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May 3, 2022

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Subject: Reevaluation of State Route 1/Summer Avenue from east of Macon Road (Interstate 40) to 0.1 mile north of Elmore Road, Shelby County, Tennessee, PIN 101609.00

Dear Mr. Fottrell:

This reevaluation of the environmental, social, and economic effects has been conducted in accordance with Title 23 of the Code of Federal Regulations (CFR) 771.129. This reevaluation is for the entire State Route 1 (SR-1)/Summer Avenue, from east of Macon Road to 0.1 mile north of Elmore Road, with a focus on the section of SR-1 from Interstate 40 (I-40) (east of Macon Road) to 0.1 mile north of Sycamore View Road (PIN 101609.01). This section is now being advanced to the construction phase. For this section, the proposed project will widen SR-1/Summer Avenue from a four-lane highway to a seven-lane highway.

The total project length is approximately 3.4 miles; the length of the project segment from 0.1 mile north of I-40 to 0.1 mile north of Sycamore View Road is approximately 1.7 miles. **Figure 1** shows the project location.

The project is listed in the Memphis Urban Area Metropolitan Planning Organization (MPO) Transportation Improvement Program (TIP) for Fiscal Years 2020-2023. The TIP page is included in **Appendix A**. Federal and State project numbers for various stages of project development are listed in **Table 1**.

Figure 1: Project Location Map

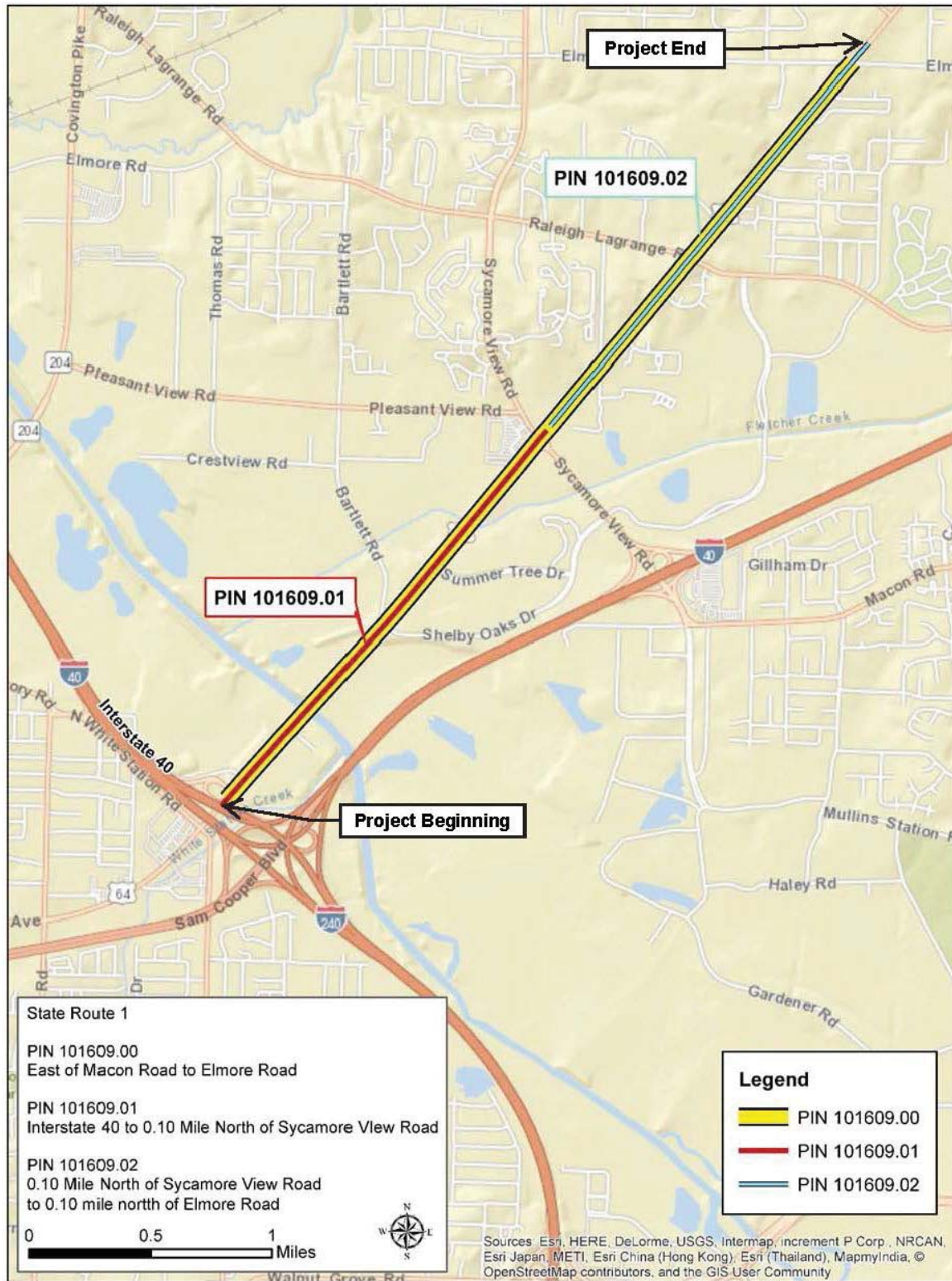


Table 1 Project Phases and Corresponding Project Numbers

Phase	Federal Aid	State Project Number
Preliminary Engineering	N/A	79011-1245-04
Right-of-Way	STP-1 (93)	79011-2247-14
Construction	NH-1 (424)	79011-3272-14

The overall project is listed in the Memphis MPO's *Livability 2050: Regional Transportation Plan (RTP)*, adopted September 12, 2019. The project from I-40 to 0.1 mile north of Sycamore View Road is identified as RTP ID# 42 and TIP ID# TN-NHPP-2020-21 in horizon year 2021-2025. The project from 0.1 mile north of Sycamore View Road to 0.1 mile north of Elmore Road is identified as RTP ID# 77 and TIP ID# RN-NHPP-2020-02 for horizon year 2026-2030. As part of the *Livability 2050 RTP* Land Use – Mobility and Livability Corridor Assessment, Summer Avenue was identified as a Livability Corridor with an emphasis on multimodal enhancements to improve access to community resources and advance regional quality of life goals.

PROJECT HISTORY

The Tennessee Department of Transportation (TDOT) first identified the need to widen SR-1/Summer Avenue from I-40 to Elmore Road as part of the *Accelerated Primary Highway Plan* accompanying the gasoline tax increase passed by the 94th General Assembly in 1986.

A Finding of No Significant Impact (FONSI) was approved by the Federal Highway Administration (FHWA) on May 10, 1999, based on the Environmental Assessment (EA) that was approved on March 9, 1998. The project file contains a Right-of-Way (ROW) Reevaluation for I-40 (near Macon Road) to Elmore Road; the memorandum stated “FONSI was signed on 10 May 1999, so major action is within 6 months [sic] time frame and no reevaluation is needed at this time.” (The memorandum was erroneously dated June 8, 1996, rather than June 8, 1999.)

Since the issuance of the FONSI, TDOT identified this project as a candidate for the Expedited Project Delivery (EPD) program, aimed at identifying and recommending improvement options that are feasible and cost effective and provide improved safety and mobility. In 2014, TDOT placed the project on hold to conduct an EPD review. In late 2016, the EPD review was completed for the project. For construction purposes the project was separated into two sections: PIN 101609.01 (from I-40 to 0.1 mile north of Sycamore View Road) and PIN 101609.02 (from 0.1 mile north of Sycamore View Road to 0.1 mile north of Elmore Road). The EPD review addressed both sections of the project. The approved EPD recommendation was to proceed with the original proposed seven-lane curb and gutter typical section. A copy of the EPD determination memorandum, dated December 7, 2016, is in Appendix C of the 2021 Reevaluation in **Appendix B**.

A reevaluation of the EA/FONSI with a focus on the section of SR-1 from I-40 (east of Macon Road) to 0.1 mile north of Sycamore View Road (PIN 101609.01) was approved by FHWA July 21, 2021. The 2021 Reevaluation was for the same section as the focus of this current reevaluation.

