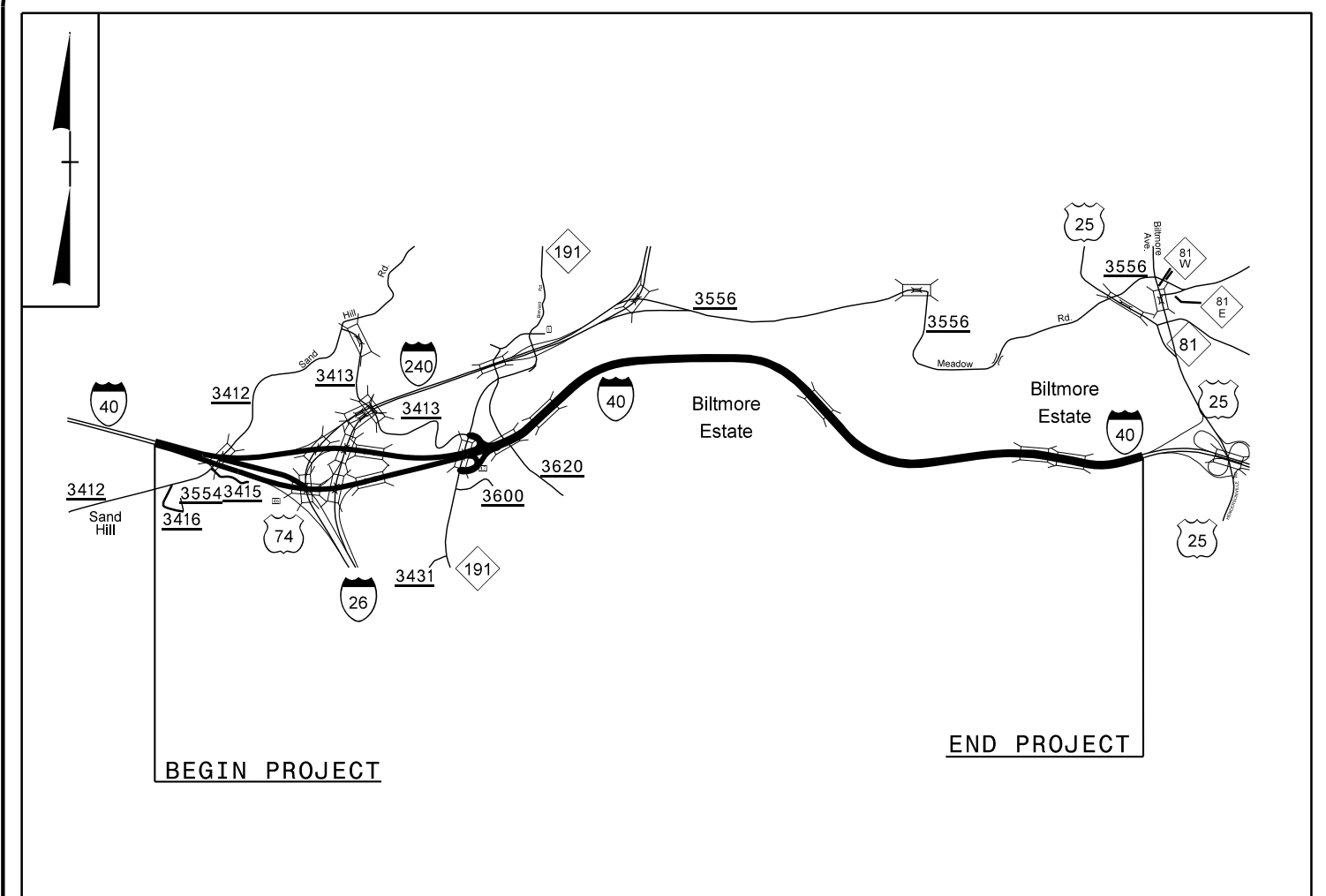


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 SA.DDC\InterState
 \$\$\$SERVNAME\$\$\$

CONTRACT: C204726 **TIP PROJECT: I-5889B**



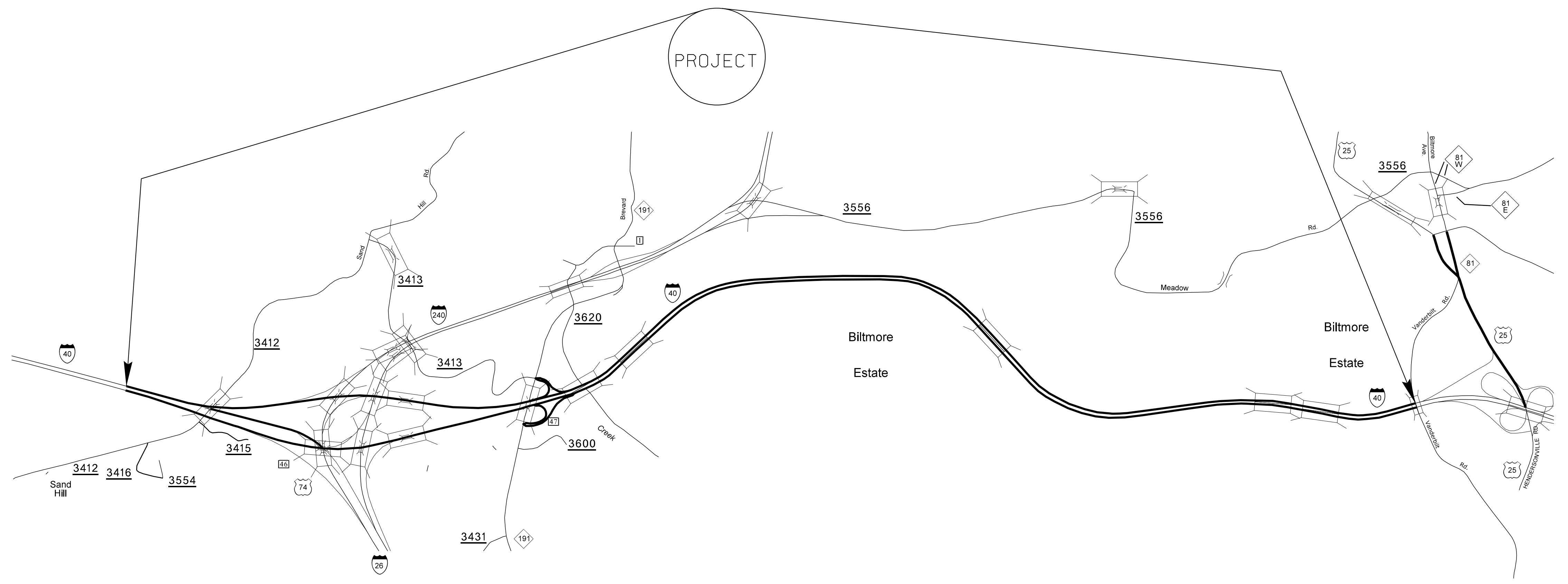
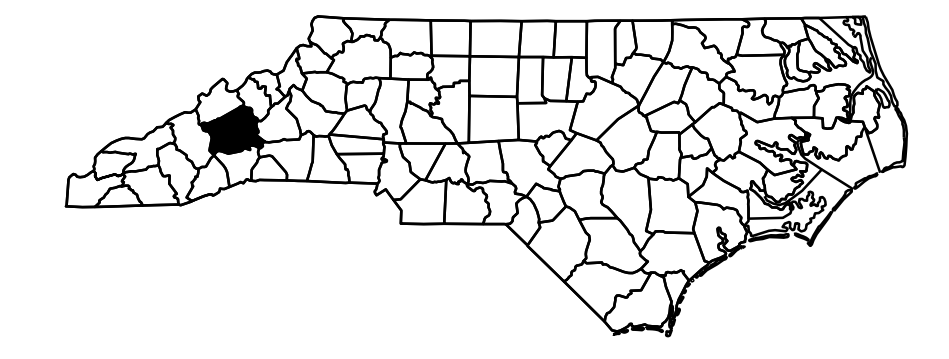
VICINITY MAP **N.T.S**

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
BUNCOMBE COUNTY

LOCATION: I40 FROM MILEMARKER 45.25 TO MILEMARKER 50

TYPE OF WORK: PAVEMENT REHABILITATION AND BRIDGE PRESERVATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5889B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46409.1.3		PE	
46409.3.3	0040103	CONST.	



2018 ROADWAY ENGLISH STANDARD DRAWINGS

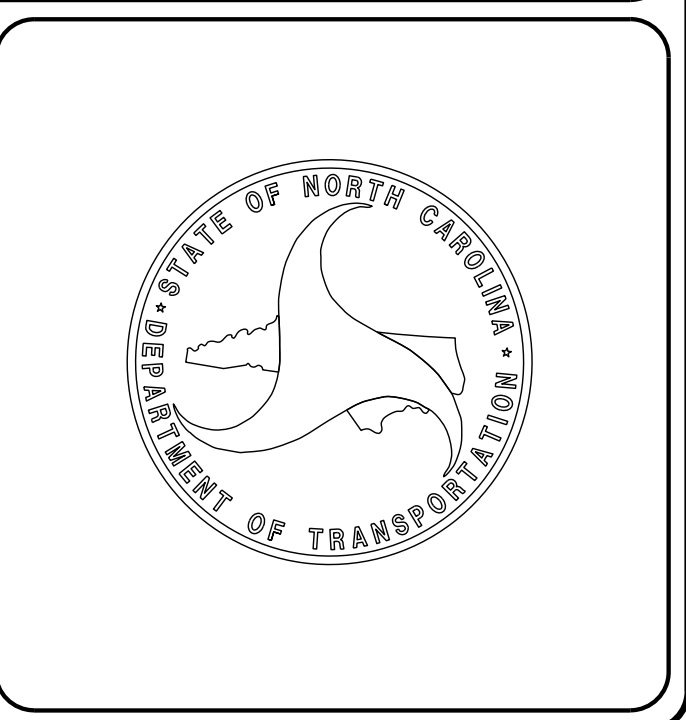
The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N.C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE	STD. NO.	TITLE
665.01	Asphalt Shoulders Milled Rumble Strips	1205.03	Pavement Markings - Exit and Entrance Ramps
820.01	Funnel and Funnel Drain		
840.16	Drop Inlet Frame and Grates	1205.04	Pavement Markings - Intersections
846.01	Concrete Curb, Gutter and Curb & Gutter	1205.05	Pavement Markings - Turn Lanes
862.01	Guardrail Placement	1205.06	Pavement Markings - Lane Drops
862.02	Guardrail Installation	1205.08	Pavement Markings - Symbols and Word Messages
862.03	Structure Anchor Units		
862.04	Anchoring End of Guardrail	1205.12	Pavement Markings - Bridges
1110.01	Stationary Work Zone Signs	1605.01	Temporary Silt Fence
1110.02	Portable Work Zone Signs	1725.01	Inductive Loop Sawcut
1150.01	Flaggers		
1165.01	Truck Mounted Attenuator		
1205.01	Pavement Markings - Line Types and Offsets		
1205.02	Pavement Markings - Two-Lane and Multi-Lane Roadways		

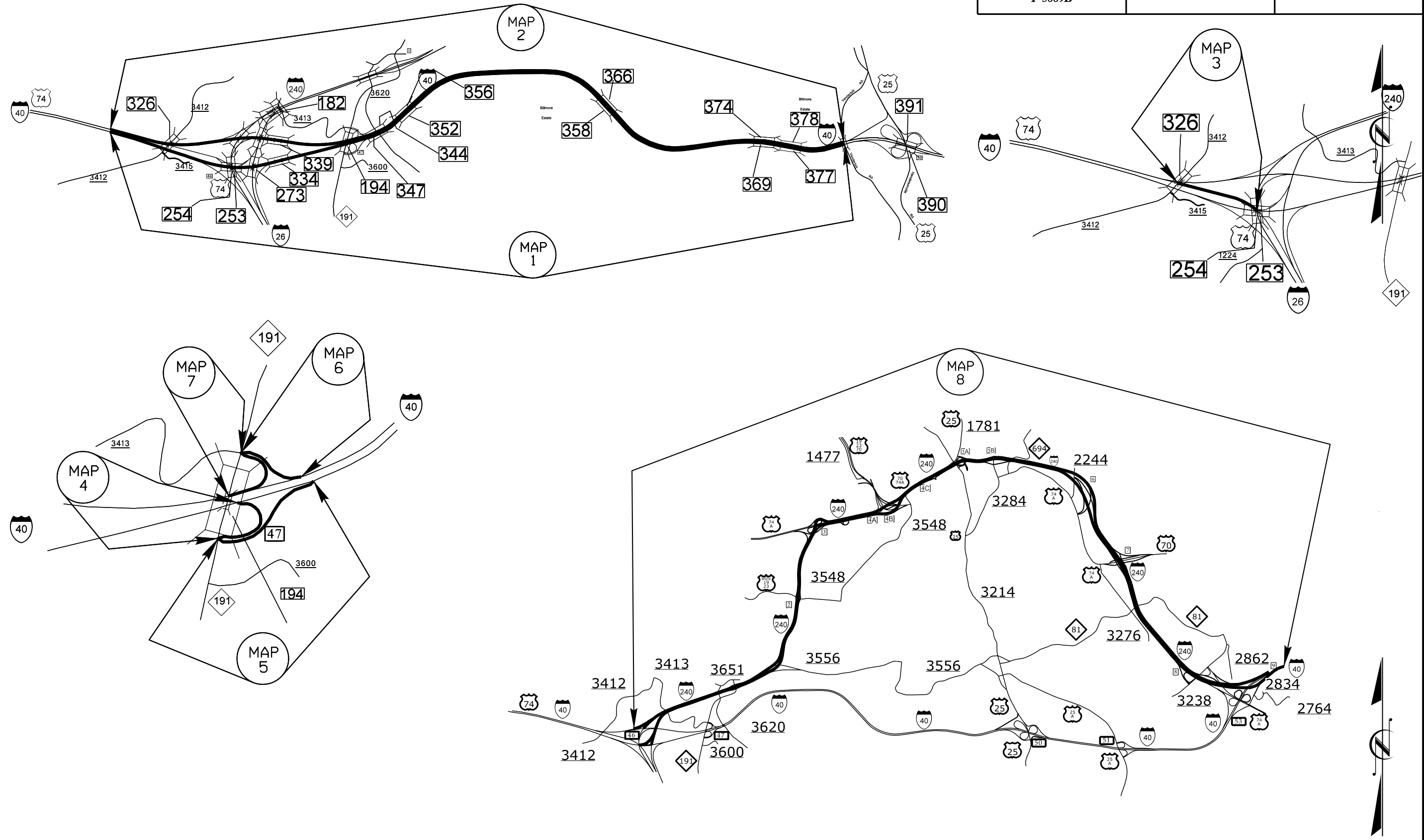
PROJECT LENGTH		
LENGTH ROADWAY TIP PROJECT I-5889B	=	4.694 MI
LENGTH STRUCTURE TIP PROJECT I-5889B	=	0.418 MI
TOTAL LENGTH OF TIP PROJECT I-5889B	=	5.112 MI

