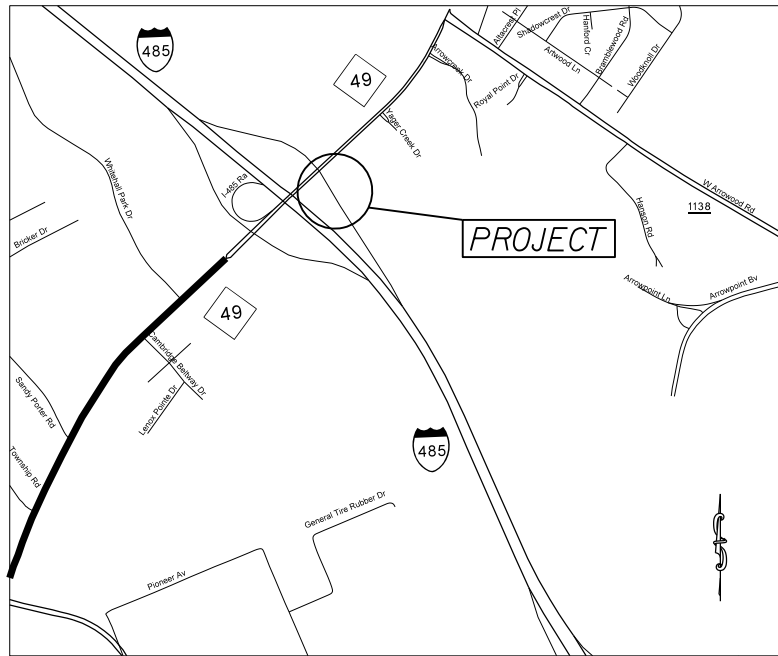


PROJECT: 50138.3.62 TIP: W-5601BI



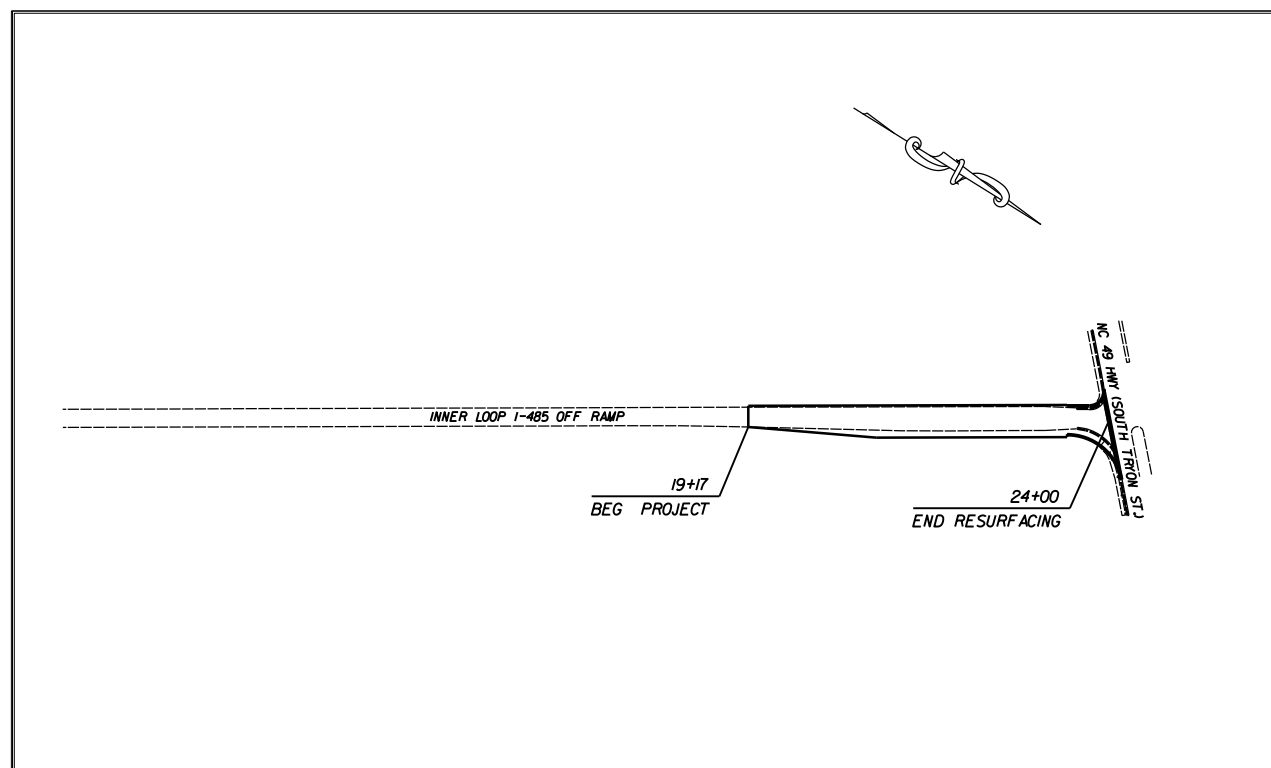
VICINITY MAP NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
MECKLENBURG

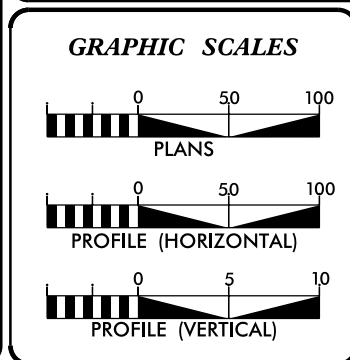
LOCATION: I-485 INNER LOOP OFF RAMP TO NC 49 SOUTH

TYPE OF WORK: GRADING, PAVING, MILLING, CONCRETE SLAB REMOVAL, ECONOCRETE SHOULDER REMOVAL, CURB & GUTTER, GUARDRAIL, THERMOPLASTIC PAVEMENT MARKINGS, AND UTILITY RELOCATION.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	50138.3.62	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50138.1.62	HSIP-0485(38)	P.E.	
50138.2.62	HSIP-0485(38)	R/W	
50138.3.62	HSIP-0485(38)	CONST.	



CLEARING ON THIS PROJECT SHALL BE TO THE LIMITS ESTABLISHED BY METHOD II AS DESCRIBED IN THE NCDOT STANDARD DRAWINGS



DESIGN DATA

ADT	=	
ADT	=	
DHV	=	%
D	=	%
T	=	%
V	=	MPH

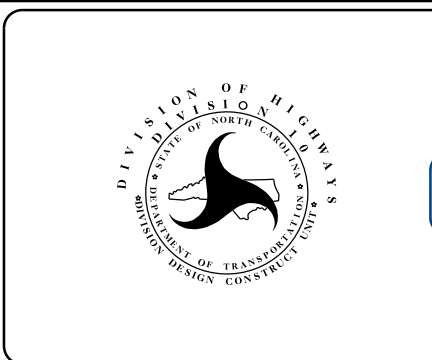
PROJECT LENGTH

LENGTH OF ROADWAY PROJECT	50138.3.62	= 0.09	MILES
TOTAL LENGTH OF STATE PROJECT	50138.3.62	= 0.09	MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
DIVISION TEN
DIVISION DESIGN / CONSTRUCT UNIT

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:	<u>DONALD GRIFFITH</u> PROJECT ENGINEER
LETTING DATE:	<u>DONALD HARWARD</u> PROJECT DESIGN ENGINEER

