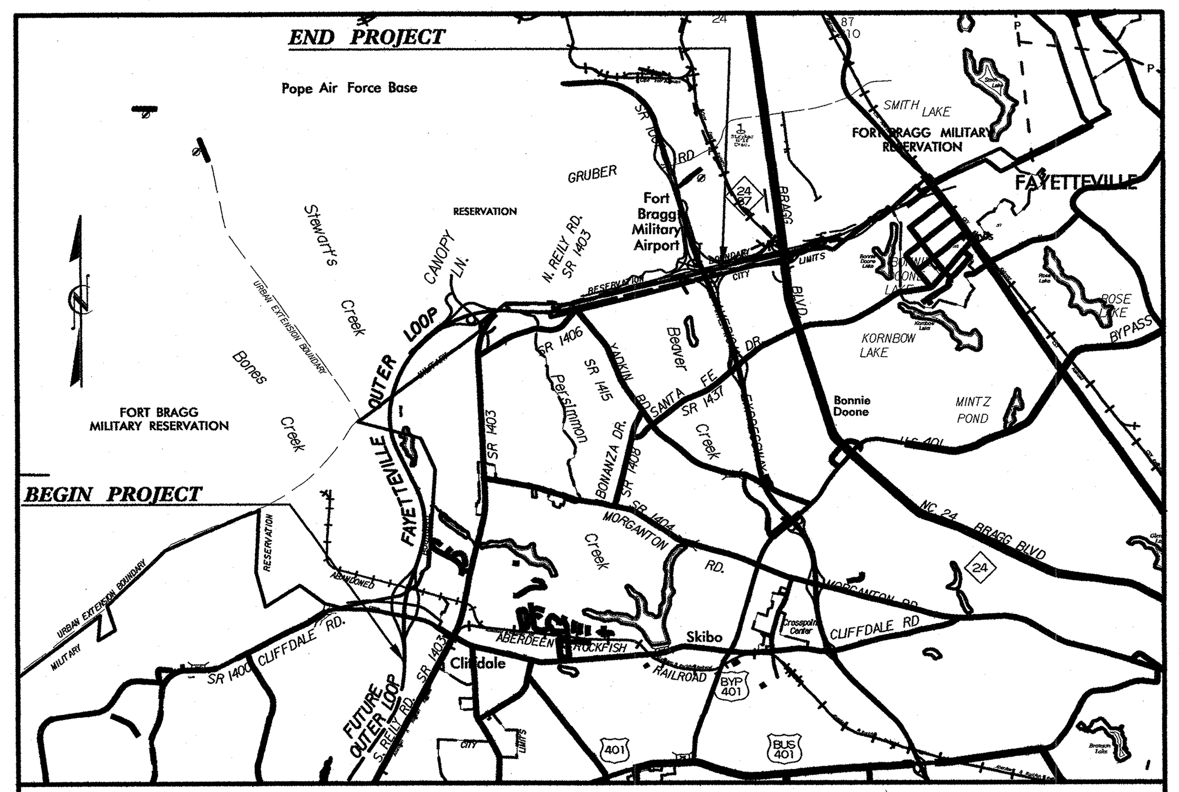
TIP PROJECT: U-2519CB

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2519CB	EC-1	

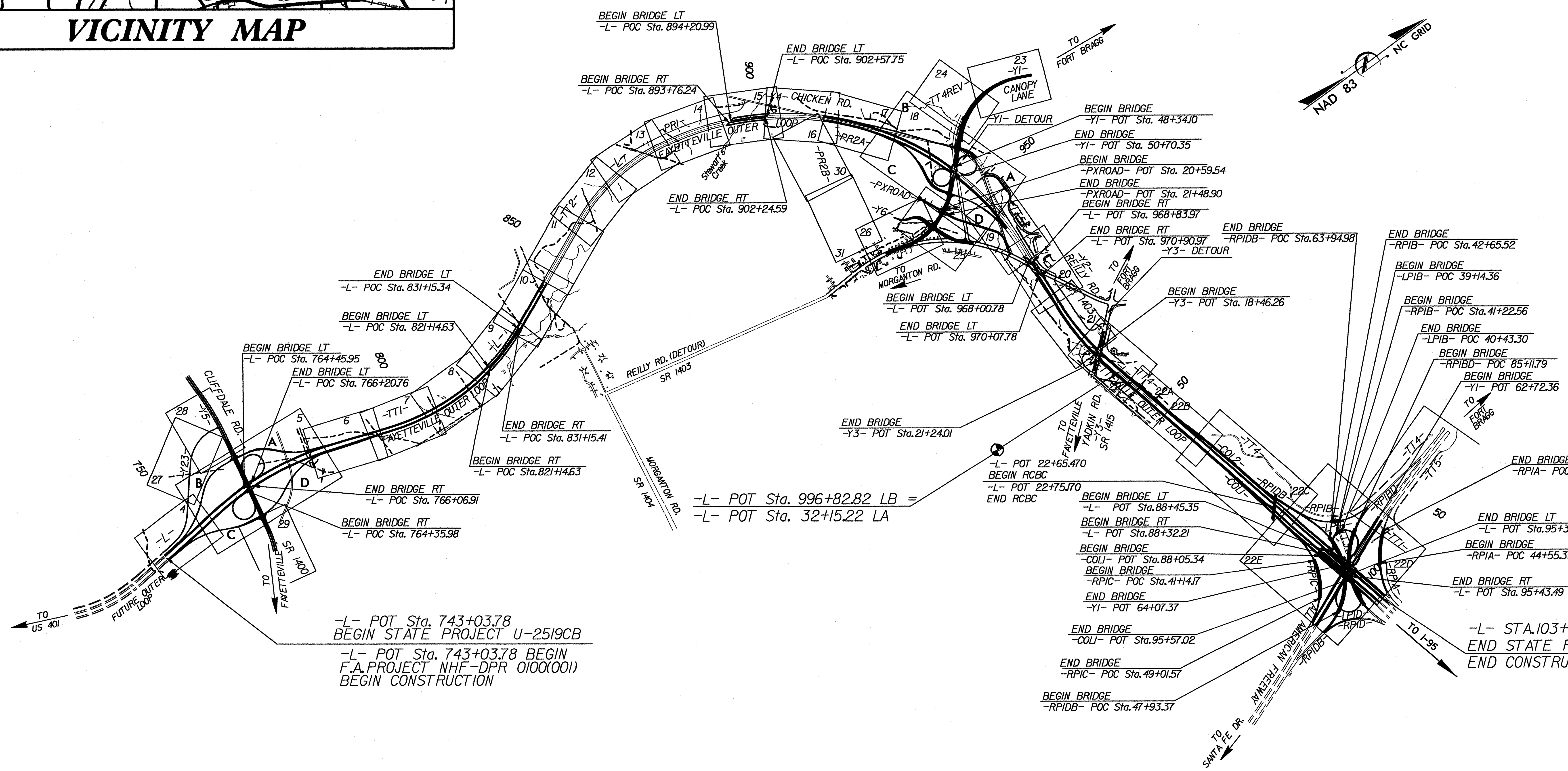
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	EW / CFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
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	
1630.06	Special 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.

GRAPHIC SCALE

50 0 100

PLANS

JOSHUA G. DALTON
LEVEL IIIA NAME
307
LEVEL IIIA CERTIFICATION NO.