Prepared in the Office of:
DIVISION OF HIGHWAYS
 55 Orange St., Asheville NC, 28801

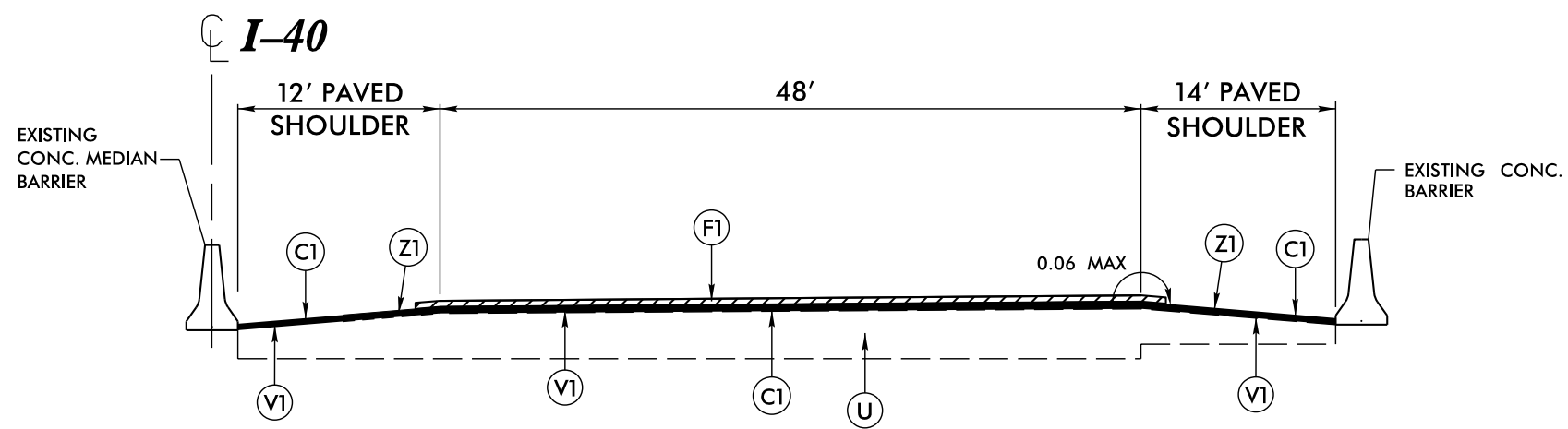
2018 STANDARD SPECIFICATIONS	WILLIAM C. CARVER PROJECT ENGINEER
RIGHT OF WAY DATE:	
LETTING DATE: APRIL 18, 2023	



PROJECT NO.	SHEET NO.	TOTAL SHEETS
I-5889B		

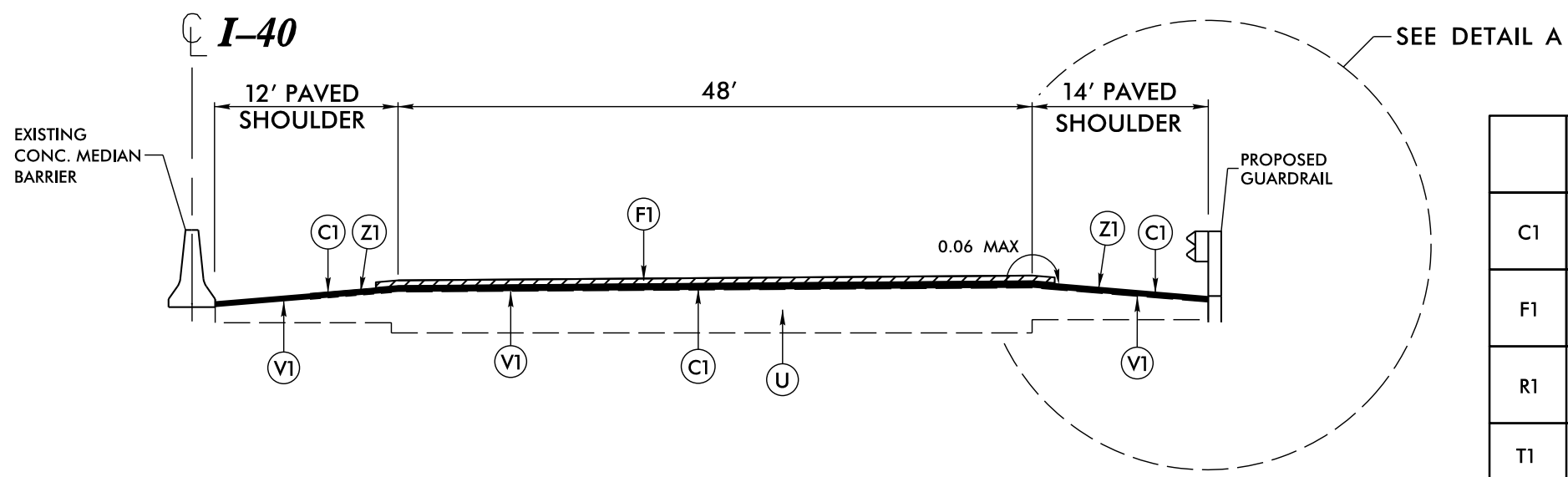


BUNCOMBE COUNTY



TYPICAL SECTION NO. 1

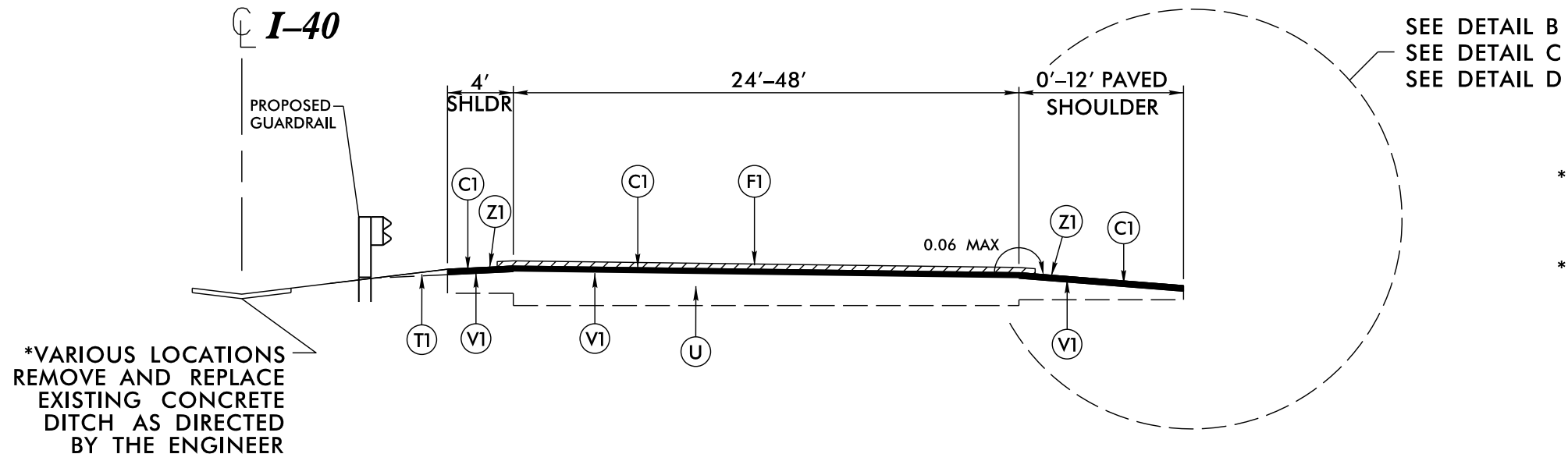
- * ULTRA-THIN BONDED WEARING COURSE SHALL EXTEND A MINIMUM OF 6" OUTSIDE OF EITHER SIDE.
- * RUMBLE STRIPS SHALL BE LOCATED 6" OUTSIDE OF ULTRA-THIN BONDED WEARING COURSE OF EITHER SIDE.



TYPICAL SECTION NO. 2

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
F1	PROP. APPROX. 3/8" ULTRA-THIN BONDED WEARING COURSE AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
R1	2'-6" CONCRETE CURB & GUTTER
T1	SHOULDER RECONSTRUCTION
U	EXISTING ASPHALT PAVEMENT
V1	MILL ASPHALT PAVEMENT, 2" DEPTH
V2	INCIDENTAL MILLING
Z1	MILLED RUMBLE STRIPS

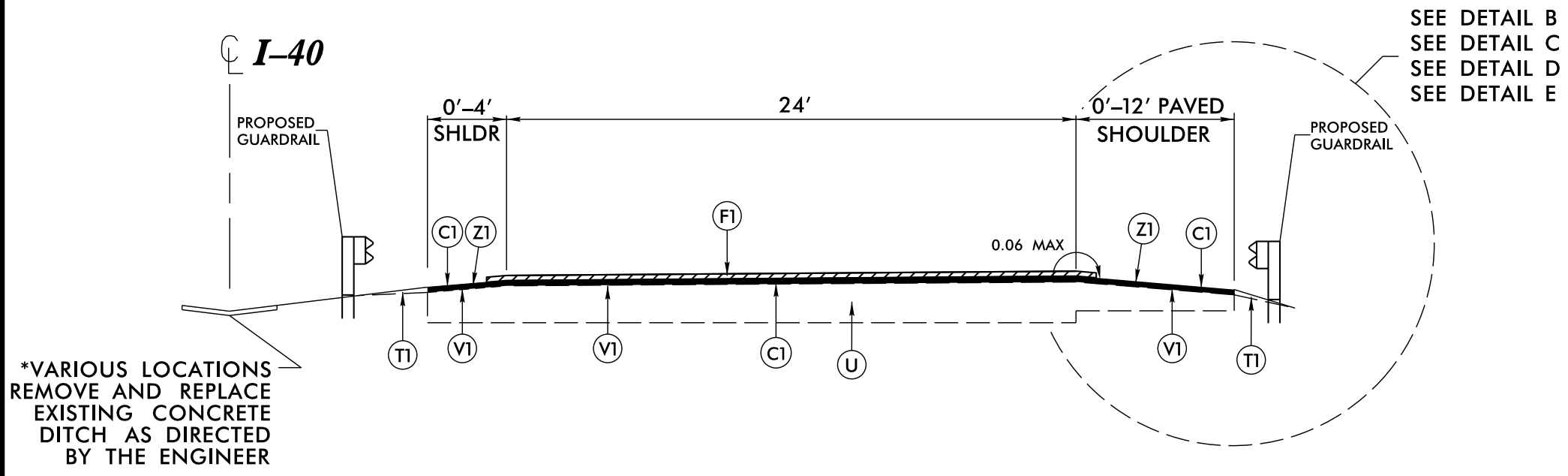
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* ULTRA-THIN BONDED WEARING COURSE SHALL EXTEND A MINIMUM OF 6" OUTSIDE OF EITHER SIDE.

* RUMBLE STRIPS SHALL BE LOCATED 6" OUTSIDE OF ULTRA-THIN BONDED WEARING COURSE OF EITHER SIDE.

