 25660

SR 1770 EASTERN AVE. 17900 19900

SOUTH ENTRANCE: 1800 2400 1000 1000

NASH COMMUNITY COLLEGE SOUTH ENTRANCE: SR 1770 EASTERN AVE. 13300 13700

EASTERN/SUNSET AVENUE (-L-)
AT N.S. OLD CARRIAGE RD. (-L1-)

2017 ADT 25660

SR 1770 EASTERN AVE. 13700 15700

EASTERN/SUNSET AVENUE: 10000 16400 2900 3400 7300 16200 5200 5200

SUNSET AVE. 13900 17300

N.S. OLD CARRIAGE RD.: 1300 1600 1200 1200 5200 5200

SUNSET AVENUE (-L-)
AT WESTFIELD RD. (-Y10-)

2017 ADT 25660

SR 1770 SUNSET AVE. 22000 23000

270 / 1 1400 / 1900 2300 / 2 2300 / 2

SUNSET AVENUE (-L-)
AT BANNER WAY

2017 ADT 25660

SR 1770 SUNSET AVE. 23000 23000

100 / 1 200 / 800 500 / 1 400 / 500

BANNER WAY

SUNSET AVENUE (-L-)
AT I-95

2017 ADT 25660

SR 1770 SUNSET AVE. 17300 24000

2700 / 1 1700 / 1900 2100 / 1 1800 / 2 18200 24900

I-95 NB / I-95 SB

SUNSET AVENUE (-L-)
AT FREIGHT RD. (-Y15-)

2017 ADT 25660

SR 1770 SUNSET AVE. 23500

100 / 1 500 / 1 500 / 1 SR 1770 SUNSET AVE. 17300 24000

SUNSET AVENUE (-L-)
AT HALIFAX RD.

2017 ADT 25660

SR 1770 SUNSET AVE. 24900 29100

2300 / 1 1800 / 1 2300 / 1 1800 / 1 6300 / 2 6800 / 2 6800 / 2 8100 / 2

SUNSET AVENUE (-L-)
AT SUNSHINE DR.

2017 ADT 25660

SR 1770 SUNSET AVE. 24900 29100

200 / 1 500 / 1 1600 / 1 1600 / 1

SUNSET AVE. / SUNSHINE DR.

LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION, AND UTILITY)
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- PROPOSED ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- LAKES, RIVER, STREAMS AND PONDS
- EXISTING UTILITY EASEMENT
- PROPOSED CONTROL OF ACCESS
- PROPOSED PARTIAL CONTROL OF ACCESS
- EXISTING CONTROL OF ACCESS
- CEMETERIES
- PROPERTY LINES
- WETLANDS
- 2017 PRESENT ADT / FUTURE ADT
- EXISTING TRAFFIC SIGNAL

TYPICAL SECTION NO. 1
CURB AND GUTTER SECTION

TYPICAL SECTION NO. 2
SHOULDER SECTION

TYPICAL SECTION NO. 3
CURB AND GUTTER SECTION

BRIDGE TYPICAL SECTION
-L- SR 1770 (SUNSET AVENUE) OVER -L2- (I-95)

NOTE:
Full Control of Access is defined as a connection to a facility provided only via ramps at interchanges (major thoroughfares with full control of access, freeways and service roads). No private driveway connections allowed.

NOTE:
Partial Control of Access is defined as one access point per property. Where more than one access point exists, only one will be retained, an additional access point may be considered. For properties that have access, but front on a road that connects to SR 1770 (Eastern Avenue) may be eliminated.

