

**IMPROVEMENTS TO SR 1521 (LAKE PINE DRIVE)
FROM EAST OF PINE PLAZA DRIVE/MACGREGOR PINES DRIVE
TO NORTHEAST OF VERSAILLES DRIVE
APEX, WAKE COUNTY**

**FEDERAL AID PROJECT No. STPDA-0501(34)
WBS No. 44112.1.F1
TIP PROJECT No. U-5537**

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

Submitted Pursuant to 42 U.S.C. 4332(2)(c) and 49 U.S.C. 303

APPROVED:

8/30/16
Date

Beverly G. Robinson

Beverly G. Robinson, Western Region Group Leader
Project Development and Environmental Analysis Unit
North Carolina Department of Transportation

8/31/16
Date

John F. Sullivan, III

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

IMPROVEMENTS TO SR 1521 (LAKE PINE DRIVE)
FROM EAST OF PINE PLAZA DRIVE/MACGREGOR PINES DRIVE
TO NORTHEAST OF VERSAILLES DRIVE
APEX, WAKE COUNTY

FEDERAL AID PROJECT NO. STPDA-0501(34)
WBS No. 44112.1.F1
TIP PROJECT No. U-5537

CATEGORICAL EXCLUSION

August 2016

Prepared by RS&H Architects-Engineers-Planners, Inc.
For the Town of Apex, North Carolina
In coordination with the North Carolina Department of Transportation



8/20/16

Date

Meredith H. Van Duyn, PE, Project Manager
RS&H Architects-Engineers-Planners, Inc.

8/30/16

Date

Russell H. Dalton, PE, Project Manager/Transportation Engineer
Town of Apex, North Carolina

8/30/16

Date

Lisa M. Feller, PE, Project Planning Engineer
Project Development and Environmental Analysis Unit
North Carolina Department of Transportation

Table of Contents

INTRODUCTION	1
I. PURPOSE AND NEED STATEMENT	1
II. EXISTING CONDITIONS	1
III. ALTERNATIVES	4
A. Description of the Build Alternative	4
B. No-Build Alternative (Eliminated from Further Study).....	5
IV. ESTIMATED COSTS	5
V. OTHER HIGHWAY PROJECTS IN THE AREA.....	6
VI. NATURAL RESOURCES	6
A. Methodology	6
B. Physiography and Soils.....	7
C. Water Resources	7
D. Biotic Resources	8
1. Terrestrial Communities	8
2. Terrestrial Wildlife.....	9
3. Aquatic Communities	9
4. Invasive Species.....	9
5. Anticipated Impacts to Biotic Communities	9
E. Jurisdictional Topics	10
1. Waters of the United States.....	10
2. Permits	11
3. Mitigation.....	12
F. Rare and Protected Species	12
VII. HUMAN ENVIRONMENT	14
A. Cultural Resources / Compliance Guidelines	14
B. Community Features	15
C. Indirect and Cumulative Effects	15
D. Air Quality	16
E. Traffic Noise	19
F. Section 4(f) Impacts	20
VIII. ENVIRONMENTAL EFFECTS	20
IX. COORDINATION AND AGENCY COMMENTS	21
A. USEPA (October 21, 2014)	21
B. NCDENR – Division of Water Resources (November 4, 2014).....	21
C. NCDENR – Raleigh Regional Office (November 14, 2014).....	22
X. PUBLIC INVOLVEMENT	22

Figures

- Figure 1 – Vicinity Map
- Figure 2 – Aerial Map
- Figure 3 – USGS Topographic Map
- Figure 4 – Project Photos
- Figures 5a-5c – Typical Section
- Figure 6 – Roadway Design
- Figure 7 – Affected Environment
- Figure 8 – Terrestrial Communities

Appendix – Agency Correspondence

PROJECT COMMITMENTS

IMPROVEMENTS TO SR 1521 (LAKE PINE DRIVE) FROM EAST OF PINE PLAZA DRIVE/MACGREGOR PINES DRIVE TO NORTHEAST OF VERSAILLES DRIVE APEX, WAKE COUNTY

**FEDERAL AID PROJECT NO. STPDA-0501(34)
WBS No. 44112.1.F1
TIP PROJECT NO. U-5537**

Town of Apex and NCDOT Natural Environment Section

The US Fish and Wildlife Service (USFWS) is protecting the northern long-eared bat (NLEB) under the Endangered Species Act because of strongly declining populations, largely because of white-nose syndrome, a disease that is severely affecting this species. A proposal to list this bat as endangered was submitted by the USFWS on October 2, 2013, and the bat gained Federal protection when it was officially listed as a Threatened species under the Endangered Species Act on April 2, 2015.

The USFWS has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and North Carolina Department of Transportation (NCDOT) for the NLEB in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program in Divisions 1-8 is “May Affect, Likely to Adversely Affect.” The PBO will provide incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where U-5537 is located.

The Town of Apex will submit to the NCDOT Natural Environment Section the amount of actual tree clearing that occurred for the project. This information will be sent before the project is completed and will be reported in tenths of acres.

Town of Apex

The Town of Apex will determine final impacts to protected stream buffers during final design. Streams in the study area are subject to Neuse River Basin Buffer Rules.

The Town of Apex will coordinate with utility companies for relocation plans prior to construction.

**IMPROVEMENTS TO SR 1521 (LAKE PINE DRIVE)
FROM EAST OF PINE PLAZA DRIVE/MACGREGOR PINES DRIVE
TO NORTHEAST OF VERSAILLES DRIVE
APEX, WAKE COUNTY**

**FEDERAL AID PROJECT NO. STPDA-0501(34)
WBS NO. 44112.1.F1
TIP PROJECT NO. U-5537**

INTRODUCTION

The Town of Apex and the North Carolina Department of Transportation (NCDOT) propose improvements to SR 1521 (Lake Pine Drive) from east of Pine Plaza Drive/MacGregor Pines Drive to the Apex/Cary Town limits (northeast of Versailles Drive). This project is included in the *2016-2025 State Transportation Improvement Program (STIP)* as Project U-5537. No substantial environmental impacts are anticipated as a result of the proposed project. This action is classified as a Federal Categorical Exclusion, as defined by the Federal Highway Administration's (FHWA) environmental guidelines (23 CFR 771.117).

I. PURPOSE AND NEED STATEMENT

Improvements are needed to approximately 1,500 feet of Lake Pine Drive to make the roadway geometrically consistent with the existing roadway at the northern terminus and provide bicycle and pedestrian connections. The Town of Cary recently restriped Lake Pine Drive from Cary Parkway to the Cary/Apex town limit (northern terminus of Project U-5537). Project U-5537 will match the recently reconstructed section, adding a bicycle lane in each direction, an auxiliary (turn) lane, a 10-foot paved street-side trail (multi-use path) on the east side, a 5-foot sidewalk on the west side, and a high-visibility crosswalk with refuge area at Versailles Drive. The existing culvert carrying Williams Creek under Lake Pine Drive will be replaced also. One travel lane in each direction will remain (no capacity to be added). The proposed project is consistent with Town of Apex and Town of Cary local plans. The project location is shown in **Figures 1, 2, and 3**. Photos of the project area are included in **Figure 4**.

II. EXISTING CONDITIONS

The proposed project is located within the municipal limits of the Town of Apex, bordering the Town of Cary municipal limits in Wake County. Lake Pine Drive is a continuation of Old Raleigh Road and serves as a connector between Downtown Apex and the Town of Cary. Surrounding land uses include commercial, recreational, and (single-family and multi-family) residential. Rex Healthcare of Cary is located north of the project area.

Apex Community Park is located within the study area and includes a greenway. The Three Lakes Loop bicycle route runs along Lake Pine Drive and Versailles Drive. Some sections of sidewalk exist along Lake Pine Drive but are not contiguous. The Town of Cary's proposed

Lower Williams Greenway is to be constructed along Lake Pine Drive and is partially included in this project.

Lake Pine Drive is a two-lane roadway with a posted speed limit of 35 miles per hour (mph). It is classified as a major collector according to NCDOT Functional Classification maps. The estimated (2013) annual daily traffic (ADT) along Lake Pine Drive is 11,000 vehicles per day (vpd). There are no signalized intersections within the project study area. School buses from Apex Elementary School, Apex Middle School, Salem Middle School, Apex High School, and several magnet schools currently travel along Lake Pine Drive within the project limits.

Utilities in the project study area include water/sewer, natural gas, overhead power and cable, and fiber optic.

Existing right-of-way varies along the corridor, and the proposed project would require permanent right-of-way and easements from Apex Community Park and permanent drainage and utility easements from five private properties (as detailed in **Section III.A.**).

There were 29 crashes reported to have occurred in the immediate project vicinity during the four-year period of January 1, 2010 through December 31, 2014. Collisions reported in **Table 1** are the combined total of crashes along segments and intersections in the project area. Most crashes occurred at the intersection of MacGregor Pines Drive and Lake Pine Drive (16), followed by the roadway segment between MacGregor Pines Drive and the Apex Community Park entrance (9). There were no fatal collisions reported. Crash data is summarized in **Tables 1, 2, and 3.**

Total crash rates for all segments in **Table 1** are lower than the North Carolina statewide average (2010-2012) for a two-lane urban secondary route undivided (average 191.01 crashes per 100 million vehicle miles traveled (100MVMt)). The critical crash rate based on the North Carolina statewide average for a similar facility and a 95% confidence interval is 228.95.

Collisions at the Intersection of MacGregor Pines Drive and Lake Pine Drive

Seven of the sixteen collisions at the intersection of MacGregor Pines Drive and Lake Pine Drive were left-turn type crashes, which may be a result of the existing sight distance issues with the horizontal curvature at this location. Six of the sixteen were angle crashes. Others included one rear-end collision, and two sideswipes.

Collisions on the Segment of Lake Pine Drive from MacGregor Pines Drive to the Apex Community Park Entrance

Eight of the nine collisions on the roadway segment of Lake Pine Drive from MacGregor Pines Drive to Apex Community Park Entrance were run-off road collisions and may point to possible sight distance and geometrical challenges in this area. One crash was a head-on collision. The addition of an auxiliary turn lane should improve safety in this section of road.

Table 1. Crash Summary: Totals and Severity

Roadway Segment Or Intersection <i>(in italics)</i>	Total Crashes	Crash Rate*		Crash Severity**					
		Total	Non-Fatal Injury	Fatal	Type A Injury	Type B Injury	Type C Injury	PDO	EPDO Severity Index***
<i>MacGregor Pines Dr. at Lake Pine Dr.</i>	16	79.91	17.12	0	0	0	3	13	23.50
Lake Pine Dr from MacGregor Pines Dr. to Apex Community Park Entrance+	9	205.48	91.32	0	0	3	1	5	19.00
<i>Apex Community Park Entrance at Lake Pine Dr.</i>	1	5.71	0	0	0	0	0	1	1.00
Lake Pine Dr. from Apex Community Park Entrance to Versailles Dr.+	3	214.04	0	0	0	0	0	3	3.00

* Rate = Crashes per 100 Million Vehicles Entered (MEV); 2010-2014 (4 years)

** Crash severity is rated Fatal, Class A to C (highest to lowest), or PDO (property damage only)

*** EPDO severity index of 8.4 is the threshold for locations that have more serious crashes. (Chapter 14 of NCDOT TEAAS Training Material)

+ Segment crash rates are on a per mile basis

Table 2. Roadway Segment Crash Type Summary: 01/01/2010 to 12/31/2014 (4 years)

Roadway Segment	Run Off Road	Head On	Other	Total
Lake Pine Dr. from MacGregor Pines Dr. to Apex Community Park Entrance	6	1	2	9
Lake Pine Dr. from Apex Community Park Entrance to Versailles Dr.	2	0	1	3

Table 3: Intersection Crash Type Summary: 01/01/2010 to 12/31/2014 (4 years)

Roadway Segment	Type of Crash							Total
	Left Turn	Rear End	Run Off Road	Head On	Angle	Sideswipe	Jackknife	
MacGregor Pines Dr. at Lake Pine Dr.	7	1	0	0	6	2	0	16
Apex Community Park Entrance at Lake Pine Dr.	0	0	1	0	0	0	0	1

III. ALTERNATIVES

A. Description of the Build Alternative

The proposed Build Alternative would provide the following:

- Replace the double-barrel corrugated metal pipes (96" diameter) carrying Williams Creek under Lake Pine Drive with a double-barrel 13' x 8' reinforced concrete box culvert. (Includes bank stabilization of Williams Creek.)
- Connect the existing sidewalks:
 - On the east side, from north of MacGregor Plaza to south of Versailles Drive, with a 10-foot paved street-side trail that will become the Lower Williams Greenway.
 - On the west side, from south of Community Park (near the retention pond) to north of Community Park, approximately 400 feet.
- Install a high-visibility crossing with a refuge island just south of Versailles Drive, connecting the proposed 10-foot paved street-side trail to Community Park.
- Convert existing pavement that is currently striped (unused) into a left-turn lane, at Versailles Drive and the entrance to Community Park, to remove left-turning traffic from through-lanes. (Minor lane widening needed in horizontal curve near Community Park.)
- Install 4-foot bicycle lane in each direction adjacent to the travel lane.
- Slight realignment of a small portion of the greenway at Community Park.
- Install advance warning signs for high-visibility pedestrian crossing (just south of Versailles Drive). Install lighting on the west side of the road at the location of the vertical curve.



