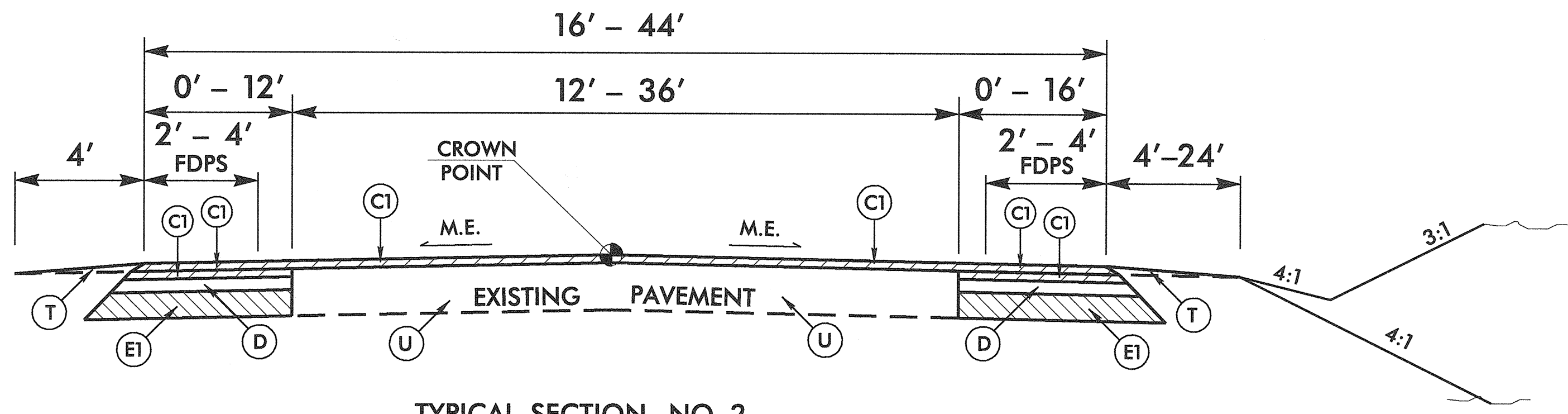
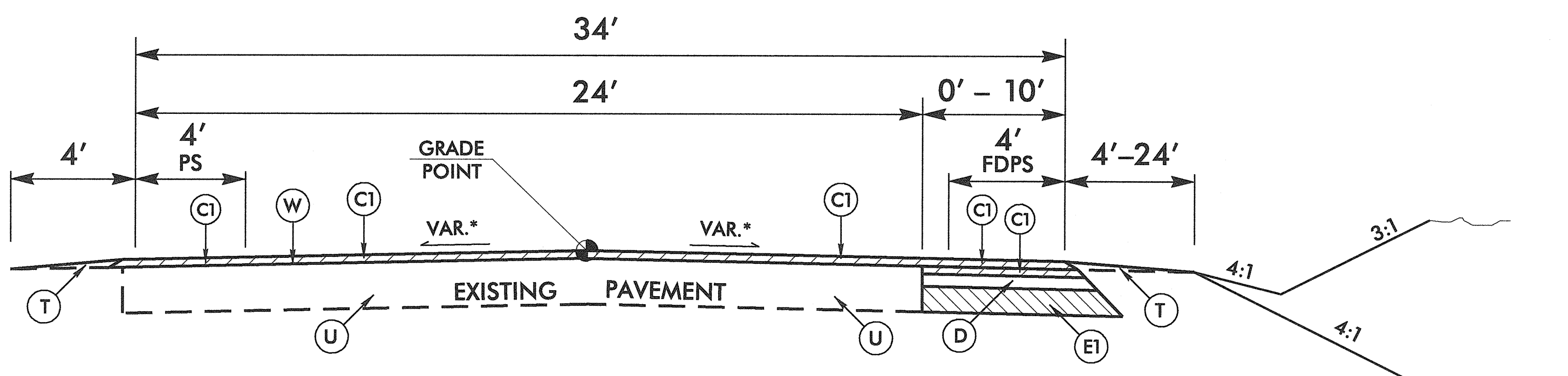


**TYPICAL SECTION NO. 1**  
(USE FOR TEMPORARY PAVEMENT, SEE SHEETS TMP-5 - TMP-8)

- L1- STA. 13+40 TO STA. 14+50
- L1- STA. 15+92 TO STA. 16+98
- L2- STA. 34+94 TO STA. 38+77
- L2- STA. 38+97 TO STA. 42+90
- L- STA. 44+07 TO STA. 46+47



**TYPICAL SECTION NO. 2**  
-L- STA. 30+67.48 TO STA. 33+00.00  
-L2- STA. 33+72.77 TO STA. 42+81.21  
-Y5- STA. 13+30.00 TO STA. 15+75.00



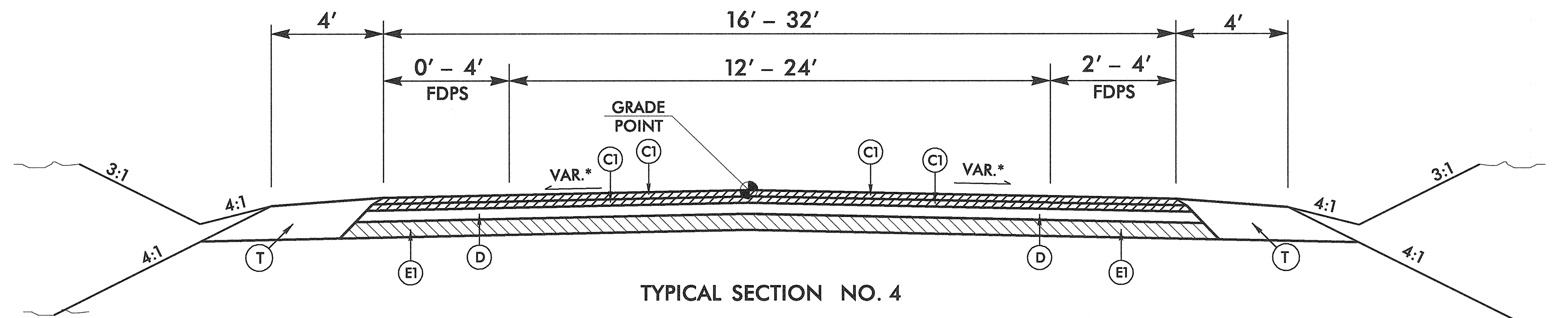
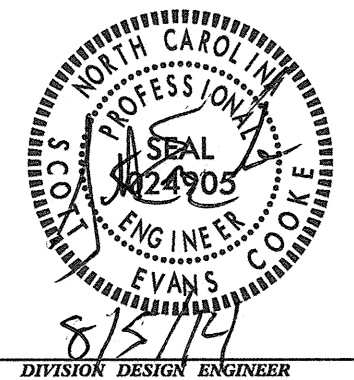
**TYPICAL SECTION NO. 3**  
-L- STA. 33+00.00 TO 40+71.09  
SEE WEDGING DETAIL "A", SHEET 2-C

PAVEMENT SCHEDULE	
C	PROP. APPROX. 3" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. IN EACH OF TWO LAYERS.
C1	PROP. APPROX. 1½" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD.
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 TO EXCEED 2" IN DEPTH
D	PROP. APPROX. 4" DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
D1	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 2½" OR GREATER THAN 4" IN DEPTH
E	PROP. APPROX. 4" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
E1	PROP. APPROX. 4½" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 513 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" OR GREATER THAN 5½" IN DEPTH
R	PROPOSED CONCRETE 1'-6" CURB & GUTTER
R1	PROPOSED CONCRETE 2'-6" CURB & GUTTER
R2	PROPOSED CONCRETE MONOLITHIC ISLAND (SURFACE MOUNTED)
R3	PROPOSED 12" CONCRETE MOUNTABLE APRON
R4	PROPOSED CONCRETE 8" X 18" CURB
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING ASPHALT, DEPTH VARIES.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1, EXCEPT FINAL SURFACE COURSE. SEE SHOULDER WEDGE DETAIL.  
SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.  
M.E. = MATCH EXISTING

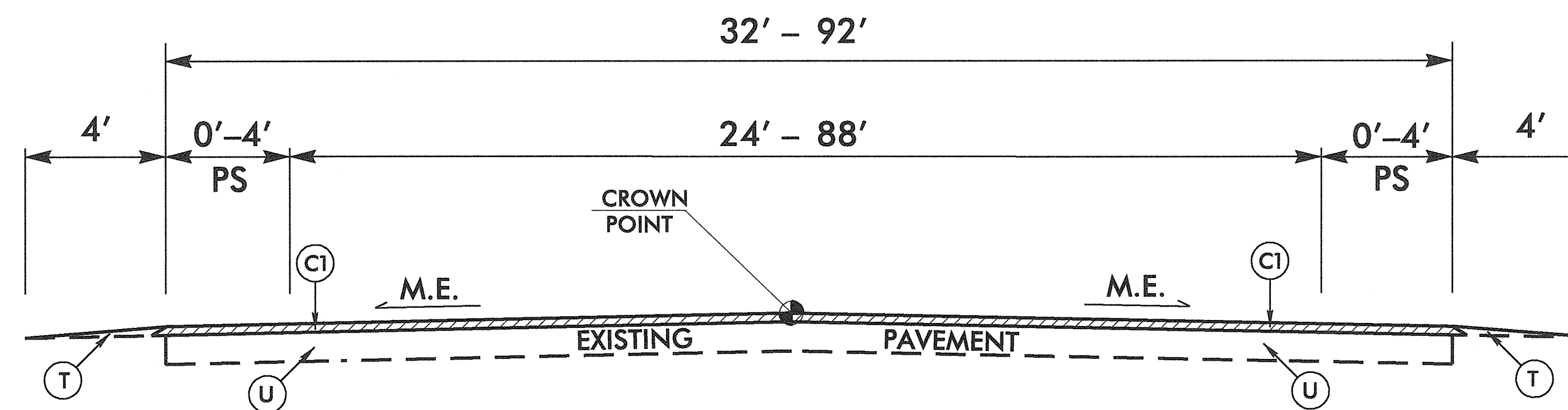
PAVEMENT CROSS SLOPE  
MAY VARY FOR TIE IN.  
\*SEE CROSS SECTIONS.

8/17/99  
REVISIONS  
04-AUG-2014 13:25 NEW\_HANOVER\Castle Hayne R48\_46130\ROADWAY\Proj\PLAN\_SHEETS\W5306\_CHRAB\_Rdy\_tjrp.dgn



**TYPICAL SECTION NO. 4**

- L- STA. 40+71.09 TO 41+40.53
- Y1- STA. 12+00.00 TO STA. 12+69.69
- Y2- STA. 10+00.00 TO STA. 10+18.53
- Y3- STA. 11+10.49 TO STA. 11+62.00
- Y4- STA. 11+10.45 TO STA. 12+10.00
- Y5 STA. 11+24.39 TO STA. 13+30.00
- Y6- STA. 10+33.51 TO STA. 10+47.47



**TYPICAL SECTION NO. 5**

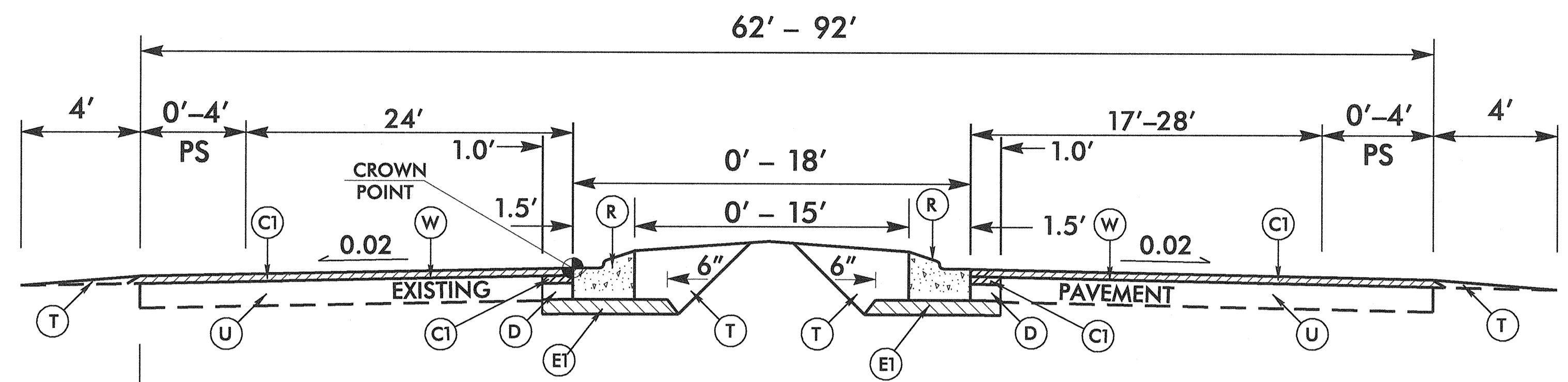
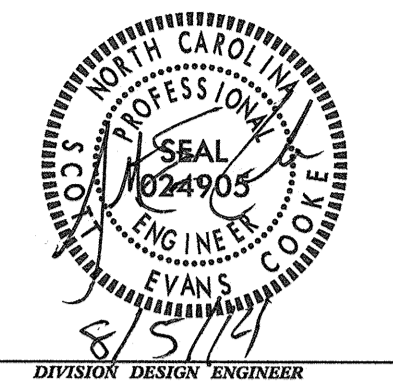
- L- STA. 51+72.51 TO STA. 52+30.74
- L- STA. 55+24.47 TO STA. 58+62.86
- Y1- STA. 10+81.65 TO STA. 12+00.00

PAVEMENT SCHEDULE	
C1	1½" S9.5C
D	4" I19.0C
E1	4½" B25.0C
T	EARTH MATERIAL
U	EXIST. PAVEMENT

NOTE: PAVEMENT EDGE SLOPES ARE 1:1, EXCEPT FINAL SURFACE COURSE. SEE SHOULDER WEDGE DETAIL.  
SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.  
M.E. = MATCH EXISTING

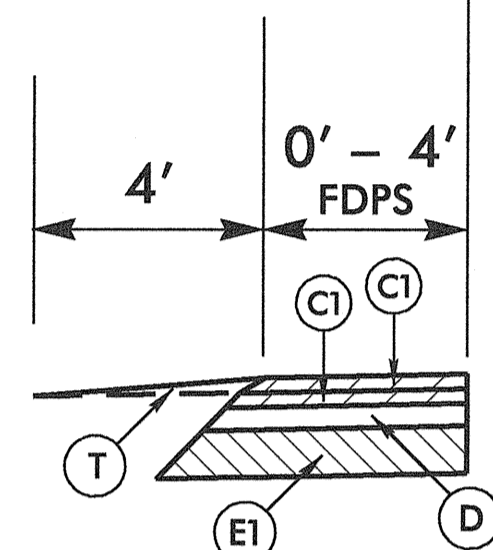
PAVEMENT CROSS SLOPE  
MAY VARY FOR TIE IN.  
\*SEE CROSS SECTIONS.