END TIP PROJECT R-5720
BEGIN TIP PROJECT U-5026

BEGIN TIP PROJECT U-5996
-L1- POT STA. 10+50.61

END TIP PROJECT U-5026
-L- POT STA. 224+65.00

SEE ROLL 3

SEE ROLL 4

SEE ROLL 4

PUBLIC MEETING MAP
NCDOT STIP Nos. R-5720 E, U-5996 AND U-5026
NASH COUNTY
WIDEN EASTERN AVE. (SR 1770) FROM RED OAK RD. (SR 1003) TO N. OLD CARRIAGE RD. (SR 1603); WIDEN N. OLD CARRIAGE RD. (SR 1603) FROM EASTERN AVE./SUNSET AVE. (SR 1770) TO GREEN HILLS RD.; REGES STONE RD. (SR 1601) AND UPGRADE US 64 INTERCHANGE; WIDEN SUNSET AVE. (SR 1770) FROM N. OLD CARRIAGE RD. (SR 1603) TO HALIFAX RD. (SR 1541) AND CONTERT GRADE-SEPARATION AT I-95 TO INTERCHANGE
ROLL 2 OF 4

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DESIGN DATA
Functional Class. = Urban Arterial
Design Speed = 50 mph
Max. Superelevation = 0.04

ORTHOPHOTO DATA
NCONEMAP 12-14-2017

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

100' 0' 100' 200'
(ENGLISH)

PUBLIC MEETING MAP
NCDOT STIP Nos. R-5720 E, U-5996 AND U-5026
NASH COUNTY
WIDEN EASTERN AVE. (SR 1770) FROM RED OAK RD. (SR 1003) TO N. OLD CARRIAGE RD. (SR 1603); WIDEN N. OLD CARRIAGE RD. (SR 1603) FROM EASTERN AVE./SUNSET AVE. (SR 1770) TO GREEN HILLS RD.; REGES STONE RD. (SR 1601) AND UPGRADE US 64 INTERCHANGE; WIDEN SUNSET AVE. (SR 1770) FROM N. OLD CARRIAGE RD. (SR 1603) TO HALIFAX RD. (SR 1541) AND CONTERT GRADE-SEPARATION AT I-95 TO INTERCHANGE
ROLL 2 OF 4

PUBLIC MEETING MAP

NCDOT STIP Nos. R–5720, U–5996 AND U–5026

NASH COUNTY

WIDEN EASTERN AVE. (SR 1770) FROM RED OAK RD. (SR 1003) TO N. OLD CARRIAGE RD. (SR 1603); WIDEN N. OLD CARRIAGE RD. (SR 1603) FROM EASTERN AVE./SUNSET AVE. (SR 1770) TO GREEN HILLS RD./ REGES STORE RD. (SR 1601) AND UPGRADE US 64 INTERCHANGE; WIDEN SUNSET AVE. (SR 1770) FROM N. OLD CARRIAGE RD. (SR 1603) TO HALIFAX RD. (SR 1544) AND CONVERT GRADE–SEPARATION AT I–95 TO INTERCHANGE

ROLL 4 OF 4

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

100' 0' 100' 200'
50'
(ENGLISH)

DESIGN DATA

Functional Class. = Urban Arterial
Design Speed = 50 mph
Max. Superelevation = 0.04

ORTHOPHOTO DATA

NCONEMAP 12–14–2017

38	WILLIAMS GENERAL CONTRACTORS, LLC
39	BARBARA ANN RICHARDSON
40	JONATHAN KURIEN
41	HICKORY PROPERTY, INC.
42	MICHEL REAL ESTATE PARTNERSHIP
44	MCKENNY DIXON, JR.
83	BOGGS STEELE INVESTMENTS, LLC
84	JOHN K. WILLIAMS, JR., ET AL
85	BERTHA HARRISON BATTLE
86	LUBERTHA JONES KELLY
87	LESTER D. CAPPS ENTERPRISES, INC.
88	OSCAR MCLAMB, JR., ET AL
89	JULIUS E. ROSE, ET UX
90	ELAINE W. SESSOMS
91	CURTIS LEE BANDY, ET UX
92	JAMES E. SESSOMS, ET UX

LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION AND UTILITY)
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- LAKES, RIVER, STREAMS AND PONDS
- EXISTING UTILITY EASEMENT
- PROPOSED CONTROL OF ACCESS
- PROPOSED PARTIAL CONTROL OF ACCESS
- EXISTING CONTROL OF ACCESS
- CEMETERIES
- PROPERTY LINES
- WETLANDS
- 2017 PRESENT ADT
- 2040 FUTURE ADT
- EXISTING TRAFFIC SIGNAL

NOTE:
Full Control of Access is defined as a connection to a facility provided only via ramps at interchanges (major crossings) and at grade intersections (minor crossing and service roads). No private driveway connections allowed.