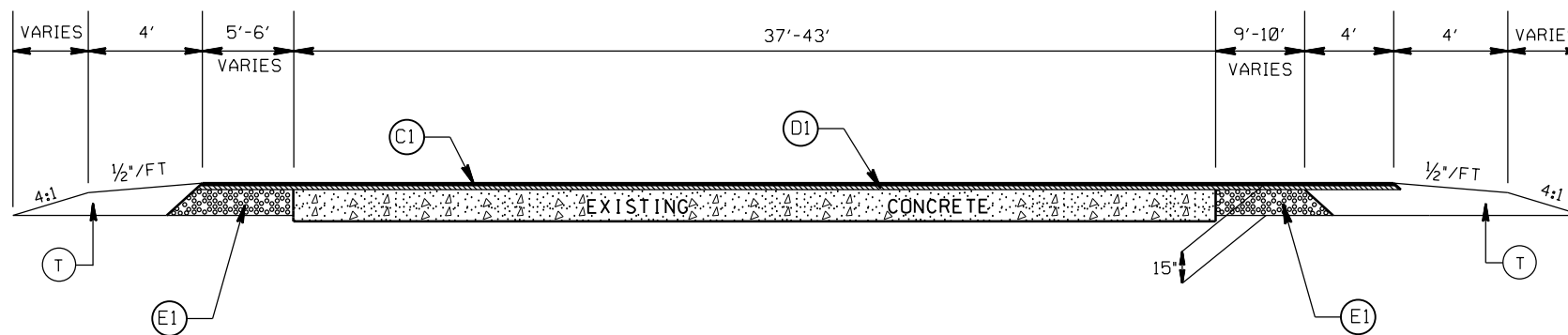


DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

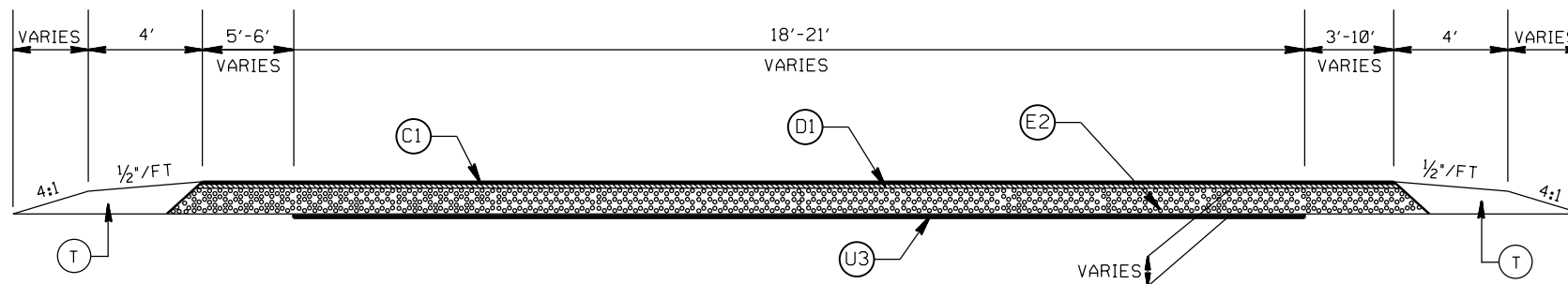
DocuSigned by:
Donald Griffith
7153CE23F21843F...
APPROVED BY
DDC ENGINEER

6/28/2017
DATE

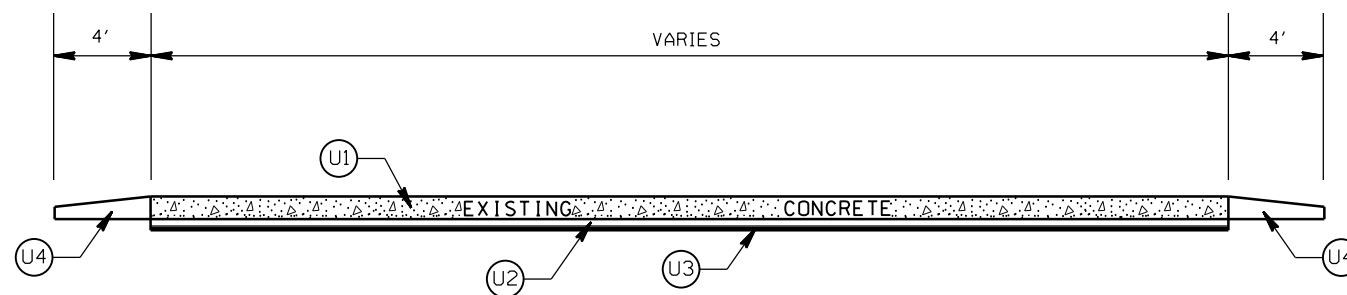
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	50138.362	2	
F.A. PROJECT NO. HSIP-0485(38)			



TYPICAL SECTION NO. 3
STA. 20+12 TO 23+14 -L-



TYPICAL SECTION NO. 2
STA. 19+17 TO 20+12 -L-



TYPICAL SECTION NO. 1
EXISTING CONDITION
FOR CONCRETE ROADWAY

PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(D1)	PROP. APPROX. 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
(E1)	PROP. APPROX. 11.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. IN EACH OF TWO LAYES.
(E2)	PROP. VARIABLE DEPTH ASPHALT CONC. BASE COURSE.
(E3)	PROP. APPROX. 8.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYES.
(E4)	PROP. APPROX. 3.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD..
(U1)	EXISTING 10" CONCRETE PAVEMENT
(U2)	EXISTING 4" PERMEABLE ASPHALT DRAINAGE LAYER (PADL)
(U3)	EXISTING 1" SURFACE COURSE TYPE I-2
(U4)	EXISTING ECONCRETE SHOULDER
(U5)	EXISTING ASPAHLT
(R1)	PROP. 2'-6" CURB & GUTTER
(T)	EARTH MATERIAL

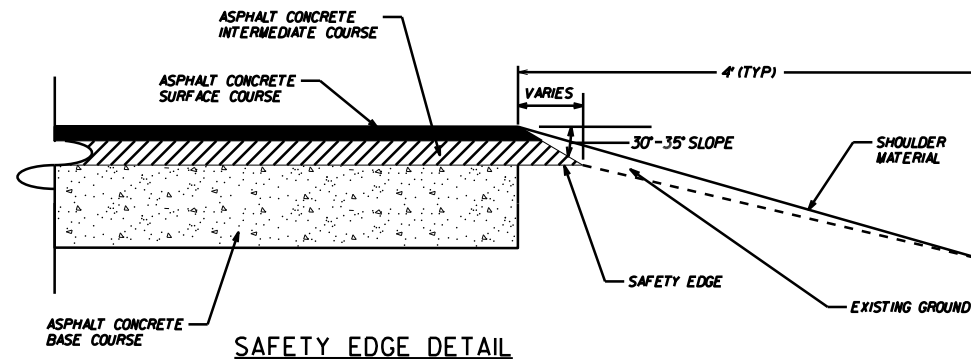
WIDEN RAMP AT I-485
AND NC 49 SOUTH

SCALE	N/A
DATE	6/12/17
DWG. BY	TBL
DESIGN BY	JDH
APPROVED	DCG



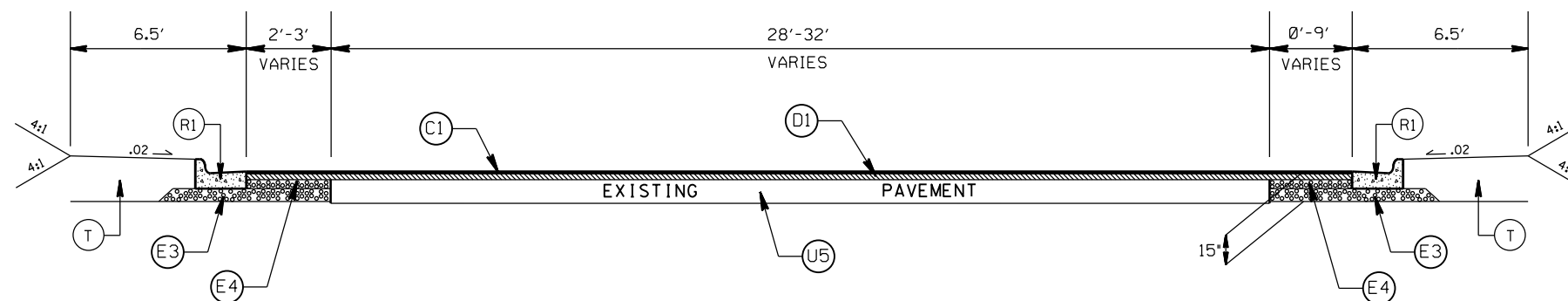
REVISIONS

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	50138.362	2A	
F.A. PROJECT NO. HSIP-0485(38)			

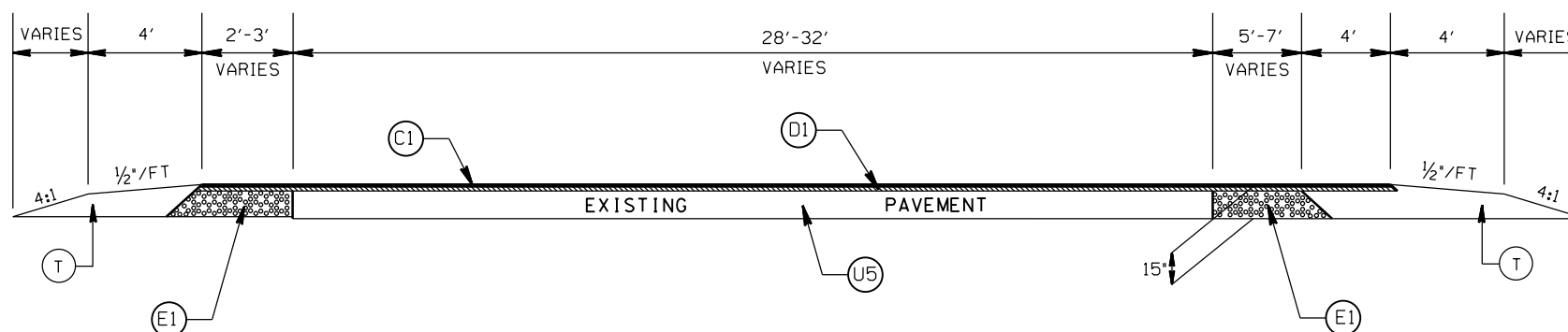


PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(D1)	PROP. APPROX. 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
(E1)	PROP. APPROX. 11.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. IN EACH OF TWO LAYES.
(E2)	PROP. VARIABLE DEPTH ASPHALT CONC. BASE COURSE.
(E3)	PROP. APPROX. 8.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYES.
(E4)	PROP. APPROX. 3.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD..
(U1)	EXISTING 10" CONCRETE PAVEMENT
(U2)	EXISTING 4" PERMEABLE ASPHALT DRAINAGE LAYER (PADL)
(U3)	EXISTING 1" SURFACE COURSE TYPE I-2
(U4)	EXISTING ECONOCRETE SHOULDER
(U5)	EXISTING ASPAHLT
(R1)	PROP. 2'-6" CURB & GUTTER
(T)	EARTH MATERIAL



