

**SR 1221 (OLD BEATTY FORD ROAD)  
HAZARD ELIMINATION IMPROVEMENTS**

From SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road)  
Rowan County, North Carolina

WBS ELEMENT – 46136.1.1  
FEDERAL AID PROJECT NO.: STP-1221(15)  
**TIP PROJECT NO. W-5313**

**ADMINISTRATIVE ACTION  
CATEGORICAL EXCLUSION**



U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
AND  
N.C. DEPARTMENT OF TRANSPORTATION  
submitted pursuant to the National Environmental Policy Act 42 USC 4332(2)(c)

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Federal Highway Administration

**SR 1221 (OLD BEATTY FORD ROAD)  
HAZARD ELIMINATION IMPROVEMENTS**

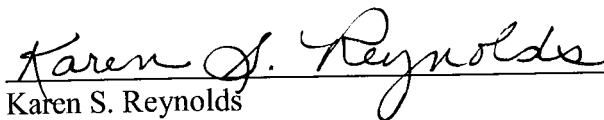
FROM SR 1337 (LENTZ ROAD) TO SR 2335 (LOWER STONE CHURCH ROAD)  
ROWAN COUNTY, NORTH CAROLINA

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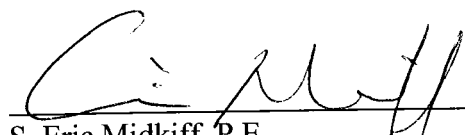
**CATEGORICAL EXCLUSION**

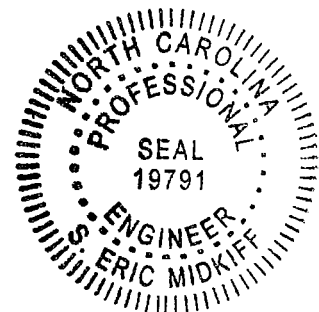
**MAY 2014**

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## PROJECT COMMITMENTS

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HAZARD ELIMINATION IMPROVEMENTS  
FROM SR 1337 (LENTZ ROAD) TO SR 2335 (LOWER STONE CHURCH ROAD)  
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### Project Development & Environmental Analysis Unit, Hydraulics Unit, Highway Division 9 Construction

- *NCDOT Design Standards in Sensitive Watersheds* will be implemented during project construction.
- All cut and fill slopes should be constructed no steeper, than 2:1 (H:V).
- No construction activities will take place within the historic boundary of the *Grace Evangelical and Reformed Church* property. This historic property is located at 2405 Lower Stone Church Road, Rockwell, North Carolina, 28138.

### Project Development & Environmental Analysis Unit, Roadway Design Unit, Highway Division 9 Construction

- Roadway design plans must provide treatment of storm water runoff through best management practices, as detailed in the most recent version of the *NCDWQ Stormwater Best Management Practices*.
- NCDOT will confine all construction activities to temporary construction easements on the Bostian School property, along SR 1221 (Old Beatty Ford Road). Tree avoidance measures and/or a replanting plan will be necessary for any affected, existing landscaping. During construction, unencumbered access will be provided for Bostian School students and staff.
- NCDOT will confine all construction activities to temporary construction easements on the historic Stirewalt-Faggart House property, located at 11020 Old Concord Road (SR 1002).
- NCDOT will confine all construction activities to temporary construction easements on the historic Orlin Cruse House property, located at 9530 Old Beatty Ford Road (SR 1221). Tree avoidance measures and/or a replanting plan will be necessary for any affected existing landscaping. Permanent utility easements may require increased trimming of trees along the Old Beatty Ford Road (SR 1221) historic property boundary.

### Highway Division 9 Construction & Maintenance

- Nine species on the *NCDOT Invasive Exotic Plant List for North Carolina* were found to occur in the study area. The threat species identified were Chinese privet and Japanese grass. The moderate threat species listed were Japanese honeysuckle, Johnsongrass, mimosa, sericea lespedeza, tree of heaven and wisteria. Additionally, periwinkle is on the watch list. The NCDOT will manage invasive plant species on department right-of-way, as appropriate.

## CATEGORICAL EXCLUSION

Prepared by the Project Development and Environmental Analysis Unit,  
of the North Carolina Department of Transportation,  
in Consultation with the Federal Highway Administration

### SUMMARY

#### 1. Type of Action

This is a Federal Highway Administration (FHWA) Administrative Action, Categorical Exclusion (CE).

#### 2. Description of Action

The North Carolina Department of Transportation (NCDOT) proposes to improve SR 1221 (Old Beatty Ford Road), from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road), south of the towns of China Grove and Rockwell, in Rowan County. Figures 1 and 2 show the project location, and the project beginning and ending limits. The purpose of the proposed project is to improve vehicular safety and traffic operations along SR 1221 (Old Beatty Ford Road), within the project limits. This project will aid in reducing the numerous run-off-the-road crashes, currently occurring along SR 1221 (Old Beatty Ford Road), within the project limits. The project is approximately 7.4 miles in length, and is a two-lane, two-way facility that will remain as such.

The proposed improvements to SR 1221 (Old Beatty Ford Road) are federally funded. Project Number W-5313 is included in the NCDOT 2012-2020 Transportation Improvement Program (TIP). Right-of-way acquisition and construction are scheduled in federal fiscal years 2014 and 2016, respectively. The current total estimated cost of the project is \$12,920,862, consisting of \$3,686,000 for right-of-way acquisition, 2,234,862 for utility relocation and \$7,000,000 for construction.

#### 3. Alternatives Considered

The alternatives studied for the proposed action include the No-Build Alternative and the Build Alternative.

The No-Build Alternative offers no improvements to the project area, and does not improve vehicular safety along this section of SR 1221 (Old Beatty Ford Road). Since the No-Build Alternative does not address the purpose and need of the proposed action, it is not recommended. However, the No-Build Alternative is given consideration in this CE, to provide a baseline of comparison with the Build Alternative.

The Build Alternative (*Recommended*) proposes standardizing the existing lane widths to 11 feet each within the project limits, constructing 2-foot paved shoulders and 2-foot earthen shoulders, and purchasing right-of-way along this section of SR 1221 (Old Beatty Ford Road). Turn lanes will be designed at project intersections as warranted, however no renovation of Bridge 126, across Dutch Buffalo Creek, is proposed in W-5313. The length of the proposed

hazard elimination improvements along SR 1221 (Old Beatty Ford Road) is approximately 7.4 miles.

#### **4. Coordination**

NCDOT Project Development staff consulted with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), the North Carolina Wildlife Resources Commission (NCWRC), the North Carolina Department of Environment and Natural Resources -Division of Water Quality (NCDWQ), the Rowan-Cabarrus Metropolitan Planning Organization (CRMPO) and the Rowan County Planning Department staff, during the planning, development and public involvement phases of this project. The USACE staff also verified project stream and wetland delineation on-site, with the NCDOT staff, prior to the final reporting of these findings. Per the NCDOT Cultural Resources staff, a survey recommended by the North Carolina Historic Preservation Office (HPO), was required for this project. Resource agency comments and correspondence is included in Appendix 1.

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

Table S1 contains a summary of the quantifiable impacts, associated with the proposed hazard elimination improvements of W-5313, along SR 1221 (Old Beatty Ford Road). The impacts associated with the proposed project are described in detail in Section V of this document.

#### **6. Actions Required by Other Agencies**

Constructing the proposed action will result in impacts to jurisdictional surface waters. Pursuant to 15A NCAC 2H.1006 and 15A NCAC 2B.0224, the NCDOT will be required to obtain a State Stormwater Permit, prior to construction.

#### **7. Additional Information**

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

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Project Development and Environmental Analysis Unit  
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**Table S1:  
W-5313: Summary of Beneficial & Adverse Environmental Impacts**

<b>Environmental Impacts</b>	<b>Units</b>	<b>Proposed Action</b>
Right-of-Way Cost	Dollars	\$3,686,000
Utility Relocation Cost	Dollars	\$2,234,862
Construction Cost	Dollars	\$7,000,000
Total Project Cost	Dollars	\$12,920,862
Project Length	Miles	7.4
Residential Relocations	Total	0
Business Relocations	Total	0
Non-Profit Relocations	Total	0
Farm Relocations	Total	0
Total Relocations	Total	0
Potential UST Facilities	Each	5
Hazardous Waste Sites	Each	0
Terrestrial Community Impacts	Acres	6.90
Prime/Statewide Important Farmland	Acres	0.08 (10 Farms)
Stream Crossings	Each	8
Stream Impacts	Linear feet	345.00
Buffer Impacts	Acres	0.00
Wetland Impacts	Acres	0.00
Open Water Impacts	Acres	0.00
Floodplain Impacts	Acres	0.00
Protected Species	Each	0
Noise (0 – 6 dBA)	Impacted Properties	0
Air Quality - Carbon Monoxide Concentration	NAAQS Standard*	In Compliance
Historic Property Impacts (De Minimus)	Eligible Properties	1
Archaeological Sites Impacts	Eligible Properties	0
Section 4(f) Resources (Parks, Recreation Areas, Wildlife Management Areas and Historic Properties)	Each	3

\* National Ambient Air Quality Standards - Maximum CO permitted per hour average = 35 parts per million (ppm)

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**I. PURPOSE AND NEED**

**A. General Description of Project**

The North Carolina Department of Transportation (NCDOT) proposes to improve SR 1221 (Old Beatty Ford Road) from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road), south of the towns of China Grove and Rockwell, in Rowan County. Figures 1 and 2 show the project location and the W-5313 beginning and ending limits. The project is approximately 7.4 miles in length and is a two-lane, two-way facility. Figure 8 shows a preliminary plan of the proposed action.

The improvements to SR 1221 (Old Beatty Ford Road) are federally funded. Project Number W-5313 is included in the NCDOT 2012-2020 Transportation Improvement Program (TIP). Right-of-way acquisition and construction are scheduled in federal fiscal years 2014 and 2016, respectively. The current total estimated cost of the project is \$12,920,862, consisting of \$3,686,000 for right-of-way acquisition, \$2,234,862 for utility relocation and \$7,000,000 for construction.

**B. Purpose and Need**

The purpose of this project is to improve vehicular safety and traffic operations along SR 1221 (Old Beatty Ford Road), from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road), by widening the existing facility, constructing paved and earthen shoulders, drainage ditches and purchasing right-of-way within the project limits, for highway maintenance and operations.

The need for this project is to improve safety. W-5313 was identified as a Hazard Elimination project by the NCDOT Triad Regional Traffic Safety engineers, in conjunction with the NCDOT Highway Division 9 engineering staff. Numerous run-off-road crashes, angle collisions and side-swipe collisions are occurring along this section of SR 1221 (Old Beatty Ford Road). Accident studies indicate that the crash rates for fatal, non-fatal and wet-conditions collisions are higher along this portion of SR 1221 (Old Beatty Ford Road), than the statewide averages of similar roads.

The proposed project improvements will upgrade the existing 9 to 11-foot wide lanes to standard 11-foot wide lanes, construct 2-foot wide paved shoulders, construct 2-foot wide earthen shoulders, construct drainage ditches and purchase right-of-way along this section of SR 1221 (Old Beatty Ford Road), for highway maintenance and operations.

**1. Traffic Volumes**

Estimated Annual Average Daily Traffic (AADT) volumes were developed for the proposed project, for the design-year 2035. These traffic volumes are shown in Figure 3A-B. The 2035 AADT volumes along SR 1221 (Old Beatty Ford Road) will range from 5,800 vehicles per day

(vpd), between SR 2570 (Roy Cline Road) and SR 2569 (Phaniel Church Road), to 4,100 vpd, between SR 2464 (Lower Stone Church Road) and SR 2335 (Lower Stone Church Road). Eight-percent truck traffic volumes are expected to use the facility in the design year 2035. SR 1221 (Old Beatty Ford Road) is currently a two-lane, two-way roadway, within the project limits.

## 2. Safety

A total of 98 crashes were reported within the project limits for the three-year period from October 1, 2007 to September 30, 2010. For crash rate purposes, this roadway section is classified as a rural, two-lane undivided North Carolina Secondary Route (SR). Table 1 shows a comparison of the crash rates for the analyzed section of SR 1221 (Old Beatty Ford Road), versus the 2006-2008 statewide crash rates and the calculated critical rate, with a 95% level of confidence for a comparable route type and configuration.

**Table 1: Crash Rate Comparisons**

Rate	Crashes	Crashes per 100 MVM	Statewide Rate	Critical Rate
<b>Total</b>	98	326.57	341.76	398.95
<b>Fatal</b>	3	<b>10.00</b>	3.89	11.48
<b>Non-Fatal Injury</b>	48	<b>159.95</b>	121.59	156.37
<b>Night</b>	34	113.30	140.27	177.51
<b>Wet</b>	19	<b>63.32</b>	53.05	76.59

MVM = million vehicle miles

Current crash rates exceed the statewide crash rate in fatal, non-fatal injury and wet categories, and exceed the critical crash rates in the non-fatal injury category. Table 2 categorizes the majority of crashes into four types; fixed object, rear-end and failure to yield frontal impact or angle and animal crashes.

**Table 2: Crash Type Comparison**

Type of Crash	Number of Crashes	Percent of Total
Fixed object	32	33%
Rear-end	13	13%
Angle	11	11%
Animal	11	11%

The intersection of SR 1221 (Old Beatty Ford Road) with SR 1002 (Old Concord Road) had the highest number of crashes of any of the intersections within the project limits. Three crashes within the project limits, during this time period, involved pedestrians. The high number of fixed object crashes should be alleviated with the widening of the existing travel lanes and the construction of paved and earthen shoulders along SR 1221 (Old Beatty Ford Road), throughout the project. The run-off-road crashes, rear-end crashes, angle crashes and animal-related crashes occurring within the project limits, should also be reduced by these actions.

## II. EXISTING CONDITIONS

### A. Length of Roadway Section Studied

The total length of the project is approximately 7.4 miles. The Federal Highway Administration (FHWA) has determined that the project, as currently proposed, connects logical termini. It is of sufficient length to address environmental matters on a broad scope, has independent utility and significance, and is a usable and reasonable expenditure, even if no additional transportation improvements are made in the area.

### B. Existing Typical Section

SR 1221 (Old Beatty Ford Road) is a two-lane, two-way facility, with varying lane widths of 9 to 11 feet, no paved shoulders and little to no existing earthen shoulders.

### C. Speed Limits

This section of SR 1221 (Old Beatty Ford Road), posts a 45 to 55 mile-per-hour speed limit.

### D. Sidewalks

There are no sidewalks along SR 1221 (Old Beatty Ford Road), in the project area.

### E. Right-of-Way

Existing right-of-way varies along this section of SR 1221 (Old Beatty Ford Road), however the facility is maintained for a width of 60 feet, or from ditch-line to ditch-line, within the project limits.

### F. Railroad Crossings

There are no railroad crossings along SR 1221 (Old Beatty Ford Road), within the project limits.

### G. Intersecting Roads

All intersecting roadways in the project limits have at-grade, stop-sign controlled intersections with SR 1221 (Old Beatty Ford Road). The roadway design plans of this project will be coordinated with the roadway design plans of Highway Division 9 Safety Project, *W-5146: Improvements to the SR 1221 (Old Beatty Ford Road) / SR 1006 (Organ Church Road) Intersection*.

### H. Structures

Bridge 126 conveys SR 1221 (Old Beatty Ford Road) over Dutch Buffalo Creek, between the intersections of SR 1002 (Old Concord Road) and SR 2569 (Phaniel Church Road), within the project limits. The sufficiency rating of this cored-slab bridge is 78.2. Bridge 126 is rated Functionally Obsolete, due to its 24 foot width, curb to curb. This bridge was built in 1992 and is not historically significant, nor is it to be replaced or rehabilitated in scope of this project.

### I. Utilities

Utility impacts within the project limits are expected to be moderate to low, in severity. Many parcels along SR 1221 (Old Beatty Ford Road) have wells located in the front yards. The utility relocation necessary to construct this project is estimated to cost approximately \$2,234,862.

**J. Bicycle Routes**

Route 1 of the *Rowan County Bike Map* (2009) utilizes SR 2464 (Lower Stone Church Road), from the Cabarrus County line northward, as it crosses SR 1221 (Old Beatty Ford Road). Additionally, SR 1221 (Old Beatty Ford Road) between SR 1308 (Moose Road) and SR 1006 (Organ Church Road), is an unsigned connector on the *Cabarrus County Bike Map*.

**K. School Bus Data**

Rowan County operates 18 bus routes along SR 1221 (Old Beatty Ford Road) twice daily, totaling 36 trips per day. Simple lane-closures and flagging-operations will be acceptable to the Rowan/Salisbury Schools Transportation Director, for buses navigating the project during construction.

**L. Navigable Waters**

There are no navigable surface waters in the project study area.

**M. Airports**

The Rowan County Airport is located approximately 8 miles north of the project area, the Davidson County Airport is located approximately 18 miles northeast of the project area, the Stanley County Airport is located approximately 16 miles southeast of the project area, and the Lake Norman Airpark is located approximately 18 miles northwest of the project area.

**N. Greenways**

There are no greenways along SR 1221 (Old Beatty Ford Road), in the project limits.

**O. Parks**

There are no parks along SR 1221 (Old Beatty Ford Road), in the project limits.

**P. Geo-Environmental Sites**

Geotechnical Engineering Unit personnel conducted a field reconnaissance along the 7.4-mile project corridor, on December 14, 2010. A search of appropriate environmental agency databases was performed to assist in evaluating sites identified during this study. Five locations may contain petroleum underground storage tanks (UST) along SR 1221 (Old Beatty Ford Road), within the project limits. No hazardous waste sites, no apparent landfills or any other geo-environmental concerns were identified, within the project limits. Low monetary and scheduling impacts resulting from these sites are anticipated, since the USTs have been removed from one of the sites and the USTs in the remaining four sites should be far enough from the proposed roadway construction to incur any such impacts. The Geotechnical Engineering Unit can provide assessments for each of these properties, if necessary prior to right-of-way acquisition. Figure 4 shows the potential UST site locations.

### **III. ALTERNATIVES CONSIDERED**

**A. Alternatives Considered For Detailed Study**

The alternatives studied for the proposed action include the No-Build Alternative and the Build Alternative. The Build Alternative consists of improving vehicular safety along SR 1221 (Old Beatty

Ford Road) by widening the existing travel lanes to standard widths to accommodate the design year traffic volumes, constructing paved and earthen shoulders and drainage ditches, and purchasing right-of-way within the project limits for highway maintenance and operations.

**1. No-Build Alternative**

The No-Build Alternative offers no improvements to the project area. It assumes that all other projects currently planned or programmed in the NCDOT TIP will be constructed in the project vicinity, as proposed. Continued roadway maintenance and minor improvements along SR 1221 (Old Beatty Ford Road) are a part of this concept. The No-Build Alternative does not improve vehicular safety along this section of SR 1221 (Old Beatty Ford Road). Since the No-Build Alternative does not address the purpose and need of the proposed action, it is not recommended.

**2. Build Alternative**

The Build Alternative proposes upgrading the existing 9 to 11-foot wide travel lanes inside the project limits to standardized 11-foot wide travel lanes, constructing 2-foot wide paved shoulders and 2-foot wide earthen shoulders, constructing drainage ditches and purchasing right-of-way along this section of SR 1221 (Old Beatty Ford Road) for highway maintenance and operations. No traffic signals are warranted for the proposed intersection designs within the project limits. The length of these proposed hazard elimination improvements along SR 1221 (Old Beatty Ford Road) is approximately 7.4 miles.

The proposed build alternative was presented to local citizens during a Citizens Informational Workshop (CIW), held in the Bostian School, on April 12, 2011. After reviewing the CIW comments and concerns, the proposed design alternative cross-section was decreased in width to minimize environmental impacts to both the natural and human environments.

The W-5313 Build Alternative proposes upgrading the existing 9 to 11-foot wide travel lanes inside the project limits, to standardized 11-foot wide travel lanes. NCDOT initially suggested constructing 12-foot wide travel lanes, throughout the project limits. Additional project minimization included constructing 2-foot wide paved shoulders, instead of 4-foot wide paved shoulders, along this section of SR 1221 (Old Beatty Ford Road). The proposed 4-foot wide earthen shoulders and 8-foot wide drainage ditches will be narrower than the widths of those items, originally presented to local officials and citizens, in the W-5313 CIW. The project will purchase additional right-of-way in various areas to average a 60-foot width of state-owned right-of-way along this section of SR 1221 (Old Beatty Ford Road), for highway maintenance and operations.

#### **IV. PROPOSED IMPROVEMENTS**

**A. Length of the Proposed Project**

The total length of the proposed project is approximately 7.4 miles.

**B. Typical Section Description**

The proposed action improves SR 1221 (Old Beatty Ford Road) by widening the lanes of the existing two-lane, two-way facility to a standard 11-foot width, constructing two-foot paved

shoulders, two-foot earthen shoulders and drainage ditches. The typical section for the proposed action is shown in Figure 5.

**C. Proposed Right-of-Way**

The proposed right-of-way along this section of SR 1221 (Old Beatty Ford Road) will be approximately 60 feet in width.

**D. Access Control**

No control-of-access is planned within the project limits.

**E. Intersection Treatment and Type of Control**

At-grade, stop-sign controlled intersections will continue to be used throughout the proposed project. No intersections are proposed to be signalized.

**F. Speed Limit and Design Speed**

The speed limit along SR 1221 (Old Beatty Ford Road) is proposed to be posted at 45 miles-per-hour, due to the rural nature of the existing facility and due to the future traffic volumes predicted to occur within the project limits.

**G. Noise Barriers**

No noise barriers are proposed as part of this project.

**H. Sidewalks**

Special accommodations for sidewalks are not included in the proposed action.

**I. Bicycle Accommodations**

Special accommodations for bicycles are not included in the proposed action.

**J. Structures**

No improvements to Bridge 126, over Dutch Buffalo Creek, are proposed in this project. "Narrow Bridge" warning signs will be installed on either bridge approach.

**K. Greenways**

There are no existing or proposed greenways along SR 1221 (Old Beatty Ford Road), within the project limits.

**L. Right-of-Way Cost**

The right-of-way cost is based on the preliminary design of the proposed action. Right-of-way costs includes: land and damage, utilities, and acquisitions. The estimated right-of-way cost for the proposed action is \$3,686,000. Table 3 shows the right-of-way cost, construction cost and total cost of the proposed project.

**M. Construction Cost**

The construction cost is based on the preliminary design of the proposed action. The construction cost estimate includes items such as clearing and grubbing, earthwork, drainage, and paving. The



estimated construction cost for the proposed action is \$7,000,000. Table 3 shows the right-of-way cost, construction cost and total cost of the proposed project.

**N. Total Cost**

The total cost of the proposed action is \$12,920,862. Table 3 summarizes the right-of-way, construction and total cost of the project.

**Table 3: Cost Summary**

<b>Cost Item</b>	<b>Proposed Action</b>
Construction Cost	\$7,000,000
Right of Way/ Utility Relocation Cost	\$5,920,862
Total Cost	\$12,920,862

**V. ENVIRONMENTAL EFFECTS**

**A. Social and Economic Effects**

**1. Existing Land Use**

The proposed project improvements along SR 1221 (Old Beatty Ford Road) are located in southeastern, Rowan County, southeast of the Town of China Grove, south of the Town of Rockwell and northeast of the City of Kannapolis. Existing land use within the project area is comprised of cultivated farmland, pasture land, forested land, institutional, limited commercial and low-density residential.

**2. Community Profile**

**a. Direct Community Impact Area (DCIA)**

The Direct Community Impact Area (DCIA) is the area surrounding a project that will likely be affected during project construction and after project completion. The area adjacent to and very near existing SR 1221 (Old Beatty Ford Road), inside the project limits in Figure 6, is the DCIA for this project. The W-5313 DCIA extends from the intersection of SR 1337 (Lentz Road) with SR 1221 (Old Beatty Ford Road) to the SR 2335 (Lower Stone Church Road) and SR 1221 (Old Beatty Ford Road) intersection. This DCIA includes the parcels fronting SR 1221 (Old Beatty Ford Road) and any parcels with sole access to and from the roadway, that could be potentially impacted by the proposed project.

