

09/08/19  
 26-JAN-2017 15:47  
 O:\RDY\ADONE\ON\_SLOW\W-5601GK\_50138.1.194\_Rocky Run Rd\ROADWAY\Proj\Plan\_Sheets\W-5601GK\_50138.1.194\_SR 1413 (Rocky Run Rd.)\_PSH\_.ldgn  
 \$\$\$SERVNAME\$\$\$

**WBS NO.: 50138.3.194**

**CONTRACT: DC00166**

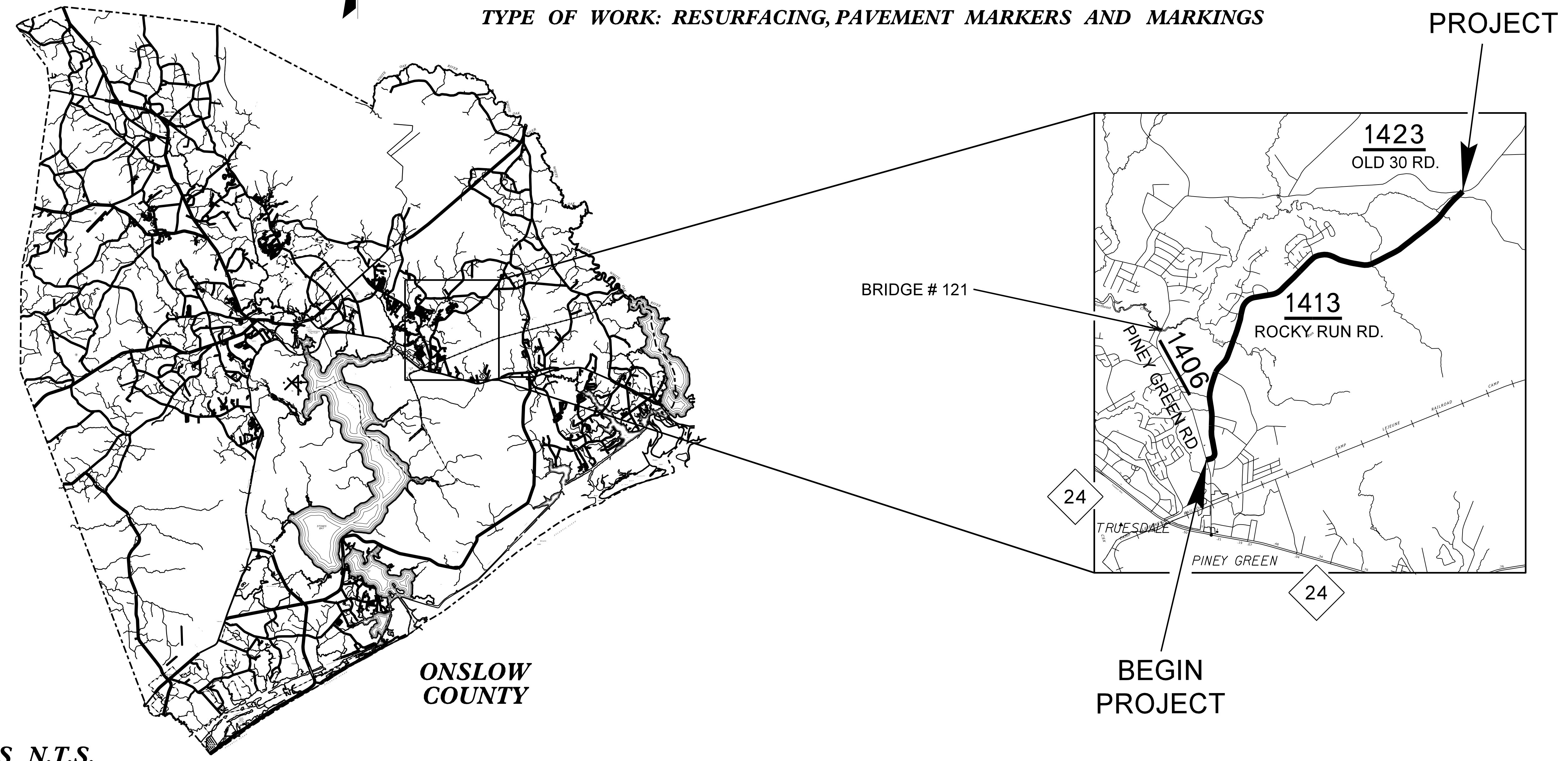
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**ONSLOW COUNTY**

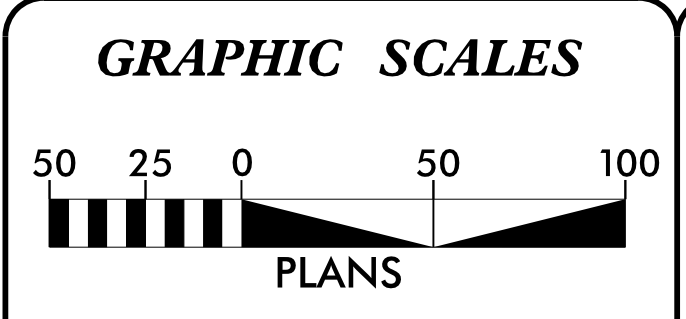
LOCATION: SR 1413 (ROCKY RUN RD.) FROM SR 1406 (PINEY GREEN RD.)  
TO SR 1423 (OLD 30 RD.)

TYPE OF WORK: RESURFACING, PAVEMENT MARKERS AND MARKINGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5601GK	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50138.3.194			



MAPS N.T.S.



**PROJECT LENGTH =**  
**4.701 MI.**

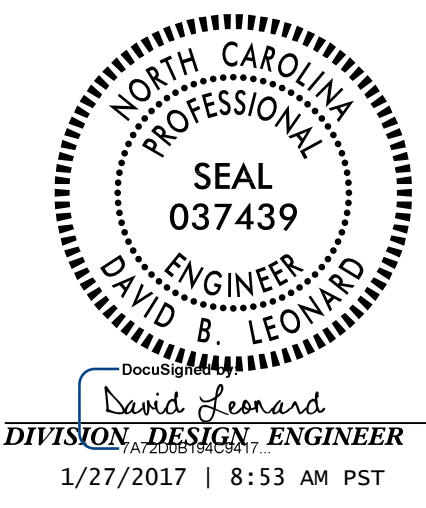
Prepared In the Office of:  
**DIVISION OF HIGHWAYS**  
5501 BARBADOS BLVD., CASTLE HAYNE, NC, 28429

2012 STANDARD SPECIFICATIONS

**LETTING DATE:**  
FEBRUARY 02, 2017

**DAVID B. LEONARD, PE**  
PROJECT ENGINEER

**JONATHAN W. MITCHELL**  
PROJECT DESIGN TECHNICIAN



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

GENERAL NOTES:

2012 SPECIFICATIONS  
EFFECTIVE: 01-17-12  
REVISED: 07/30/12

SIDE ROADS:

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.

2012 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, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

DIVISION 6 - ASPHALT BASES AND PAVEMENTS  
654.01 Pavement Repairs

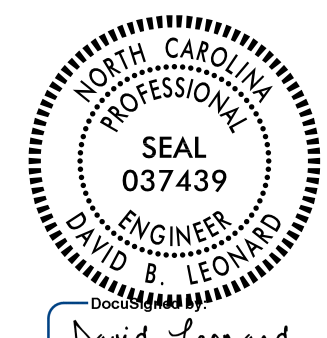
- DIVISION 11 - TRAFFIC CONTROL
- 1101.01 Work Zone Advance Warning Signs for Facilities 55 MPH
- 1101.02 Temporary Lane Closures
- 1101.04 Temporary Shoulder closures
- 1101.11 Traffic Control Design Tables
- 1110.01 Stationary Work Zone Signs
- 1110.02 Portable Work Zone Signs
- 1130.01 Drum
- 1145.01 Barricades
- 1165.01 Work Vehicle Lighting Systems and TMA Delineation
- 1180.01 Skinny Drums

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE-  
POWER-JONES ONSLOW-BENNIE MELTON-910.577.6375  
PHONE-CENTURY LINK-ANTHONY MELILI-910.577.9359  
CABLE TV-TIME WARNER-JOHN ROBERT-910.619.0192  
WATER & SEWAGE-ONWASO-KAREN FERGASON-910.937.7546

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET, ALIGNMENT AND SHEET LAYOUT
1-A	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
2 THRU 2-G	TYPICAL SECTION & PROJECT DETAILS
3A-1 THRU 3A-2	SUMMARY OF QUANTITIES

PROJECT REFERENCE NO. <b>W-5601CK</b>	SHEET NO. <b>1-A</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER



05/03/15

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# CONVENTIONAL PLAN SHEET SYMBOLS

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	-----x-----
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	WLB
Existing Endangered Animal Boundary	EAB
Existing Endangered Plant Boundary	EPB

### BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	⊗
Foundation	□
Area Outline	□
Cemetery	□ †
Building	□
School	□
Church	□
Dam	□

### HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	JS
Buffer Zone 1	BZ 1
Buffer Zone 2	BZ 2
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	*
Proposed Lateral, Tail, Head Ditch	← FLOW
False Sump	▽

### RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

### RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	○ R W
Proposed Right of Way Line with Iron Pin and Cap Marker	○ R W ▲
Proposed Right of Way Line with Concrete or Granite Marker	○ R W ▲
Existing Control of Access	○ C A
Proposed Control of Access	○ C A
Existing Easement Line	E
Proposed Temporary Construction Easement	E
Proposed Temporary Drainage Easement	TDE
Proposed Permanent Drainage Easement	PDE
Proposed Permanent Drainage / Utility Easement	DUE
Proposed Permanent Utility Easement	PUE
Proposed Temporary Utility Easement	TUE
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	C
Proposed Slope Stakes Fill	F
Proposed Wheel Chair Ramp	WCR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊗
Pavement Removal	XXXX

### VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----
Orchard	○
Vineyard	□ Vineyard

### EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	S

### UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	⊕
H-Frame Pole	●
Recorded U/G Power Line	P
Designated U/G Power Line (S.U.E.*)	P

### TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	⊕
Recorded U/G Telephone Cable	T
Designated U/G Telephone Cable (S.U.E.*)	T
Recorded U/G Telephone Conduit	TC
Designated U/G Telephone Conduit (S.U.E.*)	TC
Recorded U/G Fiber Optics Cable	T FO
Designated U/G Fiber Optics Cable (S.U.E.*)	T FO

### WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	W
Designated U/G Water Line (S.U.E.*)	W
Above Ground Water Line	A/G Water

### TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊗
U/G TV Cable Hand Hole	⊕
Recorded U/G TV Cable	TV
Designated U/G TV Cable (S.U.E.*)	TV
Recorded U/G Fiber Optic Cable	TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	TV FO

### GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded U/G Gas Line	G
Designated U/G Gas Line (S.U.E.*)	G
Above Ground Gas Line	A/G Gas

### SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	SS
Above Ground Sanitary Sewer	A/G Sanitary Sewer
Recorded SS Forced Main Line	FSS
Designated SS Forced Main Line (S.U.E.*)	FSS

### MISCELLANEOUS:

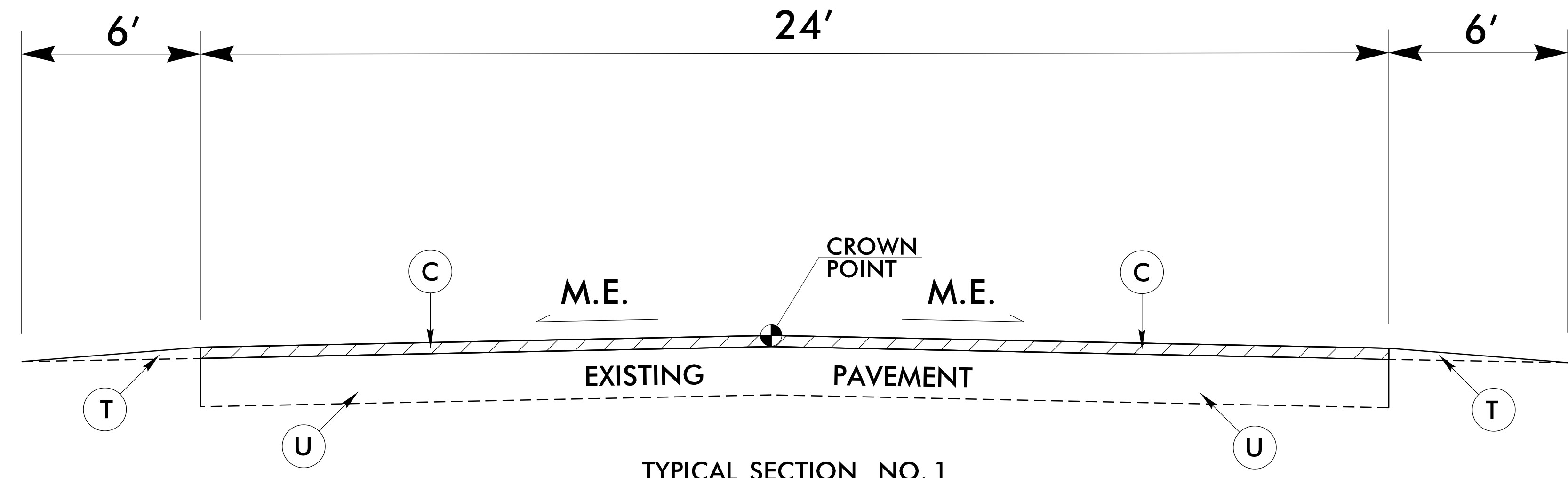
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	UTIL
U/G Tank; Water, Gas, Oil	□
A/G Tank; Water, Gas, Oil	□
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

9/17/13

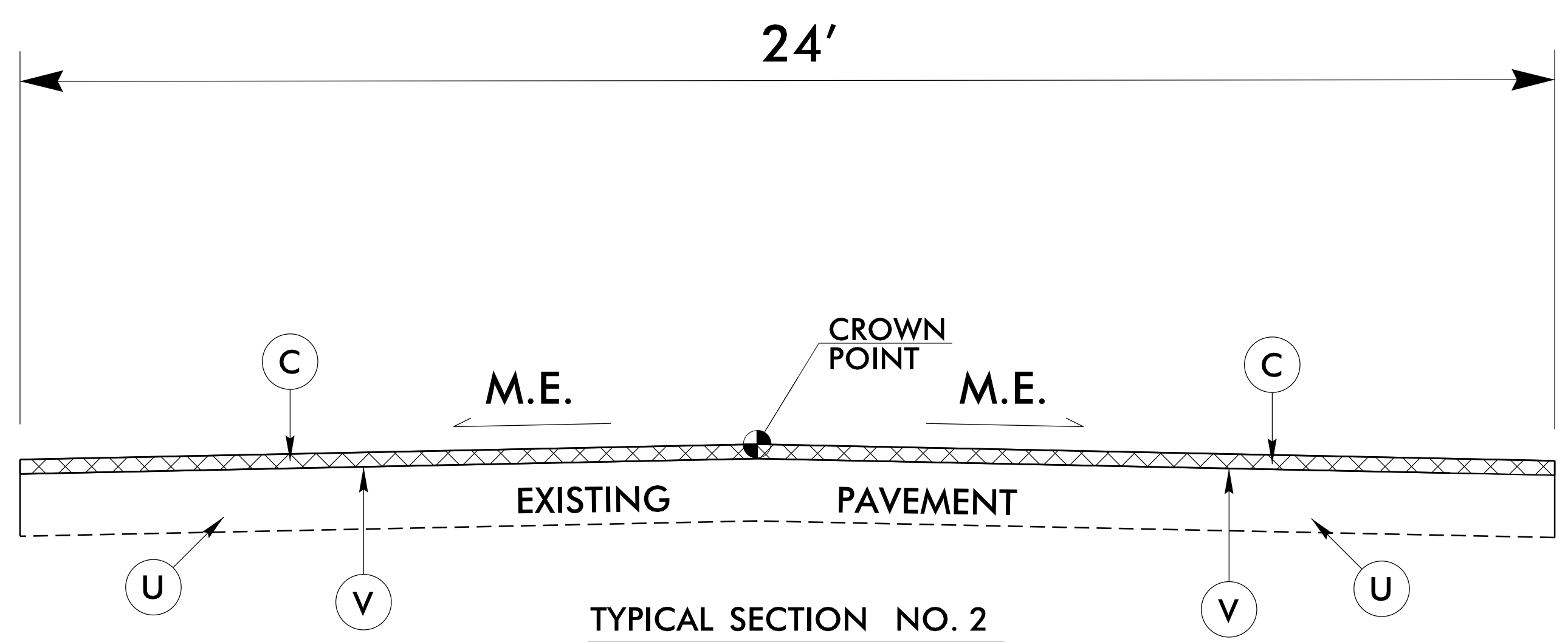
25 JAN 2017 5:50 C:\DW\WORK\5601GK\_50138.1.194\_Rocky Run Rd\ROADWAY\Proj\Plan\_Sheets\W-5601GK\_50138.1.194\_SR\_1413 (Rocky Run Rd).PSH\_2.dgn  
 5601GK\_50138.1.194\_Rocky Run Rd\ROADWAY\Proj\Plan\_Sheets\W-5601GK\_50138.1.194\_SR\_1413 (Rocky Run Rd).PSH\_2.dgn

PROJECT REFERENCE NO. W-5601GK	SHEET NO. 2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Designed by: <i>David Leonard</i>	

1/27/2017 | 8:53 AM PST



**TYPICAL SECTION NO. 1**  
 SR 1413 (ROCKY RUN RD.)  
 MP 0.000 TO MP 1.218  
 MP 1.298 TO MP 3.235  
 MP 3.355 TO MP 4.701



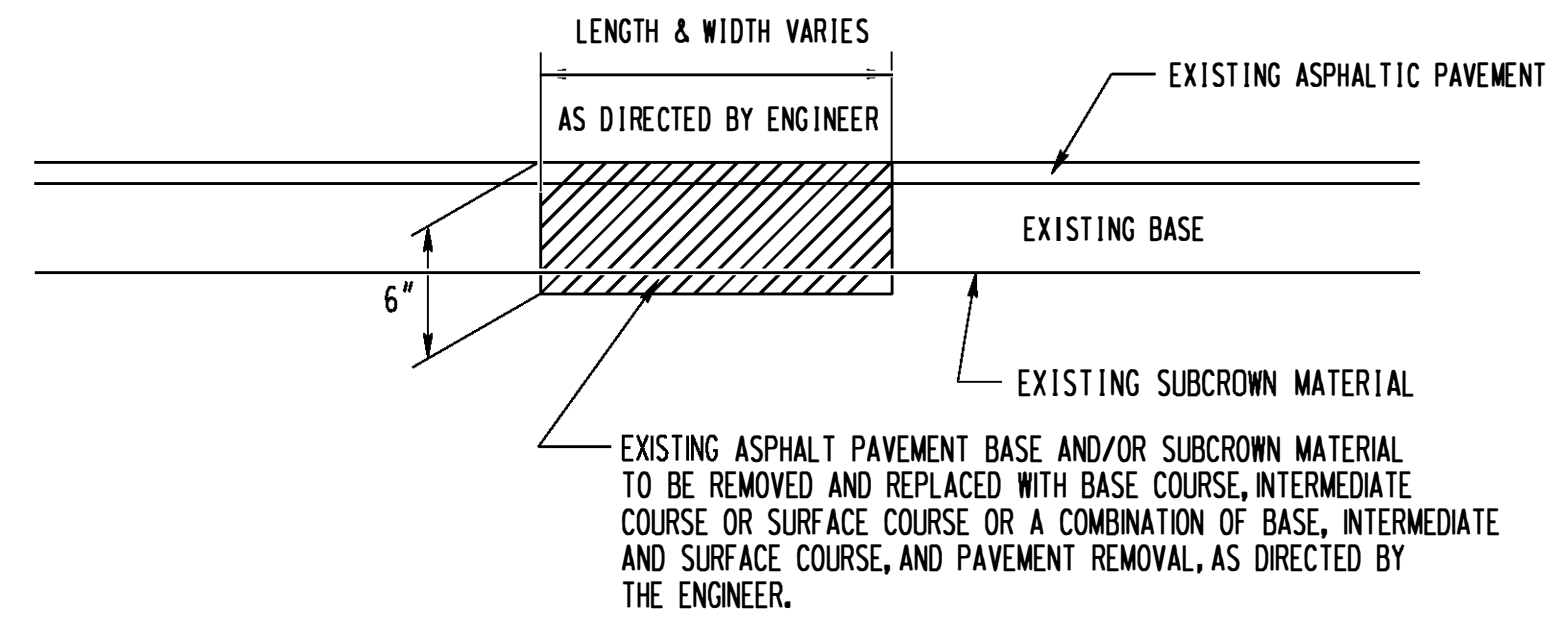
**TYPICAL SECTION NO. 2**  
 SR 1413 (ROCKY RUN RD.)  
 MP 1.218 TO MP 1.298  
 MP 3.235 TO MP 3.355

PAVEMENT SCHEDULE	
C	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING BITUMINOUS PAVEMENT. 1 1/2" DEPTH.

