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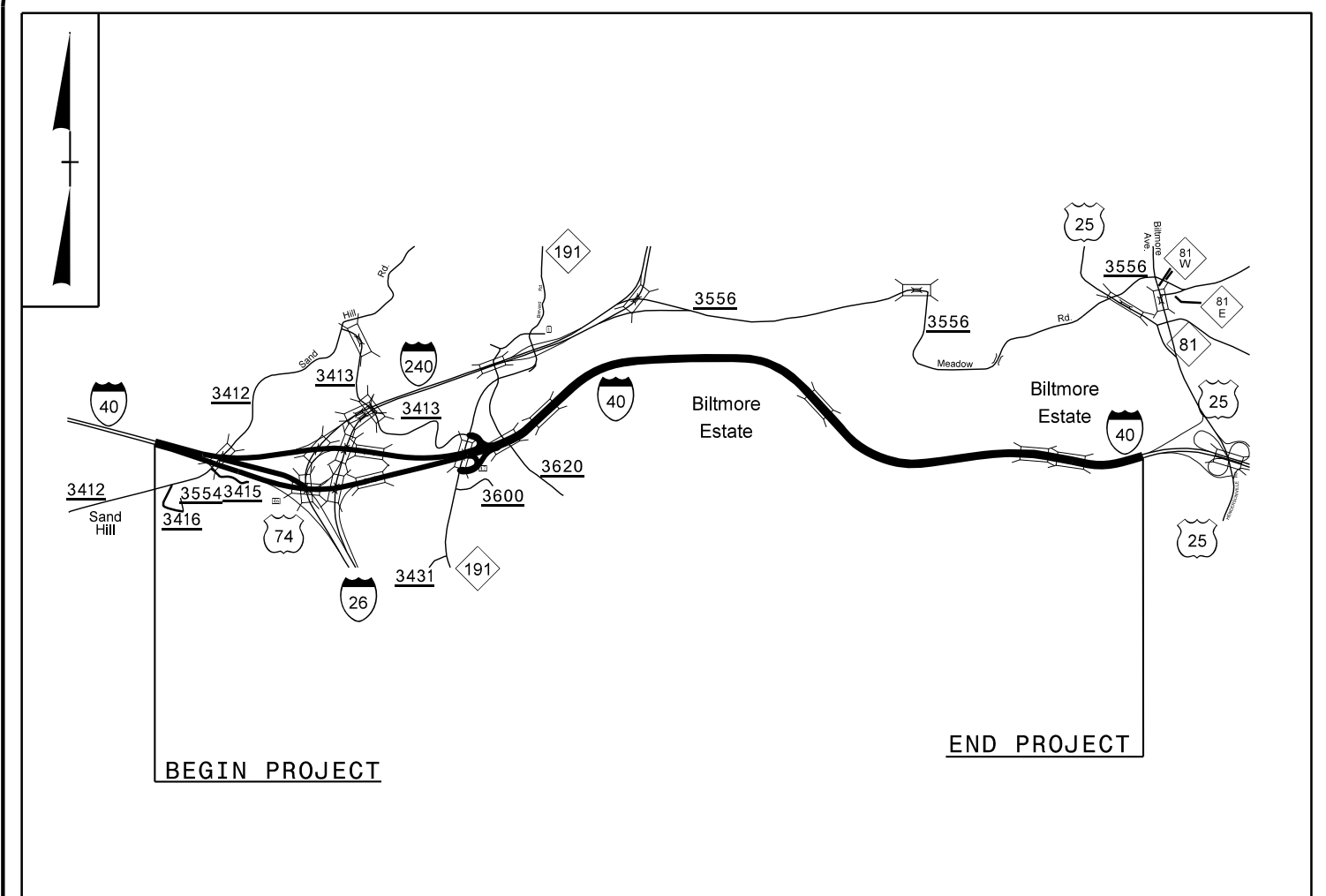
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and sealed by the individuals whose names and license
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09.08/99

28-JUL-2022 08:33 Maintenance\Buncombe\I-5889B\Roadway\Proj\I-5889B_Rdy - t sh_DDC.dgn
S:\DDC\Interstate
\$\$\$\$\$SERIALNAME\$\$\$\$\$

TIP PROJECT: I-5889B
CONTRACT: C204726



VICINITY MAP N.T.S

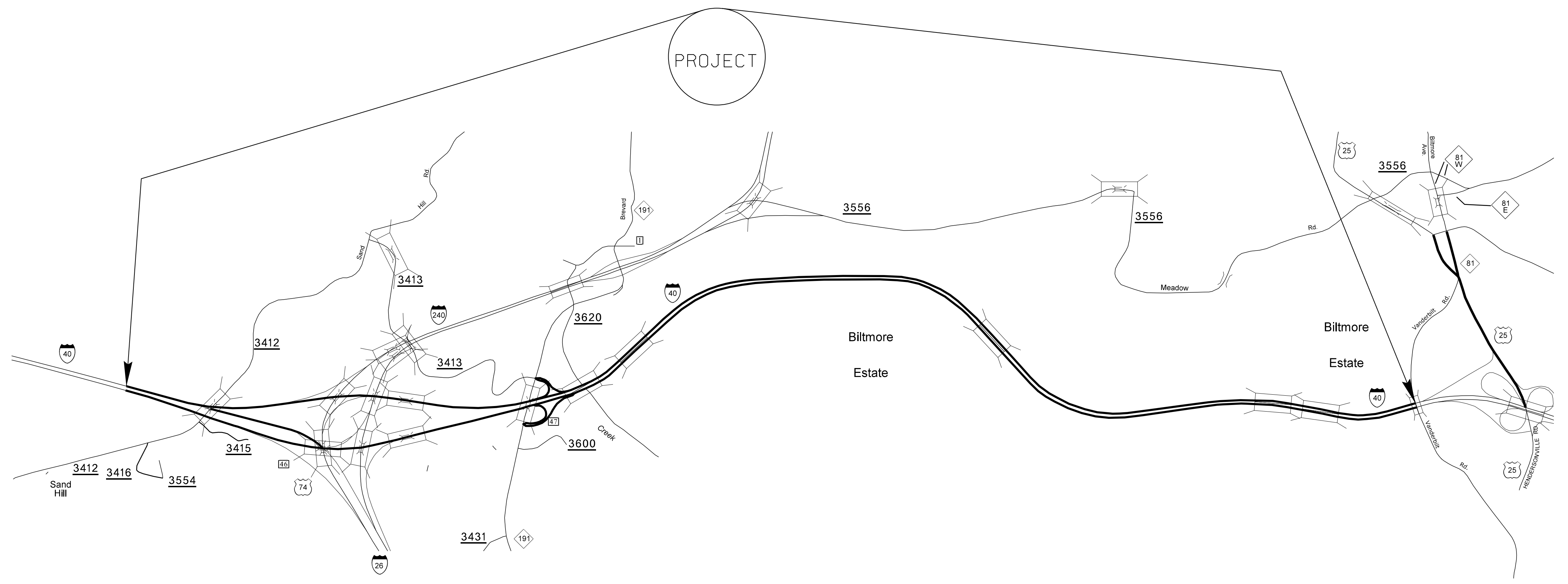
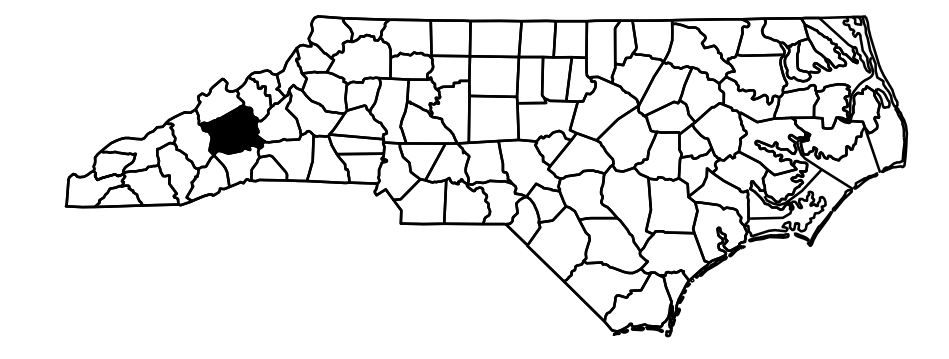
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

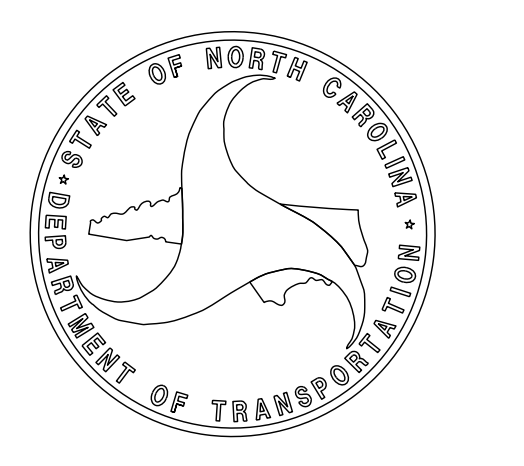
Prepared In the Office of:
DIVISION OF HIGHWAYS
55 Orange St., Asheville NC, 28801

2018 STANDARD SPECIFICATIONS

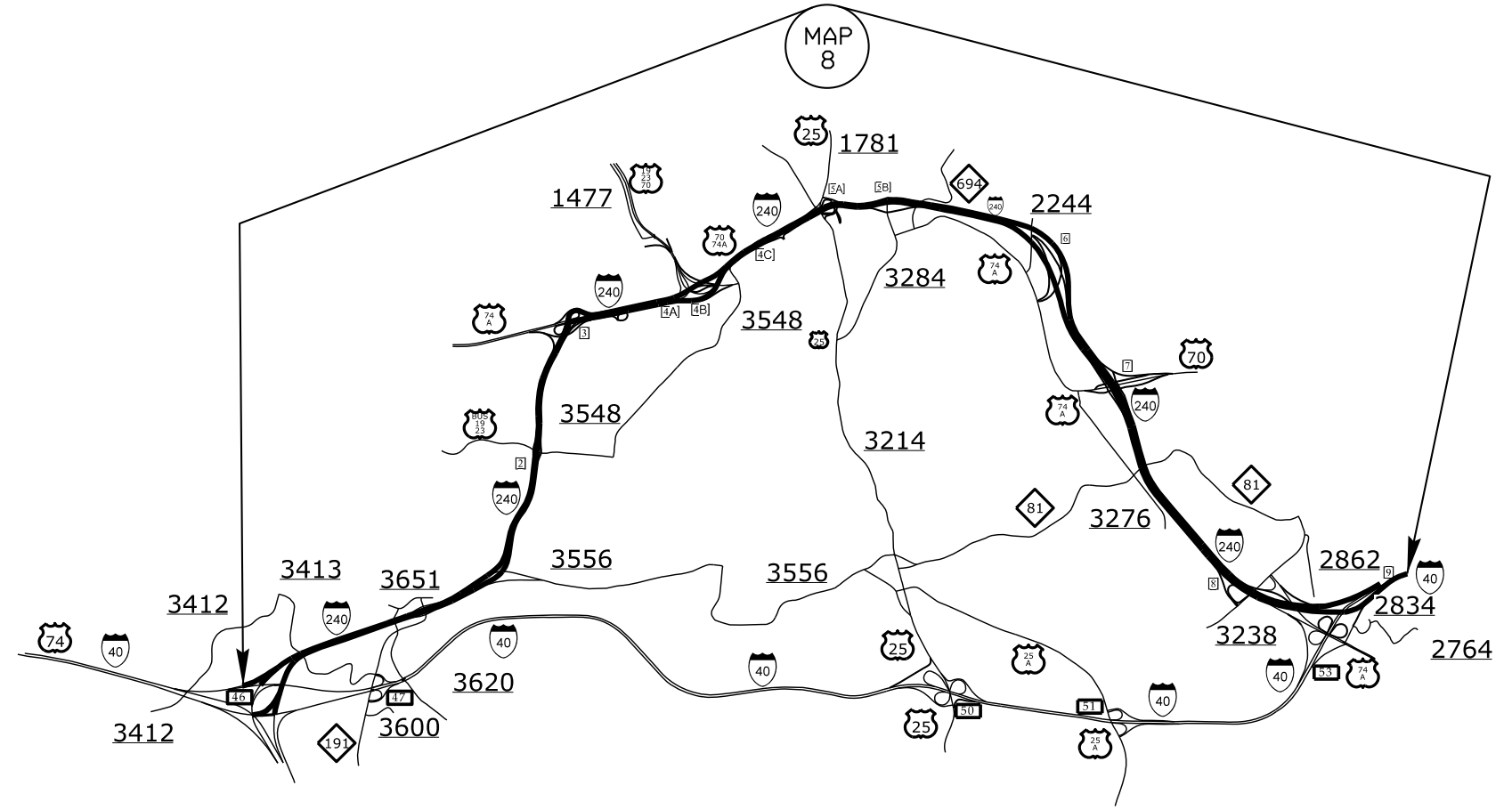
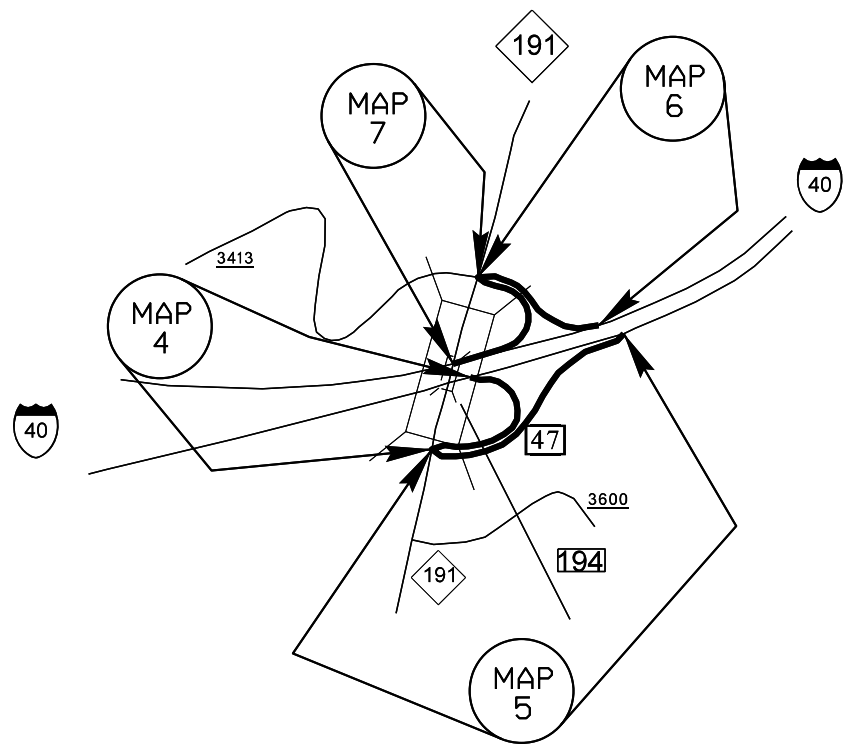
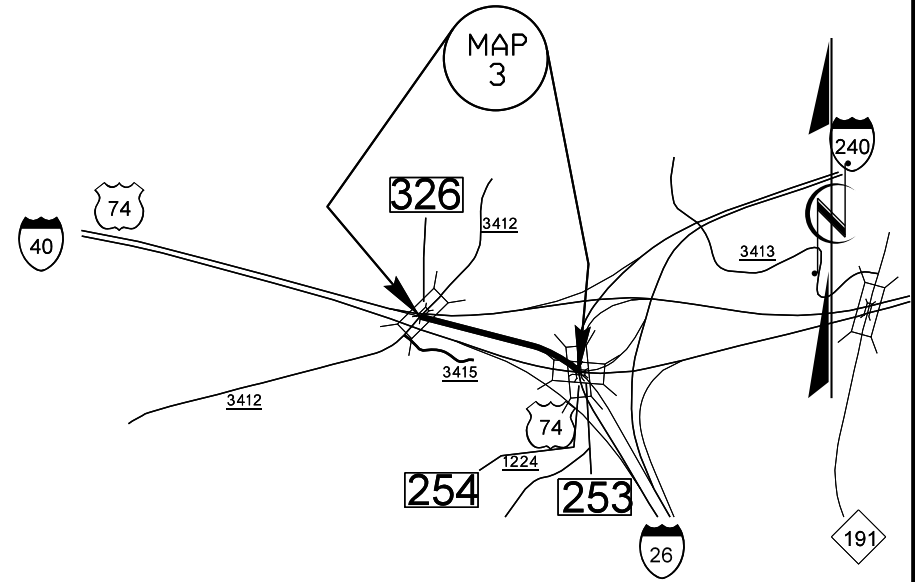
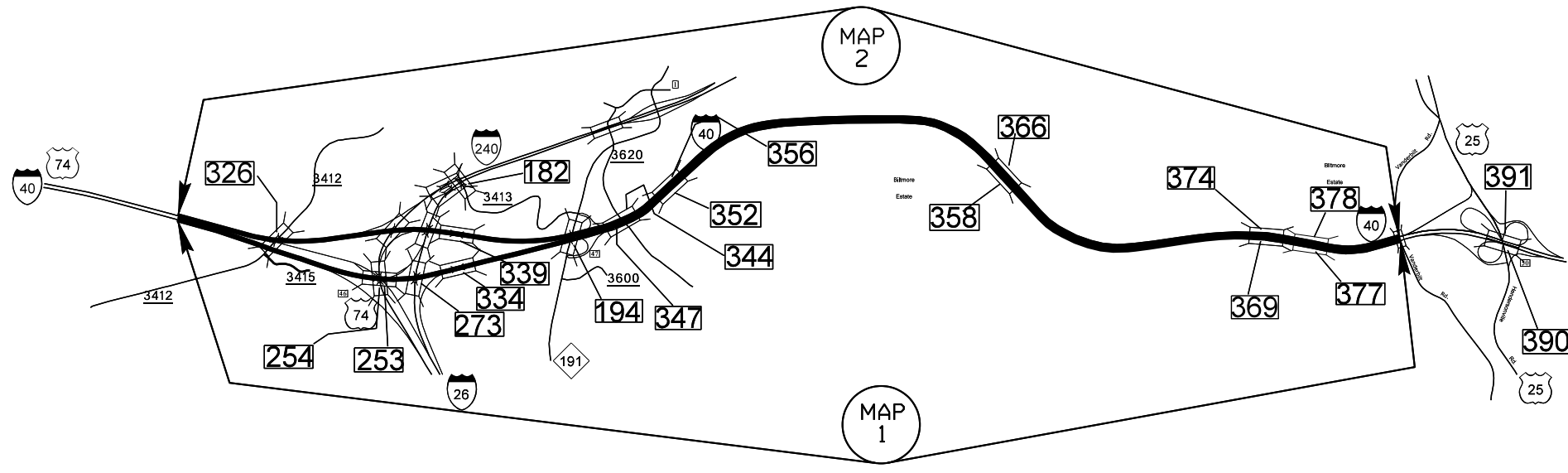
RIGHT OF WAY DATE: _____