**b. Demographic Study Area**

The Demographic Study Area is an area that completely contains the direct community impact area and the smallest number of Block Groups, as determined by the 2010 US Census. The census geographies for this project include Census Tract 514 - Block Group 1, Census Tract 511.01 - Block Groups 4 and 3, and Census Tract 510.01 – Block Group 1.

**c. Community Characteristics**

There are active farms, fields and large tracts of minimally-developed acreage that have access to this section of SR 1221 (Old Beatty Ford Road). The main land use in the project area

consists of older, modest, single-family homes. Bostian School is located in the western portion of the project. Several churches and accompanying cemeteries are located along this section of SR 1221 (Old Beatty Ford Road), including Ebenezer Lutheran, Phaniel Baptist, Vision Baptist and Grace Lower Stone Church. Historic structures, which are listed in the National Register of Historic Places, are located in the project area, as well as a rural volunteer, fire station that is located in the eastern portion of the project.

**d. Population Characteristics**

According to the 2010 US Census, the population in the Demographic Study Area was 8,706, as shown in Table 4. This number represented a 20.2% (1,463 people) increase in population from 7,243 people in 2000. This compares to a 6.2% increase in population in Rowan County, during the same period. The population increases were not consistent across the Demographic Study Area. Census Tract 514, Block Group 1, closest to China Grove and Kannapolis, experienced an increase of 18.8% or 307 people during this time. Block Group 1 in Census Tract 510.01, south of the Town of Rockwell, experienced a 28.3% increase in population or 507 people during the same time period.

**Table 4: Population Characteristics**

<b>Population Trends: 2000-2010</b>	<b>2000</b>	<b>2010</b>	<b>Difference</b>	<b>% Change</b>
Census Tract 514, Block Group 1	1,629	1,936	307	18.8%
Census Tract 511.01, Block Group 4	1,830	2,206	376	20.5%
Census Tract 511.01, Block Group 3	1,992	2,265	273	13.7%
Census Tract 510.01, Block Group 1	1,792	2,299	507	28.3%
DSA Aggregate	7,243	8,706	1,463	20.2%
Rowan County	130,340	138,428	8,088	6.2%
North Carolina	8,049,313	9,535,483	1,486,170	18.5%

Source: US Census Bureau, Summary File 2000 & 2010

**e. Race and Ethnicity**

In the Demographic Study Area, 94.1% of the population identified themselves as racially White and 2.3% identified themselves as racially Black or African-American, in the 2010 Census. The Demographic Study Area has a higher percentage of a racially White population and a much lower percentage of a Black or African-American population, than does Rowan County (76.5% White and 16.2% Black or African-American), as shown in Table 5. According to the 2010 census, only 3.0% of the population, or 225 people, living in the demographic study area identified themselves as ethnically Hispanic or Latino. This group percentage is lower than the Rowan County Hispanic or Latino group percentage, at 7.7%.

**Table 5: Race and Ethnicity**

Rowan County Block Groups – Ethnic Populations 2010 Census	Census Tract 514 Block Group 1		Census Tract 511.01 Block Group 4		Census Tract 511.01 Block Group 3		Census Tract 510.01 Block Group 1		Rowan County	
White	1,864	96.3%	1,068	96.7%	2,090	92.3%	2,131	92.7%	105,923	76.5%
Black / African American	28	1.4%	19	1.7%	77	3.4%	47	2.0%	22,392	16.2%
American Indian / Native Alaskan	4	0.2%	0	0.0%	9	0.4%	6	0.3%	468	0.3%
Asian	7	0.4%	0	0.0%	4	0.2%	27	1.2%	1,386	1.0%
Native Hawaiian / Other Pacific Islander	0	0.0%	0	0.0%	0	0.0%	1	0.0%	49	0.0%
Some other race, alone	14	0.7%	2	0.2%	55	2.4%	42	1.8%	5,993	4.3%
Non-White	72	3.7%	37	3.3%	175	7.7%	168	7.3%	32,505	23.5%
Hispanic / Latino	27	1.4%	23	2.1%	112	4.9%	63	2.7%	10,644	7.7%
<b>Total</b>	<b>1,936</b>	<b>100%</b>	<b>1,105</b>	<b>100%</b>	<b>2,265</b>	<b>100%</b>	<b>2,299</b>	<b>100%</b>	<b>138,428</b>	<b>100%</b>

Source: US Census Bureau, Table P1 (2010)

The percentage of the population that identified themselves as racially Non-White varies from 3.3% to 7.7% among these four project area, census tract block groups. These Block Groups have minority population percentages that are notably lower than the Rowan County percentage of 23.5%.

**f. Income / Poverty Status**

According to the 2006-2010 Census Estimates, 13.4% of the population within the Demographic Study Area has incomes below the poverty level, as shown in Table 6. The poverty level varies across the demographic area. In Census Tract 514, Block Group 1, 21.2% of the population has incomes that are below the poverty level, with 7.3% of the population having incomes less than 50% of the poverty level. In Census Tract 511.01, Block Group 4, 5.9% of the population has incomes that are below the poverty level, with 3.3% of the population having incomes less than 50% of the poverty level. In Census Tract 511.01, Block Group 3, 20.8% of the population has incomes that are below the poverty level, with 13.1% of the population having incomes less than 50% of the poverty level. In Census Tract 510.01, Block Group 1, 6.0% of the population has incomes that are below the poverty level, with 2.8% of the population having incomes less than 50% of the poverty level.

**Table 6: Income / Poverty Status**

Low Income	Population Below Poverty Level		Population Below 50% of Poverty Level	
CT 514, BG 1	400	21.2%	137	7.3%
CT 511.01, BG 4	110	5.9%	62	3.3%
CT 511.01, BG 3	455	20.8%	286	13.1%
CT 510.01, BG 1	136	6.0%	62	2.8%
DSA Aggregate	1,101	13.4%	547	6.7%
Rowan County	21,593	16.3%	8,716	6.6%
North Carolina	958,667	12.2%	431,894	5.5%

Source: US Census Bureau, American Community Survey 5-year Estimates (2006-2010), Table C17002 "Ratio of Income to Poverty Level in the Past 12 Months"

**g. Community Resources - Facilities and Businesses**

There are no community facilities and six small, local businesses in the DCIA. The Rockwell Rural Fire Department is just outside of the project ending terminus.

**h. Transit**

Rowan Transit operates a demand-only transit service for the handicapped and the elderly, within the project limits.

**i. Community Safety and Emergency Response**

Emergency Response Services in the project limits are provided by Rowan County.

**3. Analysis of Community Impacts**

The proposed improvements along this section of SR 1221 (Old Beatty Ford Road) are likely to have minor temporary and permanent impacts on the surrounding community and quality of life.

**a. Physical, Social and Psychological Aspects**

SR 1221 (Old Beatty Ford Road) currently acts as a physical barrier between the residences on the north side of the roadway and those on the south side. The Direct Community Impact Area (DCIA) is comprised of farms, fields and large tracts of minimally-developed acreage. The area surrounding the DCIA is becoming more suburban in-nature. No Environmental Justice populations appear to be affected and impacts to minority and low-income populations do not appear to be disproportionately high and adverse. There are no notable socio-economic resources located in the DCIA, but six local businesses exist in this area. The proposed project will not alter interactions between local individuals or groups, or change the physical composition of the local area.

The proposed widening of the existing lanes along SR 1221 (Old Beatty Ford Road) and the proposed addition of left-turn lanes at SR 1002 (Old Concord Road) and at SR 2335 (Lower Stone Church Road) will improve motorists' safety and will reduce collisions associated with run off the road crashes and with crashes associated with traffic queuing behind vehicles waiting for breaks in oncoming traffic, to execute these left-turns. The project will not impact traffic capacity, notably reduce local travel time, significantly alter local traffic patterns, affect community cohesion, access or exposure of adjacent parcels, or create new transportation or land use nodes, along this section of SR 1221 (Old Beatty Ford Road). Improvements to the intersection of SR 1006 (Organ Church Road) and SR 1221 (Old Beatty Ford Road) will be complete, prior to the beginning of the proposed action.

**b. Visual / Aesthetic Impacts**

The proposed action should have little effect on the aesthetics of the project area. The project improvements will only impact the aesthetic qualities of individual properties, where minimal vegetation is to be removed.

**c. Economic Conditions**

No businesses in the area will be displaced by the roadway project.

**d. Mobility**

Mobility is defined as the ability to move from one place to another or the potential for that movement. The project should improve overall mobility for motorists traveling to and through the project area, along SR 1221 (Old Beatty Ford Road). The construction of W-5313 should also improve overall mobility and safety for school buses using this corridor.

**e. Community Safety and Emergency Response**

The construction of the W-5313 hazard elimination improvements should increase driver safety in the project area by reducing the potential for run-off-road and rear-end collisions.

Emergency Response Services from Rowan County have indicated that the construction of the hazard elimination improvements along this section of SR 1221 (Old Beatty Ford Road) will not disrupt response times, if timely notification is received from the NCDOT, prior to construction. This will allow for determination of alternate routes for all safety vehicles in the area. After construction, the project should have no impact on emergency response.

**f. Environmental Justice**

No notably adverse community impacts are anticipated from this project. No Environmental Justice populations appear to be affected; thus, impacts to minority and low-income populations do not appear to be disproportionately high and adverse. Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the community. No denial of benefits is expected. Public involvement and outreach activities must ensure full and fair participation of all potentially affected communities, during the project decision-making process.

**g. Future Land Use Effects**

No future land use effects are expected, as a result of this project. The roadway safety and operational improvements will result in enhanced conditions for existing commuters, but will not affect sub-regional commuting patterns.

**h. Indirect and Cumulative Impacts**

No Indirect or Cumulative Impacts are anticipated in the project limits, due to the construction of the proposed hazard elimination improvements along SR 1221 (Old Beatty Ford Road). No additional lanes will be constructed by this project. Minor widening of the existing lanes will occur, along with the construction of narrow paved and earthen shoulders, and drainage ditches. The project will not alter the roadway traffic capacity or local travel-patterns, reduce travel times, affect access to, or exposure of adjacent parcels, or create new transportation or land-use nodes. Due to the minimal transportation impact-causing activities, this project will neither influence nearby land uses nor stimulate growth, within the project limits.

**i. Relocation Impacts**

The proposed action will displace no residences, businesses, farms or non-profit organizations, within the project limits.

**j. Cultural Resources**

This project is subject to compliance with section 106 of the National Historic Preservation Act of 1966, as amended, implemented by the Advisory Council on Historic

Preservation's Regulations for compliance with Section 106, licensed, or permitted project has an effect on a property listed on or eligible for the National Register of Historic Places (NRHP), the Advisory Council on Historic Preservation has been given an opportunity to comment.

**1). Historic Architectural Resources**

A search of the North Carolina Historic Preservation Office (NCHPO) GIS database revealed that there were 14 known structures of historical or architectural importance within the proposed Area of Potential Effects (APE). Since a historic structures inventory of Rowan County was more than 30 years old, a survey and evaluation of any structures over 50 years old, within the W-5313 APE was recommended. (Letter dated November 30, 2010, in Appendix 1)

The initial field survey, conducted in November 2011, identified 77 properties with buildings constructed prior to 1962. These findings were presented to the NCHPO staff in February 2012, where further information was requested concerning nine properties. A report was prepared by a consultant and submitted to the NCHPO in August 2012. The NCHPO did not concur with the report findings and requested further information in their letter, dated October 12, 2012. NCDOT architectural historians conducted the research and submitted a letter, as such, to the NCHPO on July 9, 2013. (Appendix 1) On July 29, 2013, the NCHPO concurred with the July 2012 letter and recognized the following properties, as eligible historic resources within the project APE. An effects meeting among NCDOT staff, NCHPO staff and FHWA staff was held in September 2013, to discuss impacts to each of the historic properties. NCHPO and FHWA requested further design information for two of the five historic properties. Findings by NCDOT and the HPO are described in Table 7 and in Appendix 1.

**Table 7: Historic Architectural Resources**

Historic Resource	Status	Effect
Bostian School	Determined Eligible, Criterion A	No Adverse Effect, with Environmental Commitment
Stirewalt-Faggart Farm	Determined Eligible, Criterion A	No Adverse Effect, with Environmental Commitment
John Stigerwalt House	National Register listed, but Reduced Boundary - Criterion C	No Effect
Orlin Cruse House	Determined Eligible, Criterion C	No Adverse Effect, with Environmental Commitment
Grace Evangelical & Reformed Church	National Register listed, Criteria A & C	No Effect

**2). Archaeological Resources**

A State Historic Preservation Office GIS search revealed that there were no recorded historic structures that may have intact archaeological deposits located within the footprint of the proposed project. No archaeological investigation is required for this project by the SHPO. (Letter dated December 3, 2010, in Appendix 1)

#### 4. Section 4(f) Resources

Section 4(f) of the DOT Act of 1966 protects the use and function of publicly owned parks, recreation areas, wildlife/waterfowl refuges and historic properties. A transportation project can only use land from a 4(f) resource when there are no other feasible or prudent alternatives, and when the project includes all possible planning efforts to minimize harm to the resource(s) in question.

A 20-foot wide, temporary construction easement will be required along the Bostian School property adjacent to SR 1221 (Old Beatty Ford Road), for the construction of the W-5313 hazard elimination improvements. This is considered a "De Minimis" action by the Federal Highway Administration (FHWA) and will have no adverse impact upon the elementary school property or corresponding facilities. NCDOT will confine all construction activities to temporary construction easements on the Bostian School property, along SR 1221 (Old Beatty Ford Road). Tree avoidance measures and/or a replanting plan will be necessary for any affected, existing landscaping. During construction, unencumbered access will be provided for the Bostian School students and staff. The roadway design was revised to avoid acquiring right-of-way from this property.

A 20-foot wide, temporary construction easement will be required along the historic Stirewalt-Faggart Farm property adjacent to SR 1221 (Old Beatty Ford Road), for the construction of the W-5313 hazard elimination improvements. This is considered a "De Minimis" action by the FHWA and will have no adverse impact upon the historic farm property or corresponding buildings. NCDOT will confine all construction activities to temporary construction easements on the historic property, along SR 1221 (Old Beatty Ford Road). The roadway design was revised to avoid acquiring right-of-way from this property,

A 5-foot wide parcel of right-of-way, measuring 0.08 of an acre, will be acquired from the Orlin Cruse House property along SR 1221 (Old Beatty Ford Road), for the construction of the W-5313 hazard elimination improvements. A 20-foot wide, temporary construction easement will also be required along the historic Orlin Cruse House property adjacent to SR 1221 (Old Beatty Ford Road), for the construction of these roadway improvements. These are considered "De Minimis" actions by the FHWA and will have no adverse impact upon the historic property or corresponding buildings. NCDOT will confine all construction activities to temporary construction easements on the historic Orlin Cruse House property, along SR 1221 (Old Beatty Ford Road). Tree avoidance measures and/or a replanting plan will be necessary for any affected existing landscaping. Permanent utility easements may require increased trimming of trees along the Old Beatty Ford Road (SR 1221), historic property boundary. The roadway design was revised to avoid acquiring a wider right-of-way parcel from this historic property,

#### B. Farmland Impacts

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

As is required by the *Farmland Protection Policy Act*, a screening of potential farmland impacts has been completed. Part VI of the NRCS-CPA-106 form (for corridor projects) has been completed, according to the FHWA guidelines. (Figure 6B: form and mapping) Since this project received a total point value of less than 60 points, the proposed W-5313 hazard elimination

improvements fall below the NRCS minimal criteria and will not be evaluated further for farmland impacts. No other alternatives, other than that already discussed in this document, will be considered without a re-evaluation of the potential project impacts upon farmland. This project will not have a significant impact to farmland in Rowan County.

The project is located in southern Rowan County and is surrounded by a mixture of farmland, small businesses and low-density residential land uses. Minor farmland impacts are expected in the project area, due to the right-of-way acquisition necessary to construct the project hazard elimination improvements. Much of the farmland soils in the project area are prime farmlands and are eligible for protection under the US Farmland Protection Policy Act (FPPA); however no land within the project DICA is participating as a Voluntary Agricultural District (VAD) or as an Enhanced Voluntary Agricultural District (EVAD). No currently-farmed land is expected to become non-farmable, due to the construction of the proposed, project hazard elimination improvements, which could support safer movement of agricultural machinery along this section of SR 1221 (Old Beatty Ford Road). To minimize impacts to all properties along SR 1221 (Old Beatty Ford Road), the proposed roadway design for paved and earthen shoulders and for drainage ditches on both sides of Old Beatty Ford Road, has been reduced in width. The hazard elimination improvements proposed for W-5313 are expected to impact 0.08 acres of Prime and Statewide Important Farmland on ten farms within the proposed project limits.

### **C. Natural Environment Effects**

NCDOT Biologists evaluated the natural systems and conducted field work in the project area, during five various field trips from July through October 2011. Jurisdictional areas identified in the project study area were verified by the U.S. Army Corps of Engineers (USACE) on April 30, 2012, and by the North Carolina Division of Water Quality (NCDWQ), on April 25, 2012.

The area surrounding this section of SR 1221 (Old Beatty Ford Road) is located in a rural setting, in Rowan County. The study area lies in the piedmont physiographic region of North Carolina. Topography, in the project vicinity, is comprised of gently rolling hills, with narrow, level floodplains along stream corridors (Figure 7). Elevations in the project study area range from 750 to 830 feet above sea level. Land Use in the project vicinity consists primarily of agriculture, interspersed with residential development, along roadways and forested areas.



## 1. Soils

The Rowan County Soil Survey identifies twenty soil types within the project study area. These soils types are summarized in Table 8.

**Table 8 Soils in the Study Area** \*Soils which are primarily non-hydric, but which may contain hydric inclusions

Soil Series	Mapping Unit	Drainage Class	Hydric Status
Appling sandy loam	ApB	Well Drained	Non-hydric
Ashlar-Rock outcrop	AsB	Well Drained	Non-hydric
Cecil sandy clay	CeB2	Well Drained	Non-hydric
Cecil sandy clay	CeC2	Well Drained	Non-hydric
Chewacla loam	Ch	Somewhat Poorly Drained	Hydric*
Enon fine sandy loam	EnB	Well Drained	Non-hydric
Enon fine sandy loam	EnC	Well Drained	Non-hydric
Helena sandy loam	HeB	Moderately Well Drained	Hydric
Lloyd clay loam	LdB2	Well Drained	Non-hydric
Mecklenburg loam	MeB2	Well Drained	Non-hydric
Mecklenburg loam	MeC2	Well Drained	Non-hydric
Pacolet sandy loam	PaC2	Well Drained	Non-hydric
Pacolet sandy clay	PcB2	Well Drained	Non-hydric
Pacolet sandy clay	PcC2	Well Drained	Non-hydric
Poindexter-Rowan complex	PxD	Well Drained	Non-hydric
Rion-Wedowee complex	RnC	Well Drained	Non-hydric
Rion-Wedowee-Ashlar complex	RoB	Well Drained	Non-hydric
Rion-Wedowee-Ashlar complex	RoC	Well Drained	Non-hydric
Sedgefield fine sandy loam	SeB	Moderately Well Drained	Hydric
Vance sandy loam	VaB	Well Drained	Non-hydric

## 2. Water Resources

Water resources in the study area are part of the Yadkin River Basin [U.S. Geological Survey (USGS) Hydrologic Units 03040103 and 03040105]. Eight streams were identified in the study area, as listed in Table 9. The location of each water resource is shown in Figure 8A-F. Physical characteristics of these streams are provided in Table 10.

**Table 9: Water Resources in the Study Area**

Stream Name	Map ID	NCDWQ Index Number	Best Usage Classification
Dutch Buffalo Creek	SA	13-17-11-(1)	WSII-HWQ
UT to Dutch Buffalo Ck.	SB	13-17-11-(1)	WSII-HWQ
UT to Dutch Buffalo Ck.	SC	13-17-11-(1)	WSII-HWQ
UT to Dutch Buffalo Ck.	SD	13-17-11-(1)	WSII-HWQ
UT to Dutch Buffalo Ck.	SE	13-17-11-(1)	WSII-HWQ
UT to Second Creek	SF	12-117-2	C
UT to Second Creek	SI	12-117-2	C
UT to Second Creek	SJ	12-117-2	C

**Table 10: Physical Characteristics of Water Resources in the Study Area.**

Map ID	Bank Height (ft)	Bankful Width (ft)	Water Depth (in)	Channel Substrate	Velocity	Clarity
SA	1-4	15	1-12	Si, Sa, Gr, Rr, Br	Slow	Clear
SB	2	3	6-10	Si, Co	Slow	Clear
SC	0.5-2	2-3	3-5	Si, Sa, Gr	Slow	Clear
SD	3-4	6-8	2-6	Si, Sa, Co	Slow	Clear
SE	1-3	6	4-6	Si, Sa, Gr	Slow	Turbid
SF	1-2	3	3-6	Si, Sa	Slow	Clear
SI	10-15	15	6-18	Si, Sa, Co, Bd	Slow	Turbid
SJ	8-10	10-15	6-12	Si, Sa	Slow	Clear

\*Si-Silt, Sa-Sand, Gr-Gravel, Rr-Riprap, Br-Bedrock, Co-Cobble, Bd-Boulder

One pond is located in the study area, on the south side of SR 1221 (Old Beatty Ford Road), east of the SR 2569 (Phaniel Church Road) intersection; as depicted in Figure 8C. This pond consists of an artificially excavated pit that is sustained by an unnamed tributary (UT) of Dutch Buffalo Creek, (SE). Approximately 1.1 acres of this pond are located in the study area. This pond is hydrologically connected to Wetland A (WA) and Wetland B (WB), and is therefore jurisdictional.

Dutch Buffalo Creek and its UTs have been designated as WSII High Quality Waters (HQW), from its source to a point 0.06 miles downstream of SR 2416 (Mt. Olive Road) in Cabarrus County. No other streams within 1.0 mile of project study area are listed as HQW or Water Supplies (WS-I or WS-II), or Outstanding Resource Waters (ORW). In addition, none of the streams located within the project study area support trout or anadromous fish. There are no Primary Nursery Areas (PNA) in the project study area. No streams in the project area or within 1.0 mile of project study area are listed on the 2010 Final 303(d) List of Impaired Waters for North Carolina.

Benthic samples were taken in Dutch Buffalo Creek at NC 200, and given a rating of "Good-Fair," in 2001. Fish surveys were conducted in Dutch Buffalo Creek at SR 2622 (Basinger/Klutz Road), and given a rating of "Good," in 2001, (NCIBI = 52). Benthic samples were taken in Second Creek at SR 1526 (Sherrills Ford Road) and at US 70, and given ratings of "Fair," in 2001. A fish survey was conducted in Second Creek at SR 1526 (Sherrills Ford Road), and given a rating of "Good-Fair," in 2001, (NCIBI = 42).

### 3. Biotic Resources

#### a. Terrestrial Communities

Four terrestrial communities were identified in the study area. These communities were identified as Maintained/Disturbed, Piedmont/Mountain Bottomland Forest, Mixed Pine Hardwood Forest, and Oak Hickory Forest. Figure 8A-F shows the location and extent of these terrestrial communities in the study area. A brief description of each community type follows. Scientific names of all species identified are included in Appendix 2.

##### 1.) Maintained / Disturbed

Maintained / Disturbed areas are scattered throughout the study area, in places where the vegetation is periodically mowed, such as roadside shoulders, residential lawns and areas of agricultural land. The vegetation in this community is comprised of low growing grasses, herbs and saplings; including annual ragweed, bearded beggarticks, Christmas fern, dandelion, daisy fleabane,

dogfennel, eastern baccharis, fescue, foxtail, eastern gamagrass, goldenrod, greater tickseed, horsenettle, Indiangrass, Indianhemp, Japanese honeysuckle, Johnsongrass, mimosa, morning glory, pokeweed, purpletop tridens, Queen Anne's lace, rabbit-tobacco, sawtooth blackberry, red cedar, sericea lespedeza, small woodland sunflower, smooth oxeye, sweetgum, trumpet creeper, white oak, willow oak, wingstem, winged elm, winged sumac, wisteria, and yarrow. Included in this section are wetlands WA and WB. NCWAM classifications for these wetlands are Headwater Forest and Non-Tidal Freshwater Marsh.