TYPICAL SECTION NO. 3

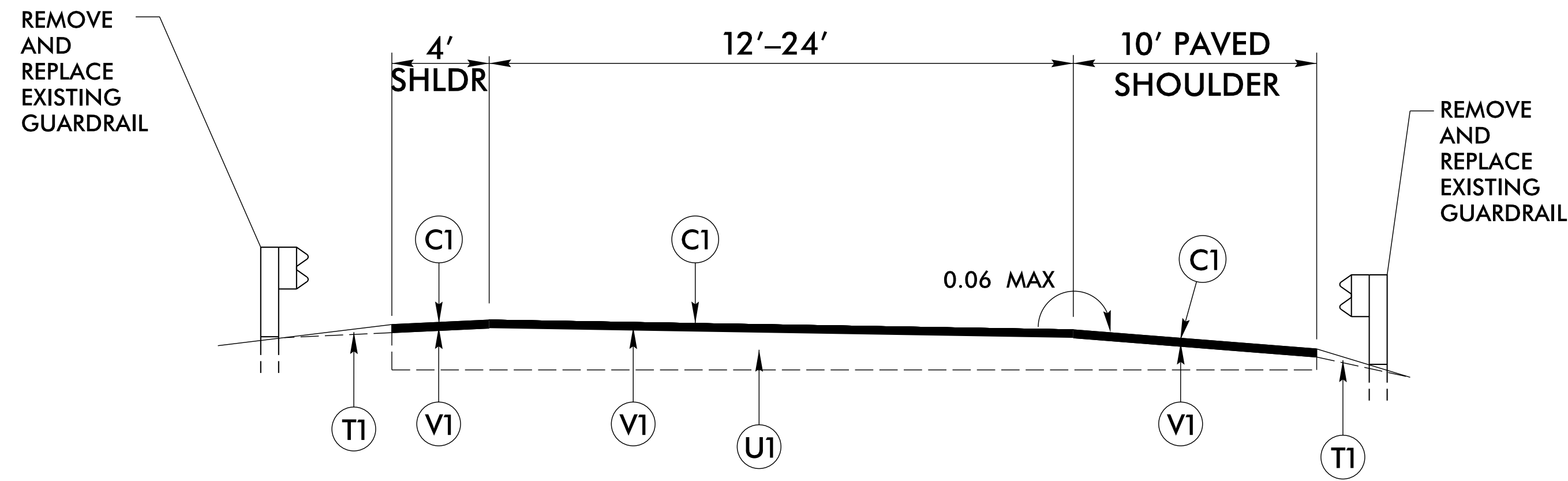


PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
F1	PROP. APPROX. 3/8" ULTRA-THIN BONDED WEARING COURSE AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
R1	2'-6" CONCRETE CURB & GUTTER
T1	SHOULDER RECONSTRUCTION
U	EXISTING ASPHALT PAVEMENT
V1	MILL ASPHALT PAVEMENT, 2" DEPTH
V2	INCIDENTAL MILLING
Z1	MILLED RUMBLE STRIPS

TYPICAL SECTION NO. 4

6/2/99
 29-JUN-2022 14:52
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RAMP (US-74)



TYPICAL SECTION NO. 7

PAVEMENT SCHEDULE

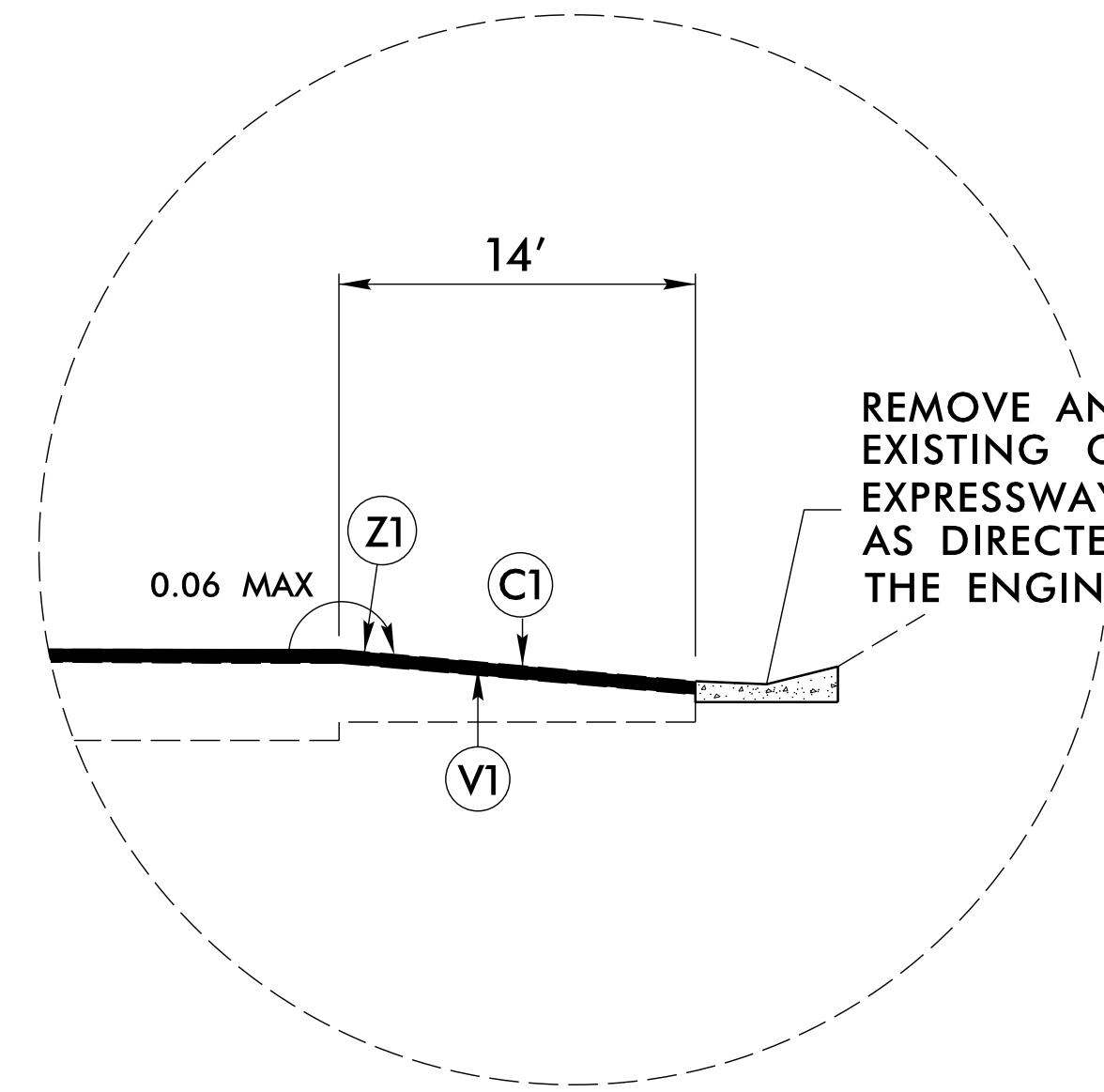
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
F1	PROP. APPROX. 5/8" ULTRA-THIN BONDED WEARING COURSE AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
R1	2'-6" CONCRETE CURB & GUTTER
T1	SHOULDER RECONSTRUCTION
U	EXISTING ASPHALT PAVEMENT
V1	MILL ASPHALT PAVEMENT, 2" DEPTH
V2	INCIDENTAL MILLING
Z1	MILLED RUMBLE STRIPS

6/2/99
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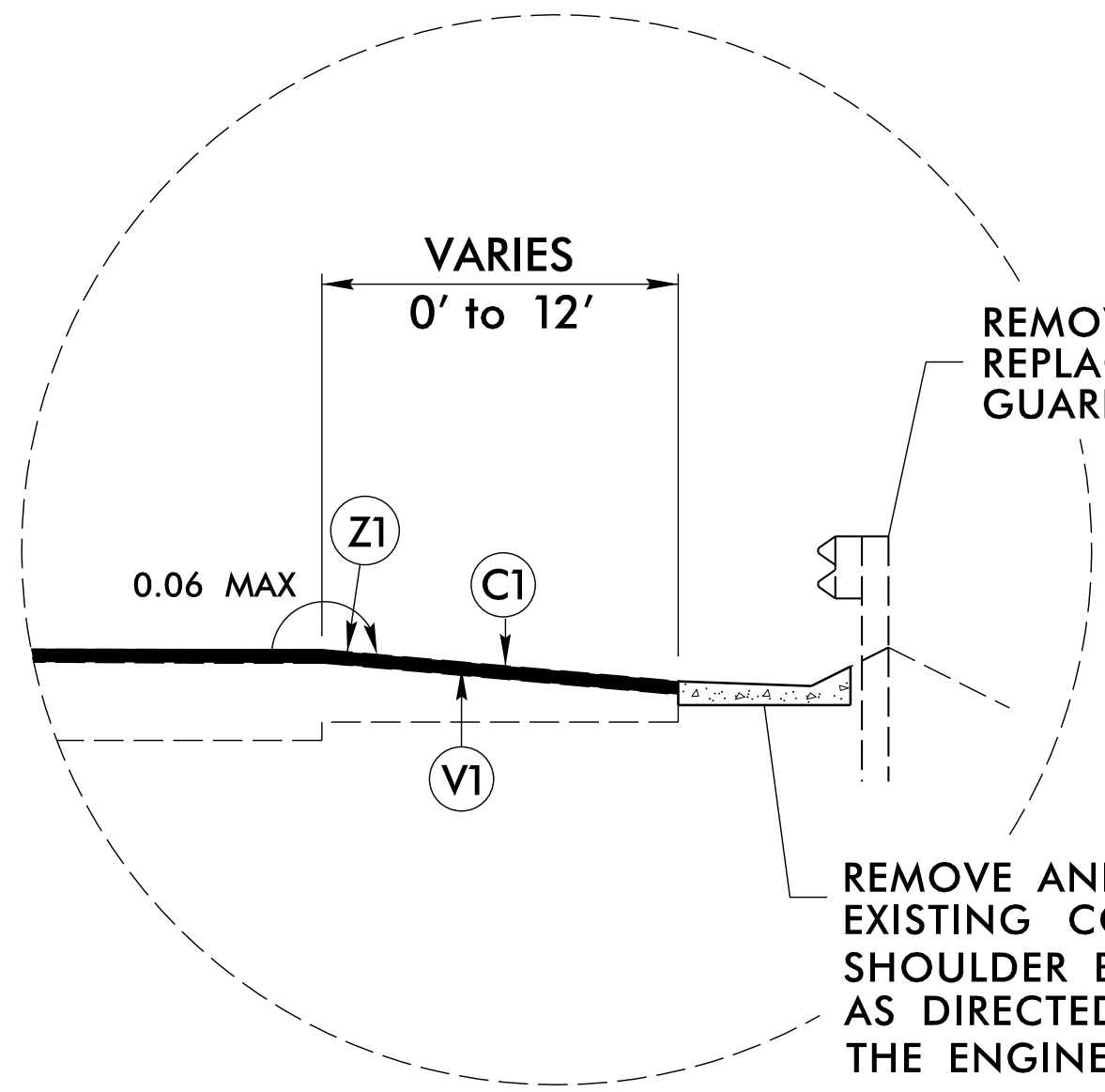
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PROJECT NO.	SHEET NO.	TOTAL SHEETS
I-5889B	7	