LETTING DATE:
SEPTEMBER 20, 2022

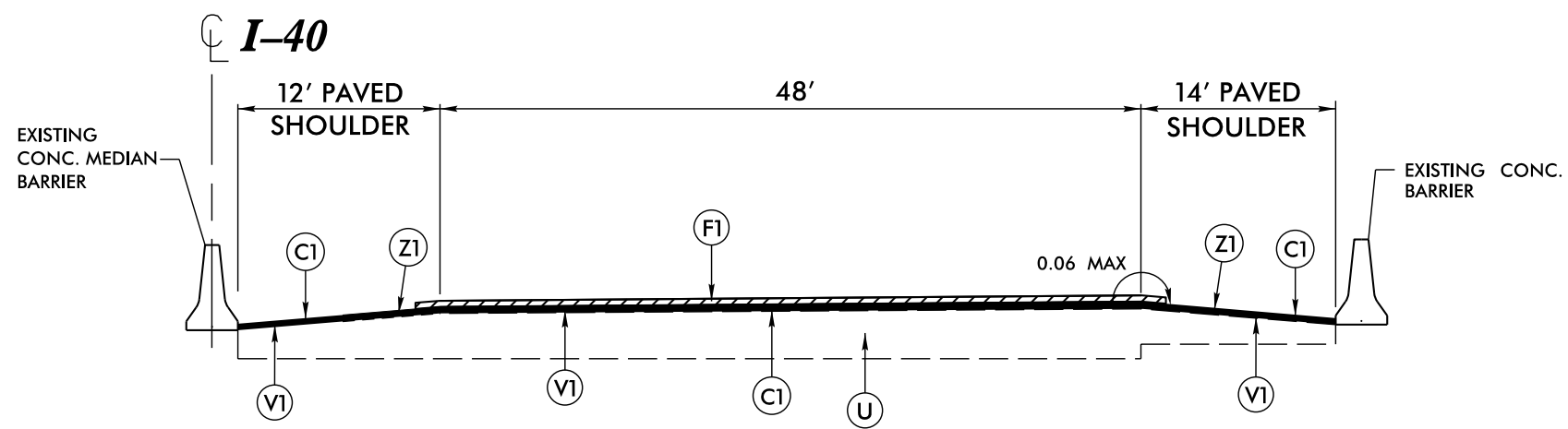
WILLIAM C. CARVER
PROJECT ENGINEER



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

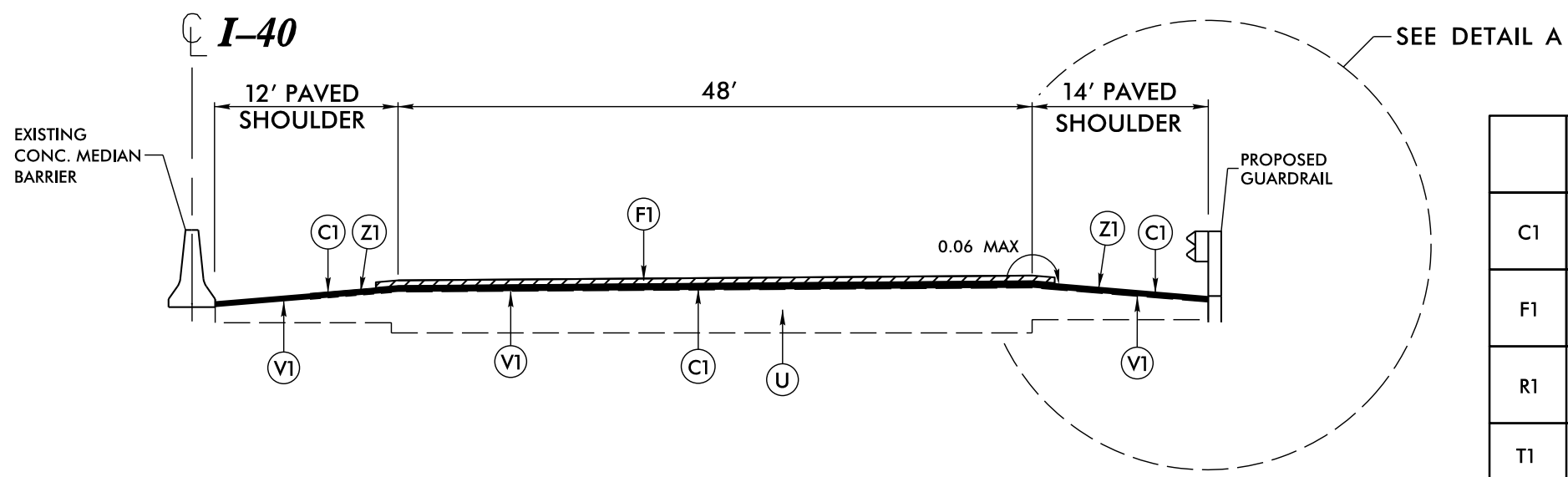


BUNCOMBE COUNTY



TYPICAL SECTION NO. 1

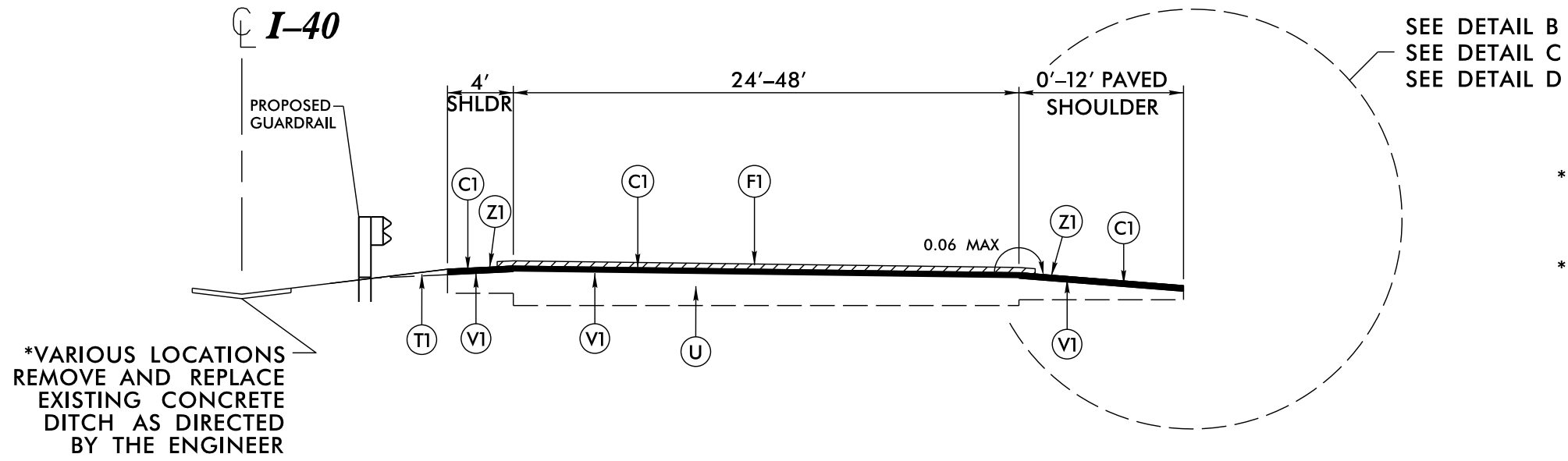
- * ULTRA-THIN BONDED WEARING COURSE SHALL EXTEND A MINIMUM OF 6" OUTSIDE OF EITHER SIDE.
- * RUMBLE STRIPS SHALL BE LOCATED 6" OUTSIDE OF ULTRA-THIN BONDED WEARING COURSE OF EITHER SIDE.



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

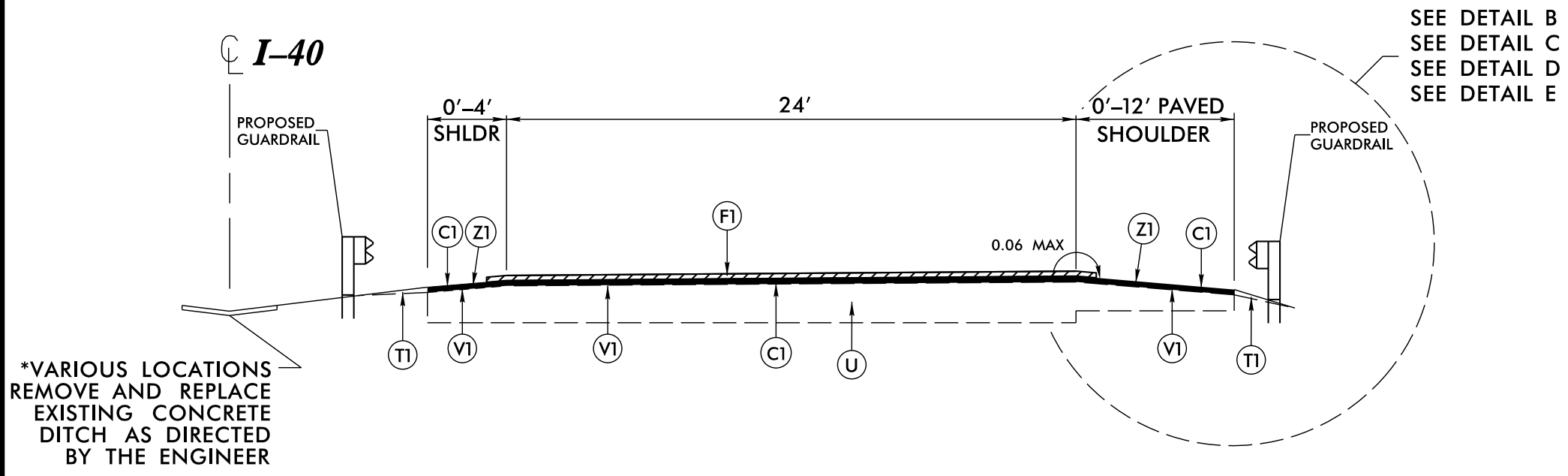
29-JUN-2022 14:51
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* ULTRA-THIN BONDED WEARING COURSE SHALL EXTEND A MINIMUM OF 6" OUTSIDE OF EITHER SIDE.