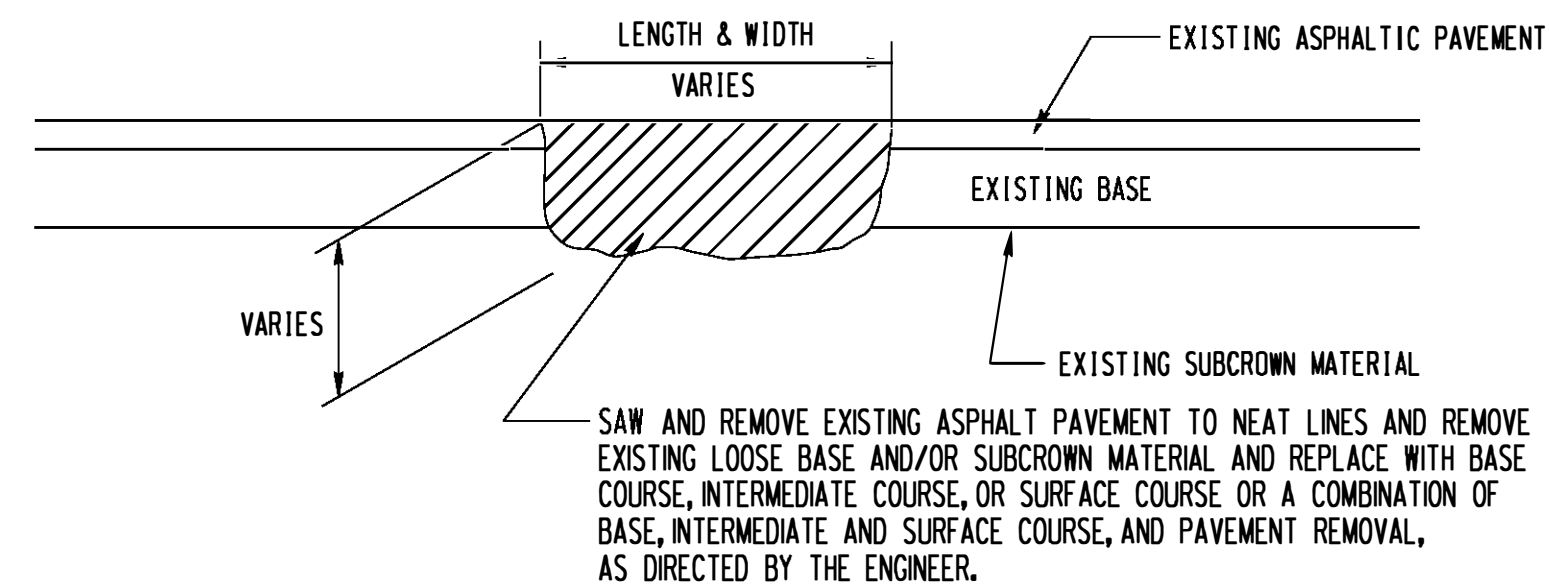
**NOT TO SCALE**

NOTE: PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE NOTED.

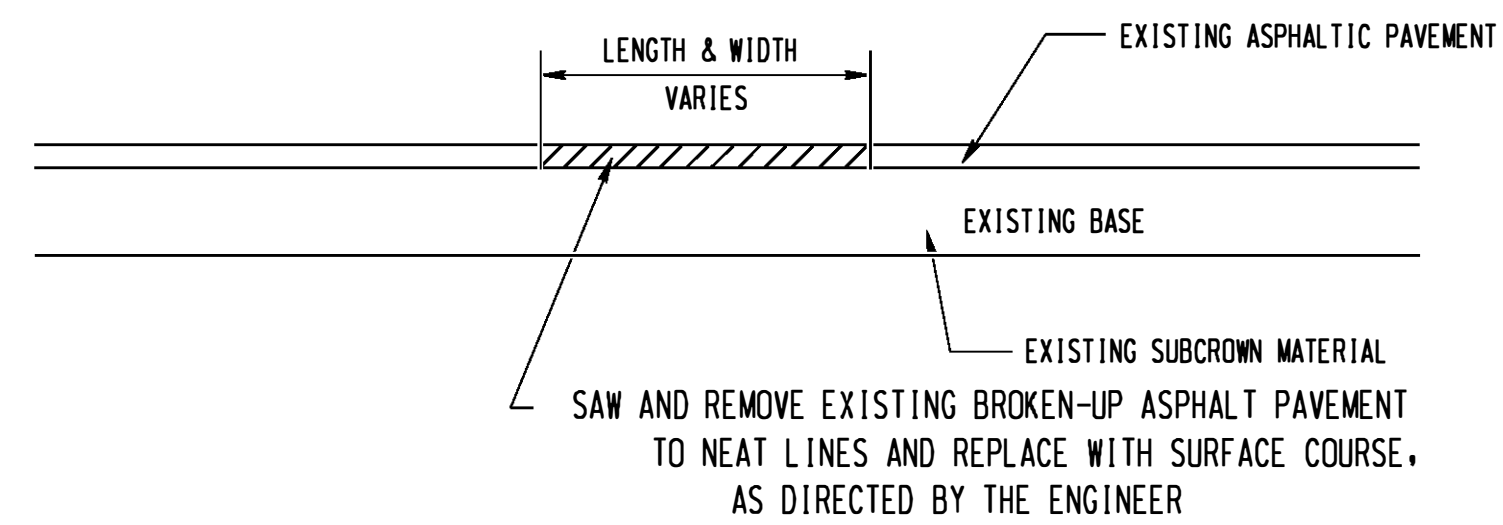
DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



