



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

February 02, 2026

Addendum No. 1

RE: Contract # C205036

WBS # 44367.3.1

STATE FUNDED

Robeson County (U-5797)

SR-1997 (FAYETTEVILLE RD) FROM FARRINGDOM ST TO EAST 22ND ST

February 17, 2026 Letting

To Whom It May Concern:

Reference is made to the plans and proposal furnished to you on this project.

The following revisions have been made to the Roadway Plans:

Sheet No.	Revision
Title Sheet	Revised Letting Date and -Y2- End Construction Label
1A	added sheet 2A-5 to index
2A-1	Typical Section 1 renamed to 1A. Typical Section 1B created to show full depth
2A-2	Typical Section 5 renamed to 5A. Typical Section 1B created to show full depth
2A-3	Typical Section 8 updated to show saw cut varies from 2' to 10' Typical 10 renamed to 10A. Typical Section 10B created to show full depth Detail G updated to match plan view Detail H deleted Typical Section 12 moved to sheet 2A-4
2A-4	Typical Section 12 renamed to 12A. Typical Section 12B created to show full depth
(New) 2A-5	The previous sheet 2A-4 moved to sheet 2A-5 -L- and -Y2- stations added to Typical section 13 and removed from typical section 14 Typical Section 14 updated with -Y- stations and added concrete island

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900
Fax: (919) 250-4127
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DR.
RALEIGH, NC 27610

2B-2	Updated Intersection Detail D to match updated design
2B-3	Deleted the Roberts RR crossing from this sheet. Island shortened to be outside of Railroad ROW
2B-6	Deleted the Roberts RR crossing from this sheet. Island shortened to be outside of Railroad ROW
3B-1	Earthwork Updated for Y2 updates
3B-2	Pavement Removal Summary Updated
3D-11	• 1101 Box removed • 1101-1100 pipe removed • 1102 box removed • 1102-1101 pipe removed • 1103 box removed • 1103-1101 pipe removed • 1104 box removed • 1104-1101 pipe removed • 1105 box removed • 1105-1104 pipe removed • 1106 box removed • 1106-1105 pipe removed 1110 through 1114 pipes and boxes moved from sheet 3D-12 to sheet 3D-11
3D-12	• 1107 box removed • 1107-1104 pipe removed • 1108 box removed • 1108-1104 pipe removed • 1109 box removed • 1109-0674 pipe removed Lines shifting up
3D-13	• Y2 36+37 Flowable fill removed • Y2 35+57 and Y2 34+71 pipe removal removed
3D-14	Revised totals for boxes, pipes, and pipes removal
8	Removed Rail Road hatching from plan sheet. Island shortened to be outside of Railroad ROW
11	Design Updated to end at the Railroad
16	Design Updated to end at the Railroad

Please void the above listed existing Sheets in your plans and staple the revised Sheets thereto. Staple New Sheet 2A-5 after revised Sheet 2A-4 in your plans.

The following revisions have been made to the Traffic Management Plans:

Sheet No.	Revision
TMP-2A-1	updated Y2 station to match the updated RDY plans
TMP-2A-2	updated Y2 station to match the updated RDY plans
TMP-3	updated Y2 design to match the updated RDY plans
TMP-22	updated Y2 design to match the updated RDY plans
TMP-25	updated Y2 design to match the updated RDY plans

Please void the above listed Sheets in your plans and staple the revised Sheets thereto.

The following revisions have been made to the Pavement Marking Plans:

Sheet No.	Revision
PMP-9	Updated pavement markings to match the updated roadway design

Please void the above listed Sheet in your plans and staple the revised Sheet thereto.

The following revisions have been made to the Erosion Control Plans:

Sheet No.	Revision
EC-11	Design updated to adjust for removal of design after of the Railroad
EC-19	Design updated to adjust for removal of design after of the Railroad

Please void the above listed Sheets in your plans and staple the revised Sheets thereto.

The following revisions have been made to the Signing Plans:

Sheet No.	Revision
SIGN-1	Updated Summary of Quantities Sign Erection, Type E
SIGN-2A	Updated Sign Quantities
SIGN-11	Updated Sign plans to match the updated roadway design

Please void the above listed Sheets in your plans and staple the revised Sheets thereto.

The following revisions have been made to the Signal Plans:

Sheet No.	Revision
Sig. 15.0	Updated Linework based on roadway and pavement marking revisions on both sides of the railroad tracks based on design update. Added existing conditions of curb and PMP east of RR tracks
Sig. 15.1	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 15.2	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 15.3	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 15.4	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 16.0	Updated Linework based on roadway, transportation management plan, and pavement marking revisions on both sides of the railroad tracks based on design update. Added existing conditions of curb and PMP east of RR tracks
Sig. 16.1	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 16.2	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 16.3	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 16.4	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 17.0	Updated Linework based on roadway, transportation management plan, and pavement marking revisions on both sides of the railroad tracks based on design update. Added existing conditions of curb and PMP east of RR tracks
Sig. 17.1	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 17.2	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 17.3	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 17.4	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 18.0	Updated Linework based on roadway, transportation management plan, and pavement marking revisions on both sides of the railroad tracks based on design update. Added existing conditions of curb and PMP east of RR tracks
Sig. 18.1	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 18.2	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26

Sig. 18.3	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26
Sig. 18.4	No plan changes. STV Address Update, Reviewer Change from Surti to Roth-Roffy, Plan and Design Date to Jan 2026, New Seal 1/27/26

Please void the above listed Sheets in your plans and staple the revised Sheets thereto.

The following revisions have been made to the Utility Construction Plans:

Sheet No.	Revision
UC-11	- Removed the design of waterline K around 97ft of 12in WL - Removed pipe DI water pipe fittings (2 - 450 bends, 1- 22.50 bend and 2 – 11.250 bends) - Removed 2 -12inch insertion valves - Removed 1- reconnect water meter - Removed a 97ft of 12in utility pipe that was meant to be abandoned
UC-16	Removed profile of waterline K (referenced out)

Please void the above listed Sheets in your plans and staple the revised Sheets thereto.

The following revisions have been made to the Cross Section Plans:

Sheet No.	Revision
X-1	Sheet numbers updated from X-67 to X-92
X-54 thru X-66	Updated to match the Y2 updates
(Existing) X-67 and (Existing) X-68	Deleted
(New) X-67 thru (New) X-92	Existing sheets X-69 thru X-94 renamed to X-67 thru X-92

Please void the above listed Sheets in your plans and staple the revised Sheets thereto and delete Existing sheets X-67, X-68, X-93 and X-94 from your plan set.

The following revisions have been made to the proposal:

Page No.	Revision
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 02-02-2026". Letting date revised.
Table of Contents	RAILROAD has been added to <u>UNIT PROJECT SPECIAL PROVISIONS</u>
G-1	The PROJECT SPECIAL PROVISION entitled <u>CONTRACT TIME AND LIQUIDATED DAMAGES</u> has been revised. The PROJECT SPECIAL PROVISION entitled <u>INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES</u> has been revised.
G-19	The PROJECT SPECIAL PROVISION entitled <u>SCHEDULE OF ESTIMATED COMPLETION PROGRESS</u> has been revised.
(New) RR-1 thru RR-19	Railroad special provisions added

Please void the above listed Pages in your proposal and staple the revised Pages thereto. Staple New pages RR-1 thru RR-19 after ST-16 in your proposal.

On the item sheets the following pay item revisions have been made:

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0017 - 0448200000-E 310	15" RC PIPE CULVERTS, CLASS IV	10,192 LF	9,916 LF
0021 - 0448600000-E 310	36" RC PIPE CULVERTS, CLASS IV	1,582 LF	1,446 LF
0032- 1297000000-E 607	MILLING ASPHALT PAVEMENT, 3" DEPTH	6,560 SY	6,670 SY
0035- 1491000000-E 610	ASPHALT CONC BASE COURSE, TYPE B25.0C	16,420 TON	16,470 TON
0036- 1503000000-E 607	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	14,660 TON	15,010 TON
0037- 1523000000-E 610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	18,400 TON	17,950 TON

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0038- 1575000000-E 620	ASPHALT BINDER FOR PLANT MIX	2,530 TON	2,525 TON
0039- 1693000000-E 654	ASPHALT PLANT MIX, PAVEMENT REPAIR	3,950 TON	3,850 TON
0051- 2286000000-N 840	MASONRY DRAINAGE STRUCTURES	265 EA	258 EA
0058- 2374000000-N 840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE F	70 EA	67 EA
0059- 2374000000-N 840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE G	74 EA	72 EA
0067- 2549000000-E 846	2'-6" CONCRETE CURB & GUTTER	22,880 LF	22,400 LF
0070- 2612000000-E 848	6" CONCRETE DRIVEWAY	680 SY	640 SY
0073- 2657000000-E 852	6" MONOLITHIC CONCRETE MEDIAN (SURFACE MOUNTED)	390 SY	110 SY
0099- 4102000000-N 904	SIGN ERECTION, TYPE E	84 EA	81 EA
0126- 4520000000-N 1266	TUBULAR MARKERS (FIXED)	63 EA	18 EA
0130- 4685000000-E 1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	36,313 LF	35,138 LF
0131- 4695000000-E 1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	5,178 LF	5,363 LF
0132- 4704000000-E 1205	THERMOPLASTIC PAVEMENT MARKING LINES (16", 90 MILS)	189 LF	80 LF

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0133-4709000000-E 1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	2,844 LF	2,735 LF
0134-4720000000-E 1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS)	25 EA	19 EA
0135-4725000000-E 1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	174 EA	149 EA
0151-5326200000-E 1510	12" WATER LINE	1,773 LF	1,676 LF
0152-5329000000-E 1510	DUCTILE IRON WATER PIPE FITTINGS	26,830 LB	26,740 LB
0173-5804000000-E 1530	ABANDON 12" UTILITY PIPE	2,846 LF	2,749 LF
0180-6000000000-E 1605	TEMPORARY SILT FENCE	23,025 LF	22,145 LF
0182-6009000000-E 1610	STONE FOR EROSION CONTROL, CLASS B	605 TON	555 TON
0183-6012000000-E 1610	SEDIMENT CONTROL STONE	4,420 TON	4,315 TON
0190-6036000000-E 1631	MATTING FOR EROSION CONTROL	14,000 SY	32,440 SY
0192-6042000000-E 1632	1/4" HARDWARE CLOTH	15,920 LF	15,440 LF
0195-6071012000-E 1642	COIR FIBER WATTLE	1,960 LF	1,900 LF

The Contractor's bid must include these pay item revisions.

The electronic bidding file has been updated to reflect these revisions. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

Signed by:

52C46046381F443...

Ronald E. Davenport, Jr., PE
State Contract Officer

RED/jjr
Attachments

cc:	Mr. Wiley W. Jones III, PE	Mr. Forrest Dungan, PE
	Mr. Wallace "Lee" Jernigan, Jr., PE	Ms. Jaci Kincaid
	Mr. Ken Kennedy, PE	Mr. Jon Weathersbee, PE
	Mr. Malcolm Bell	Project File (2)

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

PROPOSAL

INCLUDES ADDENDUM No.1 DATED 02-02-2026

DATE AND TIME OF BID OPENING: **Feb 17, 2026 AT 02:00 PM**

CONTRACT ID C205036
WBS 44367.3.1

FEDERAL-AID NO. STATE FUNDED
COUNTY ROBESON
T.I.P NO. U-5797
MILES 1.304
ROUTE NO. SR-1997
LOCATION SR-1997 (FAYETTEVILLE RD) FROM FARRINGDOM ST TO EAST 22ND ST.

TYPE OF WORK GRADING, DRAINAGE, PAVING, SIGNALS, AND CULVERTS.

NOTICE:

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

BIDS WILL BE RECEIVED AS SHOWN BELOW:

THIS IS A ROADWAY & CULVERT PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

UNIT PROJECT SPECIAL PROVISIONS

GEOTECHNICAL.....	GT-1
GEOENVIRONMENTAL.....	GV-1
PAVEMENT MARKINGS	PM-1
TRAFFIC CONTROL	TC-1
UTILITY CONSTRUCTION.....	UC-1
UTILITY BY OTHERS.....	UBO-1
EROSION CONTROL	EC-1
TRAFFIC SIGNALS	TS-1
STRUCTURE/CULVERTS	ST-1
RAILROAD	RR-1

<u>PERMITS</u>	P-1
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PROPOSAL ITEM SHEET

ITEM SHEET(S)

PROJECT SPECIAL PROVISIONS**GENERAL****HAUL ROADS:**

(7-16-24)

105

SP1 G04

Revise the *Standard Specifications* as follows:

Page 1-45, Article 105-15 RESTRICTION OF LOAD LIMITS, line 31, add the following after second sentence of the second paragraph:

At least 30 days prior to use, the Contractor shall notify the Engineer of any public road proposed for use as a haul road for the project.

CONTRACT TIME AND LIQUIDATED DAMAGES:

(8-15-00) (Rev. 5-16-23)

108

SP1 G08 A

The date of availability for this contract is **March 30, 2026**, except that work in jurisdictional waters and wetlands shall not begin until a meeting between the DOT, Regulatory Agencies, and the Contractor is held as stipulated in the permits contained elsewhere in this proposal. This delay in availability has been considered in determining the contract time for this project.

The completion date for this contract is **November 11, 2030**.

Except where otherwise provided by the contract, observation periods required by the contract will not be a part of the work to be completed by the completion date and/or intermediate contract times stated in the contract. The acceptable completion of the observation periods that extend beyond the final completion date shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are **Two Hundred Dollars (\$ 200.00)** per calendar day. These liquidated damages will not be cumulative with any liquidated damages which may become chargeable under Intermediate Contract Time Number 1.

INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES:

(7-1-95) (Rev. 2-21-12)

108

SP1 G13 A

Except for that work required under the Project Special Provisions entitled *Planting, Reforestation* and/or *Permanent Vegetation Establishment*, included elsewhere in this proposal, the Contractor will be required to complete all work included in this contract and shall place and maintain traffic on same.

The date of availability for this intermediate contract time is **March 30, 2026**.

The completion date for this intermediate contract time is **May 15, 2030**.

The liquidated damages for this intermediate contract time are **Five Thousand Dollars (\$ 5,000.00)** per calendar day.

SCHEDULE OF ESTIMATED COMPLETION PROGRESS:

(7-15-08)(Rev. 6-17-25)

108-2

SP1 G58

The Contractor's attention is directed to the Standard Special Provision entitled *Availability of Funds Termination of Contracts* included elsewhere in this proposal. The Department of Transportation's schedule of estimated completion progress for this project as required by that Standard Special Provision is as follows:

	<u>Fiscal Year</u>	<u>Progress (% of Dollar Value)</u>
2026	(7/01/25 - 6/30/26)	11% of Total Amount Bid
2027	(7/01/26 - 6/30/27)	28% of Total Amount Bid
2028	(7/01/27 - 6/30/28)	26% of Total Amount Bid
2029	(7/01/28 - 6/30/29)	23% of Total Amount Bid
2030	(7/01/29 - 6/30/30)	12% of Total Amount Bid

The Contractor shall also furnish his own progress schedule in accordance with Article 108-2 of the *Standard Specifications*. Any acceleration of the progress as shown by the Contractor's progress schedule over the progress as shown above shall be subject to the approval of the Engineer.

MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE:

(10-16-07)(Rev. 10-21-25)

102-15(J)

SP1 G66

Description

The purpose of this Special Provision is to carry out the North Carolina Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with State funds.

Definitions

Additional MBE/WBE Subcontractors - Any MBE/WBE submitted at the time of bid that will not be used to meet the Combined MBE /WBE Goal. No submittal of a Letter of Intent is required.

Combined MBE/WBE Goal: A portion of the total contract, expressed as a percentage that is to be performed by committed MBE/WBE subcontractors.

Committed MBE/WBE Subcontractor - Any MBE/WBE submitted at the time of bid that is being used to meet the Combined MBE /WBE goal by submission of a Letter of Intent. Or any MBE or WBE used as a replacement for a previously committed MBE or WBE firm.

Contract Goal Requirement - The approved participation at time of award, but not greater than the advertised Combined MBE/WBE contract goal.

Goal Confirmation Letter - Written documentation from the Department to the bidder confirming the Contractor's approved, committed participation along with a listing of the committed MBE and WBE firms.

State Project: U-5797
CSX OP No. NC1160

Robeson County

SPECIAL PROVISIONS FOR PROTECTION OF RAILROAD INTEREST

Under the terms of these provisions, the North Carolina Department of Transportation shall hereinafter be called "Department," and the CSX Transportation, Inc. shall hereinafter be called "Railroad."

The current CSXT Special Provisions, CSXT Criteria for Undergrade Railroad Bridges, CSXT Construction Submission Criteria, CSXT Soil and Water Management Policy, and CSXT Insurance Requirements, as found in the CSX Transportation Public Projects Manual, which can be found at, <https://www.csx.com/index.cfm/library/files/about-us/property/public-project-manual/>, as well as the **current version of the CSXT Design and Construction Standard Specifications** available at the time of execution of the agreement, which **shall be obtained from CSXT or its authorized representative upon request from the Department or its Contractor, all of the aforementioned shall be considered to be included by reference only**, and the attached project-specific CSXT Temporary Right-of-Entry Agreement shall serve as the basis for the railroad provisions of this contract. CSXT further reserves the right to revise, update, and enforce any and all safety related Design and Construction Standards and Specifications as may be necessary throughout the course of the project. The following additional statements are to be included as addendums to the referenced provisions:

- Requirements throughout these provisions placed on "Department or its Contractor" shall be the sole responsibility of the Contractor unless specifically stated otherwise elsewhere within these provisions. All contractor costs for railroad coordination shall be considered incidental to the other pay items.
- Unless noted elsewhere in these provisions, all contact with Railroad should be addressed to the below individual who shall be considered the CSXT Representative.

Mr. Jason Field
CE&I Lead
Moffatt & Nichol
(919) 271-3986 (Mobile)
jfield@MoffattNichol.com

- The Engineer shall be considered the Department Representative.
- All required work plan submittals shall be forwarded to and approved in writing by the Railroad prior to proceeding with the work of each applicable phase. Up to thirty (30) days will be required to review each submittal. Up to an additional thirty (30) days will be required to review each subsequent submission returned and not marked "Conforms as

Noted.”

- At project completion, a complete set of “As Built” plans for the proposed construction shall be submitted to CSXT Bridge Maintenance and Design Group via Moffatt & Nichol. CSXT will keep these plans on file in Jacksonville for future reference. Please address these plans to:

Mr. Jason Field
CE&I Lead
Moffatt & Nichol
(919) 271-3986 (Mobile)
jfield@MoffattNichol.com

- CSXT Special Provisions Section VI.A - The following paragraph shall be added as the second paragraph.

The Department will bear all railroad costs incidental to such crossings including flagging and services performed by Railroad personnel. Written approval from the Engineer is required prior to use of the crossings. The Contractor shall sequence construction to minimize the duration the crossing(s) remain in place. The Contractor shall reimburse the Department for any costs of the flagging for the crossing outside of the duration approved by the Engineer. Cost of the installation, maintenance, and removal of the temporary crossing(s) incurred by the Contractor will be considered incidental to the other pay items.

- CSXT Special Provisions Section XII.C – Flagging requests should be made to S.Brown@MoffattNichol.com. Termination or cancellation of flagger requires ten (10) days’ notice to avoid incurring costs.
- CSXT Special Provisions Section XII.D - The following paragraph shall be added as the second paragraph

Should violations of Railroad policy or unscheduled, unauthorized work by the Contractor result in additional full-time flagging being required by the Railroad, the additional cost of such flagging above normal flagging cost shall be deducted from the final payment to the Contractor as provided in Article 109-9 of the Standard Specifications. Neither the Department nor the Railroad will be liable for damages resulting from unscheduled or unauthorized work.

- CSXT Special Provisions Section XII.E - Include the following sentence at the end of the paragraph

The Contractor shall reimburse the Department for any costs of the flagging which is required for work for the benefit of the Contractor.

- Insurance Requirements Section I.4.d - The Project Description and Designation on the

Declarations shall read:

Lumberton, Robeson County, North Carolina, Improvements to N Roberts Ave & Linkhaw Rd Crossings, Carolinas Zone, Wilmington Subdivision, DOT No. #631465D/631508U; CSXT OP# NC1160, State# U-5797

- Insurance Requirements Section II.1 - Insurance documents shall be submitted to the Department at the following address:

NCDOT Rail Division
Engineering & Safety Branch
C/O State Railroad Agent
1556 Mail Service Center
Raleigh, NC 27699-1556

- The Contractor shall not commence any work on railroad rights-of-way until a fully executed copy of the attached CSX Transportation Inc. Temporary Right of Entry Agreement has been received and all other requirements of these provisions for commencement of work have been completed. It should be noted that the provisions included in the CSXT Temporary Right-of-Entry Agreement materially duplicate those included in the CSXT Special Provisions and are not intended to be standalone requirements.

Lumberton, Robeson County, North Carolina
Improvements to N Roberts Ave & Linkhaw Rd Crossings
Carolinas Zone, Wilmington Subdivision
DOT# 631465D/631508U OP# NC1160 State# U-5797

CSX Transportation, Inc.
Temporary Right of Entry Agreement

THIS AGREEMENT, made as of _____, 20____, by and between CSX TRANSPORTATION, INC., a Virginia corporation, whose mailing address is 500 Water Street, Jacksonville, Florida 32202, (hereinafter "**CSXT**") and named Contractor, (*****), whose mailing address is (*****), (*****), (hereinafter "**Licensee**").

W I T N E S S E T H:

WHEREAS, Licensee has submitted a written application to CSXT requesting permission to enter CSXT's property located within the Carolinas Zone, Norlina Subdivision, at DOT#: _____, MP SF-_____, Rogers Road in Matthews, Mecklenburg County, North Carolina (hereinafter the "**Property**"), for the Crossing CSXT over Greylock Ridge Road on behalf of the North Carolina Department of Transportation ("**Department**"), located at MP SF-_____ from approximately Sta. _____ to Sta. _____ on the right of way owned by the Department (hereinafter the "**Project**").

WHEREAS, CSXT is willing to grant to Licensee the limited right and permission to enter upon the Property for the limited purpose of performing the Project.

NOW THEREFORE, CSXT hereby grants to Licensee the right and permission to enter upon the Property for the purpose of performing said Project, subject to the terms and conditions set forth below:

1. **PROJECT:** The Project shall be performed at the entire cost and expense of the Department per the fully executed Construction Agreement between the Department and CSXT for this project, dated _____, 20____ in accordance with good and sound engineering practices, to the satisfaction of CSXT's Division Engineer or his or her duly authorized representative (hereinafter "Division Engineer") and in a manner to avoid accidents, damages, unnecessary delays to, or interference with train traffic of CSXT. Prior to entry, Licensee shall notify the Division Engineer's representative and arrange for flagging protection in accordance to Sections 5 and 6 of this Agreement. Licensee shall not dig in the ballast line or within the tracks loading influence area, or otherwise disturb the track structure. Licensee and Licensee's employees, agents, contractors (hereinafter "Contractors") and other representatives (hereinafter collectively, "Agents") shall maintain in their possession a copy of this Agreement at all times during their occupation of the Property. Licensee and Agents also further agree to abide by the Special Provisions included as Attachment B to this Agreement.

2. **INDEMNITY:**

2.1 Licensee and its Contractors hereby assume risk of and shall indemnify, defend, protect, and save CSXT and CSXT's Affiliates harmless with respect to any and all attorneys' fees, liability, claims, demands, payments, suits, actions, recoveries, penalties, costs, legal expenses, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages) for:

2.1.1 Personal injury, including, but not limited to bodily injury to or death of any person or persons whomsoever, including the agents, servants, Affiliates or employees of the parties, or the Contractors;

Lumberton, Robeson County, North Carolina
Improvements to N Roberts Ave & Linkhaw Rd Crossings
Carolinas Zone, Wilmington Subdivision
DOT# 631465D/631508U OP# NC1160 State# U-5797

- 2.1.2 The loss or damage to any property whatsoever, including property owned or in the care, custody, or control of the parties hereto or their respective Affiliates;
 - 2.1.3 Any environmental damage and any related remediation brought or recovered against CSXT or any of its Affiliates; and
 - 2.1.4 Any and all other losses or damages; arising directly or indirectly from the presence of Licensee or its Agents on or about the Property, whether or not attributable in whole or part to the negligence, gross negligence, or intentional misconduct of CSXT or its Affiliates.
- 2.2 The parties waive any and all right or opportunity to contest the enforceability of this Section and agree that, in the event this Section, or any part of this Section, is found unenforceable by the final, unappealable judgment of a court of competent jurisdiction, this Section shall be construed so as to be enforceable to the maximum extent permitted by applicable law. In the event that such court of competent jurisdiction finds that Florida statutory construction contract indemnity monetary limits apply to this Agreement with respect to Licensee's/Contractors' indemnification of CSXT and its Affiliates for liability caused in whole or in part by any act, omission, or default by CSXT or its Affiliates, the parties hereto agree that such limit shall be equal to the limits (exclusive of deductibles) of the applicable insurance required by Sections 3 and 4 of this Agreement. The parties acknowledge and agree that this monetary limit, if required, bears a commercially reasonable relationship to this Agreement, in so far as, among other factors, the parties have taken into account the availability and cost of insurance and other risk transference devices, the scope of the Project, the risks associated with the Project, and the compensation and any other benefits exchanged between the parties in connection with this Agreement.
- 2.2.1 Licensee shall comply, and shall require its Contractors to comply, with any federal, State, or local laws, statutes, codes, ordinances, rules, and regulations applicable to its presence or performance of any activity on the Property. Licensee and its Contractors shall indemnify, defend, and hold CSXT and its Affiliates harmless with respect to any fines, penalties, liabilities, or other consequences for its failure to so comply.
 - 2.2.2 For the purpose of this Agreement, the term "Affiliates" includes all entities, directly or indirectly owned or controlled by or under common control of a party or its respective officers, directors, employees, and agents, and in the case of CSXT, includes CSX Corporation, CSXT, and their Affiliates and their respective officers, directors, employees, and agents.
 - 2.2.3 The provisions of this Section shall survive the termination or expiration of this Agreement.
3. **GENERAL LIABILITY INSURANCE:** Licensee shall or shall require its Contractor to procure and maintain insurance in compliance with CSXT's insurance requirements attached to this Agreement as Attachment A. Neither the Department nor its Contractor shall commence work on the Project until such policy or policies have been submitted to and approved by CSXT's Risk Management Department.

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4. **RAILROAD PROTECTIVE LIABILITY INSURANCE:** Licensee shall or shall require its Contractor to procure and maintain Railroad Protective Liability insurance in compliance with CSXT's requirements attached to this Agreement as Attachment A.
5. **PRIOR NOTIFICATION:** Licensee or Licensee's Agents shall notify CSXT's General Engineering Consultant (GEC) Representative at least ten (10) days prior to requiring entry on the Property and shall abide by the instructions of the Division Engineer, or his or her authorized representative. CSXT's GEC Representative, Moffatt & Nichol, can be contacted at CFontenelleto schedule flagging services.
6. **CLEARANCES:** Neither Licensee nor Agents shall perform any Project or place or operate any equipment of Licensee or Agents at a distance closer than fifty (50) feet from the center of any track, without the prior approval of the Division Engineer. The Division Engineer may require protective services or such other services as deemed necessary or appropriate. Equipment shall be moved across CSXT's track(s) only at a public crossing unless prior arrangements have been made with the Division Engineer and a Private Crossing Agreement is fully executed and in place. Licensee and Agents shall take all precautions necessary to avoid interference with or damage to CSXT's property and signal and communication facilities during their performance of the Project.
7. **PROTECTIVE SERVICES:** If protective services, such as flagging protection, are required by CSXT, Licensee shall make arrangements with CSXT's GEC Representative to furnish such personnel, flagman, or watchman, that in CSXT's opinion may be necessary to protect the facilities and traffic of CSXT during the performance of the Project.
8. **PAYMENT FOR PROTECTIVE SERVICES:** Payment shall be made by the Department in accordance with the fully executed Construction Agreement between the Department and CSXT for this project.
9. **ENVIRONMENTAL:** This Agreement does not include and expressly excludes the performance of any site investigation activities designed to determine environmental conditions on, about, or beneath the Property. Precluded activities include performing soil borings for purposes other than geotechnical investigation; obtaining soil, sediment, groundwater, and surface water samples; and conducting field or laboratory analyses of any soil, sediment, groundwater, or surface water samples obtained from CSXT property to identify chemical composition or environmental condition. *If any type of environmental investigation is desired, a separate right of entry agreement issued through CSXT's Environmental Department must be secured.*
10. **CLAIMS:** Licensee shall, or shall require Agents, to promptly notify the Division Engineer of any loss, damage, injury, or death arising out of or in connection with the Project.
11. **REMEDIATION:** It is understood and agreed that, upon completion of the Project, the Property shall be left in a condition satisfactory to the Division Engineer or his or her duly authorized representative.
12. **SAFETY:**
 - 12.1 All personnel entering the Property must comply with CSXT safety rules and requirements to include, without exception, the wearing of hard hats and approved safety

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shoes and safety glasses with side shields. Anyone not in compliance with these rules and regulations will be asked to leave the Property.

- 12.2 Before performing any work authorized by this Agreement, Licensee, at its sole cost and expense, shall obtain all necessary permit(s) (including but not limited to zoning, building, construction, health, safety, or environmental matters), letter(s), or certificate(s) of approval. Licensee expressly agrees and warrants that it shall conform and limit its activities to the terms of such permit(s), approval(s), and authorization(s) and shall comply with all applicable ordinances, rules, regulations, requirements, and laws of any governmental authority (State, federal or local) having jurisdiction over Licensee's activities, including the location, contact, excavation, and protection regulations of the Occupational Safety and Health Act (OSHA) (29 C.F.R. § 1926.651(b), et al.), and State "One Call"- "Call Before You Dig" requirements.
13. **TERM:** This Right-of-Entry Agreement and the permission conferred and the license granted by it does not constitute a grant of permanent easement and shall terminate upon completion of the Project or at midnight, _____, whichever occurs first, unless extended in writing by CSXT. In the event Licensee fails to comply with the terms and provisions of this Agreement, Licensee agrees to pay and agrees that CSXT shall be entitled to recover the costs and expenses incurred by CSXT, including legal fees and expenses, to enforce the terms of this Agreement.
14. **SEVERABILITY:** The parties agree that if any part, term, or provision of this Agreement is held to be illegal, unenforceable, or in conflict with any applicable federal, State, or local law or regulation, such part, term, or provision shall be severable, with the remainder of this Agreement remaining valid and enforceable. If any provision or any part of a provision of this Agreement shall be finally determined to be superseded, invalid, illegal, or otherwise unenforceable pursuant to any applicable law, ordinance, rule, or regulation, such determination shall not impair or otherwise affect the validity, legality, or enforceability of the remaining provision or parts of the provision of this Agreement, which shall remain in full force and effect as if the unenforceable provision or part were deleted.
15. **ENTIRE AGREEMENT:** This Agreement embodies the entire understanding of the parties, may not be waived or modified except in a writing signed by authorized representatives of both parties, and supersedes all prior or contemporaneous written or oral understandings, agreements, or negotiations regarding its subject matter.
16. **NOTICES:** All notices, consents, and approvals required or permitted by this Agreement shall be in writing and shall be deemed delivered; upon personal delivery, upon the expiration of three (3) business days following mailing by U.S. first class mail, or upon the next business day following mailing by a nationally recognized overnight carrier, to the Licensee at the address above, and to CSXT at the address shown on Page 1, or at such other addresses as either party may designate by delivery of prior notice to the other party.
17. **TERMINATION:** CSXT shall have the right at any time and at its sole discretion to terminate this Agreement upon notice to Licensee.
18. **WAIVER:** If either party fails to enforce its respective rights under this Agreement or fails to insist upon the performance of the other party's obligations hereunder, such failure shall not be construed as a permanent waiver of any rights or obligations in this Agreement.

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19. **GOVERNING LAW; VENUE:** This Agreement shall be governed by and construed under the laws of the State of North Carolina, without regard to the choice of law provisions thereof. Venue for any action arising from, or brought to enforce, this Agreement, shall vest exclusively in the state or federal courts located in Duval County, Florida, and the parties agree to submit to the personal jurisdiction of any state or federal court located in Duval County, Florida.
20. **NO ASSIGNMENT:** Notwithstanding anything to the contrary contained in this Agreement, Licensee shall not permit the Agents to enter the Property without first requiring the Agents to agree in writing to comply with all of the terms of this Agreement. Notwithstanding the foregoing, Licensee shall continue to be responsible for ensuring that the Agents comply with all of the terms and conditions of this Agreement and shall indemnify and hold CSXT harmless for any damages described in Section 2 above caused in whole or in part by such subcontractor. Assignment of this Agreement to any party other than the Agents in accordance with this Section shall not be permitted except upon the prior written consent of CSXT, which consent may be granted or withheld at CSXT's sole discretion. This Agreement shall be binding upon the parties and their respective successors and assigns.

[Signatures appear on following page]

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BY SIGNING THIS AGREEMENT, I certify that there have been no changes made to the content of this Agreement since its approval by the CSXT Legal Department on _____, 20__.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the day and year first above written.

CSX TRANSPORTATION, INC.

BY: _____

NAME: Michael Liebelt

TITLE: Project Manager II

DATE: _____

(*****):

BY: _____

NAME: _____

TITLE: _____

Who, by the execution hereof, affirms that he/she has the authority to do so and to bind (*****) to the terms and conditions of this Agreement.

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Attachment A

INSURANCE REQUIREMENTS

I. Insurance Policies:

The Department and its Contractor, if and to the extent that either is performing work on or about CSXT's property, shall procure and maintain the following insurance policies:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than Five Million Dollars (\$5,000,000) in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured. The policy shall include endorsement ISO CG 24 17 evidencing that coverage is provided for work within fifty (50) feet of a railroad. If such endorsement is not included, railroad protective liability insurance must be provided as described in Item 4 below.
2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than One Million Dollars (\$1,000,000), which insurance must contain a waiver of subrogation against CSXT and its affiliates (if permitted by state law).
3. Commercial automobile liability insurance with limits of not less than One Million Dollars (\$1,000,000) combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured. The policy shall include endorsement ISO CA 20 70 evidencing that coverage is provided for work within fifty (50) feet of a railroad. If such endorsement is not included, railroad protective liability insurance must be provided as described in Item 4 below.
4. Railroad protective liability insurance with limits of not less than Five Million Dollars (\$5,000,000) combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of Ten Million Dollars (\$10,000,000), which insurance shall satisfy the following additional requirements:
 - a. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.
 - b. CSX Transportation must be the named insured on the Railroad Protective Insurance Policy.
 - c. Name and Address of Contractor and the Department must appear on the Declarations page.
 - d. Description of operations must appear on the Declarations page and must match the Project description.
 - e. Authorized endorsements must include the Pollution Exclusion Amendment - CG 28 31, unless using form CG 00 35 version 96 and later.
 - f. Authorized endorsements may include:

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- (i). Broad Form Nuclear Exclusion - IL 00 21
- (ii) 30-day Advance Notice of Non-renewal or cancellation
- (iii) Required State Cancellation Endorsement
- (iv) Quick Reference or Index - CL/IL 240

g. Authorized endorsements may not include:

- (i) A Pollution Exclusion Endorsement except CG 28 31
- (ii) A Punitive or Exemplary Damages Exclusion
- (iii) A "Common Policy Conditions" Endorsement
- (iv) Any endorsement that is not named in Section 4 (e) or (f) above.
- (v) Policies that contain any type of deductible

- 5. All insurance companies must be A.M. Best rated A- and Class VII or better.
- 6. The CSX OP number or CSX contract number, as applicable, must appear on each Declarations page and/or certificates of insurance.
- 7. Such additional or different insurance as CSXT may require.

II. Additional Terms

- 1. Contractor must submit the original Railroad Protective Liability policy, Certificates of Insurance, and all notices and correspondence regarding the insurance policies to:

Insurance Department
CSX Transportation, Inc.
500 Water Street, 14th Floor
Jacksonville, FL 32202

OR

insurancedocuments@csx.com and [CMR email address]

- 2. Neither the Department nor its Contractor may begin work on the Project until it has received CSXT's written approval of the required insurance.

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Attachment B

SPECIAL PROVISIONS

DEFINITIONS:

As used in these Special Provisions, all capitalized terms shall have the meanings ascribed to them by the Agreement, and the following terms shall have the meanings ascribed to them below:

“CSXT” shall mean CSX Transportation, Inc., its successors and assigns.

“CSXT Representative” shall mean the authorized representative of CSX Transportation, Inc.

“Agreement” shall mean the Agreement between CSXT and the Department dated as of _____, 20__ amended from time to time.

“Department” shall mean the North Carolina Department of Transportation.

“Department Representative” shall mean the authorized representative of the North Carolina Department of Transportation.

“Contractor” shall mean the Licensee identified in the CSX Transportation, Inc. Temporary Right of Entry Agreement to which these provisions are attached.

“Work” shall mean the Project as described in the Agreement.

I. AUTHORITY OF CSXT ENGINEER

The CSXT Representative shall have final authority in all matters affecting the safe maintenance of CSXT operations and CSXT property, and his or her approval shall be obtained by the Department or its Contractor for methods of construction to avoid interference with CSXT operations and CSXT property and all other matters contemplated by the Agreement and these Special Provisions.

II. INTERFERENCE WITH CSXT OPERATIONS

- A. The Department or its Contractor shall arrange and conduct its work so that there will be no interference with CSXT operations, including, but not limited to train, signal, telephone, and telegraphic services, or damage to CSXT’s property, or to poles, wires, and other facilities of tenants on CSXT’s Property or right-of-way. The Department or its Contractor shall store materials so as to prevent trespassers from causing damage to trains, or CSXT Property. Whenever Work is likely to affect the operations or safety of trains, the method of doing such Work shall first be submitted to the CSXT Representative for approval, but such approval shall not relieve the Department or its Contractor from liability in connection with such Work.
- B. If conditions arising from or in connection with the Project require that immediate and unusual provisions be made to protect train operation or CSXT’s property, the Department or its Contractor shall make such provision. If the CSXT Representative determines that such provision is insufficient, CSXT may, at the expense of the

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Department or its Contractor, require or provide such provision as may be deemed necessary, or cause the Work to cease immediately.

- C. Should work activities be required within CSXT property or right-of-way, the Contractor shall request CSXT to locate any buried utilities or facilities (air lines, wells, etc.). A written request shall be delivered to the CSXT Representative at least five (5) days in advance. The traditional "One Call" utility locate services are not responsible for locating any CSXT undergrade utilities or facilities.

III. INSURANCE

The Contractor shall not be permitted to work on, or have potential to foul, CSXT property or right-of-way until CSXT has acknowledged written acceptance of the insurance coverages for the proposed project. See CSXT INSURANCE REQUIREMENTS following these CSXT SPECIAL PROVISIONS.

IV. NOTICE OF STARTING WORK

The Department or its Contractor shall not commence any work on CSXT Property or rights-of-way until it has complied with the following conditions:

- A. Notify CSXT in writing of the date that it intends to commence Work on the Project. Such notice must be received by CSXT at least ten (10) business days in advance of the date the Department or its Contractor proposes to begin Work on CSXT property. The notice must refer to this Agreement by date. If flagging service is required, such notice shall be submitted at least thirty (30) business days in advance of the date scheduled to commence the Work.
- B. Obtain authorization, through the Notice to Proceed, from the CSXT Representative to begin Work on CSXT property. Once authorization is given, the Department or its Contractor shall provide a detailed schedule to include means and methods for review, comment and/or approval prior to commencement of work. CSXT will in turn provide direction regarding specific conditions with which it must comply.
- C. Obtain from CSXT the names, addresses, and telephone numbers of CSXT's personnel who must receive notice under provisions in the Agreement. Where more than one individual is designated, the area of responsibility of each shall be specified.

V. WORK FOR THE BENEFIT OF THE CONTRACTOR

- A. No temporary or permanent changes to wire lines or other facilities (other than third party fiber optic cable transmission systems) on CSXT property that are considered necessary to the Work are anticipated or shown on the Plans. If any such changes are, or become, necessary in the opinion of CSXT or Department, such changes will be covered by appropriate revisions to the Plans and by preparation of a force account estimate. Such force account estimate may be initiated by either CSXT or the Department but must be approved by both CSXT and the Department. The Department or its Contractor shall be responsible for arranging for the relocation of the third-party fiber optic cable transmission systems, at no cost or expense to CSXT.

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- B. Should the Department or its Contractor desire any changes in addition to the above, then it shall make separate arrangements with CSXT for such changes to be accomplished at the Department or its Contractor's expense.

VI. HAUL ACROSS RAILROAD

- A. If the Department or its Contractor desires access across CSXT property or tracks at other than an existing and open public road crossing in or incident to construction of the Project, the Department or its Contractor must first obtain the permission of CSXT and shall execute a license agreement or right of entry satisfactory to CSXT, wherein the Department or its Contractor agrees to bear all costs and liabilities related to such access.
1. Temporary construction haul roads across CSXT tracks will require a separate application and payment to CSXT Property Services. Agreement extensions require additional payment. Actual cost is variable and project specific. Additional information can be found at this URL: <https://www.csx.com/index.cfm/customers/value-added-services/property-real-estate/permitting-utility-installations-and-rights-of-entry/>.
- B. The Department and its Contractor shall not cross CSXT's property and tracks with vehicles or equipment of any kind or character, except at such crossing or crossings as may be permitted pursuant to this section.

VII. COOPERATION AND DELAYS

- A. The Department or its Contractor shall arrange a schedule with CSXT for accomplishing stage construction involving work by CSXT. In arranging its schedule, the Department or its Contractor shall ascertain, from CSXT, the lead time required for assembling crews and materials and shall make due allowance therefor.
- B. The Department or its Contractor may not charge any costs or submit any claims against CSXT for hindrance or delay caused by railroad traffic; work done by CSXT or other delay incident to or necessary for safe maintenance of railroad traffic; or for any delays due to compliance with these Special Provisions.
- C. The Department and its Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.
- D. The Department and its Contractor understand and agree that CSXT does not assume any responsibility for work performed by others in connection with the Project. The Department and its Contractor further understand and agree that they shall have no claim whatsoever against CSXT for any inconvenience, delay or additional cost incurred by the Department or its Contractor on account of operations by others.

VIII. STORAGE OF MATERIALS AND EQUIPMENT

The Department and its Contractor shall not store their materials or equipment on CSXT's property or where they may potentially interfere with CSXT's operations, unless the Department

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or its Contractor has received CSXT Representative's prior written permission. The Department and its Contractor understand and agree that CSXT will not be liable for any damage to such materials and equipment from any cause and that CSXT may move, or require the Department or its Contractor to move, such material and equipment at the Department's or its Contractor's sole expense. To minimize the possibility of damage to the railroad tracks resulting from the unauthorized use of equipment, all grading or other construction equipment that is left parked near the tracks unattended by watchmen shall be immobilized to the extent feasible so that it cannot be moved by unauthorized persons.

IX. CONSTRUCTION PROCEDURES

A. General

1. Construction work on CSXT property shall be subject to CSXT's inspection and approval.
2. Construction work on CSXT property shall be in accord with CSXT's Construction Submission Criteria, latest edition and CSXT's written outline of specific conditions and with these Special Provisions.
3. Contractor shall observe the terms and rules of the CSXT Safe Way manual, which the Department and its Contractor shall be required to obtain from CSXT, and in accord with any other instructions furnished by CSXT or CSXT's Representative. Failure to comply with the terms of the agreement and CSXT rules can result in mandatory railroad worker protective training for the Department, Contractor, and its subcontractors.

B. Blasting

1. The Department or its Contractor shall obtain CSXT Representative's and the Department Representative's prior written approval for use of explosives on or adjacent to CSXT property. If permission for use of explosives is granted, the Department or its Contractor must comply with the following:
 - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Department or its Contractor.
 - b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
 - c. No blasting shall be done without the presence of an authorized representative of CSXT. At least thirty (30) days' advance written notice to CSXT Representative is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
 - d. The Department or its Contractor must have at the Project site adequate equipment, labor, and materials, and allow sufficient time, to (i) clean up (at the Department's expense) debris resulting from the blasting without any delay to trains; and (ii) correct (at the Department's expense) any

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track misalignment or other damage to CSXT's property resulting from the blasting, as directed by CSXT Representative, without delay to trains. If the Department's or its Contractor's actions result in delay of any trains, including Amtrak passenger trains, the Department shall bear the entire cost thereof.

- e. The Department and its Contractor shall not store explosives on CSXT property.

2. CSXT Representative will:

- a. Determine the approximate location of trains and advise the Department or its Contractor of the approximate amount of time available for the blasting operation and clean-up.
- b. Have the authority to order discontinuance of blasting if, in his or her opinion, blasting is too hazardous or is not in accord with these Special Provisions.

X. ENVIRONMENTAL

- A. Should soil excavation within CSXT property be anticipated and said soils cannot remain on CSXT property during and after construction, then CSXT Environmental must be contacted at least thirty (30) days in advance of the work in order to schedule sampling, classification, and disposition of material. Excavated material is prohibited from being removed from CSXT property, or rights-of-way, without expressed written direction from CSXT. Should final disposition require disposal of excavated material, CSXT shall have sole discretion of means and location of said disposal. The project sponsor or the Department will bear all costs associated with sampling, staging, and subsequent disposal if deemed necessary. Contractor will be required to obtain all disposal tickets / documentation and provide the information to the CSXT Representative. CSXT will not bear any costs associated with this work.
- B. Any waste materials generated by the Project, including but not limited to washing with cleaning solvents, blasting, scraping, brushing, and painting operations, shall be the responsibility of the Department or its Contractor and shall be contained, collected, and properly disposed of by the Department or its Contractor. The Department and its Contractor agree to fully comply with all federal, State, and local environmental laws, regulations, statutes, and ordinances at all times.

XI. MAINTENANCE OF DITCHES ADJACENT TO CSXT TRACKS

The Department or its Contractor shall maintain all ditches and drainage structures free of silt or other obstructions that may result from their operations. In addition, the Department or its Contractor shall maintain all CSXT property or right-of-way impacted by project operations including but not limited to; access or haul roads, staging areas, parking lots in a manner that provides CSXT free and clear access to facilities, and materials while providing acceptable driving surfaces free of drainage impacts or reduced CSXT capacity. The Department or its Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including

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either (1) silt fence; (2) hay or straw barrier; (3) berm or temporary ditches; (4) sediment basin; (5) aggregate checks; and (6) channel lining. All such maintenance and repair of damages due to the Department's or its Contractor's operations shall be performed at the Department's expense.

XII. TRACK PROTECTION / INSPECTION SERVICE

- A. CSXT has sole authority to determine the need for track protection required to protect its operations and property. In general, track protection will be required whenever the Department or its Contractor or their equipment are, or are likely to be, working within fifty (50) feet of live track or other track clearances specified by CSXT, or over tracks.
- B. The Department shall reimburse CSXT directly for all costs of track protection that is required on account of construction within CSXT property shown in the Plans, or that is covered by an approved plan revision, supplemental agreement, or change order.
- C. The Department or its Contractor shall give a minimum of thirty (30) days' advance written notice to CSXT Representative for anticipated need for track protection. No work shall be undertaken until the flag person(s) is/are at the job site. If it is necessary for CSXT to advertise a flagging job for bid, it may take up to ninety (90) days to obtain this service; CSXT shall not be liable for the cost of delays attributable to obtaining such service.
- D. CSXT shall have the right to assign an individual to the site of the Project to perform inspection service whenever, in the opinion of CSXT Representative, such inspection may be necessary. The Department shall reimburse CSXT for the costs incurred by CSXT for such inspection service. Inspection service shall not relieve the Department or its Contractor from liability.
- E. CSXT shall render invoices for, and the Department shall pay for, the actual pay rate of the flagpersons and inspectors used, plus standard additives, whether that amount is above or below the rate provided in the Estimate. If the rate of pay that is to be used for inspector or flagging service is changed before the work is started or during the progress of the work, whether by law or agreement between CSXT and its employees, or if the tax rates on labor are changed, bills will be rendered by CSXT and paid by the Department using the new rates. The Department and its Contractor shall perform their operations that require track protection or inspection service in such a manner and sequence that the cost of such will be as economical as possible.

XIII. UTILITY FACILITIES ON CSXT PROPERTY

The Department shall arrange, upon approval from CSXT, to have any utility facilities on or over CSXT Property changed as may be necessary to provide clearances for the proposed trackage.

XIV. CLEAN-UP

The Department or its Contractor, upon completion of the Project, shall remove and dispose from CSXT's Property any temporary construction work, any temporary erosion control measures used to control drainage, all machinery, equipment, surplus materials, falsework, rubbish, or temporary buildings belonging to the Department or its Contractor. The Department or its Contractor, upon completion of the Project, shall leave CSXT Property in neat condition, satisfactory to the CSXT

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Representative.

XV. FAILURE TO COMPLY

If the Department or its Contractor violate or fail to comply with any of the requirements of these Special Provisions, (a) CSXT may require the Department and/or its Contractor to vacate CSXT Property; and (b) CSXT may withhold monies due the Department and/or its Contractor; (c) CSXT may require the Department to withhold monies due its Contractor; and (d) CSXT may cure such failure and the Department shall reimburse CSXT for the cost of curing such failure.

RAILROAD SITE DATA:

The following information is provided as a convenience to the Contractor. This information is subject to change and the Contractor should contact the Railroad to verify the accuracy. Since this information is shown as a convenience to the Contractor but is subject to change, the Contractor shall have no claims whatsoever against either the Railroad or the Department of Transportation for any delays or additional costs incurred based on changes in this information.

Number of tracks	-	<u>1</u>
Number of trains per day	-	<u>0</u>
Maximum speed of trains	-	<u>10 MPH</u>

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0043000000-N	226	GRADING	Lump Sum	L.S.	
0004	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUBBING	1 ACR		
0005	0057000000-E	226	UNDERCUT EXCAVATION	850 CY		
0006	0134000000-E	240	DRAINAGE DITCH EXCAVATION	210 CY		
0007	0195000000-E	265	SELECT GRANULAR MATERIAL	800 CY		
0008	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	1,500 SY		
0009	0199000000-E	SP	TEMPORARY SHORING	15,500 SF		
0010	0255000000-E	SP	GENERIC GRADING ITEM HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	50 TON		
0011	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	2,180 TON		
0012	0321000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	6,860 SY		
0013	0335400000-E	305	24" DRAINAGE PIPE	124 LF		
0014	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (12")	52 LF		
0015	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (60")	32 LF		
0016	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (72")	252 LF		
0017	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	9,916 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	2,624 LF		
0019	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	4,302 LF		
0020	0448500000-E	310	30" RC PIPE CULVERTS, CLASS IV	960 LF		
0021	0448600000-E	310	36" RC PIPE CULVERTS, CLASS IV	1,446 LF		
0022	0448700000-E	310	42" RC PIPE CULVERTS, CLASS IV	300 LF		
0023	0582000000-E	310	15" CS PIPE CULVERTS, 0.064" THICK	24 LF		
0024	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (30", 0.250")	18 LF		
0025	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (30", 0.250")	18 LF		
0026	0995000000-E	340	PIPE REMOVAL	6,385 LF		
0027	1099500000-E	505	SHALLOW UNDERCUT	3,000 CY		
0028	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	6,000 TON		
0029	1111000000-E	SP	CLASS IV AGGREGATE STABILIZATION	75 TON		
0030	1112000000-E	505	GEOTEXTILE FOR SUBGRADE STABILIZATION	9,000 SY		
0031	1220000000-E	545	INCIDENTAL STONE BASE	1,000 TON		
0032	1297000000-E	607	MILLING ASPHALT PAVEMENT, ***** DEPTH (3")	6,670 SY		
0033	1308000000-E	607	MILLING ASPHALT PAVEMENT, ***** TO ***** (0" TO 3")	1,580 SY		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0034	1330000000-E	607	INCIDENTAL MILLING	5,000 SY		
0035	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	16,470 TON		
0036	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	15,010 TON		
0037	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	17,950 TON		
0038	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	2,525 TON		
0039	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	3,850 TON		
0040	1891000000-E	SP	GENERIC PAVING ITEM 9" JOINTED CONCRETE TRUCK APRON	450 SY		
0041	2022000000-E	815	SUBDRAIN EXCAVATION	112 CY		
0042	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	500 SY		
0043	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	84 CY		
0044	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	500 LF		
0045	2070000000-N	815	SUBDRAIN PIPE OUTLET	1 EA		
0046	2077000000-E	815	6" OUTLET PIPE	6 LF		
0047	2190000000-N	828	TEMPORARY STEEL PLATE COVERS FOR MASONRY DRAINAGE STRUCTURE	3 EA		
0048	2253000000-E	840	PIPE COLLARS	5.085 CY		
0049	2264000000-E	840	PIPE PLUGS	0.486 CY		
0050	2275000000-E	SP	FLOWABLE FILL	115 CY		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0051	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	258 EA		
0052	2297000000-E	840	MASONRY DRAINAGE STRUCTURES	22.948 CY		
0053	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	134.1 LF		
0054	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	42 EA		
0055	2366000000-N	840	FRAME WITH TWO GRATES, STD 840.24	3 EA		
0056	2367000000-N	840	FRAME WITH TWO GRATES, STD 840.29	3 EA		
0057	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	44 EA		
0058	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	67 EA		
0059	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	72 EA		
0060	2396000000-N	840	FRAME WITH COVER, STD 840.54	7 EA		
0061	2407000000-N	840	STEEL FRAME WITH TWO GRATES, STD 840.37	24 EA		
0062	2451000000-N	852	CONCRETE TRANSITIONAL SECTION FOR DROP INLET	36 EA		
0063	2535000000-E	846	*** X *** CONCRETE CURB (8" X 12")	100 LF		
0064	2535000000-E	846	*** X *** CONCRETE CURB (8" X 18")	180 LF		
0065	2538000000-E	846	***-*** CONCRETE CURB & GUTTER (2'-9")	360 LF		
0066	2542000000-E	846	1'-6" CONCRETE CURB & GUTTER	710 LF		
0067	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	22,400 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0068	2591000000-E	848	4" CONCRETE SIDEWALK	6,210 SY		
0069	2605000000-N	848	CONCRETE CURB RAMPS	83 EA		
0070	2612000000-E	848	6" CONCRETE DRIVEWAY	640 SY		
0071	2627000000-E	852	4" CONCRETE ISLAND COVER	600 SY		
0072	2655000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)	4,080 SY		
0073	2657000000-E	852	*** MONOLITHIC CONCRETE MEDIAN (****) (6", SURFACE MOUNTED)	110 SY		
0074	2752000000-E	SP	GENERIC PAVING ITEM 1'-10" ROLLED CURB AND GUTTER	295 LF		
0075	2800000000-N	858	ADJUSTMENT OF CATCH BASINS	1 EA		
0076	2815000000-N	858	ADJUSTMENT OF DROP INLETS	1 EA		
0077	3001000000-N	SP	IMPACT ATTENUATOR UNITS, TYPE TL-3	2 EA		
0078	3030000000-E	862	STEEL BEAM GUARDRAIL	1,875 LF		
0079	3045000000-E	862	STEEL BEAM GUARDRAIL, SHOP CURVED	212.5 LF		
0080	3105000000-N	862	STEEL BEAM GUARDRAIL TERMINAL SECTIONS	4 EA		
0081	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	10 EA		
0082	3195000000-N	862	GUARDRAIL END UNITS, TYPE AT-1	2 EA		
0083	3210000000-N	862	GUARDRAIL END UNITS, TYPE CAT-1	6 EA		
0084	3287000000-N	862	GUARDRAIL END UNITS, TYPE TL-3	5 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0085	3288000000-N	862	GUARDRAIL END UNITS, TYPE TL-2	6 EA		
0086	3345000000-E	864	REMOVE & RESET EXISTING GUARDRAIL	369 LF		
0087	3360000000-E	863	REMOVE EXISTING GUARDRAIL	193.5 LF		
0088	3380000000-E	862	TEMPORARY STEEL BEAM GUARDRAIL	150 LF		
0089	3382000000-E	862	TEMPORARY STEEL BEAM GUARDRAIL, SHOP CURVED	50 LF		
0090	3389150000-N	862	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (AT-1)	1 EA		
0091	3389150000-N	862	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (TL-2)	1 EA		
0092	3389160000-N	862	TEMPORARY ADDITIONAL GUARDRAIL POSTS	10 EA		
0093	3572000000-E	867	CHAIN LINK FENCE RESET	275 LF		
0094	3628000000-E	876	RIP RAP, CLASS I	490 TON		
0095	3649000000-E	876	RIP RAP, CLASS B	16 TON		
0096	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	5,090 SY		
0097	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	1,710 LF		
0098	4096000000-N	904	SIGN ERECTION, TYPE D	4 EA		
0099	4102000000-N	904	SIGN ERECTION, TYPE E	81 EA		
0100	4108000000-N	904	SIGN ERECTION, TYPE F	10 EA		
0101	4109000000-N	904	SIGN ERECTION, TYPE *** (OVERHEAD) (A)	5 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0102	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (E)	10 EA		
0103	4130000000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE ***** (41+60 -L-)	Lump Sum	L.S.	
0104	4130000000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE ***** (49+20 -L-)	Lump Sum	L.S.	
0105	4130000000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE ***** (60+05 -L-)	Lump Sum	L.S.	
0106	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U- CHANNEL	62 EA		
0107	4192000000-N	907	DISPOSAL OF SUPPORT, U-CHANNEL	10 EA		
0108	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	1,537 SF		
0109	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	122 SF		
0110	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	1,121 SF		
0111	4415000000-N	1115	FLASHING ARROW BOARD	3 EA		
0112	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	5 EA		
0113	4424000000-N	SP	WORK ZONE PRESENCE LIGHTING	6 EA		
0114	4430000000-N	1130	DRUMS	607 EA		
0115	4445000000-E	1145	BARRICADES (TYPE III)	410 LF		
0116	4447000000-E	SP	PEDESTRIAN CHANNELIZING DEVICES	1,676 LF		
0117	4455000000-N	1150	FLAGGER	28 DAY		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0118	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	10 EA		
0119	4470000000-N	1160	REMOVE & RESET TEMPORARY CRASH CUSHION	7 EA		
0120	4480000000-N	1165	TMA	2 EA		
0121	4485000000-E	1170	PORTABLE CONCRETE BARRIER	384 LF		
0122	4490000000-E	1170	PORTABLE CONCRETE BARRIER (ANCHORED)	2,151 LF		
0123	4500000000-E	1170	REMOVE AND RESET PORTABLE CONCRETE BARRIER	497 LF		
0124	4505000000-E	1170	REMOVE & RESET PORTABLE CONCRETE BARRIER (ANCHORED)	630 LF		
0125	4510000000-N	1190	LAW ENFORCEMENT	32 HR		
0126	4520000000-N	1266	TUBULAR MARKERS (FIXED)	18 EA		
0127	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM AUDIBLE WARNING DEVICES	2 EA		
0128	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM TEMPORARY CURB RAMPS	3 EA		
0129	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	1,038 EA		
0130	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	35,138 LF		
0131	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	5,363 LF		
0132	4704000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (16", 90 MILS)	80 LF		
0133	4709000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	2,735 LF		
0134	4720000000-E	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS)	19 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0135	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	149 EA		
0136	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	72,917 LF		
0137	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	2,342 LF		
0138	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	2,235 LF		
0139	4840000000-N	1205	PAINT PAVEMENT MARKING CHARACTER	46 EA		
0140	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	101 EA		
0141	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	72,917 LF		
0142	4860000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (8")	2,342 LF		
0143	4870000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (24")	2,235 LF		
0144	4875000000-N	1205	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS	147 EA		
0145	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM YIELD LINE PAINT PAVEMENT MARKING (24")	69 LF		
0146	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM YIELD LINE THERMOPLASTIC PAVEMENT MARKING (24", 90 MILS)	69 LF		
0147	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	790 EA		
0148	4957000000-N	1264	OBJECT MARKERS (TYPE **) (1)	23 EA		
0149	5325600000-E	1510	6" WATER LINE	423 LF		
0150	5325800000-E	1510	8" WATER LINE	2,981 LF		
0151	5326200000-E	1510	12" WATER LINE	1,676 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0152	5329000000-E	1510	DUCTILE IRON WATER PIPE FITTINGS	26,740 LB		
0153	5540000000-E	1515	6" VALVE	13 EA		
0154	5546000000-E	1515	8" VALVE	3 EA		
0155	5562000000-E	1515	*** INSERTION VALVE (12")	12 EA		
0156	5562000000-E	1515	*** INSERTION VALVE (6")	2 EA		
0157	5562000000-E	1515	*** INSERTION VALVE (8")	15 EA		
0158	5648000000-N	1515	RELOCATE WATER METER	30 EA		
0159	5649000000-N	1515	RECONNECT WATER METER	26 EA		
0160	5653210000-E	1515	RELOCATE 2" DCV BACKFLOW PREVENTION ASSEMBLY	5 EA		
0161	5672000000-N	1515	RELOCATE FIRE HYDRANT	11 EA		
0162	5673000000-E	1515	FIRE HYDRANT LEG	530 LF		
0163	5686500000-E	1515	WATER SERVICE LINE	1,107 LF		
0164	5691300000-E	1520	8" SANITARY GRAVITY SEWER	1,545 LF		
0165	5691500000-E	1520	12" SANITARY GRAVITY SEWER	1,107 LF		
0166	5709100000-E	1520	2" FORCE MAIN SEWER	33 LF		
0167	5768000000-N	1520	SANITARY SEWER CLEAN-OUT	6 EA		
0168	5768500000-E	1520	SEWER SERVICE LINE	363 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0169	5775000000-E	1525	4' DIA UTILITY MANHOLE	30 EA		
0170	5781000000-E	1525	UTILITY MANHOLE WALL 4' DIA	56.7 LF		
0171	5800000000-E	1530	ABANDON 6" UTILITY PIPE	453 LF		
0172	5801000000-E	1530	ABANDON 8" UTILITY PIPE	3,940 LF		
0173	5804000000-E	1530	ABANDON 12" UTILITY PIPE	2,749 LF		
0174	5816000000-N	1530	ABANDON UTILITY MANHOLE	5 EA		
0175	5828000000-N	1530	REMOVE UTILITY MANHOLE	4 EA		
0176	5835700000-E	1540	16" ENCASEMENT PIPE	59 LF		
0177	5836000000-E	1540	24" ENCASEMENT PIPE	46 LF		
0178	5872500000-E	1550	BORE AND JACK OF *** (24")	25 LF		
0179	5876000000-N	SP	STEEL PILE PIERS	3 EA		
0180	6000000000-E	1605	TEMPORARY SILT FENCE	22,145 LF		
0181	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	570 TON		
0182	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	555 TON		
0183	6012000000-E	1610	SEDIMENT CONTROL STONE	4,315 TON		
0184	6015000000-E	1615	TEMPORARY MULCHING	5.12 ACR		
0185	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	300 LB		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0186	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	1.5 TON		
0187	6024000000-E	1622	TEMPORARY SLOPE DRAINS	405 LF		
0188	6029000000-E	SP	SAFETY FENCE	380 LF		
0189	6030000000-E	1630	SILT EXCAVATION	940 CY		
0190	6036000000-E	1631	MATTING FOR EROSION CONTROL	32,440 SY		
0191	6037000000-E	1629	COIR FIBER MAT	1,200 SY		
0192	6042000000-E	1632	1/4" HARDWARE CLOTH	15,440 LF		
0193	6070000000-N	1639	SPECIAL STILLING BASINS	31 EA		
0194	6071002000-E	1642	FLOCCULANT	290 LB		
0195	6071012000-E	1642	COIR FIBER WATTLE	1,900 LF		
0196	6071014000-E	1642	COIR FIBER WATTLE BARRIER	210 LF		
0197	6071030000-E	1640	COIR FIBER BAFFLE	60 LF		
0198	6084000000-E	1660	SEEDING & MULCHING	5.12 ACR		
0199	6087000000-E	1660	MOWING	2.6 ACR		
0200	6090000000-E	1661	SEED FOR REPAIR SEEDING	100 LB		
0201	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.25 TON		
0202	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	125 LB		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0203	6108000000-E	1665	FERTILIZER TOPDRESSING	3.75 TON		
0204	6111000000-E	SP	IMPERVIOUS DIKE	1,470 LF		
0205	6114500000-N	1667	SPECIALIZED HAND MOWING	5 MHR		
0206	6117000000-N	1675	RESPONSE FOR EROSION CONTROL	100 EA		
0207	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	3 EA		
0208	6120000000-E	SP	CULVERT DIVERSION CHANNEL	281 CY		
0209	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION CLEANOUT	366 EA		
0210	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION, TYPE 1	122 EA		
0211	6132000000-N	SP	GENERIC EROSION CONTROL ITEM PREFABRICATED CONCRETE WASHOUT	14 EA		
0212	6147000000-E	SP	GENERIC EROSION CONTROL ITEM 24" RCP TEMPORARY PIPE	124 LF		
0213	6147000000-E	SP	GENERIC EROSION CONTROL ITEM 42" RCP CLASS IV TEMPORARY PIPE	32 LF		
0214	6147000000-E	SP	GENERIC EROSION CONTROL ITEM TEMPORARY 108" CS STRUCTURAL PLATE PIPE, 12 GAUGE	96 LF		
0215	7048500000-E	1705	PEDESTRIAN SIGNAL HEAD (16", 1 SECTION W/COUNTDOWN)	31 EA		
0216	7060000000-E	1705	SIGNAL CABLE	33,865 LF		
0217	7120000000-E	1705	VEHICLE SIGNAL HEAD (12", 3 SECTION)	121 EA		
0218	7132000000-E	1705	VEHICLE SIGNAL HEAD (12", 4 SECTION)	30 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0219	7144000000-E	1705	VEHICLE SIGNAL HEAD (12", 5 SECTION)	3 EA		
0220	7252000000-E	1710	MESSENGER CABLE (1/4")	295 LF		
0221	7264000000-E	1710	MESSENGER CABLE (3/8")	16,085 LF		
0222	7279000000-E	1715	TRACER WIRE	2,400 LF		
0223	7300000000-E	1715	UNPAVED TRENCHING (***** (1, 2"))	30 LF		
0224	7300000000-E	1715	UNPAVED TRENCHING (***** (2, 2"))	1,575 LF		
0225	7300000000-E	1715	UNPAVED TRENCHING (***** (3, 2"))	260 LF		
0226	7301000000-E	1715	DIRECTIONAL DRILL (***** (1, 2"))	50 LF		
0227	7301000000-E	1715	DIRECTIONAL DRILL (***** (2, 2"))	1,700 LF		
0228	7324000000-N	1716	JUNCTION BOX (STANDARD SIZE)	24 EA		
0229	7348000000-N	1716	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)	19 EA		
0230	7360000000-N	1720	WOOD POLE	33 EA		
0231	7372000000-N	1721	GUY ASSEMBLY	79 EA		
0232	7396000000-E	1722	1/2" RISER WITH WEATHERHEAD	10 EA		
0233	7420000000-E	1722	2" RISER WITH WEATHERHEAD	28 EA		
0234	7456100000-E	1726	LEAD-IN CABLE (14-2)	10,330 LF		
0235	7516000000-E	1730	COMMUNICATIONS CABLE (** FIBER) (24)	14,250 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0236	7528000000-E	1730	DROP CABLE	2,185 LF		
0237	7540000000-N	1731	SPLICE ENCLOSURE	5 EA		
0238	7541000000-N	1731	MODIFY SPLICE ENCLOSURE	2 EA		
0239	7552000000-N	1731	INTERCONNECT CENTER	6 EA		
0240	7566000000-N	1733	DELINEATOR MARKER	19 EA		
0241	7576000000-N	SP	METAL STRAIN SIGNAL POLE	20 EA		
0242	7613000000-N	SP	SOIL TEST	20 EA		
0243	7614100000-E	SP	DRILLED PIER FOUNDATION	120 CY		
0244	7630000000-N	SP	METAL STRAIN POLE DESIGN	20 EA		
0245	7636000000-N	1745	SIGN FOR SIGNALS	24 EA		
0246	7642200000-N	1743	TYPE II PEDESTAL WITH FOUNDATION	29 EA		
0247	7648000000-N	1746	RELOCATE EXISTING SIGN	1 EA		
0248	7684000000-N	1750	SIGNAL CABINET FOUNDATION	7 EA		
0249	7686000000-N	1752	CONDUIT ENTRANCE INTO EXISTING FOUNDATION	1 EA		
0250	7696000000-N	1751	CONTROLLERS WITH CABINET (*****) (2070LX, BASE MOUNTED)	6 EA		
0251	7696000000-N	1751	CONTROLLERS WITH CABINET (*****) (2070LX, POLE MOUNTED)	3 EA		
0252	7901000000-N	1753	CABINET BASE EXTENDER	7 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0253	7912000000-N	1755	BEACON CONTROLLER ASSEMBLY & CABINET (*****)(F3)	1 EA		
0254	7948000000-N	1757	TRAFFIC SIGNAL REMOVAL	4 EA		
0255	7980000000-N	SP	GENERIC SIGNAL ITEM ETHERNET EDGE SWITCH	10 EA		
0256	7980000000-N	SP	GENERIC SIGNAL ITEM MICROWAVE VEHICLE DETECTION SYSTEM - MULTIPLE ZONES	49 EA		
CULVERT ITEMS						
0257	8056000000-N	402	REMOVAL OF EXISTING STRUCTURE AT STATION ***** (20+80.00 -Y2-)	Lump Sum	L.S.	
0258	8056000000-N	402	REMOVAL OF EXISTING STRUCTURE AT STATION ***** (43+26.00 -L-)	Lump Sum	L.S.	
0259	8130000000-N	414	BOX CULVERT EXCAVATION, STA ***** (20+80.00 -Y2-)	Lump Sum	L.S.	
0260	8130000000-N	414	BOX CULVERT EXCAVATION, STA ***** (43+26.00 -L-)	Lump Sum	L.S.	
0261	8130000000-N	414	BOX CULVERT EXCAVATION, STA ***** (68+62.00 -L-)	Lump Sum	L.S.	
0262	8133000000-E	414	FOUNDATION CONDITIONING MATERIAL, BOX CULVERT	1,405 TON		
0263	8196000000-E	420	CLASS A CONCRETE (CULVERT)	2,063.6 CY		
0264	8245000000-E	425	REINFORCING STEEL (CULVERT)	284,512 LB		
0265	8430000000-E	452	SHEET PILE RETAINING WALLS	225 SF		

1134/Jan30/Q901469.259/D1193536628000/E265

Total Amount Of Bid For Entire Project :

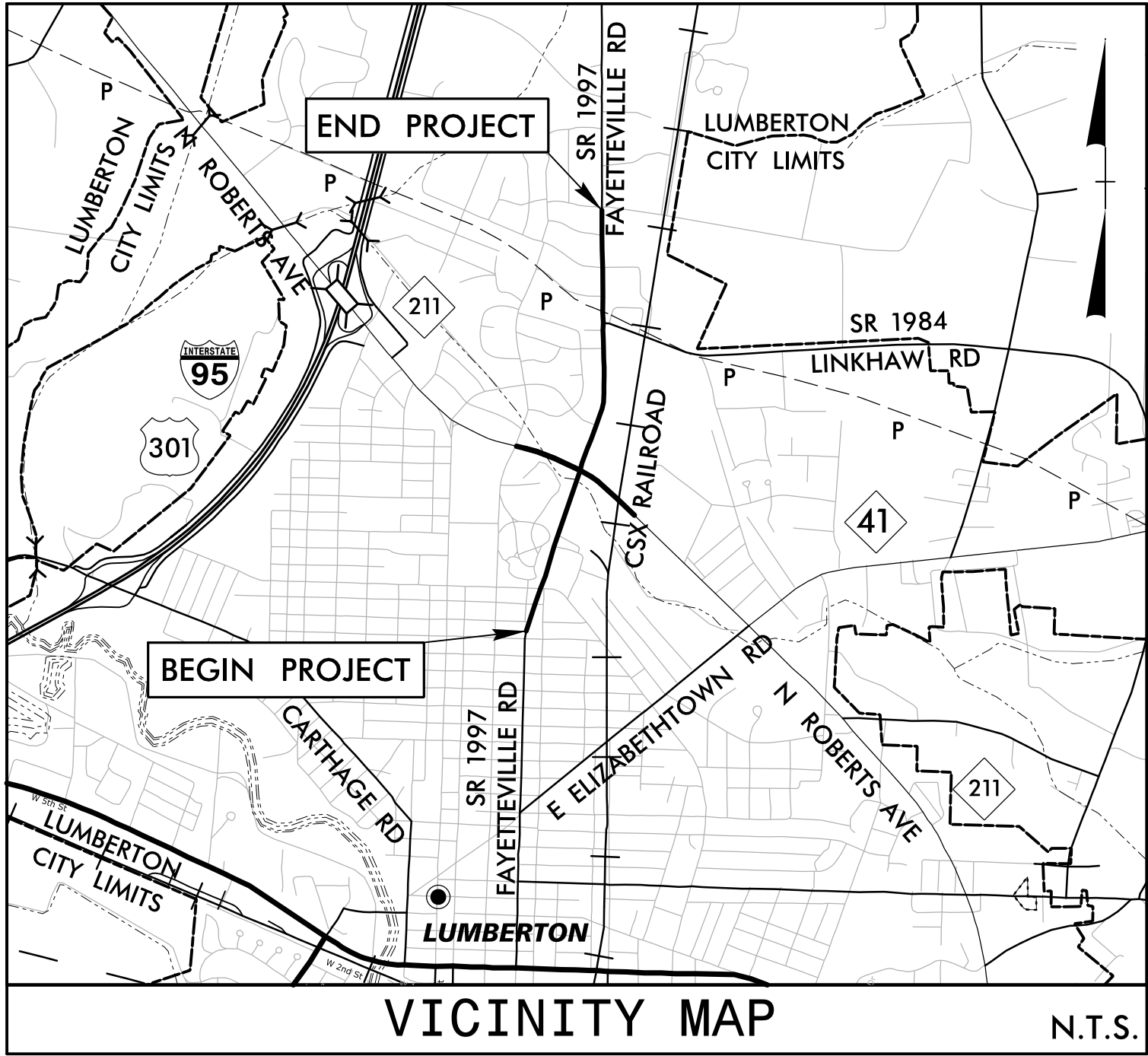
09/08/19

TIP PROJECT: U-5797

CONTRACT: C205036

1/27/2026
R:\Roadway\Proj\Sheets\U5797_rdy-fsh.dgn
Loukils

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols Sheet



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROBESON COUNTY

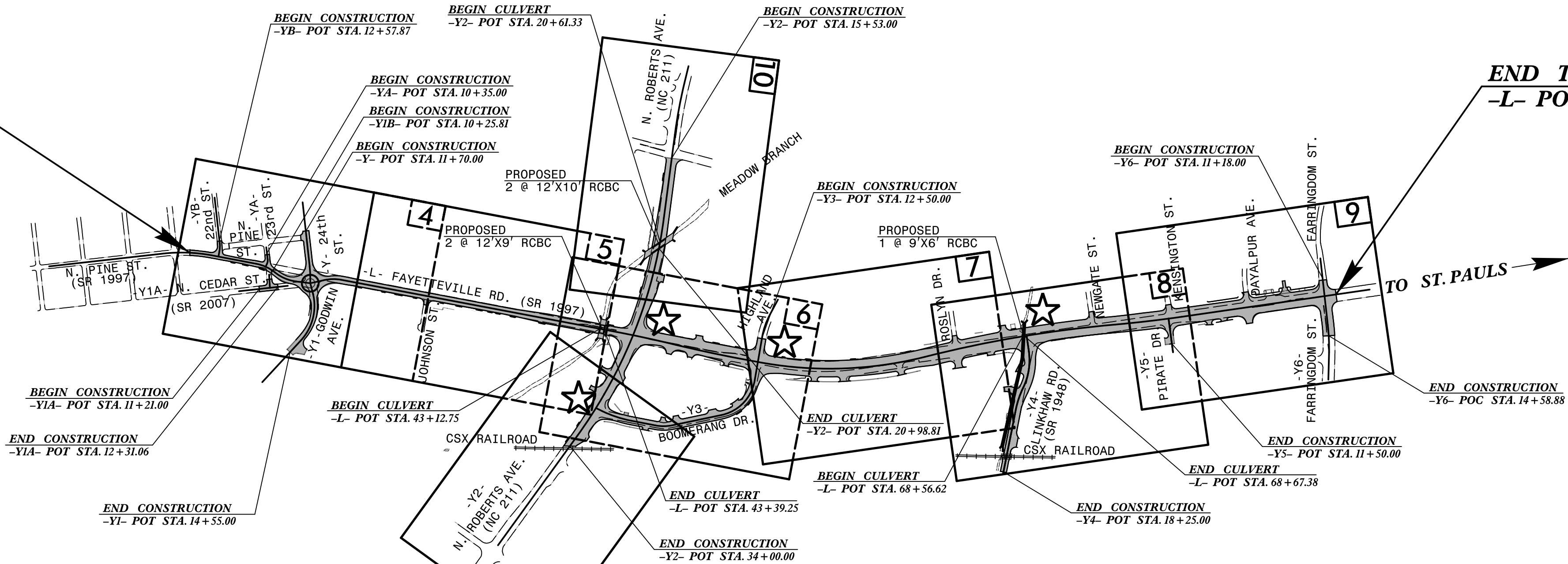
LOCATION: SR 1997 (FAYETTEVILLE ROAD) FROM FARRINGDOM STREET TO EAST 22ND STREET.