Deteriorating pipes carrying Williams Creek under Lake Pine Drive



End of sidewalk, south of Versailles Drive

Typical sections and the preliminary roadway design are included in **Figures 5 and 6**. Lake Pine Drive would retain one travel lane in each direction with a posted speed limit of 35 mph. Curb and gutter is proposed along both sides of the entire project corridor. Horizontal sight distance will be improved, and vertical sight distance will be maintained.

The proposed Build Alternative would require the following right-of-way acquisitions and easements, as shown on **Figure 6**:

- Permanent Dual Use Easement (Utility and Drainage) on private properties, 0.1 acre on east side of Lake Pine Drive near Begin Project limit.
- Permanent Drainage Easement on private property (adjoining aforementioned permanent dual use easement), 0.12 acre on east side of Lake Pine Drive.
- Permanent Right-of-Way from the Town of Apex (area surrounding proposed culvert replacement and rip rap treatment), approximately 0.8 acre on the east and west sides of Lake Pine Drive.
- Permanent Drainage Easements on private properties adjacent to Williams Creek, 0.12 acre on the east side of Lake Pine Drive.
- Permanent Utility Easement on private property, 0.02 acre on west side of Lake Pine Drive.
- Permanent Utility Easement from the Town of Apex, 0.1 acre on west side of Lake Pine Drive at Apex Community Park.
- Temporary Construction Easement from the Town of Apex, approximately 0.2 acre on west side of Lake Pine Drive at Apex Community Park.

B. No-Build Alternative (Eliminated from Further Study)

The “Do-Nothing” or No-Build Alternative would not provide any geometric, pedestrian, or bicycle improvements along Lake Pine Drive. It would not replace the double-barrel corrugated metal pipe culvert carrying Williams Creek under Lake Pine Drive. This is not desirable due to the existing geometry and inconsistency with adjacent typical sections (as described previously).

IV. ESTIMATED COSTS

The estimated costs for the Build Alternative, based on 2015 prices are as follows:

Table 4. Estimated Project Costs

Item	Build Alternative
Right-of-Way (including Permanent Easements)	TBD
Utility Relocation	TBD
Construction*	\$700,000
Contingency (10%)	\$70,000
TOTAL	\$800,000 (rounded)

* Includes roadway, drainage, and concrete and steel for the culvert. Does not include traffic control, pavement marking quantities, slope reinforcement, and final structure estimate (to be determined during final design).

The estimated cost for this project in the 2016-2025 STIP includes \$175,000 for prior years’ costs, \$80,000 for right-of-way acquisition, and \$835,000 for construction. The Town of Cary and Town of Apex are partnering in the municipal cost share for right-of-way and construction phases. The Town of Apex is managing all phases. Construction for Project U-5537 is scheduled to begin in 2017.

V. OTHER HIGHWAY PROJECTS IN THE AREA

The Capital Area Metropolitan Planning Organization's (CAMPO) *2040 Metropolitan Transportation Plan* (MTP, formerly known as a Long Range Transportation Plan or "LRTP") adopted in December 2012 includes several projects near U-5537. STIP Project U-5301B includes converting Lake Pine Drive at US 64 into an interchange. STIP Project U-5301C proposes upgrading the US 64 corridor from Laura Duncan Road to the US 1 interchange. Right-of-way acquisition for STIP Projects U-5301B and U-5301C is scheduled for Fiscal Year (FY) 2021, and construction is scheduled to begin in FY 2022. Fiscal Years 2021 and beyond are considered the "Developmental Program" in the STIP. Another project proposes to add two lanes to Lake Pine Drive/Old Raleigh Road from Apex Peakway to Cary Parkway and does not have a TIP number.

VI. NATURAL RESOURCES

A. Methodology

Carolina Ecosystems biologists conducted field work in the project area from October 21-23, 2014. Jurisdictional areas were verified by the US Army Corps of Engineers (USACE) and the North Carolina Department of Environment and Natural Resources (NCDENR) – Division of Water Resources (DWR).

Published information regarding the project study area and region was derived from several sources, including: United States Geological Survey (USGS) 7.5-minute topographical quadrangle map, United States Fish and Wildlife Service (USFWS) database reviews, National Wetland Inventory (NWI) Map, aerial photography, and Natural Resource Conservation Service (NRCS) soil survey mapping of Wake County.

Surface waters within the project study area were evaluated in the field to document their physical characteristics and jurisdictional status. Water resources information was obtained from publications of the NCDENR-DWR.

Approximate boundaries of plant communities were mapped in the field using aerial photography of the project study area. Dominant plant species were identified in each strata for each plant community. Plant community descriptions are based on the classifications used by Schafale and Weakley (1990). Plant names follow the nomenclature found in Radford *et al.* (1968).

Wildlife occurrences were determined through visual field observations, evaluation of habitat within the project study area, secondary indicators of species (tracks, scat, and burrows), as well as a review of supporting literature (Coe, 1994; Martof, et al. 1980; and Webster et al. 1985).

Information concerning the potential occurrence of federal and state protected species within the project study area and project vicinity was obtained from the USFWS list of protected species and the North Carolina Natural Heritage Program (NCHNP) database of rare species and unique habitats.

B. Physiography and Soils

The study area lies in the piedmont physiographic region of North Carolina. Topography in the project vicinity is comprised of gently rolling hills with narrow, level floodplains along streams. Elevations in the study area range from 350 to 410 ft. above sea level. Land use in the project vicinity consists primarily of residential and commercial development interspersed with some forest habitat.

The Wake County Soil Survey identifies seven soil types within the study area, two of which (Chewacla soils and Wabee fine sandy loam) are primarily non-hydric but may contain hydric inclusions. No soil types are anticipated to be problematic. A copy of the full technical report entitled *U-5537 Natural Resources Technical Report* can be viewed at the NCDOT Project Development and Environmental Analysis (PDEA) Unit, Century Center Building A, 1000 Birch Ridge Drive, Raleigh.

C. Water Resources

Water resources in the study area are part of the Neuse River Basin [USGS Hydrologic Unit 03020201]. Two streams were identified in the study area (**Table 5**). The location of each water resource is shown in **Figure 7**. The physical characteristics of these streams are provided in **Table 6**.

Table 5. Water Resources in the Study Area

Stream Name	Map ID	DWQ Stream Index Number	Best Usage Classification
Williams Creek	Williams Creek (SA)	27-43-2	WS-III;NSW
UT to Williams Creek	SB	27-43-2	WS-III;NSW

Table 6. Physical Characteristics of Water Resources in the Study Area

Map ID	Bank Height (ft)	Bankfull Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity
Williams Creek (SA)	2	15	4	Sand, Gravel, Cobble	Moderate	Clear
SB	0.5	3	3	Sand, Silt	Slow	Slightly Turbid

Portions of two ponds were located in the study area totaling approximately 0.12 acres (**Figure 7**). One of these ponds, Apex Lake (PA), has a connection to a perennial stream (jurisdictional) while the remaining pond (PB) is a maintained stormwater pond (non-jurisdictional).

Wake County is not designated by the North Carolina Wildlife Resources Commission (NCWRC) as containing Mountain Trout Waters, and no streams within the project study area

are designated as Trout Waters. There are no designated anadromous fish waters or Primary Nursery Areas (PNA) present in the study area. There are no designated Outstanding Resource Waters (ORW), High Quality Waters (HQW), or water supply watersheds (WS-I or WS-II) within 1.0 mile downstream of the study area. The North Carolina 2014 Final 303(d) list of impaired waters identifies no waters within the study area or within 1.0 mile downstream of the study as an impaired water due to excessive sedimentation or turbidity.

D. Biotic Resources

This section describes the existing vegetation and associated wildlife that occur within the project study area. Potential impacts affecting these resources are also discussed.

1. Terrestrial Communities

Four terrestrial communities were identified in the study area: maintained/disturbed, piedmont alluvial forest, mesic mixed hardwood forest (Piedmont subtype), and pine/hardwood forest. **Figure 8** shows the location and extent of these terrestrial communities in the study area. A brief description of each community type follows. A copy of the full technical report entitled *U-5537 Natural Resources Technical Report* can be viewed at the NCDOT Project Development and Environmental Analysis (PDEA) Unit, Century Center Building A, 1000 Birch Ridge Drive, Raleigh.

Maintained/Disturbed

Maintained/disturbed areas are scattered throughout the study area in places where the vegetation has been cleared or periodically mowed for residential and commercial uses. Examples of these areas include roadside shoulders, utility corridors, and other landscaped areas.

Piedmont Alluvial Forest

The piedmont alluvial forest community occurs throughout the study area mostly on floodplain ridges and terraces. The community contains jurisdictional wetlands with North Carolina Wetland Assessment Method (NCWAM) classifications of bottomland hardwood forest (WA) and headwater forest (WB, WC, and WD).

Mesic Mixed Hardwood Forest (Piedmont Subtype)

The mesic mixed hardwood forest (Piedmont subtype) community occurs throughout the site in upland areas where hardwoods are the dominate canopy species.

Pine/Hardwood Forest

The pine/hardwood forest community occurs in areas where loblolly pines are the dominate canopy species.

2. Terrestrial Wildlife

Terrestrial communities in the study area are comprised of both natural and disturbed habitats that may support a diversity of wildlife species. Several species were observed during the field visit. A copy of the full technical report entitled *U-5537 Natural Resources Technical Report* can be viewed at the NCDOT Project Development and Environmental Analysis (PDEA) Unit, Century Center Building A, 1000 Birch Ridge Drive, Raleigh.

3. Aquatic Communities

Aquatic communities in the study area consist of both perennial and intermittent Piedmont streams, as well as still water ponds. A copy of the full technical report entitled *U-5537 Natural Resources Technical Report* can be viewed at the NCDOT Project Development and Environmental Analysis (PDEA) Unit, Century Center Building A, 1000 Birch Ridge Drive, Raleigh.

4. Invasive Species

Nine species from the NCDOT Invasive Exotic Plant List for North Carolina were found to occur in the study area. A copy of the full technical report entitled *U-5537 Natural Resources Technical Report* can be viewed at the NCDOT Project Development and Environmental Analysis (PDEA) Unit, Century Center Building A, 1000 Birch Ridge Drive, Raleigh. NCDOT Best Management Practices (BMPs) for the management of invasive plant species will be followed, as appropriate.

5. Anticipated Impacts to Biotic Communities

(a) Terrestrial Communities

Terrestrial communities in the study area may be impacted by project construction as a result of grading and paving portions of the study area. Community data are presented in the context of total coverage of each type within the study area (**Table 7**) and potential impacts.

Table 7. Coverage of Terrestrial Communities in the Study Area

Community	Coverage (ac)	Impacts (ac)
Maintained/Disturbed	5.37	2.50
Piedmont Alluvial Forest	1.67	0.14
Mesic Mixed Hardwood Forest (Piedmont Subtype)	1.18	0.21
Pine/Hardwood Forest	0.97	0.05
Total	9.19	2.9

(b) Aquatic Communities

Aquatic organisms are acutely sensitive to changes in their environment, and environmental impacts from construction activities may result in long term or irreversible effects. Impacts usually associated with in-stream activities include alterations to the substrate and impacts to the adjacent streamside vegetation. Such disturbances within the substrate lead to increased siltation, which can clog the gills and/or feeding mechanisms of benthic organisms, fish, and amphibian species. Siltation may cover benthic macroinvertebrates with excessive amounts of sediment that inhibit their ability to obtain oxygen.

The removal of streamside vegetation and placement of fill material during construction enhances erosion and possible sedimentation. Quick revegetation of these areas helps to reduce the impacts by supporting the underlying soils. Erosion and sedimentation may carry soils, toxic compounds, trash, and other materials into the aquatic communities at the construction site. As a result, bars may form downstream of the site. Increased light from the removal of streamside vegetation may increase water temperatures. Warmer water contains less oxygen, thus reducing aquatic life that depends on high oxygen concentrations.

Specific impacts to Waters of the United States are listed in **Section E** (Jurisdictional Topics).

E. Jurisdictional Topics

1. Waters of the United States

Section 404 of the Clean Water Act requires regulation of discharges into Waters of the United States. The USACE has the responsibility for implementation, permitting, and enforcement of the provisions of the Act. The USACE regulatory program is defined in 33 CFR 320-330.

