

DESIGN WAIVER REQUEST FORM



TO: TDOT Region 4 Preconstruction Director

FROM: Design Manager, Preconstruction, TDOT

DATE: 8/26/2025

This form is to be used on projects requesting a Design Waiver to non-controlling elements of design on any roadway project.

Design Waiver:

For non-controlling element deviations, a Design Waiver Request must be completed. These requests do not require FHWA's approval; the Regional Preconstruction Director (PD) provides final approval. These requests include, but are not limited to, clear zone width, passing sight distance, vertical curves, and multimodal features.

DOCUMENTATION

Design Waivers to non-controlling criteria

A design **waiver** is a variance based on non-controlling criteria. 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 waivers 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.

Waivers to Non-Controlling Criteria typically require further evaluation of the design elements to support the request such as,

- Current design criteria that could 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 Waiver

Requests located within the city limits require a letter from the local agency approving the request.

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	136185.11
Federal Project No.	N/A
State Project No.	R4SVAR-S1-049 (DB 2506)
Project Limits	SR 87 Bridge over Branch, L.M. 11.75
Local Program Project	Yes ☐ No ☒ If yes, then
State Let	Yes ☒ No ☐
Local Let	Yes ☐ No ☒
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 ☒ Signilization ☐ 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

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ROADWAY GEOMETRIC DESIGN DATA	
Highway Functional Classification: (See Green Book 2011 Section 1.3)	Freeway ☐ Arterial ☐ Collector ☒ Local Road/Street ☐
Rural or Urban Context	Rural ☒ 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:	60
Existing Posted Speed:	55
Proposed Design Speed:	45 (vertical only)
Proposed Posted Speed:	55
Type of Terrain:	Level ☒ Rolling ☐ Mountainous ☐
Traffic Data:	ADT (2029): 780 D: 65-35 ADT (2049): 860 T: 2% DHV: 103
Access Control	None ☒ Partial ☐ Full ☐
Multimodal Design Elements Included in the scope of the Project	Pedestrian ☐ Pedestrian Signals ☐ Curb Ramps ☐ Shared-Use Paths ☐ New sidewalks ☐ Non-motorized Enhancement ☐ Bicycle ☐ (including bike route/lane, tract addition to existing roadway facility)
Bus Route	Yes ☐ No ☒

GEOMETRIC DESIGN NON-CONTROLLING ELEMENT CRITERIA
All applicable non-controlling elements must be completed for
Design Waiver requests

	Existing	Proposed	Waiver
Passing Sight Distance:	45 MPH - 79 "K"	45 MPH - 91 "K"	60 MPH 136 - "K"
Crest/Sag Vertical Curve:	Value	Value	Value
Design vehicle:			
Clear Zone width:			
Other:			

MULTIMODAL FEATURES

Facility Type:	Roadway ☐	Pedestrian ☐	Bicycle ☐	Shared-Use ☐
	Existing	Proposed	Waiver	
Curb Shape:				
Curb Ramp:				
Sidewalk:				
Shared-use Path:				
Mid-block Crossing:				
RRFB or HAWK:				
Bike Lane:				
Bike Lane Buffer:				
Bike Route:				
Bike Lane at Intersection:				
Cycle Track:				
Transit Facility/Stop				
Other:				

CRASH HISTORY

Years Reviewed	Total Crashes	Fatal Crashes	Injury Crashes

TDOT DIRECTIVES TO BE CONSIDERED FOR THE WAIVER REQUEST

	YES	NO	N/A
SAFETY			
Crash history data has been reviewed and is enclosed.	☐	☐	☒
All roadway and roadside safety mitigation measures have been considered and provided.	☐	☐	☒
The proposed variance from the minimum roadway design standards does not adversely affect the safety of the facility.	☒	☐	☐
The Highway Safety Manual was used to justify the Design Waiver.	☐	☒	☐
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.	☒	☐	☐
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 roadway design standards due to right-of-way restrictions, environmental impacts, etc.	☐	☒	☐
The proposed design maintains the same level of service compared to the design based on minimum roadway design standards.	☒	☐	☐
The proposed design results in a significant cost savings compared to the design based on minimum roadway design standards.	☒	☐	☐
ENVIRONMENTAL (Consult TDOT Environmental Division, if needed)			
Does the request affect environmental permit requirements? (TDEC/TVA/CORPs/TWRA, etc.)	☐	☒	☐
Does the request affect NEPA environmental boundary?	☐	☒	☐
Does the request affect Historical Section 106 area?	☐	☒	☐
WORK ZONE			
Will the proposed variation affect the TMP?	☐	☐	☒

