

**US 19E Improvements**

From SR 1186 in Micaville to the existing multilane section west of Spruce Pine

Yancey and Mitchell Counties

WBS Element 35609.1.1

State Project Number 6.909001T

**TIP Project Number R-2519B**

ADMINISTRATIVE ACTION  
**STATE ENVIRONMENTAL ASSESSMENT**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
submitted pursuant to 42 U.S.C. 4332(2)(C)



Cooperating Agency

Tennessee Valley Authority

APPROVED:

7/29/05  
Date

*Gregory J. Thorpe*  
\_\_\_\_\_  
for Gregory J. Thorpe, Ph.D., Environmental Management Director  
Project Development and Environmental Analysis Branch, NCDOT

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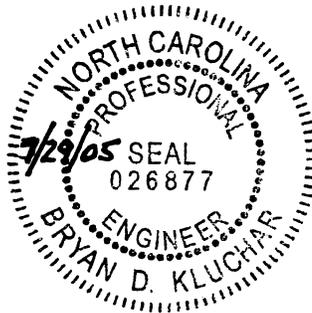
**STATE ENVIRONMENTAL ASSESSMENT**

July 2005

Documentation Prepared in the Project Development and Environmental Analysis Branch by:



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# **PROJECT COMMITMENTS**

## **US 19E Improvements**

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### **Project Development and Environmental Analysis Branch**

- Additional surveys are needed for the federally protected Virginia spirea. The affect of the proposed action on these species will be identified in the project's final environmental document.

### **Project Development and Environmental Analysis Branch, Right of Way Branch, and Division 13**

- The Human Environment Unit will provide Right of Way with notification of the prepared archaeological Data Recovery Plans so they may acquire parcels that contain eligible sites as soon as possible after Right of Way authorization. Acquisition of these parcels will occur at least 12 months prior to the let date. No construction activities will be allowed within either site's limits until the data recovery investigations are completed.

### **Roadway Design Unit**

- The improvements to US 19E will have an effect on the National Register eligible E.W. and Dollie Huskins House (Station 220). The proposed design will include a seeded slope that is feasible for mowing by the owner.
- The Roadway Design Unit will coordinate with the Human Environment Unit (HEU)-Archaeology to accurately depict archaeological sites on the design plans. If design modifications are required, the Roadway Design Unit will contact the HEU-Archaeology.

### **Roadway Design Unit, Hydraulic Design Unit, and Roadside Environmental Unit**

- The proposed project is located within a critical habitat area for the federally protected Appalachian elktoe mussel. Therefore, NCDOT will implement erosion and sedimentation control measures, as specified by NCDOT's "Design Standards in Sensitive Watersheds" (15A NCAC 04B.0124). Detailed plans for the placement of appropriate hydraulic drainage structures will be determined during the final design of the project.

### **Division 13**

- In-stream work and land disturbance within the 25-foot wide trout stream buffer zone should be prohibited during the trout spawning season of October 15-April 15 to protect the egg and fry stages of trout from off-site sedimentation during construction.

### **Hydraulic Design Unit**

- A TVA Section 26a permit is required for all proposed obstructions involving streams or floodplains in the Tennessee River drainage basin. The TVA is a cooperating agency for this project.
- Coordinate with the Federal Emergency Management Agency and local authorities in the final design stage to ensure compliance with applicable floodplain ordinances.

## State Environmental Assessment

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

### SUMMARY

#### 1. Type of Action

This is a North Carolina State Administrative Action, State Environmental Assessment (SEA).

#### 2. Description of Action

The North Carolina Department of Transportation (NCDOT) proposes to improve US 19E in Yancey and Mitchell Counties. The project begins at SR 1186 west of Micaville and ends at the existing multilane section west of Spruce Pine as shown by Figure 1. Figure 2 shows an aerial view of the project area. The length of the US 19E improvement project is approximately 7.5 miles. The purpose of the project is to add capacity, correct roadway deficiencies, and provide system linkage along US 19E.

Improvements to US 19E are state funded and identified as Project Number R-2519B in the NCDOT's latest approved Transportation Improvement Program. Proposed improvements consist of widening two-lane US 19E to a multilane facility. Right of way acquisition is scheduled to begin in the 2006-2012 Draft TIP during fiscal year 2008. Construction is scheduled for fiscal year 2010.

#### 3. Alternatives Considered

Two alternatives were considered for the proposed project. The alternatives include the No-Build Alternative and Build Alternative.

The No-Build Alternative does not increase capacity or correct existing roadway deficiencies along US 19E. Since the No-Build Alternative does not address the purpose and need, it is not recommended.

The Build Alternative contains one roadway improvement option along US 19E, identified as the "Best Fit" Alternate. This improvement option generally follows the existing alignment of US 19E to minimize impacts to the human and natural environments. The location of this alignment was approved by the Merger Team during the concurrence process explained in Section VI.

There are a variety of natural and human environment constraints in the Estatoe Community. Three preliminary alignment options were developed at the request of the Merger Team to determine the "Best Fit" alignment through this area. The three preliminary

alignment options are approximately 4000 feet in length and identified as Alternate 1, Alternate 2, and Alternate 3. Alternate 1 widens US 19E to the north, Alternate 2 widens US 19E to the south, and Alternate 3 widens symmetrically about the existing US 19E centerline. The Merger Team selected Alternate 2, widen to the south, as the “Best Fit” alignment through the Estatoe Community. Alternate 2 had fewer residential relocations, minority relocations, stream impacts, and archaeological site impacts than Alternates 1 or 3. In addition, Alternate 2 has the lowest total cost of the three design options. Consequently, Alternates 1 and 3 were eliminated from further consideration.

The proposed typical section for the proposed action includes a four-lane median divided facility with 10-foot shoulders. Shoulders include four feet of pavement to accommodate bicycles. Figure 5 shows the typical section for the proposed action.

#### **4. NCDOT Recommended Alternative**

The NCDOT recommends the Best Fit Alternate for the improvements proposed in this State Environmental Assessment. The total estimated cost of the proposed action is \$63,040,400 consisting of \$51,200,000 for construction and \$11,840,400 for right of way acquisition.

#### **5. Coordination**

The following federal, state, and local agencies were consulted during the preparation of this Environmental Assessment:

- US Army Corps of Engineers – Asheville
- US Fish and Wildlife Service – Asheville
- US Environmental Protection Agency – Raleigh and Atlanta
- Tennessee Valley Authority
- NC Department of Administration, NC State Clearinghouse
- NC Department of Public Instruction
- NC Department of Cultural Resources - SHPO
- NC Department of Environment and Natural Resources
  - Division of Water Quality
  - Division of Soil and Water Conservation
  - Division of Forest Resources
  - Division of Land Resources
  - Division of Parks and Recreation
- NC Wildlife Resources Commission
- High Country Regional Planning Organization
- Yancey County
- Mitchell County
- Town of Spruce Pine

#### **6. Summary of Beneficial and Adverse Environmental Impacts**

Table 1 contains a summary of the quantifiable impacts associated with the Best Fit Alternate. The impacts associated with the proposed project are described in detail in Section V of this document.

**Table 1  
Summary of Impacts**

<b>Category</b>	<b>Units</b>	<b>Best Fit Alternate</b>
Length	miles	7.5
Residential Relocations	total	75
	minority	3
Business Relocations	total	26
	minority	0
Farm Relocations	each	0
Total Relocations	total	101
Non-Profit Relocations	total	5
Potential Hazardous Mat. Sites	each	20
Wetlands	acres	0.869
Stream Impacts	linear feet	9365.90
Natural Communities	acres	162.47
Noise	impacted receptors (residence and business)	100
Protected Species	each	Appalachian elktoe mussel
Historic Architecture	properties	1 (No Adverse Effect)
Archaeology	sites	2
Air Quality 1-Hour	carbon monoxide (parts per million)	2.0
Construction Cost	Dollars	\$51,200,000
Right of Way Cost	Dollars	\$11,840,400
Total Cost	Dollars	\$63,040,400

National Ambient 1-hour Air Quality Standards: 35 ppm

**7. Actions Required By Other Agencies**

Constructing the proposed action will result in impacts to jurisdictional surface waters. In accordance with Section 404 of the Clean Water Act (33 U.S.C. 1344), the US Army Corps of Engineers will determine which type of permit is needed for the project. NCDOT will implement erosion and sedimentation control measures, as specified by NCDOT's "Design Standards in Sensitive Watersheds" (15A NCAC 04B.0124).

The proposed project will also require a Section 401 Water Quality General Certification from the North Carolina Department of Environment and Natural Resources, Division of Water Quality. Section 401 of the Clean Water Act requires that the state issue or deny water certification for any federally permitted or licensed activity that may result in a discharge to Waters of the United States. Section 401 Certification allows surface waters to be temporarily impacted for the duration of the construction or other land manipulation.

The proposed project is located in the Tennessee River Watershed. A permit pursuant to Section 26a of the TVA Act, is required for all obstructions involving streams or floodplains in the Tennessee River drainage basin.

**8. Other Major Actions**

The NCDOT TIP Project Numbers R-2518 and R-2519A are located along US 19 and US 19E immediately west of the proposed R-2519B project. Construction for the R-2518 and R-2519A projects is scheduled to begin in 2007 and 2008, respectively. Project Number R-2520 proposes to widen US 19E on the east side of Spruce Pine; construction is post year.

**9. Additional Information**

Additional information concerning the assessment can be obtained by contacting:

Gregory J. Thorpe, Ph.D., Environmental Management Director  
North Carolina Department of Transportation  
Project Development and Environmental Analysis Branch  
1548 Mail Service Center, Raleigh, North Carolina 27699-1548  
Telephone 919-733-3141

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## **US 19E Improvements**

From SR 1186 in Micaville to the existing multilane section west of Spruce Pine

Yancey and Mitchell Counties

WBS Element 35609.1.1

State Project Number 6.909001T

**TIP Project Number R-2519B**

### **I. PURPOSE AND NEED**

#### **A. General Description of Project**

The North Carolina Department of Transportation (NCDOT) proposes to improve US 19E in Yancey and Mitchell Counties. The project begins at SR 1186 on the west side of Micaville in Yancey County and ends at the existing multilane section west of Spruce Pine in Mitchell County. The length of the US 19E improvement project is approximately 7.5 miles. US 19E is identified as a Rural Principal Arterial in the Functional Classification System. The route is also within North Carolina Strategic Highway Corridor 10 between Asheville and Boone (I-26, US 19/US 19E, NC 105). Figures 1a and b show the location of the project. Figure 2 shows an aerial view of the project area.

Improvements to US 19E are state funded. Project Number R-2519B is included in NCDOT's latest approved Transportation Improvement Program (TIP). Right of way acquisition is scheduled in the 2006-2012 Draft TIP for state fiscal year 2008 and construction is scheduled to begin in state fiscal year 2010.

#### **B. Purpose and Need**

The purpose of this project is to add traffic capacity, improve existing roadway deficiencies, and provide system linkage along US 19E. The need is based on future capacity limitations and upgrading US 19E as part of Strategic Highway Corridor 10 in northwest North Carolina.

#### **C. Traffic Capacity**

The term "capacity" is used to express the maximum hourly rate at which vehicles can reasonably be expected to traverse a point during a given time period under prevailing roadway and traffic conditions. When traffic volumes approach or exceed the capacity of the roadway, operating levels of service are diminished and congestion results. Simply defined, level of service is a qualitative measure that describes operational conditions of a traffic stream along a roadway or at an intersection of two roadways. Six levels of service are defined from A to F, with Level of Service A representing the best and Level of Service F the worst operational conditions.

##### **1. Existing Conditions**

Existing average daily traffic volumes along US 19E, within the project limits, are 11,000 vehicles per day (vpd) near Micaville and 12,000 vpd near Spruce Pine. These traffic volumes result in a Level of Service D near Micaville and Level of Service E near Spruce Pine as shown in Figure 3. There are no signalized intersections within the project limits.

**2. No-Build Conditions - Year 2025**

No-Build conditions in the year 2025 assume that US 19E improvements will not be constructed. By the year 2025, average daily traffic volumes are expected to increase to 18,600 vpd near Micaville and 20,000 vpd near Spruce Pine, resulting in Level of Service E conditions. Year 2025 traffic volumes are located in Appendix 5.

**3. Build Conditions - Year 2025**

The Build condition widens the existing two-lane US 19E to a four-lane divided facility. Widening US 19E increases capacity to Level of Service B conditions in the year 2025.

**D. Roadway Deficiencies**

The existing design along US 19E within the project area has several design deficiencies according to current NCDOT design practices. The following table separates these deficiencies into either horizontal (curves to the left or right) or vertical (curves uphill or downhill) areas of the roadway and the corresponding design speed of the existing curve. The approximate location of the deficient curves are shown in Figure 4. The proposed project will improve the design speed of these curves to 60 miles per hour.

**Table 2  
Existing Deficient Horizontal and Vertical Curves**

<b>Horizontal Curves</b>		<b>Vertical Curves</b>	
<b>Station</b>	<b>Horizontal Design Speed</b>	<b>Station</b>	<b>Vertical Design Speed</b>
50+40	52 mph	45+50	52 mph
61+70	52 mph	72+00	54 mph
384+70	47 mph	87+00	41 mph
397+00	45 mph	97+00	52 mph
412+20	50 mph	103+00	52 mph
		252+00	46 mph
		292+00	54 mph

**E. System Linkage**

The US 19E improvement project is located in northwest North Carolina where mountains rise to heights over 6000 feet (1800 meters). In addition to providing abundant recreational opportunities, these mountains form transportation barriers with few roadway options for travelers in the area. Two and three-lane US 19/US 19E is the most important transportation facility between Madison, Yancey, Mitchell, and Avery Counties in northwestern North Carolina. In addition, US 19/US 19E is part of Strategic Highway Corridor 10 providing regional mobility between Asheville and recreational opportunities in the Boone area (I-26, US 19/US 19E, NC 105).

US 19/US 19E directly connects travelers in Madison, Yancey, Mitchell, and Avery Counties with newly constructed I-26 (TIP Project Number A-10). This new section of interstate recently opened between the US 19 interchange and the Tennessee State line. Interstate 26 will attract local, regional, and nationwide travelers, thereby enhancing the importance of US 19/US 19E in northwest North Carolina.

## **II. EXISTING CONDITIONS**

### **A. Length of Roadway Section Studied**

The total length of the project is approximately 7.5 miles.

### **B. Existing Typical Section**

US 19E is currently a two-lane rural highway with travel lane widths of 12 feet and variable width grass shoulders.

### **C. Speed Limits**

The speed limit through the project area is 55 miles per hour.

### **D. Sidewalks**

No sidewalks are currently in place along US 19E.

### **E. Right of Way**

The existing right of way width along US 19E is approximately 150 feet.

### **F. Railroad Crossings**

There are no active railroad crossings along US 19E. The abandoned Black Mountain Railroad intersects at-grade with US 19E in Micaville near NC 80. Over the years of railway inactivity, businesses were established along US 19E within the railroad corridor. There are no plans to resume railway service.

### **G. Intersecting Roads**

All roadways in the project area have at-grade intersections with US 19E except for the grade separation at SR 1308 (Double Island Road) in Micaville. All intersections are stop sign controlled; there are no traffic signals in the project area.

### **H. Structures**

There are two existing bridges within the project area. Bridge 35 is located in Yancey County at the grade separation of US 19E and SR 1308 (Double Island Road) in Micaville. The bridge was constructed in 1962 and is in fair condition.

Bridge 43 is located in Yancey County on US 19E over the South Toe River. The bridge was constructed in 1956 and has an estimated remaining life of 10 years.

**I. Utilities**

All major utilities are located within the project area, with the exception of water and sewer service.

**J. Bicycle Routes**

There are no bicycle routes in the project area.

**K. School Bus Data**

US 19E is a primary school bus route in Yancey and Mitchell Counties. School buses use this route to access secondary roads and schools in the project area.

**L. Navigable Waters**

There are no navigable waters in the project area.

**M. Greenways**

There are no greenways in the project area.

**III. ALTERNATIVES CONSIDERED**

Two broad range alternatives were considered for the proposed project. The alternatives include the No-Build Alternative, and Build Alternative.

**A No-Build Alternative**

The No-Build Alternative does not increase capacity or correct existing roadway deficiencies along US 19E. Since the No-Build Alternative does not address the purpose and need, it is not recommended.

**B. Build Alternative**

The Build Alternative contains one roadway improvement option along US 19E, identified as the Best Fit Alternate. This improvement option generally follows the existing alignment of US 19E to minimize impacts to the human and natural environments. The location of this alignment was approved by the Merger Team during the concurrence process explained in Section VI.

There are a variety of natural and human environment constraints in the Estatoe Community. Three preliminary alignment options were developed at the request of the merger team to determine the "Best Fit" alignment through this area. The three preliminary alignment options spanned approximately 4000 feet in length and labeled as Alternate 1, Alternate 2, and Alternate 3. Alternate 1 shifts the US 19E centerline slightly to the north, Alternate 2 shifts the US 19E centerline slightly to the south, and Alternate 3 widens symmetrically about the existing US 19E centerline. The merger team selected Alternate 2, widen to the south, as the Best Fit alignment through the Estatoe Community. Alternate 2 had fewer residential relocations, minority relocations, stream impacts, and archaeological site impacts than Alternates 1 or 3. In addition, Alternate 2 has the lowest total cost of the three design options.

## IV. PROPOSED IMPROVEMENTS

### A. Length of the Proposed Project

The total length of the proposed action is approximately 7.5 miles.

### B. Typical Section Description

The proposed typical section is a four-lane median divided facility with 10-foot shoulders. The median is raised with a width of 20 feet. A four-foot paved shoulder width will accommodate bicycle travel throughout the project. Figure 5 shows the typical section for the proposed action.

### C. Right of Way

The proposed right of way width varies throughout the length of the project and is dependent on the terrain and other constraints. A minimum right of way width of 150 feet is needed for the four-lane median divided typical section. The steep terrain in the project area will extend the cut and fill areas beyond the 150-foot minimum right of way requirement.

### D. Access Control

Partial control of access will be used along the US 19E improvement project. Partial control of access provides one access point for each property owner along US 19E. Median openings will be spaced according to current design standards.

### E. Intersection Treatment and Type of Control

At-grade intersections will be used throughout the proposed project, except for the grade separation (Bridge 35) at US 19E and SR 1308 (Double Island Road) in Micaville. All intersections will remain unsignalized, except for the intersection of US 19E and SR 1186 in Micaville; this intersection is recommended for signalization. Figure 6 shows the lane configurations of major intersections along US 19E.

### F. Speed Limit and Design Speed

The current speed limit of 55 miles per hour will likely be maintained with the proposed improvements along US 19E. The design speed is typically 5 miles per hour higher than the posted speed limit.

### G. Maintenance of Traffic

All traffic control devices used on this project will conform to the most current Manual of Uniform Traffic Control Devices (MUTCD).

### H. Noise Barriers

No noise barriers are proposed as part of this project.

### I. Sidewalks

No sidewalks are proposed along the US 19E improvement project.

**J. Bicycle Accommodations**

The typical section selected for the project includes 4-foot paved shoulders. The paved shoulder is located throughout the project and will accommodate bicycles.

**K. Structures**

There are two existing bridges along US 19E within the project area. Bridge 35 is located in Yancey County at the grade separation of US 19E and SR 1308 (Double Island Road) in Micaville. The bridge was constructed in 1962 and is in fair condition. As proposed, the bridge will be removed and replaced with a new structure.

Bridge 43 is located in Yancey County on US 19E over the South Toe River. The bridge was constructed in 1956 and has an estimated remaining life of 10 years. As proposed, the bridge will be removed and replaced with two separated two-lane bridges.

**L. Greenways**

There are no existing or planned greenways located in the project area.

**M. Right of Way Cost**

Right of way costs are based on the preliminary design of the three alternates studied in detail. Right of way costs include: residential and business relocation, land and damage, utilities, and acquisitions. The estimated right of way cost for the proposed action is \$11,840,400.

**N. Construction Cost**

Estimated construction costs are based on preliminary design of the proposed action. The construction cost estimate includes items such as clearing and grubbing, earthwork, drainage, structures, paving, and guardrail. The estimated construction cost of the proposed action is \$51,200,000. Table 3 shows the right of way cost, construction cost, and total cost of the Best Fit Alternate.

**Table 3  
Cost Summary**

<b>Cost Item</b>	<b>Best Fit Alternate</b>
Construction Cost	\$51,200,000
Right of Way Cost	\$11,840,400
Total Cost	\$63,040,400

**O. NCDOT Recommended Alternate**

The Best Fit Alternate is the construction option recommended by NCDOT. The Best Fit Alternate provides the best balance of alignment improvements while minimizing impacts to the human and natural environment.

## V. ENVIRONMENTAL EFFECTS

### A. Community Description

The proposed action is located in Yancey and Mitchell Counties. Both Yancey and Mitchell Counties are served by the High Country Council of Governments (COG) and Regional Planning Organization (RPO) located in Boone, approximately 40 miles to the east of Spruce Pine.

Small-scale commercial uses (convenience stores, gift shops, etc.) are concentrated along the US 19E corridor, especially in towns or at major intersections, such as NC 80 in the Micaville community and NC 226 in Spruce Pine. Some scattered industrial uses can be found along the corridor, primarily between Burnsville and Spruce Pine. Low-density, single-family housing is scattered throughout the area, but much of the land is unsuitable for development due to the steep topography, stream crossings, and wetlands.

### B. Farmland

North Carolina Executive Order Number 96, Preservation of Prime Agricultural and Forest Lands, requires all state agencies to consider the impact of land acquisition and construction projects on prime farmland soils, as designated by the US Natural Resources Conservation Service (NRCS). These soils are determined by the SCS based on criteria such as crop yield and level of input of economic resources.

The Farmland Protection Policy Act (FPPA) is designed to minimize the degree to which federally sponsored programs contribute to the “unnecessary and irreversible conversion of farmland to non-agricultural uses,” and to ensure that these programs are consistent with state, local, and private programs to protect farmland. No published soil surveys are available for Yancey and Mitchell Counties. Only Christmas tree farms exist along US 19E; however, it does not appear that these tree farms or transportation to or from these tree farms would be directly impacted by the proposed action.

### C. Social and Economic Effects

#### 1. Community Characteristics

##### a. Population Characteristics

Over the past decade, this region has experienced slower growth than North Carolina. This could possibly be attributed to job losses in the manufacturing industry, increased unemployment rates, and general economic recession. Table 4 indicates that the Demographic Area had a growth rate of 13.1% from 1990 to 2000, which was higher than in Spruce Pine (1.0%) and Mitchell County (8.7%) but less than Yancey County (15.3%) and the State (21.4%).

**Table 4  
Population Growth, 1990-2000**

Area	Population		Growth	
	1990	2000	Difference	% Change
Demographic Area	7,537	8,523	986	13.1%
Spruce Pine	2,010	2,030	20	1.0%
Mitchell County	14,433	15,687	1,254	8.7%
Yancey County	15,419	17,774	2,355	15.3%
North Carolina	6,628,637	8,049,313	1,420,676	21.4%

*Source: US Census Bureau*

The Demographic Area had the highest percentage of Whites (97.8%) when compared to the Town of Spruce Pine (95.4%), Mitchell County (97.0%), Yancey County (95.8%), and North Carolina (70.2%). Likewise, the corresponding percentages of minorities are very low as compared to the State as shown in Table 5. African Americans make up less than 1% of the populations of the Demographic Area, Spruce Pine, Mitchell County and Yancey County. The total percentage of Hispanics is relatively low in the Demographic Area; however, the percentage in Spruce Pine is only slightly less than that of North Carolina. Hispanic populations in Mitchell and Yancey Counties are higher than in the Demographic Area, but less than in Spruce Pine and North Carolina.

In terms of age distribution, the Demographic Area had a similar percentage of persons 65 years or older (18.7%) when compared to Spruce Pine (19.7%), Mitchell County (18.6%), and Yancey County (18.2%). All four of these population areas have a much higher percentage of persons 65 years or older when compared to North Carolina (12.0%), as shown in Table 6. This could be due in part to the influx of retirees, and the exodus of younger people in search of jobs elsewhere

In 1999, the Demographic Area had a higher median household income (\$32,087) than that of Mitchell and Yancey Counties (\$30,508 and \$29,674, respectively), and the Town of Spruce Pine (\$24,766). This may be attributed to the construction of relatively upscale retirement and vacation homes in the area. All geographic areas studied had a lower median household income than the State (\$39,184); however, the growth rates between 1989 and 1999 for all areas except Spruce Pine were comparable to the State's rate, as shown in Table 7.

In 1999, the Demographic Area had the lowest percentage of persons living below the poverty level (13.4%) when compared to Spruce Pine (17.0%), Mitchell County (13.8%), and Yancey County (15.8%). All four population areas studied had higher poverty levels than North Carolina (12.3%) as shown in Table 8.

**Table 5  
Population by Race, 2000**

Race	Demographic Area		Spruce Pine		Mitchell County		Yancey County		North Carolina	
	Pop.	% Pop.	Pop.	% Pop.	Pop.	% Pop.	Pop.	% Pop.	Pop.	% Pop.
White	8,332	97.8%	1,936	95.4%	15,210	97.0%	17,033	95.8%	5,647,155	70.2%
White Hispanic	68	0.8%	20	1.0%	143	0.9%	384	2.2%	157,501	2.0%
Black or African American	16	0.2%	8	0.4%	33	0.2%	101	0.6%	1,723,301	21.4%
Black Hispanic	0	0.0%	0	0.0%	1	0.0%	0	0.0%	14,244	0.2%
American Indian / Alaska Native	13	0.2%	1	0.0%	23	0.1%	38	0.2%	95,333	1.2%
American Indian / Alaska Native Hispanic	17	0.2%	10	0.5%	47	0.3%	22	0.1%	4,218	0.1%
Asian	6	0.1%	1	0.0%	32	0.2%	22	0.1%	112,416	1.4%
Asian Hispanic	0	0.0%	0	0.0%	0	0.0%	1	0.0%	1,273	0.0%
Native Hawaiian / Pacific Islander	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3,165	0.0%
Native Hawaiian / Pacific Islander Hispanic	0	0.0%	0	0.0%	0	0.0%	0	0.0%	818	0.0%
Other Race	5	0.1%	0	0.0%	3	0.0%	7	0.0%	9,015	0.1%
Other Race Hispanic	20	0.2%	46	2.3%	101	0.6%	66	0.4%	177,614	2.2%
Two or More Races	38	0.4%	7	0.3%	75	0.5%	95	0.5%	79,965	1.0%
Two or More Races Hispanic	8	0.1%	1	0.0%	19	0.1%	5	0.0%	23,295	0.3%
<b>Total</b>	<b>8,523</b>	<b>100%</b>	<b>2,030</b>	<b>100%</b>	<b>15,687</b>	<b>100%</b>	<b>17,774</b>	<b>100%</b>	<b>8,049,313</b>	<b>100%</b>
Total Hispanic	113	1.3%	77	3.8%	311	2.0%	478	2.7%	378,963	4.7%

Source: US Census Bureau

**Table 6  
Population by Age and Median Age, 2000**

Age	Demographic Area		Spruce Pine		Mitchell County		Yancey County		North Carolina	
	Pop.	% Pop.	Pop.	% Pop.	Pop.	% Pop.	Pop.	% Pop.	Pop.	% Pop.
19 years and under	2,010	23.6%	523	25.8%	3,649	23.3%	4,150	23.3%	2,193,360	27.2%
20-64 years	4,920	57.7%	1,108	54.6%	9,121	58.1%	10,387	58.4%	4,886,905	60.7%
65 or more years	1,593	18.7%	399	19.7%	2,917	18.6%	3,237	18.2%	969,048	12.0%
<b>Total</b>	<b>8,523</b>	<b>100%</b>	<b>2,030</b>	<b>100%</b>	<b>15,687</b>	<b>100%</b>	<b>17,774</b>	<b>100%</b>	<b>8,049,313</b>	<b>100%</b>
Median Age	42.5		39.8		42.0		41.9		35.3	

Source: US Census Bureau

**Table 7  
Median Household Income, 1989-1999**

Area	Median Household Income		Growth, 1989-1999	
	1989	1999	\$ Difference	% Change
Demographic Area	\$21,498	\$32,087	\$10,589	49.3%
Spruce Pine	\$18,915	\$24,766	\$5,851	30.9%
Mitchell County	\$20,554	\$30,508	\$9,954	48.4%
Yancey County	\$19,401	\$29,674	\$10,273	53.0%
North Carolina	\$26,647	\$39,184	\$12,537	47.0%

Source: US Census Bureau

**Table 8  
Percentage Below Poverty Level, 1989-1999**

Area	Percent Below Poverty		Growth, 1989-1999	
	1989	1999	Difference	% Change
Demographic Area	14.0%	13.4%	-0.6%	-4.3%
Spruce Pine	16.1%	17.0%	0.9%	5.8%
Mitchell County	16.0%	13.8%	-2.1%	-13.3%
Yancey County	18.7%	15.8%	-2.9%	-15.5%
North Carolina	13.0%	12.3%	-0.7%	-5.4%

Source: US Census Bureau

**b. Business and Employment Characteristics**

The major employment centers for the Demographic Area are as far away as Asheville and Boone, with smaller business centers at Burnsville and Spruce Pine. Local officials identified the 19E corridor as a targeted area for potential growth. Several businesses are located at the intersection of US 19E and NC 80S, including a Taylor Togs plant (Levi Jeans). There is also a cluster of businesses in the area around the intersection of US 19 E and SR 1002 (Crabtree Creek Road). Commercial and institutional uses (convenience stores, small retail uses, schools, light industry, etc.) currently exist in several places along the US 19E corridor, particularly around the community of Micaville and the Town of Spruce Pine.

Both Yancey and Mitchell Counties have depressed economic situations when compared to the rest of the State. In 2003, the North Carolina Department of Commerce identified Mitchell County as a 21st Century Community. This program was developed to help those counties in North Carolina that are most affected by the national economic slow-down and changes in the State's economy. The counties are chosen based on criteria such as economic stress, rising unemployment, reliance on "at-risk" manufacturing, the commitment of local officials and the geographic location of the county. The goal of the program is to build partnerships to help these counties prepare for economic development opportunities.

**c. Plans and Regulations**

The Yancey County and Town of Burnsville Land Development Plan was completed in September 2001. The land development plan is based upon a combination of the technical components of land use planning and the goals and aspirations of the community. Improving US 19E to a multilane facility is consistent with the land development plan. A primary challenge identified in the land use plan is to guide development along the improved US 19E transportation corridor.

Mitchell County does not have formal land use plans; however, the local officials vision for growth is a close-knit community with cottage industries such as tree farming, lantern making, and crafts. Tourism is also important to Mitchell County. Improving US 19E is consistent with and included in the Region D study prepared by the High Country Council of Governments. The Mitchell County Thoroughfare Plan is included in this Region D study.

Neither Yancey nor Mitchell Counties have zoning regulations. However, the Town of Spruce Pine does have a zoning ordinance enforced by the Mitchell County Department of Inspections. A low-density residential district (R-1) is located near the eastern project limit in Spruce Pine.

**d. Community Resources**

There are no police stations or EMS facilities located along the project. The Newdale Fire Department is located on US 19E just east of SR 1435 in Yancey County. Another volunteer fire department is located in the Estatoe community near US 19E and Hoot Owl Road in Mitchell County.

**2. Community Impact Analysis**

**a. Visual and Aesthetic Impacts**

Visual and aesthetic impacts from the proposed action may include cutting into hillsides and/or filling in steep slopes where the road will be widened. The addition of two travel lanes and the median will also change the visual environment of the corridor. Any trees or vegetation along US 19E where the roadway will be widened will need to be removed.

**b. Land Use Patterns and Compatibility**

Due to the availability of sewer and water service, the greatest potential for new residential, industrial, and commercial development is along US 19E near the Town of Spruce Pine. Other commercial and industrial developments already exist in the relatively large population center. If topography allows, residential development can also occur outside of sewer and water service areas by using wells and septic systems.

Development patterns may change with the addition of a median along US 19E. New commercial development may be driven by concerns and issues associated with accessibility issues created by the new median. Additionally, existing commercial development may be affected if the median restricts access to the business, particularly any gas stations on the corridor that rely on drive-by traffic. According to local planners, some

truckers have expressed displeasure with the plan to make US 19E a divided highway, as it makes it more difficult for them to access certain businesses or perform U-turns.

**c. Economic Conditions**

Parcels not located where median cuts are planned may experience less growth in property values than those properties that enjoy direct access. In addition, some existing businesses and residences may be displaced or lose parking with the construction of a wider roadway.

Local officials, in Mitchell County and Spruce Pine, are concerned that the proposed action would encourage travelers to speed through Yancey and Mitchell Counties on their way to other places. Additional signage may help to promote tourism and protect the viability of local businesses and industry.

**d. Transportation Access**

**1) Neighborhood Access**

Small-scale commercial uses are scattered throughout the project corridor at towns or major intersections, but land use is primarily low-density, single-family housing along US 19E. Much of the land is unsuitable for development due to the steep topography, stream crossings, and wetlands.

There is currently no control of access along the entire US 19E corridor. The proposed typical section is a four-lane, divided facility with a 20-foot median. As proposed, drivers will use U-turns and median openings to access destinations on the opposite side of the highway. Other movements may be limited to right-in/right-out. The proposed action will have minimal impact on the neighborhoods located in the area.

**2) Commercial Access and Economic Impacts**

Access along this portion of US 19E could change if a four-lane divided facility is constructed. Left turns would not be allowed out of most driveways. Although access to existing driveways will be maintained, some may be restricted to right-in/right-outs due to limited median cuts. Commercial development is scattered along US 19E and primarily located at major intersections. Therefore, much the existing commercial access may not be affected by the widening of US 19E. There are few locations where the widening of US 19E could affect parking availability for some of the businesses in the US 19E corridor.

**3) Pedestrian and Bicycle Access**

The current US 19E facility does not contain sidewalks or bicycle facilities within the project area. There are no proposed bicycle path projects or multi-use trails near US 19E. The improvements to US 19E include a four-foot paved shoulder, which will accommodate bicyclists. The four-foot paved shoulder is consistent with the other US 19/US 19E improvements between future I-26 and Micaville.

**4) The Americans with Disabilities Act (ADA)**

No sidewalks or wheelchair ramps currently exist along US 19E in the project area and none are proposed in the future. Therefore, this project will not impact any facilities for the disabled. However, a wider US 19E will be more difficult to cross.