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared In the Office of:

SUNGATE DESIGN GROUP, P.A.
915 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243 FAX (919) 859-6258
ENG FIRM LICENSE NO. C-890

Roadway Standard Drawings

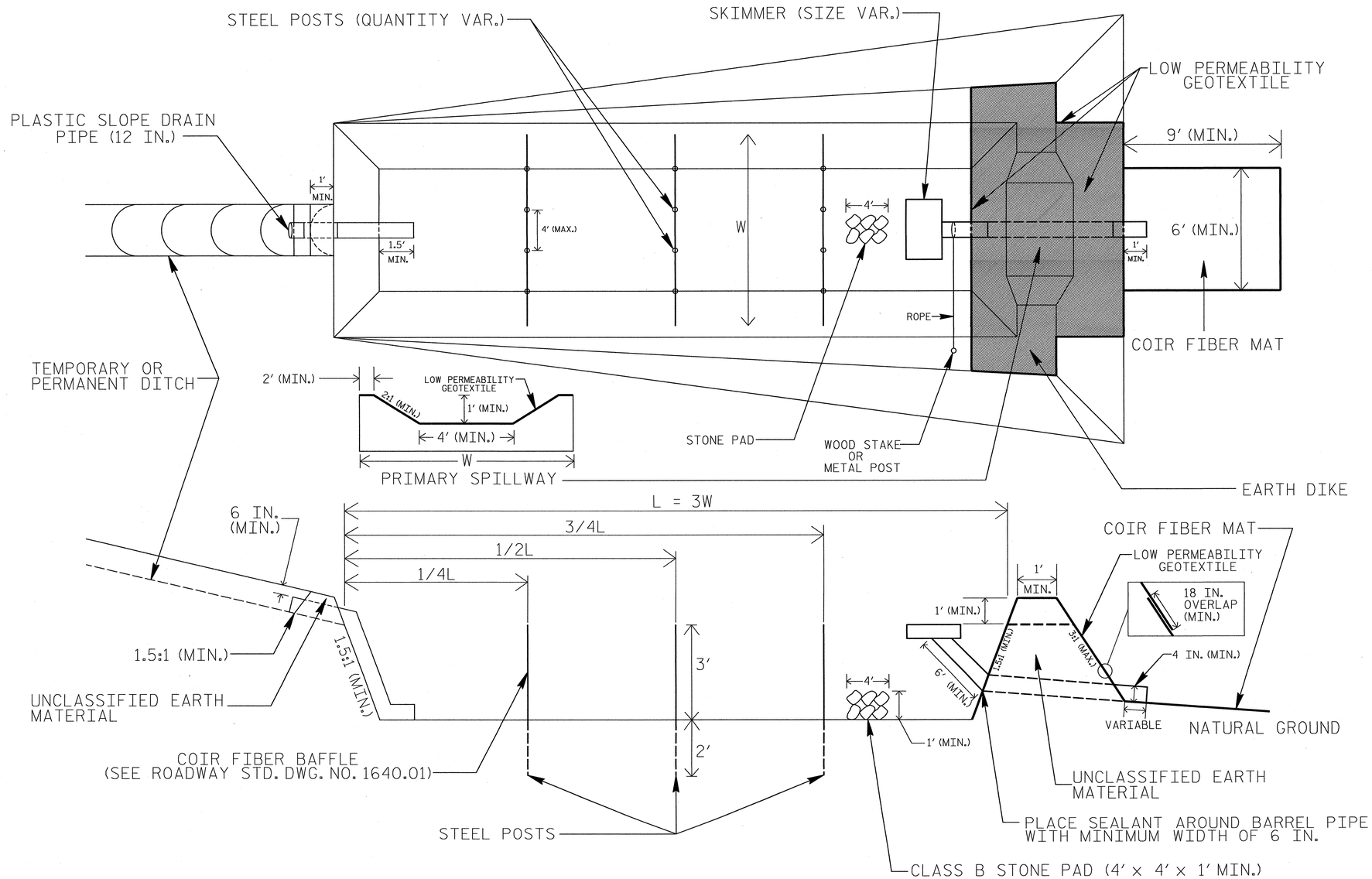
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

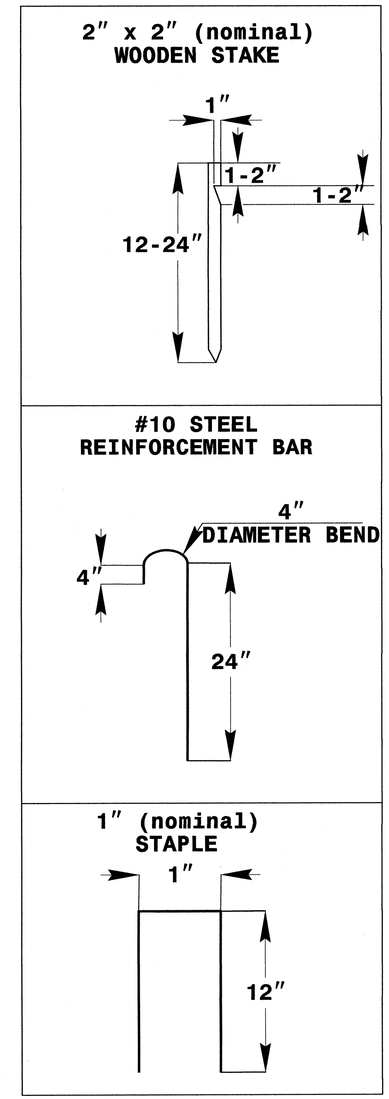
1604.01	Railroad Erosion Control Detail
1605.01	Temporary Silt Fence
1606.01	Special Sediment Control Fence
1607.01	Gravel Construction Entrance
1622.01	Temporary Berms and Slope Drains
1630.01	Riser Basin
1630.02	Silt Basin Type B
1630.03	Temporary Silt Ditch
1630.04	Stilling Basin
1630.05	Temporary Diversion
1630.06	Special Stilling Basin
1631.01	Matting Installation
1632.01	Rock Inlet Sediment Trap Type A
1632.02	Rock Inlet Sediment Trap Type B
1632.03	Rock Inlet Sediment Trap Type C
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
1640.01	Coir Fiber Baffle
1645.01	Temporary Stream Crossing

4/14/2014
U-2519CB\Design Files\Environmental\Design\U2519CB_EC_dsn_psh_01_tsh.dgn
belam

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL (EAST)