DESIGN WAIVER REQUEST – JUSTIFIED BASED ON GUIDANCE FROM THE FOLLOWING:					
Design Guidance Source	Design Guidance Met				
	YES	NO	N/A	Do Not Know	Source Reference if answered “Yes” (page, section, drawing, etc.)
AASHTO Publication	☐	☒	☐	☐	
Highway Safety Manual	☐	☒	☐	☐	
Highway Capacity Manual	☐	☒	☐	☐	
FHWA Publication	☐	☒	☐	☐	
NCHRP Publication	☐	☒	☐	☐	
TRB Publication	☐	☒	☐	☐	
TDOT Design Guidelines	☐	☒	☐	☐	
TDOT Standard Drawings	☐	☒	☐	☐	
Guidance from other states	☐	☒	☐	☐	
Other					

DESCRIBE THE REASONING AND JUSTIFICATION OF THE DESIGN WAIVER REQUEST:

The purpose of this project is to replace an existing timber bridge. The existing bridge is located in an existing sag vertical curve. The existing sag curve only meets a 45 MPH – 79 “K” value design speed. In order to meet the 60 MPH – 136 “K” value design speed the roadway grade would need to be raised 8.5’ or more. This will incur significant property and utility impacts that cause delays and increase construction cost.

DESCRIBE THE ALTERNATIVES CONSIDERED

Multiple vertical alignments were analyzed. The proposed vertical alignment was selected to minimize the property and utility impacts within the studied environmental boundary while also improving the vertical curve from existing.

DESIGN WAIVER APPROVED BY:*Gary Scruggs*

Regional Preconstruction Director**Sep 17, 2025**

Date

- ☐ Reviewer Comments Attached
- ☐ Additional Design Waiver Information Attached

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. 11.75

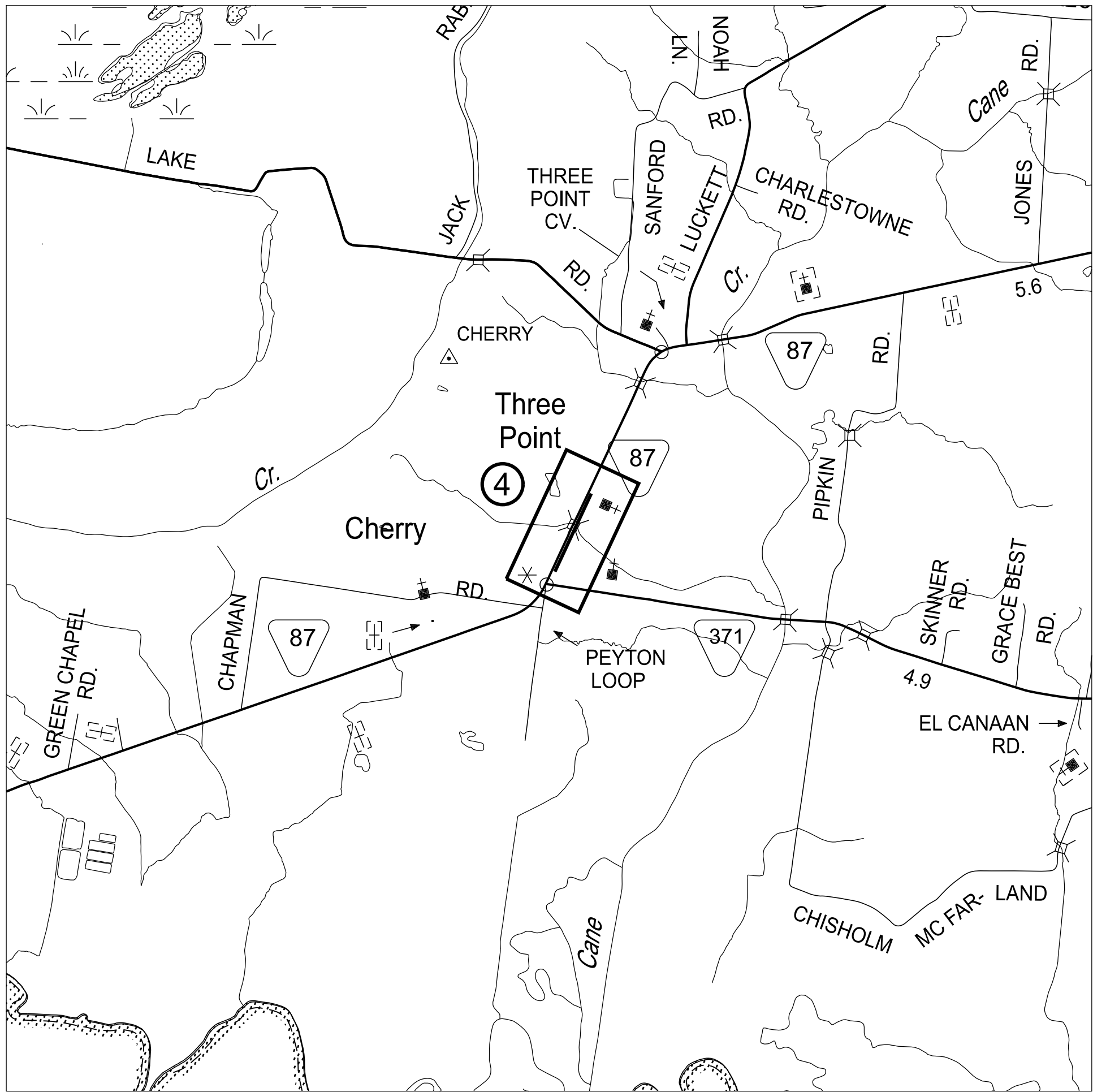
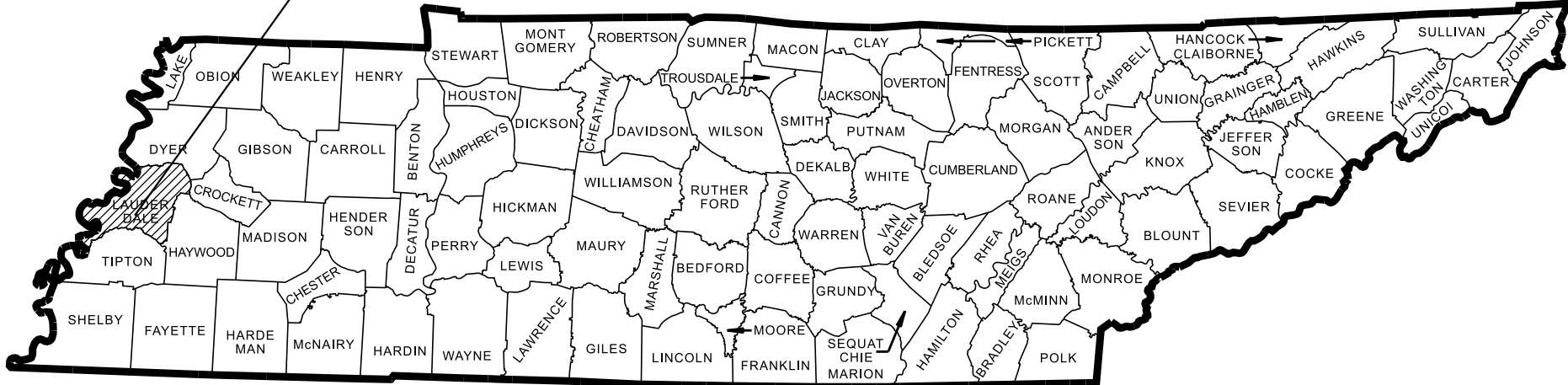
LINE AND GRADE
BRIDGE REPLACEMENT

