

**APPENDIX A:  
ENVIRONMENTAL ASSESSMENT (APPROVED JANUARY 2, 2019)**



**ENVIRONMENTAL ASSESSMENT  
and  
Draft Section 4(f) *De Minimis* Finding**

**STATE ROUTE 374**

**From State Route 149 at River Road to SR 76/US 79  
(Dover Road), Montgomery County, Tennessee**

Submitted Pursuant to the  
National Environmental Policy Act of 1969

42 USC 4332(2)(c)

**Lead Agencies:**

US Department of Transportation  
Federal Highway Administration  
and  
Tennessee Department of Transportation

**Cooperating Agencies:**

US Army Corps of Engineers, Nashville District





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US Army Corps of Engineers, Nashville District

1/2/19

Date



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## SUMMARY

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), proposes to construct a partial access-controlled multi-lane facility from State Route (SR) 149 to SR 76/US 79 (Dover Road), which would extend existing SR 374 for approximately 7.2 miles. Improvements are also proposed for SR 149 from River Road to approximately 1,700 feet west of Cumberland Heights Road, a distance of approximately one mile. The proposed project is located outside of the city limits and west of Clarksville in Montgomery County, Tennessee (see Figure S-1).

### S-1 Purpose and Need

The purpose of the proposed project is to enhance corridor linkages within the Clarksville area and improve mobility around Clarksville.

The proposed project is intended to address the following transportation needs:

- Improved system linkage,
- Transportation demand,
- Improved operational efficiency, and
- Improved safety.

### S-2 Alternatives

The No Build Alternative and the Build Alternative are evaluated in this Environmental Assessment (EA).

#### S-2-1 No Build Alternative

Under the No Build Alternative, SR 374 would not be extended beyond its existing terminus at SR 76/US 79 (Dover Road). The No Build Alternative assumes that the existing roadway network within the study corridor would remain unchanged, with the exception of one project that is included in the CUAMPO *2040 Metropolitan Transportation Plan* (TDOT Project No. 63023-1236-14). This project is described as widening SR 149 from River Road to SR 13 (Cumberland Drive) and then continuing on SR 13 (Cumberland Drive) to Zinc Plant Road. SR 149 and SR 13 (Cumberland Drive) would be widened from two lanes to four lanes with a center turn lane and curbs and gutters. This project has been let for construction and will be constructed before the SR 374 project.

The No Build Alternative would not meet the project's purpose and need, as described in Chapter 1.0.

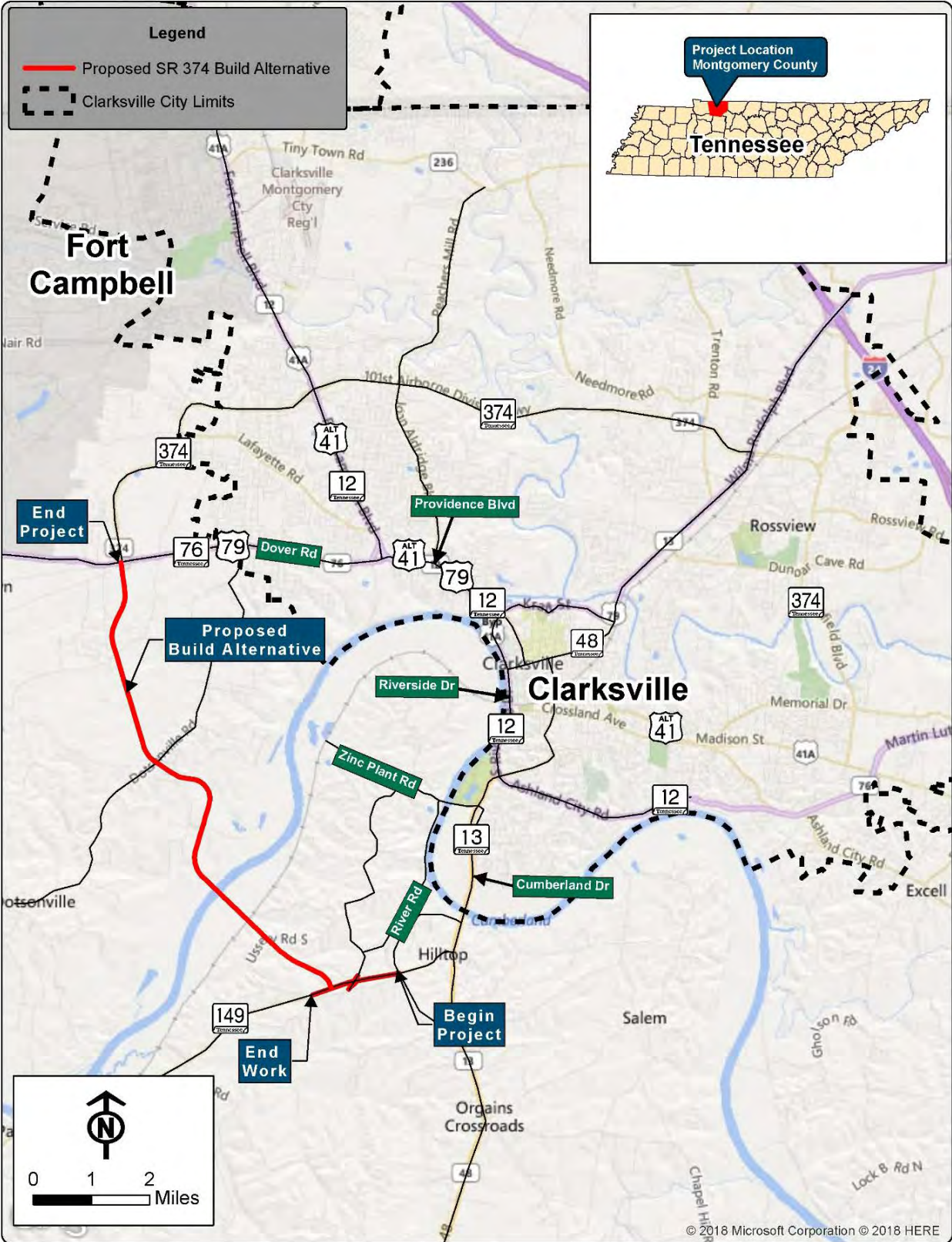


Figure S-1: SR 374 Project Location Map and Transportation Network of Clarksville, Tennessee

### **S-2-2 Build Alternative**

The Build Alternative would begin along existing SR 149 at River Road and would involve widening SR 149 for approximately one mile traveling west. At a point located approximately 1,700 feet west of Cumberland Heights Road, SR 149 would transition back to two lanes with 10-foot outside shoulders. The additional right-of-way width acquired along SR 149 varies from 25 to 110 feet. The design speed along SR 149 would be 40 miles-per-hour.

From a point approximately 1,700 feet west of Cumberland Heights Road, the Build Alternative would continue northwest on new location crossing Ussery Road, the Memphis Line of the R.J. Corman Railroad and the Cumberland River. From the Cumberland River, the Build Alternative would take a more northerly direction and would cross Dotsonville Road and York Road prior to reaching its terminus at an existing SR 76/US 79 (Dover Road) / SR 374 (Paul B. Huff Memorial Parkway) interchange. A new bridge would be constructed over the Memphis Line of the R.J. Corman Railroad. Another new bridge would be constructed over the Cumberland River, spanning portions of the Smith Branch Recreation Area and much of the floodplain on both sides of the river.

The project would include widening SR 149 from two lanes to four 12-foot travel lanes with a 12-foot center turn lane and 12-foot paved shoulders from River Road to a point approximately 1,700 feet west of Cumberland Heights Road, a distance of approximately one mile. No access control would be implemented along SR 149.

From a point approximately 1,700 feet west of Cumberland Heights Road, the project would include the construction of two 12-foot travel lanes in each direction with a 48-foot median, 12-foot outside shoulders, and 6-foot inside shoulders. A new signalized intersection would also be constructed where the new location roadway intersects SR 149. The preliminary proposed right-of-way width for the Build Alternative along the new location section varies and is dependent on the slopes, but generally remains in the range of 200 to 350 feet. A few locations along the route require a wider right-of-way width, such as the proposed SR 76/US 79 (Dover Road)/SR 374 (Paul B. Huff Memorial Parkway) interchange. The design speed for the new roadway from SR 149 to the SR 76/US 79 (Dover Road) / SR 374 (Paul B. Huff Memorial Parkway) interchange is anticipated to be 60 miles-per-hour. Access along the new location roadway would be partially access-controlled, with at-grade intersections at local roads.

### **S-3 Summary of Existing Conditions**

At the project begin point at River Road, SR 149 is classified as a minor arterial consisting of two lanes from River Road to a point located approximately 1,700 feet west of Cumberland Heights Road. At the project end point at the SR 76/US 79 (Dover Road) / SR 374 (Paul B. Huff Memorial Parkway) interchange, existing SR 76/US 79 (Dover Road) is classified as a principal arterial consisting of four lanes with a center turn lane. SR 374 (Paul B. Huff Memorial Parkway) north of SR 76/US 79 (Dover Road) is a four lane highway with a center grass median and is classified as a principal arterial.



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#### **S-4 Summary of Environmental Consequences**

The primary beneficial effects of the proposed project include:

- improved system linkage,
- capability to meet future transportation demand,
- improved operational efficiency, and
- improved safety.

The primary adverse effects of the proposed project include:

- displacement of a single-family residence;
- loss of approximately 311 acres of forested and old-field or agricultural habitat;
- impact to approximately 1.46 acres of wetland (1.42 acres permanent, 0.04 acre temporary);
- impacts to approximately 1,000 linear feet of perennial streams, 3,875 linear feet of intermittent streams, and 6,665 linear feet of wet weather conveyance/ephemeral stream impacts;
- impacts to six man-made farm ponds totaling approximately 1.04 acre;
- impacts to approximately 11.37 acres of the 100-year floodplain associated with the Cumberland River, Sally Willis Branch, and an un-named stream and approximately 15.07 acres of floodway associated with the Cumberland River;
- temporary construction impacts (fugitive dust, siltation, construction noise, etc.); and
- de minimis impact to Smith Branch Recreation Area.

#### **S-5 Summary of Comments and Coordination**

A Tennessee Environmental Streamlining Agreement (TESA) *Combined Concurrence Points 1 and 2 Package: Purpose and Need/Study Area and Alternatives to be Evaluated* was distributed to the agencies and comments were received and responded to by TDOT.

A TESA *Concurrence Point 3 Package: Preliminary Draft Environmental Document and Preliminary Mitigation* was distributed to the agencies. Comments were received and responded to by TDOT.

As part of the early planning process, several public meetings and meetings with local officials were held between 1997 and 2010 to solicit input from the public regarding their concerns or considerations for potential improvements to SR 374. A National Environmental Policy Act (NEPA) public hearing will be held after the EA is approved by the FHWA and made available for comment.

#### **S-6 Other Major Actions**

One other programmed transportation project is located in the study corridor. TDOT Project No. 63023-1236-14 is included in the *CUAMPO 2040 Metropolitan Transportation Plan* and includes widening SR 149 from two lanes to four lanes with a center turn lane from River Road east to SR 13 (Cumberland Drive) and then continuing on SR 13 (Cumberland Drive) to Zinc Plant Road. This project has been let for construction and will be constructed prior to the SR 374 project.

**S-7 Permits Required**

The acquisition of permits would occur prior to initiating construction activities, pursuant to Section 69-3-108(a) of the Tennessee Water Quality Control Act of 1977 and other state and federal laws and regulations. The following permits are likely to be required:

- USACE Clean Water Act (CWA) Section 404 Permit;
- USACE Section 10 Permit;
- US Coast Guard (USCG) Section 9 Permit;
- Tennessee Valley Authority (TVA) Section 26a Permit;
- Tennessee Department of Environment and Conservation (TDEC) Aquatic Resource Alteration Permit (ARAP);
- TDEC Section 401 Water Quality Certification;
- TDEC National Pollutant Discharge Elimination System (NPDES) Storm Water Construction Permit; and a
- TDEC Class V Underground Injection Control Permit.

**S-8 Statute of Limitations on Filing Claims**

A federal agency may publish a notice in the *Federal Register*, pursuant to 23USC§139(l), indicating that one or more federal agencies have taken final action on permits, licenses, or approvals for a transportation 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 within 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.

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**LIST OF ACRONYMS**

AADT	Annual Average Daily Traffic	ESA	Environmental Site Assessment
ACS	American Community Survey		
APE	Area of Potential Effect	ETW	Exceptional Tennessee Waters
ARAP	Aquatic Resource Alteration Permit		
AST	Aboveground Storage Tank	FEMA	Federal Emergency Management Agency
BG	Block Group		
BMPs	Best Management Practices	FHWA	Federal Highway Administration
CAA	Clean Air Act		
CAAA	Clean Air Act Amendments	FIRM	Flood Insurance Rate Map
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	FONSI	Finding of No Significant Impact
		FPPA	Farmland Protection Policy Act
CFR	Code of Federal Regulations	FY	Fiscal Year
CH <sub>4</sub>	Methane	GHGs	Greenhouse Gases
CLOMR	Conditional Letter of Map Revision	HUC	Hydrologic Unit Code
		ICI	Indirect and Cumulative Impacts
CMCRPC	Clarksville-Montgomery County Regional Planning Commission	IL	Insertion Loss
		ISAC	Invasive Species Advisory Committee
CO	Carbon Monoxide		
CO <sub>2</sub>	Carbon Dioxide	L RTP	Long Range Transportation Plan
CSRP	Conceptual Stage Relocation Plan	LOMR	Letter of Map Revision
CT	Census Tract	LOS	Level of Service
CUAMPO	Clarksville Urbanized Area Metropolitan Planning Organization	LWCFA	Land and Water Conservation Fund Act
		MSA	Metropolitan Statistical Area
CWA	Clean Water Act	MSATs	Mobile Source Air Toxics
dBA	A-Weighted Decibel	MOU	Memorandum of Understanding
EA	Environmental Assessment		
EBR	Environmental Boundaries Report	MOVES2014	Motor Vehicle Emissions Simulator Model 2014
EDR	Environmental Data Resources, Inc.	NAA	Noise Analysis Area
		NAAQS	National Ambient Air Quality Standards
EIS	Environmental Impact Statement	NAC	Noise Abatement Criteria
EJ	Environmental Justice	NEPA	National Environmental Policy Act

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TDEC	Tennessee Department of Environment and Conservation
NFIR	National Flood Insurance Regulations
NHPA	National Historic Preservation Act
NISC	National Invasive Species Council
NO <sub>x</sub>	Nitrogen Oxide
N <sub>2</sub> O	Nitrous Oxide
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
ONRW	Outstanding National Resource Waters
Pb	Lead
PGA	Planned Growth Area
PM	Particulate Matter
PND	Pond
RA	Rural Area
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
RPO	Rural Planning Organization
SO <sub>x</sub>	Sulfur Oxides
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SARA	Superfund Amendments and Reauthorization Act
SIP	State Implementation Plan
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan

# Environmental Commitments

☒ Commitments are involved on the project.

## List of Environmental Commitments

- TDOT will complete the following mitigation measures at the USACE's Smith Branch Recreation Area as described in the Section 4(f) *de minimis* Determination:

### Section 4(f) Resources

1. Pave the road leading to the boat ramp parking lot: The connector road to the parking lot will be realigned, graded and repaved to fit the intended use based on design standards for low volume local roads.
2. Pave the boat ramp parking lot to accommodate 75 spaces for passenger vehicles with boat trailers: The current boat ramp parking lot accommodates approximately 40 vehicles with boat trailers. The parking lot will be expanded to accommodate 75 vehicles with boat trailers. The expanded parking lot will be paved and striped. The USACE believes that the existing lot could be expanded to the southwest into an area that will likely be disturbed by construction (e.g., staging area and/or haul road, cutting trees). The actual design of the boat ramp parking lot expansion will be refined as final design of the project is completed.
3. Double the size of the boat ramp to accommodate two boats: The existing single boat ramp will be improved to accommodate two boats in accordance with the USACE's standard specification for boat ramps.
4. Install guardrail around the expanded boat ramp parking lot: The USACE has had numerous issues with off-road vehicles accessing the recreation area's nature trails from the parking lot. Guardrail will be installed around the improved boat ramp parking lot.
5. Facility Access: Main access to the recreation area would be from the proposed intersection of SR 374 and Manning Gate Road. Appropriate turn lanes will be provided at the SR 374/Manning Gate Road intersection and wayfinding signs will be provided to direct vehicles to the Smith Branch Recreation Area via Manning Gate Road and Smith Branch Road.
6. Utilities: TDOT will provide an electrical stub-out at the bridge to be used by USACE to set up and connect service for lightning the parking lot.

### Cultural Resources

A Phase II study will be conducted at one potentially NRHP-eligible archaeological site prior to completion of final environmental document if the site cannot be avoided.

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**APPENDICES**

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- Appendix A: Clarksville Montgomery County Economic Development Blue Print
- Appendix B: Traffic and Crash Data
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- Appendix D: Conceptual Stage Relocation Annotated Plans
- Appendix E: Mobile Source Air Toxics (MSATs) Information
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## 1.0 PURPOSE AND NEED

### 1.1 Introduction

TDOT, in cooperation with the FHWA, proposes to construct a partial access-controlled multi-lane facility from SR 149 to SR 76/US 79 (Dover Road), which would extend existing SR 374 (Paul B. Huff Memorial Parkway) for approximately 7.2 miles. Improvements are also proposed for SR 149 from River Road to approximately 1,700 feet west of Cumberland Heights Road a distance of approximately one mile. Existing SR 149 from River Road to a point located approximately 1,700 feet west of Cumberland Heights Road consists of two lanes with 10-foot outside shoulders. In the study corridor, existing SR 149 from River Road to a point approximately 1,700 feet west of Cumberland Heights Road is classified as a minor arterial. SR 76/US 79 (Dover Road) at the end of the project is classified as a principal arterial.

The project is located in Montgomery County, Tennessee. The project location is shown on Figure 1-1.

A number of studies have been conducted since the 1990s to explore potential extensions to SR 374.

This EA has been prepared to comply with the requirements of the federal National Environmental Policy Act of 1969 (NEPA). NEPA requires that projects receiving federal funding or requiring federal actions (e.g., permits) undergo an environmental review process.

An EA identifies alternative solutions that meet the project's purpose and need; provides an assessment of effects of the alternatives, positive and negative, on the natural and built environment; and identifies measures to avoid, minimize, or mitigate negative effects. This allows decision-makers to consider effects on the environment along with other important considerations, such as need, feasibility, and cost.

The purpose of the EA is to disclose the effects of a project at a stage in the development process when decision-making can still be shaped by the environmental analysis and by the comments of agency and public reviewers. If it is determined the proposed project would not have a significantly adverse effect on the environment, then the FHWA would issue a Finding of No Significant Impact (FONSI). Should it be determined that a significant adverse effect that cannot



#### *What are **minor** and **principal arterials**?*

*Minor arterial roads should, in conjunction with the principal arterial roads, form a rural network having the following characteristics:*

- 1. Link cities and larger towns (and other traffic generators) and form an integrated network providing interstate and intercounty service.*
- 2. Be spaced at such intervals, consistent with population density, so that all developed areas of the State are within reasonable distance of an arterial.*
- 3. Provide (because of the two characteristics defined immediately above) service to corridors with trip lengths and travel density greater than those predominately served by rural collector or local systems.*

*Principal arterial roads are roads that have the following characteristics:*

- 1. Have a high density of intrastate and interstate travel.*
- 2. Serve urbanized areas and a large majority of small urban areas.*
- 3. Provide an integrated network without stub connections except where unusual geographic or traffic flow conditions dictate otherwise.*

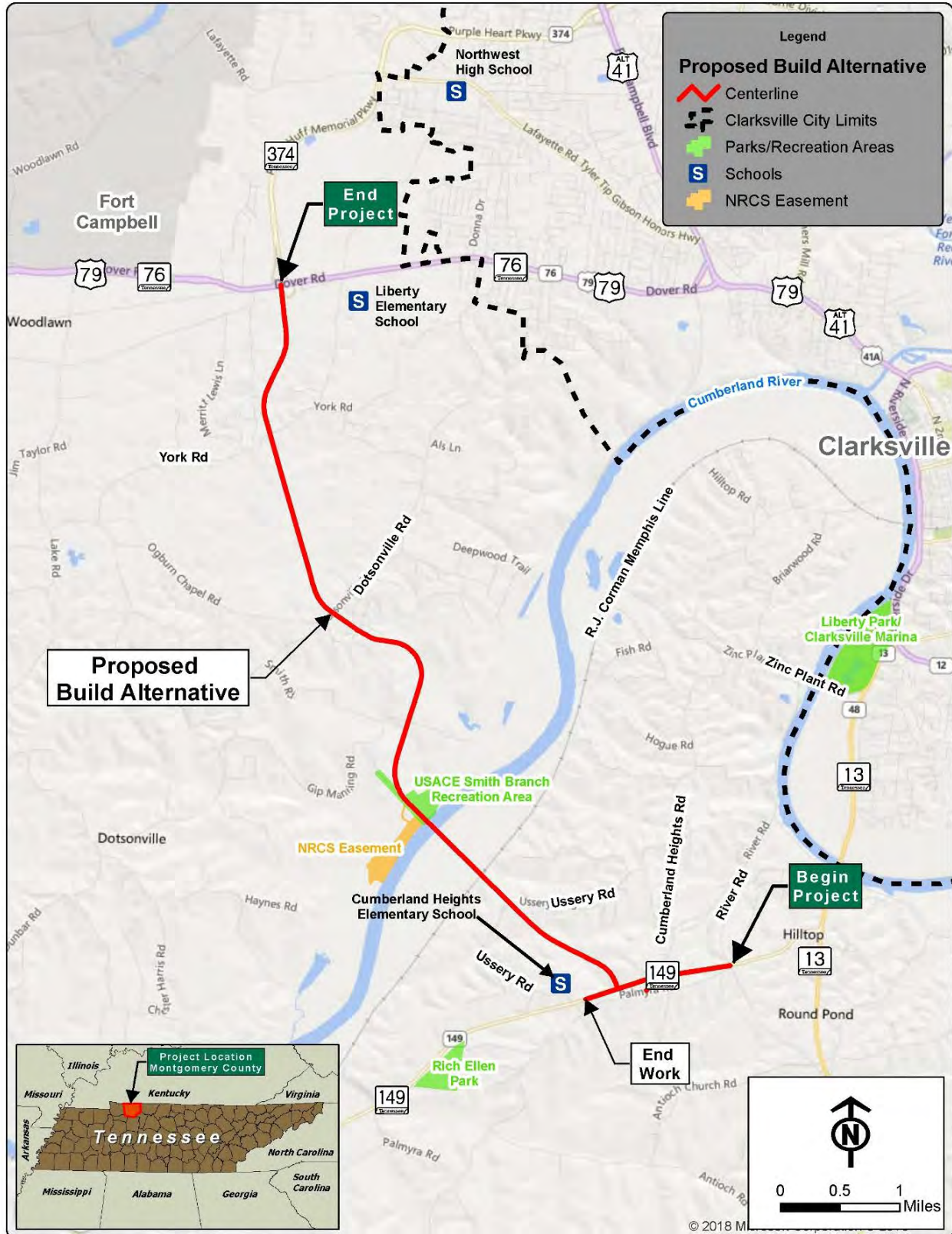


Figure 1-1: SR 374 Project Location Map

be avoided, minimized, or mitigated would occur as a result of the proposed project, an Environmental Impact Statement (EIS) will be prepared.

## 1.2 Purpose and Need

The purpose of the proposed project is to enhance corridor linkages within the Clarksville area and improve mobility around Clarksville.

The proposed project is intended to address the following transportation needs:

- Improved system linkage,
- Transportation demand,
- Improved operational efficiency, and
- Improved safety.

Each of these is discussed in the following sections.

### 1.2.1 Improved System Linkage

One of the largest employers in the area is Fort Campbell Military Reservation, which is located northwest of Clarksville and northwest of the project terminus at SR 76/US 79 (Dover Road). Existing access to the military reservation from developing areas south and west of Clarksville requires traffic, including heavy truck traffic, to travel through downtown Clarksville to cross the Cumberland River. Traffic must travel on SR 13 (Cumberland Drive) or SR 149 to SR 13 (Cumberland Drive), cross the Cumberland River via the G.G. McClure Bridge or the Zinc Plant Road bridge, and continue north along SR 13 (Cumberland Drive) to SR 12 (Riverside Drive) in downtown Clarksville. Traffic must then travel along SR 12 (Riverside Drive) through downtown until turning west on SR 12/US 79/US 41A (Providence Boulevard). From there, traffic must continue west along SR 12/US 79/US 41A (Providence Boulevard) until reaching the intersection of SR 76/US 79 (Dover Road). Traffic must continue west on SR 76/US 79 (Dover Road) until reaching the existing SR 76/US 79 (Dover Road)/SR 374 (Paul B. Huff Memorial Parkway) interchange. This route is approximately 12.5 miles long and takes travelers through congested areas along SR 13 (Cumberland Drive) near Zinc Plant Road and through multiple signalized intersections in downtown Clarksville. With the exception of local cross roads, no north-south US or state highways currently exist between SR 76/US 79 (Dover Road) and SR 149 west of Clarksville.

### 1.2.2 Transportation Demand

The need for the project originates from the rapid development that is currently occurring in Montgomery County and the city of Clarksville. According to the *2040 Metropolitan Transportation Plan*, the population in 2010 exceeded the projections of the Clarksville-Montgomery County Regional Planning Commission's (CMCRPC) *Clarksville-Montgomery County 2012 Growth Plan*, herein referred to as the *2012 Growth Plan*. That level of increased growth has continued, with Montgomery County's population growing by more than 13 percent from 2010 through July 2016, according to the US Census Bureau. The Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) *2040 Metropolitan Transportation Plan*



attributes much of the growth to Fort Campbell Military Reservation, one of the nation’s largest military installations, and Austin-Peay State University, the fastest-growing four-year university in the state. As it relates to the continued growth, the CUAMPO 2040 Metropolitan Transportation Plan states that the “continued success will depend on the region’s ability to plan and adapt to the changing demands on its infrastructure and services, including transportation”. The CUAMPO 2040 Metropolitan Transportation Plan adds that “the system currently in place will not provide the same level of mobility by 2040, with more than 250,000 people and 100,000 employees moving within the region.”

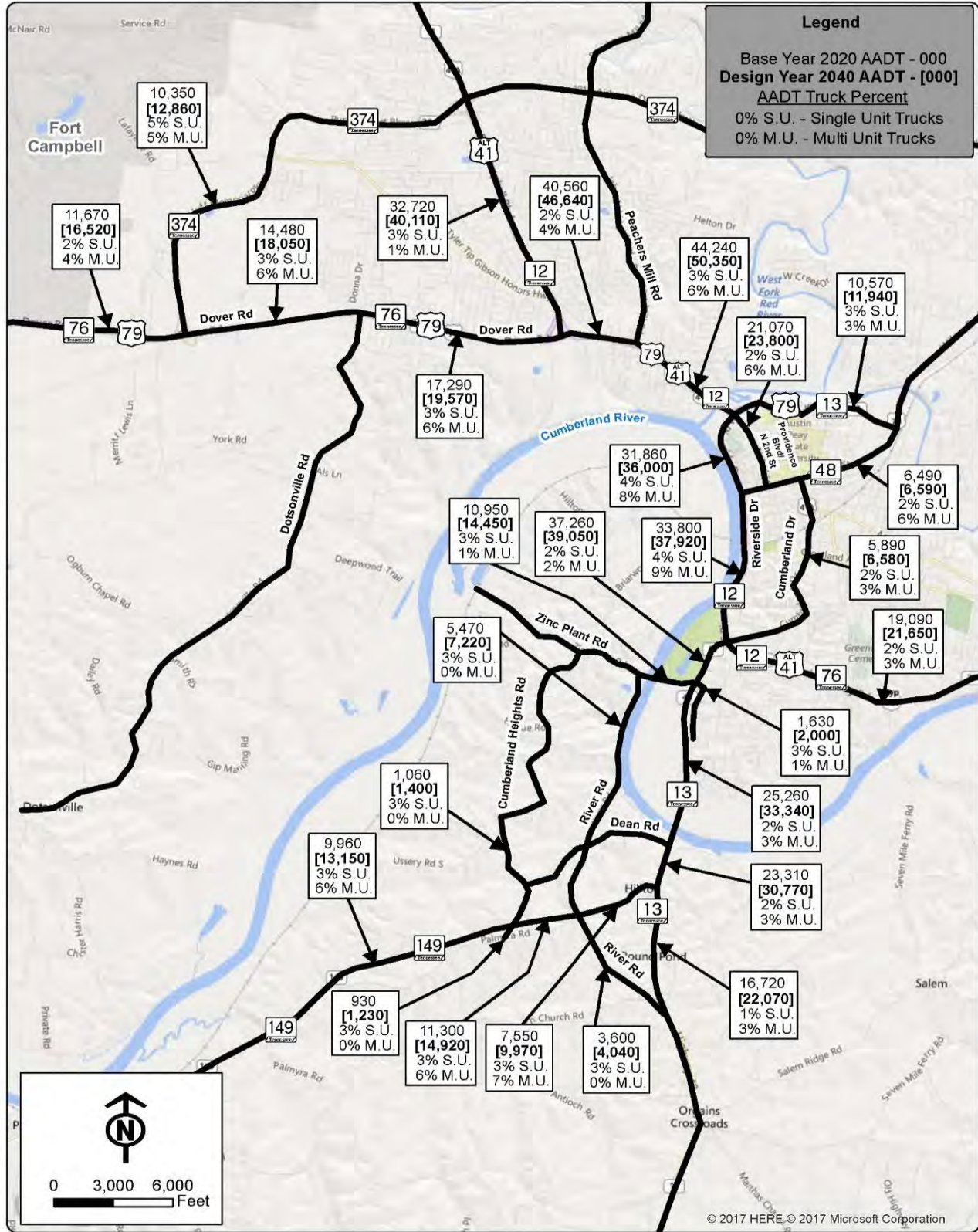
### 1.2.3 Improved Operational Efficiency

#### Traffic Volumes

Traffic volumes used in this analysis were obtained from the CUAMPO travel demand model (TDM). The CUAMPO TDM was completed in 2013. TDOT utilized the TDM to project the Base Year 2020 and Design Year 2040 No Build Alternative traffic. The traffic volumes for the Base Year 2020 and Design Year 2040 No Build Alternative are shown in Table 1-1 and Figure 1-2. A copy of the *Traffic Operations Technical Memorandum* (November 29, 2017) is in Appendix B.

**Table 1-1: Projected Base Year 2020 and Design Year 2040 No Build Alternative Traffic Volumes**

Roadway	Roadway Segment	AADT Base Year 2020 (veh. /day)	AADT Design Year 2040 (veh. /day)	% Change in AADT	AADT Truck Percentages 2020/2040
<b>SR 149</b>	West of Cumberland Heights Road	9,960	13,150	32%	9%
	Cumberland Heights Road to River Road	11,300	14,920	32%	9%
	River Road to SR 13 (Cumberland Drive)	7,550	9,970	32%	10%
<b>SR 13 (Cumberland Drive)</b>	SR 149 to Dean Road	23,310	30,770	32%	5%
	Dean Road to Zinc Plant Road	25,260	33,340	32%	5%
	Zinc Plant Road and SR 12 (Riverside Drive)	37,260	39,050	5%	4%
<b>SR 12 (Riverside Drive)</b>	SR 13 (Cumberland Drive) to SR 48 (College Street)	33,800	37,920	12%	13%
	SR 48 (College Street) to Providence Boulevard/North 2 <sup>nd</sup> Street	31,860	36,000	13%	12%
	SR 12 (Riverside Drive) to Peachers Mill Road	44,240	50,350	14%	9%
	Peachers Mill Road to SR 76/US 79 (Dover Road)	40,560	46,640	15%	6%
<b>SR 76/US 79 (Dover Road)</b>	SR 12 (Riverside Drive) to Dotsonville Road	17,290	19,570	13%	9%
	Dotsonville Road to SR 374	14,480	18,050	25%	9%
	West of SR 374	11,670	16,520	42%	6%



Source: November 2017 Traffic Operations Technical Memorandum (Volkert)

**Figure 1-2: Projected Base Year 2020 and Design Year 2040 No Build Alternative Traffic Volumes**

### Level of Service

As described by the *Highway Capacity Manual (HCM 2010)*, Level of Service (LOS) is used to represent the operational conditions of a roadway segment. The factors used in determining the LOS depend on the geometry and location of the roadway segment. For all roadway segments, the LOS can be designated as LOS A, B, C, D, E or F. The variations in these levels of service are described in Table 1-2.

**Table 1-2: Level of Service Descriptions**

LOS	Descriptions
A	Travel conditions are completely free flow. The constraint to vehicle operation is the geometric features of the roadway and individual driver preferences. Minor disruptions to traffic are easily absorbed without an effect on travel speed.
B	Travel conditions are free flow. Good progression is achieved with minimal congestion. The ability to maneuver is relatively unimpeded.
C	Travel conditions are stable but lane maneuvers are noticeably restricted. Minor disruptions in flow can be expected to have noticeable affect and queuing may form.
D	Volumes are near capacity, travel speeds are slightly below the speed limit. Maneuvering is noticeably restricted due to congestion. Minor disruptions can be expected to cause delays.
E	Volumes are slightly over capacity and travel speeds are slow, the traffic flow becomes unstable. The flow becomes irregular and speeds vary significantly. Disruption in traffic flow can be expected to cause a “shock wave” along the section and further deteriorate levels of service.
F	Operations are highly unstable with breakdown in the flow. Drivers experience “stop and go” traffic flow. Frequent slowing is required. Demand exceeds capacity.

### Base Year 2020 and Design Year 2040 No Build Alternative Level of Service

The Base Year 2020 and Design Year 2040 No Build Alternative would keep the existing roadway network unchanged with the exception of the SR 13 (Cumberland Drive) and SR 149 project that is currently being designed (TDOT Project No. 63023-1236-14). TDOT Project No. 63023-1236-14 includes widening SR 149 from two lanes to four lanes with a center turn lane from River Road east to SR 13 (Cumberland Drive) and then continues on SR 13 (Cumberland Drive) to Zinc Plant Road. Table 1-3 shows the LOS analysis results for the Base Year 2020 and Design Year 2040 No Build Alternative models. For more detailed information on the LOS analysis, see the *Traffic Operations Technical Memorandum* (November 29, 2017) in Appendix B.

The results of the No Build Alternative analyses show that SR 149 west of Cumberland Heights Road and SR 149 between Cumberland Heights Road and River Road are expected to operate at LOS E by Base Year 2020. In addition, SR 12 (Riverside Drive) from Riverside Drive to Peachers Mill Road and from Peachers Mill Road to SR 76/US 79 (Dover Road) are expected to operate at LOS E by Design Year 2040.



**Table 1-3: Base Year 2020 and Design Year 2040 No Build Alternative Level of Service Projections**

Roadway	Roadway Segment	Base Year 2020		Design Year 2040	
		AADT	LOS	AADT	LOS
<b>SR 149</b>	West of Cumberland Heights	9,960	E	13,150	E
	Cumberland Heights Road to River Road	11,300	E	14,920	E
	River Road to SR 13 (Cumberland Drive)	7,550	A	9,970	A
<b>SR 13 (Cumberland Drive)</b>	SR 149 to Dean Road	23,310	B	30,770	C
	Dean Road to Zinc Plant Road	25,260	B	33,340	C
	Zinc Plant Road to SR 12 (Riverside Drive)	37,260	D	39,050	D
<b>SR 12 (Riverside Drive)</b>	SR 13 (Cumberland Drive) to SR 48 (College Street)	33,800	C	37,920	D
	SR 48 (College Street) to Providence Boulevard/North 2 <sup>nd</sup> Street	31,860	C	36,000	D
	SR 12 (Riverside Drive) to Peachers Mill Road	44,240	D	50,350	E
	Peachers Mill Road to SR 76/US 79 (Dover Road)	40,560	D	46,640	E
<b>SR 76/US 79 (Dover Road)</b>	SR 12 (Riverside Drive) to Dotsonville Road	17,290	B	19,570	B
	From Dotsonville Road to SR 374	14,480	B	18,050	B
	West of SR 374	11,670	A	16,250	B

#### 1.2.4 Improved Safety

A crash analysis was performed along existing SR 149 where widening would occur and along SR 76/US 79 (Dover Road) near the terminus of the Build Alternative using crash data and TDOT's latest available statewide average crash rate information. The crash analyses for each highway are described in the following paragraphs and the results are summarized in Table 1-4. More detail is provided in Appendix B. Crash analysis locations are shown in Figure 1-3.

The purpose of a crash analysis is to determine the relative safety of the roadway section as compared to similar roadway sections within the State. This type of analysis provides an effective comparison of similar locations that allows for prioritization of locations when considering safety improvements. The comparison with state-wide crash rates establishes a correlation with similar facilities that helps to identify those areas with safety issues that can be addressed in the design of future roadway improvements. The most appropriate use of crash rates is to determine the relative safety of a roadway section or intersection when compared to similar sections or intersections within a specific jurisdiction.

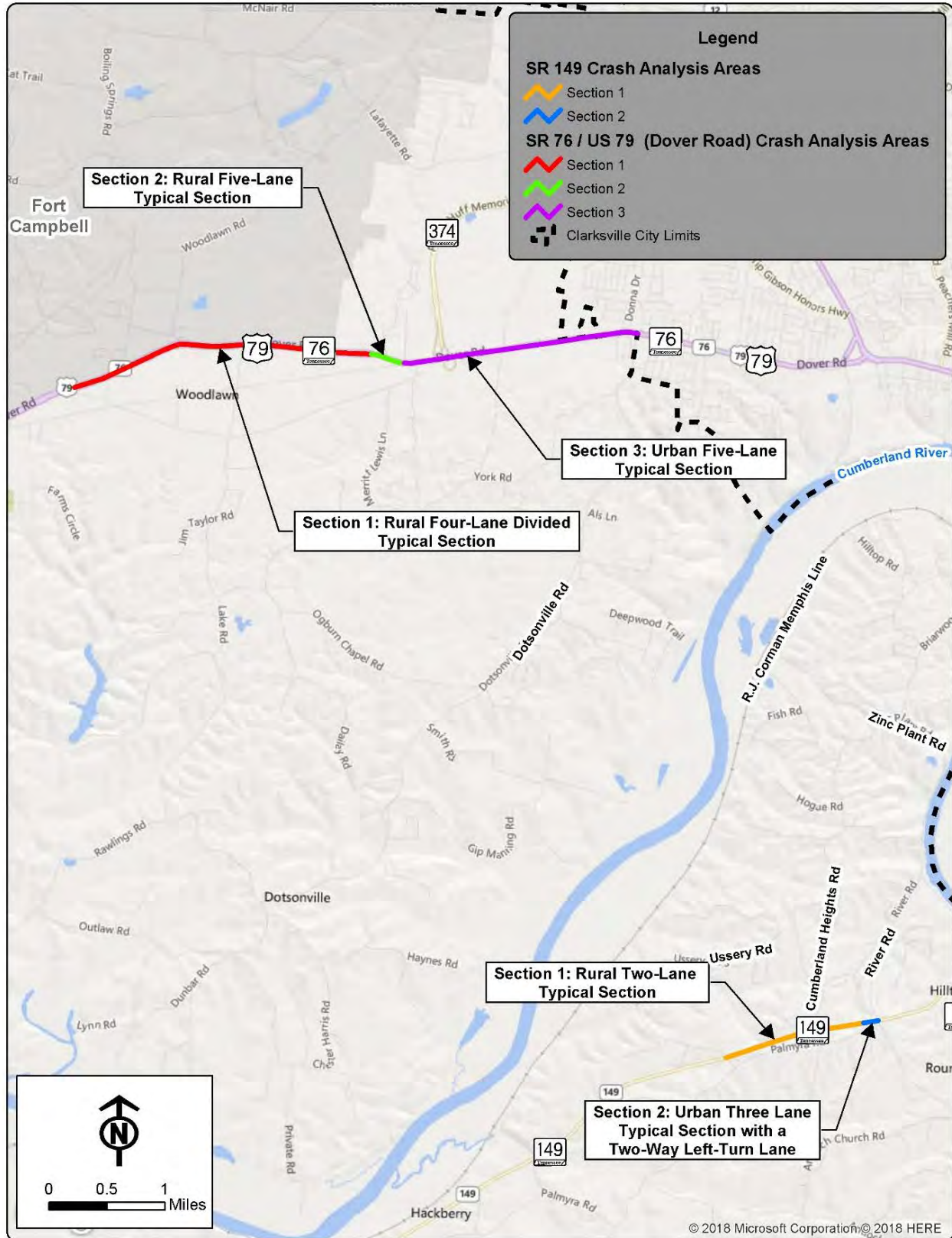


Figure 1-3: SR 374 Crash Analysis Map

Table 1-4: Crash Rates Analysis Summary

Begin LM	End LM	Length (Mile)	Average AADT	Total No. Of Crashes	Statewide Average Crash Rate	Section Crash Rate (A)	Critical Rate (C)	A/C Ratio	Severity Index
<b>SR 76/US 79 (Dover Road)</b>									
6.289	8.920	2.631	12,380	25	0.696	0.701	1.035	0.68	0.2800
8.920	9.290	0.370	12,380	15	0.896	2.991	1.979	1.51	0.2667
9.290	11.250	1.960	17,470	61	3.294	1.488	3.966	0.38	0.3443
<b>SR 149</b>									
11.720	12.955	1.235	6,890	15	2.574	1.610	3.851	0.42	0.2000
12.955	13.080	0.125	6,890	3	2.978	3.181	7.643	0.42	0.0000

### SR 149 Crash Analysis

During the three-year period from 7/1/15 to 6/30/18, a total of 18 crashes occurred along the length of the existing SR 149 roadway from log mile 11.72 at the intersection of Ussery Road to log mile 13.08 at the intersection of River Road. Of the 18 reported crashes, there were no fatal or incapacitating injury crashes. There were three non-incapacitating injury crashes. Rainy conditions were reported for one crash, snow was reported for one crash, and foggy conditions were reported for one crash. No adverse weather conditions were reported for the remaining 15 crashes. Along this section of SR 149, two distinct facility characteristics were identified for analysis: Section 1 includes a two lane roadway and Section 2 includes a two lane roadway with a two-way center left turn lane at the approach to the River Road intersection.



What is a **crash rate**? The crash rate is derived from a formula that takes into account factors such as total number of crashes, length of roadway and the time period over which the crashes occurred.

Section 1 begins at log mile 11.72 at the intersection of Ussery Road to log mile 12.955 at the intersection of Bette Road just west of the River Road intersection. A total of 15 crashes were reported. The actual crash rate for this section of SR 149 is 1.610. The statewide average rate for a section of similar type roadway is 2.574. To assess the safety of this section of SR 149, the ratio between the actual crash rate and the critical crash rate (A/C ratio) was calculated. The A/C ratio for this section of SR 149 is 0.42, which suggests that a safety deficiency does not exist.



What is the **critical crash rate**? The critical crash rate defines statistically how the actual rate differs from the statewide rate.