**2.) Piedmont / Mountain Bottomland Forest**

The Piedmont / Mountain Bottomland Forest community occurs along the floodplain of Dutch Buffalo Creek. Black walnut, black willow, green ash, river birch, and sycamore dominate the over-story canopy, while green ash and spicebush dominate the under-story canopy. Herbaceous and vine species include goldenrod, Japanese honeysuckle, Japanese grass and pokeweed.

**3.) Mixed Pine Hardwood Forest**

The Mixed Pine Hardwood Forest community is interspersed along the project study area. Dominant species in this community include black cherry, loblolly pine, mimosa, northern red oak, post oak, red cedar, red maple, slippery elm, southern red oak, shortleaf pine, sweetgum, tulip poplar, Virginia pine, white oak, and willow oak in the over-story canopy. The under-story canopy includes the same species listed above, plus Chinese privet, tree of heaven, winged elm, and winged sumac. Herbaceous and vine species include catbrier, daisy fleabane, goldenrod, hearts-a-bustin, Japanese grass, Japanese honeysuckle, muscadine, purpletop tridens, rabbit tobacco, sawtooth blackberry, poison ivy, small woodland sunflower, trumpet creeper, and Virginia creeper.

**4.) Oak Hickory Forest**

The Oak Hickory Forest community occurs at approximately the midsection of the project study area. The community is dominated by loblolly pine, mockernut hickory, northern red oak, pignut hickory, post oak, red maple, sweetgum, Virginia pine, white oak in the over-story canopy. The understory canopy includes the same species listed above, as well plus Chinese privet, red cedar, and white ash. Herbaceous and vine species include Christmas fern, ebony spleenwort, Japanese honeysuckle, little heartleaf, muscadine, periwinkle, great tickseed, Virginia creeper, and Solomon's seal.

**5.) Terrestrial Community Impacts**

Terrestrial communities in the study area will be impacted by project construction, as a result of grading and paving of portions of the study area. Terrestrial community impacts are presented in Table 11.

**Table 11: Terrestrial Community Coverage in the Study Area**

<b>Community</b>	<b>Coverage (ac)</b>	<b>Project Impacts (ac)</b>
Maintained / Disturbed	140.1	5.78
Piedmont / Mountain Bottomland Forest	1.9	0.01
Mixed Pine Hardwood Forest	16.0	0.79
Oak Hickory Forest	7.4	0.32
<b>Total</b>	<b>165.4</b>	<b>6.90</b>

### **b. Terrestrial Wildlife**

Terrestrial communities in the study area are comprised of both natural and disturbed habitats that may support a diversity of wildlife species. *Those species actually observed are indicated with an \**. Mammal species that commonly exploit forested habitats and stream corridors found within the project study area, include eastern cottontail, raccoon, Eastern gray squirrel\*, Virginia opossum, gray fox and white-tailed deer. Birds that commonly use forest and forest-edge habitats include the American crow\*, blue jay, Carolina chickadee\*, American goldfinch, wood thrush, brown thrasher, northern cardinal\*, Carolina wren, eastern kingbird, and American robin. Avian species that may use the open habitat or water resources within the project study area include, killdeer, green heron, Canada geese, belted kingfisher, eastern phoebe, eastern bluebird, eastern meadowlark, and turkey vulture\*.

Reptile species that may be found in the communities described above include black rat snake, copperhead, garter snake, rough green snake, fence lizard, eastern box turtle, snapping turtle, green anole, and southeastern five-lined skink. Amphibian species that may be observed include pickerel frog, gray treefrog, green frog, leopard frog, American toad, American bullfrog, upland chorus frog, spring peeper, northern dusky salamander and several other salamander species.

### **c. Aquatic Communities**

Aquatic communities in the study area consist of perennial piedmont streams, as well as a pond. The perennial piedmont streams could support bluehead chub, fantail darter, golden shiner, redbreast sunfish, northern dusky salamander, redbreast sunfish, spottail shiner, crayfish and various benthic macroinvertebrates. The pond is relatively shallow and small and could support green frogs.

### **d. Invasive Species**

Nine species on the *NCDOT Invasive Exotic Plant List for North Carolina* were found to occur in the study area. The threat species identified were Chinese privet and Japanese grass. The moderate threat species listed were Japanese honeysuckle, Johnsongrass, mimosa, sericea lespedeza, tree of heaven and wisteria. Additionally, periwinkle is on the *watch* list. The NCDOT will manage invasive plant species on department right-of-way, as appropriate.

## **4.0 Jurisdictional Issues**

### **a. Clean Water Act Waters of the U.S.**

Eight jurisdictional streams were identified in the study area, as listed in Table 12. The location of these streams is shown on Figure 8A-F. USACE and NCDWQ stream delineation forms are available upon request. The physical characteristics and water quality designations of each jurisdictional stream are detailed in Section C.2. All jurisdictional streams in the study area have been designated as warm water streams, for the purposes of stream mitigation. One pond located within the project study area is jurisdictional, due to the UT of Dutch Buffalo Creek (SE) flowing into and out of this pond. The area of the pond in the study area is approximately 1.1 acres.

**Table 12: Jurisdictional Characteristics of Water Resources in the Study Area**

Map ID	Length (ft.)	Proposed Action (ft.)	Classification	Compensatory Mitigation Required	River Basin Buffers	Proposed Action (sq ft)
SA	330	00.0	Perennial	Yes	Not Subject	00.0
SB	318	40.0	Perennial	Yes	Not Subject	120.0
SC	277	50.0	Intermittent	Yes	Not Subject	150.0
SD	204	45.0	Perennial	Yes	Not Subject	315.0
SE	141	55.0	Perennial	Yes	Not Subject	330.0
SF	182	50.0	Intermittent	Yes	Not Subject	150.0
SI	245	25.0	Perennial	Yes	Not Subject	375.0
SJ	218	80.0	Perennial	Yes	Not Subject	1,040.0
<b>Total</b>	<b>1,915</b>	<b>345.0</b>				<b>2,480.0</b>

Two jurisdictional wetlands were identified within the study area, as shown in Figure 8C. Wetland classification and quality rating data are presented in Table 13. All wetlands in the study area are within the Yadkin River basin (USGS Hydrologic Unit 03040105). USACE wetland delineation forms and NCDWQ wetland rating forms, for each site, are available upon request. Descriptions of the natural communities in each wetland site are presented in Section 3.a. Wetland sites WA and WB are included within the Maintained / Disturbed Community.

**Table 13: Jurisdictional Characteristics of Wetlands in the Study Area**

Map ID	NCWAM Classification	Hydrologic Classification	NCDWQ Wetland Rating	Area (ac)	Proposed Action (ac)
WA	Headwater Forest	Riparian	24	0.01	0.00
WB	Non-Tidal Freshwater Marsh	Riparian	24	0.005	0.00
<b>Total</b>				<b>0.015</b>	<b>0.00</b>

#### b. Clean Water Act Permits

Permanent or temporary impacts to jurisdictional wetlands and streams require the appropriate Nationwide or Individual permits prior to construction. The USACE holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification (WQC) from the NCDWQ will be needed.

Surface waters classified as WSII; High Quality Waters of the State, are present in the project study area. This is one of the highest classifications for water quality. Pursuant to 15A NCAC 2H.1006 and 15A NCAC 2B.0224, the NCDOT will be required to obtain a State Stormwater Permit, prior to construction. (Letter dated November 16, 2010, in Appendix 1.)

**c. Coastal Area Management Act Areas of Environmental Concern**

The proposed project is not located within one of the twenty coastal counties subject to the Coastal Area Management Act (CAMA). Therefore, no CAMA permits will be required.

**d. Construction Moratoria**

No waters within the project study area have been identified by the North Carolina Wildlife Resources Commission (NCWRC) as trout waters or by the National Marine Fisheries Service (NMFS) as habitat for anadromous fish. Additionally, in a letter dated March 16, 2011, NCWRC did not recommend any moratoria. Therefore, no moratoria are anticipated for this project.

**e. N.C. River Basin Buffer Rules**

This project is located in the Yadkin River Basin and is not subject to any NCDWQ regulated, riparian buffer rules.

**f. Rivers and Harbors Act Section 10 Navigable Waters**

No surface waters, within the project study area, have been designated as Navigable Waters under Section 10 of the *Rivers and Harbors Act*.

**g. Wetland and Stream Mitigation**

**1.) Avoidance and Minimization of Impacts**

Dutch Buffalo Creek and UTs have been designated HQW; WS-II. Therefore, *NCDOT Design Standards in Sensitive Watersheds* will be implemented during project construction. The NCDOT has avoided and minimized proposed impacts to project area streams and wetlands to the greatest extent practicable, in narrowing the proposed project lane widths to 11 feet each, narrowing the paved shoulder widths to 2 feet and narrowing the earthen shoulder and ditch widths, during the project design phase.

**2.) Compensatory Mitigation of Impacts**

The NCDOT will investigate potential on-site stream and wetland mitigation opportunities, if such measures are necessary. If on-site mitigation is not feasible, mitigation will be provided by the North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP).

**3.) Endangered Species Act Protected Species**

As of September 22, 2010, the United States Fish and Wildlife Service (USFWS) listed one federally protected species for Rowan County, as shown in Table 14. A brief description of the habitat requirements follows, along with the Biological Conclusion rendered based on survey results in the study area. Habitat requirements are based on the current best-available information, as per the referenced literature.

**Table 14: Federally Protected Species Listed for Rowan County**

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Helianthus schweinitzii</i>	Schweinitz's sunflower	E	Yes	No Effect
<i>Myotis septentrionalis</i>	Northern long-eared bat	P	As noted below	As noted below

E - Endangered, P - Proposed

**Schweinitz's sunflower**

USFWS Optimal Survey Window: late August through October

Habitat Description: Schweinitz's sunflower is a rhizomatous perennial herb that is endemic to the Piedmont physiological provinces of North and South Carolina. The few sites where this occurs in relatively natural vegetation are found in Xeric Hardpan Forests. The species is also found along roadsides, maintained power lines, edges of thickets and old pastures, clearings and edges of upland oak-pine hickory woods and Piedmont longleaf pine forests, and other sunny or semi-sunny habitats where disturbances (e.g., mowing, clearing, grazing, blow downs, storms, frequent fire) help create open or partially open areas for sunlight. It is intolerant of full shade and excessive competition from other vegetation. Schweinitz's sunflower occurs in a variety of soil series, but is generally found growing on shallow, poor, clayey or rocky soils, especially those derived from mafic rocks

Biological Conclusion: No Effect. A plant-by-plant survey was performed within the project study area on October 1, 2011. No Schweinitz's sunflower individuals were observed, but suitable habitat was present within the project study area, primarily in the form of power line cleared areas, old pastures, and roadside shoulders. In addition to the survey, a review of the North Carolina Natural Heritage Program (NCNHP) database on December 2, 2011, revealed no known occurrences of this species within 1.0 mile of the project study area. A biological conclusion of No Effect has been rendered for this species.

A US Fish and Wildlife Service proposal for listing the Northern Long-eared Bat (*Myotis septentrionalis*) as an endangered species was published in the Federal Register in October 2013. The listing may become effective as soon as October 2014. Furthermore, this species is included in the USFWS current list of protected species for Rowan County. The NCDOT is working closely with the USFWS to understand how this proposed listing may impact NCDOT projects. The NCDOT will continue to coordinate appropriately with the USFWS to determine if this project will incur potential effects to the Northern long-eared bat and how to address these potential effects, if necessary.

**4.) Bald Eagle and Golden Eagle Protection Act**

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

A desktop, GIS assessment of the project study area, as well as the area within a 1.13-mile radius (1.0 mile plus 660 feet) of the project limits, was performed on December 2, 2011, using 2010 color aerials. No water bodies large enough or sufficiently open, to be considered potential feeding sources were identified. Since there was no foraging habitat within the review area, a survey of the

project study area and the area within 660 feet of the project limits was not conducted. Additionally, a review of the NCNHP database on December 2, 2011, revealed no known occurrences of this species within 1.0 mile of the project study area. Due to the lack of habitat, known occurrences and minimal impact anticipated from this project, it has been determined that this project will not affect this species.

**5.) Endangered Species Act Candidate Species**

As of September 22, 2010, the USFWS lists one Candidate species, Georgia aster, for Rowan County, as listed in Table 15. A review of NCNHP records, updated August 2011, revealed no known occurrences of this species within 1.0 mile of the project study area.

**Table 15: Candidate Species Listed for Rowan County**

Scientific Name	Common Name	Habitat Present
<i>Symphotrichum georgianum</i>	Georgia aster	Yes

**6.) Essential Fish Habitat**

No jurisdictional waters, within the project study area, have been designated as Essential Fish Habitat by the National Marine Fisheries Service (NMFS).

**D. Traffic Noise and Air Quality**

**1. Traffic Noise**

The project is not considered a Type I traffic noise project, as defined in the NCDOT Traffic Noise Abatement Policy, but rather is a Type III noise project. Traffic Noise Analyses are not required for Type III noise projects.

**2. Air Quality**

**Introduction**

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

The Federal Clean Air Act of 1970 established the National Ambient Air Quality Standards (NAAQS). These standards were established to protect the public from known or anticipated effects of air pollutants. The most recent amendments to the NAAQS contain criteria for sulfur dioxide (SO<sub>2</sub>), particulate matter (PM), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>) and lead (Pb).

The primary pollutants from motor vehicles are unburned hydrocarbons, nitrous oxides, carbon monoxide and particulates. Hydrocarbons and nitrogen oxides can combine in a complex series of reactions catalyzed by sunlight to produce photochemical oxidants such as ozone and NO<sub>2</sub>. Because these reactions take place over a period of several hours, maximum concentrations of photochemical oxidants are often found far downwind of the precursor sources.



The proposed project is located in Rowan County, which is in attainment area for carbon monoxide, with the US Environmental Protection Agency's National Ambient Air Quality Standards. No additional work is needed to meet the requirements for transportation conformity. Because the project will have no appreciable difference in design year 2035 traffic volumes, will not change the alignment of the existing roadway and will not add new traffic carrying capacity, the project is not anticipated to create any adverse effects on the air quality of this attainment area. The project is also exempt from a Mobile Source Air Toxics (MSAT) analysis, because it meets the criteria in the MSAT Interim Guidance Update for "Projects with No Meaningful Potential MSAT Effects or Exempt Projects." Therefore, no air quality studies are necessary.

### **Attainment Status**

The project is located in Rowan County, which is within the Charlotte-Gastonia-Rock Hill nonattainment area for ozone (O<sub>3</sub>), as defined by the EPA. This area was designated marginal nonattainment for O<sub>3</sub>, under the 2008 eight-hour ozone standard, effective July 20, 2012. Section 176(c) of the CAAA requires that transportation plans, programs and projects conform to the intent of the state air quality implementation plan (SIP). The current SIP does not contain any transportation control measures for Rowan County. The Cabarrus-Rowan Metropolitan Planning Organization 2040 Metropolitan Transportation Plan (MTP) and the 2012-2018 Transportation Improvement Program (TIP) conform to the intent of the SIP (or base year emissions, in areas where no SIP is approved or found adequate). The USDOT made a conformity determination on the MTP and the TIP on May 2, 2014. The current conformity determination is consistent with the final conformity rule, found in 40 CFR Parts 51 and 93. There are no significant changes in the project design concept or scope, as used in the conformity analyses

### **Mobile Source Air Toxics (MSAT)**

The purpose of this project is to improve safety along SR 1221 (Old Beatty Ford Road), from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road), by widening each lane of the existing two-lane, two-way facility to a standard 11-foot width and constructing 2-foot paved shoulders along the entire project length of 7.4 miles. This project has been determined to generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location or any other factor that would cause an increase in MSAT impacts of the project area, compared to that of the no-build alternative.

Moreover, the US EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES model forecasts a combined reduction of over 80 percent in the total annual emission rate for the priority MSAT from 2010 to 2050, while vehicle-miles-of-travel are projected to increase by over 100 percent. This trend will both reduce the background level of MSAT, as well as the possibility of even minor MSAT emissions from this project.

## VI. COMMENTS AND COORDINATION

### A. Citizens Informational Workshop

A Citizens Informational Workshop (CIW) was held in the Bostian Elementary School, on April 12, 2011. A press release was issued on April 5, 2011, advising local citizens of the preferred project alternative, as shown in Figure 9A. Figure 8 shows the CIW mapping. Over 115 people attended this workshop in China Grove. No local municipal staff members or local elected officials attended the W-5313 CIW. A Local Officials Meeting was held earlier in the day in the Rowan County Library, in Salisbury. Approximately 8 Rowan County and NCDOT staff members discussed the project design and potential project environmental impacts. One design alternative for this proposed roadway, hazard elimination project was presented to local, project-area officials and citizens.

After reviewing the project comments and concerns collected during the W-5313 CIW and those sent to NCDOT staff after the workshop was held, the proposed design alternative cross-section was decreased in width to minimize environmental impacts to both the natural and human environments. The W-5313 Build Alternative proposes upgrading the existing 9 to 11-foot wide travel lanes inside the project limits, to standardized 11-foot wide travel lanes, instead of 12-foot wide travel lanes, which were presented at the CIW, throughout the project limits. Additional project minimization included constructing 2-foot wide paved shoulders, instead of adding 4-foot wide paved shoulders along this section of SR 1221 (Old Beatty Ford Road). The proposed 4-foot wide earthen shoulders and 8-foot wide drainage ditches remained the same widths, as presented to local officials and citizens in the W-5313 CIW. The purchase of an average 60-foot width of right-of-way is still planned along this section of SR 1221 (Old Beatty Ford Road), for highway maintenance and operations.

### B. Agency Coordination

NCDOT Project Development staff consulted with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), the North Carolina Wildlife Resources Commission (NCWRC), the North Carolina Department of Environment and Natural Resources - Division of Water Quality (NCDWQ), the Rowan-Cabarrus Metropolitan Planning Organization (CRMPO) and the Rowan County Planning Department staff, during the planning, development and public involvement phases of this project. The USACE staff also verified project stream and wetland delineation on-site, with the NCDOT staff, prior to the final reporting of these findings. Per the NCDOT Cultural Resources staff, a survey recommended by the North Carolina Historic Preservation Office (HPO), was required for this project.

### C. Comments Received During and Subsequent to the Design Public Meeting

A Design Public Meeting was held for the proposed W-5313 hazard elimination improvements along SR 1221 (Old Beatty Ford Road), in the Grace Lower Stone Church in Rockwell, on May 9, 2013. An informal, open house session was held from 4:00 p.m. until 7:00 p.m. Approximately 75 citizens attended this project design public meeting. The meeting public notice and brochure are shown in Figure 9B. A Local Officials Meeting was held earlier in the day in the Rowan County Library, in Salisbury. One design alternative and mapping for this proposed roadway, hazard elimination project was presented to local, project-area officials and citizens during these meetings. This mapping is shown in Figure 2.

The proposed 4-foot wide earthen shoulders will be reduced to 2-foot wide earthen shoulders. Drainage ditch design-widths will be reduced, as feasible. The purchase of an average 60-foot width of right-of-way is still planned along this section of SR 1221 (Old Beatty Ford Road), for highway maintenance and operations. Rumble strips will not be installed along the W-5313 project limits.

The project comments from local citizens focused on the following:

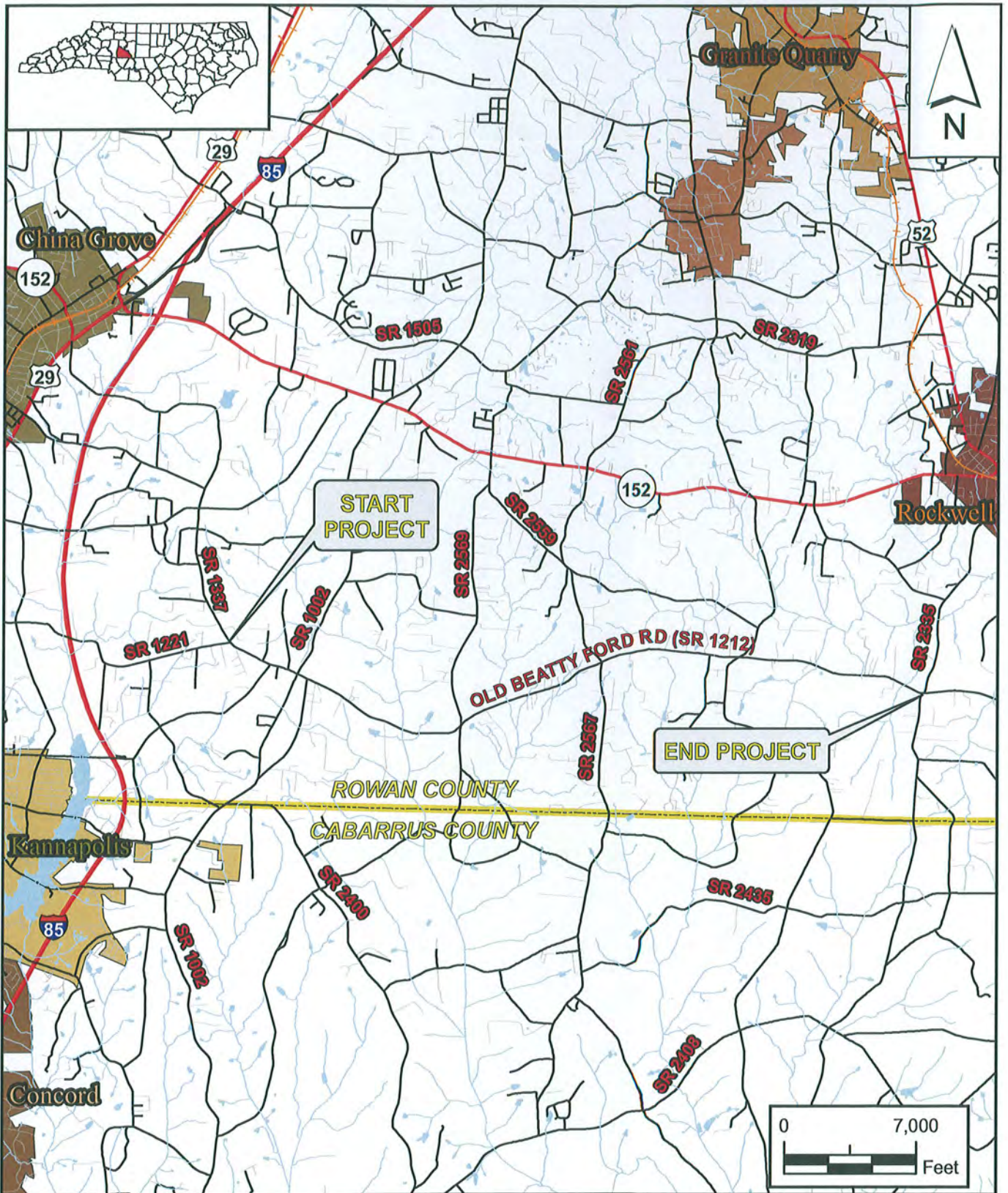
- Concern about proposed impacts to the parking lot of a business located along SR 1221 (Old Beatty Ford Road), within the project limits.
- Existing homes already very near the existing edge-of-pavement, along SR 1221.
- Loss of residential, road frontage across SR 1221 from Grace Lower Stone Church
- Few in-favor / most opposed to narrow rumble strips along SR 1221, for the project length
- Favoring rumble strip placement along the centerline of SR 1221 (Old Beatty Ford Road)
- Reducing the posted speed limit along SR 1221 (Old Beatty Ford Road) to 35 mph
- Reducing the posted speed limit along SR 2570 (Roy Cline Road) to 45 mph
- Concern about existing fence replacements, along SR 1221 (Old Beatty Farm Road)
- Selling homes and property along SR 1221 (Old Beatty Farm Road) in the project limits
- Most local citizens favored the proposed W-5313 hazard elimination improvements.

