TIP PROJECT: X-0002B

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

CUMBERLAND COUNTY

LOCATION: FAYETTEVILLE OUTER LOOP FROM EAST OF NC 24 (BRAGG BLVD.) TO NC 87 /NC 210 (MURCHISON RD.)

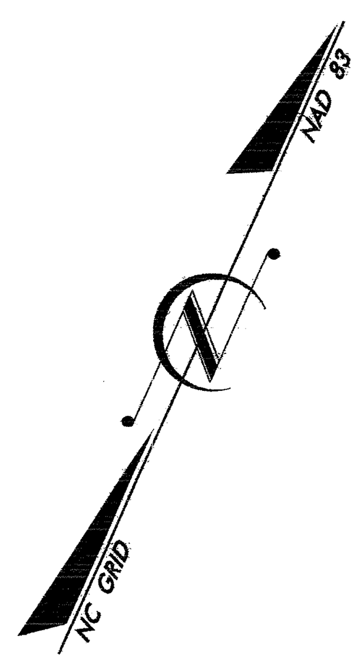
TYPE OF WORK: GRADING, STRUCTURES, RETAINING WALL, PAVING, DRAINAGE, AND SIGNING

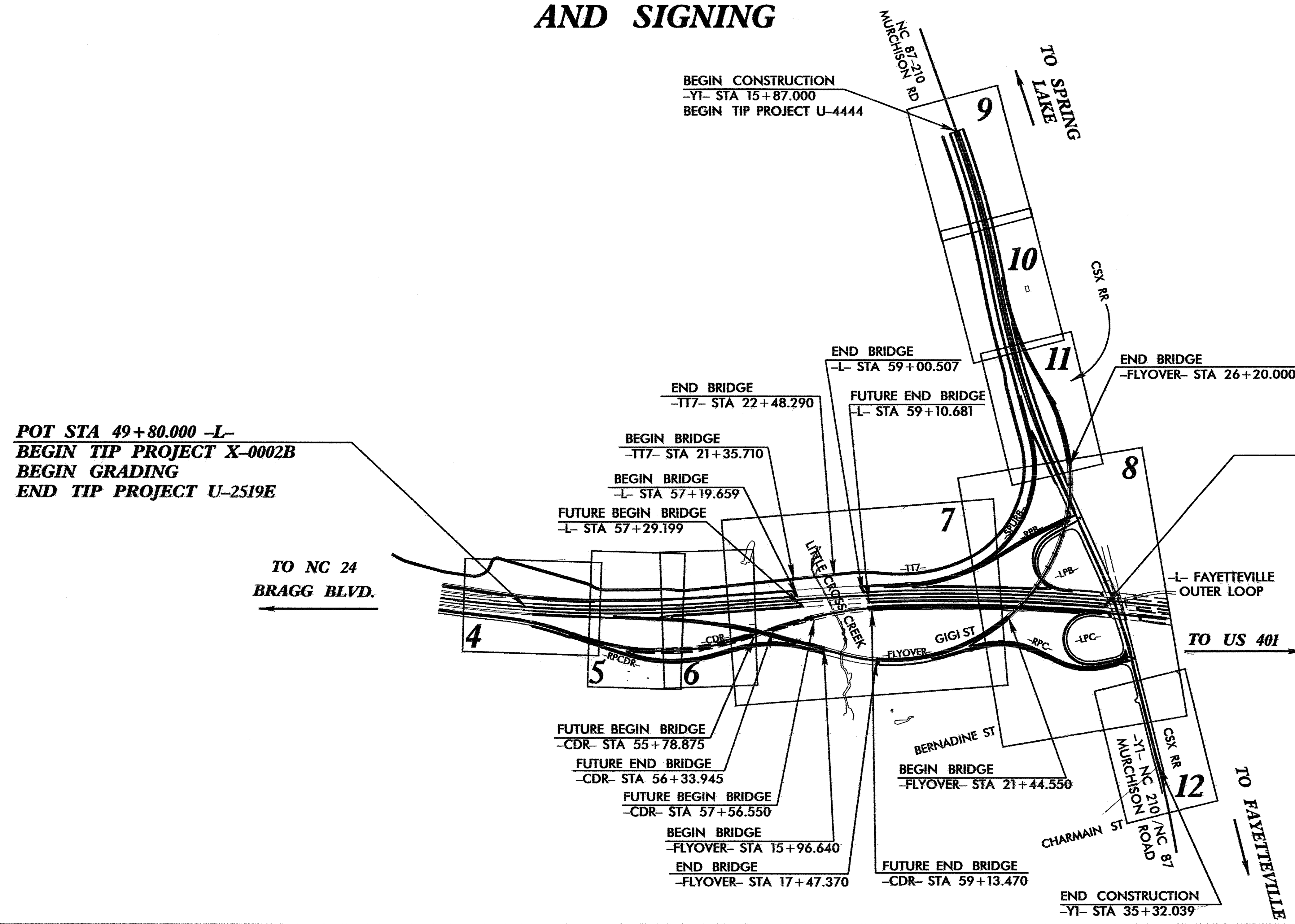
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	X-0002B	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

METRIC

ALL DIMENSIONS IN THESE PLANS ARE IN METERS UNLESS OTHERWISE SHOWN





EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.01	Riser Basin	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

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

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS

GRAPHIC SCALE

0
PLANS

0
PROFILE (HORIZONTAL)

0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Prepared In the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.
Raleigh, NC 27611

2006 STANDARD SPECIFICATIONS

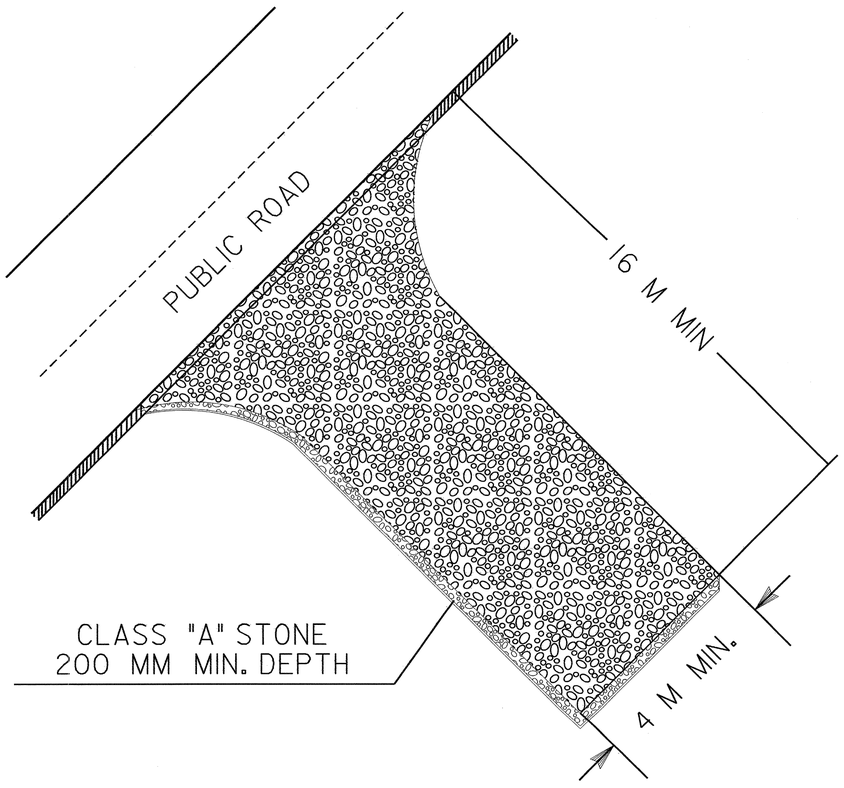
Roadway Standard Drawings

The following roadway metric standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated July 18, 2006 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1622.01 Temporary Berms and Slope Drains
1630.03 Temporary Silt Ditch
1630.05 Temporary Diversion
1632.01 Rock Inlet Sediment Trap Type A
1632.02 Rock Inlet Sediment Trap Type B
1633.01 Temporary Rock Silt Check Type A
1633.02 Temporary Rock Silt Check Type B
1634.01 Temporary Rock Sediment Dam Type A
1634.02 Temporary Rock Sediment Dam Type B
1635.01 Rock Pipe Inlet Sediment Trap Type A
1635.02 Rock Pipe Inlet Sediment Trap Type B

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002B	EC-2
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE



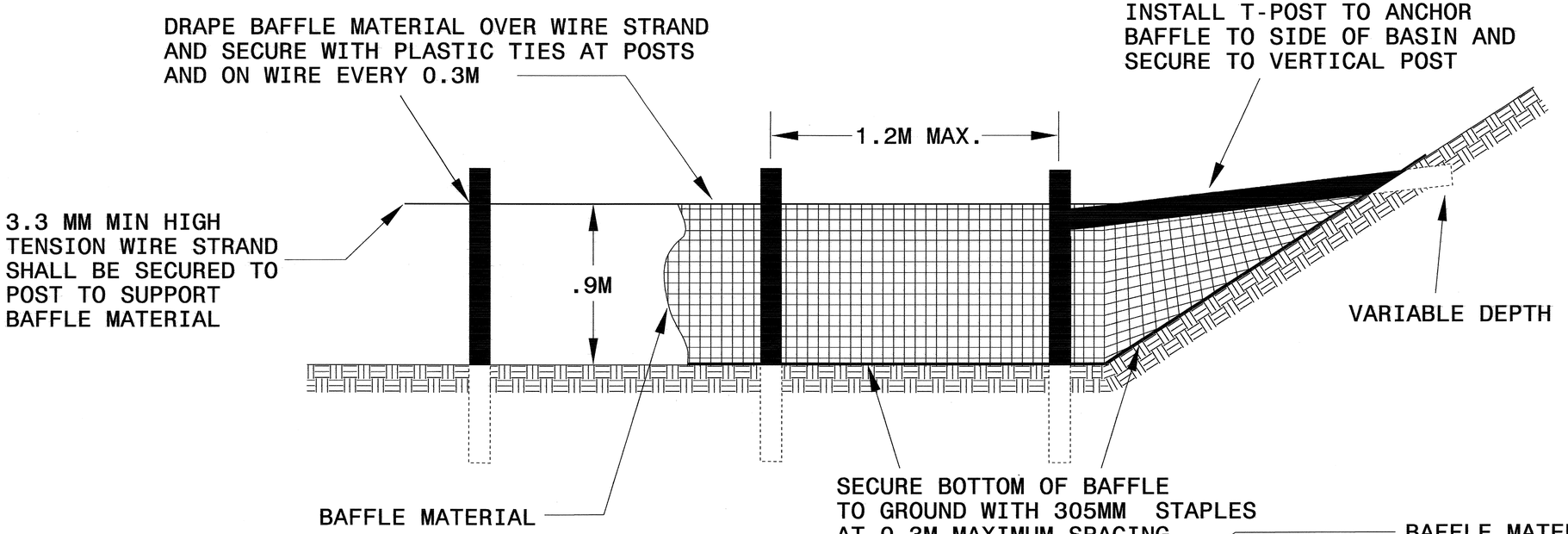
NOTES:

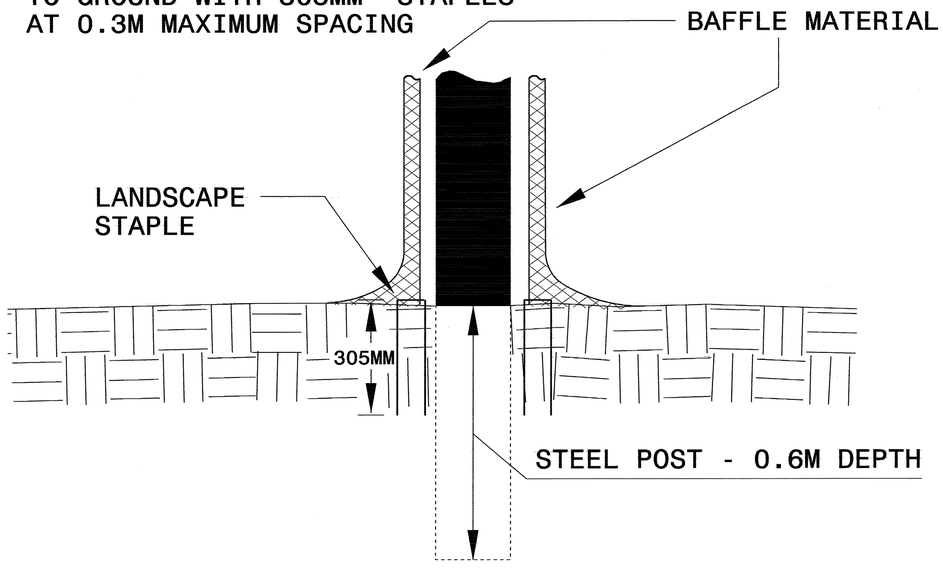
1. TURNING RADIUS SUFFICIENT TO ACCOMODATE LARGE TRUCKS SHALL BE PROVIDED.
2. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY.
4. ANY MATERIAL TRACKED ONTO THE ROADWAY MUST BE CLEANED UP IMMEDIATELY.
5. GRAVEL CONSTRUCTION ENTRANCE SHALL BE LOCATED AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.
6. NUMBER AND LOCATION OF CONSTRUCTION ENTRANCES TO BE DETERMINED BY THE ENGINEER

NOTE: FILTER FABRIC TO BE PLACED BENEATH STONE

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-2A
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



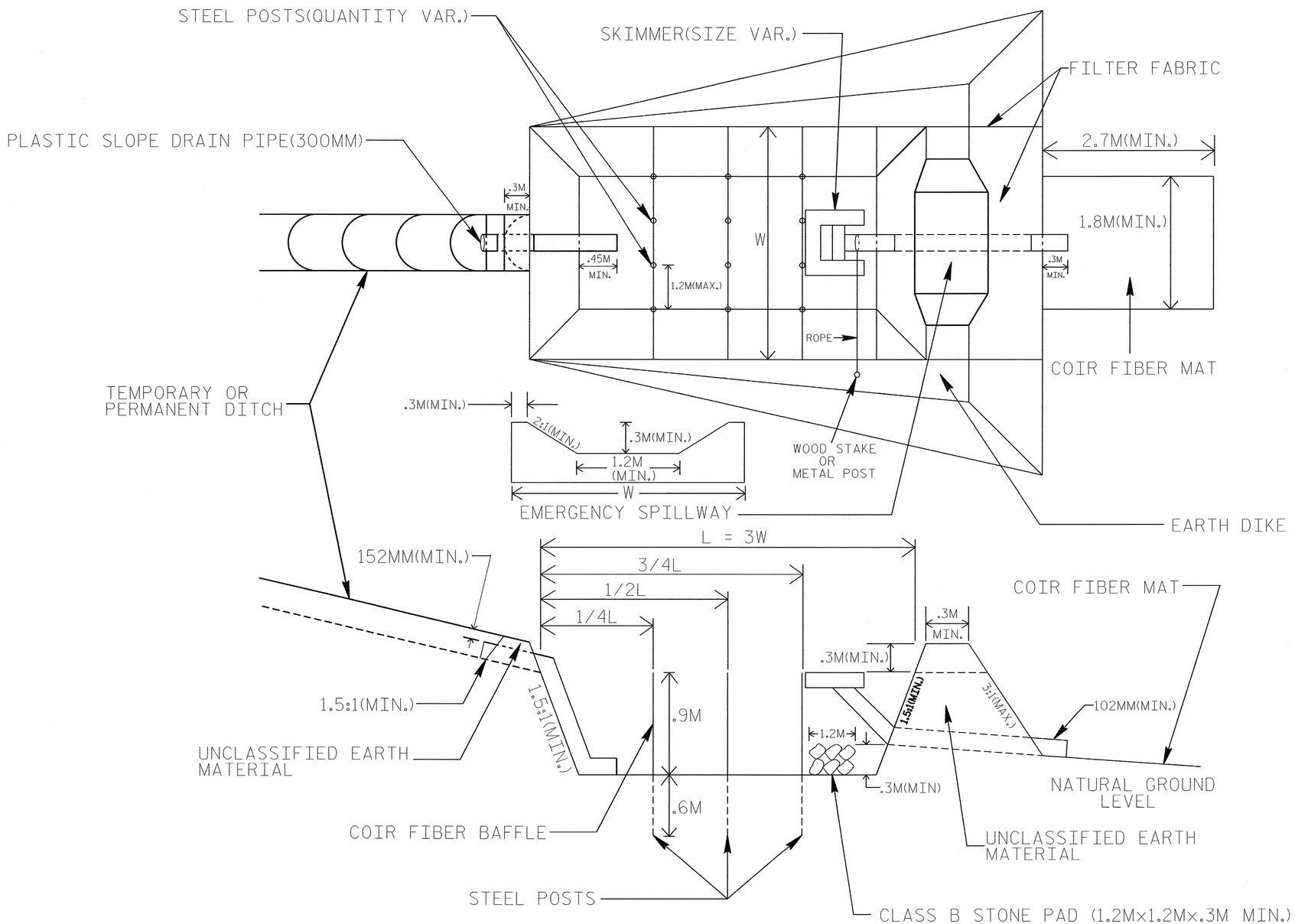


BAFFLE MATERIAL SHALL BE SECURED
TO THE BOTTOM AND SIDES OF BASIN
USING 305MM LANDSCAPE STAPLES

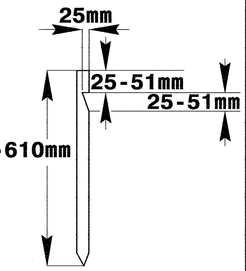
NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 6 M IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.

SKIMMER BASIN WITH BAFFLES DETAIL

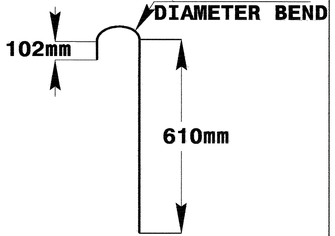
METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002B	EC-2B
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



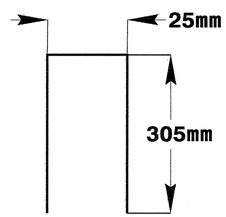
51mm x 51mm (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



25mm (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

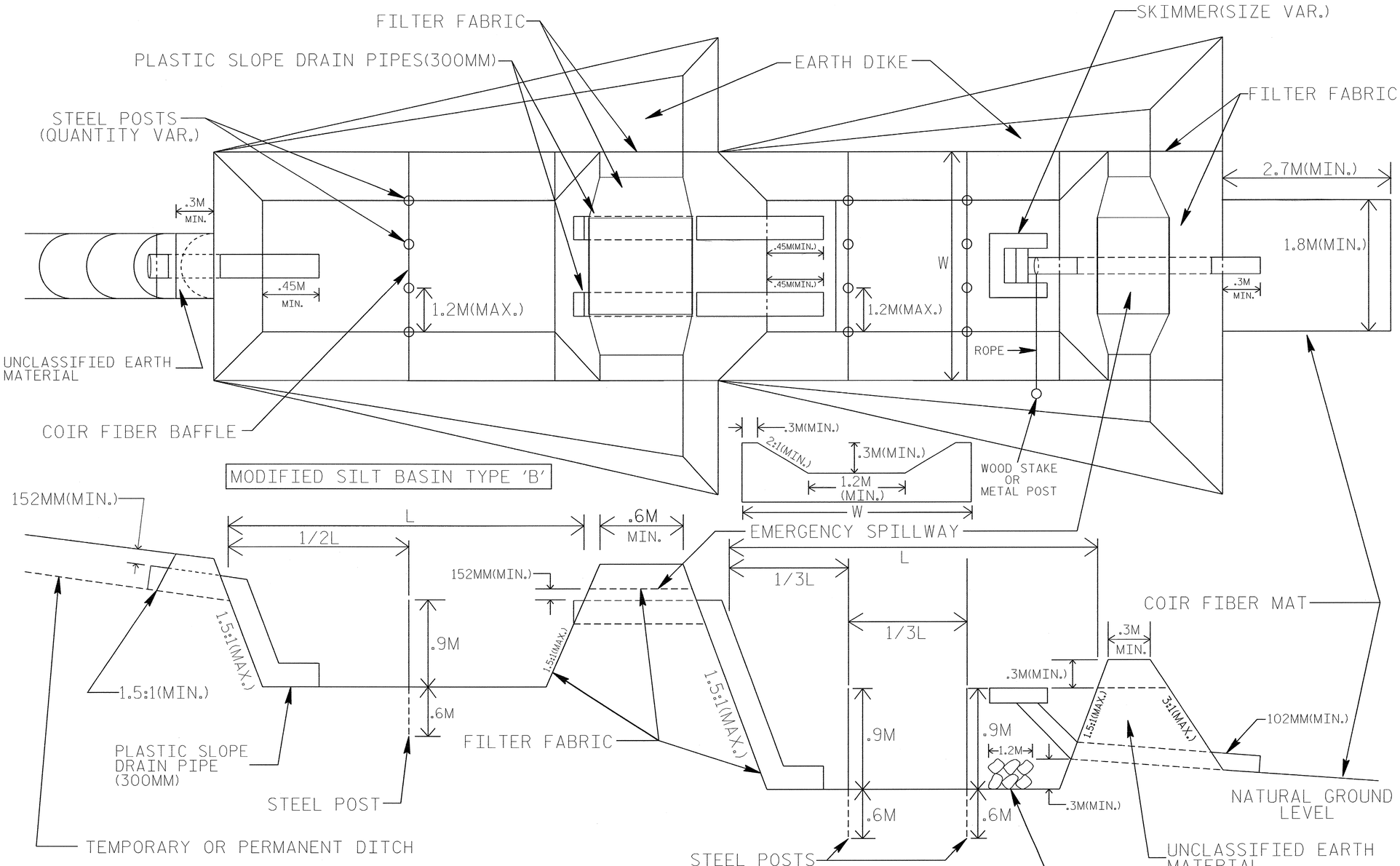
NOT TO SCALE

NOTES

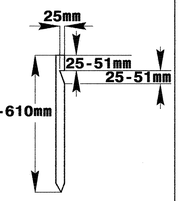
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 1.5M.
3. MINIMUM BASIN WIDTH SHALL BE 3M.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (M) USING Q/0.074, WHERE Q IS FLOW RATE (CMS) INTO BASIN.