TYPICAL SECTION NO. 5
STA. 23+43.27 TO 24+00.73 -L-



TYPICAL SECTION NO. 4
STA. 23+14 TO 23+43.27 -L-

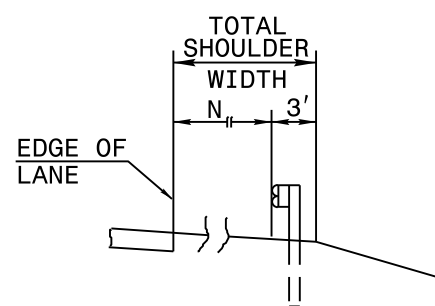
WIDEN RAMP AT I-485
AND NC 49 SOUTH

SCALE	N/A		REVISIONS
DATE	6/12/17		
DWG. BY	TBL		
DESIGN BY	JDH		
APPROVED	DCG		

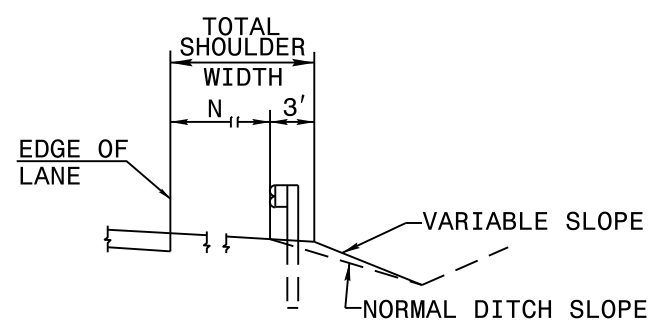
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	50138.362	2B	
F.A. PROJECT NO. HSIP-0485(38)			

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.



FILL SECTION

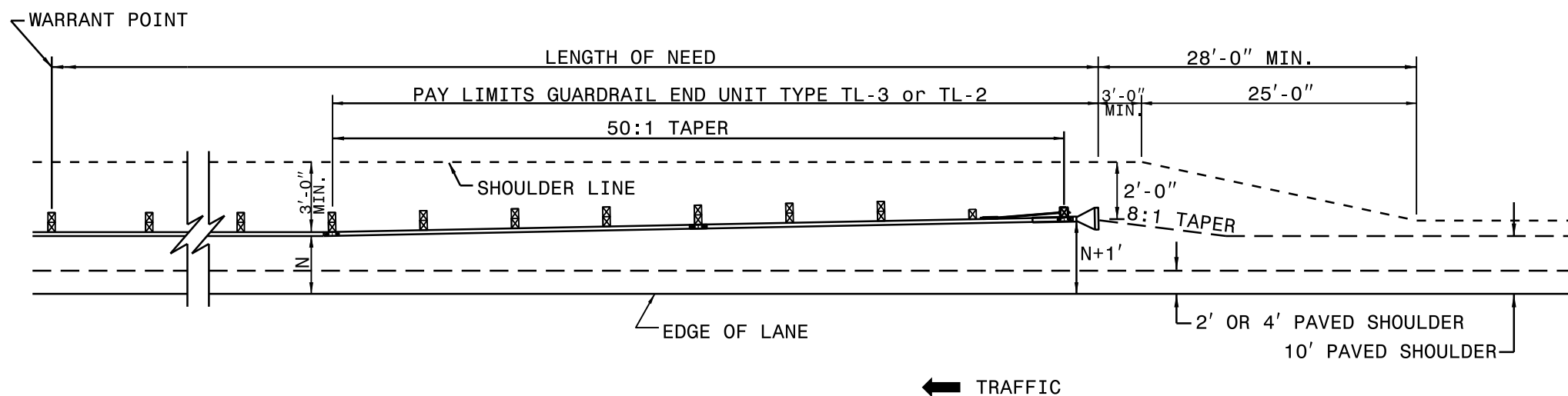


CUT SECTION

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



FOR POSTED SPEEDS \geq 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS $<$ 45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

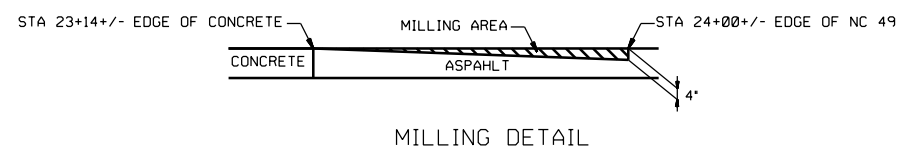
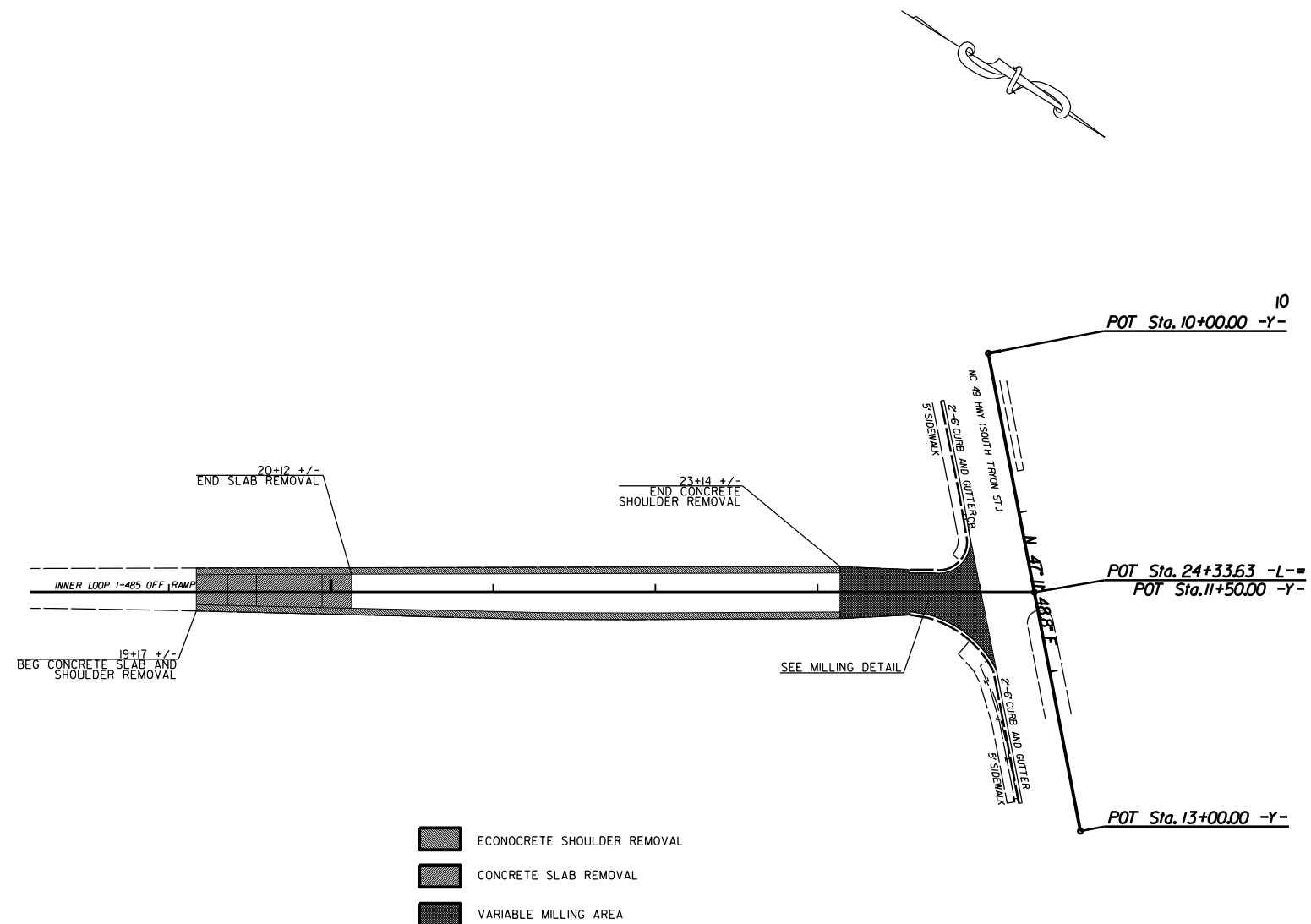
SHEET 6 OF 11
862D01