8/17/99  
 REVISIONS  
 04-AUG-2014 13:25  
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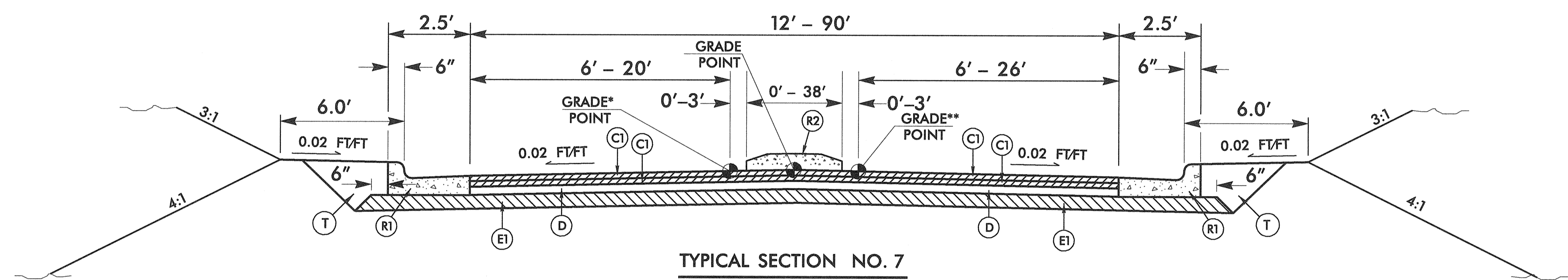


**TYPICAL SECTION NO. 6**

-L- STA. 52+30.74 TO STA. 55+24.47  
SEE WEDGING DETAIL "B", SHEET 2-C



-L- STA. 52+59.68 TO STA. 54+76.13



**TYPICAL SECTION NO. 7**

- Y1- STA. 12+69.69 TO STA. 14+02.25
- \*-Y1A-, \*\*-Y1B- (SEE DETAIL SHEET 2-E)
- Y2- STA. 10+18.53 TO 12+27.89
- \*-Y2A-, \*\*-Y2B- (SEE DETAIL SHEET 2-E)
- Y3- STA. 10+52.73 TO 11+10.49
- Y4- STA. 10+60.55 TO 11+10.45
- Y5- STA. 10+40.00 TO 11+24.39
- Y6- STA. 10+47.47 TO 11+26.41
- \*-Y6A-, \*\*-Y6B- (SEE DETAIL SHEET 2-E)

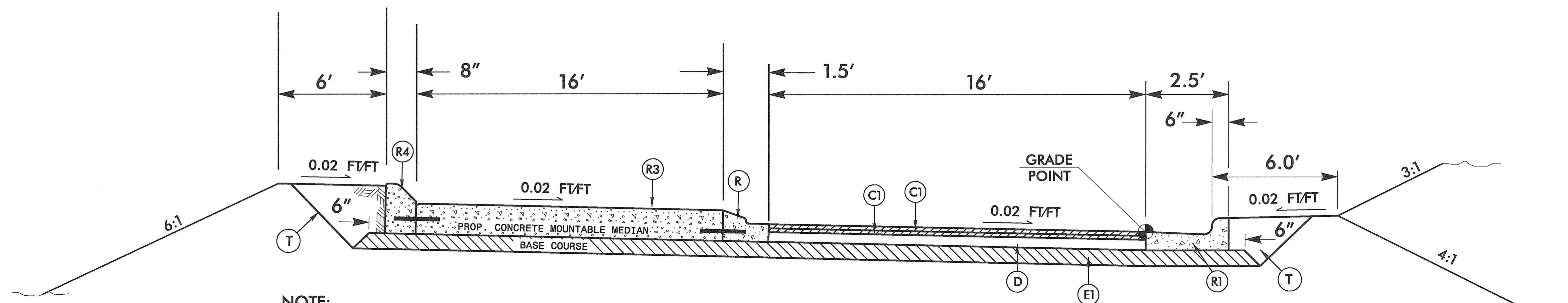
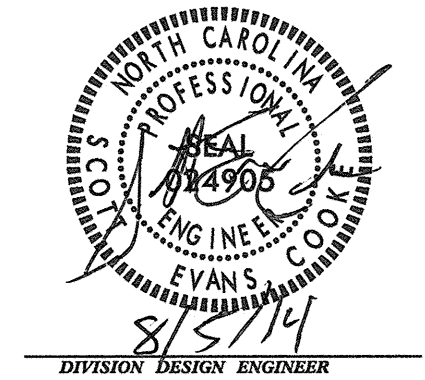
PAVEMENT SCHEDULE	
C1	1½" S9.5C
D	4" I19.0C
E1	4½" B25.0C
T	EARTH MATERIAL
R	1' - 6" C&G
R1	2' - 6" C&G
R2	CONC. MONOLITHIC ISLAND
U	EXIST. PAVEMENT
W	WEDGING

NOTE: PAVEMENT EDGE SLOPES ARE 1:1, EXCEPT FINAL SURFACE COURSE. SEE SHOULDER WEDGE DETAIL.  
SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.  
M.E. = MATCH EXISTING

PAVEMENT CROSS SLOPE  
MAY VARY FOR TIE IN.  
SEE CROSS SECTIONS.

REVISIONS

04-AUG-2014 13:25 NEW HANDOVER\Castile Hayne RAB\_46130\ROADWAY\Pro\PLAN\_SHEETS\W5306\_CHRAB\_Rdu\_tjrp.dgn  
 8/17/99

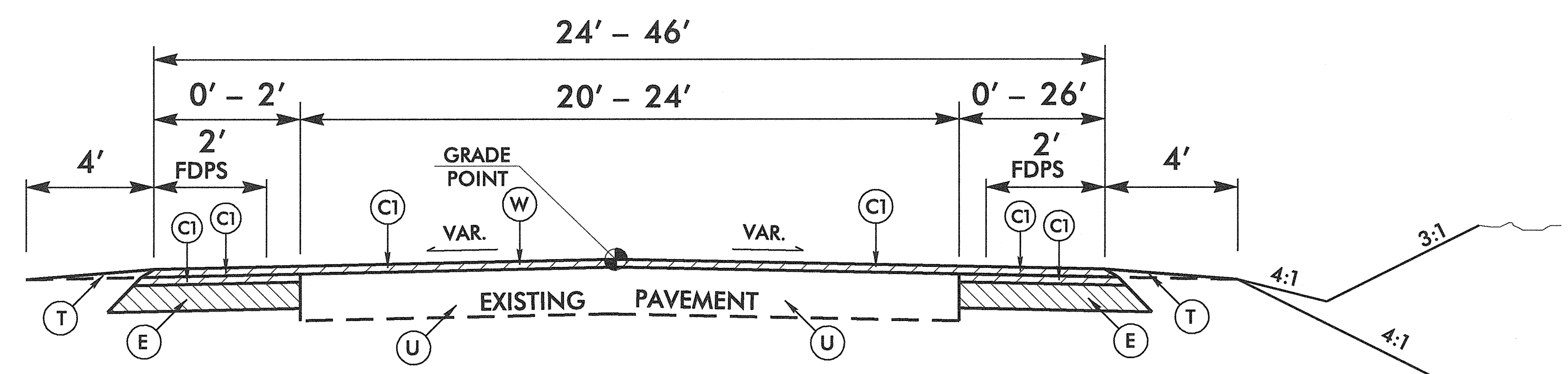


NOTE:  
 1. PLACE 18" LONG #8 BARS AT 12" CENTERS BEGINNING 6" FROM LONGITUDINAL JOINT.  
 2. PLACE 14" LONG #4 "J" BARS AT 36" CENTERS AT ALL LONGITUDINAL SLAB/CURB JOINTS.

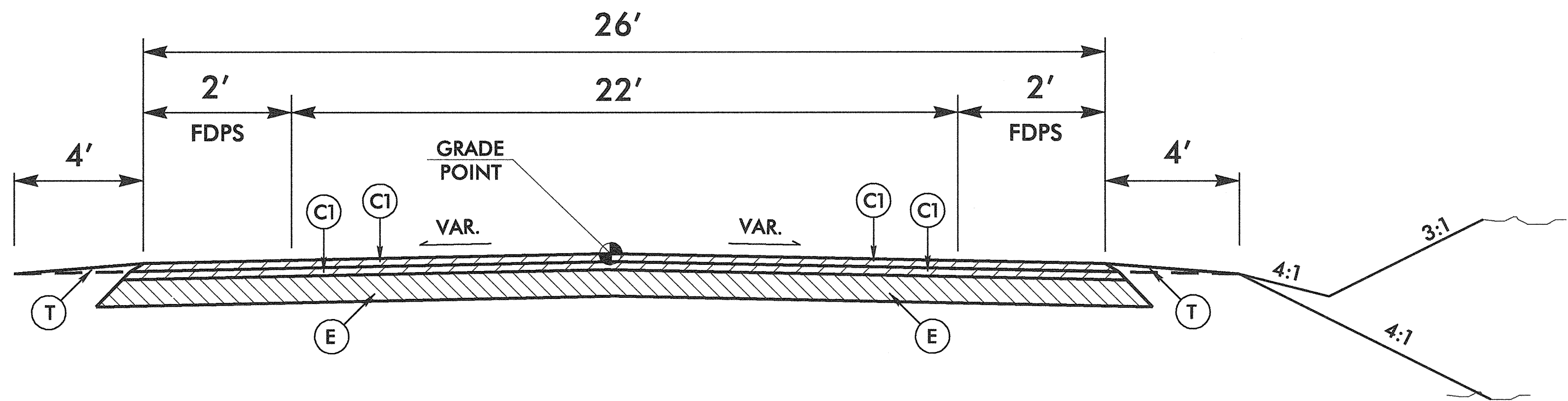
**TYPICAL SECTION NO. 8**  
 -RAB NB- STA. 11+65.01 TO 15+89.61  
 -RAB SB- STA. 15+89.61 TO 20+14.21  
 SEE DETAIL SHEET 2-E

**PAVEMENT SCHEDULE**

C1	1½" S9.5C
C2	VAR. DEPTH S9.5C
D	4" I19.0C
D1	VAR. DEPTH I19.0C
E	4" B25.0C
E1	4½" B25.0C
E2	VAR. DEPTH B25.0C
R	1' - 6" C&G
R1	2' - 6" C&G
R3	12" CONC. MOUNT. APRON
R4	8" X 18" CONC. CURB
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

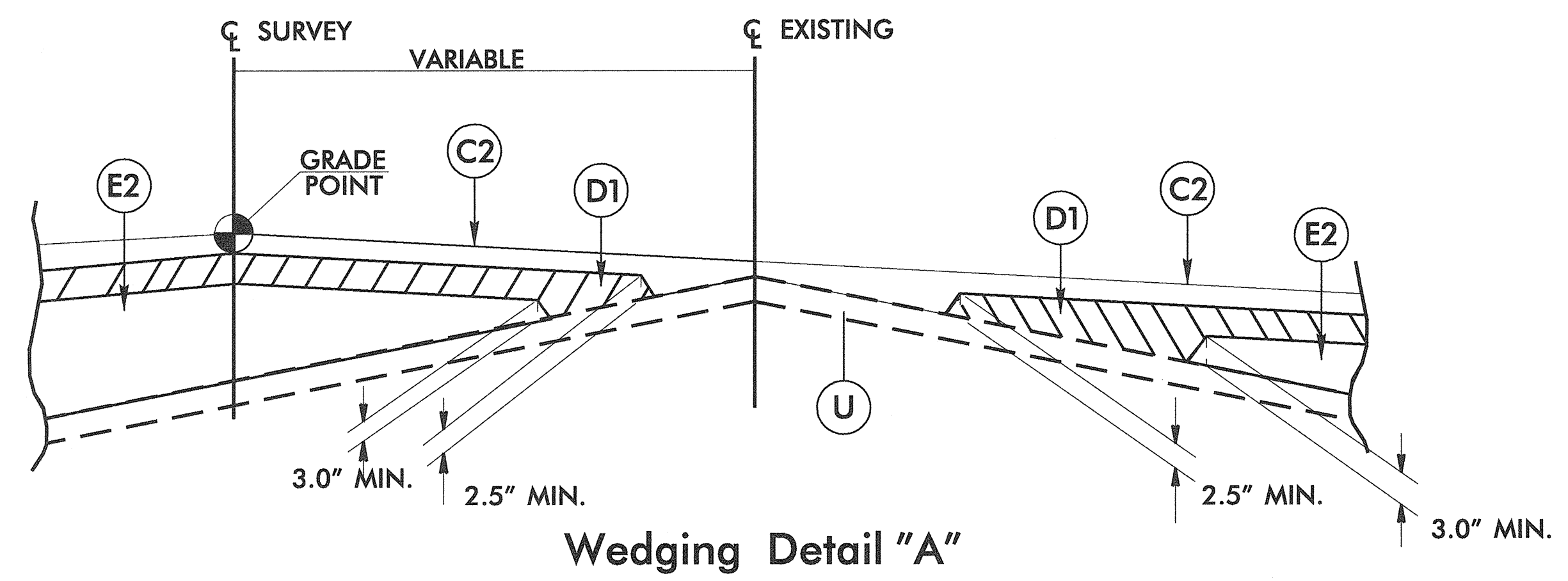


**TYPICAL SECTION NO. 9**  
 -TA1- STA. 11+00.00 TO STA. 11+97.32  
 SEE DETAIL SHEET 2-S  
 SEE WEDGING DETAIL "A", THIS SHEET



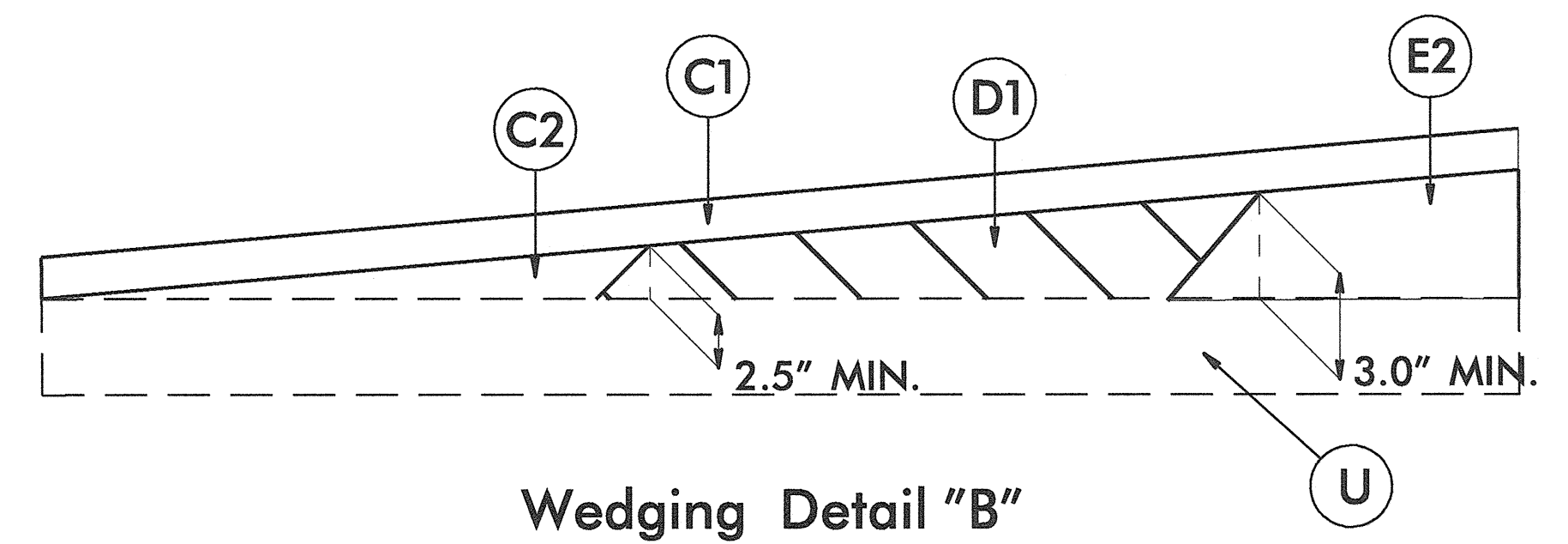
**TYPICAL SECTION NO. 10**  
 -TA1- STA. STA. 11+97.32 TO STA. 12+92.98  
 SEE DETAIL SHEET 2-S

NOTE: PAVEMENT EDGE SLOPES ARE 1:1, EXCEPT FINAL SURFACE COURSE. SEE SHOULDER WEDGE DETAIL.  
 SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.  
 M.E. = MATCH EXISTING



**Wedging Detail "A"**

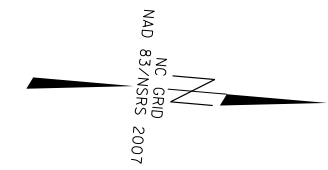
PAVEMENT CROSS SLOPE MAY VARY FOR TIE IN. SEE CROSS SECTIONS.



