STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900 - JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334
(615) 741-3655

Tennessee Environmental Evaluation Report (Major TEER)

Memorandum

To: Mr. Klint Rommel
Transportation Manager II
TDOT Environmental Division
505 Deaderick Street, Suite 900
Nashville, TN 37243

From: Mr. Marshall Boyd, PE
City Engineer
City of Hendersonville
101 Maple Drive North
Hendersonville, Tennessee 37075

Date: 05/18/2018

Project Information

Route: Local Route 6098 (Saundersville Road)

Project Termini: From SR-386 (Vietnam Veterans Boulevard) to SR-6 (US Highway 31 East, East Main Street)

City/Town/County: City of Hendersonville, Sumner County

MPO/RPO/TPO Area: Nashville Area MPO ***PIN #:*** 123346.00

	PE #	***Right-of-Way #***	***Construction #***
Federal	N/A	N/A	N/A
State	PE-N: 83LPLM-S0-103 PE-D: 83LPLM-S1-104	83LPLM-S2-105	83LPLM-S3-106

Project Planning

☐ **The project is in an MPO/TPO—**The relevant Transportation Improvement Program (TIP) page is included in Attachment 1.

☐ **The project is in an RPO—**The relevant State Transportation Improvement Program (STIP) page is included in the attachment.

This Local Interstate Connector (LIC) project is not included in the STIP or MPO's TIP. It has been planned by the City of Hendersonville to address congestion issues at the SR-386 (Vietnam Veterans Boulevard) interchange and the at-grade crossing of CSX railroad on Winston Hills Parkway since June 2006, beginning with an amendment to the city's Major Thoroughfare Plan on 06/06/2006. The City met with TDOT on 03/08/2007 to discuss proposed preliminary alignments for the LIC being prepared by Halo Properties, a development company and property owner within the study area. A traffic study was completed in 05/2007. A Transportation Planning Report (TPR) was completed by TDOT on 07/25/2007. It studied a new location alignment for the LIC as well as the realignment of Saundersville Road and the eastbound exit ramp of SR-386. Construction of the two realigned roads was completed in 2008. On 04/08/2008, the City entered an agreement with TDOT to mitigate the at-grade crossing at Winston Hills Parkway and support the funding of the LIC. The 2007 traffic study was updated on 09/24/2009 to consider different options for traffic signal operations at the Saundersville Road intersections with the SR-386 exit ramp and Winston Hills Parkway. On 03/12/2015, TDOT issued a letter to the City sharing their safety concerns and the need for the City to improve the conditions on Saundersville Road to accommodate the growing congestion. The City coordinated with TDOT and CSX for a Railroad Safety Grant for the Safe Transportation of Energy Products by Rail Program in 2015. The current status of this grant is not known. TDOT and the City entered a project development and funding agreement on 02/22/2016. The planning documents and correspondence are located in Appendix K.

Project Description

The proposed project is located in the northeast corner of Hendersonville, TN, approximately 4.0 miles east of downtown. The project would construct a road on new alignment between US-31 (East Main Street) and Local Route 6098 (Saundersville Road), located approximately 0.14 mile west of the State Route-386 (Vietnam Veterans Boulevard) freeway interchange with Saundersville Road. A new bridge would be constructed for the CSX railroad over the proposed connector road. The at-grade railroad crossing on Winston Hills Parkway, located approximately 0.15 miles east, would be permanently closed. The project would also widen US-31 to add turn lanes for the connector road and realign Saundersville Road for a new intersection with the connector road. A Project Location Map is included as Attachment 1.

The study area is located between SR-386 to the north and US-31 to the south, Winston Hills Parkway to the east and the unnamed tributary to Old Hickory Lake to the west. Land uses in the study area include undeveloped property, CSX railroad, and commercial businesses. The Bluegrass Yacht & Country Club is located approximately 0.21 miles to the west.

Existing Condtions:

Winston Hills Parkway is a local street that connects US-31 to the SR-386 freeway interchange with one lane in each direction and an at-grade railroad crossing. Eastbound traffic exiting the freeway for US-31 must turn left on Saunderville Road into a right turn lane for Winston Hills Parkway, cross the CSX tracks, then to US-31. Congestion occurs when traffic is stopped by a train crossing at Winston Hills Parkway. During this time, it is common to have vehicles backed up onto the freeway during peak hours.

Proposed Project:

The proposed typical section for the new connector road is two 12-foot lanes and a 4-foot dedicated bike lane in each direction with curb and gutter. A 5-foot landscaped buffer with a 5-foot sidewalk is proposed behind each curb. The center median would vary in width from a 12-foot raised, landscaped median to an 8-foot raised hardscaped median under the proposed CSX bridge. The buffer would include plantings, trees (less than 4" diameter when mature) and pedestrian scale lighting. Turn lanes would be 11 feet wide at the intersections with US-31 and Saundersville Road. The proposed design speed is 40 mph.

The project would begin at a new intersection with US-31 and continue northward on new location, under the CSX tracks, then curving to the right to tie into Saundersville Road and continuing with widening the existing road along the existing alignment for approximately 800 feet before tying back to the existing pavement at a

location approximately 150 feet north of Winston Hills Parkway. US-31 would be widened to add a new eastbound turn lane at the connector road. This widening would extend approximately 535 feet west of and 430 feet east of the new intersection with the connector road. Saundersville Road would be realigned for appoximately 385 feet to a new intersection with the connector road. New traffic signals are proposed at these two new intersections.

A new bridge for the CSX tracks would be constructed. The bridge would be wide enough to accommodate one additional track that could be constructed in the future on the north side. The bridge would be constructed in phases and not require a runaround detour track. The proposed roadway alignment would run under the new railroad bridge with a minimum of 16.5 feet of vertical clearance.

