ENVIRONMENTAL ASSESSMENT
State Route 266 Improvements

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For Further Information
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1 PURPOSE AND NEED FOR ACTION

1.1 Authorization

Funding authorization for this project is provided through the U.S. Army Corps of Engineers, Nashville District (USACE) supplemental Operation and Maintenance for J. Percy Priest Lake. The study is being conducted under Operation and Maintenance authority for J. Percy Priest Lake and Dam. J. Percy Priest Lake and Dam was authorized by the River and Harbor Act of 24 July 1946 (Public Law 396, 82nd Congress, 2nd Session). This Environmental Assessment (EA) is being prepared pursuant to the National Environmental Policy Act (NEPA), Council for Environmental Quality (CEQ) regulations (40 CFR 1500-1508), and the USACE Regulation ER 200-2-2, titled Policies and Procedures for Implementing NEPA.

1.2 Purpose and Need

An application was submitted to the J. Percy Priest Resource Manager’s Office on November 27, 2019 by Tennessee Department of Transportation (TDOT) for the widening the section of SR-266 extending from SR-102 (Nissan Drive) to I-840 in Rutherford County, Tennessee. The need and feasibility of the project was considered in a Transportation Planning Report (TPR) developed on November 1, 2007. Preliminary Field Review Plans were approved on October 7, 2011 and Right-of-Way (ROW) Incidental Plans were approved on June 7, 2012. Based on the TPR, Preliminary Plans, and ROW Incidental Plans, TDOT, in conjunction with the Federal Highway Administration (FHWA), determined that the proposed project met the standards for classification as a Categorical Exclusion (CE) under FHWA regulations, and a D-List CE document was approved on August 23, 2012 by TDOT and FHWA. A series of ROW revisions were completed between 2012 and 2017 and a second D-List CE was approved by TDOT on March 20, 2020. Improvements to SR-266 would address the following needs as outlined in the approved 2012 and 2020 D-List CE documents:

- To relieve traffic congestion, improve the level of service and travel times, and improve the overall safety along the roadway;
- To accommodate growth and increased traffic in the Town of Smyrna and Rutherford County;
- To address geometric features that do not meet current standards;
- To support future economic development efforts in and around the study area; and
- To provide increased parks and recreation opportunities through interconnectivity to a greenway and bikeway system.

A vicinity map is included for project orientation and location (Figures 1 and 2). USACE has determined that the project does not meet any of the categorical exclusions listed in Engineering Regulation 200-2-2 (Procedures for Implementing NEPA) and that an EA is needed to address environmental compliance under NEPA for this proposed action.
1.3 Issues and Opportunities

TDOT has an existing easement with USACE (DACW62-2-68-0233) that would be modified to accommodate the highway improvement project. The Scope of Analysis for this EA includes the entire road corridor including both private property and USACE fee simple property necessary to construct the roadway improvements, including the proposed flood storage mitigation/offset areas and installation of guardrails at East Fork Boat Ramp and Hurricane Creek Boat Ramp as described in Section 2.2. Since a large area of the road corridor involves impacts to USACE fee property, construction of the highway improvement project would not be feasible without these impacts. Therefore, areas outside fee property and flowage easement property were considered in the scope.
Figure 2. Local Aerial Imagery Map of Proposed Road Improvements
2 ALTERNATIVES CONSIDERED

2.1 Alternative 1 - No Action Alternative

Under Alternative 1, the widening of SR-266 from a two-lane to a five-lane highway would not occur. There would also be no excavation required to offset fill material associated with the project.

2.2 Alternative 2 - Approval of the Proposed Improvements to State Route 266

Road Widening: Alternative 2 involves the improvement of SR 266 to the junction of Nissan Ln. at the western terminus and extend 4.1 miles east to a point approximately 0.3 mile east of the junction with Interstate 840 at the eastern terminus. Improvements would consist of widening the existing highway by constructing four 12-foot wide travel lanes divided by a 12-foot wide center turn lane with 1-foot wide outside shoulders, two feet of curb and gutter, and six-foot wide sidewalks; and four 12-foot wide travel lanes divided by a 14-foot wide raised median with two-foot wide inside shoulders, 10-foot wide outside shoulders, two feet of curb and gutter, and six-foot wide sidewalks. The expanded sections would also have five-foot bike lane for both the center turn lane and raised median typical sections (Figures 3 and 4). The requested modification would add 8.254 acres of permanent impacts to the existing easement and include an additional 2.052 acres of temporary construction easement area. The proposed corridor was the only alternative considered since it the work would be conducted within corridor of the existing SR-266. Creation of a road of similar size in a new corridor would result in greater environmental effects and effects. To mitigate for environmental impacts to USACE property, including ground disturbance and clearing of several acres of mid-successional forest, TDOT has proposed to install 481 linear feet of guardrail along portions of East Fork Boat Ramp Road and 1,045 linear feet of guardrail along Hurricane Creek Boat Ramp Road to prevent disturbance associated with unauthorized all-terrain vehicle (ATV) usage (TDOT 2020 a).

Figure 3. Typical SR-266 Expansion Section with Center Turn Lane (Five Driving Lanes)
Offset Basin Areas

According to TDOT, the expansion project will require 145,336 cubic yards (cy) of fill and 4,383 cubic yards of cut along the SR-266 right-of-way for a total of 140,953 cy of fill placed between elevations 490’ and 530’ above mean sea level (msl). However, only 118,217 cy of that material would be placed at or below elevation 510’ msl, which is the top of the flood control pool for J. Percy Priest Lake. To offset the flood storage lost on USACE lands for J. Percy Priest Reservoir associated with this fill, TDOT considered several sites for excavation (TDOT 2020 c).

Preferred Alternative (Alternative Offset Basin [OB]-1): TDOT has identified an excavation area to remove 165,516 cy by constructing a depressional wetland area near the West Fork Boat Ramp (Figures 2 and 5). Thus, the project would result in a net cut (gain) of 47,299 cy below the flood control pool elevation of 510’ msl. The area has sufficient area to excavate the necessary area of material, is accessible to construction vehicles and consists of uplands primarily covered with herbaceous and early-successional shrub vegetation. The site was not estimated to result in adverse effects to recreation.

OB-2: This site is located in Jefferson Springs Recreation Area and was considered as an offset excavation area but was dismissed by TDOT due to potential adverse effects to recreation, including a potential future greenway project from the City of Smyrna.
OB-3: This site is located in East Fork Recreation Area and was dismissed by TDOT due to poor access for construction vehicles, lack of land available to achieve offset excavation volume, potential adverse effects to recreation, including existing horse trails.

OB-4: This site is located in Mona Recreation Area and was dismissed by TDOT due lack of land available to achieve offset excavation volume.

OB-5: This site is located along the proposed road corridor between stations 190+00 and 225+00. The site was dismissed due to the depth of subsurface rock required for excavation and additional tree clearing that would have been required.
OB-6: This site is located on USACE property along the West Fork Stones River. The site was dismissed due to anticipated difficulties for construction vehicles to access the site.

2.4 Alternatives Eliminated From Consideration

All offset basin alternatives were eliminated from consideration for reasons described in Section 2.3. The No Action Alternative (Alternative 1) and Approval of the Proposed Improvements to State Route 266, including site OB-1 as an offset basin (Alternative 2) will be carried forward for consideration.

3 AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

The study area is located along the West Fork Stones River, J. Percy Priest, within Rutherford County, Tennessee. J. Percy Priest provides a variety of outdoor recreation opportunities for millions of visitors each year. Because of the temperate climate and relatively long recreation season, visitors have numerous activities to choose from including: fishing, hunting, camping, picnicking, boating, canoeing, hiking, and many others.

3.2 Physiography and Topography

J. Percy Priest Lake is located in the Lower Cumberland Basin, on the Stones River, and covers parts of Rutherford, Davidson, and Wilson Counties in Tennessee. The proposed project, State Route 266 Improvements are completely found within Rutherford County.

Climate. The climate of the Nashville, TN area near J. Percy Priest Lake area is moderate. The area experiences a warm season that lasts for 3.8 months, from May 25 to September 19, with an average daily high temperature above 81°F. The cooler season in Nashville lasts for 3.0 months, from November 27 to February 26, with an average daily high temperature below 56°F (Weatherspark, 2020). The Nashville area receives approximately 48 inches of precipitation per year.