TIERED SKIMMER BASIN DETAIL

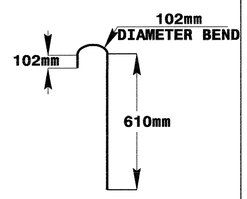
PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-2C
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



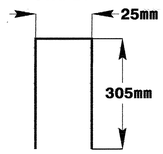
51mm x 51mm (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



25mm (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

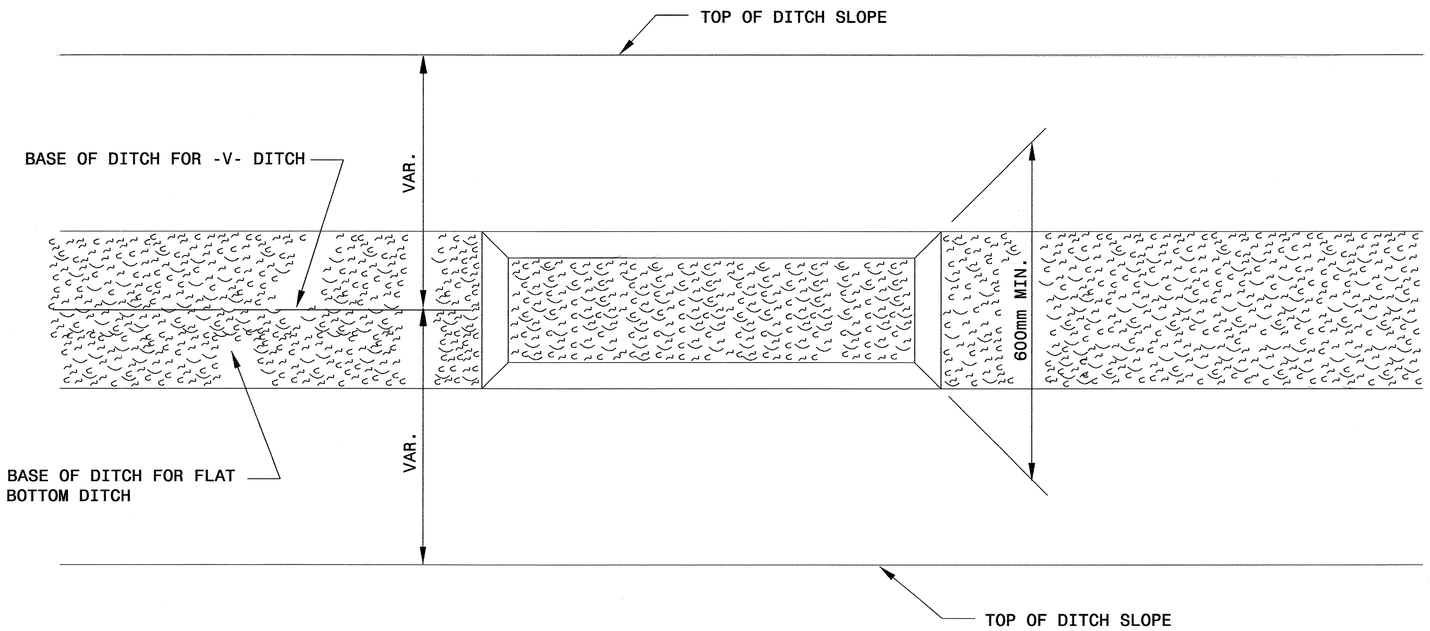
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 1.5M.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. THE MINIMUM BASIN WIDTHS SHALL BE 3M.
5. DETERMINE EMERGENCY SPILLWAY LENGTHS (M) USING Q/0.074, WHERE Q IS FLOW RATE (CMS) INTO UPPER BASIN.

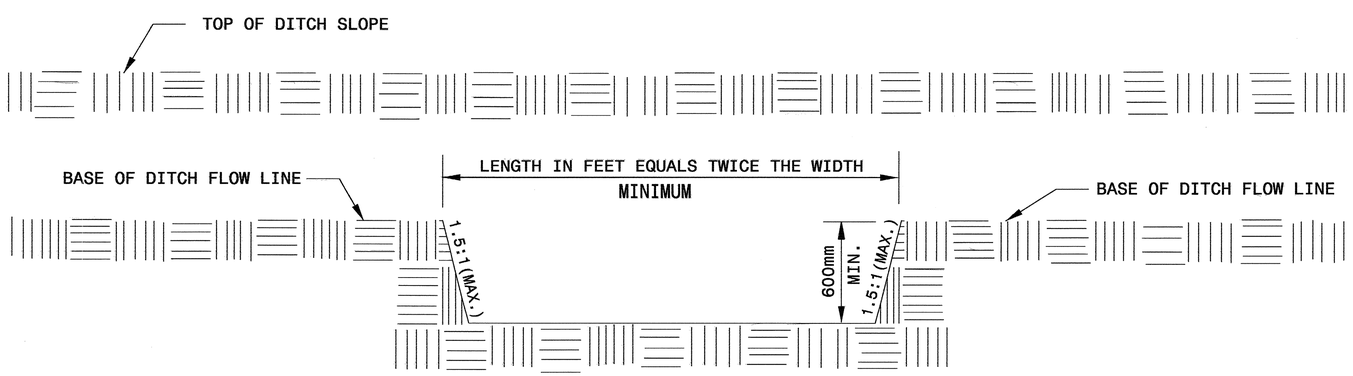
NOT TO SCALE

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002B	EC-2D
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT BASIN 'B' DETAIL



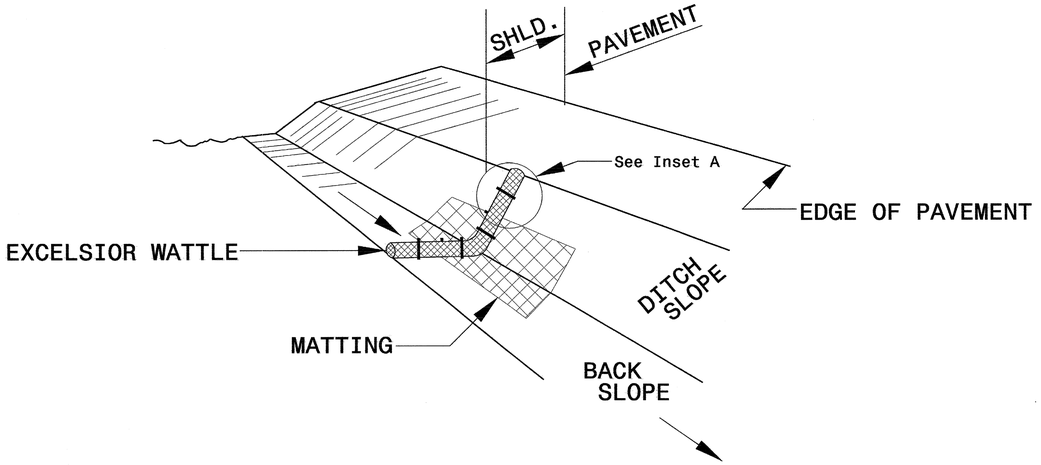
PLAN



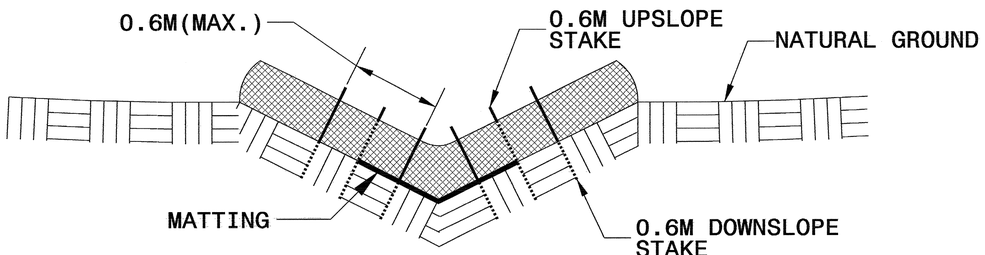
ELEVATION

WATTLE WITH POLYACRYLAMIDE DETAIL

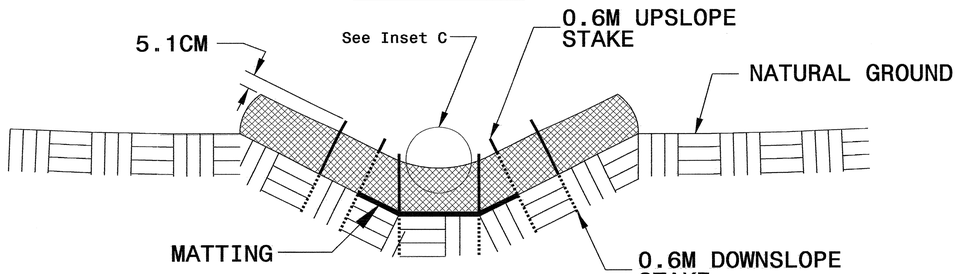
METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002B	EC-2E
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 305 MM DIAMETER EXCELSIOR WATTLE.

USE 0.6 M WOODEN STAKES WITH A 5.1 CM BY 5.1 CM CROSS SECTION.

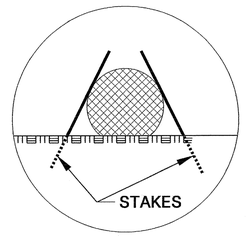
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 3 MM DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 305 MM IN LENGTH.

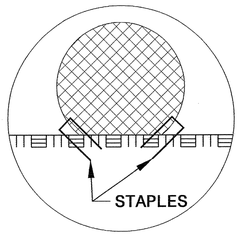
INSTALL STAPLES APPROXIMATELY EVERY 0.3 LINEAR METER ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

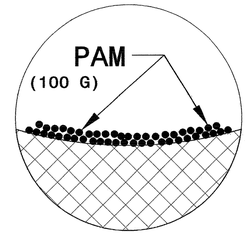
INITIALLY APPLY 100 GRAMS OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 6 MM.



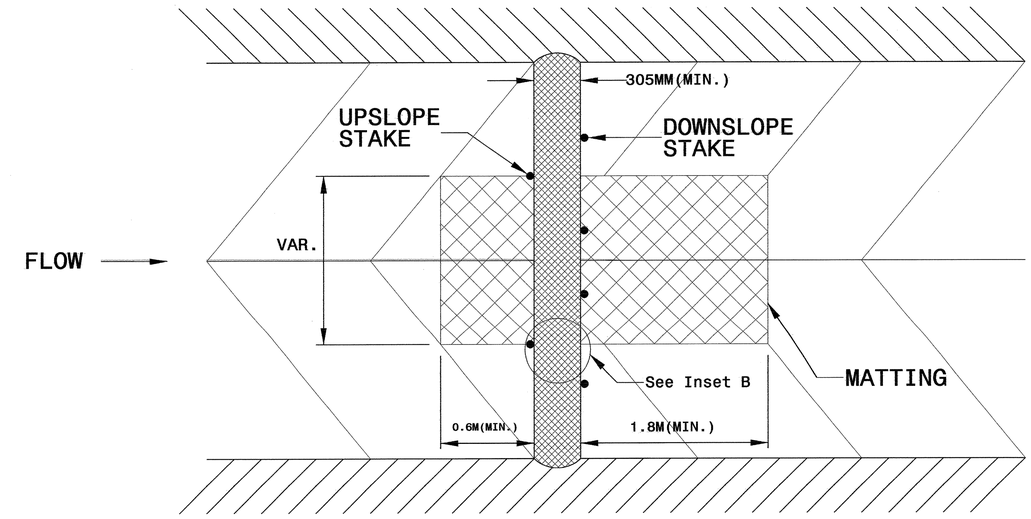
INSET A



INSET B



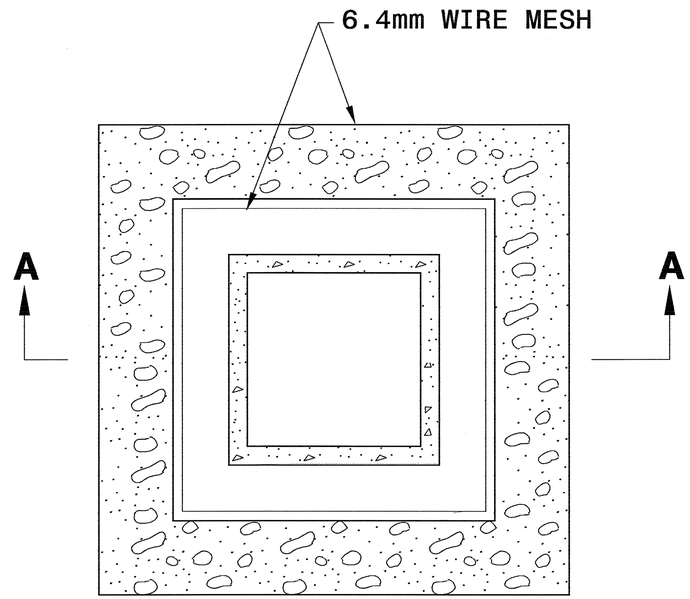
INSET C

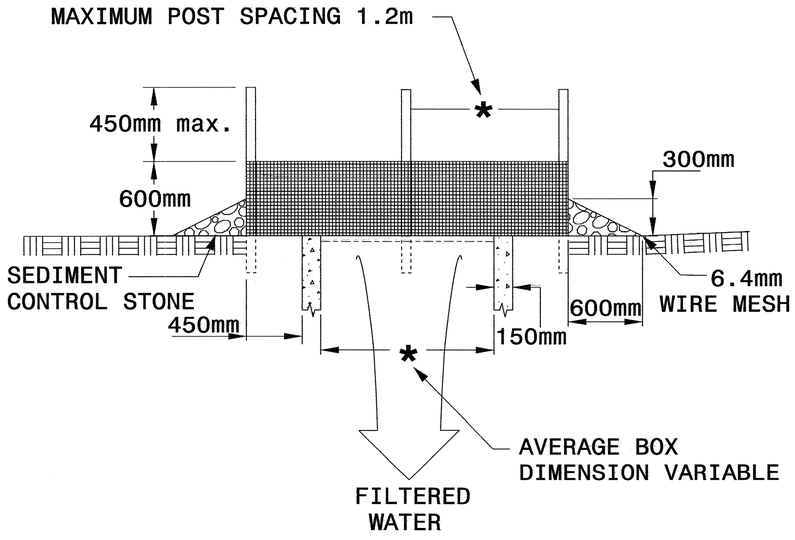


TOP VIEW

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002B	EC-2F
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

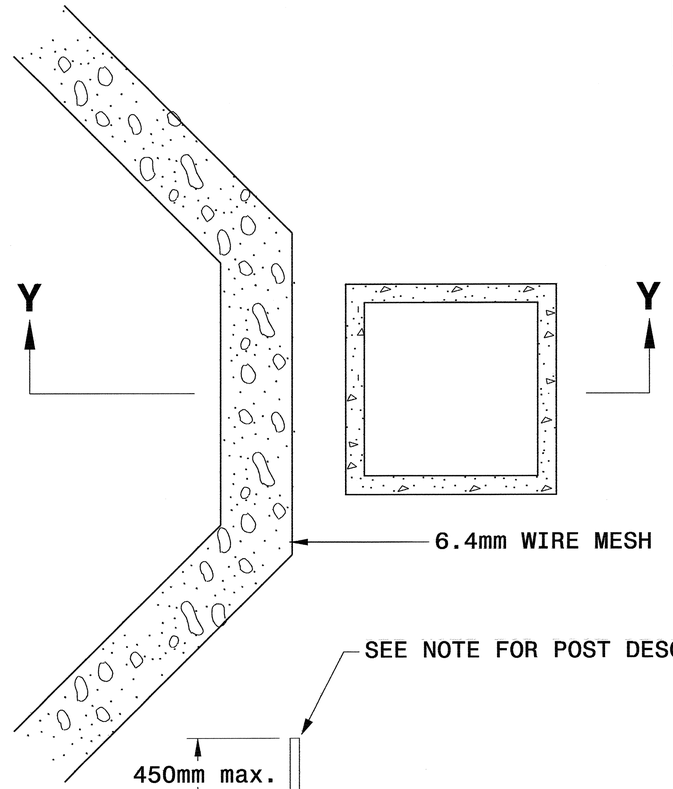
ROCK INLET SEDIMENT TRAP TYPE 'C' DETAIL

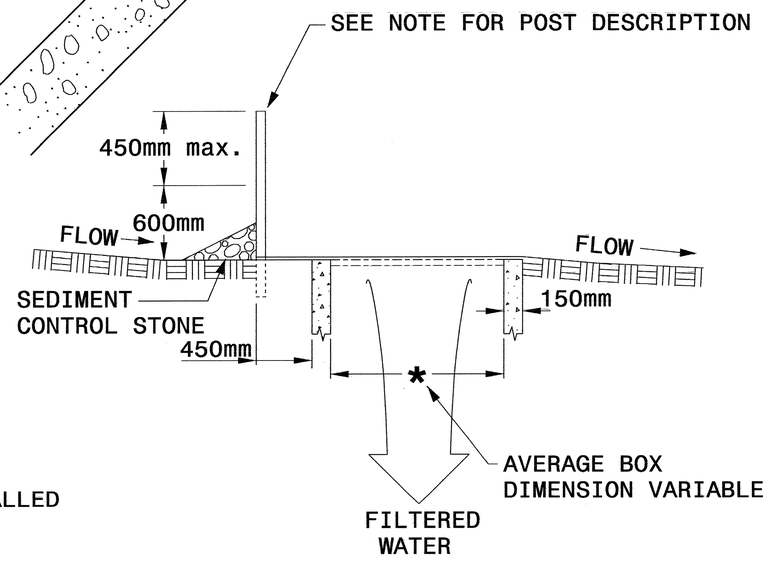




SECTION A-A

NOTE
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.
USE HARDWARE CLOTH 0.65mm WIRE MESH WITH 6.4mm MESH OPENINGS.
PLACE TOP OF WIRE MESH A MINIMUM OF 300mm BELOW THE SHOULDER OR ANY DIVERSION POINT.
INSTALL WIRE MESH UNDER SEDIMENT CONTROL STONE.
USE 1.5m STEEL POST, INSTALLED 450mm DEEP MINIMUM, AND OF THE SELF-FASTENER ANGLE STEEL TYPE.
SPACE POST A MAXIMUM OF 1.2m.





SECTION Y-Y

MULTI-DIRECTIONAL FLOW

SINGLE-DIRECTIONAL FLOW

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002B	EC-2G
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SPECIAL SEDIMENT CONTROL FENCE DETAIL

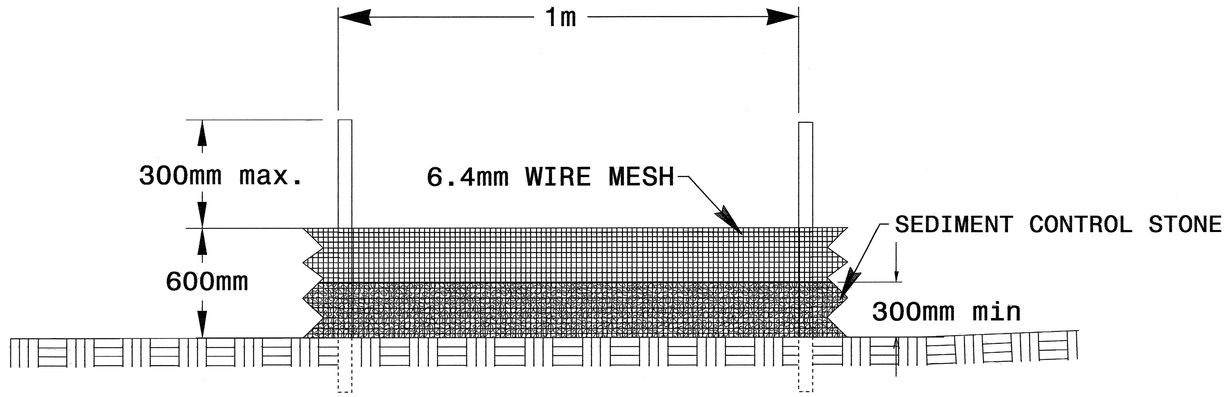
GENERAL NOTES:

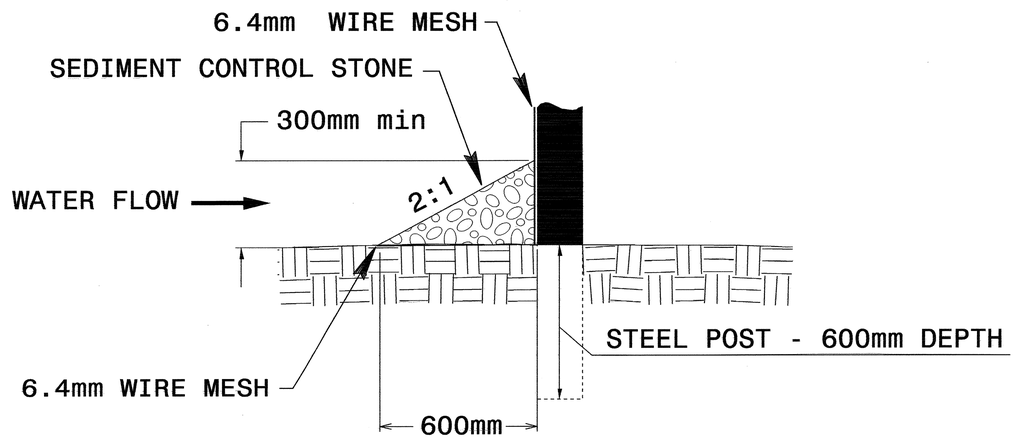
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.

USE 0.65mm HARDWARE CLOTH WIRE MESH WITH 6.4 mm MESH OPENINGS.

INSTALL 1.5m SELF FASTENER ANGLE STEEL POST 600mm DEEP MINIMUM.

