DESIGN EXCEPTION REQUEST FORM

TO: TDOT Region 4 Preconstruction Director

FROM: Design Manager, Preconstruction, TDOT



DATE: 9/18/2025

This form is to be used on projects requesting a Design Exception where roadway projects do not meet the 10 controlling elements of the geometric design criteria.

Design Exception:

Type I Exception to Controlling Criteria

- Design Speed
- Design Loading Structural Capacity

For exceptions based on Type I Criteria, all roadways on the **NHS** may require FHWA's review. The Design Director and the Regional Preconstruction Director (PD) provide final approvals. Exceptions to Type I criteria are rare and additional information shall be provided.

Type II Exception to Controlling Criteria

- Lane Width
- Horizontal Curve Radius
- Stopping Sight Distance
- Shoulder Width

- Cross Slopes
- Vertical Clearance
- Superelevation Rate
- Maximum Grade

For exceptions based on Type II Criteria, all roadways on the **NHS** with design speeds ≥ 50 mph may require FHWA's review. The regional PD provides final approval.

All other roadways (non-NHS) exceptions to controlling criteria do not require FHWA's review; the regional PD provides final approval.

Note:

Roadways on the Appalachian Development Highway System, or FHWA Risk Based Involvement (RBI) may require FHWA's review for design exceptions regardless of the controlling criteria.

DOCUMENTATION

A design **exception** is a variance based on one or more of the controlling criteria (either Type I or Type II). All requests shall be documented on this form. Plan sheets, location map, and supplemental information (i.e. Google maps) must be enclosed for a timely review by the Department. All design exception requests must be justified based on the

objective and context demonstrating compliance with accepted transportation engineering principles and reasons for the decisions. The proposed variation shall not diminish the existing operation and safety of the facility. Historical in-service performance or a traffic engineering study (on site or simulation) may be required.

Type I Exception to Controlling Criteria requires additional documentation:

- Design Speed exceptions. Length of section with reduced design speed compared to overall length of project. Measures used in transitions to adjacent sections with higher or lower design or operating speeds.
- Design Loading Structural Capacity exceptions. Verification of safe load-carrying capacity (load rating) for all State unrestricted legal loads or routine permit loads, and in the case of bridges and tunnels on the Interstate, all Federal legal loads.

Type II Exception to Controlling Criteria requires additional documentation:

- Specific design criteria that will not be met.
- Existing roadway characteristics.
- Alternatives considered.
- Comparison of the safety and operational performance of the roadway and other impacts such as right-of-way, community, environmental, cost, and usability by all modes of transportation.
- · Proposed mitigation measures.
- Compatibility with adjacent sections of roadway.

Additional guidance can be found in the Highway Capacity Manual, Highway Safety Manual, Performance Based Practical Design, and Flexibility in Design. Design Exception Requests located within the city limits require a letter from the local agency approving the request.

All other geometric design variances on facilities outside the category I and II criteria shall be documented on a Design Waiver Request form.

	PROJECT DATA
Current Project Phase	Context/Scoping ☐ Footprint Established ☐ Plan-in-Hand ☐ PS&E ☐ (Base Technical Concept for Design-Build RFP)
County/ City	Lauderdale
PIN	136185.12
Federal Project No.	N/A
State Project No.	R4SVAR-S1-049 (DB 2506)
Project Limits	SR 87 Bridge over Branch, L.M. 19.11
Local Program Project	Yes□ No ⊠
	If yes, then
State Let	Yes⊠ No □
Local Let	
Project Type	New Alignment □
	Reconstruction
	Resurfacing □
	Road Diet/Road Reconfiguration □ (Note: Road Diet Evaluation form may
	be required)
	Maintenance □
	Road Safety Audit □
	Bridge Repair □
	Bridge Rehabilitation ⊠
	Signalization □
	Other □
US Route/NHS	Yes□ No ⊠
State Route	
	Yes⊠ No □
Appalachian Development Highway System	Yes□ No ⊠
FHWA RBI Project	Yes□ No ⊠
Project Scope (Briefly describe the objective of project)	Replacement of existing Timber Bridge over Branch
Project Commitments	
•	N/A

R	OADWAY GEOMETRIC DESIGN DATA
Highway Functional Classification: (See Green Book 2011	Freeway □ Arterial □ Collector ⊠
Section 1.3)	Local Road/Street □
Rural or Urban Context	· · · · · · · ·
	Rural Town (city limits) Suburban (initially designed as rural but currently in city limits)
	Urban (city limits)
	Urban Core (in the metropolitan government jurisdiction) □
Roadway Typical Section Standard Drawing:	RD11-TS-2
Existing Design Speed:	<u>55</u>
Existing Posted Speed:	<u>55</u>
Proposed Design Speed:	<u>55</u>
Proposed Posted Speed:	<u>55</u>
Type of Terrain:	Level ⊠ Rolling □ Mountainous □
Traffic Data:	ADT (20 <u>29): 1910</u> D: <u>65-35</u> ADT (20 <u>49</u>): <u>2100</u> T: <u>1</u> %
	DHV: <u>231</u>
Access Control	None⊠ Partial □ Full □
Multimodal Design Elements Included in the scope of the Project	Pedestrian □ Curb Ramps □ Pedestrian Signals □ Shared-Use Path □ New sidewalks □ Non-motorized Enhancement □ Bicycle □ (including bike route/lane, tract addition to existing
	roadway facility)
Bus Route	Yes □ No ⊠

GEOMETRIC DESIGN CONTROLLING CRITERIA

Design Exception Requests

Controlling elements must be completed for items where an exception is requested.