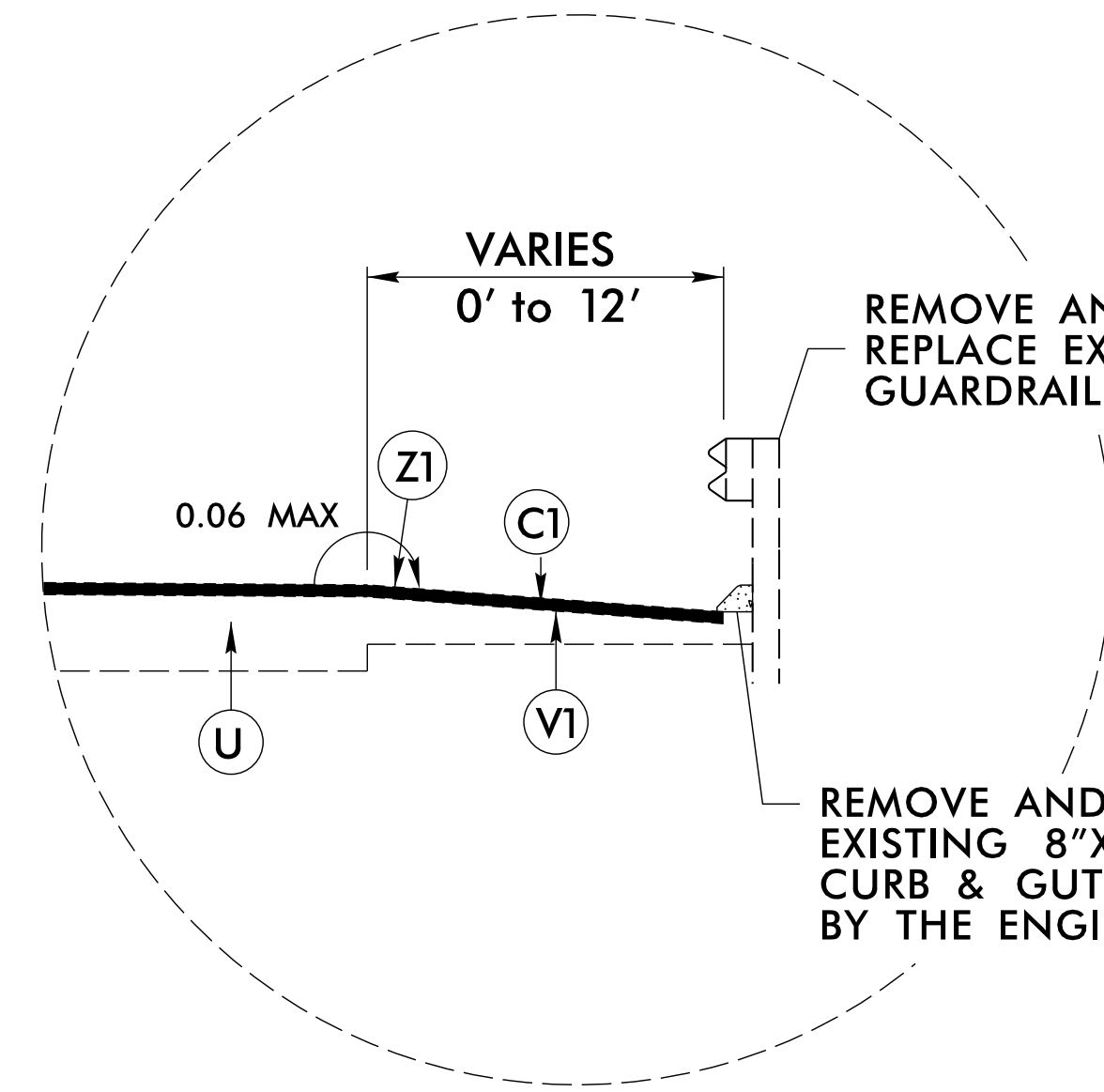
DETAILS



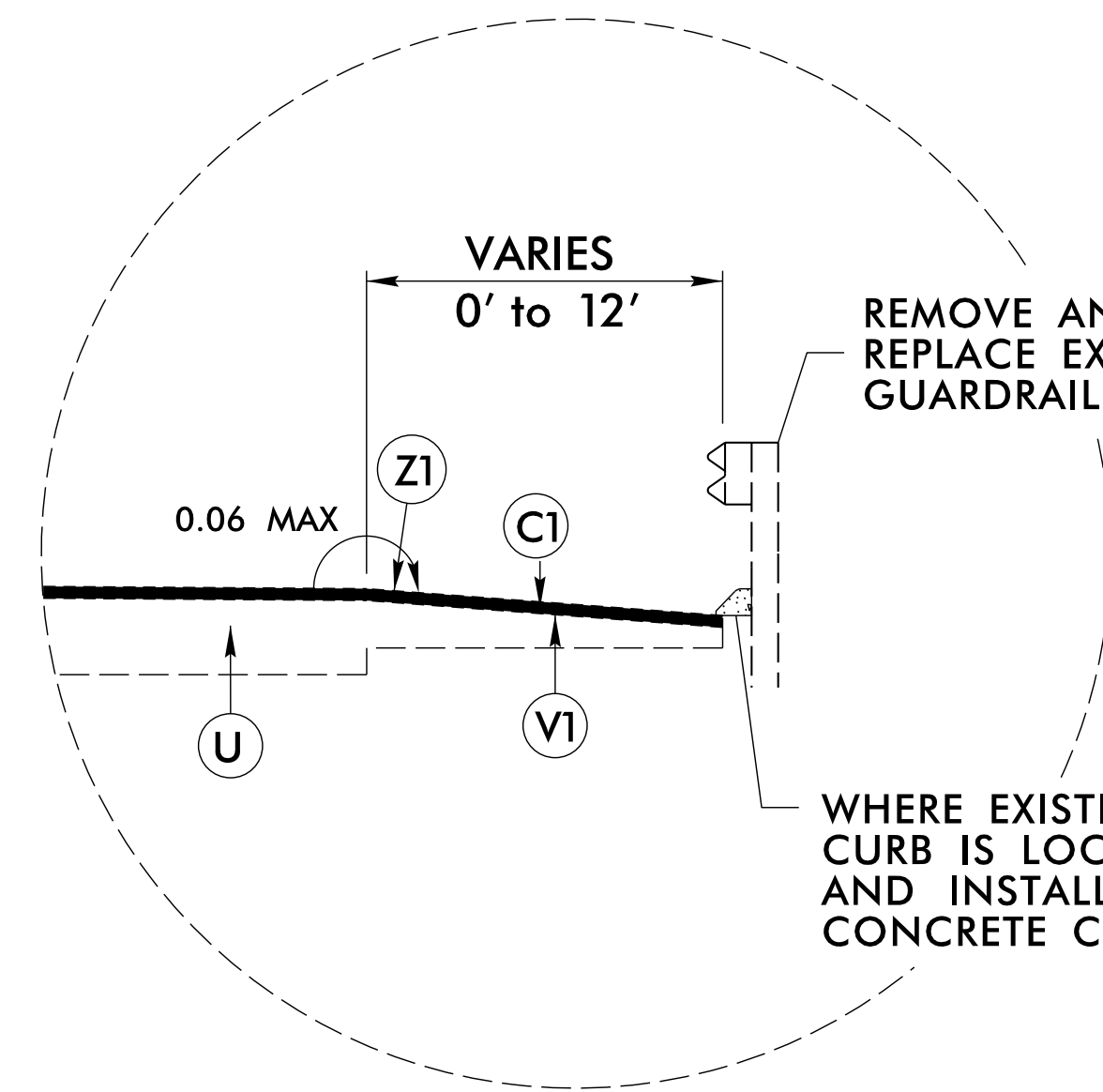
DETAIL A



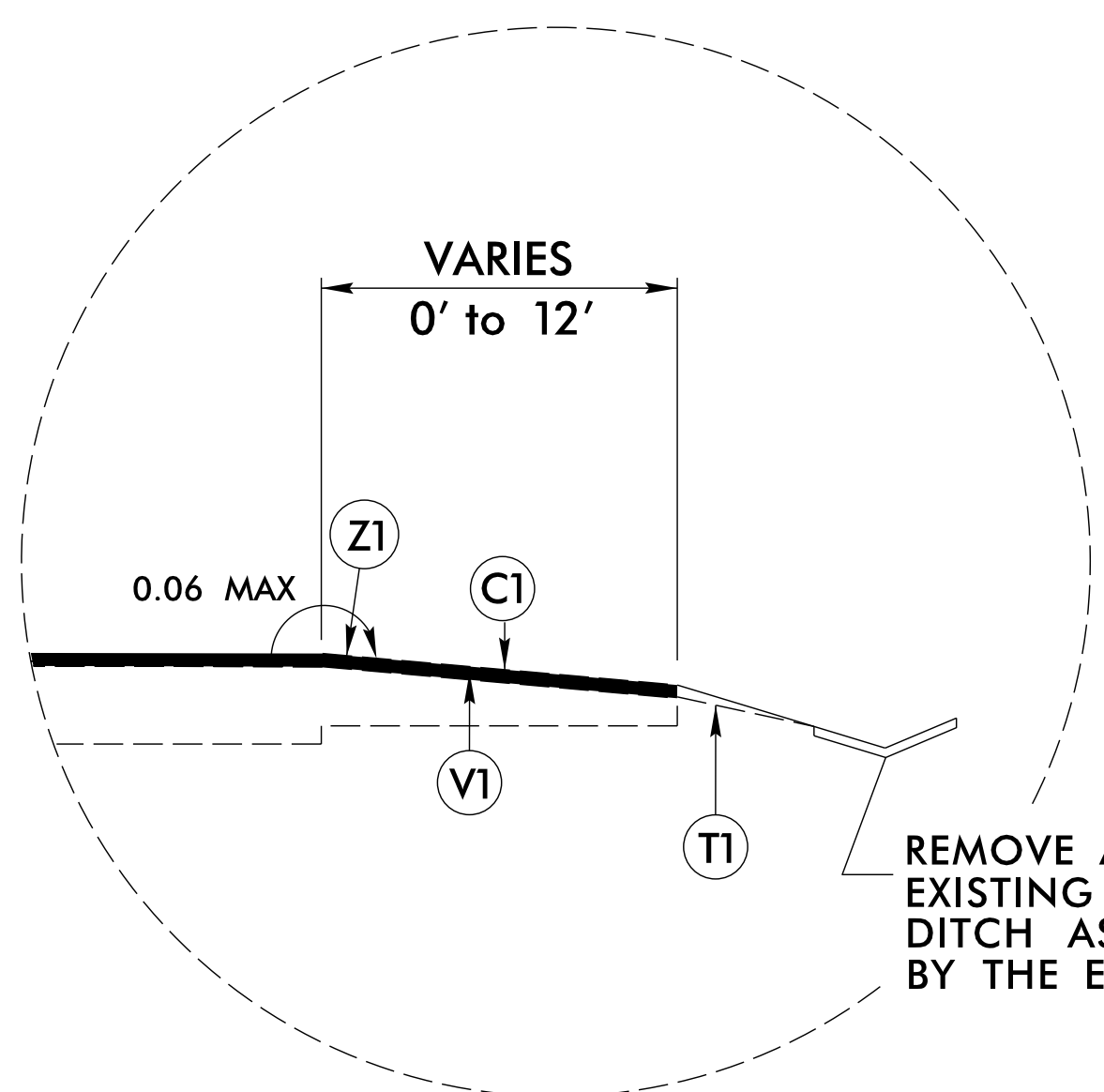
DETAIL B



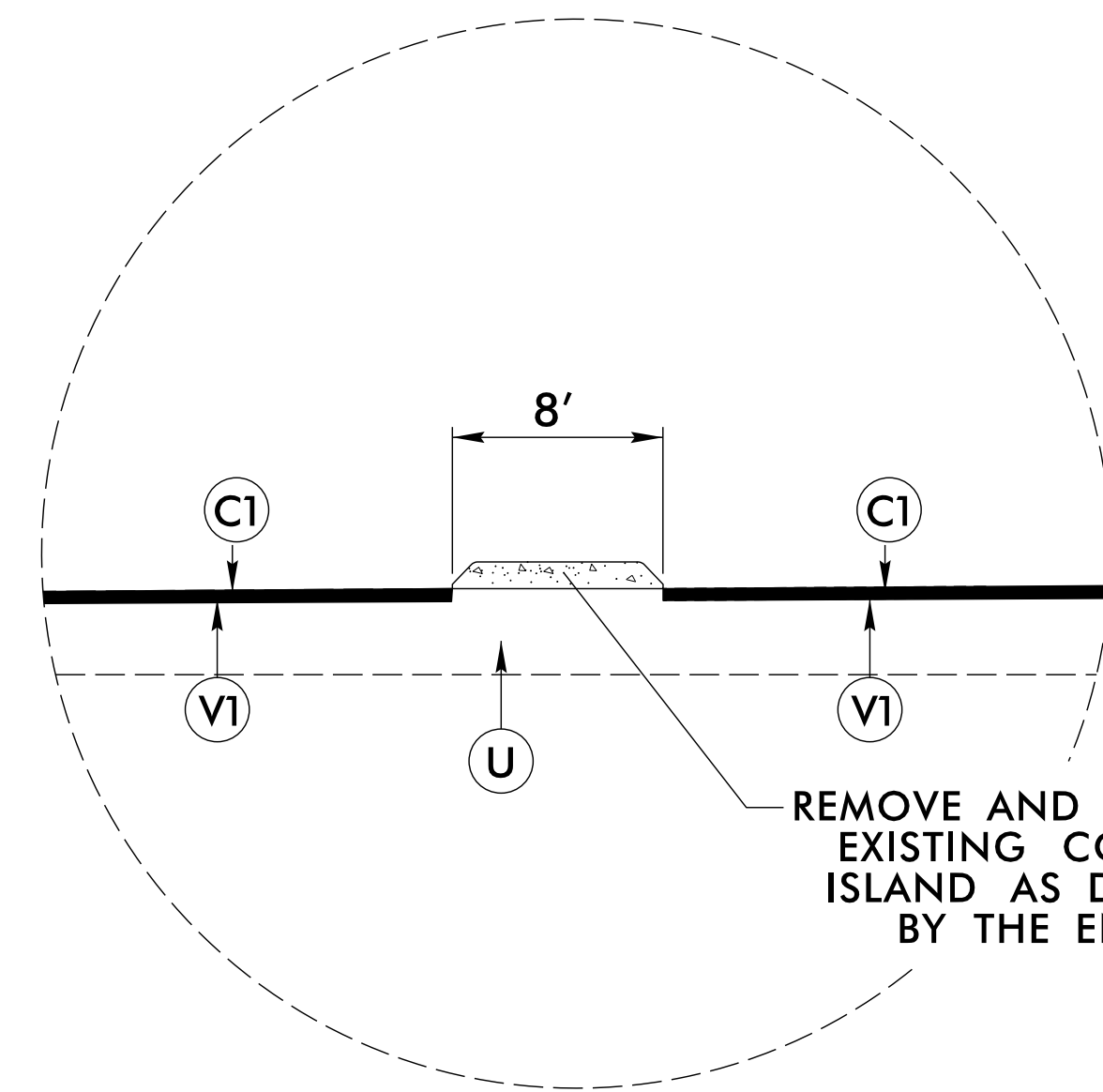
DETAIL C



DETAIL D



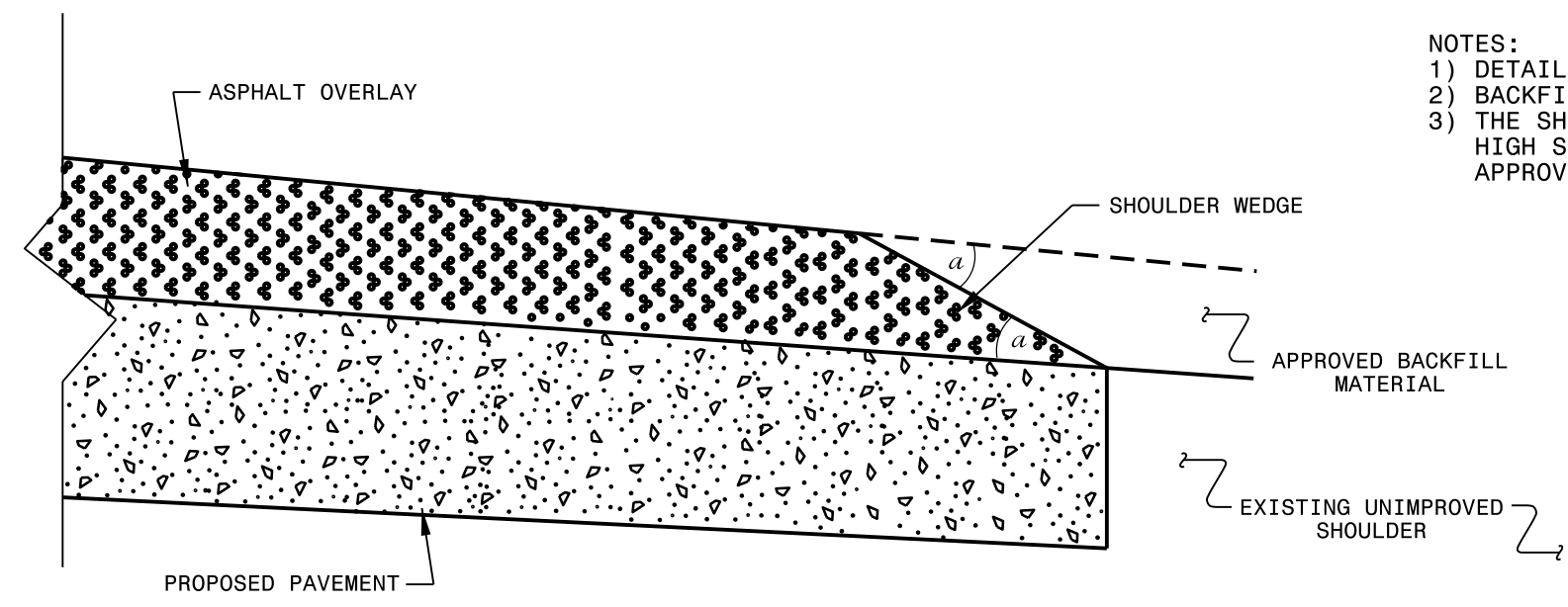
DETAIL E



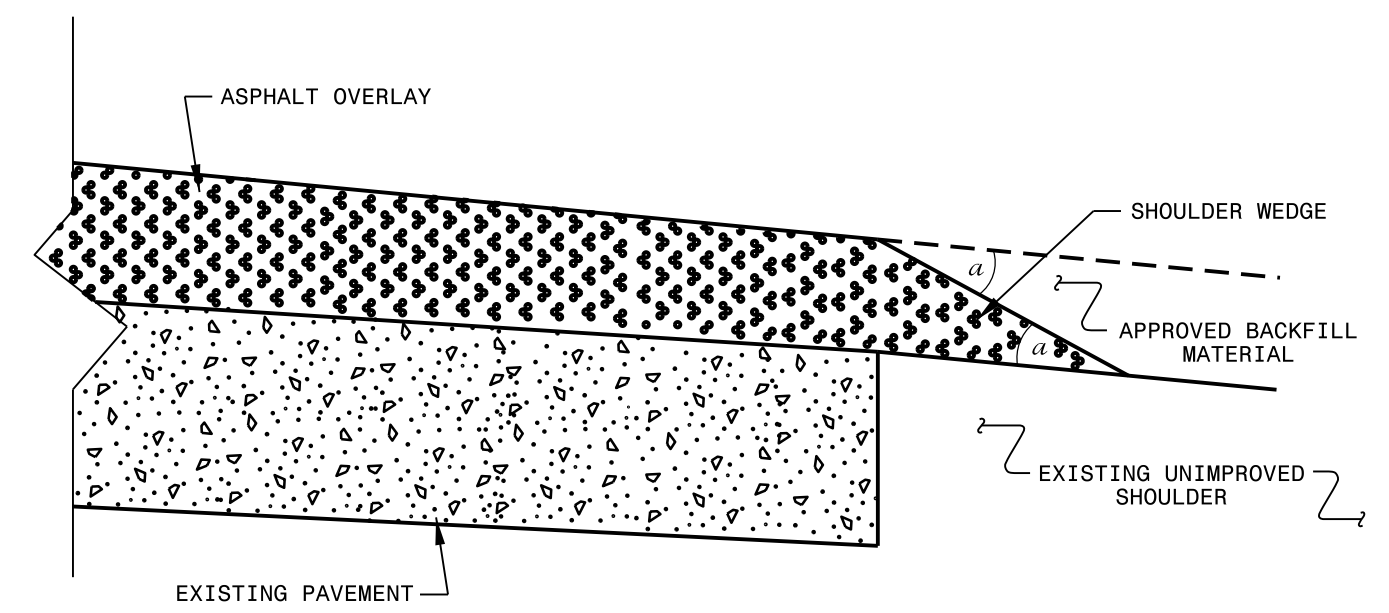
DETAIL F

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
F1	PROP. APPROX. 3/8" ULTRA-THIN BONDED WEARING COURSE AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
R1	2'-6" CONCRETE CURB & GUTTER
T1	SHOULDER RECONSTRUCTION
U	EXISTING ASPHALT PAVEMENT
V1	MILL ASPHALT PAVEMENT, 2" DEPTH
V2	INCIDENTAL MILLING
Z1	MILLED RUMBLE STRIPS

