Concept Report Form

The Concept Report Form develops an initial project vision, basis of design and report (e.g., the Concept Report) to transition into the subsequent design stages (Stages 1 through 4 in the Project Delivery Network [PDN]). This form summarizes all project components using information to complete the Concept Report.

				Gen	eral Proj	ect Informat	ion					
Project Name	Bridge over	Over	flow									
PIN	134878.00											
Route	Route	Route NHS (Y/N)			Functional Class			City		County		
Information	SR-180	No			Rural Majo	r Collector	N	lutbush		Haywo	/ood	
Project Information	Begin Lo Mile	og	End L Mile	_	AADT ¹	Design Hour Vol. (DHV) ¹	Truck % ¹	Design Speed (MPH)	Poste Spee (MPH	d Base	Design Year	
	4.57				1,180	142	3.00	50	45	2029	2049	
Project Description & Standard Drawings Used	for the app based on the will be raise the local ro	roach ne abc ed 1.5' oute de	and bri ove reco '. A deto etour is	idge v omme our is 12 m	will be 2-10' endations w recommend	span bridge usir foot travel lanes ill be 29'3". The ded. The state ro niles). Superstru (2).	with 4' sh proposed goute detou	oulders. The grade and ve r is 42 minu	e out-to ertical c ites (32.	o-out width Elearance 1miles)		
Important Project History or Related Projects	existing str report is 40 4.19.4) for 6	ucture) tons draina	e has 2-9 (08/22/2 ige area	9' trai 2023) 1 of 0.	vel lanes wit). The discha 46 square n	oridge, 57' long on the 2' shoulders. The drawinges for the drawiles: Q10 is 476 eral funding.	The listed v inage basi	veight limit n (StreamSt	on the i ats Vers	inspection sion	Project Details	
Project Purpose/Need	-Built in 19 -Timber bri	60 idges a pical s	are bein	ng pha	ased out and not meet TD	the present con d is near the end OOT standards			ridge:		Proj	
Major Environmental Considerations	Ecology: Wa	eserva ater re	tion: A s	surve s like	y will be req ly within pro		produced (unless there	e is a fec	deral		

Multi-Modal Considerations	This project is in a rural area with a proposed 2-lane bridge width of less than 44 ft where the cost of dedicated multimodal accommodations is excessively disproportionate to the need and probable use. Excessively disproportionate is defined as exceeding 20 percent of the cost of the project.	
Major Project Risks	Approx. 0.47 acres of ROW to be acquired under the detour option and 3.86 acres for the realignment option. Power, Telecom, and Gas Utilities are present. This bridge replacement should be coordinated with the replacement at L.M. 4.75. Agricultural fields border the site and farm equipment use of the bridge must be considered in design and construction. This document is covered by 23 USC § 407 and its production pursuant to fulfilling public planning requirements does not waive the provisions of § 407.	

<u>Approvals</u>

Executed for approval of this Concept Report DAVIA DUNCAN	11/25/2024
David Duncan (Nov 25, 2024 14:12 CST)	11/25/2024
Engineering Concepts and Statewide Programs Director	Date
The following individuals to execute if a bridge concept report:	11/25/2024
St <u>ruct</u> ures Director	Date
BAL	11/26/2024
Regional Project Management Director	Date

¹ Traffic numbers reflect identified design year

		Action Checklist	
0SD1 Init	iate (Concept Report and Request Funding	
Complete	NA		Date Completed
✓		Request and Finalize Safety Data	04/05/2024
✓		Request Project Number, PIN, and Task Profile Numbers	01/22/2024
	1	Coordinate with Long Range Planning	
✓		Request and Finalize Traffic Data	02/21/2024
	1	Request Preliminary Survey Data	
	1	Initiate Division Reviews	
	✓	Schedule Site Review (with appropriate Divisions)	
0EN1 Con	duct	Environmental Desktop Review	
Complete	NA		Date Completed
✓		Confirm Environmental Desktop Review is Complete	10/17/2024
0MM1 Co	nduc	t Multimodal Review	
Complete	NA		Date Completed
	1	Confirm Multimodal Review is Complete	
	1	Review Multimodal Considerations & Recommendations	
0TO1 Con	duct	Initial Traffic Ops/TSMO Review (include HQ Traffic Ops and Regional Traffic Office)	
Complete	NA		Date Completed
	✓	Confirm Transportation Systems Management & Operations (TSMO) Alignment & Operations Review is Complete	
	✓	Request Concept Report Review	
0ST1 Dev	elop	Structures Recommendations	
Complete	NA		Date Completed
✓		Confirm Recommended Structure Type for Concept Report is Complete	08/12/2024
✓		Confirm Hydraulic Recommendations for Concept Report is Complete	08/12/2024
0SY1 Prov	vide I	Preliminary Survey Data	
Complete	NA		Date Completed
	1	Confirm Control Ground Survey Set	
	1	Review Preliminary Survey Data	
	1	Determine Time to Complete the Aerial Survey	
0GT1 Con	duct	Preliminary Geotechnical Assessment	
Complete	NA		Date Completed
	✓	Confirm Geotechnical Division Review is Complete	
ORD1 Pro	vide	Roadway Desktop Review	
Complete	NA		Date Completed
		Confirm Roadway Division Review is Complete	