Section 2 includes a short section of SR 149 composed of two lanes with a center two-way left turn lane between Bette Road and the River Road intersection beginning at log mile 12.955 near Bette Road to log mile 13.08 at the intersection of River Road. A total of 3 crashes were reported. The actual crash rate for this section is 3.181. The statewide for a section of similar type roadway is 2.978. It was noted that the length of this section was just 0.125 mile and that all 3 crashes occurred at the signalized intersection of River Road. Of those 3 crashes, one was a rear-end collision. To assess the safety of this section of SR 149 the A/C ratio was calculated. The A/C ratio for this section of SR 149 is 0.42, which suggests a safety deficiency does not exist.



*What is the **A/C (actual crash rate to critical crash rate) Ratio**? The ratio of the actual rate to the critical rate, known as the A/C ratio, indicates the severity of the crash problem. It is calculated by dividing the actual crash rate by the critical rate. An A/C ratio in excess of 1.0 suggests that a safety deficiency may exist.*

### SR 76/US 79 (Dover Road) Crash Analysis

During the three-year period from 7/1/15 to 6/30/18, a total of 111 crashes occurred along SR 76/US 79 (Dover Road) from log mile 6.289 at Old Dover Road to log mile 11.25 at the intersection of Dotsonville Road. Of the 111 reported crashes, no fatalities were reported. There were six reported crashes with incapacitating injuries and 20 non-incapacitating injury crashes. Weather conditions noted rain in four crashes, snow in one crash and fog in one crash. Clear conditions were noted in 100 crashes of the 111 reported crashes.



*What is the **statewide average crash rate**? This rate is based on the number of crashes statewide for a specific highway type, such as urban, divided highways, urban roadways with turn lanes, urban freeways, and rural divided highways.*

Along this section of SR 76/US 79 (Dover Road), three distinct facility characteristics were identified for analysis: Section 1 includes a four lane divided rural roadway; Section 2 includes a five lane (four lane with a center left-turn lane) rural roadway and Section 3 includes a five lane (four lane with a center left-turn lane) urban roadway. These distinctions allowed for comparison of the various roadway sections with similar facilities in Tennessee using the latest available statewide averages provided by TDOT for years 2014 – 2016.



*What is meant by **severity index**? Knowledge of the severity of crashes can assist practitioners in determining their safety needs. For example, the frequency of crashes at urban intersections may be higher than at rural curves, but in many cases the rural curve crashes are more severe. In addition, if two similar locations had the exact same number of crashes, it may be appropriate to select the location with more severe crashes to address first.*

Section 1 of SR 76/US 79 (Dover Road) includes a four lane divided section of SR 76/US 79 (Dover Road) beginning at log mile 6.289 at Old Dover Road continuing eastward along SR 76/US 79 (Dover Road) to log mile 8.92 just west of the intersection of Butts Drive. A total of 25 crashes were reported in this section. The actual crash rate for this section is 0.701. The statewide average rate for a section of a

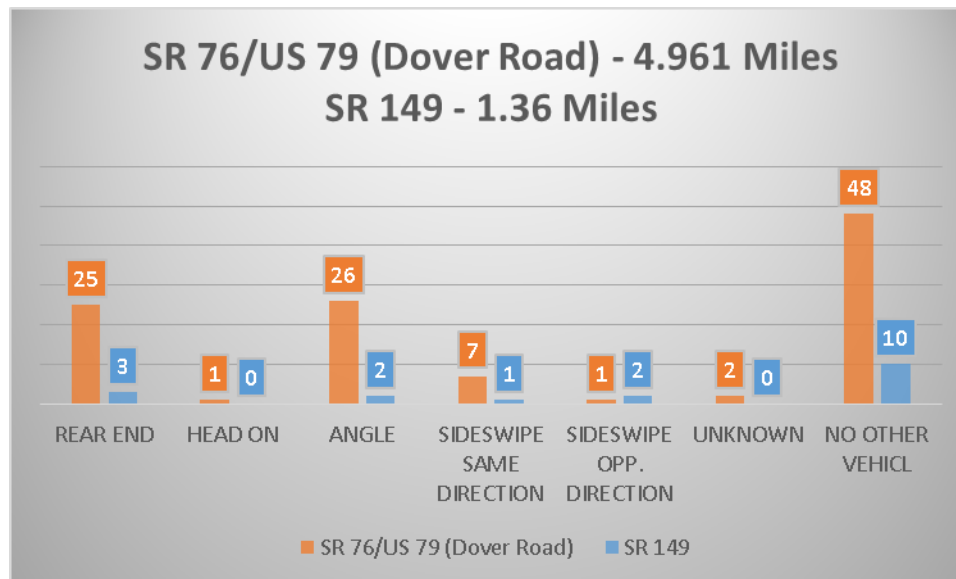


similar type facility is 0.696. The A/C ratio for this section is 0.68, which suggests that a safety deficiency does not exist.

Section 2 of SR 76/US 79 (Dover Road) includes a five lane section beginning at log mile 8.920 just west of the intersection of Butts Drive and continuing eastward along SR 76/US 79 (Dover Road) to log mile 9.29 just west of the existing SR 374 (Paul B. Huff Memorial Parkway) interchange. Fifteen crashes were reported. The statewide average rate for this type of facility is 0.896. The actual crash rate for this section is 2.991 or about 3.34 times the statewide rate. The severity index is 0.2667. The A/C ratio of 1.51 for this section of SR 76/US 79 (Dover Road) suggests that a safety deficiency may exist.

Section 3 of SR 76/US 79 (Dover Road) includes a five lane section beginning at log mile 9.29 just west of the existing SR 374 (Paul B. Huff Memorial Parkway) interchange and continuing eastward to log mile 11.250 at the intersection of Dotsonville Road. Sixty-one crashes were reported. The actual crash rate for this section is 1.488. The statewide average rate for a section of similar type facility is 3.294. The A/C ratio for this segment is 0.38, which suggests that a safety deficiency does not exist.

The manner of collision is graphically depicted for both segments in Figure 1-4. On SR 76/US 79 (Dover Road), of the 48 crashes that did not involve another vehicle, 24 involved a deer or other animal and 18 involved a fixed or other object. Of the 10 “no other vehicle” crashes reported for SR 149, eight of those involved a deer.



**Figure 1-4: Manner of Collision Summary**

The results of the analysis shows there are two safety concerns in the segments studied:

- On SR 76, the analysis for the section between Log Mile 8.92 and 9.29 reported an A/C ratio of 1.51. There is a high number of crashes along this segment of roadway.

- The analysis of crash types for the entire project shows rear-end and angle collisions to be the most frequent type of crash for those crashes involving two or more vehicles. Crashes that did not involve another vehicle were as frequent as rear-end and angle collisions combined.

Factors that contribute to rear-end and angle collisions can include inadequate access management along the corridor, such as numerous curb cuts or side street intersections. Factors for intersection crashes may include the lack of turn lanes and poor sight distance.

Factors that contribute to crashes that do not involve other vehicles vary significantly. In rural areas, such as most of the roadway segments in this study, deer and other wild animals are prevalent. Wildlife crashes are difficult to prevent in these areas with avoidance mostly left to the acute attention and skills of the driver. Similarly, where loss of vehicle control results in crashes with guardrail, ditches or embankments, the driver preparedness and attention to changing roadway conditions are key in avoiding such events.

### 1.3 Logical Termini and Independent Utility

The proposed project includes widening along an existing roadway and the construction of a new roadway on new location. The eastern terminus of the widening is logical because the project would tie into TDOT Project No. 63023-1236-14, which includes widening SR 149 from two lanes to four lanes with a center turn lane from River Road east to SR 13 (Cumberland Drive). This project has been let for construction and will be constructed prior to the SR 374 project.

The SR 149 section of the project has a logical terminus on the western end because it extends the proposed four-lane section on SR 149 to the proposed intersection of SR 149 and the proposed SR 374. To fully develop the proposed intersection, the four-lane section is extended beyond this proposed intersection to the west, and is then transitioned back to the existing two-lane section. While the proposed SR 374 does not currently exist, it is included in the CUAMPO Transportation Improvement Program (TIP) for FY 2017-2020 with construction funds committed, so it is a project that is under active development.



*What is meant by **Logical Termini & Independent Utility**? **Logical termini** are defined as (1) rational end points for a transportation improvement, and (2) rational end points for a review of the environmental impacts.*

***Independent Utility** is defined as being useable and being a reasonable expenditure even if no additional transportation improvements in the area are made.*

The northern terminus at SR 76/US 79 (Dover Road) is logical because it is where the proposed project ties into the interchange on the existing northern section of SR 374, providing route continuity for SR 374.

### 1.4 Consistency with Local and State Plans

The proposed project is consistent with the following regional and state planning efforts. The project is listed in the CUAMPO *Final Transportation Improvement Program Fiscal Years 2014-*

*2017 and Final Transportation Improvement Program (TIP) Fiscal Years 2017 - 2020.* The TIP provides the list of upcoming fiscally constrained transportation projects for a period of at least four years. The TIP is developed in cooperation with CUAMPO and TDOT. CUAMPO's transportation planning efforts, including the proposed project, is aligned with the land use and comprehensive planning efforts of the CMCRPC, which has jurisdiction over all planning and zoning in Clarksville and Montgomery County. The proposed project is listed in the following local planning documents:

- *CUAMPO 2040 Metropolitan Transportation Plan (Attachment I) as amended on July 20, 2017.*
- *CUAMPO TIP (Fiscal Years 2014-2017 and 2017 - 2020 Projects 5 and 6 – Attachment I).* Project 5 includes widening SR 149 and construction of a four lane highway from SR 149 to Dotsonville Road. Project 6 includes the construction of a two lane highway on four lane right-of-way from Dotsonville Road to SR 76/US 79 (Dover Road).
- *Clarksville-Montgomery County Economic Development Blueprint, 2013 (Appendix A).*
- *Clarksville Regional Intelligent Transportation System Architecture and Deployment Plan Update, February 2015.* The proposed bridge over the Cumberland River on the SR 374 project was considered for tolling, however, tolling was found to be not feasible. There are no ITS projects proposed currently for this section of SR 374.

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## 2.0 ALTERNATIVES

This chapter describes the two alternatives being evaluated in this EA: the No Build Alternative and one Build Alternative.

### 2.1 No Build Alternative

The No Build Alternative is required by federal regulations to be evaluated in an EA. The No Build Alternative provides a baseline against which the other project alternatives are compared.

Under the No Build Alternative, SR 374 would not be extended beyond its existing terminus at SR 76/US 79 (Dover Road). The No Build Alternative assumes that the existing roadway network within the study corridor would remain unchanged, with the exception of one project that is included in the CUAMPO 2040 Metropolitan Transportation Plan (TDOT Project No. 63023-1236-14). This project is described as widening SR 149 from River Road to SR 13 (Cumberland Drive) and then continuing on SR 13 (Cumberland Drive) to Zinc Plant Road. SR 149 and SR 13 (Cumberland Drive) would be widened from two lanes to four lanes with a center turn lane and curbs and gutters. This project has been let for construction and will be constructed before the SR 374 project.

The No Build Alternative would not meet the project's purpose and need, as described in Chapter 1.0.

### 2.2 Build Alternative

The Build Alternative, as shown in segments on Figures 2-1a – 2-1c, would begin along existing SR 149 at River Road and would involve widening SR 149 for approximately one mile traveling west. At a point located approximately 1,700 feet west of Cumberland Heights Road, SR 149 would transition back to two lanes with 10-foot outside shoulders. The additional right-of-way width acquired along SR 149 would vary from 25 to 110 feet. The design speed along SR 149 would be 40 miles-per-hour.

From a point approximately 1,700 feet west of Cumberland Heights Road, the Build Alternative would continue northwest on new location crossing Ussery Road, the Memphis Line of the R.J. Corman Railroad and the Cumberland River. From the Cumberland River, the Build Alternative would take a more northerly direction and would cross Dotsonville Road and York Road prior to reaching its terminus at an existing SR 76/US 79 (Dover Road)/SR 374 (Paul B. Huff Memorial Parkway) interchange. A new bridge would be constructed over the Memphis Line of the R.J. Corman Railroad. Another new bridge would be constructed over the Cumberland River, spanning portions of the Smith Branch Recreation Area and much of the floodplain on both sides of the river. Preliminary plans for the Build Alternative are included in Appendix C.

The project would include widening SR 149 from two lanes to four 12-foot travel lanes with a 12-foot center turn lane and 12-foot paved shoulders from River Road to a point approximately 1,700 feet west of Cumberland Heights Road, a distance of approximately one mile (see Figure 2-2). No access control would be implemented along SR 149.

From a point approximately 1,700 feet west of Cumberland Heights Road, the project would include the construction of two 12-foot travel lanes in each direction with a 48-foot median, 12-foot outside shoulders, and 6-foot inside shoulders (see Figure 2-3). A new signalized intersection would also be constructed where the new location roadway intersects SR 149. The preliminary proposed right-of-way width for the Build Alternative along the new location section varies and is dependent on the slopes, but generally remains in the range of 200 to 350 feet. A few locations along the route require a wider right-of-way width, such as the proposed SR 76/US 79 (Dover Road)/SR 374 (Paul B. Huff Memorial Parkway) interchange. The design speed for the new roadway from SR 149 to the SR 76/US 79 (Dover Road)/SR 374 (Paul B. Huff Memorial Parkway) interchange is anticipated to be 60 miles-per-hour. Access along the new location roadway would be partially access-controlled, with at-grade intersections at local roads.



*What is Access Control?*

**Full Access Control** is when access to the roadway is available only through on/off ramps at grade-separated interchanges. An example of a roadway with full access control is an Interstate.

**Partial Access Control** is when access to the roadway is limited. For example, at certain locations access onto and across the road may be controlled. Land owners would need to obtain permits for new driveways.

**No Access Control** is when access to and across the roadway is available to every land owner along the roadway.



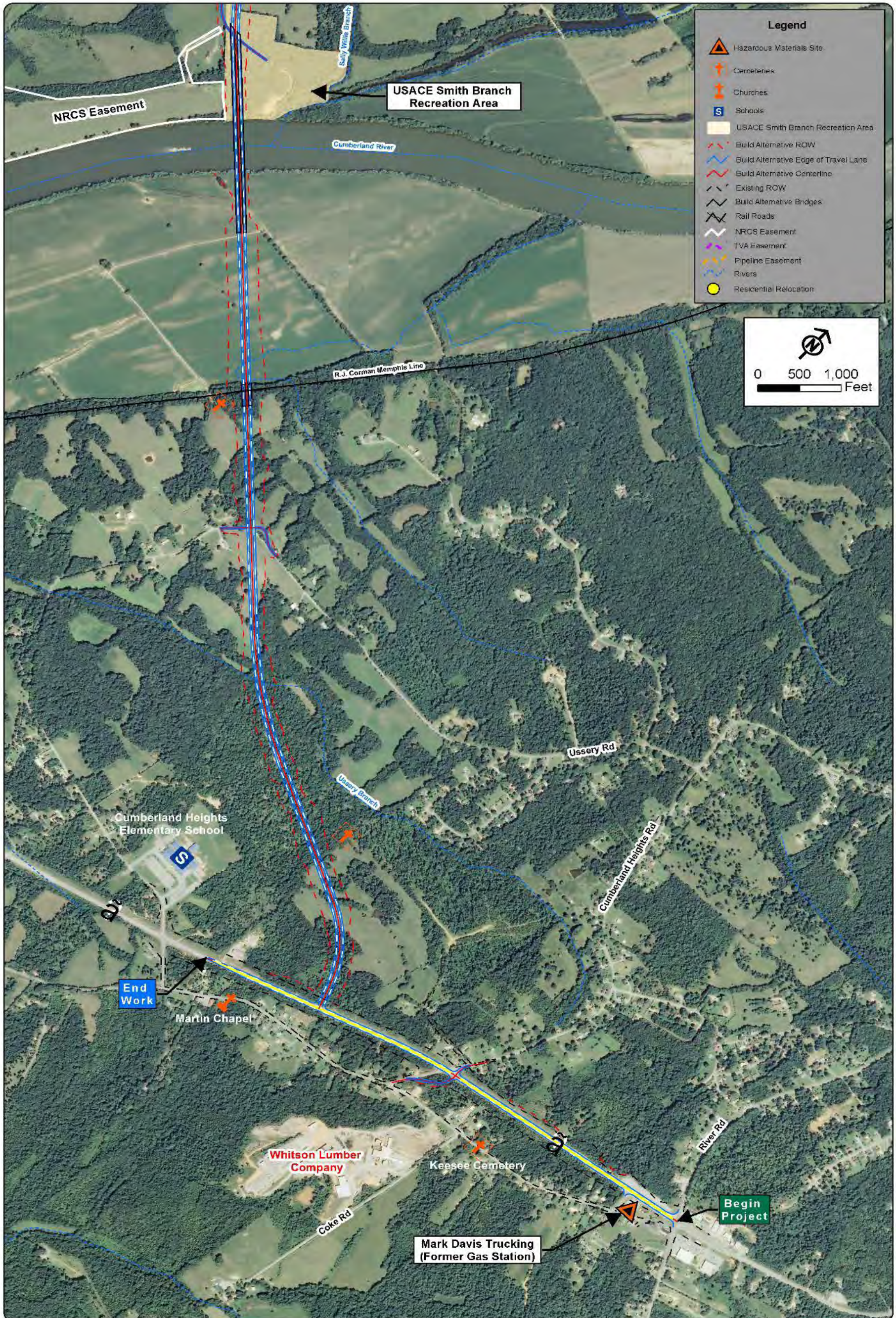


Figure 2-1a: Proposed SR 374 Build Alternative



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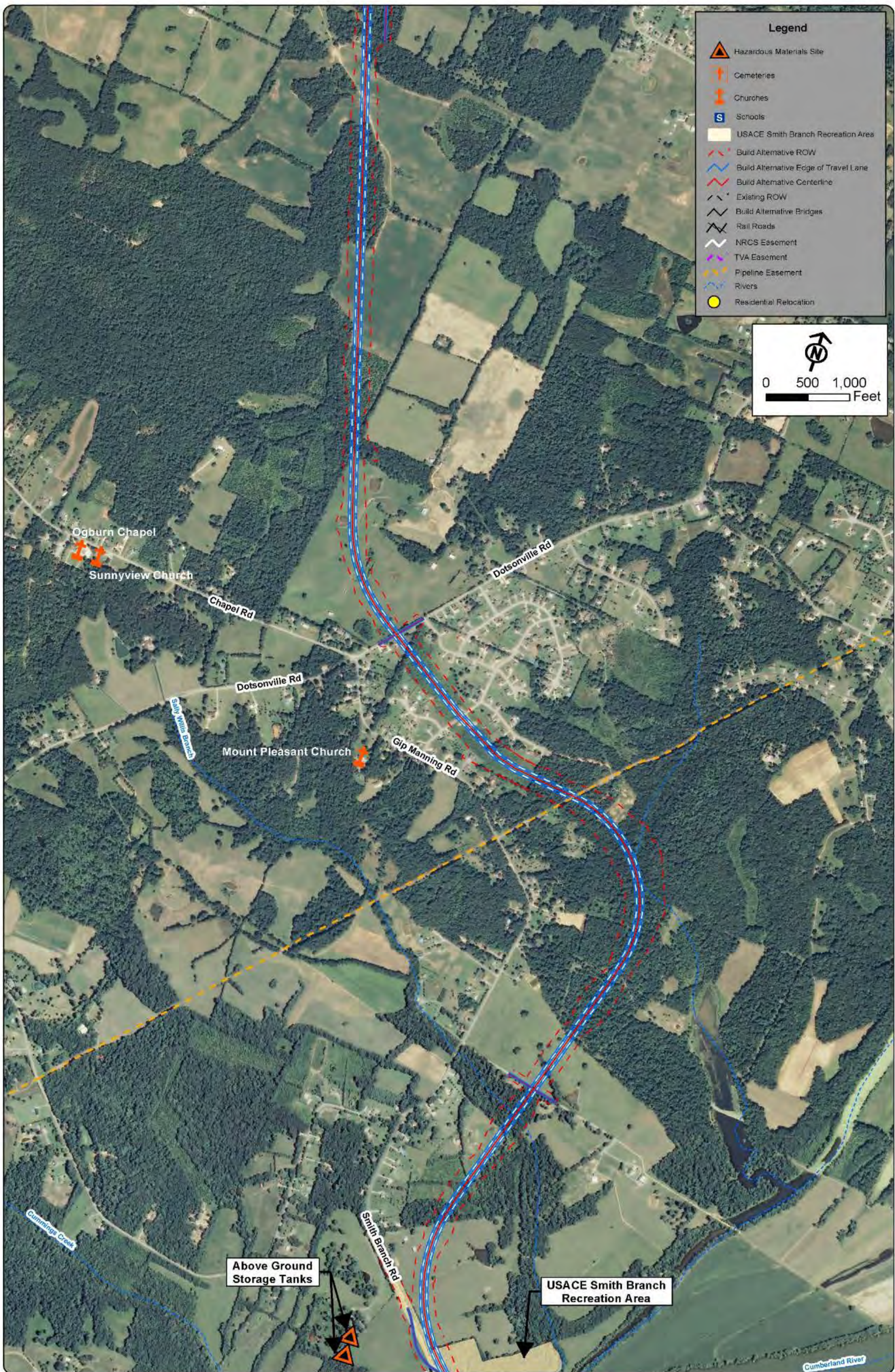


Figure 2-1b: Proposed SR 374 Build Alternative



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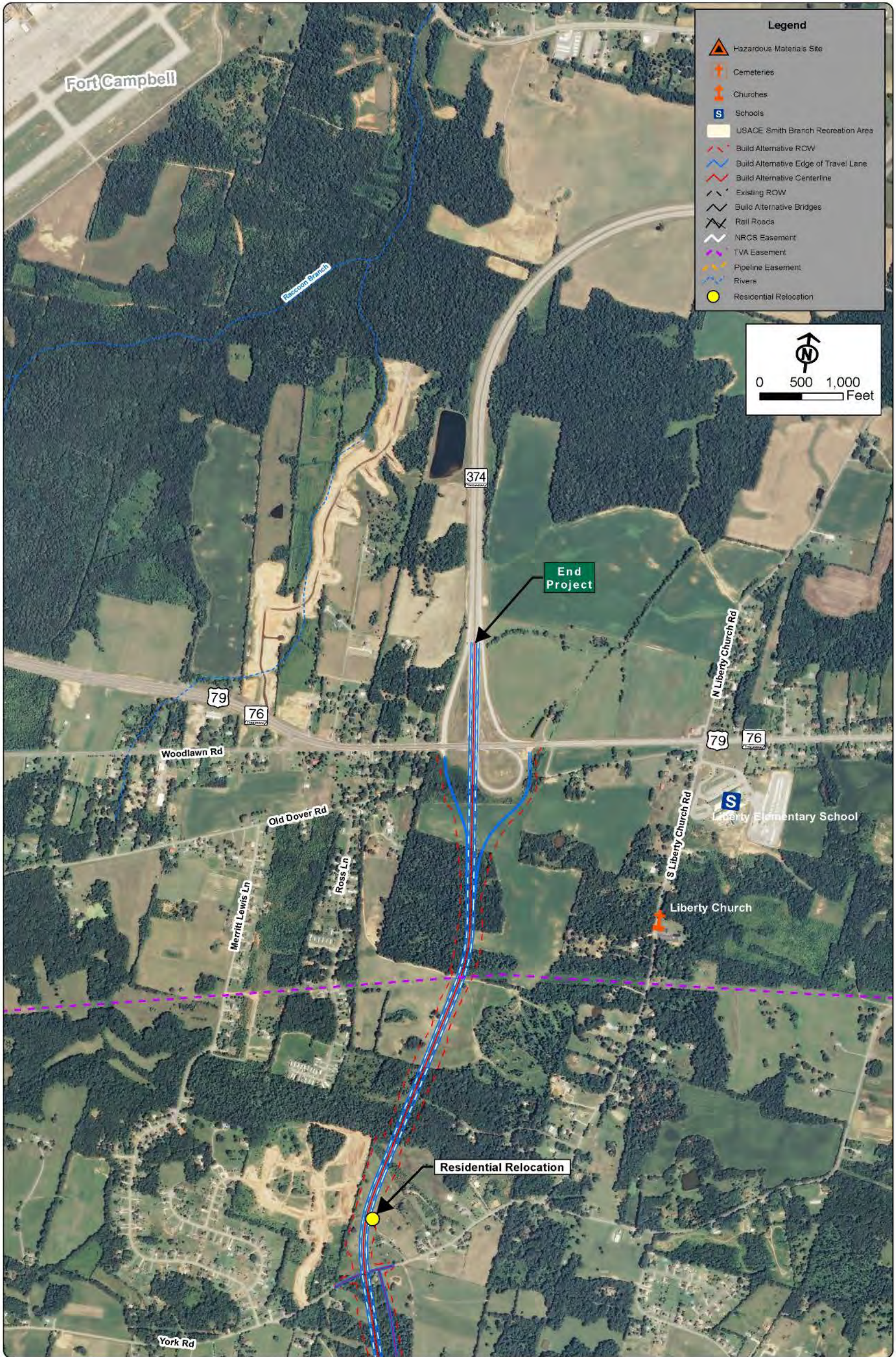
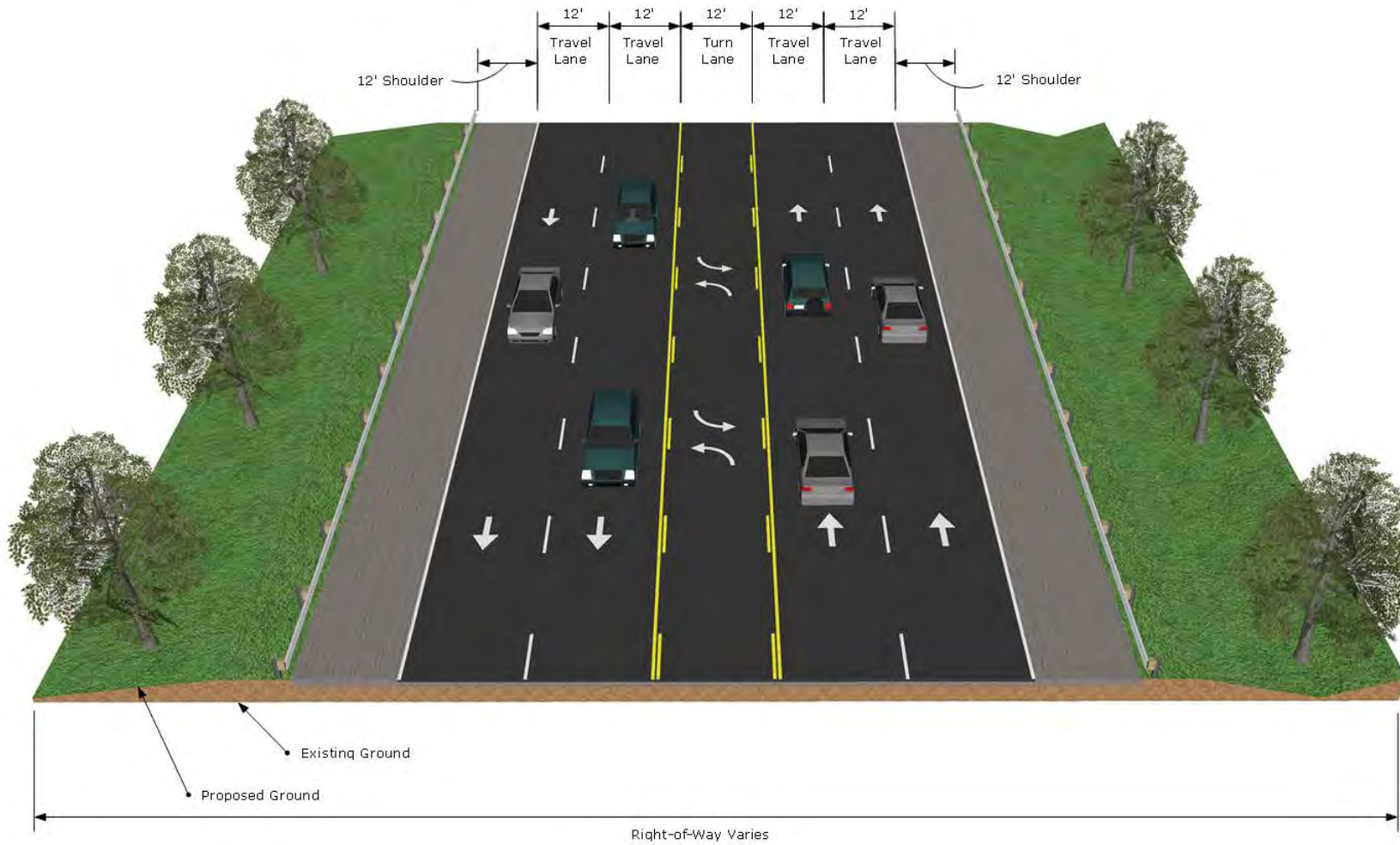


Figure 2-1c: Proposed SR 374 Build Alternative



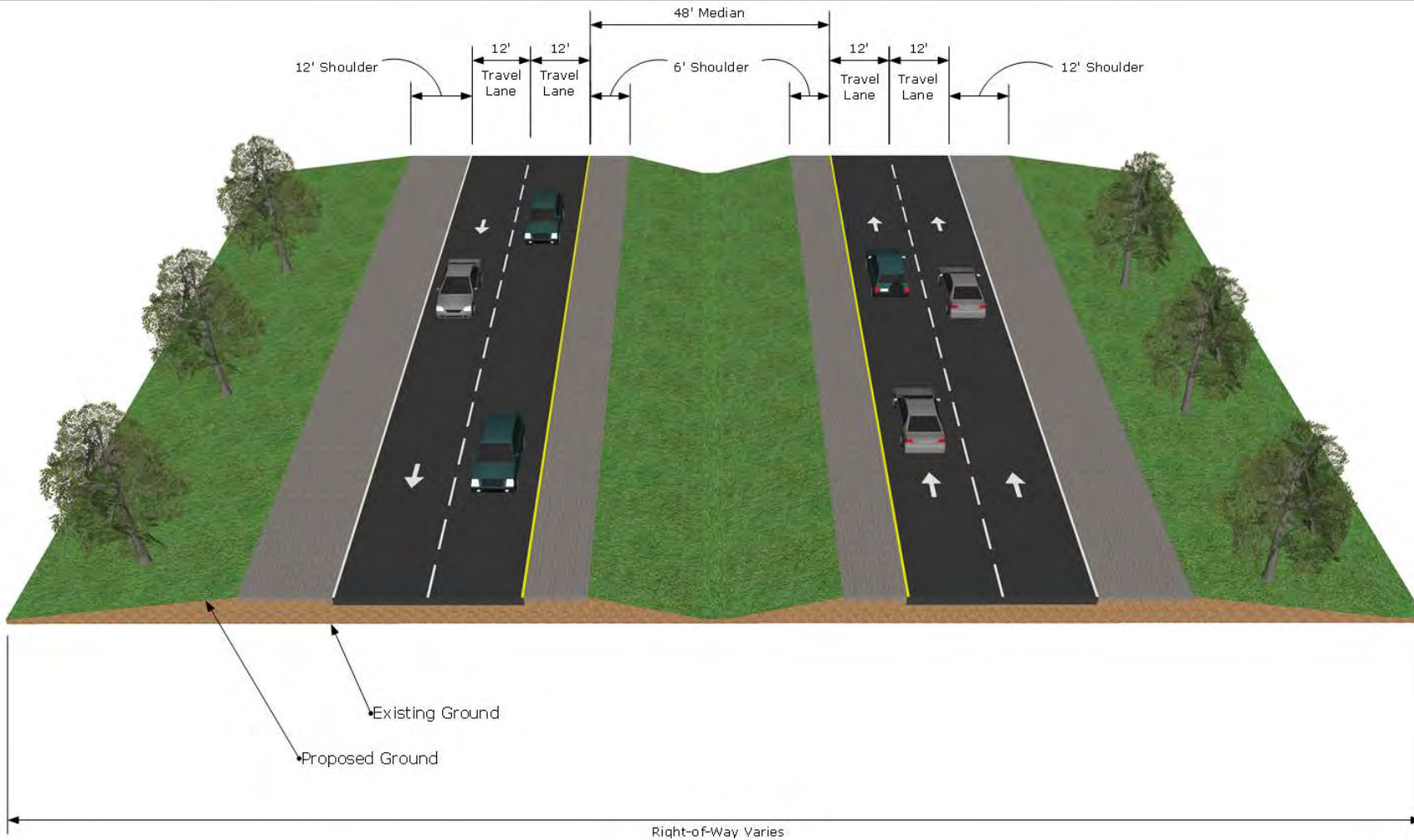
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**Figure 2-2: Typical Section Widening of SR 149 from River Road to a Point Approximately 1,700 feet West of Cumberland Heights Road**

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**Figure 2-3: Typical Section of New Location Roadway from SR 149 to SR 76/US 79 (Dover Road)**

## 2.3 Traffic

A summary of the traffic analysis for this project is presented in the sections below. More information can be found in the *November 2017 Traffic Operations Technical Memorandum* in Appendix B.

### 2.3.1 No Build Alternative

The traffic analysis prepared for this project evaluated the roadway network in the study corridor for the Base Year 2020 and Design Year 2040 No Build Alternative. The Base Year 2020 and Design Year 2040 No Build Alternative traffic are shown in Table 1-1 and Figure 1-2 of Chapter 1.

### 2.3.2 Build Alternative

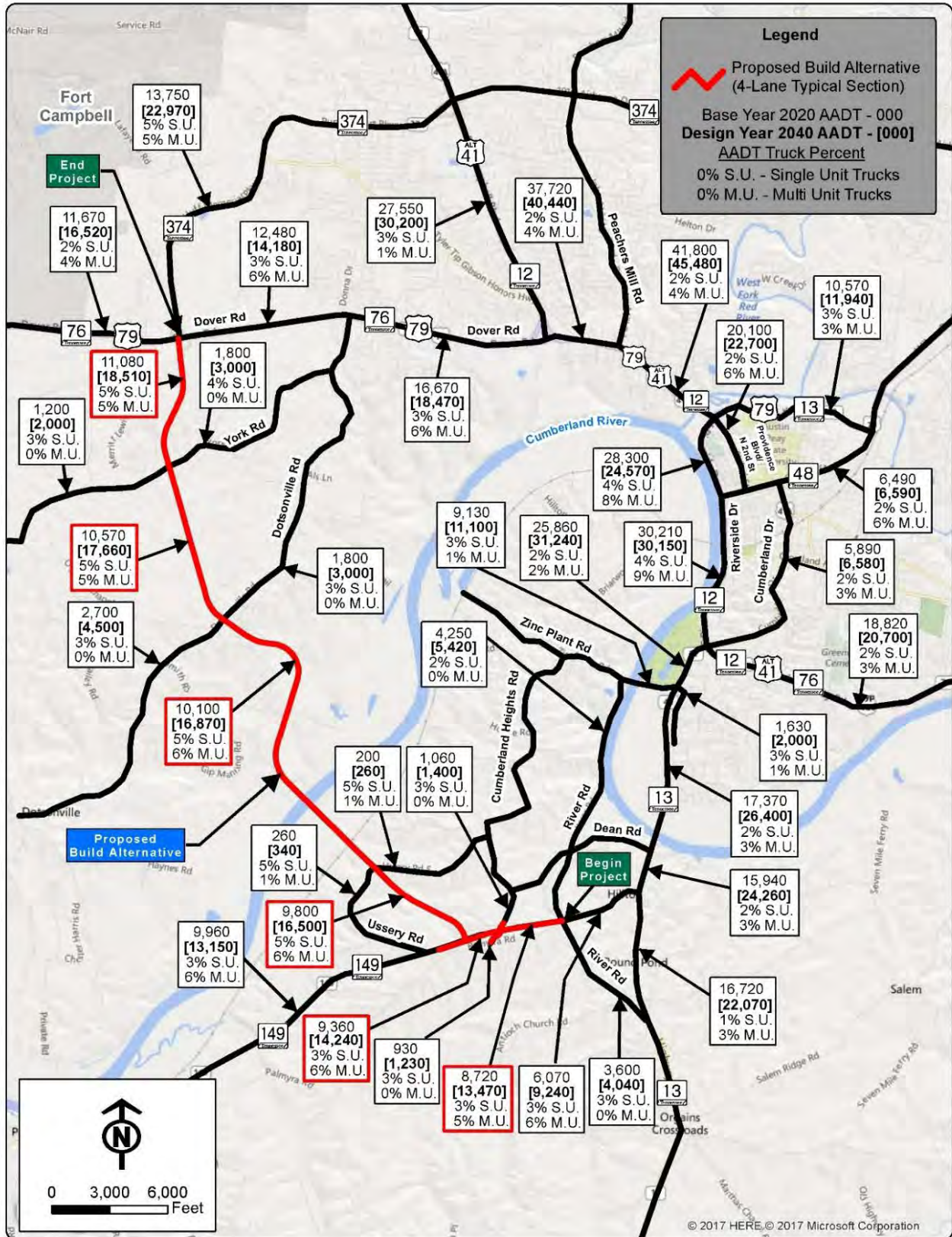
The traffic analysis prepared for this project evaluated the roadway network in the study corridor for the Base Year 2020 and Design Year 2040 Build Alternative conditions. Table 2-1 and Figure 2-4 summarize Base Year 2020 and the Design Year 2040 AADT for the Build Alternative.

**Table 2-1: Base Year 2020 and Design Year 2040 Annual Average Daily Traffic**

Roadway	Section	AADT 2020 (veh. /day)	AADT 2040 (veh. /day)
<b>SR 149</b>	West of SR 374	9,960	13,150
	SR 374 to Cumberland Heights Road	9,360	14,240
	Cumberland Heights Road to River Road	8,720	13,470
	River Road to SR 13 (Cumberland Drive)	6,070	9,240
<b>SR 13 (Cumberland Drive)</b>	SR 149 to Dean Road	15,940	24,260
	Dean Road to Zinc Plant Road	17,370	26,400
	Zinc Plant Road and SR 12 (Riverside Drive)	25,860	31,240
<b>SR 12 (Riverside Drive)</b>	SR 13 (Cumberland Drive) to SR 48 (College Street)	30,210	30,150
	SR 48 (College Street) to Providence Boulevard /N. 2 <sup>nd</sup> Street	28,300	24,570
	SR 12 (Riverside Drive) to Peachers Mill Road	41,800	45,480
	Peachers Mill Road to SR 76/US 79 (Dover Road)	37,720	40,440
<b>SR 76/US 79 (Dover Road)</b>	SR 12 (Riverside Drive) to Dotsonville Road	16,670	18,470
	Dotsonville Road to SR 374	12,480	14,180
	West of SR 374	11,670	16,520
<b>SR 374 (NEW)</b>	SR 76/US 79 (Dover Road) to York Road	11,080	18,510
	York Road to Dotsonville Road	10,570	17,660
	Dotsonville Road to Ussery Road	10,100	16,870
	Ussery Road to SR-149	9,880	16,500

Source: November 2017 Traffic Operations Technical Memorandum (Volkert)











Source: November 2017 Traffic Operations Technical Memorandum (Volkert)

Figure 2-4: Base Year 2020 and Design Year 2040 Build Alternative Traffic Volumes

## 2.4 Level of Service

The operational characteristics of an arterial roadway are described in terms of LOS, which ranges from A to F, with A representing the best-case conditions and F representing the worst-case conditions. Based on the *Highway Capacity Manual 2010*, LOS takes into account two variables for two lane facilities that are the passing capacity and the passing demand. For a four lane facility there are several characteristics that influence the LOS including vehicles entering from driveways and side roads, geometry of the roadway, and isolated signalized intersections. The LOS of a multi-lane roadway is determined by two factors: density and free-flow speed. Table 2-2 describes each LOS.

**Table 2-2: Level of Service Descriptions**

Level of Service*	Flow Condition Illustration	Description
A		Completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and by driver preferences.
B		Indicative of free flow, although the presence of other vehicles begins to be noticeable. Average travel speeds are the same as in LOS A, but drivers have less freedom to maneuver.
C		Range in which the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is now clearly affected by the presence of other vehicles.
D		Range in which ability to maneuver is severely restricted because of traffic congestion. Travel speed begins to be reduced by increasing volumes.
E		Operation at or near capacity and is quite unstable. Vehicles are operating with the minimum spacing at which uniform flow can be maintained.
F		Breakdown condition where maneuverability and speeds may drop to zero.

\*Level of service is based on definitions and illustrations from the Transportation Research Board's 2010 *Highway Capacity Manual*.

A summary of the LOS analysis for the proposed Build Alternative is summarized below. More information can be found in the *November 2017 Traffic Operations Technical Memorandum* in Appendix B.

The LOS analysis was performed for the project using the Base Year 2020 and Design Year 2040 No Build and Build Alternative traffic volumes. The LOS analyses for the proposed Build Alternative included the widening of SR 13 (Cumberland Drive) and SR 149 included in TDOT Project No. 63023-1236-14. TDOT Project No. 63023-1236-14 includes widening SR 13 (Cumberland Drive) and SR 149 from two lanes to four lanes with a center turn lane. The LOS analysis for the Build Alternative included constructing the four lane roadway from SR 149 to SR 76/US 79 (Dover Road). Table 2-3 shows results of the LOS analyses for the Base Year 2020 and Design Year 2040 No Build Alternative and Build Alternative conditions.



Table 2-3: Level of Service Analysis - Base Year 2020 and 2040 Design Year

Roadway	Section	No Build Alternative		Build Alternative	
		2020 LOS	2040 LOS	2020 LOS	2040 LOS
SR 149	West of Cumberland Heights Road	E	E	A	A
	Cumberland Heights Road to River Road	E	E	A	A
	River Road to SR 13 (Cumberland Drive)	A	A	A	A
SR 13 (Cumberland Drive)	SR 149 to Dean Road	B	C	B	C
	Dean Road to Zinc Plant Road	B	C	B	C
	Zinc Plant Road to SR 12 (Riverside Drive)	D	D	C	C
SR 12 (Riverside Drive)	SR 13 (Cumberland Drive) to SR 48 (College Street)	C	D	C	C
	SR 48 (College Street) to Providence Boulevard /N. 2 <sup>nd</sup> Street	C	D	C	C
	SR 12 (Riverside Drive) to Peachers Mill Road	D	E	D	D
	Peachers Mill Road to SR 76/US 79 (Dover Road)	D	E	D	D
SR 76/US 79 (Dover Road)	SR 12 (Riverside Drive) to Dotsonville Road	B	B	B	B
	Dotsonville Road to SR 374	B	B	B	B
	West of SR 374	A	B	A	B
SR 374 (new)*	York Road to SR 76/US 79 (Dover Road)	N/A	N/A	A	A
	Dotsonville Road to York Road	N/A	N/A	A	A
	Ussery Road to Dotsonville Road	N/A	N/A	A	A
	SR 149 to Ussery Road	N/A	N/A	A	A

Source: November 2017 Traffic Operations Technical Memorandum (Volkert)

\* = Not applicable. Roadway does not exist in the No Build Alternative condition.

### 3.0 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

This chapter describes the existing conditions and potential environmental impacts of the proposed Build Alternative and the No Build Alternative.