**5) Public Transit**

Yancey County Transportation Authority (YCTA) provides daily route service to residents of Yancey County. YCTA primarily coordinates transportation for human service agencies, but also provides transportation for the general public. Service for regular routes runs from 7:30 am to 4:30 pm, Monday through Friday, but the YCTA also provides service on non-regular routes.

Mitchell County Transportation Authority (MCTA) provides transportation services by contract to a number of human service agencies, as well serving the general public with on-call service. Routes generally run from 7:30 am to 4:30 pm, Monday through Friday.

**e. Transportation Network**

**1) Change in Commuting Patterns**

Changing commuting patterns are not likely to occur as a result of the proposed action. US 19E is the only east-west route through both Yancey and Mitchell Counties.

**2) Consistency with Thoroughfare Plans**

Both Yancey County and Mitchell County Thoroughfare Plans were included in a Region D (High Country Council of Governments) study in the early 1990s. Spruce Pine has a Thoroughfare Plan from the same time period. The Region D Plan lists US 19/19E as a rural principal arterial system, which consists of a connected network of continuous routes with substantial statewide or interstate travel. TIP Project Number R-2519 is included in the Region D plan. The Spruce Pine Plan classifies US 19E as a major thoroughfare that serves as the primary carrier of east-west traffic. It indicates that US 19E is an intrastate highway that is important to the region's economic development effort. The Spruce Pine Plan also includes mention of the NCDOT plan to widen US 19E both east and west of town.

The widening of US 19E is part of an NCDOT Strategic Highway Corridor, and is in the NCDOT 2006-2012 Transportation Improvement Program (TIP). Other NCDOT TIP projects in the area include:

- **R-2519A** – Widening of US 19 from SR 1336 west of Burnsville to SR 1186 in Micaville. Construction scheduled to begin in 2008.
- **R-2520** – Widening of US 19E/NC 194 to multi-lanes from east of Spruce Pine to US 221. Post year construction.
- **R-2598** – Upgrade of NC 226 from US 19E in Spruce Pine to the Blue Ridge Parkway. Under construction.

### **3) Travel Time**

Travel times along the corridor could improve slightly with the widening of US 19E. The proposed action will increase capacity on US 19E and provide exclusive left-turn lanes at median openings. When considered in conjunction with other proposed NCDOT TIP projects like R-2518, R-2519A and R-2520, the travel time savings would be greater.

#### **f. Community Safety**

There currently are no pedestrian or bicycle facilities along US 19E within the project area. The widening of the road would change US 19E to a partially controlled access facility with no amenities for pedestrians. Bicyclists would be accommodated on the four-foot paved shoulder.

Emergency response time should improve with the construction of the proposed action. By reducing the congestion in this area, emergency vehicles would likely have reductions in emergency response times. By adding a median to US 19E there may be a small delay when U-turns are required to access properties.

By reducing the number of conflict points and adding travel lanes, the proposed project should have a positive impact on traffic congestion, traffic flow, and vehicular safety. The widened roadway will be safer for large trucks to navigate the steep terrain.

### **3. Qualitative Indirect and Cumulative Effects Assessment**

An Indirect and Cumulative Effects (ICE) Assessment for TIP R-2518 and R-2519 was prepared in March 2004. This report encompassed the entire US 19/US 19E corridor between future I-26 and Spruce Pine. It was determined that while much of the land is unsuitable for development due to steep topography, it is possible that small-scale retail or industrial uses, or single-family residential uses would locate along US 19/US 19E. The greatest potential for induced commercial and/or industrial growth is near the Towns of Burnsville and Spruce Pine. The ICE concluded that TIP R-2518 and TIP R-2519 are unlikely to cause substantial indirect impacts to water quality.

Water and sewer service is limited within most of the US 19/US 19E corridor. However, water and sewer are available within the Town of Spruce Pine. Local officials plan to construct a new wastewater treatment plant in Micaville, between Burnsville and Spruce Pine. It is anticipated that the selected location will support the extension of water and sewer service from Burnsville to Spruce Pine.

The proposed action may have some potential to stimulate complementary land development by creating small-scale commercial or industrial development opportunities along US 19E. Residential development, particularly second homes and retiree homes, may occur in areas where the topography will allow. However, this type of development is typically dependent on water and sewer services. For this reason, it is difficult to determine where these residential developments would be constructed.

To further determine the magnitude of indirect and cumulative effects as a result of the proposed action, an analysis of a set of environmental and economic conditions was completed. This analysis roughly quantifies the potential for land use change over a 20-year timeframe. A strong rating indicates a high likelihood of land use changes related to transportation investments. Table 9 shows the results of the rating analysis for the proposed action.

**Table 9  
Potential for Land Use Change, 2000-2020**

Rating	Change in Accessibility	Change in Property Values	Forecasted Growth	Land Supply vs. Land Demand	Water/Sewer Availability	Market For Development	Public Policy
<b>Strong</b>	Travel Time Savings > 10 min.	> 50% Increase	> 3% Annual Pop. Growth	< 10-Year Supply of Land	Current Services Exist	Extremely High Potential	Less Stringent; No Growth Management
^							
"							X
"				X	X		
"		X					
"	X		X			X	
<b>Weak</b>	Travel Time Savings < 2 min.	No Change	< 1% Annual Pop. Growth	> 20-Year Supply of Land	No Plans For Future Service	Extremely Low Potential	More Stringent; Growth Management

There are several factors that seem to indicate a low potential for land use change as a result of the proposed action. These factors include change in accessibility, change in property values, low forecasted annual growth rate (less than 1%), and a relatively low market for development. The change in accessibility and mobility as a result of the proposed action will be minimal; however, travel time savings will be greater when considered cumulatively with TIP R-2518, TIP R-2519A and TIP R-2520. Local officials indicate that land values are already high in areas where development is possible. The widened roadway is not expected to change these property values dramatically. In addition, forecasted growth levels are relatively low (less than 1% annually) in both Yancey and Mitchell Counties. This has not been a high growth area, and the population growth is not expected to increase, perhaps indicating that the potential and magnitude for commercial development is limited.

On the other hand, there is available land to be developed. Some of the land along the corridor is constrained by steep slopes and wetlands; however, there are relatively large tracts of land just off the corridor that could be developed (primarily for residential purposes). The water and sewer service area for Spruce Pine extends just beyond its town limits. There are also plans to extend water and sewer services from Burnsville, west of the project corridor, to Spruce Pine and along NC 80N to Bakersville. This, coupled with the lack of growth management controls, indicates a slightly greater potential for land use change along the corridor.

Local planners indicate development momentum is occurring along the US 19E corridor from Burnsville to Spruce Pine, and they support the potential for economic benefits of the proposed action. However, the relative isolation of these towns from large employment centers, and the lack of commercial or industrial development momentum may suggest that any induced residential, industrial and/or commercial growth would be nominal.

#### **4. Evaluation of Indirect and Cumulative Analysis**

##### **a. Evaluation of Indirect Effects**

The proposed action, along with the other related NCDOT TIP projects in the area, may induce some small-scale commercial and industrial development on vacant tracts of land, or re-development of vacant buildings and single-family residential uses along the project corridor. The type of induced growth will vary depending on the location.

The land adjacent to US 19E between Micaville and Spruce Pine, which is expected to eventually be serviced by water and sewer, and the land near the Spruce Pine Town Limits are most likely to experience land use change. Since the proposed action is a widening project and no new access will be provided, impacts should be primarily limited to an area within one to two miles of the project corridor. While some of the land along the corridor is unsuitable for development due to steep topography, streams, wetlands or other natural features, it is possible for development (primarily residential) to occur on smaller tracts of land. Larger tracts of developable land may be available within a couple miles of the corridor; however, this land may have to be serviced by septic systems and wells.

New commercial uses will most likely be clustered near and in Spruce Pine at the intersection of US 19E and NC 226. These are the most likely locations for new commercial development because of proximity to other commercial uses and relatively larger population centers, as well as higher traffic volumes and availability of water and sewer. There is a slightly lower potential for growth near Micaville and NC 80 near the Taylor Togs plant, where north-south accessibility (because of NC 80) is greater than the majority of the rest of the proposed project corridor. In addition, local officials indicate water and sewer services will be expanded to this area.

Although there have been industrial closings in recent years, local officials hope that the improved accessibility provided by a widened roadway will encourage future industry to locate in the area. It does not seem probable that large-scale industry would locate along US 19E because of the proposed action, but the project may encourage the location of small, tourist-related industries. If industry does locate to the area, it is likely that some of the existing vacant buildings and sites would be filled before new buildings or sites are developed.

It is difficult to pinpoint where residential development may occur, although it is still most likely to take place within one to two miles of the US 19E corridor, as this is the main east-west roadway through the region.

**b. Evaluation of Cumulative Effects**

The cumulative impact of the proposed action increases when considered along with other proposed NCDOT TIP projects such as R-2518, R-2519A, R-2520 and R-2598. The combination of these transportation improvements will improve regional accessibility throughout this part of western North Carolina.

**c. Indirect and Cumulative Effects Conclusions**

Although some of the factors used to evaluate indirect and cumulative impacts indicate there is potential for land use change along the US 19E corridor, it is unlikely that these NCDOT TIP projects will cause substantial indirect impacts to water quality. Slow population growth and employment growth and other natural barriers (steep slopes, wetlands, etc.) to development should minimize any deterioration in water quality that could occur due to these NCDOT TIP projects.

**5. Relocation Impacts**

According to the relocation report (Appendix 1), the proposed action displaces 75 residences and 26 businesses. Three of the residences are minority displacees. Additional relocation information is included in Table 10. Appendix 1 also provides information on the NCDOT relocation assistance program.

**Table 10  
Relocation Impact Summary**

		<b>Proposed Action</b>
<b>Residences</b>	<b>Owners</b>	62
	<b>Tenants</b>	13
	<b>Total</b>	75
	<b>Minority</b>	3
<b>Businesses</b>	<b>Owners</b>	22
	<b>Tenants</b>	4
	<b>Total</b>	26
	<b>Minority</b>	0
<b>Farms</b>		0
<b>Non-Profit Organizations</b>		5

**6. Title VI and Environmental Justice**

Federal programs, under the statutes of Title VI of the Civil Rights Act of 1964, have requirements to protect individuals from discrimination on the basis of race, color, national origin, age, sex, disability, and religion. Furthermore, Executive Order 12898 "directs that programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations".

The demographic area has a very small minority population. Approximately 97.8% of the demographic area population is White. Hispanics are the largest minority group at 1.3%, followed by two or more races at 0.4%, and Black or African American at 0.2%. The potential for impacts to minority populations appears to be low.

Within the demographic area, there is a much higher percentage of persons age 65 or older (18.7%) than the percentage in North Carolina (12.0%). This same trend is evident in Spruce Pine (19.7%), Yancey County (18.2%), and Mitchell County (18.6%). However, it appears that this statistic is attributable to the relatively large number of retirees moving into the area. Most of the new development geared towards these retirees has been located off the US 19E corridor, and negative impacts to these communities area not anticipated.

According to the National Center for Education Statistics (NCES) web site, Dayton Elementary and Micaville Elementary Schools are both Title 1 Schools. While Micaville Elementary is located within the project area, Dayton Elementary is located just outside of it. Approximately 50.0% of Dayton Elementary students are eligible for free or reduced-price lunch, while none of Micaville Elementary students are eligible. The relatively high percentage of students at Dayton Elementary that received free or reduced lunch may indicate some isolated pockets of low-income families.

It does not appear that there will be disproportionate impacts to minority, low-income or other special populations. As reported earlier, the demographic area had the lowest percentage of persons living below the poverty level (13.4%) when compared to Spruce Pine (17.0%), Mitchell County (13.8%), and Yancey County (15.8%). Although poverty levels were slightly higher than North Carolina (12.3%), it is unlikely that the widened roadway will unfairly and disproportionately affect special populations along the corridor. In addition, the relocation report (Appendix 1) indicates the majority of displacees have income levels between \$25,000 and \$35,000 per year.

## **7. Cultural Resources**

### **a. Historic Architectural Resources**

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

Field survey of the Area of Potential Effects (APE) was conducted during 1999 and 2003. All structures fifty years or more in age within the APE were photographed and evaluated, and later reviewed by NCDOT architectural historians and the North Carolina State Historic Preservation Office (HPO). NCDOT in consultation with HPO determined that two properties within the APE – the Micaville Historic District and the E.W. and Dollie Huskins House – are eligible for the National Register of Historic Places.

#### **1) Micaville Historic District**

The Micaville Historic District is located in the heart of the Town of Micaville in Yancey County at the intersection of SR 1186 and NC 80 south of US 19E. The district consists of commercial and residential buildings that served the small mining and timbering community during the first half of the twentieth century and still define its center

today. The Micaville Historic District is eligible for listing in the National Register under Criterion A for community planning and development and for commerce. It is also eligible under Criterion C for architecture as a collection of early to mid-twentieth-century structures built during the town's most significant period of growth. The National Register boundary encompasses the remaining intact buildings that comprise the historic center of the community. The improvements to US 19E are a minimum distance of 60 feet from the Micaville Historic District.

## **2) E.W. and Dollie Huskins House**

The E.W. and Dollie Huskins House is located on US 19E in Yancey County near the Yancey/Mitchell County line. The National Register boundary encompasses less than two acres on the south side of US 19E, containing the house, original stone shed, the non-contributing cinder-block garage, and the well groomed lawn. Built in the 1930's and essentially unchanged, the E.W. and Dollie Huskins House is eligible for the National Register under Criterion C for its Craftsman-style architecture and local stone construction. The improvements to US 19E retain the existing right of way line along the north boundary of the E.W. and Dollie Huskins House property.

NCDOT and HPO met on April 19, 2005 and June 28, 2005 to discuss effects to the aforementioned properties eligible for listing in the National Register of Historic Places. It was determined the proposed action has no effect on the Micaville Historic District. The proposed action will have an effect on the E.W. and Dollie Huskins House because the fill slope will be closer to the house. NCDOT will mitigate the effect by creating a seeded slope that is feasible for mowing by the owner.

### **b. Archaeological Resources**

This project complies 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. Two of the four archaeological sites (Sites 31YC31 and 31ML80) recommended eligible for listing on the National Register of Historic places are impacted by the Best Fit Alternate. If site avoidance is not possible, data recovery excavations may be required for mitigation purposes.

Section 4(f) does not apply to archeological sites where the Administration, after consultation with the SHPO and the ACHP, determines that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. This exception applies both to situations where data recovery is undertaken or where the Administration decides, with agreement of the SHPO and, where applicable, the ACHP, not to recover the resource.

Two archaeological sites have been determined to be culturally significant. Sites 31YC31 and 31YC183 are documented as lying within the project's APE (Area of Potential Effects). Roadway Design will consult with the Human Environment Unit in order to determine that these sites are adequately and accurately depicted on the design plans. The site locations will be carried forward on the plans throughout the life of the project. Should

design modifications be required for the project, the Roadway Design Unit will contact the Human Environment Unit to assess the need for additional archaeological investigations.

Data Recovery Plans to recover archaeological materials for analysis and interpretation of the occupation of the sites will be drawn up. Clearly defined research goals and objectives should be stated and addressed by recovering archaeological materials for analysis and interpretation. Such an endeavor will include documenting the depth and extent of deposits and defining any additional intact deposits and features present within the archaeological sites.

The Human Environment Unit will provide the Right of Way Branch with notification of the prepared data recovery plans so they may acquire parcels that contain eligible sites as soon as possible after right of way authorization. Acquisition of these parcels will occur at least 12 months prior to the let date. The Right of Way Branch will notify the Human Environment Unit as to the availability of these parcels so the data recovery investigations may proceed. No construction activities will be allowed within either site's limits until the data recovery investigations are completed and accepted by the Human Environment Unit. Special provisions will be provided to the Roadway Design Unit by the Human Environment Unit for incorporation into the final design plans that will detail the Contractor's responsibilities regarding archaeological resources within or near the project limits. These responsibilities will include avoiding staging activities within the limits of known significant sites adjacent to or near the project limits that may have been avoided during the design process as well as following the Department's Standard Specification's for Roads and Bridges with regard to borrow pits.

#### **D. Wild and Scenic Rivers and Watersheds**

There are no water supply watersheds, Wild and Scenic Rivers, or 303 (d) listed water bodies within the project area. The South Toe River is an Outstanding Resource Water and is crossed by Bridge 43 on US 19E.

#### **E. Environmental Effects**

Prior to the site visit, published resource information pertaining to the project area was reviewed and used for the site evaluation. Water resource information was obtained from publications posted on the World Wide Web by NCDENR and NCDWQ. Information concerning the occurrence of federally protected species in the study area was obtained from the USFWS list of protected and candidate species (January 29, 2003) prior to initiation of the field investigation. Information concerning species under state protection was obtained from the NCNHP database of rare species and unique habitats. NCNHP files were reviewed for documented sightings (July 30, 2003) of species on state or federal lists and locations of significant natural areas. Records maintained by the NCNHP were consulted for documented occurrences of federally- and state-listed species before commencing the field effort. Subsequent reviews of NCNHP files were conducted to provide periodic record updates.

A general field survey was conducted along the proposed project route during August, September, and early October 2003. Water resources were identified and their physical characteristics were recorded. For the purposes of this study, a habitat assessment was

performed within the project area. Plant communities and their associated wildlife were identified using a variety of observation techniques, including active searching, visual observations, and identifying characteristic signs of wildlife (sounds, tracks, scats, and burrows).

Jurisdictional areas, if present, were identified using the three parameter approach (hydrophytic vegetation, hydric soils, wetland hydrology) established in the U.S. Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987). Jurisdictional areas were characterized according to a classification scheme established by Cowardin et al. (1979).

## **1. Physical Resources**

The study area is located in the Blue Ridge physiographic province of western North Carolina. The topography in the project study area is generally characterized as rolling hills with steeply sloping, deeply cut drainage ways. Elevations in the study area range from 2,600 to 3,000 feet above mean sea level (USGS 1978, 1994). The project study area consists of existing maintained right-of-way including fill slopes, rural residential, commercial, agricultural, and forested areas. Surrounding land uses include agricultural, residential, commercial, and forested lands.

### **a. Soils**

As shown in Table 11, there are thirty-two (32) soil mapping units identified within the project study area. Only one of these soils, Nikwasi sandy loam, is listed as a hydric soil for Yancey County. No hydric soils are listed for Mitchell County (USDA 1995). Of the remaining thirty-one (31) non-hydric soils, eight are known to include hydric soils in depressions.

### **b. Water Resources**

The project study area is located within sub-basin 06 of the French Broad River Basin (04-03), (NCDWQ 2000) and is part of the USGS hydrologic unit for the French Broad River (Hydrologic Unit Code 06010108) (USGS 1974). Sixty-eight (68) streams are located within the project study area. The locations of these streams are shown in Appendix 4, Sheets 1-13, and the physical characteristics of each of these streams is shown below in Table 12.

The project contains sixty-seven (67) perennial streams and one intermittent stream segment. Stream UT2D (Appendix 4) begins as an intermittent stream, and scored 14 points on the NCDWQ Stream Classification Form along its intermittent segment.

All streams in the study area classified by NCDWQ have been assigned a Best Usage Classification of **B**, **C**, and may contain **Tr** and/or **ORW** supplemental classifications (NCDENR 2003). The unnamed tributaries (UT) present within the project area have not been individually classified by NCDWQ; therefore, they carry the same classification as their receiving streams.

**Table 11  
Soil Mapping Units**

Soil Mapping Unit	Classification	County	Hydric Inclusions*
Bandana sandy loam, 0-3 percent slopes	<i>Aeric Fluvaquents</i>	Yancey & Mitchell	Yes
Biltmore sand, 0-3 percent slopes	<i>Typic Udipsamments</i>	Yancey	Yes
Buladean-Chestnut complex, 30-50 percent slopes	<i>Typic Dystrudepts</i>	Mitchell	No
Cashiers fine sandy loam, 30-50 percent slopes	<i>Typic Dystrudepts</i>	Yancey & Mitchell	No
Chandler loam, 8-15 percent slopes	<i>Typic Dystrudepts</i>	Mitchell	No
Chandler loam, 30-50 percent slopes	<i>Typic Dystrudepts</i>	Mitchell	No
Chandler-Micaville complex, 15-30 percent slopes	<i>Typic Dystrudepts</i>	Yancey & Mitchell	No
Chandler-Micaville complex, 30-50 percent slopes	<i>Typic Dystrudepts</i>	Yancey	No
Chandler-Micaville complex, 50-95 percent slopes	<i>Typic Dystrudepts</i>	Yancey	No
Clifton clay loam, 8-15 percent slopes	<i>Typic Hapludults</i>	Yancey	No
Clifton clay loam, 15-30 percent slopes	<i>Typic Hapludults</i>	Yancey	No
Dellwood-Reddies complex, 0-3 percent slopes	<i>Oxyaquic Dystrudepts</i>	Yancey & Mitchell	Yes
Dillard loam, 2-8 percent slopes	<i>Aquic Hapludults</i>	Yancey	Yes
Evard-Cowee complex, 8-15 percent slopes	<i>Typic Hapludults</i>	Yancey & Mitchell	No
Evard-Cowee complex, 15-30 percent slopes	<i>Typic Hapludults</i>	Yancey & Mitchell	No
Evard-Cowee complex, 30-50 percent slopes	<i>Typic Hapludults</i>	Yancey & Mitchell	No
Fannin sandy clay loam, 15-30 percent slopes	<i>Typic Hapludults</i>	Yancey & Mitchell	No
Fannin sandy clay loam, 30-50 percent slopes	<i>Typic Hapludults</i>	Yancey	No
Hunt Dale clay loam, 15-30 percent slopes	<i>Umbric Dystrachrepts</i>	Yancey	No
Hunt Dale clay loam, 30-50 percent slopes	<i>Umbric Dystrachrepts</i>	Yancey & Mitchell	No
Nikwasi sandy loam, 0-3 percent slopes	<i>Cumulic Humaquepts</i>	Yancey	#
Porters-Unaka complex, 50-95 percent slopes	<i>Typic Dystrudepts</i>	Yancey	No
Rosman fine sandy loam, 0-3 percent slopes	<i>Fluventic Humic Dystrudepts</i>	Yancey	Yes
Saunook sandy loam, 2-8 percent slopes	<i>Humic Hapludults</i>	Yancey	Yes
Saunook sandy loam, 8-15 percent slopes	<i>Humic Hapludults</i>	Yancey & Mitchell	No
Saunook-Thunder complex, 15-30 percent slopes	<i>Humic Hapludults</i>	Yancey & Mitchell	No
Toecane-Tusquitee complex, 8-15 percent slopes	<i>Humic Hapludults/Typic Dystrudepts</i>	Yancey	No
Udorthents, loamy	N/A	Yancey & Mitchell	Yes
Unison loam, 2-8 percent slopes	<i>Typic Hapludults</i>	Yancey	Yes
Unison loam, 8-15 percent slopes	<i>Typic Hapludults</i>	Yancey	No
Watauga loam, 15-30 percent slopes	<i>Typic Hapludults</i>	Mitchell	No
Watauga loam, 30-50 percent slopes	<i>Typic Hapludults</i>	Mitchell	No

**Table 12**  
**Physical Characteristics of Surface Waters**

Stream ID and Map Code*	Bank Height (feet)	Bankfull Width (feet)	Sinuosity	Substrate	Water Clarity	USACE Stream Quality Assessment Score	Stream Determination**
UT2A	3-6	3	None	Gravel/sand	Clear	45.5	Perennial
2A	18-20	15	Low	Sand/gravel/cobble	Clear	74.5	Perennial
2UT2A	3	2.5	None	Sand/gravel/cobble	Clear	48.5	Perennial
3UT2A	10	15	Low	Sand/cobble	Clear	63	Perennial
2B	5-10	3	Low	Sand/cobble	Clear	60	Perennial
UT2B	0.5	2	Low	Sand/cobble	Clear	51	Perennial
2C	3-40	3	Moderate	Sand/cobble	Clear	65	Perennial
STR	10-30	60-100	Moderate	Sand/gravel/cobble	Clear	83	Perennial
2UT STR	5	3	Low	Sand/cobble	Clear	41	Perennial
UT STR	5	3	Low	Sand/cobble	Clear	63	Perennial
3UT STR	0.5-10	2	Low	Sand/gravel/cobble	Clear	34	Perennial
2D Upstream	3-4	5-6	Moderate	Sand/gravel/cobble	Clear	60	Perennial
2D Midstream	3-40	10	Low	Sand/gravel/cobble	Clear	88	Perennial
2D Downstream	2-8	12	Low	Sand/gravel/cobble	Clear	75	Perennial
UT2D Upstream	2	4	Low	Sand/gravel	Clear	32	Intermittent
UT2D Downstream	1-3	0.5-1	Low	Sand/gravel	Clear	55	Perennial
2UT2D	4	2-3	Moderate	Sand	Clear	62	Perennial
3UT2D	3	3-15	Low	Sand	Clear	59	Perennial
4UT2D	0.5-10	2-20	Moderate	Sand/gravel/cobble	Clear	61	Perennial
UT4UT2D	0.5-6	2-3	Low	Sand/gravel/cobble	Clear	62	Perennial
5UT2D	1-3	1-3	Low	Sand/gravel/cobble	Clear	51	Perennial
6UT2D	1-3	1-3	Low	Sand/gravel/cobble	Clear	43	Perennial
7UT2D	2-3	2-3	Low	Sand/gravel/cobble	Clear	25	Perennial
8UT2D	1-3	2-6	Low	Sand/gravel/cobble	Clear	25	Perennial
9UT2D	1-2	1-4	Low	Sand/gravel/cobble	Clear	35	Perennial
10UT2D	0.5	1	Low	Sand/gravel/cobble	Clear	42	Perennial
11UT2D	3-5	1.5-3	Moderate	Sand/gravel/cobble	Clear	50	Perennial
12UT2D	3-18	2-3	Moderate	Sand/gravel/cobble	Clear	35	Perennial
14UT2D	1-3	1-1.5	Moderate	Sand/gravel/cobble	Clear	45	Perennial
13UT2D	1-3	1-1.5	Low	Sand/gravel/cobble	Clear	54	Perennial
1H	2-30	3-40	High	Sand/gravel/cobble	Clear	72	Perennial
4UT1H	2	1-3	Low	Cobble/gravel/silt	Clear	64	Perennial
UT1H	1-3	1-2	Low	Cobble/gravel/silt	Clear	77	Perennial
2UT1H	2-10	2-6	Moderate	Cobble/gravel/silt	Clear	54	Perennial
1I Upstream	1-3	1-3	Low	Gravel/sand/mud	Clear	75	Perennial
1I Downstream	0.5-10	0.5-6	Low	Cobble/sand	Clear	60	Perennial
UT1I	0.5	1	Low	Sand/gravel/cobble	Clear	47	Perennial
1CC	5-20	25	Moderate	Sand/gravel/cobble	Clear	77	Perennial
UT1CC	5-20	1-5	Moderate	Sand/gravel/cobble	Clear	67	Perennial
UTUT1CC	1	1	Low	Silt/cobble	Clear	57	Perennial
2UTUT1CC	1-20	1	Low	Silt/cobble	Clear	54	Perennial
2UT1CC	1	2	Moderate	Silt/cobble	Clear	78	Perennial
3UTUT1CC	0.5-5	1-5	Moderate	Silt/cobble	Clear	72	Perennial
UT3UTUT1CC	0.5-5	1-2	Moderate	Silt/cobble	Clear	69	Perennial
UTUT3UTUT1CC	0.5-3	1-5	Low	Silt/cobble	Clear	67	Perennial
2E	2-4	6	Moderate	Cobble/gravel/sand	Clear	69	Perennial
UT2E	1	4	Moderate	Cobble/gravel/sand	Clear	54	Perennial
2UT2E	2	5	Moderate	Silt/cobble	Clear	50	Perennial
3UT2E	2	3	Moderate	Silt/sand/gravel	Clear	69	Perennial
UT3UT2E	2	0.5	Low	Sand/gravel	Clear	37	Perennial
2BC	2-4	15	Moderate	Cobble/gravel/sand	Clear	21	Perennial

Stream ID and Map Code*	Bank Height (feet)	Bankfull Width (feet)	Sinuosity	Substrate	Water Clarity	USACE Stream Quality Assessment Score	Stream Determination**
UT2BC	1	3	Low	Gravel/sand	Clear	55	Perennial
11UT1G	3-5	3-6	Low	Gravel/cobble/sand	Clear	68	Perennial
1G Upstream	0.5-1.5	2-8	Low	Gravel/cobble/sand	Clear	73	Perennial
1G Downstream	1-4	4-10	Moderate	Silt/sand/gravel/cobble	Clear	58	Perennial
UT1G	0.5-29	2-4	Low	Sand/cobble	Clear	50	Perennial
2UT1G	1-2	3-6	Moderate	Sand/cobble	Clear	66	Perennial
3UT1G	2-6	2-4	Low	Sand/cobble	Clear	12	Perennial
4UT1G	0-2	1-4	Low	Sand/cobble	Clear	51	Perennial
5UT1G	2	5	Low	Sand/silt/gravel	Clear	40	Perennial
6UT1G	1	2	Low	Sand/gravel	Clear	18	Perennial
7UT1G	0.5	1-2	Low	Silt/sand	Clear	6	Perennial
8UT1G	0.5	1	Low	Silt/gravel	Clear	53	Perennial
9UT1G	4	1	Low	Gravel/sand	Clear	52	Perennial
10UT1G	0.5	1	Low	Silt	Clear	72	Perennial
1D	0.5-2	1-8	Low	Gravel/Sand	Clear	52	Perennial
1B	2-8	2-4	Moderate	Sand/clay	Clear	60	Perennial
1C	0.5-3	2-8	Moderate	Sand/clay	Clear	64	Perennial
1F	0.5-2	1-3	Moderate	Sand/clay	Clear	70	Perennial
UT1F	0.5-2	0.5-2	Moderate	Sand/clay	Clear	60	Perennial
2UT1F	3-15	1-2	Moderate	Sand/clay	Clear	57	Perennial
1A	4-8	1.5-2	Low	Clay/sand	Clear	59	Perennial
1Z	2-18	1-2	Moderate	Sand/clay	Clear	51	Perennial

\*UT = Unnamed tributary

\*\* Stream Determination is derived from information gathered during the completion of USACE Stream Quality Assessment Worksheets and NCDWQ Stream Classification Forms

Table 13 lists the stream field identification and map code assigned in the field, the stream name assigned by NCDWQ, the NCDWQ stream index number (SIN), and the NCDWQ Best Usage Classification for the named streams that are either crossed by the study area or that receive drainage from the study area. Within each drainage, all UTs carry the same SIN and Best Usage Classification as the named stream.

**Table 13**  
**NCDWQ Stream Identification and Classification for Major Drainages**

NCDWQ Stream Identification	Stream Identification and Map Code	NCDWQ Stream Index Number (SIN)	DWQ Best Usage Classification
South Toe River	STR	7-2-52-(30.5)	B; Tr, ORW
Little Crabtree Creek	2A	7-2-52-33	C; Tr
Big Crabtree Creek	1CC	7-2-48	C; Tr
Long Branch	2D, 6UT2D	7-2-48-52-31	C; Tr
Mine Branch	UT STR	7-2-52-32	C; Tr
Brushy Creek	2BC	7-2-48-4	C; Tr
English Creek	1F, 2UT1F	7-2-42	C; Tr
Ayles Creek	3UT2A	7-2-52-33-11	C; Tr

The South Toe River and nearly all its tributaries are classified as ORW. All of the streams that either cross the study area or receive drainage from the study area are classified as Tr, which by definition classifies them as ORW. No streams within the study area are designated as North Carolina Natural and Scenic Rivers, or as National Wild and Scenic Rivers. Furthermore, the French Broad River Basin is not currently subject to riparian buffer protection rules by the NCDWQ. None of the water resources within the project vicinity are designated as biologically impaired water bodies regulated under the provisions of CWA §303(d) (NCDWQ 2002).

There is one permitted discharger located within the project vicinity. Taylor Togs waste water treatment plant (WWTP) discharges into Little Crabtree Creek, near the eastern intersection of US 19E and SR 1186.

Short-term impacts to water quality, such as sedimentation and turbidity, may result from construction-related activities. Temporary construction impacts due to erosion and sedimentation will be minimized through implementation of NCDOT's "Design Standards in Sensitive Watersheds" (15A NCAC 04B.0024).

**2. Biotic Resources**

**a. Terrestrial Communities**

Four plant communities occur within the study area: Montane Oak-Hickory Forest, Disturbed-Maintained Communities, Wetland Communities, and White Pine Forest. Plant community impacts are based on the preliminary cut/fill sections necessary for US 19E improvements. Plant communities impacted by the proposed action total 162.47 acres as shown. Table 14 provides a summary of the plant community impacts associated with the proposed action.

**Table 14  
Plant Community Impacts**

<b>Plant Community Type</b>	<b>Proposed Action Impact (Acres)</b>
Montane Oak-Hickory Forest	55.29
Disturbed/Maintained*	96.48
Wetland Communities	0.87
White Pine Forest	9.83
<b>Total</b>	<b>162.47</b>

It is inevitable that the project will impact area wildlife. Due to the existing amount of urban and agricultural development in the project study area, wildlife habitat is fragmented. Although some loss of disturbed habitat adjacent to existing road shoulders would result, these areas are of limited value to wildlife that may utilize them. Wildlife expected to utilize the project study area are generally acclimated to fragmented landscapes in this area. However, fragmentation and loss of forested habitat may impact other wildlife in the area by reducing potential nesting and foraging areas, as well as displacing animal populations.

### **b. Aquatic Communities**

Water resource impacts may also result from the physical disturbance of the forested stream buffers that adjoin most of the streams within the study area. Removing streamside vegetation increases direct sunlight penetration, which ultimately elevates water temperatures within the stream. An increase in stream water temperatures often stresses or reduces the population of aquatic organisms. Trout are a group of fishes that often succumb to elevated water temperatures. Disturbing stream buffers can also create unstable stream banks, further increasing downstream sedimentation. Shelter and food resources, both in the aquatic and terrestrial portions of these organisms' life cycles, will be affected by losses in the terrestrial communities. The loss of aquatic plants and animals will affect terrestrial fauna that rely on them as a food source.