		Action Checklist	
0SD2 Dev	elop	Draft Concept Report	
Complete	NA		Date Completed
	✓	Conduct Intersection and Interchange Evaluation (IIE)	
	✓	Complete Conceptual Signal Warrants	
	✓	Develop Draft Conceptual Layouts/Crash Figures for Site Visit	
	✓	Compile Initial Divisional Reviews for Site Visit	
	✓	Prepare & Send Site Visit Packet	
	✓	Lead Site Visit	
	✓	Initiate Interstate Access Requests (IAR) Concept Coordination with FHWA (if applicable)	
✓		Develop, Compile, and Distribute the Draft Concept Report	10/02/2024
0TO2 Dev	elop	TSMO Scope Items (include HQ Traffic Ops and Regional Traffic Office)	
Complete	NA		Date Completed
	✓	Confirm Signal Warrants Analysis is Complete	
	√	Confirm Lighting Warrants Analysis is Complete	
	1	Review and Confirm TSMO & ITS Scope and Budget	
0RW1 Co	mple	te Preliminary Right-of-Way Estimates	
Complete	NA		Date Completed
	✓	Review and Confirm Preliminary Right-of-Way Cost Estimates	
0UT1 Con	nplet	e Utility Preliminary Estimates	
Complete	NA		Date Completed
✓		Review and Confirm Preliminary Utility Estimate	10/17/2024
	✓	Review and Confirm Preliminary Railroad Cost Estimate	
0SD3 Fina	alize (Concept Report	
Complete	NA		Date Completed
	✓	Compile and Review Initial Risk Assessment	
✓		Finalize Conceptual Layouts	11/21/2024
✓		Develop Environmental Technical Study Area (ETSA)	10/02/2024
✓		Address Comments and Finalize Concept Report	11/21/2024
	1	Address Comments and Finalize Interstate Access Requests (IAR) Document and Memo (if applicable)	
	✓	Develop Roadway Safety Audit (RSA) No Plans Document	
✓		Submit the final Concept Report for Review and Signatures (as needed; see 0SD3 for additional information)	11/21/2024
✓		Finalize Document and Upload All Needed Electronic Files	12/2/2024
✓		Notify the Project Management Director or Assigned Project Manager to Set Up Project (1PM1)	12/2/2024

NA Justification

Coordinate with Long Range Planning-Long Range Planning coordination not needed for STID BCR document

Request Preliminary Survey Data- survey data not needed for STID BCR document

Schedule a site visit-site visit not required

0MM1 Conduct Multimodal Review- multimodal coordination not required

OSY1 Provide Preliminary Survey Data- survey data not needed for STID BCR document

OGT1 Conduct Preliminary Geotechnical Assessment- geotechnical data not received for STID BCR document

OSD2 Develop Draft Concept Report-no site visit was held for this bridge and no interchange or signal warrants were required

0TO2 Develop TSMO Scope Items-no signals or lighting needed within project limits

ORW1 Complete Preliminary Right-of-Way Estimates-ROW estimate calculated in cost estimate

OUT1 Complete Utility Preliminary Estimates-utility cost calculated in cost estimate

Compile and Review Initial Risk Assessment-Risk Assessment not needed for STID BCR document

Address Comments and Finalize Interstate Access Requests (IAR) Document and Memo (if applicable)-no interstate within project limits

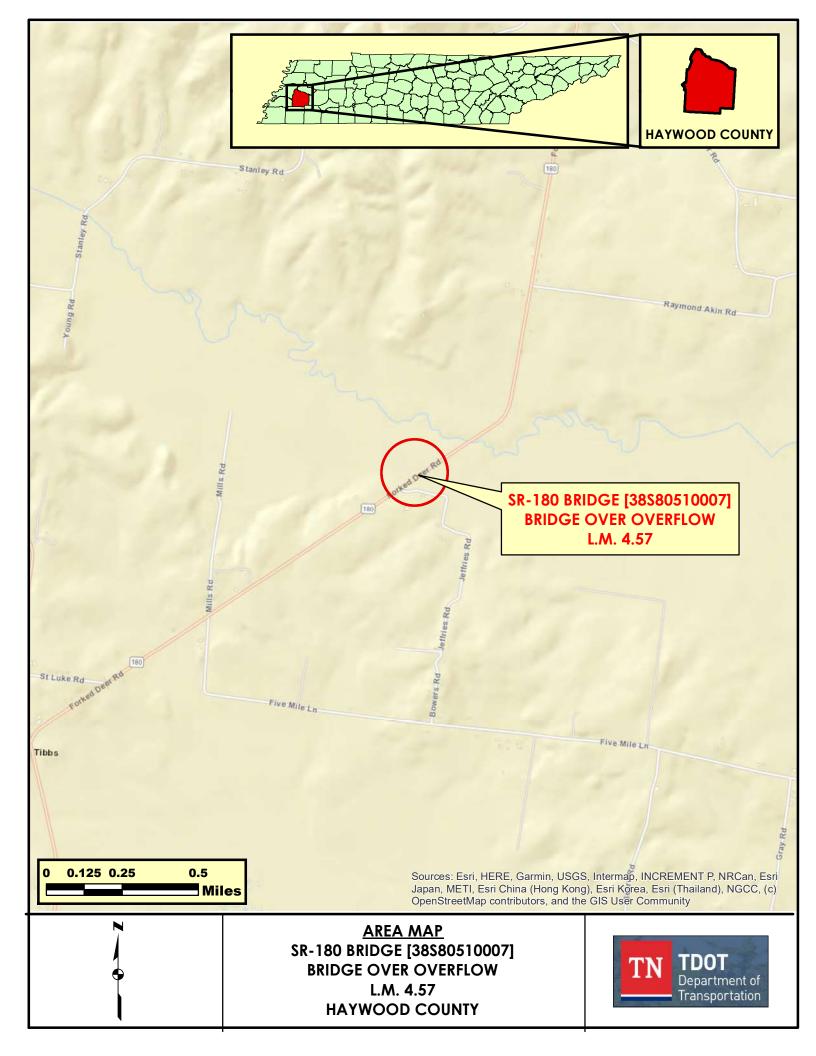
Develop Roadway Safety Audit (RSA) No Plans Document- no plans document not needed for STID BCR document