Copies of the EA, FONSI, ROW Reevaluation, and 2021 Reevaluation are in **Appendix B**.

Since approval of the 2021 Reevaluation, updated Construction Field Review Plans and Utility/Rainbow Plans have become available. As a result, this reevaluation is being prepared to evaluate any changes in impacts since the 2021 Reevaluation was approved. This reevaluation is based on updated Construction Field Review Plans, dated November 10, 2021 and Utility /Rainbow Plans (approved by TDOT August 2021). Both plan sets are in **Appendix C**.

PURPOSE AND NEED

The EA stated that the project was intended to increase the capacity of existing SR-1/ Summer Avenue and reduce congestion for current and future local and regional travelers passing into and through the area, and to address the

seismic deficiencies of the existing bridge spans over the Wolf River and Fletcher Creek. The purpose and need stated in the EA remain valid.

PROJECT DESCRIPTION

The project involves improvements to SR-1/Summer Avenue from I-40 (east of Macon Road) to 0.1 mile north of Elmore Road in Shelby County, a distance of approximately 3.4 miles. The focus of this reevaluation is the section from SR-1/Summer Avenue from I-40 (east of Macon Road) to 0.1 mile north of Sycamore View Road (PIN 101609.01), a distance of 1.7 miles. The project involves widening existing four-lane SR-1/Summer Avenue to six travel lanes with a continuous center turn lane, bike lanes and sidewalks.

Typical Sections Evaluated in the EA/FONSI

SR-1 (Summer Avenue) Typical Section

The Selected Alternative in the EA/FONSI proposed reconstructing SR-1/Summer Avenue from four lanes to six lanes with a continuous center turn lane. The proposed typical section was comprised of three 12-foot traffic lanes in each direction, a 12-foot center-turn lane, and 4-foot bike lanes in each direction, all within 116 feet of right-of-way (ROW).

Wolf River Bridge Typical Section

The EA/FONSI did not specify a typical section for the Wolf River bridge. It did state that the existing bridge would be replaced with a seismic replacement.

Fletcher Creek Bridge Typical Section

The EA/FONSI did not specify a typical section for the Wolf River bridge. It did state that the existing bridge would be replaced with a seismic replacement.

Sycamore View Road Typical Section

The Selected Alternative in the EA/FONSI proposed two left-turn lanes in both directions to permit increased north and south turning movements on Sycamore View Road. The turn lanes would transition symmetrically both north and south of the intersection with SR-1/Summer Avenue. The improvements to Sycamore View Road were proposed within a maximum ROW width of 128 feet.

Typical Sections Evaluated in the 2021 Reevaluation

SR-1(Summer Avenue) Typical Section

The typical section for SR-1/Summer Avenue evaluated in the 2021 Reevaluation, which was based on the August 30, 2017 Construction Field Review Plans, consisted of three 12-foot travel lanes in each direction, a 12-foot center turn lane, a 4-foot bike lane in each direction, curb and gutter, and 5.5-foot sidewalks in each direction. The improvements were within a ROW of 114 feet, which was slightly less than the ROW width indicated in the EA/FONSI.

While the FONSI did not specify the number of turn lanes at key intersections, the August 30, 2017 Construction Field Review Plans included dual left turn lanes at four major intersections with SR-1/Summer Avenue:

- White Station Road,
- Frontage Road (north of I-40),
- Bartlett Road, and
- Sycamore View Road.

Approaching those intersections, the mainline center turn lane transitions from a single turn lane to two turn lanes in each direction; the ROW varies in these locations to allow for widening and tapering of the center lanes.

Wolf River Bridge Typical Section

The typical section for the Wolf River bridge in the 2021 Reevaluation was based on preliminary bridge plans that were developed in June 2020. According to those plans, the existing bridge and approaches would be removed and replaced with a new bridge in the same location. The new bridge would be approximately 709 feet in length and approximately 110 feet in width, consisting of seven spans, and designed to meet current seismic standards. The new bridge would feature three 11-foot travel lanes in each direction and an 11-foot center turn lane. The northwest side of the bridge would contain a 4-foot bike lane, a 5.5-foot rail and shoulder, a 10-foot multi-use path, and a 3.5-foot safety rail on the outside. The south side of the bridge would incorporate a 4-foot bike lane, a 2-foot curb and gutter, a 6-foot sidewalk, and a 3.5-foot-tall concrete parapet with rail post. The multi-use path on the northwest side of the road would be barricade-separated from the travel lanes and bike path.

Fletcher Creek Bridge Typical Section

The typical section for the Fletcher Creek bridge in the 2021 Reevaluation was based on preliminary bridge plans that were developed in June 2020. According to those plans, the existing bridge and approaches would be removed and replaced with a new bridge in the same location. The new bridge would be approximately 204 feet in length and approximately 110 feet in width, consisting of four spans, and designed to meet current seismic standards. The new bridge would feature three 12-foot travel lanes in each direction and a 12-foot center turn lane. A 4-foot bike lane, 2-foot curb and gutter, a 6-foot sidewalk and a 3.5-foot tall concrete parapet with rail post would be constructed on each side of the bridge.

Sycamore View Road Typical Section

The typical section for Sycamore View Road evaluated in the 2021 Reevaluation, which was based on the August 30, 2017 Construction Field Review Plans, consisted of three 12-foot travel lanes in each direction and variable width right-turn and left-turn lanes. The southbound right-turn lane would range from 0 to 13.7 feet in width, the southbound left-turn lane and northbound left turn lanes would transition from a single 12-foot left-turn lane to two 12-foot left turn lanes (24 feet total width), and the northbound right-turn lane would range from 0 to 12 feet in width. The turn lanes would feed into SR-1/Summer Avenue traffic. Improvements would be within a maximum of 146 feet of ROW if the upper range of the variable lane widths are implemented, which is a potential increase of 18 feet from the ROW width proposed in the EA/FONSI.

Current Typical Sections

SR-1(Summer Avenue) Typical Section

Based on the November 10, 2021 Construction Field Review Plans, the typical section for SR-1/Summer Avenue consists of three 11-foot travel lanes in each direction, a 12-foot center turn lane, a 4-foot bike lane in each direction, curb and gutter, and 5.5-foot sidewalks in each direction. The improvements are within a ROW of width of approximately 114 feet. **Figure 2** shows the current SR-1 typical section. The typical section for the four major intersections with SR1/Summer Avenue is shown in **Figure 3**.

Wolf River Bridge Typical Section

Based on the November 10, 2021 Construction Field Review Plans, the Wolf River bridge will be 110.5 feet in width and consist of three 11-foot travel lanes in each direction. The typical section will include a 12-foot center lane, and the northwest side of the bridge will include a 4.5-foot shoulder and 12-foot multi-use path. The multi-use path will be barricade-separated from the travel lanes. The south side of the bridge will incorporate a 3-foot buffer between the travel lanes and the 4-foot bike lane; it also includes a 6-foot sidewalk (separated from the bike lane by two feet) and a 1-foot-wide parapet with rail post. **Figure 4** shows the current typical section for the Wolf River bridge.

