

Final Environmental Impact Statement

State Route 126 (Memorial Boulevard)
Improvement Project

From East Center Street to Interstate 81
Sullivan County, Tennessee

Submitted Pursuant to the
National Environmental Policy Act of 1969
42 U.S.C. 4332(2)(C) and 49 U.S.C. 303

Lead Agencies:

US Department of Transportation
Federal Highway Administration

Tennessee Department of Transportation

Cooperating Agencies:

US Army Corps of Engineers, Nashville District
Tennessee Valley Authority

State Route 126 (Memorial Boulevard)
Improvement Project

From East Center Street to Interstate 81
Sullivan County, Tennessee

Final Environmental Impact Statement

Submitted Pursuant to the National Environmental Policy Act of 1969
42 U.S.C. 4332(2)(c) and 49 U.S.C. 303


U.S. Department of Transportation
Federal Highway Administration

Tennessee Department of Transportation
Environmental Division


Cooperating Agencies
U.S. Army Corp of Engineers
Tennessee Valley Authority

The State Route 126 (Memorial Boulevard) improvement project is a joint effort between the Tennessee Department of Transportation (TDOT) and the Federal Highway Administration (FHWA). The limits of the 8.4-mile-long project extend from East Center Street, within the City of Kingsport's City Limits, east to Interstate 81 (I-81) in Sullivan County, Tennessee. A Preferred Alternative has been selected after the review of social, ecological, and cultural impacts as well as the consideration of public and agency comments. This document identifies and assesses the environmental impacts of the Preferred Alternative and previously studied alternatives.

11/19/2014
Date


Pamela M. Kordenbrock
Division Administrator
Federal Highway Administration, TN Division

11-13-14
Date


Adetokunbo "Toks" Omishakin
Deputy Commissioner/Chief
Bureau of Planning and Environment
Tennessee Department of Transportation

For additional information concerning this document contact:

Theresa Claxton
Planning and Program Management
Team Leader
Federal Highway Administration
Tennessee Division Office
404 BNA Drive, Suite 508
Nashville, TN 37217
(615) 781-5770

Jim Ozment
Director
Environmental Division
Tennessee Department of Transportation
James K. Polk Building
505 Deaderick Street, Suite 900
Nashville, TN 37243-0334
(615) 741-5373

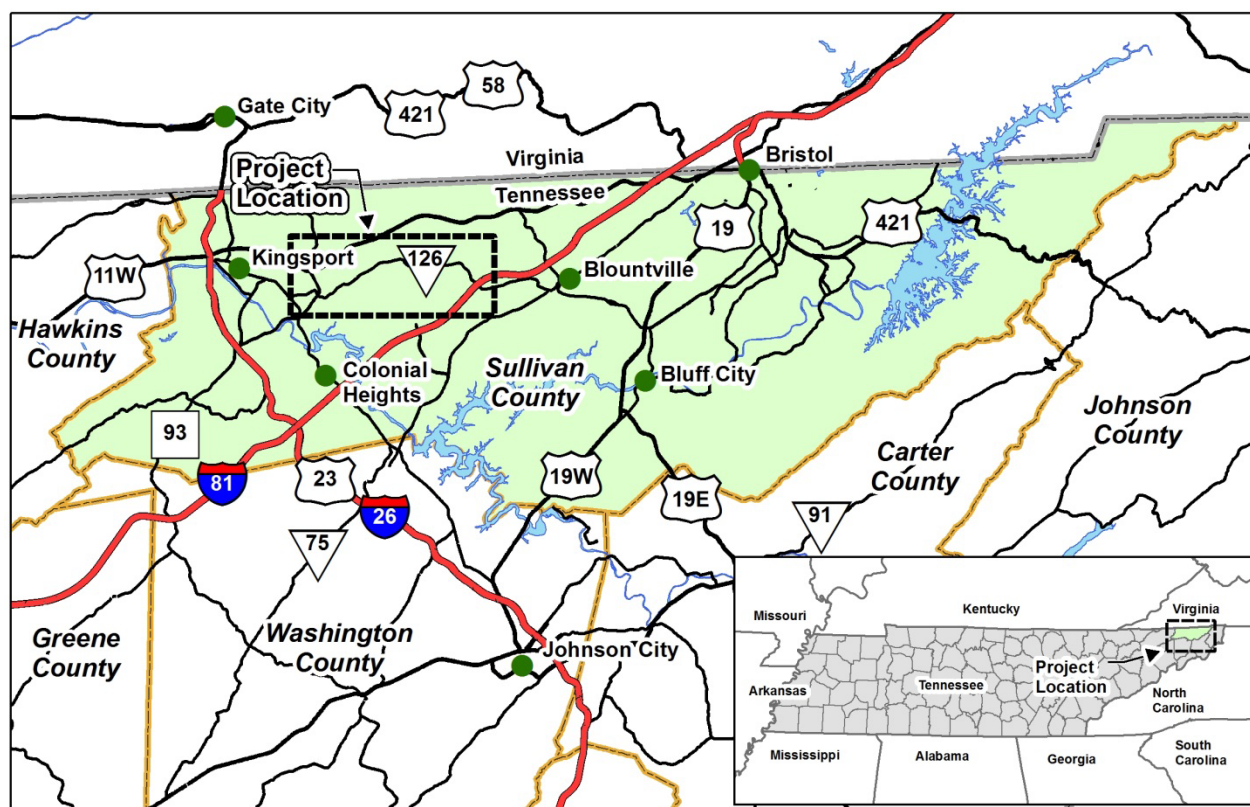
SUMMARY

S.1 General Project Description

The State Route (SR) 126 (Memorial Boulevard), SR 126 hereafter, improvement project is a joint effort between the Tennessee Department of Transportation (TDOT) and the Federal Highway Administration (FHWA). The limits of the 8.4-mile-long project extend from East Center Street, within the city limits of Kingsport, east to Interstate 81 (I-81) in Sullivan County, Tennessee. Figure S-1 illustrates the vicinity of the project.

FHWA approved the *Draft Environmental Impact Statement* (DEIS) on January 5, 2012. This document is the *Final Environmental Impact Statement* (FEIS) and summarizes all changes and updates since approval of the DEIS.

FIGURE S-1: PROJECT VICINITY MAP



SR 126 is primarily a two-lane facility (one travel lane in each direction) throughout the study corridor. The Preferred Alternative (Alternative B Modified) proposes four travel lanes from East Center Street to Harbor Chapel Road. From Harbor Chapel Road to I-81, the Preferred Alternative (Alternative B Modified) proposes two travel lanes, one in each direction. There is an additional eastbound travel lane from Harbor Chapel Road to Old Stage Road to accommodate trucks ascending the steep grade of Chestnut Ridge. There will be a continuous, left-turn lane separating the two travel lanes from Old Stage Road to Harr Town Road. For the section of roadway between Yancey's Tavern, which is listed on the National Register of Historic Places (NRHP) and East Lawn Memorial Gardens Cemetery, the Preferred Alternative (Alternative B

Modified) proposes to compress (reduce) the right-of-way (ROW) and cross-section width to minimize impacts. This is accomplished by utilizing retaining walls, reducing the lane widths for the two travel lanes and center left turn lane, and including a sidewalk only on one side of the roadway.

Improved shoulders will be provided along the entire corridor, and sidewalks will be extended to the majority of the commercial and residential areas.

The proposed SR 126 improvement project is located within the Kingsport Metropolitan Transportation Planning Organization (KMTPO) jurisdiction. Improvements along SR 126 are included in the KMTPO's *2035 Long Range Transportation Plan (LRTP)*, dated June 7, 2012, and the current (2014 – 2017) *Transportation Improvement Program (TIP)*, dated December 19, 2013.

S.2 Purpose and Need

The purpose of the project is to provide a safe and efficient route for local traffic along SR 126 between the City of Kingsport and I-81 that achieves a reduction in crash rates, improves roadway deficiencies and improves access management along the commercial areas of the route.

The proposed action is intended to address the following transportation needs in the study area:

- Improve roadway safety;
- Reduce the crash rate along the corridor;
- Improve roadway geometrics and width deficiencies to provide adequate roadway and shoulder widths for vehicles and;
- Improve access management and traffic operations.

Secondary goals include minimizing impacts to and complementing the rural nature of the area and improving pedestrian and bicycle connectivity.

S.3 Alternatives

In selecting reasonable alternatives to meet the purpose and need of the project, TDOT consulted with local, state and federal officials and agencies, identified environmentally sensitive areas, and held six public involvement sessions and two public hearings in the project corridor. The SR 126 project was the initial Context Sensitive Solutions (CSS) Project for TDOT. The CSS process included a Community Resource Team (CRT) that made recommendations that were utilized to develop project alternatives.

Two build alternatives (Alternative A and Alternative B) were considered in the DEIS. Alternative A is based on recommendations made by the CRT, which proposes four travel lanes from East Center Street to Cooks Valley Road and two travel lanes from Cooks Valley Road to I-81. Alternative B was developed as a modification to Alternative A to reduce impacts. It proposes four travel lanes from East Center Street to east of Lemay Drive and two travel lanes from there to I-81. Following approval of the DEIS, a third build alternative, Alternative B Modified was developed to further reduce impacts and incorporate changes made to the KMTPO travel demand model. Alternative B Modified proposes four travel lanes from East Center Street to

Harbor Chapel Road, three travel lanes from Harbor Chapel Road to Old Stage Road, and two travel lanes from Old Stage Road to I-81. These three build alternatives, as well as the No-Build Alternative, were presented at two public hearings. Additional alternatives that were considered but eliminated were: a continuous four-lane facility, Transportation Systems Management (TSM), and Mass Transit.

Alternative B Modified was developed as the Preferred Alternative after TDOT reviewed the impacts associated with each alternative, comments on the DEIS, and comments from the public hearings. The Preferred Alternative (Alternative B Modified) meets the purpose and need of the project and improves safety while minimizing impacts to the environment and the community. It is the only build alternative considered that does not have an adverse visual effect to the NRHP-listed Yancey's Tavern or disturb known grave sites at East Lawn Memorial Gardens Cemetery. It requires less ROW and has a lower estimated number of residential and business displacements, and is supported by the mayor of Kingsport and the mayor of Sullivan County.

S.4 Environmental Impacts

The No-Build Alternative would only provide normal roadway maintenance for SR 126 and the other existing roads. It would have minimal environmental impacts but would not meet the project's identified purpose and need. The environmental impacts for Alternative A, Alternative B, and the Preferred Alternative (Alternative B Modified) are compared in Table S-1. Table S-2 compares the estimated costs of the alternatives.

TABLE S-1: POTENTIAL ENVIRONMENTAL IMPACTS COMPARISON

Impact Category	Preferred Alternative (Alternative B Modified)	Alternative A	Alternative B
Estimated ROW Acquisition	100 acres	239 acres	121 acres
Transportation	Improved geometry, safer access, and adequate widths for emergency vehicles, school buses, and mail delivery	Improved geometry, safer access, and adequate widths for emergency vehicles, school buses, and mail delivery	Improved geometry, safer access, and adequate widths for emergency vehicles, school buses, and mail delivery
Land Use	Conversion of approximately 100 acres to highway ROW, potential indirect impact of development of vacant land along corridor	Conversion of approximately 239 acres to highway ROW, potential indirect impact of development of vacant land along corridor	Conversion of approximately 121 acres to highway ROW, potential indirect impact of development of vacant land along corridor
Farmland (Acres)	5 prime and/or unique	15 prime and/or unique	5 prime and/or unique

Impact Category	Preferred Alternative (Alternative B Modified)	Alternative A	Alternative B
SOCIAL and ECONOMIC			
Social Impacts	No adverse impact, access improved for schools and buses, and emergency response time improved	Adverse impact to grave sites. Access improved for schools and buses, and emergency response time improved	Adverse impact to grave sites. Access improved for schools and buses, and emergency response time improved
Residential Displacements ¹	Total: 104 81 single-family 22 multi-family 1 mobile home	Total: 241 102 single-family 135 multi-family 4 mobile homes	Total: 162 90 single-family 69 multi-family 3 mobile homes
Business Displacements ¹	24 businesses	43 businesses	30 businesses
Non-Profit Displacements ¹	1 (volunteer fire station)	1 (volunteer fire station)	1 (volunteer fire station)
Environmental Justice	No disproportionately high and adverse impact to minority or low-income populations	No disproportionately high and adverse impact to minority or low-income populations	No disproportionately high and adverse impact to minority or low-income populations
Economic	Economic impacts due to relocations	Economic impacts due to relocations	Economic impacts due to relocations
Pedestrians and Bicyclists	Will provide paved shoulders wide enough to accommodate pedestrians and bicyclists	Would provide paved shoulders wide enough to accommodate pedestrians and bicyclists	Would provide paved shoulders wide enough to accommodate pedestrians and bicyclists
NATURAL RESOURCES			
Wetlands Impacts (Acres)	None	None	None
Stream Impacts (Linear Feet)	Total: 3,107 2,841 perennial 266 intermittent	Total: 4,863 4,243 perennial 620 intermittent	Total: 3,107 2,841 perennial 266 intermittent
Floodplains Impacts (Acres)	3.2	4	3.2
Forest Land Acquired (Acres) ²	50	75	55
Threatened and Endangered Species (Federal and State)	None. An updated ecological survey will be completed prior to construction	None	None

Impact Category	Preferred Alternative (Alternative B Modified)	Alternative A	Alternative B
Air Quality Impacts Requiring Mitigation	None	None	None
Noise Impacts Requiring Mitigation	None	None	None
CULTURAL RESOURCES			
Historic Property Adversely Impacted	None	Yancey's Tavern Visual impact	Yancey's Tavern Visual impact
Archaeological Sites Impacted	None	None	None
Recreation	None	None	None
Section 4(f)	None	None	None
Section 6(f)	None	None	None
Gravesites Impacted	None	350 (East Lawn Memorial Gardens)	90 (East Lawn Memorial Gardens)
Hazardous Materials Sites (Potential)	Six sites will require a Phase II study	Eight sites would require a Phase II study	Six sites would require a Phase II study
Visual Impacts	None	Adverse visual impact on Yancey's Tavern	Adverse visual impact on Yancey's Tavern
Wild and Scenic Rivers	None	None	None
Energy Impacts	No adverse impact-involves the commitment of energy resources during the short-term construction period and during the long-term operation	No adverse impact-involves the commitment of energy resources during the short-term construction period and during the long-term operation	No adverse impact-involves the commitment of energy resources during the short-term construction period and during the long-term operation
Construction Impacts	Maintenance of traffic, access to properties adjoining the road, and utility relocations	Maintenance of traffic, access to properties adjoining the road, and utility relocations	Maintenance of traffic, access to properties adjoining the road, and utility relocations

1. Source: TDOT- Right-of-Way Division (4/8/2010, 8/22/2012).

2. Includes all forest land impacted within the estimated construction limits.

TABLE S-2: ESTIMATED COST COMPARISON

Cost Category	Preferred Alternative (Alternative B Modified)	Alternative A	Alternative B
ROW	\$43,440,000	\$66,000,000	\$52,800,000
UTILITIES	\$ 4,795,000	\$ 5,847,600	\$ 5,021,500
CONSTRUCTION	\$51,700,000	\$60,500,000	\$51,700,000
TOTAL COST	\$99,935,000	\$132,347,600	\$109,521,500

Source: ICA Engineering, Inc. (2014)

S.5 Areas of Controversy

Community members had differing opinions regarding the location of the four-lane and two-lane sections of the proposed project. Some thought there should be four lanes from east of Lemay Drive to Cooks Valley Road, and that there should be more consideration to extending the four lanes to I-81. Their primary reasons were supporting economic development and providing congestion relief to and beyond the design year.

Another group of citizens opposed extending four travel lanes in general and specifically from Lemay Drive to Cooks Valley Road. One key concern of these citizens was the impacts to the historic Yancey's Tavern and the East Lawn Memorial Gardens cemetery, as well as Chestnut Ridge. Another concern was that four travel lanes would change the rural character of the area.

S.6 Statute of Limitations on Filing Claims

The FHWA may publish a notice in the Federal Register, pursuant to 23 USC § 139 (I), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for this project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 150 days after the date of publication of the notice, or written such that a shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

S.7 Other Major Federal Actions

The following stream and miscellaneous water quality permits may be required for the proposed project:

- Aquatic Resource Alteration Permit from the State of Tennessee;
- Individual or Nationwide 404 Permit from the U.S. Army Corps of Engineers;
- Section 26a Permit from the Tennessee Valley Authority and;
- National Pollutant Discharge Elimination System permit from the State of Tennessee.

TDOT will undertake further coordination with the regulatory agencies before preparing mitigation plans and submitting permit applications for the Preferred Alternative (Alternative B Modified). Permit requirements and mitigation plans will be based on these discussions.

LIST OF ACRONYMS

AADT	Average Annual Daily Traffic
ACHP	Advisory Council on Historic Preservation
ACS	American Community Survey
ADA	Americans with Disabilities Act of 1990
APE	Area of Potential Effects
APR	Advance Planning Report
ARAP	Aquatic Resource Alteration Permit
AST	Above-ground Storage Tank
ASTM	American Society for Testing and Materials
BG	Block Groups
BMP	Best Management Practices
CAAA	Clean Air Act Amendments of 1990
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Act Information System
CFR	Code of Federal Regulations
CRT	Community Resource Team
CSRP	Conceptual Stage Relocation Plan
CSS	Context Sensitive Solutions
DAR	Dial-A-Ride
DBH	Diameter at Breast Height
DEIS	Draft Environmental Impact Statement
DOT	Department of Transportation
DUST	TDEC Division of Underground Storage Tanks
EIA	U.S. Energy Information Administration
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPPA	Federal Farmland Protection Policy Act of 1981
GHG	Greenhouse Gas
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
HVAC	Heating, Ventilation and Air Conditioning
KATS	Kingsport Area Transit Service
KMTPO	Kingsport Metropolitan Transportation Planning Organization
LM	Log Mile
LOS	Level of Service
L RTP	Long Range Transportation Plan
LUST	Leaking Underground Storage Tank
LWCFA	Land and Water Conservation Fund Act of 1965
MBTA	U.S. Migratory Bird Treaty Act of 1918

MOA	Memorandum of Agreement
MOE	Measure of Effectiveness
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
RCRA	Resource Conservation and Recovery Act of 1976
REC	Recognized Environmental Conditions
ROW	Right-of-Way
RSAR	Road Safety Audit Review
SARA	Superfund Amendments and Reauthorization Act of 1986
SHPO	Tennessee State Historic Preservation Office
SIP	State Implementation Plan
SR	State Route
SSWMP	Statewide Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TACIR	Tennessee Advisory Commission on Intergovernmental Relations
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
TESA	Tennessee Environmental Streamlining Agreement
TIP	Transportation Improvement Program
TNM	Traffic Noise Model
TRIMS	Tennessee Roadway Information Management Systems
TSM	Transportation Systems Management
TVA	Tennessee Valley Authority
TWLTL	Two-way Left-turn Lane
TWRA	Tennessee Wildlife Resources Agency
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
UST	Underground Storage Tank
UT	University of Tennessee
VDOT	Virginia Department of Transportation
VMT	Vehicle Miles Traveled

Environmental Commitments

☒ Commitments are involved on the project.

List of Environmental Commitments

1. Hazardous Materials

Based on Phase I Preliminary Assessment studies and a review of the current design plans, Phase II Environmental Site Assessments will be performed at the following sites during the final design process to determine the presence or absence of contamination:

- Site 2 - Roadrunner Market (Fuel and Convenience Store) (4001 Memorial Boulevard, Kingsport, TN);
- Site 5 - B&W Cleaners (Dry Cleaning Service) (3200 Memorial Boulevard, Kingsport, TN);
- Site 7 - Greenwood Market (Market and Deli) (5121 Memorial Boulevard, Kingsport, TN);
- Site 12 – People's Food Store (Fuel and Convenience Store) (3104 Memorial Boulevard, Kingsport, TN);
- Site 13 - Garden Basket Convenience Store #4 (3109 Memorial Boulevard, Kingsport, TN) and;
- Site 14 - Amoco Service Station (3101 Memorial Boulevard, Kingsport, TN)

2. Ecology

An updated environmental boundary and mitigation report for the Preferred Alternative (Alternative B Modified) will be completed with appropriate consultation with the U.S. Fish and Wildlife Service (USFWS), Tennessee Wildlife Resources Agency (TWRA), and Tennessee Department of Environment and Conservation (TDEC) prior to construction. The updated report will include the review of federal and state-listed and proposed threatened and endangered species and the potential impacts by the Preferred Alternative (Alternative B Modified). An updated bat survey will also be conducted for the Preferred Alternative (Alternative B Modified) project area prior to construction letting.

3. Historic/Architectural Impacts

Design commitments will be carried out to minimize impacts to Yancey's Tavern as detailed in the Addendum Documentation of Effects report submitted by TDOT to Tennessee State Historic Preservation Office (SHPO) on June 3, 2013. The SHPO responded on June 11, 2013, that the project as currently proposed will not adversely affect the historic property. The commitments are as follows:

- The proposed project will shift the right-of-way from Yancey's Tavern to the south onto the East Lawn Memorial Gardens Cemetery, but will not be shifted so far to the south that known occupied graves would need to be relocated;

- Only a temporary construction easement will be needed within the National Register boundary of Yancey's Tavern and that the construction easement will be returned to the current grade and appearance after construction is completed;
- TDOT is proposing an aesthetic treatment to the retaining wall that will be compatible with the historic landscape and will be minimalistic in its design. TDOT will consult with the SHPO and consulting parties in designing the retaining wall in order to get their review and comments on the proposed design feature;
- The cross-section is reduced by the removal of the proposed sidewalk on the northern side of SR 126;
- In order to re-screen the area in front of Yancey's Tavern, TDOT will develop a detailed landscaping plan that will be created in consultation with the SHPO and consulting parties to provide appropriate plantings for the area;
- Landscaping and aesthetic details will be presented to the SHPO and consulting parties for review and comment;
- Chestnut Ridge Road will end slightly to the southeast of Yancey's Tavern and a branch turn-around will be provided at the dead-end to give travelers the opportunity to turn around. Having a branch turn-around rather than a cul-de-sac will give the dead-end a more rural feel rather than the suburban feel of a bulb-out cul-de-sac. The branch turn-around will be away from the Yancey's Tavern historic property and outside the National Register Boundary and;
- The branch turn-around will require some of the mature trees to the southwest of Yancey's Tavern to be removed; however, TDOT will develop a detailed landscaping plan, in conjunction with the SHPO and consulting parties, that will replace the vegetation that will need to be removed with the branch, turn-around design.

4. Air Quality

TDOT will coordinate with the TDEC Division of Air Pollution Control to establish appropriate measures to incorporate into contract bid specifications to reduce potential impacts to two air quality monitoring stations located within 1,000 to 1,500 feet of the proposed project during construction.

TABLE OF CONTENTS

SUMMARY	i
S.1 General Project Description.....	i
S.2 Purpose and Need	ii
S.3 Alternatives	ii
S.4 Environmental Impacts.....	iii
S.5 Areas of Controversy.....	vi
S.6 Statute of Limitations on Filing Claims.....	vi
S.7 Other Major Federal Actions.....	vi
1.0 PURPOSE AND NEED FOR ACTION.....	1-1
1.1 Introduction	1-1
1.2 Description of the Study Corridor	1-5
1.2.1 Description of the Adjacent Community	1-5
1.2.2 Existing Roadway Cross-Section.....	1-5
1.3 Project Background and Status.....	1-7
1.4 Purpose and Need of the Proposed Action	1-8
1.4.1 Purpose of the Proposed Action	1-8
1.4.2 Need for the Proposed Action.....	1-8
1.5 Level of Service Analysis	1-12
1.5.1 Traffic	1-12
1.5.2 Capacity Analysis Results	1-14
1.6 Consistency with Existing Transportation Plans	1-25
1.7 Logical Termini and Independent Utility	1-25
1.8 Summary	1-25
2.0 ALTERNATIVES	2-1
2.1 Background in Determining Reasonable Alternatives.....	2-1
2.2 No-Build Alternative	2-2
2.3 Preferred and Other Build Alternatives Considered in the DEIS.....	2-2
2.3.1 Preferred Alternative (Alternative B Modified)	2-2
2.3.2 Alternative A.....	2-8
2.3.3 Alternative B.....	2-9
2.4 Preliminary Cost Estimates	2-12
2.5 Selection of the Preferred Alternative (Alternative B Modified)	2-12
2.5.1 Advantages and Disadvantages of Alternatives.....	2-12

2.5.2	Reasons for Selection of the Preferred Alternative (Alternative B Modified)	2-13
2.6	Alternatives Previously Considered.....	2-15
2.6.1	Continuous Four-Lane Alternative	2-15
2.6.2	Transportation Systems Management (TSM) Alternative.....	2-15
2.6.3	Mass Transit Alternative	2-15
3.0	AFFECTED ENVIRONMENT	3-1
3.1	Land Use	3-1
3.1.1	Existing Land Use	3-1
3.1.2	Land Use Plans and Regulatory Controls	3-1
3.2	Community Services	3-4
3.2.1	Schools	3-4
3.2.2	Fire, Medical Emergency, and Police Protection.....	3-4
3.2.3	Hospitals	3-4
3.2.4	Utilities	3-7
3.2.5	Multi-modal Transportation	3-7
3.3	Social and Economic	3-7
3.3.1	Social Characteristics	3-8
3.3.2	Economic Characteristics	3-14
3.3.3	Summary of Socioeconomic Characteristics.....	3-15
3.4	Natural Environment	3-16
3.4.1	Topography and Geology	3-16
3.4.2	Terrestrial Resources	3-16
3.4.3	Aquatic Resources	3-17
3.4.4	Federally-Listed and Proposed Threatened and Endangered Species	3-18
3.4.5	State-Listed Species	3-19
3.4.6	Invasive Species	3-22
3.5	Cultural Resources	3-22
3.5.1	Historic/Architectural Resources.....	3-23
3.5.2	Archaeological Resources	3-27
3.5.3	Native American Consultation	3-28
3.6	Recreational Resources.....	3-28
3.7	Visual Resources	3-29
4.0	ENVIRONMENTAL CONSEQUENCES	4-1
4.1	Land Use Impacts	4-1

4.2	Farmland Impacts	4-2
4.3	Social Impacts	4-3
4.3.1	Preferred Alternative (Alternative B Modified)	4-3
4.3.2	Alternatives A and B	4-4
4.4	Displacements and Relocation Impacts	4-5
4.4.1	Relocation Assistance	4-6
4.5	Environmental Justice	4-7
4.5.1	Preferred Alternative (Alternative B Modified)	4-11
4.5.2	Alternatives A and B	4-12
4.6	Economic Impacts	4-12
4.7	Pedestrians/Bicyclists	4-12
4.8	Soils and Geology	4-13
4.9	Ecological Impacts	4-13
4.9.1	Preferred Alternative (Alternative B Modified)	4-14
4.9.2	Alternatives A and B	4-24
4.10	Air Quality Impacts	4-25
4.10.1	National Ambient Air Quality Standards (NAAQS)	4-25
4.10.2	Transportation Conformity	4-26
4.10.3	Mobile Source Air Toxics (MSATs)	4-26
4.10.4	Greenhouse Gas Emissions (Climate Change)	4-28
4.11	Noise Impacts	4-29
4.11.1	Determination of Future Sound Levels for the Preferred Alternative (Alternative B Modified)	4-32
4.11.2	Determination of Future Sound Levels for Alternatives A and B	4-32
4.12	Historic/Architectural Impacts	4-34
4.12.1	Preferred Alternative (Alternative B Modified)	4-36
4.12.2	Alternatives A and B	4-37
4.13	Archaeological Impacts	4-37
4.14	Section 4(f) Impacts	4-41
4.15	Section 6(f) Impacts	4-41
4.16	Hazardous Materials Impacts	4-41
4.16.1	Regulations	4-41
4.16.2	Project Background	4-42
4.16.3	Site Investigations	4-43
4.17	Visual Impacts	4-48

4.18	Wild and Scenic Rivers Impacts.....	4-48
4.19	Energy Impacts.....	4-49
4.20	Construction Impacts	4-49
4.21	Short-term vs. Long-term Impacts.....	4-52
4.22	Irreversible and Irretrievable Commitments of Resources	4-52
4.23	Indirect and Cumulative Impacts Associated with Build Alternatives	4-53
5.0	PUBLIC INPUT AND AGENCY COORDINATION	5-1
5.1	Public Input.....	5-1
5.1.1	Public Hearing and Background	5-1
5.1.2	Issues Expressed by the Community.....	5-2
5.1.3	Comments Regarding a Four-Lane Typical Section	5-3
5.1.4	Public Comments and Dispositions	5-4
5.1.5	TDOT Consideration of Public Comments	5-6
5.2	Agency Coordination.....	5-6
5.2.1	2012 Agency DEIS Comments.....	5-6
5.2.2	2014 Agency DEIS Comments.....	5-6
6.0	REFERENCES.....	6-1
7.0	LIST OF PREPARERS	7-1

List of Figures

Figure S-1: Project Vicinity Map.....	i
Figure 1-1: Project Vicinity Map	1-1
Figure 1-2: Project Location Map (Sheet 1).....	1-2
Figure 1-3: Existing Roadway Cross-Section	1-5
Figure 1-4: SR 126 Traffic Volumes.....	1-13
Figure 1-5: SR 126 No-Build Alternative Design Year (2037) LOS	1-17
Figure 1-6: SR 126 Preferred Alternative Design Year (2037) LOS.....	1-17
Figure 1-7: SR 126 Alternative A Design Year (2037) LOS.....	1-22
Figure 1-8: SR 126 Alternative B Design Year (2037) LOS.....	1-22
Figure 2-1: Preferred Alternative Roadway Sections.....	2-3
Figure 2-2: Section 1 East Center Street to West of Hawthorne Street	2-3
Figure 2-3: Section 2 West of Hawthorne Street to Harbor Chapel Road	2-4
Figure 2-4: Section 3 Harbor Chapel Road to west of Old Stage Road	2-4
Figure 2-5: Section 4 Harr Town Road to Old Stage Road	2-5
Figure 2-6: Section 4A Yancey's Tavern and East Lawn Memorial Gardens Cemetery	2-5
Figure 2-7: Section 5 Harr Town Road to west of Carolina Pottery Road	2-6
Figure 2-8: Section 6 West of Carolina Pottery Road to Interstate 81	2-6
Figure 2-9: Alternative A Roadway Sections	2-9
Figure 2-10: Alternative B Roadway Sections	2-10
Figure 2-11: Alternatives Typical Section Comparison.....	2-11
Figure 3-1: Existing Land Use in the Project Area	3-2
Figure 3-2: Future Land Use in the Project Area	3-3
Figure 3-3: Kingsport Zoning in the Project Area.....	3-5
Figure 3-4: Sullivan County Zoning in the Project Area.....	3-6
Figure 3-5: U.S. Census Tracts West of East Center Street to Interstate 81	3-11
Figure 3-6: Sullivan County Commuting Patterns.....	3-12
Figure 3-7: Area of Potential Effect (APE) for Historic/Architectural Resources	3-24
Figure 3-8: Shipley-Jarvis House (NRHP Eligible Boundary)	3-25
Figure 3-9: Yancey's Tavern (NRHP Listed Boundary)	3-26
Figure 4-1: Minority and Low-income Populations.....	4-9
Figure 4-2: Perennial and Intermittent Streams in Project Corridor.....	4-16
Figure 4-3: Floodplains in Project Corridor	4-21
Figure 4-4: Common Indoor and Outdoor Noise Levels	4-29
Figure 4-5: Shipley-Jarvis House	4-35
Figure 4-6: Yancey's Tavern	4-35
Figure 4-7: Project in Vicinity of NRHP-listed Yancey's Tavern	4-39
Figure 4-8: Preferred Alternative at Yancey's Tavern.....	4-40
Figure 4-9: Hazardous Materials/Underground Storage Tank Sites.....	4-44

List of Tables

Table S-1: Potential Environmental Impacts Comparison	iii
Table S-2: Estimated Cost Comparison.....	vi
Table 1-1: Existing Roadway Description	1-6
Table 1-2: 2009-2011 Crash Rate Summary for SR 126.....	1-10
Table 1-3: Traffic Growth Rates Along SR 126.....	1-12
Table 1-4: SR 126 Traffic Volumes.....	1-13
Table 1-5: LOS Reference Table	1-15
Table 1-6: LOS Comparison	1-16
Table 1-7: No-Build Alternative MOE	1-19
Table 1-8: Preferred Alternative MOE.....	1-20
Table 1-9: Alternative A MOE	1-23
Table 1-10: Alternative B MOE	1-24
Table 2-1: Preliminary Cost Estimates.....	2-12
Table 2-2: Advantages and Disadvantages of Project Alternatives.....	2-12
Table 2-3: Comparison of Project Alternatives	2-14
Table 3-1: Income and Industry Overview, Sullivan County	3-8
Table 3-2: Population and Forecast Growth, Tennessee and Sullivan County	3-8
Table 3-3: Kingsport Population Growth, 2005-2012.....	3-9
Table 3-4: Population Age Characteristics, 2010	3-9
Table 3-5: Racial Characteristics by Census Tracts, Sullivan County, 2010.....	3-10
Table 3-6: Housing Data for Sullivan County and Tennessee.....	3-13
Table 3-7: Housing Data for Project Area Census Tracts.....	3-13
Table 3-8: U.S. Census Tract Household Income, 2011	3-14
Table 3-9: Economic Characteristics for Sullivan County Census Tracts	3-15
Table 3-10: Federally-Listed Species Identified Within Sullivan County	3-18
Table 3-11: State-listed Plants Identified Within Sullivan County by TDEC	3-19
Table 3-12: State-listed Animals Identified Within Sullivan County by TWRA and TDEC.....	3-20
Table 4-1: Relocation Impacts Comparison.....	4-6
Table 4-2: Sullivan County Racial Demographics	4-10
Table 4-3: Block Group Racial Demographics.....	4-10
Table 4-4: Study Area and Sullivan County Poverty Levels	4-11
Table 4-5: Perennial/Intermittent Stream Impacts for the Preferred Alternative	4-18
Table 4-6: Floodplain Impacts.....	4-20
Table 4-7: FHWA Noise Abatement Criteria in 23 CFR 772.....	4-30
Table 4-8: Substantial Noise Level Increase	4-31
Table 4-9: Design Year 2037 Sound Levels and Impacts	4-32
Table 4-10: Design Year 2037 Sound Level Impacts	4-34
Table 4-11: Build Alternative Comparison of Hazardous Materials Impacts	4-46
Table 5-1: Comment Summary and Responses from 2012 Public Hearing.....	5-4

Attachments are appended to the body of this document. Hard copies of the FEIS contain an Appendix CD on the back cover — digital copies have an “Appendix” PDF file.

List of Attachments

- Attachment A – 2014-2017 Kingsport Metropolitan Transportation Planning Organization (KMTPO) Transportation Improvement Program (TIP) Page and 2035 KMTPO Long-Range Transportation Plan (LRTP)
- Attachment B – Farmland Coordination
- Attachment C – Conceptual Stage Relocation Plan
- Attachment D – Section 7 Coordination (Correspondence)
- Attachment E – Section 106 Historic Architectural Correspondence
- Attachment F – Section 106 Archaeological Correspondence
- Attachment G – Hazardous Materials Correspondence
- Attachment H – 2014 DEIS Agency Coordination

List of Appendices

- Appendix A – Traffic Analysis Summary
- Appendix B – Air Quality Report
- Appendix C – Noise Evaluation Update
- Appendix D – Section 106 Historic Architectural Coordination and Addendum Documentation of Effects
- Appendix E – Section 106 Archaeological Coordination
- Appendix F – Hazardous Materials Studies
- Appendix G – Public Involvement Coordination
- Appendix H – Agency Coordination
- Appendix I – Conceptual Layouts
- Appendix J – 2012 Draft Environmental Impact Statement
- Appendix K – Pages from Websites Used in the FEIS

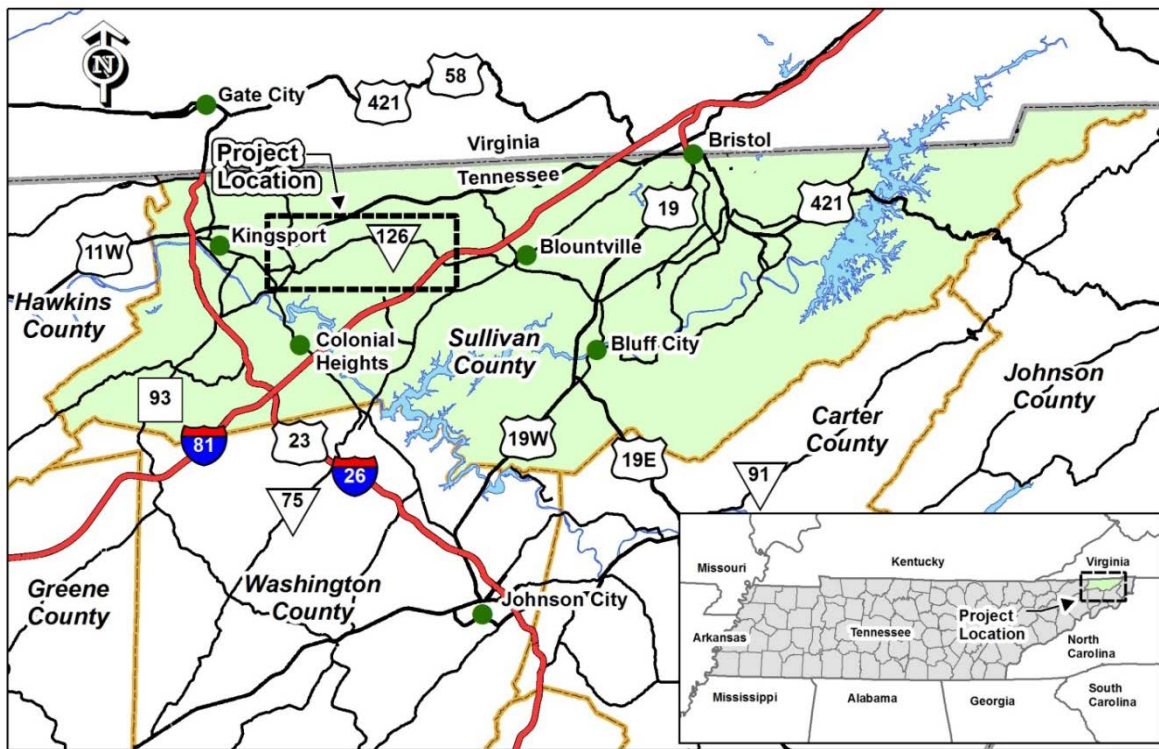
1.0 PURPOSE AND NEED FOR ACTION

1.1 Introduction

The State Route (SR) 126 (Memorial Boulevard) (SR 126 hereafter) improvement project is a joint effort between the Tennessee Department of Transportation (TDOT) and the Federal Highway Administration (FHWA). The limits of the 8.4-mile-long project extend from East Center Street, within the City of Kingsport's city limits, east to Interstate 81 (I-81) in Sullivan County, Tennessee. Figure 1-1 shows the general vicinity of the project area and Figure 1-2 (on the following page) illustrates the project corridor.

FHWA approved the *Draft Environmental Impact Statement* (DEIS) on January 5, 2012. The DEIS is available in Appendix J¹ to this document or at the TDOT project website <http://www.tdot.state.tn.us/sr126/involvement.shtml>. This document is the *Final Environmental Impact Statement* (FEIS) and summarizes all changes and updates since approval of the DEIS, including further development of alternatives, public involvement, selection of the Preferred Alternative (Alternative B Modified), agency coordination, and proposed mitigation.

FIGURE 1-1: PROJECT VICINITY MAP



The proposed SR 126 improvement project is located within the Kingsport Metropolitan Transportation Planning Organization (KMTPO) jurisdiction. Improvements along SR 126 are included in the KMTPO's *2035 Long Range Transportation Plan* (LRTP), dated June 7, 2012, and the KMTPO's Transportation Improvement Program (TIP). The plan addresses the future transportation needs within the KMTPO boundary. Both the TIP and LRTP pages are in Attachment A.

¹Attachments are appended to the body of this document. Hard copies of the FEIS contain an Appendix CD on the back cover — digital copies have an "Appendix" PDF file.

FIGURE 1-2: PROJECT LOCATION MAP (SHEET 1)

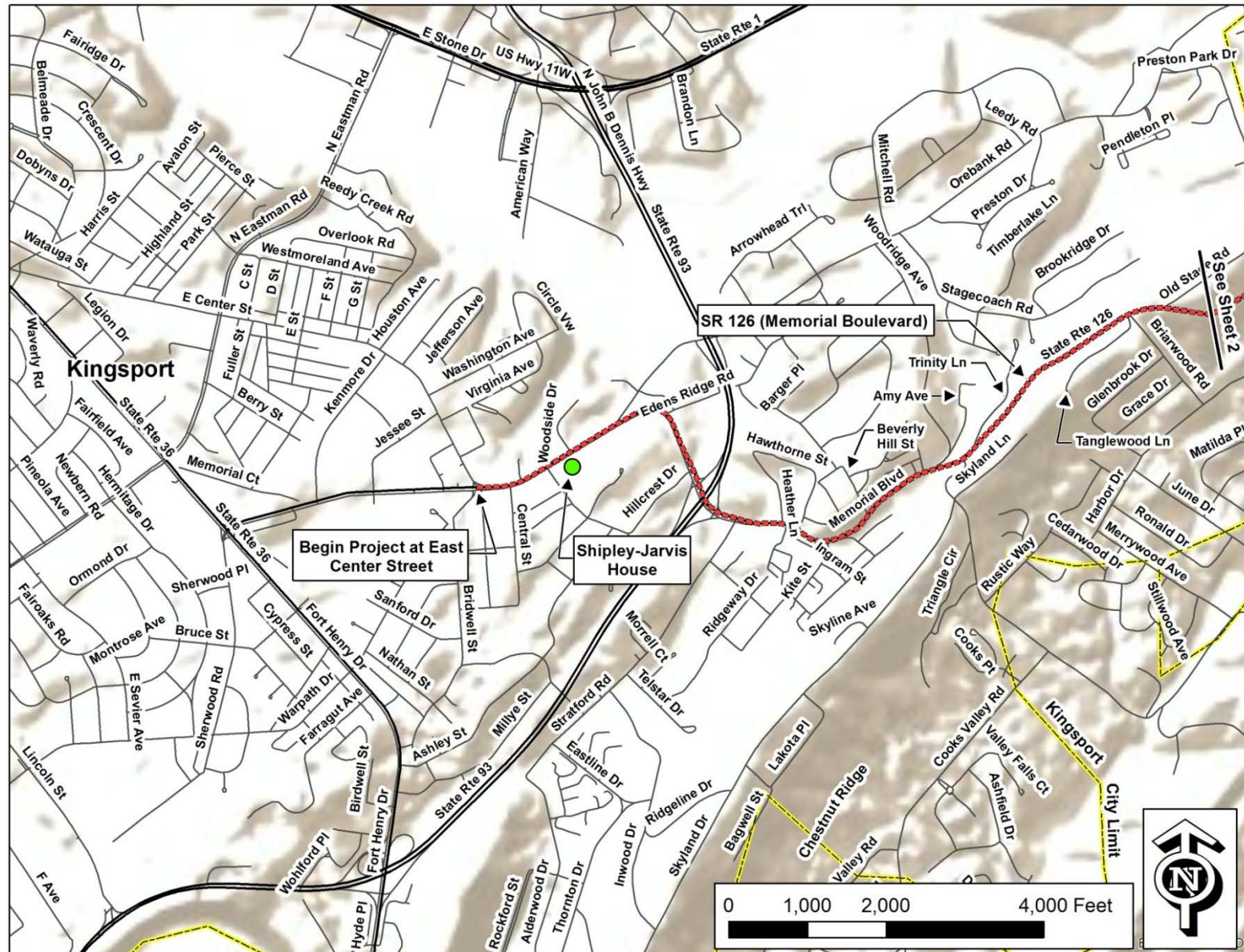


FIGURE 1-2: PROJECT LOCATION MAP (SHEET 2)

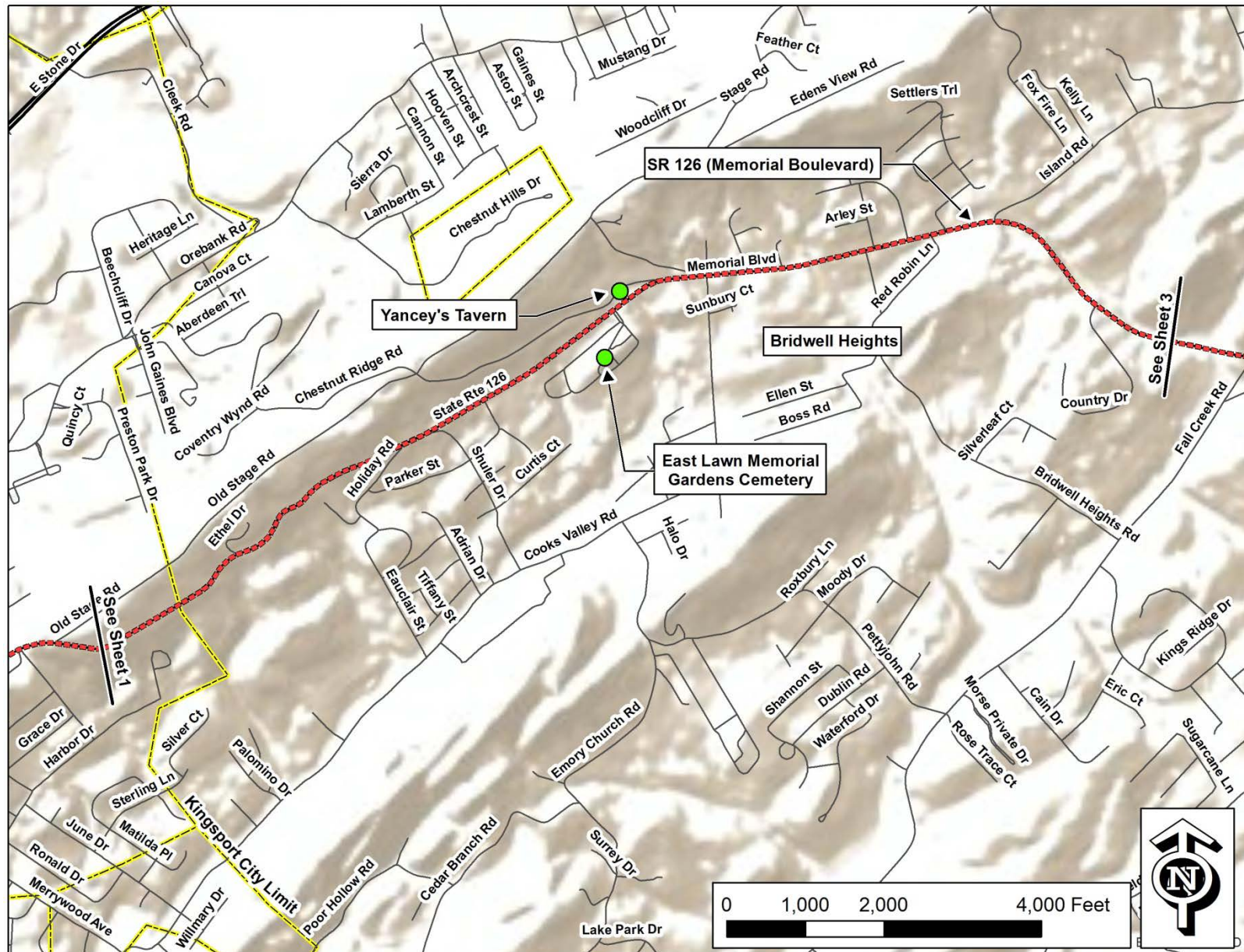
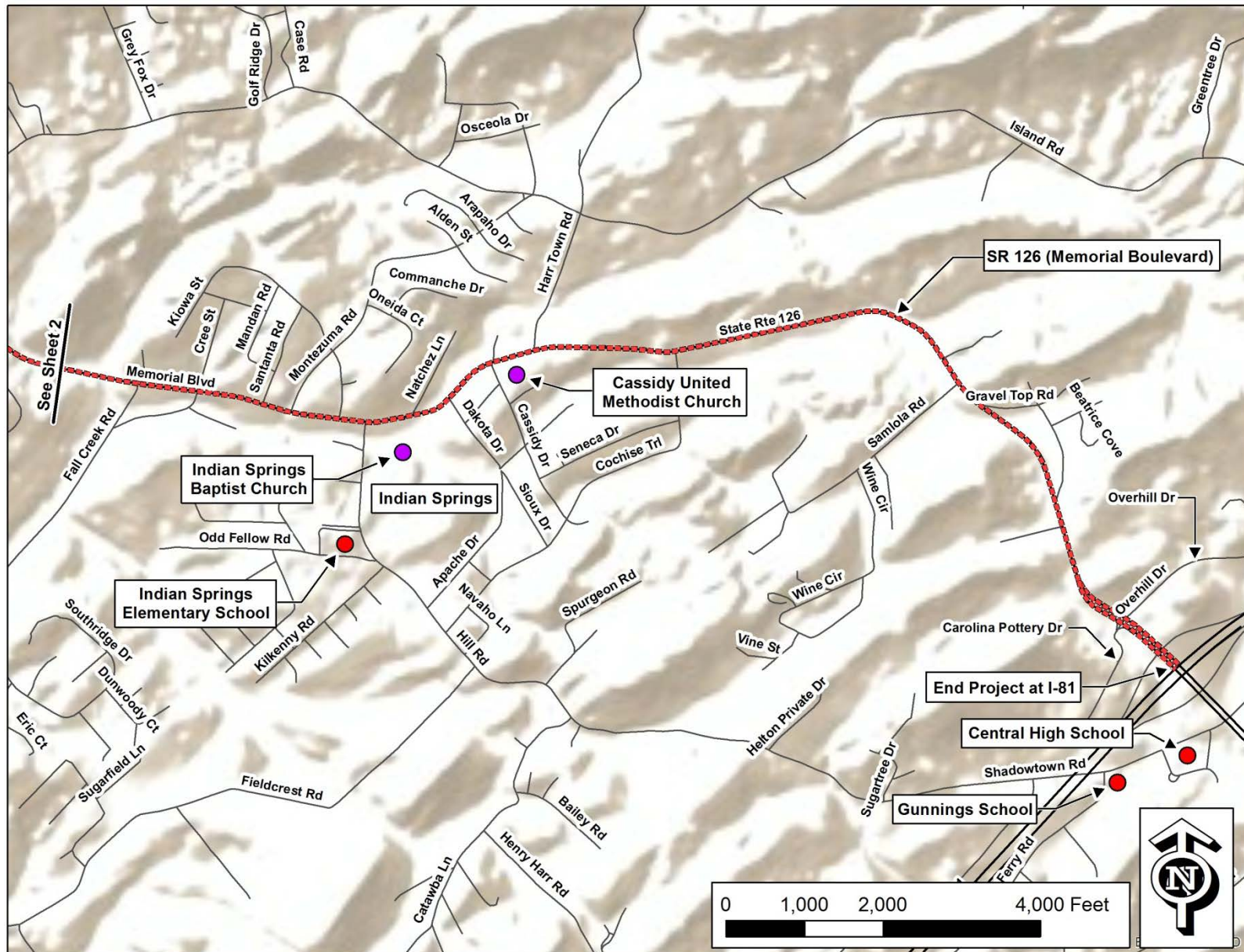


FIGURE 1-2: PROJECT LOCATION MAP (SHEET 3)



1.2 Description of the Study Corridor

1.2.1 Description of the Adjacent Community

Within the 8.4-mile-long study limits between East Center Street and I-81 the terrain is rolling. Due to the terrain, many side roads intersect SR 126 at skewed angles. Steep side-slopes and guardrails are prevalent among many segments of the corridor. Poor access control is prevalent in the commercial areas with many businesses having their entire frontage paved adjacent to the roadway. A few community resources, including two of historical significance, are located adjacent to the roadway. These resources are the Shipley-Jarvis House, which is deemed eligible for listing on the National Register of Historic Places (NRHP), and Yancey's Tavern, which is listed on the NRHP, and is currently used as a community event and meeting place. The East Lawn Memorial Gardens Cemetery is also very important to the community.

The corridor contains a mixture of land uses, including commercial, residential, and rural. Residential and commercial land use is present from the corridor's western terminus at East Center Street east to Beverly Hill Street. Within this approximately 1.19-mile-long segment, the commercial land uses are generally small, privately owned stores, restaurants, car lots, gas stations, and other service businesses. The residential land use is generally single-family housing. The Shipley-Jarvis House is located adjacent to the eastbound lanes near Woodside Drive in this segment. The residential land use is generally single-family for the next 1.13 miles, from Beverly Hill Street to near Ethel Drive.

The land use is primarily rural for the final 6.08 miles of the corridor, from near Ethel Drive to I-81, though there are some areas of commercial development within this segment. The commercial land uses are generally small, privately owned stores, restaurants, car lots, gas stations, and other service businesses. Yancey's Tavern and the East Lawn Memorial Gardens Cemetery are located on either side of SR 126 near Chestnut Ridge Road in this segment.

1.2.2 Existing Roadway Cross-Section

Four travel lanes are present along 13 percent of the corridor and are located at the eastern and western termini. The middle 87 percent of the corridor has two travel lanes (including a 0.90-mile-long truck climbing lane). Sidewalks are present along one percent of the corridor. A shoulder width equal to or greater than four feet, which is generally regarded as the minimum safe width for bicyclists, is present along eight percent of the corridor. The existing right-of-way (ROW) width varies from approximately 60 feet to 160 feet. Figure 1-3 illustrates and Table 1-1 describes the existing roadway features.

FIGURE 1-3: EXISTING ROADWAY CROSS-SECTION

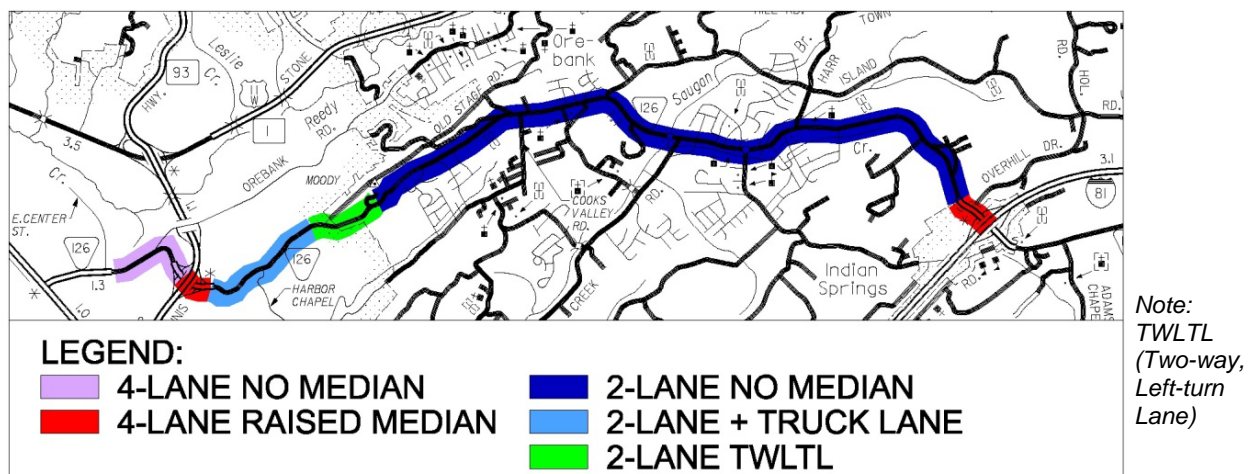


TABLE 1-1: EXISTING ROADWAY DESCRIPTION

Segment ID	Location	Length (Miles)	Posted Speed Limit	Travel Lanes	Description ROW, Medians, Shoulders, Ditches and Curbs and Gutters (C&G), Sidewalks, Traffic Signals
1	Center St. to West of Hillcrest Dr.	0.61	35	4 lanes vary from 11-11.5 ft. wide	<ul style="list-style-type: none"> - ROW varies (60-90 feet (ft.)) - Left turn lane at Center St., median begins at Hillcrest for SR 93 Interchange - Shoulders 2 ft. wide or less (paved, gravel, none) - Vary: ditch only, ditch with C&G, C&G only - Sidewalks for approximately 0.10 miles in the Orebank Rd./Edens Ridge Rd. area - Traffic signal at East Center St.
2	West of Hillcrest Dr. to between Stratford Rd. and Heather Ln.	0.27	35	4 lanes vary from 11-12 ft. wide	<ul style="list-style-type: none"> - ROW varies (100-160 ft.) - Median ranges 20-28 ft. wide and generally raised with grass; some areas depressed; flush with concrete barrier at SR 93 (John B. Dennis Hwy.) - Shoulders 5-16 ft. wide (generally gravel with some paved areas) - Ditches, ditch with C&G in the SR 93/ Stratford Rd./ Heather Ln. area - No sidewalks - Traffic signals at two SR 93 (John B. Dennis Hwy.) ramp intersections
3	Between Stratford Rd. and Heather Ln. to between Trinity Ln. and Tanglewood Rd.	0.90	45	3 lanes 11 ft. wide	<ul style="list-style-type: none"> - ROW varies (generally 120 ft.) - No median - Shoulders 1 ft. wide (paved) - Ditches - No sidewalks - Traffic signal at Harbor Chapel Rd.
4	Between Trinity Lane and Tanglewood Road and between Old Stage Road and Ethel Drive	0.50	45	2 lanes 11 ft. wide	<ul style="list-style-type: none"> - ROW varies (generally 120 ft.) - Two-way center left-turn lane - Shoulders 2 ft. wide (paved, soil and gravel) - Ditches - No sidewalks
5	Between Old Stage Road and Ethel Drive and west of Carolina Pottery Drive	5.90	50	2 lanes vary from 11-12 ft. wide	<ul style="list-style-type: none"> - ROW varies (60-120 ft.) - Two-way center left-turn lane from west of Kiowa St. to west of Natchez Ln. - Shoulders vary 2 ft. (soil/gravel) to 6 ft. (paved) - Ditches - No sidewalks
6	West of Carolina Pottery Drive to I-81 Overpass	0.22	40	4 lanes 12 ft. wide	<ul style="list-style-type: none"> - ROW varies (160 ft. max) - Median transitions to 29 ft. raised with grass - Shoulders 12 ft. paved - Ditches - No sidewalks

1.3 Project Background and Status

SR 126 was initially constructed in 1926. The roadway was originally 18 feet wide and constructed of concrete. The roadway was widened to 22 feet in 1950 and overlaid with asphalt. Existing SR 126 follows the original 1926 alignment.

Since the early 1990s, improvements for SR 126 have been discussed that would facilitate improved traffic and safety conditions for the route. The executive board and executive staff of the KMTPO passed a resolution requesting the preparation of an advanced planning report (APR) for SR 126 in March 2003. In April 2003, a copy of this resolution was sent by the Mayor of Kingsport to TDOT. A response from TDOT was provided in May 2003 acknowledging Kingsport's efforts and needs and the resolution was sent to the TDOT Planning Division with instructions to initiate an APR. In September 2003, TDOT responded by selecting the SR 126 project as Tennessee's first to go through the Context Sensitive Solutions (CSS) process.

The purpose of the CSS process was to include community members in the study and preparation of a concept plan to improve SR 126 for recommendation to TDOT. Between October 2003 and May 2005, a Community Resource Team (CRT) was assembled and participated in meetings, CSS training, workshops, and six public involvement sessions. In February 2006, the CSS report for SR 126 was completed and is now on file at the TDOT Environmental Division Office in Nashville. The CSS process determined several "common ground" recommendations with unanimous support among the CRT members. The CRT agreed:

- Safety is the highest priority on this project;
- Impacts should be minimized to protect the integrity of community treasures in the SR 126 study area;
- Enhancement features such as retaining walls, landscape buffers, and decorative guardrail and lighting should be incorporated into the design plans;
- Where roadway widening is undertaken, use as much of the existing roadway as possible and;
- Where the roadway is widened from two to four lanes, consider leaving the existing road in place and constructing the new lanes to one side (asymmetrical widening). Asymmetrical widening should not preclude making improvements to correct horizontal and vertical alignment deficiencies.

Conceptual layouts for three distinct proposals and one blended proposal were prepared by TDOT with input from the CRT. The concepts were originally presented at two public involvement sessions in November 2004. Revised concepts were presented for review and comment at two public involvement sessions in May 2005. The majority of the CRT members supported a blend of roadway cross-sections along the corridor. Alternative A, as described in Chapter 2, represents the recommendations made by the majority of the CRT members.

The report prepared as a result of the CSS process includes three CRT member minority objection statements that addressed specific sections of the project study area. Alternative B, as described in Chapter 2, was developed to address the request to minimize impacts to Yancey's Tavern and the East Lawn Memorial Gardens Cemetery near Cooks Valley Road on opposite sides of SR 126.

The DEIS was approved by FHWA on January 5, 2012. The document discussed the two build alternatives (Alternative A and Alternative B) and the No-Build Alternative at a comparable level of detail. The social, ecological, and cultural impacts for each were presented. Two public hearings were held on December 11, 2012. TDOT presented the results of the alternatives studied in the DEIS along with a modification to Alternative B, which was referred to as “Alternative B Modified”. Alternative B Modified is the result of comments received from the community following the circulation of the approved DEIS for review and an update to the KMTPO Travel Demand Model in the spring of 2012 showing a reduction in traffic projections. It was also developed in consultation with resource agencies in regards to avoiding impacts to Yancey’s Tavern. After careful consideration, Alternative B Modified was selected as the Preferred Alternative because it meets the purpose and need of the project and was supported by the community. It improves safety while minimizing impacts to the environment and the community. The Preferred Alternative (Alternative B Modified) is the only alternative that does not have an adverse visual effect to Yancey’s Tavern or disturb known graves at the East Lawn Memorial Gardens Cemetery. It also has a lower total number of residential and business displacements and is supported by the mayors of Kingsport and Sullivan County.

1.4 Purpose and Need of the Proposed Action

1.4.1 Purpose of the Proposed Action

The purpose of the project is to provide a safe, efficient route for local traffic between the City of Kingsport and I-81 that achieves a reduction in crash rates, improvement of roadway deficiencies and improvement of access management to adjacent roadways and properties.

The proposed action is intended to address the following transportation needs in the study area:

- Improve roadway safety;
- Reduce the crash rate along the corridor;
- Improve roadway geometry and width deficiencies;
- Provide adequate roadway and shoulder widths for vehicles and;
- Improve access management and traffic operations.

Secondary goals include minimizing the roadway footprint, complementing the rural nature of the area, and improving pedestrian and bicycle connectivity.

1.4.2 Need for the Proposed Action

Improve Roadway Safety

Safety needs have been recognized for this segment of SR 126 since the early 1990s. Safety was the subject of a resolution by the KMTPO in March 2003 requesting TDOT assistance, which led to the CSS process. Since that time, various safety studies were conducted and improvement projects have been completed, including the following:

- In August 2005, the CRT provided their recommendations for improving SR 126 to TDOT. The CSS process is summarized in Section 1.3 and detailed in the DEIS. Among the unanimous recommendations made by the CRT, safety was identified as the highest priority improvement for the project;
- Safety improvements recommended in a March 2006 Road Safety Audit Review (RSAR), which included paving, vegetation maintenance, restriping, pavement markings,

and signage, have been completed. The intersection of Carolina Pottery Drive/Overhill Drive with SR 126 had four times the crash rate as that of similar intersections;

- In December 2008, the KMTPO developed the Draft State Route 126/Memorial Boulevard (Sullivan County) Safety Improvements Project report. The report recommended major and minor improvements to be constructed. It also stated that many of the proposed safety improvements, such as intersection improvements and upgrading the S-curves on Chestnut Ridge, would become an integral part of the future final upgrade of the highway and;
- TDOT issued an additional RSAR in June 2009, which recommended safety improvements along the entire study corridor from East Center Street to I-81. The RSAR noted that the crash rate along the entire corridor was higher than the statewide average crash rate for similar roadway segments. It identified short-term safety solutions such as paving, restriping, signage, reflectors and pavement markers, vegetation maintenance, and guardrails that would correct critical areas of concern. The recommendations in the RSAR were completed in 2010.

Each of these studies are described in the DEIS. These studies and safety projects document the need for improvements along the study corridor. The past efforts to improve the safety of the roadway have involved relatively low cost improvements for spot locations along the route. However, the crash rate remains high and residents continue to have difficulty safely accessing adjacent roads, driveways and parking lots. A corridor-wide improvement is needed to adequately address the safety issues and roadway deficiencies of SR 126.

Reduce Crash Rate

A safety analysis was conducted along the SR 126 study corridor as part of project development. The analysis utilized TDOT's crash data from 2009 to 2011 and 2011 traffic volumes taken from the Tennessee Road Information Management System (TRIMS) database. From 2009 to 2011, a total of 337 crashes occurred along the SR 126 study corridor, including 92 non-incapacitating injury crashes, 11 incapacitating injury crashes, and zero fatal crashes. It should be noted that 2012 data was incomplete at the time of this analysis; however, it is known to contain one reported fatality near the intersection of Cassidy Drive.

The study corridor was divided into seven segments for the purpose of the crash analysis. A summary of the reported crashes and their calculated crash rate is provided in Table 1-2. Crash rates are reported in crashes per one million vehicle miles traveled for segments and crashes per one million vehicles entering the intersection. As shown in Table 1-2, the actual crash rate calculated for several segments along the study corridor exceed the statewide average crash rate for similar roadway segments. The ratio of the actual crash rate to the statewide critical crash rate (A/C Ratio) is also provided in the last column. An A/C Ratio in excess of 1.0 indicates a roadway segment that should be considered for safety improvements.

TABLE 1-2: 2009-2011 CRASH RATE SUMMARY FOR SR 126

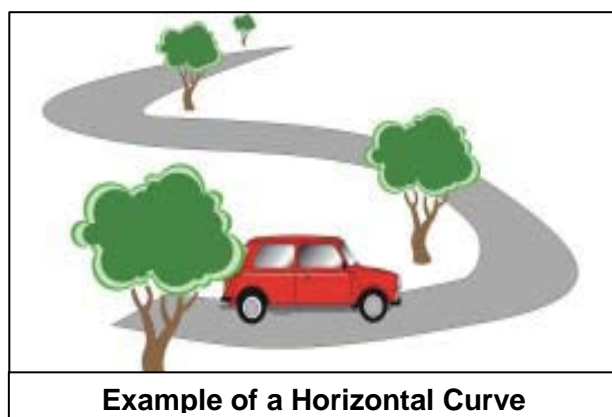
Section Limits or Intersection Location	Section	Crashes						
		Total	Non-Incapacitating Injury	Incapacitating Injury	Fatal	Actual Rate	Statewide Average Rate	A/C* Ratio
E. Center Street to Hillcrest Drive	4-Lane Undivided	45	7	0	0	4.261	3.216	0.94
Hillcrest Street to Stratford Road	4-Lane Divided	45	15	0	0	14.651	1.777	3.95
Stratford Road to Old Stage Road	2-Lane (w/ Truck Climbing Lane)	71	15	4	0	4.334	2.334	1.34
Old Stage Road to Cooks Valley Road	2-Lane	35	11	0	0	2.511	2.334	0.76
Cooks Valley Road to Harrtown Road	2-Lane	81	24	1	0	4.467	2.334	1.35
Harrtown Road to Overhill Road	2-Lane	24	7	1	0	1.714	2.334	0.52
SR 126 Intersection with Overhill Rd.	N/A (Intersection)	32	12	5	0	3.766	0.09	9.7

Sources: TDOT - Project Safety Office (2009-2011); (TRIMS) (2011) *Excess of 1.0 indicates likely safety issue.

Improve Roadway Deficiencies

The existing roadway features inadequate lane widths, a lack of shoulders, and a roadside with steep side-slopes and roadside hazards. Additionally, substandard horizontal and vertical curves were identified by the public and by the CRT as a major concern on SR 126. These concerns were considered during engineering field studies. Following is a summary of the identified deficiencies for horizontal and vertical curves and shoulder widths within the study area.

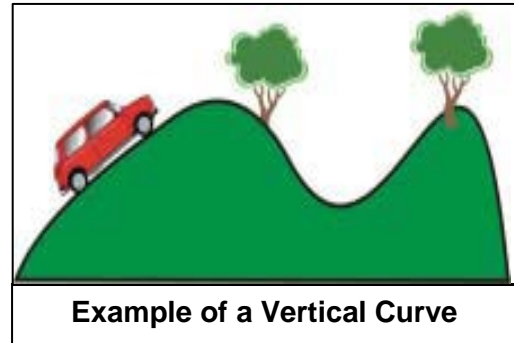
Horizontal Curves: Horizontal curves provide side to side movement, or bends, along the roadway. They are used to allow a roadway to fit within the terrain and environment along the roadway. Roadways that originated before modern design standards, such as SR 126, frequently have curves that do not allow motorists traveling at normal speeds to see sufficiently along the roadway to safely recognize and respond to objects present or entering the travel way. Buildings, vegetation, utilities, and other features adjacent to the roadway obscure the driver's line of sight as the roadway bends or curves along their direction of travel.



The speed at which a reasonable and prudent driver can safely navigate a curve is dependent on the amount of sight distance available as the driver moves along the curve. Based on TDOT design standards, this speed is recognized as the design speed of a curve based on its rate of

curvature and other criteria. TDOT designs roadways with design speeds equal to or greater than their anticipated posted speed limit. Approximately 41 percent (20 out of 49) of the horizontal curves along the study section of SR 126 do not meet TDOT design standards for their corresponding posted speed limit. The design speeds of these 20 curves based on their existing geometry are deficient by 10 mph to 25 mph when compared to their posted speed limit. To warn drivers of potentially unsafe conditions, eight horizontal curves are currently posted with advisory speed signs, which range from 10 to 15 mph below the posted speed limit.

Vertical Curves: Vertical curves provide the up and down movements along a roadway. These are needed to accommodate changes in terrain (hills and valleys) and to cross features such as roads, railroads, and bodies of water. The sight distance available to a driver to perceive and respond to a roadway hazard is dependent on the rate of curvature of the vertical curve and the driver's travel speed. A flatter curve allows a driver to see a greater distance, which will allow a higher safe travel speed.



Similar to horizontal curves, the speed at which a reasonable and prudent driver can safely navigate a vertical curve is dependent on the amount of sight distance available as the driver moves along the curve. Based on TDOT design standards, this speed is recognized as the design speed of a curve based on its rate of curvature and other criteria. Data from a controlled aerial survey was used to develop a centerline profile for the project area of SR 126. The curvature of the profile was examined to identify vertical curves that do not meet current design standards and are insufficient for sight distance for the posted speed limit. Forty-two vertical curves were identified as having a design speed less than the posted speed limit. Deficiencies in design speed compared to posted speed range from 5 mph to 30 mph. Eleven vertical curves have a deficiency of 15 mph or greater.

Lane and Shoulder Widths: Due to a lack of adequate shoulders accompanied by narrow lane widths in some segments, emergency vehicle response time is reduced within and near the project corridor. Wider shoulders are needed to allow adequate room for stalled vehicles to pull over, emergency vehicles to pass through to their intended destinations, and to allow mail delivery vehicles and buses to have sufficient pull-over space. These were needs identified by the CRT during the CSS process.

Field studies and review of aerial mapping was performed during the CSS process to identify existing lane and shoulder widths. These are tabulated in Chapter 2 for the No-Build Alternative. Eleven-foot lanes are predominant through most of the corridor. TDOT standards require a 12-foot lane width for a rural arterial with an ADT of 2,000 or greater. The existing roadway from near Harbor Chapel Road to Harr Town Road does not meet this standard. Shoulder widths vary from one-foot to eight-foot. For a two-lane rural arterial, TDOT standards require a minimum six-foot shoulder. Most of the roadway from Harbor Chapel Road to I-81 has deficient shoulder widths.

Improved shoulders will also meet the secondary goal of accommodating bicycles and pedestrians. A shoulder width equal to or greater than four feet is generally regarded as the minimum safe width for bicyclists. As summarized in the DEIS; only eight percent of the existing route provides adequate shoulder width to accommodate bicyclists.

Improve Access Management

Entering and exiting business parking lots along SR 126 is a safety concern. This is due, primarily, to the existing lack of access control to businesses along the roadway. Some private drives and cross roads have excessive pavement and lack of channelization that allows uncontrolled traffic flow. Many of the access points are located near or within substandard curves or hills that limit sight distance for drivers attempting to turn into or out of the businesses. Some cross roads approach the highway at sharp angles and with poor approach grades that inhibit sight distance. The Preferred Alternative (Alternative B Modified) proposes to improve access management with intersection improvements, reconstruction of cross road approaches, and closure of selected access points.

1.5 Level of Service Analysis

1.5.1 Traffic

Traffic projections were initially created by TDOT during the CSS process to assist with determining the needed improvements. Traffic projections were updated for the base and design years of 2017 and 2037, respectively, following an update to the KMTPO Travel Demand Model in the spring of 2012. The updated model indicates lower traffic growth trends. This condition has created stagnant development in and around the zones that generate traffic on SR 126. Table 1-3 shows the traffic growth rate for specific locations along SR 126 in percentages.

The Base Year Traffic (2017) utilized four TDOT count stations within the study corridor, historical data within the study corridor, and calibrated turning movement counts. The Design Year Traffic (2037) was calculated utilizing four zones segmented by the TDOT count stations with respect to variances in growth rates provided from the KMTPO model. As shown in Table 1-3, the growth rates range from 0.08 percent and 1.75 percent.

TABLE 1-3: TRAFFIC GROWTH RATES ALONG SR 126

Percent per year	Location
1.33	East Center Street and Orebank Road
1.35	Orebank Road and SR 93 (John B. Dennis Highway)
1.33	SR 93 (John B. Dennis Highway) and Hawthorne Street
1.46	Hawthorne Street and Harbor Chapel Road
1.47	Harbor Chapel Road and Old Stage Road
1.75	Old Stage Road and Cooks Valley Road
1.45	Cooks Valley Road and Island Road
0.6	Island Road and Fall Creek Road
0.9	Fall Creek Road and Hill Road
0.5	Hill Road and Harrtown Road
0.08	Harrtown Road and I-81

Source: TDOT-Planning Division (2012)

The traffic volumes utilized for this study are listed in Table 1-4 and illustrated graphically in Figure 1-4. As can be seen in the Figure 1-4 graph, the traffic is heaviest at the western terminus of the study corridor, peaking in the SR 93 (John B. Dennis Highway) interchange area. The land use in this area is mixed commercial and residential. The traffic volumes gradually decrease until it reaches Cooks Valley Road. Cooks Valley Road is located just outside the Kingsport city limits in a residential area. The land use east from Cooks Valley Road

changes from residential to rural. East from Cooks Valley Road, the traffic volumes are lighter and continue to decrease until reaching the study corridor's eastern terminus at I-81.

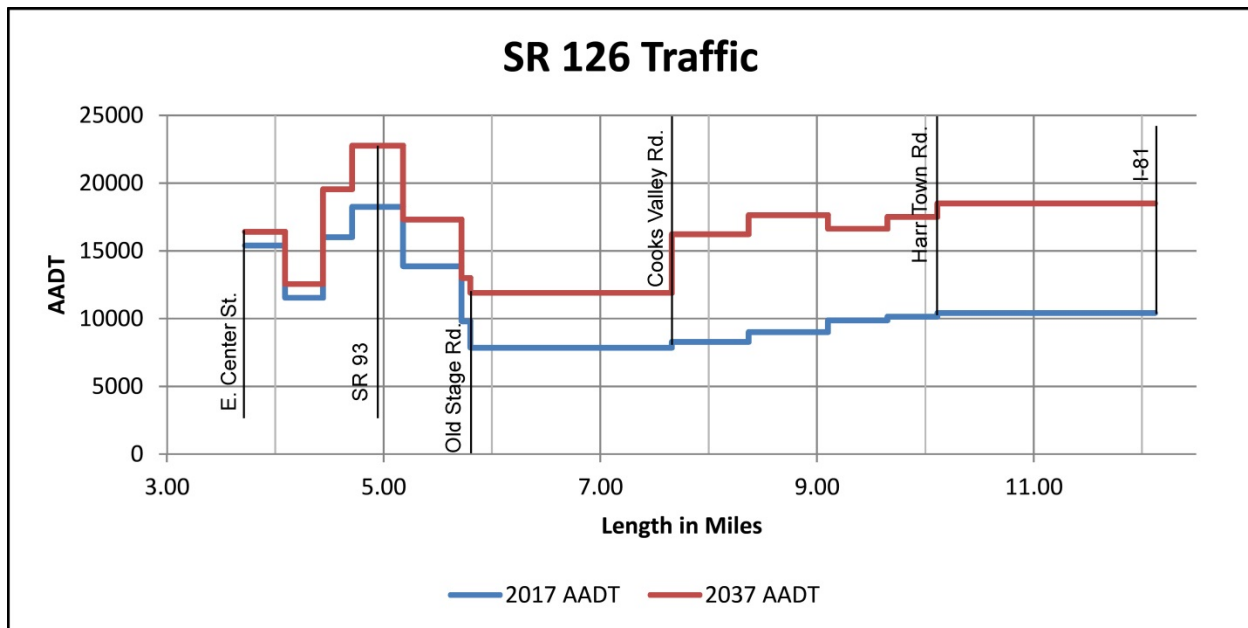
TABLE 1-4: SR 126 TRAFFIC VOLUMES

SR 126 Existing and Future Traffic Volumes			
From	To	2017 AADT	2037 AADT
Cross Road	Cross Road		
East Center Street	Orebank Road	15,390	16,410
Orebank Road	SR 93	11,530	12,540
SR 93	Hawthorne Street	16,000	19,550
Hawthorne Street	Harbor Chapel Road	18,240	22,760
Harbor Chapel Road	Briarwood Road	13,860	17,300
Briarwood Road	Old Stage Road	9,790	13,000
Old Stage Road	Cooks Valley Road	7,840	11,890
Cooks Valley Road	Island Road	8,280	16,230
Island Road	Fall Creek Road	9,000	17,640
Fall Creek Road	Hill Road	9,870	16,630
Hill Road	Harr Town Road	10,150	17,510
Harr Town Road	I-81	10,420	18,490

Note: AADT = Average Annual Daily Traffic.

Source: TDOT-Planning Division (2012).

FIGURE 1-4: SR 126 TRAFFIC VOLUMES



Source: TDOT-Planning Division (2012).

1.5.2 Capacity Analysis Results

Several measures of effectiveness (MOE) are utilized in this document to assess the operational conditions of SR 126 for the No-Build, Preferred Alternative (Alternative B Modified), Alternative A, and Alternative B. These MOEs are level of service, density, and average travel speed. A definition of these measures is provided in the following paragraphs. Analysis results for each MOE are based on the updated KMTPO Travel Demand Model (2012). A summary of the Level of Service MOE is provided for all alternatives in Table 1-6. Details for the No-Build and Preferred Alternative (Alternative B Modified) Design Year (2037) MOE are provided in Tables 1-7 and 1-8. A traffic analysis summary for Alternatives A and B is included in Appendix A.

Level of Service:

Level of Service (LOS) is a measure of quality that describes operational conditions within a traffic stream, generally in terms such as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. LOS ranges from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each LOS rating represents a range of operating conditions and the driver's perception of those conditions. Please refer to Table 1-5 for a description of each LOS.

The quality of service was assessed utilizing the methodology outlined in the *Highway Capacity Manual 2010* (HCM) Urban Street Segments, Two-Lane Highways, and Multilane Highways chapters. The LOS calculations were performed with the Highway Capacity Software (HCS 2010, version 6.41). HCS 2010 was developed and is maintained as an implementation of the HCM procedures. HCS 2010 calculations assign a LOS value along route segments with similar geometric and traffic characteristics.

Average Travel Speed:

Average travel speed is calculated in the LOS analysis. Speed is an important measure of congestion and the quality of the traffic service provided to the motorist.

Density and Congestion Reduction:

Unlike LOS, which is a qualitative measure, density is a quantitative measure. The density is reported to demonstrate the magnitude of congestion for the options included in this document. Density reports the number of vehicles occupying a lane along a roadway segment during a specific time.

TABLE 1-5: LOS REFERENCE TABLE







LOS	Traffic Flow Conditions	Representative Photo
A	Free flow operations. Vehicles are almost completely unimpeded in their ability to maneuver with the traffic stream. The general level of physical and psychological comfort provided to the driver is high.	
B	Reasonable free flow operations. The ability to maneuver within the traffic stream is slightly restricted, and the general level of physical and psychological comfort provided to the driver is still high.	
C	Flow with speeds at or near free flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver. The driver notices an increase in tension.	
D	Speeds decline with increasing traffic. Freedom to maneuver within the traffic stream is noticeably limited. The driver experiences reduced physical and psychological comfort levels.	
E	The facility is at capacity. Operations are volatile because there are virtually no gaps in the traffic stream. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.	
F	Breakdowns in traffic flow. The number of vehicles entering the highway section exceeds the capacity or ability of the highway to accommodate traffic. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.	

TABLE 1-6: LOS COMPARISON

Segment	Alternative				Range
	No Build	Preferred (Alternative B Modified)	A	B	
	LOS	LOS	LOS	LOS	
1a	B	B	B	B	Center to SR 93
1b	C	B	B	B	SR 93 to Hawthorne
2a	B/B ¹	B	B	B	Hawthorne to Harbor Chapel
2b	A/B ¹	A	A	A	Harbor Chapel to Past Harbor Chapel
3	B	A/A ¹	A	A	Past Harbor Chapel to Past Old Stage
4	E	E	A	A	Past Old Stage to Lemay
5	E	E	A	E	Lemay to Cooks Valley
6	E	E	E	E	Cooks Valley to Island
7	E	E	E	E	Island to Fall Creek
8	E	E	E	E	Fall Creek to Hill
9	E	E	E	E	Hill to Harrtown
10	E	D	D	D	Harrtown to Carolina Pottery
11	A	A	A	A	Carolina Pottery to I-81

Source: ICA Engineering (2012)

¹Analysis segment geometry is asymmetrical (two lanes eastbound and one lane westbound). LOS is given for both eastbound and westbound lanes, respectively.

Table 1-6 compares the LOS calculation results for all alternatives. Segments were defined for analysis based on geometric features of the various alternatives and changes in traffic volumes for the design year traffic projections. For this reason, the analysis segments differ from those summarized for alternatives in Chapter 2. Details for the traffic analysis for all alternatives are provided in Appendix A.

No-Build Alternative MOE

The No-Build Alternative makes no improvements to SR 126 other than scheduled maintenance activities. The existing roadway characteristics of the No-Build Alternative are discussed in Chapter 2.

For the No-Build Alternative, the HCS analysis calculates LOS ratings ranging from A to E along SR 126 through the year 2037 during peak hour conditions. Seventy percent of the route is calculated to operate with a LOS of E by 2037. Results of the LOS calculations for the No-Build Alternative is provided in a summary graphic in Figure 1-5 and listed in Table 1-7. The LOS ratings are reported for the years 2017 and 2037.

The speed limit ranges from 35 to 45 mph along SR 126. For the No-Build Alternative in the year 2017, travel speeds along the corridor are calculated by the HCS to range from 25 mph to 45 mph, with a weighted average of 36 mph. In 2037, the travel speed ranges from 25 mph to 45 mph with a weighted average of 35 mph. The average was weighted based upon the length of each segment analyzed. The weighted average of the speed limit along the route is 44 mph. The calculated average route speed is 82 percent, and 80 percent of the posted speed limit in the years 2017 and 2037, respectively.