SHEET 6 OF 11
862D01

WIDEN RAMP AT I-485
AND NC 49 SOUTH

SCALE	N/A		REVISIONS
DATE	APRIL 2016		
DWG. BY	TBL		
DESIGN BY	JDH		
APPROVED	DCG		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	50138.3.62	4	
F.A. PROJECT NO. HSIP-0485(38)			



WIDEN RAMP AT I-485
AND NC 49 SOUTH

SCALE	1"=50'
DATE	6/12/17
DWG. BY	TBL
DESIGN BY	JDH
APPROVED	DCG



REVISIONS	

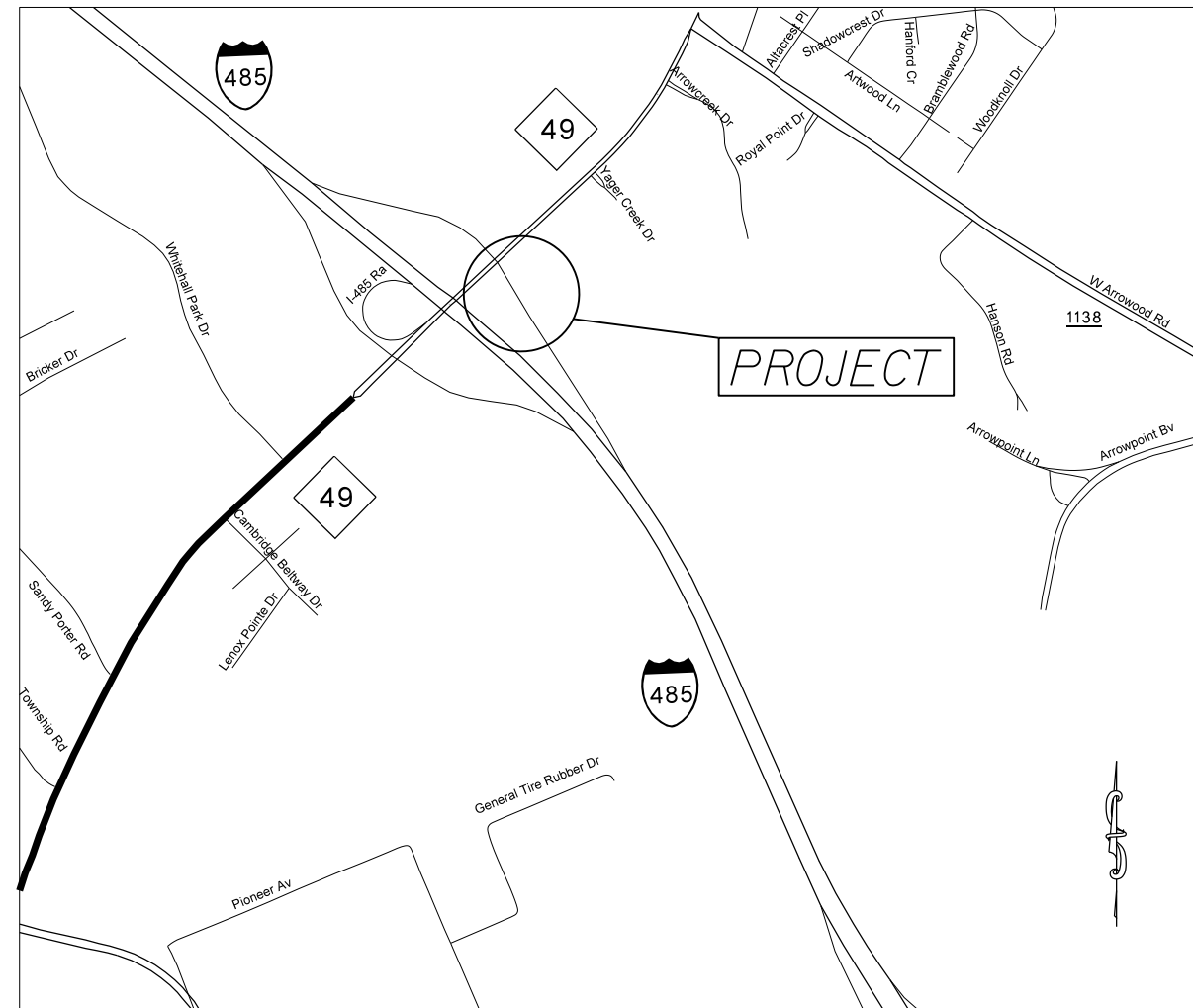
TIP PROJECT: W-5601BI

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
**PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	50138.3.62	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50138.1.62	HSIP-0485(38)	P.E.	
50138.2.62	HSIP-0485(38)	R/ W	
50138.3.62	HSIP-0485(38)	CONST.	

EROSION AND SEDIMENT CONTROL MEASURES

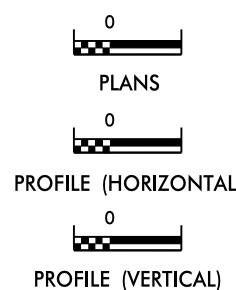
Std. #	Description	Symbol
1630.05	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	



VICINITY MAP NOT TO SCALE

THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.

GRAPHIC SCALE



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611
2012 STANDARD SPECIFICATIONS

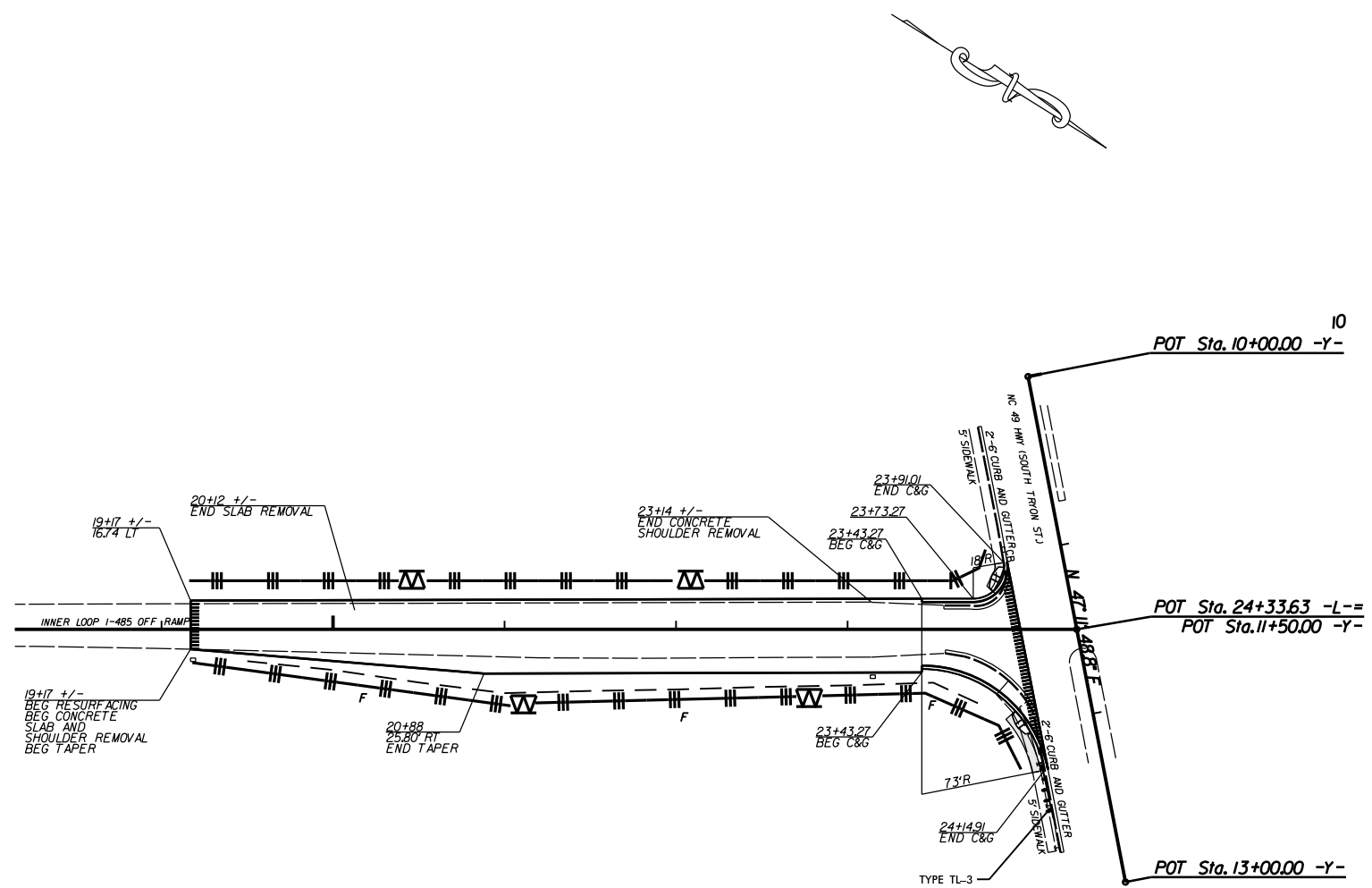
Designed by:
Travis Lowder **3742**
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	50138.3.62	EC-2	
F.A. PROJECT NO. HSIP-0485(38)			