TYPE OF WORK: GRADING, PAVING, DRAINAGE, CULVERTS, AND SIGNALS



END TIP PROJECT U-5797
-L- POT STA. 87+20.00

BEGIN TIP PROJECT U-5797
-L- POC STA. 18+35.00



UPGRADED SIGNAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

DESIGN DATA

ADT 2025 = 34,600

ADT 2045 = 41,600

K = 55 %

D = 9 %

T = 4 % *

V = 50 MPH

* TTST =1% DUAL =3%

FUNC CLASS =

URBAN ARTERIAL

REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT U-5797 = 1.299 MILES

LENGTH OF STRUCTURE TIP PROJECT U-5797 = 0.005 MILES

TOTAL LENGTH OF TIP PROJECT U-5797 = 1.304 MILES

NCDOT CONTACT: CRAIG A. FREEMAN JR., PE
NCDOT DIVISION 6

P.O. Box 1150
558 Gillespie Street (Delivery)
Fayetteville, NC 28302

910-364-0603 Office
910-364-0841 Direct
cafreeman2@ncdot.gov

PLANS PREPARED FOR THE NCDOT BY:



STV Engineers, Inc.
400 Hillsborough St, Suite 430
Raleigh, NC 27603
NC License Number F-0991

RIGHT OF WAY DATE:
July 22, 2022

LETTING DATE:
FEBRUARY 17, 2026

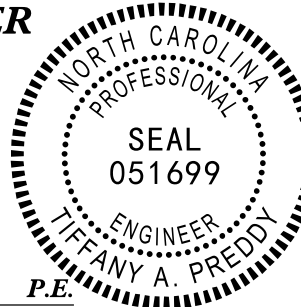
PATRICK A. LIVINGSTON, PE
PROJECT ENGINEER

WESTON D. MURPHY, PE
PROJECT DESIGNER

HYDRAULICS ENGINEER

1/27/2026

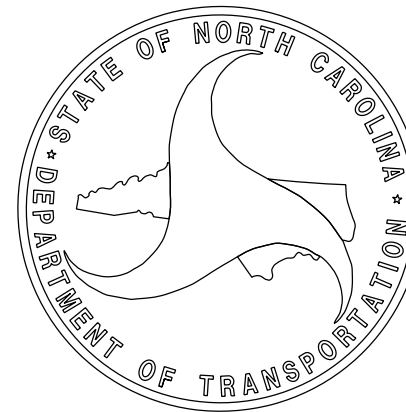
Signed by:
Signature
SIGNATURE:



ROADWAY DESIGN
ENGINEER

1/27/2026

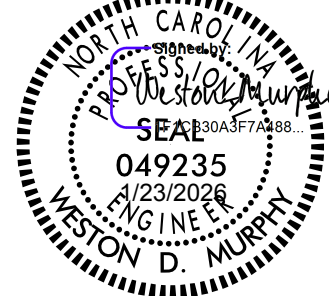
Signed by:
Signature
SIGNATURE:



PROJECT REFERENCE NO.
U-5797

SHEET NO.
1A

ROADWAY DESIGN
ENGINEER



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

STV Engineers, Inc.
2121 RDU Center Dr.
Suite 210
Morrisville, NC 27560
NC License Number F-0991

INDEX OF SHEETS

GENERAL NOTES

STANDARD DRAWINGS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-5	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1 THRU 2B-2	INTERSECTION DETAIL SHEETS
2B-3	RAILROAD DETAIL SHEET
2B-4	TEMPORARY WIDENING DETAIL SHEET
2B-5	ROLLED CURB AND GUTTER DETAIL
2B-6	RAILROAD INTERSECTION DETAIL SHEET
2C-1	METHOD OF PIPE INSTALLATION FLEXIBLE PIPE
2C-2	METHOD OF PIPE INSTALLATION RIGID PIPE
2C-3	EXTRA DEPTH CONCRETE CATCH BASIN
2C-4	SPECIAL DI 840D14
2C-5	CONCRETE MEDIAN DROP INLET TYPE 'A' EXTRA DEPTH OVER 12' TO 25'
2C-6	CONCRETE SIDEWALK
2C-7	CURB RAMP PARALLEL RAMP
2C-8	MEDIAN CURB FOR TRAFFIC BEARING GRATED DROP INLET
2C-9 THRU 2C-10	GUARDRAIL PLACEMENT
2C-11	DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE
3B-1 THRU 3B-3	ROADWAY SUMMARIES
3D-1 THRU 3D-15	DRAINAGE SUMMARY SHEETS
3G-1	GEOTECH SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 11	PLAN SHEETS
12 THRU 18	PROFILE SHEETS
RW-1 THRU RW-11	RIGHT OF WAY SHEETS
TMP-1 THRU TMP-30	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-9	PAVEMENT MARKING PLANS
EC-1 THRU EC-19	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-11	SIGNING PLANS
UC-1 THRU UC-16	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-11	UTILITY BY OTHERS PLANS
X-1	CROSS-SECTIONS INDEX OF SHEETS
X-1A THRU X-1C	CROSS-SECTIONS SUMMARY
X-2 THRU X-94	CROSS-SECTIONS
C1-1 THRU C1-12	CULVERT 1 PLANS
C2-1 THRU C2-11	CULVERT 2 PLANS
C3-1 THRU C3-17	CULVERT 3 PLANS

GENERAL NOTES: 2024 SPECIFICATIONS
EFFECTIVE: 01-01-2024

GRADE LINE:
GRADING AND SURFACING OR RESURFACINGAND WIDENING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILESSHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SUBSURFACE DRAINS:
SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

SIDE ROAD:
THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

DRIVEWAYS:
DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

GUARDRAIL:
THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE:
POWER - DUKE ENERGY
POWER - NEW LUMBERTON ELECTRIC UTILITIES
TELECOMMUNICATIONS - AT&T
CATV - TIME WARNER
FIBER OPTIC - WINDSTREAM
FIBER OPTIC - CROWN CASTLE
NATURAL GAS - PIEDMONT NATURAL GAS
WATER & SEWER - CITY OF LUMBERTON

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

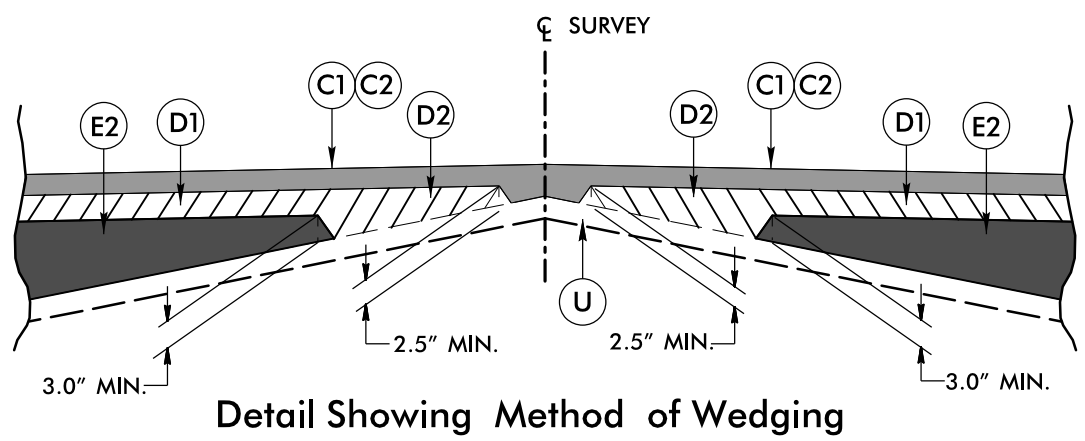
CURB RAMPS:
CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.
CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.06.

2024 ROADWAY ENGLISH STANDARD DRAWINGS EFF. January, 2024

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

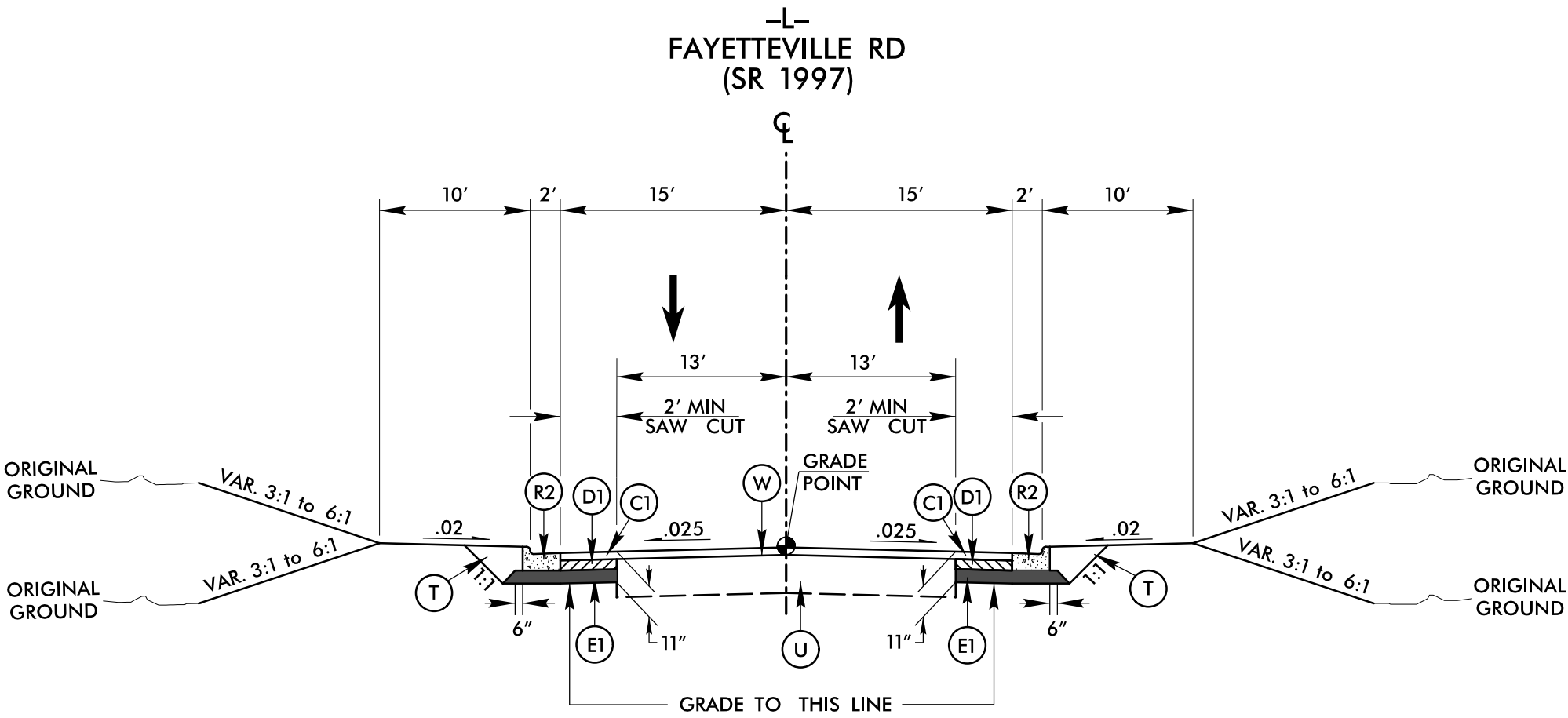
STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENT	
654.01	Pavement Repairs - For Superpave Mix Types
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain - Installation in Grass Medians and Roundabouts.
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.04	Concrete Open Throat Catch Basin - 12" thru 48" Pipe
840.05	Brick Open Throat Catch Basin - 12" thru 48" Pipe
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.36	Traffic Bearing Grated Drop Inlet - For Steel (840.37) Double Frame and Grates.
840.37	Steel Grate and Frame
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.03	Driveway Turnout - Drop Curb Type
848.04	Street Turnout
848.06	Curb Ramp
852.01	Concrete Islands
852.05	Median Curb for Catch Basin - for Use with 1'-6" Curb and Gutter
852.06	Method for Placement of Drop Inlets in Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation
876.01	Rip Rap in Channels and Ditches

8/17/99



PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN DATED SEPTEMBER 11, 2024) NTS	
A1	PROP. 9" DEPTH JOINTED CONCRETE TRUCK APRON
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ.YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ.YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
R1	1'-6" CONCRETE CURB AND GUTTER
R2	2'-6" CONCRETE CURB AND GUTTER
R3	2'-9" CONCRETE CURB AND GUTTER
R4	8" X 18" CONCRETE CURB
R5	8" X 12" CONCRETE CURB
R6	ROLLED CONCRETE CURB AND GUTTER (SEE DETAIL ON SHEET 2B-5)
R7	5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R8	6" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
R9	4" CONCRETE ISLAND COVER
S	CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	0" TO 3" MILLING
V2	3" MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS THIS SHEET)

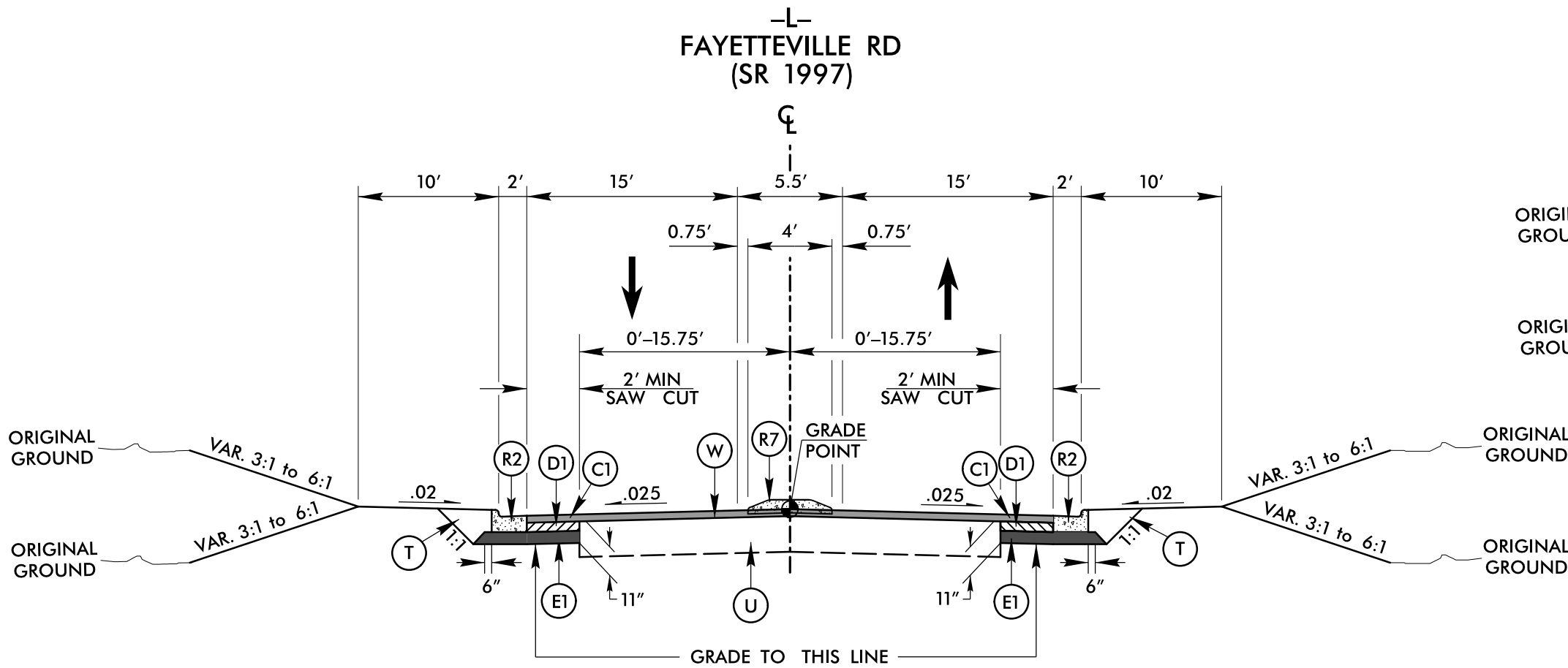
NOTES : PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
INCIDENTAL MILLING TO BE USED AT DISCRETION OF ENGINEER
FOR ALL TIE-INS.
SEE PLANS FOR LOCATION OF MONOLITHIC ISLANDS.



TYPICAL SECTION NO. 1

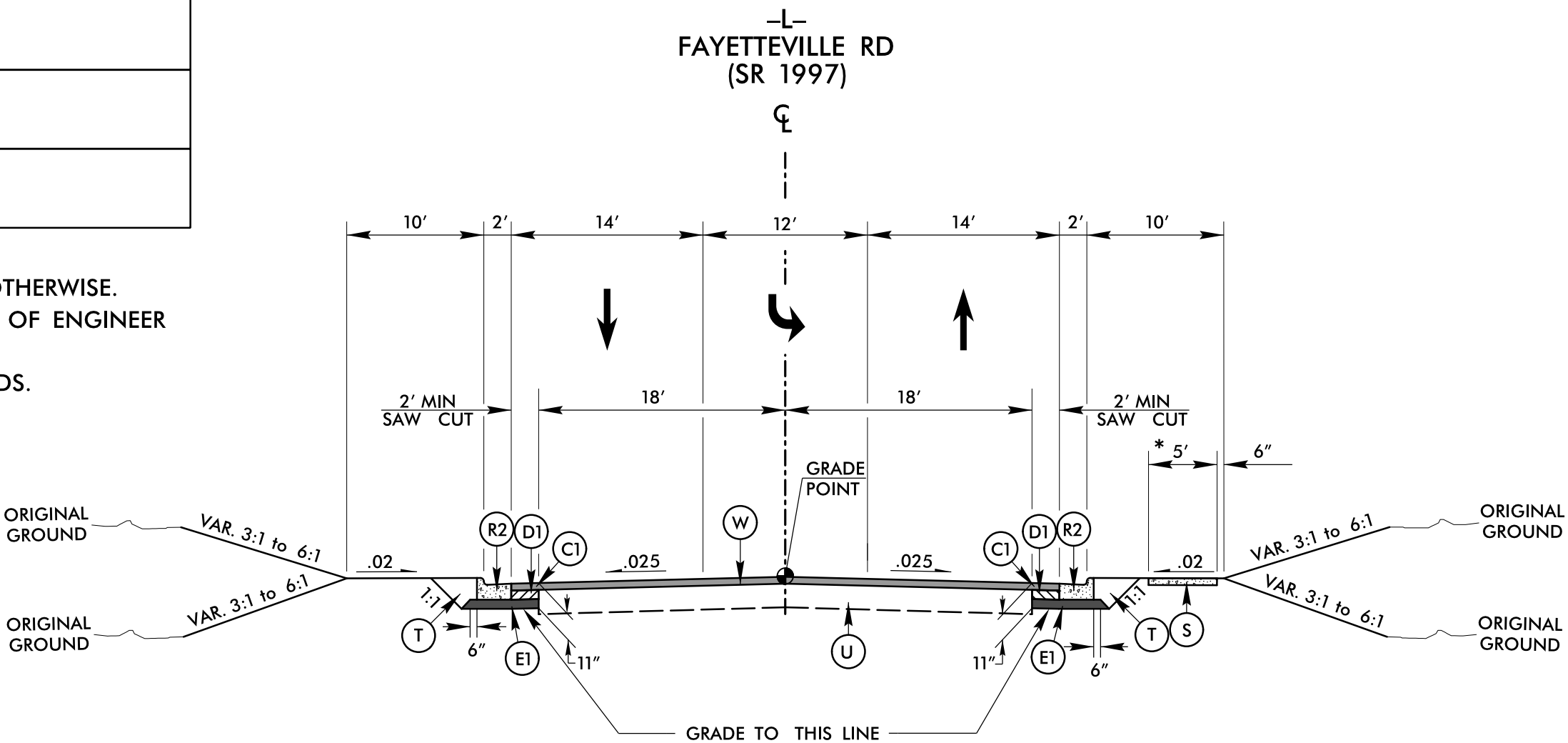
-L- STA. 20+38.00 TO 22+95.16*

*NOTE: SEE TYPICAL 17 FOR MILL AND OVERLAY
-L- STA. 18+35.00 TO 20+38.00



TYPICAL SECTION NO. 2A

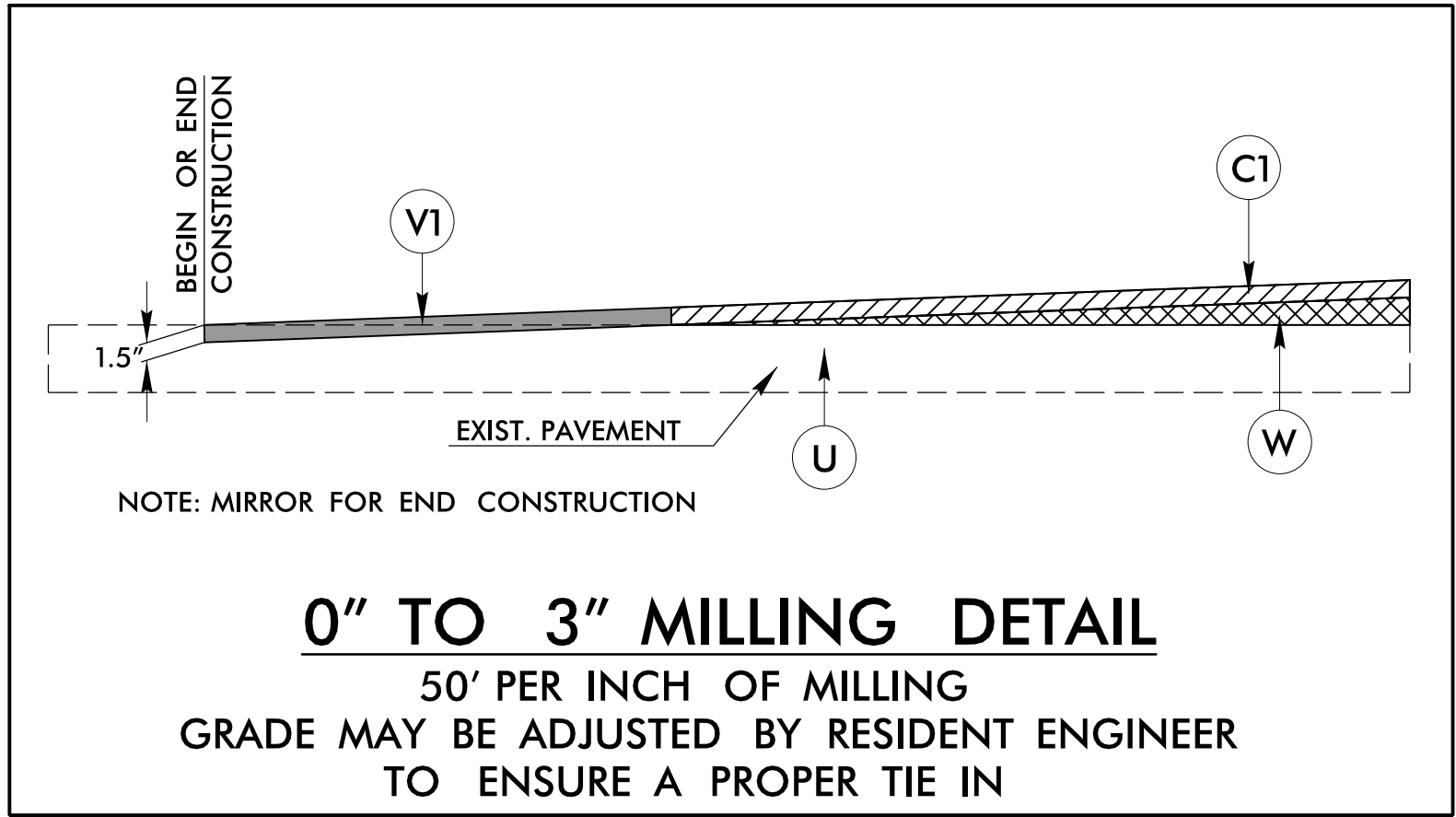
-L- STA. 22+95.16 TO 23+50.00
-L- STA. 26+42.05(END ROUNDABOUT) TO 28+70.94



TYPICAL SECTION NO. 3

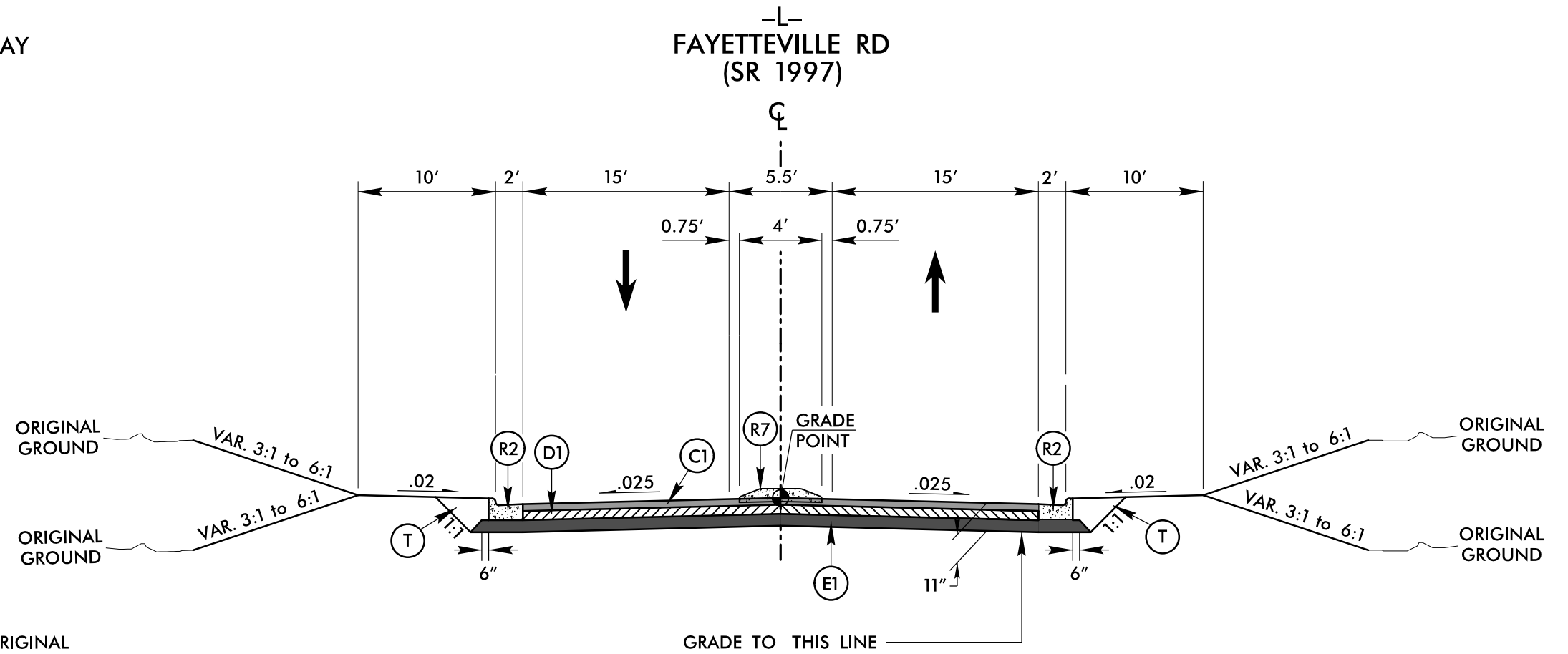
-L- STA. 28+70.94 TO 40+12.00

* NOTE: SEE PLANS FOR SIDEWALK LOCATIONS
BERM DESIGNED TO ACCOMMODATE FUTURE SIDEWALK



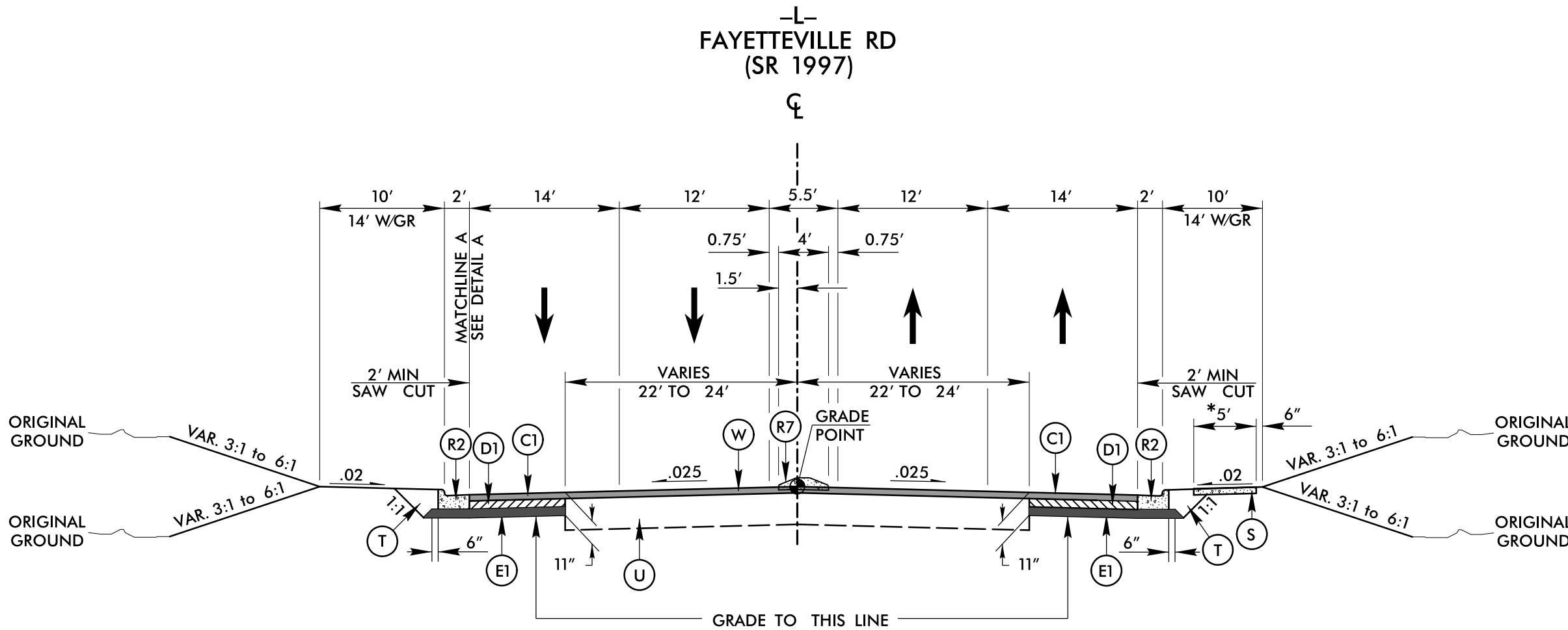
0" TO 3" MILLING DETAIL

50' PER INCH OF MILLING
GRADE MAY BE ADJUSTED BY RESIDENT ENGINEER
TO ENSURE A PROPER TIE IN



TYPICAL SECTION NO. 2B

-L- STA. 23+50.00 TO 25+12.05(BEGIN ROUNDABOUT)



TYPICAL SECTION NO. 4

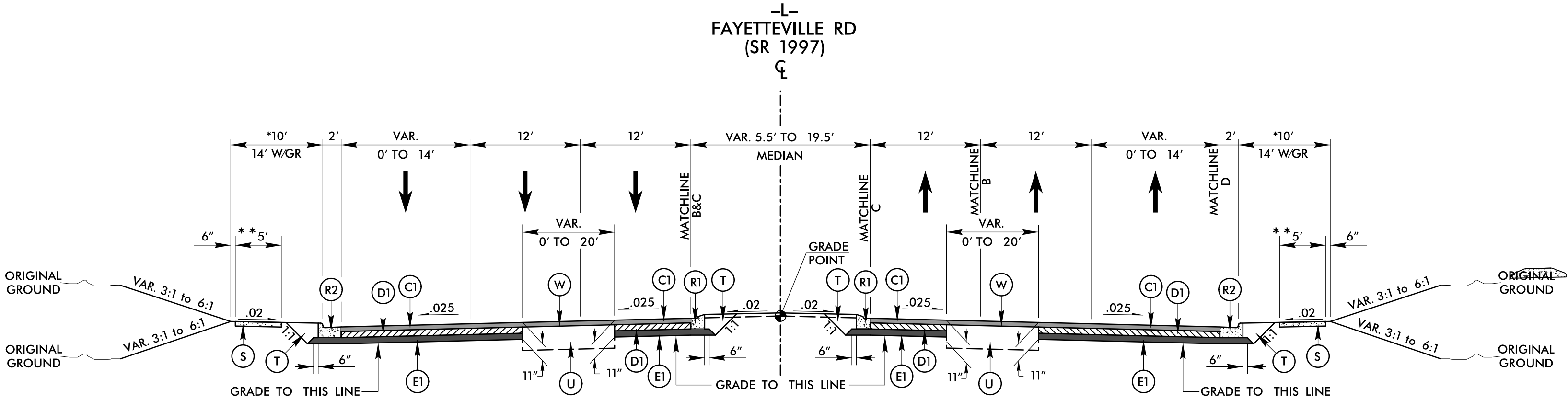
-L- STA. 40+12.00 TO 45+89.65

* NOTE: SEE PLANS FOR SIDEWALK LOCATIONS
BERM DESIGNED TO ACCOMMODATE FUTURE SIDEWALK

PROJECT REFERENCE NO. U-5797		SHEET NO. 2A-1	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER NORTH CAROLINA SEAL 049235 WESTON D. MURPHY		PAVEMENT ENGINEER NORTH CAROLINA SEAL 039779 JEREMY R. HANN	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
STV Engineers, Inc. 2121 RDU Center Dr. Suite 210 Morrisville, NC 27560 NC License Number F-0991			

I:\2026 Projects\Proj\Sheets\U5797_rdy_psh_2A-1.dgn
8/23/2026
MicroStation

8/17/99

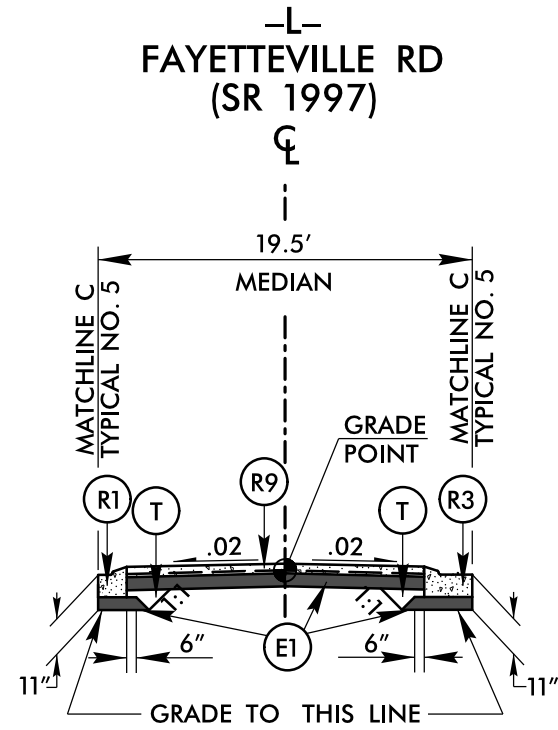
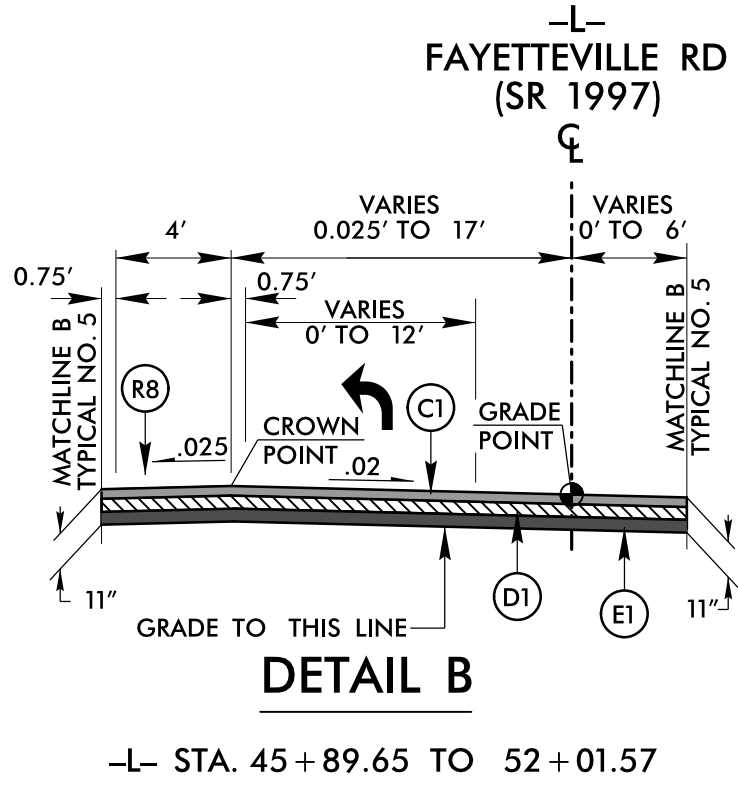


* NOTE: 7' BERM
-L- STA. 46+60.43 TO STA. 48+78.89 LT.
-L- STA. 49+39.65 TO STA. 50+71.48 RT.
-L- STA. 64+86.19 TO STA. 67+24.67 LT.
-L- STA. 72+96.32 TO STA. 86+21.90 LT.
** NOTE: SEE PLANS FOR SIDEWALK LOCATIONS
BERM DESIGNED TO ACCOMMODATE FUTURE SIDEWALK

TYPICAL SECTION NO. 5A

-L- STA. 45+89.65 TO STA. 59+00.00
-L- STA. 62+50.00 TO STA. 86+23.34

NOTE: SEE TYPICAL SECTION NO. 13
FOR MILL & OVERLAY
-L- STA. 86+23.34 TO 87+20.00



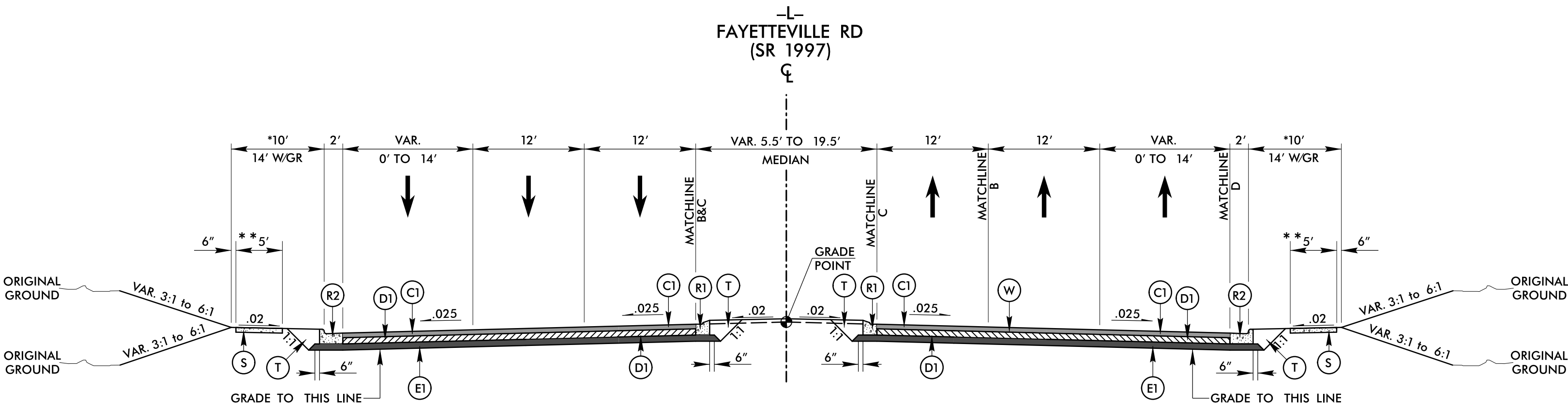
-L- FAYETTEVILLE RD.
(SR 1997)

-L- STA. 58+50.00 TO STA. 62+00.00

DETAIL A
(TEMPORARY PAVEMENT)

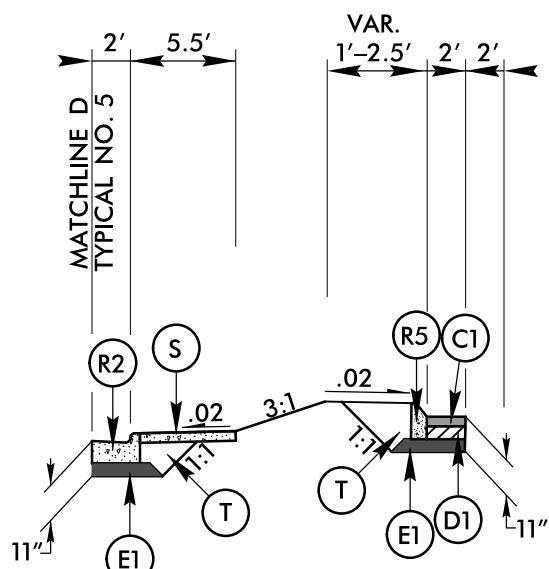
-L- STA. 41+20.93 TO 44+58 +/-
* SEE SHEET 2B-4 FOR
TEMPORARY PAVEMENT DETAILS

PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN) NTS	
A1	9" CONC. APRON
C1	3.0" S9.5C
C2	VAR. S9.5C
D1	4.0" I19.0C
D2	VAR. I19.0C
E1	4.0" B25.0C
E2	VAR. B25.0C
R1	1'-6" C&G
R2	2'-6" C&G
R3	2'-9" C&G
R4	8" x 18" CURB
R5	8" x 12" CURB
R6	ROLLED C&G (SEE DETAIL ON SHEET 2B-5)
R7	5" MONO. ISLAND (KEYED IN)
R8	6" MONO. ISLAND (SURFACE MOUNTED)
R9	4" CONC. ISLAND COVER
S	CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	0" TO 3" MILLING
V2	3" MILLING
W	WEDGING



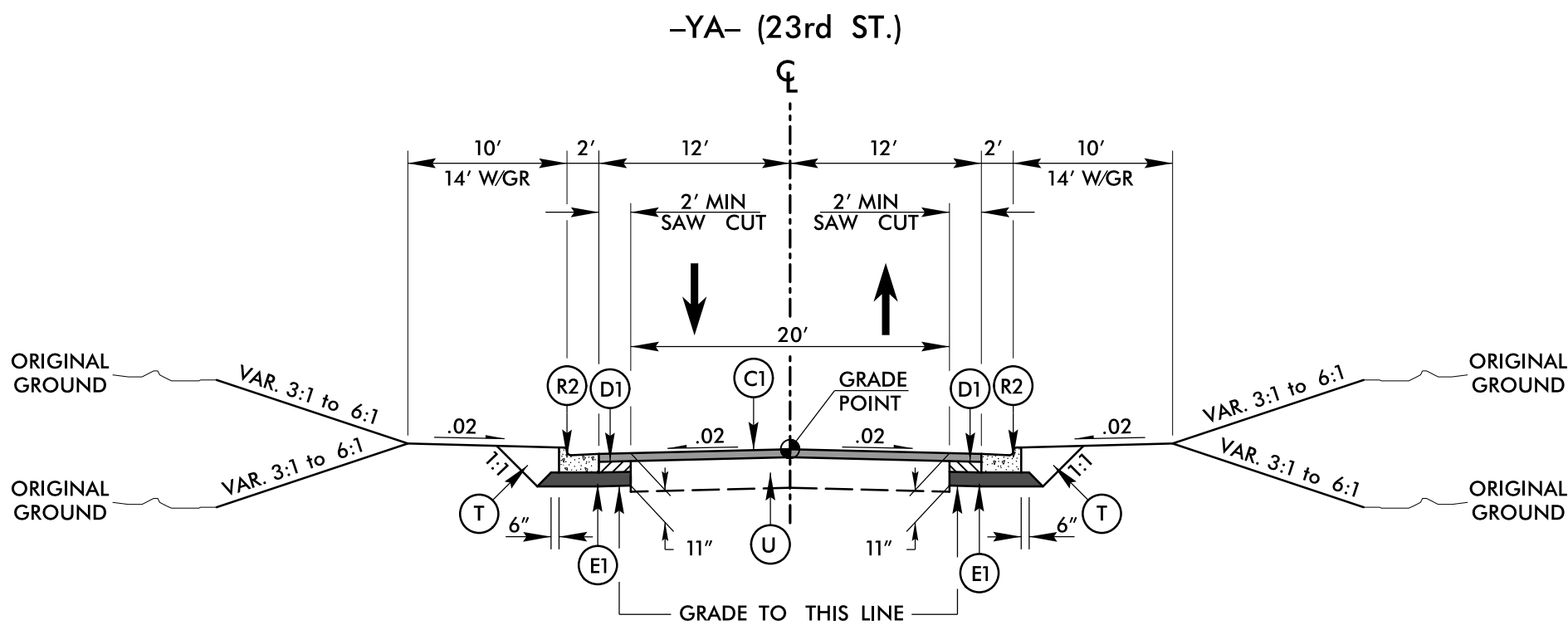
TYPICAL SECTION NO. 5B

-L- STA. 59+00.00 TO STA. 62+50.00



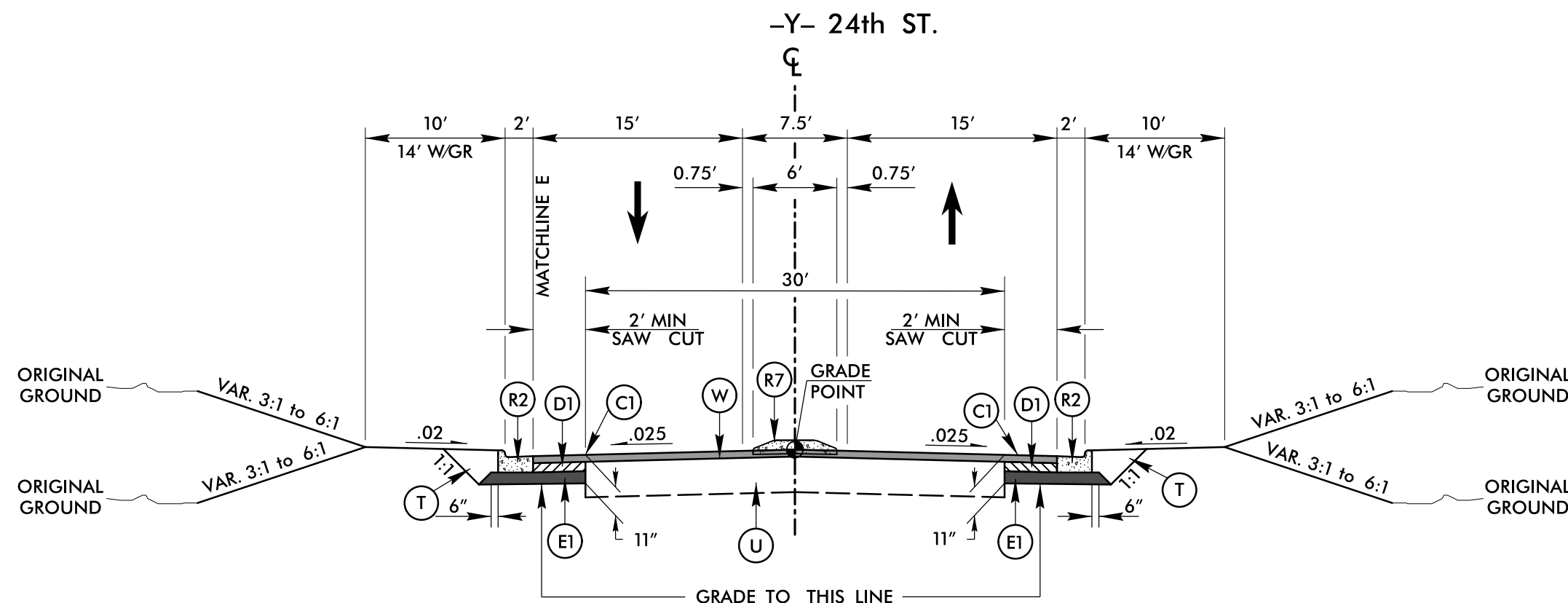
DETAIL D

-L- STA. 49+56.58 TO STA. 50+55.70



TYPICAL SECTION NO. 6

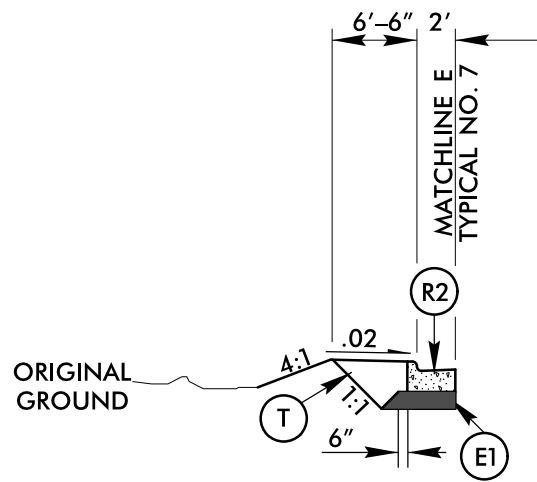
-YA- STA. 10+44.00 TO STA. 10+99.78



TYPICAL SECTION NO. 7

-Y- STA. 13+10.00 TO STA. 14+14.95

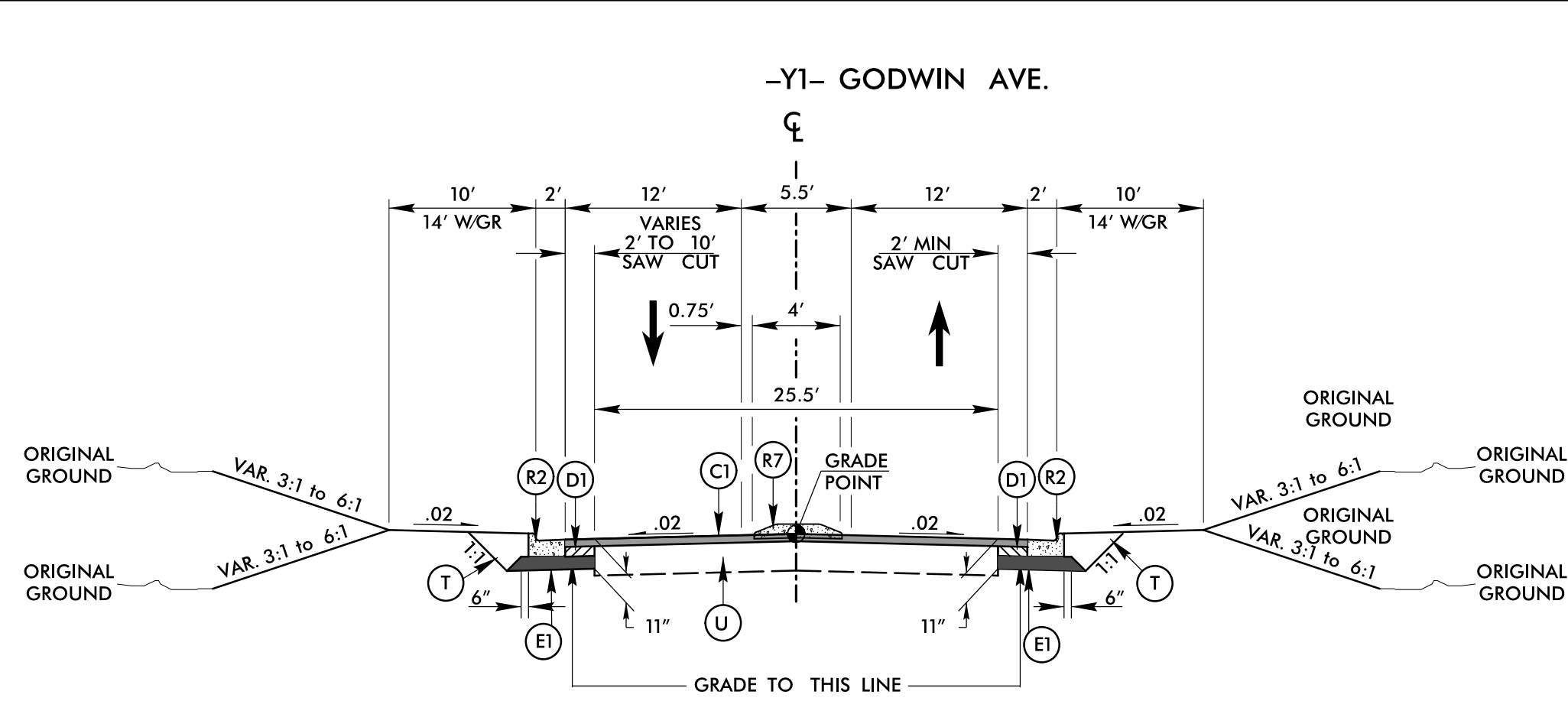
NOTE: SEE TYPICAL SECTION NO. 13 & 14
FOR MILL & OVERLAY
-Y- STA. 11+70.00 TO 13+10.00



DETAIL E

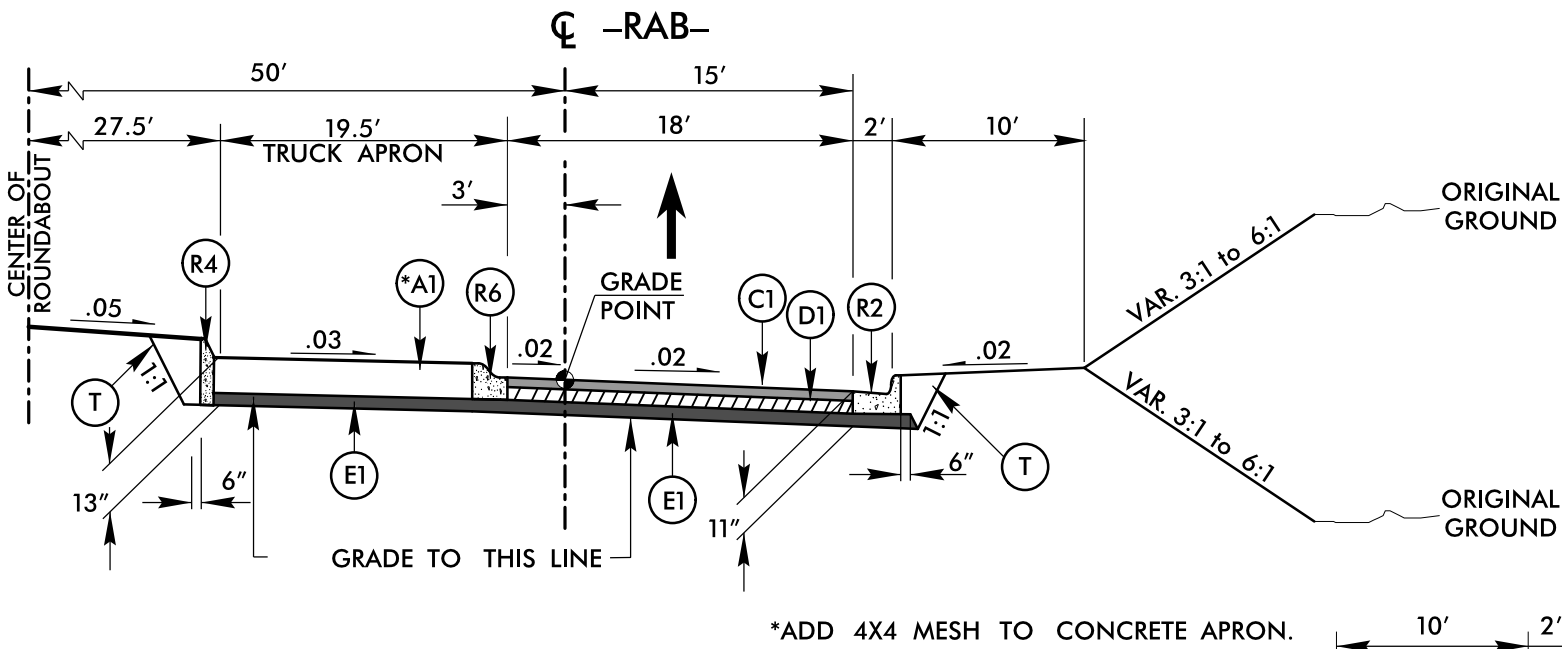
-Y- STA. 14+00.00 TO 14+14.95 LT.

8/17/99



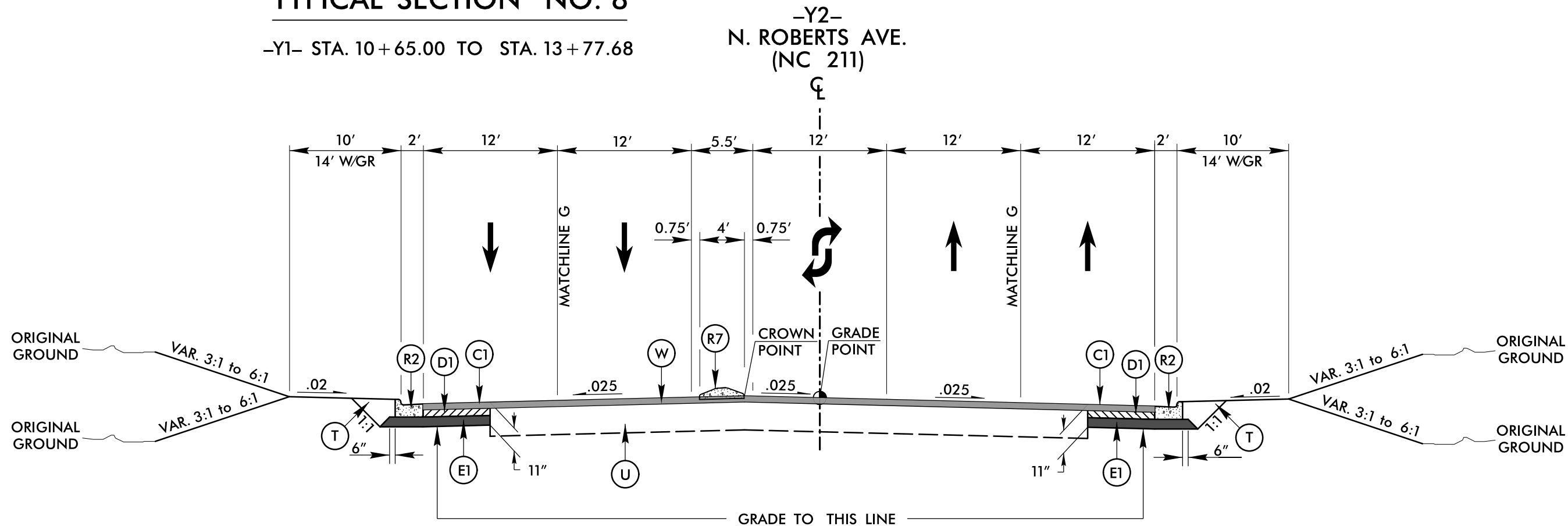
TYPICAL SECTION NO. 8

-Y1- STA. 10 + 65.00 TO STA. 13 + 77.68



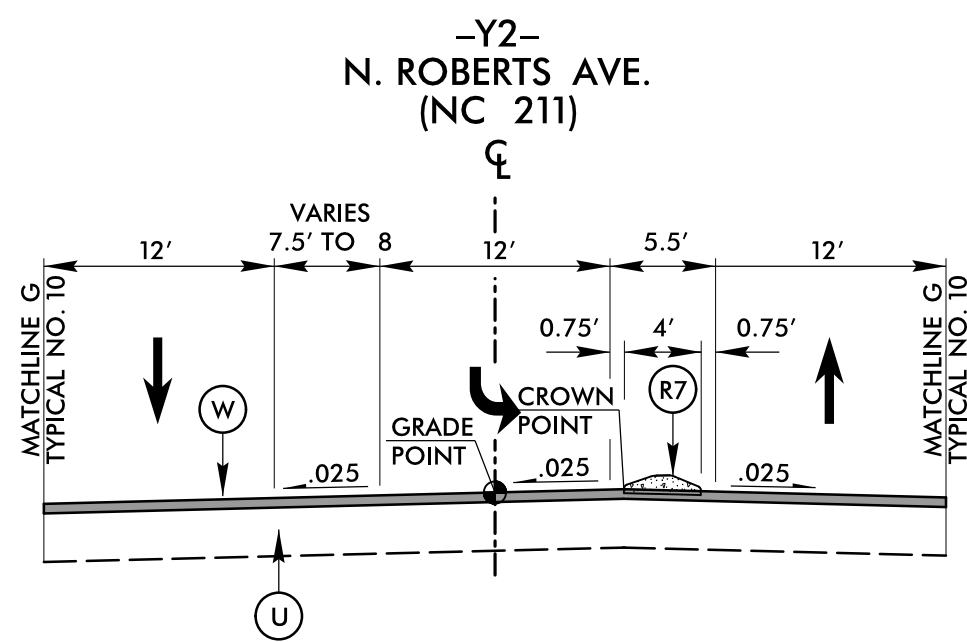
TYPICAL SECTION NO. 9

-RAB- STA. 0 + 00.00 TO STA. 3 + 14.15



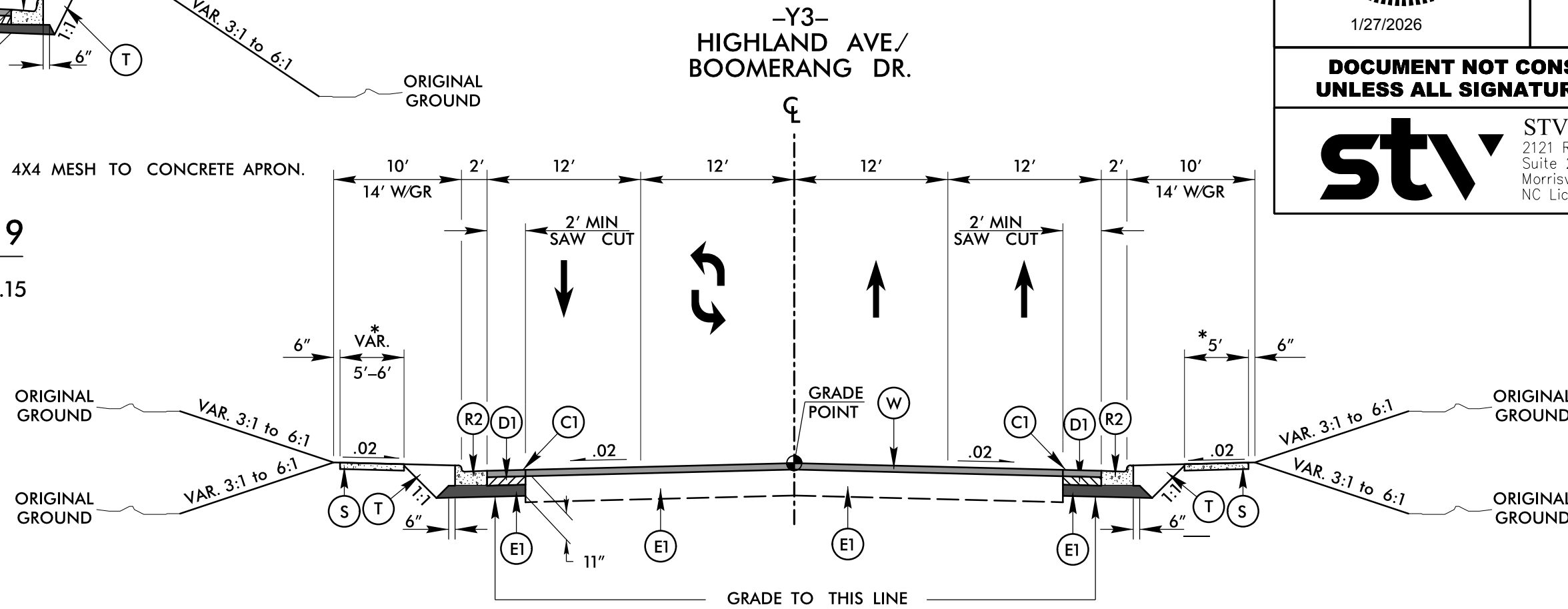
TYPICAL SECTION NO. 10A

-Y2- STA. 15 + 60.00 TO STA. 25 + 96.31
-Y2- STA. 26 + 55.16 TO STA. 27 + 00.00
-Y2- STA. 28 + 50.00 TO STA. 33 + 93.11



DETAIL G

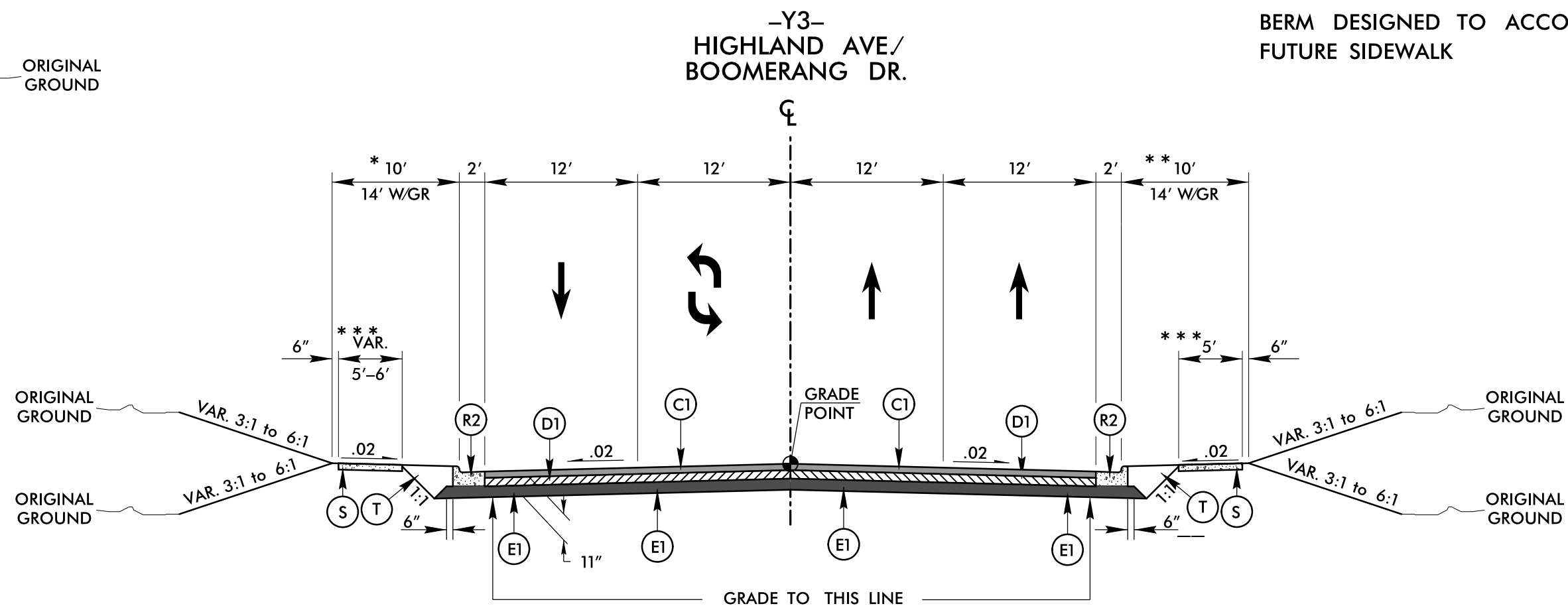
-Y2- STA. 26 + 55.16 TO 27 + 00.00



TYPICAL SECTION NO. 11A

-Y3- STA. 12 + 50.00 TO STA. 13 + 42.46 * NOTE: REPLACE EXISTING SIDEWALK

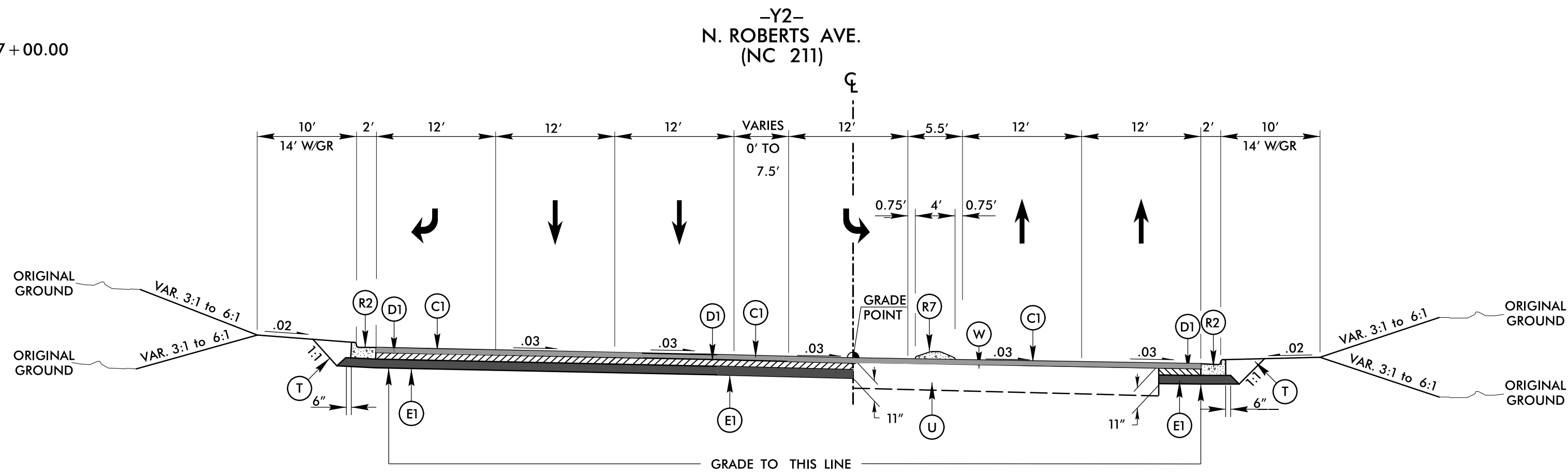
BERM DESIGNED TO ACCOMMODATE FUTURE SIDEWALK



TYPICAL SECTION NO. 11B

-Y3- STA. 14 + 21.97 TO STA. 25 + 23.64

* NOTE: 7' BERM FROM -Y3- STA. 21 + 33.38 TO 25 + 23.14 LT.
** NOTE: 7' BERM FROM -Y3- STA. 14 + 97.75 TO 25 + 23.14 RT.
*** NOTE: REPLACE EXISTING SIDEWALK
BERM DESIGNED TO ACCOMMODATE FUTURE SIDEWALK
**** NOTE: 10.5' MONOLITHIC ISLAND IN TWO WAY LEFT TURN LANE FROM 24 + 00.00 TO 25 + 13.79



TYPICAL SECTION NO. 10B

-Y2- STA. 27 + 00.00 TO STA. 28 + 50.00

PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN) WTS	
A1	9" CONC. APRON
C2	3.0" S9.5C
C3	VAR. S9.5C
D1	4.0" I19.0C
D2	VAR. I19.0C
E1	4.0" B25.0C
E2	VAR. B25.0C
R1	1'-6" C&G
R2	2'-6" C&G
R3	2'-9" C&G
R4	8" x 18" CURB
R5	8" x 12" CURB
R6	ROLLED C&G (SEE DETAIL ON SHEET 2B-5)
R7	5" MONO. ISLAND (KEYED IN)
R8	6" MONO. ISLAND (SURFACE MOUNTED)
R9	4" CONC. ISLAND COVER
S	CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	0" TO 3" MILLING
V3	3" MILLING
W	WEDGING

NOTES : PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
INCIDENTAL MILLING TO BE USED AT DISCRETION OF ENGINEER
FOR ALL TIE-INS.
SEE PLANS FOR LOCATION OF MONOLITHIC ISLANDS.