-	Existing	Proposed	Exception
Design Speed:			
Design Loading structural			
capacity:			
Lane width:	<= 11'	11'	12'
Shoulder width			
(inside/outside):	<= 1'	4'	8'
Cross Slope:			
Superelevation Rate:			
Horizontal Curve Radius:			
Stopping Sight Distance:			
Maximum Grade:			
Vertical Clearance:			
Navigational			
Waterway:			
Grade separation:			
Railroad crossing:			

BRIDGE DESIGN FEATURES							
Complete if the bridge feature values differ	r from those lis	sted in the Geom	etric Design Contr	olling			
Criteria Section.							
	Existing	Proposed	Exception	REQ			
Traffic Lane Widths:							
Outside Shoulder Widths:							
Inside Shoulder Widths:							
Sufficiency Rating:							

	CRASH HISTORY SUMMARY REPORT								
Years	Total	Fatal Crashes	Injury Crashes						
Reviewed	Crashes								

TDOT DIRECTIVES TO BE CONSIDERED FOR THE EXCEPTION R	EQUE	ST	
	YES	NO	N/A
SAFETY			
Crash history data has been reviewed and is enclosed.			\boxtimes
All roadway and roadside safety mitigation measures have been considered and			
provided.			\boxtimes
The proposed variance from the minimum roadway design standards does not			
adversely affect the safety of the facility.	\boxtimes		

The Highway Safety Manual was used to justify the design exception.		\boxtimes	
OPERATIONS			
The operation of the proposed typical cross-section is comparable with operation of the adjacent cross-sections.			
The proposed design does not cause a reduction in capacity or adversely affect traffic flow of the facility.			
The proposed design does not adversely affect long-term operations.	\boxtimes		
The proposed design does not impact the existing access control.	☒		
Travel demand management solutions have been evaluated.			
ROADWAY DESIGN			
It is not feasible to meet the minimum design standards due to right-of-way restrictions, environmental impacts, etc.		\boxtimes	
The proposed design maintains the same level of service compared to the design based on minimum design standards.			
The proposed design results in a significant cost savings compared to the design based on minimum design standards.			
ENVIRONMENTAL (Consult TDOT Environmental Division, if needed)			
Does the request affect the NEPA environmental boundary?	\boxtimes		
Does the request affect environmental permit requirements? (TDEC/TVA/CORPs/TWRA, etc.)			
Does the request affect Historical Section 106?		\boxtimes	
WORK ZONE			•
Will the proposed variation affect the TMP?			⊠

DESCRIBE THE REASONING AND JUSTIFICATION OF THE DESIGN EXCEPTION REQUEST:

The purpose of this project is to replace existing timber bridges.

A Bridge Concept Report was completed and approved. The Bridge Concept Reports provided a recommended typical section utilizing two 11' travel lanes and 4' shoulders. The existing roadway approaches along SR 87 have lane widths of less than 11' (<10' in a few locations) and less than 1' existing shoulders. Note that the proposed condition improves upon the existing condition. The 11' lanes and 4' shoulders do meet criteria up to 1,500 for the design ADT. There are environmental commitments to the north side of the project to not impact the Choctaw property. 12' lanes with 8' shoulders would extend the limits beyond the existing right-of-way on the north side and therefore impact the Choctaw property and require a lengthy environmental and right-of-way acquisition process that would significantly affect the schedule of the project. The NEPA process for impacting the Choctaw property could be upwards to two years long and would require this bridge to be removed from the Region 4 Timber Bridge Bundle 1 Project. The extended impacts to the north would require an Individual ARAP permit because of impacts to a stream. Additional efforts, including natural stream design, and right-of-way would be required to relocate and mitigate that stream.