#### 3.1 Land Use

The existing land use along SR 149 and within the study corridor consists almost entirely of single-family residential properties. Commercial development at the intersection of River Road and SR 149 is the only exception. Cumberland Heights Elementary School is located outside the study corridor, near the intersection of Ussery Road and SR 149. Along the new location portion of the study corridor, the majority of the existing land is predominantly fragmented forests, primarily associated with stream corridors and steeper slopes, and agriculture, with some single-family residential. The USACE Smith Branch Recreation Area is also located along the study corridor along the west side of the Cumberland River (Figure 3-1).

The Clarksville-Montgomery County Regional Planning Commission (CMCRPC) 2004 *Clarksville-Montgomery County Land Use Study Update*, herein referred to as the *Land Use Study Update*, designates planning areas throughout the city and county. According to the *Land Use Study Update* the proposed project is located within two designated planning areas: the Woodlawn Planning Area and the Cumberland River South Planning Area. These planning areas are illustrated on Figure 3-1. The *Land Use Study Update* notes that future growth and development within both planning areas are constrained by below average availability of infrastructure and that the lack of sewer connectivity will inhibit future development.

In addition to the *Land Use Study Update*, the CMCRPC 2012 *Growth Plan* includes a county-wide 20-year growth plan that documents the existing land use, presents regulatory strategies to support and direct future growth, and provides guidance for transportation investments in Montgomery County and the city of Clarksville. The 2012 *Growth Plan* also establishes a planning growth boundary.

To categorize the land use within the planning growth boundary, the 2012 *Growth Plan* establishes three distinct planning areas in Montgomery County and within the City Limits of Clarksville. The three distinct areas are described as follows:

- 1) Urban Growth Boundary (UGB): Contains the corporate limits of a municipality and the adjoining territory where higher density residential, commercial, and industrial growth is expected to take place;
- 2) Planned Growth Area (PGA): Contains sections outside of the current municipality and urban growth boundaries where low to moderate density residential, commercial, and industrial growth is projected; and
- 3) Rural Area (RA): Contains land that is to be preserved for agriculture, recreation, forest, wildlife, and use other than high-density commercial or residential development.



Figure 3-1: Urban, Planned, and Rural Growth Boundaries Relative to the Build Alternative



Figure 3-1 illustrates the limits of the UGB, PGA, and RA relative to the study corridor. The majority of the study corridor is located within the boundaries of PGA #1 and PGA #2; however, portions of the roadway would also be located within both the UGB and the RA. According to the *2012 Growth Plan*, PGA #1 is the next area likely to receive access to a public sewer system.

**No Build Alternative:** The No Build Alternative would not result in the direct conversion of existing forest, agricultural, residential, or commercial land to a transportation use, nor would it alter the current land use trends in the study corridor. The No Build Alternative would not be consistent with local land use plans and policies.

**Build Alternative:** Construction of the proposed Build Alternative would convert approximately 311 acres of land to roadway right-of-way. The proposed Build Alternative would complement the anticipated future growth by providing an enhanced transportation facility.



*Rural land use along the new location section of the study corridor at Dotsonville Road.*

### 3.2 Social Conditions

Social conditions relate to the human environment and include people, housing, employment, and community resources.

#### 3.2.1 Existing Social Conditions

The project is located within three census tracts and five census block groups.

- Census Tract 1016
  - Block Group 1
  - Block Group 2
- Census Tract 1015
  - Block Group 3
  - Block Group 4
- Census Tract 1011.02
  - Block Group 1

See Figure 3-2 for the locations of the census tracts and block groups within the study corridor.

#### Population Trends and Forecasts

According to the 2000 and 2010 US Census, Montgomery County experienced approximately 30 percent growth in population between 2000 and 2010. Table 3-1 shows the 2000, 2010, and forecasted 2030 population for the state, county and census blocks that include the study corridor. The census blocks percent change in population between 2000 and 2010 varies from

negative 66 percent to 28,800 percent. According to the University of Tennessee Center for Business and Economic Research, the population of Montgomery County is forecast to increase by approximately 120.5 percent between 2000 and 2030. It is forecast to increase by approximately 72 percent between 2010 and 2030.

**Table 3-1: Population Data: Tennessee, Montgomery County, City of Clarksville and Block Groups.**

Geographic Area	Population			Percent Change	Percent Change
	2000	2010	2030	2000-2010	2010-2030
Tennessee	5,689,283	6,346,105	7,489,809	11.5%	18.0%
Montgomery County	134,768	172,331	297,098	27.9%	72.4%
City of Clarksville	103,455	132,929	NA**	28.5%	N/A**
CT 1011.02 BG 1 B 1003	67	23	N/A**	-65.7%	N/A**
CT 1011.02 BG 1 B 1005	87	55	N/A**	-36.8%	N/A**
CT 1015 BG 3 B 3001	2	578	N/A**	28,800.0%	N/A**
CT 1015 BG 3 B 3003	3	250	N/A**	8,233.3%	N/A**
CT 1015 BG 4 B 4001	N/A*	659	N/A**	N/A**	N/A**
CT 1015 BG 4 B 4008	N/A*	233	N/A**	N/A**	N/A**
CT 1016 BG 1 B 1003	174	70	N/A**	-59.8%	N/A**
CT 1016 BG 1 B 1030	221	126	N/A**	-43.0%	N/A**
CT 1016 BG 1 B 1032	19	186	N/A**	878.9%	N/A**
CT 1016 BG 2 B 2007	169	297	N/A**	75.7%	N/A**
CT 1016 BG 2 B 2008	0	39	N/A**	N/A***	N/A**
CT 1016 BG 2 B 2009	163	55	N/A**	-66.3%	N/A**

CT=Census Tract, BG=Block Group, B=Block, N/A = Not available.

\*CT 1015 BG 4 did not exist for the 2000 Census.

\*\*2030 population projections not available.

\*\*\*Percent change calculation not available when 2000 Population is 0.

Sources: US Census Bureau American Factfinder (2000 and 2010)

Tennessee State Data Center (2017)



Figure 3-2: Census Tracts and Block Groups



### Age

The percentage of Montgomery County population under the age of 18 is higher than that of the State of Tennessee (28 percent versus 23.6 percent). Two of the census blocks within the study corridor have a higher percent population under the age of 18 than Montgomery County (CT 1015 BG 4 B 4008 and CT 1016 BG 1 B 1030).

### Education

The percentage of high school graduates in Montgomery County is higher than that of the State of Tennessee (91 percent versus 84.9 percent). The percentage of college graduates in Montgomery County is comparable to that of the State of Tennessee (24 percent versus 24.4 percent).

### 3.2.2 Environmental Justice

The proposed project has been developed in accordance with Executive Order 12898, *Federal Actions to Address Environmental Justice (EJ) in Minority and Low-Income Populations*, which requires each federal agency to develop a strategy for its programs, policies and activities to avoid disproportionately high and adverse impacts on minority and low-income populations with respect to human health and the environment.

The project is located within five census block groups (Figure 3-3). The US Census Bureau American Factfinder 2010 data shows that the minority population for the city of Clarksville is 34.4 percent, while Montgomery County is 29 percent. Within the study corridor, minority populations range from 9.3 percent (CT 1016 BG 1) to 35.2 percent (CT 1011.02 BG 1).

As shown in Table 3-2, none of the five block groups within the study corridor exceeds the county average for minority populations by 10 percent or more. None of the minority populations are greater than 50 percent of the total population within any of the block groups. Block groups that satisfy either of these two criteria are considered to be EJ populations. Figure 3-3 shows the location of the block groups and respective minority percentages.

US Census Bureau American Community Survey (ACS) 2015 data was used to determine low-income populations (percent below poverty). According to the data, low-income populations for Montgomery County and the city of Clarksville are 15.8 percent and 17.4



#### *What is Environmental Justice?*

*Executive Order 12898, issued in 1994, requires that each federal agency, to the greatest extent by law, administer and implement its programs, policies, and activities that affect human health or the environment so as to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations. There are three basic principles of environmental justice:*

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



percent, respectively. Within the study corridor, low-income populations range from 2.8 percent (CT 1015 BG 3) to 38.9 percent (CT 1016 BG 2).

**Table 3-2: Minority Population Percentages and EJ Determination**

Minority Populations							
Census Tract (CT)/ Block Group (BG)	CT 1011.02 BG 1	CT 1015 BG 3	CT 1015 BG 4	CT 1016 BG 1	CT 1016 BG 2	Montgomery County	City of Clarksville
Minority (non-white) %	35.2%	17.5%	12.6%	9.3%	19.6%	29.0%	34.4%
Exceeds County % by 10 % or more?	No	No	No	No	No	N/A*	N/A*
> 50% of Block Group Population?	No	No	No	No	No	N/A*	N/A*
Meet EJ Criteria?	No	No	No	No	No	N/A*	N/A*

\*= Not applicable.

Source: US Census Bureau American Factfinder (2010)

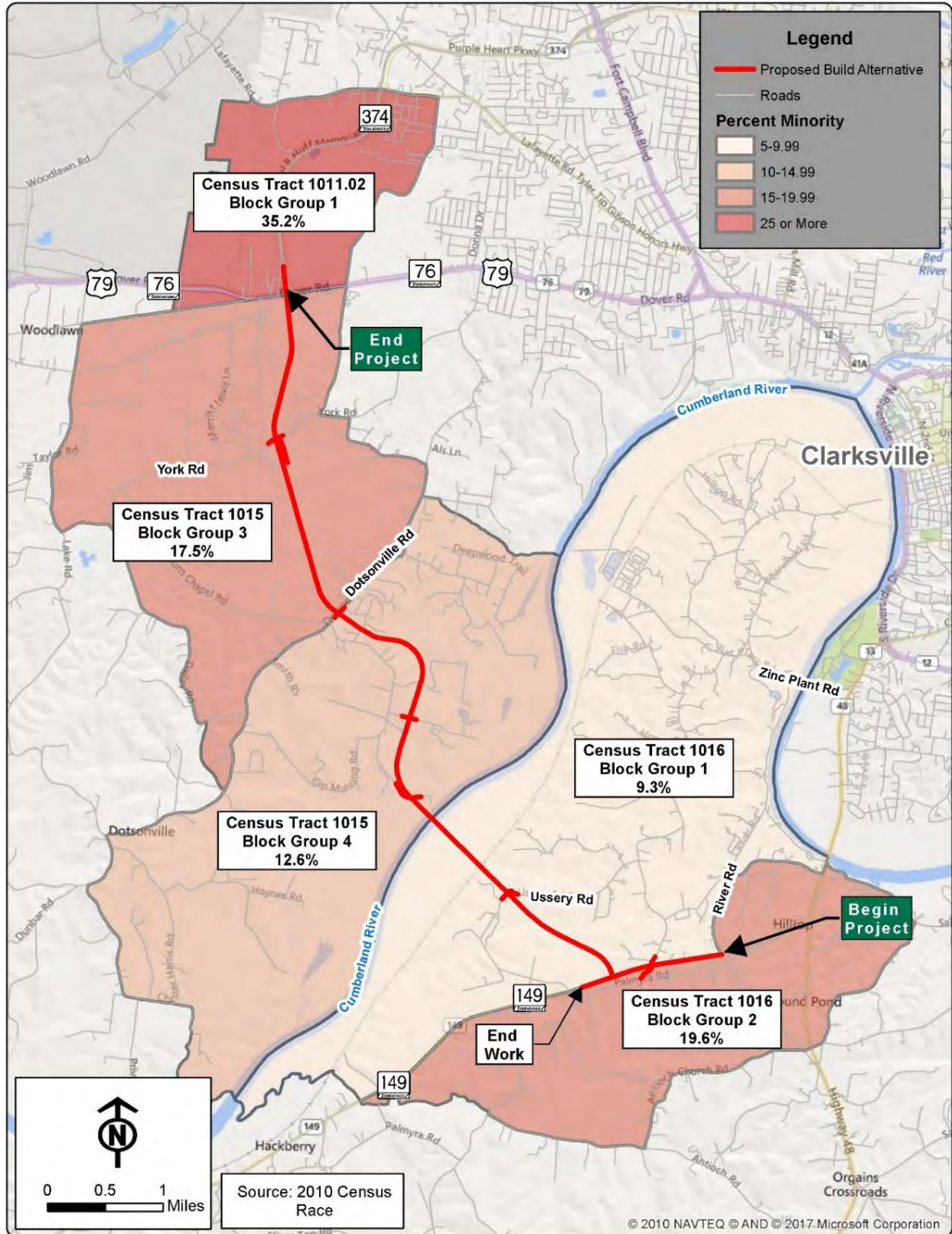


Figure 3-3: Minority Population Percentages by Block Group

As shown in Table 3-3, two of the five block groups within the study corridor exceed the county average for low-income populations by 10 percent or more. None of the low-income populations are greater than 50 percent of the total population for each block group. Block groups that satisfy either of these two criteria are considered to be EJ populations. Therefore, CT 1016, BGs 1 and 2 are considered EJ populations. Figure 3-4 shows the location of the block groups and respective low-income percentages.

**Table 3-3: Low-Income Population Percentages and EJ Criteria Determination**

Low-Income Populations							
Census Tract (CT)/ Block Group (BG)	CT 1011.02 BG 1	CT 1015 BG 3	CT 1015 BG 4	CT 1016 BG 1	CT 1016 BG 2	Montgomery County	City of Clarksville
<b>Low-Income %</b>	<b>25.3%</b>	<b>2.8%</b>	<b>6.1%</b>	<b>32.9%</b>	<b>38.9%</b>	<b>15.8%</b>	<b>17.4%</b>
Exceeds County % by 10% or more?	No	No	No	Yes	Yes	N/A*	N/A*
> 50% of Block Group Population?	No	No	No	No	No	N/A*	N/A*
Meet EJ Criteria?	No	No	No	Yes	Yes	N/A*	N/A*

\* = Not applicable.

Source: US Census Bureau American Community Survey 2015

### Environmental Justice Impacts

In summary, based on the demographic data provided by the 2010 US Census and the 2015 ACS, none of the census block groups within the study corridor meet the EJ criteria for minority populations. Two census block groups (CT 1016, BG 1 and BG 2) meet the EJ criteria for low-income populations.

The No Build Alternative would not result in any impacts to EJ populations within the study corridor.

The proposed Build Alternative would not result in any relocations within either of the identified EJ populations within the study corridor. Noise impacts were not predicted to occur for the proposed Design Year 2040 Build Alternative condition for CT 1016 BG 1 or CT 1016 BG 2. The Build Alternative would not result in a disproportionately high or adverse effect on minority or low-income populations. TDOT has made every effort to minimize impacts to the surrounding communities, including minority and low-income populations, within the study corridor. The safety and mobility improvements that would result if the Build Alternative is selected would benefit the local residents using the facility.



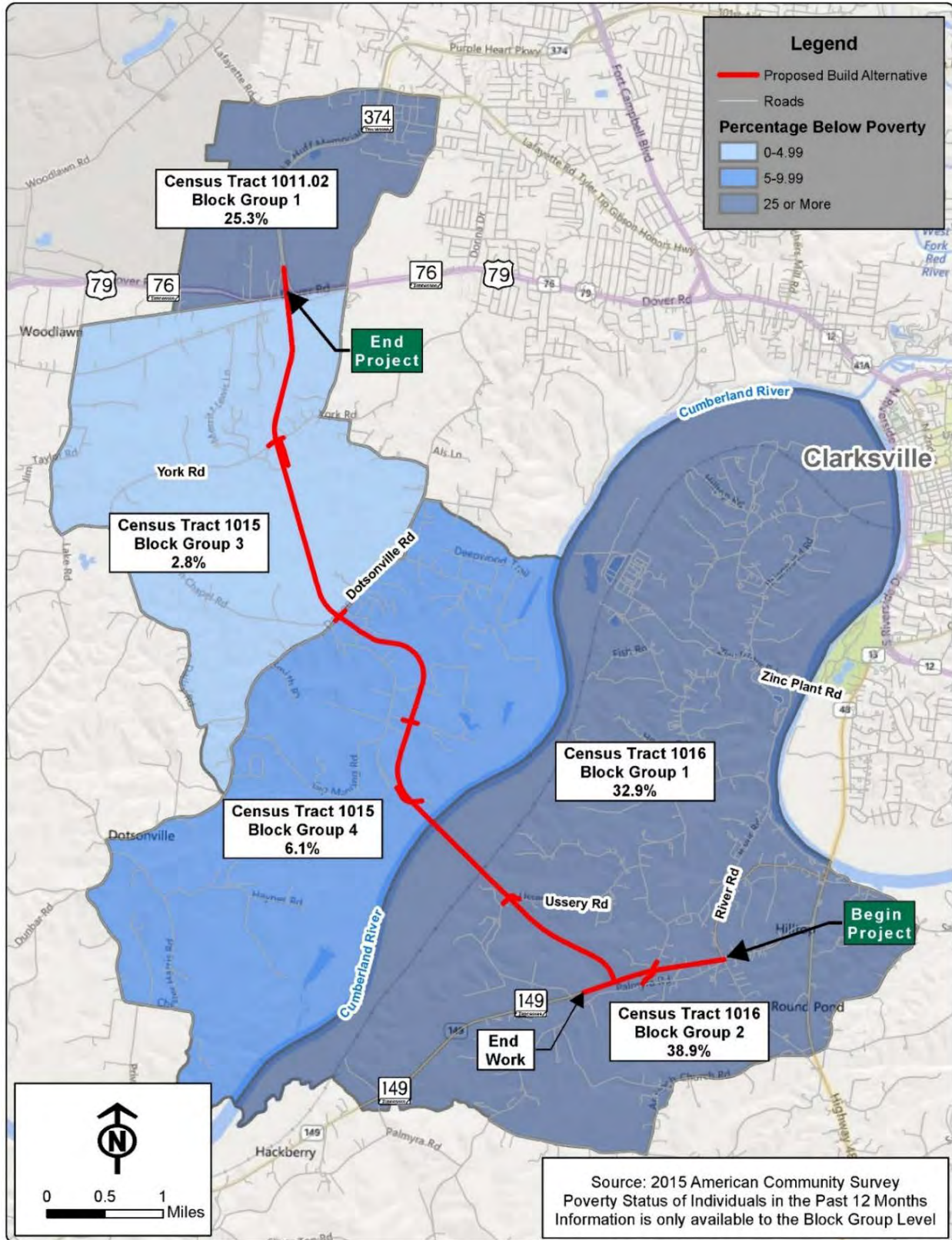


Figure 3-4: Low-Income Population Percentages by Block Group

This document has been sent to the TDOT Civil Rights Office for review. In accordance with Title VI of the Civil Rights Act of 1964, TDOT ensures that “no person shall be, on the grounds of race, color, or national origin, excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving federal assistance.”

Further, continued outreach to EJ populations and additional opportunities for their involvement in the project will occur. Public meetings have occurred as part of the project and at least one additional public hearing will take place upon approval of this EA. Minority and low-income populations will have an opportunity to review and comment on the Build Alternative and its effects.

### 3.2.3 Community Facilities, Resources and Services

Community facilities, resources, and services are important attributes of society and often serve to unify people that would otherwise not associate with one another. In order to identify these features within the study corridor field surveys were conducted and information was collected from the following resources: Montgomery County, city of Clarksville, Clarksville Area Chamber of Commerce, Clarksville-Montgomery County School System, Convention and Visitors Bureau, Industrial Development Board, Economic Development Council, the Clarksville River District Commission, the Tennessee Department of Labor and Workforce Development, and the Tennessee Advisory Commission on Intergovernmental Relations.

#### Fire Protection, Emergency, and Law Enforcement

The study corridor is served by the Montgomery County Volunteer Fire Service which provides service to areas of county outside the city of Clarksville. The Montgomery County Emergency Management Agency is located in Clarksville and is responsible for coordinating responses to natural and man-made disasters within the borders of Montgomery County. Law enforcement in Montgomery County is administered by the Montgomery County Sheriff’s Office.

#### Medical Services/Health Facilities

Gateway Medical Center of Montgomery County, located in Clarksville, is a 270-bed hospital that houses a 24-hour emergency department with around-the-clock physicians and medical staff. Various other health clinics exist in downtown Clarksville.

#### Schools

Cumberland Heights Elementary School is located near the study corridor at 2093 Ussery Road South (see Figure 2-1a, Chapter 2) and Liberty Elementary School is located in the vicinity of the study corridor at 849 South



*Cumberland Heights Elementary School located near the study corridor along Ussery Road.*

Liberty Church Road (see Figure 2-1c, Chapter 2).

### Shopping

The majority of the commercial establishments exist in the city of Clarksville which is located east of the study corridor.

### Churches

No churches would be displaced by the proposed project. Churches located in the vicinity of the study corridor include Martin Chapel (see Figure 2-1a, Chapter 2) and Mount Pleasant Church (see Figure 2-1b, Chapter 2).

### Cemeteries

No cemeteries would be displaced by the Build Alternative. One unnamed cemetery is located within the study corridor adjacent to the proposed right-of-way (see Figure 2-1a, Chapter 2) and two cemeteries are located in the vicinity of the project (see Figures 2-1a, Chapter 2).

## 3.2.4 Social Impacts

No Build Alternative: The No Build Alternative would not result in any immediate, direct adverse impacts to established residents, neighborhoods or communities. However, the beneficial impacts of the proposed project would also not be realized under the No Build Alternative. The No Build Alternative would not meet the purpose and need of the project in terms of alleviating traffic, including truck traffic through downtown Clarksville. This would result in continued decreases in LOS on SR 13 (Cumberland Drive), SR 149, SR 12 (Riverside Drive), and SR 12/US 79/US 41A (Providence Boulevard). The reduced LOS and travel efficiency on local roadways could adversely impact response times for emergency vehicles and travel times for residents. Access to area schools, churches, shopping centers, and parks could also be adversely impacted as congestion increases.

Build Alternative: The Build Alternative is not anticipated to represent a barrier to social interaction. Construction of the proposed project would result in temporary or minor impacts to residents along the study corridor. The project is anticipated to result in one residential relocation, which is not expected to affect community cohesion. If the Build Alternative is selected, access to the new roadway at major cross streets is anticipated to benefit community cohesion by providing improved access to community resources, places of work, and schools within and outside of the study corridor and reduced traffic congestion in downtown Clarksville.

As discussed in Section 3.2.2, the Build Alternative would not result in a disproportionately high or adverse effect to minority or low-income populations. TDOT has made efforts to minimize impacts to the surrounding communities, including minority and low-income populations, by implementing minor shifts to the Build Alternative in order to minimize displacements.

### 3.3 Economic Conditions

#### 3.3.1 Existing Economic Conditions

Montgomery County is within the Clarksville Metropolitan Statistical Area (MSA), which is comprised of Montgomery and Stewart Counties in Tennessee and Christian and Trigg Counties in Kentucky. The Tennessee Department of Labor and Workforce Development estimates that the labor force in the Clarksville MSA for September 2017 was 111,320, of which 107,000 people were employed and 4,310 people were unemployed. For this same period, the seasonally adjusted unemployment rate in the Clarksville MSA was 3.9 percent. This rate is above the state unemployment rate of 3.0 percent and below the national unemployment rate of 4.2 percent<sup>1</sup>.

The three largest employment categories in Montgomery County are retail trade, accommodations and food services, and local government (Table 3-4). The top business and industrial employers in the region are listed in Table 3-5.

**Table 3-4: 2016 Employment Percentages of the Top 10 Industries in Montgomery County**

Industry*	Montgomery County**
Retail Trade	16.9%
Accommodation and Food Services	15.1%
Local Government	14.0%
Health Care and Social Services	12.3%
Manufacturing	8.0%
Administrative and Support and Waste Management	6.1%
Construction	3.6%
State Government	3.6%
Federal Government	3.2%
Finance and Insurance	2.5%

\*This table shows the top 10 industries in the county, not all industries.

\*\*Percentages for county may not total to 100%.

Source: Tennessee Advisory Commission on Intergovernmental Relations, 2018.

<sup>1</sup> Source: Tennessee Department of Labor and Workforce Development, September 2017



**Table 3-5: Top Business / Industrial Employers in the Region**

Employer	Number of Employees
Clarksville-Montgomery County School System	4,000
Tennova Healthcare	1,150
Trane Company	1,100
City of Clarksville	1,050
Austin Peay State University	860
Montgomery County Government	850
Agero	750
Convergys Corporation	600
Akebono	500
Jostens, Printing and Publishing Div.	400

Source: Clarksville Chamber of Commerce, 2017

The top institutional employers in the region are listed in Table 3-6. Fort Campbell is the largest employer in the Clarksville MSA. Fort Campbell is located in northern Montgomery County and in Christian County, Kentucky. Fort Campbell is the home of the 101<sup>st</sup> Airborne Division, the 5<sup>th</sup> Special Forces Group, and the 160<sup>th</sup> Special Operations Aviation Regiment.

**Table 3-6: Top Institutional Employers in the Region**

Employer	Number of Employees
Fort Campbell Military Reservation	> 35,000
Clarksville-Montgomery County School System	4,000
Austin Peay State University	860

Source: Clarksville Chamber of Commerce, 2017

As of 2017, Fort Campbell had 25,791 active duty soldiers, 56,355 family members, 4,457 on-post quarters, 8,677 civilian employees, 2,879 contract employees, and a total of 155,591 supported population (retirees, retiree family members and reserve). As of 2014 the annual total employee compensation (including direct payroll, the value of housing and in-kind services, health care, pension and other benefits) was \$2.9 billion, which includes active duty, civilians, and retirees<sup>2</sup>. Downtown Clarksville is also home to the 170 acre Austin Peay State University. The University is both a major employer in the community and an economic generator, stemming from its student enrollment of 10,344 in 2016<sup>3</sup>.

### 3.3.2 Economic Impacts

**No Build Alternative:** Under the No Build Alternative, traffic, including heavy trucks, would continue to travel through downtown Clarksville. This would result in decreases in LOS on SR 13

<sup>2</sup> Source: Kentucky Commission on Military Affairs, 2014

<sup>3</sup> Source: Austin Peay State University, 2018

(Cumberland Drive), SR 149, SR 12 (Riverside Drive), and SR 12/US 79/US 41A (Providence Boulevard). As the population in Clarksville and surrounding Montgomery County continues to increase, it is anticipated that the existing transportation network would become more congested. This has the potential to impact local and regional economic growth.

**Build Alternative:** According to the US Census Bureau's ACS, the mean travel time to work for workers in Montgomery County is approximately 24 minutes<sup>4</sup>. Once constructed, the project would provide a direct connection between SR 149 and SR 76/US 79 (Dover Road) that is roughly half the distance of the existing route through downtown Clarksville. According to the *2017 Traffic Operations Technical Memorandum* (Appendix B), on the roadway segments analyzed in the downtown area, approximately 46,000 daily trips would be diverted in 2020 and approximately 57,500 daily trips would be diverted in 2040. The diverted downtown trips would be seen from the commuters and travelers driving to and from areas located south and west of Clarksville being given the option of a more direct route. In addition, it is expected that the new highway would also divert traffic including heavy truck traffic away from downtown Clarksville. As a result, it is expected that the improved connectivity and reduced congestion in Clarksville would effectively reduce commuter travel time and delay. The traffic analysis results discussed in Chapter 2 show that the LOS of several roadway segments would improve under the Design Year 2040 Build Alternative condition. The roadway segments that would have an improved LOS include:

- SR 13 (Cumberland Drive) from SR 12 (Riverside Drive) to Zinc Plant Road improve from LOS D (Design Year 2040 No Build Alternative) to LOS C (Design Year 2040 Build Alternative),
- SR 12 (Riverside Drive) from SR 13 (Cumberland Drive) to SR 48 (College Street) improve from LOS D (Design Year 2040 No Build Alternative) to LOS C (Design Year 2040 Build Alternative),
- SR 12 (Riverside Drive) from SR 48 (College Street) to Providence Blvd/N. 2<sup>nd</sup> Street improve from LOS D (Design Year 2040 No Build Alternative) to LOS C (Design Year 2040 Build Alternative),



*The City of Clarksville welcome sign along SR 76/US 79 (Dover Road).*

<sup>4</sup> Source: US Census Bureau American Community Survey, 2015

- SR 12 (Riverside Drive) from Peachers Mill Road to SR 76/US 79 (Dover Road) improves from LOS E (Design Year 2040 No Build Alternative) to LOS D (Design Year 2040 Build Alternative).

The improved connectivity also has the potential to benefit the local and regional economy.

### 3.4 Relocations

The Build Alternative was designed to minimize community impacts, including residential and business displacements. A Conceptual Stage Relocation Plan (CSRP) was prepared by the TDOT Right-of-Way Division to identify potential residential, business and public/non-profit displacements (relocations) that could potentially occur as a result of the Build Alternative. The CSRP report is included in Attachment II and the annotated plans are included in Appendix D.

#### 3.4.1 Residential Relocations

No Build Alternative: The No Build Alternative would not require any residential relocations.

Build Alternative: Based on the findings of the CSRP, it is anticipated the Build Alternative would displace one single-family residence, a mobile home. The location of the single-family residence is illustrated on Figure 2-1c, Chapter 2.

#### 3.4.2 Business Relocations

No Build Alternative: The No Build Alternative would not require any business relocations.

Build Alternative: Based on the findings of the CSRP, it is anticipated that the Build Alternative would not result in any business relocations.

#### 3.4.3 Non-profit Organization Relocations

No Build Alternative: The No Build Alternative would not require the relocation of any non-profit organizations.

Build Alternative: Based on the findings of the CSRP, the Build Alternative would not result in the relocation of any non-profit organizations.

#### 3.4.4 Availability of Replacement Housing

A survey of the Montgomery County real estate market in the study corridor was conducted to determine the availability of residential real estate for either sale or lease. Results of the survey indicate that the supply of available property in the vicinity of the project appears to be adequate to satisfy the relocation requirements of the



*What is Last Resort Housing? Last Resort Housing is used by TDOT 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 Act of 1970.*

residential displacement. Because sufficient replacement property appears to be available, the need for Last Resort Housing is not anticipated at this time.

### 3.4.5 Available Relocation Assistance

To minimize the unavoidable effects of right-of-way acquisition and displacement of people and businesses, the right-of-way acquisition and relocation program will be administered in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Act of 1970* and the Tennessee *Uniform Relocation Assistance Act of 1972*, as amended. Relocation resources are available to all residential and business relocatees without discrimination.

TDOT will provide advance notification of impending right-of-way acquisition and, before acquiring right-of-way, will have all properties appraised on the basis of comparable sales and land values in the area. Owners of properties from which right-of-way would be acquired will be offered and paid fair market value for their property. Displacees will be interviewed during the acquisition phase, and more specific solutions will be made at the time all the facts are gathered. Since sufficient replacement property appears to be available, the need for Last Resort Housing is not anticipated at this time.

TDOT will assign a relocation agent to the project to carry out the relocation assistance and payments program. A relocation agent will contact the household to be relocated to determine individual needs and desires and to provide information, answer questions, and give help in finding replacement property. Relocation services and payments are provided without regard to race, color, religion, sex, or national origin.

## 3.5 Air Quality

An air quality analysis for the project was conducted in accordance with Section 5.3.5 (Air Quality) of the *Tennessee Environmental Procedures Manual*. The purposes of this analysis are to address potential air quality effects including transportation conformity, Mobile Source Air Toxics (MSATs), construction air quality, and indirect and cumulative effects.

### 3.5.1 Transportation Conformity

The United States Environmental Protection Agency (USEPA) establishes allowable concentrations and exposure limits for various “criteria” pollutants called the National Ambient Air Quality Standards (NAAQS). The criteria pollutants include carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), sulfur oxides (SO<sub>x</sub>), and lead (Pb).

In accordance with the *Clean Air Act Amendments of 1990* (CAAA of 1990), the USEPA designates areas that do not meet the NAAQS as “nonattainment” areas. Once a nonattainment area meets the NAAQS, it is redesignated as a “maintenance” area.

CAAA require that transportation plans, programs, and projects in nonattainment or maintenance areas that are funded or approved by the FHWA conform to the State

Implementation Plan (SIP), which represents the State's plan to either achieve or maintain the NAAQS for a particular pollutant.

Montgomery County was previously a maintenance area for the 1997 ozone NAAQS and is an attainment area for the 2008 ozone NAAQS. USEPA revoked the 1997 ozone NAAQS in 2015, thus eliminating the transportation conformity requirements for projects in Montgomery County. The U.S. Court of Appeals for the D.C. Circuit recently issued a decision in *South Coast Air Quality Management District v. EPA* (No 15-1115) that struck down portions of the 2008 Ozone NAAQS SIP Requirements Rule including the anti-backsliding requirements associated with the revocation of the 1997 ozone NAAQS.

On April 23, 2018, FHWA issued *Interim Guidance on Conformity Requirements for the 1997 Ozone NAAQS* that provides direction on planning and project development actions for FHWA projects while USEPA develops guidance. FHWA's guidance indicates that NEPA approvals for projects in affected areas can proceed if they are included in the existing Metropolitan Plan and TIP. The SR-374 project is included in the current *Clarksville Urbanized Area Metropolitan Planning Organization FINAL Transportation Improvement Program FY 2017-2020 and 2040 Metropolitan Transportation Plan* (adopted February 20, 2014, amended January 19, 2017) as summarized in Table 3-7.

The Plan specifies SR 374 as 4-lanes; however, the TIP shows a 2-lane facility on a 4-lane right-of-way. The MPO is currently updating the TIP and LRTP and will change the TIP descriptions to match. Once conformity determinations are made for the TIP and LRTP, a conformity determination can be made for the project.

### 3.5.2 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, December 6, 2012, and most recently on October 18, 2016 by FHWA's *Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*, herein referred to as the Updated Interim Guidance. The purpose of FHWA's Updated Interim Guidance is to advise on when and how to analyze MSATs in the NEPA process for highways. This guidance is interim, because MSAT science is still evolving. As the science progresses, FHWA will revise and update the guidance.

The qualitative analysis presented below provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various 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*. Appendix E provides additional MSATs information.

FHWA's guidance groups projects into the following categories:

- Exempt Projects and Projects with *No Meaningful Potential MSAT Effects*
- Projects with *Low Potential MSAT Effects*

- Projects with *Higher Potential MSAT Effects*

The guidance provides examples of Projects with *Low Potential MSAT 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.

The Build Alternative includes the construction of SR 374 on a new alignment and the widening of SR 149 from two to five lanes. Design year traffic projections on SR 374 are projected to be between 16,500 and 18,510 vehicles per day (vpd). These volumes are substantially lower than the FHWA criterion. Therefore, the project meets the criteria for a *Project with Low Potential MSAT Effects*.

For both the Build and No 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. The purpose of the project is to enhance the corridor linkages and provide efficient transportation options around Clarksville. The enhanced corridor links are comprised of SR 374, SR 149, SR 13 (Cumberland Drive), and US 41A.

The VMTs for the No Build and Build Alternatives were determined for the affected roadway network as shown in Table 3-7. Appendix E includes the link-by-link VMT analysis. As shown, the projected VMT for the No Build and Build Alternatives are 617,799 and 690,191 miles, respectively. The project will reduce VMT on the existing roadway network; however, the construction of SR-374 is projected to induce new travel and increase total VMT by approximately 12 percent.

**Table 3-7: Design Year 2040 VMT Projections on Affected Roadway Network**

Alternative	Phase II
Design Year 2040 No Build Alternative	617,799
Design Year 2040 Build Alternative	690,191
<b>Change</b>	<b>12%</b>

Any increase in emissions due to the increased VMT would be offset somewhat by lower MSAT emission rates due to increased speeds; according to the USEPA's MOVES2014 model, emissions of all the priority MSAT decrease as speed increases. Travel speeds for the Build Alternative are expected to be higher than for the No Build Alternative.

Also, regardless of the alternative, emissions are virtually certain to be lower than present levels in the design year as a result of USEPA's national control programs that are projected to reduce annual MSAT emissions by over 90 percent from 2010 to 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 USEPA-projected reductions is so great (even



after accounting for VMT growth) that MSAT emissions in the study corridor are likely to be lower in the future than they are today.

The new travel lanes contemplated for the Build Alternative will have the effect of moving some traffic closer to nearby sensitive land uses; therefore, there may be localized areas where ambient concentrations of MSATs would be higher under the Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced at locations near the segments of SR 374 that will be constructed on new alignment and near the segments of SR 149 that will be widened. However, the magnitude and duration of these potential increases cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. Further, future MSAT emissions are expected to be substantially lower in the design year than today under all alternatives due to implementation of the USEPA vehicle and fuel regulations.

In sum, the Build Alternative is projected to increase VMT in the design year relative to the No Build Alternative. However, increased speeds and the USEPA's vehicle and fuel regulations are projected to offset any VMT increases and reduce current MSAT levels.

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

### 3.5.3 Construction Air Quality

Construction activities would generate intermittent and temporary construction-related pollutant emissions and dust. The contractor should follow the procedures in TDOT's *Standard Specifications for Road and Bridge Construction* as amended by the most recent applicable supplements to minimize these effects. Construction equipment shall be maintained, repaired and adjusted to keep it in full satisfactory condition.

## 3.6 Noise

A noise analysis for the project was completed in accordance with the FHWA noise regulation, *Procedures for Abatement of Highway Traffic and Construction Noise*, 23 CFR 772, and the TDOT's *Policy on Highway Traffic Noise Abatement*, herein referred to as TDOT's *Noise Policy*, effective July 2011. Appendix F includes the Noise Technical Report for the project.

### 3.6.1 Traffic Noise Terminology

Traffic noise levels are expressed in terms of the hourly, A-weighted equivalent sound level in decibels (dBA). A sound level represents the level of the rapid air pressure fluctuations caused by sources (such as traffic) that are heard as noise. A decibel is a unit that relates the sound pressure of a noise to the faintest sound the young human ear can hear.

The A-weighting refers to the amplification or attenuation of the different frequencies of the sound (subjectively, the pitch) to correspond to the way the human ear "hears" these

frequencies. Generally, when the sound level exceeds the mid-60 dBA range, outdoor conversation in normal tones at a distance of three feet becomes difficult. Figure 3-5 shows some common indoor and outdoor sound levels.

A 9-10 dB increase in sound level is typically judged by the listener to be twice as loud as the original sound while a 9-10 dB reduction is judged to be half as loud. Doubling the number of sources (i.e. vehicles) will increase the hourly sound level by approximately 3 dB, which is usually the smallest change in hourly A-weighted traffic noise levels that people can detect without specifically listening for the change.

Because most environmental noise fluctuates from moment to moment, it is standard practice to condense data into a single level called the equivalent sound level ( $L_{eq}$ ). The  $L_{eq}$  is a steady sound level that would contain the same amount of sound energy as the actual time-varying sound evaluated over the same time-period. The  $L_{eq}$  averages the louder and quieter moments, but gives much more weight to the louder moments in the averaging. For traffic noise assessment purposes,  $L_{eq}$  is typically evaluated over the worst one-hour period and is defined as  $L_{eq}(1h)$ .

The term insertion loss (IL) is generally used to describe the reduction in  $L_{eq}(1h)$  at a location after a noise barrier is constructed. For example, if the  $L_{eq}(1h)$  at a residence before a barrier is constructed is 75 dBA and the  $L_{eq}(1h)$  after a barrier constructed is 65 dBA, then the insertion loss would be 10 dB.

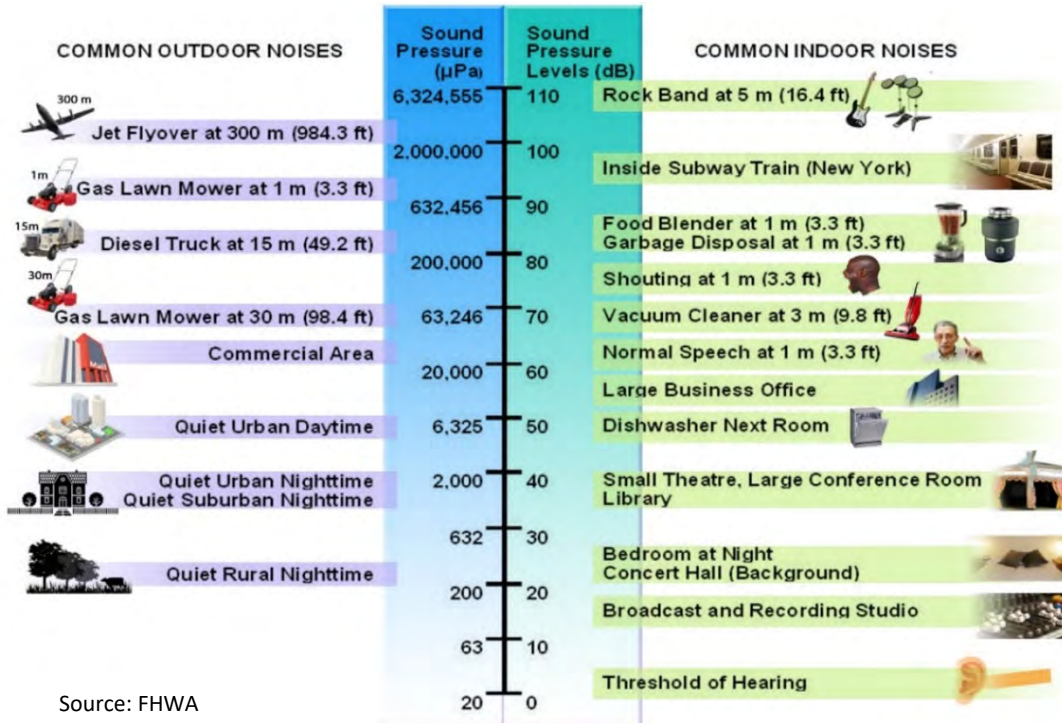


Figure 3-5: Common Sound Levels

### 3.6.2 Criteria for Determining Noise Impacts

Noise impacts are determined by comparing future projected noise levels: (1) to a set of Noise Abatement Criteria (NAC) for a particular land use category, and (2) to existing noise levels.

The FHWA noise regulation and TDOT's *Noise Policy* state that traffic noise impacts require consideration of abatement when worst-hour noise levels approach or exceed FHWA's NAC listed in Table 3-8. TDOT's *Noise Policy* defines "approach" as one decibel below the NAC, or 66 dBA for Activity Category B (residential) and C land uses.

**Table 3-8: FHWA Noise Abatement Criteria**

Activity Category	L <sub>Aeq</sub> (1h) dBA	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 <sup>(1)</sup>	67	Exterior	Residential.
C <sup>(1)</sup>	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 <sup>(1)</sup>	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.

(1) Includes undeveloped lands permitted for this activity category.

The FHWA noise regulation and TDOT's *Noise Policy* also define impacts to occur if there is a substantial increase in design year noise levels. Table 3-9 presents TDOT's criteria to define substantial noise increase.

**Table 3-9: Substantial Noise Level Increase**

Existing Noise Level (dBA) <sup>(1)</sup>	Noise Level Increase (dB) <sup>(2)</sup>
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.

### 3.6.3 Noise-Sensitive Land Uses

The study identified thirteen areas of noise-sensitive land uses called Noise Analysis Areas (NAAs). Table 3-10 summarizes the land uses in each NAA. The Noise Technical Report shows the NAA locations.