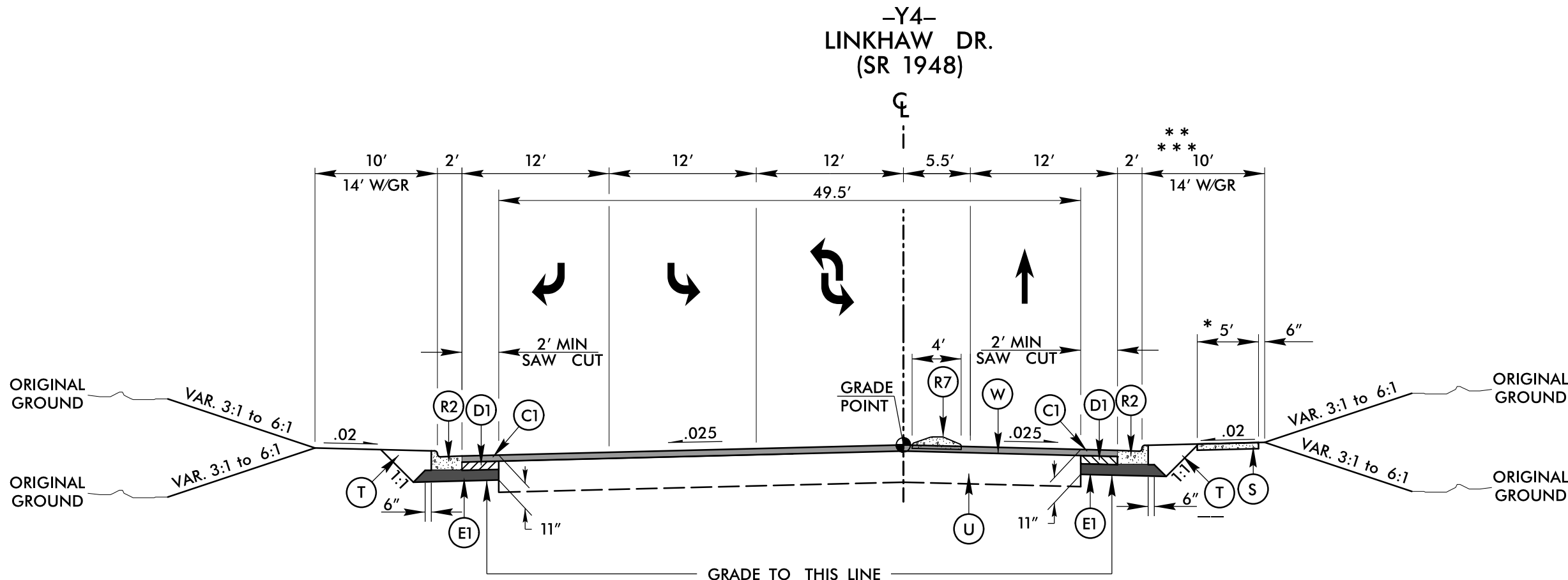
PROJECT REFERENCE NO. U-5797		SHEET NO. 2A-3	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 049235 1/27/2026		PAVEMENT ENGINEER NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 089779 1/27/2026	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
STV Engineers, Inc. 2121 RDU Center Dr. Suite 210 Morrisville, NC 27560 NC License Number F-0991			

8/17/99

1/27/2026
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1/27/2026

PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN) NTS	
A1	9" CONC. APRON
C1	3.0" S9.5C
C2	VAR. S9.5C
D1	4.0" I19.0C
D2	VAR. I19.0C
E1	4.0" B25.0C
E2	VAR. B25.0C
R1	1'-6" C&G
R2	2'-6" C&G
R3	2'-9" C&G
R4	8" x 18" CURB
R5	8" x 12" CURB
R6	ROLLED C&G (SEE DETAIL ON SHEET 2B-5)
R7	5" MONO. ISLAND (KEYED IN)
R8	6" MONO. ISLAND (SURFACE MOUNTED)
R9	4" CONC. ISLAND COVER
S	CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	0" TO 3" MILLING
V2	3" MILLING
W	WEDGING

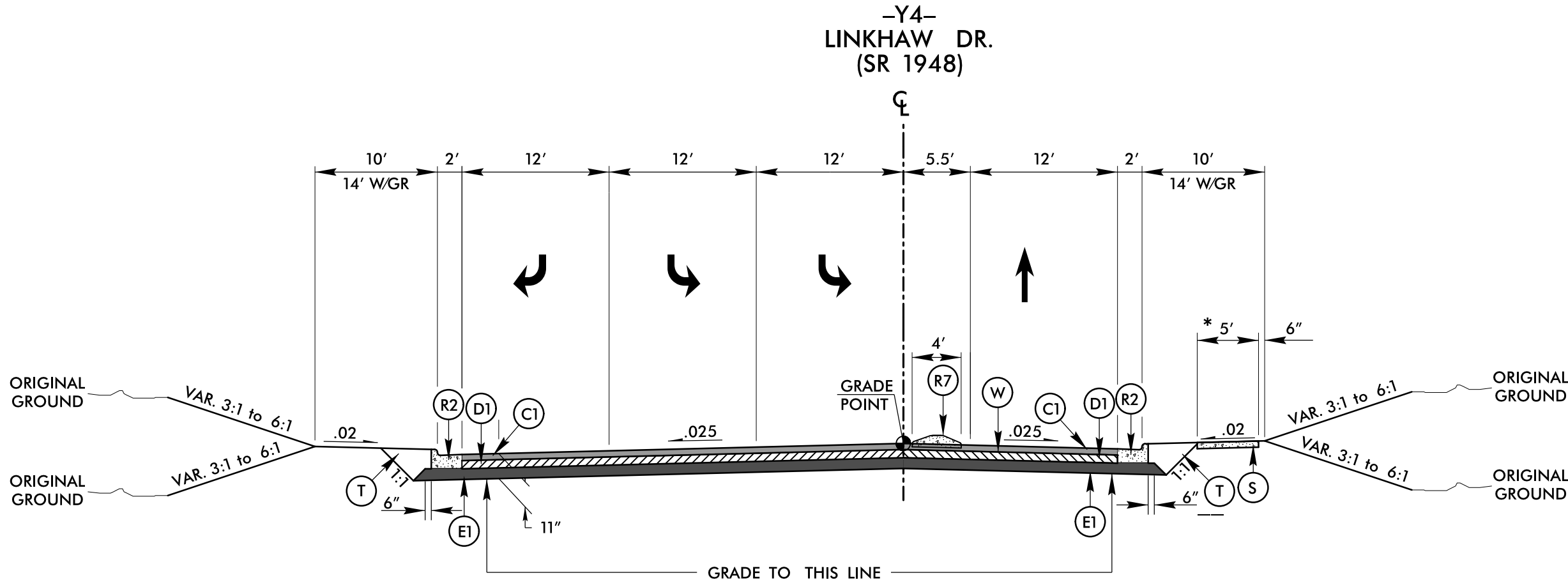
NOTES : PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
INCIDENTAL MILLING TO BE USED AT DISCRETION OF ENGINEER
FOR ALL TIE-INS.
SEE PLANS FOR LOCATION OF MONOLITHIC ISLANDS.



TYPICAL SECTION NO. 12A

-Y4- STA. 11+50.00 TO STA. 16+07.33

- * NOTE: REPLACE EXISTING SIDEWALK
BERM DESIGNED TO ACCOMMODATE FUTURE SIDEWALK
- ** NOTE: 13' BERM FROM -Y4- STA. 15+00.00 TO 15+50.00 RT.
- *** NOTE: 16' BERM FROM -Y4- STA. 16+00.00 TO 16+07.33 RT.



TYPICAL SECTION NO. 12B

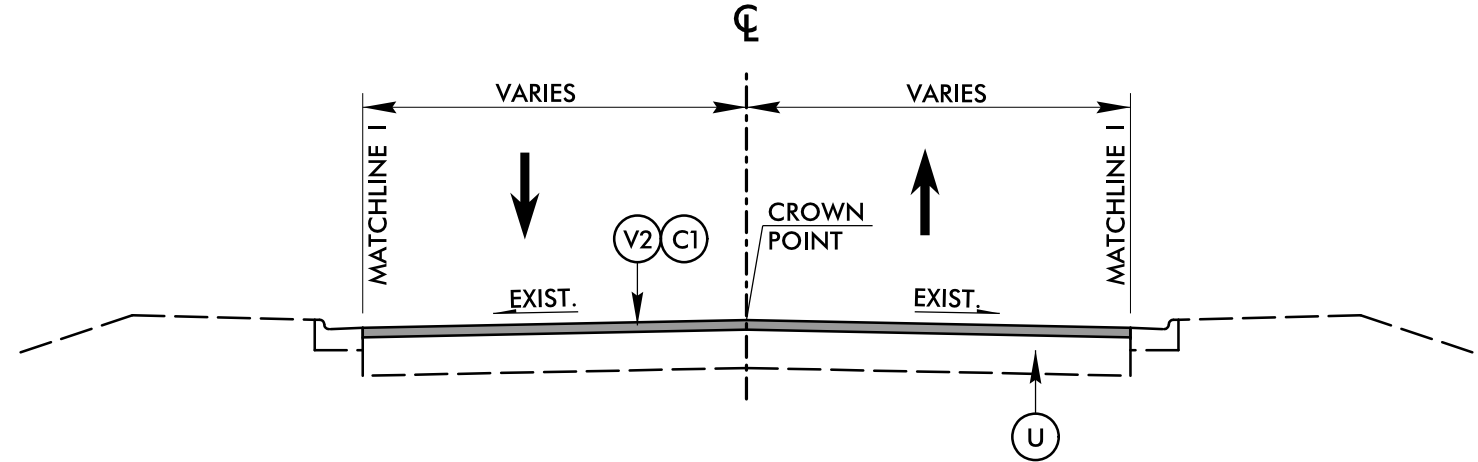
-Y4- STA. 10+47.76 TO STA. 11+50.00

- * NOTE: REPLACE EXISTING SIDEWALK
BERM DESIGNED TO ACCOMMODATE FUTURE SIDEWALK

PROJECT REFERENCE NO.	SHEET NO.
U-5797	2A-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER WESTON D. MURPHY 1/27/2026	PAVEMENT ENGINEER JEREMY R. HANN 1/27/2026
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
STV Engineers, Inc. 2121 RDU Center Dr. Suite 210 Morrisville, NC 27560 NC License Number F-0991	

8/17/99

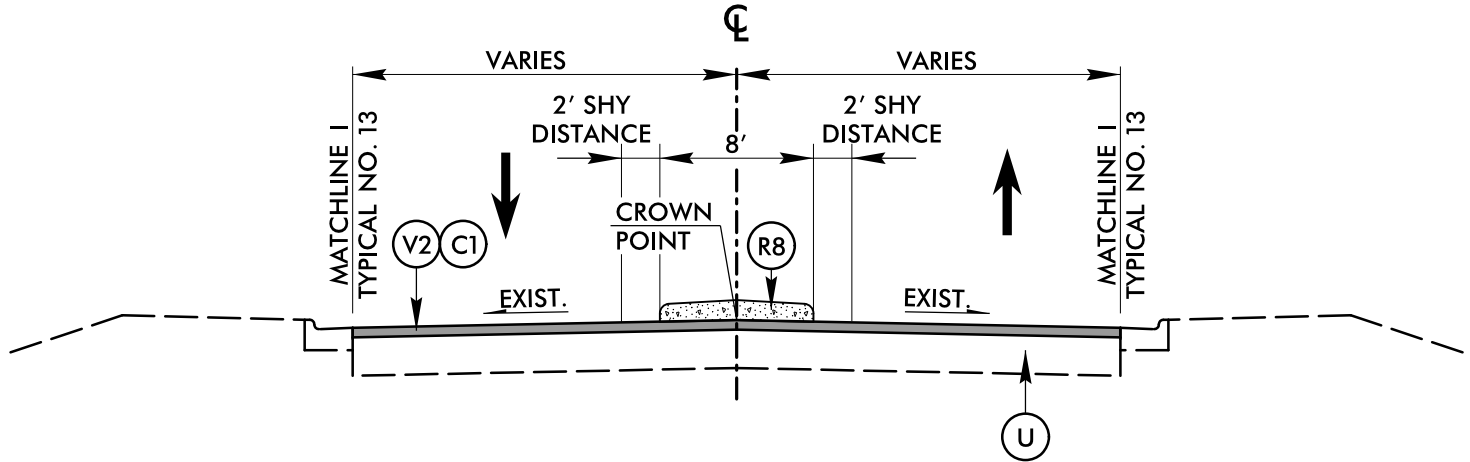
-L- FAYETTEVILLE RD. (SR 1997)
-Y- E. 24th ST.
-Y2- ROBERTS AVE. (NC 211)
-Y1- GODWIN AVE.
-Y1A- N. CEDAR ST.
-Y4- LINKHAW DR. (SR 1948)
-Y6- FARRINGDOM ST.



TYPICAL SECTION NO. 13

-L- STA. 86+23.34 TO STA. 87+20.00
-Y- STA. 11+70.00 TO STA. 12+30.00
-Y1- STA. 13+77.68 TO STA. 14+55.00
-Y1A- STA. 11+21.00 TO STA. 12+31.06
-Y2- STA. 15+53.00 TO STA. 15+60.00
-Y2- STA. 33+93.11 TO STA. 34+00.00
-Y4- STA. 16+07.33 TO STA. 18+25.00
-Y6- STA. 11+28.93 TO STA. 11+74.56
-Y6- STA. 12+68.11 TO STA. 14+58.88

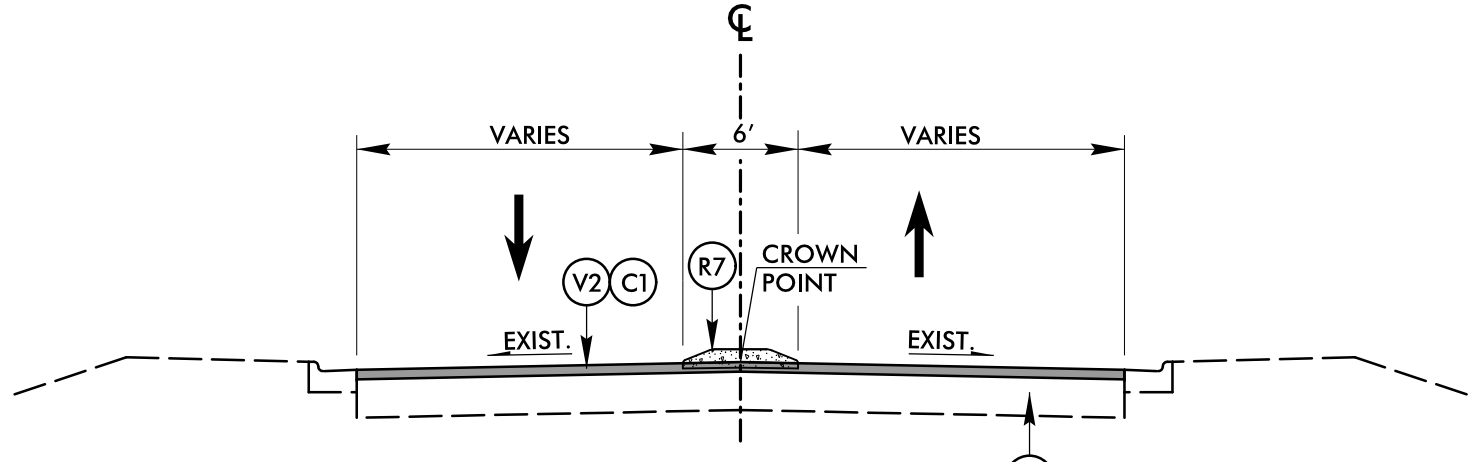
-Y4- LINKHAW DR. (SR 1948)



DETAIL I

-Y4- STA. 16+75.60 TO STA. 17+27.62
-Y4- STA. 17+36.76 TO STA. 18+21.53

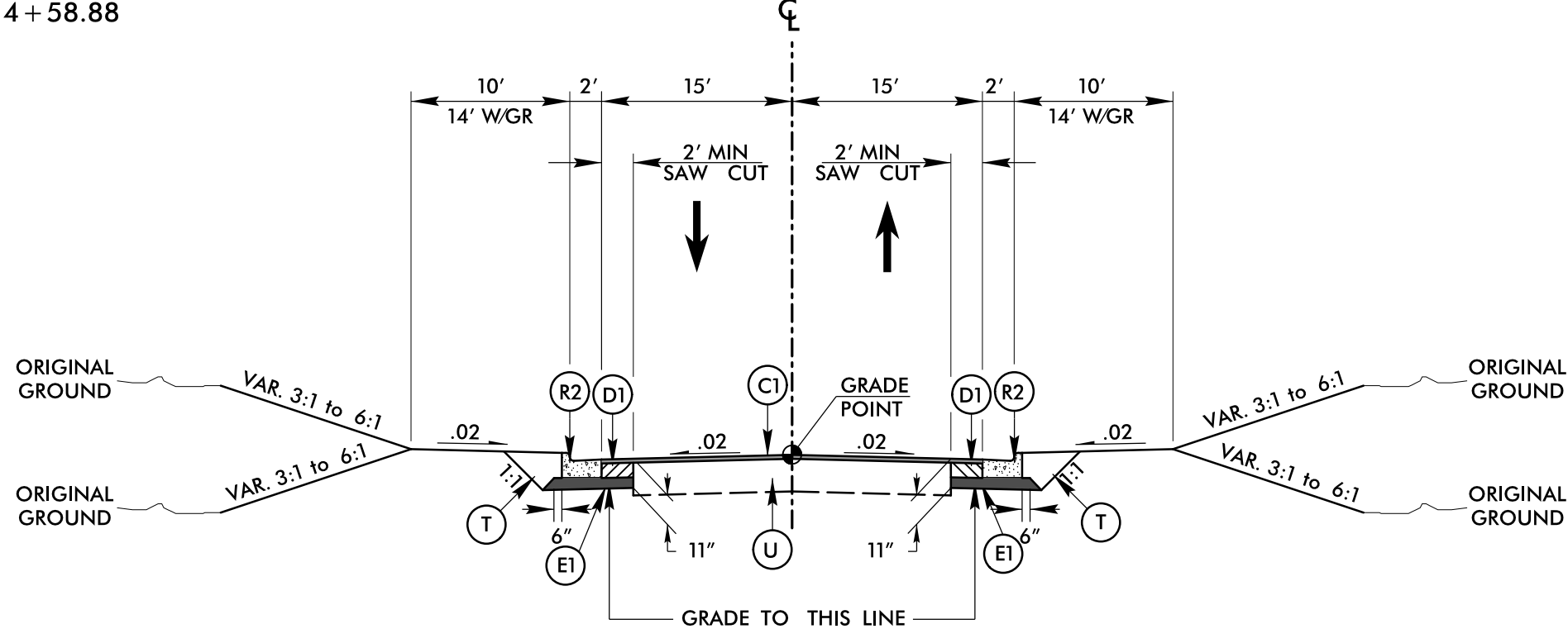
-Y- E. 24th ST.



TYPICAL SECTION NO. 14

-Y- STA. 12+30.00 TO STA. 13+10.00

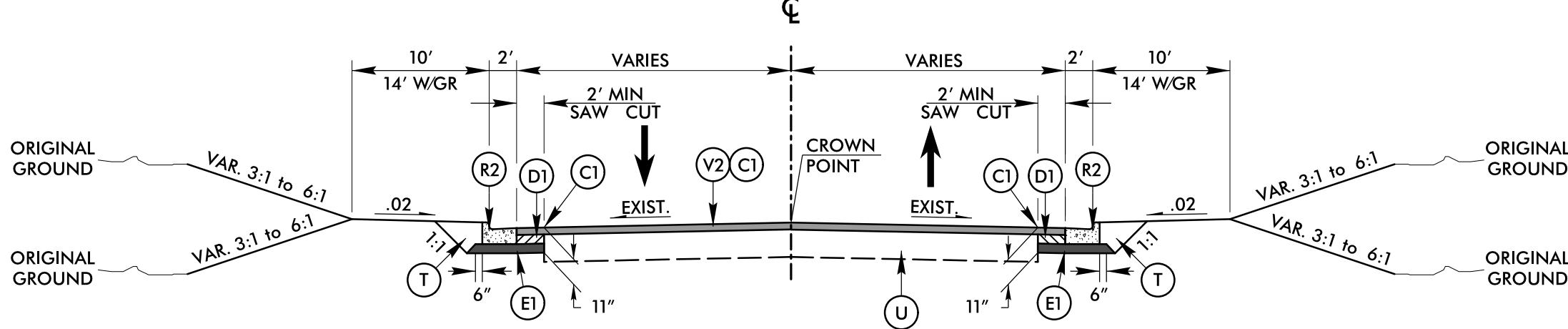
-Y5- PIRATE DR.



TYPICAL SECTION NO. 15

-Y5- STA. 10+47.75 TO STA. 11+50.00

-Y1B- (23rd ST.)

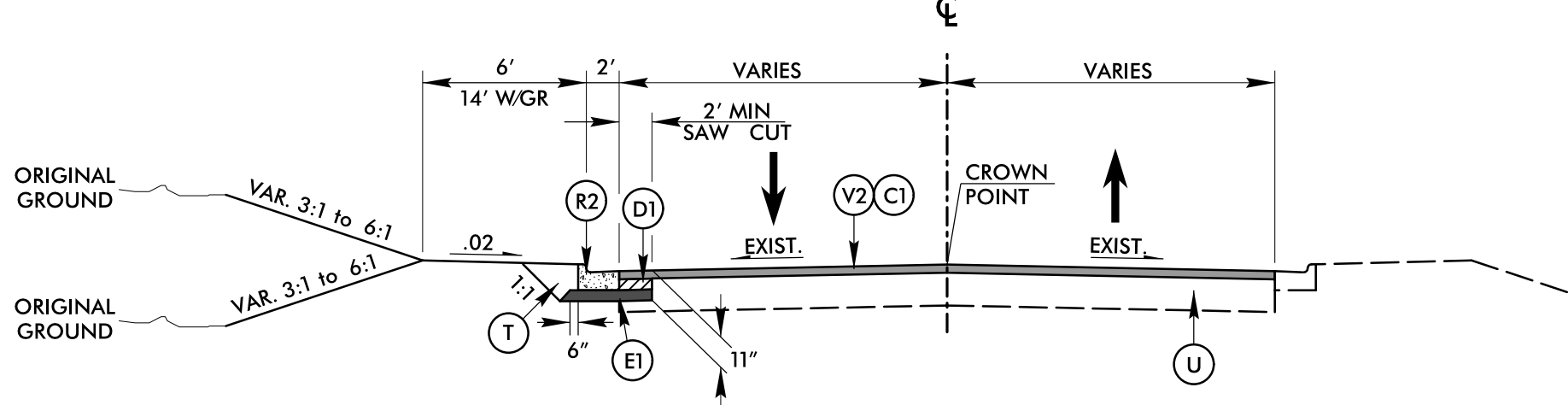


TYPICAL SECTION NO. 16

-Y1B- STA. 10+25.81 TO STA. 10+62.10

PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN) NTS	
A1	9" CONC. APRON
C1	3.0" S9.5C
C2	VAR. S9.5C
D1	4.0" I19.0C
D2	VAR. I19.0C
E1	4.0" B25.0C
E2	VAR. B25.0C
R1	1'-6" C&G
R2	2'-6" C&G
R3	2'-9" C&G
R4	8" x 18" CURB
R5	8" x 12" CURB
R6	ROLLED C&G (SEE DETAIL ON SHEET 2B-5)
R7	5" MONO. ISLAND (KEYED IN)
R8	6" MONO. ISLAND (SURFACE MOUNTED)
R9	4" CONC. ISLAND COVER
S	CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	0" TO 3" MILLING
V2	3" MILLING
W	WEDGING

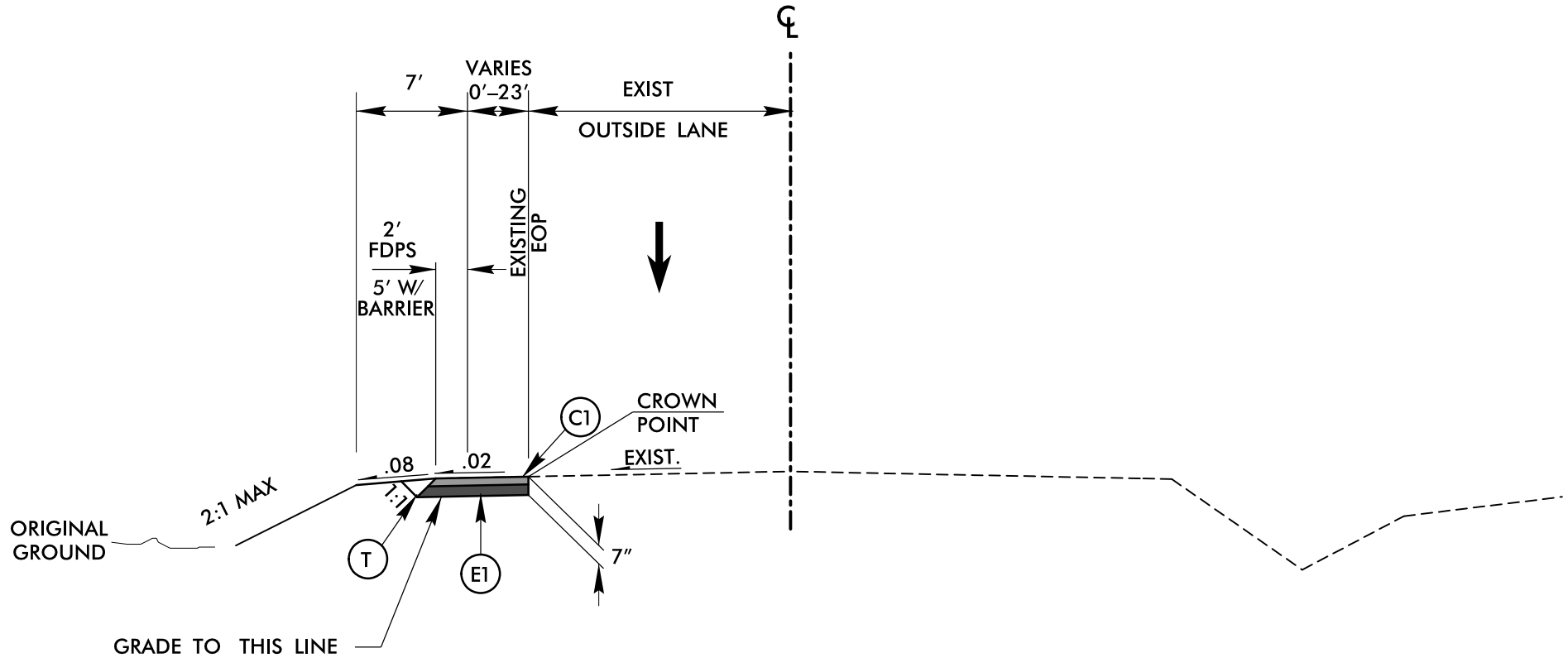
-L- FAYETTEVILLE RD. (SR 1997)
-YB- (22nd ST.)



TYPICAL SECTION NO. 17

-L- STA. 18+35.00 TO STA. 20+38.00
-YB- STA. 12+57.87 TO STA. 13+35.25

-Y2-
N. ROBERTS AVE.
(NC 211)



TYPICAL SECTION NO. 18
(TEMPORARY PAVEMENT)

-Y2- STA. 15+85.46 TO STA. 23+55.01 LT

* SEE SHEET 2B-4 FOR
TEMPORARY PAVEMENT DETAILS

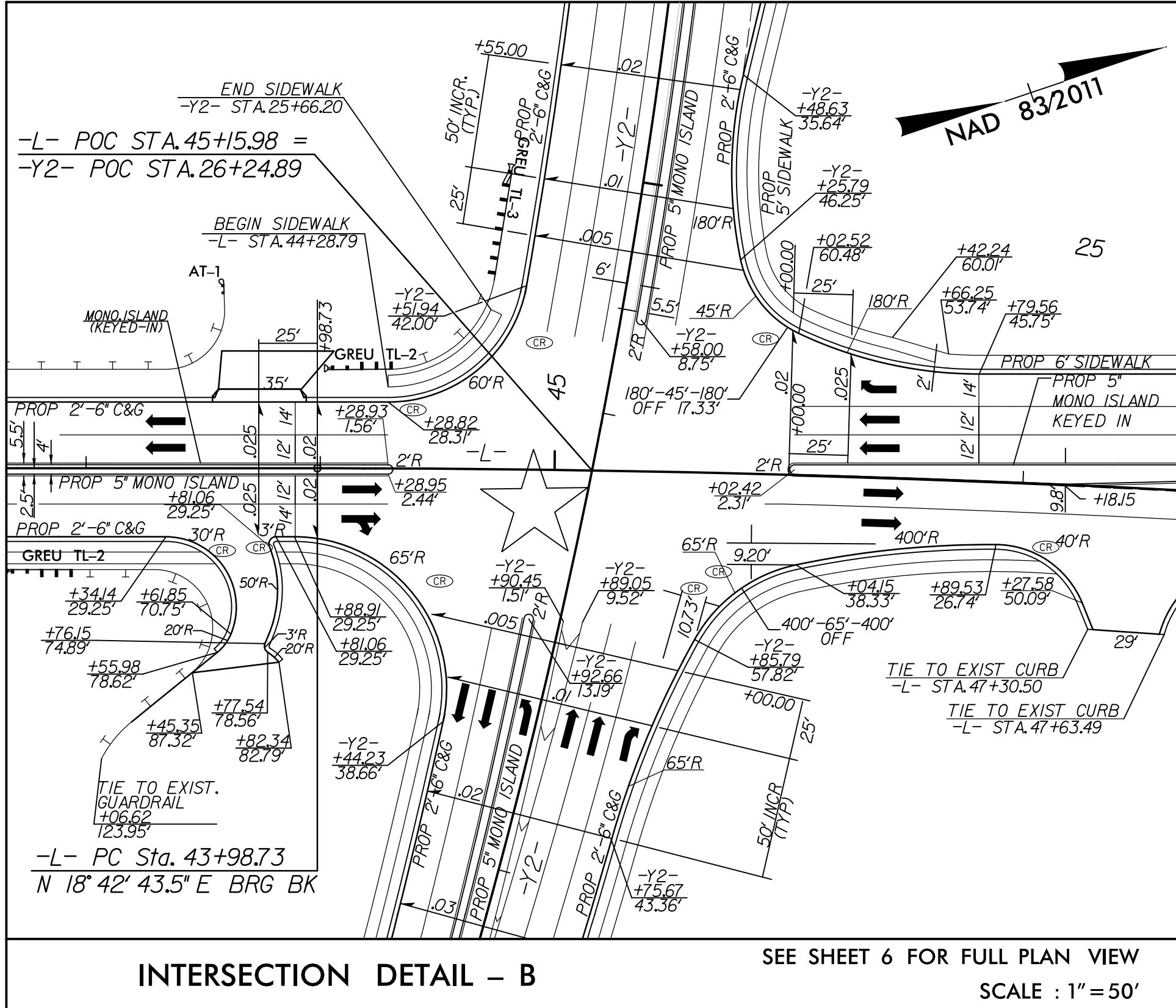
NOTES : PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
INCIDENTAL MILLING TO BE USED AT DISCRETION OF ENGINEER
FOR ALL TIE-INS.
SEE PLANS FOR LOCATION OF MONOLITHIC ISLANDS.

PROJECT REFERENCE NO. U-5797		SHEET NO. 2A-5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER WESTON D. MURPHY 1/27/2026		PAVEMENT ENGINEER JEREMY R. HANN 1/27/2026	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
STV Engineers, Inc. 2121 RDU Center Dr. Suite 210 Morrisville, NC 27560 NC License Number F-0991			

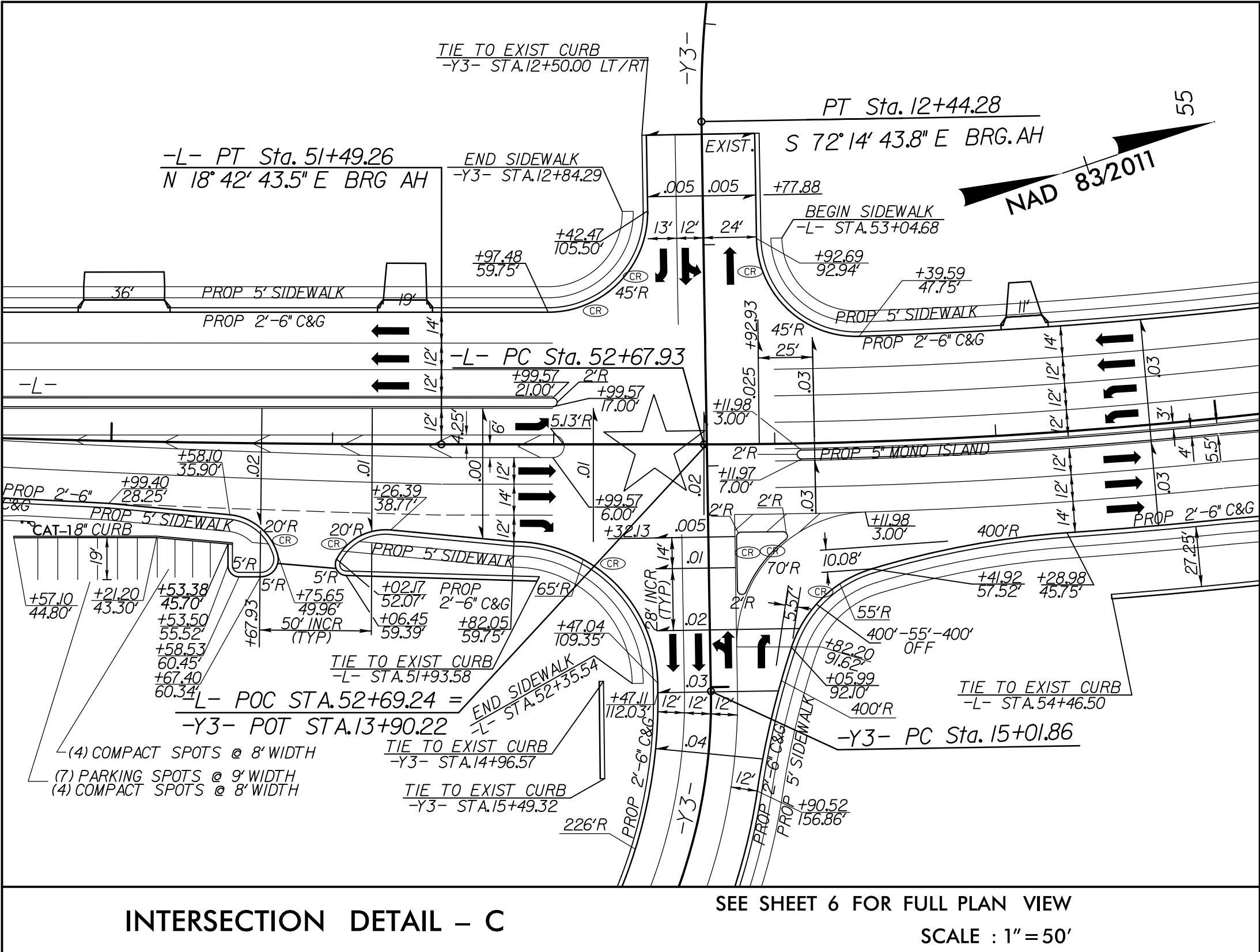
1/27/2026
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Jouko

8/17/99

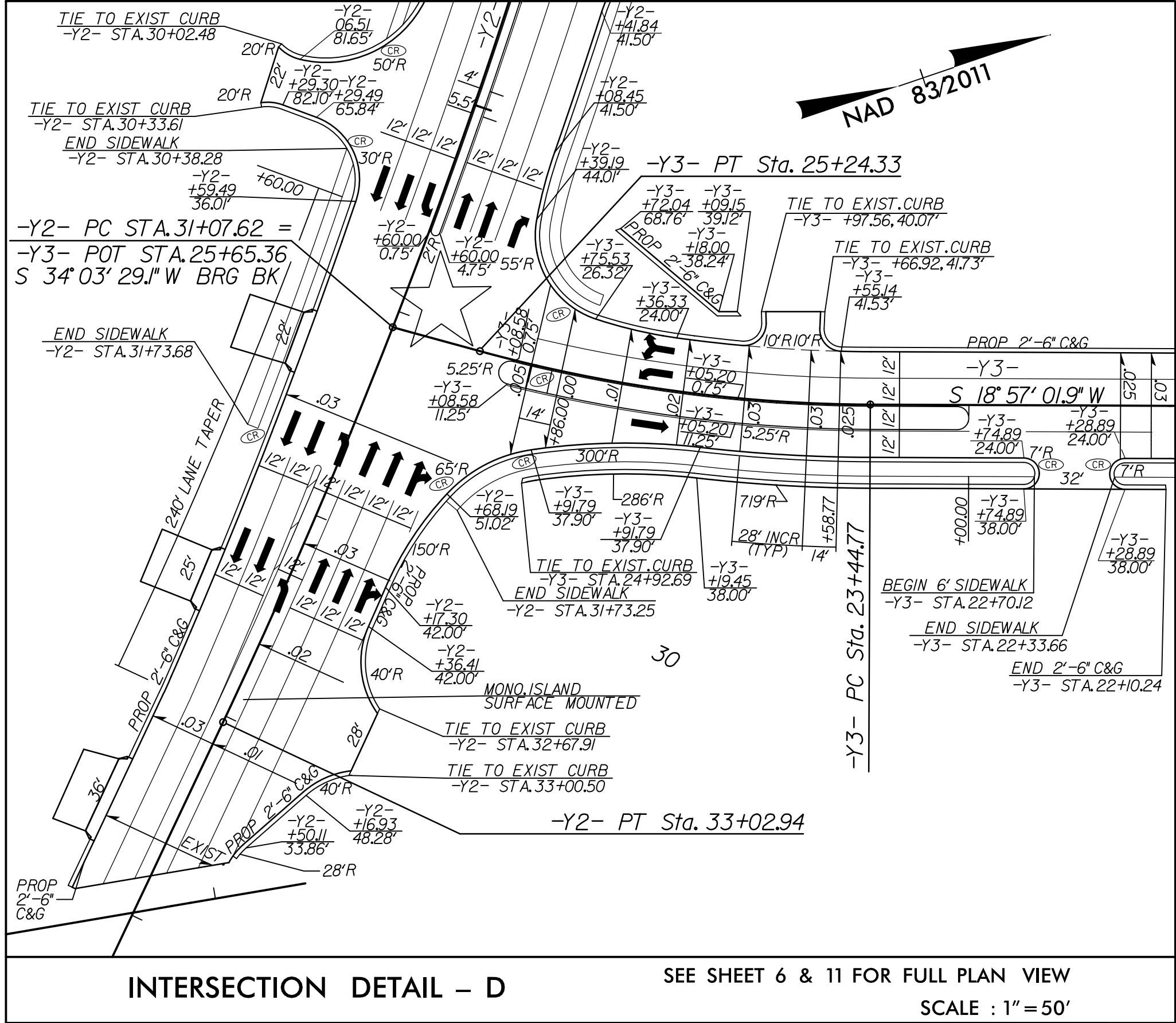
-L- (FAYETTEVILLE RD.)
-Y2- (NC 211 / ROBERTS AVE.)



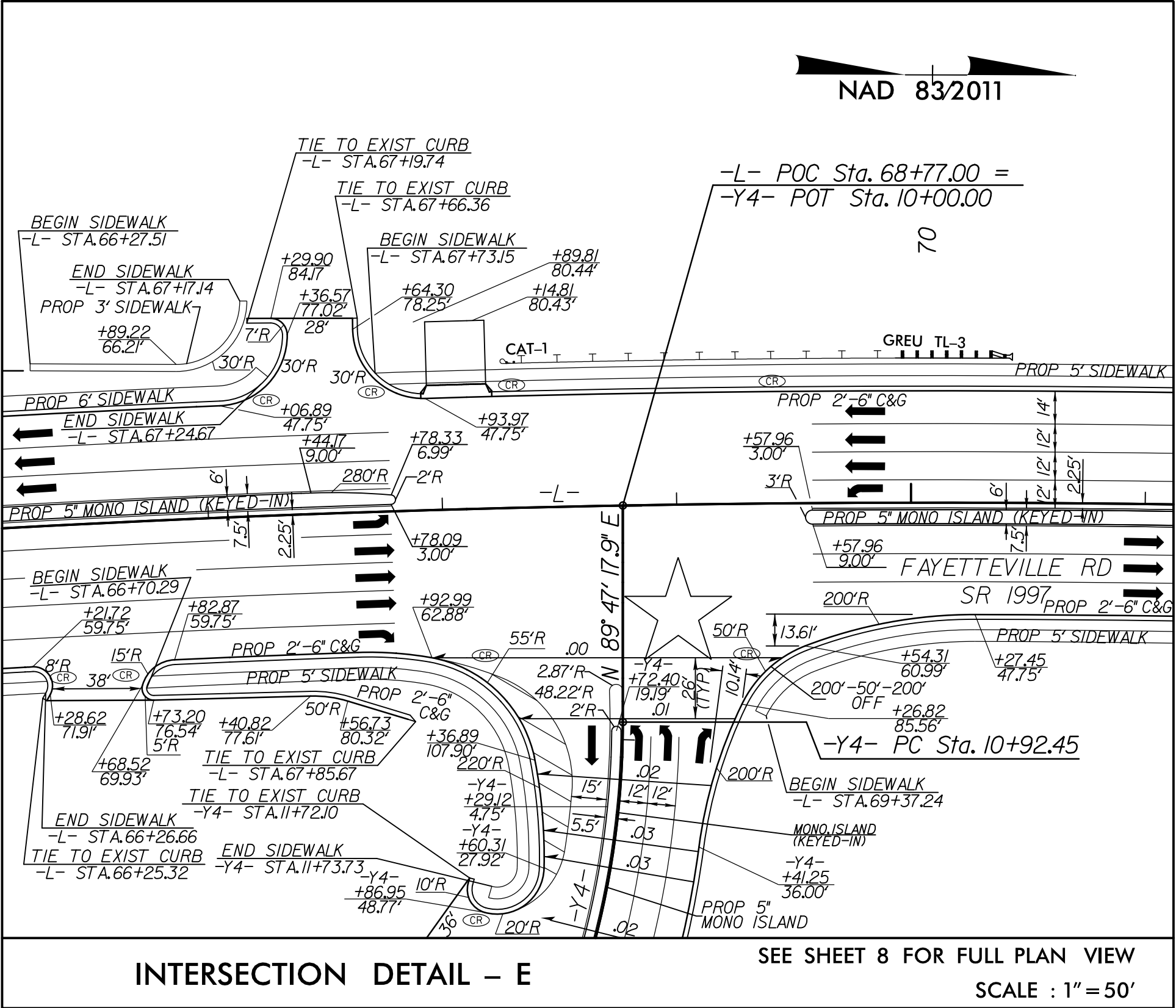
-L- (FAYETTEVILLE RD.)
-Y3- (BOOMERANG DR.)



-Y2- (NC 211 / ROBERTS AVE.)
-Y3- (BOOMERANG DR.)



-L- (FAYETTEVILLE RD.),
-Y4- (LINKAW RD.)



PROJECT REFERENCE NO.	SHEET NO.
U-5797	2B-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	 STV Engineers, Inc. 2121 RDU Center Dr. Suite 210 Morrisville, NC 27560 NC License Number F-0991
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



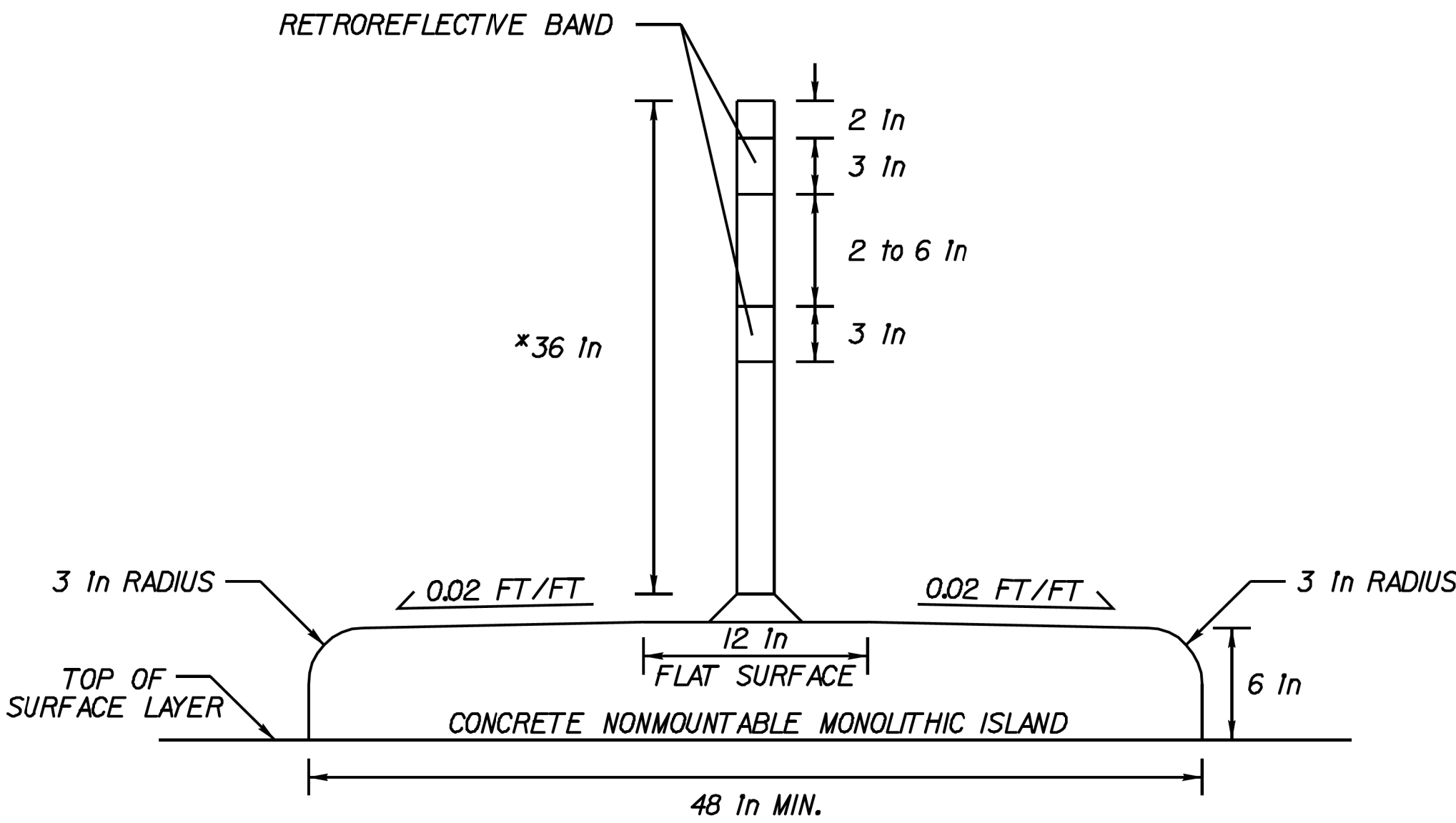
8/17/99

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33\Roadway\Proj\Sheets\15797_rdu_psh_28-3.dgn
MURPHY

PROJECT REFERENCE NO.		SHEET NO.
U-5797		2B-3
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
		STV Engineers, Inc. 2121 RDU Center Dr. Suite 210 Morrisville, NC 27560 NC License Number F-0991

TYPICAL TUBULAR MARKER

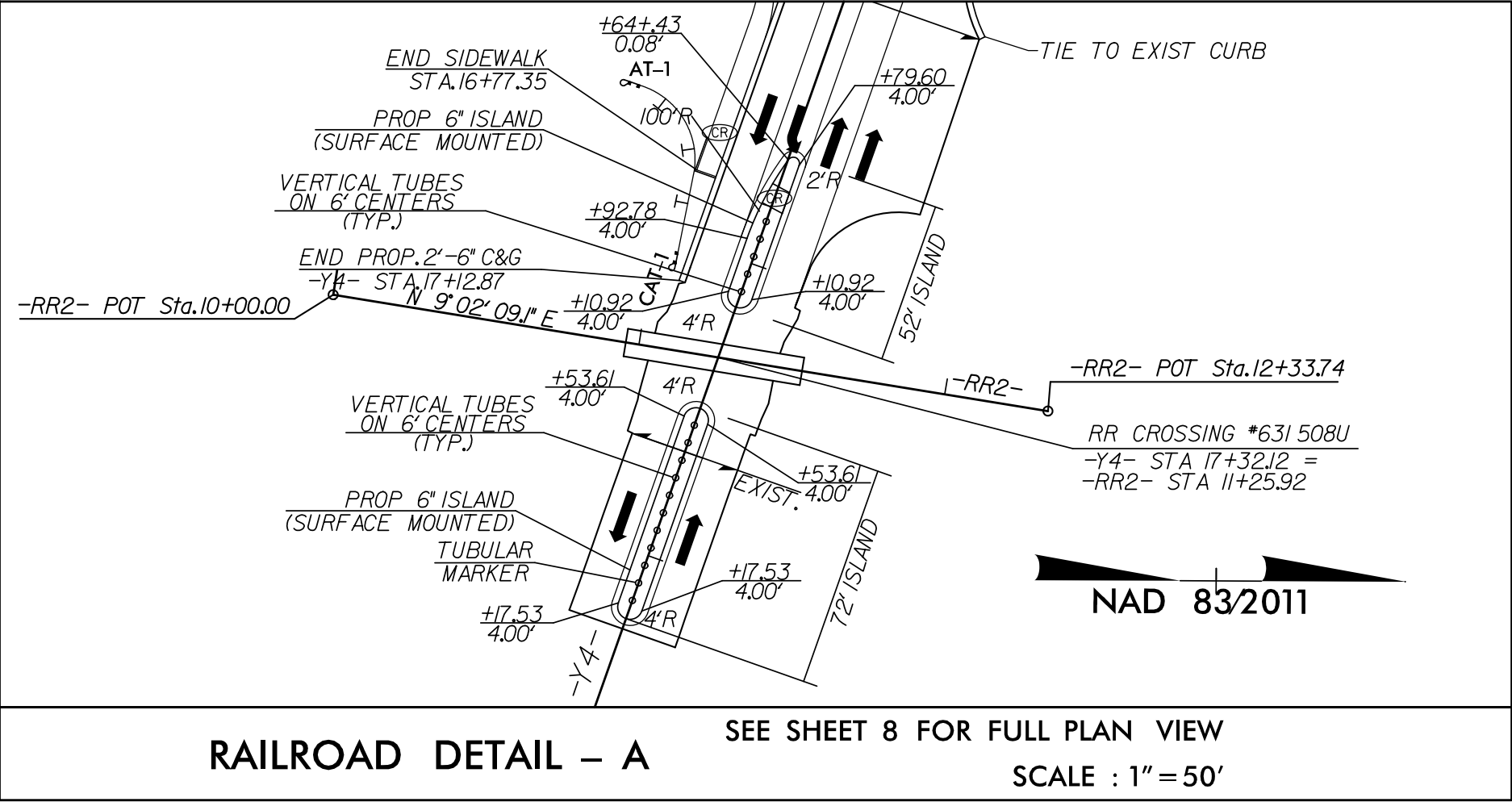
(SEE 2024 NCDOT STANDARD DRAWINGS, STD. 1266.01)



*36 In height may be reduced upon further coordination with the Rail Division if the crossing has a lot of use by oversized vehicles.

SCALE: NTS

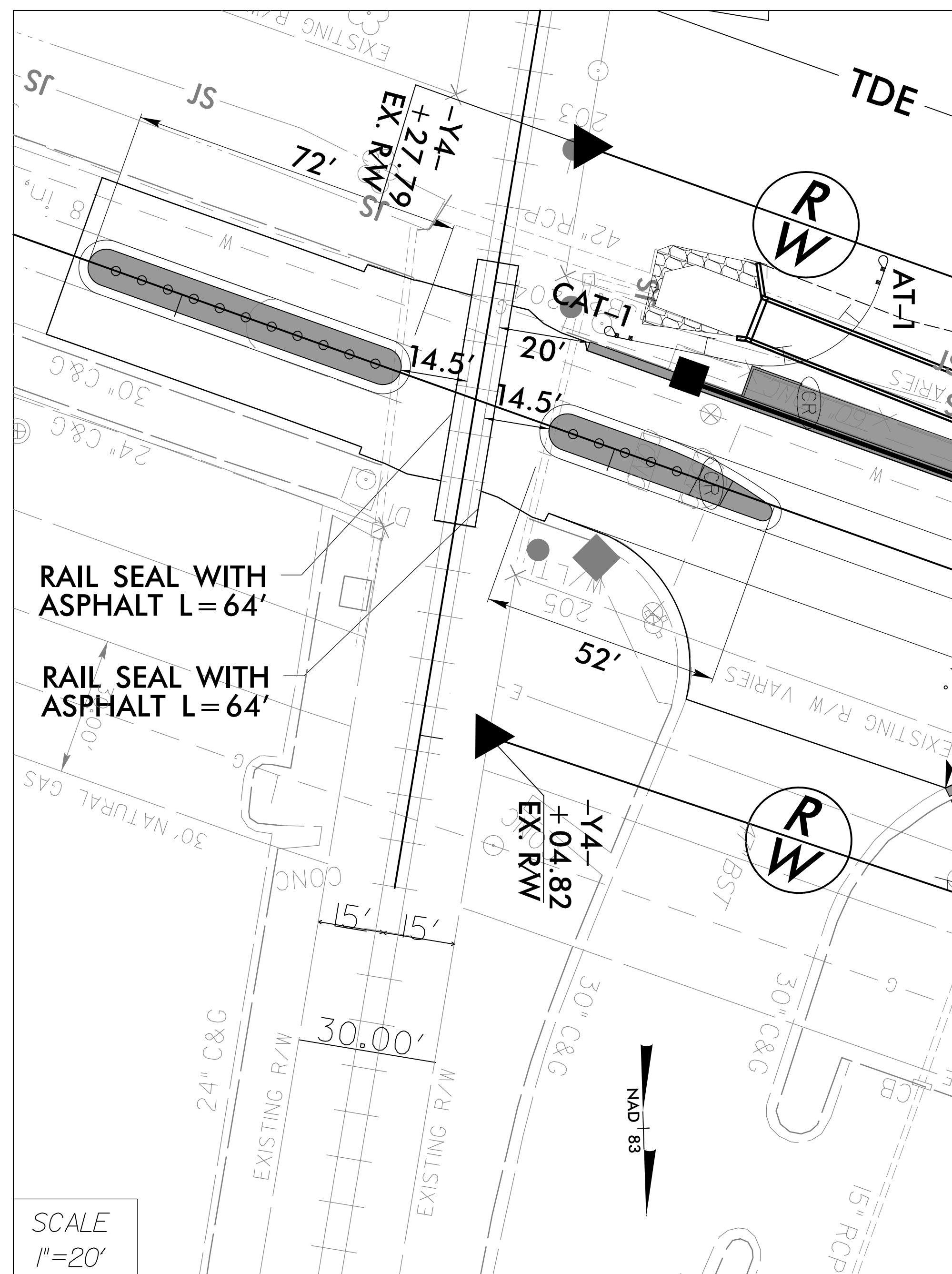
-Y4- (LINKHAW RD.)
CSXT RAILROAD

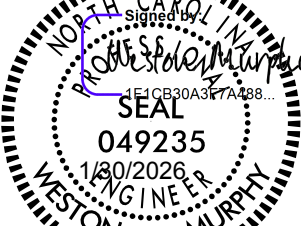
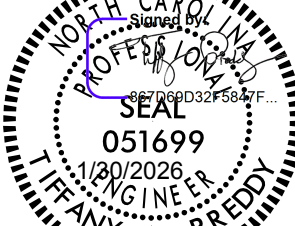


RAILROAD DETAIL - A
SEE SHEET 8 FOR FULL PLAN VIEW
SCALE : 1" = 50'

* CONCRETE MOUNTABLE MONOLITHIC ISLAND IS 8' WIDE AT -Y4- (LINKHAW RD.)
TUBULAR MARKER TO BE PLACES ON CENTER OF CONCRETE ISLAND.

-Y4- (LINKHAW RD.)
CSX RAILROAD



PROJECT REFERENCE NO.	SHEET NO.
U-5797	2B-6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.

U-5797

SHEET NO.

3B-1

STV Engineers, Inc.
2121 RDU Center Dr.
Suite 210
Morrisville, NC 27560
NC License Number F-0991

SUMMARY OF EARTHWORK
IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE	LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L- 53+00.00 TO 67+92.00 RT	423		3,503	3,080		-L- 45+00.00 TO 48+86.00 RT	104		99		5
-Y3- 14+21.97 TO 25+23.64 LT	174		890	716		-Y2- 26+55.16 TO 34+00.00 RT	176		236	60	
SUBTOTAL 1	597		4,393	3,796		SUBTOTAL 11	280		335		104
-L- 48+86.00 TO 53+00.00 RT	191		178		14	-L- 40+21.00 TO 44+60.00 LT (FILL REDUCED TO ACCOUNT FOR FILL PLACED WITH TEMPORARY WIDENING)	49		409	360	
-Y3- 14+21.97 TO 25+23.64 RT	431		104		327						
SUBTOTAL 2	622		281		340	-Y2- 15+60.00 TO 25+96.31 RT	46		2,908	2,862	
-L- 52+65.00 TO 69+50.00 LT	1,228		2,471	1,243		SUBTOTAL 12	95		3,317	3,222	
-L- 69+50.00 TO 86+23.34 LT	1,384		784		600	-L- 20+38.00 TO 38+51.00 RT	341		548	207	
-Y3- 12+50.00 TO 13+42.46 LT	59		39		20	-Y1- 10+65.00 TO 13+77.68	132		168	36	
SUBTOTAL 3	2,671		3,293	1,243	620	-RAB- 00+00.00 TO 3+14.15	142		2,030	1,888	
-L- 69+00.00 TO 86+23.34 RT	257		521	264		SUBTOTAL 13	615		2,746	2,131	429
-Y4- 10+47.76 TO 16+07.49 LT	355		198		158	-L- 18+35.00 TO 40+21.00 LT	768		339		31
-Y5- 10+47.45 TO 11+50.00	58		85	27		-Y- 11+70.00 TO 14+14.95	66		35		4
SUBTOTAL 4	670		804	291	158	-YA- 10+44.00 TO 10+99.78	19		15		464
-L- 67+92.00 TO 69+00.00 RT	12		0		12	SUBTOTAL 14	853		389		
-Y4- 10+47.76 TO 12+50.00 RT	190		30		160						2,149
SUBTOTAL 5	202		30		172	TOTAL	8,012		22,280	16,341	
-Y4- 12+50.00 TO 17+06.00 RT	16		960	944		LOSS DUE TO CLEARING & GRUBBING	-50			50	
						USE WASTE IN LIEU OF BORROW				-2,071	-2,071
SUBTOTAL 6	16		960	944							
-Y2- 16+07.21 TO 22+37.26 LT (TEMP)	293		1,278	985		PROJECT TOTAL	7,962		22,280	14,321	
SUBTOTAL 7	293		1,278	985		ESTIMATE 5% TO REPLACE TOPSOIL ON BORROW PIT				716	
-L- 38+56.00 TO 44+60.00 LT (TEMP)	118		296	178		GRAND TOTAL	7,962			15,037	
-Y2- 18+03.71 TO 25+96.31 RT	249		1,338	1,089							
SUBTOTAL 8	367		1,634	1,267		SAY	7,970			15,040	
-L- 44+60.00 TO 52+65.00 LT	54		228	174							
-Y2- 15+60.00 TO 25+96.31 LT (INCLUDES REMOVAL OF TEMPORARY FILL)	139		2,246	2,107		EST. DDE = 210 CY EST. SHALLOW UNDERCUT (CONTINGENCY) = 3000 CY EST. CLASS IV SUBGRADE STABILIZATION (CONTINGENCY) = 6000 TONS PER GEOTECH RECOMMENDATION, ESTIMATED 850 CY OF UNDERCUT TO BE USED AT THE DISCRETION OF THE RESIDENT ENGINEER. PER GEOTECH RECOMMENDATION, ESTIMATED 50 CUBIC YARDS OF GRADE POINT UNDERCUT PER GEOTECH RECOMMENDATION, ESTIMATED 800 CUBIC YARDS OF SELECT GRANULAR MATERIAL TO BE USED TO BACKFILL AREAS OF UNDERCUT.					
SUBTOTAL 9	193		2,474	2,281							
-L- 45+00.00 TO 48+86.00 RT	0		124	124							
-Y2- 26+55.16 TO 33+56.37 LT	465		185		280						
-Y3- 12+50.00 TO 13+42.46 RT	73		41		32	NOTE: Earthwork quantities are calculated by the Engineer. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.					
SUBTOTAL 10	538		350	124							

NOTE: Earthwork quantities are calculated by the Engineer.
These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

NOTE: Approximate quantities only. Unclassified excavation, borrow excavation, fine grading, clearing and grubbing, and removal of existing pavement will be paid for at the contract lump sum price for grading.

5/28/99

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EXISTING
ASPHALT PAVEMENT REMOVAL
IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD
-L-	23+00	26+49	LT	2241.64
-L-	26+49	39+01	LT	626.17
-L-	27+31	32+64	RT	207.67
-L-	32+97	38+92	RT	235.00
-L-	41+21	44+60	LT	413.77
-L-	45+92	52+50	LT	3891.94
-L-	47+66	48+56	RT	57.85
-L-	48+91	49+70	RT	24.19
-L-	49+61	50+61	RT	50.55
-L-	51+11	51+90	RT	125.35
-L-	54+47	57+50	RT	764.77
-L-	57+50	62+50	RT	2747.27
-L-	59+50	63+50	LT	2559.38
-L-	64+20	64+98	LT	195.06
-L-	66+66	67+84	RT	196.83
-L-	72+47	73+02	RT	227.89
-L-	76+92	77+68	LT	184.16
-L-	78+90	79+29	RT	29.94
-L-	79+63	81+46	LT	252.47
-L-	79+97	80+28	RT	39.92
-L-	80+60	80+95	RT	34.06
-L-	81+59	82+32	LT	165.08
-L-	82+32	83+01	LT	45.14
-L-	83+13	83+55	LT	74.76

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD
-L-	83+55	84+20	LT	117.51
-L-	84+29	86+03	LT	267.25
-Y1B-	9+77	10+26	RT	125.29
-Y-	13+03	14+05	RT/LT	448.83
-Y1-	10+25	12+02	RT/LT	936.45
-Y2-	15+61	23+66	LT	3271.11
-Y2-	15+59	16+94	RT	18.76
-Y2-	26+53	30+22	RT/LT	1953.30
-Y2-	29+05	29+32	RT	143.78
-Y2-	29+43	30+02	RT	33.74
-Y2-	30+33	30+59	RT	27.26
-Y2-	31+82	33+56	LT	52.02
-Y2-	31+70	34+00	RT	50.14
-Y3-	12+50	13+37	RT/LT	526.39
-Y3-	14+31	25+16	RT/LT	4871.09
-Y4-	10+60	11+89	LT/RT	689.00
-Y4-	12+30	13+36	RT	422.40
-Y4-	13+67	16+07	RT	217.43
-Y2- TEMP.	15+73	22+37	LT	2630.91
-L- TEMP.	41+20	44+60	LT	326.87
-L- TEMP.	58+45	62+00	RT	148.43
			TOTAL:	32,668.82
			SAY:	32,670

PROJECT REFERENCE NO.
U-5797

SHEET NO.
8

RW SHEET NO.

ROADWAY DESIGN ENGINEER

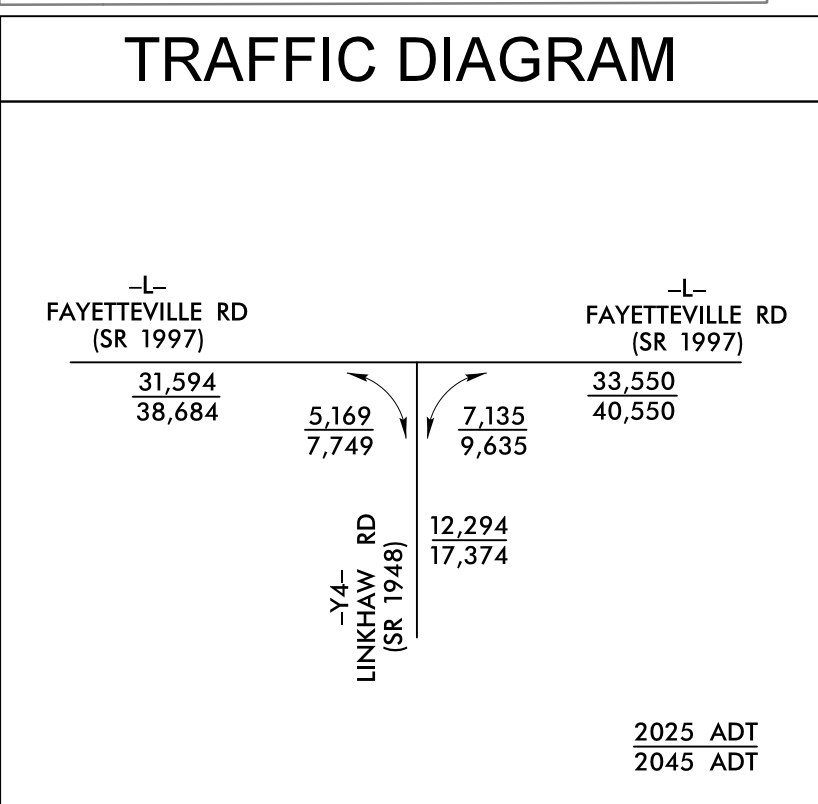
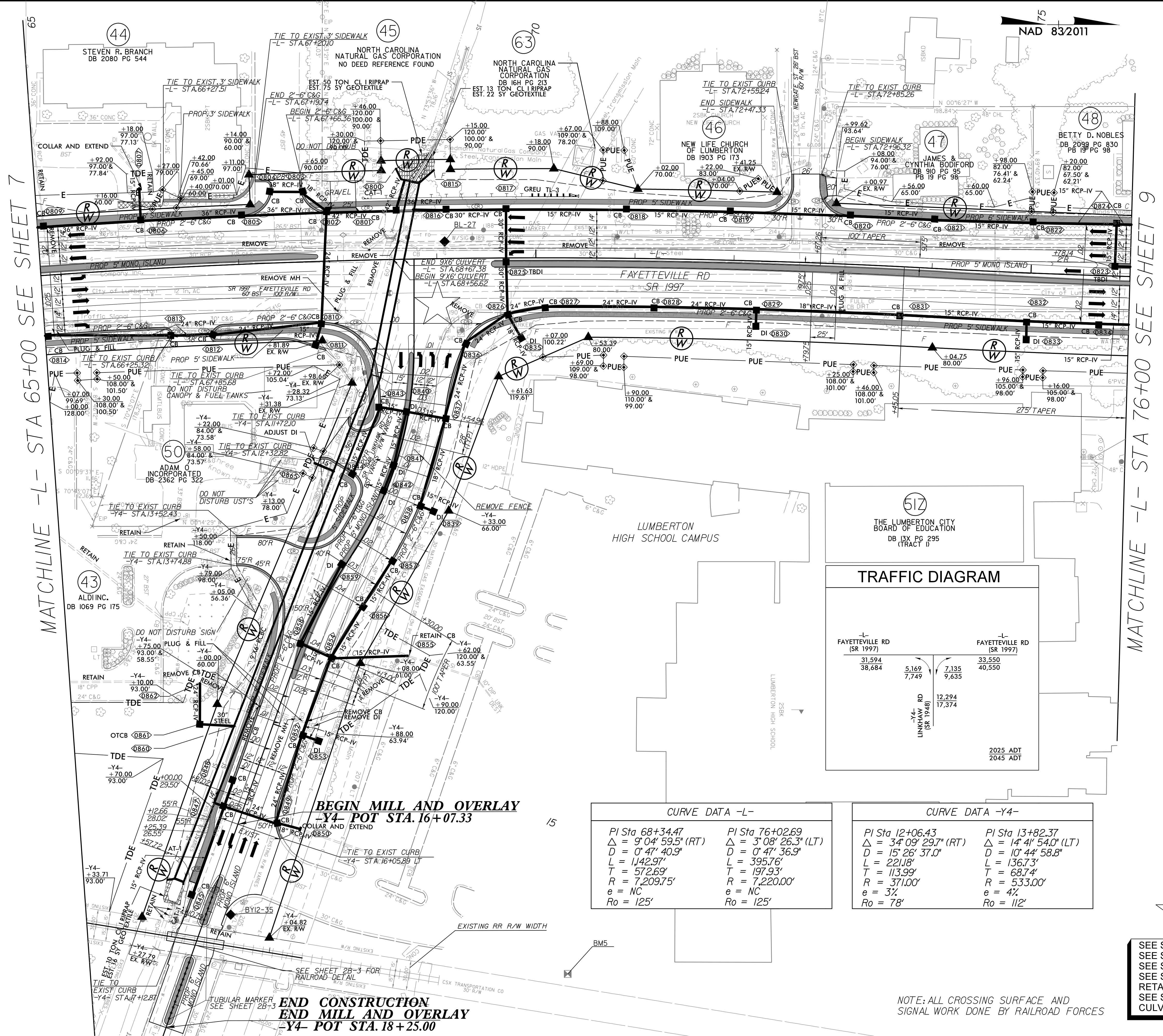
HYDRAULICS ENGINEER

SEAL
049235
190/2026
ENGINEER
JANIS D. MURPHY

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

STV

STV Engineers, Inc.
2121 RDU Center Dr.
Suite 210
Morrisville, NC 27560
NC License Number F-0991



CURVE DATA -L-

PI Sta 68+34.47 Δ = 9° 04' 59.5" (RT) D = 0' 47' 40.9" L = 1,429.7' T = 572.69' R = 7,209.75' e = NC Ro = 125'	PI Sta 76+02.69 Δ = 3° 08' 26.3" (LT) D = 0' 47' 36.9" L = 395.76' T = 197.93' R = 7,220.00' e = NC Ro = 125'
---	--

CURVE DATA -Y4-

PI Sta 12+06.43 Δ = 34° 09' 29.7" (RT) D = 15° 26' 37.0" L = 221.18' T = 113.99' R = 371.00' e = 3% Ro = 78'	PI Sta 13+82.37 Δ = 14° 41' 54.0" (LT) D = 10° 44' 58.8" L = 136.73' T = 68.74' R = 533.00' e = 4% Ro = 112'
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★ **UPGRADED SIGNAL**

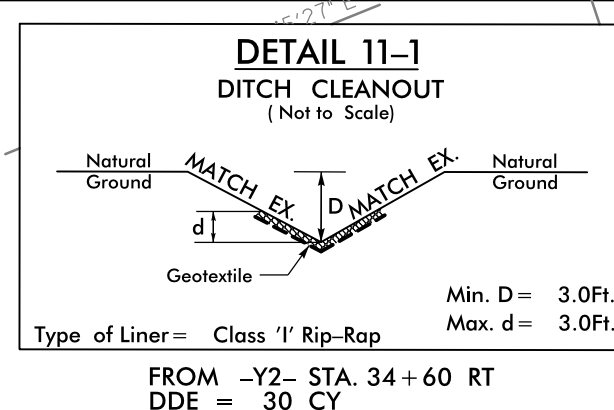
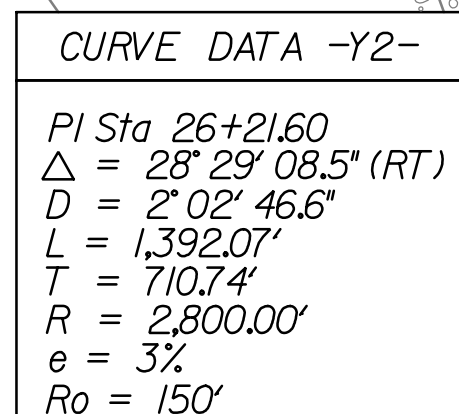
SEE SHEET 2B-2 FOR INTERSECTION DETAILS
SEE SHEET 2B-3 FOR RAILROAD DETAILS
SEE SHEET 14 FOR -L- PROFILE
SEE SHEET 18 FOR -Y4- PROFILE
RETAIN EXISTING RIGHT OF WAY
SEE SHEETS C3-1 THRU C3-17 FOR CULVERT PLANS

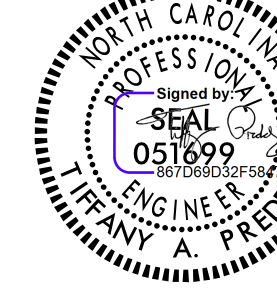
NOTE: ALL CROSSING SURFACE AND SIGNAL WORK DONE BY RAILROAD FORCES

8/17/99

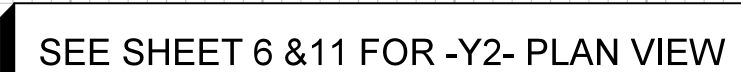
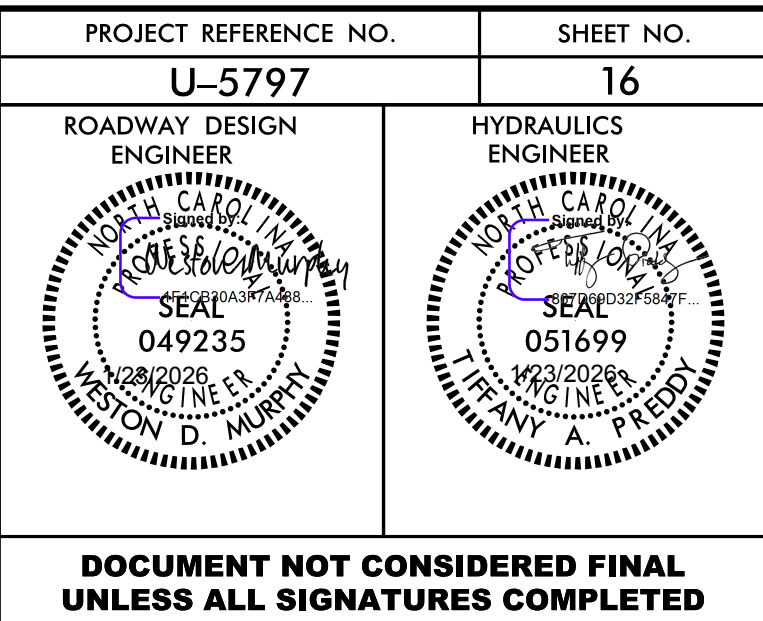
13/30/2026

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PROJECT REFERENCE NO.	SHEET NO.
<u>U-5797</u>	<u>11</u>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER  1/27/2026	HYDRAULICS ENGINEER  1/27/2026
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	STV Engineers, Inc. 2121 RDU Center Dr. Suite 210 Morrisville, NC 27560 NC License Number F-0991

SEE SHEET 16 FOR -Y2- PROFILE
RETAIN EXISTING RIGHT OF WAY



PHASING NOTES

NOTE:

- CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS FOR ALL PHASES WITHIN THE PROJECT LIMITS AND COORDINATE AS NECESSARY WITH PROPERTY OWNERS.
- SOME PHASES MAY BE COMBINED AT THE DISCRETION OF THE RESIDENT ENGINEER.
- FLAGGERS SHALL BE USED AS NECESSARY ON ALL MAJOR DRIVEWAYS.
- TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE FINAL PAVEMENT MARKING PLANS, UNLESS OTHERWISE SHOWN IN THE TRANSPORTATION MANAGEMENT PLANS OR DIRECTED BY THE ENGINEER. REMOVE CONFLICTING MARKINGS AS NEEDED.

PHASE I

STEP 1

INSTALL WORKZONE ADVANCE WARNING SIGNS IN ACCORDANCE WITH NCDOT RSD NO. 1101.01 SHEET 2 & 3 OF 3.

STEP 2

USING RSD 1101.02 SHEET 2 OF 19 OR 1101.04 AS REQUIRED, PLACE TEMPORARY PAVEMENT MARKINGS AND SHIFT TRAFFIC ON -Y3- (BOOMERANG DR.) AS SHOWN ON TMP-3 THRU TMP-5 TO PERFORM THE FOLLOWING.

- A) CONSTRUCT PROPOSED DRAINAGE, INCIDENTAL DRIVEWAYS, SIDEWALKS, AND ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM FOLLOWING STATION RANGES:
- Y2- STA. 33+56+/- LT TO -Y2- STA. 31+32+/- LT
 - Y3- STA. 25+38+/- LT TO -Y3- 14+21+/- LT
 - L- 52+76+/- RT TO -L- STA. 67+92+/- RT
 - L- 69+82+/- RT TO -Y4- STA. 16+07.49 LT
- B) CONSTRUCT TEMPORARY PAVEMENT FROM -L- STA. 58+45+/- RT TO -L- STA. 60+83+/- RT AND 61+35+/- RT TO 62+00+/- RT.

STEP 3 (NOT SHOWN)

- USING RSD 1101.02 SHEET 2 OF 19 OR 1101.04 AS REQUIRED, SHIFT TRAFFIC ON -Y3- (BOOMERANG DR.) TO PERFORM THE FOLLOWING:
- A) CONSTRUCT PROPOSED DRAINAGE CROSS PIPES IN THE CENTER OF THE ROAD SO THE REMAINDER CAN BE CONSTRUCTED IN PHASE II STEP 1. CROSS PIPES ARE LOCATED AT THE FOLLOWING STATIONS:
- Y3- STA. 24+05+/-
 - Y3- STA. 24+85+/-
- B) PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-6 FOR PHASE II USING 1101.02 SHEET 7 OF 19.