Physiology and Topography. J. Percy Priest Lake, including the project area, is located within the Inner Nashville Basin (71i) (Figure 6) This sub-ecoregion is less hilly and lower than the Outer Nashville Basin (71l), outcrops of the Ordovician-age limestone are common, and the generally shallow soils are redder and lower in phosphorus than those of the outer basin. Streams are lower gradient than surrounding regions, often flowing over large expanses of limestone bedrock. The most characteristic hardwoods within the inner basin are a maple-oak-hickory-ash association. The limestone cedar glades of Tennessee, a unique mixed grassland/forest cedar glades vegetation type with many endemic species, are located primarily on the limestones of the Inner Nashville Basin. The more xeric, open characteristics and shallow soils of the cedar glades also result in a distinct distribution of amphibian and reptile species. (EPA, 2017).

Soils. The Inner Nashville Basin is predominately ultisols, alfisols and inceptisols (EPA 2017). Inceptisols have altered horizons either from weathering or removal of minerals through land practices. Alfisols are mineral soils that are relatively freely drained and have a short period of
moisture deficiency. Ultisols are usually low in fertility and severely weathered. Within the project review corridor, the soils are comprised of a mixture of silt loam soils and rock outcrops. The most common soils are: Gladeville Rock Outcrop (45.9%), Bradyville silt loam (18.2%), Harpeth silt loam (17.6%), and Lomond silt loam (8.1%) (USDA 2020)

Land Use. The landscape of the J. Percy Priest Reservoir HUC-8 watershed (05130203) is approximately 921 square miles (589,000 acres) in size. Within the last 30 years, the land use has changed rapidly in the central and northwestern portions of the watershed as the cities of LaVergne, Smyrna, and Murfreesboro and adjacent unincorporated areas of Rutherford County have grown and transitioned to suburban communities in the greater Nashville Metropolitan Area (TNC, 2011). The largest category of land use in the watershed is agricultural use (51% of watershed), primarily cattle pasture (38% of watershed). The second highest land use category is defined as natural vegetation (31% of watershed) with Southern Interior Low Plateau Dry Mesic Oak Forest accounting for approximately 16% and Nashville Basin Limestone Glade and Woodland accounting for approximately 12% of the overall watershed Table 1 shows the varied land use within the watershed (TNC, 2011).

Figure 6. EPA Ecoregions in Vicinity of Project Site
Table 1. Land Cover Type in Stones River Watershed (TNC 2011)

<table>
<thead>
<tr>
<th>Land Cover Type</th>
<th>Entire Watershed</th>
<th>Floodway</th>
<th>100-Yr Floodplain</th>
<th>500-Yr Floodplain</th>
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<tr>
<td><strong>Agricultural or Successional</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasture</td>
<td>217144</td>
<td>23824</td>
<td>171021</td>
<td>22299</td>
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<td>Cropland</td>
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<td>32222</td>
<td>2496</td>
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<tr>
<td>Old Field / Successional</td>
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<td>4792</td>
<td>30544</td>
<td>2460</td>
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<td>Total acreage within land feature category</td>
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<td>233787</td>
<td>27264</td>
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<tr>
<td>Percent of total acreage within land feature category</td>
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<td>52%</td>
<td>48%</td>
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<td><strong>Natural Vegetation</strong></td>
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<td></td>
</tr>
<tr>
<td>Southern Interior Low Plateau Dry-Mesic Oak Forest</td>
<td>85155</td>
<td>18559</td>
<td>72201</td>
<td>4334</td>
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<tr>
<td>Nashville Basin Limestone Glade and Woodland</td>
<td>72024</td>
<td>4435</td>
<td>62952</td>
<td>4637</td>
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<tr>
<td>South-Central Interior Small Stream and Riparian</td>
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<td>1673</td>
<td>6440</td>
<td>58</td>
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<tr>
<td>South-Central Interior Mesophytic Forest</td>
<td>2375</td>
<td>448</td>
<td>1833</td>
<td>94</td>
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<tr>
<td>South-Central Interior Large Floodplain</td>
<td>750</td>
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<td>Low Intensity Developed</td>
<td>24249</td>
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<td>Medium Intensity Developed</td>
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<td>16%</td>
<td>21%</td>
<td>13%</td>
<td>35%</td>
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<tr>
<td><strong>Other Land Uses</strong></td>
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<tr>
<td>Excavated Land (Strip Mine /Rock Quarry / Gravel Pit)</td>
<td>12695</td>
<td>369</td>
<td>12072</td>
<td>253</td>
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<td>Forest Plantation</td>
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<tr>
<td>Percent of total acreage within land feature category</td>
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<td>1%</td>
<td>3%</td>
<td>1%</td>
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</tbody>
</table>

Alternative 1 (No Action Alternative): No Action Alternative would have no effect on the physiography and topography.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): would have negligible effects to physiographic and topography since widening of SR 266 would occur in the existing road corridor, which is already heavily developed.

3.3 Aquatic Resources

J. Percy Priest Lake supports a diverse aquatic community including numerous fish and freshwater mussel species. Recreational fishing is popular within J. Percy Priest Lake and popular sport fish such as: largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), several species of catfish (*Ictalurus spp.*), crappie (*Pomoxis spp.*), and
other sunfish (*Lempomis spp.*) can be found within the reservoir. The project would result in 0.02 acre of impacts to J. Percy Priest Reservoir to facilitate replacement of SR-266 bridge over the reservoir. Construction plans are shown in Appendix A of this document.

**Streams/Wetlands**

**Alternative 1 (No Action Alternative):** The No Action Alternative would result in no construction activities and would have no effect on aquatic resources such as streams or wetlands.

**Alternative 2 (Approval of the Proposed Improvements to State Route 266):** TDOT has proposed impacts to approximately 1,182 linear feet (lf) and 0.1136 acre of streams to complete the road improvement project. The project would also result in permanent loss of 1.017 acres of wetlands. Compensatory mitigation would be required for some of the aquatic resource impacts. Stream impacts would be mitigated by purchase of 859 credits from Neely’s Bend Mitigation Bank. Some stream impacts, such as replacement of SR-266 Bridge over J. Percy Priest reservoir did not require stream mitigation.

The wetland impacts would be mitigated through the purchase of 2.03 wetland credits from the Coffee County Wetland Mitigation Bank (2:1 mitigation ratio). TDOT would also create a depressional basin approximately 25 acres in size near the West Fork Boat Ramp to offset fill below the flood storage control pool. Although it would be primarily inundated with water it would serve some wetland functions, such as habitat for aquatic and amphibious fauna species.

An application for an Individual Water Quality Certification (WQC) is being reviewed by the Tennessee Department of Environment and Conservation (TDEC) under Section 401 of the Clean Water Act (CWA). Further, the USACE Regulatory Division is reviewing the project application to determine if it meets the conditions of Nationwide Permit 23 (Categorically Excluded Actions) under Section 404 CWA, which is for actions that would have no more than minimal individual and cumulative effects to the aquatic environment. The project would be expected to comply with permit conditions under all CWA permits to minimize damage to aquatic resources.

**Water Quality**

According to the TDEC 2016 303 (d) List for impaired waters in Tennessee, J. Percy Priest Reservoir is assigned the following designated uses: fish and aquatic life; recreation; irrigation; livestock watering and wildlife; navigation; domestic water supply, and industrial water supply. The 2016 report lists J. Percy Priest Reservoir as threatened in terms of meeting the designated use for domestic water supply due to high phosphorus levels, particularly in the upper portion of the reservoir. Approximately 44 streams within the Stones River HUC-8 watershed are categorized on the State’s 303(d) list as failing to meet at least one of their designated uses, which vary based on the size and location of the stream. The most common causes of impairment and sources (in parenthesis) are listed as: alteration of stream-side or littoral vegetation (land development), loss of biological integrity due to siltation (land development),
physical substrate habitat alterations (land development/highways and bridges), E. coli (pasture grazing/discharges from MS4 area) and nutrients (discharges from MS4 area) (TDEC 2016).