**Table 3-10: Noise Analysis Areas**

Noise Analysis Area	Description	Activity Category	NAC
<b>SR 149 to Dotsonville Road</b>			
1	Residences on Palmyra Road, Cumberland Heights Road, and Luran Road near existing SR 374.	B	67
2	Residences on Ussery Road near the new alignment.	B	67
3	Residence on Smith Branch Road and Smith Branch Recreation Area (boat launch) near the new alignment.	B, C	67
4	Residences on Smith Branch Road and Gip Manning Road near the new alignment.	B	67
5	The Southwinds subdivision (Roscoe Drive, Brandi Phillips Road, Trey Phillips Road, and Barney Lane) east of the new alignment south of Dotsonville Road.	B	67
6	Residences on Gip Manning Road west of the new alignment south of Dotsonville Road.	B	67
7	The Southwinds subdivision (Roscoe Drive and Rowdy Drive) and residences on Dotsonville Road west of the new alignment south of Dotsonville Road.	B	67
<b>Dotsonville Road to SR 76/US 79 (Dover Road)</b>			
8	Residences on Ogburn Chapel Road west of the new alignment north of Dotsonville Road.	B	67
9	Residences on York Road east of the new alignment.	B	67
10	Residences on York Road and C Booth Road west of the new alignment.	B	67
11	The York Meadows subdivision (York Meadows Road and Earnest Stewart Road) west of the new alignment.	B	67
12	Residences on Ross Lane near the new alignment.	B	67
13	Residences on Old Dover Road, Old Dover Court, Dover Road, and Cherry Road near the proposed intersection of Dover Road and the new alignment.	B	67

As indicated, each NAA includes Activity Category B residences. NAA 3 also includes the Smith Branch Recreation Area boat launch which is an Activity Category C land use. The project would impact these land uses if future noise levels are 66 dBA or higher, or if the project causes a substantial increase in existing noise levels.

There are also tracts of Activity Category G undeveloped lands along the project. These undeveloped lands are not noise-sensitive and were not included in the noise analysis. However, noise impacts could occur in the future if noise-sensitive land uses are constructed near SR 374. A discussion of future noise levels and the need for noise-compatible land use planning is provided in Section 3.6.9.

### 3.6.4 Existing Noise Levels

The noise analysis included noise measurements at nine locations in the study corridor to characterize the existing noise environment. Noise levels at six of the nine sites are between 40 and 47 dBA and are typical of background noise levels where there are no continuous traffic sources. Noise levels at the other three sites were between 57 and 64 dBA due to their proximity to significant local roads. The noise levels at the measurement locations were used to estimate existing noise levels for the remaining residences in the study corridor.

A noise measurement was not conducted at the Smith Branch Recreation Area. However, noise levels associated with launching boats would likely be much higher than the measured ambient background levels of 40 to 47 dBA. Therefore, the analysis used an existing noise level of 50 dBA for the area.

### 3.6.5 Future Noise Levels

#### 3.6.5.1 No Build Alternative

Traffic on the existing roadway network will continue to grow resulting in noise levels at locations near existing roads that are 1-2 dB higher than existing levels. Noise levels at more remote locations would not be expected to change, so noise levels for the No Build Alternative are the same as existing noise levels at those locations.

#### 3.6.5.2 Build Alternative

The project would increase noise levels at nearby locations. Noise modeling of the Design Year 2040 Build Alternative was completed using the FHWA Traffic Noise Model (TNM 2.5) computer program. The program calculated year 2040 design-hour noise levels at the noise-sensitive land uses in each NAA. Table 3-11 summarizes the predicted design year noise levels for the modeled receivers in each NAA for the Build Alternative. As shown, noise levels range from 47 to 69 dBA.



**Table 3-11: Noise Levels and Impacts, for Design Year 2040 Build Alternative**

Noise Analysis Area (See Appendix F Figures)	Design Year 2040 Noise Levels (dBA)	Increase Over Existing Noise Levels (dB)	Impacted?	Number of Impacts
<b>SR 149 to Dotsonville Road</b>				
1	51 – 64	0 – 5	No	0
2	53 – 64	13 – 14	No	0
3	51 – 60	3 – 20	Yes	1
4	48 – 62	7 – 22	Yes	2
5	54 – 62	6 – 21	Yes	20
6	51 – 59	7 – 19	Yes	4
7	47 – 65	3 – 24	Yes	11
<b>Dotsonville Road to SR 76/US 79 (Dover Road)</b>				
8	50 – 61	6 – 12	Yes	2
9	56 – 66	15 – 26	Yes	5
10	54 – 63	14 – 19	Yes	3
11	53 – 61	13 – 19	Yes	24
12	50 – 54	6 – 10	No	0
13	51 – 69	0 – 2	Yes	3
<b>Total:</b>				<b>75</b>

### 3.6.6 Noise Impacts

The project would impact a noise-sensitive land use if the predicted worst-hour noise level in the design year approaches or exceeds the NAC, or the project causes a *substantial increase* in existing noise levels.

#### 3.6.6.1 Design Year 2040 Build Alternative

Seventy-five (75) residences in 10 NAAs are predicted to be impacted. Of those, 70 residences are predicted to be impacted by *substantial increases* in existing noise levels and three residences in NAA 13 are predicted to be impacted with noise levels approaching or exceeding the NAC. Two residences in NAA 9 are impacted based on both criteria. The Smith Branch Recreation Area in NAA 3 is not predicted to be impacted.

### 3.6.7 Noise Abatement Evaluation

Noise abatement was evaluated for the impacted land uses in each of the 10 impacted NAAs in accordance with TDOT's *Noise Policy* and procedures. TDOT's noise procedures state that noise abatement will generally not be reasonable for isolated residences due to the cost of abatement verses the benefits provided. The only impacted residence in NAA 3 is at 650 Smith Branch Road. Noise abatement is not reasonable for this isolated residence. The two impacted residences in NAA 4 at 1140 Manning Gate Road and 915 Gip Manning Road are approximately 750 feet apart and isolated from each other; therefore, noise abatement is not reasonable for these residences.

The study evaluated noise abatement in the form of noise barriers for the impacted residences in NAAs 5 through 11 and 13. For noise barriers to be included in the project plans, they must be determined to be both feasible and reasonable in accordance with TDOT's *Noise Policy*.

#### 3.6.7.1 Noise Barrier Feasibility

Feasibility means that: (1) the construction of a barrier would not be anticipated to pose any major design, construction, maintenance, or safety problems; and, (2) the noise barriers will provide a noise reduction (or insertion loss) of 5 dB in design year highway traffic noise levels for the majority of the impacted first-row receptors.

Noise generated by significant local traffic on SR 76 (Dover Road) precludes achieving a 5 dB noise reduction for the impacted residences in NAA 13. Therefore, a noise barrier is not feasible for NAA 13.

The study concluded that 5 dB IL could be achieved at the majority of impacted first-row residences in NAAs 5 through 11. Therefore, noise barriers for these NAAs are acoustically feasible. There do not appear to be any major design, construction, maintenance, or safety problems associated with construction of these noise barriers within TDOT's right-of-way. However, design issues could arise during the final design process.

#### 3.6.7.2 Noise Barrier Reasonableness

The following conditions must be met for a noise barrier to be reasonable:

1. TDOT's Noise Reduction Design Goal must be achieved,
2. The required noise barrier *area per benefited residence* must be less than or equal to the allowable *area per benefited residence*,
3. The benefited residents and/or property owners must support the construction of the noise barrier.

#### Noise Barrier Design

The noise barriers were designed to meet the Noise Reduction Design Goal while also minimizing the barrier *area per benefited residence*, so that the designed barrier is the one that is most likely to be reasonable in accordance with TDOT's *Noise Policy*.

#### Noise Reduction Design Goal

TDOT's Noise Reduction Design Goal is at least 7 dB noise reduction at 60 percent or more of the first-row benefited residences. Table 3-12 summarizes the noise reduction design goal analysis results for each barrier. The barriers meet the Noise Reduction Design Goal for all NAAs except NAAs 6 and 8.

#### Noise Barrier Area Per Benefited Residence

The required noise barrier area per benefited residence must be less than or equal to the allowable noise barrier area per benefited residence. Benefited residences receive 5 dB or more of insertion loss due to construction of the barrier.

The allowable barrier area per benefited residence is calculated using the following equation:

$$\begin{aligned}
 & \text{Base Allowance} && \text{_____ square feet} \\
 + & \text{Previous Type I Widening Allowance} && \text{_____ square feet} \\
 + & \text{Design Year Noise Levels Allowance} && \text{_____ square feet} \\
 & \quad + \text{Noise Level Increase Allowance} && \text{_____ square feet} \\
 + & \text{Noise Compatible Planning Allowance} && \text{_____ square feet} \\
 = & \text{Total Allowable Area per Benefited Residence} && \text{_____ square feet}
 \end{aligned}$$

**Table 3-12: Noise Reduction Design Goal Analysis**

Noise Analysis Area	Barrier Location	Stationing (See Appendix F Figures)	First-Row Benefited Residences			Noise Reduction Design Goal Met?
			Total	Receiving 7 dB IL	Percent	
<b>SR 149 to Dotsonville Road</b>						
5	East, South of Dotsonville Road	499+00-525+00	9	8	89%	<b>Yes</b>
6	West, South of Dotsonville Road (Gip Manning Road)	502+00-481+00	2	1	50%	No
7	West, South of Dotsonville Road (Southwinds subdivision)	527+00-508+00	5	4	80%	<b>Yes</b>
<b>Dotsonville Road to SR 76/US 79 (Dover Road)</b>						
8	West, North of Dotsonville Road	542+00-529+00	2	0	0%	No
9	East, North of York Road	616+00-630+00	2	2	100%	<b>Yes</b>
10	West, South of York Road	613+00-604+00	1	1	100%	<b>Yes</b>
11	West, North of York Road (York Meadows subdivision)	629+00-614+00	10	9	90%	<b>Yes</b>

Table 3-13 shows the values for each allowance type and Table 3-14 summarizes the allowable cost per benefited residence for NAAs 5, 6, 7, 9, 10, and 11. The resulting allowable area per benefited residence for each barrier is 1,900 square feet as shown in Table 3-14.

**Table 3-13: Reasonableness Allowances**

Allowance Type	Criteria	Allowance in square feet
Base Allowance	Residences pre-date the highway <sup>(1)</sup> or the project is on a new alignment.	1,500
	Residences post-date the highway <sup>(2)</sup> but were constructed before September 16, 2005. <sup>(3)</sup>	750
	Residences were constructed after September 16, 2005. <sup>(3)</sup>	250
Previous Type I Widening Allowance <sup>(4)</sup>	Residences pre-date a Type I widening project on the adjacent highway.	200
Design Year Noise Levels Allowance <sup>(5)</sup>	69 dBA or less	0
	70 – 74 dBA	100
	75 dBA or more	200
Noise Level Increase Allowance <sup>(6) (7)</sup>	0 – 4 dB	0
	5 – 9 dB	200
	10 or more dB	400
Noise Compatible Planning Allowance	The local government of the jurisdiction in which the project will be constructed has no policies to require that noise be considered in the land development process.	0
	The local government of the jurisdiction in which the project will be constructed has adopted official and enforceable policies to require that noise be considered as an integral component of the land development process.	100

(1) The majority (more than 50%) of residences existed before the original highway construction.

(2) The majority (more than 50%) of residences were constructed after the original highway construction.

(3) TDOT's previous noise policy became effective on September 16, 2005. FHWA's approval of this policy was contingent upon TDOT's completion of a public outreach program to 1) notify local jurisdictions of the changes in TDOT's new noise policy and 2) encourage them to consider noise compatible land use planning when noise-sensitive land uses are proposed adjacent to TDOT's highways. As a result, development that occurs after this date receives less consideration in the reasonableness analysis.

(4) The majority (more than 50%) of residences existed before the most recent Type I project that added through traffic lanes.

(5) Based on an average of the impacted first-row receivers' levels (design year noise levels for Type I projects and existing noise levels for Type II projects).

(6) An average of the increases from existing noise levels to design year noise levels for the Build Alternative at the impacted first-row receivers.

(7) Not applicable for Type II projects.



**Table 3-14: Reasonableness Allowances**

<b>Allowance Type</b>	<b>Criteria</b>	<b>Allowance (square feet)</b>
Base Allowance	SR 374 is on a new alignment.	1,500
Previous Type I Widening Allowance	There has not been a previous Type I study.	n/a
Design Year Noise Levels Allowance	The average of the impacted first-row receptors noise levels is below 69 dBA.	0
Noise Level Increase Allowance	The average of the increases from existing to design year noise levels for the impacted first-row receptors is greater than 10 dB,	400
Noise Compatible Planning Allowance	Montgomery County does not have policies to require that noise be considered in the land development process.	0
<b>Total Allowance</b>		<b>1,900</b>

Table 3-15 summarizes the noise barrier designs for each NAA and compares the calculated area per benefited residence to the allowable area per benefited residence. The required *area per benefited residence* is significantly higher than the allowable *area per benefited residence* for NAAs 9, and 10. Therefore, noise barriers for these NAAs are not reasonable. However, the required *area per benefited residence* is lower than the allowable area per benefited residence for NAA 5 (Southwinds subdivision east of alignment) and NAA 11 (York Meadows subdivision). The allowable *area per benefited residence* for NAA 7 (Southwinds subdivision west of alignment) is slightly higher than the allowable area per benefited residence.

TDOT allows NAAs to be combined for reasonableness if they share a “common noise environment” which is the case for NAAs 5 and 7. As shown in Table 3-15, the area per benefited residence for NAAs 5 and 7 combined is lower than the allowable area per benefited residence of 1,900 square feet.

**Table 3-15: Noise Barrier Design Results and Reasonableness Analysis**

<b>NAA (See Appendix F Figures)</b>	<b>Barrier Location</b>	<b>Length (ft.)</b>	<b>Average Height (ft.)</b>	<b>Barrier Area (sq. ft.)</b>	<b>Benefited Residences</b>	<b>Area Per Benefited Residence (sq. ft.)</b>	<b>Allowable Area Per Benefited Residence (sq. ft.)</b>	<b>Reasonable ?</b>
5	East, South of Dotsonville Road	2,378	14	33,292	33	1,009	1,900	<b>Yes</b>
7	West, South of Dotsonville Road (Southwinds subdivision)	1,951	15	28,298	14	2,021	1,900	No
5 and 7 (Combined)	East and West, South of Dotsonville Road	4,329	14	61,590	47	1,310	1,900	<b>Yes</b>
9	East, North of York Road	1,407	11	14,866	3	4,955	1,900	No
10	West, South of York Road	900	21	18,600	2	9,300	1,900	No
11	West, North of York Road (York Meadows subdivision)	1,549	14	21,986	23	956	1,900	<b>Yes</b>

*Views of Benefited Residents and Property Owners*

The benefited residents and property owners must also support the barrier for it to be reasonable. If TDOT determines that noise barriers for the Southwinds subdivision (NAAs 5 and 7) and the York Meadows subdivision (NAA 11) are both feasible and reasonable based on the final design plans for the project, TDOT will solicit the viewpoints of the benefited residents and property owners in accordance with TDOT's *Noise Policy* and procedures.

**3.6.7.3 Statement of Likelihood**

Noise barriers for NAAs 5 and 7 (Southwinds subdivision) and NAA 11 (York Meadows subdivision) are preliminarily feasible and reasonable in accordance with TDOT's *Noise Policy*. TDOT will reevaluate the feasibility and reasonableness of these barriers using the final design plans for the project. If noise barriers remain feasible and reasonable, TDOT will solicit the viewpoints of the benefited residents and property owners as outlined in TDOT's noise procedures. If the benefited residents and property owners support the barrier, then the barriers will be incorporated into the project plans.

### 3.6.8 Construction Noise

Construction activities will generate intermittent and temporary noise above existing ambient noise levels. The noise levels resulting from construction activities will depend on the types of equipment utilized, the duration of the activities, and the distances between construction activities and nearby land uses. However, the noise increases will be temporary and will not constitute a noise impact as defined by the FHWA noise regulation and TDOT's *Noise Policy*.

TDOT's construction specifications will apply to this project. Construction procedures should be governed by the *Standard Specifications for Road and Bridge Construction* as issued by TDOT and as amended by the most recent applicable supplements. All construction equipment shall be maintained, repaired and adjusted to keep it in full satisfactory condition.

### 3.6.9 Information for Local Officials

Some tracts of undeveloped land exist adjacent to SR 149 and proposed SR 374. TDOT encourages the local governments with jurisdiction over these lands, as well as potential developers of these lands to practice noise compatibility planning 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."*

Guidance documents on noise compatible land use planning are available from FHWA as noted in the Noise Technical Report.

Table 3-16 presents Design Year noise levels for areas along SR 374 where vacant and possibly developable lands exist. Noise predictions were made at distances between 150 and 500 feet from the centerline of the near lane for the Design Year 2040. As indicated, noise levels within approximately 100 to 150 feet of the centerline of the near lane of SR 374 would exceed 66 dBA. Noise-sensitive land uses should generally not be constructed in these areas unless noise mitigation measures are provided.

**Table 3-16: Design Year 2040 Build Alternative Noise Levels for Undeveloped Lands**

Distance from SR 374 <sup>(1)</sup>	L <sub>eq</sub> (1h) (dBA) <sup>(2)</sup>
150 feet	65
200 feet	62
300 feet	58
400 feet	55
500 feet	54

(1) Perpendicular distance to the center of near lane.

(2) At-grade situation.

Finally, TDOT has constructed Type II or “retrofit” noise barriers along existing highways. To be eligible for a Type II noise barrier, an area must meet the following criteria:

- The neighborhood must be located along a limited-access roadway;
- The neighborhood must be primarily residential;
- The majority (more than 50 percent) of residences in the neighborhood near the highway pre-dated the initial highway construction;
- A noise barrier for the neighborhood must not have been previously determined to be not reasonable or not feasible as part of a new highway construction or through-lane widening study (Type I project);
- Existing noise levels measured in the neighborhood must be above the NAC of 66 dBA;
- A barrier must be feasible to construct and will provide substantial noise reduction; and
- A barrier must be reasonable (barrier area per benefited residence) in accordance with TDOT’s *Noise Policy*. A residence is considered “benefited” if the noise barrier will reduce the traffic noise by at least 5 dB.

### 3.7 Natural Resources

The following natural resources reports have been prepared for this project:

- *Environmental Boundaries Report Addendum, SR 374 from SR-76 (US-79) to Dotsonville Road in Clarksville* (TDOT/BWSC, 2017)
- *Environmental Boundaries Report [Ecology Technical Studies Report] Addendum B, SR 374 from SR-76 to Dotsonville Road in Clarksville* (BWSC, 2016)
- *Environmental Boundaries Report [Ecology Technical Studies Report], SR 374 from SR 76 (US 79) to Dotsonville Road in Clarksville* (BWSC, 2016)
- *Environmental Boundaries Report, SR 149 from SR 374 to River Road and SR 374 from SR 149 to Dotsonville Road in Clarksville* (CEC, 2015)
- *A Mussel Survey for the Proposed Construction of Two Bridge Piers at Cumberland River Mile 119.4* (Mainstream Commercial Divers, Inc., 2015)
- *Acoustic and Mist Net Survey Indiana Bat (*Myotis sodalis*), SR 374 from SR 76 to SR 149; SR 149 from Proposed SR 374 to River Road* (Third Rock Consultants, LLC, 2011)

The natural resources reports are available in Appendix G on the attached CD. The findings from the reports are summarized in the following subsections.

#### 3.7.1 Terrestrial Ecology

With the exception of the flat agricultural fields in the Cumberland River floodplain, the



*Much of the land within the study corridor has been disturbed by agriculture in the past.*



topography is hilly with narrow valleys associated with small streams that cross the study corridor. Most of the land in the study corridor has been disturbed by agriculture in the past. The land use is predominantly fragmented forests primarily associated with stream corridors and steeper slopes and agriculture (pasture, hay, soybeans). Within the project limits, approximately 178 acres (51 percent) are forest, approximately 143 acres (41 percent) are agricultural land use, and approximately 26 acres (8 percent) are residential/commercial.

Plant communities found in the study corridor are characteristic of communities formed over limestone. Oak and beech trees, with some sugar maple and white ash, dominate the forested habitats on the upper slopes and hilltops. The forested habitats in the low areas of the study corridor and floodplains include red maple and green ash with some sycamore, box elder, elm and hackberry. The old-field lands exhibit the characteristics of habitats that are in the early stages of succession. These habitats are dominated by eastern red cedar or young pine trees with dense blackberry, goldenrod, and Japanese honeysuckle on the edges. Both the forested and floodplain habitats provide food, cover, and nesting opportunities for numerous small mammals, including rabbits, squirrels, and other rodents, as well as numerous reptiles, native birds, spiders and other arachnids, and insects. The old-field habitats in various stages of succession are also useful to many types of wildlife while the agricultural and residential/commercial lands generally have limited wildlife value, as they are usually cropped or mowed, except for undisturbed vegetation along fencerows or boundaries.

### ***Impacts to Terrestrial Ecology***

No Build Alternative: The No Build Alternative would not result in the conversion of land to highway use; therefore, no project-related impacts to habitat or terrestrial ecology would occur.

Build Alternative: The Build Alternative would impact approximately 347 acres of terrestrial habitat. The Build Alternative would result in the loss of approximately 143 acres of agricultural and old-field habitat, 26 acres of residential or commercial habitat and 178 acres of forested habitat.

There would be direct long-term adverse impacts to all terrestrial habitats that are converted to roadway use. Minor long-term adverse impacts would occur to terrestrial habitats within the right-of-way limits due to the clearing of old-fields, pastures and forested habitats. Due to the limited value of the agricultural, residential and commercial habitats in the study corridor and because most of the habitats have been disturbed in the past, it is not expected that the loss of these habitats would have a substantial influence on wildlife populations in the area. In addition, only a small amount of the preliminary right-of-way would need to be converted to roadway use. After project construction, areas within the right-of-way would be revegetated and may provide temporary refuge, foraging areas, and/or travel corridors for wildlife in the area.

### 3.7.2 Water Quality

Section 303(d) of the federal CWA requires that states develop a compilation of the streams and lakes that are “water quality limited” or are expected to exceed water quality standards in the next two years and need additional pollution controls. The TDEC Division of Water Pollution Control (WPC) is responsible for overseeing water quality in the state of Tennessee and reporting to the USEPA.

A review of TDEC’s Year 2014 Final 303(d) list found no listed streams within the study corridor. Tennessee water quality standards require the incorporation of the anti-degradation policy into regulatory decisions (Chapter 1200-4-3-.06). The TDEC Division of WPC is also responsible for identifying Exceptional Tennessee Waters (ETW; previously known as Tier 2) and Outstanding National Resource Waters (ONRW); Tier 3.

A review of TDEC’s ETW and ONRW list found no listed streams within the study corridor.

#### ***Impacts to Water Quality***

No Build Alternative: The No Build Alternative would not result in the conversion of land to highway use; therefore, no project-related direct impacts to water quality are anticipated.

Build Alternative: Increased sediment loadings during construction activities could occur if the Build Alternative is selected. TDOT’s *Standard Specifications for Road and Bridge Construction* will be followed to avoid or minimize erosion, siltation, and sedimentation impacts. In addition, potential water quality impacts would be reduced by the roadway design and by the federal, state and local regulations that require erosion and sediment control plans, the implementation of BMPs, and various water quality permits that require water quality monitoring.

### 3.7.3 Aquatic Resources

The study corridor is within the Hurricane Creek (hydrologic unit code [HUC] 051302050305), Cummings Creek (HUC 051302050308) of the Cumberland River Watershed and Little West Fork (HUC 051302060406) of the Red River Lower Watershed.

Information regarding the ponds, streams, springs, wet-weather conveyances, and other watercourses and waterbodies that could be impacted by the project is included in the Environmental Boundaries Reports (EBR) prepared for the project (See Appendix G). These features are shown on Figures 3-6a – 3-6c.

A total of 19 streams (intermittent and perennial), 40 wet-weather conveyances/ephemerals, 10 ponds, one spring and two sinkholes were identified within or adjacent to the limits of the Build Alternative. With the exception of the Cumberland River, most of the streams located within the study corridor contain a limited amount of aquatic habitat due to their small size and narrow band of riparian habitat. These smaller perennial streams contain several small fish species, reptiles, amphibians, mammals, and various invertebrates that are common in streams of this size in the area.

### ***Impacts to Aquatic Resources***

No Build Alternative: Under the No Build Alternative, the proposed project would not be constructed; therefore, project-related impacts to aquatic resources would not occur within the study corridor.

Build Alternative: The Build Alternative could potentially directly impact 13 streams, 36 wet weather conveyances and six ponds. The Build Alternative would impact approximately 3,875 linear feet of intermittent streams and 1,000 linear feet of perennial streams. Approximately 6,665 linear feet of wet weather conveyances/ephemeral streams would also be impacted by the Build Alternative. A total of approximately 1.04 acres of ponds would be impacted by the Build Alternative. Impacts would be reevaluated and refined once final design plans are available. Potential impacts to streams are shown in Table 3-17. Potential impacts to ponds are shown in Table 3-18.

Direct long-term adverse impacts to aquatic habitats would occur as a result of encapsulating streams. Potential long-term impacts could include changes in aquatic habitat conditions associated with encapsulation and changes in hydrology and water quality. Complete encapsulation can decrease water temperatures and changes in hydrology may impact microhabitat conditions, such as substrate type, stream channel depth and width, and vegetation in portions of these streams. Removal of canopy cover increases sun exposure to the water surface, which can raise stream water temperature. Changes in water temperature and other microhabitat changes can alter species composition in area streams. These impacts have potential to affect spawning and larval fish due primarily to the decreased water quality and subsequent decrease in benthic invertebrates.

Storm water runoff could also result in adverse impacts to all streams within or in the vicinity of the study corridor. However, implementation and maintenance of effective erosion and sediment control measures throughout the construction process would keep the overall impacts to these aquatic resources to a minimum.

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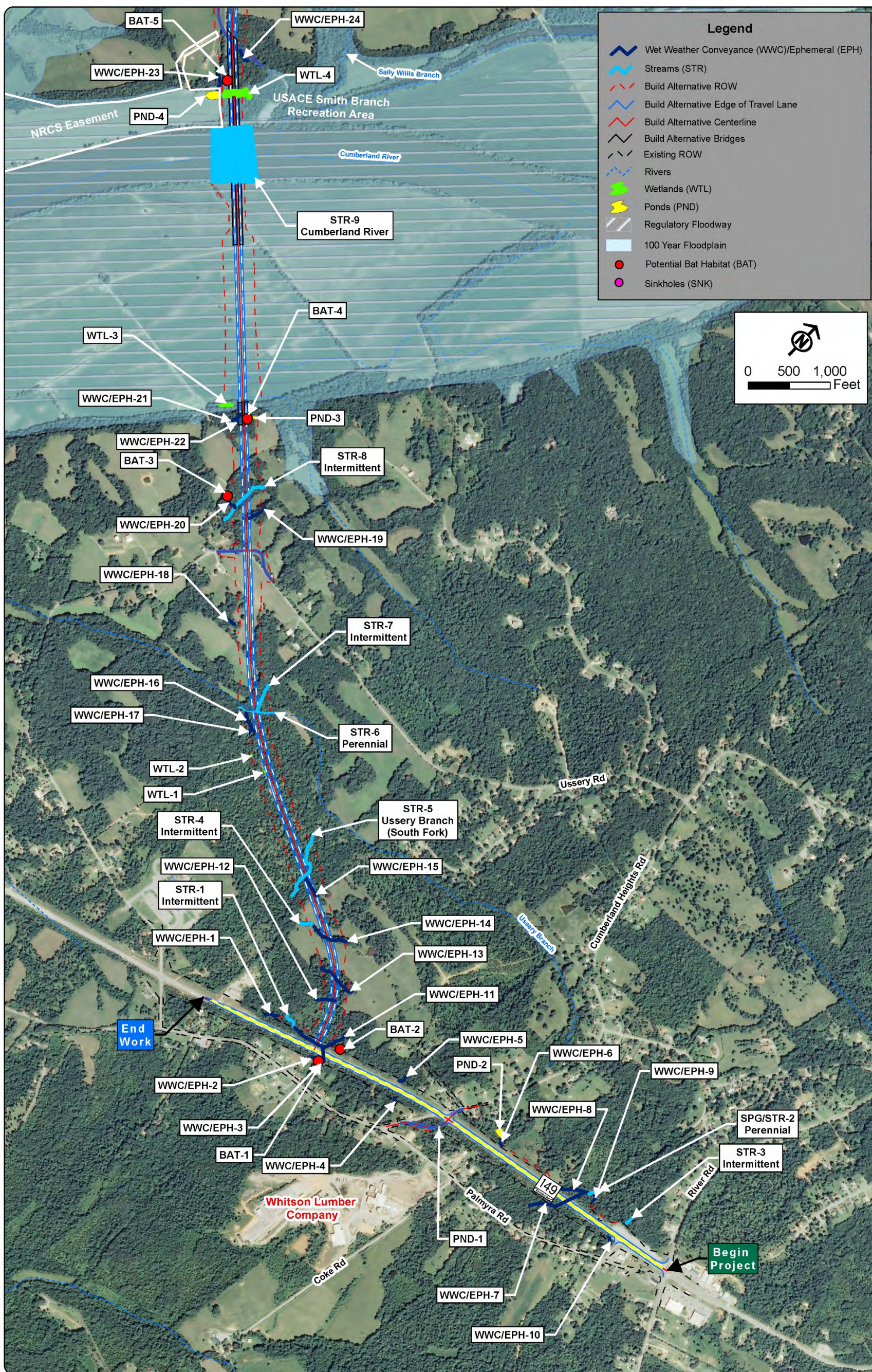


Figure 3-6a: Aquatic Resources, Floodplains, and Floodways within the SR 374 Study Corridor



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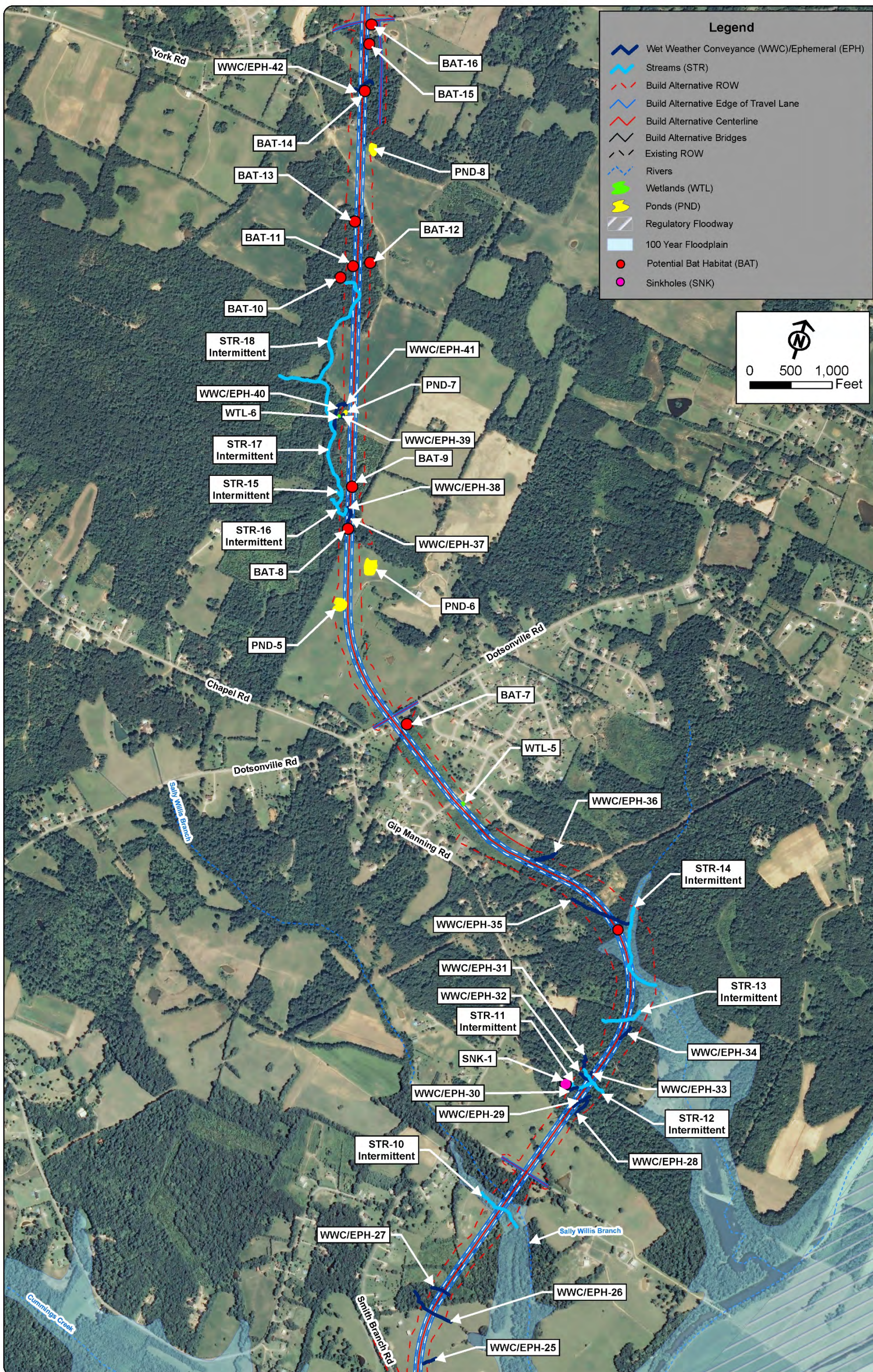


Figure 3-6b: Aquatic Resources, Floodplains, and Floodways within the SR 374 Study Corridor



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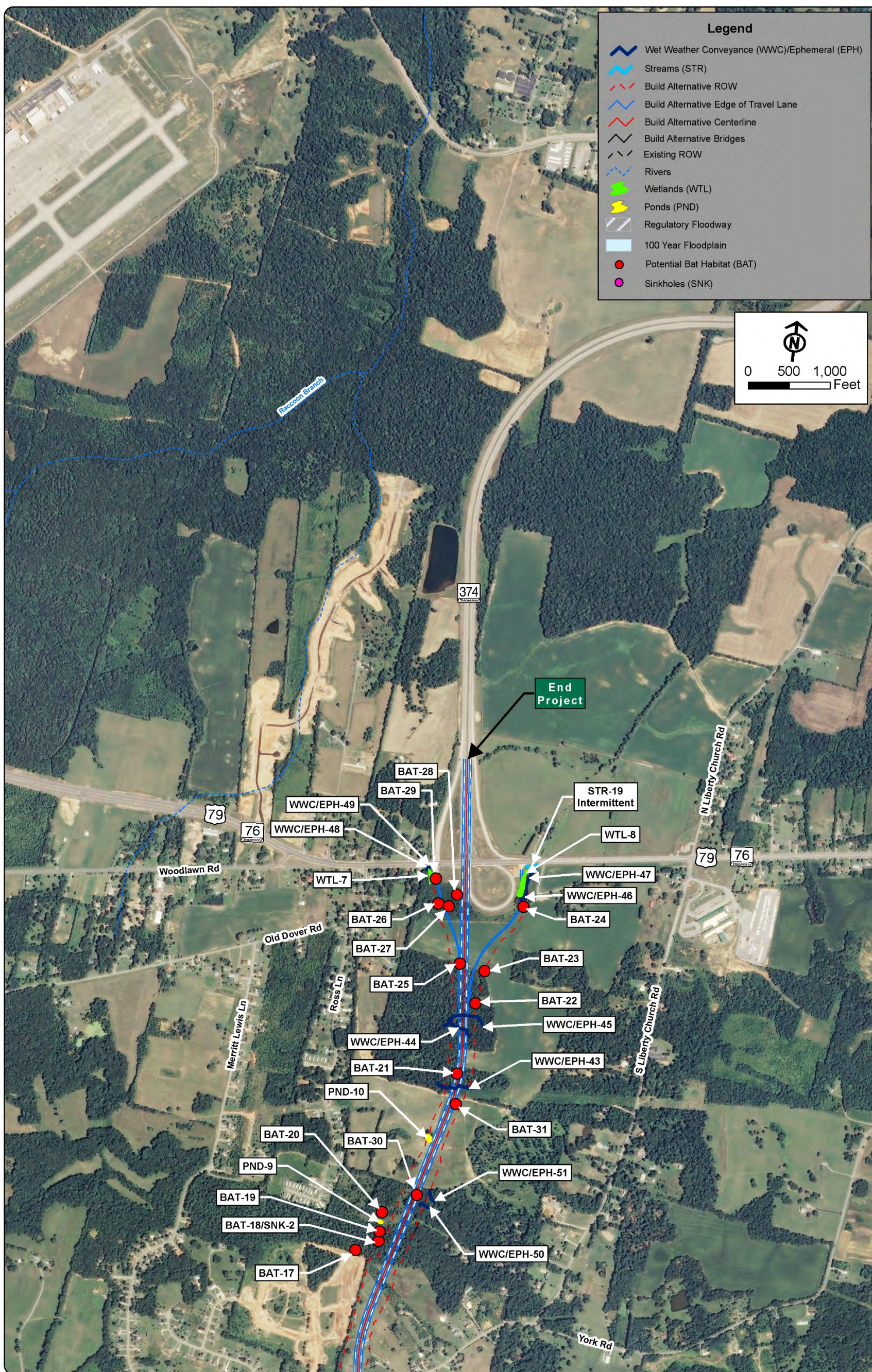


Figure 3-6c: Aquatic Resources, Floodplains, and Floodways within the SR 374 Study Corridor



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Table 3-17: Potential Impacts to Streams

Labels	Type*	Potential Impact** (linear feet)
STR-1	Intermittent	0
SPG-1/STR-2	Perennial	0
STR-3	Intermittent	0
STR-4	Intermittent	45
STR-5	Perennial	650
STR-6 Ussery Branch	Perennial	350
STR-7	Intermittent	290
STR-8	Intermittent	525
STR-9 (Cumberland River)	Perennial	**
STR-10	Intermittent	375
STR-11	Intermittent	450
STR-12	Intermittent	200
STR-13	Intermittent	375
STR-14	Intermittent	825
STR-15	Intermittent	0
STR-16	Intermittent	0
STR-17	Intermittent	80
STR-18	Intermittent	610
STR-19	Intermittent	100
<b>Total Perennial Stream Impacts</b>		<b>1,000</b>
<b>Total Intermittent Stream Impacts</b>		<b>3,875</b>
WWC/EPH-1	Ephemeral	20
WWC/EPH-2	Ephemeral	330
WWC/EPH-3	Ephemeral	20
WWC/EPH-4	Ephemeral	35
WWC/EPH-5	Ephemeral	40
WWC/EPH-6	Ephemeral	15
WWC/EPH-7	Ephemeral	500
WWC/EPH-8	Ephemeral	325
WWC/EPH-9	Ephemeral	15
WWC/EPH-10	Ephemeral	50
WWC/EPH-11	Ephemeral	475
WWC/EPH-12	Ephemeral	155
WWC/EPH-13	Ephemeral	400
WWC/EPH-14	Ephemeral	450
WWC/EPH-15	Ephemeral	265
WWC/EPH-16	Ephemeral	260
WWC/EPH-17	Ephemeral	50
WWC/EPH-18	Ephemeral	0
WWC/EPH-19	Ephemeral	180
WWC/EPH-20	Ephemeral	50
WWC/EPH-21	Ephemeral	150
WWC/EPH-22	Ephemeral	50



Labels	Type*	Potential Impact** (linear feet)
WWC/EPH-23	Ephemeral	0
WWC/EPH-24	Ephemeral	50
WWC/EPH-25	Ephemeral	60
WWC/EPH-26	Ephemeral	350
WWC/EPH-27	Ephemeral	225
WWC/EPH-28	Ephemeral	200
WWC/EPH-29	Ephemeral	225
WWC/EPH-30	Ephemeral	110
WWC/EPH-31	Ephemeral	65
WWC/EPH-32	Ephemeral	150
WWC/EPH-33	Ephemeral	75
WWC/EPH-34	Ephemeral	175
WWC/EPH-35	Ephemeral	750
WWC/EPH-36	Ephemeral	175
WWC/EPH-46	Ephemeral	50
WWC/EPH-47	Ephemeral	170
WWC/EPH-48	Ephemeral	0
WWC/EPH-49	Ephemeral	0
<b>Total Wet Weather / Ephemeral Stream Impacts</b>		<b>6,665</b>

\*Identification of features has not been reviewed by regulatory agencies and determinations of stream type could possibly be changed.

\*\*Predicted impacts are considered "preliminary" and will not be completely accurate until the time of permit application.  
Source: 2015 EBR (CEC), 2017 EBR (BWSC)

**Table 3-18: Potential Impacts to Ponds**

Labels	Potential Impact (acres)
PND-1	>0.00
PND-2	0
PND-3	0.03
PND-4	0
PND-5	0.51
PND-6	0
PND-7	0.05
PND-8	0.29
PND-9	0
PND-10	0.16
<b>Total Pond Impacts</b>	<b>1.04</b>

Source: 2015 EBR (CEC), 2017 EBR (BWSC)

### **Mitigation of Aquatic Resource Impacts**

The Build Alternative would be designed to avoid major impacts to aquatic resources to the extent practicable. Mitigation of impacts to streams or any other fluvial systems would be accomplished through the avoidance and minimization of potential impacts during the design process. Permanent stream alterations such as relocations, impoundments or channel

modification would be mitigated on-site to the extent possible in order to return the channel to its most probable natural state. Impacts that cannot be mitigated on-site would be subject to a compensatory mitigation plan that may include restoration of a comparable resource or application of an in-lieu fee program. Final mitigation measures would be developed and confirmed as part of TESA Concurrence Point 4 and the permitting process.

In an effort to minimize sedimentation impacts, erosion and sediment control plans would be included in the project construction plans. TDOT would also implement measures as described in its *Standard Specifications for Road and Bridge Construction*, which includes erosion and sediment control standards for use during construction. TDOT would monitor for strict adherence to *Stormwater Pollution Prevention Plan and Erosion Prevention and Sediment Control Measures*.

3.7.4 Wetlands

Information regarding wetlands that could be impacted by the project is included in the EBRs prepared for the project (See Appendix G). Wetlands are shown on Figures 3-6a – 3-6c.

Eight wetlands were identified within or adjacent to the study corridor during the 2015 and 2017 field surveys. The type and function of these wetlands is shown in Table 3-19.

**Impacts to Wetlands**

No Build Alternative: Under the No Build Alternative, the proposed project would not be constructed; therefore, project-related impacts to wetlands would not occur within the study corridor.

Build Alternative: A total of 1.42 acres of wetlands are estimated to be permanently impacted (filled or drained) if the Build Alternative is constructed. An additional 0.04 acre of wetlands is estimated to be temporarily impacted. The potential wetland impacts are shown in Table 3-19.

**Table 3-19: Potential Impacts to Wetlands**

Label	Type*	Function	Potential Impact (acres)**		
			Permanent	Temporary	Total
WTL-1	Emergent	Stormwater Storage / Wildlife Habitat	0.01	0.00	0.01
WTL-2	Forested	Stormwater Storage / Wildlife Habitat	0.01	0.00	0.01
WTL-3	Forested	Stormwater Storage / Wildlife Habitat	0.16	0.04	0.20
WTL-4	Forested	Stormwater Storage / Wildlife Habitat	0.80	0.00	0.80
WTL-5	Emergent	Stormwater Storage / Wildlife Habitat	0.02	0.00	0.02
WTL-6	Forested	Stormwater Storage / Wildlife Habitat	0.02	0.00	0.02
WTL-7	Forested	Stormwater Storage / Wildlife Habitat	0.00	0.00	0.00
WTL-8	Emergent	Stormwater Storage / Wildlife Habitat	0.40	0.00	0.40
<b>Total</b>			<b>1.42</b>	<b>0.04</b>	<b>1.46</b>

\*Identification of features has not been reviewed by regulatory agencies and determinations of stream type could possibly be changed.