The project would also eliminate the existing intersection of Saundersville Road and Winston Hills Parkway and remove the existing at-grade railroad crossing on Winston Hills Parkway. The pavement on Winston Hills Parkway would be removed between Saundersville Road and the CSX tracks. Access would be retained as a gravel driveway for maintainance vehicles to drive to the wastewater pump station located at the crossing. On the south side of the tracks, the Winston Hills Parkway pavement would be retained for access to the existing business driveways. A barrier would be placed to stop any northbound traffic from crossing the tracks.

US-31 at the connector road would include one westbound turn lane approximately 150 feet long and two eastbound turn lanes approximately 250 feet long. The bike lanes along the shoulders would be maintained. Saundersville Road would remain at the existing width with two lanes in each direction and a center raised median. It would be realigned, curving to the right to intersect the new connector road. The intersection at the connector road would include a left and right turn lane approximately 350 feet long.

An earthen berm approximately 320 feet long would be constructed on the west side of the connector road between the CSX tracks and Saundersville Road. The berm would prevent stormwater from reaching the road due to detention that would occur during a 100-year storm event at an existing culvert under the CSX tracks located approximately 565 feet west of the connector road. The top of berm would be set at elevation 520 and be no more than four feet higher than the sidewalk.

The Preliminary Plans for the proposed project are located in Appendix A.

Purpose and Need

The purpose of the project is to improve safety, mobility, and system linkage between State Route 386 (Vietnam Veterans Boulevard) and US-31 (East Main Street) with a transportation solution that meets the current design standards for a major collector, and it will minimize the impacts to the human and natural environment. The proposed project would improve the connection between a freeway and principal arterial with a new connector road that will replace an at-grade railroad crossing with an underpass structure.

The project will address the following needs:

- Improve roadway system linkage between US-31 and SR-386 (Vietnam Veterans Boulevard);

  The current connection between US-31 and SR-386 interchange is on Winston Hills Parkway, which crosses CSX railroad with an at-grade intersection. The proposed project will provide a new route with grade-separated crossing and eliminate the need for a preemptive signal at the interchange whenever a train passes.

- Improve the safety by eliminating an existing at-grade railroad crossing at Winston Hills Parkway;

  According to CSX records updated 01/10/2016 (Attachment 9), there are 15 trains per day that cross at Winston Hills Parkway. The project would replace the at-grade crossing with a grade separated crossing, eliminating the potential for a collision with a train at this location. A crash analysis was

completed for 2012-2014 crash data on the four roadway segments within the study area, including Saundersville Road, US-31, Winston Hills Parkway and SR-386. Three of the four roads had a higher crash rate than the statewide average for a similar roadway type, with SR-386 as the only road that was below the average statewide crash rate.

Despite being below the statewide average, safety concerns for SR-386 were expressed in a letter dated 03/12/2015 from TDOT to the Mayor of Hendersonville where traffic stopped by a train and the associated preemptive signal conditions (all red) at the interchange is causing vehicles to back out onto the freeway, creating the potential for severe crashes on a high speed (65 mph) facility.

Low light or dark conditions were cited in recent crashes as a factor on Saundersville Road where a vehicle hit the curb. Currently, only the interchange has street lights. The project project would add lights from the interchange along Saundersville Road and to the new connector road to improve visibility.

The crash analysis and TDOT letter are included in Appendix G.

- Accommodate growth, relieve current and anticipated traffic volumes on the existing street network;

  Hendersonville continues to grow as a subburb of Metropolitan Nashville. Traffic volumes are estimated to increase at an annual rate of 1.5% based on projections from TDOT and the MPO. The proposed project would be designed for the 2040 design year traffic volumes with additional turn lanes on Saundersville Road and US-31 and revised signal timing. The approach and methodology were approved on 01/19/2018 (Attachment 11).

  In the aforementioned 03/12/2015 letter from TDOT, it cites "signficant growth due to the influx of large tracts of residential development" as a factor in the increases in traffic volumes. The proposed project would increase the roadway capacity with two lanes in each direction for the connection between US-31 and the SR-386 interchange, along with dual turn lanes on Saundersville Road and the connector road.

  The Traffic Analysis Report with forecasting and methodology is included in Appendix H.

- Eliminate emergency vehicles being stopped by a train at the at-grade crossing on Winston Hills Parkway;

  According to an 05/18/2017 email from Hendersville's Fire Chief (Appendix H), in the past three years (2014-2016), there have been 1,792 fire and emergency calls from Firehouse No. 6 which is located approximately 0.5 mile from the project site. Of this total, 595 have been on or off Saundersville Road. Approximately 27 (1-2%) of these calls have occurred when a passing train does not allow the tracks to be crossed. Three detour routes are available. One is to the west via Indian Lake Boulevard for 6.2 miles, one to the east via Lower Station Camp Boulevard and back on SR-386 to exit at Saundersville Road for a total of 6.9 miles, or one for 1.1 miles to the east that is not considered due to trucks having to make a U-turn across multiple lanes of US-31 to access the westbound entrance ramp of SR-386 and then exit off at Saundersville Road. Any of these detour routes add critical minutes to response times which is a concern to the fire department.

  The proposed project would have a grade separation with CSX railroad and eliminate the at-grade crossing at Winston Hills Parkway. The new route would increase the distance from Fire Station No. 6 to the Saundersville Road interchange by 0.7 miles, adding less than two minutes to the current response time when there is no train passing.

- Increase recreational opportunities through improved connectivity to an existing network of bike lanes along US-31 (East Main Street) and sidewalks on Saundersville Road.