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

DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86	YES	NO
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TENN.	YEAR	SHEET NO.
	2025	1
FED. AID PROJ. NO.		
STATE PROJ. NO.		

PROJECT LOCATION
BRIDGE ID. # 49SR0870025



NO EXCLUSIONS

CAUTION!
PRELIMINARY
PLANS
SUBJECT TO
CHANGE

DESIGN EXCEPTION
APPROVED - -

1) DESIGN SPEED EXCEPTION FOR VERTICAL CURVES.
DESIGN SPEED OF 45 MPH USED. (PENDING)

SEALED BY

APPROVED:

DEPUTY COMMISSIONER /
CHIEF ENGINEER

DATE:

APPROVED:

DEPUTY GOVERNOR &
COMMISSIONER

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.

TDOT PROJECT MANAGER: STEVE SELLERS
DESIGN FIRM : AMERICAN STRUCTUREPOINT INC
DESIGNER : _____ CHECKED BY _____
P.E. NO. _____
PIN NO. 136185.11

R.O.W. LENGTH _____ MILES
ROADWAY LENGTH _____ MILES
BRIDGE LENGTH _____ MILES
BOX BRIDGE LENGTH _____ MILES
BOX BRIDGE LENGTH _____ MILES ▲
PROJECT LENGTH _____ MILES

Not included in the project length (Non Riding Surface).

SURVEY - -	TRAFFIC DATA
	ADT (2029) 860
	ADT (2049)
	DHV (2029) 103
	D -
	T (ADT) 2.0%
	T (DHV) %
	V 45 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 ____