Two jurisdictional streams were identified in the study area (**Table 8**). The location of these streams is shown on **Figure 7**. All jurisdictional streams in the study area have been designated as warm water streams for the purposes of stream mitigation.

Table 8. Jurisdictional Characteristics of Water Resources in the Study Area

Map ID	Length (ft) within Study Area	Classification	Compensatory Mitigation Required	River Basin Buffers ¹	Impacts (Linear ft)
Williams Creek (SA)	282	Perennial	Yes	Subject	181 ²
SB	444	Intermittent	Yes	Subject	218 ³

¹ Impacts to be determined for impact drawings for environmental permit.

² Includes construction of new rip rap for bank armoring at the inlet and outlet. Permanent: 159 ft. Temporary: 22 ft.

³ Stream B impacts are all permanent due to relocation and tie-in to Wetland C.

Wetlands are those areas that are inundated or saturated by surface water or groundwater 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.

The project study area was surveyed for jurisdictional wetlands on October 21-23, 2014. Five jurisdictional wetlands were identified within the study area (**Figure 7**). Wetland classification and quality rating data are presented in **Table 9**. All wetlands in the study area are within the Neuse River Basin (USGS Hydrologic Unit 03020201).

Table 9. Jurisdictional Characteristics of Wetlands in the Study Area

Map ID	NCWAM	Hydrologic Classification	NCDWQ Wetland Rating	Total Wetland Area (ac)	Potential Impacts (ac)
WA	Bottomland Hardwood Forest	Riparian	37	0.05	0.0
WB	Headwater Forest	Riparian	29	0.05	0.0
WC	Headwater Forest	Riparian	55	0.12	0.0*
WD	Headwater Forest	Riparian	19	0.02	<0.01
WE	Non-Tidal Freshwater Marsh	Riparian	42	0.03	0.0

* Retaining wall needed

2. Permits

Clean Water Act Permits

The proposed project has been designated as a Categorical Exclusion (CE) for the purposes of National Environmental Policy Act documentation. Depending on the amount of impacts, a Nationwide Permit 14 or an Individual Permit will likely be applicable. The USACE holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required then a Section 401 Water Quality Certification (WQC) from the NCDWR will be needed.

Coastal Area Management Act Areas of Environmental Concern

Wake County is not under the jurisdiction of the Coastal Area Management Act, and no Areas of Environmental Concern are located in the project study area.

Construction Moratoria

No construction moratoria apply to any waters in the study area.

North Carolina River Basin Rules

Streamside riparian zones within the study area are protected under provisions of the Neuse River Buffer Rules as administered by NCDWR. As shown in **Table 8**, the streams in the study

area are subject to the buffer rule protection. Potential impacts to protected stream buffers will be determined during final design.

Rivers and Harbors Act, Section 10 – Navigable Waters

No waters in the study area are designated as Navigable Water under Section 10 of the Rivers and Harbors Act.

3. Mitigation

The Town of Apex will attempt to avoid and minimize impacts to streams and wetlands to the greatest extent practicable during final design.

In accordance with 15A NCAC 2H.0506 (h) and 40 CFR 1508.20, mitigation is required for impacts to jurisdictional streams when impacts are equal to or greater than 150 linear feet per stream. Possible mitigation scenarios will be coordinated with the USACE and NCDWR during final design.

F. Rare and Protected Species

Federal law under the provisions of Section 7 of the Endangered Species Act (ESA) of 1973, as amended, requires that any action likely to adversely affect a federally protected species be subject to review by USFWS. Other species may warrant protection under separate state laws.

Plants and animals with federal classifications of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under Section 7 and Section 9 of the ESA.

As of April 2, 2015, USFWS lists four federally protected species for Wake County (**Table 10**). A brief description of each species’ habitat requirements follows, along with the Biological Conclusion rendered based on survey results in the study area. Habitat requirements for each species are based on the current best available information from referenced literature and/or USFWS. A copy of the full technical report entitled *U-5537 Natural Resources Technical Report* can be viewed at the NCDOT Project Development and Environmental Analysis (PDEA) Unit, Century Center Building A, 1000 Birch Ridge Drive, Raleigh.

Table 10. Federally Protected Species Listed for Wake County

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Picoides borealis</i>	Red-cockaded woodpecker	E	Yes	No Effect
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	E	Yes	No Effect
<i>Rhus michauxii</i>	Michaux’s sumac	E	Yes	No Effect
<i>Myotis septentrionalis</i>	Northern long-eared bat	T	Yes	MA/LAA*

E = Endangered; T = Threatened

* May Affect, Likely to Adversely Affect

Red-Cockaded Woodpecker

Biological Conclusion: No Effect

Suitable forage and nesting habitat for the red-cockaded woodpecker was found within the study area. Potential nesting is present within 0.5 miles of the study area habitat. Field surveys were conducted in all identified nesting habitat on October 23, 2014. No red-cockaded woodpeckers or nesting trees were found. A review of NCNHP data, updated October 2014, indicates no known RCW occurrence within 1.0 mile of the study area.

Dwarf wedgemussel

Biological Conclusion: No Effect

A review of NCNHP records, updated October 2014, indicates the nearest known occurrence of dwarf wedgemussel (EO 13799) in Swift Creek located south of Lake Benson, 13 miles downstream from the Williams Creek confluence and 14 miles downstream of the project. Both Lake Wheeler and Lake Benson separate Williams Creek from this occurrence. As a result of the current conditions and degraded habitat in Williams Creek, the dwarf wedgemussel will not be impacted as a result of project implementation.

Michaux's sumac

Biological Conclusion: No Effect

Suitable habitat for Michaux's sumac is present in the study area along roadside shoulders and utility rights-of-way. Surveys of potential habitat were conducted October 21, 2014. No individuals of Michaux's sumac were observed. A review of NCNHP records, updated October 2014, indicates no known occurrences within 1.0 mile of the study area.

Northern Long-eared Bat

Biological Conclusion: May Affect, Likely to Adversely Affect

USFWS is protecting the northern long-eared bat (NLEB) under the Endangered Species Act because of strongly declining populations, largely because of white-nose syndrome, a disease that is severely affecting this species. A proposal to list this bat as endangered was submitted by the US Fish and Wildlife Service (USFWS) on October 2, 2013, and the bat gained Federal protection when it was officially listed as a Threatened species under the Endangered Species Act on April 2, 2015.

The USFWS has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the NLEB in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program in Divisions 1-8 is "May Affect, Likely to Adversely Affect." The PBO will provide incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Wake County, where U-5537 is located.

The Town of Apex will submit to the NCDOT Natural Environment Section (Neil Medlin, Biological Surveys Group Leader) the amount of actual tree clearing that occurred for the project. This information will be sent before the project is completed and will be reported in tenths of acres.

Bald and Golden Eagle Protection Act

The bald eagle was removed from the USFWS's list of Threatened and Endangered Species (effective August 8, 2007), but it is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large, dominant trees are utilized for nesting sites, typically within one mile of open water.

A desktop-GIS assessment of the project study area, as well as the area within a 1.13 mile radius (1.0 mile plus 660 feet) of the project limits, was performed on October 16, 2014 using 2013 color aerials. Water bodies large enough or sufficiently open to be considered potential feeding sources were identified. Suitable habitat for bald eagle exists in the study area, as it is within 1 mile of suitable forage habitat (Apex Lake). On October 21 and 23, 2014, a survey of the project study area and the area within 660 feet of the project limits was conducted, where suitable forage habitat was located within a distance of 1.0 mile. No nests were identified, and no bald eagles were sighted. A review of the NCNHP records, updated October 2014, indicates no known bald eagle occurrences within 1.0 mile of the study area.

Endangered Species Act Candidate Species

As of December 27, 2012 (verified August 2016), the USFWS lists no Candidate species for Wake County.

Essential Fish Habitat

The National Marine Fisheries Service (NMFS) has identified no essential fish habitat in the study area.

VII. HUMAN ENVIRONMENT

A. Cultural Resources / Compliance Guidelines

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

The North Carolina Department of Cultural Resources State Historic Preservation Office had no comment on historic or archaeological resources following a review of the Project Scoping Letter (October 24, 2014 response is included in the **Appendix**).

B. Community Features

Land uses along Lake Pine Drive within the project area consist of commercial, recreational, and (single-family and multi-family) residential. Lake Pine Drive facilitates local trips to adjacent destinations including the Lake Pine Plaza, Apex Community Park, residential subdivisions, and a Rex Healthcare complex to the north. One existing greenway runs parallel to Lake Pine Drive as well as a bicycle route that runs along the north end of the project. No other community facilities are in the project vicinity.

The Nichols Plaza development is proposed at the western end of Pine Plaza Drive (along US 64 between Lake Pine Drive and Laura Duncan Road) and will include a Costco.

There are several local plans to guide growth in the project area, including land use plans, area plans, corridor plans, and zoning ordinances adopted by the Town of Apex and the Town of Cary. Local area plans include the *Town of Apex Parks, Recreation, Greenways, and Open Space Master Plan*; *Peak Plan 2030*; the *Bicycle, Pedestrian, and Equestrian Plan*; the *Comprehensive Plan*; and the *2025 Land Use Plan*. Project U-5537 is not anticipated to conflict with any local plans.

No notable concentrations of populations meeting Environmental Justice criteria exist within the study area. Community impacts appear to be minimal. Impacts to minority and low income populations do not appear to be disproportionately high or adverse. Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the community.

Sidewalks exist along a portion of the Lake Pine Drive study corridor and are located on most streets within adjacent neighborhoods. However, current pedestrian facilities are not contiguous. Additional sidewalks, greenway connectors and bicycle routes are proposed throughout the study area. Phase four of the Lower Williams Creek project will include a trail connection between Swift Creek Greenway and Apex Community Park.

No permanent impacts to community resources are anticipated as part of this project. Although the Lake Pine Drive widening project largely can be built while keeping the existing Lake Pine Drive open to traffic, there may be some temporary impacts to mobility during construction. These impacts will include longer travel times due to general construction congestion as no lane reductions are planned. Drivers may choose to use alternate routes into the area to avoid the construction.

C. Indirect and Cumulative Effects

The limited scope of this project, very limited travel time saving, and a minor change in access as a result of the project will inhibit change in land use effects associated with this project. In addition, public policy is in place to regulate potential growth. Therefore, indirect effects from this project alone will be minor, and the threat to downstream water quality will be very limited.

Because no indirect impacts are anticipated, the cumulative effects of this project, when considered in the context of other past, present, and future actions, and the resulting impact on notable human and natural features should be minimal. Therefore, contributions of the project to cumulative impacts resulting from current and planned development patterns are expected to be minimal.

D. Air Quality

Introduction

Air pollution originates from various sources. Emissions from industry and internal combustion engines are the most prevalent sources. The impact resulting from highway construction ranges from intensifying existing air pollution problems to improving the ambient air quality. Changing traffic patterns are a primary concern when determining the impact of a new highway facility or the improvement of an existing highway facility.

The Federal Clean Air Act of 1970 established the National Ambient Air Quality Standards (NAAQS). These were established to protect public from known or anticipated effects of air pollutants. The most recent amendments to the NAAQS contain criteria for sulfur dioxide (SO₂), particulate matter (PM), carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and lead (Pb),

The primary pollutants from motor vehicles are unburned hydrocarbons, nitrous oxides, carbon monoxide, and particulates. Hydrocarbons and nitrogen oxide can combine in a complex series of reactions catalyzed by sunlight to produce photochemical oxidants such as ozone and NO₂. Because these reactions take place over a period of several hours, maximum concentrations of photochemical oxidants are often found far downwind of the precursor sources.

A project-level qualitative air quality analysis was prepared for this project. A copy of the unabridged version of the full technical report entitled U-5537 Air Quality Analysis Proposed Improvements to SR 1521 (Lake Pine Drive), Apex, North Carolina, dated April 24, 2015, can be viewed at the Project Development and Environmental Analysis Unit, Century Center Building A, 1010 Birch Ridge Drive, Raleigh.

Attainment Status

The project is located in Wake County, which is within the Raleigh-Durham attainment area for CO as defined by the EPA. The Raleigh-Durham area was redesignated for CO on September 18, 1995, and the 20-year maintenance requirement for CO in Wake and Durham Counties has been met as of September 18, 2015.

The Triangle Area is now in attainment for all the National Ambient Air Quality Standards. There are no Transportation Conformity Requirements (regional or project level) for Wake and Durham Counties. The Metropolitan Transportation Plan (MTP) will now be on a 5-year cycle. The new MTP date is the date that the MPO TAC made their adoption on the original 2040 MTP. The MTP dates are:

- CAMPO: 5/8/13
- DCHC MPO: 4/10/13

Mobile Source Air Toxics (MSAT)

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the USEPA regulate 188 air toxics, also known as hazardous air pollutants. The USEPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (<http://www.epa.gov/iris>). In addition, USEPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA). These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics (MSAT), the list is subject to change and may be adjusted in consideration of future USEPA rules. The 2007 EPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (vehicle-miles travelled, VMT) increases by 145 percent as assumed, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050.