NOTE:
Partial Control of Access is defined as one access point per parcel. For properties with large road frontages (for example, 2000 feet or more), an additional access point may be considered. For properties that have access, such as via a side road, access to SR 1770 (Eastern Avenue) may be eliminated.

TYPICAL SECTION NO. 6

–CD1–, –CD2–; 53'± (46' FROM FUTURE I-95 8-LANE EOT); 16'; I-95 MAINLINE EOT; 14' SHLDR.; 20'±*; 13'*; 6'; 4'; 12'; 14' (17' W/GR); 15'; 6'; 10'; 4' FDPS; GRADE POINT; 8:1**; 6:1**; 0.035; 0.025; 0.08; HINGE POINT FOR FILLS; HINGE POINT FOR CUTS; 3:1; 4:1; 6:1; VARIABLE SLOPE; 30'

*DISTANCE CAN VARY AS NECESSARY
**SLOPE CAN VARY AS NECESSARY

DRIVEWAY NOTE

DRIVEWAYS ARE NOT SHOWN, AS MAPS ARE BASED ON PRELIMINARY PLANS AND ARE SUBJECT TO CHANGE. DRIVEWAYS LOCATIONS WILL BE FINALIZED AT A LATER DATE.

UTILITY INFORMATION

TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITIES ARE NOT SHOWN ON THESE MAPS OR ON OTHER DISPLAYS. THE UTILITY INFORMATION SHOWN ON THESE MAPS IS LIMITED TO LOCATIONS OF MAJOR EXISTING AND POTENTIAL UTILITY EASEMENTS. THE DESIGNS SHOWN ON THESE MAPS, INCLUDING UTILITY EASEMENTS, ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.

TYPICAL SECTION NO. 3
CURB AND GUTTER SECTION

–L– SR 1770 (SUNSET AVENUE); 18' (18' W/GR); 10' SIDEPATH; 5'; 2'; 24'; 12'; 12'; VAR. 17'–6" TO 23'; 24'; 12'; 12'; 2'; 10' (14' W/GR); 4'; 5'; 6"; 0.02; 0.025; GRADE POINT; 0.02; 0.02; 0.025; 0.02; VAR. 3:1 TO 4:1

BRIDGE TYPICAL SECTION
–L– SR 1770 (SUNSET AVENUE) OVER –L2– (I–95)

10' MUP; 1'; 2'; 12'; 12'; 6'; 12'; 12'; 8' SHLDR.; 0.025; 0.025; GRADE POINT; 0.025; 42" CONC. BARRIER

SUNSET AVENUE (–L–) AT I–95

2017 / 2040 ADT

Movement	2017	2040
Sunset Ave. north leg	18200	24900
I–95 west	41500	58800
I–95 east	38600	54300
Sunset Ave. south leg	17200	24000
Ramp (NW)	3100	4600
Ramp (NE)	1800	2800
Ramp (SW)	2700	4600
Ramp (SE)	1100	1900

DESIGN DATA

SUNSET AVE. (SR 1770)
Functional Class. = Urban Arterial
Design Speed = 50 mph
Max. Superelevation = 0.04

COLLECTOR DISTRIBUTOR
Functional Class. = Interstate
Design Speed = 60 mph
Max. Superelevation = 0.08

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DRIVEWAY NOTE

DRIVEWAYS ARE NOT SHOWN, AS MAPS ARE BASED ON PRELIMINARY PLANS AND ARE SUBJECT TO CHANGE. DRIVEWAY LOCATIONS WILL BE FINALIZED AT A LATER DATE.

UTILITY INFORMATION

TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITIES ARE NOT SHOWN ON THESE MAPS OR ON OTHER DISPLAYS. THE UTILITY INFORMATION SHOWN ON THESE MAPS IS LIMITED TO LOCATIONS OF MAJOR EXISTING AND POTENTIAL UTILITY EASEMENTS. THE DESIGNS SHOWN ON THESE MAPS, INCLUDING UTILITY EASEMENTS, ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.