## **VII. BASIS FOR THE CATEGORICAL EXCLUSION**

Based on the studies performed for the proposed project, it is concluded that the project will not result in significant social, economic or environmental impacts, and that the categorical exclusion classification, as defined in 40 CFR 1508.4 and 23 CFR 771.117, is appropriate.

# FIGURES

- Figure 1: Project Vicinity Map
- Figure 2: Preliminary Design
- Figure 3: 2010-2035 Traffic Volumes & Projections
- Figure 4: Potential Underground Storage Tank Locations
- Figure 5: Proposed Typical Section
- Figure 6: Direct Community Impact Area (DICA) Map  
Farmland Conversion Form AD-1006, Part VI
- Figure 7: Project Topographic Area
- Figure 8: Project Jurisdictional Features
- Figure 9: Citizens Informational Workshop Brochure  
Design Public Meeting Brochure



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

**VICINITY MAP**  
**SR 1212 OLD BEATTY FORD RD**  
ROWAN COUNTY  
TIP PROJECT W-5313

County:	ROWAN
Div:	9
TIP#:	W-5313
WBS:	46136.1.1
Date:	DECEMBER 2010

**Figure**  
**1**

By: J.TORTORELLA

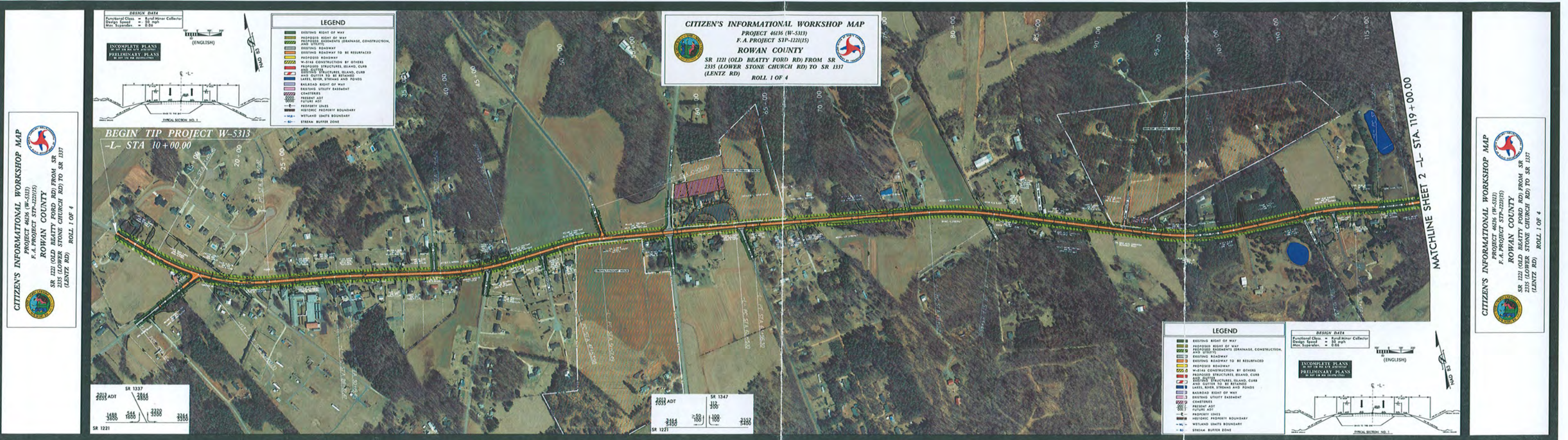


Figure 2A



**CITIZEN'S INFORMATIONAL WORKSHOP MAP**  
 PROJECT 4616 (W-511)  
 F.A. PROJECT STP-121(15)  
 ROWAN COUNTY  
 SR 121 (OLD BEATTY FORD RD) FROM SR 235 (LOWER STONE CHURCH RD) TO SR 137 (LENTZ RD) ROLL 3 OF 4

**CITIZEN'S INFORMATIONAL WORKSHOP MAP**  
 PROJECT 4616 (W-511)  
 F.A. PROJECT STP-121(15)  
 ROWAN COUNTY  
 SR 121 (OLD BEATTY FORD RD) FROM SR 235 (LOWER STONE CHURCH RD) TO SR 137 (LENTZ RD) ROLL 3 OF 4

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 ROWAN COUNTY  
 SR 121 (OLD BEATTY FORD RD) FROM SR 235 (LOWER STONE CHURCH RD) TO SR 137 (LENTZ RD) ROLL 3 OF 4



MATCHLINE SHEET 4 -L- STA. 340+00.00

MATCHLINE SHEET 2 -L- STA. 230+00.00

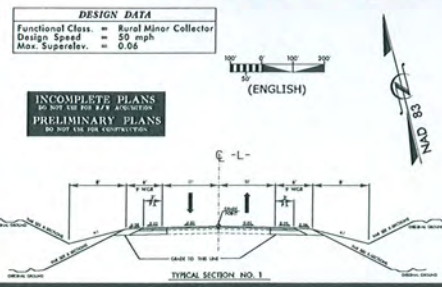
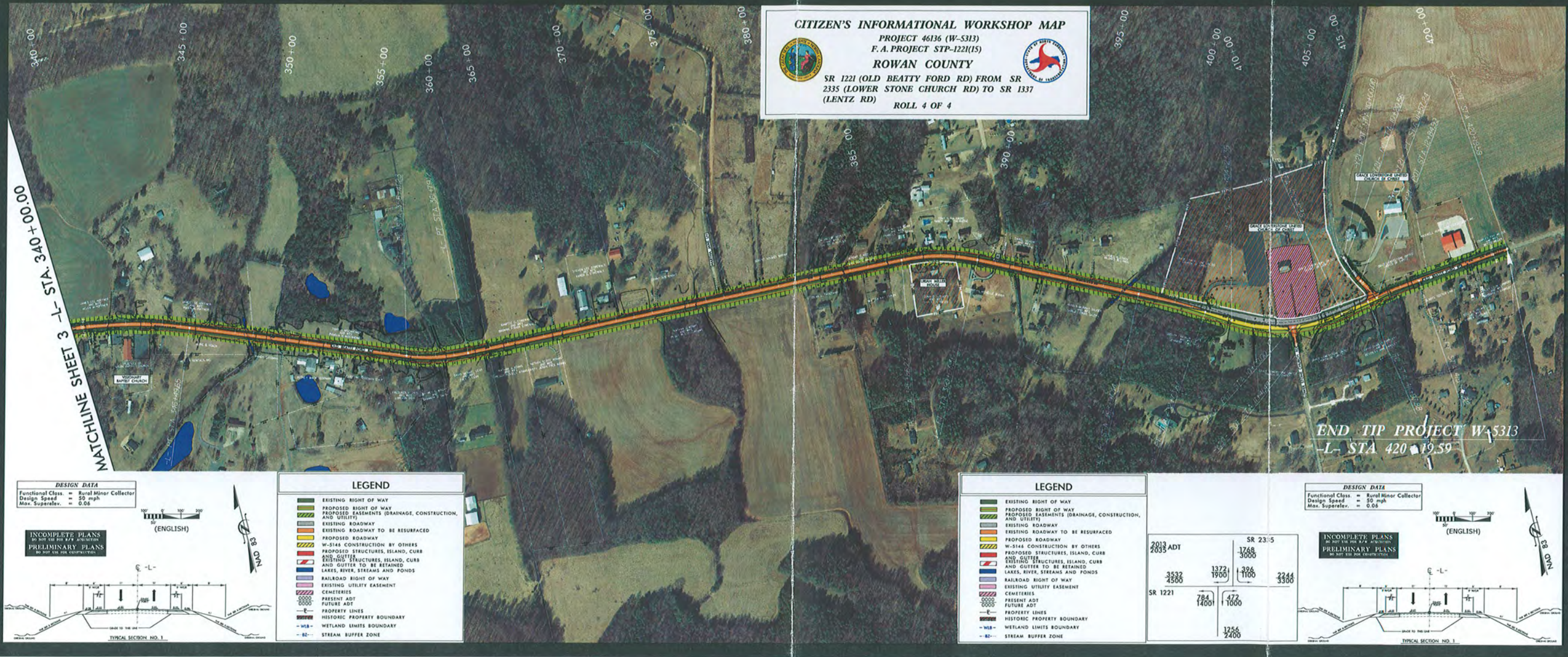
Figure 2C



CITIZEN'S INFORMATIONAL WORKSHOP MAP  
 PROJECT 46136 (W-5313)  
 F.A. PROJECT STP-122(15)  
 ROWAN COUNTY  
 SR 1221 (OLD BEATTY FORD RD) FROM SR 2335 (LOWER STONE CHURCH RD) TO SR 1337 (LENTZ RD)  
 ROLL 4 OF 4

CITIZEN'S INFORMATIONAL WORKSHOP MAP  
 PROJECT 46136 (W-5313)  
 F.A. PROJECT STP-122(15)  
 ROWAN COUNTY  
 SR 1221 (OLD BEATTY FORD RD) FROM SR 2335 (LOWER STONE CHURCH RD) TO SR 1337 (LENTZ RD)  
 ROLL 4 OF 4

CITIZEN'S INFORMATIONAL WORKSHOP MAP  
 PROJECT 46136 (W-5313)  
 F.A. PROJECT STP-122(15)  
 ROWAN COUNTY  
 SR 1221 (OLD BEATTY FORD RD) FROM SR 2335 (LOWER STONE CHURCH RD) TO SR 1337 (LENTZ RD)  
 ROLL 4 OF 4



**LEGEND**

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION, AND UTILITY)
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- W-3144 CONSTRUCTION BY OTHERS
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- LAKES, RIVER, STREAMS AND PONDS
- RAILROAD RIGHT OF WAY
- EXISTING UTILITY EASEMENT
- CENTERLINES
- PRESENT ADT
- FUTURE ADT
- PROPERTY LINES
- HISTORIC PROPERTY BOUNDARY
- W-83 WETLAND LIMITS BOUNDARY
- 82- STREAM BUFFER ZONE

**LEGEND**

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENTS (DRAINAGE, CONSTRUCTION, AND UTILITY)
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- W-3144 CONSTRUCTION BY OTHERS
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE RETAINED
- LAKES, RIVER, STREAMS AND PONDS
- RAILROAD RIGHT OF WAY
- EXISTING UTILITY EASEMENT
- CENTERLINES
- PRESENT ADT
- FUTURE ADT
- PROPERTY LINES
- HISTORIC PROPERTY BOUNDARY
- W-83 WETLAND LIMITS BOUNDARY
- 82- STREAM BUFFER ZONE

**DESIGN DATA**  
 Functional Class = Rural Minor Collector  
 Design Speed = 50 mph  
 Max. Superelev. = 0.06

INCOMPLETE PLANS  
 PRELIMINARY PLANS  
 Do not use for construction

(ENGLISH)

TYPICAL SECTION NO. 1

2013 2035 ADT	SR 2335	SR 2335	SR 2335
3532 3500	1372 1900	306 1100	2244 3300
SR 1221	784 1400	472 1000	1256 2400

Figure 2D

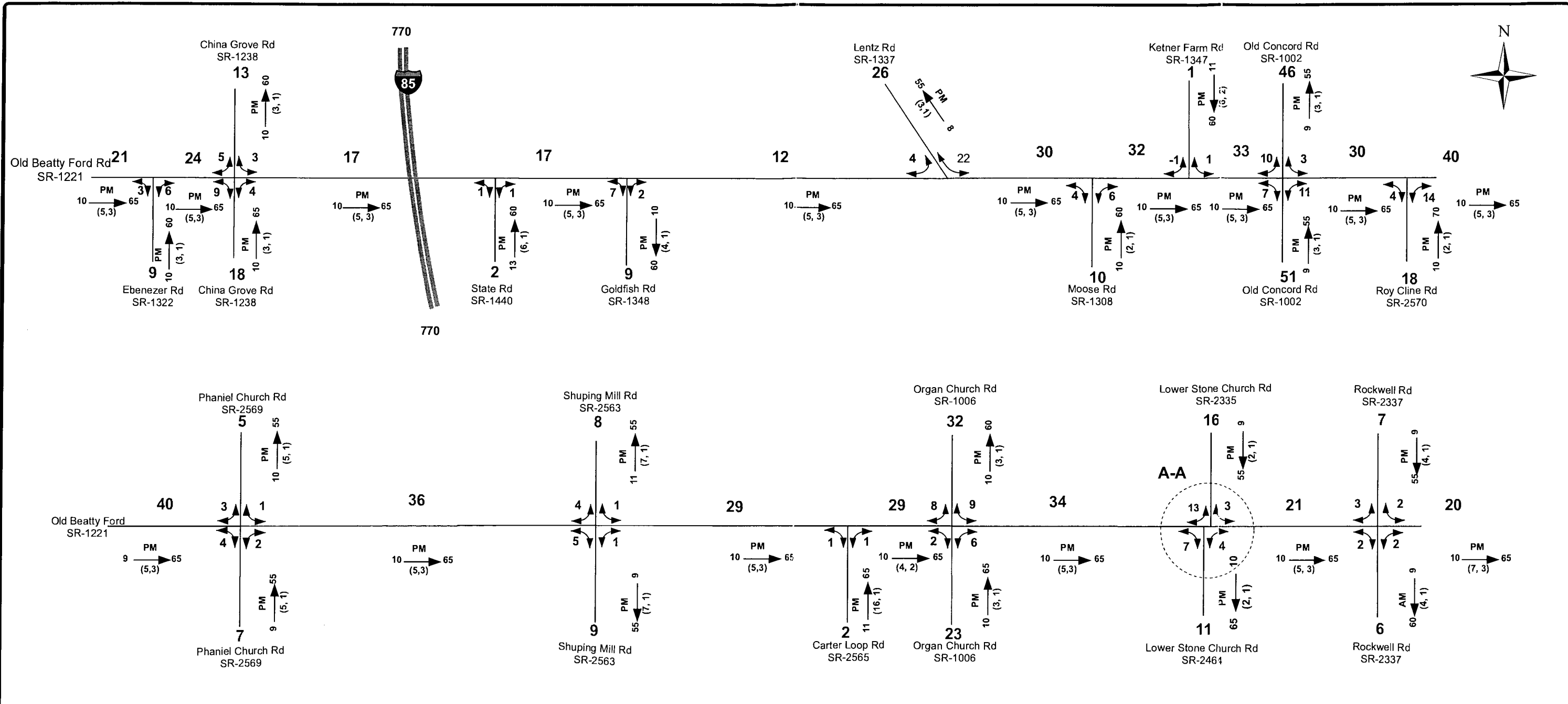
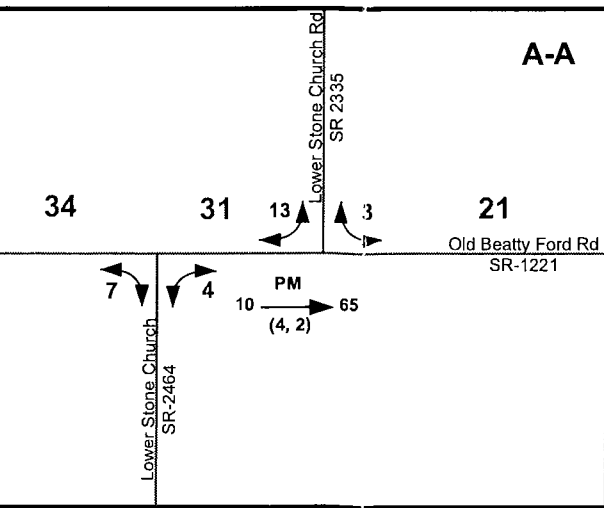
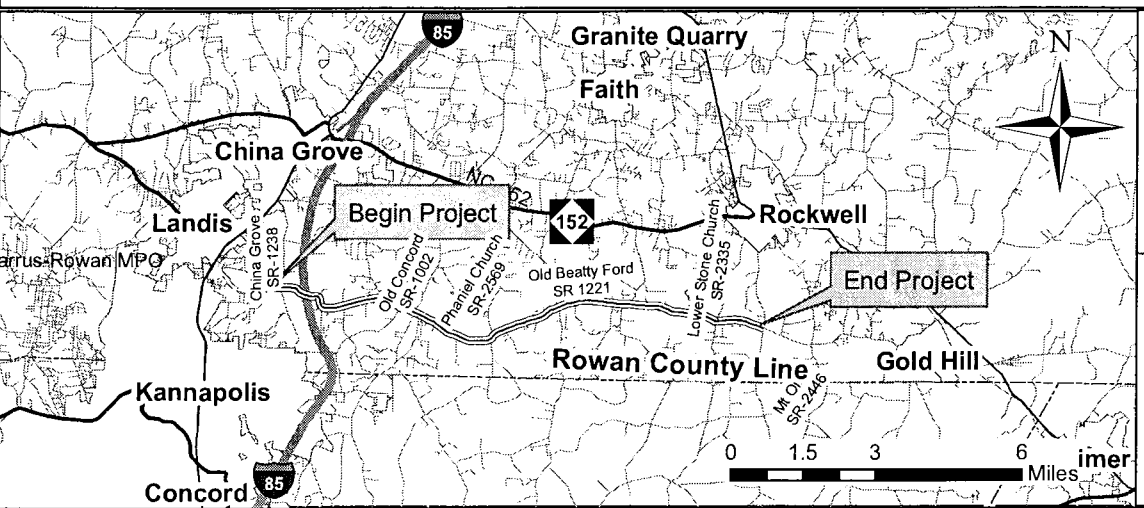


Figure 3A



<h1>2010</h1> ANNUAL AVERAGE DAILY TRAFFIC		NO BUILD	
		SHEET 1 - 1	
<h2>LEGEND</h2> <p>### No. of Vehicles Per Day (VPD) in 100s</p> <p>1- Less than 50 VPD</p> <p>X Movement Prohibited</p> <p>— Proposed Roadway</p> <p>K Design Hour Factor (%)</p> <p>PM PM Peak Period</p> <p>D Peak Hour Directional Split</p> <p>→ Indicates Direction of D</p> <p>(d, t) Duals, TT-STs (%)</p>		TIP: W-5313	WBS: 46136.1.1
		COUNTY: Rowan	DIVISION: 9
		DATE: 04-07-2011	
		PREPARED BY: Atefe M. Northcutt	
		LOCATION: SR 1221-Old Beatty Ford Rd from SR 1238 to SR 2337	
		PROJECT: SR 1221 widen and install rumble strips	

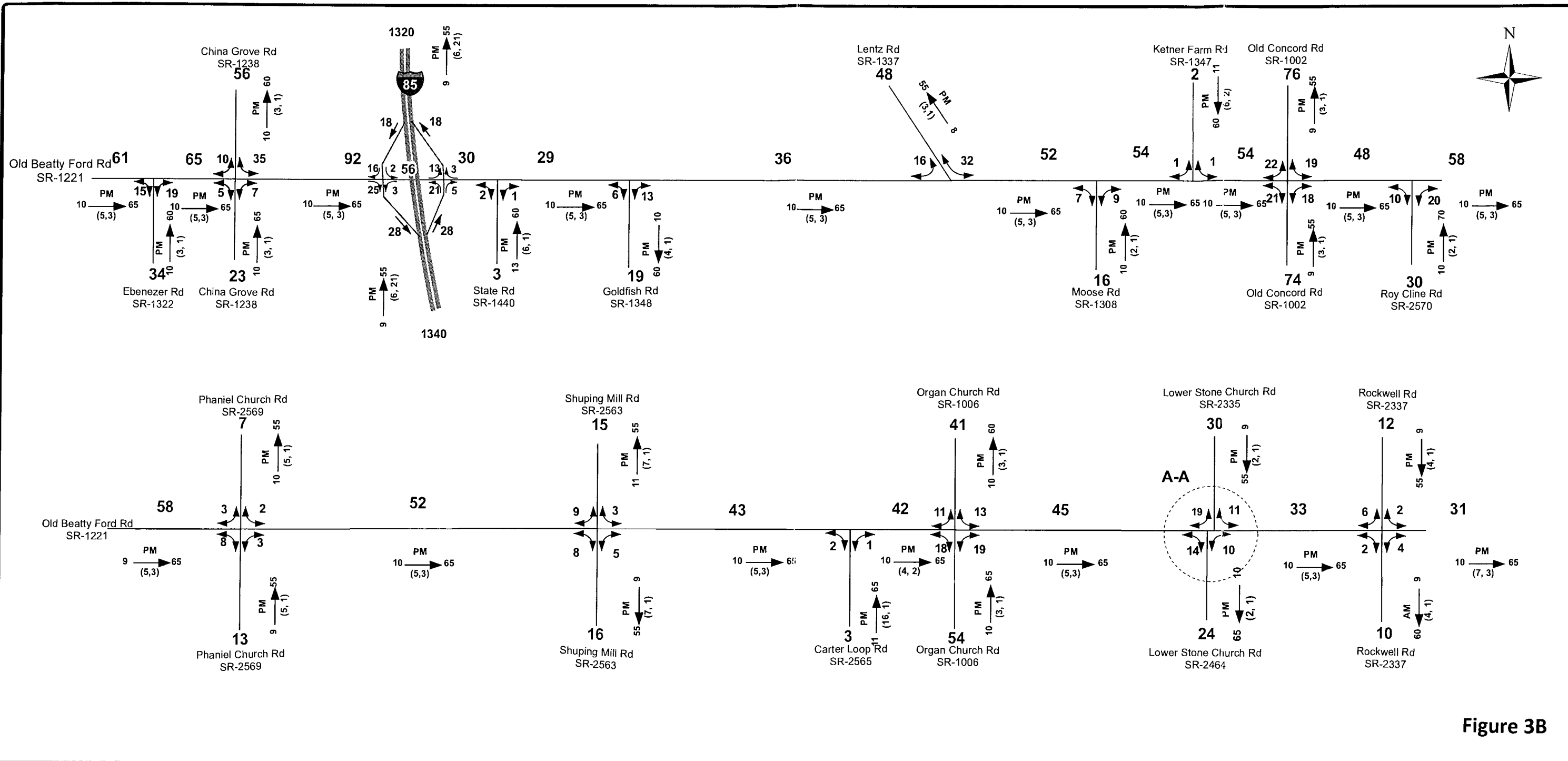
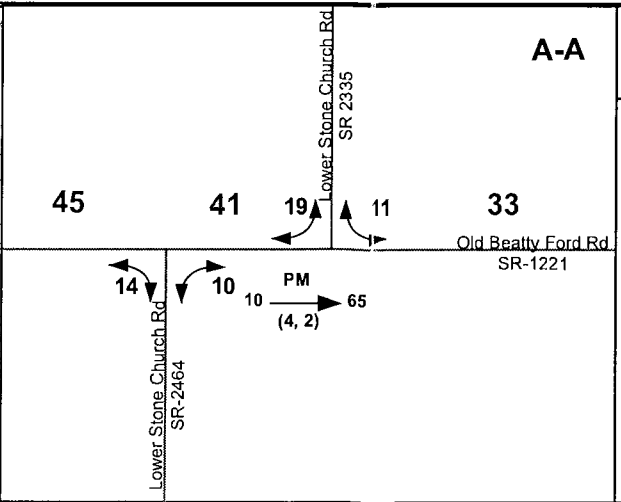
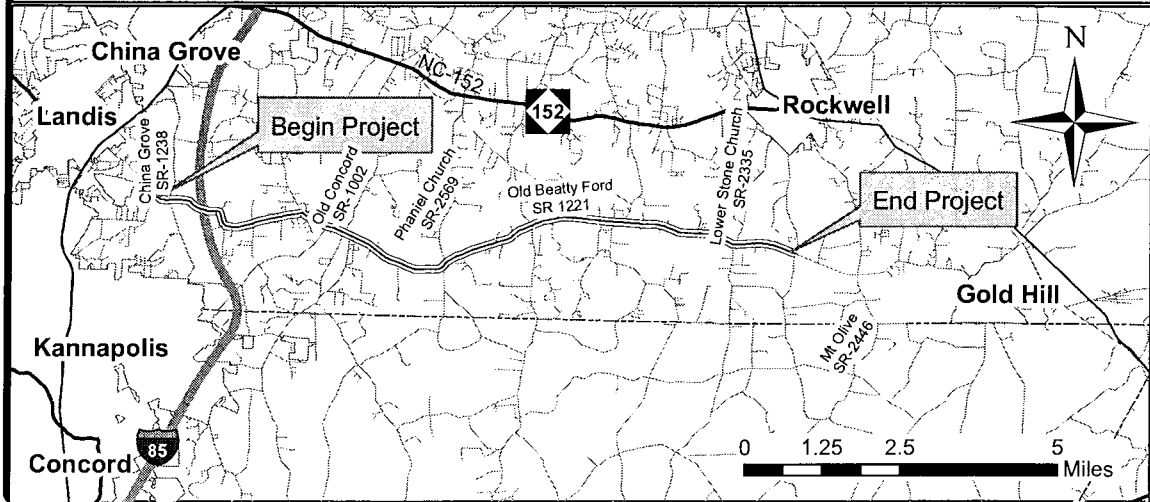