**Alternative 1 (No Action Alternative):** No Action Alternative would have no effect on water quality.

**Alternative 2 (Approval of the Proposed Improvements to State Route 266):** The project would have permanent, minor adverse impacts to water quality within the proposed project area, primarily due to the loss of streams and wetlands described in Section 3.3.1. The loss of streams and wetlands could reduce flood attenuation and cause increased turbidity in tributaries to J. Percy Priest and unnamed tributaries during construction. Also, construction within the corridor, including excavation associated with the flood storage offset mitigation channel would produce short-term, localized turbidity in tributaries and in J. Percy Priest Lake. To begin construction proposed under Alternative 2, TDOT would be required to obtain a Stormwater Construction Permit from TDEC through the National Pollution Discharge Elimination System (NPDES) under Section 402 of the CWA. Construction Best Management Practice’s (BMP’s) would be implemented to further reduce potential impacts as a result of construction activities and with proper implementation of BMPs there would be little effect to the reservoir. TDEC noted a water intake for the City of Smyrna, TN near the project. Provided TDOT adherence to standard road construction BMPs and adherence to Section 401, 402 and 404 CWA permit conditions, the project is not expected to impact the water intake.

### 3.4 Terrestrial Resources

**Vegetation**

Table 1, in Section 3.2 describes the land usage and associated ground cover within the Stones River watershed as being predominately agricultural with approximately 31% cover comprised of “natural vegetation” (TNC 2011). However, site visits to the project area by USACE Biologists indicate the proposed widening corridor is predominately wooded through a combination of mixed-mesophytic deciduous forest and glades primarily dominated by Eastern red cedar (*Juniperus virginiana*). Trees common to the deciduous forest include: hackberry (*Celtis occidentalis*) and American elm (*Ulmus americana*) with several species present in lesser percentages, such as green ash (*Fraxinus pennsylvanica*), yellow poplar (*Liriodendron tulipifera*), sugar maple (*Acer saccharum*), red maple (*Quercus rubra*), northern red oak (*Quercus rubra*), shingle oak (*Quercus imbricaria*), black walnut (*Juglans nigra*), various hickories (*Carya spp.*), American beech (*Fagus grandifolia*), pawpaw (*Asimina triloba*) and blackgum (*Nyssa sylvatica*). Common understory species associated with the deciduous forest include sugar maple, Chinese privet (*Ligustrum sinense*), redbud (*Cercis canadensis*), and bush honeysuckle (*Diospyros virginiana*). Chinese privet is also a common understory species in cedar glades along with a variety of herbaceous species. The offset basin area was determined to be comprised of shrub and herbaceous understory species including sawtooth blackberry (*Rubus argutus*), serecia lezpedeza (*Lezpedeza cuneata*), multiflora rose (*Rosa multiflora*) daisy fleabane (*Erigeron annuus*), broomsedge (*Andropogon virginicus*) and assorted asters (*Asteracea spp.*) as well as other early successional species during a site visit by USACE Biologists on February 15,
2018. An Environmental Baseline Review (EBR) for the site conducted by TDOT noted a similar vegetative community with the presence of American beautyberry (*Callicarpa americana*), box elder seedings (*Acer negundo*) and trees such as hackberry and osage orange (*Maclura pomifera*) scattered sparsely in the offset basin work area (TDOT 2018).

**Alternative 1 (No Action Alternative):** No Action Alternative would have no effect on terrestrial vegetation.

**Alternative 2 (Approval of the Proposed Improvements to State Route 266):** Alternative 2 would present long-term adverse impacts to vegetative resources located within the project footprint. Vegetative clearing necessary to improve State Route 266 would result in ground disturbance and tree removal along the corridor. Generally, a manicured utility corridor approximately 60’ wide is present on one side of the road corridor and forested habitat is present within several feet on the other side of the road. Approximately 37.6 acres of trees would be removed over the entire corridor in order to complete the improvements listed above, including 16.65 acres on USACE property. The project would also result in the clearing of approximately 25 acres of upland shrub/scrub vegetation associated with the flood storage offset basin at West Fork Recreation Area consisting of the species listed in Table 2 below. The perimeter of the offset basin and temporary work area would be seeded with a mix of herbaceous species (1/4 lb. per 1,000 sf.) and shrubs planted on 3’ centers with trees planted in equal numbers on 10’ centers. The species, elevations and estimated acreage of plantings are included below (TDOT 2020a).

<table>
<thead>
<tr>
<th>Elevation</th>
<th>Area of Planting</th>
<th>Species to be Planted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Herbaceous Species</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 492’ msl</td>
<td>Approx. 15 acres</td>
<td>20% Rice Cutgrass (<em>Leersia oryzoides</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20% Barnyard grass (<em>Echinocloa sp.</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% Smartweed (<em>Persicaria sp.</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% Common Arrowhead (<em>Sagittaria latifolia</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% Pickerelweed (<em>Pontederia cordata</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% Sedges (<em>Carex sp.</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% Woolgrass (<em>Scirpus cyperinus</em>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% Dark green rush (<em>Scirpus atrovirens</em>)</td>
</tr>
<tr>
<td>489’ - 492’ msl (Selective Areas)</td>
<td>Approx. 1 acre</td>
<td><strong>Shrub Species</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Tree Species</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Black willow (<em>Salix nigra</em>)</td>
<td></td>
</tr>
<tr>
<td>Sycamore (<em>Platanus occidentalis</em>)</td>
<td></td>
</tr>
<tr>
<td>Bald cypress (<em>Taxodium distichum</em>)</td>
<td></td>
</tr>
<tr>
<td>492’- +/- 494’ msl</td>
<td>Approx. 6 acres</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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</tbody>
</table>
Wildlife
Areas adjacent to the project area are divided into several different habitat types from scrub/shrub cover at the offset basin site, to a combination of open, manicured utility corridor and mid-successional forest habitat throughout the road corridor. Some common species that frequent wooded sites in moderate to heavily developed areas are expected to be present, such as: opossum (Didelphis virginiana), raccoon (Procyon lotor), white-tailed deer (Odocoileus virginiana), eastern cottontail rabbit (Sylvilagus floridanus), eastern gray squirrel (Sciurus carolinensis), nine-banded armadillo (Dasypus novemcinctus) and an array of songbirds can also be found within the project location.

Alternative 1 (No Action Alternative): No Action Alternative would have no effect on terrestrial or wildlife.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): The loss of forested habitat within the road corridor and 25 acres of scrub/shrub habitat within the flood storage offset basin would have minor, long-term effects to wildlife that used the areas for habitat but proposed planting of trees, shrubs and herbaceous wetland species location by TDOT at the offset basin site (post-construction) and blocking ATV use at Hurricane Creek and East Fork Creek Recreation Areas would help to minimize long-term effects to wildlife by eventually restoring habitat.

3.5 Threatened and Endangered Species

Federally Listed Species
TDOT has performed consultation with the U.S. Fish and Wildlife Service (USFWS) on several occasions on behalf of the Federal Highways Administration (FHWA). TDOT completed an EBR on March 23, 2009 for the project roadway found that the following six federally-listed species have the potential to occur within the project area: the gray bat (Myotis grisescens), Indiana bat (Myotis sodalis), Braun’s rockcress (Arabis perstellata), Pyne’s ground plum (Astragalus bifullatus), leafy prairie clover (Dalea foliosa), and the Tennessee coneflower (Echinacea tennesseensis). Surveys of the site revealed no federally listed plants (Braun’s rockcress, Pyne’s ground plum, leafy prairie clover and Tennessee coneflower). Surveys of the site also found no suitable roosting habitat for the gray bat and subsequent coordination with the USFWS concluded that the project would not adversely affect the gray bat. According to correspondence with the USFWS, the other species are not believed to occur within the project area. Therefore, according to a D-List CE completed in 2012, “the potential endangered species concerns have been adequately addressed and the requirements of Section 7 have been fulfilled.” Updated correspondence with the USFWS, TWRA, and with TDEC resulted in a finding of “not likely to adversely affect” for the Indiana bat (Myotis sodalis) and northern long-eared bat (Myotis septentrionalis) (TDOT 2020a).