**Wedging Detail "B"**

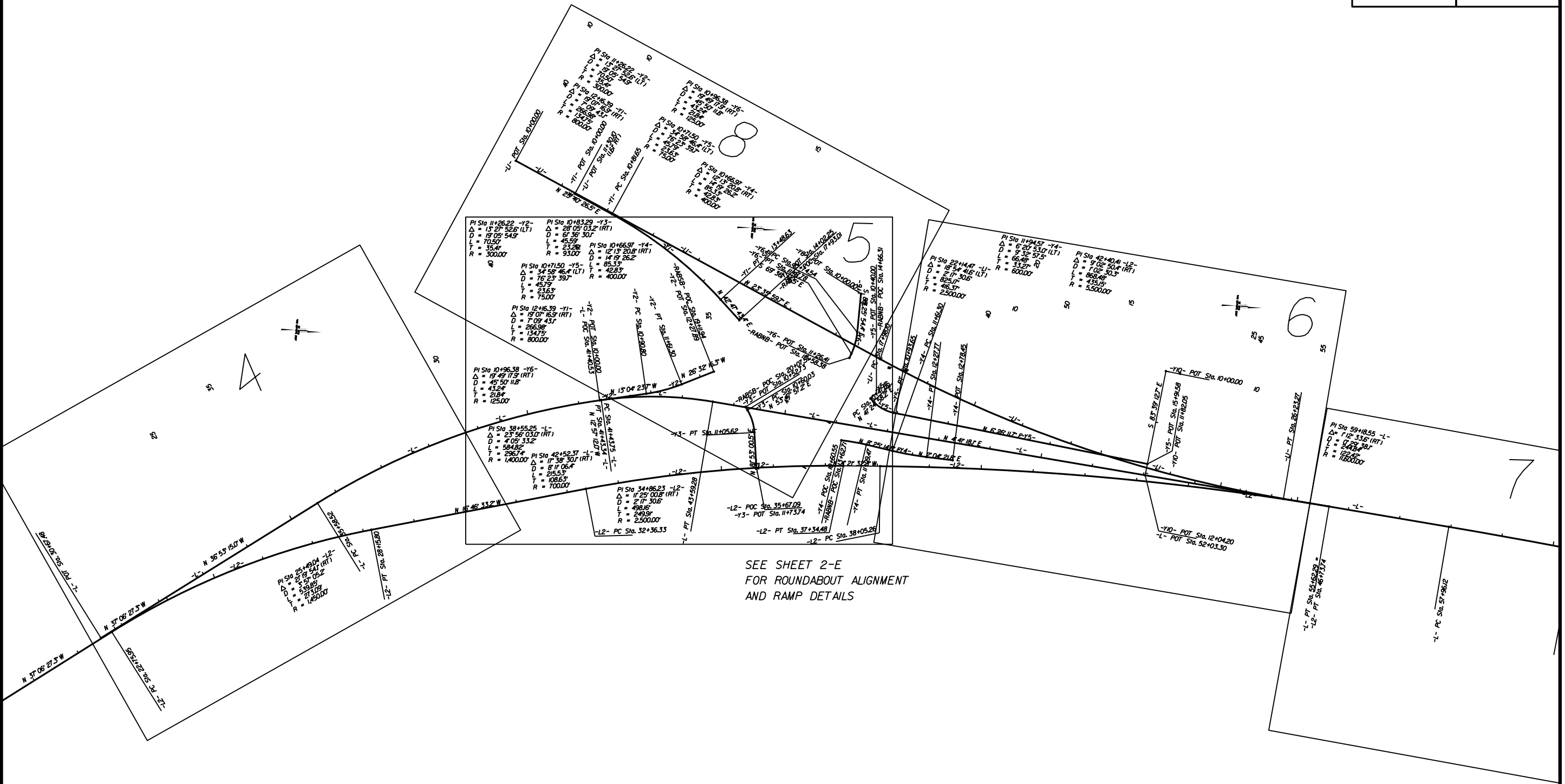
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 REVISIONS  
 8/17/99

PROJECT REFERENCE NO.	SHEET NO.
W-5306	2-D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



5/14/99

30-MAY-2014 09H2  
 C:\castle\hoyce\46130\ROADWAY\PC\PLAN\_SHEETS\W5306\_PSH\_2D.dgn  
 SAV



SEE SHEET 2-E  
 FOR ROUNDABOUT ALIGNMENT  
 AND RAMP DETAILS

PROJECT REFERENCE NO.	SHEET NO.
W-5306	2-E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# ALIGNMENT DETAILS

-Y1-, -Y1A- & -Y1B-  
 -Y2-, -Y2A- & -Y2B-  
 -Y6-, -Y6A- & -Y6B-  
 -RABNB- & -RABSB-



PI Sta 13+76.98 -RAB\_NB-  
 $\Delta = 105^{\circ} 03' 06.1''$  (LT)  
 $D = 63^{\circ} 39' 43.1''$   
 $L = 165.01'$   
 $T = 117.40'$   
 $R = 90.00'$

PI Sta 16+38.01 -RAB\_SB-  
 $\Delta = 30^{\circ} 06' 12.2''$  (RT)  
 $D = 31^{\circ} 49' 51.6''$   
 $L = 94.57'$   
 $T = 48.40'$   
 $R = 180.00'$

PI Sta 15+42.00 -RAB\_NB-  
 $\Delta = 105^{\circ} 03' 06.1''$  (LT)  
 $D = 63^{\circ} 39' 43.1''$   
 $L = 165.01'$   
 $T = 117.40'$   
 $R = 90.00'$

PI Sta 18+01.58 -RAB\_SB-  
 $\Delta = 105^{\circ} 03' 06.1''$  (LT)  
 $D = 63^{\circ} 39' 43.1''$   
 $L = 165.01'$   
 $T = 117.40'$   
 $R = 90.00'$

PI Sta 12+13.41 -RAB\_NB-  
 $\Delta = 30^{\circ} 06' 12.2''$  (RT)  
 $D = 31^{\circ} 49' 51.6''$   
 $L = 94.57'$   
 $T = 48.40'$   
 $R = 180.00'$

PI Sta 19+66.60 -RAB\_SB-  
 $\Delta = 105^{\circ} 03' 06.1''$  (LT)  
 $D = 63^{\circ} 39' 43.1''$   
 $L = 165.01'$   
 $T = 117.40'$   
 $R = 90.00'$

PI Sta 12+16.39 -Y1-  
 $\Delta = 19^{\circ} 07' 16.9''$  (RT)  
 $D = 7^{\circ} 09' 43.1''$   
 $L = 266.98'$   
 $T = 134.75'$   
 $R = 800.00'$

PI Sta 12+01.73 -Y2B-  
 $\Delta = 38^{\circ} 50' 35.3''$  (RT)  
 $D = 63^{\circ} 39' 43.1''$   
 $L = 61.01'$   
 $T = 31.73'$   
 $R = 90.00'$

PI Sta 13+77.59 -Y1A-  
 $\Delta = 10^{\circ} 44' 15.3''$  (LT)  
 $D = 14^{\circ} 19' 26.2''$   
 $L = 74.96'$   
 $T = 37.59'$   
 $R = 400.00'$

PI Sta 10+96.38 -Y6-  
 $\Delta = 19^{\circ} 49' 17.9''$  (RT)  
 $D = 45^{\circ} 50' 11.8''$   
 $L = 43.24'$   
 $T = 21.84'$   
 $R = 125.00'$

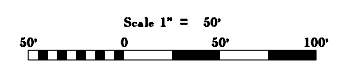
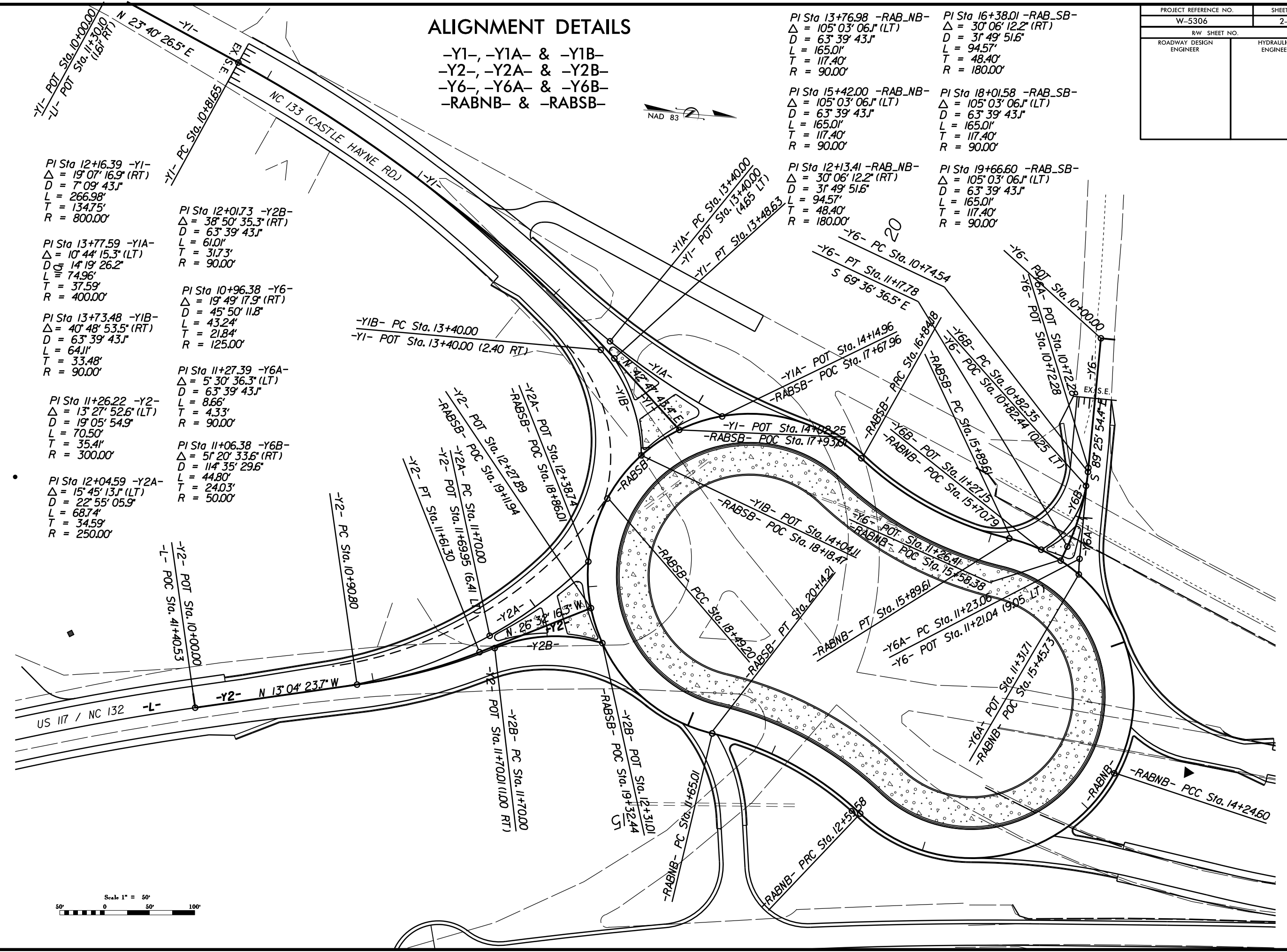
PI Sta 13+73.48 -Y1B-  
 $\Delta = 40^{\circ} 48' 53.5''$  (RT)  
 $D = 63^{\circ} 39' 43.1''$   
 $L = 64.11'$   
 $T = 33.48'$   
 $R = 90.00'$

PI Sta 11+27.39 -Y6A-  
 $\Delta = 5^{\circ} 30' 36.3''$  (LT)  
 $D = 63^{\circ} 39' 43.1''$   
 $L = 8.66'$   
 $T = 4.33'$   
 $R = 90.00'$

PI Sta 11+26.22 -Y2-  
 $\Delta = 13^{\circ} 27' 52.6''$  (LT)  
 $D = 19^{\circ} 05' 54.9''$   
 $L = 70.50'$   
 $T = 35.41'$   
 $R = 300.00'$

PI Sta 11+06.38 -Y6B-  
 $\Delta = 51^{\circ} 20' 33.6''$  (RT)  
 $D = 11^{\circ} 35' 29.6''$   
 $L = 44.80'$   
 $T = 24.03'$   
 $R = 50.00'$

PI Sta 12+04.59 -Y2A-  
 $\Delta = 15^{\circ} 45' 13.1''$  (LT)  
 $D = 22^{\circ} 55' 05.9''$   
 $L = 68.74'$   
 $T = 34.59'$   
 $R = 250.00'$

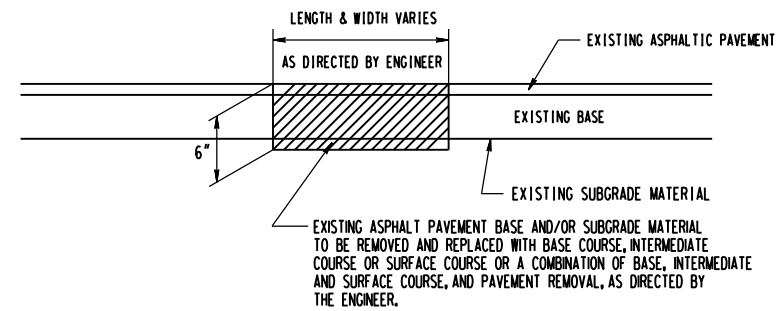


REVISIONS

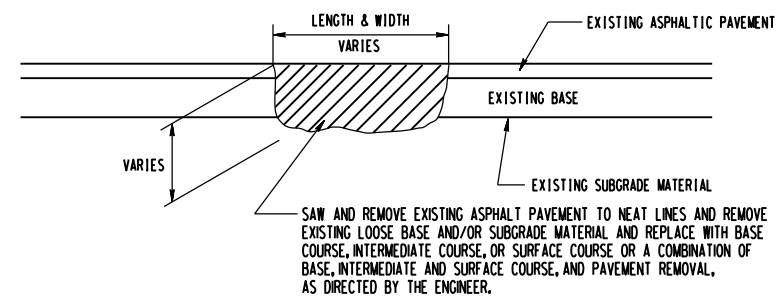
15-MAY-2014 15:41 NEW\_HANDOVER\Castle Hayne RAE\_46130\ROADWAY\Proj\PLAN\_SHEETS\W5306\_PSH\_2E.dgn  
 8/17/99

# PAVEMENT DETAILS

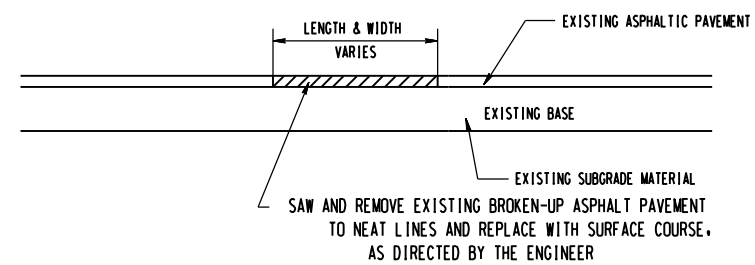
## DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