\*\*Predicted impacts are considered “preliminary” and will not be completely accurate until the time of permit application.

Source: 2015 EBR (CEC), 2017 EBR (BWSC)

### **Mitigation of Wetland Impacts**

The alignment of the proposed Build Alternative has been located to avoid wetlands to the extent possible. Mitigation of impacts to wetlands would be accomplished through avoidance and minimization of potential impacts during project design such as: minor shifts in the alignment and special design, construction features, or other measures. Permanent impacts would be mitigated through compensatory mitigation alternatives, improvements to existing water resources and natural habitats, or mitigation banking.

#### **3.7.5 Floodplains**

As required under the provisions of *Executive Order 11988*, a survey of the study corridor for floodplain impacts was completed using Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs).

A large floodplain easement designated by the Natural Resources Conservation Service (NRCS) is located along the west side of the Cumberland River adjacent to the Smith Branch Recreation Area (Figure 3-6a). The purpose of this easement is to “restore, protect, manage, maintain, and enhance the functional values of floodplains, wetlands, riparian areas, and other lands; and for the conservation of natural values including fish and wildlife and their habitat, water quality improvement, flood water retention, groundwater recharge, open space, aesthetic values, and environmental education; and to safeguard lives and property from flood, drought, and the products of erosion”<sup>5</sup>. The NRCS floodplain easement prohibits the placement of structures within the boundaries of the easement.



*What is Executive Order 11988 – Floodplain Management? The intent of this executive order is to avoid impacts to floodplains and to preserve and/or restore their natural values.*

Floodplains and the NRCS floodplain easement are shown on Figures 3-6a and 3-6b.

### **Impacts to Floodplains**

**No Build Alternative:** Under the No Build Alternative, the proposed project would not be constructed; therefore, project-related impacts to floodplains would not occur within the study corridor.

**Build Alternative:** Portions of this project impact a FEMA defined floodplain where a floodway is defined. The project is located on the following FIRMs in Montgomery County: Panel 215 of 491 Map #47215C0215D; Panel 330 of 491 Map #47125C0330D; and Panel 335 of 491 Map #47125C0335D. A No Rise Certification or a Conditional Letter of Map Revision (CLOMR) or Letter

<sup>5</sup> NRCS Emergency Watersheds Protection Program Floodplain Warranty Easement Deed, August 2010.



of Map Revision (LOMR) will be submitted for the project and it will be consistent with the Memorandum of Understanding (MOU) between FHWA and FEMA. The design of the roadway system will be consistent with the MOU between FHWA and FEMA and with the floodplain management criteria set forth in the National Flood Insurance Regulations (NFIR) of Title 44 of the Code of Federal Regulations (CFR). It will be consistent with the requirements of floodplain management guidelines for implementing *Executive Order 11988* and FHWA guidelines 23 CFR 650A. The relevant panels of the FEMA FIRMs are included in Appendix H.

A review of the FIRMs and the preliminary plans for the proposed Build Alternative indicate that it is likely that the Build Alternative would require fill within a floodway associated with the Cumberland River and floodplains associated with the Cumberland River, Sally Willis Branch, and an unnamed stream. No encroachments of the floodplains are anticipated that would result in one or more of the following construction or flood related impacts:

- A significant potential for interruption or termination of a transportation facility which is needed for emergency vehicles or provides the community's only evacuation route due to the construction of the project;
- A significant risk, including property loss or hazard to life; or
- A significant adverse impact on natural and beneficial floodplain values.

The floodway and floodplains are illustrated on Figure 3-6a and Figure 3-6b. Table 3-20 shows the potential direct impacts the proposed Build Alternative would have on the floodway and floodplains.

**Table 3-20: Build Alternative Floodway and Floodplain Impacts**

Resource Name	Floodway Impact	Floodplain Impact
Cumberland River	15.07 acres	2.22 acres
Sally Willis Branch	N/A	2.09 acres
Unnamed Stream	N/A	7.06 acres

N/A = Not applicable.

There is no practical alternative to avoid the floodway and floodplain associated with the Cumberland River since the river generally follows an east-to-west course and the study corridor is south-to-north. The Build Alternative minimizes impacts by crossing the Cumberland River floodway and floodplain perpendicularly.

The land use adjacent to the Build Alternative at the Sally Willis Branch floodplain crossing (Figure 3-6a and 3-6b) and the unnamed stream floodplain crossing (Figure 3-6b) consists of single family residences. In order to avoid the floodplains, the Build Alternative would need to be shifted and would result in residential relocations.

### ***Mitigation of Floodplains***

Where possible, impacts to the floodplains have been minimized by perpendicular crossings. If the Build Alternative is selected, further minimization measures would be evaluated and implemented during the design and construction of the proposed project to reduce the direct impacts to the 100-year floodplains.

#### **3.7.6 Threatened and Endangered Species**

Pursuant to Section 7 of the *Endangered Species Act of 1973*, as amended, coordination has been conducted with the USFWS. The *Endangered Species Act of 1973* provides Federal protection for all species designated as threatened or endangered. Copies of USFWS coordination are in Attachment III.

A TDEC Natural Heritage Division database search was performed by TDOT in December 2011 for the EBR for SR 149 from SR 374 to River Road and SR 374 from SR 149 to Dotsonville Road. A TDEC Natural Heritage Division database search was conducted by TDOT in June 2015 for the EBR for SR 374 from SR 76/US 79 (Dover Road) to Dotsonville Road. These TDEC database searches were updated October 17, 2017 and the results are shown in Table 3-21. Copies of the database searches are in Appendix G.

An acoustic and mist net survey was conducted for the federally endangered Indiana bat (*Myotis sodalis*) on June 20-25 and July 11-12, 2011. Two Indiana bat calls were recorded during the acoustic survey. No Indiana bats were captured during the mist net survey. Twenty gray bats (*Myotis grisescens*) were captured. A copy of the survey report is in Appendix G.

A mussel survey was conducted for the federally endangered pink mucket (*Lampsilis abrupta*) on September 10, 2015. No pink muckets were discovered during the survey. A copy of the mussel survey report is in Appendix G.

**Table 3-21: Threatened and Endangered Species Documented Within 1 and 4 Miles of the Proposed Project**

Species	Status		Species Potentially Present?	Accommodations to Minimize Impacts	Habitat
	Federal	State			
<b><i>Species Documented Within 1 Mile of the Proposed Project</i></b>					
Naked-stem sunflower ( <i>Helianthus occidentalis</i> ) (P)	-	S	No Present habitat unsuitable	N/A	Limestone glades and barrens
Short-beaked arrowhead ( <i>Sagittaria brevirostra</i> ) (P)	-	T	No Present habitat unsuitable	N/A	Swamps and floodplains
Bewick's wren ( <i>Thryomanes bewickii</i> ) (A)	-	E	Yes Habitat is present (last observance in this area 1967)	Not practical due to broad habitat description or mobility of species	Brushy areas, thickets and scrub in open country, open and riparian woodland
Sweet coneflower ( <i>Rudbeckia subtomentosa</i> ) (P)	-	T	No Present habitat unsuitable	N/A	Barrens
<b><i>Species Documented Within 4 Miles of the Proposed Project</i></b>					
Naked-stem sunflower ( <i>Helianthus occidentalis</i> ) (P)	-	S	No Present habitat unsuitable	N/A	Limestone glades and barrens
Short-beaked arrowhead ( <i>Sagittaria brevirostra</i> ) (P)	-	T	No Present habitat unsuitable	N/A	Swamps and floodplains
Bewick's wren ( <i>Thryomanes bewickii</i> ) (A)	-	E	Yes Habitat is present (last observance in this area 1967)	Not practical due to broad habitat description or mobility of species	Brushy areas, thickets and scrub in open country, open and riparian woodland
Sweet coneflower ( <i>Rudbeckia subtomentosa</i> ) (P)	-	T	No Present habitat unsuitable	N/A	Barrens
Beak grass ( <i>Diarrhena obovata</i> ) (P)	-	S	Yes Habitat is present	Not practical due to broad habitat description or mobility of species	Upland woodlands to floodplain woodlands, wooded slopes along bluffs, shaded limestone cliffs
Sweet-scented Indian-plantain ( <i>Hasteola suaveolens</i> ) (P)	-	S	No Present habitat unsuitable	N/A	Alluvial woods, moist slopes
Buffalo clover ( <i>Trifolium reflexum</i> ) (P)	-	E	No Present habitat unsuitable	N/A	Rocky open woods
Buffalo currant ( <i>Ribes odoratum</i> ) (P)	-	T	No Present habitat unsuitable	N/A	Limestone bluffs



Species	Status		Species Potentially Present?	Accommodations to Minimize Impacts	Habitat
	Federal	State			
Yellow water-crowfoot ( <i>Ranunculus flabellaris</i> ) (P)	-	T	No Habitat is present; not observed during site visit	N/A	Ponds and marshes
Featherfoil ( <i>Hottonia inflata</i> ) (P)	-	S	No Present habitat unsuitable	N/A	Wet sloughs and ditches
Rock goldenrod ( <i>Solidago rupestris</i> ) (P)	-	E	No Present habitat unsuitable	N/A	Limestone riverbanks, bluffs
Eastern slender glass lizard ( <i>Ophisaurus attenuatus longicadus</i> ) (A)	-	D	Yes Habitat is present	Not practical due to broad habitat description or mobility of species	Dry upland areas including brushy, cut-over woodlands and grassy fields
Muskingum sedge ( <i>Carex muskingumensis</i> ) (P)	-	E	No Habitat is present; not observed during site visit	N/A	Wet woods
American ginseng ( <i>Panax quinquefolius</i> ) (P)	-	S-CE	No Present habitat unsuitable	N/A	Rich, cool, moist but not extremely wet woods under a closed canopy
Hair grass ( <i>Muhlenbergia glabriflora</i> ) (P)	-	S	No Present habitat unsuitable	N/A	Dry woods and barrens
Blue mud-plantain ( <i>Heteranthera limosa</i> ) (P)	-	T	No Present habitat unsuitable	N/A	Mud flats
Southeastern shrew ( <i>Sorex longirostris</i> ) (A)	-	D	Yes Habitat is present	Not practical due to broad habitat description or mobility of species	Various habitats ranging from bogs and damp woods to upland shrubby or wooded areas

State Status: T=Threatened; E=Endangered; S=Special Concern; S-CE=Special Concern, Commercially Exploited;

### ***Potential Impacts to Threatened and Endangered Species***

No Build Alternative: Under the No Build Alternative, the proposed project would not be constructed; therefore project-related impacts to threatened and endangered would not occur.

#### Build Alternative:

##### Federally Threatened and Endangered Species

###### *Indiana Bat and Northern Long-eared Bat*

Based on the results of the 2011 survey for the federally endangered Indiana bat, USFWS concurred that the project is “not likely to adversely affect” the Indiana bat. They also concurred with a “not likely to adversely affect” finding for the threatened Northern long-eared bat, due to no captures during the survey efforts.

###### *Pink Mucket*

Based on the results of the 2015 mussel survey, USFWS concurred that the project is “not likely to adversely affect” the pink mucket.

A copy of the October 22, 2015 USFWS concurrence letter for the federally-listed bats and pink mucket is in Attachment III. In the letter, USFWS notes that TDEC has committed to coordinating with USFWS for potential impacts to all species prior to construction; therefore, based on the best information available at this time, they believe that the requirements for Section 7 of the *Endangered Species Act of 1973* are fulfilled for all species that currently receive protection under the Act.

##### State Listed Species

Based on the results of the October 2017 TDEC Natural Heritage Division database search, one endangered species, two threatened species and one species of special concern had documented occurrences within one mile of the proposed Build Alternative (Table 3-21). Three of these species are not considered potentially present within the Build Alternative due to unsuitable habitat. Habitat is present for the state endangered Bewick’s wren; however, this species was last observed in the area in 1967. Based on this, the Build Alternative is not likely to adversely affect the Bewick’s wren.

Based on the results of the October 2017 TDEC Natural Heritage Division database search, four endangered species, five threatened species, two species deemed in need of management, five species of special concern, and one species of special concern/commercially exploited had documented occurrences within four miles of the proposed Build Alternative (Table 3-21). Thirteen of these species are not considered potentially present in proposed project right-of-way due to unsuitable habitat.

The four species considered potentially present are the Bewick’s wren (endangered), beak grass (species of concern), eastern slender glass lizard (deemed in need of management), and the southeastern shrew (deemed in need of management). As mentioned above, habitat is present

for the state endangered Bewick's wren; however, this species was last observed in the area in 1967. Based on this, the Build Alternative is not likely to adversely affect the Bewick's wren.

Habitat is present for the eastern slender glass lizard; however, the record for the eastern slender glass lizard is historical (one individual observed in one location in 1968). Based on this, the Build Alternative is not likely to adversely affect the eastern slender glass lizard.

Habitat is present for the southeastern shrew; however, this species was last observed within four miles of the proposed Build Alternative in 1994. Based on this, the Build Alternative is not likely to adversely affect the southeastern shrew.

Habitat is present for the beak grass; however, this species was last observed within four miles of the proposed Build Alternative in 2008. Based on this, the Build Alternative is not likely to adversely affect the beak grass.

On December 13, 2017, the Tennessee Wildlife Resources Agency (TWRA) responded that they concurred with the finding for the mussel survey and the mist net survey and that implementation of standard Best Management Practices (BMPs) will be sufficient to satisfy the need of the agency. A copy of the TWRA correspondence is in Appendix G.

### ***Mitigation for Threatened and Endangered Species Impacts***

Stringent BMPs, including erosion and siltation control measures, will be implemented during construction.

#### **3.7.7 Migratory Birds**

As directed under *Executive Order 13186*, in furtherance of the *Migratory Bird Treaty Act* (16 USC 703-711), federal agencies are required to ensure that the environmental analyses of federal actions required by the NEPA review process evaluate the effects of actions on migratory birds. Large tracts of undeveloped, forested habitat are required for the successful nesting of many migratory bird species. Forest fragmentation is thought to be one of the leading contributors to the decline in migratory bird populations. The edge habitat created by fragmentation contributes to increasing populations of disturbance-tolerant predators, such as opossums (*Didelphis marsupialis*), raccoons (*Procyon lotor*), domestic cats (*Felis catus*), and parasitic birds, such as the brown-headed cowbird (*Molothrus ater*). The cowbird is a brood parasite that lays its eggs in the nests of many migratory bird species, reducing the success for the host bird species.

Forested habitats generally provide the best foraging and nesting habitat for a majority of the migratory bird species. Agricultural (pasture, hay, soybeans), residential and commercial uses have removed, fragmented or disturbed the forested habitats within the study corridor. While the remaining forests provide foraging and nesting opportunities for migratory bird species, the value of these forested areas has been greatly diminished due to their size and degraded condition.



### ***Impacts to Migratory Birds***

**No Build Alternative:** Under the No Build Alternative, the proposed project would not be constructed; therefore project-related impacts to migratory bird species or their habitat would not occur within the study corridor.

**Build Alternative:** The Build Alternative would convert approximately 178 acres of forested habitat to roadway use. The loss of forested land would remove some foraging and nesting habitat. However, given the existing and past land uses within the study corridor, migratory bird species currently utilizing the area for nesting and foraging are likely adapted to anthropogenic disturbances, and any impacts to migratory bird species from the construction of the Build Alternative are anticipated to be minimal. In addition, the study corridor lacks large amounts of the undisturbed forested habitat that is preferred by most migratory bird species.

#### 3.7.8 Invasive Species

Executive Order 13112 *Invasive Species* (February 3, 1999) called for the prevention and control of invasive species (non-native exotics) and directed federal agencies to expand and coordinate their efforts to combat the introduction and spread of plants and animals not native to the US. *Executive Order 13112* was amended on December 5, 2016 by *Executive Order 13751, Safeguarding the Nation from the Impacts of Invasive Species*, which directs actions to continue coordinated Federal prevention and control efforts related to invasive species. This order maintains the National Invasive Species Council (NISC) and the Invasive Species Advisory Committee (ISAC); expands the membership and clarifies operations of the NISC; incorporates considerations of human and environmental health, climate change, technological innovation, and other emerging priorities into Federal efforts to address invasive species; and strengthens coordinated, cost-efficient Federal action.

Construction and earthmoving activities create disturbed soil areas that become susceptible to the introduction of invasive exotic plant species, depleting suitable habitat for more desirable native plant species. Exotic, invasive plant species are determined by the US Department of Agriculture (USDA) and designated by the State of Tennessee on the “Regulated Noxious Weeds” list. The list includes just two species that are recognized as agricultural threats in Tennessee: purple loosestrife (*Lythrum salicaria*) and tropical soda apple (*Solanum viarum*).

In addition, the Tennessee Exotic Plant Council has developed a list of non-regulated invasive exotic pest plants that are commonly found throughout Tennessee and are considered to pose a potential threat to native plant species. This list includes over 100 invasive exotic pest species that could occur throughout Tennessee. Some of the most common species on this list observed in the proposed study corridor include:

- privet (*Ligustrum sp.*)
- Japanese honeysuckle (*Lonicera japonica*)
- multiflora rose (*Rosa multiflora*)

### **Mitigation for Invasive Species Impacts**

During construction of the proposed project, TDOT would follow the guidance of *Executive Order 13112* to control and prevent the spread of these invasive exotic pest plant species. The use of native trees, shrubs, and warm season grasses, where practicable, would be implemented for the stabilization of disturbed area and to prevent revegetation of disturbed areas by harmful exotic plants. Disturbed areas would not be revegetated with plants listed by the Tennessee Exotic Pest Plant Council as harmful exotic plants.

#### **3.7.9 Wild and Scenic Rivers**

Wild and scenic rivers are federally protected under the Wild and Scenic Rivers Act for their scenic, cultural, historic, recreation, wildlife, geologic, or other values. The US Department of Agriculture, through the US Forest Service, and the US Department of Interior, USFWS, the Bureau of Land Management, and the National Park Service (NPS) maintain the National Inventory of Rivers. The National Inventory of Rivers lists rivers that are designated or may be eligible for wild and scenic rivers designation.

No Wild and Scenic rivers are located within or adjacent to the study corridor.

### **3.8 Hazardous Materials**

Hazardous materials are substances that have, or would have (when combined with other materials) a harmful effect on humans or the natural environment. Hazardous materials are regulated under the *Resource Conservation and Recovery Act (RCRA) of 1976*, as amended; the *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980*; and the *Superfund Amendments and Reauthorization Act (SARA) of 1986*.

A *Phase 1 Environmental Site Assessment (ESA)* and a Phase 1 ESA Addendum were prepared for the proposed project. The Phase 1 ESA identified two potential sites, both above ground storage tanks (ASTs) within the proposed project right-of-way.

The Phase 1 ESA addendum was prepared to cover the section of the project widening SR 149 from River Road to 600 feet east of Ussery Road. The section was not studied in the original Phase 1 ESA. The Phase 1 ESA addendum identified one potential site, the former Hilltop BP, within the proposed project right-of-way. A First Search Report prepared by Environmental Data Resources, Inc. (EDR) listed the site as containing five underground storage tanks (USTs). Subsequent field observations made on April 15, 2014, revealed that the site is now Mark Davis Trucking. According to an interview with the business owner during the field survey, Mark Davis Trucking has been operating at the site since April 1, 2014. The Nashville TDEC Field Office confirmed that the five USTs were removed on August 11, 2014, while the lines were closed in-place.

Based on the results of the Phase I investigations, no Phase 2 activities were recommended. The Phase I ESA and addendum are included in Appendix I on the attached CD.

### ***Impacts to Hazardous Materials Sites***

**No Build Alternative:** Under the No Build Alternative, the proposed project would not be constructed; therefore, project-related hazardous materials impacts would not occur within the study corridor.

**Build Alternative:** Based on the findings of the Phase I investigations for the Build Alternative, the risk for encountering hazardous materials contamination is low. If evidence of a release is observed during earth-moving activities, sampling should be conducted to determine whether a Phase 2 investigation is warranted.

### ***Mitigation for Hazardous Materials Sites***

In the event hazardous substances/wastes are encountered within the right-of-way, their disposition shall be subject to all applicable regulations, including the applicable sections of the RCRA, as amended; and the CERCLA, as amended; and the *Tennessee Hazardous Waste Management Act of 1983*, as amended.

## **3.9 Soils and Geology**

A *Preliminary Geotechnical Report* was prepared for the proposed project in February 2011. The report is included in Appendix J on the attached CD. The *Preliminary Geotechnical Report* concluded that there are no geotechnical or geologic conditions along the proposed study corridor that would require altering the alignment of the Build Alternative.

## **3.10 Farmlands**

The majority of the study corridor consists of fragmented forests and agricultural land. Development in the study corridor consists of single-family residences, agricultural uses and a few small commercial businesses. However, the study corridor is located in a rapidly developing area near the city of Clarksville and the forests and farmland in the area are being converted to residential and commercial development.

According to the NRCS, between 1992 and 2012 the number of farms in Montgomery County has decreased from 941 to 783 and the 2012 average farm size in the county is 188 acres. The acreage in farms has also decreased by 16 percent, and the average (per farm) market value of agricultural products sold has increased by approximately 86 percent. Table 3-22 displays a summary of the changes in Montgomery County farmland from 1992 to 2012.

In accordance with the *Farmland Protection Policy Act (FPPA)* of 1981, TDOT coordinated with the US



*What is the National Farmland Protection Policy Act (FPPA)? The aim of the FPPA is to minimize Federal Programs (including technical or financial assistance) contribution to the conversion of important farmland to non-agricultural uses. The act seeks to encourage alternatives, if possible, that would lessen the adverse effects to important farmlands. Important farmlands are lands with soils that are identified as prime and unique or of statewide and local importance.*



Department of Agriculture - NRCS, and completed the Farmland Conversion Rating Form (Form 1006) in 2014 (Appendix K) for the Build Alternative.

**Table 3-22: Farmland in Montgomery County**

	1992	1997	2002	2007	2012	% Change (1992-2012)
Number of Farms	941	988	1,090	862	783	-17
Land in Farms (acres)	174,807	164,575	166,648	151,461	147,371	-16
Market Value of Agricultural Products Sold (average per farm)	\$32,416	\$31,185	\$25,623	\$32,277	\$60,350	+86

Source: *US Census of Agriculture* (1992, 1997, 2002, 2007, 2012)

### ***Impacts to Farmland***

**No Build Alternative:** No right-of-way would be acquired and no construction would occur under the No Build Alternative; therefore, project-related impacts to farmlands would not occur.

**Build Alternative:** The Build Alternative would acquire approximately 160 acres of farmland for roadway right-of-way. According to the NRCS, 71 acres within the roadway right-of-way qualify as prime and unique farmland. This represents 0.06 percent of the farmland in Montgomery County that would be converted to roadway right-of-way.

In accordance with Title 7 CFR, Part 658, FPPA criteria were applied to determine effects to farmland. The site assessment criteria are designed to protect farmland and assess important factors other than the agricultural value of the land. 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 160 points or more require the consideration of build alternative(s) project alignments that would serve the proposed purpose but would convert either fewer acres of farmland or other farmland that has a relative lower value.

The farmland assessment determined that the Build Alternative would have a site assessment score of 118. Since the ratings are below the 160-point criterion that requires the consideration of other alternatives, the proposed project has been found to be compliant with the FPPA, and examination of avoidance alternatives is not mandated. Based on site information and coordination with the NRCS, the proposed project would not have a substantial impact to farmland.

### 3.11 Cultural Resources

Pursuant to the regulations implementing Section 106 of the *National Historic Preservation Act* (NHPA) as outlined in 36 CFR 800, studies were conducted to identify and evaluate any historic architectural and archeological resources located in the proposed project's Area of Potential Effect (APE) that are listed in or eligible for listing in the National Register of Historic Places (NRHP). The proposed project has been coordinated with the Tennessee State Historic Preservation Office (TN-SHPO) and other entities, as required under Section 106.



*What is an Area of Potential Effect (APE)? A project's APE is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist." The APE is influenced by the scale and nature of an undertaking.*

The No Build Alternative would have no effect on Cultural Resources. Potential impacts from the proposed Build Alternative are described in the following sections.

#### 3.11.1 Historical/Architectural Resources

The original historical/architectural assessment was completed for SR 374 from SR 149 to the existing SR 76/US 79 (Dover Road)/SR 374 (Paul B. Huff Memorial Parkway) interchange in July 2011. The original report identified no historical/architectural resources eligible for listing in the NRHP.

An addendum to the original July 2011 report was completed in April 2012 to evaluate a change in termini along SR 149. The termini of the Build Alternative were expanded to include widening along SR 149 for a distance of approximately one mile. The addendum found no historical/architectural resources eligible for listing in the NRHP within the APE of the expanded study corridor.

The TN-SHPO reviewed the reports and in letters dated August 17, 2011 and April 17, 2012 concurred that the APE contained no historical/architectural resources eligible for listing in the NRHP. Copies of the TN-SHPO letters are included in Attachment IV. The historic resources reports are included in Appendix L on the attached CD.

In April 2016, TDOT's Historic Preservation Section reviewed a shift in the Build Alternative alignment between York Road and SR 76/US 79 (Dover Road). The alignment shift was needed to avoid a large sink hole that was discovered along the study corridor. The Historic Preservation Section determined that the alignment shift was within the original APE; therefore, the April 17, 2012 TN-SHPO letter remains valid. The Historic Preservation Section's determination is included in an April 18, 2016 Environmental Study Request response included in Attachment IV.

#### 3.11.2 Archaeological Resources

The following archaeological reports have been prepared for this project:

- *Phase I Archaeological Assessment of State Route 374/149, State Route 76 to West of River Road* (Michael Baker International, Inc., October 2016)
- *Phase I Archaeological Assessment of State Route 374/149, State Route 76 to West of River Road* (New South Associates, January 2016)

Copies of the reports are in Appendix L on the attached CD. Copies of the TN-SHPO letters are included in Attachment IV. The findings from the reports are summarized below. Table 3-23 provides a summary of archaeological sites within the APE, NRHP recommendation, and management recommendation.

SR 374 from SR 76/US 79 (Dover Road) to southeast of Dotsonville Road

In October 2016, a Phase I Archaeological Assessment was completed for the section of the proposed project from SR 76/US 79 (Dover Road) southward to southeast of Dotsonville Road. No previously recorded archaeological sites were identified within the APE. The study identified one previously unrecorded archaeological site (40MT1278) and nine isolated finds. Site 40MT1278 was determined not eligible for listing in the NRHP and no further work is recommended for this site.

In a letter dated December 5, 2016, for this section of the project, the TN-SHPO concurred that no archaeological resources eligible for listing in the NRHP would be affected by the proposed project.

SR 374 from southeast of Dotsonville Road to SR 149, SR 149 from proposed SR 374 to River Road, proposed improvements to Smith Branch Recreation Area

In January 2016, a Phase I Archaeological Assessment was completed for the section of the proposed project from southeast of Dotsonville Road to SR 149, SR 149 from proposed SR 374 to River Road, and the proposed boat ramp and parking area improvements within the Smith Branch Recreation Area. The study updated four previously known sites (40MT461, 40MT462, 40MT911, and 40MT912) and identified one new archaeological site (40MT1230) and nine isolated finds. Sites 40MT461, 40MT462, and 40MT1230 were determined not eligible for listing in the NRHP and no further work is recommended for these sites.

Site 40MT912, a historic cemetery, was delineated during the study. No evidence of marked or unmarked graves was found within the proposed SR 374 right-of-way. The study findings indicate that the likelihood of outlying graves being present in areas beyond the grounds examined within the proposed right-of-way is low.

Site 40MT911 is an intact, stratified, multicomponent prehistoric habitation site dating to the Early Archaic and Late Archaic-Early Woodland periods. The site is known to contain intact deposits and at least two prehistoric components. It retains the potential to contain features from the Late Archaic-Early Woodland, Early Archaic, and possibly the Paleoindian period. Based on the presence of intact, stratified cultural deposits and the potential to contain cultural features, the site retains the potential to provide important information on the prehistory of the area.



In a letter dated February 26, 2016, for this section of the project, the TN-SHPO concurred that the study corridor contains archaeological resources potentially eligible for listing in the NRHP.

**Table 3-23: Summary of Archaeological Sites within the Project's APE**

Site Number	NRHP Recommendation	Management Recommendation
40MT461	Not eligible.	No further study.
40MT462	Not eligible.	No further study.
40MT911	Potentially eligible.	Avoidance is recommended. If avoidance is not feasible, additional testing is recommended.
40MT912	Not eligible.	Avoidance is recommended.
40MT1230	Not eligible.	No further study.
40MT1278	Not eligible.	No further study.

### **Impacts to Archaeological Resources**

Site 40MT912: No evidence of marked or unmarked graves was found within the proposed SR 374 right-of-way. The study findings indicate that the likelihood of outlying graves being present in areas beyond the grounds examined within the proposed right-of-way is low. In order to avoid disturbance, if the Build Alternative is selected, it is recommended that Special Notes be added to the construction plans and the site boundaries be labeled as *Sensitive Environmental Area*.

Site 40MT911: Avoidance is recommended for this site. If avoidance is not feasible, additional testing is recommended.

In a letter dated February 26, 2016, the TN-SHPO concurred that Site 40MT911 should be avoided by all ground disturbing activities or subjected to Phase II testing and assessment and Site 40MT912, a historic cemetery should be avoided.

### **3.12 Parks and Recreation Resources**

The following parks/recreation resources are located within the study corridor:

- RichEllen Park, and
- Smith Branch Recreation Area.

#### **3.12.1 RichEllen Park**

RichEllen Park is located along SR 149 approximately 2.25 miles west of the proposed project. The 52-acre park features a large pavilion with enough space to accommodate larger events such as craft fairs, trade shows, fund raising events for the community, and public gatherings. RichEllen Park also includes eight ball fields.

### 3.12.2 Smith Branch Recreation Area

The Smith Branch Recreation Area is located adjacent to the Cumberland River within the study corridor. The recreation area is owned and operated by the USACE, Nashville District and the primary use of the recreation area is to provide a boat ramp for river access and parking for ramp users. The proposed Build Alternative would acquire approximately nine acres of land from the Smith Branch Recreation Area. Through consultation with the USACE, it has been determined that the proposed project would not compromise the intended use of the property. As a result, a Section 4(f) *de minimis* Determination has been prepared. Project impacts and mitigation are discussed in Section 3.13.

### 3.13 Section 4(f)

Section 4(f) was originally enacted in the *Department of Transportation Act of 1966* (re-codified in 1983) (49 USC 1653(f)) to preserve publicly owned land for recreation, wildlife, and waterfowl refuges, as well as all historic properties listed or eligible for the NRHP. Approval of a transportation project that requires use of a Section 4(f) property is contingent upon the following conditions:

- (i) there is no prudent or feasible alternative to using that land; and
- (ii) all possible measures have been taken to minimize harm to that property as a result of the proposed project.

*Section 6009(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)* amended the existing Section 4(f) legislation to simplify the processing and approval of projects that have what is referred to as *de minimis* (minimal) impacts on land protected by Section 4(f). *De minimis* impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not adversely affect the activities, features, and attributes of the Section 4(f) resource.

#### 3.13.1 Summary of Section 4(f) *de minimis* Determination for the Smith Branch Recreation Area

The proposed Build Alternative would impact the Smith Branch Recreation Area, a resource protected under Section 4(f). The Smith Branch



*What is Section 4(f)? Section 4(f) from the Department of Transportation Act of 1966 (Title 49 United States Code Section 303) declares it is national policy that special effort will be made to preserve the natural beauty of the countryside, public park and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) permits the Secretary of Transportation to approve a project that requires the use of publicly-owned land from a park, recreation area, wildlife refuge, or any land from a historic site of national, state, or local significance only if the following determinations have been made: "there is no feasible and prudent alternative to the use of such land, and all possible planning has been undertaken to minimize harm to the Section 4(f) lands resulting from such use."*



*Boat ramp to the Cumberland River at the USACE's Smith Branch Recreation Area.*

Recreation Area is shown on Figure 3-6a. The following section summarizes the Section 4(f) *de minimis* Determination and related correspondence, which is included in Attachment V.

### **Description of the Smith Branch Recreation Area**

The Smith Branch Recreation Area is a 38.8 acre site located adjacent to the Cumberland River within the study corridor. The recreation area is owned and operated by the USACE, Nashville District, and consists of a parking lot and a public boat ramp. The primary use of the recreation area is to provide a boat ramp for river access and parking for ramp users.



*The USACE's Smith Branch Recreation Area along the Cumberland River.*

### **Section 4(f) Impact**

**No Build Alternative:** Under the No Build Alternative, no Section 4(f) impacts would occur and access to the recreation area will not be improved.

**Build Alternative:** The Build Alternative would use approximately nine acres of the 38.8 acre Smith Branch Recreation Area. This use would involve the construction of an at-grade roadway and bridge abutment on approximately five acres of the recreation area. The remaining four acres of use would involve the acquisition of right-of-way from the recreation area for land under the bridge from the bridge abutment to the Cumberland River. This property would be required for construction and maintenance of the bridge. Existing Smith Branch Road would be extended through the existing cul-de-sac just south of the entrance to the Smith Branch Recreation Area, approximately 1,000 feet. The realigned Smith Branch Road would parallel the west side of the Build Alternative, crossing under the proposed bridge to connect with the parking lot for the boat ramp. TDOT will coordinate with the USACE to determine whether the portion of Smith Branch Road on USACE property that is currently used to access the boat ramp would be scarified, graveled, or left as is. The proposed Build Alternative bridge location at the recreation area is shown in Attachment V.

### **Mitigation for Smith Branch Recreation Area Impacts**

The following site-specific measures to avoid and/or minimize impacts have been coordinated with the USACE, Nashville District, and will be implemented as mitigation for the project's impacts to the recreation area.

1. **Pave the road leading to the boat ramp parking lot:** The connector road to the parking lot will be realigned, graded and repaved to fit the intended use based on design standards for low volume local roads.
2. **Pave the boat ramp parking lot to accommodate 75 spaces for passenger vehicles with boat trailers:** The current boat ramp parking lot accommodates approximately 40 vehicles with boat trailers. The parking lot will be expanded to accommodate 75 vehicles with boat trailers. The expanded parking lot will be paved and striped. The USACE believes

that the existing lot could be expanded to the southwest into an area that will likely be disturbed by construction (e.g., staging area and/or haul road, cutting trees). The actual design of the boat ramp parking lot expansion will be refined as final design of the project is completed.

3. Double size of boat ramp to accommodate two boats: The existing single boat ramp will be improved to accommodate two boats in accordance with the USACE's standard specification for boat ramps.
4. Install guardrail around the expanded boat ramp parking lot: The USACE has had numerous issues with off-road vehicles accessing the recreation area's nature trails from the parking lot. Guardrail will be installed around the improved boat ramp parking lot.
5. Facility Access: Main access to the recreation area will be from the proposed intersection of SR 374 and Manning Gate Road. Appropriate turn lanes will be provided at the SR 374/Manning Gate Road intersection and wayfinding signs will be provided to direct vehicles to the Smith Branch Recreation Area via Manning Gate Road and Smith Branch Road.
6. Utilities: TDOT will provide an electrical stub-out at the bridge to be used by USACE to set up and connect service for lighting the parking lot.

### **Section 4(f) Coordination**

The proposed project was developed in coordination with the USACE, which has jurisdiction over the Smith Branch Recreation Area. TDOT has prepared a recommendation for a *de minimis* finding for impacts to the recreation area. The Section 4(f) requirements are satisfied if the proposed project, which is a Federal-aid project, has a *de minimis* impact on the Smith Branch Recreation Area. After considering any comments received from the public, if the USACE (official with jurisdiction) concurs in writing that the project would not adversely affect the activities, features, or attributes that make the recreation area eligible for Section 4(f) protection, then the FHWA may finalize the *de minimis* impact determination.

An opportunity for public review and comment on the Section 4(f) *de minimis* Determination is required and will be provided during the NEPA public hearing. Copies of any public comments received will be made available to the USACE prior to the request for their concurrence with the *de minimis* determination.

### **3.14 Section 6(f)**

Section 6(f) of the *Land and Water Conservation Fund Act of 1965* (LWCFA) (36 CFR 59) protects grant-assisted areas from conversion to other uses. The purpose of the LWCFA is to "assist in preserving, developing and assuring accessibility to all citizens of the United States of present and future generations...such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable for individual active participation." The program provides matching grants to states and local governments through the NPS for the acquisition and development of public outdoor recreation areas and facilities.

No Section 6(f) resources were identified within the study corridor.



### 3.15 Visual Resources

The visual landscape along SR 149 consists of an existing two-lane roadway with grassed right-of-way, large tracts of undeveloped woodlots, single family residences, and a few small commercial businesses among rolling hills. Along the new location section of the study corridor with an exception being at the Cumberland River crossing the visual landscape consists of large tracts of undeveloped woodlots, single-family residences, and farmland among rolling hills.

No Build Alternative: No construction would occur under the No Build Alternative; therefore, project-related impacts to visual resources would not occur.

Build Alternative: Along SR 149, the highway is part of the existing environment and the Build Alternative includes widening the road along the existing alignment, thus minimizing impacts to the visual landscape. Along the new location section of the study corridor, the view of the highway from most of the residents would likely be obscured by the rolling terrain and woodlots. At the Cumberland River crossing the visual landscape consists of floodplains used for farming. No scenic vistas, areas considered to have high visual quality, or visually sensitive resources are located along or adjacent to the study corridor. Since no areas of high visual quality or visually sensitive resources exist along and adjacent to the proposed Build Alternative alignment, the visual impacts of the proposed project are anticipated to be minimal.

### 3.16 Energy Impacts

Construction of the proposed project would involve the commitment of energy resources during both the short-term construction stage and throughout the long-term operation and maintenance of the highway. The energy requirements during construction would be greater than the No Build Alternative. However, the post-construction operational energy requirements of vehicles using the facility should be less than with the No Build Alternative. The savings in operational energy requirements are expected to more than offset construction energy requirements, and the long-term result would be a net savings in energy usage. Additionally, the impact of the proposed project is not expected to be substantial in the context of regional or national energy usage.

### 3.17 Pedestrian/Bicycle Considerations

SR 149 within the study corridor is included in the statewide *Bicycle and Pedestrian Plan* element of the TDOT *Long Range Transportation Plan* (LRTP). Although the shoulders of SR 149 would not be specifically marked for pedestrian and bicycle use, pedestrian and bicycle traffic could utilize the 10-foot paved shoulders. Along the new location portion of the proposed project, the shoulders of the highway would not be specifically designated for bicycle and pedestrian traffic but the shoulders would be wide enough (12-foot) to accommodate these uses. Pedestrian and bicycle safety and mobility would not be improved under the No Build Alternative.

### 3.18 Construction Impacts

A roadway construction project is likely to have some level of inconvenience through disruptions to residents, businesses, and travelers. Maintenance of traffic, access to adjoining properties and road and utility relocations are particular construction-related issues that must be addressed with the proposed 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 inconvenience or disrupt the flow of customers, employees and material/supplies to and from businesses. Construction impact controls would be integrated into the proposed project's contract specifications and traffic control plans. The proposed project would be constructed in accordance with all applicable rules and regulations regarding construction impacts, as required in TDOT's *Standard Specifications for Road and Bridge Construction*.

No Build Alternative: Construction for this project would not occur under the No Build Alternative scenario; therefore, project-related construction impacts would not occur.

Build Alternative: The Build Alternative would have physical construction-related impacts, but with the implementation of appropriate controls, no adverse cumulative or secondary construction impacts are foreseeable. The following potential construction-related impacts are addressed in this section:

- Traffic and circulation
- Air quality
- Noise
- Water quality and erosion control
- Wetlands
- Waste disposal
- Discovery of unknown archaeological sites

#### ***Traffic and Circulation***

Traffic would be maintained on existing roadways during construction or detours would be developed. Access to all properties would be maintained during construction. Additionally, the public would be kept informed of any proposed detours or temporary road closures.

#### ***Air Quality***

The proposed project would result in the temporary generation of construction-related pollutant emissions and dust that could result in short-term localized air quality impacts. 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. All construction equipment shall be maintained, repaired and adjusted to keep it in full satisfactory condition to minimize pollutant emissions.

### **Noise**

There would be unavoidable, short-term noise impacts as a result of project construction. The sound levels resulting from construction activities at nearby noise-sensitive receivers would be a function of the types of equipment utilized, the duration of the activities, and the distances between construction activities and nearby land uses.

TDOT's construction specifications would apply to the proposed 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 would be bound by Section 107.01 of the *Standard Specifications* to observe any noise ordinance in effect within the project limits.

### **Water Quality and Erosion Control**

Short-term adverse impacts to water quality would include impacts associated with site preparation, grading, and construction activities. The contractor would be required to employ BMPs to minimize the impacts of point and non-point source pollution resulting from increased siltation and highway runoff. A sediment control plan would be formulated in accordance with the TDOT *Standard Specifications for Road and Bridge Construction* and would include the following measures:

- Temporary erosion control devices such as silt fences, straw bales, burlap, jute matting, grading, seeding and sod will be used to minimize erosion and sedimentation;
- Removal of vegetation will be minimized; and,
- Fill slopes will be constructed and stabilized during the growing season if feasible through the establishment of non-invasive species.

The project would be subject to the conditions of the NPDES. Permit conditions require the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) to help control erosion, sedimentation, and other project-generated waste. Periodic inspection is also required to ensure that the plan is implemented and effective. If inspection shows that the installed erosion and sediment controls are failing or inadequate, they shall be immediately repaired or upgraded. The failure of erosion and sediment controls that leads to exceeding turbidity standards in receiving waters shall result in work being stopped until the problem is remedied.

### **Wetlands**

Construction activities would be confined to within the permitted limits to prevent unnecessary disturbance of adjacent wetland areas. Potential temporary impacts to wetlands would be minimized by implementing sediment and erosion control measures.

### **Waste Disposal**

Solid waste could be generated by project construction (e.g., through demolition/removal of buildings and structures). The quantity of disposed waste would represent a negligible proportion of the total waste deposited in local landfills.

Any toxic and hazardous materials would be handled and used in accordance with package labels and manufacturer's directions. Wastes would be segregated, labeled and stored in a manner that would prevent their release into the environment from a crash or spill. The contractor would 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 would be contractually required to handle and dispose of the material in accordance with the *TDOT Standard Specifications for Road and Bridge Construction*.

In the event hazardous substances/wastes are encountered within the right-of-way during construction, their disposition shall be subject to all applicable regulations, including the applicable sections of the Federal RCRA, as amended; and the CERCLA, as amended; and the Tennessee Hazardous Waste Management Act of 1983, as amended.

#### ***Discovery of Unknown Archaeological Sites***

If archaeological materials are uncovered during construction, all construction work in the area of the find would cease. The Tennessee Division of Archaeology and recognized Native American tribes would be immediately contacted so that their representative may have the opportunity to examine and evaluate the materials.