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

TYPICAL SECTION NO. 3

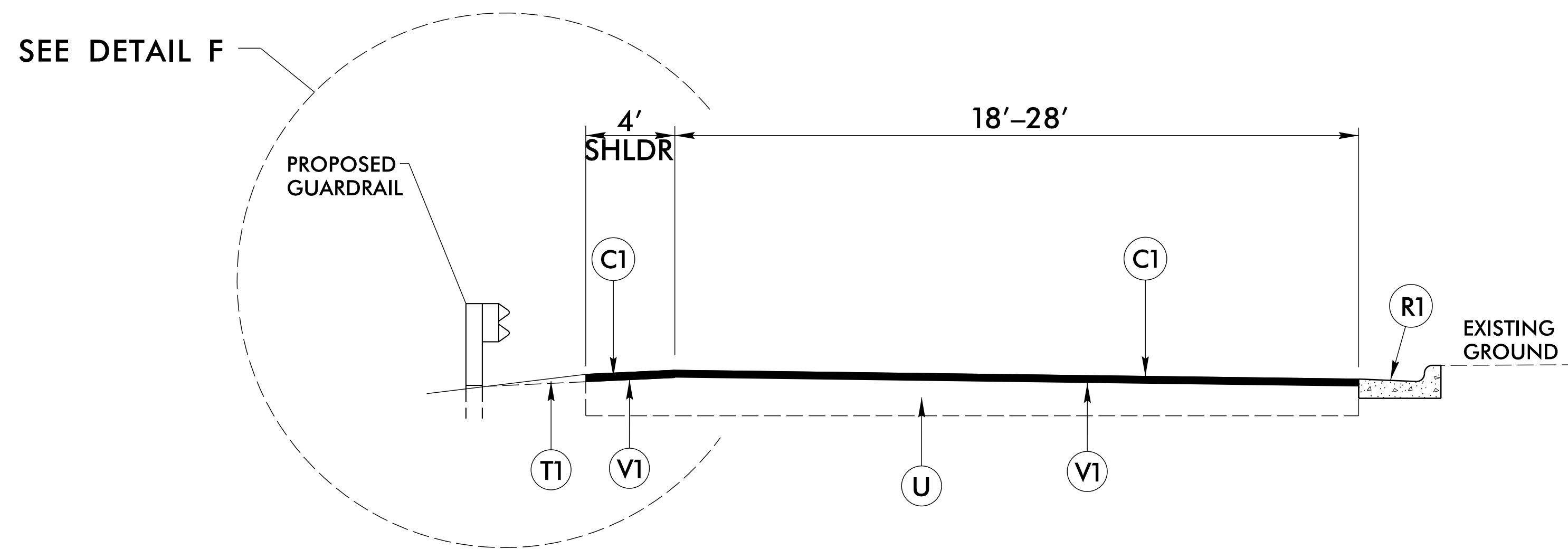


PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
F1	PROP. APPROX. 3/8" ULTRA-THIN BONDED WEARING COURSE AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
R1	2'-6" CONCRETE CURB & GUTTER
T1	SHOULDER RECONSTRUCTION
U	EXISTING ASPHALT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

TYPICAL SECTION NO. 4

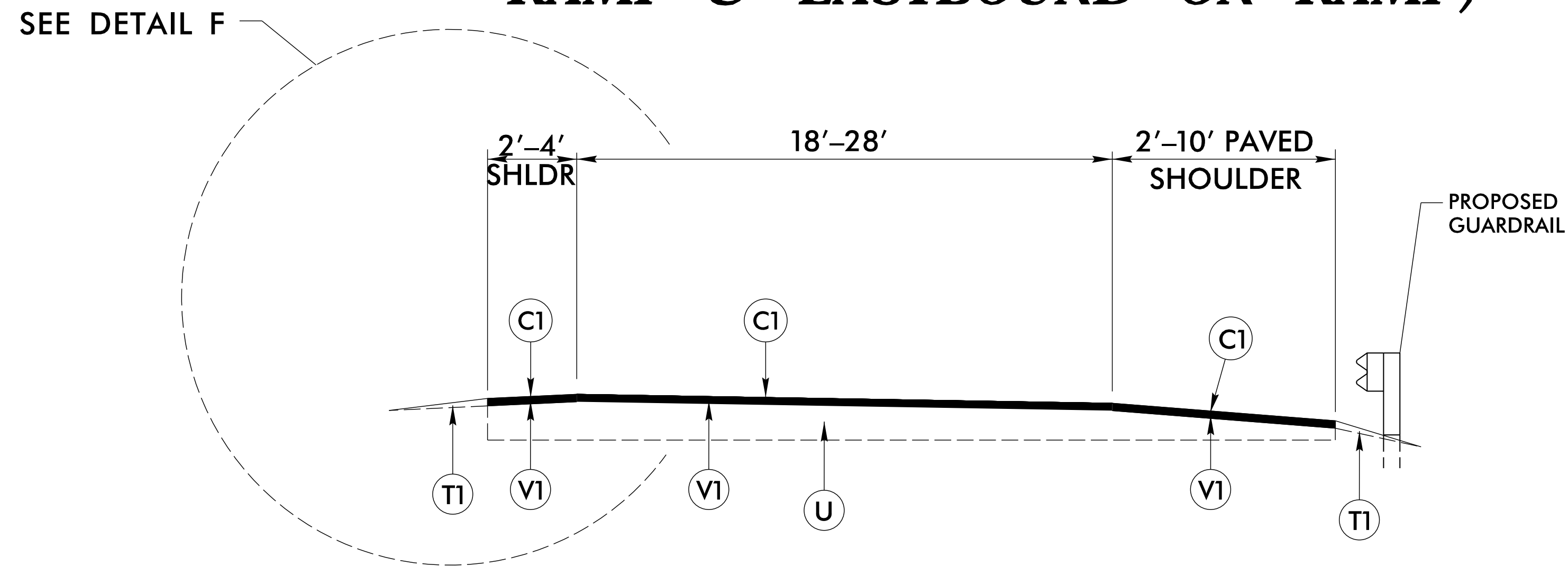
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RAMP (EXIT 47 WESTBOUND ON RAMP & EASTBOUND OFF RAMP)



TYPICAL SECTION NO. 5

RAMP (EXIT 47 WESTBOUND OFF RAMP & EASTBOUND ON RAMP)

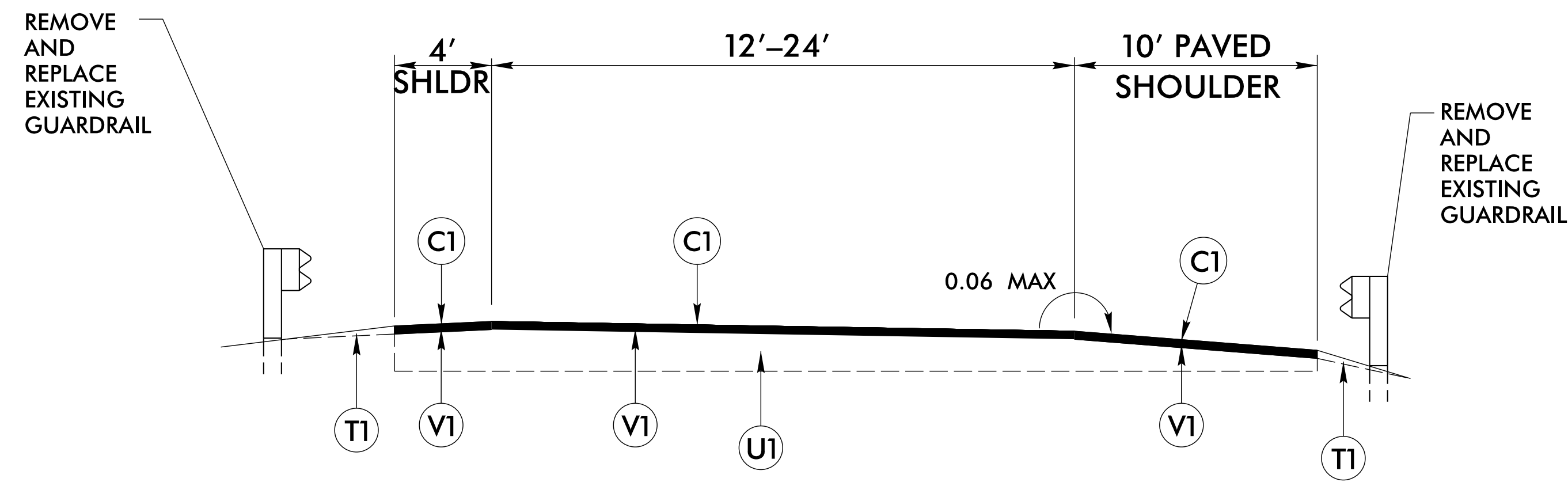


TYPICAL SECTION NO. 6

	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

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RAMP (US-74)



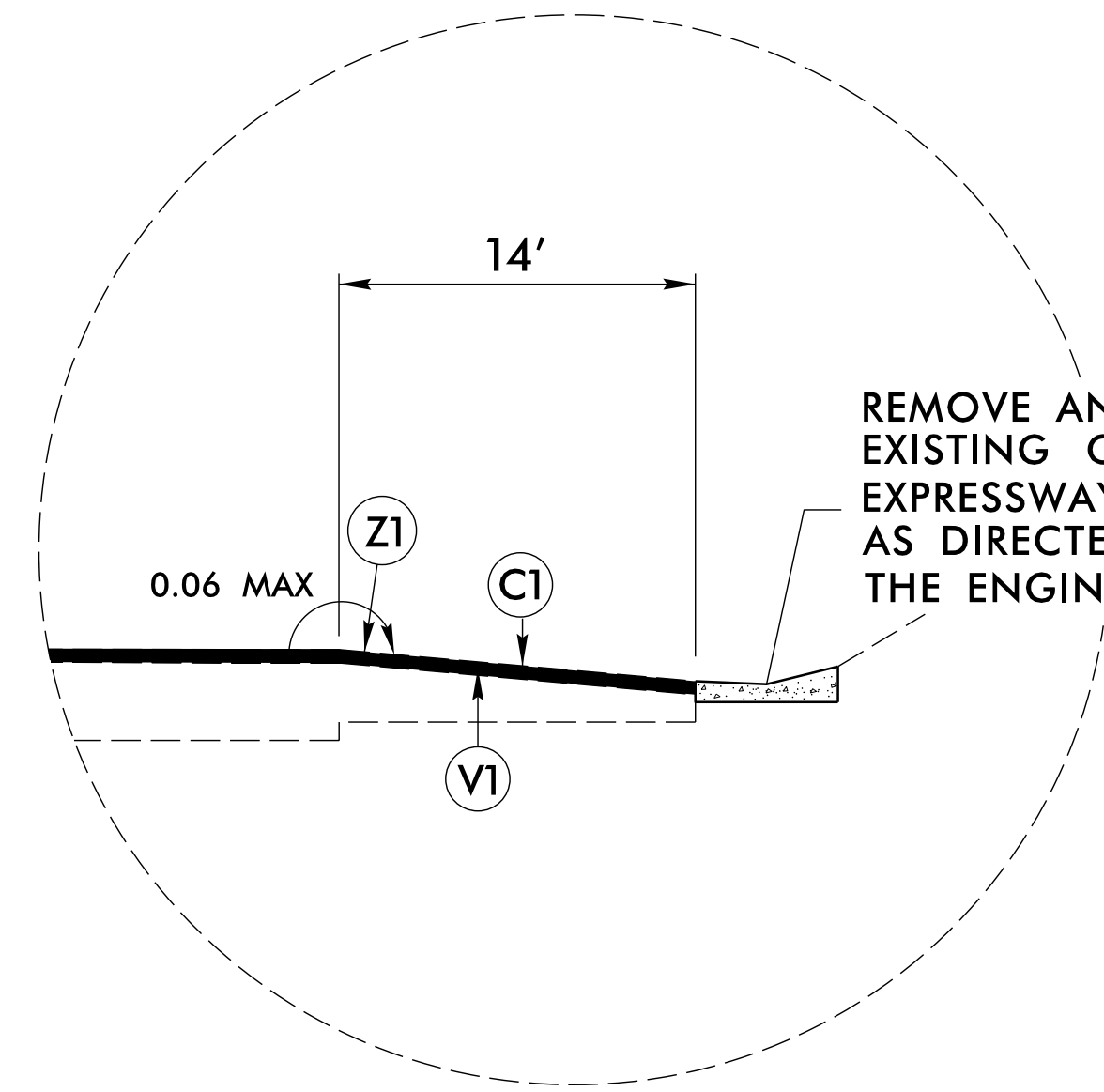
TYPICAL SECTION NO. 7

	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. $\frac{5}{8}$ " 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

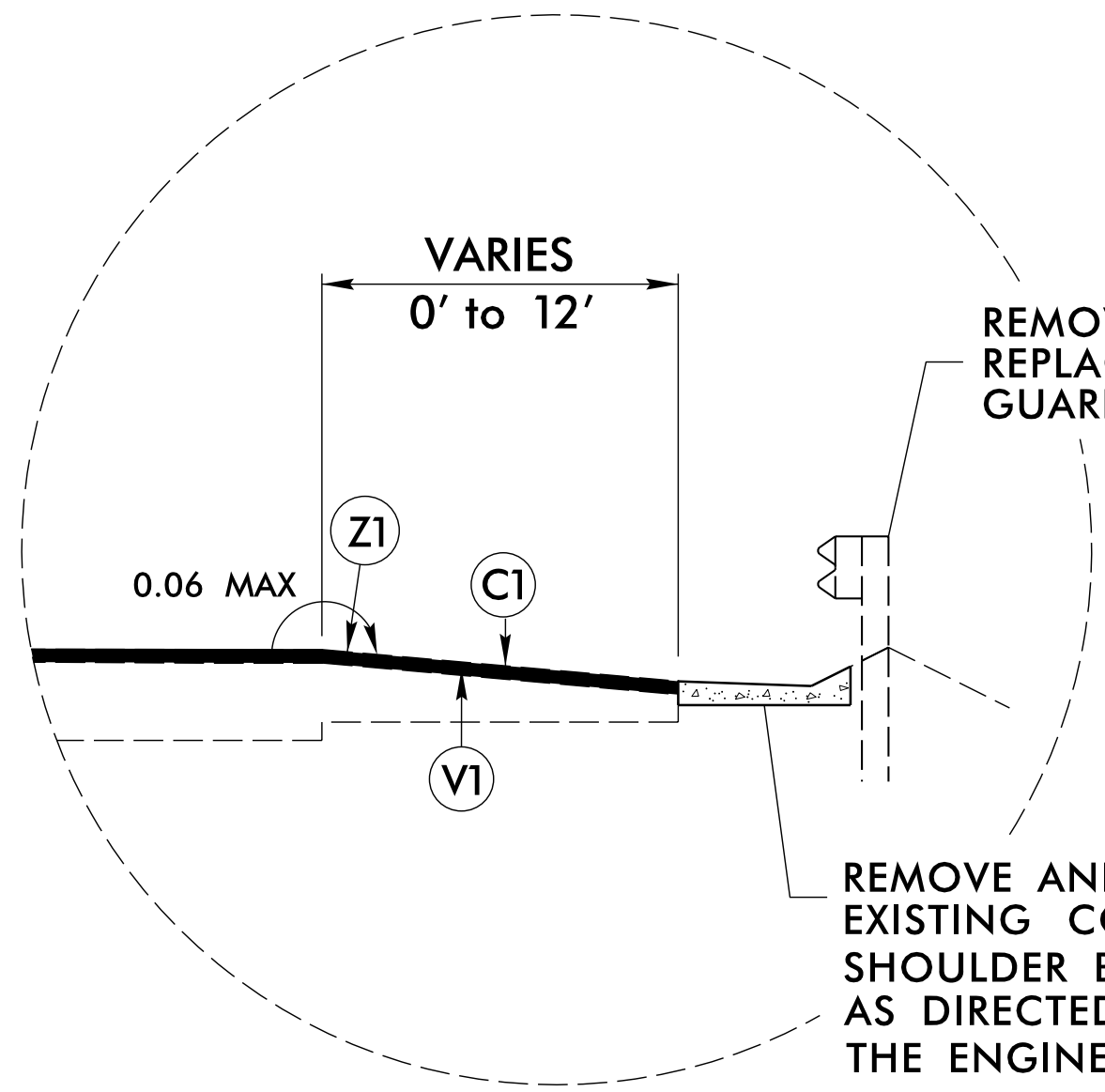
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PROJECT NO.	SHEET NO.	TOTAL SHEETS
I-5889B	7	