Figure 3B



**2035 ANNUAL AVERAGE DAILY TRAFFIC**

**LEGEND**

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

<b>BUILD</b>		<b>SHEET 1 - 1</b>
TIP: W-5313	WBS: 46136.1.1	
COUNTY: Rowan	DIVISION: 9	
DATE: 04-07-2010		
PREPARED BY: Atefe M. Northcutt		
LOCATION: SR 1221-Old Beatty Ford Rd from SR 1238 to SR 2337		
PROJECT: SR 1221 widen and install rumble strips		

## Appendix A Locations of USTs, Landfills, & Other Potentially Contaminated Sites

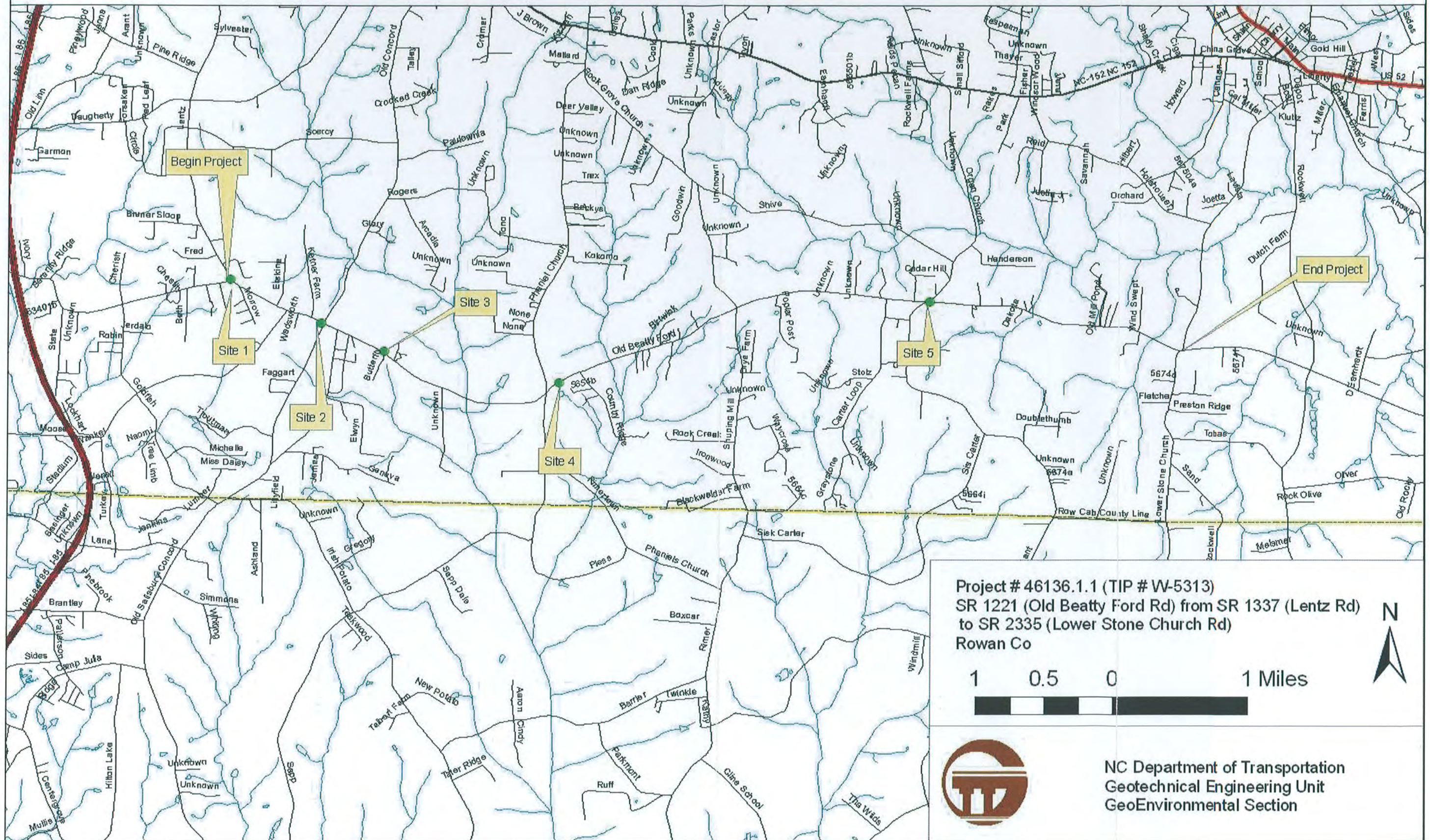
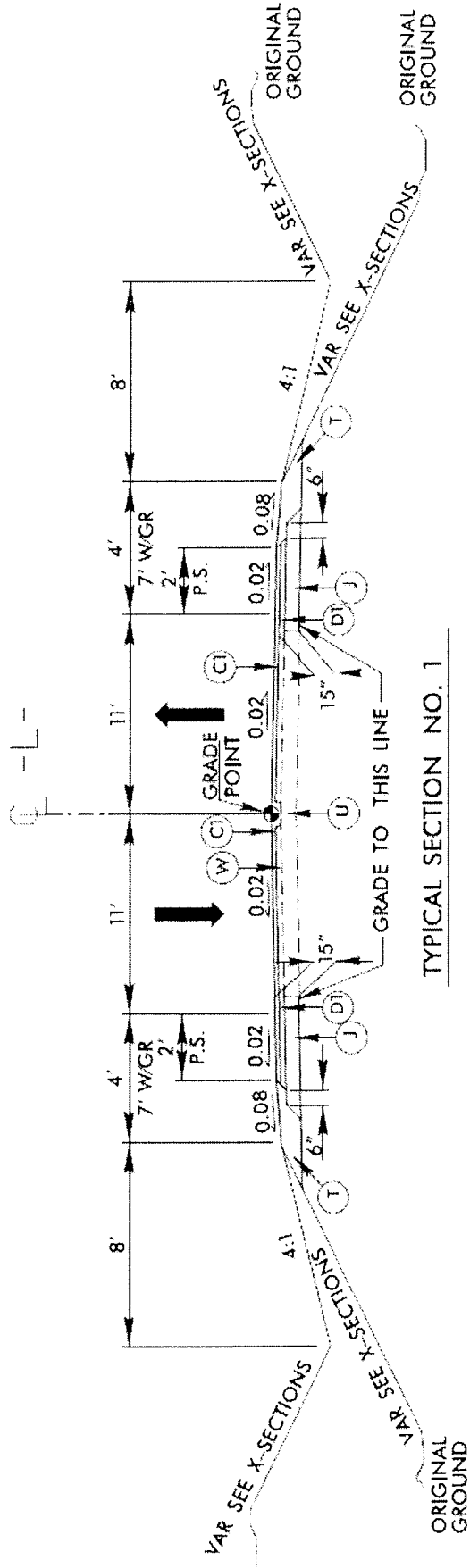


Figure 4

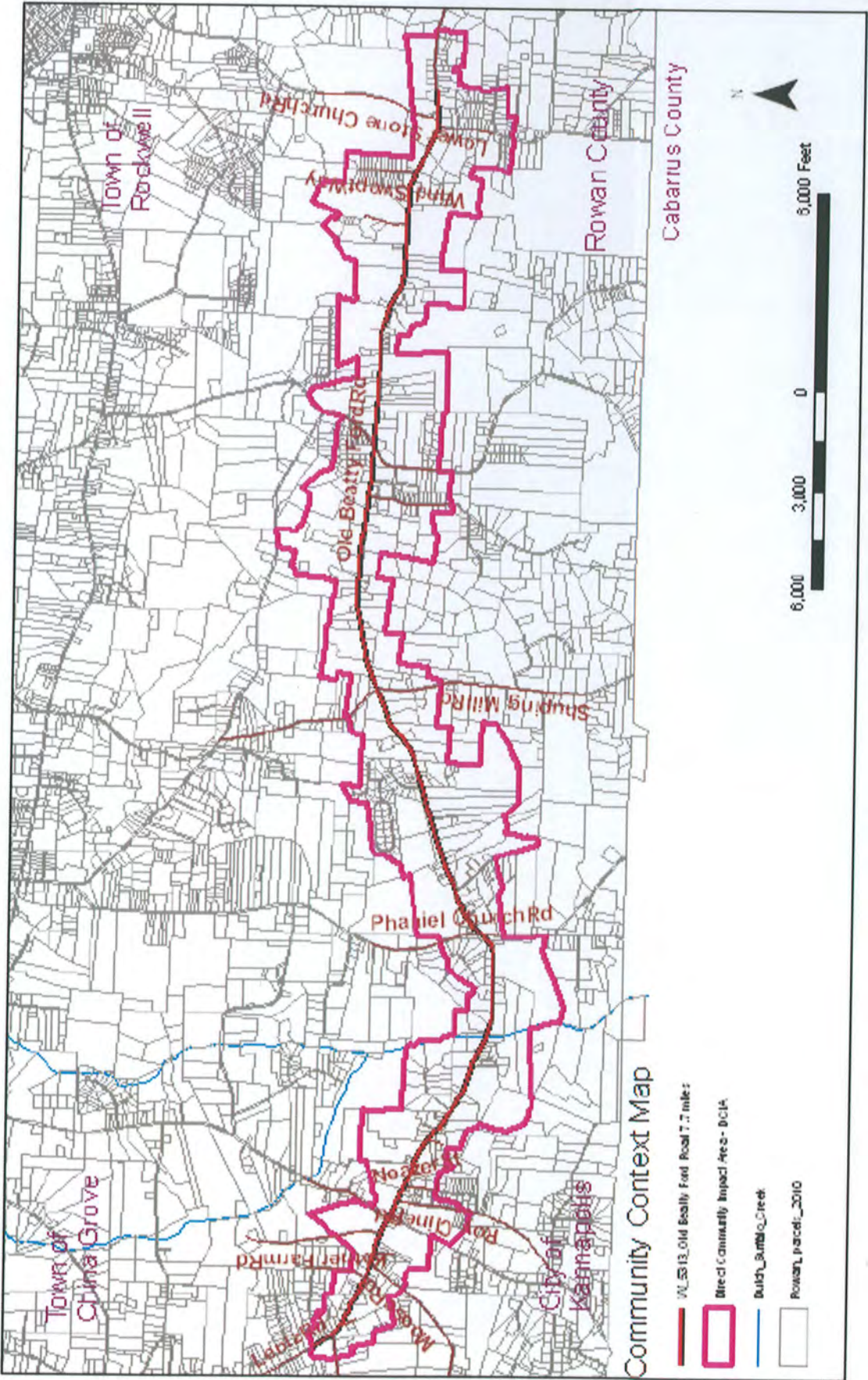


**Transportation Improvement Program (TIP) Project W-5313**

SR 1221 (Old Beatty Ford Road) – Rowan County

Hazard Elimination Improvements Project

**Figure 5**



\*\* NOTE: MAP IS NOT DRAWN TO SCALE

Figure 6A

## **APPENDIX D: NRCS FARMLAND SOILS SCREENING**

W-5313 ROWAN COUNTY, OLD BEATTY FORD ROAD

AVERAGE SIZE OF FARMS IN PROJECT AREA 55 ACRES

MEDIAN SIZE IN ROWAN COUNTY 44 ACRES

### **NRCS FARMLAND CONVERSION FORM AD-1006, PART VI**

#### **W-5313 ROWAN COUNTY**

- 1. AREA IN NON-URBAN USE. POINTS AWARDED = 12 OUT OF 15**  
APPROXIMATELY 75% OF THE AREA WITHIN THE DIRECT COMMUNITY IMPACT AREA OF THE PROJECT IS NON-URBAN.
- 2. PERIMETER IN NON-URBAN USE. POINTS AWARDED = 7 OUT OF 10**  
APPROXIMATELY 70% OF THE AREA WITHIN A 1000 FOOT RADIUS OF THE PROJECT IS NON-URBAN.
- 3. PERCENT OF SITE BEING FARMED. POINTS AWARDED = 5 OUT OF 20**  
25% OF THE AREA IS BEING FARMED.
- 4. PROTECTION PROVIDED BY STATE AND LOCAL GOVERNMENT. POINTS AWARDED = 0 OUT OF 20**  
NO LAND WITHIN THE DCIA IS PARTICIPATING IN THE VOLUNTARY AGRICULTURAL DISTRICT PROGRAM.
- 5. DISTANCE FROM URBAN BUILT-UP AREA. POINTS AWARDED = 5 OUT OF 15**  
THE PROJECT IS NOT FAR FROM THE URBAN BUILT UP AREA SURROUNDING KANNAPOLIS AND CHINA GROVE, NC.
- 6. DISTANCE TO URBAN SUPPORT SERVICES. POINTS AWARDED = 10 OUT OF 15**  
WATER AND SEWER SERVICES EXIST WITHIN 1 MILE OF THE SITE.
- 7. SIZE OF PRESENT FARM UNIT COMPARED TO AVERAGE. POINTS AWARDED = 0 OUT OF 10**  
THE AVERAGE FARM SIZE IN THE DCIA IS GREATER THAN THE SIZE OF THE AVERAGE FARM IN ROWAN COUNTY (118 ACRES VS.44 ACRES).
- 8. CREATION OF NON-FARMABLE FARMLAND. POINTS AWARDED = 0 OUT OF 10**  
NO CREATION OF NON-FARMABLE FARMLAND IS ANTICIPATED.
- 9. AVAILABILITY OF FARM SUPPORT SERVICES. POINTS AWARDED = 5 OUT OF 5**  
ALL FARMLAND SUPPORT SERVICES ARE AVAILABLE.
- 10. ON-FARM INVESTMENTS. POINTS AWARDED = 15 OUT OF 20**  
SOME ON-FARM INVESTMENT WAS OBSERVED DURING THE FIELD VISIT, INCLUDING BARNs AND IRRIGATION SYSTEMS.
- 11. EFFECTS OF CONVERSION ON FARM SUPPORT SERVICES. POINTS AWARDED = 0 OUT OF 10**  
NO REDUCTION IN DEMAND FOR SUPPORT SERVICES IS ANTICIPATED.
- 12. COMPATIBILITY WITH EXISTING AGRICULTURAL USE. POINTS AWARDED = 5 OUT OF 10**  
THE PROJECT WILL HAVE AN IMPACT ON EXISTING AGRICULTURAL USES DUE TO ADDITIONAL RIGHT-OF-WAY REQUIRED.

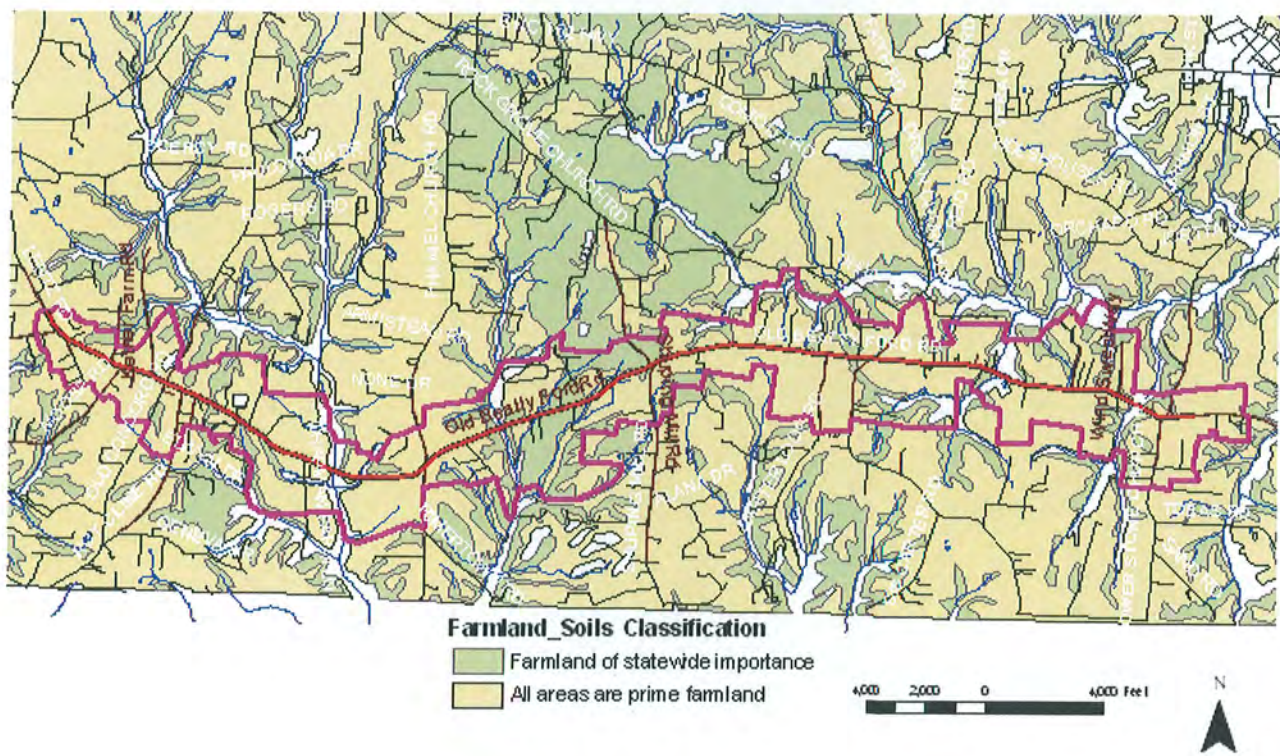
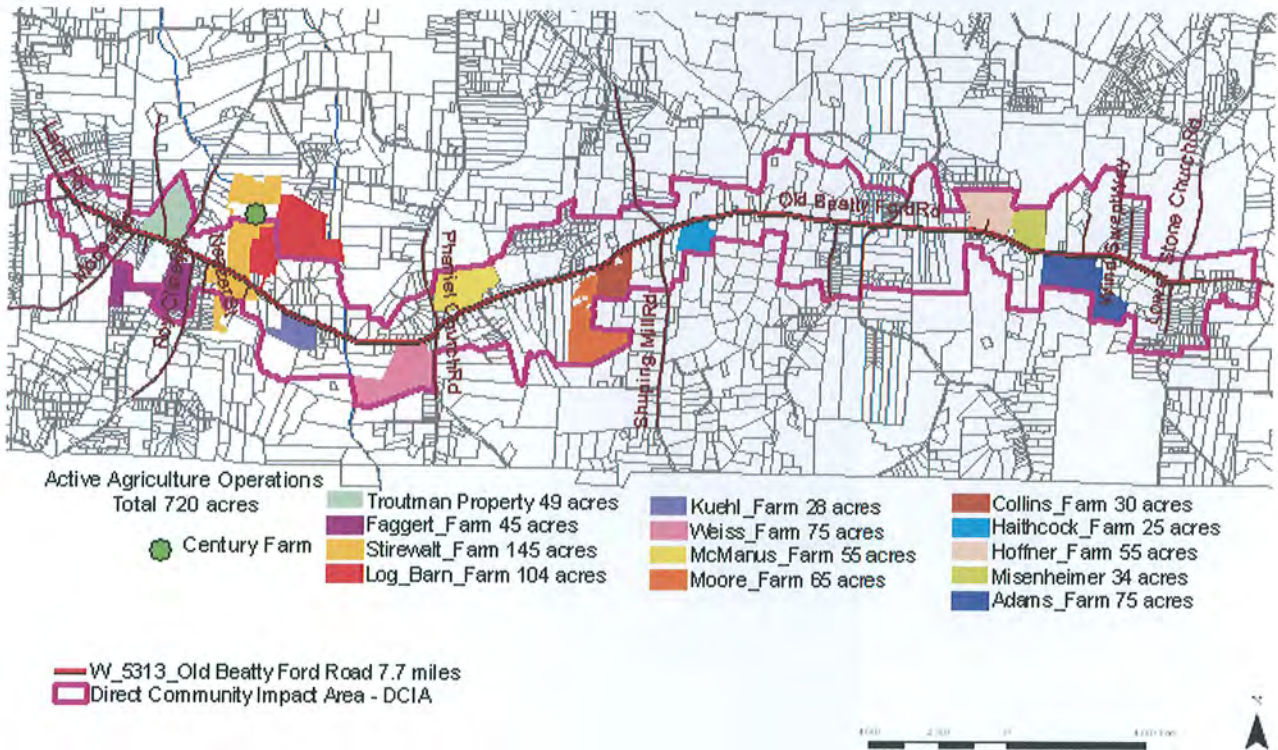
#### **CONCLUSION: TOTAL POINTS = 64 OUT OF 160**

SCREENING OF FARMLAND IN THE PROJECT AREA CALCULATES THE NUMBER OF POINTS TO BE 64 OUT OF 160 PER PART VI OF THE NRCS AD-1006 FARMLAND CONVERSION IMPACT RATING FORM.