TDOT sent correspondence to USFWS on December 5, 2017 and March 9, 2018 to show results of mist net bat surveys for the project area conducted in June 2017, which included capture of three bats, including one gray bat. The correspondence also considered effects
associated with the offset basin near West Fork Boat Ramp. In a letter dated March 30, 2018, USFWS concurred with the TDOT determinations of “not likely to adversely affect” for the Indiana bat or NLEB based on these results. USFWS further concurred with the TDOT determination that best management practices, to include stringent erosion and sediment control measures, should be sufficient to minimize potential for harm to the gray bat. The letter concluded “we are unaware of any federally listed or proposed species that would be impacted by the project” (TDOT 2020). In an email dated February 27, 2019, USFWS concurred with TDOT’s assessment that gray bat are not likely to be present at newly discovered cave features near the project site and provided an updated project Section 7 clearance until April 1, 2023. According to the TDOT EBR dated August 30, 2019, USFWS and TWRA both concurred with TDOT’s finding of “Not Likely to Adversely Affect” for the Indiana bat and northern long-eared bat in regards to guardrail installation areas of Hurricane Creek and East Fork Creek Recreation Areas (TDOT 2020a). USFWS stated in scoping comments that results of the bat survey are valid until April 1, 2023, and will not require re-coordination provided active construction has begun by this date. It was USFWS stated position in scoping comments that all ESA requirements have been met by TDOT and we would not be opposed to a construction easement on J. Percy Priest Reservoir for the project.

Alternative 1 (No Action Alternative): No Action Alternative would result in no construction and therefore, have no effect on federally listed threatened or endangered species.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): Based on previous survey results and correspondence between TDOT and USFWS, USACE concurs that the project, including the offset basin and installation of guardrails at East Fork Boat Ramp Road and Hurricane Creek Boat Ramp Road would have no effect on Braun’s rockcress, Pyne’s ground plum, leafy prairie clover and Tennessee coneflower. Further, USACE concurs the project is “not likely to adversely affect” the Indiana bat, gray bat and northern long-eared bat.

State Listed Species
State Listed Flora: A TDOT EBR for this project, updated on July 5, 2019, an Environmental Commitment was identified to remove Glade Cleft Phlox specimens from the project location through consultation of the main roadway project with TDEC Division of Natural Areas (DNA). In April 2018, staff from TDOT and TDEC transplanted specimens of Glade Cleft Phlox to Couchville Cedar Glade State Natural Area (SNA). TDEC staff also went out in the fall of 2018 and transplanted more specimens from the project area to Couchville Cedar Glade SNA. Thus, this Environmental Commitment was completed. (TDOT 2018). In coordination with DNA regarding the offset basin in 2017, TDOT identified an environmental commitment to remove and store the top 12 inches of soil during construction of the SR-266 offset basin. Once all work within the offset basin is complete, the contractor will evenly distribute the stored topsoil back within the offset basin area in order to preserve the existing seedbank in the event that seed from rare species, including Stones River bladderpod (Paysonia stonensis) are present. In an email dated December 20, 2017 DNA stated via email that they “don’t anticipate any issues with the proposed offset basin project” (TDOT 2020a)
A search of DNA’s rare species database was performed on 08/20/2019 for the guardrail installation areas at Hurricane Creek and East Fork Creek Recreation Areas, indicating that 45 state or federally-recognized plant and/or animal species are present within a one-mile radius of the project area. A response from DNA was received on September 9, 2019 stating that the office “does not anticipate any impacts to rare, threatened, or endangered plant species from this project.” (TDOT 2020 a)

State Listed Fauna: TDOT also coordinated with TWRA regarding impacts to State Listed Species associated with the road corridor widening. TWRA listed the following species as five mile radius of the proposed project in an email dated October 27, 2017 (TDOT 2020a):

- Southern Cavefish (*Typhlichthys subterraneus*) observed 2007; Listed as State Deemed-In-Need-of-Management;
- Finescale (smallscale) darter (*Etheostoma microlepidum*); observed 1980; Listed as State Deemed-In-Need-of-Management;
- Tippecanoe darter (*Etheostoma tippecanoe*); observed 1968; Listed as State Deemed-in-Need-of-Management;
- Bedrock shiner (*Notropis rupestris*); observed 1976; Listed as State Deemed-In-Need-of-Management;
- Tennessee Cave Salamander (*Gyrinophilus palleucus*); observed 1970; Listed as State Threatened
- Brawley’s Fork Crayfish (*Cambarus williami*); observed 2016; Listed as State Endangered;
- Gray Myotis (*Myotis grisescens*); observed 2004; Listed as State Endangered;
- Meadow Jumping Mouse (*Zapus hudsonius*); observed 2005; Listed as State Deemed-In-Need-of-Management.

TWRA did not have specific species requirements, but did recommend strict adherence to BMP’s to prevent unnecessary sedimentation to the Stones River system. In regards to the offset basin, TWRA stated they had no comment in addition to the aforementioned BMP recommendations in an email dated March 5, 2018 (TDOT 2020 a).

Alternative 1 (No Action Alternative): No Action Alternative would result in no construction and therefore, have no effect on state listed threatened or endangered species.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): Based on previous survey results and correspondence between TDOT, TWRA and DNA, USACE concurs that the project, including the offset basin and installation of guardrails at East Fork Boat Ramp Road and Hurricane Creek Boat Ramp Road would not have an adverse effect on state listed species so long as contractors maintain their environmental commitment to store and re-spread the top 12 inches of soil during construction of the offset basin and adhere to construction BMPs to reduce sediment migration into streams.
3.6 Archeological and Historic Resources

TDOT Consultation on behalf of FHWA under Section 106

Section 106 of the National Historic Preservation Act (Section 106) requires Federal agencies to take into account the effects of their actions on historic properties and afford the Advisory Council of Historic Preservation the opportunity to comment on undertakings. TDOT performed consultation for various aspects of the project on several occasions on behalf of the lead federal agency, FHWA.

Road Corridor: An architectural/historical assessment dated May 6, 2008 was completed by TDOT for the project and submitted to the Tennessee State Historic Preservation Office (SHPO). In a letter dated May 19, 2008 from SHPO, it was determined that no resources eligible for or listed in the National Register of Historic Places (NRHP) would be affected by the proposed project at the time (TDOT 2020). A Phase I Cultural Resources Survey Report of the project area was completed by TDOT in December of 2009. The survey evaluated four sites for NRHP eligibility. One of the archaeological sites was determined to have been substantially disturbed by the construction of the existing alignment and the formation of J. Percy Priest Reservoir. Another site, Espey Cemetery was determined not eligible but a plan was created to avoid the cemetery. An archaeological monitoring plan was also created by TDOT for ground-disturbing work near Espey Cemetery. In a letter dated March 22, 2019, the SHPO concurred with the archaeological monitoring strategy. The two remaining sites evaluated in the report were too small and disturbed to be eligible for listing in the NRHP. Therefore, TDOT concluded that none of the archaeological sites were eligible for listing in the NRHP. In a letter dated September 17, 2019, the SHPO concurred with this finding. An updated historic/architectural survey report was completed by TDOT for the roadway on May 14, 2019 which concluded with a determination that “no architectural resources eligible for listing in the NRHP will be affected by this undertaking”. SHPO concurred with those findings in a letter dated May 17, 2019 (TDOT 2020 a).

Offset Basin: An assessment of archeological and historic resources under Section 106 was completed by TDOT on July 31, 2018 for the offset basin which concluded with a determination that there are no resources eligible for listing on the NRHP within the project area. SHPO concurred with the findings in a letter, dated August 13, 2018 (TDOT 2020 a).

TDOT conducted consultation with nine Tribal nations were consulted regarding the project on May 13, 2019. TDOT received responses from the Cherokee Nation and the Chickasaw Nation. Both tribes indicated that they would like to be notified if any human remains or artifacts were uncovered during excavation (TDOT 2020 a).