DESIGN EXCEPTION	REQU			IFIED BA DWING:	SED ON GUIDANCE FROM THE
			OLL		gn Guidance Met
Design Guidance Source	YES	NO	N/A	Do Not Know	Source Reference if answered "Yes" (page, section, drawing, etc.)
AASHTO Publication		\boxtimes		П	(1-1-9-,, 1-1
Highway Safety Manual		\boxtimes			
Highway Capacity Manual		\boxtimes			
FHWA Publication		\boxtimes			
NCHRP Publication		\boxtimes			
TRB Publication		\boxtimes			
TDOT Design Guidelines		\boxtimes			
TDOT Standard Drawings	\boxtimes				RD11-TS-2 for design ADT 400 - 1500
Guidance from other states		\boxtimes			
Other					Approved Bridge Concept Report
current alignment would im impact would require mitigate To avoid impacts to the Chalignment would need to be	npact the street the pro-	e Cho credits roperty I to the adway posed	ctaw p purch y and r south . That	oroperty a ased. naintain 1 . This shif horizontal	sts. 12' lanes with 8' shoulders on the and a stream to the north. This stream 2' lanes with 8' shoulders, the current it not only extends the project limits but I alignment would have 45mph reverse speed.
Jary Scrugge				Sep 25	5, 2025
Regional Preconstructio	n Direc	tor		Date	
Katherine Jennifer Lloyd Design Director				Sep 2	5, 2025
☐ Reviewer Comments Att☐ Additional Design Excep		ormatio	on Atta		

From: <u>Steve Sellers</u>
To: <u>K.Brandon Chance</u>

Cc: Tammy Sellers; Derek Link; Liptak, Gabe; Shawn Wurst; Erick Hunt-Hawkins; Jeremiah Johnston; Kimberly

Vasut-Shelby

Subject: RE: Environmental for Emergency SR180 and DB2506

Date: Thursday, June 19, 2025 1:10:39 PM

Attachments: <u>image003.png</u>

50 - 134860.00 Lauderdale SR-87 Bridge over Branch, LM 19.11 (TMA)-ETSA - Edited.pdf

Brandon,

Gabe stated the ETSA limits in yellow that you provided will work. The only thing being that the Team will need to look into the tie in points more on either end.

The team will make a note to make sure we stay within the ROW on the north side and out of the Choctaw property and make sure to address this in the RFP.

Thank you.



Steve Sellers I Manager of Region 4 Alternative Delivery Blue Oval City Program Manager Alternative Delivery Division 300 Benchmark Place Jackson, Tennessee 38301 731-935-0344 steve.sellers@tn.gov

tn.gov/tdot

From: K.Brandon Chance < K.Brandon.Chance@tn.gov>

Sent: Tuesday, June 17, 2025 1:35 PM **To:** Steve Sellers <Steve.Sellers@tn.gov>

Cc: Tammy Sellers <Tammy.Sellers@tn.gov>; Derek Link <Derek.Link@tn.gov>; Liptak, Gabe <gliptak@structurepoint.com>; Shawn Wurst <Shawn.Wurst@tn.gov>; Erick Hunt-Hawkins <Erick.Hunt-Hawkins@tn.gov>; Jeremiah Johnston <jjohnston@avenueconsultants.com>; Kimberly Vasut-Shelby <Kimberly.Vasut-Shelby@tn.gov>

Subject: RE: Environmental for Emergency SR180 and DB2506

Steve,

Any word on the ETSA shift for Bridge #50 on SR-87? We need to update our consultant if this shift is possible, if not to possible we would need to start the ARPA permit process. Thanks,



K. Brandon Chance | Manager

Environmental Division / Technical Studies Section James K. Polk Building, 9th Floor

505 Deaderick Street, Nashville, TN 37243

p. 615-741-7179 m. 615-218-0497

k.brandon.chance@tn.gov

tn.gov/tdot

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From: K.Brandon Chance

Sent: Wednesday, June 11, 2025 9:09 AM **To:** Steve Sellers < Steve.Sellers@tn.gov>

Cc: Tammy Sellers < Tammy.Sellers@tn.gov">Tammy.Sellers@tn.gov; Derek Link < Derek.Link@tn.gov; Liptak, Gabe < gliptak@structurepoint.com; Shawn Wurst < Shawn.Wurst@tn.gov; Erick Hunt-Hawkins@tn.gov; Jeremiah Johnston < jjohnston@avenueconsultants.com; Kimberly

Vasut-Shelby < Kimberly.Vasut-Shelby@tn.gov>

Subject: RE: Environmental for Emergency SR180 and DB2506

Steve.

I have added my updates for Tech Studies in blue below:

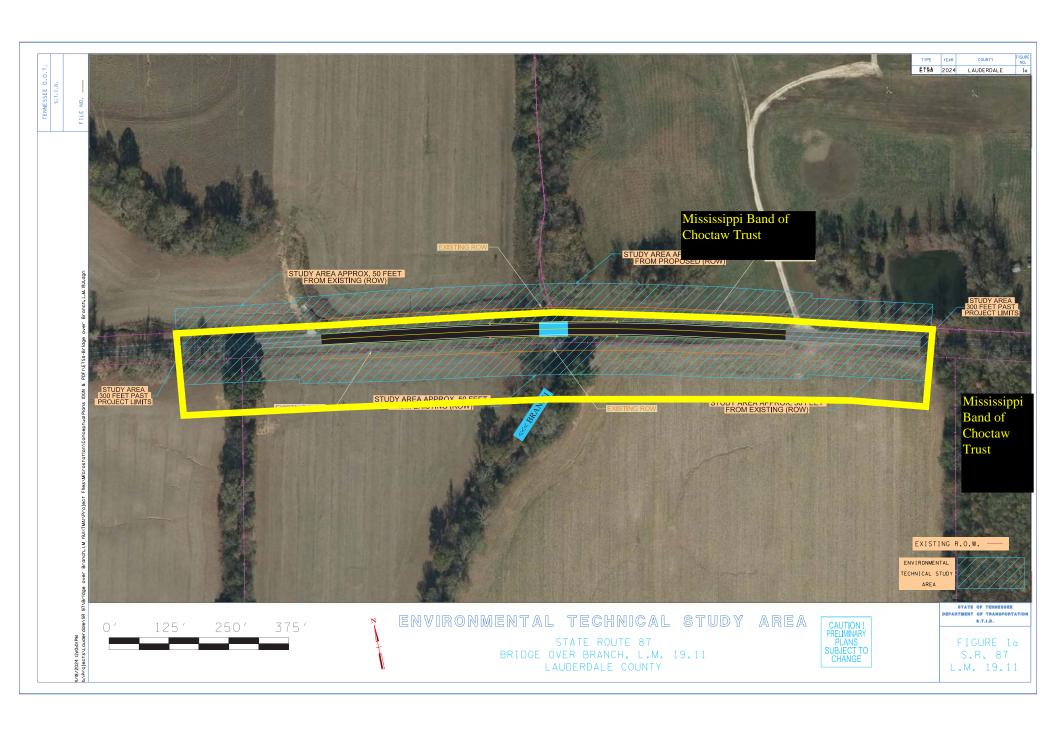
I also need to discuss the need for an ETSA revision at Bridge #50 on SR-087 in Lauderdale Co. One of the adjacent properties is owned by the Choctaw Nation an held in trust by US Department of Interior, Bureau of Indian Affairs. To do Archaeology work on this site would require a Federal ARPA permit. The person doing those permits has recently retired and the workload has been transferred to a new person. We have not worked with the Bureau of Indian Affairs on this permit type before, but with other federal agencies (US Army Corps, Park Service, Forest Service, etc.) the process has take 10 months to 2 years. It does appear that we have an opportunity to shift the ETSA off the property and keep the project in the bundle, we just need to discuss this option. I have attached a proposed shift that would avoid the property in question. Let me know your thoughts.

Thanks,



K. Brandon Chance | Manager

Environmental Division / Technical Studies Section James K. Polk Building, 9th Floor 505 Deaderick Street, Nashville, TN 37243



Index Of Sheets

LINE AND GRADE INDEX OF SHEETS

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STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING

LAUDERDALE COUNTY

STATE ROUTE 87 **BRIDGE OVER** BRANCH L.M. 19.11

LINE AND GRADE **BRIDGE REPLACEMENT**

STATE HIGHWAY NO. 87 F.A.H.S. NO.

DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86

NO EXCLUSIONS

YES NO

SHEET NO. TENN. 2025 FED. AID PROJ. NO.

PROJECT LOCATION BRIDGE ID. # 49SR0870033

STATE PROJ. NO.

GUY LN. **OPPOSSUM** Springs WAD\$WORTH OOPER HENNING NASH LIP\$COMB HATCHIE ROADSIDE 5280 7920 SCALE: 1"= 1/2 MILE

MILES

MILES

MILES

MILES

MILES

MILES A

CAUTION! |PRELIMINARY| PLANS SUBJECT TO CHANGE

SEALED BY

APPROVED:

DEPUTY COMMISSIONER / **CHIEF ENGINEER** DATE:

APPROVED:

DEPUTY GOVERNOR & COMMISSIONER

SURVEY	TRAFFIC DATA	
	ADT (2029)	2100
	ADT (2049)	
	DHV (2029)	231
	D	-
	T (ADT)	1.0%
	T (DHV)	%
	V	40 MPH

COORDINATES ARE NAD/83(1995) (_____ ADJUSTMENT) ADJUSTED BY THE FACTOR OF _. ___ AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 USING GEOID ____

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION APPROVED: DATE DIVISION ADMINISTRATOR

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2021 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

CHECKED BY

TDOT PROJECT MANAGER: STEVE SELLERS DESIGN FIRM: AMERICAN STRUCTUREPOINT INC

DESIGNER:

PIN NO.