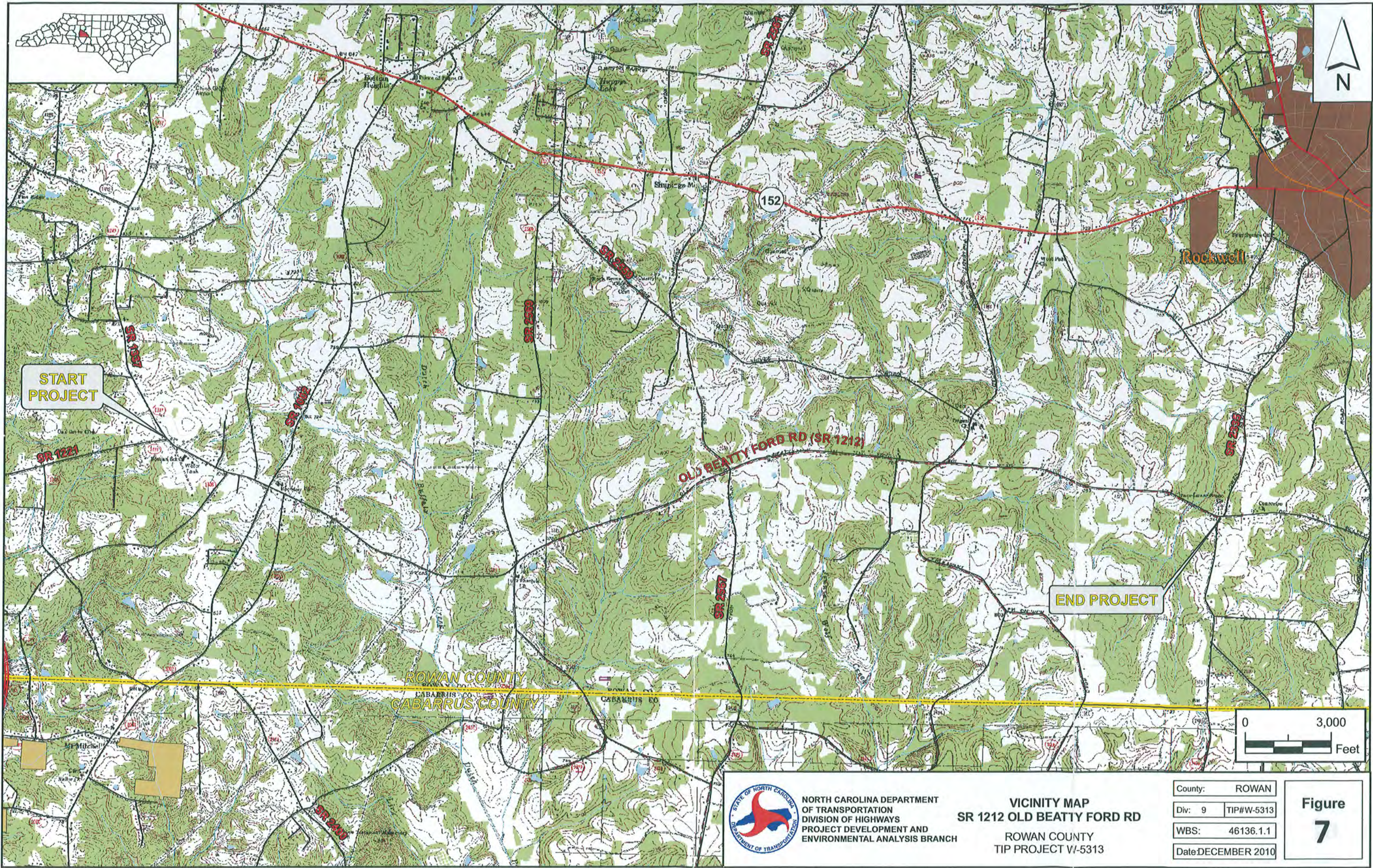


Figure 6B

**APPENDIX D: FARMLAND MAPS**







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

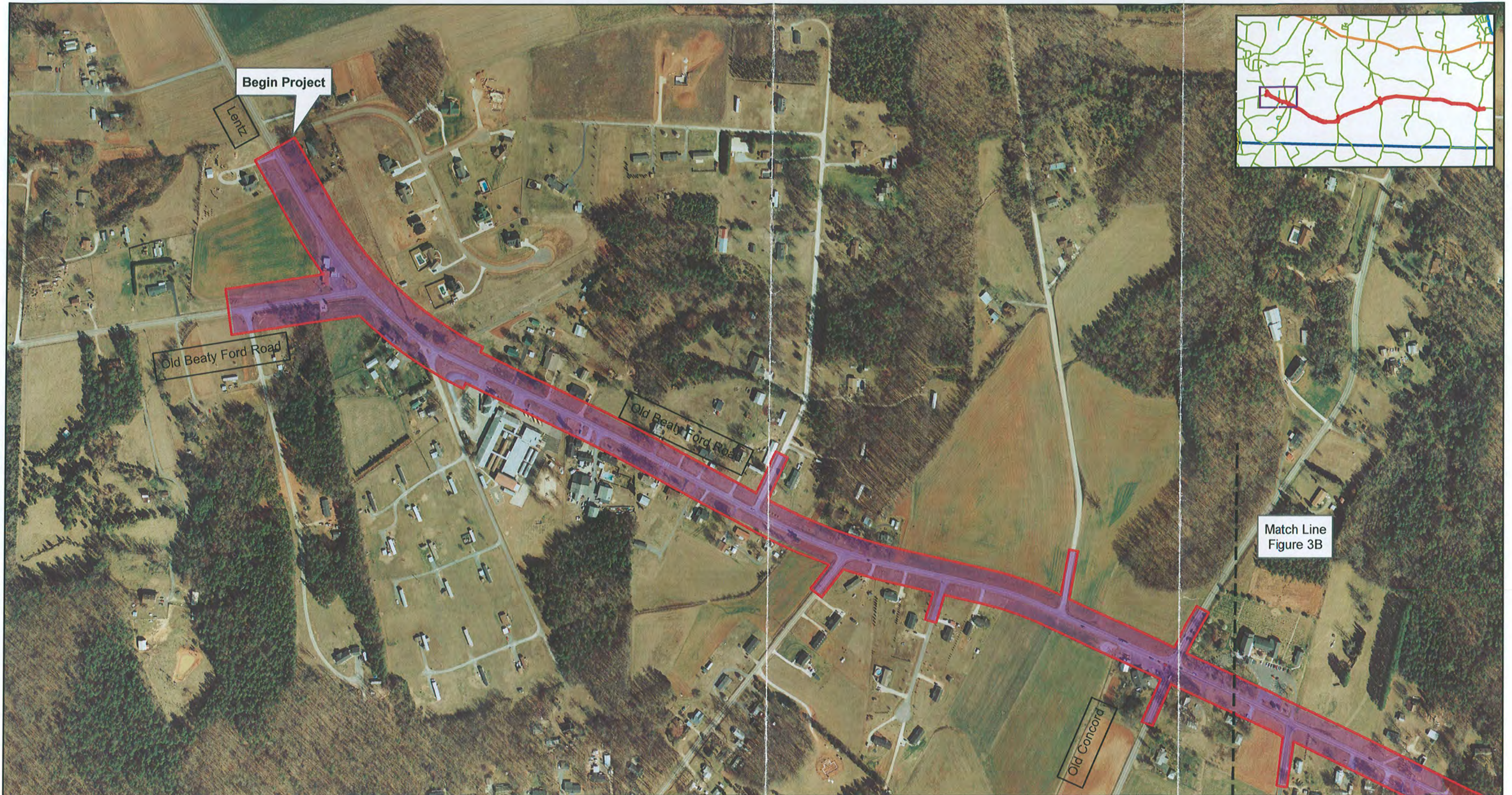
VICINITY MAP  
SR 1212 OLD BEATTY FORD RD  
ROWAN COUNTY  
TIP PROJECT W-5313

County:	ROWAN
Div:	9
TIP#:	W-5313
WBS:	46136.1.1
Date:	DECEMBER 2010

**Figure**  
**7**

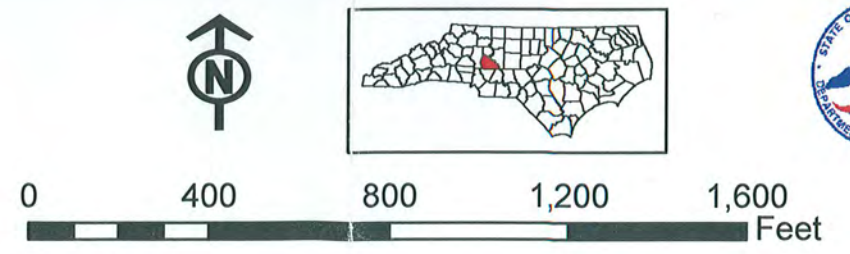
By: J.TORTORELLA

Source: USGS Topographic Quadangles China Grove, Rockwell, Concord, Mt. Pleasant



- Legend**
- Streams
  - Wetlands
  - W-5313 Project Study Area
- W-5313 Terrestrial Communities**
- Maintained Disturbed
  - Mixed Pine Hardwood Forest
  - Oak Hickory Forest
  - Piedmont/Mountain Bottomland Forest

Figure 3A  
**W-5313 Jurisdictional Features**  
 Old Beaty Ford Rd (SR 1221), Rowan County



**Figure 8A**



**Legend**








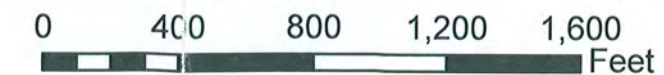
-  Streams
-  Wetlands
-  W-5313 Project Study Area
- W-5313 Terrestrial Communities**
-  Maintained Disturbed
-  Mixed Pine Hardwood Forest
-  Oak Hickory Forest
-  Piedmont/Mountain Bottomland Forest

Figure 3B  
**W-5313 Jurisdictional Features**  
 Old Beaty Ford Rd (SR 1221), Rowan County



**Figure 8B**



- Legend**
- Streams
  - Wetlands
  - W-5313 Project Study Area
  - W-5313 Terrestrial Communities**
  - Maintained Disturbed
  - Mixed Pine Hardwood Forest
  - Oak Hickory Forest
  - Piedmont/Mountain Bottomland Forest

Figure 8C  
 W-5313 Jurisdictional Features  
 Old Beaty Ford Rd (SR 1221), Rowan County



Figure 8C



**Legend**








-  Streams
-  Wetlands
-  W-5313 Project Study Area
- W-5313 Terrestrial Communities**
-  Maintained Disturbed
-  Mixed Pine Hardwood Forest
-  Oak Hickory Forest
-  Piedmont/Mountain Bottomland Forest

Figure 3D  
**W-5313 Jurisdictional Features**  
 Old Beaty Ford Rd (SR 1221), Rowan County



**Figure 8D**



**Legend**








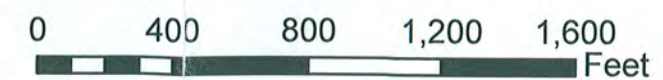
-  Streams
-  Wetlands
-  W-5313 Project Study Area
- W-5313 Terrestrial Communities**
-  Maintained Disturbed
-  Mixed Pine Hardwood Forest
-  Oak Hickory Forest
-  Piedmont/Mountain Bottomland Forest

Figure 8E  
**W-5313 Jurisdictional Features**  
 Old Beaty Ford Rd (SR 1221), Rowan County



**Figure 8E**



- Legend**
- Streams
  - Wetlands
  - W-5313 Project Study Area
- W-5313 Terrestrial Communities**
- Maintained Disturbed
  - Mixed Pine Hardwood Forest
  - Oak Hickory Forest
  - Piedmont/Mountain Bottomland Forest

W-5313 Jurisdictional Features  
 Old Beaty Ford Rd (SR 1221), Rowan County

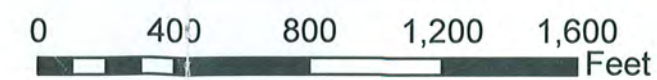
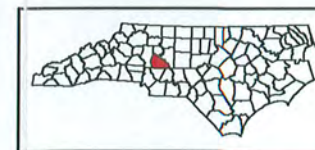


Figure 8F

**NOTICE OF A CITIZENS INFORMATIONAL WORKSHOP  
FOR IMPROVING VEHICULAR SAFETY AND TRAFFIC OPERATIONS  
AT SR 1221 (OLD BEATTY FORD ROAD) FROM SR 1337 (LENTZ ROAD) TO  
SR 2335 (LOWER STONE CHURCH ROAD)**

TIP Project No. W-5313

WBS No. 46136.1.1

Rowan County

The North Carolina Department of Transportation (NCDOT) will hold the above Citizens Informational Meeting on April 12, 2011 between the hours of 4:30 p.m. and 7:00 p.m. at Bostian Elementary School, 4245 Old Beatty Ford Road, China Grove, 28023-7660.

The purpose of this meeting is for NCDOT representatives to provide information and answer questions regarding this project. The opportunity to submit written comments will also be provided. Interested citizens may attend at any time during the above mentioned hours. Please note: there will be not be a formal presentation.

This project will upgrade SR 1221 (Old Beatty Ford Road) from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road). NCDOT proposes to widen Old Beatty Ford Road, a two lane roadway, consistently throughout the project limits to 12 foot lane widths in both directions, construct four (4) foot paved shoulders, and install rumble-strips onto the paved shoulders. Right of way acquisition will be required for this project. This project will be coordinated with Transportation Improvement Program (TIP) Project W-5146, the improvement of SR 1006 (Organ Church Road) intersection with SR 1221 (Old Beatty Ford Road).

Anyone desiring additional information may contact Karen Reynolds, Project Planning Engineer at 1548 Mail Service Center, Raleigh, 27699-1548, phone (919) 733-3141, fax (919) 733-9794 or email [kreynolds@ncdot.gov](mailto:kreynolds@ncdot.gov).

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to participate in this meeting. Anyone requiring special services should contact Ms. Reynolds as early as possible so that arrangements can be made.



# North Carolina Department of Transportation

Project Development and Environmental Analysis Branch



SR 1221 - OLD BEATTY FORD ROAD  
FROM SR 1337 (LENTZ ROAD) TO SR 2335 (LOWER STONE CHURCH ROAD)

ROWAN COUNTY  
TIP PROJECT W-5313

CITIZENS INFORMATIONAL WORKSHOP  
APRIL 12, 2011

# CITIZENS INFORMATIONAL WORKSHOP

OLD BEATTY FORD ROAD PROPOSED IMPROVEMENTS  
FROM SR 1337 (LENTZ ROAD) TO  
SR 2335 (LOWER STONE CHURCH ROAD) IN ROWAN COUNTY  
HAZARD ELIMINATION PROJECT  
TIP PROJECT W-5313  
WBS: 46136

## PURPOSE OF THE CITIZENS INFORMATIONAL WORKSHOP

The purpose of this workshop is to involve the public in the project development process and to present the alternates under consideration for the Old Beatty Ford Road hazard elimination project. If you have comments or suggestions about the proposed improvements described in this handout, please inform a representative of the North Carolina Department of Transportation (NCDOT). Please use the enclosed comment sheet to express your concerns or suggestions.

NCDOT realizes that individuals living close to a proposed project want to be informed of the possible effects of the project on their homes and businesses. However, exact information is not available at this stage of the project development process. For example, design work is necessary before the actual right of way limits can be established. This type of detailed information will be available at a later date. **The purpose of this workshop is to receive your comments and suggestions *before* final design decisions are made.**

Written comments on this project may be left with NCDOT representatives at the workshop or mailed to NCDOT. If additional information is needed or you would like to submit comments after the workshop, please address requests and comments to:

**Write:** Mr. Eric Midkiff, P.E., Project Development Unit Head  
ATTN: Karen Reynolds, Project Development Engineer  
Project Development & Environmental Analysis Branch  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548



**Call:** Karen Reynolds, Project Development Engineer  
(919) 707-6038



**E-Mail:** [kreynolds@ncdot.gov](mailto:kreynolds@ncdot.gov)

## PROJECT DESCRIPTION

The North Carolina Department of Transportation (NCDOT) is proposing to improve SR 1221 (Old Beatty Ford Road) from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road) in Rowan County. This project is approximately 7.4 miles in length. Project W-5313 is included in NCDOT 2011-2020 Transportation Improvement Program (TIP).

The attached Project Location Map shows the general location of the proposed hazard elimination improvements. TIP Project W-5313 proposes to widen existing lanes along Old Beatty Ford Road to 12 feet, construct 4-foot wide paved shoulders and purchase right-of-way along the entire project length, within the project limits. The installation of rumble strips along this section of Old Beatty Ford Road and improvements to Bridge 126, over Dutch Buffalo Creek, will be investigated.

During construction, traffic along Old Beatty Ford Road will be maintained by a temporary lane closures and flaggers. NCDOT apologizes for any inconveniences due to the installation of this project, and will work to minimize the construction duration of TIP Project W-5313.

## PROJECT SCHEDULE

### DRAFT NCDOT 2011-2020 TRANSPORTATION IMPROVEMENT PROGRAM

PROJECT STAGE	TIP SCHEDULE
CATEGORICAL EXCLUSION	December 2012
RIGHT-OF-WAY ACQUISITION	May 2013
CONSTRUCTION	November 2015
<b>TOTAL ESTIMATED PROJECT COST</b> \$ 11,000,000	

## PURPOSE OF THE PROJECT

The proposed Old Beatty Ford Road hazard elimination improvements are needed to:

- ❖ Improve safety and operations along Old Beatty Ford Road, within the project limits, by widening the existing facility, constructing paved shoulders and purchasing right-of-way within the project limits.
- ❖ Reduce the numerous rear-end, angle and side-swipe collisions associated with this section of Old Beatty Ford Road.

## OTHER RELATED PROJECTS

- ❖ W-5146: Old Beatty Ford Road - Organ Church Road intersection hazard elimination improvements. Construction currently scheduled for March 2012.
- ❖ I-3802B: I-85 from Exit 63 (Lane Street) in Cabarrus County to Exit 68 (US 29-US 601 Connector) in Rowan County. Construction currently scheduled for 2020. (6.5 miles)

## CURRENT PROJECT STATUS

Currently, project development and environmental studies for the proposed project are in progress. NCDOT is asking for your cooperation by allowing personnel entry onto your property to compile environmental surveys. **A Categorical Exclusion (CE) is scheduled for completion in December 2012.** The CE will address impacts that the proposed roadway may have on the human and natural environments.

## THE PROJECT DEVELOPMENT PROCESS

Project development and environmental studies are conducted in order to comply with the National Environmental Policy Act (NEPA). NCDOT is preparing a Categorical Exclusion (CE) for the Old Beatty Ford Road hazard elimination project.

The Categorical Exclusion will discuss the purpose and need for the proposed improvements, evaluate alternatives, and analyze the project impacts on both the human and natural environments. The document will address the following areas of concern:

Efficiency and safety of travel  
Neighborhoods and communities  
Relocation of homes and/or businesses  
Economy of project area  
Historic properties and sites  
Wetlands  
Endangered species

Wildlife and plant communities  
Water quality  
Floodplains  
Farmland and land use plans of project area  
Hazardous materials (underground tanks, etc.)  
Traffic noise  
Air quality

## OPPORTUNITIES FOR PUBLIC INVOLVEMENT

NCDOT provides a number of opportunities for citizen and interest group participation during project development. Some of these opportunities are listed below:

### **SCOPING LETTER**

This letter, published in the N.C. Environmental Bulletin, notifies agencies and groups on the State Clearinghouse mailing list that a project study has been initiated and solicits comments from them.

### **CITIZENS INFORMATIONAL WORKSHOP**

This is an informal workshop with the public. NCDOT representatives are available to discuss the project one-on-one with citizens. Workshop handouts provide citizens with project information. Comment sheets are also available to convey questions, comments, and concerns. The number of workshops scheduled for a project depends on the scope and anticipated impact of the project.

### **DOCUMENT DISTRIBUTION**

Copies of the environmental document are submitted to the State Clearinghouse for distribution and a notice is published in the N.C. Environmental Bulletin. Upon request, NCDOT will provide copies of the document to the public. Copies are available for public viewing at NCDOT Raleigh and Division offices; the State Clearinghouse office; local government offices, including the local council of government office; and local public libraries.

### **PUBLIC HEARING**

One or possibly more formal public hearings for the public record are held. The hearing format typically involves a short presentation, followed by an opportunity for citizens to comment.

### **CITIZEN LETTERS**

Citizens are encouraged to write NCDOT, provide information, and express concerns regarding the proposed improvements. Correspondence from citizens and interest groups is considered during the course of the project study.

**COMMENT SHEET**

**OLD BEATTY FORD ROAD HAZARD ELIMINATION PROJECT  
ROWAN COUNTY  
TIP NO. W-5313**

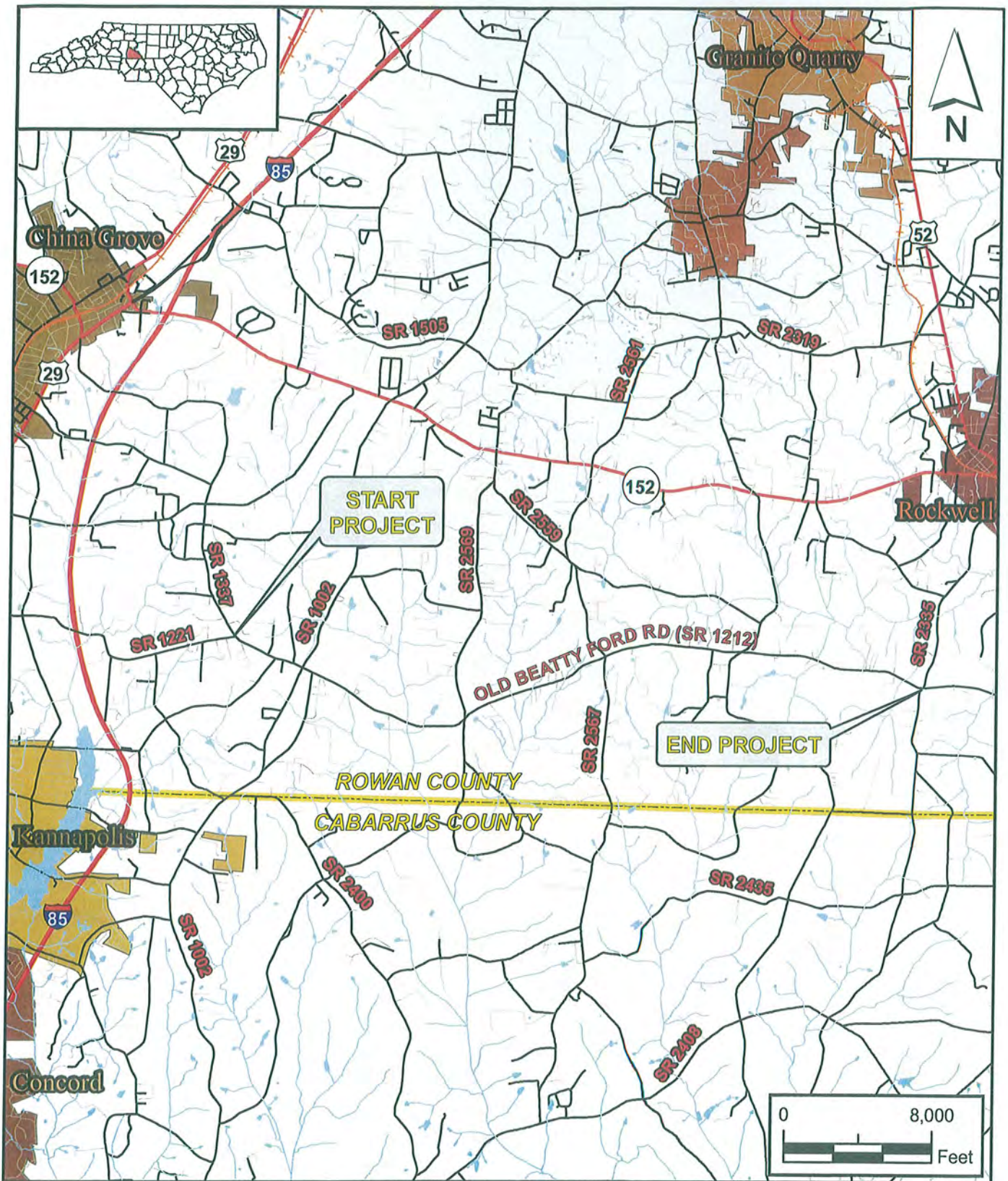
**April 12, 2011**

**NAME** \_\_\_\_\_  
**(Please Print)**

**ADDRESS** \_\_\_\_\_  
**(Please Print)**

**COMMENTS** \_\_\_\_\_  
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Please send comments to:  
Mr. Eric Midkiff, P.E., Project Development Unit Head  
ATTN: Karen Reynolds, Project Development Engineer  
Project Development and Environmental Analysis Branch  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina, 27699-1548



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

**VICINITY MAP  
SR 1212 OLD BETTY FORD RD**

ROWAN COUNTY  
TIP PROJECT W-5313

County:	ROWAN
Div:	9
TIP#:	W-5313
WBS:	46136.1.1
Date:	DECEMBER 2010

**Figure  
1**

NOTICE OF A DESIGN PUBLIC MEETING FOR PROPOSED SAFETY AND TRAFFIC  
OPERATIONS IMPROVEMENTS TO OLD BEATTY FORD ROAD FROM LENTZ  
ROAD TO LOWER STONE CHURCH ROAD IN ROWAN COUNTY

TIP Project No. W-5313

Rowan County

The North Carolina Department of Transportation proposes to upgrade Old Beatty Ford Road from Lentz Road to Lower Stone Church Road. Under current plans, NCDOT will widen both lanes of Old Beatty Ford Road to 12 feet, construct four-foot paved shoulders and install rumble strips on the paved shoulders. Additional right of way will be required for construction. NCDOT will coordinate this project with another project to improve the intersection of Organ Church Road and Old Beatty Ford Road.

NCDOT will hold a design public meeting for the Old Beatty Ford Road widening project on **Thursday, May 9, 2013** from **4 p.m.** until **7 p.m.** at the **Grace Lower Stone Church**, located at **2405 Lower Stone Church Road in Rockwell**.