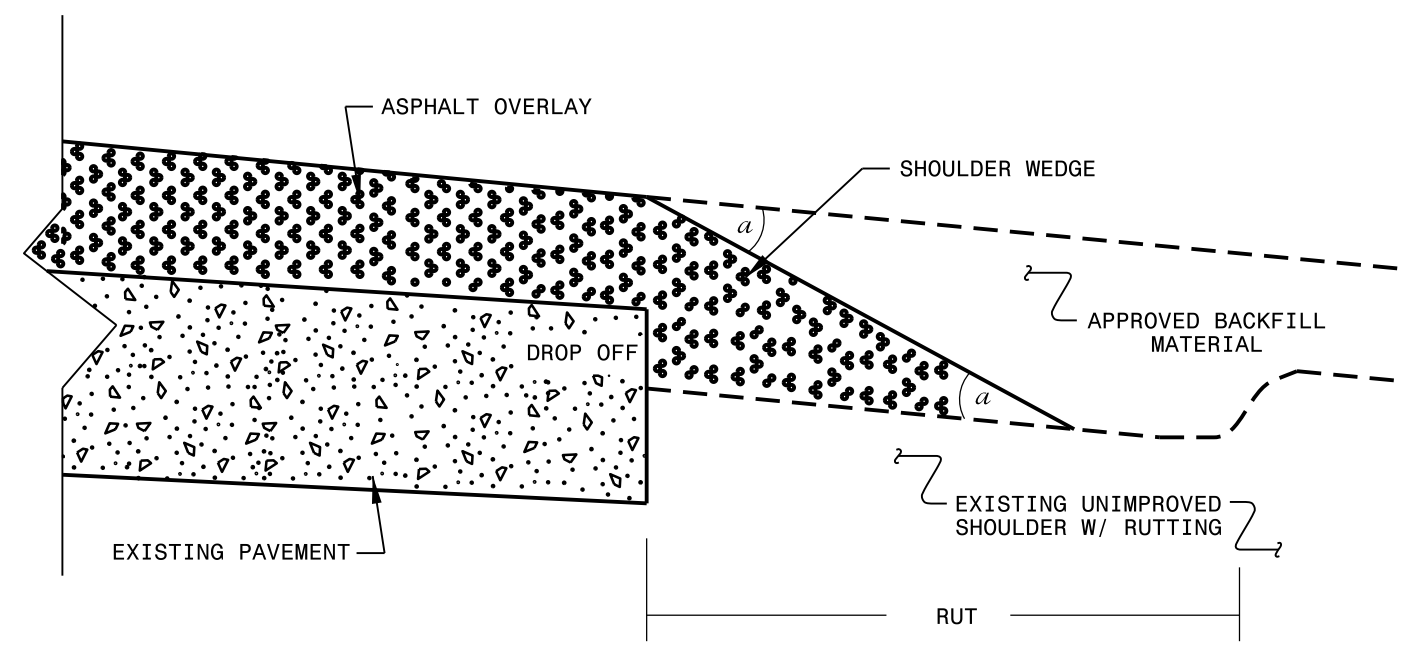
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ NO Widening)



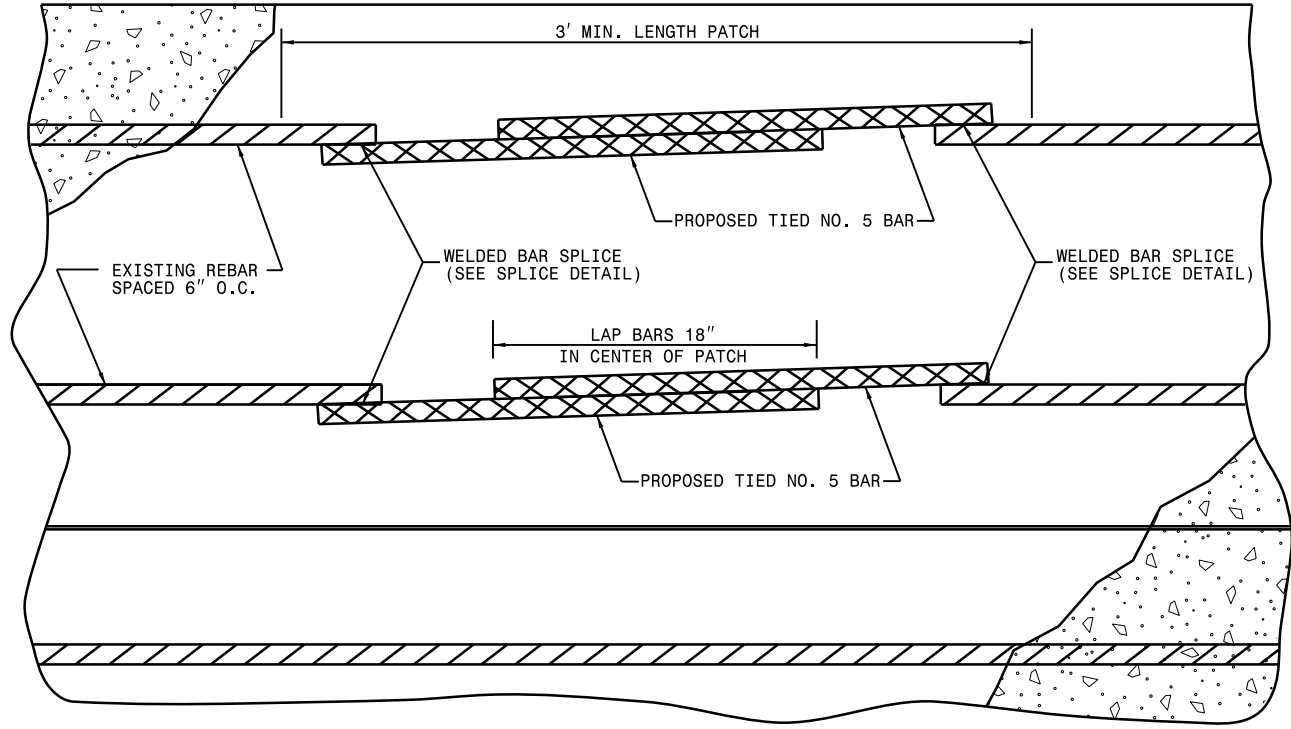
SHOULDER WEDGE DETAIL
(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

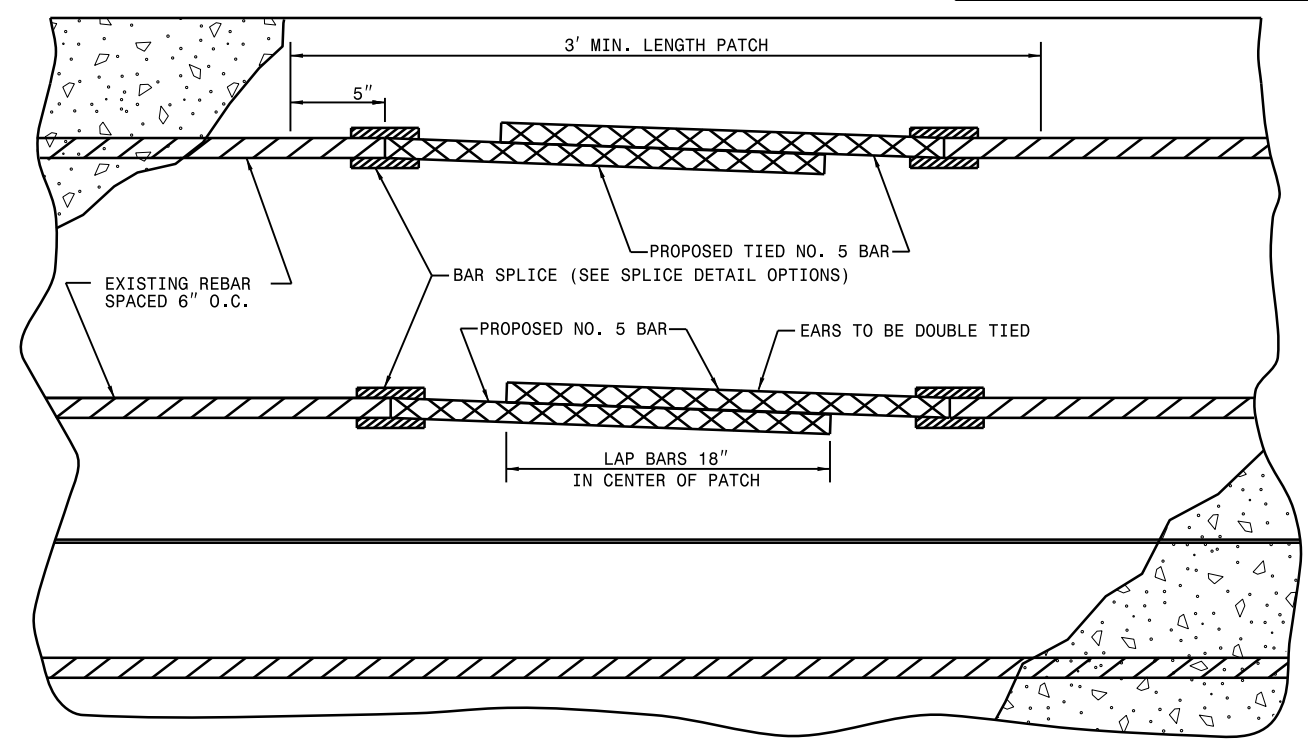
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
SHOULDER WEDGE DETAILS	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 2/2/16
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\detatl1s\stand\shoulderwedgedetatl1.dgn	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

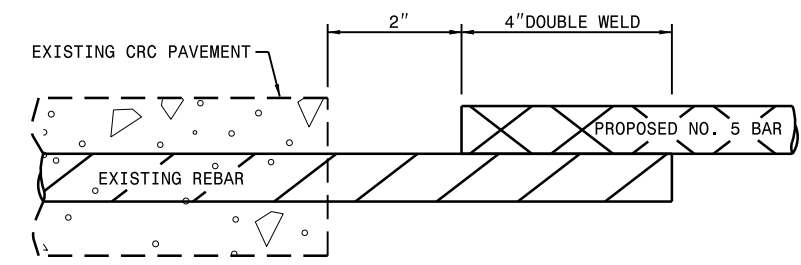
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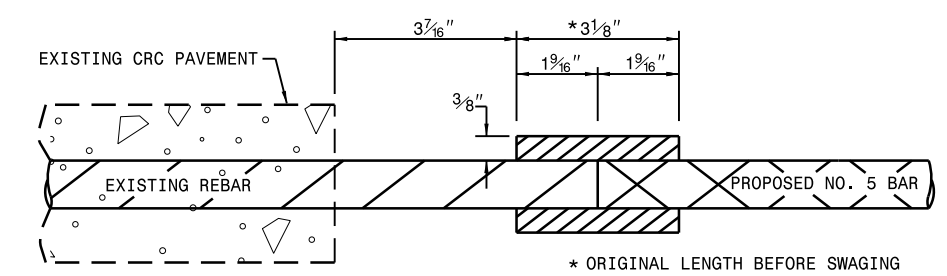
PLAN