  The proposed project is consistent with the Bicycle-Greenway Plan (Appendix L) and adds a new mulitmodal connection between US-31 and Saundersville Road. The City of Hendersonville's current Bicyle-Greenway Plan proposes bike lanes along wide shoulders on US-31 throught the city limits. US-31 currently has dedicated bike lanes between Sanders Ferry Road and Winston Hills Parkway. The

City's Greenway Plan proposes to extend the existing Indian Lake East Greeway (multi-use path) eastward from its current terminus near the Hendersonville Public Library to the city limits along Saundersville Road either on a multi-use path or wide outside lanes.

The proposed project would retain the wide shoulders (10-foot total, 8-foot paved) on US-31 with existing bike lanes. The connector road would include bike 4-foot wide dedicated lanes and 5-foot sidewalks in both directions. The sidewalk along the westbound lanes of Saundersville Road would be replaced where the road is being widened. Along the eastbound lanes of Saundersville Road, the existing 5-foot sidewalk would be replaced with a 12-foot multi-use path that would connect to the future extension of the existing greenway along Saundersville Road.

Public Involvement

☐ No public meeting/hearing was held on the project.

☒ A public meeting/hearing was held on the project. The meeting/hearing summary is included as an attachment.

The Project Team held a town hall style public information meeting on 06/26/2017 from 5:00 p.m. to 7:00 p.m. at Hendersonville City Hall. There were 12 attendees with six people signed in, including three Aldermen. Three members of the consultant team and one representative from the City presented and answered questions. Advertisements were run in The Hendersonville Standard and Tennessee Tribune, a minority newspaper. The advertisements and meeting materials are included in Appendix B.

In summary, the findings of the meeting are:

- Attendees were not opposed to the project. There was a interest in expediting the project schedule.
- The idea for the preferred alignment came from the public meeting while reviewing the display map.
- There was concern about business driveways along US-31 and being able to turn left into and out of the property. Connecting the driveways to each other with access at the proposed signal was suggested.
- 3 comment forms were filled out and 9 handouts were taken. One form was mailed to the City after the meeting.

The meeting summary is located in Attachment 10.

On 04/26/2017, an online conference was held with the Project Team and Mr. Randy Hoffman, a property owner on the project. As a real estate developer, his concern was his remaining property after a right-of-way settlement. Mr. Hoffman did not attend the public meeting, but the meeting materials were made available to him.

Project Alternatives

Several alignment options were orignally considered and evaluated as a means of addressing the transportation need within the study area, including the No Build option. These are shown in Appendix A. They all included a new connector road between US-31 and Saundersville Road and the widening for turn lanes along these roads. The differences between the options were the location of the new connector road and whether the road would go over or under the railroad. The City initially preferred Alignment 5, which was presented and discussed at the public meeting. From this discussion, the idea for the Preferred Build Alternative 6 was developed. It met the purpose and need with the fewest impacts.

The No Build option was not preferred because it would not improve travel conditions (e.g. congestion and safety) for drivers in this area and did not eliminate the at-grade crossing.

The other build alternatives were not preferred because they had a greater impacts. Alternatives 1, 2 and 5 alignments would have passed under the railroad with a new bridge for CSX, and Alternatives 3 and 4 alignments would have had the roadway pass over the railroad on a new roadway bridge. Alternatives 1, 2 and 3 each had greater impacts to Stream #2 (STR-2) than Alternative 4, 5 and the preferred alternative. They would have been constructed within an area that is prone to flooding due to an undersized stone culvert constructed under the CSX tracks. Alternative 4 avoided the stream impacts, but was not preferred due to the visual impact from the height above the surrounding area. The required bridge would have been constructed over 50 feet above the existing ground to meet the vertical clearance requirements of the railroad. Construction would have involved bringing in over 250,000 cubic yards of fill material from an off-site location. The original concept developed for the City under a separate study was also considered. The beginning of that alignment was similar to the Alternative 5 and the preferred alternative, but it also included realigning approximately 3,800 linear feet of CSX tracks on a new location to the north to construct the new railroad bridge, which created greater impacts.

At a work session with the City on 04/13/17, the Project Team presented five alternatives considered at that time. Build Alternative 5 was initially selected as the preferred alternative because it had the fewest impacts and smallest construction footprint. It was presented at the public meeting.

The Preferred Build Alternative 6 was developed after the public meeting and was then selected by the City for the following reasons:

1. It least impacts the streams compared to the other alternatives.
2. It has the smallest construction footprint and does not require realigning the railroad.
3. Eliminates the dual left turn required by Alternative 5 by for the higher volume of traffic at this intersection, thus improving traffic flow.

Build Alternative: New connector road on new location between US-31 (East Main Street) and the SR-386 interchange will have the following features:

- New signalized at-grade intersections at US-31 and realigned Saundersville Road. New right-of-way will be required.
- The proposed typical section from the beginning of the project to the interchange ramp will include two 12-foot travel lanes in each direction with 4-foot dedicated bike lanes running adjacent to curb and gutter. A 5-foot grass strip and 5-foot sidewalk will run behind the curb and gutter for the entire length for the southbound lane between US-31 and the new Saundersville Road intersection.
- The proposed typical section between the new Saundersville Road intersection and the SR-386 exit ramp will include a 12-foot multi-use path along the eastbound lane located 5 feet behind the back of the curb.
- Within the interchange, the proposed typical section will have two 12-foot lanes in the northbound direction and two 12-foot lanes in the southbound direction for approximately 250 linear feet, then transition to the existing single 12-foot lane over a distance of 160 feet. The proposed shoulders will match the existing shoulders with 10-foot total width and eight feet stabilized.
- The new location portion of the new connector road is approximately 1,550 linear feet (0.29 mile) and the section being widened along existing Saundersville Road is approximately 900 linear feet (0.17 mile).
- The alignment crosses under CSX railroad. A new bridge will be constructed under the tracks for the existing rail and a future track on the north side. The bridge would be constructed in place with a constuction technique to build a "jump span" that will require temporary short-term closures of rail service. Coordination with CSX will continue into the design phase. This approach does not require a new or

temporary track alignment. Early coordination has been done with CSX to discuss this construction approach.