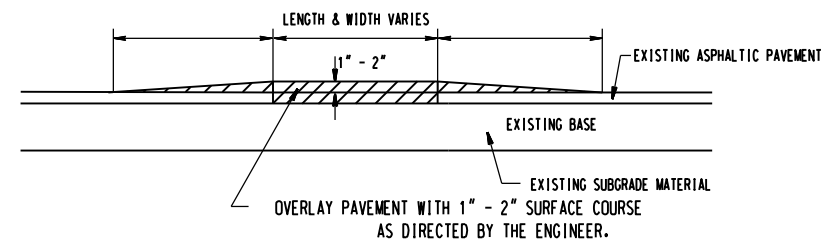
DETAIL NO. 1



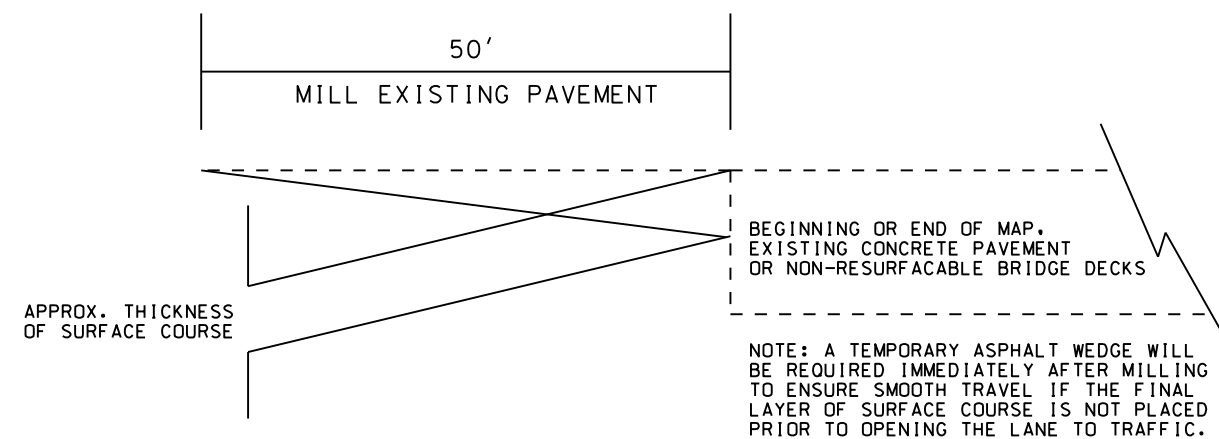
DETAIL NO. 2



DETAIL NO. 3

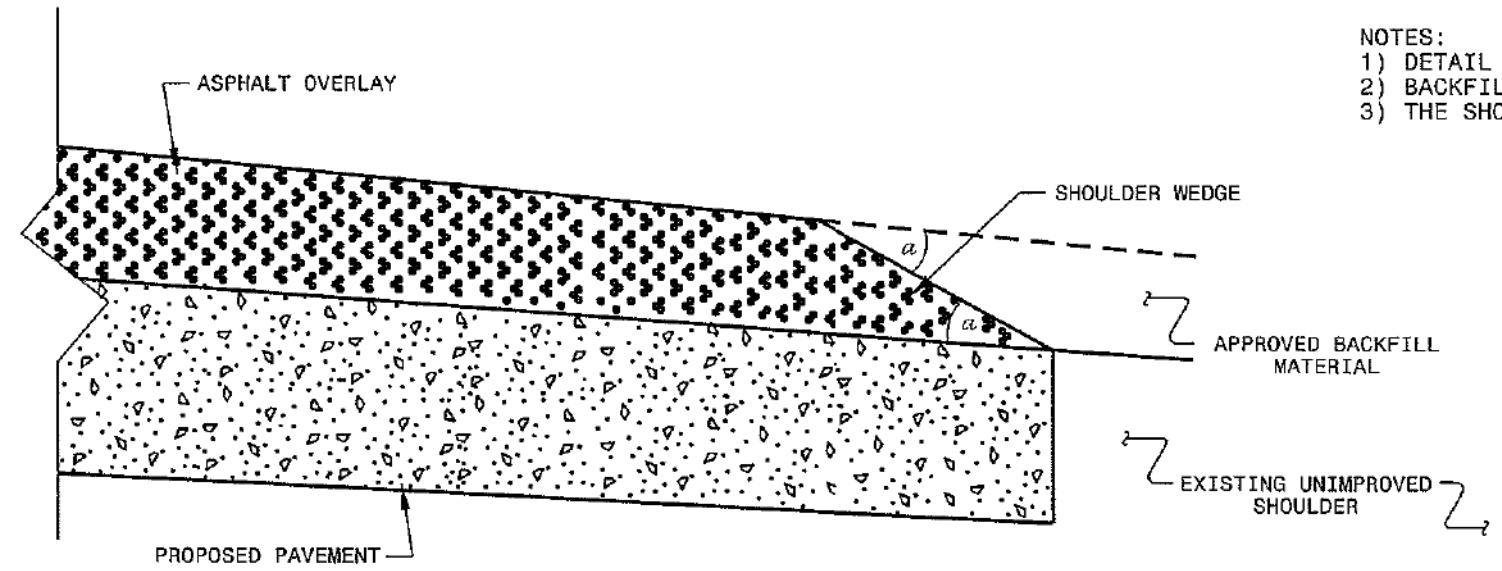


DETAIL NO. 4



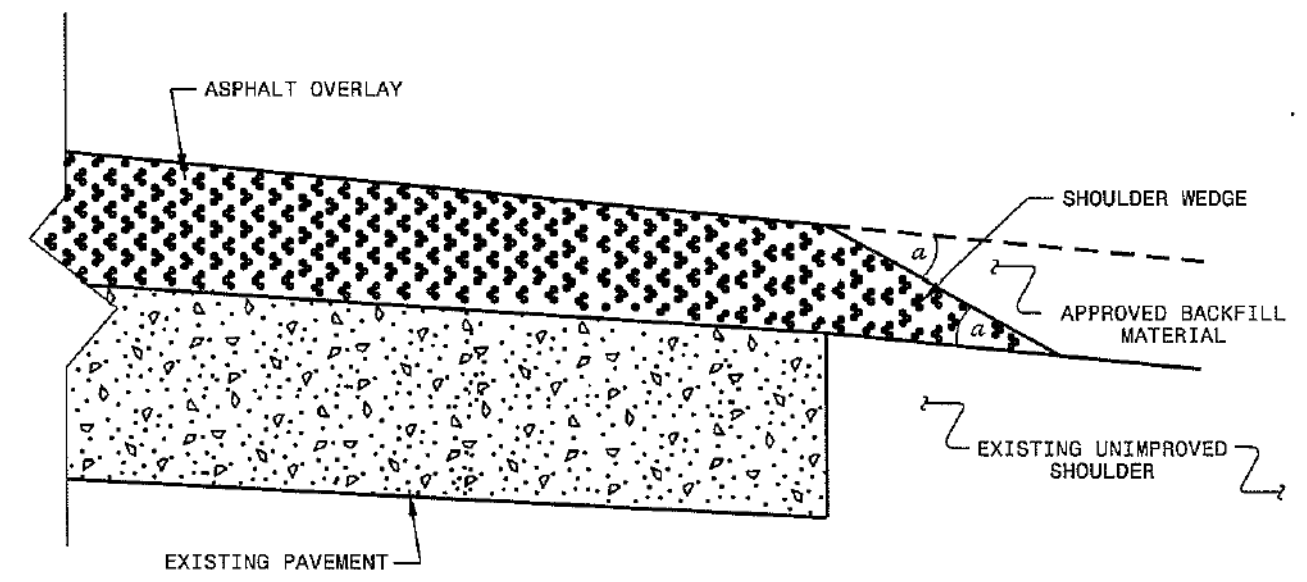
REVISIONS

09-APR-2014 09:06  
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 8/17/99

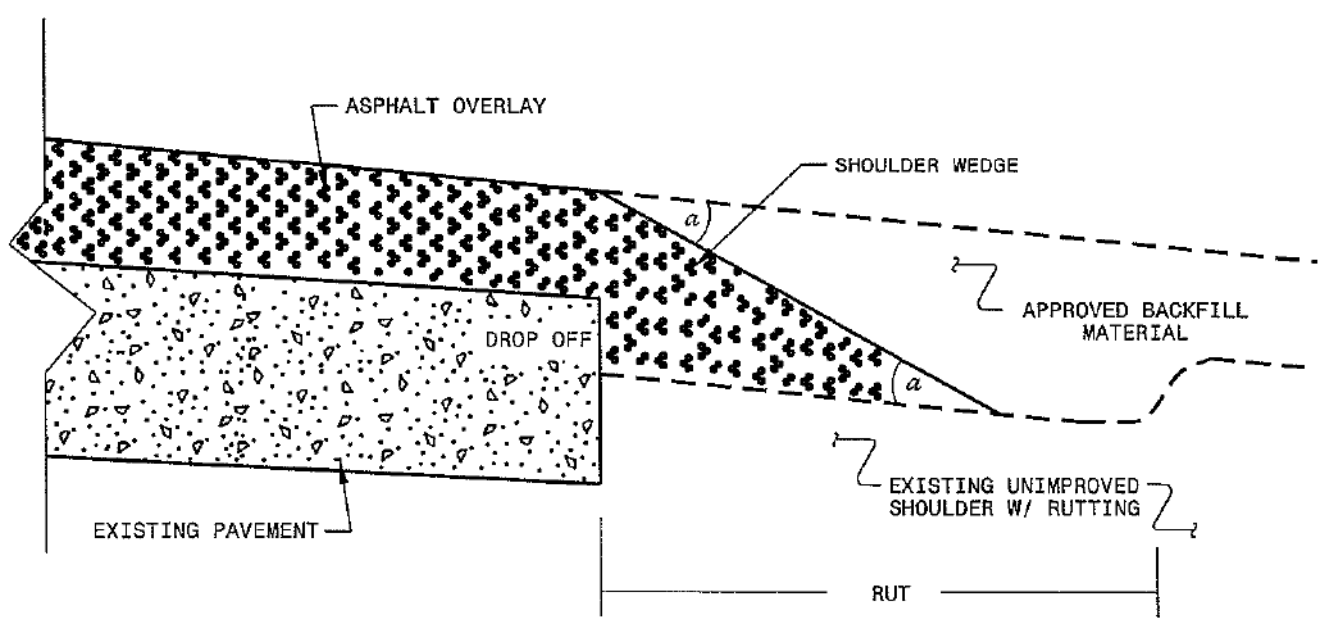


- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFG AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.

**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)

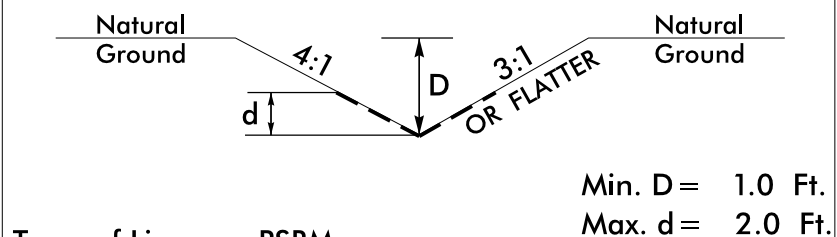
- SHOULDER WEDGE ANGLE = 30°

16-MAY-2014 11:33  
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 dlofave AT D3CAD27448



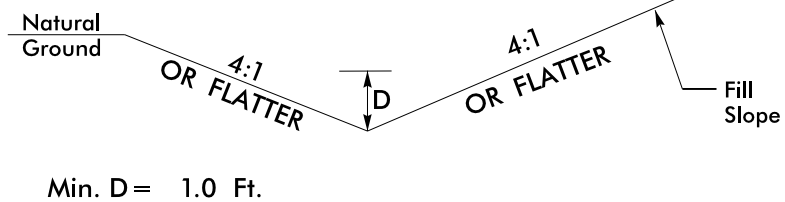
# DITCH DETAILS

**DETAIL A**  
STANDARD 'V' DITCH  
(Not to Scale)



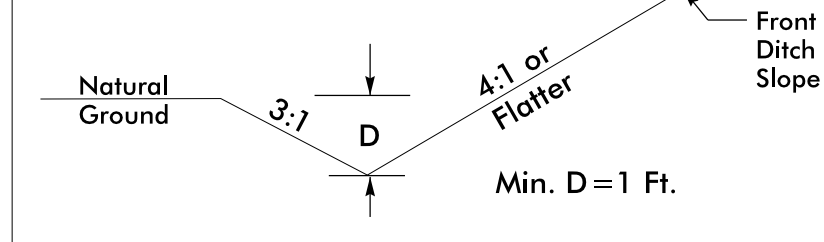
FROM -Y2- STA. 10+00 TO STA. 11+88 (RT)

**DETAIL B**  
SPECIAL LATERAL DITCH  
(Not to Scale)



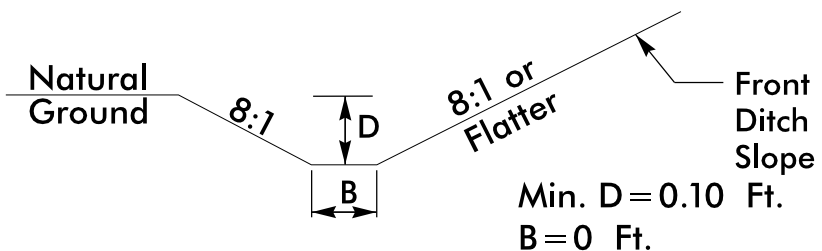
FROM -Y4- STA. 11+36 TO STA. 12+30 (LT)

**DETAIL C**  
SPECIAL CUT DITCH  
(Not to Scale)



-L- FROM STA. 33+00 TO STA. 34+00 (RT) +/-

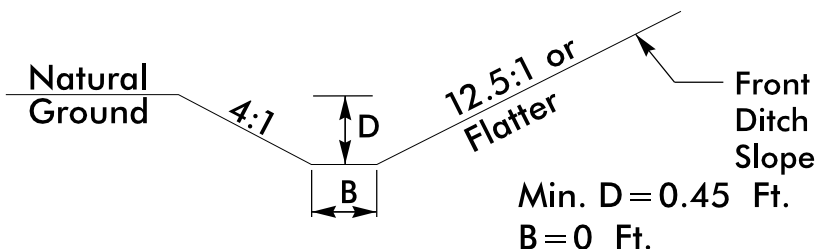
**DETAIL D**  
SPECIAL CUT GRASSED SWALE  
(Not to Scale)



-L- FROM STA. 40+77 TO STA. 41+40 (LT) +/-

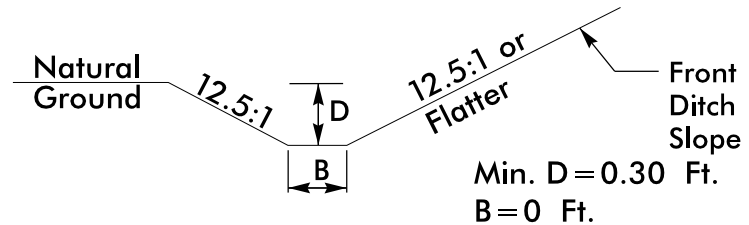
- \*NOTES:  
1) LONGITUDINAL SLOPES BETWEEN 0.3% AND 4.0%.  
2) MODIFICATIONS MAY BE NEEDED, AS APPROVED BY ENGINEER.

**DETAIL E**  
SPECIAL CUT GRASSED SWALE  
(Not to Scale)



-L2- FROM STA. 36+50 TO STA. 38+00 (LT) +/-

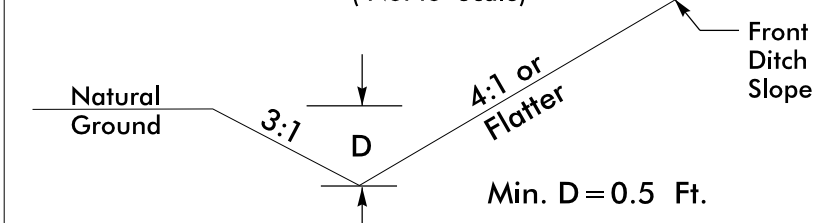
**DETAIL F**  
SPECIAL CUT GRASSED SWALE  
(Not to Scale)



-Y2- FROM STA. 10+00 TO STA. 10+30 (LT) +/-

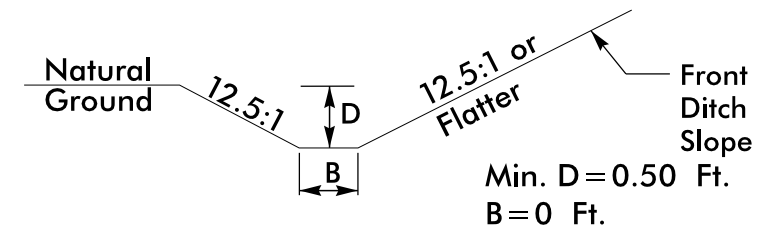
- \*NOTES:  
1) LONGITUDINAL SLOPES BETWEEN 0.3% AND 4.0%.  
2) MODIFICATIONS MAY BE NEEDED, AS APPROVED BY ENGINEER.