Incomplete or Unavailable Information for Project Specific MSAT Health Impact Analysis

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

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

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in

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

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

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

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

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

Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed applicable.

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

Conclusion

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

Summary

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

The project is located in Wake County, which complies with the National Ambient Air Quality Standards. This project will not add substantial new capacity or create a facility that is likely to meaningfully increase emissions. Therefore, it is not anticipated to create any adverse effects on the air quality of this area. This evaluation completes the assessment requirements for air quality of the 1990 Clean Air Act Amendments and the NEPA process, and no additional reports are necessary.

E. Traffic Noise

Noise levels may increase during project construction; however, these impacts are not expected to be substantial considering the relatively short-term nature of construction noise and the limitation of construction to daytime hours. The transmission loss characteristics of nearby natural elements and man-made structures are believed to be sufficient to moderate the effects of intrusive construction noise.

This project has been determined to be a Type III Noise Project and therefore, no traffic noise analysis is required to meet the requirements of 23 CFR 772.

F. Section 4(f) Impacts

The *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) amendment to the Section 4(f) requirements allows the USDOT to determine that certain uses of Section 4(f) land will have no adverse effect on the protected resource. When this is the case, and the responsible official(s) with jurisdiction over the resource agrees in writing, compliance with Section 4(f) is greatly simplified.

The proposed improvements to Lake Pine Drive as part of STIP Project U-5537 has been planned and designed to minimize impacts to the surrounding properties. The public was afforded an opportunity to comment on the proposed land acquisitions through a public workshop and open invitation to submit comments via email, mail, or phone. The Town of Apex's Parks, Recreation, and Cultural Resources Director concurred that the project will have no adverse impact on Apex Community Park and agreed that the work and impacts to Apex Community Park be considered *de minimis* (letters included in the **Appendix**). Therefore, a Section 4(f) analysis of avoidance alternatives is not required under the SAFETEA-LU amendment. After considering the project's impacts to Apex Community Park, in addition to the concurrence of the official with jurisdiction of the resource, the FHWA-North Carolina Division Office is officially making a *de minimis* impact finding for Apex Community Park.

VIII. ENVIRONMENTAL EFFECTS

This action is classified as a Federal "Categorical Exclusion," as defined by FHWA's environmental guidelines (23 CFR 771.117). The proposed project is not expected to have an adverse effect on the quality of the human or natural environment with the use of current NCDOT standards and specifications.

This project is included in the *2016-2025 State Transportation Improvement Program* (STIP) as Project U-5537.

The proposed project would require permanent right-of-way and easements from Apex Community Park and permanent drainage and utility easements from five private properties (as detailed in **Section III.A.**). No impacts to residences or businesses are anticipated.

No adverse effect on public facilities or services is anticipated. The project is not expected to adversely affect social, economic, or religious opportunities in the area. There are no anticipated impacts from this project to publicly owned public facilities, wildlife or waterfowl refuges, or sites of national, state, or local importance.

The project's impact on noise and air will not be substantial. Noise levels could increase during construction but will be temporary.

It is anticipated that the project will impact 399 linear feet of stream and approximately 0.01 acre of wetlands.

Anticipated impacts to utilities include water/sewer, natural gas, phone, and power lines. Coordination with utility companies for relocation plans will be complete before construction begins.

Apex Community Park entrance/exit is located along Lake Pine Drive within the study area. This public recreational resource is protected under Section 4(f) of the US Department of Transportation Act of 1966. Potential impacts exist to the park frontage along Lake Pine Drive, but the project will not impact any parking or park facilities. A letter from the Town's Parks, Recreation & Cultural Resources Department Director in support of the project is included in the **Appendix**.

IX. COORDINATION AND AGENCY COMMENTS

A scoping letter was mailed to the following agencies on October 6, 2014 asking for input regarding anticipated permits or other known potential issues. Responses were received from agencies marked in bold with an asterisk (*). Letters and additional agency comments are included in the **Appendix**.

Federal Highway Administration
US Army Corps of Engineers
***US Environmental Protection Agency**
***US Fish and Wildlife Service**
***NC Department of Public Safety, Div. of
Emergency Management**
***NC Department of Cultural Resources,
State Historic Preservation Office**

**NC Department of Environment and
Natural Resources**
• Division of Marine Fisheries
• ***Division of Water Resources**
***NC Wildlife Resources Commission**

A summary of project-specific comments received as a response to the scoping letter follows:

A. USEPA (October 21, 2014)

Comment: *The project has one concern – the potential for future flood hazard according to FEMA flood mapping. It appears that there is a 1% annual chance for flood hazard. Please verify this with your engineering staff.*

Response: Comment noted. The project is contained within an approximate flood zone. The proposed structure provides more hydraulic conveyance than the existing structure and improves roadway overtopping from the 10+ year event to the 100+ year event. The proposed structure does not increase the chances of flooding insurable structures.

B. NCDENR – Division of Water Resources (November 4, 2014)

Comments:

- Williams Creek is class WS-III; NSW waters of the State. The NCDWR is very concerned with sediment and erosion impacts that could result from this project. The NCDWR recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to Williams Creek and its tributaries. Additionally,*

the NCDWR requests that road design plans provide treatment of the storm water runoff through the best management practices as detailed in the most recent version of the NCDOT Stormwater Best Management Practices Toolbox manual.

- 2. This project is within the Neuse River Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 15A NCAC 2B.0233. New development activities located in the protected 50-foot wide riparian areas within the basin shall be limited to “uses” identified within and constructed in accordance with 15A NCAC 2B.0233. Buffer mitigation may be required for buffer impacts resulting from activities classified as “allowable with mitigation” within the “Table of Uses” section of the Buffer Rules or require a variance under the Buffer Rules. A buffer mitigation plan, including use of the NC Ecosystem Enhancement Program, must be provided to the NCDWR prior to approval of the Water Quality Certification.*

Response: Comments noted. The Town of Apex will adhere to standard conditions for the USACE Nationwide/Individual Permits (as applicable), Section 404 and 401 conditions, Neuse River Basin Buffer Rules, and NCDOT’s *Guidelines for Best Management Practices for the Protection of Surface Waters*.

C. NCDENR – Raleigh Regional Office (November 14, 2014)

Comments:

- 1. If land disturbance exceeds 1 acre, an erosion and sedimentation control plan should be secured. Additionally, compliance with construction stormwater permit conditions (NCG010000) will be required.*
- 2. Due to observed topographic crenulations and blue lines in the project vicinity, a stream determination is necessary to confirm whether impacts will occur to waters or if riparian buffer authorization(s) are necessary. If stream, wetland, or riparian buffer impacts are proposed, this project will need to comply with/secure a 404 permit from USACE, obtain a Water Quality Certification and secure a riparian buffer authorization, as appropriate.*

Response: Comments noted. The Town of Apex will adhere to standard conditions for the USACE Nationwide/Individual Permits (as applicable), Section 404 and 401 conditions, Neuse River Basin Buffer Rules, and NCDOT’s *Guidelines for Best Management Practices for the Protection of Surface Waters*.

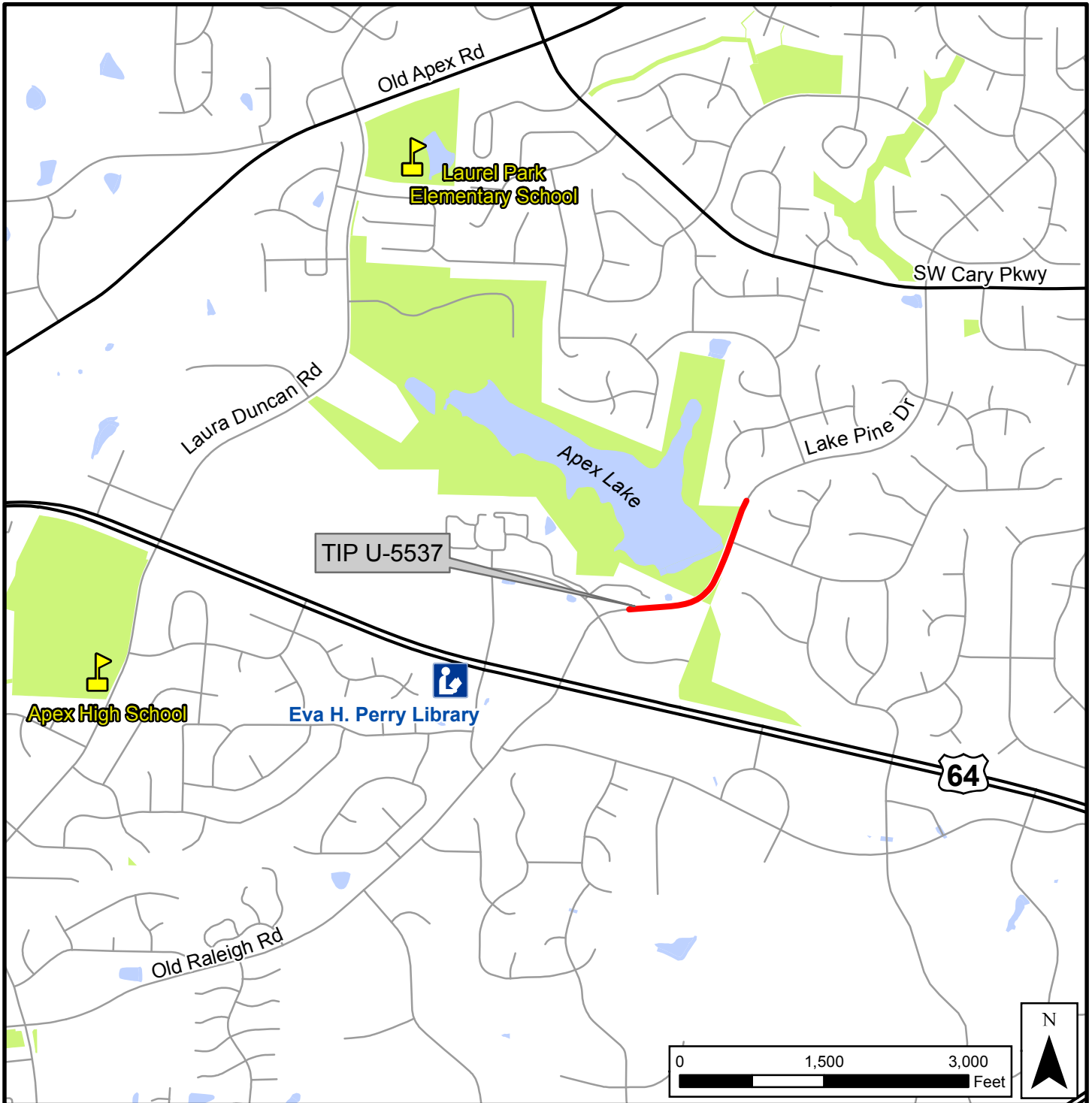
X. PUBLIC INVOLVEMENT

Public Meeting (February 19, 2015)

The Town of Apex hosted an open-house public meeting for the project on February 19, 2015 from 4:30 to 6:30 PM at Apex Town Hall. Area residents and business owners were notified in advance of the public meeting via the Town of Apex website, Town of Cary website, press releases, signs posted along the project corridor, and a direct postcard mailing (January 27, 2015).