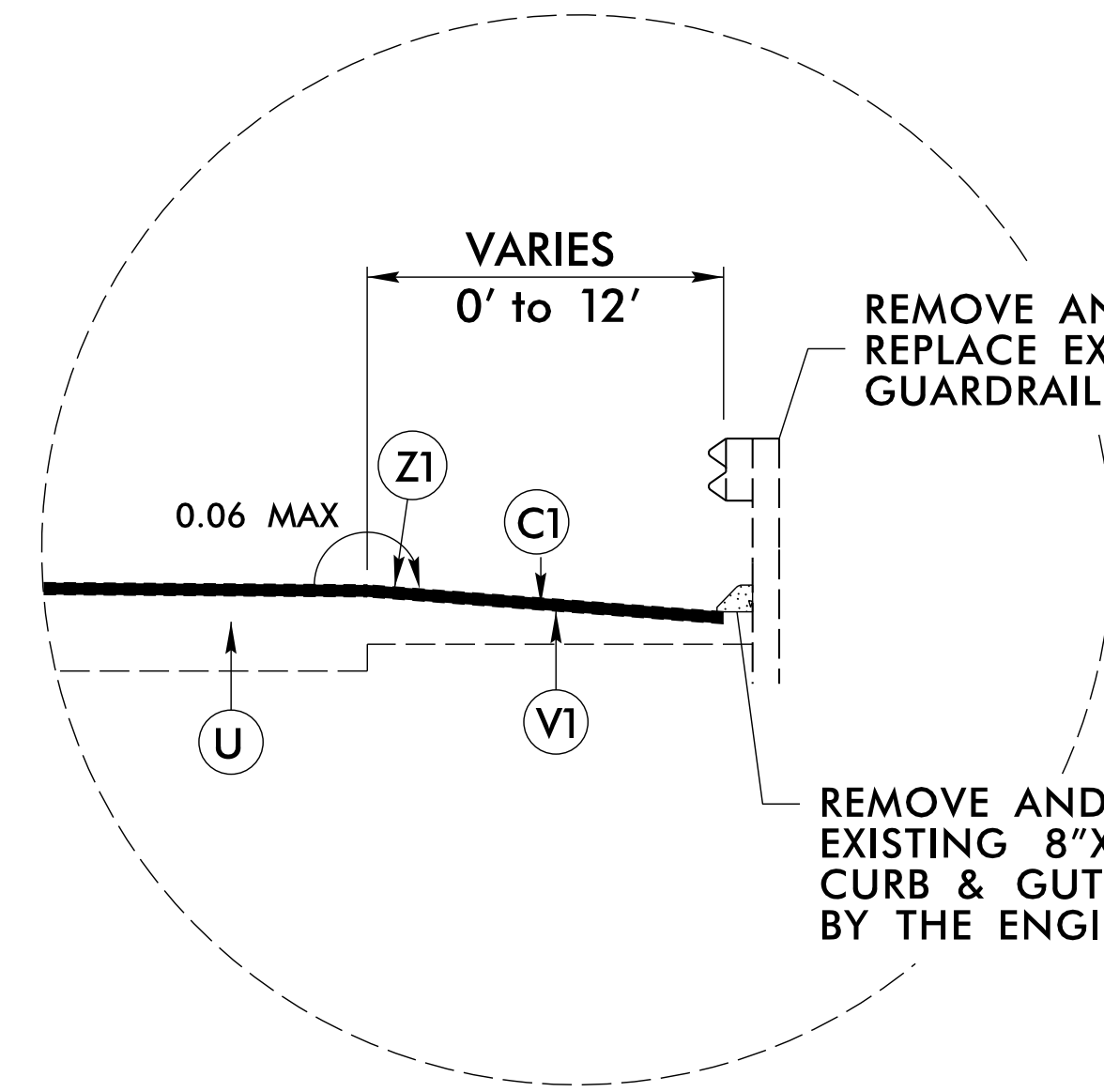
DETAILS



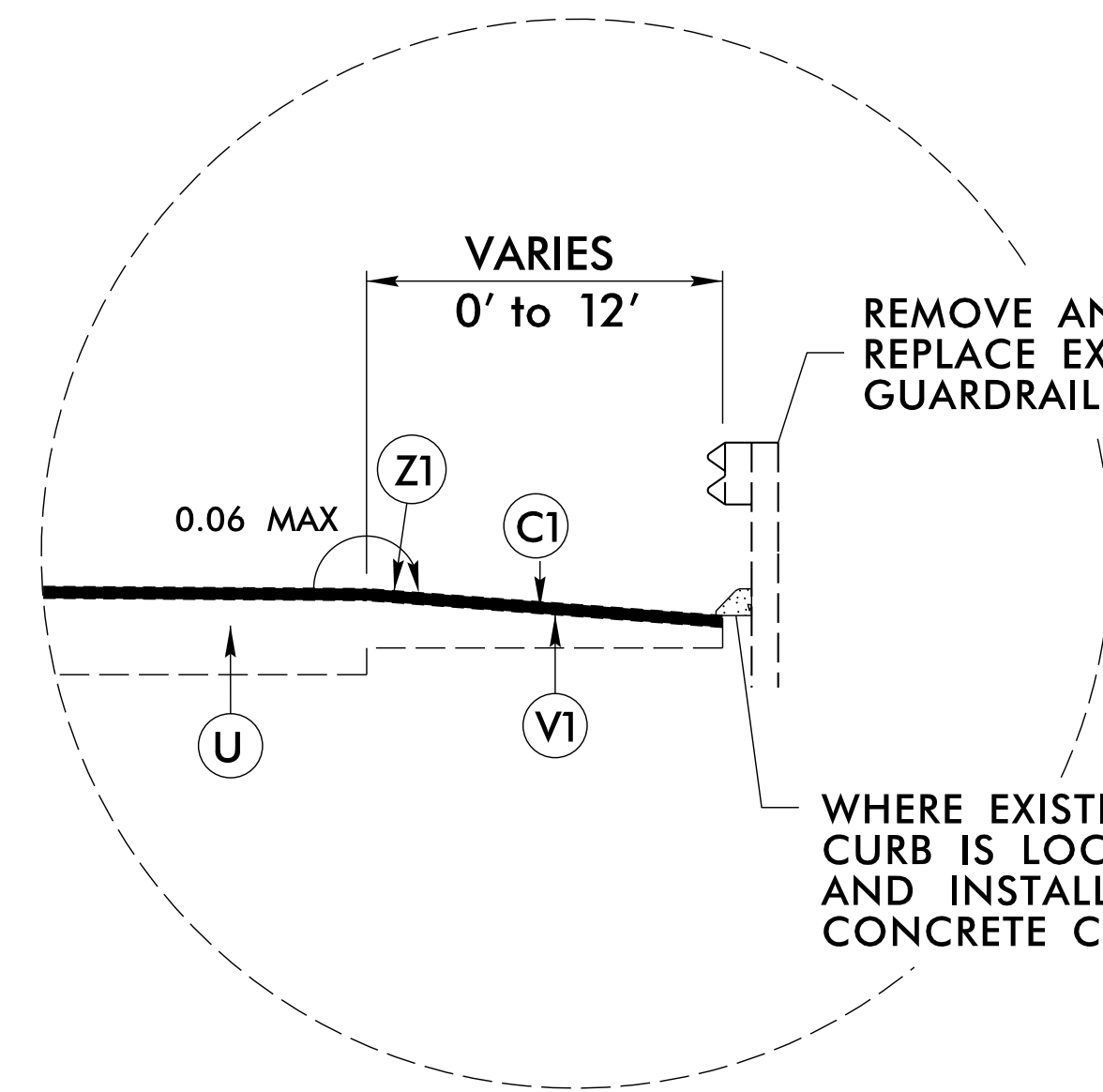
DETAIL A



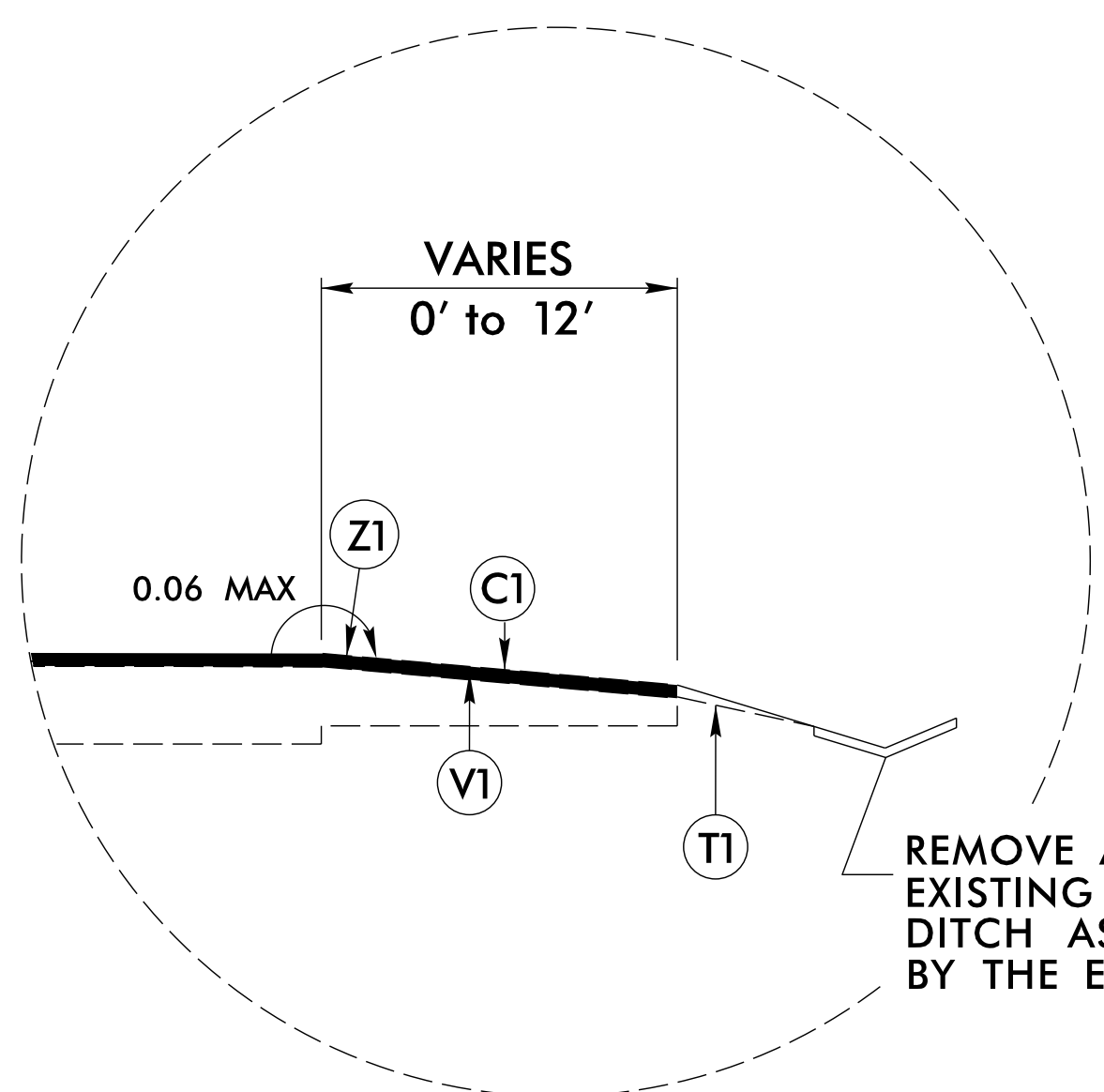
DETAIL B



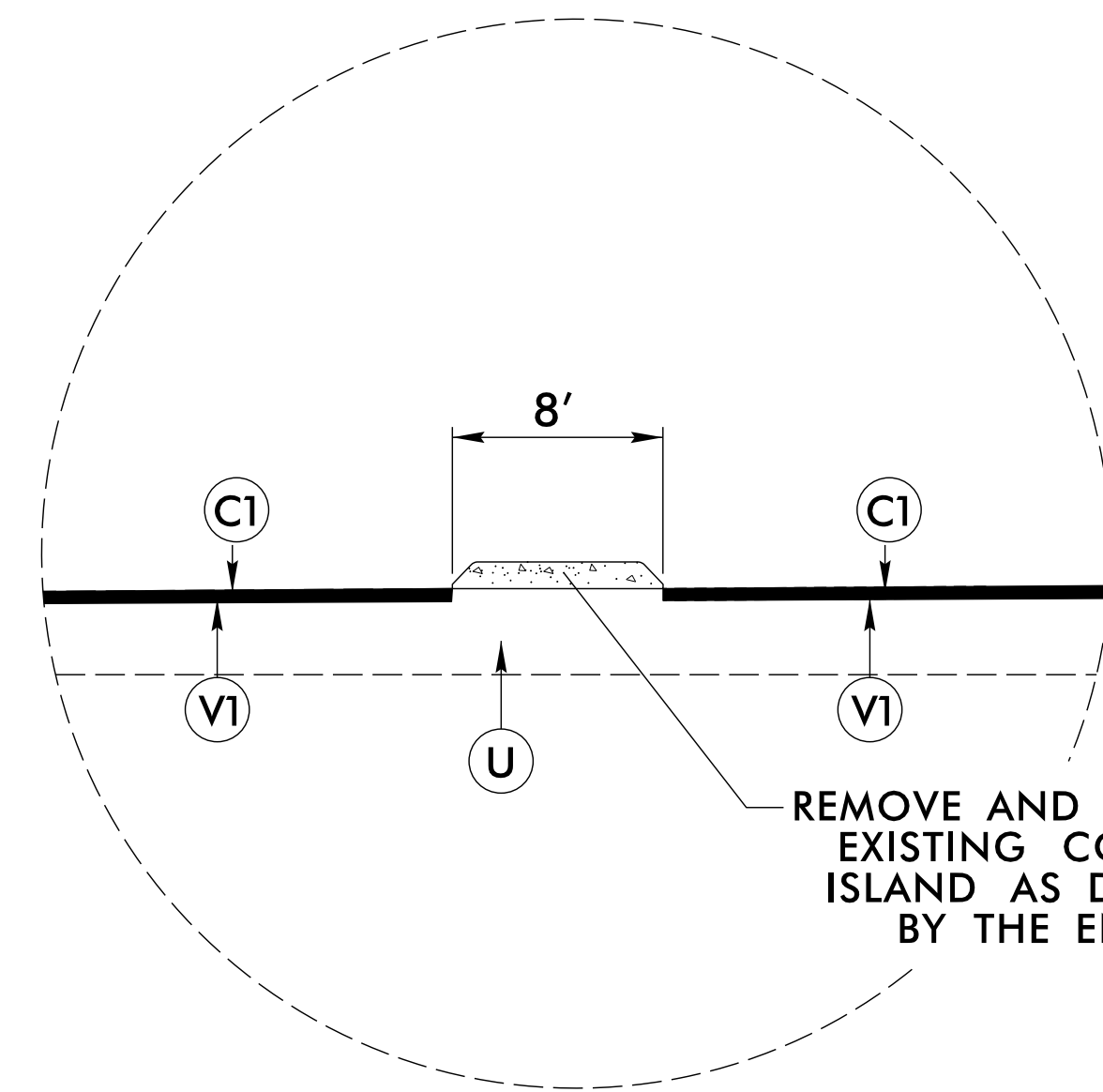
DETAIL C



DETAIL D



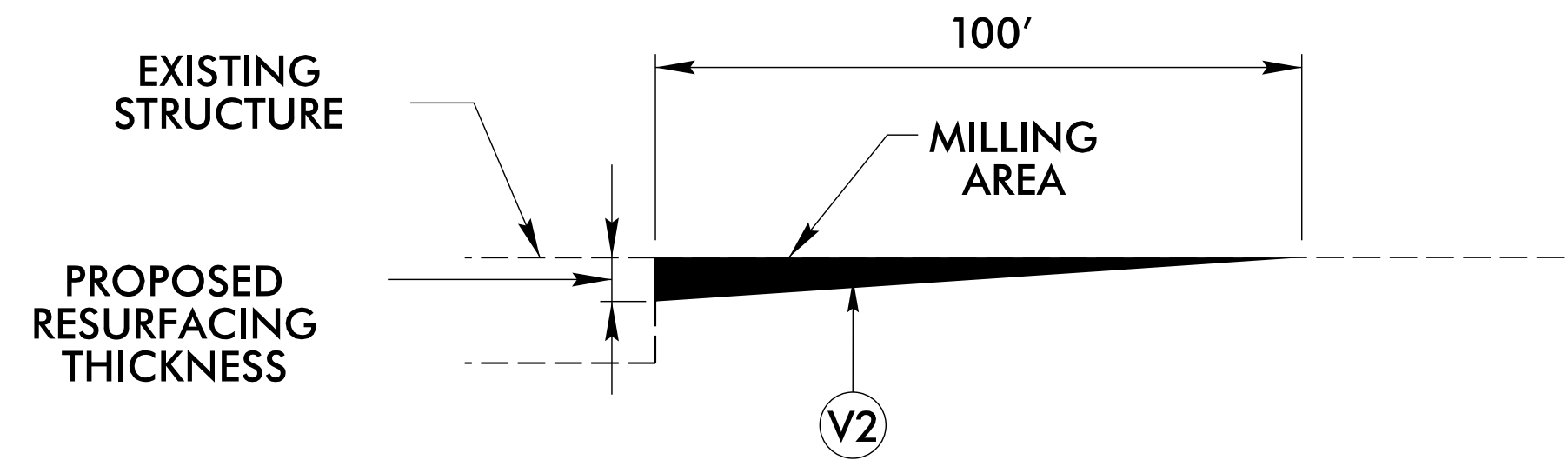
DETAIL E



DETAIL F

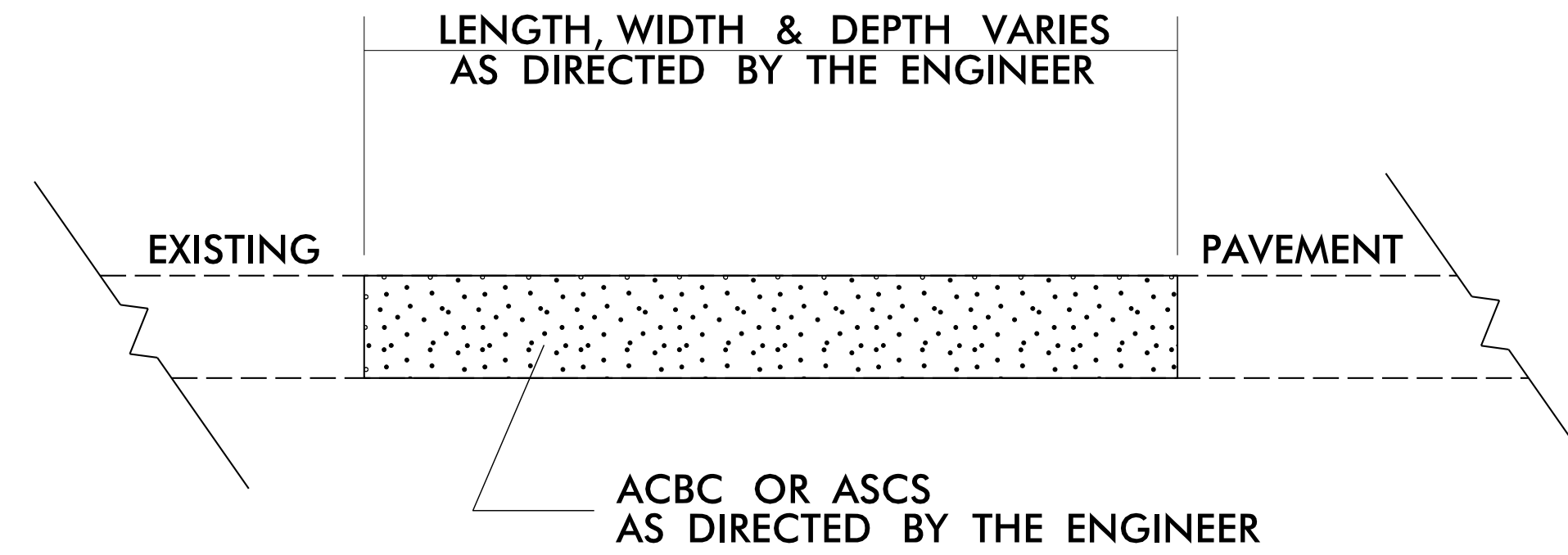
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