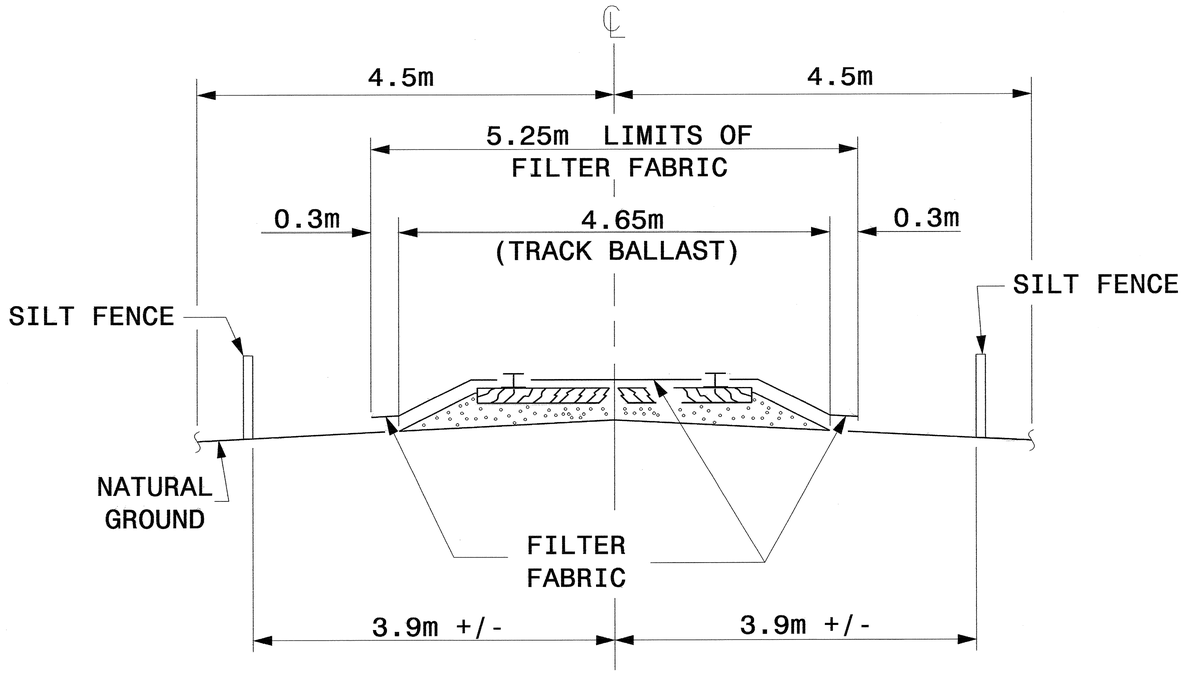
SPACE POST A MAXIMUM OF 1m.





METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002B	EC-2H
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

RAILROAD EROSION CONTROL DETAIL



NOTES

INSTALL RAILROAD EROSION CONTROL MEASURES PRIOR TO PERFORMING ANY WORK IN THE RAILROAD RIGHT-OF-WAY.

ADDITIONAL EROSION CONTROL MEASURES FOR PROTECTION OF RAILROAD DITCHES MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.

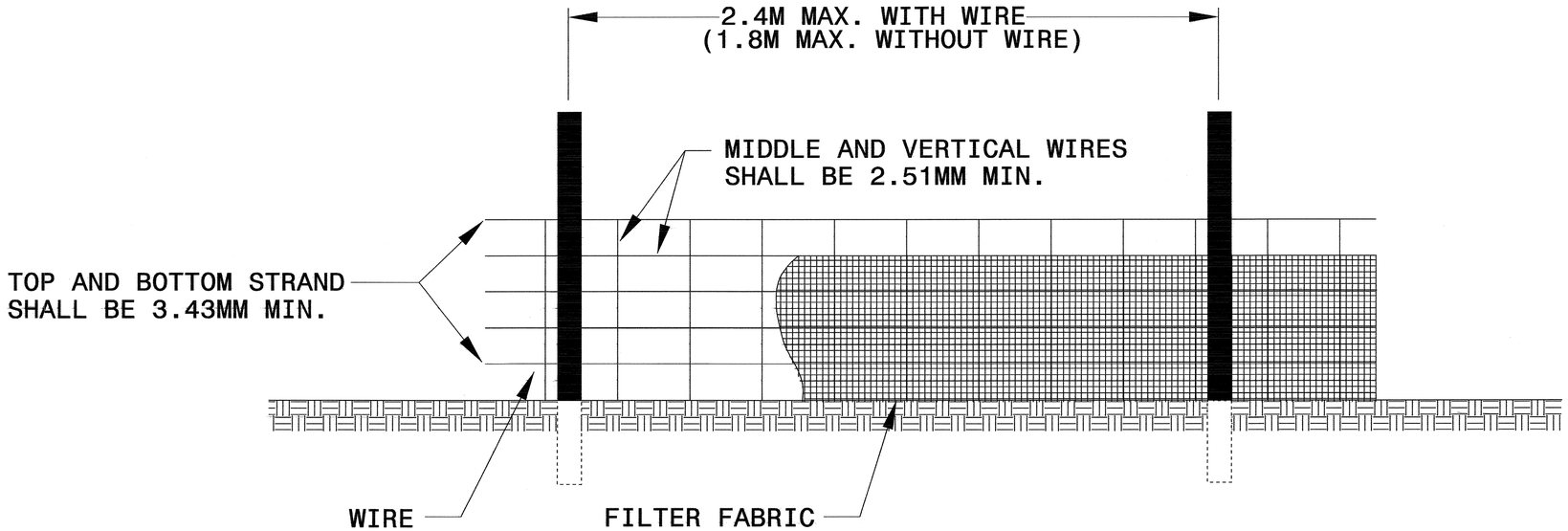
MAKE NO SEPARATE PAYMENT FOR RAILROAD EROSION CONTROL MEASURES.

EXTEND LIMITS OF SILT FENCE AND FILTER FABRIC PARALLEL TO RAILROAD A MINIMUM OF 3m OUTSIDE EDGE OF SUPERSTRUCTURE OR TOE OF SLOPE ON CONSTRUCTION. A GREATER LENGTH OF SILT FENCE OR FILTER FABRIC MAY BE REQUIRED IF SO DIRECTED BY THE ENGINEER.

NAIL FILTER FABRIC TO TIMBER RAIL TIES WITH PRIME SOURCE "GRIP CAP" OR EQUIVALENT. SECURE FILTER FABRIC ON SHOULDER AS DIRECTED BY THE ENGINEER AND RAILROAD.

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	X-0002B	EC-21
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY SILT FENCE DETAIL

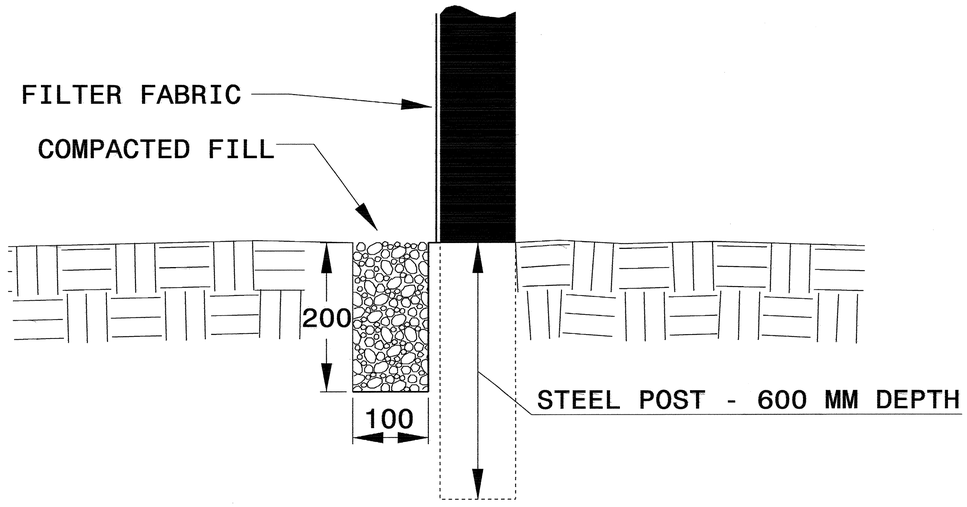


NOTES

USE WIRE A MINIMUM OF 800MM IN WIDTH AND WITH A MINIMUM OF 6 LINE WIRES WITH 300MM STAY SPACING.

USE FILTER FABRIC A MINIMUM OF 900MM IN WIDTH AND FASTEN ADEQUATELY TO THE WIRE AS DIRECTED BY THE ENGINEER.

PROVIDE 1.5M STEEL POST OF THE SELF-FASTENER ANGLE STEEL TYPE. ANGLE STEEL TYPE.



EXTENSION OF FABRIC AND WIRE INTO TRENCH

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)
4	-L-	49+80	50+80	RT	2770
4	-CDR-	50+48	51+60	LT	410
5	-FLYOVER-	11+30	11+66	RT	90
6	-FLYOVER-	12+37	12+97	LT	220
6	-L-	55+60	55+78	RT	55
6	-L-	53+80	54+40	RT	730
6	-CDR-	53+40	55+00	LT	305
6	-RPCDR-	13+89	15+11	LT	235
7	-L-	56+40	57+20	RT	630
7	-CDR-	61+73	62+36	RT	200
7	-RPCDR-	15+20	15+80	RT	160
7	-L-	61+20	61+60	LT	490
7	-SPURB-	12+00	12+80	LT	225
8	-LPB-	11+83	12+20	LT	685
8	-RPC-	12+55	13+40	RT	290
8	-RPC-	12+55	14+20	LT	7700
8	-LPC-	13+00	15+40	LT	745
8	-L-	60+00	65+40	RT	3420
8	-TT7-	28+00	29+00	LT	225
14	-Y1-	16+00	17+20	MEDIAN	730
15	-Y1-	18+20	19+60	MEDIAN	855
15	-Y1-	21+20	22+20	RT	1845
16	-Y1-	23+80	24+40	LT	1730
16	-Y1-	25+00	25+60	LT	660
16	-FLYOVER-	26+32	27+80	LT	285
			SUBTOTAL		25690
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					35720
				TOTAL	61410
				SAY	61500

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-3A
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF NORTH CAROLINA

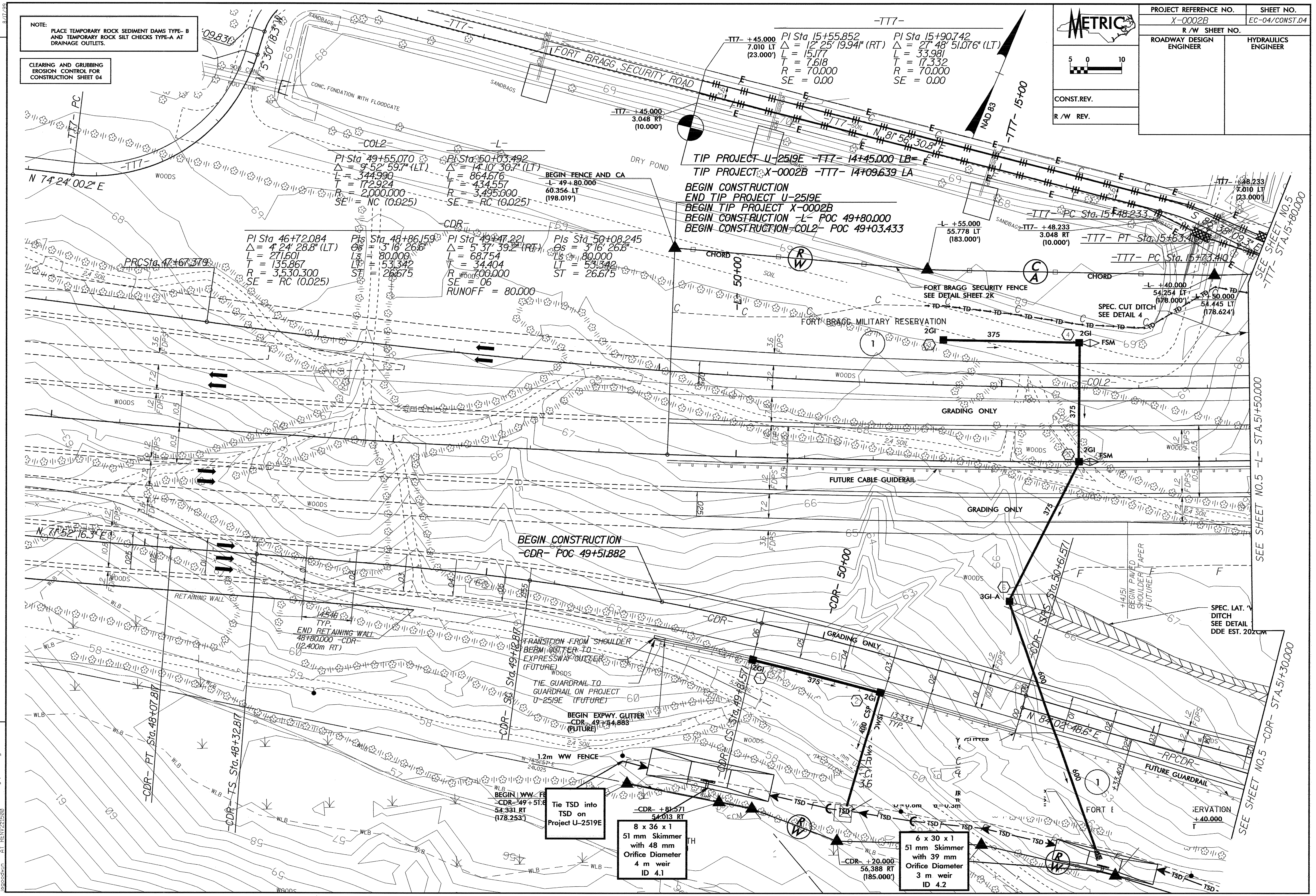
SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMENT MAT

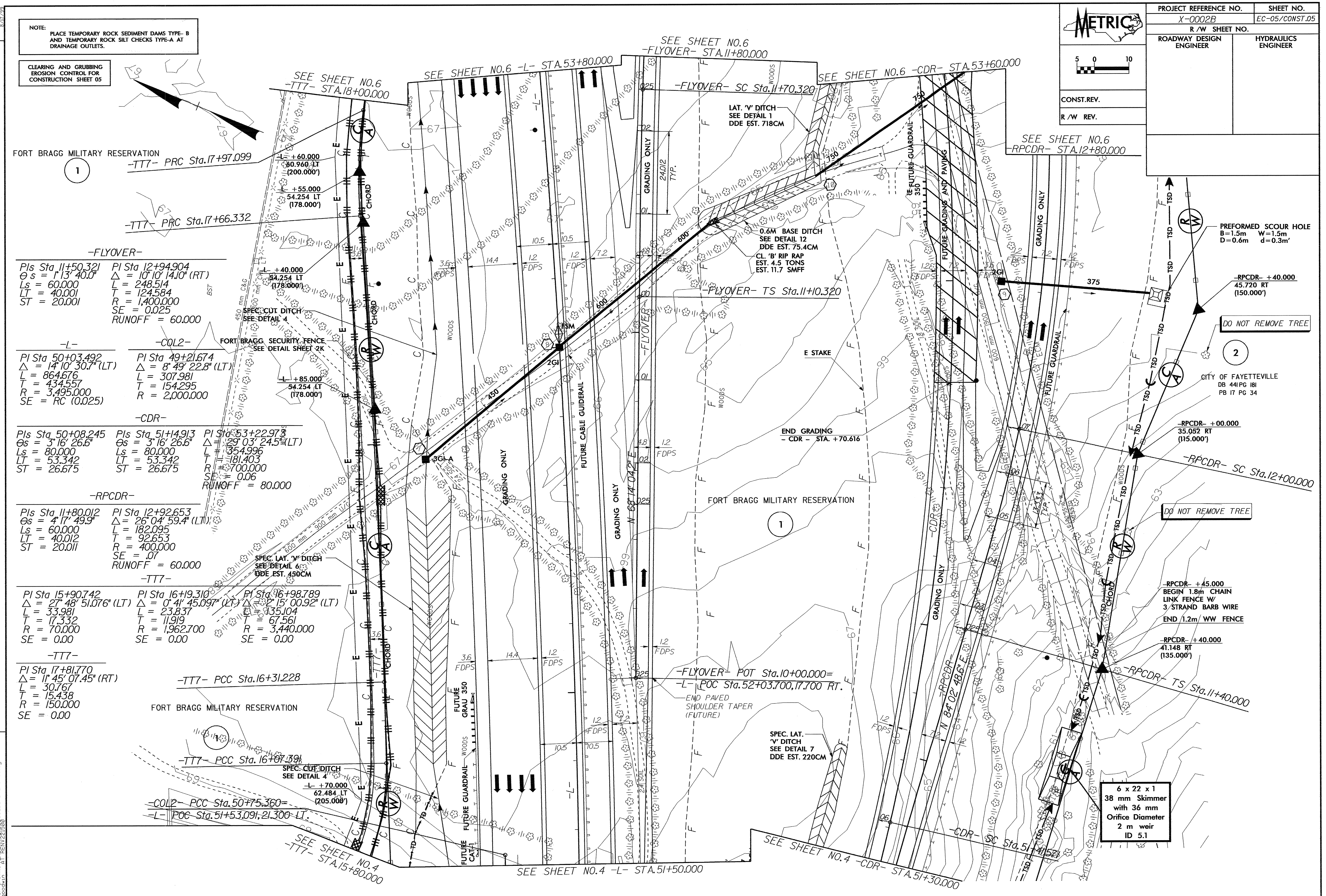
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)
8	-FLYOVER-	20+60	21+40	RT	2970
8	-LPC-	10+88	11+45	RT	5785
8	-SPURB-	13+40	14+40	MEDIAN	1650
8	-L-	63+60	64+00	LT	1650
8	-CDR-	62+36	63+16	RT	175
15	-Y1-	20+40	21+00	MEDIAN	365
16	-Y1-	24+80	25+60	RT	1320
			SUBTOTAL		13915
		ADDITIONAL PSRM TO BE INSTALLED			675
				TOTAL	14590
				SAY	14600

PERMANENT SOIL REINFORCEMENT MAT

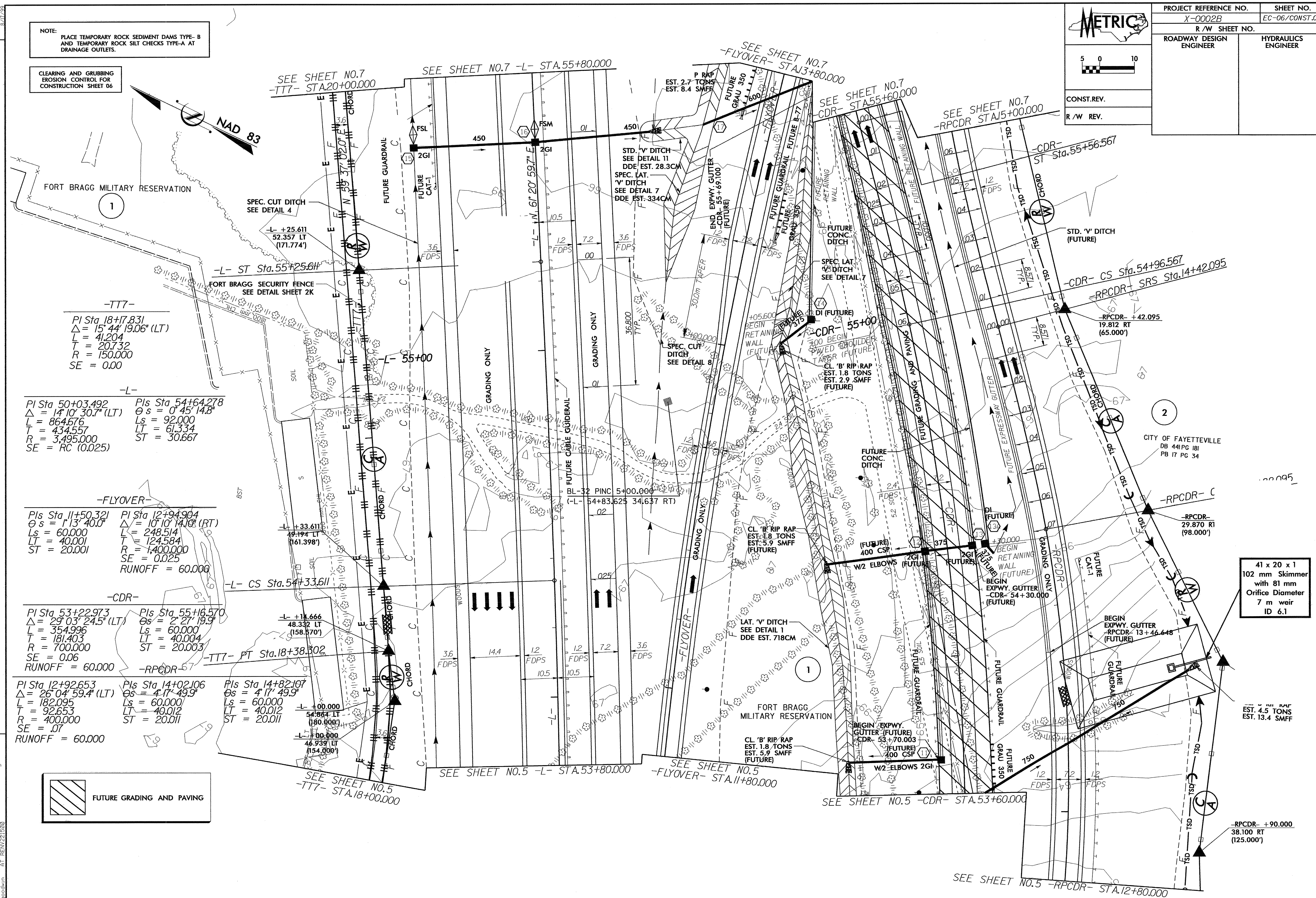
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SM)