Figure 2: Current SR-1/Summer Avenue Typical Section

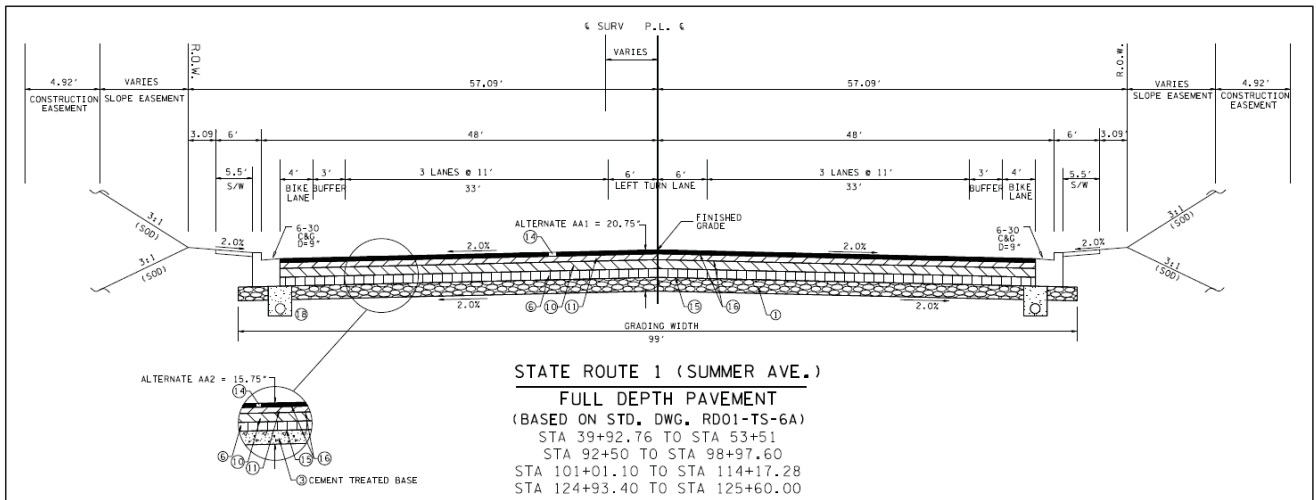


Figure 3: Current SR-1/Summer Avenue Typical Section at Dual Left Turn Lane Locations

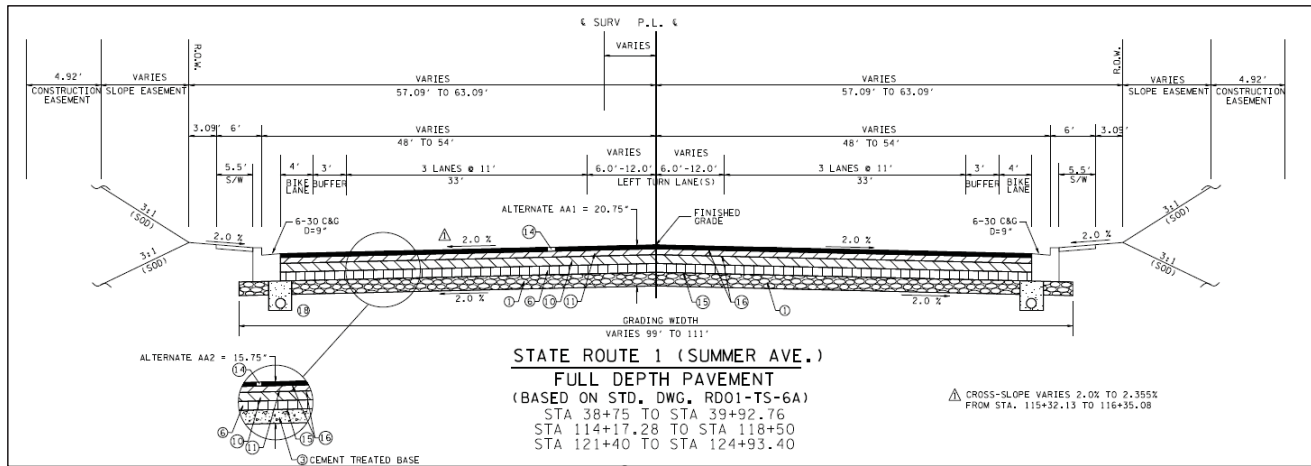
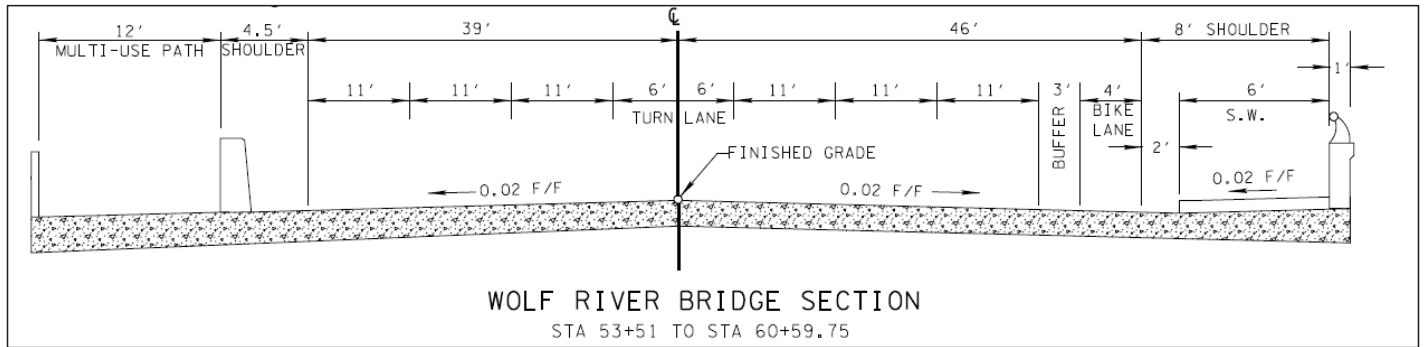


Figure 4: Current Wolf River Bridge Typical Section



Fletcher Creek Bridge Typical Section

Based on the November 10, 2021 Construction Field Review Plans, the Fletcher Creek bridge will be 110 feet in width and consist of three 11-foot travel lanes in each direction, a 12-foot center turn lane, 4-foot bike lanes on both sides of the roadway, and 6-foot sidewalks on both sides of the roadway. A 3-foot buffer will separate the bike lanes from the outside travel lanes. **Figure 5** shows the current Fletcher Creek Bridge typical section.

Sycamore View Road Typical Section

Based on the November 10, 2021 Construction Field Review Plans, the typical section for Sycamore View Road consists of three 12-foot travel lanes in each direction, a variable width right-turn lane on the north side of the roadway, and left-turn lanes (**Figure 6**). The right-turn lane would range from 0 to 13.7 feet in width, the left-turn lanes would transition from a single 12-foot turn lane to two 12-foot turn lanes (24-foot total width).

Changes Occurring Since Approval of the 2021 Reevaluation

Since the approval of the 2021 Reevaluation, Utility/Rainbow Plans have been approved by TDOT (August 2021) and the August 30, 2017 Construction Field Review Plans have been updated with November 10, 2021 Construction Field Review Plans. A review of the 2021 Utility/Rainbow Plans identified easements outside the previous study area:

- Electric easement – 10-foot easement from just east of the I-40 westbound ramp to just west of Bartlett Road and a section just east of the Fletcher Creek Bridge; other minor electric easements from Bartlett Road to Fletcher Creek Bridge and a section of easement near the project terminus at 0.1 mile north of Sycamore View Road.
- Fiber easement – Fiber to be placed along the electric poles and within ROW or electric easements.
- Gas easement – 10-foot easements in the vicinities of Virginia Run Cove and the Fletcher Creek Bridge. Easements at the intersection of Pleasant View Road and Sycamore View Road. Gas easements were also noted as generally located at the edge of ROW or easements and were therefore reviewed.
- Water easement – 30-foot easements in the vicinity of Virginia Run Cove, the Wolf Run bridge, and the Fletcher Creek bridge.

In addition to the easements listed above, ROW is required from Parcel 12SS. Prior plans did not affect this parcel. Current plans acquire 2.279 acres from this 28.638-acre parcel. This property lies just north of the Wolf River and the additional ROW is required for relocation of Stream 2.

A review of the November 10, 2021 Construction Field Review Plans also identified the following design changes:

- The width of the travel lanes on SR-1/Summer Avenue has been reduced from 12 feet per lane to 11 feet per lane and 3-foot buffers between the bike lanes and outside travel lanes have been added.
- Three-foot buffers between the bike lanes and outside travel lanes have been added to the typical section at the four major intersections with SR-1/Summer Avenue.
- The width of the travel lanes on the Wolf River bridge has been reduced from 12 feet per lane to 11 feet per lane and a 3-foot buffer between the bike lane and outside travel lane has been added to the south side of the bridge.
- The width of the travel lanes on the Fletcher Creek bridge has been reduced from 12 feet per lane to 11 feet per lane and 3-foot buffers between the bike lanes and outside travel lanes have been added.
- The right-turn lane on the south side of Sycamore View Road has been removed.