USACE Consultation under Section 106

Consultation with the Tennessee Historical Commission (THC) was initiated via correspondence on May 8, 2019, recommending a finding of “no adverse effects to historic properties”. The THC concurred with this determination in a letter dated May 24, 2019. An addendum letter dated July
1, 2020 was sent to THC to incorporate the installation of guardrails along Hurricane Creek Boat Ramp Road and the East Fork Boat Ramp Road into the project’s Area of Potential Effects. USACE concurred with TDOT’s previous assessment of the project footprint and recommended to the THC no additional field investigations and a finding of “no adverse effects to historic properties”. The THC concurred with the USACE determination in a letter dated July 1, 2020, thus fulfilling the USACE Section 106 obligations with the THC.

Consultation with 11 federally recognized Native American Tribes was initiated by USACE via correspondence dated May 13, 2019. Consulting Tribes include the; United Keetoowah Band of Cherokee Indians, Absentee-Shawnee Tribe of Indians of Oklahoma, Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma and the Shawnee Tribe, Kialegee Tribal Town, Alabama Coushatta Tribe of Texas, Poarch Band of Creek Indians, and the Muscogee (Creek) Nation, Oklahoma. The Shawnee and Muscogee (Creek) Nation expressed no cultural concerns of the proposed project undertaking but requested to be notified in the event of inadvertent discoveries during construction activities. USACE did not receive any comments from the remaining tribes. Per regulations of 36 CFR 800.4(d)(1)(i) no response from the tribes after the 30 day comment period, implies concurrence with USACE’s ‘no adverse effects to historic properties” determination.

Alternative 1 (No Action Alternative): No Action Alternative would have no effect to archeological or historical resources.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): After a review of correspondence between TDOT, SHPO and Tribal Nations, as well as the consultation conducted by USACE, the proposed action would have no adverse effects to historic properties eligible for listing in the NRHP.

### 3.7 Hazardous, Toxic, and Radioactive Waste

**Alternative 1 (No Action Alternative):** No Action Alternative would not disturb, create, or uncover HTRW material.

**Alternative 2 (Approval of the Proposed Improvements to State Route 266):** TDOT conducted a hazardous materials evaluation for the subject project in 2017. At that time, the ROW plans dated September 7, 2017 identified two tracts of interest, however, plan revisions released since then show that these tracts would no longer be affected by the project. Updated coordination with the TDOT Hazardous Materials Section dated August 7, 2019 states “no new known hazardous materials sites have been identified and no additional hazardous material studies are recommended at this time”. Two asbestos bridge environmental commitments, were developed and submitted to TDOT Design. Asbestos Containing Material (ACM) surveys have been conducted on Bridge No. 75E0072007, over Stones River and Bridge No. 75SR8400047, over I-840. The Stones River bridge has asbestos in the gray coating and sealant on the pipe insulation joints. No ACM was identified at the bridge over I-840. The ACM on Stones River bridge
would be removed and disposed of according to state law and would not result in an adverse
effect to the human environment.

3.8 Health and Safety

Based on the Transportation Planning Report prepared for this project in 2007 by TDOT, the
statewide average crash rate for a similar roadway is 1.7, while the actual rate for this section of
SR 266 is 2.57. The actual 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.
The critical rate defines statistically how the actual rate differs from the statewide rate. The
critical rate for this segment of roadway is 2.12. The ratio of the actual rate (2.57) to the critical
rate (2.12), known as the A/C ratio, indicates the severity of the accident problem. An A/C ratio
in excess of 1.0 suggests that a safety deficiency may exist. This segment of roadway has an
A/C ratio of 1.21, indicating that a safety deficiency may exist (TDOT 2020 a).

Alternative 1 (No Action Alternative): No Action Alternative would result in continued use of
SR-266 with the safety issues documented in the 2007 TDOT TPR. This would have an overall
negative effect on safety for travelers.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): The proposed
modifications would improve traffic flow and would be expected to provide a long-term
beneficial effect to motorist safety.

3.9 Recreation

Alternative 1 (No Action Alternative): No Action Alternative would have no effect to recreation.
The existing SR-266 corridor would remain the same, there would be no excavation for an offset
basin on USACE lands near the West Fork Recreation Area. Other recreation areas such as
Hurricane Creek Boat Ramp Road and the East Fork Boat Ramp would experience continued
ATV use with no addition of guardrails.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): One of the stated
purposes of the project was to provide increased parks and recreation opportunities through
interconnectivity to a greenway and bikeway system. On March 12, 2020 TDOT reached a
deminimus finding under Section 4(f) of U.S. Department of Transportation Act of 1966 (49
U.S.C. § 303), regarding the effects of the proposed road widening to SR-266 on Jefferson
Springs Recreation Area (USACE managed park) and Sharp Springs Natural Area (park on
USACE lands outgranted to City of Smyrna). USACE (J. Percy Priest Resource Manager’s
Office concurred with the TDOT deminimus findings on March 20, 2020. Summary of effects to
each recreation area is listed below.

Jefferson Springs Recreation Area: The project proposes the use of 0.63 acre for a temporary
construction easement to accommodate the haul road from the 65-acre Jefferson Springs
Recreation Area. The proposed project would require the temporary use of approximately 0.97
percent of the total park acreage. The haul road is for use in the replacement of the SR-266
bridge over Stones River and is proposed to be in use for the duration of the project. No structures or designated trails will be impacted by the project. Due to the location and temporary nature of the use, TDOT does not anticipate that the primary features of the recreation area including the picnic shelter and boat ramp will be compromised by the project.

Sharp Springs Natural Area: The project as currently proposed would require the acquisition of approximately 0.75 acre for right-of-way, approximately 0.1 acre for a permanent drainage easement, 0.93 acre of slope easements and approximately 0.43 acre of construction easements from the 357.35-acre Sharp Springs Natural Area. The widening would require the use of approximately 0.62 percent of the total park acreage. Minor impacts would occur near the park entrance where drainage improvements are required. The proposed project would not impact the hiking trails, greenway trailheads, Frisbee golf course, fishing piers, or bird watching areas and would not have adversely affected the qualities, activities, features, or attributes of the recreation property (TDOT 2020).

East Fork Boat Ramp Road (USACE launching area): TDOT would install 481 linear feet of guardrail to prevent disturbance associated with ATV usage.

Hurricane Creek Boat Ramp (USACE launching area): TDOT would install 1,045 linear feet of guardrail to prevent disturbance associated with ATV usage.

West Fork Boat Ramp Area: Excavation of an offset basin could attract waterfowl in winter months and could create hunting opportunities for a limited number of local hunters.

Based on the stated potential of the project to provide increased parks and recreation opportunities through interconnectivity to a greenway and bikeway system, the deminimus findings to Jefferson Springs Recreation Area and Sharp Springs Natural Area, the installation of guardrails at East Fork Boat Ramp and Hurricane Creek Boat Ramp to reduce impacts to USACE lands associated with ATV usage, the project would have negligible effects to recreation on J. Percy Priest Lake. Temporary impacts to navigation on J. Percy Priest Lake associated with bridge replacement are discussed in Section 3.13.

3.10 Scenic Resources

Alternative 1 (No Action Alternative): No Action Alternative would have no effect to scenic resources. The existing SR-266 corridor would remain the same, there would be no excavation for an offset basin on USACE lands near the West Fork Recreation Area.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): The project would have minor negative effects to scenic resources in the project area, both temporary and long-term, when considering the initial construction (temporary) and clearing of a wooded corridor to add three additional lanes of traffic. Creation of an offset basin to replace shrub/scrub upland areas with a water filled depression could be seen as negative or positive depending on the preferences of individual recreational users.
3.11 Socioeconomics

TDOT conducted an environmental justice (EJ) analysis on September 23, 2019 based on the U.S. Census Bureau 2013-2017 American Community Survey (ACS) 5-Year Estimates. The project area encompasses three census block group(s): Census Tract 404.03, Block Group 3; Census Tract 405.01, Block Group 1; Census Tract 410, Block Group 4 (TDOT 2020). Table 3 in Section 5.10 (Environmental Justice) displays the population data for these block groups comparing their percentages of low-income population to that of the entire county. The block groups showed lower populations of low-income populations (5.5%, 1.2% and 3.9%) when compared to Rutherford County’s overall population (11.8%) (TDOT 2020 a)

Alternative 1 (No Action Alternative): Since one of the stated goals of the project was to enhance future economic development efforts in and around the study area, the No Action Alternative could have a negative effect to socioeconomics through hampering of economic development by continuation of traffic congestion.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): This alternative would be expected to result in enhanced economic development opportunities along the corridor by improving traffic flow and allowing more free ingress and egress to local commercial developments.