**DETAIL G**  
SPECIAL CUT DITCH  
(Not to Scale)



-Y3- FROM STA. 11+00 TO STA. 11+60 (RT) +/-

**DETAIL H**  
SPECIAL CUT GRASSED SWALE  
(Not to Scale)



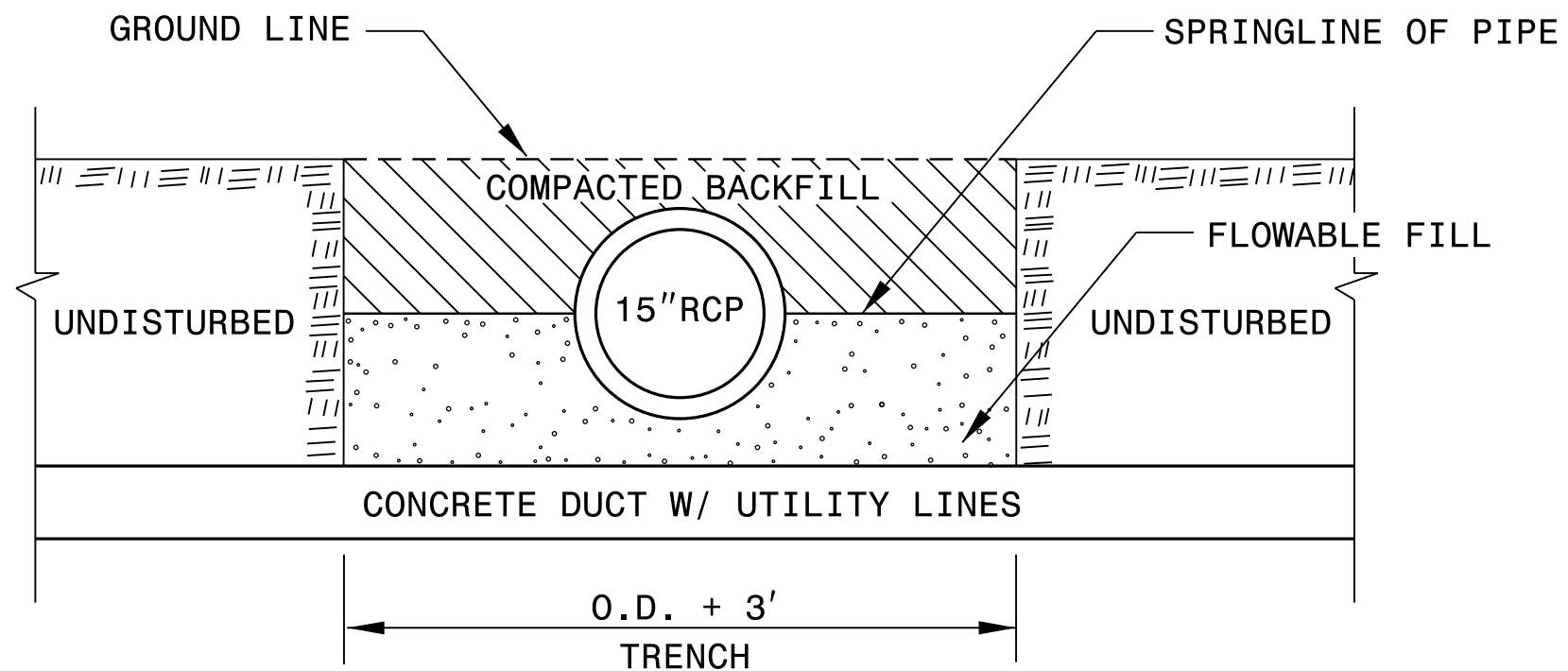
-Y5- FROM STA. 11+25 TO STA. 13+15 (LT) +/-

- \*NOTES:  
1) LONGITUDINAL SLOPES BETWEEN 0.3% AND 4.0%.  
2) MODIFICATIONS MAY BE NEEDED, AS APPROVED BY ENGINEER.

REVISIONS

8/17/99

30-MUN-2014-1512 NEW\_HANOVER\Castle Hayne RA# 46130\ROADWAY\Proj\PLAN\_SHEETS\PSH\_2.H ditch details.dgn



### NORMAL EARTH FOUNDATION

ALIGNMENT	STATION	OFFSET	LT / RT	EXISTING GROUND ELEVATION	EXISTING UTILITY ELEVATION (TOP)	DRAINAGE STRUCTURE REFERENCE
-RAB.SB-	18+96.01	36.47'	LT	17.94'	14.38'	0520 TO 0518
-Y6-	10+62.53	32.20'	RT	19.18'	15.60'	0503 TO 0502

CONTRACT STANDARDS & DEVELOPMENT UNIT  
STANDARDS AND SPECIAL DESIGN  
Office 919-707-6900 FAX 919-250-4119

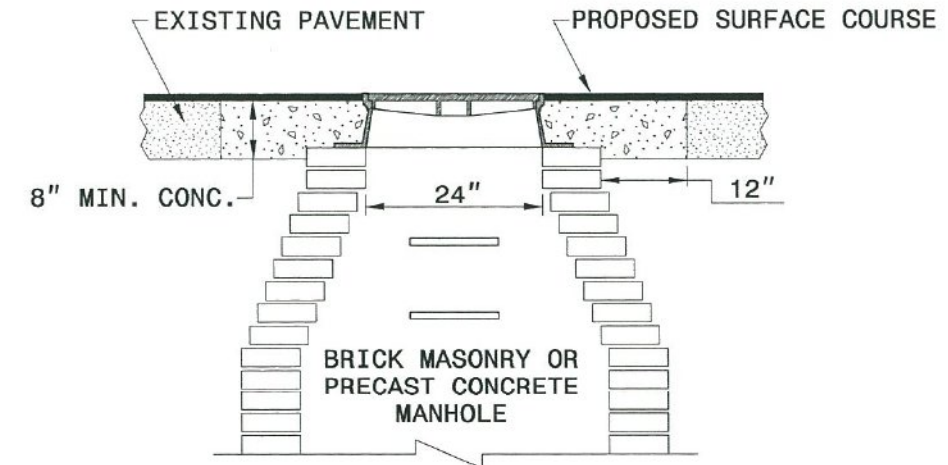
#### METHOD OF PIPE INSTALLATION

ORIGINAL BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 MODIFIED BY: rnbritt DATE: 02-28-14  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FILE SPEC.: details/nbritt/english/hydro/pipe\_install.dgn

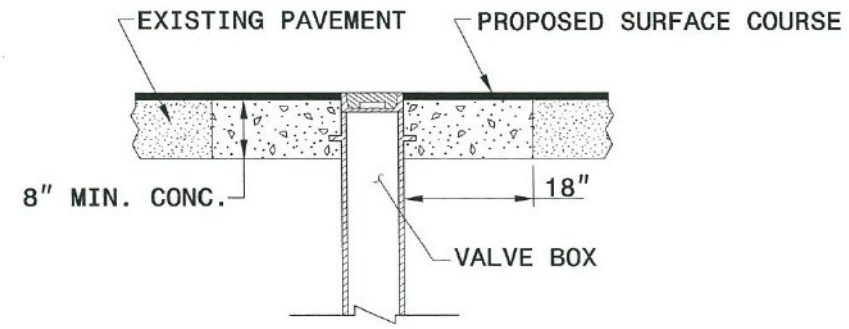
## MANHOLE AND VALVE BOX ADJUSTMENTS

**GENERAL NOTES:**

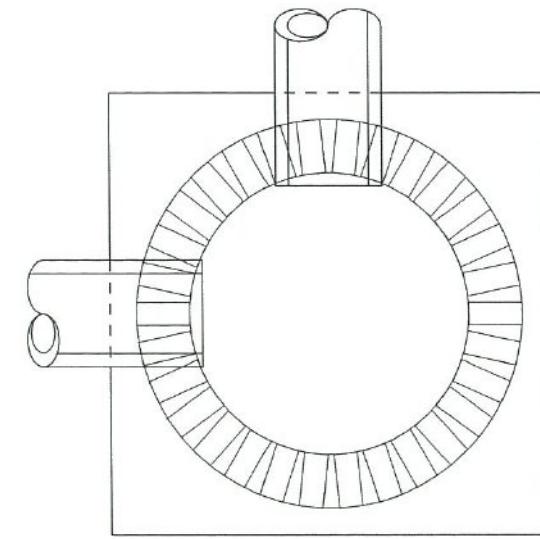
1. USE RAPID SET GROUT, MORTAR, OR CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. REMOVE ALL FAULTY EXISTING BRICKWORK AND REPLACE WITH NEW BRICK MASONRY.
3. SHEER CUT EXCAVATION FOR THE ADJUSTMENT ON ALL SIDES.
4. FILL AREA BELOW 8" DEPTH WITH 78M OR NO. 57 CLEAN STONE.
5. MIX MORTAR TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS  $1\frac{1}{2}" \pm \frac{1}{8}"$



**MANHOLE CONCRETE ENCASEMENT**



**VALVE BOX CONCRETE ENCASEMENT**



**ELEVATION VIEW**

PLACE BRICK ACCORDING TO ELEVATION VIEW

NOT TO SCALE

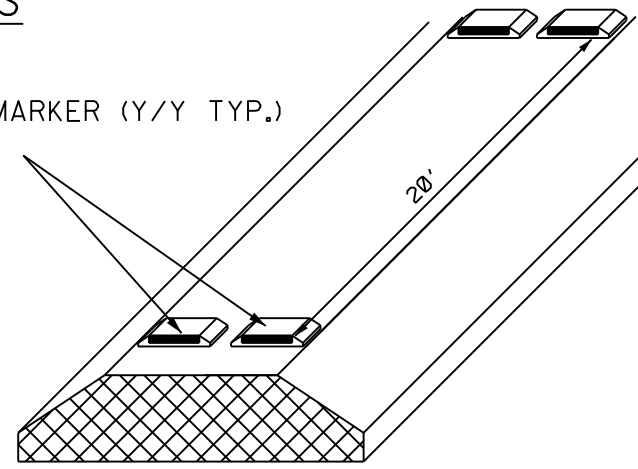
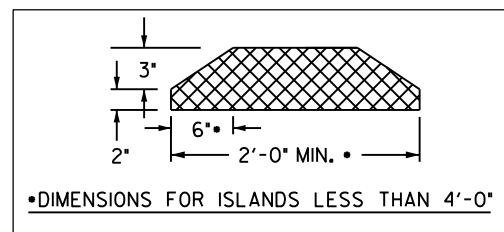
15-MAY-2014 15:55 C:\FD\DOT\FREE\NEW\_HANDOVER\Castle Hayne RAB\_46130\ROADWAY\Proj\PLAN\_SHEETS\W5306.Rdy.tsh..dgn  
 8/17/99

PROJECT REFERENCE NO.	SHEET NO.
W-5306	2-K
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# CONCRETE ISLAND DETAILS

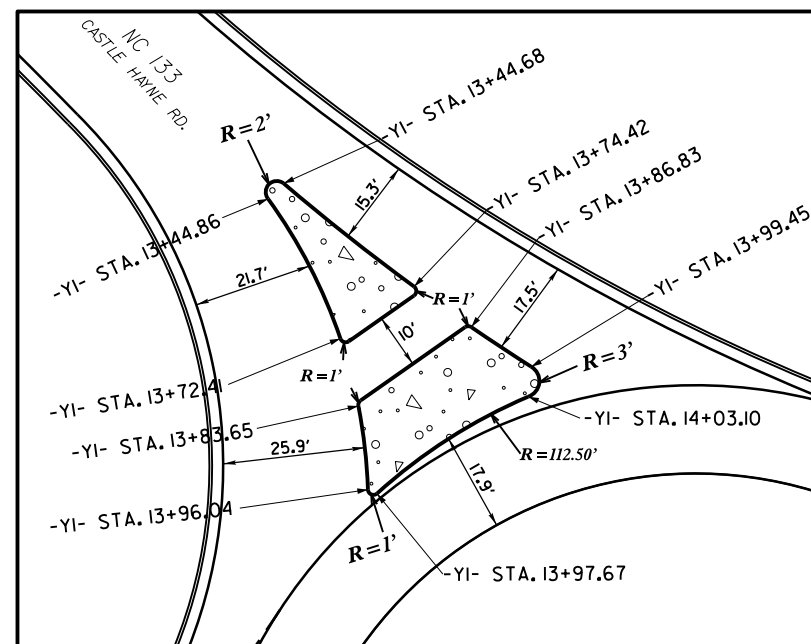
## PAVEMENT MARKER DETAIL FOR CONCRETE ISLANDS

RAISED PAVEMENT MARKER (Y/Y TYP.)  
(STD. DWG 1251.01)

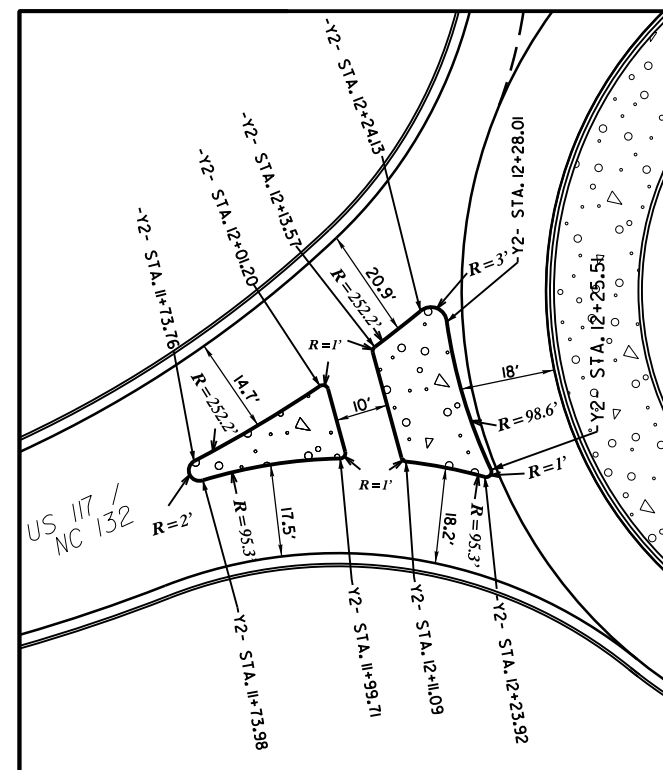


MONOLITHIC CONCRETE ISLAND

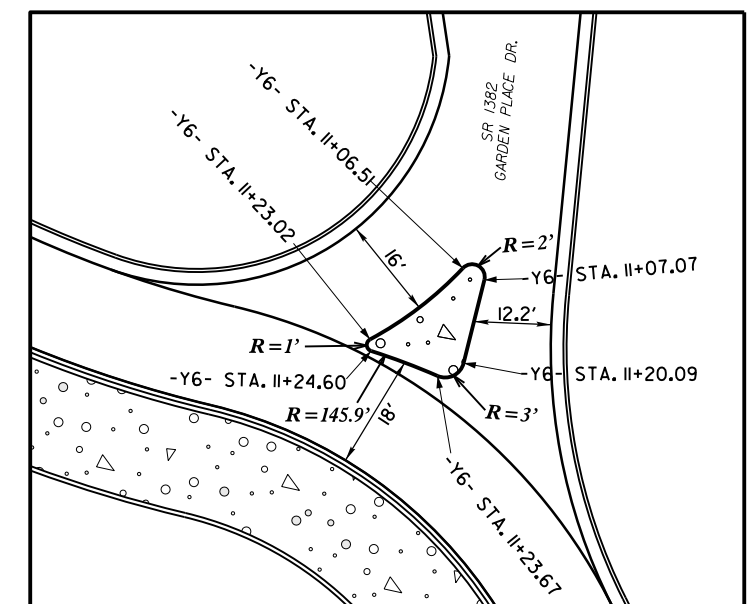
(SEE STANDARD DRAWINGS 852.01, 852.02, & 852.06 FOR DETAILS.)