COIR FIBER MAT ANCHOR OPTIONS

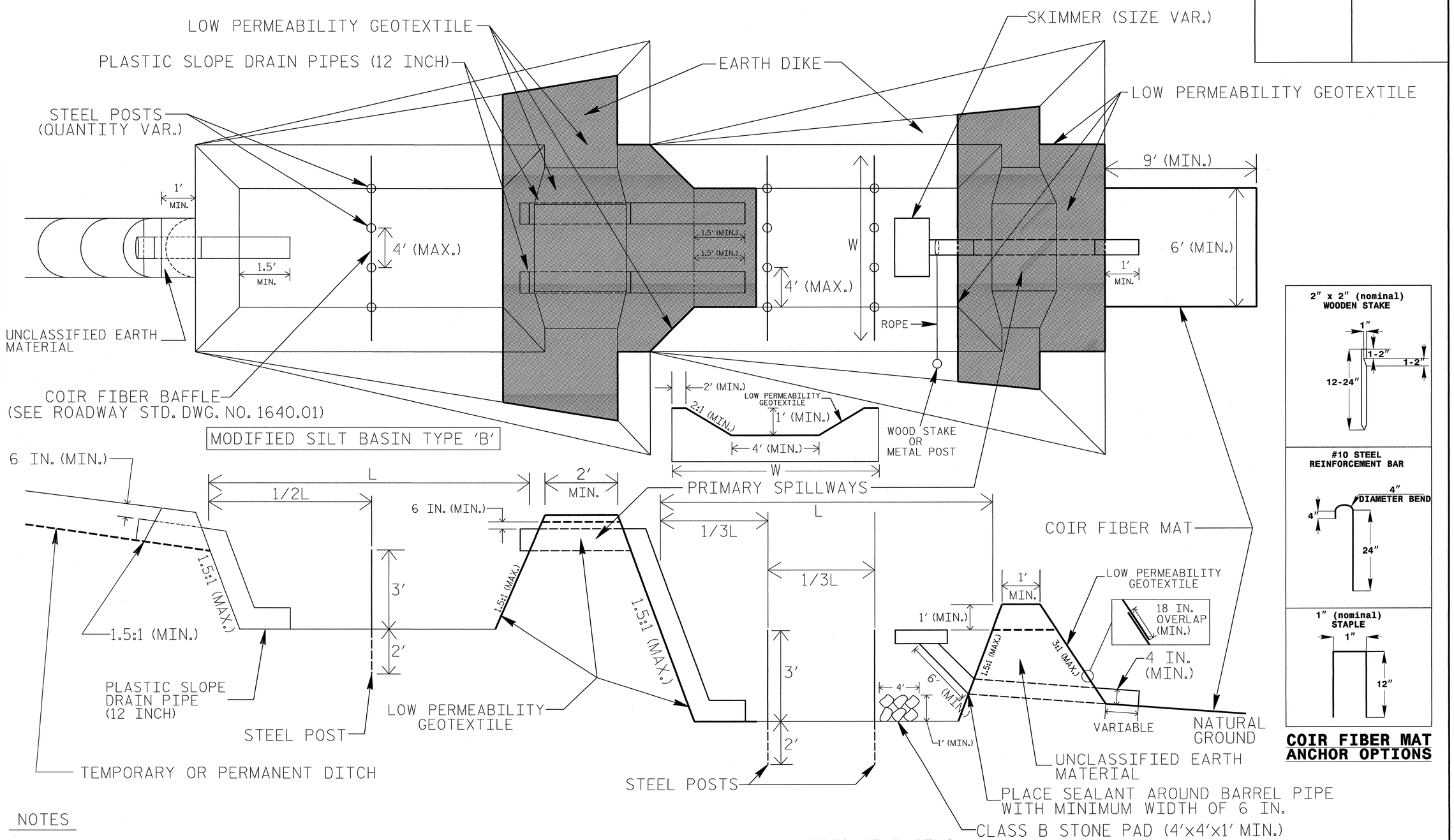
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TIERED SKIMMER BASIN DETAIL (EAST)



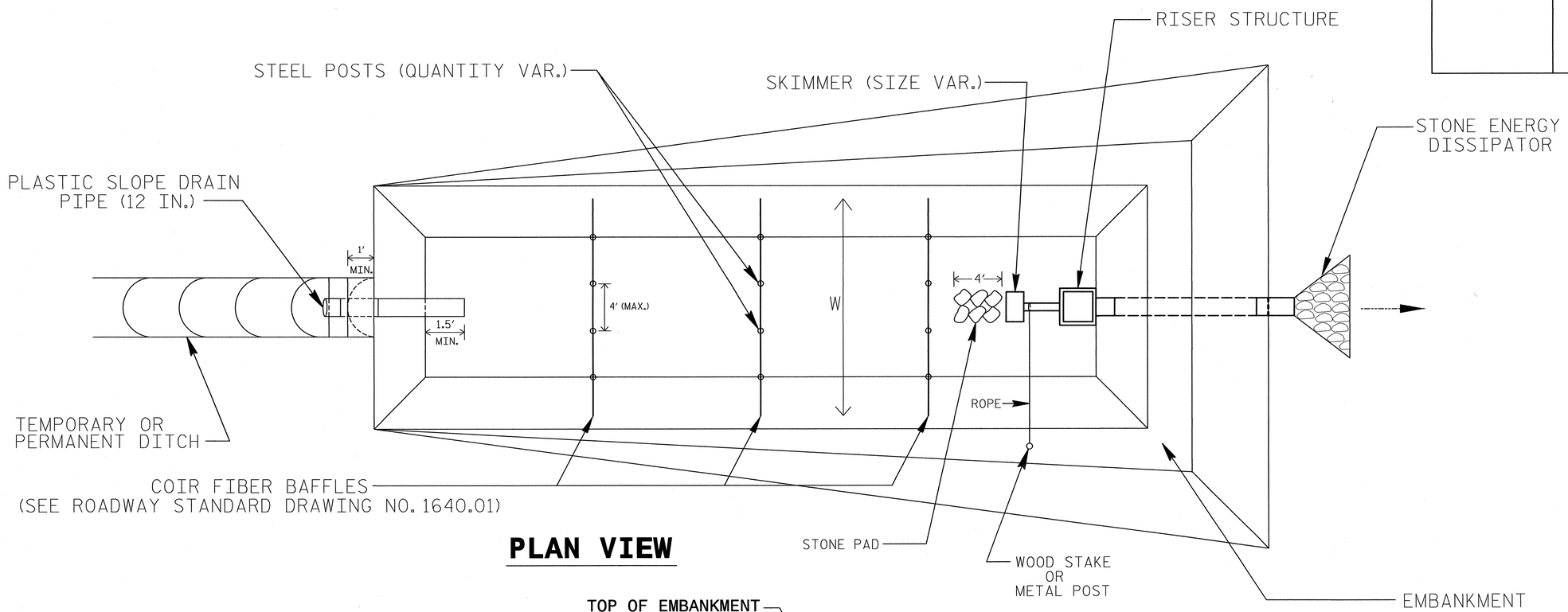
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. FOR BASIN DEPTHS OF 3FT., THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE PRIMARY SPILLWAY LENGTHS (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