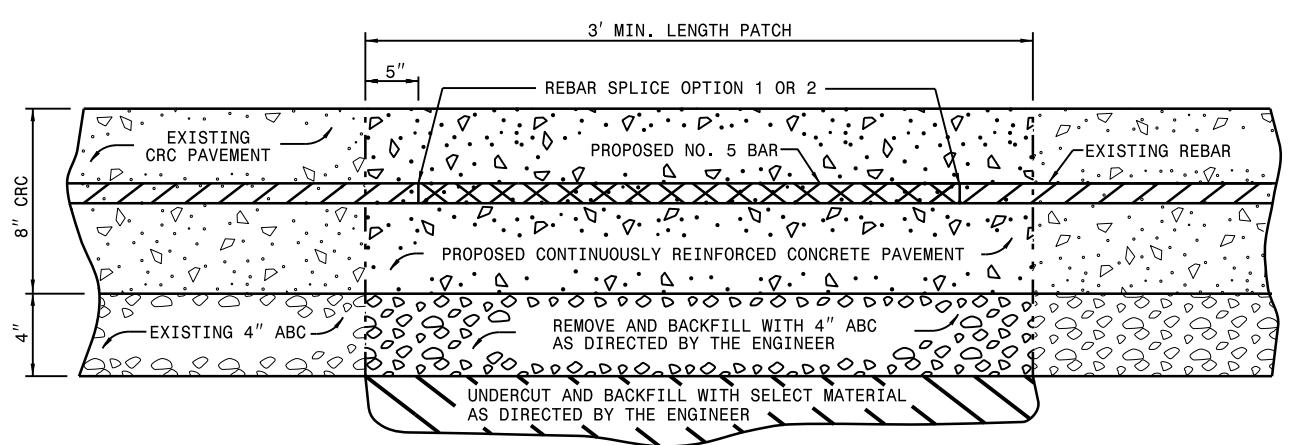
PLAN



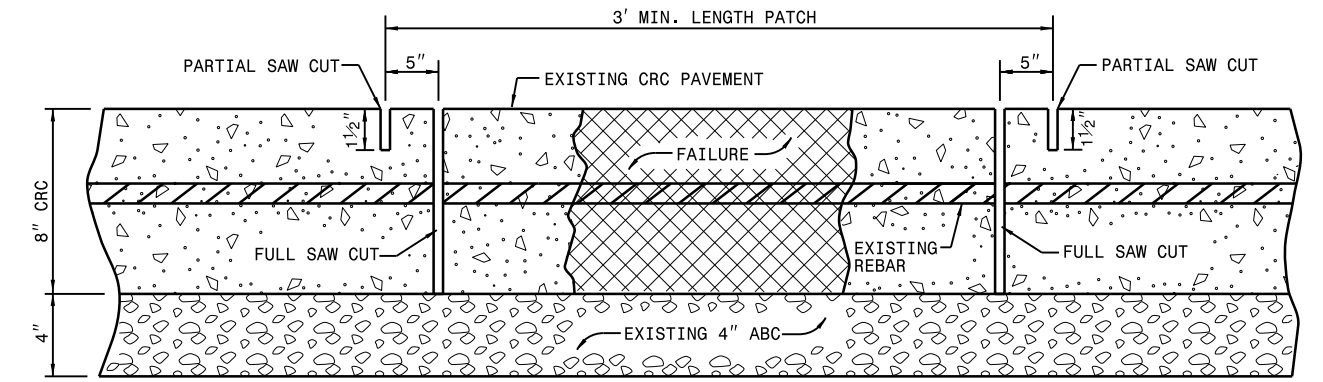
OPTION 1 - DETAIL OF WELDED SPLICE



OPTION 2 - DETAIL OF MECHANICAL SPLICE



DETAIL OF CONCRETE PAVEMENT REMOVAL AND REPLACEMENT



DETAIL OF SAW CUTS

PLACE BAR SUPPORTS ON 5' CENTERS FOR PATCHES GREATER THAN 10' IN LENGTH AND AT CENTER OF PATCH FOR REPAIRS LESS THAN 10'. HEIGHT OF SUPPORTS DETERMINED BY THE CONTRACTOR.

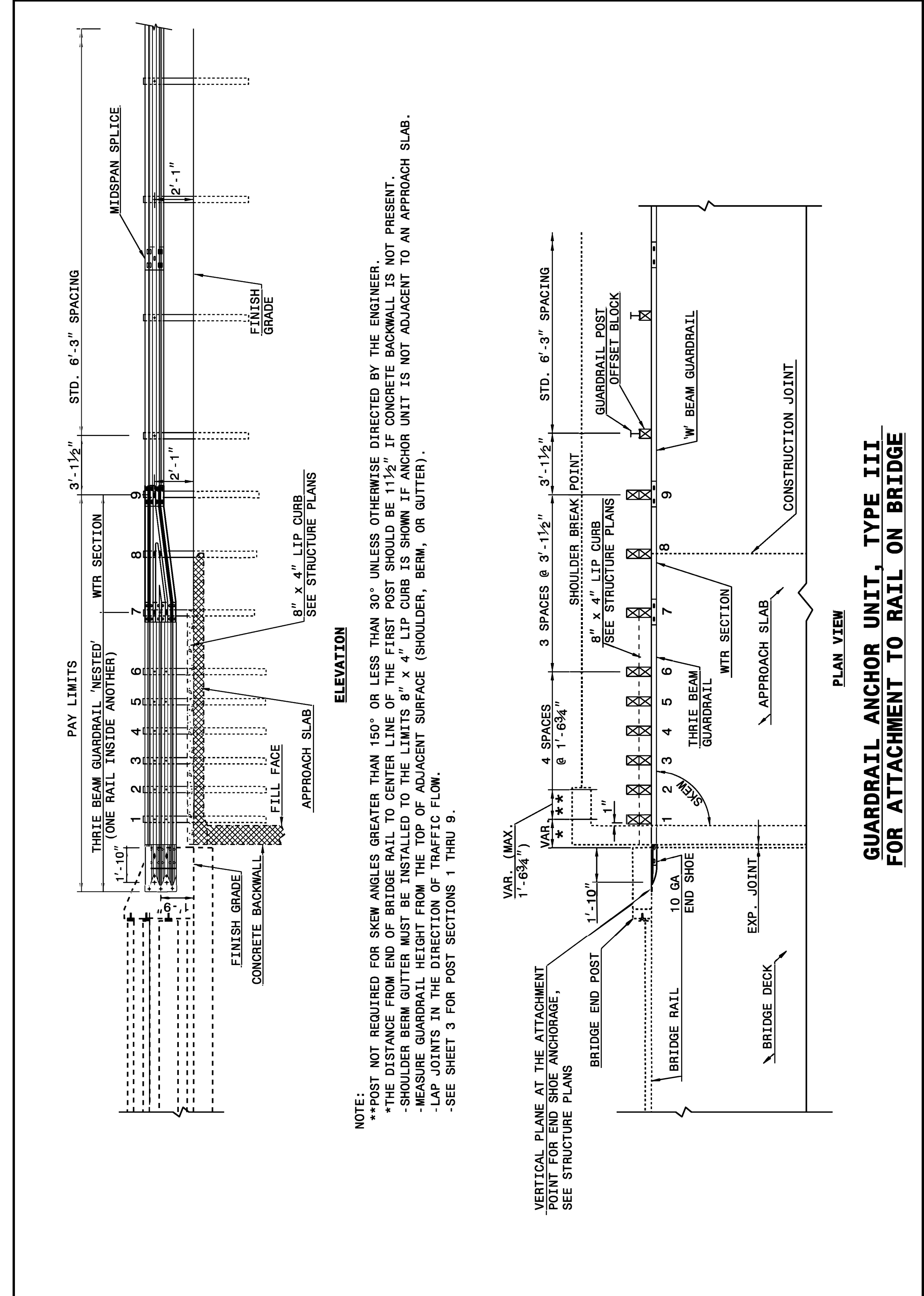
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
DETAIL FOR REPAIR OF CONTINUOUSLY REINFORCED CONCRETE PAVEMENT	
ORIGINAL BY: E.E. WARD	DATE: 4-98
MODIFIED BY: JSH	DATE: 6-13
CHECKED BY:	DATE:
FILE SPEC.: usr/details/stand/crcrepair.dgn	

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

ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7 **862D03**



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

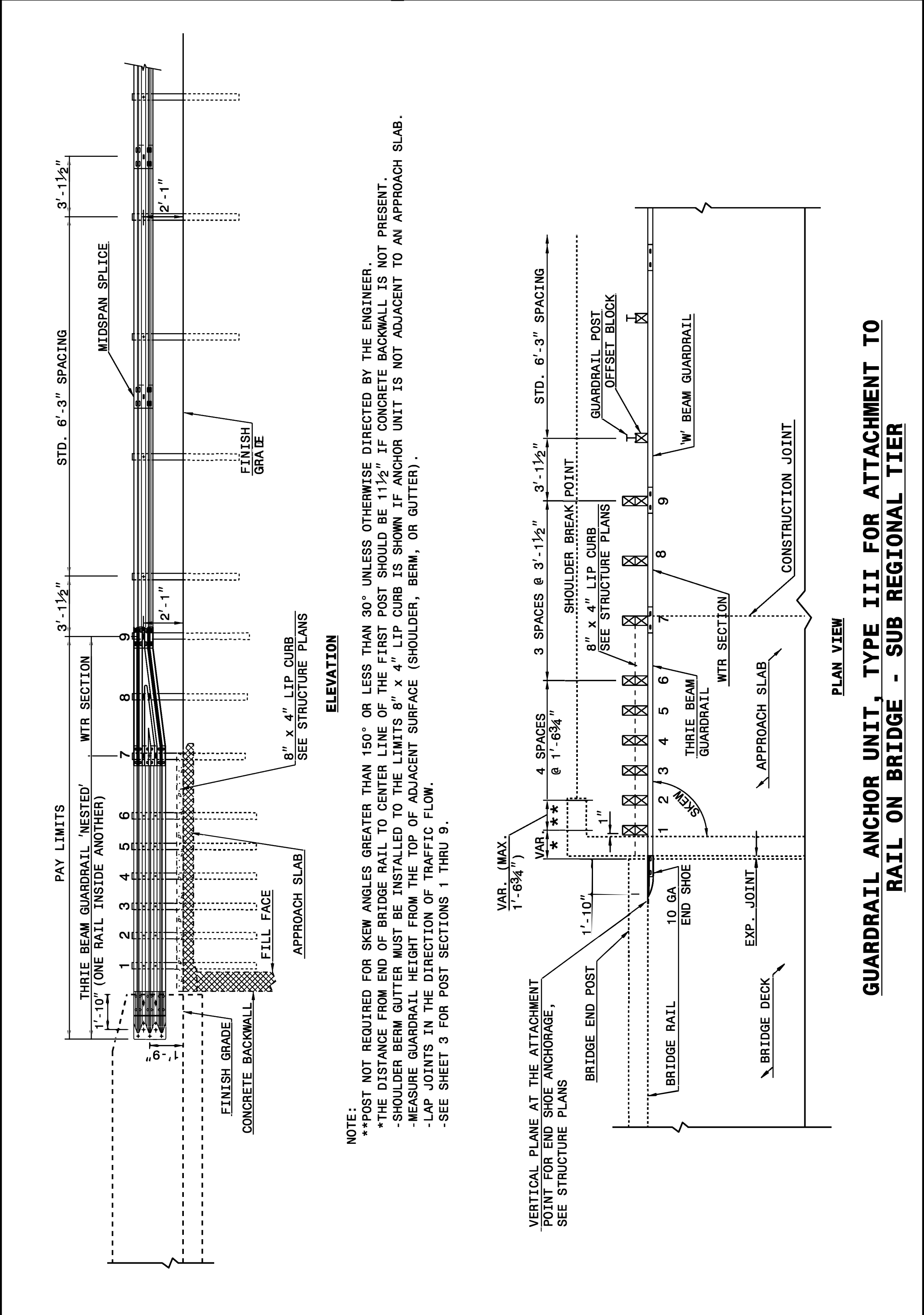
ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7 **862D03**