3.12 Noise

Currently, noise levels experienced within and around the project area are from everyday traffic along State Route 266 and neighboring roads.

Alternative 1 (No Action Alternative): No Action Alternative would have no effect on noise levels. Noise levels associated with normal, congested traffic would remain the same.

Alternative 2 (Approval of the Proposed Improvements to State Route 266): A noise evaluation was conducted by TDOT in March, 2012. The study identified traffic noise impacts at eight residences. It was determined that noise barriers could not be constructed for these residences because they were isolated from each other by significant distances and local cross streets and barriers would limit access from the impacted residences and adjacent properties. Therefore, noise barriers were determined to be not feasible and noise abatement was not proposed for the project. (TDOT 2020)

Correspondence from the TDOT Air and Noise Section dated September 8, 2019 concluded that “the project would impact eight residences but that noise barriers were either not feasible or not reasonable in accordance with TDOT’s noise policy. A review of the current plans indicates that the only revision that would affect noise is the addition of a southbound truck acceleration/refuge lane on SR 266 at the Hickory Grove Road intersection. However, there are no noise-sensitive land uses in this area. TDOT [sic] has updated the traffic projections for the project and the current design year 2034 traffic projections are 12% to 30% lower than those the design year
2031 traffic projections used for the noise study. Therefore, the conclusions regarding noise impacts are conservatively high and the conclusion that noise abatement is not feasible or not reasonable remains valid.” (TDOT 2020A)

Based on the information collected by TDOT, noise levels associated with the project would be expected to have short-term effects associated with construction activities and minor, long term adverse effects to local residents.

### 3.13 Navigation

J. Percy Priest Lake was listed as a navigable water in Nashville District Public Notice #86-23, dated May 8, 1986. The listing was based on a study in 1986 by the USACE Navigation Branch. None of the other waters (streams, wetlands, etc.) proposed to be impacted are listed as navigable waters.

**Alternative 1 – (No Action Alternative):** The No Action Alternative would not affect navigation.

**Alternative 2 (Approval of the Proposed Improvements to State Route 266):** Approval of the proposed action would require replacement of the existing bridge over J. Percy Priest (old Stones River Channel) to replace the existing two-lane bridge. There is no commercial navigation above the SR-266 bridge but the channel does accommodate recreational traffic since the channel is approximately 350’ wide and 38’ deep at the existing bridge site (Navionics, 2020). Based on correspondence with TDOT, there will likely be periods during bridge construction (e.g. when the contractor is setting beams or engaged in other overhead heavy construction) that recreational boat traffic would be prohibited. However, depending on the design of the bridge, it may be possible to keep part of the navigation channel open while construction is being performed on an adjacent section of the bridge. It is possible that these navigation restrictions would be pushed to winter months when recreational traffic is lower. TDOT would also be required to provide safety features such as lighting, navigation buoys and signage if a portion of the channel or the entire channel was blocked to ensure boater safety. Although recreational navigation could be temporarily impacted during construction of the bridge, the effects would be expected to be minor and temporary.

In summary the channel will not be closed for the entire project. It will only be closed when beams or other overhead heavy construction are been done.

### 4 CUMULATIVE IMPACTS

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the (proposed) action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions (40 CFR 1508.7).” This cumulative effects analysis will focus on loss of aquatic and terrestrial resources as those are the aspects of the human environment most affected by the proposed actions. Geographical boundary considered for this discussion of cumulative impacts is the J. Percy Priest Lake.
Percy Priest Lake HUC-8 watershed (05130203). The temporal boundary established spans from J. Percy Priest Lake impoundment (1968) to twenty (20) years’ future projection (2040).
4.1 Past Actions
As previously discussed, the majority of the land cover in the Stones River watershed – and the Central Basin of Tennessee in general – began to be converted to agricultural uses over 200 years ago. Within the last 30 years, the land use has changed rapidly in the central and northwestern portions of the watershed as the cities of LaVergne, Smyrna, and Murfreesboro and adjacent unincorporated areas of Rutherford County have grown and transitioned to suburban communities in the greater Nashville Metropolitan Area (TNC 2011). National Land Cover Data from 2011 (Figure 7) shows the extent of development and pasture grazing in the watershed as opposed to natural vegetation. Based on aerial imagery, the USACE fee land surrounding J. Percy Priest has a higher percentage of natural vegetation than the surrounding developed areas.

4.2 Present Actions
There are no actions within USACE property boundaries on J. Percy Priest Lake currently awaiting approval for a Real Estate lease, easement or license with the exception of SR-266 widening.

4.3 Reasonably Foreseeable Future Actions
No actions are currently pending USACE approval for Real Estate actions on J. Percy Priest Lake. However, Elm Hill Marina has indicated they will attempt to expand the land-based on their existing lease with facilities that would result in approximately three acres of mid-successional forest comprised of deciduous species and Eastern red cedar similar to the forested area that would be removed through the corridor of SR-266 widening. Table 3 shows a list of projects proposed by TDOT over the next several years that would occur in the Stones River watershed. It should be noted that none of these projects would encroach on USACE lands.

<table>
<thead>
<tr>
<th>TDOT Project</th>
<th>Estimated Construction Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widening of SR-99 (New Salem Highway) from two lanes to five lanes over a seven mile reach from Veterans Parkway (SW Loop) to Hwy. 96 (Old Fort Parkway) in Murfreesboro, TN.</td>
<td>2021-2022</td>
</tr>
<tr>
<td>Widening of SR-96 from two lanes to five lanes over 18.7 miles from east of Arno Road in Williamson County to Veterans Parkway in Rutherford County.</td>
<td>Unclear; Divided into Four Phases</td>
</tr>
<tr>
<td>Widening of the Interstate 24 /Hickory Hollow Parkway interchange (Exit 60) in Davidson County, including modification and reconstruction of existing ramps and connector roads.</td>
<td>Currently-2021</td>
</tr>
</tbody>
</table>
4.4 Combined Cumulative Effects

Although past industrial, commercial and residential development within the Stones River watershed has reduced the amount of streams, wetlands and natural terrestrial vegetation, the effects of the proposed action to these resources, when combined with the reasonably foreseeable future actions and would be relatively minor within the Stones River watershed. Mitigation measures, including adherence to BMP’s, limiting ATV access and destruction to forested resources at Hurricane Creek Boat Ramp and East Fork Boat Ramp, creation of an open water resource (offset basin) and planting in and around the offset basin would help mitigate these impacts.

5 ENVIRONMENTAL COMPLIANCE

5.1 Executive Order 11990-Wetlands

As discussed in Section 3.3.1, the proposed road improvements would result in the permanent loss of 1.017 acres of wetlands. However, the wetland impacts would be mitigated through the purchase of 2.03 wetland credits from the Coffee County Wetland Mitigation Bank (2:1 mitigation ratio). TDOT would also create a depressional basin approximately 25 acres in size near the West Fork Boat Ramp to offset fill below the flood storage control pool. Although it would be primarily inundated with water it would serve some wetland functions, such as habitat for aquatic and amphibious fauna species.

5.2 Farmland Policy Protection Act

No prime and unique farmlands are located in the proposed project area.

5.3 Executive Order 11988-Floodplain Management

The proposed project is located within the 100-year floodplain and falls under the purview of Executive Order 11988, Floodplain Management. This executive order requires federal agencies to evaluate and minimize to the extent possible, impacts and modifications to the floodplain. Bridge and highway ramp construction would inherently occur within the floodplain; therefore, there is no alternative to working in the floodplain. None of the alternatives considered in detail would increase the risk of a” base flood”. TDOT has proposed to place 118,217 cy of material would at or below elevation 510’ msl on USACE property, which is the top of the flood control pool for J. Percy Priest Lake. To offset this fill, TDOT has identified an excavation area to remove 165,516 cy of material by constructing a depressional wetland area near the West Fork Boat Ramp. Thus, the project would result in a net cut (gain) of 47,299 cy below the flood control pool elevation of 510’ msl.