- Two 11-foot southbound right turn lanes, 200 feet long and two 11-foot southbound left turn lanes, 200 feet long approaching US-31.
- One 11-foot northbound left turn lane, 250 feet long and one 11-foot southbound right turn lane, 200 feet long approaching the new intersection with Saundersville Road.
- A raised 12-foot center median for approximately 270 feet beginning approximately 375 feet north of US-31 and ending approximately 125 feet south of the CSX tracks. From there, the width transitions to 8 feet and continues under the proposed bridge for approximately 200 feet before ending approximately 80 feet north of the CSX tracks. Another 12-foot raised center median begins at the new intersection with Saundersville Road and continues for approximately 515 feet to the SR-386 exit ramp.

Avoidance and minimization efforts from the design of the LIC include the roadway realignment from the Build Alternative 5 alignment. This eliminated impacts to Wet Weather Conveyence #1 (WWC-1) and reduced the impacts to STR-2. The revised alignment also reduced the length of the proposed earthen berm along the west side of the LIC.

US-31, starting approximately 2,500 feet west of the Winston Hills Parkway intersection, will have the following features:

- Two travel lanes in each direction would be maintained, with the road being widened for new turn lanes at the proposed intersection with the connector road. The posted speed of US-31 would remain 45 mph.
- Widened from the existing pavement width over a distance of approximately 290 feet approaching from the west then transitioning back to the existing width over a distance of approximately 325 feet east of the intersection.
- One additional eastbound left turn lane would constructed for 250 feet. This would provide two eastbound left turn lanes to the connector road.
- A new 250-foot long westbound right turn lane. The shoulder for the turn lane would match the existing conditions with curb and gutter and a five foot sidewalk that would continue along the connector road.
- New right-of-way is required.
- The total length of the improvement is approximately 1,030 feet (0.20 mile).
- Existing bike lanes along both shoulders would be retained.
- New sidewalk would be constructed to connect the existing sidewalk along the north side of the road to the proposed sidewalk along the connector road.

Minimization efforts for the design include steeper back slopes for the roadside ditches to mimimize impacting the parking lots along the south side of the road. Additional efforts to reduce parking impacts will occur during the final design phase.

Saundersville Road from approximately 1,000 feet west of the SR-386 exit ramp intersection to the new intersection with the connector road will have the following features:

- Two 12-foot travel lanes in each direction with a 12-foot raised center median. The two westbound lanes would continue as through lanes to the west. The two eastbound lanes would become turn-only lanes, with the outside lane becoming a right turn lane and the inside lane becoming a left turn lane.

Both would have approximately 350 feet of storage capacity.

- Curb and gutter with a five foot sidewalk along the westbound lane and a 12-foot multi-use path along the eastbound lane. There would be a five-foot grass buffer between the back of curb and sidewalk and multi-use path.
- A new traffic signal at the intersection with the connector road. The existing signal at Winston Hills Parkway will be removed. The existing signal at the SR-386 exit ramp terminus would be modified for the new intersection lane configuration.
- The length of the improvements would be approximately 385 feet (0.07 mile).

The realignment of Saundersville Road minimized the impacts to Stream #1 (STR-1) by eliminating the need to extend the culvert that would have been required by Build Alternative 5.

Winston Hills Parkway from US-31 to Saundersville Road will be modified as follows:

- Road will be closed to through traffic from approximately 70 feet south of the CSX tracks to the Saundersville Road intersection. The pavement will be removed and area vegetated. Access will be retained for the sewer pump station located adjacent to the CSX tracks at the crossing location.
- The existing traffic signal will be removed at Saundersville Road.
- The existing signal will remain at US-31. The road will remain open to traffic up to the rear driveway entrance of the gas station.
- The existing 48" pipe culvert will be removed, reducing the encapsulated length of STR-1 by approximately 109 feet.

Mobility improvements include a sidewalk and bike lane on both sides of the connector road and reconstructing the sidewalks on realigned Saundersville Road. US-31 bike lanes would be replaced in kind on the shoulder where the road is widened. The Indian Lake East Greenway terminates approximately 3,100 feet west of the proposed connector alignment and is proposed for future eastward expansion along Saundersville Road. Extending the greenway would not be a part of this project, but the project will replace the existing five-foot sidewalk with a 12-foot multi-use path where it is being realigned and continuing along the connector road up to the SR-386 ramp. A future greenway project can connect to this segment and continue it northward as shown in the City of Hendersonville Greenways map.

A raised berm is proposed along the west side of the connector road between the railroad and Saundersville Road. The berm would vary in height but be no more than four feet high. It would be constructed to elevation 520 which is one foot above the 100-year flood elevation of the unmapped, unnamed tributary to Old Hickory Lake. There is an undersized stone culvert under the railroad embankment approximately 565 feet west of the connector road that backs up water along the north side of the tracks. STR-2 and WWC-2 flow into this culvert. This berm would be designed to protect the connector road during a 100-year storm event. The low point of the road will be at an elevation high enough to construct a stormwater pipe system that will outlet to STR-2 south of the railroad tracks.

Relocation and Right-of-Way (ROW) Impacts

☒ The project does not involve relocation.
☐ The project involves relocation and the relevant Conceptual Stage Relocation Plan is included in the Technical Studies attachment.
☒ The project involves permanent easements.

Based on the preliminary design concept dated 07/17/2017, the proposed project would require the acquisition of approximately 4.58 acres of additional ROW from 17 tracts plus approximately 4.34 acres of temporary construction and slope easements from 19 tracts. All ROW would be acquired following the Uniform Act process.