F1	PROP. APPROX. 3/8" ULTRA-THIN BONDED WEARING COURSE AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
R1	2'-6" CONCRETE CURB & GUTTER
T1	SHOULDER RECONSTRUCTION
U	EXISTING ASPHALT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

DETAILS

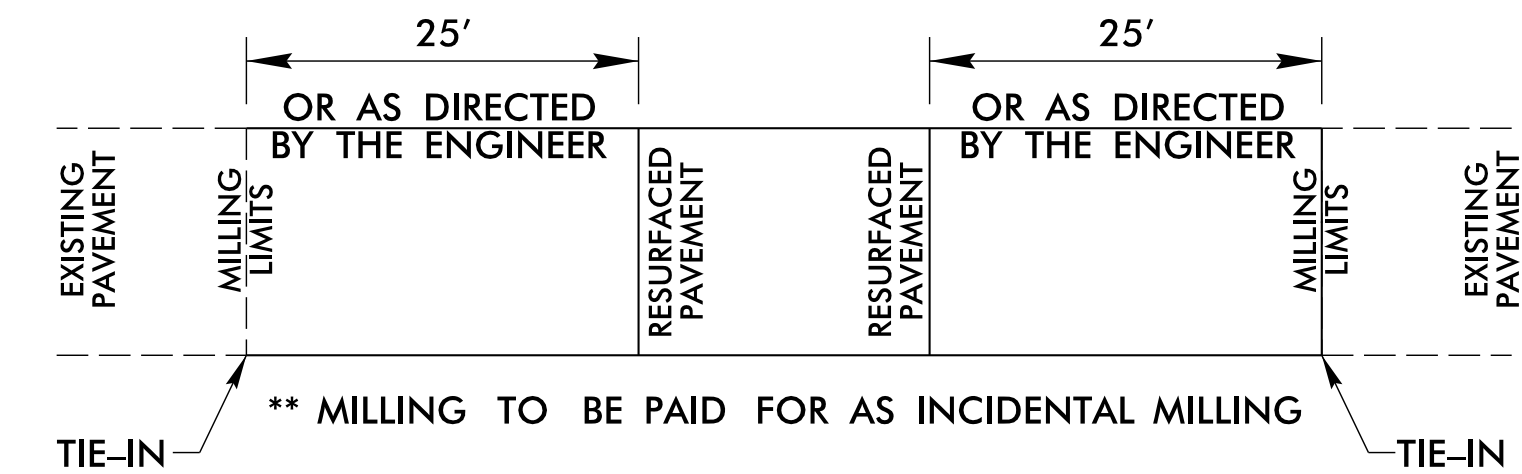


MILLING DETAIL AT BRIDGE APPROACHES

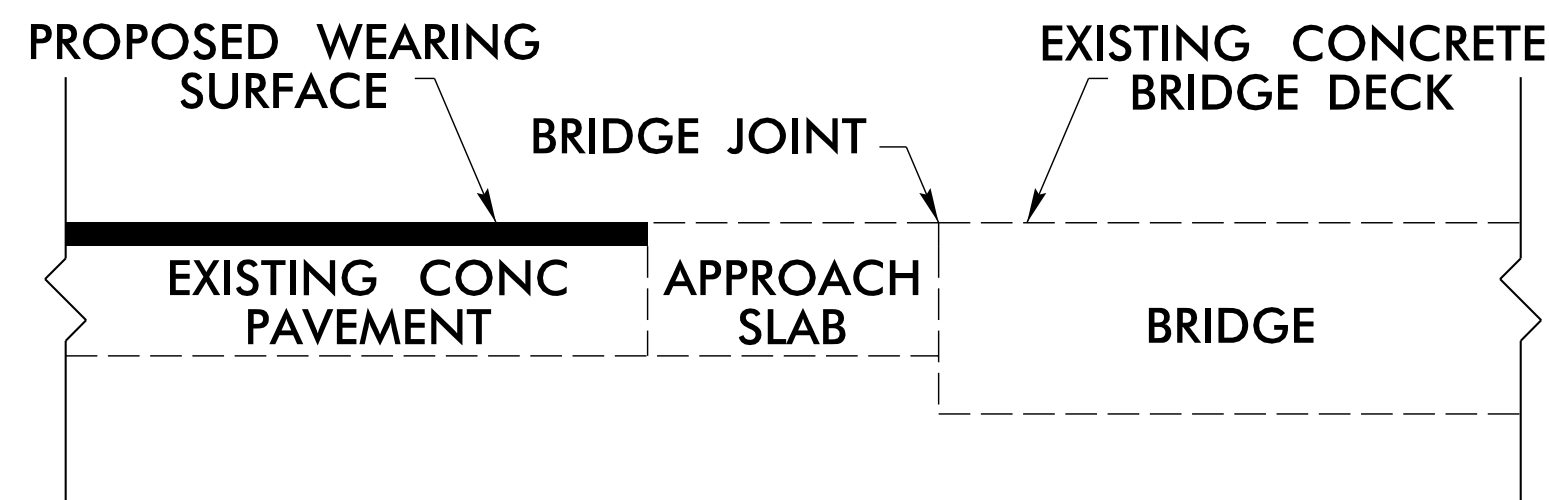
WHERE BRIDGES WILL NOT BE RESURFACED.
THIS WILL BE PAID FOR AS INCIDENTAL MILLING.
USE AT BRIDGE NUMBERS 254.