PUBLIC MEETING MAP

NCDOT STIP Nos. R-5720, U-5996 AND U-5026

NASH COUNTY

WIDEN EASTERN AVE. (SR 1770) FROM RED OAK RD. (SR 1003) TO N. OLD CARRIAGE RD. (SR 1603); WIDEN N. OLD CARRIAGE RD. (SR 1603) FROM EASTERN AVE./SUNSET AVE. (SR 1770) TO GREEN HILLS RD./ REGES STORE RD. (SR 1601) AND UPGRADE US 64 INTERCHANGE; WIDEN SUNSET AVE. (SR 1770) FROM N. OLD CARRIAGE RD. (SR 1603) TO HALIFAX RD. (SR 1544) AND CONVERT GRADE-SEPARATION AT I-95 TO INTERCHANGE

ROLL 3 OF 4

NOTE:
Full Control of Access is defined as a connection to a facility provided only via ramps at interchanges (major crossings) and at grade intersections (minor crossing and service roads). No private driveway connections allowed.

NOTE:
Partial Control of Access is defined as one access point per parcel. For properties with large road frontages (for example, 2000 feet or more), an additional access point may be considered. For properties that have access, such as via a side road, access to SR 1770 (Eastern Avenue) may be eliminated.

UTILITY INFORMATION

TO PROVIDE GREATER VISUAL CLARITY, EXISTING AND PROPOSED UTILITIES ARE NOT SHOWN ON THESE MAPS OR ON OTHER DISPLAYS. THE UTILITY INFORMATION SHOWN ON THESE MAPS IS LIMITED TO LOCATIONS OF MAJOR EXISTING AND POTENTIAL UTILITY EASEMENTS. THE DESIGNS SHOWN ON THESE MAPS, INCLUDING UTILITY EASEMENTS, ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.

100′ 0′ 100′ 200′ 50′ (ENGLISH)

DESIGN DATA

Functional Class.	=	Urban Arterial
Design Speed	=	50 mph
Max. Superelevation	=	0.04

ORTHOPHOTO DATA

NCONEMAP 12-14-2017

DRIVEWAY NOTE

DRIVEWAYS ARE NOT SHOWN, AS MAPS ARE BASED ON PRELIMINARY PLANS AND ARE SUBJECT TO CHANGE. DRIVEWAY LOCATIONS WILL BE FINALIZED AT A LATER DATE.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

EASTERN AVENUE (-L-) AT NASH COMMUNITY COLLEGE SOUTH ENTRANCE (-Y9-) — 2017/2040 ADT

Approach	ADT
-Y9- NASH COMM. COLLEGE SOUTH ENT.	1800 / 2400
-Y9- left turn	800 / 1300
-Y9- right turn	1000 / 1100
-L- SR 1770 EASTERN AVE. (west)	12900 / 15900
-L- SR 1770 EASTERN AVE. (east)	10100 / 16000

EASTERN/SUNSET AVENUE (-L-) AT N. OLD CARRIAGE RD. (-L1-) — 2017/2040 ADT

Approach	ADT
-L1- SR 1603 N. OLD CARRIAGE RD. (north)	10000 / 16400
turns	2800 / 5400; 3100 / 6800
-L- SR 1770 EASTERN AVE.	13100 / 15700
turns	900 / 1400; 1300 / 1600
-L- SR 1770 SUNSET AVE.	13800 / 17300
-L1- SR 1603 N. OLD CARRIAGE RD. (south)	6300 / 7200

N. OLD CARRIAGE RD. (-L1-) AT NASH COMMUNITY COLLEGE SOUTH ENTRANCE (-Y19-) — 2017/2040 ADT

Approach	ADT
-Y19- NASH COMM. COLLEGE SOUTH ENT.	1500 / 2000
turns	600 / 800; 900 / 1200
-L1- SR 1603 N. OLD CARRIAGE RD. (west)	11800 / 17800
-L1- SR 1603 N. OLD CARRIAGE RD. (east)	12100 / 18200