Concept Report Table of Contents/Attachments		
	Included	NA
One-Page Summary (with project location map)	✓	
Conceptual Layout(s) and Cross Section	✓	
Environmental Technical Study Area (ETSA) Layout	✓	
Concept Cost Estimate (Construction Year Estimate)	✓	
TSMO & ITS Scope and Budget ¹		✓
ROW Form 44-A ¹		1
Crash Packet ¹	✓	
Crash Prediction Analysis ¹		1
Site Visit Attendee List		✓
Environmental Desktop Review Form ¹		
Multimodal Considerations & Recommendations ¹		✓
Existing Structure Summary ¹	1	
Email or memo containing Structure Type Recommendations ¹	1	
Email or memo containing Hydraulic Recommendations ¹	✓	
Hydraulic Data	1	
Intersection and Interchange Evaluation (IIE) Analysis and Summary Form		1
Traffic Analysis Summary/Tables	✓	
Forecasted Traffic Sheets ¹	✓	
Traffic Modeling (e.g., Synchro, VISSIM, Highway Capacity Software (HCS) Output) ¹		1
Signal Warrant ¹		1
Lighting Warrant ¹		1
Initial Risk Assessment using the Risk Assessment Form		✓
Final Interstate Access Request (IAR) Document and Memo with Letter from STID Director		✓
Road Safety Audit (RSA) No Plans ¹		✓

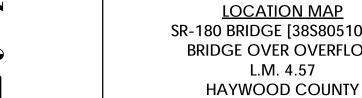
NA Justification

TSMO & ITS Scope and Budget-no ITS within project limits; ROW Form 44-A-form not needed for STID BCR document; Crash Prediction Analysis- 2 crashes occurred within the project limits, crash prediction analysis not needed; Site Visit Attendee List-no site visit was held; Multimodal Considerations & Recommendation-no multimodal coordination; Intersection and Interchange Evaluation (IIE) Analysis and Summary Form- AADT is too low for IIE Analysis Traffic Modeling (e.g., Synchro, VISSIM, Highway Capacity Software (HCS) Output)- AADT too low to model Signal Warrant-no signals warranted within project limits; Lighting Warrant-no lighting warranted within project limits Initial Risk Assessment using the Risk Assessment Form-Risk Assessment not needed for STID BCR document Final IAR Document and Memo with Letter from STID Director-no interstate access within project limits Road Safety Audit (RSA) No Plans-RSA no plans document not needed for STID BTIR document