PATCHING EXISTING PAVEMENT

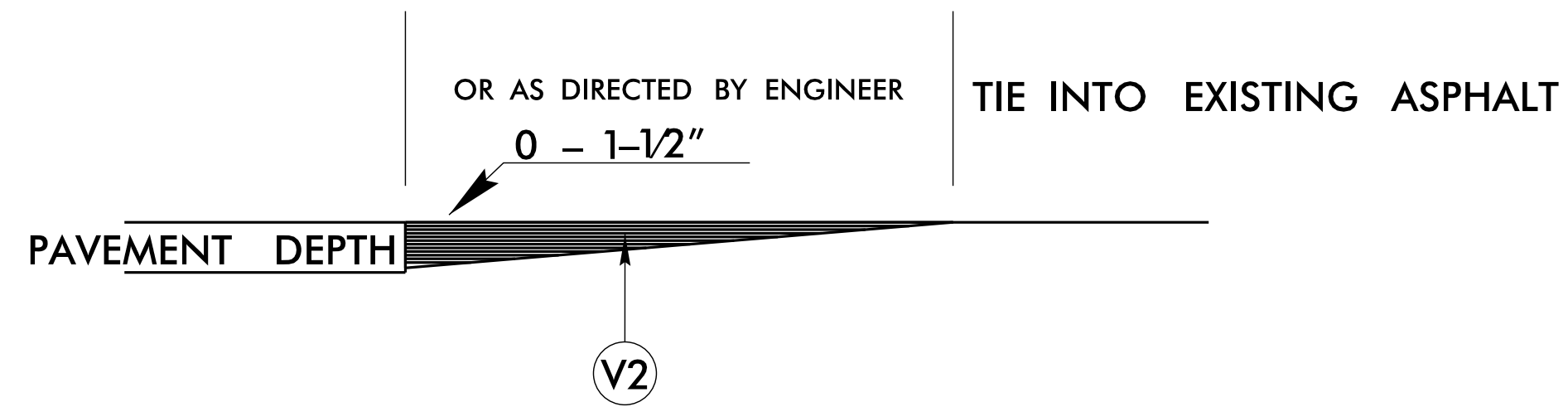


PAVEMENT TIE IN DETAIL



TIE-IN DETAIL AT BRIDGES

TIE PROPOSED WEARING SURFACE TO EXISTING CONC OVERLAY ON BRIDGE DECKS AND APPROACH SLABS.
BRIDGE # 254



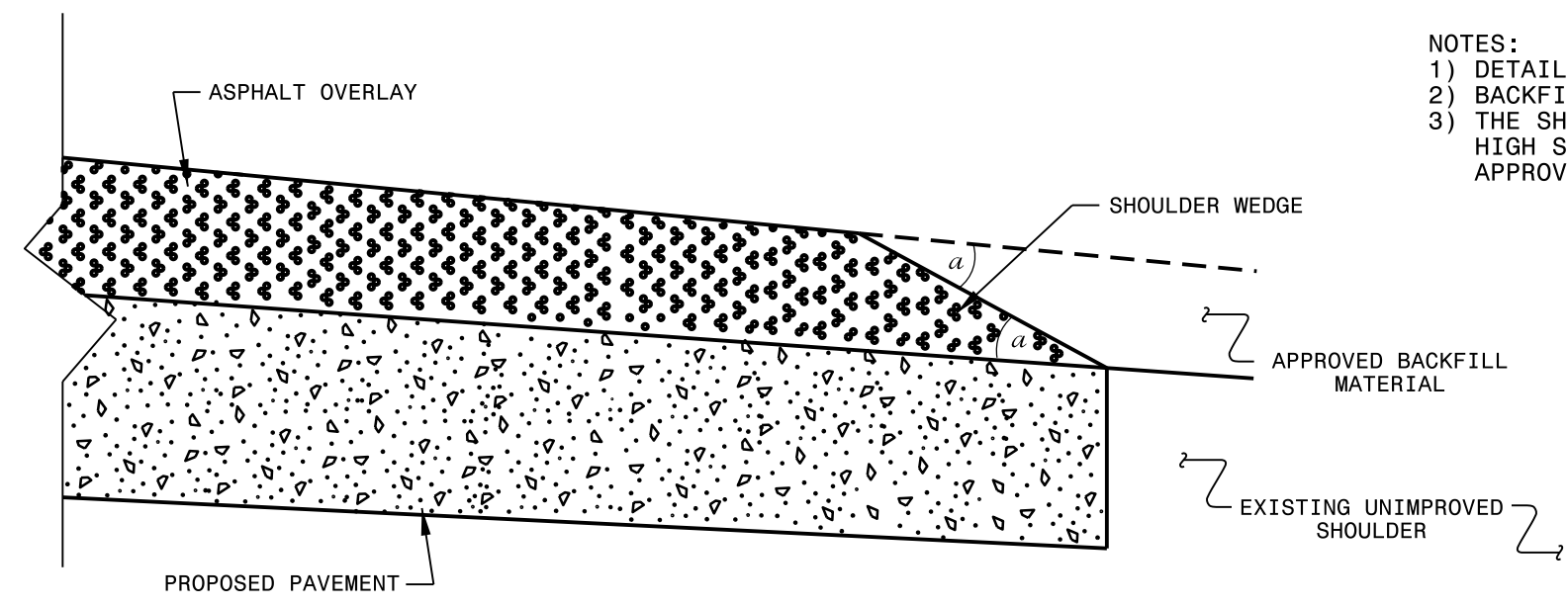
DETAIL TO TIE INTO EXIST PAVEMENT

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT HE WILL BE REQUIRED TO MILL THE EXISTING ASPHALT PAVEMENT TO ENSURE A PROPER TIE-IN WITH THE EXISTING SURFACE AT THE BEGINNING, END AND Y LINES OF EACH MAP TO BE RESURFACED WITH ASPHALT CONC SURFACE COURSE, TYPE S9.5C. THIS WILL BE PAID FOR AS INCIDENTAL MILLING.

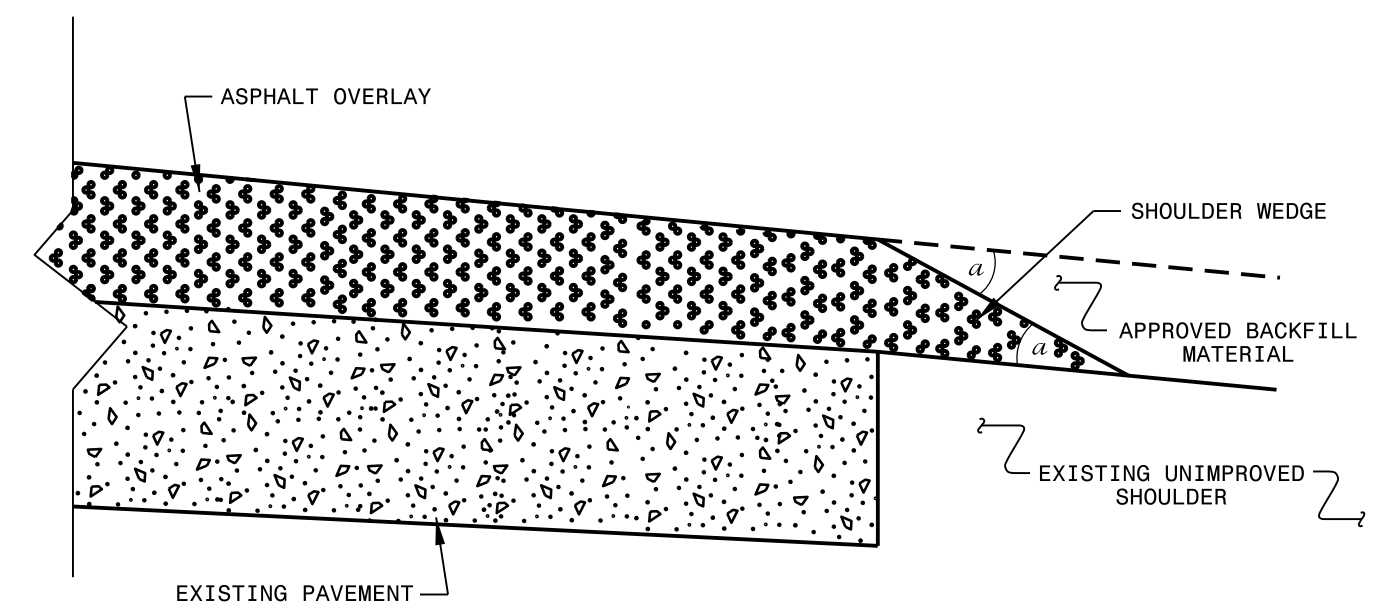
	PAVEMENT SCHEDULE
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
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V1	MILL ASPHALT PAVEMENT, 2" DEPTH
V2	INCIDENTAL MILLING
Z1	MILLED RUMBLE STRIPS

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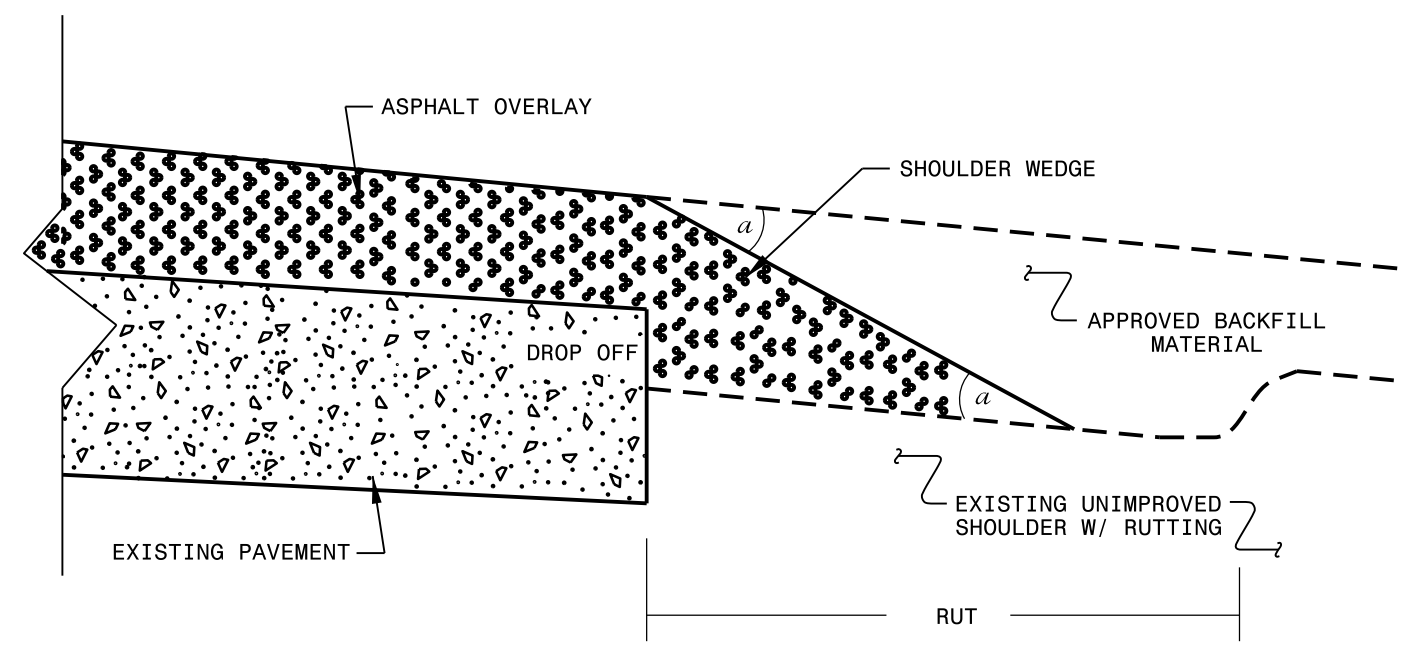
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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



SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ NO Widening)



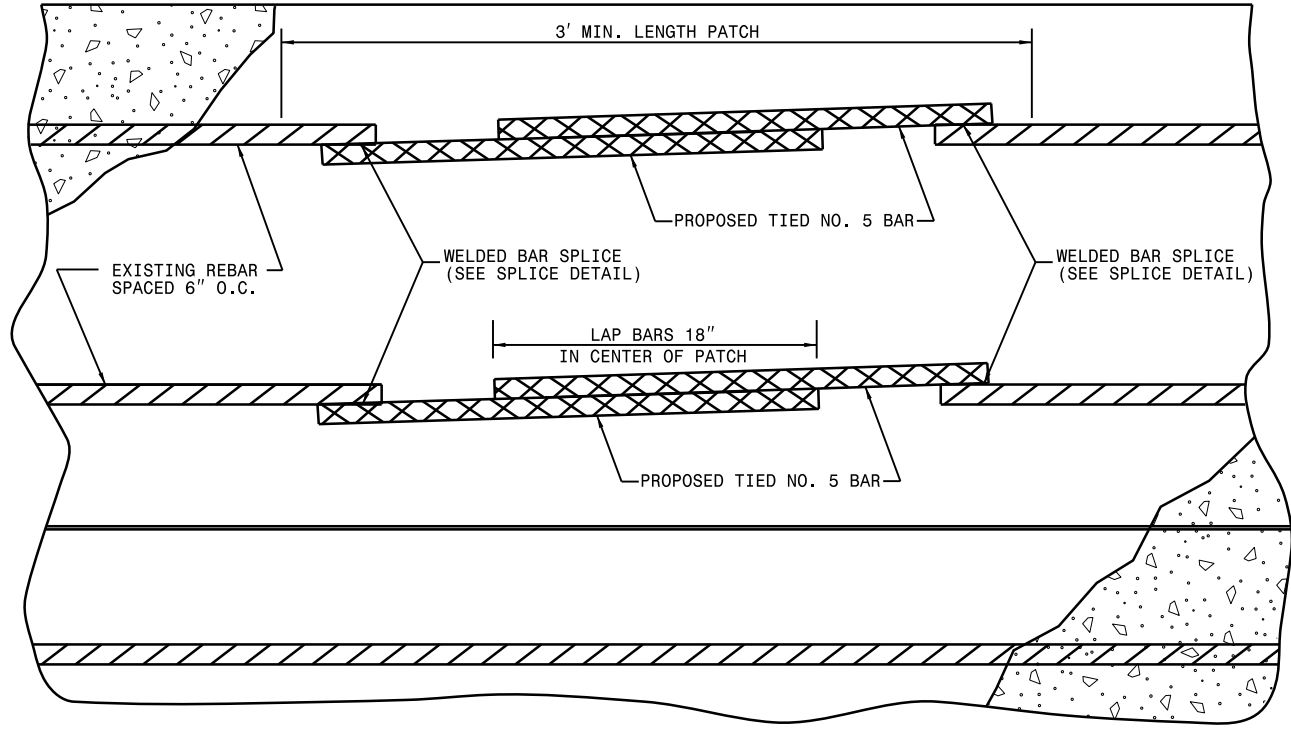
SHOULDER WEDGE DETAIL
(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

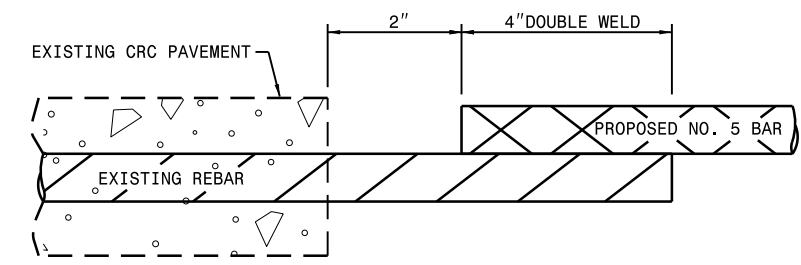
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\$\$\$\$USERNAME\$\$\$\$

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\detatl1\stand\shoulderwedgedetatl1.dgn	