The removal of the riparian buffer may also increase the amount of sediment released into the stream. Temporary and permanent impacts to aquatic organisms may result from this increased sedimentation. Aquatic invertebrates may drift downstream during construction and recolonize the disturbed area once it has been stabilized. Sediments have the potential to affect fish and other aquatic life in several ways, including the clogging and abrading of gills and other respiratory surfaces, affecting the habitat by scouring and filling of pools and riffles, altering water chemistry, and smothering different life stages. Increased sedimentation may cause decreased light penetration through an increase in turbidity.

In-stream work and land disturbance within the 25-foot wide trout stream buffer zone should be prohibited during the trout spawning season of October 15-April 15 to protect the egg and fry stages of trout from off-site sedimentation during construction. Temporary construction impacts due to erosion and sedimentation will be minimized through implementation of NCDOT's "Design Standards in Sensitive Watersheds" (15A NCAC 04B.0024).

## **3. Jurisdictional Topics**

### **a. Waters of the United States**

"Waters of the United States" are impacted by the proposed action. The field assessment of the project study area for jurisdictional wetland boundaries based on current US Army Corps of Engineers (USACE) methodology (Environmental Laboratory 1987) identified twenty-six (26) areas meeting the federal criteria for wetlands. However, only eight (8) of these wetlands are impacted by the proposed action. Jurisdictional wetland impacts total 0.869 acres. Figure 7 shows the location of the jurisdictional wetlands. A USACE Wetland Determination Data Form and a NCDWQ Wetland Rating Form were completed for each wetland.

Table 15 lists information about the jurisdictional wetlands impacted by the proposed action, including the Cowardin classification, NCDWQ Wetland Rating score, the overall wetland quality, and the size of each wetland within the study area. The wetland quality presented in Table 15 corresponds to the categories used by NCDWQ to define wetland quality (a score of 0-33 represents a low quality wetland, 34-66 a medium quality wetland, and 67-100 a high quality wetland).

**Table 15**  
**Jurisdictional Wetland Impacts**

<b>Wetland Identification and Map Code</b>	<b>Cowardin Classification *</b>	<b>NCDWQ Wetland Rating Score</b>	<b>Overall Wetland Quality</b>	<b>Impact (acres)**</b>
5UT2D	PEM1E	35	Medium	0.007
6UT2D	PSS1E	37	Medium	0.743
2DN	PSS1E	33	Medium	0.03
2DM	PEM1E	43	Medium	0.04
1I and 2-1I	PEM1E	46	Medium	0.023
UT2BC	PEM1E	28	Low	0.02
1GD	PEM1E	30	Low	0.006
<b>TOTAL</b>				<b>0.869</b>

Most of the wetlands are palustrine emergent, with some areas of palustrine forested and palustrine scrub shrub also present. The Cowardin classification of these wetland types are discussed below.

Palustrine forested (PFO) – These areas are identified as forested wetlands, which are palustrine in nature. All of the palustrine forested wetlands within the study area are broad-leaved deciduous communities (Cowardin designation PFO1). Because these wetlands are generally found within the floodplains of perennial streams, usually in areas of groundwater seepage, the hydrologic regime is seasonally flooded and/or saturated (represented by Cowardin water regime modifier E).

Palustrine scrub-shrub (PSS) – These palustrine areas are dominated by woody vegetation less than 20 feet tall. The species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. Scrub-shrub wetlands may represent a successional stage leading to forested wetland, or they may be relatively stable communities. The four palustrine scrub-shrub wetlands within the study area are broad-leaved deciduous communities (PSS1). Because these wetlands are typically located along the margins of perennial streams or the margins of ponds, the hydrologic regime is seasonally flooded and/or saturated (represented by Cowardin water regime modifier E).

Five jurisdictional ponds are located within the study area, and are considered “Waters of the United States”. None of these ponds are directly impacted by the proposed action.

Sixty-eight (68) jurisdictional streams are located within the study area; however, only thirty-three (33) of these streams are impacted by the proposed action. Figure 7 shows the location of the streams in the study area. These streams meet the definition of surface waters and are therefore classified as Waters of the United States. Table 16 shows the jurisdictional stream impacts for the project. There are approximately 9,365.9 linear feet of streams impacted by the proposed action.

**Table 16  
Jurisdictional Stream Impacts**

<b>Stream ID and Map Code</b>	<b>NCDWQ stream Index Number (SIN)</b>	<b>Stream Impact (linear feet)</b>
2A	7-2-52-33	236.20
2UT2A	7-2-52-33	187.54
2B	7-2-52-33	308.34
UT2B	7-2-52-33	14.6
2C	7-2-52-(30.5)	154.49
STR	7-2-52-(30.5)	303.73
3UT STR	7-2-52-(30.5)	345.29
2D	7-2-52-33	3448.77
UT2D	7-2-52-33	153.65
2UT2D	7-2-52-33	95.44
3UT2D	7-2-52-33	232.79
7UT2D	7-2-52-33	101.87
10UT2D	7-2-52-33	12.65
11UT2D	7-2-52-33	5.75
12UT2D	7-2-52-33	119.66
13UT2D	7-2-52-33	95.86
1H	7-2-48	50.73
UT1H	7-2-48	28.91
2UT1H	7-2-48	54.59
1I	7-2-48	700.09
UT1I	7-2-48	78.13
1CC (Crabtree Creek)	7-2-48	230.39
2E	7-2-48-4	228.82
2BC	7-2-48-4	96.41
1G and 2-1G	7-2-48-4	1382.95
5UT1G	7-2-48-4	222.58
7UT1G	7-2-48-4	55.99
8UT1G	7-2-48-4	45.77
1B	7-2-42	85.54
1D	7-2-42	82.96
1C	7-2-42	134.36
1Z	7-2-42	71.05
<b>Total Stream Impact</b>		<b>9,365.90</b>

The jurisdictional features associated with this project were verified by USACE and NCDWQ representatives during a site visit on May 6, 2004. A Notification of Jurisdictional Determination was issued by the USACE on September 1, 2004.

**b. Permits**

**1) Section 404 and 401 Permits**

In accordance with provisions of Section 404 of the CWA (33 U.S.C. 1344), a permit will be required from the USACE for the discharge of dredged or fill material into "Waters of the United States." It is expected that the project will require a Nationwide Permit (NWP) No. 14 [67 FR 2020, 2080; January 15, 2002]. The USACE issues a NWP No. 14 for linear transportation projects impacting "Waters of the United States", provided that the project is in non-tidal waters and the discharge does not cause the loss of greater than a half an acre of "Waters of the United States" or greater than 300 linear feet of channel permanently impacted. However, if the discharge of fill material exceeds 0.5 acre of "Waters of the United States" for any one crossing, stream impacts exceed 300 linear feet for any one crossing, or multiple crossings of a single stream incur impacts, then an Individual Permit may become necessary.

**2) Water Quality Certification**

Section 401 of the CWA requires that the state issue or deny water quality certifications for any federally permitted or licensed activity that may result in a discharge into "Waters of the United States". Issuance of a CWA §401 Water Quality Certification (WQC) from the NCDWQ is a prerequisite to the issuance of a CWA Section 404 Permit.

If an Individual Permit is required based upon impacts in the study area, a corresponding CWA §401 Major Water Quality Certification will be required by NCDWQ. If it is determined, upon refinement of project design, that a NWP No. 14 is required to authorize impacts to "Waters of the United States", then a CWA §401 WQC No. 3404 will be required from NCDWQ.

**3) Tennessee Valley Authority**

The proposed project is located in the Tennessee River Watershed. A permit pursuant to Section 26a of the TVA Act is required for all obstructions involving streams or floodplains in the Tennessee River drainage basin.

**4) Trout Waters**

All streams within the project study area carry a Tr designation by NCDWQ. A Tr designation is for streams that are suitable for natural trout propagation and maintenance of stocked trout. Yancey and Mitchell Counties are among the twenty-five (25) mountain counties designated by the NCWRC as having trout waters. The South Toe River is a designated Public Mountain Trout Water a few miles upstream of the study area. Since the project is located in designated "trout" counties, a letter of approval from the NCWRC is needed. In addition, an in-water work moratorium is effective from January 1 through April 15 for rainbow trout, and October 15 through April 15 for brook and brown trout. This moratorium is included in the Project Commitments "green sheet" at the beginning of this document.

**c. Mitigation**

The USACE has adopted through the Council on Environmental Quality (CEQ) a wetland mitigation policy which embraces the concept of "no net loss of wetlands" and

sequencing. The purpose of this policy is to restore and maintain the chemical, biological and physical integrity of waters of the United States, and specifically wetlands. Mitigation of wetland impacts has been defined by the CEQ to include: avoiding impacts (to wetlands), minimizing impacts, rectifying impacts, reducing impacts over time and compensating for impacts (40 CFR 1508.20). Each of these three aspects (avoidance, minimization and compensatory mitigation) must be considered sequentially.

**1) Avoidance**

Jurisdictional surface waters are present within the project study area. Through the project development process, wetlands and streams were delineated and mapped. With the wetland, streams, and other constraints identified, the Merger Team approved the alignment of the Best Fit Alternate which shifts the proposed action away from wetlands and streams, to the extent practicable. As the design of the project progresses, additional avoidance to wetlands and streams may be possible.

**2) Minimization**

Since the proposed action is located along existing US 19E, impacts to “Waters of the United States” will be minimized by using as much of the existing roadway corridor as possible. This should result in a minimal amount of new impact depending on the final design of the widening. The Merger Team has already begun minimizing wetland and stream impacts by developing the Best Fit Alternate. As the project design continues, there will be additional opportunities to minimize impacts, including the “Minimization” Merger Team meeting.

All the streams within the project area are designated Trout waters by the NCDWQ. Temporary construction impacts due to erosion and sedimentation will be minimized through implementation of NCDOT’s “Design Standards in Sensitive Watersheds” (15A NCAC 04B.0024).

**3) Compensatory mitigation**

The USACE requires compensation under a NWP No. 14 for perennial streambed if the discharge causes the loss of greater than 0.1 acre of “Waters of United States” or if the activity causes more than 150 linear feet of perennial streambed impacts or intermittent streambed impacts if the intermittent stream has important aquatic function(s) as denoted on USACE’s Intermittent Channel Evaluation Form. In accordance with 15A NCAC 2H .0506(h), NCDWQ may require under WQC No. 3404 compensation for impacts to 150 linear feet or more of jurisdictional streams and/or one acre or more of wetlands.

The USACE may require compensation for all cumulative jurisdictional impacts to wetlands and perennial streambed or important intermittent streambed that result from activities authorized under an Individual Permit. The NCDWQ may require compensation for all cumulative jurisdictional stream and wetland impacts for activities authorized under a Major Water Quality Certification (WQC).

**d. Federally Protected Species**

Species with the federal classification of Endangered (E) or Threatened (T), or Proposed (P) for such listing are protected under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). As shown below in Table 17, there are twelve (12) federally protected species listed for Yancey and Mitchell Counties. Surveys for plants with “no effect” are valid for 5 years. Surveys for other species are valid for two years from the survey date. If the project is not constructed within those two years, then species may need to be resurveyed before the let date.

**Table 17  
Federally Protected Species Listed for Yancey and Mitchell Counties**

Common Name	Scientific Name	Federal Status*	Biological Conclusion	County
<b>Vertebrates</b>				
Bog turtle	<i>Clemmys muhlenbergii</i>	T(S/A)	Not Applicable	Yancey
Carolina northern flying squirrel	<i>Glaucomys sabrinus coloratus</i>	E	No Effect	Mitchell and Yancey
Eastern cougar	<i>Puma concolor cougar</i>	E	No Effect	Yancey
Indiana bat	<i>Myotis sodalis</i>	E	Not Likely to Adversely Affect	Mitchell
Virginia big-eared bat	<i>Corynorhinus (=Plecotus) townsendii virginianus</i>	E	No Effect	Yancey
<b>Invertebrates</b>				
Appalachian elktoe	<i>Alasmidonta raveneliana</i>	E	Will Adversely Affect	Mitchell and Yancey
Spruce-fir moss spider	<i>Microhexura montivaga</i>	E	No Effect	Mitchell
<b>Vascular Plants</b>				
Blue Ridge goldenrod	<i>Solidago spithamaea</i>	T	No Effect	Mitchell
Heller’s blazing star	<i>Liatris helleri</i>	T	No Effect	Mitchell
Roan Mountain bluet	<i>Houstonia montana</i> (= <i>Hedyotis purpurea</i> var. <i>montana</i> )	E	No Effect	Yancey
Spreading avens	<i>Geum radiatum</i>	E	No Effect	Yancey
Virginia spiraea	<i>Spiraea virginiana</i>	T	Not Likely to Adversely Affect/ Unresolved	Mitchell and Yancey
<b>Nonvascular Plants</b>				
Rock gnome lichen	<i>Gymnoderma lineare</i>	E	No Effect	Mitchell and Yancey

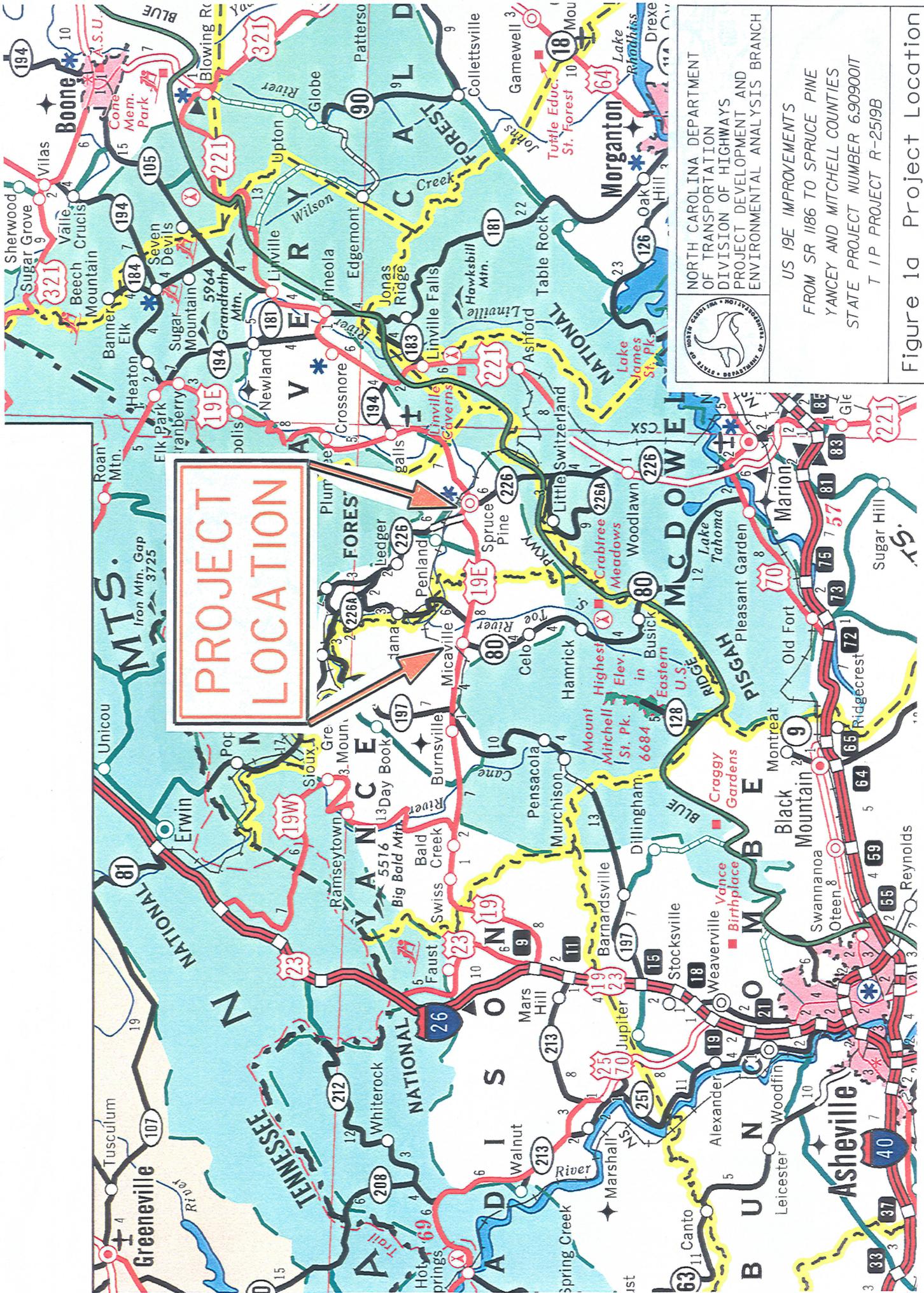
\*E - Endangered, T - Threatened, T(S/A) - Threatened due to similarity of appearance.

**Bog turtle (*Clemmys muhlenbergii*)**

**BIOLOGICAL CONCLUSION:**

**Not Applicable**

The southern population of the bog turtle is listed as Threatened due to Similarity of Appearance to the northern population; therefore, the southern population is not afforded protection under ESA §7. No habitat exists in the project area for the bog turtle, as there are no freshwater wetlands characterized by slow-moving water or ditches. In addition, freshwater wetlands characterized by marshy or boggy areas do not exist in the study area. No known occurrence of the bog turtle has been reported by the NCNHP within the project vicinity.




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 FROM SR 186 TO SPRUCE PINE  
 YANCEY AND MITCHELL COUNTIES  
 STATE PROJECT NUMBER 6.909001T  
 T I P PROJECT R-2519B

Figure 1a Project Location





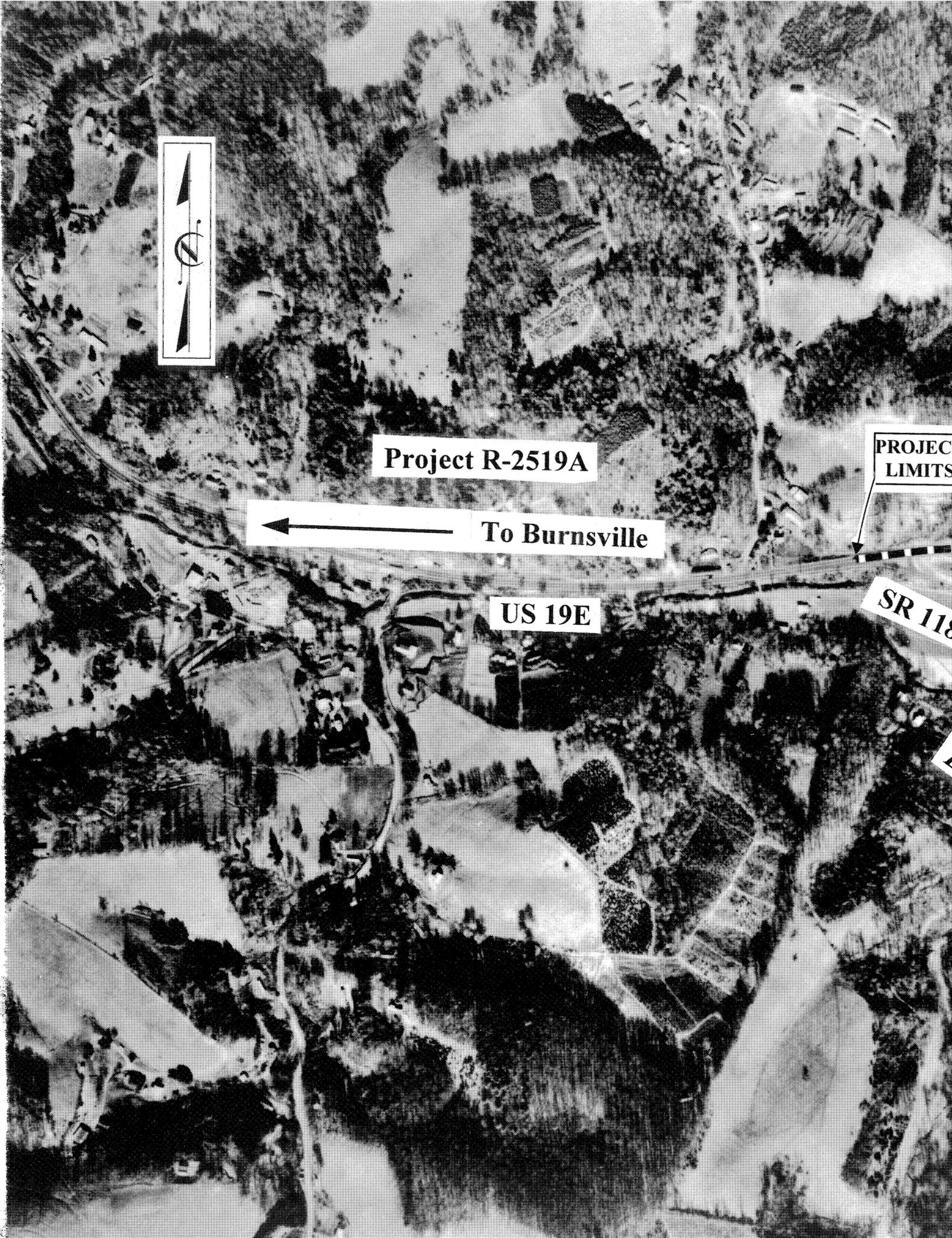
**Project R-2519A**

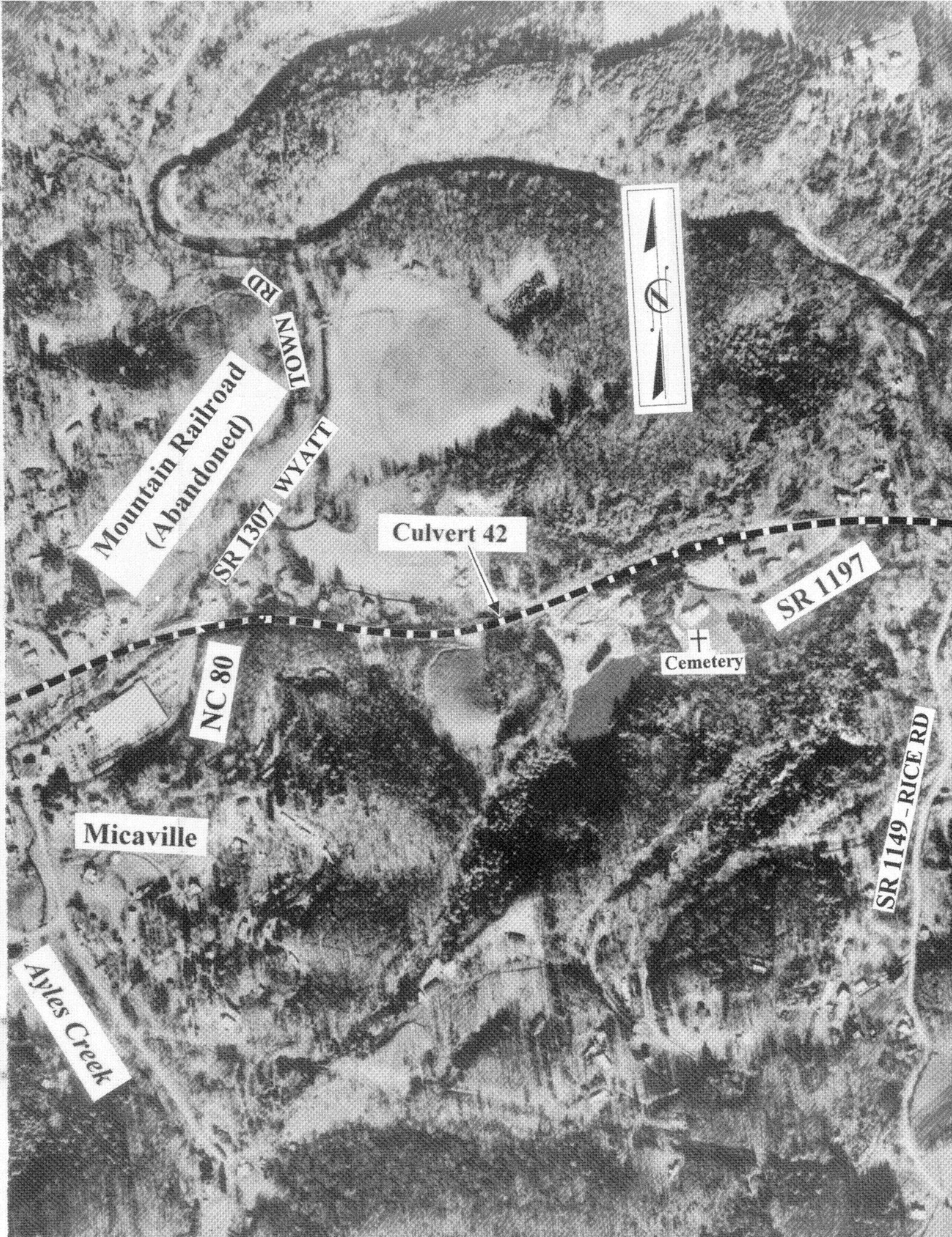
**To Burnsville**

**PROJECT  
LIMITS**

**US 19E**

**SR 118**





Mountain Railroad  
(Abandoned)