PROJECT REFERENCE NO.
X-0002B
SHEET NO.
EC-04/CONST.04
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
REVISIONS
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 04
-TT7-
PI Sta 15+55.852
△ = 12° 25' 19.941" (RT)
L = 15.177
T = 7.618
R = 70.000
SE = 0.00
PI Sta 15+90.742
△ = 27° 48' 51.076" (LT)
L = 33.981
T = 17.332
R = 70.000
SE = 0.00
-COL2-
PI Sta 49+55.070
△ = 9° 52' 59.7" (LT)
L = 344.990
T = 172.924
R = 2,000.000
SE = NC (0.025)
-L-
PI Sta 50+03.492
△ = 14° 10' 30.7" (LT)
L = 864.676
T = 434.557
R = 3,495.000
SE = RC (0.025)
-CDR-
PI Sta 46+72.084
△ = 4° 24' 28.8" (LT)
L = 271.601
T = 135.867
R = 3,530.300
SE = RC (0.025)
PIs Sta 48+86.159
θs = 3° 16' 26.6"
Ls = 80.000
LT = 53.342
ST = 26.675
PI Sta 49+47.221
△ = 5° 37' 39.2" (RT)
L = 68.754
T = 34.404
R = 700.000
SE = 06
RUNOFF = 80.000
PIs Sta 50+08.245
θs = 3° 16' 26.6"
Ls = 80.000
LT = 53.342
ST = 26.675
FORT BRAGG SECURITY ROAD
TIP PROJECT U-2519E -TT7- 14+45.000 LB=
TIP PROJECT X-0002B -TT7- 14+09.639 LA
BEGIN CONSTRUCTION
END TIP PROJECT U-2519E
BEGIN TIP PROJECT X-0002B
BEGIN CONSTRUCTION -L- POC 49+80.000
BEGIN CONSTRUCTION -COL2- POC 49+03.433
BEGIN FENCE AND CA
-L- 49+80.000
60.356 LT
(198.019')
FORT BRAGG SECURITY FENCE
SEE DETAIL SHEET 2K
FORT BRAGG MILITARY RESERVATION
SPEC. CUT DITCH
SEE DETAIL 4
DRY POND
CONC. FONDATION WITH FLOODGATE
SANDBAGS
WOODS
CHORD
GRADING ONLY
FUTURE CABLE GUIDERAIL
BEGIN CONSTRUCTION
-CDR- POC 49+51.882
PRCSta. 47+67.379
N 74° 24' 00.2" E
N 71° 52' 16.3" E
N 84° 02' 48.6" E
N 81° 56' 30.8" E
N 5° 30' 18.3" W
RETAINING WALL
14.546 TYP.
END RETAINING WALL 48+80.000 -CDR- (12.400m RT)
TRANSITION FROM SHOULDER BERM GUTTER TO EXPRESSWAY GUTTER (FUTURE)
TIE GUARDRAIL TO GUARDRAIL ON PROJECT U-2519E (FUTURE)
BEGIN EXPWY. GUTTER -CDR- 49+54.883 (FUTURE)
1.2m WW FENCE
BEGIN WW FENCE
Tie TSD into TSD on Project U-2519E
8 x 36 x 1
51 mm Skimmer
with 48 mm
Orifice Diameter
4 m weir
ID 4.1
6 x 30 x 1
51 mm Skimmer
with 39 mm
Orifice Diameter
3 m weir
ID 4.2
-CDR- +20.000
56.388 RT
(185.000')
-CDR- +81.571
54.013 RT
13.333 TYP.
SPEC. LAT. V DITCH
SEE DETAIL
DDE EST. 2020M
+41.51 BEGIN PAVED SHOULDER TAPER (FUTURE)
-RPCDR-
FUTURE GUARDRAIL
-CDR- PT Sta. 48+07.817
-CDR- TS Sta. 48+32.817
-CDR- SC Sta. 49+12.817
-CDR- CS Sta. 49+81.571
-CDR- ST Sta. 50+61.571
-TT7- PC Sta. 15+48.233
-TT7- PT Sta. 15+63.410
-TT7- PC Sta. 15+73.410
SEE SHEET NO.5 -TT7- STA.15+80.000
SEE SHEET NO.5 -L- STA.51+50.000
SEE SHEET NO.5 -CDR- STA.51+30.000
NAD 83
2GI
3GI-A
FSM
375
600
400 CSP



PROJECT REFERENCE NO.
X-0002B
SHEET NO.
EC-05/CONST.05
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
REVISIONS
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 05
FORT BRAGG MILITARY RESERVATION
SEE SHEET NO.6 -TT7- STA.18+00.000
SEE SHEET NO.6 -L- STA.53+80.000
SEE SHEET NO.6 -FLYOVER- STA.11+80.000
SEE SHEET NO.6 -CDR- STA.53+60.000
SEE SHEET NO.6 -RPCDR- STA.12+80.000
SEE SHEET NO.4 -TT7- STA.15+80.000
SEE SHEET NO.4 -L- STA.51+50.000
SEE SHEET NO.4 -CDR- STA.51+30.000
-TT7- PRC Sta.17+97.099
-TT7- PRC Sta.17+66.332
-TT7- PCC Sta.16+31.228
-TT7- PCC Sta.16+07.391
-COL2- PCC Sta.50+75.360=
-L- POC Sta.51+53.091, 21.300 LT.
-FLYOVER- SC Sta.11+70.320
-FLYOVER- TS Sta.11+10.320
-FLYOVER- POT Sta.10+00.000=
-L- POC Sta.52+03.700, 17.700 RT.
-RPCDR- SC Sta.12+00.000
-RPCDR- TS Sta.11+40.000
-CDR- SC Sta.51+41.571
-FLYOVER-
PIs Sta 11+50.321 Θs = 1°13' 40.0" Ls = 60.000 LT = 40.001 ST = 20.001
PI Sta 12+94.904 Δ = 10°10' 14.10" (RT) L = 248.514 T = 124.584 R = 1,400.000 SE = 0.025 RUNOFF = 60.000
-L-
PI Sta 50+03.492 Δ = 14°10' 30.7" (LT) L = 864.676 T = 434.557 R = 3,495.000 SE = RC (0.025)
-COL2-
PI Sta 49+21.674 Δ = 8°49' 22.8" (LT) L = 307.981 T = 154.295 R = 2,000.000
-CDR-
PIs Sta 50+08.245 Θs = 3°16' 26.6" Ls = 80.000 LT = 53.342 ST = 26.675
PIs Sta 51+14.913 Θs = 3°16' 26.6" Ls = 80.000 LT = 53.342 ST = 26.675
PI Sta 53+22.973 Δ = 29°03' 24.5" (LT) L = 354.996 T = 181.403 R = 700.000 SE = 0.06 RUNOFF = 80.000
-RPCDR-
PIs Sta 11+80.012 Θs = 4°17' 49.9" Ls = 60.000 LT = 40.012 ST = 20.011
PI Sta 12+92.653 Δ = 26°04' 59.4" (LT) L = 182.095 T = 92.653 R = 400.000 SE = .07 RUNOFF = 60.000
-TT7-
PI Sta 15+90.742 Δ = 27°48' 51.076" (LT) L = 33.981 T = 17.332 R = 70.000 SE = 0.00
PI Sta 16+19.310 Δ = 0°41' 45.097" (LT) L = 23.837 T = 11.919 R = 1,962.700 SE = 0.00
PI Sta 16+98.789 Δ = 2°15' 00.92" (LT) L = 135.104 T = 67.561 R = 3,440.000 SE = 0.00
-TT7-
PI Sta 17+81.770 Δ = 11°45' 07.45" (RT) L = 30.767 T = 15.438 R = 150.000 SE = 0.00
-L- +60.000 60.960 LT (200.000')
-L- +55.000 54.254 LT (178.000')
-L- +40.000 54.254 LT (178.000')
-L- +85.000 54.254 LT (178.000')
-L- +70.000 62.484 LT (205.000')
SPEC. CUT DITCH SEE DETAIL 4
FORT BRAGG SECURITY FENCE SEE DETAIL SHEET 2K
SPEC. LAT. 'V' DITCH SEE DETAIL 6 DDE EST. 450CM
LAT. 'V' DITCH SEE DETAIL 1 DDE EST. 718CM
0.6M BASE DITCH SEE DETAIL 12 DDE EST. 75.4CM
CL. 'B' RIP RAP EST. 4.5 TONS EST. 11.7 SMFF
SPEC. LAT. 'V' DITCH SEE DETAIL 7 DDE EST. 220CM
END GRADING - CDR - STA. +70.616
E STAKE
END PAVED SHOULDER TAPER (FUTURE)
GRADING ONLY
FUTURE CABLE GUIDERAIL
FUTURE GUARDRAIL
FUTURE GRADING AND PAVING
FUTURE GRAU 350
WOODS
PREFORMED SCOUR HOLE B=1.5m W=1.5m D=0.6m d=0.3m'
-RPCDR- +40.000 45.720 RT (150.000')
DO NOT REMOVE TREE
CITY OF FAYETTEVILLE DB 441PG 181 PB 17 PG 34
-RPCDR- +00.000 35.052 RT (115.000')
-RPCDR- +45.000 BEGIN 1.8m CHAIN LINK FENCE W/ 3 STRAND BARB WIRE
END 1.2m WW FENCE
-RPCDR- +40.000 41.148 RT (135.000')
6 x 22 x 1 38 mm Skimmer with 36 mm Orifice Diameter 2 m weir ID 5.1
N 68°14' 04.2" E
N 84°02' 48.6" E



PROJECT REFERENCE NO.
X-0002B
SHEET NO.
EC-06/CONST.06
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
5 0 10
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 06
NAD 83
SEE SHEET NO.7 -TT7- STA.20+00.000
SEE SHEET NO.7 -L- STA.55+80.000
SEE SHEET NO.7 -FLYOVER- STA.13+80.000
SEE SHEET NO.7 -CDR- STA.55+60.000
SEE SHEET NO.7 -RPCDR- STA.15+00.000
FORT BRAGG MILITARY RESERVATION
SPEC. CUT DITCH SEE DETAIL 4
-L- +25.611 52.357 LT (171.774')
-L- ST Sta.55+25.611
FORT BRAGG SECURITY FENCE SEE DETAIL SHEET 2K
-TT7-
PI Sta 18+17.831
Δ = 15° 44' 19.06" (LT)
L = 41.204
T = 20.732
R = 150.000
SE = 0.00
-L-
PI Sta 50+03.492
Δ = 14° 10' 30.7" (LT)
L = 864.676
T = 434.557
R = 3,495.000
SE = RC (0.025)
PIs Sta 54+64.278
θ s = 0° 45' 14.8"
Ls = 92.000
LT = 61.334
ST = 30.667
-FLYOVER-
PIs Sta 11+50.321
θ s = 1° 13' 40.0"
Ls = 60.000
LT = 40.001
ST = 20.001
PI Sta 12+94.904
Δ = 10° 10' 14.10" (RT)
L = 248.514
T = 124.584
R = 1,400.000
SE = 0.025
RUNOFF = 60.000
-CDR-
PI Sta 53+22.973
Δ = 29° 03' 24.5" (LT)
L = 354.996
T = 181.403
R = 700.000
SE = 0.06
RUNOFF = 60.000
PIs Sta 55+16.570
θs = 2° 27' 19.9"
Ls = 60.000
LT = 40.004
ST = 20.003
-RPCDR-
PI Sta 12+92.653
Δ = 26° 04' 59.4" (LT)
L = 182.095
T = 92.653
R = 400.000
SE = .07
RUNOFF = 60.000
PIs Sta 14+02.106
θs = 4° 17' 49.9"
Ls = 60.000
LT = 40.012
ST = 20.011
PIs Sta 14+82.107
θs = 4° 17' 49.9"
Ls = 60.000
LT = 40.012
ST = 20.011
-L- +33.611 49.194 LT (161.398')
-L- CS Sta.54+33.611
-L- +14.666 48.332 LT (158.570')
-TT7- PT Sta.18+38.302
-L- +00.000 54.864 LT (180.000')
-L- +00.000 46.939 LT (154.000')
FUTURE GUARDRAIL
FUTURE CAT-1
FUTURE CABLE GUIDERAIL
GRADING ONLY
2GI
FSL
FSM
450
-L- N 61° 20' 59.7" E
N 59° 37' 02.0" E
STD. 'V' DITCH SEE DETAIL 11 DDE EST. 28.3CM
SPEC. LAT. 'V' DITCH SEE DETAIL 7 DDE EST. 334CM
P RAP EST. 2.7 TONS EST. 8.4 SMFF
END EXPWY. GUTTER -CDR- 55+69.100 (FUTURE)
FUTURE CONC. DITCH
SPEC. LAT. 'V' DITCH SEE DETAIL 7
DI (FUTURE)
-CDR- 55+00
SPEC. CUT DITCH SEE DETAIL 8
CL. 'B' RIP RAP EST. 1.8 TONS EST. 2.9 SMFF (FUTURE)
BEGIN RETAINING WALL (FUTURE)
FUTURE RETAINING WALL
BL-32 PINC 5+00.000 (-L- 54+83.625 34.637 RT)
CL. 'B' RIP RAP EST. 1.8 TONS EST. 5.9 SMFF (FUTURE)
(FUTURE) 400 CSP
W/2 ELBOWS
375
BEGIN EXPWY. GUTTER -CDR- 54+30.000 (FUTURE)
LAT. 'V' DITCH SEE DETAIL 1 DDE EST. 718CM
FORT BRAGG MILITARY RESERVATION
CL. 'B' RIP RAP EST. 1.8 TONS EST. 5.9 SMFF (FUTURE)
BEGIN EXPWY. GUTTER (FUTURE) -CDR- 53+70.003
(FUTURE) 400 CSP W/2 ELBOWS 2GI
FUTURE GUARDRAIL
FUTURE GRAU 350
FUTURE GRADING AND PAVING
FUTURE EXPRESSWAY GUTTER
-CDR- ST Sta.55+56.567
STD. 'V' DITCH (FUTURE)
-CDR- CS Sta.54+96.567
-RPCDR- SRS Sta.14+42.095
-RPCDR- +42.095 19.812 RT (65.000')
CITY OF FAYETTEVILLE DB 441 PG 181 PB 17 PG 34
-RPCDR- 29.870 RT (98.000')
41 x 20 x 1 102 mm Skimmer with 81 mm Orifice Diameter 7 m weir ID 6.1
BEGIN EXPWY. GUTTER -RPCDR- 13+46.648 (FUTURE)
EST. 4.5 TONS EST. 13.4 SMFF
-RPCDR- +90.000 38.100 RT (125.000')
750
SEE SHEET NO.5 -TT7- STA.18+00.000
SEE SHEET NO.5 -L- STA.53+80.000
SEE SHEET NO.5 -FLYOVER- STA.11+80.000
SEE SHEET NO.5 -CDR- STA.53+60.000
SEE SHEET NO.5 -RPCDR- STA.12+80.000
FUTURE GRADING AND PAVING
REVISIONS
05-MAR-2009 13:55

NOTE: UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 07

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-07/CONST.07
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST.REV.

R/W REV.

-L-
PI Sta 63+88.087
Δ = 14° 26′ 05.5″ (RT)
L = 1,259.679
T = 633.192
R = 5,000.000
SE = NC (0.025)

-FLYOVER-
PI Sta 12+94.904
Δ = 10° 10′ 14.10″ (RT)
L = 248.514
T = 124.584
R = 1,400.000
SE = 0.025
RUNOFF = 60.000

PIs Sta 14+38.835
Θs = 1° 13′ 40.0″
Ls = 60.000
LT = 40.001
ST = 20.001

PIs Sta 16+68.849
Θs = 4° 17′ 49.9″
Ls = 75.000
LT = 50.015
ST = 25.013

PI Sta 26+73.787
Δ = 125° 56′ 09.8″ (LT)
L = 1,098.999
T = 979.953
R = 500.000
SE = 0.05
RUNOFF = 75.000

-CDR-
PIs Sta 57+20.968
Θs = 1° 43′ 07.9″
Ls = 60.000
LT = 40.002
ST = 20.002

PI Sta 58+37.812
Δ = 11° 03′ 47.5″ (RT)
L = 193.089
T = 96.846
R = 1,000.000
SE = 0.04
RUNOFF = 60.000

PIs Sta 59+57.411
Θs = 0° 20′ 46.3″
Θs = 1° 43′ 08.1″
Ls = 60.000
LT = 36.650
ST = 23.356

PI Sta 63+53.718
Δ = 8° 17′ 13.2″ (RT)
L = 718.072
T = 359.663
R = 4,964.700
SE = NC (0.025)

-RPCDR-
PIs Sta 14+82.107
Θs = 4° 17′ 49.9″
Ls = 60.000
LT = 40.012
ST = 20.011

PI Sta 15+83.101
Δ = 22° 53′ 49.1″ (RT)
L = 159.851
T = 81.006
R = 400.000
SE = 0.07
RUNOFF = 60.000

PIs Sta 16+81.957
Θs = 4° 17′ 49.9″
Ls = 60.000
LT = 40.012
ST = 20.011

-RPB-
PIs Sta 10+40.005
Θs = 2° 51′ 53.2″
Ls = 60.000
LT = 40.005
ST = 20.005

PI Sta 11+83.413
Δ = 23° 14′ 45.6″ (LT)
L = 243.432
T = 123.413
R = 600.000
SE = 0.05
RUNOFF = 60.000

-SPURB-
PIs Sta 12+26.906
Θs = 2° 51′ 47.3″
Θs = 5° 27′ 30.19″
Ls = 60.000
LT = 33.168
ST = 26.936

PI Sta 14+88.346
Δ = 73° 21′ 23.9″ (LT)
L = 403.299
T = 234.608
R = 315.000
SE = 0.075
RUNOFF = 60.000

-RPC-
PIs Sta 10+20.007
Θs = 3° 23′ 20.2″
Ls = 60.000
LT = 40.007
ST = 20.007

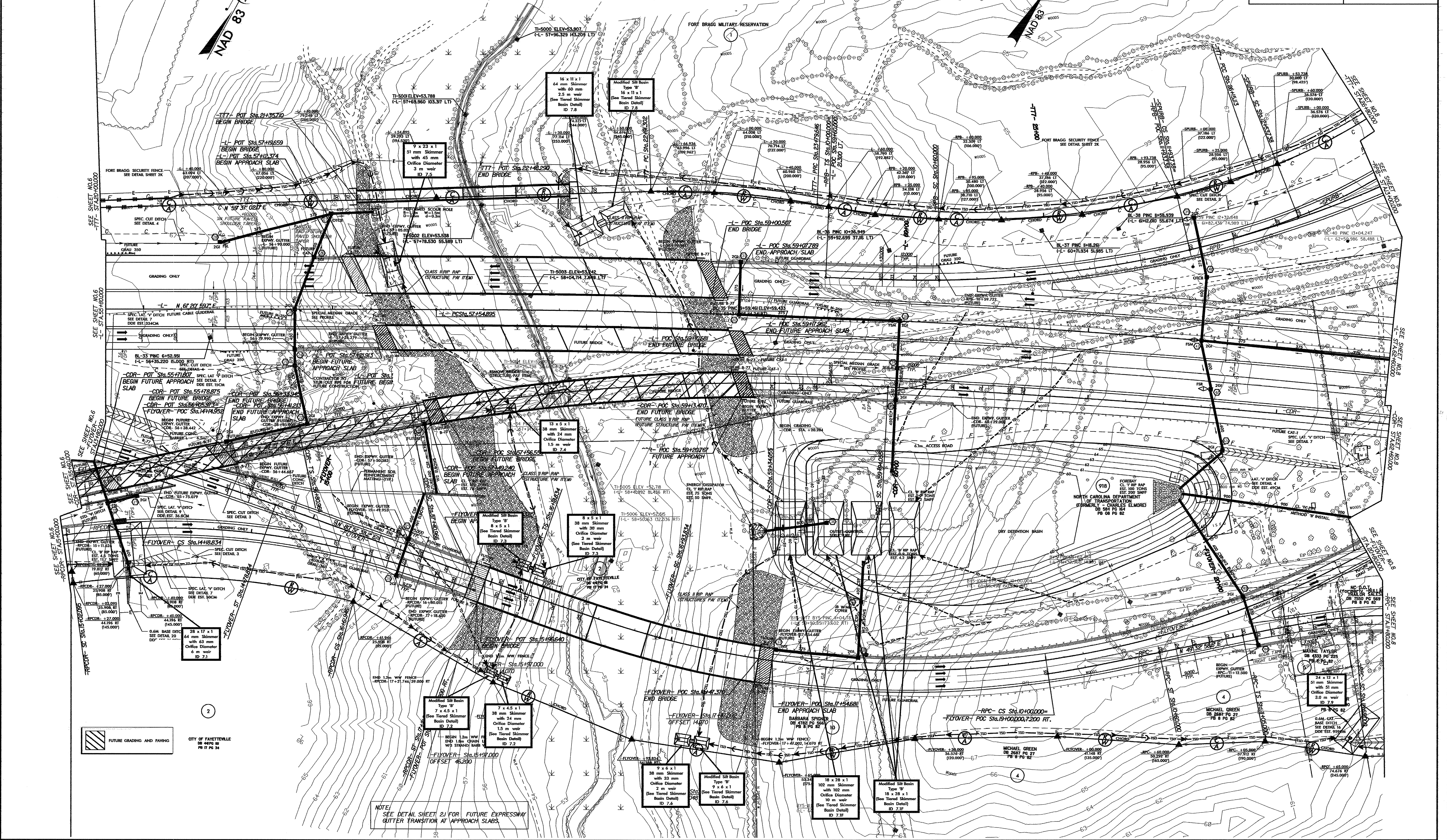
PIs Sta 11+45.036
Θs = 7° 28′ 24.1″
Ls = 60.000
LT = 40.036
ST = 20.032

PI Sta 12+24.312
Δ = 28° 55′ 14.9″ (RT)
L = 116.096
T = 59.312
R = 230.000
SE = 0.08
RUNOFF = 60.000

-TT7-
PI Sta 23+35.650
Δ = 12° 29′ 53.08″ (RT)
L = 88.344
T = 44.348
R = 405.000

PI Sta 25+00.141
Δ = 29° 58′ 50.01″ (LT)
L = 235.467
T = 120.495
R = 450.000

PI Sta 28+60.043
Δ = 81° 21′ 06.67″ (LT)
L = 404.659
T = 244.930
R = 285.000



REVISIONS

05-MAR-2009 07:41
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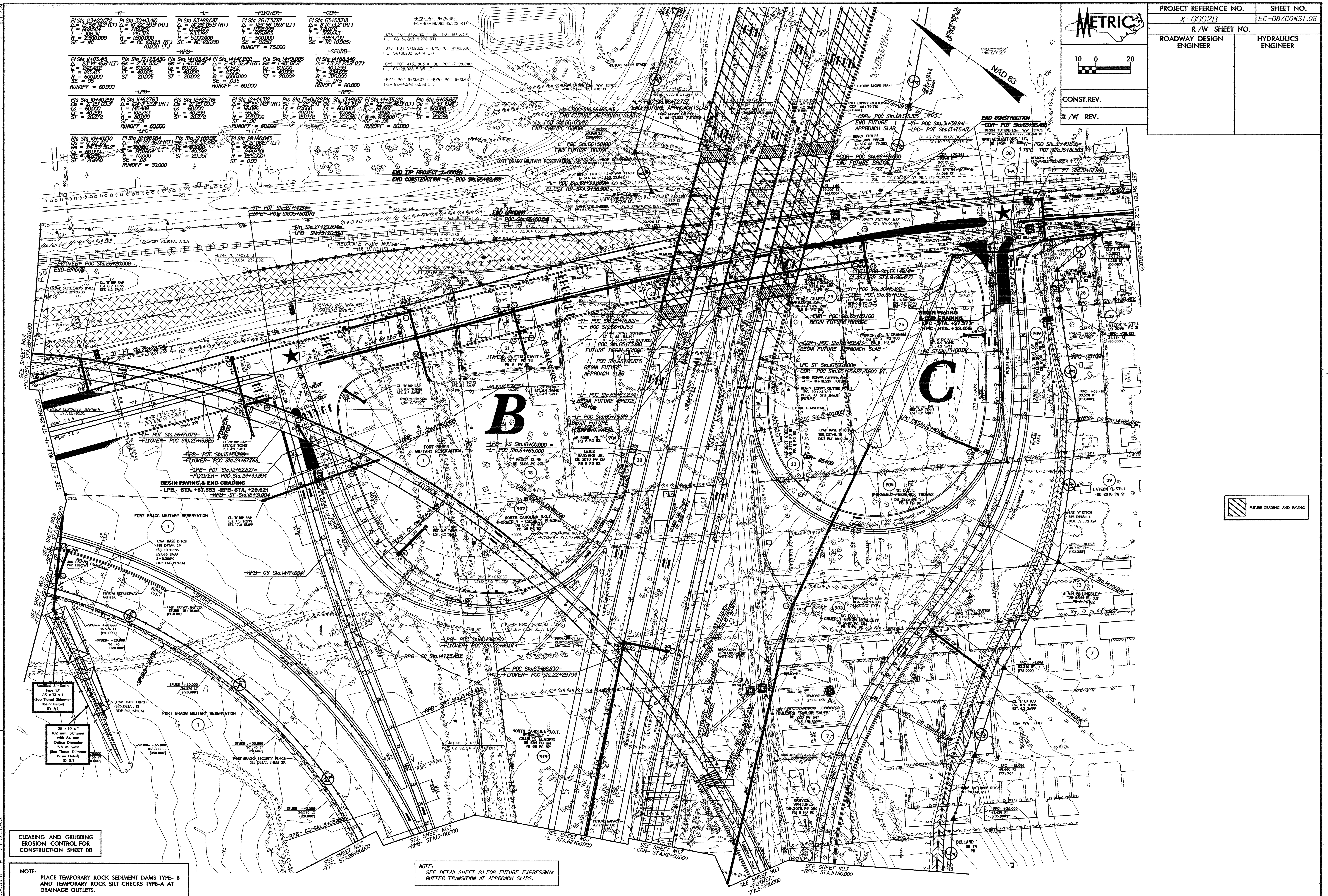
PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-08/CONST.08
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST.REV.