PHASE II

STEP 1

- A) USING RSD 1101.03 SHEET 2 OF 9, INSTALL AND COVER OFF-SITE DETOUR SIGNS FOR CLOSURE OF SOUTHBOUND -Y3- (BOOMERANG DR).
- B) PLACE TYPE III BARRICADES AND CLOSE SOUTHBOUND -Y3- (BOOMERANG DR) TO TRAFFIC. UNCOVER DETOUR SIGNS AND DETOUR TRAFFIC OFF-SITE VIA -L- (FAYETTEVILLE RD) TO -Y2- (N. ROBERTS AVE) BACK TO -Y3- (BOOMERANG DR). KEEP THE NORTHBOUND -Y3- TRAFFIC IN A TEMPORARY PATTERN AS SHOWN IN TMP-6
- C) PERFORM THE FOLLOWING:
CONSTRUCT PROPOSED DRAINAGE, INCIDENTAL DRIVEWAYS, SIDEWALKS, AND ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA. 48+86+/- RT TO -L- STA. 52+68+/- RT AND -Y3- STA. 14+16+/- RT TO -Y3- STA. 25+30+/- RT.

STEP 2 (NOT SHOWN)

USING RSD. 1101.02 SHEET 3 OF 19, WEDGE EXISTING PAVEMENT AS NECESSARY AND PLACE TEMPORARY PAVEMENT MARKINGS ON -L- FAYETTVILLE RD. AS SHOWN ON TMP-7 THRU TMP-9 FOR PHASE II STEP 3.

STEP 3

- USING RSD 1101.02 SHEET 3 OF 19 OR RSD 1101.04 AS REQUIRED, WEDGE EXISTING PAVEMENT AS NECESSARY TO SHIFT TRAFFIC ON -L- (FAYETTEVILLE RD.), PLACE PORTABLE CONCRETE BARRIER, TEMPORARY SHORING, AND TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-6 THRU TMP-8 TO PERFORM THE FOLLOWING:
- A) CONSTRUCT PROPOSED STRUCTURES, INCIDENTAL DRIVEWAYS, SIDEWALKS, AND ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y2- STA. 24+80+/- LT TO -L- STA. 86+31+/- LT.
- B) PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-9 THRU TMP-11 FOR PHASE III.

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U-5797	TMP-2A-1

PHASE III

STEP 1

- USING RSD 1101.02, SHEET 3 OF 19, SHIFT TRAFFIC ON -L- (FAYETTEVILLE RD.), PLACE CHANGEABLE MESSAGE SIGNS, PORTABLE CONCRETE BARRIER, AND TEMPORARY SHORING AS SHOWN ON TMP-10 THRU TMP-12 TO PERFORM THE FOLLOWING:
- A) CONSTRUCT PROPOSED STRUCTURES, DRAINAGE, GUARDRAIL, AND ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA. 52+79+/- TO -L- STA. 86+31+/- and -Y2- STA. 25+15+/- TO -Y2- STA. 27+15+/-.
- B) PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-15 THRU TMP-17 FOR PHASE IV.
- C) UTILIZING LAW ENFORCMENT TO CONTROL TRAFFIC. CONTRACTOR SHALL MAINTAIN ACCESS FOR SCHOOL BUSES THROUGH MEDIAN FOR ALL ARRIVALS AND DEPARTURES TO LUMBERTON SENIOR HIGH SCHOOL. USE STEEL PLATES AND INCIDENTAL STONE BASE AS NEEDED.

STEP 2 (NOT SHOWN)

- USING RSD 1101.02, SHEET 3 OF 19, SHIFT TRAFFIC ON -L- (FAYETTEVILLE RD.) TO THE OUTSIDE LANES AND PERFORM THE FOLLOWING:
- A) CONSTRUCT PROPOSED DRAINAGE, MONOLITHIC ISLANDS, AND INSIDE LANES OF ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA. 45+00+/- TO -L- STA. 52+79+/-.
- B) REMOVE EXISTING ISLAND ON -L- (FAYETTEVILLE RD.) FROM -L- STA. 41+69+/- TO STA. 44+57+/-, AND PATCH ROADWAY.
- C) PLACE TEMPORARY PAVEMENT MARKINGS ON -L- (FAYETTEVILLE RD.) AS SHOWN ON TMP-13.

STEP 3:

USING RSD 1101.02, SHEET 3 OF 19, INSTALL ALL PERMANENT SIGNAGE NECESSARY FOR THE QUAD LEFT TURN MOVEMENTS AND SHIFT TRAFFIC ON -L- (FAYETTEVILLE RD.) EXCEPT OVERHEAD SIGNS 4 AND 5. UTILIZED CHANGEABLE MESSAGE BOARDS IN PLACE OF OVERHEAD SIGNS UNTIL THEY ARE CONSTRUCTED IN STEP 4. SHIFT TRAFFIC TO UTILIZE THE NEW QUAD LEFT TRAFFIC PATTERN.

STEP 4

- USING RSD 1101.02, SHEET 1 OF 19 OR 1101.03 SHEETS 1 AND 2 OF 9 AS NEEDED, PERFORM THE FOLLOWING:
- PLACE TYPE III BARRICADES, PORTABLE CONCRETE BARRIER, AND TEMPORARY PAVEMENT MARKINGS TO SHIFT TRAFFIC ON -L- FAYETTVILLE ROAD AND -Y4- LINKHAW TO THE PHASE IV TRAFFIC CONFIGURATION AS SHOWN ON TMP-15 THRU TMP-17.
- INSTALL AND COVER DETOUR SIGNAGE TO CLOSE -L- (FAYETTEVILLE RD.) AND CLOSE INSIDE LEFT TURN LANE ON -Y4- LINKHAW ROAD. UNCOVER DETOUR SIGNS, AND DETOUR SB FAYETTEVILLE RD. TRAFFIC ONTO THE OFF-SITE DETOUR AS SHOWN ON SHEET TMP-14A THRU TMP-14C.
- AWAY FROM TRAFFIC AND UTILIZING FLAGGERS AND LAW ENFORCEMENT AS NECESSSARY TO MAINTAIN LOCAL ACCESS, CONSTRUCT PROPOSED OVERHEAD SIGN 4 AND 5 ON -L- (FAYETTEVILLE RD.). SEE SIGNING PLANS.

STEP 5 (NOT SHOWN)

REMOVE DETOUR SIGNS AND UNCOVER PERMANENT SIGNS NECESSARY FOR THE QUAD LEFT TURN MOVEMENTS. OPEN -L- (FAYETTEVILLE RD.) TO TRAFFIC UTILIZING THE NEW TRAFFIC PATTERN.

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APPROVED:

Signed by: Weston Murphy

 DATE: 1/23/2026

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049235
WESTON D. MURPHY

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

TEMPORARY TRAFFIC
CONTROL PHASING

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U-5797	TMP-2A-2

PHASE IV

STEP 1

USING RSD 1101.02, SHEET 3 OF 19, SHIFT TRAFFIC ON -Y4- (LINKHAW RD.), PLACE TRAFFIC CONTROL DEVICES, AND TEMPORARY SHORING AS SHOWN ON TMP-15 THRU TMP-17.

- A) CONSTRUCT PROPOSED STRUCTURES, INCIDENTAL DRIVEWAYS, SIDEWALKS, DRAINAGE, AND ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM THE FOLLOWING STATION RANGES:
- L- STA. 63+28+/- RT TO -Y4- STA. 12+50+/- RT
 - L- STA. 69+82+/- RT TO -L- STA. 86+14+/- RT

- B) PLACE TEMPORARY PAVEMENT MARKINGS ON -L- IN THE FINAL PATTERN FROM -L- STA. 52+79+/- TO STA. 86+31+/- (SEE PAVEMENT MARKING PLANS).

STEP 2

USING RSD 1101.02, SHEET 3 OF 19, SHIFT TRAFFIC ON -Y4- (LINKHAW RD.), PLACE PORTABLE CONCRETE BARRIER, AND TEMPORARY SHORING AS SHOWN ON TMP-18 AND PERFORM THE FOLLOWING:

- A) CONSTRUCT PROPOSED STRUCTURES, INCIDENTAL DRIVEWAYS, SIDEWALKS, AND ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y4- STA. 12+50+/- RT TO -Y4- STA. 17+06+/- RT.
- B) USING RSD. 1101.02 SHEET 3 OF 19, OR 1101.04, PLUG AND FILL THE EXISTING CULVERT AND TEMPORARY EXTENTION.

STEP 3 (NOT SHOWN)

USING RSD 1101.02 SHEET 3 OF 19, SHIFT TRAFFIC ON -Y4- (LINKHAW RD.) TO THE OUTSIDE LANES AND PERFORM THE FOLLOWING:

- A) CONSTRUCT THE REMAINDER OF DRAINAGE AND PROPOSED ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE ON -Y4- (LINKHAW RD.).
- B) PLACE TEMPORARY PAVEMENT MARKINGS ON -Y4- IN THE FINAL PATTERN (SEE PAVEMENT MARKING PLANS).

STEP 4

USING RSD 1101.02 SHEET 3 OF 19 OR RSD 1101.04 AS REQUIRED, SHIFT TRAFFIC ON -Y2- (NC 211), PLACE TEMPORARY PAVEMENT MARKINGS, PORTABLE CONCRETE BARRIER, AND TEMPORARY SHORING AS SHOWN ON TMP-19 TO PERFORM THE FOLLOWING:

- A) CLOSE LEFT OUTSIDE LANE OF -Y2- AS NECESSARY TO CONSTRUCT THE 72" RCP.
- B) OPEN LEFT OUTSIDE LANE AND CONSTRUCT PROPOSED STRUCTURES AND TEMPORARY 108" CSPs.
- C) CONSTRUCT TEMPORARY PAVEMENT FROM -Y2- STA. 15+75+/- TO -Y2- STA. 24+55+/-.

PHASE V

STEP 1

USING RSD 1101.02 SHEET 3 OF 19, PLACE PORTABLE CONCRETE BARRIER, TEMPORARY SHORING, TEMPORARY PAVEMENT MARKINGS, AND SHIFT TRAFFIC ON -Y2- (ROBERTS AVE.) AND -L- (FAYETTVILLE RD.) AS SHOWN ON TMP-20 THRU TMP-21.

- A) CONSTRUCT PROPOSED STRUCTURES, DRAINAGE, GUARDRAIL, AND ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA. 38+56+/- LT. TO -Y2- STA. 17+30+/- RT.
- B) COORDINATE WITH THE FIRE DEPARTMENT AND CLOSE THE RIGHT OUTSIDE LANE OF -Y2-(ROBERTS AVE.) AND CONSTRUCT DRAINAGE AND PROPOSED ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y2- STA. 15+60+/- RT TO STA. 17+30+/- RT.

STEP 2

USING RSD 1101.02, SHEET 3 OF 19, SHIFT TRAFFIC ON -Y2- (ROBERTS AVE.) AND -L- (FAYETTVILLE RD.) AS SHOWN ON TMP-22.

- A) CONSTRUCT PROPOSED DRAINAGE AND PROPOSED ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA. 48+58+/- RT TO -Y2- STA. 30+19+/- LT.

PHASE VI

STEP 1

USING RSD 1101.02, SHEET 3 OF 19, PLACE TEMPORARY PAVEMENT MARKINGS, AND SHIFT TRAFFIC ON -Y2- (ROBERTS AVE.) AS SHOWN ON TMP-23.

- A) REMOVE TEMPOARRY PAVEMENT WIDENING AND CULVERT EXTENSION.
- B) CONSTRUCT PROPOSED DRAINAGE, AND ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y2- STA. 15+60+/- LT TO -Y2- STA. 24+78+/- LT.

STEP 2 (NOT SHOWN)

USING RSD 1101.02 SHEET 3 OF 19, SHIFT TRAFFIC ON -Y2- (ROBERTS AVE.) TO THE OUTSIDE LANES IN EACH DIRECTION.

- A) CONSTRUCT PROPOSED DRAINAGE AND INSIDE LANES UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y2- STA. 15+60+/- TO -Y2- STA. 33+80.10.

STEP 3 (NOT SHOWN)

USING RSD 1101.03, SHEET 1 AND 2 OF 9, INSTALL AND COVER TYPE III BARRICADES AND DETOUR SIGNS TO CLOSE THE FOLLOWING ROADS AS SHOWN ON TMP-24 THRU TMP-25A:

- GODWIN AVE. FROM -Y1- STA. 13+77.68 TO -L-(FAYETTEVILLE RD.)
- CEDAR ST. FROM -Y1A- STA. 10+21 TO -Y1-(GODWIN AVE.)

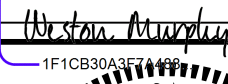
STEP 4

USING RSD 1101.02 SHEET 2 OF 19 OR SHEET 3 OF 19 AS NEEDED, PLACE TEMPORARY PAVEMENT MARKINGS, CONCRETE BARRIER, TEMPORARY SHORING, UNCOVER DETOUR SIGNAGE AND SHIFT TRAFFIC ON -L-(FAYETTEVILLE RD.) AS SHOWN ON TMP-24 AND TMP-25.

- A) CONSTRUCT PROPOSED STRUCTURES, DRAINAGE, INCIDENTAL DRIVEWAYS, GUARDRAIL, AND ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER COURSE FROM THE FOLLOWING STATION RANGES:
- L- STA. 20+38.00 RT TO -Y2- STA. 34+00.00 RT
 - Y1- STA 10+61+/- TO -Y1- STA. 13+77.68
 - Y1A- STA 10+21.00 TO -Y1A- STA. 12+31.06
 - Y1B- STA 10+25.81 TO -Y1B- STA. 10+62+/-
- B) REMOVE EXISTING PAVEMENT ON -Y1B- (E. 23RD ST.) AS SHOWN ON TMP-24.
- C) PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-26 AND TMP-27 FOR PHASE VII.

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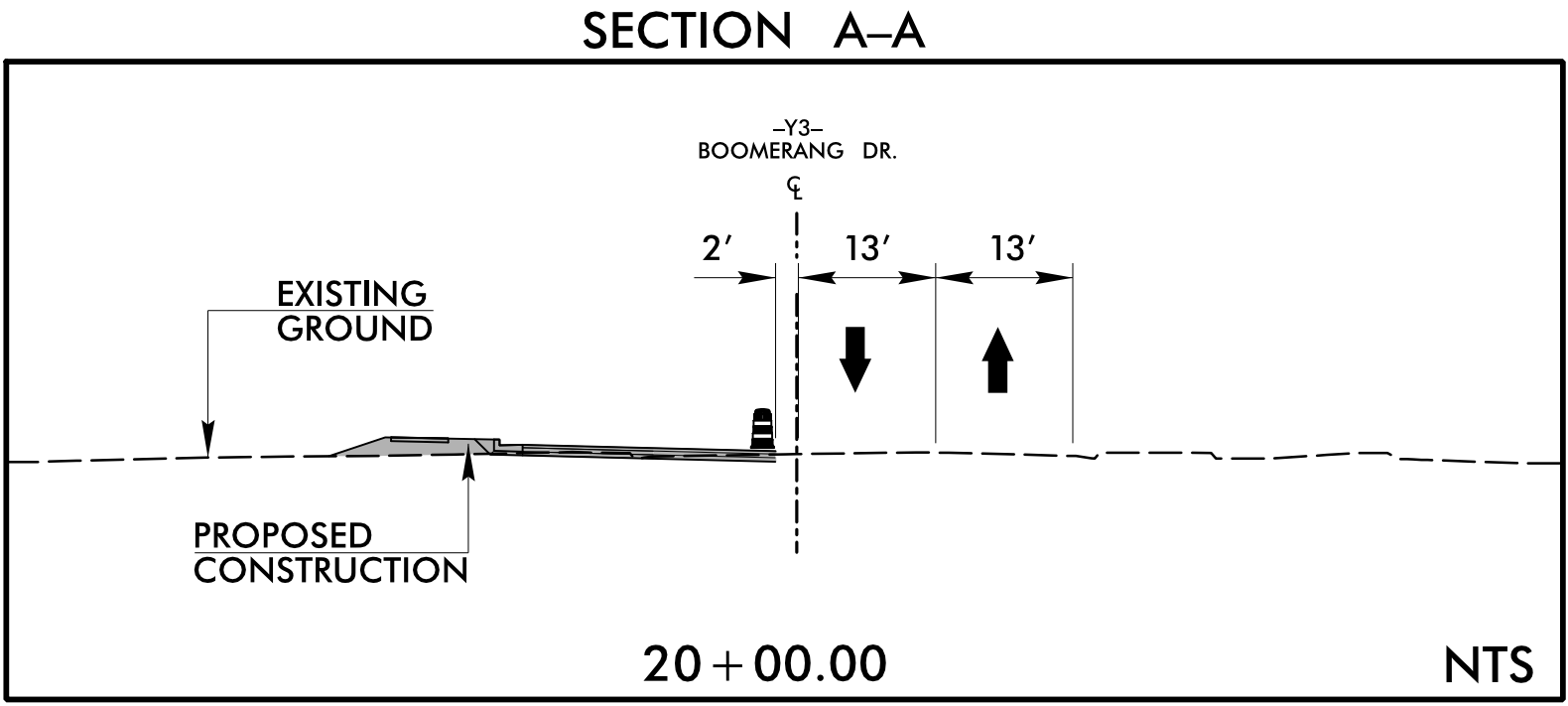
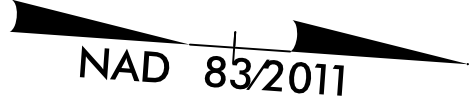
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U-5797	TMP-3



RR CROSSING #631 465D
RR CROSSING TO BE
CONSTRUCTED BY CSX
FORCES

EXIST. PAVEMENT
MARKINGS

EXIST.
PAVEMENT
MARKINGS

-Y3- STA. 25+38+/-
-Y2- STA. 31+32+/-

FAYETTEVILLE RD. (SR 1997)

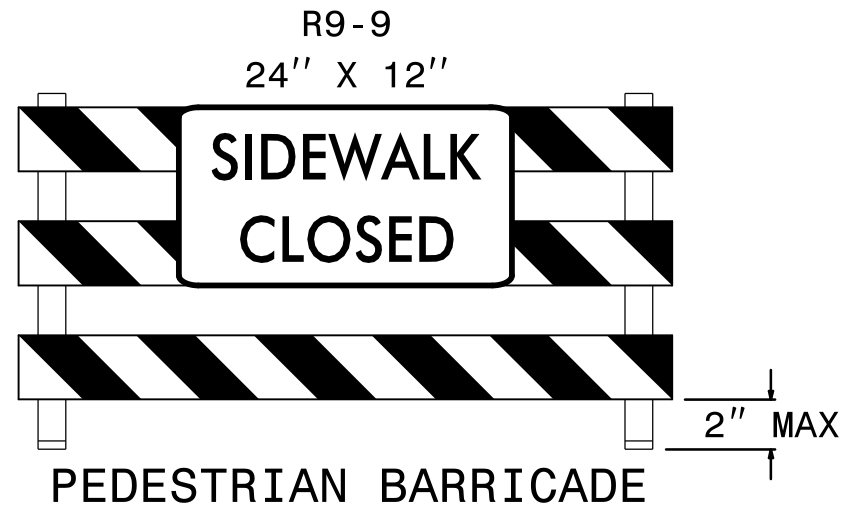
N. ROBERTS AVE. (NC 211)

-Y2- STA. 33+80.10

-Y3-
BOOMERANG DR.

TEMPORARY PAVEMENT
MARKINGS

MATCHLINE SHEET
-Y3- STA. 17+00.00
TMP-4

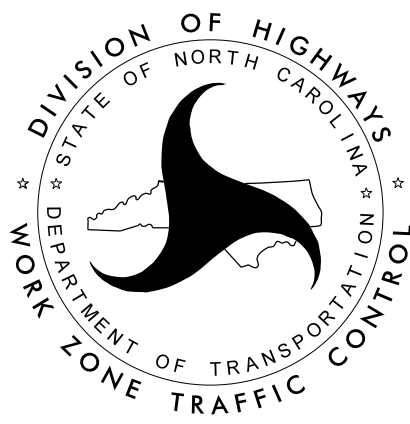


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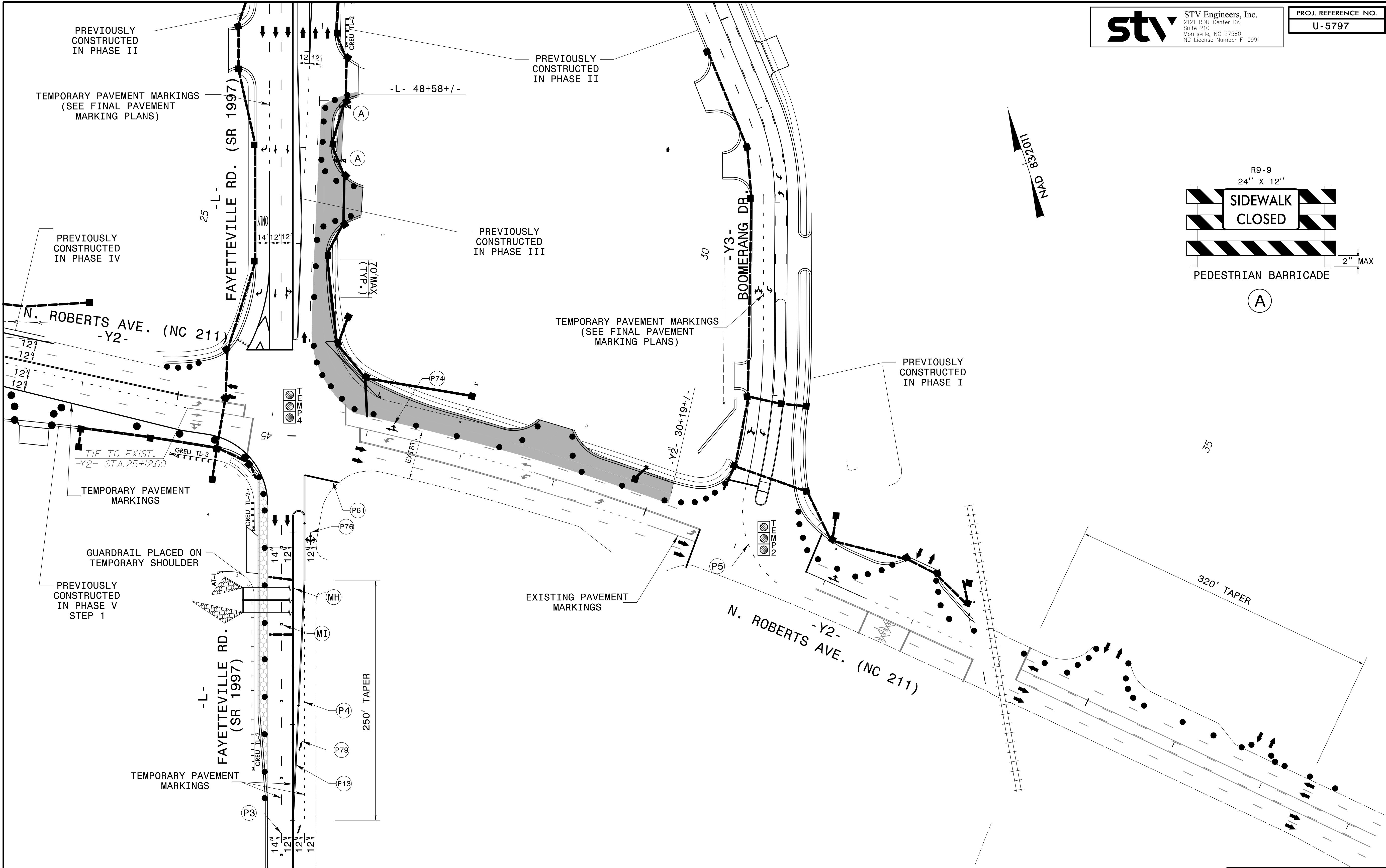
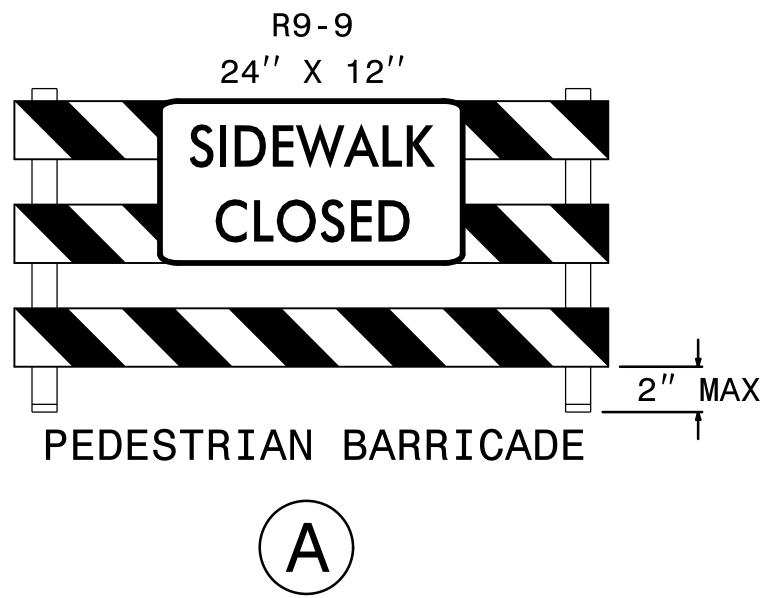


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TEMPORARY TRAFFIC
CONTROL PHASE I

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SEE ROADWAY PLANS SHEET 2B-4 FOR TEMPORARY
WIDENING DETAIL

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APPROVED: Weston Murphy DATE: 1/23/2026

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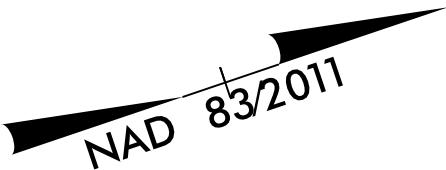
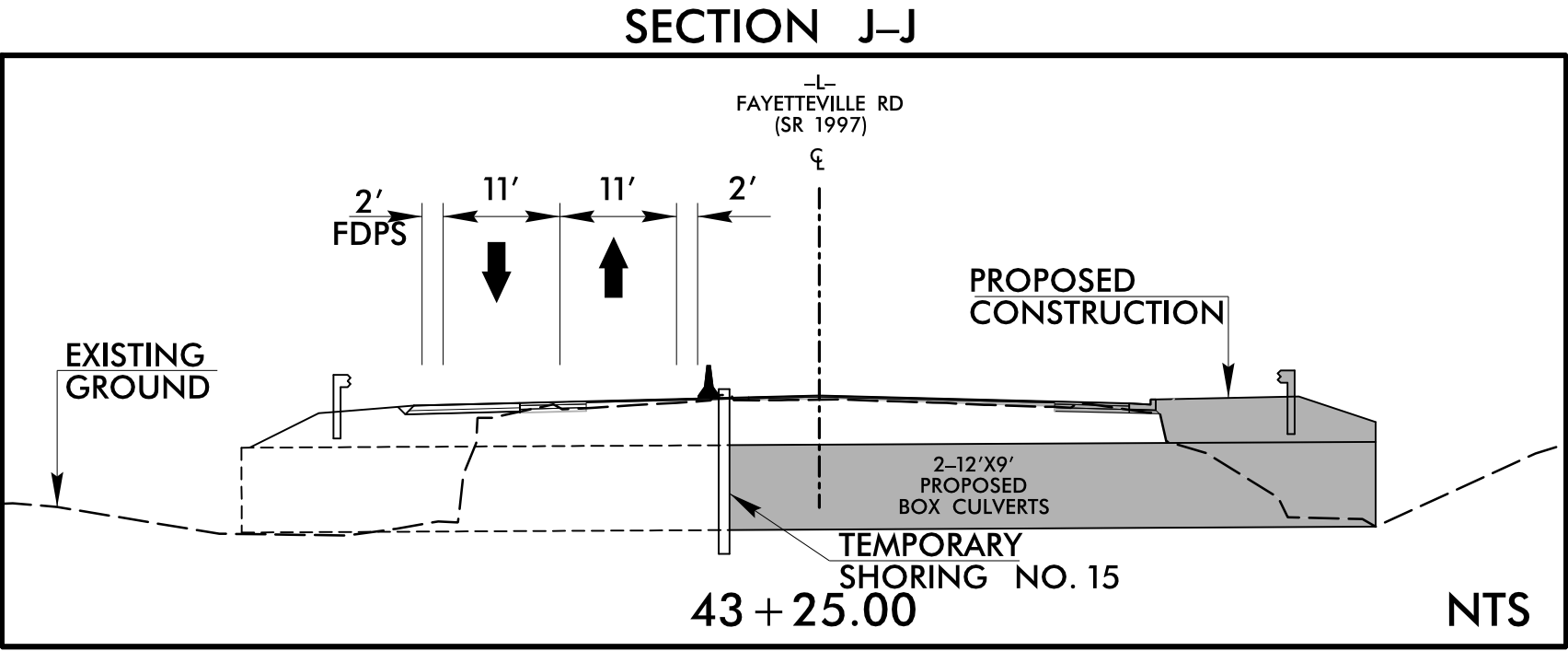
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TEMPORARY TRAFFIC
CONTROL PHASE V DETAIL
STEP 2

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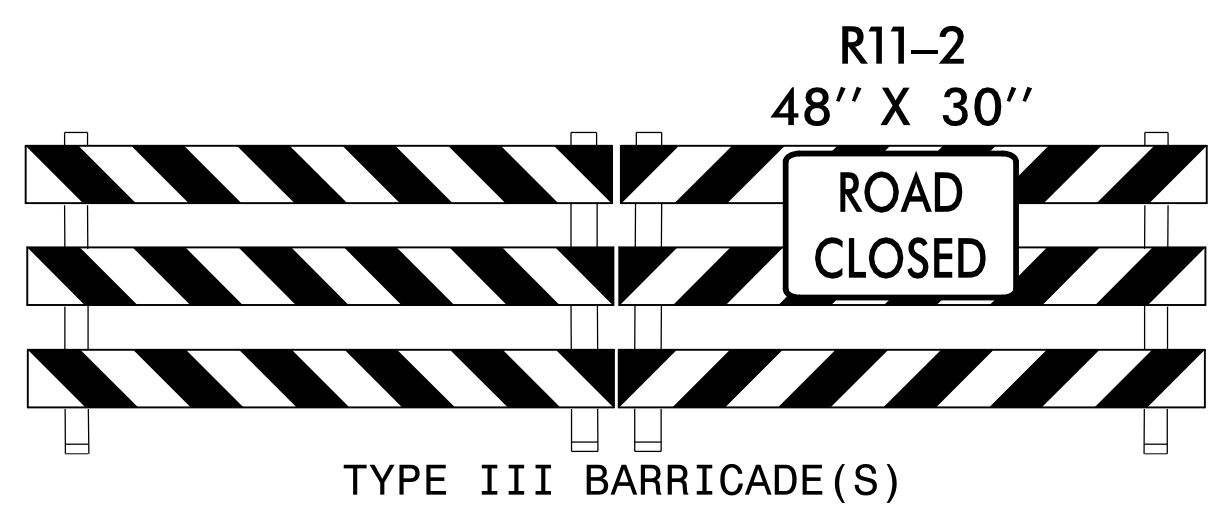
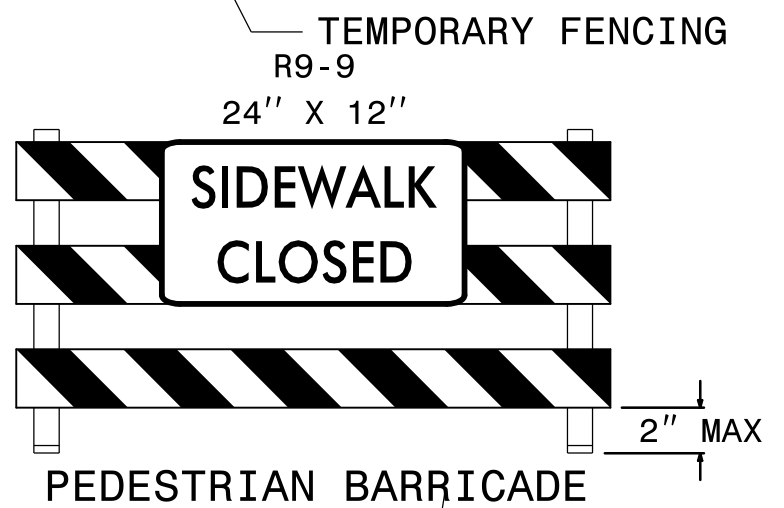
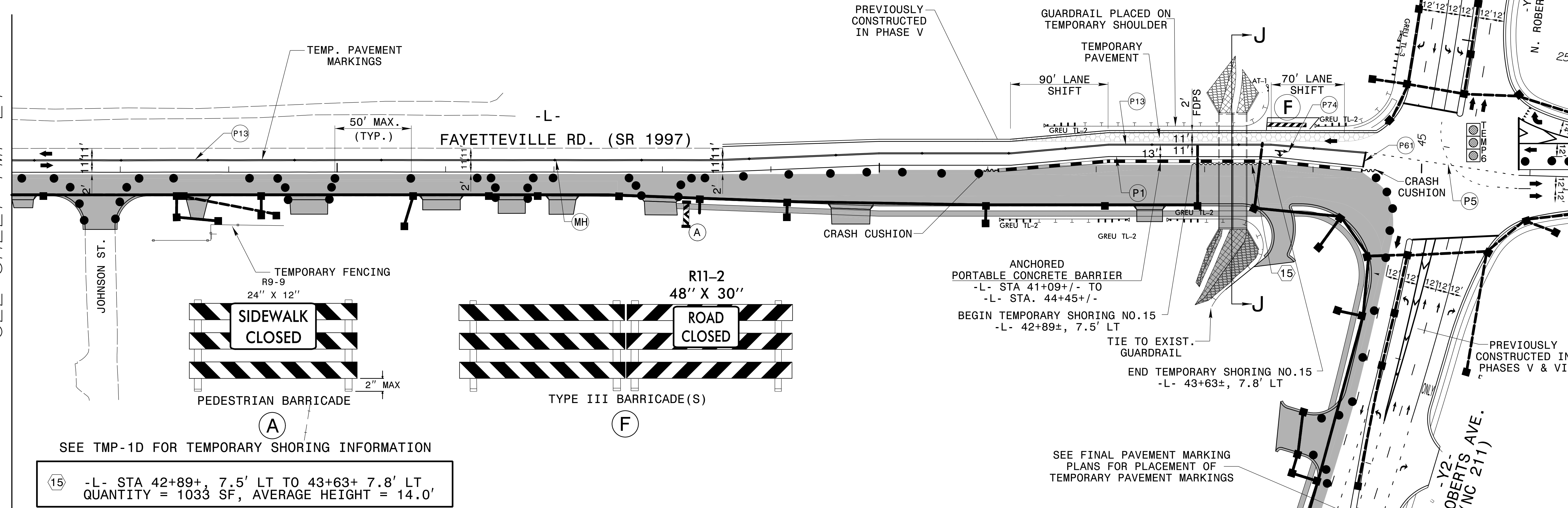
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U-5797	TMP-25



PREVIOUSLY
CONSTRUCTED IN
PHASES V & VI

SEE FINAL PAVEMENT MARKING
PLANS FOR PLACEMENT OF
TEMPORARY PAVEMENT MARKINGS

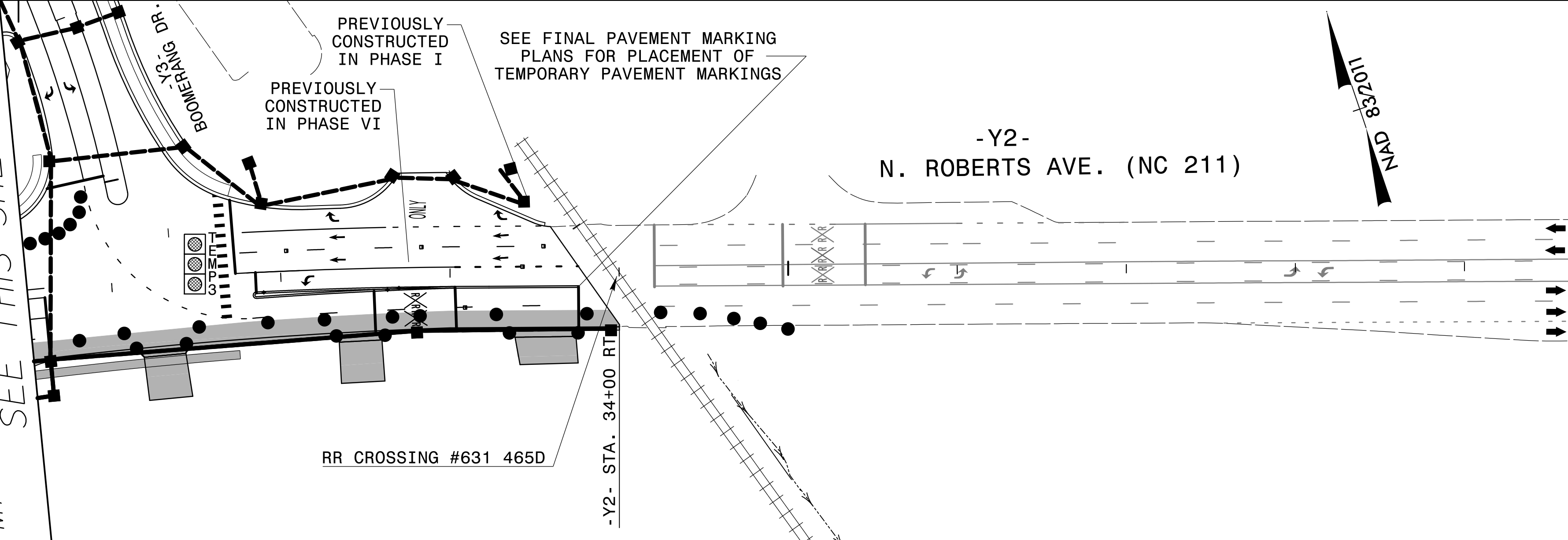
MATCHLINE -L- STA. 32+00
SEE SHEET TMP-24



SEE TMP-1D FOR TEMPORARY SHORING INFORMATION

(15) -L- STA 42+89+, 7.5' LT TO 43+63+ 7.8' LT
QUANTITY = 1033 SF, AVERAGE HEIGHT = 14.0'

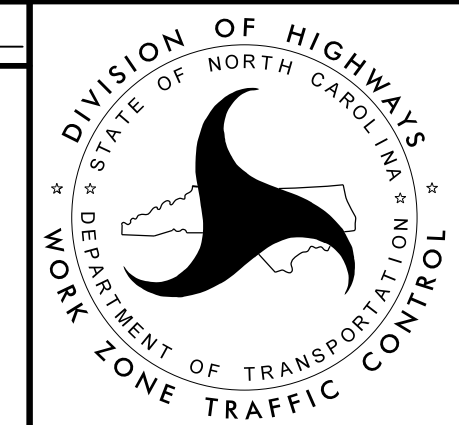
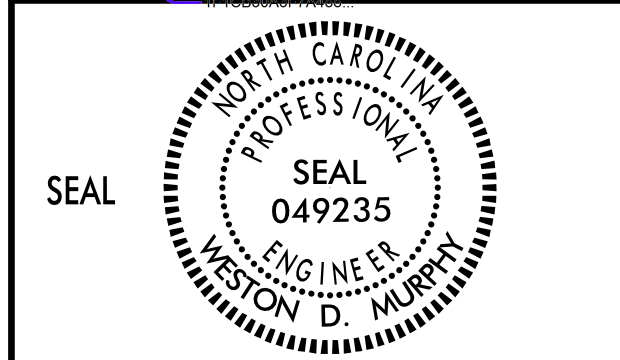
MATCHLINE -Y2- STA. 30+50
SEE THIS SHEET



MATCHLINE -Y2- STA. 30+50
SEE THIS SHEET

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APPROVED: Weston Murphy DATE: 2/23/2026



TEMPORARY TRAFFIC
CONTROL PHASE VI DETAIL
STEP 4

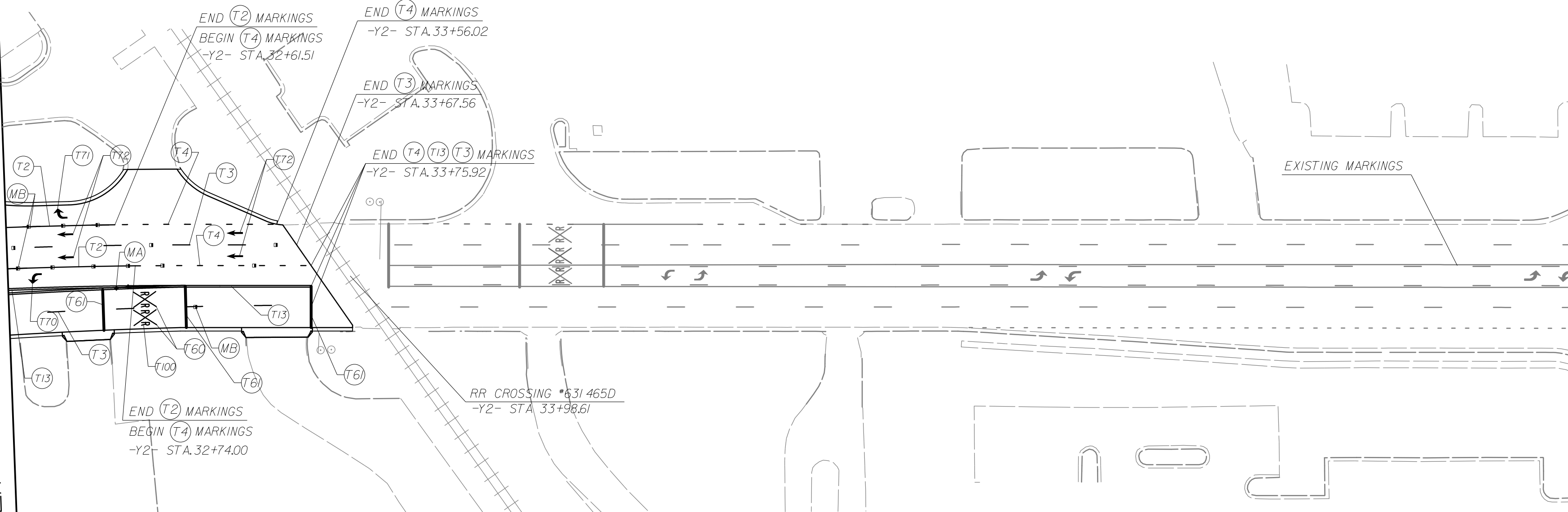
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PROJ. REFERENCE NO.	SHEET NO.
U-5797	PMP-9



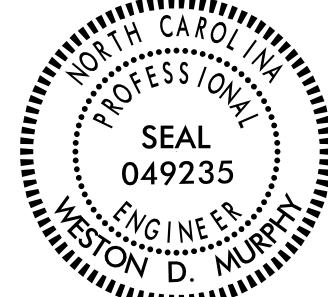
MATCHLINE -Y2- STA 32+00 SEE PMP-4



PAVEMENT MARKING SCHEDULE	
SYMBOL	DESCRIPTION
THERMOPLASTIC (4",90 MILS)	
T1	WHITE EDGELINE
T2	WHITE SOLID LANE LINE
T3	10' WHITE SKIP LINE
T4	3' WHITE MINI SKIP 9' SPACING
T5	2' WHITE MINI SKIP 6' SPACING
T10	YELLOW EDGELINE
T11	YELLOW SINGLE CENTER
T12	YELLOW 10' SKIPS
T13	YELLOW DOUBLE CENTER
T14	2' YELLOW MINI SKIP 6' SPACING
THERMOPLASTIC (8",90 MILS)	
T40	WHITE GORELINE
T41	WHITE DIAGONAL
T42	YELLOW DIAGONAL
T43	WHITE SOLID LANE LINE
T44	3' WHITE MINI SKIP 9' SPACING
T45	3' WHITE MINI SKIP 3' SPACING
T46	WHITE CROSSWALK LINE
THERMOPLASTIC (16",90 MILS)	
T60	WHITE LINE, RR
THERMOPLASTIC (24",90 MILS)	
T61	WHITE STOP BAR
T62	WHITE CROSSWALK LINE
THERMOPLASTIC (90 MILS)	
T70	LEFT TURN ARROW
T71	RIGHT TURN ARROW
T72	STRAIGHT ARROW
T73	COMBINED STRAIGHT/LEFT ARROW
T74	COMBINED STRAIGHT/RIGHT ARROW
T75	COMBINED LEFT/RIGHT ARROW
T77	U-TURN ARROW
T100	ALPHANUMERIC CHARACTERS
T103	24" YIELD LINE TRIANGLE
T118	FISH-HOOK WITH CIRCLE
MARKERS	
MA	RAISED MARKER (YELLOW & YELLOW)
MB	RAISED MARKER (CRYSTAL & RED)

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

APPROVED:  DATE: 1/23/2026

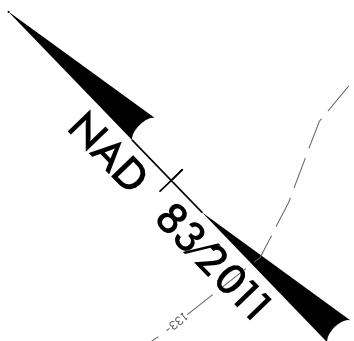
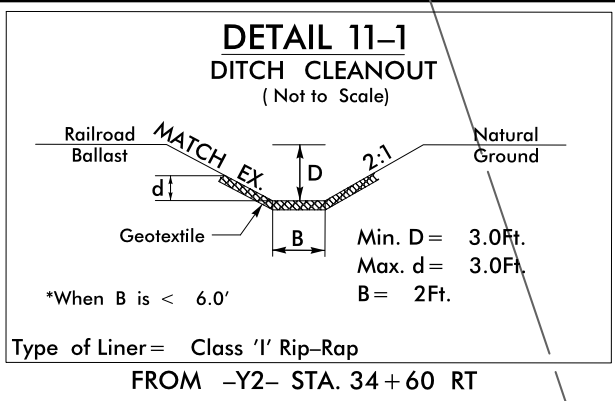
SEAL


PAVEMENT MARKING DETAIL			
SCALE: NONE		REVISIONS	
DWG. BY: ENP			
DESIGN BY: WDM			
REVIEWED BY: PAL			
		CADD FILE	

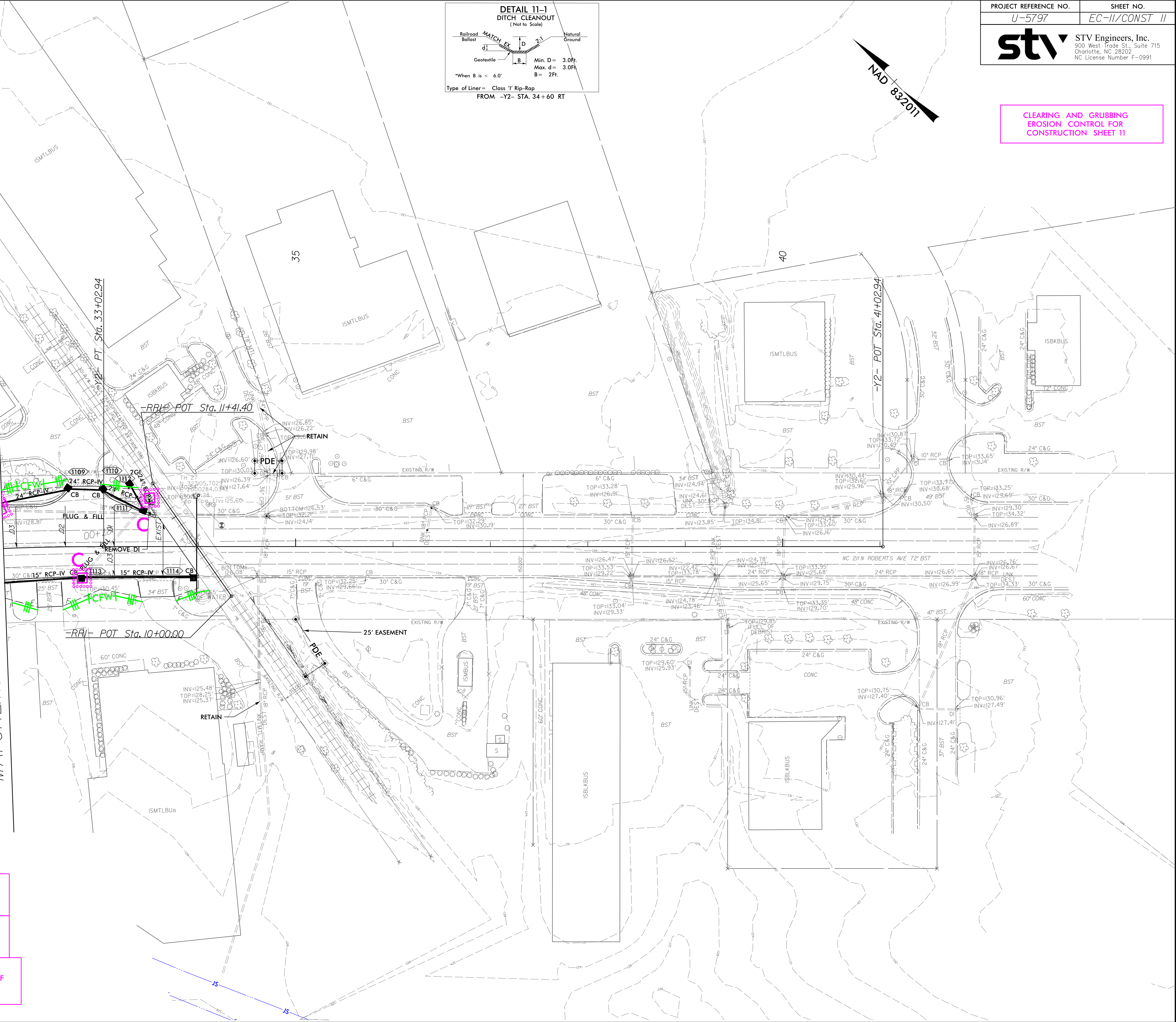
NOTES:
1) PAVEMENT MARKINGS, MARKERS, AND SYMBOLS TO BE MARKED ACCORDING TO THE ROADWAY STANDARD DRAWINGS UNLESS NOTED OTHERWISE.

PROJECT REFERENCE NO.	SHEET NO.
U-5797	EC-II/CONST II
stv STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11



MATCHLINE -Y2- STA 32+00 SEE SHEET EC-6



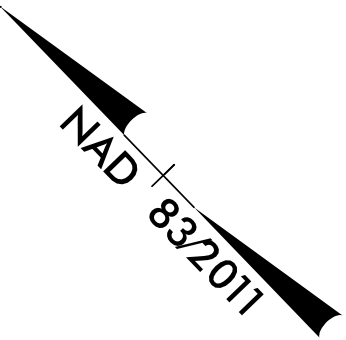
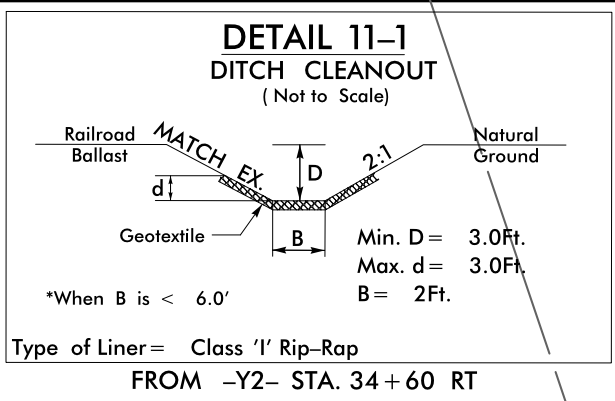
NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE
INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

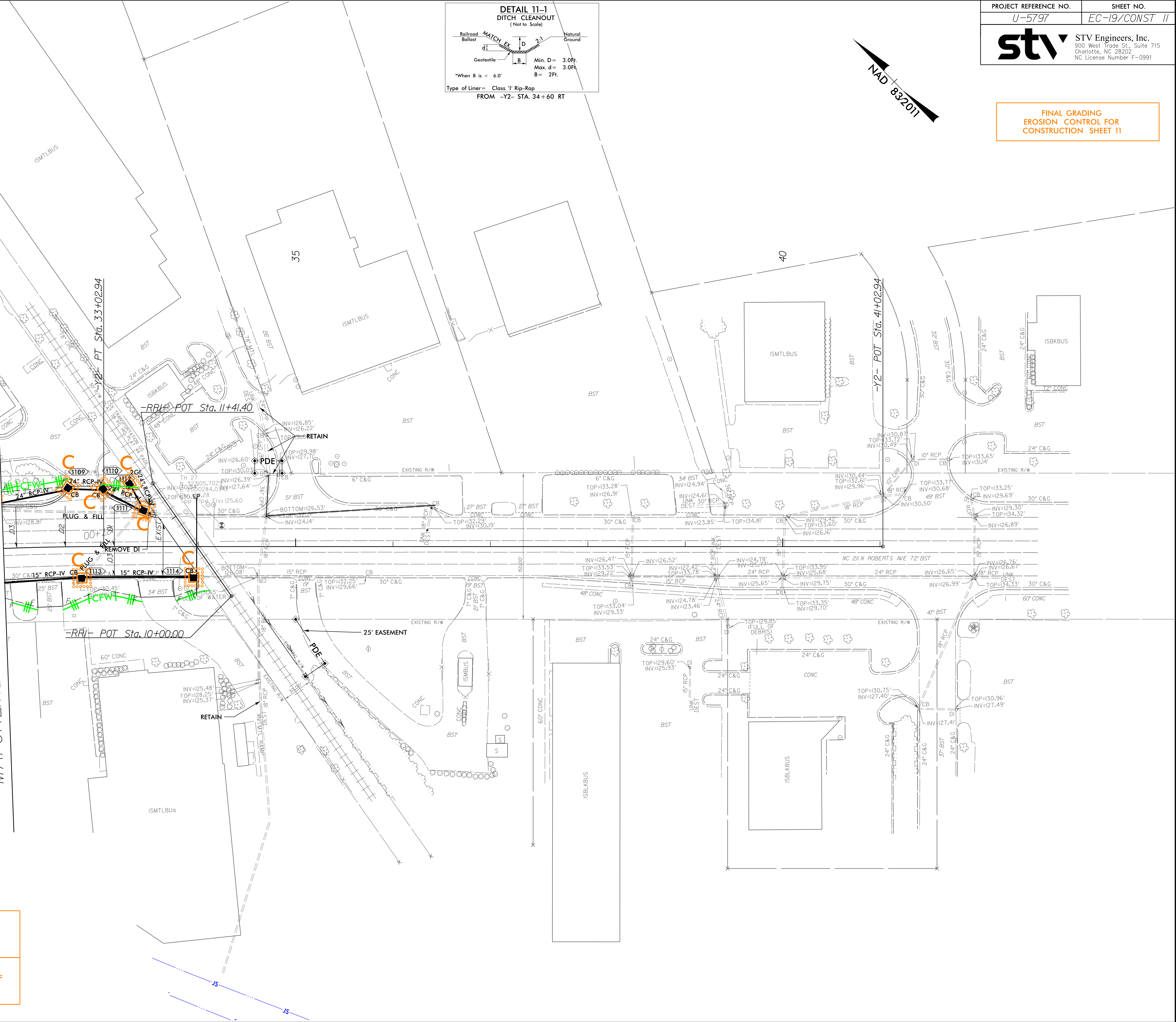
NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF
ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID
IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

PROJECT REFERENCE NO.	SHEET NO.
U-5797	EC-19/CONST II
stv STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	

FINAL GRADING
EROSION CONTROL FOR
CONSTRUCTION SHEET II



MATCHLINE -Y2- STA 32+00 SEE SHEET EC-14



NOTE:
USE MATTING ON FILL SLOPES WHERE USE OF SILT FENCE
IS NOT POSSIBLE DUE TO SITE CONDITIONS.

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICES IN LIEU OF
ROCK INLET SEDIMENT TRAPS, TYPE-C AS DIRECTED TO AVOID
IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

I:\23\2026
R:\Traffic\TrafficControl\Sign\U5797_Sign_PSHol_TSH.dgn
MurphyWD

PROJECT: U-5797

CONTRACT: C205036

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
U-5797	SIGN-1

SIGNING PLAN

ROBESON COUNTY

LOCATION: SR 1997 (FAYETTEVILLE RD.) FROM FARRINGDOM STREET TO EAST OF 22ND STREET.

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE	STD. NO.	TITLE
901.10	TYPE 'A' SIGNS	904.50	MOUNTING OF TYPE 'D', 'E', AND 'F' SIGNS ON 'U' CHANNEL POSTS
901.50	ARROWS AND SHIELDS	910.30	SIGNING UNSIGNALIZED SUPERSTREET
901.80	SIGN MOUNTING DETAILS - TYPE 'A' AND 'B' SIGNS	910.40	SINGLE LANE ROUNDABOUT SIGNING, W/ PEDESTRIANS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS		

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4072000000	903	SUPPORTS, 3-LB STEEL U-CHANNEL	1710	LF
4130000000	906	SUPPORTS, OVERHEAD SIGN STRUCTURE @ -L- STA 41+60+/-	1	LS
4130000000	906	SUPPORTS, OVERHEAD SIGN STRUCTURE @ -L- STA 49+20+/-	1	LS
4130000000	906	SUPPORTS, OVERHEAD SIGN STRUCTURE @ -L- STA 60+05+/-	1	LS
4096000000	904	SIGN ERECTION, TYPE D	4	EA
4102000000	904	SIGN ERECTION, TYPE E	81	EA
4108000000	904	SIGN ERECTION, TYPE F	10	EA
4109000000	904	SIGN ERECTION, TYPE A (OVERHEAD)	5	EA
4116100000	904	SIGN ERECTION, RELOCATE TYPE E (GROUND MOUNTED)	10	EA
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	62	EA
4192000000	907	DISPOSAL OF SUPPORT, U-CHANNEL	10	EA

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

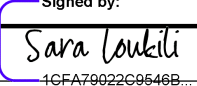
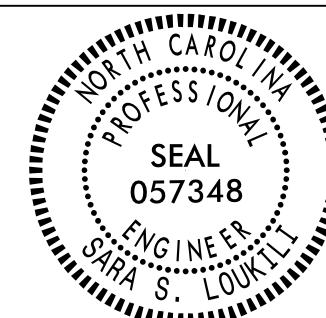
SIGNING:

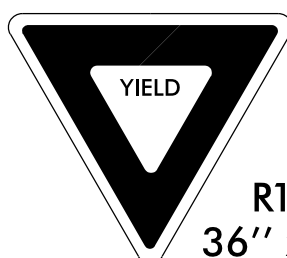
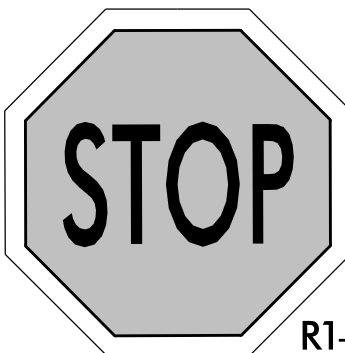
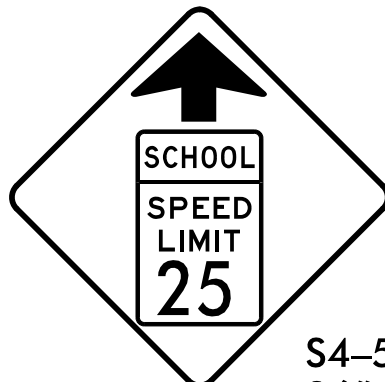
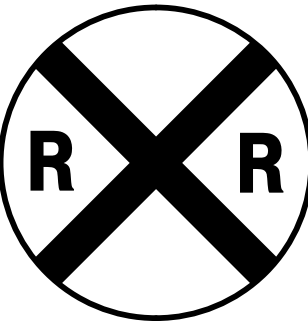
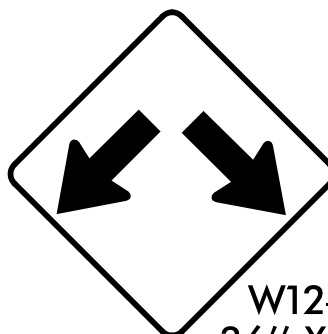
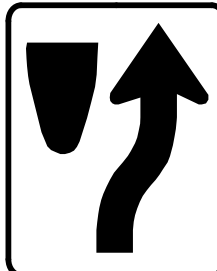
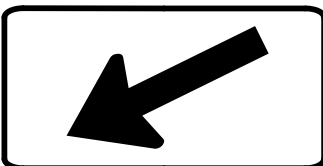
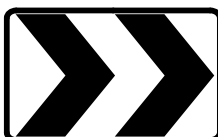
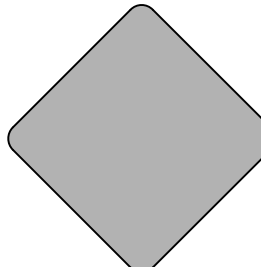
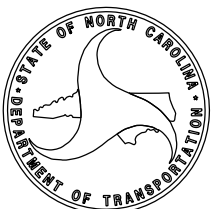
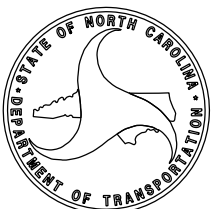
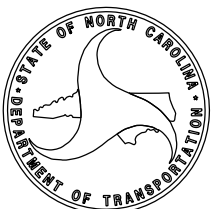
- SIGNS FURNISHED BY STATE
- ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POST UNLESS OTHERWISE INDICATED ON THE PLANS.
- IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.
- ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTING SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- THE BACKGROUND FOR TYPE 'E' AND 'F' SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- DO NOT BEGIN FABRICATION FOR TYPES A & B SIGNS MOUNTED ON OVERHEAD STRUCTURES OR STEEL SUPPORTS UNTIL 'S' DIMENSIONS HAVE BEEN FIELD VERIFIED.

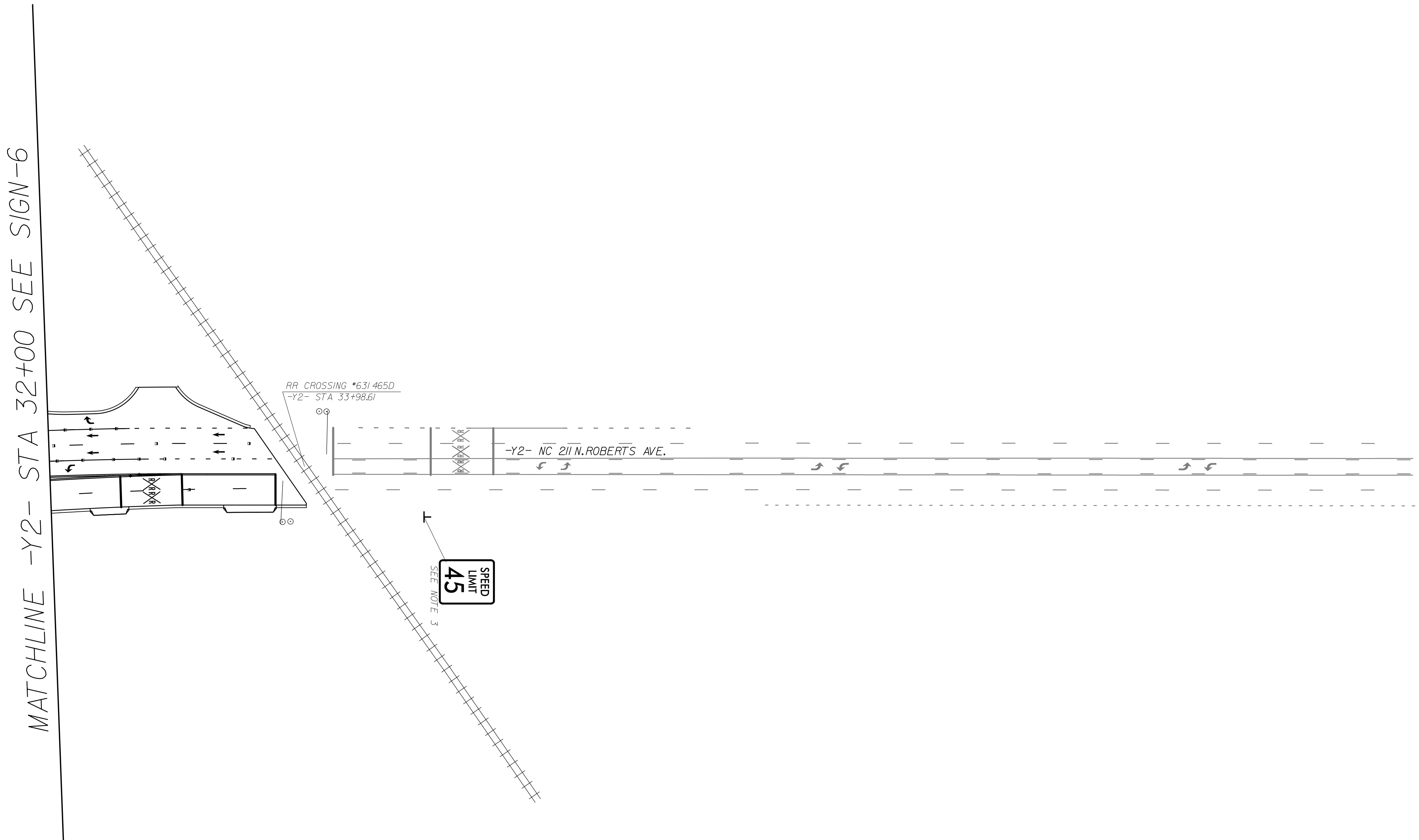
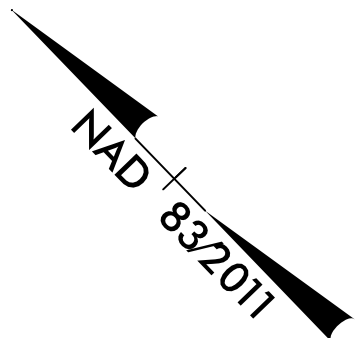
INDEX OF SHEETS

SHEET NO.	TITLE
SIGN-1	SIGNING PLAN COVER SHEET
SIGN-2A THRU 2C	SUMMARY OF SIGNAGE QUANTITIES
SIGN-3A THRU SIGN-3C	SIGN DESIGNS
SIGN-3D THRU SIGN-3F	OVERHEAD SIGN ASSEMBLY
SIGN-4 THRU SIGN-11	SIGNING DETAIL SHEETS

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

APPROVED:  DATE: 1/23/2026	PLAN PREPARED FOR N.C.D.O.T. BY: STV ENGINEERS, INC.
	PATRICK A. LIVINGSTON, PE PROJECT ENGINEER WESTON D. MURPHY, PE DESIGN ENGINEER E. NEAL PASCHAL, PE DESIGN TECHNICIAN

401 QUANTITY REQ'D = 5  R1-2 36'' x 36'' x 36''	405 QUANTITY REQ'D = 14  R1-1 30'' X 30''	409 QUANTITY REQ'D = 3  R2-1 30'' X 36''		417 QUANTITY REQ'D = 1  S4-5 36'' x 36''	STV STV Engineers, Inc. 2121 RDU Center Dr. Suite 210 Morrisville, NC 27560 NC License Number F-0991 421 QUANTITY REQ'D = 3 SCHOOL S4-3P 24'' X 8''	425 QUANTITY REQ'D = 2  W10-1 36'' DIA.																					
402 QUANTITY REQ'D = 4  W3-2A 30'' X 30''	406 QUANTITY REQ'D = 1  W12-1 36'' X 36''	410 QUANTITY REQ'D = 15  R4-7 24'' X 30''	414 QUANTITY REQ'D = 1 RIGHT LANE MUST TURN RIGHT R3-7 R 36'' X 36''	418 QUANTITY REQ'D = 2 REDUCED SPEED AHEAD R2-5A 18'' X 24''	422 QUANTITY REQ'D = 2 SPEED LIMIT 25 R2-1 24'' X 30'' MOUNT BELOW SIGN 421 IN 2 INSTALLMENTS	426 QUANTITY REQ'D = 3  W16-7p 24'' X 12'' MOUNT BELOW SIGN 419 IN 3 INSTALLMENTS																					
403 QUANTITY REQ'D = 4  W2-6 30'' X 30''	407 QUANTITY REQ'D = 1 SPEED LIMIT 25 R2-1 24'' X 30''	411 QUANTITY REQ'D = 4 25 M.P.H. W13-1 18'' X 18'' MOUNT BELOW SIGN 403 IN 4 INSTALLMENTS	415 QUANTITY REQ'D = 2 LEFT LANE MUST TURN LEFT R3-7 L 30'' X 30''	419 QUANTITY REQ'D = 3  W11-2 36'' X 36''	423 QUANTITY REQ'D = 2 END SCHOOL ZONE S5-2 24'' X 30''	427 QUANTITY REQ'D = 1 AHEAD S1-1 24'' X 12'' MOUNT BELOW SIGN 420 IN 1 INSTALLMENT																					
404 QUANTITY REQ'D = 4  R6-4 30'' X 24''	408 QUANTITY REQ'D = 8 SPEED LIMIT 35 R2-1 24'' X 30''	412 QUANTITY REQ'D = 15  OM1-3 18'' X 18'' MOUNT BELOW SIGN 410 IN 17 INSTALLMENTS	416 QUANTITY REQ'D = 1 BEGIN LEFT TURN LANE R3-20 L 24'' X 36''	420 QUANTITY REQ'D = 1  S1-1 36'' X 36''	424 QUANTITY REQ'D = 1  W4-1L 36'' X 36''	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED																					
APPROVED Sara Loukli DATE: 1/23/2026 SEAL 					TYPE E SIGNS <table><tr><td>SCALE: NONE</td><td rowspan="4"></td><td colspan="2">REVISIONS</td></tr><tr><td>DATE: 3/21/19</td><td></td><td></td></tr><tr><td>DWG. BY: ENP</td><td></td><td></td></tr><tr><td>DESIGN BY: ENP</td><td></td><td></td></tr><tr><td>REVIEWED BY: PAL</td><td></td><td></td><td></td></tr><tr><td colspan="2"></td><td>CADD FILE</td><td></td></tr></table>		SCALE: NONE		REVISIONS		DATE: 3/21/19			DWG. BY: ENP			DESIGN BY: ENP			REVIEWED BY: PAL						CADD FILE	
SCALE: NONE		REVISIONS																									
DATE: 3/21/19																											
DWG. BY: ENP																											
DESIGN BY: ENP																											
REVIEWED BY: PAL																											
		CADD FILE																									



- NOTES:
- 1) REMOVE EXIST. SIGN SYSTEM AND ERECT SIGN SYSTEM.
 - 2) REMOVE EXIST. SIGN SYSTEM.
 - 3) RETAIN EXIST. SIGN SYSTEM.
 - 4) RELOCATE EXIST SIGN AND ERECT NEW U-CHANNEL
 - 5) SIGN TO BE REPLACED BY OTHERS.
 - 6) SEE SIGNAL PLANS FOR SIGN PLACEMENT
 - 7) CONTRACTOR TO VERIFY ALL SIGNS CURRENTLY EXISTING IN THE FIELD.

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

Signed by: _____
APPROVED: Sara Loukili DATE: 1/23/2026



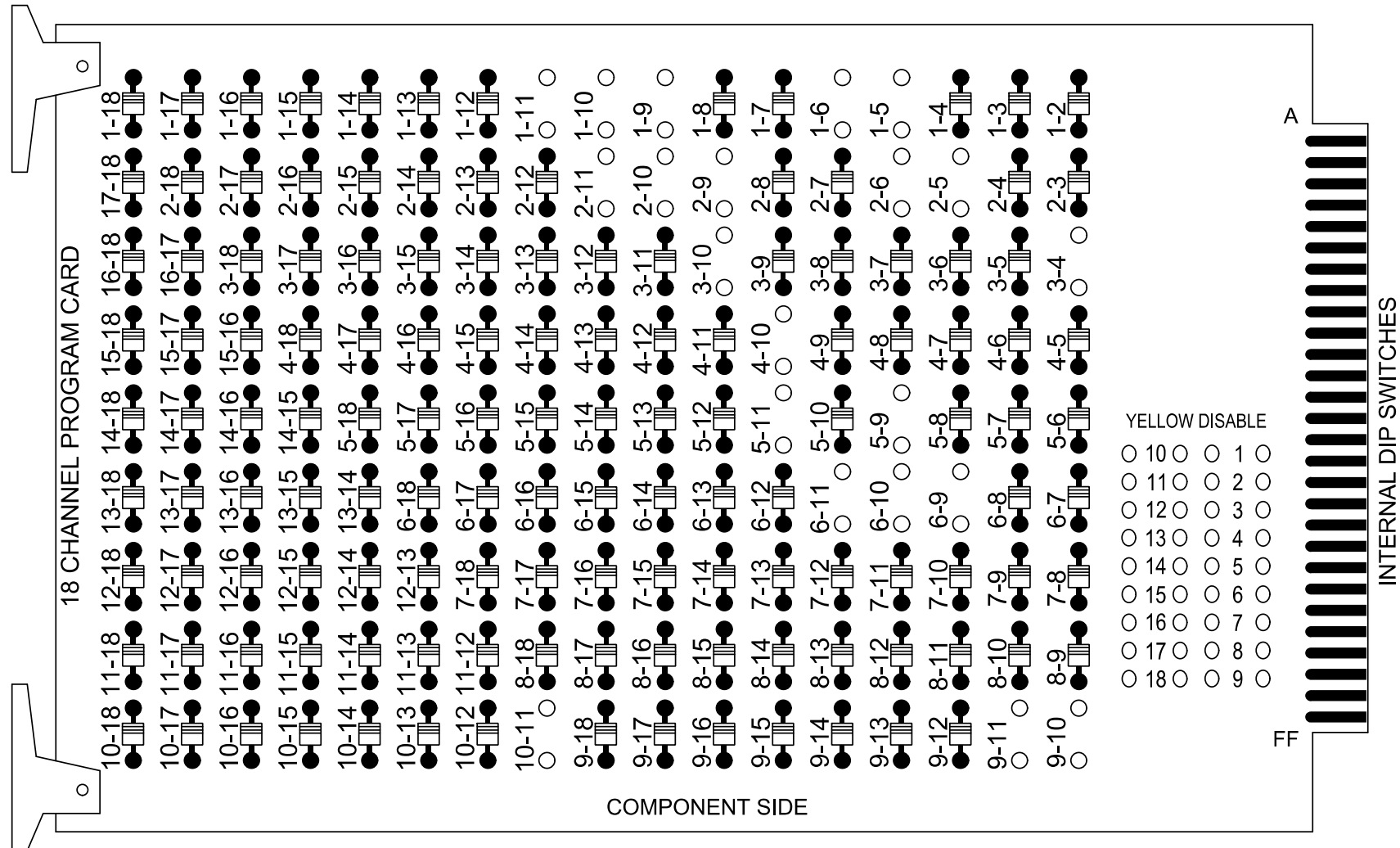
SIGNING DETAIL

SCALE:	NONE		REVISIONS	
DWG. BY:	ENP			
DESIGN BY:	WDM			
REVIEWED BY:	PAL			
			CADD FILE	

18 CHANNEL IP CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

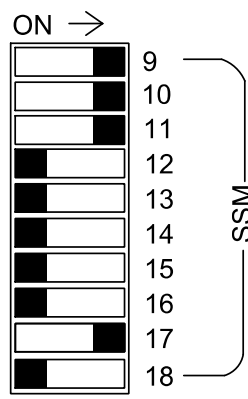
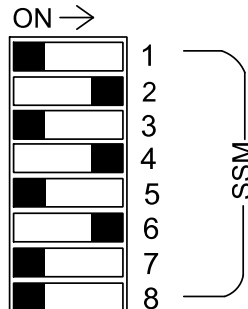
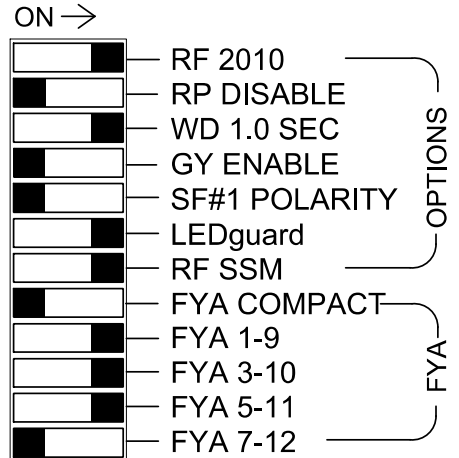
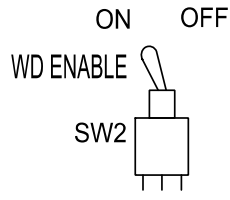
REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-10, 1-11, 2-5, 2-6, 2-9, 2-10, 2-11, 3-4, 3-10, 4-10, 5-9, 5-11, 6-9, 6-10, 6-11, 9-10, 9-11, and 10-11.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that the Red Enable is active at all times during normal operation.
- Integrate monitor with Ethernet network in cabinet.