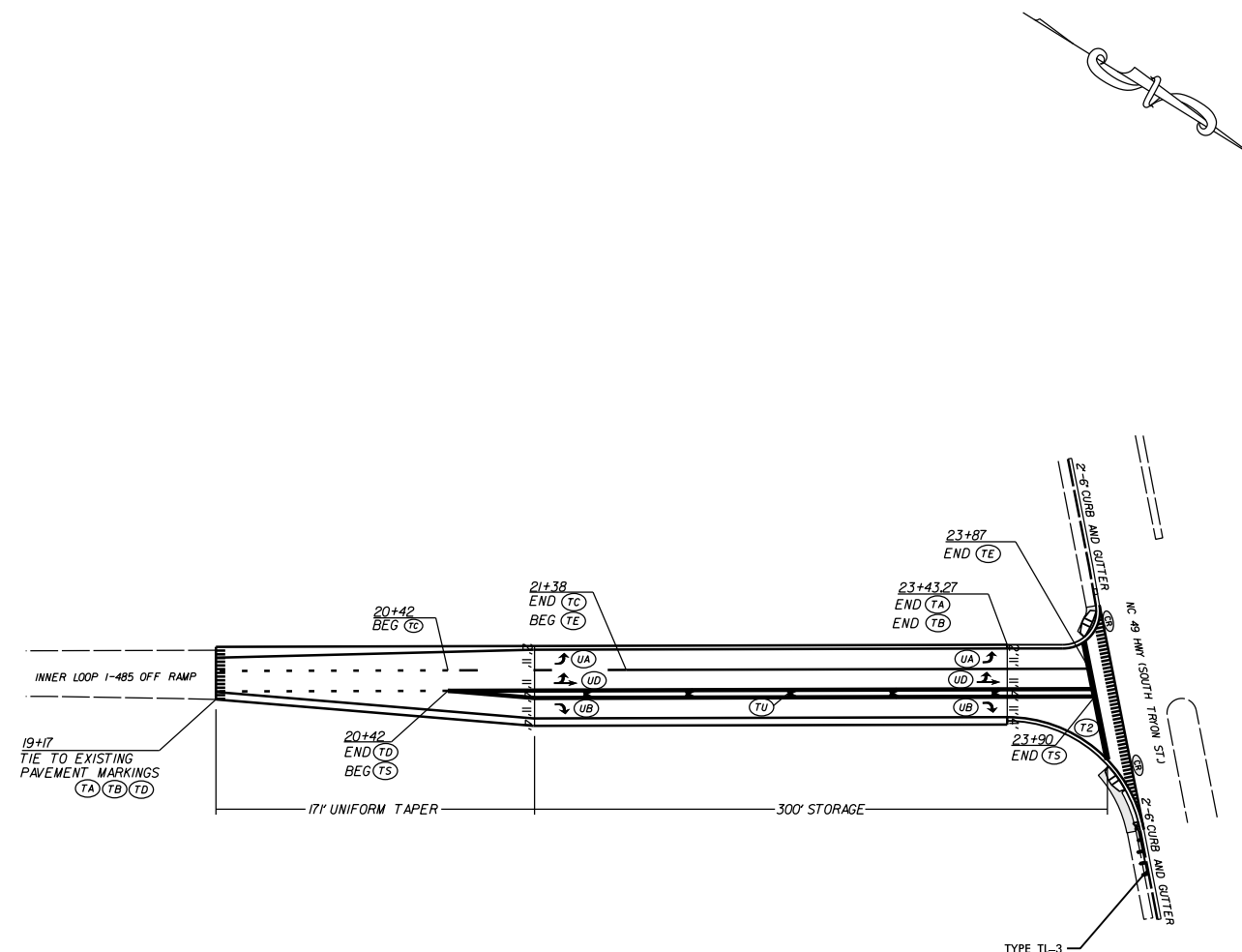
WIDEN RAMP AT I-485
AND NC 49 SOUTH

SCALE	r=50'
DATE	6/12/17
DWG. BY	TBL
DESIGN BY	JDH
APPROVED	DCG



REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	50138.3.62	PMP-1	
F.A. PROJECT NO. HSIP-0485(38)			



PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING LINES

- | | |
|--|---|
| TA - WHITE EDGELINE (4',.90 MIL) | TU - WHITE DIAGONAL (12',.90 MIL) |
| TB - YELLOW EDGELINE (4',.90 MIL) | TV - YELLOW DIAGONAL (12',.90 MIL) |
| TC - 10FT. WHITE SKIP (4',.120 MIL) | TI - WHITE LINE, RR X (16',.120 MIL) |
| TD - 3FT.-9FT./SP WHITE MINISKIP (4',.120 MIL) | T2 - WHITE STOPBAR (24',.120 MIL) |
| TE - WHITE SOLID LANE LINE (4',.120 MIL) | T3 - WHITE CROSSWALK LINE (24',.120 MIL) |
| TF - 10FT. YELLOW SKIP (4',.120 MIL) | T4 - WHITE RUMBLE STRIP (4',.240 MIL) |
| TH - YELLOW SINGLE CENTER (4',.120 MIL) | T5 - YELLOW RUMBLE STRIP (4',.240 MIL) |
| TI - YELLOW DOUBLE CENTER (4',.120 MIL) | T6 - WHITE EDGELINE (6',.90 MIL) |
| TJ - 10FT. WHITE SKIP (6',.120 MIL) | T7 - YELLOW EDGELINE (6',.90 MIL) |
| TK - 3FT.-9FT./SP WHITE MINISKIP (6',.120 MIL) | T8 - 2FT.-6FT./SP WHITE MINISKIP (4',.120 MIL) |
| TL - WHITE SOLID LANE LINE (6',.120 MIL) | T9 - 2FT.-6FT./SP YELLOW MINISKIP (4',.120 MIL) |
| TM - 10FT. YELLOW SKIP (6',.120 MIL) | T10 - 3FT.-3FT./SP WHITE MINISKIP (12',.120 MIL) |
| TN - WHITE GORELINE (8',.90 MIL) | T11 - 2FT.-6FT./SP WHITE MINISKIP (6',.120 MIL) |
| TO - WHITE DIAGONAL (8',.90 MIL) | T12 - 2FT.-6FT./SP YELLOW MINISKIP (6',.120 MIL) |
| TP - YELLOW DIAGONAL (8',.90 MIL) | T13 - 3FT.-9FT./SP WHITE MINISKIP (8',.120 MIL) |
| TQ - WHITE CROSSWALK LINE (8',.120 MIL) | T14 - 3FT.-9FT./SP WHITE MINISKIP (12',.120 MIL) |
| TR - WHITE SOLID LANE LINE (8',.120 MIL) | T15 - YELLOW SINGLE CENTER (6',.120 MIL) |
| TS - WHITE GORELINE (12',.90 MIL) | T16 - YELLOW DOUBLE CENTER (6',.120 MIL) |
| TT - WHITE SOLID LANE LINE (12',.120 MIL) | T17 - 3FT.-3FT./SP WHITE MINISKIP ENTRANCE LINE (8',.120 MIL) |

PAVEMENT MARKING SYMBOLS

- | | |
|--|--|
| UA - LEFT TURN ARROW (90 MIL) | UU - FISH-HOOK STRAIGHT ARROW (90 MIL) |
| UB - RIGHT TURN ARROW (90 MIL) | UV - FISH-HOOK LEFT/STRAIGHT ARROW (90 MIL) |
| UC - STRAIGHT ARROW (90 MIL) | UW - FISH-HOOK RIGHT/STRAIGHT ARROW (90 MIL) |
| UD - COMBO. LEFT/STRAIGHT ARROW (90 MIL) | UX - FISH-HOOK LEFT/RIGHT ARROW (90 MIL) |
| UE - COMBO. RIGHT/STRAIGHT ARROW (90 MIL) | UY - FISH-HOOK LEFT/RIGHT/STRAIGHT ARROW (90 MIL) |
| UF - COMBO. LEFT/RIGHT ARROW (90 MIL) | UZ - FISH-HOOK W/CIRCLE STRAIGHT ARROW (90 MIL) |
| UG - COMBO. LEFT/RIGHT/STRAIGHT ARROW (90 MIL) | |
| UH - HANDICAP PARKING (90 MIL) | WA - FISH-HOOK W/CIRCLE LEFT ARROW (90 MIL) |
| UI - ALPHANUMERIC CHAR. (120 MIL) | WB - FISH-HOOK W/CIRCLE LEFT/STRAIGHT ARROW (90 MIL) |
| UJ - BICYCLE SYMBOL (90 MIL) | WC - FISH-HOOK W/CIRCLE LEFT/RIGHT/STRAIGHT ARROW (90 MIL) |
| UK - BICYCLE STRAIGHT ARROW (90 MIL) | |
| UL - BICYCLE CHAR. (120 MIL) | MA - PERMANENT RAISED MARKER (YELLOW & YELLOW) |
| UM - 12" YIELD LINE TRIANGLE (90 MIL) | MB - PERMANENT RAISED MARKER (CRYSTAL & RED) |
| UN - 24" YIELD LINE TRIANGLE (90 MIL) | MC - PERMANENT RAISED MARKER (YELLOW & RED) |
| UO - BICYCLE LEFT ARROW (90 MIL) | MD - PERMANENT RAISED MARKER (YELLOW) |
| UP - MERGE ARROW (90 MIL) | ME - SNOWPLOWABLE MARKER (YELLOW & YELLOW) |
| UQ - RAMP ARROW SYMBOL (90 MIL) | MF - SNOWPLOWABLE MARKER (CRYSTAL & RED) |
| UR - SHARROW (90 MIL) | MG - SNOWPLOWABLE MARKER (YELLOW & RED) |
| US - BICYCLE LOOP DETECTOR (90 MIL) | ML - PERMANENT RAISED MARKER (CRYSTAL & CRYSTAL) |
| UT - U-TURN ARROW (90 MIL) | MO - SNOWPLOWABLE MARKER (CRYSTAL & CRYSTAL) |