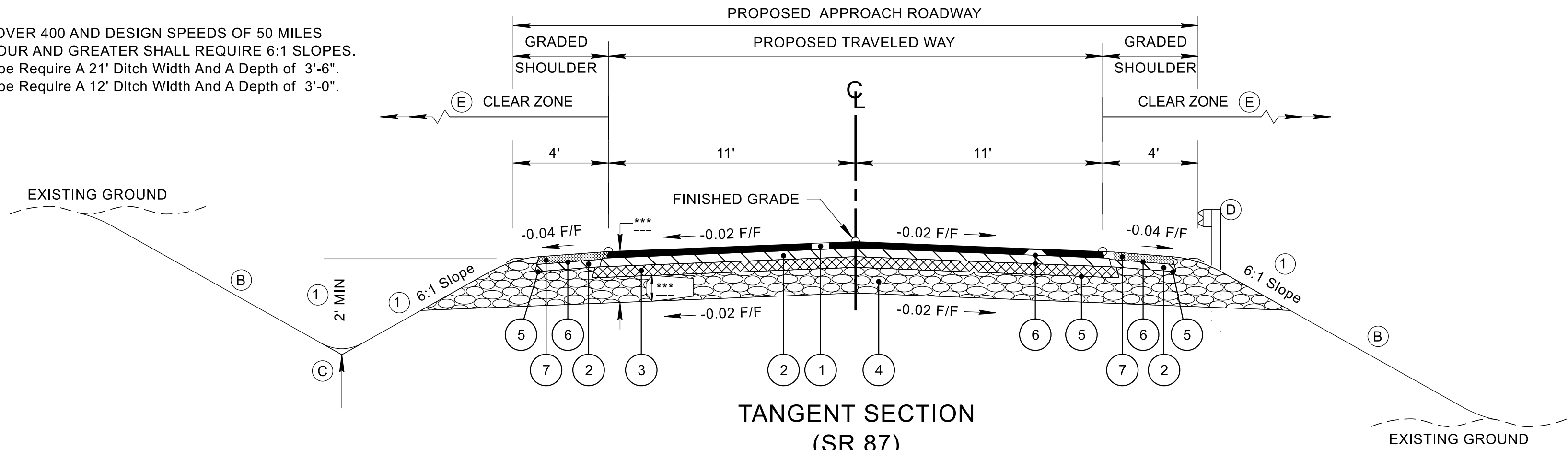
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR

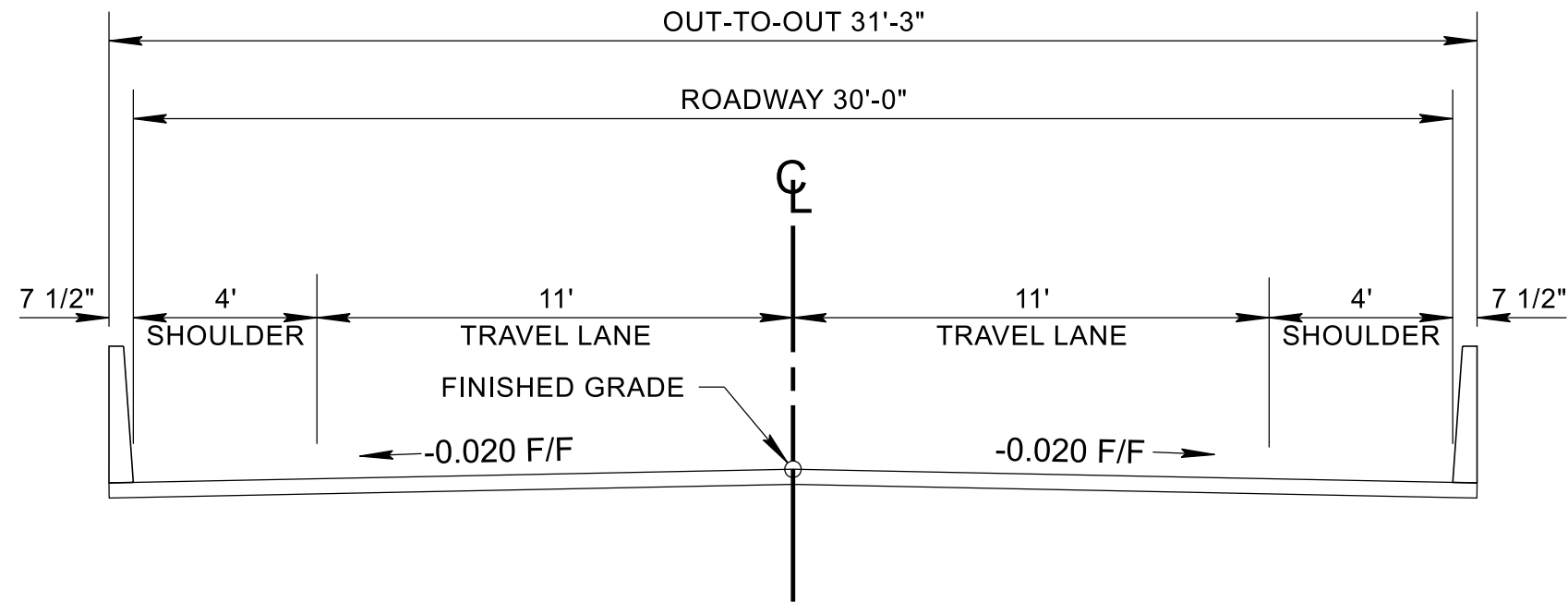
DATE

① ADTS OVER 400 AND DESIGN SPEEDS OF 50 MILES PER HOUR AND GREATER SHALL REQUIRE 6:1 SLOPES.
6:1 Slope Require A 21' Ditch Width And A Depth of 3'-6".
4:1 Slope Require A 12' Ditch Width And A Depth of 3'-0".