R.O.W. LENGTH

ROADWAY LENGTH

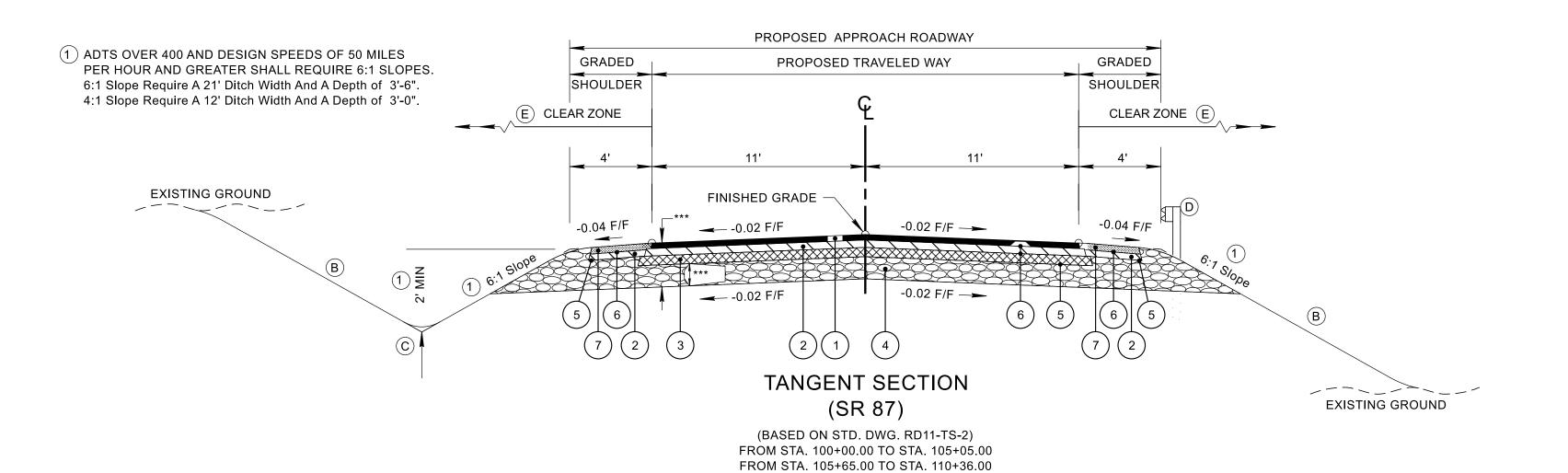
BOX BRIDGE LENGTH

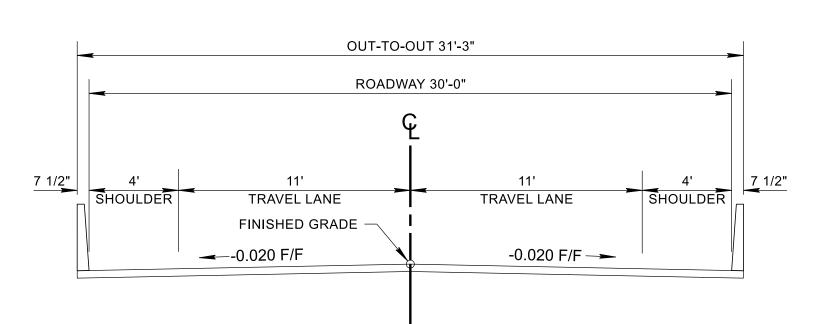
BOX BRIDGE LENGTH

PROJECT LENGTH

BRIDGE LENGTH

Not included in the project length (Non Riding Surface)





BRIDGE SECTION (SR 87)

BRIDGE 50 FROM STA. 105+05.00 TO STA. 105+65.00

PROPOSED PAY	PROPOSED PAVEMENT SCHEDULE					
ASPHALTIC CONCRETE SURFACE (HOT MIX) PGXX-XX GRADING "D" SURFACE @ X.XX" THICK (APPROX. 132.5 LB./S.Y.) 411-XX.XX ACS MIX (PGXX-XX) GRADING "D"	PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) AT 0.30-0.35 GALLONS/S.Y. 402-02 AGGREGATE FOR COVER MATERIAL (PC) AT 8-12 LB./S.Y.					
BITUMINOUS PLANT MIX BASE (HOT MIX) PGXX-XX GRADING "B-M2" @ 2.00" THICK (APPROX. 226 LB./S.Y.) 307-XX.XX ASPHALT CONCRETE MIX (PGXX-XX) (BPMB-HM) GRADING "B-M2"	TACK COAT 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) AT 0.07 GALLONS/S.Y. SEE 403.05 FOR DETERMINING APPLICATION RATE IN THE FIELD					
BITUMINOUS PLANT MIX BASE (HOT MIX) PGXX-XX GRADING "A" @ X.XX" THICK (APPROX. 345 LB./S.Y.) 307-XX.XX XXXXASPHALT CONCRETE MIX (PGXX-XX) (BPMB-HM) GRADING "A	ASPHALTIC CONCRETE SURFACE (HOT MIX) PGXX-XX GRADING "E" SURFACE @ X.XX" THICK (APPROX. LB./S.Y.) 411-XX.XX ACS MIX (PGXX-XX) GRADING "E" SHOULDER					
MINERAL AGGREGATE XX" THICK 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"						