SR 1307 WYATT

Culvert 42

SR 1197

+

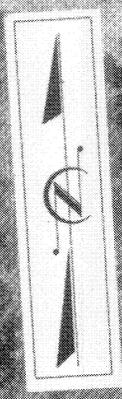
Cemetery

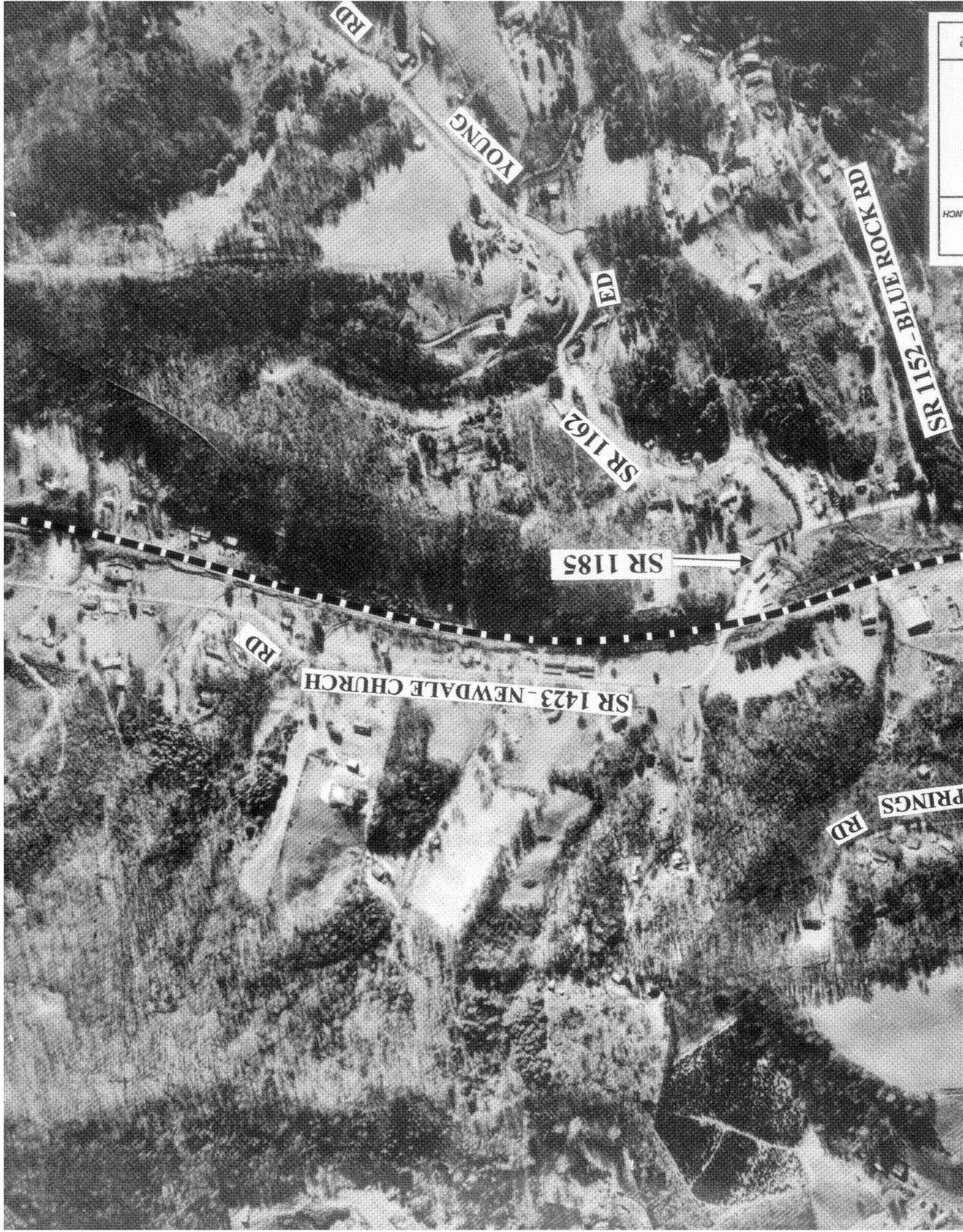
NC 80

Micaville

Ayles Creek

SR 1149 - RICE RD





RD

YOUNG

ED

SR 1162

SR 1185

SR 1423-NEWDALE CHURCH

RD

RD

PRINGS

SR 1152-BLUE ROCK RD

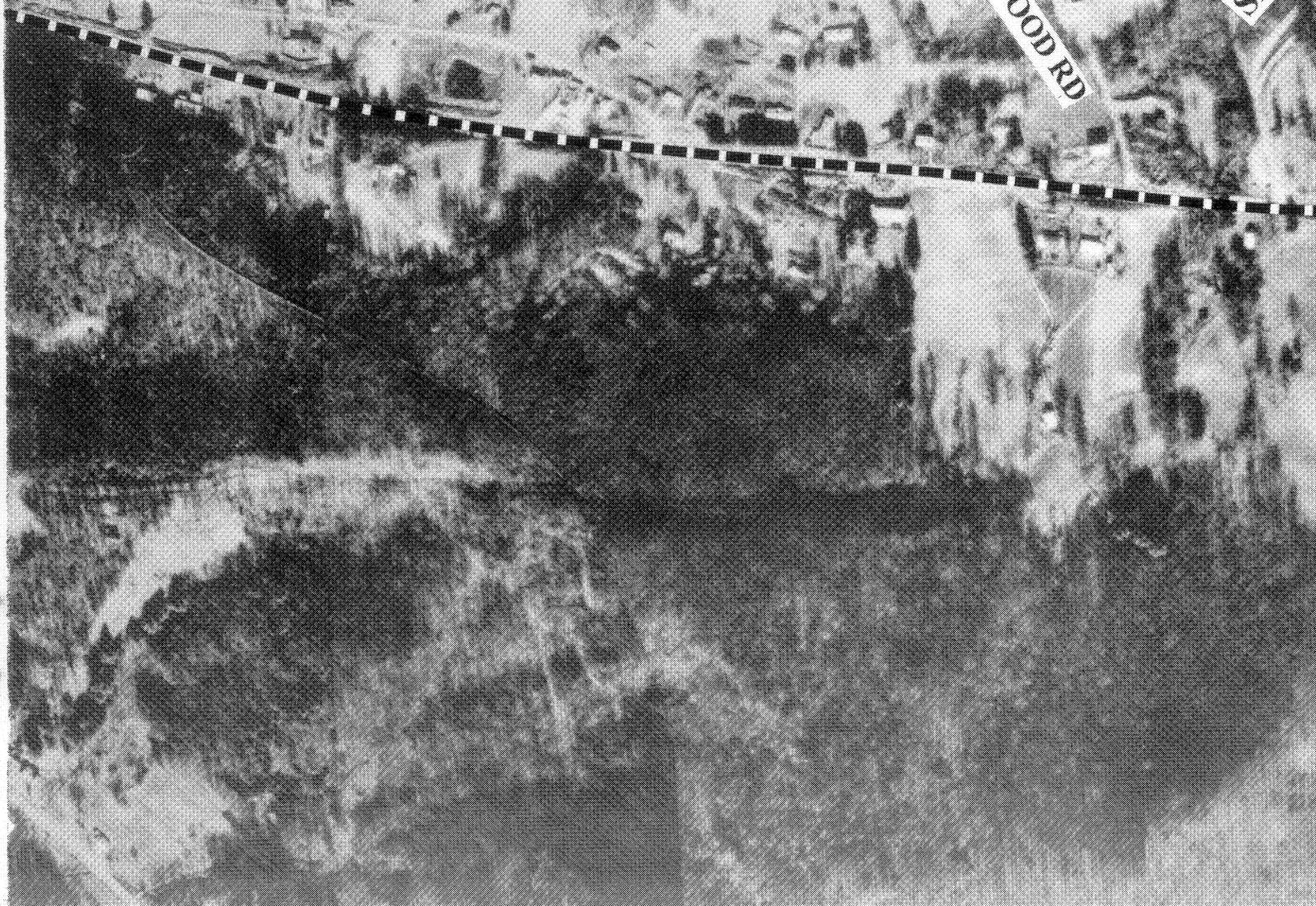



CH

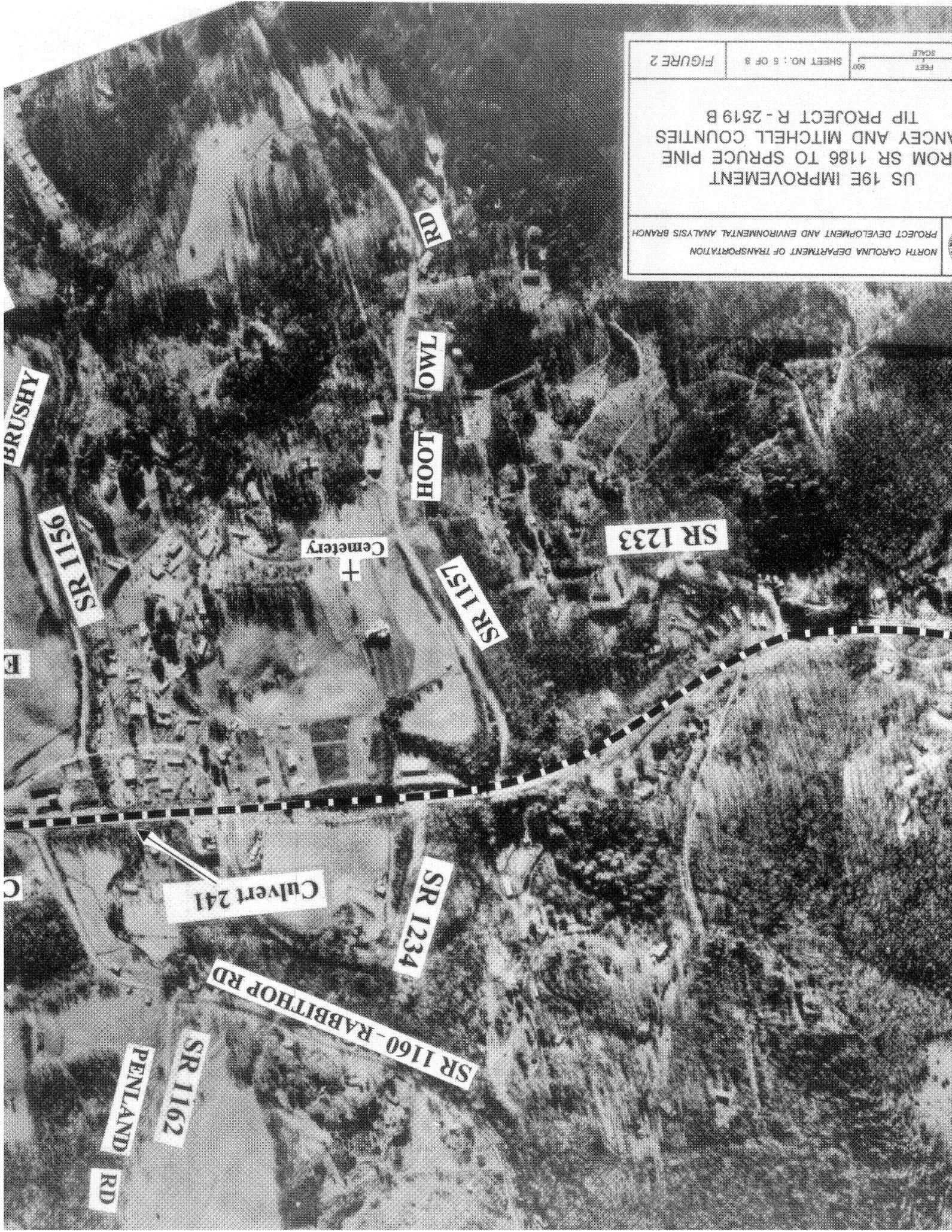
RD

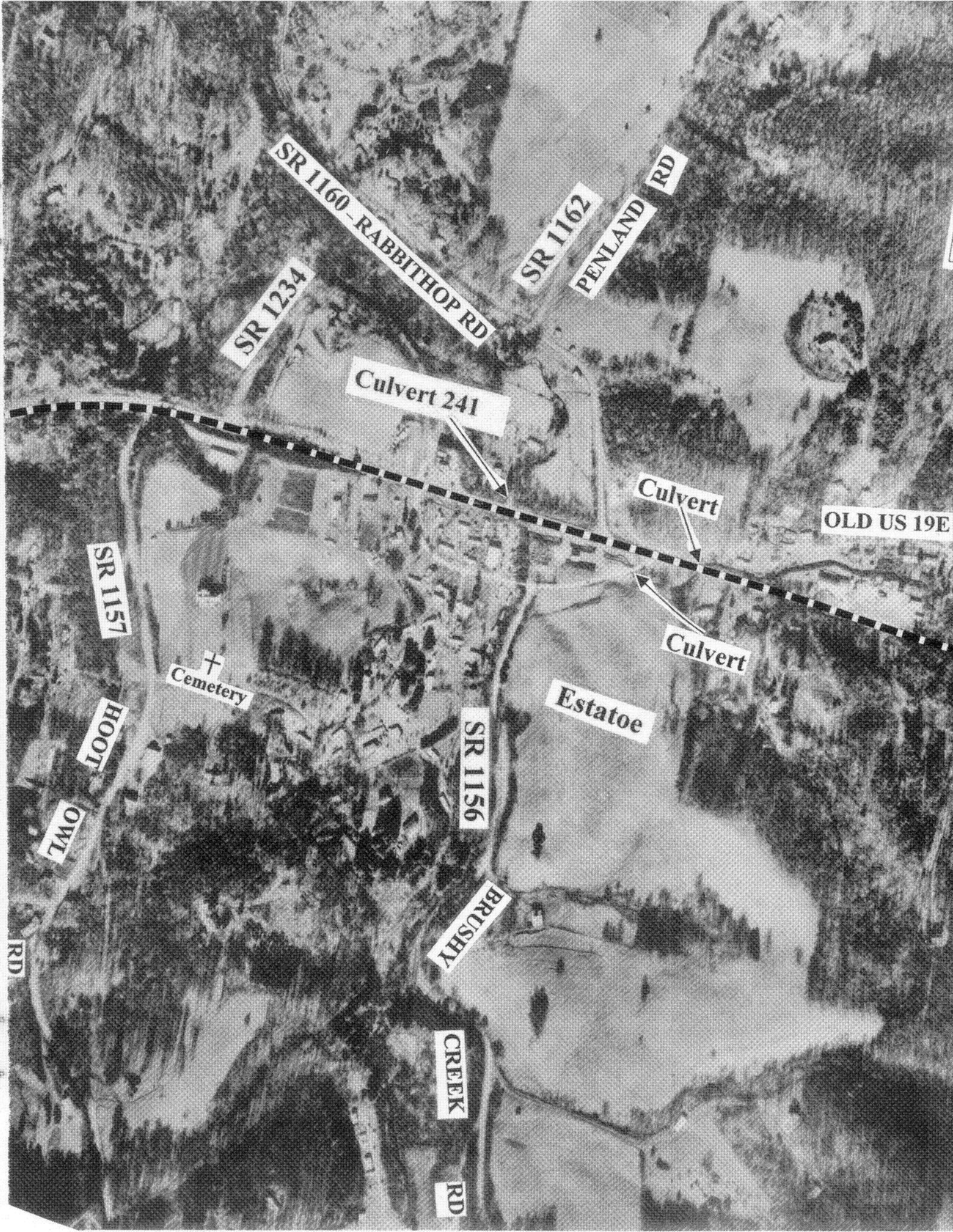
SR 1433 - BOXWOOD RD

SR 1300



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH	US 19E IMPROVEMENT FROM SR 1186 TO SPRUCE PINE VANCEY AND MITCHELL COUNTIES TIP PROJECT R-2519 B	FEET SCALE 500
	SHEET NO.: 6 OF 8	FIGURE 2





SR 1160-RABBITHOP RD

SR 1162  
PENLAND RD

SR 1234

Culvert 241

Culvert

OLD US 19E

SR 1157

+  
Cemetery

Culvert

Estatoe

HOOT RD

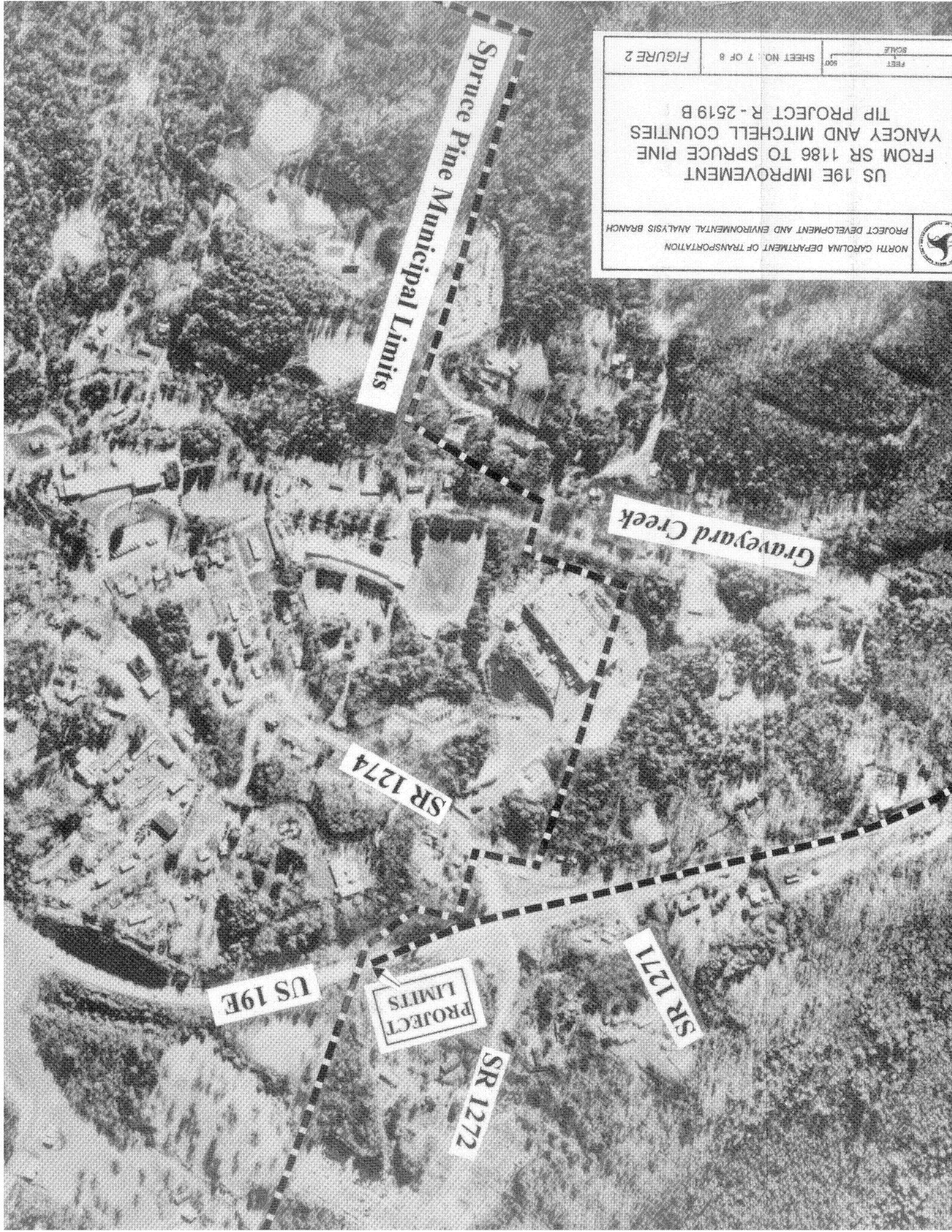
SR 1156

OWL RD

BRUSHY RD

CREEK RD

RD



Spruce Pine Municipal Limits

Graveyard Creek

SR 1274

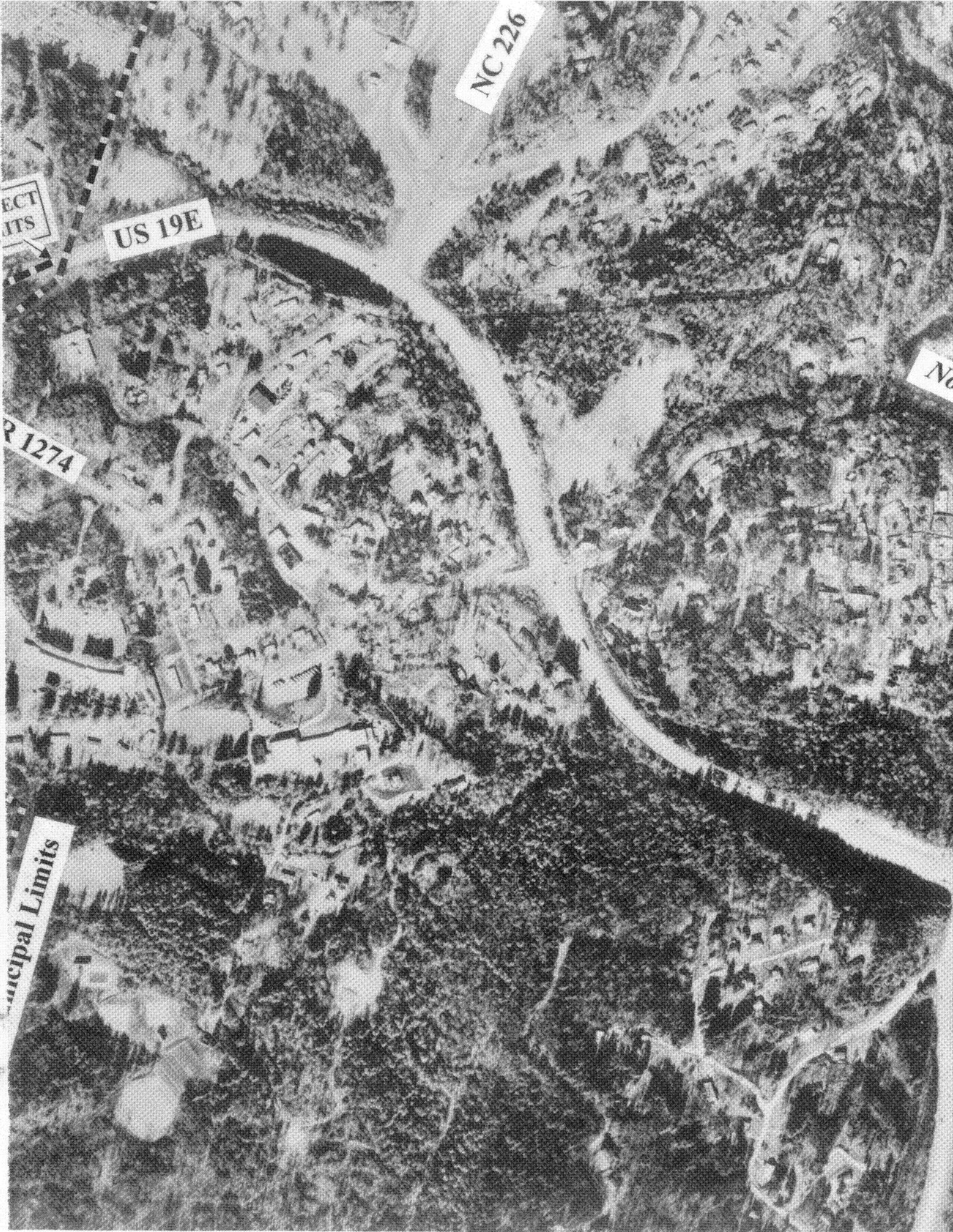
SR 1271

SR 1272

US 19E

PROJECT LIMITS

FIGURE 2	SHEET NO. 7 OF 8	SCALE 0 500 FEET
US 19E IMPROVEMENT FROM SR 1186 TO SPRUCE PINE YANCEY AND MITCHELL COUNTIES TIP PROJECT R - 2519 B		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH		



NC 226

US 19E

JECT ITS

R 1274

Principal Limits

NC





H 50 MPH

H 45 MPH

H 47 MPH

V 46 MPH

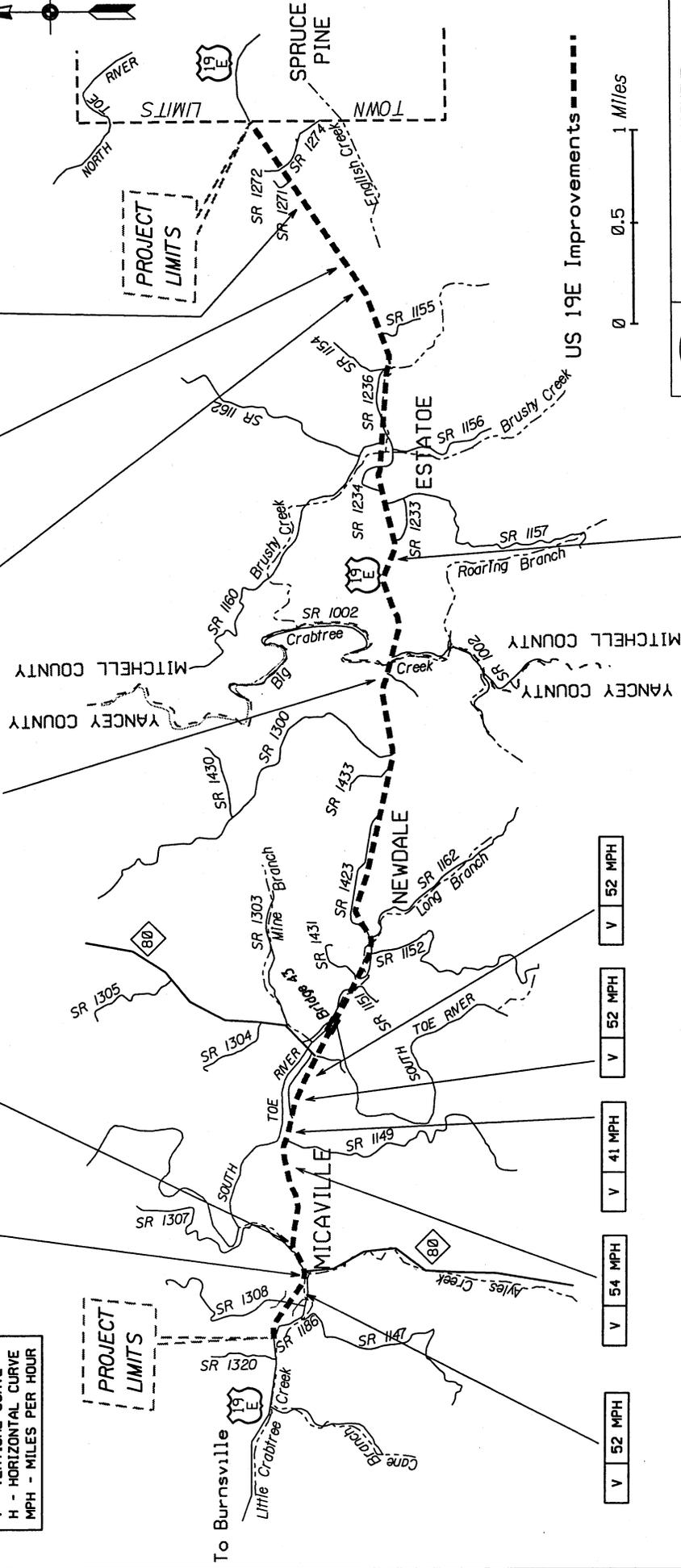
H 52 MPH

H 52 MPH

V 52 MPH

**LEGEND**  
 V - VERTICAL CURVE  
 H - HORIZONTAL CURVE  
 MPH - MILES PER HOUR

PROJECT LIMITS



US 19E Improvements



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Figure 4 Roadway Deficiencies