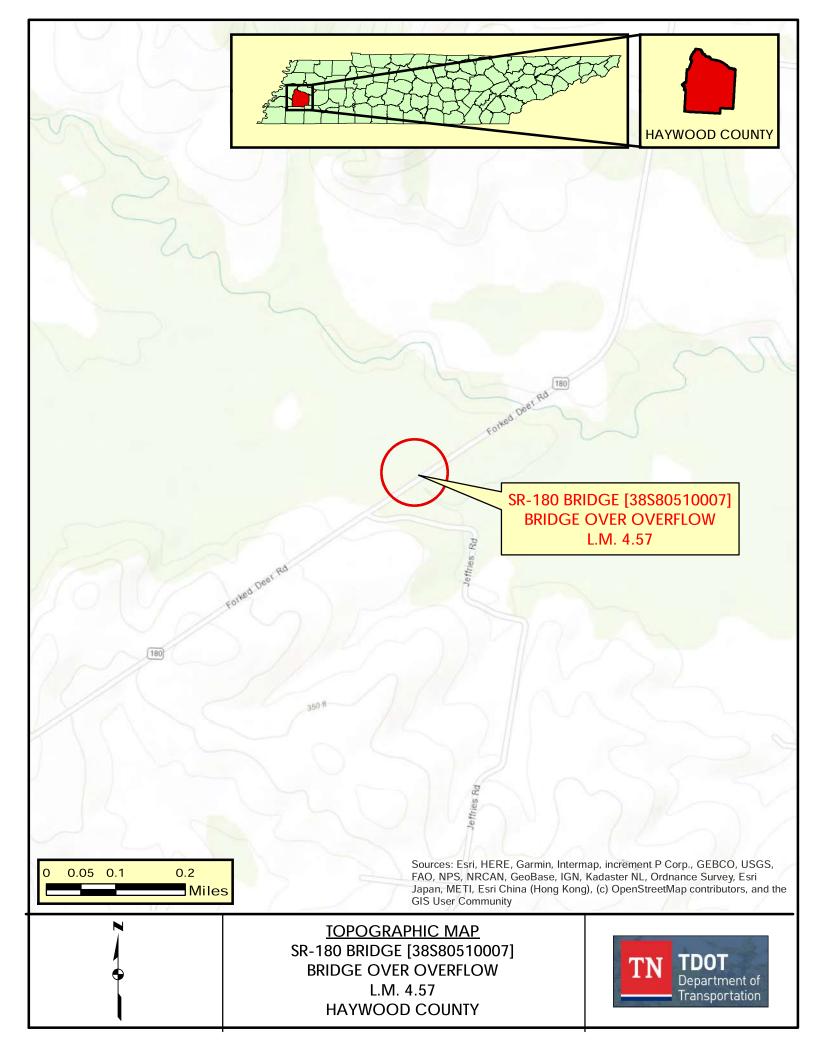
¹ External document to STID



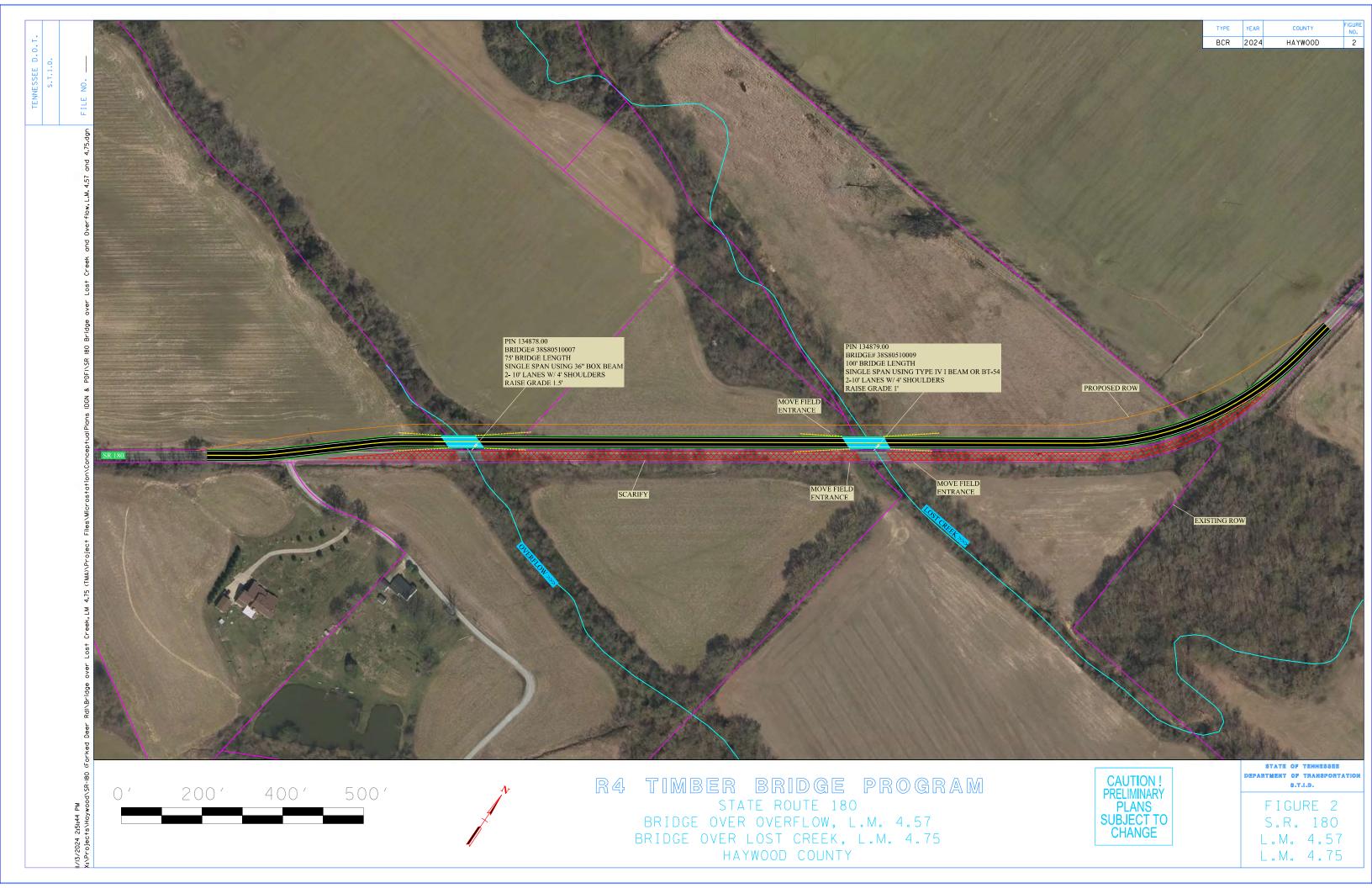


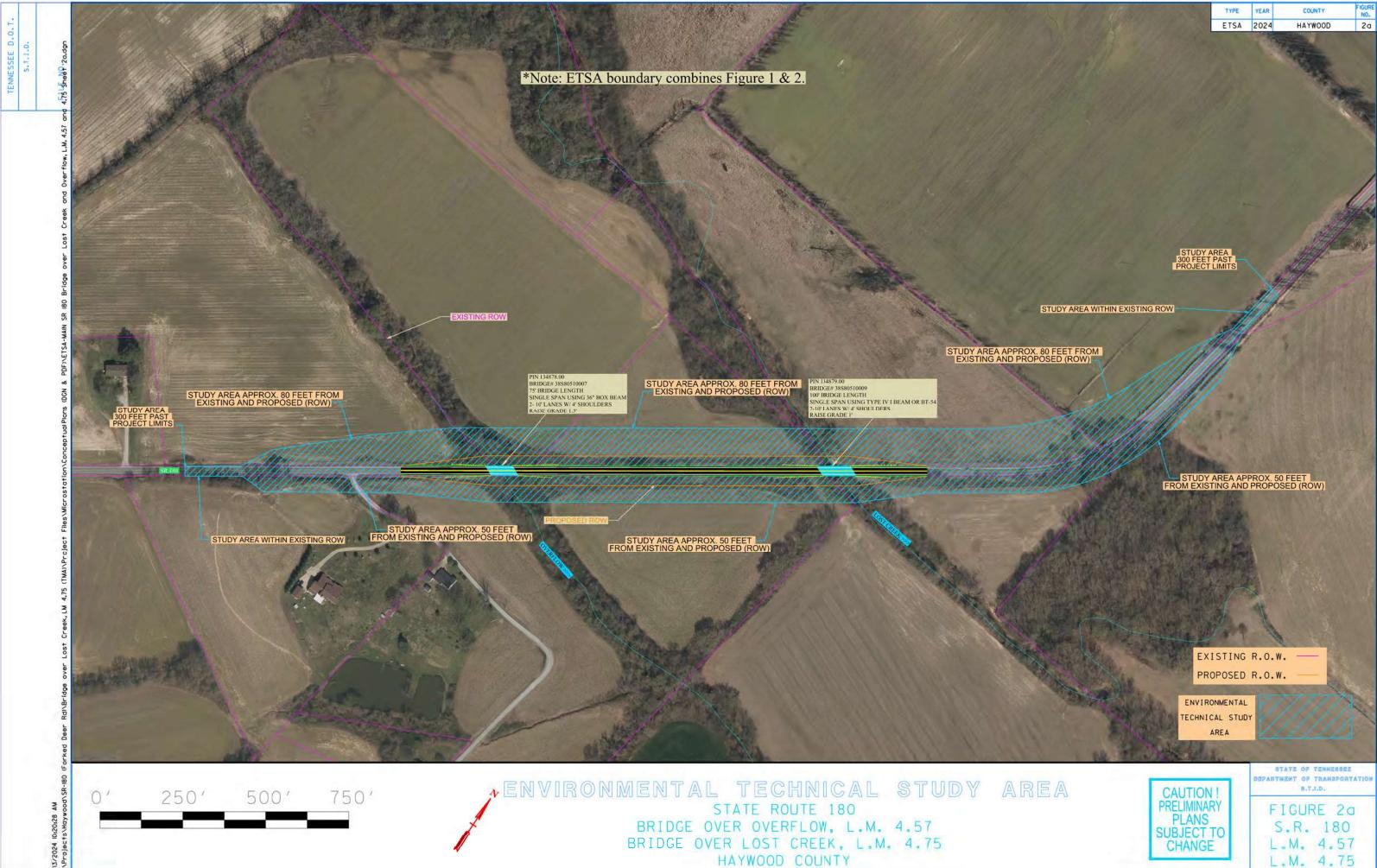


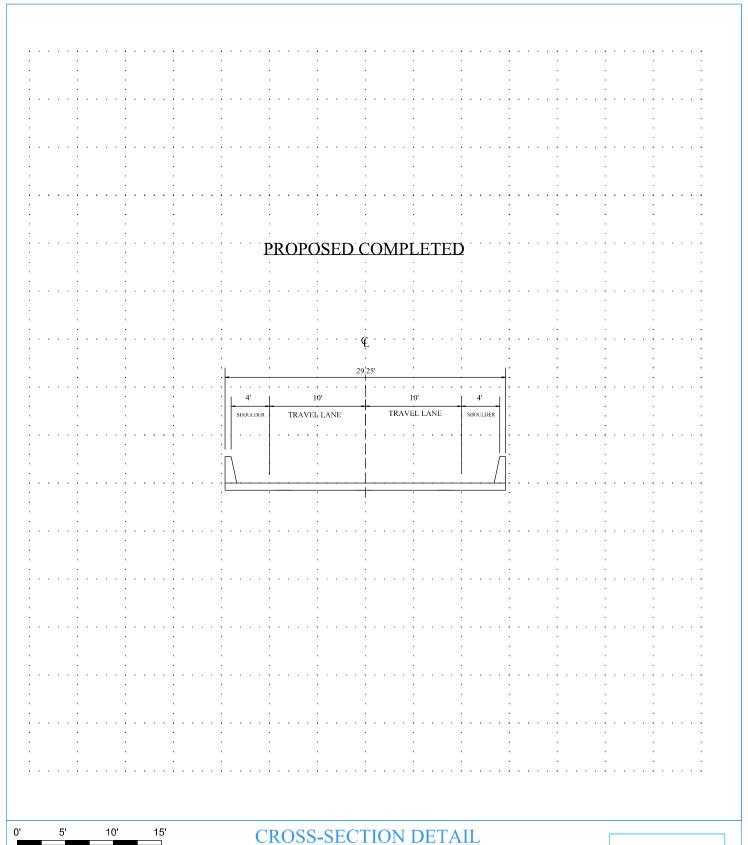








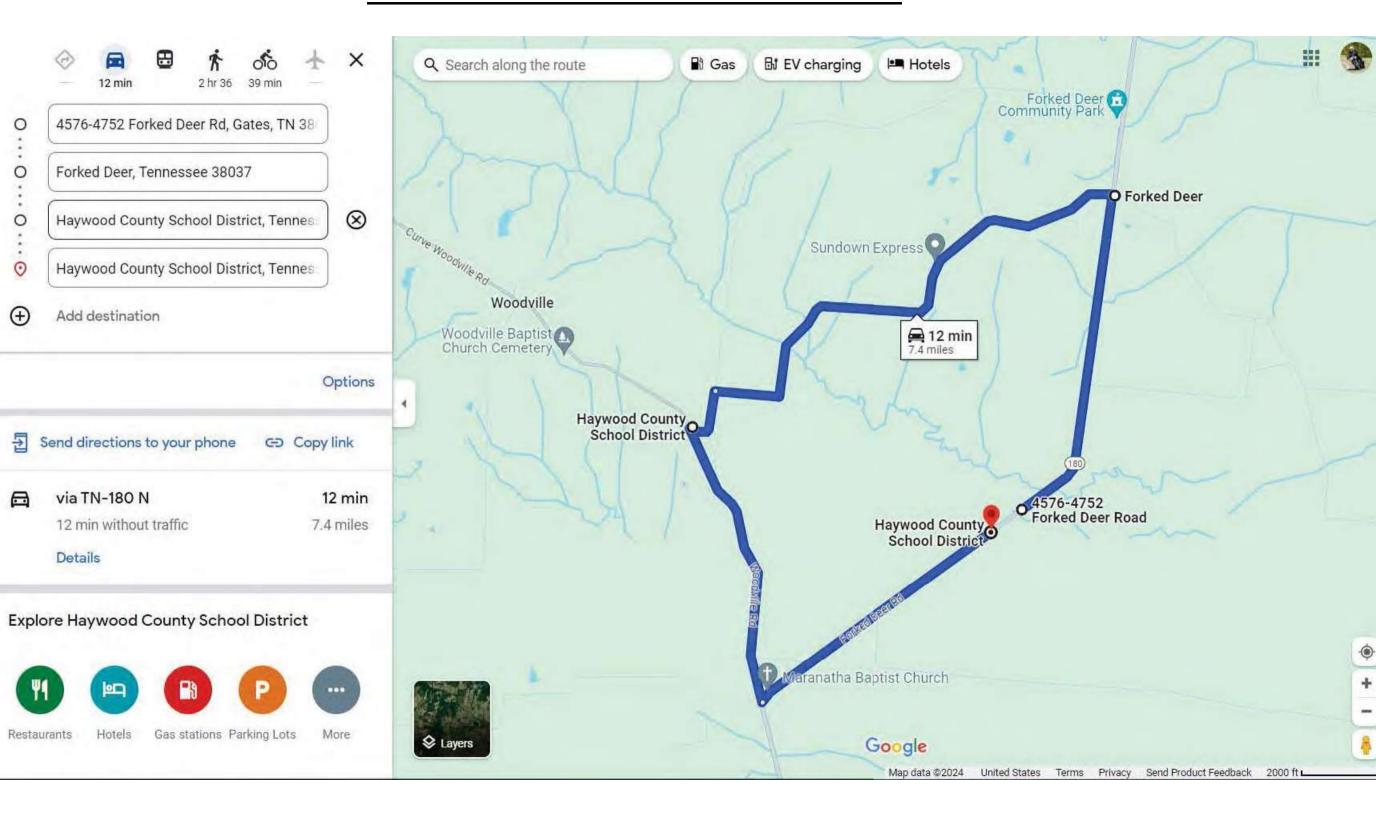




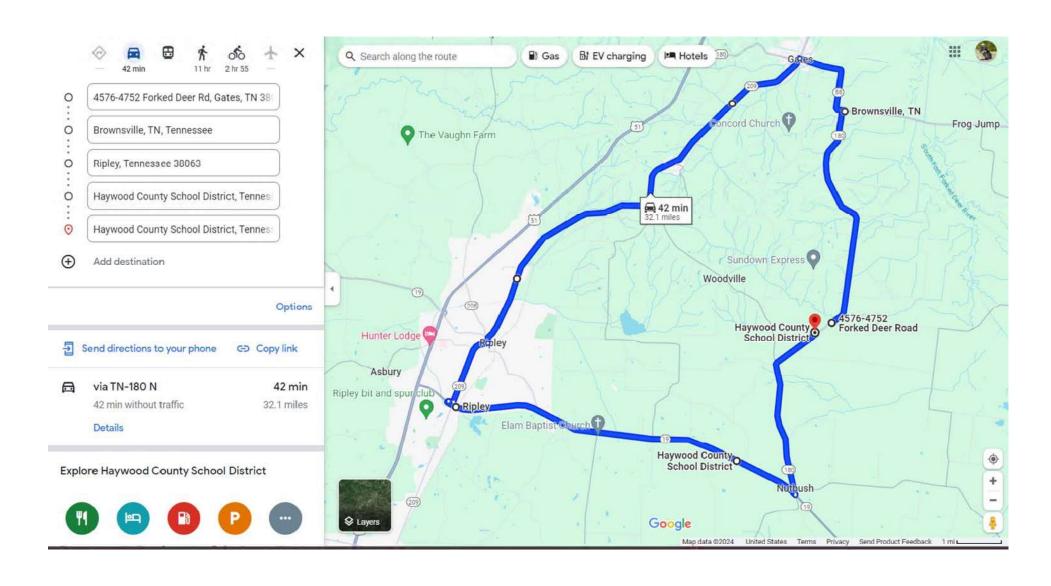


CAUTION!
PRELIMINARY
PLANS
SUBJECT TO
CHANGE

DETOUR MAP - LOCAL ROUTE



DETOUR MAP - STATE ROUTE



Haywood Co SR180 - Bridge over Overflow

Created on April 4, 2024 Created by JOSHUA CLOUD

Data extents: March 28, 2021 to March 28, 2024



Applied Filters





Summary		Crash
Total Crashes	2	100.00%
+ 5 more	0	0%
Type of Crash		Crash
(B) Suspected Minor Injury	1	50.00%
(0) Property-Damage Only	1	50.00%
+ 3 more	0	0%
Date of Crash (Year)		Crash
2023	1	50.00%
2021	1	50.00%
+ 9 more	0	0%
Manner of First Collision		Crash
No Collision W/ Vehicle	2	100.00%
+ 9 more	0	0%