FIGURE 1-5: SR 126 No-BUILD ALTERNATIVE DESIGN YEAR (2037) LOS

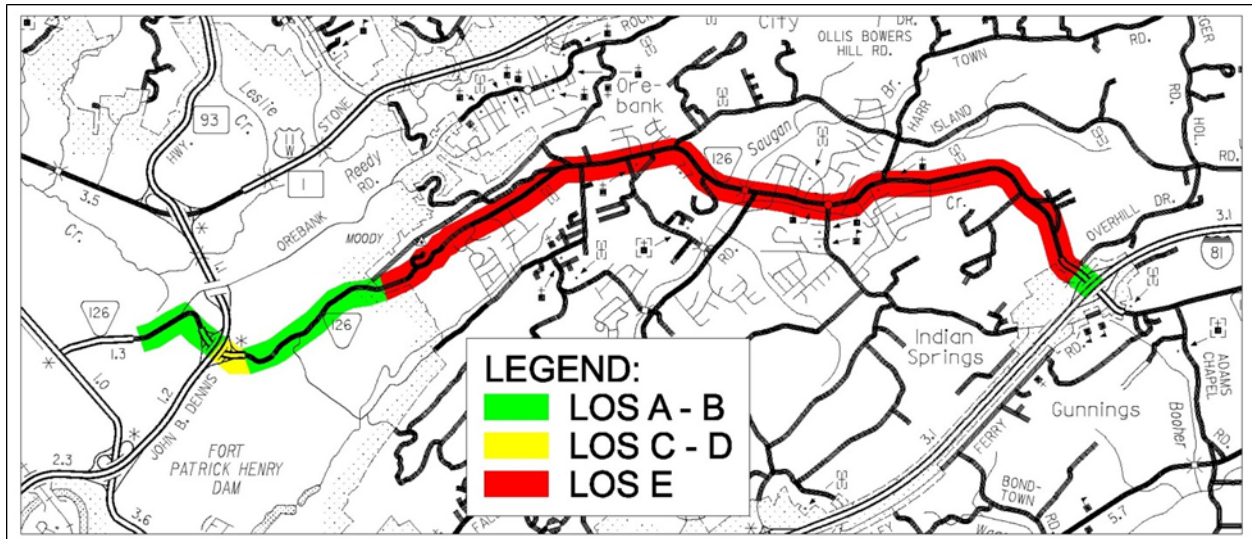
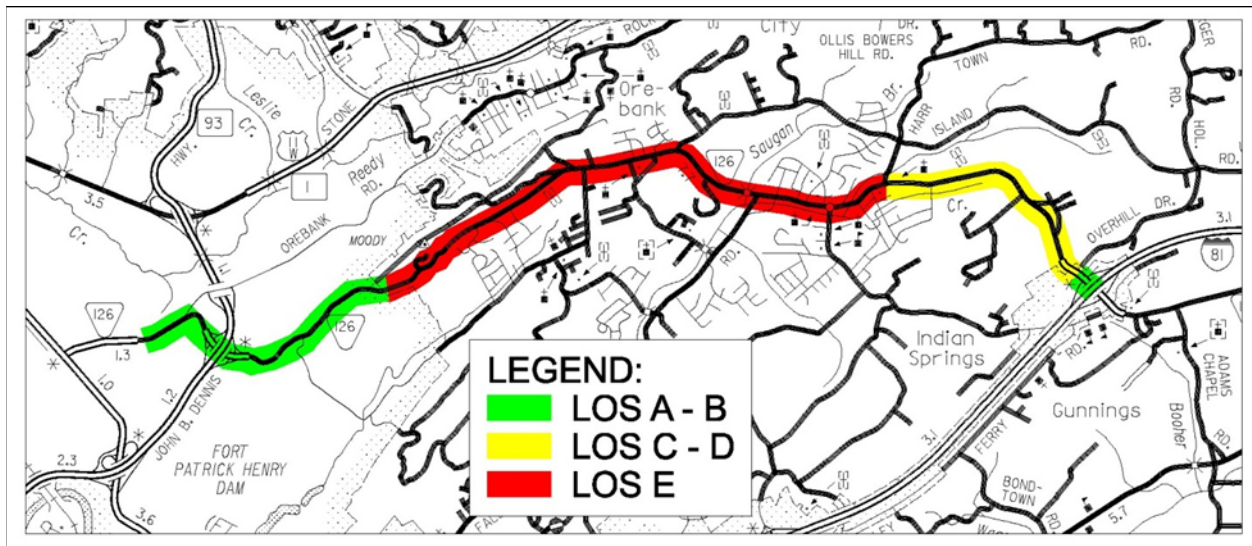


FIGURE 1-6: SR 126 PREFERRED ALTERNATIVE (ALTERNATIVE B MODIFIED) DESIGN YEAR (2037) LOS



A summary of the travel speed calculations for the No-Build Alternative is provided in Table 1-7. The travel speeds are reported for the years 2017 and 2037.

For the No-Build Alternative in the year 2017, the density of SR 126 is calculated to range from 6.6 to 32.9 passenger cars per mile per lane (pc/mi/ln), with a weighted average of 18.6 pc/mi/ln. In 2037, the density ranges from 6.7 to 43.4 pc/mi/ln with a weighted average of 23.0. The average was weighted based upon the length of each segment analyzed. A summary of the density calculations for the No-Build Alternative is provided in Table 1-7. The densities are reported for the years 2017 and 2037.

Preferred Alternative (Alternative B Modified) MOE

For the Preferred Alternative (Alternative B Modified), the HCS analysis calculates LOS ratings ranging from A to E along SR 126 through the year 2037 during peak hour conditions. Forty-nine percent of the route is calculated to operate with a LOS of E by 2037. The results of the LOS calculations for the Preferred Alternative (Alternative B Modified) are provided in Table 1-8 and a summary graphic is provided in Figure 1-6. The LOS ratings are reported for the years 2017 and 2037.

The Preferred Alternative (Alternative B Modified) provides a LOS E from Old Stage Road to Cooks Valley Road. This is a reduced LOS compared to Alternatives A and B (see Table 1-6), which provide a LOS A for the projected traffic volumes through Lemay Drive and Cooks Valley Road, respectively. This is because Alternatives A and B extend four travel lanes through these limits, while the Preferred Alternative (Alternative B Modified) provides only two travel lanes. However, the improvements proposed by the Preferred Alternative (Alternative B Modified) were selected in this area because they improve safety and traffic operations while requiring less right-of-way acquisition of private property, displacements of residents, and impacts to Chestnut Ridge, including Yancey's Tavern and the East Lawn Memorial Gardens Cemetery. The Preferred Alternative (Alternative B Modified) will provide improved traffic operations when compared to the No-Build Alternative. While this is not reflected in the LOS values, it is revealed in review of other MOEs, such as travel speed and density, listed in Table 1-7 and Table 1-8.

The speed limit of the Preferred Alternative (Alternative B Modified) is expected to range from 35 to 50 mph along SR 126. For the Preferred Alternative (Alternative B Modified) in the year 2017, travel speeds along the corridor are calculated by the HCS to range from 30 mph to 50 mph, with a weighted average of 38 mph. In 2037, the travel speed ranges from 29 mph to 50 mph, but the weighted average decreases to 37 mph. The average was weighted based upon the length of each segment analyzed and represents a slight improvement over the No-Build Alternative. The weighted average of the proposed speed limit along the route is 44 mph. The calculated average route speed is 86 percent and 84 percent of the posted speed limit in the years 2017 and 2037, respectively. This represents a slight improvement over the No-Build Alternative. A summary of the travel speed calculations for the Preferred Alternative (Alternative B Modified) is provided in Table 1-8. The travel speeds are reported for the years 2017 and 2037.

Table 1-7: No-Build Alternative MOE

ID	From	To	Dist.	Cross Section	Speed Limit	2017				2037			
						AADT	LOS	Speed	Density	AADT	LOS	Speed	Density
1a	Center St.	SR 93	0.72	4-Lanes with No Median and Narrow Shoulders	35	14,680	B	32	16.5	18,580	B	31	21.2
1b	SR 93	Hawthorne St.	0.27	4-Lanes with a Raised Grass Median and Wide Shoulders	35	16,100	C	25	22.6	20,380	C	26	28.5
2a	Hawthorne St.	Harbor Chapel Rd.	0.47	2-Lanes Eastbound, 1-Lane Westbound with No Median and Narrow Shoulders	45	15,630	B	34	32.9	20,190	B	33	43.4
2b	Harbor Chapel Rd.	Past Harbor Chapel Rd.	0.34	2-Lanes Eastbound, 1-Lane Westbound with No Median and Narrow Shoulders	45	10,030	A	41	17.7	12,980	A	41	22.7
3	Past Harbor Chapel Rd.	Past Old Stage Rd.	0.5	2-Lanes with TWLTL and Narrow Shoulders	45	10,030	B	32	22.2	12,980	B	31	30.2
4	Past Old Stage Rd.	Lemay Rd.	1.2	2-Lanes with No Median and Narrow Shoulders	45	7,680	E	38	17.4	10,370	E	36	23.7
5	Lemay Rd.	Cooks Valley Rd.	0.44	2-Lanes with No Median and Narrow Shoulders	45	7,680	E	36	18.5	10,370	E	34	25.3
6	Cooks Valley Rd.	Island Rd.	0.71	2-Lanes with No Median and Narrow Shoulders	45	9,570	E	34	23.0	12,350	E	32	30.9
7	Island Rd.	Fall Creek Rd.	0.73	2-Lanes with No Median and Narrow Shoulders	45	7,510	E	36	18.1	8,410	E	35	20.1
8	Fall Creek Rd.	Hill Rd.	0.55	2-Lanes with No Median and Narrow Shoulders	45	8,440	E	35	20.1	9,960	E	34	24.4
9	Hill Rd.	Harrtown Rd.	0.47	2-Lanes with No Median and Narrow Shoulders	45	6,370	E	36	15.5	7,010	E	36	16.8
10	Harrtown Rd.	Carolina Pottery Rd.	1.8	2-Lanes with No Median and Narrow Shoulders	45	6,870	E	39	15.4	6,980	E	38	15.7
11	Carolina Pottery Rd.	I-81	0.2	4-Lanes with a Raised Grass Median and Wide Shoulders	40	6,870	A	45	6.6	6,980	A	45	6.7
Σ =			8.4	Weighted Average =	44			36	18.6			35	23.0

Source: TDOT-Planning (2012), ICA Engineering 2012.

TABLE 1-8: PREFERRED ALTERNATIVE (ALTERNATIVE B MODIFIED) MOE

ID	To	From	Dist.	Cross Section	Speed Limit	2017				2037			
						AADT	LOS	Speed	Density	AADT	LOS	Speed	Density
1a	Center St.	SR 93	0.72	4-Lanes with a Raised Grass Median and 4 Ft. Shoulders	35	14,680	B	31	17.2	18,580	B	30	22.4
1b	SR 93	Hawthorne St.	0.27	4-Lanes with a Raised Grass Median and 4 Ft. Shoulders	35	16,100	B	30	19.4	20,380	B	29	25.3
2	Hawthorne St.	Harbor Chapel Rd.	0.47	4-Lanes with a TWLTL and 4 Ft. Shoulders	35	15,630	A	35	15.8	20,190	B	35	20.6
3	Harbor Chapel Rd.	Past Old Stage Rd.	0.84	2-Lanes w/ EB Truck Climbing Lane and 10 Ft. Shoulders	45	10,030	A	40	9.0	12,980	A	40	11.7
4	Past Old Stage Rd.	Past Lemay Rd.	1.2	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	7,680	D	40	16.3	10,370	E	38	22.1
5	Past Lemay Rd.	Cooks Valley Rd.	0.44	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	7,680	E	38	17.2	10,370	E	36	23.5
6	Cooks Valley Rd.	Island Rd.	0.71	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	9,570	E	37	21.4	12,350	E	35	28.6
7	Island Rd.	Fall Creek Rd.	0.73	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	7,510	E	38	17.0	8,410	E	37	19.0
8	Fall Creek Rd.	Hill Rd.	0.55	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	8,440	E	38	18.8	9,960	E	36	22.7
9	Hill Rd.	Harrtown Rd.	0.47	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	6,370	E	39	14.5	7,010	E	39	15.7
10	Harrtown Rd.	Carolina Pottery Rd.	1.8	2-Lanes with No Median and 10 Ft. Shoulders	45	6,870	D	41	14.5	6,980	D	41	14.7
11	Carolina Pottery Rd.	I-81	0.2	4-Lanes with a Raised Grass Median and 12 Ft. Shoulders	45	6,870	A	50	5.9	6,980	A	50	6.0
Σ =			8.40	Weighted Average =	43			38	15.7			37	19.2

Source: TDOT-Planning Division (2012), ICA Engineering 2012.

For the Preferred Alternative (Alternative B Modified) in the year 2017, the density of SR 126 is calculated to range from 5.9 to 21.4 passenger cars pc/mi/ln, with a weighted average of 15.7 pc/mi/ln. In 2037, the density ranges from 6.0 to 28.6 pc/mi/ln with a weighted average of 19.2 pc/mi/ln. The average was weighted based upon the length of each segment analyzed and represents an improvement compared to 23.0 pc/mi/ln as calculated for the No-Build Alternative. A summary of the density calculations for the Preferred Alternative (Alternative B Modified) is provided in Table 1-8. The densities are reported for the years 2017 and 2037.

The two travel lane improvements proposed for the Preferred Alternative (Alternative B Modified) differ from the four-lane improvements proposed for Alternatives A and B along the segment from Old Stage Road to Lemay Drive and Cooks Valley Road, respectively. As expected, traffic density will be greater for the Preferred Alternative (Alternative B Modified) in this segment when compared to the other build alternatives. However, the Preferred Alternative (Alternative B Modified) presents an improved density MOE in relation to the existing conditions of the No-Build Alternative while providing improved safety with less impact to properties, residents, and the environment along this segment.

Alternatives A and B MOE

For Alternatives A and B, the HCS analysis calculates LOS ratings ranging from A to E along SR 126 through the year 2037 during peak hour conditions. As shown in Table 1-6, the only differences in LOS for these alternatives, when compared to the Preferred Alternative (Alternative B Modified), are the segments from Harbor Chapel Road to Cooks Valley Road. Alternative A extends the proposed four-lane section to Cooks Valley Road and Alternative B extends the four-lane section to Lemay Drive. For this reason, they present a LOS A through their respective four-lane limits compared to a LOS E for the three-lane section proposed by the Preferred Alternative (Alternative B Modified). Thirty percent of the route is calculated to operate with a LOS of E by 2037 for Alternative A and 35 percent of the route is a LOS E with Alternative B. A summary of the LOS calculations for these alternatives is provided graphically in Figure 1-7 and Figure 1-8, while the calculations are provided in Table 1-9 and Table 1-10.

The speed limit of the corridor is expected to range from 35 to 50 mph along SR 126. For Alternatives A and B in the year 2037, the travel speed ranges from 29 mph to 50 mph with a weighted average of 40 mph and 39 mph, respectively. The weighted average of the proposed speed limit along the route is 44 mph. Therefore, the calculated average travel speed is 91 percent of the posted speed limit for Alternative A and 89 percent for Alternative B in the year 2037. The results of the travel speed calculations for these alternatives are provided in Table 1-9 and Table 1-10.

For Alternative A in the year 2037, the density of SR 126 is calculated to range from 9.0 to 29.0 passenger cars pc/mi/ln, with a weighted average of 16.6 pc/mi/ln. For Alternative B, the density ranges from 9.0 to 29.0 pc/mi/ln with a weighted average of 17.4 pc/mi/ln. The results of the density calculations for these alternatives are provided in Table 1-9 and Table 1-10.

For each MOE discussed, the values calculated for Alternative A and Alternative B represent small improvements over the same MOE calculated for the No-Build Alternative and the Preferred Alternative (Alternative B Modified). This is expected when considering the only difference related to traffic capacity between the build alternatives is the extent of the proposed four-lane cross-section. The extended four-lane sections of Alternatives A and B would provide a higher traffic capacity between Harbor Chapel and Cooks Valley Road. However, the improvements proposed by the Preferred Alternative (Alternative B Modified) were selected in this area because they improve safety and traffic operations compared to the No-Build Alternative while requiring less ROW acquisition of private property, displacements of residents,

and impacts to Chestnut Ridge, including Yancey's Tavern and the East Lawn Memorial Gardens Cemetery, when compared to Alternatives A and B.

FIGURE 1-7: SR 126 ALTERNATIVE A DESIGN YEAR (2037) LOS

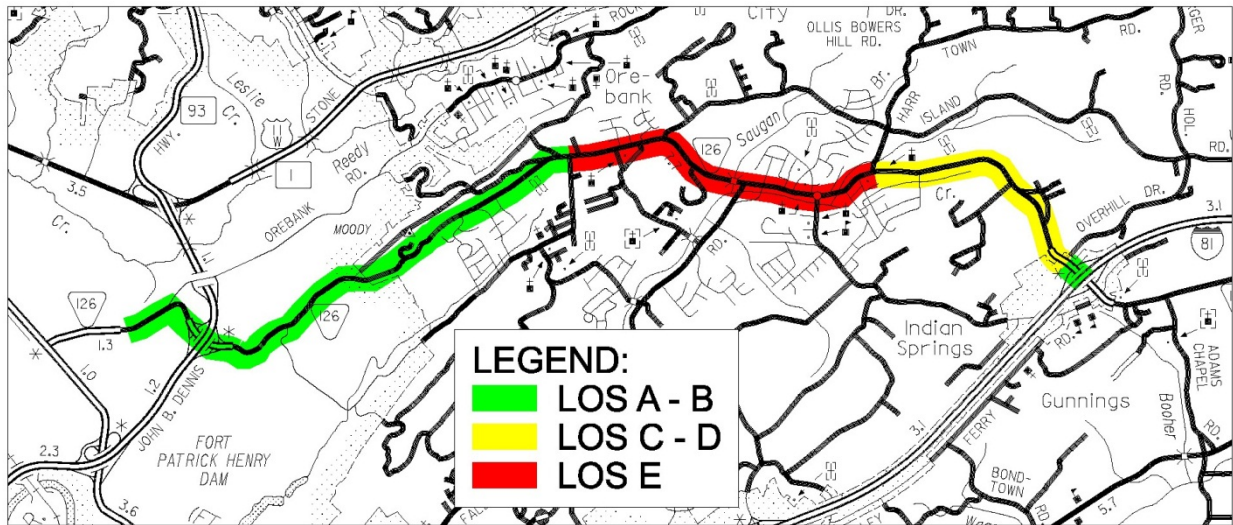


FIGURE 1-8: SR 126 ALTERNATIVE B DESIGN YEAR (2037) LOS

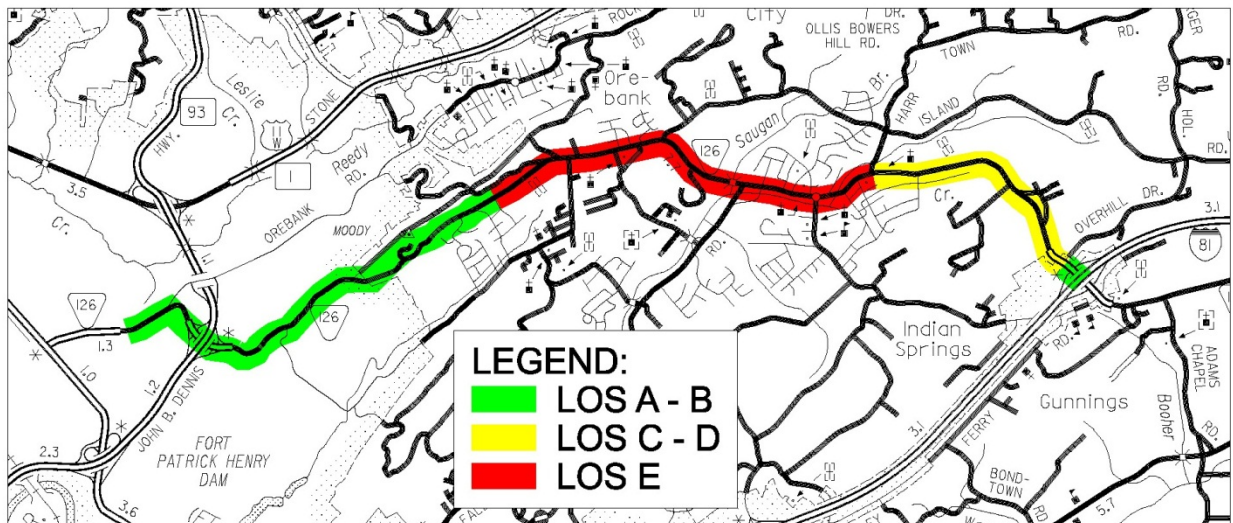


TABLE 1-9: ALTERNATIVE A MOE

ID	From	To	Dist.	Cross Section	Speed Limit	2017				2037			
						AADT	LOS	Speed	Density	AADT	LOS	Speed	Density
1a	Center St.	SR 93	0.72	4-Lanes with a Raised Grass Median and 4 Ft. Shoulders	35	14,680	B	31	17.2	18,580	B	30	22.4
1b	SR 93	Hawthorne St.	0.27	4-Lanes with a Raised Grass Median and 4 Ft. Shoulders	35	16,100	B	30	19.4	20,380	B	29	25.3
2	Hawthorne St.	Harbor Chapel Rd.	0.47	4-Lanes with a TWLTL and 4 Ft. Shoulders	35	15,630	A	35	15.8	20,190	B	35	20.6
3	Harbor Chapel Rd.	Past Old Stage Rd.	0.84	4-Lanes with a Raised Grass Median and 4 Ft. Shoulders	45	10,030	A	41	8.8	12,980	A	40	11.6
4	Past Old Stage Rd.	Past Lemay Rd.	1.2	4-Lanes with a Raised Grass Median and 8 Ft. Shoulders	45	7,680	A	50	6.7	10,370	A	50	9.0
5	Past Lemay Rd.	Cooks Valley Rd.	0.44	4-Lanes with a Raised Grass Median and 8 Ft. Shoulders	45	7,680	A	45	7.4	10,370	A	45	10.0
6	Cooks Valley Rd.	Island Rd.	0.71	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	9,570	E	37	21.4	12,350	E	34	29.0
7	Island Rd.	Fall Creek Rd.	0.73	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	7,510	E	38	17.0	8,410	E	37	19.0
8	Fall Creek Rd.	Hill Rd.	0.55	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	8,440	E	38	18.8	9,960	E	36	23.0
9	Hill Rd.	Harrtown Rd.	0.47	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	6,370	E	39	14.5	7,010	E	38	15.8
10	Harrtown Rd.	Carolina Pottery Rd.	1.8	2-Lanes with No Median and 10 Ft. Shoulders	45	6,870	D	41	14.5	6,980	D	41	14.7
11	Carolina Pottery Rd.	I-81	0.2	4-Lanes with a Raised Grass Median and 12 Ft. Shoulders	45	6,870	A	50	5.9	6,980	A	50	6.0
			Σ =	8.4	Weighted Average =	43		40	13.77			40	16.6

Source: TDOT-Planning Division (2012), ICA Engineering 2012.

TABLE 1-10: ALTERNATIVE B MOE

ID	From	To	Dist.	Cross Section	Speed Limit	2017				2037			
						AADT	LOS	Speed	Density	AADT	LOS	Speed	Density
1a	Center St.	SR 93	0.72	4-Lanes with a Raised Grass Median and 4 Ft. Shoulders	35	14,680	B	31	17.2	18,580	B	30	22.4
1b	SR 93	Hawthorne St.	0.27	4-Lanes with a Raised Grass Median and 4 Ft. Shoulders	35	16,100	B	30	19.4	20,380	B	29	25.3
2	Hawthorne St.	Harbor Chapel Rd.	0.47	4-Lanes with a TWLTL and 4 Ft. Shoulders	35	15,630	A	35	15.8	20,190	B	35	20.6
3	Harbor Chapel Rd.	Past Old Stage Rd.	0.84	4-Lanes with a Raised Grass Median and 4 Ft. Shoulders	45	10,030	A	41	8.8	12,980	A	40	11.6
4	Past Old Stage Rd.	Past Lemay Rd.	1.2	4-Lanes with a Raised Grass Median and 8 Ft. Shoulders	45	7,680	A	50	6.7	10,370	A	50	9.0
5	Past Lemay Rd.	Cooks Valley Rd.	0.44	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	7,680	E	38	17.2	10,370	E	36	23.7
6	Cooks Valley Rd.	Island Rd.	0.71	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	9,570	E	37	21.4	12,350	E	34	29.0
7	Island Rd.	Fall Creek Rd.	0.73	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	7,510	E	38	17.0	8,410	E	37	19.0
8	Fall Creek Rd.	Hill Rd.	0.55	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	8,440	E	38	18.8	9,960	E	36	23.0
9	Hill Rd.	Harrtown Rd.	0.47	2-Lanes with a TWLTL and 6 Ft. Shoulders	45	6,370	E	39	14.5	7,010	E	38	15.8
10	Harrtown Rd.	Carolina Pottery Rd.	1.8	2-Lanes with No Median and 10 Ft. Shoulders	45	6,870	D	41	14.5	6,980	D	41	14.7
11	Carolina Pottery Rd.	I-81	0.2	4-Lanes with a Raised Grass Median and 12 Ft. Shoulders	45	6,870	A	50	5.9	6,980	A	50	6.0
			Σ =	8.4	Weighted Average =	43		40	13.77			40	16.6

Source: TDOT-Planning Division (2012), ICA Engineering 2012.

1.6 Consistency with Existing Transportation Plans

The project is included in the KMTPO *Transportation Improvement Program* (TIP), for fiscal years 2014 through 2017, adopted December 19, 2013. The project limits from Center Street to I-81 are covered by Project TN-5 (PIN 105467.00) as listed in Section A, *Previous Projects – Status Report* on page 18 of the TIP. Phase 1, from East Center Street in Kingsport to Cook's Valley Road, is in the TIP as TN-5 (PIN 105467.01) with funding through the ROW phase in 2016. This information is included as Attachment A.

This project is included in the KMTPO's 2035 LRTP, dated June 7, 2012. The plan addresses the future transportation needs within the KMTPO boundary. The project is divided into three segments and is listed in the LRTP as PIN 105467.00, 8-TC, and 36-TSTI.

1.7 Logical Termini and Independent Utility

The project begins at the intersection of East Center Street and a previously-improved section of SR 126. This intersection is the convergence of East Center Street, a local collector that provides direct access to the Kingsport Central Business District and SR 126, which has already been improved west of this intersection; and two other local roads – Miller Street and Warpath Drive. The project ends at I-81.

The project has logical termini because of its connection to the previously-improved section of SR 126 and to I-81. It also provides a connection to two state roadways – SR 36 and SR 93, which are located within the city limits of Kingsport. The project is of sufficient length to address environmental matters on broad scope.

The Preferred Alternative (Alternative B Modified) demonstrates independent utility because it is not dependent upon the development of any other transportation projects. The project would not restrict consideration of alternatives to other reasonably foreseeable transportation improvements.

1.8 Summary

TDOT has determined the need for this proposed project based on the documented safety issues, geometric deficiencies, unacceptable crash rates, and unmanaged access to businesses, adjacent roads and driveways presented in this chapter.

The project has logical termini, is of sufficient length to address environmental matters on a broad scope, has independent utility, and will not restrict consideration of alternatives for other foreseeable transportation improvements.

2.0 ALTERNATIVES

The National Environmental Policy Act (NEPA) requires that agencies proposing a major project explore various ways that the project's purpose and need could be met. This chapter describes the alternatives that were evaluated in the DEIS and identifies and describes the Preferred Alternative (Alternative B Modified) that is the subject of this FEIS.

Two build alternatives (Alternative A and Alternative B) were considered in the DEIS. Following approval of the DEIS, a third build alternative, Alternative B Modified, was developed to further reduce impacts and incorporate changes made to the KMTPO travel demand model. These three build alternatives, as well as the No-Build Alternative, were presented at two DEIS public hearings. Following the circulation of the DEIS in 2012 and consideration of the comments received from the public and federal, state, regional and local agencies, between 2011 and 2013, TDOT selected Alternative B Modified as the Preferred Alternative.

2.1 Background in Determining Reasonable Alternatives

A continuous four-lane alternative with a divided median was considered and discussed during the planning stages of the project and through the CSS process. Although some support was noted for this alternative, there was considerable opposition, in part, due to the increased ROW requirements, which would require a higher number of family and business relocations, adverse impacts to the historic Yancey's Tavern property, and additional grave relocations within the East Lawn Memorial Gardens Cemetery located directly across the roadway from the historic property. The continuous, four-lane alternative would also require higher areas of encroachment into floodplains, greater lengths of channel changes to streams, and potential hazardous material impacts. The public expressed concerns about potential diminished visual and rural aesthetics, accelerated development, and increased traffic speed in the corridor if a continuous four-lane alignment were to be constructed.

In the CSS process, the public expressed preferences for the blending of four-, three-, and two-lane sections of the roadway. They also expressed a preference for maintaining fewer travel lanes and lower speed limits in portions of the project area to minimize potential increases in land use changes within and adjacent to the project area.

Conceptual layouts were presented for discussion at two public involvement sessions that were held in May, 2005, associated with the CSS process. The layouts were not fully developed alternatives. They were presented as tables with options (i.e., landscaped median or center turn lane). Three main concepts, A, B, and C, were presented.

A preference survey was included with the handout material distributed during both sessions. In the survey, citizens were asked to express a preference for Concept A, B, C, or the No-Build Alternative along various segments of the study corridor. The public comments favored Concept C by 1,102 of the 2,424 responses collected. Concept C incorporates the public's expressed preference for the blending of four-, three-, and two-lane sections of the roadway along the corridor. Concepts A and B were dismissed by the CRT and TDOT based on a lack of public support for a four-lane section in the portion of the project between Cooks Valley Road and I-81. Concept C was carried forward for further consideration in the design process. Concept C was renamed Alternative A in the DEIS document. Alternative B in the DEIS document is a refinement of Alternative A. Alternative B incorporates the public's desire to minimize adverse impacts to the historic Yancey's Tavern property and grave relocations within the East Lawn Memorial Gardens Cemetery, located directly across the roadway from the historic property.

Therefore, three alternatives were considered in the DEIS: the No-Build Alternative, Alternative A, and Alternative B.

Following approval of the DEIS on January 5, 2012, additional traffic data was developed to incorporate a revised travel demand model by the KMTPO, which resulted in a reduction in future traffic projections. This new data along with a new Highway Capacity Manual (HCM 2010) prompted TDOT to re-evaluate the design of the alternatives. This led to a reduction in project impacts through development of a modification of Alternative B that was named Alternative B Modified. This alternative was also developed in coordination with resource agencies to create an alternative that would further minimize impacts to Yancey's Tavern and the cemetery without compromising the integrity of the project's design.

After the review of social, ecological, and cultural impacts, as well as the consideration of public and agency comments, Alternative B Modified was selected as the Preferred Alternative for the project. Public comments are included in Appendix G.

2.2 No-Build Alternative

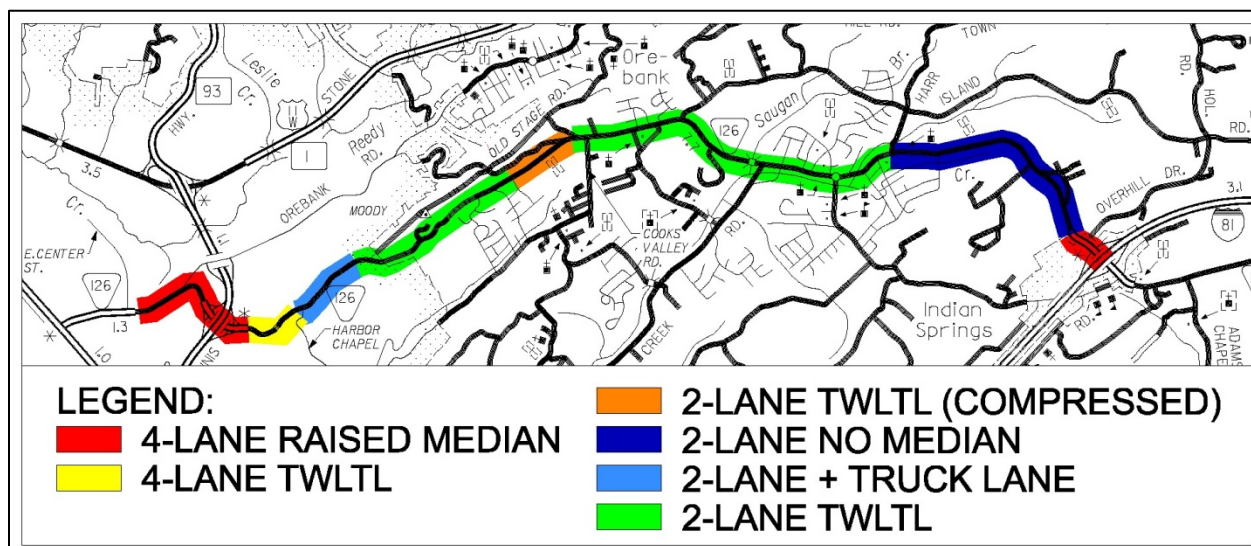
Under the No-Build Alternative, SR 126 would not be improved other than to have scheduled maintenance activities. There are advantages to the No-Build Alternative. One is that present travel patterns would not be temporarily disrupted by the construction of this project. Noise and construction impacts would not occur. There would be no impacts to wildlife, cultural resources, or farmland. There would be no family or business relocations and no costs for ROW, construction, or utility relocation. The No-Build Alternative would have no direct impacts on the environment.

There are several disadvantages to the No-Build Alternative. It would not correct existing geometric deficiencies, improve safety along the route, or improve access management, and therefore does not meet the purpose and need of the project. In addition, the No-Build Alternative fails to meet secondary goals of improving pedestrian and bicyclist mobility. Because of these reasons, the No-Build Alternative was eliminated from consideration in the DEIS. The characteristics of the existing SR 126 corridor are described in Section 1.2 of this document.

2.3 Preferred and Other Build Alternatives Considered in the DEIS

2.3.1 Preferred Alternative (Alternative B Modified)

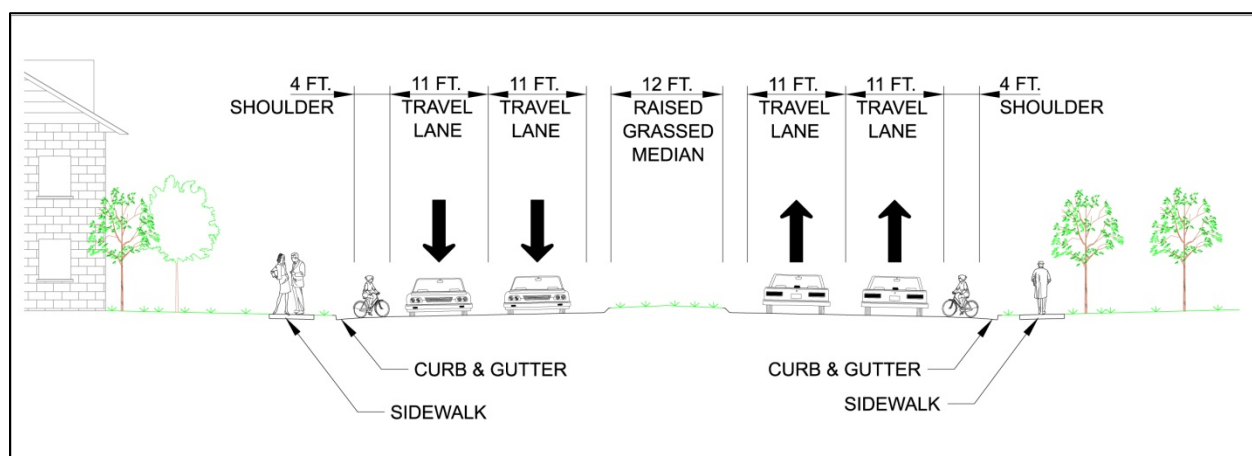
As previously mentioned, before selection as the Preferred Alternative, this concept was studied and presented to the public as Alternative B Modified. As a modification to Alternative B, the four-lane segment that extended from East Center Street to east of Lemay Drive has been reduced in length. The revised design concept proposes four travel lanes from East Center Street to Harbor Chapel Road. From Harbor Chapel Road to I-81, the concept proposes two travel lanes; one in each direction. There is an additional eastbound travel lane from Harbor Chapel Road to Old Stage Road to accommodate trucks ascending the steep grade of Chestnut Ridge. There will be a continuous left-turn lane separating the two travel lanes from Old Stage Road to Harr Town Road. The following information describes each section in more detail. Figure 2-1 graphically illustrates the various roadway sections along the route as proposed for the Preferred Alternative (Alternative B Modified) and is followed by cross-sections for each. The conceptual layouts for the Preferred Alternative (Alternative B Modified) are provided in Appendix I. The Preferred Alternative (Alternative B Modified) would require approximately 100 acres of ROW.

FIGURE 2-1: PREFERRED ALTERNATIVE (ALTERNATIVE B MODIFIED) ROADWAY SECTIONS

Note: TWLTL (Two-way, Left-turn Lane)

Section 1: East Center Street to west of Hawthorne Street

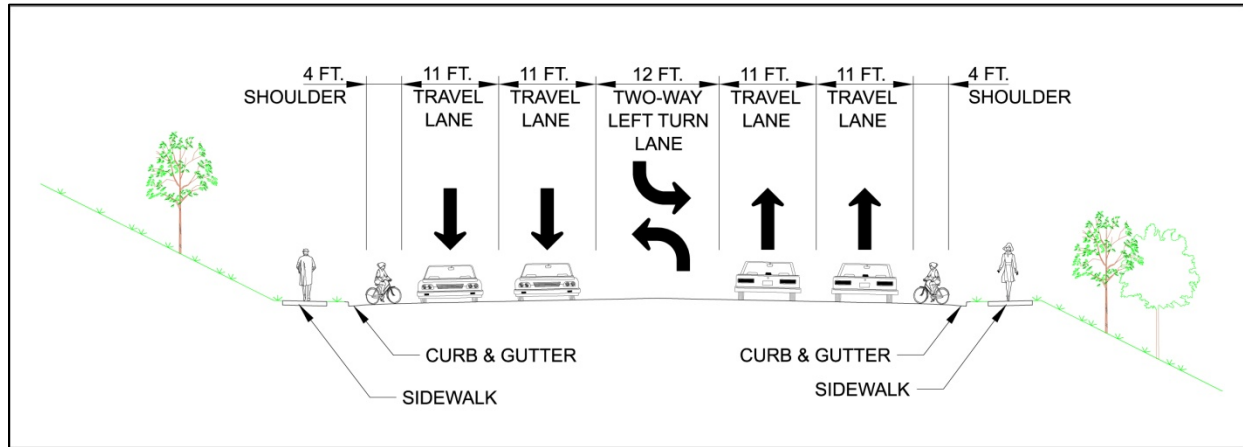
The first segment of the four-lane section, beginning at East Center Street and extending to west of Hawthorne Street, will have two, 11-foot lanes in each direction separated by a 12-foot raised grass median. It will also have four-foot shoulders to accommodate bicyclists and have five-foot sidewalks for pedestrians on both sides of the roadway. Details such as delineation of bike lanes will be determined in accordance with TDOT policies and standards during the design phase. Figure 2-2 illustrates the first section of the Preferred Alternative (Alternative B Modified).

FIGURE 2-2: SECTION 1 EAST CENTER STREET TO WEST OF HAWTHORNE STREET

Section 2: West of Hawthorne Street to Harbor Chapel Road

West of Hawthorne Street, the grass median will transition to a center, two-way, left-turn lane and continue to Harbor Chapel Road. All other features will remain the same as Section 1. Figure 2-3 illustrates the second section of the Preferred Alternative (Alternative B Modified).

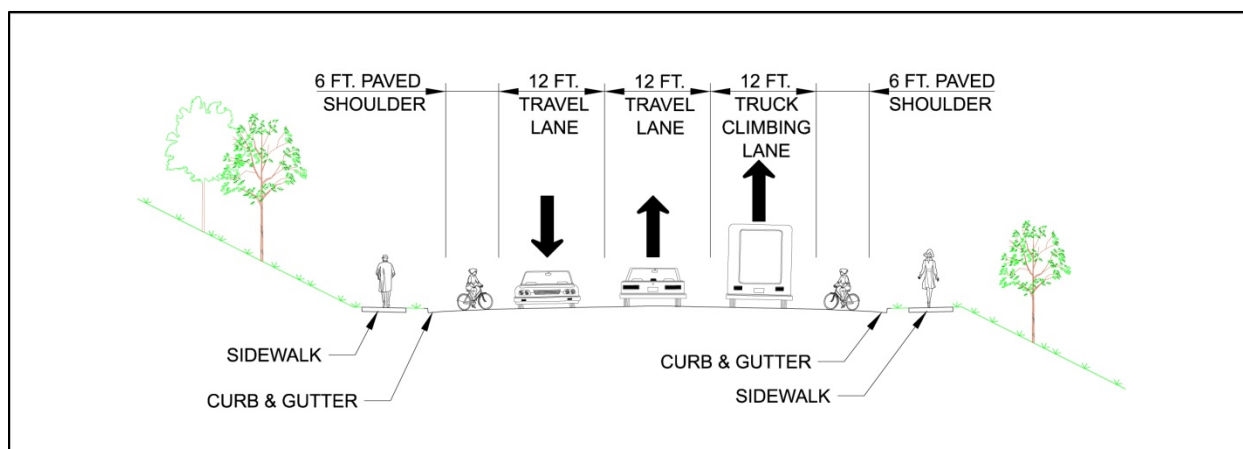
FIGURE 2-3: SECTION 2 WEST OF HAWTHORNE STREET TO HARBOR CHAPEL ROAD



Section 3: Harbor Chapel Road to west of Old Stage Road

At Harbor Chapel Road, the roadway cross-section is reduced from the four-lane section of Alternative B to a three-lane roadway consisting of one lane in each direction and a 12-foot eastbound truck climbing lane. Five-foot sidewalks and six-foot paved shoulders to accommodate bicyclists are proposed for both sides of the roadway. Details such as the delineation of bike lanes and sidewalk width will be determined in accordance with TDOT policies and standards during the design phase. This three-lane roadway will continue to west of Old Stage Road. Figure 2-4 illustrates the third section of the Preferred Alternative (Alternative B Modified).

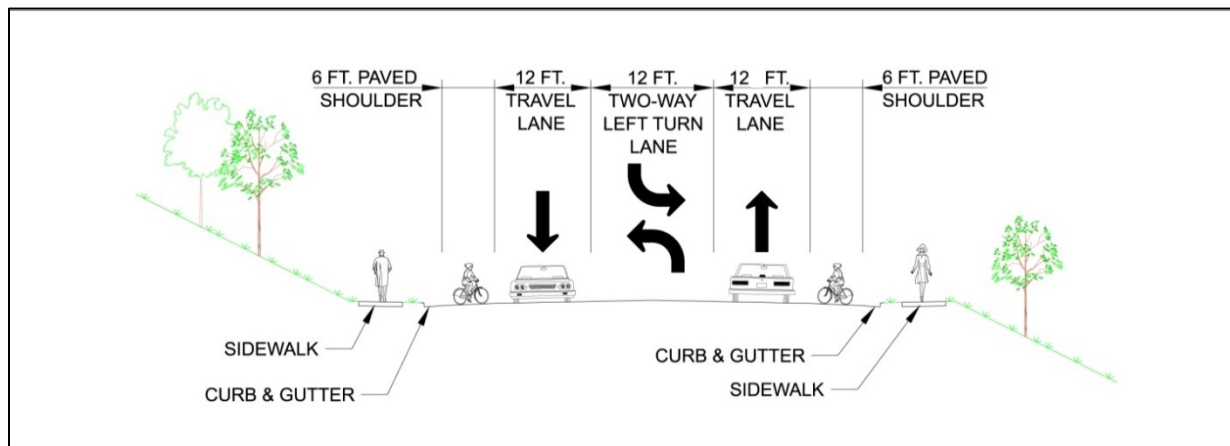
FIGURE 2-4: SECTION 3 HARBOR CHAPEL ROAD TO WEST OF OLD STAGE ROAD



Section 4: Old Stage Road to Harr Town Road

The three-lane roadway will transition near Old Stage Road to a two-lane roadway (one lane in each direction) separated by a center, two-way, left-turn lane, which continues to Harr Town Road. Five-foot sidewalks for pedestrians and six-foot paved shoulders to accommodate bicyclists are proposed for both sides of the roadway. Details such as the delineation of bike lanes will be determined in accordance with TDOT policies and standards during the design phase. Figure 2-5 illustrates the fourth section of the Preferred Alternative (Alternative B Modified).

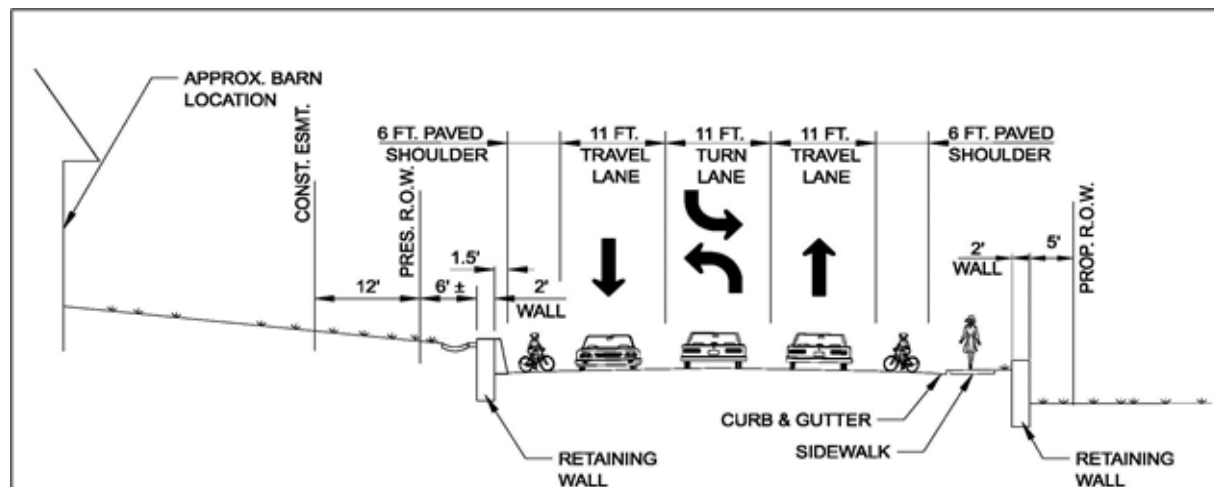
FIGURE 2-5: SECTION 4 HARR TOWN ROAD TO OLD STAGE ROAD



Section 4A: Yancey's Tavern and East Lawn Memorial Gardens Cemetery

The proposed three-lane cross-section is compressed as it passes between Yancey's Tavern and the East Lawn Memorial Gardens Cemetery. This design concept avoids taking property from Yancey's Tavern, which is listed on the NRHP, and avoids displacing any known grave sites. Six-foot paved shoulders to accommodate bicyclists are proposed for both sides of the roadway, and a five-foot sidewalk for pedestrians would be located across the road from Yancey's Tavern. The compressed section begins east of Lemay Drive and ends at the intersection of Cooks Valley Road and Eatons Station Road. Figure 2-6 illustrates the compressed portion of the fourth section of the Preferred Alternative (Alternative B Modified).

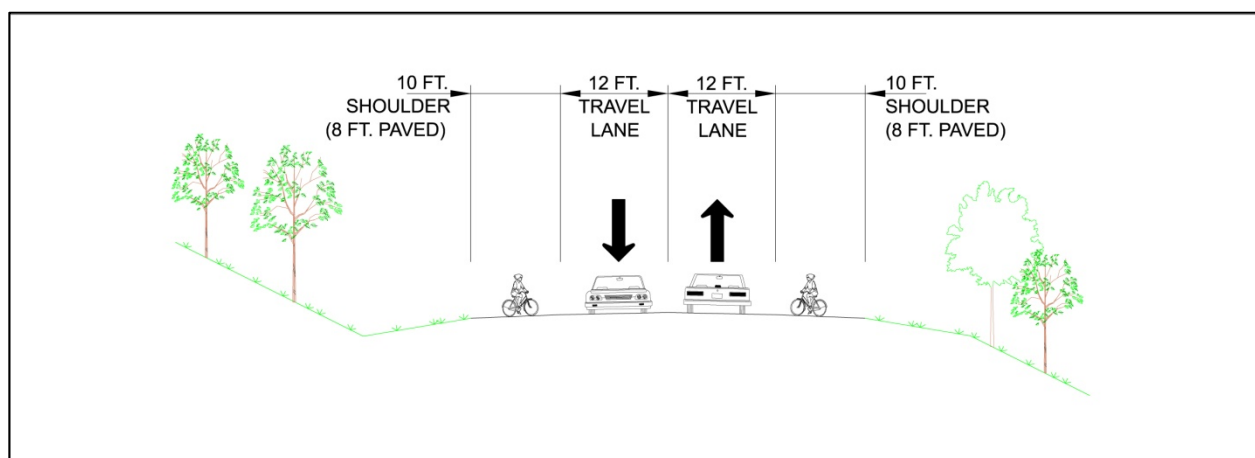
FIGURE 2-6: SECTION 4A YANCEY'S TAVERN AND EAST LAWN MEMORIAL GARDENS CEMETERY



Section 5: Harr Town Road to west of Carolina Pottery Road

At Harr Town Road, the roadway cross-section transitions to a two-lane roadway, with ten-foot shoulders on both sides of the roadway to accommodate both pedestrians and bicyclists, and continues to Carolina Pottery Road. Figure 2-7 illustrates the fifth section of the Preferred Alternative (Alternative B Modified).

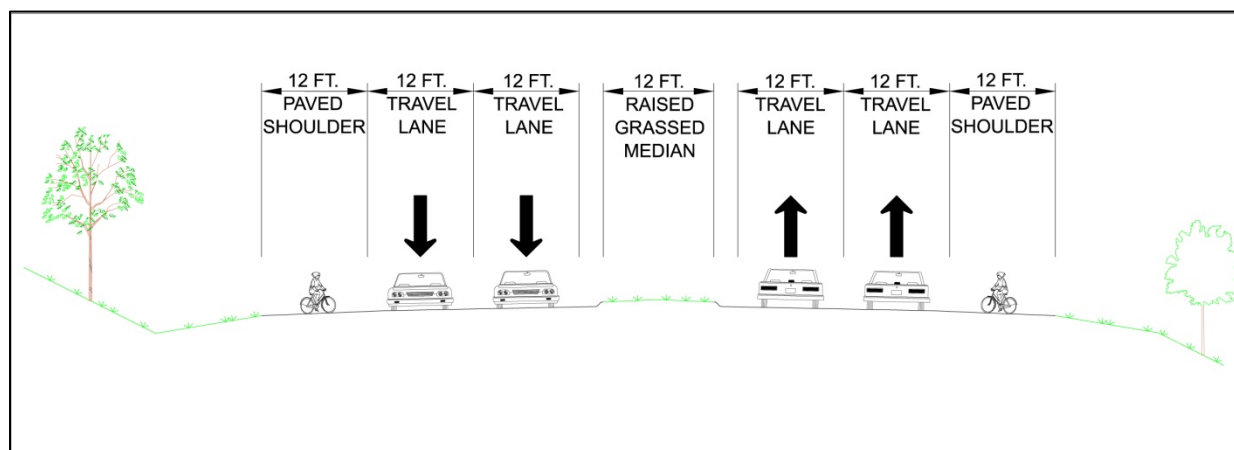
FIGURE 2-7: SECTION 5 HARR TOWN ROAD TO WEST OF CAROLINA POTTERY ROAD



Section 6: West of Carolina Pottery Road to Interstate 81

The roadway transitions at Carolina Pottery Road to a four-lane divided highway with a 12-foot, raised grass median with 12-foot paved shoulders on both sides of the roadway to accommodate both pedestrians and bicyclists, and continues to I-81, the ending point for this project. Figure 2-8 illustrates the sixth section of the Preferred Alternative (Alternative B Modified).

FIGURE 2-8: SECTION 6 WEST OF CAROLINA POTTERY ROAD TO INTERSTATE 81



The Preferred Alternative (Alternative B Modified) meets the purpose and need of the project with improvements to safety, roadway geometry, and access management, as well as traffic operations compared to the No-Build Alternative. The modified design, which begins east of Lemay Drive and ends at the intersection of Cooks Valley Road and Eatons Station Road, modified design reduces the footprint of the roadway and reduces the cost and number of displacements in relation to Alternatives A and B, while improving safety.

Improve Safety

Due to high crash rates along the route, safety is the predominant need identified for the project. Safety is improved by correcting deficiencies in roadway geometry, adding adequate shoulders, and managing access to SR 126. By correcting deficiencies in roadway alignment, sight distances are improved and roadway curvature is reduced to be appropriate for the proposed travel speeds. Other geometric elements, such as appropriate roadway cross slope, raised medians, center turn lanes, curbs, and drainage systems, will be incorporated to meet TDOT Design Standards. By providing adequate shoulders, the roadway will have a much needed recovery area along the outside of the roadway and a safe pull-over location for vehicles. Buses and mail delivery can utilize the proposed shoulders, as needed. Adequate shoulder widths will also provide accommodations for bicycles and pedestrians. All of these features improve the safety of the roadway. Many of these features, such as improved lane and shoulder widths and center left-turn lanes, will also improve traffic operations. For example, in the three-lane section from Old Stage Road to Harr Town Road, the center left-turn lane will allow left-turning vehicles to exit the traffic flow while waiting on a gap in opposing traffic to allow a left turn. In an area with many access points to cross roads, businesses, and residents, this feature will benefit traffic operations when compared to the existing two-lane roadway. Additional benefits to safety and traffic operations will be gained by management of access points along the route, which are discussed further in the next section.

Improve Access Management

In addition to the SR 126 roadway typical cross-section and alignment improvements, several side road intersection approaches to SR 126 are proposed for improvement. Many of these minor connections intersect SR 126 at sharp angles. Realigning side road approaches to intersect as close to 90 degrees as possible has proven safety benefits. Conceptual layouts of the Preferred Alternative (Alternative B Modified), which include proposed realignments to the proposed side road approaches, are provided in Appendix I. These realignments and other modifications will be considered during the design phase. Side road approaches to SR 126 that are being considered for realignment include:

- | | | |
|----------------------|----------------------|-------------------------|
| ▪ Orebank Road | ▪ Old Stage Road | ▪ Natchez Lane |
| ▪ SR 93 NB Exit Ramp | ▪ Ethel Drive | ▪ Harr Town Road |
| ▪ Heather Lane | ▪ Eaton Station Road | ▪ Gravel Top/Adams Road |
| ▪ Amy Avenue | ▪ Woods Way | ▪ Trinity Lane |
| ▪ Island Road | ▪ Woodridge Avenue | ▪ Country Drive |

The Preferred Alternative (Alternative B Modified) also proposes to close several intersections along SR 126. Access for most of these minor connections to SR 126 will remain via improved intersections on neighboring roads. Closing these intersections will improve access control and safety along the route due to the reduction of conflict points. These road closures and others will

be considered further during the design phase when final determination is made. The conceptual layouts of the Preferred Alternative (Alternative B Modified), which include the proposed intersection closings, are provided in Appendix I. Intersections along SR 126 that are being considered for closure are:

- | | | |
|-----------------------|-------------------|-------------------|
| ▪ Edens Ridge Road | ▪ Tanglewood Road | ▪ Cree Street |
| ▪ Hillcrest Drive | ▪ Holiday Road | ▪ Gravel Top Road |
| ▪ Hawthorne Street | ▪ Shuler Drive | ▪ Busbee Street |
| ▪ Chestnut Ridge Road | ▪ Kent Street | ▪ Lana View Drive |
| ▪ Beverly Hills | ▪ Red Robin Lane | |

Other intersections and roadway segments will require realignment or closure as the roadway network is improved along with SR 126. The conceptual layouts show the intersections and roadway segments that are currently under consideration, such as Busbee Street and Woodridge Avenue. Also, a new local street connection is proposed, Parker Street Connector, to maintain access to Holiday Road (see Sheet 6 of the conceptual layouts). All roadway connections and alignments will be reviewed and improved, as appropriate, in the design phase of this project.

Additional Design Solutions

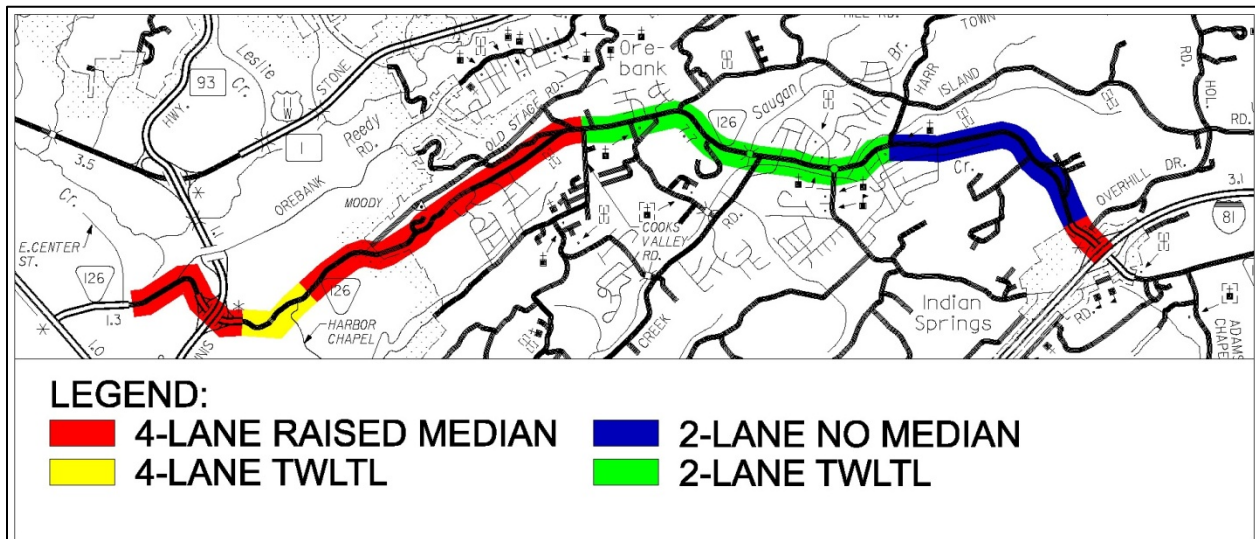
During design, TDOT will look for ways to further reduce impacts to the environment and the number of residential relocations. For example, retaining walls will be considered where feasible and cost effective to reduce the width of ROW needed.

2.3.2 Alternative A

Alternative A, as included in the DEIS, would improve SR 126 to a four-lane facility (two travel lanes in each direction) within the commercial and residential areas of the western half of the study corridor. The eastern half of the study corridor, which is rural in nature, would remain a two-travel-lane facility. Either a raised median or two-way left-turn lane would be provided along the majority of the route. Improved shoulders would be provided along the entire corridor and sidewalks extended to the majority of the commercial and residential areas.

Alternative A would require approximately 239 acres of ROW. Figure 2-9 illustrates the proposed roadway sections for Alternative A. Detailed information regarding Alternative A, including conceptual plans, are provided in the DEIS.

The proposed alignment of Alternative A generally follows the existing alignment. The proposed alignment shifts from side to side to minimize impacts, reduce earthwork volumes, simplify constructability, and improve the curvature of the roadway. Despite the effort to minimize impacts, additional ROW would be required and many residences and businesses will need to be relocated. Numerous gravesites will also need to be relocated at the East Lawn Memorial Gardens Cemetery.

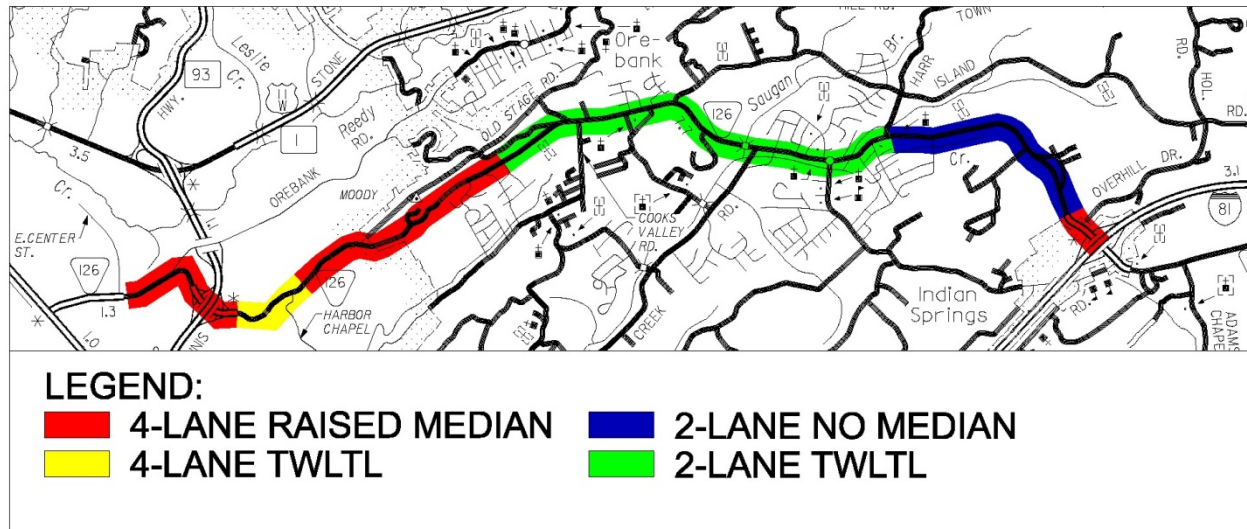
FIGURE 2-9: ALTERNATIVE A ROADWAY SECTIONS

Note: TWLTL (Two-way, Left-turn Lane)

2.3.3 Alternative B

Alternative B utilizes the same proposed typical roadway cross-sections as Alternative A, but the length of the four-travel lane section is reduced. As a result, the section with two travel lanes and a two-way, left-turn lane begins further west, near Lemay Drive, and is 0.6-mile longer than in Alternative A and the widening was shifted to the south. These modifications were made to minimize impacts to Yancey's Tavern and to reduce impacts to the East Lawn Memorial Gardens Cemetery located on opposing sides of SR 126. It should be noted that numerous gravesites would still need to be relocated with Alternative B as included in the DEIS. Additional changes incorporated into Alternative B include minor modifications of the proposed centerline to minimize excavation and fill impacts, and to improve maintenance of traffic during construction. Alternative B would require approximately 121 acres of ROW, which is less than Alternative A. Alternative B would also impact fewer residences and businesses than Alternative A.

Alternative B would require more ROW than with the Preferred Alternative (Alternative B Modified). Figure 2-10 illustrates the proposed roadway sections for Alternative B. Detailed information for Alternative B, including conceptual plans, are included in the appendix of the DEIS.

FIGURE 2-10: ALTERNATIVE B ROADWAY SECTIONS

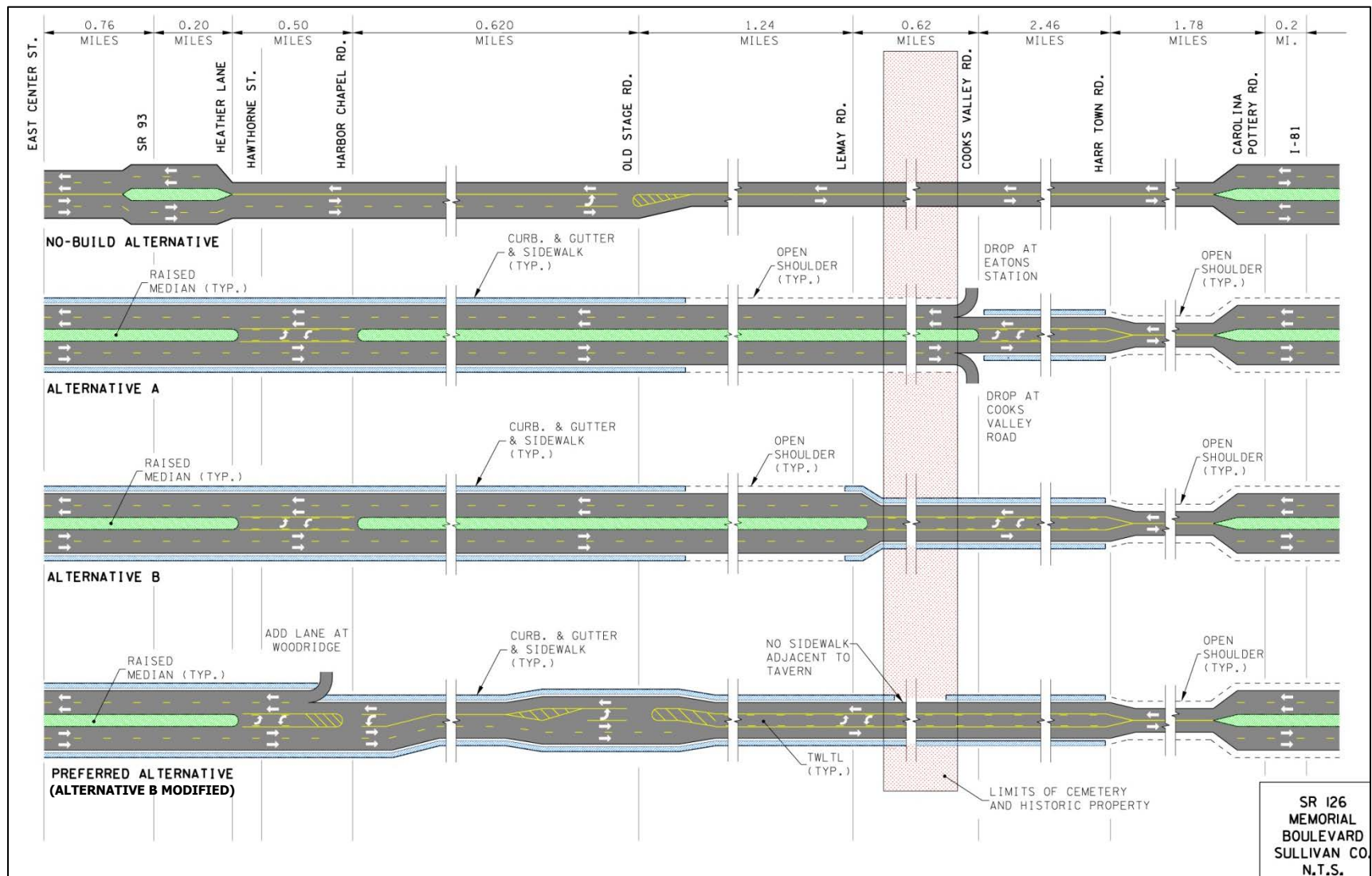
Note: TWLTL (Two-way, Left-turn Lane)

Improved Access Management for Alternative A and Alternative B

The access modifications and their benefits as described for the Preferred Alternative (Alternative B Modified) would also apply to Alternative A or Alternative B. Similar improvements to side road access were proposed and listed for the build alternatives in Chapter 2 of the DEIS. During the development of Alternative B Modified, which was later chosen as the Preferred Alternative (Alternative B Modified), the conceptual design was refined for side road connections.

Figure 2-11 compares the No-Build Alternative, Alternative A, Alternative B, and Preferred Alternative (Alternative B Modified) typical sections for the project.

FIGURE 2-11: ALTERNATIVES TYPICAL SECTION COMPARISON



2.4 Preliminary Cost Estimates

The preliminary cost estimates for the Preferred Alternative (Alternative B Modified) and Alternatives A and B are shown in Table 2-1. No capital costs are associated with the No-Build Alternative. The costs are shown in 2014 dollars. The Preferred Alternative (Alternative B Modified) has the lowest total costs of the three build alternatives considered.

TABLE 2-1: PRELIMINARY COST ESTIMATES

Cost Type	Preferred Alternative (Alternative B Modified)	Alternative A	Alternative B
ROW Acquisition	\$ 43,440,000	\$ 66,000,000	\$ 52,800,000
Utilities	\$ 4,795,000	\$ 5,847,600	\$ 5,021,500
Construction	\$ 51,700,000	\$ 60,500,000	\$ 51,700,000
Total Estimated Costs	\$ 99,935,000	\$ 132,347,600	\$ 109,521,500

Source: ICA Engineering (2014)

2.5 Selection of the Preferred Alternative (Alternative B Modified)

TDOT reviewed the comments received at the public hearing and during the official comment period. All comments were read and considered in TDOT's alternative decision-making process. This information was compiled with data from technical reports and analyses related to each alternative and that was used to evaluate each alternative and the selection of a preferred alternative.

2.5.1 Advantages and Disadvantages of Alternatives

Each Build Alternative: follows the existing alignment; improves safety by realigning or closing approaches on intersecting roads (as appropriate); provides shoulders and turn lanes to improve safety; provides sidewalks and widened shoulders to accommodate bicyclists and pedestrians (where feasible); and improves traffic operations. Table 2-2 summarizes the advantages and disadvantages of each alternative as considered for selection of a preferred alternative.

TABLE 2-2: ADVANTAGES AND DISADVANTAGES OF PROJECT ALTERNATIVES

ADVANTAGES OF PROJECT ALTERNATIVES		
PREFERRED ALTERNATIVE <i>Modification to Alternative B</i>	ALTERNATIVE A <i>CRT Recommended Concept</i>	ALTERNATIVE B <i>Modification to Alternative A</i>
<ul style="list-style-type: none"> Least impact to ROW, (fewer displacements), Yancey's Tavern, East Lawn Memorial Cemetery, and the environment in general. Least costly. No Adverse Effect to Yancey's Tavern. Received favorably at the Public Hearing. 	<ul style="list-style-type: none"> Accommodates higher traffic volumes from Harbor Chapel Road to Cooks Valley Road. 	<ul style="list-style-type: none"> Accommodates higher traffic volumes from Harbor Chapel Road to east of Lemay Drive. Requires less displacement than Alternative A. Less costly than Alternative A.

TABLE 2-2: ADVANTAGES AND DISADVANTAGES OF PROJECT ALTERNATIVES (CONTINUED)

DISADVANTAGES OF PROJECT ALTERNATIVES		
PREFERRED ALTERNATIVE <i>Modification to Alternative B</i>	ALTERNATIVE A <i>CRT Recommended Concept</i>	ALTERNATIVE B <i>Modification to Alternative A</i>
<ul style="list-style-type: none"> • Less capacity for future traffic than a four-lane section from Harbor Chapel Road to Cooks Valley Road. • Least desirable for maintenance of traffic and constructability. 	<ul style="list-style-type: none"> • Greatest impact to ROW and graves. Requires the most displacements. • Adverse Visual Impact to Yancey's Tavern and requires Memorandum of Agreement. • Highest cost. 	<ul style="list-style-type: none"> • Significant impact to ROW and graves. Requires more displacements than Preferred Alternative. • Adverse Visual Impact to Yancey's Tavern and requires Memorandum of Agreement. • Higher cost than Preferred Alternative.

2.5.2 Reasons for Selection of the Preferred Alternative (Alternative B Modified)

The Preferred Alternative (Alternative B Modified) was selected after the review of potential social, ecological, and cultural impacts as well as the consideration of public and agency comments. After careful consideration, the alternative studied and presented to the public as Alternative B Modified was selected as the Preferred Alternative because it best meets the purpose and need of the project by improving safety while minimizing impacts to the environment and the community. As previously stated, the Preferred Alternative (Alternative B Modified) was the only concept studied that did not have an adverse visual effect to Yancey's Tavern or impacts to graves in East Lawn Memorial Gardens Cemetery. It also has a lower total number of residential and business displacements. The Preferred Alternative (Alternative B Modified) was supported by the mayor of Kingsport and the mayor of Sullivan County in a joint letter dated March 21, 2013. This correspondence is included in Appendix G.

When compared to the existing roadway, the Preferred Alternative (Alternative B Modified) creates a safer, more efficient route between the City of Kingsport and I-81. Lane widths and shoulder widths will be improved along the corridor. Deficient horizontal and vertical curves will be improved. These geometric improvements will create a safer, more efficient route. The addition of wider shoulders along the entire corridor and sidewalks along commercial and residential areas will promote bicycle and pedestrian use of the facility. Access management will be improved along the commercial areas of the corridor through the use of raised grass medians and curb and gutter. Throughout the study corridor, access management will be improved by closing or realigning many side road intersections with SR 126. This will improve the safety and efficiency of the route. The Preferred Alternative (Alternative B Modified) will improve traffic operations and travel times for both commuters and emergency response vehicles. The Preferred Alternative (Alternative B Modified) will provide these improvements in a context sensitive design, preserving the rural nature of the eastern half of the study corridor.

Alternative A would have the greatest impact to ROW and the East Lawn Memorial Gardens Cemetery. The alternative would have a visual effect on Yancey's Tavern and would require a Memorandum of Agreement (MOA) under the *National Historic Preservation Act of 1966* (NHPA). Alternative A would have the highest construction cost of the three build alternatives: Alternative A, Alternative B, and Alternative B Modified. Based on these factors, after Alternative

A was considered, it was eliminated as an alternative. A detailed discussion of Alternative A was presented in Section 2.0 of the DEIS.

Alternative B would have an impact to ROW and the East Lawn Memorial Gardens Cemetery. The alternative would have a visual effect on Yancey's Tavern and would require a MOA under the NHPA. Based on these factors, after Alternative B was considered pursuant to NEPA, it was eliminated as an alternative. A detailed discussion of Alternative B was presented in Section 2.0 of the DEIS.

The No-Build Alternative was considered and eliminated because it does not meet the purpose and need of the project.

Table 2-3 summarizes project data contained in the DEIS for Alternatives A and B along with corresponding information compiled for the Preferred Alternative (Alternative B Modified). Like the alternatives proposed in the DEIS, the Preferred Alternative (Alternative B Modified) provides an improvement to traffic operations in comparison to the No-Build Alternative.

TABLE 2-3: COMPARISON OF PROJECT ALTERNATIVES

Item	No-Build	Preferred Alternative (Alternative B Modified)	Alternative A	Alternative B
Estimated ROW (Acres) ¹	0	100	239	121
Residential Displacements	0	104	241	162
Business Displacements	0	24	43	30
Non-Profit Displacements (Volunteer Fire Station)	0	1	1	1
Air Quality/Noise Impacts Requiring Mitigation	0	0	0	0
Archaeological Sites Impacted	0	0	0	0
Historic Resources Adversely Impacted	0	0	1	1
Section 4(f) Properties Impacted	0	0	0	0
Gravesites Impacted	0	0	350	90
Wetlands Impacted (Acres)	0	0	0	0
Stream Crossings (Linear Feet)	0	3107	4863	3107
Floodplains Impacts (Acres)	0	3.2	4	3.2
Forest Land Acquired (Acres) ²	0	50	75	55
Threatened/Endangered Species Impacts	0	0	0	0
Hazardous Material Sites Impacted (Potential)	0	5	7	5
Farmland Impacted (Acres)	0	5	15	5
Total Estimated Project Cost (Million \$)	\$ -	\$99.9	\$132.3	\$109.5

1. The estimated ROW width is reported based upon an approximate width needed for each typical section. Actual proposed ROW widths will vary throughout the project based upon the use of retaining walls, slope easements, total versus partial property acquisitions, uneconomic remnants, etc.
2. Includes all forest land impacted within the estimated construction limits, which may be within slope easements and outside of the ROW limits.

The Preferred Alternative (Alternative B Modified) reduces the cost and number of residential displacements, avoids Yancey's Tavern and avoids displacing all known grave sites, while offering similar safety improvements as Alternatives A and B.

2.6 Alternatives Previously Considered

2.6.1 Continuous Four-Lane Alternative

A continuous four-lane alternative was considered and discussed in the planning and CSS process and subsequent to circulation of the DEIS and the public hearings. Although many supported this alternative, there were more in opposition, in part, due to the increased ROW requirements, which would require a higher number of family and business relocations, adverse impacts to the historic Yancey's Tavern property, and additional grave relocations within the East Lawn Memorial Gardens Cemetery located directly across the roadway from historic property. The continuous, four-lane alternative would also require higher areas of encroachment into floodplains, a greater visual impact to Chestnut Ridge, greater lengths of channel changes to streams, and the potential for hazardous material impacts. The public expressed concerns about potential diminished visual and rural aesthetics, accelerated development, and increased traffic speed in the corridor if a continuous four-lane alignment were to be constructed.

2.6.2 Transportation Systems Management (TSM) Alternative

TSM is an integrated approach to optimize the performance of the existing transportation infrastructure through the implementation of systems, services, and projects designed to preserve capacity and improve security, safety, and reliability. The goal of TSM is to improve the efficiency of existing transportation facilities while minimizing the need for major construction/reconstruction projects. TSM strategies reviewed in the DEIS include the following: ridesharing, roadway improvements, dedicated lanes, bicycle and pedestrian facilities, transit improvements, intelligent transportation systems, and general purpose lanes. TSM strategies alone cannot serve the purpose and need for this project, which includes correcting existing roadway deficiencies and improving access management. Therefore, TSM alternatives as the only improvements were not carried forward in the DEIS.

2.6.3 Mass Transit Alternative

Fixed route mass transit service has been offered within the City of Kingsport through the Kingsport Area Transit Service (KATS) since 1995. KATS offered five routes at the time of the DEIS. KATS now operates six vehicles on six fixed routes Monday through Friday from 7:30 am until 5:30 pm. The cost to ride a KATS bus is \$1 for the general public ages 18 to 64. The fare is reduced to \$0.50 for those 65 and older, disabled passengers, and military veterans.

What was described as KATS Paratransit in the DEIS is now known as Dial-A-Ride (DAR). DAR complements KATS by providing curb-to-curb, next-day transportation service for Kingsport seniors aged 65 or older and also for residents with a health-related condition. The system operates four vehicles during the same service hours as KATS.

NET Trans is a public transportation system now in place that was not prior to completion of the DEIS. NET Trans is designed to serve those who live in the Tri-Cities Area. Red Route 3 of the NET Trans system transports persons from the KATS Transit Center in downtown Kingsport to the Johnson City transit connection at I-81.

KATS is currently offered within the first 0.8-mile (10 percent) of the study corridor between East Center Street and Stratford Road. DAR is offered within the Kingsport city limits, which accounts

for 2.1 miles (25 percent) of the study corridor. Net Trans is not offered within the study corridor. There are no known plans to extend transit service beyond these limits. The majority of the study corridor is rural in nature with low population densities, which is unfavorable for transit ridership. Furthermore, improvements to the mass transit system alone do not serve the purpose and need for this project, which is primarily to improve the safety of the route. Therefore, the Mass Transit Alternative was not carried forward in the DEIS.

It should be noted that if expanding transit service along the study corridor is ever warranted, the improvements in the Preferred Alternative (Alternative B Modified) will be beneficial to the expansion. SR 126 is primarily a two-lane roadway with limited capacity for future traffic growth. The majority of the route has a rural cross-section with no shoulders or sidewalks. The narrow cross-section width, lack of shoulders, and lack of sidewalks makes many segments of the corridor unfavorable for bus/transit service. There are few safe locations to locate bus stops, with poor pedestrian connectivity between potential stops and adjacent developments. The proposed improvements will correct these deficiencies along the route and provide a facility that is more acceptable for transit service.

3.0 AFFECTED ENVIRONMENT

3.1 Land Use

This chapter presents existing conditions in the project area. Where appropriate, impacts are addressed in Chapter 4.

3.1.1 Existing Land Use

As described in Chapter 2, land use from East Center Street in downtown Kingsport to SR 93 (John B. Dennis Highway) is primarily commercial with some residential land use. Commercial uses are a mix of services, including exercise facilities, a dry cleaning business, an auto repair business, a music store, and several convenience stores. The residential land use is mainly single-family residential (40 years of age or older). The land use transitions to mainly residential with very few commercial enterprises as SR 126 crosses underneath SR 93. Between SR 93 and Old Stage Road, the land use is an urban residential composition that includes a mixture of older single-family residences and multi-family buildings, with some businesses along the corridor. The location of homes in this area is either in a valley (lower level than the roadway), or above the roadway on a ridge due to the road's proximity to hills and the degree of hill slopes.

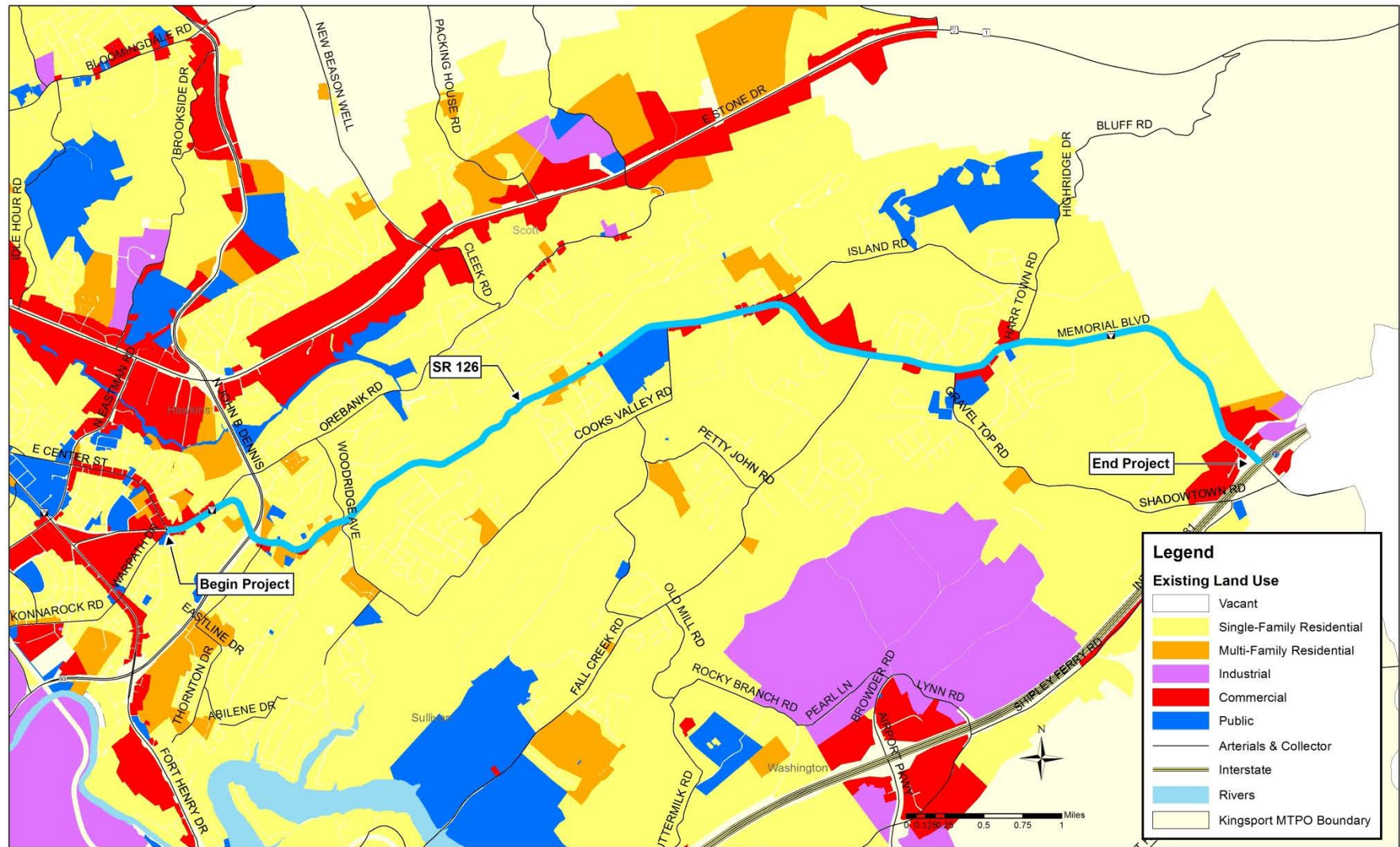
East of Old Stage Road, SR 126 crests Chestnut Ridge and begins to flatten. The areas to the north and south of SR 126 become less severe in their slopes. In this area, the land use remains residential although agricultural land use becomes more evident. The area between Old Stage Road and Cooks Valley Road also includes the East Lawn Memorial Gardens Cemetery with numerous gravesites adjacent to the existing roadway and Yancey's Tavern, a property listed on the NRHP. The property is currently used as a community meeting and events venue.