SUNSET AVENUE (-L-) AT WESTRY RD. (-Y10-) — 2017/2040 ADT

Approach	ADT
-L- SR 1770 SUNSET AVE.	15900 / 22000
turns	700 / 900; 1400 / 1900
-L- SR 1770 SUNSET AVE.	16500 / 23000
-Y10- WESTRY RD.	2100 / 2800

N. OLD CARRIAGE RD. (-L1-) AT NASH COMMUNITY COLLEGE NORTH ENTRANCE (-Y21-) — 2017/2040 ADT

Approach	ADT
-Y21- NASH COMM. COLLEGE NORTH ENT.	3000 / 3800
turns	1300 / 1600; 1700 / 2200
-L1- SR 1603 N. OLD CARRIAGE RD.	12100 / 18200
-L1- SR 1603 N. OLD CARRIAGE RD.	12500 / 18800

N. OLD CARRIAGE RD. (-L1-) AT US 64 — 2017/2040 ADT

Approach	ADT
US 64 (north)	35000 / 49200
turns	2800 / 4600; 700 / 800
-L1- SR 1603 N. OLD CARRIAGE RD.	12500 / 18800
turns	6500 / 10400; 2200 / 2600
-L1- SR 1603 N. OLD CARRIAGE RD.	6100 / 7200
US 64 (south)	40200 / 56800

N. OLD CARRIAGE RD. (-L1-) AT REGES STORE RD./GREEN HILLS RD. — 2017/2040 ADT

Approach	ADT
REGIS STORE RD.	1800 / 2500
turns	700 / 800; 300 / 400
-L1- SR 1603 N. OLD CARRIAGE RD.	6100 / 7200
turns	2100 / 2600; 300 / 600
-L1- SR 1603 N. OLD CARRIAGE RD.	3900 / 4800
GREEN HILLS RD.	3200 / 4500

(11) BOYD M. TOLMAN, ET AL
(12) AUDREY LOCKE SHEARIN #2, LLC
(13) CHARLES J. KOLTZ, JR.
(14) MICHAEL V. BARNHILL, ET UX
(15) NANETTE F. BARRINGER, ET AL
(16) DAVID L. KEETER, ET UX
(17) JANICE KATHLEEN MCLAREN
(18) JOHN F. WILSON AND MARY W. WILSON IRREVOCABLE TRUST
(19) THE VILLAGE IN WESTRY CROSSING OWNERS ASSOCIATION
(20) DELIA L. SMITH
(21) BRITTNEY MARY BROUWERS
(22) ROBERT O. MORRIS, JR., ET UX
(23) THOMAS R. WATT, ET UX
(24) SYLVIA DIANE ARMSTRONG
(25) THE VILLAGE IN WESTRY CROSSING OWNERS ASSOCIATION
(26) EDWIN KEITH BONE
(27) SHERRY WILCZEWSKI
(28) NATHAN E. WICKSTROM, ET UX
(29) LEONARD SULLIVAN
(30) DAUGHTRIDGE PROPERTIES, LLC
(31) SUNSETTER PROPERTIES, LLC

(76) AFFORDABLE PROPERTIES FOR RENT, LLC, SERIES 2
(77) MATTHEW P. LEININGER, ET UX
(78) AFFORDABLE PROPERTIES FOR RENT, LLC, SERIES 7
(79) GSM PROPERTIES LLC
(80) J C BELL JR
(81) SHEILA JOHNSON
(82) VICTOR HOOKER

LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION AND UTILITY)
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- GAS STATION
- SCHOOL
- LAKES, RIVER, STREAMS AND PONDS
- EXISTING UTILITY EASEMENT
- PROPOSED CONTROL OF ACCESS
- PROPOSED PARTIAL CONTROL OF ACCESS
- EXISTING CONTROL OF ACCESS
- CEMETERIES
- PROPERTY LINES
- WETLANDS
- 2017 PRESENT ADT / 2040 FUTURE ADT
- EXISTING TRAFFIC SIGNAL
- EXISTING TRAFFIC SIGNAL TO BE REMOVED

LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION AND UTILITY)
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE REMOVED
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- GAS STATION
- SCHOOL
- LAKES, RIVER, STREAMS AND PONDS
- EXISTING UTILITY EASEMENT
- PROPOSED CONTROL OF ACCESS
- PROPOSED PARTIAL CONTROL OF ACCESS
- EXISTING CONTROL OF ACCESS
- CEMETERIES
- PROPERTY LINES
- WETLANDS
- 2017 PRESENT ADT / 2040 FUTURE ADT
- EXISTING TRAFFIC SIGNAL
- EXISTING TRAFFIC SIGNAL TO BE REMOVED

PUBLIC MEETING MAP
NCDOT STIP Nos. R-5720, U-5996 AND U-5026
NASH COUNTY
WIDEN EASTERN AVE. (SR 1770) FROM RED OAK RD. (SR 1003) TO N. OLD CARRIAGE RD. (SR 1603); WIDEN N. OLD CARRIAGE RD. (SR 1603) FROM EASTERN AVE./SUNSET AVE. (SR 1770) TO GREEN HILLS RD./ REGES STORE RD. (SR 1601) AND UPGRADE US 64 INTERCHANGE; WIDEN SUNSET AVE. (SR 1770) FROM N. OLD CARRIAGE RD. (SR 1603) TO HALIFAX RD. (SR 1544) AND CONVERT GRADE-SEPARATION AT I-95 TO INTERCHANGE
ROLL 3 OF 4

PUBLIC MEETING MAP
NCDOT STIP Nos. R-5720, U-5996 AND U-5026
NASH COUNTY
WIDEN EASTERN AVE. (SR 1770) FROM RED OAK RD. (SR 1003) TO N. OLD CARRIAGE RD. (SR 1603); WIDEN N. OLD CARRIAGE RD. (SR 1603) FROM EASTERN AVE./SUNSET AVE. (SR 1770) TO GREEN HILLS RD./ REGES STORE RD. (SR 1601) AND UPGRADE US 64 INTERCHANGE; WIDEN SUNSET AVE. (SR 1770) FROM N. OLD CARRIAGE RD. (SR 1603) TO HALIFAX RD. (SR 1544) AND CONVERT GRADE-SEPARATION AT I-95 TO INTERCHANGE
ROLL 3 OF 4

Appendix C – Cultural Resources Correspondence

HISTORIC ARCHITECTURE AND LANDSCAPES
SURVEY REQUIRED FORM

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

PROJECT INFORMATION

Project No:	U-5996 and R-5720	***County***:	Nash
WBS No.:	47133.1.1	***Document Type***:	
Fed. Aid No:		***Funding***:	X State Federal
Federal Permit(s):	X Yes No	***Permit Type(s)***:	USACE

Project Description: Add center turn lane and evaluate interchange operations on SR 1603 (Old Carriage Road) from Green Hills Road to SR 1770 (Eastern Avenue), replace Bridge No. 154 on SR 1603 over US 64, and widen SR 1770 (Eastern Avenue) from SR 1003 (Red Oak Road) to SR 1603 (Old Carriage Road (no off-site detour specified in review request).

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions: HPOWeb reviewed on 25 October 2018 and yielded two SS and no NR, DE, SL, or LD properties in the Area of Potential Effects (APE). Nash County current GIS mapping, aerial photography, and tax information indicated a partly developed APE with residential, commercial, and institutional resources dating from the 1910s to the 2010s (viewed 25 October 2018). The APE equates with the study area provided in the review request (see attached). Of thirty-four properties with above-ground resources, eighteen pre-date 1970, of which all but one are unexceptional (some are also altered) examples of their types. Two of the pre-1970 resources were determined not NR-eligible in 2016, a finding that remains valid (House (NS1494) and House (NS 1493) at #2943 Eastern Avenue and #4170 E. Old Spring Hope Road). The house and outbuildings at #3033 Eastern Avenue (PIN: 382117119260) requires additional investigation and evaluation for National Register eligibility to establish compliance with Section 106 for historic architecture (see attached). Bridge Numbers 73 (2008), 154 (1960) and 284 (1973) are not NR-eligible as they are neither aesthetically nor technologically significant. The comprehensive county architectural survey (1984), as well as later studies record no properties in the APE apart from the two previously recorded houses (Richard L. Mattson. *The History and Architecture of Nash County, North Carolina* (Nashville, NC: Nash County Planning Department, 1987)). County GIS/tax materials and other visuals, like Google Maps "Streetview," clearly illustrate the relative placement of all resources and the proposed work, which indicates the need for field investigation and NR eligibility evaluation of the house and outbuildings noted above (viewed 25 October 2018). The project will be reviewed under both GS 121-12(a) and Section 106.