■ = DENOTES POSITION OF SWITCH

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.
- Program controller to start up in phase 2 Green No Walk, 6 Green No Walk, 39 Phase Not On, and 40 Green No Walk.
- Program Phase 39 for No Startup Veh Call.
- Program phases 2, 6, and 40 for Min Recall.
- If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
- The cabinet and controller are part of the #D06-17 Lumberton US 301 and SR 1997 (Fayetteville Road).

EQUIPMENT INFORMATION

Controller.....2070LX
Cabinet.....332 w/ Aux
Software.....Q-Free MAXTIME
Cabinet Mount.....Base
Output File Positions.....18 With Aux. Output File
Load Switches Used.....S1, S2, S4, S5, S7, S8, AUX S1, AUX S2, AUX S3, AUX S4
Phases Used.....1, 2, 3, 4, 5, 6
Overlap "1".....*
Overlap "2".....*
Overlap "3".....*
Overlap "4".....NOT USED
Overlap "5".....*
Overlap "7".....*

*See overlap programming detail on sheet 2

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5			S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3		AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	4			14	5	6	15	7	8	16	9	10	17		11	12	18
PHASE	1	2	2 PED	OL7	4			4 PED	5	6	6 PED	7	8	8 PED	OL1	OL2	OL5		OL3	OL4	SPARE
SIGNAL HEAD NO.	11★	21,22	NU	63	41	42	43	NU	51★	61,62	NU	NU	NU	NU	11★	63★	31	32	51★	NU	NU
RED	-	128	-	-	-	101	101	-	-	134	-	-	-	-	-	A124	A111	A111	-	-	-
YELLOW	★	129	-	★	-	102	102	-	★	135	-	-	-	-	-	-	A112	A112	-	-	-
GREEN	-	130	-	-	-	103	103	-	-	136	-	-	-	-	-	-	A113	A113	-	-	-
RED ARROW	-	-	-	-	101	-	-	-	-	-	-	-	-	-	A121	-	-	-	A114	-	-
YELLOW ARROW	-	-	-	-	102	-	-	-	-	-	-	-	-	-	A122	A125	-	-	A115	-	-
FLASHING YELLOW ARROW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A123	A126	-	-	A116	-	-
GREEN ARROW	127	-	-	118	103	103	-	-	133	-	-	-	-	-	-	-	A113	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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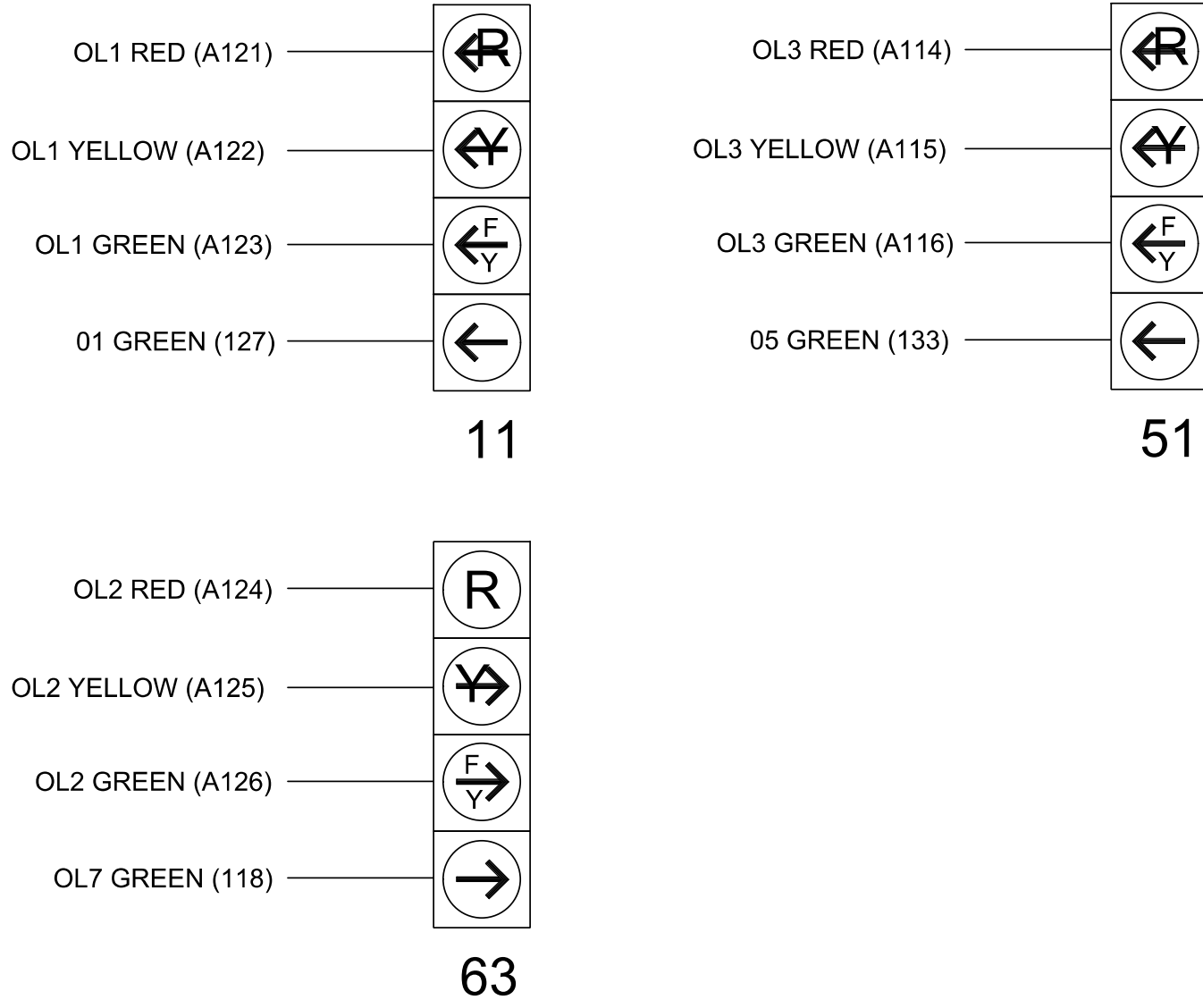
NU = Not Used

* Denotes install load resistor. See load resistor installation detail this sheet.

* See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



INPUT FILE POSITION LAYOUT
(front view)

FILE "I"	1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	Ø 1	Ø 1A*	Ø 1B	Ø 1C	Ø 1D	Ø 1E	Ø 1F	Ø 1G	Ø 1H	Ø 1I	Ø 1J	Ø 1K	Ø 1L	Ø 1M
L	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
FILE "J"	1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	Ø 5	Ø 5A*	Ø 5B	Ø 5C	Ø 5D	Ø 5E	Ø 5F	Ø 5G	Ø 5H	Ø 5I	Ø 5J	Ø 5K	Ø 5L	Ø 5M
L	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME
PRE = PREEMPT

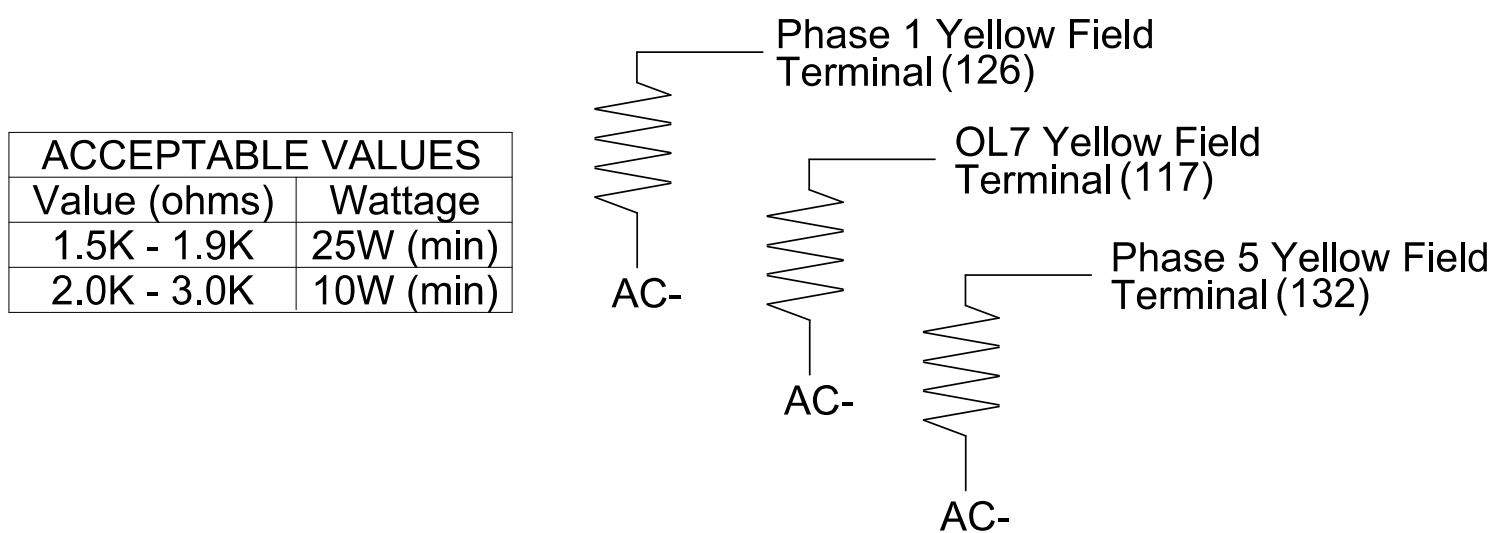
* Reflects the detector utilized in the "MAXTIME DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOPS 1A & 5A" on Sheet 2.

SPECIAL DETECTOR NOTE

Install a multizone microwave detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer -approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown)



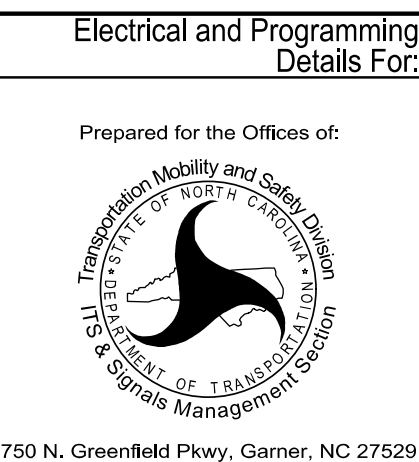
ACCEPTABLE VALUES	Value (ohms)	Wattage
1.5K - 1.9K	25W (min)	
2.0K - 3.0K	10W (min)	

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387T1
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

Temporary Design 1 - TMP Phase III, Step 3
Electrical Detail - Sheet 1 of 4



STV Engineers, Inc.
2151 Hawkins St, Suite 1400
Charlotte, NC 28203
(704) 372-1885
NC License Number F-0991



NC 211 (N. Roberts Avenue) at Boomerang Drive / Restaurant Driveway			
Division 6	Robeson County	Lumberton	
PLAN DATE:	Jan 2026	REVIEWED BY:	B.J. Roth-Roffy
PREPARED BY:	J.C. Grimm	REVIEWED BY:	T.M. Moody
REVISIONS	INIT.	DATE	

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SEAL NORTH CAROLINA PROFESSIONAL ENGINEER 040329 T.M. MOODY
DocuSigned by: T.M. Moody 1/27/2026 DATE
SIG. INVENTORY NO. 06-1387T1

↑ ↑

NOTE: ALL RED FLASH

All Red Flash Exit Time
6

← NOTICE INCLUDED PHASE

5A

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SIGNATURES COMPLETED

Electrical and Programming
Details For:

Prepared for the Offices of:



Transportation Mobility and Safety Division
U.S. & Signals Management Section

750 N. Greenfield Pkwy, Garner, NC 27529

[illegible]

DocuSigned by:
Trent Moody
1/27/2026

PREEMPTION PROGRAMMING

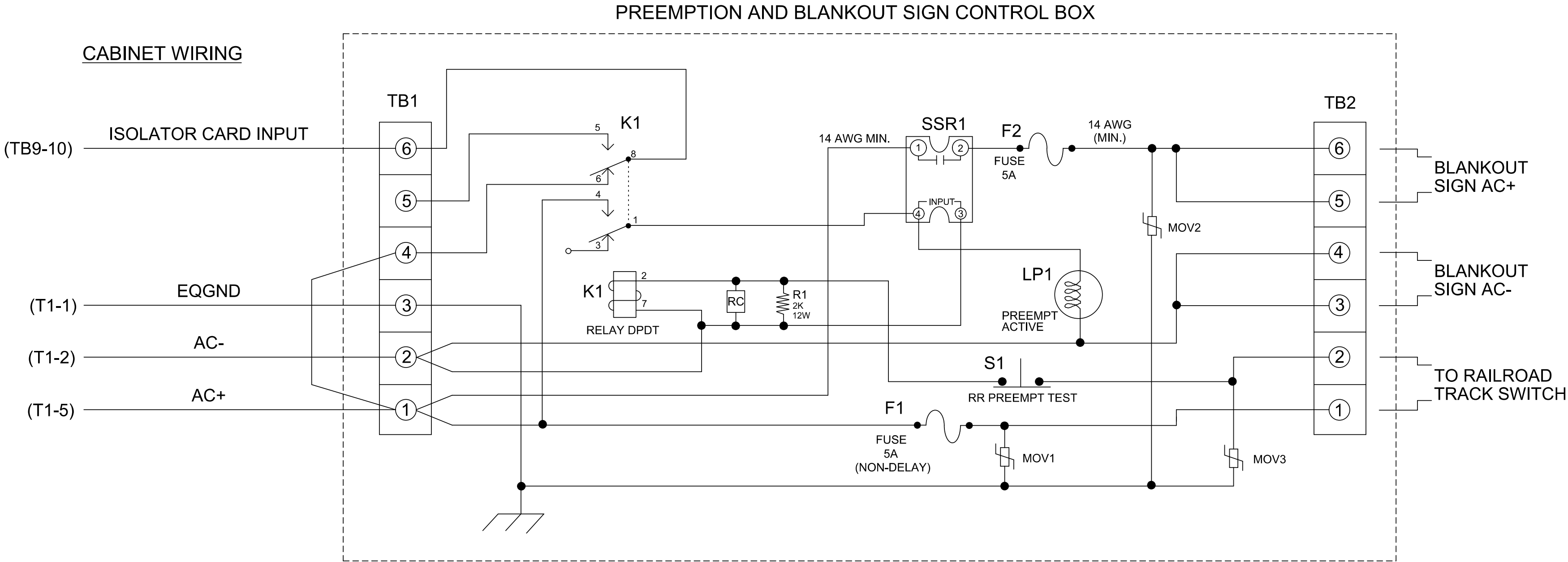
Front Panel
Main Menu >Controller >Preemption >Preempt Phasing/Preempt Parameters

Web Interface
Home >Controller >Preempt Configuration >Preempts

Preempt	1
Enabled	Enabled
Type	Rail Road
Track Phases	1, 6, 39
Track Overlaps	1, 2, 3
Dwell Phases	3
Dwell Peds	-
Dwell Overlaps	5
Cycling Phases	3, 5
Cycling Peds	-
Cycling Overlaps	3, 5
Exit Phases	2, 6
Exit Overlaps	1, 2, 3
Delay	0
Call Ext Time	1.0
Max Presence	0
Max Pres Act	Terminate
Enter Min Green	1
Enter Walk	1
Enter Ped Clear	0
Enter Yellow Change	4.6
Enter Red Clear	3.3
Track Green	37
Track Yellow Clr	4.6
Track Red Clear	2.6
Dwell Green	7
Exit Min Green	255
Exit Yellow Change	25.5
Exit Red Clear	25.5
Exit Type	Exit Phases
Non Locking Memory	-
Not Ovrd Flash	X
Not Ovrd Nxt Pre	-
Require All Red Entry	-
Track Clear Ovrd	X
Ped Clear During Yellow	-
Entry Omit OLTG	X
Track Reserve	X

RAILROAD PREEMPTION WIRING DETAIL

(wire as shown below)

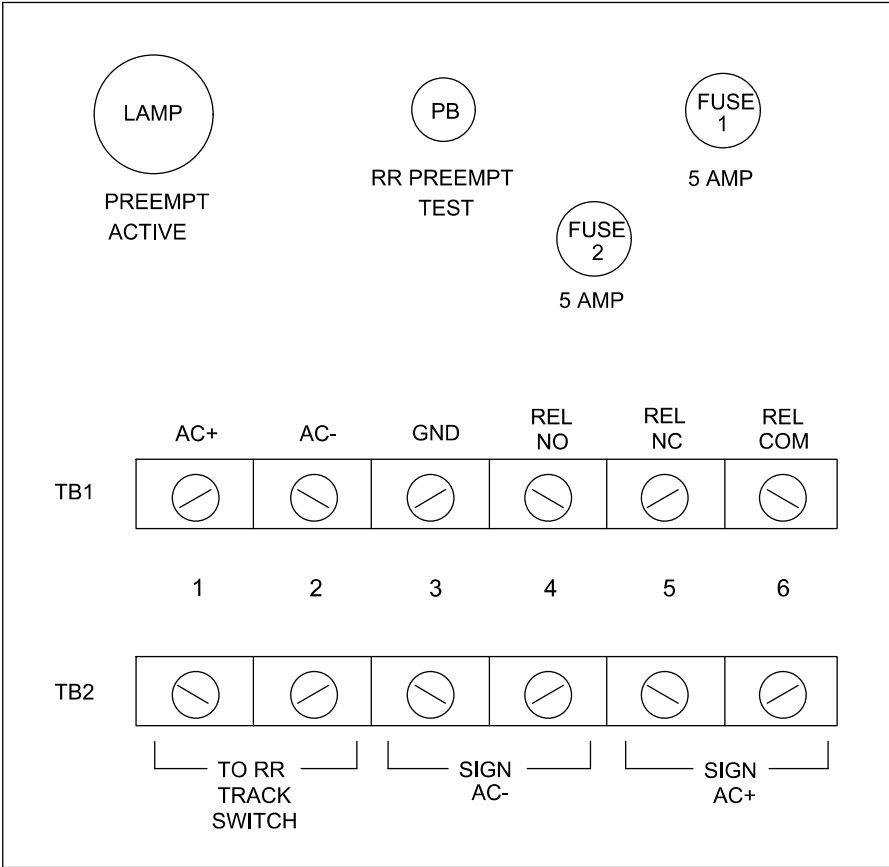


NOTES

- Relay K1 is shown in the energized (Preempt not active) normal operation state.
- Relay K1 is a DPDT with 120VAC coil with octal base.
- Relay SSR1 is a SPST (normally open) Solid State Relay with AC input and AC (25 amp) output.
- AC Isolator Card shall activate preemption upon removal of AC+ from the input (as shown above). To accomplish this set invert dip switch on AC Isolator Card.

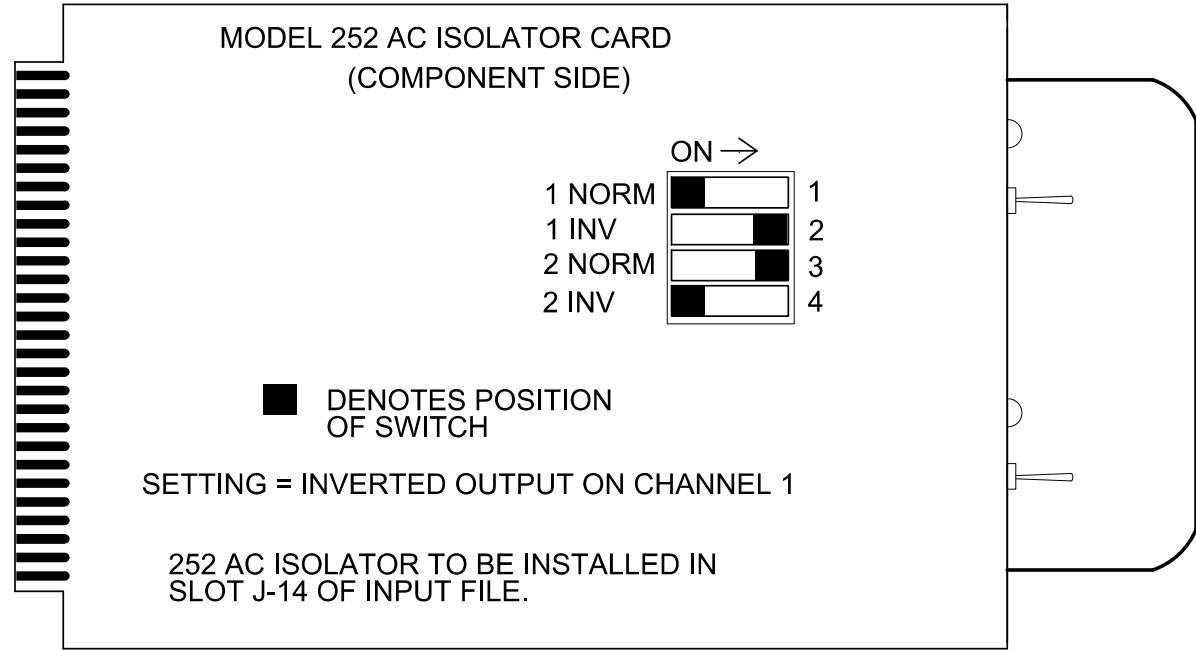
5. IMPORTANT!! A jumper must be added between input file terminals J14-E and J14-K if not already present. Also, terminal TB9-12 (on input panel) shall be connected to AC neutral (jumper may have to be added).

FRONT VIEW



PREEMPT 1 AC ISOLATOR (MODEL 252)
OUTPUT PROGRAMMING DETAIL

(set DIP switches as shown below)



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387T1
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

Temporary Design 1 - TMP Phase III, Step 3
Electrical Detail - Sheet 3 of 4

STV Engineers, Inc.
2151 Hawkins St, Suite 1400
Charlotte, NC 28203
(704) 372-1885
NC License Number F-0991

Electrical and Programming
Details For:

Prepared for the Offices of:
750 N. Greenfield Pkwy, Garner, NC 27529

NC 211 (N. Roberts Avenue)
at
Boomerang Drive / Restaurant Driveway

Division 6Robeson CountyLumberton

PLAN DATE: Jan 2026REVIEWED BY: B.J. Roth-Roffy

PREPARED BY: J.C. GrimmREVIEWED BY: T.M. Moody

REVISIONSINIT. DATE

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SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL 040329
T.M. MOODY

DocuSigned by
T.M. Moody1/27/2026
DATE

SIG. INVENTORY NO. 06-1387T1

1/27/2026
A:\P\Projects\4018560\4018560_0001\450_Deliverables & Submittals\4018560-5797\Traffic\Signal\Temporary Signal\406-1387 (Roberts-Boomerang)\06-1387T1_sm.dgn
RothRB

MAXTIME ALTERNATE PHASING PATTERN
PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Coordination >Patterns

Web Interface
Home >Controller >Coordination >Patterns

Pattern Parameters

Pattern	Veh Det Plan	Overlap Plan
*	2	2

* The Pattern number(s) are to be determined by the Division and/or City Traffic Engineer.

PROJECT REFERENCE NO.	SHEET NO.
U-5797	Sig. 15.4

MAXTIME ALTERNATE PHASING ACTIVATION DETAIL

To run alternate phasing, select a Pattern that is programmed to run Overlap Plan 2 and Detector Plan 2.
A Pattern can be selected through the scheduler or manually by changing the Operational Mode.

PHASING	OVERLAP PLAN	VEH DET PLAN
ACTIVE PLAN REQUIRED TO <u>RUN DEFAULT PHASING</u>	1	1
ACTIVE PLAN REQUIRED TO <u>RUN ALTERNATE PHASING</u>	2	2

ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN OVERLAP PLAN 2 AND VEHICLE DETECTOR PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

OVERLAP PLAN 2: Modifies overlap included phases for heads 11 and 51 to run protected turns only.

VEH DET PLAN 2: Disables phase 6 call on loop 1A and reduces delay time for phase 1 call on loop 1A to 0 seconds.

Disables phase 2 call on loop 5A and reduces delay time for phase 5 call on loop 5A to 0 seconds.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387T1
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Temporary Design 1 - TMP Phase III, Step 3
Electrical Detail - Sheet 4 of 4

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Division 6		Robeson County		Lumberton	
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REVISIONS		INIT.	DATE		

SEAL



DocuSigned by
Trent Moody
1/27/2026
DATE

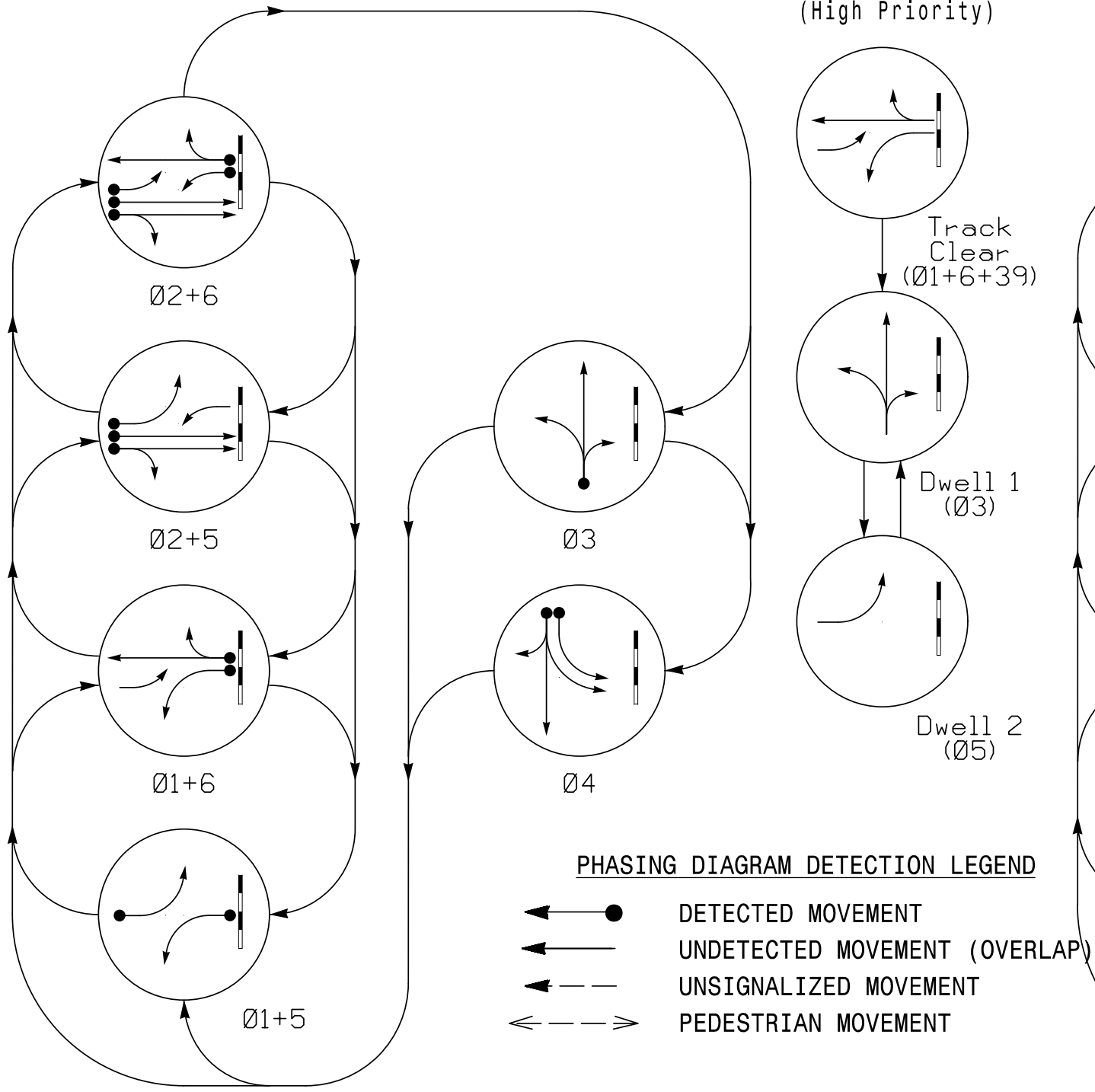
SIG. INVENTORY NO. 06-1387T1

6 Phase
Fully Actuated w/ Railroad Preemption
#D06-18 Lumberton NC 211 (N. Roberts Avenue)

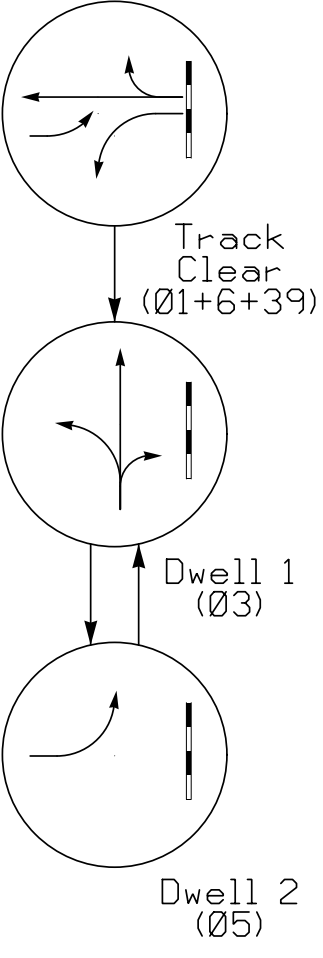
NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Program phase 40 to run concurrently with all phases during normal operation. Phase 39 must be incompatible with phase 40 and included as a track clear phase.
- The Division Traffic Engineer will determine the hours of use for each phasing plan.
- This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

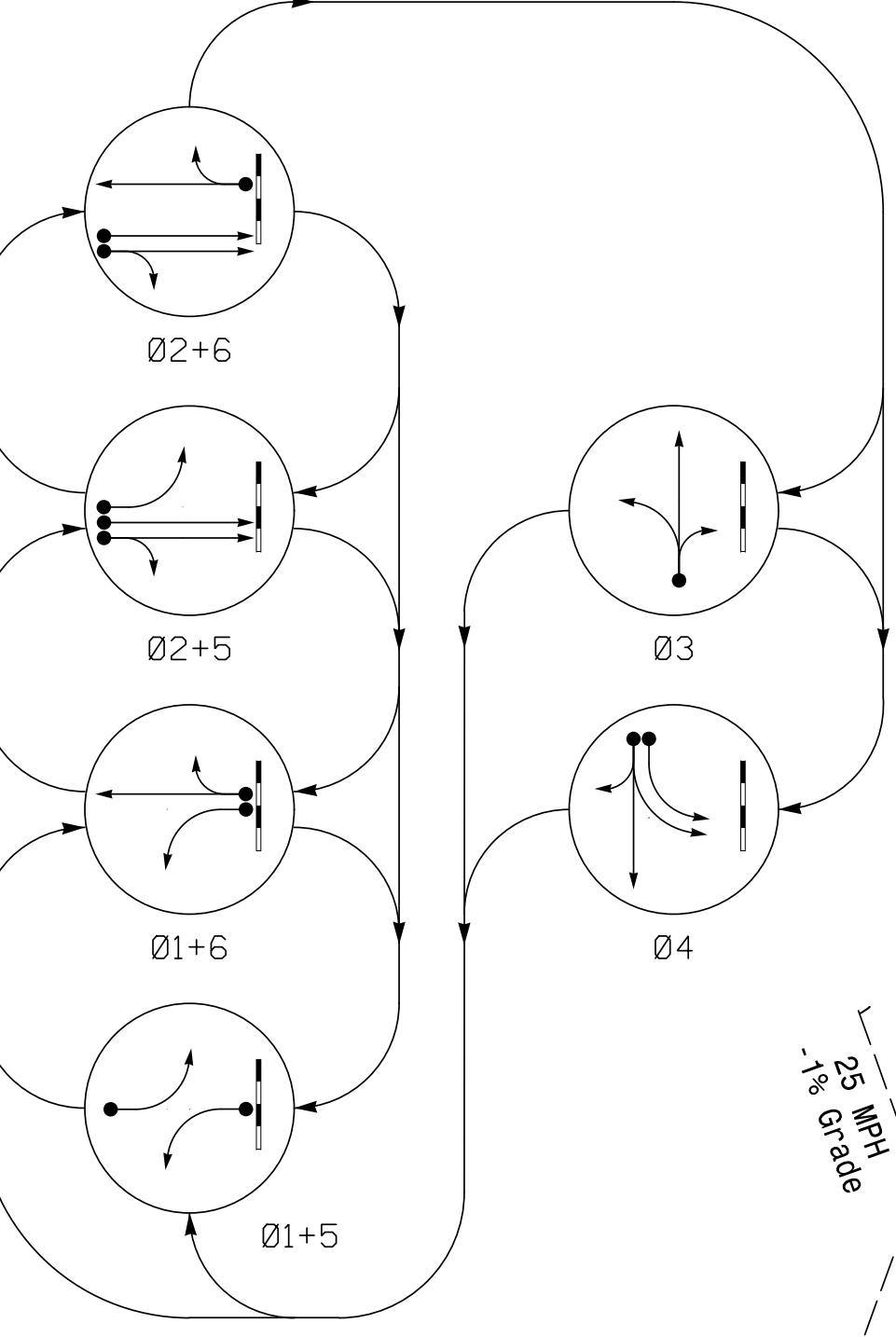
DEFAULT PHASING DIAGRAM



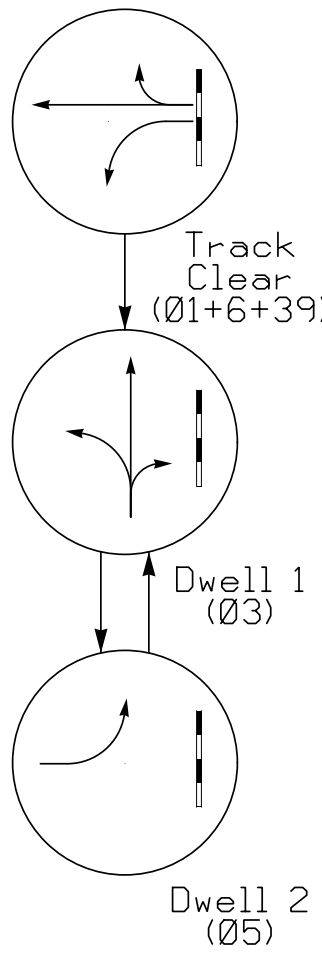
DEFAULT RAIL
PREEMPT PHASES
(High Priority)



ALTERNATE PHASING DIAGRAM



ALTERNATE RAIL
PREEMPT PHASES
(High Priority)



DEFAULT PHASING
TABLE OF OPERATION

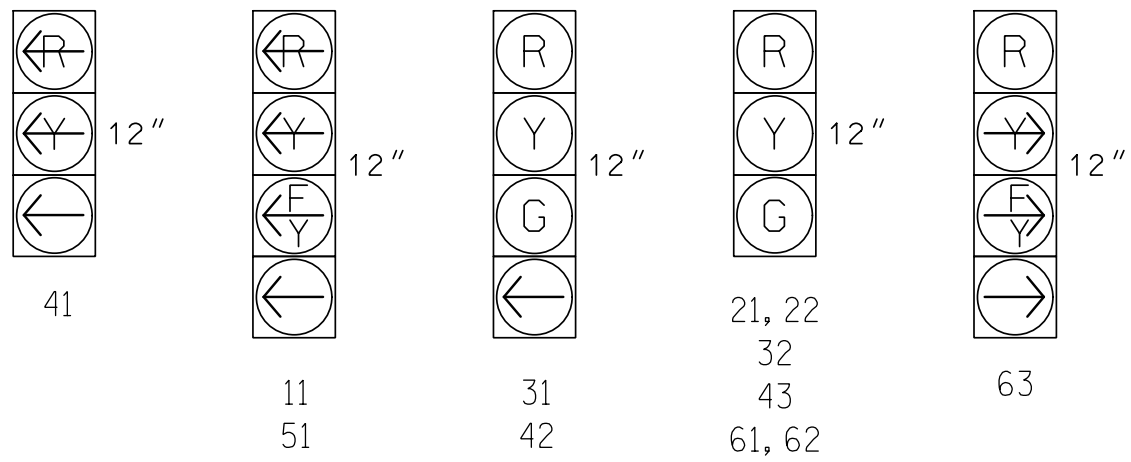
SIGNAL FACE	PHASE											
	Ø 1 + 5	Ø 1 + 6	Ø 2 + 5	Ø 2 + 6	Ø 3	Ø 4	R R C L R	D W R L 1	D W R L 2	F L A S H		
11	←	←	←	←	←	←	←	←	←	←		
21, 22	R	R	G	G	R	R	R	R	R	R		
31	R	R	R	R	←	←	←	←	←	←		
32	R	R	R	R	G	R	R	G	R	R		
41	←	←	←	←	←	←	←	←	←	←		
42	R	R	R	R	R	←	←	R	R	R		
43	R	R	R	R	R	G	R	G	R	R		
51	←	←	←	←	←	←	←	←	←	←		
61, 62	R	G	R	G	R	R	G	R	R	R		

ALTERNATE PHASING
TABLE OF OPERATION

SIGNAL FACE	PHASE											
	Ø 1 + 5	Ø 1 + 6	Ø 2 + 5	Ø 2 + 6	Ø 3	Ø 4	R R C L R	D W R L 1	D W R L 2	F L A S H		
11	←	←	←	←	←	←	←	←	←	←		
21, 22	R	R	G	G	R	R	R	R	R	R		
31	R	R	R	R	←	←	←	←	←	←		
32	R	R	R	R	G	R	R	G	R	R		
41	←	←	←	←	←	←	←	←	←	←		
42	R	R	R	R	R	←	←	R	R	R		
43	R	R	R	R	R	G	R	G	R	R		
51	←	←	←	←	←	←	←	←	←	←		
61, 62	R	G	R	G	R	R	G	R	R	R		

SIGNAL FACE I.D.

All Heads L.E.D.



MAXTIME PREEMPTION CHART

FUNCTION	PRE 1
Type	RAIL ROAD
Exit Phases	2, 6
Delay	0.0
Max Presence	0
Enter Min Green	1
Enter Walk	1
Enter Ped Clear	0
Enter Yellow Change	4.6
Enter Red Clear	3.3
Track Green	37
Track Yellow Change	4.6
Track Red Clear	2.6
Dwell Green	7
Exit Min Green	255 *
Exit Yellow Change	25.5 *
Exit Red Clear	25.5 *
Call Extend Time	1.0
Exit Type	EXIT PHASES
Ped Clear Through Yellow	N
Require All Red Entry	N

* Directs controller to use default phase timing.

MAXTIME TIMING CHART

FEATURE	PHASE							39	40
	1	2	3	4	5	6			
Walk *	-	-	-	-	-	-			
Ped Clear *	-	-	-	-	-	-			
Min Green	7	12	7	7	7	12			
Passage *	2.0	2.0	2.0	2.0	2.0	2.0			
Max 1 *	20	90	30	30	20	90			
Yellow Change	3.0	4.6	3.2	3.2	3.0	4.6	4.6	4.6	
Red Clear	2.6	1.6	2.6	3.3	2.8	1.6	2.6	3.3	
Added Initial *	-	-	-	-	-	-			
Maximum Initial *	-	-	-	-	-	-			
Time Before Reduction *	-	-	-	-	-	-			
Time To Reduce *	-	-	-	-	-	-			
Minimum Gap	-	-	-	-	-	-			
Advance Walk	-	-	-	-	-	-			
Non Lock Detector	X	-	X	X	X	-			
Vehicle Recall	-	MIN RECALL	-	-	-	MIN RECALL			MIN RECALL
Dual Entry	-	-	-	-	-	-			

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

MAXTIME DETECTOR INSTALLATION CHART

DETECTOR				PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	NEW CARD
1A	6X40	0	*	*	1	15**	-	X	-	X	*
3A	6X20	0	*	*	6 #	-	-	X	-	X	*
4A	6X40	0	*	*	3	5	-	X	-	X	*
4B	6X40	0	*	*	4	-	-	X	-	X	*
5A	6X40	0	*	*	4	5	-	X	-	X	*
					5	15**	-	X	-	X	*
					2 #	-	-	X	-	X	*

* Multi-zone Microwave Detection Zone

** Disable Delay During Alternate Phasing

Disable Phase Call for Loop During Alternate Phasing

RADAR DETECTION
SYSTEM

FUNCTION	SENSOR 1 - 2A	SENSOR 2 - 6A
Channel	1	2
Phase	2	6
Direction of Travel	EB	WB
Detection Zone (ft)	500 - 100	500 - 100
Enable Speed	Y	Y
Speed Range (mph)	35 - 100	35 - 100
Enable Estimated Time of Arrival	Y	Y
Estimated Time of Arrival (sec)	2.5 - 6.5	2.5 - 6.5

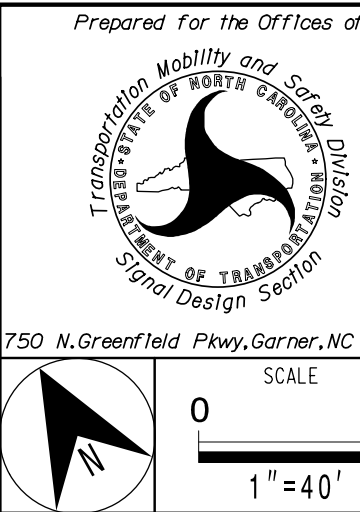
LEGEND

PROPOSED	EXISTING

New Installation
Temporary Design 2 - TMP Phase V, Step 2



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(704) 372-1885
NC License Number F-0991



NC 211 (N. Roberts Avenue)

at
Boomerang Drive /
Restaurant Driveway

Division 6 Robeson County Lumberton

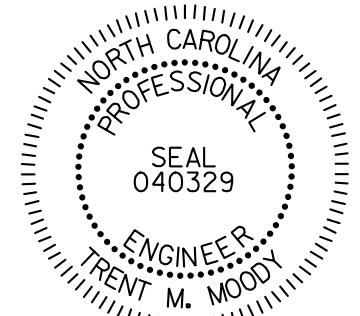
PLAN DATE: Jan 2026 REVIEWED BY: B.J. Roth-Roffy

PREPARED BY: J.C. Grimm REVIEWED BY: T.M. Woody

REVISIONS INIT. DATE

DOCUMENT NOT CONSIDERED
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SEAL

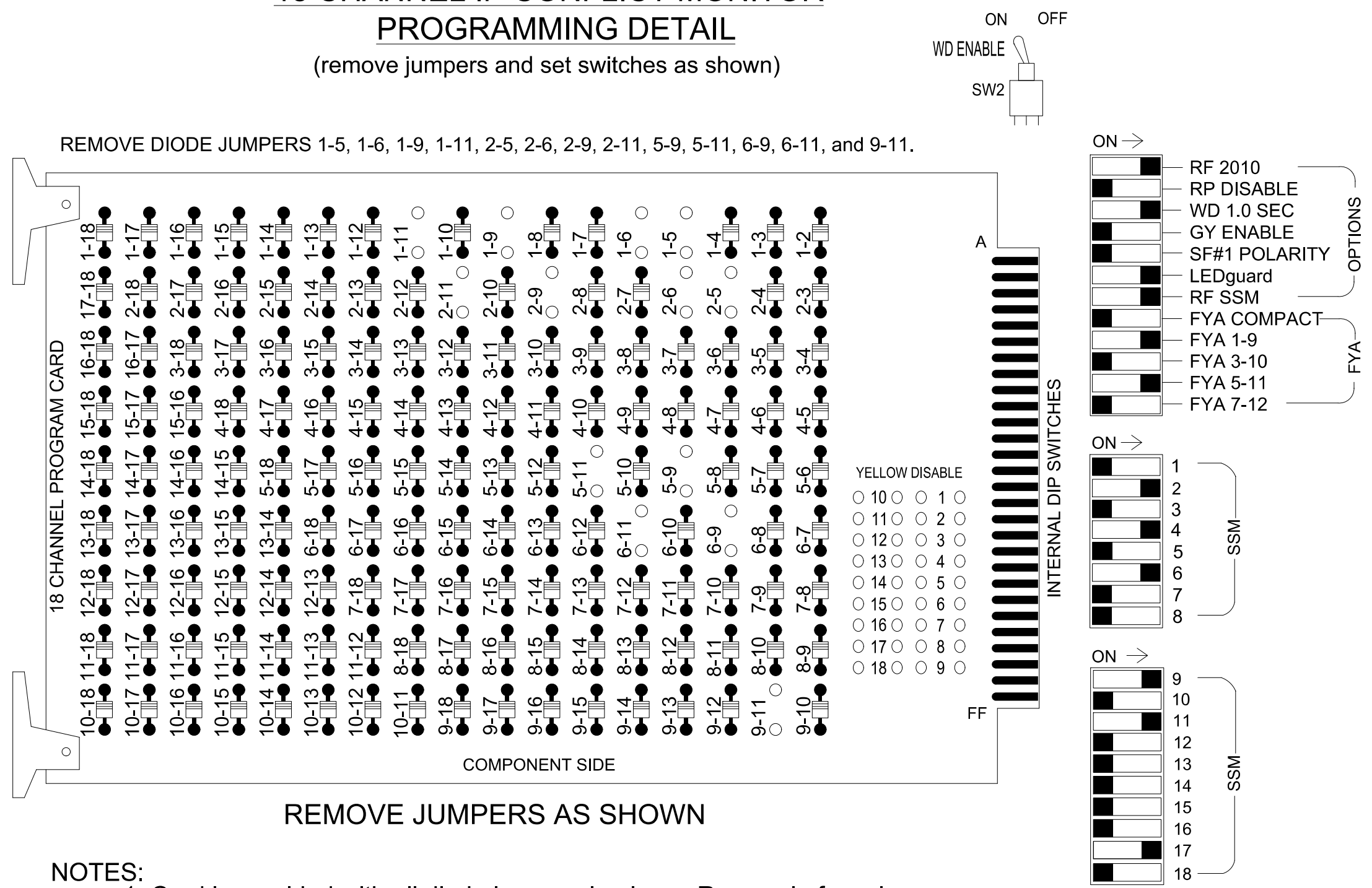


DocuSigned by: Trent M. Woody 1/27/2026

SIG. INVENTORY NO. 06-138772

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



- NOTES:
1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
 2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
 3. Ensure that the Red Enable is active at all times during normal operation.
 4. Integrate monitor with Ethernet network in cabinet.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.
2. Program controller to start up in phase 2 Green No Walk, 6 Green No Walk, 39 Phase Not On, and 40 Green No Walk.
3. Program Phase 39 for No Startup Veh Call.
4. Program phases 2, 6, and 40 for Min Recall.
5. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
6. The cabinet and controller are part of the #D06-17 Lumberton US 301 and SR 1997 (Fayetteville Road).

EQUIPMENT INFORMATION

Controller.....	2070LX
Cabinet.....	332 w/ Aux
Software.....	Q-Free MAXTIME
Cabinet Mount.....	Base
Output File Positions.....	18 With Aux. Output File
Load Switches Used.....	S1, S2, S5, S7, S8, AUX S1, AUX S3, AUX S4
Phases Used.....	1, 2, 3, 4, 5, 6
Overlap "1".....	*
Overlap "2".....	NOT USED
Overlap "3".....	*
Overlap "4".....	NOT USED
Overlap "5".....	*

*See overlap programming detail on sheet 2

[illegible]

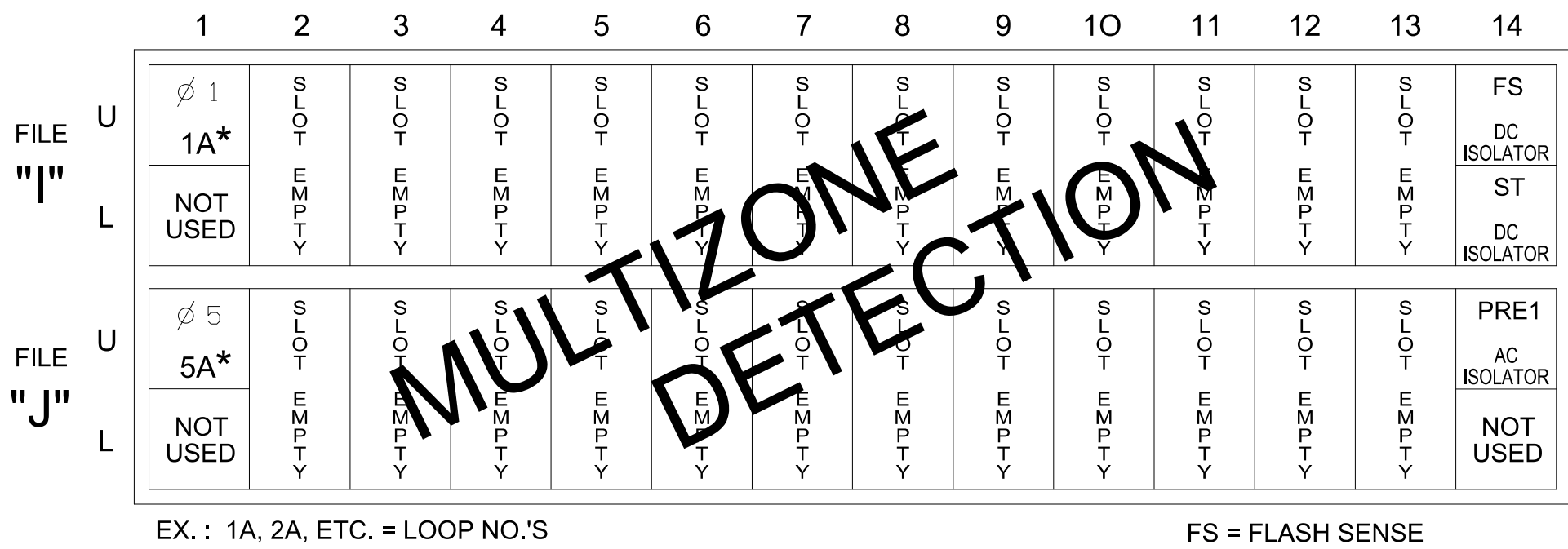
NU = Not Used

* Denotes install load resistor. See load resistor installation detail this sheet.

* See pictorial of head wiring in detail this sheet.

INPUT FILE POSITION LAYOUT

(front view)



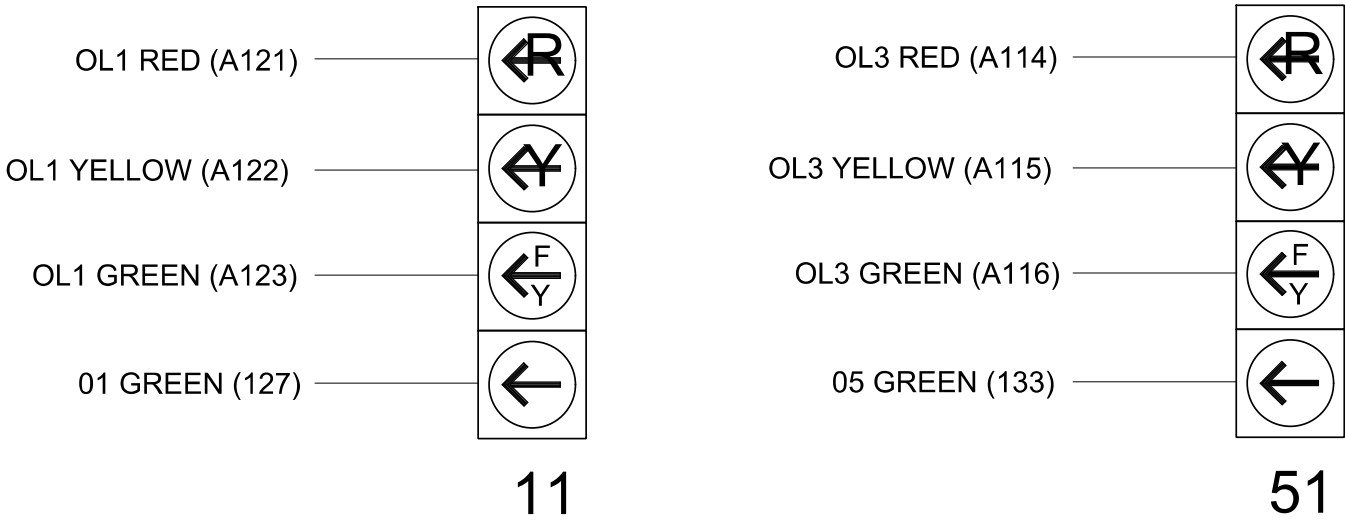
* Reflects the detector utilized in the "MAXTIME DETECTOR PROGRAMMING
DETAIL FOR ALTERNATE PHASING LOOPS 1A & 5A" on Sheet 2.

SPECIAL DETECTOR NOTE

Install a multizone microwave detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer -approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

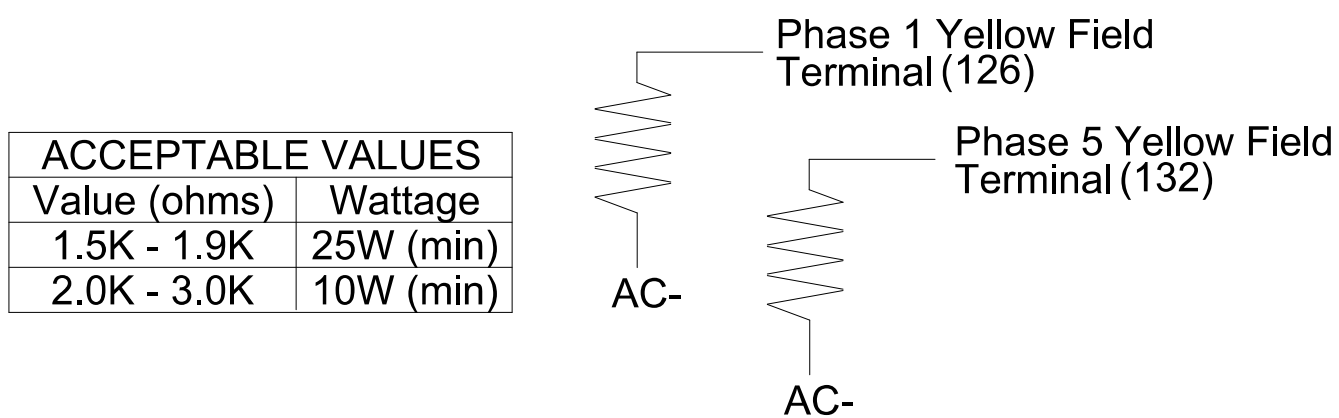
FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown)



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387T2
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

Temporary Design 2 - TMP Phase V, Step 2
Electrical Detail - Sheet 1 of 4

STV
STV Engineers, Inc.
2151 Hawkins St, Suite 1400
Charlotte, NC 28203
(704) 372-1885
NC License Number F-0991

Electrical and Programming
Details For:

Prepared for the Offices of:

The seal of the North Carolina Department of Transportation is circular. It features a stylized black and white graphic of a road or path curving through a landscape. The text "DEPARTMENT OF TRANSPORTATION" is written in a circle around the graphic. Above the graphic, it says "TRANSPORTATION MOBILITY AND SAFETY DIVISION". Below the graphic, it says "SIGNALS MANAGEMENT SECTION".

750 N. Greenfield Pkwy, Garner, NC 27529

NC 211 (N. Roberts Avenue)
at
Boomerang Drive / Restaurant Driveway

Division 6		Robeson County		Lumberton	
PLAN DATE: Jan 2026		REVIEWED BY: B.J. Roth-Roffy			
PREPARED BY: J.C. Grimm		REVIEWED BY: T.M. Moody			
REVISIONS				INIT.	DATE

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Trent Moody
 E-SIGNATURE
 1/27/2022
 DATE
 SIG. INVENTORY NO. 06-138772

OUTPUT CHANNEL CONFIGURATION

Front Panel
Main Menu >Controller >More>Channels>Channels Config

Web Interface
Home >Controller >Advanced IO>Channels>Channels Configuration

Channel Configuration						
Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
1	Phase Vehicle	1		X	X	1
2	Phase Vehicle	2		X		2
3	Phase Vehicle	3		X	X	3
4	Phase Vehicle	4		X		4
5	Phase Vehicle	5		X		5
6	Phase Vehicle	6		X	X	6
7	Phase Vehicle	7		X		7
8	Phase Vehicle	8		X	X	8
9	Overlap	1		X	X	9
10	Overlap	2		X	X	10
11	Overlap	3		X		11
12	Overlap	4		X		12
13	Phase Ped	2				13
14	Phase Ped	4				14
15	Phase Ped	6				15
16	Phase Ped	8				16
17	Overlap	5		X	X	17
18	Overlap	6		X		18

↑ ↑
NOTE: ALL RED FLASH

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Unit

Web Interface
Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters	Unit Flash Parameters
StartUp Clearance Hold	All Red Flash Exit Time
6	6

MAXTIME OVERLAP PROGRAMMING DETAIL FOR DEFAULT PHASING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

Overlap	1	3	5
Type	FYA - 4 Section	FYA - 4 Section	Normal
Included Phases	2	6	3
Modifier Phases	1	5	-
Modifier Overlaps	-	-	-
Trail Green	0	0	0
Trail Yellow	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0

MAXTIME OVERLAP PROGRAMMING DETAIL FOR ALTERNATE PHASING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

In the table view of the web interface, right click on "Overlap" in the top left corner of the table. Copy the entire contents of Overlap Plan 1. Paste Overlap Plan 1 into Overlap Plan 2. Modify Overlap Plan 2 as shown below and save changes.

Overlap	1	3	5
Type	FYA - 4 Section	FYA - 4 Section	Normal
Included Phases	-	-	3
Modifier Phases	1	5	-
Modifier Overlaps	-	-	-
Trail Green	0	0	0
Trail Yellow	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0

← NOTICE INCLUDED PHASE

SEQUENCE DETAIL

Front Panel
Main Menu >Controller >Sequence & Phs Config>Sequences

Web Interface
Home >Controller >Sequence

Sequence 1	
Ring	Sequence Data
1	1,2,a,3,4,b
2	5,6,a,b
3	39,c,40,d

MAXTIME DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOPS 1A & 5A

Front Panel
Main Menu >Controller >Detector >Veh Det Plans

Web Interface
Home >Controller >Detector Configuration >Vehicle Detectors

In the table view of web interface right click on "Detector" in the top left corner of the table. Copy the entire contents of Detector Plan 1. Paste Detector Plan 1 into Detector Plan 2. Modify Detector Plan 2 as shown below and save changes.

Plan 2			
	Detector	Call Phase	Delay
1A	1	1	-
	29	0	-
	Detector	Call Phase	Delay
5A	15	5	-
	31	0	-

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387T2
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

Temporary Design 2 - TMP Phase V, Step 2
Electrical Detail - Sheet 2 of 4



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PREPARED BY: J.C. Grimm	REVIEWED BY: T.M. Moody	
REVISIONS	INIT.	DATE

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SEAL



SEAL 040329
ENGINEER
TRENT M. MOODY

DocuSigned by:  1/27/2026
DATE

SIG. INVENTORY NO. 06-1387T2

1/27/2026
A:\MP\Projects\4018560\4018560_0001\450_Deliverables & Submittals\4018560_5797\Traffic\Signal\Temporary Signal\4018560-1387 (Roberts-Boomerang)\06-1387T2_sm.dgn
RothRdB

MAXTIME ALTERNATE PHASING PATTERN
PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Coordination >Patterns

Web Interface
Home >Controller >Coordination >Patterns

Pattern Parameters

Pattern	Veh Det Plan	Overlap Plan
*	2	2

* The Pattern number(s) are to be determined by the Division and/or City Traffic Engineer.

MAXTIME ALTERNATE PHASING ACTIVATION DETAIL

To run alternate phasing, select a Pattern that is programmed to run Overlap Plan 2 and Detector Plan 2.
A Pattern can be selected through the scheduler or manually by changing the Operational Mode.

PHASING	OVERLAP PLAN	VEH DET PLAN
ACTIVE PLAN REQUIRED TO RUN DEFAULT PHASING	1	1
ACTIVE PLAN REQUIRED TO RUN ALTERNATE PHASING	2	2

ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN OVERLAP PLAN 2 AND VEHICLE DETECTOR PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

OVERLAP PLAN 2: Modifies overlap included phases for heads 11 and 51 to run protected turns only.

VEH DET PLAN 2: Disables phase 6 call on loop 1A and reduces delay time for phase 1 call on loop 1A to 0 seconds.

Disables phase 2 call on loop 5A and reduces delay time for phase 5 call on loop 5A to 0 seconds.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387T2
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

Temporary Design 2 - TMP Phase V, Step 2
Electrical Detail - Sheet 4 of 4



STV Engineers, Inc.
2151 Hawkins St, Suite 1400
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(704) 372-1885
NC License Number F-0991

Electrical and Programming
Details For:

Prepared for the Offices of:



750 N. Greenfield Pkwy, Garner, NC 27529

NC 211 (N. Roberts Avenue)
at
Boomerang Drive / Restaurant Driveway

Division 6Robeson CountyLumberton

PLAN DATE: Jan 2026REVIEWED BY: B.J. Roth-Roffy

PREPARED BY: J.C. GrimmREVIEWED BY: T.M. Moody

REVISIONSINIT. DATE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
TRENT M. MOODY
040329

DocuSigned by
Trent Moody1/27/2026
DATE

SIG. INVENTORY NO. 06-1387T2

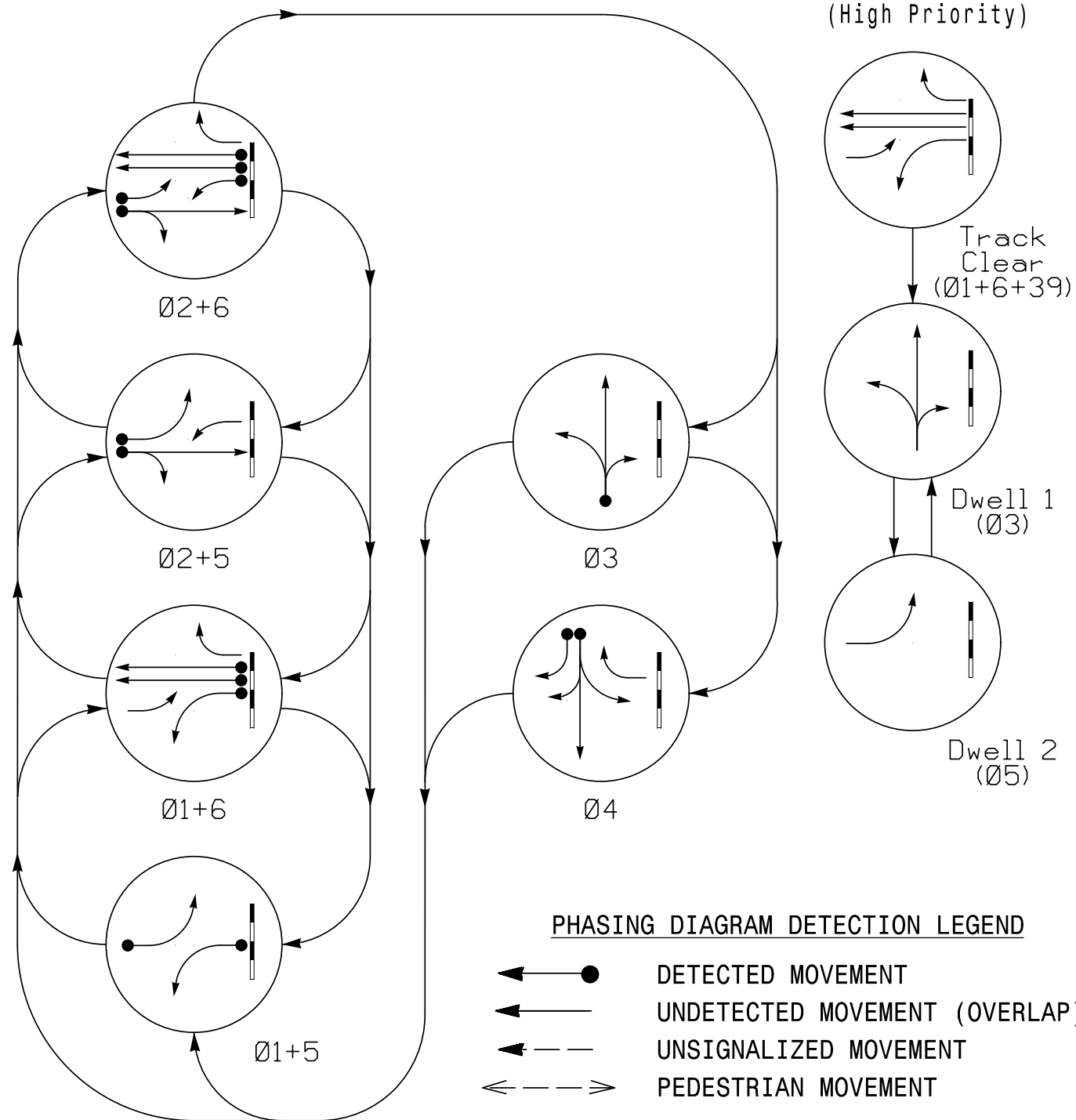
PROJECT REFERENCE NO.	SHEET NO.
U-5797	Fig. 17.0

6 Phase
Fully Actuated
w/ Railroad Preemption
#D06-18 Lumberton NC 211 (N. Roberts Avenue)

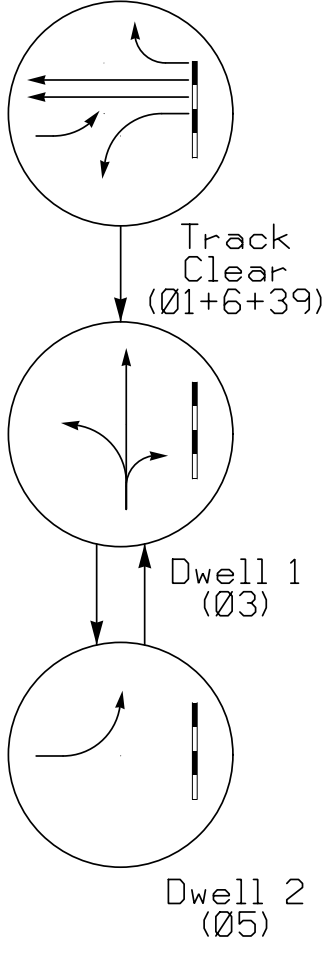
NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Reposition existing signal heads numbered 22 and 51.
- Program phase 40 to run concurrently with all phases during normal operation. Phase 39 must be incompatible with phase 40 and included as a track clear phase.
- The Division Traffic Engineer will determine the hours of use for each phasing plan.
- This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

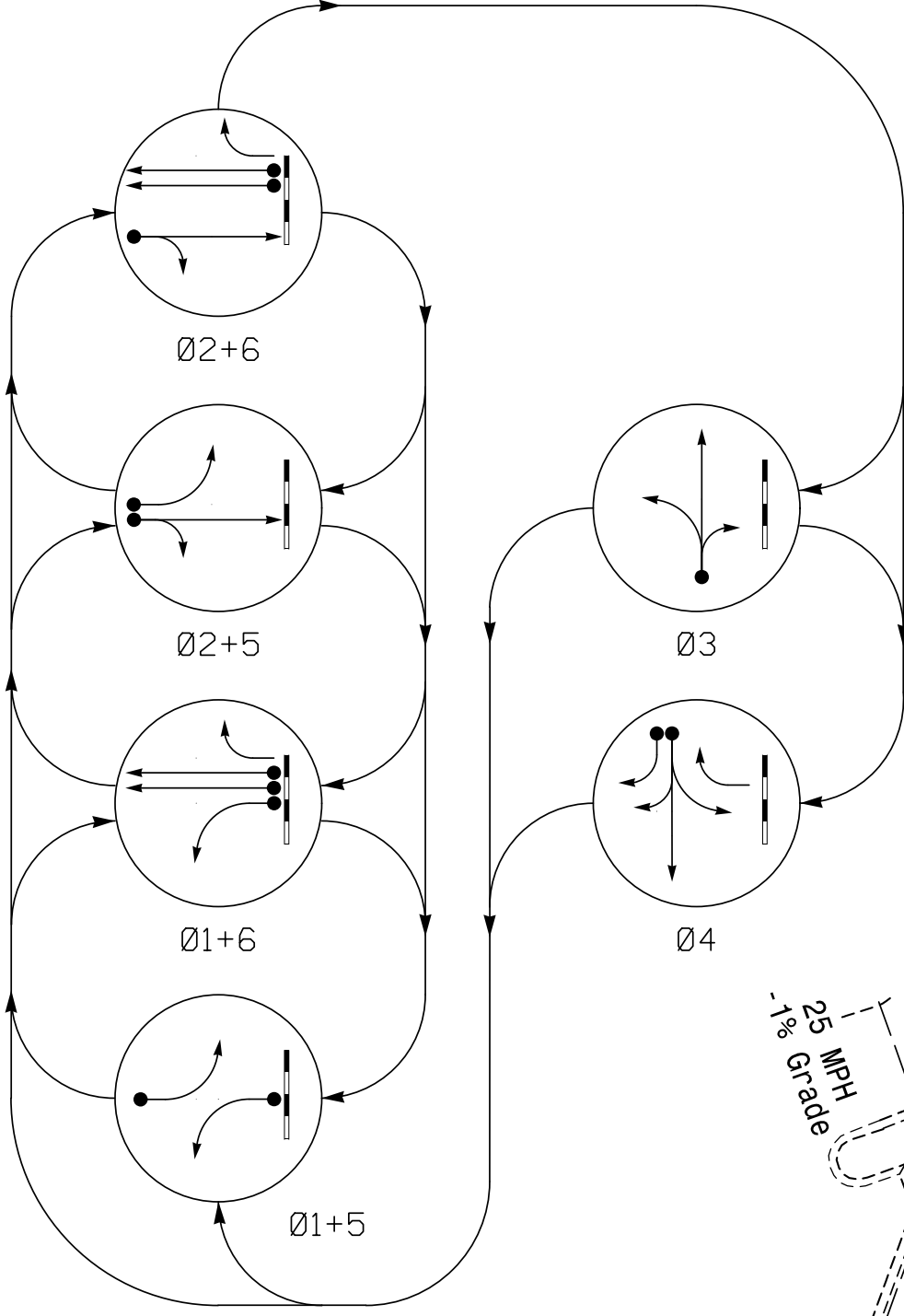
DEFAULT PHASING DIAGRAM



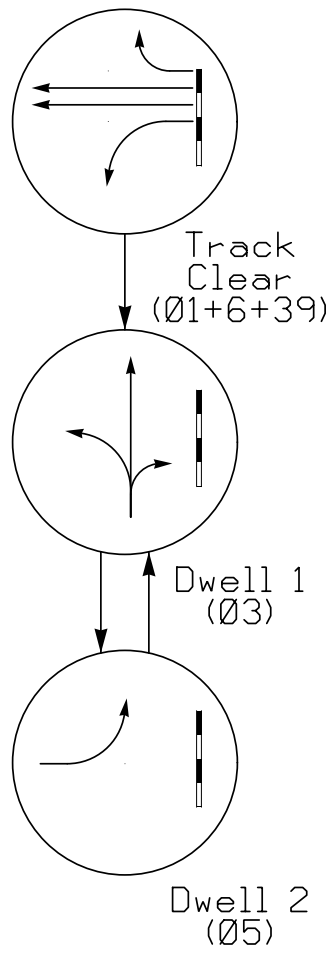
DEFAULT RAIL
PREEMPT PHASES
(High Priority)



ALTERNATE PHASING DIAGRAM



ALTERNATE RAIL
PREEMPT PHASES
(High Priority)



DEFAULT PHASING
TABLE OF OPERATION

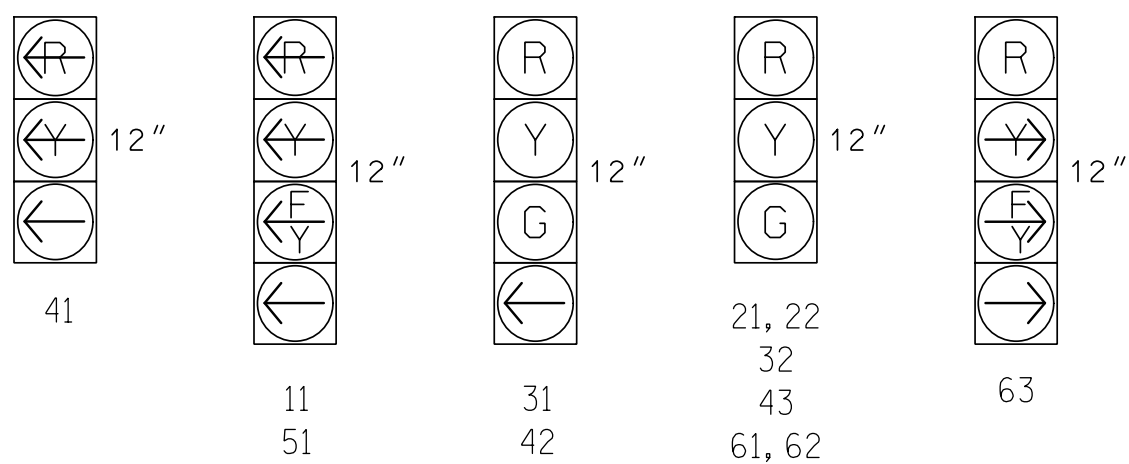
SIGNAL FACE	PHASE											
	Ø 1 + 5	Ø 1 + 6	Ø 2 + 5	Ø 2 + 6	Ø 3	Ø 4	R R C L R	D W R L 1	D W R L 2	F L A S H		
11	←	←	←	←	←	←	←	←	←	←		
21, 22	R	R	G	G	R	R	R	R	R	R		
31	R	R	R	R	G	R	R	G	R	R		
32	R	R	R	R	G	R	R	G	R	R		
41	←	←	←	←	←	←	←	←	←	←		
42	R	R	R	R	R	G	R	R	R	R		
43	R	R	R	R	R	G	R	R	R	R		
51	←	←	←	←	←	←	←	←	←	←		
61, 62	R	G	R	G	R	R	G	R	R	R		
63	R	←	R	←	R	→	←	R	R	R		

ALTERNATE PHASING
TABLE OF OPERATION

SIGNAL FACE	PHASE											
	Ø 1 + 5	Ø 1 + 6	Ø 2 + 5	Ø 2 + 6	Ø 3	Ø 4	R R C L R	D W R L 1	D W R L 2	F L A S H		
11	←	←	←	←	←	←	←	←	←	←		
21, 22	R	R	G	G	R	R	R	R	R	R		
31	R	R	R	R	G	R	R	G	R	R		
32	R	R	R	R	G	R	R	G	R	R		
41	←	←	←	←	←	←	←	←	←	←		
42	R	R	R	R	R	G	R	R	R	R		
43	R	R	R	R	R	G	R	R	R	R		
51	←	←	←	←	←	←	←	←	←	←		
61, 62	R	G	R	G	R	R	G	R	R	R		
63	R	←	R	←	R	→	←	R	R	R		

SIGNAL FACE I.D.