TANGENT SECTION
(SR 87)

(BASED ON STD. DWG. RD11-TS-2)
FROM STA. 107+30.00 TO STA. 113+27.00
FROM STA. 113+67.00 TO STA. 116+60.00



BRIDGE SECTION
(SR 87)

BRIDGE 49 FROM STA. 113+27.00 TO STA. 113+67.00

- (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.
- (C) 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.

PROPOSED PAVEMENT SCHEDULE

① 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"	⑤ 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.
② 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"	⑥ 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
③ 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"	⑦ 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
④ MINERAL AGGREGATE XX" THICK 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"	

TYPE	YEAR	PROJECT NO.	SHEET NO.
L&G	2025		2B

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
SECTION

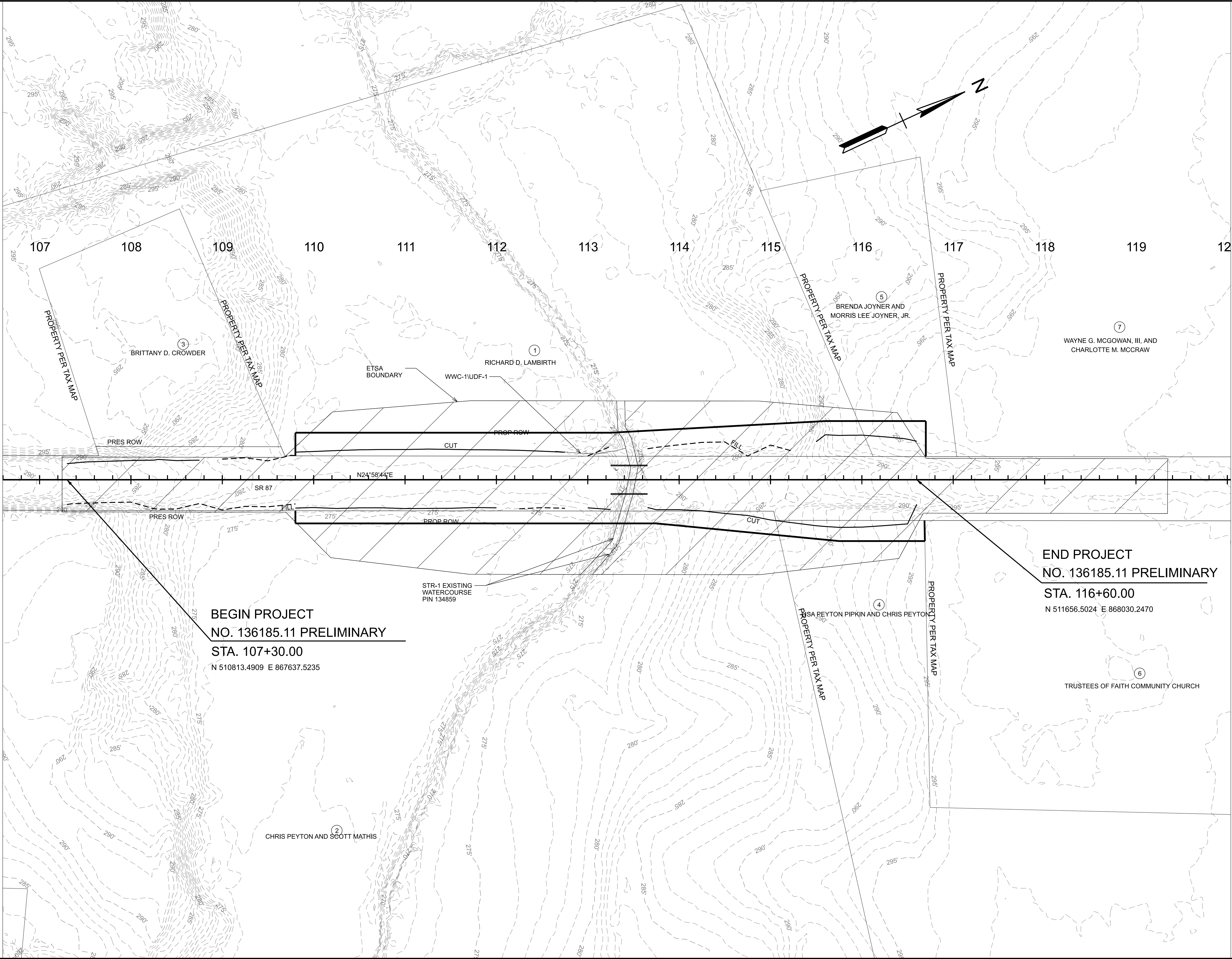
R.O.W. ACQUISITION TABLE						R.O.W. ACQUISITION TABLE													
TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA (ACRES)			AREA TO BE ACQUIRED (ACRES)			AREA REMAINING (ACRES)		EASEMENT (SQUARE FEET)					
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE		LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM DRAINAGE	SLOPE	CONST	AIR RIGHTS	PERM RAILROAD	
				BOOK	PAGE														
1	RICHARD D. LAMBIRTH	115	036.00	DB 696	427	9.560		9.560	0.415		0.415	9.145							
2	CHRIS PEYTON AND SCOTT MATHIS	115	033.07	RB 642	503		30.020	30.020		0.184	0.184		29.836						
3	BRITTANY D. CROWDER	115	036.02	RB 742	741	0.990		0.990				0.990							
4	LISA PEYTON PIPKIN AND CHRIS PEYTON	115	033.13	RB 777	172		25.580	25.580		3421 S.F.	3421 S.F.		25.501						
5	BRENDA JOYNER AND MORRIS LEE JOYNER, JR.	115	037.01	RB 702	36	0.980		0.980	2558 S.F.		2558 S.F.	0.921							
6	TRUSTEES OF FAITH COMMUNITY CHURCH	115	033.04	RB 793	836		2.850	2.850					2.850						
7	WAYNE G. MCGOWAN, III, AND CHARLOTTE M. MCCRAW	115	037.00	RB 654	259	566.700		566.700				566.700							
ACQUISITION TOTALS (ACRES)									0.736										