5.4 Department of the Army Permit Authorization (Section 404 CWA and Section 10 Rivers and Harbors Act)

On May 5, 2020 TDOT submitted an updated permit application with USACE Regulatory Division for verification that the project met NWP 23 (Approved (FHWA or TDOT) Categorical Exclusions). The permit application is still pending at this time.
5.5 **TDEC Individual WQC (Section 401 Clean Water Act)**

An updated permit application for Individual WQC was submitted to TDEC on May 12, 2020 (Section 401 CWA). This application is still pending.

5.6 **NPDES (Section 402 CWA)**

Construction projects disturbing over one acre of land require a NPDES Stormwater Construction permit. Therefore, a permit is required for Alternative 2. Coordination with TDEC would occur and the permit would be obtained prior to construction. Construction BMP’s would be followed to minimize environmental impacts. Examples of general construction BMP’s are listed below.

- Minimize Disturbance – minimize disturbed areas within the project area to those being actively worked.

- Sediment Control Devices – sediment control devices such as silt fences, fiber rolls, straw bale barriers, geotextile filter fabric, and rock filters would be used as temporary erosion control barriers to capture stormwater runoff from project area.

- Inspection and Maintenance - inspect and verify activity-based BMPs are in place prior to commencement of associated activities and regular inspect erosion control devices to assure they are functioning properly.

5.7 **Endangered Species Act**

TDOT has consulted with USFWS numerous times throughout the past decade as documented in Section 3.5.1. USFWS has concurred with TDOT determinations that the project, including offset basin and guardrail installation is “not likely to adversely affect” the Indiana bat, gray bat and northern long-eared bat.

5.8 **Fish and Wildlife Coordination Act**

USACE is required to coordinate with the USFWS and TWRA under the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). TDOT consulted with USFWS and TWRA numerous times throughout the decade regarding various environmental aspects of the proposed work as documented in Section 3.5. Coordination with USFWS and TWRA continued through with advertisement of a scoping letter on June 29, 2020. USFWS responded with comments on July 10, 2020 as discussed in Section 6.1.3. A copy of the scoping letter is included with this document as Appendix B.

5.9 **National Historic Preservation Act**

Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their actions on historic properties and afford the Advisory Council of Historic Preservation the opportunity to comment on undertakings. Consultation with the
Tennessee Historical Commission (THC) was initiated via correspondence on May 8, 2019, recommending a finding of ‘no adverse effects to historic properties”. The THC concurred with this determination in a letter dated May 24, 2019. An addendum letter dated July 1, 2020 was sent to THC to incorporate the installation of guardrails along Hurricane Creek Boat Ramp Road and the East Fork Boat Ramp Road into the project’s Area of Potential Effects. USACE concurred with TDOT’s previous assessment of the project footprint and recommended to the THC no additional field investigations and a finding of “no adverse effects to historic properties”. The THC concurred with the USACE determination in a letter dated July 1, 2020, thus fulfilling the USACE Section 106 obligations with the THC.

Consultation with 11 federally recognized Native American Tribes described in Section 3.6.2 was initiated via correspondence dated May 13, 2019. Per regulations of 36 CFR 800.4(d)(1)(i) no response from the tribes after the 30 day comment period, implies concurrence with USACE’s ‘no adverse effects to historic properties” determination. Follow-up consultation letters were sent to Native American Tribes on July 1, 2020 to incorporate addition of the guardrails at East Fork Boat Ramp and Hurricane Creek Boat Ramp.

This project also complies with cultural resource laws such as Section 110 of the National Historic Preservation Act, the Archaeological Resourced Protection Act, Native American Graves and Repatriation Act, American Indian Religious Freedom Act, and Executive Orders 13006.

5.10 Executive Order 12898 – Environmental Justice

The 1994 Executive Order 12898: “Federal Actions to address Environmental Justice in Minority Populations and Low Income Populations” was signed by President Clinton on February 11, 1994, to focus Federal attention on the environmental and human health conditions of minority and low-income populations, with the goal of achieving environmental protection for all communities. As defined by the “Draft Guidance for Addressing Environmental Justice under NEPA” (CEQ, 1996), a minority population exists where the percentage of minorities in an affected area either exceeds 50% or is significantly greater than in the general population.

TDOT conducted an environmental justice (EJ) analysis on September 23, 2019 based on the U.S. Census Bureau 2013-2017 American Community Survey (ACS) 5-Year Estimates. The project area encompasses three census block group(s): Census Tract 404.03, Block Group 3; Census Tract 405.01, Block Group 1; Census Tract 410, Block Group 4. Table 4 displays the population data for these block groups comparing their respective minority population and low-income population percentages to that of the entire county.
Table 4. Minority and Low-Income Population Considerations in Vicinity of the Project Site (TDOT 2020)

<table>
<thead>
<tr>
<th>Minority Populations</th>
<th>Census Tract (CT)/Block Group (BG)</th>
<th>CT404.03 BG3</th>
<th>CT405.01 BG1</th>
<th>CT410 BG4</th>
<th>Rutherford County</th>
</tr>
</thead>
<tbody>
<tr>
<td>%Minority / Non-White</td>
<td></td>
<td>15.9%</td>
<td>13.7%</td>
<td>20.5%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Exceeds County Average by 10% or More</td>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>BG Pop. Avg. &gt;50%</td>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Meet EJ Criteria?</td>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low-Income Populations</th>
<th>Census Tract (CT)/Block Group (BG)</th>
<th>CT404.03 BG3</th>
<th>CT405.01 BG1</th>
<th>CT410 BG4</th>
<th>Rutherford County</th>
</tr>
</thead>
<tbody>
<tr>
<td>%Low-Income / Below Poverty Line</td>
<td></td>
<td>5.5%</td>
<td>1.2%</td>
<td>3.9%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Exceeds County Average by 10% or More</td>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>BG Pop. Avg. &gt;50%</td>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Meet EJ Criteria?</td>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

Minority Populations: The TDOT analysis indicates the subject block groups’ (Census Tract 404.03, Block Group 3; Census Tract 405.01, Block Group 1; and Census Tract 410, Block Group 4) minority population averages do not exceed the county average by 10 percent or more, nor are they greater than 50 percent of the block groups’ total populations. Block groups that satisfy either of these criteria are considered to contain EJ minority populations (TDOT 2020).

Low-income Populations: Based on information from TDOT, Census Tract 404.03, Block Group 3; Census Tract 405.01, Block Group 1; and Census Tract 410, Block Group 4's low-income population average do not exceed the county average by 10 percent or more. Furthermore, the block group's low-income population average equals considerably less than 50 percent of its total population. Block groups that satisfy either of these criteria are considered to contain EJ populations for poverty level (TDOT 2020).

Summary: Based on the EJ analysis provided by TDOT, Census Tract 404.03, Block Group 3; Census Tract 405.01, Block Group 1; and Census Tract 410, Block Group 4 do not satisfy any of the EJ criteria reviewed for this analysis; therefore, the block groups do not contain minority or low-income populations that would qualify as EJ concerns for the proposed project. All populations included within the proposed project area will benefit equally from the proposed improvements (TDOT 2020). Therefore, the project complies with Executive Order 12898
5.11 Clean Air Act

Rutherford County, Tennessee, nor any surrounding areas are listed on the EPA “Summary Non-Attainment Area Population Exposure Report” (NAAQS, 2020). Therefore, based on the best available data, neither of the alternatives described in this document would impact long-term ambient air quality standards.

5.12 Comprehensive Environmental Response, Compensation, and Liability Act

No Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites were identified within the proposed project boundaries.

5.13 Resource Conservation and Recovery Act

All alternatives would be in compliance with the Resource Conservation and Recovery Act (RCRA).