All Heads L.E.D.



MAXTIME PREEMPTION CHART

FUNCTION	PRE 1
Type	RAIL ROAD
Exit Phases	2, 6
Delay	0.0
Max Presence	0
Enter Min Green	1
Enter Walk	1
Enter Ped Clear	0
Enter Yellow Change	4.6
Enter Red Clear	3.0
Track Green	36
Track Yellow Change	4.6
Track Red Clear	2.8
Dwell Green	7
Exit Min Green	255 *
Exit Yellow Change	25.5 *
Exit Red Clear	25.5 *
Call Extend Time	1.0
Exit Type	EXIT PHASES
Ped Clear Through Yellow	N
Require All Red Entry	N

* Directs controller to use default phase timing.

MAXTIME TIMING CHART

FEATURE	PHASE							39	40
	1	2	3	4	5	6			
Walk *	-	-	-	-	-	-			
Ped Clear *	-	-	-	-	-	-			
Min Green	7	12	7	7	7	12			
Passage *	2.0	2.0	2.0	2.0	2.0	2.0			
Max 1 *	20	90	30	30	20	90			
Yellow Change	3.0	4.6	3.2	3.2	3.0	4.6	4.6	4.6	
Red Clear	2.8	1.6	2.6	3.0	2.8	1.6	2.8	3.0	
Added Initial *	-	-	-	-	-	-			
Maximum Initial *	-	-	-	-	-	-			
Time Before Reduction *	-	-	-	-	-	-			
Time To Reduce *	-	-	-	-	-	-			
Minimum Gap	-	-	-	-	-	-			
Advance Walk	-	-	-	-	-	-			
Non Lock Detector	X	-	X	X	X	-			
Vehicle Recall	-	MIN RECALL	-	-	-	MIN RECALL			MIN RECALL
Dual Entry	-	-	-	-	-	-			

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

This signal was designed for Advanced Preemption.

MAXTIME DETECTOR INSTALLATION CHART

DETECTOR				PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND INITIAL	CALL	NEW CARD
1A	6X40	0	*	*	1	15**	-	X	-	*
					6 #	-	-	X	-	*
3A	6X20	0	*	*	3	5	-	X	-	*
4A	6X40	0	*	*	4	5	-	X	-	*
4B	6X40	0	*	*	4	15	-	X	-	*
5A	6X40	0	*	*	5	15**	-	X	-	*
					2 #	-	-	X	-	*

* Multi-zone Microwave Detection Zone

** Disable Delay During Alternate Phasing

Disable Phase Call for Loop During Alternate Phasing

RADAR DETECTION
SYSTEM

FUNCTION	SENSOR 1 - 2A	SENSOR 2 - 6A
Channel	1	2
Phase	2	6
Direction of Travel	EB	WB
Detection Zone (ft)	500 - 100	500 - 100
Enable Speed	Y	Y
Speed Range (mph)	35 - 100	35 - 100
Enable Estimated Time of Arrival	Y	Y
Estimated Time of Arrival (sec)	2.5 - 6.5	2.5 - 6.5

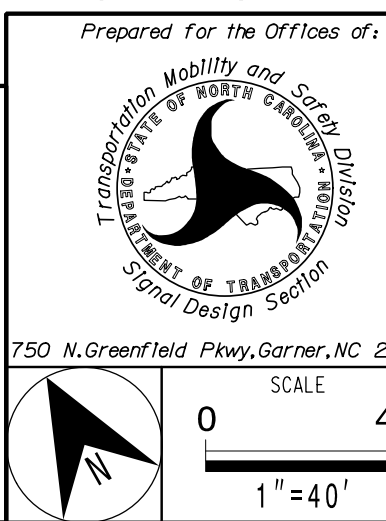
LEGEND

PROPOSED	EXISTING

New Installation
Temporary Design 3 - TMP Phase VI, Step 4

stv

STV Engineers, Inc.
2151 Hawkins St, Suite 1400
Charlotte, NC 28203
(704) 372-1885
NC License Number F-0991



NC 211 (N. Roberts Avenue)

at
Boomerang Drive /
Restaurant Driveway

Division 6 Robeson County Lumberton

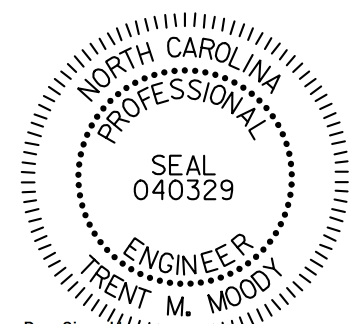
PLAN DATE: Jan 2026 REVIEWED BY: B.J. Roth-Roffy

PREPARED BY: J.C. Grimm REVIEWED BY: T.M. Woody

REVISIONS INIT. DATE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

SEAL



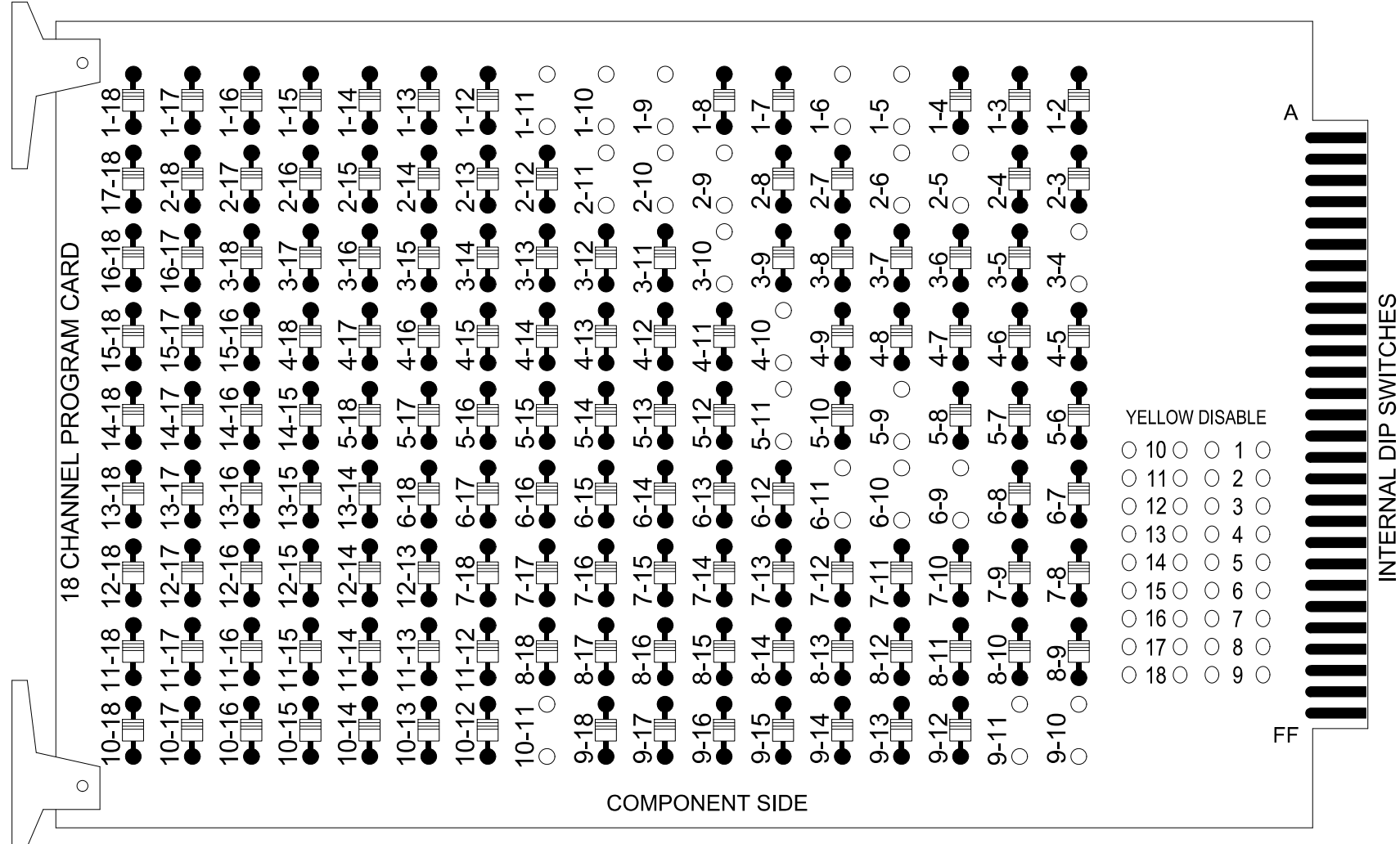
1/27/2026

SIG. INVENTORY NO. 06-138773

18 CHANNEL IP CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

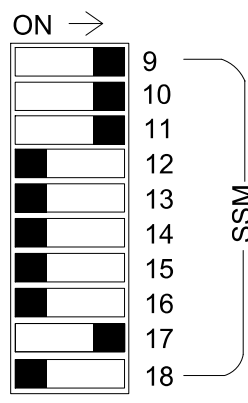
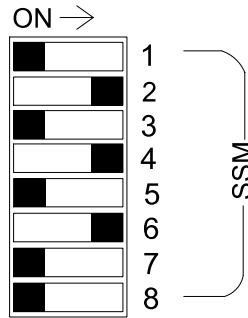
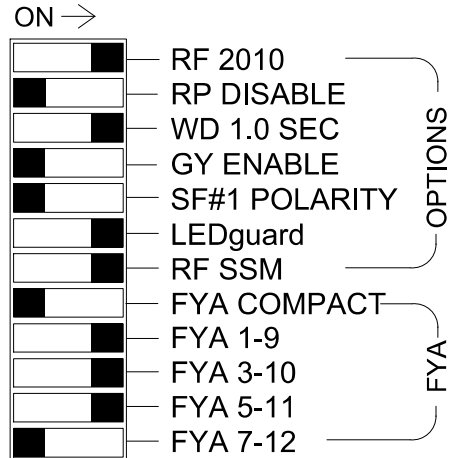
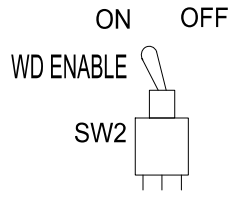
REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-10, 1-11, 2-5, 2-6, 2-9, 2-10, 2-11, 3-4, 3-10, 4-10, 5-9, 5-11, 6-9, 6-10, 6-11, 9-10, 9-11, and 10-11.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that the Red Enable is active at all times during normal operation.
- Integrate monitor with Ethernet network in cabinet.



■ = DENOTES POSITION OF SWITCH

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.
- Program controller to start up in phase 2 Green No Walk, 6 Green No Walk, 39 Phase Not On, and 40 Green No Walk.
- Program Phase 39 for No Startup Veh Call.
- Program phases 2, 6, and 40 for Min Recall.
- If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
- The cabinet and controller are part of the #D06-17 Lumberton US 301 and SR 1997 (Fayetteville Road).

EQUIPMENT INFORMATION

Controller.....2070LX
Cabinet.....332 w/ Aux
Software.....Q-Free MAXTIME
Cabinet Mount.....Base
Output File Positions.....18 With Aux. Output File
Load Switches Used.....S1, S2, S4, S5, S7, S8, AUX S1, AUX S2, AUX S3, AUX S4
Phases Used.....1, 2, 3, 4, 5, 6
Overlap "1".....*
Overlap "2".....*
Overlap "3".....*
Overlap "4".....NOT USED
Overlap "5".....*
Overlap "7".....*

*See overlap programming detail on sheet 2

PROJECT REFERENCE NO.

SHEET NO.

U-5797

Sig. 17.1

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5			S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6	
CMU CHANNEL NO.	1	2	13	3	4			14	5	6	15	7	8	16	9	10	17	11	12	18	
PHASE	1	2	2 PED	OL7	4			4 PED	5	6	6 PED	7	8	8 PED	OL1	OL2	OL5	OL3	OL4	SPARE	
SIGNAL HEAD NO.	11★	21.22	NU	63	41	42	43	NU	51★	61,62	NU	NU	NU	NU	11★	63★	31	32	51★	NU	NU
RED		128			101	101				134						A124	A111	A111			
YELLOW	★	129		★	102	102		★	135								A112	A112			
GREEN		130			103	103				136							A113	A113			
RED ARROW					101											A121			A114		
YELLOW ARROW					102											A122	A125		A115		
FLASHING YELLOW ARROW																A123	A126		A116		
GREEN ARROW	127			118	103	103			133								A113				
																					
																					

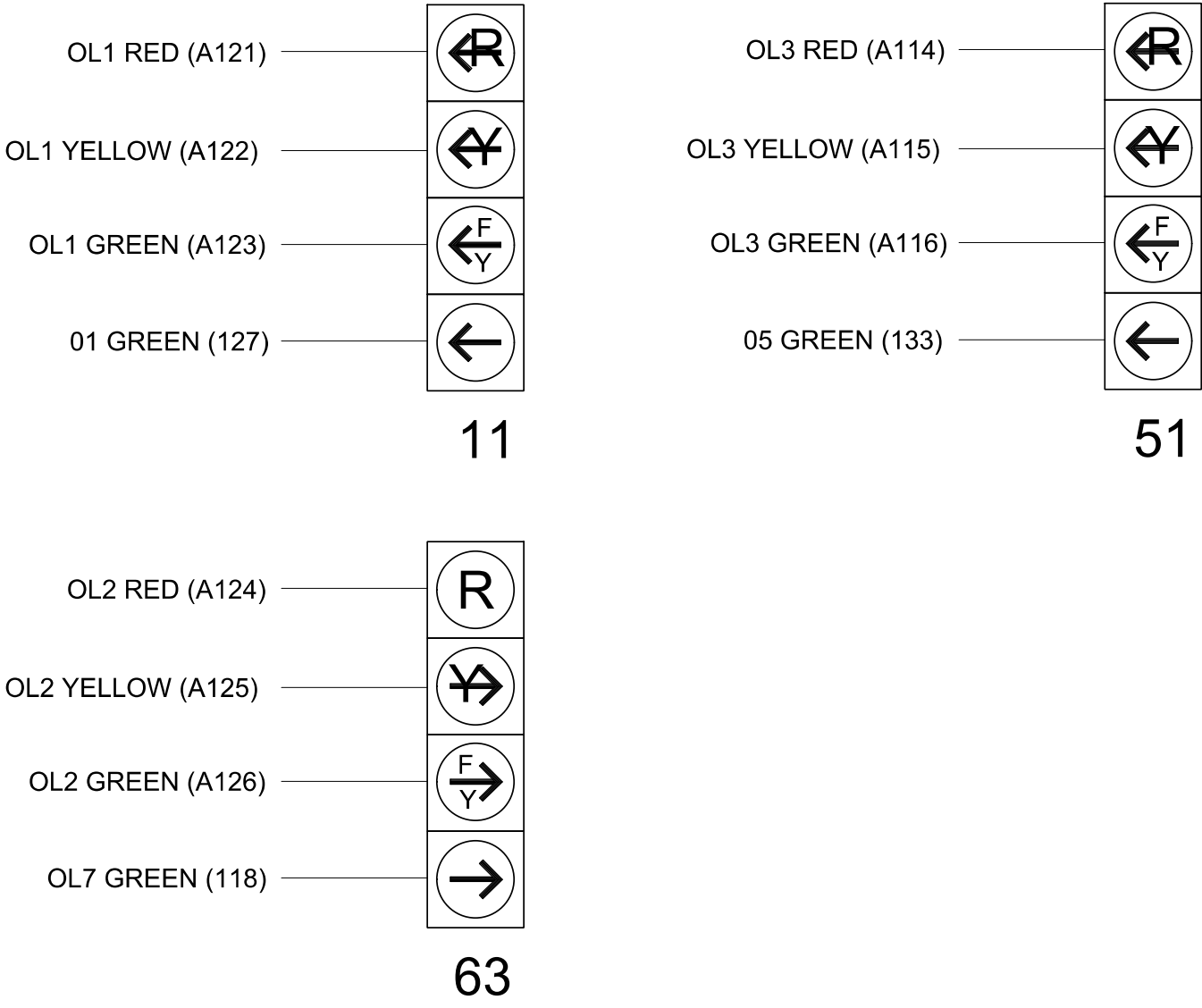
NU = Not Used

★ Denotes install load resistor. See load resistor installation detail this sheet.

† See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



INPUT FILE POSITION LAYOUT
(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	∅ 1	1A*	NOT USED											FS
	L														DC ISOLATOR
FILE "J"	U	∅ 5	5A*	NOT USED											PRE1
	L														AC ISOLATOR

EX. : 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME
PRE = PREEMPT

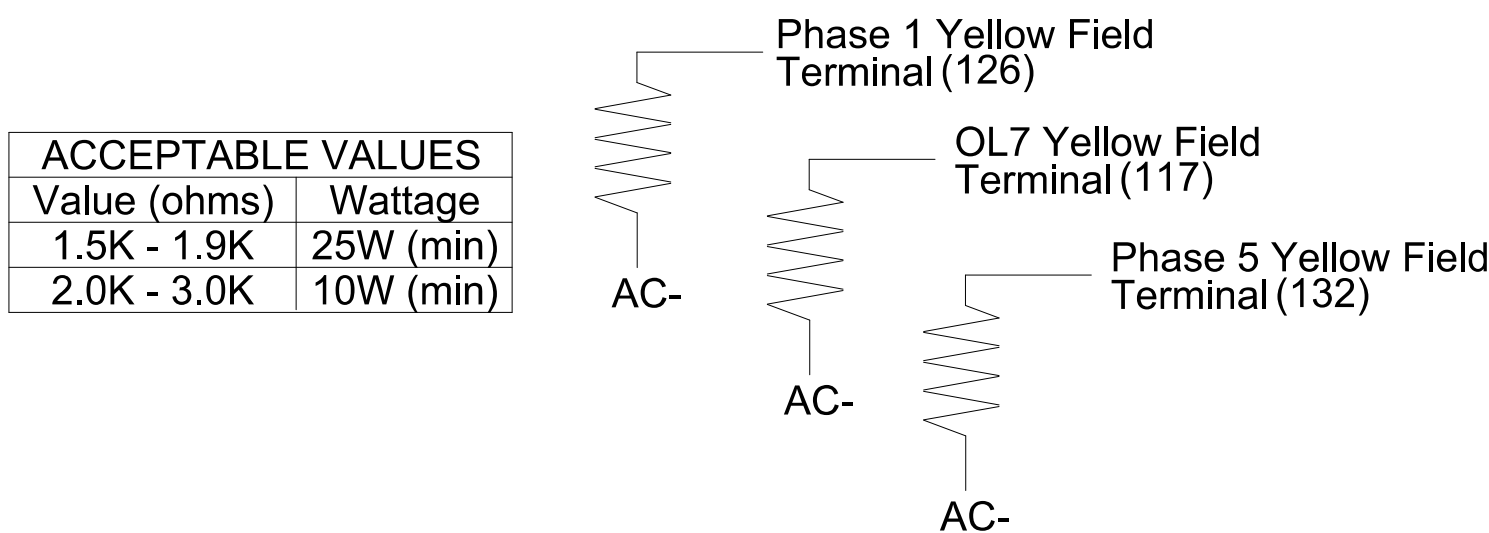
* Reflects the detector utilized in the "MAXTIME DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOPS 1A & 5A" on Sheet 2.

SPECIAL DETECTOR NOTE

Install a multizone microwave detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer -approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown)



ACCEPTABLE VALUES	
Value (ohms)	Wattage
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)

FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO ENSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

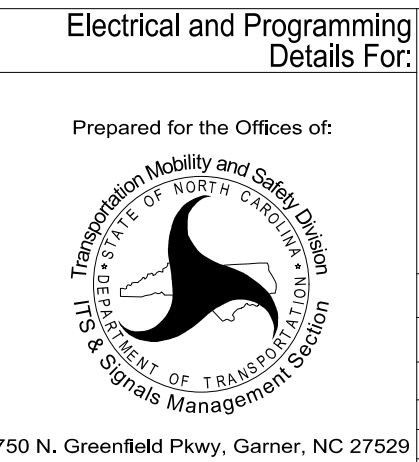
- ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
- ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-5 AND TERMINATE ON T2-3.
- REMOVE FLASHER UNIT 2.

THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 06-1387T3
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

Temporary Design 3 - TMP Phase VI, Step 4
Electrical Detail - Sheet 1 of 4

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NC License Number F-0991



Division 6		Robeson County		Lumberton	
PLAN DATE:	Jan 2026	REVIEWED BY:	B.J. Roth-Roffy		
PREPARED BY:	J.C. Grimm	REVIEWED BY:	T.M. Moody		
REVISIONS		INIT.	DATE		

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER

SEAL 040329

RENT M. MOODY

DocuSigned by: Trent Moody

1/27/2026

SIG. INVENTORY NO. 06-1387T3

OUTPUT CHANNEL CONFIGURATION

Front Panel
Main Menu >Controller >More>Channels>Channels Config

Web Interface
Home >Controller >Advanced IO>Channels>Channels Configuration

Channel Configuration

Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
1	Phase Vehicle	1		X	X	1
2	Phase Vehicle	2		X		2
3	Overlap	7		X	X	3
4	Phase Vehicle	4		X		4
5	Phase Vehicle	5		X		5
6	Phase Vehicle	6		X	X	6
7	Phase Vehicle	7		X		7
8	Phase Vehicle	8		X	X	8
9	Overlap	1		X	X	9
10	Overlap	2		X	X	10
11	Overlap	3		X		11
12	Overlap	4		X		12
13	Phase Ped	2				13
14	Phase Ped	4				14
15	Phase Ped	6				15
16	Phase Ped	8				16
17	Overlap	5		X	X	17
18	Overlap	6		X		18

NOTE OL7 ASSIGNED
TO CHANNEL 3



↑
NOTE: ALL RED FLASH
↑

MAXTIME STARTUP AND SOFTWARE FLASH
PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Unit

Web Interface
Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

StartUp Clearance Hold
6

Unit Flash Parameters

All Red Flash Exit Time
6

MAXTIME OVERLAP PROGRAMMING DETAIL
FOR DEFAULT PHASING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

Overlap	1	2	3	5	7
Type	FYA - 4 Section	FYA - 4 Section	FYA - 4 Section	Normal	Normal
Included Phases	2	6	6	3	4
Modifier Phases	1	4	5	-	-
Modifier Overlaps	-	-	-	-	-
Trail Green	0	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0	0.0

MAXTIME OVERLAP PROGRAMMING DETAIL
FOR ALTERNATE PHASING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

In the table view of the web interface, right click on "Overlap" in the top left corner of the table. Copy the entire contents of Overlap Plan 1. Paste Overlap Plan 1 into Overlap Plan 2. Modify Overlap Plan 2 as shown below and save changes.

Overlap Plan 2

Overlap	1	2	3	5	7
Type	FYA - 4 Section	FYA - 4 Section	FYA - 4 Section	Normal	Normal
Included Phases	-	6	-	3	4
Modifier Phases	1	4	5	-	-
Modifier Overlaps	-	-	-	-	-
Trail Green	0	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0	0.0

NOTICE
INCLUDED
PHASE



MAXTIME DETECTOR PROGRAMMING DETAIL
FOR ALTERNATE PHASING LOOPS 1A & 5A

Front Panel
Main Menu >Controller >Detector >Veh Det Plans

Web Interface
Home >Controller >Detector Configuration >Vehicle Detectors

In the table view of web interface right click on "Detector" in the top left corner of the table. Copy the entire contents of Detector Plan 1. Paste Detector Plan 1 into Detector Plan 2. Modify Detector Plan 2 as shown below and save changes.

1A

Plan 2

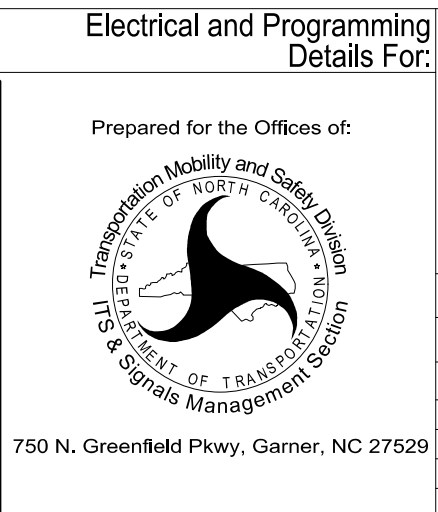
Detector	Call Phase	Delay
1	1	-
29	0	-

5A

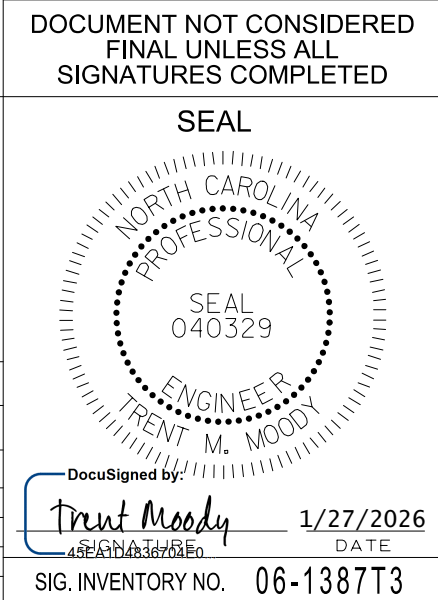
Detector	Call Phase	Delay
15	5	-
31	0	-

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387T3
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

Temporary Design 3 - TMP Phase VI, Step 4
Electrical Detail - Sheet 2 of 4



NC 211 (N. Roberts Avenue) at Boomerang Drive / Restaurant Driveway			
Division 6		Robeson County	
PLAN DATE: Jan 2026		REVIEWED BY: B.J. Roth-Roffy	
PREPARED BY: J.C. Grimm		REVIEWED BY: T.M. Moody	
REVISIONS		INIT.	DATE

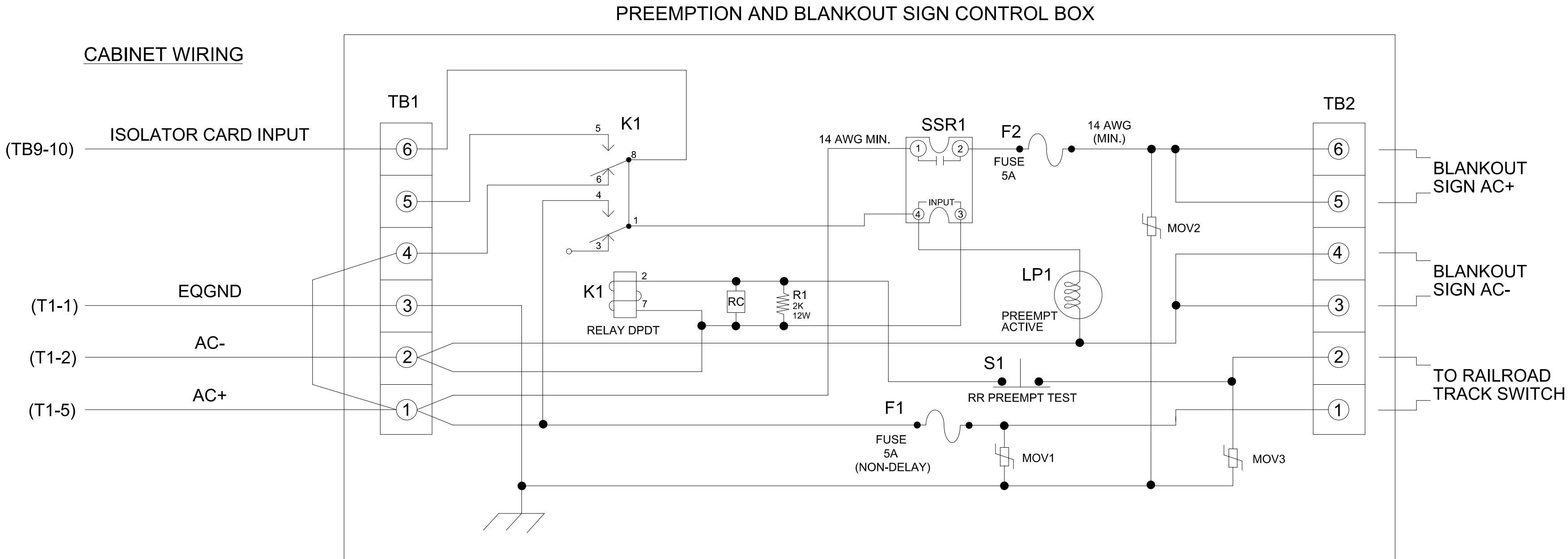


Front Panel
Main Menu >Controller >Preemption >Preempt Phasing/Preempt Parameters

Preempt Configuration

Preempt	1
Enabled	Enabled
Type	Rail Road
Track Phases	1, 6, 39
Track Overlaps	1, 2, 3
Dwell Phases	3
Dwell Peds	-
Dwell Overlaps	5
Cycling Phases	3, 5
Cycling Peds	-
Cycling Overlaps	3, 5
Exit Phases	2, 6
Exit Overlaps	1, 2, 3
Delay	0
Call Ext Time	1.0
Max Presence	0
Max Pres Act	Terminate
Enter Min Green	1
Enter Walk	1
Enter Ped Clear	0
Enter Yellow Change	4.6
Enter Red Clear	3.0
Track Green	36
Track Yellow Clr	46
Track Red Clear	2.8
Dwell Green	7
Exit Min Green	255
Exit Yellow Change	25.5
Exit Red Clear	25.5
Exit Type	Exit Phases
Non Locking Memory	-
Not Ovrd Flash	X
Not Ovrd Nxt Pre	-
Require All Red Entry	-
Track Clear Ovrd	X
Ped Clear During Yellow	-
Entry Omit OLTG	X
Track Reserve	X

(wire as shown below)



1. Relay K1 is shown in the energized (Preempt not active) normal operation state.

2. Relay K1 is a DPDT with 120VAC coil with octal base.

3. Relay SSR1 is a SPST (normally open) Solid State Relay with AC input and AC (25 amp) output.

4. AC Isolator Card shall activate preemption upon removal of AC+ from the input (as shown above). To accomplish this set invert dip switch on AC Isolator Card.

5. **IMPORTANT!!** A jumper must be added between input file terminals J14-E and J14-K if not already present. Also, terminal TB9-12 (on input panel) shall be connected to AC neutral (jumper may have to be added).

The diagram shows two terminal blocks, TB1 and TB2, each with six terminals. TB1 terminals are labeled AC+, AC-, GND, REL NO, REL NC, and REL COM. TB2 terminals are unlabeled but correspond to the same functions as TB1. Below TB2, three connection groups are shown with brackets: 'TO RR TRACK SWITCH' connecting the first two terminals, 'SIGN AC-' connecting the next two terminals, and 'SIGN AC+' connecting the last two terminals.

Legend:

- LAMP
- PB
- FUSE 1
- FUSE 2

Terminal Block TB1:

	AC+	AC-	GND	REL NO	REL NC	REL COM
TB1						
	1	2	3	4	5	6

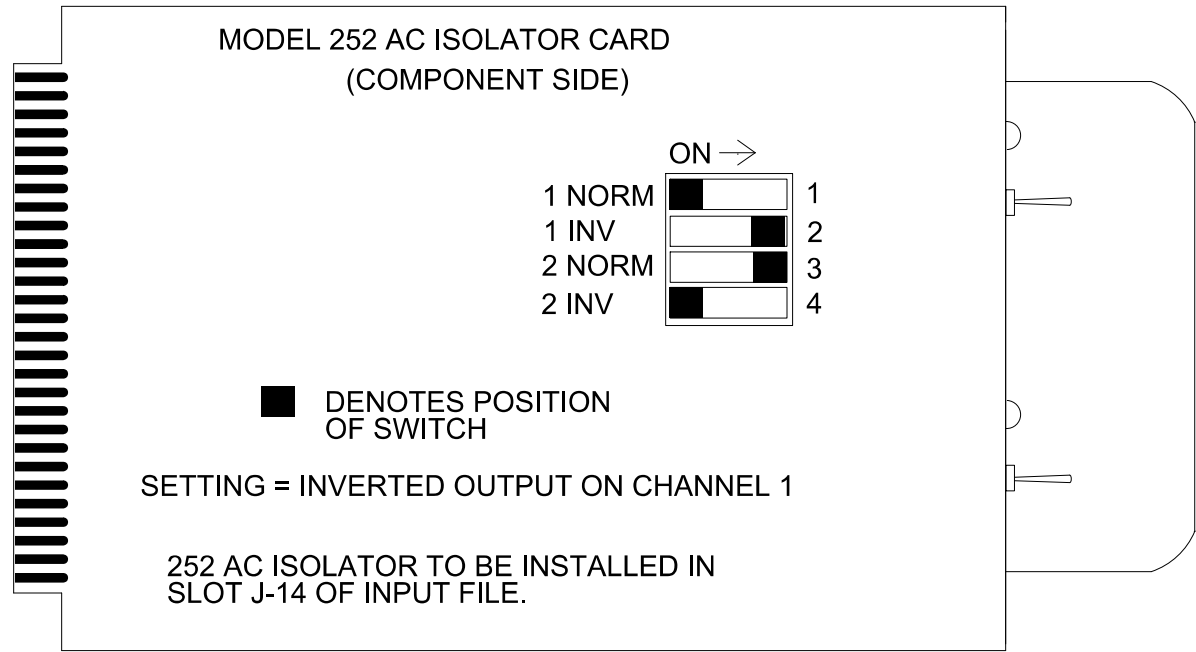
Terminal Block TB2:

TB2						
-----	--	--	--	--	--	--

Connections:

- Terminals 1 and 2: TO RR TRACK SWITCH
- Terminals 3 and 4: SIGN AC-
- Terminals 5 and 6: SIGN AC+

(set DIP switches as shown below)



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387T3
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

Temporary Design 3 - TMP Phase VI, Step 4
Electrical Detail - Sheet 3 of 4

stv
STV Engineers, Inc.
2151 Hawkins St, Suite 1400
Charlotte, NC 28203
(704) 372-1885
NC License Number F-0991

Electrical and Programming
Details For:

Prepared for the Offices of:

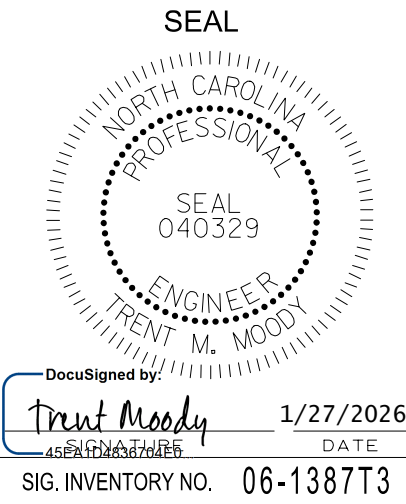


750 N. Greenfield Pkwy, Garner, NC 27529

NC 211 (N. Roberts Avenue)
at
Boomerang Drive / Restaurant Driveway

Division 6	Robeson County	Lumberton
PLAN DATE: Jan 2026	REVIEWED BY: B.J. Roth-Roffy	
PREPARED BY: J.C. Grimm	REVIEWED BY: T.M. Moody	
REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



1/27/2026
A:\P\Projects\4018560\4018560_0001\450_Deliverables & Submittals\4018560-5797\Traffic\Signal\Temporary Signal\4018560-1387 (Roberts-Boomerang)\06-1387T3_sml_e_2024xxxx.dgn
RothRB

MAXTIME ALTERNATE PHASING PATTERN
PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Coordination >Patterns

Web Interface
Home >Controller >Coordination >Patterns

Pattern Parameters

Pattern	Veh Det Plan	Overlap Plan
★	2	2

★The Pattern number(s) are to be determined by the Division and/or City Traffic Engineer.

MAXTIME ALTERNATE PHASING ACTIVATION DETAIL

To run alternate phasing, select a Pattern that is programmed to run Overlap Plan 2 and Detector Plan 2.
A Pattern can be selected through the scheduler or manually by changing the Operational Mode.

PHASING	OVERLAP PLAN	VEH DET PLAN
ACTIVE PLAN REQUIRED TO RUN DEFAULT PHASING	1	1
ACTIVE PLAN REQUIRED TO RUN ALTERNATE PHASING	2	2

ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN OVERLAP PLAN 2 AND VEHICLE DETECTOR PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

OVERLAP PLAN 2: Modifies overlap included phases for heads 11 and 51 to run protected turns only.

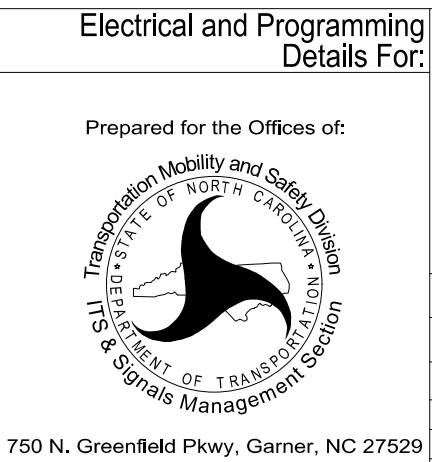
VEH DET PLAN 2: Disables phase 6 call on loop 1A and reduces delay time for phase 1 call on loop 1A to 0 seconds.

Disables phase 2 call on loop 5A and reduces delay time for phase 5 call on loop 5A to 0 seconds.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387T3
DESIGNED: Jan 2026
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Temporary Design 3 - TMP Phase VI, Step 4
Electrical Detail - Sheet 4 of 4

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NC 211 (N. Roberts Avenue) at Boomerang Drive / Restaurant Driveway			
Division 6		Robeson County	
Lumberton			
PLAN DATE:	Jan 2026	REVIEWED BY:	B.J. Roth-Roffy
PREPARED BY:	J.C. Grimm	REVIEWED BY:	T.M. Moody
REVISIONS		INIT.	DATE

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

SEAL

DocuSigned by
Trent Moody
1/27/2026
DATE

SIG. INVENTORY NO. 06-1387T3

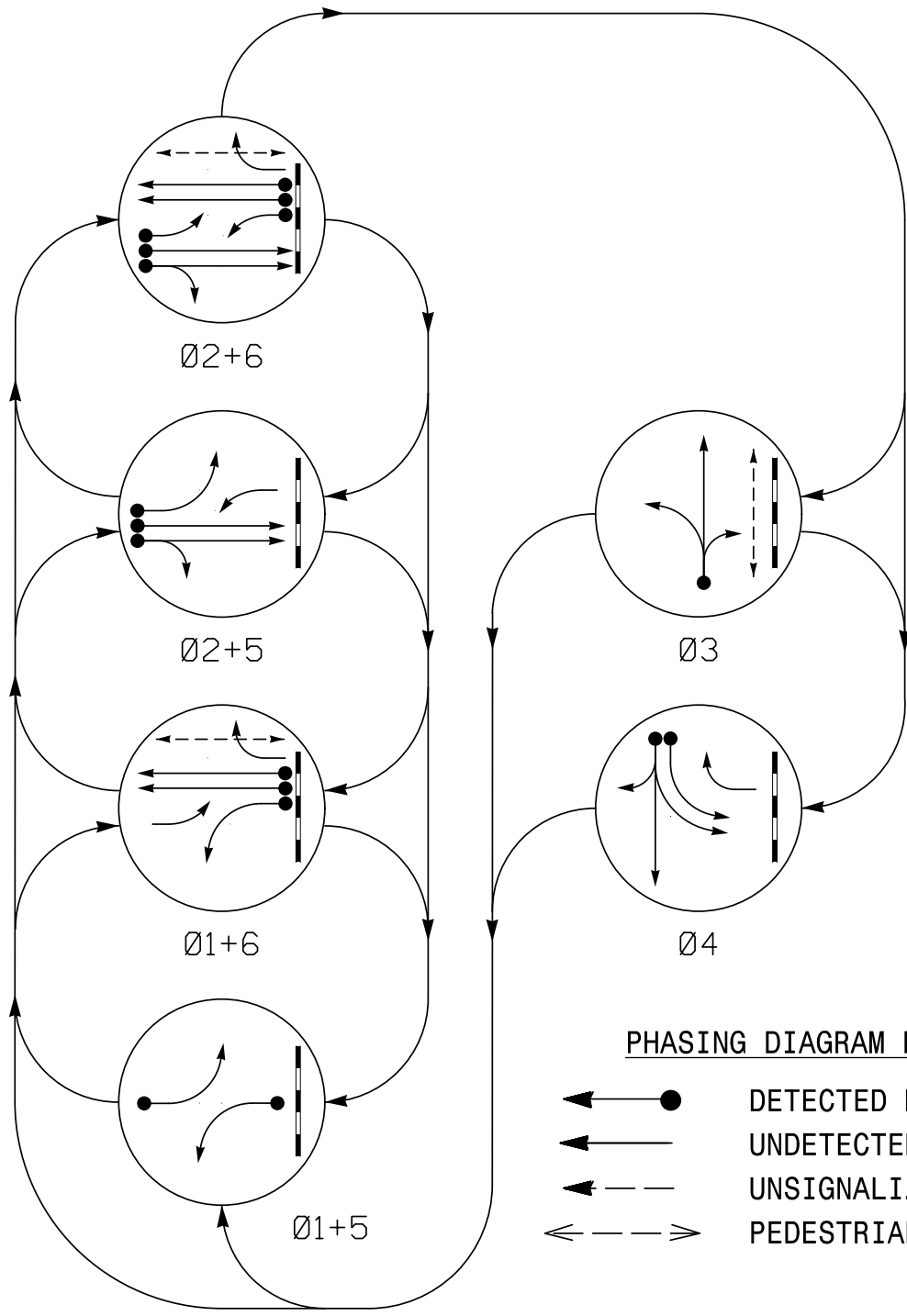
PROJECT REFERENCE NO.	SHEET NO.
U-5797	Fig. 18.0

6 Phase
Fully Actuated
w/ Railroad Preemption
Signal System #D06-18 Lumberton
NC 211 (N. Roberts Avenue)

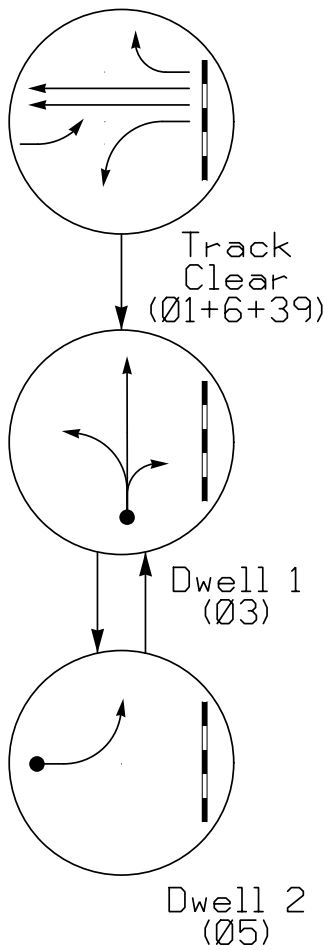
NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Program phase 40 to run concurrently with all phases during normal operation. Phase 39 must be incompatible with phase 40 and included as a track clear phase.
- The Division Traffic Engineer will determine the hours of use for each phasing plan.
- This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

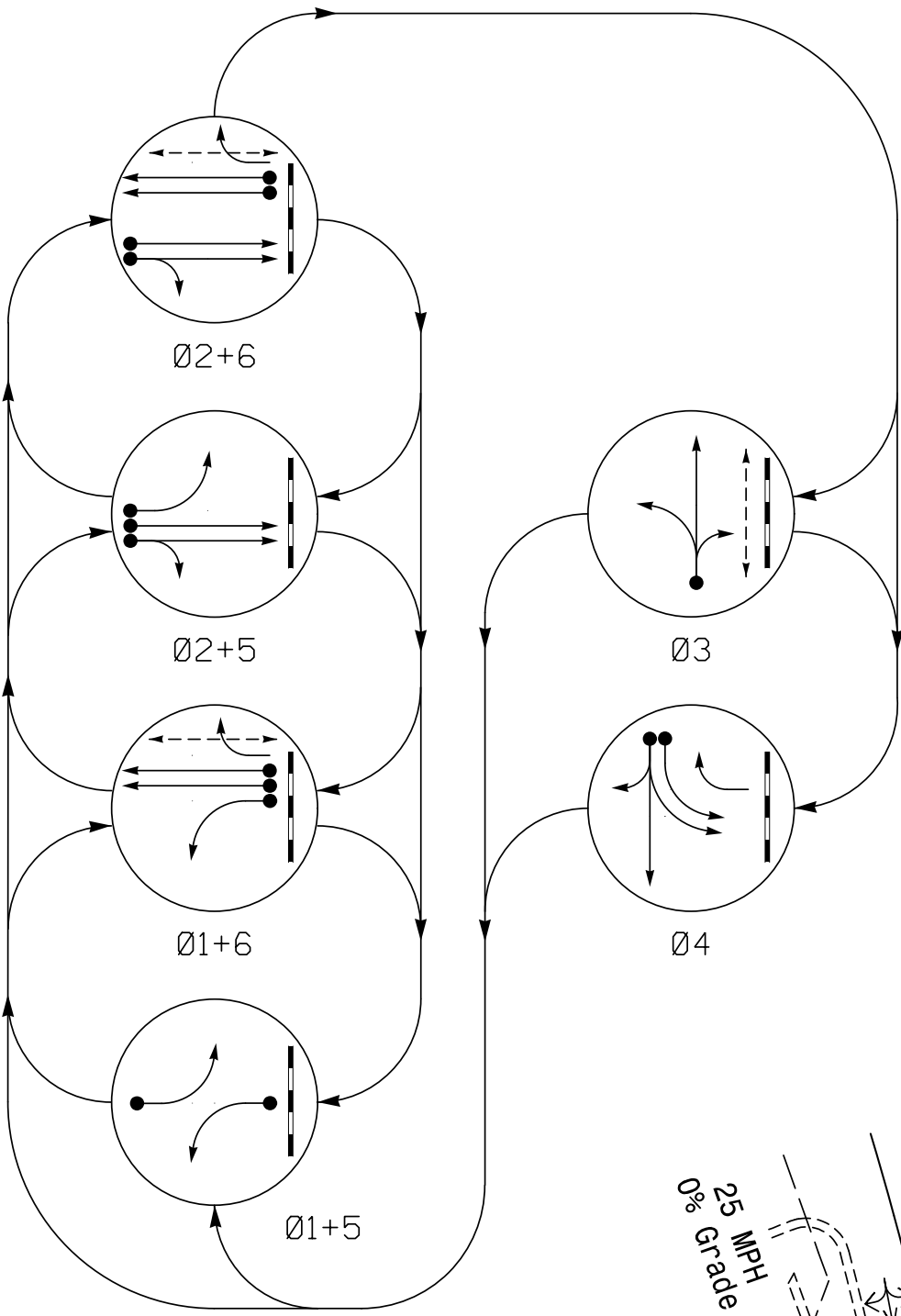
DEFAULT PHASING DIAGRAM



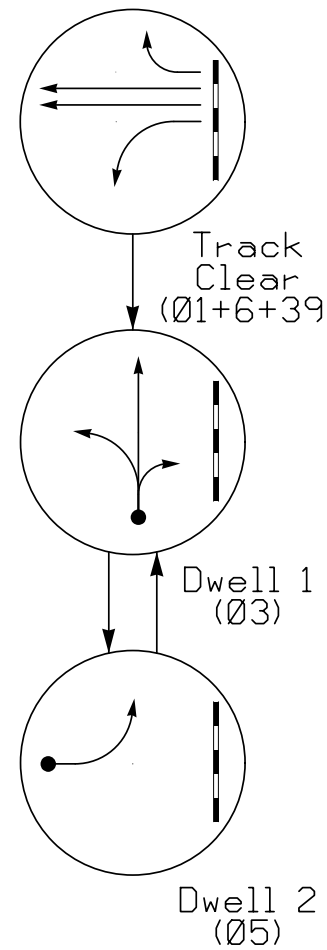
DEFAULT RAIL
PREEMPT PHASES
(High Priority)



ALTERNATE PHASING DIAGRAM



ALTERNATE RAIL
PREEMPT PHASES
(High Priority)



DEFAULT TABLE OF OPERATION

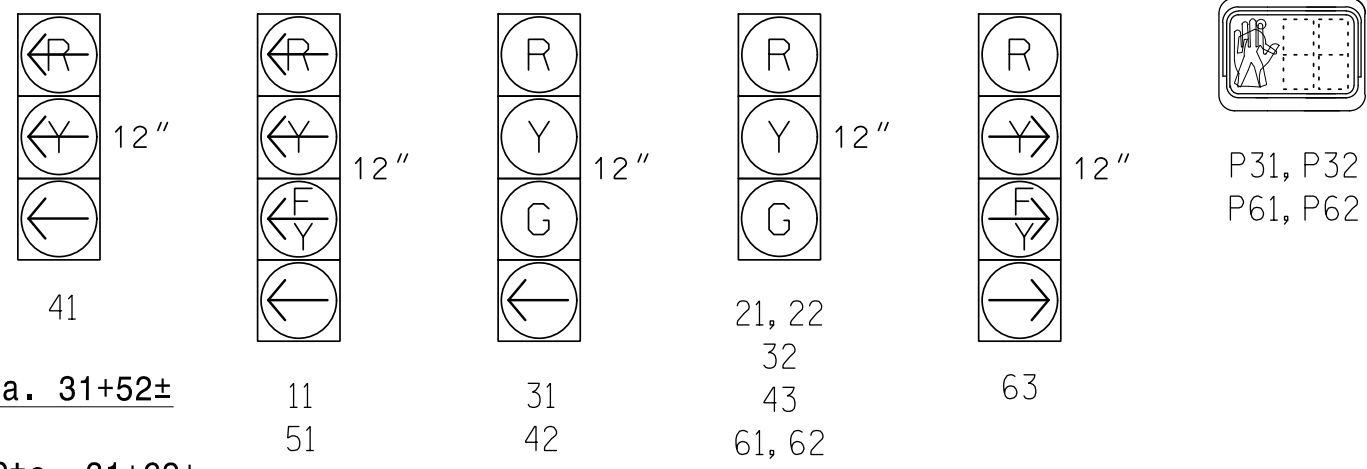
SIGNAL FACE	PHASE											
	Ø 1 + 5	Ø 1 + 6	Ø 2 + 5	Ø 2 + 6	Ø 3	Ø 4	R	DW	DW	F	DRK	DRK
11	←	←	←	←	←	←	←	←	←	←	←	←
21, 22	R	R	G	G	R	R	R	R	R	R	R	R
31	R	R	R	R	G	G	R	R	R	R	R	R
32	R	R	R	R	G	G	R	R	R	R	R	R
41	←	←	←	←	←	←	←	←	←	←	←	←
42	R	R	R	R	G	G	R	R	R	R	R	R
43	R	R	R	R	G	G	R	R	R	R	R	R
51	←	←	←	←	←	←	←	←	←	←	←	←
61, 62	R	G	R	G	R	R	G	R	R	R	R	R
63	R	←	R	←	←	←	←	←	←	←	←	←
P31, P32	DW	DW	DW	DW	W	DW	DW	DW	DW	DRK	DRK	DRK
P61, P62	DW	W	DW	W	DW	DW	DW	DW	DW	DRK	DRK	DRK

ALTERNATE TABLE OF OPERATION

SIGNAL FACE	PHASE											
	Ø 1 + 5	Ø 1 + 6	Ø 2 + 5	Ø 2 + 6	Ø 3	Ø 4	R	DW	DW	F	DRK	DRK
11	←	←	←	←	←	←	←	←	←	←	←	←
21, 22	R	R	G	G	R	R	R	R	R	R	R	R
31	R	R	R	R	G	G	R	R	R	R	R	R
32	R	R	R	R	G	G	R	R	R	R	R	R
41	←	←	←	←	←	←	←	←	←	←	←	←
42	R	R	R	R	G	G	R	R	R	R	R	R
43	R	R	R	R	G	G	R	R	R	R	R	R
51	←	←	←	←	←	←	←	←	←	←	←	←
61, 62	R	G	R	G	R	R	G	R	R	R	R	R
63	R	←	R	←	←	←	←	←	←	←	←	←
P31, P32	DW	DW	DW	DW	W	DW	DW	DW	DW	DRK	DRK	DRK
P61, P62	DW	W	DW	W	DW	DW	DW	DW	DW	DRK	DRK	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



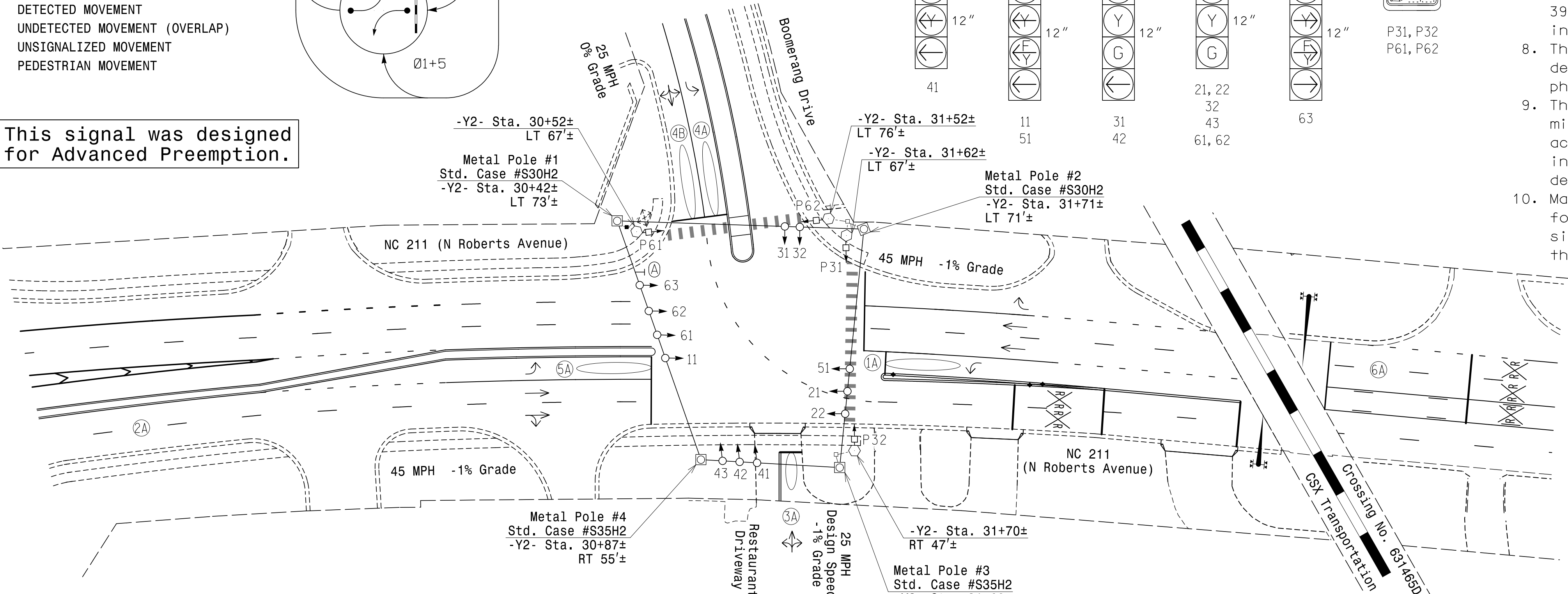
MAXTIME PREEMPTION CHART

FUNCTION		PRE 1
Type	RAIL ROAD	
Exit Phases		2, 6
Delay		0.0
Max Presence		0
Enter Min Green		1
Enter Walk		1
Enter Ped Clear		4
Enter Yellow Change		4.6
Enter Red Clear		3.7
Track Green		37
Track Yellow Change		4.6
Track Red Clear		2.4
Dwell Green		7
Exit Min Green		255 *
Exit Yellow Change		25.5 *
Exit Red Clear		25.5 *
Call Extend Time		1.0
Exit Type	EXIT PHASES	
Ped Clear Through Yellow		Y
Require All Red Entry		N

* Directs controller to use default phase timing.

This signal was designed for Advanced Preemption.

PHASING DIAGRAM DETECTION LEGEND
● DETECTED MOVEMENT
← UNDETECTED MOVEMENT (OVERLAP)
--- UNSIGNALIZED MOVEMENT
--- PEDESTRIAN MOVEMENT



MAXTIME TIMING CHART

FEATURE	PHASE						39	40
	1	2	3	4	5	6		
Walk *	-	-	13	-	-	14		
Ped Clear *	-	-	22	-	-	17		
Min Green	7	12	7	7	7	12		
Passage *	2.0	2.0	2.0	2.0	2.0	2.0		
Max 1 *	15	90	20	20	15	90		
Yellow Change	3.0	4.6	3.2	3.2	3.0	4.6	4.6	4.6
Red Clear	2.4	1.8	3.3	3.7	3.4	1.8	2.4	3.7
Added Initial *	-	-	-	-	-	-		
Maximum Initial *	-	-	-	-	-	-		
Time Before Reduction *	-	-	-	-	-	-		
Time To Reduce *	-	-	-	-	-	-		
Minimum Gap	-	-	-	-	-	-		
Advance Walk	-	-	6	-	-	7		
Non Lock Detector	X	-	-	X	X	-		
Vehicle Recall	-	MIN RECALL	-	-	-	MIN RECALL		
Dual Entry	-	-	-	-	-	-		

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

MAXTIME DETECTOR INSTALLATION CHART

DETECTOR				PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	NEW CARD
1A	6X40	0	*	*	1	15**	-	X	-	X	*
					6 #	-	-	X	-	X	*
3A	6X20	0	*	*	3	5	-	X	-	X	*
4A	6X40	0	*	*	4	-	-	X	-	X	*
4B	6X40	0	*	*	4	5	-	X	-	X	*
					5	15**	-	X	-	X	*
5A	6X40	0	*	*	2 #	-	-	X	-	X	*

* Multi-zone Microwave Detection Zone

** Disable Delay During Alternate Phasing

Disable Phase Call for Loop During Alternate Phasing

RADAR DETECTION SYSTEM

FUNCTION	SENSOR 1 - (2A)	SENSOR 2 - (6A)
Channel	1	2
Phase	2	6
Direction of Travel	EB	WB
Detection Zone (ft)	500 - 100	500 - 100
Enable Speed	Y	Y
Speed Range (mph)	35 - 100	35 - 100
Enable Estimated Time of Arrival	Y	Y
Estimated Time of Arrival (sec)	2.5 - 6.5	2.5 - 6.5

LEGEND

PROPOSED	EXISTING

Signal Upgrade - Final Design

STV Engineers, Inc.
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Charlotte, NC 28203
(704) 372-1885
NC License Number F-0991

Prepared for the Offices of:
Transportation Mobility and Safety
UNIVERSITY OF NORTH CAROLINA
STATE OF NORTH CAROLINA
Signal Design Section

NC 211 (N Roberts Avenue)
at
Boomerang Drive /
Restaurant Driveway
Robeson County Lumberton
Division 6
PLAN DATE: Jan 2026
REVIEWED BY: B.J. Roth-Roffy
PREPARED BY: J.C. Grimm
REVIEWED BY: T.M. Woody

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

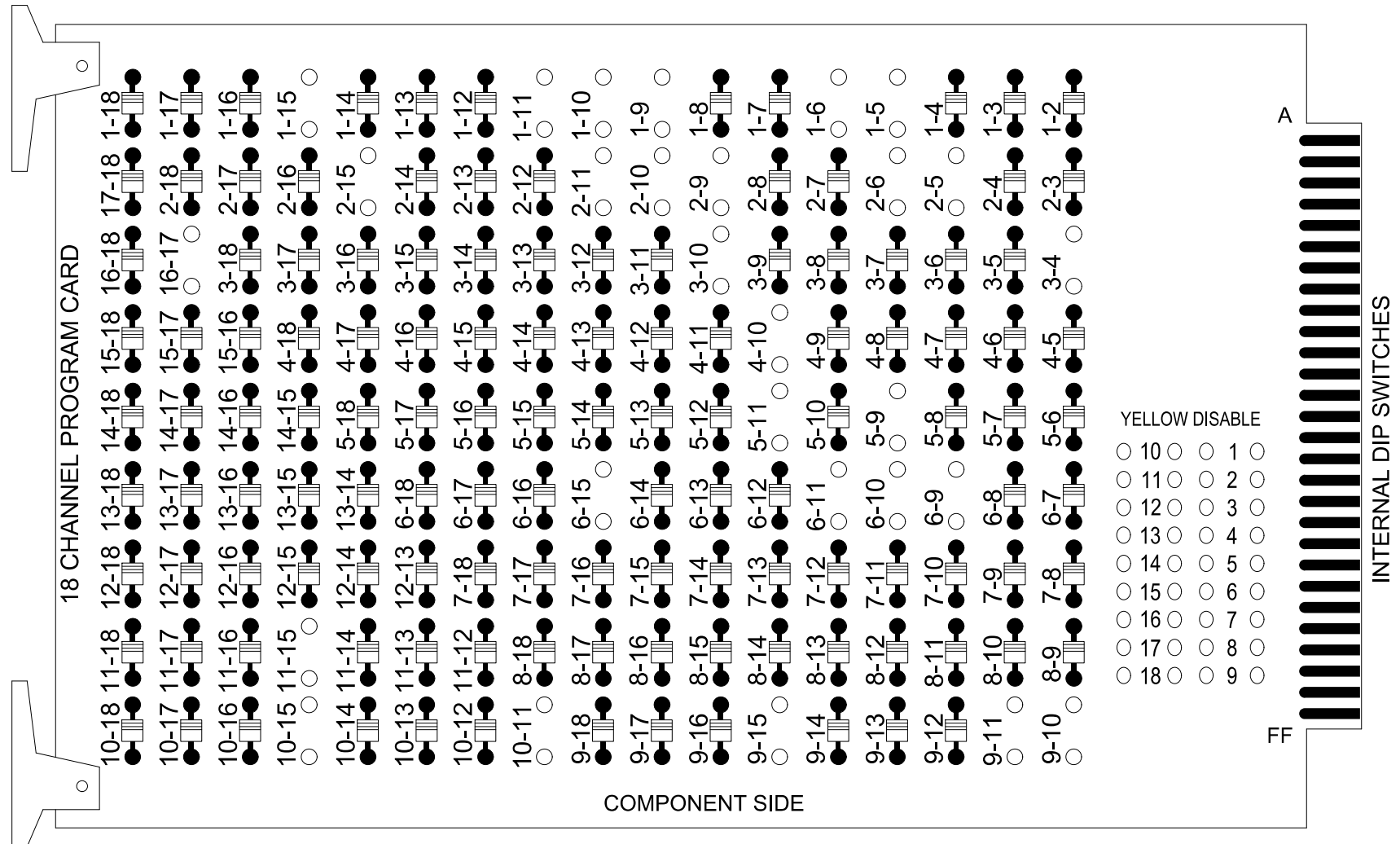
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NORTH CAROLINA
PROFESSIONAL
SEAL
040329
ENGINEER
T.M. WOODY

1/27/2026
DATE
SIC. INVENTORY NO. 06-1387

18 CHANNEL IP CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

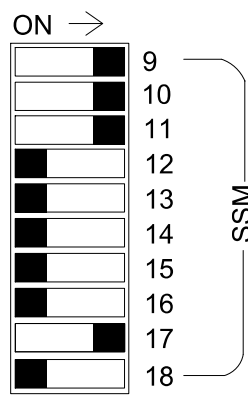
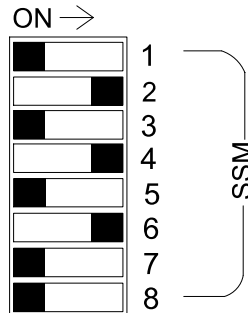
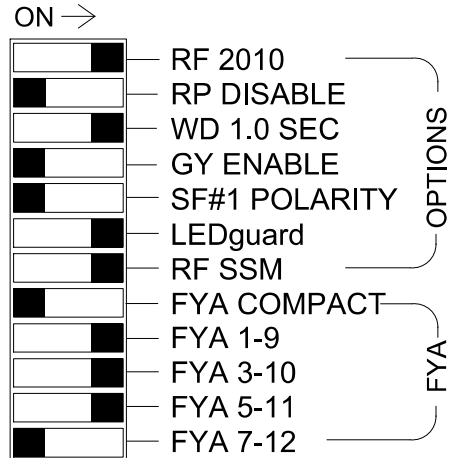
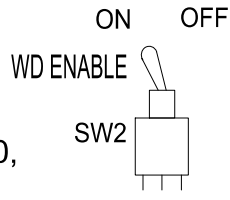
REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-10, 1-11, 1-15, 2-5, 2-6, 2-9, 2-10, 2-11, 2-15, 3-4, 3-10, 4-10, 5-9, 5-11, 6-9, 6-10, 6-11, 6-15, 9-10, 9-11, 9-15, 10-11, 10-15, 11-15, and 16-17.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that the Red Enable is active at all times during normal operation.
- Integrate monitor with Ethernet network in cabinet.



■ = DENOTES POSITION OF SWITCH

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.
- Program controller to start up in phase 2 Green No Walk, 6 Green No Walk, 39 Phase Not On, and 40 Green No Walk.
- Program Phase 39 for No Startup Veh Call.
- Program phases 2, 6, and 40 for Min Recall.
- If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
- The cabinet and controller are part of the #D06-17 Lumberton US 301 and SR 1997 (Fayetteville Road).

EQUIPMENT INFORMATION

Controller.....2070LX
Cabinet.....332 w/ Aux
Software.....Q-Free MAXTIME
Cabinet Mount.....Base
Output File Positions.....18 With Aux. Output File
Load Switches Used.....S1, S2, S4, S5, S7, S8, S9, S12, AUX S1, AUX S2, AUX S3, AUX S4

Phases Used.....1, 2, 3, 4, 5, 6, 6PED, 3PED
Overlap "1".....*
Overlap "2".....*
Overlap "3".....*
Overlap "4".....NOT USED
Overlap "5".....*
Overlap "7".....*

*See overlap programming detail on sheet 2

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5			S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6	
CMU CHANNEL NO.	1	2	13	3	4			14	5	6	15	7	8	16	9	10	17	11	12	18	
PHASE	1	2	2 PED	OL7	4			4 PED	5	6	6 PED	7	8	3 PED	OL1	OL2	OL5	OL3	OL4	SPARE	
SIGNAL HEAD NO.	11★	21.22	NU	63	41	42	43	NU	51★	61,62	P61, P62	NU	NU	P31, P32	11★	63★	31	32	51★	NU	NU
RED		128				101	101			134						A124	A111	A111			
YELLOW	★	129		★		102	102		★	135							A112	A112			
GREEN		130				103	103			136							A113	A113			
RED ARROW					101										A121				A114		
YELLOW ARROW					102										A122	A125			A115		
FLASHING YELLOW ARROW															A123	A126			A116		
GREEN ARROW	127			118	103	103			133								A113				
											119			110							
											121			112							

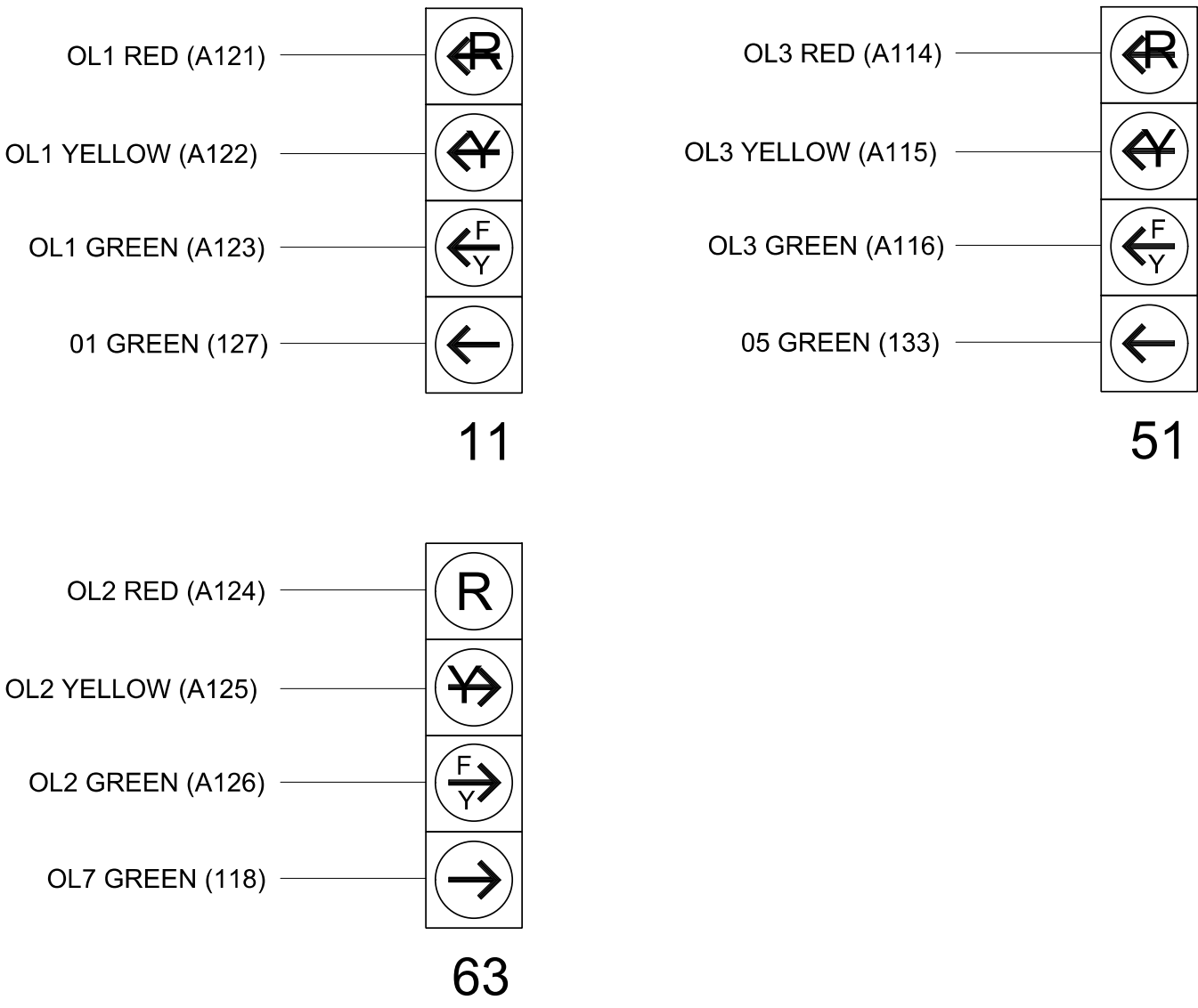
NU = Not Used

★ Denotes install load resistor. See load resistor installation detail this sheet.

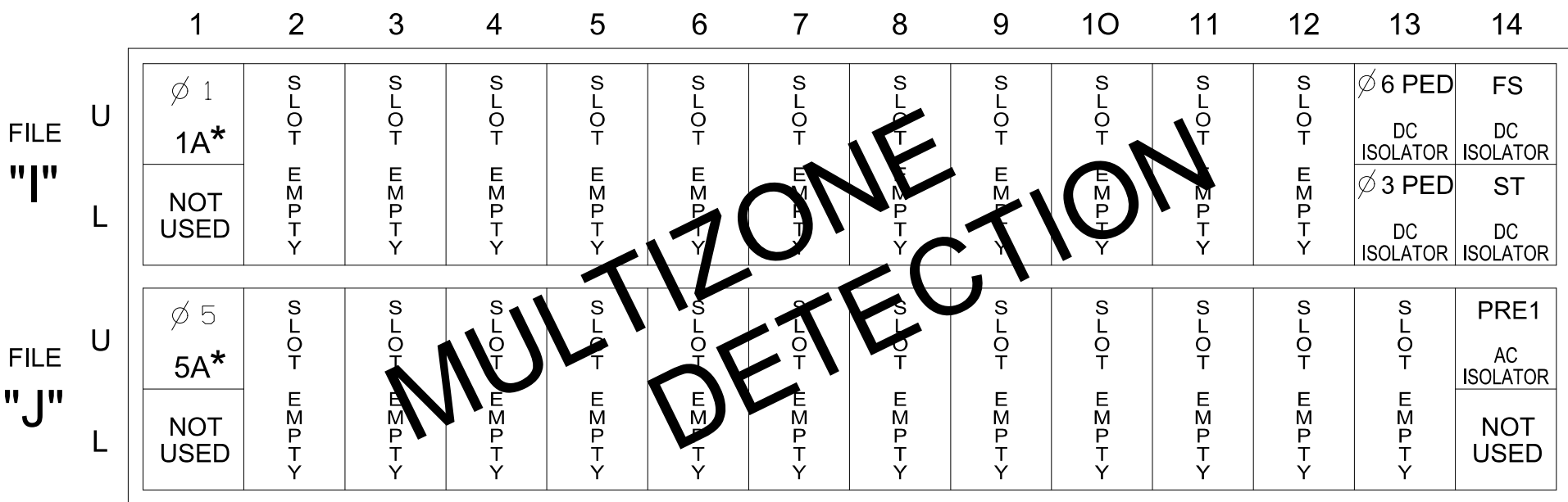
★ See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



INPUT FILE POSITION LAYOUT
(front view)



EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME
PRE = PREEMPT

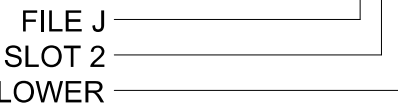
* Reflects the detector utilized in the "MAXTIME DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOPS 1A & 5A" on Sheet 2.

INPUT FILE CONNECTION & PROGRAMMING CHART

PED PUSH BUTTONS	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE
P61,P62	TB8-7,9	I13U	68	34	6	PED 6
P31,P32	TB8-8,9	I13L	70	36	8	PED 3

NOTE:
INSTALL DC ISOLATOR IN INPUT FILE SLOT I13.