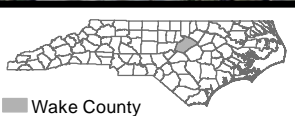
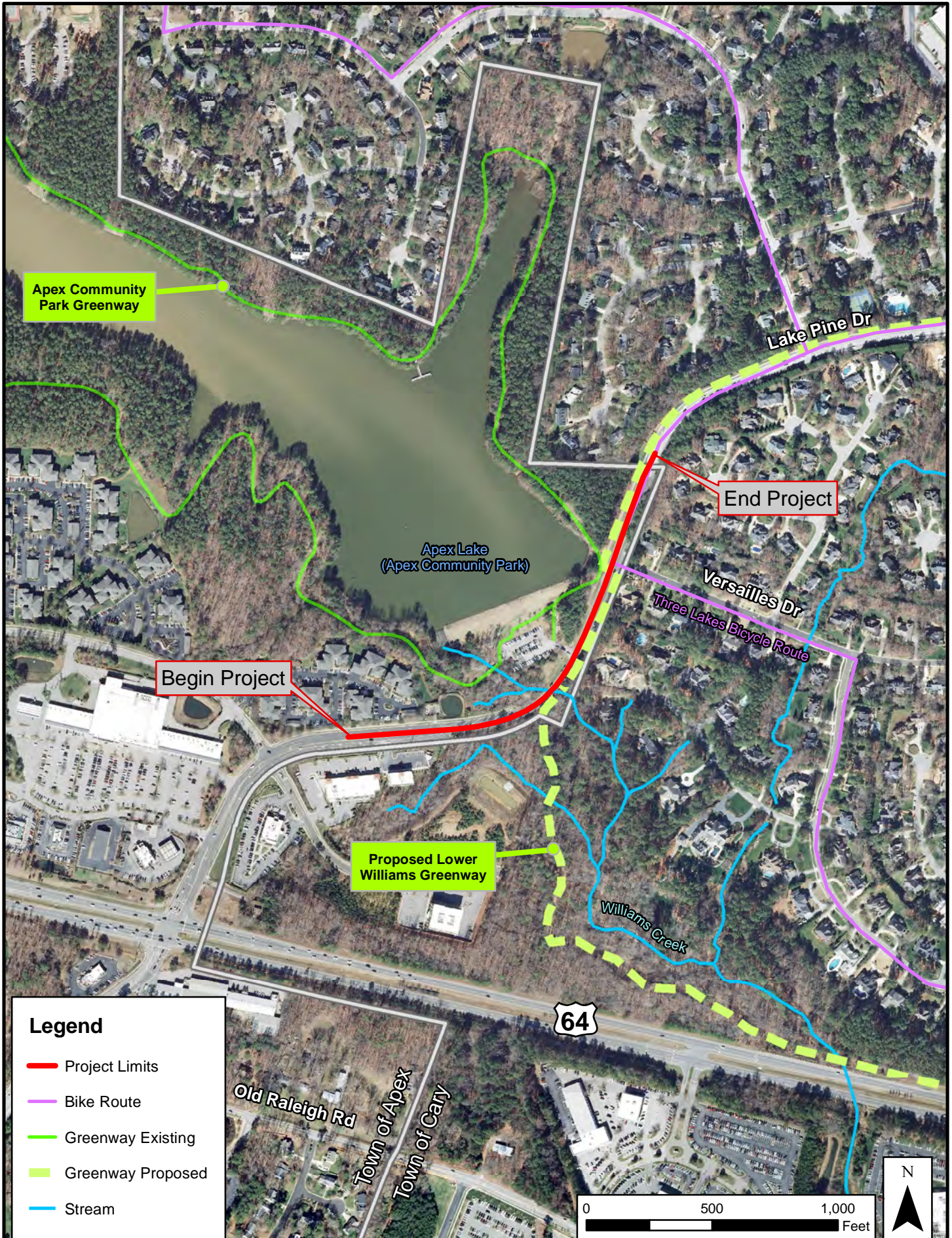
Seven citizens attended and supported the need for the project. Maps of the project study area were displayed, and attendees discussed the proposed improvements with Town of Apex, Town of Cary, NCDOT, and consultant staff. Several citizens corresponded with Town of Apex staff prior to the meeting with questions about whether their property would be impacted. Town staff responded to their emails. No relocations are anticipated as a result of this project. No private property impacts are anticipated except for a permanent drainage easement needed for bank stabilization along Williams Creek. Town of Apex staff discussed the permanent drainage easement with the property owner who asked questions about the construction process, access during construction, and final appearance of the stream.

FIGURES



Legend

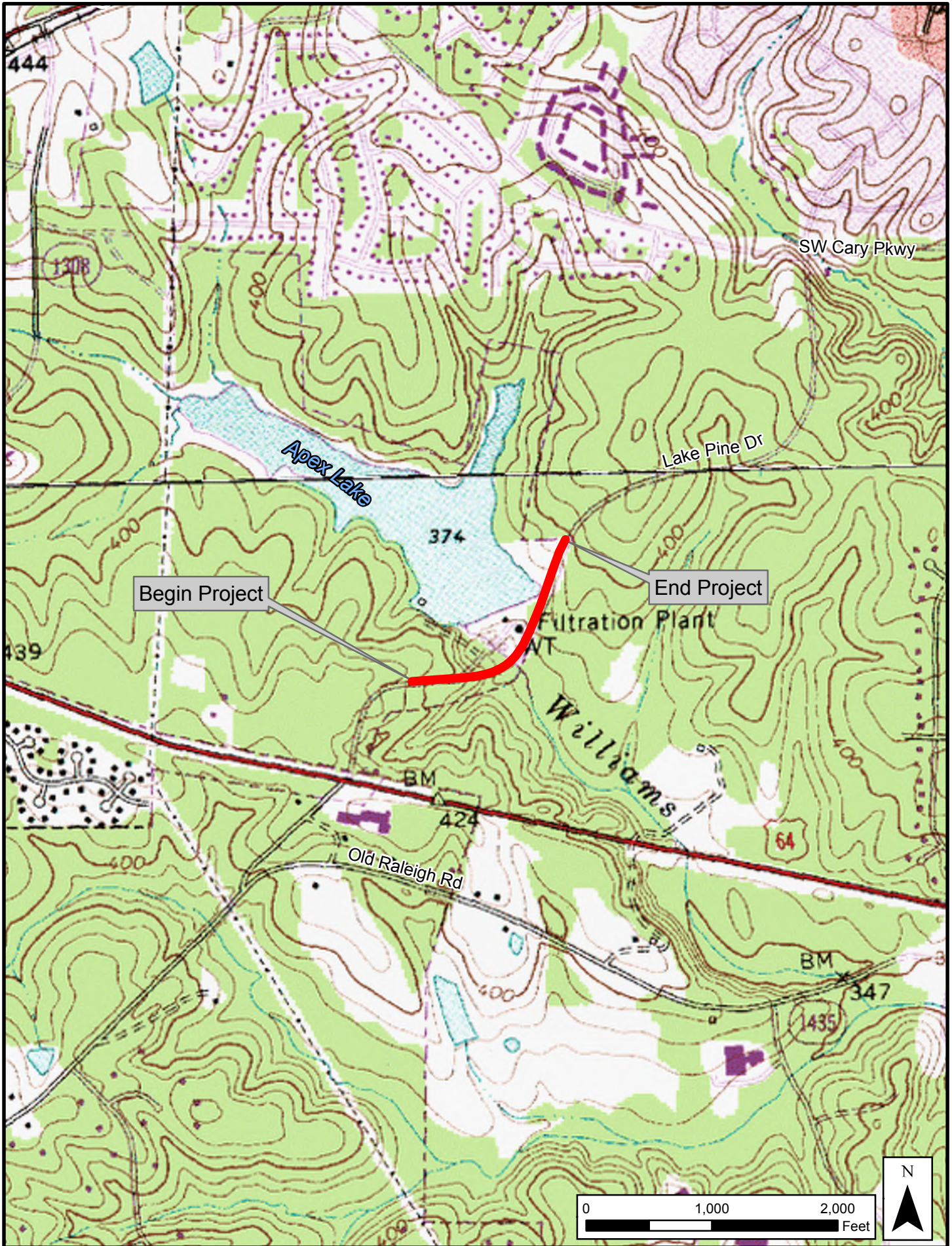
- Project Limits
- Major Roads
- Local Roads
- Water Bodies
- Parks
- 🚩 Schools
- 📖 Libraries



Lake Pine Drive Improvements

TIP No: U-5537
Division: 5

Figure: 2
Aerial Map



Lake Pine Drive Improvements

TIP No: U-5537
Division: 5

Figure: 3
Topographic Map



Culverts carrying Williams Creek under Lake Pine Drive



Lake Pine Drive at Apex Community Park, looking south



Lake Pine Drive at Apex Community Park, looking north



Lake Pine Drive at Versailles Drive



Lake Pine Drive between MacGregor Pines Drive/ Pine Plaza Drive and Apex Community Park



Lake Pine Drive near MacGregor Pines Drive/ Pine Plaza Drive, looking north



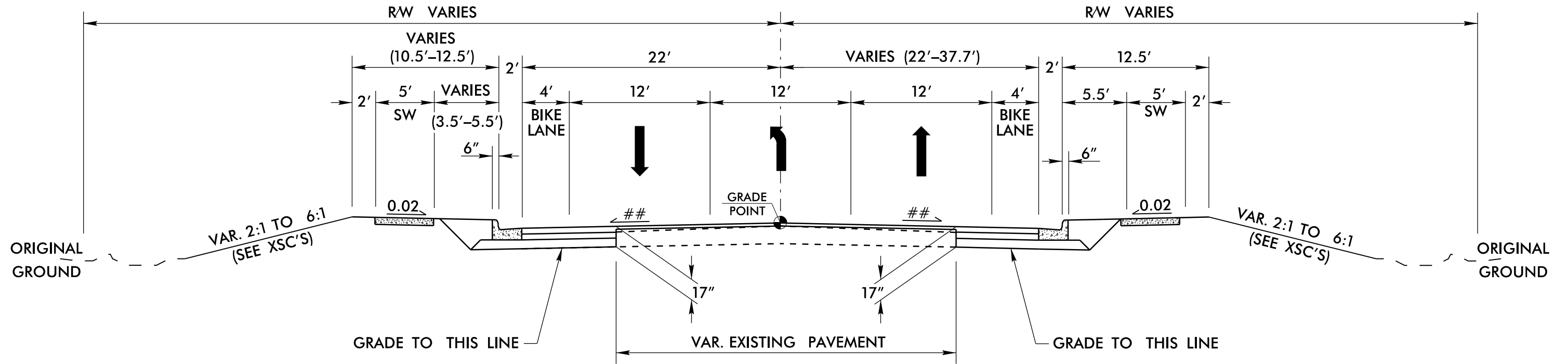
Lake Pine Drive Improvements

TIP No: U-5537

Division: 5

Figure: 4
Project Area Photos

DESIGN BASELINE



TYPICAL SECTION NO. - 1

-L- STA. 15+08.04 TO -L- STA. 18+55.34

= REFER TO PLANS FOR SUPERELEVATIONS
(MINIMUM 1/4" PER FT EXCEPT IN SUPERELEVATION TRANSITIONS)



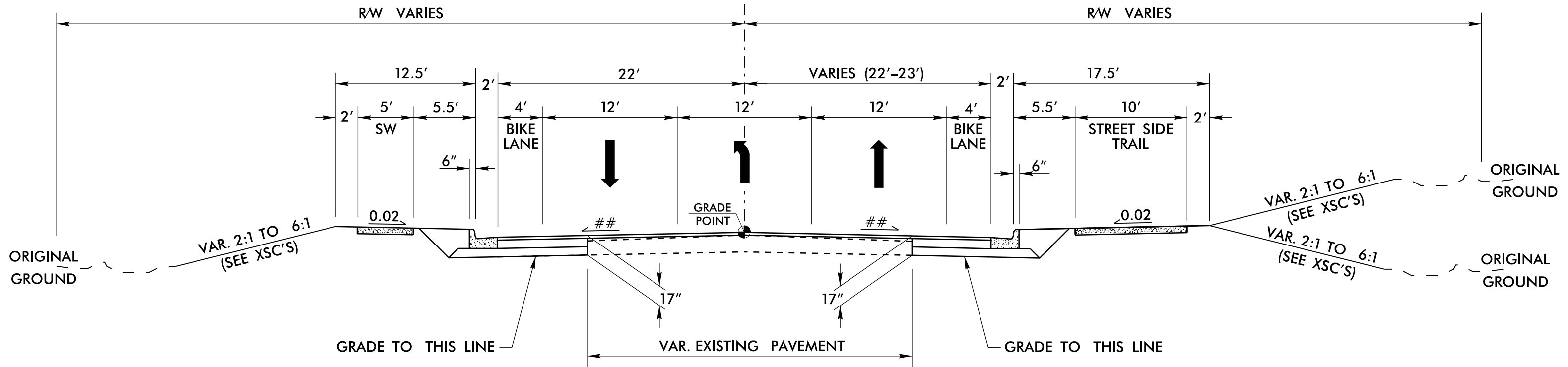
LAKE PINE DRIVE IMPROVEMENTS

TIP No: U-5537

Division: 5

FIGURE: 5a
TYPICAL SECTION

DESIGN BASELINE



TYPICAL SECTION – NO. 2

–L– STA. 18+55.34 TO –L– STA. 25+02.01

= REFER TO PLANS FOR SUPERELEVATIONS
(MINIMUM 1/4" PER FT EXCEPT IN SUPERELEVATION TRANSITIONS)