6 PUBLIC AND AGENCY COORDINATION

TDOT Conceptual and Environmental Office staff members conducted a public meeting on May 1, 2008 to provide information on the proposed improvements to SR-266. TDOT presented information on the project, answered public questions, and invited attendees to view functional layouts and aerial photographs of the project. As a result of this meeting, it was determined that more public outreach was needed. Therefore, TDOT held a public design meeting on April 19, 2012 to provide the public an opportunity to comment on the project as it moved into the ROW phase. TDOT has not held a public meeting on the project since that time (TDOT 2020). In addition to TDOT public notifications, TDEC issued a public notice to advertise impacts to waters of the State associated with the project on June 2, 2020 as part of the Individual WQC review process.

6.1 Scoping Responses

The USACE issued a scoping letter regarding the proposed marine expansion project was issued to interested members of the public and agencies, including state and Federal governments with jurisdiction by law or special expertise through a combination of email, mailings, media outlets, local U.S. Post Office, and other public sources on June 29, 2020. The scoping letter and comments are included in entirety in Appendix B. All scoping issues relative to the project have been addressed within the EA.

6.1.1 Public Citizens or Local Agency Comments

Smyrna Public Works Department (PWD): Submitted comments via email on July 3, 2020 requesting consideration of an offset basin as shown in Figure 8 as Alternate Site. PWD stated that the Alternate Site is owned by USACE, is prone to flood and after flooding, stays inundated for months at times. PWD questioned whether excavating it further would hold more flood storage.
USACE Response: As described in Section 2.2, there were six sites considered for placement of an offset basin by TDOT, however, the site described by PWD was not one of them. A USACE Biologist briefly visited the suggested site on July 9, 2020. The site is covered in mid-successional forest split between two communities. Higher, more well drained areas were dominated by Eastern red cedar and sparse deciduous species such as shingle oak, tulip poplar and sugar maple with dense ground cover of upland species such as Chinese privet, Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), sugar maple seedlings, etc. A substantial part of the site was lower in elevation, dominated in the tree canopy by *Celtis* sp. (estimated to be primarily *laevigata*) and had very sparse vegetation on the ground, likely due to frequent and prolonged inundation. Herbaceous species that were present were facultative wetland species (more likely to occur in wetlands than uplands) such as greater bladder sedge (*Carex intumescens*) and Small-spike false nettle (*Boehemia cylindrica*). Soils in the lower, Celtis portion of the site showed dark manganese concentration at approximately 10% and appeared to meet wetland soil indicator F8 (Redox Depressions) (USDA 2010). Although the entire site was not examined and a formal delineation of wetlands was not performed, it is very likely that the Alternate Site contains wetlands in lower portions of the site given the description of hydrologic inundation described by PWD and the vegetation present during the visit. A hydrologic study has not been performed for that area but it is unclear how much net gain for flood storage could be gained from excavating the site since it remains inundated for long periods of time under current conditions as J. Percy Priest Lake rises during rain events. It is possible that excavating the site further would only result in a deeper area of normal inundation rather than providing additional offset. Given the lack of information regarding site effectiveness when compared to OB-1 and the additional environmental impacts that would occur from use of the Alternate Site, including clearing of forest and the potential for additional stream/wetland impacts, this site is not carried forward for further consideration as an offset basin.
Figure 8. Alternate Offset Basin Site Discussed by Smyrna Public Works Department

6.1.2 State Agency Comments
TDEC Division of Solid Waste Management (DSW): DSW issued comments dated July 13, 2020 stating they had performed a review of the project using the EPA’s EnviroFacts and Enforcement Compliance History Online (ECHO) databases, there was no evidence of any significant permitted/compliance/enforcement solid or hazardous waste or toxic substances related issues within the site locations despite the presence of multiple industrial facilities. However upon review of WasteBin, of minor note are two incidents in 2019 in close proximity to SR-266, involving chemical spills associated with traffic accidents. DSWM strongly recommended that the project’s plans reflect that any wastes associated with the planned improvements be handled in accordance with the Solid and Hazardous Waste Rules and Regulations of the state. This includes all materials that would be classified as solid and/or hazardous wastes per these chapters.
USACE Response: Project comments were sent to TDOT on July 16, 2020 for their information. Potential HTRW effects associated with the project are discussed in Section 3.8.

TDEC Division of Water Resources (DWR): DWR issued a letter dated June 30, 2020 stating the project was currently under review for an Individual WQC (See Section 5.5) and that the work would require coverage under a Stormwater Construction permit (See Section 5.6). DWR also indicated that the City of Smyrna water intake is near one of the bridges proposed for replacement and precautions are necessary to avoid impacting the intake.

USACE Response: DWR permit requirements are outlined in Sections 5.5 and 5.6 of this document. Adherence to BMPs should avoid impacts to J. Percy Priest Lake and the water intake mentioned in DWR comments.

Tennessee Historical Commission (THC): After reviewing USACE correspondence describing the project on July 1, 2020, THC concluded that there are no National Register of Historic Places listed or eligible properties affected by this undertaking. THC stated they had no objections to the undertaking.

6.1.3 Federal Agency Comments

USFWS: The USFWS issued comments via email dated July 10, 2020 summarizing previous TDOT consultation described in Section 3.5.1 and acknowledged USFWS concurrences of “not likely to adversely affect” for Indiana bat and northern long-eared bat in a letter to TDOT dated October 20, 2017. USFWS comments further acknowledged concurrence with TDOT’s assessment that gray bats are not likely to utilize any of the features and provided an updated project Section 7 clearance in an email dated February 27, 2019. USFWS stated in comments that results of the bat survey are valid until April 1, 2023, and will not require re-coordination provided active construction has begun by this date. It was USFWS stated position in scoping comments that all ESA requirements have been met by TDOT and we would not be opposed to a construction easement on J. Percy Priest Reservoir for the project.

USACE Response: Comments noted. Compliance with Section 7 of the Endangered Species Act is discussed in Section 3.5.1 and 5.7 of this document. Compliance with the Fish and Wildlife Coordination Act is discussed in Section 5.8 of this document.

6.2 Notice of Availability (NOA)

This EA is being made available to federal and state natural resources agencies, other interested agencies, and the general public for a fifteen (15) day review period through an NOA notice. The EA would also be posted to USACE webpage for public review at http://www.lrn.usace.army.mil/Media/Public-Notices/Category/10561/project-planning-branch/. All comments received during the fifteen (15) day comment period would be considered in the EA.
CONCLUSION

Two alternatives were evaluated in detail throughout this EA: The No Action Alternative (Alternative 1) and Approval of the Proposed Improvements to State Route 266 (Alternative 2).

Under Alternative 1 no road construction project or associated environmental impacts would occur along the proposed construction corridor. However, no improvements would be made to the existing highway deficiencies and the level of service to public travelers.

Alternative 2 would allow the proposed widening of SR-266. The road construction project would have minor, temporary detrimental impacts to water quality, noise and navigation while the minor detrimental effects to aquatic resources, terrestrial resources and scenic resources would be long-term in nature. Any minor, temporary increases to turbidity to local streams and J. Percy Priest reservoir during construction, would be minimized through the sequential approach to road construction and implementation of BMPs. Localized impacts to aquatic resources near Old Hickory Lake due to the permanent loss of approximately 1.017 acres of wetlands would be mitigated through the purchase of 2.03 wetland credits from the Coffee County Wetland Mitigation Bank (2:1 mitigation ratio). TDOT would also create a basin approximately 25 acres in size near the West Fork Boat Ramp to offset fill below the flood storage control pool. The permanent loss of approximately 1,182 linear feet of stream would be mitigated by purchase of 859 credits from Neely’s Bend Mitigation Bank. Impacts to terrestrial resources on Corps property, such as clearing of trees would be partially mitigated by tree planting in the flood storage offset basin and construction of guardrails East Fork Boat Ramp and Hurricane Creek Boat Ramp to limit ATV use. The proposed project would allow for efficient traffic flow along the existing highway corridor and provide long-term benefits to the health/safety and socioeconomics for local citizens. Temporary direct, indirect and cumulative impacts to the Old Hickory Lake watershed associated with Alternative 2 would be not be significant. All work would be performed in accordance with federal, state and local regulations.
8 REFERENCES


Tennessee Department of Transportation, 2020 c. Additional information sent by TDOT personnel via email. Received July 8, 2020.


9 LIST OF PREPARERS

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