From the cemetery to Samlola Road, the land use on either side of SR 126 is a blend of residential and agricultural, with some commercial land use scattered lightly through the area. Within this segment, residences are more densely populated around Fall Creek Road, Lonesome Pine Road, Cochise Trail, and Chippewa Lane. Residential development is planned and ongoing adjacent to Island Road. The areas of commercial land use are concentrated around neighborhoods. The Indian Hills area features a shopping center with a national chain discount store. In addition, a veterinary clinic and several small businesses exist in this area, which includes the junction of SR 126 and Island Road.

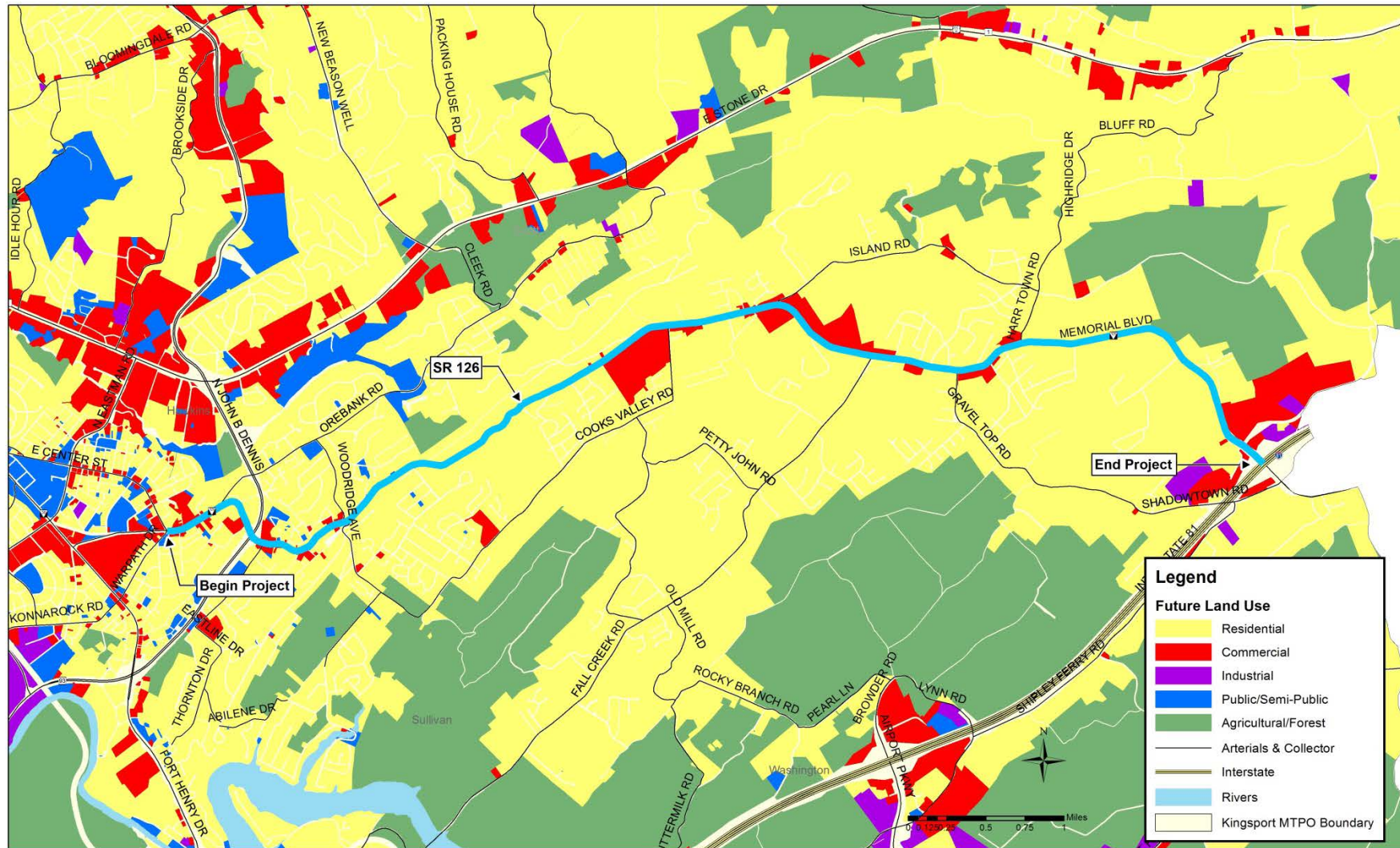
From Samlola Road to Overhill Drive, the area is less developed. Some homes exist, but farmland is more prevalent. The Overhill Drive area, Shadowtown Road, and Carolina Pottery Drive are all located in the vicinity around the SR 126 interchange with I-81, the eastern terminus of the project. This area is primarily highway commercial with some residential land use.

3.1.2 Land Use Plans and Regulatory Controls

Kingsport's city limits include the western terminus of the study corridor at East Center Street and extend eastward to approximately the western terminus of Old Stage Road. The area from Old Stage Road eastward to the I-81 interchange is outside the Kingsport city limits. Kingsport's city limits also include the area around I-81 as a linear corridor. The interchange of SR 126 and I-81 is included in this linear corridor and is within the city limits. According to the KMTPO 2035 LRTP, existing land uses along the project corridor are residential and agricultural/forest. See Figure 3-1 for the existing land use in the project area. Commercial land uses are also present with the larger concentrations of commercial uses located at each terminus.

FIGURE 3-1: EXISTING LAND USE IN THE PROJECT AREA

Source: Kingsport Metropolitan Transportation Planning Organization's (KMTPO) 2035 Long Range Transportation Plan.

FIGURE 3-2: FUTURE LAND USE IN THE PROJECT AREA

Source: Kingsport Metropolitan Transportation Planning Organization's (KMTPO) 2035 Long Range Transportation Plan.

The LRTP future land use map indicates land uses are expected to generally remain the same. See Figure 3-2 for the future land use in the project area. The existing land use map indicates some commercial areas will be larger in the future.

Reviews of the project area and zoning maps for Kingsport (July 2013) and Sullivan County (April 2012) indicate the zoning along the project corridor is primarily residential. See Figure 3-3 and Figure 3-4. The predominant residential zoning is single-family with some multi-family (duplexes and apartments). Commercial zoning is predominantly at the western and eastern termini, with some smaller scattered areas along the corridor.

The *Sullivan County Regional Plan: A Guide for Future Land Use and Transportation Development, Planning Period 2006 – 2026* (Sullivan County, 2008) notes that, like many counties in northeast Tennessee, the pattern of land use or development in Sullivan County has been significantly affected by natural factors, including extreme slopes and soil suitability. Slopes in Sullivan County, and within the SR 126 Study Corridor, range from below five percent to nearly 50 percent. In areas with a slope greater than 20 percent, limitations to development are severe. Based on soils analysis, there is very little of Sullivan County that is considered suitable for urban development utilizing subsurface sewage disposal systems (septic tanks). Areas not serviced by sewer lines have limited high density development potential. The area along SR 126 Corridor, from Harr Town Road to I-81, is not serviced by sewer lines.

3.2 Community Services

3.2.1 Schools

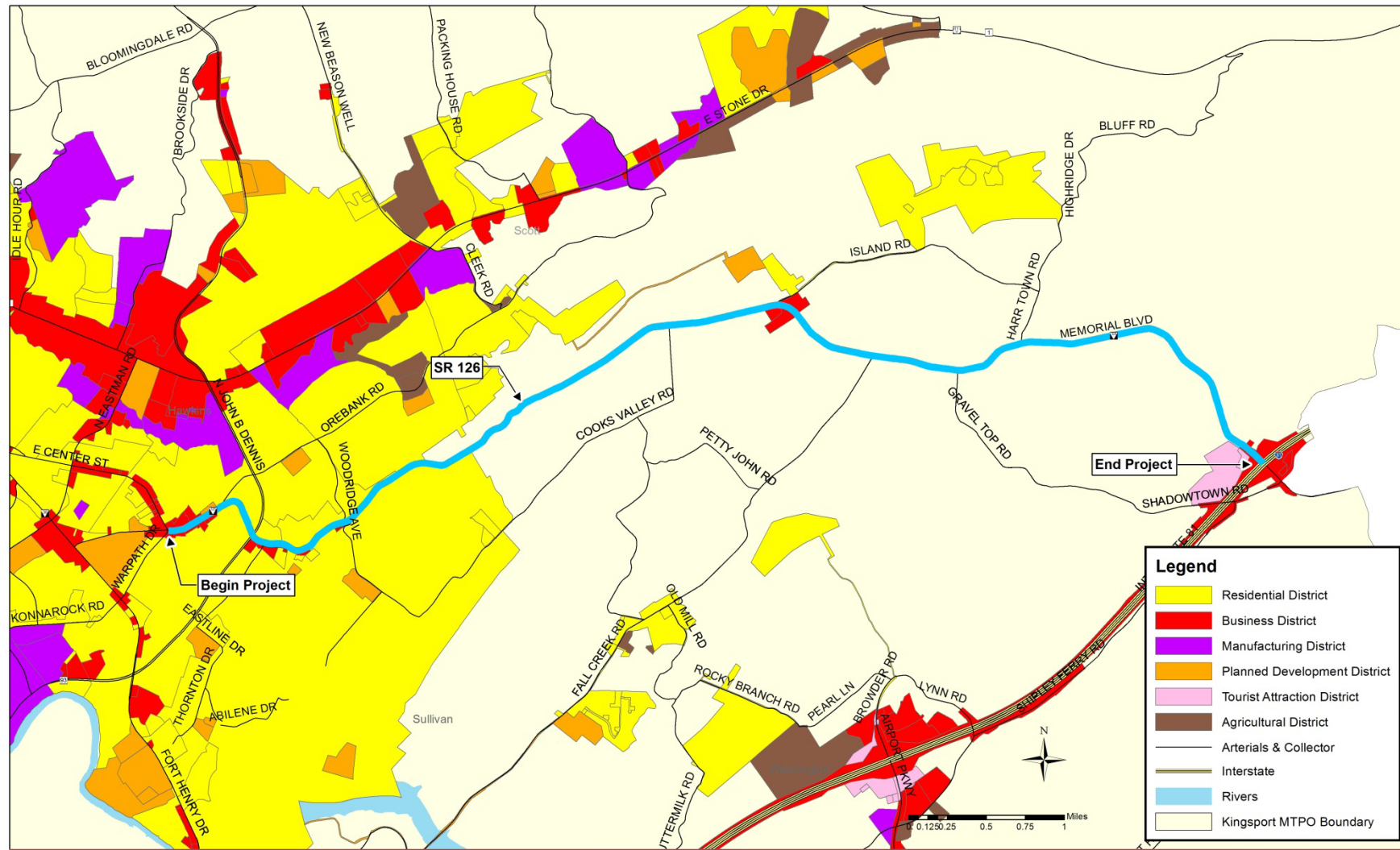
The Sullivan County Department of Education serves over 10,000 students. In total, there are four high schools, six middle schools, and 10 elementary schools. The nearest school to the project corridor is Indian Springs Elementary School, located approximately 300 yards south of SR 126. Central High School is located just outside the eastern terminus of the study corridor and is east of I-81. There are four other schools that have bus service within the project area: Blountville Elementary, Blountville Middle, Holston Elementary, and Holston Middle.

3.2.2 Fire, Medical Emergency, and Police Protection

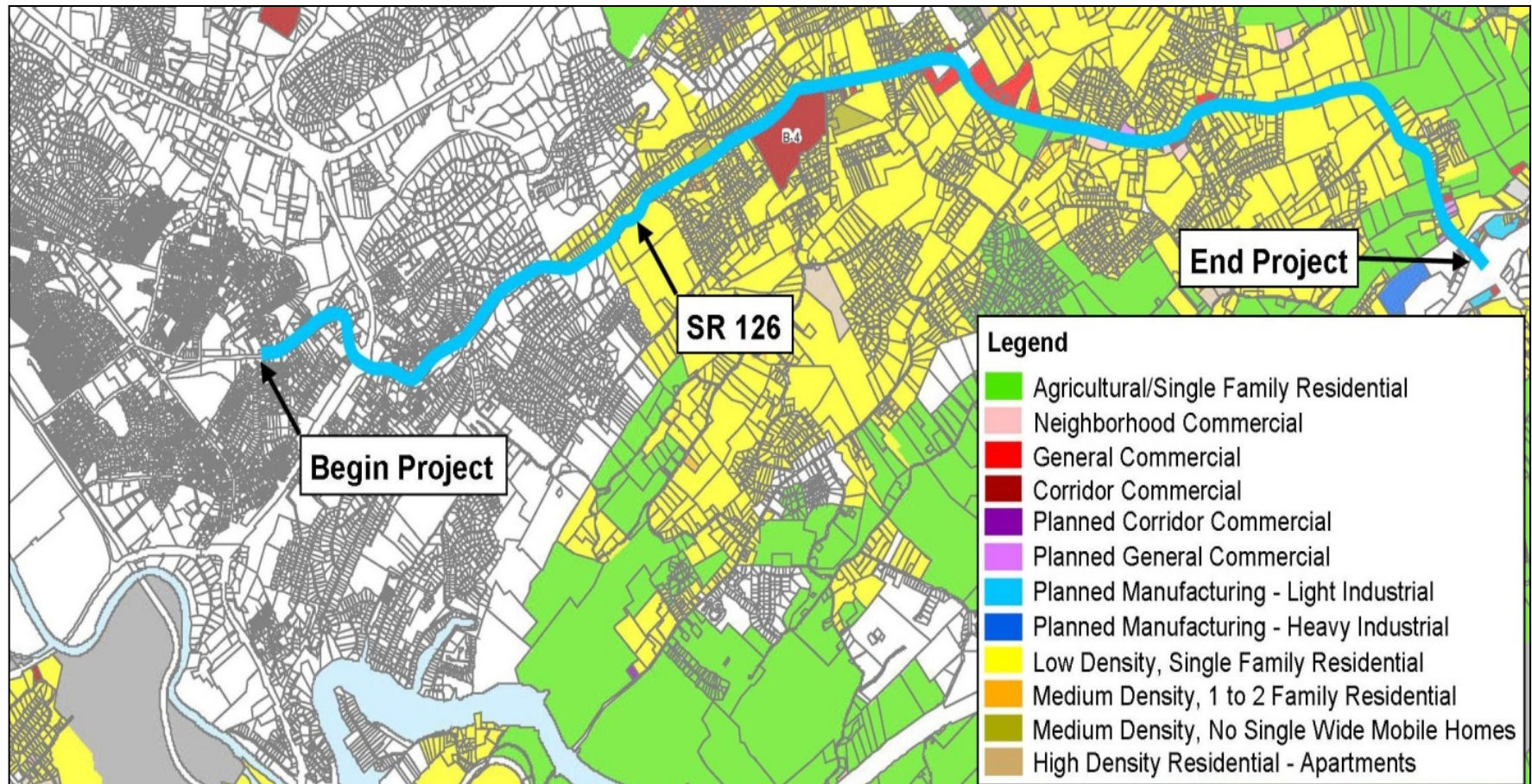
The proposed project area includes one volunteer fire station, Kingsport Fire Department Station #4, which is located near the western terminus of the study area near Heather Lane. No other emergency service facilities are located within the project impact area.

3.2.3 Hospitals

Sullivan County has several hospitals, and three are located in Kingsport. These hospitals are HealthSouth Rehabilitation Hospital of Kingsport (113 Cassel Drive), Indian Path Medical Center (2000 Brookside Drive), and Holston Valley Medical Center (130 West Ravine Road). None are located within close proximity to the project corridor.

FIGURE 3-3: KINGSFORT ZONING IN THE PROJECT AREA

Source: Kingsport Zoning Map (July 2013).

FIGURE 3-4: SULLIVAN COUNTY ZONING IN THE PROJECT AREA

Source: Sullivan County Zoning Map (April 2012).

3.2.4 Utilities

The Preferred Alternative (Alternative B Modified) will replace portions of the existing roadway. Utilities are provided by the City of Kingsport (sewer and water) and Appalachian Power (electric). As a result of the proposed project, sewer lines and water lines within sections of the project area will have to be moved, replaced, and, or repaired.

3.2.5 Multi-modal Transportation

Airports

The area is served by the Tri-Cities Regional Airport. This facility is owned by Johnson City, Kingsport, and Bristol in Tennessee as well as Bristol in Virginia. It is centrally located to serve these communities and is not located near the project area.

Rail

According to the KMTPO's 2035 LRTP and the *Sullivan County Regional Plan 2006-2026*, future plans do not include increased usage of this form of transportation.

Two Class I railroads operate in the Kingsport area: Norfolk Southern Railroad and CSX. No existing railways and no proposed railways are identified within the project corridor.

Pedestrian and Bicycle Facilities

SR 126 is not listed as a state-designated bicycle route. However, it is TDOT's policy (*Bicycle and Pedestrian Policy #530-01*) that provisions for bicycles and pedestrians be integrated into new construction and reconstruction of roadways through design features appropriate for the context and function of the transportation facility.

After the DEIS was approved, the KMTPO developed the *2012 Kingsport Regional Bicycle and Pedestrian Plan* to establish a comprehensive bikeway and pedestrian network within its jurisdiction. The Plan objectively rated the quality of roadways for cyclists and pedestrians using a bicycle LOS and a pedestrian LOS. Scoring ranges from LOS A to F, with A being the best conditions and F the worst conditions. Within the project corridor, bicycle operations range from LOS E to LOS F and pedestrian operations range from LOS D to LOS F.

The Plan recommends a bicycle lane for the project corridor from East Center Street to west of Old Stage Road and paved shoulders from west of Old Stage Road to I-81. It also recommends sidewalks along the entire length of the project corridor between East Center Street and I-81.

3.3 Social and Economic

The demographic characteristics presented in the DEIS were based upon estimates made available through the U.S. Census Bureau following the 2010 U.S. Census. Some of the 2010 Census data was incomplete when the DEIS was published. Since that time, the majority of the data has been updated to reflect official Census Bureau records.

According to the 2010 U.S. Census, Sullivan County contains 413.4 square miles of land area and a population density of 379.4 people per square mile. The county's population in 2010 was estimated to be 156,823. The average household size is 2.33 persons compared to a national average family size of 2.58 persons. Owner-occupied homes totaled 48,423 while 17,875 residents occupied rented homes in Sullivan County.

In 2008, manufacturing was the largest of 20 major employment sectors; however, by the first quarter of 2013, manufacturing was surpassed by the health care and social assistance sector. Health care and social assistance became the largest of 20 major employment sectors as of the first quarter in 2013. Sullivan County's per capita income grew by 8.6 percent between 1996 and 2006 and by 19.8 percent between 2006 and 2012 (not adjusted for inflation). An overview of income and industry in Sullivan County is provided in Table 3-1.

TABLE 3-1: INCOME AND INDUSTRY OVERVIEW, SULLIVAN COUNTY

People and Income Overview	Value	Industry Overview (First Quarter 2013)	Value
Population (2010)	156,823	Total Employees	66,717
Growth (%) since 1990	9.2%	Health Care and Social Assistance - % all jobs in County	18.9%
Households	66,298		
Labor Force (persons) (October 2013)	73,130	Manufacturing	17.5%
Unemployment Rate (2013)	7.2%		

Sources: U.S. Census Bureau, 2010 U.S. Census; Tennessee Department of Labor and Workforce Development, Division of Employment Security (2013).

3.3.1 Social Characteristics

The University of Tennessee (UT) Center for Business and Economic Research performs population projections for the State of Tennessee, including state, county, and city populations. County populations are based on data to determine the annual change in population (the change in population equals births minus deaths plus net migration).

Population Characteristics - Tennessee and Sullivan County

Population projections for Tennessee and Sullivan County provided by the U.S. Census Bureau are shown in Table 3-2. Population growth for Sullivan County in the decades of 2010, 2020, 2030, and 2040 are far less than the population growth for the state. Sullivan County shows a growth rate (1.9 percent) between 2010 and 2020 that is 10.1 percent below the growth rate for the state (12 percent). Projected growth rates for Sullivan County indicate a net growth in population through 2040 of 1.5 percent higher than the 2010 figure. The State of Tennessee is predicted to realize an increase in population of 33.1 percent between 2010 and 2040.

TABLE 3-2: POPULATION AND FORECAST GROWTH, TENNESSEE AND SULLIVAN COUNTY

Geographic Area	Population				
	2010	2020	2030	2040	2010-2040 Change
Tennessee	6,346,105	7,107,926	7,799,933	8,449,472	2,103,367
Change from Previous Decade	11.5%	12.0%	9.7%	8.3%	33.1%
Sullivan County	156,823	159,749	160,591	159,219	2,396
Change from Previous Decade	2.5%	1.9%	0.5%	-0.9%	1.5%

Sources: Source: U.S. Census Bureau, 2010 U.S. Census; UT Center for Business and Economic Research (2013).

Population Characteristics - City of Kingsport

As shown in Table 3-3, the population for the City of Kingsport has remained steady when comparing estimates from 2005 through 2009. Between 2009 and 2012, the population increased by 14.4 percent due to a series of annexations.

TABLE 3-3: KINGSFORT POPULATION GROWTH, 2005-2012

City of Kingsport		Rate of Change in Percentages
2005	44,238	---
2006	44,259	+0.05%
2007	44,548	+0.65%
2008	44,610	+0.14%
2009	44,758	+0.33%
2010	47,643	+6.44%
2011	48,438	+1.67%
2012	51,206	+5.71%

Source: U.S. Census Bureau, (2005-2012)

*Note – Population statistics are based on 3-year estimates based on the U.S. Census Bureau's American Community Survey (ACS) between 2007 and 2012.

Population Characteristics - Study Corridor

The project study corridor bisects seven U.S. Census tracts. Table 3-4 provides data for each of the census tracts in the study corridor. However, many of these seven census tracts include large portions that are located outside of the immediate project area. Most of the SR 126 project is situated within Census Tract 423. Lesser portions of the project are located within Census Tracts 408, 409, 410, 411, 422 and 424. These adjacent census tracts are provided in Figure 3-5. The 2010 population within the immediate study corridor was 26,683. Census Tracts 423 (6,780 persons), 410 (4,052 persons), and 408 (3,633 persons) have the largest populations. A majority of the population in all tracts considered comprises senior adults 65 years of age or older.

TABLE 3-4: POPULATION AGE CHARACTERISTICS, 2010

Subject	Sullivan County Census Tracts							Total
	408	409	410	411	422	423	424	
TOTAL POPULATION	3,633	3,229	4,052	2,375	3,199	6,780	3,415	26,683
Under 5	208	203	204	106	152	335	173	1,381
5 – 14	420	418	564	270	393	850	375	3,290
15 – 24	399	380	363	230	384	680	415	2,851
25 – 34	408	322	385	243	281	615	343	2,597
35 – 44	436	388	551	297	453	964	493	3,582
45 – 54	461	431	654	335	525	1062	536	4,004
55 – 64	433	421	571	343	429	1064	485	3,746
65 and over	868	666	760	551	582	1210	595	5,232
Median age	43.9	42.6	44.3	46.5	43.8	44.3	43.4	

Source: U.S. Census Bureau, 2010 U.S. Census.

Racial Characteristics - Sullivan County and Study Corridor

The majority of Sullivan County's population is white. As seen in Table 3-5, the census tracts for the study corridor also reflect that a majority of the population is white. The largest minority group in Sullivan County is comprised of Hispanic/Latino (of any race) citizens.

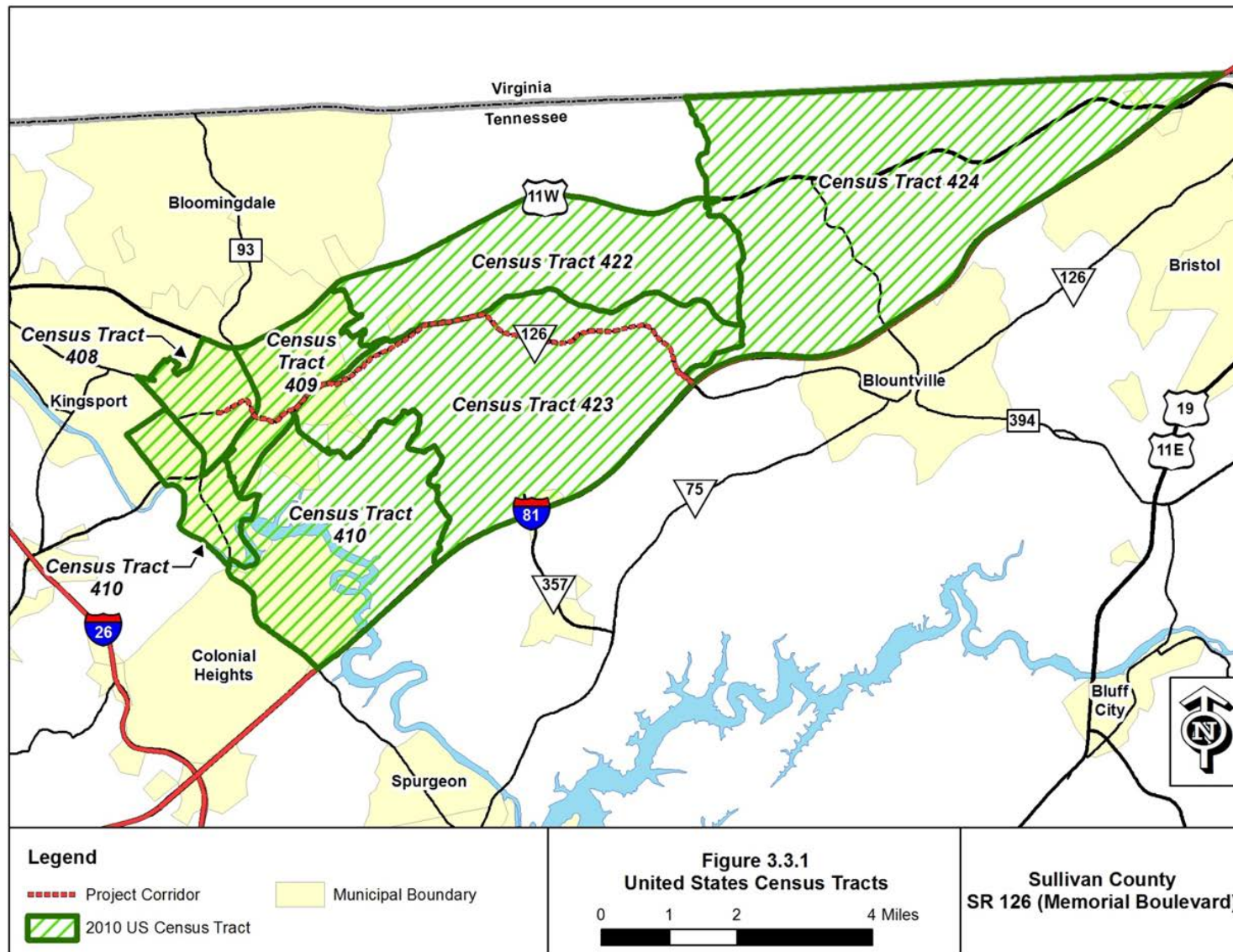
TABLE 3-5: RACIAL CHARACTERISTICS BY CENSUS TRACTS, SULLIVAN COUNTY, 2010

Subject	Sullivan County Census Tracts							Total
	408	409	410	411	422	423	424	
Race								
Total Population	3,633	3,229	4,052	2,375	3,199	6,780	3,415	26,683
One Race*	3,573	3,152	4,020	2,325	3,161	6,711	3,385	26,327
White	3,371	3,008	3,936	2,204	3,105	6,593	3,325	25,542
African-American	123	82	25	62	13	36	20	361
American Indian/Alaskan	19	5	7	12	7	14	5	69
Asian	12	40	39	21	12	42	13	179
Native Hawaiian	1	1	1	0	0	4	1	8
Some other race	47	16	12	26	24	22	21	168
Two or more races*	60	77	32	50	38	69	30	356
Hispanic/Latino (of any race)	94	40	63	50	45	60	39	391

Source: U.S. Census Bureau, 2010 U.S. Census.

Note: *Beginning in 2000, the U.S. Census Bureau allowed individuals to identify one or more races to indicate their racial identity.

FIGURE 3-5: U.S. CENSUS TRACTS WEST OF EAST CENTER STREET TO INTERSTATE 81



Source: U.S. Census Bureau, 2010 TIGER Shapefiles (2010).

Educational Characteristics - Tennessee and Sullivan County

Sullivan County has a similar percentage of residents who are high school graduates or equivalent (85 percent) as the State of Tennessee (85.1 percent). When comparing the percentage of residents who have attained a bachelor's degree or higher, Sullivan County has a slightly lower percentage (21.1 percent) than the State of Tennessee (24.3 percent).

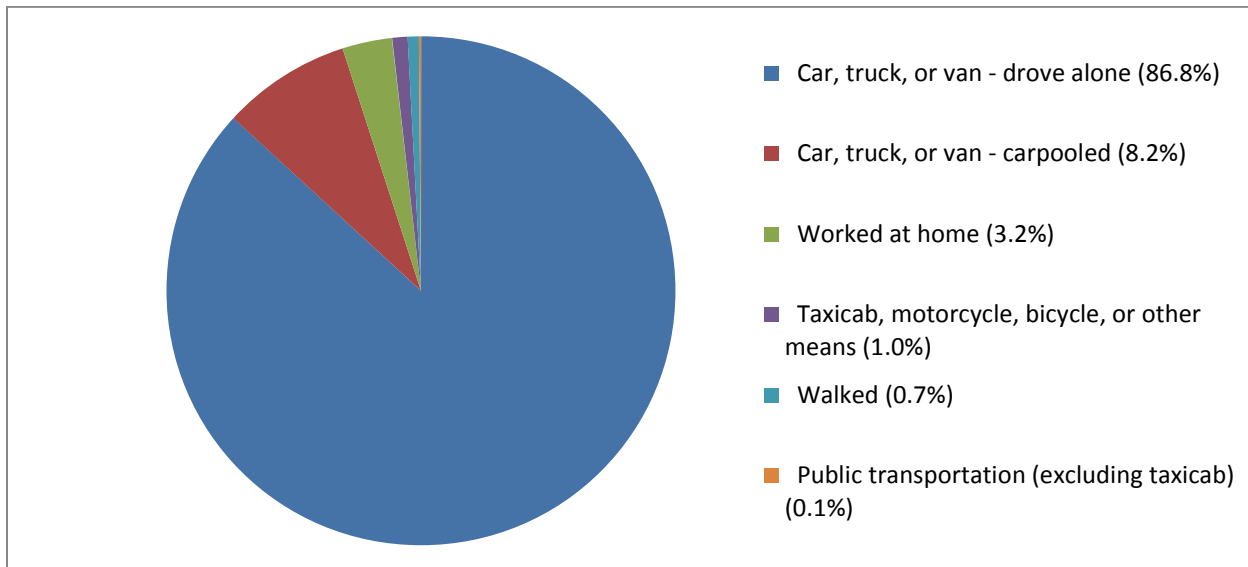
Urban/Rural Population Distribution - Sullivan County

The urban and rural distribution of residents within Sullivan County indicates that most residents live within the populated areas of Kingsport and Bristol. The study corridor is located primarily within a rural area. A small portion of the project within the city limits is urban. The U.S. Census 2010 figures estimate that 74.7 percent (116,737) of the county's residents are classified as living in urban areas, and the remaining 25.6 percent (40,086) reside in rural areas.

Commuting Methods - Sullivan County

A large majority (86.8 percent) of the residents in Sullivan County chooses the most common method of commuting to and from work, which is commuting as a single occupant. Carpooling with two or more vehicle occupants is the second most popular choice (8.2 percent). Very few residents utilize buses, taxis, bicycles or walking when commuting to work. Approximately three percent of residents work at home. Figure 3-6 includes a graphic which represents the means of transportation to work based on figures from the U.S. Census Bureau's 2010-2012 ACS.

FIGURE 3-6: SULLIVAN COUNTY COMMUTING PATTERNS



Sources: U.S. Census Bureau, American Community Survey 2010-2012.

Housing – Tennessee, Sullivan County, and Study Corridor

Interviews were conducted with local officials at the KMPTO and with a local real estate agent, and the Multiple Listings Service database was reviewed for Kingsport and Sullivan County. The discussions and research indicate that the area has not experienced drastic declines in home sales and home construction during the economic downturn between 2008 and 2009. Sales prices and home sales volumes show that home values remained steady between 2006 and 2009 for Kingsport and the Tri-City region of Kingsport, Bristol, and Johnson City. Annual sales volumes for the same years declined, but activities in 2010 indicated an increase.

Tables 3-6 and 3-7 provide U.S. Census 2010 information on the number of tenants and the type of homes they occupy. As seen in the table, 8,595 of the 11,091 housing units in the study corridor (77.5 percent) were owner-occupied, with the remaining 22.5 percent of housing units being occupied by renters. Census Tracts 408 (42.1 percent) and 409 (29.4 percent) had the highest percentages of renter-occupied housing units, while Census Tract 410 (11.3 percent) and Census Tract 422 (16.0 percent) had the lowest percentages.

TABLE 3-6: HOUSING DATA FOR SULLIVAN COUNTY AND TENNESSEE

	Total Project Area*	Sullivan County	Tennessee
Total Housing Units	11,091	73,760	2,493,552
Owner occupied	8,595	48,423	1,700,592
Percentage	77.5%	73.0%	68.2%
Renter occupied	2,496	17,875	792,960
Percentage	22.5%	27.0%	31.8%

Source: U.S. Census Bureau, 2010 U.S. Census.

Note: *These figures resulted from totaling the values of the seven Census Tract Areas

TABLE 3-7: HOUSING DATA FOR PROJECT AREA CENSUS TRACTS

	408	409	410	411	422	423	424
Total Housing Units:	1,569	1,388	1,599	1,103	1,284	2,725	1,423
Owner occupied	908	980	1,418	803	1,078	2,284	1,124
Percentage	57.9%	70.6%	88.7%	72.8%	84.0%	83.8%	79.0%
Renter occupied	661	408	181	300	206	441	299
Percentage	42.1%	29.4%	11.3%	27.2%	16.0%	16.2%	21.0%

Source: U.S. Census Bureau, 2010 U.S. Census.

Poverty – Tennessee, Sullivan County, City of Kingsport, and the Study Corridor

This project is located mainly within rural areas that are transitioning to suburban land use. The beginning of the project is within the city limits of Kingsport in an urban setting. An additional section of the project, along the I-81 corridor near and at the eastern terminus, is also within the city limits. The U.S. Census Bureau reported in its 2012 estimates that Kingsport had poverty levels of 17.4 percent, which is similar to Sullivan County (17.7 percent) and the State of Tennessee (17.9 percent).

As presented in the DEIS, and reconfirmed with the most recent census data, the area along the project corridor does not feature concentrations of socially interdependent family clusters. The area consists primarily of subdivisions and larger tracts of land with homes. Some multi-family housing exists within or adjacent to the project limits, but these structures are not occupied by largely minority or low-income populations. Table 3-8 compares poverty levels within the project's census tracts.

TABLE 3-8: U.S. CENSUS TRACT HOUSEHOLD INCOME, 2011

Category	Sullivan County Census Tracts							Total
	408	409	410	411	422	423	424	
Households	1,569	1,388	1,599	1,103	1,284	2,725	1,423	11,091
Median household income (\$)	28,723	57,917	57,045	47,500	55,881	52,083	45,193	---
Families	882	1,388	1,209	666	971	2,082	1,031	8,229
Median family income (\$)	44,375	67,089	68,563	58,094	55,898	65,857	55,168	---
Percent of all families below poverty	15.1%	16.0%	4.7%	4.3%	10.6%	6.9%	10.7%	---
Below poverty individuals	24.6%	21.9%	7.1%	7.9%	13.3%	9.2%	15.3%	---

Source: U.S. Census Bureau (2010, 2007-2011).

Personal Income – Tennessee and Sullivan County

The Tennessee Advisory Commission on Intergovernmental Relations (TACIR) provides selected statistical information for counties and compares them to state data. In 2011, the per capita personal income of Sullivan County was \$35,000. This is less than the state's per capita personal income of \$36,567 and ranks 16th out of Tennessee's 95 counties.

In 2011, the median household income of Sullivan County was \$40,572. This is less than the State's median household income of \$43,989 and ranks 32nd out of Tennessee's 95 counties.

3.3.2 Economic Characteristics

The 2013 labor force characteristics provided by the Tennessee Department of Labor and Workforce Development, indicated that Sullivan County had a lower unemployment rate than the State of Tennessee. The statewide labor force contained 3,058,300 persons in total, 2,806,400 of which were employed and 251,900 unemployed; the statewide unemployment rate was 8.2 percent. The labor force for Sullivan County contained 73,130 persons, 67,900 of which were unemployed and 5,230 unemployed; the unemployment rate for Sullivan County equaled 7.2 percent.

The highest numbers of employees located within the study area are found in the educational, health and social services, manufacturing, and in retail trade sectors. The immediate project area features mainly retail, agricultural, and other service industries. The majority of the retail located within the project area is in the East Center Street area and also at the interchange with I-81. Types of retail include convenience stores/gas stations, grocery stores, and clothing stores. Table 3-9 presents economic characteristics in census tracts.

TABLE 3-9: ECONOMIC CHARACTERISTICS FOR SULLIVAN COUNTY CENSUS TRACTS

Subject Industry Employees	Sullivan County Census Tracts							Total
	408	409	410	411	422	423	424	
Agriculture, forest, fishing and hunting, and mining	15	0	23	0	0	78	11	127
Construction	149	44	174	60	232	188	91	938
Manufacturing	134	304	339	250	293	646	322	2,288
Wholesale trade	0	9	30	39	9	21	10	118
Retail trade	201	106	182	171	195	330	131	1,316
Transportation and warehousing, and utilities	42	20	36	50	36	87	85	356
Information	27	0	7	9	42	54	10	149
Finance, insurance, real estate, and rental and leasing	86	72	85	20	72	156	8	499
Professional, scientific, management, administrative, and waste management services	62	41	195	92	65	213	17	685
Educational, health and social services	424	287	525	341	439	881	329	3,226
Arts, entertainment, recreation, accommodation and food services	238	102	129	95	67	217	194	1,042
Other services (except public administration)	7	83	115	37	92	200	39	573
Public administration	33	19	88	36	41	114	100	431

Source: U.S. Census Bureau (2007-2011).

3.3.3 Summary of Socioeconomic Characteristics

Socioeconomic characteristics of a project area establish an understanding of the local users of the roadway system, existing and future needs, and provide a context for transportation improvements. The demographic makeup and economic conditions within the project study area help to determine the significance of project-related impacts.

The City of Kingsport grew by 6,658 persons (14.9 percent) between 2007 and 2012 while the County population grew by 3,775 persons (2.5 percent) between 2000 and 2012. Many residents of the City of Kingsport and Sullivan County are senior adults that retired from the Eastman Kodak plant and have remained in the area. The vast majority of residents in the county and city are white homeowners with median household incomes that are higher than the statewide median household incomes for all but one of the project area's census tracts.

The unemployment rate for Sullivan County has decreased since 2010 and is currently lower than that of the state. Sullivan County high school graduates (or equivalent) constitute 85 percent of the residents, which is close to that of the State of Tennessee with 85.1 percent. Sullivan County also has a slightly lower percentage of residents who have attained a

bachelor's degree or higher (21.1 percent) than the State of Tennessee (24.3 percent). The poverty rate of Sullivan County (17.7 percent) is comparable to the poverty rate for Tennessee (17.9 percent). These rates are also similar to the 17.4 percent poverty rate within the Kingsport city limits.

3.4 Natural Environment

3.4.1 Topography and Geology

The project is located in Sullivan County along the eastern limits of the City of Kingsport. This area of Sullivan County features undulating to rolling valleys with rounded hills. The project area is situated within the Valley and Ridge physiographic region. In Tennessee, the Valley and Ridge is sometimes referred to as the Valley of East Tennessee, a rolling lowland formed on highly folded limestone, dolomite, and shale. Fertile valleys separated by wooded ridges make up this area. The eastern escarpment of the Cumberland Plateau and the Blue Ridge subdivision mark the boundaries of this region.

The valleys and lower flanks of major ridges are underlain by shale and limestone. Streams generally follow the narrow valley floors or cut across the strike of the ridges. Strikes are a geologic term that refers to the attitude or position of linear structural features such as faults, beds, joints, and folds. The Tennessee River flows southwest through the region. Principal feeders from the north are the Clinch, French Broad, and Holston Rivers. Major tributaries from the east are the Hiwassee and Little Tennessee Rivers.

Although karst topography is present within the project area, very few sinkholes have been mapped in the greater project region. Field observation did not result in the identification of sinkholes within or adjacent to the project limits. The underlying geologic formations are susceptible to sinkhole development due to their carbonate composition. Sinkhole development or the discovery of developing sinkholes could occur at any time but none were evident in areas where recent development has occurred, namely in the areas surrounding SR 126.

TDOT conducted a preliminary geologic investigation in June 2009. The varying topography ranges throughout the project from nearly level areas to steeply rolling terrain. A copy of the Preliminary Geologic Report is in the appendix of the DEIS.

A possible former borrow site was observed immediately west of Holiday Hills Road adjacent to the westbound lane of SR 126. No geotechnical concerns were noted with regard to this area.

Pyritic material is not expected to be encountered on the proposed project, and there do not appear to be any significant geological issues that cannot be addressed during the design and construction phases.

3.4.2 Terrestrial Resources

The project area is within the U.S. Environmental Protection Agency (EPA) Level III ecoregion (an ecologically and geographically defined area smaller than an ecosystem contains distinct natural communities and species) termed the "Ridge and Valley Ecoregion." This northeast-southwest trending, relatively low-lying, but diverse ecoregion is situated between generally higher, more rugged mountainous regions with greater forest cover.

Springs and caves are relatively numerous. Present-day forests cover about 50 percent of the region. The ecoregion has a diversity of aquatic habitats and species of fish. Natural plant

communities in this area of the ecoregion are Appalachian oak forest (mixed oaks, hickory, pine, poplar, birch, maple); bottomland oak and mesophytic forests; and cedar barrens.

Field studies and records reviews indicate that two main types of forests, mixed mesophytic and upper hardwood, exist in the project area. The mixed mesophytic habitat is found in the more sheltered ravines of the lower elevations and is dominated by woody species of white basswood (*Tilia heterophylla*), American beech (*Fagus grandifolia*), yellow buckeye (*Aesculus octandra*), sugar maple (*Acer saccharum*), red oak (*Quercus rubra*), and fraser magnolia (*Magnolia fraseri*); and, conifers such as white pine (*Pinus strobus*), eastern hemlock (*Tsuga canadensis*), and white ash (*Fraxinus americana*). The under-story vegetation includes successional species such as flowering dogwood (*Cornus florida*), eastern redbud (*Cercis canadensis*), eastern red cedar (*Juniperus virginiana*) and sassafras (*Sassafras albidum*). Rhododendron (*Rhododendron maximum*) and mountain laurel (*Kalmia latifolia*) dominate the slopes and stream sides. The upper hardwood habitat is found mainly at the higher elevations. The tree species at the higher elevations are often stunted or broken due to exposure to strong winds and include red oak (*Quercus rubra*), American beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), American elm (*Ulmus americana*), and Virginia pine (*Pinus virginiana*).

Open land exists in the project area and includes abandoned farmland, hay fields, and utility ROW. These areas exhibit an early successional, grass-shrub habitat with the dominant plants being cool-season grasses (fescue, timothy, and orchard grass), and a vast assortment of forbs (a broad-leaved herb other than a grass) and shrubs such as blackberry and honeysuckle. Plant succession is defined as the change in plant communities as a result of some kind of disturbance. Reviews of aerial photography of the project corridor for the past 60 years indicate that the amount of trees in the area has increased, which can be attributed to farmlands left inactive and that revert back to a more natural state.

3.4.3 Aquatic Resources

Surface Waters

Six streams are identified within the project corridor. Perennial streams include Sougans Branch, Fall Creek, and an unnamed tributary of Sougans Branch. Intermittent streams include an unnamed tributary of Fall Creek and an unnamed tributary of Reedy Creek. Booher Creek is depicted on U.S. Geologic Survey (USGS) topographic maps as a potential perennial stream. Booher Creek is listed in the EPA-approved 2010 303(d) list of impaired streams published by the Tennessee Department of Environment and Conservation's (TDEC) Division of Water Quality Control. The stream is impaired due to *Escherichia coli* (bacterium), and the source of the pollutant impairment is pasture grazing. Fall Creek is listed as an Exceptional Tennessee Waters/Outstanding Natural Resource Waters within the Warriors Path State Park. The park is approximately 4 miles outside of the project corridor.

Ephemeral streams (wet weather conveyances) may also be considered jurisdictional waters of the U.S. and subject to permitting requirements in Section 404 of the *Clean Water Act*, which controls the discharge of dredged or fill material in any portion of navigable waters) administered by the U.S. Army Corps of Engineers (USACE). An updated environmental boundary and mitigation report will be completed with appropriate consultation with the U.S. Fish and Wildlife Service (USFWS), the Tennessee Wildlife Resources Agency (TWRA), and TDEC prior to construction.

Floodplains

The review of Floodplain Insurance Rate Maps (FIRM) indicates that 100-year floodplains are within and near the SR 126 project corridor. The floodplains are associated with Fall Creek and Sougans Branch which are currently crossed by SR 126.

Wetlands

TDOT conducted surveys within the project impact area and consulted National Wetland Inventory and topographical maps. TDOT also coordinated with state and federal agencies to locate the presence of these resources. No wetlands were located within the corridor.

3.4.4 Federally-Listed and Proposed Threatened and Endangered Species

The TDEC Natural Heritage Inventory Program database was reviewed in December 2013. The review indicated nine species that are federally-listed as threatened or endangered in Sullivan County, Tennessee. The identified species from the 2013 listing are listed in Table 3-10. The table also indicates species in common with the 2008 listing completed for the DEIS. An updated environmental boundary and mitigation report will be completed with appropriate consultation with the USFWS, TWRA, and TDEC prior to construction. This documentation will include the review of state and federally-listed species.

TABLE 3-10: FEDERALLY-LISTED SPECIES IDENTIFIED WITHIN SULLIVAN COUNTY

Scientific Name	Common Name	Status – Habitat Information
<i>Erimonax monachus</i>	Spotfin Chub	Threatened - clear upland rivers with swift currents and boulder substrates.
<i>Myotis grisescens</i>	Gray Bat	Endangered - cave obligate year-round; frequents forested areas; migratory.
<i>Epioblasma florentina walkeri</i>	Tan Riffleshell	Endangered - river headwaters, in riffles and shoals in sand and gravel substrates.
<i>Fusconaia edgariana</i>	Shiny Pigtoe	Endangered - shoals and riffles of small-medium sized rivers.
<i>Fusconaia cuneolus</i>	Finerayed Pigtoe	Endangered - riffles of fords and shoals in firm cobble and gravel substrates.
<i>Quadrula intermedia</i>	Cumberland Monkeyface	Endangered - shallow riffle and shoal areas of headwater streams and bigger rivers in coarse sand/gravel substrates.
<i>Pegias fabula</i>	Littlewing Pearlymussel	Endangered - cool, clear, high-gradient streams in sand, gravel, and cobble substrates.
<i>Villosa perpurpurea</i>	Purple Bean	Endangered - creeks to medium-sized rivers, headwaters, in riffles with coarse sand/gravel and some silt.
<i>Etheostoma marmorpinnum</i>	Marbled Darter	Endangered - pools and moderate runs with clean pebbles, cobble, and small boulders.

Source: TDEC – Natural Heritage Inventory Program - www.tn.gov/environment/natural-areas/natural-heritage-inventory-program.shtml (December 2013).

Although the Indiana bat (*Myotis sodalis*) is not known to occur in the project area, a bat survey for this federally-listed endangered species was conducted at the request of the USFWS. Mist netting and field reviews were conducted in the project impact area from August 3 to August 10, 2011. No Indiana bats were documented. An *Indiana bat (Myotis sodalis) Mist Net Survey* report was completed in October 2011, and was provided in the appendix of the DEIS. The report covered the August 2011 field review. The northern long-eared bat (*Myotis septentrionalis*) has similar habitat requirements as the Indiana bat (*Myotis sodalis*). However, while awaiting

additional information from USFWS, TDOT will assume the bat may be present and will conduct a survey prior to construction letting.

3.4.5 State-Listed Species

According to the TDEC Natural Heritage Inventory Program database review in December 2013, there are 55 state-listed species that have been designated as endangered, threatened, deemed in need of management, or of special concern in Sullivan County, Tennessee. The identified species have been compiled into lists of plants and animals in Tables 3-11 and 3-12.

TABLE 3-11: STATE-LISTED PLANTS IDENTIFIED WITHIN SULLIVAN COUNTY BY TDEC

Scientific Name	Common Name	Status – Habitat Information
<i>Allium burdickii</i>	Narrow-leaf Ramps	Threatened and Commercially Exploited - rich woods
<i>Berberis canadensis</i>	American Barberry	Special Concern - rocky woods and river bars. According to the Nature Conservancy, American barberry was formerly found in fire-maintained habitats which kept the canopy open, i.e., it was an inhabitant of savannas and open woodlands, and fire suppression has significantly restricted its habitat to sites with shallow soil (such as glades and cliffs) or areas with mowing or other canopy-clearing activities (such as powerline corridors, railroad/road rights-of-way and riverbanks).
<i>Botrychium matricariifolium</i>	Chamomile Grapefern	Special Concern - mountain woods and thickets
<i>Buckleya distichophylla</i>	Piratebush	Threatened - rocky mountain woods and scattered among host trees within openings of hemlock forests, but habitats also include south-facing slopes and chestnut oak forests. It was thought that <i>B. distichophylla</i> was host specific to hemlocks, but subsequent investigations have shown otherwise.
<i>Carex roanensis</i>	Roane Mountain Sedge	Endangered - mid-elevation woodlands
<i>Cimicifuga rubifolia</i>	Appalachian Bugbane	Threatened - rich soil on river bluffs, north-facing hillsides and talus slopes, moist dolomite ledges in ravines, as well as rocky and shady woods below limestone bluffs
<i>Cymophyllus fraserianus</i>	Fraser's Sedge	Special Concern - mixed mesophytic forests
<i>Draba ramosissima</i>	Branching Whitlow-grass	Special Concern - dry, calcareous rocky cliffs
<i>Dryopteris cristata</i>	Crested Shield-fern	Threatened - bogs
<i>Goodyera repens</i>	Dwarf Rattlesnake-plantain	Special Concern - cool, moist, mountainous forest usually in proximity to conifers
<i>Hexastylis virginica</i>	Virginia Heartleaf	Special Concern - sandy or rocky woods
<i>Hydrophyllum virginianum</i>	Appalachian Waterleaf	Threatened - rich moist woods
<i>Juglans cinerea</i>	Butternut	Threatened - rich woods and hollows
<i>Lilium canadense</i>	Canada Lily	Threatened - rich woods and seeps
<i>Lonicera dioica</i>	Mountain Honeysuckle	Special Concern - moist mountain woods and thickets

TABLE 3-11: STATE-LISTED PLANTS IDENTIFIED WITHIN SULLIVAN COUNTY BY TDEC (CONTINUED)

Scientific Name	Common Name	Status – Habitat Information
<i>Magnolia virginiana</i>	Sweetbay Magnolia	Threatened - forested acidic wetlands
<i>Maianthemum stellatum</i>	Starflower False Solomon's-seal	Endangered - moist stream banks, floodplains, and sandy woods
<i>Meehania cordata</i>	Heartleaf Meehania	Threatened - wooded mountain slopes
<i>Panax quinquefolius</i>	American Ginseng	Special Concern and Commercially Exploited - rich, cool, moist hardwood-dominated or mixed woods, under a closed canopy, especially on slopes or ravines and often over a limestone or marble parent material on soil with a good humus component.
<i>Platanthera grandiflora</i>	Large Purple Fringed Orchid	Endangered - wet meadows and along streams
<i>Platanthera orbiculata</i>	Large Round-leaved Orchid	Threatened - mid-elevation mesic forests
<i>Potamogeton epihydrus</i>	Nuttall's Pondweed	Special Concern - lakes and streams
<i>Pyrola Americana</i>	American Wintergreen	Endangered - moist woods and bogs
<i>Ribes americanum</i>	Wild Black Currant	Endangered/Proposed Threatened - slopes in mesic forests
<i>Silene caroliniana</i> ssp. <i>Pensylvanica</i>	Carolina Pink	Threatened - sandy, dry and open woodlands and rocky bluffs
<i>Streptopus amplexifolius</i>	White Mandarin	Threatened - wet cliffs and mesophytic mountain woods
<i>Symplocarpus foetidus</i>	Skunk-cabbage	Endangered - swamps and bogs
<i>Thuja occidentalis</i>	Northern White Cedar	Special Concern - calcareous rocky seeps and cliffs
<i>Trientalis borealis</i>	Northern Starflower	Threatened - mountain mesophytic hardwood forests
<i>Tsuga caroliniana</i>	Carolina Hemlock	Threatened - dry ridges
<i>Viburnum rafinesquianum</i>	Downy Arrowwood	Special Concern - calcareous woods and river bluffs
<i>Woodsia scopulina</i> ssp. <i>Appalachiana</i>	Alleghany Cliff-fern	Special Concern - mountain cliffs

Source: TDEC – Natural Heritage Inventory Program (December 2013)

TABLE 3-12: STATE-LISTED ANIMALS IDENTIFIED WITHIN SULLIVAN COUNTY BY TWRA AND TDEC

Scientific Name	Common Name	Status – Habitat Information
<i>Corvus corax</i>	Common Raven	Threatened - mountainous (elevation usually above 3000 feet), hilly areas with open and spottily wooded lowlands. It is usually found far from humans.
<i>Epioblasma florentina walkeri</i>	Tan Riffleshell	Endangered - river headwaters, in riffles and shoals in sand and gravel substrates
<i>Erimonax monachus</i>	Spotfin Chub	Threatened - clear upland rivers with swift currents and boulder substrates
<i>Fusconaia cuneolus</i>	Finerayed Pigtoe	Endangered - riffles of fords and shoals in firm cobble and gravel substrates
<i>Fusconaia edgariana</i>	Shiny Pigtoe	Endangered - shoals and riffles of small-medium sized rivers
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Wildlife-In-Need-Of-Management - shoreline along unpolluted water with high perching and lookout points, and tall, often dead, trees for nests

TABLE 3-12: STATE-LISTED ANIMALS IDENTIFIED WITHIN SULLIVAN COUNTY BY TWRA AND TDEC (CONTINUED)

Scientific Name	Common Name	Status – Habitat Information
<i>Limnothlypis swainsonii</i>	Swainson's Warbler	Wildlife-In-Need-Of-Management - mountains of east Tennessee, in rhododendron or mountain laurel tangles, generally in ravines in hardwood or mixed forests
<i>Myotis grisescens</i>	Gray Bat	Endangered - cave obligate year-round; frequents forested areas; migratory
<i>Myotis leibii</i>	Eastern Small-footed Bat	Wildlife-In-Need-Of-Management - hibernates in caves and mines; also uses abandoned buildings, bridges, and barns seasonally
<i>Parascalops breweri</i>	Hairy-tailed Mole	Wildlife-In-Need-Of-Management - not restricted to any one habitat type, and is found in secondary hardwood forest, open fields, old pastures, cultivated fields, and along roadsides
<i>Pegias fabula</i>	Littlewing Pearlymussel	Endangered - cool, clear, high-gradient streams in sand, gravel, and cobble substrates
<i>Percina aurantiaca</i>	Tangerine Darter	Wildlife-In-Need-Of-Management - medium sized streams to moderate rivers, with adults typically occupying the deeper, smooth-surfaced areas with moderately swift currents adjacent to shallow riffles. Smaller individuals are usually found along the shoreline of pools.
<i>Percina burtoni</i>	Blotchside Darter	Wildlife-In-Need-Of-Management – large creeks and small medium rivers with low turbidity
<i>Percina williamsi</i>	Sickle Darter	Threatened - flowing pools over rocky, sandy, or silty substrates in clear creeks or small rivers
<i>Phoxinus tennesseensis</i>	Tennessee Dace	Wildlife-In-Need-Of-Management – first order spring-fed streams of woodlands in Ridge and Valley limestone region
<i>Quadrula intermedia</i>	Cumberland Monkeyface	Endangered - shallow riffle and shoal areas of headwater streams and bigger rivers in coarse sand/gravel substrates
<i>Sorex fumeus</i>	Smoky Shrew	Wildlife-In-Need-Of-Management - confined to mountains, and the preferred habitat is damp deciduous-coniferous forest around stumps, under mossy logs and rocks and near streams
<i>Sorex longirostris</i>	Southeastern Shrew	Wildlife-In-Need-Of-Management - moist to wet areas usually bordering swamps, marshes or rivers. It is also found in old fields, dry upland hardwoods, and planted pine plots. In all habitats, this species is associated with heavy ground cover of grasses, sedges, rushes, blackberry, Japanese honeysuckle, and/or thick mats of decaying leaves.
<i>Synaptomys cooperi</i>	Southern Bog Lemming	Wildlife-In-Need-Of-Management - a broad range of habitats, ranging from moist meadows, marsh borders, dry field thickets, eastern red cedar woodland, and moist woodlands

TABLE 3-12: STATE-LISTED ANIMALS IDENTIFIED WITHIN SULLIVAN COUNTY BY TWRA AND TDEC (CONTINUED)

Scientific Name	Common Name	Status – Habitat Information
<i>Tyto alba</i>	Common Barn Owl	Wildlife-In-Need-Of-Management - areas of idle or lightly grazed grassland. Reduction in number of buildings and silos that can still be accessed for nesting, but remain out of reach of increasing raccoon populations, is a major contributing factor to the decrease in the population of barn owls.
<i>Villosa perpurpurea</i>	Purple Bean	Endangered - creeks to medium-sized rivers, headwaters, in riffles with coarse sand/gravel and some silt
<i>Zapus hudsonius</i>	Meadow Jumping Mouse	Wildlife-In-Need-Of-Management - grasslands, orchards, meadow and old fields. It prefers areas with numerous shrubs, and areas with herbaceous ground cover. They are sometimes taken in wooded areas when herbaceous cover is adequate. Impatiens (touch-me-not) is apparently a good habitat indicator.

Source: TDEC – Natural Heritage Inventory Program (December 2013)

An environmental boundary and mitigation report will be completed with appropriate consultation with the USFWS, TWRA, and TDEC prior to construction.

3.4.6 Invasive Species

Executive Order 13112 was enacted to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts that invasive species cause. The aquatic and terrestrial ecology report completed in December 2008 identified invasive plant species in the project area. The plant species included: Japanese honeysuckle (*Lonicera japonica*), mimosa/silk tree (*Albizia julibrissin*), kudzu (*Puereria montana*), Chinese privet (*Ligustrum sinense*), common privet (*Ligustrum vulgare*), multiflora rose (*Rosa multiflora*), tree of heaven (*Ailanthus altissima*), Queen Anne's lace/wild carrot (*Daucus carota*), paper mulberry (*Broussonetia papyifera*), cocklebur (*Xanthium strumarium*), bull-thistle (*Cirsium vulgare*), Canada thistle (*Cirsium arvense*), ox-eye daisy (*Chrysanthemum leucathemum*), and fescue (*Festuca arundinacea*). Field observations also noted the occurrence of several exotic animal species including Asian clam (*Corbicula fluminea*) and the European starling (*Sturnus vulgaris*). Other exotic organisms are likely present within the project area but the survey did not reveal their presence.

3.5 Cultural Resources

Section 106 of the *National Historic Preservation Act of 1966* requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the ACHP and referred to as "Protection of Historic Properties" in 36 Code of Federal Regulations (CFR) Part 800.

Surveys of potential historic properties and archaeological sites were performed in accordance with Section 106 guidelines outlined in 36 CFR 800. The purpose of these studies was to determine the presence of resources listed, or eligible for listing, in the NRHP within the project's Area of Potential Effect (APE). The APE is defined as the geographic area or areas

within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.

3.5.1 Historic/Architectural Resources

The APE was established as being 1,500 feet from either side of the existing SR 126 centerline. TDOT identified two properties within the APE that are eligible for, or listed in, the NRHP. The properties are the Shipley-Jarvis House located at 3309 Memorial Boulevard (SR 126) and Yancey's Tavern located on SR 126 at its intersection with Chestnut Ridge Road. The properties are described below. See Figure 3-7 for a map of the APE.

Shipley-Jarvis House

This property is located on the south side of SR 126 in a residential and commercial section of East Kingsport. It exemplifies the adaptation of 19th century dwellings to conform to 20th century architectural tastes. Its architectural features continue to illustrate both mid-19th century building methods and 20th century stylistic changes. The property is NRHP eligible. The Shipley-Jarvis House is located on a 1.6-acre tract near the project's East Center Street terminus. See Figure 3-8 for a map of the property.



Yancey's Tavern



This property was listed in the NRHP in 1972 for its significance in the early settlement of Sullivan County. According to the NRHP listing, Yancey's Tavern was constructed in 1782 as a double log house with a dogtrot. Underneath the present façade remain the logs used to construct the house. Hand-fired brick replaced the original chimneys which were constructed of stone. Bricks have also replaced some of the original stone foundation. Brick was used in recent years to completely enclose the cellar, but the framing of the door and window openings leading into the cellar

are from a much earlier time period. Front and back porches were later additions to the structure. The back wing of the house includes a fireplace with a simple mantel, suggesting an early date though it is not part of the original structure. The location of a back chimney suggests that this area was once a small open area between the kitchen and the main structure. Openings for windows and doors pre-date the 20th century but are not original materials. The interior of Yancey's Tavern is simple with three plain, well-executed mantels on the first floor. The two second-story rooms are accessed by separate stairways. The construction of the dogtrot is visible on the second floor because this portion of the house has not been finished for use.

FIGURE 3-7: AREA OF POTENTIAL EFFECT (APE) FOR HISTORIC/ARCHITECTURAL RESOURCES

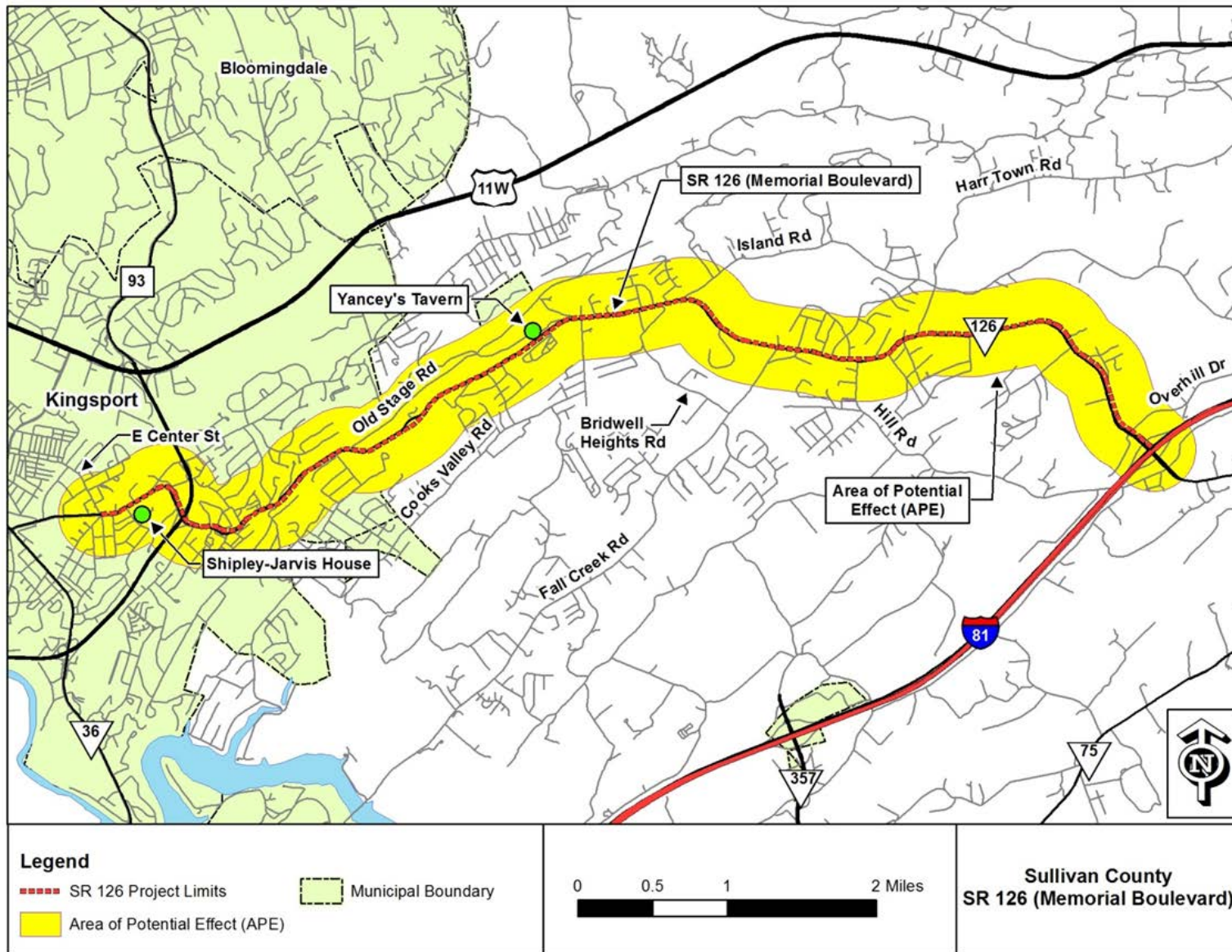


FIGURE 3-8: SHIPLEY-JARVIS HOUSE (NRHP ELIGIBLE BOUNDARY)

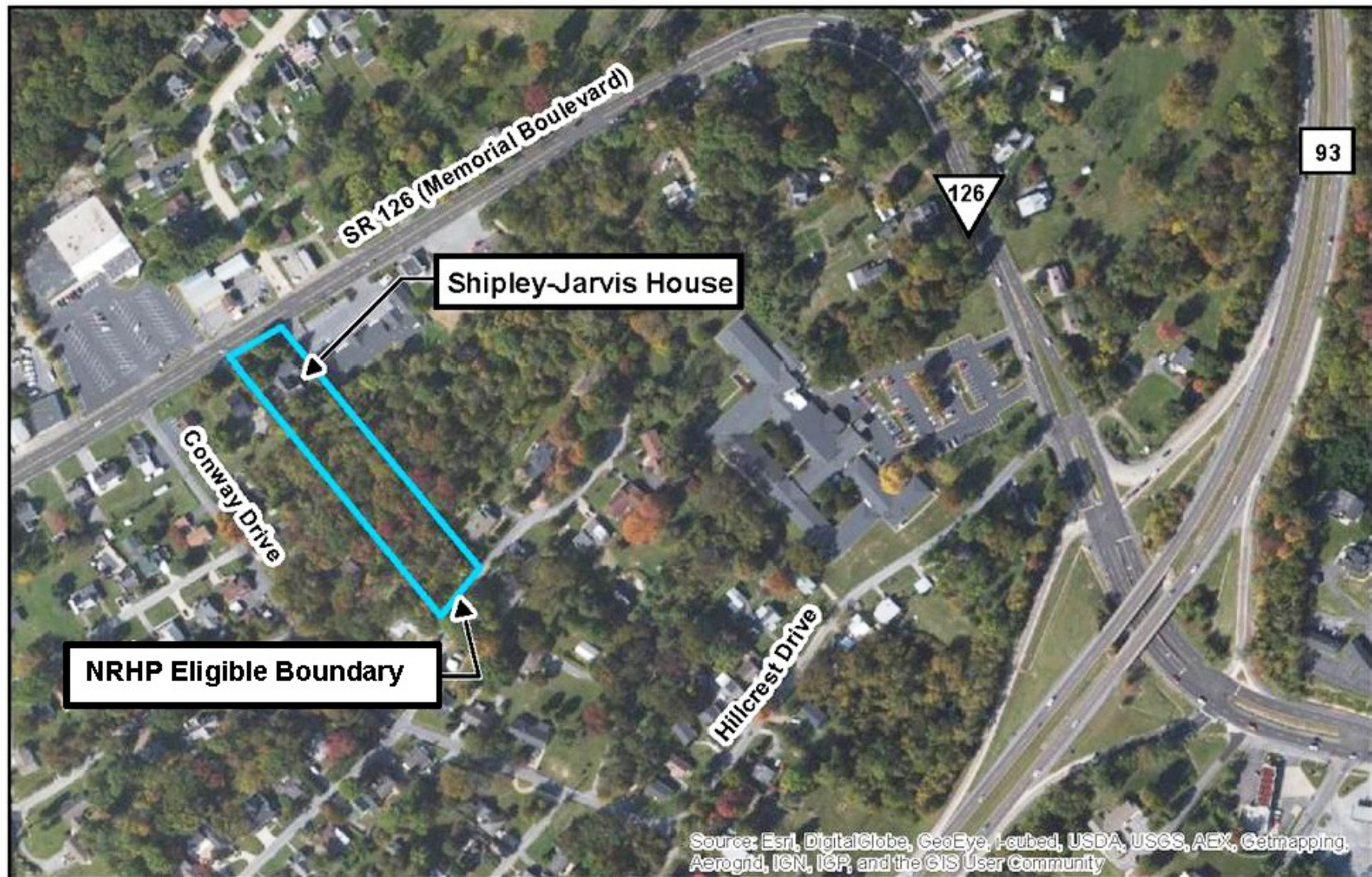
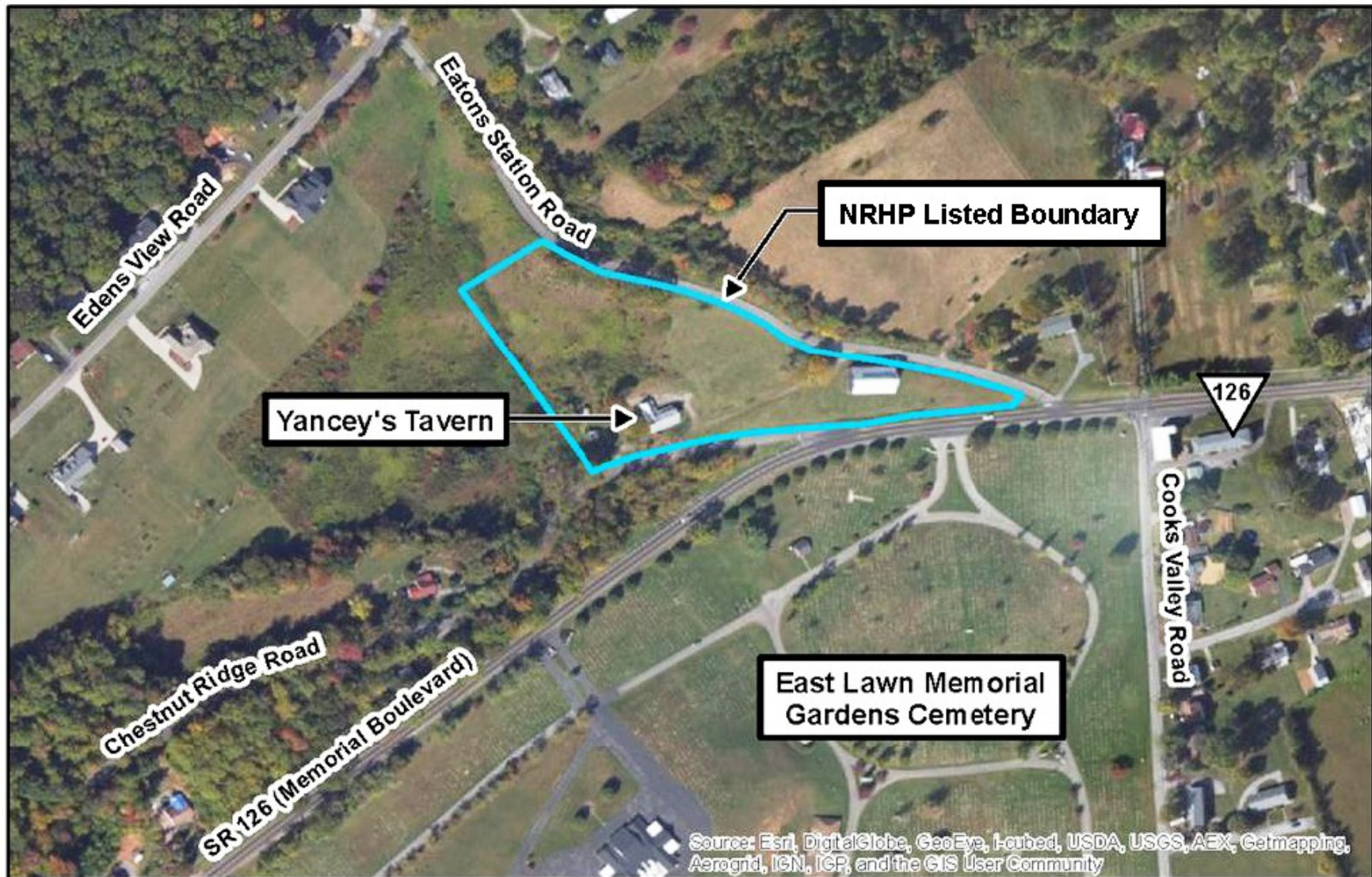


FIGURE 3-9: YANCEY'S TAVERN (NRHP LISTED BOUNDARY)



The Yancey's Tavern property includes various outbuildings such as a barn, a wash house, spring house, chicken house, and a corn crib, which all are associated with the late 19th/early 20th centuries. The frame granary which features a shingled roof and stone foundation is considerably earlier according to the NRHP narrative. See Figure 3-9 for a map of the property.

The NRHP also states that Yancey's Tavern was a crucial stopping point along Island Road, which was a major artery in East Tennessee. This allowed the historic property to figure prominently in the development of the area and attracted notable visitors, including John Sevier and William Blount. Yancey's Tavern also served as headquarters for local businesses including meetings of the Sullivan County Court. Island Road predates the historic property, being completed in September 1761, and is the first road constructed in Tennessee. Island Road connected Chillhowie, Virginia, to the Long Island of the Holston River. Part of Island Road later was renamed the "Great Stage Road." The Tennessee section of Island Road supported connections between three forts, including Eaton's Fort which in the early 1770s was a portion of Amos Eaton's "corn rights" land. Eaton sold a portion of his land near the fort in 1779 to James Hollis who ultimately sold 900 acres to John Yancey, Sr. in 1782. It cannot be determined if the structure now known as Yancey's Tavern was constructed prior to the sale of the land to Yancey, but became operable shortly after the real estate transaction was completed. The Yancey heirs maintained the property until the last half of the 19th century. The property changed ownership several times until it was purchased in 1889 by John R. Spahr, whose descendants owned the property into the 20th century. The property was purchased by the current owner, Rann L. Vaulx, at auction.

3.5.2 Archaeological Resources

Beginning in October 2001, investigations were conducted to provide information on the existence of archaeological resources within the project area. This information was used during development of the concept for improving SR 126.

These investigations were conducted in two phases. Phase 1A consisted of a literature and records search for the areas surrounding the proposed alternatives. Phase 1B consisted of a systematic pedestrian survey of high-probability areas that were identified in Phase 1A. The objective of the survey was to identify and record all archaeological resource sites within or adjacent to the proposed project corridor that are listed, eligible for listing, or potentially eligible for listing on the NRHP pursuant to criteria set forth in 36 CFR 60.4.

The results of the archaeological surveys identified four sites within or adjacent to the proposed build alternatives. Site 40SL412 is a late 19th or early 20th century farmstead site with a small prehistoric component. The site contains information that could be important to understanding life in rural Sullivan County in the late 19th and early 20th centuries. Site 40SL413 is a prehistoric lithic scatter that has a high potential for intact deposits below the plowzone. Since there are not many prehistoric sites along the corridor, the Tennessee State Historic Preservation Office (SHPO) agreed that this property is potentially eligible. Site 40SL419 is the archaeological component of the already NRHP-listed Yancey's Tavern property, including both historic and prehistoric components. The historic component was determined eligible, and the prehistoric component was determined potentially eligible. The prehistoric component lies inside the area of the barn, Eaton Station Road, and SR 126. Site 40SL421 is a small historic house site with a surviving stone-lined cellar and a brick-lined cistern, both situated on a rocky rise between the current SR 126 and one of its earlier roadbeds. Probable dates for the structure range from between 1854 and 1939.

3.5.3 Native American Consultation

Pursuant to Section 106 of the NHPA and 36 CFR 800, Section 106 consultation letters were sent to the following Native American tribes in November of 2003:

- Eastern Shawnee Tribe of Oklahoma
- Muscogee (Creek) Nation of Oklahoma
- Eastern Band of Cherokee Indians
- Chickasaw Nation
- Choctaw Nation of Oklahoma
- Seminole Nation of Oklahoma
- United Keetoowah Band of Cherokee Indians in Oklahoma
- Quapaw Tribe of Oklahoma
- Thlopthlocco Tribal Town, Oklahoma

The Eastern Shawnee Tribe of Oklahoma, Muscogee (Creek) Nation of Oklahoma, and the Eastern Band of Cherokee Indians each stated they were either currently unaware of any documentation linking Indian religious sites to the proposed construction, or unaware of any cultural or archaeological sites in the project area. Each tribe requested that they be notified if any human remains or objects are encountered.

A tribal summit, “Recognizing Native American Religious and Cultural Interests in Tennessee: Implementing Section 106 of the National Historic Preservation Act for Transportation Projects” was held in December 2005. Tribe representatives identified for TDOT their interests in Tennessee within specific counties. One of the results of this summit was to shorten the list of tribes to whom TDOT would send Section 106 consultation based on those identified interests.

Using the list developed at the summit, and because of the time that had passed since the original coordination and the introduction of Alternative B Modified, tribal coordination was conducted for the project on January 9, 2012. As a result of this coordination, both the Cherokee Nation and United Keetoowah Band of Cherokee Indians in Oklahoma indicated that they were unaware of any sites and had no objections to the project as proposed. Both tribes will be notified if human remains or objects are discovered. Additional coordination was sent to the Muscogee (Creek) Nation of Oklahoma, Eastern Shawnee Tribe of Oklahoma, Shawnee Tribe, United Keetoowah Band of Cherokee Indians, Eastern Band of Cherokee Indians and the Cherokee Nation on February 27, 2014, but no responses were received.

If archaeological material, including human remains and objects, is uncovered during construction, all construction will cease in that area, and the Federal Highway Administration, federally recognized Native American tribes and Tennessee Division of Archaeology will be contacted to resolve disposition of the discovery.

3.6 **Recreational Resources**

A site reconnaissance was conducted within the project corridor to determine if public or private parks, wildlife refuge areas, or other forms of recreational resources exist. In addition to the site reconnaissance, maps of the area were reviewed, and interviews were conducted with local officials. No recreational resources were identified within or near the project corridor.

3.7 Visual Resources

The project begins in an urbanized segment of Kingsport, and as it moves eastward, it climbs a hill and transitions into an area with scattered agricultural and residential land use. The urban section of the project is in a relatively flat area with numerous houses and businesses situated close to one another along the existing roadway and surrounding areas. As the project climbs out of the urbanized area, homes become less dense. Most of the homes are along the existing SR 126 or along feeder roads. Farmland becomes more evident as the project area moves eastward. Reviews of land use maps on file at the TDOT Environmental Division Office in Nashville, which span a 50-year period, indicate that many areas now have more trees within the area in relation to the initial photographs from the 1950s. Most of the areas with trees are in the rural area and indicate the loss of smaller farms as lack of agricultural activity allows for re-growth. Some additional wooded areas are located in neighborhoods that have been established for several decades.

In addition to becoming more rural in nature in the eastern portion of the project corridor, the project terrain becomes more mountainous and rolling. Vegetation is predominately a mix of agricultural lands and scattered forests in the eastern two-thirds of the project. The western third of the project contains mainly manicured lawns or is covered by impermeable surfaces in the urban section of the project. Local and commuter traffic generally use the existing SR 126 on a daily basis and view the surrounding landscape from their vehicles.

Viewers of the road comprise residents and businesses occupying the areas and vary in frequency based on whether they are located in an urban or rural setting. There are more residents in the city of Kingsport than in the middle section of the project.

Throughout the CSS process, the CRT expressed concerns on behalf of the public regarding any action that would diminish the scenic attributes of the hillsides of Chestnut Ridge that account for a great portion of the project. The hills and rural nature of the greater portion of the project are important to residents of the immediate area and to residents of Kingsport and Sullivan County.

4.0 ENVIRONMENTAL CONSEQUENCES

This chapter presents the potential environmental impacts of the Preferred Alternative (Alternative B Modified) and Alternatives A and B based on conceptual plans as discussed in the DEIS that was approved in January 2012. As discussed in Chapter 2, the Preferred Alternative (Alternative B Modified) is a modification of Alternative B. Project impacts will be refined and reevaluated as needed in the design and permitting phases.

The baseline conditions presented in Chapter 3 are the basis for which potential impacts are defined. Three types of impacts are discussed in this chapter: direct, indirect, and cumulative. Under 40 CFR 1508, direct effects are those that are “caused by the action and occur at the same time and place.” Indirect effects are “caused by the action and are later in time and farther removed in distance, but are still reasonably foreseeable.” Cumulative effect is the “impact on the environment which results from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

The No-Build Alternative involves making no improvements to existing SR 126, other than those already proposed by state, county, and local governments. The No-Build Alternative would have no direct impacts to the environment, but would not meet the project purpose and need. It would not improve roadway safety, reduce the crash rate along the corridor, improve roadway geometry and width deficiencies, provide adequate roadway and shoulder widths for vehicles and improve adjacent roadway access and traffic operations. In addition, the No-Build Alternative would not meet secondary goals of minimizing the roadway footprint, complementing the rural nature of the area and improving pedestrian and bicycle connectivity. The No-Build Alternative would contribute to a continuation of existing trends without providing an enhanced roadway for SR 126 within the project area. The following sections describe the impacts of the Preferred Alternative (Alternative B Modified) and Alternatives A and B.