There will be no residential or business relocations. The driveway on one tract on the south side of US-31 would be revised to line up across from the new connector road. The driveway for the adjacent tract would be modified and a raised median island constructed to prohibit westbound direct left turns from US-31 so close to the intersection. Westbound traffic would enter the left turn lane and make a U-turn to turn right into the driveway.

TECHNICAL STUDIES

Ecology

☒ The Ecology Report is included in Appendix C and Ecology coordination is included in Attachment 2.

Terestrial Environment:

The land in the project area has been primarily agricultural until 2008 when area development began with the construction of Saundersville Road. Most of the land is in fields and lawns with hedge rows and isolated mature trees, including hackberries, eastern red cedar and black walnut. Fields are the most common habitat and include grasses and perennial vegetation. Eight bird species, two fish, and the tracks from three mammals were observed during the 05/18/2017 site visit.

Terrestrial Impact Summary

The loss of a limited number of trees adjacent to the railroad, plus approximately 10 isolated trees, and approximately 9.26 acres of old-field habitat are impacts of the project. There will be direct long-term adverse impacts when trees and old-field areas are converted to roadway. This will be limited, however, as this habitat is adjacent to an existing commercial and industrial land use that does not have substantial connectivity to other habitat. Highway noise can affect the utilization of habitats by wildlife; however, this is an urban project and is located adjacent to a railroad and other streets and commercial activity so noise is already a factor within existing habitats. After project construction, areas that remain undisturbed within highway rights of way, will, over time, provide some degree of refuge for local wildlife as the surrounding areas continue to urbanize and habitats are replaced.

Aquatic Environment:

Stream #1 (STR-1) is a perennial stream with an undetermined quality designation. Approximately 915 linear feet of STR-1 flows through project area within the SR-386 interchange. A total of 149 linear feet will be impacted by the project. It cannot be avoided because of the widening of Saundersville Road and removal of a culvert. This stream crosses under Saundersville Road through an existing box culvert, which will be extended approximately 20 feet at both the inlet and outlet ends, resulting in 40 linear feet of impact. STR-1 also crosses under Winston Hills Parkway near the intersection with Saundersville Road. This segment of Winston Hills Parkway will be removed in association with the closure of the at-grade crossing of the CSX railroad. Approximately 109 linear feet of existing 48-inch pipe will also be removed, allowing STR-1 to flow in a more natural channel for a total of 149 linear feet of impact with an average channel width at the ordinary high water

mark of 2.5 feet. STR-1 flows into Stream #2 within the project area.

Stream #2 (STR-2) is a perennial stream with an undetermined quality designation. Approximately 1,273 linear feet of STR-2 flows through the project area. There will be no impacts from the proposed project. STR-2 currently flows under Saundersville Road. The existing box culvert was originally constructed at a length that will allow the realigned segment of Saundersville Road to be constructed without it having to be extended. The proposed Build Alternative 6 avoids the impacts that would have occurred under the previously preferred Build Alternative 5, which would have required the box culvert to be lengthened.

Wet weather conveyence #1 (WWC-1) is a wet weather conveyence that flows into STR-2 and has a linear wetland (LW-1) associated with it. Approximately 284 linear feet of WWC-1 and 86 linear feet of LW-1 are located within the project area west of the LIC. Impacts to WWC-1 and LW-1 were avoided with proposed Build Alternative 6. WWC-1 was the historic channel of STR-1 that was diverted to STR-2 for the construction of Saundersville Road and currently has no watershed.

Wet weather conveyence #2 (WWC-2) is a wet weather convenance that flows into STR-2 away from the project area. Wetland #1 is associated with WWC-2. Other build alternatives considered would have impacted WWC-2. There are no impacts from proposed Build Alternative 6.

Wet weather conveyence #3 (WWC-3) is a wet weather conveyance that flows to STR-2 on the south side of the CSX tracks. Approximately 777 linear feet of WWC-3 is located within the project area. Approximatly 35 linear feet of WWC-3 will be impacted by crossing and runoff with the placement of roadway fill. Impacts to WWC-3 cannot be completely avoided due to the widening required for US-31.

Compensatory mitigation for permanent stream impacts will be accomplished through permittee-responsible mitigation, mitigation banking, or In-Lieu Fee mitigation to satisfy mitigation requirements.

The Ecology Report is in Appendix C.

Executive Order 11990—Protection of Wetlands

☒ No wetland areas protected under Executive Order 11990 will be impacted.
☐ Wetlands are impacted and supporting documentation is included as an attachment.

USACE correspondence can be found in Attachment 2.

An ecology survey of the subject properties was conducted on 05/18/17. According to the report no wetlands would be impacted. The United States Army Corps of Engineers (USACE) reviewed the ecology report and in response, dated 06/29/2017, indicated that “a Department of Army permit may be required” and must be applied for “prior to any disturbance to stream and/or wetlands.” They also responded in an email dated 08/09/2017 that they “stand by our original letter indicating that a permit may be required,” but “a jurisdictional determination may indicate that a permit is not required, but current information does not rule out the possibility of waters of the U.S. being within the project area.”

Linear Wetland #1 (LW-1) is a linear wetland associated with WWC-1. Approximately 86 linear feet of LW-1 is within the project area to the west of the proposed LIC. It would not be permanently impacted by the project. Wetland #2 (WET-2) is located west of the proposed project. WET-2 is adjacent to STR-2 and has an approximate area of 934 square feet. It will not be impacted by the proposed project.

Endangered Species

USFWS

☐ The proposed project meets the TDOT/U.S. Fish and Wildlife Service (USFWS) Memorandum of Agreement (MOA). No further coordination with USFWS is required. A copy of the MOA is included as an attachment.

☒ The proposed project has been coordinated with the USFWS Field Office. The USFWS responses dated 05/22/2017, 07/11/2017, and 08/22/2017 are included in Attachment 2.