- A THE SLOPE OF THE SHOULDER AND THE ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 7%.
- B SEE STANDARD DRAWINGS RD11-S-11 AND RD11-S-11B FOR FILL AND CUT SLOPE TABLES, ROUNDING ON TOP OF CUT SLOPES AND TOE OF FILL SLOPES, SPECIAL ROCK TREATMENT AND SUB GRADE ROUNDING IF APPLICABLE.
- © SEE STANDARD DRAWING RD11-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPES.
- D SEE STANDARD DRAWING S-PL-6 FOR TYPICAL GUARDRAIL PLACEMENT.
- E SEE STANDARD DRAWING S-CZ-1 FOR CLEAR ZONE CRITERIA. SEE THE "ROADSIDE DESIGN GUIDE", AASHTO, 2011, FOR FURTHER INFORMATION REGARDING CLEAR ZONES.

SEALED BY

COORDINATES ARE NAD 83(), ARE
DATUM ADJUSTED BY THE FACTOR
OF AND TIED TO THE TGRN.
ALL ELEVATIONS ARE REFERENCED

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TO THE NAVD 1988 WITH GEOID .

PROPOSED TYPICAL

TYPE	YEAR	PROJECT NO.	SHEET NO.	
L&G	2025		3A	
				l

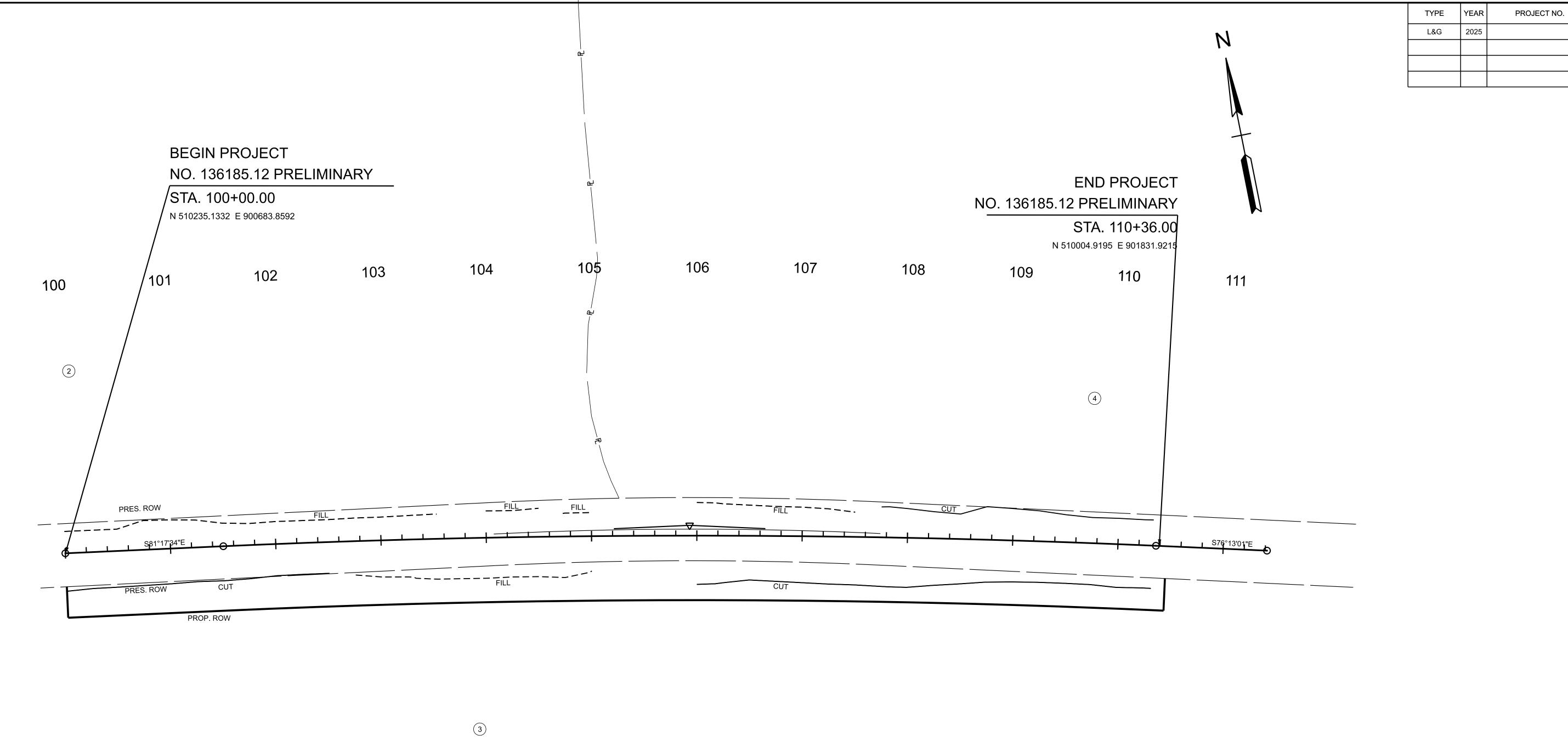
	R.O.W. ACQUISITION TA	ABLE							R.O.W.	ACQUIS	ITION TA	ABLE						
TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA (ACRES)			AREA TO BE ACQUIRED (ACRES)			AREA REMAINING (ACRES)		EASEMENT (SQUARE FEET)				
		TAY MAD	PARCEL NO.	DEED DOCUMENT REFERENCE										PERM			1	DEDM
		NO.		воок	PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	DRAINAGE	SLOPE	CONST	AIR RIGHTS	PERM RAILROAD
1	H. FRANK KELLER, II AND PATRICIA R. KELLER	117	018.00	RB 399	448		75.500	75.500					75.500					
2	WILLIAM C. WINTERS AND DONNA J. WINTERS	117	019.00	RB 817	727	36.390		36.390				36.390						
3	WILLIAM C. WINTERS AND DONNA J. WINTERS	117	019.00	RB 817	727		84.350	84.350		0.793	0.793		83.557					
4	UNITED STATES OF AMERICA	117	020.02	RB 645	187	89.460		89.460				89.460						
ACQUISITION TOTALS (ACRES)										0.793								