4.1 Land Use Impacts

Land use patterns and transportation patterns directly influence each other. The type of land uses in an area has a direct impact on traffic patterns, which in turn influence project design and development. The existing land uses along the project corridor are varied; the primary land uses are residential and agricultural/forest. While commercial land uses are scattered throughout the project corridor, there are concentrations at each terminus and also where Cooks Valley Road intersects SR 126. Future land use types along the corridor are generally the same; however, future land use projections show an increase of residential and commercial uses, while agricultural/forest uses are reduced. Part of the increased residential and commercial land uses will come from conversion of agricultural/forest land.

Preferred Alternative (Alternative B Modified)

The construction of the proposed project will result in the conversion of approximately 100 acres of land adjacent to SR 126 to highway ROW, changing the use of the land acquired to highway use. This land to be converted abuts existing SR 126 and is generally residential, with agricultural/forest and commercial uses. The Preferred Alternative (Alternative B Modified) is not anticipated to directly affect future land use and is consistent with the plans, policies and regulations adopted by the City of Kingsport, Sullivan County and the KMTPO as shown in the

Sullivan County Regional Plan: A Guide for Land Use and Transportation Development (2008), the KMTPO 2035 LRTP, and city and county zoning maps.

Alternatives A and B

Similar to the Preferred Alternative (Alternative B Modified), Alternatives A and B would both result in the conversion of land adjacent to SR 126 to ROW, though at slightly larger amounts of acreage. Because both of these alternatives generally follow existing alignment, they would convert existing residential, agricultural/forested and commercial land uses. Both Alternative A and Alternative B would be consistent with existing local and regional plans, policies and regulations.

4.2 Farmland Impacts

Congress passed the *Agriculture and Food Act of 1981* (Public Law 97-98) containing the *Farmland Protection Policy Act (FPPA)* Subtitle I of Title XV, Section 1539-1549. The *FPPA* requires federal agencies to take steps to ensure that federal actions do not contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses in cases in which other national interests do not override the importance of protecting the farmland resources. Before farmland can be used for a project utilizing federal funds, an assessment must be completed to determine if prime, unique, or statewide or locally important farmlands would be converted to non-agricultural uses and coordinated with the USDA Natural Conversation Service (NRCS).

The NRCS characterizes farmlands as prime farmland, unique farmland, or farmland of statewide or local significance. The designations are based on NRCS soil type and are protected by federal legislation.

The impacts of the proposed project on farmland were determined in the DEIS through coordination with NRCS, using the U.S. Department of Agriculture's (USDA) *Farmland Conversion Impact Rating Form*. The form was completed in accordance with 7 CFR, Part 658 of the *FPPA*. The form includes a rating of several factors to determine the level of a project impact to farmland.

Each factor is assigned a score relative to its importance. Sites that receive a total site assessment score of 160 points or less are given a minimal level of consideration for protection. Sites with a total site assessment score of 161 points or more would require the consideration of alternative project alignments that would serve the proposed purpose but convert either fewer acres of farmland or other farmland that has a relatively lower value.

Preferred Alternative (Alternative B Modified)

The Preferred Alternative (Alternative B Modified) is within prime and unique farmland in non-urbanized areas and results in approximately five acres of impact. Since the Preferred Alternative (Alternative B Modified) has a slightly smaller footprint than the original Alternative B, there is no need for new coordination with the NRCS. Since the score is below 160, there is no requirement to consider additional alignments to reduce farmland impacts. In addition, no impacts to active farming operations are anticipated.

Alternatives A and B

The site assessment score for Alternative A and Alternative B in the DEIS was 82 points, indicating no need to consider additional alignments, which would reduce farmland impacts. The DEIS estimate for the taking of prime and unique farmland was 15 acres for Alternative A and five acres for Alternative B. Coordination with the NRCS and the *Farmland Conversion Impact Rating Form* is included in Attachment B.

4.3 Social Impacts

This section describes the anticipated social impacts under the Preferred Alternative (Alternative B Modified), Alternatives A and B. Social impacts, which include schools, fire and police, hospitals, cemeteries and utilities are assessed to determine potential impacts of the build alternatives.

Implementation of the proposed project will not substantially change the basic social arrangement or character of the project area. Although no neighborhoods will be split or bisected by the Preferred Alternative (Alternative B Modified), Alternative A or Alternative B, traffic patterns will change for some residences with the closing of some cross roads that currently have direct access to SR 126. The road closings are proposed to improve safety and better manage access along SR 126. Access will remain available to SR 126 via other cross roads nearby. In one instance, access to SR 126 from Holiday Road will be eliminated. However, access will be maintained through a proposed local connector at Parker Street and Shuler Drive. All access modifications will be evaluated and determined during the design phase.

4.3.1 Preferred Alternative (Alternative B Modified)

Schools

The Preferred Alternative (Alternative B Modified) will not impact any school property. Accessibility to and from area schools will be enhanced by improvements to SR 126. SR 126 is the main route for students traveling to schools from areas east of Kingsport. Indian Springs Elementary serves students in the immediate project area. Several Sullivan County bus routes use portions of SR 126 or its connecting roads to transport students between home and school. The improved roadway will provide shoulders and sidewalks that will create a safer environment for school bus passengers.

Fire and Police

A volunteer fire department station (Kingsport Station #3) will be acquired and relocated under the Preferred Alternative (Alternative B Modified). The volunteer fire department is a non-profit organization and is located along SR 126 at the intersection with Heather Lane. It is not occupied full time but is used during emergencies and includes a garage and a small office/organization area. The relocation process will be carried out in such a manner as to ensure that no interruption of service occurs to area residents. No other police, fire, or emergency services facilities will be displaced by the Preferred Alternative (Alternative B Modified).

The Preferred Alternative (Alternative B Modified) will improve emergency response time for police, fire and emergency services due to wider lanes, providing turn lanes and increased shoulder widths, which allow drivers to safely pull over when emergency vehicles need to

access an accident, as well as for emergency vehicles to pass through traffic safely. This will occur along the alignment except where the design of the Preferred Alternative (Alternative B Modified) was modified to avoid environmentally-sensitive resources, as discussed throughout Chapter 4.

Hospitals

As presented in Section 3.2, there are three area hospitals. None of the services provided by these facilities will be impaired by the Preferred Alternative (Alternative B Modified). This alternative will provide adequate shoulder widths for use by emergency response vehicles for situations in which drivers are unable move out of a response vehicle's pathway.

Cemeteries

A large cemetery, East Lawn Memorial Gardens Cemetery, is located on the south side of SR 126 and abuts the existing ROW. There are approximately 11,800 existing grave sites in this cemetery. The Preferred Alternative (Alternative B Modified) was designed to include a reduced width cross-section through this area to avoid impacting grave sites.

Utilities

Relocation of utilities will be required; however, no long-term utility impacts are anticipated under the Preferred Alternative (Alternative B Modified). Temporary service disruptions could result during project construction. Utility relocation will require coordination with local service providers, which will minimize, if not avoid, disruptions.

4.3.2 Alternatives A and B

Schools

Alternative A and Alternative B would not have an impact to any school property. In addition, improved access and safety for project area schools and buses resulting from Alternatives A and B are the same as the Preferred Alternative (Alternative B Modified).

Fire and Police

As with the Preferred Alternative (Alternative B Modified), Alternatives A and B would impact and require the Kingsport Station #3 fire department to relocate. No other facilities would be displaced by Alternative A or Alternative B. Also, similar to the Preferred Alternative (Alternative B Modified), improved roadway design would allow for safer access to accidents for emergency vehicles.

Hospitals

Improvements to traffic flow anticipated under Alternatives A and B are the same as the Preferred Alternative (Alternative B Modified). None of the services provided by the hospitals would be impaired.

Cemeteries

As reported in the DEIS, 350 graves would be impacted by Alternative A and 90 graves would be impacted by Alternative B. This was a result of shifting the proposed alignment for

Alternatives A and B to the south side of the roadway to avoid impacting Yancey's Tavern, a NRHP-listed property.

Utilities

Impacts to utilities within the project area resulting from Alternatives A and B are the same similar to those for the Preferred Alternative (Alternative B Modified).

4.4 Displacements and Relocation Impacts

Displacements are a potential adverse environmental effect associated with the Preferred Alternative (Alternative B Modified), and both Alternatives A and B. An initial Conceptual Stage Relocation Plan (CSRP) was prepared on April 8, 2010, as part of the DEIS to assess the effects of displacements. This assessment considered optional relocation property in the community. Since the approval of the DEIS on January 5, 2012, the KMTPO updated their travel demand model, which resulted in a reduction of projected traffic volumes. This led to a reduction in project impacts through the development of Alternative B Modified.

An updated CSRP was completed for the Preferred Alternative (Alternative B Modified) on August 22, 2012. The updated CSRP confirmed that conditions have not changed for Alternatives A and B since the completion of the original CSRP in 2010, and it provides new information disclosing impacts for the Preferred Alternative (Alternative B Modified). The updated CSRP and the previous CSRP are in Attachment C. A comparison of estimated relocation impacts for the build alternatives is provided in Table 4-1.

Preferred Alternative (Alternative B Modified)

As presented in Table 4-1, under the Preferred Alternative (Alternative B Modified) displacements are anticipated for 81 single-family homes, 22 multi-family homes, one mobile home, 24 businesses, and one non-profit organization (a fire station).

A study of the real estate market in the project area was included in the 2012 CSRP. Because of the built-out nature of the project study area, the residential and business market conditions have not changed since 2012. The CSRP indicated a market that is not capable of supporting the anticipated residential displacements within the immediate project area, due to an insufficient replacement housing availability. Expanding the study beyond the immediate project area reveals a market that can accommodate the projected relocations but with some difficulty. Analysis performed for the CSRP also concluded that it is unlikely that a large number of business displacees can relocate in the immediate project area due to an insufficient number of suitable replacement sites.

The CSRP found that no schools or churches would be either partially or totally acquired by the Preferred Alternative (Alternative B Modified).

Alternatives A and B

Alternative A would result in the displacement of 102 single-family homes, 135 multi-family homes, four mobile homes, 43 businesses, and one non-profit organization (a fire station).

Alternative B would result in the displacement of 90 single-family homes, 69 multi-family homes, three mobile homes, 30 businesses, and one non-profit displacement (a fire station). No schools or churches would be either partially or totally acquired by Alternative A or B.

As previously stated for the Preferred Alternative (Alternative B Modified), the 2012 CSRP indicated a market that is not capable of supporting a large number of residential displacements within the immediate project area. Expanding the study beyond the immediate project area reveals a market that can accommodate the projected relocations but with some difficulty.

Analysis performed for the CSRP also concluded that it is unlikely that a large number of business displacees can relocate in the immediate project area due to an insufficient number of suitable replacement sites.

The CSRP found that no schools or churches would be either partially or totally acquired by the Alternatives A or B.

TABLE 4-1: RELOCATION IMPACTS COMPARISON

Type of Relocation	Preferred Alternative (Alternative B Modified) 2012	Alternative A 2010	Alternative B 2010
Single-Family Homes	81	102	90
Multi-Family Units	22	135	69
Mobile Homes	1	4	3
Businesses	24	43	30
Non-Profit Organizations	1	1	1
Community Institutions	0	0	0

Source: TDOT-Right-of-Way Division (2012 and 2010).

4.4.1 Relocation Assistance

TDOT will make relocation assistance available to all eligible persons impacted by this project, including residences, businesses, farm operations, non-profit organizations, and those requiring special services or assistance. Title VI prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance. The TDOT ROW Division Relocation and Property Management Office will administer the relocation program under the rules, policies, and procedures set forth in the *Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* as amended, the *Uniform Relocation Assistance Act of 1972*, in federal regulations TCA 13-11-101 through 119, the *State of Tennessee Relocation Assistance Brochure* and Chapter Nine of the *State of Tennessee, Department of Transportation, Right-of-Way Manual*.

Relocation resources are available to all displacees without discrimination. The provisions of suitable and acceptable replacement housing, combined with adequate relocation payments, can be expected to minimize relocation impacts. If any situation exists where decent, safe, and sanitary replacement housing within the financial means of the displaced residents is not available, such housing will be made available under the U.S. Department of Housing and Urban Development's Housing of Last Resort provisions. Housing of Last Resort is used when there is no comparable housing available for sale or rent within TDOT's current limitations. Should Last Resort Housing become necessary, supplemental payments or other housing options, as determined by TDOT, can be implemented through procedures provided for in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

At least one relocation agent is assigned to each highway project to carry out the relocation assistance payments program. A relocation agent will contact each person to be relocated to determine individual needs and desires, to provide information, answer questions, and aid in finding replacement property. TDOT provides advance notification of impending ROW acquisition and has all properties appraised on the basis of comparable sales and land values in the area before acquiring ROW. Owners of property to be acquired will be offered fair market value for their property. Relocation services and payment are provided without regard to race, color, religion, sex, or national origin.

No person lawfully occupying real property will be required to move without at least 90 days written notice of the intended vacating date, and no occupant of a residential property will be required to move until decent, safe, and sanitary replacement housing is made available. “Made available” means that either the affected person has by themselves obtained and has the right of possession of replacement housing or TDOT has offered the relocated resident decent, safe, and sanitary housing that is within their financial means and available for immediate occupancy.

4.5 Environmental Justice

Executive Order 12898 (EO 12898), *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, directs federal agencies to “promote nondiscrimination in federal programs substantially affecting human health and the environment, and provide minority and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment.” The Order directs federal agencies to ensure that existing plans, programs and activities:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process and;
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

This Environmental Justice (EJ) analysis has been performed in accordance with EO 12898 and the U.S. Department of Transportation (DOT) *Updated Environmental Justice Order 5610.2(a)* (May 2012) and FHWA Order 6640.23A: *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (June 2012).

Methodology and Analysis

This EJ analysis presents the population characteristics of persons within the study area and determines whether the potential for disproportionately high and adverse impacts exist for study area U.S. Census Block Groups (BGs). To determine the impacts of the build alternatives on minority and low-income populations, the analysis utilized U.S. Census data for the project area and information gathered during a field review of the project area. TDOT also coordinated with local government and the TDOT Division of Civil Rights throughout the DEIS and FEIS process.

According to DOT Order 5610.2(a) and FHWA Order 6640.23A, minority populations are “any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or

Native Americans) who will be similarly affected by a proposed DOT [FHWA] program, policy, or activity.” Low-income populations are “any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT [FHWA] program, policy, or activity.”

The affected population for this analysis, or population with greatest likelihood of experiencing impacts, is located within 2010 Census Block Groups (BGs) that intersect the project alignment. The BGs that intersect the project alignment are the same for each of the build alternatives. As depicted in Figure 4-1, EJ study area BGs are:

- Tract 408, BG1
- Tract 408, BG2
- Tract 408, BG3
- Tract 409, BG1
- Tract 409, BG2
- Tract 410, BG1
- Tract 422, BG2
- Tract 423, BG1
- Tract 423, BG2
- Tract 423, BG3
- Tract 424, BG1
- Tract 435, BG1
- Tract 434.01, BG3

As stated above, U.S. Census data was utilized in the identification of potential EJ populations. Data on racial and income characteristics was collected for the above-listed BGs, and also for the larger geographic areas of Sullivan County. This larger area would help serve as a baseline for comparison against the BGs that intersect the project alignment.

To identify and compare the racial characteristics of the BGs, Sullivan, 2010 U.S. Census data was used and is reflected in this section. Because low-income data is not available for the 2010 U.S. Census at the BG level, the U.S. Census American Community Survey (ACS) data was used. The most recent five-year ACS data available is from 2006-2010 and was selected for the analysis. Using ACS data to determine low-income populations allows for an appropriate comparison across the state, county and BG level.

Based on methodology from the “*Effective Methods for Environmental Justice Assessment*” report (National Cooperative Highway Research Program Report 532), minority communities are defined as being 10 percentage points higher than the county average, or 50 percent of the total geographic unit.

Table 4-2 provides data on racial demographics for Sullivan County. When combined, minorities (non-white alone) made up 4.2 percent of the County total. Table 4-3 provides racial data for study area BGs. Based on data presented in Table 4-2 and Table 4-3, no BGs within the project area contain concentrations of minority populations that meet either of the EJ criteria constituting disproportionately and high adverse impacts.

As shown in Table 4-4, three BGs (Tract 408 BG1, Tract 408 BG2, and Tract 409 BG2) have percentages of low-income persons that are 10 percent higher than the percentage for Sullivan County.

FIGURE 4-1: MINORITY AND LOW-INCOME POPULATIONS

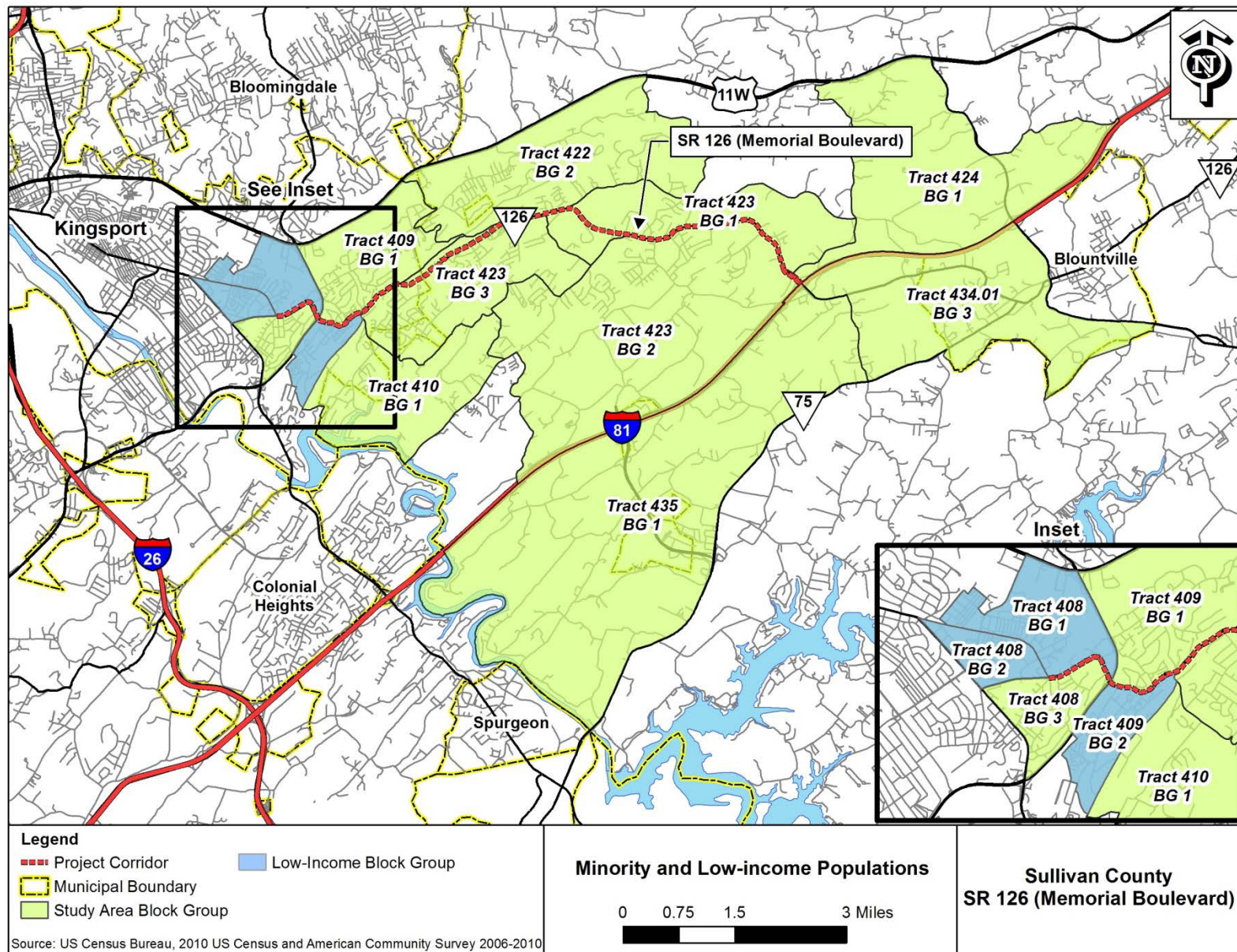


TABLE 4-2: SULLIVAN COUNTY RACIAL DEMOGRAPHICS

Group	Number	Percent of Total**
Total Persons	156,823	100%
White Alone	149,208	95.1%
Black or African American Alone	3,329	2.1%
American Indian and Alaska Native Alone	416	0.3%
Asian Alone	884	0.6%
Native Hawaiian and Other Pacific Islander Alone	34	0.0%
Hispanic or Latino (of any race) *	2,126	1.4%
Total Minority	7,615	4.2%

Source: U.S. Census Bureau, 2010 U.S. Census Summary File 1.

* Hispanic or Latino populations are listed separately under each of the above group classifications.

**Percent of Total is based on rounding estimates.

TABLE 4-3: BLOCK GROUP RACIAL DEMOGRAPHICS

Group	Study Area Tracts/Block Groups												
	T408 BG1	T408 BG2	T408 BG3	T409 BG1	T409 BG2	T410 BG1	T422 BG2	T423 BG1	T423 BG2	T423 BG3	T424 BG1	T434.01 BG3	T435 BG1
White Alone	91.3%	94.9%	93.5%	95.1%	90.3%	96.5%	96.9%	98.8%	97.3%	96.6%	97.0%	97.0%	97.6%
Black or African American Alone	3.8%	2.8%	3.2%	1.6%	3.9%	0.5%	0.5%	0.1%	0.3%	0.9%	0.1%	0.4%	0.4%
American Indian and Alaska Native Alone	0.9%	0.3%	0.2%	0.2%	0.2%	0.1%	0.2%	0.4%	0.3%	0.0%	0.1%	0.4%	0.1%
Asian Alone	0.4%	0.1%	0.3%	1.0%	1.5%	1.7%	0.5%	0.2%	0.6%	0.8%	0.5%	0.2%	0.2%
Native Hawaiian and Other Pacific Islander Alone	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
*Hispanic or Latino (of any race)	2.1%	2.0%	3.0%	1.2%	1.0%	1.9%	1.6%	0.0%	0.8%	0.9%	0.8%	0.6%	0.8%
**Total Minority	7.2%	5.2%	6.8%	4.1	6.6%	4.2%	2.8%	0.7%	2.0%	2.7%	1.5%	1.6%	1.5%

Source: U.S. Census, 2010 U.S. Census Summary File 1.

Notes – Percentages are based on rounding, estimates and sampling error; therefore, totals will not equal 100 percent. “T” – Census Tract; “BG” – Block Group.

* Hispanic or Latino populations are listed separately under each of the above group classifications.

** Total is based on rounding estimates and may not equal 100 percent.

TABLE 4-4: STUDY AREA AND SULLIVAN COUNTY POVERTY LEVELS

Group	*Number of Persons Below Poverty	Percent of Person Below Poverty	Meets EJ Criteria?
Tract 408, BG1	369	26.2%	Yes
Tract 408, BG2	238	38.2%	Yes
Tract 408, BG3	150	13.0%	No
Tract 409, BG1	333	15.6%	No
Tract 409, BG2	311	27.9%	Yes
Tract 410, BG1	20	1.4%	No
Tract 422, BG2	370	18.9%	No
Tract 423, BG1	72	7.3%	No
Tract 423, BG2	344	10.2%	No
Tract 423, BG3	99	4.4%	No
Tract 424, BG1	75	10.8%	No
Tract 434.01, BG3	159	11.6%	No
Tract 435, BG1	172	8.2%	No
Sullivan County	24,138	15.9%	---

Source: U.S. Census Bureau, American Community Survey, 2006-2010.

Notes – Percentage are based on rounding and estimates. Margin of error at the Block Group level ranges from two to 15 percent.

*Refers to Below Poverty Ratio of Income to Poverty in the Past 12 Months, estimated in 2010.

4.5.1 Preferred Alternative (Alternative B Modified)

Adverse impacts include residential and business displacements, changes in access, conversion of existing land uses to ROW, and ecological impacts due to loss of farmland, forested area and streams. These impacts will impact all populations as they will occur throughout the study area corridor. The project also provides beneficial impact associated with roadway safety, improved access, improved pedestrian and bicycle accommodations, and opportunity to facilitate future growth and economic development, while avoiding protected architectural/historic resources.

Based on the EJ analysis conducted in this section, it is determined that impacts resulting from the Preferred Alternative (Alternative B Modified) will not result in a disproportionately high and adverse impact to the BGs that contain EJ (low-income) populations.

Additional research on minority populations was gathered from the KMTPO 2035 LRTP, which included a review of Title VI Assessment in the Kingsport region. Based on census data used in their analysis, minority populations are about five percent of the planning area's total population. This is comparable to that of Sullivan County and the BGs within the SR 126 study area. The KMTPO did not identify any Title VI minority areas.

An EJ analysis was also conducted by the KMTPO for low-income populations and determined that within the Kingsport region, low-income populations are approximately 15 percent, which is similar to the Sullivan County average. As previously stated, the SR 126 study area contains three BGs with low-income populations that exceed the KMTPO average, but they are not high percentages and also will not be subject to disproportionately high and adverse impacts resulting from the project.

4.5.2 Alternatives A and B

As with the Preferred Alternative (Alternative B Modified), Alternatives A and B would result in similar adverse and beneficial impacts. Also similar to the Preferred Alternative (Alternative B Modified), impacts resulting from Alternatives A and B would not result in a disproportionately high and adverse impact to the BGs that contain EJ (low-income) populations.

4.6 Economic Impacts

This section presents a discussion of the anticipated economic impacts associated with the Preferred Alternative (Alternative B Modified), Alternative A and Alternative B.

Preferred Alternative (Alternative B Modified)

Given the CSRP results indicating a market not capable of supporting the large number of anticipated residential or business displacements within the immediate project area, there will be a loss of tax revenues associated with both residential and business relocations out of the project area. Businesses may choose to close or move out of the project area, causing a loss of tax revenues. Also, the conversion of land to ROW for the project will decrease the area property tax base. However, as discussed in Sections 3.1 and 4.1, commercial development is expected to occur within the project area over the next several decades. So while some existing businesses may relocate or close improvements to safety and access as a result of the Preferred Alternative (Alternative B Modified) will help accommodate future economic growth along the corridor. Indirect and Cumulative economic impacts are presented in Section 4.23. No industrial sites are located within or adjacent to the proposed project's limits. No impacts will be imposed upon these resources by the project.

Alternatives A and B

There would be similar long-term adverse economic effects with Alternatives A and B as described for the Preferred Alternative (Alternative B Modified).

4.7 Pedestrians/Bicyclists

This section presents a discussion of the impacts to pedestrians/bicyclists that are associated with the Preferred Alternative (Alternative B Modified), Alternative A and Alternative B.

Preferred Alternative (Alternative B Modified)

The lack of sufficient shoulders or sidewalks creates an unsafe environment for bicyclists and pedestrians along existing SR 126. The Preferred Alternative (Alternative B Modified) provides paved shoulders to accommodate bicyclists throughout the length of the project. Sidewalks to accommodate pedestrians are proposed throughout the project limits except in the rural area and near the interchange with I-81. Sidewalks were not included in this project segment because the design is intended to match the rural character of the area. The paved shoulders range from four feet where sidewalks are provided, to 12 feet where no sidewalks are proposed. The shoulders will be wide enough to accommodate bicycles and pedestrians. The cross-section schematics in Chapter 2 provide the planned shoulder widths. Details such as delineation of bike lanes and sidewalk widths will be determined in the design phase.

Alternatives A and B

As with the Preferred Alternative (Alternative B Modified), Alternatives A and B would provide shoulders along the entire route, sidewalks where appropriate, and sight distance improvements for similar benefits to pedestrians and bicyclists.

4.8 Soils and Geology

This section presents a discussion of the impacts to soils and geology associated with the Preferred Alternative (Alternative B Modified), Alternative A and Alternative B.

Preferred Alternative (Alternative B Modified)

The observations made during the site reconnaissance and reviews of topographic mapping indicate that the majority of roadway improvements will require shifting into the existing hill slopes. This will result in a greater number of constructed cut slopes than embankment fills. The greatest cuts are expected in areas with steeper terrain such as the Sougan Hollow vicinity and the southern flank of Chestnut Ridge. Moderate to steep cuts could occur throughout the project with less steep cuts anticipated in areas of more gentle topography. Other areas along creek bottoms or in areas where the roadway is not shifted into the hill slopes could encounter minor to moderate fills.

The varied topography encountered throughout the project area will require a range of minor to possibly considerable cuts and fills with the Preferred Alternative (Alternative B Modified). A subsurface investigation program with core drilling will be conducted prior to construction.

The potential for slope stability problems within both soil and rock areas will require a detailed evaluation of the actual slope conditions, particularly within the cut slopes of steep and rocky terrain. This evaluation will be conducted to determine the actual stability and slope geometry. Any slope stability problems that might be determined will be addressed in the design and construction phases of the project. The design of any slope stabilization elements for the project will be consistent with any commitments made during the CSS process.

Karst topography, though present in the area, was not identified within or adjacent to the project limits. The underlying geologic formations are susceptible to the formation of sinkholes, which could occur during construction. If sinkholes are discovered, the appropriate permits and, or, mitigation treatments will be implemented before the construction phase.

Pyritic material is not expected to be encountered on the proposed project, and there do not appear to be any significant geological issues associated with the Preferred Alternative (Alternative B Modified) that cannot be addressed during the design or construction phase.

Alternatives A and B

There do not appear to be any geologic issues with these alternatives that cannot be addressed during the design or construction phase.

4.9 Ecological Impacts

This section presents a discussion of the impacts to terrestrial and aquatic resources and also to threatened and endangered species associated with the Preferred Alternative (Alternative B Modified), Alternative A and Alternative B.

4.9.1 Preferred Alternative (Alternative B Modified)

Terrestrial Resources

The majority of the land has been converted to agricultural and residential/commercial uses over the past century. Roads and highways affect wildlife both directly as road kill and indirectly through the degradation, fragmentation, and loss of habitat. Construction of the proposed project will result in the loss of habitat for small mammals and birds through the conversion of open space areas to roadway; however, as a whole, the project will result in minimal loss of wildlife habitat and local wildlife populations.

Construction of the project in previously undisturbed areas will impact native vegetation. Mitigation measures for the disturbances of the floral community will include the establishment of rapid-growing vegetation as soon as possible following land disturbance. Leaving soil exposed to the elements for a prolonged period of time will increase the likelihood of invasion of the area by invasive/exotic plant species and could potentially cause erosion and sedimentation problems in nearby area streams. Plants chosen for the site will be compatible with the hydrology, geology, and land use of the surrounding landscape. The proposed project is along an existing facility, and any removal of native vegetation will occur along the shoulders and will remain minimal.

Improvements to SR 126 through the implementation of the Preferred Alternative (Alternative B Modified) will result in minimal impacts to local terrestrial wildlife and plant communities in the area. The existing roadway will be widened, requiring additional land beyond the current ROW.

Since the project is along an existing facility and lacking extensive forested areas, the impacts to terrestrial plants and animals will be minimal. The Preferred Alternative (Alternative B Modified) will result in 50 acres of scattered forested habitat converted to ROW.

Aquatic Resources

Surface Waters

Perennial streams within the project corridor include: Sougans Branch, Fall Creek, and an unnamed tributary of Sougans Branch. Intermittent streams include: an unnamed tributary of Fall Creek and an unnamed tributary of Reedy Creek. Booher Creek is depicted on USGS topographic mapping as a potential perennial stream. This resource was not characterized in the initial ecological study for the project. Ephemeral streams (wet weather conveyances) may also be considered jurisdictional waters of the U.S. and subject to Section 404 of the *Clean Water Act 1972* permitting requirements administered by the USACE. Figure 4-2 identifies the location of the perennial and intermittent streams in the vicinity of the project.

Impacts to a stream during road construction activities are primarily destruction of habitat and sedimentation. Habitat destruction will directly impact portions of the stream located within the project's ROW limits. Sedimentation may be associated with construction activities. Sedimentation impacts are usually temporary but can impact a stream for hundreds of feet downstream. These impacts include reduced levels of oxygen in the stream and interference with the ability of fish, aquatic insects, mussels and other aquatic organisms to utilize oxygen from the water. Temperature patterns and water flow patterns can be altered.

Siltation (deposition of sediment) increases turbidity (cloudiness from dust and other disturbed particles) which can slow photosynthesis, clog gills in fish and other aquatic life, and covers

macroinvertebrates and fish egg-laying substrates (streambed layers). This can result in long-term negative impacts to streams. Siltation can redistribute itself to increase flooding events, loss of storage capacity in reservoirs, and potential economic impacts associated with increased water treatment costs. Organic chemicals and metals can be reintroduced into the water columns that were previously contaminated.

The impacts to area streams will be minimized by strict adherence to TDEC's standard specifications for soil erosion prevention and sediment control.

Nonpoint source pollution in the project area is related primarily to agricultural practices. However, urban runoff, sewage and construction activities can also be contributing factors. Pollutants from these sources may include: deicing compounds; weed, rodent, and insect control products; surface runoff of pollutants coming from vehicular operations (oil, grease, asbestos and rubber); toxic chemical spills by trucks into a water supply system, and; contamination of surface and groundwater supplies by polluted fill materials. Deicing (removal of snow, ice or frost from a surface) and herbicide/pesticide uses are seasonal and typically result in short-term increases in area waters. Surface runoffs associated with vehicles are unavoidable, but the quantities of these pollutants are typically small and result in negligible impacts. Accidental spills are not predictable, but local emergency procedures are in place in most municipalities that report, contain and clean up hazardous materials.

Five of the streams within the project corridor will be impacted by the Preferred Alternative (Alternative B Modified). The streams include: Sougans Branch, Fall Creek, an unnamed tributary of Sougans Branch, an unnamed tributary of Fall Creek, and an unnamed tributary of Reedy Creek. The project is not anticipated to impact Booher Creek. None of the five streams have been listed as Tennessee Exceptional Waters within the project impact area and none were impaired to the degree that they have been placed upon the EPA-approved 2010 303(d) list of impaired streams published by TDEC Division of Water Pollution Control. The total amount of stream channel impacted will be determined after final project plans become available and documented for the environmental permitting process; however, stream impacts have been estimated based on conceptual plans for the Preferred Alternative (Alternative B Modified). The Preferred Alternative (Alternative B Modified) will require both culverts and stream relocation for an estimated total of 3,107 linear feet within the proposed ROW. All project stream crossings will consist of either culverts or pipes. Table 4-5 depicts the perennial and intermittent stream impacts anticipated in association with the alternatives considered.

Impacts to streams must be permitted pursuant to regulations promulgated by the TDEC Division of Water Pollution Control and the USACE and the Tennessee Valley Authority (TVA). Coordination with TDEC for a potential Water Quality Certification (401) prior to disturbance of streams is required. Physical alterations to properties of Waters of the State require an Aquatic Resource Alteration Permit (ARAP) or a Section 401 Water Quality Certification. Alterations to waters of the U.S. require either a Section 404 Nationwide or Individual Permit from the USACE and, where applicable, a 26a Permit or Letter of No Objection from TVA.

The Preferred Alternative (Alternative B Modified) will require one or more permits under the ARAP program administered by TDEC for the encapsulation and relocation of streams. Impacts to streams will also require either a Nationwide Permit or Individual Permit under the federal permit program administered by the USACE. The type of permit issued will be determined after the significance of the impacts to the streams is reviewed by the USACE. A TVA Section 26a Permit will also be required for the proposed stream crossings if within a Tennessee River Watershed.

FIGURE 4-2: PERENNIAL AND INTERMITTENT STREAMS IN PROJECT CORRIDOR

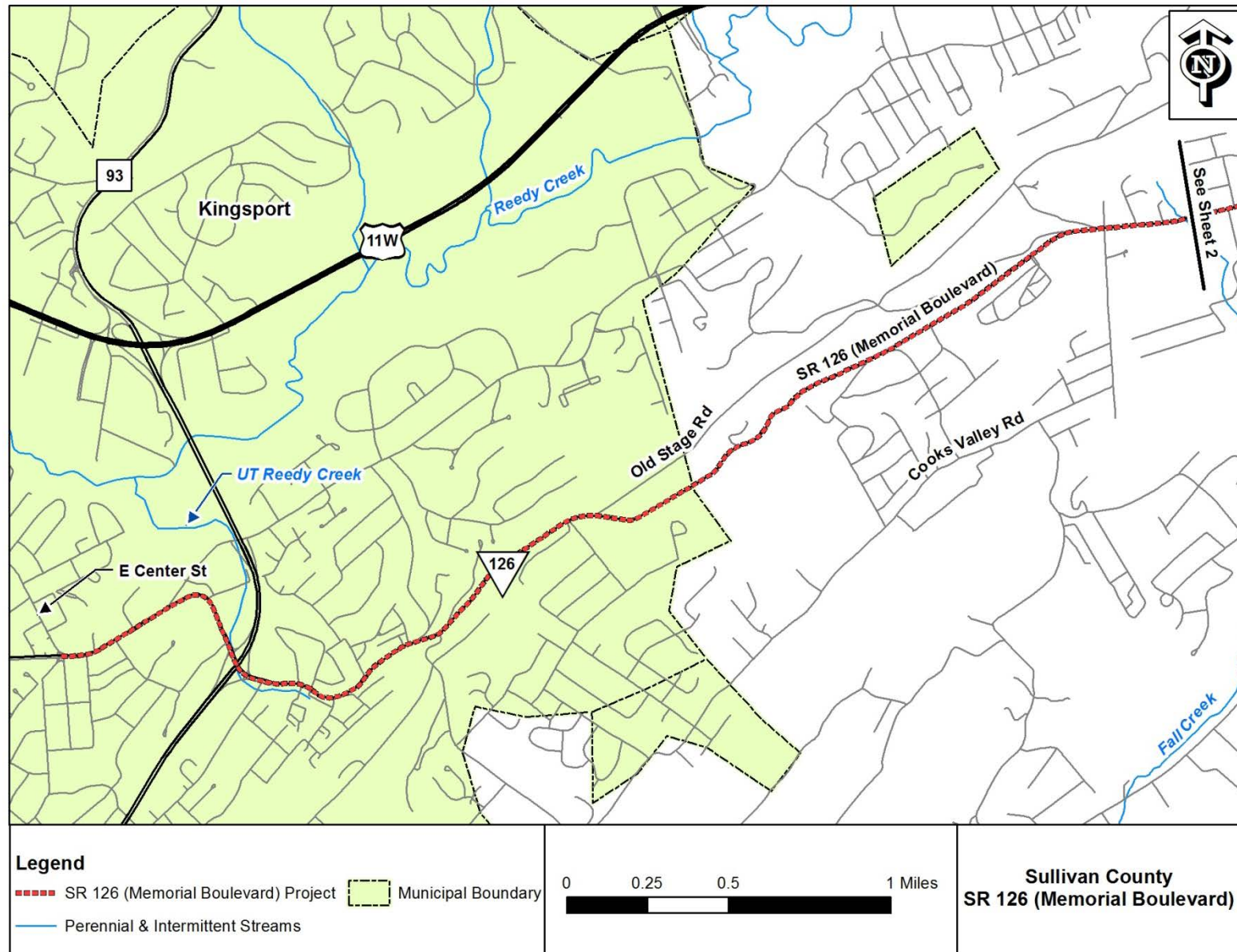


FIGURE 4-2: PERENNIAL AND INTERMITTENT STREAMS IN PROJECT CORRIDOR (CONTINUED)

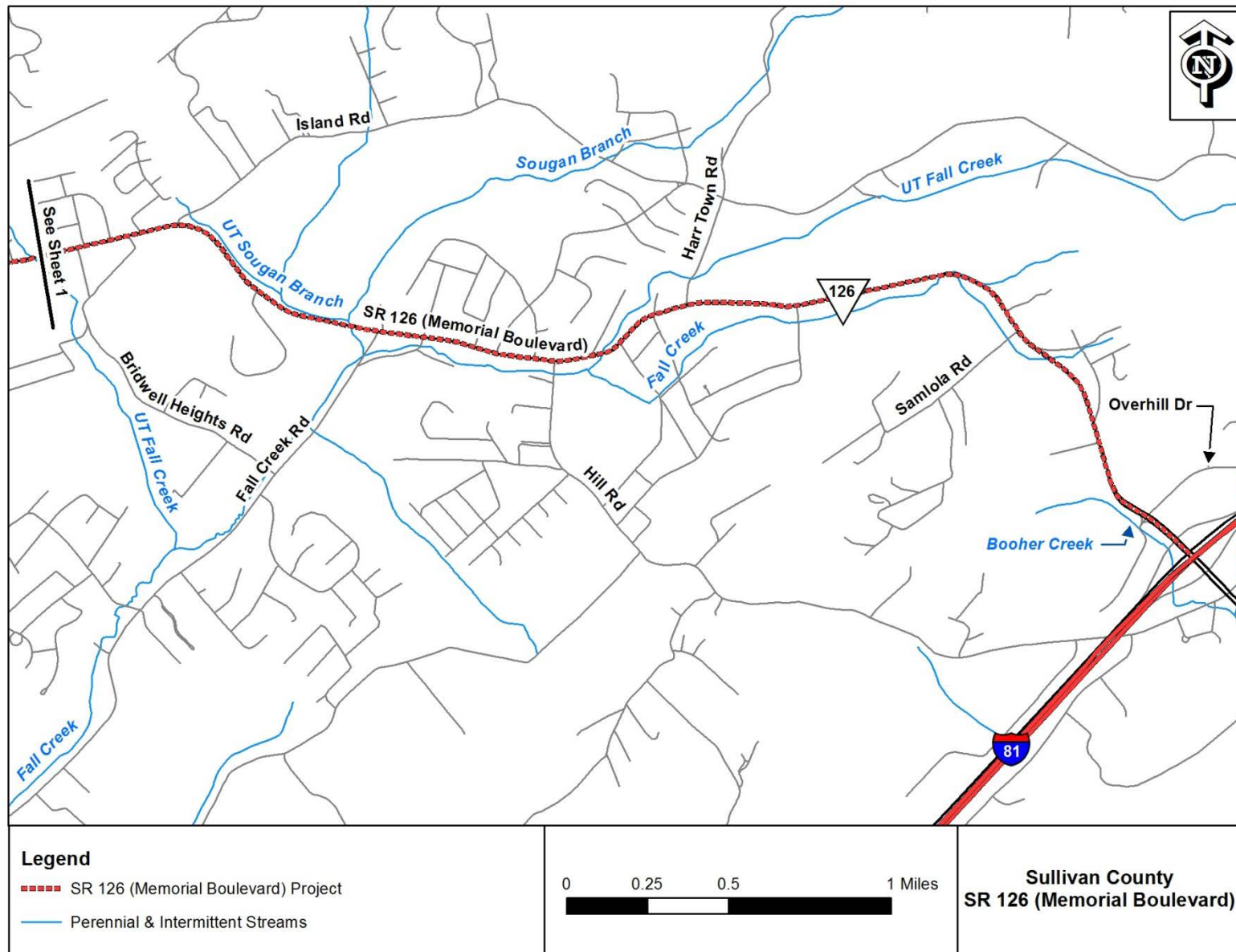


TABLE 4-5: PERENNIAL/INTERMITTENT STREAM IMPACTS FOR THE PREFERRED ALTERNATIVE (ALTERNATIVE B MODIFIED)

Streams Impacted	Drainage Area (acres)	Flow Regime	Preferred Alternative (Alternative B Modified) Linear Feet Impacted	Alternative A Linear Feet Impacted	Alternative B Linear Feet Impacted
Sougans Branch	1,574	Perennial	99	93	99
Fall Creek	2,032	Perennial	874	1,644	874
Unnamed Tributary of Sougans Branch	439	Perennial	1,868	2,506	1,868
Unnamed Tributary of Fall Creek	53	Intermittent	92	192	92
Unnamed Tributary of Reedy Creek	113	Intermittent	174	428	174
			Total: 3,107	Total: 4,863	Total: 3,107

Note: Impacts are Estimates.

Mitigation is required for stream impacts which do not meet the requirements for TDEC's General ARAP program or for certain Nationwide Section 404 permits issued by the USACE.

To protect water quality and aquatic species, TDOT will design stream crossings perpendicular to the direction of flow. The construction of culverts will be staged during the drier times of the year and construction will not take place immediately following rain events. Locations of these structures will be determined during final design and prior to submission of federal and state permit applications. Culvert improvements will be made during final design, if necessary, based on a hydraulic capacity analysis. Culverts will also be wide enough to pass high flows and will be placed so as not to restrict the movement of aquatic vertebrates within the streams.

In an effort to minimize sedimentation impacts, erosion prevention and sediment control plans will be included in the project construction plans. TDOT will also implement its *Standard Specifications for Road and Bridge Construction* and the *Statewide Storm Water Management Plan (SSWMP)*, which includes erosion prevention and sediment control standards for use during construction. To minimize potential run-off impacts to streams, and subsequent wildlife that utilize those streams, all appropriate best management practices (BMPs) will be implemented during and after construction to prevent erosion and control sedimentation within contributing drainage systems. Some of the BMPs that can be utilized include the following:

- Preservation of roadside vegetation beyond the limits of construction;
- Preservation of mature canopy along streams and establishment of a dense herbaceous layer of native species;
- Early re-vegetation of disturbed areas to hold soil movement to a minimum;

- Utilization of detention/retention structures;
- Prevention of heavy equipment in streams;
- Utilization of diversion channels to keep surface flow away from the construction site or to direct flow from the construction site into appropriate sediment control services;
- Seeding with temporary vegetation to help control sediment runoff;
- Avoiding construction activities immediately following rain events;
- Prevention of the release of chemicals, fuels, lubricants, bitumens, raw sewage, or harmful waste into or alongside of streams or impoundments, or into natural or manmade channels that lead to same and;
- Inclusion of BMPs in the construction plans, specifications, and contract pay items as specified in *TDOT Standard Specifications for Road and Bridge Construction* as well as the *TDOT Design Division Drainage Manual*.

Erosion control devices should limit any adverse effects to area streams. Exact measures will be developed and coordinated with the appropriate permitting agencies later in the design phase. If these mitigation measures are utilized, there should be no cumulative impacts to streams as a result of the construction of this project.

A General NPDES Permit for Discharges of Stormwater Associated with Construction Activities will be required for the proposed project. This permit is issued by TDEC's Division of Water Pollution Control pursuant to the federally-promulgated National Pollutant Discharge Elimination System (NPDES) program. The permit requires a Stormwater Pollution Prevention Plan (SWPPP) detailing the erosion prevention and sediment control practices designed to minimize sediment-laden stormwater run-off during precipitation events.

An updated environmental boundary and mitigation report will be completed with appropriate consultation with the USFWS, TWRA, TDEC, and USACE prior to construction. Impacts to perennial, intermittent, and ephemeral streams within the project corridor will be included in this documentation. The Preferred Alternative (Alternative B Modified) will be designed to avoid major impacts to these resources to the extents practicable. Efforts to further minimize impacts will continue throughout the design, permitting, and construction processes. Unavoidable impacts will be mitigated as required by applicable laws and regulations.

Floodplains

The review of FIRMs indicates that 100-year floodplains exist within the SR 126 project corridor. The floodplains are associated with Fall Creek and Sougans Branch, which are currently crossed by SR 126. Table 4-6 compares the floodplain impacts for the alternatives considered. Figure 4-3 illustrates the floodplains within the project corridor.

TABLE 4-6: FLOODPLAIN IMPACTS

Area	Preferred Alternative (Alternative B Modified)	Alternative A	Alternative B
Total Area of land within the 2,000-foot Corridor	2,100 acres	2,100 acres	2,100 acres
Impacted Floodplains within the Corridor	3.2 acres	4.0 acres	3.2 acres

Improvements to SR 126 with the Preferred Alternative (Alternative B Modified) will result in 3.2 acres of floodplain impacts. The project will be designed to minimize floodplain impacts as required by Executive Order 11988 and 23 CFR 650A. Where feasible, impacts will be minimized through the use of a perpendicular stream crossing aimed at reducing fill and/or structures within the floodplain. The floodplain crossing will be designed so that the following criteria are met:

- There is no potential for interruption or termination of the transportation facility that is needed for emergency vehicles or provides the communities' only evacuation route due to the construction of the project;
- The water crossings will convey floodwaters so there will be no increase in flooding due to the encroachment in the floodplain and;
- The Preferred Alternative (Alternative B Modified) will have no substantial adverse impacts on the natural and beneficial floodplain values.

Wetlands

Field surveys were conducted within the project impact area for the 2012 DEIS. In addition, National Wetland Inventory maps and topographical maps were reviewed to determine the possible presence of these resources. Impacts to wetlands are permitted through TDEC and the USACE in the same fashion as stream impacts. No wetlands were identified within the project corridor; therefore the Preferred Alternative (Alternative B Modified) will not result in impacts to wetlands. A review of the wetland and topographic maps since the approval of the DEIS confirms these findings remain valid.

Federally-Listed and Proposed Threatened and Endangered Species

An aquatic and terrestrial ecology report was completed in December 2008 for the DEIS. Through the coordination with federal agencies, it was concluded that no endangered or threatened species or their critical habitats occur within the potentially disturbed limits of the proposed action. No foreseen impacts will occur to those species or their ecological communities. Based on the best information at that time, the requirements of Section 7 of the *Endangered Species Act of 1973*, as amended, were fulfilled for Alternative A and Alternative B. On October 24, 2013, the USFWS responded to the selection of the Preferred Alternative (Alternative B Modified) stating that, based on the best information available at the time, the requirements of Section 7 were fulfilled for all species that currently receive federal protection. An updated environmental boundary and mitigation report for the Preferred Alternative (Alternative B Modified) will be completed with appropriate consultation with the USFWS, TWRA, and TDEC prior to construction.

FIGURE 4-3: FLOODPLAINS IN PROJECT CORRIDOR

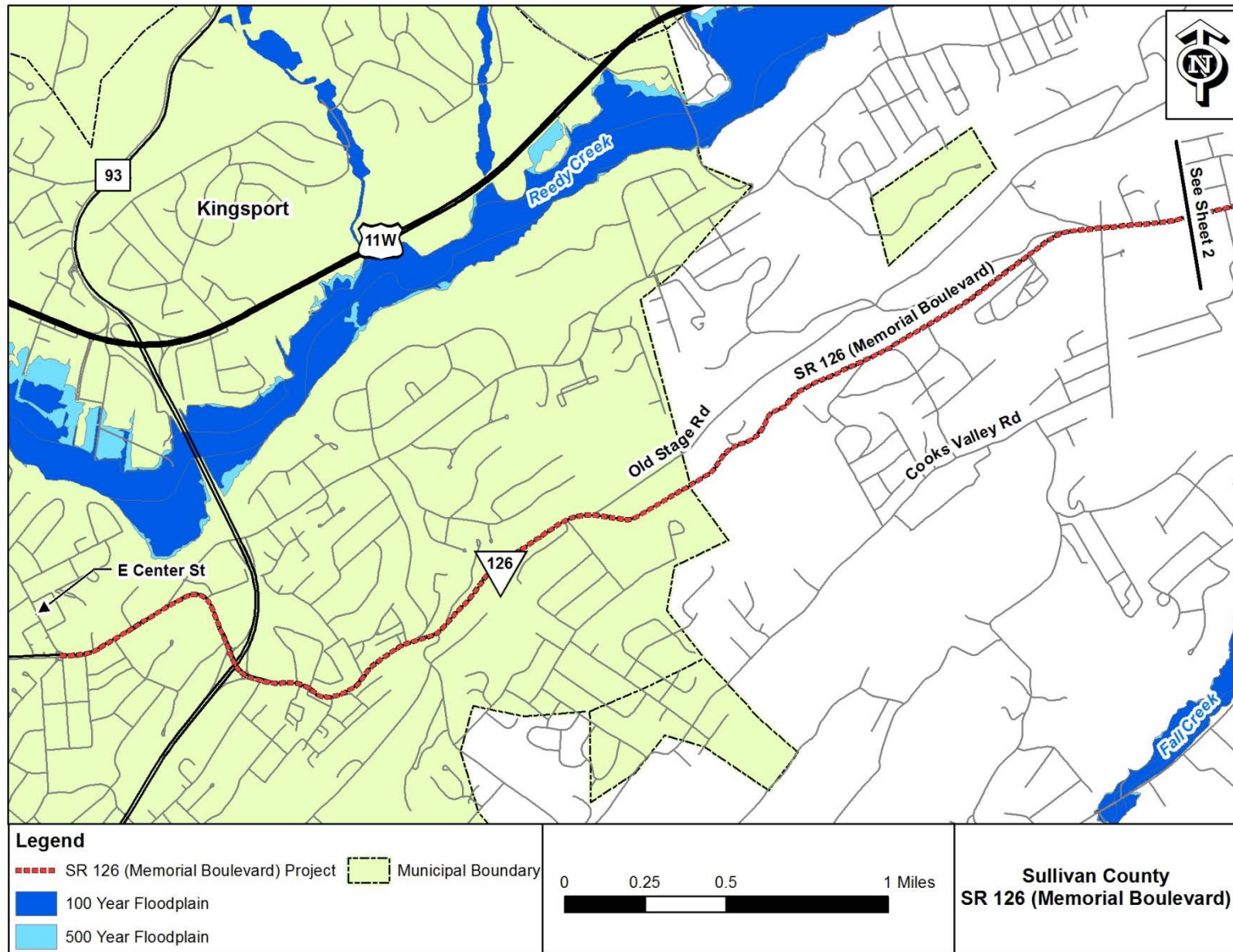
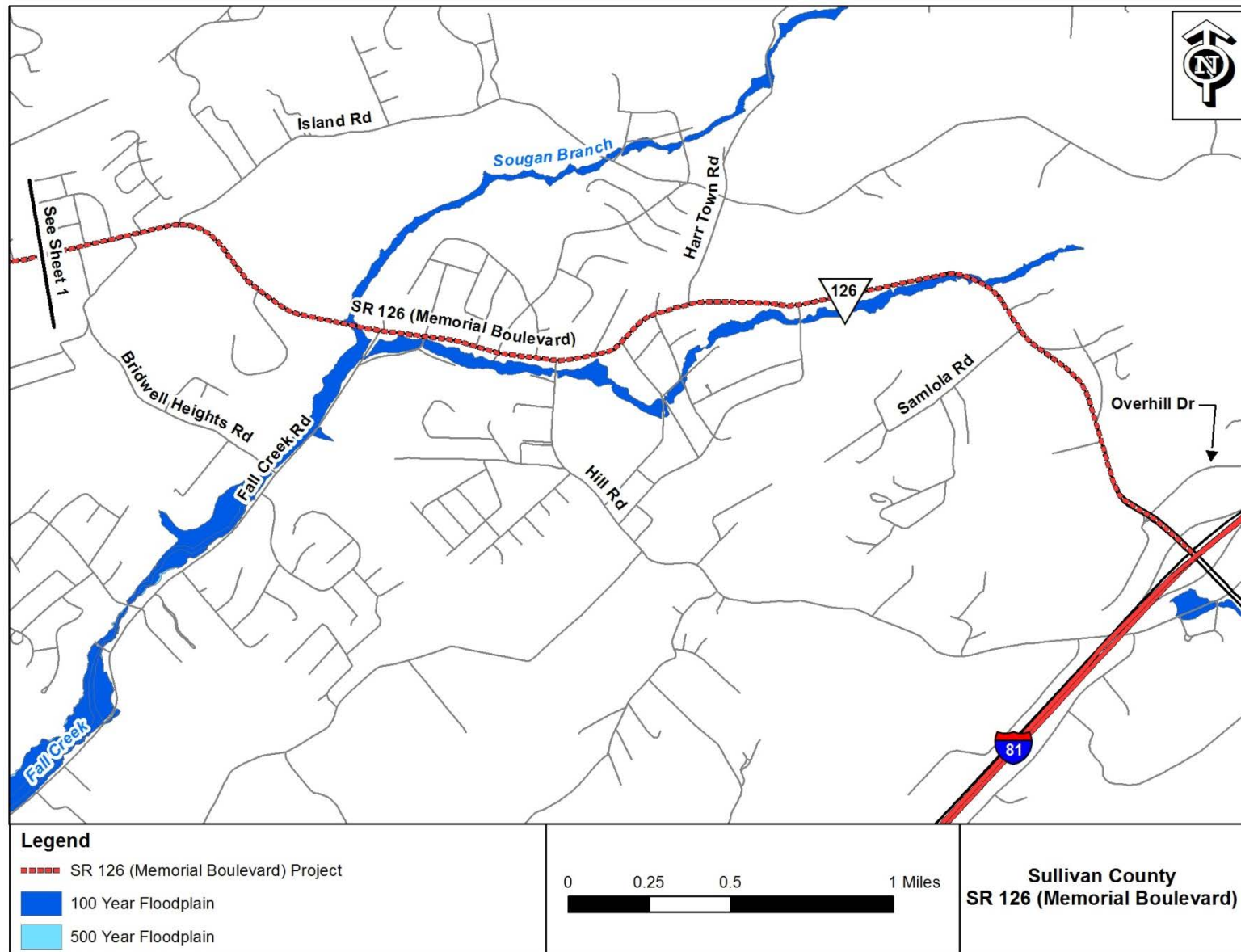


FIGURE 4-3: FLOODPLAINS IN PROJECT CORRIDOR (CONTINUED)



Since the Preferred Alternative (Alternative B Modified) is a modification of Alternative B, it is within the limits of the previously-studied corridor for federally-threatened and endangered species. The updated report will include the review of federally-listed and proposed threatened and endangered species and the potential impacts by the Preferred Alternative (Alternative B Modified). An updated bat survey will be conducted in the project area prior to construction letting.

The TDEC Natural Heritage Inventory Program database was reviewed in December 2008 and again in December 2013. The 2013 database review indicated nine species that are federally-listed as threatened or endangered in Sullivan County, Tennessee. The species are listed in Section 3.4.

The species review indicated that the bald eagle (*Haliaeetus leucocephalus*), Swainson's warbler (*Limnithlypis swainsonii*), the common raven (*Corvus corax*), and the common barn owl (*Tyto alba*) are known to exist in Sullivan County. Field surveys in 2008 did not identify either bald eagles or nests. If any of these four species were to locate within the project's Area of Potential Effect at any time during the construction phase, they will be protected under the *U.S. Migratory Bird Treaty Act of 1918* (MBTA) and TDOT will obtain a permit issued pursuant to federal regulations.

Although the Indiana bat (*Myotis sodalis*) is not known to occur in the project area, a bat survey for this federally-listed endangered species was conducted at the request of the USFWS. Mist netting and field reviews were conducted in the project impact area from August 3 to August 10, 2011. No Indiana bats were documented.

An *Indiana bat (Myotis sodalis) Mist Net Survey* report was completed in October 2011, and was provided in the appendix of the DEIS. The report covered the August 2011 field review. This study expired on April 1, 2014; however, according to USFWS, one bat survey will meet the USFWS' needs to fulfill Section 7 during the NEPA phase of a project. Correspondence from the USFWS on May 9, 2014, confirms that an initial bat survey during the NEPA phase and additional bat survey(s) prior to construction letting are sufficient at this time to document this effort. The USFWS also reconfirmed that Section 7 [of the *Endangered Species Act of 1973*] clearance was still valid. A copy of the USFWS correspondence is in Attachment D.

The project was evaluated for the Indiana bat (*Myotis sodalis*) and was deemed "not likely to adversely affect" the species. The northern long-eared bat (*Myotis septentrionalis*) has similar habitat requirements, so it is unlikely that the proposed project will jeopardize the existence of the northern long-eared bat. However, while awaiting additional information from USFWS, it will be assumed that the bat is present. Addressing the impacts to the species will be accomplished through whatever means that the USFWS deems necessary, including avoiding, minimizing, or mitigating potential effects, and adhering to all USFWS requirements prior to the letting and construction of the project.

State-Listed Species

According to the TDEC Natural Heritage Inventory Program database review in December 2013, there are 55 state-listed species that have been designated as endangered, threatened, deemed in need of management, or of special concern in Sullivan County, Tennessee. The species are listed in Section 3.4.

The December 2008 ecology report for the DEIS indicated that no state-listed species will be impacted by Alternative A or Alternative B. Through the coordination with state agencies, it was concluded that no endangered or threatened species or their critical habitats occur within the potentially disturbed limits of the proposed action. No foreseen impacts will occur to these species or their ecological communities. An updated environmental boundary and mitigation report for the Preferred Alternative (Alternative B Modified) will include the review of state-listed species as well as species protected under the MBTA for potential impacts.

Invasive Species

The potential for introducing additional exotic or invasive species to the natural and farmed plant communities in the project area is remote. Habitat fragmentation has already resulted in the establishment of these organisms in the region. Additional fragmentation of habitat and soil disturbance could create more favorable conditions for the existing non-native species. These impacts will be minimized by planting native vegetation on cut and fill slopes and in the medians of the selected Preferred Alternative (Alternative B Modified).

4.9.2 Alternatives A and B

Terrestrial Resources

Alternatives A and B are along the existing facility which also lacks extensive forested areas. Alternative A would require the most ROW acquisition of the alternatives; the conversion of approximately 75 acres of scattered forested habitat to ROW. Alternative B would result in the conversion of 55 acres of scattered forested habitat to ROW.

Aquatic Resources

Surface Waters

The same streams impacted by the Preferred Alternative (Alternative B Modified) would be impacted by Alternative A. Culverts or pipes would be used for stream crossings. Alternative A would require both culverts and stream relocation for an estimated total of 4,863 linear feet within the proposed ROW. This alternative would have the most stream impacts of the alternatives considered.

The same five streams as previously mentioned would also be impacted by Alternative B. Alternative B would require both culverts and stream relocation for an estimated total of 3,107 linear feet within the proposed ROW. This alternative would have similar stream impacts as the Preferred Alternative (Alternative B Modified).

Refer to Table 4-5 in the Preferred Alternative (Alternative B Modified) discussion for a comparison of stream impacts for each of the three Build Alternatives.

Floodplains

Alternatives A and B cross the same two floodplains as does the Preferred Alternative (Alternative B Modified). Alternative A would impact approximately four acres of floodplain. Alternative B would impact approximately 3.2 acres.

Refer to Table 4-6 in the Preferred Alternative (Alternative B Modified) discussion for a comparison of floodplain impacts for each of the three Build Alternatives.

Wetlands

Improvements to SR 126 through the implementation of either Alternative A or Alternative B would not result in impacts to wetlands.

Federally-Listed and Proposed Threatened and Endangered Species

Both Alternatives A and B were reviewed for federally-threatened and endangered species in December 2008. Based on the best information at that time, the requirements of Section 7 of the *Endangered Species Act of 1973*, as amended, were fulfilled.

An *Indiana bat (Myotis sodalis)* Mist Net Survey report was completed in October 2011, and was provided in the appendix of the DEIS. The report covered the August 2011 field review. This study expired on April 1, 2014; however, according to USFWS, one bat survey will meet the USFWS' needs to fulfill Section 7 during the NEPA phase of a project. Correspondence from the USFWS on May 9, 2014, confirms that an initial bat survey during the NEPA phase and additional bat survey(s) prior to construction letting are sufficient at this time to document this effort. The USFWS also reconfirmed that Section 7 [of the *Endangered Species Act of 1973*] clearance was still valid. A copy of the USFWS correspondence is in Attachment D.

The project was evaluated for the Indiana bat (*Myotis sodalis*) and was deemed “not likely to adversely affect” the species. The northern long-eared bat (*Myotis septentrionalis*) has similar habitat requirements, so it is unlikely that the proposed project would jeopardize the existence of the northern long-eared bat. However, while awaiting additional information from USFWS, it will be assumed that the bat is present. Addressing the impacts to the species will be accomplished through whatever means that the USFWS deems necessary, including avoiding, minimizing, or mitigating potential effects, and adhering to all USFWS requirements prior to the letting and construction of the project.

State-Listed Species

Both Alternatives A and B were reviewed for state-threatened and endangered species in December 2008. Neither Alternative A nor Alternative B would impact species protected under state law.

Invasive Species

Impacts caused by the introduction of invasive species would be minimized by planting native vegetation on cut and fill slopes and in the medians of either Alternative A or Alternative B.

4.10 Air Quality Impacts

A copy of the *Air Quality Technical Report for State Route 126 from East Center Street to Interstate 81* (updated January 2014) is in Appendix B. The analysis was conducted in accordance with Section 5.3.5 (Air Quality) of the *Tennessee Environmental Procedures Manual*.

4.10.1 National Ambient Air Quality Standards (NAAQS)

The EPA has established allowable concentrations and exposure limits called the National Ambient Air Quality Standards (NAAQS) for various “criteria” pollutants. These pollutants

include carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), sulfur oxides (SO_x), and lead (Pb).

In accordance with the *Clean Air Act Amendments of 1990* (CAAA of 1990), the EPA identified areas that did not meet the NAAQS for the criteria pollutants and designated them as “nonattainment” areas. Once a nonattainment area meets the NAAQS, it is re-designated as a “maintenance” area. Sullivan County is in attainment for all transportation-related criteria pollutants.

Preferred Alternative (Alternative B Modified)

Based on the screening procedure in the *Tennessee Environmental Procedures Manual*, the Preferred Alternative (Alternative B Modified) does not meet the criteria requiring a CO project level hot-spot analysis and will not produce a projected violation of the CO NAAQS.

Alternatives A and B

As with the Preferred Alternative (Alternative B Modified), Alternatives A and B do not meet the criteria requiring a CO project level hot-spot analysis and would not produce a projected violation of the CO NAAQS.

4.10.2 Transportation Conformity

Transportation conformity is a process required of Metropolitan Planning Organizations (MPOs) pursuant to the CAAA. CAAA requires that transportation plans, programs, and projects in nonattainment or maintenance areas that are funded or approved by the FHWA be in conformity with the State Implementation Plan (SIP), which represents the State’s plan to either achieve or maintain the NAAQS for a particular pollutant.

This project is located in Sullivan County, which are in attainment for all transportation-related criteria pollutants. Therefore, a transportation conformity determination is not required.

4.10.3 Mobile Source Air Toxics (MSATs)

On February 3, 2006, the FHWA released *Interim Guidance on Air Toxic Analysis in NEPA Documents*. This guidance was superseded on September 30, 2009 and most recently on December 6, 2012 by FHWA’s *Interim Guidance Update on Air Toxic Analysis in NEPA Documents*. The purpose of FHWA’s guidance is to advise on when and how to analyze Mobile Source Air Toxics (MSATs) in the NEPA process for highways. This guidance is interim because MSATs science is still evolving. As the science progresses, FHWA will update the guidance.

The qualitative analysis presented below provides a basis for identifying and comparing the potential differences among MSATs emissions, if any, for the build alternatives. The assessment is derived in part from a study conducted by the FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*.

FHWA’s Interim Guidance groups projects into the following categories:

- Exempt Projects and Projects with no Meaningful Potential MSATs Effects;
- Projects with Low Potential MSATs Effects and;
- Projects with Higher Potential MSATs Effects.

FHWA's Interim Guidance provides examples of "Projects with Low Potential MSATs Effects." These projects include minor widening projects and new interchanges, such as those that replace a signalized intersection on a surface street or where design year traffic projections are less than 140,000 to 150,000 AADT (Annual Average Daily Traffic).

The Preferred Alternative (Alternative B Modified) includes the widening of SR 126 in some locations and the improvement of SR 126 in other locations. The highest projected design year 2037 AADT on SR 126 is 20,380 and substantially lower than the FHWA criterion. Therefore, the project meets the criteria for a "Project with Low Potential MSATs Effects."

For the No-Build and build alternatives, the amount of MSATs emitted would be proportional to the vehicle miles traveled (VMT), assuming that other variables such as fleet mix are the same for each alternative. The estimated VMT for the Preferred Alternative (Alternative B Modified) is essentially the same as the VMT for the No-Build Alternative. Therefore, it is expected that there would be no appreciable difference in overall MSATs emissions between the No-Build and Preferred Alternative (Alternative B Modified).

Any emissions increases would also be offset somewhat by lower MSATs emission rates due to increased speeds; according to the EPA's MOVES2010b model, emissions of all of the priority MSATs decrease as speed increases. Travel speeds for the Preferred Alternative (Alternative B Modified) are expected to be higher than for the No-Build Alternative.

Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of the EPA's national control programs that are projected to reduce annual MSATs emissions by over 80 percent between 2010 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSATs emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated for the Preferred Alternative (Alternative B Modified) will have the effect of moving some traffic closer to nearby sensitive land uses; therefore, under the Preferred Alternative (Alternative B Modified) there may be localized areas where ambient concentrations of MSATs could be higher than under the No-Build Alternative.

However, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSATs health impacts.

Preferred Alternative (Alternative B Modified)

When SR 126 is widened, the localized level of MSATs emissions for the Preferred Alternative (Alternative B Modified) could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSATs emissions). Also, MSATs will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover (replacement of older cars with newer ones), will cause substantial reductions over time that, in almost all cases, will cause region-wide MSATs levels to be significantly lower than today.

Alternatives A and B

As with the Preferred Alternative (Alternative B Modified), the localized level of MSATs emissions for Alternatives A and B could be higher relative to the No-Build Alternative but lower in other locations when traffic shifts away from them. EPA's vehicle and fuel regulations, coupled with fleet turnover, would cause substantial reductions in region-wide MSATs levels in the future.

4.10.4 Greenhouse Gas Emissions (Climate Change)

Climate change is an important national and global concern. To help address the global issue of climate change, USDOT is committed to reducing GHG emissions from vehicles traveling on our nation's highways. USDOT and EPA are working together to reduce these emissions by substantially improving vehicle efficiency and shifting toward lower carbon intensive fuels. The agencies have jointly established new, more stringent fuel economy and first ever GHG emissions standards for model year 2012-2025 cars and light trucks. On October 15, 2015, the agencies finalized even more stringent standards for model year 2017-2025 vehicles, with an ultimate fuel economy standard of 54.5 miles per gallon for cars and light trucks by model year 2025. Further, on September 15, 2011, the agencies jointly published the first ever fuel economy and GHG emissions standards for heavy-duty trucks and buses.² Increasing use of technological innovations that can improve fuel economy, such as gasoline- and diesel-electric hybrid vehicles, will improve air quality and reduce CO₂ emissions future years.

Consistent with our view that broad-scale efforts hold the greatest promise for meaningfully addressing the global climate change problem, FHWA is engaged in developing strategies to reduce transportation's contribution to GHGs—particularly CO₂ emissions—and to assess the risks to transportation systems and services from climate change. In an effort to assist States and MPOs in performing GHG analyses, FHWA has developed a Handbook for Estimating Transportation GHG Emissions for Integration into the Planning Process. The Handbook presents methodologies reflecting good practices for the evaluation of GHG emissions at the transportation program level, and demonstrates how such evaluation may be integrated into the transportation planning process. FHWA also refined a web-based tool, The Energy and Emissions Reduction Policy Analysis Tool (EERPAT), for use at the statewide level to model a large number of GHG reduction scenarios and alternatives for use in transportation planning, climate action plans, scenario planning exercises, and in meeting state GHG reduction targets and goals. To assist states and MPOs in assessing climate change vulnerabilities to their transportation networks, FHWA has developed a climate change and extreme weather vulnerability and risk assessment framework.

Preferred Alternative (Alternative B Modified)

The GHG emissions from the Preferred Alternative (Alternative B Modified) will be insignificant. For these reasons, no project-level GHG analysis was performed for this project.

² For more information on fuel economy proposals and standards, see the National Highway Traffic Safety Administration's Corporate Average Fuel Economy website: <http://www.nhtsa.gov/fuel-economy/>.

Alternatives A and B

As with the Preferred Alternative (Alternative B Modified), the GHG emissions for Alternatives A and B would be insignificant compared to global emissions.

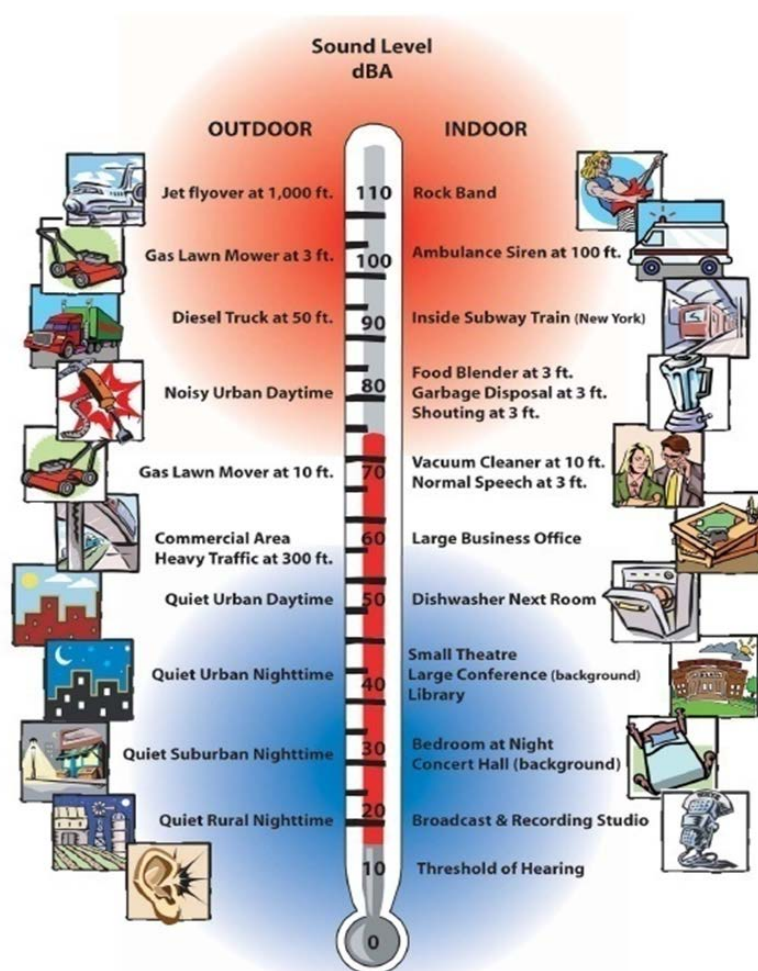
4.11 Noise Impacts

The noise evaluation for this project was conducted in accordance with federal guidance for handling noise impacts and abatement contained in 23 CFR 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise* and the TDOT's *Policy on Highway Traffic Noise Abatement*, effective July 13, 2011. A copy of the *Noise Evaluation Update for State Route 126 from East Center Street to Interstate 81* (updated January 2014) is in Appendix C.

Fundamentals of Sound and Noise

The intensity or loudness of sound is measured in units called decibels (dB). However, because the human ear does not hear sound waves of different frequencies at the same subjective loudness, an adjustment or weighting of the high-pitched and low-pitched sounds is made to approximate how an average person hears sounds. When such adjustments to the sound levels are made, they are called "A-weighted levels" and are labeled "dBA." Figure 4-4 shows some common indoor and outdoor sound levels.

FIGURE 4-4: COMMON INDOOR AND OUTDOOR NOISE LEVELS



Noise is defined as unwanted sound. Since highway traffic sound is normally unwanted, it is usually called highway traffic noise. The level of highway traffic noise is never constant; therefore, it is necessary to use a statistical descriptor to describe the varying traffic noise levels. The equivalent continuous sound level (L_{eq}) is the statistical descriptor used in a noise impact analysis. The L_{eq} sound level is the steady A-weighted sound level, which would produce the same A-weighted sound energy over a stated period of time.

Criteria for Determining Impacts

FHWA regulations establish Noise Abatement Criteria (NAC) that must be used by states to determine if noise-sensitive land uses will be impacted by a project.

The regulations state that noise mitigation should be evaluated for any receptor or group of receptors where predicted traffic noise levels, using future traffic volumes and roadway conditions, approach or exceed the NAC shown in Table 4-7.

TABLE 4-7: FHWA NOISE ABATEMENT CRITERIA IN 23 CFR 772

Activity Category	L_{Aeq} (1h)	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ⁽¹⁾	67	Exterior	Residential.
C ⁽¹⁾	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio stations, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structure, radio studios, recording studios, schools, and television studios.
E ⁽¹⁾	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D, or F.
F	---	---	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	---	---	Undeveloped lands that are not permitted.

Traffic noise is considered to “approach” a criterion at a level of one dBA less than the criterion (e.g., 66 dBA for Category B receptors).

The FHWA regulations and TDOT’s noise policy also define impacts to occur if there is a substantial increase in design year sound levels over existing sound levels. Table 4-8 presents TDOT’s criteria to define substantial noise increase.

The determination regarding substantial increase depends on 1) the existing level, and 2) the increase in the existing level caused by the project. If the existing level is 42 and the project will increase that level by 15 dB or more (i.e. 42 to 57 or higher), then that would constitute a substantial increase. If the level was increased from 42 to 55 dB, then that would not be an impact because the increase was less than 15 dB.

Identification of Noise-Sensitive Land Uses

Review of available electronic mapping revealed over 200 Category B residences adjacent to SR 126 that might be impacted by the project. These uses include both single-family homes and apartments.

The Holston Manor nursing home and the East Lawn Memorial Park cemetery are also located near SR 126 within the project limits. The exterior of the nursing home and cemetery are classified as Category C land uses. For cemeteries, frequent human use areas include exterior areas where services are held on a regular basis but do not include individual grave sites. Therefore, only the exterior of the cemetery building used for services was assessed for impacts.

TABLE 4-8: SUBSTANTIAL NOISE LEVEL INCREASE

Existing Noise Level (dBA) ⁽¹⁾	Predicted Design Year Noise Level Increase (dB) ⁽²⁾
42 or less	15 or more
43	14 or more
44	13 or more
45	12 or more
46	11 or more
47 or more	10 or more

(1) Worst hour noise level from the combination of natural and mechanical sources and human activity.

(2) Predicted design year noise level minus existing noise level.

Noise impacts at the residences, nursing home, and cemetery were identified, and noise abatement was considered if design year sound levels are 66 dBA or higher or if there is a substantial increase in existing sound levels.

There are some Category F industrial and retail properties located within the project limits. As indicated in Table 4-9, these land uses are not noise-sensitive and do not have an NAC. Therefore, they have not been included in the noise study.

Finally, there are some tracts of Activity Category G undeveloped lands that exist along the project. These undeveloped lands are not noise-sensitive and have not been included in the noise analysis. However, noise impacts could occur in the future if noise-sensitive land uses are constructed near SR 126. A discussion of future sound levels and the need for noise-compatible land use planning is provided later in this report.

Properties that are shown in the conceptual plans to be acquired have not been included in the noise analysis.

Determination of Existing Sound Levels

Noise measurements were conducted at several noise-sensitive land uses in the project area to characterize the existing noise environment. Existing peak hour sound levels at the measurement locations range from 44 to 66 dBA. Traffic noise from SR 126 is the dominant noise source in the area.

Determination of Future Sound Levels

Sound levels for the No-Build Alternative are predicted to be approximately one dB higher than existing sound levels.

Noise modeling of the Preferred Alternative (Alternative B Modified) was completed using the FHWA Traffic Noise Model (TNM 2.5) computer program. The program calculated year 2037 design-hour equivalent sound levels at the noise-sensitive land uses in the project area, including the measurement locations. The predicted sound levels are summarized in Table 4-9. The predicted sound levels at each noise-sensitive land use are provided in the noise evaluation update report.

TABLE 4-9: DESIGN YEAR 2037 SOUND LEVELS AND IMPACTS

Alternative	Design Year Sound Levels (dBA)	Impacted based on NAC?	Number of Impacts
Preferred (Alternative B Modified)	44 – 68	Yes	18

4.11.1 Determination of Future Sound Levels for the Preferred Alternative (Alternative B Modified)

Design year sound levels for the Preferred Alternative (Alternative B Modified) are predicted to be between zero and four dB higher than existing sound levels, as shown in Table 4-9. These increases are not substantial according to TDOT's Noise Policy. Therefore, none of the receivers are predicted to be impacted by a substantial increase in sound level. Additionally, sound levels at some residences will be reduced in many locations due to a reduced roadway cross-section. Noise levels under the Preferred Alternative (Alternative B Modified) will be lower than those projected under Alternatives A and B in part due to reduced traffic projections under the Preferred Alternative (Alternative B Modified).

Design year sound levels at most receivers are predicted to be below the NAC. However, 18 residences are predicted to be impacted with design year sound levels of 66 dBA or higher. The nursing home and cemetery are not predicted to be impacted.

4.11.2 Determination of Future Sound Levels for Alternatives A and B

Design year sound levels for Alternatives A and B are predicted to be between zero and eight dB higher than existing sound levels. None of the receivers are predicted to be impacted by a substantial increase in sound level. Additionally, sound levels at some residences would be reduced in many locations due to a reduced roadway cross-section.

Design year sound levels at most receivers are predicted to be below the NAC. However, 35 residences are predicted to be impacted by Alternative A with design year sound levels of 66

dBA or higher. Similarly, 45 residences are predicted to be impacted under Alternative B. The increased number of impacts for Alternative B is primarily the result of fewer properties being acquired and some residences remaining in close proximity to SR 126.

Noise Abatement Evaluation

Abatement is generally evaluated when impacts are predicted to occur. Noise barriers were evaluated to reduce sound levels for impacted land uses. In order for noise barriers to be included in a project, they must be determined to be both feasible and reasonable in accordance with TDOT's Noise Policy as discussed below.

Feasibility means that: the construction of a barrier would not be anticipated to pose any major design, construction, maintenance, or safety problems; and the noise barriers will provide a noise reduction (or insertion loss) of five dB reduction in design year highway traffic noise levels for the majority of the impacted first-row receptors.

SR 126 is not a limited access facility. In fact, all of the impacted residences have direct driveway access to SR 126. Noise barriers are not feasible to mitigate impacts at these residences because a noise barrier would limit access from these properties and adjacent properties.

Some of the impacted residences are also isolated from other impacted residences. Noise barriers for isolated residences are not reasonable since the required area per benefited residence will greatly exceed the allowable area for benefited residence. As a result, noise barriers were determined not to be feasible or reasonable for this project.

Statement of Likelihood

Noise abatement is not proposed for this project.

Information for Local Officials

There are tracts of undeveloped land adjacent to SR 126. TDOT encourages the local governments with jurisdiction over these lands, as well as potential developers of these lands, to practice noise compatibility planning in order to avoid future noise impacts. The following language is included in TDOT's Noise Policy:

"Highway traffic noise should be reduced through a program of shared responsibility. Local governments should use their power to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway or that the developments are planned, designed and constructed in such a way that noise impacts are minimized."

Table 4-10 presents design year sound levels for areas along SR 126 where vacant and possibly developable lands exist. Noise predictions were made at distances between 50 and 300 feet from the centerline of the near lane for the design year 2037. As indicated, sound levels within approximately 50 to 100 feet of the centerline of the near lane of SR 126 will approach or exceed the NAC of 66 dBA. Noise-sensitive land uses should generally not be constructed in these areas unless noise mitigation measures are provided.

Finally, TDOT currently has an active Type II Noise Barrier Program to facilitate the construction of “retrofit” noise barriers along existing highways.

Noise levels in the project area will be increased during construction. The sound levels resulting from construction activities at nearby noise-sensitive receivers will be a function of the types of equipment utilized, the duration of the activities, and the distances between construction activities and nearby land uses.

TABLE 4-10: DESIGN YEAR 2037 SOUND LEVEL IMPACTS

Distance ⁽¹⁾	L _{eq} (1h) (dBA) ⁽²⁾
50 feet	67
100 feet	64
200 feet	59
300 feet	55

(1) Perpendicular distance to the center of near lane. (2) At-grade situation.