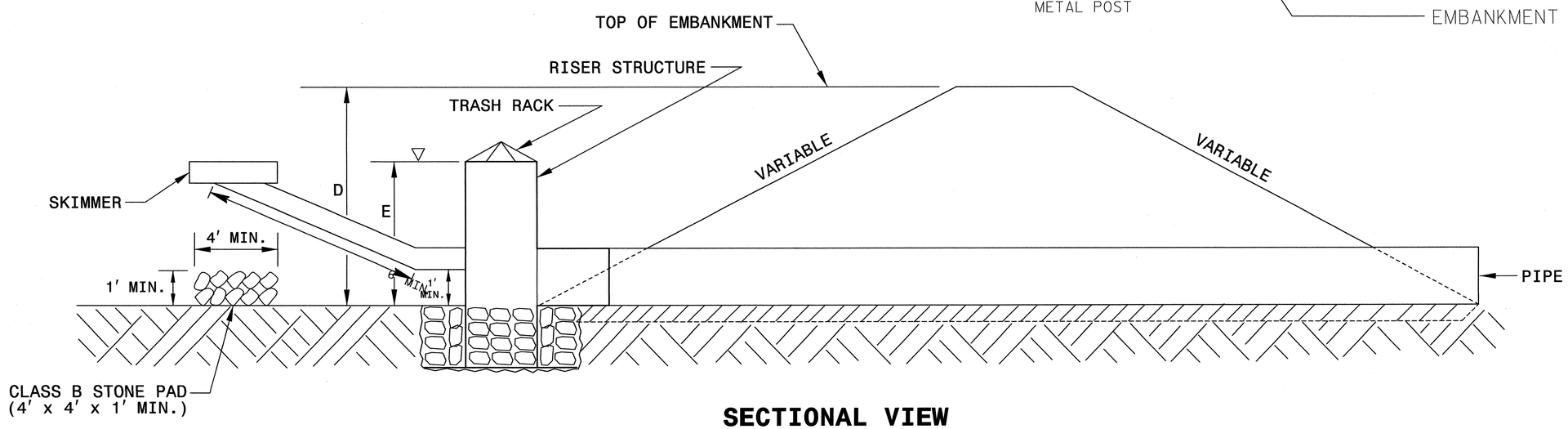
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STORMWATER BASIN WITH SKIMMER



PLAN VIEW



SECTIONAL VIEW

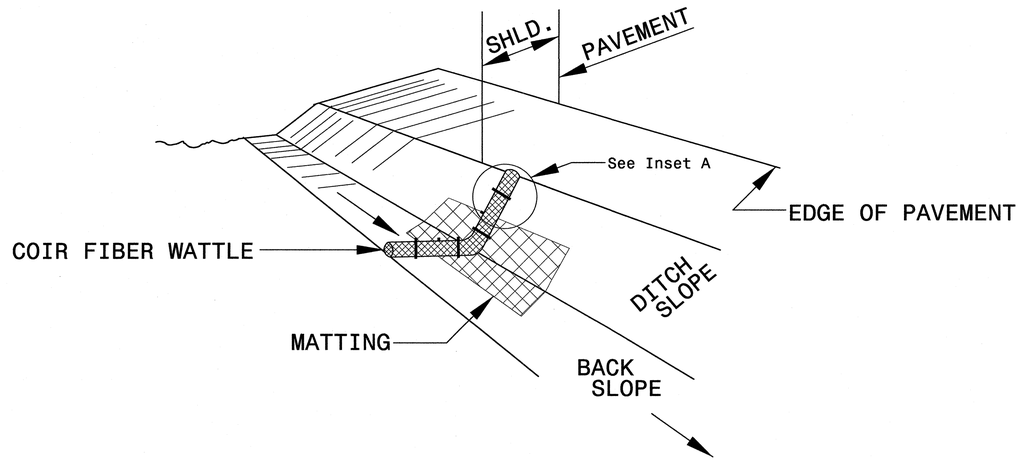
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. INSTALL A MINIMUM OF 3 COIR FIBER BAFFLES IN ACCORDANCE WITH ROADWAY STD. DRAWING 1640.01.
3. INSTALL SKIMMER AND COUPLING TO RISER STRUCTURE OR DIRECTLY INTO EMBANKMENT 1 FT. FROM BOTTOM OF BASIN.
4. THE ARM PIPE SHALL HAVE A MINIMUM LENGTH OF 6 FT. BETWEEN THE SKIMMER AND COUPLING.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE AS DIRECTED.
6. THE DIFFERENCE BETWEEN LENGTHS "D" AND "E" REPRESENT THE FREEBOARD AND SHOULD BE 1 FT. MINIMUM.

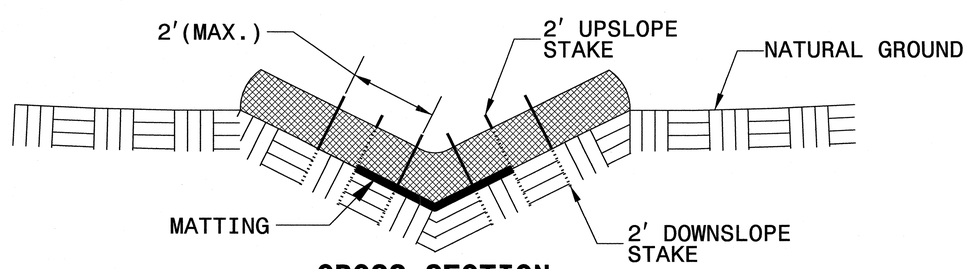
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2915CB	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

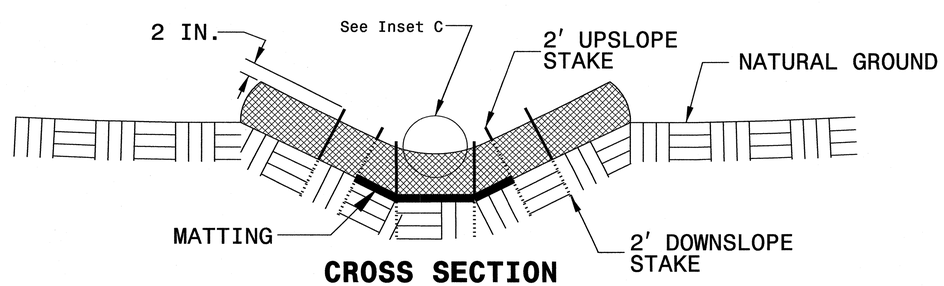
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) 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.

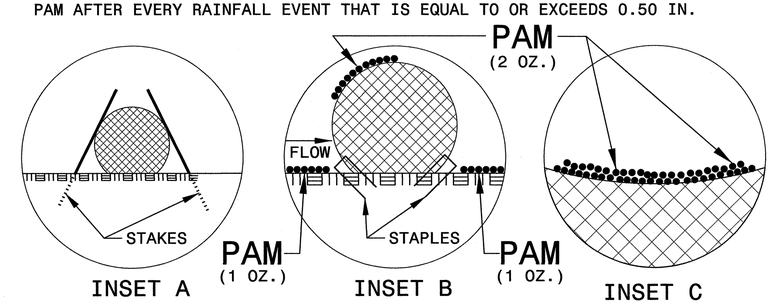
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

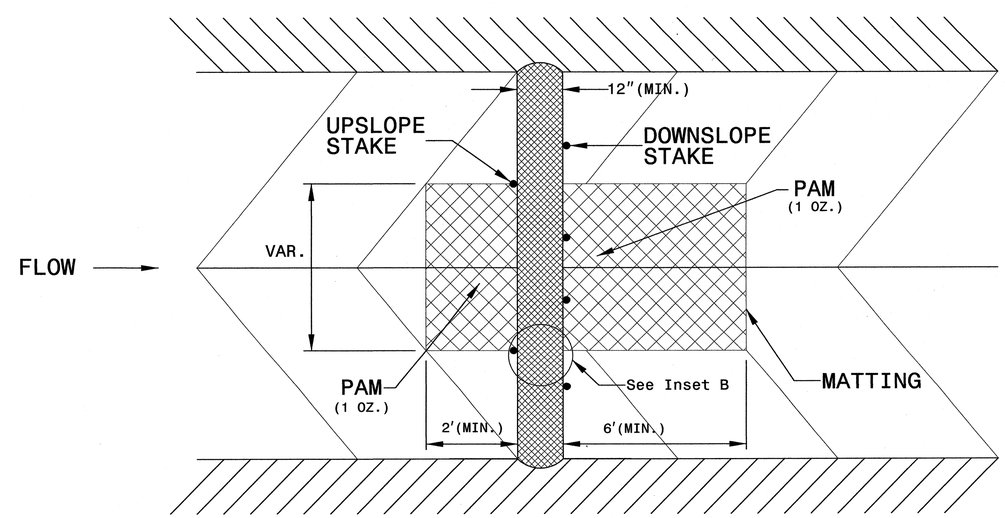
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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.