DISTURBED AREA							
IN BETWEEN SLOPE LINES	1.363	(AC)					
15 FOOT WIDE STRIP (OUT SIDE SLOPE LINES)	0.497	(AC)					
TOTAL DISTURBED AREA	1.860	(AC)					
TOTAL PROJECT AREA	2.061	(AC)					

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE



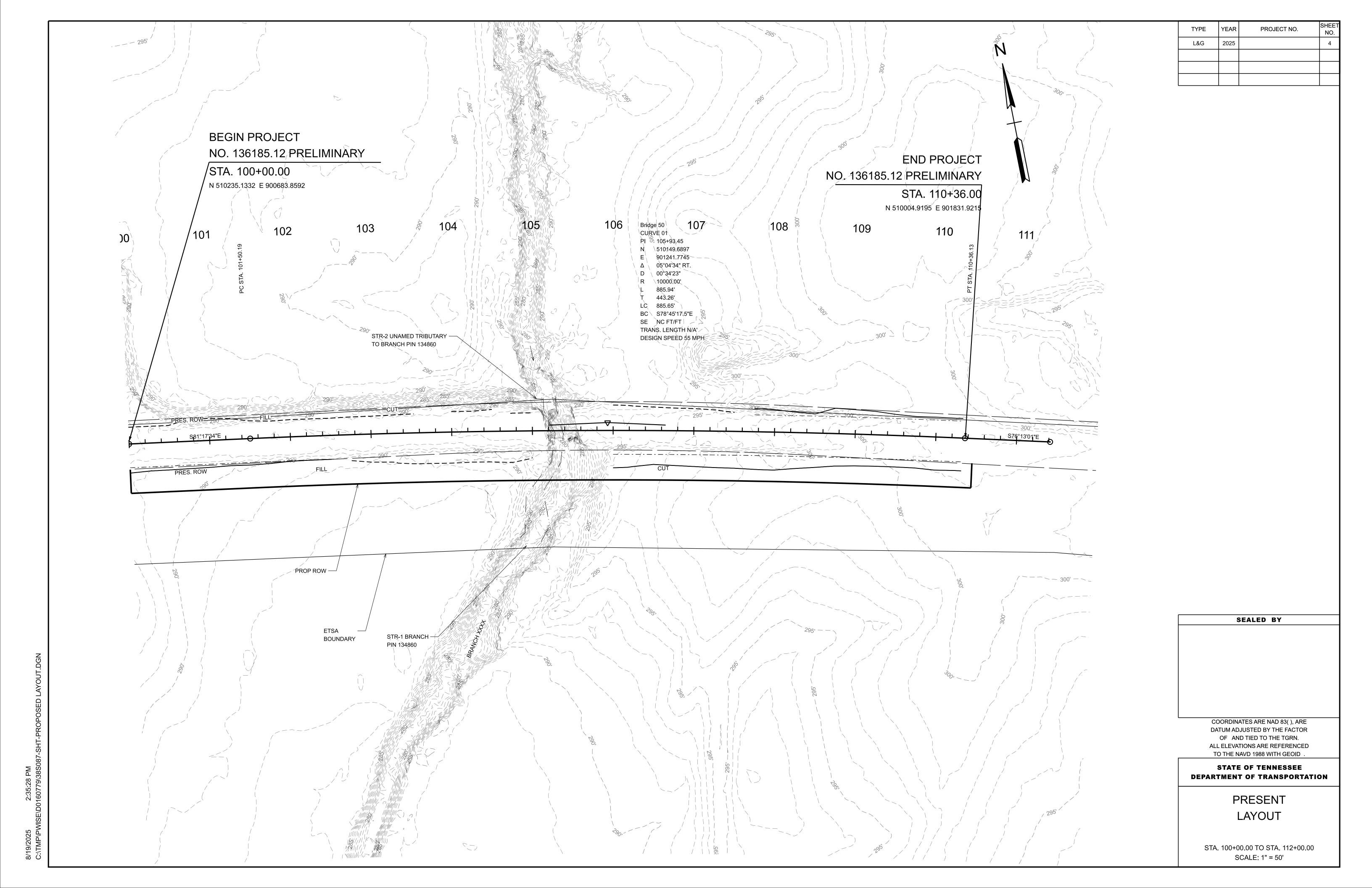
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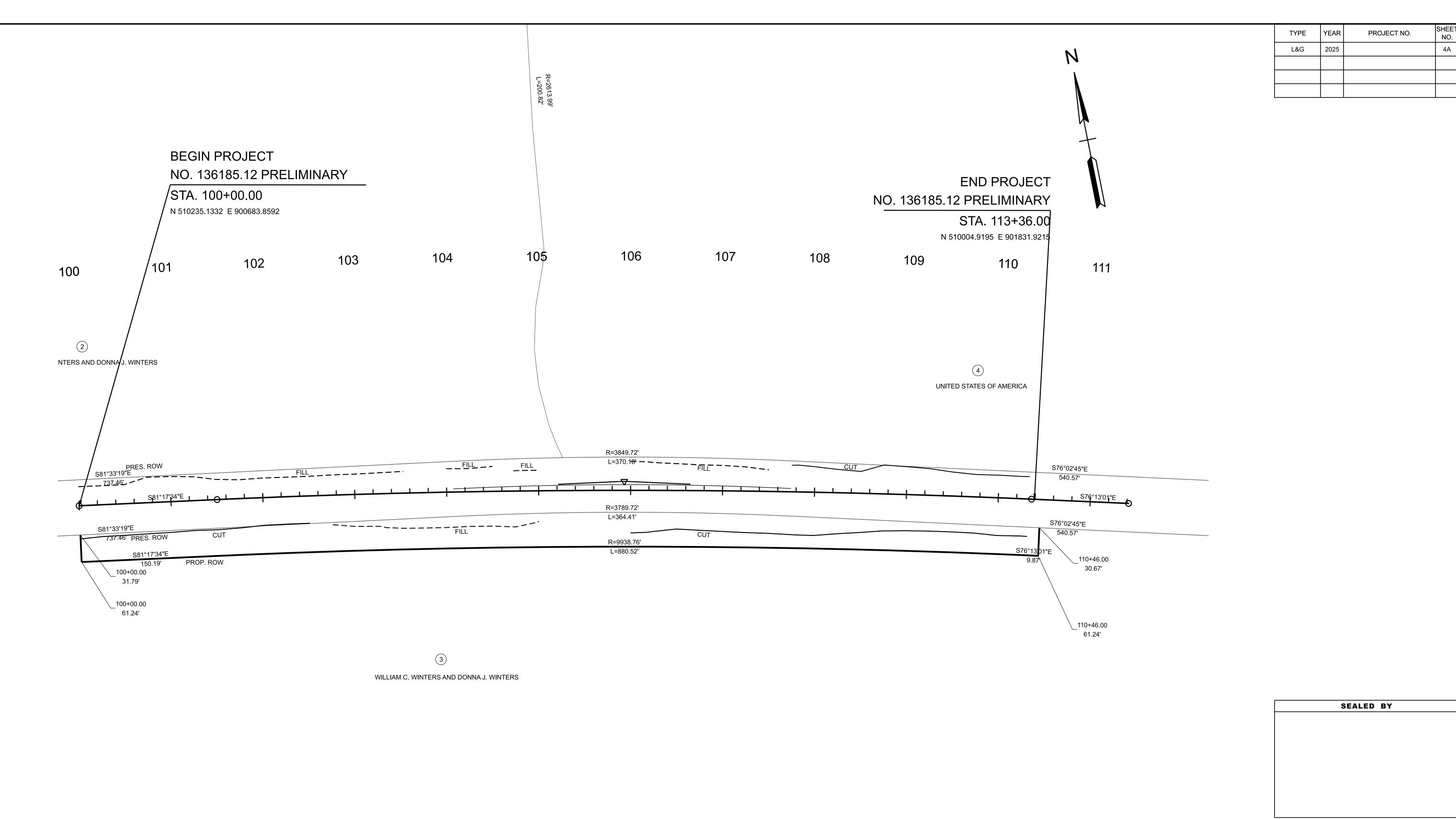
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STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

> PROPERTY MAP

STA. 100+00.00 TO STA. 111+71.16 SCALE: 1" = 50'





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ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

ROW DETAILS

STA. 100+00.00 TO STA. 112+00.00 SCALE: 1" = 50'