TDOT's construction specifications will apply to this project. As a result, construction procedures shall be governed by the *Standard Specifications for Road and Bridge Construction* as issued by TDOT and as amended by the most recent applicable supplements. The contractor will be bound by Section 107.01 of the Standard Specifications to observe any noise ordinance in effect within the project limits. Detoured traffic shall be routed during construction so as to cause the least practicable noise impact on noise-sensitive areas.

4.12 Historic/Architectural Impacts

Surveys of potential historic resources were performed in accordance with Section 106 of the *National Historic Preservation Act of 1966*. In September 2008, TDOT identified two properties within the APE that are eligible for, or listed in, the NRHP. The properties are the Shipley-Jarvis House located at 3309 Memorial Boulevard (SR 126) and Yancey's Tavern located on SR 126 at its intersection with Chestnut Ridge Road. The Shipley-Jarvis House is eligible for listing on the NRHP and Yancey's Tavern is listed on the NHRP. The historic resources are depicted in Figure 4-5 and Figure 4-6.

Shipley-Jarvis House

This Shipley-Jarvis House is located on the south side of SR 126 in a residential and commercial section of East Kingsport. The house is located on a 1.6-acre tract near the project's East Center Street terminus. It exemplifies the adaptation of 19th century dwellings to conform to 20th century architectural tastes. Its architectural features continue to illustrate both mid-19th century building methods and 20th century stylistic changes.

Yancey's Tavern

Yancey's Tavern is located on the northern side of SR 126 on Chestnut Ridge Road. This property was listed in the NRHP in 1972 under Criterion A for its significance in the early settlement of Sullivan County. According to the NRHP listing, the structure was constructed in 1782 as a double log house with a dogtrot. It is currently used as a community event and meeting place.

FIGURE 4-5: SHIPLEY-JARVIS HOUSE

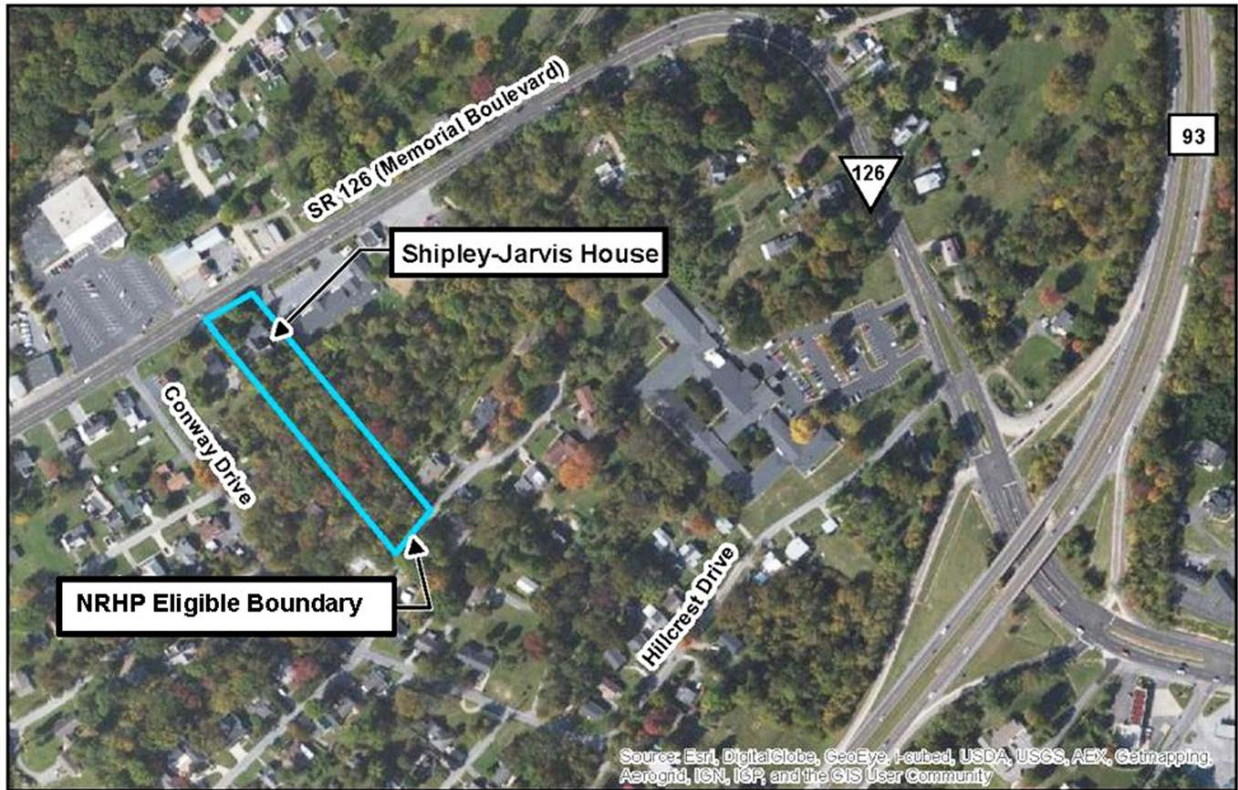
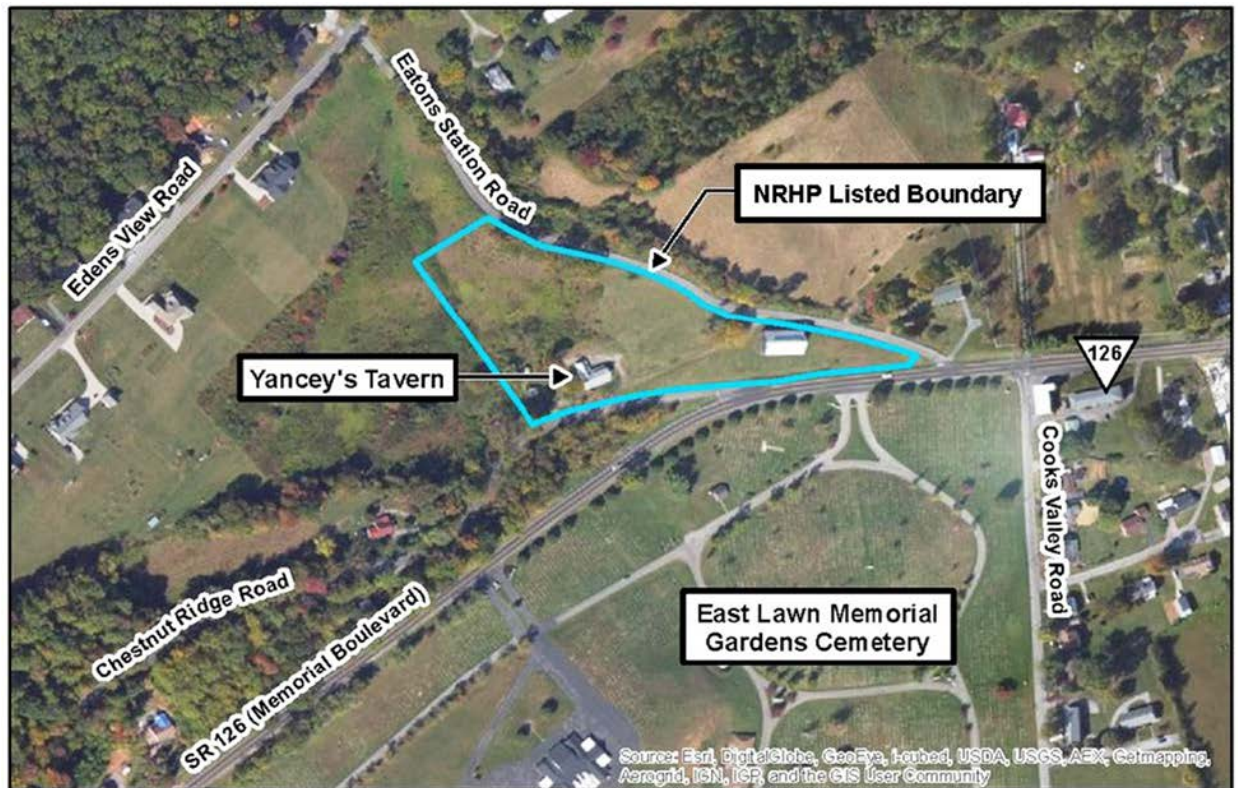


FIGURE 4-6: YANCEY'S TAVERN



4.12.1 Preferred Alternative (Alternative B Modified)

Shipley-Jarvis House

The Preferred Alternative (Alternative B Modified) proposes the widening of the roadway in front of the Shipley-Jarvis House to be shifted away from the property as necessary. This widening will not acquire any ROW within the proposed NRHP boundary of the property. The widening will not have an adverse effect on this property. The SHPO concurred with this finding in a letter dated November 3, 2008, for Alternative B, which is identical to the Preferred Alternative (Alternative B Modified) in this area. The SHPO letter is in Attachment E, and also in the DEIS, which is in Appendix J.

Yancey's Tavern

The Preferred Alternative (Alternative B Modified) is a modification to Alternative B. As described in the DEIS, the SHPO commented on November 3, 2008, that an adverse impact on Yancey's Tavern would occur with Alternative B. On February 26, 2010, the SHPO advised that the ACHP should be consulted regarding this adverse impact. Upon receiving written notification and information regarding the adverse impact to Yancey's Tavern, the ACHP responded on February 18, 2011, that there is no need for their participation to resolve the adverse effect. A Memorandum of Agreement (MOA) is not required since there is no adverse effect.

In an effort to minimize impacts to Yancey's Tavern associated with the Preferred Alternative (Alternative B Modified), TDOT considered avoidance options. On June 3, 2013, TDOT submitted to the SHPO an Addendum Documentation of Effects report outlining proposed measures associated with the Preferred Alternative (Alternative B Modified). The SHPO responded on June 11, 2013, that the project as proposed with the Preferred Alternative (Alternative B Modified) will not adversely affect Yancey's Tavern under Section 106, which is explained in Section 3.5 of this document. The Preferred Alternative (Alternative B Modified) includes a compressed three-lane cross-section as it passes between Yancey's Tavern and the East Lawn Memorial Gardens Cemetery. This alternative avoids taking property from Yancey's Tavern and avoids displacing any known graves from the cemetery. Since the Preferred Alternative (Alternative B Modified) will not adversely affect Yancey's Tavern, an MOA is not required. Figure 4-7 indicates the Yancey's Tavern and East Lawn Memorial Gardens Cemetery location.

Figure 4-8 details the proposed mitigation for the area. The compressed section for the Preferred Alternative (Alternative B Modified) is discussed in greater detail in Chapter 2.

The following design commitments will be carried out in association with the Preferred Alternative (Alternative B Modified):

- The proposed project will shift the ROW from Yancey's Tavern to the south onto the East Lawn Memorial Park and Cemetery, but will not be shifted so far to the south that known occupied graves will need to be relocated;
- Only a temporary construction easement will be needed within the National Register boundary of Yancey's Tavern and that construction easement will be returned to the current grade and appearance after construction is completed;
- TDOT is proposing an aesthetic treatment to the retaining wall that will be compatible with the historic landscape and will be minimalist in its design. TDOT will consult with the

SHPO and consulting parties in designing the retaining wall in order to get their review and comments on the proposed design feature;

- The cross-section is reduced by the removal of the sidewalk on the northern side of SR 126, but the sidewalk on the south side will be retained;
- In order to re-screen the area in front of Yancey's Tavern, TDOT is proposing a detailed landscaping plan that will be created in consultation with the SHPO and consulting parties to provide appropriate plantings for the area;
- Landscaping and aesthetic details will be presented to the SHPO and consulting parties for review and comment;
- Chestnut Ridge Road will end slightly to the southeast of the historic property itself and a branch turn-around will be provided at the dead end to give travelers the opportunity to turn around. Having a branch turn-around rather than a cul-de-sac will give the dead end a more rural feel rather than the suburban feel of a bulb-out cul-de-sac and;
- The branch turn-around will require some of the mature trees to the southwest of Yancey's Tavern to be removed; however, TDOT will develop a detailed landscaping plan, in consultation with the SHPO and consulting parties, that will replace the vegetation that will need to be removed with the branch, turn-around design.

4.12.2 Alternatives A and B

Shipley-Jarvis House

Alternatives A and B include the same plan for widening of the roadway in front of the Shipley-Jarvis House as the Preferred Alternative (Alternative B Modified). The widening would not acquire any ROW from the property. It was determined by TDOT that these alternatives would not have an adverse effect on this property and no mitigation is required. The SHPO concurred with this finding in the letter dated November 3, 2008. The SHPO letter is in the appendix of the DEIS.

Yancey's Tavern

The SHPO commented on November 3, 2008 that an adverse impact on Yancey's Tavern would occur with either Alternative A or B. On February 26, 2010, the SHPO advised that the ACHP should be consulted regarding this adverse impact. Upon receiving written notification and information regarding the adverse impact to Yancey's Tavern, the ACHP responded on February 18, 2011, that there is no need for their participation to resolve the adverse effect. The ACHP correspondence also noted that supporting documentation along with a final MOA must be filed with the ACHP. Coordination related to Yancey's Tavern is in Attachment E.

Conclusion

As stated above, for the Preferred Alternative (Alternative B Modified), coordination occurred with the property owner of Yancey's Tavern and the SHPO to avoid an adverse effect under Section 106. Because there is no adverse effect, an MOA was deemed unnecessary.

4.13 Archaeological Impacts

Beginning in October 2001, investigations were conducted to provide information on the distribution of important archaeological properties within the project area. This information was used to make informed management decisions relating to the design, improvements, and construction of SR 126.

As stated in Chapter 3, archaeological investigations were conducted in phases: Phase 1a and Phase 1b. Phase 1a consisted of a literature and records search for the areas surrounding the proposed alternatives. Phase 1b, the second phase of the investigation, consisted of a systematic pedestrian survey of high-probability areas resulting from the predictive model for archaeological resources within the proposed alternatives.

A pedestrian survey involves walking the surface of an archaeological site or large region in stratified patterns, and either marking the location of identified artifacts, or collecting a sample for further investigation. High-probability areas are locations where there is a strong possibility of artifacts present.

A Phase I Archaeological Survey for the APE was completed in September 2009. Thirteen sites were identified. Four of them were considered potentially eligible for the National Register, warranting additional investigation to determine their National Register status if they could not be avoided by the build alternatives. One site (40SL419) encompasses all of the area within the boundaries of the NRHP-listed Yancey's Tavern property.

Alternatives A and B

During the development of the DEIS, an archaeological avoidance plan was developed. By implementing minor modifications to Alternatives A and B, the plan avoided all four of the archaeology sites considered potentially eligible for the National Register. The archaeological avoidance plan was submitted to the SHPO on July, 1, 2010 and on July 14, 2010, the SHPO stated that the revised project area contained no archaeological resources eligible for listing in the NRHP.

Preferred Alternative (Alternative B Modified)

As part of the development of the Preferred Alternative (Alternative B Modified), the project design was refined to avoid impacts on the Yancey's Tavern historic property. The roadway section was reduced and a retaining wall was included to keep project impacts outside the NRHP boundaries of the property. This effectively avoided prehistoric and historic archaeological deposits that may be present there. In a letter dated June 11, 2013, the SHPO states that the project as proposed under the Preferred Alternative (Alternative B Modified) will not adversely affect Yancey's Tavern.

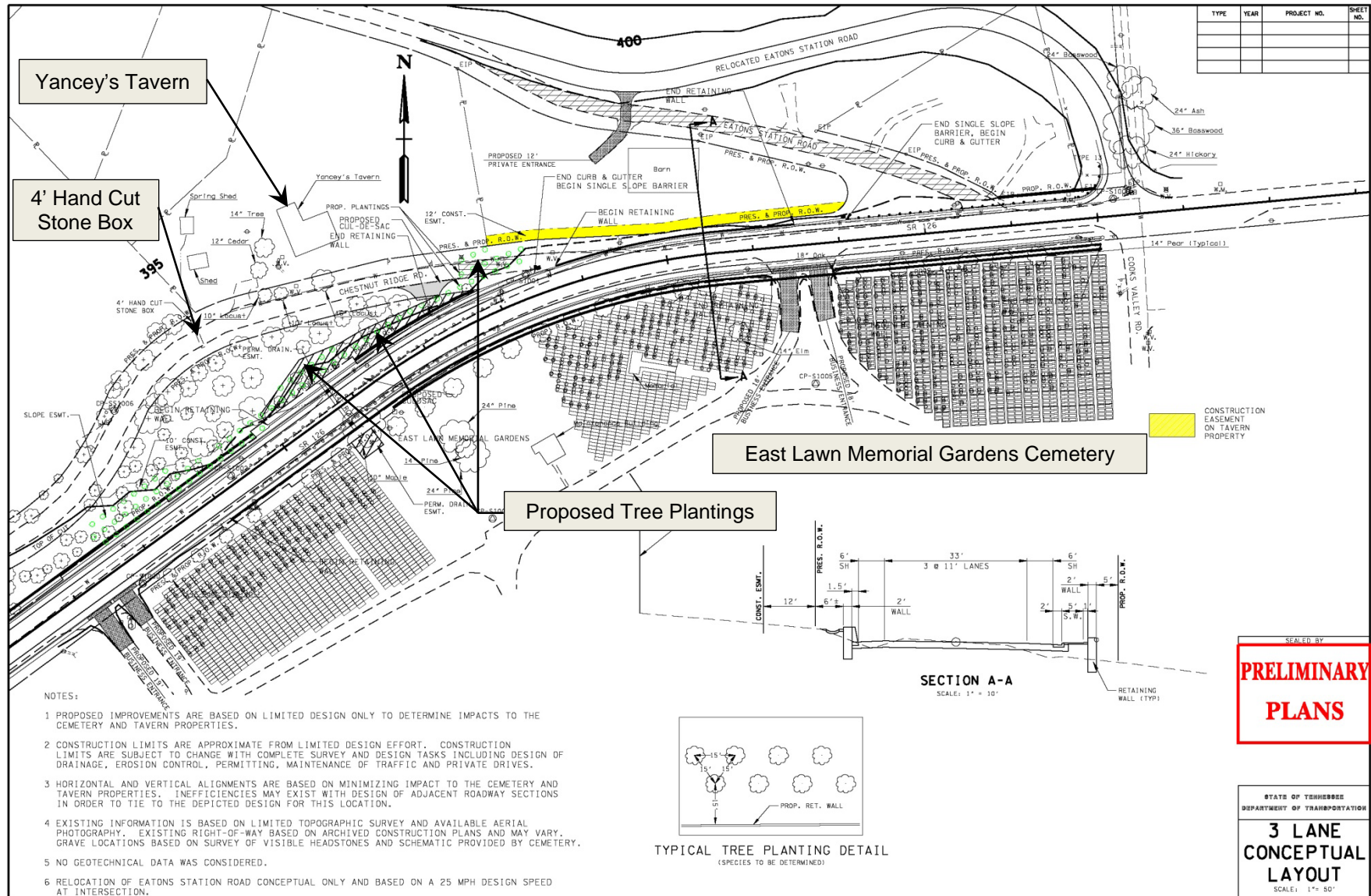
Tribal coordination was conducted for the project on January 9, 2012. As a result of this coordination, both the Cherokee Nation and United Keetoowah Band of Cherokee Indians in Oklahoma indicated that they were unaware of any sites and had no objections to the project as proposed. Both tribes will be notified if human remains or objects are discovered. Additional coordination was sent to the Muscogee (Creek) Nation of Oklahoma, Eastern Shawnee Tribe of Oklahoma, Shawnee Tribe, United Keetoowah Band of Cherokee Indians, Eastern Band of Cherokee Indians and the Cherokee Nation on February 27, 2014, but no responses were received.

If archaeological material, including human remains and objects, is uncovered during construction, all construction will cease in that area, and the Federal Highway Administration, federally recognized Native American tribes and Tennessee Division of Archaeology will be contacted to resolve disposition of the discovery. This is pursuant to compliance with 36 CFR 800.13, Post-review discoveries. Archaeological coordination is in Attachment F.

FIGURE 4-7: PROJECT IN VICINITY OF NRHP-LISTED YANCEY'S TAVERN



FIGURE 4-8: PREFERRED ALTERNATIVE (ALTERNATIVE B MODIFIED) AT YANCEY'S TAVERN



4.14 Section 4(f) Impacts

Section 4(f) of the United States Department of Transportation Act of 1966, promulgated in 23 CFR 774, requires US DOT agencies to take special efforts to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.

The proposed project would not directly impact any public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The proposed project also would not result in noise or visual proximity impacts that would constitute a constructive use of any Section 4(f) protected property.

Preferred Alternative (Alternative B Modified)

No Section 4(f) properties would be impacted.

Alternatives A and B

No Section 4(f) properties would be impacted.

4.15 Section 6(f) Impacts

The *Land and Water Conservation Fund* (LWCF) was established by the *LWCF Act of 1965* which was enacted to assist in preserving, developing, and assuring accessibility to outdoor recreational facilities by: (1) providing funds for and authorizing federal assistance in planning, acquisition, and development of needed land and water areas and facilities and (2) providing funds for the federal acquisition and development of certain lands and other areas. Section 6(f) of the LWCF Act prohibits the conversion of properties acquired or developed with LWCF monies to non-recreational purposes without approval from the U.S. Department of the Interior's National Park Service (NPS).

Preferred Alternative (Alternative B Modified)

The Preferred Alternative (Alternative B Modified) will not take any property acquired through the LWCF Act.

Alternatives A and B

Neither Alternative A nor Alternative B would take property acquired through the LWCF Act.

4.16 Hazardous Materials Impacts

4.16.1 Regulations

Hazardous materials are substances that have, or will have (when combined with other materials), a harmful effect on the human and natural environment. Hazardous materials are primarily regulated under the Federal Resource Conservation and Recovery Act (RCRA), as amended; the *Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)* of 1980; and the *Superfund Amendments and Reauthorization Act (SARA)* of 1986.

Agencies whose records were reviewed for this analysis included the EPA and the Tennessee Department of Environment and Conservation, Division of Underground Storage Tanks (UST)

and Division of Solid and Hazardous Waste Management. Database searches revealed the following results:

- The National Priorities List (NPL) is a federal list of sites subject to cleanup directed by the EPA. These sites are part of the national Superfund program. This list revealed no NPL sites in the project study area;
- The *Comprehensive Environmental Response, Compensation and Liability Act* Information System (CERCLIS) is also part of the national Superfund program. Inclusion in CERCLIS is the first step in the ranking of potentially hazardous sites to determine whether they meet the criteria for inclusion in the NPL. There are no active CERCLIS sites within the project area and;
- Superfund also has an archive designation. The “archive status” means that assessment at a site has been completed, and the EPA has determined that no steps will be taken to designate the site as a priority by listing it on the NPL. There are no Superfund archive sites in the project study area.

4.16.2 Project Background

An initial hazardous materials study was conducted for this project from 2007-2008. Phase I Environmental Site Assessments (ESAs) were conducted in accordance with the scope and limiting conditions set forth in the American Society for Testing and Materials (ASTM). Recognized Environmental Conditions (RECs) were identified for properties within, or adjacent to, the proposed ROW limits of the build alternatives under consideration in the DEIS. The ESAs identified a total of nine RECs in the study area that consisted of a 2,000-foot wide corridor, 1,000 feet from either side of the existing centerline of SR 126.

The goal of the assessment was to determine the potential presence of aboveground and/or underground storage tanks, hazardous wastes or materials, solid and special wastes, and areas of potential hazardous waste concerns which may pose a threat to human health and/or the environment. The results of the Phase I ESAs were used to determine the need for Phase II Site Assessments.

The DEIS recommended a Phase II ESA be performed for ROW acquisition on the following three parcels identified in the 2008 Phase I Hazardous Materials Survey Report:

- Site 2 – Roadrunner Market (4001 Memorial Boulevard, Kingsport, TN);
- Site 5 – B&W Cleaners (3200 Memorial Boulevard, Kingsport, TN) and;
- Site 7 – Greenwood Market (Market and Deli) (5121 Memorial Boulevard, TN).

The following three sites, identified by TDEC in comments they provided on a preliminary draft of the DEIS during the Tennessee Environmental Streamlining Agreement (TESA) review process (September 19, 2011), were also evaluated as potential hazardous waste sites in 2013.

- Site 10 - English Cabinet Shop (5236 Memorial Boulevard, Kingsport, TN);
- Site 12 - People's Food Store (3104 Memorial Boulevard, Kingsport, TN) and;
- Site 15 - Riviera Apartment Complex (former Richard Chadbourne Property) (5340 Memorial Boulevard, TN).

4.16.3 Site Investigations

If the Preferred Alternative (Alternative B Modified) alignment requires acquisition of portions of the properties with RECs, the sites will be further analyzed through a Phase II ESA, which would include soil and groundwater sampling, to further clarify potential contamination concerns. The following section provides a summary of the site investigations performed for the Preferred Alternative (Alternative B Modified). Figure 4-9 provides the location of all investigated properties. Site investigation reports are included in Appendix F.

Preferred Alternative (Alternative B Modified)

Sites that have the potential to contain hazardous materials which could be impacted by the Preferred Alternative (Alternative B Modified) are presented in Table 4-11. There are six sites that could be impacted by the Preferred Alternative (Alternative B Modified). Where warranted, Phase II Environmental Site Assessments will be performed on these sites during the design phase of the project. Correspondence from the TDOT Hazardous Materials section is in Attachment G.

In the event that hazardous substances/wastes are encountered within the proposed ROW prior to or during construction activities, the appropriate authorities will be notified, permits will be secured, and cleanup activities will take place. Their disposition shall be subject to the applicable sections of the RCRA, as amended; the CERCLA, as amended; and the *Tennessee Hazardous Waste Management Act of 1983*.

Alternatives A and B

As with the Preferred Alternative (Alternative B Modified), sites that have the potential to contain hazardous materials, which could be impacted by Alternative A or B, are presented in Table 4-11. There are eight sites that could be impacted by Alternative A, the most of any of the build alternatives. There are six sites that could be impacted by Alternative B.

Where warranted, Phase II Environmental Site Assessments would be performed on these sites during the design phase of the project. Their disposition shall be subject to the applicable sections of the RCRA, as amended; the CERCLA, as amended; and the *Tennessee Hazardous Waste Management Act of 1983*.

FIGURE 4-9: HAZARDOUS MATERIALS/UNDERGROUND STORAGE TANK SITES

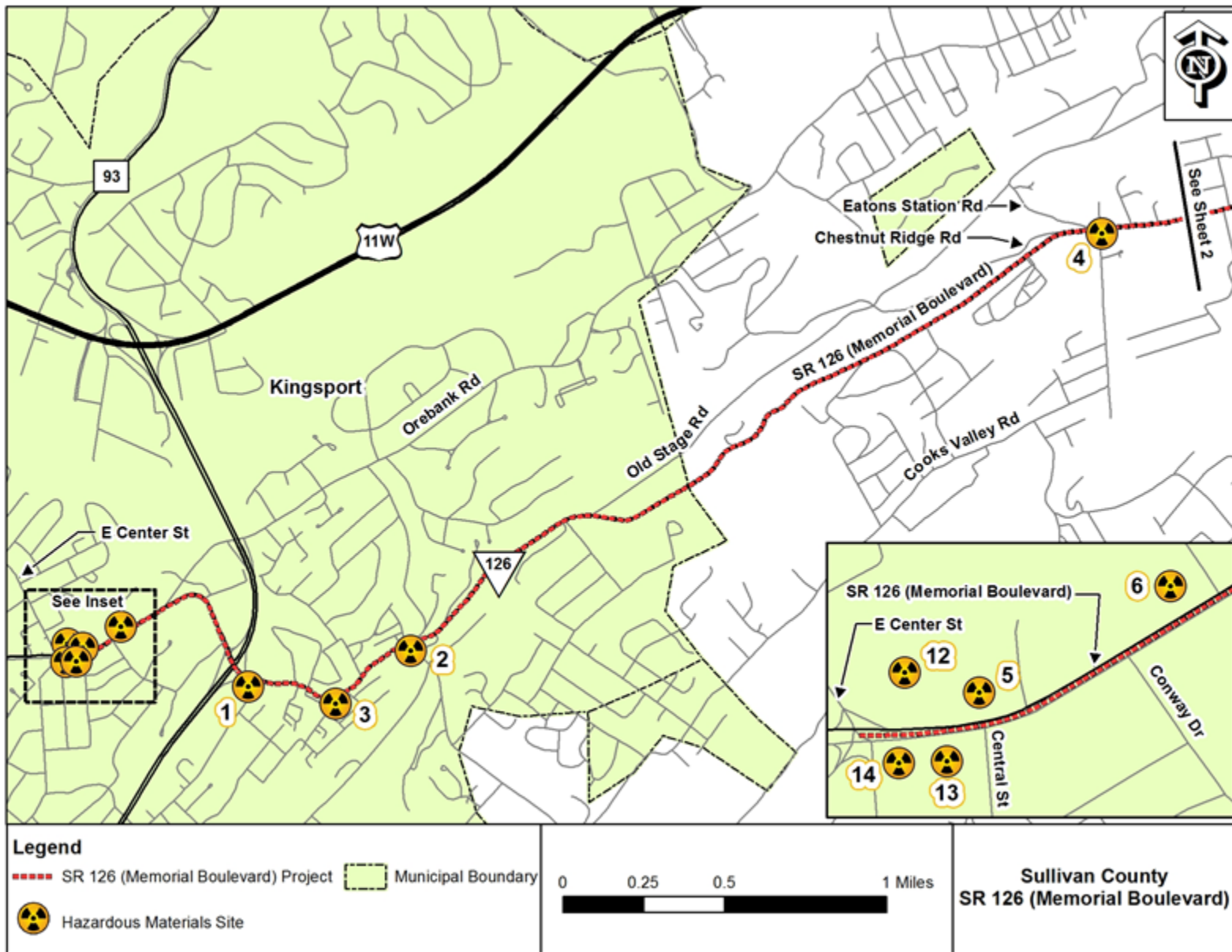


FIGURE 4-9: HAZARDOUS MATERIALS/UNDERGROUND STORAGE TANK SITE (CONTINUED)

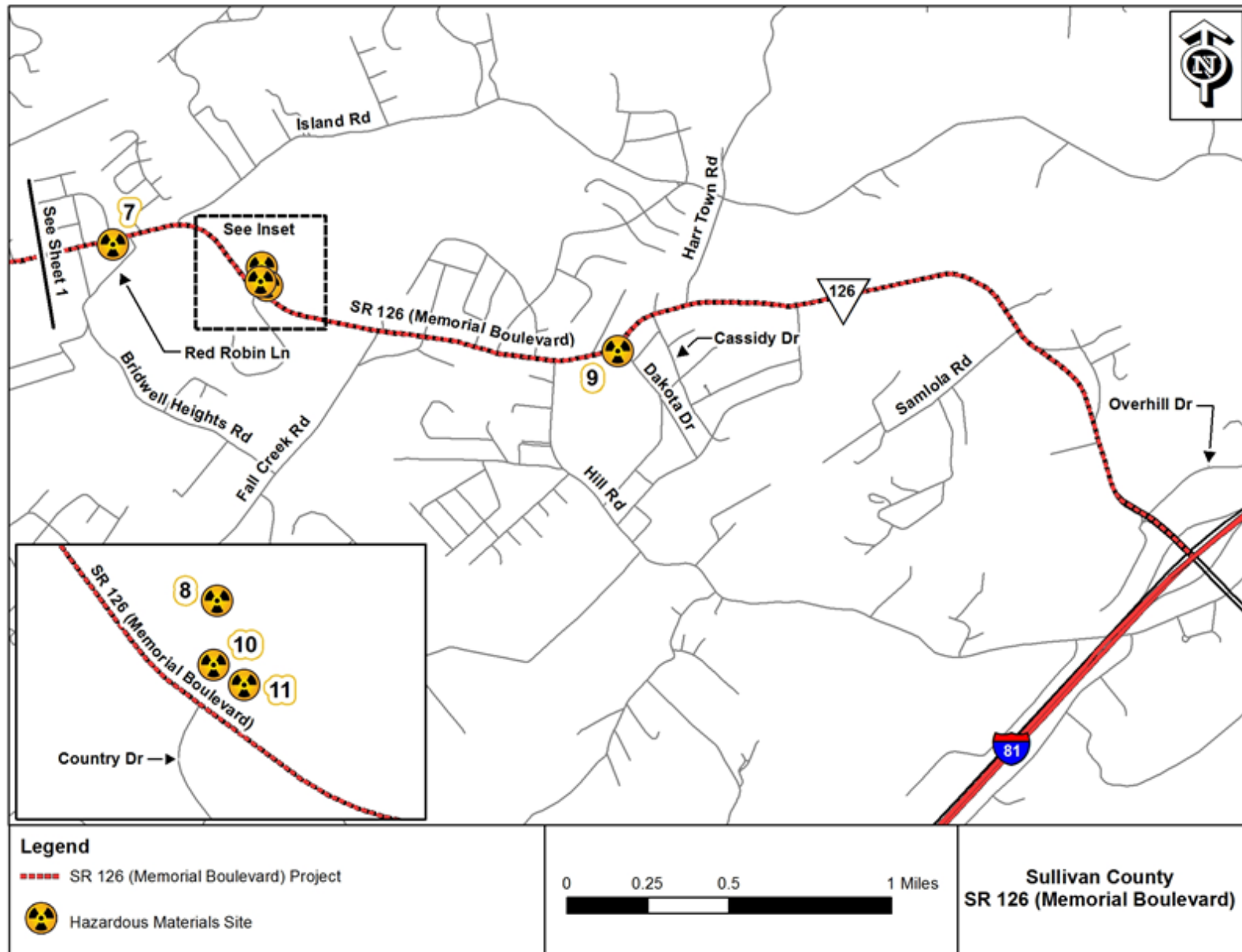


TABLE 4-11: BUILD ALTERNATIVE COMPARISON OF HAZARDOUS MATERIALS IMPACTS

Site No.	Facility/Address	History/Status	Concern/Determination	Alternative Causing Impact
1	Gas Station; 3717 Memorial Boulevard, Kingsport, TN 37663	Active gas station with former leaking UST (LUST) (1991).	Mitigated, no concerns.	None
2	Roadrunner Market (Fuel and Convenience Store): 4001 Memorial Boulevard, Kingsport, TN 37664	Active gasoline station and convenience store with five underground gas storage tanks. Two tanks are in use and three are permanently out of use.	Phase II ESA will be performed during design phase if selected alternative causes an impact.	Preferred (Alternative B Modified), A, B
3	Pool and Spa Supplies Store: 3933 Memorial Boulevard, Kingsport, TN 37664	Former gas station currently occupied by a retail pool and spa store. A 1,000 gallon gas UST was removed 20 years ago.	No environmental concerns exist.	None
4	Upholstery and Fabric Store: 5001 Memorial Boulevard, Kingsport, TN 37664	Former gas station, currently upholstery and fabric store. Three former USTs have been removed.	No environmental concerns exist.	None
5	B&W Cleaners (Dry Cleaning Service): 3200 Memorial Boulevard, Kingsport, TN 37660	Dry cleaner has been identified as a RCRA site. TDEC records database indicated that there are no environmental concerns associated with this site however because of chemicals used for dry cleaners further analysis is recommended for the selected alternative.	Phase II ESA will be performed during design phase if selected alternative causes an impact.	Preferred (Alternative B Modified), A, B
6	Automobile Repair: 3310 Memorial Boulevard, Kingsport, TN 37664	Automobile repair business is former site of s full-service gas station. Gas USTs have been removed.	No environmental concerns exist.	None
7	Greenwood Market (Market and Deli): 5121 Memorial Boulevard, Kingsport, TN 37664	Active gasoline station and convenience store with two active gas USTs. An inactive kerosene tank was reported as leaking in the past. Records also indicate the presence of a 2,000 gallon diesel.	Phase II ESA will be performed during design phase if selected alternative causes an impact.	Preferred (Alternative B Modified), B
8	Unnamed Construction Site: (Adjacent to 5234 Memorial Blvd.), Kingsport, TN 37664	This construction site contains tires, trucks, construction equipment and scrap material.	Site has a high potential for contamination; however, project-related impacts are not anticipated and no further analysis is required.	None

TABLE 4-11: BUILD ALTERNATIVE COMPARISON OF HAZARDOUS MATERIALS IMPACTS (CONTINUED)

Site No.	Facility/Address	History/Status	Concern/Determination	Alternative Causing Impact
10	English Cabinet Shop: 5236 Memorial Boulevard, Kingsport, TN 37664	Fabricated wood cabinets have been used on-site since the 1980s. Chemicals associated with the wood fabrication process were used and stored onsite; however, the site currently does not utilize fabrication chemicals.	Phase II ESA will be performed during design phase if selected alternative causes an impact.	A
11	Clymens Automotive Repair: 5242 Memorial Boulevard, Kingsport, TN 37664	Automobile repair business, containing a 55-gallon capacity drums of used automotive fluids.	Phase II ESA will be performed during design phase if selected alternative causes an impact.	A
12	Peoples Food Store: 3104 Memorial Boulevard, Kingsport, TN 37664	Gas station and convenience store. According to research, the site currently has one 5,000-gallon capacity UST, one 10,000-gallon capacity UST, and one 15,000-gallon capacity UST in operation. According to TDEC, the site has had no reported spills or leaks since installing the tanks in 2010.	Phase II ESA will be performed during design phase if selected alternative causes an impact.	Preferred (Alternative B Modified), A, B
13	Garden Basket Convenience Store: 3109 Memorial Blvd., Kingsport, TN 37664	Convenience store located in front of the Model City Motel. According to research, the convenience store has two 6,000-gallon USTs and one 4,000-gallon UST permanently out of use.	Phase II ESA will be performed during design phase if selected alternative causes an impact.	Preferred (Alternative B Modified), A, B
14	Amoco Service Station: 3101 Memorial Boulevard, Kingsport, TN 37664	Former gas station with two 4,000-gallon capacity USTs and one 6,000-gallon capacity UST all permanently out of use. According to TDEC records, the three USTs were removed in 2002. Site also has a past LUST.	Phase II ESA will be performed during design phase if selected alternative causes an impact.	Preferred (Alternative B Modified), A, B
15	Riviera Apartment Complex (Former Richard Chadborne Property): 5340 Memorial Boulevard, Kingsport, TN	Multi-tenant apartment structure with two outbuildings used for storage and maintenance. Site also has two mobile trailer structures currently occupied with residents.	No further investigation is required.	A

4.17 Visual Impacts

Viewer groups in the SR 126 project area fall into two categories; persons with a view of the surrounding area from the existing roadway and persons with a view of the existing roadway from the surrounding area. The proposed project passes through commercial, residential, and agricultural areas, including Chestnut Ridge. Chestnut Ridge is an area located within and around a large portion of the project, contains views of rolling hillsides and displays the rural nature of this region.

The dominant visual elements in the western portion of the project, extending from East Center Street to SR 93 (John B. Dennis Highway), are buildings. The development is typical of developed areas commonly found around cities and does not indicate visual sensitivity or unique visual importance. The dominant visual element from SR 93 (John B. Dennis Highway) to east of Old Stage Road is predominantly commercial developments with scattered residential developments. In the last segment of the project, from near Old Stage Road to the end of the project at I-81, the dominant visual element through this segment is predominantly residential with some commercial and agricultural property and the local cemetery.

Preferred Alternative (Alternative B Modified)

The visual impacts of the Preferred Alternative (Alternative B Modified) to the surrounding landscape will be minimal. Much of the corridor is developed with commercial and residential properties. The project will widen the road along its existing alignment to provide additional lanes, thus minimizing impacts to the surrounding area.

There may be, however, some visual impact to the Chestnut Ridge area as a result of the project. The Preferred Alternative (Alternative B Modified) will widen the roadway footprint, and will include the removal of vegetation, changing of contours, change the roadway character from a shoulder and ditch roadway to a roadway with curb and gutter. These actions will increase the roadway's visibility within the existing visual setting. However, this alternative was developed in a way that will reduce visual impacts to Chestnut Ridge where feasible, including the utilization of existing alignment, and reduction of roadway width in the more visually-sensitive locations. Such visually-sensitive locations include Yancey's Tavern and the East Lawn Memorial Gardens Cemetery, which are located within the Chestnut Ridge area.

As stated in Section 4.12, the Preferred Alternative (Alternative B Modified) is the only alternative that does not have an adverse visual effect to Yancey's Tavern, a NRHP-listed site.

Alternatives A and B

As stated in Section 4.12, both Alternative A and Alternative B would have an adverse visual impact to Yancey's Tavern. Also, both alternatives would have some visual impact to the Chestnut Ridge area.

4.18 Wild and Scenic Rivers Impacts

The *Wild and Scenic Rivers Act 1968* established a National Wild and Scenic Rivers System for the protection of certain selected rivers of the Nation which, with their immediate environments, possess "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values." These rivers are to be preserved in free-flowing condition and their immediate environments are to be protected for the benefit and enjoyment of present and future generations.

The Obed River and its two main tributaries, Clear Creek and Daddys Creek, located in Cumberland County and Morgan County, is the only federally-designated Wild and Scenic River system in the State of Tennessee.

Preferred Alternative (Alternative B Modified)

The Preferred Alternative (Alternative B Modified) will not impact resources protected under the Wild and Scenic Rivers Act.

Alternatives A and B

Neither Alternative A nor Alternative B would impact resources protected under the Wild and Scenic Rivers Act.

4.19 Energy Impacts

Construction of the Preferred Alternative (Alternative B Modified), Alternative A or Alternative B will involve the commitment of energy resources both during the short-term construction period and throughout the long-term operation of the facility. The energy requirements of the Preferred Alternative (Alternative B Modified) are greater than the energy requirements of the No-Build Alternative.

The energy used by the Preferred Alternative (Alternative B Modified), Alternative A or Alternative B can be characterized as follows:

Construction: Energy would be used for the manufacturing and transport of the construction components and by the heavy equipment utilized for roadway and bridge construction.

Maintenance: The project would require routine maintenance that could result in energy use for the maintenance activities. Traffic delays could accompany the maintenance activities and could result in temporary increases in energy use.

Motor Vehicle Use: Improved traffic flow and reduced travel time could result in a decrease from existing energy use.

In summary, the amount of energy required to construct a roadway project of this type is substantial but temporary in nature. This type of project generally leads to reduced operating costs once the project is completed. A reduction in cost and energy use could result from improved access, reduced travel time and increased safety.

4.20 Construction Impacts

Construction impacts would be the same under each of the Build alternatives. Each build alternative would likely inconvenience or disturb residents, businesses, and business customers. In the case of improvements to an existing highway, inconvenience to highway users also occurs. Maintenance of traffic, access to properties adjoining the road, and utility relocations are specific construction-related impact issues that must be addressed with this project.

Without proper planning and implementation of controls, traffic disruption, loss of access, and utility relocation could adversely affect the comfort and daily life of residents and disrupt the flow of customers, employees, and material/supplies to and from businesses. Construction impact

controls would be integrated into the project's contract specifications and traffic control plans. Construction impacts detailed below would occur with the Preferred Alternative (Alternative B Modified), Alternative A or Alternative B. With the implementation of appropriate controls, no cumulative or secondary impacts are foreseeable with any build alternative. The following construction issues are addressed below:

- Maintenance of traffic and access
- Economic benefits
- Waste disposal
- Utility relocation
- Discovery of unknown archaeological sites
- Borrow pits
- Erosion control
- Air quality
- Noise abatement

Maintenance of Traffic and Access: Traffic will be maintained on existing roadways during construction or detours will be developed. Access to all properties will be maintained during construction.

Economic Benefits: The construction activities may result in short-term economic benefits to the local area that would include increased revenue to local businesses through the sale of construction supplies and material and retail/service purchases by construction personnel. Construction jobs also could be available for persons residing in the area. These short-term revenues and jobs are not expected to be locally or regionally significant.

Construction could result in adverse economic impacts to the local businesses along the corridor that are not relocated by the project. Motorists may avoid the corridor during construction thus lessening the potential number of customers for some businesses. The construction-related adverse impacts will be minimal and short-term.

Waste Disposal: Solid waste will be generated by project construction (i.e., through removal of structures that cannot be relocated). The quantity of disposed waste would represent a negligible proportion of the total amount directed toward local landfills.

Any toxic and hazardous materials would be handled and used in accordance with package labels and manufacturer's directions. Wastes will be segregated, labeled and stored in a manner that would prevent their release into the environment from an accident or spill. The contractor will dispose of these materials and their containers in accordance with applicable state and federal regulations.

Disposal of excess material would be the responsibility of the contractor who will be contractually required to handle and dispose of the material in accordance with the *TDOT Standard Specifications for Road and Bridge Construction*. These specifications require that the contractor comply with open burning regulations and be supervised by a competent watchman; that material is disposed of in accordance with all applicable laws and ordinance; and that material will only be disposed of on private property when there is a signed agreement with the property owner.

Utility Relocation: The relocation of utilities will be included in final design plans. As appropriate, TDOT and the City of Kingsport will coordinate with the appropriate representatives to avoid or minimize damage or disruption of existing services.

Discovery of Unknown Archaeological Sites: If archaeological materials are uncovered during construction, all construction work in the area of the find will cease. The Tennessee Division of Archaeology and the recognized Native American Tribes will be immediately contacted so a representative of each office may have the opportunity to examine and evaluate the materials.

Borrow Pits: Should earth fill be required for this project, the applicable TDOT borrow provisions will be followed and permits obtained.

Erosion Control: The Preferred Alternative (Alternative B Modified) will disturb land that has a tendency to erode when disturbed. The contractor will be required to employ BMPs to prevent erosion and control sediment movement from the project.

A sediment control plan will be formulated in accordance with the TDOT *Standard Specifications for Road and Bridge Construction* and will include, but not be limited to, the following measures:

- Temporary erosion control devices, such as silt fences, straw bales, burlap, jute matting, grading, seeding and sodding will be used to minimize erosion and sedimentation;
- Minimization of vegetation removal;
- Construction and stabilization of fill slopes during the growing season should be accomplished through the establishment of non-invasive vegetation and;
- Planting of native woody and herbaceous vegetation.

Air Quality: Even though the NAAQS are not exceeded in the design year, all phases of construction operations associated with the Preferred Alternative (Alternative B Modified), Alternative A or Alternative B could temporarily contribute to air pollution. Particulates would increase slightly along the project as dust from construction activities collects in the air surrounding the project. The construction equipment would temporarily produce minor amounts of exhaust emissions. The emission of air pollutants would be reduced by the use of properly maintained equipment and the use of tarp covers on trucks transporting refuse and construction waste products.

Any burning of wastes and control of dust will be the responsibility of the construction contractor. The contractor must meet the burning and dust control requirements of TDOT's *Standard Specifications for Road and Bridge Construction* and is required to comply with applicable state and local laws, ordinances and regulations regarding these emissions.

Substantial construction-related MSATs emissions are not anticipated for this project as construction is not planned to occur over an extended building period. However, construction activity may generate temporary increases in MSATs emissions in the project area.

Construction Best Management Practices represent practicable project-level measures that, while not substantially reducing global GHG emissions, may help reduce GHG emissions on an incremental basis and could contribute in the long term to meaningful cumulative reduction when considered across the federal-aid highway program.

Construction Noise Abatement: Temporary noise impacts will occur within the immediate vicinity of the construction activities under the Preferred Alternative (Alternative B Modified), Alternative A or Alternative B. The sound levels resulting from construction activities at nearby noise-sensitive receivers will be a function of the types of equipment utilized, the duration of the

activities, and the distances between construction activities and nearby land uses. The exact noise levels cannot be predicted because the specific types of construction equipment, methods and schedule are unknown at this time.

Construction procedures shall be governed by the *Standard Specifications for Road and Bridge Construction* as issued by TDOT and as amended by the most recent applicable supplements. The contractor will be bound by Section 107.01 of the Standard Specifications to observe any noise ordinance in effect within the project limits. Detoured traffic shall be routed during construction so as to cause the least practicable noise impact on noise-sensitive areas.

4.21 Short-term vs. Long-term Impacts

Short-term impacts occurring during construction operations would be the same under each of the build alternatives. Some interruption to vehicular traffic flow is inevitable; however, appropriate maintenance of traffic phasing will be employed to minimize inconvenience. Traffic control plans will be developed to minimize congestion and delays during construction.

Temporary air impacts from dust and exhaust fumes, and noise associated with construction operations cannot be avoided. Every effort will be made to minimize these effects by using best management practices.

Many long-term benefits are anticipated to result from the proposed project, such as a decrease in travel time and traffic congestion and an improved level of service. Accidents along segments of existing highways may also decrease over the long term. Elimination of congestion is expected to result in more efficient use of energy. In the long term, the construction of the roadway through the area will provide a better modal connection.

No-Build Alternative

Long-term impacts associated with the No-Build Alternative are anticipated to include increases in travel time, traffic congestion, and a deteriorating level of service.

4.22 Irreversible and Irretrievable Commitments of Resources

Irreversible and irretrievable commitments of resources would be the same under each Build alternative. Irretrievable resources necessary to build the proposed roadway include energy (fossil fuel), concrete, aggregate and steel. None of these materials are in short supply. Implementation of the proposed project involves a commitment of a range of natural, physical, human and fiscal resources. Land used in the construction of the proposed facility is considered an irreversible commitment during the time period that the land is used for a highway facility. However, if the highway facility is no longer needed, the land can be converted to another use.

Considerable amounts of fossil fuels, labor and roadway construction materials such as cement, aggregate and bituminous materials will be expended. Additionally, large amounts of labor and natural resources will be used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use will not have an adverse effect upon continued availability of these resources. Construction will require a one-time expenditure of both state and federal funds, which are not retrievable.

The commitment of these resources is based on the concept that residents in the immediate area, state and region will benefit by the improved quality of the transportation system. These

benefits will consist of improved accessibility and safety, savings in time and greater availability of quality services that are anticipated to outweigh the commitment of these resources.

No-Build Alternative

There are no irreversible or irretrievable resource commitments associated with the No-Build Alternative other than through routine maintenance.

4.23 Indirect and Cumulative Impacts Associated with Build Alternatives

By the United States Code of Federal Regulations (CFR) definition, direct effects (or impacts) are caused by the action and occur at the same time and place (40 CFR § 1508.8). Indirect effects (or impacts), are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect impacts may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR § 1508.8).

Cumulative effects (or impacts) are impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.7).

Indirect and Cumulative Impacts for the human and natural environments associated with the SR 126 project include land use changes and farmland conversion; and changes to existing terrestrial and aquatic habitat.

Indirect Impacts to Growth and Development

A review of project area maps were and aerial photography from the 1950s through 2006, combined with field visits, and conversations with local officials were conducted to determine the types of growth that have been experienced in East Kingsport and Sullivan County. The area of potential effect was defined as the area circumscribed by U.S. 11, SR 126 at East Center Street, Falls Creek Road and the intersection of SR 126 with I-81. This area has experienced slow, sustained residential growth throughout a 50-year period.

Neighborhoods between SR 126 and Falls Creek Road are currently adding new homes in the area. Local officials indicate that this rate of growth and type of development will continue whether the improvements to SR 126 are implemented using the Preferred Alternative (Alternative B Modified) or either of the Build Alternatives. In the eastern portions of this project, development activities are minimal and not expected to substantially increase in the next 20 to 25 years.

The implementation of an improved SR 126 with safety improvements and new shoulders, as planned, will not measurably increase or decrease the current patterns. The Preferred Alternative (Alternative B Modified) only adds one west bound lane for a short (0.5-mile) section between Heather Lane and Harbor Chapel Road. Because the Preferred Alternative (Alternative B Modified) does not effectively add travel lanes to the study corridor, implementation of the proposed improvements likely will not result in an increase in the rate of land development, nor

will it be likely to induce a major change in the types of land uses (i.e., shifting to industrial from residential or light commercial). Alternatives A and B add lanes to a small portion of the project length, but project similar effects as the Preferred Alternative (Alternative B Modified). Should land use changes occur, those uses would continue regardless of the build alternative chosen.

Many of the commercial sites in the area are geographically dependent to consumers in the surrounding neighborhoods. They provide goods and services that include convenience stores/gas stations, groceries, veterinary services, clothing, and auto repair. These commercial sites may experience some interruption from the construction of the improved facility and changes in land use along the corridor due to an improved SR 126 corridor. Improvements to the corridor may cause some properties to become more attractive as a non-commercial site. Those commercial sites not relocated by the project will be better served with the increased efficiency, access and improved safety conditions of a new roadway.

Indirect beneficial impacts would be realized from the additional jobs created both on- and off-site during construction and project development. Indirect employment would result in the form of jobs associated with the provision of supportive goods, supplies, and services necessary for the construction phase of the project. This creation of indirect employment would result in additional indirect personal income for the purchase of goods and services within the project study area and surrounding region.

Cumulative Impacts to Growth and Development

Cumulative impacts associated with this project in combination with other past, present, and reasonably foreseeable future projects would include potential land use changes, including increased commercial and residential development, overall improvement of the transportation infrastructure resulting in improved traffic flow, improved access management and safety. The cumulative impacts to land use in the study area as a result of past and future transportation and infrastructure projects has been anticipated by local governments for many years. Local land use plans have identified areas for future growth and local services.

The Preferred Alternative (Alternative B Modified) and both Build Alternatives, as previously discussed in this document, are located mostly along the existing roadway. Future land use changes in the project impact area would be influenced by other factors in addition to the proposed project. Changes in the local economy, changes in land use by local jurisdictions and other infrastructure changes can all affect how, when, and to what degree land is developed and redeveloped. A positive cumulative effect in transportation service to the surrounding area will occur with the proposed improvements to SR 126.

The improved transportation infrastructure and potential commercial developments may promote increased residential development in the surrounding areas, which would maintain and enhance residential land uses. The combination of all past, present, and reasonably foreseeable future development projects may result in additional infrastructure projects needing to be implemented to continue to provide adequate facilities capable of supporting the growth. The project will provide a safer, less congested roadway for local travelers, as well as a safer environment for pedestrians and bicyclists. Combined with other projects initiated by various transportation agencies, this project will contribute to an improved overall local and regional transportation network.

Indirect Impacts to the Natural Environment, Air Quality and Noise

The residential and agricultural activities in the area have already displaced forested areas, natural habitat areas and farmland. These rates will not appreciably change, with the improvements proposed by the Preferred Alternative (Alternative B Modified) or from either of the build alternatives. Therefore, additional pressures to animals, plants, wetlands, and streams are not expected to substantially increase. Losses of floral and faunal habitat, degradation of water quality in streams, and conversion of farmland are not anticipated to experience additional cumulative or indirect pressures from the proposed action.

In general, roadway projects most commonly result in indirect impacts to land use, farmland, community and economic resources, water quality, wetland, and terrestrial ecology. Future construction activities along the corridor may result in a decline in the local wildlife populations due to the removal of habitat. Increased noise levels may also affect wildlife populations in the vicinity.

Potential short-term indirect adverse impacts on aquatic species could occur from stormwater runoff, which would increase turbidity and total suspended solids. Erosion would be the primary source of adverse impacts, potentially resulting in an increased silt load (suspended solids and total solids), turbidity, change in color, and introduction of contaminants, such as petroleum products from heavy equipment. Siltation can cause mortality or impair the growth of the aquatic animal species, while increased turbidity and color can impact primary production by aquatic plants.

Streams within the project area could be impacted during construction due to surface runoff and subsequent sedimentation. It is not anticipated that these streams would be substantially impacted due to the BMPs and other mitigation measures that will be used during construction to help reduce runoff and stream sedimentation downstream of the project area.

Forecasted traffic volumes for most projects typically account for any redistribution of traffic that would occur as a result of the project. The air quality analysis summarized in Section 4.10 addresses any indirect traffic-related air quality impacts that might occur.

Indirect noise impacts associated with the project are anticipated, though negligible. Areas where new development occurs would likely increase traffic volumes and would result in potential increased noise levels.

Cumulative Impacts to the Natural Environment, Air Quality and Noise

It is anticipated that SR 126 would promote some secondary commercial and residential developments within the project area resulting in increased potential for water quality impacts. Regulatory agencies would be responsible for monitoring private developments in the project area to help ensure no substantial water quality impacts occur. Any adverse cumulative impacts associated with future projects constructed in the watersheds crossed by the project have potential to add to the adverse impacts to water quality associated with construction and operation of SR 126 in these watersheds. However, since adverse impacts associated with new construction projects are often temporary, it is not anticipated that substantial long-term water quality impacts would occur.

Forecasted traffic volumes for most projects typically account for any redistribution of traffic that would occur as a result of the project. Therefore, the forecasted traffic volumes include

expected traffic growth and other planned and programmed projects in the area. As a result, the air quality analysis addresses the traffic-related cumulative air quality impacts of the project.

Implementation of any of the build alternatives would result in potential cumulative noise impacts when combined with other potential infrastructure projects expected to occur in the reasonably foreseeable future. It is probable that the projects would result in increased construction noise levels and long-term noise levels. A noise study for those projects, and identification of noise abatement measures, if determined to be necessary, would likely help reduce the potential for cumulative noise impacts in the project area.

No-Build Alternative

Indirect and cumulative impacts are also associated with the No-Build Alternative. Based on land use changes for the project area, residential development will occur with or without the project. In addition, farmland would continue to be converted to other land use types in the project area regardless of whether the project is constructed or not.

The No-Build Alternative would not address the current access issues facing SR 126. Without safe and controlled access, growth or sustained commercial development along the route may also be inhibited. Poor access would not only slow economic growth along the route, but could also impact adjacent areas. This could result in an adverse cumulative impact for areas that may already be seeing depressed income levels and lack of economic growth.

The No-Build Alternative would contribute to increased congestion and reduced LOS along SR 126. Increasing traffic volumes will decrease the LOS on secondary routes as well. These conditions could contribute to higher crash rates and would likely increase response times of emergency vehicles.

Ecological resources including streams, forests, wetlands, and other fish and wildlife habitats would continue to be impacted in the project area due to the continued growth and development of the area even under the No-Build Alternative.

Impacts to the human environment will be lessened due to more efficient facility for transportation within the corridor.

5.0 PUBLIC INPUT AND AGENCY COORDINATION

Since the early 1990s, improvements to SR 126 have been discussed that would facilitate improved traffic operations and safety conditions for the route. The executive board and staff of the KMTPO passed a resolution requesting the preparation of an APR for the route in March 2003. In April 2003, a copy of the resolution was forwarded to TDOT by the Mayor of Kingsport. A response from TDOT was provided in May 2003 acknowledging instructions to initiate an APR, and in September 2003, TDOT selected the SR 126 project as the initial CSS project for Tennessee. The purpose of the CSS Project was to study and prepare a concept plan recommendation for improving the facility.

A CRT was developed as part of the CSS process to facilitate local stakeholder involvement. The CRT agreed upon features in the design plan, safety improvements, points of interest to the community, and other special issues. The CSS process, the CRT involvement, and additional public involvement prior to the development of the DEIS are discussed further in Chapter 1.

Agency coordination for the project was initiated with an initial coordination package describing the project area and distributed to approximately 45 federal, state, and local agencies in December 2008. The initial package included a description of the proposed improvements to SR 126 and the goals of the project. The agencies were invited to become cooperating or participating agencies as applicable, and to provide comments relative to the project. In July 2014, the DEIS was distributed to 35 federal, state and local agencies and interested organizations for review and comment.

This section describes the public involvement activities and agency coordination process that was conducted for this project since the DEIS was made available for review in January 2012. In addition, the key issues that have been identified through those efforts are included in this section.

5.1 Public Input

5.1.1 Public Hearing and Background

Two NEPA public hearings on the DEIS were held on December 11, 2012. The first occurred at 11:30 AM at the Kingsport Civic Center Auditorium and the second at 6:00 PM at the Sullivan County Central High School. A notice advertising the public hearing was published in local newspapers November 9, 2012. Both hearings were well attended with 172 signing in at the first and 128 signing in at the second for a total of 300. TDOT presented the results of the alternatives studied in the DEIS along with a modification to Alternative B, which was referred to as Alternative B Modified. Alternative B Modified was developed in response to comments received from the community in the spring of 2012, following the circulation of the approved DEIS for public review and to incorporate changes to the KMTPO Travel Demand Model.

Each person attending the public hearing was given a general information handout and instructions as to how they could comment on the project (by using a comment card available at the hearing, providing comments to court reporter, or by sending comments by U.S. mail or email). TDOT project staff and the engineering consultant were available to discuss issues with individual citizens. There was broad-based support of the project from residents and local officials, who generally agreed that SR 126 should be improved primarily to address safety deficiencies. However, there were differing opinions regarding a preferred alternative.

Prior to and during the public hearing comment period, TDOT received 202 responses in the form of letters, comment cards, and e-mails regarding the project. Each response was reviewed carefully and comments were recorded and summarized. Several issues were raised that have been considered in determining the selected Preferred Alternative (Alternative B Modified) and preparation of the FEIS. These issues are listed below.

5.1.2 Issues Expressed by the Community

- Safety and speed;
- Differing views on 4-lane and 3-lane cross-section limits;
- Minimize impact to the environment and property;
- Avoid grave relocations;
- Avoid Yancey's Tavern;
- Questioned proposed sidewalks in rural areas;
- Wide shoulders for safety vs. narrow shoulders to lower impacts;
- No continuous left-turn lane (requires ROW and will be used to pass);
- No grass median (requires ROW and maintenance);
- Concern for closing side streets and loss of access;
- Improved sight distance and alignment are needed;
- Guardrail is needed;
- Stop lights at major intersections are needed;
- Need a 4-lane throughout for economic growth and future travel demand;
- Reduce speed limit and enforce the law;
- Process is taking too long and;
- Rumble strips work, but create noise.

Safety improvements cited by many included straightening the alignment to remove dangerous curves and improving substandard roadway grades that limit sight distances. The lack of shoulders was a consistent issue raised in regard to safety. Side road and driveway profiles were noted as well; concerns included realigning side roads and driveways with poor sight distances or unsatisfactory grades. There were requests made for traffic signals at major intersections and for the installation of guardrails. Some citizens noted the need for more law enforcement and lower speed limits to improve the safety in addition to, or in lieu of, the planned improvements.

While most agreed that safety is a primary concern, one group favored limiting improvements to only those necessary to improve safety with only secondary concern for improving operational performance. This group generally favored Alternative B Modified, which provides for three lanes through most of the route east of Harbor Chapel Road. Some portion of this group preferred to have only shoulders and turn lanes at intersections that are warranted. This group was opposed to improving the roadway beyond what is needed for safety at the expense of environmental and community impacts. Most cited concern that the project would impact the natural beauty of Chestnut Ridge, the historic value of Yancey's Tavern, and the community resource of East Lawn Memorial Park Cemetery. Another group favored improving operational

performance through the Design Year (2037) with additional through lanes in addition to improvements needed for safety. Their preference was that a four-lane alternative with raised median and turn lanes, where needed, be used to I-81, or at least Harr Town Road. They acknowledged the importance of limiting impact to the environment and favored the use of retaining walls, where necessary, to achieve that goal. They also support a narrow four-lane section without a median or sidewalks at Yancey's Tavern and the East Lawn Memorial Park Cemetery. They were concerned that the project would not sufficiently meet the long-term needs of the growing communities on the east end of the project without extending the four-lane sections to those limits.

The limits of the proposed four-lane typical section became a focal point for comments from both groups described above. DEIS alternatives end the four-lane cross-section near Lemay Drive or Cooks Valley Road. Alternative B Modified ends the four-lane section at Harbor Chapel Road (approximately 2.5 miles to the west). Those supporting additional lanes preferred four lanes to be carried to I-81, but to Cooks Valley Road at a minimum. Various comments made by those in favor of a four-lane cross-section, as well as those in opposition are summarized below.

5.1.3 Comments Regarding a Four-Lane Typical Section

The following are typical comments received in support of a four-lane cross-section from east of Lemay Drive to Cooks Valley Road and were considered during TDOT's evaluation of extending the four-lane section to I-81:

- Will support economic development;
- Will provide congestion relief to and beyond the design year;
- Projected LOS for a three-lane section is unacceptable;
- If we do not build a four-lane now, it will never happen;
- It will cost more to widen again in the future;
- The high school is a significant traffic generator and warrants the additional lanes;
- Retaining walls can be used with a compressed section at the [Yancey's] tavern and [East Lawn Memorial Gardens] cemetery (note: this is true, but shoulder widths will have to be reduced, the median reduced, and sidewalks removed) and;
- Provides a LOS D or better in the design year for the rural section, which is seen as a minimum standard by the group supporting a four-lane section.

Typical comments received in opposition of a four-lane cross-section from Lemay Drive to Cooks Valley Road and were considered during TDOT's evaluation of extending the four-lane section to I-81 are:

- Four-lane section will adversely impact Yancey's Tavern and East Lawn Memorial Park Cemetery;
- Four-lane section will impact more properties and require more residential displacements;
- Four-lane section will change the rural character of the corridor;
- Four-lane section will encourage speeding, thus offsetting safety gains;
- Four-lane section will impact environment more in general;

- Four-lane section will cost more and;
- Traffic projections do not warrant the additional lanes. The projections have been questioned claiming the growth factors are too high and that travel demand is actually reducing over time. (It should be noted that traffic projections were based on the KMTPO Travel Demand Model with consideration of data collected at count stations along the corridor.)

5.1.4 Public Comments and Dispositions

There were 202 comments received in the time period between the publishing of the approved DEIS (January 5, 2012) and the end of the public hearing comment period (January 31, 2013). Of those, 165 comments were received. All comments received are summarized in Appendix G. All comments were considered in the selection of the Preferred Alternative (Alternative B Modified). There were many repeat comments by the same households. When the comments are condensed by household, there were 136 households represented by comments.

In addition to the issue regarding the number of lanes, the following table shows a representative sample of comments received with the associated disposition.

TABLE 5-1: COMMENT SUMMARY AND RESPONSES FROM 2012 PUBLIC HEARING

Comment	Disposition
Thirty-two comments were submitted opposing the disturbance of graves at the East Lawn Memorial Park Cemetery.	TDOT has developed a preliminary design that avoids impacting known grave sites and will continue to evaluate alternatives in the FEIS to avoid relocating any grave sites. The TDOT Design Division conducts the final design and will evaluate design considerations to avoid impacting graves.
A number of comments were submitted opposing any impacts to Yancey's Tavern, a NRHP listed property.	TDOT has developed Alternative B Modified that avoids taking property from Yancey's Tavern. The SHPO has concurred in a "No Adverse Effect" finding on the latest proposed design.
Thirty comments were received regarding side road and driveway access and possible street closings. Issues with sight distance and oncoming traffic were mentioned.	TDOT will, in the final design of the roadway, evaluate each side road connection for safety and access. Some side roads will be realigned and others that have unsafe sight distance or unsatisfactory grades will be closed and connected to other existing roadways.
Fifteen comments were submitted regarding the need for sidewalks and bike lanes along sections of the proposed roadway.	TDOT, in the final design of the roadway, will provide adequate sidewalks and shoulders for pedestrians and bicyclists. Sidewalks will be provided in appropriate areas where pedestrian traffic warrants. Shoulders will be provided along the entire route. The adequate width of the shoulder will be determined during final design to meet approved design standards.
Thirteen comments were submitted regarding the addition of shoulders and guardrail to improve safety of the roadway.	TDOT, in the final design, will include shoulders based on current design standards and guardrail in appropriate areas along the roadway to improve safety for the traveling public.
Five commenters opposed the raised median. They felt it would be a maintenance issue and requires more ROW.	TDOT, in the final design of the project, will apply acceptable design criteria in evaluating the safest median design required along the roadway.

TABLE 5-1: COMMENT SUMMARY FROM 2012 PUBLIC HEARING (CONTINUED)

Comment	Disposition
Ten comments were submitted regarding the use of retaining walls to reduce the amount of needed ROW, improve safety and sight distances.	TDOT evaluated the use of retaining walls in the conceptual design of the Preferred Alternative (Alternative B Modified) to reduce ROW impacts where appropriate for safety and cost effectiveness. This will be considered and finalized during design of the project.
Five comments were submitted questioning the traffic projections. Requested recalculating traffic data using expanded socio-economic data and trend lines.	The current traffic projections used in this study are a function of the 2012 KMTPO Model, which is a travel demand model, and existing traffic counts.
Eighteen comments were submitted regarding minimizing impacts to the environment. There were concerns over the physical and visual impact to Chestnut Ridge, as well as the Holly Springs area, Yancey's Tavern, Memorial Park and the loss of trees and other vegetation.	TDOT will design the project to minimize as many environmental impacts as reasonable and feasible. TDOT will use the best construction methods possible to reduce the physical and visual impacts. Retaining walls and native vegetation will be used wherever practicable to reduce physical and visual impacts.
Five comments were submitted favoring the No-Build Alternative, citing driver behavior as the cause of most accidents.	Comments are noted.
Several commenters stated the project is needed for future economic development in the project area.	Comments are noted.
Four comments were submitted requesting the project stay on the existing alignment and only add shoulders and guardrail.	Comments are noted.
Five comments were submitted regarding impacts to private property. Specifically regarding the process to identify property impacts, compensation and acquiring the property. One commenter questioned property lines as well as, ownership of certain tracts of land shown on the layouts.	<p>TDOT will pay a fair market value for all properties impacted by displacement / relocation and ROW needs, and provide sufficient notice of intent to acquire the property to minimize any harm.</p> <p>The relocation of displaced households, businesses, and any other affected property will be administered in accordance with the provisions and procedures of the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Public Law 91-646) and the Tennessee Uniform Relocation Assistance Act of 1972. All damages will be considered during the ROW negotiation and acquisition process.</p> <p>Before final ROW plans are completed, a title search will be conducted as surveyors check for specific items such as fences, circle drives, underground storage tanks, and building types and add them to the final ROW plans as appropriate. Where possible, the designer will reevaluate ROW plans based on new information. Any damages will be considered during the ROW process.</p>
A number of comments were submitted regarding the installation of traffic signals and adding guardrail at major intersections to slow drivers down and improve safety.	TDOT, in the final design of the project, will evaluate intersections and include traffic signals where warranted along the roadway to promote safe and efficient traffic operations.

5.1.5 TDOT Consideration of Public Comments

TDOT reviewed the comments received at the public hearing and during the official comment period. All comments were read and considered in TDOT's alternative decision-making process. Most comments indicate that safety is a primary concern. However, as discussed in Section 5.1, there were two distinct perspectives on what the selected alternative should include. One group favored limiting improvements to only those necessary to improve safety with only secondary concern for improving operational performance. This group generally favored Alternative B Modified, which provides for three lanes for most of the route east of Harbor Chapel Road. Another group favored improving operational performance through the Design Year (2037) with additional through lanes in addition to improvements needed for safety. Their preference was a four-lane alternative, with raised median and turn lanes to I-81 or at least to Harr Town Road. When tabulated by household, there were more comments in support of limiting the impact to the community than those in support of providing additional capacity.

5.2 **Agency Coordination**

5.2.1 2012 Agency DEIS Comments

The DEIS was approved on January 5, 2012, and made available to both the public and agencies for review and comment at the time of approval. One agency comment on the DEIS was provided to TDOT.

U.S. Department of the Interior: Office of the Secretary for Environmental Policy and Compliance (June 19, 2013)

Comment: The Department of Interior (Department) has reviewed the DEIS for SR 126 Improvement Project. We have no comments at this time.

Response: No response required.

5.2.2 2014 Agency DEIS Comments

In July 2014, the DEIS was re-distributed to 35 federal, state and local agencies and interested organizations to ensure they had an opportunity to comment on the 2012 DEIS. The DEIS was also re-distributed to ensure agency coordination was consistent with the guidelines provided in 23 CFR 771.123, or the Tennessee Environmental Procedures Manual.

Eight agency responses were received. A summary of the comments and disposition is provided below. Copies of the agency responses that were received are included in Attachment H.

Tennessee Department of Environment and Conservation: Division of Remediation (July 16, 2014)

Comment: We conclude that there are no DoR sites that will be affected by the proposed activity.

Response: No response required.

U.S. Department of Transportation: Federal Aviation Administration (August 1, 2014)

Comment: Based on the DEIS and documents in our office it has been determined that Indian Springs Airport (3TN0), Kingsport, TN is the closest airport facility to the proposed road project. Please coordinate any high lift construction equipment with the airport. Please notify us if the project boundaries change.

Response: TDOT will coordinate with the Indian Springs Airport should any high lift construction equipment be used for the project. In addition, TDOT will coordinate with the Federal Aviation Administration (FAA) should the project boundaries change.

U.S. Department of the Interior: Fish and Wildlife Service (August 13, 2014)

Comment: We recommend that consideration be given to construction of the crossings with bottomless culverts or a span bridge design to minimize any long-term alterations to stream functions.

Response: TDOT will consider design improvements that minimize adverse impacts to natural resources and make design accommodations as feasible. In addition, TDOT will continue to coordinate with the USFWS throughout the project design, ROW acquisition, permitting and construction phases.

Comment: Bat surveys were conducted along the proposed corridor in the summer of 2011...we concurred with TDOT's determination of "not likely to adversely affect" in a letter dated November 9, 2011; however due to the time elapsed since the survey, TDOT will need to re-coordinate with our [USFWS] office for potential impacts to the Indiana bat prior to letting of the project for construction.

Response: During the development of the FEIS, TDOT has continued coordination with the USFWS regarding an updated bat study, which will occur prior to letting of the project for construction. A commitment reflecting this has been included in the Environmental Commitments ("Green Sheet").

Comment: We are unaware of any caves that would be impacted by the project and are concerned mainly for water quality along travel/feeding corridors. Best management practices, to include stringent erosion and sediment control measures, should be sufficient to address our concerns for the gray bat.

Response: No response required.

Comment: The northern long-eared bat was proposed for federal listing under the ESA on October 2, 2013. No designated critical habitat has been proposed at this time. While proposed species are not afforded protection under the ESA, if/when the species is listed, the prohibition against jeopardy, and the prohibition against taking a listed species under section 9 of the ESA, becomes effective immediately, regardless of the proposed action's stage of completion. The listing decision for this species should be announced on or before April 2, 2015. If clearing of trees would occur after listing, we would need to coordinate for potential impacts.

Response: TDOT will continue to coordinate with the USFWS throughout the project design, ROW acquisition, permitting and construction phases.

**U.S. Department of Agriculture: Natural Resources Conservation Service
(August 20, 2014)**

Comment: We are pleased to see that comments and information provided for the preparation of the DEIS for prime farmland conversions and hydric soils are incorporated in the DEIS. We do not have any changes or additional information to provide for these elements in the project area.

Response: The information provided by the NRCS is also carried forward with the FEIS.

Tennessee Department of Environment and Conservation (August 21, 2014)

Comment: We note that much of the information is dated by a couple of years. TDEC recommends TDOT update all relevant data and information prior to completing the final DEIS. In particular, TDEC notes that six (6) [hazardous materials] sites were noted in the DEIS as needing some sort of follow-up investigation or evaluation given the business operations that are and have historically occurred on those sites. TDEC recommends...that all the information pertaining to these sites that has been developed between the original time frame for this DEIS and the final DEIS be included and discussed in the final DEIS, including any additional, necessary environmental commitments.

Response: All information provided in the DEIS has been updated as part of the FEIS. Regarding the hazardous materials sites reported in the DEIS,

Phase I evaluations were completed, satisfying the commitment made in the DEIS. Below is a summary of those findings:

English Cabinets (5236 Memorial Boulevard)

The Phase I report for the English Cabinets recommended a Phase II. However, TDOT Hazmat Office concluded that it was not needed because the plans do not indicate ROW acquisition at this location and that further investigation is not warranted at this time.

People's Food Store (3104 Memorial Boulevard)

The Phase I report for People's Food Store recommended a Phase II, which was concurred by the TDOT Hazmat Office.

Richard Chadbourne Property (5340 Memorial Boulevard) – A/K/A: Riviera Apartment Complex

The Phase I report for Riviera Apartment complex determined a Phase II was not needed at this time.

During these investigations two additional properties were identified as needing a Phase II investigation:

- Garden Basket Convenience Store #4 (3109 Memorial Boulevard)
- Amoco Service Station (3101 Memorial Boulevard)

Additional Hazardous Materials Commitments in the DEIS included a Phase II investigation for three properties:

- Fuel and Convenience Store (4001 Memorial Boulevard) – A/K/A: Roadrunner Market
- Dry Cleaning Service (3200 Memorial Boulevard) – A/K/A: B&W Cleaners
- Fuel and Convenience Store (5121 Memorial Boulevard) – A/K/A: Greenwood Market

In summary, there are six properties that need a Phase II investigation as identified in the DEIS and subsequent technical studies:

- Site 2 - Roadrunner Market (Fuel and Convenience Store) (4001 Memorial Boulevard);
- Site 5 - B&W Cleaners (Dry Cleaning Service) (3200 Memorial Boulevard);
- Site 7 - Greenwood Market (Market and Deli) (5121 Memorial Boulevard);
- Site 12 – People’s Food Store (Fuel and Convenience Store) (3104 Memorial Boulevard);
- Site 13 - Garden Basket Convenience Store #4 (3109 Memorial Boulevard) and;
- Site 14 - Amoco Service Station (3101 Memorial Boulevard)

These sites are listed as commitments in the FEIS and will be conducted during the final design process.

Comment: The Division of Water Resources has reviewed the DEIS and notes that Alternative A would require a total of 1,278 feet of culverts to be constructed and a total of 3,585 feet of stream would be relocated within the project's proposed right-of-way. Alternative B would require a total of 846 feet of culverts to be constructed and a total of 2,261 feet of stream would be relocated within the project's proposed right-of-way. The Division requests that TDOT commit to using natural stream design for relocations greater than 200 feet in length where practicable.

Response: Culvert improvements will be made during final design, including using natural stream design for relocations greater than 200 feet in length where practicable. TDOT will continue to coordinate with TDEC during the design, permitting, and construction phases.

Comment: The Division of Solid Waste Management has reviewed the DEIS and notes that any asbestos encountered in the displacements that will occur with either Build Alternative should be managed in accordance with appropriate regulations and law and disposed of in an approved landfill. Similarly, any contaminated soils/debris from commercial sources should be evaluated, a determination made, and the materials should be handled in accordance with appropriate regulations and law.

Response: Comment noted. No response required.

Comment: The Division of Air Pollution Control notes that two air monitoring stations are located within 1,000 to 1,500 feet of the proposed project. One site is operated by Eastman Chemical and the other is the Division's Blountville ozone monitoring site. Although it appears the specific monitoring sites are located outside the proposed construction right-of-way, use of certain equipment and activities associated with construction of the proposed project could adversely impact the monitors and monitoring activities. High readings at these monitors could impact the area's ability to remain in attainment for one or more pollutants, which could then impact the area's ability to continue economic development and growth. TDEC recommends TDOT coordinate with the Division of Air Pollution Control to plan for and establish mitigating measures to be incorporated into bid specifications to reduce the potential impacts to these monitors and local air quality during construction.

Response: TDOT will coordinate with the TDEC Division of Air Pollution Control to establish appropriate measures to incorporate into bid specifications to reduce potential impacts to two air quality monitoring stations located within 1,000 to 1,500 feet of the proposed project during construction. This has been added to the Environmental Commitments (“Green Sheet”).

Comment: The Division of Air Pollution Control also notes that long-term traffic volume may be a concern, but it appears both existing and future traffic volumes, as included in Table 1.5.6 of the DEIS do not approach traffic volumes that would be a concern for ozone or other pollutants.

Response: Updated traffic volumes used for the air quality analysis are included as part of the FEIS. Both existing and future traffic volumes do not approach (volumes) that would be a concern for ozone or other pollutants.

Comment: The Division of Air Pollution Control also notes that each owner or operator of a demolition activity is required to thoroughly inspect the facility for the presence of asbestos prior to the commencement of the demolition (Rule 1200-03-11-.02(2)(d)1). The person inspecting a structure for asbestos containing material must be accredited by the state of Tennessee. Additionally, Division Rule 1200-03-11-.02(2)(d)2., subparts (i) and (iii)(I), requires each owner or operator of a demolition activity to provide the Technical Secretary of the Division with written notice of intention to demolish at least ten working days before demolition begins. Notification is required even when there is no asbestos present.

Response: TDOT will continue to coordinate with the TDEC Division of Air Pollution Control regarding asbestos inspections, including intent to demolish structures containing asbestos materials.

Comment: The Division of Natural Areas has reviewed the DEIS and has no comments.

Response: No response required.

Kingsport Metropolitan Planning Organization (August 21, 2014)

Comment: A number of comments were provided on the project's design, which resulted from a meeting with representatives from TDOT Right-of-Way Design Division and TDOT Region 1. The comments are listed in bullets below:

- Proposed Roundabout at Center Street – this would likely be a 2 lane roundabout – this needs to be thoroughly studied for operational issues.
- Section from Center Street to John B. Dennis Highway (SR 93) – recommend continuous center turning lanes (eliminate initial plan to include grass medians. Note; there are too many curb cuts that currently exists that would be removed creating significant side-street level of service and access issues if a grass median with limited turning lanes were installed.
- Section from John B. Dennis Highway (SR 93) to Harbor Chapel Road – recommend continuous center turning lanes – this keeps design and operations consistent with the previous section.
- Section from Hawthorn to Beverly Hills Road – need to insure alignment corrects sharp curves and severe site distance problems that exists along this section. Use northern alignment (will require taking of several homes to the north side).

- Section from Beverly Hills Street to Harbor Chapel Road – move entire alignment (cross-section) southward to open field (mini-farm) – which eliminates taking of several houses to the north side of the alignment.
- Section from Harbor Chapel Road to 100 yards past Old Stage Road – current plans include sidewalks on both sides. No residential or commercial access exists on the north side, significantly reducing need for sidewalks on this side – therefore we are suggesting to remove sidewalk on this side, but keep sidewalk on south sides. This will free up some space to add an 8 to 10 foot center median (or barrier) of some type (concrete, grass, or other) to provide separation from on-coming traffic, which is a constant safety hazard that currently exists. The sidewalks on both sides or the alternative “center barrier and sidewalk on south side” could impact the taking of additional right-of-way on the south side. In order to mitigate this we suggest installing retaining walls where necessary.
- The “S Curves” found in the section from Old Stage Road to Holiday Hills road should be soften (straightened) more. Significant horizontal curvature still exists in the preliminary plans. This section could also get by with sidewalks on one side only.
- Section from Holiday Hills to Cemetery Property – in order to reduce cut and fill consider installing sidewalks on one side (south side) and add a couple more feet to shoulders on north side.
- Section from west end of Cemetery to Cook’s Valley Road – to reduce cut and fill consider sidewalks on one side (south side) and add a couple feet to shoulders on north side. Also add a west-bound turning lane to the approach to Cook’s Valley Road in project.
- Consider removing apartment building on south side of SR 126 adjacent to Shuler – for better access and site distance from Shuler (as opposed to closing Shuler).
- Add fiber-optic cabling (underground) throughout entire project – for future use (camera systems, computer access, variable message boards, other communication needs).
- Where possible throughout the entire project wide shoulders (6 to 10 feet) should be installed in order to provide safer clear zones and/or forgiveness zones and to also provide pullover areas for motorists (and location for police and emergency vehicles to park, when needed). This is important !

Response: The project is currently based on a preliminary design. This design was derived from the 2003 APR, and modified during the NEPA process, which included coordination with the Kingsport MPO and local government representatives. TDOT will continue to explore design options in the design phase, including the modifications suggested by the Kingsport MPO.

Tennessee Wildlife Resources Agency (August 25, 2014)

Comment: We recommend that Alternative B be given serious thought for the Preferred Alternative since Alternative B has fewer stream and floodplain impacts. Also, Alternative B required fewer relocations to complete the project.