*We can complete this investigation using one of the Historic Architecture Team's on-call firms or if Division would like to manage and complete the work they can use an NCDOT-prequalified architectural historian under contract with one of Division's on-call firms. Historic Architecture will provide a scope of work for the Division to use, but we do need to know **within seven days** which path the Division plans to follow. All work products produced by the Division's consultant must be submitted to the Historic Architecture Team for review, acceptance, and submittal to the State Historic Preservation Office as per the Programmatic Agreement.*

SUPPORT DOCUMENTATION

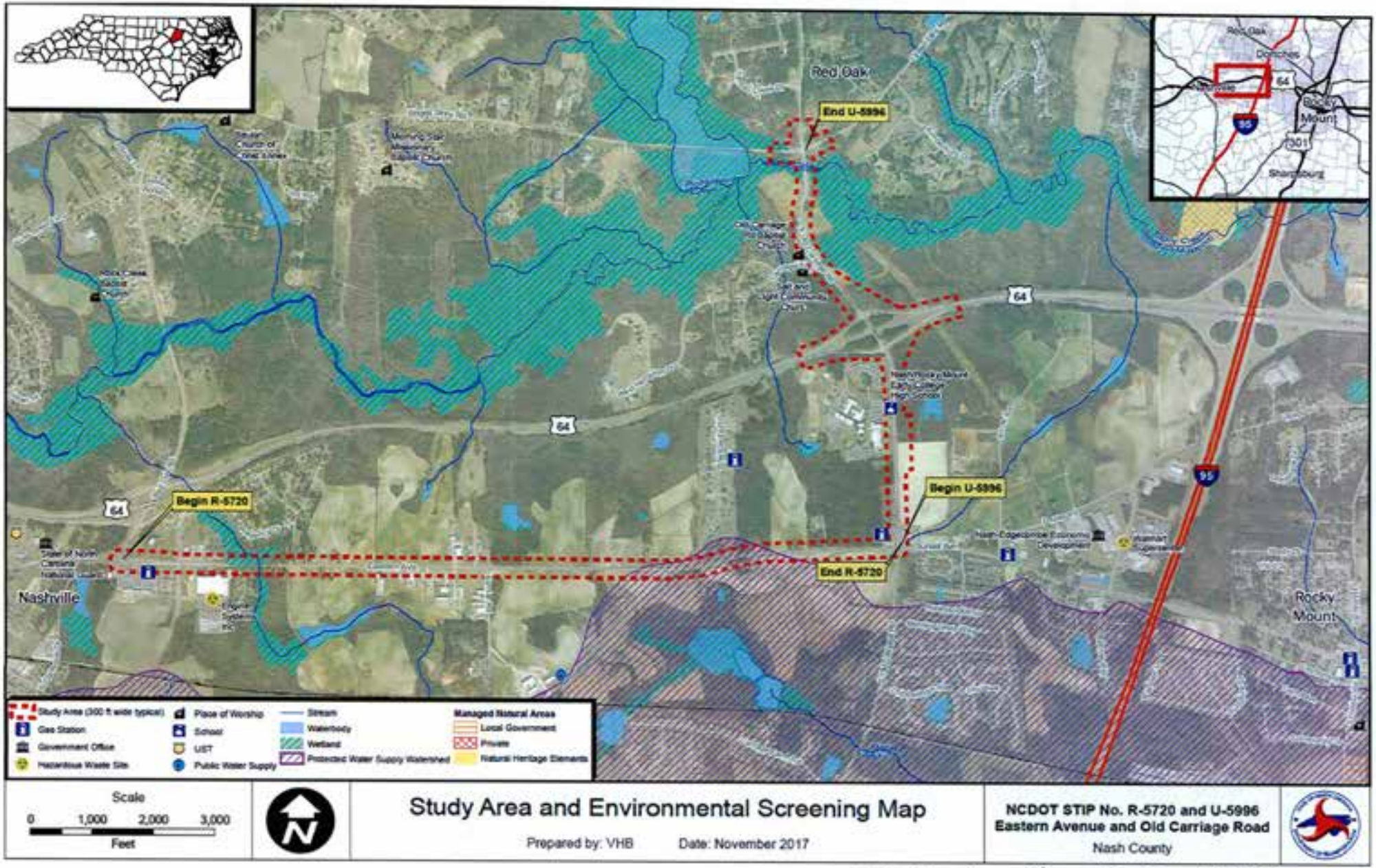
X Map(s) ☐ Previous Survey Info. ☐ Photos ☐ Correspondence ☐ Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- **SURVEY REQUIRED**