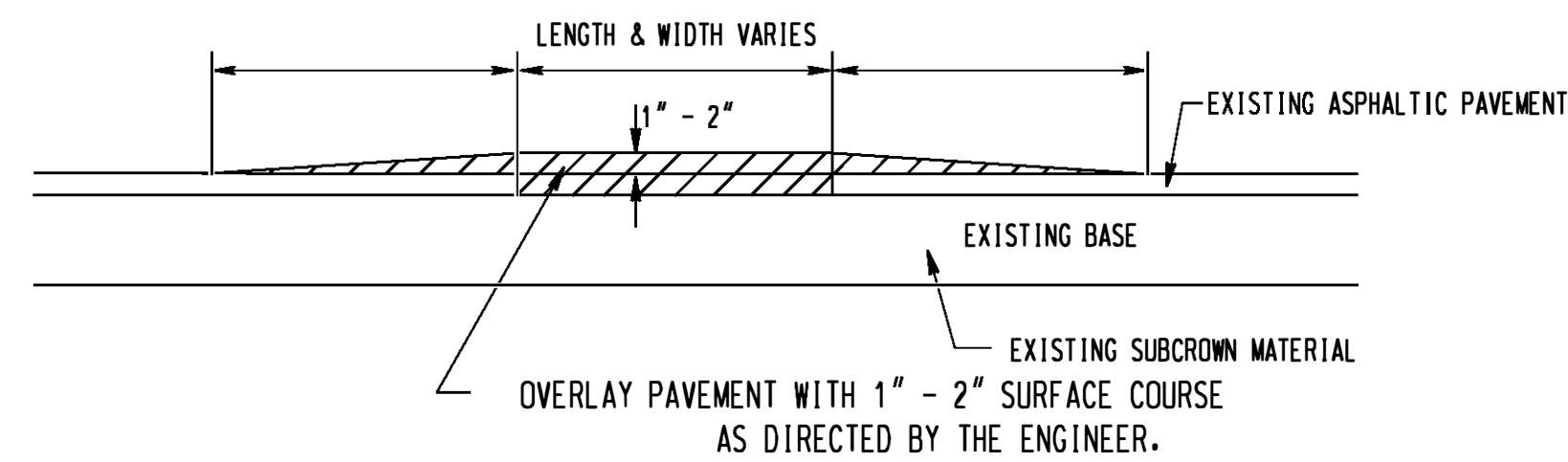
DETAIL NO. 1



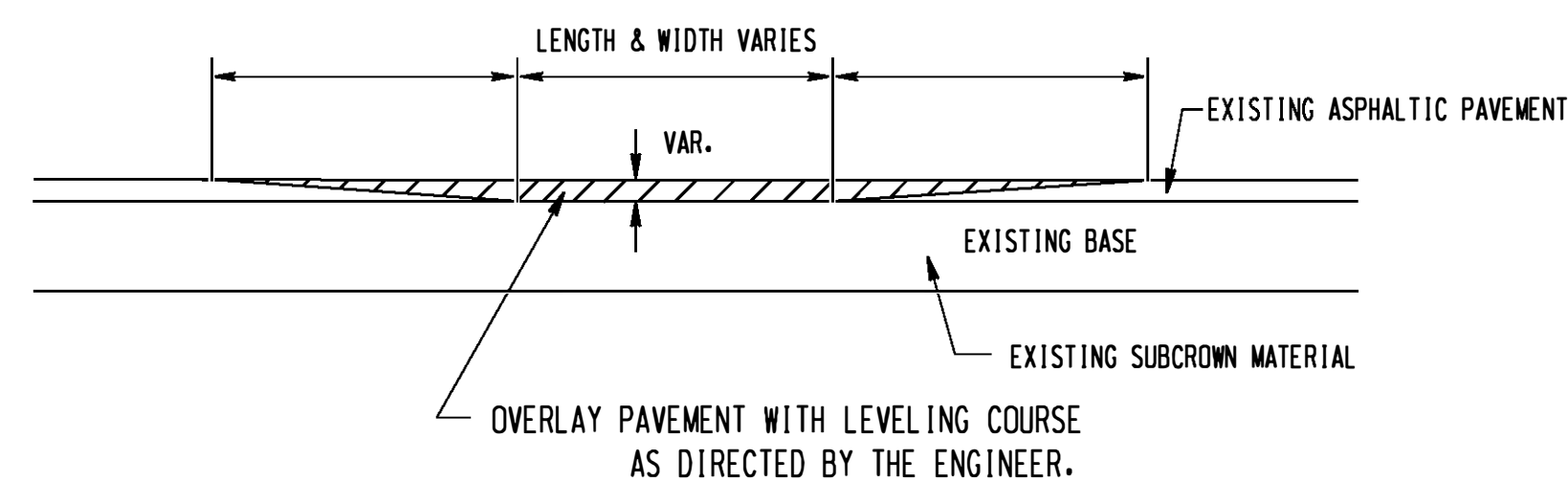
DETAIL NO. 2



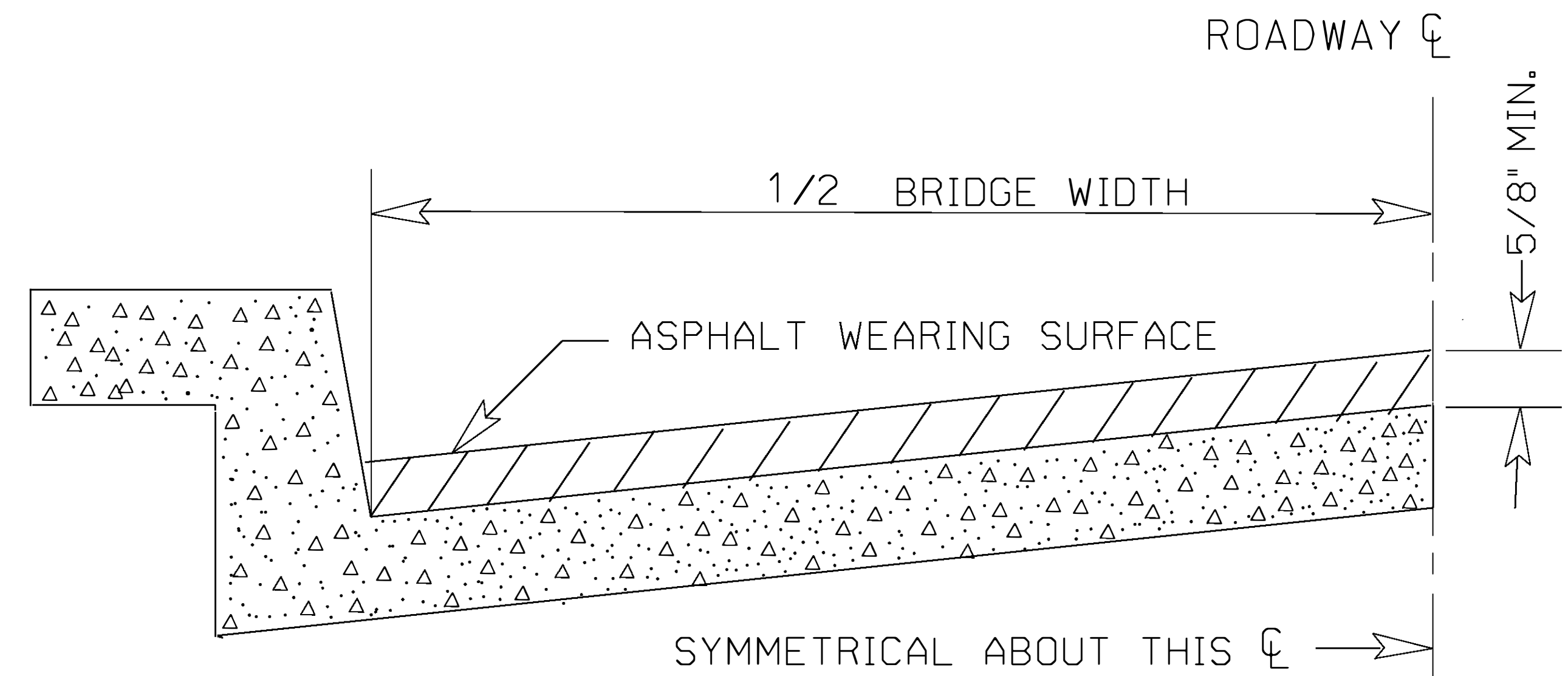
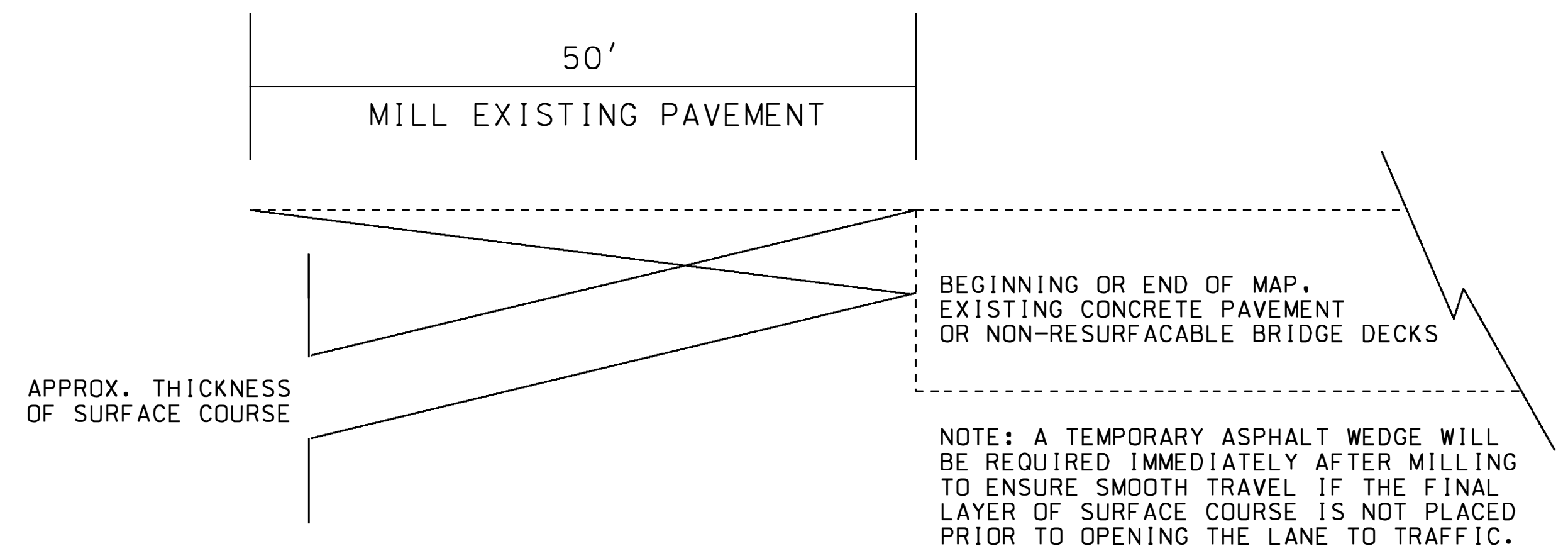
DETAIL NO. 3



DETAIL NO. 4



DETAIL NO. 5



BRIDGE HALF TYPICAL SECTION

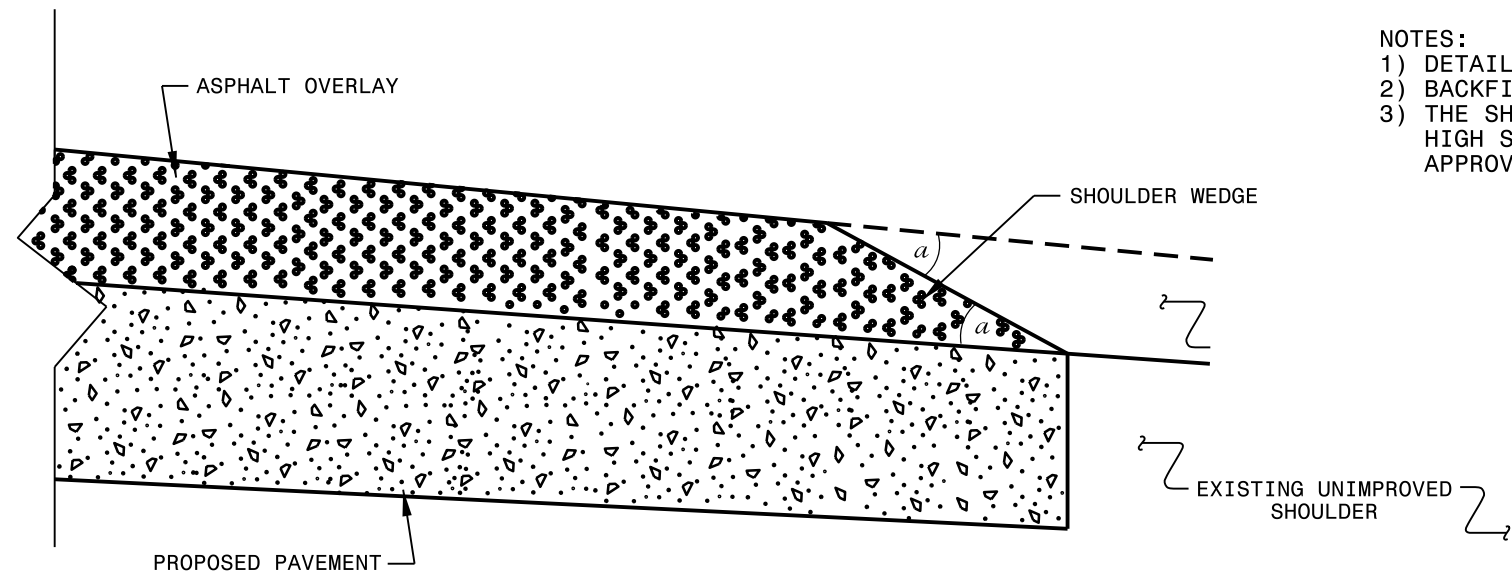
FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

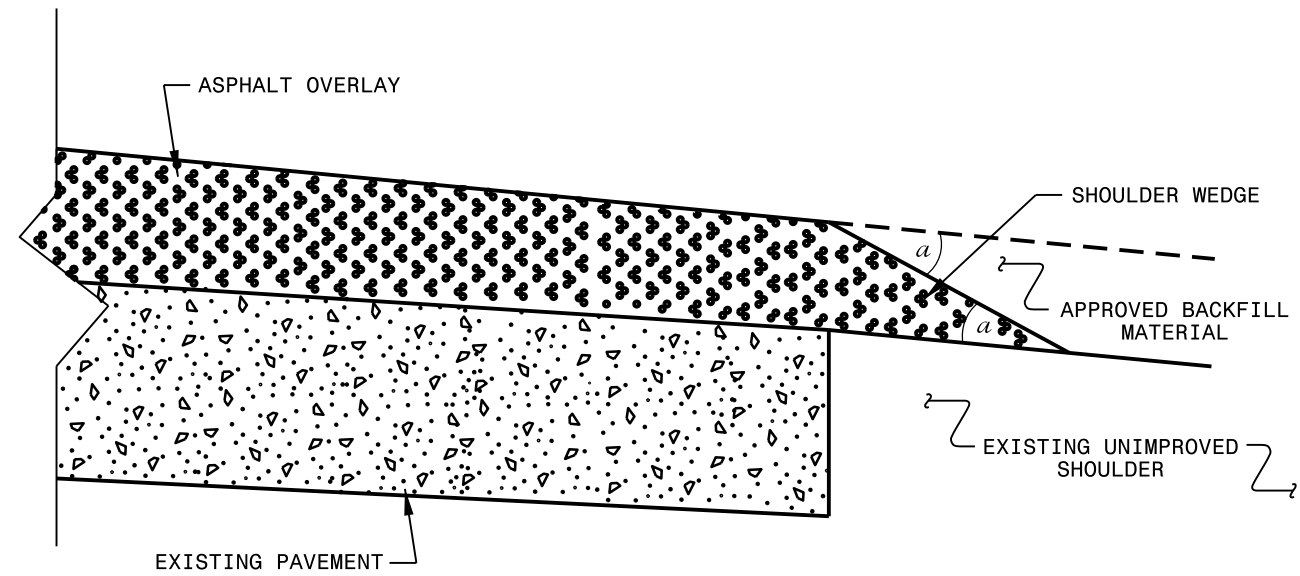
REVISIONS

04-NOV-2016 17:06 C:\PROJ\01\NEW\PROJECTS\5001CB\_40924\1.F78.S1.dwg Point Loop MUP\ROADWAY\Proj\Plan\_Sheets\3CR.PE\_PSH\_2A.dgn  
 \$\$\$\$\$\$  
 8/6/2016