The Construction Field Review Plans dated November 10, 2021 and the 2021 Utility/Rainbow Plans are in **Appendix C**.

Figure 5: Current Fletcher Creek Bridge Typical Section

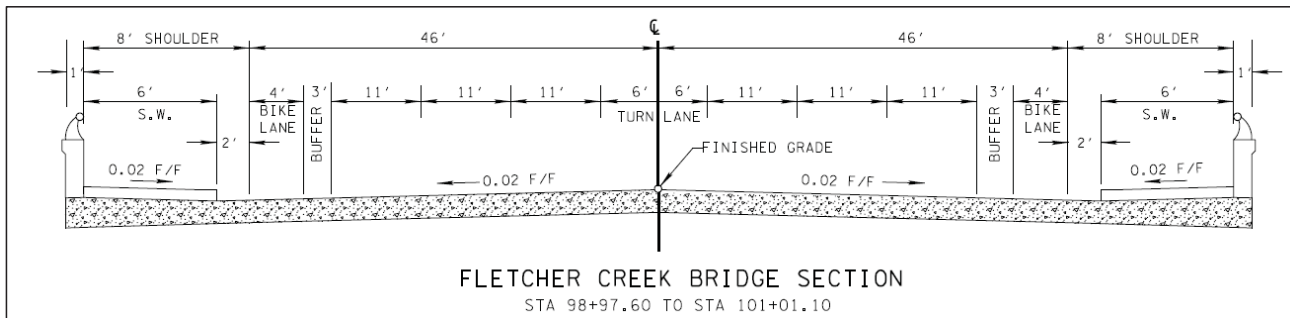
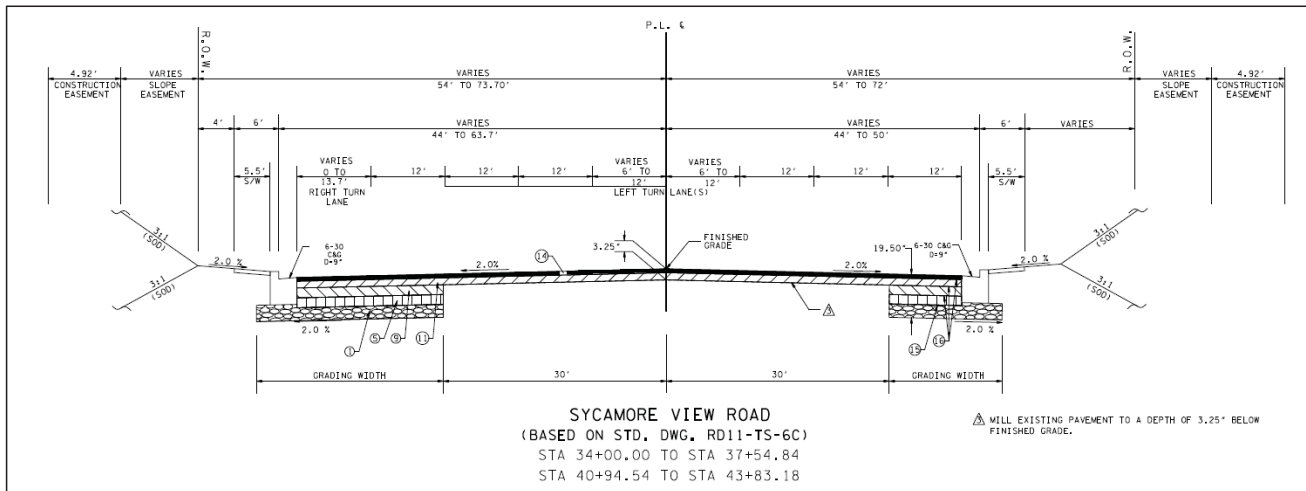


Figure 6: Current Sycamore View Road Typical Section



Public Outreach Activities

Upon approval of the EA on March 9, 1998, a public hearing was held as a part of the National Environmental Policy Act (NEPA) environmental review process to present the EA to the public and solicit input. The hearing was held on May 12, 1998 in the Shelby Oaks Elementary School Cafeteria, at 6053 Summer Avenue in the project area. As noted in the FONSI, there were 54 public attendees and 17 individuals provided comments. Most of the comments offered no clear support or opposition to the project; rather, the comments were directed to personal issues related to impacted properties. Two individuals stated their support for the project and one person expressed opposition to the project. Additional information on the May 12, 1998 NEPA Public Hearing is contained within the FONSI, which is in **Appendix B** of this reevaluation.

A public notice about a proposed *de minimis* finding was published in the *Commercial Appeal* on January 19, 2022. See the section entitled Section 4(f) and Section 6(f) for more information.

Reevaluation of the Environmental Effects

This reevaluation of the environmental effects for the proposed project included the review of the Construction Field Review Plans dated November 10, 2021 and the 2021 Utility/Rainbow Plans with the information presented in the 2021 Reevaluation.

The relocation of Memphis Light, Gas & Water (MLGW) utilities will be necessary for the construction of this project. While MLGW will be responsible for acquiring the easements necessary for the relocation of its utilities, this reevaluation examined the easement locations for potential environmental impacts since the utilities will be relocated in contract with TDOT.

This document has been updated to include areas not addressed in the 2021 Reevaluation and/or for which policy or regulations have resulted in the need for updated information or studies. Of particular interest to this reevaluation are the following topics:

Traffic and Safety

Updated traffic and crash analyses were prepared for the 2021 Reevaluation. Since the information is less than three years old and there have not been any substantial changes to either the project design or within the project area, the information presented in the 2021 Reevaluation remains valid.

Bridge Sufficiency

According to the most recent inspection of the SR-1/Summer Avenue bridge over the Wolf River (79SR0010015), at Log Mile (LM) 12.53 (March 9, 2021), the sufficiency rating for this bridge is 67.2. According to the most recent inspection of the SR-1/Summer Avenue bridge over Fletcher Creek (79SR0010017) at LM 13.39 (March 9, 2021), the sufficiency rating for this bridge is 65.5. These sufficiency ratings have not changed from those reported in the 2021 Reevaluation (**Appendix B**), which were based on the March 20, 2019 inspection reports.

A copy of the March 9, 2021 inspection reports for the two bridges are in **Appendix F**.

Relocation and Right-of-Way Impacts

Table 2 compares the ROW acquisition from the 2021 Reevaluation with the current ROW based on the November 10, 2021 Construction Field Review Plans. MLGW will be responsible for obtaining the necessary easements for the relocation of its utilities.

Table 2 Right-of-Way Acquisition

	Permanent Acquisition (acres)				Temporary Acquisition (acres)	
	ROW Acquisition	Drainage Easements	Slope Easement	Total	Construction Easements	Total
2021 Reevaluation (August 30, 2017 Construction Field Review Plans)	10.95	0.88	1.81	13.64	5.95	5.95
Current Reevaluation (November 10, 2021 Construction Field Review Plans)	13.31	0.90	1.81	16.02	6.03	6.03

Environmental Justice

The 2020 Environmental Justice (EJ) analysis completed for the 2021 Reevaluation supported the conclusion that the project would not result in disproportionately high and adverse effects on low-income or minority populations under Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The 2020 EJ analysis was reviewed and found acceptable by the TDOT’s Civil Rights staff in accordance with Title VI of the Civil Rights Act of 1964.

Since updated demographic data is now available, an updated EJ analysis was prepared for this reevaluation. The analysis utilized two threshold indicators to identify EJ populations:

- Percent of minority and/or low-income population exceeds 50 percent of the total block group population, and/or
- Percent of minority and/or low-income population exceeds the overall county population average by 10 percentage points or more.

A copy of the Updated EJ Technical Memorandum is in **Appendix G**.

The project corridor covers sections of four census tracts (CT) and six block groups (BG), as shown in **Figure 7**. The boundaries of the census tracts and block groups have not changed since the 2020 EJ Analysis.