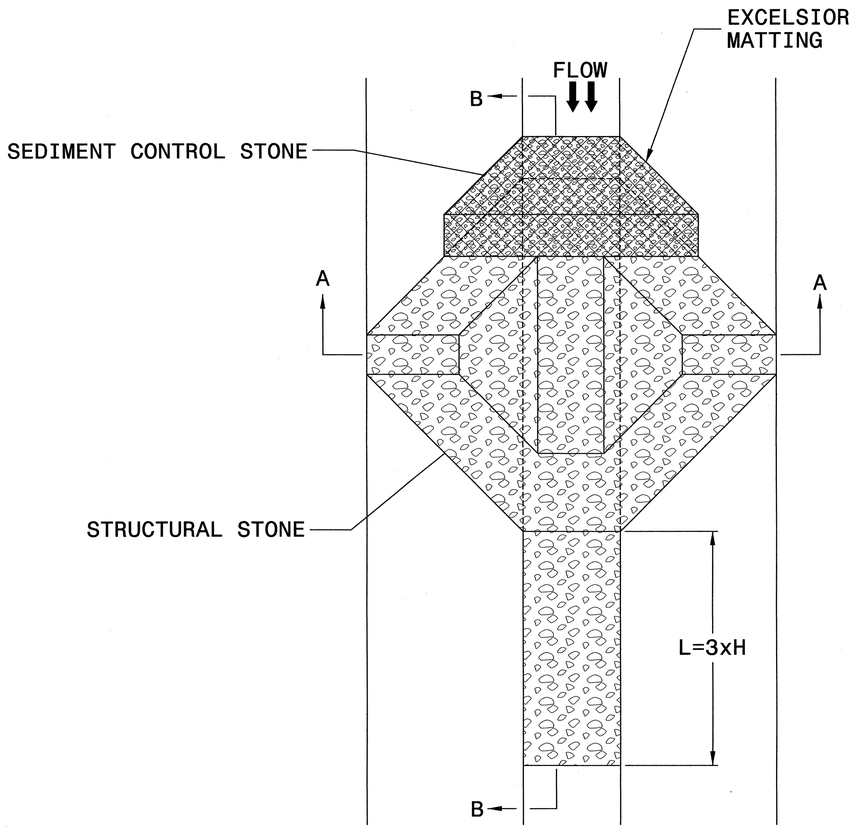




TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-2D
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



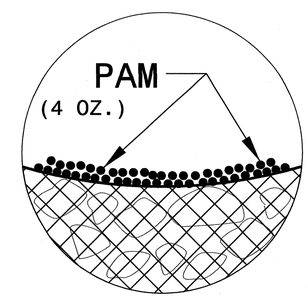
PLAN

NOTES

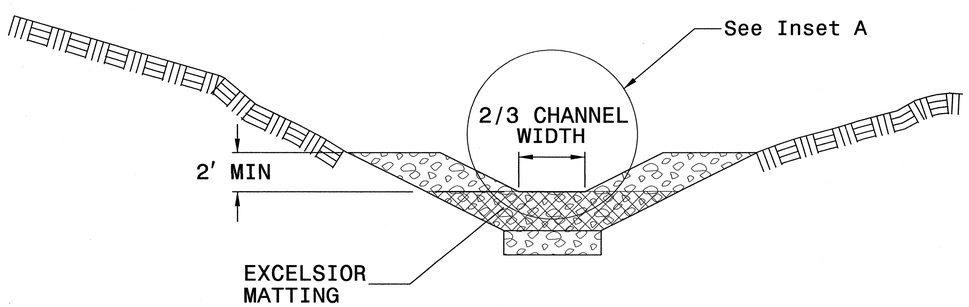
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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 ROCK SILT CHECK.

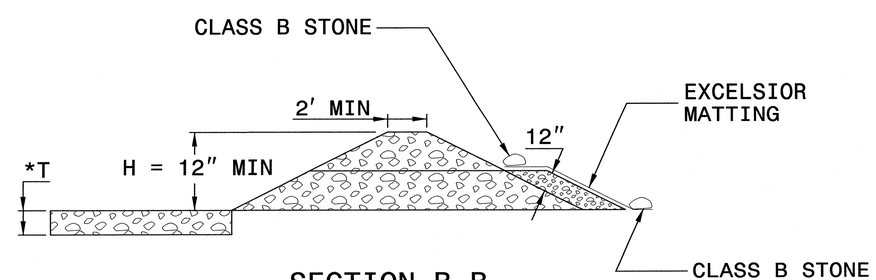
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