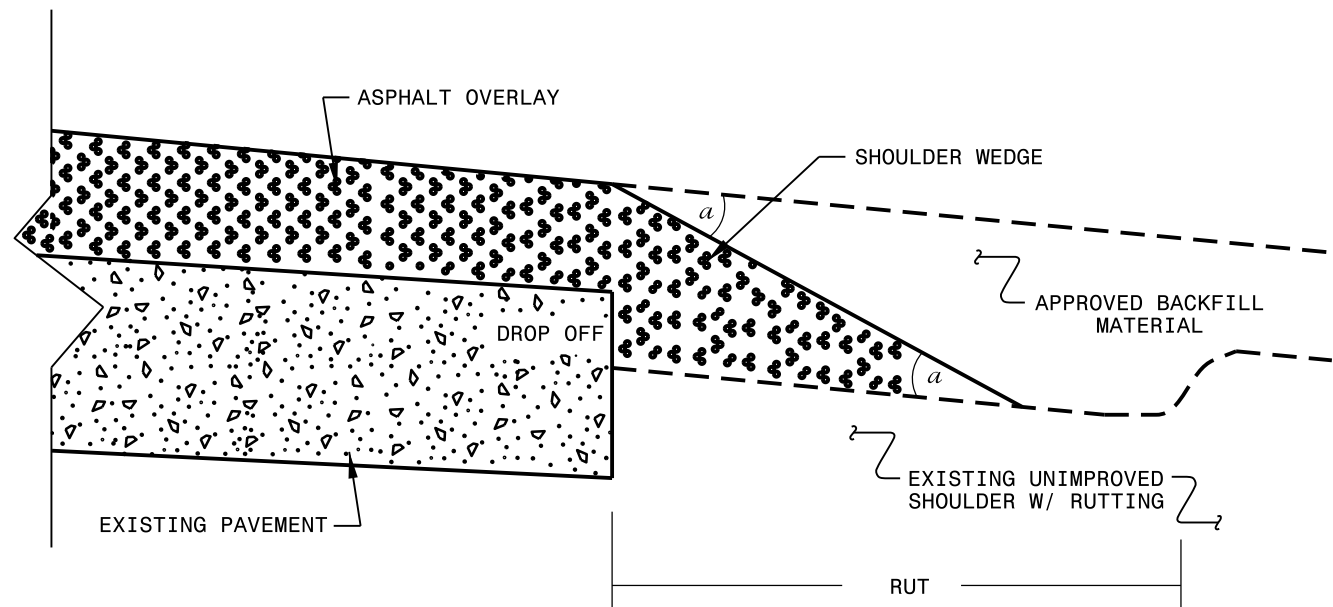
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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



**SHOULDER WEDGE DETAIL**  
(Resurfacing Projects w/ NO Widening)



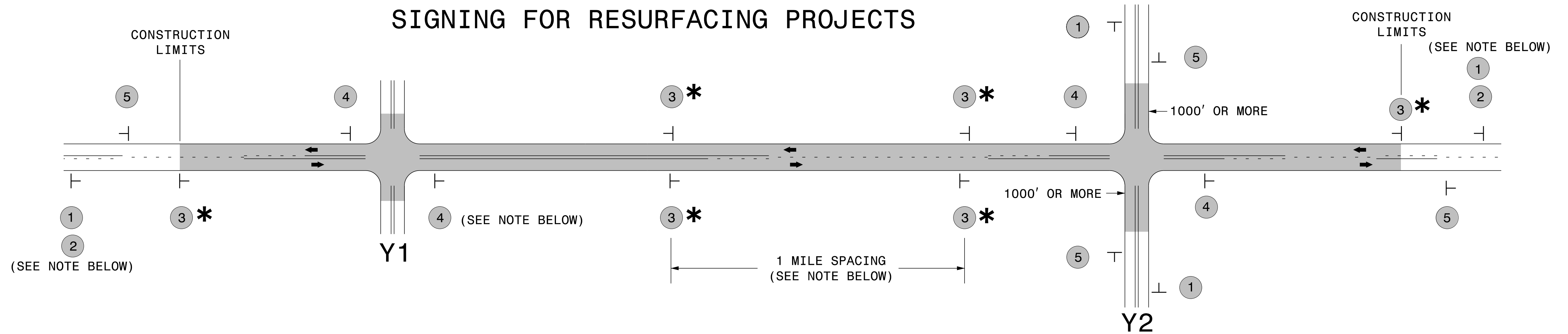
**SHOULDER WEDGE DETAIL**  
(Resurfacing Adjacent to  
Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>			
Office 919-707-6950		FAX 919-250-4119	
<b>SHOULDER WEDGE DETAILS</b>			
ORIGINAL BY: T.SPELL	DATE: 7-19-11		
MODIFIED BY:	DATE: 2/2/16		
CHECKED BY:	DATE:		
FILE SPEC.: susr/details/stand/shoulderwedgedetail.dgn			

SYSTEMS DESIGN  
USER NAME

## SIGNING FOR RESURFACING PROJECTS



LEGEND	
	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

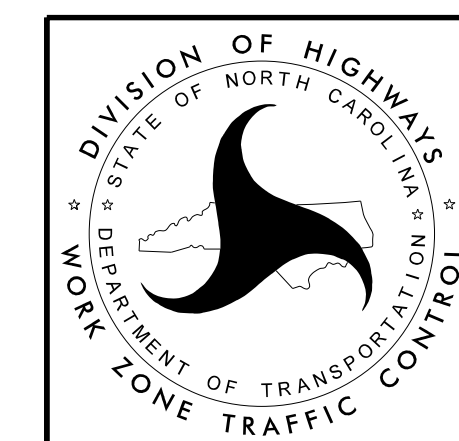
### MAINLINE (-L-) SIGNING

### -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION		
1 2		<p style="text-align: center;"><b>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</b></p> <ol style="list-style-type: none"> <li>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <p style="text-align: center;">WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>W20-1 48" X 48"</p> </div> <div style="text-align: center;"> <p>W20-7 A 48" X 48"</p> </div> </div> <p style="text-align: center;">PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p>
3 *		
4		
5		

### \* SIGNING FOR ASPHALT SURFACE TREATMENTS (ONLY)

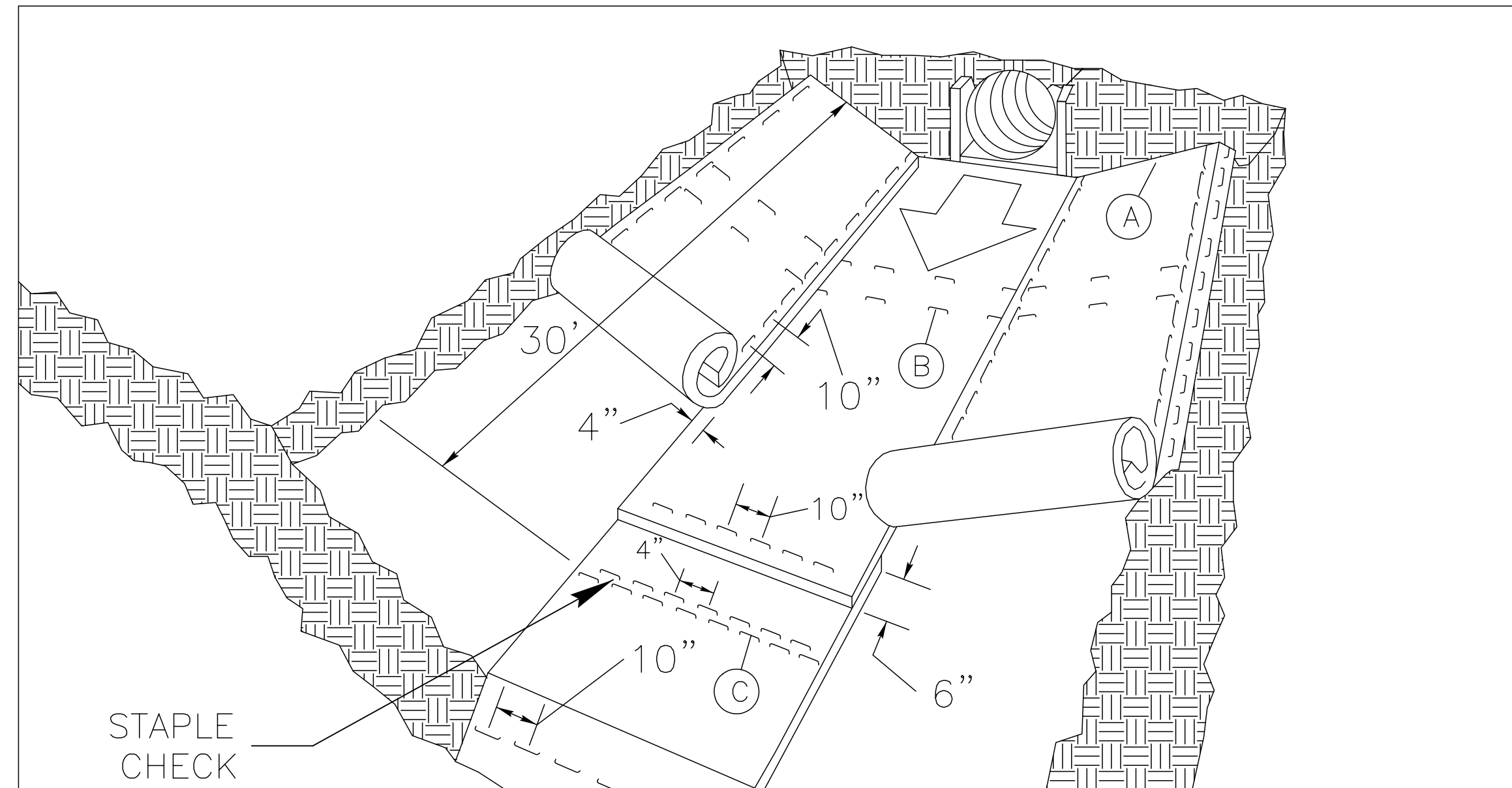
SUBSTITUTE LOW/SOFT SHOULDER SIGNS BY ALTERNATING THE FOLLOWING TWO SIGNS:  
STARTING WITH "UNMARKED PAVEMENT AHEAD" (SP 06026) FOLLOWED BY "LOOSE GRAVEL" (W8-7).