R/W REV.

REVISIONS



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 08

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

NOTE:
SEE DETAIL SHEET 2J FOR FUTURE EXPRESSWAY GUTTER TRANSITION AT APPROACH SLABS.

04-MAR-2009 16:42

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 09

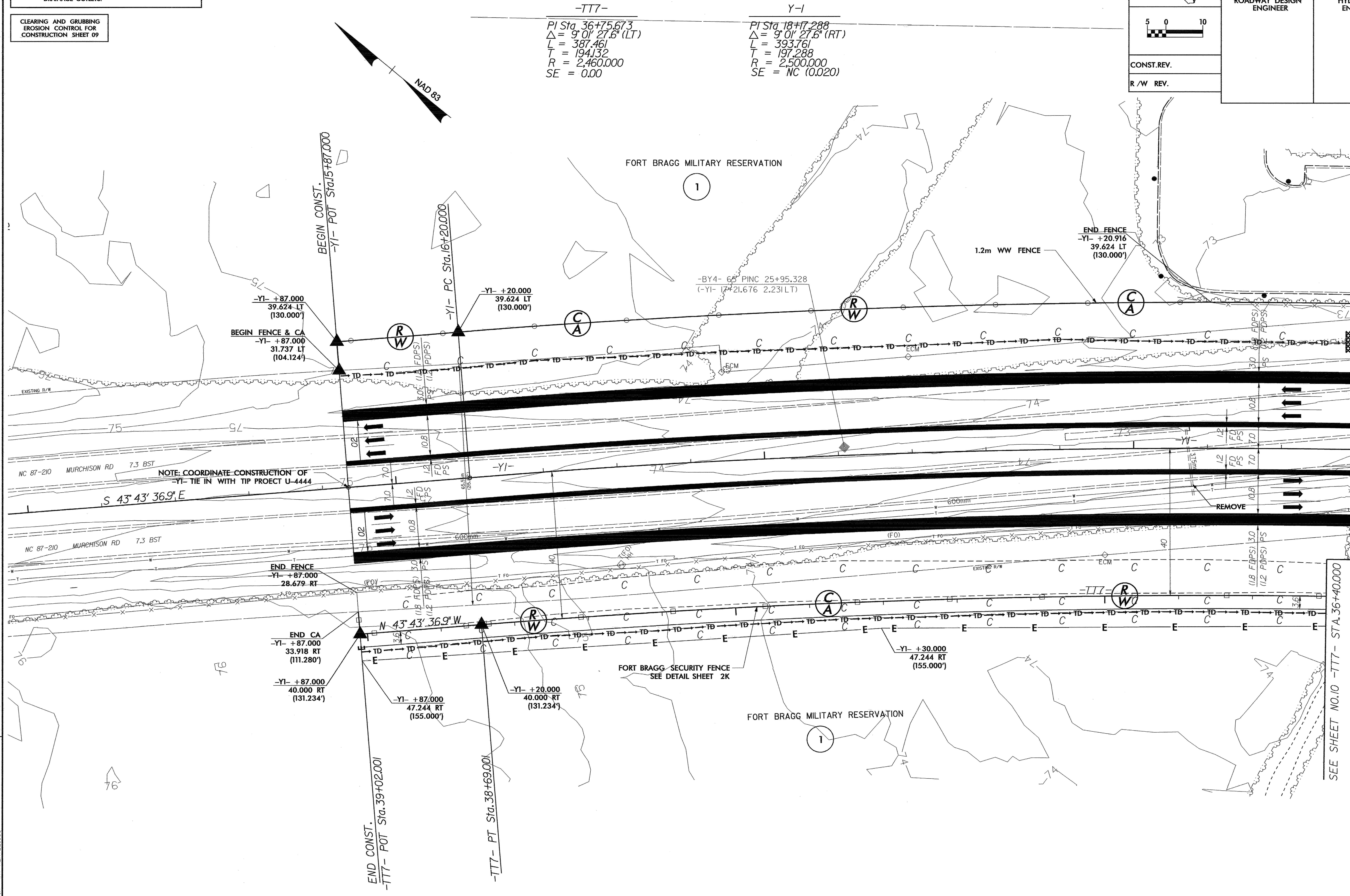
PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-09/CONST.09
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST.REV.

R/W REV.

REVISIONS



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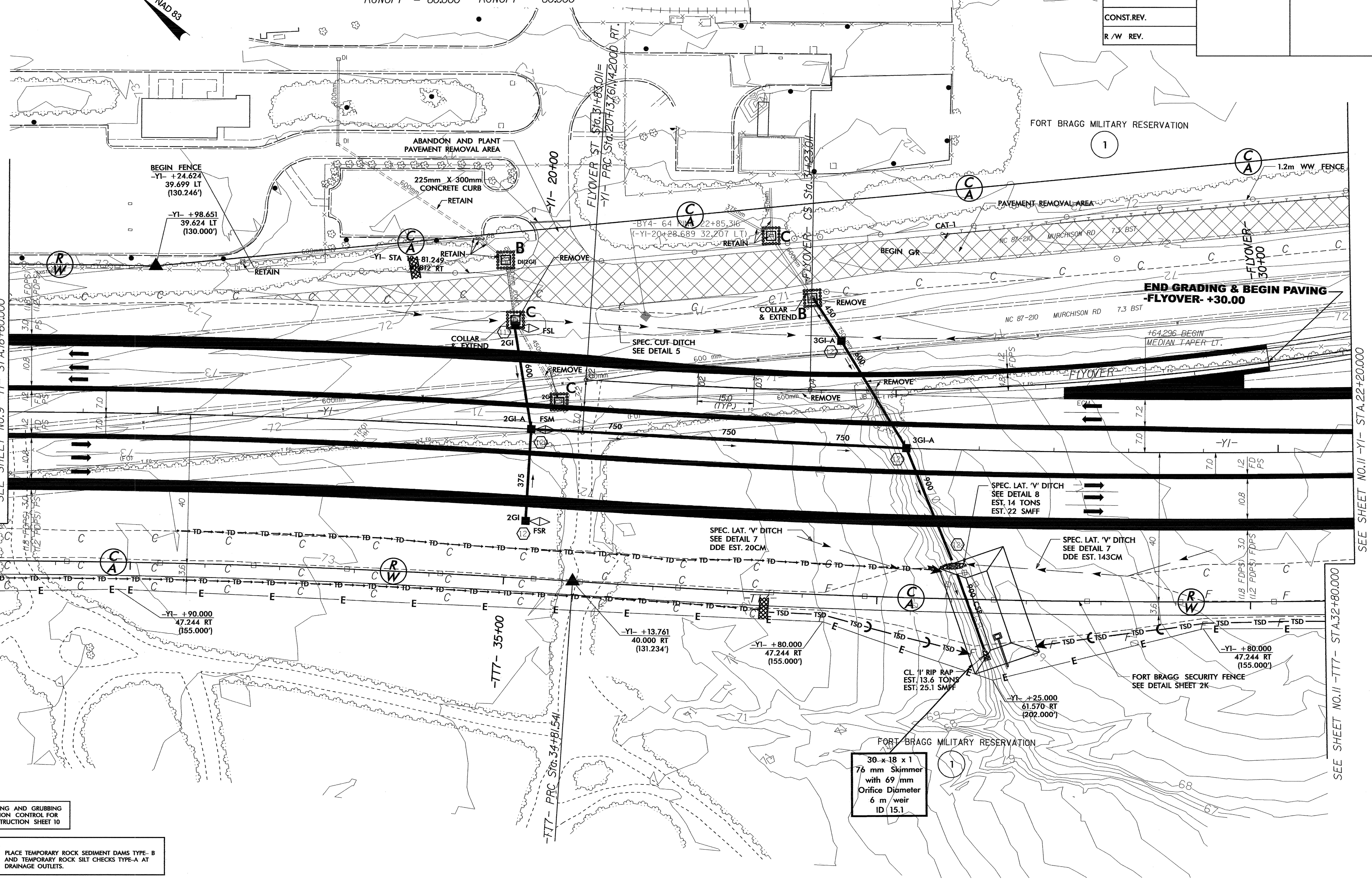
PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-10/CONST.10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST.REV.

R/W REV.

-Y1-		-FLYOVER-		-TT7-	
PI Sta 18+17.288	PI Sta 23+20.072	PI Sta 30+25.909	PIs Sta 31+47.886	PI Sta 36+75.673	PI Sta 33+54.526
△ = 9° 01' 27.6" (RT)	△ = 13° 58' 14.3" (LT)	△ = 13° 58' 42.8" (RT)	Θs = 0° 41' 29.0"	△ = 9° 01' 27.59" (LT)	△ = 5° 44' 06.22" (RT)
L = 393.761	L = 609.584	L = 195.178	Θs = 2° 08' 55.2"	L = 387.461	L = 254.243
T = 197.288	T = 306.311	T = 98.076	Ls = 60.000	T = 194.132	T = 127.228
R = 2,500.000	R = 2,500.000	R = 800.000	LT = 35.137	R = 2,460.000	R = 2,540.000
SE = NC (0.020)	SE = NC (0.020)	SE = 0.04	ST = 24.875	SE = 0.00	SE = 0.00
	RUNOFF = 60.000	RUNOFF = 60.000			



NAD 83
FORT BRAGG MILITARY RESERVATION
ABANDON AND PLANT PAVEMENT REMOVAL AREA
BEGIN FENCE -Y1- +24.624 39.699 LT (130.246')
-Y1- +98.651 39.624 LT (130.000')
225mm X 300mm CONCRETE CURB
RETAIN
REMOVE
-Y1- 20+00
FLYOVER ST Sta.31+83.011= -Y1- PRC Sta.20+13.761 4.2000 RT.
FLYOVER CS Sta.31+23.011
-BY4- 64 PINC 22+85.316 (-Y1-20+28.689 32.207 LT)
1.2m WW FENCE
PAVEMENT REMOVAL AREA
BEGIN GR
NC 87-210 MURCHISON RD 7.3 BST
END GRADING & BEGIN PAVING -FLYOVER- +30.00
+64.296 BEGIN MEDIAN TAPER LT.
COLLAR & EXTEND
SPEC. CUT DITCH SEE DETAIL 5
FSL
FSM
FSR
2GI
2GI-A
3GI-A
15.0 (TYP)
SEE SHEET NO.9 -Y1- STA.18+60.000
SEE SHEET NO.11 -Y1- STA.22+20.000
SPEC. LAT. 'V' DITCH SEE DETAIL 8 EST. 14 TONS EST. 22 SMFF
SPEC. LAT. 'V' DITCH SEE DETAIL 7 DDE EST. 20CM
SPEC. LAT. 'V' DITCH SEE DETAIL 7 DDE EST. 143CM
-Y1- +90.000 47.244 RT (155.000')
-Y1- +13.761 40.000 RT (131.234')
-Y1- +80.000 47.244 RT (155.000')
-Y1- +80.000 47.244 RT (155.000')
CL. 'I' RIP RAP EST. 13.6 TONS EST. 25.1 SMFF
-Y1- +25.000 61.570 RT (202.000')
FORT BRAGG SECURITY FENCE SEE DETAIL SHEET 2K
-TT7- 35+00
-TT7- PRC Sta.34+81.541
SEE SHEET NO.9 -TT7- STA.36+40.000
SEE SHEET NO.11 -TT7- STA.32+80.000
30 x 18 x 1 76 mm Skimmer with 69 mm Orifice Diameter 6 m weir ID 15.1

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 10

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

REVISIONS

05-MAR-2009 13:58

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-II/CONST.II
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST.REV.

R/W REV.

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE-B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

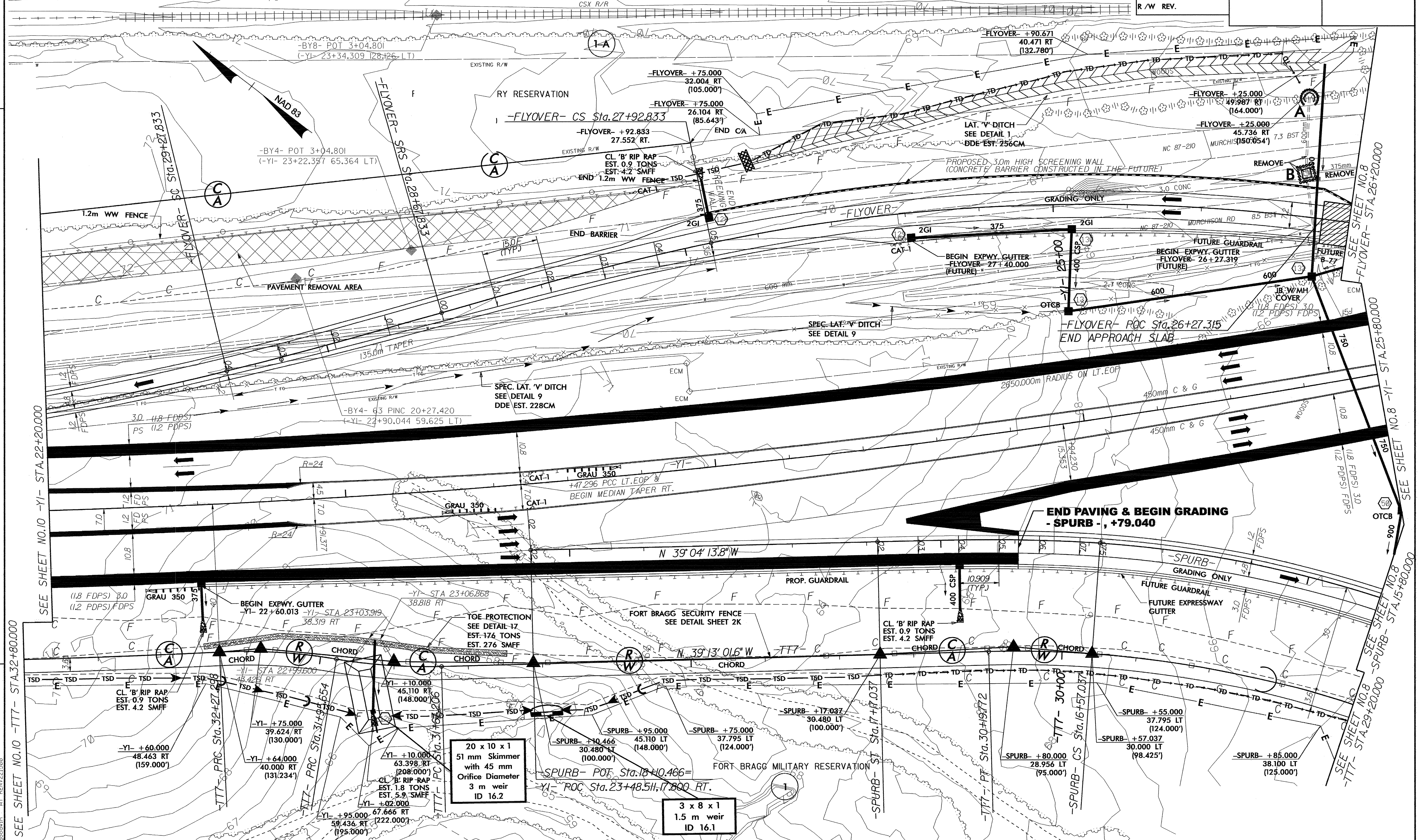
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 11

-FLYOVER-

PI Sta 26+73.787	PIs Sta 28+17.847	PIs Sta 29+07.836	PI Sta 30+25.909
Δ = 125° 56' 09.8" (LT)	Θs = 4° 17' 49.9"	Θs = 2° 08' 54.9"	Δ = 13° 58' 42.8" (RT)
L = 1,098.999	Ls = 75.000	Ls = 60.000	L = 195.178
T = 979.953	LT = 50.015	LT = 40.003	T = 98.076
R = 500.000	ST = 25.013	ST = 20.003	R = 800.000
SE = 0.05			SE = 0.04
RUNOFF = 75.000			RUNOFF = 60.000

-SPURB-

PI Sta 14+88.346	PIs Sta 16+77.054
Δ = 73° 21' 23.9" (LT)	Θs = 5° 27' 24.3"
L = 403.299	Ls = 60.000
T = 234.608	LT = 40.019
R = 315.000	ST = 20.017
SE = 0.075	
RUNOFF = 60.000	



CSX R/R
-BY8- POT 3+04.801
(-Y1- 23+34.309 128.126 LT)
NAD 83
EXISTING R/W
RY RESERVATION
-FLYOVER- CS Sta. 27+92.833
-FLYOVER- +75.000
32.004 RT
(105.000')
-FLYOVER- +75.000
26.104 RT
(85.643')
END C/A
-FLYOVER- +92.833
27.552 RT.
CL. 'B' RIP RAP
EST. 0.9 TONS
EST. 4.2 SMFF
END 1.2m WW FENCE
END SCREENING WALL
-FLYOVER- +90.671
40.471 RT
(132.780')
-FLYOVER- +25.000
49.987 RT
(164.000')
-FLYOVER- +25.000
45.736 RT
(150.054')
LAT. 'V' DITCH
SEE DETAIL 1
DDE EST. 256CM
NC 87-210
MURCHISON RD
REMOVE
PROPOSED 3.0m HIGH SCREENING WALL
(CONCRETE BARRIER CONSTRUCTED IN THE FUTURE)
GRADING ONLY
-BY4- POT 3+04.801
(-Y1- 23+22.357 65.364 LT)
-FLYOVER- SC Sta. 29+27.833
-FLYOVER- SRS Sta. 28+67.833
1.2m WW FENCE
END BARRIER
CAT-1
2GI
-FLYOVER-
BEGIN EXPWY. GUTTER
-FLYOVER- 27+40.000
(FUTURE)
FUTURE GUARDRAIL
BEGIN EXPWY. GUTTER
-FLYOVER- 26+27.319
(FUTURE)
FUTURE B-77
JB W/MH COVER
OTCB
PAVEMENT REMOVAL AREA
15.0F (TYP)
135.0m TAPER
SPEC. LAT. 'V' DITCH
SEE DETAIL 9
-FLYOVER- POC Sta. 26+27.315
END APPROACH SLAB
SPEC. LAT. 'V' DITCH
SEE DETAIL 9
DDE EST. 228CM
-BY4- 63 PINC 20+27.420
(-Y1- 22+90.044 59.625 LT)
2650.000m RADIUS ON LT. EOP
450mm C & G
SEE SHEET NO. 8 -FLYOVER- STA. 26+20.000
SEE SHEET NO. 8 -Y1- STA. 25+80.000
SEE SHEET NO. 10 -Y1- STA. 22+20.000
CAT-1
GRAU 350
+47.296 PCC LT. EOP &
BEGIN MEDIAN TAPER RT.
GRAU 350
END PAVING & BEGIN GRADING
- SPURB - , +79.040
N 39° 04' 13.8" W
-SPURB-
GRADING ONLY
PROP. GUARDRAIL
FUTURE GUARDRAIL
FUTURE EXPRESSWAY GUTTER
SEE SHEET NO. 8 -SPURB- STA. 15+80.000
GRAU 350
BEGIN EXPWY. GUTTER
-Y1- 22+60.013
-Y1- STA 23+06.868
38.818 RT
-Y1- STA 23+03.919
38.319 RT
TOE PROTECTION
SEE DETAIL 17
EST. 176 TONS
EST. 276 SMFF
FORT BRAGG SECURITY FENCE
SEE DETAIL SHEET 2K
CL. 'B' RIP RAP
EST. 0.9 TONS
EST. 4.2 SMFF
N 39° 13' 01.6" W
-TT7-
CHORD
-Y1- STA 22+99.000
43.425 RT
CL. 'B' RIP RAP
EST. 0.9 TONS
EST. 4.2 SMFF
-Y1- +75.000
39.624 RT
(130.000')
-Y1- +64.000
40.000 RT
(131.234')
-Y1- +60.000
48.463 RT
(159.000')
-Y1- +10.000
45.110 RT
(148.000')
-Y1- +10.000
63.398 RT
(208.000')
CL. 'B' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF
-Y1- +02.000
67.666 RT
(222.000')
-Y1- +95.000
59.436 RT
(195.000')
-TT7- PRC Sta. 32+27.298
-TT7- PRC Sta. 31+74.654
-TT7- PC Sta. 31+24.206
20 x 10 x 1
51 mm Skimmer
with 45 mm
Orifice Diameter
3 m weir
ID 16.2
-SPURB- +10.466
30.480 LT
(100.000')
-SPURB- +95.000
45.110 LT
(148.000')
-SPURB- +75.000
37.795 LT
(124.000')
-SPURB- POT Sta. 18+10.466=
-Y1- POC Sta. 23+48.511, 17.800 RT.
3 x 8 x 1
1.5 m weir
ID 16.1
FORT BRAGG MILITARY RESERVATION
-SPURB- +17.037
30.480 LT
(100.000')
-SPURB- ST Sta. 17+17.037
-TT7- PT Sta. 30+19.772
-TT7- 30+00
-SPURB- +80.000
28.956 LT
(95.000')
-SPURB- CS Sta. 16+57.037
-SPURB- +57.037
30.000 LT
(98.425')
-SPURB- +55.000
37.795 LT
(124.000')
-SPURB- +85.000
38.100 LT
(125.000')
SEE SHEET NO. 10 -TT7- STA. 32+80.000
SEE SHEET NO. 8 -TT7- STA. 29+20.000
REVISIONS
05-MAR-2009 14:07
pgoodwin AT PENTZ21008

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE- B AND TEMPORARY ROCK SILT CHECKS TYPE-A AT DRAINAGE OUTLETS.