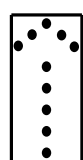
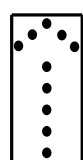
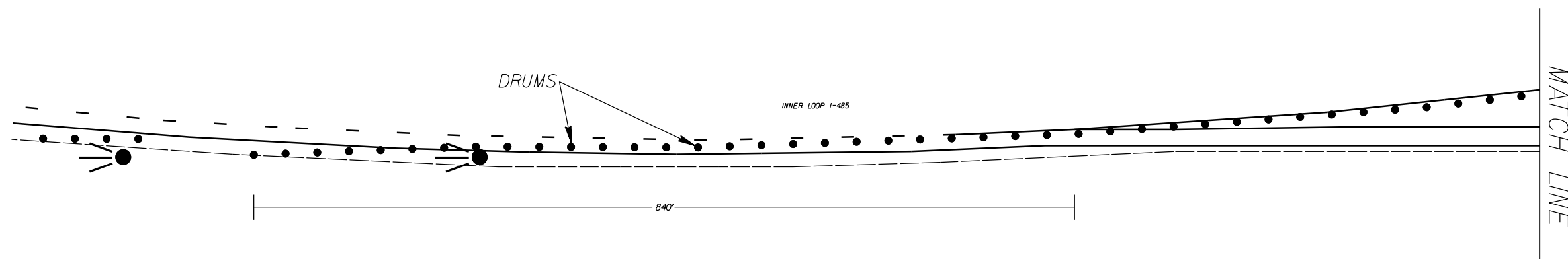
WIDEN RAMP AT I-485
AND NC 49 SOUTH

SCALE 1"=50'
DATE 6/12/17
DWG. BY TBL
DESIGN BY JDH
APPROVED DCG

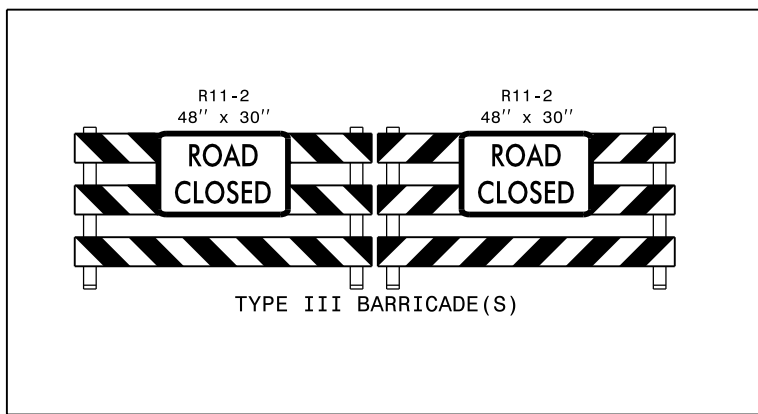
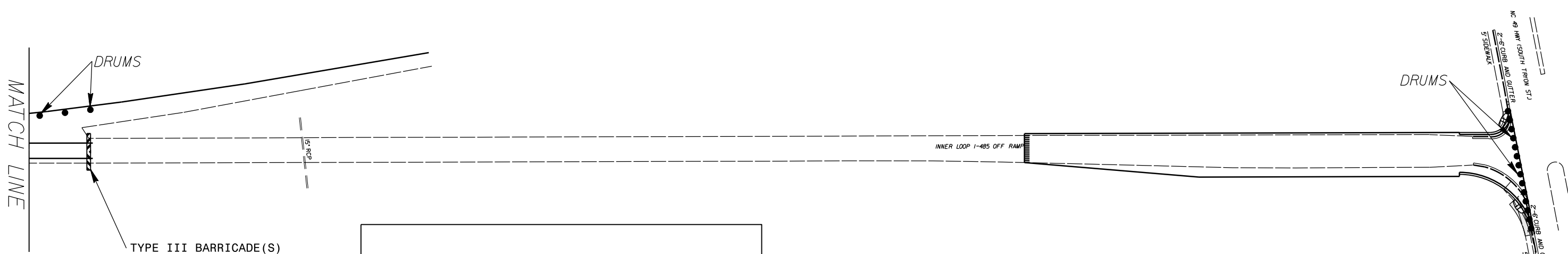


REVISIONS


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	50138.3.62	TCP-1	
F.A. PROJECT NO. HSIP-0485(38)			



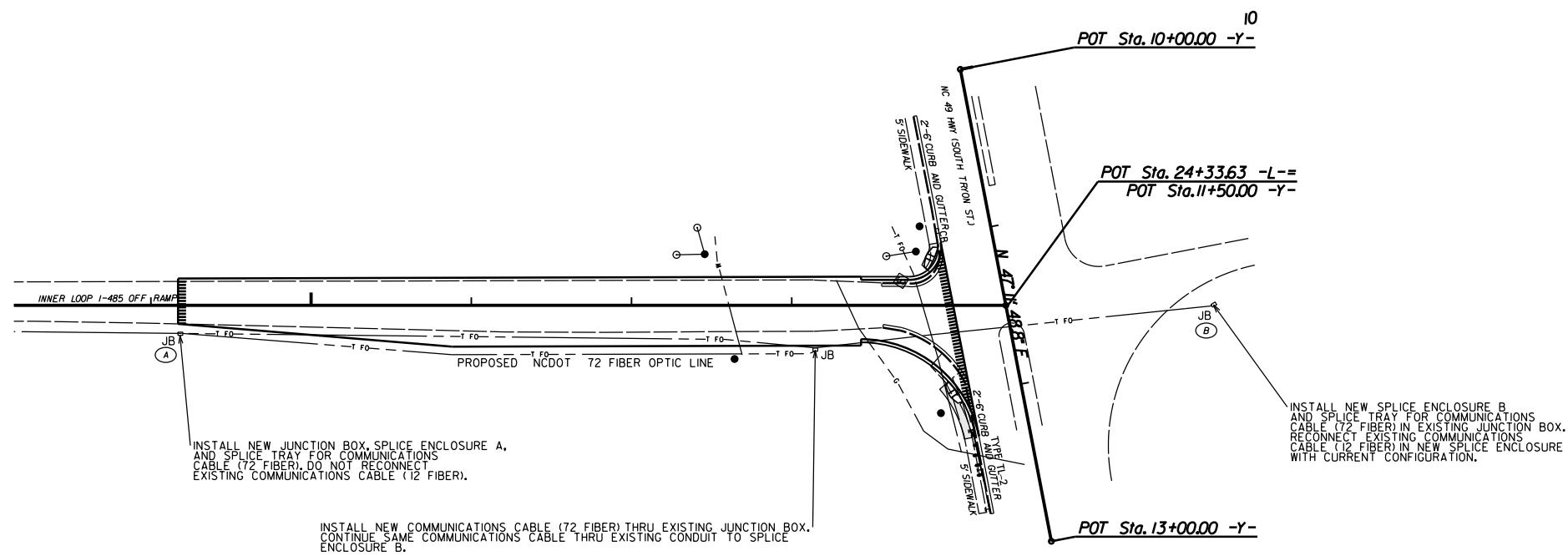
NOTE: SEE STANDARD DRAWING 1101.02 SHEET 4 OF 15 FOR ARROW BOARD PLACEMENT.



WIDEN RAMP AT I-485
AND NC 49 SOUTH

SCALE	NTS		REVISIONS
DATE	6/12/17		
DWG. BY	TBL		
DESIGN BY	JDH		
APPROVED	DCG		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	50138.3.62	UC-1	
F.A. PROJECT NO. HSIP-0485(38)			



INSTALL NEW JUNCTION BOX, SPLICE ENCLOSURE A, AND SPLICE TRAY FOR COMMUNICATIONS CABLE (72 FIBER). DO NOT RECONNECT EXISTING COMMUNICATIONS CABLE (12 FIBER).