DISTURBED AREA	
IN BETWEEN SLOPE LINES	1.349 (AC)
15 FOOT WIDE STRIP (OUT SIDE SLOPE LINES)	0.556 (AC)
TOTAL DISTURBED AREA	1.905 (AC)
TOTAL PROJECT AREA	1.998 (AC)

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY
ACQUISITION
TABLE



TYPE	YEAR	PROJECT NO.	SHEET NO.
L&G	2025		4

BEGIN PROJECT
NO. 136185.11 PRELIMINARY
STA. 107+30.00
N 510813.4909 E 867637.5235

END PROJECT
NO. 136185.11 PRELIMINARY
STA. 117+65.00
N 511656.5024 E 868030.2470

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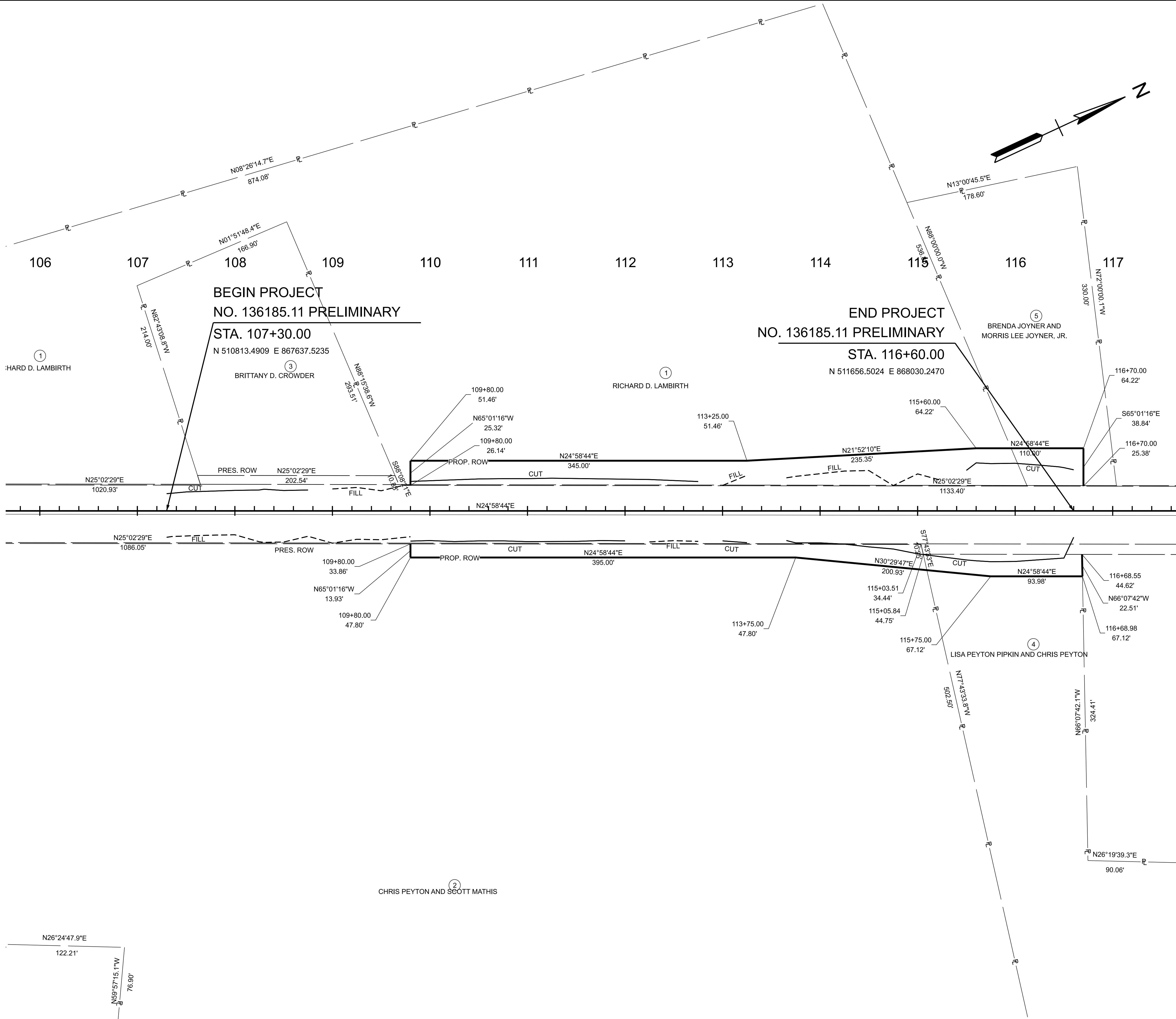
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT
LAYOUT