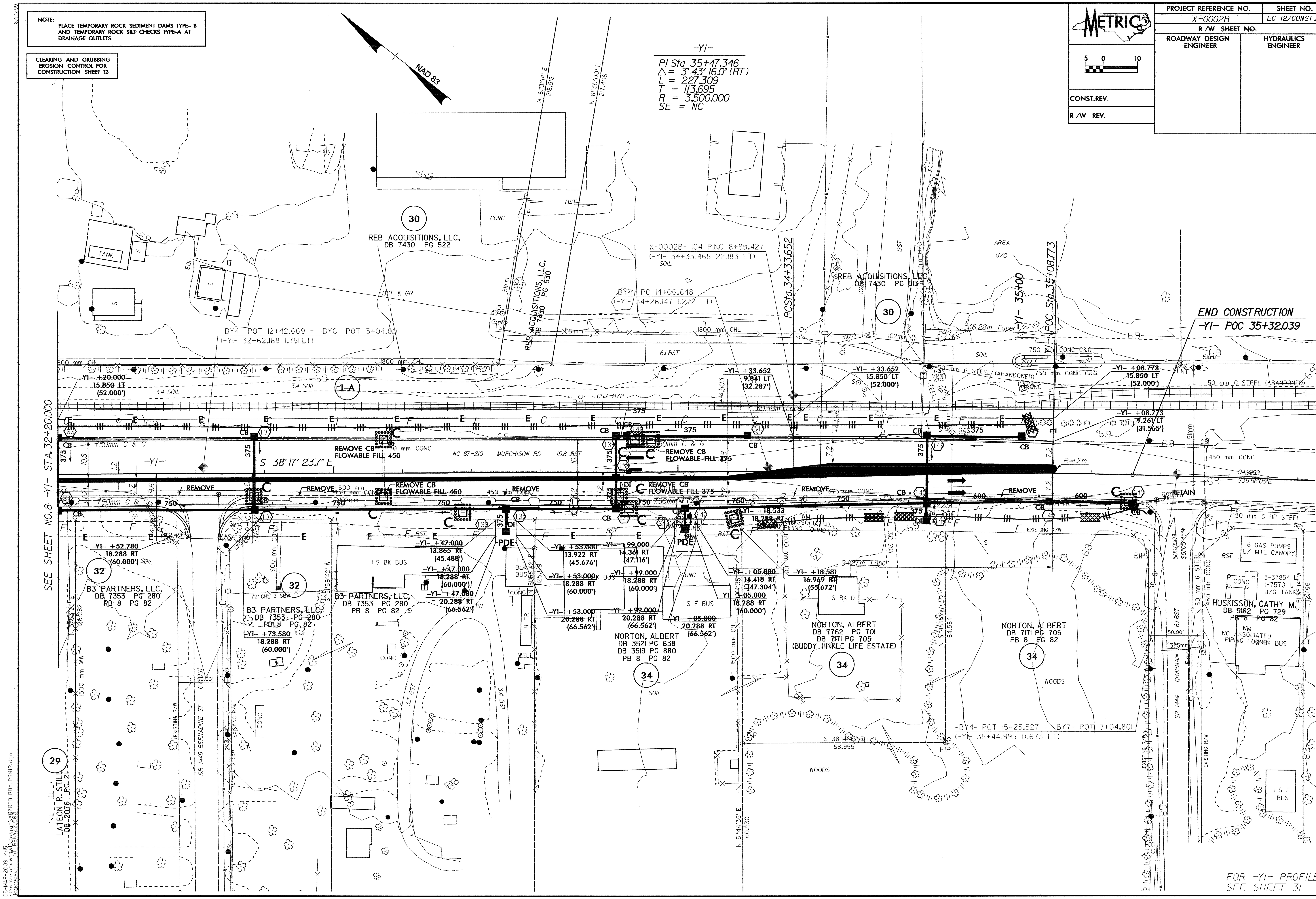
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 12

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-12/CONST.12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

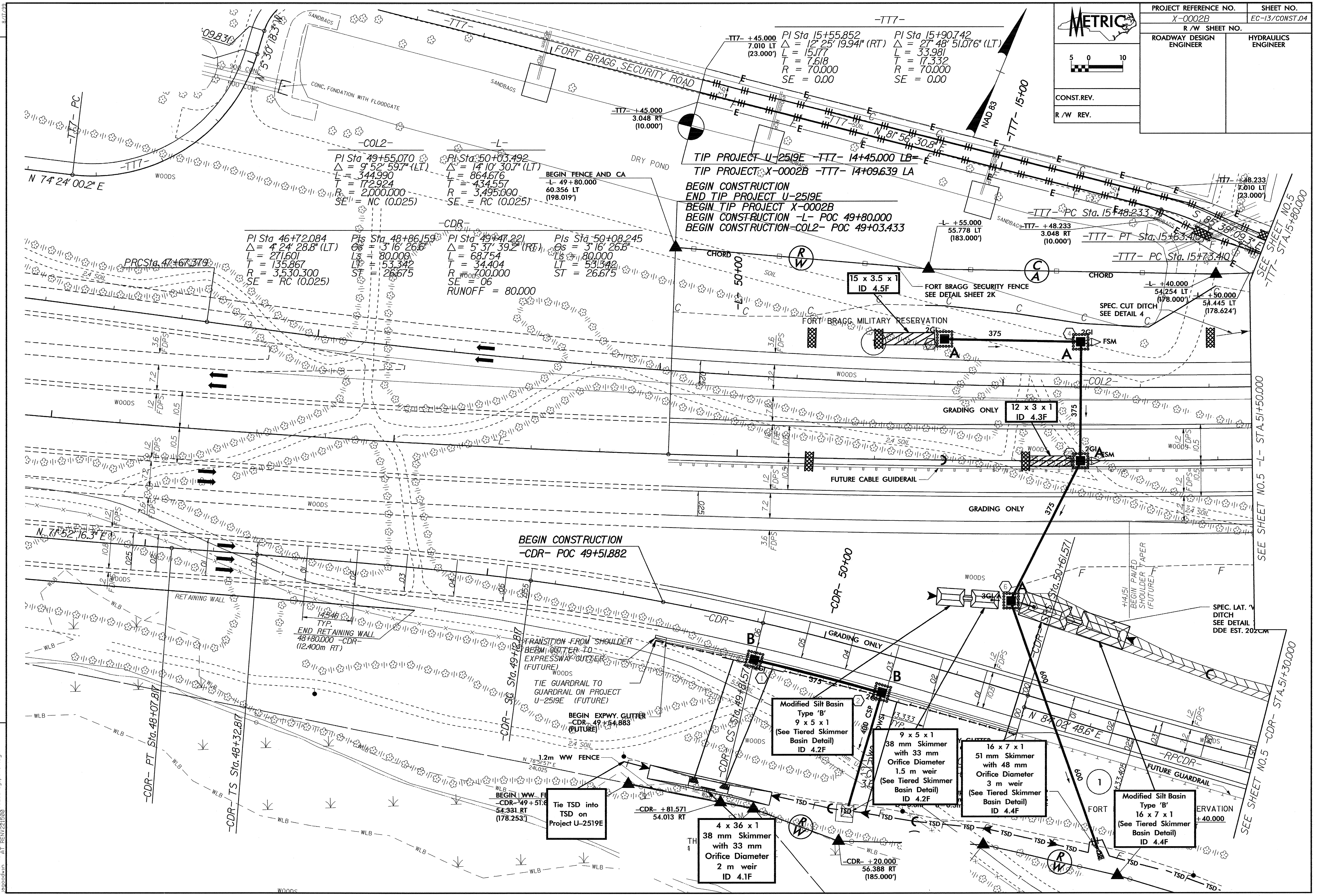
METRIC

CONST.REV.

R/W REV.



NAD 83
-Y1-
PI Sta 35+47.346
Δ = 3° 43' 16.0" (RT)
L = 227.309
T = 113.695
R = 3,500.000
SE = NC
30
REB ACQUISITIONS, LLC.
DB 7430 PG 522
REB ACQUISITIONS, LLC.
DB 7430 PG 530
REB ACQUISITIONS, LLC.
DB 7430 PG 513
X-0002B- 104 PINC 8+85.427
(-Y1- 34+33.468 22.183 LT)
-BY4- PC 14+06.648
(-Y1- 34+26.147 1.272 LT)
-BY4- POT 12+42.669 = -BY6- POT 3+04.801
(-Y1- 32+62.168 1.751 LT)
PCSta.34+33.652
-Y1- 35+00
-Y1- POC Sta.35+08.773
END CONSTRUCTION
-Y1- POC 35+32.039
CSX R/R
NC 87-210 MURCHISON RD
S 38° 17' 23.7" E
REMOVE CB FLOWABLE FILL 450
REMOVE CB FLOWABLE FILL 460
REMOVE CB FLOWABLE FILL 375
REMOVE
RETAIN
SEE SHEET NO.8 -Y1- STA.32+20.000
B3 PARTNERS, LLC.
DB 7353 PG 280
PB 8 PG 82
NORTON, ALBERT
DB 3521 PG 638
DB 3519 PG 880
PB 8 PG 82
NORTON, ALBERT
DB 7762 PG 701
DB 7171 PG 705
(BUDDY HINKLE LIFE ESTATE)
NORTON, ALBERT
DB 7171 PG 705
PB 8 PG 82
HUSKISSON, CATHY M.
DB 5162 PG 729
PB 8 PG 82
LATEON R. STILL
DB 2076 PG 21
6-GAS PUMPS U/ MTL CANOPY
-BY4- POT 15+25.527 = -BY7- POT 3+04.801
(-Y1- 35+44.995 0.673 LT)
SR 1445 BERNADINE ST
SR 1444 CHARMAIN ST
FOR -Y1- PROFILE SEE SHEET 31


METRIC
PROJECT REFERENCE NO.
X-0002B
SHEET NO.
EC-13/CONST.04
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
CONST.REV.
R/W REV.
NAD 83
-TT7-
PI Sta 15+55.852
△ = 12° 25' 19.941" (RT)
L = 15.177
T = 7.618
R = 70.000
SE = 0.00
PI Sta 15+90.742
△ = 27° 48' 51.076" (LT)
L = 33.981
T = 17.332
R = 70.000
SE = 0.00
FORT BRAGG SECURITY ROAD
TIP PROJECT U-2519E -TT7- 14+45.000 LB=
TIP PROJECT X-0002B -TT7- 14+09.639 LA
BEGIN CONSTRUCTION
END TIP PROJECT U-2519E
BEGIN TIP PROJECT X-0002B
BEGIN CONSTRUCTION -L- POC 49+80.000
BEGIN CONSTRUCTION -COL2- POC 49+03.433
-COL2-
PI Sta 49+55.070
△ = 9° 52' 59.7" (LT)
L = 344.990
T = 172.924
R = 2,000.000
SE = NC (0.025)
-L-
PI Sta 50+03.492
△ = 14° 10' 30.7" (LT)
L = 864.676
T = 434.557
R = 3,495.000
SE = RC (0.025)
-CDR-
PI Sta 46+72.084
△ = 4° 24' 28.8" (LT)
L = 271.601
T = 135.867
R = 3,530.300
SE = RC (0.025)
PIs Sta 48+86.159
Θs = 3° 16' 26.6"
Ls = 80.000
LT = 53.342
ST = 26.675
PI Sta 49+47.221
△ = 5° 37' 39.2" (RT)
L = 68.754
T = 34.404
R = 700.000
SE = .06
RUNOFF = 80.000
PIs Sta 50+08.245
Θs = 3° 16' 26.6"
Ls = 80.000
LT = 53.342
ST = 26.675
BEGIN FENCE AND CA
-L- 49+80.000
60.356 LT
(198.019')
FORT BRAGG SECURITY FENCE
SEE DETAIL SHEET 2K
FORT BRAGG MILITARY RESERVATION
SPEC. CUT DITCH
SEE DETAIL 4
15 x 3.5 x 1
ID 4.5F
12 x 3 x 1
ID 4.3F
GRADING ONLY
FUTURE CABLE GUIDERAIL
BEGIN CONSTRUCTION
-CDR- POC 49+51.882
N 71° 52' 16.3" E
N 74° 24' 00.2" E
N 84° 02' 48.6" E
RETAINING WALL
END RETAINING WALL
48+80.000 -CDR-
(12.400m RT)
TRANSITION FROM SHOULDER BERM GUTTER TO EXPRESSWAY GUTTER (FUTURE)
TIE GUARDRAIL TO GUARDRAIL ON PROJECT U-2519E (FUTURE)
BEGIN EXPWY. GUTTER -CDR- 49+64.883 (FUTURE)
1.2m WW FENCE
Tie TSD into TSD on Project U-2519E
Modified Silt Basin Type 'B' 9 x 5 x 1 (See Tiered Skimmer Basin Detail) ID 4.2F
9 x 5 x 1 38 mm Skimmer with 33 mm Orifice Diameter 1.5 m weir (See Tiered Skimmer Basin Detail) ID 4.2F
16 x 7 x 1 51 mm Skimmer with 48 mm Orifice Diameter 3 m weir (See Tiered Skimmer Basin Detail) ID 4.4F
Modified Silt Basin Type 'B' 16 x 7 x 1 (See Tiered Skimmer Basin Detail) ID 4.4F
4 x 36 x 1 38 mm Skimmer with 33 mm Orifice Diameter 2 m weir ID 4.1F
SPEC. LAT. V DITCH SEE DETAIL DDE EST. 202CM
FUTURE GUARDRAIL
-RPCDR-
SEE SHEET NO.5 -TT7- STA.15+80.000
SEE SHEET NO.5 -L- STA.51+50.000
SEE SHEET NO.5 -CDR- STA.51+30.000
-CDR- PT Sta.48+07.817
-CDR- TS Sta.48+32.817
-CDR- SC Sta.49+12.817
-CDR- CS Sta.49+81.571
-CDR- ST Sta.50+61.571
-TT7- PC Sta.15+48.233
-TT7- PT Sta.15+63.410
-TT7- PC Sta.15+73.410
PRCSta.47+67.379
WOODS
DRY POND
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-14/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST.REV.

R/W REV.

REVISIONS

FORT BRAGG MILITARY REMOVATION

-FLYOVER-

PIs Sta 11+50.321
Θs = 1° 13' 40.0"
Ls = 60.000
LT = 40.001
ST = 20.001

PI Sta 12+94.904
Δ = 10° 10' 14.10" (RT)
L = 248.514
T = 124.584
R = 1,400.000
SE = 0.025
RUNOFF = 60.000

-L-

PI Sta 50+03.492
Δ = 14° 10' 30.7" (LT)
L = 864.676
T = 434.557
R = 3,495.000
SE = RC (0.025)

-COL2-

PI Sta 49+21.674
Δ = 8° 49' 22.8" (LT)
L = 307.981
T = 154.295
R = 2,000.000

-CDR-

PIs Sta 50+08.245
Θs = 3° 16' 26.6"
Ls = 80.000
LT = 53.342
ST = 26.675

PIs Sta 51+14.913
Θs = 3° 16' 26.6"
Ls = 80.000
LT = 53.342
ST = 26.675

PI Sta 53+22.973
Δ = 29° 03' 24.5" (LT)
L = 354.996
T = 181.403
R = 700.000
SE = 0.06
RUNOFF = 80.000

-RPCDR-

PIs Sta 11+80.012
Θs = 4° 17' 49.9"
Ls = 60.000
LT = 40.012
ST = 20.011

PI Sta 12+92.653
Δ = 26° 04' 59.4" (LT)
L = 182.095
T = 92.653
R = 400.000
SE = .07
RUNOFF = 60.000

-TT7-

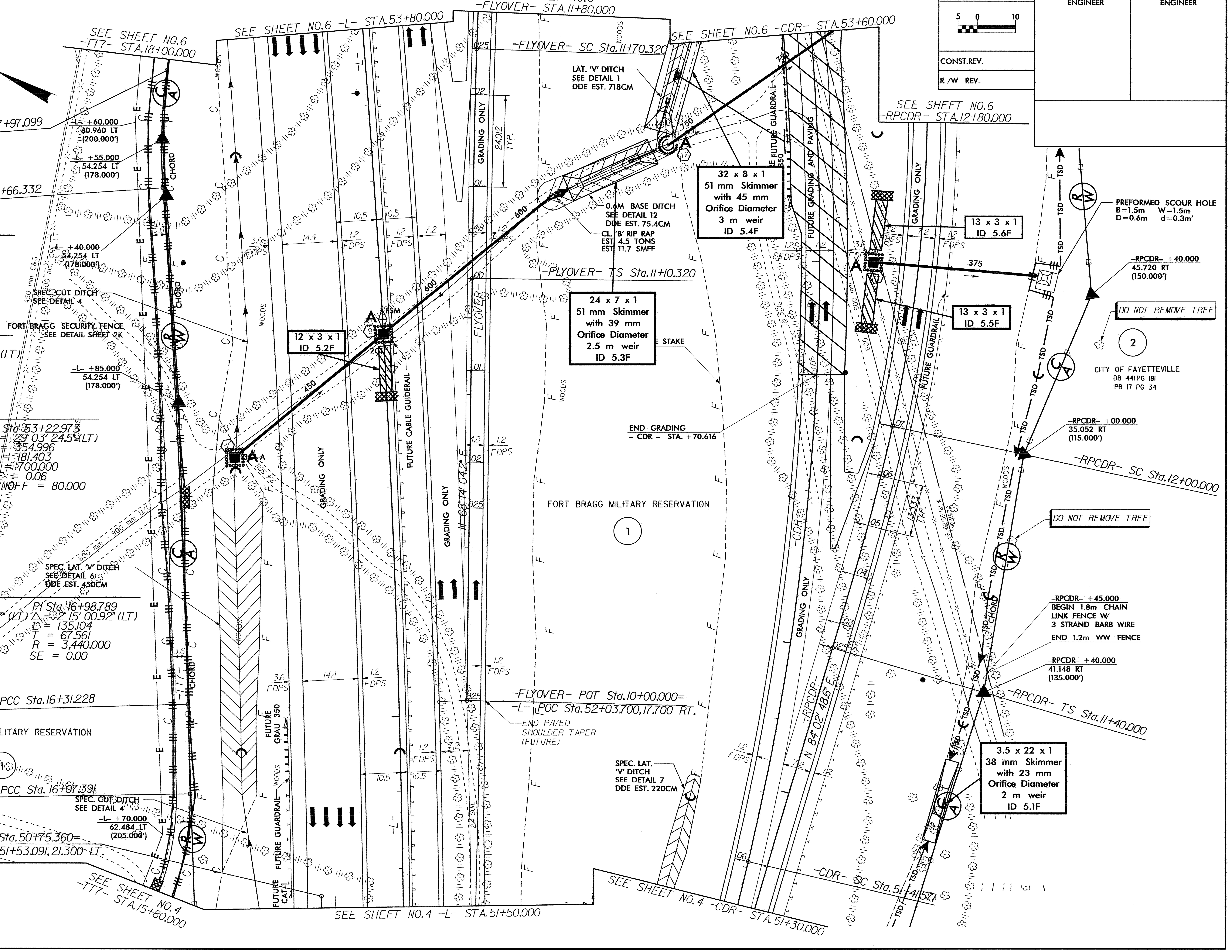
PI Sta 15+90.742
Δ = 27° 48' 51.076" (LT)
L = 33.981
T = 17.332
R = 70.000
SE = 0.00