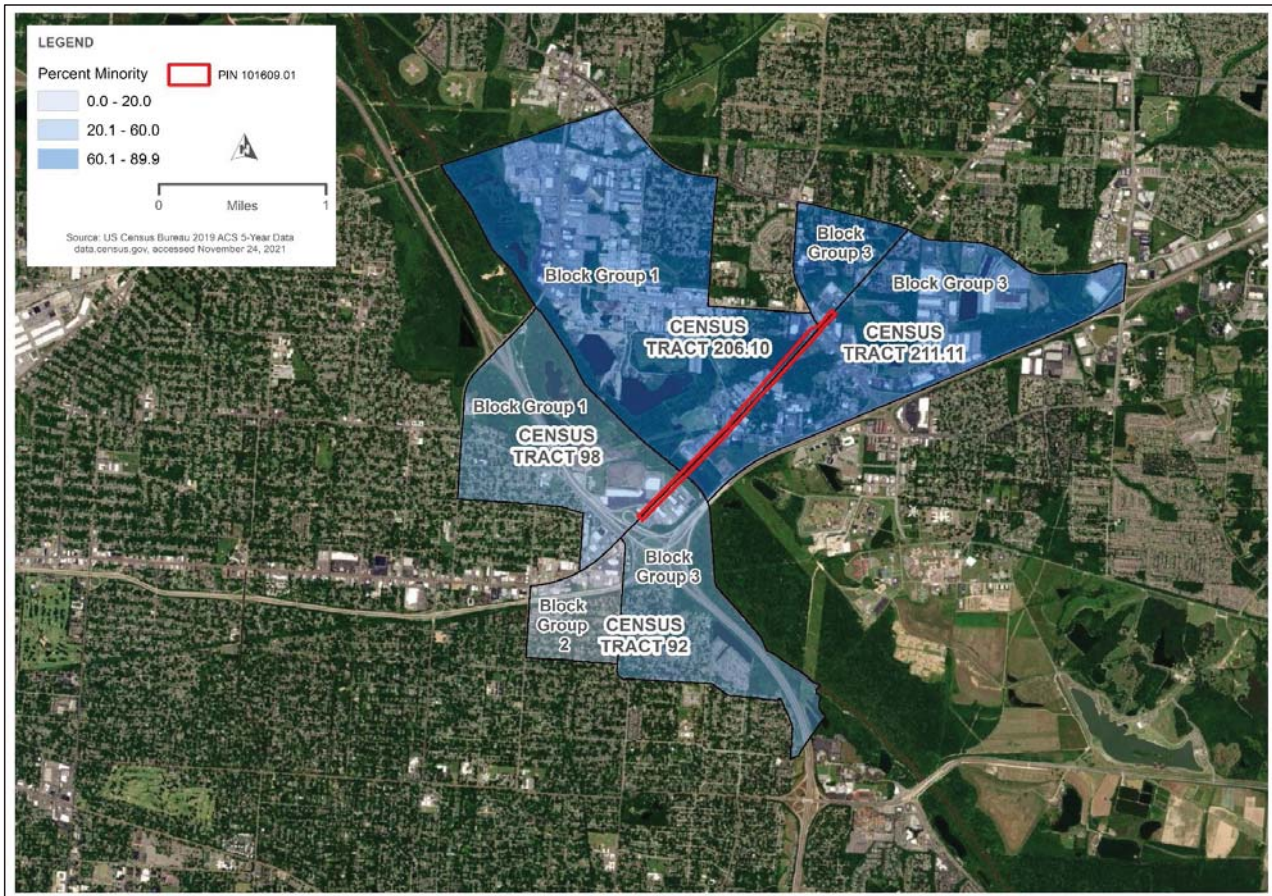
- CT 92, BG 2
- CT 92, BG 3
- CT 98, BG 1
- CT 206.10, BG 1
- CT 206.10, BG 3
- CT 211.11, BG 3

Minority Populations

The US Census Bureau’s 2015-2019 American Community Survey (ACS) 5-Year Estimates shows that the minority population for Shelby County is 64.2 percent and that of the City of Memphis is 74.3 percent. Within the project corridor, minority populations in block groups range from 3.1 percent to 89.9 percent. The percentage minority by census block group is shown in **Figure 7**.

Based on the 2015-2019 5-Year Estimates, two census block groups (CT 206.10 BG 3 and CT 211.11 BG 3) have minority population percentages that exceed the county average by 10 percentage points or more. These two same block groups plus one additional one (CT 206.10 BG 1) have a minority population that is 50 percent or more of the overall population of the block group. Block groups that satisfy one or more of these criteria are considered EJ populations.

Figure 7 Minority Populations by Census Block Group



In comparison to the 2020 EJ Analysis (Table 3), the percentage of minority residents has decreased in three census block groups while increasing in the remaining three census block groups. CT 92 BG 2 had the most significant change, with the minority population decreasing from 16.4 to 3.1 percent, a decrease of 81.1 percent. No changes occurred, however, that resulted in a change in the EJ determination for any census block group. Three census block groups previously met EJ criteria and those three continue to meet EJ criteria. Those census block groups are CT 206.10 BG 1, CT 206.10 BG 3, and CT 211.11 BG 3.

Percent of Low-Income Populations by Block Group

According to the 2015-2019 5-Year Estimates, Shelby County's low-income population comprises 19.4 percent of the total population. The City of Memphis' low-income population comprises 25.1 percent of the total population. Within the project area, low-income populations range from 4.1 percent (CT 92, BG 2) to 44.5 percent (CT 211.11, BG 3). Table 3 presents the low-income population data. The percentage low-income by census block group is shown in Figure 8.

Based on the ACS 2015-2019 5-Year Estimates, two census block groups have a low-income population that exceeds the county average by 10 percentage points or more. No census block groups have a minority population that is 50 percent or more of the overall population of the block group. Block groups that satisfy one or more of these criteria are considered EJ populations. In comparison to the 2020 EJ analysis (Table 3), the percentage of low-income residents has decreased in three census block groups while increasing in the remaining three census block groups. CT 211.11 BG 3 had the most substantial change, with the low-income population decreasing from 56.7 to 44.5 percent, a decrease of 21.5 percent. In addition, the EJ determination changed for two census block groups. CT 98 BG 1 previously met EJ criteria, exceeding the county average by more than 10 percent, but based on the current analysis, it no longer does. Conversely, CT 206.10 BG 3 did not meet EJ criteria previously, but based on the current analysis, it now does. Finally, a third census block group, CT 211.11 BG 3, previously met EJ criteria and based on the updated analysis, it continues to do so.

Table 3 Environmental Justice Analysis 2020 and 2021

Minority Populations													
Census Tract	CT 92				CT 98		CT 206.10				CT 211.11		Shelby
Block Group	BG 2		BG 3		BG 1		BG 1		BG 3		BG 3		
Year of Analysis	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Total Population	854	966	2521	2794	1522	1365	983	1099	1313	1480	1142	1272	937005
% Minority (non-white)	16.4	3.1	23.2	23.4	41.7	49.2	56.1	62	86.7	78.2	90.9	89.9	63.9
Exceeds County Average by 10% or more?	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	
Block Group Population Average >50%?	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
Meet EJ Criteria?	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
Low-Income Populations													
Census Tract	CT 92				CT 98		CT 206.10				CT 211.11		Shelby
Block Group	BG 2		BG 3		BG 1		BG 1		BG 3		BG 3		
Year of Analysis	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Total Population	854	966	2506	2778	1487	1301	983	1099	1313	1480	1142	1272	919244
% Low-Income	14.5	4.1	18.2	18.7	30.9	25.8	7.4	7.5	20.8	31.8	56.7	44.5	20.6
Exceeds County Average by 10% or more?	No	No	No	No	Yes	No	No	No	No	Yes	Yes	Yes	
Block Group Population Average >50%?	No	No	No	No	No	No	No	No	No	No	Yes	No	
Meet EJ Criteria?	No	No	No	No	Yes	No	No	No	No	Yes	Yes	Yes	

Environmental Justice Determination

As indicated in the 2021 Construction Reevaluation, the ROW acquisition previously completed for the entire project included several business relocations; however, no residents were relocated. The relocated businesses were determined to not be business that provided critical services to low-income and minority residents that could not otherwise be accessed elsewhere. The project will not affect access to schools, parks, medical facilities, religious institutions, or other community facilities, nor will the project disrupt community cohesion.