INPUT FILE POSITION LEGEND: J2L

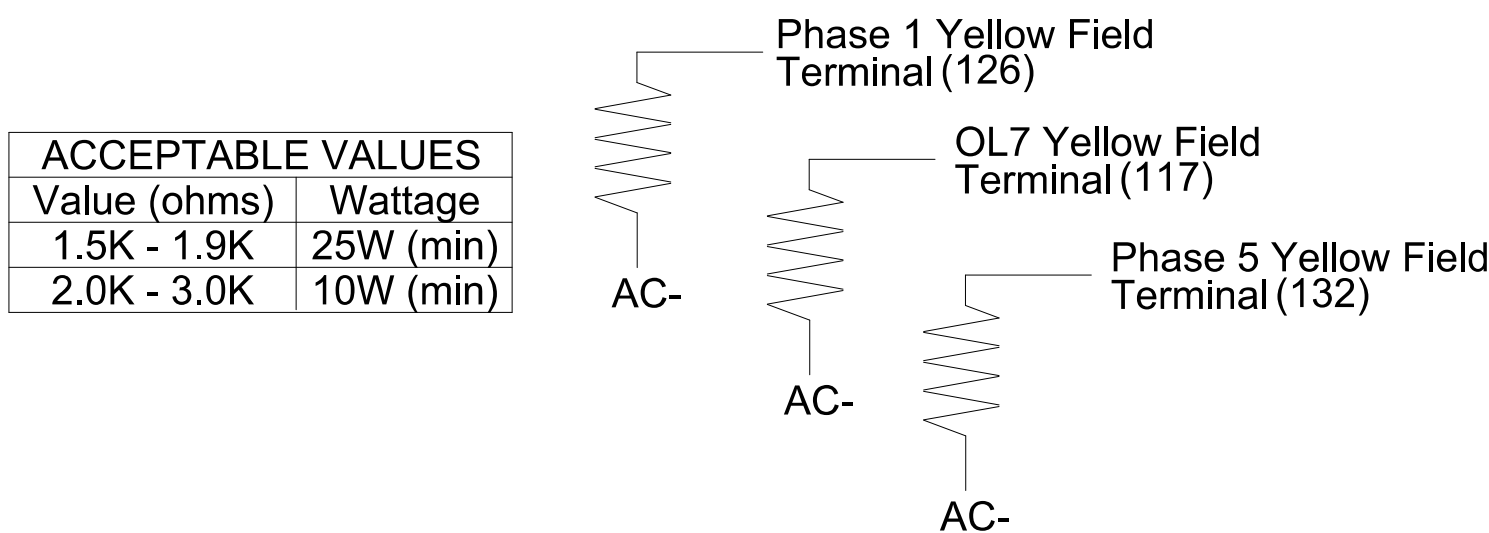


SPECIAL DETECTOR NOTE

Install a multizone microwave detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer -approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown)



ACCEPTABLE VALUES	
Value (ohms)	Wattage
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)

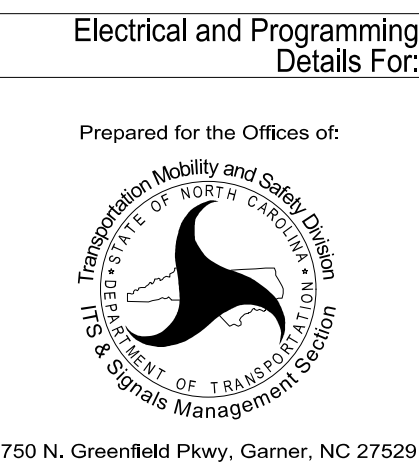
COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.



STV Engineers, Inc.
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Charlotte, NC 28203
(704) 372-1885
NC License Number F-0991

Final Design
Electrical Details - Sheet 1 of 4



NC 211 (N. Roberts Avenue)
at
Boomerang Drive / Restaurant Driveway

Division 6	Robeson County	Lumberton
PLAN DATE: Jan 2026	REVIEWED BY: B.J. Roth-Roffy	
PREPARED BY: J.C. Grimm	REVIEWED BY: T.M. Moody	
REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



DocuSigned by
Trust Moody
1/27/2026
DATE
SIG. INVENTORY NO. 06-1387

PED 3 PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Detector >Ped Det Plans

Web Interface
Home >Controller >Detector Configuration >Pedestrian Detector

NOTICE PHASE 3 PED
ASSIGNED TO
DETECTOR 8 PED →

Detector	Descripton	Call Phase	Call Overlap
2		2	0
4		4	0
6		6	0
8		3	0

Front Panel
Main Menu >Controller >More>Channels>Channels Config

Web Interface
Home >Controller >Advanced IO>Channels>Channels Configuration

Channel Configuration

NOTE OL7 ASSIGNED
TO CHANNEL 3 →

Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
1	Phase Vehicle	1		X	X	1
2	Phase Vehicle	2		X		2
3	Overlap	7		X	X	3
4	Phase Vehicle	4		X		4
5	Phase Vehicle	5		X		5
6	Phase Vehicle	6		X	X	6
7	Phase Vehicle	7		X		7
8	Phase Vehicle	8		X	X	8
9	Overlap	1		X	X	9
10	Overlap	2		X	X	10
11	Overlap	3		X		11
12	Overlap	4		X		12
13	Phase Ped	2				13
14	Phase Ped	4				14
15	Phase Ped	6				15
16	Phase Ped	3				16
17	Overlap	5		X	X	17
18	Overlap	6		X		18

NOTICE PHASE 3 PED
ASSIGNED TO CHANNEL 16 →

↑
NOTE: ALL RED FLASH
↑

MAXTIME OVERLAP PROGRAMMING DETAIL
FOR DEFAULT PHASING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

Overlap	1	2	3	5	7
Type	FYA - 4 Section	FYA - 4 Section	FYA - 4 Section	Normal	Normal
Included Phases	2	6	6	3	4
Modifier Phases	1	4	5	-	-
Modifier Overlaps	-	-	-	-	-
Trail Green	0	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0	0.0

MAXTIME OVERLAP PROGRAMMING DETAIL
FOR ALTERNATE PHASING

Front Panel
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface
Home >Controller >Overlap Configuration >Overlaps

In the table view of the web interface, right click on "Overlap" in the top left corner of the table. Copy the entire contents of Overlap Plan 1. Paste Overlap Plan 1 into Overlap Plan 2. Modify Overlap Plan 2 as shown below and save changes.

Overlap Plan 2

Overlap	1	2	3	5	7
Type	FYA - 4 Section	FYA - 4 Section	FYA - 4 Section	Normal	Normal
Included Phases	-	6	-	3	4
Modifier Phases	1	4	5	-	-
Modifier Overlaps	-	-	-	-	-
Trail Green	0	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0	0.0

←
NOTICE
INCLUDED
PHASE

SEQUENCE DETAIL

Front Panel
Main Menu >Controller >Sequence & Phs Config>Sequences

Web Interface
Home >Controller >Sequence

Sequence 1

Ring	Sequence Data
1	1,2,a,3,4,b
2	5,6,a,b
3	39,c,40,d

MAXTIME DETECTOR PROGRAMMING DETAIL
FOR ALTERNATE PHASING LOOPS 1A & 5A

Front Panel
Main Menu >Controller >Detector >Veh Det Plans

Web Interface
Home >Controller >Detector Configuration >Vehicle Detectors

In the table view of web interface right click on "Detector" in the top left corner of the table. Copy the entire contents of Detector Plan 1. Paste Detector Plan 1 into Detector Plan 2. Modify Detector Plan 2 as shown below and save changes.

1A

Plan 2

Detector	Call Phase	Delay
1	1	-
29	0	-

5A

Detector	Call Phase	Delay
15	5	-
31	0	-

MAXTIME STARTUP AND SOFTWARE FLASH
PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Unit

Web Interface
Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

StartUp Clearance Hold
6

Unit Flash Parameters

All Red Flash Exit Time
6

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

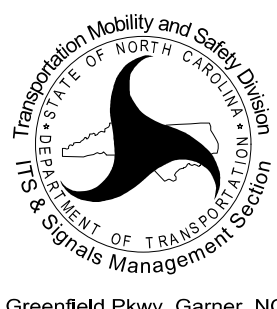
Final Design
Electrical Details - Sheet 2 of 4



STV Engineers, Inc.
2151 Hawkins St, Suite 1400
Charlotte, NC 28203
(704) 372-1885
NC License Number F-0991

Electrical and Programming
Details For:

Prepared for the Offices of:



750 N. Greenfield Pkwy, Garner, NC 27529

NC 211 (N. Roberts Avenue)
at
Boomerang Drive / Restaurant Driveway

Division 6Robeson CountyLumberton

PLAN DATE: Jan 2026REVIEWED BY: B.J. Roth-Roffy

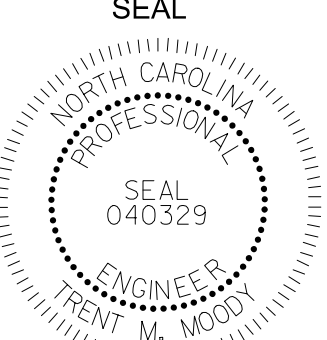
PREPARED BY: J.C. GrimmREVIEWED BY: T.M. Moody

REVISIONS

INIT. DATE

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SIGNATURES COMPLETED

SEAL



SEAL
040329
ENGINEER
TRENT M. MOODY

DocuSigned by
Trent Moody
1/27/2026
DATE

SIG. INVENTORY NO. 06-1387

PREEMPTION PROGRAMMING

Front Panel
Main Menu >Controller >Preemption >Preempt Phasing/Preempt Parameters

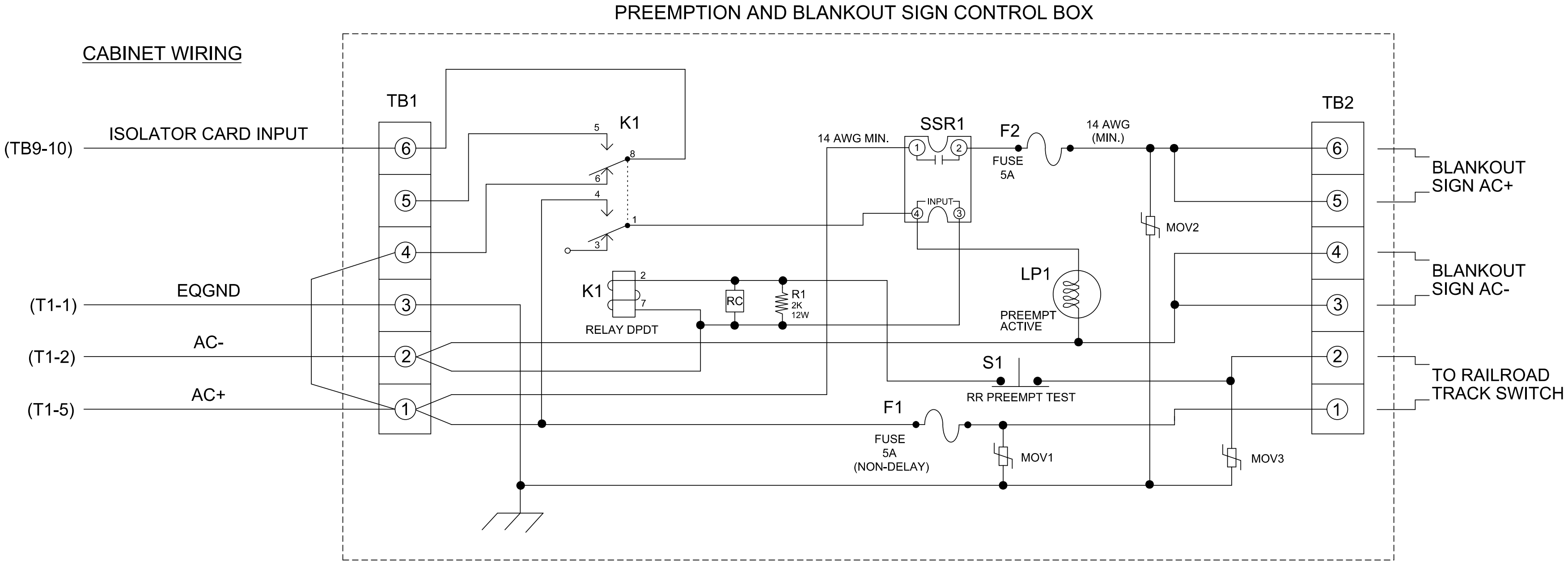
Web Interface
Home >Controller >Preempt Configuration >Preempts

Preempt Configuration

Preempt	1
Enabled	Enabled
Type	Rail Road
Track Phases	1, 6, 39
Track Overlaps	1, 2, 3
Dwell Phases	3
Dwell Peds	-
Dwell Overlaps	5
Cycling Phases	3, 5
Cycling Peds	-
Cycling Overlaps	3, 5
Exit Phases	2, 6
Exit Overlaps	1, 2, 3
Delay	0
Call Ext Time	1.0
Max Presence	0
Max Pres Act	Terminate
Enter Min Green	1
Enter Walk	1
Enter Ped Clear	4
Enter Yellow Change	4.6
Enter Red Clear	3.7
Track Green	37
Track Yellow Clr	4.6
Track Red Clear	2.4
Dwell Green	7
Exit Min Green	255
Exit Yellow Change	25.5
Exit Red Clear	25.5
Exit Type	Exit Phases
Non Locking Memory	-
Not Ovrd Flash	X
Not Ovrd Nxt Pre	-
Require All Red Entry	-
Track Clear Ovrd	X
Ped Clear During Yellow	X
Entry Omit OLTG	X
Track Reserve	X

RAILROAD PREEMPTION WIRING DETAIL

(wire as shown below)

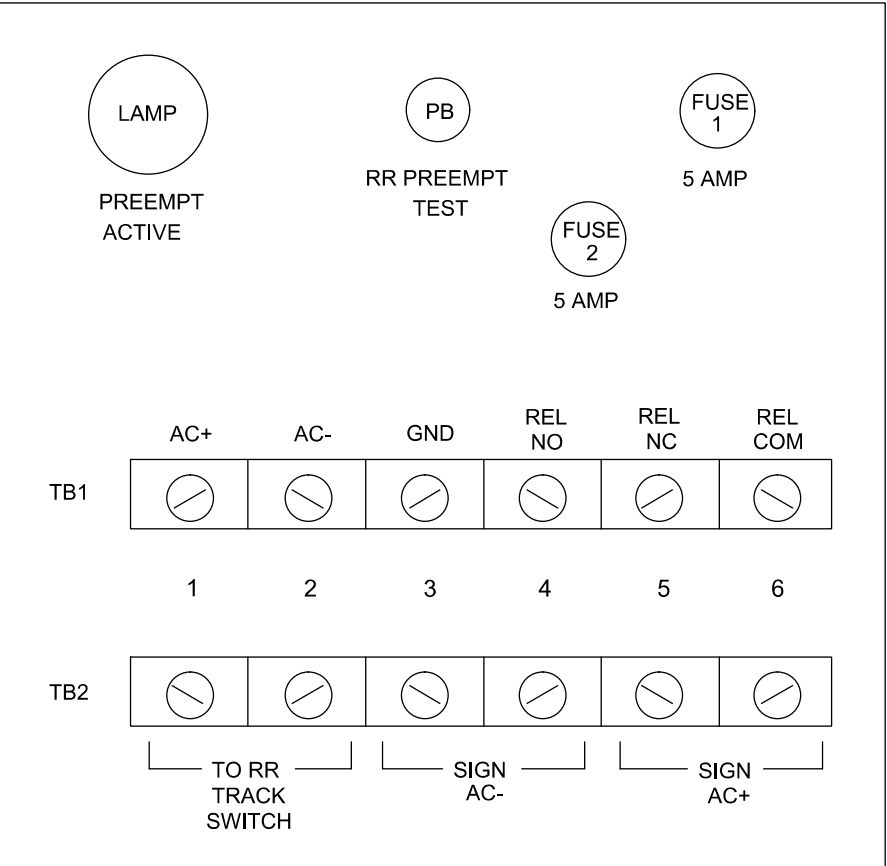


NOTES

- Relay K1 is shown in the energized (Preempt not active) normal operation state.
- Relay K1 is a DPDT with 120VAC coil with octal base.
- Relay SSR1 is a SPST (normally open) Solid State Relay with AC input and AC (25 amp) output.
- AC Isolator Card shall activate preemption upon removal of AC+ from the input (as shown above). To accomplish this set invert dip switch on AC Isolator Card.

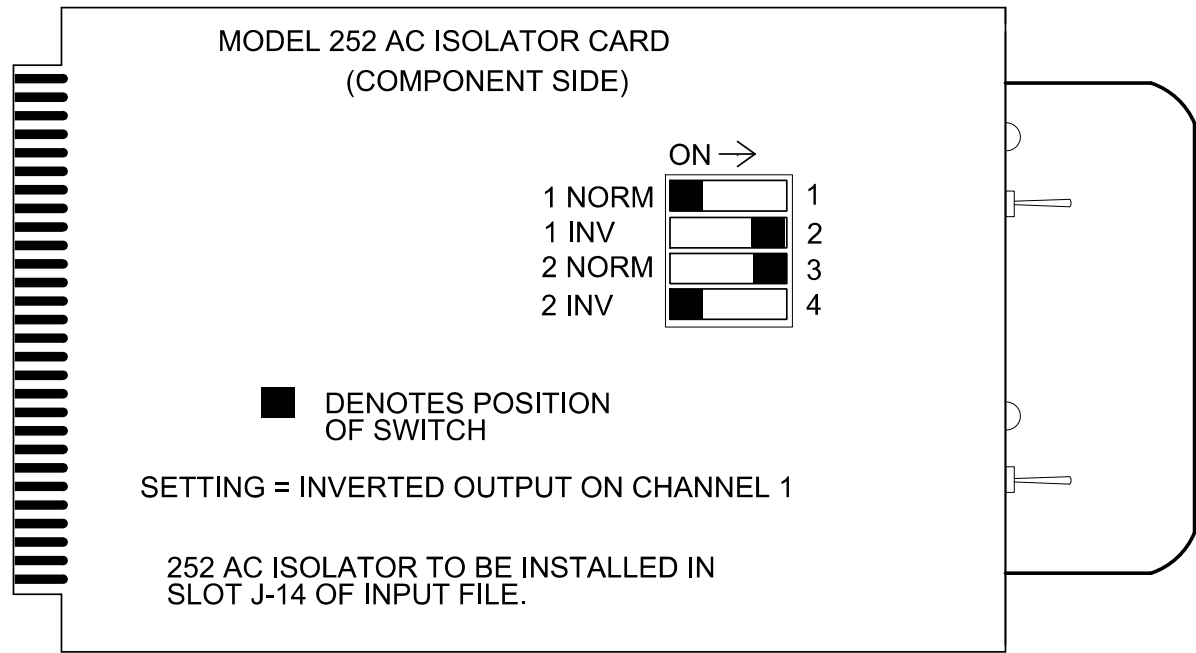
5. IMPORTANT!! A jumper must be added between input file terminals J14-E and J14-K if not already present. Also, terminal TB9-12 (on input panel) shall be connected to AC neutral (jumper may have to be added).

FRONT VIEW



PREEMPT 1 AC ISOLATOR (MODEL 252)
OUTPUT PROGRAMMING DETAIL

(set DIP switches as shown below)



Final Design
Electrical Details - Sheet 3 of 4

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Charlotte, NC 28203
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NC License Number F-0991

Electrical and Programming
Details For:

Prepared for the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

NC 211 (N. Roberts Avenue)
at
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Division 6 Robeson County Lumberton

PLAN DATE: Jan 2026 REVIEWED BY: B.J. Roth-Roffy

PREPARED BY: J.C. Grimm REVIEWED BY: T.M. Moody

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PROFESSIONAL
ENGINEER
SEAL
040329
T.M. MOODY

DocuSigned by: T.M. Moody
1/27/2026
DATE

SIG. INVENTORY NO. 06-1387

MAXTIME ALTERNATE PHASING PATTERN
PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Coordination >Patterns

Web Interface
Home >Controller >Coordination >Patterns

Pattern Parameters		
Pattern	Veh Det Plan	Overlap Plan
★	2	2

★ The Pattern number(s) are to be determined by the Division and/or City Traffic Engineer.

MAXTIME ALTERNATE PHASING ACTIVATION DETAIL

To run alternate phasing, select a Pattern that is programmed to run Overlap Plan 2 and Detector Plan 2.
A Pattern can be selected through the scheduler or manually by changing the Operational Mode.

PHASING	OVERLAP PLAN	VEH DET PLAN
ACTIVE PLAN REQUIRED TO RUN DEFAULT PHASING	1	1
ACTIVE PLAN REQUIRED TO RUN ALTERNATE PHASING	2	2

ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN OVERLAP PLAN 2 AND VEHICLE DETECTOR PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

OVERLAP PLAN 2: Modifies overlap included phases for heads 11 and 51 to run protected turns only.

VEH DET PLAN 2: Disables phase 6 call on loop 1A and reduces delay time for phase 1 call on loop 1A to 0 seconds.

Disables phase 2 call on loop 5A and reduces delay time for phase 5 call on loop 5A to 0 seconds.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1387
DESIGNED: Jan 2026
SEALED: 1/27/2026
REVISED:

Final Design
Electrical Details - Sheet 4 of 4

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Details For:

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Division 6Robeson CountyLumberton

PLAN DATE: Jan 2026

REVIEWED BY: B.J. Roth-Roffy

PREPARED BY: J.C. Grimm

REVIEWED BY: T.M. Moody

REVISIONS

INIT.

DATE

SEAL



SEAL
040329
ENGINEER
TRENT M. MOODY

DocuSigned by:
Trent Moody

1/27/2026

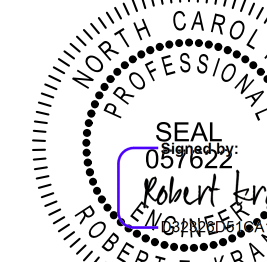
DATE

SIG. INVENTORY NO. 06-1387

5/14/99

NOTES:
1. NO WATER OR SEWER RELOCATIONS ON THIS SHEET.



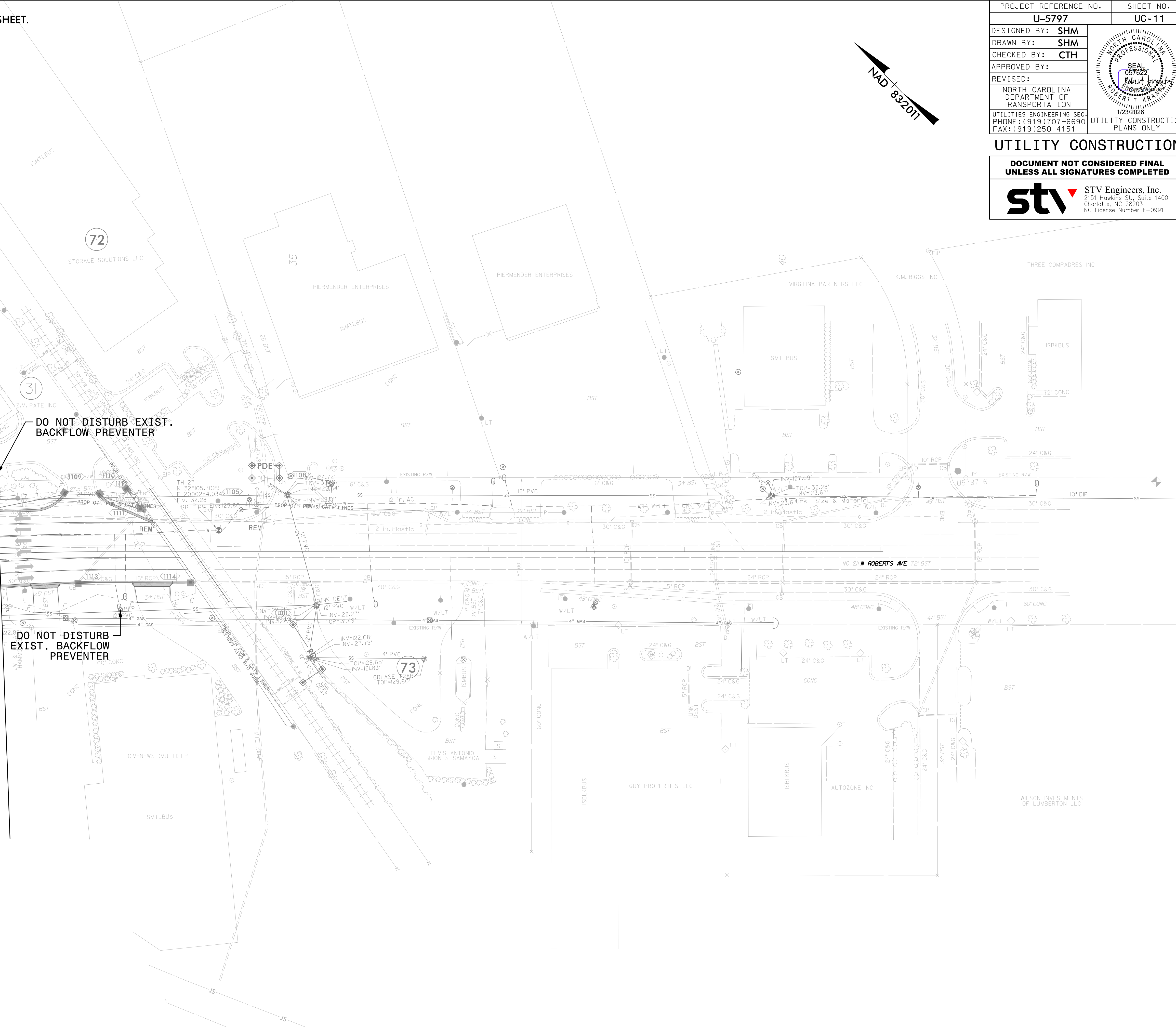
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U-5797		UC-11
DESIGNED BY:	SHM	
DRAWN BY:	SHM	
CHECKED BY:	CTH	
APPROVED BY:		
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		1/23/2026 UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

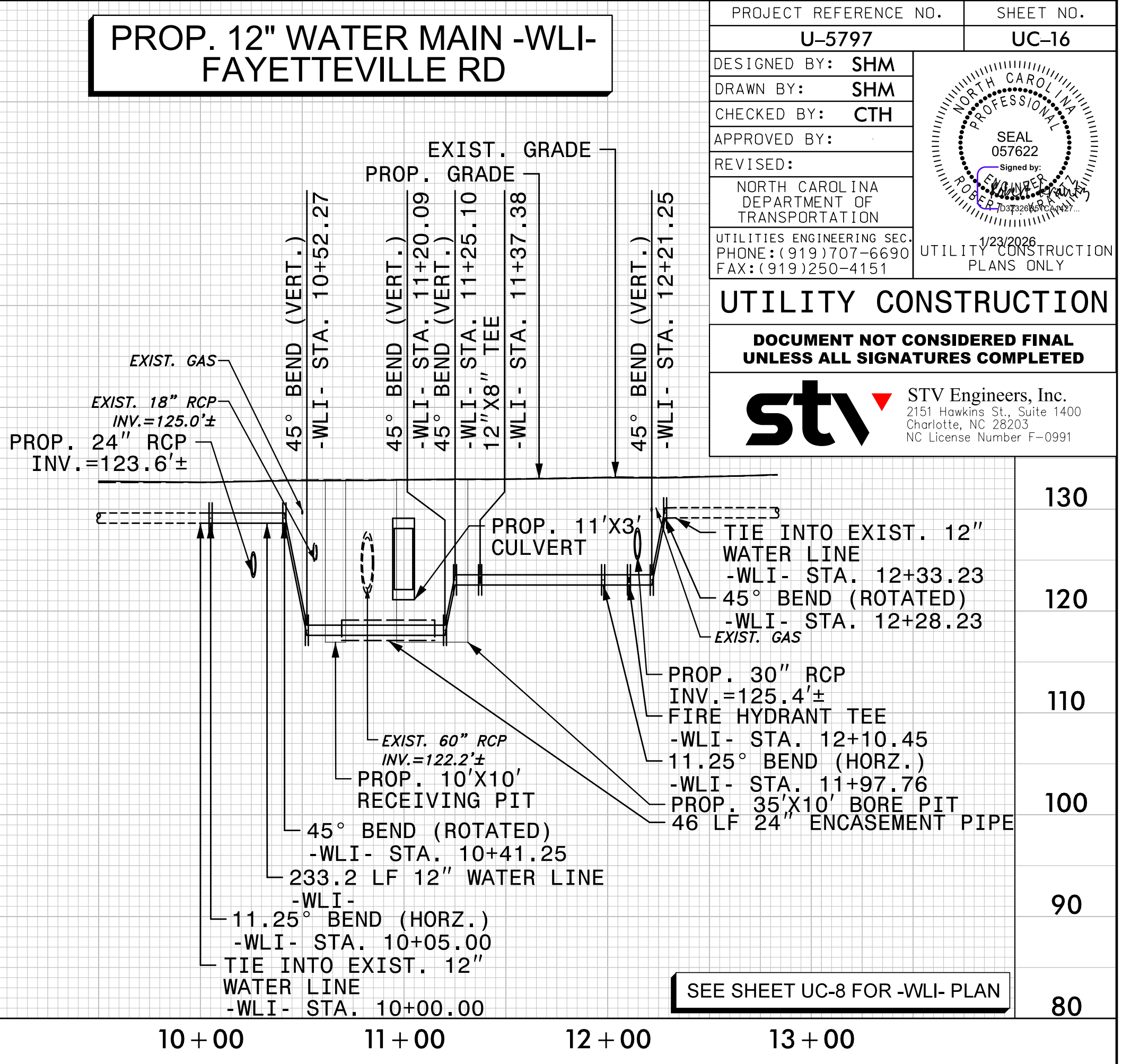
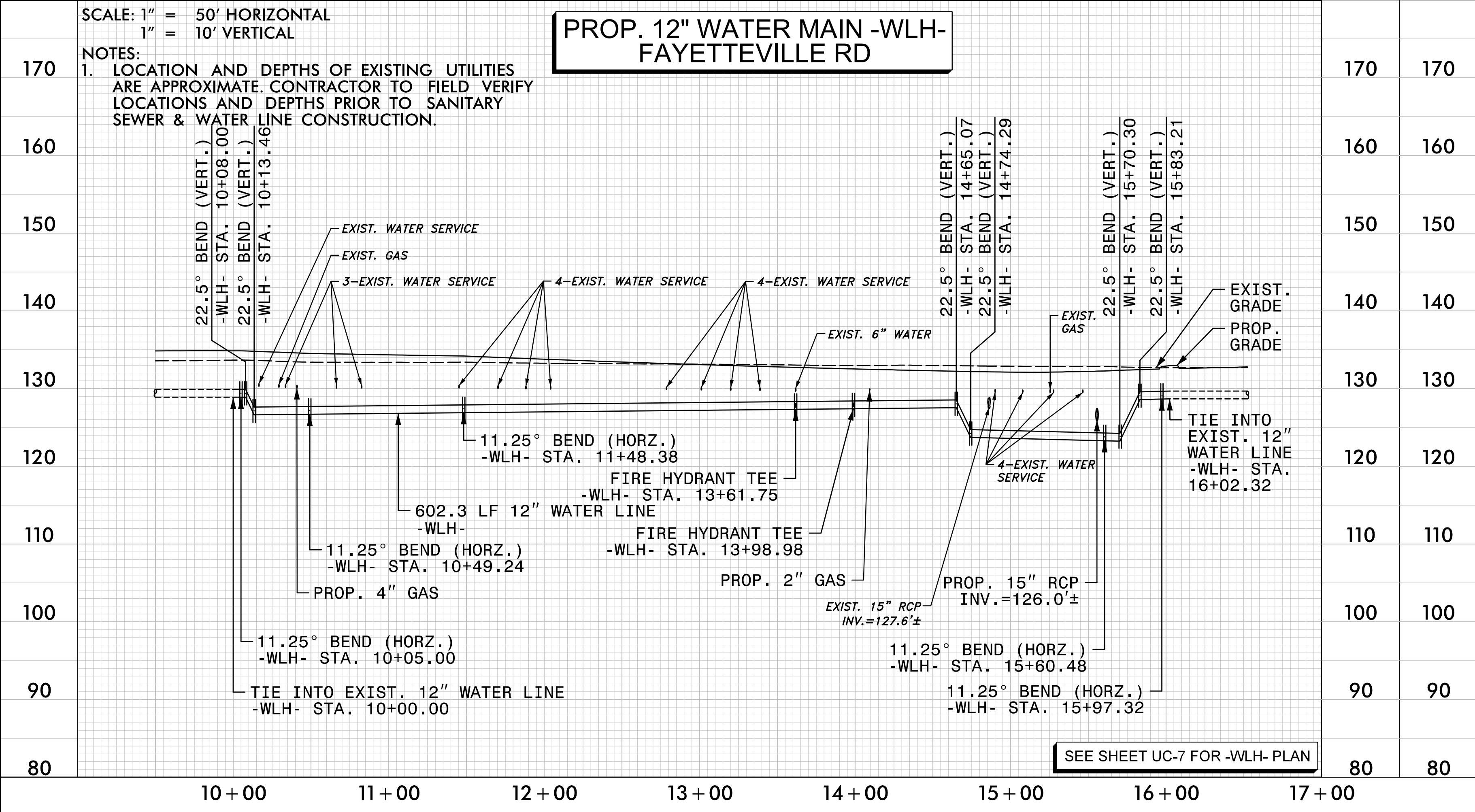
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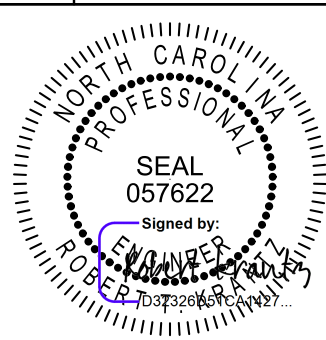
stv STV Engineers, Inc.
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MATCHLINE -Y2- STA 32+00 SEE SHEET UC-6

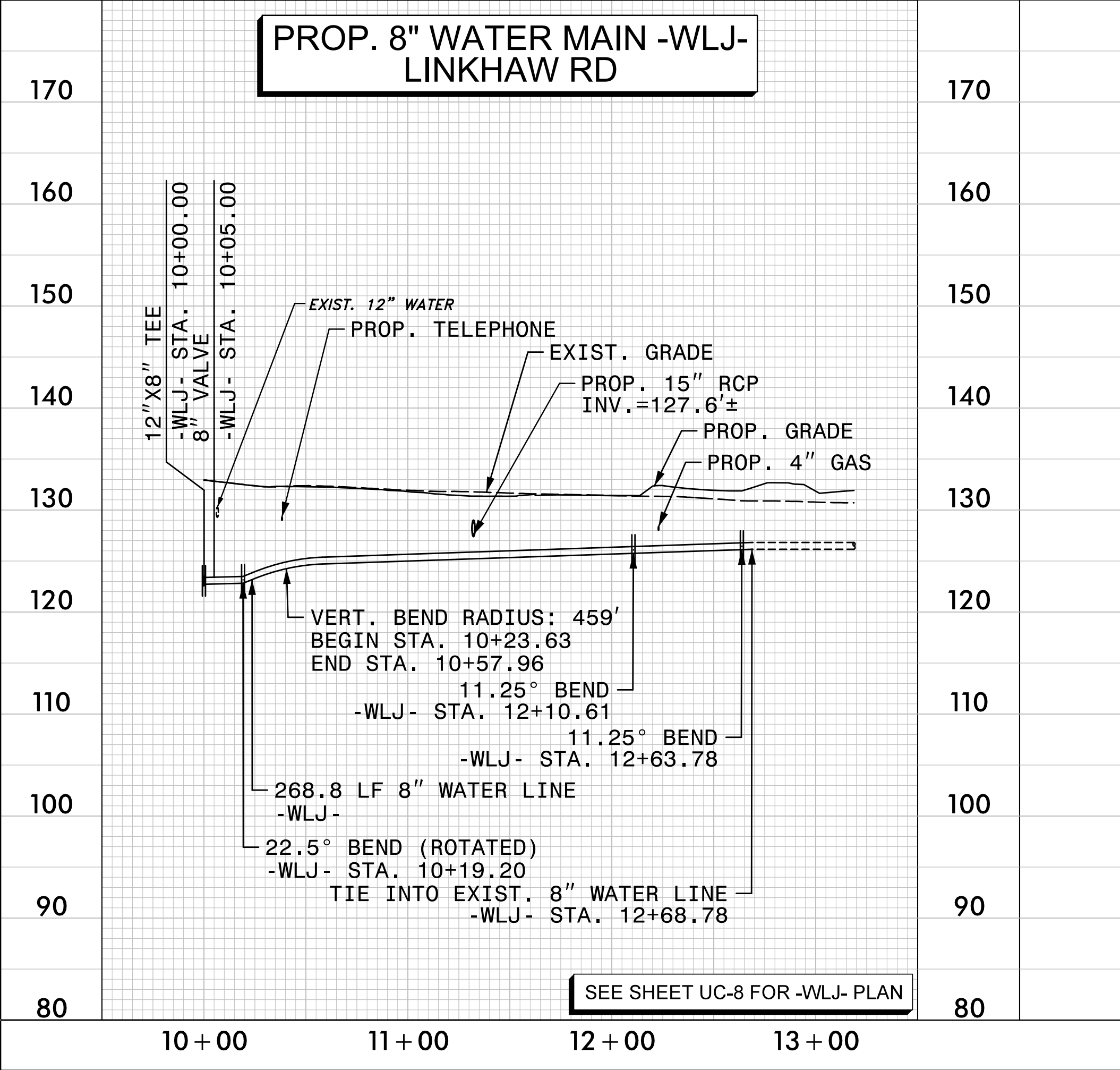


5/28/99



PROJECT REFERENCE NO.		SHEET NO.	
U-5797		UC-16	
DESIGNED BY:	SHM		
DRAWN BY:	SHM		
CHECKED BY:	CTH		
APPROVED BY:			
REVISED:		1/23/2026	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	
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JumoreH



ORIGINAL DOCUMENT SIGNED AND SEALED BY COLIN T. HUGHES ON 1/29/25 NC PE LICENSE #046708. ROBERT KRANTZ IS SIGNING THESE PLANS FOR THE REMOVAL OF WATERLINE 'K'

NOTES

X-2 THRU X-45
X-46 THRU X-47
X-48
X-49
X-50 THRU X-51
X-52 THRU X-53
X-54 THRU X-66
X-67 THRU X-75
X-76 THRU X-80
X-81
X-82 THRU X-85
X-86 THRU X-92

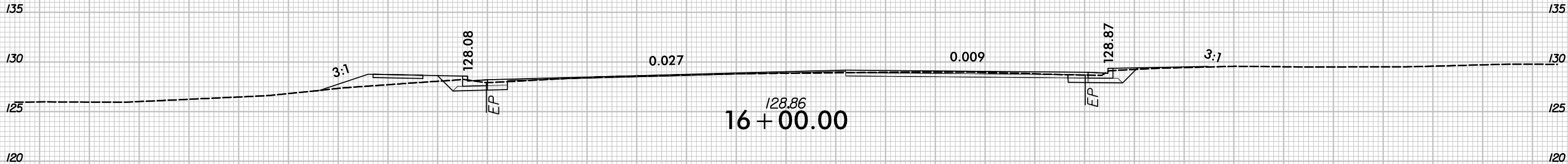
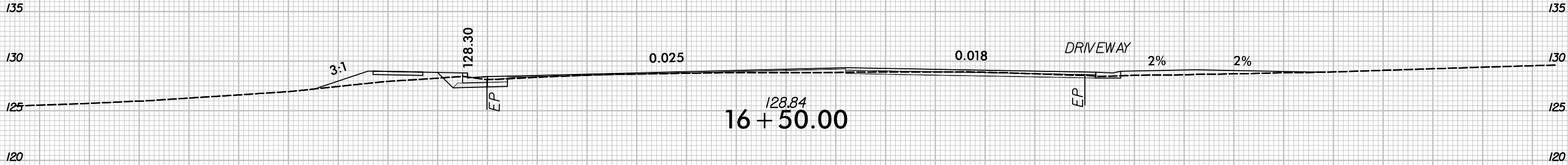
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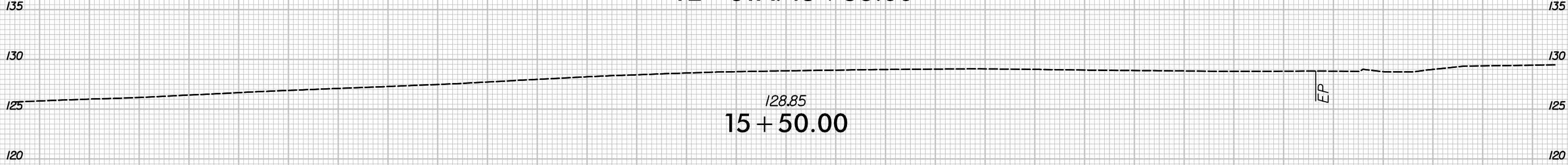
PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-54

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BEGIN CONSTRUCTION
BEGIN MILL AND OVERLAY
-Y2- STA. 15 + 53.00



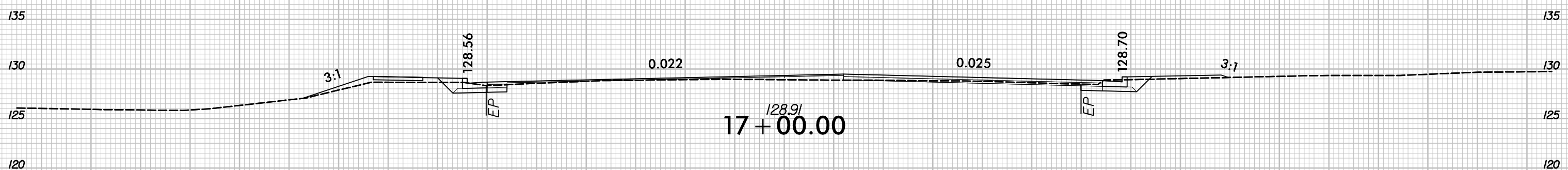
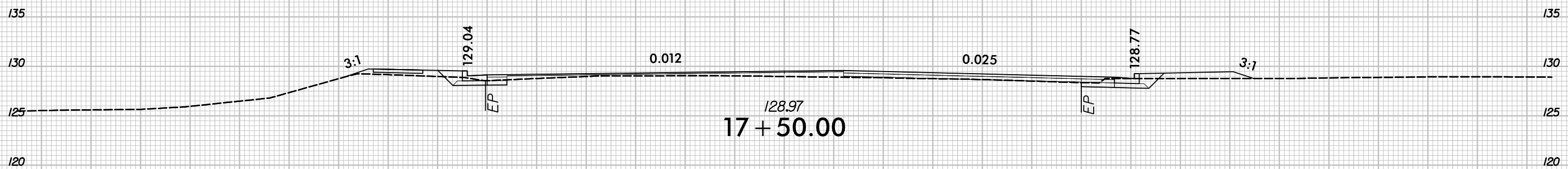
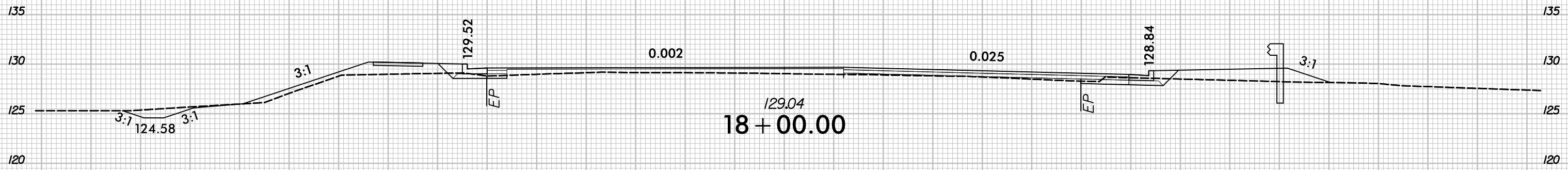
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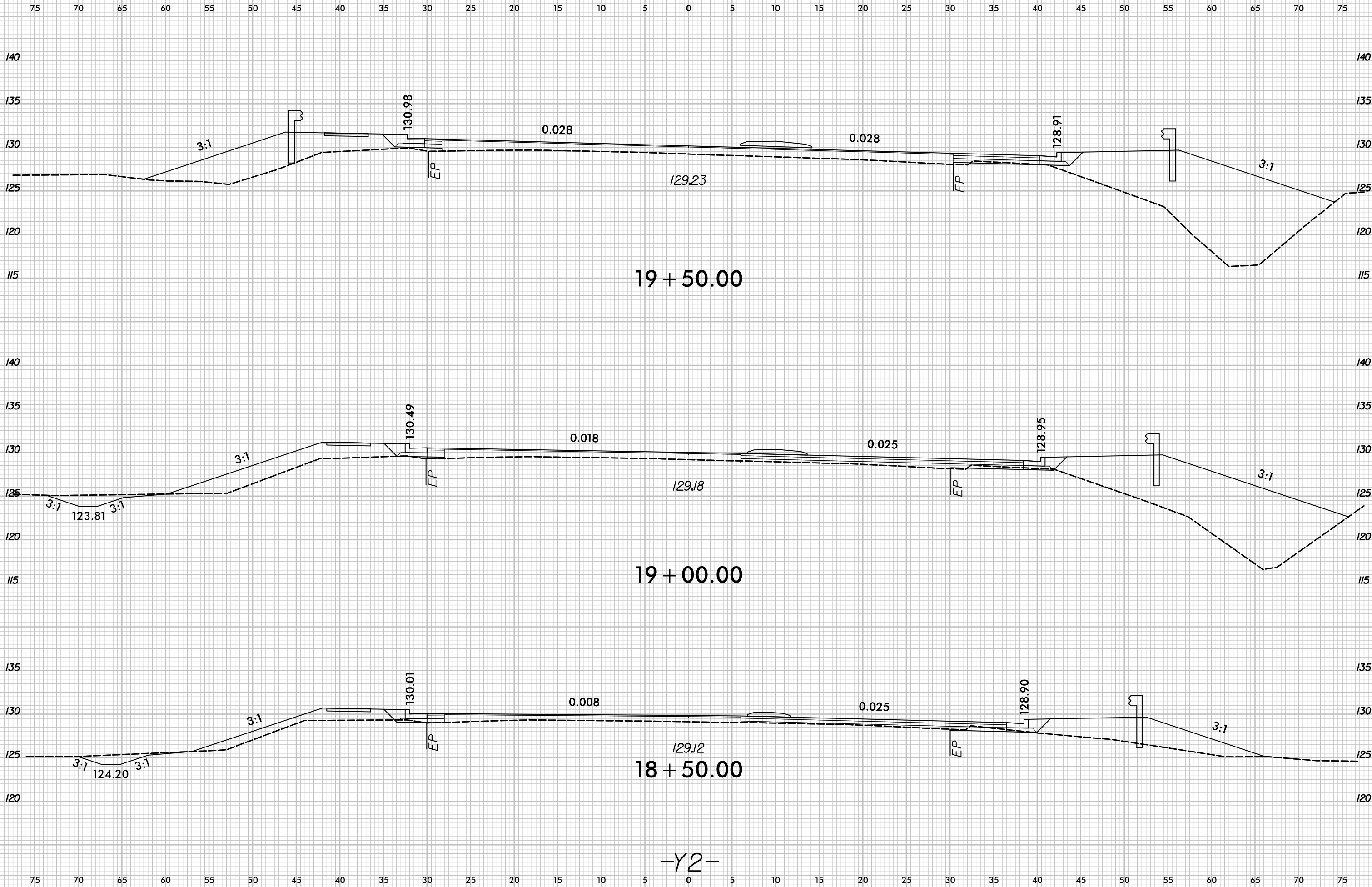


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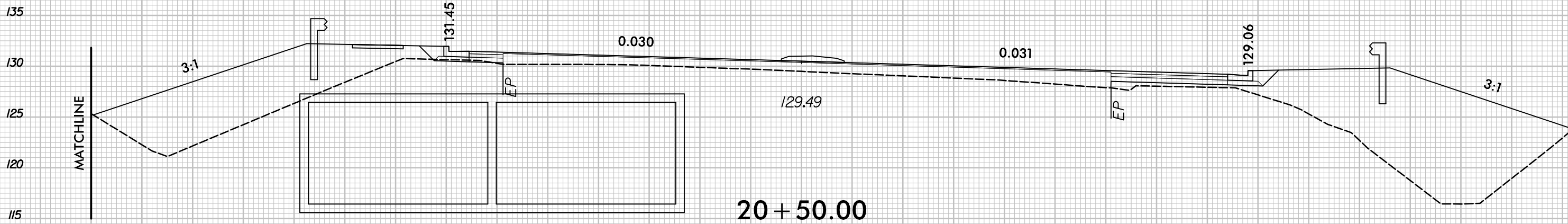
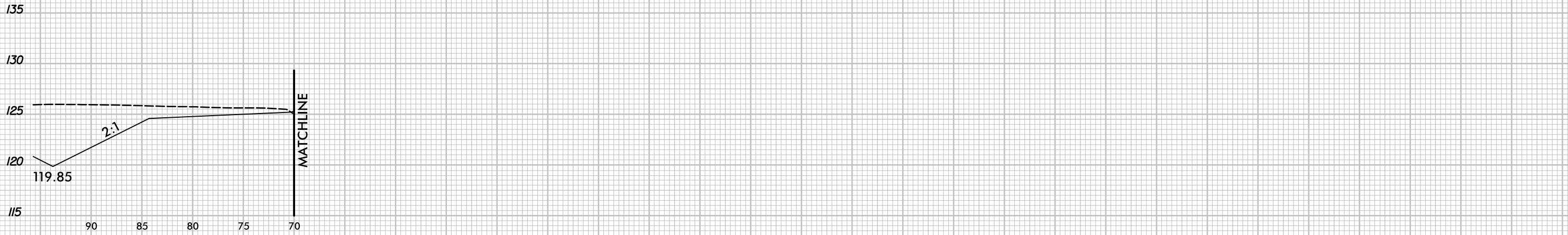


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PROJ. REFERENCE NO.	SHEET NO.
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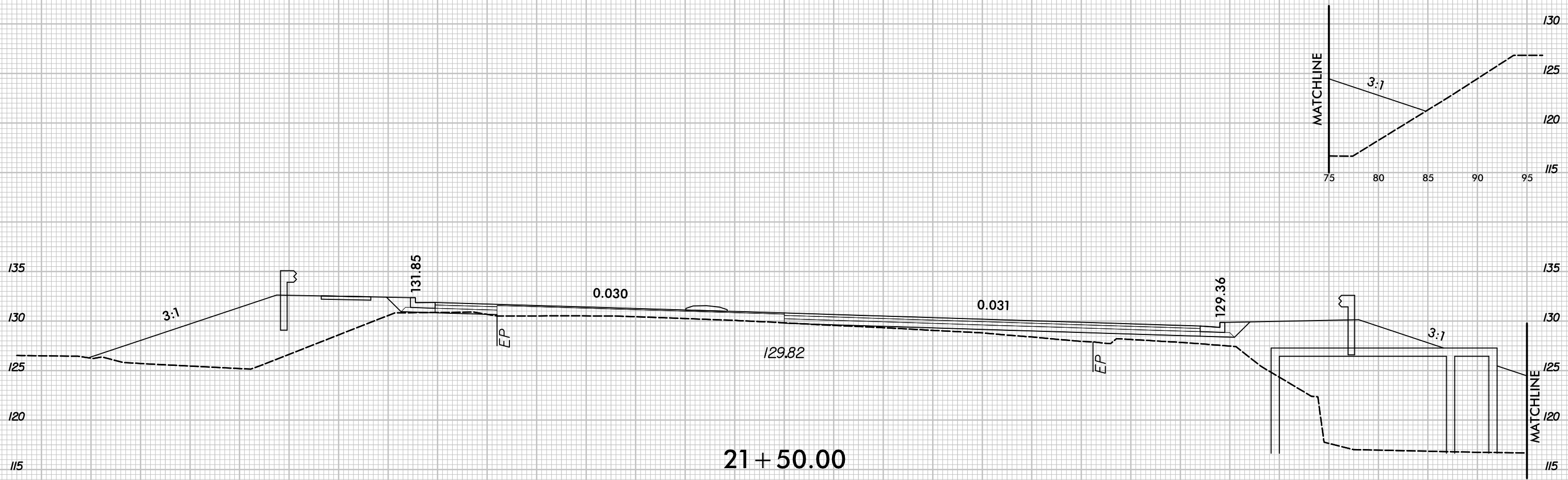
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20 + 00.00

-Y2-

8/23/16

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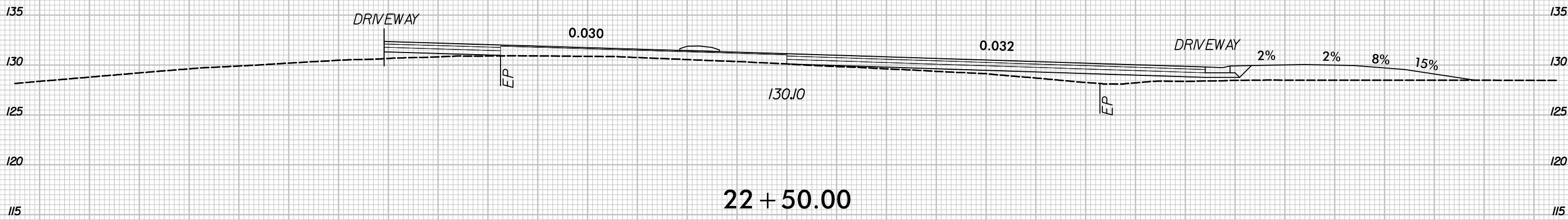
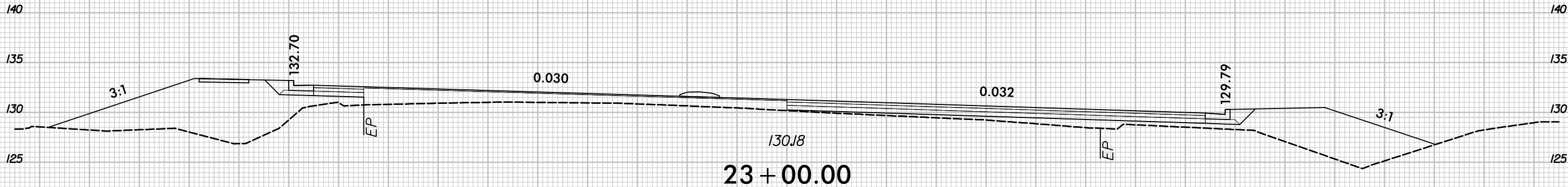
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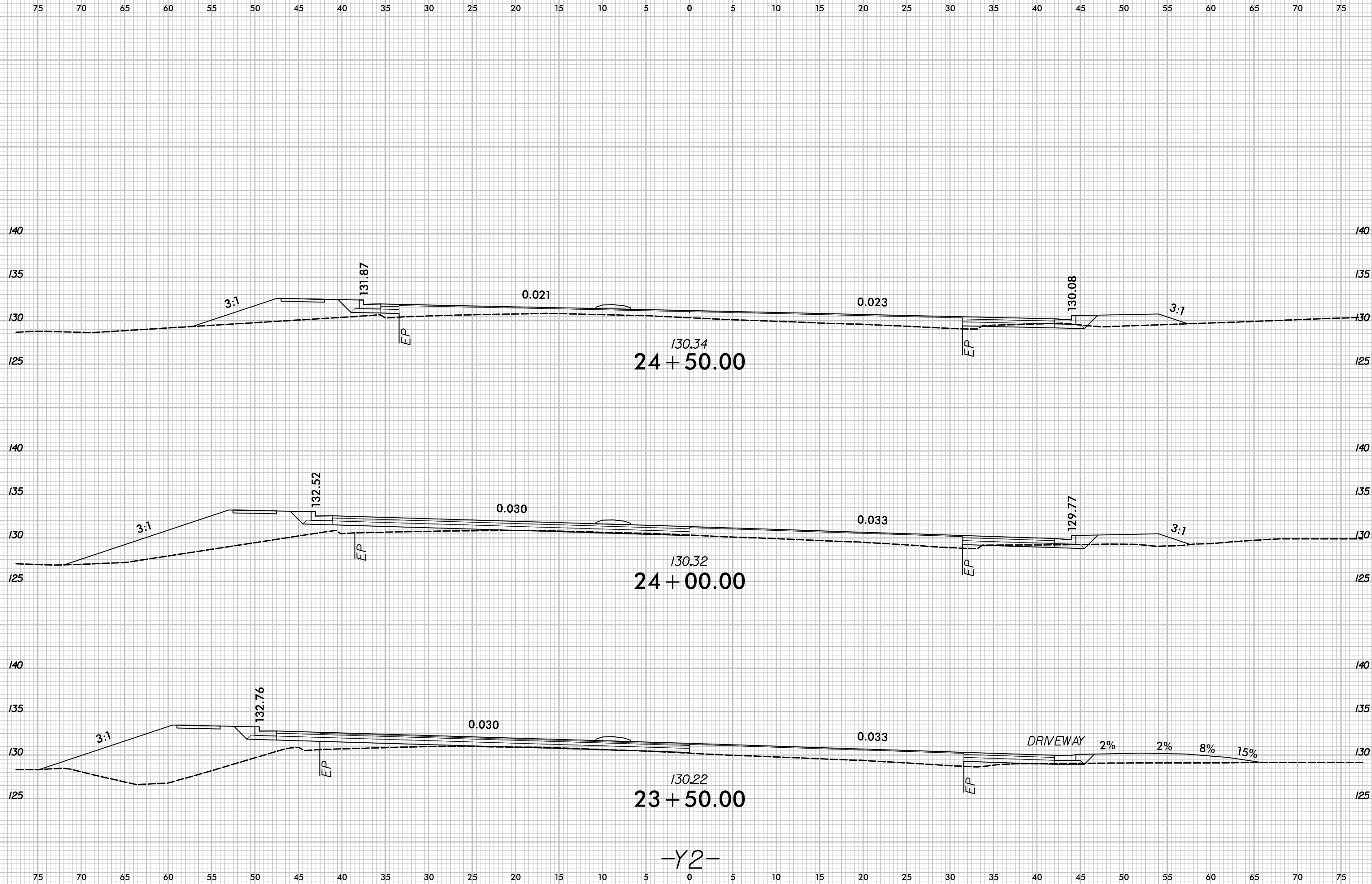


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U-5797	X-60



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-Y2-

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PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-61

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135 135

130 130

125 125

135 135

130 130

125 125

140 140

135 135

130 130

125 125

140 140

135 135

130 130

125 125

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

130.50
26 + 50.00

130.49
26 + 00.00

130.39
25 + 50.00

130.30
25 + 00.00

-Y2-

-L-

EP

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0.005

130.56

3:1

EP

3:1

131.43

0.011

0.012

130.42

3:1

EP

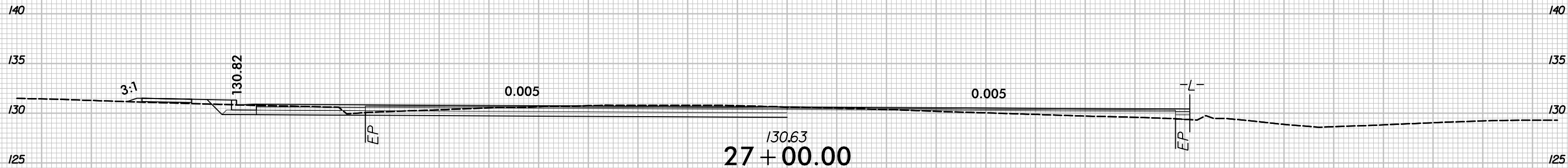
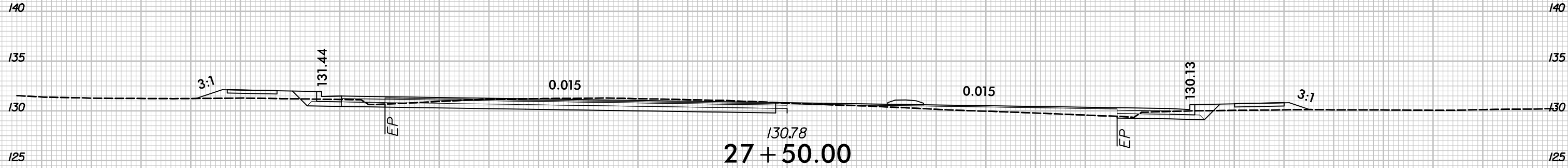
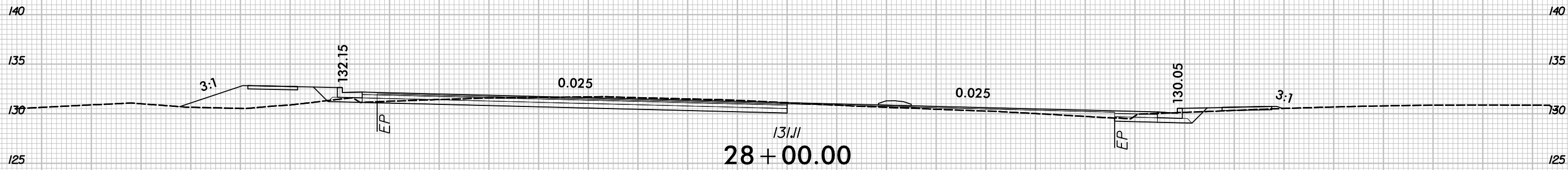
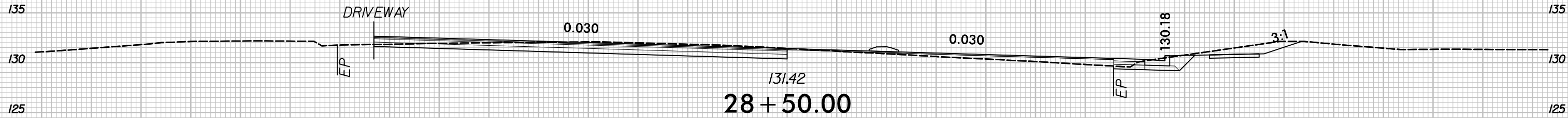
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PROJ. REFERENCE NO.	SHEET NO.
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-Y2-

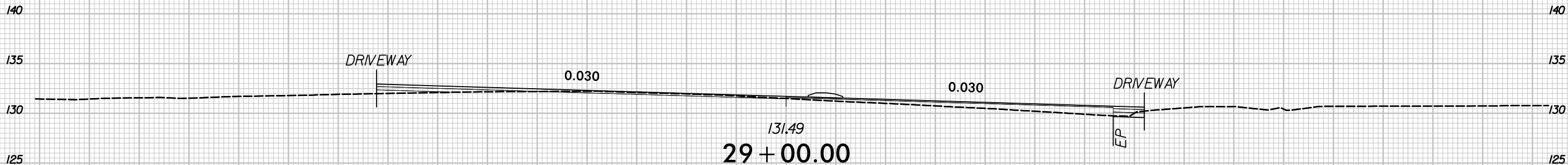
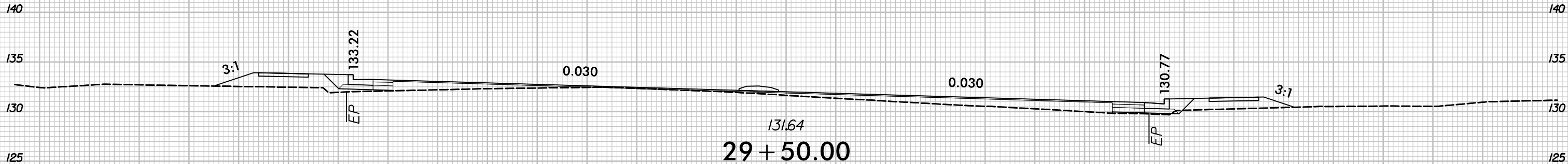
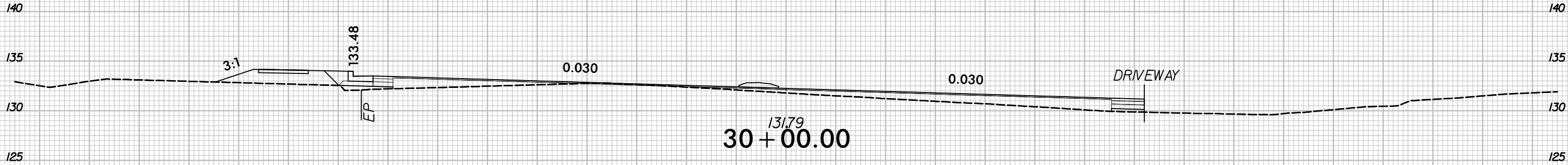
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JRP:RWD

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PROJ. REFERENCE NO.	SHEET NO.
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-Y2-

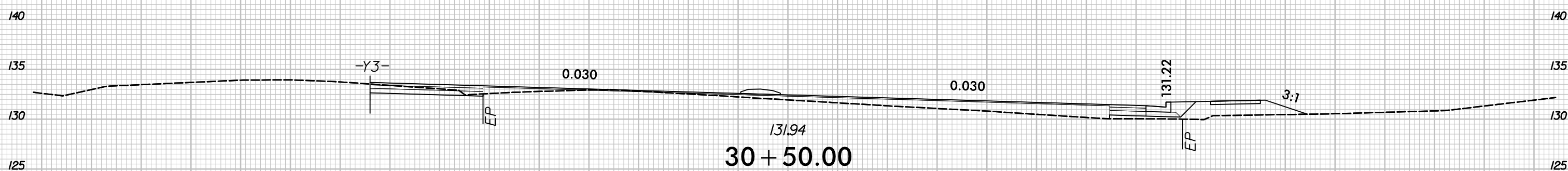
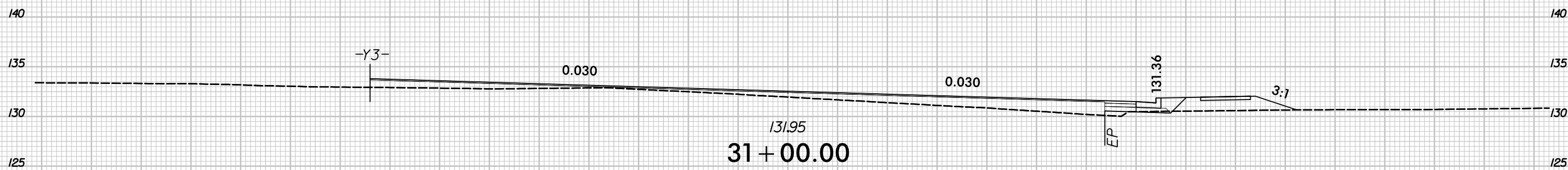
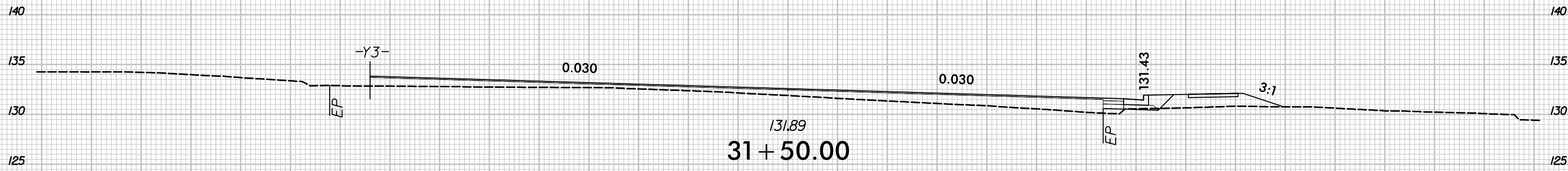
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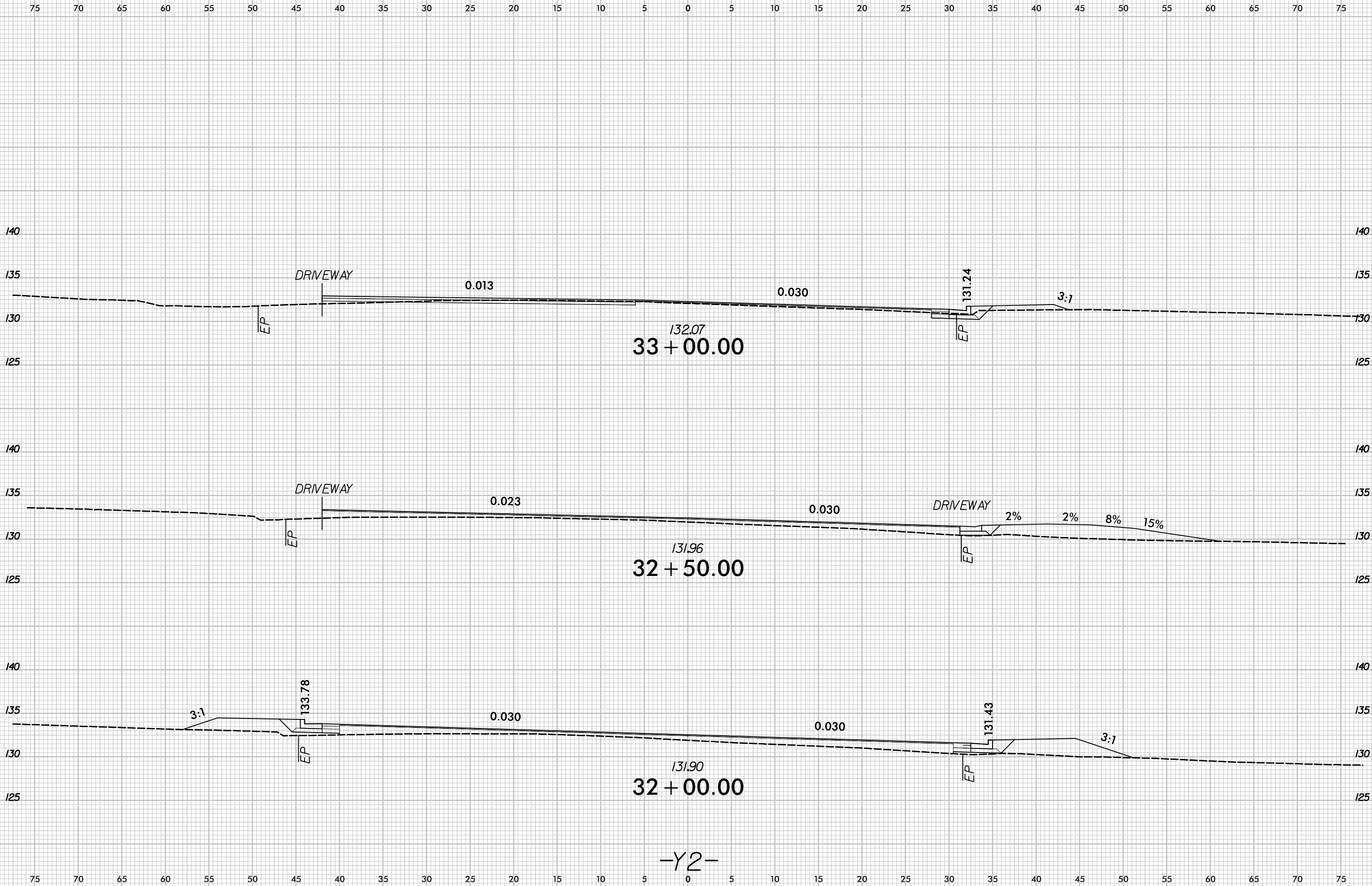
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JRP:RWD

6/23/16



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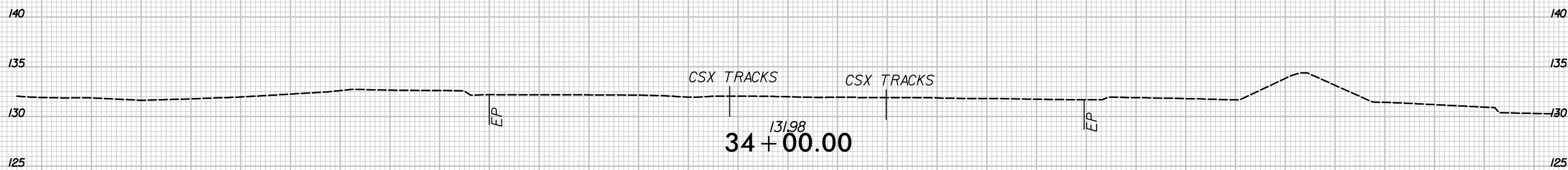
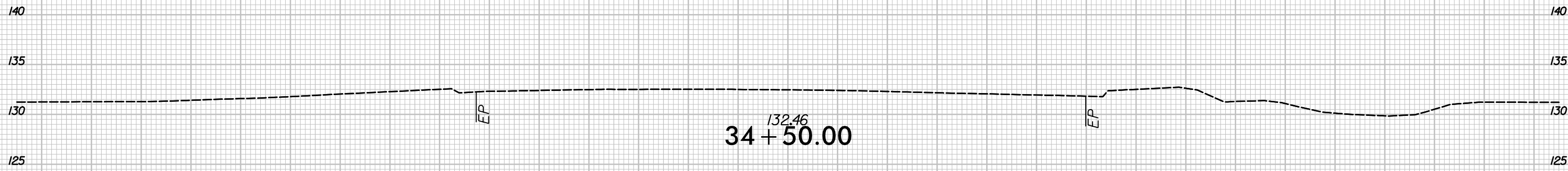
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6/23/16

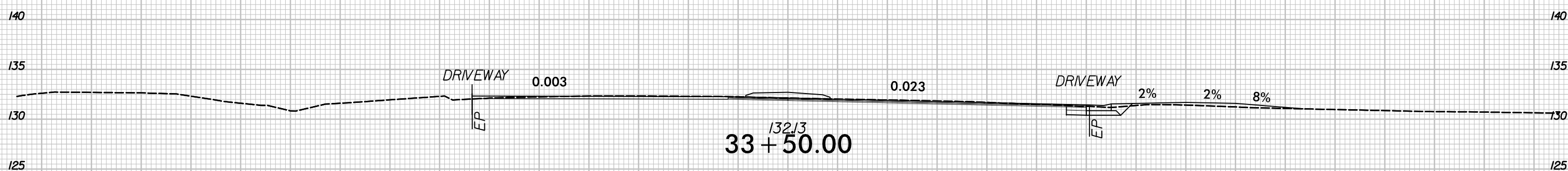


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U-5797	X-66

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



END CONSTRUCTION STA. 34 + 00.00



-Y2-

1/23/2026
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JRP:RWD

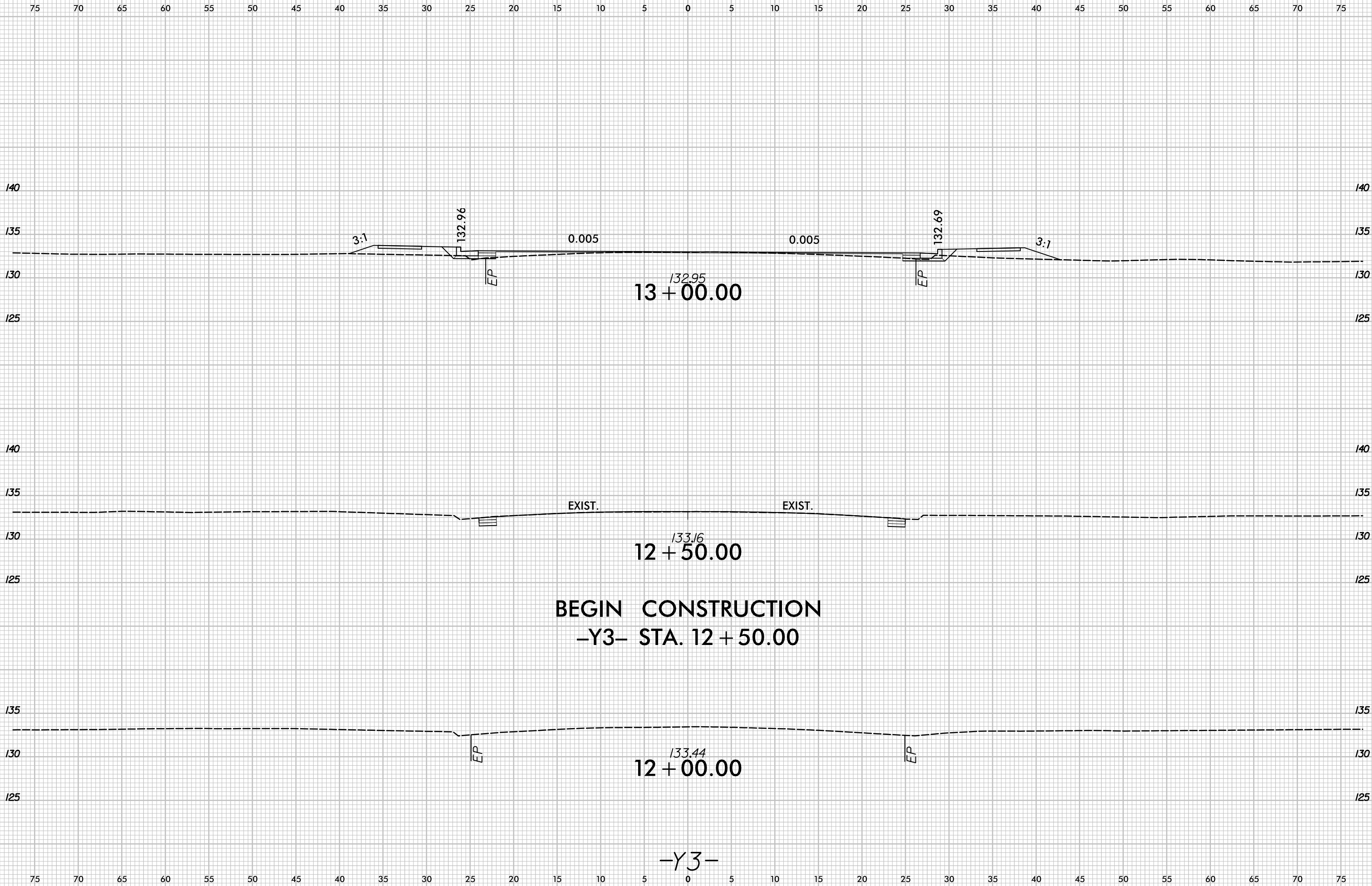
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U-5797