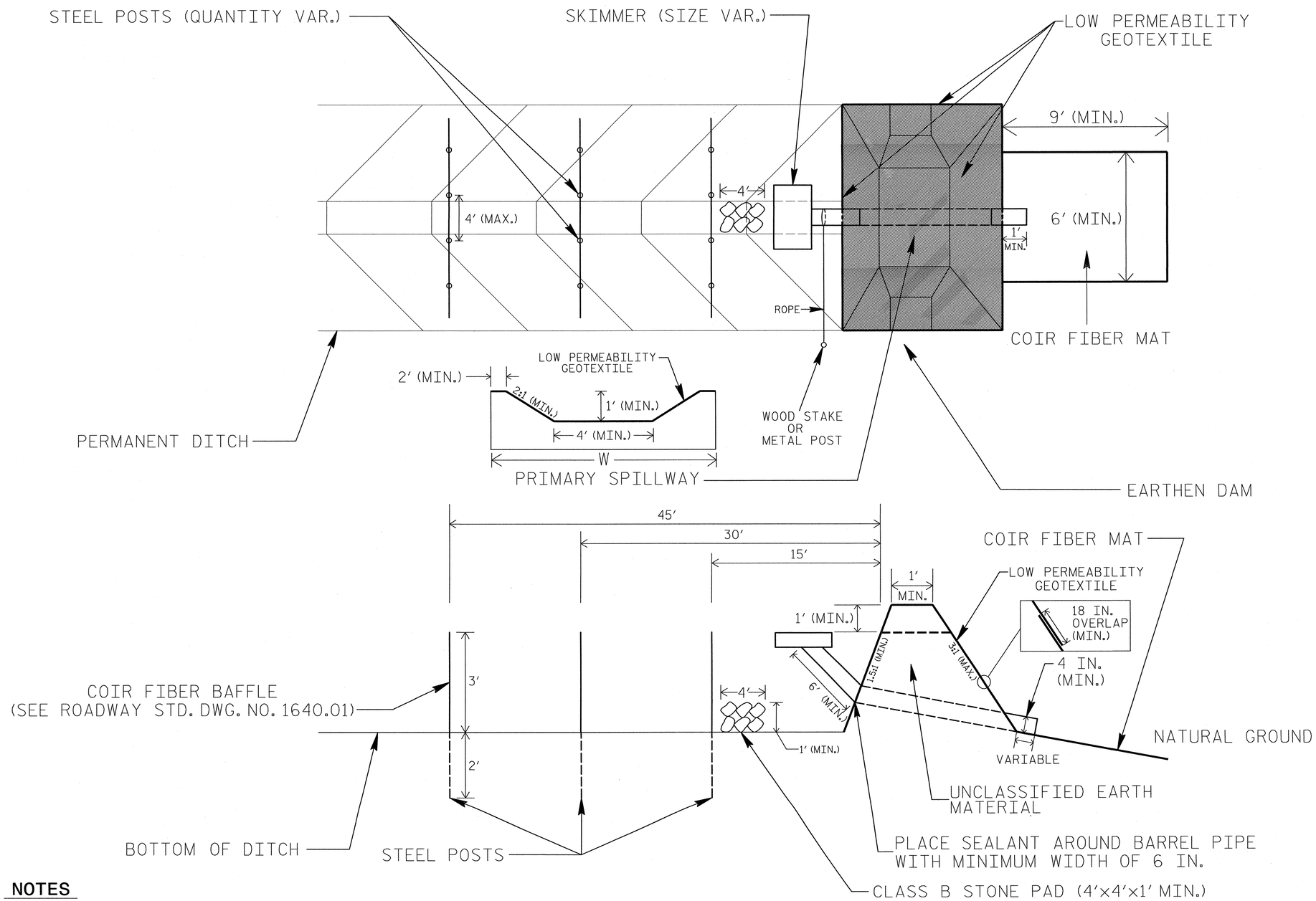
SECTION B-B

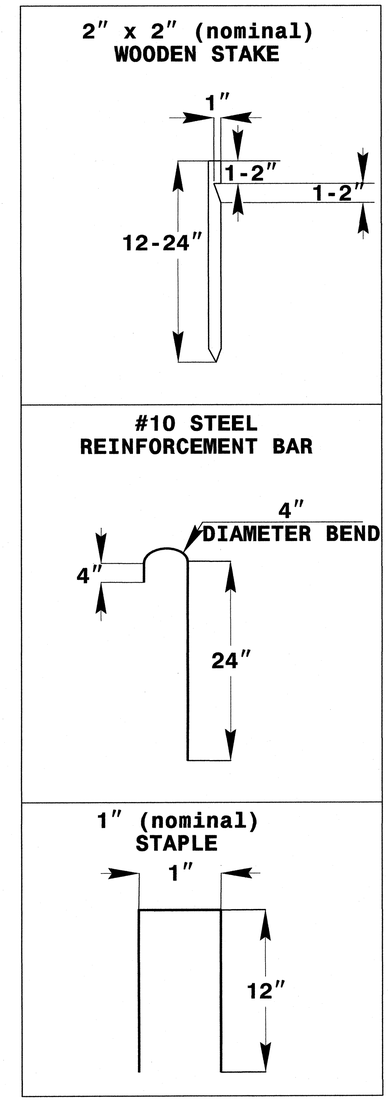
*T = 12" MIN., 18" MAX.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-2E
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EARTHEN DAM WITH SKIMMER DETAIL (EAST)