V 52 MPH

V 52 MPH

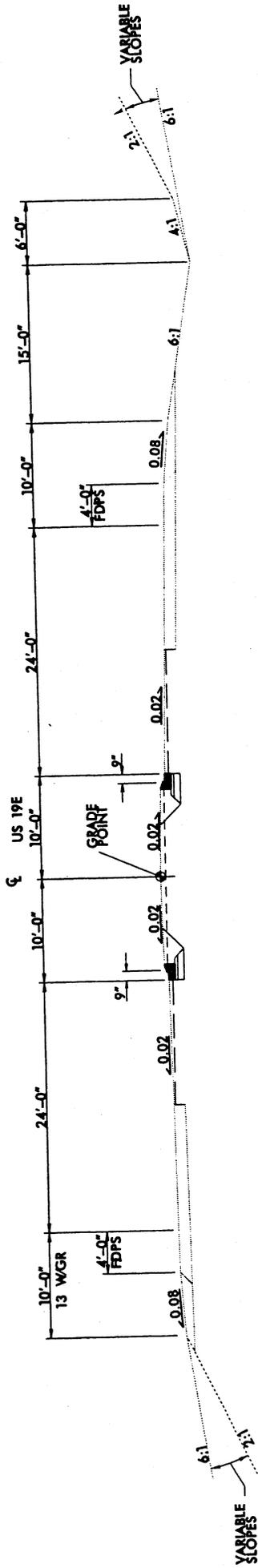
V 41 MPH

V 54 MPH

V 52 MPH

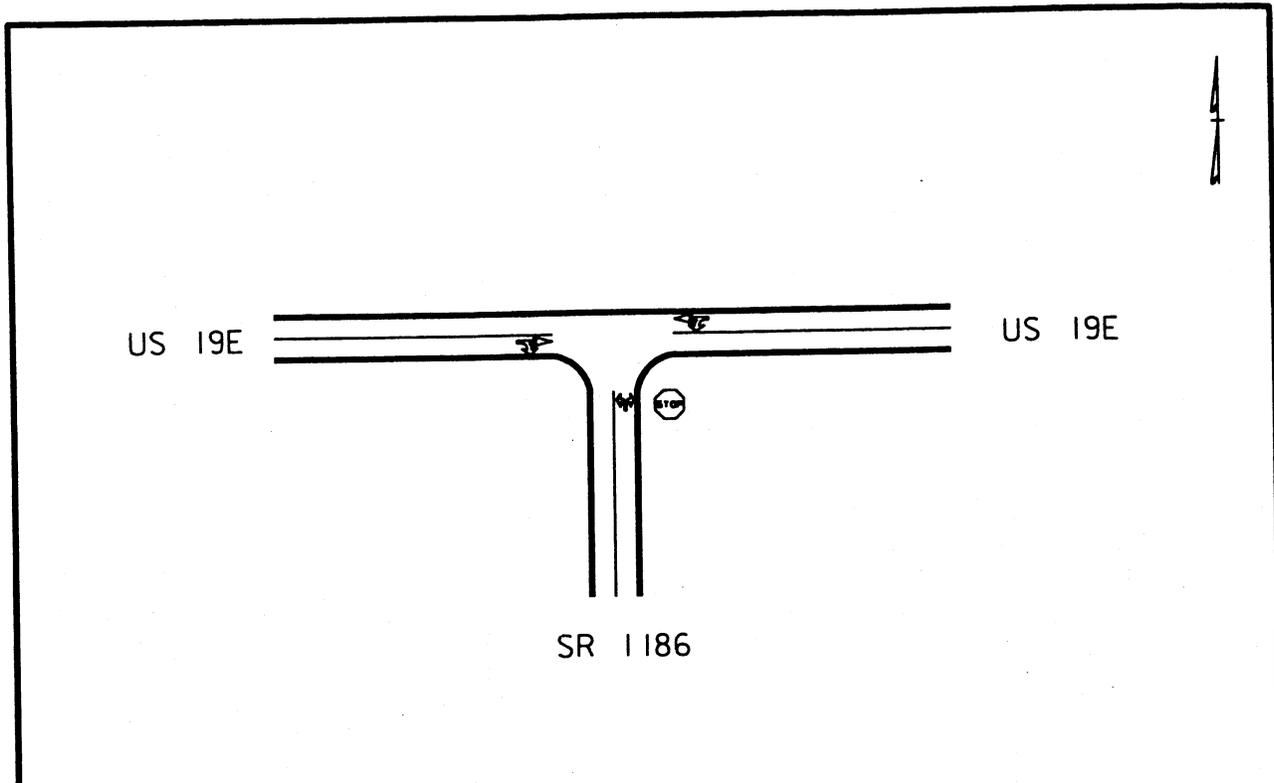
# US 19E IMPROVEMENTS

R-25I9B



# PROPOSED 4 - LANE DIVIDED (RAISED GRASS MEDIAN) SHOULDER SECTION

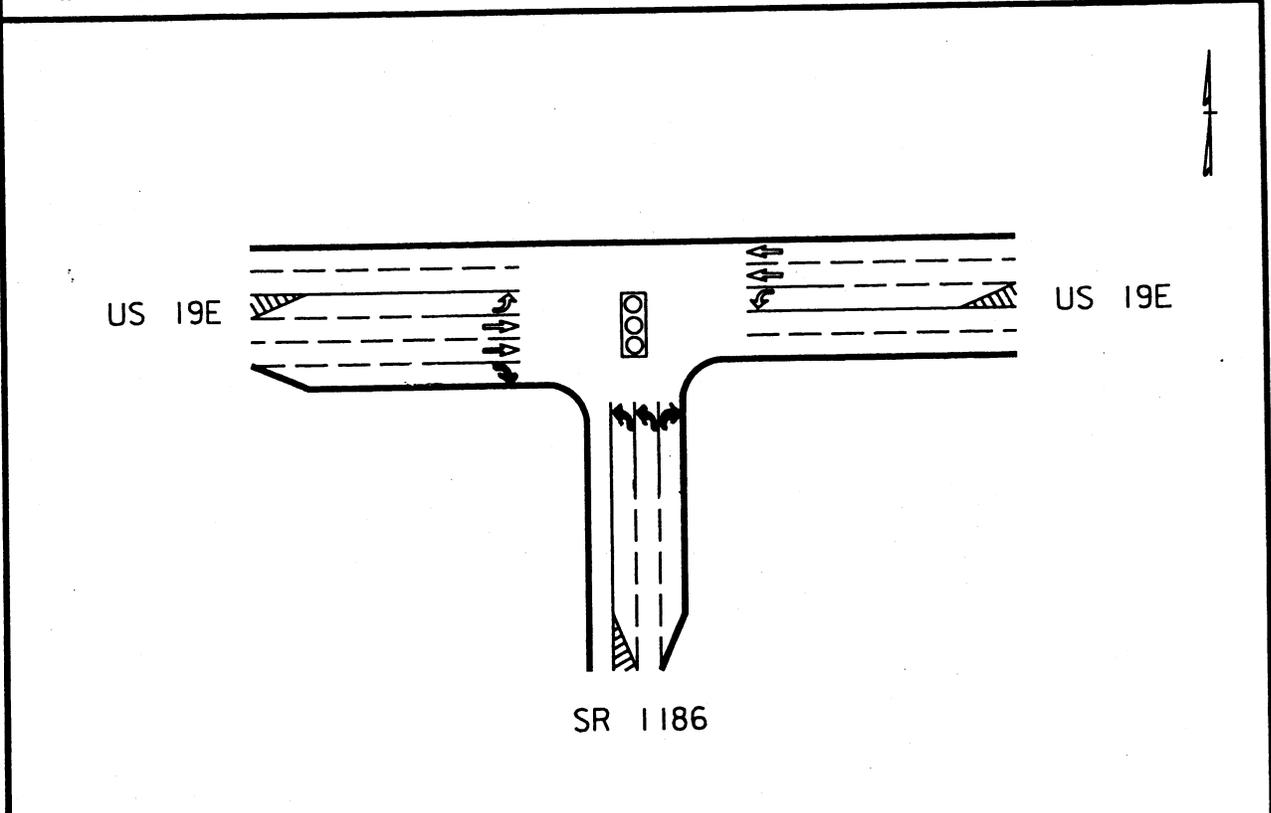
Figure 5 Typical Section



**Figure 6a: Existing Geometry for the Intersection of US 19 and SR 1186.**

R-25 19B

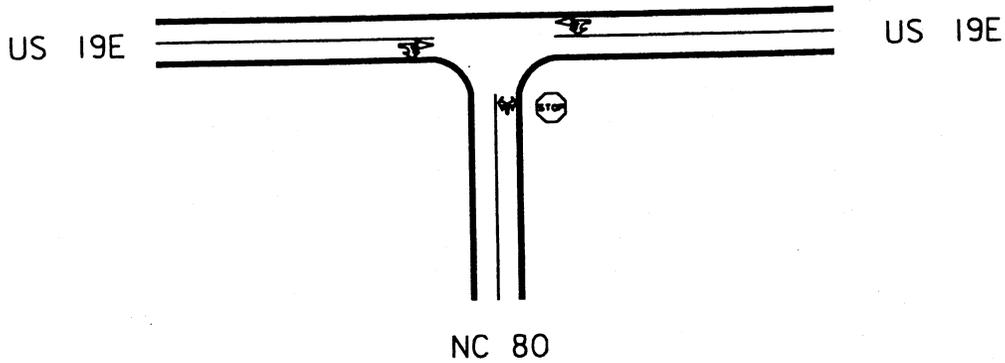
NOT TO SCALE



**Figure 6b: Proposed Geometry for the Intersection of US 19 and SR 1186.**

R-25 19B

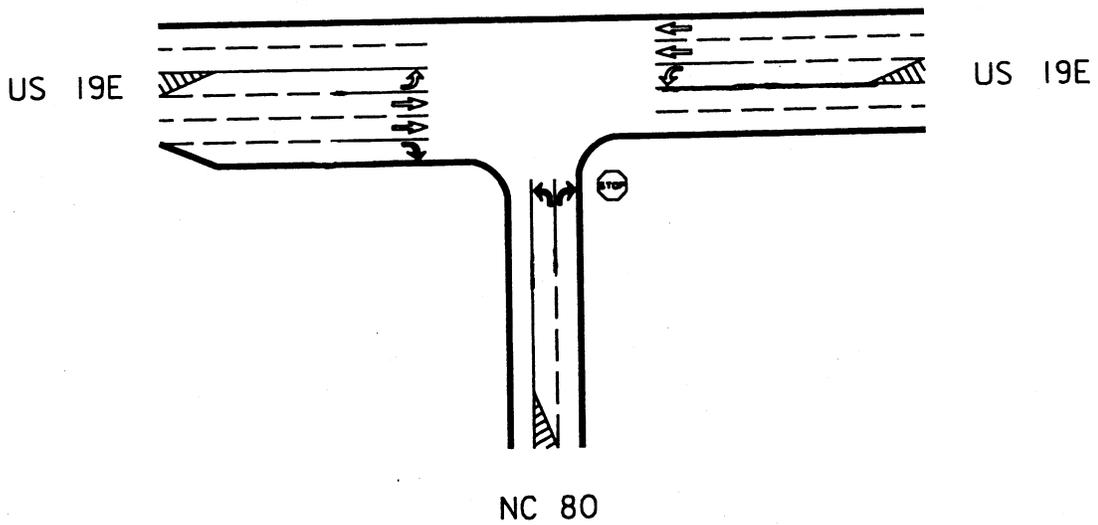
NOT TO SCALE



**Figure 6c: Existing Geometry for the Intersection of US 19 and NC 80.**

R-25 19B

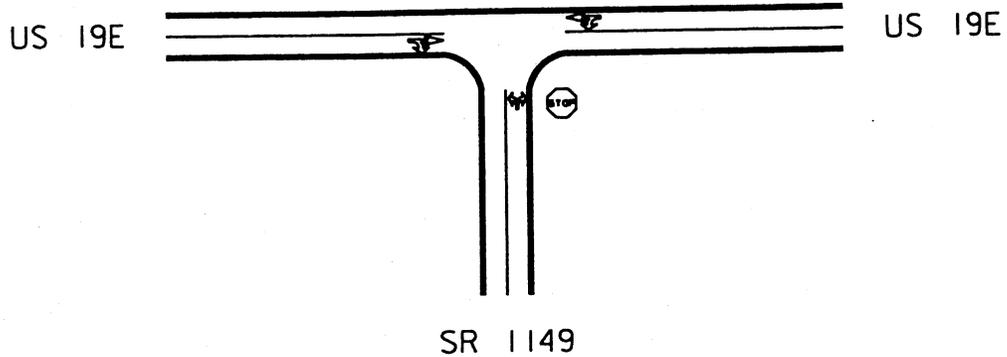
NOT TO SCALE



**Figure 6d: Proposed Geometry for the Intersection of US 19 and NC 80.**

R-25 19B

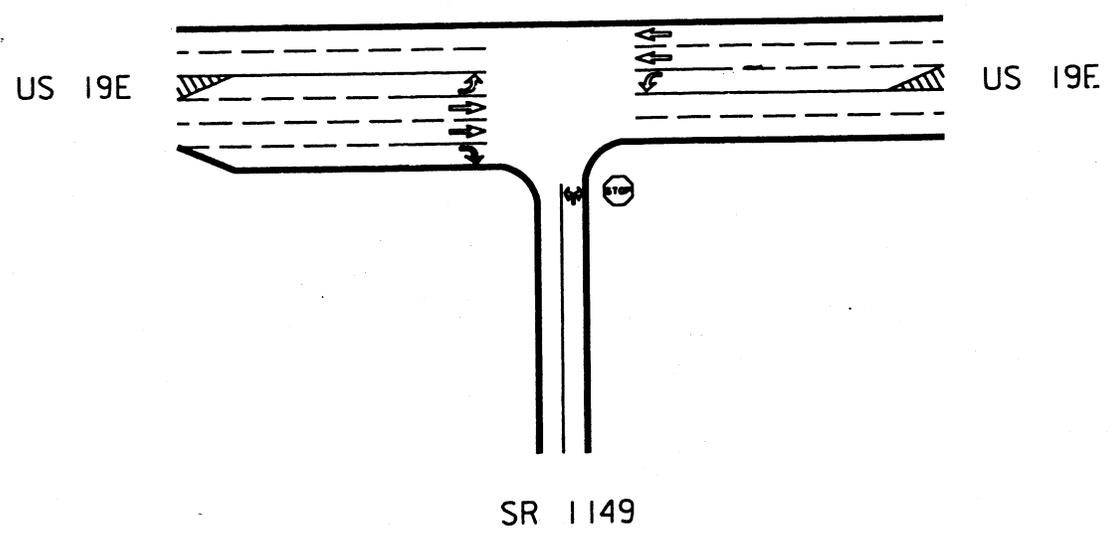
NOT TO SCALE



**Figure 6e: Existing Geometry for the Intersection of US 19 and SR 1149.**

R-25 19B

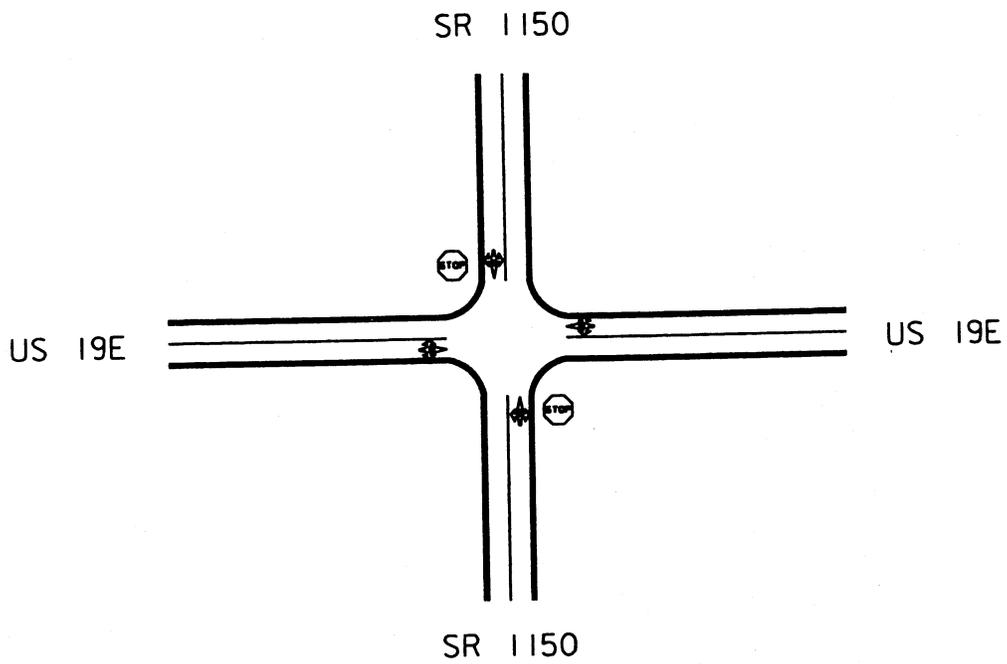
NOT TO SCALE



**Figure 6f: Proposed Geometry for the Intersection of US 19 and SR 1149.**

R-25 19B

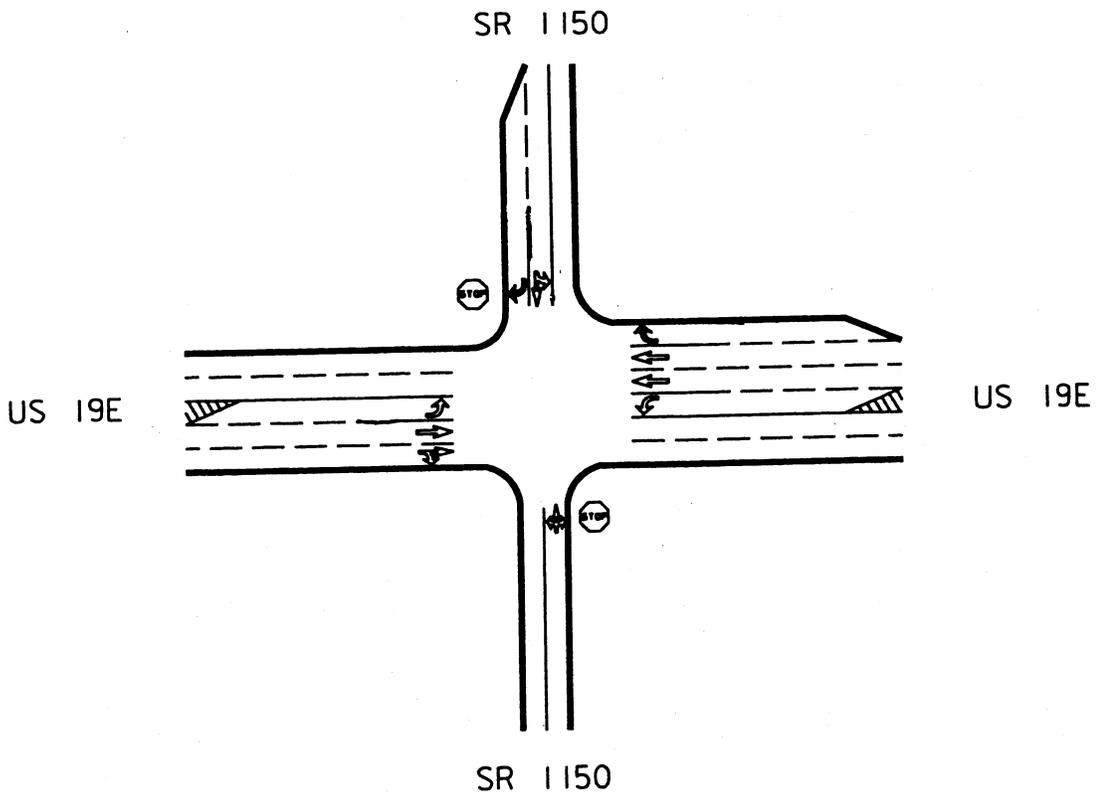
NOT TO SCALE



**Figure 6g: Existing Geometry for the Intersection of US 19 and SR 1150.**

R-25 19B

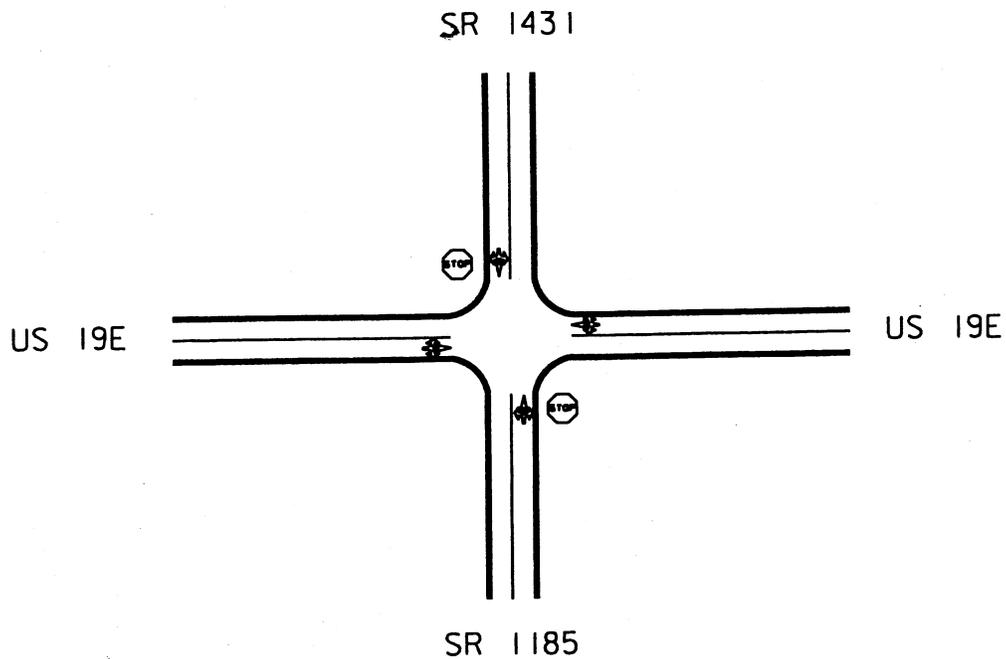
NOT TO SCALE



**Figure 6h: Proposed Geometry for the Intersection of US 19 and SR 1150.**

R-25 19B

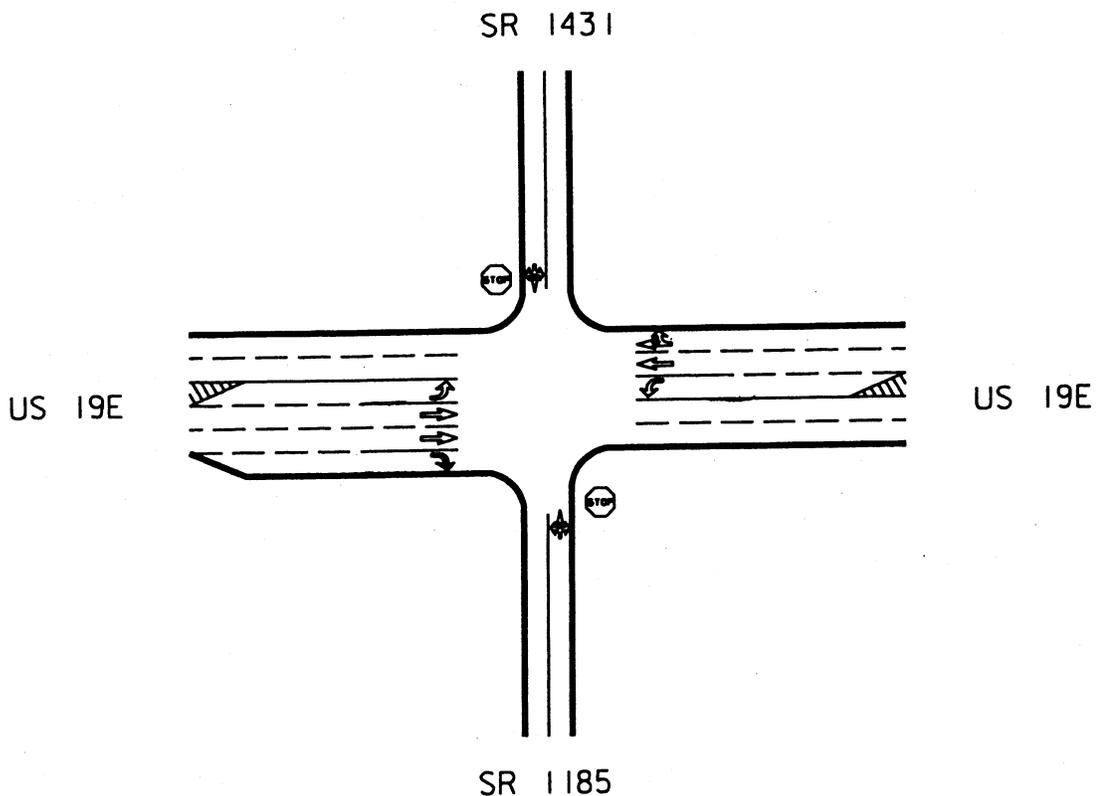
NOT TO SCALE



**Figure 6i:** Existing Geometry for the Intersection of US 19 and SR 1431/SR 1185.

R-25 19B

NOT TO SCALE



**Figure 6j:** Proposed Geometry for the Intersection of US 19 and SR 1431/SR 1185.

R-25 19B

NOT TO SCALE

NCDOT were available at the workshop to discuss the project with citizens and local officials. Approximately 43 people attended the workshop.

**C. Agency Coordination**

A National Environmental Polity Act (NEPA) / 404 Merger Team was established for the project to improve environmental protection and the regulatory process. The merger team consists of representatives from the following state and federal agencies:

- US Army Corps of Engineers
- US Fish and Wildlife Service
- US Environmental Protection Agency
- Tennessee Valley Authority
- NCDENR-Division of Water Quality/Wetlands
- NC Wildlife Resources Commission
- NC Department of Cultural Resources

Merger team meetings were held to discuss and agree on the project purpose and need, alternatives under consideration, and to review the impacts associated with the alternates under consideration. The merger team concurs with the location and typical section of the Best Fit Alternate.

Concurrence Point 1 (Purpose and Need):	Concurrence on 8/20/03
Concurrence Point 2 (Alternatives):	Concurrence on 9/15/04

**D. Public Hearing**

A public hearing will be held for this project following the circulation of this document. At the hearing, more detailed information about the proposed improvements will be available for the public. The public will be invited to make comments or voice concerns regarding the proposed action. A final decision with regard to a preferred alternative will not be made until all public hearing comments are fully evaluated.

# FIGURES

**Figure 1a..... Project Location**

**Figure 1b .... Project Vicinity**

**Figure 2 ..... Project Aerial**

**Figure 3 ..... Level of Service**

**Figure 4 ..... Roadway Deficiencies**

**Figure 5 ..... Typical Section**

**Figure 6 ..... Lane Configurations**

**Figure 7 ..... Wetlands and Streams**

**Figure 8 ..... Potentially Contaminated Sites**



























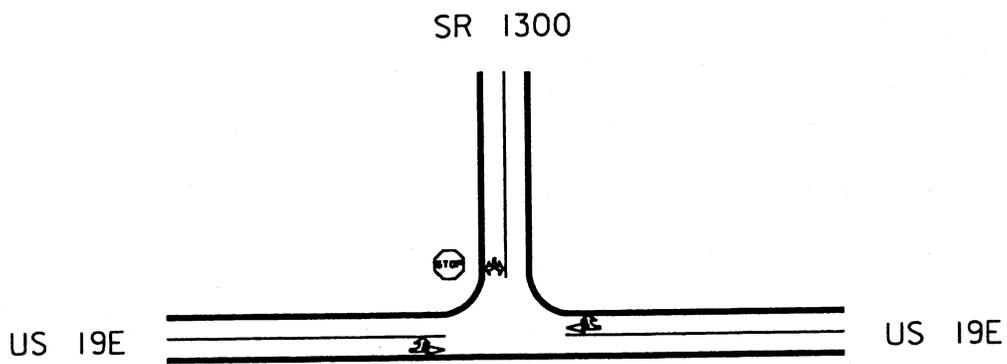








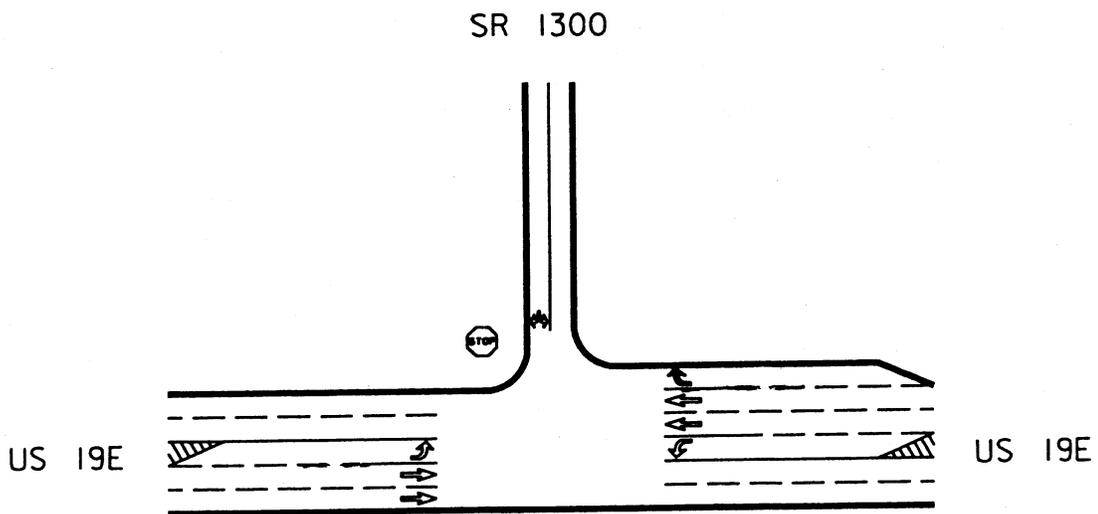




**Figure 6k: Existing Geometry for the Intersection of US 19 and SR 1300.**

R-25 19B

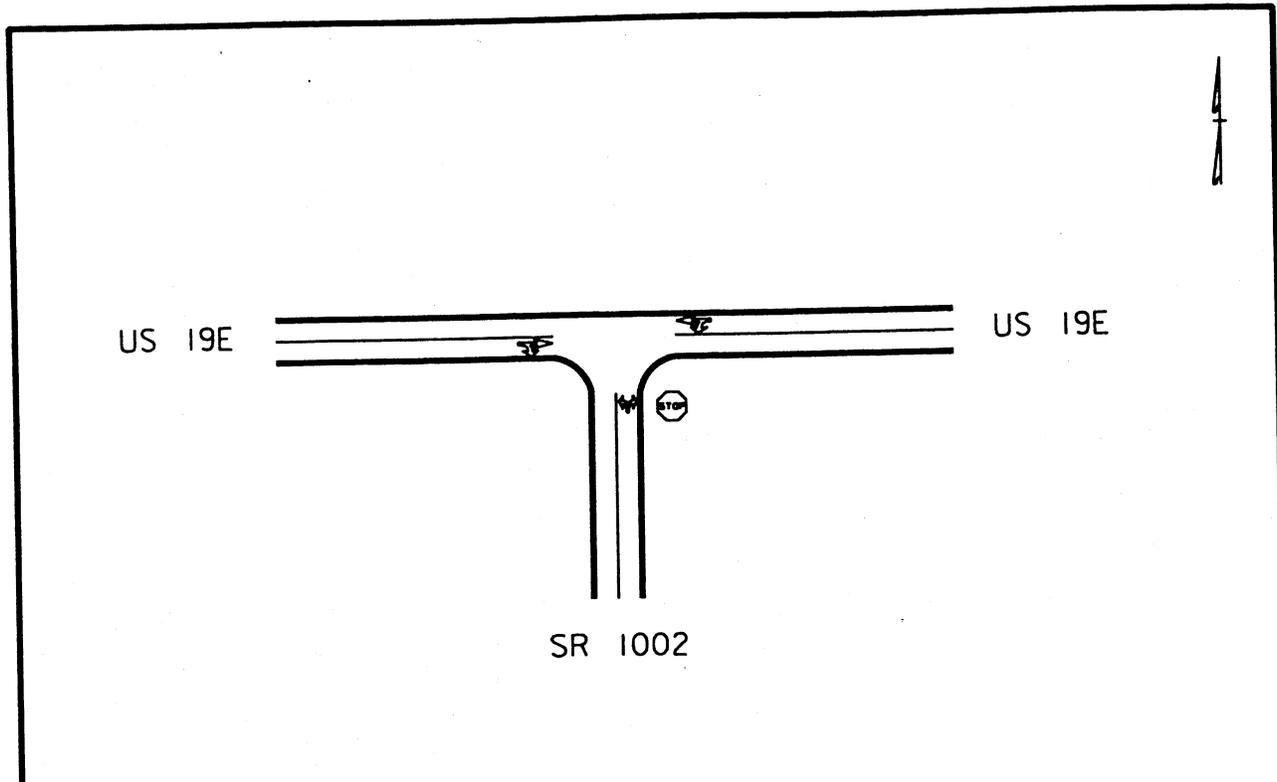
NOT TO SCALE



**Figure 6l: Proposed Geometry for the Intersection of US 19 and SR 1300.**

R-25 19B

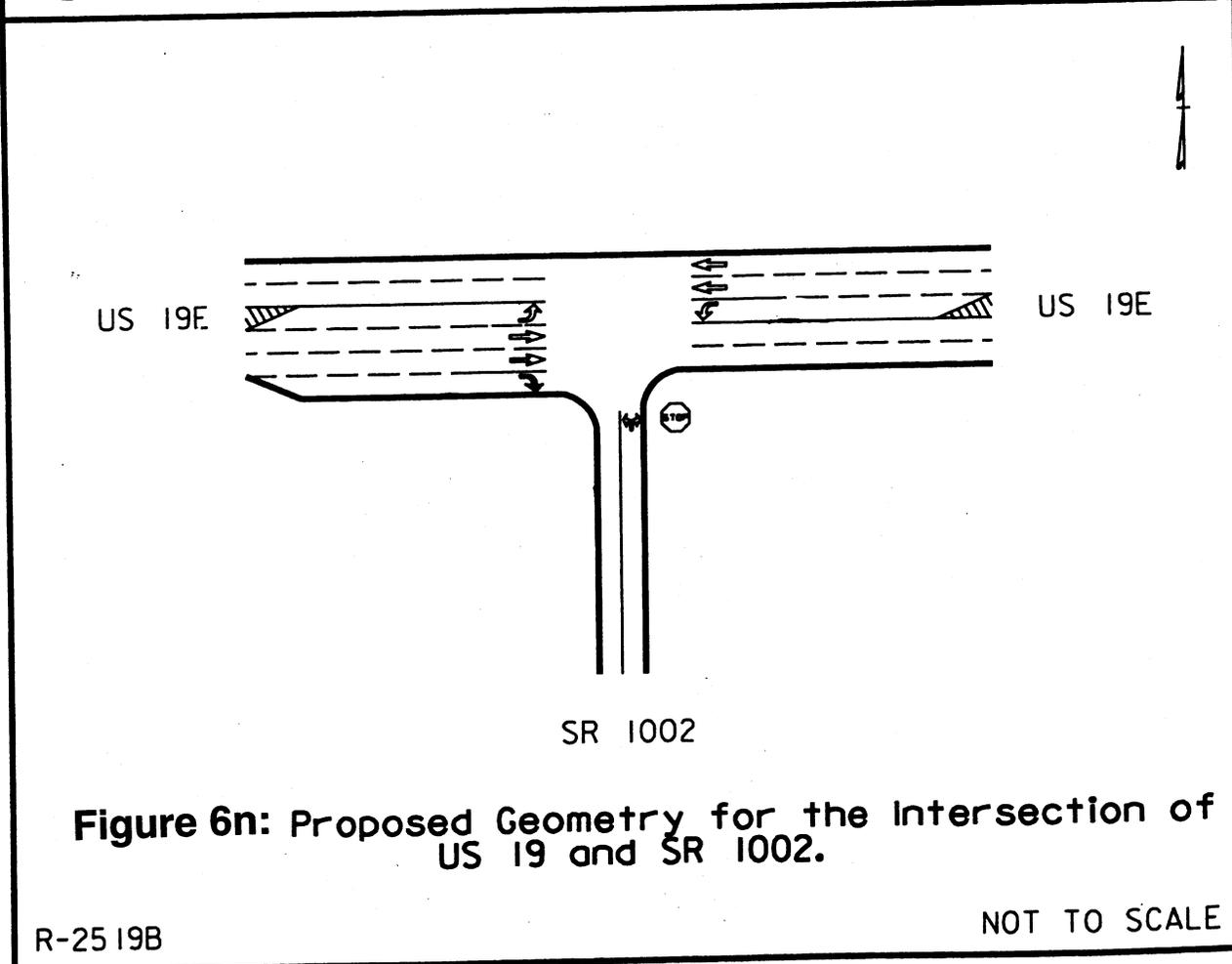
NOT TO SCALE



**Figure 6m: Existing Geometry for the Intersection of US 19 and SR 1002.**

R-25 19B

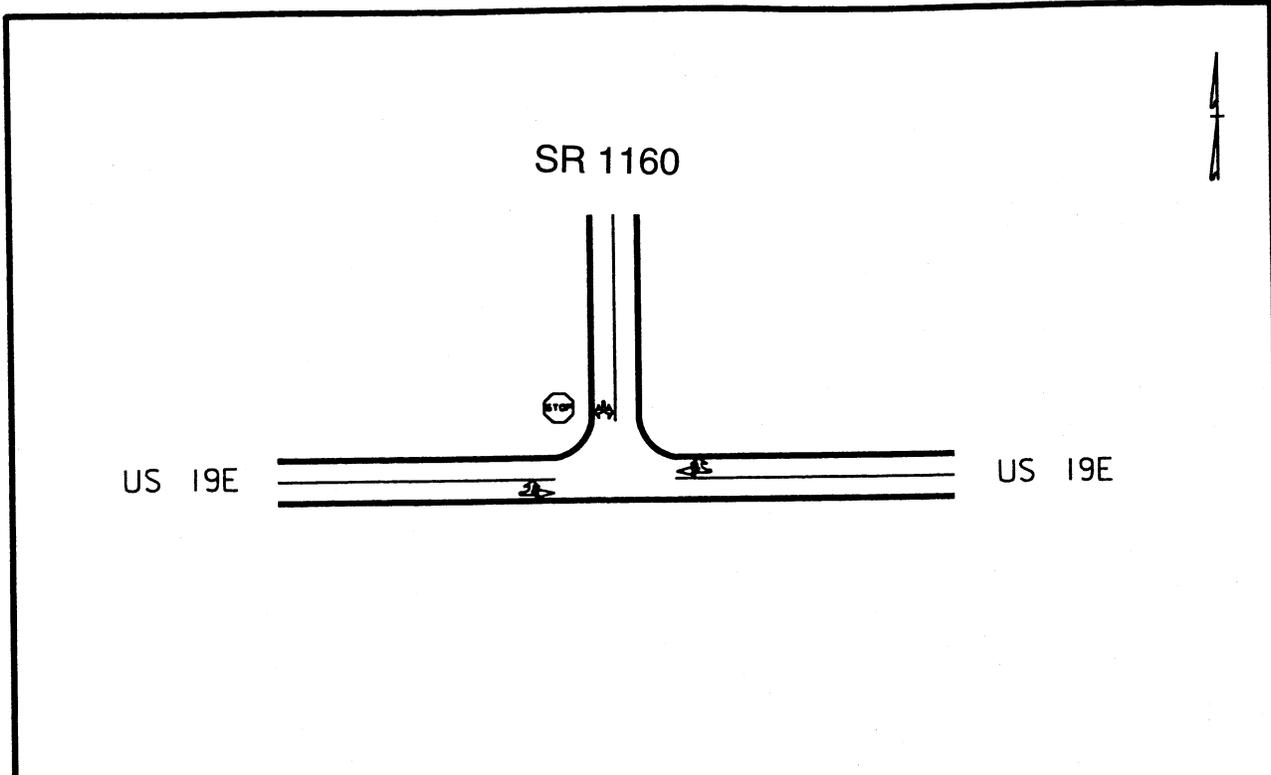
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**Figure 6n: Proposed Geometry for the Intersection of US 19 and SR 1002.**

R-25 19B

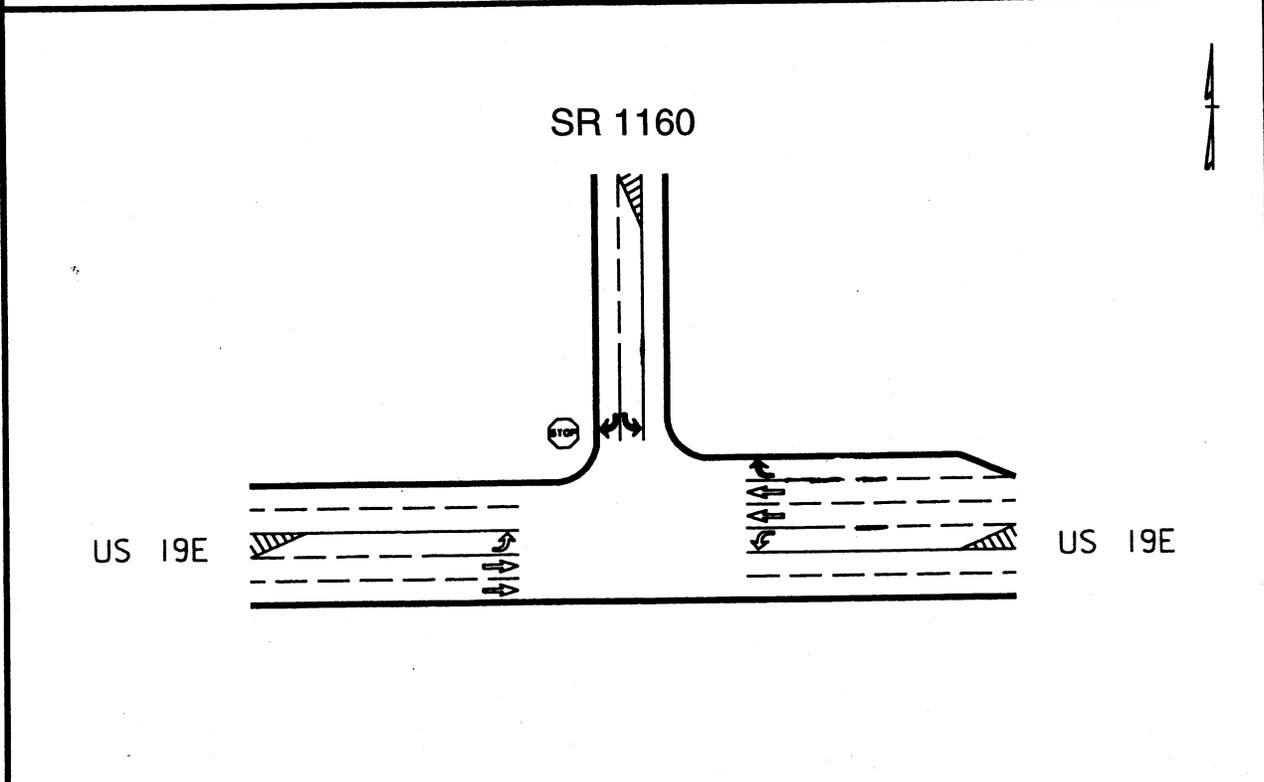
NOT TO SCALE



**Figure 6o:** Existing Geometry for the Intersection of US 19 and SR 1160.

R-25 19B

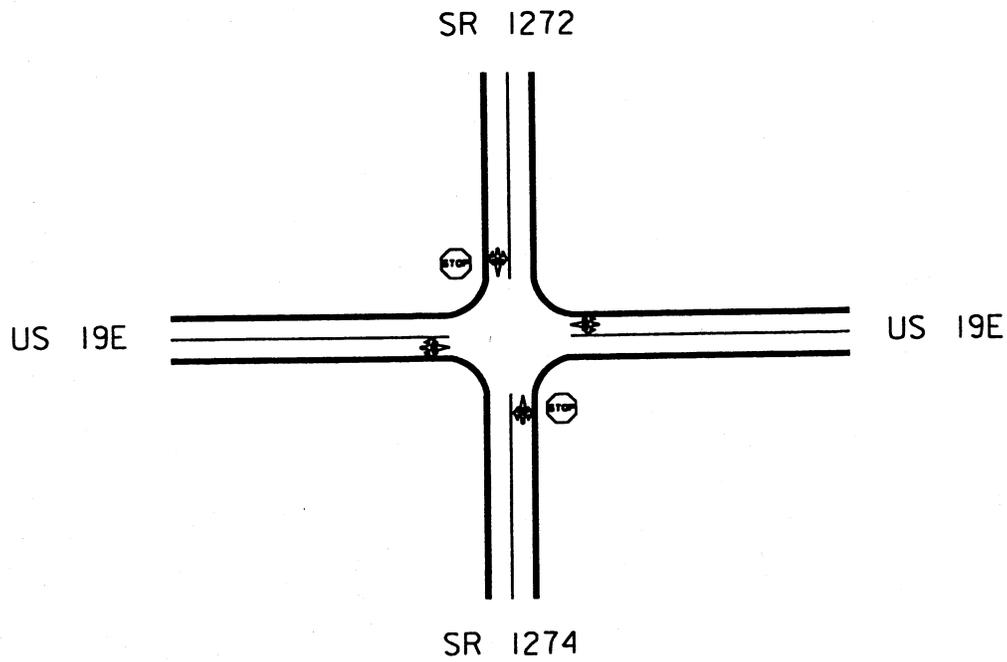
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**Figure 6p:** Proposed Geometry for the Intersection of US 19 and SR 1160.