Citizens are invited to speak individually with NCDOT officials and review the proposed design maps. The opportunity to submit written comments or questions will also be provided. Interested citizens may attend at any time during the aforementioned hours. There will not be a formal presentation.

For additional information, contact Karen Reynolds of the NCDOT Project Development and Environmental Analysis Unit at 1548 Mail Service Center, Raleigh, NC 27699-1548, by phone at (919) 707-6038 or via email at [kreynolds@ncdot.gov](mailto:kreynolds@ncdot.gov).

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who want to participate in this meeting. Anyone requiring special services should contact Ms. Reynolds as early as possible, so arrangements can be made.

Persons who speak Spanish and do not speak English, or have a limited ability to read, speak or understand English, may receive interpretive services upon request prior to the meeting by calling 1-800-481-6494.





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**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**

**Old Beatty Ford Road (SR 1221)  
Safety and Traffic Operations Improvements  
from Lentz Road (SR 1337) to  
Lower Stone Church Road (SR 2335)**

**TIP PROJECT NO.: W-5313**

WBS Number: 46136.1.1

Rowan County

**Design Public Meeting**

**Informal Open House: 4:00 p.m. – 7:00 p.m.**

***May 09, 2013***

Grace Lower Stone Church  
2405 Lower Stone Church Road  
Rockwell, NC, 28138

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## PURPOSE OF THE DESIGN PUBLIC MEETING

This meeting is another important step in the North Carolina Department of Transportation (NCDOT) procedure for involving the public in the project development process. The purpose of this meeting is to obtain public input concerning the roadway design being considered for the project.

The meeting maps are available online at: [www.ncdot.gov/projects/publicmeetings/](http://www.ncdot.gov/projects/publicmeetings/)

## YOUR PARTICIPATION

You are encouraged to participate in this meeting by making your comments and/or questions, a part of the public record. This may be done by writing them on the attached comment sheet. Representatives of the North Carolina Department of Transportation are present and will be happy to talk with you to explain the project to you and to answer your questions. You may write your comments or questions on the comment sheet and leave it with one of the NCDOT representatives or you may mail your comments by **June 5, 2013**, to the following address:

Mrs. Karen Reynolds  
NCDOT - Project Development & Environmental Analysis  
1548 Mail Service Center  
Raleigh, NC 27699-1548  
Phone: 919.707.6038  
Email: [kreynolds@ncdot.gov](mailto:kreynolds@ncdot.gov)

## WHAT IS DONE WITH YOUR INPUT?



A post-design public meeting will be conducted after the design public meeting comment period has ended. NCDOT staff representing Planning, Design, Traffic Operations, the local NCDOT Highway Division, Right-of-Way, Public Involvement & Community Studies, and others who play a role in the development of a project, will attend this meeting. The project will also be reviewed with various state agencies, such as the NC Department of Environment and Natural Resources. When appropriate, local government staff will also attend this meeting.

All comments received during the public meeting comment period will be discussed during the project post-design public meeting. The NCDOT considers safety, project cost, traffic services, social impacts and public comments in creating project design decisions. Complex project issues may require additional study and may be reviewed by higher management, the NCDOT Board of Transportation and/or the Secretary of Transportation.

Minutes of the post-design public meeting will be summarized and will be available to the public, by noting your request on the attached comment sheet.

## **WHAT HAPPENS NEXT**

Comments received from the design public meeting concerning the design of the Old Beatty Ford Safety and Traffic Operations Improvements project will be reviewed and recorded in the project environmental document, or Categorical Exclusion (CE). The project CE will be circulated for public and agency review.

## **PURPOSE AND NEED OF PROJECT**

The purpose of the proposed project is to improve safety and traffic operations along Old Beatty Ford Road within the project limits, by widening the existing lanes to a standard 11-foot width, constructing two-foot paved shoulders with rumble strips and by purchasing the right-of-way necessary for the construction of these project improvements. The proposed hazard elimination improvements are needed to reduce the numerous rear-end, angle and side-swipe collisions occurring along this section of Old Beatty Ford Road, within the project limits.

The NCDOT will coordinate this project with the W-5146 project improvements to the intersection of Organ Church Road and Old Beatty Ford Road.

The proposed improvements are consistent with the Long Range Transportation Plans of the local municipalities within project the study area. Local governments within the Cabarrus-Rowan Urban Metropolitan Planning Organization (CRUMPO), as well as the NCDOT, have included this project in their adopted transportation improvement plans.

## **PROJECT DESCRIPTION**

The North Carolina Department of Transportation proposes to improve Old Beatty Ford Road (SR 1221) from Lentz Road (SR 1337) to Lower Stone Church Road (SR 2335), in Rowan County. This project is about 7.4 miles in length.

The attached Project Vicinity Map (Figure 1) shows the location of the proposed project improvements. During construction, traffic along Old Beatty Ford Road will be maintained with temporary lane closures and flaggers. The NCDOT apologizes for any inconvenience caused due to the construction of this project, and will strive to minimize the duration construction.

## **RIGHT-OF-WAY PROCEDURES**

After decisions are made regarding the final design, the proposed right-of-way limits will be staked in the ground. If you are an affected property owner, a Right-of-Way Agent will contact you and arrange a meeting. The agent will explain the plans and advise you as to how the project will affect you. The agent will inform you of your rights as a property owner. If permanent right-of-way is required, professionals who are familiar with real estate values will evaluate or appraise your property. The evaluations or appraisals will be reviewed for completeness and accuracy, and then the Right-of-Way Agent will make a written offer to you. The current market value of the property at its highest and best use when appraised will be offered as compensation. The Department of Transportation must:

1. Treat all owners and tenants equally.
2. Fully explain the owner's rights.
3. Pay just compensation in exchange for property rights.
4. Furnish relocation advisory assistance.

## **RELOCATION ASSISTANCE**

If you are a relocatee, that is, if your residence or business is to be acquired as part of the project, additional assistance in the form of advice and compensation is available. You will also be provided with assistance on locations of comparable housing and/or commercial establishments, moving procedures, and moving aid. Moving expenses may be paid for you. Additional monetary compensation is available to help homeowners cope with mortgage increases, increased value of comparable homes, closing costs, etc. A similar program is available to assist business owners. The Right-of-Way Agent can explain this assistance in greater detail.

**NOTE: PAMPHLETS SUMMARIZING RIGHT OF WAY AND RELOCATION PROCEDURES ARE AVAILABLE AT THE SIGN-IN TABLE.**

Table 1. Summary of the W-5313 Hazard Elimination Improvements Impacts<sup>1</sup>

Feature	Impact
Length (miles)	7.4
Delineated Wetland Impacts (acres)	0.00
Delineated Stream Impacts (linear feet)	310.00
Displacements	Residential Business
	0 0
Surveyed Federal / State Threatened and Endangered Species Habitat Present	Yes (No Effects)
100 Year Floodplain and Floodway Impacts (acres)	0.00
Water Supply Watershed Critical Area (acres)	0.00
Historic Properties	3 - 5 (Low Effects)
Noise Impacted Receptors	0
Recorded Archaeological Sites	0
Recreational Areas / Parks	0
Cemeteries (acres)	0.00
Potential Underground Storage Sites (UST) Sites	5 (Low Impacts)
Total Estimated Project Cost	\$11,000,000

<sup>1</sup>Impact totals are preliminary and are subject to change during final design.

## **ADDITIONAL PROJECT INFORMATION**

Typical Section: See Figure 2

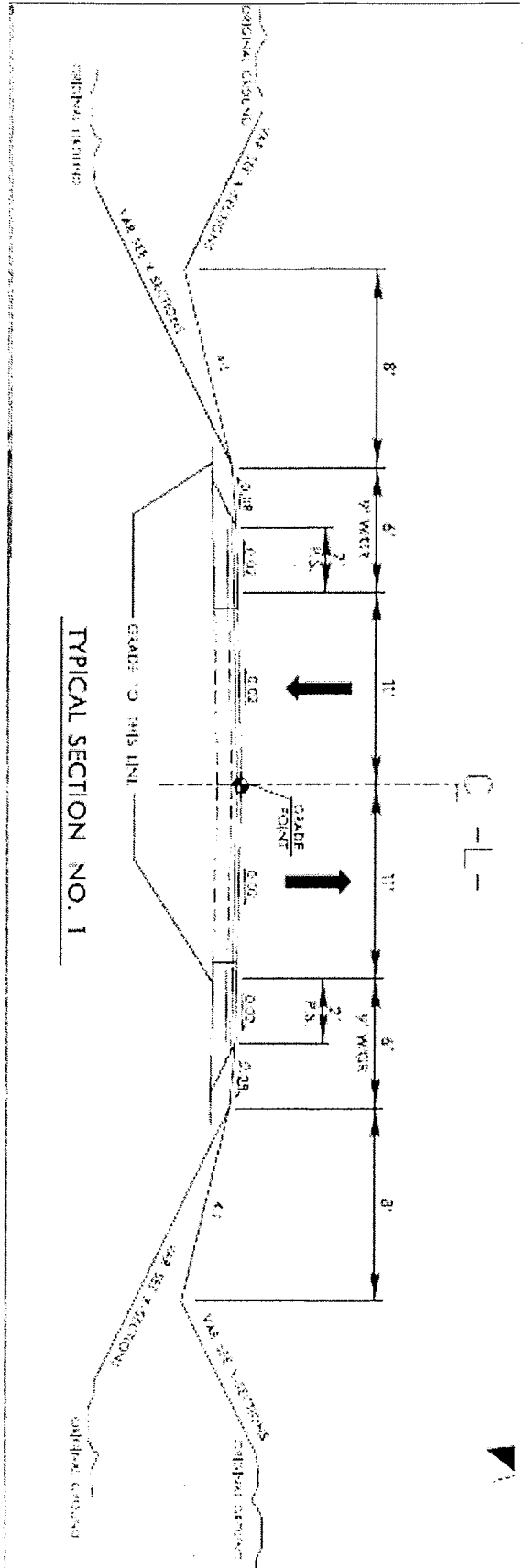
Right of Way: Variable width; approximately 60-70 feet.

Access Control: None; the same as currently exists.

Project Schedule: The tentative schedule is shown below. Various factors can affect a project schedule, so all such schedules are subject to change.

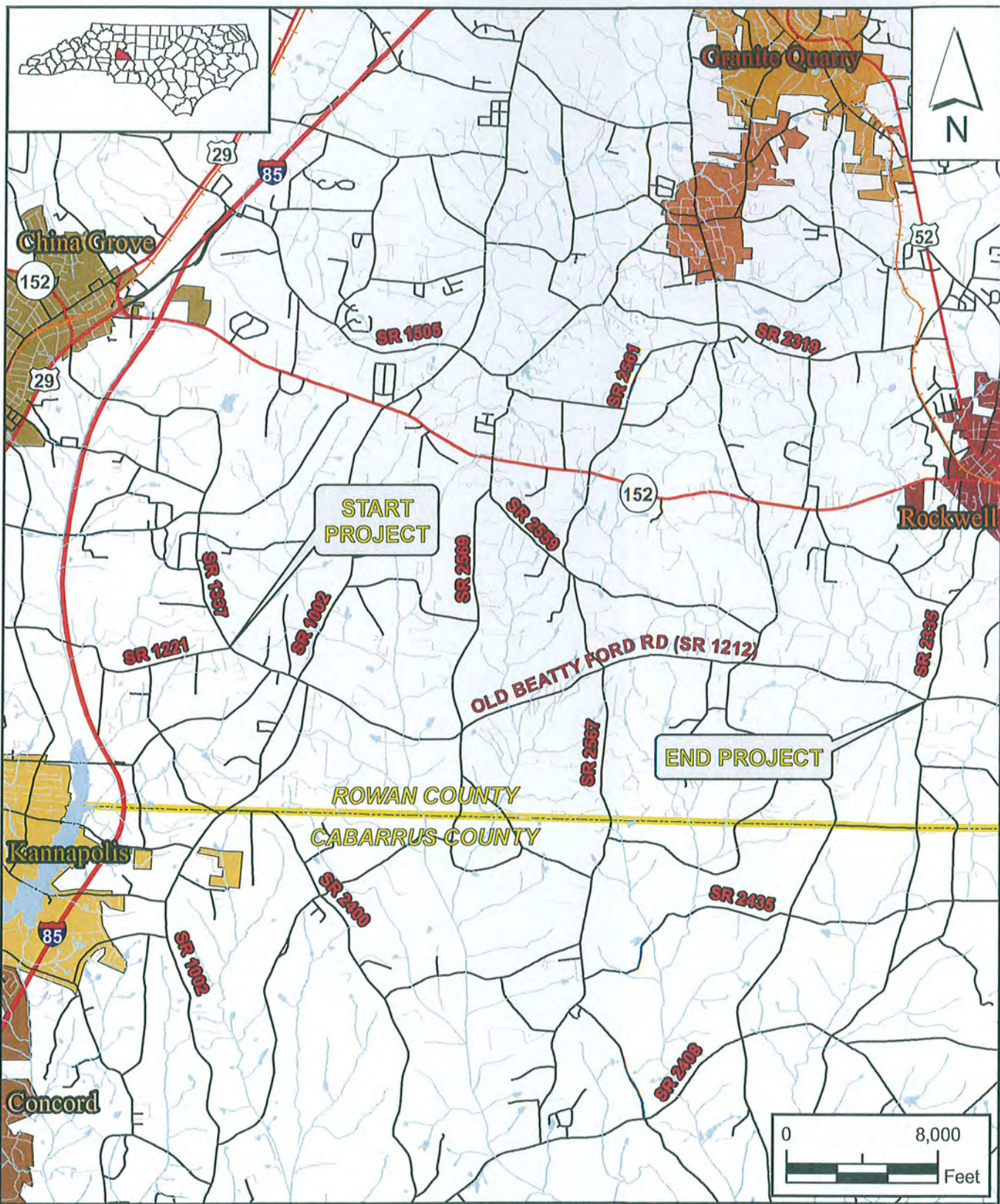
Right of Way Acquisition: May 2014

Construction: September 2015



**Transportation Improvement Program (TIP) Project W-5313**  
 SR 1221 (Old Beatty Ford Road) – Rowan County  
 Hazard Elimination Improvements Project

*Figure 2*



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

**VICINITY MAP**  
**SR 1212 OLD BETTY FORD RD**  
 ROWAN COUNTY  
 TIP PROJECT W-5313

County:	ROWAN
Div:	9
TIP#:	W-5313
WBS:	46136.1.1
Date:	DECEMBER 2010

**Figure**  
**1**

By: J.TORTORELLA

# TITLE VI PUBLIC INVOLVEMENT FORM

Completing this form is **completely** voluntary. You are not required to provide the information requested in order to participate in this meeting.

<b>Meeting Type:</b> Design Public Meeting	<b>Date:</b> May 9, 2013
<b>Location:</b> Grace Lower Stone Church, Rockwell, NC	
<b>TIP No.:</b> W-5313	
<b>Project Description:</b> Old Beatty Ford Road Safety and Traffic Operations Improvements	

In accordance with Title VI of the Civil Rights Act of 1964 and related authorities, the North Carolina Department of Transportation (NCDOT) assures that no person(s) shall be excluded from participation in, denied the benefits of, or subjected to discrimination under any of the Department's programs, policies, or activities, based on their race, color, national origin, disability, age, income, or gender.

Completing this form helps meet our data collection and public involvement obligations under Title VI and NEPA, and will improve how we serve the public. Please place the completed form in the designated box on the sign-in table, hand it to an NCDOT official or mail it to the PDEA-Human Environment Section, 1598 Mail Service Center, Raleigh, NC 27699-1598.

All forms will remain on file at the NCDOT as part of the public record.

<b>Zip Code:</b> _____	<b>Gender:</b> <input type="checkbox"/> Male <input type="checkbox"/> Female
<b>Street Name:</b> (i.e. Main Street) _____	<b>Age:</b> <input type="checkbox"/> Less than 18 <input type="checkbox"/> 45-64 <input type="checkbox"/> 18-29 <input type="checkbox"/> 65 and older <input type="checkbox"/> 30-44
<b>Total Household Income:</b> <input type="checkbox"/> Less than \$12,000 <input type="checkbox"/> \$47,000 – \$69,999 <input type="checkbox"/> \$12,000 – \$19,999 <input type="checkbox"/> \$70,000 – \$93,999 <input type="checkbox"/> \$20,000 – \$30,999 <input type="checkbox"/> \$94,000 – \$117,999 <input type="checkbox"/> \$31,000 – \$46,999 <input type="checkbox"/> \$118,000 or greater	<b>Have a Disability:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Race/Ethnicity:</b> <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Native Hawaiian/Pacific Islander <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Other (please specify): _____	<b>National Origin:</b> (if born outside the U.S.) <input type="checkbox"/> Mexican <input type="checkbox"/> Central American: _____ <input type="checkbox"/> South American: _____ <input type="checkbox"/> Puerto Rican <input type="checkbox"/> Chinese <input type="checkbox"/> Vietnamese <input type="checkbox"/> Korean <input type="checkbox"/> Other (please specify): _____

How did you hear about this meeting? (newspaper advertisement, flyer, and/or mailing) \_\_\_\_\_

For more information regarding Title VI or this request, please contact the NCDOT Title VI Section at (919) 508-1808 or toll free at 1-800-522-0453, or by email at [slipscomb@ncdot.gov](mailto:slipscomb@ncdot.gov).

Thank you for your participation!





NCDOT - PDEA  
Human Environment Section  
1598 Mail Service Center  
Raleigh, NC 27699-1598

**COMMENT SHEET**

*SR 1221 (Old Beatty Ford Road) Hazard Elimination Improvements Project*

*Design Public Meeting*

TIP Project No. W-5313

*Rowan County*

**NAME:**

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**ADDRESS:**

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**EMAIL ADDRESS:**

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**COMMENTS AND/OR QUESTIONS:**

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**Comments may be mailed by June 05, 2013, to:**

Mrs. Karen Reynolds  
NCDOT - Project Development & Environmental Analysis Unit  
1548 Mail Service Center  
Raleigh, NC 27699-1548  
Phone: 919.707.608 FAX: 919.250.4224  
Email: [kreynolds@ncdot.gov](mailto:kreynolds@ncdot.gov)

Mrs. Karen Reynolds  
NCDOT - Project Development & Environmental Analysis Unit  
1548 Mail Service Center  
Raleigh, NC 27699-1548

# **APPENDIX 1**

## **Agency Comments**

11/17/2010 - KJK



North Carolina Department of Environment and Natural Resources

Division of Water Quality  
Coleen H. Sullins  
Director

Beverly Eaves Perdue  
Governor

Dee Freeman  
Secretary

November 16, 2010

MEMORANDUM

To: Karen Reynolds, NCDOT, PDEA

From: Amy Euliss, NC Division of Water Quality, Office

Subject: Scoping comments on proposed improvements to SR 1221 (Old Beatty Ford Road), from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road) in Rowan County, Federal Aid Project No. STP-1221 (15), WBS # 46136, TIP W-5313.

Reference your correspondence dated November 9, 2010 in which you requested comments for the referenced project. Preliminary analysis of the project reveals the potential for multiple impacts to streams and jurisdictional wetlands in the project area. More specifically, impacts to:

Stream Name	River Basin	Stream Classification(s)	Stream Index Number	303(d) Listing
Dutch Buffalo Creek and unnamed tributaries	Yadkin-Pee Dee	WSII;HQW	13-17-11-(1)	Not listed
Jennie Wolf Creek and unnamed tributaries	Yadkin-Pee Dee	WSII;HQW	13-17-11-3	Not listed
Second Creek and unnamed tributaries	Yadkin-Pee Dee	C	12-117-2	Not listed

Further investigations at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Quality requests that NCDOT consider the following environmental issues for the proposed project:

Project Specific Comments:

- Review of the project reveals the presence of surface waters classified as WSII; High Quality Waters of the State in the project study area. This is one of the highest classifications for water quality. Pursuant to 15A NCAC 2H .1006 and 15A NCAC 2B .0224, NCDOT will be required to obtain a State Stormwater Permit prior to construction except in North Carolina's twenty coastal counties.

North Carolina Division of Water Quality, Winston-Salem Regional Office  
Location: 585 Waughtown St. Winston-Salem, North Carolina 27107  
Phone: 336-771-5000 \ FAX: 336-771-4630 \ Customer Service: 1-877-623-6748  
Internet: www.ncwaterquality.org



### General Project Comments:

1. The environmental document shall provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.
2. Environmental assessment alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.
3. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, NCDOT is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.
4. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 150 linear feet to any single stream. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.
5. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
6. If a bridge is being replaced with a hydraulic conveyance other than another bridge, NCDWQ believes the use of a Nationwide Permit may be required. Please contact the US Army Corp of Engineers to determine the required permit(s).
7. If the old bridge is removed, no discharge of bridge material into surface waters is allowed unless otherwise authorized by the US ACOE. Strict adherence to the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.
8. Whenever possible, NCDWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters shall not be blocked. Bridge supports (bents) shall not be placed in the stream when possible.
9. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NCDWQ's *Stormwater Best Management Practices*.

11-05-0026



## HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS FORM

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

### PROJECT INFORMATION

<b>Project No.:</b>	W-5313	<b>County:</b>	Rowan
<b>WBS No.:</b>	46136	<b>Document Type:</b>	CE
<b>Fed. Aid No.:</b>	STP-1221(15)	<b>Funding:</b>	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Permit Type(s):</b>	401 Water Quality Certification
<b><u>Project Description:</u></b> Widen Old Beatty Ford Road (SR 1221) from SR 1337 to SR 2335. The purpose of the proposed project is to standardize 12-foot lane widths, construct 4-foot paved shoulders, install rumble strips on the proposed paved shoulders and to purchase ROW along this 7.4 mile section.			

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

**Description of review activities, results, and conclusions:**

The State Historic Preservation Office (HPO) issued scoping comments on November 30, 2010 which recommended a survey. Surveys were completed by a sub-consultant (SEARCH) in August 2012. HPO reviewed the report and submitted a letter in October 2012 with further questions about eligibility. NCDOT staff architecture historian addressed those concerns in a letter July 2013 and the HPO concurred with the recommendations that the following properties are eligible or listed on the National Register: Bostian School, Stirewalt-Faggart Farm, John Stigerwalt House, Orlin Cruse House, Grace Evangelical and Reformed Church.

### ASSESSMENT OF EFFECTS

<b>Property Name:</b>	Bostian School	<b>Status:</b>	DE
<b>Survey Site No.:</b>	RW 1772	<b>PIN:</b>	137005
<b>Effects</b> <input type="checkbox"/> No Effect <input checked="" type="checkbox"/> No Adverse Effect <input type="checkbox"/> Adverse Effect			

**Explanation of Effects Determination:**

Temporary construction easements may require removal of trees and landscape plantings. During construction there will be unencumbered access for students and staff.

No ROW required, 20' of TCE anticipated

**List of Environmental Commitments:**

Tree avoidance measures and/or replanting plan for affected landscaping.

<b>Property Name:</b>	Stirewalt-Faggart Farm	<b>Status:</b>	DE
<b>Survey Site No.:</b>	RW 1410	<b>PIN:</b>	137029

**Effects**

No Effect

No Adverse Effect

Adverse Effect

**Explanation of Effects Determination:**

Temporary construction easements will only affect a sliver of farm field. Not enough to affect the resources that make the property eligible for the National Register.

No ROW required, 20' of TCE anticipated

**List of Environmental Commitments:**

none

<b>Property Name:</b>	John Stigerwalt House	<b>Status:</b>	NR & DE (reduced boundary)
<b>Survey Site No.:</b>	RW 0500	<b>PIN:</b>	137005

**Effects**

No Effect

No Adverse Effect

Adverse Effect

**Explanation of Effects Determination:**

No construction activities will take place within or adjacent to the reduced boundary of the property.