COIR FIBER MAT ANCHOR OPTIONS

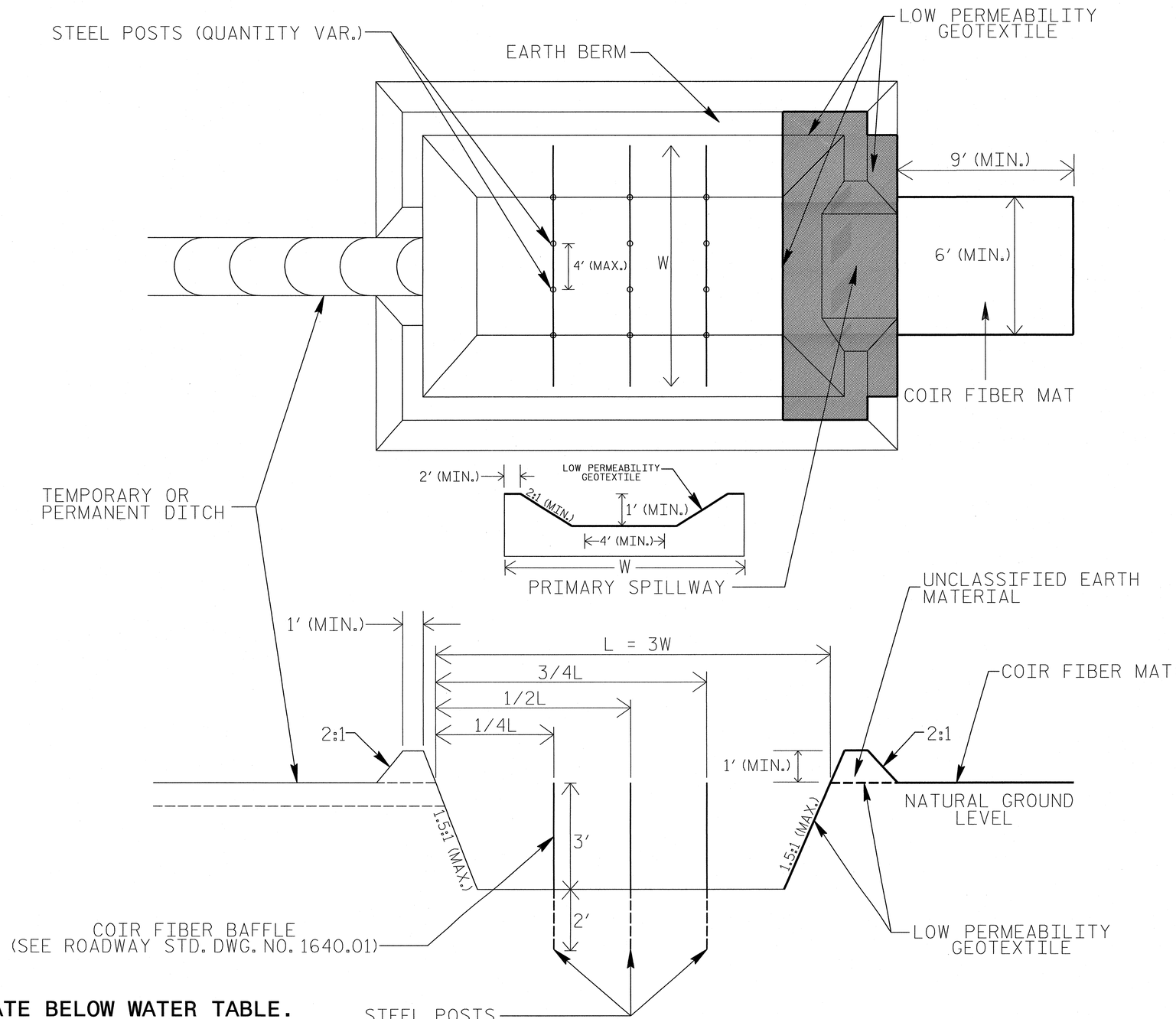
NOTES

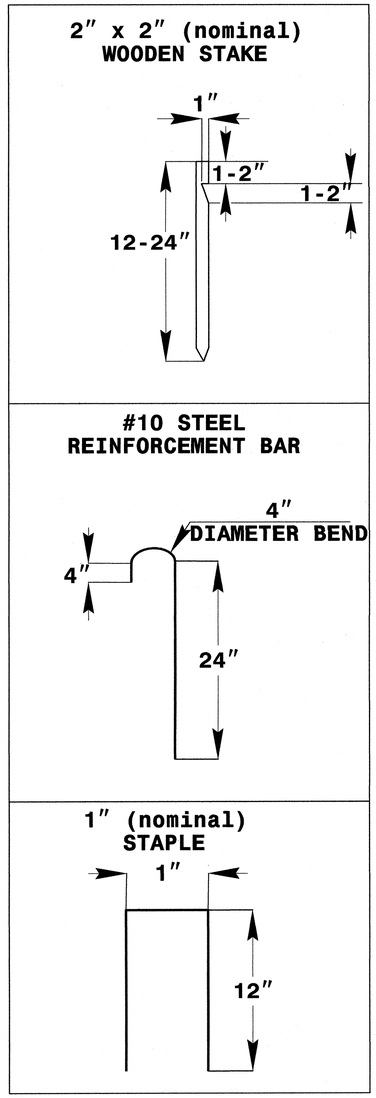
1. LIMIT EARTHEN DAM HEIGHT TO 5 FT.
2. DETERMINE PRIMARY SPILLWAY LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
3. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-2F
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INFILTRATION BASIN WITH BAFFLES DETAIL (EAST)





COIR FIBER MAT ANCHOR OPTIONS

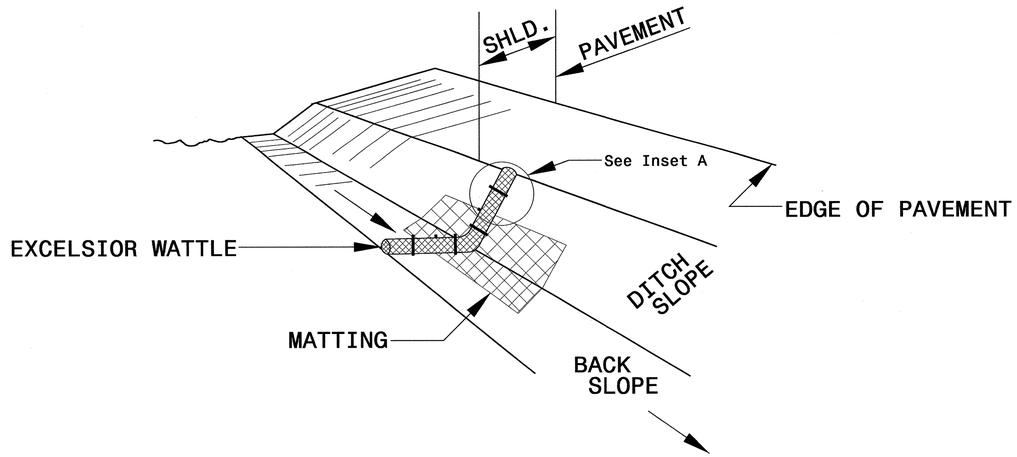
NOTES

1. DO NOT EXCAVATE BELOW WATER TABLE.
2. LIMIT EARTH BERM HEIGHT TO 3 FT.
3. AVOID COMPACTING BOTTOM OF BASIN.
4. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
5. DETERMINE PRIMARY SPILLWAY LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.

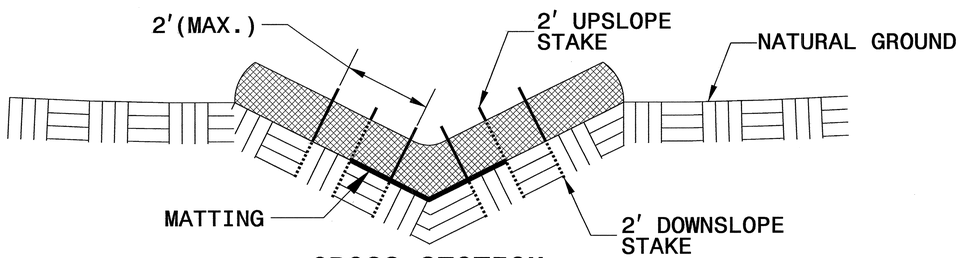
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-2G
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

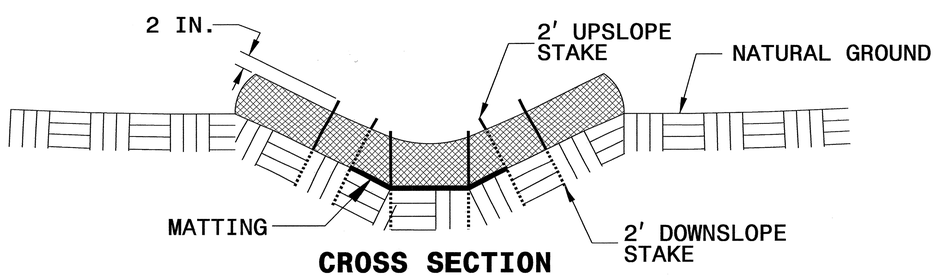
WATTLE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

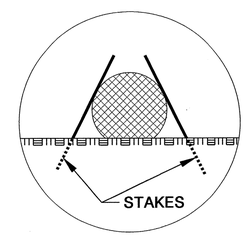
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

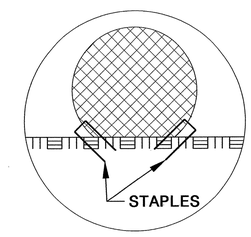
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

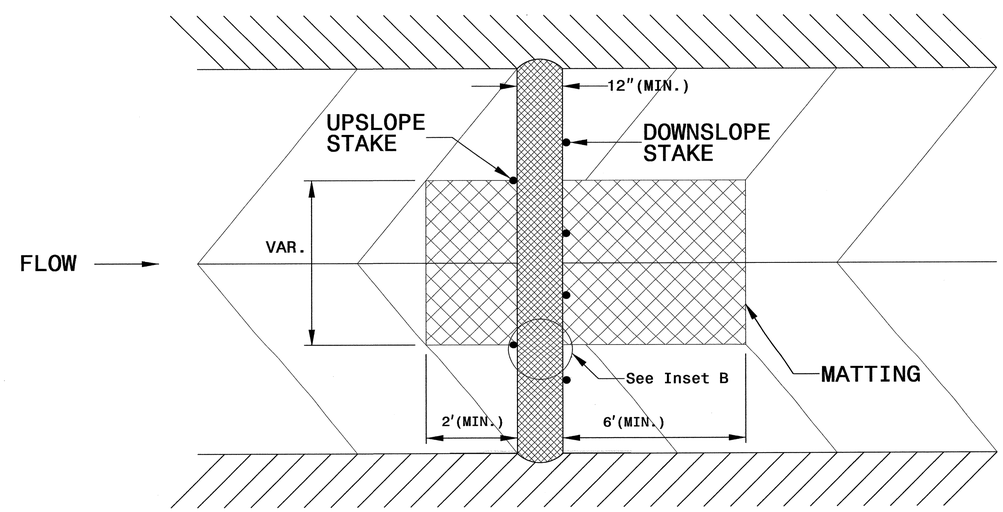
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-2H
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

BORROW PIT DEWATERING BASIN DETAIL

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING $V = 8.0203 * Q * T$, WHERE V IS VOLUME (FT^3), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1060-14.