Response: Comment noted. The Preferred Alternative (Alternative B Modified) identified in the FEIS is a modification of Alternative B and has the same amount of stream and floodplain impacts. It also requires less relocations than Alternative B.

U.S. Department of the Army: Corps of Engineers, Nashville District (August 26, 2014)

Comment: Potential impacts to perennial and intermittent streams are addressed; however, ephemeral streams may also be waters of the U.S. and subject to Section 404 of the CWA [Clean Water Act] permitting requirements. Therefore, any impacts to ephemeral streams should be included in the DEIS where appropriate, including Table A in Summary, Chapter 4.0, and the Comparisons of Stream Impacts in linear feet.

Additionally, mitigation of stream impacts is discussed in the Water Quality section. While it is correct that typically "mitigation is required for all stream impacts which do not meet requirements for certain Nationwide Section 404 permits", it is also true that compensatory mitigation may be required for certain Nationwide Permits to ensure lost aquatic resource function is replaced. If compensatory mitigation is required for Nationwide Permits and/or Standard Permits, compliance with 33 CFR 332 (Compensatory Mitigation for Losses of Aquatic Resources) must be demonstrated. We recommend that a stream and wetland delineation of the sites be provided to this office for verification prior to submittal of a DA permit application.

Response: Comments noted. As stated in Section 4.9 – Ecological Impacts, an updated environmental boundary and mitigation report will be completed with appropriate consultation with the USFWS, TWRA, TDEC, and USACE prior to construction. Impacts to perennial, intermittent, and ephemeral streams within the project corridor will be included in this documentation. The Preferred Alternative (Alternative B Modified) will be designed to avoid major impacts to these resources to the extents practicable. Efforts to further minimize impacts will continue throughout the design, permitting, and construction processes. Unavoidable impacts will be mitigated as required by applicable laws and regulations.

6.0 REFERENCES

City of Kingsport Planning and GIS Department, accessed on January 17, 2014.

<http://development.kingsporttn.gov/planning>.

“Division of Employment,” *Labor Market Services – Area Profile*, Tennessee Department of Labor and Workforce Development, accessed on December 3, 2013,

<http://www.Jobs4tn.gov>.

HealthSouth Rehabilitation Hospital, accessed on December 17, 2013,

<http://www.healthsouthkingsport.com>.

Kingsport Metropolitan Transportation Planning Organization, *2035 Long Range Transportation Plan*, June 7, 2012.

Kingsport Metropolitan Transportation Planning Organization, *Kingsport Regional Bicycle and Pedestrian Plan*, 2012.

Mountain States Health Alliance, accessed on December 17, 2013, <http://ipmc.msha.com/>.

“State and County Quickfacts: Sullivan County and Tennessee,” U.S. Census Bureau, accessed on December 3, 2013, <http://www.quickfacts.census.gov/qfd/states/47/47163.html>.

Sullivan County Department of Education, accessed on December 18, 2013,

<http://www.sullivank12.net>.

Sullivan County Government, *Sullivan County Regional Plan: A Guide for Future Land use and Transportation Development (Planning Period: 2006-2026)*, 2008.

Sullivan County Planning and Codes Department, *Sullivan County Zoning Code*, 2014.

Tennessee Department of Environment and Conservation, Natural Heritage Inventory, accessed on December 19, 2013, <http://www.tn.gov/environment/natural-areas/natural-heritage-inventory-program.shtml>.

Tennessee Department of Environment and Conservation, Final Version 2010 303(d) List, accessed on December 19, 2013, http://www.state.tn.us/environment/water/water-quality_publications.shtml.

Tennessee Department of Transportation, *Air Quality Technical Report for State Route 126 (Memorial Boulevard) from East Center Street to Interstate 81*, 2014.

Tennessee Department of Transportation, *Baseline Phase I Site Assessment of Underground Tanks and Hazardous Material Sites: SR 126 Memorial Boulevard from Center Street to I-81*, 2008.

Tennessee Department of Transportation, *Tennessee Environmental Procedures Manual: Guidelines for Preparing Environmental Documentation for Federally Funded and State Funded Transportation Projects*, 2011.

- Tennessee Department of Transportation, *Noise Evaluation Update for State Route 126 (Memorial Boulevard) from East Center Street to Interstate 81*, 2014.
- Tennessee Department of Transportation. *Phase I Preliminary Assessment Study: English Cabinet Shop, Inc.*, 2013.
- Tennessee Department of Transportation. *Phase I Preliminary Assessment Study: Riviera Apartment Complex*, 2013.
- Tennessee Department of Transportation. *Phase I Preliminary Assessment Study: People's Food Store (Shell Station)*, 2013.
- Tennessee Department of Transportation, *Aquatic and Terrestrial Ecology Report: SR 126 Memorial Boulevard from Center Street to I-81*, 2008.
- Tennessee Department of Transportation, *Indiana Bat (Myotis sodalis) Mist Net Survey for Proposed SR 126 from East Center Street to I-81*, 2011.
- Tennessee Department of Transportation, *Documentation of Effect Report Pursuant to 36 CFR 800: State Route 126 from East Center Street to Interstate 81*, 2008.
- Tennessee Department of Transportation, *Addendum Documentation of Effects Pursuant to 36 CFR 800 and Section 4(f) Documentation: State Route 126 from East Center Street to Interstate 81 in Kingsport*, 2013.
- Tennessee Department of Transportation, *Conceptual Stage Relocation Plan: State Route 126 from East Center Street to I-81*, 2010.
- Tennessee Department of Transportation, *Conceptual Stage Relocation Plan: State Route 126 from East Center Street to I-81*, 2012.
- Tennessee Department of Transportation, *Draft Environmental Impact Statement: State Route 126 (Memorial Boulevard) Corridor Improvement Project from East Center Street to I-81*, 2012.
- United States Census Bureau, American Community Survey, accessed on February 20, 2014, <http://www.census.gov/acs/www/>.
- United States Census Bureau, 2010 Decennial Census, accessed on February 20, 2014, <http://www.census.gov>.

7.0 LIST OF PREPARERS

Federal Highway Administration - Tennessee Division

Leigh Ann Tribble
Environmental Program Engineer

Tennessee Department of Transportation - Environmental Division

Margaret Slater, AICP
Manager
Major Projects Office

JonnaLeigh Stack, Esq.
Transportation Coordinator
NEPA Project Manager

Parsons Brinckerhoff

Valerie Birch, AICP
Consultant Reviewer for
TDOT Major Projects Office
B.S. Geography
M.U.R.P Urban and Regional Planning
Senior Environmental Manager

ICA Engineering, Inc.

Robbie Hayes, AICP
B.S. Political Science
M.C.P. Community Planning
M.P.A. Public Administration
Environmental Planner

John Farmer, P.E., CPESC
B.S. Biology
B.S. Civil Engineering
Senior Environmental Engineer

Mark Reep, PE
B.S. Civil Engineering
Senior Project Engineer

Will Kerr, AICP
B.S. Political Science
M.A. Urban and Regional Planning
Senior Environmental Planner

**ATTACHMENT A – KINGSFORT METROPOLITAN
TRANSPORTATION PLANNING ORGANIZATION (KMTPO):**

**2014-2017 TRANSPORTATION IMPROVEMENT PROGRAM
(TIP) PAGE**

**2014-2017 TRANSPORTATION IMPROVEMENT PROGRAM
ADJUSTMENT PAGE**

AND

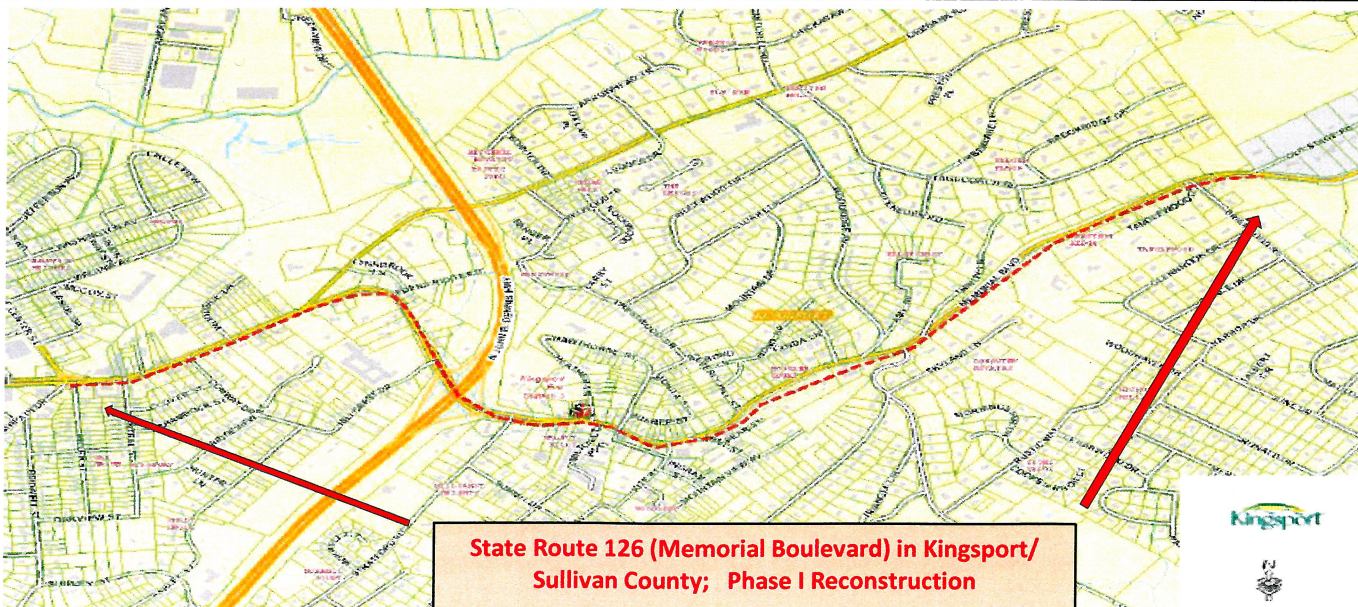
**2035 (KMTPO) LONG-RANGE TRANSPORTATION PLAN
(LRTP) PAGE**



TIP #	TN-5	TDOT PIN# / VA UPC#	PIN # 105467.01	Priority		Lead Agency	TDOT - 82020
County	Sullivan	Length	4.1 Miles	L RTP#	MNA-20a	Conformity Status	N/A
Route/Project Name	SR-126 (Memorial Blvd) - Phase I					Total Project Cost	\$40,000,000
Termini or Intersection	From East Center Street in Kingsport to Cook's Valley Road						
Project Description	Widen the section from Center Street to Hawthorne Street to 4 lanes (gras median). Widen from Hawthorne Street to Harbor Chapel Road from 2 to 5 lanes (center turning). Widen the section from Harbor Chapel to Old Stage Road from 3 ot 4 lanes (grass or paved median) and Widen the section from Old Stage Road to Cook's Valley Road from 2 to 3 lanes.						

Fiscal Year	Type of Work	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
FY 14	PE-D	S-STP	\$1,000,000	\$800,000	\$200,000	\$0
FY 15						
FY 16	ROW	S-STP	\$6,000,000	\$4,800,000	\$1,200,000	\$0
FY 17						

Remarks	Amendment Number	Adjustment Number
Phase I project - East Center Street to East of Cook's Valley Road. Note: The previously obligated funds listed in FY 14 include funding for the NEPA process		



**State Route 126 (Memorial Boulevard) in Kingsport/
Sullivan County; Phase I Reconstruction**

SECTION A

Previous Projects – Status Report Listed below are major projects from the previous TIP

ID	Project Location	Description	Status
TN-1	Fordtown Rd	Realignment	PE and ROW completed
TN-2	I-26 Welcome Center	Welcome Center and interchange	PE and ROW underway
TN-3 PIN# 103725	Intersection of US 11W/Indian Trail Dr	Install new signal and add median work at approaches	Construction complete, awaiting final voucher
TN-4 PIN# 101552.00	Netherland Inn Bridge	Bridge replacement	Construction complete
TN-5 PIN# 105467.00	SR 126 from Center St to I-81	Reconstruction/widening improvements	Currently in PE Phase
TN-18	KATS Operations	Bus drivers, dispatch, staff, operating	Complete
TN-8 PIN #109896.00 & 109896.01	Intersection of SR 93 and Pavilion Dr	Install new signal and geometric improvements	Construction in Summer of 2010, waiting final voucher
TN-9	Watauga Roundabout	Construct roundabout at 5 legged intersection with local funds	Complete
TN-10	Eastman Rd/Ryder Dr	Signalization with local funds	Complete
TN-11	Gibson Mill / W Ravine Rd	Realignment and relocation project funded by local/private partnership	W Ravine Rd extension complete; Gibson Mill realignment construction underway
TN-12 PIN# 030627.00	Adjacent to Netherland Inn	Construct Historic Transportation Museum using Enhancement funds	Construction complete, awaiting final voucher
TN-13	Warriors Path State Park	Park amenities	Construction complete, awaiting final voucher

**TENNESSEE DEPARTMENT OF TRANSPORTATION
FY 2014 THRU FY 2017
TRANSPORTATION IMPROVEMENT PROGRAM
TITLE 23 U.S.C., SECTIONS 105 & 135**

OLD PAGE

STIP #	1482020	TDOT PIN	105467.01	LENGTH IN MILES	4.1	LEAD AGENCY	TDOT
COUNTY:	SULLIVAN	TOTAL PROJECT COST	\$40,000,000		TIP NO:	TN-5	
ROUTE:	SR-126						
TERMINI :	FROM EAST CENTER STREET IN KINGSPORT TO EAST OF COOKS VALLEY ROAD						
PROJECT DESCRIPTION:	WIDEN THE SECTION FROM CENTER STREET TO HAWTHORNE STREET TO 4 LANES(GRAS MEDIAN).WIDEN FROM HAWTHORNE STREET TO HARBOR CHAPEL ROAD FROM 2 TO 5 LANES(CENTER TURNING). WIDEN THE SECTION FROM HARBOR CHAPEL TO OLD STAGE ROAD FROM 3 OT 4 LANES(GRASS OR PAVED						
REMARKS							

<u>FISCAL YEAR</u>	<u>TYPE OF WORK</u>	<u>FUNDING TYPE</u>	<u>TOTAL FUNDS</u>	<u>FED FUNDS</u>	<u>STATE FUNDS</u>	<u>LOCAL FUNDS</u>
2014	PE-D	STP	1,000,000	800,000	200,000	
2016	ROW	STP	6,000,000	4,800,000	1,200,000	

**TENNESSEE DEPARTMENT OF TRANSPORTATION
FY 2014 THRU FY 2017
TRANSPORTATION IMPROVEMENT PROGRAM
TITLE 23 U.S.C., SECTIONS 105 & 135**

ADJUSTED PAGE

Adjustment Number: 162

STIP #	1482020	TDOT PIN	105467.01	LENGTH IN MILES	4.1	LEAD AGENCY	TDOT
COUNTY:	SULLIVAN	TOTAL PROJECT COST	\$40,000,000		TIP NO:	TN-5	
ROUTE:	SR-126						
TERMINI :	FROM EAST CENTER STREET IN KINGSPORT TO EAST OF COOKS VALLEY ROAD						
PROJECT DESCRIPTION:	WIDEN VARIOUS SECTIONS FROM 2 TO 3 LANES, 2 TO 4 LANES, 2 TO 5 LANES, INCLUDING TURN LANES, TRUCK CLIMBING LANES AND MEDIANS						
REMARKS							

<u>FISCAL YEAR</u>	<u>TYPE OF WORK</u>	<u>FUNDING TYPE</u>	<u>TOTAL FUNDS</u>	<u>FED FUNDS</u>	<u>STATE FUNDS</u>	<u>LOCAL FUNDS</u>
2014	PE-D	STP	1,000,000	800,000	200,000	
2016	ROW	STP	6,000,000	4,800,000	1,200,000	

KINGSPORT METROPOLITAN TRANSPORTATION PLANNING ORGANIZATION

2035 Long Range Transportation Plan (LRTP)



June 7, 2012

**Table 5-2
Projects Completed Since 2008 & Committed Improvements (E+C Network)**

TDOT/VA #	Project/Route	From/To	Type of Improvement	Improvement Description	Status
Projects Completed Since Last Plan (2008)					
10614.00	Fordtown Road	End of I-81 Exit Ramps (at Exit 56) to Near Eastern Star Road	Safety	Relocate and widen to 3 lanes along new corridor.	Completed
TN-4	I-81	Along I-81 corridor at the I-26 interchange Exit 57, MM 53.0, MM 54.8, MM 56.8, MM 59.3, and MM 61.4	ITS	Install the required number of traffic cameras needed to monitor traffic along the I-81 corridor and their associated hardware/software, etc.	Completed
City of Kingsport	Gibson Mill	Intersection of East Stone Drive; West Ravine Road; and South to Watauga Street	Intersection/ Realignment	Realignment at intersection of East Stone Dr, add roundabout at West Ravine Road, and add turn lane south to Watauga Street	Completed
City of Kingsport	Cleek Road	Intersection of East Stone Drive and New Beasonwell Road. Realignment of Cleek Road from East Stone Drive to new intersection on Orebank Road.	Safety/ Reconstruction	Intersection improvements and realignment as well as the addition of a multi-use path	Completed
Committed Projects					
112789.00	SR-1 - Main St / Hammond Ave Signalization & Geometric Improvements	Intersection of SR 1/Hammond Ave and Main St/Hammond Ave	Intersection	Dual signal arrangement with a coordinated timing plan along with the installation of additional geometric improvement to add turning lanes and other safety improvements as designed.	Under Construction
040028.01	I-26 Tennessee Welcome Center	Proposed Welcome Station South of Bell Ridge Road	Welcome Center	Construct New Tennessee Welcome Station	Under Construction
101397.00	SR-75	SR-36 to SR-357 (HPP ID# 2026, 388 & 4969)	Widening	Widen from 2 lanes to 5 lanes	Under Construction
70080.00	Route 72 - Phase II (Moccasin Gap Bypass)	From: 0.394 Kilometer South ECL Weber City To: West ECL Weber City (3.5 KM)	Reconstruction/ Realignment	Construct to 4 lanes	Under Construction
86598.00	US-23 (RTE 23)	SBL Over North Fork Holston River VA Structure #1003	Bridge Replacement	Bridge Replacement	Under Construction
101389.00	US-23 (RTE 23)	NBL over North Fork Holston River (VA STR1108)	Bridge Replacement	Bridge Replacement	Under Construction
293.00	Route 614 (Yuma Road)	From .06 miles west of intersection Route 713 to .02 miles east of Route 867 West	Reconstruction	Reconstruction	Under Construction
City of Kingsport	Gibson Mill	Gibson Mill Rd (Phase V) from Gibson St to Watauga St	Reconstruction	Reconstruct to 3 lanes as part of Gibson Mill Rd Improvements (transition to 2 lanes near Robertson St)	Under Construction
City of Kingsport	Rock Springs Road	From Edinburgh Channel Rd (entrance to new elementary school) to Cox Hollow/Rock Springs Drive	Safety/ Reconstruction	Add shoulders, multi-use path, and eliminate horizontal/vertical curves	Under Construction
STP-5	Netherland Inn Road	Realignment of Union St from US-11W to Netherland Inn Rd	Reconstruction/ Realignment	Realign and reconstruct Union St to improve access to Netherland Inn Rd and economic redevelopment area along the Holston River.	Under Development
114173.00	I-81	Eastbound truck climbing lane at mile marker 60 to Exit 63	Widening	Add an eastbound truck climbing lane from mile marker 60 to Exit 63 to improve congestion.	Under Development
17747.00	Intersection of SR-224, US-23, & US-58 (RTE 58) (Moccasin Gap Bypass)	From: 0.486 Kilometer West ECL Weber City To: 0.491 Kilometer East ECL Weber City	New Interchange	New Interchange	Under Development
12764.00	Route 72 (RTE 72) (Moccasin Gap Bypass)	From: 0.394 Kilometer South ECL Weber City To: 0.120 Kilometer North Route 71	Reconstruction/ Realignment	Roadway Reconstruction (New Alignment)	Under Development
86594.00	Route 687 (Gate Road)	Over Big Moccasin Creek VA Structure #6102	Bridge Replacement	Bridge Replacement	Under Development
105467.00	SR-126 (Memorial Blvd)	From East Center Street in Kingsport to East of Cooks Valley Road	Widening	Widening project from 2 to 4 lanes	Under Development
112834.00	SR-93 (Sullivan Gardens Parkway)	From I-81 to SR-347	Safety	Various safety spot improvements along the corridor at five locations. Improvements range from the addition of a center turn lane at two locations, the flattening of existing horizontal curves, the addition of paved shoulders at several locations, and sidewalk improvements at one location.	Under Development

APPENDIX B

TABLE 47: NETWORK IMPROVEMENTS

Project ID	Roadway	Improvement	Year
11-TC	Rock Springs Rd	Reconstruct to 3 lanes and widen shoulders with safety and geometric improvements at select locations/intersections	2015
13-TC	Sullivan St West	Reconstruct to 3 lanes and widen shoulders with safety and geometric improvements at select locations/intersections	2015
14-TC	Eastern Star Rd	Reconstruct to 3 lanes with safety and geometric improvements at select locations/intersections	2015
15-TC	Tri-Cities Crossing	Reconstruct to 3 lanes with safety and geometric improvements at select locations/intersections	2015
17-TC	Lincoln St/MLK Jr Dr Connector	Extend Lincoln St/MLK Jr Dr to Industry Dr	2015
19-TC	Mitchell Rd Connector	Construct new 3 lane roadway to link Fordtown Rd to Eastern Star at I-26 Interchange	2015
36-TSTI	Memorial Blvd (SR 126)	Reconstruct to 2 lanes and widen shoulders with safety and geometric improvements at select locations/intersections	2015
3-VC	Wadlow Gap Rd (SR 224)	Pave gravel shoulders; provide safety and geometric improvements at select locations/intersections	2015
9-TC	Netherland Inn Rd	Reconstruct to 3 lanes (center turn lane) in coordination with roundabout	2015
1-VC	US 58/US 421	Reconstruct to 3 lanes (center turn lane) as part of Moccasin Gap project	2025
38-TSTI	Fort Henry Dr (SR 36)	Widen shoulders and improve turning movements/extend center turn lane	2025
40-TSTI	Bloomingtondale Pk	Reconstruct to 3 lanes with safety and geometric improvements at select locations/intersections	2025
8-TC	Memorial Blvd (SR 126)	Reconstruct to 3 lanes and widen shoulders with safety and geometric improvements at select locations/intersections	2025
10-TC	Reservoir Rd	Reconstruct to 3 lanes (center turn lane) and widen shoulders	2035
22-TC	Fort Henry Drive (SR 36)	Widen existing 2 lane road to 4/5 lanes	2035
26-TC	Granby Rd Extension	Extend Granby Dr from Stone Dr to Fort Robinson Dr as part of improved access to Netherland Inn Rd	2035
2-VC	Jackson St East (SR 71)	Reconstruct to 3 lanes as part of proposed Clinch Mountain/SR 72 bypass project	2035
34-TSTI	Riverport Rd	Reconstruct to 2 lanes and widen shoulders with safety and geometric improvements at select locations/intersections	2035
4-TC	Stone Dr West (US 11W/SR 1)	Widen to 6 lanes	2035

ATTACHMENT B – FARMLAND COORDINATION

United States Department of Agriculture



Natural Resources Conservation Service
675 U.S. Courthouse
801 Broadway
Nashville, Tennessee 37203

December 22, 2008

Mr. Tom Love
Tennessee Department of Transportation
Suite 900, James K. Polk Bldg.
505 Deaderick Street
Nashville, TN 37243-0334

Dear Mr. Love:

We received your request for Environmental assessment and FPPA information for the State Route 126 highway project from East Center Street in Kingsport to Interstate 81, Sullivan County, TN

Your request for information related to environmental impacts is being forwarded to the Tennessee NRCS National Environmental Policy Act (NEPA) Coordinator to review and coordinate with other NRCS specialists for any comments or recommendations they may have pertaining to this project.

The following NRCS specialist will supply a Farmland Conversion Impact Rating based upon information you submitted on Form CPA-106 and accompanying documents:

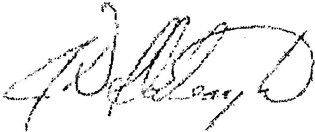
Livingston, Richard L, RESOURCE SOIL SCI
KNOXVILLE SERVICE CENTER
9737 COGDILL RD
KNOXVILLE, TN 37918
(865) 671-3830 x 3

Some other items in your request are outside of the authority of our agency or we do not have the expertise to provide that type of information for your organization.

Our soil survey information can also be found online at <http://websoilsurvey.nrcs.usda.gov>. This website will provide you with all of our most current soil survey data and interpretations including prime farmland and hydric soils.

Please feel free to call me at (615) 277-2550, or e-mail me at doug.slabaugh@tn.usda.gov, if you have questions about this request, or if you need assistance with accessing our soils information on the web and any other needs that may arise for Tennessee Soil Survey products or information.

Sincerely,

A handwritten signature in dark ink, appearing to read 'J. Douglas Slabaugh', with a stylized flourish at the end.

J. DOUGLAS SLABAUGH
State Soil Scientist

Cc: (w/enclosures)

Rick Livingston, NRCS Resource Soil Scientist, Knoxville, TN

Carol Chandler, NRCS NEPA Coordinator, Nashville, TN

NRCS:SS:JD Slabaugh::12/22/08

United States Department of Agriculture



Natural Resources Conservation Service
9737 Cogdill Road, Suite 152C
Knoxville, TN 37932
Phone 865-671-3830 x. 112

January 12, 2009

Mr. Tom Love
Tennessee Department of Transportation
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, TN 37243-0334

Project: State Route 126 (Memorial Blvd.) from East Center St. in Kingsport to I-81 Sullivan County, TN

Dear Mr. Love,

The request for soils information that was sent to Mr. Kevin Brown forwarded to me. I will be addressing the portion of the request concerning the Farmland Protection Policy and hydric soils

This information was compiled using a corridor of 1,000 ft. on either side of existing S.R. 126 as specified in the information you sent. This project will result in the conversion of 132 acres of Prime Farmland as defined in the Farmland Protection Policy Act. Form AD-1006 is attached to this letter to document this determination. Prime farmland is land that has the best combination of physical and chemical characteristics, growing season, and moisture supply for producing agricultural crops. Generally, land may be pasture, forestland, or cropland but may not be urban built-up land or waterways. Additionally, construction within an existing right-of-way purchased on or before August 4, 1984 is not subject to the Farmland Protection Policy Act.

Concerning Hydric Soils, there are 54 map units of Bloomingdale silty clay loam. 0 to 2 percent slopes, occasionally flooded within the corridor. These 4 map units occupy about 47 acres of the total 2,100 acres. Hydric soil criteria is only one of the 3 factors used in determining a wetland. Areas of hydric soils may or may not meet all of the requirements of a wetland.

Much of our soils information is available on-line at <http://websoilsurvey.nrcs.usda.gov/app/>
Additional information on Prime Farmland may be obtained at our websites
www.tn.nrcs.usda.gov/technical/soils/fppa.html or www.nrcs.usda.gov/programs/fppa/.

Feel free to contact me if I may be of further assistance.
Sincerely,

A handwritten signature in dark ink, appearing to read "Richard Livingston", is written over the typed name.

Richard Livingston
Resource Soil Scientist

Enclosure

Helping People Help the Land

An Equal Opportunity Provider and Employer

FARMLAND CONVERSION IMPACT RATING

PART 1 (To be completed by Federal Agency)		1. Date of Land Evaluation Request December 12, 2008		2. Sheet <u>1</u> of <u>1</u>	
3. Name of Project SR 126, Memorial Boulevard		4. Federal Agency Involved US Department of Transportation, Federal Highway Administration			
5. Proposed Land Use Improved Highway Corridor		6. County and State Sullivan County, TN		7. Type of Project: Corridor <input checked="" type="checkbox"/> Other <input type="checkbox"/>	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS		2. Person Completing the NRCS parts of this form	
3. Does the site or corridor contain prime, unique, statewide or local important farmland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, the FPPA does not apply - Do not complete additional parts of this form)				4. Acres Irrigated NA	
				5. Average Farm Size 120 acres	
6. Major Crop(s) Corn		7. Farmable Land in Government Jurisdiction Acres: 97,375 35%		8. Amount of Farmland As Defined in FPPA Acres: 16,623 6 %	
9. Name of Land Evaluation System Used LESA		10. Name of Local Site Assessment System None		11. Date Land Evaluation Returned by NRCS January 12, 2009	
PART III (To be completed by Federal Agency)			Alternative Site Rating		
			Alternate A	Alternate B	
A. Total Acres To Be Converted Directly			239 acres	121 acres	
B. Total Acres To Be Converted Indirectly, Or To Receive Services					
C. Total Acres in Site			239 acres	121 acres	
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime and Unique Farmland			132.0	132.0	
B. Total Acres Statewide and Local Important Farmland			15	5	
C. Percentage of Farmland in County or Local Govt. Unit to be Converted			0.01	0.01	
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value			80%	80%	
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)			18	18	
PART VI (To be completed by Federal Agency) Corridor or Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b & c))			Max. Points Corridor		
1. Area in Nonurban Use			15	9	9
2. Perimeter in Nonurban Use			10	7	7
3. Percent of Site Being Farmed			20	12	12
4. Protection Provided by State and Local Government			20	5	5
5. Distance from Urban Built-up area			0	NA	NA
6. Distance to Urban Support Services			0	NA	NA
7. Size of Present Farm Unit Compared to Average			10	8	8
8. Creation of Non-Farmable Farmland			25	1	1
9. Availability of Farm Support Services			5	5	5
10. On-Farm Investments			20	10	10
11. Effects of Conversion on Farm Support Services			25	2	2
12. Compatibility with Existing Agricultural Use			10	5	5
TOTAL CORRIDOR OR SITE ASSESSMENT POINTS			160	64	64
PART VII (To be completed by Federal Agency)					
Relative Value of Farmland (from Part V above)			100	18	18
Total Corridor or Site Assessment (From Part VI above or a local site assessment)			160	64	64
TOTAL POINTS (Total of above 2 lines)			260	82	82
PART VIII (To be completed by Federal Agency after final alternative is chosen)					
1. Corridor or Site Selected: Improvements to SR 126, Memorial Blvd. from East Center Street to Interstate 81 in Kingsport, TN.			2. Date of Selection: NA		3. Was A Local Site Assessment Used? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
4. Reason For Selection: Selection has not been made – This is a comparison of the two proposed Build Alternatives. Signature of person completing the Federal Agency parts of this form:			Sullivan County State Route 126 Memorial Boulevard LESA Site Assessment		

ATTACHMENT C – CONCEPTUAL STAGE RELOCATION PLAN



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

RIGHT OF WAY DIVISION
SUITE 600, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3196

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

August 22, 2012

JonnaLeigh Stack
TDOT Transportation Coordinator, NEPA Manager
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, TN. 37243

Re: **Modified Alternate "B"**
County: **Sullivan**
Route: **SR-126**
NEPA Project Number: **82085-0233-04**
Federal Project Number: **STP-126(10)**
PIN Number: **105467.00**

Dear Ms. Stack:

In order to reduce impacts and the anticipated number of residential relocations that would result from construction of Alternate "B" for the above project, a 2.7± mile segment of the preliminary plans was modified.

As scaled from the conceptual plans supplied by the Nashville office of Florence & Hutcheson, Inc., the studied segment begins roughly 500 feet southwest of the intersection of SR-126 and Glenwood Street and ends approximately 60 feet east of the intersection of SR-126 and Cook's Valley Road. A map showing the location of the modified segment is attached to this letter.

A set of the conceptual plans for the modified segment marked to indicate the anticipated relocations is also included with this letter.

Results are summarized in the chart shown on the next page.

DISPLACEMENTS:

RELOCATIONS	Original Alternate B (Total Before)	Net Reduction of Relocations in Study Area	Alternate B Incorporating the Modification (Total After)
SINGLE FAMILY RES.	90	9	81
MULTI-FAMILY UNITS	69	47	22
MOBILE HOMES	3	2	1
BUSINESSES	30	6	24
NON-PROFIT	1	0	1

DISPLACEMENT EFFECTS AND ANALYSIS

Single Family Units

Alternate B: Construction of this option is expected to result in the displacement of 90 (ninety) single family residences.

Modified Alternate B: After incorporating the reduction in relocations resulting from the modified segment, construction is expected to result in the displacement of 81 (eighty one) single family residences, 9 (nine) fewer than originally estimated.

Multi-Family Units

Alternate B: Construction of this option is expected to displace 69 (sixty nine) multi-family units.

Modified Alternate B: After incorporating the reduction in relocations resulting from the modified segment, construction is expected to result in the displacement of 22 (twenty two) multi-family units, 47 (forty seven) units fewer than originally estimated.

Mobile Homes

Alternate B: Construction of this option is expected to displace 3 (three) mobile homes.

Modified Alternate B: After incorporating the reduction in relocations resulting from the modified segment, construction is expected to result in the displacement of 1 (one) mobile home, 2 (two) fewer than originally estimated.

Businesses

Alternate B: Construction of this option is expected to result in the displacement of 30 (thirty) small businesses.

Modified Alternate B: Construction is expected to displace 24 (twenty four) small businesses, 6 (six) fewer than originally estimated.

Non-Profit

Modified Alternate B: Construction of this option will not affect the number of non-profit displacements.

No new potential relocations (single family residential, multi-family, mobile home, business, farm, or non-profit) were noted on the project.

The reduction in anticipated relocations within the 2.7± mile modified segment is summarized in the table below.

RELOCATIONS	Portion of Alternate B Affected by the Modification (Before)	Modified Alternate B “Study Area” (After)	Net Reduction of Relocations in “Study Area”
SINGLE FAMILY RES.	28	19	9
MULTI-FAMILY UNITS	50	3	47
MOBILE HOMES	2	0	2
BUSINESSES	8	2	6
NON-PROFIT	0	0	0

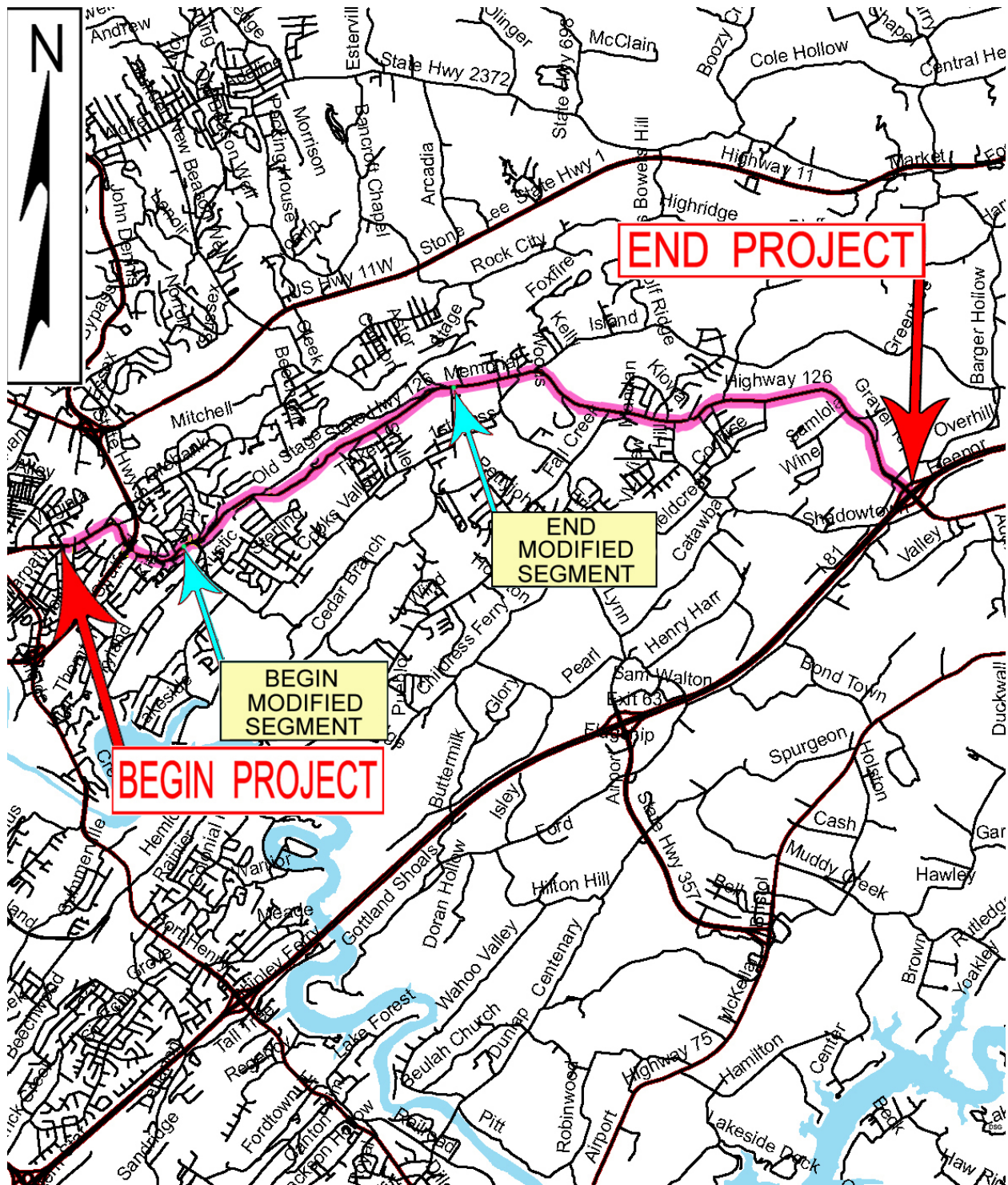
Prepared By:



David S. Goodman
Transportation Specialist 1

Digitally signed by David S. Goodman
DN: cn=David S. Goodman,
o=Tennessee Dept. of Transportation,
ou=Right of Way Office,
email=David.S.Goodman@tn.gov,
c=US
Date: 2012.08.22 09:13:37 -05'00'

LOCATION MAP
(For Illustration Only)



ANTICIPATED RELOCATIONS

SR 126 DEIS, SULLIVAN CO.

MODIFIED ALTERNATE "B"

RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

MULT-FAMILY
RELO. (3 UNITS)

RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

Garage

RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

BUSINESS
RELOCATION

Pump Island in
Proposed ROW

RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

MODIFIED ALTERNATE "B"
PROPOSED ROW (RED LINE)

ALTERNATE "B" PROPOSED
ROW (BLUE LINE)

TRINITY LN. CONNECTOR

WOODRIDGE

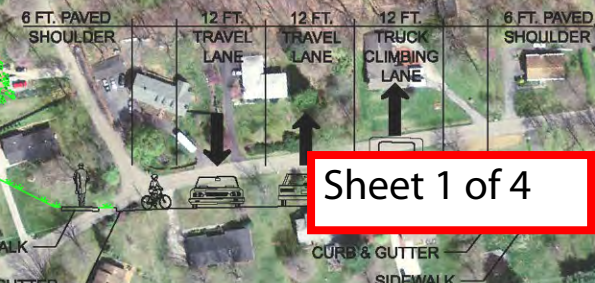
AMY AVE.

TRINITY LN.

SKYLAND LN.

HARBOR CHAPEL RD.

TANGLEWOOD RD.





TYPICAL SECTION - OLD STAGE ROAD

ALTERNATE "B" PROPOSED ROW (BLUE LINE)

MODIFIED ALTERNATE "B" PROPOSED ROW (RED LINE)

BUSINESS RELOCATION



ALTERNATE "B" PROPOSED ROW (BLUE LINE)

MODIFIED ALTERNATE "B" PROPOSED ROW (RED LINE)

RESIDENTIAL RELOCATION

Garage

UNINHABITABLE RESIDENCE

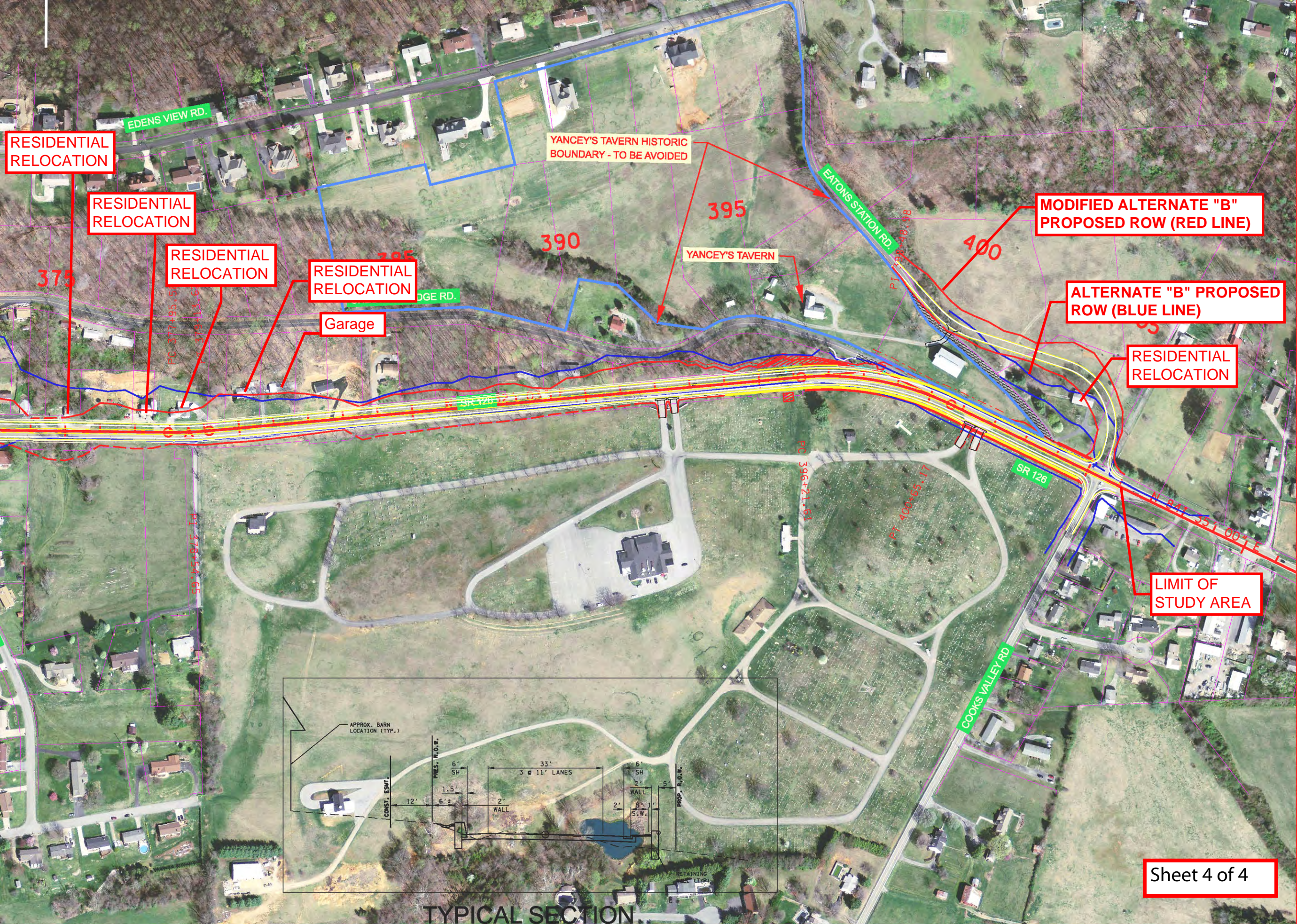
RESIDENTIAL RELOCATION

Garage

RESIDENTIAL RELOCATION



TYPICAL SECTION - SEGMENT 3B



RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

RESIDENTIAL
RELOCATION

Garage

YANCEY'S TAVERN HISTORIC
BOUNDARY - TO BE AVOIDED

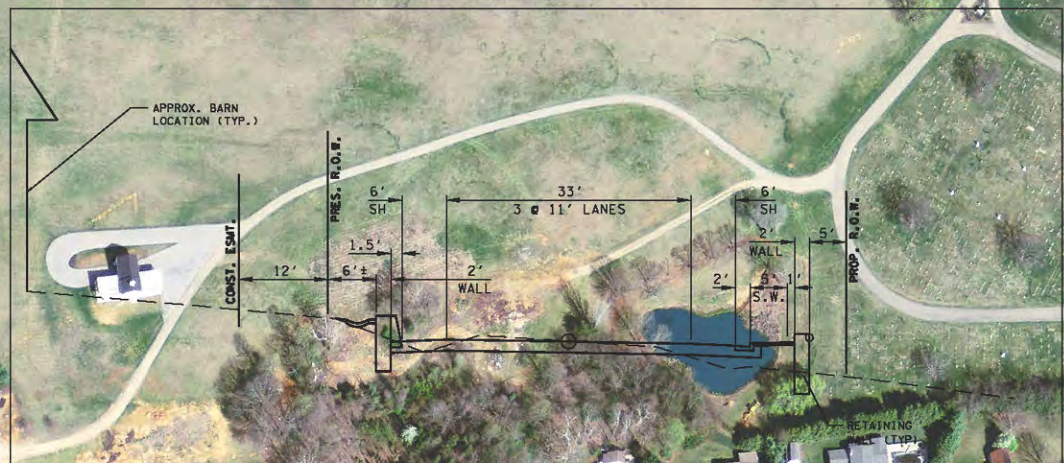
YANCEY'S TAVERN

MODIFIED ALTERNATE "B"
PROPOSED ROW (RED LINE)

ALTERNATE "B" PROPOSED
ROW (BLUE LINE)

RESIDENTIAL
RELOCATION

LIMIT OF
STUDY AREA



TYPICAL SECTION



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY DIVISION
SUITE 600, JAMES K. POLK BUILDING
NASHVILLE, TENNESSEE 37243-0337**

GERALD F. NICELY
COMMISSIONER

PHIL BREDESEN
GOVERNOR

CONCEPTUAL STAGE RELOCATION PLAN

Sullivan Co.
Project No. 82085-1225-14; STP-126(10)
PIN NO. 105467.00

State Route 126 from East Center Street to I-81

GENERAL AREA AND PROJECT INFORMATION

The Tennessee Department of Transportation is proposing to improve State Route 126 from East Center Street in Kingsport to Interstate 81. The project proposes to improve the existing two (2) lane roadway which currently suffers from substandard geometry and sight distance issues.

Sullivan County is located in northeast Tennessee and has a population of 153,048 (2000 census data). Kingsport, where the project begins, has a population of 44,905 (2000 census data).

DISPLACEMENTS

RELOCATIONS	A	B
SINGLE-FAMILY UNITS	102	90
MULTI-FAMILY UNITS	135	69
MOBILE HOMES	4	3
BUSINESSES	43	30
NON PROFIT	1	1

DISPLACEMENT EFFECTS AND ANALYSIS

RESIDENTIAL:

This project is expected to cause either one hundred and sixty two (162) or two hundred forty one (241) residential displacements depending on the alternate chosen. The displacements are as follows:

Alternate A is expected to cause two hundred forty one (241) residential displacements consisting of one hundred two (102) single family residences, one hundred thirty five (135) units in multi-family housing, and four (4) mobile homes. A majority of the single family residences and mobile homes are believed to be owner occupied. All multi-family units are believed to be tenant occupied.

Alternate B is expected to cause one hundred sixty two (162) residential displacements consisting of ninety (90) single family residences, sixty nine (69) units in multi-family housing, and three (3) mobile homes. A majority of the single family residences and mobile homes are believed to be owner occupied. All multi-family units are believed to be tenant occupied.

A study of the real estate market in the project area indicates a market not capable of supporting the one hundred and sixty two (162) to two hundred forty one (241) residential displacements within the immediate project area. Expanding the study beyond the immediate project area reveals a market that can support this large number of relocations, but not easily. It will be difficult to adequately address the varying needs of all those displaced by this project. Numerous, substantial last resort housing payments could be expected.

BUSINESS:

This project is expected to cause either forty three (43) or thirty (30) non-residential displacements depending on the alternate chosen. The displacements are as follows:

Alternate A is expected to cause forty three (43) non-residential displacements.

Alternate B is expected to cause thirty (30) non-residential displacements.

The displaced businesses represent a variety of service and retail operations, including service stations, a lawn & garden center, restaurants, a health/fitness club, a dry cleaner, and retail sales. The above counts also include numerous apartment buildings that will likely be categorized as displaced businesses, as well as, a few vacant buildings that could be occupied prior to offers being made. All displaced businesses are believed to employ fifteen (15) or fewer.

A study of the real estate market in the project area reveals that it is unlikely that such a large number of business displacees can relocate in the immediate project area. Successful relocation will require many of the businesses to expand their search area beyond the immediate project area.

NON-PROFIT:

This project is expected to cause one (1) non-profit displacement on either alternate, Kingsport Fire Department, Station #3. The station employs fewer than ten (10) with three (3) per shift. Some difficulty is anticipated in relocating this station. Due to the nature of their "business", they will need to relocate in close proximity to their current location. Based on a study of the local real estate market, it is believed that suitable replacement sites do exist but not in great numbers. This is complicated by the large number of businesses displaced by the project.

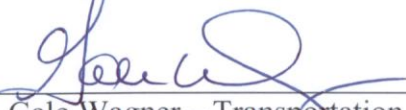
FARM:

This project is not expected to cause any farm displacements.

ASSURANCES

The Tennessee Department of Transportation will make relocation assistance available to all eligible persons impacted by this project, including residences, businesses, farm operations, non-profit organizations, and those requiring special services or assistance. The Regional Relocation Staff will administer the relocation program under the rules, policies, and procedures set forth in the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended, the Uniform Relocation Assistance Act of 1972, implementing federal regulations, TCA 13-11-101 through 119, The State of Tennessee Relocation Assistance Brochure and Chapter Nine of the State of Tennessee, Department of Transportation, Right-of-Way Manual. TDOT's relocation program is practical and will allow for the efficient relocation of all eligible displaced persons in accordance with State and Federal guidelines.

Prepared By:



Gale Wagner – Transportation Manager 1

Date: 4/8/10

Approved By:



Joe Shaw – Transportation Manager 2

Date: 4/8/10

ATTACHMENT D – SECTION 7 COORDINATION (CORRESPONDENCE)

JonnaLeigh Stack

Subject: FW: SR 126 - Bat survey

From: John Griffith [mailto:john_griffith@fws.gov]

Sent: Friday, May 09, 2014 2:58 PM

To: JonnaLeigh Stack

Subject: RE: SR 126 - Bat survey

JonnaLeigh,

It was good speaking with you earlier. We acknowledge TDOT's commitments to address potential impacts to these species prior to construction. As such, we would be satisfied that concerns for these species have been addressed if this language is included in the FEIS. Therefore, our section 7 clearance for this project is still valid. Please let me know if we can offer further assistance. Sincerely,

John Griffith
Transportation Biologist
U.S. Fish and Wildlife Service
Tennessee Field Office
931-525-4995 (office)
931-528-7075 (fax)

From: JonnaLeigh Stack [<mailto:JonnaLeigh.Stack@tn.gov>]

Sent: Friday, May 09, 2014 2:44 PM

To: John_Griffith@fws.gov

Subject: SR 126 - Bat survey

Hi John,
Thanks for the information.

To confirm, it is okay with USFWS if TDOT waits until prior to construction to perform an updated bat study for the Indiana bat; the previous having expired April 1, 2014. I assume that the Long-eared bat would be listed by the time this project is let for construction. TDOT would include them in the study.

Please confirm USFWS will be satisfied with the FEIS if this qualifying language and commitment is included in the document.

jls

JonnaLeigh Stack, Esq.
Transportation Coordinator, NEPA Project Manager
TDOT Environmental Division
505 Deaderick St. Ste. 900
Nashville, TN 37243
Main 615 741-3655
Direct 615 253-2463
jonnaleigh.stack@tn.gov

<http://www.tdot.state.tn.us/environment>



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, TN 38501

October 24, 2013

Ms. JonnaLeigh Stack
Tennessee Department of Transportation
Environmental Planning and Permits Division
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

Subject: FWS# 13-CPA-0793. Concurrence Point 4. Proposed construction to State Route 126 (Memorial Boulevard), Sullivan County, Tennessee.

Dear Ms. Stack:

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), has initiated National Environmental Policy Act (NEPA) documentation and analysis for the proposed construction to approximately 8.4 miles of State Route 126 between East Center Street and Interstate 81 (I-81) in Sullivan County, Tennessee. The purpose of this project is to improve the existing two-lane roadway, reduce the crash rates, and enhance travel and emergency response times from East Center Street in Kingsport to I-81. TDOT, the City of Kingsport, and local citizens conducted a Context Sensitive Solutions process which documents the majority decisions made by a Community Resource Team regarding design elements, roadway cross sections, and components of the project's purpose and need.

Concurrence Point 4 considered four alternatives under the NEPA process, the No-Build Alternative and three Build Alternatives. The No-Build Alternative would not provide for improvements to the existing roadway aside from standard maintenance activities. TDOT has concluded that the No-Build Alternative does not meet the purpose and need as documented in the approved Environmental Impact Statement. Alternative B Modified was selected as the preferred alternative.

According to Table 7.0-2, stream impacts would include alterations to 3,107 linear feet of perennial and intermittent streams. TDOT has committed to constructing the crossings perpendicular to the streams during low flow times to minimize impacts. We additionally recommend that the crossings be constructed with bottomless culverts or a span bridge design to minimize any long-term alterations to stream functions (e.g., fish and other aquatic species passage, sediment transport, movement of woody debris, etc.).

Bat surveys were conducted along the proposed corridor in the summer of 2011 to establish whether the area is being utilized as roosting habitat by the Indiana bat. Due to negative survey results for this species, we concurred with TDOT's determination of "not likely to adversely affect" in a letter dated November 9, 2011. Unless new information otherwise indicates Indiana bat use of the area, this survey will be valid until April 1, 2014. Although it is likely that this project would have an insignificant effect on the Indiana bat, we would appreciate consideration given to the removal of trees with a DBH (diameter at breast height) of five inches or greater from October 15 through March 31 to further minimize potential for harm to the Indiana bat.

The capture of two gray bats during survey efforts indicates that this species utilizes the area streams as travel/feeding corridors. Our database indicates that the nearest gray bat cave is Morrell Cave, approximately 10 miles east of the project. We are unaware of any caves that would be impacted by the project and are concerned mainly for water quality along travel/feeding corridors. Best management practices, to include stringent erosion and sediment control measures, should be implemented throughout the project to minimize potential for harm to the gray bat.

Based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act of 1973, as amended, are fulfilled for all species that currently receive protection under the Act. Obligations under section 7 of the Act must be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action. The signed TESA concurrence points 1 and 2 package for this project is attached.

We believe that the provisions of TESA Concurrence Point 4 have been satisfied, and we concur with the *Preferred Alternative and Preliminary Mitigation Package*. The signed TESA Concurrence Point 4 for this project is attached.

Thank you for the opportunity to participate in this process. If you have any questions regarding our comments, please contact John Griffith of my staff at 931/525-4995 or by email at john_griffith@fws.gov.

Sincerely,

A handwritten signature in cursive script, reading "Mary E. Jennings".

Mary E. Jennings
Field Supervisor

Enclosure



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
P. O. BOX 40747
NASHVILLE, TENNESSEE 37204

October 9, 2013

JonnaLeigh Stack
Transportation Coordinator, NEPA Project Manager
TDOT Environmental Division
James K. Polk Building, Suite 900,
505 Deaderick Street
Nashville, TN 37243-0334

Re: Concurrence Point 4 – Preferred Alternative and Preliminary Mitigation Package – State Route 126 (Memorial Boulevard) Improvement Project from East Center Street to I-81, Sullivan County, Tennessee, PIN 105467.00

Dear Ms. Stack:

The Tennessee Wildlife Resource Agency has reviewed the Tennessee Department of Transportation (TDOT) Concurrence Point 4 documents for the State Route 126 (Memorial Boulevard) Improvement Project from East Center Street to I-81 in Sullivan County and concurs on Concurrence Point 4 and supports Alternative B Modified as the Preferred Alternative. We have completed the Concurrence Point 4 Form as requested and it is attached.

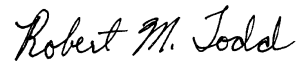
The Tennessee Wildlife Resources Agency provides the following comments regarding “Preferred Alternative and Preliminary Mitigation Package” for the proposed State Route 126 (Memorial Boulevard) Improvement Project. In our comments on Concurrence Point 3 for this proposed project that are included in Appendix C of the Concurrence Point 4 “Preferred Alternative and Preliminary Mitigation Package” it states: “**Comment:** On page 121 in Chapter 3, the title of TABLE 3.5.2: entitled “ANIMALS IDENTIFIED WITHIN SULLIVAN COUNTY BY TWRA (1 OF 2)” should be reworded to read “ANIMALS IDENTIFIED WITHIN SULLIVAN COUNTY BY TWRA AND TDEC (1 OF 2)”, since this information was provided to TDOT by TDEC and since TWRA does not have regulatory authority of the Stonefly (*Allocapnia brooksi*), the Cherokee Clubtail Dragonfly (*Gomphus consanguis*), the Cave Spider (*Nesticus paynei*), and the Diana Fritillary (*Speyeria Diana*). We also request that the state status of “Wildlife-In-Need-Of-Management” be included in the table for the following species” Tangerine Darter (*Percina aurantiaca*), Blotchside Logperch (*Percina burtoni*), Bald Eagle (*Haliaeetus leucocephalus*) Swainson’s Warbler (*Limnothlypis swainsonii*), Common Barn Owl (*Tyto alba*), Hairy-tailed Mole (*Parascalops breweri*), Smoky Shrew (*Sorex fumeus*) and the Meadow Jumping Mouse (*Zapus hudsonius*). The Sharphead Darter (*Etheostoma acuticeps*), the Tennessee Dace (*Phoxinus tennesseensis*), and the Least Weasel (*Mustela nivalis*) have no Tennessee Wildlife Resources Agency state status. The state status for the Longhead Darter (*Percina macrocephala*) is threatened. **Response:** The suggested changes will be made.”

The State of Tennessee

IS AN EQUAL OPPORTUNITY, EQUAL ACCESS, AFFIRMATIVE ACTION EMPLOYER

Nowhere in this document do we see that our comments have been incorporated into the Concurrence Point 4 document. The only mention of listed species in the Concurrence Point 4 document is in regard to the federally listed Indiana Bat (*Myotis sodalis*).

Sincerely,

A handwritten signature in black ink that reads "Robert M. Todd". The script is cursive and fluid, with the first letters of each word being capitalized and prominent.

Robert M. Todd
Fish and Wildlife Environmentalist

cc: Vincent Pontello, Wildlife Biologist/East TN TDOT Liaison
Rob Lindbom, Region IV Habitat Biologist
John Gregory, Region IV Manager
John Griffith, USFWS
Ben Brown, TDEC
Jamie Higgins, EPA
Larry Long, EPA
Amy Robinson, U.S. Army Corps of Engineers, Nashville District
Leigh Ann Tribble, Federal Highway Administration



United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

November 17, 2011

Ms. Leigh Ann Tribble
Federal Highway Administration
Tennessee Division Office
404 BNA Drive, Suite 508
Nashville, Tennessee 37217

Subject: FWS #12-CPA-0072. Proposed construction to State Route 126 (Memorial Boulevard) from Center Street to Interstate 81; PIN# 105467.00, P.E. 82085-1225-14, Sullivan County, Tennessee.

Dear Ms. Tribble:

Thank you for your letter dated October 26, 2011, transmitting acoustic and mist netting survey results for the proposed construction to State Route 126 from Center Street to Interstate 81 in Sullivan County, Tennessee. At the request of our office, surveys were conducted along the proposed corridor to determine if the area is being utilized as summer roosting habitat by the federally endangered Indiana bat (*Myotis sodalis*). Personnel of the U.S. Fish and Wildlife Service have reviewed the information provided and offer the following comments.

Joint mist netting and acoustical studies were performed from August 3 through August 10, 2011, at six sites determined to contain suitable habitat for the Indiana bat. The acoustical study resulted in the recording of 883 bat calls, of which none were identified as Indiana bats. The mist netting efforts resulted in the capture of 26 bats, of which two individuals were federally endangered gray bats (*Myotis grisescens*). The Tennessee Division Office agrees with the determination made by the Tennessee Department of Transportation (TDOT) that the project is "not likely to adversely affect" the Indiana bat because none were observed during surveys.

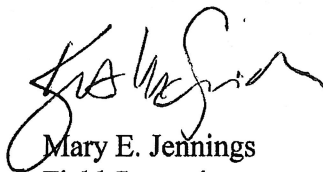
Due to negative Indiana bat surveys, we concur with TDOT's finding of "not likely to adversely affect" for the Indiana bat. Although it is likely that this project would have an insignificant effect on the Indiana bat, we would appreciate consideration given to the removal of trees with a DBH (diameter at breast height) of five inches or greater from October 15 through March 31 to further minimize potential for harm to the Indiana bat. Based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. Obligations under the Act must be reconsidered if (1) new information reveals impacts

of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

The capture of two gray bats during survey efforts would indicate that this species utilizes the area streams as travel/feeding corridors. Our database indicates that the nearest gray bat cave is Morrell Cave, approximately 10 miles east of the project. We are unaware of any caves that would be impacted by the project and are concerned mainly for water quality along travel/feeding corridors. Best management practices, to include stringent erosion and sediment control measures, should be implemented throughout the project to minimize potential for harm to the gray bat.

If you have any questions regarding our comments, please contact John Griffith of my staff at 931/525-4995 or by email at john_griffith@fws.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Mary E. Jennings", is written over the typed name.

Mary E. Jennings
Field Supervisor

Farmer, John

From: Keven Brown <Keven.Brown@tn.gov>
Sent: Wednesday, March 05, 2014 7:53 AM
To: Farmer, John
Subject: RE: SR-126 (Memorial Boulevard) Final Environmental Impact Statement; Kingsport, Sullivan County, TN

John,

The statement for the bats will do for documentation at this time. No additional FWS letter is needed for the NLEB. It's not a listed species yet. Work on the EBR has not begun at this time and I'm not sure when that will start. We'll try to work it in as our schedule allows.

Keven A. Brown
Ecology Section
TDOT, Region 1
865-594-2437
Keven.Brown@tn.gov

ATTACHMENT E – SECTION 106 HISTORIC ARCHITECTURAL CORRESPONDENCE



SR-126

TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

June 11, 2013

Ms. Martha Carver
Tennessee Department of Transportation
505 Deaderick St/900
Nashville, Tennessee, 37243-0349

RE: FHWA, EFFECT DETERMINATION, ALTERNATIVE B MODIFIED/SR-126 IMPVTS./PIN# 105467.00, KINGSPORT, SULLIVAN COUNTY

Dear Ms. Carver:

Pursuant to your request, received on Wednesday, June 5, 2013, this office has reviewed documentation concerning the above-referenced undertaking. This review is a requirement of Section 106 of the National Historic Preservation Act for compliance by the participating federal agency or applicant for federal assistance. Procedures for implementing Section 106 of the Act are codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739)

Based on the information provided, we find that the project area contains a cultural resource eligible for listing in the National Register of Historic Places: Yancey's Tavern. We further find that the project as currently proposed will not adversely affect this resource. Unless project plans change, this office has no objection to the implementation of this project. Should project plans change, please contact this office to determine what additional action, if any, is necessary.

I wish to take this opportunity to commend your on-going good work and that of Ms. Tammy Sellers in bringing this case to successful completion of Section 106 review. You both deserve great credit in melding the mission of your agency with that of historic preservation. Often, this is a difficult task, and you both accomplished it with remarkable diligence and fortitude. As Tennessee SHPO, I want you both to know how much I appreciate it.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jyg



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ENVIRONMENTAL DIVISION
SUITE 800, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

June 3, 2013

Mr. E. Patrick McIntyre
State Historic Preservation Officer
Tennessee Historical Commission
2941 Lebanon Road
Nashville, TN 37243

SUBJECT: Addendum Documentation of Effects Pursuant to 36 CFR 800 and Section 4(f) Documentation
At Yancey's Tavern for Proposed Improvements to *State Route 126 from East Center Street*
To Interstate 81 in Kingsport, Sullivan County PIN 105467.00

Dear Mr. McIntyre:

Enclosed you will find an addendum report for the above referenced project. The addendum discusses the effects to one National Register listed property: Yancey's Tavern. In 2004, TDOT historians surveyed the Area of Potential Effects (APE) and inventoried 96 properties. In a 2005 report, it was the opinion of TDOT that one property, Yancey's Tavern, was listed in the National Register of Historic Places and one additional property, the Shipley-Jarvis House, was eligible for listing in the National Register of Historic Places. In a letter dated March 22, 2005, the Tennessee State Historic Preservation Officer (TN-SHPO) concurred with these findings.

In 2008, TDOT historians sent a Documentation of Effects report to your office and in that document stated that it was TDOT's opinion that the proposed project would not adversely affect the Shipley-Jarvis House and would adversely affect Yancey's Tavern. Your office agreed with TDOT's findings in a November 3, 2008 letter. In the 2008 report, the proposed project design adjacent to Yancey's Tavern indicated that a substantial number of graves in the East Lawn Funeral Home and Memorial Garden would be relocated. Due to the initial public response to the removal of graves and reburials, TDOT re-designed a segment of the roadway adjacent to Yancey's Tavern in June 2012, entitle Alternative B1. In June 2012, a TDOT historian wrote an addendum effects assessment to evaluate potential effects at Yancey's Tavern. In that addendum document, it was TDOT's opinion that the proposed Alternative B1 would still adversely affect Yancey's Tavern. In a letter dated June 13, 2012, the TN-SHPO agreed with TDOT's assessment.

In an effort to minimize harm to the historic property, TDOT is currently proposing Alternative B Modified and the enclosed document discusses the effects to the National Register listed Yancey's Tavern. It is the opinion of TDOT that the proposed Alternative B Modified would have an effect that is not adverse to the National Register listed property. Please review the addendum effects assessment pursuant to regulations set forth in 36 CFR 800 of the National Historic Preservation Act of 1966. We look forward to your comments. Thank you for your help in this matter.

Sincerely,

Martha Carver
Historic Preservation Manager



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

June 3, 2013

SUBJECT: Addendum Documentation of Effects Pursuant to 36 CFR 800 and Section 4(f) Documentation
At Yancey's Tavern for Proposed Improvements to *State Route 126 from East Center Street*
To Interstate 81 in Kingsport, Sullivan County PIN 105467.00

To Whom It May Concern:

The Tennessee Department of Transportation is proposing to improve State Route 126 from East Cedar Street to Interstate 81 in Kingsport. The enclosed document addresses the effects of Alternative B Modified to the National Register listed Yancey's Tavern. The proposed Alternative B Modified is being proposed by TDOT in an effort to minimize impacts to both Yancey's Tavern and the East Lawn Memorial Garden.

A federal law, the National Historic Preservation Act of 1966, requires that for road projects with federal funds, TDOT should identify and work to protect properties that are considered historic. Under this law, "historic" is defined as those properties that are listed in or eligible for listing in the National Register of Historic Places. Because of these laws, TDOT has staff historians that review all projects that have federal funding. Since this project includes federal money, a staff historian for TDOT surveyed the general project area in an attempt to identify historic properties which could be impacted by the proposed project.

The enclosed report discusses the survey findings. You are receiving this report because TDOT has identified you as a Sullivan County party or individual with historic preservation interests. The Advisory Council on Historic Preservation Regulations specify that members of the public with interests in an undertaking and its effects on historic properties should be given reasonable opportunity to have an active role in the Section 106 process. As such, TDOT would like to give you the opportunity to participate in that process. If you would like to learn more about the historic review process go to <http://www.achp.gov> for additional information.

If you have any comments on historic issues related to this project, please write me. Federal regulations provide that you have thirty days to respond from the receipt of this letter.

Sincerely,

A handwritten signature in cursive script that reads "Tammy Sellers".

Tammy Sellers
Historic Preservation Supervisor

Enclosure
cc: Mr. Patrick McIntyre, TN-SHPO

TENNESSEE DEPARTMENT OF TRANSPORTATION

**Addendum Documentation of Effects Pursuant to 36 CFR 800
And Section 4(f) Documentation**

For Proposed Improvements to:

***State Route 126 from East Center Street
To Interstate 81 in Kingsport***

Sullivan County

PIN 105467.00



May 2013

Tammy Sellers
Tennessee Department of Transportation
Environmental Division
Suite 900 James K. Polk Building
Nashville, TN 37243-0334
Phone: (615) 741-5367

Addendum Documentation of Effects Pursuant to 36 CFR 800 and Section 4(f) Documentation

For Proposed Improvements to:

*State Route 126 from East Center Street
To Interstate 81 in Kingsport*

Sullivan County

MANAGEMENT SUMMARY

The Tennessee Department of Transportation with funding made available through the Federal Highway Administration is proposing to improve State Route 126 from East Center Street to I-81 in Kingsport.

This addendum report discusses the effects to the National Register listed property: Yancey's Tavern located on State Route 126 outside of Kingsport. In 2004, TDOT historians surveyed the Area of Potential Effects (APE) and inventoried 96 properties. In a 2005 report, it was the opinion of TDOT that one property, Yancey's Tavern, was listed in the National Register of Historic Places and one additional property, the Shipley-Jarvis House, was eligible for listing in the National Register of Historic Places. In a letter dated March 22, 2005, the Tennessee State Historic Preservation Officer (TN-SHPO) concurred with these findings.

In 2008, TDOT historians sent a Documentation of Effects report to the TN-SHPO and in that document stated that it was TDOT's opinion that the proposed project would not adversely affect the Shipley-Jarvis House and would adversely affect Yancey's Tavern. The TN-SHPO agreed with TDOT's findings in a November 3, 2008 letter. In the 2008 report, the proposed project design adjacent to Yancey's Tavern indicated that a substantial number of graves in the East Lawn Funeral Home and Memorial Garden would be relocated. Due to the initial public response to the removal of graves and reburials, TDOT re-designed a segment of the roadway adjacent to Yancey's Tavern in June 2012, entitled Alternative B1. In June 2012, a TDOT historian wrote an addendum effects assessment to evaluate potential effects at Yancey's Tavern. In that addendum document, it was TDOT's opinion that the proposed Alternative B1 would still adversely affect Yancey's Tavern. In a letter dated June 13, 2012, the TN-SHPO agreed with TDOT's assessment.

In an effort to minimize harm to the historic property, TDOT is currently proposing ***Alternative B Modified*** and this document will discuss the effects to the National Register listed Yancey's Tavern.

Table of Contents

	<u>Page</u>
<i>Statement of Determination</i>	1
<i>Project Background and Description</i>	5
Build Alternative A	5
Build Alternative B	7
Build Alternative B1	8
Modified Alternative B	9
<i>Public Involvement</i>	11
<i>Inventoried Properties:</i>	13
<i>Yancey's Tavern</i>	14
National Register Boundary	16
Documentation of Effects	17
Section 4(f) Documentation	25
<i>Conclusions</i>	26
<i>Bibliography</i>	27

Figures

<i>Figure 1: Project Location Map at Yancey's Tavern</i>	4
<i>Figure 2: Proposed Typical Section for Section 3, Build Alternative A</i>	7
<i>Figure 3: Proposed Typical Section between Yancey's Tavern and Cemetery</i> ..	8
<i>Figure 4: Conceptual Layout for Build Alt. B1</i>	9
<i>Figure 5: Conceptual Layout for Modified Alternative B</i>	10
<i>Figure 6: Front Elevation at Yancey's Tavern</i>	15
<i>Figure 7: Side Elevation</i>	15
<i>Figure 8: Side Elevation showing chimney</i>	15
<i>Figure 9: Current Photograph showing Yancey's Tavern and SR126</i>	16
<i>Figure 10: Approximate National Register Boundary</i>	16
<i>Figure 11: Drawing showing the Branch Turnaround</i>	20
<i>Figure 12: Existing setting from Yancey's Tavern porch</i>	21
<i>Figure 13: Rendering showing the setting from Yancey's Tavern porch</i>	21
<i>Figure 14: Existing Setting from State Route 126 toward Yancey's Tavern</i>	22
<i>Figure 15: Rendering showing State Route 126 to Yancey's Tavern</i>	22
<i>Figure 16: Functional Plans for Modified Alternative B with Landscaping</i>	24

Appendices

Appendix A: Fact Sheet on Section 106	
Appendix B: National Register Criteria	
Appendix C: Criteria of Effect, 36 CFR 800.5	
Appendix D: Section 4(f) of the U.S. DOT Act	
Appendix E: Public Comment Letters from 2008 Report	
Appendix F: Public Participation Letters	

**Addendum Documentation of Effects Pursuant to 36 CFR 800
For Proposed Improvements to:**

***State Route 126 from East Center Street
To Interstate 81 in Kingsport***

Sullivan County

Statement of Determination

The Tennessee Department of Transportation with funding made available through the Federal Highway Administration is proposing to improve State Route 126 from East Center Street to I-81 in Kingsport.

This addendum report discusses the effects to the National Register listed property: Yancey's Tavern, located on State Route 126 outside of Kingsport. In 2004, TDOT historians surveyed the Area of Potential Effects (APE) and inventoried 96 properties. In a 2005 report, it was the opinion of TDOT that one property, Yancey's Tavern, was listed in the National Register of Historic Places and one additional property, the Shipley-Jarvis House, was eligible for listing in the National Register of Historic Places. In a letter dated March 22, 2005, the Tennessee State Historic Preservation Officer (TN-SHPO) concurred with these findings.

In 2008, TDOT historians sent a Documentation of Effects report to the TN-SHPO and in that document stated that it was TDOT's opinion that the proposed project would not adversely affect the Shipley-Jarvis House and would adversely affect Yancey's Tavern. The TN-SHPO agreed with TDOT's findings in a November 3, 2008 letter. In the 2008 report, the cross section for the alignment included four travel lanes adjacent to Yancey's Tavern and the preliminary plans indicated that a substantial number of graves in the East Lawn Funeral Home and Memorial Garden would be removed in order to keep from taking right-of-way from the National Register boundary of the historic tavern.

As the project evolved and more detailed information became available, two build alternatives were proposed in the draft Environmental Impact Statement (EIS) that meet the purpose and need as defined in the EIS (a copy of the draft EIS is available at <http://www.tdot.state.tn.us/sr126/docs/SR126MemorialBoulevardDEIS010912.pdf>, or is on file with the TDOT Environmental Division). Build Alternative A would improve State Route 126 largely on the existing alignment and includes a typical cross section of four-lane roadway (two travel lanes in each direction) within the commercial and residential areas of the western half of the study corridor. The eastern half of the corridor, which is rural in nature, would remain a two-travel lane facility. Build Alternative B is a variation of Alternative A. The key variations for this document is the reduction of the four-travel lane section for a length of approximately 0.5 miles and the use of retaining walls through the section of road between Yancey's Tavern and the East Lawn Funeral Home and Memorial Garden. These alternatives will be discussed in greater detail in the Project Background and Description Section of this document.

In 2012, the negative public response to the removal of graves and reburials caused TDOT to consider redesigning a segment of the roadway adjacent to Yancey's Tavern. The design of the project at the Shipley-Jarvis House did not change so the effects remain the same as described in the 2008 document. In an effort to avoid the removal of graves from the East Lawn Memorial Garden, TDOT re-designed the proposed project between Yancey's Tavern and the East Lawn Memorial Garden in June 2012.

In June 2012, Alternative B1 was proposed that did not require any additional right-of-way from the memorial garden but would have required right-of-way from the northern side of the State Route 126, and resulted in taking approximately one acre of right-of-way and 0.1 acre of permanent slope easements from Yancey's Tavern. Shifting the roadway alignment to the north would have also removed the majority of mature trees that currently shield the historic property from State Route 126. With this alternative, a required retaining wall—seven feet tall at its highest point—was proposed on the northern side of the roadway in front of the tavern. A cul-de-sac was also proposed for the existing Chestnut Ridge Road to the west of Yancey's Tavern, cutting Yancey's Tavern off from the two-lane road that it had been historically associated with. In a June 2012 report, it was the opinion of TDOT that the proposed Alternative B1 would have an adverse effect to the historic property based on the right-of-way take, height of the retaining wall, the introduction of a modern, urban roadway, and the removal of screening vegetation. On June 13, 2012, the TN-SHPO concurred with TDOT's adverse effect finding. Detailed documentation of this alternative is on file with the TDOT Historic Preservation Section and can be provided upon request.

Due to the potential adverse effect of Alternative B1, TDOT historians worked with the designers to minimize harm to the historic property, Yancey's Tavern. This design, entitled **Alternative B Modified**, will be studied in depth within this document to determine the effects it would have on Yancey's Tavern. According to the plans for Alternative B Modified, the proposed project would shift the right-of-way from Yancey's Tavern to the south onto the East Lawn Memorial Garden and Cemetery but would not be shifted so far to the south that occupied graves would need to be relocated. This would allow for only a small, temporary, construction easement within the National Register boundary of Yancey's Tavern and that construction easement would be returned to the current grade and appearance after construction is completed. A retaining wall would be required on both the north and south side of the proposed State Route 126; however, given the existing grade and elevation of the historic Yancey's Tavern only a short section of the wall would be visible from the house itself. Although little of the retaining wall will be visible from Yancey's Tavern, TDOT is proposing an aesthetic treatment to the wall that will be compatible with the historic landscape but will be minimalist in its design. TDOT will consult with the TN-SHPO and consulting parties in designing the retaining wall in order to get their review and comments on the proposed design feature. The cross-section in Alternative B Modified would also be reduced by the removal of the sidewalks on the northern side of State Route 126. Utilities will be relocated with this revised alternative and according to representatives from TDOT's Right-of-Way and Utilities Divisions there is sufficient space within that cross-section to relocate all utilities.

Federal laws require TDOT and FHWA to comply with Section 106 of the National Historic Preservation Act of 1966, as amended. Appendix A contains a fact sheet about Section 106. Regulations detailing the implementation of this act are codified at 36 CFR 800. This legislation requires TDOT and FHWA to identify any properties (either above-ground buildings, structures, objects, or historic sites or below ground archaeological sites) of historic significance. For the purposes of this legislation, historic significance is defined as those properties which are included in the National Register of Historic Places or which are eligible for inclusion in the National Register. Appendix B contains a copy of the National Register criteria, which are codified at 36 CFR 60.4. Once historic resources are identified, legislation requires these agencies to determine if the proposed project would affect the historic resource. Appendix C contains a copy of the Criteria of Effect as defined in 36 CFR 800.5. If the proposed project would have an adverse effect to a historic property, the legislation requires FHWA to provide the Advisory Council on Historic Preservation (an independent federal agency) an opportunity to

comment on the effect. Appendix D contains information on Section 4(f) of the U.S. DOT Act, as amended. This law prohibits the Secretary of Transportation from approving any project which requires the "use" of a historic property unless there is no prudent and feasible alternative to that use and unless the project includes all possible planning to minimize harm to the historic resources.

This document has been prepared in consultation with the TN-SHPO and will be circulated to the TN-SHPO, FHWA, and local individuals, agencies, or organizations with interests in historic and cultural resources.

The archaeology is contained in a separate document.

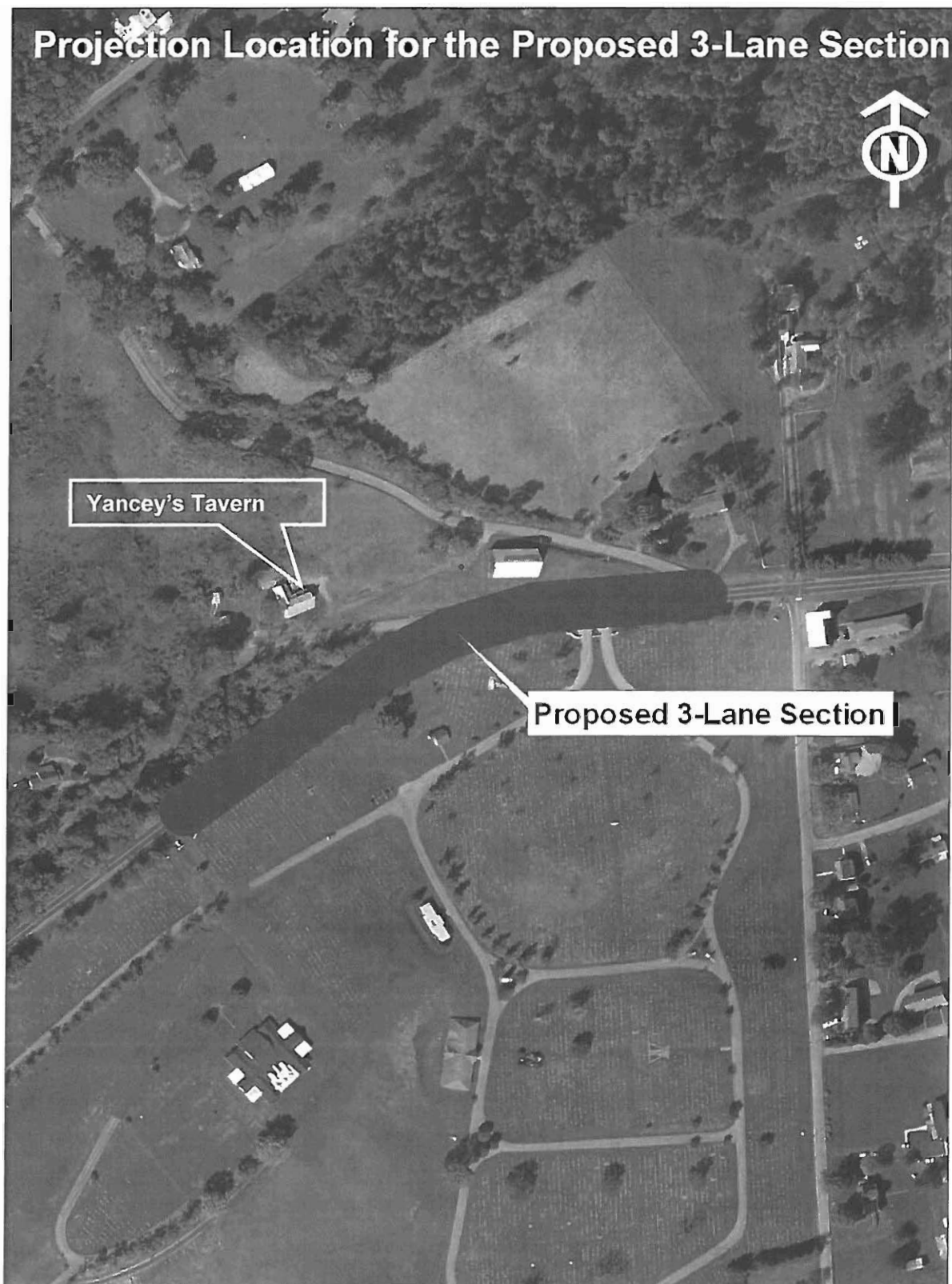


Figure 1: Project Location Map at Yancey's Tavern

Project Background and Description

The Tennessee Department of Transportation with funding made available through the Federal Highway Administration is proposing to improve State Route 126 from East Center Street to I-81 in Kingsport.

This project served as a Context Sensitive Solutions (CSS) pilot project with TDOT, and the CSS team recommended a four-lane, urban roadway with curb and gutter between the memorial garden and Yancey's Tavern. In 2008, the TDOT consultant provided functional plans indicating that the four-lane facility could be built between the memorial garden and the historic property without taking right-of-way from Yancey's Tavern. Since that time, it has been determined that right-of-way will be required in order to build the proposed project.