Based on the updated analysis conducted, it was determined that impacts resulting from construction of the project will not result in disproportionately high and adverse impacts to any EJ populations in the project area with respect to human health and the environment. TDOT acknowledges that minority and low-income populations are present within the project area. While there will be some adverse impacts from the project, including impacts from construction noise, there is not a disproportionately high and adverse effect to EJ populations when compared to the impacts borne by all populations in and around the project area. TDOT has made every effort to minimize impacts to the surrounding community, including minority and low-income communities within the project area. It is intended that all individuals living within and near the project area, regardless of race, ethnicity, or economic status, will share equally in the benefits of the proposed project, including increased mobility and improved safety conditions.

TDOT will comply with Title VI to ensure that "no person shall be, on the grounds of race, color or national origin, excluded from participation in, denied benefits of, or subject to discrimination under any program or activity receiving federal assistance."

This EJ analysis has been coordinated with the TDOT Civil Rights Division. In a letter dated December 16, 2021, the Civil Rights Division concurred with the findings, stating "There does not appear to be any Title VI nor Environmental Justice issues." The TDOT Civil Rights Division letter is included in **Appendix G**

Figure 8 Low-Income Populations by Census Block Group



Hazardous Materials

TDOT's Hazardous Materials Section reviewed the Construction Field Review Plans and Utility/Rainbow Plans and provided the following response on November 17, 2021: *"Based on the Construction Review Plans and Utility Plans provided, the hazmat review completed 23 September 2021 based on the 21 September 2021 Right of Way Plans remains valid."*

The Hazardous Materials Section staff provided the following response on September 23, 2021 after reviewing the September 21, 2021 Right of Way Plans: *"Based on the revised Right of Way Plans dated 21 September 2021, one new hazardous materials site has been identified, Tract 17A. Based on the previous review of Construction Plans dated 29 August 2017 and the Phase I Environmental Site Assessment completed February 2011 the following suspect tracts were identified, but the minimal proposed ROW shown is unlikely to impact the project."*

- *Tract 3 is Summer Avenue Shell – 9791630, 5260 Summer Ave.*
- *Tract 8 is Mapco Express #3144 – 9791847, 5325 Summer Ave.*
- *Tract 16 is Unlimited Auto Service – 9792396, 5485 Summer Ave.*
- *Tract 17A is Summer Mobil – 9790242, 5491 Summer Ave.*
- *Tract 36 is Formerly Fill-em-fast Summer – 9790314, 5842 Summer Ave.*
- *Tract 36B is Jiffy Lube #71 – 9790433, 1717 Sycamore View*
- *Tract 39 is Murphy Express 8713 – 9793620, 5856 Summer Ave.*

Several tracts are also listed in EPA [Environmental Protection Agency] EnviroFacts databases including the following. Based on the proposed ROW, these tracts should not impact the project.

- *Tract 4 is Lewis Ford Inc, 5299 Summer Ave.*
- *Tract 32 is Americoach Tours Ltd, 5702 Summer Ave.*
- *Tract 29 (?) is Ops Contracting Services, LLC, 5669 Summer Ave.*
- *Tract 43 is Bensingers Cleaners, 5877 Summer Ave.*

The asbestos surveys on bridges 79SR0010015 and 79SR0010017 have been completed and asbestos was detected."

A copy of the coordination with TDOT's Hazardous Materials Section is in **Appendix H**.

Aquatic Resources

TDOT's Ecology Section reviewed the November 10, 2021 Construction Field Review and 2021 Utility/Rainbow Plans and provided the following response on February 3, 2022: *"The March 23, 2018 EBR [Environmental Boundary Report] remains valid, however, due to age and changes in agreements, additional coordination was completed with TWRA [Tennessee Wildlife Resources Agency] and TDEC-DNA [Tennessee Department of Environment and Conservation - Division of Natural Areas] and those responses are attached to this email."*

One commitment on the project is no longer valid. Since TDOT conducted a bat survey and had no captures, we are no longer required to have a tree cutting restriction.”¹

The Ecology Section also provided an updated aquatic resources impact table. **Table 4** compares the aquatic resources impact reported in the 2021 Reevaluation with the current impacts.

A copy of the 2018 EBR is in Appendix I of the 2021 Reevaluation in **Appendix B**. A copy of the coordination with TDOT’s Ecology Section is in **Appendix I**.

Table 4 Aquatic Resources Impacts

Labels	Type	Quality	Impacts					
			Permanent		Temporary		Total	
			2021	2022	2021	2022	2021	2022
Wetlands								
WTL-1	Emergent	Low	0.50 acre	0.32 acre	0 acres	0 acres	0.50 acre	0.32 acre
WTL-2	Forested	Moderate	N/A	0.96 acre	0 acres	0.96 acre	N/A	0.96 acre
Total							0.50 acre	1.28 acres
Streams								
STR-1 (Wolf River)	Perennial	Impaired	270 feet	0 feet	0 feet	0 feet	270 feet	0 feet
STR-2	Intermittent	Impaired	1,197 feet	89 feet	0 feet	0 feet	1,197 feet	89 feet
STR-3 (Fletcher Creek)	Perennial	Impaired	250 feet	0 feet	0 feet	0 feet	250 feet	0 feet
Total							1,717 feet	89 feet
Wet-Weather Conveyances								
WWC-1	WWC	N/A	0 feet	0 feet	0 feet	0 feet	0 feet	0 feet
WWC-2	WWC	N/A	0 feet	0 feet	0 feet	0 feet	0 feet	0 feet
Total							0 feet	0 feet

Compensatory mitigation for permanent wetland and stream impacts would be accomplished either through permittee-responsible mitigation, mitigation banking, or In-Lieu Fee mitigation to satisfy regulatory and statutory requirements.

Threatened and Endangered Species

Due to the age of previous agency coordination and changes in agency agreements, additional coordination was completed with the Tennessee Wildlife Resources Agency (TWRA) and the Tennessee Department of Environment and Conservation Division of Natural Areas (TDEC-DNA).

¹ A tree cutting restriction was not noted as an environmental commitment in the 1998 EA, 1999 FONSI, 1999 Reevaluation, or 2021 Reevaluation.

In coordination dated July 1, 2021, TWRA stated that the implementation of standard best management practices (BMPs) would be sufficient to satisfy the needs of the Tennessee Wildlife Resources Agency.

In coordination dated January 28, 2022, TDEC-DNA stated that they had reviewed the state's natural heritage database with regard to the project boundaries and found no rare species had been observed previously within one mile of the project area. Three rare species were reported within four miles of the project area (Table 5). Based on its review, TDEC-DNA does not anticipate any impacts to occurrences of rare, threatened, or endangered plant species from the project. TDEC-DNA requested that BMPs to address erosion and sediment be implemented and maintained during construction activities.

Coordination with the TDOT's Ecology Section, TWRA, and TDEC-DNA is in **Appendix I**.

Table 5 Rare and Threatened Species Within Four Miles of Project

Species	Status	Habitat
Copper iris (<i>Iris fulva</i>)	Threatened	Bottomlands
Sweetbay magnolia (<i>Magnolia virginiana</i>)	Threatened	Forested acidic wetlands
Southern cricket frog (<i>Acris gryllus</i>)	Rare, not state listed	Grassy margins of swamps, marshes, lakes, ponds, streams, ditches, and nearby temporary pools; far southwest Tennessee

Floodplain Management

Portions of this project impact a Federal Emergency Management Agency (FEMA) defined floodplain where a floodway is defined. The project is located on Flood Insurance Rate Maps (FIRMs) in Shelby County, Panels 294, 292 and 311 of 635, Map #s 47157C0294G, 47157C0292G, and 47157C0311G. FEMA FIRM maps covering the project area are in **Appendix J**.

A No Rise Certification or a Conditional Letter of Map Revision (CLOMR) or Letter 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.