**RESURFACING  
ADVANCE WARNING SIGNS  
FOR  
RURAL AND SUBURBAN  
2 LANE ROADWAYS**

PROJECT REFERENCE NO. W-5601GK	SHEET NO. 2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# MATTING INSTALLATION DETAIL



**MATTING IN DITCHES**

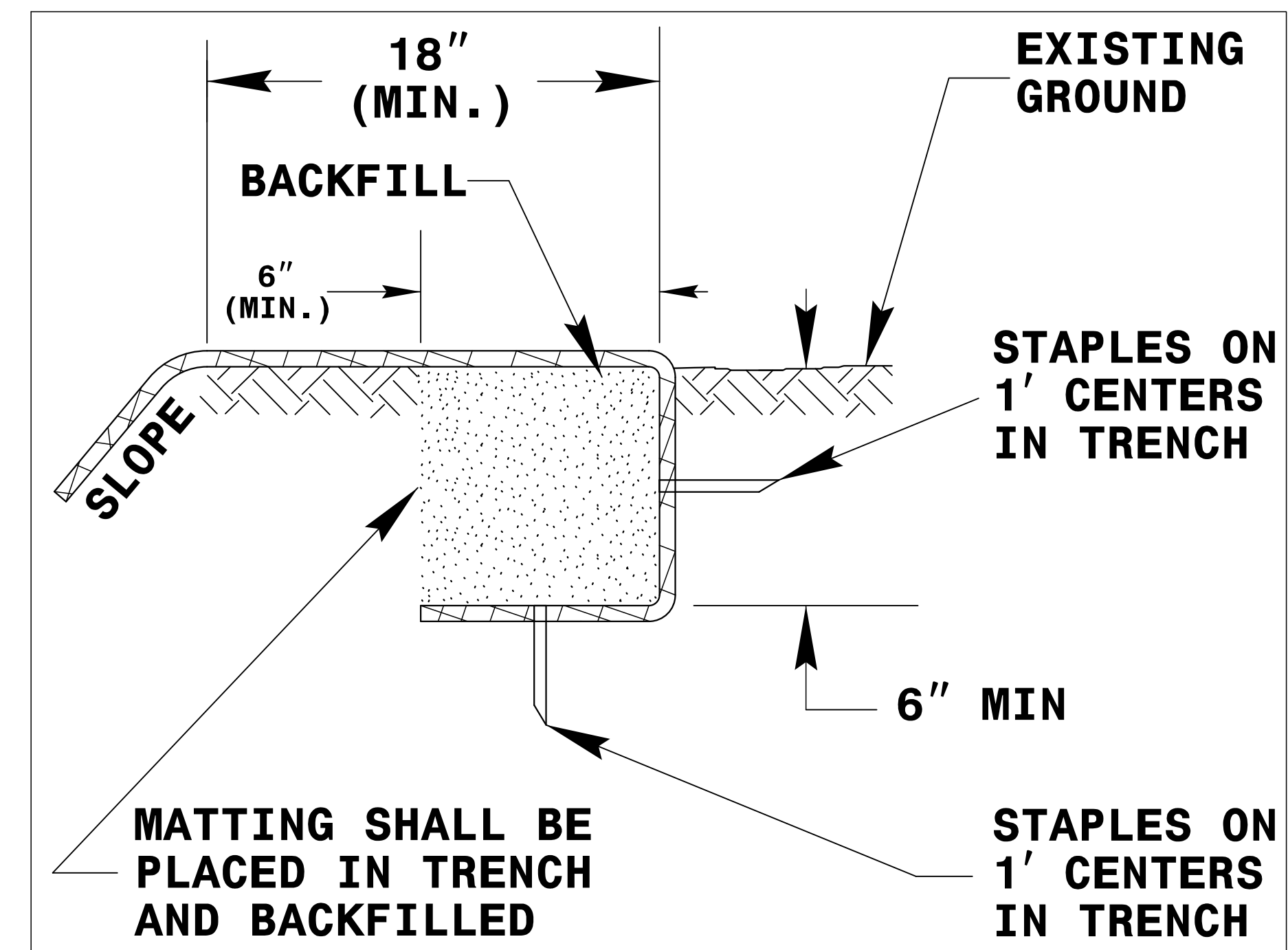
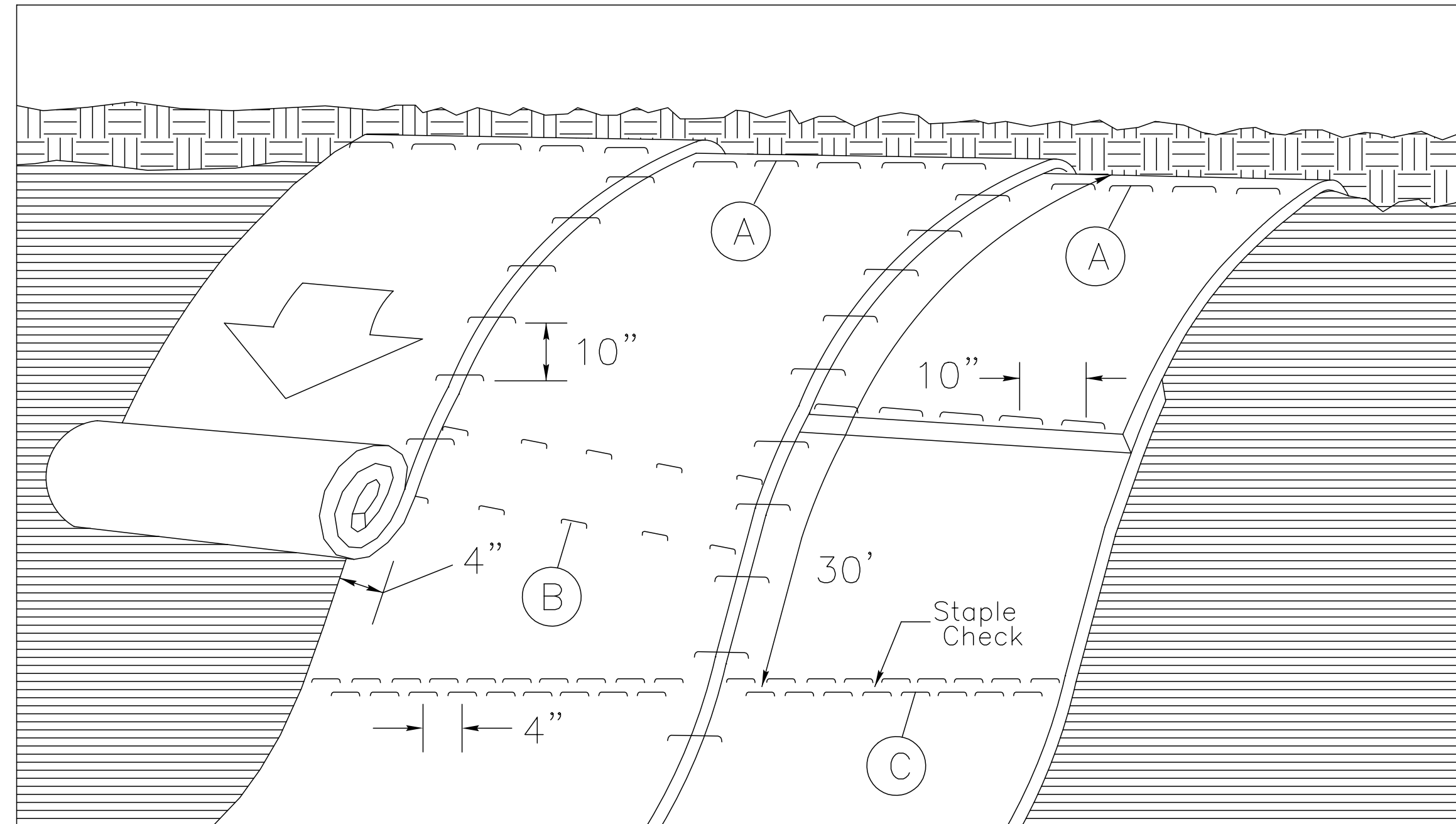


DIAGRAM (A)



**MATTING ON SLOPES**

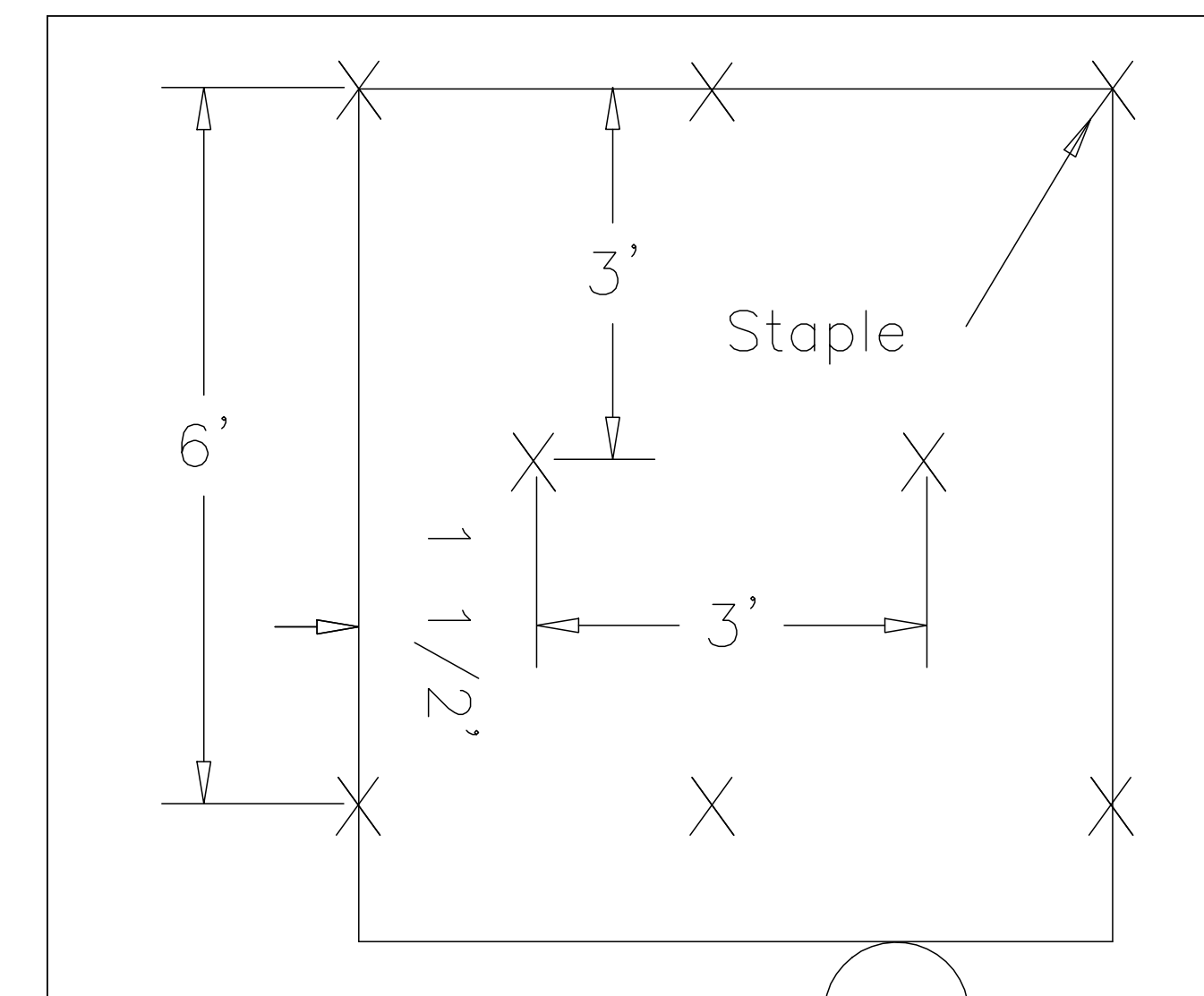


DIAGRAM (B)