First Harmful Event		Crash
Ditch	1	50.00%
Earth Embankment	1	50.00%
+ 63 more	0	0%
Crash Location		Crash
Along Roadway	2	100.00%
+ 6 more	0	0%
Light Conditions		Crash
Dark-Not Lighted	1	50.00%
Daylight	1	50.00%
+ 6 more	0	0%
Weather Conditions		Crash
Clear	2	100.00%
+ 11 more	0	0%





Team Lead: Nathan Bedford, Inspection Date: 08/22/2023



Latitude:35.75164, Longitude:-89.39347

Region 04, 38 - Haywood County

Team Leader: Nathan Bedford

Inspectors: Stuart Wood, Shayne Hayes, Ty Patrick





Bottom deck span #2



Span #3 PCCS "G" spall to steel





Span #3 PCCS "F" spall to steel



Span #3 PCCS "B" spall to steel





Span #2 PCCS "F" spall to steel



Span #1 PCCS "E" spall to steel





Left side upstream



Span 3 post spall

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PUBLIC RECORDS REQUEST
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Document records request does not
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Span 3 post impending spall



Opposite direction of route/ approach 2 weight limit sign missing

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Approach 2 asphalt



Span 3 cracks





Span 3 rail damage



Span 2 spall





Span 2 post spall to steel



Right side downstream





Span 2 cracks



Span 2 post spall to steel





View across top deck



Span 1 post spall





Span 1 curb spall



Span 1 crack

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PUBLIC RECORDS REQUEST
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Document records request does not
Waive the provisions of §407





Bridge #



Approach 1 asphalt





Approach 1 weight limit sign



Direction of route





Rear side bent 1



Abutment. 1





Right elevation



Left elevation





Bent 2



Abutment 2

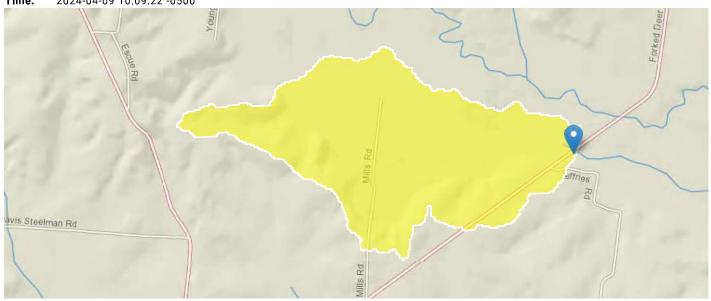
Haywood Co SR180 - Bridge over Overflow (LM 4.57)

Region ID: Th

Workspace ID: TN20240409150855424000

Clicked Point (Latitude, Longitude): 35.75172, -89.39337

Time: 2024-04-09 10:09:22 -0500



Collapse All

> Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CONTDA	Area that contributes flow to a point on a stream	0.46	square miles
DRNAREA	Area that drains to a point on a stream	0.46	square miles

> Peak-Flow Statistics

Peak-Flow Statistics Parameters [DAOnly Area 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	0.46	square miles	0.76	2308

Peak-Flow Statistics Disclaimers [DAOnly Area 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [DAOnly Area 4]

Statistic	Value	Unit
50-percent AEP flood	290	ft^3/s
20-percent AEP flood	405	ft^3/s
10-percent AEP flood	478	ft^3/s

Statistic	Value	Unit
4-percent AEP flood	567	ft^3/s
2-percent AEP flood	630	ft^3/s
1-percent AEP flood	691	ft^3/s
0.2-percent AEP flood	831	ft^3/s

Peak-Flow Statistics Citations

Law, G.S., and Tasker G.D.,2003, Flood-Frequency Prediction Methods for Unregulated Streams of Tennessee, 2000: U.S. Geological Survey Water-Resources Investigations Report 03-4176, 79p. (http://pubs.usgs.gov/wri/wri034176/)

> Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.46	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 3]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	2450	ft^3/s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (https://pubs.usgs.gov/wsp/1887/report.pdf)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.19.4 StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