Air Quality

TDOT's Air and Noise Section provided the following response on November 3, 2021: *"An air quality evaluation was completed for the larger SR-1 project from east of Macon Road to Elmore Road in 1998. The results were summarized in the EA and FONSI. Subsequently, an EA/FONSI reevaluation of the project was conducted based on construction plans and was approved on July 12, 2021. The conclusions of the previous studies for the section of SR-1 being reevaluated were reviewed to determine if they remain valid for the current plans and in accordance with current air quality conditions and guidance. The results are included in the attached Air Quality Technical Report and summarized below.*

Transportation Conformity

The project is in the Shelby County ozone maintenance area and subject to transportation conformity. This section of the project is included in the Memphis Metropolitan Planning Organization (MPO) Fiscal Year 2020-2023

Transportation Improvement Program (TIP) (amended August 20, 2020) as TIP number TN-NHPP-2020-01 and RTP ID 42. The project is also included in Livability 2050: Regional Transportation Plan Update (amended August 20, 2020). The project limits and description are consistent with the proposed project. Therefore, the project conforms to the State Implementation Plan (SIP).

Shelby County is now an attainment area for carbon monoxide (CO), so a hot-spot analysis is no longer needed.

Mobile Source Air Toxics (MSAT)

The project qualifies as a "Project with Low Potential Mobile Source Air Toxic (MSAT) Effects" in accordance with FHWA's "Updated Interim Guidance on Air Toxic Analysis in NEPA Documents" dated October 2016. A qualitative MSAT evaluation was conducted in accordance with FHWA's guidance and concluded that the project is not predicted to create any adverse MSAT effects.

Greenhouse Gas Emissions (Climate Change)

The air quality evaluation also concluded that the project will have no adverse greenhouse gas emissions (climate change) effects.

Construction Activities

Construction activities will 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 should be maintained, repaired and adjusted to keep it in full satisfactory condition.

Additionally, there are air quality monitoring stations close to the project. The closest station monitors with a particulate matter 2.5 (PM2.5) system, a nitrogen dioxide (NO2) system, and a carbon monoxide (CO) system on the eastbound roadside of I-40, located on the campus of Southwest Tennessee Community College, approximately 0.39 mile southeast of the project.

Indirect and Cumulative Effects

The air quality analysis is for the design year 2041 and includes projected traffic volumes for the project as well as forecasted background traffic growth and other planned and programmed projects in the area. As a result, the air quality analysis addresses the traffic-related direct and cumulative air quality effects of the project.

The widening SR-1 could cause a redistribution of traffic on the surrounding roadway network and affect development and land use patterns in the project area. These situations could result in higher traffic volumes at locations near roadways beyond the project limits. However, any effects would be small. As a result, the project is not predicted to cause any significant indirect air quality effects."

TDOT's Air and Noise Section provided the following response on December 12, 2021 "the air quality and noise impact statements provided on 11.03.2021 remained valid for the current plans."

Coordination with TDOT's Air and Noise Section is in **Appendix K**.

Noise

The TDOT Air and Noise Section provided the following response²: *"A noise evaluation was completed for the larger SR-1 project from east of Macon Road to Elmore Road in 1997. The results were included in the EA. The results of the previous noise study were reviewed to determine if the conclusions remain valid in accordance with TDOT's current noise policy, effective July 2011, and TDOT's agreement with the FHWA Tennessee Division office regarding noise reevaluations. The previous noise study was no longer valid because the analysis used FHWA's previous noise model, STAMINA/OPTIMA. Therefore, TDOT updated the noise evaluation in 2020 as part of a reevaluation and in accordance with the FHWA noise regulation, "Procedures for Abatement of Highway Traffic and Construction Noise", 23 CFR 772 and TDOT's Policy on Highway Traffic Noise Abatement (TDOT's noise policy). The results are summarized in the attached memorandum [see the Noise Memorandum in Appendix K of the 2021 Reevaluation]. The current plans and the previous noise analyses and conclusions were reviewed to determine if they remain valid.*

Noise Impacts

The only potentially affected noise-sensitive land uses within the project limits are one single-family residence (5541 Summer Avenue) and the swimming pool at the Welcome Inn. The project is predicted to impact the residence but not the pool.

Abatement Evaluation

Per TDOT's noise procedures, noise abatement is generally not reasonable for isolated residences due to the required barrier area verses the benefits provided. Therefore, noise abatement is not proposed.

Statement of Likelihood

Noise abatement is not proposed for this project.

Construction Activities

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. The procedures in TDOT's Standard Specifications for Road and Bridge Construction will help minimize construction noise effects.

Undeveloped Land

Some tracts of undeveloped land exist in the project area. TDOT encourages the local governments with jurisdiction over these lands, as well as potential developers, to practice noise compatibility planning to avoid future noise impacts. The "Information for Local Officials" section of the updated evaluation provides additional information on noise levels for undeveloped lands, noise compatibility planning, and TDOT's requirements for Type II (retrofit) noise barriers.

Indirect and Cumulative Effects

² This response is from 11.03.2021. The 12.12.2021 response stated that the air quality and noise impact statements provided on 11.03.2021 remained valid for the current plans.

Finally, the noise analysis includes projected traffic volumes for the project as well as forecast background traffic growth and other planned and programmed projects in the area. Therefore, the predicted noise impacts represent both direct and cumulative noise impacts. The project is also not predicted to cause any indirect effects.

Coordination with the TDOT Air Quality and Noise Section is in **Appendix K**.

Section 4(f) and Section 6(f)

Since the approval of the 2021 Reevaluation, it has been determined that utility easements would be required from the Wolf River Greenway and the Fletcher Creek Greenway. The project previously did not result in impacts to these Section 4(f) resources since the ROW was acquired prior to designation of the greenways. The following sections describe the Section 4(f) use of the greenways.

Wolf River Greenway

The Wolf River Greenway is a 25.4-mile, multi-use greenway being developed in 15 primary phases. Activities on the greenway include walking and running while motorized vehicles are prohibited. Phases 12B and 13, which intersect the SR-1/Summer Avenue project, together form a 2.75-mile segment that runs between Covington Pike and the Shelby Farms Greenline. These two phases of the greenway are currently being designed under the direction of the Wolf River Conservancy. Once completed, the 10- to 12-foot-wide greenway will connect the neighborhoods of north Mud Island, downtown Memphis, north central Memphis, and the cities of Germantown and Collierville. The City of Memphis has jurisdiction over the greenway for all sections within the Memphis city limits.

The location of the greenway west of SR-1/Summer Avenue is on the north side of the Wolf River. The greenway proposes to cross the Wolf River on the SR-1/Summer Avenue bridge, which will be replaced as part of the SR-1/Summer Avenue project and will have a 12-foot multi-use path. After crossing the river, the greenway would cross under the Wolf River bridge and continue on the south side of the Wolf River until it joins the Shelby Farms Greenline.

The project would use approximately 0.53 acre of Wolf River Greenway's 36.95 acres. Phases 12b and 13 of the Wolf River Greenway will cross the Wolf River bridge on SR-1/Summer Avenue; the bridge will be replaced by this project. The replacement of the bridge requires utility easements that amount to approximately 1.43 percent of the total acreage of the Wolf River Greenway. The Wolf River Greenway would also need approval from Memphis Light, Gas and Water (MLGW) to cross MLGW utility easements in the vicinity of the Wolf River bridge. In a letter dated February 15, 2022, MLGW agreed to allow the Wolf River Greenway to cross the MLGW easements where the greenway and the MLGW easements intersect at SR-1/Summer Avenue and the Wolf River as outlined on the Wolf River Greenway-Summer Avenue Bridge Connections Concept Plan (**Appendix L**). On March 22, 2022 the City of Memphis concurred that the SR-1/Summer Avenue project would have a *de minimis* effect on the Wolf River Greenway based on the agreement with MLGW. The *Determination of Section 4(f) De Minimis Use* was approved by FHWA on April 6, 2022. A copy of the *Determination of Section 4(f) De Minimis Use* is in **Appendix L**.

Fletcher Creek Greenway

The proposed 12.5-mile Fletcher Creek Greenway, from the Wolf River Greenway in Memphis to the International Harvester Managerial Park in Lakeland, is identified as one of the recommended greenway trails in the *MidSouth Regional Greenprint and Sustainability Master Plan (Greenprint 2015/2040)*. The greenway is shown in the Memphis MPO's 2020 *Walk and Roll: Memphis Regional Pedestrian and Bicycle Master Plan*. The vision for the Fletcher Creek Greenway is to run alongside Fletcher Creek to connect the cities of Memphis, Barlett, and Lakeland.