R-25 19B

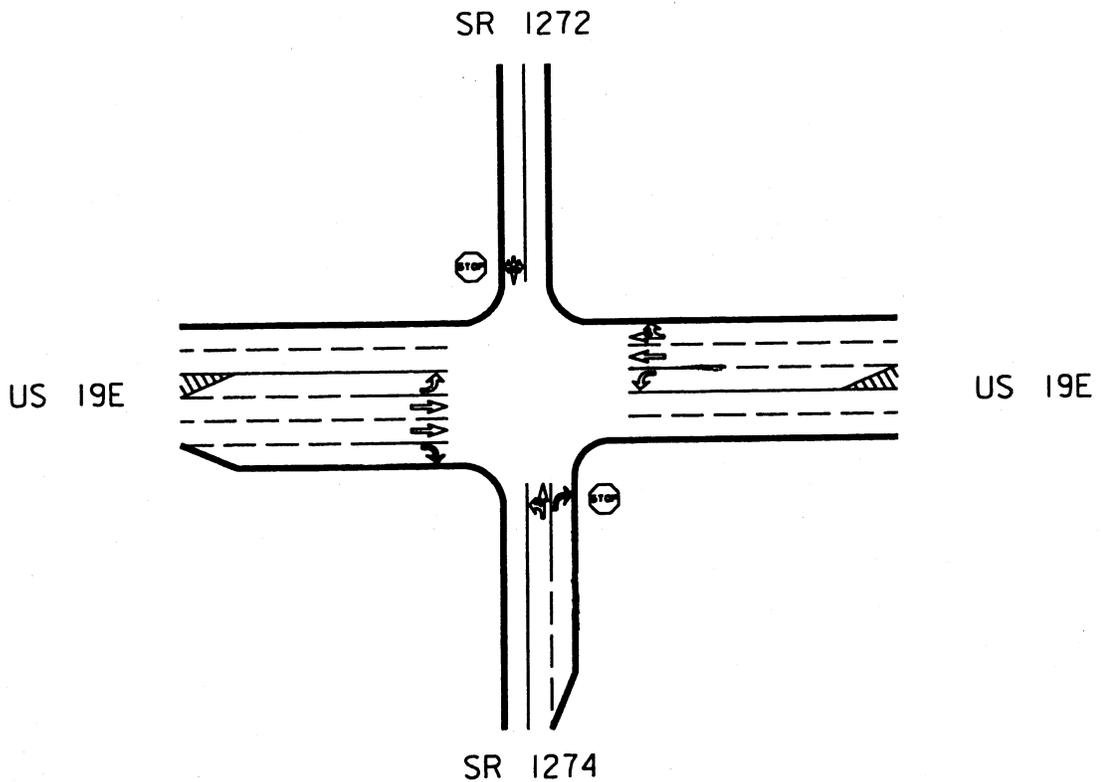
NOT TO SCALE



**Figure 6q: Existing Geometry for the Intersection of US 19 and SR 1272/SR 1274.**

R-25 19B

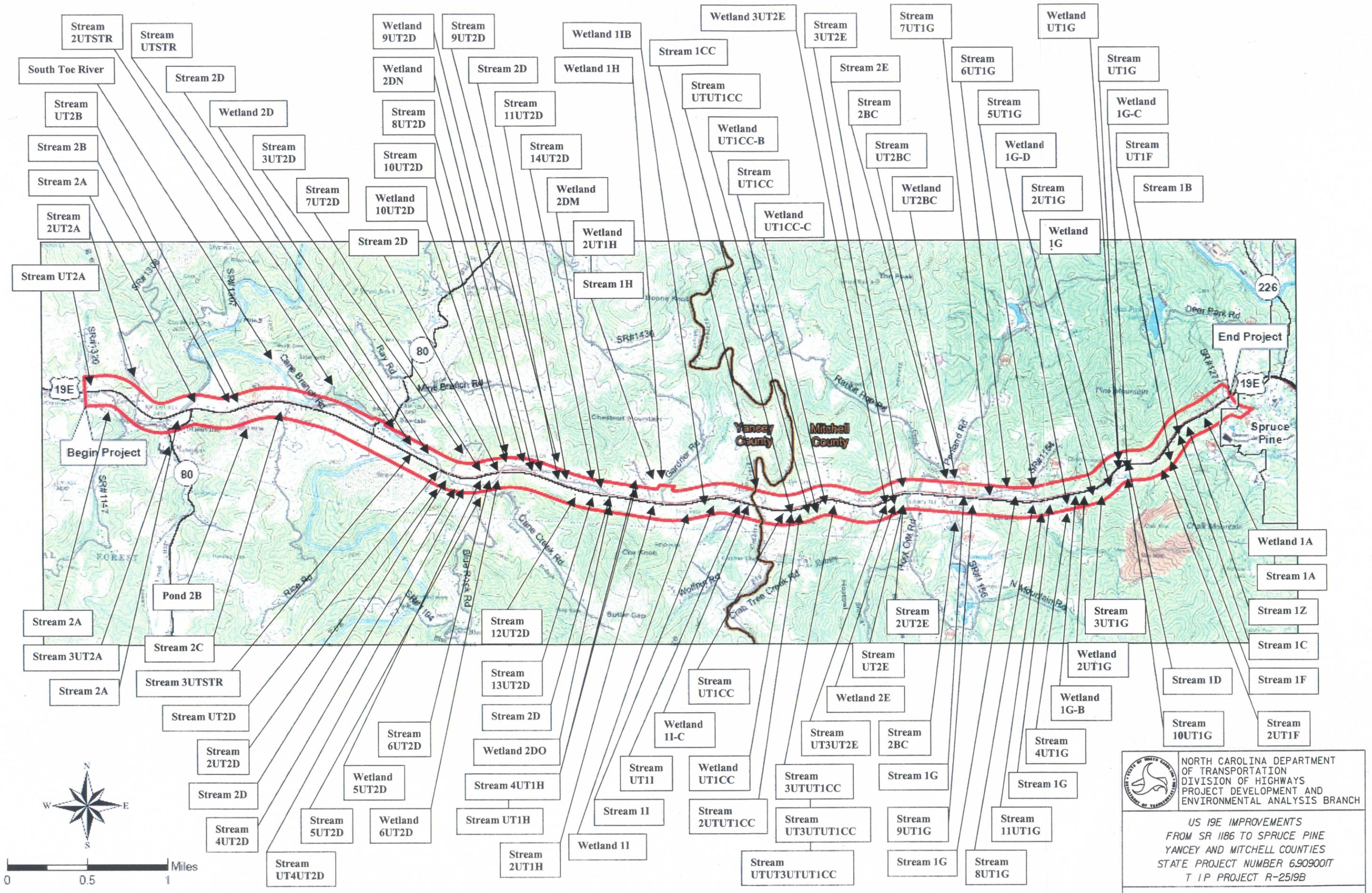
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**Figure 6r: Proposed Geometry for the Intersection of US 19 and SR 1272/SR 1274.**

R-25 19B

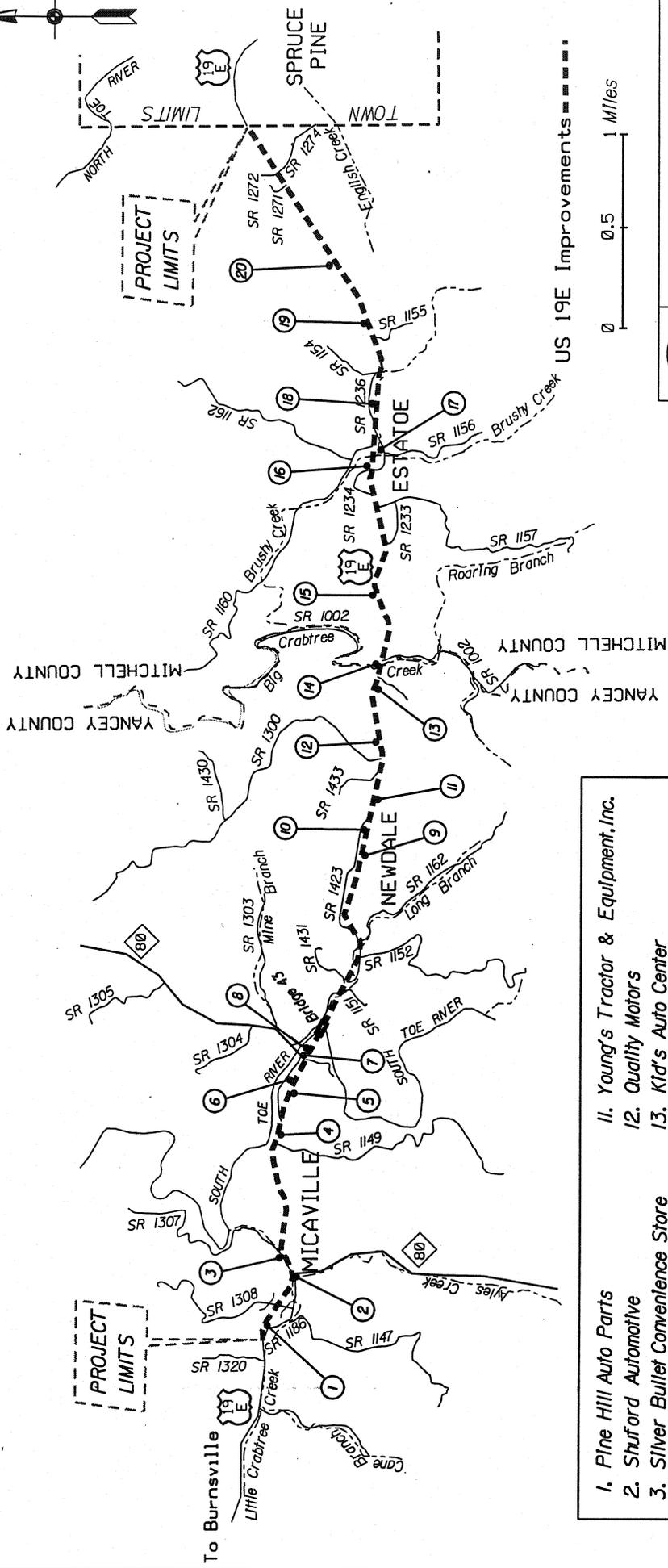
NOT TO SCALE




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 YANCEY AND MITCHELL COUNTIES  
 STATE PROJECT NUMBER 6.90900IT  
 T I P PROJECT R-2519B

Figure 7 Wetlands and Streams



US 19E Improvements

- |                                    |                                       |
|------------------------------------|---------------------------------------|
| 1. Pine Hill Auto Parts            | 11. Young's Tractor & Equipment, Inc. |
| 2. Shuford Automotive              | 12. Quality Motors                    |
| 3. Silver Bullet Convenience Store | 13. Kid's Auto Center                 |
| 4. Robinson Automotive             | 14. Mountain Traders                  |
| 5. Ledford Tire & Trucking, Inc.   | 15. Former Ridgeway Carwash           |
| 6. Precision Auto Body             | 16. Timber Ridge Log Homes            |
| 7. Crabtree Valley Truck Parts     | 17. Excel Mart #312 (Texaco)          |
| 8. Wilson General Store            | 18. Former Gas Station                |
| 9. Newdale Chevron                 | 19. Murphy's Auto Center              |
| 10. Former Newdale Grocery         | 20. Hill's Quick Stop (Amoco)         |



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YANCEY AND MITCHELL COUNTIES  
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FIGURE 8 Potentially Contaminated Sites

# APPENDIX 1

NCDOT Relocation Reports and  
Relocation Assistance Program

# EIS RELOCATION REPORT

North Carolina Department of Transportation  
RELOCATION ASSISTANCE PROGRAM

E.I.S.       CORRIDOR       DESIGN

WBS:		COUNTY	Yancey/Mitchell	Alternate	2	of	3	Alternate
I.D. NO.:	R-2519 B	F.A. PROJECT	State Project: 6.909001T					
DESCRIPTION OF PROJECT:	US 19E Improvement Project from SR 1186 in Micaville to the multilane section West of Spruce Pine in Yancey and Mitchell Counties							

ESTIMATED DISPLACED					INCOME LEVEL								
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP				
Residential	62	13	75	3	0	10	36	26	3				
Businesses	22	4	26	0	VALUE OF DWELLING				DSS DWELLING AVAILABLE				
Farms	0	0	0	0	Owners		Tenants		For Sale		For Rent		
Non-Profit	4	1	5	0	0-20M	0	\$ 0-150	0	0-20M	1	\$ 0-150	0	
					20-40M	16	150-250	0	20-40M	37	150-250	4	
					40-70M	24	250-400	13	40-70M	46	250-400	22	
					70-100M	14	400-600	0	70-100M	58	400-600	7	
					100 UP	8	600 UP	0	100 UP	17	600 UP	4	
					<b>TOTAL</b>	<b>62</b>		<b>13</b>		<b>125</b>		<b>37</b>	

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
X		2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
	X	6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
X		8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? <b>18-24 mos</b>

REMARKS (Respond by Number)							
2. See Attachment							
3. Yancey/Mitchell Counties have numerous small businesses which are not impacted or minimally impacted by this project.							
4. See Attachment							
8. Last resort housing will be required because there are numerous houses/mobile homes that are old and in poor shape. It also appears that several relocatees may be somewhat low income.							
11. Public housing is available with the Housing Authority in both Yancey and Mitchell Counties.							
12. After reviewing the MLS, talking with realtors in the area, and looking at realty publications, it appears that adequate DSS housing will be available.							
14. Suitable business sites are available according to Carolina Mountain Realty, Premier Mtn. Properties, and Burnsville Realty.							

<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">               Janice H. Rogers              Right of Way Agent         </div> <div style="text-align: center;">             January 13, 2005              Date         </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">               Ann Simpson              Relocation Coordinator         </div> <div style="text-align: center;">             1-27-05              Date         </div> </div>
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Attachment for Question 4 – Alternate 2 of 3

	Approx. Size of Business	Type	Est. # Employees	Minorities	Additional Information
1.	3,500 SF	Pine Hill Auto Parts - Auto parts/Sales. Large fuel oil tanks, fuel oil pumps, propane gas tank & sales	8	0	
2.	1,000 SF	Wilson's Gems & Jewelry – Retail sales shop	2	0	
3.	1,800 SF	Metal Business Bldg. – Garage/Auto Repair	4	0	
4.	1,500 SF	Art Gallery/Floral Shop	3	0	New Bldg. Not shown on plans. Located at Crabtree Creek Rd/NC 19
5.	500 SF	B & W Stone Company – Sale of building rock and large stones.	8	0	Office Area (SWMH) is in RW. It appears that the mobile home can be set back on lot.
6.	700 SF	Robinson's Used Cars – Used car sales	3	0	
7.	2,000 SF	Newdale Volunteer Fire Dept. <b>NON-PROFIT BUSINESS</b>	Unknown	Unknown	Bldg. appears to be main office and parking area for this volunteer fire dept.
8.	3,000 SF	Garage/Tire Shop – Auto repair and tire sales. Also 18-wheeler truck leasing	15	2	
9.	2,800 SF	G & R Power Company – Sales of power tools and equipment. May also sale motorcycles.	10	1	
10.	3,000 SF	Crabtree Truck Parts - Welding & Hydraulic Equipment	5	1	
11.	800 SF	Martin's Chapel United Methodist Church – Fellowship Hall <b>NON-PROFIT BUSINESS</b>	1	0	Project acquires Fellowship Hall which is a -separate structure from Church. The Church appears to be unaffected.
12.	2,100 SF	The Country Store – Sales of antiques.	5	0	Apartment is located at building. It appears that the dwg. is occupied.
13.	2,800 SF	Service Station/Convenience Store – Also has car repair stop attached to convenience store. It is unclear whether or not this is a separate (tenant) business.	10	0	
14.	1,000 SF	One-Story business bldg- Unclear about type of business. May be related to operations of #13.	2	0	
15.	1,800 SF	Young's Tractor Sales – Sales of tractors & farm equipment	5	0	
16.	2,100 SF	Quality Motors Body Shop – Auto repair and body shop	4	0	
17.	500 SF	Charter Way - Satellite and Cable Service Bldg	Unknown	Unknown	It does not appear that the building is used for office space. However, large satellites and block building are in take. Cable service for the area may be provided via these satellites.

*July*

Attachment for Question 4 – Alternate 2 of 3

18.	2,800 SF	Habitat Retail Store – Sales of building supplies	10	2	
19.	1,800 SF	Mountain Traders – Seasonal sales of crafts/antiques	5	0	
20.	2,000 SF	Jim's Auto & Tractor Repair	4	0	
21.	1,500 SF	Children's day care	5	0	Day care center does not appear to be shown on plans.
22.	2,500 SF	Edistoe Church of God <b>NON-PROFIT (CHURCH)</b>	2	0	Church bldg. may be outside r/w. However, all parking is acquired. Cannot be cured due to terrain of parcel.
23.	1,200 SF	Car Wash – 3-bay car wash, self-serve, with two vacuum cleaners			
24.	1,200 SF	Jim Barva Log Systems – Sales office for log homes	4	0	
25.	4,000 SF	Stewart Insulation Company	5	0	(Bldg. appears to be partially unoccupied)
26.	800 SF	Christ Baptist Church <b>NON-PROFIT (CHURCH)</b>	0	0	Small church located at the southern end of Stewart Insulation Co.
27.	1,200 SF	The Chop Shoppe – Builders and repairs of motorcycles	4	0	
28.	600 SF	Murphy's Auto Center – Sales of Used Cars	3	0	
29.	3,800 SF	Stewart's Mountain View Animal Hosp.	6	0	
30.	1,800 SF	Blue Ridge Gymnastics	5	0	Does not appear to be full time business.
31.	2,000 SF	Volunteer Fire Dept. near Spruce Pine at end of project. <b>NON-PROFIT BUSINESS</b>	Unknown	Unknown	Bldg. appears to be main office and parking area for this volunteer fire dept.

SUB

The Division of Highways offers a Relocation Assistance Program to help minimize the effects of displacement on families. The occupants of the affected residences may qualify for aid under one or more of the NCDOT relocation programs. It is the policy of the NCDOT to ensure that comparable replacement housing will be available prior to construction of state and federally assisted projects. Furthermore, the North Carolina Board of Transportation has the following three programs to minimize the inconvenience of relocation:

- \*Relocation Assistance,
- \*Relocation Moving Payments, and
- \*Relocation Replacement Housing Payments or Rent Supplement.

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

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

The relocation officer will determine the needs of displaced families, individuals, businesses, non-profit organizations, and farm operations for relocation assistance advisory services without regard to race, color, religion, sex, or national origin. The NCDOT will schedule its work to allow ample time, prior to displacement, for negotiations and possession of replacement housing which meets decent, safe, and sanitary standards. The displacees are given at least a 90-day written notice after NCDOT purchases the property. Relocation of displaced persons will be offered in areas not generally less desirable in regard to public utilities and commercial facilities. Rent and sale prices of replacement property will be within the financial means of the families and individuals displaced and will be reasonably accessible to their places of employment. The relocation officer will also assist owners of displaced businesses, non-profit organizations, and farm operations in searching for and moving to replacement property.

All tenant and owner residential occupants who may be displaced will receive an explanation regarding all available options, such as (1) purchase of replacement housing, (2) rental of replacement housing, either private or public, or (3) moving existing owner-occupant housing to another site (if possible). The relocation officer will also supply

information concerning other state or federal programs offering assistance to displaced persons and will provide other advisory services as needed in order to minimize hardships to displaced persons in adjusting to a new location.

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

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

It is a policy of the state that no person will be displaced by the NCDOT's state or federally-assisted construction projects unless and until comparable replacement housing has been offered or provided for each displacee within a reasonable period of time prior to displacement. No relocation payment received will be considered as income for the purposes of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law.

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

# APPENDIX 2

## Noise Tables

TABLE N3  
 AMBIENT NOISE LEVELS (Leq)  
 US 19E, Yancey/Mitchell Counties, TIP # R-2519B

SITE	SECTION	DESCRIPTION	NOISE LEVEL (dBA)
1	US 19E Approximately 550' West of SR 1307 at Messiah of the Mountians Lutheran Church	Paved	69.5
2	US 19E Approximately 1900' East of SR 1002 at Estatoe Church of God	Grassy	71.4
3	US 19E Approximately 500' East of SR 1236 at Tri-County Christian School	Grassy	70.9

NOTE: The ambient noise level sites were measured at 50 feet from edge of pavement of the nearest lane of traffic.

TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR INFORMATION ID#	LAND USE CATEGORY	NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE	
				NAME	CL DIST(ft)	-L-	-Y-		MAXIMUM
US 19E From SR 1186 (Old US 19) to NC 80									
1	Residence	US 19E	68	-L-	90.0 R	-	-	* 70	+ 2
2	Business	"	68	"	90.0 R	-	-	70	+ 2

-L- Denotes proposed roadway's noise level contribution and -Y- denotes contributions from other roadways.  
 "\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR INFORMATION ID#	LAND USE CATEGORY	NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE
				NAME	CL DIST(ft)	-L-	-Y- MAXIMUM	
US 19E From NC 80 to SR 1150 (Hicks Road)								
13	Business	US 19E	66	-L-	110.0 L	-	69	+ 3
14	Residence	"	64	"	135.0 L	-	* 67	+ 3

-L- Denotes proposed roadway's noise level contribution and -Y- denotes contributions from other roadways.  
 "\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR INFORMATION ID#	LAND USE CATEGORY	NEAREST EXISTING ROADWAY	NEAREST AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE
				NAME	CL DIST(ft)	-L-	-Y- MAXIMUM	
US 19E From SR 1150 (Hicks Road) to SR 1162 (Penland Road)								
45	Business	US 19E	67	-L-	115.0 L	-	-	69 + 2
46	Church	"	60	"	220.0 L	-	-	62 + 2

-L- Denotes proposed roadway's noise level contribution and -Y- denotes contributions from other roadways.  
 "\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR INFORMATION ID#	LAND USE CATEGORY	NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS			NOISE LEVEL INCREASE
				NAME	CL DIST(ft)	-L-	-Y-	MAXIMUM	
US 19E From SR 1162 (Penland Road) to End of Project at the US 226 Bypass									
133	Residence	US 19E	62	-L-	120.0 R	-	-	* 68	+ 6
134	Residence	"	66	"	70.0 R	-	-	R/W	-

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 "\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR INFORMATION ID#	LAND USE CATEGORY	NEAREST EXISTING ROADWAY		AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE
		US 19E	US 19E		NAME	CL DIST(ft)	-L-	-Y- MAXIMUM	
US 19E From SR 1186 (Old US 19) to NC 80									
1	Residence	B	US 19E	68	-L-	90.0 R	-	* 70	+ 2
2	Business	C	"	68	"	90.0 R	-	70	+ 2
3	Residence	B	"	62	"	105.0 L	-	* 68	+ 6
4	Residence	B	"	68	"	50.0 L	-	R/W	-
5	Residence	B	"	66	"	100.0 R	-	* 69	+ 3
6	Residence	B	"	64	"	75.0 L	-	R/W	-
7	Residence	B	"	67	"	95.0 R	-	* 69	+ 2
8	Residence	B	"	61	"	120.0 L	-	R/W	-
9	Church	E	"	63/43	"	170.0 L	-	63/43	+ 0/0
10	Church	E	"	63/43	"	140.0 L	-	66/46	+ 3/3
11	Business	C	"	61	"	130.0 R	-	67	+ 6
12	Business	C	"	61	"	170.0 L	-	63	+ 2
US 19E From NC 80 to SR 1150 (Hicks Road)									
13	Business	C	US 19E	66	-L-	110.0 L	-	69	+ 3
14	Residence	B	"	64	"	135.0 L	-	* 67	+ 3
15	Residence	B	"	68	"	100.0 L	-	* 70	+ 2
16	Residence	B	"	70	"	90.0 L	-	* 71	+ 1
17	Residence	B	"	66	"	115.0 L	-	* 69	+ 3
18	Residence	B	"	59	"	170.0 R	-	64	+ 5
19	Residence	B	"	60	"	155.0 R	-	65	+ 5
20	Residence	B	"	61	"	175.0 L	-	64	+ 3
21	Residence	B	"	67	"	60.0 R	-	R/W	-
22	Church	E	"	57/<40	"	210.0 R	-	62/42	+ 5/3
23	Residence	B	"	62	"	115.0 R	-	* 69	+ 7

-L- Denotes proposed roadway's noise level contribution and -Y- denotes contributions from other roadways.  
 "\*\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR ID#	LAND USE CATEGORY	NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE	
				NAME	CL DIST(ft)	-L-	-Y-		MAXIMUM
US 19E From NC 80 to SR 1150 (Hicks Road) - Continued									
24	Residence	US 19E	67	-L-	65.0 R	-	-	R/W	-
25	Residence	"	63	"	110.0 R	-	-	* 69	+ 6
26	Residence	"	66	"	65.0 R	-	-	* 73	+ 7
27	Residence	"	58	"	190.0 R	-	-	63	+ 5
28	Residence	"	66	"	110.0 L	-	-	* 69	+ 3
29	Residence	"	67	"	105.0 L	-	-	* 69	+ 2
30	Residence	"	68	"	100.0 L	-	-	* 70	+ 2
31	Residence	"	68	"	60.0 R	-	-	* 73	+ 5
32	Business	"	65	"	85.0 R	-	-	* 71	+ 6
33	Business	"	67	"	65.0 R	-	-	R/W	-
34	Residence	"	63	"	145.0 L	-	-	* 66	+ 3
35	Business	"	66	"	115.0 L	-	-	69	+ 3
36	Business	"	72	"	70.0 R	-	-	R/W	-
37	Residence	"	56	"	270.0 L	-	-	59	+ 3
38	Residence	"	64	"	130.0 L	-	-	* 68	+ 4
39	Residence	"	60	"	185.0 L	-	-	63	+ 3
40	Business	"	68	"	95.0 L	-	-	70	+ 2
41	Residence	"	62	"	160.0 L	-	-	65	+ 3
42	Residence	"	66	"	105.0 L	-	-	* 69	+ 3
43	Residence	"	66	"	70.0 R	-	-	* 72	+ 6
44	Residence	"	67	"	105.0 L	-	-	* 69	+ 2
US 19E From SR 1150 (Hicks Road) to SR 1162 (Penland Road)									
45	Business	US 19E	67	-L-	115.0 L	-	-	69	+ 2
46	Church	"	60/40	"	220.0 L	-	-	62/42	+ 2/2

-L- Denotes proposed roadway's noise level contribution and -Y- denotes contributions from other roadways.  
 "\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

ID#	RECEPTOR INFORMATION		NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE
	LAND USE	CATEGORY			NAME	CL DIST(ft)	-L-	-Y-	
US 19E From SR 1150 (Hicks Road) to SR 1162 (Penland Road) - Continued									
46A	Residence	B	US 19E	63	-L-	160.0 L	-	* 66	+ 3
47	Residence	B	"	66	"	125.0 L	-	* 69	+ 3
48	Residence	B	"	62	"	135.0 R	-	* 68	+ 6
49	Residence	B	"	66	"	80.0 R	-	* 72	+ 6
50	Residence	B	"	70	"	90.0 L	-	* 71	+ 1
51	Residence	B	"	63	"	145.0 L	-	* 67	+ 4
52	Business	C	"	64	"	120.0 R	-	69	+ 5
53	Business	C	"	64	"	130.0 L	-	68	+ 4
54	Business	C	"	64	"	135.0 L	-	68	+ 4
54A	Church	E	"	55/<40	"	345.0 L	-	59/<40	+ 4/0
55	Residence	B	"	65	"	130.0 L	-	* 68	+ 3
56	Residence	B	"	64	"	145.0 L	-	* 67	+ 3
57	Residence	B	"	64	"	140.0 L	-	* 67	+ 3
58	Business	C	"	65	"	90.0 R	-	* 71	+ 6
59	Business	C	"	65	"	90.0 R	-	* 71	+ 6
60	Residence	B	"	65	"	95.0 R	-	* 71	+ 6
61	Residence	B	"	64	"	110.0 R	-	* 70	+ 6
62	Business	C	"	63	"	155.0 L	-	66	+ 3
63	Residence	B	"	61	"	160.0 R	-	* 66	+ 5
64	Residence	B	"	62	"	150.0 R	-	* 67	+ 5
65	Residence	B	"	67	"	100.0 L	-	* 70	+ 3
66	Residence	B	"	61	"	180.0 L	-	64	+ 3
67	Residence	B	"	63	"	145.0 L	-	* 67	+ 4
68	Residence	B	"	63	"	155.0 L	-	* 66	+ 3

-L- Denotes proposed roadway's noise level contribution and -Y- denotes contributions from other roadways.  
 "\*\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR INFORMATION	NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE	
			NAME	CL DIST(ft)	-L-	-Y-		MAXIMUM
US 19E From SR 1150 (Hicks Road) to SR 1162 (Penland Road) - Continued								
69 Residence	B	US 19E	-L-	150.0 L	-	-	* 67	+ 4
70 Residence	B	"	"	145.0 L	-	-	* 67	+ 4
71 Residence	B	"	"	90.0 L	-	-	* 71	+ 5
71A Residence	B	"	"	105.0 L	-	-	* 70	+ 2
72 Business	C	"	"	80.0 R	-	-	* 72	+ 5
73 Residence	B	"	"	110.0 L	-	-	* 70	+ 4
74 Residence	B	"	"	150.0 R	-	-	* 67	+ 5
75 Residence	B	"	"	150.0 R	-	-	* 67	+ 5
76 Residence	B	"	"	90.0 R	-	-	* 71	+ 3
77 Residence	B	"	"	145.0 L	-	-	R/W	-
78 Residence	B	"	"	140.0 R	-	-	* 67	+ 3
79 Residence	B	"	"	90.0 L	-	-	* 71	+ 6
80 Business	C	"	"	75.0 L	-	-	* 73	+ 6
81 Residence	B	"	"	180.0 R	-	-	64	+ 2
82 Business	C	"	"	130.0 R	-	-	68	+ 3
83 Residence	B	"	"	75.0 L	-	-	R/W	-
84 Residence	B	"	"	140.0 R	-	-	* 67	+ 3
85 Residence	B	"	"	135.0 R	-	-	* 68	+ 4
86 Residence	B	"	"	105.0 R	-	-	* 70	+ 3
87 Residence	B	"	"	65.0 L	-	-	R/W	-
88 Residence	B	"	"	135.0 L	-	-	* 68	+ 6
89 Residence	B	"	"	205.0 R	-	-	63	+ 2
90 Business	C	"	"	55.0 L	-	-	R/W	-
91 Business	C	"	"	55.0 L	-	-	R/W	-

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 "\*\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4

TRAFFIC NOISE EXPOSURES

US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR INFORMATION ID#	LAND USE CATEGORY	NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE		
				NAME	CL DIST(ft)	-L-	-Y-		MAXIMUM	
US 19E From SR 1150 (Hicks Road) to SR 1162 (Penland Road) - Continued										
92	Residence	B	US 19E	62	-L-	175.0 R	-	-	65	+ 3
93	Residence	B	"	65	"	125.0 R	-	-	* 69	+ 4
94	Residence	B	"	62	"	170.0 R	-	-	65	+ 3
95	Residence	B	"	67	"	115.0 R	-	-	* 69	+ 2
96	Residence	B	"	68	"	100.0 R	-	-	* 70	+ 2
97	Church	E	"	70/50	"	90.0 R	-	-	* 71/51	+ 1/1
98	Residence	B	"	64	"	150.0 R	-	-	* 67	+ 3
99	Residence	B	"	64	"	150.0 R	-	-	* 67	+ 3
100	Business	C	"	67	"	70.0 L	-	-	* 73	+ 6
101	Residence	B	"	60	"	230.0 R	-	-	61	+ 1
102	Residence	B	"	60	"	230.0 R	-	-	61	+ 1
103	Residence	B	"	62	"	170.0 R	-	-	65	+ 3
104	Business	C	"	64	"	140.0 R	-	-	67	+ 3
105	Residence	B	"	63	"	155.0 R	-	-	* 66	+ 3
106	Residence	B	"	62	"	130.0 L	-	-	* 68	+ 6
107	Residence	B	"	60	"	170.0 L	-	-	65	+ 5
108	Residence	B	"	65	"	95.0 L	-	-	R/W	-
109	Residence	B	"	65	"	90.0 L	-	-	R/W	-
110	Residence	B	"	62	"	130.0 L	-	-	* 68	+ 6
111	Residence	B	"	63	"	120.0 L	-	-	* 69	+ 6
112	Residence	B	"	66	"	125.0 R	-	-	* 69	+ 3
113	Residence	B	"	68	"	100.0 R	-	-	* 70	+ 2
114	Residence	B	"	67	"	115.0 R	-	-	* 69	+ 2
115	Residence	B	"	63	"	160.0 R	-	-	* 66	+ 3

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TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR INFORMATION ID#	LAND USE CATEGORY	NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE	
				NAME	CL DIST(ft)	-L-	-Y-		MAXIMUM
US 19E From SR 1150 (Hicks Road) to SR 1162 (Penland Road) - Continued									
116	Residence	B	US 19E	63	-L-	160.0 R	-	* 66	+ 3
117	Residence	B	"	64	"	150.0 R	-	* 67	+ 3
118	Residence	B	"	66	"	120.0 R	-	* 69	+ 3
119	Residence	B	"	60	"	210.0 R	-	62	+ 2
120	Residence	B	"	64	"	110.0 L	-	R/W	-
121	Residence	B	"	62	"	140.0 L	-	R/W	-
122	Residence	B	"	62	"	140.0 R	-	* 67	+ 5
123	Residence	B	"	65	"	90.0 R	-	* 71	+ 6
124	Residence	B	"	64	"	155.0 L	-	* 66	+ 2
125	Residence	B	"	67	"	70.0 R	-	* 73	+ 6
126	Residence	B	"	68	"	55.0 R	-	R/W	-
126A	Residence	B	"	67	"	65.0 R	-	* 74	+ 7
127	Residence	B	"	65	"	90.0 R	-	* 71	+ 6
128	Residence	B	"	70	"	40.0 R	-	R/W	-
129	Residence	B	"	68	"	100.0 L	-	* 70	+ 2
130	Residence	B	"	66	"	125.0 L	-	* 69	+ 3
131	Residence	B	"	68	"	110.0 L	-	* 70	+ 2
132	Business	C	"	63	"	115.0 R	-	69	+ 6
US 19E From SR 1162 (Penland Road) to End of Project at the US 226 Bypass									
133	Residence	B	US 19E	62	-L-	120.0 R	-	* 68	+ 6
134	Residence	B	"	66	"	70.0 R	-	R/W	-
135	Residence	B	"	65	"	75.0 R	-	* 72	+ 7
136	Residence	B	"	70	"	85.0 L	-	* 71	+ 1
137	Residence	B	"	65	"	120.0 L	-	* 68	+ 3

-L- Denotes proposed roadway's noise level contribution and -Y- denotes contributions from other roadways.  
 "\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4

TRAFFIC NOISE EXPOSURES

US 19E From SR 1186 (Old US 19) to US 226 Bypass

Yancey/Mitchell Counties, TIP # R-2519B

Best Fit Alternate

ID#	RECEPTOR INFORMATION		NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE	
	LAND USE CATEGORY	NAME			CL DIST(ft)	-L-	-Y-	MAXIMUM		
US 19E From SR 1162 (Penland Road) to End of Project at the US 226 Bypass - Continued										
138	Residence	B	US 19E	57	-L-	260.0 L	-	-	60	+ 3
139	Residence	B	"	56	"	270.0 L	-	-	60	+ 4
140	School	E	"	65/45	"	120.0 L	-	-	68/48	+ 3/3
141	Residence	B	"	57	"	270.0 L	-	-	60	+ 3
142	Residence	B	"	58	"	230.0 L	-	-	61	+ 3
143	Residence	B	"	60	"	205.0 L	-	-	62	+ 2
144	Business	C	"	68	"	100.0 L	-	-	70	+ 2
145	Residence	B	"	59	"	170.0 R	-	-	65	+ 6
146	Residence	B	"	62	"	120.0 R	-	-	* 68	+ 6
147	Residence	B	"	61	"	145.0 L	-	-	* 67	+ 6
148	Residence	B	"	66	"	70.0 L	-	-	R/W	-
149	Business	C	"	64	"	90.0 L	-	-	R/W	-
150	Residence	B	"	56	"	220.0 L	-	-	61	+ 5
151	Residence	B	"	62	"	140.0 L	-	-	* 67	+ 5
152	Business	C	"	63	"	150.0 L	-	-	66	+ 3

-L- Denotes proposed roadway's noise level contribution and -Y- denotes contributions from other roadways.  
 "\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

TABLE N4  
 TRAFFIC NOISE EXPOSURES  
 US 19E From SR 1186 (Old US 19) to US 226 Bypass  
 Yancey/Mitchell Counties, TIP # R-2519B  
 Best Fit Alternate

RECEPTOR ID#	LAND USE CATEGORY	NEAREST EXISTING ROADWAY	AMBIENT NOISE LEVEL	NEAREST PROPOSED ROADWAY		PREDICTED NOISE LEVELS		NOISE LEVEL INCREASE	
				NAME	CL DIST(ft)	-L-	-Y-		MAXIMUM
US 19E From SR 1162 (Penland Road) to End of Project at the US 226 Bypass - Continued									
153	Business	US 19E	63	-L-	175.0 L	-	-	64	+ 1
154	Residence	"	63	"	100.0 R	-	-	* 70	+ 7
155	Business	"	66	"	125.0 L	-	-	68	+ 2
156	Residence	"	68	"	80.0 L	-	-	* 72	+ 4
157	Business	"	65	"	85.0 R	-	-	* 71	+ 6
158	Residence	"	65	"	80.0 R	-	-	* 72	+ 7
159	Residence	"	66	"	70.0 R	-	-	R/W	-
160	Residence	"	65	"	115.0 L	-	-	* 69	+ 4
161	Business	"	71	"	40.0 R	-	-	R/W	-
162	Residence	"	66	"	110.0 L	-	-	* 69	+ 3
163	Residence	"	59	"	180.0 R	-	-	64	+ 5
164	Residence	"	61	"	180.0 L	-	-	64	+ 3
165	Residence	"	64	"	135.0 L	-	-	* 68	+ 4
166	Residence	"	64	"	100.0 R	-	-	* 70	+ 6
167	Residence	"	64	"	140.0 L	-	-	* 67	+ 3
168	Residence	"	60	"	150.0 R	-	-	* 66	+ 6

-L- Denotes proposed roadway's noise level contribution and -Y- denotes contributions from other roadways.  
 "\*" Denotes a noise impact per 23 CFR Part 772 and Category E noise levels shown as exterior/interior (68/48).