List of Environmental Commitments:  
 none

<b>Property Name:</b>	Orlin Cruse House	<b>Status:</b>	DE
<b>Survey Site No.:</b>	RW 1356	<b>PIN:</b>	374050

**Effects**  
 No Effect                       No Adverse Effect                       Adverse Effect

Explanation of Effects Determination:                      several (3-4)  
 Temporary construction easements may require removal of trees. Permanent utility easements may require increased trimming of trees along historic property boundary.  
 Approximately 1-5' of permanent ROW required for length of road frontage, 20' of TCE anticipated.

List of Environmental Commitments:  
 Tree avoidance measures and/or replanting plan for affected landscaping.

<b>Property Name:</b>	Grace Evangelical & Reformed Church	<b>Status:</b>	DE
<b>Survey Site No.:</b>	RW 0003	<b>PIN:</b>	379004

**Effects**  
 No Effect                       No Adverse Effect                       Adverse Effect

Explanation of Effects Determination:  
 No construction activities will take place within the historic boundary of the property.

List of Environmental Commitments:  
 none



KSR-12/3/10



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Division of Highways

DEC 03 2010

North Carolina Department of Cultural Resources  
State Historic Preservation Office

Peter B. Sandbeck, Administrator

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

Reconstruction  
Project Development and  
Environmental Analysis  
Office of Archives and History  
Division of Historical Resources  
David Brook, Director

November 30, 2010

MEMORANDUM

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

FROM: Peter Sandbeck *Best for Peter Sandbeck*

SUBJECT: Improvements to SR 1221 (Old Beatty Ford Road) from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road), W-5313, Rowan County, ER 10-2127

Thank you for your letter of November 9, 2010, regarding the above project.

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

- **Grace Evangelical and Reformed Church (Lower Stone Church)** (RW0003, listed in the National Register since 1972): The church cemetery abuts the northern limit of the existing Old Beatty Ford Road right-of-way.
- **John Stigerwalt House** (RW0500, listed in the National Register since 1984): The National Register boundary has approximately 180' of frontage along Old Beatty Ford Road. A 0.17-acre triangle at the southwest corner of the property was taken for right-of-way sometime prior to 1980. In 2006, the original 74-acre parcel that defined the NR boundary, was subdivided into 13 new lots—1 that contains the 1811 Stigerwalt house and 5 others (per 2010 aerial photographs) that now contain new residential homes.
- **George Matthias Bernhardt House** (RW0036, listed in the National Register since 1982): While the northern edge of the National Register boundary is within 0.5 miles of Old Beatty Ford Road, the house itself is 0.75 miles from Old Beatty Ford Road and is accessed via Klutz Road (SR 2361) to the south.
- **Zion Lutheran Church** (RW0012, listed in the National Register since 1972): The southwest corner of the property is located 0.2 miles from the intersection of Old Beatty Ford Road and Organ Church Road.
- **Ebenezer Lutheran Church** (RW0690, surveyed in 1977): This property abuts the northern limit of the existing Old Beatty Ford Road right-of-way.
- **Rimer Family Bake Oven** (RW0736, surveyed in 1977): The exact location and condition of this site is unknown. However, it is located on the Drye property, which does not abut Old Beatty Ford Road and is accessed via Drye Farm Road. The location of this site on the attached map is only approximate.
- **Concordia Church** (RW1304, surveyed in 1977): This site abuts Old Beatty Ford Road, but approximately 0.2 miles east of the intersection with Lower Stone Church Road (SR 2336) at the eastern terminus of the project area.

- **Orlin Cruse House** (RW1356, surveyed in 1977): This property abuts the northern limit of the existing Old Beatty Ford Road right-of-way.
- **Uriah Miller House** (RW1381, surveyed in 1977): This property abuts the southern limit of the existing Old Beatty Ford Road right-of-way.
- **Klutz Family House** (RW1382, surveyed in 1977): This property is located approximately 0.3 miles south of Old Beatty Ford Road, but is accessed via Carter Loop Road (SR 2565).
- **Ketner-Funderburke House** (RW1402, surveyed in 1977): This property is located approximately 0.2 miles northwest of the intersection of Old Beatty Ford Road and Lentz Road (SR 1337).
- **Stirewalt-Faggart House** (RW1410, surveyed in 1977): This property abuts the southern limit of the existing Old Beatty Ford Road right-of-way, but the house is accessed via Old Concord Road (SR 1002).
- **Jacob Barger House and Farm** (RW1416, surveyed in 1977): The exact location and condition of this site, including the house, barn, granary, well house, and other features of the farm complex are unknown. As of 1977, the farm complex was located on the Ketner property which abuts the northern limit of the existing Old Beatty Ford Road right-of-way. The location of this site on the attached map is only approximate.
- **Rendlemen Mill Site** (RW0734, surveyed in 1977): The exact location and condition of this site is unknown. The creek on which the mill is/was located on is approximately 0.5 miles north of Old Beatty Ford Road. The location of this site on the attached map is only approximate.

Please see the enclosed map for more information on the location of the above historic sites.

As the Rowan County Survey is more than thirty years old, 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.

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

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

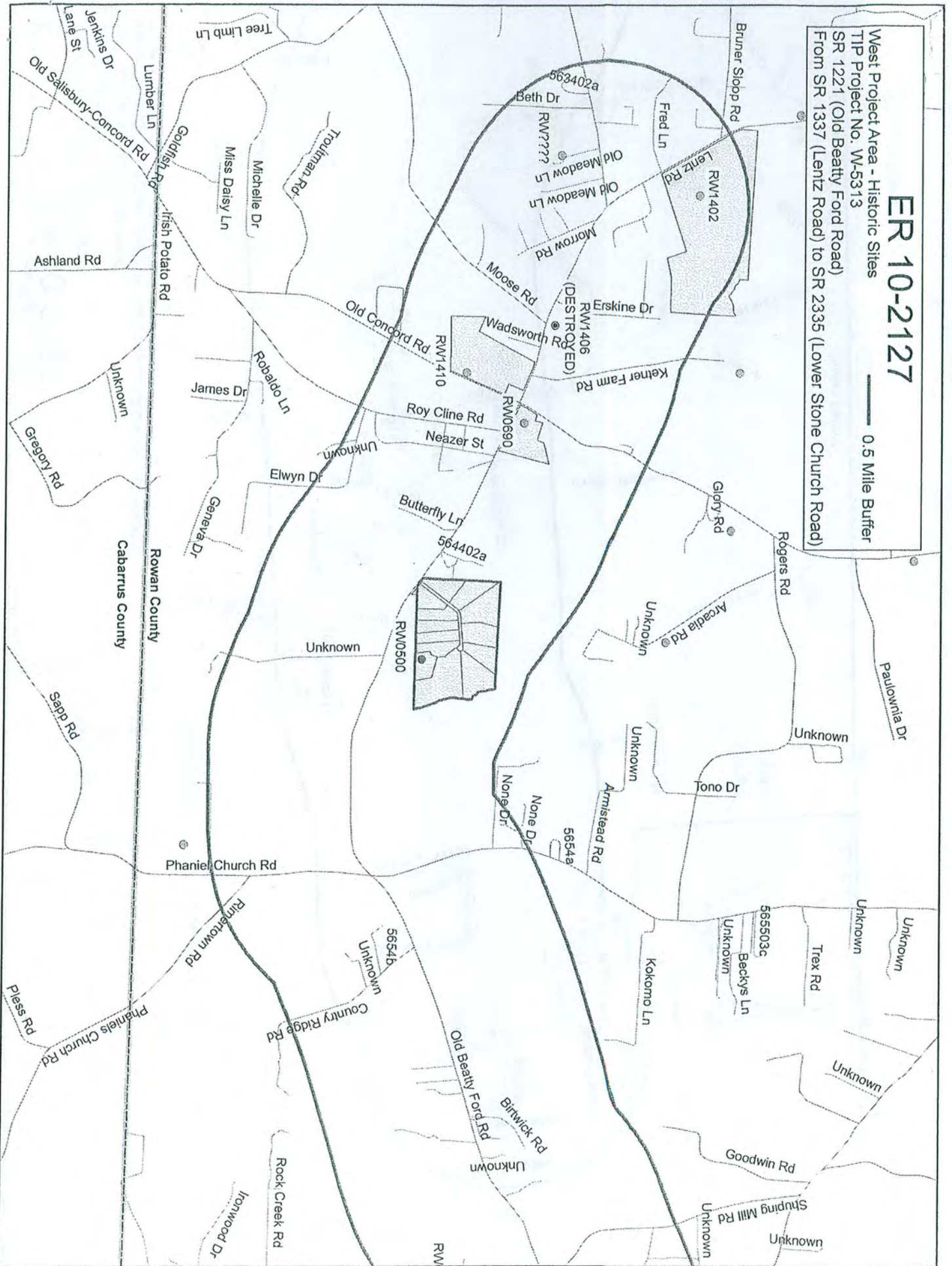
Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, Environmental Review Coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above referenced tracking number. (ER 10-2127)

cc: Mary Pope Furr, NCDOT  
 Matt Wilkerson, NCDOT  
 Andy Goodall, Rowan County Historic Landmarks Commission

# ER 10-2127

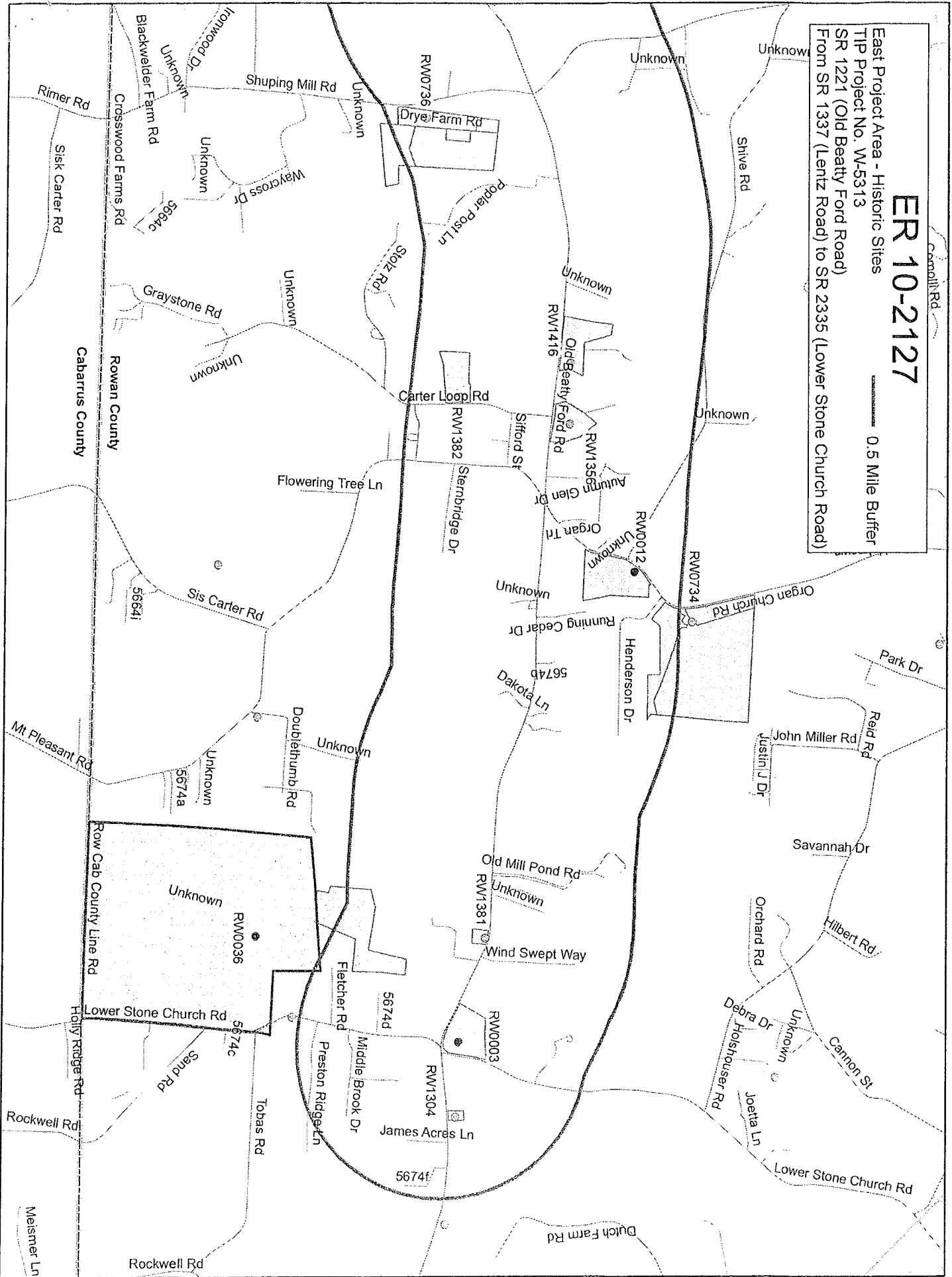
West Project Area - Historic Sites  
TIP Project No. W-5313  
SR 1221 (Old Beatty Ford Road)  
From SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road)

0.5 Mile Buffer



# ER 10-2127

East Project Area - Historic Sites  
TIP Project No. W-5313  
SR 1221 (Old Beatty Ford Road)  
From SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road)  
0.5 Mile Buffer



10. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
11. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species should be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
12. Placement of culverts and other structures in waters, streams, and wetlands shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
13. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel shall be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
14. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3624/Nationwide Permit No. 6 for Survey Activities.
15. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
16. All work in or adjacent to stream waters shall be conducted in a dry work area unless otherwise approved by NCDWQ. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures should be used to prevent excavation in flowing water.
17. Sediment and erosion control measures shall not be placed in wetlands and streams.
18. Borrow/waste areas shall avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas could precipitate compensatory mitigation.

19. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.
20. Heavy equipment shall be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
21. In most cases, NCDWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure shall be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed and restored to the natural ground elevation. The area shall be stabilized with grass and planted with native tree species. Tall fescue shall not be used in riparian areas.
22. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.

Thank you for requesting our input at this time. NCDOT is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Amy Euliss at (336) 771-4959.

cc: John Thomas, US Army Corps of Engineers, Raleigh Field Office  
Federal Highway Administration  
Chris Militscher, Environmental Protection Agency (electronic copy only)  
Marla Chambers, NC Wildlife Resources Commission (electronic copy only)  
Wetlands/401 Transportation Permitting Unit  
File Copy



**From:** Muire, Ed D. [<mailto:Ed.Muire@rowancountync.gov>]

**Sent:** Monday, February 21, 2011 3:38 PM

**To:** Reynolds, Karen S

**Subject:** W-5313 Scoping Meeting

Karen-

Thanks for the opportunity to participate in the call-in last week, but unfortunately the connection was terrible. As I mentioned, I am very interested in reviewing the comments / minutes from the meeting when available; please email them to me.

One thing I wanted to bring to your attention was the Cabarrus-Rowan MPO's street appendix and typical cross sections. I noticed in your report under item E regarding the proposed typical cross section, the improvement would be 12' lane widths and 4' paved shoulders. This is in keeping w/ our recommendation for Old Beatty Ford Rd using the "K" cross section available at this link: [http://www.crm-po.org/Forms/NCDOT X Sections - Appendix C.pdf](http://www.crm-po.org/Forms/NCDOT_X_Sections_-_Appendix_C.pdf) and page 7 & 8 of the street appendix R/W at this link: <http://www.crm-po.org/Forms/CRMPOstreetappendixADOPTEDFINAL.pdf>

I would encourage R/W acquisition of 70' since it coincides w/ our street appendix and it is the right-of-way observed when measuring setbacks for subdivision and zoning purposes.

Should you have any questions / comments about this material please contact me directly at 704-216-8599. Thanks.

Ed Muire, AICP, CFM  
Planning Director

**Rowan County Planning & Development**

402 N. Main Street - Suite 204 - Salisbury, NC 28144

Phone: 704.216.8588

Fax: 704.638.3130

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APR 13 2011

Preconstruction  
Project Development and  
Environmental Analysis Branch



## ☒ North Carolina Wildlife Resources Commission ☒

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TO: Gregory J. Thorpe, Ph.D., Manager  
Project Development and Environmental Analysis Branch, NCDOT

FROM: Marla Chambers, Western NCDOT Permit Coordinator *Marla Chambers*  
Habitat Conservation Program, NCWRC

DATE: March 16, 2011

SUBJECT: Review of NCDOT scoping sheets for improvements to SR 1221 (Old Beatty Ford Road) from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road), Rowan County. TIP No. W-5313.

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 improve SR-1221 (Old Beatty Ford Road) by providing standardized 11-foot lane widths, constructing 4-foot paved shoulders, and installing rumble-strips. Several streams cross the project and it appears that the western half of the project is in a water supply watershed with streams classified as WS II, HQW. The Carolina creekshell (*Villosa vaghaniana*), a Federal Species of Concern and state Endangered mussel, occurs near and downstream of the Dutch Buffalo Creek crossing. Another portion of the project drains to Second Creek, which flows to High Rock Lake, a popular lake for fishing, boating, and swimming, which also has sediment issues. The notched rainbow (*V. constricta*), a state Special Concern mussel, has been recorded in Second Creek downstream of the project. Enhanced sediment and erosion control should be utilized to protect sensitive listed species, water quality, and recreational use of the lake. 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  
<http://www.ncnhp.org>  
1601 Mail Service Center  
Raleigh, N. C. 27699-1601

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) 485-8291.

cc: Amy Euliss, NCDWQ  
Karen Reynolds, NCDOT

# **APPENDIX 2**

**Scientific Names of Species Identified in Project Area**

## Appendix 2: W-5313 Scientific Names of Identified Species

### Plants

<u>Common Name</u>	<u>Scientific Name</u>
Annual ragweed	<i>Ambrosia artemisiifolia</i>
Bearded beggarticks	<i>Bidens aristosa</i>
Black cherry	<i>Prunus serotina</i>
Black walnut	<i>Juglans nigra</i>
Black willow	<i>Salix nigra</i>
Catbrier	<i>Smilax rotundifolia</i>
Chinese privet	<i>Ligustrum sinense</i>
Christmas fern	<i>Polystichum acrostichoides</i>
Crape myrtle	<i>Lagerstroemia indica</i>
Daisy fleabane	<i>Erigeron annuus</i>
Dandelion	<i>Taraxacum officinale</i>
Dogfennel	<i>Eupatorium capillifolium</i>
Eastern baccharis	<i>Baccharis halimifolia</i>
Eastern gamagrass	<i>Tripsacum dactyloides</i>
Ebony spleenwort	<i>Asplenium platyneuron</i>
Flowering dogwood	<i>Cornus florida</i>
Foxtail	<i>Alopecurus</i> sp.
Fescue	<i>Festuca</i> spp
Goldenrod	<i>Solidago</i> sp.
Greater tickseed	<i>Coreopsis major</i>
Green ash	<i>Fraxinus pennsylvanica</i>
Hearts-a-bustin'	<i>Euonymus americanus</i>
Horsenettle	<i>Solanum carolinense</i>
Indiangrass	<i>Sorghastrum nutans</i>
Indianhemp	<i>Apocynum cannabinum</i>
Japanese grass	<i>Microstegium vimineum</i>
Japanese honeysuckle	<i>Lonicera japonica</i>
Johnsongrass	<i>Sorghum halepense</i>
Little heartleaf	<i>Hexastylis minor</i>
Loblolly pine	<i>Pinus taeda</i>
Mimosa	<i>Albizzia julibrissin</i>
Morning glory	<i>Ipomoea jaegeri</i>
Muscadine	<i>Vitis rotundifolia</i>
Mockernut hickory	<i>Carya alba</i>
Northern red oak	<i>Quercus rubra</i>
Periwinkle	<i>Vinca minor</i>
Pignut hickory	<i>Carya glabra</i>
Pin oak	<i>Quercus palustris</i>
Poison ivy	<i>Toxicodendron radicans</i>
Pokeweed	<i>Phytolacca americana</i>

Post Oak  
Purpletop tridens  
Queen Anne's lace  
Rabbit-tobacco  
Red cedar  
Red maple  
River birch  
Sawtooth blackberry  
Sericea lespedeza  
Shortleaf pine  
Slippery elm  
Small woodland sunflower  
Smooth oxeye  
Solomon's seal  
Southern red oak  
Spicebush  
Sycamore  
Sweetgum  
Tree of heaven  
Trumpet creeper  
Tulip poplar  
Virginia creeper  
Virginia pine  
White ash  
White oak  
Willow oak  
Winged elm  
Winged sumac  
Wingstem  
Wisteria  
Yarrow

*Quercus stellata*  
*Tridens flavus*  
*Daucus carota*  
*Pseudognaphalium obtusifolium*  
*Juniperus virginiana*  
*Acer rubrum*  
*Betula nigra*  
*Rubus argutus*  
*Lespedeza cuneata*  
*Pinus echinata*  
*Ulmus rubra*  
*Helianthus microcephalus*  
*Heliopsis helianthoides*  
*Polygonatum biflorum*  
*Quercus falcata*  
*Lindera benzoin*  
*Platanus occidentalis*  
*Liquidambar styraciflua*  
*Ailanthus altissima*  
*Campsis radicans*  
*Liriodendron tulipifera*  
*Parthenocissus quinquefolia*  
*Pinus virginiana*  
*Fraxinus americana*  
*Quercus alba*  
*Quercus phellos*  
*Ulmus alata*  
*Rhus copallinum*  
*Verbesina alternifolia*  
*Wisteria sp.*  
*Achillea millefolium*

## **Animals**

### Common Name

American bullfrog  
American crow  
American goldfinch  
American robin  
American toad  
Bald eagle  
Belted kingfisher  
Black rat snake  
Bluehead chub  
Blue jay  
Brown thrasher

### Scientific Name

*Rana catesbeiana*  
*Corvus brachyrhynchos*  
*Carduelis tristis*  
*Turdus migratorius*  
*Bufo americanus*  
*Haliaeetus leucocephalus*  
*Megaceryle alcyon*  
*Elaphe obsoleta*  
*Nocomis leptcephalus*  
*Cyanocitta cristata*  
*Toxostoma rufum*

Canada geese  
Carolina chickadee  
Carolina wren  
Copperhead  
Crayfish  
Eastern bluebird  
Eastern box turtle  
Eastern cottontail  
Eastern fence lizard  
Eastern gray squirrel  
Eastern kingbird  
Eastern meadowlark  
Eastern phoebe  
Fantail darter  
Garter snake  
Golden shiner  
Gray fox  
Gray treefrog  
Green anole  
Green heron  
Green treefrog  
Killdeer  
Leopard frog  
Northern cardinal  
Northern dusky salamander  
Pickerel frog  
Raccoon  
Redbreast sunfish  
Redlip shiner  
Rough green snake  
Snapping turtle  
Southeastern five-lined skink  
Spottail shiner  
Spring peeper  
Turkey vulture  
Upland chorus frog  
Virginia opossum  
White-tailed deer  
Wood thrush

*Branta canadensis*  
*Poecile carolinensis*  
*Thryothorus ludovicianus*  
*Agkistrodon contortrix*  
Cambaridae  
*Sialia sialis*  
*Terrapene carolina*  
*Sylvilagus floridanus*  
*Sceloporus undulatus*  
*Sciurus carolinensis*  
*Tyrannus tyrannus*  
*Sturnella magna*  
*Sayornis phoebe*  
*Etheostoma flabellare*  
*Thamnophis sirtalis*  
*Notemigonus crysoleucas*  
*Urocyon cinereoargenteus*  
*Hyla versicolor*  
*Anolis carolinensis*  
*Butorides virescens*  
*Hyla cinerea*  
*Charadrius vociferus*  
*Rana sphenocephala*  
*Cardinalis cardinalis*  
*Desmognathus fuscus*  
*Rana palustris*  
*Procyon lotor*  
*Lepomis auritus*  
*Notropis chiliticus*  
*Opheodrys aestivus*  
*Chelydra serpentina*  
*Eumeces inexpectatus*  
*Notemigonus hudsonius*  
*Pseudacris crucifer*  
*Cathartes aura*  
*Pseudacris feriarum*  
*Didelphis virginiana*  
*Odocoileus virginianus*  
*Hylocichla mustelina*