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

ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7 **862D03**



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

ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7 **862D03**



DocuSigned by:
 Ron Davenport
 08/17/2022
 F81B6038A47A442

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

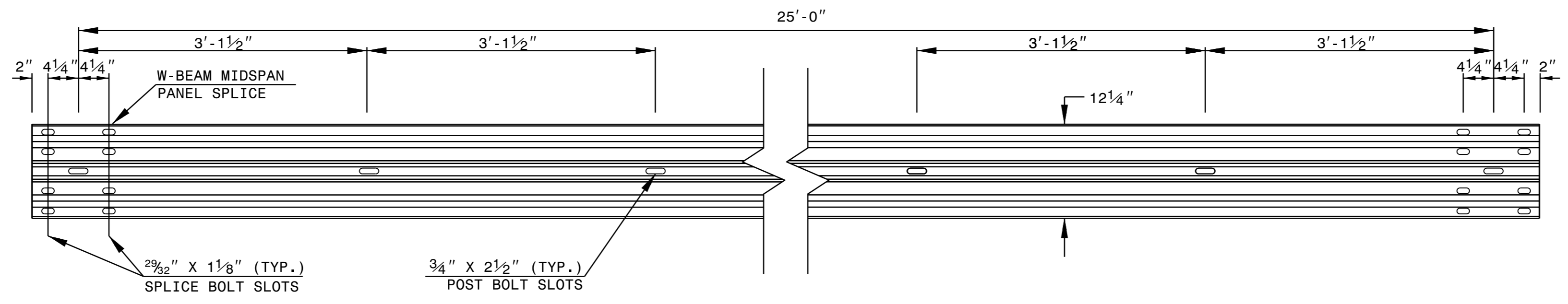
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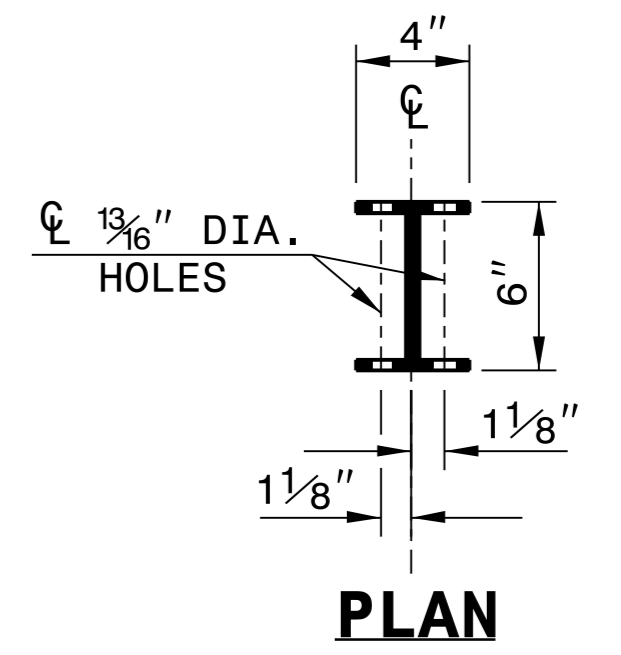
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