INSTALL NEW COMMUNICATIONS CABLE (72 FIBER) THRU EXISTING JUNCTION BOX. CONTINUE SAME COMMUNICATIONS CABLE THRU EXISTING CONDUIT TO SPLICE ENCLOSURE B.

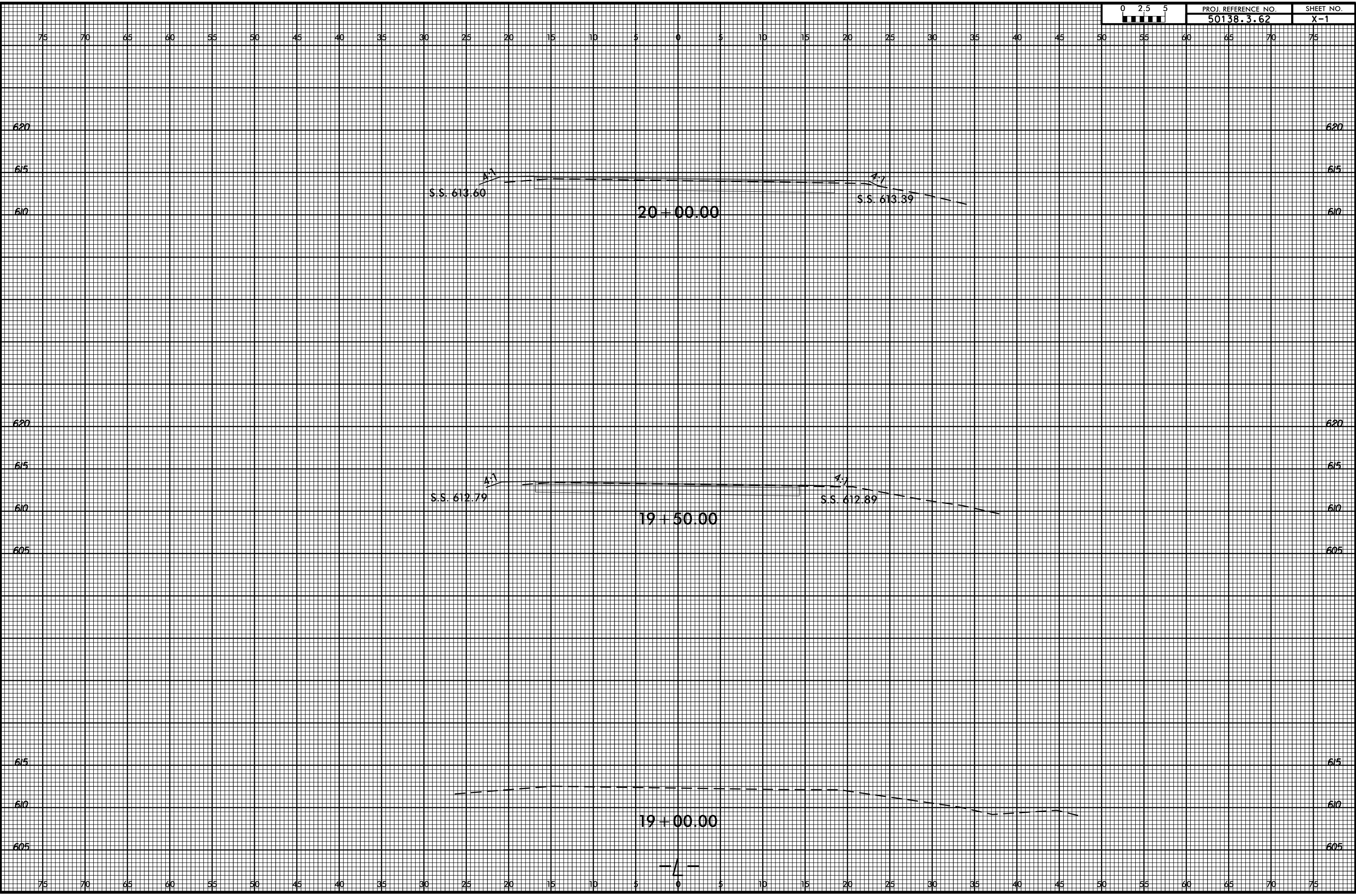
INSTALL NEW SPLICE ENCLOSURE B AND SPLICE TRAY FOR COMMUNICATIONS CABLE (72 FIBER) IN EXISTING JUNCTION BOX. RECONNECT EXISTING COMMUNICATIONS CABLE (12 FIBER) IN NEW SPLICE ENCLOSURE WITH CURRENT CONFIGURATION.

NOTE: INSTALL NEW COMMUNICATION CABLE (72 FIBER) 5' OUTSIDE NEW EDGE OF PAVEMENT.