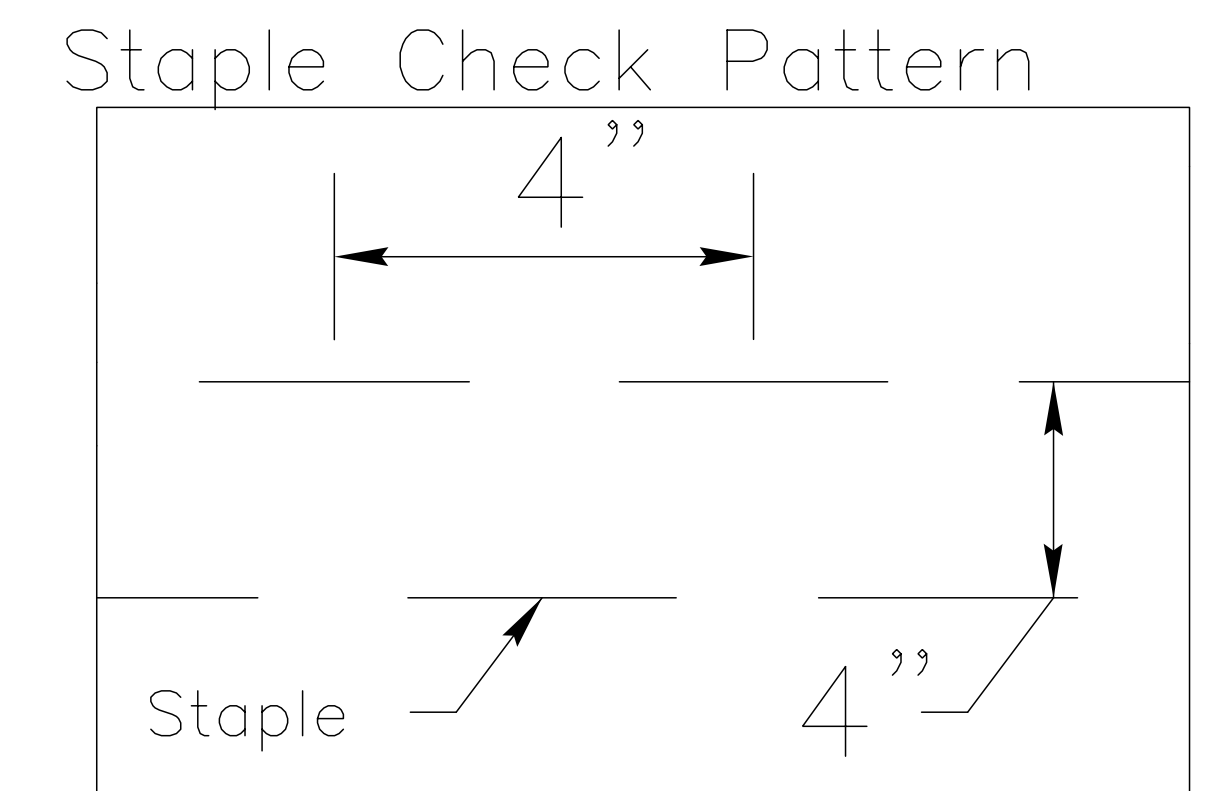


DIAGRAM (C)

**NOTES:**

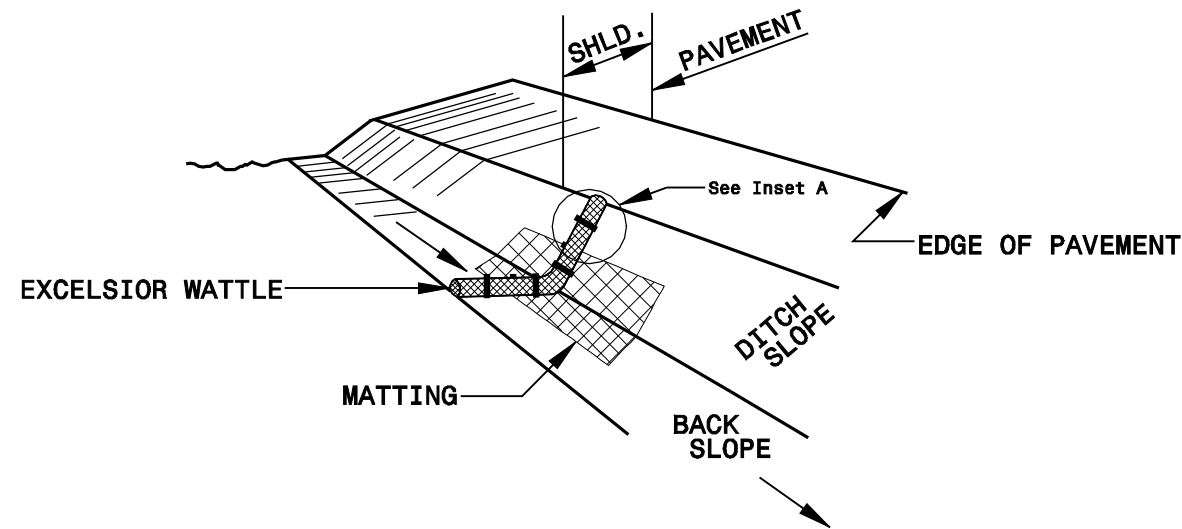
THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.  
 STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

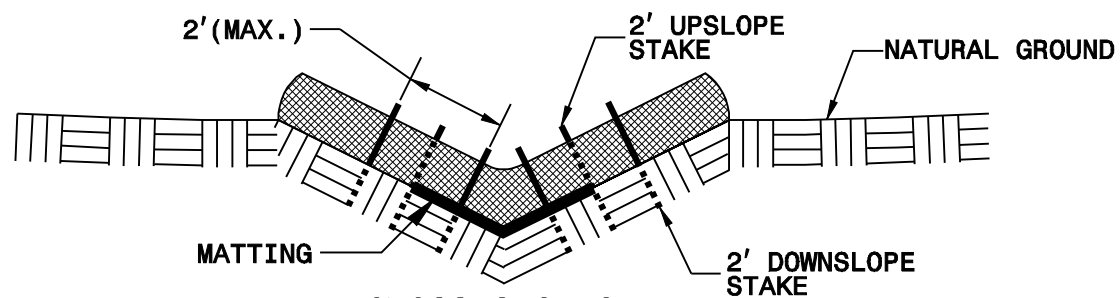


PROJECT REFERENCE NO. W-5601GK	SHEET NO. 2E
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

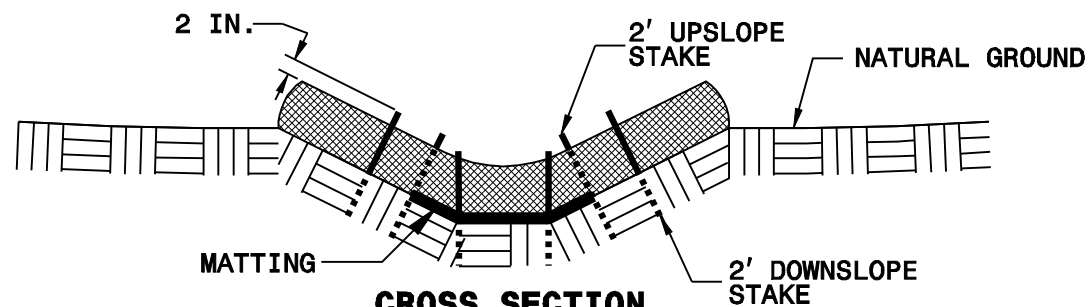
# WATTLE DETAIL



**ISOMETRIC VIEW**



**CROSS SECTION  
VEE DITCH**



**CROSS SECTION  
TRAPEZOIDAL DITCH**

**NOTES:**

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

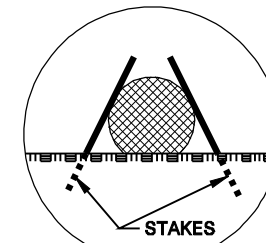
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

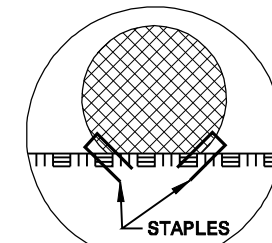
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

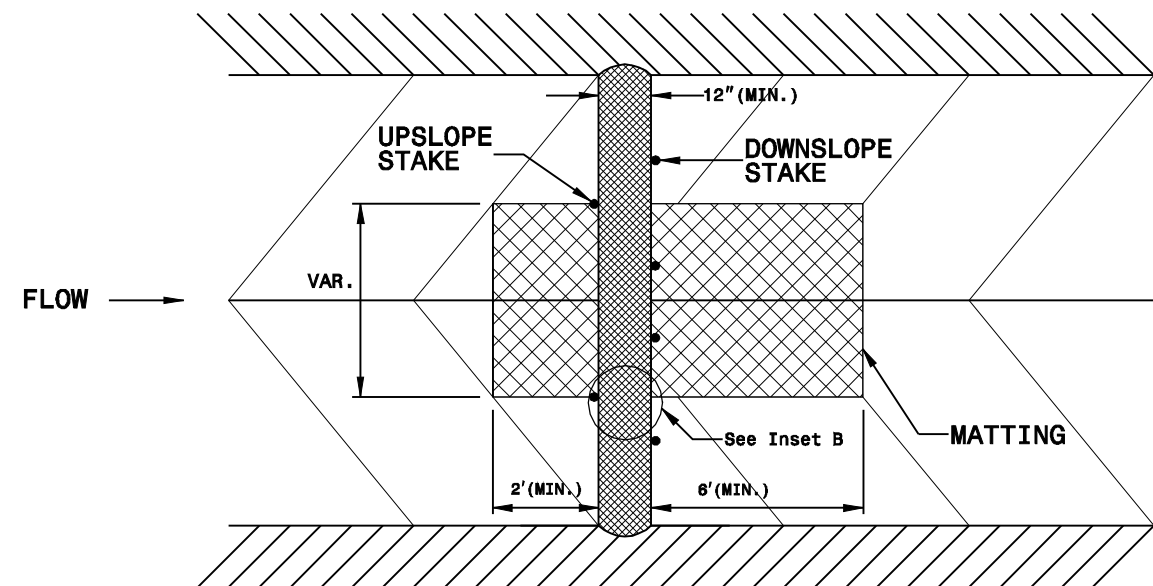
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