TENNESSEE DEPARTMENT OF TRANSPORTATION STRATEGIC TRANSPORTATION INVESTMENTS DIVISION

PROJECT	NO.: 3	8S180-S1-005			ROUTE:	S.R. 180				
COUNTY: HAYWOOD			CITY:							
		1BER: <u>134</u>								
PROJECT	DESCRI	PTION: BI	RIDGE OV	ER O	VERFLO	W @ L.M. 4.5	57			
DIVISIO	N REQ	UESTING	: :			DAMEMEN	T DEGL	CNI	_	7
_				PAVEMENT DESIGN						
			STRUCTU SURVEY &		M		\exists			
S.T.I.D.	EVEL OF	NATAIT O. A	DM [4		TRAFFICS			<u> </u>	\exists
		MENT & A	.DM. L	╡			SIGNAL	DESIGN	`	\exists
PUBLIC T					DUCTION	OTHER _				
		ROGRAMME		ONST	RUCTIO	N: <u>2029</u>				_
PROJECTI	ED LETT.	ING DATE:	2029							
TRAFFI	C ASSI	GNMENT								
IIMI	C Abbi	GIVILLIVI	<u>-</u>							
				DESIGN DESIGN			SIGN			
							ROADWAY AVERAGE			RAGE
BASE Y	EAR		DES	IGN Y	EAR		% TRUCKS DAILY LOADS			LOADS
AADT	YEAR	AADT	DHV	%	YEAR	DIR.DIST.	DHV	AADT	FLEX	RIGID
820	2029	1,180	142	12	2049	65-35	3	4		
REQUEST	ED BY:	NAME	CALE	3 SMI	ГН			DATE	2/15/24	
REQUESTED B1.		NAME CALEB SMITH DATE 2/15/24 DIVISION S.T.I.D.								
ADDRESS 1000 J. K. POLK BUILDING										
NASHVILLE TN 37243										
										
REVIEWED BY: RANDY B			BOGUSKIE Randy Boguskie DATE 2/22/2024							
TRANSPO		TRANSPORT	NSPORTATION MANAGER I							
SUITE 1000, JAMES K. POLK BUILDING										
APPROVED BY: TONY ARMSTRONG Tony Armstrong DATE 2/22/2024				24						
TRANSPORTATION MANAGER 2//										
		SUITE 1000,	JAMES K.	POLK	BUILDING	G				
COMMENTS										
COMMENTS: FURNISH THE 2029-2049 TRAFFIC DATA.										
FUR	RNISH TH	1E 2029-2049	TRAFFIC	CDAT	A.					

DHV'S ARE NOT REQUIRED FOR SIDE ROADS LESS THAN 1000 AADT.

THIS TRAFFIC IS BASED ON A 2023 CYCLE COUNT. THE DESIGN YEAR TRAFFIC IS BASED ON GROWTH RATE FROM THE TN-TIMES LINEAR REGRESSION TOOL.



Environmental Division

OSD2 Environmental Desktop Review Form

Part 1 – Project Information				
PIN	134878.00			
Project Number (if available)				
County	Haywood			
Route	SR180			
Termini	Bridge over Overflow (TMA)			
Type of Document				
Date ENV DIV Comments are Due	10/17/24 by noon			

Part 2: Provide information identifying known Environmental Resources within the proposed project area using the attached information. If no known resources are identified, each study area should note that none were identified.

Air & Noise

AIR QUALITY

Transportation Conformity

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

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 January 2023.

NOISE

This project is Type III in accordance with the FHWA noise regulation in 23 CFR 772 and TDOT's noise policy; therefore, a noise study is not needed.

Cultural Resources

Archaeology: No resources within a 1 mile radius. A survey will be required.

Historic Preservation – There are no previously surveyed resources within 0.25 miles of the proposed project. However, the bridge itself is over 50 years old. A survey will be required.

Ecology

Water resources likely within project area.

HazMat

No known hazardous materials sites affect the area around this bridge replacement. No additional hazardous material studies are recommended at this time. The asbestos bridge survey has been completed and the following project commitments have been submitted in PPRM. In the event hazardous materials or wastes are encountered within the right-of-way, notification shall be made per TDOT Standard Specifications for Road and Bridge Construction (January 1, 2021) Section 107.08.C. Disposition of hazardous materials or wastes shall be subject to all applicable Federal, State, and local regulations, including the applicable sections of the Federal Resource Conservation and Recovery Act, as amended; the Comprehensive Environmental Response, Compensation, and Liability Act, as amended; and the Tennessee Hazardous Waste Management Act of 1983, as amended. Databases reviewed include Google Earth imagery, EPA National Priorities List, EPA EnviroMapper (Envirofacts), TDEC Registered Underground Storage Tanks Public Data Viewer and Oil and Gas Wells database, TDEC Division of Remediation Sites Public Data Viewer, TDOT Integrated Bridge Information System, and others, as necessary.

EDHZ001. An Asbestos Containing Material (ACM) survey was completed on Bridge No. 38S80510007 SR-180 over Overflow LM 4.57 (38-SR180-04.57). The bridge has asbestos in the pad material between the curb and guard rail supports; approximately 40 square feet at 80% chrysotile. Please see the report for further details and photographs.

EDHZ002. The State of Tennessee asbestos accreditation requirements (TDEC Rules Chapter 1200-01-20) mandates that ACM abatement work be performed by an accredited firm (contractor) using accredited abatement workers and supervisors. Abatement of this

material shall be accomplished per SP202ACM Special Provision Regarding Removal of Asbestos-Containing Materials. ACM abatement should be completed prior to any demolition activities if possible. Prior to the demolition or rehabilitation of any structure (bridge or building), the contractor is required to submit the National Emission Standards for Hazardous Air Pollutants standard 10-day notice of demolition to the TDEC Division of Air Pollution Control (per TDOT Standard Specifications for Road and Bridge Construction (January 1, 2021) Sections 107.08.D and 202.03).

NEPA

If the project remains state-funded, a TEER will be produced unless there is a federal nexus.

Based on the 2022 ACS data, there are no EJ populations.

Based on a preliminary review, there are No Section 6(f) properties within the project area.

Consider combining the ETSA boundaries from Figure 1a and Figure 2a. A single ETSA should be reasonably conservative to minimize the risk of a Reevaluation.