-YI- CONCRETE ISLANDS DETAIL



-Y2- CONCRETE ISLANDS DETAIL



-Y6- CONCRETE ISLAND DETAIL

8/17/99  
 30-MIN-2014-1513  
 C:\ADN\THREE\NEW\_HANOVER\Castle Hayne RAE\46130\ROADWAY\Proj\PLAN\_SHEETS\W5306.Rdy\_PSH\_2K.dgn  
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DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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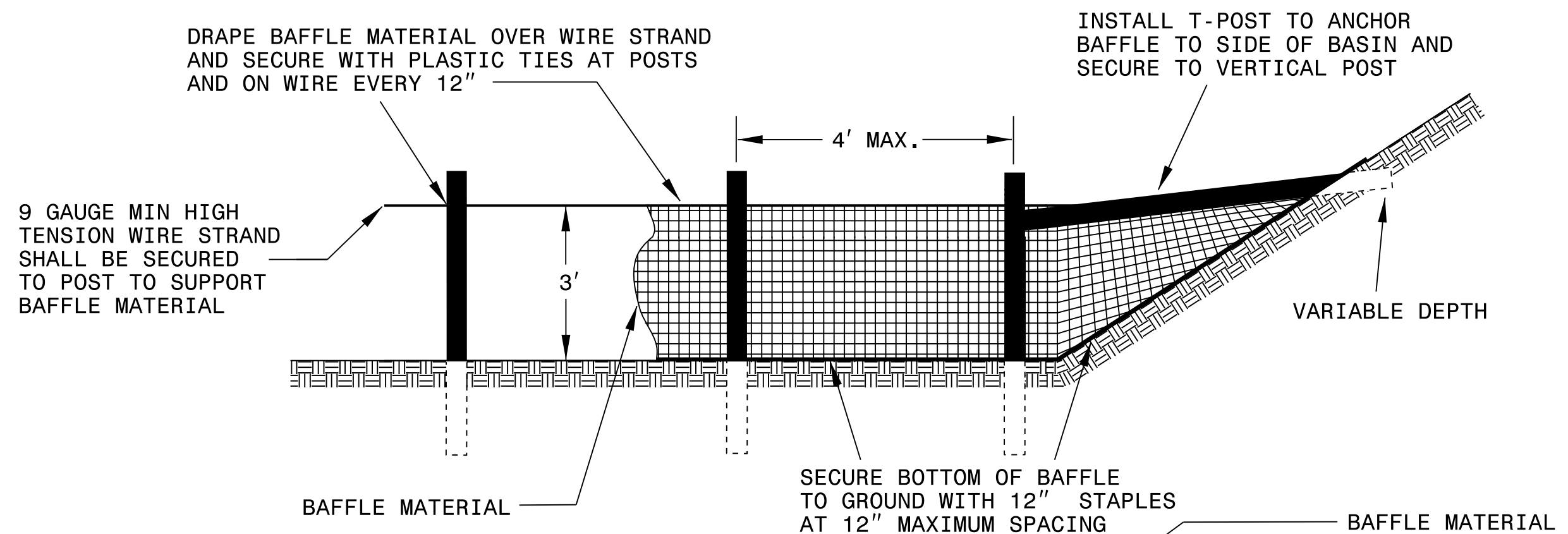


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## ***SOIL STABILIZATION TIMEFRAMES***

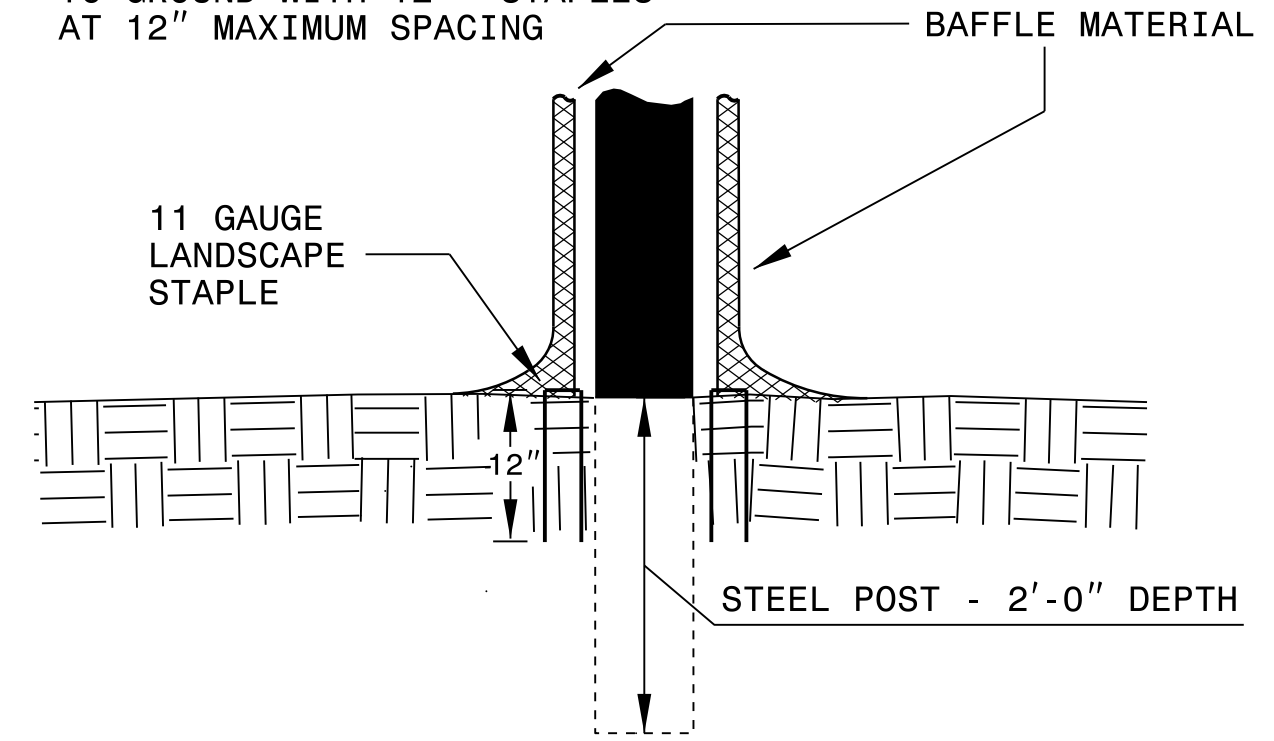
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES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

# COIR FIBER BAFFLE DETAIL



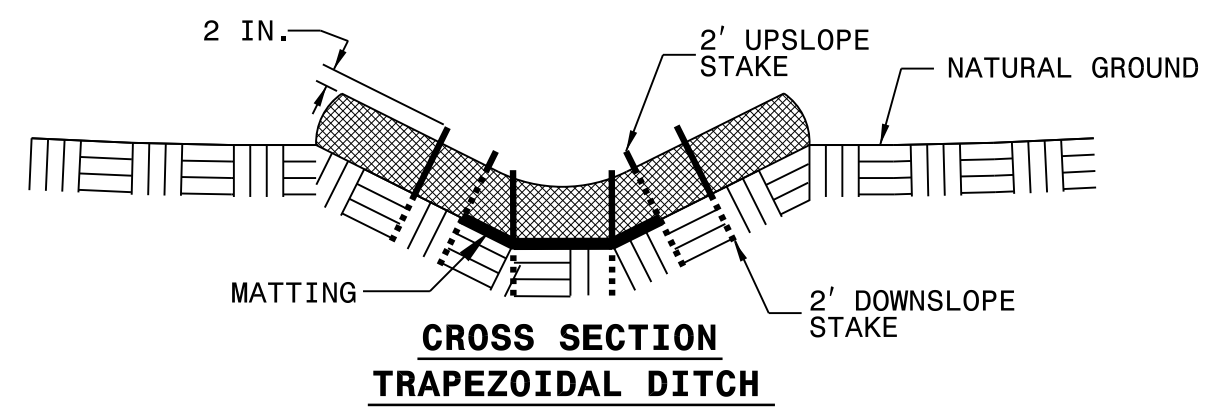
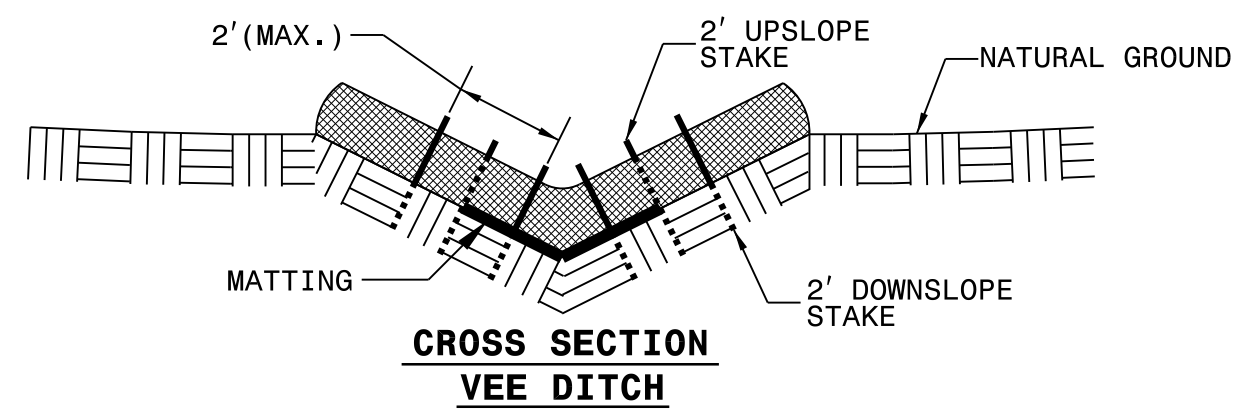
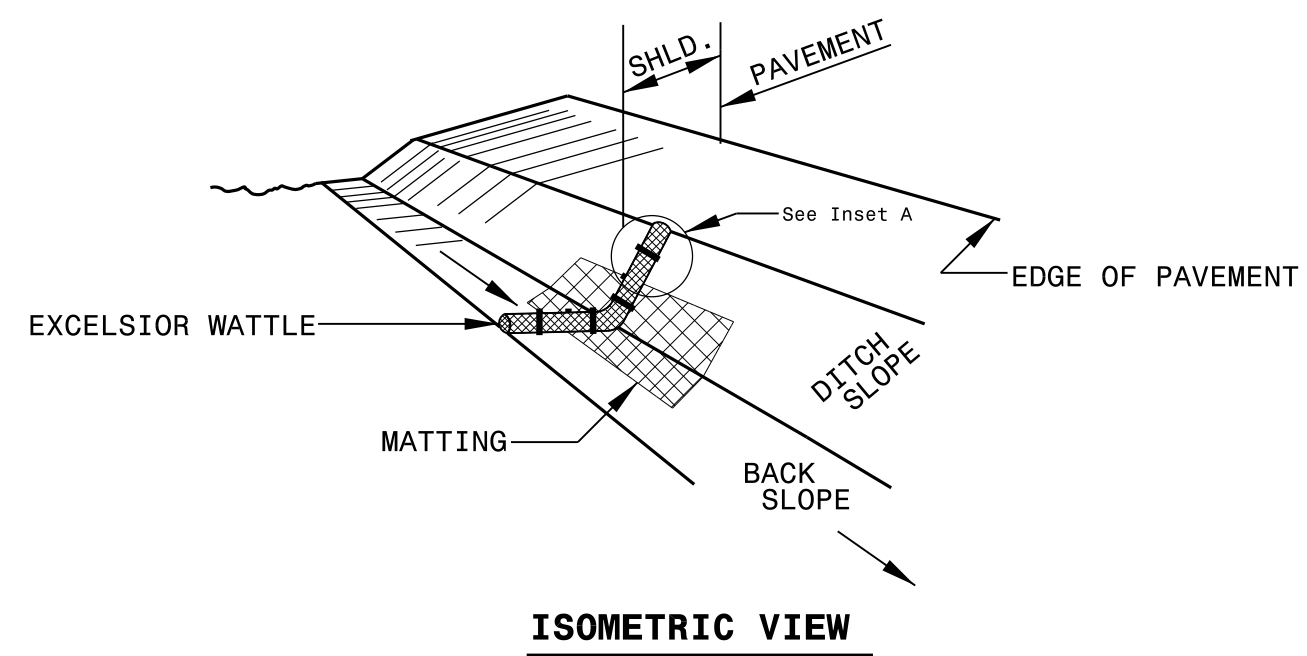
**NOTES:**

1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF  $\frac{1}{4}$  THE BASIN LENGTH.
2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF  $\frac{1}{3}$  THE BASIN LENGTH.
3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.



BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

# WATTLE DETAIL



**NOTES:**

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

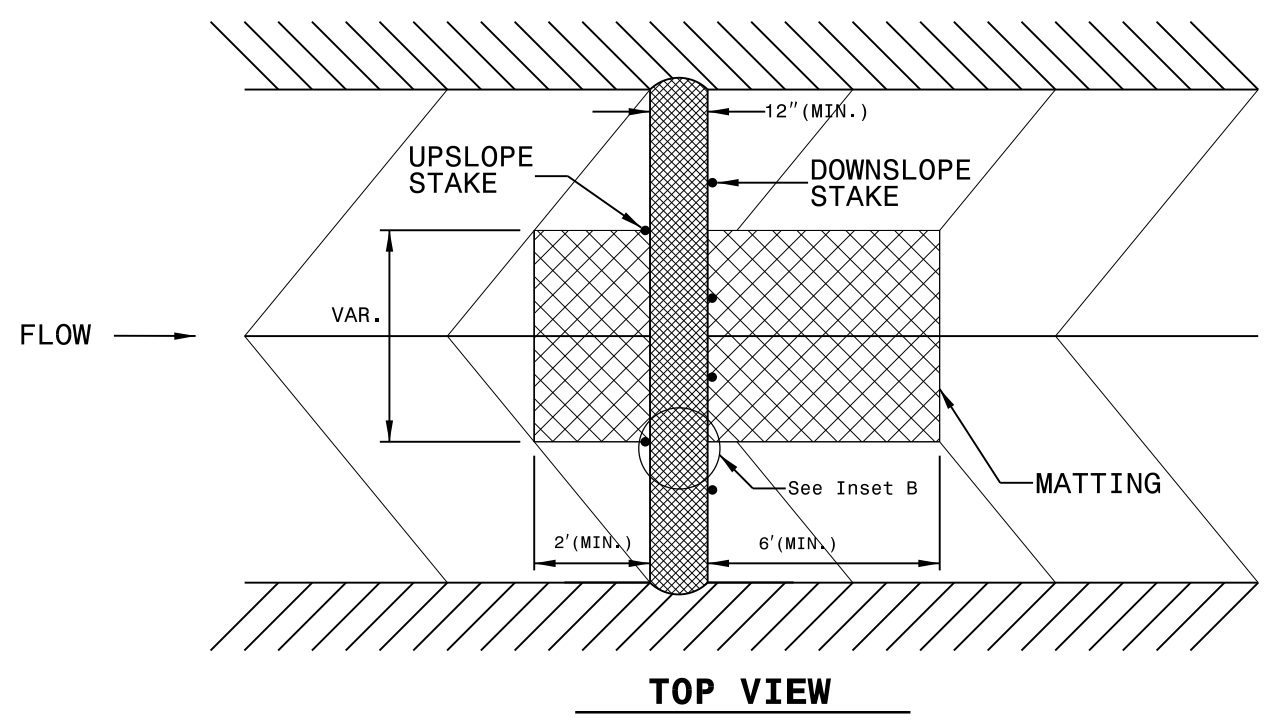
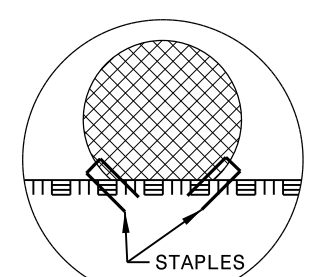
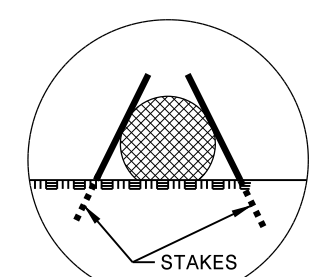
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