### **3.19 Permits Required**

The acquisition of permits would occur prior to initiating construction activities, pursuant to Section 69-3-108(a) of the *Tennessee Water Quality Control Act of 1977* and other state and federal laws and regulations. The following permits would likely be required:

- **USACE CWA Section 404 Permit:** Required for construction that involves the placement of dredge and fill material in waters of the US Section 404 Permits would be required by the USACE prior to construction.
- **USACE Section 10 Permit:** Required to construct any structure in or over any navigable water of the United States.
- **USCG Section 9 Permit:** Required to construct any structure in or over any navigable water of the United States.
- **TVA Section 26a Permit:** Required for crossing of the Cumberland River. Section 26a of the *Tennessee Valley Act of 1933* (as amended) prohibits the construction, operation, or maintenance of any structure affecting navigation, flood control on public lands or reservations across, along, or in the Tennessee River or any of its tributaries until plans for such activities have been reviewed and approved by the TVA.
- **TDEC Aquatic Resource Alteration Permit (ARAP):** Required for any alterations of state waters, including wetlands that do not require a Federal Section 404 Permit. ARAPs are issued by the TDEC, Division of WPC.
- **TDEC Section 401 Water Quality Certification:** Must be obtained from the TDEC, Division of WPC, before any activity that may result in pollution discharge into waters of the US can be permitted by a federal agency.



- **TDEC National Pollutant Discharge Elimination System (NPDES) Stormwater Construction Permit:** Required for grubbing, clearing, grading, or excavation of one or more acres of land. NPDES Permits are issued by TDEC, Division of WPC.
- **TDEC Class V Underground Injection Control Permit:** Required to discharge shallow non-hazardous wastes into a subsurface system other than city sewers or modifies karst features.

### 3.20 Indirect and Cumulative Impacts

This section presents a discussion of the potential indirect and cumulative impacts (ICI) the No Build and Build Alternative (if selected) may have on resources. The NEPA and the Council on Environmental Quality regulations require that the indirect and cumulative effects of a project be analyzed in addition to direct impacts (40 CFR §1508.25 (c)).

Available data from a variety of resources including the *2012 Growth Plan*, the *CUAMPO 2040 Metropolitan Transportation Plan*, the USGS, the US Department of Agriculture NRCS and the CMCRPC GIS Division was compiled for this ICI analyses.

#### 3.20.1 Indirect Effects

Indirect impacts are defined as impacts that may be caused by a project, but would occur in the future or outside the study corridor and are reasonably foreseeable. Indirect impacts may include growth-inducing effects and other effects related to changes in the pattern of land use, population density or growth rate and related effects on air and water and other natural systems (40 CFR 1508.7). Reasonably foreseeable actions/projects include:

- A project identified in a local or regional comprehensive land use plan;
- A subdivision plat that has been filed with the local government, county or other plat-approving agency;
- Population/development trends that are identified in local or regional comprehensive land use plans;
- Planned transportation improvements by city or county governments; and
- Local or regional infrastructure projects that could impact resources (schools, hospitals, etc.).

Actions that are not usually considered reasonably foreseeable include:

- Possible, but not likely actions/projects; and
- Actions that have little or no influence on the transportation decision.

Often, if a project does not have a direct effect on a resource, it will not have an indirect effect on that resource. Occasionally, however, a project may not have a direct effect but it will have an indirect effect. In general, highway projects most commonly result in indirect impacts to land use, community and economic resources, farmland, water resources, water quality, wetlands and terrestrial ecology.

The time used for the assessment of reasonably foreseeable indirect impacts was determined to be approximately 20 years into the future, which is the planning horizon for most of the local and regional land use planning documents. The indirect analysis involved assessing impacts with growth-inducing effects of the Build Alternative.

### 3.20.2 Cumulative Effects

The cumulative impacts analysis presents a comprehensive, long-term look at how the construction of the Build Alternative (if selected) and other past, present and future planned development and transportation projects might result in additional resource impacts.

Cumulative impact assessments for each resource must consider spatial (physical) and temporal (duration) boundaries. For this cumulative impacts assessment, the spatial boundaries for the land use, air quality, noise impacts, natural resources and farmland generally included an area extending approximately one mile from the study corridor and the city of Clarksville. For the water quality cumulative effects analysis, the spatial boundary was determined to be the Cumberland River basin. The temporal boundary extended back to the late 1960s when the greatest changes in the land use and the transportation network are visible on available aerial photography. The future temporal boundary extended forward approximately 20 years, which is the planning horizon for most of the local and regional land use planning documents.

Cumulative impacts are the combined effects of all past, present and reasonably foreseeable actions (not just the current project and not just highway projects) on a given resource (e.g. wetlands); regardless of who has built or plans to build a project (including developers, localities, etc., not just local or federal transportation agencies). If an action or project will not cause direct or indirect impacts on a resource, it will not contribute to a cumulative impact on the resource.

Past Actions: Past actions are defined as actions within the cumulative impacts analysis area that occurred before the current SR 374 NEPA study was initiated. These include past actions in the study corridor, and past demographic, land use, and development trends that surround the study corridor.

Present Actions: Present actions include:

- Current activities within the cumulative impacts analysis area; and
- Current resource management programs, land use activities, and development projects that are being implemented by other governmental agencies and the private sector (where they can be identified) within the cumulative impact analysis areas.

Reasonably Foreseeable Future Actions: Reasonably-foreseeable future actions may include those actions in the planning, budgeting, or execution phases. Actions may be those of the federal government, state government, local government, private organizations or companies, and/or individuals.

Cumulative effects can be analyzed with respect to all resource areas, including ecological resources, physical resources, historical and archaeological resources, economic resources, and social conditions. Cumulative effects can be both beneficial and adverse.

The following sections discuss the potential ICI the No Build and Build Alternative may have on resources.

### 3.20.3 Indirect and Cumulative Impacts to Land Use

#### 3.20.3.1 Indirect Effects to Land Use

**No Build Alternative:** Under the No Build Alternative, the anticipated growth in Montgomery County, including the city of Clarksville, would continue to result in land use changes in the area. Eventually the land within the study corridor is expected to become more developed and the agricultural land uses would be replaced by residential, commercial, and/or industrial land uses based on the *2012 Growth Plan*.

**Build Alternative:** Construction of the Build Alternative could cause a redistribution of traffic on the surrounding roadway network that might affect development and land use patterns in the study corridor. Section 2.3.2 summarizes the results of the traffic analysis of the Build Alternative. The Build Alternative may therefore promote secondary development and land use changes in the area. Land use changes, especially conversion of agricultural land and other open spaces to other uses, would occur in areas where induced growth occurs. The improved system linkage west of Clarksville between SR 149 and SR 76/US 79 (Dover Road), along with the recently let for construction widening of SR 149 from River Road east to SR 13 (Cumberland Drive) and then continuing on SR 13 (Cumberland Drive) to Zinc Plant Road (TDOT Project No. 63023-1236-14), may serve to accelerate residential and commercial development in the long-term. More immediate secondary developments would be expected to occur along SR 76/US 79 (Dover Road) at the project terminus at the SR 374 (Paul B. Huff Memorial Parkway) interchange. Secondary development may also occur at other strategic points along the Build Alternative, such as along SR 149 between River Road and the proposed intersection of SR 374. Highway oriented commercial development, such as service stations, fast food restaurants, truck stops, and motels, would most likely be the initial types of development. Because the study corridor is in the vicinity of the city of Clarksville and Fort Campbell Military Reservation, it is anticipated that residential developments could occur in this area.

It is likely that much of the developable open space in this area would be converted to more residential developments in the foreseeable future regardless of the new roadway being constructed due to the expected growth of Clarksville. Therefore, the land use changes associated with the Build Alternative may not differ substantially from the No Build Alternative in the long-term. However, the development of some areas would likely occur sooner than under the No Build Alternative.

It is not possible at this time to predict the amount or timing of any secondary development that may be attributed to the construction of the Build Alternative. Growth in the area is primarily

under the jurisdiction of local government agencies, primarily the CUAMPO and the CMCRPC. The extent of land use changes would be the responsibility of the local governments under their local ordinances and land use planning policies.

### 3.20.3.2 Cumulative Impacts to Land Use

**No Build Alternative:** Under the No Build Alternative, the planned growth west of Clarksville would likely occur at a slower rate than would be expected if the Build Alternative were constructed to provide improved system linkage between SR 149 and SR 76/US 79 (Dover Road). Therefore, overall land use changes in the area would be slower to occur under the No Build Alternative when compared to the Build Alternative.

**Build Alternative:** Growth west of Clarksville would likely occur at a faster rate if the Build Alternative is constructed, because the improved system linkage would improve travel efficiency and access to the surrounding lands.

This faster growth in the area would result in land use changes that would result in loss of undeveloped and agricultural land. The surrounding area would eventually become more developed. Local land use planners can help ensure that the growth in the area occurs in a controlled manner so that adverse impacts to resources can be minimized. If the Build Alternative is constructed, new developments could be promoted, especially along SR 76/US 79 (Dover Road) at the project terminus at the SR 374 (Paul B. Huff Memorial Parkway) interchange and along SR 149 between River Road and the proposed intersection of SR 374. Any development promoted by the project would be cumulative to the other growth that would be expected to occur with or without the project based on the CMCRPC's 2012 Growth Plan.



*Planned single-family residential neighborhood located within the study corridor.*

### 3.20.4 Indirect and Cumulative Impacts to Air Quality

#### 3.20.4.1 Indirect Impacts to Air Quality

The forecasted traffic volumes account for any redistribution of traffic that would occur as a result of the project; therefore, the air quality analysis discussed in Section 3.5 addresses the indirect traffic-related air quality impacts that might occur. The summary of the air quality study was that the Build Alternative is expected to have an increase in VMT in the design year relative to the No Build Alternative. However, the improved system linkage, improved travel efficiency and the USEPA's vehicle and fuel regulations are projected to offset any VMT increases and reduce current MSAT levels. Therefore, the air quality impacts would be comparable to the No Build Alternative.



#### 3.20.4.2 Cumulative Impacts to Air Quality

The forecasted traffic volumes include expected traffic growth and other planned and programmed projects in the vicinity of the proposed project. As a result, the air quality analysis addresses the traffic-related cumulative air quality impacts. The cumulative effects of the Build Alternative when combined with other planned and programmed projects are not expected to adversely affect air quality.

#### 3.20.5 Indirect and Cumulative Impacts to Noise

##### 3.20.5.1 Indirect Effects to Noise

The project would cause a redistribution of traffic on the surrounding roadway network that might affect development and land use patterns. These changes could cause indirect noise effects at locations near roadways beyond the project limits. The purpose of the proposed project is to enhance the corridor linkages and provide efficient transportation options around Clarksville. The enhanced corridor links are comprised of SR 374 (Paul B. Huff Memorial Parkway), SR 149, SR 13 (Cumberland Drive), and US 41A. The traffic projections indicate that the project would reduce traffic volumes on SR 13 (Cumberland Drive) and SR 12 (Riverside Drive) in the city of Clarksville as well as on SR 149 east of proposed SR 374 and, therefore, reduce noise levels for the properties along these corridors. The project is not expected to change traffic on SR 149 and SR 76/US 79 (Dover Road) west of proposed SR 374. As a result, the project is not expected to create any adverse indirect noise effects but is expected to create positive indirect noise effects at many properties by reducing the traffic on adjacent roads.

##### 3.20.5.2 Cumulative Impacts to Noise

The traffic projections include forecasted background traffic growth, the effect of other planned and programmed projects within the one mile spatial boundary by the Design Year 2040 and the effects of the project. Other than the previously mentioned TDOT widening project along SR 149 and SR 13 (Cumberland Drive) (Project No. 63023-1236-14), no federal or non-federal transportation or private development projects are currently planned in the vicinity of the project. The projected traffic volumes are expected to decrease on many area roads once the SR 374 project is constructed. Noise levels would be expected to decrease along roads where the traffic levels decrease. Traffic volumes are also projected to increase on many roads in and around Clarksville. Along these roads, noise levels would likely increase as the traffic volumes increase. The increased traffic volumes would likely result in noise impacts.

#### 3.20.6 Indirect and Cumulative Impacts to Natural Resources

##### 3.20.6.1 Indirect Effects to Natural Resources

In general, natural resources would likely continue to be impacted in the study corridor due to the continued growth and development of the area that is anticipated regardless of whether or not the new roadway is constructed based on the CMCRPC's *2012 Growth Plan*. However, the conversion of undeveloped areas to developed areas could occur at a slower rate under the No Build Alternative than would occur if the Build Alternative is built due to the potential for more immediate secondary development. Secondary developments could be promoted under the Build Alternative where access to the new roadway would provide, especially at the SR 76/US 79

(Dover Road) / SR 374 (Paul B. Huff Memorial Parkway) interchange and along SR 149 between River Road and the proposed intersection of SR 374. Therefore, the No Build Alternative may have fewer impacts to natural resources in the near future, but in the long-term the impacts would likely not differ substantially between the No Build and Build Alternative. Human activity has already extensively modified most of the natural resources of the study corridor, and virtually all of the land in the study corridor has been developed or otherwise altered to some extent by agricultural practices.

Terrestrial Ecology: The anticipated growth in Montgomery County and the city of Clarksville would likely continue to have potential adverse impacts on the terrestrial ecology in the area in terms of loss or continued fragmentation of habitat, along with increased human disturbance. Eventually much of the land within the study corridor is expected to become more developed. The overall habitat alterations are not expected to differ substantially between the No Build and Build Alternative. This is because most of the areas that would be expected to become developed due to secondary impacts from the Build Alternative are within the UGB and PGAs of Clarksville (see Figure 3-1) and are described as being primarily residential or agricultural in the CMCRPC's *2012 Growth Plan*.

Loss of terrestrial habitat initially displaces wildlife from the area, forcing them to concentrate into a smaller area, which causes over-use of the habitat. This ultimately lowers the carrying capacity of the remaining habitat and can be manifested in some species as becoming more susceptible to disease, predation, and starvation. Many of the species present within the study corridor are adapted to human disturbance and fragmented habitats due to the past land uses that have shaped the existing habitats. During the initial construction of the roadway it is anticipated that there would be adequate habitat in the immediate vicinity for the maintenance of populations that could be displaced. However, as the area continues to become developed, some habitats may become too isolated or too small to support some of the species currently using the area.

All of these potential indirect impacts are anticipated to be minimal as a result of the Build Alternative when compared to the No Build Alternative.

Water Quality and Aquatic Resources: The anticipated growth in Montgomery County and the city of Clarksville could have potential adverse impacts on wetlands in the area in terms of indirect sedimentation impacts under both the No Build and Build Alternative.

The Build Alternative could result in sedimentation impacts due to any secondary developments promoted by the project. Secondary developments would be expected to occur where access to the Build Alternative is provided, especially near the SR 76/US 79 (Dover Road)/ SR 374 (Paul B. Huff Memorial Parkway) interchange and along SR 149 between River Road and the proposed intersection at SR 374. Minor long-term adverse impacts could occur due to runoff containing petroleum products and other roadway contaminants entering the remaining aquatic resources adjacent to the roadway.

Secondary developments may result in additional impacts to water quality and aquatic resources, due to stream channel modifications or loss, and loss of associated aquatic habitat. However, the lands immediately adjacent to the Build Alternative are within the UGB and PGAs of Clarksville (see Figure 3-1) and the development is expected to be low to moderate in the foreseeable future. As a result, the Build Alternative is not expected to differ substantially from the No Build Alternative. In addition, federal, state, and local regulations would help to off-set the anticipated indirect impacts associated with the proposed project. Section 404 of the CWA, a federal regulation, is administered and enforced by the USACE and requires entities seeking impact to jurisdictional Waters of the US to obtain various permits prior to impacting these resources. These permits require the use of minimization measures and for many projects obtaining some form of mitigation for impacting these jurisdictional waters, such as purchasing mitigation credits from a mitigation bank that serves the same watershed or an adjacent watershed, and/or preserving, creating and/or restoring jurisdictional Waters of the US within the same watershed.

Some of the secondary development impacts to aquatic resources could occur sooner due to the improved system linkage and access provided by the Build Alternative especially near the SR 76/US 79 (Dover Road) / SR 374 (Paul B. Huff Memorial Parkway) interchange and along SR 149 between River Road and the proposed intersection at SR 374. Based on the CMCRPC's *2012 Growth Plan*, most of these areas are expected to be developed into low to medium density residential areas.

Wetlands: The anticipated growth in Montgomery County and the city of Clarksville could have potential adverse impacts on wetlands in the area in terms of indirect sedimentation impacts under both the No Build and the Build Alternative. The Build Alternative could result in some downstream sedimentation impacts to adjacent wetlands during construction and due to any secondary developments promoted by the project, especially near the local roadways that are provided access to the proposed roadway mentioned previously.

Secondary developments associated with the Build Alternative may result in additional impacts to wetlands, due to fill and/or modifications to hydrology. However, federal, state, and local regulations would help to off-set the anticipated indirect impacts associated with the proposed project as described above under the water quality and aquatic resources discussion.

The lands immediately adjacent to the proposed Build Alternative are within the UGB and PGAs of Clarksville (see Figure 3-1) and the projected development is expected to be primarily low to moderate residential in the foreseeable future. Therefore, the Build Alternative is not expected to differ substantially from the No Build Alternative. As discussed above, some of the development impacts to wetlands may occur sooner with the improved system linkage, which could promote faster development in the immediate area.

Floodplains: The proposed Build Alternative would increase the amount of impervious surface area within the study corridor. This increase in impervious surface area could indirectly impact floodplains and flood prone areas. The most notable effect would be the increased volume and

velocity of storm water runoff. To minimize these indirect effects from flooding, the proposed project would be designed to control the increase in velocity of storm water run runoff. The design measures may include urban curb and gutters, minimization of storm water discharge locations, storm water runoff directed into the median, grassed ditches, and limits on direct storm water discharge into stream channels if feasible.

Additionally, any secondary developments promoted by the project could have potential adverse impacts to floodplains in the area in terms of increased impervious surface area. However, impacts from the secondary developments would be minimized by federal, state, and local laws that have been established to control development within floodplain and flood prone areas.

Threatened and Endangered Species: No state-listed aquatic species are known to occur in the vicinity of the study corridor; therefore, it is expected that the proposed project would not result in indirect adverse effects to state-listed aquatic species. One federally listed aquatic species, the Pink Mucket mussel, was listed as potentially occurring within the Cumberland River. The primary impact that the proposed project could have on the Pink Mucket is the potential to increase silt and sediment within the Cumberland River.

Secondary developments promoted by the project could lead to indirect impacts to state-listed and federally listed aquatic species beyond the limits of the study corridor. These impacts would primarily be due to silt and sedimentation impacts within the streams and the Cumberland River.

For terrestrial species, including the federally listed Indiana bat and the northern long-eared bat, indirect impacts could occur due primarily to additional loss or continued fragmentation of potential suitable habitat, along with increased human disturbance, associated with secondary developments. The indirect impacts to the Indiana and northern long-eared bats may include removal of potential suitable roosting trees and/or removal of potentially suitable foraging habitat. Eventually much of the land within the study corridor is expected to become more developed based on the *2012 Growth Plan*. Therefore, overall habitat alterations are not expected to differ substantially between the No Build and Build Alternative. This is because most of the areas that would be expected to become developed due to secondary impacts from the Build Alternative are within the UGB and PGAs of Clarksville (see Figure 3-1) and the projected development is anticipated to primarily be low to moderate residential.

Migratory Birds: The conversion of land to new uses as a result of the proposed project being constructed would likely result in changes and fragmentation of forested habitat. Forest fragmentation is thought to be one of the leading contributors to the decline in migratory bird populations. The *2012 Growth Plan* anticipates low to medium density residential development to occur within study corridor and expects this development regardless if the project is built or not. In addition, the study corridor lacks large amounts of the undisturbed forested habitat that is preferred by most migratory bird species. As a result, it is expected that the potential for indirect impacts to migratory birds as a result of the project being constructed would be minimal.



### 3.20.6.2 Cumulative Impacts to Natural Resources

In general, the impacts to natural resources that could occur under the No Build or Build Alternative would be relatively minor. This is because past and present human activity has already extensively modified the natural resources of the study corridor, and virtually all of the land in the study corridor has been developed or otherwise altered or disturbed to some extent. However, any impacts to the remaining natural resources in the area would be cumulative to all of the other past, present, and reasonably foreseeable impacts associated with other developments and activities that have impacted, and/or continue to impact, those same natural resources. Overall, there is not anticipated to be any substantial long-term difference in the cumulative impacts to the natural resources remaining in the area between the No Build and Build Alternative. This is because most of the area is planned to be developed, regardless of the new roadway being constructed based on the *2012 Growth Plan*.

Terrestrial Ecology: The terrestrial habitats in the area are already fragmented and modified by the existing agricultural land uses, residential developments, and construction of the existing roadways and other infrastructure. Consequently, there are no substantial reasonably foreseeable cumulative impacts to these resources associated with the proposed project when compared to the No Build Alternative.

Water Quality and Aquatic Resources: There is some potential for cumulative impacts to water quality and aquatic resources from the proposed project in combination with other projects and actions in the area, such as the additional residential development that is anticipated based on the *2012 Growth Plan*. As more development occurs, there would be additional access roadways, parking lots, and driveways built. This would result in an increase in the percentage of impervious surface in the study corridor. As the amount of impervious surfaces increases, stormwater runoff would increase. Stormwater runoff often carries chemicals associated with roads and lawn fertilizer from new residences, which would degrade downstream water quality and aquatic habitats.

Local governments and regulatory agencies with jurisdiction over water resources can minimize many of these impacts through proper planning, permitting, and compliance monitoring as the area continues to develop.

Future actions that could occur in and around the study corridor may result in encapsulation of streams, erosion and sedimentation, and the addition of impervious surfaces. Such actions occurring in a geographic area tend to degrade overall quality of aquatic habitats and water quality resulting in cumulative impacts. The placement of lengths of stream in culverts is considered by TDEC to be a permanent impact. While the water quality impacts of culverts over 200 feet in length are mitigated by either on-site or off-site programs, increases in numbers of culverts associated with highways, private driveways, and industrial and commercial development may cumulatively reduce available habitats over time.

Wetlands: Any loss of wetlands associated with the Build Alternative would result in cumulative impacts when combined with the loss of wetlands due to other past, present, and reasonably

foreseeable future projects in the area. Since much of the area within the UGB and PGAs are expected to become developed, the impact of the Build Alternative is not expected to differ substantially from the No Build Alternative. However, TDOT would be required to mitigate for wetland impacts to help offset any long-term impacts to wetlands in the area.

Floodplains: The continued growth and development expected in the city of Clarksville and surrounding areas, based on the *2012 Growth Plan*, could result in some construction near floodplains. This would result in an increase the amount of impervious surface area and increases in the velocity and amount of storm water run-off. However, much of the development will be subject to federal, state, and local floodplain regulations that will prohibit or limit the development within floodplain areas.

Threatened and Endangered Species: As discussed in Section 3.7.6, the Build Alternative is not anticipated to adversely affect populations of federal or state-listed species known to occur in the vicinity. Therefore, the potential for cumulative impacts is considered low. However, the anticipated growth that is expected to occur could potentially contribute to adverse impacts to populations of threatened and endangered species that may be present in the vicinity under both the No Build Alternative and Build Alternative.

Prior to the *Endangered Species Act of 1973*, there was no legislation that gave federal protection to plant and animal species that were in danger of becoming extinct. Without this legislation, many plant and animal species with specific habitat requirements and/or that are sensitive to various forms of disturbance became extinct or were reduced in number. A major contributor to plant and animal extinction is due to loss of habitat, which is typically attributed to conversion of land use from its native state. Such land use conversions have taken place in this region of Tennessee with agriculture being the major land use type. The agricultural land uses have already fragmented and modified most of the terrestrial and aquatic habitats in Montgomery County and within the study corridor.

Current trends and future plans indicate a conversion of land use from agriculture to residential and commercial as the region experiences an increase in population. The federally listed Indiana bat and northern long-eared bat may be impacted by further reduction of suitable roosting and foraging habitat caused by the anticipated growth and development. The proposed project is expected to facilitate some secondary development due to improved access and travel efficiency and would likely contribute to the ongoing trend of land use conversion. However, it is unlikely that the proposed project would have cumulative effects on any populations of federally or state protected species. This is because the potential impacts associated with ongoing development in the area are expected to occur regardless of the proposed project, and would therefore not be considered a cumulative impact of the Build Alternative.

Impacts to federally and state listed species will continue to be coordinated with the appropriate agencies, and any project specific requirements will be complied with should the Build Alternative be selected.

Migratory Birds: As discussed in Section 3.7.7, the Build Alternative is not anticipated to adversely affect migratory birds species. Any indirect impacts to migratory birds are also projected to be minimal; therefore, the potential for cumulative impacts is considered low. This is because past and existing land uses within the study corridor have fragmented the undisturbed forested habitat that is preferred by most migratory bird species and any migratory bird species currently utilizing the area for nesting and foraging are likely adapted to anthropogenic disturbances.

### 3.20.7 Indirect and Cumulative Impacts to Farmland

#### 3.20.7.1 Indirect Effects to Farmland

The anticipated growth of the city of Clarksville and Montgomery County, regardless of alternative selected, could have potential adverse impacts on existing farmland in the area. Eventually the land within the study corridor is expected to become more developed as it is within the UGB and PGAs of Clarksville. Future land use as described by the CMCRPC's *2012 Growth Plan* suggest much of the farmland in the study corridor would eventually be replaced by low to moderate residential development with some additional commercial, and or industrial developments closer to existing roadways.

The proposed Build Alternative may result in secondary developments that could result in additional impacts to farmland. However, since the lands immediately adjacent to the proposed route for the project are within the UGB and PGAs of Clarksville, it is expected that much of the land in this area could eventually be converted to other land uses as growth occurs. Therefore, the Build Alternative is not expected to differ substantially from the No Build Alternative or baseline conditions.

#### 3.20.7.2 Cumulative Impacts to Farmland

The majority of the study corridor is within the UGB of Clarksville (see Figure 3-1). Most of the land within the study corridor is planned primarily for low to moderate residential development based on the CMCRPC's *2012 Growth Plan*. Therefore, it is anticipated that much of the land in this area is expected to become developed in the reasonably foreseeable future. Any new developments that do occur could possibly result in a cumulative conversion of farmland into non-farm-related uses. Conversion of farmland could continue to occur in the project vicinity regardless of whether or not the Build Alternative is constructed. However, the conversion would most likely occur at a slower rate than would occur if the proposed project is built. Therefore, the No Build Alternative may have a minor beneficial impact to farmland in the reasonably foreseeable future when compared to the Build Alternative.

Some of the impacts to farmland in the area could be controlled by local zoning and land use planning efforts. In most cases, the landowners would more than likely have the choice whether or not to stop farming their land to convert it to other uses or sell their property to private developers.

### 3.21 Impacts Summary

Table 3-24 summarizes the potential adverse environmental impacts associated with the construction of the Build Alternative. As previously discussed, the No Build Alternative will have minimal to no environmental impacts.

**Table 3-24: Summary of the Potential Impacts Associated with the Build Alternative**

Impact Category		Potential Impact
Project Length		Approximately 7.2 miles on new location, approximately 1.0 mile along SR 149.
Estimated Right-of-Way Needed		311 acres
Land Use		Direct conversion of land to roadway right-of-way
Social and Economic	Social/community cohesion	No adverse effect
	Community services	No adverse effect
	Environmental justice	No disproportionately high or adverse effect on minority or low income populations
	Residential relocations	1 single-family residence
	Business displacements	None
	Non-profit displacements	None
Air Quality		No effect
Noise (number of noise sensitive receptors)		75
Cultural Resources	Architectural/historic resources	No effect
	Archaeological resources	Phase II investigation necessary at one potentially eligible archaeological site if it cannot be avoided.
Section 6(f) resources		No effect
Section 4(f) resources		<i>de minimis</i> impact to the USACE's Smith Branch Recreation Area
Recreation resources		<i>de minimis</i> impact to the USACE's Smith Branch Recreation Area
Natural Resources	Floodways / Floodplains	15.07 acres floodways / 11.37 acres floodplains
	Ponds	1.04 acres
	Stream impacts	3,875 linear feet of intermittent 1,000 linear feet of perennial
	Wet weather conveyances (WWC)	6,665 linear feet
	Wetlands (wetland/acres impacted)	1.42 acres permanent 0.04 acre temporary
	Threatened and endangered species	Not Likely to Adversely Affect the Indiana bat, Northern Long-eared bat, and the pink mucket.
	Farmland	160 acres of farmland (71 acres of prime farmland)
Visual		No adverse effect
Energy		No adverse effect
Construction		Temporary utility disruptions could occur. The use of BMPs could avoid or minimize air/noise and sedimentation/erosion impacts.
Hazardous Materials		Low potential for impacts



## 4.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

This chapter describes the agency coordination process and public involvement activities that have been carried out as part of this EA.

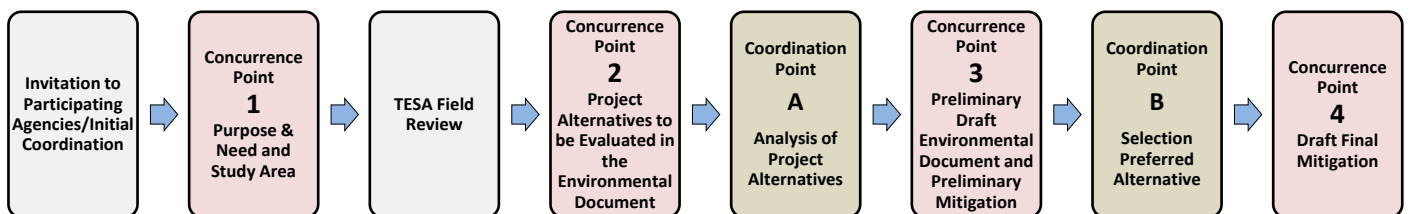
### 4.1 Tennessee Environmental Streamlining Agreement

TESA was developed to establish a coordinated planning and project development process for transportation projects in Tennessee in order to ensure agency, Metropolitan Planning Organization (MPO) and RPO participation and involvement early and throughout the project development process. As of January 2014, TESA signatory agencies are: TDOT, FHWA, USACE (Nashville District), USACE (Memphis District), USFWS, TVA, TDEC, and TWRA. The TN-SHPO and the USCG are conditional signatory agencies. Signatory agencies are not required to participate in every project; only those projects that affect their area of jurisdiction, expertise, or interest. MPOs are not signatories but are invited to participate in projects affecting their jurisdiction.

Signatory agencies that would be affected by this project are the USACE (Nashville District), TVA, USFWS, TDEC, TWRA, TN-SHPO, and the USCG. The CUAMPO is not a signatory to TESA but has been invited to participate in the development of the project.

The TESA process includes both Concurrence Points and Coordination Points (see Figure 4-1). Concurrence Points occur at four key points in the project development process and are designed to streamline the process with a cross-agency review that provides for transparent and collaborative decision-making that results in obtainable solutions. The four Concurrence Points are:

- Concurrence Point 1: Purpose and Need and Study Area,
- Concurrence Point 2: Project Alternatives to be Evaluated in the Environmental Document,
- Concurrence Point 3: Preliminary Draft Environmental Document and Preliminary Mitigation, and
- Concurrence Point 4: Draft Final Mitigation.



**Figure 4-1: Primary Steps in an Environmental Assessment NEPA/TESA Process**

Concurrence Points 1, 2, and 3 occur during the NEPA process. Concurrence Point 4 occurs later in the process, after a FONSI or ROD has been approved. Upon receipt of a Concurrence Point

package, TESA signatory agencies are required to respond within 45 days with concurrence, non-concurrence, a request for extension of time, or a request for cessation of formal consultation. If no response is received within the 45 day concurrence period, TDOT assumes concurrence. For this project, TESA Concurrence Points 1 and 2 (CP 1/2) were combined into one package that was distributed on July 7, 2011. The 45 day concurrence period ended on August 21, 2011. The following signatory agencies responded stating concurrence with CP 1/2:

- USFWS
- TDEC
- TWRA
- TVA
- USEPA (prior to 2014, when CP 1/2 was distributed, USEPA was a TESA signatory agency)
- CUAMPO (prior to 2014, when CP 1/2 was distributed, CUAMPO was a TESA signatory agency)

No response was received from USACE, USCG, and the TN-SHPO (signatory agency at the time); thus, they were assumed to concur per TESA guidelines.

TESA Concurrence Point 3 (CP 3) was distributed on February 9, 2018. The 45 day concurrence period ended on March 26, 2018. The following signatory agencies responded stating concurrence with CP 3:

- USFWS
- TDEC
- TWRA
- TVA
- USACE

No response was received from the USCG; thus, they were assumed to concur per TESA guidelines.

A summary of agency comments on the TESA CP 1/2 and CP 3 packages is in Appendix M.

#### 4.1.1 TESA Agency Field Review

A TESA field review of the study corridor was conducted on March 10, 2011. Participants met at the USACE Smith Branch Recreation Area located adjacent to the Cumberland River. Maps illustrating environmental constraints, the current Build Alternative, and the alternative developed to avoid the USACE Smith Branch Recreation Area were distributed to the attendees. A project data summary sheet containing information on the proposed project was also provided to the attendees. Attendees toured the study corridor in two vans and were encouraged to comment and ask questions. A summary of the comments or questions that were raised during the field review and responses to those comments or questions were included in the *TESA Combined Concurrence Points 1 and 2 Package: Purpose & Need and Study Area and Project Alternatives to be evaluated in the Environmental Document (July 7, 2011)*. Representatives from

the USACE, USFWS, USEPA, NRCS, TWRA, and CUAMPO participated in the field review, along with representatives from TDOT and FHWA.

#### **4.2 Section 106 Coordination**

Pursuant to Section 106 of the *National Historic Preservation Act*, letters that included the project description and a project location map were sent to Native American Groups and local officials inviting them to be Section 106 Consulting Parties for the project. Nine Native American Tribes were invited to be Section 106 Consulting Parties for the proposed project:

- The Cherokee Nation,
- Shawnee Tribe of Oklahoma,
- Eastern Band of Cherokee Indians,
- Eastern Shawnee Tribe of Oklahoma,
- United Keetoowah Band of Cherokee Indians,
- Thlopthlocco Tribal Town,
- Shawnee Tribe,
- Absentee-Shawnee Tribe of Indians, Oklahoma,
- Chickasaw Nation

The Cherokee Nation responded on May 13, 2011 stating they had no knowledge of any historic, cultural, or sacred sites within the affected area (Appendix L). The Cherokee Nation requested that if ground disturbance reveals an archaeological site or human remains, all activity be ceased immediately and the Cherokee Nation and other appropriate agencies be contacted immediately.

No other Native American Tribes responded to the Section 106 coordination requests.

#### **4.3 Coordination with the Public and Other Interested Parties**

As part of the early planning process, several public meetings and meetings with local officials were held between 1997 and 2010 to solicit input from the public regarding their concerns or considerations for potential improvements to SR 374. A public hearing will be held for the project once the EA has been approved.

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## 5.0 REFERENCES

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**Attachment I – Transportation Improvement Program (TIP) and Long Range Transportation Plan (LRTP) Pages**

- Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) 2040 Metropolitan Transportation Plan Page
- CUAMPO Transportation Improvement Program Fiscal Year 2014 through 2017 pages.
- CUAMPO Transportation Improvement Program Fiscal Year 2017 through 2020 pages.







**CLARKSVILLE URBANIZED AREA  
METROPOLITAN PLANNING ORGANIZATION**

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July 20, 2017

Deborah Fleming, Manager  
TDOT, Planning Division  
JK Polk Bldg, Suite 900  
Nashville, TN 37243-0349

RE: Clarksville Urbanized Area MPO 2040 MTP Amendment #3 MTP

Dear Ms. Fleming:

The Clarksville Urbanized Area MPO Technical Coordinating Committee met on July 20, 2017 to recommend approval of an amendment to the 2040 Metropolitan Transportation Plan (MTP). The Clarksville Urbanized Area MPO Executive Board met on July 20, 2017 and approved the recommended MTP amendment #3. The detailed MTP amendment #3 is attached, and was made available for public comment on July 5, 2017 and no public comments were received at the public meeting or during the public comment period.

The MPO has determined that amendment #3 complies with the FAST Act, the Statewide and Metropolitan Planning Regulation and other applicable Federal and State requirements. Revised Table 5-14 (Projected Revenue Compared to Total Cost of Roadway Projects by Horizon) in the 2040 MTP shows the MTP remains fiscally constrained.

The amendment was subject to all public participation requirements set forth in the Public Participation Plan.

The attached resolution outlines the findings of the Clarksville Urbanized Area MPO Executive Board in taking this action to amend the 2040 MTP. It is therefore the request by the Clarksville Urbanized Area MPO that the MTP amendment is forwarded to the appropriate federal agencies for approval.

Should you have any questions, please contact me at your convenience at (931) 645-7448 or by email.

Sincerely,

J. Stan Williams  
Transportation Planning Director

Attachment

## RESOLUTION 2017-07

### APPROVING THE 2040 METROPOLITAN TRANSPORTATION PLAN (MTP) AMENDMENT FOR CONSISTENCY WITH FY2017-FY2020 TIP FOR THE CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

**WHEREAS**, a comprehensive and continuing transportation planning program must be carried out cooperatively in order to ensure that funds for transportation projects are effectively allocated to the Clarksville Urbanized Area; and

**WHEREAS**, on February 20, 2014 the MPO adopted the 2040 Metropolitan Transportation Plan as a blueprint for transportation investments based on a series of stated community goals, financial capability and environmental considerations; and

**WHEREAS**, the MPO has worked cooperatively with TDOT to amend the following projects in the 2040 MTP:

#### A. SR-374 Extension (Alternate C)

1. Table 5-7: Roadway Projects Proposed for Completion in 2014-2016 – change the table under column heading “Future Lanes” from the interim build – 2 lanes on 4-lane ROW to show the ultimate build of 4-lanes for project E+C 19, TIP#6;
2. Table 5-9: Roadway Projects Proposed for Completion in 2027-2035 – change the table under column heading “Future Lanes” from the interim build – 2 lanes on 4-lane ROW to show the ultimate build of 4-lanes for project T-42, TIP#5;
3. Table 5-3: Projected Funding for Highway Capital Projects, 2014-2040 – increased TN-S-STP under 2027-2035; and
4. Table 5-14: Projected Revenue Compared to Total Cost of Roadway Projects by Horizon –increased TN-S-STP/TN-S-STBG under “Revenue” and “Cost of Projects” in 2027-2035; and

#### B. Trenton Road

1. Table 5-9: Roadway Projects Proposed for Completion in 2027-2035 –removed T-05B/Trenton Road from Table 5-9. (T-05B/Trenton Road was combined with T-05A/Trenton Road to make one project under Table 5-8.)
2. Table 5-8: The T-05B/Trenton Road was combined intoT-05A/Trenton Road project to making it one project for Trenton Road under the project number T-05A. T-05A/Trenton Road new termini is from Tylertown Road to SR-374, with a length of 4.0 miles, and a cost of \$92.9 million; and

3. Table 5-3: Projected Funding for Highway Capital Projects, 2014-2040 – decreased TN-S-STP under 2027-2035 and increased under 2017-2026; and
4. Table 5-14: Projected Revenue Compared to Total Cost of Roadway Projects by Horizon –decreased TN-S-STP/TN-S-STBG under “Revenue” and “Cost of Projects” in 2027-2035 and increased TN-S-STP/TN-S-STBG in 2017-2026; and

**WHEREAS**, opportunity for public review and comment as indicated in the Public Participation Plan was given for this document;

**WHEREAS**, members of the Technical Coordinating Committee did recommend approval of the 2040 MTP amendment #3 to the Executive Board;

**NOW THEREFORE BE IT RESOLVED**, that the Metropolitan Planning Organization’s Executive Board hereby adopts the 2040 Metropolitan Transportation Plan Amendment #3 and hereby certifies that the CUAMPO is meeting all the requirements of 23 CFR, Part 450 relating to the Urban Transportation Planning Process.

**RESOLUTION 2017-07 APPROVED: July 20, 2017**

**Authorized Signatures:**

  
\_\_\_\_\_  
Mayor Jim Durrett, Chairman  
MPO Executive Board



based on a 3% annual growth rate for federal, state and local funds. The revenue forecasts also reflect the Kentucky and Tennessee State Data Centers' projections that the region's population will grow more than 48% between now and 2040, which will lead to a corresponding increase in the base amount allocated to the CUAMPO through federal population-based formulas for transportation funding. Projections for the CUAMPO's allocation of local Surface Transportation Program (L-STP) funds have been adjusted accordingly to reflect increases after the 2020 and 2030 decennial census.

The annual base funds assumed for NHPP and S-STP were derived from data on highway usage, as explained above. Daily vehicle-miles traveled (DVMT) for Montgomery County were compared to statewide figures for DVMT as reported in the state's most recently published Highway Performance Monitoring System data (2011). Similarly, an estimate of DVMT for Christian County was developed by comparing statewide DVMT to DVMT for the proportion of NHS and state highway mileage contained within the CUAMPO planning area. The ratio of these counties' DVMT to statewide DVMT was then applied to the estimated apportionment of NHPP and S-STP for the two states for federal fiscal year 2014. The resulting figures were used as the region's base funds.

Estimates for the remaining funding categories are trend projections based on historic average expenditures over the past three to six years. The exceptions are the High Priority Funds (HPP) program and the Congestion Mitigation/Air Quality Improvement (CMAQ) program. Since the HPP program was not re-authorized in MAP-21, no additional HPP revenue is assumed over the life of the Plan. An equally conservative assumption has been made for future CMAQ funds, since the region has recently been reclassified as having attained the National Ambient Air Quality Standards (NAAQS) for ozone.