**INSET A**



**INSET B**



**TOP VIEW**

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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# ***SOIL STABILIZATION TIMEFRAMES***

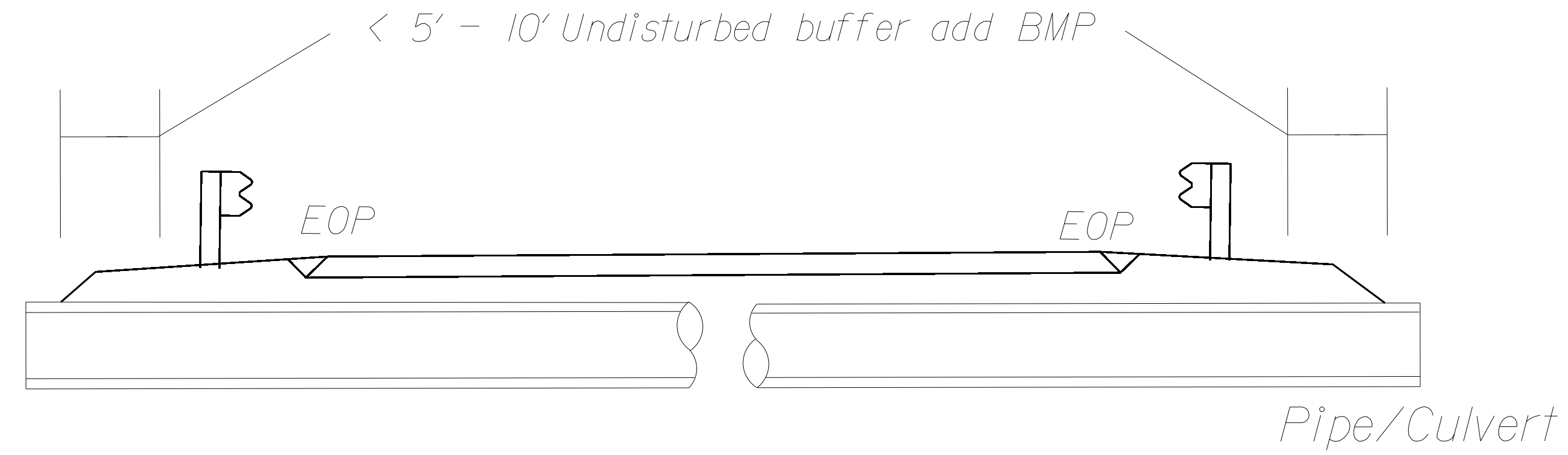
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

8/17/99  
 70 JULY 2016 13:08  
 C:\JULY 2016\13:08\DWG\W-5203L-45333.1.12.OLD FILLSTONE 2FT WIDEN\ROADWAY\POJ\W5203L-Plan Sheets\W5203L-D03\_EC\_02E.dgn  
 \$\$\$SERVATF\$\$\$

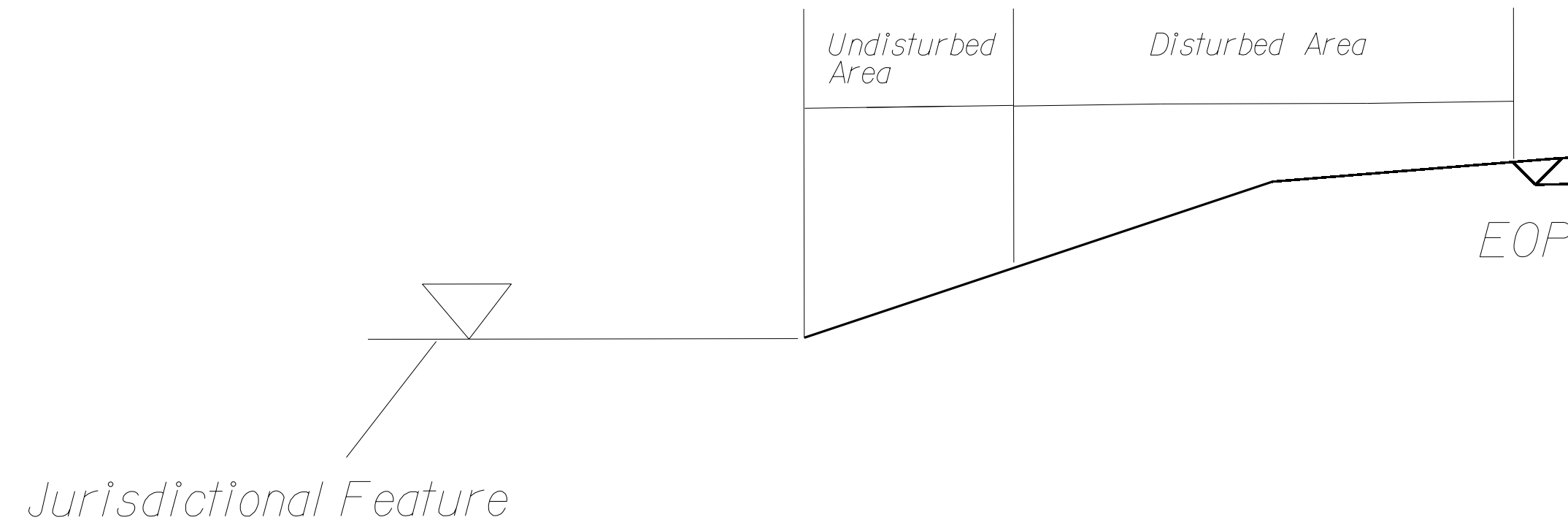
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

# EROSION CONTROL DETAIL

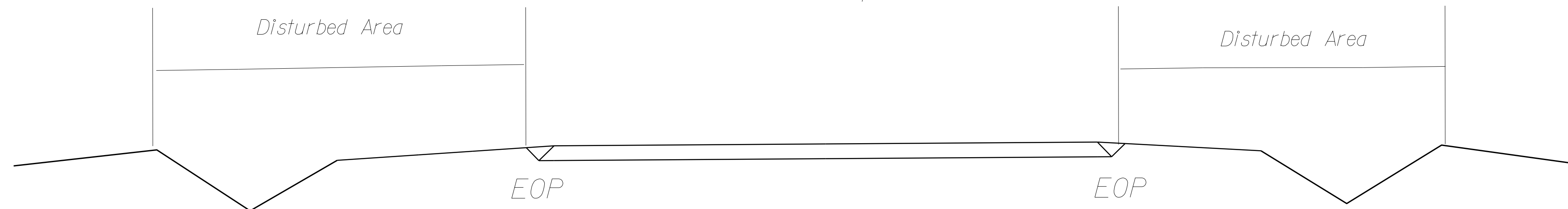


< 5' - 10' Undisturbed buffer from jurisdictional feature add BMP

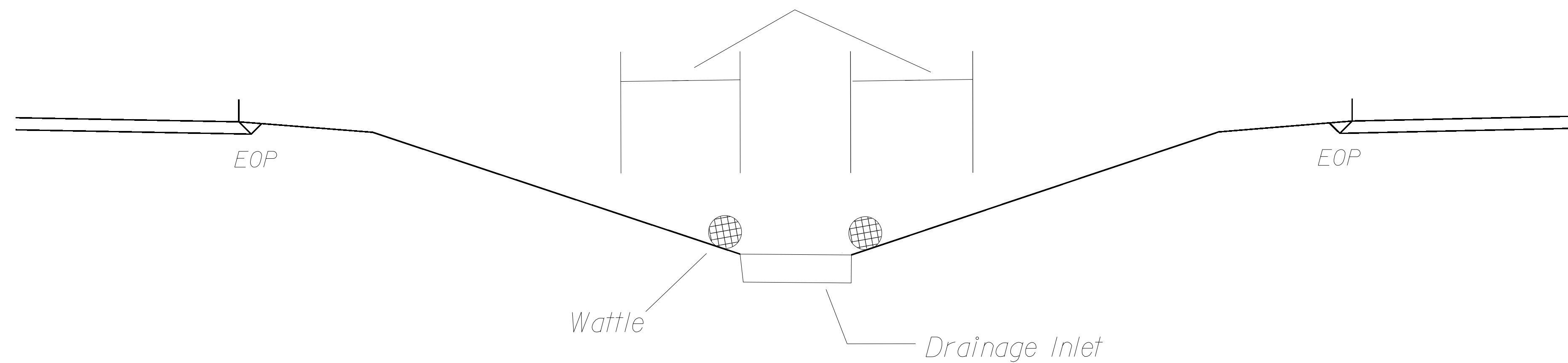


< 5' - 10' Undisturbed buffer from ditchline, add BMP

Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed



< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

PROJECT NO.	SHEET NO.	TOTAL NO.
W-5601GK	3A-1	

### SUMMARY OF QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	BORROW EXC. CY	INC. STONE BASE TONS	SHOULDER RECONST. SMI	INC. MILLING SY	SURFACE COURSE, S9.5B TONS	LEVELING COURSE, S9.5B TONS	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT (MILL) GENERIC ITEM TON	PATCHING EXISTING PAVEMENT (FULL DEPTH) GENERIC ITEM TON	TEMP. SILT FENCE LF	STONE FOR EC CLASS B TON	SEDIMENT CONTROL STONE TON	TEMP. MULCHING ACR	SAFETY FENCE LF	MATTING FOR EROSION CONTROL SY	1/4" HARDWARE CLOTH LF	WATTLE LF	SEED & MULCHING AC	SEED FOR REPAIR SEEDING LB	FERTILIZER FOR REPAIR SEEDING TON	RESPONSE FOR EROSION CONTROL EA
50138.1.194	Onslow	1	SR 1413 (ROCKY RUN RD.)	RESURFACING, PAVEMENT MARKERS AND MARKINGS		2		YES	YES	4.701	24	865	500	9.40	840	5,893	25	355	305	25	471	118	118	3.50	200	40	236	80	3.50	236	1.20	5
TOTAL FOR MAP NO. 1										4.701		865	500	9.40	840	5,893	25	355	305	25	471	118	118	3.50	200	40	236	80	3.50	236	1.20	5
TOTAL FOR PROJ NO. 50138.1.194										4.701		865	500	9.40	840	5,893	25	355	305	25	471	118	118	3.50	200	40	236	80	3.50	236	1.20	5
GRAND TOTAL										4.701		865	500	9.40	840	5,893	25	355	305	25	471	118	118	3.50	200	40	236	80	3.50	236	1.20	5