SHEET NO.
X-67



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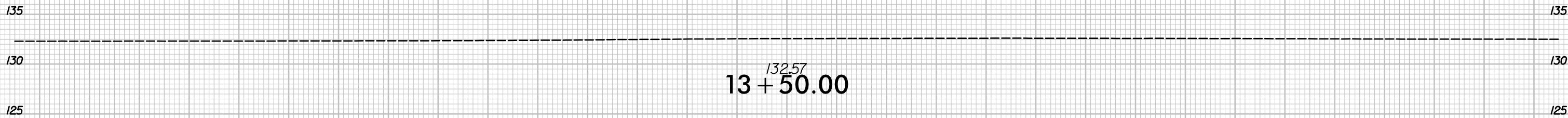
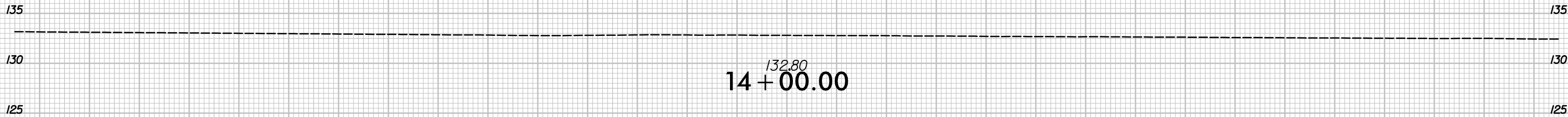
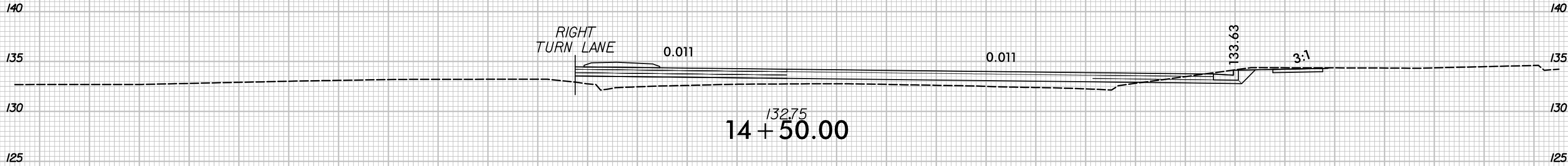
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U-5797

SHEET NO.
X-68

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

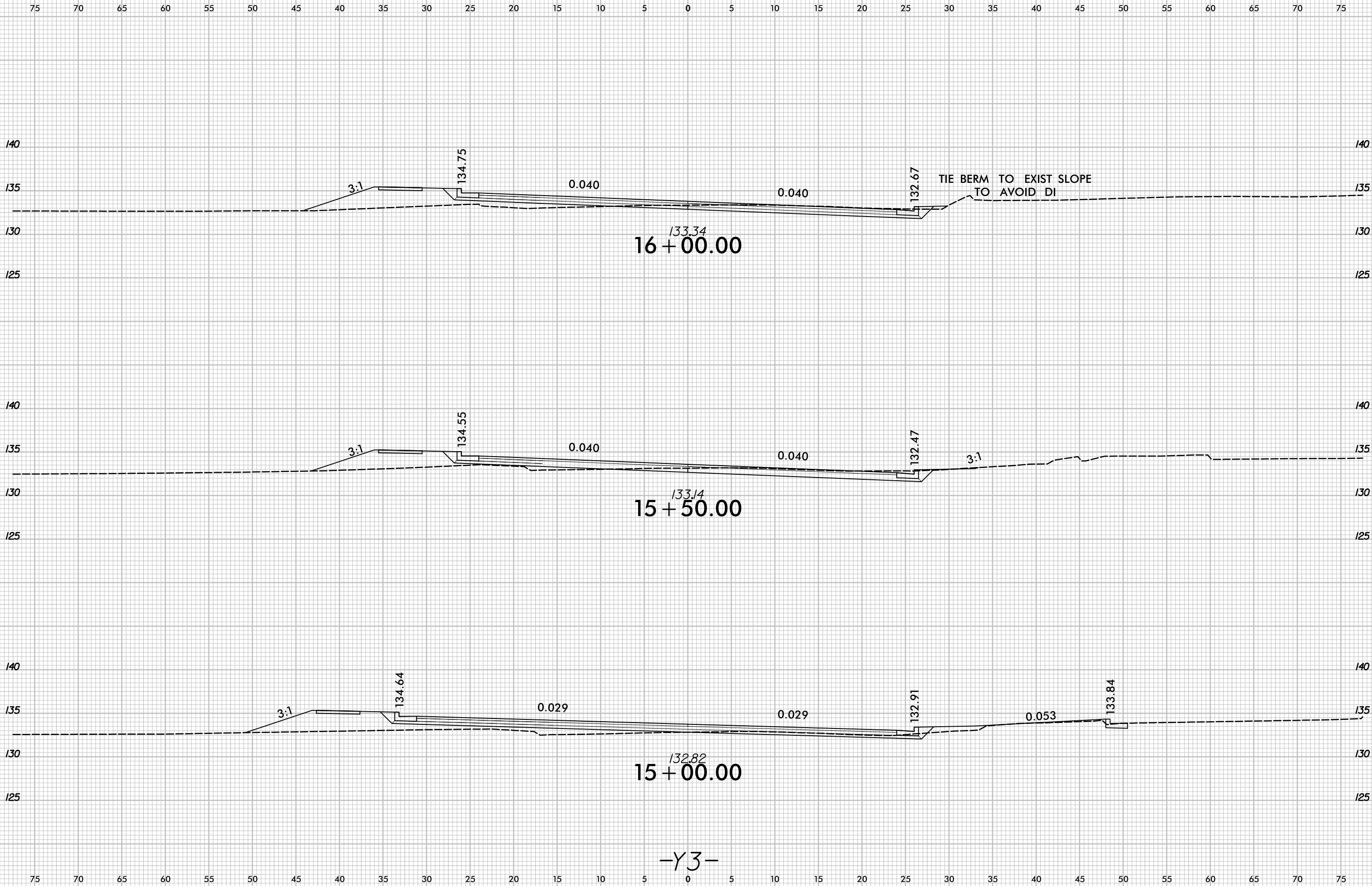


-Y3-

8/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-5797	X-69

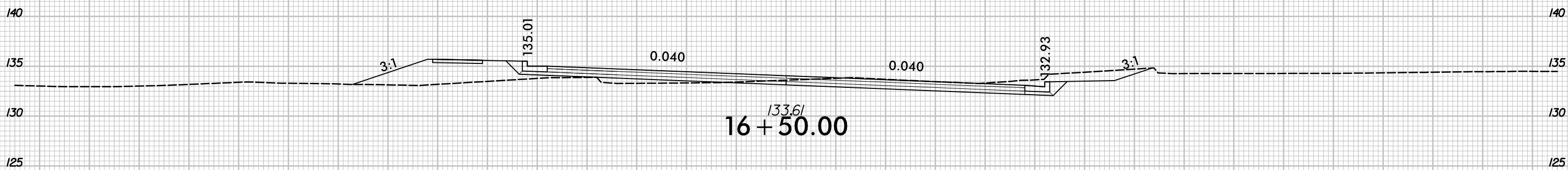
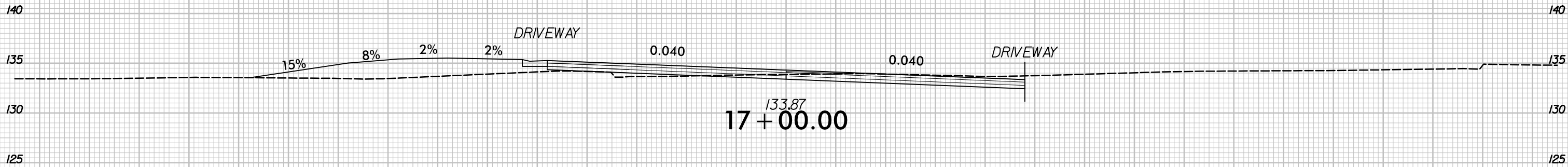


6/23/16



PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-70



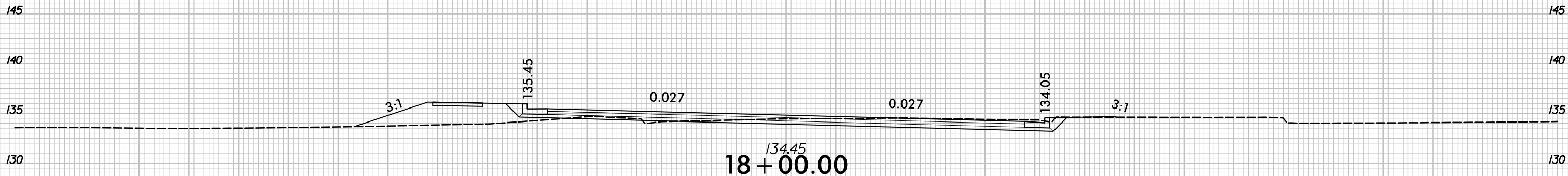
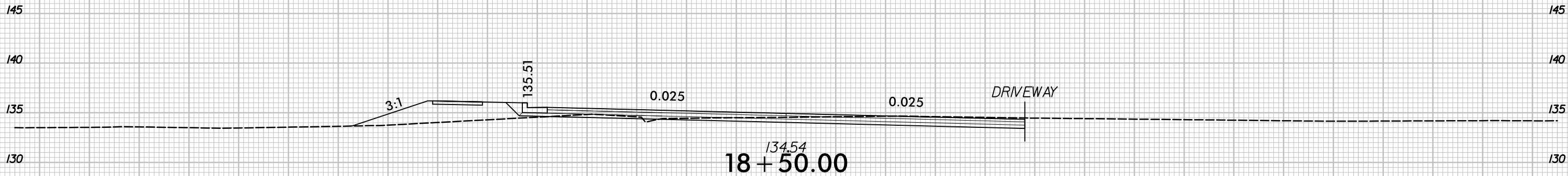
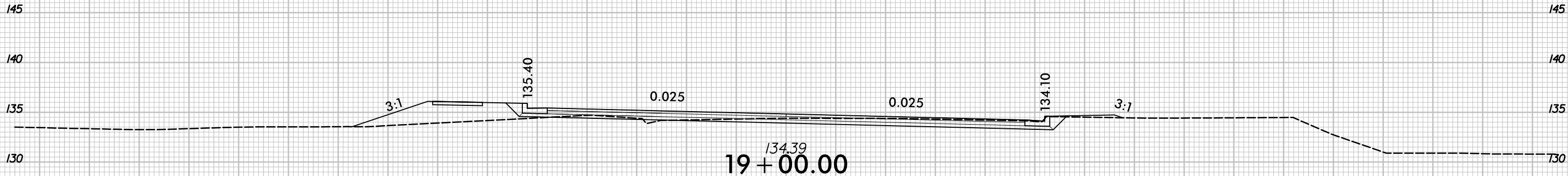
-Y3-

6/23/16



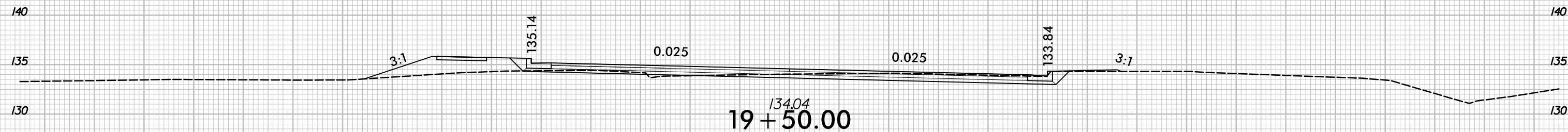
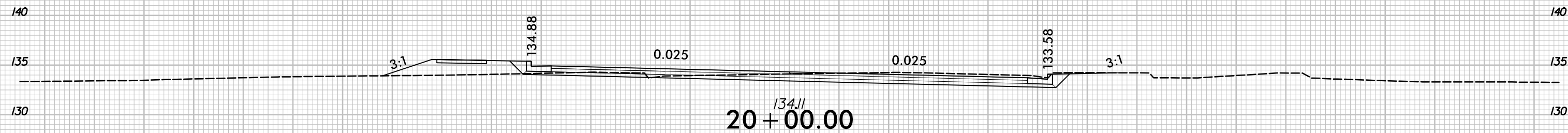
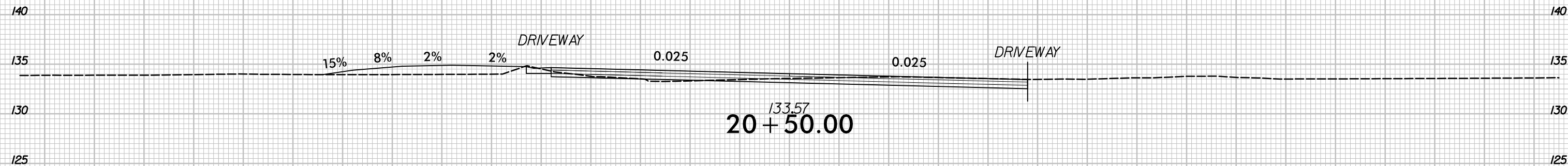
PROJ. REFERENCE NO.	SHEET NO.
U-5797	X-71

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



-Y3-

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

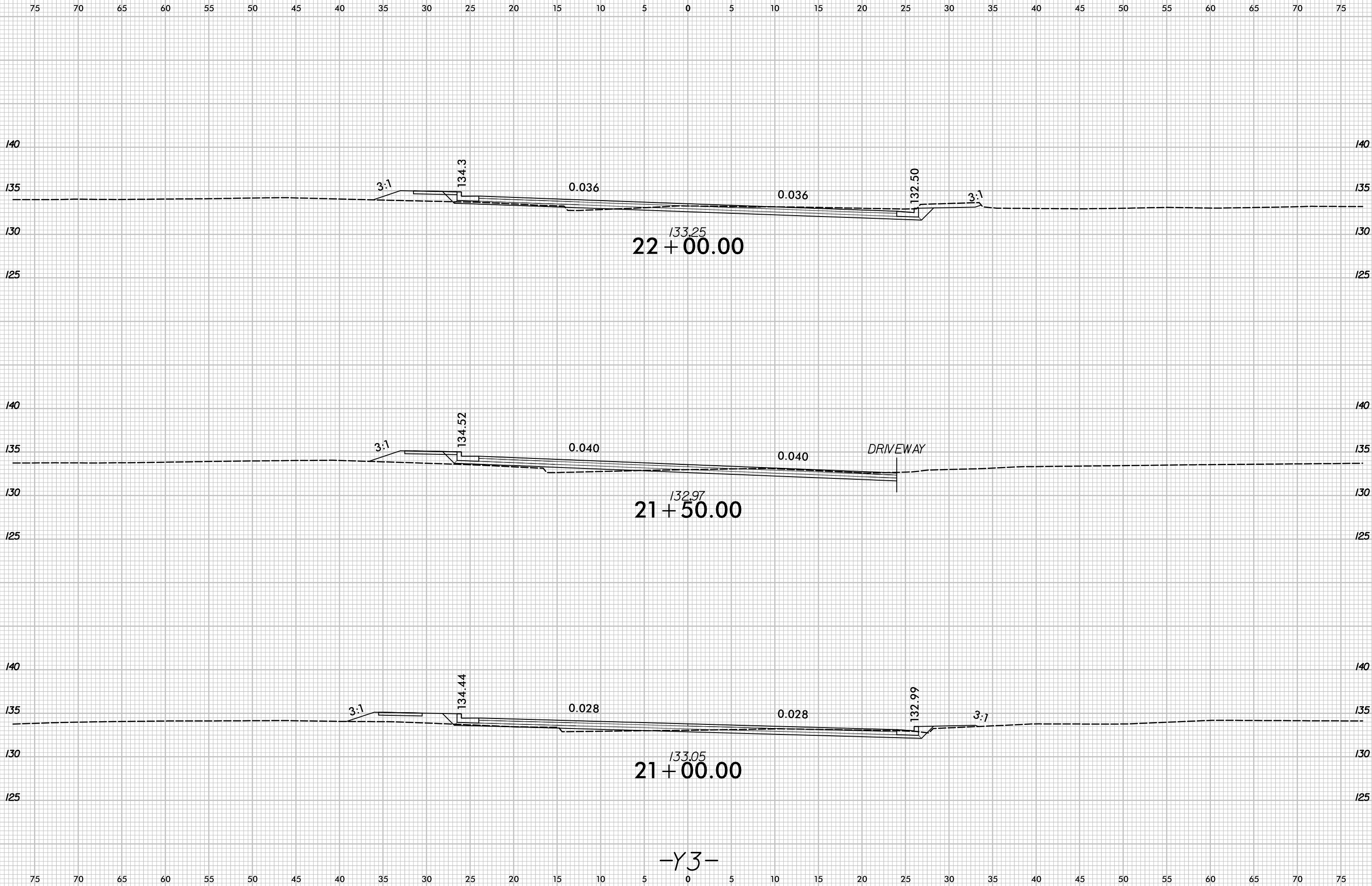


6/23/16



PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-73



1/23/2026
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furp.dwg

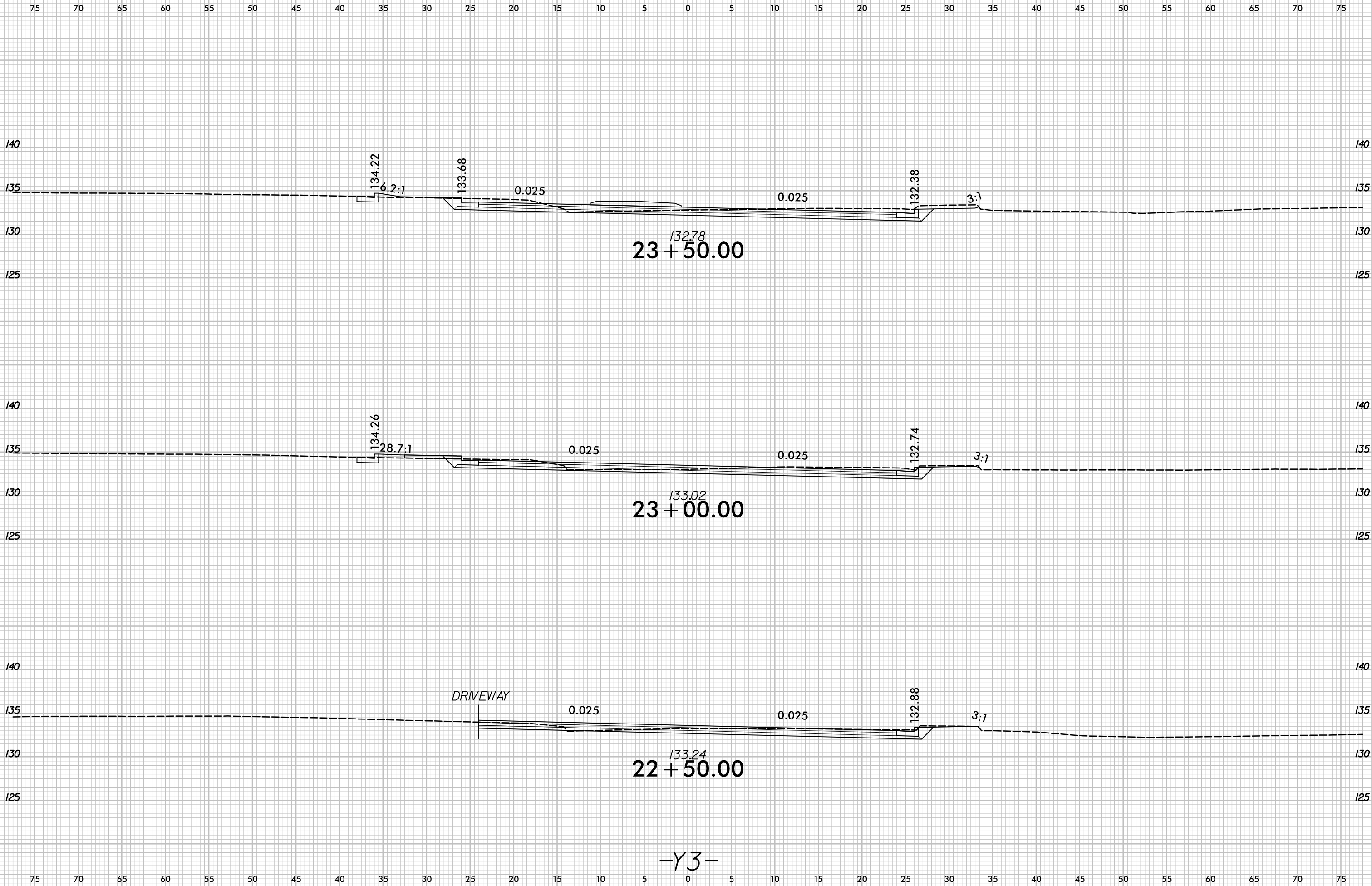
-Y3-

8/23/16



PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-74



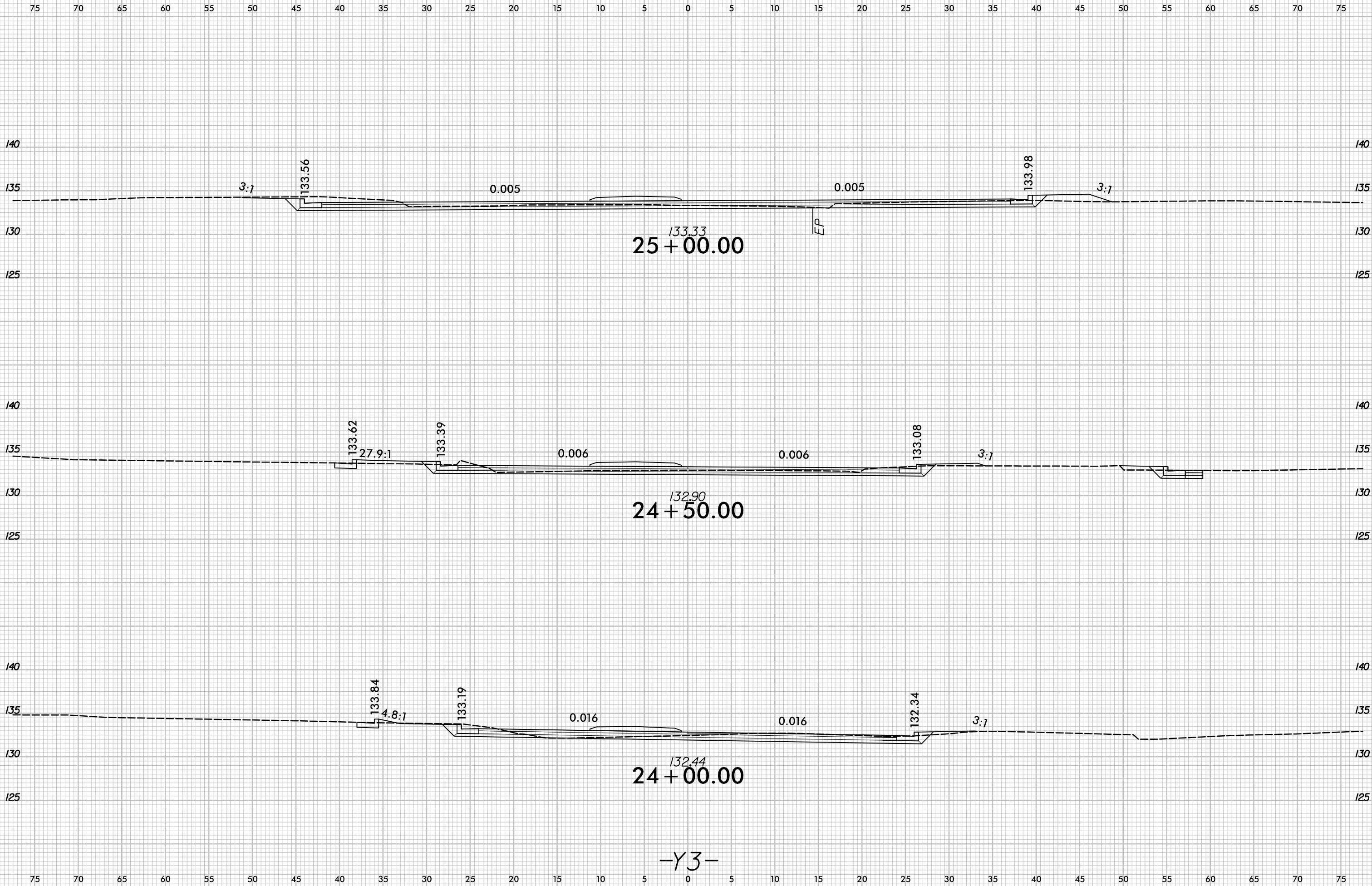
1/23/2026
P:\Roadway\Xsc\U5797_rdy_xpl\Y3.dgn
JRP:RWD

-Y3-

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-5797	X-75



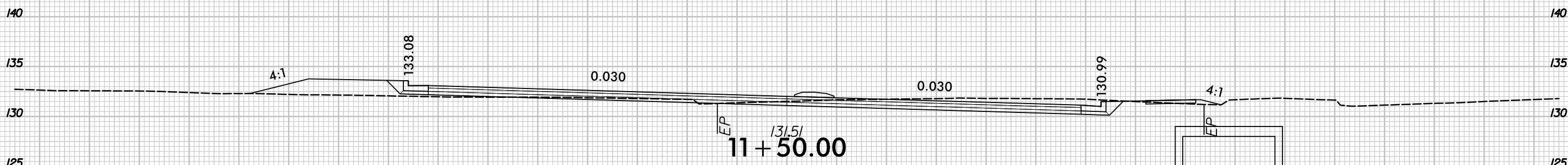
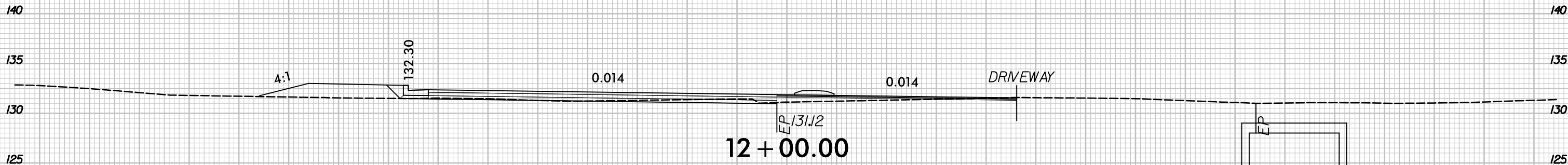
-Y3-

8/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-5797	X-76

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



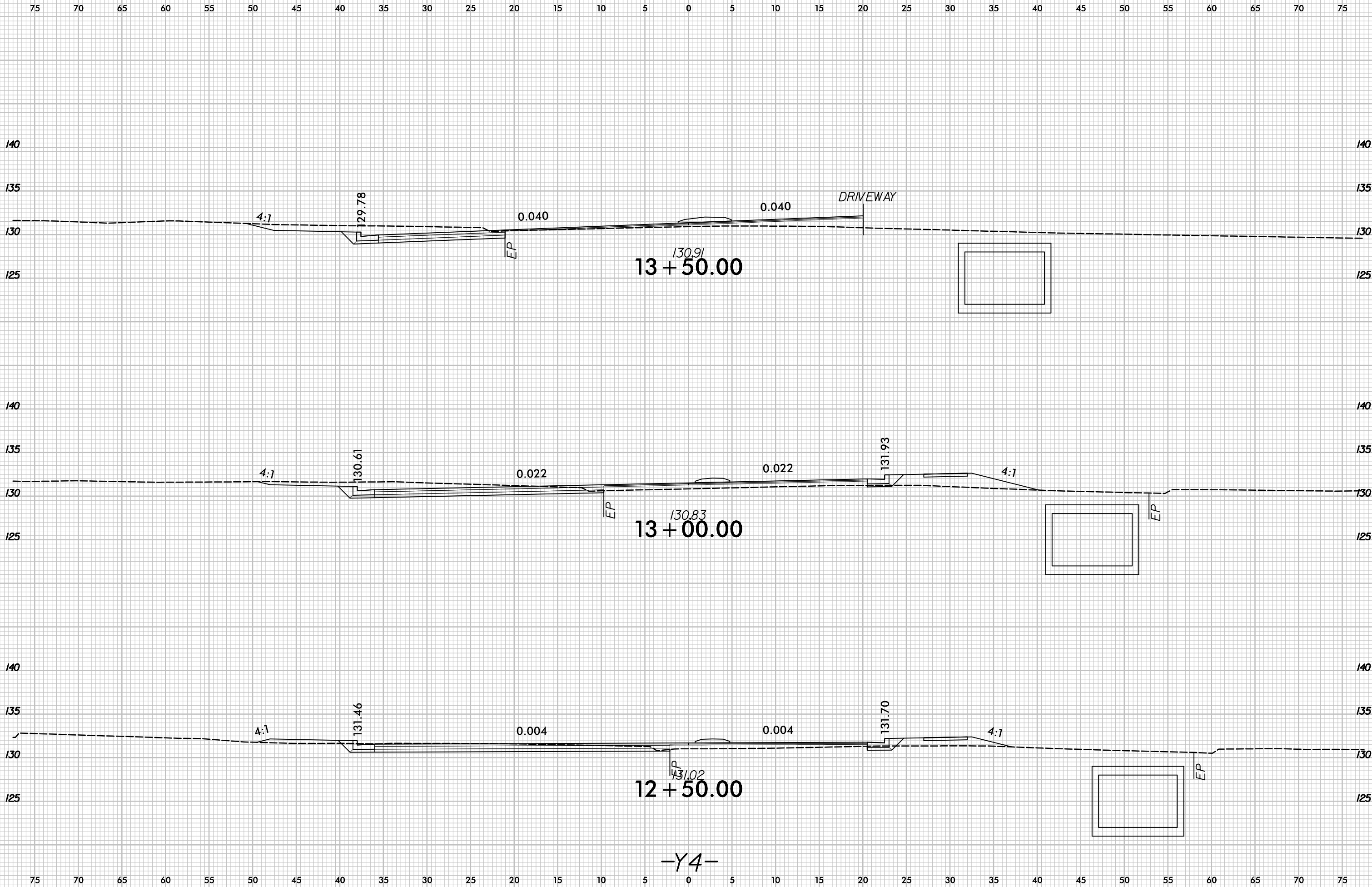
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

-Y4-

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-5797	X-77

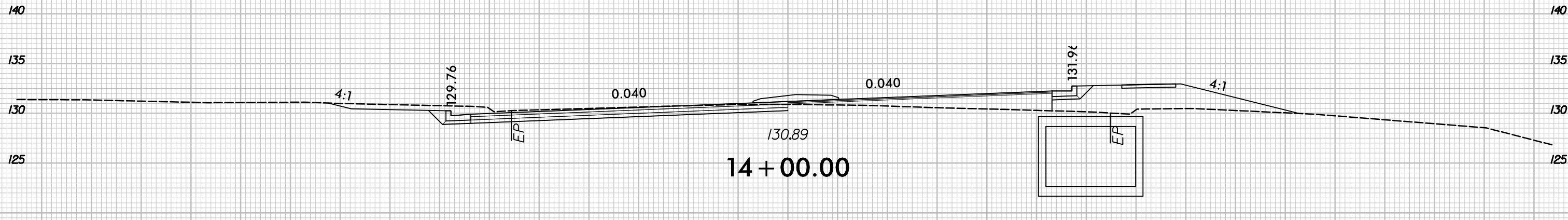
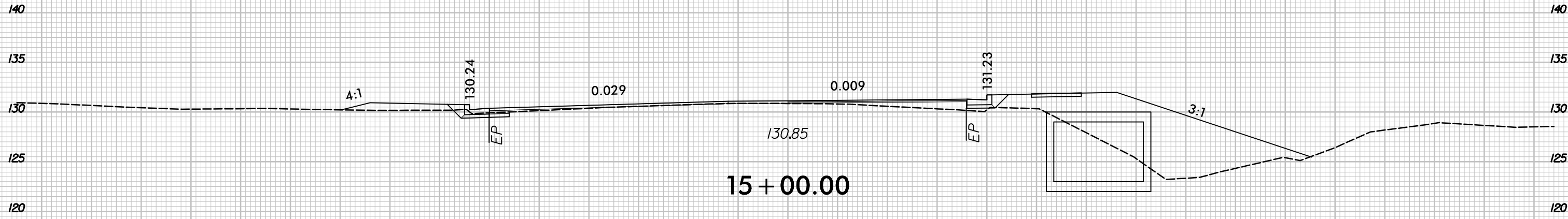


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PROJ. REFERENCE NO.	SHEET NO.
U-5797	X-78

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

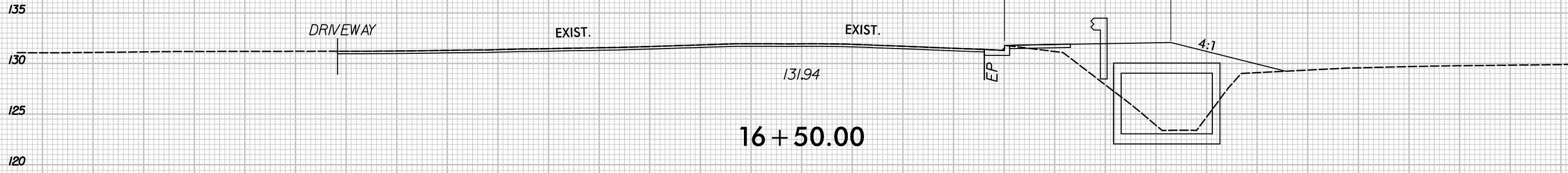
-Y4-

6/23/16

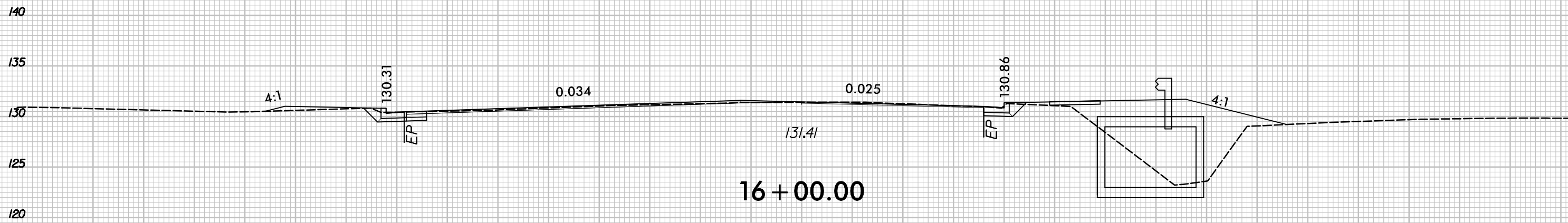


PROJ. REFERENCE NO.	SHEET NO.
U-5797	X-79

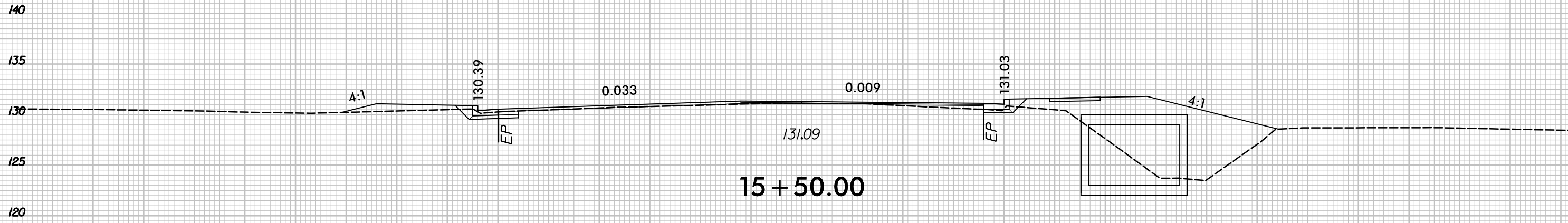
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



BEGIN MILL & OVERLAY
-Y4- STA. 16+07.33



16+00.00



15+50.00

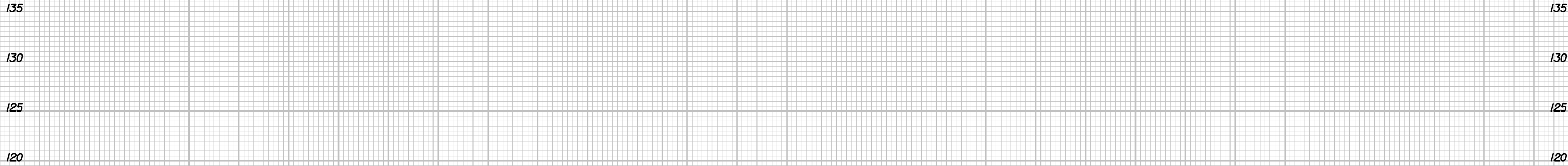
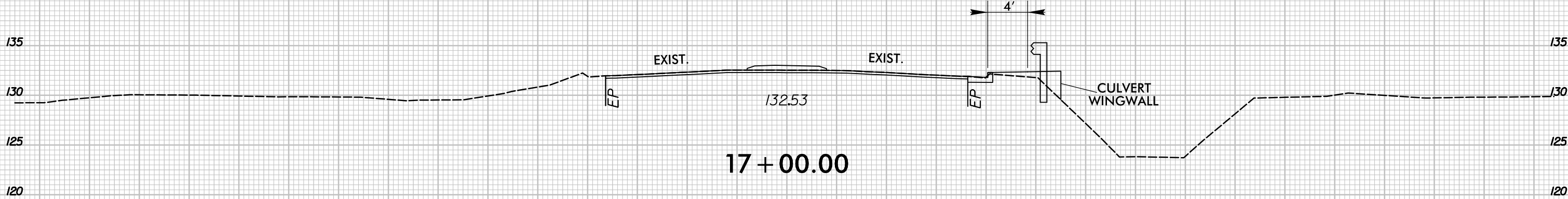
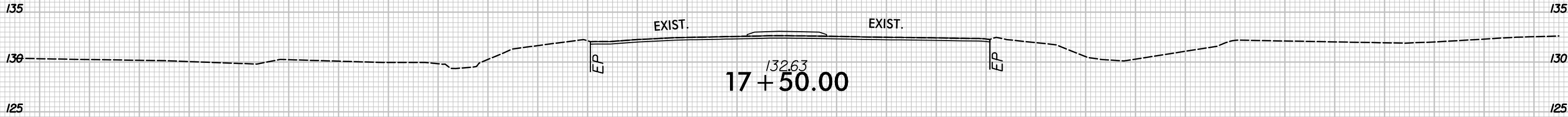
-Y4-

8/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-5797	X-80

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-Y4-

8/23/16



PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-81

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

135 135

130 130

125 125

120 120

135 135

130 130

125 125

120 120

135 135

130 130

125 125

120 120

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

EP

131.78

EP

18 + 50.00

END CONSTRUCTION & MILL & OVERLAY
-Y4- STA. 18 + 25.00

EP

132.12

EP

18 + 00.00

-Y4-

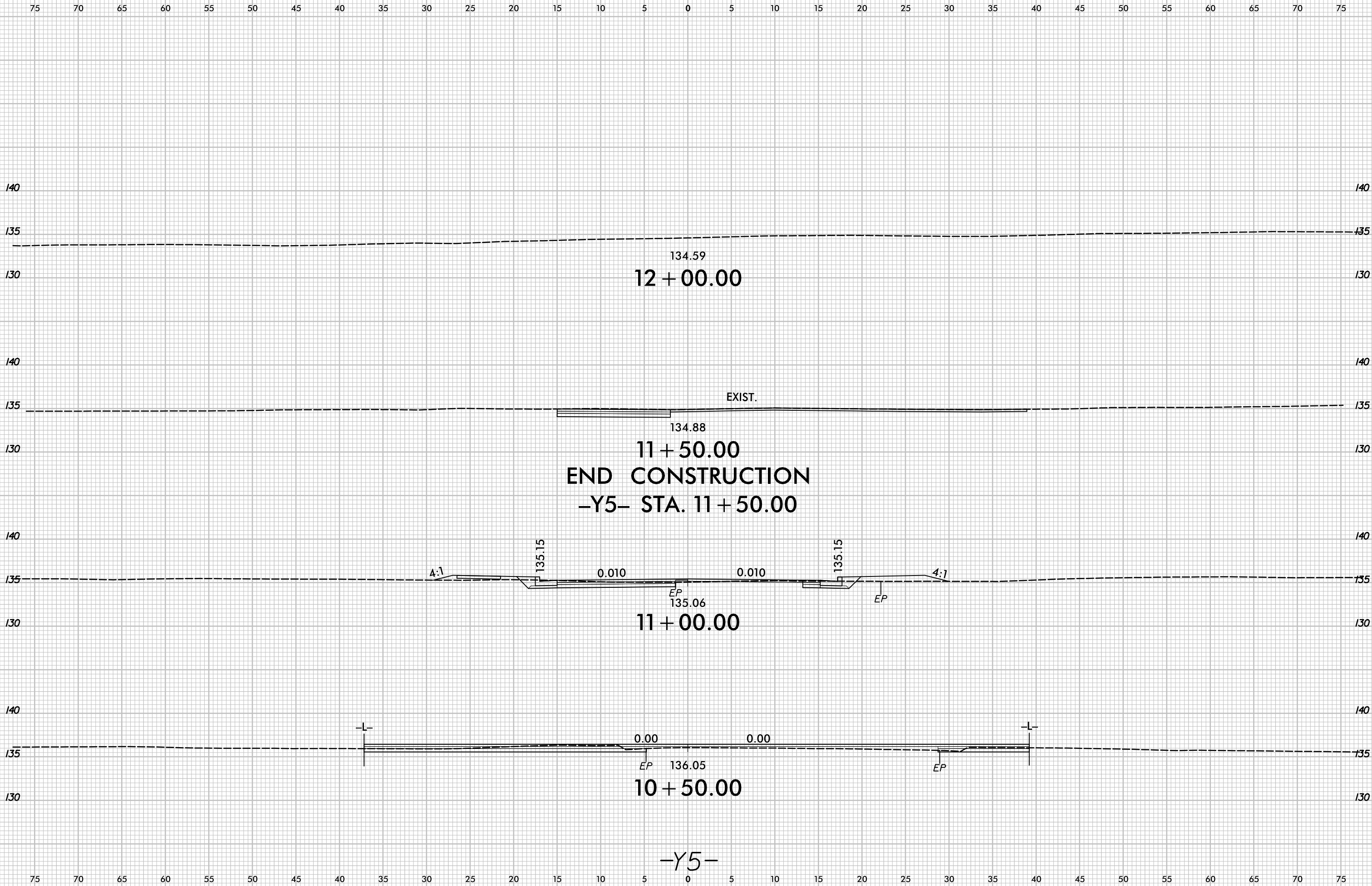
1/23/2026
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curpdu

6/23/16



PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-82



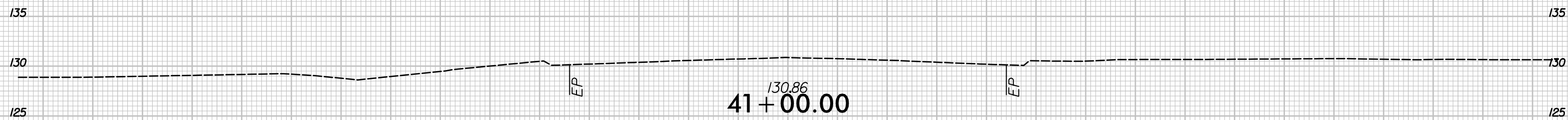
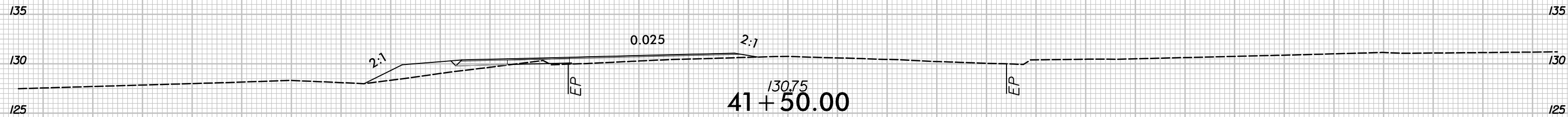
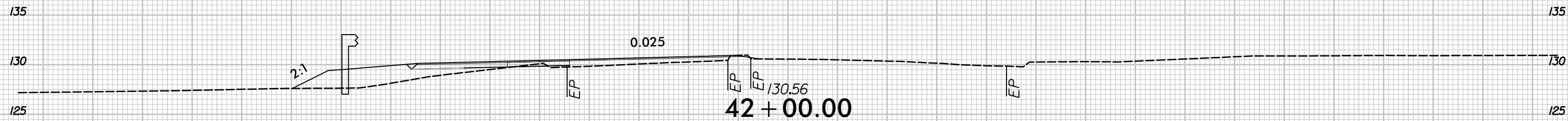
8/23/16



PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-83

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



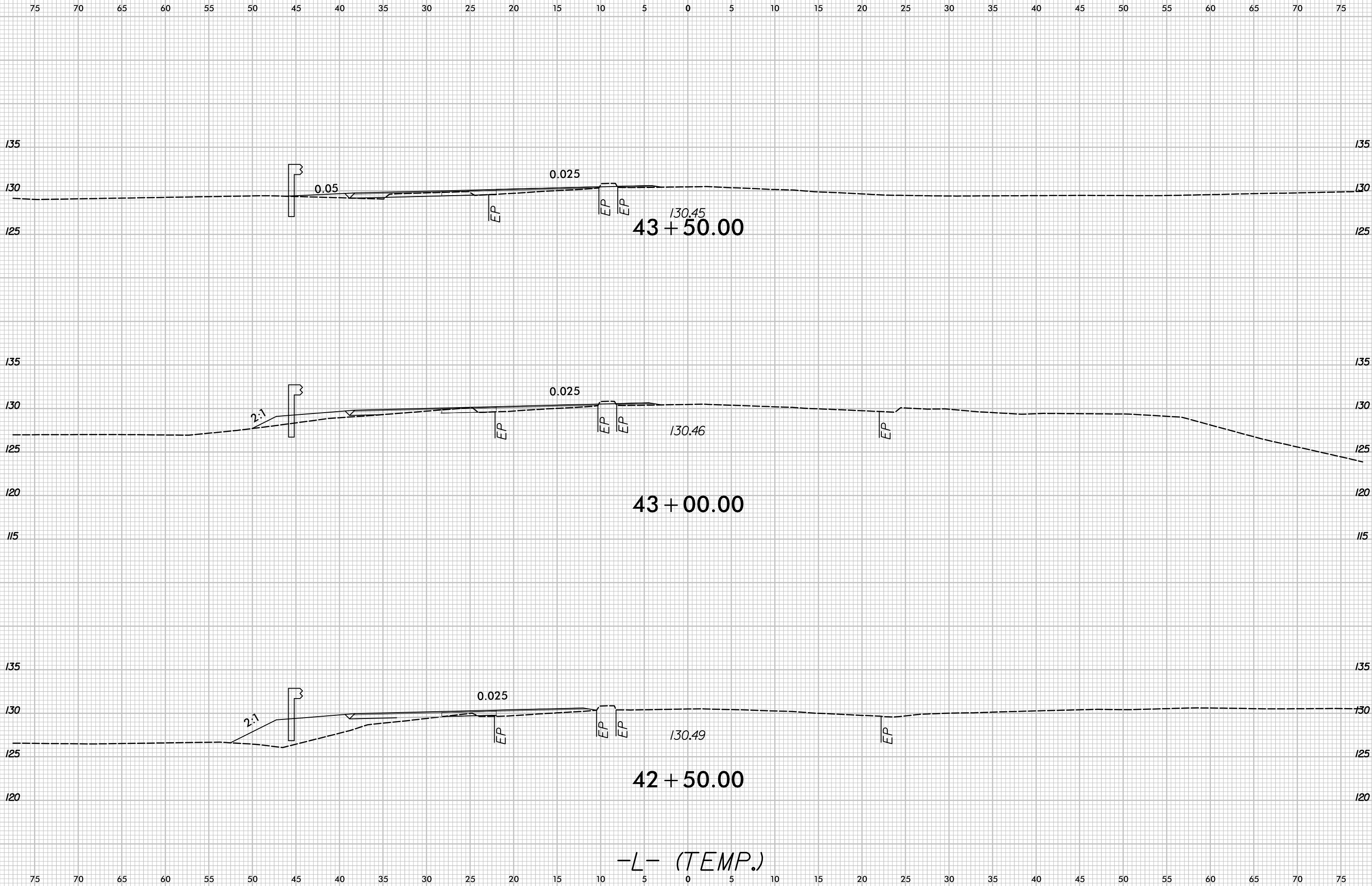
-L- (TEMP.)

6/23/16



PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-84



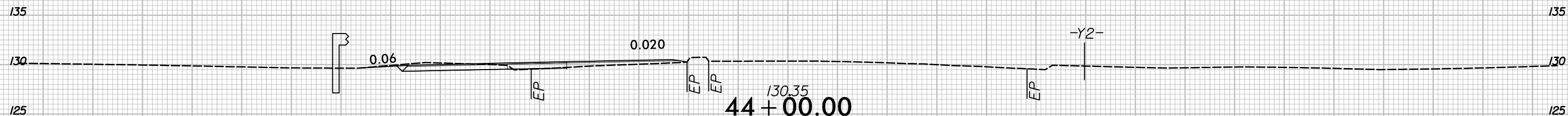
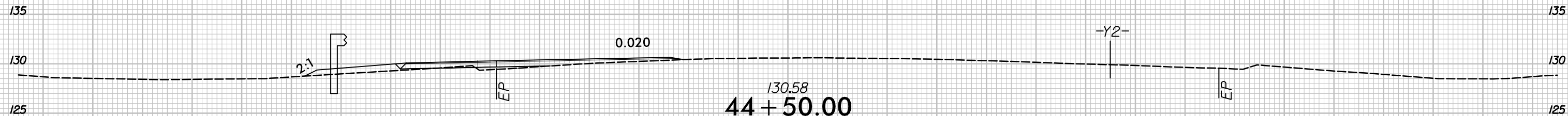
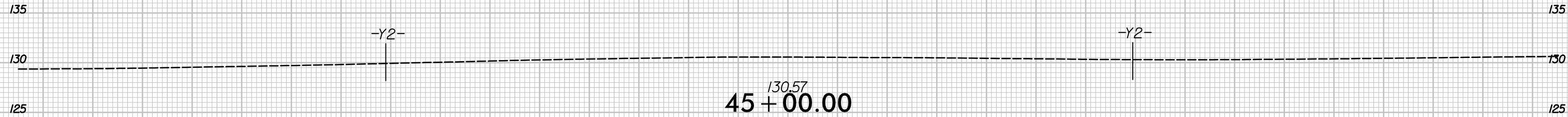
6/23/16



PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-85

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



-L- (TEMP.)

1/23/2026
P:\Roadway\Xsc\5797_rdy_xpl_L-Temp.dgn
CurPldWD

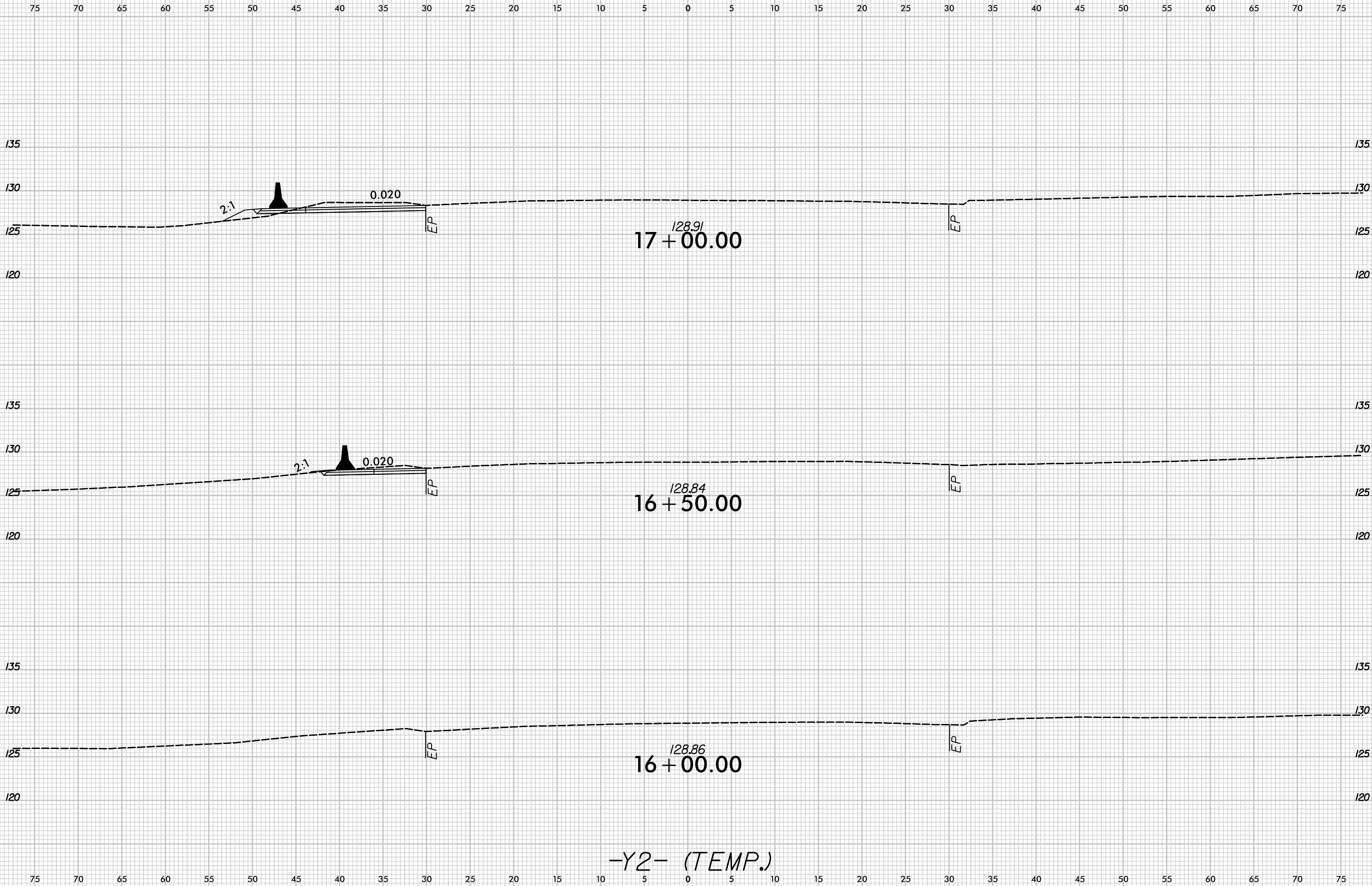
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

6/23/16



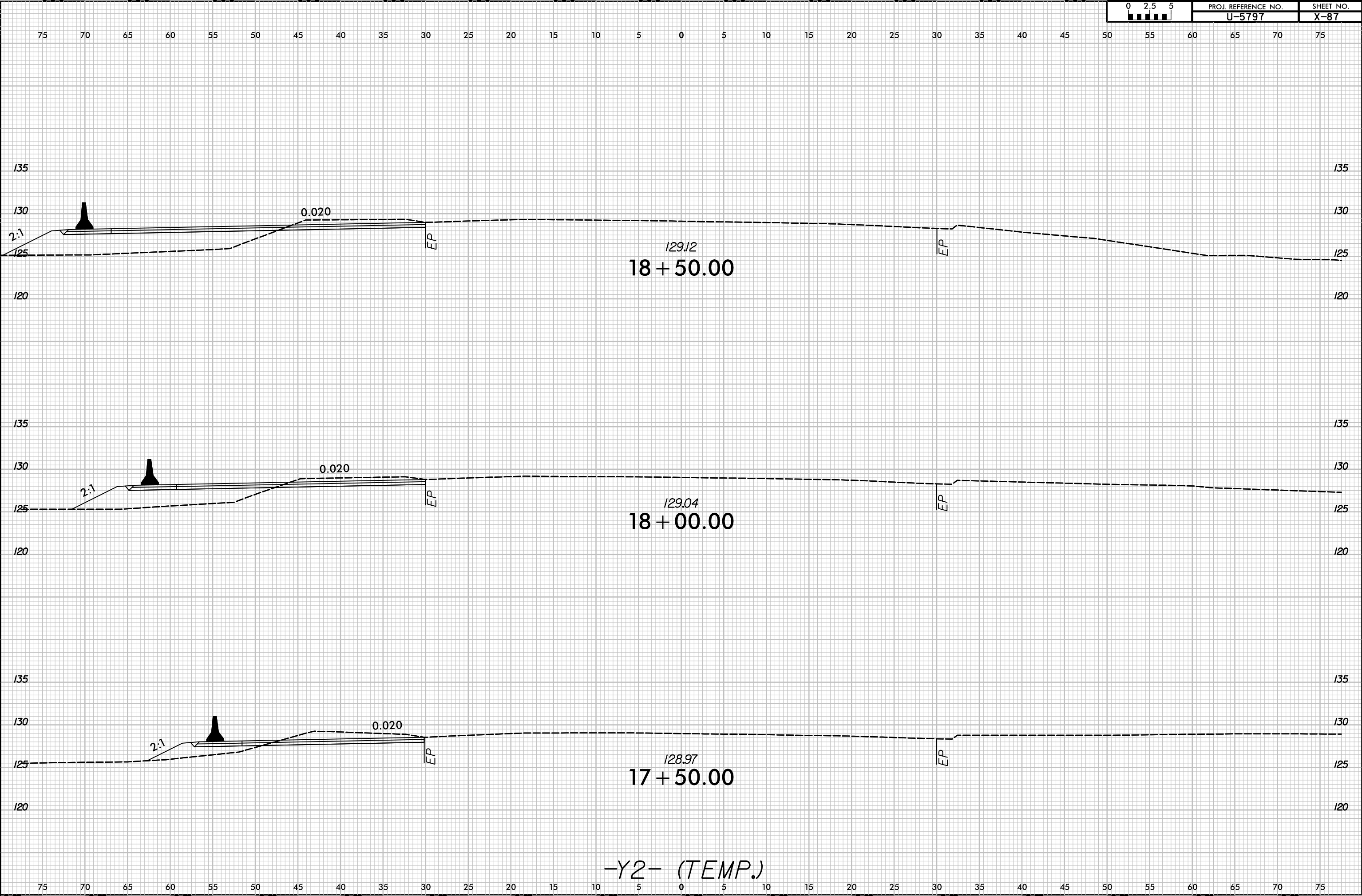
PROJ. REFERENCE NO.
U-5797

SHEET NO.
X-86



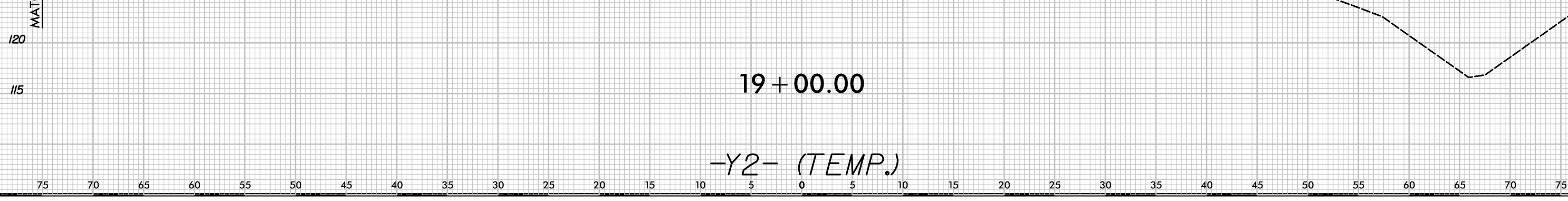
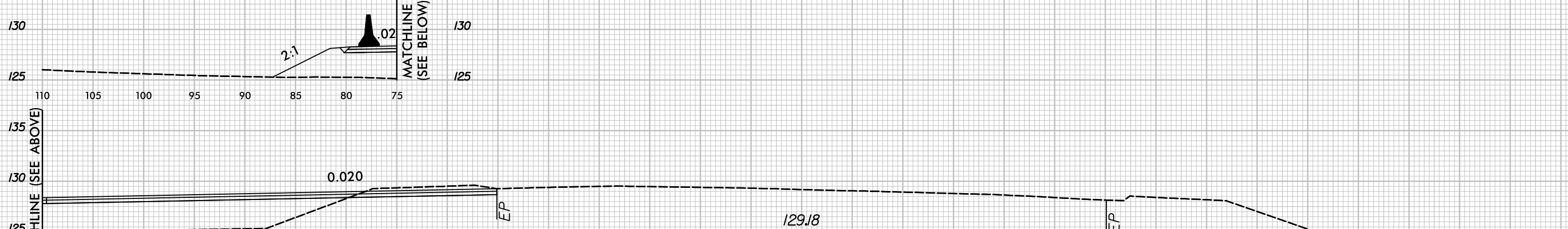
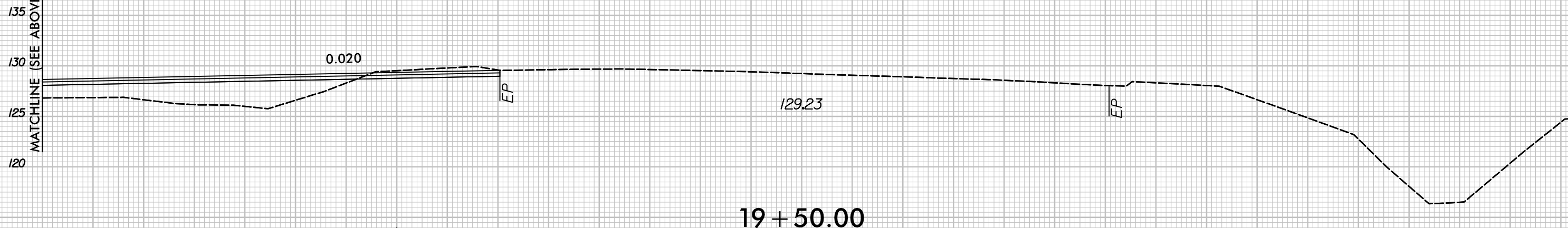
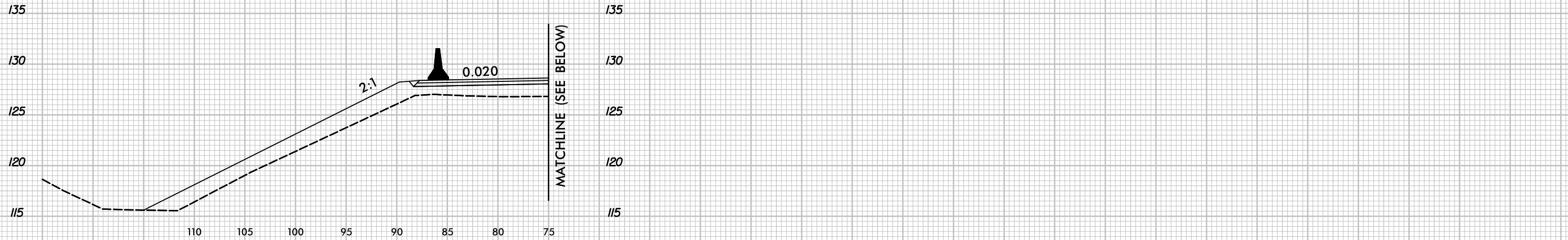
1/23/2026
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CurPntWD

8/23/16



8/23/16

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

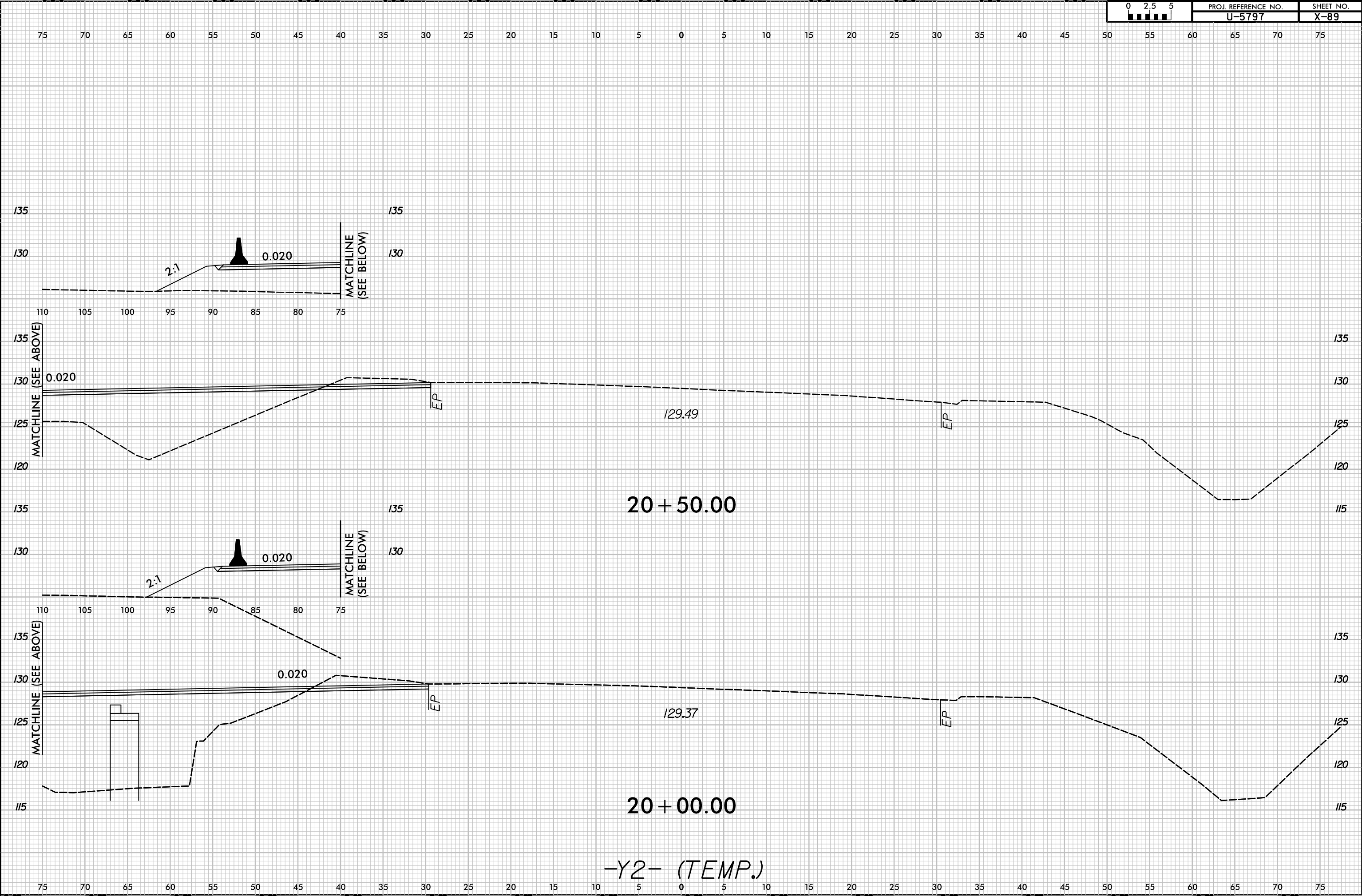


-Y2- (TEMP.)

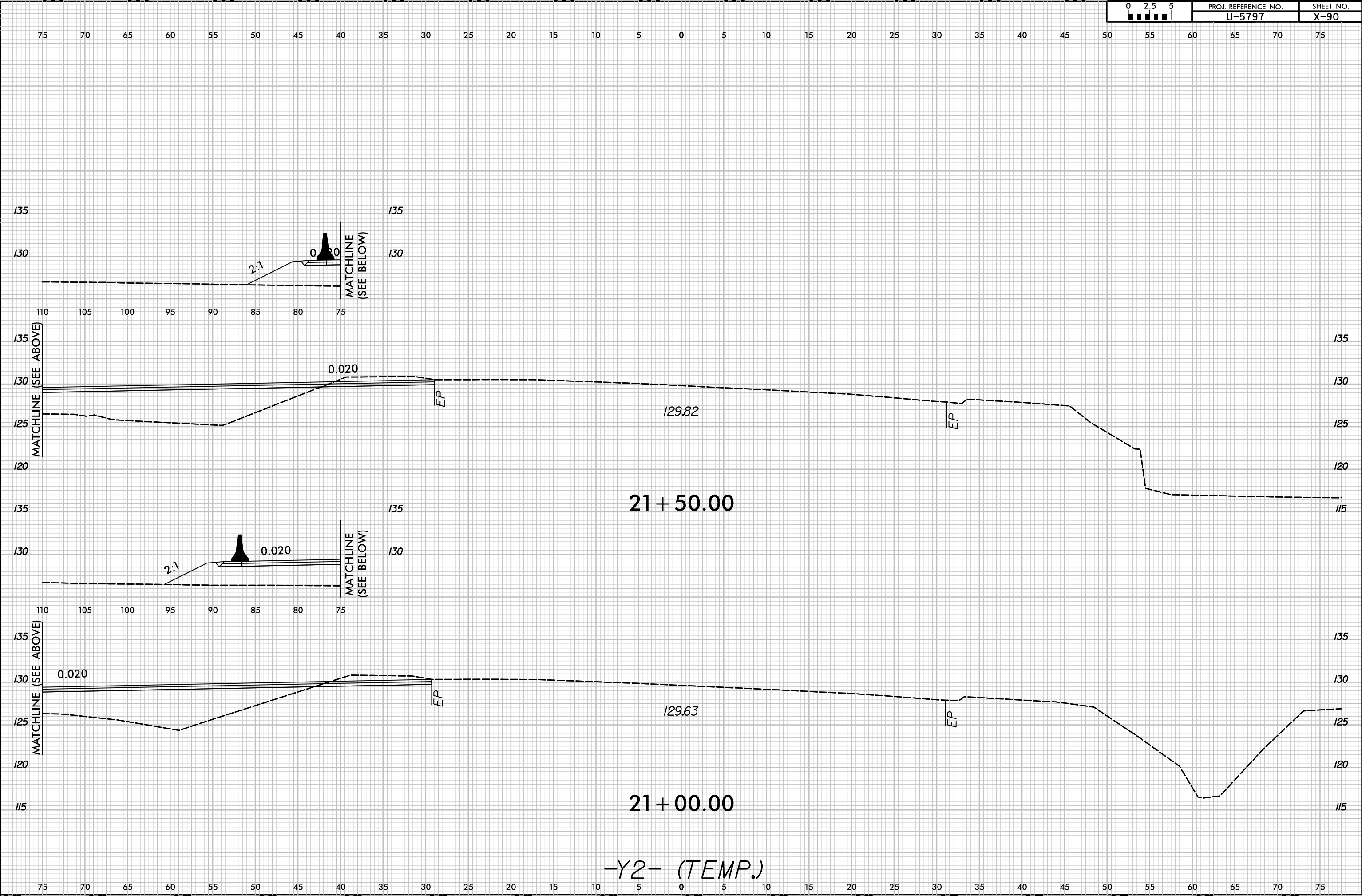
8/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-5797	X-89



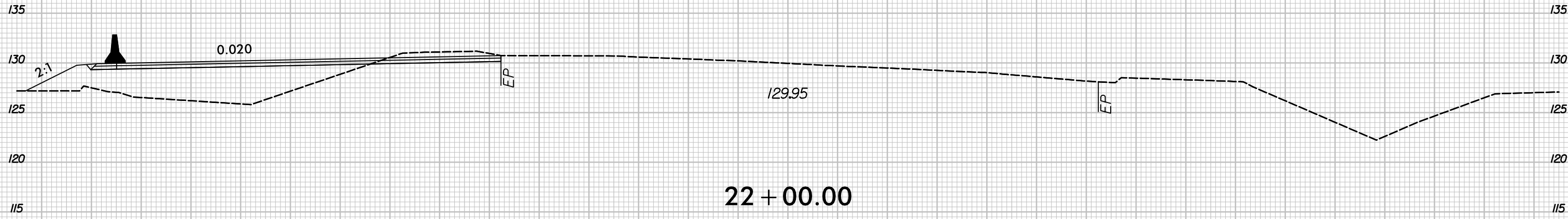
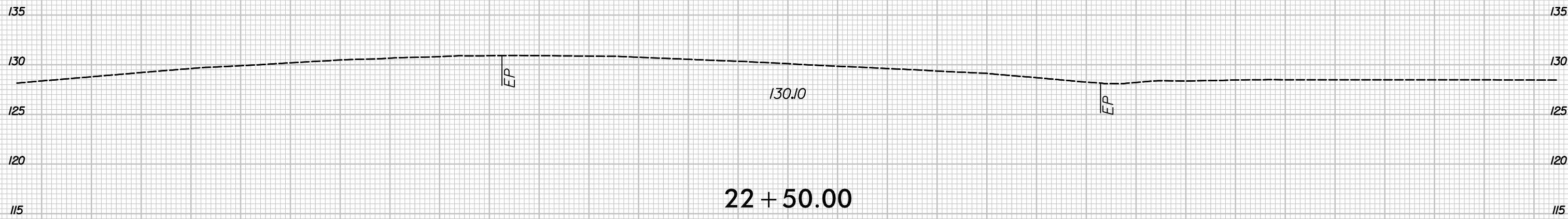
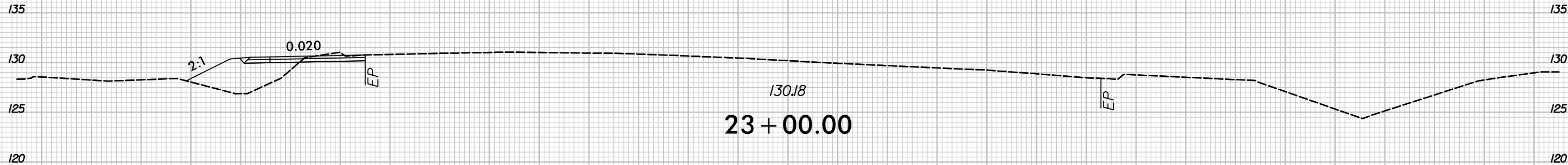
6/23/16



-Y2- (TEMP.)

6/23/16

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

-Y2- (TEMP.)



SHEET NO.
X-92