On 05/22/2017, the USFWS provided a species list that identified threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat that may occur within the boundary of the proposed project and/or may be affected by the proposed project. The correspondence stated, “The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended.” The letter went on to state “A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act.”

An ecology survey of the subject properties was conducted on 05/18/17. The ecology survey is included in Appendix C.

On 07/11/2017, the USFWS issued a letter stating, “The documentation provided suggests that removal of some trees would be required for the project. We currently have insufficient information as to whether suitable summer roosting habitat for the federally endangered Indiana bat or threatened northern long-eared bat is present within the project area. As a designated representative for the Federal Highway Administration, TDOT may submit its assessment and findings directly to this office for review and concurrence.”

On 08/22/2017, the USFWS issued a final letter stating, “we concur with TDOT’s determinations of ‘not likely to adversely affect’ for the federally endangered Indiana bat or threatened northern long-eared bat. We are unaware of any federally listed or proposed species that would be impacted by this project. Therefore, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act (Act) of 1973, as amended, are fulfilled for all species that currently receive protection under the Act.”

TDEC Database

☐ On mm/mm/yyyy the preparer coordinated with the Tennessee Department of Environment and Conservation (TDEC) Natural Heritage database to determine if any federal or state listed endangered species are known to exist in the project area.

☒ N/A—A check of the TDEC database was not required.

TDEC Natural Heritage Inventory Program

☒ The proposed project was coordinated with TDEC's Natural Heritage Inventory Program. The TDEC responses dated 06/06/2017, 07/07/2017, and 08/09/2017 are included in Attachment 2. Reviewing their natural heritage database, TDEC responded that there was one animal species observed previously within one mile of the project and one animal species observed previously within four miles of the project. TDEC stated, "Our concern would be the habitat within the site for the state deemed in need of management, Streamside salamander. Otherwise, the project area is already disturbed by development and we see very little chance for impacts to rare plants or habitats." TDEC requested that TWRA be contacted concerning the Streamside salamander record from 2017 found on the project site. TDEC went on to state, "Should suitable habitat exist on or immediately downstream of the site, asked that the project plans provide for the protection of these species."

After reviewing the Ecology Report, TDEC responded in an email dated 07/07/2017 "we do not anticipate any impacts to rare, threatened, or endangered plant species from this project."

In an 08/09/2017 email regarding changes from Build Alternative 6, TDEC responded, "The Division of Natural Areas comments are still valid."

☐ N/A—Coordination with TDEC's Natural Heritage Inventory Program was not required because either no plant species of concern were found during the TDEC database check or were determined not to be affected by the project.

TWRA

☒ The proposed project was coordinated with Tennessee Wildlife Resources Agency (TWRA). TWRA response dated 06/19/2017, 09/27/2017, and 11/15/2017 are included in Attachment 2. The TWRA letter dated 06/19/2017 stated, "It is our understanding from what was sent that this project is not expected to impact any state-listed species that are Deemed-in-Need-of-Management, Threatened, or Endangered."

☐ N/A—Coordination with TWRA was not required because no animal species of concern were found during the TDEC database check.

TWRA also responded on 09/27/2017 in an email stated, "the TWRA has reviewed the redesigned Saundersville Road project and our previous comments on this proposed project are still valid."

In a letter dated 11/15/2017, TWRA addressed TDEC's concern for the Streamside salamander habitat with the following response: "Recently, the state Deemed-in-Need-of-Management Streamside Salamander has recently been documented (March 12, 2017) approximately 0.3 miles from the project alignment in Wet Weather Conveyance 3, and is likely present in the other wet weather conveyances in the project area. Since the revised design eliminated most of the aquatic feature impacts and only 35 feet of impacts remain to Wet Weather Conveyance 3, we do not anticipate significant adverse impacts to this state listed species; provided that best management practices to address erosion and sediment are implemented and maintained during construction activities."

In their 06/19/2017 letter, TWRA requested the note, "Any major change to plans, construction methodology, or right-of-way must be reviewed by TWRA," be put on all construction plans.

Biological Assessment for Endangered Species

☒ No Biological Assessment is needed.
☐ A Biological Assessment will be required prior to construction.
☐ The Biological Assessment is included in the Technical Studies attachment.
☐ A concurrence letter dated mm/dd/yyyy is included as an attachment.

No Biological Assessment is needed.

Executive Order 11988—Floodplain Management

☒ No encroachments upon the 100-year floodplain protected under Executive Order 11988 are involved.
☐ Encroachments upon the 100-year floodplain are involved and a FEMA map is included in an attachment.

The project is not in a FEMA floodway, floodplain, or study area, and is located on Flood Insurance Rate Map (FIRM) in Sumner County, Panel 404 of 477, Map # 47165C0404G. A portion of the FEMA FIRM is included as Attachment 3.

A raised berm constructed to elevation 520 will be constructed along the southbound lane of the connector road between the railroad and Saundersville Road. This would serve to protect the road from stormwater being detained during the 100-year storm due to an undersized stone culvert under the CSX tracks located approximately 565 feet west of the connector road. The proposed project does not impact the flow or impounding of stormwater water. A figure showing the existing and post-construction conditions is included with Attachment 3.

Farmland

☒ The project does not convert farmland to a transportation use.
☐ If the project converts farmland, the total points in the Natural Resource Conservation Service (NRCS) Farmland Impact Conversion Form are less than 160 points.

The project does not convert farmland to a transportation use. Correspondence dated 09/27/2017 with the USDA is included in Attachment 4.

Wild and Scenic Rivers

☒ The project does not involve a designated Wild and Scenic River.
☐ The project involves a designated Wild and Scenic River.

The project does not involve a designated Wild and Scenic River.

Air Quality

Transportation Conformity

☐ The Air Quality Report is included in Appendix D.
☒ Air quality coordination information is included as an attachment.