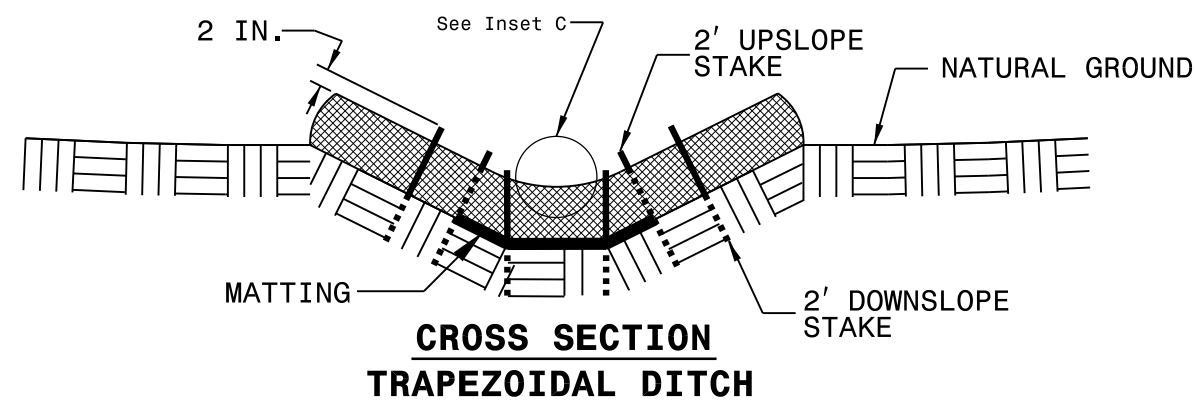
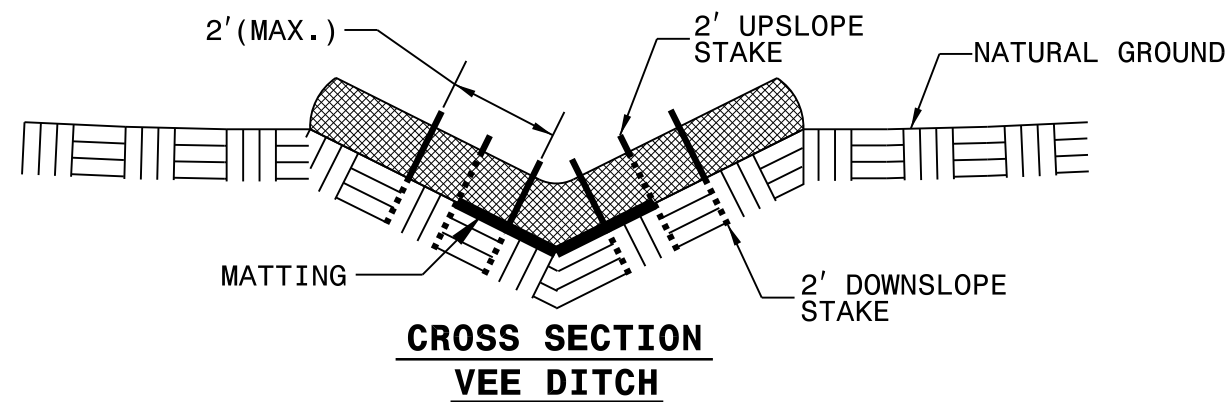
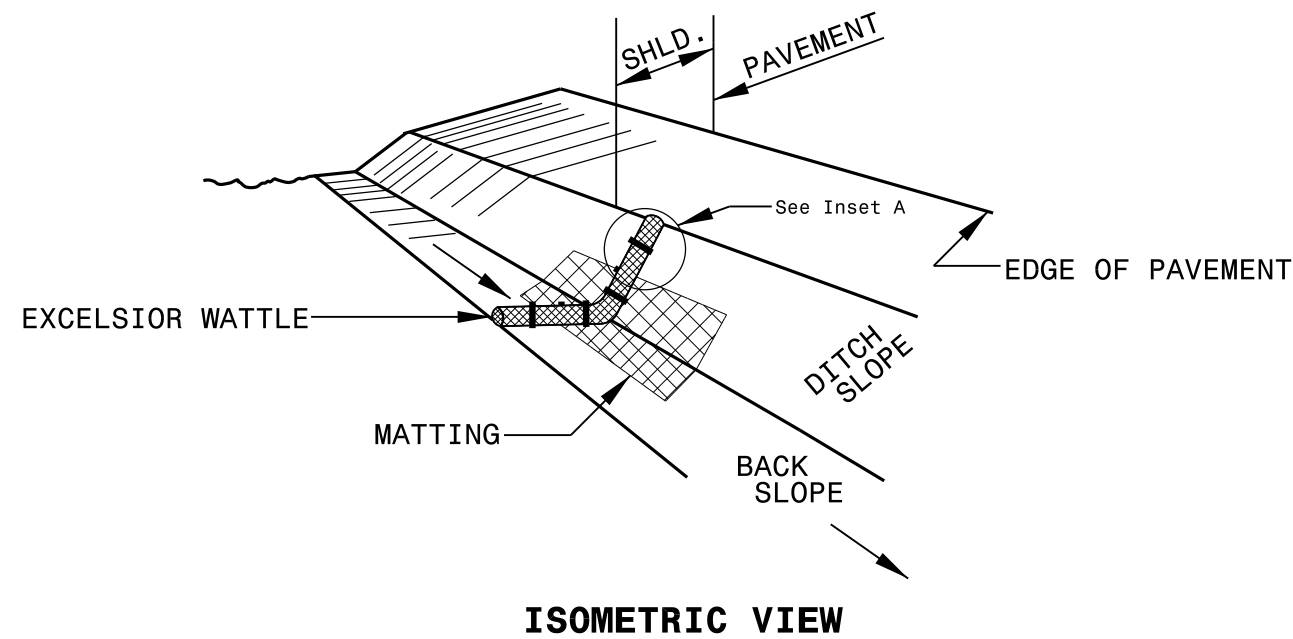
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.



# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



**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.

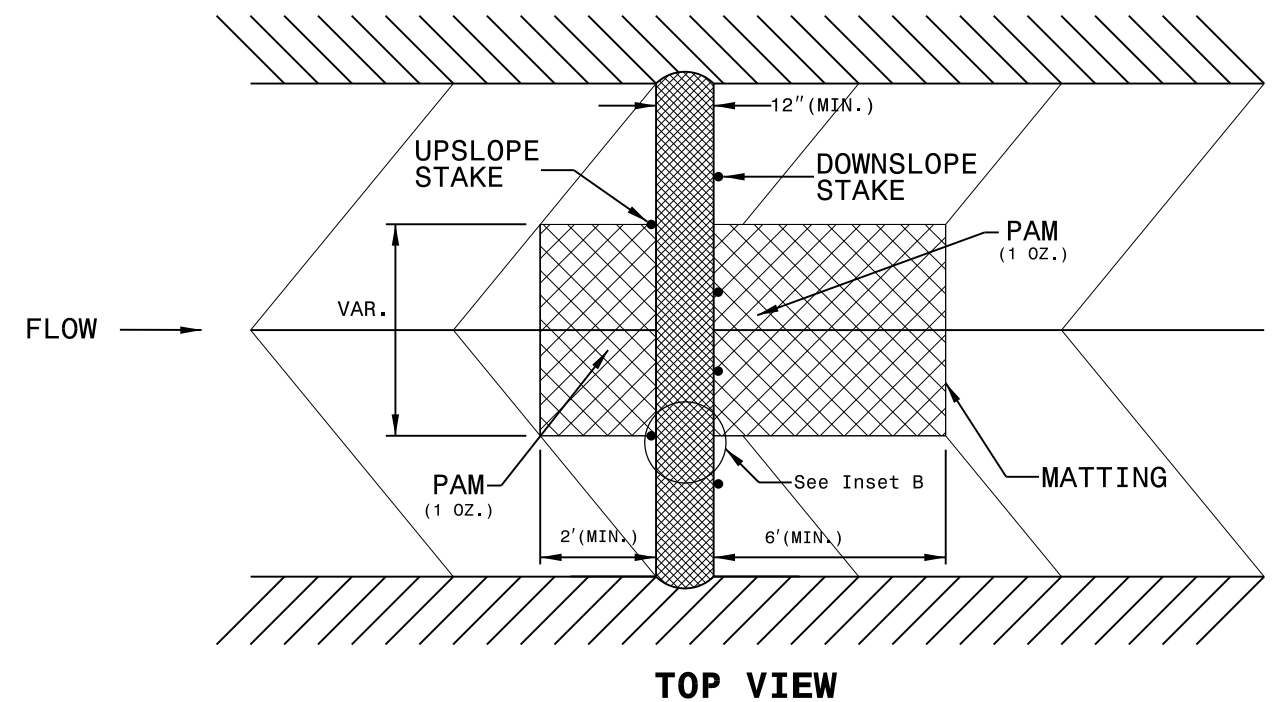
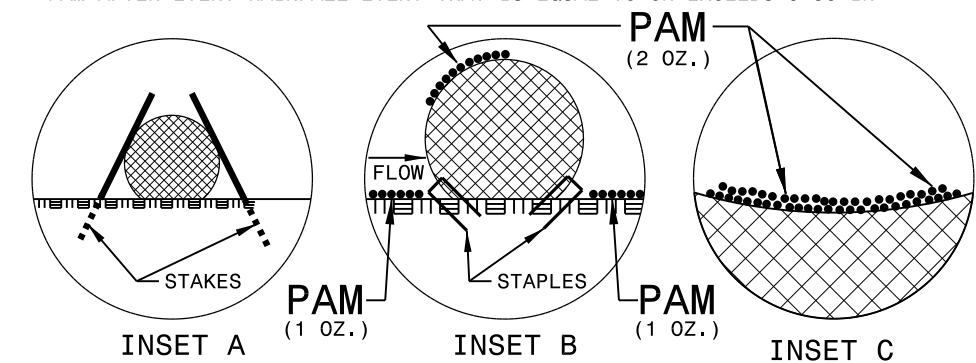
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

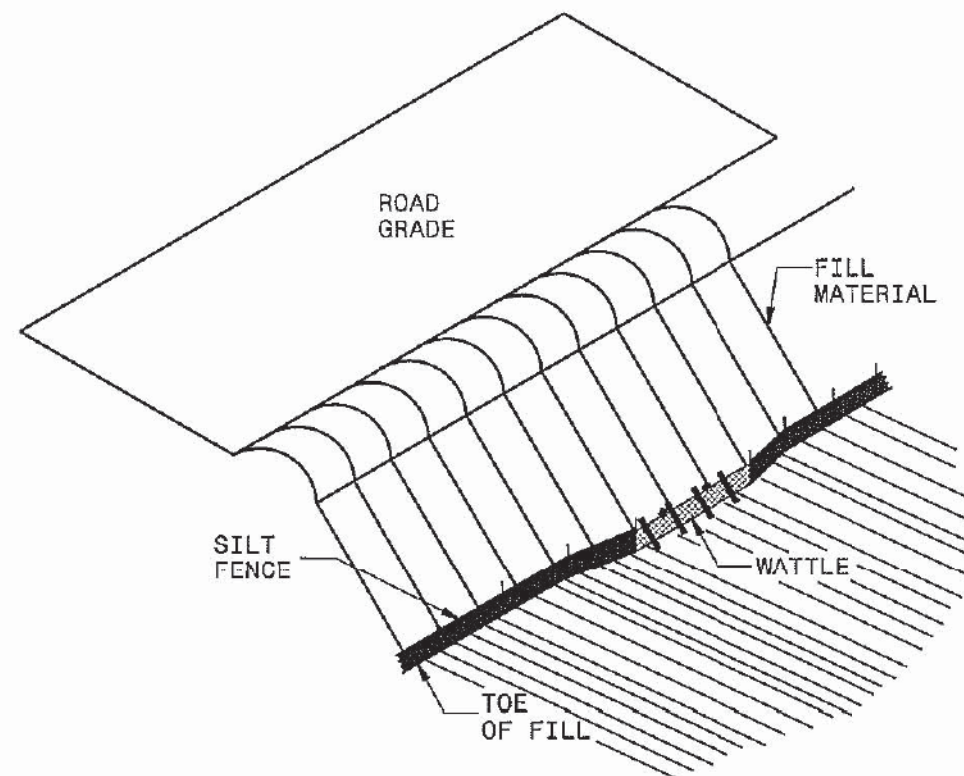
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

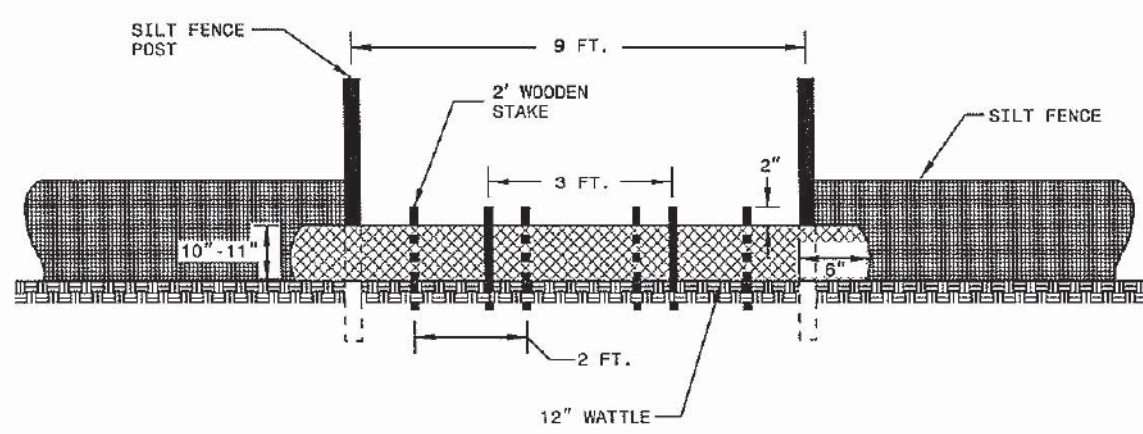




# SILT FENCE WATTLE BREAK DETAIL



**ISOMETRIC VIEW**

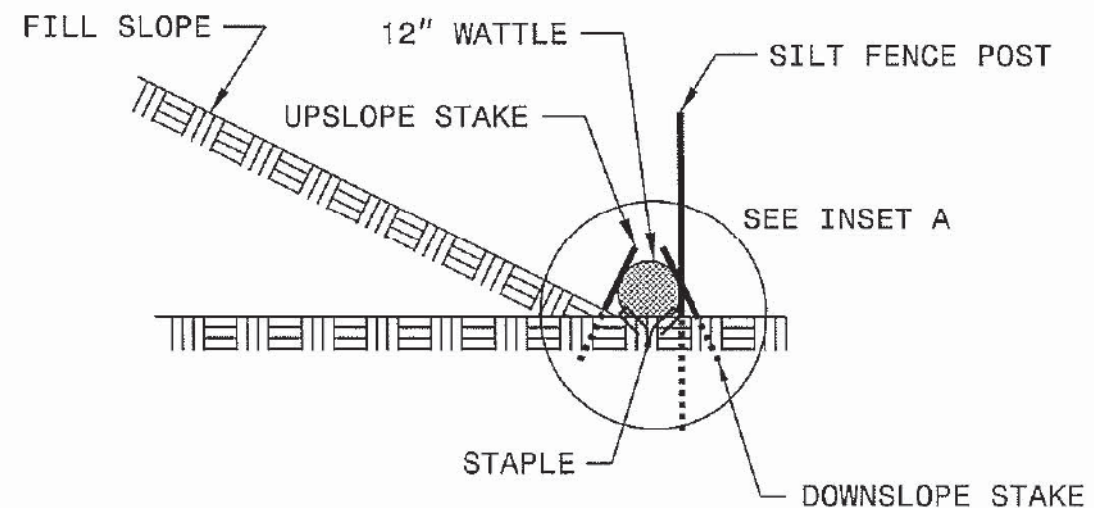
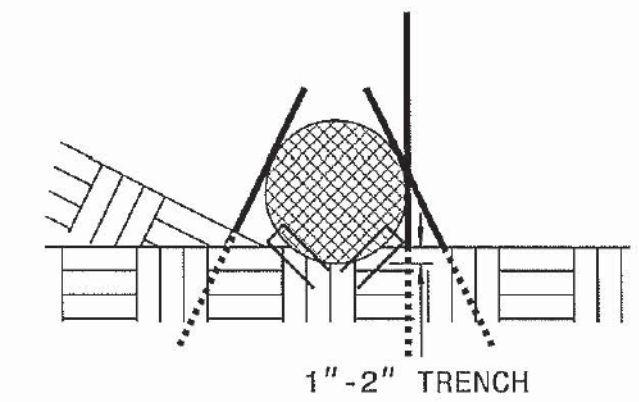


**VIEW FROM SLOPE**

**NOTES:**

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- 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.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