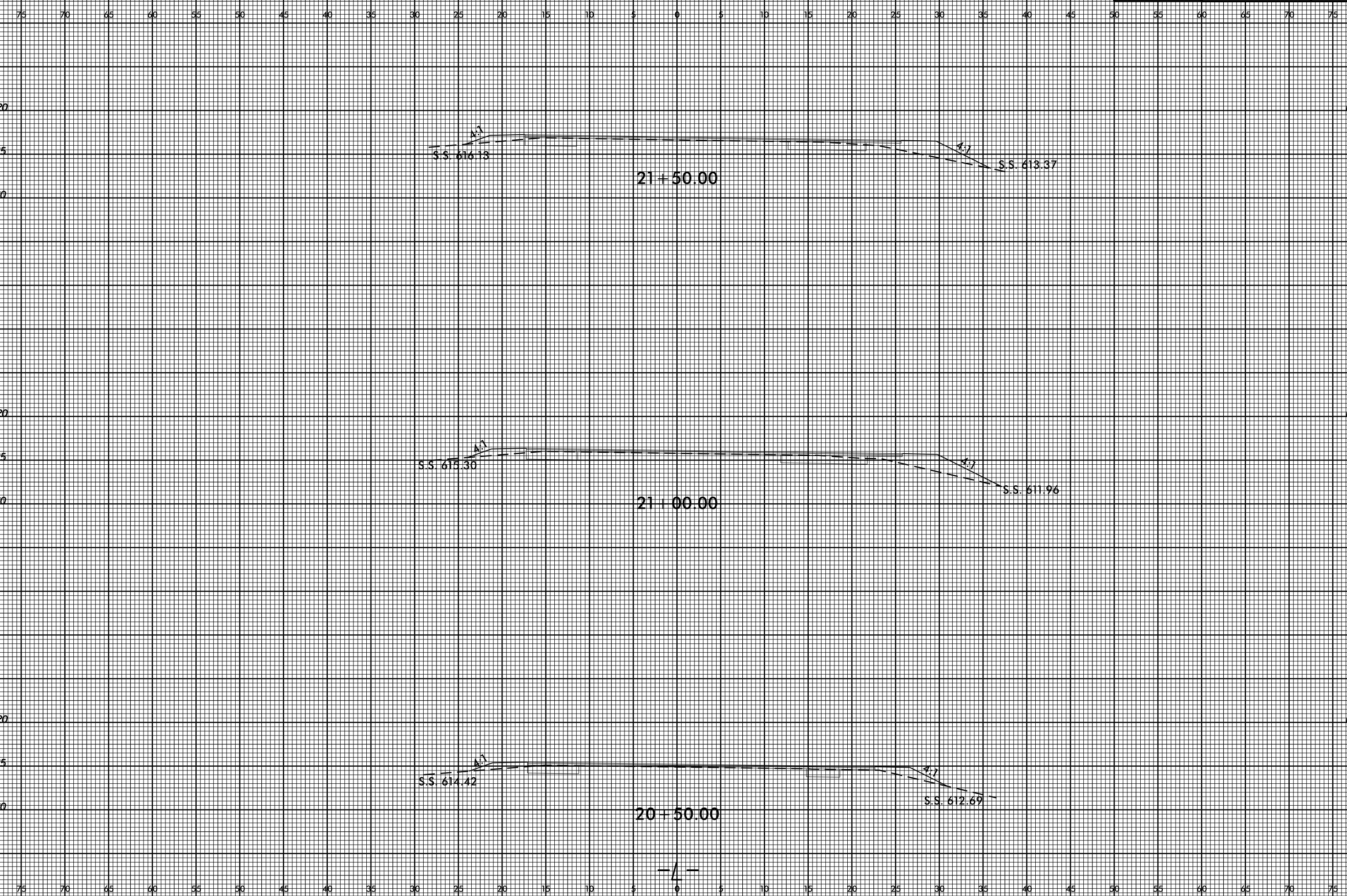
WIDEN RAMP AT I-485 AND NC 49 SOUTH

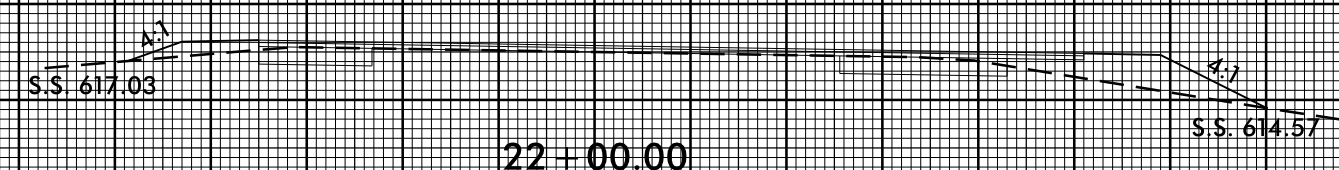
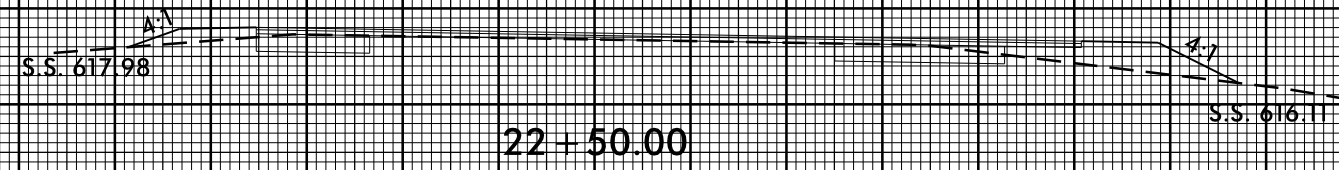
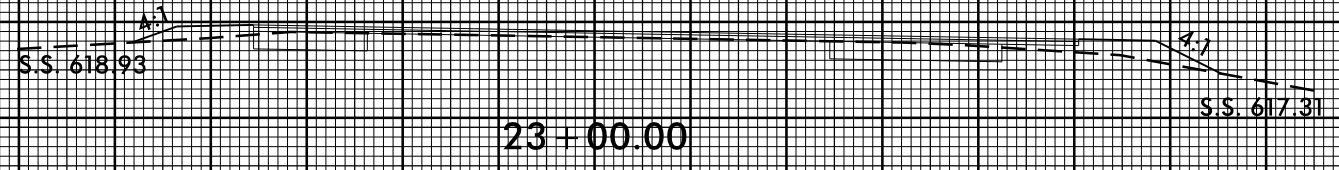
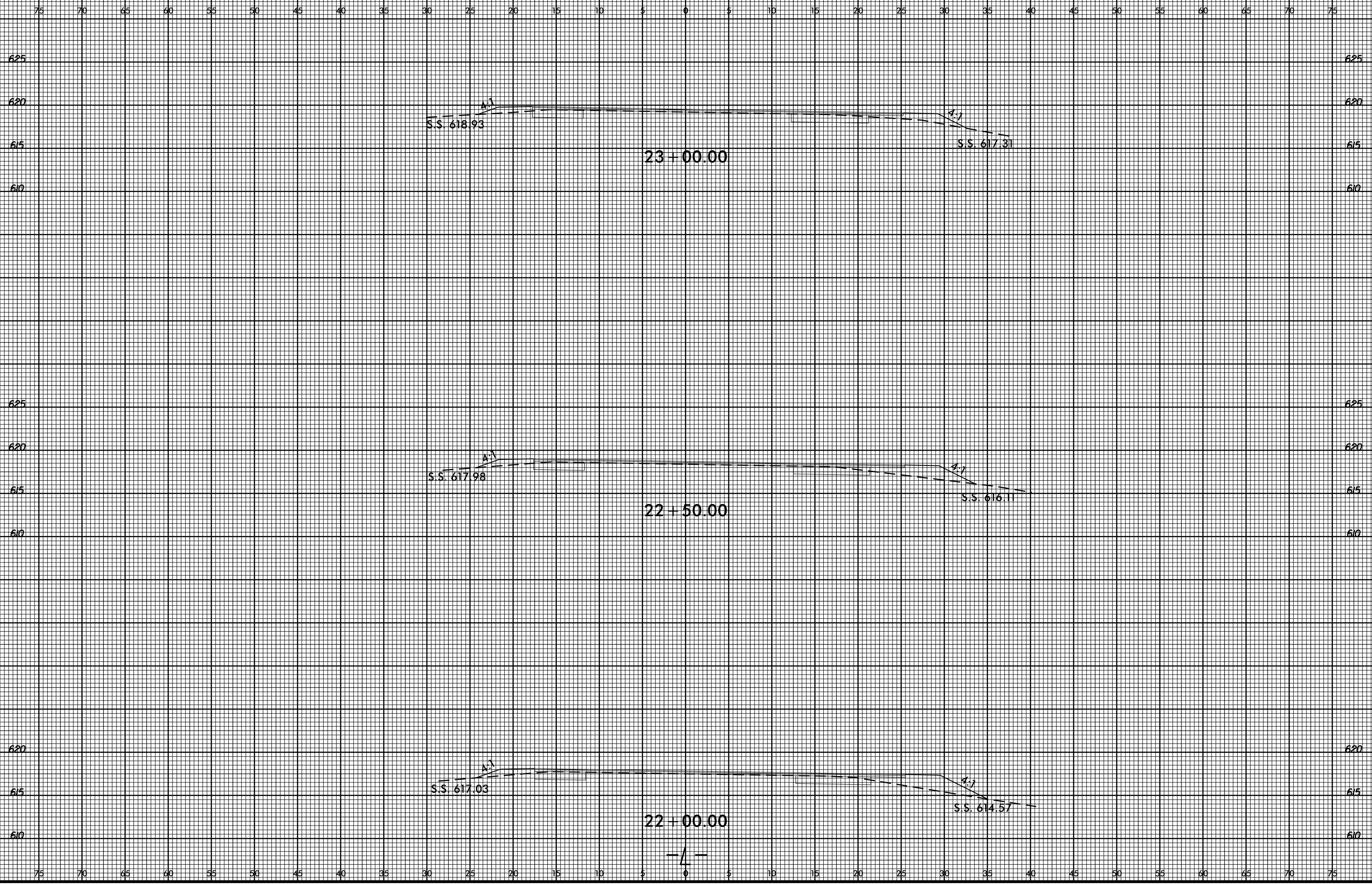
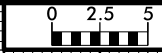
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DATE	6/12/17			
DWG. BY	TBL			
DESIGN BY	JDH			
APPROVED	DCG			

6/23/16



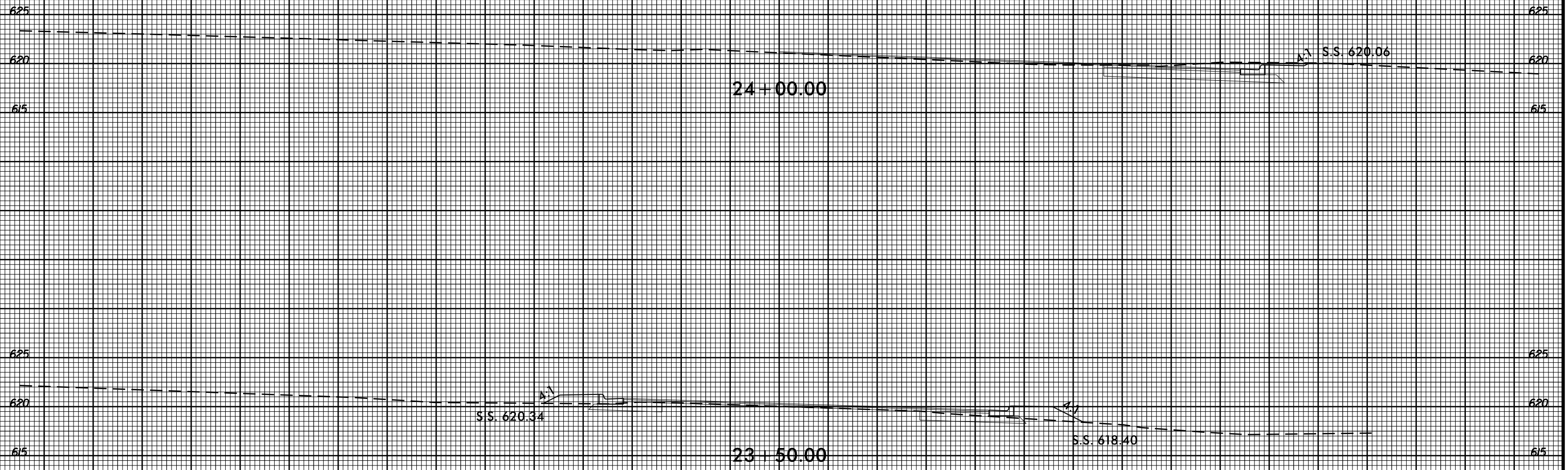
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 19+00.00 19+50.00 20+00.00







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



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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