The proposed project was coordinated with TDOT's Air and Noise section. An ESR was signed 10/18/2017. A summary of the findings are included below and full correspondence is included in Attachment 5.

Transportation Conformity:

"This project is in Sumner County which is in attainment for all regulated criteria pollutants. Therefore, conformity does not apply to this project."

Mobile Source Air Toxics (MSAT)

☒ The project is exempt from MSAT analysis. Coordination information is included as an attachment.
☐ An MSAT analysis is required.
☐ MSAT supporting documentation is included as an appendix.

The proposed project was coordinated with TDOT's Air and Noise section. An ESR was signed 10/18/2017. A summary of the findings are included below and full correspondence is included in Attachment 5.

Mobile Source Air Toxics (MSATs):

"This project qualifies as a categorical exclusion under 23 CFR 771.117 and, therefore, does not require an evaluation of MSATs per FHWA's "Interim Guidance Update on Air Toxic Analysis in NEPA Documents" dated October 2016."

Particulate Matter less than 2.5 microns ($PM_{2.5}$)

☐ The project area is in a nonattainment area for $PM_{2.5}$.
☒ The project area is in attainment for $PM_{2.5}$.
☐ Inter-agency consultation (IAC) documentation is included as an attachment.

Noise

☐ This project is Type III. Coordination information is included as an attachment.
☒ This project is Type I or Type II. The Noise Report is included in Appendix D.

The proposed project was coordinated with TDOT's Air and Noise section. An ESR was signed 10/18/2017. A summary of the findings are included below and full correspondence is included in Attachment 5.

Noise:
"The project involves the construction of a road on a new alignment and is Type I per the FHWA noise regulation, Procedures for Abatement of Highway Traffic and Construction Noise, 23 CFR 772, and the Tennessee Department of Transportation's Policy on Highway Traffic Noise Abatement (TDOT's noise policy). Therefore, a noise study was conducted in accordance with TDOT's noise policy and procedures." "The study identified the noise-sensitive land uses in the project area including a senior living center and two churches but determined that the project will not impact the uses."

Statement of Likelihood:

"Noise abatement is not proposed for this project."

Refer to Appendix D for the Noise Report.

Section 4(f) of the Department of Transportation Act of 1966

☒ No land given protection under Section 4(f) will be affected by this project.
☐ Section 4(f) land is involved. The required Section 4(f) evaluation is included in the Technical Studies attachment.
☐ A *de minimus* finding for this project is included in the Technical Studies attachment.

No land given protection under Section 4(f) will be affected by this project.

Section 6(f) of the Land and Water Conservation Fund Act of 1965

☒ Section 6(f) is not involved.
☐ Section 6(f) is involved. Supporting documentation is included as an attachment.

No Section 6(f) funds were expended for resources within the project study area.

Section 106 of the National Historic Preservation Act of 1966

Cultural Resources

☐ This project meets a TDOT/Tennessee State Historic Preservation Office (SHPO) Memorandum of Understanding (MOU). No further coordination with the SHPO is necessary.

☐ Combined Cultural Resources Report was prepared (the combined report is in the Technical Studies attachment).
☐ SHPO combined cultural resources letter dated mm/dd/yyyy is included as an attachment.

☒ Separate Cultural Resources Reports were prepared (see next two sections below). The Historic/Architectural and the Archaeology Reports are in the Technical Studies attachment.
☒ SHPO historic/architectural resources letter dated 06/28/2017 is included as an attachment.
☐ National Register of Historic Places listed or eligible historic/architectural properties are affected.
☒ No National Register of Historic Places listed or eligible historic/architectural properties are affected.
☒ SHPO archaeological resources letter dated 10/19/2017 is included as an attachment.
☐ National Register of Historic Places listed or eligible archaeological properties are affected.
☒ No National Register of Historic Places listed or eligible archaeological properties are affected.

Three previously unrecorded potential historic and architectural resources within the Area of Potential Effects (APE) were evaluated. These included the “House of Cash,” a commercial building owned by country music stars June and Johnny Cash, the Jackson House, and the CSX Railroad, which was originally the L&N Railroad between Nashville and Gallatin, TN. Two other previously recorded resources were also within the APE, including the Scott House and Saundersville United Methodist Church. None of these resources were recommended to be eligible for the National Register of Historic Places.

On 06/28/2017, the TN-SHPO issued a letter stating that “we find that no architectural resources eligible for listing in the National Register of Historic Places will be affected by this undertaking.” This coordination and an ESR from the TDOT’s Historic Preservation section are included in Attachment 6. The Historic and Architectural Survey report is included in Appendix E.

TDOT’s Historic Preservation section reviewed the boundary of the revised project and issued an email dated 07/05/2017 which indicated, “The general Area of Potential Effects identified in the consultant’s report covered a large enough area that the slight change in alignment continues to be covered by the report.”

A Phase I Archaeological survey was performed on 04/24/2017 and 06/02/2017 and a report was completed in June 2017 for the original alignment of the preferred build alternative. Additional field work was required for the revised APE of Build Alternative 6. The report was revised in August 2017. Shovel tests and visual examination of exposed ground surfaces revealed no archaeological resources in the APE of either alternative. No further archaeological investigations are recommended. The full report is included in Appendix F.

On 10/19/2017, the TN-SHPO issued a letter stating that “we find that no archaeological resources eligible for listing in the National Register of Historic Places will be affected by this undertaking.” The letter and ESR from TDOT’s Archaeology section are included in Attachment 6.

☐ Cultural resources mitigation measures are included as an attachment.

Native American Consultation

☐ This project does not require Native American consultation. Verification that coordination is not required is included as an attachment.

☒ Pursuant to 36 CFR 800, a consultation letter dated 06/26/2017 was sent to the following tribes *(check below all tribes that apply)* and is included as an attachment.