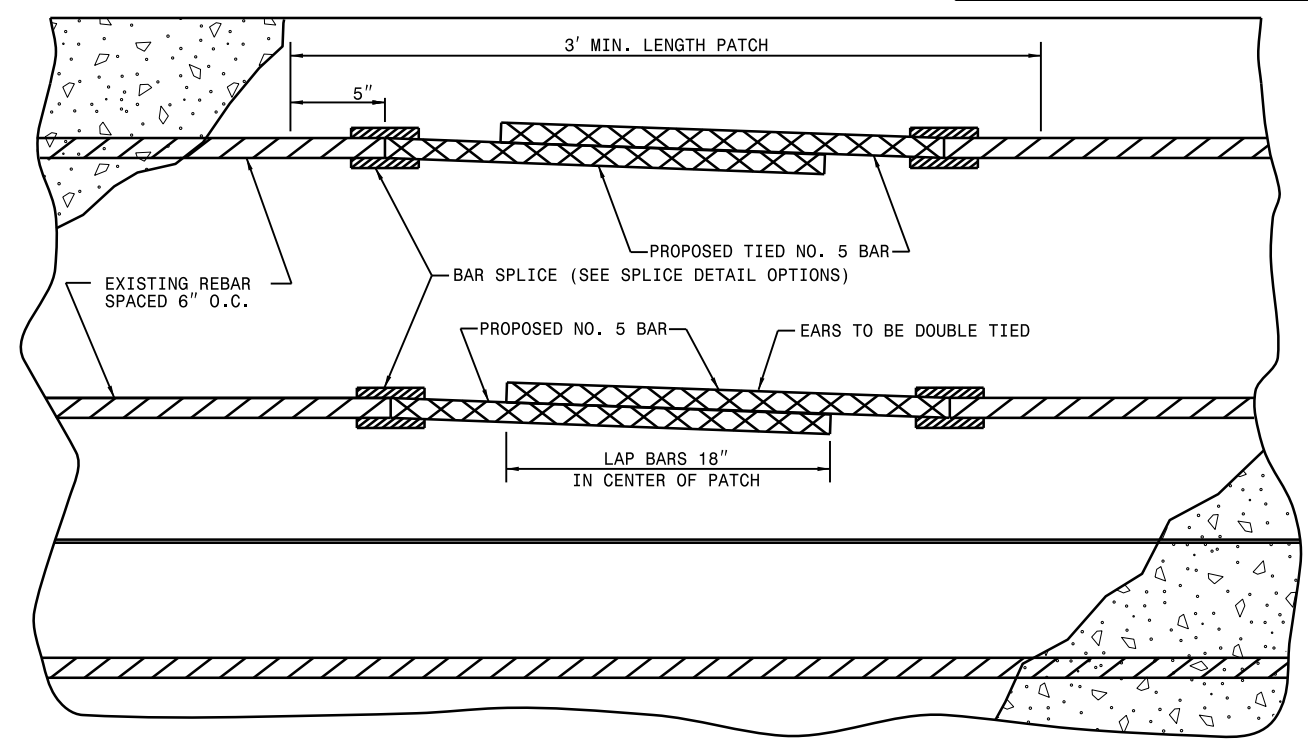
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UNLESS ALL SIGNATURES COMPLETED



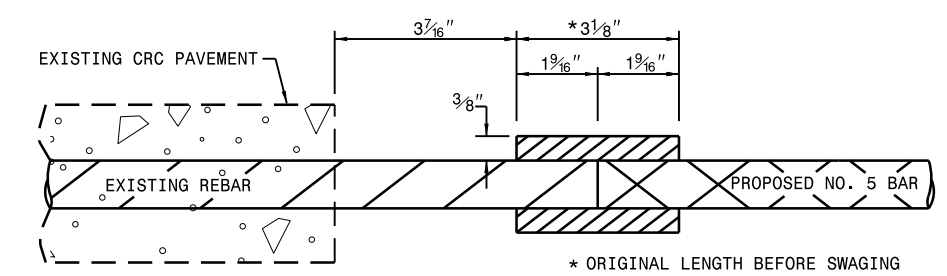
PLAN



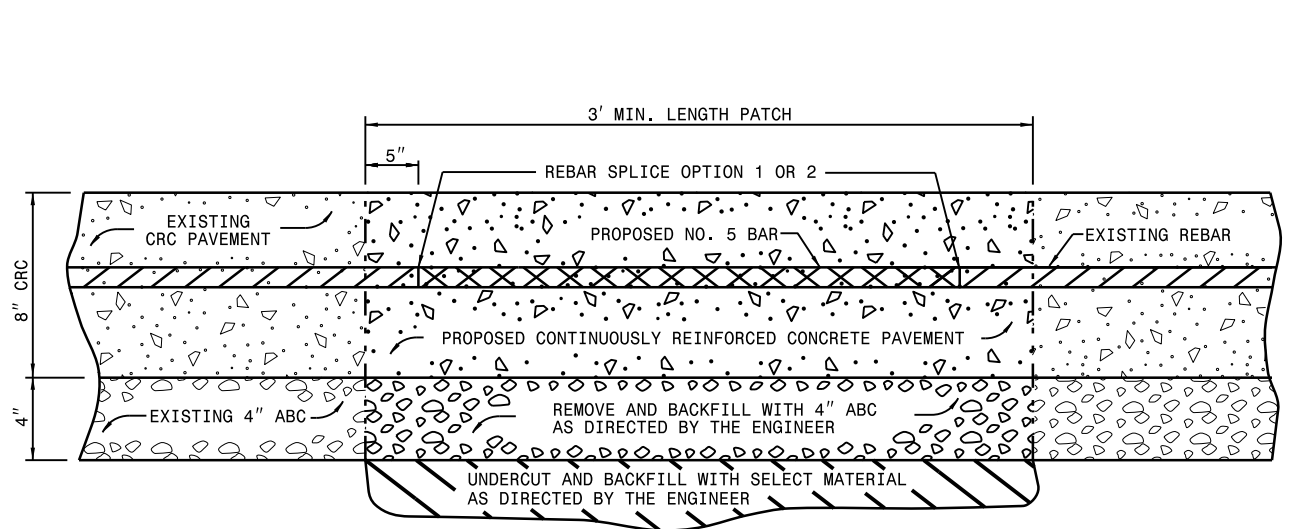
OPTION 1 - DETAIL OF WELDED SPLICE



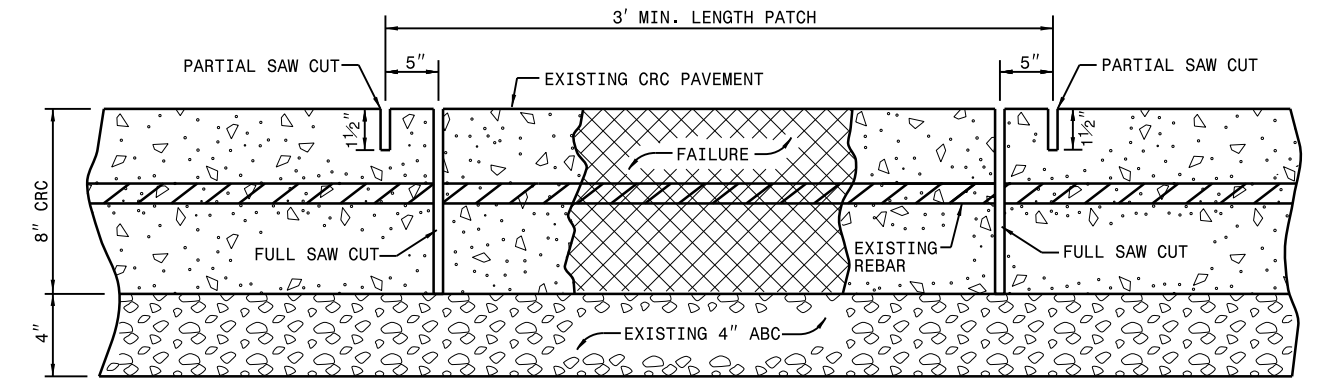
PLAN



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	

I4-DEC-2017 10:36 S:\Contracts\2018\Standard Drawings\Special Details\Drawings\Division 8\0662d0301.dgn
 Jhowerton AT:CSU-212855

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
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> </div> <div style="width: 50%;"> <p>NOTE:</p> <ul style="list-style-type: none"> **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER. *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT. -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" X 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB. -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER). -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW. -SEE SHEET 3 FOR POST SECTIONS 1 THRU 9. </div> </div>		
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE		

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
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> </div> <div style="width: 50%;"> <p>NOTE:</p> <ul style="list-style-type: none"> **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER. *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT. -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" X 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB. -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER). -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW. -SEE SHEET 3 FOR POST SECTIONS 1 THRU 9. </div> </div>		
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER		



Documented by: *Ron Davenport* 08/17/2022
 F81803847A44Z

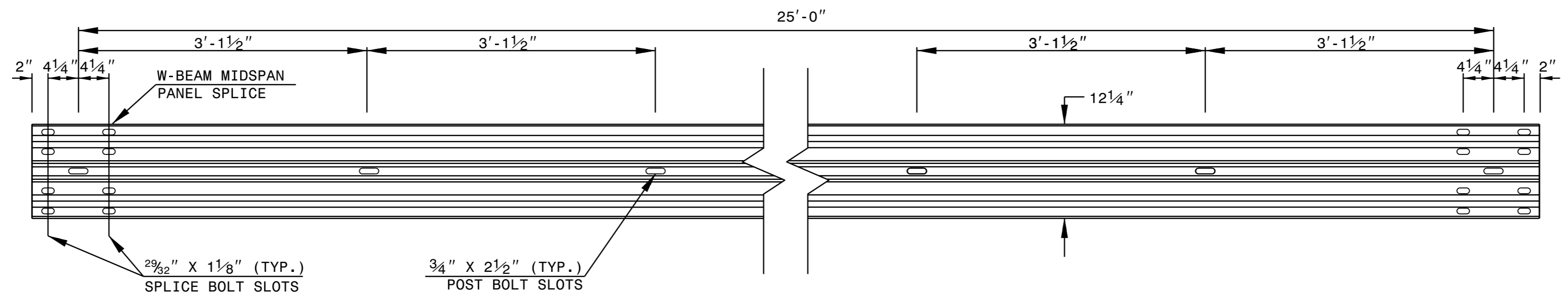
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950 FAX 919-250-4119	
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MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	DATE:

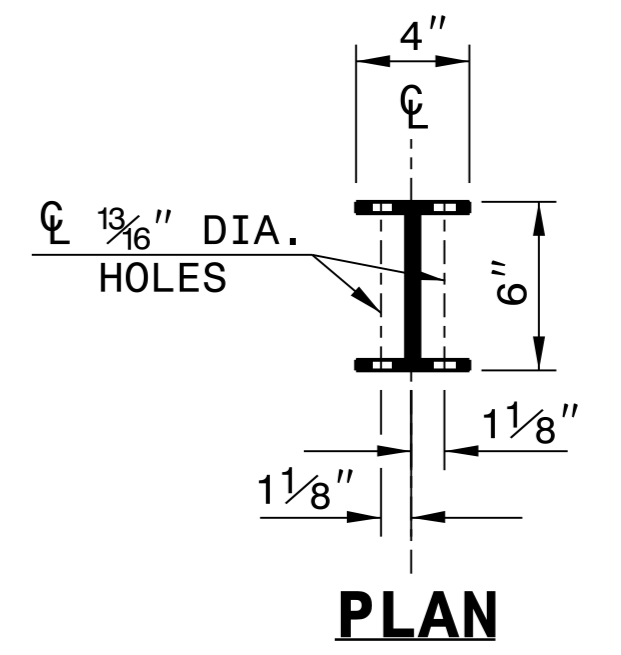
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