The following build alternative information was taken from the 2012 Draft EIS.

Build Alternative A

Build Alternative A improves SR 126 (Memorial Boulevard) to a four-lane facility (two travel lanes in each direction) within the commercial and residential areas of the western half of the study corridor. The eastern half of the study corridor, which is rural in nature, will remain a two-travel lane facility. Either a raised median or two way left turn lane (TWLTL) will be provided along the majority of the route. Improved shoulders will be provided along the entire corridor and sidewalks will be extended to the majority of the commercial and residential areas.

Several different typical cross sections are proposed along the SR126 (Memorial Boulevard) corridor. Additional right-of-way will be required along the entire corridor to accommodate the proposed improvements. . .

The proposed alignment of Alternative A generally follows the existing alignment. The proposed alignment shifts from side to side to minimize impacts, reduce earthwork volumes, simplify constructability, and improve the curvature of the roadway. Despite the effort to minimize impacts, considerable additional Right of Way will be required and many residences and businesses will need to be relocated. . .

In addition to the SR126 (Memorial Boulevard) roadway typical cross section and alignment improvements, several side road intersection approaches to SR126 (Memorial Boulevard) are improved. Many of these minor connections intersect SR 126 (Memorial Boulevard) at skewed angles. Realigning side road approaches to intersect to as close to 90 degrees as possible has proven visibility and safety benefits. . . Side Road approaches to SR 126 (Memorial Boulevard) to be realigned include:

Warpath Drive	Heather Lane	Natchez Lane
Miller Street	Old Stage Road	Harr Town Road
Orebank Road	Eaton Station Road	Adams Street
John B. Dennis Exit Ramp	Woods Way	Island Road

Several intersections are proposed to be closed along SR126 (Memorial Boulevard). These minor connections to SR 126 (Memorial Boulevard) will be rerouted to connect via improved intersections on neighboring roads. Closing these intersections will improve

access control and safety along the route due to the reduction of conflict points. . .
Intersections to be closed along SR 126 (Memorial Boulevard) include:

Edens Ridge Road
Hawthorne Street
Kent Street
Shuler Drive

Trinity Lane
Tanglewood Road
Holiday Road

Red Robin Lane
Gravel Top Road
Amy Avenue

The draft EIS continues to discuss each cross section that is being proposed under Build Alternative A. The following information discusses the proposed cross section for this build alternative in relation to Yancey's Tavern and the East Lawn Funeral Home and Cemetery and was taken directly from the draft EIS.

3. Harbor Chapel Road (L.M. 5.18) to Cooks Valley Road (L.M. 7.66)

The proposed cross section of this 2.5 mile long segment of SR 126 (Memorial Boulevard) from Harbor Chapel Road to Cooks Valley Road includes four travel lanes (two in each direction) and a raised grass median. The first 0.6 miles of this segment from Harbor Chapel Road to east of Old Stage Road includes four-foot wide paved shoulders, curb and gutter, and sidewalks on both sides of the roadway. The next 1.9 miles of this segment from east of Old Stage Road to Cooks Valley Road will not have curb and gutter, and instead will have roadside ditches for drainage. The shoulders will be eight feet wide, six feet of which will be paved. No sidewalks will be provided along this 1.9 mile segment between Old Stage Road and Cooks Valley Road due to the lack of properties fronting SR 126 (Memorial Boulevard). The travel lanes throughout the entire 2.5 mile long segment will be eleven feet wide. The four to six-foot wide paved shoulders will accommodate bicyclists. The design speed of this segment is 45 miles per hour.

Additional features in this section include intersection realignments and closings. Trinity Lane's intersection with SR 126 (Memorial Boulevard) will be closed. Access to SR 126 (Memorial Boulevard) will be provided via a new connection to Amy Avenue and Glenwood Street. Tanglewood's intersection with SR 126 (Memorial Boulevard) will be closed. Access to SR 126 (Memorial Boulevard) will be provided via a new connection to Briarwood Road. Old Stage road's approach to SR 126 (Memorial Boulevard) will be realigned to improve the skew of the intersection. Holiday Road's intersection with SR 126 (Memorial Boulevard) will be closed. Access to SR 126 (Memorial Boulevard) will be provided via a new connection between Parker Street and Old Parker Drive. The new connection will provide access to Peers Street and Lemay Drive. Shuler Drive's intersection with SR 126 (Memorial Boulevard) will also be closed. Access to SR 126 (Memorial Boulevard) will be provided via Peers Street and Lemay Drive. Eaton Station Road's approach to SR 126 (Memorial Boulevard) will be realigned to improve the skew of the intersection. These features will improve the safety and access control along SR 126 (Memorial Boulevard).

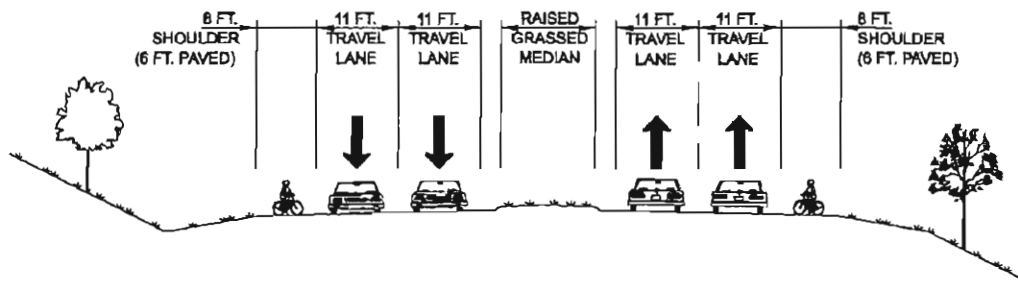


FIGURE 2.3.9: SEGMENT 3B PROPOSED TYPICAL SECTION

Figure 2: Proposed Typical Cross Section for Section 3 of Build Alternative A

The draft EIS describes Build Alternative B as follows:

Build Alternative B

Alternative B is a refinement of Alternative A. Alternative B utilizes the same proposed typical roadway cross sections as Alternative A but the length of the four-travel lane section of Segment 3 is reduced. As a result, the two-travel lane section of Segment 4 begins further west, near Lemay Drive, and is longer than in Alternative A. Retaining walls will also be utilized in the vicinity of historic Yancey's tavern and East Lawn Memorial Gardens Cemetery. These modification were made to minimize impacts to Yancey's Tavern and the East Lawn Memorial Gardens Cemetery located on the opposing sides of SR 126 (Memorial Boulevard) in Segment 4. It should be noted that numerous gravesites will still need to be relocated with Alternative B. Additional changes incorporated into Alternative B include minor modifications of the proposed centerline to minimize excavation and fill impacts and improve maintenance of traffic during construction. Alternative B subsequently requires less additional right-of-way and impacts fewer residences and businesses than Alternative A. . . .

In addition to the SR 126 (Memorial Boulevard) roadway typical cross section and alignment improvements, several side road intersection approaches to SR 126 (Memorial Boulevard) are improved or closed. These side road modifications improve the safety and access control along SR126 (Memorial Boulevard). The side road approaches modified in Alternative B are the same as those in Alternative A [see above].

The section of the roadway that is adjacent to the National Register Listed Yancey's Tavern is described as the following in the draft EIS.

East of Lemay Drive (L.M. 7.20) to Harr Town Road (L.M. 10.11)

The proposed cross section of this 2.9 mile long segment of SR 126 (Memorial Boulevard) from east of Lemay Drive to Harr Town Road includes two travel lanes (one in each direction), six-foot wide paved shoulders, and curb and gutter. The median in this section will consist of a two-way left turn lane. The six-foot wide shoulders would

accommodate bicyclists. The design speed of this segment is 45 miles per hour. This section is 0.5 miles longer than in Alternative A.

Additional features in this section include intersection realignments and closings. Ted Robin Lane's intersection with SR 126 (Memorial Boulevard) will be closed. Access to SR 126 (Memorial Boulevard) will be provided via Bridwell Heights Road. The side road approaches of Eaton Station Road, Woods Way, Island Road, Natchez Lane, and Harr Town Road to SR 126 (Memorial Boulevard) will be realigned to improve the skews of the intersections. These features will improve the safety and access control along SR 126 (Memorial Boulevard).

Two community resources are located on either side of SR 126 (Memorial Boulevard) in this segment: Yancey's Tavern and East Lawn Memorial Gardens Cemetery. Yancey's Tavern is listed on the National Register of Historic Places. To avoid direct impacts to the Yancey's Tavern property, it is proposed to widen SR 126 (Memorial Boulevard) to the south. The roadway improvements will impact the East Lawn Memorial Gardens Cemetery. In order to minimize the impacts, the roadway cross section is reduced to two travel lanes in this section of Alternative B, compared to four travel lanes in Alternative A. This will minimize the visual impacts to Yancey's Tavern and reduce the number of gravesites which must be relocated in the East Lawn Memorial Gardens Cemetery. Retaining walls will also be utilized in this area to further reduce impacts to the cemetery.

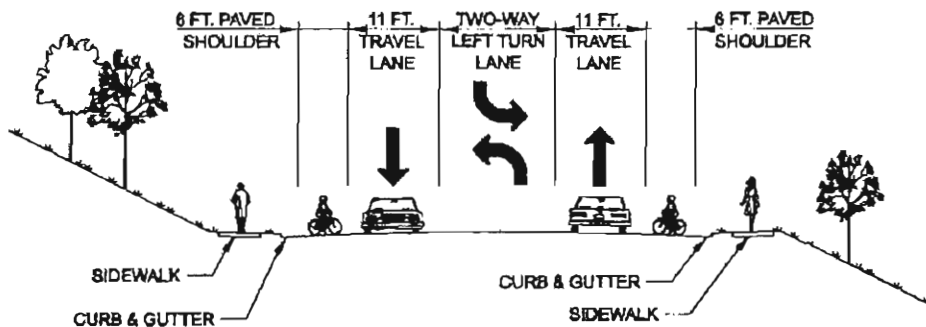


FIGURE 2.4.6: SEGMENT 4 PROPOSED TYPICAL SECTION

Figure 3: Proposed Typical Cross-Section Between Yancey's Tavern and the East Lawn Memorial Gardens Cemetery

2012 Alternatives

Build Alternative B1

The draft EIS estimated that approximately 350 occupied gravesites would be impacted with Alternative A and Alternative B would impact about 50 gravesites that are currently occupied. However, the large memorial garden would have sufficient room to relocate impacted gravesites. In an effort to reduce impacts to the East Lawn Memorial Gardens and Cemetery, TDOT proposed a three-lane, urban roadway with curb-and-gutter on the existing State Route

126 alignment. This three-lane alternative, as proposed in June 2012, would not have taken any right-of-way from the memorial garden and would have required approximately 1 acre from Yancey's Tavern with 0.1 acres of permanent slope easements. This proposed alternative required a retaining wall on both sides of the roadway, with the northern side being 7-feet tall at its highest point and on the southern side being 4.5 feet tall at its highest point. In addition, this Alternative B1 required a cul-de-sac of Chestnut Ridge Road to the west of Yancey's Tavern and would have cut off the historic property from the road.

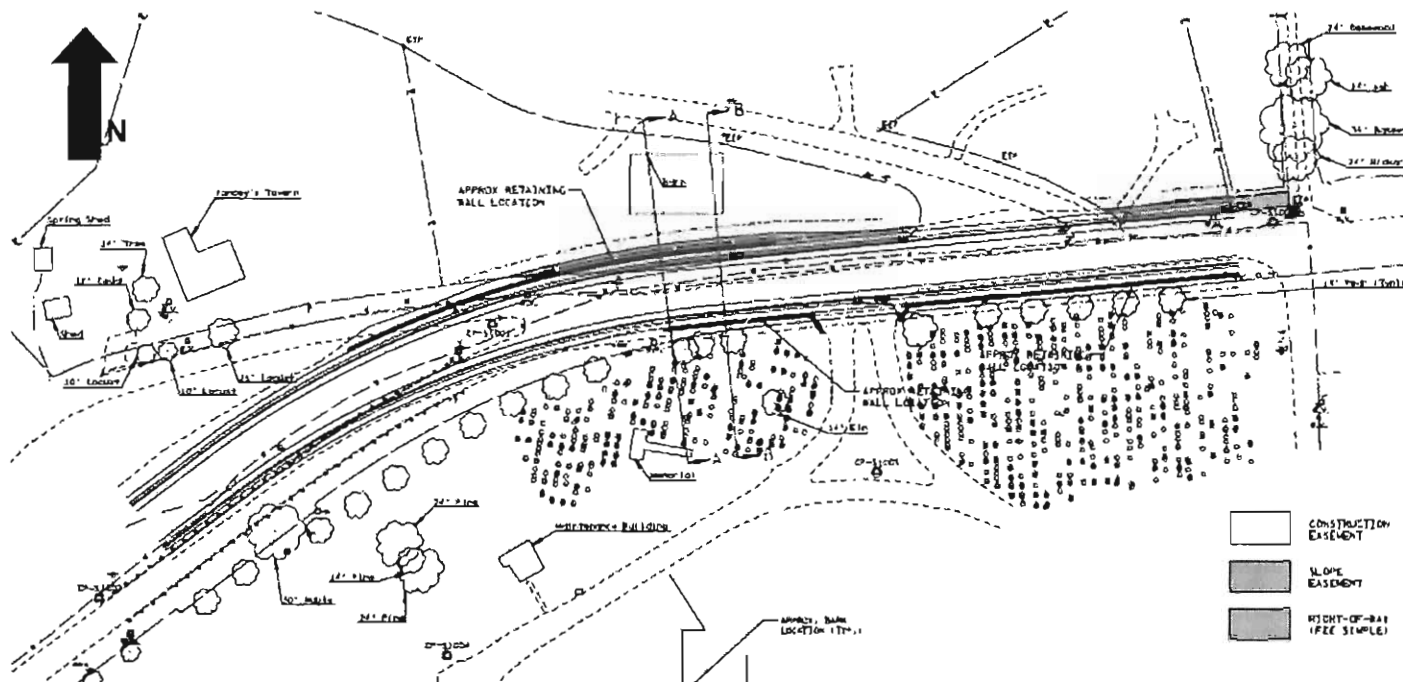


Figure 4: Conceptual Layout between Yancey's Tavern and the East Lawn Memorial Garden

Modified Alternative B

Given the potential impacts to the East Lawn Memorial Garden Cemetery if the alignment shifts to the south and the impacts to the National Register listed Yancey's Tavern if the alignment is shifted to the north, TDOT is currently proposing a compromise alternative that would take some land from the cemetery without taking graves. This revised alternative would eliminate the right-of-way take from Yancey's Tavern and eliminate the proposed slope easement. An approximately twelve-foot wide temporary construction easement will be needed on the Yancey's Tavern side. However, after construction the land will be returned to its pre-construction grade and appearance.

In addition, the revised alternative would keep the existing Chestnut Ridge Road open to traffic in front of the tavern rather than have a cul-de-sac to the west. However, Chestnut Ridge Road would no longer tie into SR 126 but would end with a branch turn-around just beyond the tavern. The branch turn-around will provide travelers on Chestnut Ridge Road with a safe way to turn around without having to use Yancey's Tavern's driveway. Landscaping will be added around the turn-around to provide further screening at the historic property. A retaining wall will still be needed on both sides of the road but the height would be approximately six-feet tall. Only a short segment of the retaining wall on the northern side of SR 126 will be visible from Yancey's Tavern.

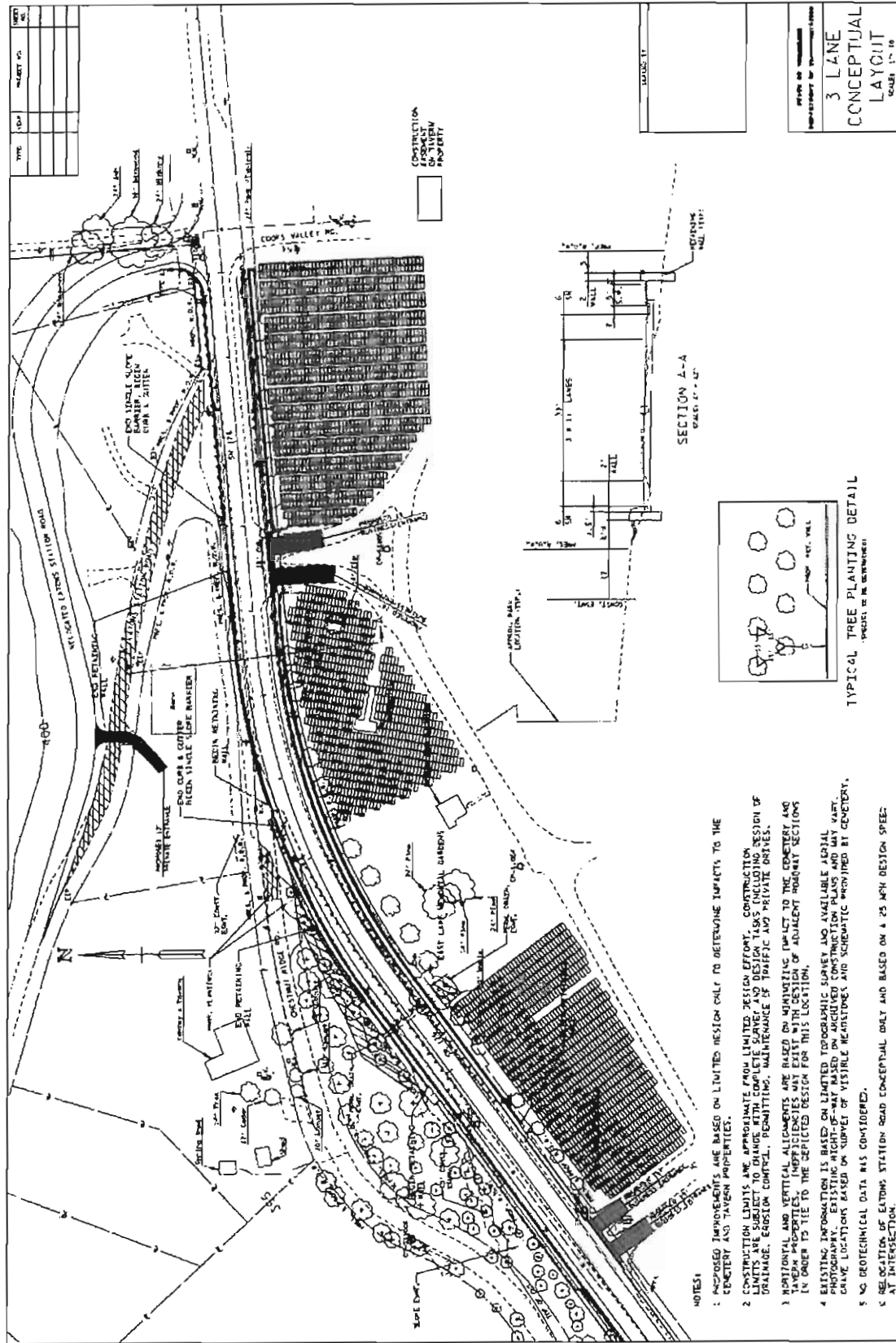


Figure 5: Functional Design for Alternative B Modified

Public Involvement

On November 19, 2003, TDOT mailed letters to nine groups or tribes representing Native American interests and asked them if they wished to participate in the historic review process as consulting parties (list below). To date, TDOT has not received any responses related to architectural resources. Appendix F contains a copy of the letter.

Mr. James Bird-THPO
Eastern Band of Cherokee Indians

Dr. Richard Allen
Research and Policy Analyst

Ms. Rena Duncan
Cultural Resources Director
Chickasaw Nation

Mr. Gregory E. Pyle
Choctaw Nation of Oklahoma

Mr. Tim Thompson
Muscogee (Creek) Nation

Mr. Emman Spain
Historic Preservation Specialist
Seminole Nation of Oklahoma

Mr. Archie Mouse, Chief
United Keetoowah Band of Cherokee

Mr. Charles D. Enyart
Eastern Shawnee Tribe Oklahoma

Ms. Carrie Wilson
Quapaw Tribe of Oklahoma

On October 17, 2008, the Documentation of Effect Report was circulated to the following historic groups. A copy of this addendum will be circulated to these historic groups and those that commented on the 2008 document.

Sullivan County Historical Society
P.O. Box 60
Blountville, TN 37617

Ken Weems
CLG/Historic Commission
City of Kingsport
225 W. Center Street
Kingsport, TN 37660-4237

Tennessee Valley Authority
Cultural Resources
400 West Summit Hill Drive
Knoxville, TN 37902

Dr. Dale Royalty
East Tennessee State University
Department of History
Box 70672
Johnson City, TN 37614-0672

Ambre Torbett,
Director of Planning and Codes
Sullivan County
3411 Highway 26, Suite 30
Blountville TN 37617,

Mayor of Kingsport
225 West Center Street
Kingsport, TN 37660

Claudia Moody
Northeast Heritage Tourism Area
P. O. Box 375
Jonesborough, TN 37659

Sullivan County Mayor
3411 Highway 126, Suite 206
Blountville, TN 37617

Deborah Montanti
The Heritage Alliance of Northeast TN
& Southeast Virginia
212 East Sabin Drive
Jonesborough, TN 37659

Sheila Hunt
Sullivan County Historian
Dept of Archives & History
3425 Highway 126, Suite 100
Blountville, TN 37617

Justin Sanders
The Heritage Alliance, NE TN
212 Sabin Drive
Jonesborough, TN 37659

Sullivan County Historical and
Genealogical Society
P.O. Box 568
Blountville, TN 37617

Gray Stothart
Historian First TN Development District
3211 North Roan Street
Johnson City, TN 37601

Downtown Kingsport Association
Attn: Calvin Wright
140 West Main Street
Kingsport, TN 37660

Property Owners

Rann Vaulx
Yancey's Tavern Owner
405 Wine Circle
Blountville, TN 37617

Jack and Shirley Jarvis
Shipley-Jarvis House
3309 Memorial Blvd.
Kingsport, TN 37664

Previous Commenters on the 2008 Documentation of Effect Report

Mary Fanslow
Netherland Inn/Exchange Place
P.O. Box 293
Kingsport, TN 37662

Robert J. Nolestine, III
Association for the Preservation of
Tennessee Antiquities
110 Leake Avenue
Nashville, TN 37205

Judith B. Murray
804 Rock City Road
Kingsport, TN 37664

The 2008 Documentation of Effect Report was also provided to the property owners of the National Register listed and eligible properties within the project corridor. The document was then passed on to other regional and statewide organization with a historic preservation

interest. After the public commenting period ended, TDOT forwarded copies of the comment letters and TDOT response letters to the TN-SHPO on January 26, 2009. The following is a summary of the historic comment letters (Copies of the letters can be found in Appendix E).

- November 14, 2008: Mr. Rann Vaulx, owner of Yancey's Tavern, requested that TDOT send a copy of the Documentation of Effect Report to several historic groups (The report was mailed to these groups in December 2008). Mr. Vaulx agreed that the proposed improvements would be an adverse visual impact to the historic property but further commented that the removal of Chestnut Ridge Road would destroy "the paved continuation of the 1761 Island Road." In a letter dated November 24, 2008, TDOT responded to Mr. Vaulx and forwarded a copy of both letters to the TN-SHPO.
- November 19, 2008: Ms. Judith Murray, a member of the Citizens Resource Team (CRT) for the CSS process, wrote at Mr. Vaulx's request, regarding the project. She pointed out the nuances of the CSS process and agreed that the project would adversely impact the historic property. She further requested that TDOT look at additional alignments. Since the majority of her comments dealt with CSS items, the project manager, Ray Henson, responded to her letter on December 23, 2008. A copy of this letter is attached.
- December 18, 2008: A representative of the Association for the Preservation of Tennessee Antiquities (APTA) wrote a letter agreeing with TDOT's position that the proposed project would adversely impact the historic Yancey's Tavern property.
- April 1, 2009: The Netherland Inn/Exchange Place commented on the significance of Yancey's Tavern in the early settlement of Sullivan County. The organization also agreed that the project would have an adverse effect on Yancey's Tavern.

Although each of the public comment letters agreed with TDOT's assessment that the project would adversely affect Yancey's Tavern, the letter writers disagreed with the overall design of the project. Since these letters were written and responded to, TDOT is currently working to resolve the historic issues and this document carefully lays out the ways TDOT is addressing citizen concerns. Each person or organization that responded to the 2008 Documentation of Effects Report will receive a copy of this addendum document.

Inventoried Properties

TDOT historians surveyed the APE for the proposed project and determined that two properties were either listed in or eligible for listing in the National Register of Historic Places.

- The Shipley-Jarvis House is eligible for listing in the National Register of Historic Places. The proposed project adjacent to the Shipley-Jarvis house remains the same as it was described in the 2008 Documentation of Effects Report and, at that time, it was TDOT's opinion that the project would not adversely affect the historic property. Since the design of the project at the Shipley-Jarvis House has not changed it will not be discussed further in this addendum.
- Yancey's Tavern was listed in the National Register of Historic Places in 1972. The design of the proposed project has been changed and the following is the documentation of effect to Yancey's Tavern.

Listed in the National Register of Historic Places under Criterion A for its association in the early settlement of Sullivan County, Yancey's Tavern is situated on Chestnut Ridge Road located to the northwest of the existing State Route 126. In the 2008 report, the design of the proposed project adjacent to Yancey's Tavern included a four-lane cross-section; however, no right-of-way was being taken from the historic property with all of the proposed right-of-way at the property coming off of the East Lawn Memorial Garden on the southern side of State Route 126. In the 2008 report, it was the opinion of TDOT that the project would have an adverse effect to the National Register listed property.

The following information is from the 1972 National Register Nomination:

Yancey's Tavern, built by 1782, was at one time, and remains so beneath its present covering, a double log house with a dogtrot. Handfired brick replaced the original stone chimneys and part of the stone foundation, probably sometime in the nineteenth century. More recently, brick was used to completely enclose the cellar area, although the framing of the door and window openings leading into the cellar are much earlier. Both front and back porches are later. The one-story back wing is not original to the house, although the fireplace with its simple mantel and crane suggests an early date. The placement of the back chimney also suggests the possibility that this area was once a small distance from the main structure and served as a kitchen. Window and door openings in the structure are not entirely original, but their location would pre-date the twentieth century.

The interior of Yancey's Tavern is simple, with three plain but well-executed mantels on the first floor. Two second-story rooms are reached by separate stairways. On the upper floor, construction of the dogtrot is visible because this section of the house has not been finished for use.

Miscellaneous frame outbuildings of varying dates surround the dwelling house. Most of the structures, including a barn, wash house, spring house, chicken house, and corncrib, date from the late nineteenth or early twentieth centuries. The frame granary with its shingle roof and stone foundation is considerably earlier.¹

The nomination further states:

Yancey's Tavern was an important stop along the Island Road, the major artery in upper East Tennessee. As such, it figured prominently in the development of the area, attracting as its visitors such men as John Sevier and William Blount, and serving as headquarters for local business such as meetings of the Sullivan County court.

The Island Road predates Yancey's Tavern. Completed in September 1761, it was the first organized road to be built not only in Tennessee but also to the southwest, connecting Chilhowie, Virginia, to the Long Island of the Holston River. Although built for

¹ Ellen Beasley, "Yancey's Tavern," *National Register of Historic Places Nomination*, 10 November 1972, On file with the Tennessee Historical Commission, Nashville, Tennessee.

military purposes, it served as a route for settlers. Part of the Island Road later became known as the Great Stage Road.

Along the road in the Tennessee section were three forts, including Eaton's Fort. This fort was located on property which, by the early 1770s, was part of Amos Eaton's 'corn rights' lands. In 1779, Eaton sold a portion of his land near the fort to James Hollis, who, in turn, sold 900 acres to John Yancey Sr. in 1782. It is not known if Yancey's purchase included a dwelling or if Yancey built the structure; however, within a short period, the tavern was in operation. Yancey's heirs maintained the property until the last half of the nineteenth century, when it changed ownership several times prior to being purchased in 1889 by John R. Spahr, whose descendants still own the place today.²



Figure 6: Front elevation of the National Register listed Yancey's Tavern located on the Old Stage Road near the intersection with State Route 126. This photograph was taken in 2003. In September 2004, the area surrounding the historic property was broken into 16 tracts of land and sold at auction.

Figure 7: Side elevation showing the exterior brick chimney that, according to the National Register nomination, replaced an earlier stone chimney.



Figure 8: Side elevation showing the Other brick chimney

² Ibid.

DOCUMENTATION OF EFFECTS—Alternative B Modified at Yancey's Tavern

TDOT applied the Criteria of Effect as found in 36 CFR 800.5 to the proposed design, entitled *Alternative B Modified*, adjacent to the historic property. In 2008, the proposed design included a four-lane urban cross-section with no right-of-way coming from within the National Register boundary of the historic property. However, it was the opinion of TDOT that the proposed project would introduce a road that is out-of-scale and character with the historic property and would be an adverse visual effect to the historic property.

In June of 2012, TDOT proposed design changes to *Alternative B1* that reduced the cross-section from a four-lane urban roadway to a three-lane urban roadway. Although the width of the road was reduced, the roadway would still have been almost double the pavement width of the existing two-lane road with this alternative. This proposed design would not take any land from the East Lawn Funeral Home and Cemetery on the southern side of the road but required approximately one acre of right-of-way and about 0.1 acres of permanent easements from within the boundary of the historic property. Additionally, this proposed design would have required a retaining wall on both sides of State Route 126, the existing alignment of Chestnut Ridge Road would have been cut off from State Route 126 with a cul-de-sac that would have been to the west of Yancey's Tavern that cut the historic property off from Chestnut Ridge Road and would have required a new driveway. Additionally, the three-lane urban roadway with approximately 45-feet of pavement would have been shifted to the north closer to the historic property. Due to these design features, it was the opinion of TDOT that the proposed *Alternative B1* from June 2012 would adversely affect Yancey's Tavern. In a letter dated June 13, 2012, the TN-SHPO agreed with TDOT's findings. Figure 4 (on page 8) contains the functional plan sheet showing the proposed *Alternative B1* at Yancey's Tavern.

Due to the potential adverse effect of *Alternative B1*, TDOT historians worked with the designers to minimize harm to the historic property, Yancey's Tavern. According to the plans for *Alternative B Modified*, the proposed project would shift the right-of-way from Yancey's Tavern to the south onto the East Lawn Memorial Garden and Cemetery but would not be shifted so far to the south that occupied graves would need to be relocated. This would allow for only a small temporary construction easement within the National Register boundary of Yancey's Tavern and that construction easement would be returned to the current grade and appearance after construction is completed. A retaining wall would be required on both the north and south sides of the proposed State Route 126; however, given the existing grade and elevation of the historic Yancey's Tavern building only a short section of the wall would be visible from the house itself. Although little of the retaining wall will be visible from Yancey's Tavern, TDOT is proposing an aesthetic treatment to the wall that will be compatible with the historic landscape but will be minimalist in its design. TDOT will consult with the TN-SHPO and consulting parties in designing the retaining wall in order to get their review and comments on the proposed design feature. The cross-section in *Alternative B Modified* would also be reduced by the removal of the sidewalks on the northern side of State Route 126. Utilities will be relocated with this revised alternative and according to representatives from TDOT's Right-of-Way and Utilities Divisions there is sufficient space within that cross-section to relocate all utilities.

Additionally, mature trees currently shield Yancey's Tavern from State Route 126, and the shift to the south would allow more of those trees to remain than previous alternatives. Although these revisions would allow for more of the existing trees to remain, some of the trees would be removed. In order to re-screen the area in front of Yancey's Tavern, TDOT is proposing a detailed landscaping plan that will be created in consultation with TDOT, the TN-SHPO and

consulting parties to provide appropriate plantings for the area. As the proposed project continues to be designed, landscaping and aesthetic details will be presented to the TN-SHPO and consulting parties for review and comment.

Alternative B Modified would also keep Chestnut Ridge Road open in front of Yancey's Tavern, allowing the historic property to keep its entrance off the existing Chestnut Ridge Road. Although Yancey's Tavern will continue to stay connected to Chestnut Ridge Road, the road itself will no longer intersect with State Route 126 to the east of Yancey's Tavern. Chestnut Ridge Road will end slightly to the southeast of the tavern itself and a branch turn-around will be provided at the dead end to give travelers the opportunity to turn around. The turn-around has been provided in order to keep drivers from using Yancey's Tavern's driveway as a turn-around and to continue to allow Yancey's Tavern to have access from Chestnut Ridge Road. Having a branch turn-around rather than a cul-de-sac will give the dead end a more rural feel rather than the suburban feel of a bulb-out cul-de-sac. The branch turn-around will require some of the mature trees to the southwest of Yancey's Tavern to be removed; however, TDOT will develop a detailed landscaping plan, in conjunction with the TN-SHPO and consulting parties, that will replace the vegetation that will need to be removed with the branch, turn-around design.

A drawing of the branch turn-around can be found in Figure 11. Figure 12 shows the existing setting from the porch at Yancey's Tavern. Figure 13 is a computer generated rendering from Yancey's Tavern toward State Route 126 after the proposed project is complete. Figure 14 shows the existing view of Yancey's Tavern from the cemetery. Figure 15 is a computer generated rendering showing the roadway and the tavern after construction is completed. Figure 16 shows the functional design plans for the *Alternative B Modified* with the location of the proposed landscaping shown in a general format. The detailed landscaping plan will be developed by TDOT and will be designed in consultation with the TN-SHPO and consulting parties.

⇒ *Alternative B Modified* includes numerous design revisions to minimize harm to the historic property. *Alternative B Modified* will reduce the pavement width of the proposed State Route 126 with the removal of the sidewalk on the northern side of the road and will shift the roadway alignment as far south as possible without taking graves from the East Lawn Memorial Garden. Additionally, the need for right-of-way from Yancey's Tavern has been eliminated with this alternative, taking only a temporary construction easement at the tavern. Yancey's Tavern will also stay connected to Chestnut Ridge Road as it was historically; however Chestnut Ridge Road will have a branch turn-around at the dead end just southeast of the tavern. TDOT will design a detailed landscaping plan that is compatible with the existing landscape and an aesthetic treatment for the retaining wall will be developed with the TN-SHPO and consulting parties in order to provide additional screening at the tavern.

For the reasons stated above, it is the opinion of TDOT that the proposed ***Alternative B Modified*** will have **No Adverse Effect** on the National Register listed Yancey's Tavern.

36CFR 800.5 (a) Apply Criteria of Adverse Effect

In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the Agency Official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The Agency Official shall consider any views concerning such effects, which have been provided by consulting parties and the public.

(a) (1) Criteria of Adverse Effect

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

(b) (2) Examples of Adverse Effects

An undertaking is considered to have an Adverse Effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to:

- (i) Physical destruction of or damage to all or part of the property;

The proposed *Alternative B Modified* shifts the proposed right-of-way to the south of the historic property onto the East Lawn Memorial Garden, eliminating the need for right-of-way from within the National Register Boundary of Yancey's Tavern. Only a temporary construction easement that is approximately twelve feet wide will be needed and after construction the area will be returned to its pre-construction slope and appearance. Therefore, it is the opinion of TDOT that the proposed *Alternative B Modified* would not physically damage or destroy all or part of the historic property.

- (ii) Removal of the property from its historic location

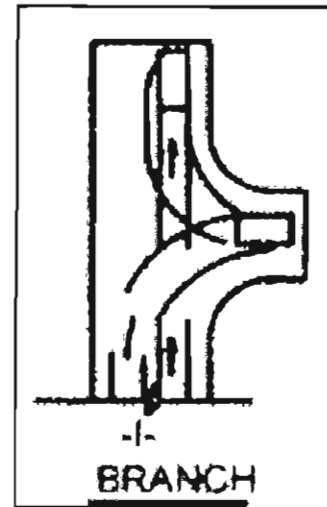
The proposed *Alternative B Modified* would not result in the removal of a contributing structure from its historic location.

- (iii) Change of the character of the property's use or physical features within the property's setting that contribute to its historic significance;

Yancey's Tavern was listed in the National Register of Historic Places under Criterion A for its significance in the early settlement of Sullivan County. *Alternative B Modified* shifts the proposed three-lane roadway further to the south than previous alternatives. The overall amount of pavement is also reduced by the removal of the sidewalk on the northern side of State Route 126. Since the roadway is shifted to the south, more mature trees located directly in front of Yancey's Tavern will remain in place. The trees that are removed for the new roadway will be replanted on the slope with a detailed landscaping plan that will be coordinated with the TN-SHPO and consulting parties. Additionally, Chestnut Ridge Road will remain open and provide access to the historic tavern and will remain a small, two-lane road that has historically provided access to structure. This keeps the historic road pattern in place. A branch turn-around with landscaping will end Chestnut Ridge Road to the southeast of the historic tavern rather than a suburban cul-de-sac. This design feature will provide travelers with the opportunity to turn around at the dead end without using the Yancey's Tavern property as a

turn around. Figure 11 shows the proposed branch design. This design will provide a more natural ending to the road while providing additional screening from State Route 126.

Figure 11: This drawing, from the American Association of State Highway and Transportation Officials (AASHTO) Handbook, shows the standard for the proposed branch turn-around at the dead end on Chestnut Ridge Road adjacent to Yancey's Tavern. It shows the reduced pavement and rural feel of the turn-around. The branch will be located away from the historic property and TDOT is proposing to provide a detailed landscaping plan developed in coordination with the TN-SHPO and consulting parties, at the branch.



A retaining wall will be required on both the northern and southern sides of State Route 126; however it will be shorter than in previous alternatives. Due to the slope and terrain at Yancey's Tavern, only a small section of the retaining wall will be visible from the porch of the historic tavern. TDOT will use an aesthetic treatment on the wall to improve the overall aesthetic design of the project from State Route 126 itself. The aesthetic features of the retaining wall will be coordinated with the TN-SHPO and consulting parties in order to design a wall that fits the character of the environment surrounding the historic property. Figure 12 is a 2012 photograph that shows the view from the second-story porch at Yancey's Tavern as State Route 126 currently looks. Figure 13 is a computer generated rendering from the same spot on the Yancey's Tavern porch as it will look after the completion of the proposed State Route 126 improvements. Note that in Figure 13 the landscaping around the branch turn-around is conceptual and a detailed landscaping plan will be designed in consultation with the TN-SHPO and consulting parties. Figure 14 shows the view from State Route 126 to the northeast toward Yancey's Tavern as it currently looks. Figure 15 is a computer generated that shows the view of the landscape from State Route 126 after the project is complete. Since the rendering is a conceptual plan, design details of the retaining wall and the landscaping plan will be determined in more detail in consultation with the TN-SHPO and consulting parties. Figure 16 shows the area where trees will be removed and the general area for tree plantings; however a detailed landscaping plan will be developed in consultation with the TN-SHPO and consulting parties.

Due to the design of Alternative B Modified, it is the opinion of TDOT that the proposed project would not change the character of the property's use or physical features that contribute to its historic significance.



Figure 12: Existing setting from the Yancey's Tavern porch



Figure 13: A computer rendering showing the setting from the porch at Yancey's Tavern. Note that the branch turnaround is beyond the tavern itself which will allow the tavern to remain on the road it has historically been associated with. As part of the project, TDOT will create a landscaping plan that may include trees other than the ones show in the rendering. The landscaping plan will be developed in consultation with the TN-SHPO and consulting parties.

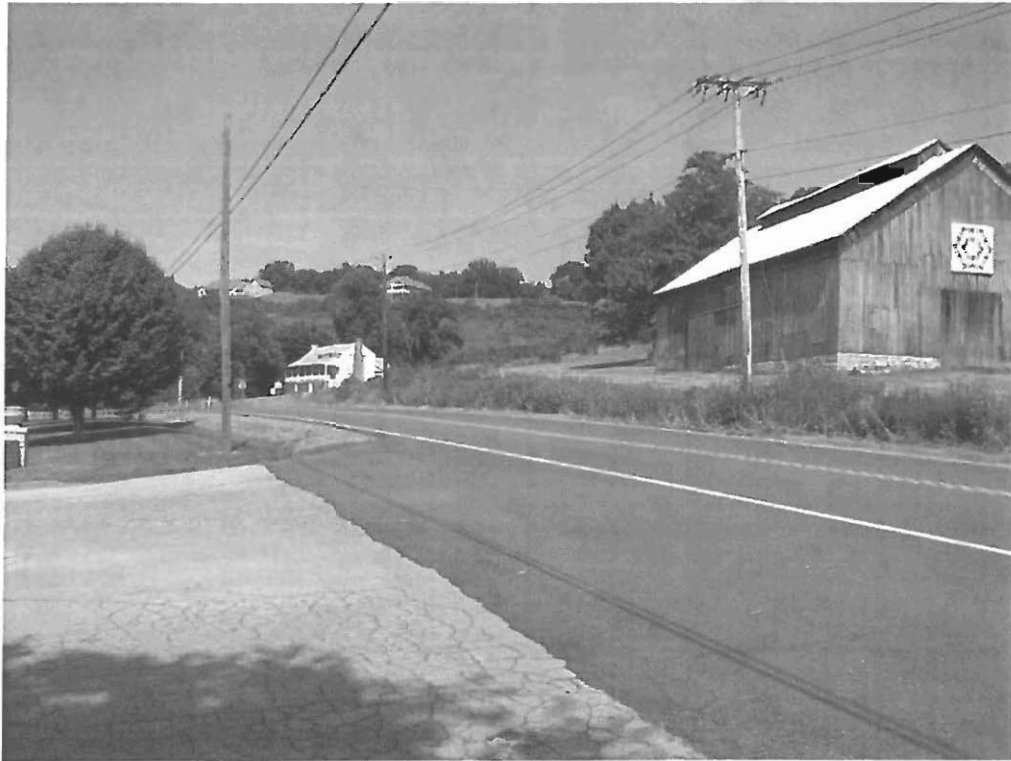


Figure 14: Existing view of Yancey's Tavern from State Route 126



Figure 15: Computer generated rendering from the cemetery toward Yancey's Tavern showing the view of the property from the road. The colors depicted in the rendering are due to the nature of the technology and it appears darker than it should be when constructed.

- (iv) Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;

Yancey's Tavern is eligible for listing in the National Register under Criterion A for its significance in the early settlement of Sullivan County and was historically used as a hotel and restaurant for travelers in the late eighteenth and nineteenth centuries. Historically associated with the road, the tavern currently sits on a two-lane road with vegetation between the historic property and the existing State Route 126. *Alternative B Modified* would build a three-lane roadway that has been shifted further to the south than previous alternatives and the cross-section has been reduced by the removal of the sidewalk on the northern side of State Route 126. These design changes would allow for more of the mature trees that currently separate Yancey's Tavern from State Route 126 to remain in place and provisions have been made to landscape the northern slope of the proposed three-lane roadway in order to provide additional vegetative screening for the tavern.

Since its historical association is with the road itself, *Alternative B Modified* proposes to keep Chestnut Ridge Road open in front of Yancey's Tavern which will allow for continued access at its historic entrance. Chestnut Ridge Road will be closed just beyond the tavern itself and a branch turnaround with landscaping will mark the end of Chestnut Ridge Road. This branch turn-around will provide drivers with the opportunity to safely turn around without using the driveway at Yancey's Tavern. TDOT will also provide landscaping around the turn-around for additional screening from the proposed three-lane facility. The *Alternative B Modified* has proposed right-of-way that has been shifted to the south and the height of the retaining wall on the northern side of State Route 126 at Yancey's Tavern has been reduced. Additionally, keeping the mature trees, the historic road configuration, and ending Chestnut Ridge with a branch turn-around and landscaping will provide historically appropriate screening. Therefore, it is the opinion of TDOT that the proposed *Alternative B Modified* would not introduce any visual, atmospheric, or audible elements that diminish the integrity of Yancey's Tavern.

- (v) Neglect of a property which causes its deterioration, except where such neglect or deterioration are recognized qualities or a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

The proposed improvements will not result in the neglect or associated deterioration of Yancey's Tavern.

Based on the proposed design of *Alternative B Modified*, it is the opinion of TDOT that the proposed project would have **no adverse effect** on Yancey's Tavern.

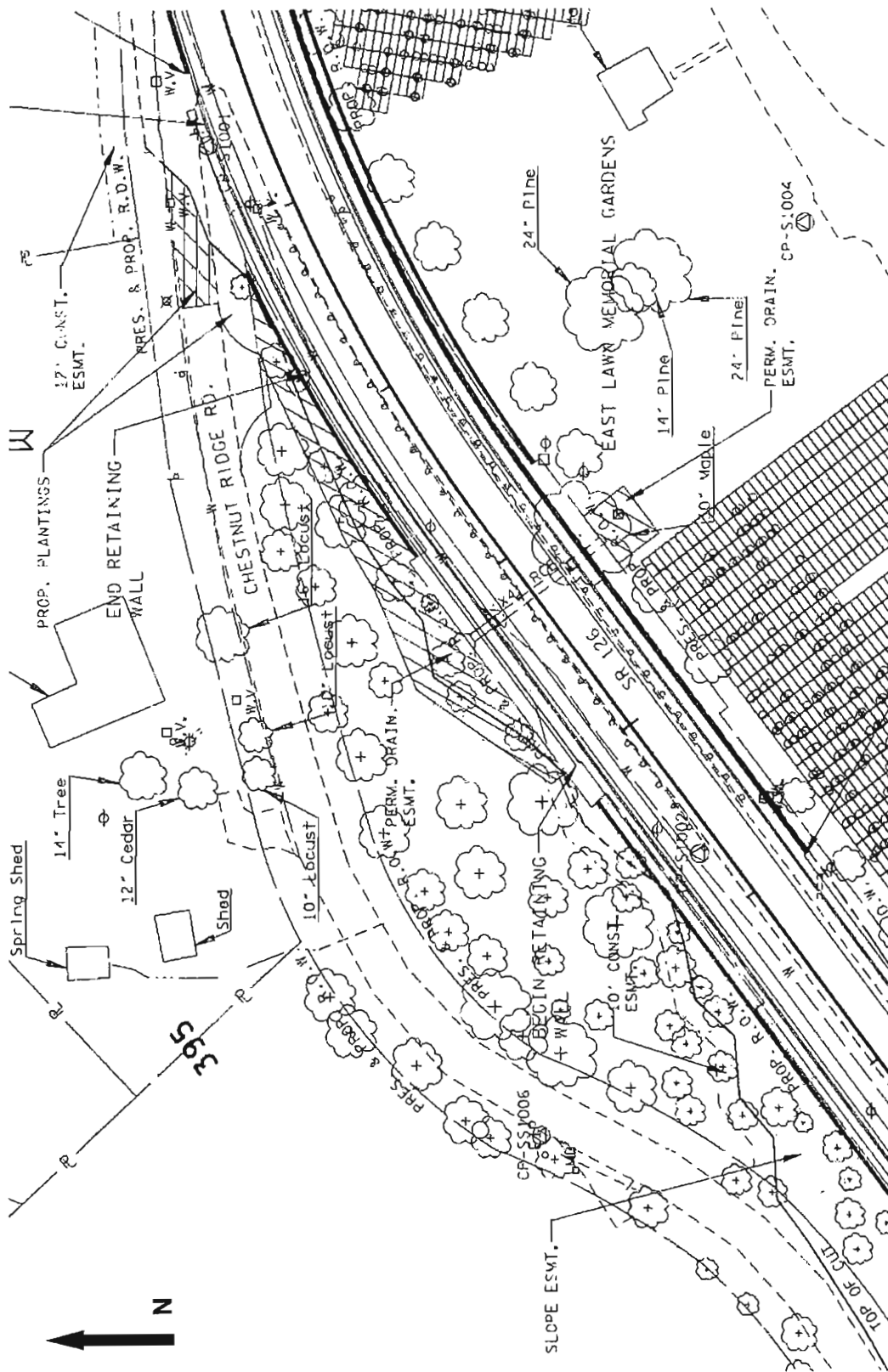


Figure 16: Alternative B Modified Detail, the proposed right-of way is shown with a heavy black line and the cross-hatching indicates proposed construction easements and the removal of existing vegetation. As part of the project, TDOT will develop a detailed landscaping plan to replace trees that have been removed for the proposed project. The green trees are only a representation and a more detailed plan will be designed in consultation with the TN-SHPO and consulting parties.

Section 4(f) Involvement—Alternative B Modified at Yancey's Tavern

Codified at 49 CFR 303, "Section 4(f)" refers to a section of the U.S. Department of Transportation Act (1966, as amended) that gives special consideration to the use of park and recreational lands, wildlife and waterfowl refuges, and historic sites by federally assisted transportation projects. To be considered "historic," a property must be either listed in the National Register of Historic Places or is determined eligible for such listing by the Keeper of the Register of the State Historic Preservation Officer. Section 4(f) applies only to those projects using federal funds from the U.S. Department of Transportation.

Federal laws state that the Secretary of the Department of Transportation may approve the use of land from a historic site only if:

- (1.) there is no prudent or feasible alternative to using that land, and
- (2.) the program or project includes all possible planning to minimize harm to the historic site resulting from the use (see Appendix D).

The Federal Highway Administration (FHWA) determines if the requirements of the Section 4(f) statute are met. The FHWA will approve the use of the Section 4(f) property only if the requirements are satisfied.

The proposed project would not incorporate any land from the historic boundary into a transportation facility nor would it adversely affect it while temporarily occupying land within the boundaries of the historic property. The proposed project would not substantially impair any activities, features, or attributes that qualify the historic property as eligible for listing in the National Register. Under the Section 106 process, the proposed project would have an effect that is not adverse to the historic property. For these reasons, it is the opinion of TDOT that the proposed project would not have a Section 4(f) use of the historic property.

Conclusions

The Tennessee Department of Transportation with funding made available through the Federal Highway Administration is proposing to improve State Route 126 from East Center Street to I-81 in Kingsport.

This addendum report discusses the effects to the National Register listed property: Yancey's Tavern located on State Route 126 outside of Kingsport. In 2004, TDOT historians surveyed the Area of Potential Effects (APE) and inventoried 96 properties. In a 2005 report, it was the opinion of TDOT that one property, Yancey's Tavern, was listed in the National Register of Historic Places and one additional property, the Shipley-Jarvis House, was eligible for listing in the National Register of Historic Places. In a letter, dated March 22, 2005, the Tennessee State Historic Preservation Officer (TN-SHPO) concurred with these findings.

In 2008, TDOT historians sent a Documentation of Effects report to the TN-SHPO and in that document stated that it was TDOT's opinion that the proposed project would not adversely affect the Shipley-Jarvis House and would adversely affect Yancey's Tavern. The TN-SHPO agreed with TDOT's findings in a November 3, 2008 letter. In the 2008 report, the alignment adjacent to Yancey's Tavern indicated that a substantial number of graves in the East Lawn Funeral Home and Memorial Garden would be relocated as part of both of the proposed alternatives.

In 2012, the negative public response to the removal of graves and reburials caused TDOT to redesign a segment of the roadway adjacent to Yancey's Tavern. The design of the project at the Shipley-Jarvis House has not changed so the effects remain the same as described in the 2008 document. In an effort to avoid the removal of graves from the East Lawn Memorial Garden, TDOT redesigned the proposed project between Yancey's Tavern and the East Lawn Memorial Garden in June 2012.

In June 2012, Alternative B1 was proposed and would not have required any additional right-of-way from the memorial garden but would have required right-of-way from the northern side of the State Route 126, and would have resulted in taking approximately one acre of right-of-way and about 0.1 acres of permanent slope easements from the historic property. With this alternative, a retaining wall that would have been seven feet tall at its highest point was proposed on the northern side of the roadway in front of the tavern and a cul-de-sac was proposed for the existing Chestnut Ridge Road to the west of the historic property, disconnecting it from the road with which it has been historically associated. Based on the right-of-way take, height of the retaining wall, and the introduction of a modern, urban roadway, it was the opinion of TDOT that Alternative B1 would have an adverse effect to the historic property. In a letter, dated June 13, 2012, the TN-SHPO agreed with TDOT's findings.

In an effort to minimize harm to Yancey's Tavern, the proposed project has been redesigned in the area between Yancey's Tavern and the East Lawn Memorial Garden. According to the plans for **Alternative B Modified**, the proposed project would shift the right-of-way from Yancey's Tavern to the south onto the East Lawn Memorial Garden and Cemetery but would not be shifted so far to the south that occupied graves would need to be relocated. This would allow for only a small construction easement of approximately twelve-feet within the National Register boundary of Yancey's Tavern. After construction, the easement area will be returned to the current grade and appearance. A retaining wall will be required on both the north and south side of the proposed State Route 126; however, given the existing grade and elevation of the historic Yancey's Tavern building the wall would not be visible from the house itself.

Additionally with *Alternative B Modified*, the shift to the south would allow more mature trees that currently shield Yancey's Tavern from the road to stay in place and TDOT is proposing additional landscaping with this alternative. *Alternative B Modified* would keep Chestnut Ridge Road open in front of Yancey's Tavern, allowing the historic property to keep its entrance off the existing road and the historic connection to that road. Chestnut Ridge Road would dead end to the southeast of Yancey's Tavern with a branch turn-around that will provide motorists with a safe turn-around location at the dead end without using the driveway at Yancey's Tavern. The branch turn-around will be located away from the historic property and a landscaping plan is proposed at the end of the road to make a more natural ending rather than a suburban cul-de-sac.

Alternative B Modified includes numerous design revisions to minimize harm to the historic property. *Alternative B Modified* will reduce the pavement width of the proposed State Route 126 with the removal of the sidewalk on the northern side of the road and will shift the roadway alignment as far south as possible without taking graves from the East Lawn Memorial Garden. Additionally, the need for right-of-way from Yancey's Tavern has been eliminated with this alternative, taking only a temporary construction easement at the tavern. Yancey's Tavern will also stay connected to Chestnut Ridge Road as it was historically; however Chestnut Ridge Road will have a branch turn-around at the dead end just southeast of the tavern. A landscaping plan and an aesthetic treatment for the retaining wall will be developed with the TN-SHPO and consulting parties in order to continually have vegetative screening at the tavern.

For the reasons stated above, it is the opinion of TDOT that the proposed ***Alternative B Modified*** will have **No Adverse Effect** on the National Register listed Yancey's Tavern. Pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, the proposed project would not constitute a Section 4(f) use of a historic property.

Bibliography

Beasley, Ellen. "Yancey's Tavern," *National Register of Historic Places Nomination*, 10 November 1972, On file with the Tennessee Historical Commission, Nashville, Tennessee.

SECTION 106 REVIEW, NATIONAL HISTORIC PRESERVATION ACT OF 1966

Section 106 of the *National Historic Preservation Act* requires that Federal agencies consider what effects their actions and/or actions they may assist, permit, or license, may have on historic properties, and that they give *the Advisory Council on Historic Preservation (Council)* a "reasonable opportunity to comment" on such actions. The Council is an independent Federal agency. Its role in the review of actions under Section 106 is to encourage agencies to consider, and where feasible, adopt measures that will preserve historic properties that would otherwise be damaged or destroyed. The Council's regulations, entitled "Protection of Historic Properties" (36 CFR Part 800) govern the Section 106 process. The Council does not have the authority to require agencies to halt or abandon projects that will affect historic properties.

Section 106 applies to properties that have been listed in the *National Register of Historic Places (NRHP)*, properties that have been determined to be eligible for inclusion in the NRHP, and properties that may be eligible but have not yet been evaluated. If a property has not yet been nominated to the NRHP or determined eligible for inclusion, it is the responsibility of the Federal agency involved to ascertain its eligibility.

The Council's regulations are set forth in a process consisting of four basic steps which are as follows:

1. Initiate Section 106 Process: The Federal agency responsible for the action establishes the undertaking, determines whether the undertaking has the potential to affect historic properties (i.e., properties listed in or eligible for listing in the National Register of Historic Places), and identifies the appropriate State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO). At this time, the agency plans to involve the public and identify other consulting parties.
2. Identify Historic Properties: If the agency's undertaking has the potential to affect historic properties, the agency determines the scope of appropriate identification efforts and proceeds to identify historic properties within the area of potential effects. Identification involves assessing the adequacy of existing survey data, inventories, and other information on the area's historic properties. This process may also include conducting further studies as necessary and consulting with the SHPO/THPO, consulting parties, local governments, and other interested parties. If properties are discovered that may be eligible for the National Register, but have not been listed or determined eligible for listing, the agency consults with the SHPO/THPO and, if needed, the Keeper of the National Register to determine the eligibility status of the property.
3. Assess Adverse Effects: The agency, in consultation with the SHPO/THPO, assesses the potential effects to historic properties affected by the undertaking. The agency at this time will determine that the action will have "no adverse effect" or an "adverse effect" on historic properties. Consulting parties and interested members of the public are informed of these findings.

The regulations provide specific criteria for determining whether an action will have an effect, and whether that effect will be adverse. Generally, if the action may alter the characteristics that make a property eligible for the National Register, it is recognized that the undertaking will have an effect. If those alterations may be detrimental to the property's characteristics, including relevant qualities of the property's environment or use, the effects are recognized as "adverse."

4. Resolve Adverse Effects: The agency consults with the SHPO/THPO and others, including consulting parties and members of the public. The Council may choose to participate in consultation, particularly under circumstances where there are substantial impacts to historic properties, when a case presents important questions about interpretation, or if there is the potential for procedural problems. Consultation usually results in a Memorandum of Agreement (MOA).

If agreement cannot be reached, the agency, SHPO/THPO, or Council may terminate consultation. If the SHPO/THPO terminates consultation, the agency and the Council may conclude the MOA without SHPO/THPO involvement. If the SHPO/THPO terminates consultation and the undertaking is on or affecting historic properties on tribal lands, the Council must provide formal comments. The agency must request Council comments if no agreement can be reached.

**ELIGIBILITY CRITERIA OF THE
NATIONAL REGISTER OF HISTORIC PLACES
AS SET FORTH AT 36 CFR 60.4**

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- **CRITERION A.** that are associated with events that have made a significant contribution to the broad patterns of our history (history); or
- **CRITERION B.** that are associated with the lives of persons significant in our past (person); or
- **CRITERION C.** that embody the distinctive characteristic of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that components may lack individual distinction (architecture); or
- **CRITERION D.** that have yielded, or may be likely to yield, information important in prehistory or history (archaeology).

Ordinarily, cemeteries; birthplaces or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years are not considered eligible for the National Register of Historic Places; however, such properties will qualify if they are integral parts of historic districts that do meet the criteria or if they fall within the following categories:

- **EXCEPTION A.** a religious property deriving primary significance from architectural or artistic distinction or historical importance; or
- **EXCEPTION B.** a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- **EXCEPTION C.** a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his productive life; or
- **EXCEPTION D.** a cemetery which derives its primary significance from graves or persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
- **EXCEPTION E.** a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
- **EXCEPTION F.** a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or
- **EXCEPTION G.** a property achieving significance within the past 50 years if it is of exceptional importance.

NATIONAL REGISTER OF HISTORIC PLACES

Summary Sheet Prepared by TDOT

What is the National Register of Historic Places? The National Register, maintained by the Keeper of the Register within the National Park Service, Department of Interior, is the nation's official list of districts, buildings, sites, structures, and objects significant in American history, architecture, archeology, engineering, and culture.

What are the benefits and restrictions of listing? In addition to honorific recognition, listing in the National Register results in the following benefits for historic properties:

- Section 106 provides for consideration of National Register listed or eligible properties in planning for Federal, federally licensed, and federally assisted projects;
- Eligibility for certain tax provisions for the certified rehabilitation of income-producing National Register structures such as commercial, industrial, or rental residential buildings;
- Consideration of historic values in the decision to issue a surface mining permit where coal is located in accordance with the Surface Mining Control Act of 1977; and
- Qualification of Federal grants for historic preservation, when funds are available.

Does National Register designation place any additional burdens or obligations on the property owner? Owners of private property listed in the National Register are free to maintain, manage, or dispose of their property as they choose, provided that no Federal moneys are involved.

How is a property nominated to the National Register? The first step is for the owner to contact the Tennessee State Historic Preservation Office (TN-SHPO), Clover Bottom Mansion, 2941 Lebanon Road, Nashville, TN 37243-0442; 615-532-1558. Ordinarily, private individuals (or paid consultants) prepare nomination forms. The TN-SHPO submits these nominations to a State Review Board, which meets three times a year. This body reviews the nominations and votes to recommend or deny National Register listing. If approved, the TN-SHPO submits the nomination to the Keeper of the Register in Washington, D.C. for consideration for listing. The Keeper's Office has 45 days to review the nomination, and its decision regarding National Register listing is final.

How long does the nomination process take? The process varies but typically takes between eight and twelve months.

CRITERIA OF ADVERSE EFFECT

Regulations codified at 36 CFR 800 require Federal agencies to assess their impacts to historic resources. The regulations provide specific criteria for determining whether an action will have an effect, and whether that effect will be adverse. These criteria are given below.

36 CFR 800.5 Assessment of Adverse Effects

(a) *Apply Criteria of Adverse Effect.* In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the Agency Official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The Agency Official shall consider any views concerning such effects which have been provided by consulting parties and the public.

(1) *Criteria of adverse effect.* An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

(2) *Examples of adverse effects.* Adverse effects on historic properties include, but are not limited to:

- (i) Physical destruction of or damage to all or part of the property;
- (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access that is not consistent with the Secretary's Standards for the Treatment of Historic Properties and applicable guidelines;
- (iii) Removal of the property from its historic location;
- (iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- (v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
- (vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- (vii) Transfer, lease or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

SECTION 4(f), TDOT SUMMARY SHEET

WHAT IS SECTION 4 (f)? Codified at 49 CFR 303, "Section 4 (f)" refers to a section of the U.S. Department of Transportation Act which gives special consideration to the use of park and recreation lands, wildlife and waterfowl refuges, and historic sites by Federally assisted transportation projects. Section 4 (f) applies only to those projects using funds from the U.S. Department of Transportation. The law states:

(c) The Secretary may approve a transportation program or project (other than any project for a park road or parkway under section 204 of title 23) requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if -

(1) *there is no prudent or feasible alternative to using that land; and*

(2) *the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.*

WHAT IS THE SECTION 4 (f) PROCESS FOR HISTORIC PROPERTIES? To be considered "historic," a property must either be listed in the National Register of Historic Places or be determined eligible for such listing by the Keeper of the Register or the State Historic Preservation Officer (SHPO).

On any project, the primary objective is to develop a design that does not have Section 4(f) involvement. If such a design is not possible, then the Section 4 (f) documentation is prepared and circulated. Such documentation is circulated to all appropriate agencies or groups (consistent with the Section 106 process and the National Environmental Policy Act), and as applicable, to the U.S. Department of the Interior, Housing and Urban Development, and Agriculture. It is also circulated to the agency having authority over the Section 4 (f) property. For historic properties, such agencies are the SHPO and the Advisory Council on Historic Preservation (ACHP). After review of any comments received, the final Section 4(f) documentation is sent to the Federal Highway Administration (FHWA) which determines if the requirements of the Section 4(f) statute are met. If the requirements are satisfied, then the FHWA will approve the use of the Section 4 (f) property.

HOW ARE SECTION 4 (f) AND SECTION 106 RELATED? Section 106 is a provision of the National Historic Preservation Act of 1966, which requires all federal agencies to consider the effects of their projects on historic properties and to provide the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on those effects. The ACHP has promulgated regulations at 36 CFR 800 that describe the procedures that agencies must follow in order to comply with Section 106. Many of the Section 106 documentation requirements overlap the Section 4 (f) documentation requirements for historic properties. For this reason, for projects having a 4(f) use of a historic site, the documentation for Section 106 and Section 4 (f) is usually combined into one document and circulated to the appropriate groups described above. The consent of neither the SHPO nor the ACHP is necessary for FHWA to approve a Section 4 (f) use, but FHWA gives great consideration to comments from these agencies.

APPENDIX E
2008 PUBLIC PARTICIPATION LETTERS

405 Wine Circle
Blountville, TN 37617
November 14, 2008

Ms Tammy Sellers, TDOT Environmental Division
505 Deaderick St. Suite 900
Nashville, TN 37243

Reference: Documentation of Effect of proposed improvements to State Route 126
(Memorial Boulevard) from East Center Street to Interstate 81

Dear Ms. Sellers:

Thank you for including me in the distribution of the referenced report. As the owner and restorer (some say savior) of Yancey's Tavern I definitely want to follow the plans for Hwy 126.

First some suggestions and requests for your distribution list as given on Page 6 of the referenced report. For the Sullivan County Historical Society, Dennis Houser (471 Camp Placid Road, Blountville, TN 37617) should replace Sam Stuffle, who is deceased. In addition the following will be interested in the adverse impact of this project on Yancey's Tavern: President of Netherland Inn/Exchange Place Association (P.O. Box 293, Kingsport, TN 37662) and President of Association for the Preservation of Tennessee Antiquities (APTA 110 Leake Avenue, Nashville, TN 37205). Please send them copies of the referenced report.

The referenced report states correctly that the National Register site Yancey's Tavern was sold at auction September 11, 2004. So that your readers know the status of this local historic treasure the Hwy 126 project could adversely impact, be advised I bought the house to prevent its demolition by hewn log buyers who were active bidders at the auction. I bore the cost of its restoration and furnishing with good older reproductions of 18th century furniture. I maintain it at an annual cost of about \$4000. As it is not a house museum, I have allowed a broad cross section of groups to hold meetings and other events in the house at no charge. These groups include historic, patriotic, genealogy, garden, and social clubs, church Sunday school classes (covered dish suppers), Kingsport Chamber of Commerce (tourism and historic preservation teams), and joint legislative/judicial socials.

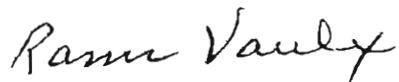
The referenced report admits there will be an adverse visual impact on Yancey's Tavern from the conversion of the present two lane Hwy 126 to a divided four lane with curbs,

gutters and sidewalks as recommended by the resource team. Trying to excuse this by saying the Tavern has always been on a main road starting with the Island Road, which was built in 1761, is laughable. Fronting direct on an urban four-lane would alter the Tavern's context in the history of our community and state! Taking no right-of-way from the Yancey's Tavern National Register boundary is commendable and should be an absolute if avoidance of delay of the project is a factor.

One of the most distressing and unacceptable adverse impacts revealed by the referenced report is the destruction of Chestnut Ridge Road west of Yancey's Tavern (see map showing right-of-way requirements, Figure 10, page 18). This road is the paved continuation of the 1761 Island Road which runs in front of the Tavern and on up Chestnut Ridge. Our patriot ancestors traversed this route via the present Old Stage Road down the ridge to the important triumph over the Indians at the 1776 Battle of Island Flats. After the Island road was rerouted about 1830 the settlers followed it over Chestnut Ridge to Exchange Place, Kingsport's popular living history farm. Destruction of the eastern section of Chestnut Ridge Road (paved Island Road) will destroy the ability of heritage tourists and our own public to follow the actual historic route. If we are serious about developing heritage tourism and our officials certainly make a lot of noise about it, we need to preserve assets as significant as Chestnut Ridge/Island Road.

No one denies Highway 126 is overdue for a safety upgrade. It needs shoulders with rumble strips, turn lanes at its four major intersections, and sight distance improvements where passing could be safe. Section 3 East of Highway 126 has never had current or projected traffic counts to justify a four-lane configuration. The resource team's recommendation for this section destroys historic heritage, community graves and homes, and much of scenic Chestnut Ridge at a staggering cost that is completely unjustified. The two-lane Concept A is the prudent, feasible, cost effective, and context sensitive alternative for Section 3 East.

Sincerely,

A handwritten signature in cursive script that reads "Rann Vaulx".

Rann Vaulx
Owner of Yancey's Tavern

cc: Patrick McIntyre, TN-SHPO, Dennis Houser (Sullivan County Historic Preservation Association), Robert Notestine (APTA), Mary Fanslow (Netherland Inn/Exchange Place Association)

November 19, 2008

Tammy Sellers,
Historic Preservation Supervisor
State of Tennessee Department of Transportation
Environmental Division
505 Deadrick Street
Suite 900, James K. Polk Building
Nashville, TN 37243-0349

SUBJECT: Documentation of Effect for the Proposed Improvements to State Route 126
(Memorial Boulevard) from East Center Street to Interstate 81 in Kingsport,
Sullivan County, Tennessee

Dear Ms. Sellers:

Rann Vaulx, owner of Yancey' Tavern, shared his copy of TDOT's "Documentation of Effect Report Pursuant to 36 CFR 800 for Proposed Improvements to State Route 126 (Memorial Boulevard) from East Center Street to Interstate 81, Sullivan County," September 2008, with me. As a citizen representative on the SR 126 Community Resource Team (CRT) with a keen interest in our community's historic resources, I appreciated the opportunity to review the report. I would like to submit the following comments and questions for inclusion in the review and evaluation of alternatives for Section 3 East.

Context Sensitive Solutions

As I'm sure you are aware, the improvement of the 8.8-mile segment of SR 126 is Tennessee's pilot project for the Context Sensitive Solutions (CSS) process. As such, it would be relevant to include an overview of the Core Principles of CSS in this report. In brief:

- The project is a safe facility for both the user and the community.
- The project is in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area, i.e., exhibits context sensitive design.
- The project exceeds the expectations of both designers and stakeholders and achieves a level of excellence in people's minds.
- The project involves efficient and effective use of the resources (time, budget, community) of all involved parties.
- The project is designed and built with minimal disruption to the community.
- The project is seen as having added lasting value to the community

From the Community Resource Team's June 22, 2005, Recommendation, *"The CRT wants to minimize impacts to and protect the integrity of community treasures in the SR 126 study area. Sites that are considered community treasures include:*

- *Cherry Point Animal Hospital (Barger house)*
- *White house at the corner of Santana Road and SR 126 (Testerman house)*
- *East Lawn Cemetery*
- *Chestnut Ridge view shed*
- *Anything within the historic boundary of Yancey's Tavern, including the tavern, barn, and trace of Old Island Road*
- *Shipley Mansion"*

CSS principles are particularly germane to the discussion of Section 3 East that includes the Yancey's Tavern National Register Site (including Island Road), East Lawn Cemetery, and a significant portion of Chestnut Ridge. This should be a high priority driver in selection of the appropriate alternative.

Alternatives

Three major concepts or alternatives were developed by the Resource Team and were examined for each of the eight sections of the road project. Given the sensitive nature of the community treasures located in Section 3 East, all three alternatives need to be evaluated with regard to impacts to Yancey's Tavern, as well as East Lawn Cemetery and Chestnut Ridge.

- Concept A – generally a two-lane roadway
- Concept B – so-called "three-lane." Two travel lanes and a center turn lane
- Concept C – a four-lane roadway with either a raised median or center turn lane

All concepts have bicycle and pedestrian accommodations, shoulders, improved curvature, improved line of sight and other modern safety features. Of note, traffic counts drop dramatically east of Harbor Chapel Road and do not justify four-laning.

Report Comments

Page 14. Just a point of clarification--please note that while on p.10 the report correctly identifies the road immediately south of the Yancey's Tavern property as Chestnut Ridge Road, on p. 14 it incorrectly identifies it on the map as "Old Stage Road." This is an important clarification, since it is a paved portion of Island Road which merits further consideration. (See comments re p. 16)

Page 14 states, under Effects to Yancey's Tavern, *"... the cross-section adjacent to the historic Yancey's Tavern will be a four-lane roadway with a median, curb, gutter, and sidewalks."* Issue must be taken with the words, *"will be."* That is yet to be determined.

While Concept C was the recommendation of a majority of the Resource Team, there were dissenting opinions on the team. (See Minority Report attachment.) In an October press release, "TDOT Announces Decision on State Route 126/Memorial Boulevard," posted on the TDOT SR 126 website, are the following remarks by Commissioner Nicely:

"There is concern over the use of a 4 lane section from East of Old Stage Road to Cooks Valley Road and the impact this would have on the ridge, Yancey's Tavern and East Lawn Cemetery," said Commissioner Gerald Nicely. "These concerns must and will be addressed during the preparation of the EIS for this truly to be a Context Sensitive Solutions process."

[<http://www.tdot.state.tn.us/news/2005/102705a.htm>]

When and how will these concerns be addressed?

Page 16. It is reassuring that the alternative (Concept C) with the greatest impact on Section 3 East *"would not cause physical damage to all or part of the historic Yancey's Tavern property or result in the removal of the property from its historic location."* There is sincere disagreement, however, with the opinion that, *"Although the proposed State Route 126 is (a) four-lane median divided roadway, the location adjacent to Yancey's Tavern is a continuation of the property's historic past that so closely linked its use to the road itself. Therefore in the opinion of TDOT, the proposed project would not change the character of the property's use that contributes to its historic significance."* Yancey's Tavern is immediately linked with Island Road, the trace of which remains on the property and on Chestnut Ridge Road which is the paved section of the historic Island Road on which the Tavern fronts. It is retention of that road, yet existent, that provides the true and actual historic context for the Tavern and its property, not SR 126.

While, unfortunately, Chestnut Ridge Road was not identified as a historic resource of concern for the purposes of this study, nevertheless, it is of concern to the community and the state. It is certainly an element for CSS consideration. It yet provides the historic travel corridor to the Battle of Long Island Flats, and its reroute ca. 1830 to Exchange Place. Disruption of this road for today's heritage travelers would be a great loss. While not a legal requirement, it is within the purview of TDOT to be sensitive to the protection of this pre-Revolutionary historic road. *Historic Roads* (www.historicroads.org) recognizes the importance that roads have played in our nation's history, "enhancing our understanding of the American experience..." TDOT has a great opportunity to help protect—at least to do no harm—to what was the state's first road and played such a prominent role in our country's history.

Page 17. I completely concur with TDOT's conclusion that Concept C "would introduce an adverse visual impact and therefore have an adverse effect to the National Register Property." Fortunately there is an alternative!

Page 4

Summary

Given 1) the inherent devastating impacts of Concept C to the community's significant historic and environmental attributes on Section 3 East, 2) the low level of use--current and projected, and 3) the exceedingly high costs of four-lane median divided construction on Chestnut Ridge, what is the justification for its selection?

An evaluation of Concepts A and B by TDOT is in order, not only for the purpose of upholding the principles of Context Sensitive Solutions, but also for minimizing the impacts to a National Register listed property by selecting the most prudent and feasible alternative.

Thank you for the opportunity to speak to community concerns. Please add me to your circulation list on this project. I am enclosing several supporting documents with my letter.

Sincerely,



Judith B. Murray
804 Rock City Road
Kingsport, TN 37664

cc: Rann Vaulx
State Historic Preservation Office
Claudia Moody, Northeast Heritage Tourism Area
Shelia Hunt, Sullivan County Historian
Ray Henson, TDOT 126 Project Manager

Enclosures

For Immediate Release:
October 27, 2005



TDOT Announces Decision on State Route 126/Memorial Boulevard

Nashville, Tenn. – Governor Phil Bredesen and the Tennessee Department of Transportation (TDOT) announced today that the state will accept the State Route 126 Community Resource Team (CRT) recommendation. This recommendation will now move forward as an alternative that will be studied further during the Environmental phase of work. During this phase an Environmental Impact Statement (EIS) will be prepared according to NEPA (National Environmental Protection Act) standards. This phase is currently not in the Department's transportation budget, but will be considered when next year's budget is developed. Funding, however, is available to begin technical studies including, ecological, archeological, geological and historical. This information will be included in the final EIS.

"This milestone represents a lot of hard work and commitment by the volunteers on the Citizens Resource Team and I would like to thank them for their efforts," said Bredesen.

The Community Resource Team (CRT) for the State Route 126 (Memorial Boulevard) Context Sensitive Solution (CSS) project has worked together since October 2003 to study and prepare a concept plan recommendation for improving SR 126 in Kingsport and Sullivan County. The project is considered by TDOT to be its' "pilot" CSS project. Documentation of the process and lessons learned will be part of the project report.

The project study area extends from East Center Street to Interstate 81, a distance of approximately 8 miles. During the 21-month CRT study process, the team gathered thirteen times for meetings, training, and workshops and conducted three Public Involvement Sessions in Kingsport. Public opinion was surveyed at each session and the results of those surveys were reviewed and discussed by the CRT and used to guide their decision making.

- CRT unanimously agreed upon:
 - 11 Enhancement features in the Design Plan.
 - 10 Safety Improvements, with safety stated as the number one priority for SR 126.
 - 7 Points of interest to the community.
 - 4 Other special Issues.

Working together the CRT developed recommendations for roadway cross sections. The recommendations are divided into eight sections, identified by intersecting cross streets.

- Five of the eight sections, the CRT developed consensus design recommendations.
- Three of the eight sections, the CRT developed design recommendations that were supported by a majority of team members.
- The attached map shows a graphic depiction of the CRT's team recommendation for number of travel lanes on SR 126.

Consensus design recommendations include:

- Improve these sections to a four-lane median divided facility with curb, gutter and sidewalks:
 - Section 1 West – East Center Street to Orebank Road.
 - Section 1 East – Orebank Road to West of Hawthorne Street.
 - Section 3 West – Harbor Chapel Road to east of Old Stage Road.
- Improve this section to four travel lanes and a center turn lane with curb and gutter and sidewalks:
 - Section 2 – West of Hawthorne Street to Harbor Chapel Road.

- Provide an improved two-lane roadway with paved shoulders, wide centerline, and rumble strips:
 - Section 4 East – Harrtown Road to Cochise Trail.

Majority design recommendations with minority objection statements include:

- Improve this section to a four-lane median divided facility with shoulders:
 - Section 3 East – East of Old Stage Road to Cooks Valley Road.
- Improve this section to provide two travel lanes and a center turn lane with curb, gutter and sidewalks:
 - Section 4 West – Cooks Valley Road to Harrtown Road.
- Provide an upgraded two-lane roadway with paved shoulders, wide centerline, and rumble strips:
 - Section 5 – Cochise Trail to Interstate 81.

"There is concern over the use of a 4 lane section from East of Old Stage Road to Cooks Valley Road and the impact this would have on the ridge, Yancey's Tavern and East Lawn Cemetery," said TDOT Commissioner Gerald Nicely. "These concerns must and will be addressed during the preparation of the EIS for this to truly be a Context Sensitive Solutions process."

"Context Sensitive Solutions (CSS) is a new way transportation planning approach being used by TDOT which provides solutions that are not only safe and effective, but are also designed in harmony with the community and environment", said Senator Ron Ramsey. "This process benefits us all."

"It took extensive community effort and commitment to get to this point and the results will be a better overall product," added Representative Nathan Vaughn. "I'd like to thank everyone involved in the process."

"US126 will be a vital transportation corridor for Sullivan County and is a much needed improvement for the region," said Representative Jason Mumpower. "The resource team's safety suggestions are important too."

For a map depicting some of the State Route 126 CRT's recommendations go or for more information about CSS, go to www.tennessee.gov/tdot.

Minority Report for Section 3 East Of State Route 126 in Sullivan County

Basic concept for this segment:

Old Stage Road to Cooks Valley Road: Concept A with a right turn lane onto Lemay Drive.

Statement of Purpose:

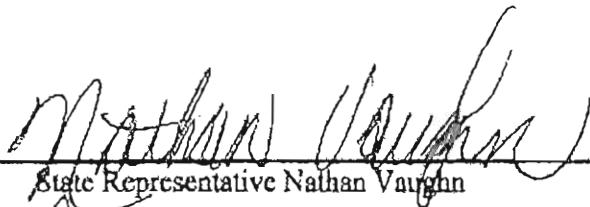
We find ourselves in fundamental opposition to the exhumation of human remains or the destruction of an historical treasure (Yancey's Tavern property) while a viable alternative is available that fulfills the agreed upon requirements for the project. Further, with respect to the preservation of Chestnut Ridge, we also are unable to accept a solution or concept that is more destructive with respect to the original contours and appearance of the ridge than is required, while a viable alternative exists that, again fulfills the agreed upon requirements for the project.

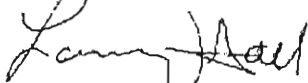
Rationale:

- **Safety**
 - Eight foot shoulders, guard rails, improved sight distances and improved horizontal and vertical curves
 - Has centerline & shoulder rumble strips to minimize lane departure (as recommended in State of Tennessee Strategic Highway Safety Plan, p. 8, 11/17/04)
 - Designated right turn lane into Lemay Drive provides greater safety for new traffic by adjacent road closures. Also allows eastbound traffic to continue while vehicles make right turn.
- **Community Impacts**
 - Concept A has the least impact to Chestnut Ridge both environmentally and visually.
 - Concept A has the smallest number of impacts to residences.
 - Best preserves the community wishes of maintaining the scenic beauty of Chestnut Ridge.
- **Cost Justification**
 - B & C are not justified by actual and projected traffic counts through 2028.
 - B & C are not justified by turning needs (few driveways & minimal left turns to side roads since most traffic is westbound in the morning and eastbound in the evening)

MINORITY OBJECTION STATEMENTS

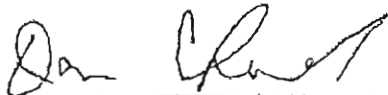
- There is a lack of consideration of cost in this section in light of the lack of potential benefit that might be realized by the community.
- Public Response
 - 58% of those surveyed in Public Session III chose an option other than a 4-lane, i.e. Concept C, in the section.
 - Additionally, a petition with 1100+ names expressed a preference for a two lane road in this section.
 - Eleven foot travel lanes minimize the road footprint.
 - Concept A impacts East Lawn Cemetery the least of all concepts
 - Concept A protects the historic Yancey tavern and barn, as well as remnants of Old Island Road and the surrounding site. The history of this area predates the American Revolution
- Mobility
 - Right turn lane increases capacity in Concept A.
 - Traffic counts have drastically fallen east of Old Stage Road.