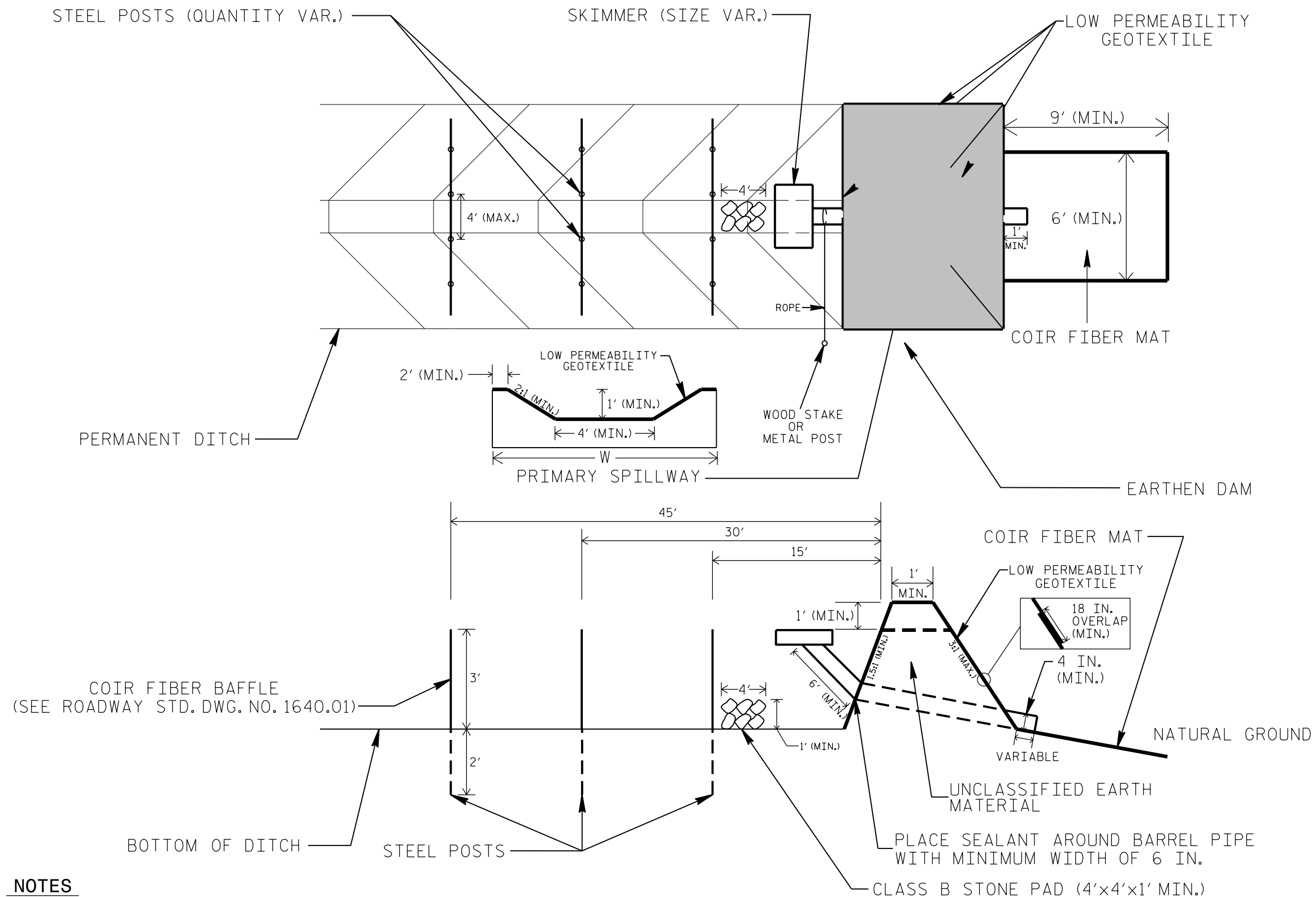
**INSET A**



**SIDE VIEW**

8/17/99  
 16-MAY-2014 11:32  
 C:\Users\A1\Desktop\16-MAY-2014 11:32  
 16-MAY-2014 11:32  
 NEW\_HANOVER\Casttle Hayne RAB-46130\ROADWAY\Proj\PLAN\_SHEETS\W5306-Rdy.tsh.dgn  
 A1\_D3CAB274428

# EARTHEN DAM WITH SKIMMER DETAIL (EAST)



**2" x 2" (nominal) WOODEN STAKE**

**#10 STEEL REINFORCEMENT BAR**

**1" (nominal) STAPLE**

**COIR FIBER MAT ANCHOR OPTIONS**

**NOTES**

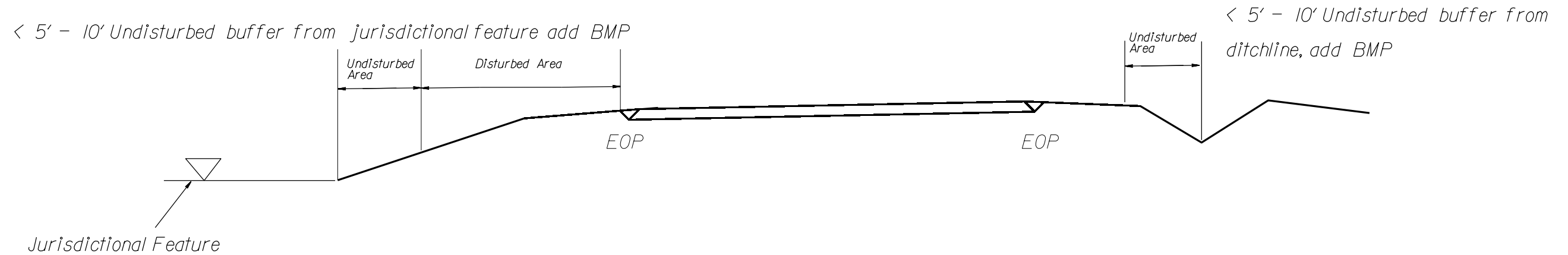
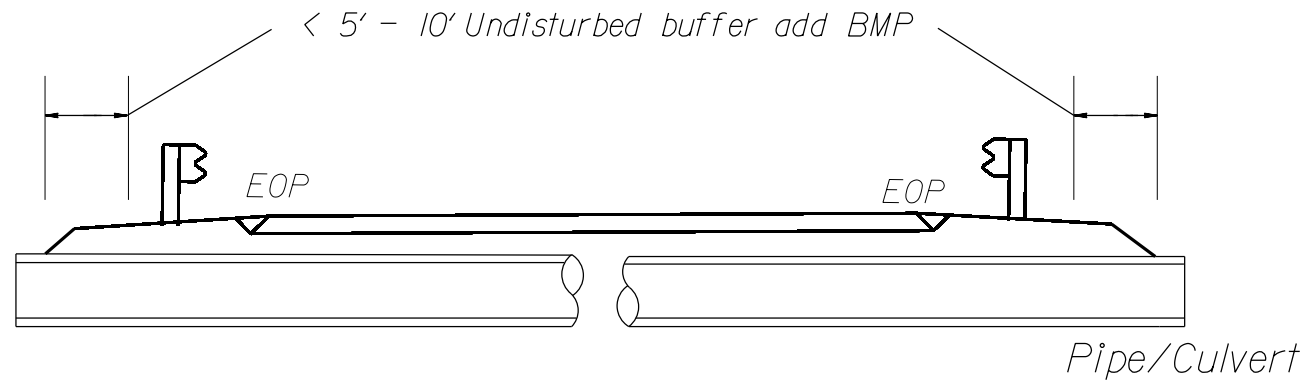
1. LIMIT EARTHEN DAM HEIGHT TO 5 FT.
2. DETERMINE PRIMARY SPILLWAY LENGTH (FT.) USING  $Q/0.4$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.
3. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

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

BMP Options: Wattle or Silt Fence

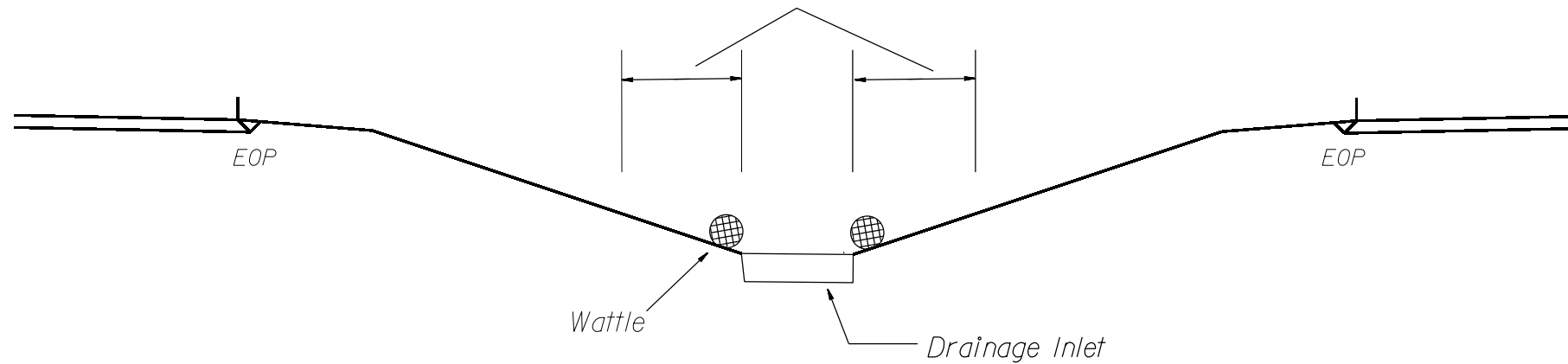
# EROSION CONTROL DETAIL



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



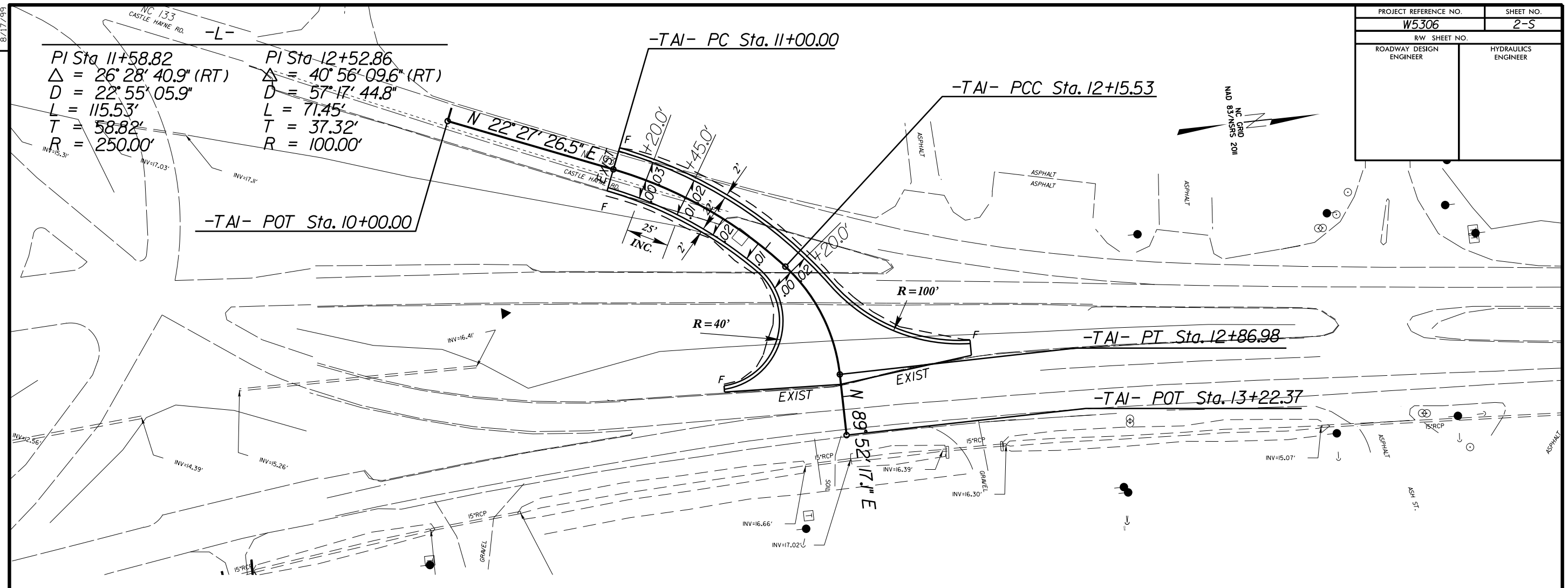
< 5' - 10' Undisturbed buffer from inlet, add wattle



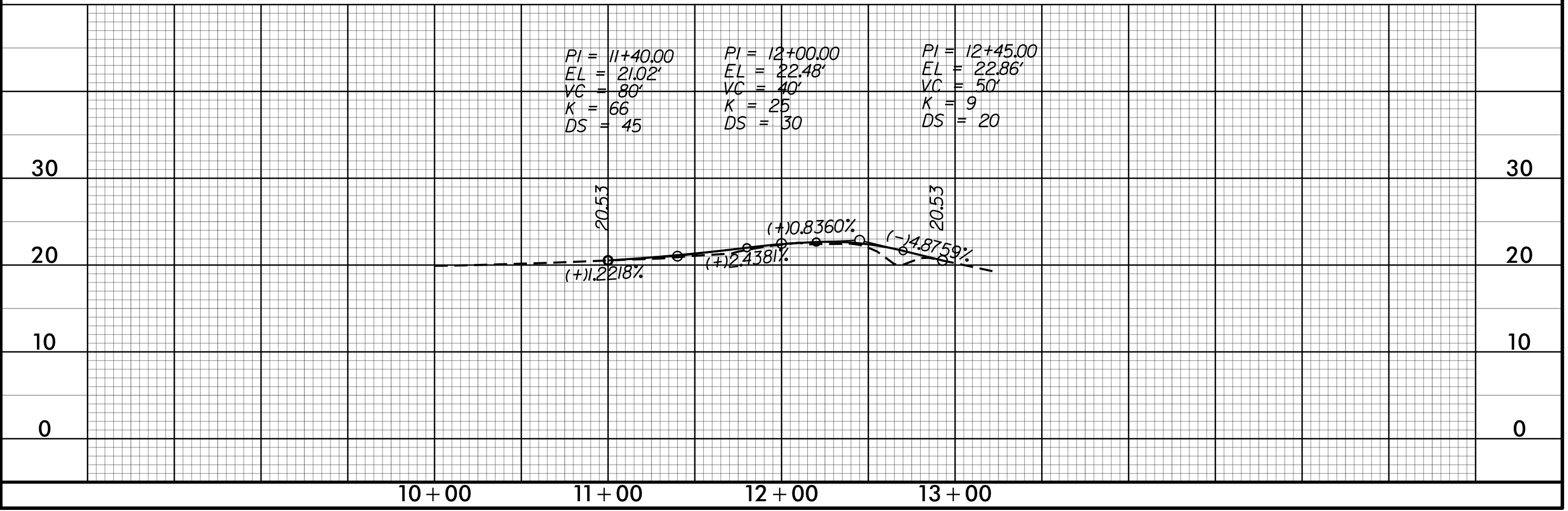
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
W5306	2-S
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NC 133  
 CASTLE HAYNE RD. -L-  
 PI Sta 11+58.82      PI Sta 12+52.86  
 $\Delta = 26^\circ 28' 40.9''$  (RT)       $\Delta = 40^\circ 56' 09.6''$  (RT)  
 $D = 22^\circ 55' 05.9''$        $D = 57^\circ 17' 44.8''$   
 $L = 115.53'$        $L = 71.45'$   
 $T = 58.82'$        $T = 37.32'$   
 $R = 250.00'$        $R = 100.00'$



PI = 11+40.00 EL = 21.02' VC = 80' K = 66 DS = 45	PI = 12+00.00 EL = 22.48' VC = 40' K = 25 DS = 30	PI = 12+45.00 EL = 22.86' VC = 50' K = 9 DS = 20
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REVISIONS

30-MAY-2014 10:35 NEW\_HANOVER\Castle Hayne RAE 46130\ROADWAY\Proj\PLAN\_SHEETS\W5306\_PSH\_2S.dgn  
 DRAWN BY: FREE, DATE: 04/24/14