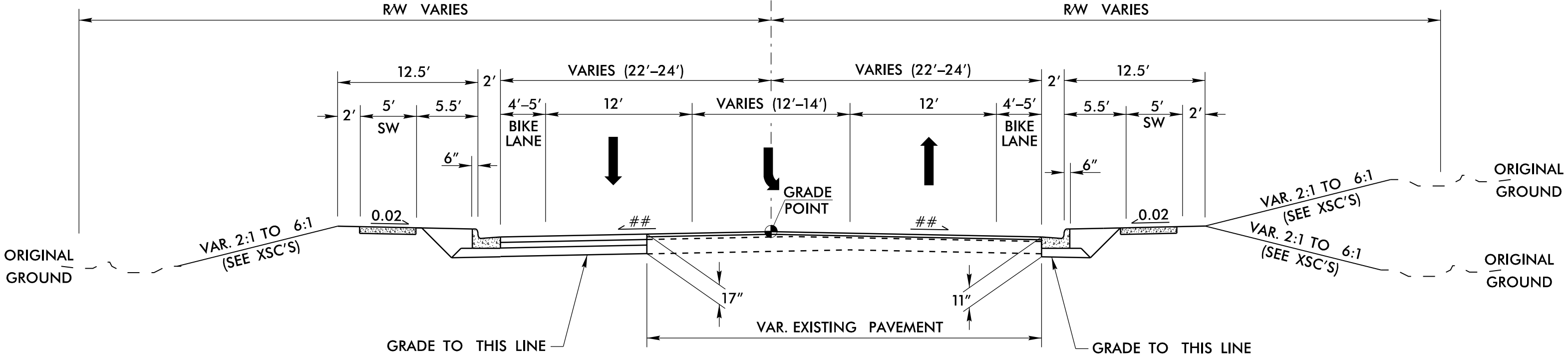
LAKE PINE DRIVE IMPROVEMENTS

TIP No: U-5537

Division: 5

FIGURE: 5b
TYPICAL SECTION

DESIGN BASELINE



TYPICAL SECTION – NO. 3

-L- STA. 25+02.01 TO -L- STA. 29+48.57

= REFER TO PLANS FOR SUPERELEVATIONS
(MINIMUM 1/4" PER FT EXCEPT IN SUPERELEVATION TRANSITIONS)

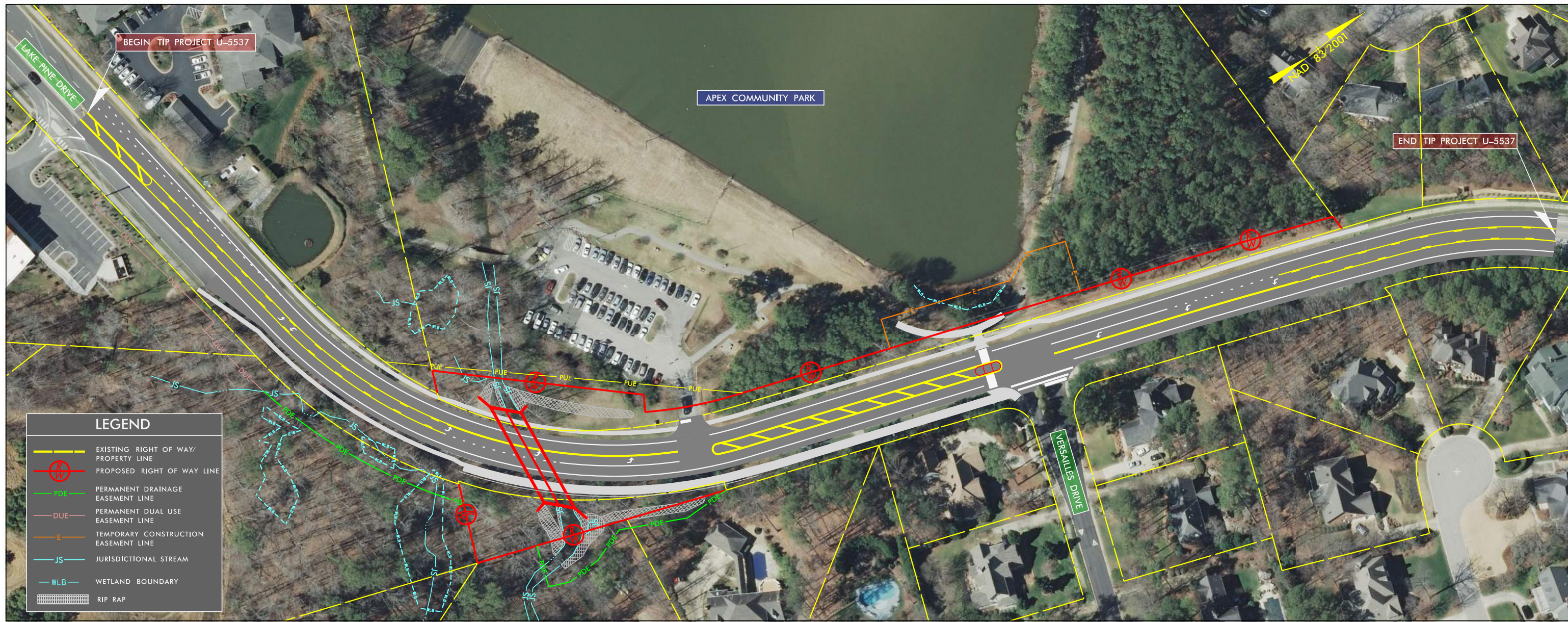


LAKE PINE DRIVE IMPROVEMENTS

TIP No: U-5537

Division: 5

FIGURE: 5c
TYPICAL SECTION



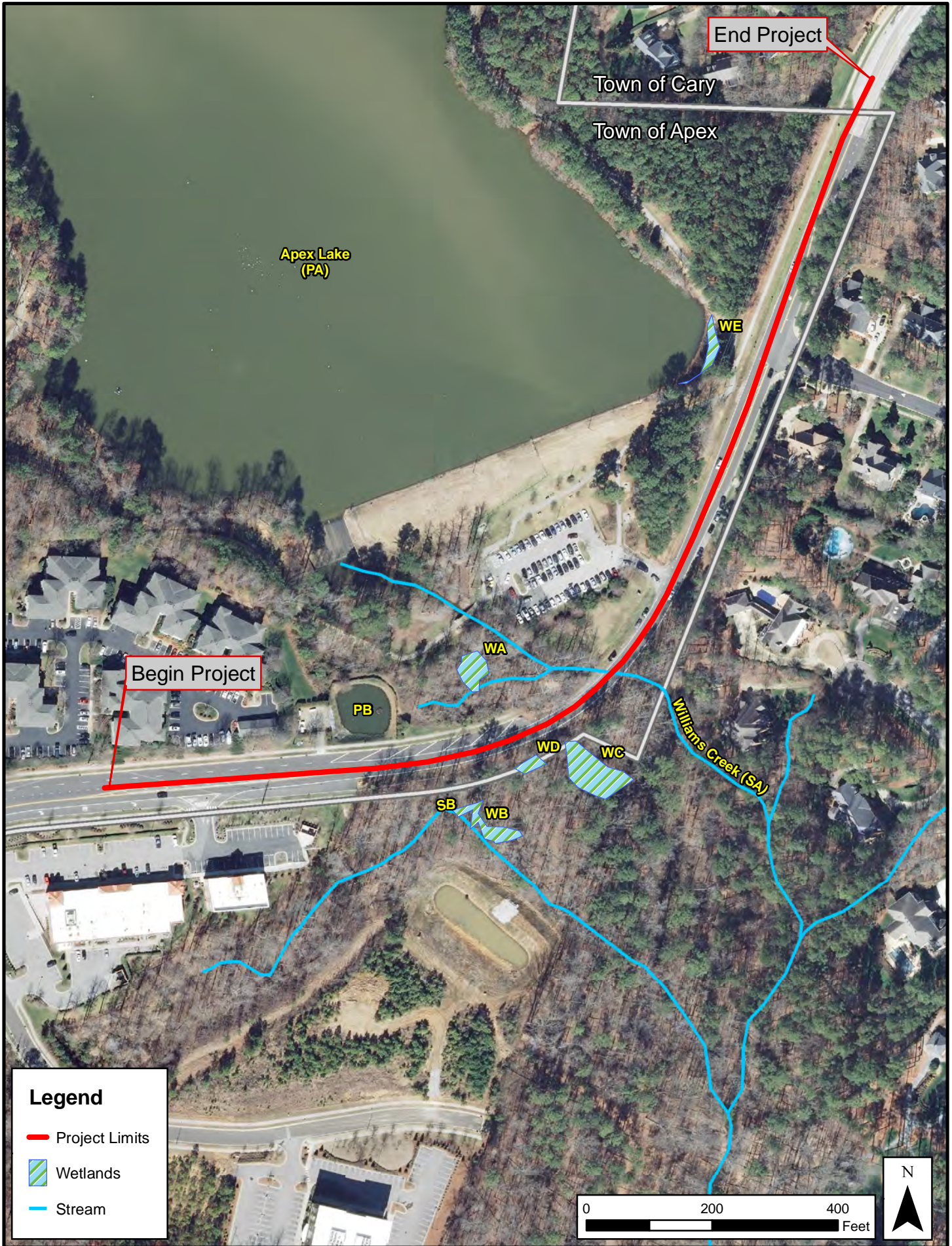
LAKE PINE DRIVE IMPROVEMENTS

TIP No: U-5537

Division: 5

FIGURE: 6
ROADWAY DESIGN

Not to Scale



Legend

- Project Limits
- Wetlands
- Stream

0 200 400
Feet

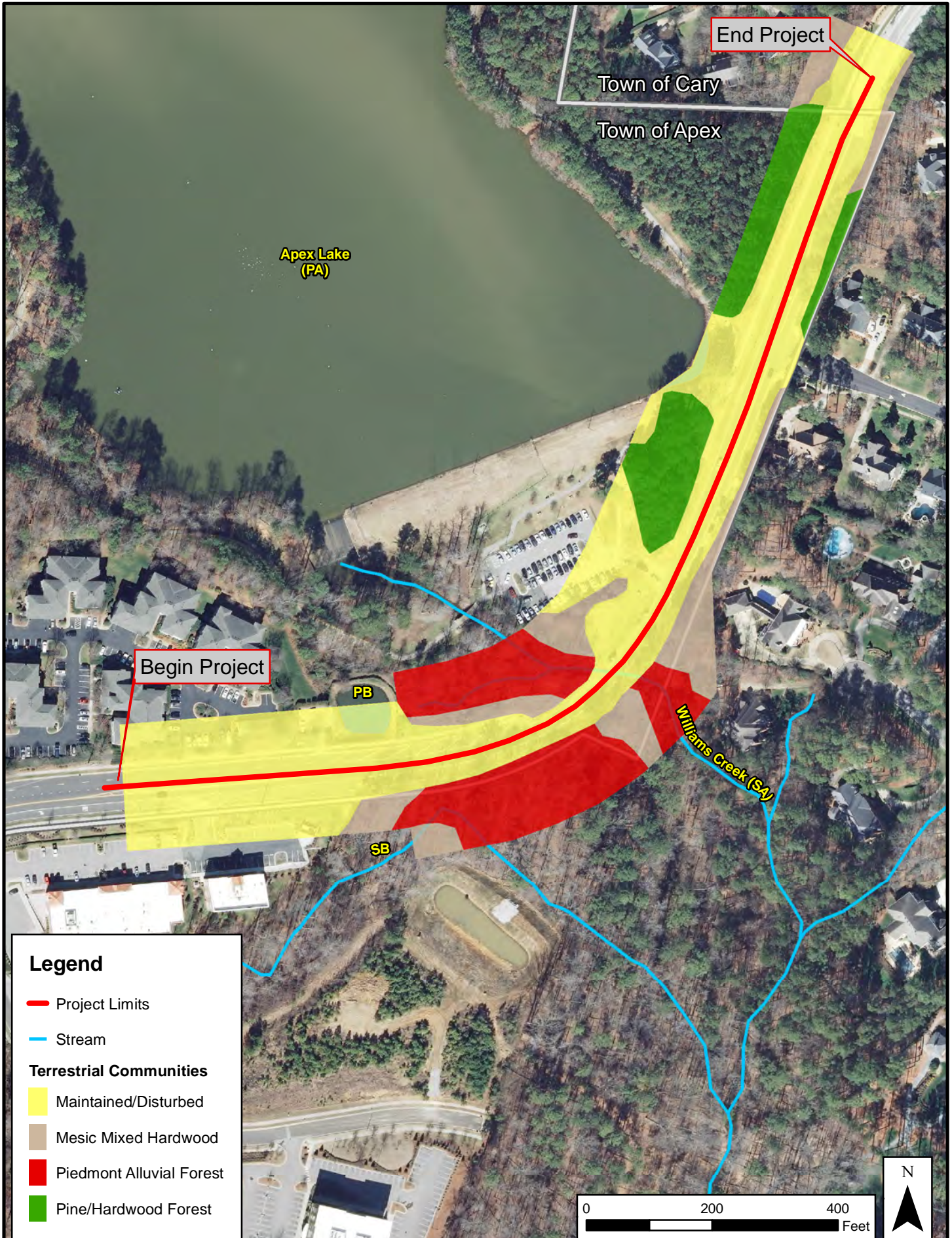
N
▲



Lake Pine Drive Improvements

TIP No: U-5537
Division: 5

Figure: 7
Affected Environment



Legend

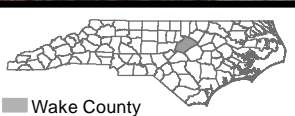
- Project Limits
- Stream

Terrestrial Communities

- Maintained/Disturbed
- Mesic Mixed Hardwood
- Piedmont Alluvial Forest
- Pine/Hardwood Forest

0 200 400
Feet

N



Lake Pine Drive Improvements

TIP No: U-5537
Division: 5

Figure: 8
Terrestrial Communities

APPENDIX

Van Duyn, Meredith

From: Russell Dalton <Russell.Dalton@apexnc.org>
Sent: Tuesday, October 21, 2014 8:21 AM
To: Van Der Wiele, Cynthia
Cc: Van Duyn, Meredith; Adam Stephenson
Subject: RE: U-5537 Lake Pine Drive Scoping Notice

Cynthia,

Thank you for your input. Our study team will review and address this issue. Our project is anticipated to replace the existing metal culverts at the stream crossing. There will be a study associated with this effort to determine the appropriate solution.