State Representative Nathan Vaughn



Larry Hall, Member of the Sullivan County Board of Commissioners, District 6

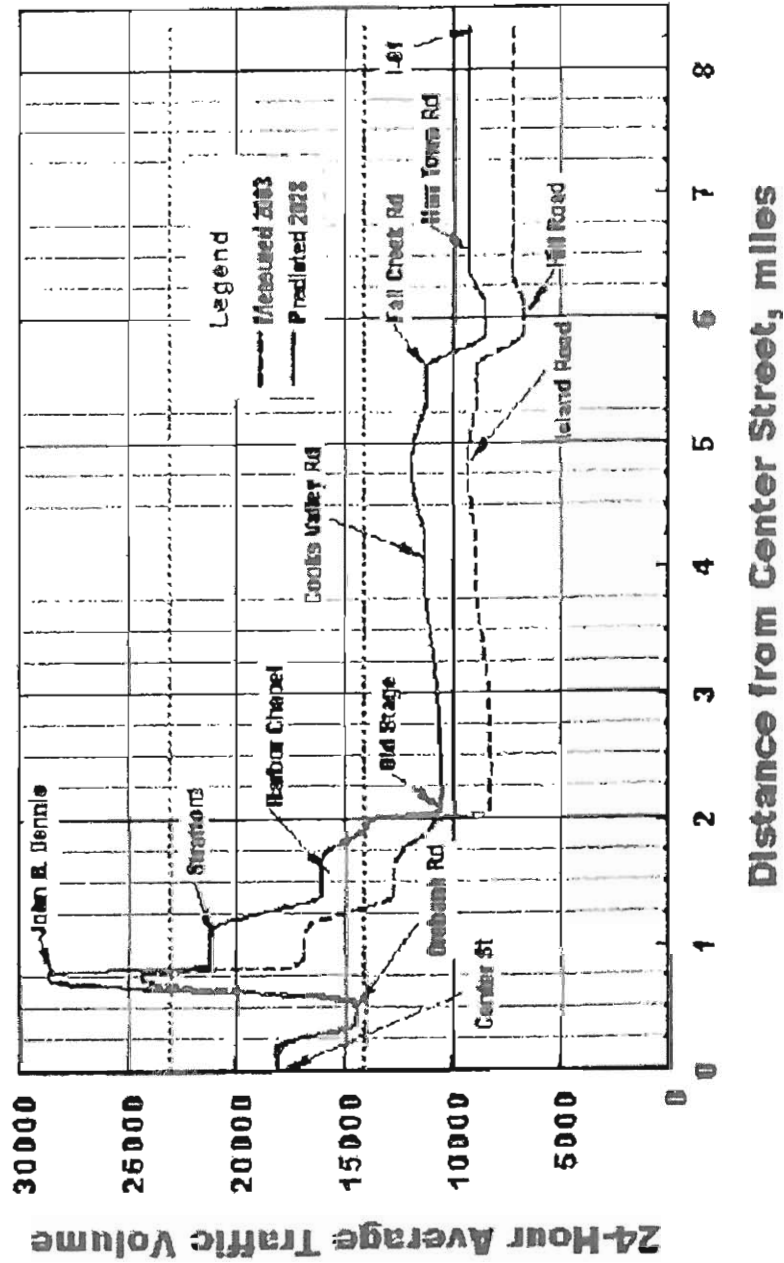

Judith Murray, Citizen Representative



Dan Cheek, Citizen Representative

2005

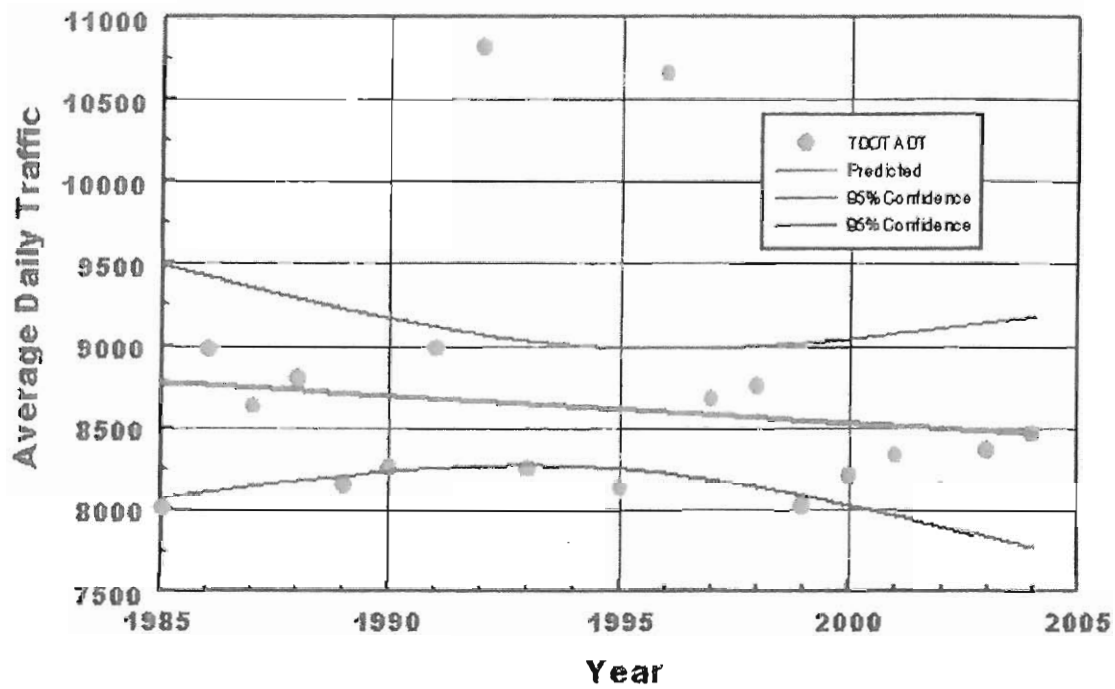
Predicted Traffic Growth along SR-126



Station #	County	Location	Route #
000167	Sullivan	MEMORIAL - KINGSPORT	SR126

Record	Year	AADT
1	2007	7773
2	2005	8718
3	2004	8465
4	2003	8358
5	2002	8117
6	2001	8335
7	2000	8206
8	1999	8015
9	1997	8675
10	1996	10655
11	1995	8130
12	1994	7846
13	1993	8250
14	1992	10816
15	1991	8988
16	1990	8253
17	1989	8150
18	1988	8800
19	1987	8625
20	1986	8980
21	1985	8001
22	2006	8057
23	1998	8753

Average Daily Traffic for TN-167



Not reflected on this graph

Year	ADT
2005	8715
2006	8557
2007	1775



ASSOCIATION
FOR THE
PRESERVATION
OF TENNESSEE
ANTIQUITIES

December 18, 2008

Ms. Tammy Sellers
Historic Preservation Supervisor
State of Tennessee
Department of Transportation
Environmental Division
505 Deaderick Street
Suite 900, James W. Polk Building
Nashville, TN 37243-0349

Re: Comments regarding proposed improvements to State Route 126 in
Sullivan County - Adverse Impact on Yancey's Tavern.

Dear Mr. Sellers:

I am in receipt of your letter dated November 24, 2008 and I have reviewed the Documentation of Effect Report pursuant to 36 CFR 800. Thank you for providing this information which I found to be very informative. I also concur that the proposed project has potential negative effect on Yancey's Tavern. The APTA is not in favor of any negative impact of the project on this unique historic site.

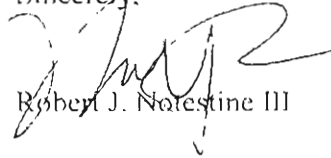
Yancey's Tavern has been selected by our Board as a significant historic site due both to its 18th century architecture, its continued presence and recognition in the Kingsport area, and its role as a gathering place and government center in the 18th and 19th centuries. Any act that would minimize the view of this structure from the public would be a disservice to historic preservation in this state. The construction of the proposed State Route 126 in such a manner as to cause the four lane road to be immediately adjacent to Yancy's Tavern as stated in page 16 of your document package cannot be supported by this organization.

In this light we urge TDOT to modify the proposed plan to minimize any negative aspects of this project upon Yancey's Tavern. It is a truly unique structure. Upon entering Yancey's Tavern

one truly has an immediate sense of being in the past. Constructing a modern four lane highway upon to the front boundary of the Tavern will frankly greatly diminish this sense of history.

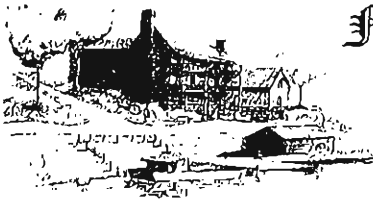
I certainly don't wish to unduly interfere in this project but I am hereby requesting that you consider the position of the APTA in your planning process for this project. I will be glad to discuss this matter further with you at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Nolestine III", written over the printed name.

Robert J. Nolestine III

cc: Ms. Ron Vaulx
E. Patrick McIntyre, Jr., THC
Martha Sloan, Executive Director, APTA



Netherland Inn

Netherland Inn/Exchange Place Association, Inc.

P. O. Box 293
KINGSPORT, TENNESSEE 37662



Exchange Place

April 1, 2009

Ms. Tammy Sellers
Historic Preservation Supervisor
State of Tennessee
Department of Transportation
Environmental Division
505 Deaderick Street
Suite 900, James W. Polk Building
Nashville, TN 37243-0349

Dear Ms. Sellers:

I am responding on behalf of the Netherland Inn / Exchange Place Association (NIA) to the Documentation of Effect Report pursuant to 36 CFR 800. The NIA believes that the project proposed by TDOT has potential adverse impact on Yancey's Tavern and the adjacent Chestnut Ridge Road and Chestnut Ridge view shed.

Yancey's Tavern and its environs constitute an important part of the history of Sullivan County and, in fact, our nation's history. Yancey's Tavern, built 209 years ago, served as the meeting place for the second meeting of the Sullivan County Commissioners. The road that connected it to Abingdon and up Chestnut Ridge is the Island Road. The Island Road is the second oldest military road (after Braddock's Road) in the country and the first wagon road in Tennessee. It was built in 1761 to bring the militia from Chilhowie to Long Island of the Holston where, as in the Watauga and Nolichucky River Valleys, significant settlements had developed. It is the oldest still in-use road in the state.

The critical importance of Island Road became apparent in the summer of 1776 when Cherokee, incited by the British to rise up against colonists in the west, approached the Long Island of the Holston. In response, colonists gathered at Eaton's Fort (near Yancey's Tavern). Using Island Road, the militia arrived at Eaton's Fort before the Indians. It was decided that the best strategy would be to march out and engage the Cherokee before being penned up in the fort. The settlers readily agreed, and together the militia and settlers marched along the Island Road to near the current intersection of Memorial Boulevard (Hwy 126) and Center Street where they engaged in a brief, but violent, skirmish with the Cherokee, known as the Battle of Island Flats. This battle figures prominently in Theodore Roosevelt's 1889 work, *The Winning of the West*.

The TDOT proposal for modifying Hwy 126 would render an adverse impact on this route and the ridge itself and potentially destroy a significant aspect of our history. The NIA requests that TDOT reconsider its proposal and consider alternatives that would


Netherland Inn Exchange Place Hammond House

minimize any negative aspects of its project upon Yancey's Tavern and the Chestnut Ridge Road and its view shed.

Thank you for sending the NIA the proposal documentation and for allowing us to comment.

I am enclosing a copy of a new brochure, "Pioneer Pathways." This brochure is the first of a series of planned brochures on historic pathways. The next one to be produced in the next year or so will cover the Island Road. We envision that these brochures will give area residents and tourists an appreciation for historic pathways in Sullivan County.

Sincerely,

A handwritten signature in cursive script that reads "Mary Fanslow".

Mary Fanslow
President, NIA

cc: Dr. Rann Vaulx
Dr. E. Patrick McIntyre, Jr., THC
Rep. Tony Shipley
Mr. Bill Albright, City of Kingsport
Honorable Steve Godsey, Mayor of Sullivan County
Lt. Governor Ron Ramsey
Ms. Sheila Steele Hunt, Director, Sullivan County Dept. of Archives and Tourism
Commissioner Gerald Nicely, TDOT
Mr. Ray Henson, SR 126 Project Leader, TDOT

APPENDIX F
PUBLIC PARTICIPATION



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL PLANNING AND PERMITS DIVISION**

SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334
(615) 741-3653

**GERALD F. NICELY
COMMISSIONER**

**PHIL BREDESEN
GOVERNOR**

November 19, 2003

Mr. James Bird
Tribal Historic Preservation Officer
Eastern Band of Cherokee Indians
Qualla Boundary
P.O. Box 455
Cherokee, NC 28719

Sample Letter to Native Americans

SUBJECT: Section 106 Initial Coordination for Proposed Improvements to State Route 126
(Memorial Blvd) From E. Center St. in Kingsport to I-81, Sullivan County, Tennessee

Dear Mr. Bird:

The Tennessee Department of Transportation (TDOT) in cooperation with the Federal Highway Administration is in the planning stages of evaluating the above-referenced project for possible implementation. The location of the proposed project is shown on the enclosed map.

The 2001 Advisory Council on Historic Preservation regulations, 36 CFR 800, stipulate that Indian tribes that attach religious and cultural significance to properties that may be affected by an undertaking be invited to participate in the project review process as consulting parties. TDOT would like to invite you to participate as a consulting party for the proposed project. This letter is also TDOT's request for comments on the identification of properties in the project's area of potential effect that may be of religious and cultural significance to your tribe.

If you choose to participate as a consulting party on the above-referenced project, you will receive copies of cultural assessment reports that identify Native American related properties. You will also be invited to attend project-related meetings with FHWA, TDOT and the Tennessee State Historic Preservation Office (TN-SHPO), if any are held. We respectfully request written responses to project reports and other materials within thirty (30) days of receipt.

If you would like to participate as a consulting party, please respond to me via letter, telephone (615-741-5257), fax (615-741-1098) or E-mail (Gerald.Kline@state.tn.us). To facilitate our planning process, please respond within 30 days of receipt of this letter. If you do not respond, you will not receive reports related to this project unless you specifically request them at a later date. Thank you for your assistance.

Sincerely,

Gerald Kline
Transportation Specialist I
Archaeology Program Manager

Enclosure



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENTAL PLANNING AND PERMITS
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334
(615) 741-3653

GERALD F. NICELY
COMMISSIONER

PHIL BREDESEN
GOVERNOR

November 19, 2003

Richard Venable, County Mayor
3411 Hwy 126, Ste 206
Blountville, TN 37617

Letter to Local Government Official

RE: Section 106 Initial Coordination for Proposed Improvements to State Route 126
(Memorial Blvd) From E. Center St. in Kingsport to I-81, Sullivan County,
Tennessee

Dear Mr. Venable:

The Tennessee Department of Transportation (TDOT) in cooperation with the Federal Highway Administration is proposing to improve the above referenced project. Its location is shown on the enclosed map.

The 2001 Advisory Council on Historic Preservation regulations stipulate that TDOT invite local government representatives to participate in the historic review process as a consulting party. TDOT would like to invite you, as the local government official, to participate as a consulting party for the proposed project.

If you choose to participate as a consulting party, you will receive copies of TDOT's environmental reports and will be invited to attend project-related meetings between TDOT and the Tennessee State Historic Preservation Office (TN-SHPO), if any are held. As a consulting party, you should be prepared to attend any such meetings between TDOT and the TN-SHPO and provide a response to TDOT's reports in written form within 30 days upon receipt of the report. TDOT also wishes to seek your comments on the identification and evaluation of historic properties that the proposed project might impact.

If you would like to participate as a consulting party, please write to me at the above address. To facilitate our planning process, please respond within 30 days of receipt of this letter. Thank you for your assistance.

Sincerely,

Martha Carver
Historic Preservation Program Manager

Enclosure
cc: Mr. Herbert Harper, TN-SHPO



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENTAL PLANNING AND PERMITS
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334
(615) 741-3653

GERALD F. NICELY
COMMISSIONER

PHIL BREDESEN
GOVERNOR

November 19, 2003

Jeanette Blazier, Mayor
City of Kingsport
225 West Center Street
Kingsport, TN 37660

Letter to Local Government Official

RE: Section 106 Initial Coordination for Proposed Improvements to State Route 126
(Memorial Blvd) From E. Center St. in Kingsport to I-81, Sullivan County,
Tennessee

Dear Ms. Blazier:

The Tennessee Department of Transportation (TDOT) in cooperation with the Federal Highway Administration is proposing to improve the above referenced project. Its location is shown on the enclosed map.

The 2001 Advisory Council on Historic Preservation regulations stipulate that TDOT invite local government representatives to participate in the historic review process as a consulting party. TDOT would like to invite you, as the local government official, to participate as a consulting party for the proposed project.

If you choose to participate as a consulting party, you will receive copies of TDOT's environmental reports and will be invited to attend project-related meetings between TDOT and the Tennessee State Historic Preservation Office (TN-SHPO), if any are held. As a consulting party, you should be prepared to attend any such meetings between TDOT and the TN-SHPO and provide a response to TDOT's reports in written form within 30 days upon receipt of the report. TDOT also wishes to seek your comments on the identification and evaluation of historic properties that the proposed project might impact.

If you would like to participate as a consulting party, please write to me at the above address. To facilitate our planning process, please respond within 30 days of receipt of this letter. Thank you for your assistance.

Sincerely,

Martha Carver

Martha Carver
Historic Preservation Program Manager

Enclosure
cc: Mr. Herbert Harper, TN-SHPO

Sullivan County
Office of the County Executive



Richard S. Venable
County Executive

December 10, 2003

Ms. Martha Carver
T.D.O.T.
Environmental Planning & Permits
Suite 900, James Polk Bldg
505 Deaderick Street
Nashville, TN 37243-0334

RE: Improvements to S.R. 126, Sullivan County, Tennessee

Dear Ms. Carver:

Please include me on your list of consulting party contacts for the above referenced project.

Warmest regards,

A handwritten signature in black ink that reads "Richard S. Venable". The signature is fluid and cursive.

Richard S. Venable
Mayor of Sullivan County

RSV/ait

ATTACHMENT F – SECTION 106 ARCHAEOLOGICAL CORRESPONDENCE



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

February 27, 2014

Muscogee (Creek) Nation
P.O. Box 589
Okmulgee, OK 74447
Attn: Mr. Emman Spain, THPO

SUBJECT: Section 106 Initial Coordination for the Proposed SR-126 (Memorial Blvd) Project, from East Center Street to I-81, Kingsport, Sullivan County, Tennessee

Dear Mr. Spain:

The City of Kingsport in cooperation with the Tennessee Department of Transportation (TDOT) is proposing to implement the SR-126 (Memorial Boulevard) project in Sullivan County (maps attached). The widened roadway would vary from two-lanes to four-lanes with a landscaped raised median between the eastern city limits of Kingsport and I-81. The approximate project length is 8.4 miles. Additional right-of-way is required.

Native American Coordination was originally distributed for this project on January 9, 2012. Since then, your tribe added Sullivan County to its list of counties of interest for transportation projects in Tennessee.

The National Historic Preservation Act (NHPA) recognizes that federally funded undertakings, like the subject project, can affect historic properties to which your tribe attaches religious, cultural, and historic significance. In accordance with 36 CFR 800 regulations implementing compliance with Section 106 of the NHPA, I would like to know if you have information you could share with me about tribal concerns in the project area and if you wish to be a consulting party on the project? Early awareness of your concerns can serve to protect historic properties valued by your tribe.

If you act as a consulting party you will receive archaeological assessment reports and related documentation, be invited to attend project meetings with FHWA, TDOT, and the Tennessee State Historic Preservation Office (TN-SHPO), if any are held, and be asked to provide input throughout the process. If you choose to not act as a consulting party at this time, you can do so at a later date simply by notifying me.

Please respond to me via letter, telephone (615-741-5257), fax (615-741-1098), or E-mail (Gerald.Kline@tn.gov). I respectfully request responses (email is preferred) to project reports and other materials within thirty (30) days of receipt if at all possible. Thank you for your assistance.

Sincerely,

Gerald Kline
Transportation Specialist I
Archaeology Program Manager

Enclosure

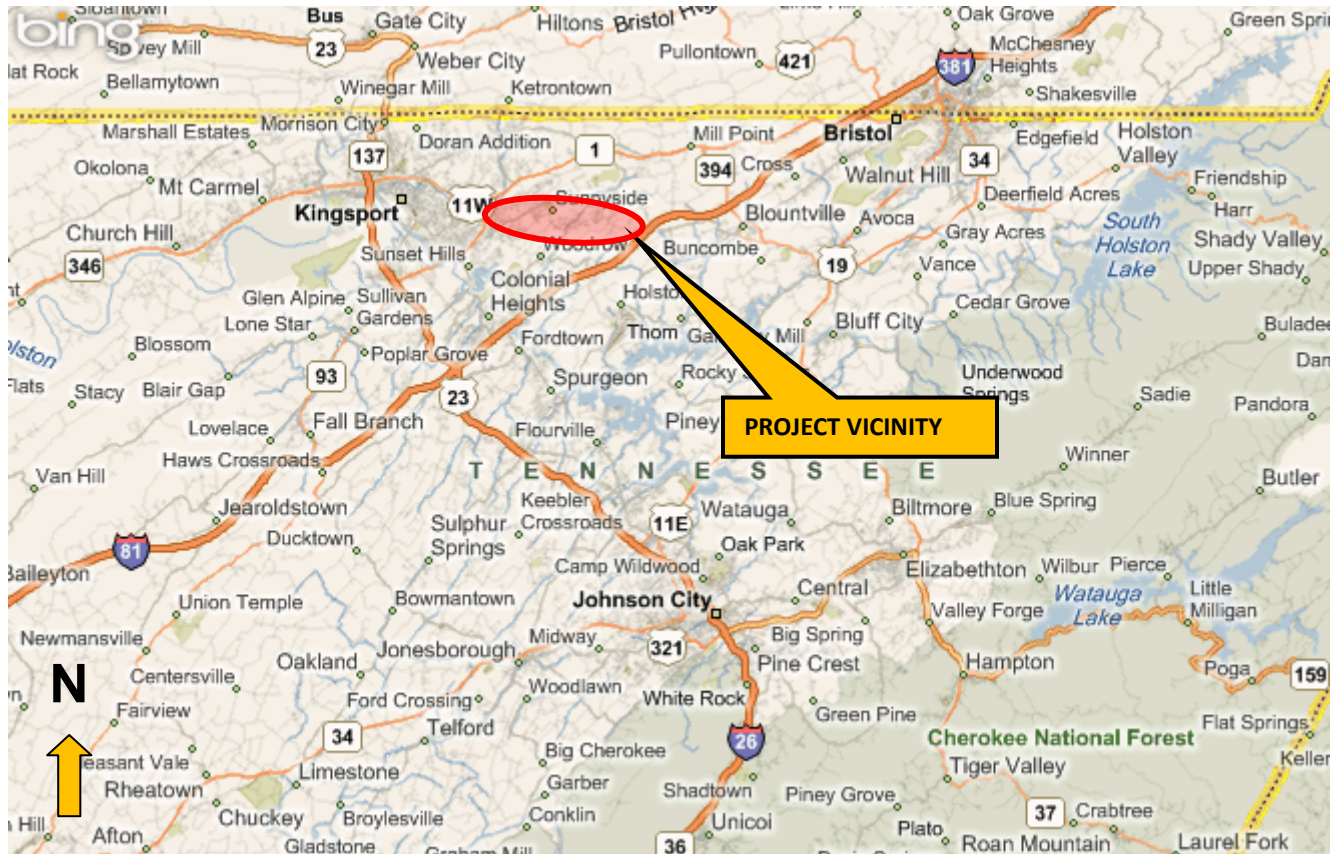
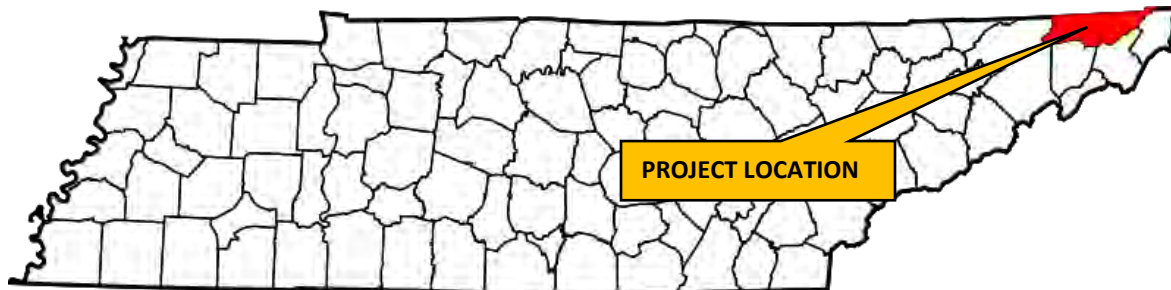
cc Robin Dushane, Eastern Shawnee Tribe of Oklahoma
Kim Jumper, Shawnee Tribe
Lisa C. Baker, United Keetowah Band of Cherokee Indians
Tyler Howe, Eastern Band of Cherokee Indians
Richard Allen, Cherokee Nation



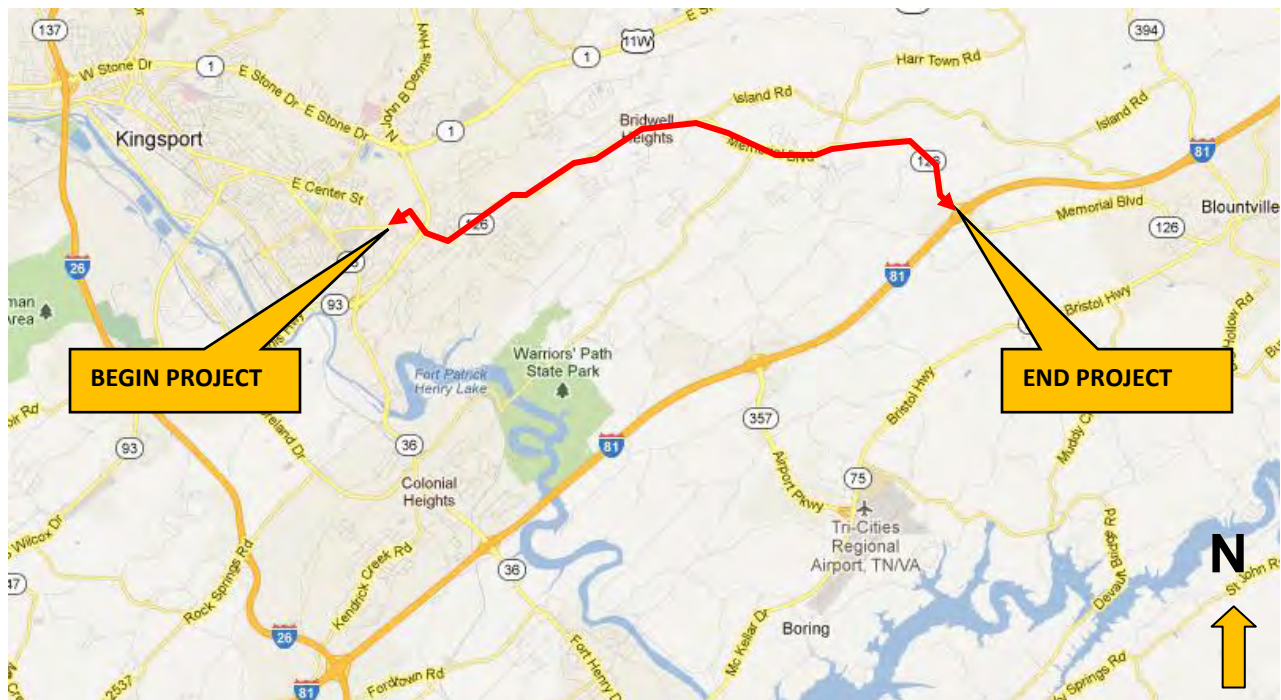
SR-126 (MEMORIAL BOULEVARD) PROJECT

FROM EAST CENTER STREET TO I-81

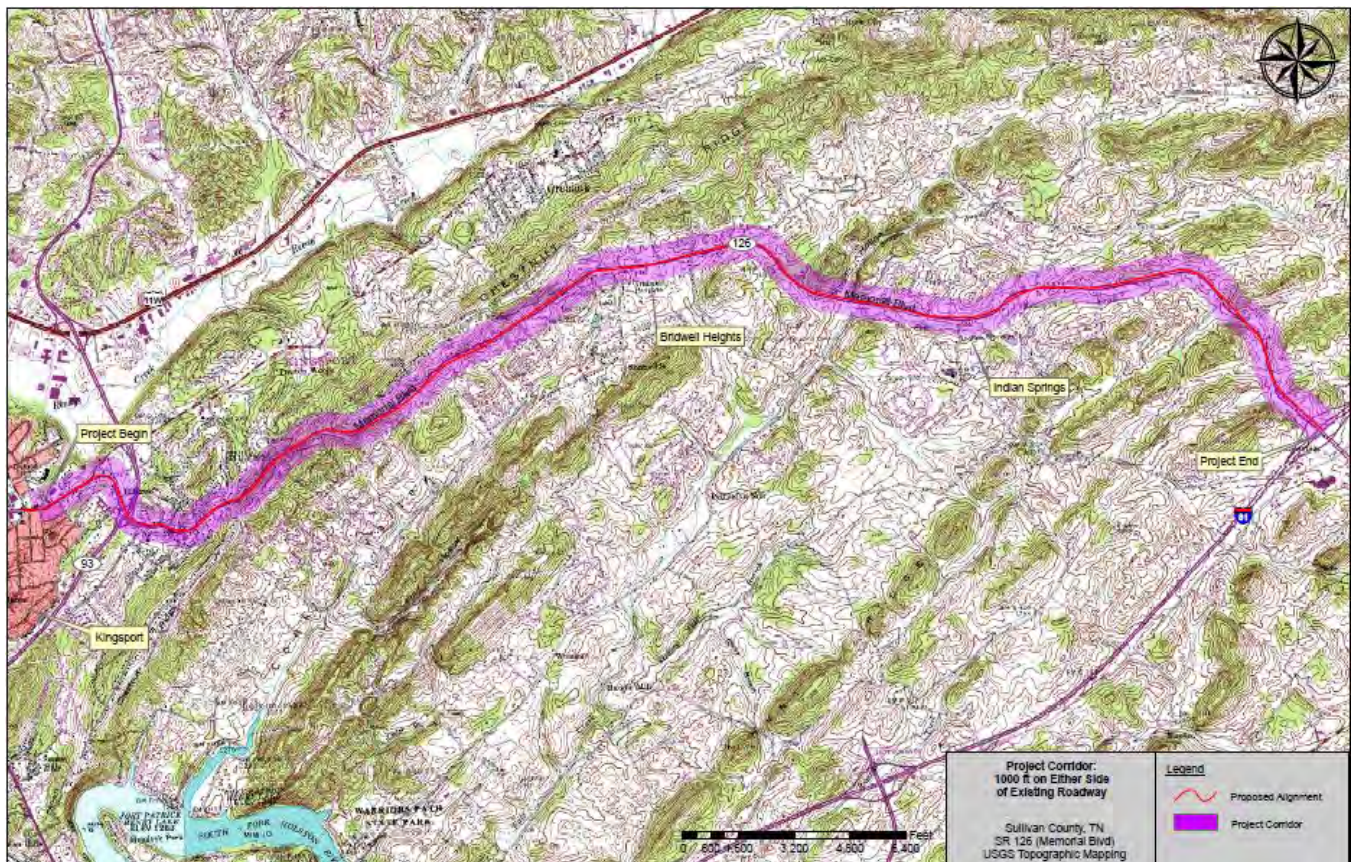
KINGSPORT, SULLIVAN COUNTY, TENNESSEE



PROJECT VICINITY MAP



PROJECT LOCATION MAP



PROJECT LOCATION MAPS – USGS QUAD Kingsport (188 SE) and Indian Springs (197 SW)





**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION**

**SUITE 900 - JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334
(615) 741-3655**

January 9, 2012

The Cherokee Nation
17675 South Muscogee
Tahlequah, OK 74464
Attn: Dr. Richard Allen, Research and Policy Analyst

SUBJECT: Section 106 Initial Coordination for the Proposed SR-126 (Memorial Blvd) Project, from East Center Street to I-81, Kingsport, Sullivan County, Tennessee

Dear Dr. Allen:

The City of Kingsport in cooperation with the Tennessee Department of Transportation (TDOT) is proposing to implement the SR-126 (Memorial Boulevard) project in Sullivan County (maps attached). The widened roadway would vary from two-lanes to four-lanes with a landscaped raised median between the eastern city limits of Kingsport and I-81. The approximate project length is 8.4 miles. Additional right-of-way is required.

The National Historic Preservation Act (NHPA) recognizes that federally funded undertakings, like the subject project, can affect historic properties to which your tribe attaches religious, cultural, and historic significance. In accordance with 36 CFR 800 regulations implementing compliance with Section 106 of the NHPA, I would like to know if you have information you could share with me about tribal concerns in the project area and if you wish to be a consulting party on the project? Early awareness of your concerns can serve to protect historic properties valued by your tribe.

If you act as a consulting party you will receive archaeological assessment reports and related documentation, be invited to attend project meetings with FHWA, TDOT, and the Tennessee State Historic Preservation Office (TN-SHPO), if any are held, and be asked to provide input throughout the process. If you choose to not act as a consulting party at this time, you can do so at a later date simply by notifying me.

Please respond to me via letter, telephone (615-741-5257), fax (615-741-1098), or E-mail (Gerald.Kline@tn.gov). I respectfully request responses (email is preferred) to project reports and other materials within thirty (30) days of receipt if at all possible. Thank you for your assistance.

Sincerely,

Gerald Kline
Transportation Specialist I
Archaeology Program Manager

Enclosure

cc Kim Jumper, Shawnee Tribe
Tyler Howe, Eastern Band of Cherokee Indians
Lisa LaRue, United Keetoowah Band of Cherokee Indians
Robin Dushane, Eastern Shawnee Tribe of Oklahoma

Robbie D. Jones

From: Richard Allen <Richard-Allen@cherokee.org>
Sent: Friday, March 02, 2012 12:37 PM
To: Robbie D. Jones
Subject: RE: Section 106 Coordination, Sullivan Co., TN #105467

The Cherokee Nation has no knowledge of any historic, cultural or sacred sites within the affected area. Should any ground disturbance reveal an archaeological site or human remains, we ask that the all activity cease immediately and the Cherokee Nation and other appropriate agencies be contacted immediately.

Thank you,

Dr. Richard L. Allen

Policy Analyst

NAGPRA/Section 106 Contact

Cherokee Nation

P.O. Box 948

Tahlequah, Oklahoma 74465

(918) 453-5466 (office)

(918) 822-2707 (cell)

(918) 458-5898 (fax)

From: Robbie.D Jones [<mailto:Robbie.D.Jones@tn.gov>]
Sent: Monday, January 09, 2012 3:46 PM
To: Richard Allen
Cc: Gerald Kline; Robbie.D Jones
Subject: Section 106 Coordination, Sullivan Co., TN #105467

Dear Dr. Allen:

I'm sending this email communication on behalf of Gerald Kline, Archaeology Program Manager for the Tennessee Department of Transportation. Please see the attached letters and maps for the following project:

- **SR-126, Kingsport, Sullivan County, Tennessee (PIN# 105467.00)**

If you have any questions or need additional information, please contact Gerald Kline at (615) 741-5257 or Gerald.Kline@tn.gov.

Thank you for your assistance in this matter.

Robbie

Robbie D. Jones
Native American Coordinator
TDOT Environmental Division
Director's Office
Suite 900, J K Polk Bldg.
Nashville, TN 37243-0334
Telephone: 615-741-3655
Fax: 615-741-1098
Robbie.D.Jones@tn.gov

Robbie D. Jones

From: Lisa Larue <llarue@unitedkeetoowahband.org>
Sent: Wednesday, January 11, 2012 8:07 PM
To: Robbie D. Jones
Cc: Laverna Stapleton
Subject: RE: Section 106 Coordination, Sullivan Co., TN # 105467

The United Keetoowah Band of Cherokee Indians in Oklahoma has reviewed your project, and has no comment or objections at this time. However, if any inadvertent discoveries of human remains or funerary items are encountered, please cease all work and contact us immediately.

Thank you,

Lisa LaRue

Acting Tribal Historic Preservation Officer

United Keetoowah Band of Cherokee Indians in Oklahoma

CELL: 918-822-1952 FAX: 918-458-6889

NOTE!!!! As of DECEMBER 15, 2011, PLEASE ADDRESS CORRESPONDENCE TO: UKBTHPO-LARUE@YAHOO.COM

PLEASE MAKE CHANGES TO YOUR ADDRESS BOOK, THANK YOU!!!

-----Original Message-----

From: Robbie.D Jones [<mailto:Robbie.D.Jones@tn.gov>]
Sent: Mon 1/9/2012 3:49 PM
To: Lisa Larue
Cc: Robbie.D Jones
Subject: Section 106 Coordination, Sullivan Co., TN # 105467

Dear Ms. LaRue:

I'm sending this email communication on behalf of Gerald Kline, Archaeology Program Manager for the Tennessee Department of Transportation. Please see the attached letters and maps for the following project:

SR-126, Kingsport, Sullivan County, Tennessee (PIN# 105467.00)

If you have any questions or need additional information, please contact Gerald Kline at (615) 741-5257 or Gerald.Kline@tn.gov.

Thank you for your assistance in this matter.

Robbie

Robbie D. Jones
Native American Coordinator
TDOT Environmental Division
Director's Office
Suite 900, J K Polk Bldg.
Nashville, TN 37243-0334
Telephone: 615-741-3655
Fax: 615-741-1098
Robbie.D.Jones@tn.gov



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

July 14, 2010

Mr. Gerald Kline
Tennessee Department of Transportation
Environmental Division
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

RE: FHWA, ARCHAEOLOGICAL AVOIDANCE PLAN, SR-126/NORTH CENTER ST. TO I-81,
UNINCORPORATED, SULLIVAN COUNTY, TN

Dear Mr. Kline:

At your request, our office has reviewed the above-referenced archaeological avoidance plan in accordance with regulations codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739). Based on the information provided, we find that the revised project area contains no archaeological resources eligible for listing in the National Register of Historic Places.

If project plans are changed or archaeological remains are discovered during construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jmb



The Eastern Band of Cherokee Indians

Tribal Historic Preservation Office
P.O. Box 455, Cherokee, NC 28719
(828) 488-0237 / Fax (828) 497-1590

3/19/04

RE: PFH-306(7)-POIK Co

Petty Lane (A571) over Carter Creek, LM 2.32, Maury Co 2003207.
Fitzgerald Rd (A088) over Snow Creek, LM 2.98, Maury Co 2003205
Cane Creek Church Rd (A130) over Cane Creek, LM 0.06, Perry Co 2003203
State Route 141 (N) at State Route 10/25, Triondale Co 2003202.
State Route 245 (Campbellsville Pike) and Indian Camp Springs Rd, Maury Co 2003204
Roaring Fork Creek (A845) over Roaring Fork Creek, LM 0.01, Sevier Co 2001074
Bridge Improvements to SR 56 over Pigeon Creek, LM 20.56, Grundy Co 2002020
Bridge Improvements to SR 56 over Barren Fork, LM 7.7, Warren Co 2001116
" " " SR 286 " " " LM 2.54, " 2001116
Bridge Improvements to Trentham Hollow Rd over Clear Creek LM 2.95, Rock Co 2001116

The Eastern Band of Cherokee Indians appreciates the invitation to participate as a consulting party in compliance with 36CFR800 on the above referenced project(s). According to the information you provided, the EBCI THPO is unaware of any known cultural resources or archaeological sites in the project area significant to our Tribe. However, should any cultural resources or human remains be encountered during the proposed project's activities, work should cease and this office should be contacted immediately.

As a consulting party we request that you send all information pertaining to cultural resources within the above-referenced project(s) area of potential effect (APE) for our review and comment. If you have any questions, please direct them to me at (828) 488-0237.

Sincerely,

Mh

Michelle Hamilton
Tribal Historic Preservation Specialist
Eastern Band of Cherokee Indians
(828) 488-0237
michhami@nc-choerokee.com

PS: Sorry for the delay - working through a backlog

- Bridge Improvements to Earl Townsend Rd (A372) over West Fork Shoal Creek, LM 0.07, Giles Co 2003191
- Bridge Improvements to MLK Dr. (A584) over Branch LM 0.08, Madison Co 200316
- Bridge Improvements to Binkley Acres Rd (E488) over Brushy Fork Creek LM 0.06²⁰⁰³¹⁹⁰ Anderson Co
- Bridge Imp. to Beech Rd (A045) over Morgan's Creek LM 2.79, Overton Co 200318
- Bridge Imp. to Beech Rd (A045) over Bryan's Fork Creek, LM 0.93, Overton Co 200319
- Bridge Imp. to Ella West Rd (A042) over East Fork Lynn Creek LM 2.42, Giles Co 2003190
- Bridge Imp. to Yarnell Rd (E516) over Little Dismal Creek, LM 0.96, Anderson Co 2003194
- Bridge Imp. to SR 70 over Nolichucky R, LM 8.51, Greene Co 98059
- Imp. to SR 126 (Memorial Blvd) from E. Center St in Kingsport to I-81, Sullivan Co 200316
- Imp in Roane Co 1) Culvert Imp over westbound ramp of I-40 @ LM 12.23, 2) Bridge repair at I-40 Bridge over SR 58 @ LM 12.34²⁰⁰³²⁰⁴ 2003203
- Imp in Marion Co 1) Rehab drainage on SR 2 @ LM 26.93, 2) Rehab drainage on SR 2 @ LM 27.78, 3) Replace drainage on SR 283 @ LM 5.40
- Imp SR 96 (Mar freasboro Rd) and Royal Oaks Blvd, Williamson Co 2003018
- Bridge Imp to West 9th St Bridge over CSX Railroad LM 0.01, Maury Co 2000187
- Bridge Imp to Kennys Bend Rd (A230) over Lost Creek LM 1.23, Smith Co 200301
- Bridge Imp to Harris Hollow Rd (A047) over Deepated Creek, LM 0.19, Smith Co 20031
- Bridge Imp to SR 247 over Carters Creek LM 15.78, Maury Co 2000120
- Bridge Imp to SR 1 (Kingston Pike) over Norfolk Southern Railroad, LM 1517, RNC 2000
- Bridge Imp to SR 33 (E. Broadway) over Bawn Creek, LM 12.51, Blount Co 200001
- Bridge Imp to SR 33 (E. Broadway) over Bawn Creek, LM 12.51, Blount Co 200001
- Bridge Imp to Rock Branch Rd over Hanging Rock Creek, LM 0.78, Macon Co 200318
- Bridge Imp to Carr Branch Rd over Carr Creek LM 0.89, Macon Co 2003170
- Bridge Imp to W. Wixtown Rd over West Fork Long Creek, LM 1.00, Macon Co 200318
- Bridge Imp to Trammel Creek Rd over Piz Trammel Creek, LM 0.01, Macon Co 2003
- Imp to SR 15 (US 64) at SR 117, McNairy Co > NOT IN TERRITORY! 200318
- Bridge Imp to SR 269 over Knob Creek, LM 11.10, Bedford Co 2001071
- Imp to SR 416-A, Two segments of Birds Creek Rd, Sevier Co 2003164
- Imp to Big Pass Rd from SR 16 to Georgia Crossing Rd, Georgia Crossing Rd from Bypass Road to East of Greenview Dr in Franklin Co 2003168

- Bridge Imp to SR 127 over I-24, LM 3.74, Coffee Co 2002015
- Imp at SR 336 and Blockhouse Rd, Blount Co 2003185
- Imp to SR 400 Bridge over Brush Creek @ LM 4.99, Washington Co 200201
- Imp to SR 1 over Southern Railroad @ LM 19.47, Knox Co 2002009
- Bridge Imp to SR 2 over Duck River, LM 12.72, Coffee Co 2002016
- Bridge Imp to Hawkins Rd over Big Trammel Creek, LM 0.82, Macon Co 2001150
- Bridge Imp to SR 107 over Indian Creek, LM 8.69, Unicoi Co 2000154
- Bridge Imp to SR 37 (US 19E) over Doe River, LM 6.65, Carter Co 2002008
- Bridge Imp to Sycamore Rd over Sycamore Creek, LM 7.32, Cannon Co 20011
- Imp to SR 30 (White St) to near Davidson Rd, McMinn Co 2004005
- Bridge Imp to I-24 over Elk River @ LM 1.25 and over Patton ~~Creek~~
@ LM 1.57, Grundy Co 2003200



Creek Nation of Oklahoma

Cultural and Historic Preservation

December 11, 2003

Gerald Kline
State of Tennessee-Department of Transportation
Environmental Planning and Permits Division
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

Subjects: SEE ATTACHED

Dear Mr. Kline:

In keeping with a government-to-government relationship and in compliance with 36CFR800, the Muscogee (Creek) Nation appreciates the invitation to participate as a consulting party.

At this time, we are unaware of any cultural or archaeological sites in the above project area that would be eligible for inclusion in the National Register.

In the event that human remains or culturally significant artifacts are inadvertently discovered during construction, please contact me at (918) 732-7732.

Respectfully,

Tim Thompson
Research Specialist
Muscogee Creek Nation

jj

SUBJECTS:

Section 106 Initial Coordination for Proposed Bridge Improvements to Ella West Road (A092) over East Fork Lynn Creek, LM 2.42, Giles County, Tennessee 2003192

Section 106 Initial Coordination for Proposed Bridge Improvements to Earl Townsend Road (A372) over West Fork Shoal Creek, LM 0.07, Giles County, Tennessee 2003191

Section 106 Initial Coordination for Proposed Bridge Improvements to Martin Luther King Drive (A584) over Branch, LM 0.08, Madison County, Tennessee 2003193

Section 106 Initial Coordination for Proposed Bridge Improvements to Binkley Acres Road (E488) over Brushy Fork Creek, LM 0.06, Anderson County, Tennessee 2003195

Section 106 Initial Coordination for Proposed Bridge Improvements to Beach Road (A045) over Morgan's Creek, LM 2.79, Overton County, Tennessee 2003197

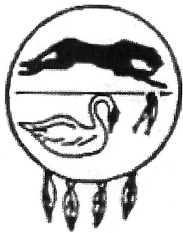
Section 106 Initial Coordination for Proposed Bridge Improvements to Beech Road (A045) over Bryan's Fork Creek, LM 0.93, Overton County, Tennessee 2003196

Section 106 Initial Coordination for Proposed Bridge Improvements to Trentham Hollow Road over Clear Creek, LM 2.95, Cocke County, Tennessee 2001126

X * Section 106 Initial Coordination for Proposed Bridge Improvements to State Route 126 (Memorial Blvd) from E. Center St. in Kingsport to I-81, Sullivan County, Tennessee 2003190

Section 106 Initial Coordination for Proposed Bridge Improvements to Yarnell Road (E516) over Little Dismal Creek, LM 0.96, Anderson County, Tennessee 2003194

Section 106 Initial Coordination for Proposed Bridge Improvements to State Route 70 over Nolichuncky River, LM 8.51, Green County, Tennessee 98059



EASTERN SHAWNEE TRIBE OF OKLAHOMA

P.O. Box 350 • Seneca, MO 64865 • (918) 666-2435 • FAX (918) 666-3325

November 24, 2003

Department of Transportation
Environmental Planning & Permitting Division
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

Re: See Attached

To Whom It May Concern:

Thank you for notice of the referenced project(s). The Eastern Shawnee Tribe of Oklahoma is currently unaware of any documentation directly linking Indian Religious Sites to the proposed construction. In the event any items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) are discovered during construction, the Eastern Shawnee Tribe request notification and further consultation.

The Eastern Shawnee Tribe has no objection to the proposed construction. However, if any human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, the construction should stop immediately, and the appropriate persons, including state and tribal NAGPRA representatives contacted.

Sincerely,

Charles Enyart, Chief
Eastern Shawnee Tribe of Oklahoma

1. 7. Site 1: Culvert Improvements over westbound ramp of I-40 at Log Mile 12.23
Site 2: Bridge repair at the I-40 bridge over State Route 58 at Log Mile 12.34
2. Section 106 initial coordination for proposed improvements to State Route 126 (Memorial Blvd.) from E. Center St. in Kingsport to I-81, Sullivan County, Tennessee 2003190
3. Section 106 initial coordination for proposed bridge improvements to Yarnell Road (E516) over Little Dismal Creek, LM 0.96, Anderson County, Tennessee 2003194
4. Section 106 initial coordination for proposed bridge improvements to Ella West Road (A092) over East Fork Lynn Creek, LM 2.42, Giles County, Tennessee 2003192
5. Section 106 initial coordination for proposed bridge improvements to Earl Townsend Road (A372) over West Fork Shoal Creek, LM 0.07, Giles County Tennessee 2003191
6. Section 106 initial coordination for proposed bridge improvements to Martin Luther King Drive (A584) over Branch, LM 0.08, Madison County, Tennessee 2003193
7. Section 106 initial coordination for proposed bridge improvements to Binkley Acres Road (E488) over Brushy Fork Creek, LM 0.06, Anderson County, Tennessee 2003195
8. Section 106 initial coordination for proposed bridge improvements to Beech Road (A045) over Morgan's Creek, LM 2.79, Overton County, Tennessee 2003197
9. Section 106 initial coordination for proposed bridge improvements to Beech Road (A045) over Bryan's Fork Creek, LM 0.93, Overton County, Tennessee 2003194
10. Section 106 initial coordination for proposed bridge improvements to Trentham Hollow Road over Clear Creek, LM 2.95, Cocke County, Tennessee 2001120

ATTACHMENT G – HAZARDOUS MATERIALS CORRESPONDENCE

Farmer, John

From: Jeffrey Ballard <Jeffrey.Ballard@tn.gov>
Sent: Friday, January 03, 2014 11:43 AM
To: Farmer, John
Cc: JonnaLeigh Stack
Subject: HazMat Update for PIN 105467.00 - SR-126 East Center Street in Kingsport to I-81, Sullivan Co.

John,

Upon review of the Functional plans for SR 126 Sullivan County DEIS – Alternate B Modified, there do not appear to be any hazardous substance sites that will affect this project as it is currently located. There do not appear to be any significant changes within the proposed corridor. The findings in the Baseline Study Phase I Site Assessment of Underground Storage Tanks and Hazardous Material Sites State Route 126 Memorial Boulevard from Center Street to I-81 dated March 2008 are still valid. Available environmental databases were reviewed, including the TDEC Superfund Database, TDEC Registered UST database, and EPA's Enviromapper.

The previous DEIS listed three properties that would be evaluated as potential hazardous waste sites prior to submittal of the Final EIS. These properties were the English Cabinet Shop at 5236 Memorial Boulevard, Kingsport, TN, People's Food Court at 3104 Memorial Boulevard, Kingsport, TN, and Richard Chadbourne Property at 5340 Memorial Boulevard, Kingsport, TN. A Phase I Preliminary Assessment Study was conducted on these properties and the properties adjacent to them.

The Phase I report for the English Cabinet Shop recommends that this property and two near it have a follow up Phase II conducted. According to the Functional plans for SR 126 Sullivan County DEIS – Alternate B Modified, no ROW will be acquired from these properties. Unless the ROW changes, no further investigation is warranted.

The Phase I report for the Richard Chadbourne Property, currently identified as the Riviera Apartment Complex, indicated that no further investigation was warranted on this property or the properties adjacent to it.

The Phase I report for People's Food Store indicated that a Phase II Preliminary Site Investigation should be conducted on this property as well as the Garden Basket Convenience Store #4 at 3109 Memorial Boulevard, the Amoco Service Station at 3101 Memorial Boulevard, and B&W Cleaners at 3200 Memorial Boulevard. B&W Cleaners was identified in the previous DEIS as requiring a Phase II.

A Phase II Preliminary Site Investigation will be performed on the following properties during final design to ascertain the presence of possible contamination:

- Garden Basket Convenience Store #4 at 3109 Memorial Boulevard, Kingsport, TN
- Amoco Service Station at 3101 Memorial Boulevard, Kingsport, TN
- B&W Cleaners at 3200 Memorial Boulevard, Kingsport, TN
- Roadrunner Market at 4001 Memorial Boulevard, Kingsport, TN
- Greenwood Market at 5121 Memorial Boulevard, Kingsport, TN

In the event hazardous substances/wastes are encountered within the proposed right-of-way, their disposition shall be subject to all applicable regulations, including the applicable sections of the Federal Resource Conservation and Recovery Act, as amended; and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended; and the Tennessee Hazardous Waste Management Act of 1983, as amended.

Jeffrey Ballard, P.E.

K.S. Ware & Associates

Hazmat Coordinator
Social and Cultural Resources Office
Environmental Division
Tennessee Department of Transportation
505 Deaderick Street – Suite 900
Nashville, TN 37243

615.532.8684
jeffrey.ballard@tn.gov

For Jim Ozment

Farmer, John

From: Jeffrey Ballard <Jeffrey.Ballard@tn.gov>
Sent: Wednesday, November 27, 2013 11:51 AM
To: Farmer, John
Subject: RE: SR-126 East Center Street in Kingsport to I-81
Attachments: E2137131_T3.People's Food Store.pdf

From: Jeffrey Ballard
Sent: Wednesday, November 27, 2013 11:49 AM
To: Farmer, John (jfarmer@icaeng.com)
Subject: SR-126 East Center Street in Kingsport to I-81

John,

Attached is copy of one of the Phase I reports that were conducted on the three properties that were mentioned in the Environmental Commitments for this project. One was completed for each site. The other two will be sent under separate e-mails due to size.

The report for the English Cabinet Shop recommends that this property and two near it have a follow up Phase II conducted. According to the Stripmap for Alt B MOD, no ROW will be acquired for these properties. Unless the ROW changes, it doesn't look like further study is warranted.

The report for the Riviera Apartment Complex at 5340 Memorial Boulevard indicated that no further investigation was warranted on this property or the properties adjacent to it are warranted at this time.

The report for People's Food Store indicated that a Phase II should be conducted on this property as well as Garden Basket Convenience Store #4; 3109 Memorial Boulevard, Amoco Service Station; 3101 Memorial Boulevard, and B&W Cleaners; 3200 Memorial Boulevard. B&W Cleaners was previously identified in the E Environmental Commitments as requiring a Phase II.

It appears that three site should be added to the Environmental Commitments to have a Phase II performed on them. The Phase II would probably be performed after ROW is set.

Please review the reports and let me know if you agree with my assessment.

Jeffrey Ballard, P.E.
K.S. Ware & Associates

Hazmat Coordinator
Social and Cultural Resources Office
Environmental Division
Tennessee Department of Transportation
505 Deaderick Street – Suite 900
Nashville, TN 37243

615.532.8684
jeffrey.ballard@tn.gov

For Jim Ozment

ATTACHMENT H – 2014 DEIS AGENCY COORDINATION



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

July 9, 2014

Mail Merge info

Subject: Request for Comments, Draft Environmental Impact Statement, SR 126 (Memorial Blvd.), from East Center Street in Kingsport to I-81, Sullivan County, Tennessee

Dear Mail Merge info:

The Tennessee Department of Transportation (TDOT) is proposing the above-listed highway improvements. In accordance with 23 CFR 771.123, TDOT has prepared a Draft Environmental Impact Statement (DEIS) for the subject project. The DEIS has been approved for circulation by the Federal Highway Administration.

We request that you submit your comments on the DEIS within 45 days (by Monday, August 25, 2014). If you have questions or need additional information, please contact me at Margaret.Slater@tn.gov or 615 253-0033.

Once all comments are received, TDOT will address the comments within the Final Environmental Impact Statement (FEIS). The FEIS will contain a summary of all received comments and a disposition that explains how the comments have been addressed. All technical studies in the FEIS will be updated from the DEIS, as needed.

Sincerely,

Margaret Slater, AICP
Manager, Major Projects Office

Enclosure



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Remediation
312 Rosa L. Parks
14th Floor
Nashville, TN 37243

Date: 7/16/2014

Re: Request for Comments, Draft Environmental Impact Statement
SR 126 (Memorial Blvd.) from East Center St. in Kingsport to I-81
Sullivan County

Dear: Margaret Slater

The Division of Remediation (DoR) has received your environmental review request on July 9, 2014, regarding the Request for Comments, Draft Environmental Impact Statement SR 126 (Memorial Blvd.) from East Center St. in Kingsport to I-81. After reviewing your maps and our project files, we concluded that there are no DoR sites that will be affected by the proposed activity.

If you have any further questions, do not hesitate to call Darrell Hale, our Johnson City Field Office manager, at (423) 854-5463

Sincerely,

A handwritten signature in cursive script that reads "Andy Binford".

Andy Binford
Director

RAB:RED

cc: Johnson City Field Office
Central Office files



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

Memphis Airports District Office
2862 Business Park Dr, Bldg G
Memphis, TN 38118-1555
Phone: 901-322-8180

August 1, 2014

Ms. Margaret Slater, AICP
Environmental Division
Tennessee Department of Transportation
James K. Polk Building, Suite 900
505 Deaderick Street
Nashville, TN 37243

Re: Draft EIS – SR 126 Improvements

Dear Ms. Slater:

We have reviewed the Draft Environmental Impact Statement (DEIS) you provided related to the proposed SR 126 improvements in Sullivan County, Tennessee. Based on the DEIS and documents in our office it has been determined that Indian Springs Airport (3TN0), Kingsport, TN is the closest airport facility to the proposed road project. Please coordinate any high lift construction equipment with the airport.

Please notify us if the project boundaries change.

Thank you for the opportunity to comment on this project.

Sincerely,

Original Signed by Stephen Wilson

Stephen Wilson
Community Planner



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, TN 38501

August 13, 2014

Ms. Margaret Slater
Tennessee Department of Transportation
Environmental Planning and Permits Division
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

Subject: FWS# 13-I-0858. Concurrence Point 3. Proposed construction to State Route 126 (Memorial Boulevard), Sullivan County, Tennessee.

Dear Ms. Slater:

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration, is initiating National Environmental Policy Act (NEPA) documentation and analysis for the proposed construction to approximately 8.4 miles of State Route 126 between East Center Street and Interstate 81 (I-81) in Sullivan County, Tennessee. The purpose of this project is to improve the existing two-lane roadway, reduce the crash rates, and enhance travel and emergency response times from East Center Street in Kingsport to I-81. TDOT, the City of Kingsport, and local citizens conducted a Context Sensitive Solutions process which documents the majority decisions made by a Community Resource Team on design elements, roadway cross sections, and components of the project's purpose and need.

You spoke with John Griffith of my staff on August 11, 2014, concerning the status of this project. Since the original issuance of the *Draft Environmental Impact Statement*, TDOT chose Alternative B as the final alignment and further refined it to minimize impacts. We concurred with the adequacy of the TESA Concurrence Point 4, *Preferred Alternative and Preliminary Mitigation*, in a letter to TDOT dated October 24, 2013. Please consider the following comments in development of the *Final Environmental Impact Statement*.

TDOT has committed to constructing the crossings perpendicular to the streams during low flow times to minimize impacts. We additionally recommend that consideration be given to construction of the crossings with bottomless culverts or a span bridge design to minimize any long-term alterations to stream functions (e.g., fish and other aquatic species passage, sediment transport, movement of woody debris, etc.).

Bat surveys were conducted along the proposed corridor in the summer of 2011 to establish whether the area is being utilized as summer roosting habitat by the Indiana bat. Based on negative results for this species, we concurred with TDOT's determination of "not likely to adversely affect" in a letter dated November 9, 2011. However, due to the time elapsed since surveys, TDOT will need to recoordinate with our office for potential impacts to the Indiana bat prior to letting of the project for construction.

The capture of two gray bats during survey efforts indicates that this species utilizes the area streams as travel/feeding corridors. Our database indicates that the nearest gray bat cave is Morrell Cave, approximately 10 miles east of the project. We are unaware of any caves that would be impacted by the project and are concerned mainly for water quality along travel/feeding corridors. Best management practices, to include stringent erosion and sediment control measures, should be sufficient to address our concerns for the gray bat.

The northern long-eared bat was proposed for federal listing under the ESA on October 2, 2013. No designated critical habitat has been proposed at this time. While proposed species are not afforded protection under the ESA, if/when the species is listed, the prohibition against jeopardy, and the prohibition against taking a listed species under section 9 of the ESA, becomes effective immediately, regardless of the proposed action's stage of completion. The listing decision for this species should be announced on or before April 2, 2015. If clearing of trees would occur after listing, we would need to coordinate for potential impacts.

If you have any questions regarding our comments, please contact John Griffith of my staff at 931/525-4995 or by email at john_griffith@fws.gov.

Sincerely,



Mary E. Jennings
Field Supervisor



United States Department of Agriculture

August 20, 2014

State of Tennessee
Dept. of Transportation, Environmental Division
Attn: Margaret Slater, AICP
Manager, Major Projects Office
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-1402

Re: Draft Environmental Impact Statement (DEIS) for State Route 126 (Memorial Blvd.), from East Center Street in Kingsport to I-81, Sullivan County, Tennessee

Dear Ms. Slater:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for State Route 126 (Memorial Boulevard), from East Center Street in Kingsport to I-81, Sullivan County Tennessee, provided to this office on July 9, 2014.

The Natural Resources Conservation Service (NRCS) in Tennessee is pleased to see that comments and information provided for the preparation of the DEIS for prime farmland conversions and hydric soils are incorporated in the DEIS. We do not have any changes or additional information to provide for these elements in the project area.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Brown", with a stylized flourish at the end.

Kevin Brown
State Conservationist

Natural Resources Conservation Service
675 US Courthouse, 801 Broadway
Nashville, Tennessee 37203
Voice (615) 277-2531 Fax (615) 277-2577
An Equal Opportunity Provider and Employer



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

ROBERT J. MARTINEAU, JR.
COMMISSIONER

BILL HASLAM
GOVERNOR

August 21, 2014

Via First Class Mail and Electronic Mail to Ann.Epperson@tn.gov
Tennessee Department of Transportation
505 Deaderick Street, Suite 900
Nashville, Tennessee 37243

RE: Project State Route 126 (Memorial Boulevard) Corridor Improvement Projects, Sullivan County, Tennessee

Dear Ms. Epperson:

Applicable divisions within the Tennessee Department of Environment and Conservation ("TDEC") have reviewed the following document as part of the ongoing review of State Route 126 (Memorial Boulevard) Corridor Improvement Project from East Center Street to Interstate 81 in Sullivan County, Tennessee under the Tennessee Environmental Streamlining Agreement ("TESA"):

Draft Environmental Impact Statement, attachments and appendices

TDEC appreciates the opportunity to provide comments on the draft document.

The Tennessee Department of Transportation ("TDOT"), in cooperation with the Federal Highway Administration ("FHWA"), proposes to improve State Route 126 (Memorial Boulevard) from East Center Street, within the City of Kingsport's city limits, east to Interstate 81 for a distance of 8.4 miles. The Draft Environmental Impact Statement (DEIS) evaluates a no build alternative and two build alternatives- A and B. The proposed project would improve SR 126 to a four-lane facility (two travel lanes in each direction) within the commercial and residential areas of the western half of the study corridor. The eastern half of the study corridor, which is rural in nature, will remain a two-travel lane facility. Improved shoulders will be provided along the entire corridor and sidewalks will be extended to the majority of the commercial and residential areas.

The DEIS states that the purpose of the proposed project is to "provide a safe, efficient route for local traffic between the City of Kingsport and I-81." The DEIS also notes that State Route 126 was the initial Context Sensitive Solutions Project for Tennessee and included a Community Resource Team that assisted with the development of the alternatives.

In reviewing the DEIS, TDEC notes that much of the information is dated by a couple of years. TDEC recommends TDOT update all relevant data and information prior to completing the final DEIS. In particular, TDEC notes that six (6) sites were noted in the DEIS as needing some sort of follow-up investigation or evaluation given the business operations that are and have historically occurred on those sites. TDEC recommends, as noted below in the environmental commitment section, that all the

information pertaining to these sites that has been developed between the original time frame for this DEIS and the final DEIS be included and discussed in the final DEIS, including any additional, necessary environmental commitments.

The Division of Water Resources has reviewed the DEIS and notes that Alternative A would require a total of 1,278 feet of culverts to be constructed and a total of 3,585 feet of stream would be relocated within the project's proposed right-of-way. Alternative B would require a total of 846 feet of culverts to be constructed and a total of 2,261 feet of stream would be relocated within the project's proposed right-of-way. The Division requests that TDOT commit to using natural stream design for relocations greater than 200 feet in length where practicable.

The Division of Solid Waste Management has reviewed the DEIS and notes that any asbestos encountered in the displacements that will occur with either Build Alternative should be managed in accordance with appropriate regulations and law and disposed of in an approved landfill. Similarly, any contaminated soils/debris from commercial sources should be evaluated, a determination made, and the materials should be handled in accordance with appropriate regulations and law.

The Division of Air Pollution Control has reviewed the DEIS and notes that two air monitoring stations are located within 1000 to 1500 feet of the proposed project. One site is operated by Eastman Chemical and the other is the Division's Blountville ozone monitoring site. Although it appears the specific monitoring sites are located outside the proposed construction right-of-way, use of certain equipment and activities associated with construction of the proposed project could adversely impact the monitors and monitoring activities. High readings at these monitors could impact the area's ability to remain in attainment for one or more pollutants, which could then impact the area's ability to continue economic development and growth. TDEC recommends TDOT coordinate with the Division of Air Pollution Control to plan for and establish mitigating measures to be incorporated into bid specifications to reduce the potential impacts to these monitors and local air quality during construction. The Division also notes that long-term traffic volume may be a concern, but it appears both existing and future traffic volumes, as included in Table 1.5.6 of the DEIS do not approach traffic volumes that would be a concern for ozone or other pollutants.

The Division also notes that each owner or operator of a demolition activity is required to thoroughly inspect the facility for the presence of asbestos prior to the commencement of the demolition (Rule 1200-03-11-.02(2)(d)1). The person inspecting a structure for asbestos containing material must be accredited by the state of Tennessee. Additionally, Division Rule 1200-03-11-.02(2)(d)2., subparts (i) and (iii)(I), requires each owner or operator of a demolition activity to provide the Technical Secretary of the Division with written notice of intention to demolish at least ten working days before demolition begins. Notification is required even when there is no asbestos present.

The Division of Natural Areas has reviewed the DEIS and has no comments.

TDEC recognizes the following environmental commitments included in the DEIS for the proposed project:

- Three (3) sites will be evaluated as potential hazardous waste sites prior to submittal of the final EIS- the information from this evaluation should be included in the final EIS.

- Three (3) parcels will receive a Phase II Environmental Site Investigation- if this work has been completed, the information and Phase II reports should be included in the final EIS and discussed.
- Trees with a diameter at breast height of five inches or greater will not be removed from October 15-March 31.
- An MOA with the State Historic Preservation Office will be prepared and signed prior to the approval of the Final EIS.
- If archaeological materials are uncovered during construction, all construction work in the area of the find will cease and the Tennessee Division of Archeology and recognized Native American Tribes will be immediately contacted. Any sites identified during construction of the proposed project will be monitored during construction activities to ensure that the areas are avoided and not utilized as equipment staging areas or otherwise impacted by the construction of the project.
- A volunteer fire department station (Number Four) will be acquired and relocated with either Build Alternative. The relocation process will be carried out in such a manner as to ensure no interruption of service occurs to area residents.

Thank you again for the opportunity to provide comments on the above-referenced document. With the comments included in this letter addressed in the final Environmental Impact Statement, TDEC has identified no compelling reason to withhold concurrence for State Route 126 (Memorial Boulevard).

Please do not hesitate to contact me should you have any questions regarding TDEC's comments.

Sincerely,



Michelle B. Walker
Director, Policy and Planning

cc (via electronic mail): Shari Meghreblian, *Deputy Commissioner for Environment, TDEC*
 Britton Dotson, *Division of Water Resources, TDEC*
 Jimmy Smith, *Division of Water Resources, TDEC*
 Barry Brawley, *Division of Remediation, TDEC*
 Jeff Norman, *Division of Solid Waste, TDEC*
 Lacey Hardin, *Division of Air Pollution Control, TDEC*
 Stephanie Whitaker, *Division of Natural Areas, TDEC*
 Jim Ozment, *TDOT*

Kingsport MPO
Comments / Concerns on State Route 126 Project
For Environmental Document
August 21, 2014

- Proposed Roundabout at Center Street – this would likely be a 2 lane roundabout – this needs to be thoroughly studied for operational issues.
- Section from Center Street to John B. Dennis Highway (SR 93) – recommend continuous center turning lanes (eliminate initial plan to include grass medians. Note; there are too many curb cuts that currently exists that would be removed creating significant side-street level of service and access issues if a grass median with limited turning lanes were installed.
- Section from John B. Dennis Highway (SR 93) to Harbor Chapel Road – recommend continuous center turning lanes – this keeps design and operations consistent with the previous section.
- Section from Hawthorn to Beverly Hills Road – need to insure alignment corrects sharp curves and severe sight distance problems that exists along this section. Use northern alignment (will require taking of several homes to the north side).
- Section from Beverly Hills Street to Harbor Chapel Road – move entire alignment (cross-section) southward to open field (mini-farm) – which eliminates taking of several houses to the north side of the alignment.
- Section from Harbor Chapel Road to 100 yards past Old Stage Road – current plans include sidewalks on both sides. No residential or commercial access exists on the north side, significantly reducing need for sidewalks on this side – therefore we are suggesting to remove sidewalk on this side, but keep sidewalk on south sides. This will free up some space to add an 8 to 10 foot center median (or barrier) of some type (concrete, grass, or other) to provide separation from on-coming traffic, which is a constant safety hazard that currently exists. The sidewalks on both sides or the alternative “center barrier and sidewalk on south side” could impact the taking of additional right-of-way on the south side. In order to mitigate this we suggest installing retaining walls where necessary.
- The “S Curves” found in the section from Old Stage Road to Holiday Hills road should be softened (straightened) more. Significant horizontal curvature still exists in the preliminary plans. This section could also get by with sidewalks on one side only.

- Section from Holiday Hills to Cemetery Property – in order to reduce cut and fill consider installing sidewalks on one side (south side) and add a couple more feet to shoulders on north side.
- Section from west end of Cemetery to Cook's Valley Road – to reduce cut and fill consider sidewalks on one side (south side) and add a couple feet to shoulders on north side. Also add a west-bound turning lane to the approach to Cook's Valley Road in project.
- Consider removing apartment building on south side of SR 126 adjacent to Shuler – for better access and site distance from Shuler (as opposed to closing Shuler).
- Add fiber-optic cabling (underground) throughout entire project – for future use (camera systems, computer access, variable message boards, other communication needs).
- Where possible throughout the entire project wide shoulders (6 to 10 feet) should be installed in order to provide safer clear zones and/or forgiveness zones and to also provide pullover areas for motorists (and location for police and emergency vehicles to park, when needed). This is important !



COLLABORATION MEETING MINUTES

Groundbreaking by Design.

Project: SR 126; From East Center Street in Kingsport to East of Cooks Valley Road, Sullivan County

Project No: 82085-0225-14, PIN 105467.01

Contract: E1745

Meeting Date: August 7, 2014

Prepared By: Chris Jenkins

Attendees:

Freddie Miller	TDOT – Consultant Management (via phone)
Danny Oliver	TDOT – Region 1, Development Director (via phone)
Bill Albright	Kingsport MPO
Troy Ebbert	Kingsport MPO
Michael Thompson	Kingsport MPO
Charles Melhart	Qk4 (via phone)
Cody Humble	Qk4 (via phone)
Chris Jenkins	Qk4
Brian Johnson	Qk4
Gary King	TDOT – Consultant Management (absent b/c of Jury Duty)

Purpose: A collaborative discussion between TDOT, Kingsport MPO, and Qk4 regarding various design components of the proposed design SR-126 Memorial Blvd (Sullivan County, TN).

Brian Johnson:

- Opened meeting with introductions.
- Briefly went over proposed schedule

Freddie Miller:

- PE is the only phase currently funded at this time
- ROW is not yet funded for the project

Danny Oliver:

- Final Environmental Document is anticipated complete by the end of 2014

**SR-126, Sullivan County
Collaboration Meeting Minutes**

August 7, 2014

Page 2

Brian Johnson facilitated discussions of various design sections:

- **Section 1** – Beginning of project at East Center Street to west of Hawthorne Street
 - Attributes (Approx. 1.0 mile section)
 - 35 mph design speed
 - 11 ft. travel lanes, 2 in each direction
 - 12 ft. wide raised grass median
 - Both sides
 - 4 ft. wide shoulders to accommodate bicyclists
 - Curb and gutter, grass strip and sidewalks
 - May have to “design around” 3 possible sinkholes at Orebank Road proposed tie-in
 - Plans currently call for capping existing sinkhole and placing new centerline of Orebank Road on top of the sinkhole
 - City of Kingsport has no objection to Orebank Road being built over the sinkhole, provided it is permitted by TDEC and constructed accordingly.
 - City of Kingsport has 2’ contour information available from the last time they had aerials generated.
 - Bill Albright asked about the grass median – Can it be eliminated?
 - Grass medians intended to assist with access control
 - TDOT suggested evaluation of traffic movements before making determination
 - Discussed possibility of allowing Hillcrest Drive to remain open as a “right-in-right-out” only, due to having the raised median that would prevent left turns.
 - Bill anticipates much resistance if Hillcrest Drive is proposed to be closed at SR-126.
 - Qk4 will evaluate shifting SR126 alignment southwest near Heather Lane and Hawthorne Street to bring alignment within design standards.
 - Improved access (vertical alignment) for apartment complex entrances
 - Improved safety (sight distance)
 - May reduce number of relocations on the north side of SR-126
- **Section 2** – West of Hawthorne Street to Harbor Chapel Road
 - Attributes (Approx. 0.5 mile section)
 - 35 mph design speed
 - 11 ft. travel lanes, 2 in each direction
 - 12 ft. center two-way turn lane
 - Both sides
 - 4 ft. wide shoulders to accommodate bicyclists
 - Curb and gutter, grass strip and sidewalks
 - Qk4 will evaluate shifting SR-126 alignment south near Beverly Hills Street at request of MPO
 - Reduce severity of SR-126 horizontal curve near Beverly Hills Street intersection.
 - MPO has received numerous requests from property owners on the north side within this vicinity to consider shifting alignment toward the empty field to minimize relocations.

**SR-126, Sullivan County
Collaboration Meeting Minutes**

August 7, 2014

Page 3

- **Section 3** – Harbor Chapel Road to east of Old Stage Road
 - Attributes (Approx. 0.6 mile section)
 - 45 mph design speed
 - 12 ft travel lanes, 1 in each direction with an eastbound truck climbing lane
 - Both sides
 - 6 ft. wide shoulders to accommodate bicyclists
 - Curb and gutter, grass strip and sidewalks
 - Bill identified this section as the focal point of the MPO's concerns for the project
 - Eastbound motorists "race" up the hill to be the first one to the merge location and often encroach into oncoming traffic, thus contributing to head-on collisions.
 - Due to the number of questions the MPO had related to this section, it was agreed that the MPO would assemble them in written format and submit to TDOT for consideration. A follow-up meeting could then be scheduled to address these concerns.
 - Can sidewalk be eliminated from one side? Suggested eliminating the sidewalk on the north side throughout this section similar to Section 5.
 - Can there be some sort of separation of traffic (raised median, etc.) introduced in this section of the project?
- **Section 4** – East of Old Stage Road to LeMay Drive
 - Attributes (Approx. 1.2 mile section)
 - 45 mph design speed
 - 12 ft travel lanes, 1 in each direction
 - 12 ft center two-way turn lane
 - Both sides
 - 6 ft. wide shoulders to accommodate bicyclists
 - Curb and gutter and sidewalks
 - Discussed the fact that there has been no resistance yet to the proposed closing of Holiday Road and Shuler Drive at the intersection of SR-126. The closure of these two streets will require construction of a Parker Street Connector tying the two neighborhoods together. Resistance is anticipated.
- **Section 5** – LeMay Drive to Cooks Valley Road
 - Attributes (Approx. 0.7 mile section)
 - 45 mph design speed
 - 12 ft travel lanes, 1 in each direction
 - 12 ft center two-way turn lane
 - Both sides
 - 4 ft. wide shoulders to accommodate bicyclists
 - Curb and gutter
 - Sidewalk on south side only
 - Kingsport requests making sure that the WB turn lane to Cooks Valley Road is included into this phase of the SR-126 improvements.

**SR-126, Sullivan County
Collaboration Meeting Minutes**

August 7, 2014

Page 4

- **Section 5 (Compact)** – At Yancey’s Tavern and East Lawn Memorial Garden
 - Attributes (Approx. 650 ft. section)
 - 45 mph design speed
 - 11 ft travel lanes, 1 in each direction
 - 11 ft center two-way turn lane
 - Both sides
 - 4 ft. wide shoulders to accommodate bicyclists
 - Curb and gutter
 - Retaining walls
 - Sidewalk on south side only
 - Mike asked about the possibility of making the center turn lane 12’. Can this be accomplished by taking width from the bike lane?
 - Discussed making sure aesthetics were considered in the vicinity of Yancey’s Tavern due to preserving the historic nature. Consideration shall be given to viewshed from Yancey’s Tavern and toward Yancey’s Tavern.

Other Discussion Topics:

- East Center Street Intersection with SR-126 options were considered/discussed.
 - Bill advised that the intersection was originally a roundabout years ago. It was referred to as the “upper circle”.
 - City of Kingsport does not have a strong preference as to the proposed intersection type. However, Mike will do a check on political will to verify.
 - Mike was of the opinion that the traffic numbers should be the determining factor in deciding the type of intersection. He agreed that the option handling the traffic in the most efficient manner should be the one chosen.
 - It was discussed that Kingsport currently does not have a two-lane roundabout.
- Drainage
 - Charlie asked the City if they had a preferred method in which to handle drainage at some of the large cuts. Different options were discussed:
 - Charlie pointed out that some agencies discouraged allowing water to drain across the sidewalk and over the curbs.
 - If the aforementioned is not allowed, a ditch will need to be introduced behind the berm, thus requiring an additional 20-50 feet +/- for purposes of “daylighting” the cuts.
 - Discussed possibility of using a combination of retaining walls and ditches to minimize cuts. However, cost and aesthetics need to be considered.
 - Mike suggested maybe eliminating the grass strip (shifting sidewalk immediately against the back of curb) to assist with accommodating additional room required for drainage ditches. Continuity throughout the entire project length needs to be considered as part of the decision regarding drainage.

ACTION ITEMS:

1. Kingsport MPO will generate a list of questions pertaining the various items discussed and noted above and present those questions to TDOT for consideration.
2. Once TDOT and Qk4 have an opportunity to consider and evaluate the items noted by Kingsport, Qk4 will schedule a follow-up meeting.

End of Meeting Notes

SR 126 (MEMORIAL BLVD)
COLLABORATION MEETING WITH KINGSFORT MPO
SIGN IN SHEET
AUGUST 7, 2014

NAME: Brian Johnson TELEPHONE #: 423-989-0904 CELL #: 423-341-2764

FIRM OR DEPT.
REPRESENTED:

Qk4

COMPLETE BUSINESS
ADDRESS:

1135 Volunteer Pkwy Suite 16

E-MAIL ADDRESS:

bjohnson@qk4.com

NAME: Chris Jenkins TELEPHONE #: 865-661-1554 CELL#: 865-254-3118

FIRM OR DEPT.
REPRESENTED:

Qk4

COMPLETE BUSINESS
ADDRESS:

101 Sherlake Drive, Suite 105

Knoxville, TN 37922

E-MAIL ADDRESS:

cjenkins@qk4.com

NAME: Michael Thompson TELEPHONE #: 423-224-2748 CELL #: - -

FIRM OR DEPT.
REPRESENTED:

Kingsport MPO

COMPLETE BUSINESS
ADDRESS:

225 W. Market Street Kingsport TN 37660

E-MAIL ADDRESS:

Michael Thompson @ KingsportTn.gov

NAME: Troy Ebbert TELEPHONE #: 423-224-2670 CELL #: - -

FIRM OR DEPT.
REPRESENTED:

Kingsport MPO

COMPLETE BUSINESS
ADDRESS:

225 W. Market Street, Kingsport TN 37660

E-MAIL ADDRESS:

Troy Ebbert @ KingsportTN.gov

NAME: Bill Albright TELEPHONE #: 423-224-2011 CELL # 423-803-3559

FIRM OR DEPT.
REPRESENTED:

Kingsport Tn / Va MPO

COMPLETE BUSINESS
ADDRESS:

225 W Market Street Kingsport, TN 37660

E-MAIL ADDRESS:

BillAlbright@KingsportTn.gov

NAME: _____ TELEPHONE #: _____ CELL #: _____

FIRM OR DEPT.
REPRESENTED:

COMPLETE BUSINESS
ADDRESS:

E-MAIL ADDRESS:



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
P. O. BOX 40747
NASHVILLE, TENNESSEE 37204

August 25, 2014

Margaret Slater
Tennessee Department of Transportation
Environmental Division
505 Deaderick Street, Suite 900
James K. Polk Building
Nashville, TN 37243-0334

Re: Draft Environmental Impact Statement
State Route 126 (Memorial Blvd.) from East Center Street in Kingsport to I-81, Sullivan
County, TN

Dear Ms. Slater:

The Tennessee Wildlife Resource Agency has received and reviewed the information your office provided to us regarding the Draft Environmental Impact Statement for State Route 126 (Memorial Blvd.) from East Center Street in Kingsport to I-81, Sullivan County, Tennessee. We recommend that Alternative B be given serious thought for the preferred alternative since Alternative B has fewer stream and floodplain impacts. Also, Alternative B requires fewer relocations to complete the project.

Thank you for the opportunity to review and comment on this proposed project.

Sincerely,

Robert M. Todd
Fish and Wildlife Environmentalist

cc: Vincent Pontello, Wildlife Biologist/East TN TDOT Liaison
Rob Lindbom, Region IV Habitat Biologist
John Gregory, Region IV Manager
Jim Ozment, TDOT
JonnaLeigh Stack, TDOT

The State of Tennessee

IS AN EQUAL OPPORTUNITY, EQUAL ACCESS, AFFIRMATIVE ACTION EMPLOYER



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
3701 BELL ROAD
NASHVILLE, TENNESSEE 37214

August 26, 2014

REPLY TO
ATTENTION OF:

Regulatory Branch

SUBJECT: File No. 2009-00048; Draft Environmental Impact Statement for Proposed Improvements to State Route 126 (Memorial Boulevard) from East Center Street, in Kingsport, to Interstate 81, in Sullivan County, Tennessee [TDOT Pin 105467.00]

Ms. Margaret Slater
Manager, Major Projects Office
Tennessee Department of Transportation
James K. Polk Building, Suite 900
505 Deaderick Street
Nashville, Tennessee 37243-0334

Dear Ms. Slater:

This is in response to your request for U.S. Army Corps of Engineers' (Corps) comments regarding the Draft Environmental Impact Statement (DEIS) for State Route 126 Improvements in Sullivan County, Tennessee. This office's comments are provided pursuant to the National Environmental Policy Act and Section 404 of the Clean Water Act (CWA). Comments have previously been provided by this office pursuant to the Tennessee Environmental Streamlining Agreement (TESA). Please refer to File No. 2009-00048 in any future correspondence to this office concerning the subject project.

The DEIS provides information concerning alternatives and preliminary mitigation options for the proposed highway improvement. The document evaluated three alternatives/alignments for the proposed project. These alternatives included the No-Build Alternative, Alternative A, and Alternative B. Review of environmental and public impacts indicates that Alternative B would minimize residential/business displacements, wetland/stream impacts, floodplain impacts, impacts to threatened/endangered species, and farmland impacts. Please be advised that when a Department of the Army (DA) permit application is submitted, the Corps will also evaluate alternatives pursuant to the Section 404(b)(1) Guidelines. The Section 404(b)(1) Guidelines require a determination that the proposed project as described in the DA permit application is the "Least Environmentally-Damaging Practicable Alternative".

Potential impacts to perennial and intermittent streams are addressed; however, ephemeral streams may also be waters of the U.S and subject to Section 404 of the CWA permitting requirements. Therefore, any impacts to ephemeral streams should be included in the DEIS where appropriate, including Table A in Summary, Chapter 4.0, and the Comparisons of Stream Impacts in Linear Feet. Additionally, mitigation of stream impacts is discussed in the Water

Quality section. While it is correct that typically "mitigation is required for all stream impacts which do not meet requirements for certain Nationwide Section 404 permits", it is also true that compensatory mitigation may be required for certain Nationwide Permits to ensure lost aquatic resource function is replaced. If compensatory mitigation is required for Nationwide Permits and/or Standard Permits, compliance with 33 CFR 332 (Compensatory Mitigation for Losses of Aquatic Resources) must be demonstrated. We recommend that a stream and wetland delineation of the sites be provided to this office for verification prior to submittal of a DA permit application.

Thank you for coordinating the DEIS with this office. If we can be of further assistance, or if you have any questions regarding DA permit requirements, please contact Amy Robinson at the above address, telephone number 615-369-7507, or email at amy.m.robinson@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. Reusch', with a long horizontal flourish extending to the right.

Eric Reusch
Chief, Eastern Regulatory Section
Operations Division