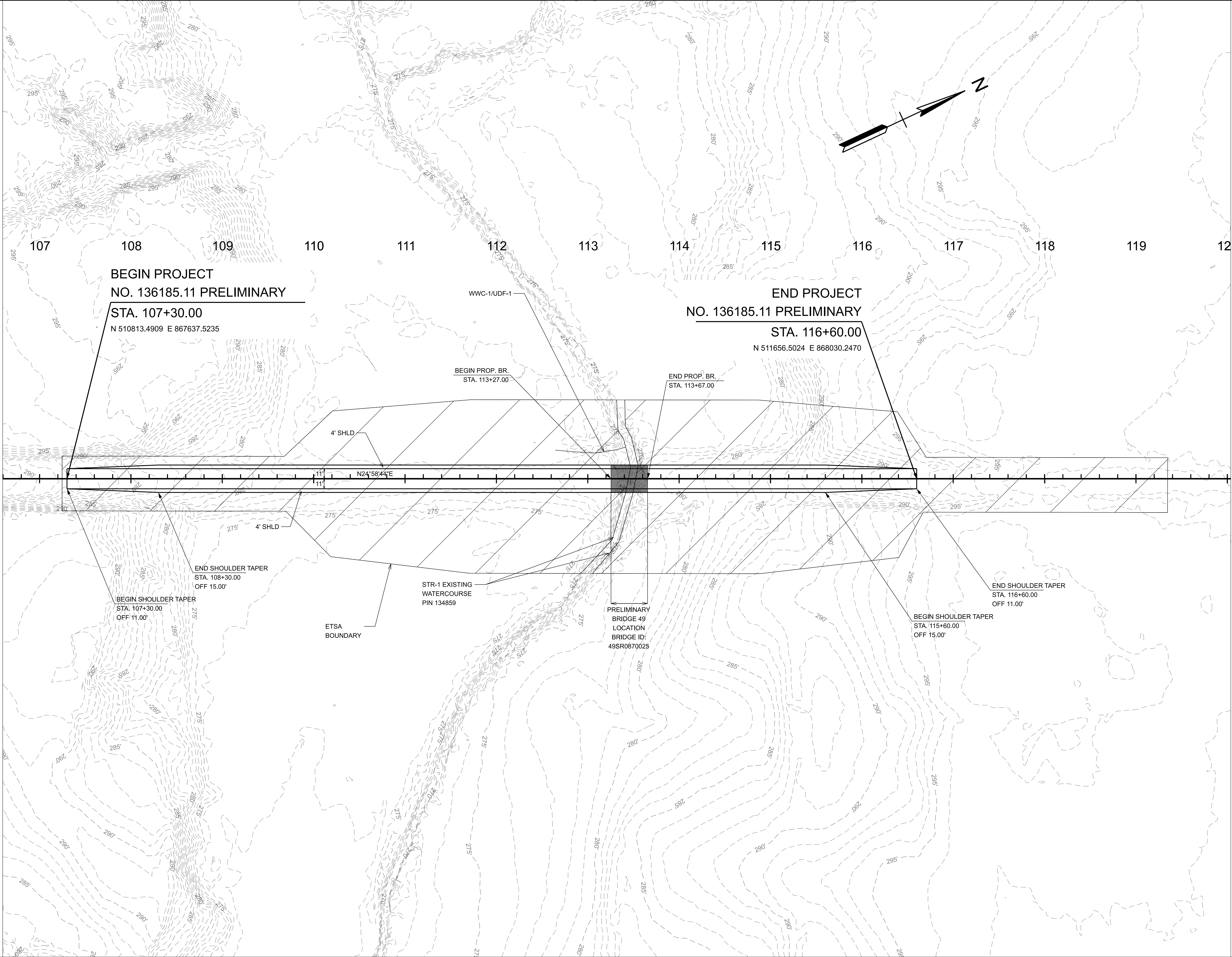
STA. 105+65.00 TO STA. 117+65.00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
L&G	2025		4A