**TABLE N5**  
**FHWA NOISE ABATEMENT CRITERIA SUMMARY**  
**US 19E, Yancey/Mitchell Counties, TIP # R-2519B**

DESCRIPTION	Leq NOISE LEVELS (dBA)			MAXIMUM CONTOUR DISTANCES	APPROXIMATE # OF IMPACTED RECEPTORS ACCORDING TO TITLE 23 CFR PART 772					
	50ft	100ft	200ft		A	B	C	D	E	
	TOTALS --->				0	0	0	0	0	
<b>Best Fit Alternate</b>										
1 - US 19E From SR 1186 (Old US 19) to NC 80	71.0	66.9	60.0	70.9	132.1	0	4	0	0	0
2 - US 19E From NC 80 to SR 1150 (Hicks Road)	71.8	67.8	60.9	81.0	142.3	0	16	1	0	0
3 - US 19E From SR 1150 (Hicks Road) to SR 1162 (Penland Road)	72.6	68.5	61.6	89.3	150.2	0	56	5	0	1
4 - US 19E From SR 1162 (Penland Road) to the US 226 Bypass	72.1	68.1	61.2	84.9	145.6	0	16	1	0	0
	TOTALS --->					0	92	7	0	1

1. 50ft, 100ft, and 200ft distances are measured from the center of nearest travel lane.  
2. 72 dBA and 67 dBA contour distances are measured from the center of proposed roadway.



# APPENDIX 3

Comments Received from Federal,  
State, and Local Agencies



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Asheville Field Office  
160 Zillicoa Street  
Asheville, North Carolina 28801

December 11, 2002

Dr. Gregory J. Thorpe  
Environmental Management Director, PDEA  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: US 19E Improvements from SR 1186 in Yancey County to the Existing Multilane Section West of Spruce Pine in Mitchell County, North Carolina, State Project No. 6.909001T, TIP Project No. R-2519B

The North Carolina Department of Transportation proposes to improve US 19E from SR 1186 in Yancey County to west of Spruce Pine in Mitchell County. Given the early stages of the proposal and subsequent lack of detail, we will limit our comments primarily to listed species. We will provide comments on impacts to aquatic resources and terrestrial wildlife habitat when more detailed information is available, including wetland delineation, stream impacts, and overall project maps. Our comments are provided in accordance with the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e), and Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

Enclosed is a list of species from Mitchell and Yancey Counties that are on the *Federal List of Endangered and Threatened Wildlife and Plants* as well as Federal species of concern. Our records indicate known locations of the federally endangered Appalachian elktoe (*Alasmodonta raveneliana*), the federally threatened Virginia spiraea (*Spiraea virginiana*), and the threatened due to similarity of appearance bog turtle (*Clemmys muhlenbergii*) in the vicinity of the project. The project also crosses the South Toe River on a reach designated as critical habitat for the Appalachian elktoe and crosses Big Crabtree Creek upstream of its confluence with the North Toe River.

We are concerned about effects to listed species from this project, in particular, the Appalachian elktoe mussel and its designated critical habitat in the Nolichucky River basin. This project likely will have direct effects on the elktoe and is an extension of two other State projects,

R-2518 and R-2519A, both of which are likely to impact this species or its habitat. Under the Act, an analysis of cumulative effects would include all of these projects. Under the National Environmental Policy Act, a cumulative effects analysis would include these projects and bridge replacements B-2848 and B-1443, both of which would have direct effects on the elktoe in the North Toe River. We strongly recommend that this project be considered as a part of the analysis for R-2518 and R-2519A to adequately address direct, indirect, and cumulative effects to the Appalachian elktoe, its designated critical habitat, and tributaries to its habitat.

In North Carolina the bog turtle is federally listed as threatened due to similarity of appearance. While the bog turtle in North Carolina does not require Section 7 consultation, it is a species of concern for which the North Carolina Department of Transportation is actively managing habitat on mitigation sites. Additionally, the North Carolina Wildlife Resources Commission considers this animal rare in North Carolina and participates actively in surveys and conservation efforts on its behalf. We would encourage habitat assessments and surveys for this species to locate and protect it in the project area. Federal species of concern are not legally protected under the Act and are not subject to any of its provisions, including Section 7, unless they are formally proposed or listed as endangered or threatened. We are including these species in our response to give you advance notification and to request your assistance in protecting them if any are found in the vicinity of your project.

If you have questions about these comments, please contact Ms. Marella Buncick of our staff at 828/258-3939, Ext. 237. In any future correspondence concerning this project, please reference our Log Number 4-2-03-063.

Sincerely,



Brian P. Cole  
State Supervisor

Enclosure

cc:

Ms. Marla J. Chambers, Highway Projects Coordinator, North Carolina Wildlife Resources Commission, 12275 Swift Road, Oakboro, NC 28129

Mr. Steve Lund, U.S. Army Corps of Engineers, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, NC 28801-5006

Ms. Cynthia Van Der Wiele, North Carolina Department of Environment and Natural Resources, Division of Water Quality, Wetlands Section, 1621 Mail Service Center, Raleigh, NC 27699-1621

**ENDANGERED, THREATENED, AND CANDIDATE SPECIES AND  
FEDERAL SPECIES OF CONCERN, MITCHELL AND  
YANCEY COUNTIES, NORTH CAROLINA**

This list was adapted from the North Carolina Natural Heritage Program's County Species List. It is a listing, for Mitchell and Yancey Counties, of North Carolina's federally listed and proposed endangered, threatened, and candidate species and Federal species of concern (for a complete list of rare species in the state, please contact the North Carolina Natural Heritage Program). The information in this list is compiled from a variety of sources, including field surveys, museums and herbariums, literature, and personal communications. The North Carolina Natural Heritage Program's database is dynamic, with new records being added and old records being revised as new information is received. Please note that this list cannot be considered a definitive record of listed species and Federal species of concern, and it should not be considered a substitute for field surveys.

**Critical habitat:** Critical habitat is noted, with a description, for the counties where it is designated or proposed.

**Aquatic species:** Fishes and aquatic invertebrates are noted for counties where they are known to occur. However, projects may have effects on downstream aquatic systems in adjacent counties.

COMMON NAME	SCIENTIFIC NAME	STATUS
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**MITCHELL COUNTY**

**Critical Habitat Designation:**

**Spruce-fir moss spider, *Microhexura montivaga*** - Critical habitat designated (see the July 6, 2001, *Federal Register*, 66:35547-35566).

**Proposed Critical Habitat Designation:**

**Appalachian elktoe, *Alasmidonta raveneliana*** - Main stem of the North Toe River, Yancey and Mitchell Counties, North Carolina, from the confluence of Big Crabtree Creek, downstream to the confluence of the South Toe River; the main stem of the South Toe River, Yancey County, North Carolina, from the N.C. State Route 1152 Bridge, downstream to its confluence with the North Toe River; the main stem of the Toe River, Yancey and Mitchell Counties, North Carolina, from the confluence of the North Toe River and the South Toe River, downstream to the confluence of the Cane River; the main stem of the Cane River, Yancey County, North Carolina, from the N.C. State Route 1381 Bridge, downstream to its confluence with the Toe River; and the main stem of the Nolichucky River from the confluence of the Toe River and the Cane River in Yancey County and Mitchell County, North Carolina, downstream to the U.S. Highway 23/19W Bridge southwest of Erwin, Unicoi County, Tennessee.

**Vertebrates**

Southern Appalachian saw-whet owl	<i>Aegolius acadicus</i>	FSC
Olive-sided flycatcher	<i>Contopus borealis</i>	FSC
Blotched chub	<i>Erimystax insignis</i>	FSC
Carolina northern flying squirrel	<i>Glaucomys sabrinus coloratus</i>	Endangered

COMMON NAME	SCIENTIFIC NAME	STATUS
Southern Appalachian red crossbill	<i>Loxia curvirostra</i>	FSC
Indiana bat	<i>Myotis sodalis</i>	Endangered (winter records)
Alleghany woodrat	<i>Neotoma magister</i>	FSC*
Southern Appalachian black-capped chickadee	<i>Parus atricapillus praticus</i>	FSC
Olive darter	<i>Percina squamata</i>	FSC
Southern Appalachian yellow-bellied sapsucker	<i>Sphyrapicus varius appalaciensis</i>	FSC
Appalachian cottontail	<i>Sylvilagus obscurus</i>	FSC
<b>Invertebrates</b>		
Appalachian elktoe	<i>Alasmidonta raveneliana</i>	Endangered
Spruce-fir moss spider	<i>Microhexura montivaga</i>	Endangered
Roan supercoil	<i>Paravitrea varidens</i>	FSC
Diana fritillary butterfly	<i>Speyeria diana</i>	FSC*
<b>Vascular Plants</b>		
Fraser fir	<i>Abies fraseri</i>	FSC
Piratebush	<i>Buckleya distichophylla</i>	FSC
Roan sedge	<i>Carex roanensis</i>	FSC
Tall larkspur	<i>Delphinium exaltatum</i>	FSC*
Glade spurge	<i>Euphorbia purpurea</i>	FSC
Bent avens	<i>Geum geniculatum</i>	FSC
Spreading avens	<i>Geum radiatum</i>	Endangered
Butternut	<i>Juglans cinerea</i>	FSC
Heller's blazing star	<i>Liatris helleri</i>	Threatened
Gray's lily	<i>Lilium grayi</i>	FSC
Canby's mountain lover (=cliff green)	<i>Paxistima canbyi</i>	FSC*
Blue Ridge goldenrod	<i>Solidago spithamaea</i>	Threatened
Virginia spiraea	<i>Spiraea virginiana</i>	Threatened
<b>Nonvascular Plants</b>		
Rock gnome lichen	<i>Gymnoderma lineare</i>	Endangered
A liverwort	<i>Plagiochila sullivantii</i> var. <i>sullivantii</i>	FSC
A liverwort	<i>Sphenolobopsis pearsonii</i>	FSC

## YANCEY COUNTY

### Proposed Critical Habitat Designation:

**Appalachian elktoe, *Alasmidonta raveneliana*** - Main stem of the North Toe River, Yancey and Mitchell Counties, North Carolina, from the confluence of Big Crabtree Creek, downstream to the confluence of the South Toe River; the main stem of the South Toe River, Yancey County, North Carolina, from the N.C. State Route 1152 Bridge, downstream to its confluence with the North Toe River; the main stem of the Toe River, Yancey and Mitchell Counties, North Carolina, from the confluence of the North Toe River and the South Toe River, downstream to the confluence of the Cane River; the main stem of the Cane River, Yancey County, North Carolina, from the N.C. State Route 1381 Bridge, downstream to its confluence with the Toe River; and the main stem of the

COMMON NAME	SCIENTIFIC NAME	STATUS
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Nolichucky River from the confluence of the Toe River and the Cane River in Yancey County and Mitchell County, North Carolina, downstream to the U.S. Highway 23/19W Bridge southwest of Erwin, Unicoi County, Tennessee.

**Vertebrates**

Southern Appalachian saw-whet owl	<i>Aegolius acadicus</i>	FSC
Bog turtle	<i>Clemmys muhlenbergii</i>	T(S/A) <sup>1</sup>
Olive-sided flycatcher	<i>Contopus borealis</i>	FSC
Virginia big-eared bat	<i>Corynorhinus (=Plecotus) townsendii virginianus</i>	Endangered
Hellbender	<i>Cryptobranchus alleganiensis</i>	FSC
Blotched chub	<i>Erimystax insignis</i>	FSC
Eastern cougar	<i>Felis concolor couguar</i>	Endangered*
Carolina northern flying squirrel	<i>Glaucomys sabrinus coloratus</i>	Endangered
Southern Appalachian red crossbill	<i>Loxia curvirostra</i>	FSC
Southern rock vole	<i>Microtus chrotorrhinus carolinensis</i>	FSC
Eastern small-footed myotis	<i>Myotis leibii</i>	FSC
Alleghany woodrat	<i>Neotoma magister</i>	FSC
Southern Appalachian black-capped chickadee	<i>Parus atricapillus praticus</i>	FSC
Olive darter	<i>Percina squamata</i>	FSC
Southern Appalachian yellow-bellied sapsucker	<i>Sphyrapicus varius appalaciensis</i>	FSC
Appalachian cottontail	<i>Sylvilagus obscurus</i>	FSC

**Invertebrates**

Appalachian elktoe	<i>Alasmidonta raveneliana</i>	Endangered
Fragile glyph	<i>Glyphyalinia clingmani</i>	FSC
Spruce-fir moss spider	<i>Microhexura montivaga</i>	Endangered
Roan supercoil	<i>Paravitrea varidens</i>	FSC*
Yancey sideswimmer	<i>Stygobromus carolinensis</i>	FSC*

**Vascular Plants**

Fraser fir	<i>Abies fraseri</i>	FSC
Cain's reedgrass	<i>Calamagrostis cainii</i>	FSC
Mountain bittercress	<i>Cardamine clematitidis</i>	FSC
Glade spurge	<i>Euphorbia purpurea</i>	FSC
Spreading avens	<i>Geum radiatum</i>	Endangered
Roan Mountain bluet	<i>Houstonia montana (=Hedyotis purpurea var. montana)</i>	Endangered
Butternut	<i>Juglans cinerea</i>	FSC
Gray's lily	<i>Lilium grayi</i>	FSC
Carolina saxifrage	<i>Saxifraga caroliniana</i>	FSC
Mountain catchfly	<i>Silene ovata</i>	FSC
Virginia spiraea	<i>Spiraea virginiana</i>	Threatened

**Nonvascular Plants**

Rock gnome lichen	<i>Gymnoderma lineare</i>	Endangered
A liverwort	<i>Plagiochila sharpii</i>	FSC

COMMON NAME	SCIENTIFIC NAME	STATUS
A liverwort	<i>Plagiochila sullivanii</i> var. <i>sullivanii</i>	FSC
A liverwort	<i>Sphenolobopsis pearsonii</i>	FSC

**KEY:**

Status	Definition
Endangered	A taxon "in danger of extinction throughout all or a significant portion of its range."
Threatened	A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."
FSC	A Federal species of concern--a species that may or may not be listed in the future (formerly C2 candidate species or species under consideration for listing for which there is insufficient information to support listing).
T(S/A)	Threatened due to similarity of appearance (e.g., American alligator)--a species that is threatened due to similarity of appearance with other rare species and is listed for its protection. These species are not biologically endangered or threatened and are not subject to Section 7 consultation.

Species with 1, 2, 3, or 4 asterisks behind them indicate historic, obscure, or incidental records.

\*Historic record - the species was last observed in the county more than 50 years ago.

\*\*Obscure record - the date and/or location of observation is uncertain.

\*\*\*Incidental/migrant record - the species was observed outside of its normal range or habitat.

\*\*\*\*Historic record - obscure and incidental record.

<sup>1</sup>In the November 4, 1997, *Federal Register* (55822-55825), the northern population of the bog turtle (from New York south to Maryland) was listed as T (threatened), and the southern population (from Virginia south to Georgia) was listed as T(S/A) (threatened due to similarity of appearance). The T(S/A) designation bans the collection and interstate and international commercial trade of bog turtles from the southern population. The T(S/A) designation has no effect on land-management activities by private landowners in North Carolina, part of the southern population of the species. In addition to its official status as T(S/A), the U.S. Fish and Wildlife Service considers the southern population of the bog turtle as a Federal species of concern due to habitat loss.



Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902-1499

November 26, 2002

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

Dear Mr. Thorpe:

US 19E IMPROVEMENTS FROM SR 1186 IN YANCEY COUNTY TO THE EXISTING MULTILANE SECTION WEST OF SPRUCE PINE IN MITCHELL COUNTY, SOUTH TOE RIVER AND TRIBUTARIES, NORTH CAROLINA, STATE PROJECT NO. 6.909001T, TIP NO. R-2519B

TVA has reviewed the October 24, 2002, request for comments on the proposed multilane construction of US 19E between Micaville and Spruce Pine. We are not aware of any unique environmental issues associated with this project, although a previously evaluated segment (US 19/19E Improvements between Mars Hill and Burnsville) had the potential to affect the Appalachian elktoe and other endangered and threatened species. The environmental documentation prepared for this project should note that an approval under Section 26a of the TVA Act would be required for culverts, bridges, and stream relocations involving Little Crabtree Creek, South Toe River, Long Branch, Big Crabtree Creek, Brushy Creek, and other Tennessee River tributary streams.

We would appreciate the inclusion of TVA in any interagency or merger team meetings related to this project. Even though it is anticipated that the project will be processed as a state funded Environmental Assessment, TVA would appreciate the opportunity to serve as a cooperating agency in the preparation of the environmental document. TVA was included as a cooperating agency in the State EA for US 19/19E, TIP Project Number R-1518 and R-2519A.

Should you have any questions, please contact Harold M. Draper at (865) 632-6889 or [hmdraper@tva.gov](mailto:hmdraper@tva.gov).

Sincerely,

A handwritten signature in black ink that reads "Harold M. Draper".

*for* Jon M. Loney, Manager  
NEPA Administration  
Environmental Policy and Planning



North Carolina Department of Environment and Natural Resources  
Division of Parks and Recreation

Michael F. Easley, Governor

William G. Ross, Jr., Secretary

Philip K. McKnelly, Director

**MEMORANDUM**

TO: Gregory J. Thorpe, Environmental Management Director

FROM: Brian Strong, DPR Environmental Review Coordinator *BSA*

DATE: November 13, 2002

SUBJECT: Review of Scoping Sheets for US 19E Improvements from SR 1186 in Yancey County to the existing multilane section west of Spruce Pine in Mitchell County, State Project No. 6.909001T, TIP Project No. R-2519B.

The primary concern for this project is the crossing of the South Toe River. The South Toe River Aquatic Habitat is a Significant Natural Heritage Area of statewide significance. This stretch supports three rare animals, Appalachian elktoe (*Alasmidonta raveneliana*), blotchside darter (*Percina burtoni*), and olive darter (*Percina squamata*). The Appalachian elktoe is both state and federally listed as Endangered, the blotchside darter is state listed as Endangered, and the olive darter is listed as Significantly Rare. The federally listed Virginia spiraea (*Spiraea virginiana*) occurs on the river bank about three miles downstream and would also potentially be affected by impacts to the river.

If you have any questions regarding these comments please contact me at (919) 715-8711.

cc: Project files (2)



November 13, 2002

**MEMORANDUM**

TO: Gregory J. Thorpe, Ph.D., Environmental Management Director  
NCDOT, Project Development & Environmental Analysis

FROM: Cynthia F. Van Der Wiele, NCDOT Coordinator *cdw*

SUBJECT: Review of Scoping Sheets for US 19E Improvements from SR 1186 in Yancey County to the existing multilane section west of Spruce Pine in Mitchell County, State Project No. 6.909001T, TIP Project R-2519B.

This letter is in reply to your correspondence dated October 24, 2002 in which you requested comments for the referenced project. Preliminary analysis of the project indicates the following streams may be impacted in Hydrologic Unit 040306:

<u>Stream</u>	<u>Index No.</u>	<u>Classification</u>
▪ Unnamed tributaries to North Toe River	7-2	*WS-IV trout
▪ Brushy Creek and UTs	7-2-48-4	C trout
▪ Big Crabtree Creek	7-2-48	C trout
▪ Long Creek	7-2-48-2-3	C trout
▪ South Toe River and unnamed tributaries	7-2-52	B trout ORW
▪ Ayles Creek	7-2-52-33-11	C trout
▪ Little Crabtree Creek and UT's	7-2-52-33	C trout

\* May be reclassified to High Quality Water (HQW).

The Division of Water Quality offers these comments:

*Environmental Documentation*

- The environmental document pertaining to this project should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. There should be a discussion on mitigation plans for unavoidable impacts. If mitigation is required, it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. While the NCDWQ realizes that this may not always be practical, it should be noted that for projects requiring mitigation, appropriate mitigation plans will be required prior to issuance of a §401 Water Quality Certification.
- As the Scoping Sheets indicate that this project proposes to widen to multi-lanes, and the facility is a principal arterial, NCDWQ will require a Cumulative and Secondary Impact Study on the project.

*Design and Construction Considerations*

- NC Division of Water Quality strongly supports improving the existing roadway over alignments on new location. If an alternative other than improve existing is selected, documentation will be required to demonstrate the impracticality or unfeasibility of improving the existing roadway.
- Due to the excellent quality of the resources (noted in the *French Broad River Basinwide Water Quality Plan*, DWQ, May 2000), the DWQ will require that NCDOT strictly adhere to North Carolina



regulations entitled, "Design Standards in Sensitive Watersheds" [15A NCAC 04B .0124 (a) – (d); see [http://ncrules.state.nc.us/ncadministrativ\\_/title15aenviron\\_/chapter04sedime\\_/default.htm](http://ncrules.state.nc.us/ncadministrativ_/title15aenviron_/chapter04sedime_/default.htm)] and NCDOT's publication, *Best Management Practices for the Protection of Surface Waters* (March 1997) throughout design and construction of the project. Please be aware of turbidity standards for trout streams (not to exceed 10 NTU's) and construction moratoriums dates set by the NC Wildlife Resource Commission may apply, based on their findings. Enforcement of sediment and erosion control laws will help to reduce impacts on these streams.

- Hazardous spill catch basins may be required along crossings of the South Toe River in order to protect these resources.
- According to the *2000 French Broad River Basinwide Water Quality Plan*, habitat degradation and turbidity are noted problem parameters for this section of the sub-basin.
- In order to reduce sedimentation in receiving waters, the following are recommended during construction:
  - ❖ Use phased grading/seeding plans.
  - ❖ Limit time of exposure.
  - ❖ Plant temporary ground cover.
  - ❖ Use sediment basins and traps.
  - ❖ Same day seeding and mulching is strongly encouraged.
- Sediment and erosion control measures should not be placed in wetlands. Sediment should be removed from any water pumped from behind a cofferdam before the water is returned to the stream.
- The hydraulic design of the project shall route storm water through grass-lined ditches, vegetated buffers or to storm water collection devices prior to entering streams.
- Machinery shall not be used in the stream channels unless absolutely necessary. Vegetation should not be removed from the stream bank unless it is absolutely necessary. Especially avoid removing large trees and undercut banks. If large, undercut trees must be removed, then cut the trunks and leave the stumps and root systems in place to minimize damage to stream banks.
- Borrow/waste areas should not be located in wetlands. Compensatory mitigation will be required if wetlands are impacted by waste or borrow.
- Wetland and stream impacts should be avoided to the maximum extent practical. If this is not possible, alternatives that minimize wetland impacts should be chosen. In accordance with the NCDWQ Wetlands Rules {15A NCAC 2H.0506(b)(6)}, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation becomes required, the mitigation plan should be designed to replace appropriate lost functions and values. In accordance with the NCDWQ Wetlands Rules {15A NCAC 2H.0506 (h)(3)}, the Wetland Restoration Program may be available for use as stream mitigation.
- Use qualified personnel to perform onsite wetland delineations prior to permit approval.

Thank you for requesting our input at this time. The DOT 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 Cynthia Van Der Wiele at (919) 733.5715.

pc: Steve Lund, USACE Asheville Field Office  
Chris Militscher, USEPA  
Marla Chambers, NCWRC  
File Copy



## North Carolina Wildlife Resources Commission

Charles R. Fullwood, Executive Director

TO: Gregory J. Thorpe, Environmental Management Director  
Project Development and Environmental Analysis Branch, NCDOT

FROM: Marla Chambers, Highway Projects Coordinator   
Habitat Conservation Program, NCWRC

DATE: May 23, 2003

SUBJECT: Review of NCDOT scoping sheets for improvements to US 19E from SR 1186 in Yancey County to the existing multilane section west of Spruce Pine in Mitchell County. TIP No. R-2519B.

North Carolina Department of Transportation (NCDOT) is requesting comments from the North Carolina Wildlife Resources Commission (NCWRC) regarding impacts to fish and wildlife resources resulting from the subject project. Staff biologists have reviewed the information provided on the scoping sheets and have the following preliminary comments. These comments are provided in accordance with the 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).

The NCDOT proposes to widen US 19E to a four-lane divided highway with partial control of access. The project crosses the South Toe River, Cranberry Creek and several other tributaries. The South Toe River is designated B Tr ORW south of the project crossing and C Tr along and north of the project, however the river is expected to be too low in the watershed for trout reproduction in the project vicinity. The following protected species have been found in the South Toe River in the US 19E project area: Appalachian elktoe (*Alasmidonta raveneliana*), federal and state endangered; wavy-rayed lampmussel (*Lampsilis fasciola*), state special concern; blotchside logperch (*Percina burtoni*), state endangered; olive darter (*Percina squamata*), federal species of concern and state special concern; and hellbender (*Cryptobranchus alleganiensis*), federal species of concern and state special concern. Consultation with the U. S. Fish and Wildlife Service is expected. Surveys should be conducted on the South Toe River and Cranberry Creek by biologists with both state and federal endangered species permits to assess potential direct project impacts.

NCWRC recommends an in-water work moratorium from April 1 to June 30 in the South Toe River to protect the Appalachian elktoe, blotchside logperch, and olive darter during their breeding seasons, as well as smallmouth bass reproduction. Cranberry Creek and other perennial stream crossings should have an in-water and 25-foot trout buffer work moratorium from October 15 to April 15. Sediment and erosion control measures should adhere to the design standards for sensitive watersheds (15A NCAC 4B .0124 (a)-(d)) and be strictly maintained until project completion. Secondary and cumulative impacts are important concerns for this area of the state and should be sufficiently addressed in the environmental document.

In addition, to help facilitate document preparation and the review process, our general information 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 the following programs:

The Natural Heritage Program  
N. C. Division of Parks and Recreation  
1615 Mail Service Center  
Raleigh, N. C. 27699-1615  
(919) 733-7795

and,

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

2. Description of any streams or wetlands affected by the project. If applicable, include the linear feet of stream that will be channelized or relocated.
3. Cover type maps showing wetland acreage impacted by the project. Wetland acreage should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (USACE). If the USACE is not consulted, the person delineating wetlands should be identified and criteria listed.
4. Cover type maps showing acreage of upland wildlife habitat impacted by the proposed project. Potential borrow sites and waste areas should be included.
5. Show the extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).

6. Include the mitigation plan for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.
7. Address the overall environmental effects of the project construction and quantify the contribution of this individual project to environmental degradation.
8. Provide 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 of this project. If you have any questions regarding these comments, please contact me at (704) 485-2384.

cc: Marella Buncick, USFWS  
Cynthia Van Der Wiele, NCDWQ  
Sarah Kopplin, NHP



**North Carolina Department of Cultural Resources**  
**State Historic Preservation Office**  
David L. S. Brook, Administrator

Michael F. Easley, Governor  
Lisbeth C. Evans, Secretary  
Jeffrey J. Crow, Deputy Secretary  
Office of Archives and History

Division of Historical Resources

October 20, 2003

MEMORANDUM

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

FROM: David Brook *for David Brook*

SUBJECT: Scoping Sheets, US 19E Improvements from SR 12186 in Yancey County to Existing Multilane Section West of Spruce Pine, R-2519B, Mitchell County, ER02-11410

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

RC and Zora Hise House, Intersection of Old US 19E and  
Double Island Road, Micaville  
Micaville Historic District, Micaville

We recommend that a Department of Transportation architectural historian identify and evaluate any structures over fifty years of age within the project area, and report the findings to us.

In addition, both Yancey and Mitchell Counties have not been surveyed in over fifteen years.

In terms of archaeological resources, this area of the state is extremely rich in prehistoric occupation sites. Several different types of archaeological sites have been recorded within the area, ranging from temporary hunting camps, to larger base camps, to more sedentary occupation sites. Several archaeological sites of the historic period are also recorded within the study area.

[www.hpo.dcr.state.nc.us](http://www.hpo.dcr.state.nc.us)

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-4763 • 733-8653
RESTORATION	515 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-6547 • 715-4801
SURVEY & PLANNING	515 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-6545 • 715-4801

October 20, 2003

Page 2

We recommend that a comprehensive survey be conducted by an experienced archaeologist to identify and evaluate the significance of archaeological remains that may be damaged or destroyed by the proposed project. Potential effects on unknown resources must be assessed prior to the initiation of construction activities.

Two copies of the resulting archaeological survey report, as well as one copy of the appropriate site forms, should be forwarded to us for review and comment as soon as they are available and well in advance of any construction activities.

A list of archaeological consultants who have conducted or expressed an interest in contract work in North Carolina is available at [www.arch.dcr.state.nc.us/consults](http://www.arch.dcr.state.nc.us/consults). The archaeologists listed, or any other experienced archaeologist, may be contacted to conduct the recommended survey.

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

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT  
Matt Wilkerson, NCDOT

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: Widen US 19E from SR 1186 (Old US 19) to existing multilane west of Spruce Pine

On April 19, 2005 representatives of the

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

Reviewed the subject project and agreed

- There are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.
- There are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.
- There is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.
- There is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

Signed: Vanessa E. Farris      4-19-05  
Representative, NCDOT      Date

\_\_\_\_\_  
FHWA, for the Division Administrator, or other Federal Agency      Date  
Samuel A. [Signature]      4/19/05  
Representative, HPO      Date

Peter B. Sandberg      4-19-05  
State Historic Preservation Officer      Date

State Project No.: 6.909001T

T.I.P. No.: R-2519B

County: Yancey/Mitchell

Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Micaville HD (DE)

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

Reason(s) why the effect is not adverse (if applicable).

Initialed:

NCDOT

VEP

FHWA

HPO

State Project No.: 6.909001T

T.I.P. No.: R-2519B County: Yancey/Mitchell

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: Widen US 19E from SR 1186 (Old US 19) to existing multilane west of Spruce Pine

On June 28, 2005 representatives of the

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

Reviewed the subject project and agreed

- There are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.
- There are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.
- There is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.
- There is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

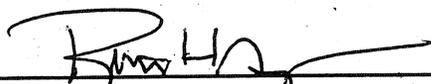
Signed:



Representative, NCDOT

June 28, 2005

Date



FHWA, for the Division Administrator, or other Federal Agency

6-28-05

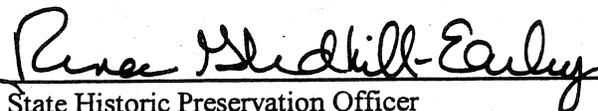
Date



Representative, HPO

6/28/05

Date



State Historic Preservation Officer

6-28-05

Date

State Project No.: 6.909001T

T.I.P. No.: R-2519B County: Yancey/Mitchell

Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

E.W. & Dollie Huskins House (DE) - fill of front yard

Reason(s) why the effect is not adverse (if applicable).

NCDOT will create slope (+seeded)  
that is feasible for mowing by owner

Initialed:

NCDOT

VEP

FHWA

RHW

HPO

SDM

# MITCHELL COUNTY



P.O. BOX 409, BAKERSVILLE, NC 28705  
TELEPHONE: 828-688-2139 FAX: 828-688-4443

E-mail: mitcty@mitchell.main.nc.us

October 29, 2002

Gregory J. Thorpe, Ph.D.  
Environmental Management Director, PDEA  
NC Department of Transportation  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Re: US 19E Improvements from SR 1186 in Yancey County to the  
Existing Multilane Section West of Spruce Pine in Mitchell County;  
State Project No. 6.909001T; TIP Project No. R-2519B

Dear Dr. Thorpe:

To our knowledge, there are no environmental impacts that could potentially arise from the proposed improvements to US 19E. Neither are there permits or approvals that our agency would require.

Should you or your staff have any other questions or need further assistance in some other manner, please do not hesitate to call the Mitchell County administration office, 828/688-2139, extension 110.