**Table 5-3: Projected Funding for Highway Capital Projects, 2014-2040**

Revenue Source	Annual Base Funds	Projected Funds*				
	Total	2014-2016	2017-2026	2027-2035	2036-2040	Total (2014-2040)
<b>TENNESSEE</b>						
National Highway Performance Program (NHPP)	\$6,912,827	\$10,080,000	\$84,922,910	\$105,827,329	\$75,659,869	\$276,490,107
State Surface Transportation Program (S-STP)Block Grant (S-STBG)	\$6,822,023	\$17,040,000	\$130,640,000	\$104,437,223	\$74,666,031	\$326,783,254
Highway Safety Improvement Program (HSIP); Penalty (PHSIP)	\$900,000	\$5,400,000	\$11,056,348	\$13,777,951	\$9,850,367	\$40,084,666
Local Surface Transportation Program (L-STP)Block Grant (L-STBG)	\$2,062,500	\$11,090,000	\$47,641,992	\$62,265,660	\$44,516,022	\$165,513,674
Congestion Mitigation/ Air Quality (CMAQ)	\$921,230	\$377,599	\$0	\$0	\$0	\$377,599

(continued next page)





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Table 5-3: Projected Funding for Highway Capital Projects, 2014-2040 (continued)

Revenue Source	Annual Base Funds	Projected Funds*				
	Total	2014-2016	2017-2026	2027-2035	2036-2040	Total (2014-2040)
High Priority Funds (HPP)	\$1,571,234	\$5,027,949	\$0	\$0	\$0	\$5,027,949
Transportation Alternatives Program (TAP) Enhancement (TE)	\$1,164,739	\$626,360	\$14,308,626	\$17,830,803	\$12,747,900	\$45,513,689
City of Clarksville & Montgomery County (Local)	\$4,593,662	\$13,781,286	\$56,433,588	\$70,325,144	\$50,278,045	\$190,818,064
<b>Subtotal (TN)</b>	<b>\$23,377,081</b>	<b>\$63,423,194</b>	<b>\$345,003,464</b>	<b>\$374,464,111</b>	<b>\$267,718,234</b>	<b>\$1,050,609,003</b>
<b>KENTUCKY</b>						
National Highway Performance Program (NHPP)	\$3,839,439	\$0	\$47,166,858	\$58,777,339	\$42,022,092	\$147,966,289
State Surface Transportation Program (KY-STP)	\$2,049,945	\$8,110,000	\$25,183,229	\$31,382,272	\$22,436,346	\$87,111,847
State Funds (KY-SP)	\$3,937,500	\$12,050,325	\$51,271,058	\$67,008,666	\$47,906,972	\$178,237,021
<b>Subtotal (KY)</b>	<b>\$9,826,884</b>	<b>\$20,160,325</b>	<b>\$123,621,145</b>	<b>\$157,168,277</b>	<b>\$112,365,410</b>	<b>\$413,315,157</b>
<b>MPO TOTAL</b>	<b>\$33,203,965</b>	<b>\$83,583,519</b>	<b>\$431,184,609</b>	<b>\$531,632,388</b>	<b>\$380,083,644</b>	<b>\$1,426,484,160</b>

\* All totals include federal and non-federal share. Annual Base for NHPP and S-STP is based on ratio of daily vehicle-miles (DVMT) traveled in the CUAMPO planning area to statewide DVMT. Other programs based on historic averages. See text in this section for additional details.

In addition to capacity enhancement projects, the region's roadway system will need funds for ongoing operations and maintenance (capacity preservation) to meet future transportation needs.

Over the past ten years, the City of Clarksville has spent an average of \$3.4 million annually for basic roadway operations and maintenance activities. The majority of the expenditures were for paving and pavement rejuvenation; other typical activities include maintenance of streetlights, signs and striping, traffic signals, street sweeping, mowing, and guardrail.

During the same period, the Montgomery County Highway Department spent an average of \$1.3 million annually for roadway maintenance and operations. As with the City of Clarksville, the majority of the funds were spent on paving, but mowing is also a significant roadway maintenance expense for the county.



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Table S-7: Roadway Projects Proposed for Completion in 2014-2016

Project Number	Location	Route	Length (Miles)	County	Project Description	Improvement	Estimated Cost (\$)	Priority	Anticipated Start	Anticipated End	Estimated Cost (\$)
E+C 14, TIP #1	SR-112 / US-41A (Madison St.)	SR-76	3.0	Clarksville, Montgomery	Minor Arterial	Widening/Intersection Improvements	2	5	TN-S-STP		E+C
E+C 19, TIP# 6	SR-374 Extension (Alternate C)	Dover Rd. / US-79/SR-76 (Dover Rd.)	2.9	Montgomery Co.	Principal Arterial	New road	0	2	HPP, TN-S-STP, TN-S-STBG		E+C
E+C 24, TIP #18	KY-115 at KY-911 (Thompsonville Ln)	-	0.1	Oak Grove	Minor Arterial	Intersection - add turn lane	-	-	KY-STP		E+C
E+C 35, TIP #65	Oakland Rd.	US-79/SR-13	0.5	Montgomery Co.	Urban Collector	Realignment	2	2	TN-L-STP, TN-L-STBG		E+C
E+C 37	SR-237 (Rossview Rd.)	International Blvd.	0.8	Montgomery Co.	Minor Arterial	Widening	2	5	TN-S-STP		E+C
E+C 36, TIP #67	Sango Rd.	SR-76	0.25	Clarksville	Urban Collector	Reconstruct - add center turn lane	2	3	TN-L-STP		E+C

Table S-8: Roadway Projects Proposed for Completion in 2017-2026

Project Number	Location	Route	Length (Miles)	County	Project Description	Improvement	Estimated Cost (\$)	Priority	Anticipated Start	Anticipated End	Estimated Cost (\$)
E+C 34, TIP#66	SR-237 (Rossview Rd.)	I-24	1.5	Clarksville	Minor Arterial	Widening	2	5	E+C		E+C
E+C 21, TIP#13	KY-911 (Thompsonville Ln.)	US-41A	1.8	Oak Grove	Urban Collector	Widening	2	5	E+C		E+C
E+C 14, TIP #3	SR-112 (Madison St.)@SR-76	-	0.0	Clarksville	Minor Arterial	Intersection Improvements	-	-	TN-S-STBG		\$4.70
T-33	US-79/SR-13/Guthrie Hwy.	I-24	1.4	Clarksville, Montgomery	Minor Arterial	Widening	2/3	5	TN-NHPP, TN-S-STP, TN-S-STBG		\$25.90
T-43, TIP #4	SR-149/SR-13	River Road	3.1	Clarksville, Montgomery	Minor Arterial	Widening	2	5	TN-S-STP, TN-S-STBG		\$82.50
T-41, TIP #2	SR-374 (North Pkwy)	Dunbar Cove Rd	1.7	Clarksville	Minor Arterial	Widening	2	4/5	TN-S-STP, TN-S-STBG		\$29.20
T-05A	SR-48 (Trenton Rd.)	Hazelwood Rd.	2.0	Clarksville	Minor Arterial	Widening	2	5	TN-S-STP, TN-S-STBG		\$36.70
T-16	East-West Connector Phase 1	US-79 (Wilma Rudolph Blvd.)	2.5	Clarksville	Minor Arterial	New Road	0	4	TN-L-STP, TN-L-STBG		\$34.10
T-22	Jack Miller Blvd. Extension	Tobacco Rd.	2.0	Clarksville	Minor Arterial	New Road	0	4	TN-L-STP, TN-L-STBG		\$29.50
T-29	Lafayette Rd	Walnut Grove Rd	0.4	Clarksville, Fort Campbell	Minor Arterial	Widening	2	5	FLAP		\$8.20
T-34	SR-48/Trenton Rd. at Needmore Rd.	-	-	Clarksville	Urban Collector	Intersection Improvements	-	-	TN-L-STP		\$0.60
K-06	KY-400 (State Line Rd)	US-41A (Fort Campbell Blvd)	1.4	Oak Grove	Urban Collector	Reconstruct-Add Center Turn Lane	2	3	KY-STP		\$16.20
K-07	KY-115 (Pembroke-Oak Grove Rd)	KY-400 (State Line Rd)	2.9	Oak Grove	Urban Minor Arterial	Reconstruct-Add Center Turn Lane	2	3	KY-STP		\$28.20
K-08	KY-115 (Pembroke Rd.)	I-24	1.9	Oak Grove	Rural Minor Arterial	Reconstruct-Add Center Turn Lane	2	3	KY-NHPP		\$13.70
K-12	Catts-Riggins Rd (New Roadway)	KY-400 (State Line Rd)	1.5	Oak Grove	Urban Collector	New Road	0	3	KY-NHPP		\$9.90
K-13	KY-1453 (Elmo Rd) Rehabilitation	US-41A (Fort Campbell Blvd)	4.1	Christian Co.	Local	Reconstruct-Add Center Turn Lane	2	3	KY-SP		\$21.70

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Table 5-9: Roadway Projects Proposed for Completion in 2027-2035

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (Millions in 2025)
T-40	SR-374/Richview Rd/Warfield Blvd	Memorial Dr.	Dunbar Cave Rd	2.1	Clarksville	Principal Arterial	Widening	2	4	TN-S-STP	\$49.9
T-42	SR-149/SR-374 Ext (Alternate C)	River Rd to SR-149/SR-149	Dotsonville Rd	5.2	Montgomery Co.	Principal Arterial	New Road	0	2	TN-S-STP	\$51.4
T-058	SR-48 (Trenton Rd.)	Hazelwood Rd.	Needmore Rd	2.2	Clarksville	Minor Arterial	Widening	2	5	TN-S-STP	\$56.2
T-23	US41A Bypass (Ashland City Rd.)	US41A/SR-112	SR-13	5.5	Clarksville	Principal Arterial	Widening	2/3	5	TN-NHPP/TN-S-STP	\$134.3
T-35	East-West Connector Phase 2	SR-48 (Trenton Rd)	Peachers Mill Rd.	3.7	Clarksville	Minor Arterial	New Road	0	4	TN-L-STP	\$73.2
T-36	Peachers Mill Rd.	Pine Mountain Rd.	Stonecrossing Dr.	0.4	Clarksville	Minor Arterial	Widening	3	4	TN-L-STP	\$6.3
K-02	Hugh Hunter/Gritton Church Rd.	KY 911 (Thompsonville Ln)	Allen Rd.	1.9	Oak Grove, Christian Co.	Local	Reconstruction	2	2	KY-SP	\$24.2
K-05	Gate 4 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.2	Oak Grove	Urban Collector	New Road	0	2	KY-STP/KY-NHPP	\$19.4
K-10	KY-117 (New Roadway)	US-41A (Ft. Campbell Blvd.)	KY-115 (Pembroke-Oak Grove Rd)	3.0	Oak Grove	Urban Collector	New Road	0	5	KY-STP	\$19.6
K-11	Gate 5 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.5	Oak Grove	Urban Collector	New Road	0	2	KY-STP	\$26.9
K-14	KY-109 (Bradshaw Rd) Rehabilitation	KY-1453 (Elmo Rd)	Bradshaw-Fidelio Rd.	1.0	Christian Co.	Rural Minor Collector	Reconstruct - add center lane	2	3	KY-STP/KY-SP	\$6.8

Table 5-10: Roadway Projects Proposed for Completion in 2036-2040

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (Millions in 2025)
T-06	I-24	Eastern terminus of Project K-04 (KY/TN State Line)	SR-76	10.7	Montgomery Co.	Interstate	Widening	4	6	TN-NHPP/S-STP	\$195.9
T-37	I-24	SR-76	SR-256 (Robertson County)	8.6	Montgomery Co., Robertson Co.	Interstate	Widening	4	6	TN-NHPP/S-STP	\$148.0
T-01	Needmore Rd.	Hazelwood Rd.	SR-236 (Tiny Town Rd.)	0.9	Clarksville	Urban Collector	Reconstruct - add center lane	2	3	TN-L-STP/TN-Local	\$13.6
T-05C	SR-48 (Trenton Rd.)	SR-13/US 79 (Wilma Rudolph Blvd.)	SR-374/101st Alburne Division Pkwy.	1	Clarksville	Minor Arterial	Widening	2	5	TN-S-STP	\$25.0
T-18	Whitefield Rd./Old Trenton Rd.	Needmore Rd.	SR-374/101st Alburne Division Pkwy	0.2	Clarksville	Urban Collector	Reconstruct - add center lane	2	3	TN-L-STP/TN-Local	\$5.2
K-04	I-24	US-41A (Fort Campbell Blvd)	TN State Line	7.8	Oak Grove, Christian Co.	Interstate	Widening	4	6	KY-NHPP	\$112.0



## DEMONSTRATION OF FISCAL CONSTRAINT

**Table 5-14** summarizes total roadway project costs by horizon, compared to available revenue. Unspent funds from one horizon were carried forward to the next horizon, with the appropriate annual growth factor applied to reflect that the value of the surplus funds increases over time. The 2014-2016 horizon is not shown, since all of the proposed roadway projects in that timeframe are already programmed in the fiscally constrained Transportation Improvement Program.

These projections reflect the reality that spending occurs in response to needs, which are variable over time, and that it is sometimes appropriate to build funding reserves. An apparent surplus of NHPP funds occurs in the 2017-2026 horizon because the routes that need improvement are not eligible for those funds. The state will spend the funds in other parts of the state where they are needed. Later in the Plan, the state will draw surplus funds from other areas to make major capital investments on I-24. Likewise, local fund reserves are used for emergency projects, responses to major developments, etc.

**Table 5-14: Projected Revenue Compared to Total Cost of Roadway Projects, by Horizon**

Funding Source	2017-2026		2027-2035		2036-2040	
	Revenue	Cost of Projects	Revenue	Cost of Projects	Revenue	Cost of Projects
<b>TENNESSEE</b>						
National Highway Performance Program (TN-NHPP) *	\$ 84.9	\$ 15.8	\$ 219.7	\$ 134.3	\$ 342.0	\$ 342.0
State Surface Transportation Prog. (TN-S-STP)Block Grant(TN-S-STBG)	\$ 130.6	\$ 130.6	\$ 104.4	\$ 99.1	\$ 74.7	\$ 30.8
Highway Safety Improvement Program (HSIP) Penalty (PHSIP)	\$ 11.1	\$ 11.1	\$ 13.8	\$ 13.8	\$ 9.9	\$ 9.9
Transportation Alternatives Program (TAP)Enhancements (TE)	\$ 14.3	\$ 11.0	\$ 17.8	\$ 9.0	\$ 12.8	\$ 5.0
Local Surface Transportation Prog. (TN-L-STP)Block Grant(TN-L-STBG)	\$ 47.6	\$ 47.6	\$ 62.3	\$ 62.3	\$ 44.5	\$ 18.8
City of Clarksville and Montgomery County (Local)	\$ 56.4	\$ 56.2	\$ 75.7	\$ 75.5	\$ 50.6	\$ 0
<b>TN Subtotal</b>	<b>\$ 344.9</b>	<b>\$ 272.3</b>	<b>\$ 493.7</b>	<b>\$ 394.0</b>	<b>\$ 534.5</b>	<b>\$ 406.5</b>
<b>KENTUCKY</b>						
National Highway Performance Program (KY-NHPP)	\$ 47.2	\$ 24.6	\$ 98.9	\$ 19.4	\$ 194.2	\$ 112.5
Surface Transportation Program (KY-STP)	\$ 25.2	\$ 25.2	\$ 31.4	\$ 31.4	\$ 22.4	\$ 1.8
State Funds (KY-SP)	\$ 51.3	\$ 43.5	\$ 84.6	\$ 51.1	\$ 142.8	\$ 0.5
<b>KY Subtotal</b>	<b>\$ 123.7</b>	<b>\$ 93.3</b>	<b>\$ 214.9</b>	<b>\$ 101.9</b>	<b>\$ 359.4</b>	<b>\$ 114.8</b>
<b>CUAMPO TOTAL</b>	<b>\$ 468.6</b>	<b>\$ 365.6</b>	<b>\$ 708.6</b>	<b>\$ 495.9</b>	<b>\$ 893.9</b>	<b>\$ 521.3</b>

Note: Revenues and costs are shown in millions of dollars and reflect year of expenditure.

\*Assumes NHPP expenditures for 2036-2040 will exceed typical regional spending levels since I-24 is a facility of statewide importance. See text for discussion.





based on a 3% annual growth rate for federal, state and local funds. The revenue forecasts also reflect the Kentucky and Tennessee State Data Centers' projections that the region's population will grow more than 48% between now and 2040, which will lead to a corresponding increase in the base amount allocated to the CUAMPO through federal population-based formulas for transportation funding. Projections for the CUAMPO's allocation of local Surface Transportation Program (L-STP) funds have been adjusted accordingly to reflect increases after the 2020 and 2030 decennial census.

The annual base funds assumed for NHPP and S-STP were derived from data on highway usage, as explained above. Daily vehicle-miles traveled (DVMT) for Montgomery County were compared to statewide figures for DVMT as reported in the state's most recently published Highway Performance Monitoring System data (2011). Similarly, an estimate of DVMT for Christian County was developed by comparing statewide DVMT to DVMT for the proportion of NHS and state highway mileage contained within the CUAMPO planning area. The ratio of these counties' DVMT to statewide DVMT was then applied to the estimated apportionment of NHPP and S-STP for the two states for federal fiscal year 2014. The resulting figures were used as the region's base funds.

Estimates for the remaining funding categories are trend projections based on historic average expenditures over the past three to six years. The exceptions are the High Priority Funds (HPP) program and the Congestion Mitigation/Air Quality Improvement (CMAQ) program. Since the HPP program was not re-authorized in MAP-21, no additional HPP revenue is assumed over the life of the Plan. An equally conservative assumption has been made for future CMAQ funds, since the region has recently been reclassified as having attained the National Ambient Air Quality Standards (NAAQS) for ozone.

**Table 5-3: Projected Funding for Highway Capital Projects, 2014-2040**

Revenue Source	Annual Base Funds	Projected Funds*				
	Total	2014-2016	2017-2026	2027-2035	2036-2040	Total (2014-2040)
<b>TENNESSEE</b>						
National Highway Performance Program (NHPP)	\$6,912,827	\$10,080,000	\$84,922,910	\$105,827,329	\$75,659,869	\$276,490,107
State Surface Transportation Program (S-STP)Block Grant (S-STBG)	\$6,822,023	\$17,040,000	\$186,840,000	\$112,537,223	\$74,666,031	\$391,083,254
Highway Safety Improvement Program (HSIP); Penalty (PHSIP)	\$900,000	\$5,400,000	\$11,056,348	\$13,777,951	\$9,850,367	\$40,084,666
Local Surface Transportation Program (L-STP)Block Grant (L-STBG)	\$2,062,500	\$11,090,000	\$47,641,992	\$62,265,660	\$44,516,022	\$165,513,674
Congestion Mitigation/ Air Quality (CMAQ)	\$921,230	\$377,599	\$0	\$0	\$0	\$377,599

(continued next page)





Table 5-3: Projected Funding for Highway Capital Projects, 2014-2040 (continued)

Revenue Source	Annual Base Funds	Projected Funds*				
	Total	2014-2016	2017-2026	2027-2035	2036-2040	Total (2014-2040)
High Priority Funds (HPP)	\$1,571,234	\$5,027,949	\$0	\$0	\$0	\$5,027,949
Transportation Alternatives Program (TAP) Enhancement (TE)	\$1,164,739	\$626,360	\$14,308,626	\$17,830,803	\$12,747,900	\$45,513,689
City of Clarksville & Montgomery County (Local)	\$4,593,662	\$13,781,286	\$56,433,588	\$70,325,144	\$50,278,045	\$190,818,064
<b>Subtotal (TN)</b>	<b>\$23,377,081</b>	<b>\$63,423,194</b>	<b>\$401,203,464</b>	<b>\$382,564,110</b>	<b>\$267,718,234</b>	<b>\$1,114,909,002</b>
<b>KENTUCKY</b>						
National Highway Performance Program (NHPP)	\$3,839,439	\$0	\$47,166,858	\$58,777,339	\$42,022,092	\$147,966,289
State Surface Transportation Program (KY-STP)	\$2,049,945	\$8,110,000	\$25,183,229	\$31,382,272	\$22,436,346	\$87,111,847
State Funds (KY-SP)	\$3,937,500	\$12,050,325	\$51,271,058	\$67,008,666	\$47,906,972	\$178,237,021
<b>Subtotal (KY)</b>	<b>\$9,826,884</b>	<b>\$20,160,325</b>	<b>\$123,621,145</b>	<b>\$157,168,277</b>	<b>\$112,365,410</b>	<b>\$413,315,157</b>
<b>MPO TOTAL</b>	<b>\$33,203,965</b>	<b>\$83,583,519</b>	<b>\$524,824,609</b>	<b>\$539,732,388</b>	<b>\$380,083,644</b>	<b>\$1,426,484,160</b>

\* All totals include federal and non-federal share. Annual Base for NHPP and S-STP is based on ratio of daily vehicle-miles (DVMT) traveled in the CUAMPO planning area to statewide DVMT. Other programs based on historic averages. See text in this section for additional details.

In addition to capacity enhancement projects, the region's roadway system will need funds for ongoing operations and maintenance (capacity preservation) to meet future transportation needs.

Over the past ten years, the City of Clarksville has spent an average of \$3.4 million annually for basic roadway operations and maintenance activities. The majority of the expenditures were for paving and pavement rejuvenation; other typical activities include maintenance of streetlights, signs and striping, traffic signals, street sweeping, mowing, and guardrail.

During the same period, the Montgomery County Highway Department spent an average of \$1.3 million annually for roadway maintenance and operations. As with the City of Clarksville, the majority of the funds were spent on paving, but mowing is also a significant roadway maintenance expense for the county.





New  
Amend #3 MTP

Table 5-7: Roadway Projects Proposed for Completion in 2014-2016

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (millions, in YOE)
E+C 14, TIP #1	SR-112 / US-41A (Madison St.)	SR-76	McAdoo Creek Rd. / Sango Rd.	3.0	Clarksville, Montgomery Co.	Minor Arterial	Widening	2	5	TN-S-STP	E+C
E+C 19, TIP # 6	SR-374 Extension (Alternate C)	Dotsomville Rd.	US-79/SR-76 (Dover Rd.)	2.9	Montgomery Co.	Principal Arterial	New road	0	4	HPP, TN-S-STP TN-S-STBG	E+C
E+C 24, TIP #18	KY-115 at KY-911 (Thompsonville Ln)	-	-	0.1	Oak Grove	Minor Arterial	Intersection - add turn lane	-	-	KY-STP	E+C
E+C 35, TIP #55	Oakland Rd.	US-79/SR-13	Oakland Rd.	0.5	Montgomery Co.	Urban Collector	Realignment	2	2	TN-L-STP TN-L-STBG	E+C
E+C 37	SR-237 (Rossview Rd.)	International Blvd.	I-24	0.8	Montgomery Co.	Minor Arterial	Widening	2	5	TN-S-STP	E+C
E+C 36, TIP #67	Sango Rd.	SR-76	Sango Rd.	0.25	Clarksville	Urban Collector	Reconstruct - add center turn lane	2	3	TN-L-STP	E+C

Table 5-8: Roadway Projects Proposed for Completion in 2017-2026

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (millions, in YOE)
E+C 34, TIP #66	SR-237 (Rossview Rd.)	I-24	400 feet west of Keysburg Rd.	1.5	Clarksville	Minor Arterial	Widening	2	5	E+C	E+C
E+C 21, TIP #13	KY-911 (Thompsonville Ln.)	US-41A	KY-115 (Pembroke Rd.)	1.8	Oak Grove	Urban Collector	Widening	2	5	E+C	E+C
T-33	US-79/SR-13/Guthrie Hwy.	I-24	Solar Way / International Blvd.	1.1	Clarksville, Montgomery Co.	Minor Arterial	Widening	2/3	5	TN-S-STBG	\$18.0
T-43, TIP #4 and 5	SR-149/SR-13	Proposed SR-374	Zinc Plant Rd	3.8	Clarksville, Montgomery Co.	Minor Arterial	Widening	2	5	TN-NHPP TN-S-STP TN-S-STBG	\$50.9
T-41, TIP #2	SR-374 (North Pkwy)	Dunbar Cave Rd	Stokes Rd. (US-79/SR-13)	1.7	Clarksville	Minor Arterial	Widening	2	4/5	TN-S-STP TN-S-STBG	\$17.7
T-05A	SR-48 (Trenton Rd)	Tylerown Road	SR-374	4.0	Clarksville	Minor Arterial	Widening	2	5	TN-S-STP TN-S-STBG	\$92.9
T-16	East-West Connector Phase 1	US-79/Wilma Rudolph Blvd	Trenton Rd. (SR-48)	2.5	Clarksville	Minor Arterial	New Road	0	4	TN-L-STP TN-L-STBG	\$34.1
T-22	Jack Miller Blvd. Extension	Tobacco Rd.	Peachers Mill Rd.	2.0	Clarksville	Minor Arterial	New Road	0	4	TN-L-STP TN-L-STBG	\$29.5
T-29	Lafayette Rd	Walnut Grove Rd	Gate - Fort Campbell	0.4	Clarksville, Fort Campbell	Minor Arterial	Widening	2	5	FLAP	\$8.2
T-34	SR-48/Trenton Rd at Needmore Rd	-	-	-	Clarksville	Urban Collector	Intersection Improvements	-	-	TN-L-STP	\$0.6
K-06	KY-400 (State Line Rd)	US-41A (Fort Campbell	KY-115/Pembroke-Oak Grove Rd	1.4	Oak Grove	Urban Collector	Reconstruct - Add Center Turn Lane	2	3	KY-STP	\$16.2
K-07	KY-115 (Pembroke-Oak Grove Rd)	KY-400 (State Line Rd.)	I-24	2.9	Oak Grove	Urban Minor Arterial	Reconstruct - Add Center Turn Lane	2	3	KY-STP	\$28.2
K-08	KY-115 (Pembroke Rd.)	I-24	KY-1453 (Barker's Mill Rd.)	1.9	Oak Grove	Rural Minor Arterial	Reconstruct - Add Center Turn Lane	2	3	KY-NHPP	\$13.7
K-12	Oatts-Riggins Rd (New Roadway)	KY-400 (State Line Rd)	KY-911 (Thompsonville Ln)	1.5	Oak Grove	Urban Collector	New Road	0	3	KY-NHPP	\$9.9
K-13	KY-1453 (Elmo Rd) Rehabilitation	US-41A (Fc. Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	4.1	Christian Co.	Local	Reconstruct - Add Center Turn Lane	2	3	KY-SP	\$21.7





11/20/20  
Amended #3 MTP

Table 5-9: Roadway Projects Proposed for Completion in 2027-2035

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (millions in YOE)
T-40	SR-374/Richview Rd/Warfield Blvd	Memorial Dr.	Dunbar Cave Rd	2.1	Clarksville	Principal Arterial	Widening	2	4	TN-S-STP	\$49.9
T-42	SR-149/SR-374 Ext (Alternate C)	River Rd to SR-149/SR-149	Dotsomville Rd	5.2	Montgomery Co.	Principal Arterial	New Road	0	4	TN-S-STP/	\$115.7
T-23	US41A Bypass (Ashland City Rd.)	US41A/SR-112	SR-13	5.5	Clarksville	Principal Arterial	Widening	2/3	5	TN-NHPP/TN-S-STP	\$134.3
T-35	East-West Connector Phase 2	SR-48 (Trenton Rd)	Peachers Mill Rd.	3.7	Clarksville	Minor Arterial	New Road	0	4	TN-L-STP	\$73.2
T-36	Peachers Mill Rd.	Pine Mountain Rd.	Stonecrossing Dr.	0.4	Clarksville	Minor Arterial	Widening	3	4	TN-L-STP	\$6.3
K-02	Hugh Hunter/Griton Church Rd.	KY 911 (Thompsonville Ln)	Allen Rd.	1.9	Oak Grove, Christian Co.	Local	Reconstruction	2	2	KY-SP	\$24.2
K-05	Gate 4 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.2	Oak Grove	Urban Collector	New Road	0	2	KY-STP/KY-NHPP	\$19.4
K-10	KY-117 (New Roadway)	US-41A (Ft. Campbell Blvd.)	KY-115 (Pembroke-Oak Grove Rd)	3.0	Oak Grove	Urban Collector	New Road	0	5	KY-STP	\$19.6
K-11	Gate 5 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.5	Oak Grove	Urban Collector	New Road	0	2	KY-STP	\$26.9
K-14	KY-109 (Bradshaw Rd) Rehabilitation	KY-1453 (Elmo Rd)	Bradshaw-Fidelio Rd.	1.0	Christian Co.	Rural Minor Collector	Reconstruct-add center lane	2	3	KY-STP/KY-SP	\$6.8

Table 5-10: Roadway Projects Proposed for Completion in 2036-2040

Project Number	Roadway	From	To	Length (Miles)	Jurisdiction	Federal Functional Classification	Type of Improvement	Current Lanes	Future Lanes	Anticipated Funding Source	Cost (millions in YOE)
T-06	I-24	Eastern terminus of Project K-04 (KY/TN State Line)	SR-76	10.7	Montgomery Co.	Interstate	Widening	4	6	TN-NHPP/S-STP	\$193.9
T-37	I-24	SR-76	SR-256 (Robertson County)	8.6	Montgomery Co., Robertson Co.	Interstate	Widening	4	6	TN-NHPP/S-STP	\$148.0
T-01	Needmore Rd.	Hazelwood Rd.	SR-236 (Tiny Town Rd.)	0.9	Clarksville	Urban Collector	Reconstruct-add center lane	2	3	TN-L-STP/TN-Local	\$13.6
T-05C	SR-48 (Trenton Rd.)	SR-13/US 79 (Wilma Rudolph Blvd.)	SR-374/101st Airborne Division Pkwy.	1	Clarksville	Minor Arterial	Widening	2	5	TN-S-STP	\$25.0
T-18	Whitefield Rd./Old Trenton Rd.	Needmore Rd.	SR-374/101st Airborne Division Pkwy	0.2	Clarksville	Urban Collector	Reconstruct-add center lane	2	3	TN-L-STP/TN-Local	\$5.2
K-04	I-24	US-41A (Fort Campbell Blvd)	TN State line	7.8	Oak Grove, Christian Co.	Interstate	Widening	4	6	KY-NHPP	\$112.0





## DEMONSTRATION OF FISCAL CONSTRAINT

Table 5-14 summarizes total roadway project costs by horizon, compared to available revenue. Unspent funds from one horizon were carried forward to the next horizon, with the appropriate annual growth factor applied to reflect that the value of the surplus funds increases over time. The 2014-2016 horizon is not shown, since all of the proposed roadway projects in that timeframe are already programmed in the fiscally constrained Transportation Improvement Program.

These projections reflect the reality that spending occurs in response to needs, which are variable over time, and that it is sometimes appropriate to build funding reserves. An apparent surplus of NHPP funds occurs in the 2017-2026 horizon because the routes that need improvement are not eligible for those funds. The state will spend the funds in other parts of the state where they are needed. Later in the Plan, the state will draw surplus funds from other areas to make major capital investments on I-24. Likewise, local fund reserves are used for emergency projects, responses to major developments, etc.

Table 5-14: Projected Revenue Compared to Total Cost of Roadway Projects, by Horizon

Funding Source	2017-2026		2027-2035		2036-2040	
	Revenue	Cost of Projects	Revenue	Cost of Projects	Revenue	Cost of Projects
<b>TENNESSEE</b>						
National Highway Performance Program (TN-NHPP) *	\$ 84.9	\$ 15.8	\$ 219.7	\$ 134.3	\$ 342.0	\$ 342.0
State Surface Transportation Prog. (TN-S-STP)Block Grant(TN-S-STBG)	\$ 186.8	\$ 186.8	\$ 112.5	\$ 107.2	\$ 74.7	\$ 30.8
Highway Safety Improvement Program (HSIP) Penalty (PHSIP)	\$ 11.1	\$ 11.1	\$ 13.8	\$ 13.8	\$ 9.9	\$ 9.9
Transportation Alternatives Program (TAP)Enhancements (TE)	\$ 14.3	\$ 11.0	\$ 17.8	\$ 9.0	\$ 12.8	\$ 5.0
Local Surface Transportation Prog. (TN-L-STP)Block Grant(TN-L-STBG)	\$ 47.6	\$ 47.6	\$ 62.3	\$ 62.3	\$ 44.5	\$ 18.8
City of Clarksville and Montgomery County (Local)	\$ 56.4	\$ 56.2	\$ 75.7	\$ 75.5	\$ 50.6	\$ 0
<b>TN Subtotal</b>	<b>\$ 401.1</b>	<b>\$ 328.5</b>	<b>\$ 501.8</b>	<b>\$ 402.1</b>	<b>\$ 534.5</b>	<b>\$ 406.5</b>
<b>KENTUCKY</b>						
National Highway Performance Program (KY-NHPP)	\$ 47.2	\$ 24.6	\$ 98.9	\$ 19.4	\$ 194.2	\$ 112.5
Surface Transportation Program (KY-STP)	\$ 25.2	\$ 25.2	\$ 31.4	\$ 31.4	\$ 22.4	\$ 1.8
State Funds (KY-SP)	\$ 51.3	\$ 43.5	\$ 84.6	\$ 51.1	\$ 142.8	\$ 0.5
<b>KY Subtotal</b>	<b>\$ 123.7</b>	<b>\$ 93.3</b>	<b>\$ 214.9</b>	<b>\$ 101.9</b>	<b>\$ 359.4</b>	<b>\$ 114.8</b>
<b>CUAMPO TOTAL</b>	<b>\$ 524.8</b>	<b>\$ 421.8</b>	<b>\$ 716.7</b>	<b>\$ 504.0</b>	<b>\$ 893.9</b>	<b>\$ 521.3</b>

Note: Revenues and costs are shown in millions of dollars and reflect year of expenditure.

\*Assumes NHPP expenditures for 2036-2040 will exceed typical regional spending levels since I-24 is a facility of statewide importance. See text for discussion.



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**Notice of Public Meeting**  
 The Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) Executive Board will be meeting on Thursday July 20, 2017 beginning at 11:00 a.m. Said meeting will be at the Regional Planning Commission, 329 Main Street, Clarksville, TN 37040. Business includes the review and adoption of Resolution 2017-07 for amending the 2040 MTP; the review and adoption of Resolution 2017-08 for amending the FY2017-FY2020 TIP for CTS revised FY2018 budget; the review and adoption of Resolution 2017-09 for the Final FY2018-FY2019 UPWP; and review of the KYTC SHIFT/BOOST project prioritizing for the Highway Plan.

Said documents are available for public review during normal business hours of the MPO and available online at [www.cuampo.com](http://www.cuampo.com). The discussion of air quality and other routine business may be conducted. Anyone having questions or comments concerning these items should contact Stan Williams or Jill Hall at 931-645-7448 or email [stan.williams@cityofclarksville.com](mailto:stan.williams@cityofclarksville.com), [jill.hall@cityofclarksville.com](mailto:jill.hall@cityofclarksville.com) and/or attend this meeting. In accordance with the "Americans with Disabilities Act", if you have a disability, for which the MPO needs to provide accommodations, please notify us of your requirements by July 14, 2017. This request does not have to be in writing. It is the policy of the MPO to ensure compliance with Title VI of the Civil Rights Act of 1964; 49 CFP part 26; No person shall be excluded from participation in or be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal funds on the grounds of Race, Color, Sex or National Origin.

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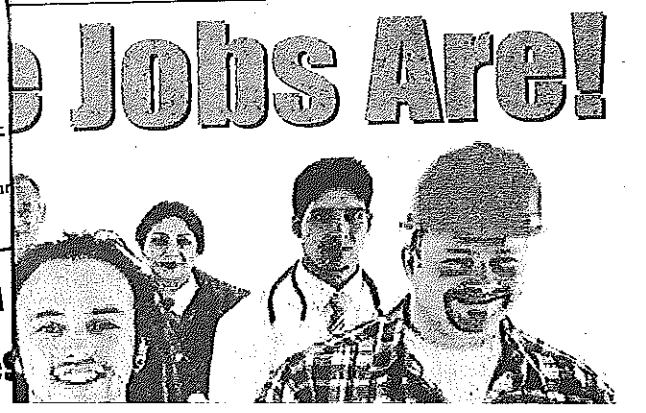
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**Notice of Public Meeting**  
The Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) Executive Board will be meeting on Thursday July 20, 2017 beginning at 11:00 a.m. Said meeting will be at the Regional Planning Commission, 329 Main Street, Clarksville, TN 37040. Business includes the review and adoption of Resolution 2017-07 for amending the 2040 MTP; the review and adoption of Resolution 2017-08 for amending the FY2017-FY2020 TIP for CTS revised FY2018 budget; the review and adoption of Resolution 2017-09 for the Final FY2018-FY2019 UPWP; and review of the KYTC SHIFT/BOOST project prioritizing for the Highway Plan.  
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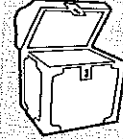
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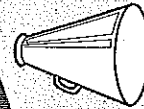
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Anyone having claims against the estate of the late CPL Dillon C. Baldrige, former member of D, 1-187TH IN, 3D BCT, should contact 1LT San Nicolas at 270-798-2206.

Anyone having claims against the estate of the late SGT William M. Bays, former member of D, 1-187TH IN, 3D BCT, should contact 2LT French at 270-798-2206.

Anyone having claims against the estate of the late SGT Eric M. Houck, former member of HHB, 3-320TH FAR, DIVARTY, should contact 1LT Ippolito at 270-798-5883.

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## Comité Consultivo en Tennessee de la Comisión de Derechos Civiles de los Estados Unidos

**Audiencia Pública: Impacto de los Derechos Civiles de las Leyes de Confiscación de Activos Civiles en TN. Lunes, 24 de Julio, Biblioteca Pública del Centro de Nashville.**

**Quiénes somos:** Somos el Comité Asesor de Tennessee, un grupo de voluntarios de Tennessee que han sido nombrados por la Comisión de Derechos Civiles de los Estados Unidos para estudiar y recopilar información y luego asesorar a la Comisión de Estados Unidos sobre asuntos relacionados con derechos civiles, discriminación, protección de la ley bajo la Constitución o en la administración de justicia aquí en el Estado de Tennessee. Estamos celebrando una audiencia pública sobre las leyes de confiscación de bienes civiles de Tennessee el 24 de julio de 2017 en el centro de Nashville.

**¿De qué se trata esto?** Muchos estados en el país no permiten que la policía y otros agentes de la ley para llevar el dinero de una persona o bienes a menos que la persona es condenada por un crimen y el dinero o la propiedad está de alguna manera conectado a ese crimen. Esto se denomina confiscación de activos criminales.

Tennessee es uno de los pocos estados en el país que tiene una ley que permite a la policía y otros agentes de la ley a tomar el dinero o la propiedad de una persona, y tomarla de ellos permanentemente, sin acusar a la persona de ningún crimen, siempre y cuando haya razón para creer que está relacionado con un crimen. Esto se llama decomiso de activos civiles.

Además del efectivo y las drogas, los tipos de propiedad que pueden ser incautados incluyen automóviles y otros vehículos, computadoras, las televisores y otros aparatos electrónicos, y casas, entre muchos otros.

**¿Es buena o mala la ley de decomiso de activos civiles de Tennessee?** Algunas personas están a favor de la ley y algunas personas están en contra. Hay muchas razones de política en ambos lados. Aquí hay algunas razones para y en contra.

**PRO:** Algunas personas dicen que las leyes de decomiso civil son buenas porque ayudan a las fuerzas del orden en la lucha contra el crimen de varias maneras. Primero, al tomar el dinero de una persona o otra propiedad que pudiera estar relacionada con un crimen, las personas son menos propensas a cometer crímenes porque no podrán beneficiarse del crimen. De esta manera, esta ley disuadirá a la gente de involucrarse en conducta criminal en primer lugar. En segundo lugar, en muchos casos, cuando las fuerzas del orden toman dinero en efectivo o bienes (y luego venden la propiedad incautada por dinero en efectivo), las agencias de aplicación de la ley pueden mantener los fondos y usar el dinero para apoyar el trabajo adicional de lucha contra el crimen para proteger a las comunidades.

**CON:** Algunas personas dicen que las leyes de decomiso civil son malas porque no protegen suficientemente los derechos de las personas a su dinero y propiedades de varias maneras. En primer lugar, porque nadie necesita demostrar realmente en un tribunal que la persona estaba haciendo algo criminal antes de que el dinero en efectivo o la propiedad puede ser tomada de él o ella, los derechos de las personas a su dinero y bienes no están suficientemente protegidos por el proceso judicial y las normas legales. En segundo lugar, hay preocupaciones de que si la aplicación de la ley consigue mantener el efectivo o la propiedad, algunas fuerzas de seguridad podrían ser tentados.

Para tomar el dinero de alguien o la propiedad sin una buena razón solo para aumentar la financiación para la aplicación de la ley y que esta práctica podría dirigirse a las personas de color y las personas con bajos ingresos.

En nuestra audiencia pública del 24 de julio, estaremos escuchando de la ley, legisladores, académicos y grupos comunitarios y de defensa para aprender más sobre la ley de confiscación de bienes civiles de Tennessee, cómo opera y su impacto en individuos y comunidades a través de nuestro estado.

Si su organización tiene información o experiencia con la confiscación de activos civiles y desea dar testimonio a nuestro Comité sobre la posición política de su organización, por favor háganoslo saber lo antes posible.

También estamos buscando individuos que personalmente han sido afectados por esta ley. Si conoce a una persona afectada que desea informarnos sobre sus experiencias, háganoslo saber.

**CONTACTO:** Daniel Horwitz en: [daniel.horwitz@gmail.com](mailto:daniel.horwitz@gmail.com) o Justin Owen en: [Justin@beacontn.org](mailto:Justin@beacontn.org) o D. Di Ianni en [ddianni@gmail.com](mailto:ddianni@gmail.com)

### Tennessee Advisory Committee to the U.S. Commission on Civil Rights

**Public Hearing: Civil Rights Impact of TN Civil Asset Forfeiture Laws Monday, July 24, Downtown Nashville Public Library, Main Branch.**

**Who we are:** We are the Tennessee Advisory Committee, a group of Tennessee volunteers who have been appointed by the U.S. Commission on Civil Rights to study and collect information and then advise the U.S. Commission on matters relating to civil rights, discrimination, denial of equal protection of the law under the Constitution or in the administration of justice here in the State of Tennessee. We are holding a public hearing on Tennessee civil asset forfeiture laws on July 24, 2017 in downtown Nashville.

**What is this about?** Many states in the country do not allow the police and other law enforcement personnel to take away a person's cash or property unless the person is convicted of a crime and the cash or property is somehow connected to that crime. This is called criminal asset forfeiture.

Tennessee is one of several states in the country that has a law that permits police and other law enforcement personnel to seize a person's cash or property, and take it from them permanently, without charging the person with any crime, as long as there is reason to believe it is related to a crime. This is called civil asset forfeiture.

In addition to cash and drugs, the types of property that can be seized include automobiles and other vehicles, computers, T.V.s and other electronic devices, and houses, among many others.

**Is Tennessee's civil asset forfeiture law good or bad?** Some people are in favor of the law and some people are against it. There are many policy reasons on both sides. Here are a just a few reasons for and against.

**PRO:** Some people say that civil forfeiture laws are good because they assist law enforcement in fighting crime in several ways. First, by taking a person's cash or other property that might be related to a crime, people are less likely to commit crimes because they will not be able to benefit from the crime. In this way, this law will discourage people from engaging in criminal conduct in the first place. Second, in many instances, when law enforcement takes cash or property (and then sells the seized property for cash), law enforcement agencies then may keep the funds and use the money to support additional crime fighting work to protect communities.

**CON:** Some people say that civil forfeiture laws are bad because they do not sufficiently protect people's rights to their cash and property in several ways. First, because no one needs to actually prove in a court of law that the person was doing anything criminal before cash or property may be taken from him or her, people's rights to their cash and property are not sufficiently protected by court process and legal standards. Second, there are concerns that if law enforcement gets to keep the cash or property, some law enforcement might be tempted to take someone's cash or property without a good reason just to increase the funding for law enforcement and that this practice might target persons of color and individuals with low incomes.

Who we would like to hear from: At our July 24 public hearing, we will be hearing from law enforcement, lawmakers, academics, and community and advocacy groups to learn more about the Tennessee civil asset forfeiture law, how it operates, and its impact on individuals and communities across our state.

If your organization has information or experience with civil asset forfeiture and wishes to provide testimony to our Committee about your organization's policy position, please let us know as soon as possible.