☒ Responses were received from the following tribes *(check below all tribes that apply)* and are included as an attachment.

☐ No tribal responses were received.

*Letters sent to/responses received from (Check all that apply)**:***

Sent to	*Received from*		*Sent to*	*Received from*	
☒	☐	Absentee—Shawnee Tribe of Oklahoma	☒	☒	Muscogee (Creek) Nation
☐	☐	Alabama Quassarte Tribal Town	☐	☐	Poarch Band of Creek Indians
☒	☒	Cherokee Nation	☐	☐	Quapaw Tribe of Oklahoma
☐	☐	Chickasaw Nation	☒	☐	Shawnee Tribe
☐	☐	Choctaw Nation of Oklahoma	☐	☐	Thlopthlocco Tribal Town
☒	☐	Eastern Band of Cherokee Indians	☒	☒	United Keetoowah Band of Cherokee Indians in Oklahoma
☒	☐	Eastern Shawnee Tribe of Oklahoma	☐	☐	Other—name of tribe
☐	☐	Kialegee Tribal Town	☐	☐	Other—name of tribe

An ESR from TDOT's Archaeology Program Manager who handles Native American Coordination, dated 01/11/2018, stated the following:

"Initial consultation was sent on [06/26/2017] to federally recognized Native American tribes with interests in Sumner County. The Muscogee (Creek) Nation, Cherokee Nation, and United Keetoowah Band of Cherokee Indians in Oklahoma responded on [07/28/2017], [07/07/2017], and [07/31/2017], respectively, and requested to be consulting parties. Upon completion of the cultural resources documentation and SHPO coordination, all three tribes were provided with copies of this documentation and invited to provide comments. All three tribes indicated that they have no current concerns and concur with the findings of the cultural resources reports. They also requested to be contacted in the event that human remains or archaeological materials are inadvertently discovered during construction. In such an event, the Department would proceed pursuant to 36 CFR 800.13, "Post-Review Discoveries." The discovery of human remains is furthermore subject to T.C.A. 46-4-101."

Refer to Attachment 7 for all correspondence regarding NAC.

Hazardous Materials

☒ No underground storage tanks or sources of hazardous materials are, or have been, located in the project impact area. If any hazardous materials are found during construction they will be handled and disposed of in compliance with applicable federal and state regulation. Verification that there are not sites or a study is not needed is included as an attachment.

☐ Hazardous material site(s) are involved.

☒ The Hazardous Materials (Phase I ESA) Report is included in the Technical Studies attachment.

The proposed project was coordinated with TDOT's Hazardous Materials section. An ESR dated 08/07/2017 stated, "The Draft Phase I Environmental Site Assessment dated August 2017 is sufficient and meets the requirements of Tennessee Environmental Procedures Manual, TDOT, June 2011. However, as I stated in the previous review, a statement "no Phase II ESA studies are recommended" in the conclusions would be recommended along with the "no potential REC's" sentence in the Findings section.

The Phase I Environmental Site Assessment Survey Report is included in Appendix I. The ESR dated 08/07/2017 confirming the findings is in Attachment 8.

Environmental Justice

☒ No Environmental Justice issue is involved.
☐ Environmental Justice issues are involved.
☐ Environmental Justice documentation is included in the Technical Studies attachment.

The proposed does not have the potential to have disproportionately high and adverse impacts on low-income or minority populations. A summary report is included in Appendix J.

Other Issues

☒ No other issues are involved.
☐ Other issues are involved.
☐ Supporting documentation of other issues is included as an attachment.

An 18-inch wide, two-foot deep sinkhole was observed to the west of the project site, but none within the project site. A geotechnical investigation will be completed during the design phase of the project. It will identify and make recommendations on how to address any subsurface issues during design and construction.

The initial CSX railroad coordination has been done by TDOT and is included in Attachment 9.

Environmental Commitments

○ **Commitments are involved on the project and the list is found on the Environmental Commitments Green Sheet.**
◉ **Commitments are not involved on the project.**

Preparer's Certification

I hereby certify that I have read and understand the *Guidance for TDOT Environmental Document Templates.*

This document has been reviewed for compliance with applicable federal, state, and local laws and regulations. It has been prepared in compliance with the Council on Environmental Quality Regulations for Implementing the Procedural Provision of the National Environmental Policy Act, 40 CFR 1500–1508, 23 CFR 771, and the Tennessee Environmental Procedures Manual. I hereby certify that I have read and understand 23 CFR 771.117(d).

This document has been prepared by experienced, technically competent, and knowledgeable professionals. I can attest to the document's quality, accuracy, and completeness. By signing this document I am further certifying that, to the best of my knowledge, it meets the criteria for a D-List Categorical Exclusion and Tennessee Environmental Evaluation Report (Major TEER).

Prepared by:

Jeffrey Koontz, PE
Consultant

05/16/2018

Local Government Representative Signature (if prepared by local government):

05/16/2018

Marshall Boyd, PE
City Engineer

TDOT Approval

The Environmental Division TDOT has reviewed the proposed project for compliance with environmental laws and regulations. This project as proposed will not involve significant impacts to planned growth, land use, or existing travel patterns. The above findings demonstrate the fact that the proposed improvements will not indirectly or cumulatively have any significant environmental impacts. Therefore; it is our recommendation that this project be classified as a Major TEER or D-List Categorical Exclusion under the provision of 23 CFR 771.117(d).

Reviewed by:

Amy Warren
NEPA, Local Programs Coordinator
TDOT Environmental Division

Approved by:

Amy Warren on behalf of Klint Rommel
Transportation Manager II
TDOT Environmental Division

cc: TDOT Local Programs Office
TDOT Environmental Division
TDOT Region 3
City of Hendersonville
Mr. John Kahle