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STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION	
ROW DETAILS	
STA. 105+65.00 TO STA. 117+65.00 SCALE: 1" = 50'	

TYPE	YEAR	PROJECT NO.	SHEET NO.
L&G	2025		4B



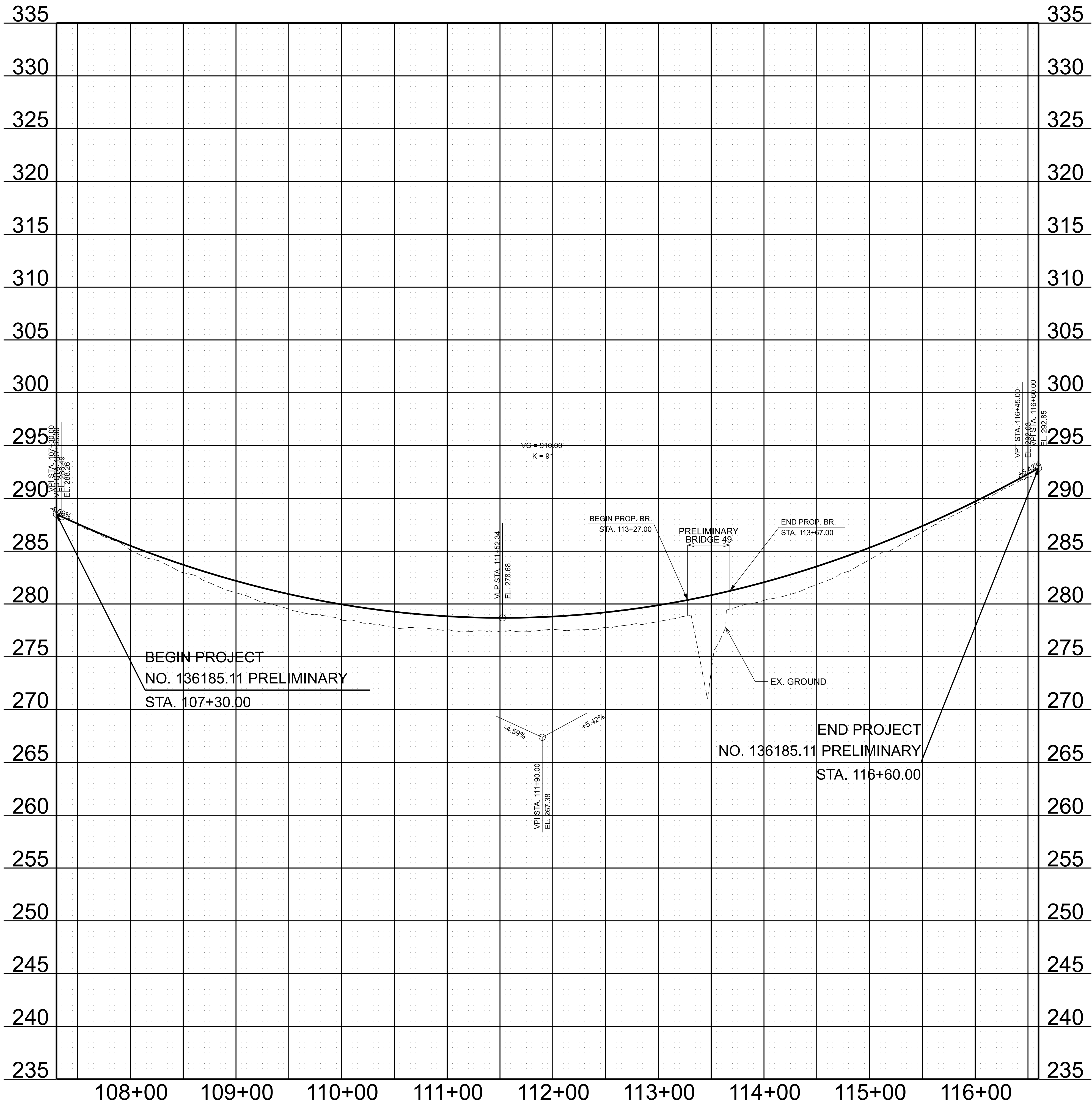
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**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

**PROPOSED
LAYOUT**

STA. 105+65.00 TO STA. 117+65.00
SCALE: 1" = 50'



TYPE	YEAR	PROJECT NO.	SHEET NO.
L&G	2025		4C

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED
PROFILE

STA. 107+30.00 TO STA. 116+60.00

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.