Russell H. Dalton, PE
Transportation Engineer - Town of Apex
919-249-3358

From: Van Der Wiele, Cynthia [mailto:VanDerWiele.Cynthia@epa.gov]
Sent: Monday, October 20, 2014 11:39 AM
To: Russell Dalton
Subject: U-5537 Lake Pine Drive Scoping Notice
Importance: High

Dear Mr. Dalton:

The USEPA has reviewed the Lake Pine Drive Project (NCDOT STIP Project U-5537). I used NEPAassist to examine whether or not USEPA has any hazardous waste, TRI, TSCA, Superfund, etc. types of sites in the project area. The project has one concern—the potential for future flood hazard according to FEMA flood mapping. It appears that there is a 1% annual chance for flood hazard. Please verify this with your engineering staff.

USEPA does not have any other particular concerns regarding this project. Generally, projects that support additional modes of transportation (i.e., bicycle and pedestrian accommodations) are favored by USEPA as they have the potential to reduce toxic air emissions through mobile sources (i.e., vehicles) and serve to provide critical linkages for a variety of sociodemographic communities to various points of interest in the area.

Thank you for the opportunity to comment on this project.

Best,
Cynthia

Cynthia F. Van Der Wiele, Ph.D.
USEPA Region 4 NEPA Program Office
NCDOT 404/NEPA Interagency Team
Durham, NC

Van Duyn, Meredith

Subject: FW: Proposed Improvements to Lake Pine Drive in Apex; TIP No. U-5537

From: Jordan, Gary [mailto:gary_jordan@fws.gov]

Sent: Wednesday, November 12, 2014 10:13 AM

To: Russell Dalton

Subject: Proposed Improvements to Lake Pine Drive in Apex; TIP No. U-5537

Mr. Dalton,

I have reviewed the information you submitted for the Proposed Improvements to Lake Pine Drive project in Apex (TIP No. U-5537). Due to the suburban nature of the project area and the limited scope of the project, impacts to fish and wildlife resources are expected to be minimal. It is unlikely that any federally threatened or endangered species will be affected. Therefore, the USFWS does not have any concerns or objections to the project.

Gary Jordan
Fish and Wildlife Biologist
US Fish and Wildlife Service
P.O. Box 33726
Raleigh, NC 27636-3726

Phone: 919-856-4520 x.32

Email: gary_jordan@fws.gov

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: WAKE

F02: HIGHWAYS AND ROADS

STATE NUMBER: 15-E-0000-0255
DATE RECEIVED: 10/14/2014
AGENCY RESPONSE: 11/10/2014
REVIEW CLOSED: 11/13/2014

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

REVIEW DISTRIBUTION

CC&PS - DIV OF EMERGENCY MANAGEMENT
DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
TRIANGLE J COG

PROJECT INFORMATION

APPLICANT: Town of Apex
TYPE: National Environmental Policy Act
Scoping

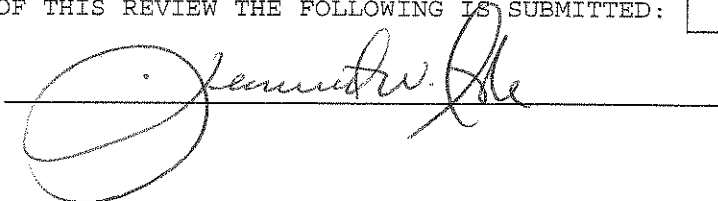
DESC: Proposed project is to improve approx. 1,500 feet of Lake Pine Drive to a three lane section, including bicycle lanes in each direction, multi-use path on the east side, sidewalk on the west side and a high visibility crosswalk at Versailles Drive.

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

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

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

SIGNED BY:



DATE: 10/24/15

RECEIVED
OCT 17 2014
N.C. Department of Administration

OCT 2014
RECEIVED
Secretary's Office
DOA



North Carolina Department of Public Safety
Emergency Management

Pat McCrory, Governor
Frank L. Perry, Secretary

Michael A. Sprayberry, Director

October 24, 2014

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

Subject: Intergovernmental Review State Number: 15-E-0000-0255
Lake Pine Drive, Town of Apex, Wake County

As requested by the North Carolina State Clearinghouse, the North Carolina Department of Public Safety Division of Emergency Management Risk Management reviewed the proposed project listed above and offers the following comment:

The project encroaches on the 1% Future Conditions Special Flood Hazard Area of Swift Creek. The Town of Apex Floodplain Administrator should review the proposed plans for compliance with the Town of Apex Flood Damage Prevention Ordinance and, if appropriate, issue a Floodplain Development Permit for the Lake Pine Drive project.

Thank you for your cooperation and consideration. If you have any questions concerning the above comments, please contact Dan Brubaker, P.E., CFM, the NC NFIP Engineer at (919) 825-2300, by email at dan.brubaker@ncdps.gov or at the address shown on the footer of this document.

Sincerely,

Kenneth W. Ashe, P.E., CFM
Assistant Director
Risk Management

cc: John Gerber, NFIP State Coordinator
Dan Brubaker, NFIP Engineer
Adam Stephenson, Senior Engineer, Town of Apex
File

MAILING ADDRESS:
4218 Mail Service Center
Raleigh NC 27699-4218
www.ncem.org



GTM OFFICE LOCATION:
4105 Reedy Creek Road
Raleigh, NC 27607
Telephone: (919) 825-2341
Fax: (919) 825-0408

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: WAKE

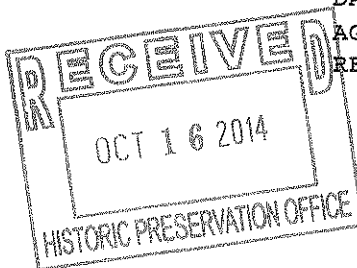
F02: HIGHWAYS AND ROADS

STATE NUMBER: 15-E-0000-0255

DATE RECEIVED: 10/14/2014

AGENCY RESPONSE: 11/10/2014

REVIEW CLOSED: 11/13/2014



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

EX 14. 2374

REVIEW DISTRIBUTION

CC&PS - DIV OF EMERGENCY MANAGEMENT
DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
TRIANGLE J COG

DEC 10/28/14 A - (NO) DHT 10/21/14

PROJECT INFORMATION

APPLICANT: Town of Apex
TYPE: National Environmental Policy Act
Scoping

DEC 10/24/14 S - (NO) ASK 10/20/14

DESC: Proposed project is to improve approx. 1,500 feet of Lake Pine Drive to a three lane section, including bicycle lanes in each direction, multi-use path on the east side, sidewalk on the west side and a high visibility crosswalk at Versailles Drive.

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

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

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

SIGNED BY:

Renee Gledhill-Earley

DATE:

10-24-14



OCT 21 2014



☒ North Carolina Wildlife Resources Commission ☒

Gordon Myers, Executive Director

MEMORANDUM

TO: Lyn Hardison, Environmental Assistance Coordinator
Division of Environmental Assistance and Outreach, DENR

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: October 29, 2014

SUBJECT: Response to the start of study notification regarding fish and wildlife concerns for the proposed improvements to Lake Pine Drive, Town of Apex, Wake County, North Carolina. NCDOT TIP No. U-5537, SCH Project No. 15-0255.

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

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

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

NC Natural Heritage Program
Dept. of Environment & Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601.
WWW.ncnlip.org

and,

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

NCCA Plant Conservation Program

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

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

Thank you for the opportunity to provide input in the early planning stages for this project. If we can further assist your office, please contact me at (919) 707-0370.

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

Kupal Desai

COUNTY: WAKE

F02: HIGHWAYS AND ROADS

STATE NUMBER: 15-E-0000-0255
DATE RECEIVED: 10/14/2014
AGENCY RESPONSE: 11/10/2014
REVIEW CLOSED: 11/13/2014

MS CARRIE ATKINSON
CLEARINGHOUSE COORDINATOR
DEPT OF TRANSPORTATION
STATEWIDE PLANNING - MSC #1554
RALEIGH NC

REVIEW DISTRIBUTION

- CC&PS - DIV OF EMERGENCY MANAGEMENT
- DENR LEGISLATIVE AFFAIRS
- DEPT OF AGRICULTURE
- DEPT OF CULTURAL RESOURCES
- DEPT OF TRANSPORTATION
- TRIANGLE J COG

PROJECT INFORMATION

APPLICANT: Town of Apex
TYPE: National Environmental Policy Act
Scoping



DESC: Proposed project is to improve approx. 1,500 feet of Lake Pine Drive to a three lane section, including bicycle lanes in each direction, multi-use path on the east side, sidewalk on the west side and a high visibility crosswalk at Versailles Drive.

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

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

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

SIGNED BY: *Kupal*

DATE: 11/3/14





North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

November 4, 2014

MEMORANDUM

To: Lyn Hardison, Environmental Coordinator, Office of Legislative and Intergovernmental Affairs

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

Subject: Scoping comments on proposed improvements to SR 1521 in Wake County, Federal Aid Project No. STPDA-0501(32), State Project No. 44112.1, TIP #U-5537.
State Clearinghouse Project No. 15-0255.

Reference your request for comments for the referenced project. Preliminary analysis of the project reveals the potential for impacts to streams, buffers, and/or jurisdictional wetlands in the project area. Further investigations at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Resources requests that the applicant consider the following environmental issues for the proposed project:

Project Specific Comments:

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

General Project Comments:

1. The environmental document should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.
2. Environmental impact statement alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWR's *Stormwater Best Management Practices Manual*, July 2007, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.
3. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the applicant is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules (15A NCAC 2H.0506[h]), mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.
4. In accordance with the Environmental Management Commission's Rules (15A NCAC 2H.0506[h]), mitigation will be required for impacts of greater than 150 linear feet to any single stream. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.
5. Future documentation, including the 401 Water Quality Certification Application, shall continue to include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.
6. The NCDWR is very concerned with sediment and erosion impacts that could result from this project. The applicant shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
7. An analysis of cumulative and secondary impacts anticipated as a result of this project is required. The type and detail of analysis shall conform to the NC Division of Water Resource Policy on the assessment of secondary and cumulative impacts dated April 10, 2004.
8. The applicant is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, and rip rap to jurisdictional wetlands, streams, and riparian buffers need to be included in the final impact calculations. These impacts, in addition to any construction impacts, temporary or otherwise, also need to be included as part of the 401 Water Quality Certification Application.
9. Where streams must be crossed, the NCDWR prefers bridges be used in lieu of culverts. However, we realize that economic considerations often require the use of culverts. Please be advised that culverts should be countersunk to allow unimpeded passage by fish and other aquatic organisms. Moreover, in areas where high quality wetlands or streams are impacted, a bridge may prove preferable. When applicable, the applicant should not install the bridge bents in the creek, to the maximum extent practicable.
10. Whenever possible, the NCDWR prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoists and boaters shall not be blocked. Bridge supports (bents) should not be placed in the stream when possible.

11. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NCDWR's *Stormwater Best Management Practices*.
12. Sediment and erosion control measures should not be placed in wetlands or streams.
13. Borrow/waste areas should avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas will need to be presented in the 401 Water Quality Certification and could precipitate compensatory mitigation.
14. The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater shall not be permitted to discharge directly into streams or surface waters.
15. Based on the information presented in the document, the magnitude of impacts to wetlands and streams may require a Nationwide Permit application to the Corps of Engineers and corresponding 401 Water Quality Certification. Please be advised that a 401 Water Quality Certification requires satisfactory protection of water quality to ensure that water quality standards are met and no wetland or stream uses are lost. Final permit authorization will require the submittal of a formal application by the applicant and written concurrence from the NCDWR. Please be aware that any approval will be contingent on appropriate avoidance and minimization of wetland and stream impacts to the maximum extent practical, the development of an acceptable stormwater management plan, and the inclusion of appropriate mitigation plans where appropriate.
16. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
17. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
18. Unless otherwise authorized, placement of culverts and other structures in waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required.
19. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
20. If foundation test borings are necessary; it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3883/Nationwide Permit No. 6 for Survey Activities.

21. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
22. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of the NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
23. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.
24. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
25. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
26. Riparian vegetation (native trees and shrubs) shall be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

Thank you for requesting our input at this time. The applicant is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Rob Ridings at 919-707-8786.

Electronic copy only distribution:

Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Russell H. Dalton, PE, Transportation Engineer, Town of Apex
File Copy



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

November 14, 2014

MEMORANDUM

TO: Lyn Hardison, Environmental Assistance Coordinator
Department of Environment and Natural Resources

FROM: Harold Brady, SEPA Review Coordinator

SUBJECT: Environmental Review – Lake Pine Drive
DENR# 15-0255

Thank you for providing the Division of Water Resources (DWR) an opportunity to provide comments regarding the proposed improvements to approximately 1,500 feet of Lake Pine Drive to a three lane section, including bicycle lanes in each direction, multi-use path on the east side, sidewalk on the west side and a high visibility crosswalk at Versailles Drive in Wake County.

DWR has no objection to the proposed project, but offer the following comments from Danny Smith of the Raleigh Regional Office:

1. If land disturbance exceeds 1 acre, an erosion and sedimentation control plan should be secured. Additionally, compliance with construction stormwater permit conditions (NCG010000) will be required.
2. Due to observed topographic crenulations and blue lines in the project vicinity, a stream determination is necessary to confirm whether impacts will occur to waters or if riparian buffer authorization(s) are necessary. If stream, wetland or riparian buffer impacts are proposed, this project will need to comply with/secure a 404 permit from the USACE, obtain a 401 Water Quality Certification and secure a riparian buffer authorization, as appropriate.

If you have any questions about this comment, please contact me at (919) 707-9005 or harold.m.brady@ncdenr.gov. Thank you.

State of North Carolina
 Department of Environment and Natural Resources
 INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

Reviewing Office: Raleigh Regional Office
 Project Number 15-0255 Due Date: 11/10/2014
 County Wake

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

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

PERMITS		SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
<input type="checkbox"/>	Permit to drill exploratory oil or gas well	File surety bond of \$5,000 with ENR running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to ENR rules and regulations.	10 days N/A
<input type="checkbox"/>	Geophysical Exploration Permit	Application filed with ENR at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days N/A
<input type="checkbox"/>	State Lakes Construction Permit	Application fee based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property.	15-20 days N/A
<input type="checkbox"/>	401 Water Quality Certification	N/A	60 days (130 days)
<input type="checkbox"/>	CAMA Permit for MAJOR development	\$250.00 fee must accompany application	55 days (150 days)
<input type="checkbox"/>	CAMA Permit for MINOR development	\$50.00 fee must accompany application	22 days (25 days)
<input type="checkbox"/>	Several geodetic monuments are located in or near the project area. If any monument needs to be moved or destroyed, please notify: N.C. Geodetic Survey, Box 27687 Raleigh, NC 27611		
<input type="checkbox"/>	Abandonment of any wells, if required must be in accordance with Title 15A, Subchapter 2C.0100.		
<input type="checkbox"/>	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
<input type="checkbox"/>	Compliance with 15A NCAC 2H 1000 (Coastal Stormwater Rules) is required.		45 days (N/A)
<input type="checkbox"/>	Tar Pamlico or Neuse Riparian Buffer Rules required.		
<input checked="" type="checkbox"/>	Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the Division of Water Resources/Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq. Plans and specifications should be submitted to 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. All public water supply systems must comply with state and federal drinking water monitoring requirements. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days
<input checked="" type="checkbox"/>	If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Water Resources/Public Water Supply Section at 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days

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

Division	Initials	No comment	Comments	Date Review
DAQ	ddm	<input type="checkbox"/>		11/5/14
DWR-WQROS (Aquifer & Surface)	N/A ds	<input type="checkbox"/> <input type="checkbox"/>		/ / 11/3/14
DWR-PWS	WAH	<input type="checkbox"/>	See last two checked comment boxes	10/29/14
DEMLR (LQ & SW)	JLH	<input type="checkbox"/>	See above.	11/5/14
DWM - UST	N/A	<input type="checkbox"/>		/ /

REGIONAL OFFICES

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

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

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

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

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

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

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

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



North Carolina
Department of Administration

Pat McCrory, Governor

Bill Daughtridge, Jr., Secretary

November 19, 2014

Mr. Russell Dalton
Town of Apex
Post Office Box 250
Apex, North Carolina 27502

Re: SCH File # 15-E-0000-0255; SCOPING; Proposed project is to improve approx. 1,500 feet of Lake Pine Drive to a three lane section, including bicycle lanes in each direction, multi-use path on the east side, sidewalk on the west side and a high visibility crosswalk at Versailles Drive.

Dear Mr. Dalton:

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

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

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

Sincerely,

A handwritten signature in cursive script that reads "Crystal Best".

Crystal Best

State Environmental Review Clearinghouse

Attachments

cc: Region J

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

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

Location Address:
116 West Jones Street
Raleigh, North Carolina



U.S. Department
of Transportation
**Federal Highway
Administration**

North Carolina Division

December 15, 2014

310 New Bern Avenue, Suite 410
Raleigh, NC 27601
(919) 856-4346
(919) 747-7030
<http://www.fhwa.dot.gov/ncdiv/>

In Reply Refer To:
HDA-NC

Mr. Anthony J. Tata, Secretary
North Carolina Department of Transportation
1501 Mail Service Center
Raleigh, NC 27699-1501

Dear Secretary Tata:

We reviewed the Triangle Area (Capital Area Metropolitan Planning Organization - CAMPO) Transportation Conformity Determination Report U-5537 Amendment #17 (Lake Pine Dr.) for the:

- The CAMPO amended FY 2012-2018 Transportation Improvement Program (TIP)

The CAMPO made a conformity determination on their amended FY 2012-2018 TIP (the TIP is a direct subset of the 2040 MTP) on the following date:

- November 19, 2014

The FHWA reviewed these documents. We also coordinated our review with the Environmental Protection Agency (EPA) Region 4 and enclosed their comments to this letter.

Based on our review and comments provided by the US EPA, we find that the following area conforms to the purpose of the State Implementation Plan (or interim emissions tests, in areas where no State Implementation Plan is approved or found adequate by EPA) in accordance with 40 CFR Part 93:

- CAMPO amended FY 2012-2018 TIP

Sincerely,

For John F. Sullivan, III, P.E.
Division Administrator

Enclosure



Town of Apex

P. O. BOX 250
APEX, NORTH CAROLINA 27502

Date April 30, 2015

Lisa M. Feller, PE
North Carolina Department of Transportation
Project Development and Environmental Analysis Unit
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

RE: STIP Project U-5537 (Lake Pine Drive Improvements), Town of Apex
Acknowledgment of Potential Impacts to Community Park

Dear Ms. Feller:

The Town of Apex proposes improvements to SR 1521 (Lake Pine Drive), from east of Pine Plaza Drive/MacGregor Pines Drive to northeast of Versailles Drive at the Town of Apex/Cary municipal limits. The proposed project would require use of land from Apex Community Park, which is owned and maintained by the Town of Apex and is a public park. Section 4(f) of the US Department of Transportation Act of 1966 applies to publicly owned park property. The purpose of this letter is to document the Town's agreement and support of the project and address any potential concerns about this Section 4(f) resource.

The proposed project is included in NCDOT's State Transportation Improvement Program (STIP) as Project U-5537 and includes the following:

- Replacement of the double-barrel corrugated metal pipe carrying Williams Creek under Lake Pine Drive, located near Community Park.
- Connection of existing sidewalks on the east and west sides of Lake Pine Drive.
- Installation of a high-visibility crossing with a refuge island just south of Versailles Drive, connecting to Community Park.
- Conversion of existing (unused) pavement into a left-turn lane.
- Installation of a 4-foot bicycle lane in each direction adjacent to the travel lane.
- Slight realignment of a small portion of the greenway at Community Park.

The Town of Apex's Parks, Recreation & Cultural Resources staff has reviewed the preliminary design plans for this project and supports the proposed improvements. In addition, the project was reviewed by the Parks, Recreation, and Cultural Resources Citizens Advisory Commission reviewed the project at their April 29th meeting and unanimously supports the project. As the official having specific jurisdiction over Apex Community Park, I hereby acknowledge that the project is acceptable and consistent with the designated use of the property and that all possible planning to minimize harm has been accomplished in the location and design of the improvements.

If you have any questions about this project, please feel free to contact me at (919) 249-3402 or john.brown@apexnc.org.

Sincerely,

John M. Brown
Director
Parks, Recreation & Cultural Resources
Town of Apex



PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

August 3, 2016

Mr. John M. Brown
Director of Parks, Recreation & Cultural Resources
Town of Apex
73 Hunter Street
Apex, North Carolina 27502

Re: NCDOT STIP Project U-5537: Section 4(f) Coordination for Apex Community Park

Dear Mr. Brown,

The Town of Apex and the North Carolina Department of Transportation (NCDOT) are proposing improvements to SR 1521 (Lake Pine Drive) from east of Pine Plaza Drive/MacGregor Pines Drive to northeast of Versailles Drive at the Town of Apex/Cary municipal limits. This project is included in the 2016-2025 State Transportation Improvement Program (STIP) as Project U-5537.

The project includes the following:

- Replacement of the double-barrel corrugated metal pipes carrying Williams Creek under Lake Pine Drive, located near Community Park, with a double-barrel reinforced concrete box culvert including bank stabilization of Williams Creek.
- Connection of existing sidewalks on the east and west sides of Lake Pine Drive.
- Installation of a high-visibility crossing with a refuge island just south of Versailles Drive, connecting to Community Park.
- Conversion of existing (unused) pavement into a left-turn lane.
- Installation of a 4-foot bicycle lane in each direction adjacent to the travel lane.
- Slight realignment of a small portion of the greenway at Community Park.
- Installation of advance warning signs and lighting for the high-visibility pedestrian crossing.

In order to construct the proposed project, NCDOT will need to acquire property from Apex Community Park, which is owned by the Town of Apex and subject to Section 4(f) of the U.S. Department of Transportation Act of 1966. Preliminary design indicates that additional right-of-way and easements (Permanent Utility Easement and Temporary Construction Easement) are needed for relocating existing utilities and roadside ditches/drainage features. Attached is a figure detailing the proposed approximate right-of-way required adjacent to the park.

NCDOT and the FHWA believe that the proposed project will have no adverse effect on the activities, features, and attributes that qualify Apex Community Park for protection under Section 4(f). With your agreement, we would deem the impacts from the proposed project to be *de minimis*.



If you concur that the proposed impacts to Apex Community Park, as described above and shown on the attached figure, will not adversely affect the park's access and use, NCDOT is requesting that you sign and date this letter in the spaces provided below, keep a copy for your files, and return a signed original to the address provided. We will keep a copy of the letter in the project files.

As the Director of Parks, Recreation, and Cultural Resources for the Town of Apex, North Carolina, and the official with jurisdiction over Apex Community Park in Apex, I concur with the determination that the proposed NCDOT project U-5537 as described in this letter and shown on the accompanying attachment will not adversely affect the activities, features, and attributes that qualify Apex Community Park for protection under Section 4(f) of the Department of Transportation Act, as amended. I have been informed that, based on my concurrence, the FHWA intends to make a de minimis finding regarding impacts to Apex Community Park, thus satisfying the requirements of Section 4(f).

John M. Brown

Digitally signed by John M. Brown
DN: cn=John M. Brown, o=Town of Apex, ou=Parks
and Recreation, email=John.Brown@apexnc.org, c=US
Date: 2016.08.03 16:00:24 -04'00'

Signed: _____

John M. Brown, Director of Parks, Recreation, and Cultural Resources
Town of Apex, North Carolina

Date: 8/3/16

Upon signing and dating this letter, please return it to me within two weeks of the date of the letter by email at lfeller@ncdot.gov, brobinson@ncdot.gov or to the following address:

NC Department of Transportation
Project Development and Environmental Analysis Unit
1548 Mail Service Center
Raleigh, NC 27699-1548

NCDOT greatly appreciates your cooperation in making the U-5537 project possible. Should you have any questions or concerns, please contact me at 919-707-6022 or at lfeller@ncdot.gov or Beverly Robinson at 919-707-6041 or at brobinson@ncdot.gov.

Sincerely,



Lisa M. Feller
Project Development Engineer
Project Development and Environmental Analysis Unit

LMF/

Attachment

cc: Felix Davila, PE – FHWA