We also are looking for individuals who personally have been impacted by this law. If you know an impacted person who wishes to tell us about their experiences, please let us know.

**CONTACT:** Daniel Horwitz at: [daniel.horwitz@gmail.com](mailto:daniel.horwitz@gmail.com) or Justin Owen at: [Justin@beacontn.org](mailto:Justin@beacontn.org) or D. Di Ianni at [ddianni@gmail.com](mailto:ddianni@gmail.com)

### AVISO DE REUNIÓN PÚBLICA

La Junta Ejecutiva de la Organización Metropolitana de Planeación del Área Urbanizada de Clarksville (CUAMPO) se reunirá el jueves 20 de julio de 2017 a partir de las 11:00 am. Dicha reunión será en la Comisión de Planificación Regional, 329 Main Street, Clarksville, TN 37040. Negocios incluye la revisión Y la adopción de la Resolución 2017-07 para enmendar el PMT 2040; La revisión y adopción de la Resolución 2017-08 para enmendar el Presupuesto FY2017-FY2020 para el presupuesto revisado de FTS2018 del CTS; La revisión y adopción de la Resolución 2017-09 para el FY2018-FY2019 UPWR; Y revisión del proyecto KYTC SHIFT / BOOST priorizando el Plan de Carreteras.

Dichos documentos están disponibles para su revisión pública durante las horas normales de oficina en la MPO y están disponibles en línea en [www.cuampo.com](http://www.cuampo.com). La discusión sobre la calidad del aire y otros asuntos de rutina puede llevarse a cabo. Cualquier persona que tenga preguntas o comentarios sobre estos artículos debe comunicarse con Stan Williams o Jill Hall al 931-645-7448 o por correo electrónico a [stan.williams@cityofclarksville.com](mailto:stan.williams@cityofclarksville.com) o [jill.hall@cityofclarksville.com](mailto:jill.hall@cityofclarksville.com) y / o asistir a esta reunión. De acuerdo con la "Ley de Americanos con Discapacidades", si usted tiene una discapacidad, para la cual la MPO necesita proporcionar alojamiento, por favor notifiquenos de sus requerimientos antes del 14 de julio de 2017. Esta solicitud no tiene que ser por escrito. Es política de la MPO asegurar el cumplimiento del Título VI de la Ley de Derechos Civiles de 1964; 49 CFR parte 26; Ninguna persona será excluida de la participación o será negada los beneficios de, o será objeto de discriminación bajo cualquier programa o actividad que reciba fondos federales por motivos de raza, color, sexo u origen nacional.

### COREA DEL NORTE de la portada.

igual forma Rusia ha rechazado sanciones adicionales. Ambos países consideran estratégica la existencia de Corea del Norte, una especie de tapón ideológico y político frente a Corea del Sur. La gran economía de la zona.

Más allá de la dura retórica de Washington, desde el punto de vista práctico EEUU se ha limitado a movilizar su sistema antimisiles THAAD en Corea del Sur, muy cerca de la frontera con su vecino del norte. Además, dos grupos de batalla encabezados por los portaviones USS Carl Vinson y USS Ronald Reagan estuvieron realizando ejercicios militares con Japón en aguas cercanas a la Península de Corea. Y esta semana, EEUU y Corea del Sur realizaron un simulacro de guerra con el lanzamiento de misiles como reacción a la prueba norcoreana.

En el corto plazo a Trump le queda reunirse con sus colegas Xi Jinping y Vladimir Putin en el marco de la Cumbre del G-20 en Alemania, si es que en ese marco hay terreno para opciones nuevas. Pero más allá de la "may,

may mala conducta" de Corea del Norte, una afirmación de Trump, lo único concreto desde el punto de vista diplomático ha sido las críticas a China y Rusia de la embajadora de EEUU en la ONU, Nikki Haley, que acusó a Moscú y a Pekín de tenderle la mano a Kim Jong Un.

Esto deja a Estados Unidos solo y más cerca de considerar el uso de la fuerza, una opción sumamente peligrosa.

Una de nuestras capacidades está en nuestras considerables fuerzas militares, dijo Haley. "Las usaremos si hay que hacerlo, pero no preferimos ir en esa dirección".

Y es que un ataque preventivo a instalaciones nucleares o de misiles balísticos en territorio norcoreano provocaría una reacción de consecuencias impredecibles y la posibilidad más obvia es que el régimen de Kim Jong Un ataque con todo su poderío de artillería a Seúl, la capital de Corea del Sur, a pocas millas de la frontera y donde estarían en peligro las vidas de un poco más de 10 millones de personas. ■

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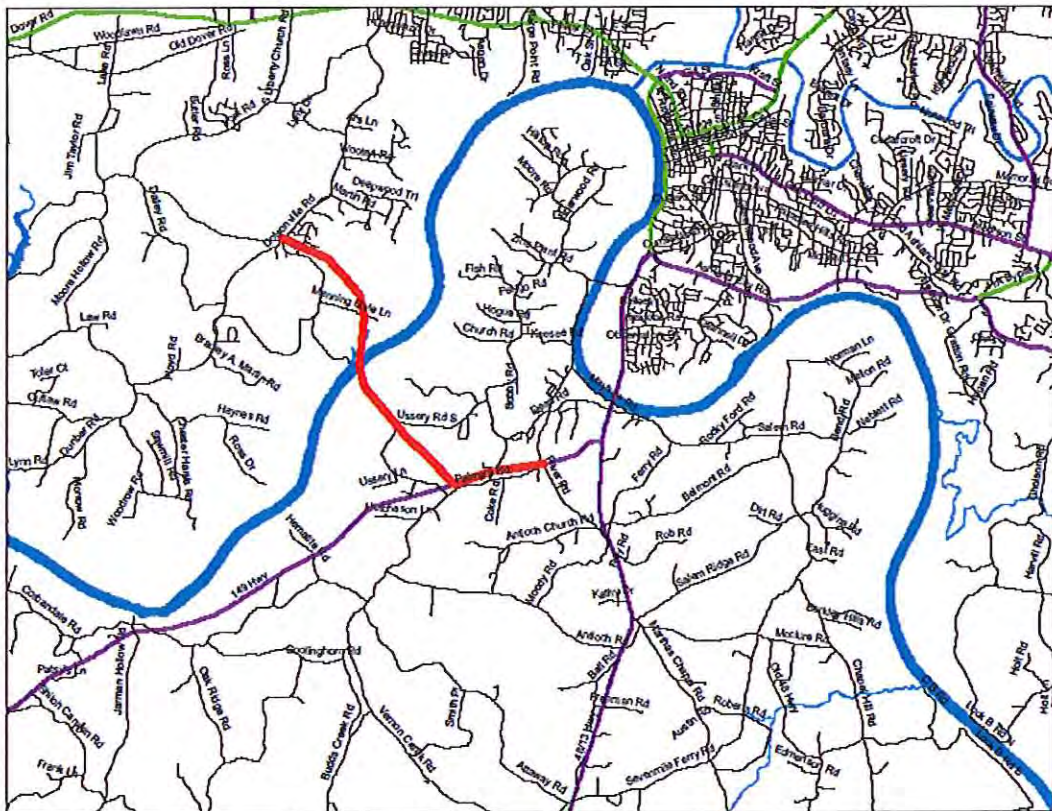


# CUAMPO

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County	<input type="text" value="Montgomery"/>	Length	<input type="text" value="5.3"/> mi	L RTP#	<input type="text" value="E+C.28; E+C.18 (Table 4-2)"/>	Conformity Status	<input type="text" value="Non-Exempt"/>
Route/Project Name	<input type="text" value="SR-149 / SR-374 (STIP# 63080)"/>					Total Project Cost	<input type="text" value="\$49,875,000"/>
Terminals or Intersection	<input type="text" value="HPP ID# TN046 (Section 1602-TEA21) SR-149; From SR-374 to River Rd; SR-374; from SR-149 to Dotsonville Rd"/>						
Project Description	<input type="text" value="Construct new 2-lane roadway"/>						

Fiscal Year	Type of Work	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
<input type="text" value="2014"/>	<input type="text" value="PE-D"/>	<input type="text" value="NHPP"/>	<input type="text" value="300,000"/>	<input type="text" value="240,000"/>	<input type="text" value="60,000"/>	<input type="text" value="0"/>
<input type="text" value="2014"/>	<input type="text" value="ROW"/>	<input type="text" value="NHPP"/>	<input type="text" value="1,000,000"/>	<input type="text" value="800,000"/>	<input type="text" value="200,000"/>	<input type="text" value="0"/>
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Remarks	Amendment Number	<input type="text" value="0"/>	Adjustment Number	<input type="text" value="0"/>
<p>HPP funds were appropriated and are being carried forward from a previous year.          Project began in 1997 - \$11,900,000 obligated from previous TIPs. Please contact Rick Pack for further information.</p>				



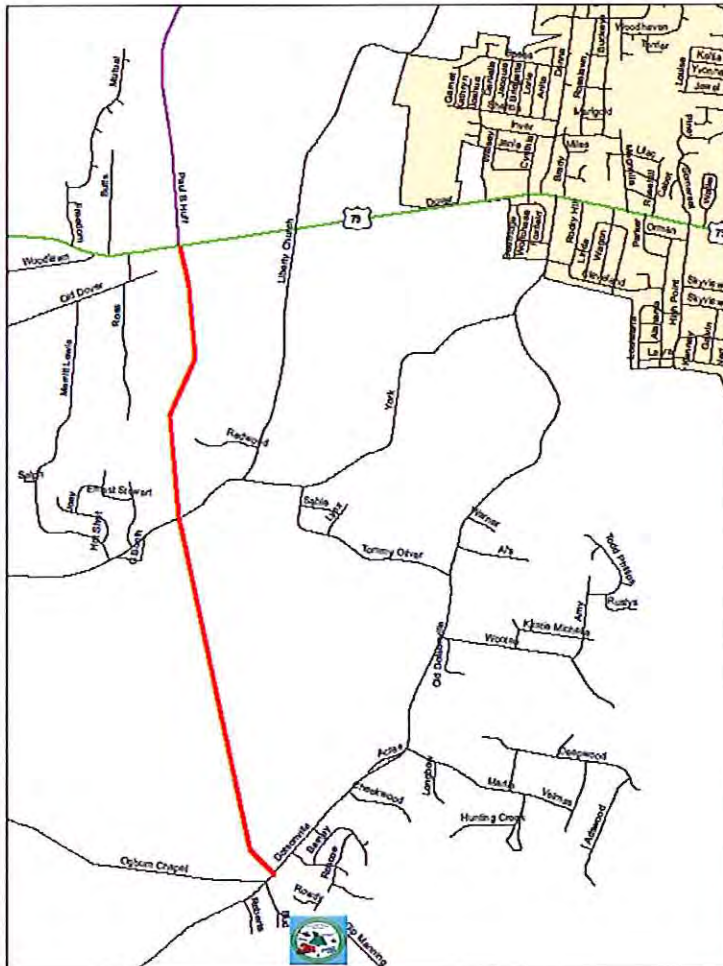


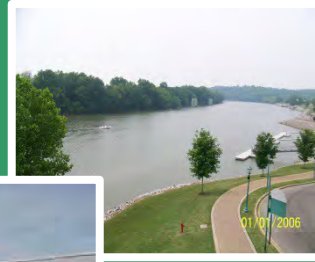
# CUAMPO

TIP #	<input type="text" value="6"/>	TDOT PIN #	<input type="text" value="101463.03"/>	Priority	<input type="text" value="A"/>	Lead Agency	<input type="text" value="TDOT"/>
County	<input type="text" value="Montgomery"/>	Length	<input type="text" value="2.9"/> mi	L RTP#	<input type="text" value="E+C 19 (Table 4-2)"/>	Conformity Status	<input type="text" value="Non-Exempt"/>
Route/Project Name	<input type="text" value="SR-374 (STIP# 63090)"/>					Total Project Cost	<input type="text" value="\$17,200,000"/>
Termini or Intersection	<input type="text" value="HPP ID# TN046 (TEA21) Dotsonville Road to SR-76"/>						
Project Description	<input type="text" value="Construct new 2 lane roadway"/>						

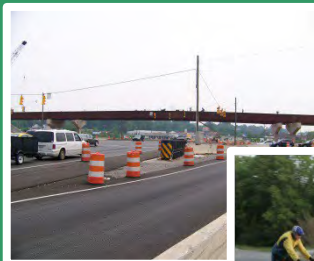
Fiscal Year	Type of Work	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
2014	PE, ROW, CONST	PLHD	452,760	452,760	0	0
2014	ROW	HPP	2,630,154	2,104,123	526,031	0
2015	STG CONST	NHPP	11,000,000	8,800,000	2,200,000	0
			0	0	0	0

Remarks	Amendment Number	<input type="text" value="0"/>	Adjustment Number	<input type="text" value="0"/>
<p>*TIP #6 in previous TIP 2008 \$3,117,086 ROW. PE performed under TIP #5. This project was separated from TIP #5.</p>				





**Clarksville Urbanized Area  
Metropolitan Planning  
Organization  
FINAL  
Transportation  
Improvement Program  
FY 2017 - FY 2020**

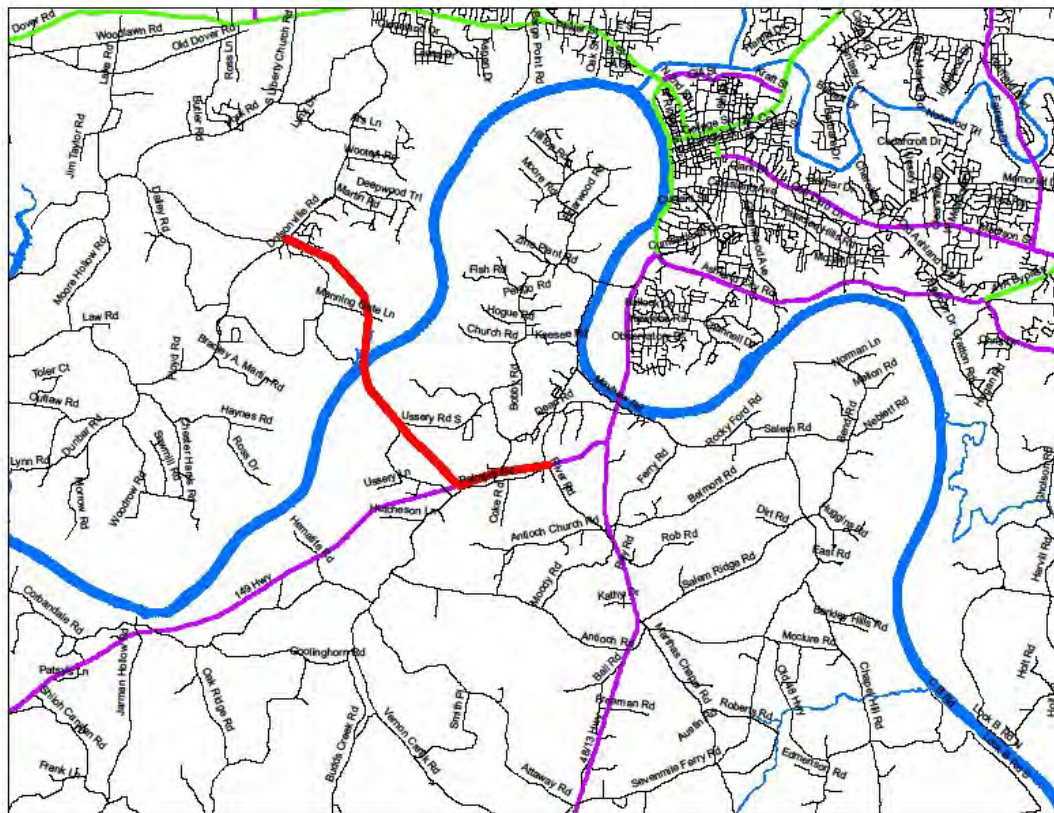


# CUAMPO

TIP #	<input type="text" value="5"/>	TDOT/KYTC	<input type="text" value="101463.02"/>	Priority	<input type="text" value="A"/>	Lead Agency	<input type="text" value="TDOT"/>
County	<input type="text" value="Montgomery"/>	Length	<input type="text" value="5.2"/> mi	MTP#	<input type="text" value="T-43; T-42 (Table 4-8, 4-9)"/>	Conformity Status	<input type="text" value="Non Exempt"/>
Route/Project Name	<input type="text" value="SR-149 / SR-374 (STIP#63080)"/>					Total Project Cost	<input type="text" value="\$51,375,000"/>
Termini or Intersection	<input type="text" value="HPP ID# TN046 (Section 1602-TEA21)SR-149: From SR-374 to River Rd; SR-374; from SR-149 to Dotsonville Rd"/>						
Project Description	<input type="text" value="Construct two 12' lanes and 10' shoulders (Super two-lane) on four-lane divided ROW"/>						

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
<input type="text" value="2019"/>	<input type="text" value="CONST"/>	<input type="text" value="STBG"/>	<input type="text" value="35,000,000"/>	<input type="text" value="28,000,000"/>	<input type="text" value="7,000,000"/>	<input type="text" value="0"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Remarks	Amendment Number	<input type="text" value="0"/>	Adjustment Number	<input type="text" value="0"/>
<p>HPP funds were appropriated and are being carried forward from a previous year.          Project began in 1997 - \$13,200,000 obligated from previous TIPs. Please contact Brian Hurst, TDOT, for further information.</p>				



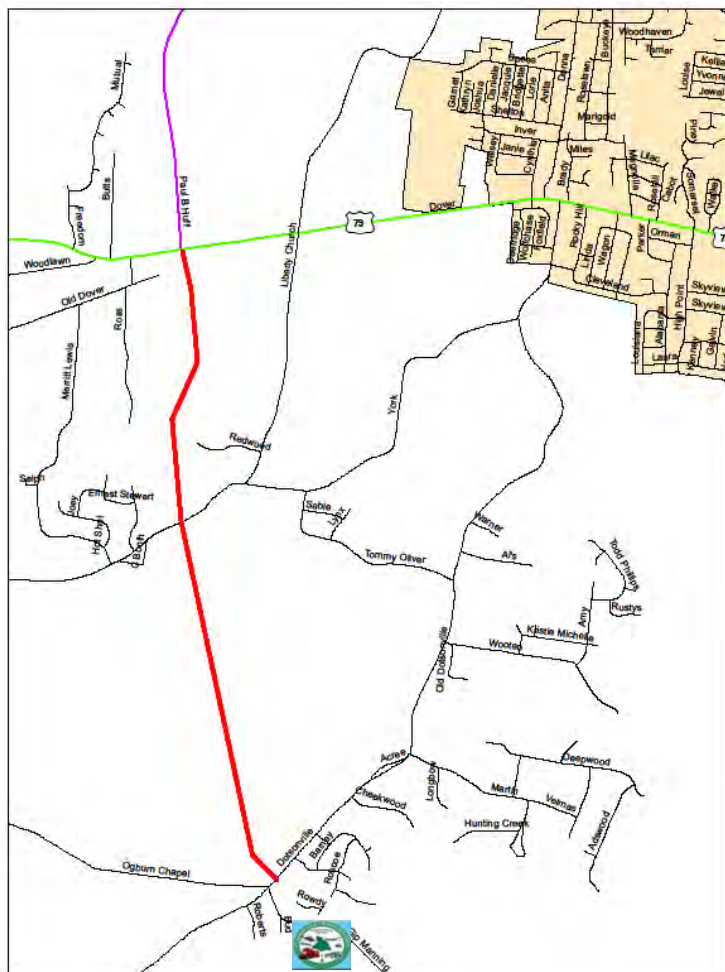


# CUAMPO

TIP #	<input type="text" value="6"/>	TDOT/KYTC	<input type="text" value="101463.03"/>	Priority	<input type="text" value="A"/>	Lead Agency	<input type="text" value="TDOT"/>
County	<input type="text" value="Montgomery"/>	Length	<input type="text" value="2.9"/> mi	MTP#	<input type="text" value="E+C 19 (Table 4-3)"/>	Conformity Status	<input type="text" value="Non Exempt"/>
Route/Project Name	<input type="text" value="SR-374 (STIP# 63090)"/>					Total Project Cost	<input type="text" value="\$16,600,000"/>
Termini or Intersection	<input type="text" value="HPP ID# TN046 (TEA21) Dotsonville Road to SR-76"/>						
Project Description	<input type="text" value="Construct two 12' lanes and 10' shoulders (Super two-lane) on four-lane divided ROW"/>						

Fiscal Year	Phase	Funding Type	Total Funds	Fed Funds	State Funds	Local Funds
<input type="text" value="2017"/>	<input type="text" value="ROW"/>	<input type="text" value="HPP"/>	<input type="text" value="2,400,000"/>	<input type="text" value="1,920,000"/>	<input type="text" value="480,000"/>	<input type="text" value="0"/>
<input type="text" value="2018"/>	<input type="text" value="CONST"/>	<input type="text" value="STBG"/>	<input type="text" value="11,000,000"/>	<input type="text" value="8,800,000"/>	<input type="text" value="2,200,000"/>	<input type="text" value="0"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Remarks	Amendment Number	<input type="text" value="0"/>	Adjustment Number	<input type="text" value="0"/>
<p>*TIP #6 in previous TIP 2008, \$3,117,086 ROW. TIP 2014, PE performed under TIP #5. This project was separated from TIP #5.                  *2019 STBG funds are to Stage Construction</p>				



**Attachment II - Conceptual Stage Relocation Plan**

- Conceptual Stage Relocation Plan





**From:** [David S. Goodman](#)  
**To:** [Valerie Birch](#)  
**Subject:** RE: Updated CSRP for SR 374, PIN 101463.03  
**Date:** Monday, July 25, 2016 3:24:59 PM  
**Attachments:** [image001.png](#)

---

Valerie,

After reviewing the recent design changes for PIN 101463.03, it appears there will be no additional relocations.



**David S. Goodman**

Right-of-Way Agent, Senior  
Tennessee Dept. of Transportation  
505 Deaderick Street, Suite 600  
Nashville, TN. 37243

Office: 615-253-1133

Fax: 615-532-1548

Email: [David.S.Goodman@tn.gov](mailto:David.S.Goodman@tn.gov)

Website: [tn.gov/tdot](http://tn.gov/tdot)



**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

**CONCEPTUAL STAGE RELOCATION PLAN**

County: **Montgomery**  
NEPA Project Number: **63374-0220-14**  
Federal Project Number: **HPP/STP-374(14)**  
PIN Number: **101463.04**

**SR-374/149; SR-76 to West of River Road**

**“Section 1” - SR-149 from 600’ East of Ussery Road to River Road – 1.364± Miles**

**“Section 2” - SR-374 from SR-149 to 2775’ South of Dotsonville Road – 3.978± Miles**

**“Section 3” - SR-374 from 2775’ South of Dotsonville Road to SR-76 (US-79) – 2.858± Miles**

**PROJECT INFORMATION:** The Tennessee Department of Transportation (TDOT) is proposing to widen and improve 1.364± miles of SR-149 and extend SR-374 6.836± miles in order to improve safety, relieve traffic congestion, and promote economic growth. The total length of the project is 8.20± miles. SR-374 is a major connector between the northern portion of Clarksville (and the Fort Campbell military reservation) and residential/commercial areas situated to the east and southwest. A location map of the proposed project showing each of the three above described sections is provided on Page 4 of this report.

Typical sections as shown on the submitted plans indicate two 12 foot traffic lanes in each direction, 12 foot outside shoulders (10 feet stabilized), 12 foot inside shoulders (10 feet stabilized) and a 48 foot depressed median. Due to the irregular topography of the area, width of the proposed right-of-way will vary according to construction requirements. For more specific detail, please refer to the separately attached set of CSRP Marked Plans.

**AREA INFORMATION:** The subject area is located in the north central portion of Montgomery County and roughly five miles west of Clarksville, the County Seat. Current land use in the project area includes a mixture of residential and agricultural.

According to the U. S. Census Bureau, the population for Montgomery County in 2013 was estimated to be 184,119. This reflects a 6.8% increase since the 2010 census. The population of Clarksville in 2013 was estimated to be 142,519, reflecting a 7.2% increase since the 2010 census.

**DISPLACEMENTS:**

<b>ANTICIPATED RELOCATIONS</b>	
<b>MOBILE HOMES</b>	<b>1</b>

**DISPLACEMENT EFFECTS AND ANALYSIS**

**“Section 1” - SR-149 From 600’ East of Ussery Road to River Road**

No anticipated relocation activity.

**“Section 2” - SR-374 From SR-149 to 2775’ South of Dotsonville Road**

No anticipated relocation activity.

**“Section 3” - SR-374 From 2775’ South of Dotsonville Road to SR-76 (US-79)**

**Mobile Homes** Construction is expected to displace 1 (one) single-wide mobile home residence. Based on field observation, this mobile home does not currently appear to be occupied, however it could be at a later date

**Other** No single family residences, businesses, non-profits, multi-family or farming operations are expected to be displaced.

**Availability of Replacement Housing**

A survey of the Montgomery County real estate market in the immediate project area was conducted to determine the availability of residential real estate either sale or lease. Results of the survey indicate that the supply of available property in the project area appears to be adequate to satisfy the relocation requirements of the one mobile home residence.

**ENVIRONMENTAL:** Although the proposed improvement will potentially result in the displacement of one family, the immediate area should experience only minor impact. No neighborhoods will be disrupted nor will access from areas north of the roadway to areas south of the roadway be significantly affected.

**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 IX 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.

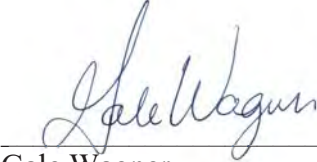
Prepared By:



David S. Goodman  
Transportation Specialist 1

Digitally signed by David S. Goodman  
DN: cn=David S. Goodman,  
o=Tennessee Department of  
Transportation, ou=Right-of-Way  
Office,  
email=David.S.Goodman@tn.gov, c=US  
Date: 2014.04.21 13:09:16 -05'00'

Approved by:



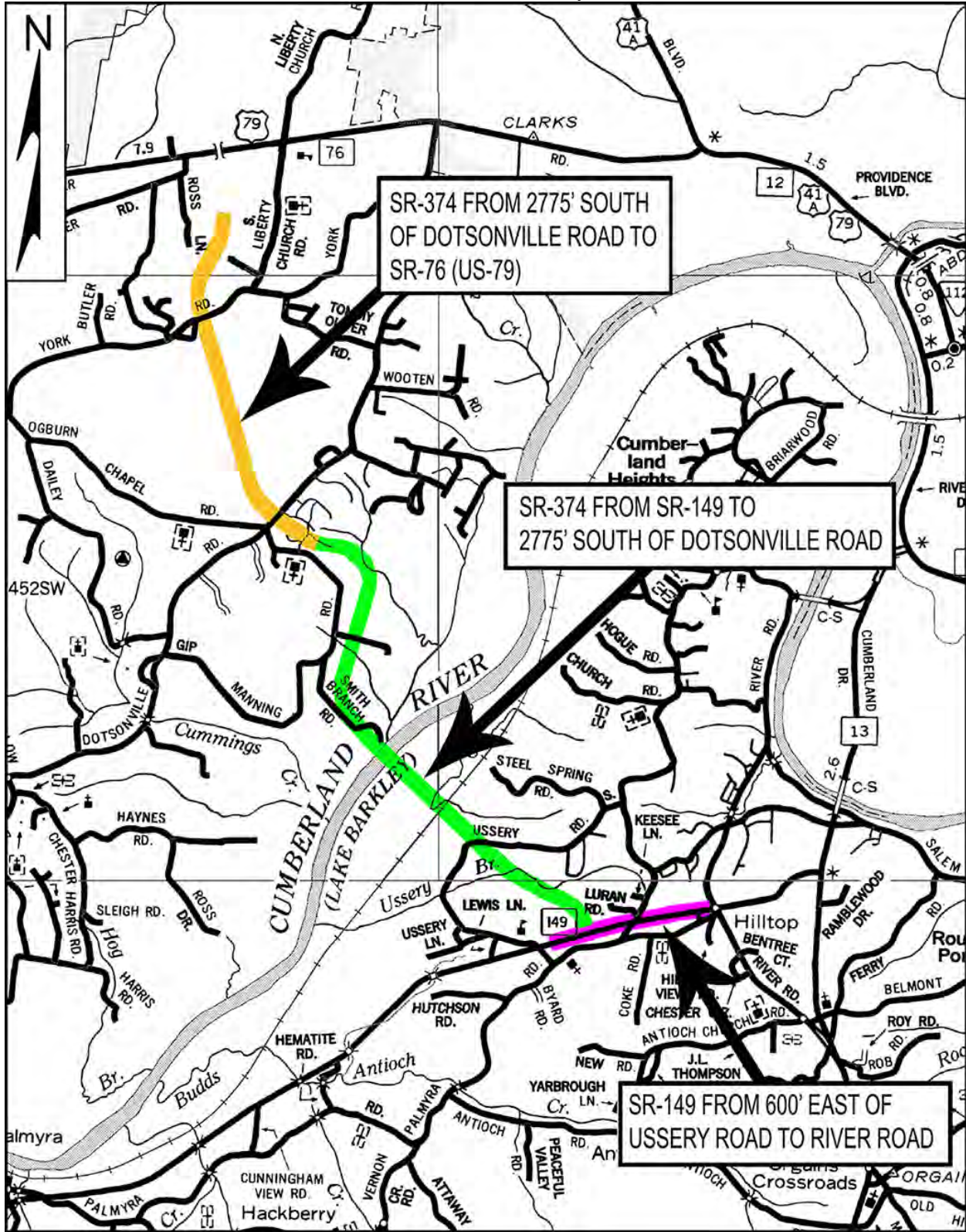
Gale Wagner  
Transportation Manager 1

Digitally signed by Gale Wagner  
DN: cn=Gale Wagner, o=TDOT,  
ou=ROW Division,  
email=gale.wagner@tn.gov, c=US  
Date: 2014.04.21 13:12:04 -05'00'



# LOCATION MAP

(For Illustration Only)





**Attachment III - Section 7 Coordination**

- USFWS Letter (October 22, 2015)
- USFWS Letter (September 21, 2011)







# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
446 Neal Street  
Cookeville, TN 38501

October 22, 2015

Mr. Dennis Crumby  
Tennessee Department of Transportation  
Environmental Planning and Permits  
James K. Polk Building, Suite 900  
505 Deaderick Street  
Nashville, Tennessee 37243-0334

Subject: FWS# 15-CPA-0775. Proposed construction of State Route (SR) 374 from SR 149 west of River Road to SR 76; PIN# 101463.04, Montgomery County, Tennessee.

Dear Mr. Crumby:

Thank you for your email correspondence dated September 29, 2015, transmitting findings of a mussel survey for a new crossing to the Cumberland River for construction of SR 374 from SR 149 west of River Road to SR 76 in Montgomery County, Tennessee. The survey resulted in no observations of listed mussels and indicated a low diversity of mussel fauna in the area. As a result, the Tennessee Department of Transportation (TDOT) has concluded that the proposed project is "not likely to adversely affect" the federally endangered pink mucket (*Lampsilis abrupta*). Personnel of the U.S. Fish and Wildlife Service (Service) have reviewed the subject proposal and offer the following comments.

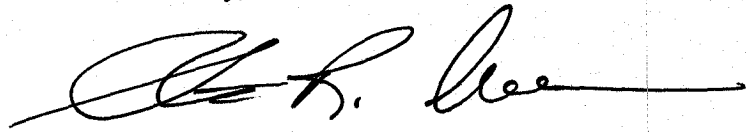
On September 10, 2015, Mainstream Commercial Divers, Inc., conducted a transect survey to document presence/probable absence of the pink mucket in the proposed footprint of the new bridge piers. The survey resulted in the collection of 13 live mussels, representing four non-listed species. Based on these survey findings, we concur with TDOT's determination of "not likely to adversely affect" for the pink mucket.

Summer presence/probable absence surveys for the federally endangered Indiana bat (*Myotis sodalis*) were conducted in 2011. The Service provided our concurrence of "not likely to adversely affect" based on no captures of Indiana bats in mist netting efforts. We would further concur with a "not likely to adversely affect" finding for the threatened northern long-eared bat (*Myotis septentrionalis*) due to no captures during survey efforts. TDOT has committed to reCOORDINATING with our office for potential impacts to all species prior to construction. Therefore, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act (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.

Our National Wetlands Inventory maps indicate that wetlands exist within the proposed corridor of the build alignment. The Corps of Engineers and Tennessee Department of Environment and Conservation should be contacted regarding the presence of regulatory wetlands and the requirements of wetlands protection statutes.

Sincerely,

A handwritten signature in black ink, appearing to read "M. E. Jennings", with a long horizontal line extending to the right.

*For* Mary E. Jennings  
Field Supervisor

xc: Ed Harsson, TWRA, Nashville, TN



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

446 Neal Street  
Cookeville, TN 38501

September 21, 2011

Mr. Dennis Crumby  
Tennessee Department of Transportation  
Environmental Planning and Permits  
James K. Polk Building, Suite 900  
505 Deaderick Street  
Nashville, TN 37243-0334

Subject: FWS# 11-CPA-0673. Proposal to construct State Route 374 from State Route 149 west of River Road to State Route 76; PIN# 101463.04, P.E. 63374-0220-14, Montgomery County, Tennessee.

Dear Mr. Crumby:

Thank you for your letter dated August 31, 2011, transmitting acoustic and mist netting survey results for the proposed construction of State Route 374 from State Route 149 west of River Road to State Route 76 in Montgomery County, Tennessee. The Tennessee Department of Transportation (TDOT) has concluded that the project is "not likely to adversely affect" the federally endangered Indiana bat (*Myotis sodalis*) because no Indiana bats were mist netted during the surveys. Personnel of the U.S. Fish and Wildlife Service (Service) have reviewed the subject proposal and offer the following comments.

Joint mist netting and acoustical studies were performed during the periods of June 20-25 and July 11-12, 2011, at nine sites determined to contain suitable habitat for the Indiana bat. The acoustical study resulted in 2,467 bat calls, of which three were identified as Indiana bats. The mist netting efforts resulted in the capture of 26 individual bats, including 20 federally endangered gray bats (*Myotis grisescens*). Two additional nights of surveys were conducted at Site 1/Site 7 because two calls passed through the MoreNet filter. No further survey efforts were required at Site 5 because only one Indiana bat call was recorded.

Due to negative mist netting results for the Indiana bat with additional survey efforts, we concur with TDOT's determination of "not likely to adversely affect" for this species. 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 for this species. 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 20 gray bats during survey efforts would indicate that this species utilizes the area streams as travel/feeding corridors. Upon review of our database, the nearest gray bat cave is a historic record approximately 6.7 miles northeast of the project area. We are unaware of any caves existing within the project area 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](mailto:john_griffith@fws.gov).

Sincerely,

A handwritten signature in blue ink that reads "Mary E. Jennings". The signature is written in a cursive style with a large, stylized "M" and "J".

Mary E. Jennings  
Field Supervisor



**Attachment IV - Section 106 Coordination**

- TN-SHPO Letter (December 5, 2016)
- TN-SHPO Letter (February 26, 2016)
- TN-SHPO Letter (April 17, 2012)
- TN-SHPO Letter (August 17, 2011)
- TN-SHPO Letter (December 29, 1998)





**TENNESSEE HISTORICAL COMMISSION**  
STATE HISTORIC PRESERVATION OFFICE  
2941 LEBANON PIKE  
NASHVILLE, TENNESSEE 37243-0442  
OFFICE: (615) 532-1550  
[www.tnhistoricalcommission.org](http://www.tnhistoricalcommission.org)

December 5, 2016

Mr. Gerald Kline  
Tennessee Department of Transportation  
Office of Environmental Planning  
505 Deaderick Street, Suite 900  
Nashville, TN 37243-1402

RE: FHWA / FEDERAL HIGHWAY ADMINISTRATION, Northern Section of SR-374/149 from SR-76 to West of River Road, MONTGOMERY COUNTY, TN

Dear Mr. Kline:

In response to your request, we have reviewed the archaeological report of investigations and accompanying documentation submitted by you regarding the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Considering the information provided, we find that no archaeological resources eligible for listing in the National Register of Historic Places will be affected by this undertaking. If project plans are changed or archaeological remains are discovered during project 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. Questions or comments may be directed to Jennifer Barnett (615) 741-1588, ext. 105.

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.  
Executive Director and  
State Historic Preservation Officer

EPM/jmb



**TENNESSEE HISTORICAL COMMISSION**  
**STATE HISTORIC PRESERVATION OFFICE**  
2941 LEBANON ROAD  
NASHVILLE, TENNESSEE 37243-0442  
OFFICE: (615) 532-1550  
[www.tnhistoricalcommission.org](http://www.tnhistoricalcommission.org)

February 26, 2016

Mr. Gerald Kline  
Tennessee Department of Transportation  
Office of Environmental Planning  
505 Deaderick Street, Suite 900  
Nashville, Tennessee 37243-0334

RE: FHWA, PHASE I ARCHAEOLOGICAL ASSESSMENT, SR-374/FROM SR-76 TO RIVER ROAD,  
UNINCORPORATED, MONTGOMERY COUNTY,

Dear Mr. Kline:

At your request, our office has reviewed the above-referenced archaeological survey report in accordance with regulations codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739). Based on the information provided, we concur that the project area contains archaeological resources potentially eligible for listing in the National Register of Historic Places. Archaeological site 40MT911 should be avoided by all ground-disturbing activities or subjected to Phase II archaeological testing and assessment. Site 40MT912, a recorded cemetery should also be avoided. No additional investigation is warranted for site 40MT1230.

Upon receipt of the Phase II testing report or avoidance strategy, we will complete our review of this undertaking as expeditiously as possible. Please submit a minimum of two copies of each final report to this office in accordance with the Tennessee Historical Commission Review and Compliance Section Reporting Standards and Guidelines. Complete and/or updated Tennessee Site Survey Forms should be submitted to the Tennessee Division of Archaeology. Until such time as this office has rendered a final comment on this project, your Section 106 obligation under federal law has not been met. Please inform this office if this project is canceled or not permitted or funded by the federal agency. Questions and comments may be directed to Jennifer M. Barnett (615) 741-1588, ext. 105.

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.  
Executive Director and  
State Historic Preservation Officer

EPM/jmb



# Environmental Study

## Technical Section

---

**Section:** Historic Preservation

## Study Results

---

Based on a review of the ROW plans dated 04/13/16, the TN-SHPO letter dated 04/17/12 is still valid.

## Commitments

---

Did the study of this project result in any environmental commitments?

No

## Additional Information

---

Is there any additional information or material included with this study?

Yes

**Type:** TN-SHPO letter

**Location:** Email Attachment


## Certification

---

**Responder:** Katherine Looney

**Title:** TESS-AD, Historic Preservation Specialist

**Signature:**

  
Digitally signed by  
Katherine Looney  
Date: 2016.04.18  
15:21:41 -05'00'



April 17, 2012

**TENNESSEE HISTORICAL COMMISSION**  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
2941 LEBANON ROAD  
NASHVILLE, TN 37243-0442  
(615) 532-1550

Ms. Martha Carver  
Tennessee Department of Transportation  
505 Deaderick St/900  
Nashville, Tennessee, 37243-0349

RE: FHWA, ARCHITECTURAL SURVEY REPORT, SR-374/RIVER RD/SR-76 AT SR-374,  
UNINCORPORATED, MONTGOMERY COUNTY

Dear Ms. Carver:

In response to your request, received on Thursday, April 5, 2012, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicant for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800. You may wish to familiarize yourself with these procedures (Federal Register, December 12, 2000, pages 77698-77739) if you are unsure about the Section 106 process.

Considering the information provided, we find that the area of potential effects contains no architectural resources eligible for listing in the National Register of Historic Places affected by this undertaking. You should notify interested persons and make the documentation associated with this finding available to the public.

All borrow areas outside proposed rights-of-way will require separate certification as specified under Section 107.06-Federal Aid Provisions. If your agency proposes any modifications in current project plans or discovers any archaeological remains during the ground disturbance or construction phase, please contact us to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. This office appreciates your cooperation.

Sincerely,

E. Patrick McIntyre, Jr.  
Executive Director and  
State Historic Preservation Officer

EPM/jyg



**TENNESSEE HISTORICAL COMMISSION**

DEPARTMENT OF ENVIRONMENT AND CONSERVATION

2941 LEBANON ROAD

NASHVILLE, TN 37243-0442

(615) 532-1550

August 17, 2011

Ms. Martha Carver  
Tennessee Department of Transportation  
505 Deaderick St/900  
Nashville, Tennessee, 37243-0349

RE: FHWA, ARCHITECTURAL SURVEY REPORT, SR-374/SR-159 TO SR-76 AT SR-374,  
UNINCORPORATED, MONTGOMERY COUNTY

Dear Ms. Carver:

In response to your request, received on Thursday, August 11, 2011, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicant for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800. You may wish to familiarize yourself with these procedures (Federal Register, December 12, 2000, pages 77698-77739) if you are unsure about the Section 106 process.

Considering the information provided, we find that the area of potential effects contains no architectural resources eligible for listing in the National Register of Historic Places affected by this undertaking. You should notify interested persons and make the documentation associated with this finding available to the public.

All borrow areas outside proposed rights-of-way will require separate certification as specified under Section 107.06-Federal Aid Provisions. If your agency proposes any modifications in current project plans or discovers any archaeological remains during the ground disturbance or construction phase, please contact us to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act. This office appreciates your cooperation.

Sincerely,

E. Patrick McIntyre, Jr.  
Executive Director and  
State Historic Preservation Officer

EPM/jyg



**TENNESSEE HISTORICAL COMMISSION**  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
2941 LEBANON ROAD  
NASHVILLE, TN 37243-0442  
(615) 532-1550

December 29, 1998

Mr. Gerald Kline  
Tennessee Department of Transportation  
Environmental Planning Office  
Suite 900, James K. Polk Building  
505 Deaderick Street  
Nashville, Tennessee 37243-0334

RE: FHWA, PHASE I ARCHAEOLOGICAL ASSESSMENT, SR-374/SR-13 TO SR-76/ALTERNATE C,  
UNINCORPORATED, MONTGOMERY COUNTY, TN

Dear Mr. Kline:

At your request, our office has reviewed the above-referenced revised archaeological survey report in accordance with regulations codified at 36 CFR 800 (51 FR 31115, September 2, 1986). Based on the information provided, we concur that the project area contains archaeological resources potentially eligible for listing in the National Register of Historic Places. Site 40MT462 should be subjected to Phase II archaeological testing in order to determine whether this site contains eligible archaeological resources. In contrast, site 40MT461 does not contain eligible resources, and no further work is required at this site.

Upon receipt of the Phase II testing report, we will complete our review of this undertaking as expeditiously as possible. Please submit a minimum of two copies of each final report and complete and Tennessee Site Survey Forms to this office in accordance with the Tennessee Historical Commission Review and Compliance Section Reporting Standards and Guidelines. Until such time as this office has rendered a final comment on this project, your Section 106 obligation under federal law has not been met. Please inform this office if this project is canceled or not funded by the federal agency. Questions and comments may be directed to Jennifer M. Bartlett (615) 741-1588, ext. 17.

Your cooperation is appreciated.

Sincerely,

Herbert L. Harper  
Executive Director and  
Deputy State Historic  
Preservation Officer

HLH/jmb