PI Sta 16+19.310
Δ = 0° 41' 45.097" (LT)
L = 23.837
T = 11.919
R = 1,962.700
SE = 0.00

PI Sta 16+98.789
Δ = 2° 15' 00.92" (LT)
L = 135.104
T = 67.561
R = 3,440.000
SE = 0.00

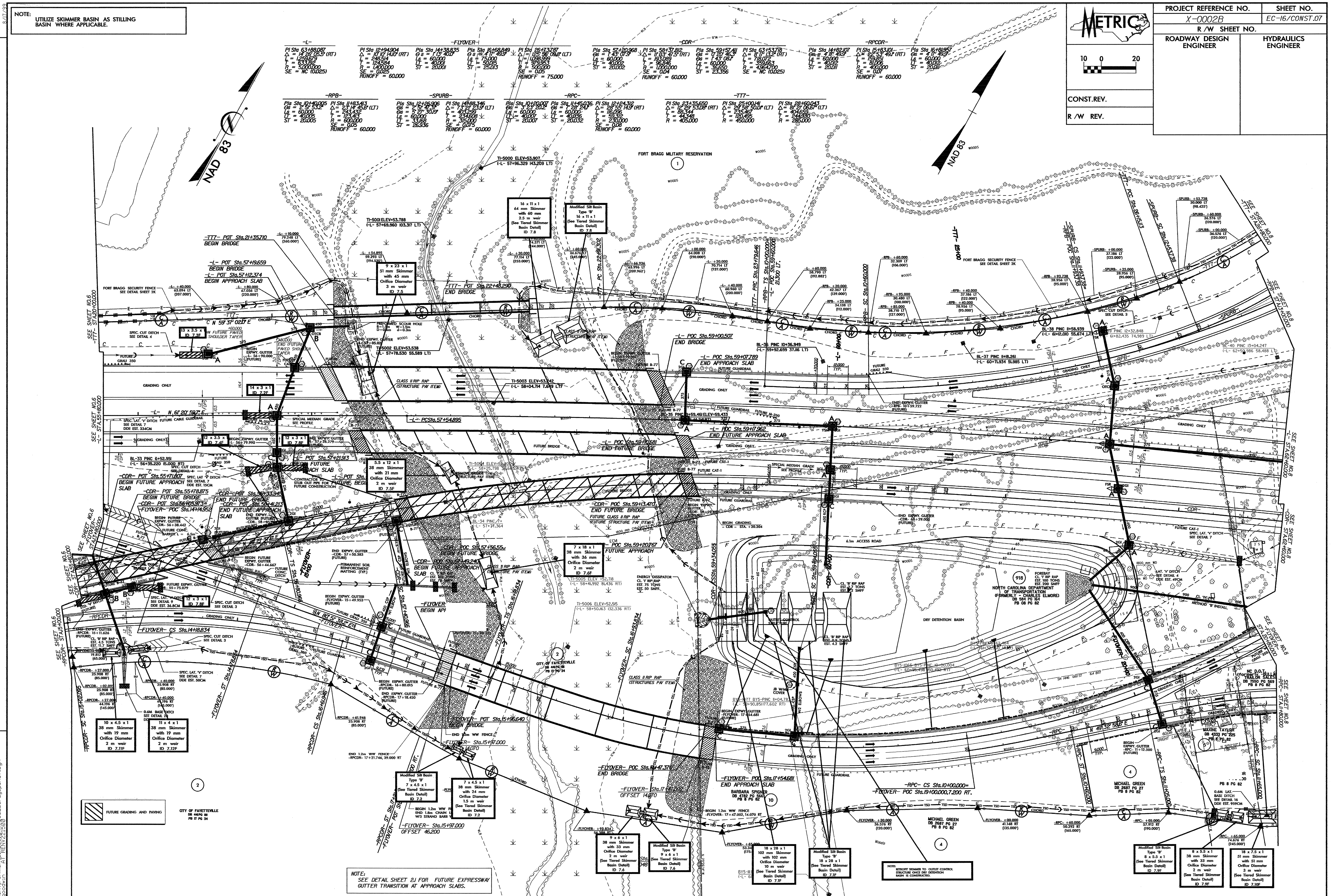
-TT7-

PI Sta 17+81.770
Δ = 11° 45' 07.45" (RT)
L = 30.767
T = 15.438
R = 150.000
SE = 0.00



05-MAR-2009 13:54


METRIC
PROJECT REFERENCE NO.
X-0002B
SHEET NO.
EC-15/CONST.06
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
CONST.REV.
R/W REV.
REVISIONS
NAD 83
SEE SHEET NO.7 -TT7- STA.20+00.000
SEE SHEET NO.7 -L- STA.55+80.000
SEE SHEET NO.7 -FLYOVER- STA.13+80.000
SEE SHEET NO.7 -CDR- STA.55+60.000
SEE SHEET NO.7 -RPCDR- STA.15+00.000
SEE SHEET NO.5 -TT7- STA.18+00.000
SEE SHEET NO.5 -L- STA.53+80.000
SEE SHEET NO.5 -FLYOVER- STA.11+80.000
SEE SHEET NO.5 -CDR- STA.53+60.000
SEE SHEET NO.5 -RPCDR- STA.12+80.000
FORT BRAGG MILITARY RESERVATION
CITY OF FAYETTEVILLE
DB 441 PG 181
PB 17 PG 34
14 x 5.5 x 1
38 mm Skimmer
with 27 mm
Orifice Diameter
2 m weir
ID 6.4F
12 x 3 x 1
ID 6.2F
13 x 3.5 x 1
ID 6.1F
18 x 7 x 1
38 mm Skimmer
with 36 mm
Orifice Diameter
2.5 m weir
ID 6.3F
12 x 4.5 x 1
38 mm Skimmer
with 21 mm
Orifice Diameter
1.5 m weir
ID 6.6F
13 x 4.5 x 1
38 mm Skimmer
with 21 mm
Orifice Diameter
1.5 m weir
ID 6.5F
SPEC. CUT DITCH
SEE DETAIL 4
STD. 'V' DITCH
SEE DETAIL 11
DDE EST. 28.3CM
SPEC. LAT. 'V' DITCH
SEE DETAIL 7
DDE EST. 334CM
END EXPWY. GUTTER
-CDR- 55+69.100
(FUTURE)
FUTURE CONC. DITCH
SPEC. LAT. 'V' DITCH
SEE DETAIL 7
SPEC. CUT DITCH
SEE DETAIL 8
CL. 'B' RIP RAP
EST. 1.8 TONS
EST. 2.9 SMFF
(FUTURE)
FORT BRAGG SECURITY FENCE
SEE DETAIL SHEET 2K
-L- ST Sta.55+25.611
-L- CS Sta.54+33.611
-TT7- PT Sta.18+38.302
-CDR- CS Sta.54+96.567
-CDR- ST Sta.55+56.567
-RPCDR- SRS Sta.14+42.095
-L- 55+00
-CDR- 55+00
BL-32 PINC 5+00.000
(-L- 54+83.625 34.637 RT)
GRADING ONLY
FUTURE CABLE GUIDERAIL
FUTURE GUARDRAIL
FUTURE GRADING AND PAVING
STD. 'V' DITCH
(FUTURE)
-RPCDR- +42.095
19.812 RT
(65.000')
-RPCDR- +90.000
38.100 RT
(125.000')
-RPCDR-
29.870 RT
(98.000')
-L- +25.611
52.357 LT
(171.774')
-L- +33.611
49.194 LT
(161.398')
-L- +14.666
48.332 LT
(158.570')
-L- +00.000
54.864 LT
(180.000')
-L- +00.000
46.939 LT
(154.000')
CL. 'B' RIP RAP
EST. 1.8 TONS
EST. 5.9 SMFF
(FUTURE)
LAT. 'V' DITCH
SEE DETAIL 1
DDE EST. 718CM
BEGIN EXPWY. GUTTER
-CDR- 54+30.000
(FUTURE)
BEGIN EXPWY. GUTTER
-RPCDR- 13+46.648
(FUTURE)
BEGIN EXPWY. GUTTER (FUTURE)
-CDR- 53+70.003
(FUTURE)
400 CSP
W/2 ELBOWS 2GI
EST. 4.5 TONS
EST. 13.4 SMFF
-TT7-
PI Sta 18+17.831
△ = 15° 44' 19.06" (LT)
L = 41.204
T = 20.732
R = 150.000
SE = 0.00
-L-
PI Sta 50+03.492
△ = 14° 10' 30.7" (LT)
L = 864.676
T = 434.557
R = 3,495.000
SE = RC (0.025)
PIs Sta 54+64.278
θs = 0° 45' 14.8"
Ls = 92.000
LT = 61.334
ST = 30.667
-FLYOVER-
PIs Sta 11+50.321
θs = 1° 13' 40.0"
Ls = 60.000
LT = 40.001
ST = 20.001
PI Sta 12+94.904
△ = 10° 10' 14.10" (RT)
L = 248.514
T = 124.584
R = 1,400.000
SE = 0.025
RUNOFF = 60.000
-CDR-
PI Sta 53+22.973
△ = 29° 03' 24.5" (LT)
L = 354.996
T = 181.403
R = 700.000
SE = 0.06
RUNOFF = 60.000
PIs Sta 55+16.570
θs = 2° 27' 19.9"
Ls = 60.000
LT = 40.004
ST = 20.003
-RPCDR-
PI Sta 12+92.653
△ = 26° 04' 59.4" (LT)
L = 182.095
T = 92.653
R = 400.000
SE = .07
RUNOFF = 60.000
PIs Sta 14+02.106
θs = 4° 17' 49.9"
Ls = 60.000
LT = 40.012
ST = 20.011
PIs Sta 14+82.107
θs = 4° 17' 49.9"
Ls = 60.000
LT = 40.012
ST = 20.011
FUTURE GRADING AND PAVING
05-MAR-2009 13:55


NOTE:
UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.
8/17/99
REVISIONS
METRIC
PROJECT REFERENCE NO. X-0002B
SHEET NO. EC-16/CONST.07
R /W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
CONST.REV.
R /W REV.
10 0 20
-L-
PI Sta 63+88.087 Δ = 14° 26' 05.5" (RT) L = 1,259.679 T = 633.192 R = 5,000.000 SE = NC (0.025)
-FLYOVER-
PI Sta 12+94.904 Δ = 10° 10' 14.0" (RT) L = 248.514 T = 124.584 R = 1,400.000 SE = 0.025 RUNOFF = 60.000
PIs Sta 14+38.835 θs = 1° 13' 40.0" Ls = 60.000 LT = 40.001 ST = 20.001
PIs Sta 16+68.849 θs = 4° 17' 49.9" Ls = 75.000 LT = 50.015 ST = 25.013
PI Sta 26+73.787 Δ = 125° 56' 09.8" (LT) L = 1,098.999 T = 979.953 R = 500.000 SE = 0.05 RUNOFF = 75.000
-CDR-
PIs Sta 57+20.968 θs = 1° 43' 07.9" Ls = 60.000 LT = 40.002 ST = 20.002
PI Sta 58+37.812 Δ = 11° 03' 47.5" (RT) L = 193.089 T = 96.846 R = 1,000.000 SE = 0.04 RUNOFF = 60.000
PIs Sta 59+57.411 θs = 0° 20' 46.3" θs = 1° 43' 08.1" Ls = 60.000 LT = 36.650 ST = 23.356
PI Sta 63+53.718 Δ = 8° 17' 13.2" (RT) L = 718.072 T = 359.663 R = 4,964.700 SE = NC (0.025)
-RPCDR-
PIs Sta 14+82.107 θs = 4° 17' 49.9" Ls = 60.000 LT = 40.012 ST = 20.011
PI Sta 15+83.101 Δ = 22° 53' 49.1" (RT) L = 159.851 T = 81.006 R = 400.000 SE = 0.07 RUNOFF = 60.000
PIs Sta 16+81.957 θs = 4° 17' 49.9" Ls = 60.000 LT = 40.012 ST = 20.011
-RPB-
PIs Sta 10+40.005 θs = 2° 51' 53.2" Ls = 60.000 LT = 40.005 ST = 20.005
PI Sta 11+83.413 Δ = 23° 14' 45.6" (LT) L = 243.432 T = 123.413 R = 600.000 SE = 0.05 RUNOFF = 60.000
-SPURB-
PIs Sta 12+26.906 θs = 2° 51' 47.3" θs = 5° 27' 30.19" Ls = 60.000 LT = 33.168 ST = 26.936
PI Sta 14+88.346 Δ = 73° 21' 23.9" (LT) L = 403.299 T = 234.608 R = 315.000 SE = 0.075 RUNOFF = 60.000
-RPC-
PIs Sta 10+20.007 θs = 3° 23' 20.2" Ls = 60.000 LT = 40.007 ST = 20.007
PIs Sta 11+45.036 θs = 7° 28' 24.1" Ls = 60.000 LT = 40.036 ST = 20.032
PI Sta 12+24.312 Δ = 28° 55' 14.9" (RT) L = 116.096 T = 59.312 R = 230.000 SE = 0.08 RUNOFF = 60.000
-TT7-
PI Sta 23+35.650 Δ = 12° 29' 53.08" (RT) L = 88.344 T = 44.348 R = 405.000
PI Sta 25+00.141 Δ = 29° 58' 50.01" (LT) L = 235.467 T = 120.495 R = 450.000
PI Sta 28+60.043 Δ = 8° 21' 06.67" (LT) L = 404.659 T = 244.930 R = 285.000
NAD 83
FORT BRAGG MILITARY RESERVATION
-TT7- POT Sta.21+35.710 BEGIN BRIDGE
-L- POT Sta.57+19.659 BEGIN BRIDGE
-L- POT Sta.57+12.374 BEGIN APPROACH SLAB
-TT7- POT Sta.22+48.290 END BRIDGE
-L- POC Sta.59+00.507 END BRIDGE
-L- POC Sta.59+07.789 END APPROACH SLAB
-L- PCSta.57+54.895
-L- POC Sta.59+17.962 END FUTURE APPROACH SLAB
-L- POC Sta.59+10.681 END FUTURE BRIDGE
-L- POT Sta.57+21.913 BEGIN FUTURE APPROACH SLAB
-CDR- POT Sta.55+71.607 BEGIN FUTURE APPROACH SLAB
-CDR- POT Sta.55+78.875 BEGIN FUTURE BRIDGE
-CDR- POT Sta.56+05.973= -FLYOVER- POC Sta.14+14.952
-CDR- POT Sta.56+33.945 END FUTURE BRIDGE
-CDR- POT Sta.56+41.213 END FUTURE APPROACH SLAB
-CDR- POC Sta.59+13.470 END FUTURE BRIDGE
-CDR- POC Sta.59+20.767 END FUTURE APPROACH
-CDR- POC Sta.57+56.55 BEGIN FUTURE BRIDGE
-CDR- POC Sta.57+49.240 BEGIN FUTURE APPROACH SLAB
-FLYOVER- CS Sta.14+18.834
-FLYOVER- POT Sta.15+96.640 BEGIN BRIDGE
-FLYOVER- Sta.15+97.000 OFFSET 14.070
-FLYOVER- Sta.15+97.000 OFFSET 46.200
-FLYOVER- POC Sta.17+47.370 END BRIDGE
-FLYOVER- Sta.17+47.002 OFFSET 14.070
-FLYOVER- POC Sta.17+54.681 END APPROACH SLAB
-RPC- CS Sta.10+00.000= -FLYOVER- POC Sta.19+00.000,7.200 RT.
9 x 23 x 1 51 mm Skimmer with 45 mm Orifice Diameter 3 m weir ID 7.5
16 x 11 x 1 64 mm Skimmer with 60 mm 2.5 m weir (See Tiered Skimmer Basin Detail) ID 7.8
Modified Silt Basin Type 'B' 16 x 11 x 1 (See Tiered Skimmer Basin Detail) ID 7.8
13 x 3.5 x 1 ID 7.3F
14 x 3 x 1 ID 7.2F
12 x 3.5 x 1 ID 7.4F
12 x 3 x 1 ID 7.8F
5.5 x 12 x 1 38 mm Skimmer with 21 mm Orifice Diameter 2 m weir ID 7.5F
7 x 18 x 1 38 mm Skimmer with 36 mm Orifice Diameter 2 m weir ID 7.6F
10 x 4.5 x 1 38 mm Skimmer with 19 mm Orifice Diameter 2 m weir ID 7.11F
11 x 4 x 1 38 mm Skimmer with 19 mm Orifice Diameter 2 m weir ID 7.12F
Modified Silt Basin Type 'B' 7 x 4.5 x 1 (See Tiered Skimmer Basin Detail) ID 7.2
7 x 4.5 x 1 38 mm Skimmer with 24 mm Orifice Diameter 1.5 m weir (See Tiered Skimmer Basin Detail) ID 7.2
9 x 6 x 1 38 mm Skimmer with 33 mm Orifice Diameter 2 m weir (See Tiered Skimmer Basin Detail) ID 7.6
Modified Silt Basin Type 'B' 9 x 6 x 1 (See Tiered Skimmer Basin Detail) ID 7.6
18 x 28 x 1 102 mm Skimmer with 102 mm Orifice Diameter 10 m weir (See Tiered Skimmer Basin Detail) ID 7.1F
Modified Silt Basin Type 'B' 18 x 28 x 1 (See Tiered Skimmer Basin Detail) ID 7.1F
Modified Silt Basin Type 'B' 8 x 5.5 x 1 (See Tiered Skimmer Basin Detail) ID 7.9F
8 x 5.5 x 1 38 mm Skimmer with 33 mm Orifice Diameter 2 m weir (See Tiered Skimmer Basin Detail) ID 7.9F
18 x 7.5 x 1 51 mm Skimmer with 51 mm Orifice Diameter 3 m weir (See Tiered Skimmer Basin Detail) ID 7.10F
NOTE: RETROFIT SKIMMER TO OUTLET CONTROL STRUCTURE ONCE DRY DETENTION BASIN IS CONSTRUCTED.
FOREBAY CL. 'I' RIP RAP EST. 100 TONS EST. 200 SMFF
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (FORMERLY - CHARLES ELMORE) DB 584 PG 164 PB 08 PG 82
DRY DETENTION BASIN
ENERGY DISSIPATOR CL. 'I' RIP RAP EST. 75 TONS EST. 50 SMFF
OUTLET CONTROL STRUCTURE
CITY OF FAYETTEVILLE DB 441 PG 181 PB 17 PG 34
BARBARA SPIGNER DB 4782 PG 566 PB 8 PG 82
MICHAEL GREEN DB 2687 PG 27 PB 8 PG 82
MAXINE TAYLOR DB 4333 PG 225 PB 8 PG 82
NC D.O.T. DB 7550 PG 569 PB 8 PG 82
SEE SHEET NO.6 -TT7- STA.20+00.000
SEE SHEET NO.6 -L- STA.55+80.000
SEE SHEET NO.6 -FLYOVER- STA.13+80.000
SEE SHEET NO.6 -CDR- STA.55+60.000
SEE SHEET NO.6 -RPCDR- STA.15+00.000
SEE SHEET NO.8 -TT7- STA.26+80.000
SEE SHEET NO.8 -RPB- STA.13+00.000
SEE SHEET NO.8 -L- STA.62+60.000
SEE SHEET NO.8 -CDR- STA.62+60.000
SEE SHEET NO.8 -FLYOVER- STA.20+80.000
SEE SHEET NO.8 -RPC- STA.11+80.000
FUTURE GRADING AND PAVING
NOTE: SEE DETAIL SHEET 2J FOR FUTURE EXPRESSWAY GUTTER TRANSITION AT APPROACH SLABS.
05-MAR-2009 07:40
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jagoodwin AT RENV221500

-YI-

PI Sta 23+20.072
Δ = 13° 58' 14.3" (LT)
L = 609.584
T = 306.311
R = 2,500.000
SE = NC

PI Sta 30+13.410
Δ = 10° 22' 59.9" (RT)
L = 289.956
T = 145.376
R = 1,600.000
SE = RC (0.025 RT) (0.030 LT)

-L-

PI Sta 63+88.087
Δ = 14° 26' 05.5" (RT)
L = 1,259.679
T = 633.192
R = 5,000.000
SE = NC (0.025)

-FLYOVER-

PI Sta 26+73.787
Δ = 125° 56' 09.8" (LT)
L = 1,098.999
T = 979.953
R = 500.000
SE = 0.050
RUNOFF = 75.000

-CDR-

PI Sta 63+53.718
Δ = 8° 17' 13.2" (RT)
L = 718.072
T = 359.663
R = 4,964.700
SE = NC (0.025)

-RPB-

PI Sta 11+83.413
Δ = 23° 14' 45.6" (LT)
L = 243.432
T = 123.413
R = 600.000
SE = .05
RUNOFF = 60.000

PIs Sta 13+23.436
Θs = 2° 51' 53.2"
Ls = 60.000
LT = 40.005
ST = 20.005

PIs Sta 14+03.434
Θs = 1° 43' 07.9"
Ls = 60.000
LT = 40.002
ST = 20.002

PI Sta 14+47.222
Δ = 2° 43' 32.4" (RT)
L = 47.572
T = 23.791
R = 1,000.000
SE = .035
RUNOFF = 60.000

PIs Sta 14+91.005
Θs = 1° 43' 07.9"
Ls = 60.000
LT = 40.002
ST = 20.002

-SPURB-

PI Sta 14+88.346
Δ = 73° 21' 23.9" (LT)
L = 403.299
T = 234.608
R = 315.000
SE = .075
RUNOFF = 60.000

-LPB-

PIs Sta 10+40.299
Θs = 21° 29' 09.3"
Ls = 60.000
LT = 40.299
ST = 20.272

PI Sta 11+62.763
Δ = 104° 11' 56.8" (RT)
L = 145.489
T = 102.763
R = 80.000
SE = .08
RUNOFF = 60.000

PIs Sta 12+25.761
Θs = 21° 29' 09.3"
Ls = 60.000
LT = 40.299
ST = 20.272

-RPC-

PI Sta 12+44.312
Δ = 28° 55' 14.9" (RT)
L = 116.096
T = 59.312
R = 230.000
SE = .08
RUNOFF = 60.000

PIs Sta 13+01.128
Θs = 7° 28' 24.1"
Ls = 60.000
LT = 40.036
ST = 20.032

PIs Sta 13+81.157
Θs = 9° 49' 19.7"
Ls = 60.000
LT = 40.062
ST = 20.056

PI Sta 14+35.212
Δ = 22° 03' 46.0" (LT)
L = 67.387
T = 34.116
R = 175.000
SE = .08
RUNOFF = 60.000

PIs Sta 5+08.827
Θs = 9° 49' 19.7"
Ls = 60.000
LT = 40.062
ST = 20.056

-LPC-

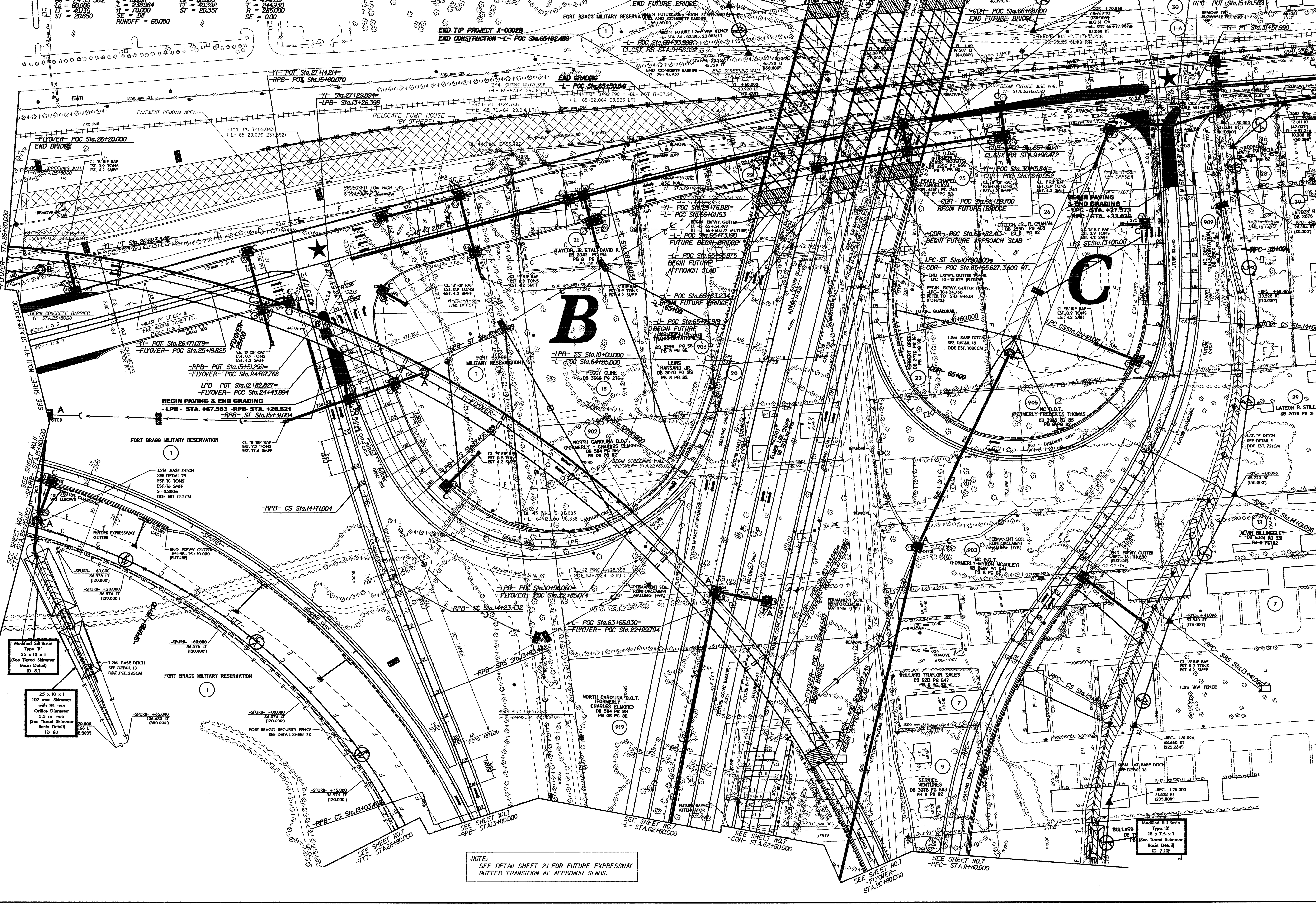
PIs Sta 10+40.130
Θs = 0° 20' 10.1"
Θs = 24° 33' 56.2"
Ls = 60.000
LT = 40.130
ST = 20.650