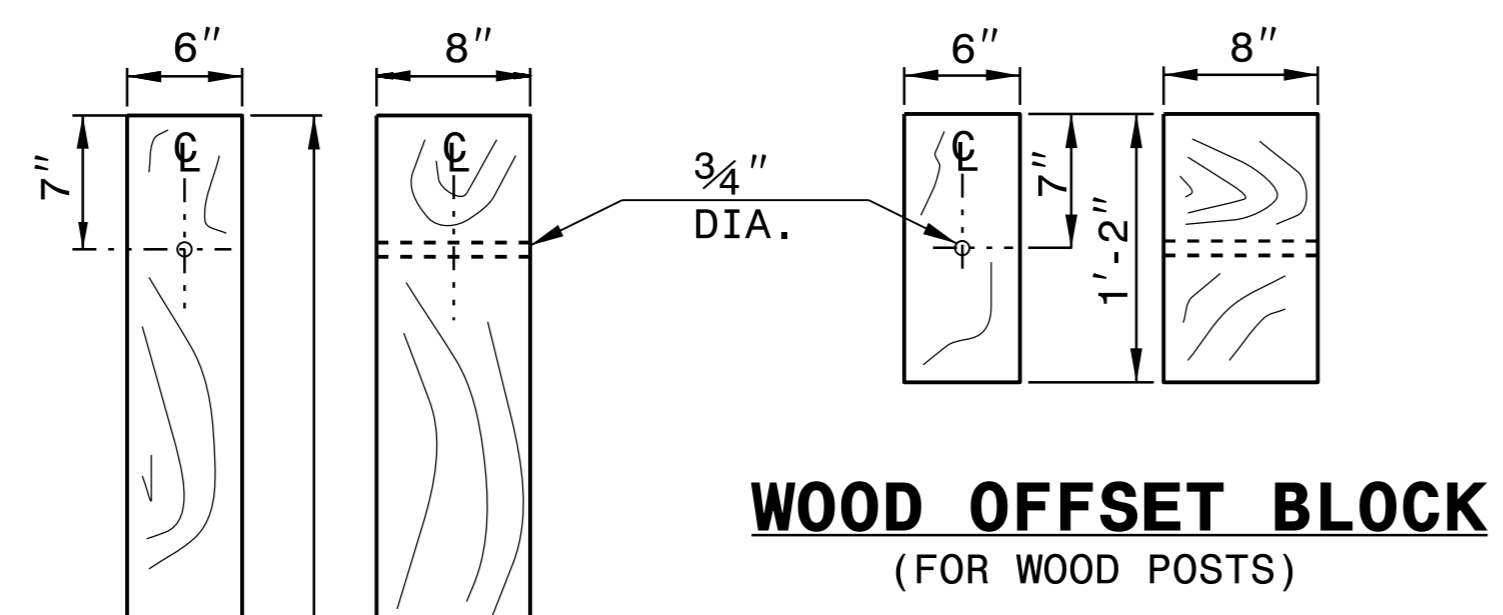
SHEET 6 OF 8
862D02



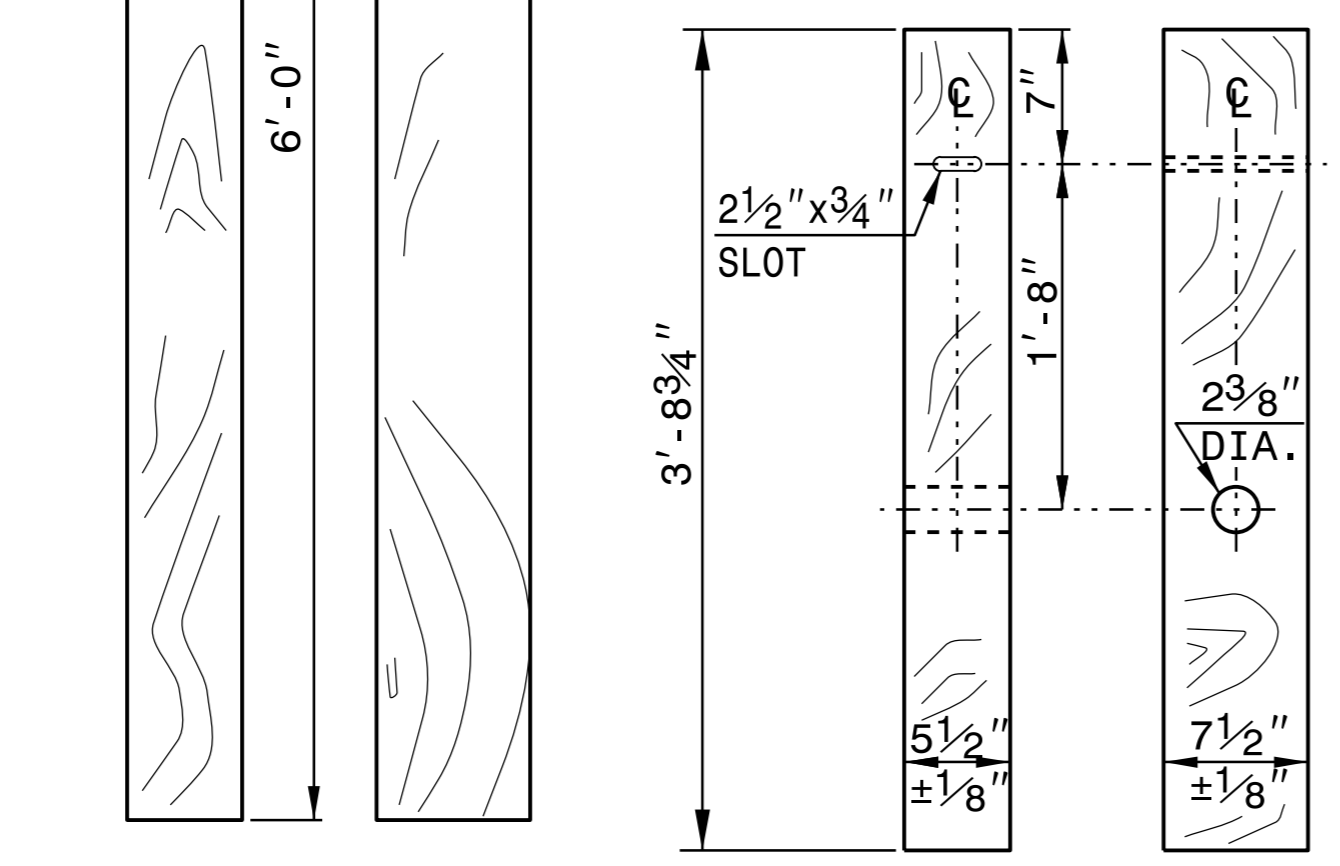
STANDARD W-BEAM GUARDRAIL



PLAN

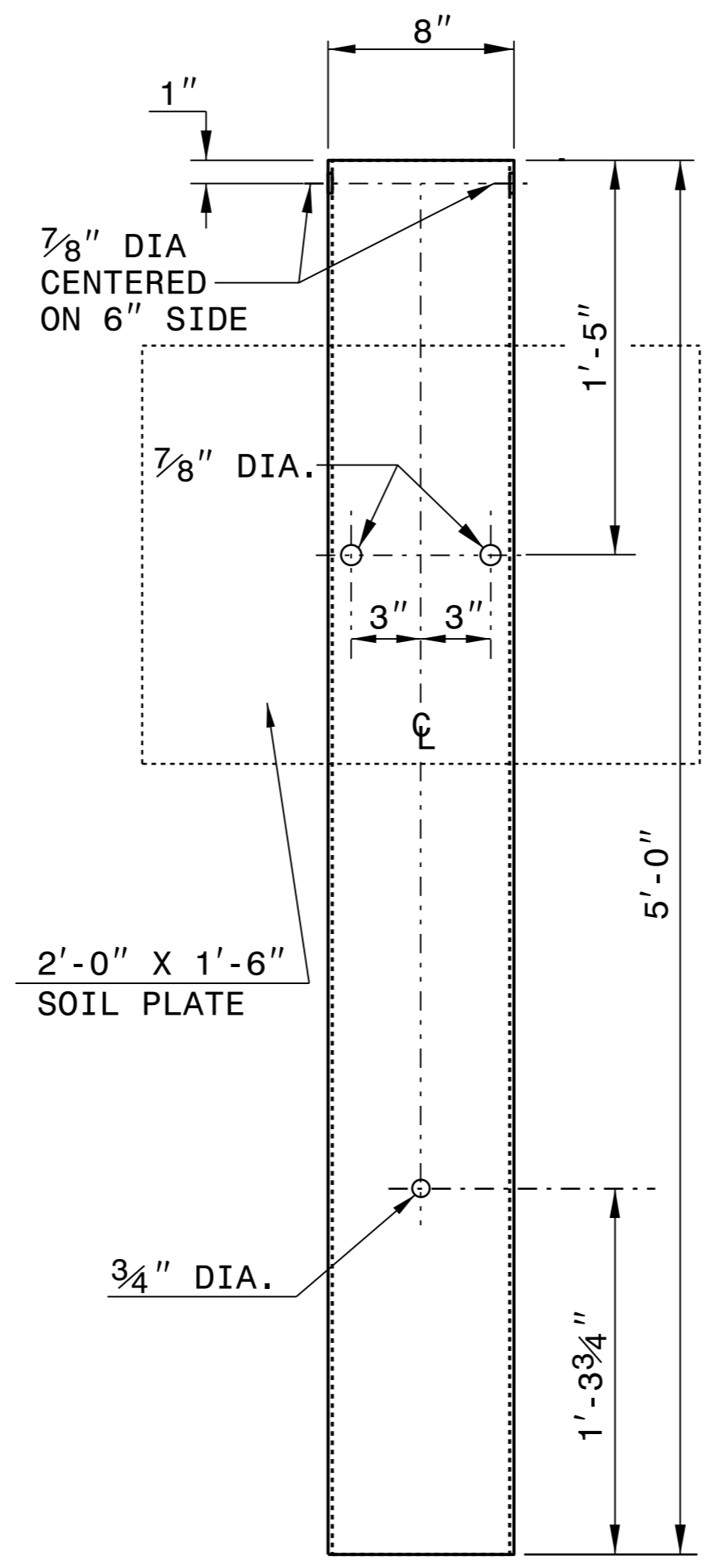


**WOOD OFFSET BLOCK
(FOR WOOD POSTS)**

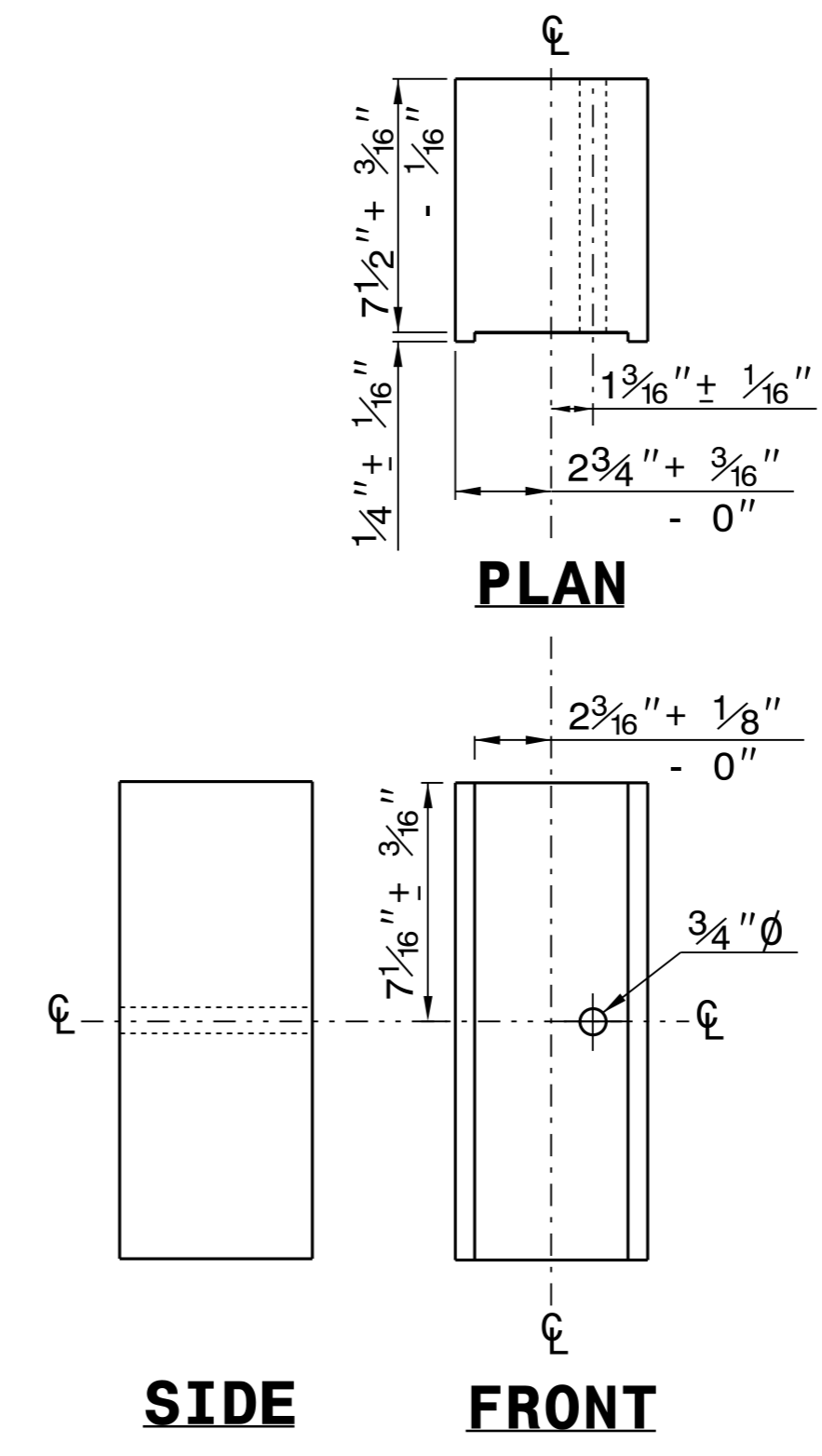


**STANDARD
LINE POST**

**SHORT WOOD
BREAKAWAY POST**



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

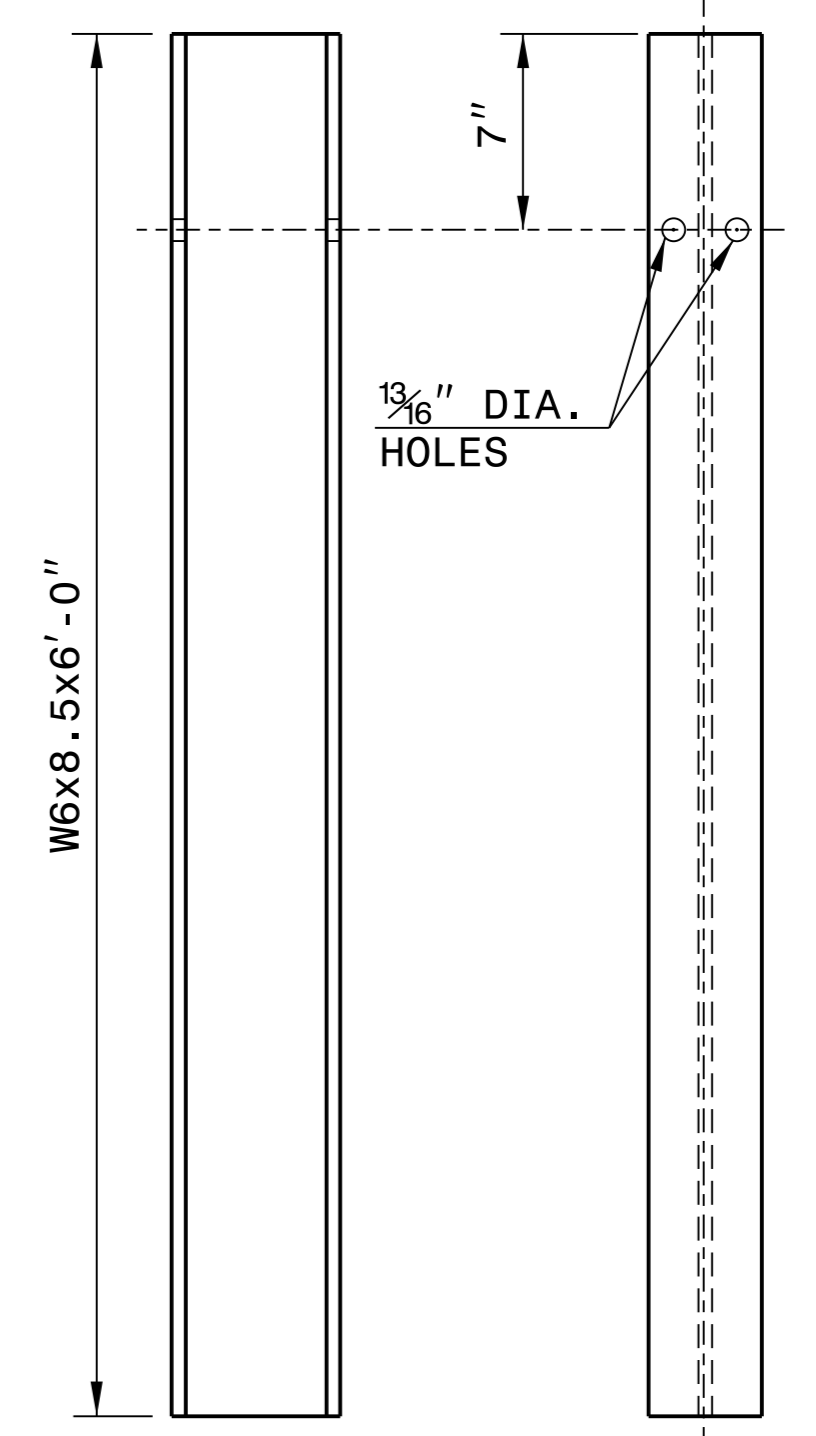


PLAN

SIDE

FRONT

**ROUTED
OFFSET BLOCK**



SIDE

FRONT

"W6" STEEL POST

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

SYSTEM PARTS



DesiGned by:
Ken Davenport 08/17/2022
F8180238A7442

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

SEE TITLE BLOCK

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