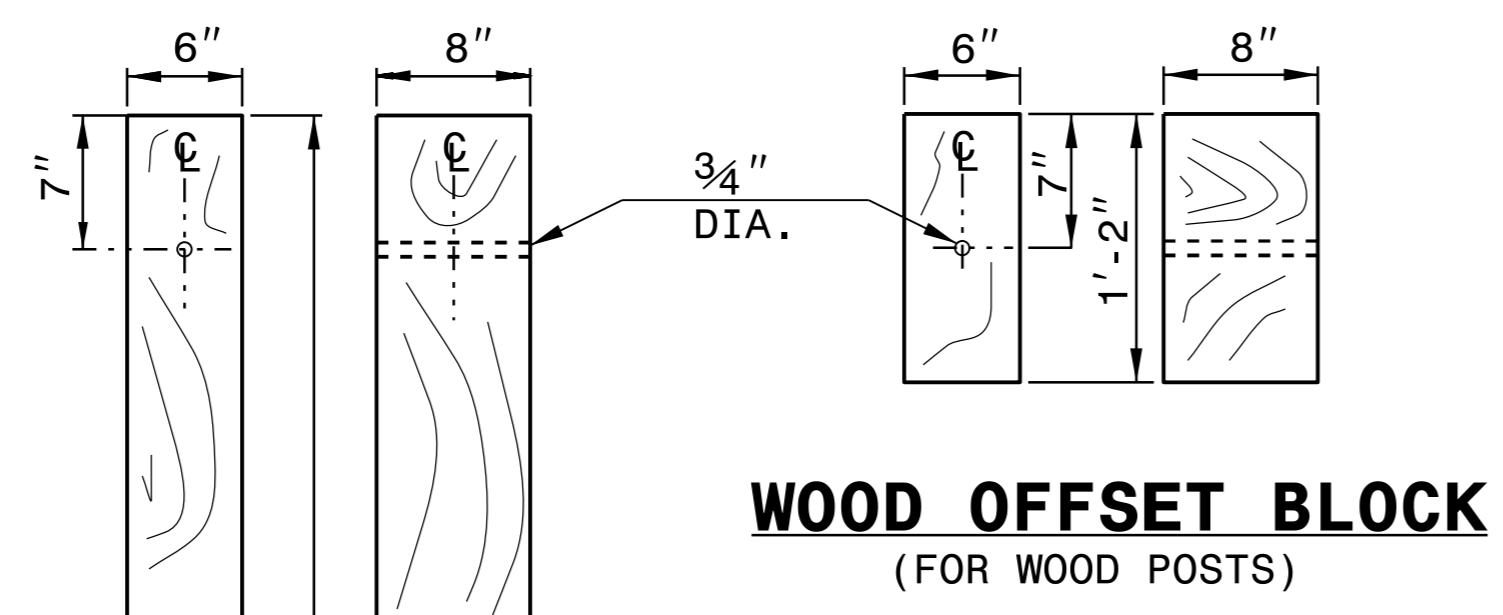
SHEET 6 OF 8
862D02



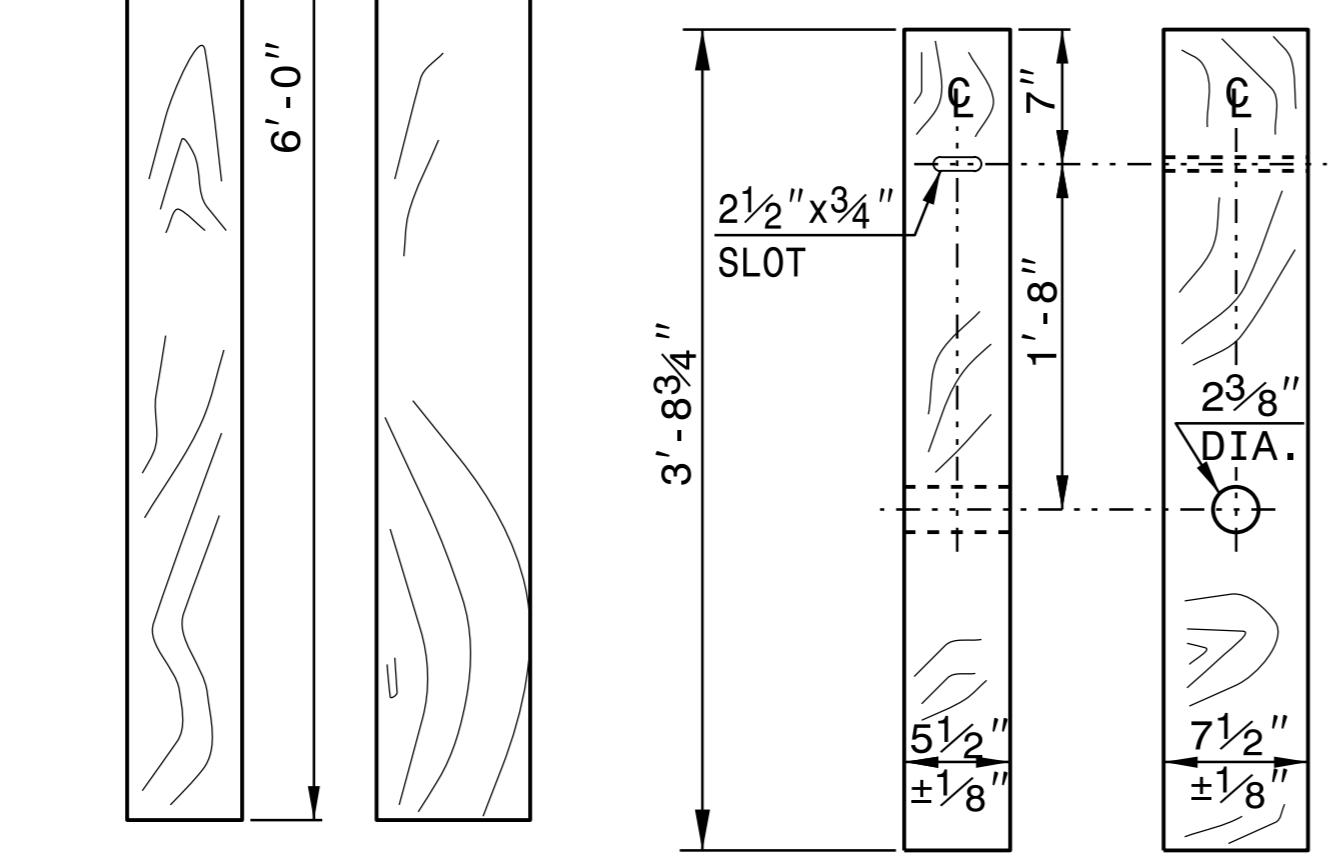
STANDARD W-BEAM GUARDRAIL



PLAN

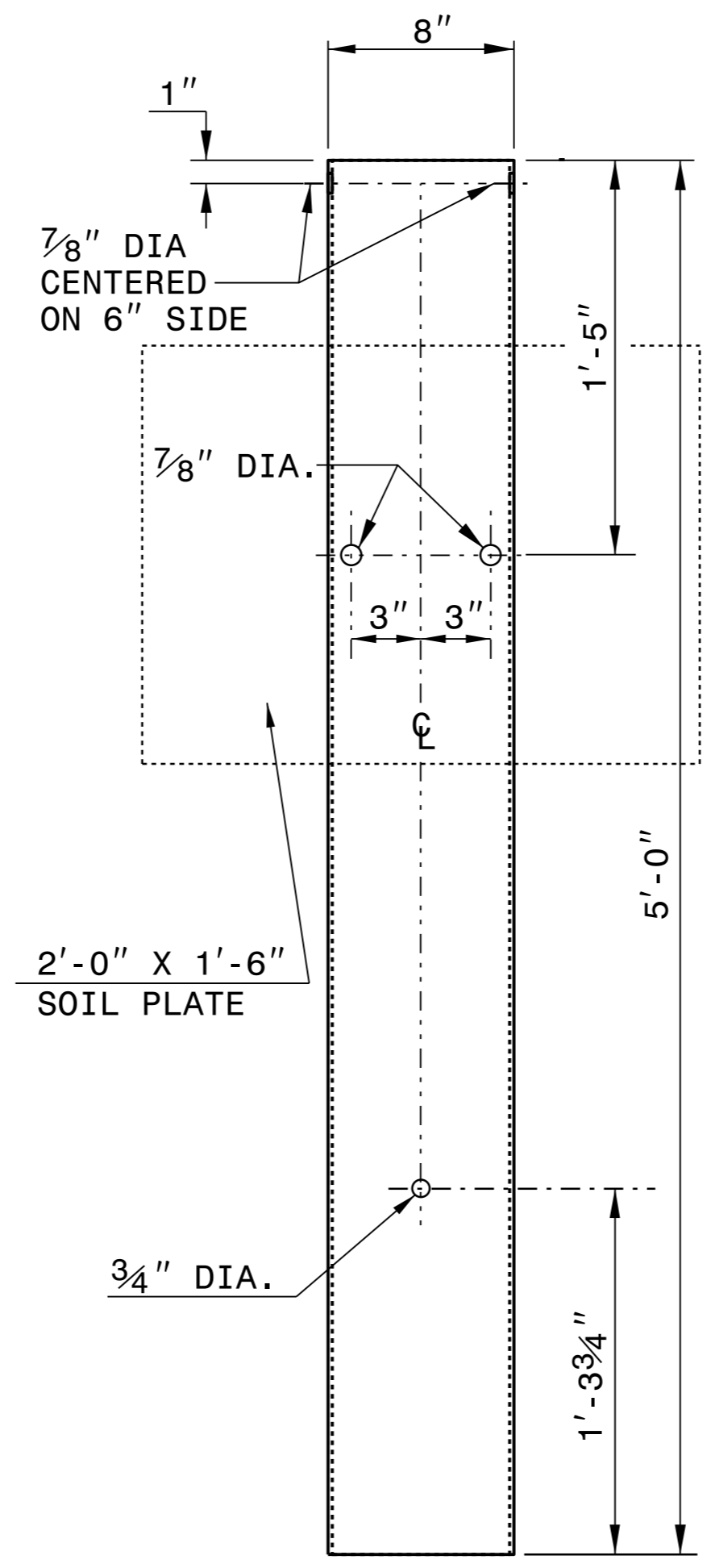


**WOOD OFFSET BLOCK
(FOR WOOD POSTS)**

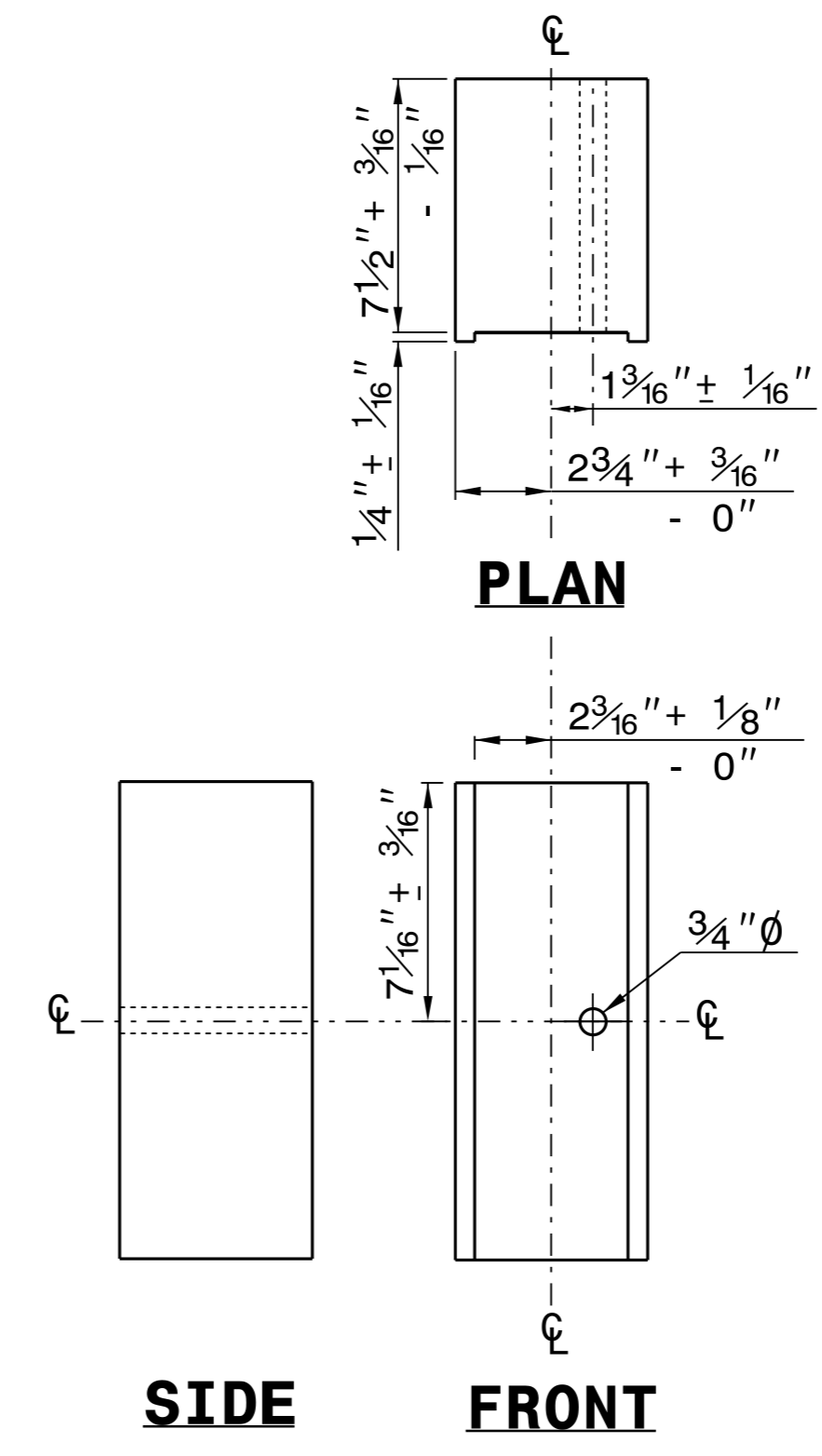


**STANDARD
LINE POST**

**SHORT WOOD
BREAKAWAY POST**



**STEEL TUBE
TS 6"x8"x0.1875"**

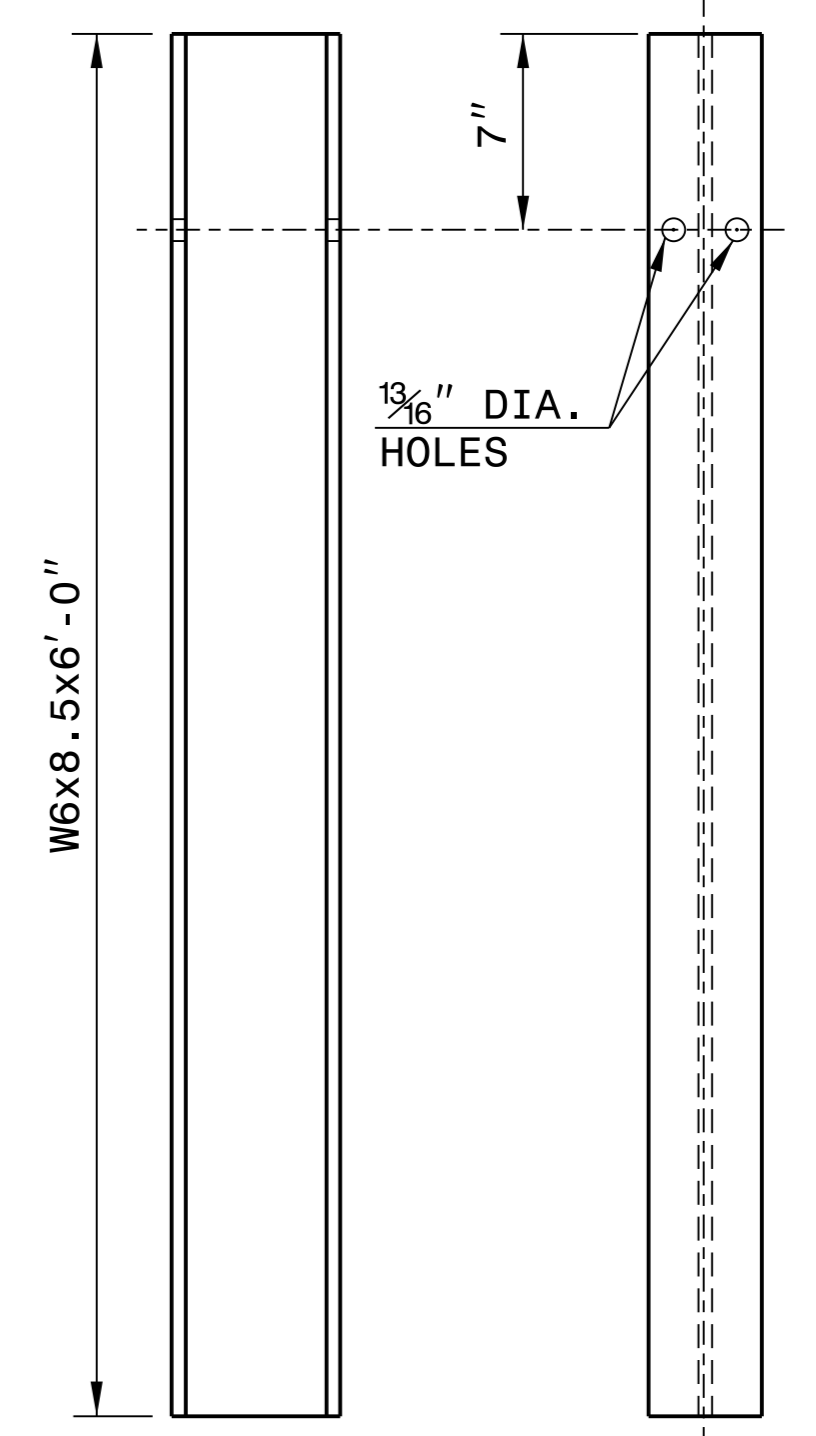


PLAN

SIDE

FRONT

**ROUTED
OFFSET BLOCK**



SIDE

FRONT

"W6" STEEL POST

SYSTEM PARTS

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02



DesiGned by:
Ken Davenport 08/17/2022
F8180238A74442

**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: J. HOWERTON	DATE: 3-7-2018
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	

PROJECT NO.	SHEET NO.	TOTAL NO.
I-5889B		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4273000000-N	4400000000-E	4405000000-E	4410000000-E	4415000000-N	4420000000-N	4424000000-N	4430000000-N	4445000000-E	4447000000-E	4455000000-N	4480000000-N	4510000000-N	4688000000-E					4695000000-E	4700000000-E	4709000000-E			
										GENERIC SIGNING ITEM, M1-1 INTERSTATE SIGN	WORK ZONE SIGNS (STATIONARY)	WORK ZONE SIGNS (PORTABLE)	WORK ZONE SIGNS (BARRICADE MOUNTED)	FLASHING ARROW BOARD	PORTABLE CHANGEABLE MESSAGE SIGN	WORK ZONE PRESENCE LIGHTING	DRUMS	BARRICADES (TYPE III)	PEDESTRIAN CHANNELIZING DEVICES	FLAGGER (DAILY)	TMA	LAW ENFORCEMENT	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS) WHITE	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS) YELLOW	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS) WHITE	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS) WHITE	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS) WHITE	EA	SF	SF	SF	EA	EA
I-5889B	Buncombe	1	I-40 EAST BOUND	FROM MP 50 PVMT JOINT TO MP 45.25	1,3,4	2	MD	4.86	38		570	216	76	3	2	8	130	64	20		2	500	29,348	22,221			1,229						
TOTAL FOR MAP NO. 1										570	216	76	3	2	8	130	64	20		2	500	29,348	22,221			1,229							
I-5889B	Buncombe	2	I-40 WEST BOUND	FROM VANDERBILT RD OVERPASS TO MM 45.25	2,3,4	3	MD	4.94	36		579	216	36	3	5	7	130	16			1	500	33,869	27,593		1,091							
TOTAL FOR MAP NO. 2										579	216	36	3	5	7	130	16			1	500	33,869	27,593		1,091								
I-5889B	Buncombe	3	US 74 ON RAMP	FROM BRIDGE TIE DOWN TO I-40 W/B	7	2	2WU	0.39	38		43												2,621	2,061		206							
TOTAL FOR MAP NO. 3										43													2,621	2,061		206							
I-5889B	Buncombe	4	EXIT 47 EAST BOUND OFF RAMP	FROM NC 191 OVERPASS TO NC 191	5,6	1		0.18	22		20									5			745	320	120	432	47						
TOTAL FOR MAP NO. 4										20									5			745	320	120	432	47							
I-5889B	Buncombe	5	EXIT 47 EAST BOUND ON RAMP	FROM NC 191 TO END OF GORE LINE	5,6	1		0.2	28		22									5			1,040	833									
TOTAL FOR MAP NO. 5										22									5			1,040	833										
I-5889B	Buncombe	6	EXIT 47 WEST BOUND OFF RAMP	FROM BEGIN MERGE LANE TO NC 191	5,6	1		0.27	20.5		30									5			1,750	465		328	18						
TOTAL FOR MAP NO. 6										30									5			1,750	465		328	18							
I-5889B	Buncombe	7	EXIT 47 WEST BOUND ON RAMP	FROM NC 191 TO END OF GORE LINE	5,6	1		0.14	18		16									5			496	440		385							
TOTAL FOR MAP NO. 7										16									5			496	440		385								
I-5889B	Buncombe	8	I-240	I-40 Detour							8																						
TOTAL FOR MAP NO. 8										8																							
TOTAL FOR PROJ NO. 46409.1.3										8	1,280	432	112	6	7	15	260	80	20	20	3	1,000	69,869	53,933	120	3,671	65						
GRAND TOTAL										8	1,280	432	112	6	7	15	260	80	20	20	3	1,000	69,869	53,933	120	3,671	65						

123,802

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4720000000-E	4725000000-E				4810000000-E		4820000000-E	4825000000-E	4835000000-E	4840000000-N	4845000000-N					4847096000-E	4847096000-E	4905100000-N	
										THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS) ONLY	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) MERGE ARROW	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) RT ARROW	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) LT ARROW	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) STR & LT ARROW	PAINT PAVEMENT MARKING LINES (4") WHITE	PAINT PAVEMENT MARKING LINES (4") YELLOW	PAINT PAVEMENT MARKING LINES (8") WHITE	PAINT PAVEMENT MARKING LINES (12") WHITE	PAINT PAVEMENT MARKING LINES (24") WHITE	PAINT PAVEMENT MARKING CHARACTER (ONLY)	PAINT PAVEMENT MARKING SYMBOL MERGE ARROW	PAINT PAVEMENT MARKING SYMBOL (LT ARROW)	PAINT PAVEMENT MARKING SYMBOL (RT ARROW)	PAINT PAVEMENT MARKING SYMBOL (STR & LT ARROW)	POLYUREA PAVEMENT MARKING WHITE LINES, STANDARD GLASS BEADS (6", 20 MILS)	POLYUREA PAVEMENT MARKING YELLOW LINES, STANDARD GLASS BEADS (6", 20 MILS)	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKERS	EA	EA
I-5889B	Buncombe	1	I-40 EAST BOUND	FROM MP 50 PVMT JOINT TO MP 45.25	1,3,4	2	MD	4.86	38	8	3	4			199,590	149,286		7,374		32	24						1,978	1,518	473
TOTAL FOR MAP NO. 1										8	3	4			199,590	149,286		7,374		32	24				1,978	1,518	473		
I-5889B	Buncombe	2	I-40 WEST BOUND	FROM VANDERBILT RD OVERPASS TO MM 45.25	2,3,4	3	MD	4.94	36		3				192,090	149,286		6,546			36					1,935	1,495	493	
TOTAL FOR MAP NO. 2											3				192,090	149,286		6,546			36			1,935	1,495	493			
I-5889B	Buncombe	3	US 74 ON RAMP	FROM BRIDGE TIE DOWN TO I-40 W/B	7	2	2WU	0.39	38						5,242	5,242		412										46	
TOTAL FOR MAP NO. 3															5,242	5,242		412									46		
I-5889B	Buncombe	4	EXIT 47 EAST BOUND OFF RAMP	FROM NC 191 OVERPASS TO NC 191	5,6	1		0.18	22			1	4		1,920	3,750	720	810	282			16	4					26	
TOTAL FOR MAP NO. 4															1,920	3,750	720	810	282		16	4				26			
I-5889B	Buncombe	5	EXIT 47 EAST BOUND ON RAMP	FROM NC 191 TO END OF GORE LINE	5,6	1		0.2	28		3				6,420	3,332						3							
TOTAL FOR MAP NO. 5											3				6,420	3,332					3								
I-5889B	Buncombe	6	EXIT 47 WEST BOUND OFF RAMP	FROM BEGIN MERGE LANE TO NC 191	5,6	1		0.27	20.5			3	3		3,420	2,790		1,968	108						9	9		36	
TOTAL FOR MAP NO. 6															3,420	2,790		1,968	108				9	9		36			
I-5889B	Buncombe	7	EXIT 47 WEST BOUND ON RAMP	FROM NC 191 TO END OF GORE LINE	5,6	1		0.14	18						2,040	2,640		2,310										18	
TOTAL FOR MAP NO. 7															2,040	2,640		2,310									18		
I-5889B	Buncombe	8	I-240	I-40 Detour																									
TOTAL FOR MAP NO. 8																													
TOTAL FOR PROJ NO. 46409.1.3										8	9	8	4	3	410,722	316,326	720	19,420	390	32	63	16	13	9	3,913	3,013	1,092		
GRAND TOTAL										8	9	8	4	3	410,722	316,326	720	19,420	390	32	63	16	13	9	3,913	3,013	1,092		

727,048

6,926