PI Sta 12+98.964
Δ = 147° 20' 46.0" (RT)
L = 180.017
T = 238.964
R = 70.000
SE = .08
RUNOFF = 60.000

PIs Sta 12+60.017
Θs = 24° 33' 19.2"
Ls = 60.000
LT = 40.392
ST = 20.357

-TT7-

PI Sta 28+60.043
Δ = 81° 21' 06.67" (LT)
L = 404.659
T = 244.930
R = 285.000
SE = 0.00



NOTE:
SEE DETAIL SHEET 2J FOR FUTURE EXPRESSWAY GUTTER TRANSITION AT APPROACH SLABS.

FUTURE GRADING AND PAVING

METRIC

10 0 20

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-17/CONST.08
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CONST. REV.

R/W REV.

REVISIONS

8/17/99

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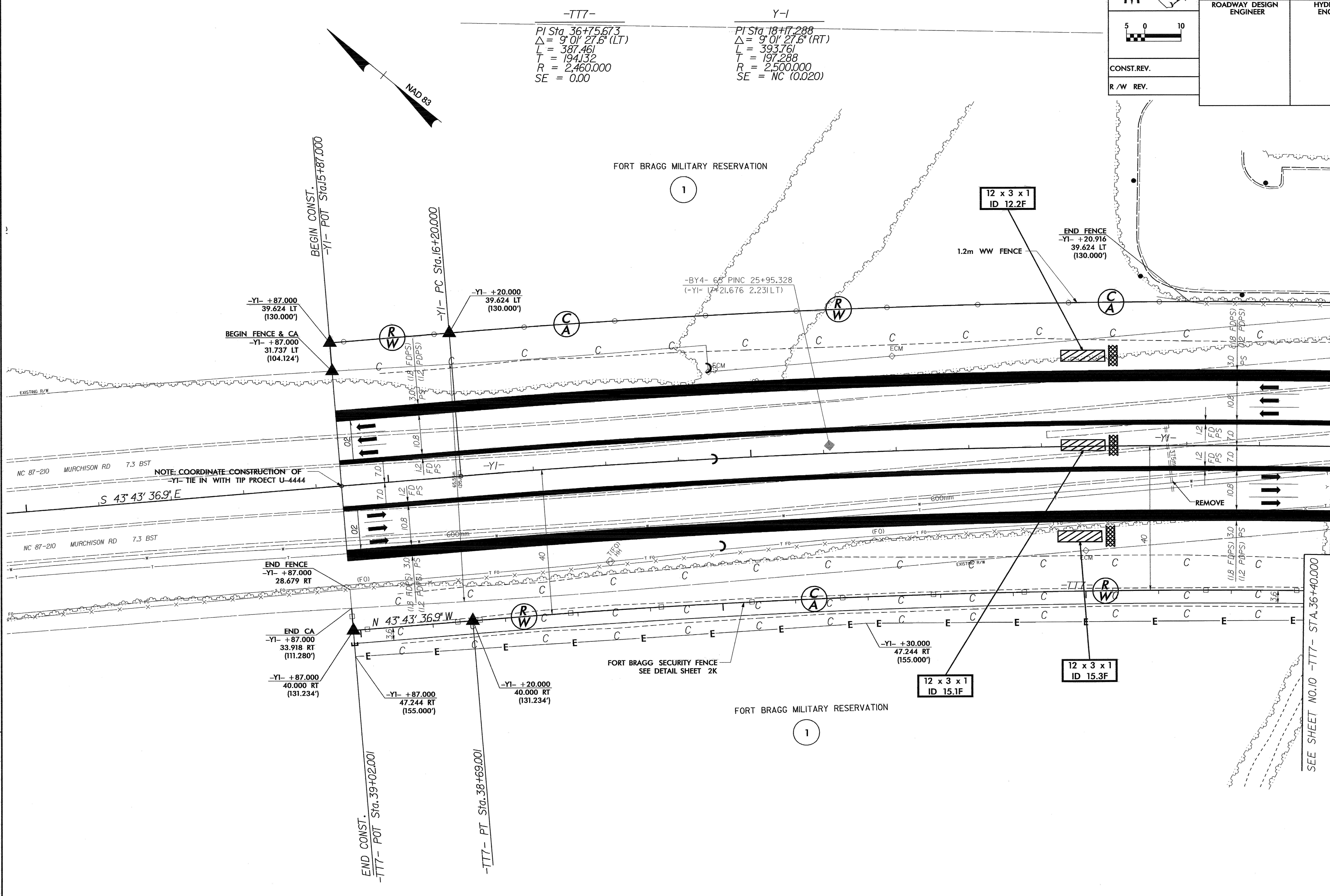
jagoodwin AT RENV221500

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-18/CONST.09
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST.REV.

R/W REV.



REVISIONS

05-MAR-2009 13:57

PROJECT REFERENCE NO. X-0002B
SHEET NO. EC-19/CONSTJO
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
REVISIONS
Y-1
PI Sta 18+17.288
△ = 9° 01' 27.6" (RT)
L = 393.761
T = 197.288
R = 2,500.000
SE = NC (0.020)
PI Sta 23+20.072
△ = 13° 58' 14.3" (LT)
L = 609.584
T = 306.311
R = 2,500.000
SE = NC (0.020)
RUNOFF = 60.000
-FLYOVER-
PI Sta 30+25.909
△ = 13° 58' 42.8" (RT)
L = 195.178
T = 98.076
R = 800.000
SE = 0.04
RUNOFF = 60.000
PIs Sta 31+47.886
Θs = 0° 41' 29.0"
Θs = 2° 08' 55.2"
Ls = 60.000
LT = 35.137
ST = 24.875
-TT7-
PI Sta 36+75.673
△ = 9° 01' 27.59" (LT)
L = 387.461
T = 194.132
R = 2,460.000
SE = 0.00
PI Sta 33+54.526
△ = 5° 44' 06.22" (RT)
L = 254.243
T = 127.228
R = 2,540.000
SE = 0.00
NAD 83
FORT BRAGG MILITARY RESERVATION
ABANDON AND PLANT PAVEMENT REMOVAL AREA
225mm X 300mm CONCRETE CURB
RETAIN
BEGIN FENCE -Y1- +24.624 39.699 LT (130.246')
-Y1- +98.651 39.624 LT (130.000')
12 x 3.5 x 1 ID 15.2F
11 x 3 x 1 ID 15.4F
14 x 4.5 x 1 ID 15.11F
12 x 3 x 1 ID 15.10F
1.2m WW FENCE
PAVEMENT REMOVAL AREA
BEGIN GR
NC 87-210 MURCHISON RD 7.3 BST
END GRADING & BEGIN PAVING -FLYOVER- +30.00
+64.296 BEGIN MEDIAN TAPER LT.
COLLAR & EXTEND
SPEC. CUT DITCH SEE DETAIL 5
REMOVE
SEE SHEET NO.9 -Y1- STA.18+60.000
SEE SHEET NO.9 -TT7- STA.36+40.000
SEE SHEET NO.11 -Y1- STA.22+20.000
SEE SHEET NO.11 -TT7- STA.32+80.000
SPEC. LAT. 'V' DITCH SEE DETAIL 8 EST. 14 TONS EST. 22 SMFF
SPEC. LAT. 'V' DITCH SEE DETAIL 7 DDE EST. 20CM
SPEC. LAT. 'V' DITCH SEE DETAIL 7 DDE EST. 143CM
-Y1- +90.000 47.244 RT (155.000')
12 x 3 x 1 ID 15.1F
12 x 3.5 x 1 ID 15.3F
-TT7- 35+00
-Y1- +13.761 40.000 RT (131.234')
12 x 3 x 1 ID 15.4F
Modified Silt Basin Type 'B' 7 x 4 x 1 (See Tiered Skimmer Basin Detail) ID 15.6F
-Y1- +80.000 47.244 RT (155.000')
7 x 4 x 1 38 mm Skimmer with 24 mm Orifice Diameter 2 m weir (See Tiered Skimmer Basin Detail) ID 15.6F
CL. 'I' RIP RAP EST. 13.6 TONS EST. 25.1 SMFF
-Y1- +25.000 61.570 RT (202.000')
9 x 4 x 1 38 mm Skimmer with 15 mm Orifice Diameter 1.5 m weir ID 15.7F
8 x 3.5 x 1 1.5 m weir ID 15.8F
16 x 4 x 1 38 mm Skimmer with 24 mm Orifice Diameter 2 m weir ID 15.9F
FORT BRAGG SECURITY FENCE SEE DETAIL SHEET 2K
-Y1- +80.000 47.244 RT (155.000')
-TT7- PRC Sta.34+81.541
-Y1- 20+00
-FLYOVER- 30+00

PROJECT REFERENCE NO.	SHEET NO.
X-0002B	EC-20/CONSTJI
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST.REV.

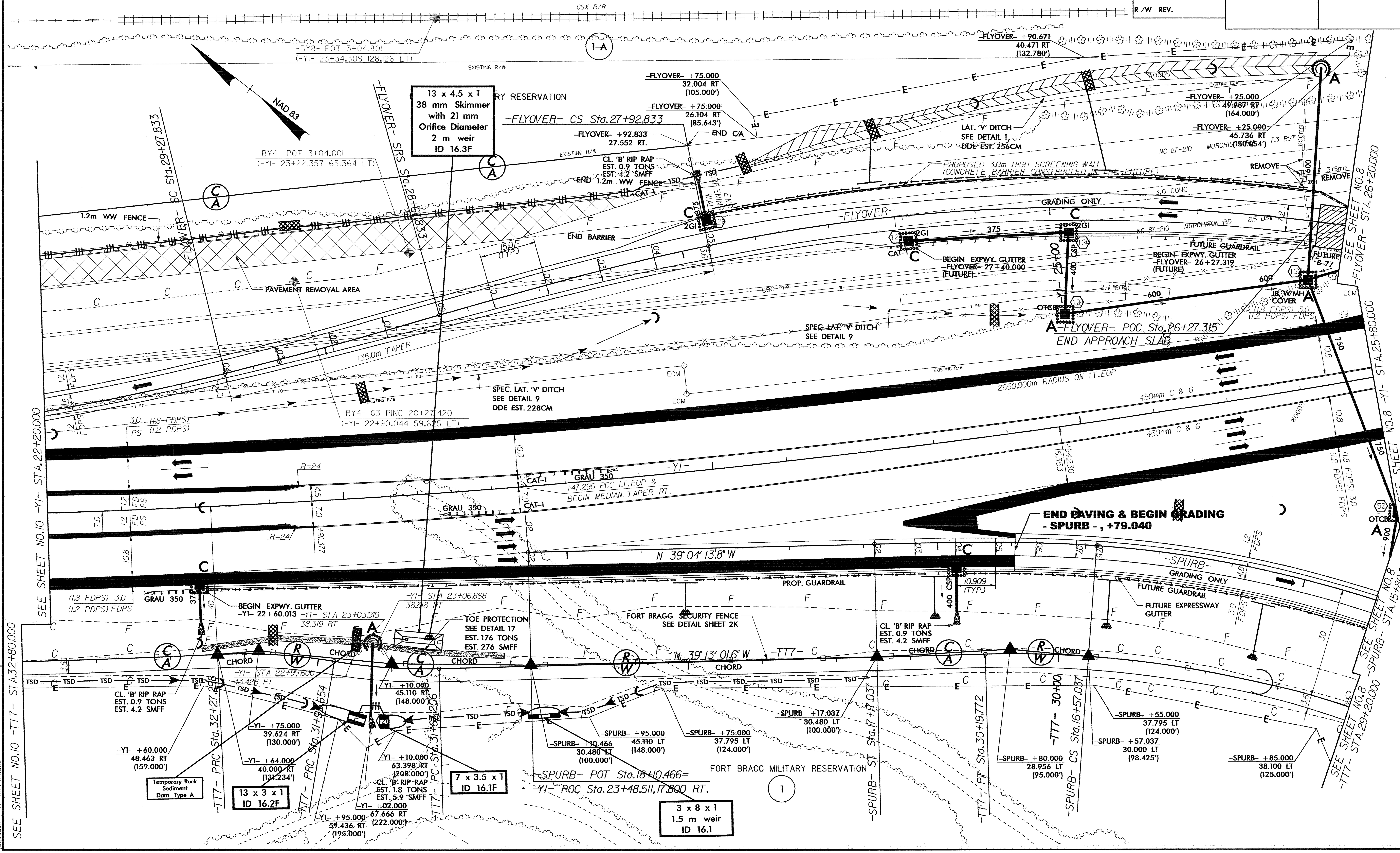
R/W REV.

-FLYOVER-

PI Sta 26+73.787	PIs Sta 28+17.847	PIs Sta 29+07.836	PI Sta 30+25.909
Δ = 125° 56' 09.8" (LT)	Θs = 4° 17' 49.9"	Θs = 2° 08' 54.9"	Δ = 13° 58' 42.8" (RT)
L = 1,098.999	Ls = 75.000	Ls = 60.000	L = 195.178
T = 979.953	LT = 50.015	LT = 40.003	T = 98.076
R = 500.000	ST = 25.013	ST = 20.003	R = 800.000
SE = 0.05			SE = 0.04
RUNOFF = 75.000			RUNOFF = 60.000

-SPURB-

PI Sta 14+88.346	PIs Sta 16+77.054
Δ = 73° 21' 23.9" (LT)	Θs = 5° 27' 24.3"
L = 403.299	Ls = 60.000
T = 234.608	LT = 40.019
R = 315.000	ST = 20.017
SE = 0.075	
RUNOFF = 60.000	



REVISIONS

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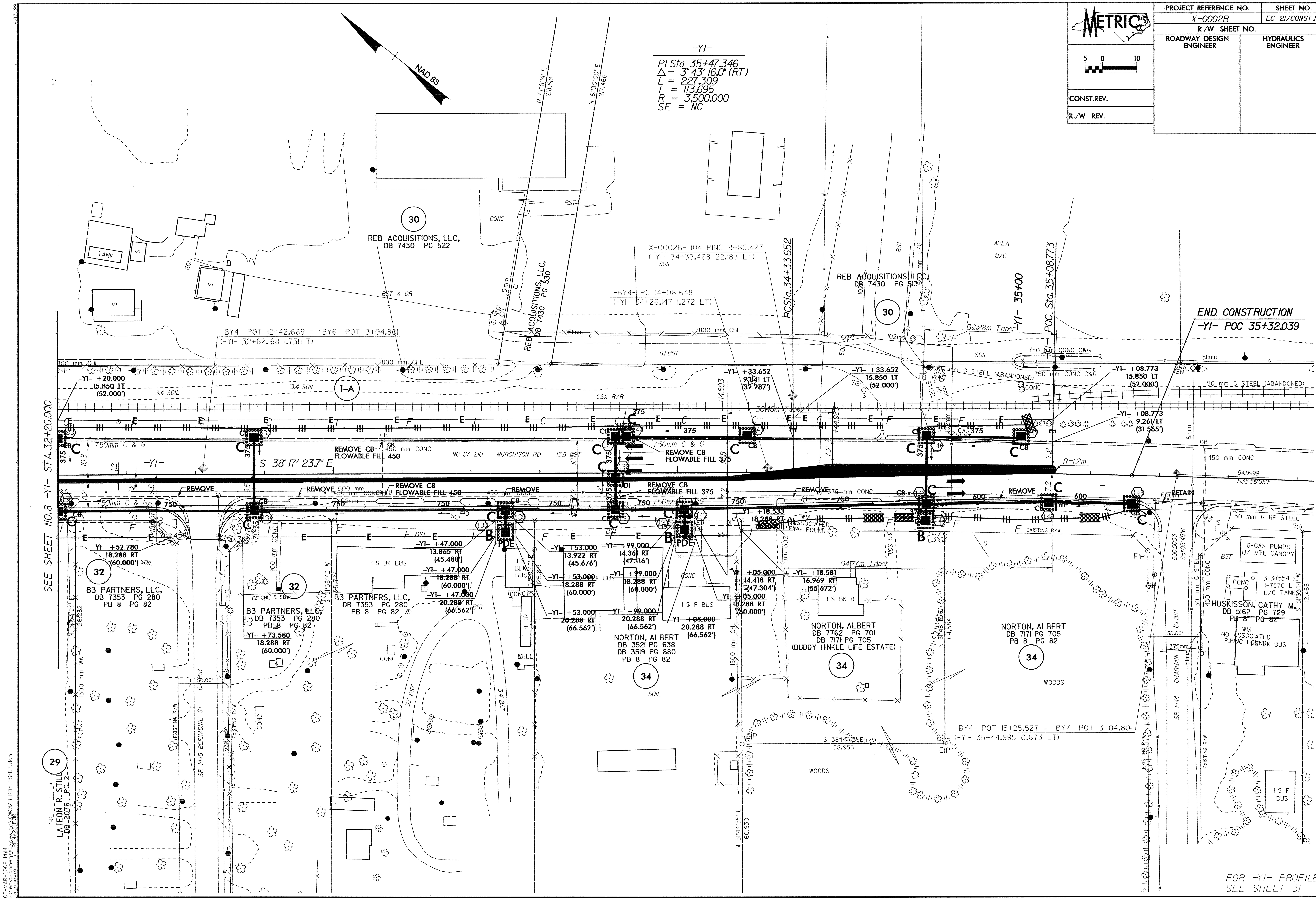

METRIC
PROJECT REFERENCE NO.
X-0002B
SHEET NO.
EC-21/CONST J2
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
CONST.REV.
R/W REV.
5 0 10
NAD 83
-Y1-
PI Sta 35+47.346
Δ = 3° 43' 16.0" (RT)
L = 227.309
T = 113.695
R = 3,500.000
SE = NC
REB ACQUISITIONS, LLC, DB 7430 PG 522
REB ACQUISITIONS, LLC, DB 7430 PG 530
REB ACQUISITIONS, LLC, DB 7430 PG 513
X-0002B- 104 PINC 8+85.427 (-Y1- 34+33.468 22.183 LT)
-BY4- PC 14+06.648 (-Y1- 34+26.147 1.272 LT)
-BY4- POT 12+42.669 = -BY6- POT 3+04.801 (-Y1- 32+62.168 1.751 LT)
PC Sta. 34+33.652
-Y1- 35+00
POC Sta. 35+08.773
END CONSTRUCTION
-Y1- POC 35+32.039
CSX R/W
NC 87-210 MURCHISON RD
S 38° 17' 23.7" E
REMOVE CB FLOWABLE FILL 450
REMOVE CB FLOWABLE FILL 375
SEE SHEET NO. 8 -Y1- STA. 32+20.000
B3 PARTNERS, LLC, DB 7353 PG 280 PB 8 PG 82
NORTON, ALBERT DB 3521 PG 638 DB 3519 PG 880 PB 8 PG 82
NORTON, ALBERT DB 7762 PG 701 DB 7171 PG 705 (BUDDY HINKLE LIFE ESTATE)
NORTON, ALBERT DB 7171 PG 705 PB 8 PG 82
HUSKISSON, CATHY M. DB 5162 PG 729 PB 8 PG 82
LATEON R. STILL DB 2076 PG 21
-BY4- POT 15+25.527 = -BY7- POT 3+04.801 (-Y1- 35+44.995 0.673 LT)
SR 1445 BERNADINE ST
SR 1444 CHARMAIN
6-GAS PUMPS U/ MTL CANOPY
FOR -Y1- PROFILE SEE SHEET 31