Vanessa E. Patrick 10 January 2019

NCDOT Architectural Historian Date



Study Area and Environmental Screening Map

Prepared by: VHB Date: November 2017

NCDOT STIP No. R-5720 and U-5996
Eastern Avenue and Old Carriage Road
Nash County

PA Tracking No. 18-10-0022

Property to be Evaluated

U-5996 and R-5720 WBS No. 47133.1.1 Nash County

Base map: HPOWeb, nts

House and Outbuildings
#3033 Eastern Avenue
PIN: 382117119260

NCDOT – Historic Architecture
January 2019
PA Tracking No. 18-10-0022

Development of a community college and/or law enforcement training facilities at the intersection of the two projects was subjected to an archaeological review (ER 12-1340) and was not subjected to further archaeological investigations.

As noted earlier, much of the remaining APE along Eastern Avenue (SR 1770) is currently agricultural land with open, plowed fields, and probably has been for well over a century. With fieldwork occurring in the wintertime, ground surface visibility was generally good in these winterized fields. For this reason, pedestrian survey and visual inspection of the APE was most appropriate to identify archaeological sites on these plowed, desirable and level landforms, a more efficient methodology, yielding better results than a program of subsurface testing.

One previously recorded archaeological site (31Ns159) is located nearby, but outside of, the current APE. Identified and evaluated as part of a pipeline project (ER 14-1475), the small Native American site was determined to be not eligible for the NRHP. The overlapping portion of that pipeline investigation did not yield any archaeological sites within this current APE.

Three new archaeological sites (31Ns194, 31Ns195, 31Ns196) were identified as a result of the January fieldwork, all historic scatters of mostly broken ceramics or glass beside of standing early 20th century residences. Most of the artifacts, bottle glass, whiteware, porcelain, and terracotta, appear to be related to the nearby houses. One isolated find held an apparent older age, a single fragment of an unscalloped blue edged whiteware that dates from between 1840s and 1860s found on the surface at 31Ns195. No other artifacts were noted at this site. None of these small historic scatters located in a plowed, disturbed context, are recommended as eligible for listing on the National Register of Historic Places.

No previously recorded archaeological sites are located inside or immediately adjacent to the APE. Field investigations, which included a multiple-transect surface survey of the plowed APE, yielded three new historic archaeological sites, 31Ns194, 31Ns195 and 31Ns196. The artifact fragments are generally unremarkable, typical domestic wares likely associated with residences in the immediate surroundings. Since there are no previously recorded or newly documented archaeological sites eligible or listed on the NRHP identified within the APE, a finding of no National Register of Historic Places listed, or eligible sites is appropriate.

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

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

SUPPORT DOCUMENTATION

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

Signed:

01/29/2019

NCDOT ARCHAEOLOGIST **Date**