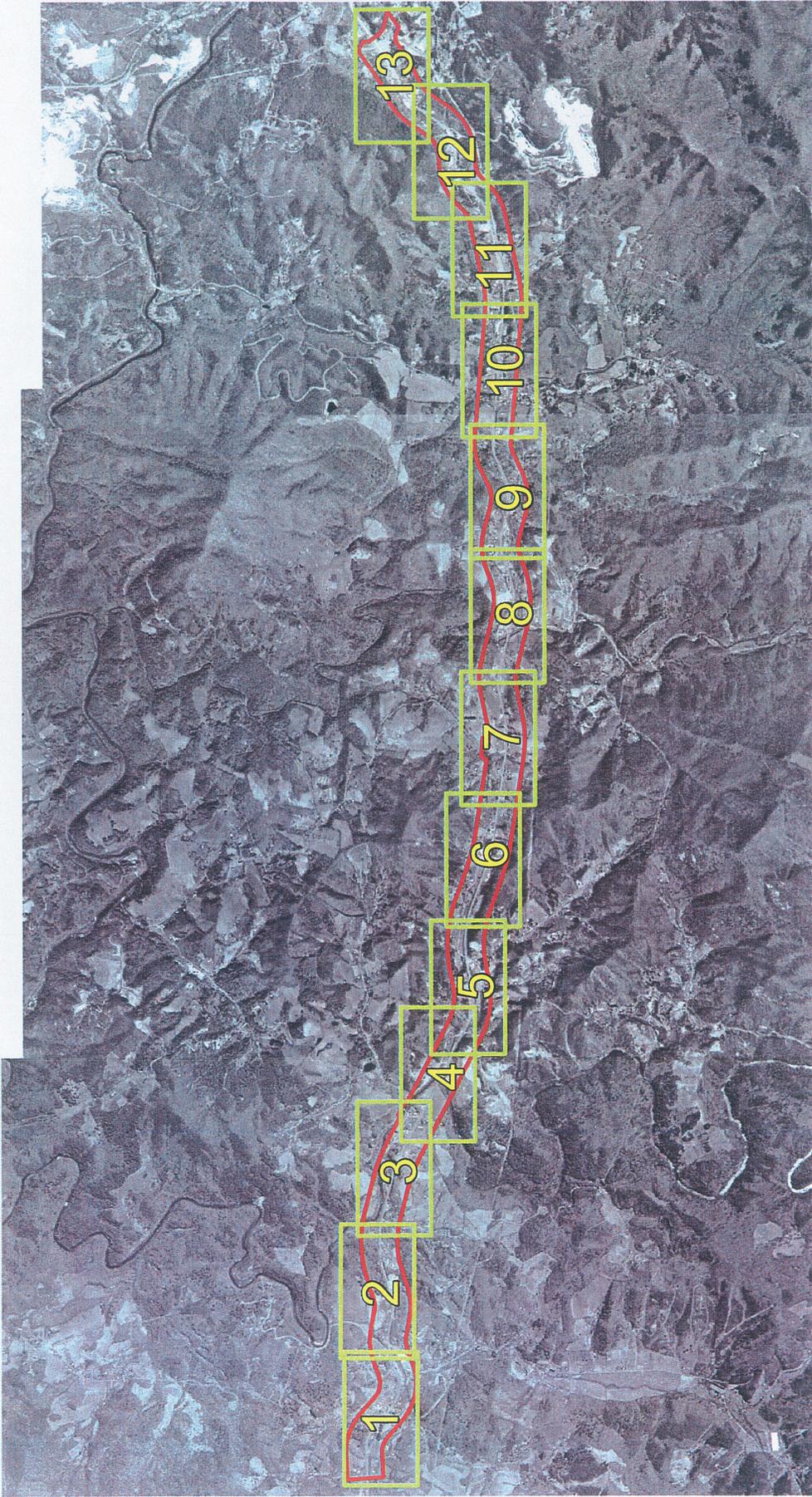
Sincerely,

*for* Harry Anderson, Chairman  
Mitchell County Board of Commissioners

SHN

# APPENDIX 4

## Wetland and Stream Locations



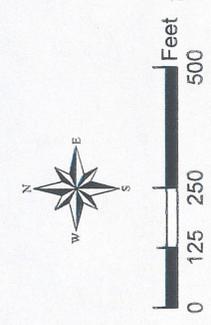
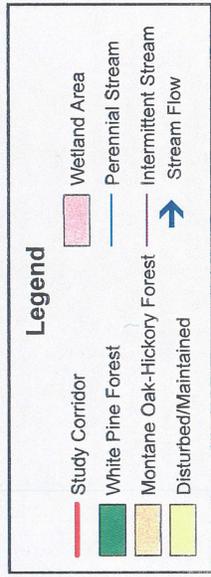
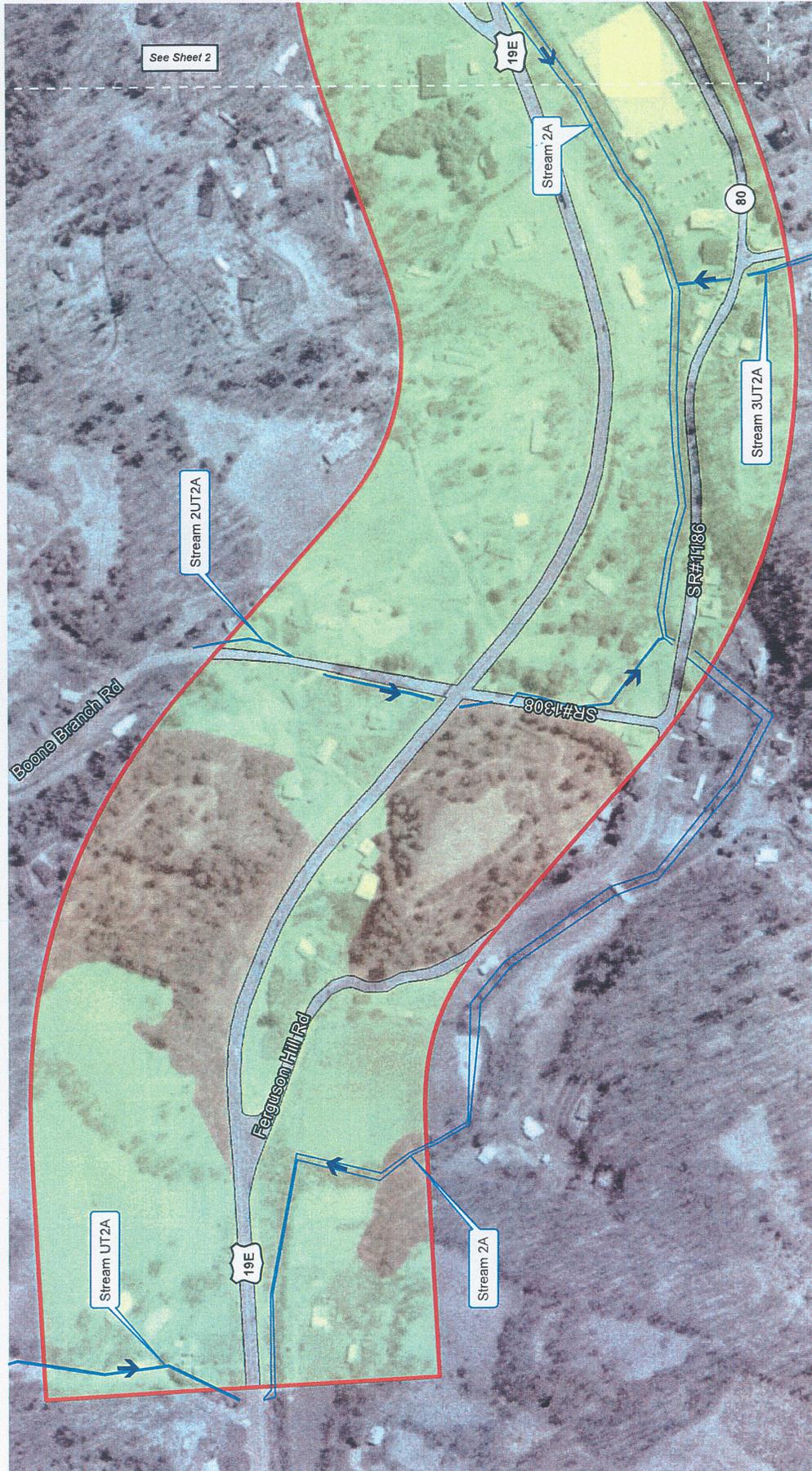
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PROJECT DEVELOPMENT & CONSTRUCTION  
PLANNING, DESIGN & CONSTRUCTION

Widening of US 19E  
Mitchell and Yancey Counties, NC

State Project No. 6.908001T  
T.J.P. No. R-25198

### Natural Resources Index Map





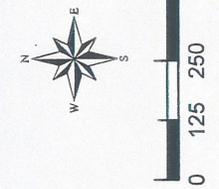

 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAY DESIGN AND CONSTRUCTION  
 ENVIRONMENTAL ANALYSIS BRANCH

Widening of US 19E  
 Mitchell and Yancey Counties, NC  
 State Project No. 6.909001T  
 T.I.P. No. R-2519B




 NORTH CAROLINA DEPARTMENT  
 OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 ENVIRONMENTAL PLANNING BRANCH

Widening of US 19E  
 Mitchell and Yancey Counties, NC  
 State Project No. 6 909001T  
 T.I.P. No. R-25198



**Legend**

-  Study Corridor
-  White Pine Forest
-  Montane Oak-Hickory Forest
-  Disturbed/Maintained
-  Wetland Area
-  Perennial Stream
-  Intermittent Stream
-  Stream Flow



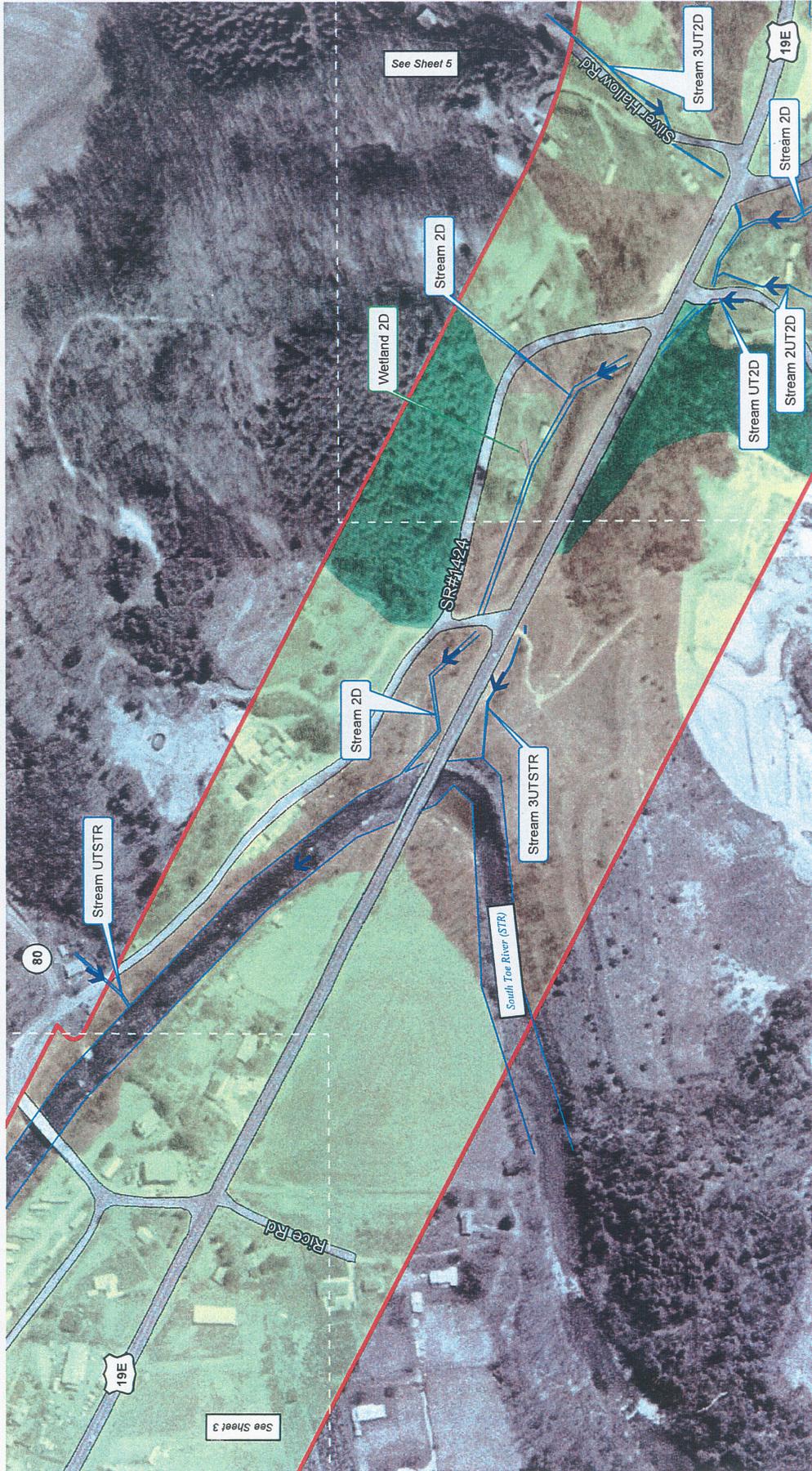

 NORTH CAROLINA DEPARTMENT  
 OF TRANSPORTATION  
 DIVISION OF HIGHWAY DESIGN AND  
 ENVIRONMENTAL AND SAFETY BRANCH

Widening of US 19E  
 Mitchell and Yancey Counties, NC  
 State Project No. 6 909001T  
 T.I.P. No. R-2519B


**Legend**

-  Study Corridor
-  White Pine Forest
-  Montane Oak-Hickory Forest
-  Disturbed/Maintained
-  Wetland Area
-  Perennial Stream
-  Intermittent Stream
-  Stream Flow



See Sheet 5

See Sheet 3

**Legend**

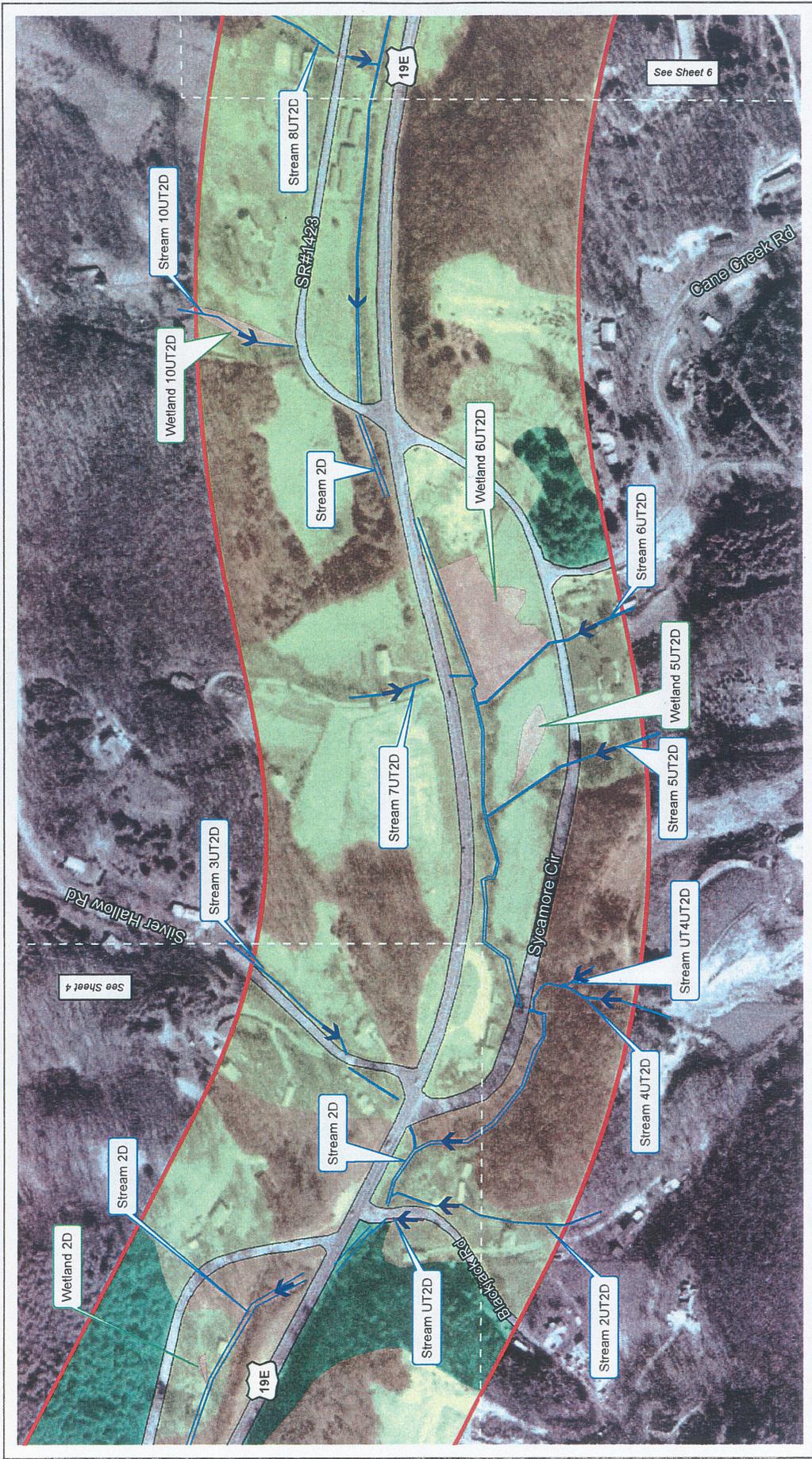
- Study Corridor
- White Pine Forest
- Montane Oak-Hickory Forest
- Disturbed/Maintained
- Wetland Area
- Perennial Stream
- Intermittent Stream
- Stream Flow




 NORTH CAROLINA DEPARTMENT  
 OF TRANSPORTATION  
 NCEM DEVELOPMENT AND  
 ENVIRONMENTAL AFFAIRS BRANCH

Widening of US 19E  
 Mitchell and Yancey Counties, NC

State Project No. 6 505001T  
 T.I.P. No. R-2519B



**Legend**

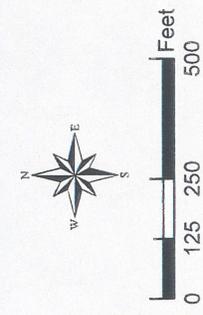
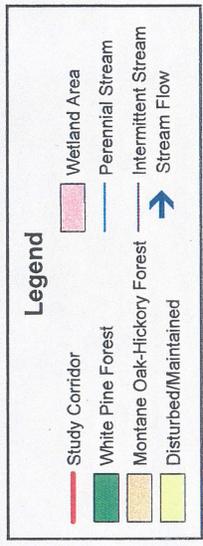
- Study Corridor
- White Pine Forest
- Montane Oak-Hickory Forest
- Disturbed/Maintained
- Wetland Area
- Perennial Stream
- Intermittent Stream
- Stream Flow

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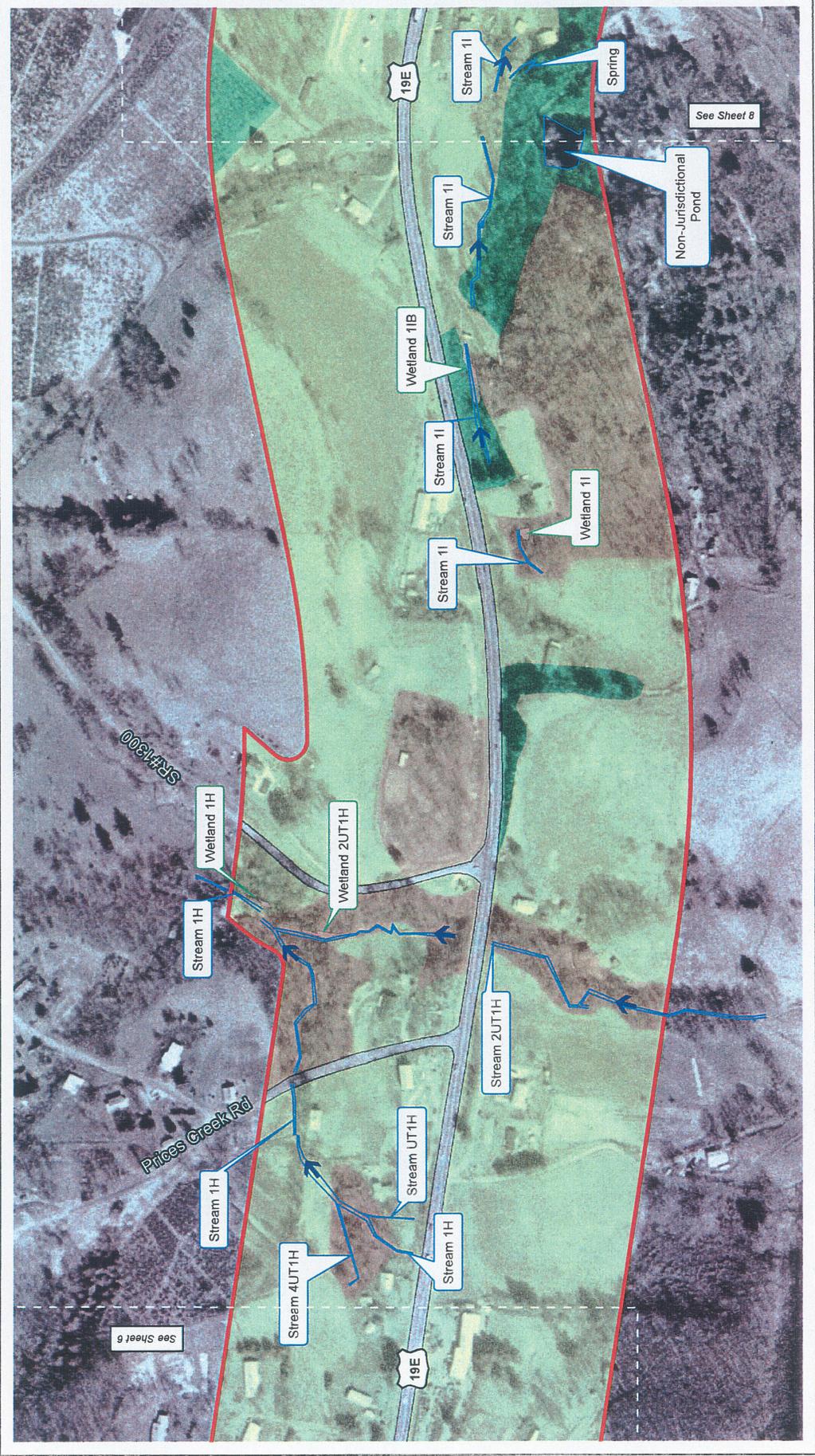
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 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 PROJECT ENGINEERING AND ENVIRONMENTAL PLANNING BRANCH  
 Widening of US 19E  
 Mitchell and Yancey Counties, NC  
 State Project No. 6.950001T  
 T.I.P. No. R-2518B



**Legend**

- Study Corridor
- White Pine Forest
- Montane Oak-Hickory Forest
- Disturbed/Maintained
- Wetland Area
- Perennial Stream
- Intermittent Stream
- Stream Flow

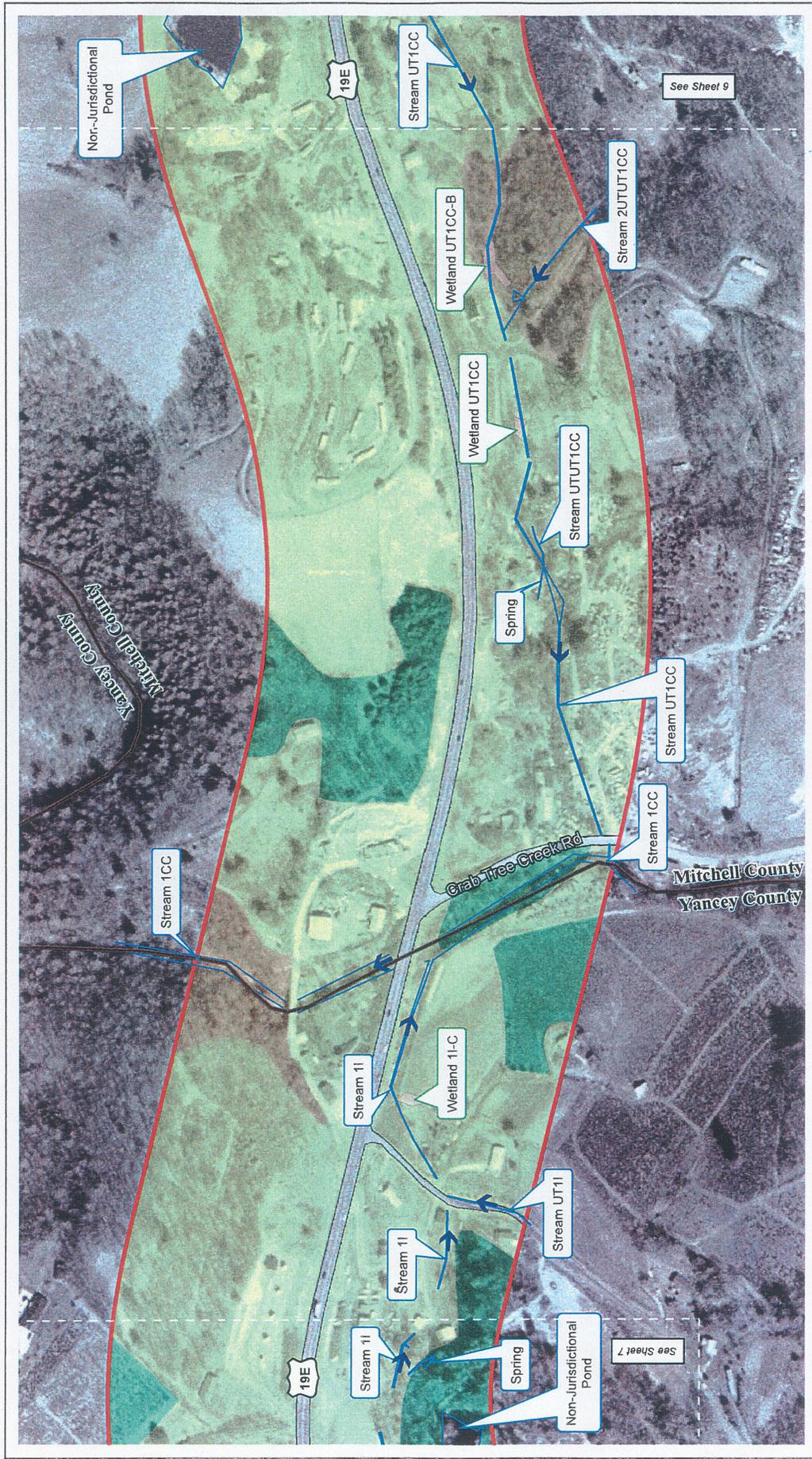
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NORTH CAROLINA DEPARTMENT  
OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
AND TRANSPORTATION PLANNING

Widening of US 19E  
Mitchell and Yancey Counties, NC

State Project No. 6.909001T  
T.I.P. No. R-2519B



See Sheet 9

See Sheet 7

**Legend**

- Study Corridor
- Wetland Area
- White Pine Forest
- Perennial Stream
- Montane Oak-Hickory Forest
- Intermittent Stream
- Stream Flow
- ➔ Stream Flow
- Disturbed/Maintained

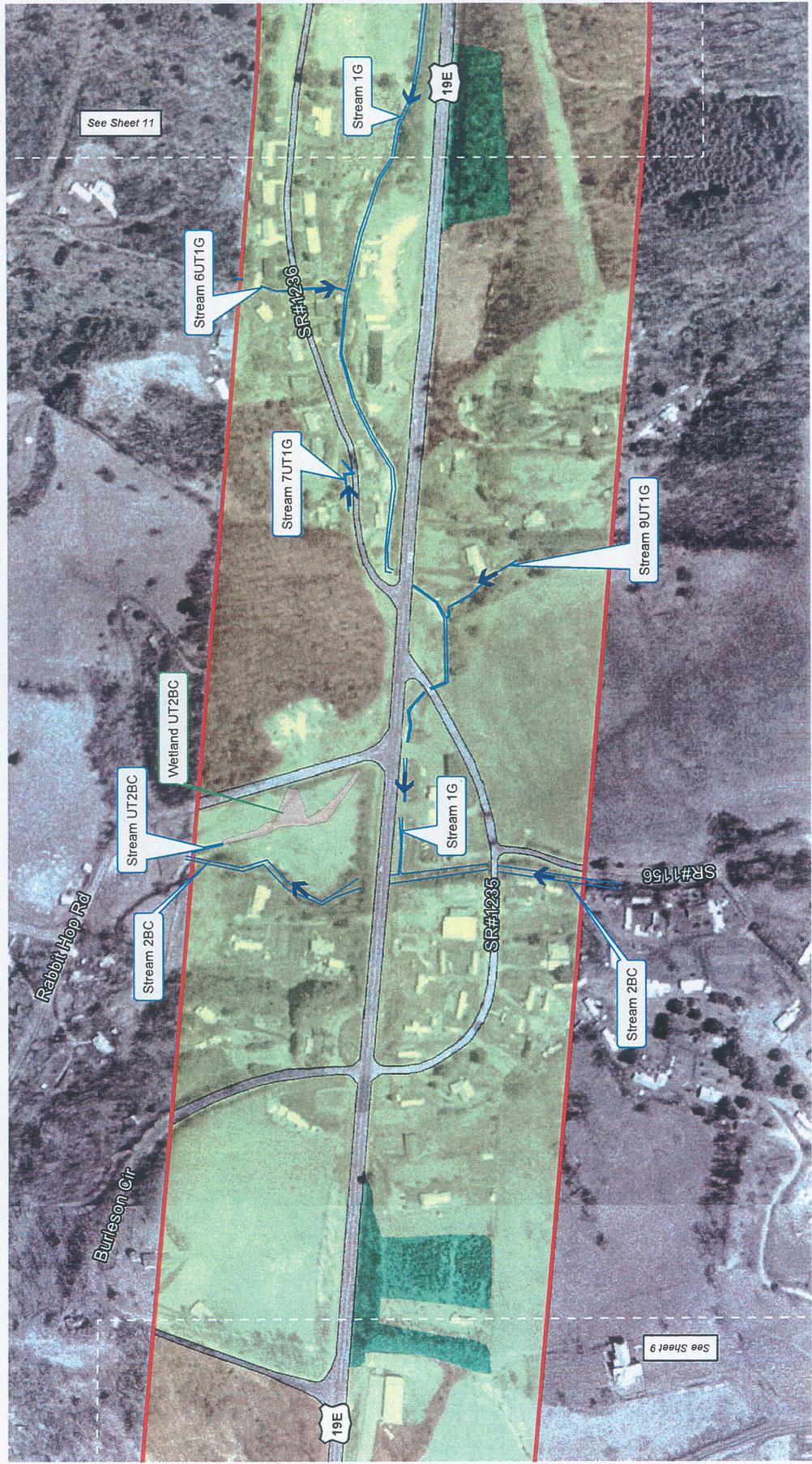
North Arrow

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 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 ENVIRONMENTAL AFFAIRS SECTION

Winding of US 19E  
 Mitchell and Yancey Counties, NC  
 State Project No. 6.990001T  
 T.I.P. No. R-2519B





See Sheet 11

See Sheet 9



NORTH CAROLINA DEPARTMENT  
 OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 TRANSPORTATION ANALYSIS BRANCH

Widening of US 19E  
 Mitchell and Yancey Counties, NC  
 State Project No. 6.900001T  
 T.I.P. No. R-2519B



**Legend**

- Study Corridor
- White Pine Forest
- Montane Oak-Hickory Forest
- Disturbed/Maintained
- Wetland Area
- Perennial Stream
- Intermittent Stream
- Stream Flow

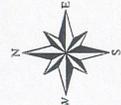


See Sheet 12

See Sheet 10

**Legend**

- Study Corridor
- White Pine Forest
- Montane Oak-Hickory Forest
- Disturbed/Maintained
- Wetland Area
- Perennial Stream
- Intermittent Stream
- Stream Flow



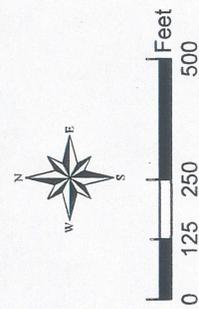
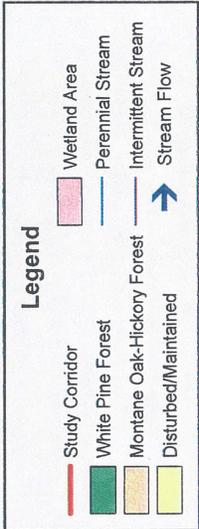
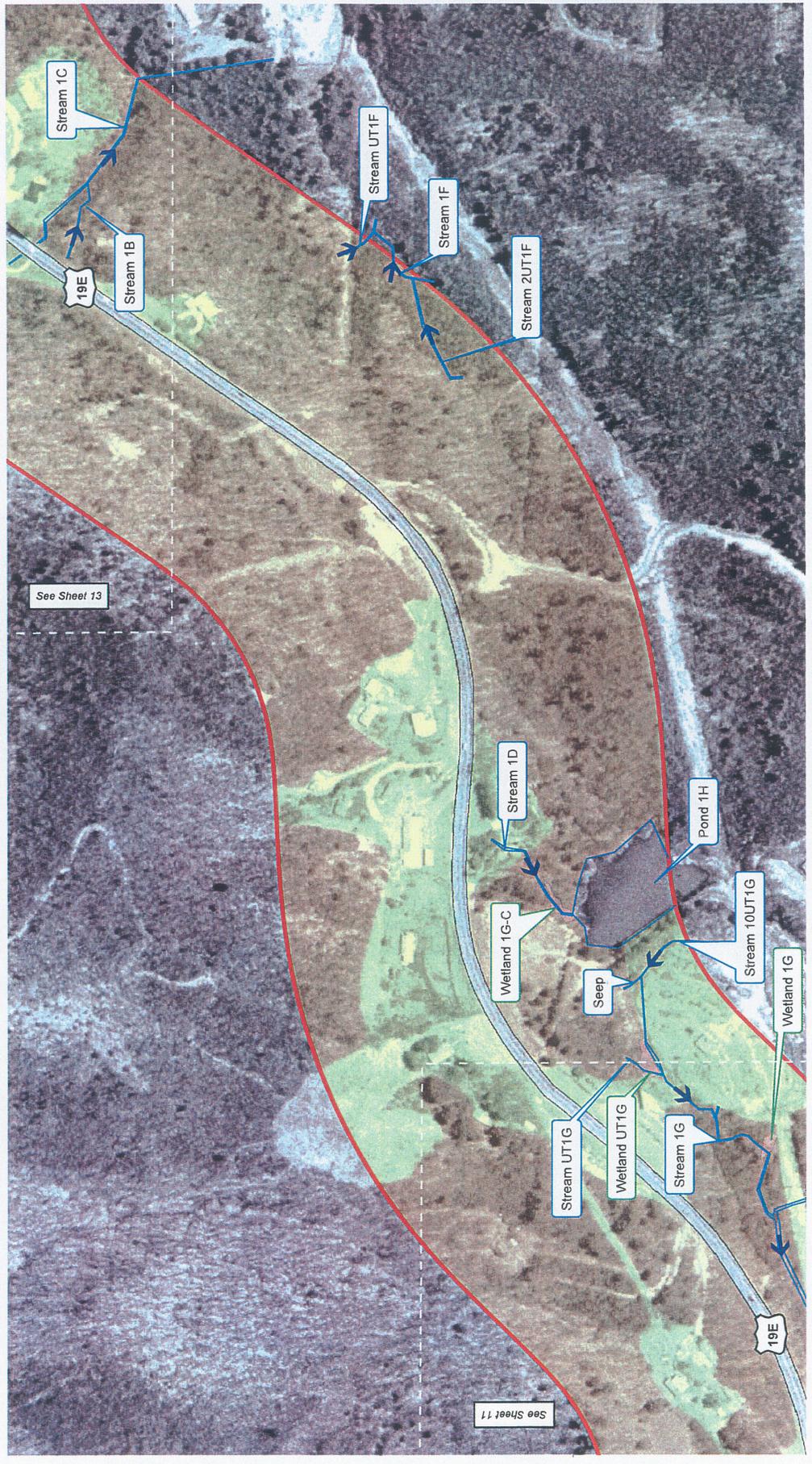
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PROJECT DEVELOPMENT AND MANAGEMENT UNIT/STAFF

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Widening of US 19E  
Mitchell and Yancey Counties, NC

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State Project No. 6 090901T  
T.L.P. No. R-2519B




 NORTH CAROLINA DEPARTMENT  
 OF TRANSPORTATION  
 DIVISION OF HIGHWAY DESIGN AND  
 CONSTRUCTION  
 ENVIRONMENTAL ANALYSIS BRANCH

Widening of US 19E  
 Mitchell and Yancey Counties, NC  
 Site Project No. 6.930001T  
 T.I.P. No. R-2518B



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION PLANNING AND REVENUE DIVISION  
 ENVIRONMENTAL SERVICES BRANCH  
  
 Widening of US 19E  
 Mitchell and Yancey Counties, NC  
 State Project No. 6.930001T  
 T.I.P. No. R-2518B

**Legend**

	Study Corridor		Wetland Area
	White Pine Forest		Perennial Stream
	Montane Oak-Hickory Forest		Intermittent Stream
	Disturbed/Maintained		Stream Flow