The western end of the proposed Fletcher Creek Greenway, from the proposed Wolf River Greenway and across SR-1/Summer Avenue to the Barlett city limits, has not been designed or constructed. The City of Barlett has developed a master plan for its portion of the greenway between SR-1/Summer Avenue and Brunswick Road. Phase 1 of the greenway, from SR-15 (US 64, Stage Road) to near the intersection of Brother Boulevard and Yale Road has been completed, while Phase 2, from the end of Phase 1 to near Youth Villages, is under construction. Phases 3 and 4,

which will extend the greenway to SR 177 (N. Germantown Parkway), are in the planning stage. Phases 1 through 4 of Fletcher Creek Greenway are east of the project area, and will not be impacted by the project.

Fletcher Creek Greenway in the vicinity of the SR-1/Summer Avenue project is under the jurisdiction of the City of Memphis.

The proposed project would use approximately 0.66 acre of Fletcher Creek Greenway's 18.18 acres. Current plans for Fletcher Creek Greenway show the greenway passing underneath a bridge to be replaced during the improvements to SR-1/Summer Avenue. The replacement of the bridge requires utility easements that amount to approximately 3.63% of Fletcher Creek Greenway's total acreage. Additionally, a temporary construction easement of approximately 0.04 acre will be required to install the water and gas utilities. On March 22, 2022, the City of Memphis concurred that the SR-1/Summer Avenue project would have a *de minimis* effect on the Fletcher Creek Greenway based on the agreement with MLGW. The *Determination of Section 4(f) De Minimis Use* was approved by FHWA on April 6, 2022. A copy of the *Determination of Section 4(f) De Minimis Use* is in **Appendix L**.

This project does not involve the use of property assisted by the Land and Water Conservation Fund (LWCF).

Cultural Resources/Section 106 Coordination

Architectural/Historical Resources

TDOT Cultural Resources Section staff provided the following response on November 30, 2021: "*Based on a review of the 11/10/2021 [Construction Field Review Plans], the SHPO letter dated 06/21/2017 remains valid. The project APE does not contain any architectural resources listed or eligible for listing in the National Register of Historic Places as currently proposed.*"

Coordination with the Cultural Resources Section and a copy of the TN-SHPO letter are in **Appendix M**.

Archaeological Resources

After reviewing the November 10, 2021 Construction Field Review Plans and 2021 Utility/Rainbow Plans, the Cultural Resources Section staff provided the following response on November 22, 2021: "The previous SHPO letter dated October 28, 1997 remains valid."

Coordination with the TDOT Cultural Resources Section and a copy of the TN-SHPO letter are in **Appendix M**.

Native American Consultation (NAC)

An invitation to participate in the Section 106 process was sent on October 1, 2021 to all federally recognized Native American tribes with interests in the subject county.

The Chickasaw Nation responded and accepted the invitation to be a consulting party on October 4, 2021. Reports were sent to this consulting party on November 8, 2021. Following review of the reports, the Chickasaw Nation gave the following statement on November 12, 2021:

"This letter is a continuation of consultation under Section 106 of the National Historic Preservation Act. We concur with the findings of no adverse effect to historic or cultural properties.

- Proposed widening of SR 1, Shelby County, TN PIN 101609.01
- Proposed widening of SR 54, Henry County, TN PIN 101886.02

The Chickasaw Nation is in support of the proposed undertakings and is not presently aware of any specific historic properties, including those of traditional religious and cultural significance, that will be impacted by the projects. In the event the agency becomes aware of the need to enforce other statutes we request to be notified under ARPA, AIRFA, NEPA, NAGPRA, NHPA, and Professional Standards."

The Choctaw Nation of Oklahoma responded and accepted the invitation to be a consulting party on November 1, 2021. Reports were sent to this consulting party on November 8, 2021.

To date, no other responses have been received.

TDOT will re-initiate consultation if additional cultural resources studies are required or if archaeological materials or human remains are discovered during construction.

(Following guidance issued on April 8, 2020 by the Advisory Council on Historic Preservation (ACHP) in response to the COVID-19 outbreak, federal agencies are to remain flexible regarding federally recognized Native American tribes' Section 106 review responsibilities. The ACHP's guidance furthermore indicates that federal agencies may not foreclose on the statutory rights afforded to federally recognized Native American tribes under the National Historic Preservation Act and regulations implementing Section 106 of the Act. As several federally recognized Native American tribes with interests in Tennessee have indicated that their ability to carry out their Section 106 review responsibilities is diminished or otherwise limited, it should be expected that tribal responses for the subject project may be received subsequent to the date of this ESR and that any such response may require additional information, fieldwork, or coordination with any or all tribes and, perhaps, the SHPO and/or ACHP. An updated ESR will be provided in the event that any additional responses are received, along with updated Section 106 documentation, if any.)

Table 6 lists the Tribes that TDOT in 2021 and identifies those that responded.

Copies of NAC coordination are in **Appendix M**.

Table 6 Native American Consultation, October 1, 2021

Native American Consultation					
Sent	Response	Tribe	Sent	Response	Tribe
X		Absentee Shawnee Tribe of Oklahoma	X		Muscogee (Creek) Nation
X		The Cherokee Nation			Poarch Band of Creek Indians
X	X	The Chickasaw Nation	X		Quapaw Tribe of Oklahoma
X	X	Choctaw Nation of Oklahoma	X		Shawnee Tribe
		Eastern Band of Cherokee Indians	X		Thlopthlocco Tribal Town
X		Eastern Shawnee Tribe of Oklahoma	X		United Keetoowah Band of Cherokee Indians
X		Kialegee Tribal Town	X		Jena Band of Choctaw Indians

Bicycle and Pedestrian Access

TDOT's Multimodal Division reviewed the November 10, 2021 Construction Field Review Plans and 2021 Utility/Rainbow Plan on November 23, 2021 and provided the following response: *"This project accommodates bicyclists with bike lanes and pedestrians with sidewalks, pedestrian islands and curb ramps."*

Coordination with the Multimodal Section is in **Appendix N**.

Environmental Commitments

No environmental commitments are involved.

Conclusion

Based on the findings of this reevaluation, neither the subject improvement's major design features nor the regulatory requirements have changed for the work. The basic setting of the affected and existing environment has not been altered and the project is of essentially the same character as previously studied, with no substantial modifications of land use or new development that would negatively impact the purpose and need for the project.

The anticipated impacts have not substantially changed, and the examination of the November 10, 2021 Construction Field Review Plans and 2021 Utility/Rainbow Plans indicated that there have been no substantial new environmental consequences or effects not presented and/or discussed in the approved Environmental Assessment (EA) or the 2021 Construction Reevaluation that would invalidate earlier approvals or significantly affect the quality of the environment.

In regard to these conclusions, the Department believes that the May 10, 1999 FONSI remains valid for the requested administrative action. A space is provided below for your concurrence.

Sincerely Yours,



Erick Hunt-Hawkins
Environmental Manager
NEPA Special Projects Section

Concurrence:

SABRINA S DAVID

Digitally signed by SABRINA S
DAVID
Date: 2022.05.04 12:23:54 -05'00'

Sabrina David, AICP
Deputy Division Administrator
Federal Highway Administration, TN Division

VB/EHH

cc: Tammy Sellers
John Kahle
Jason Baker
Gary Scruggs
Seth Hendren

Appendices

Appendices

Appendix A: Memphis Area MPO 2020-2023 TIP Page

Appendix B: Previous Environmental Documentation

Appendix C: Project Plans 2021

Appendix D: Traffic Operations Technical Memorandum

Appendix E: Traffic Safety Technical Memorandum

Appendix F: Bridge Inventory and Appraisal Reports

Appendix G: Environmental Justice

Appendix H: Hazardous Materials

Appendix I: Ecology

Appendix J: FEMA FIRMs

Appendix K: Air Quality and Noise

Appendix L: Section 4(f)

Appendix M: Cultural Resources

Appendix N: Multimodal