PROVIDE 5′ STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3′ OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12″ STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

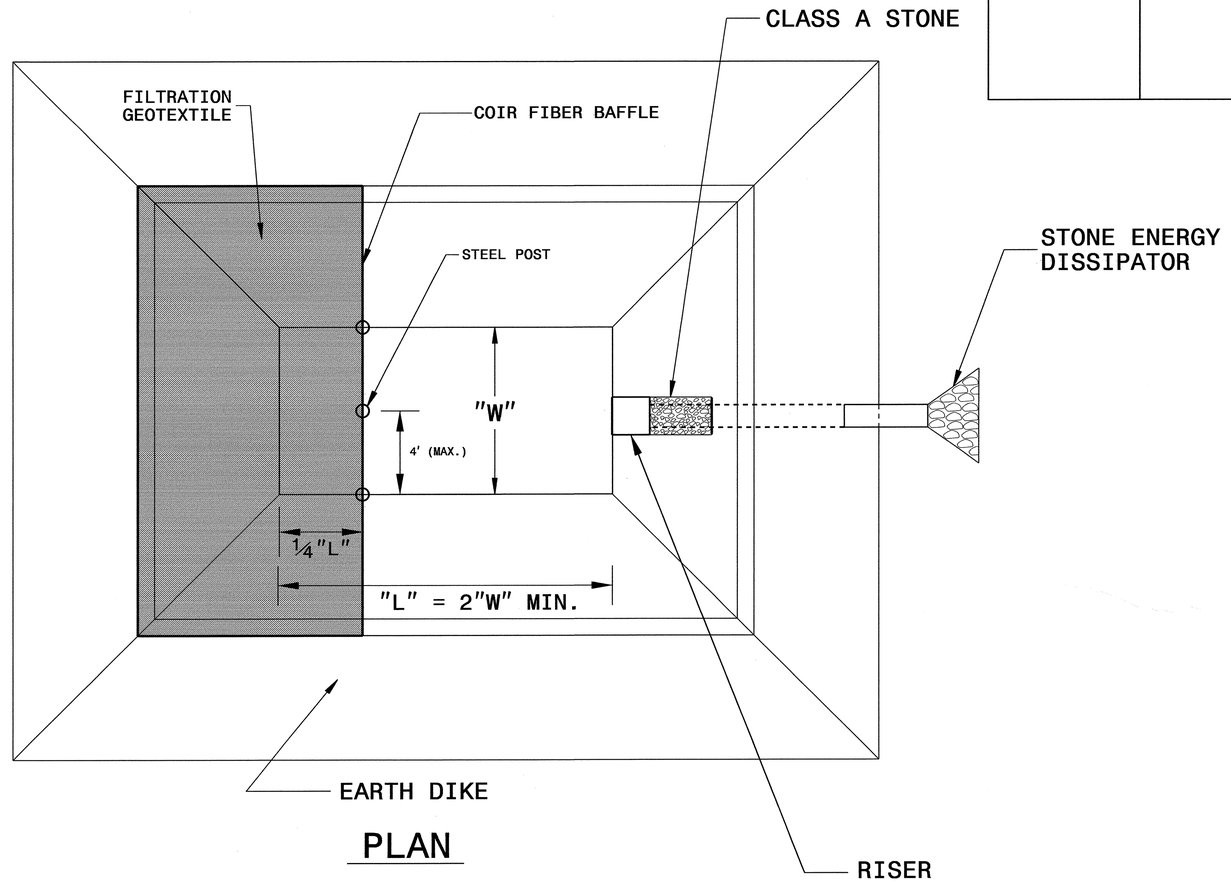
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

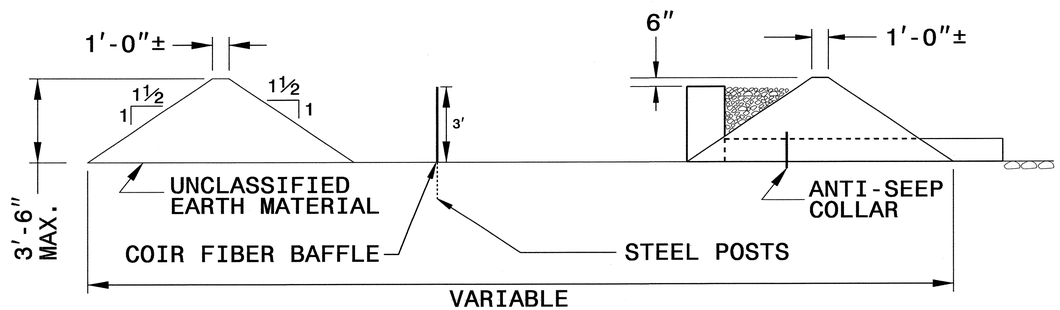
SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



PLAN



TYPICAL SECTION VIEW

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
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.

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	738+00	743+79	RT	935
4,5	-L-	742+00	764+00	MED	1955
4,5	-RPC1-	0+00	18+50	RT	2105
4	-L-	91+50	105+50	LT	910
5	-Y23-	753+20	759+00	LT	405
5	-LPC1-	5+00	7+50	LT	315
5	-RPD1-	7+26	18+85	LT	735
5	-LPA1-	2+00	7+50	LT	410
5	-RPB1-	11+43	23+00	LT	885
5	-RPB1-	11+92	23+00	RT	625
5-8	-L-	766+50	821+00	MED	4245
7,8	-L-	794+00	808+00	RT	1110
7,8	-L-	802+00	816+50	LT	1110
8	-L-	813+00	816+00	RT	230
8	-L-	817+00	820+50	LT	325
10	-L-	835+00	837+50	LT	180
10	-L-	833+00	836+50	RT	270
10	-L-	839+65	840+50	RT	120
10,11	-L-	832+50	846+50	LT	1070
10,11	-L-	841+00	846+50	RT	550
10-14	-L-	831+50	894+00	MED	4200
10,11	-L-	912+50	916+50	LT	420
11,12	-L-	849+50	859+00	LT	730
12	-L-	856+50	858+50	RT	105
12	-L-	862+50	864+00	RT	115
12	-L-	862+50	864+00	LT	115
13	-L-	868+00	869+00	RT	95
13,14	-L-	868+50	883+00	LT	1110
13,14	-L-	869+00	883+50	RT	1110
13	-L-	874+80	877+35	LT	180

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
13	-L-	877+00	878+00	LT	90
14	-L-	887+00	891+00	LT	280
16	-L-	902+75	906+50	LT	550
16,17	-L-	912+00	926+00	RT	1075
16,17	-L-	906+50	912+50	LT	420
16-19	-L-	902+50	967+00	MED	4330
17	-L-	917+00	928+50	LT	855
18	-L-	927+50	942+00	LT	815
18	-Y1-	45+00	46+00	LT	70
18	-RPA2-	5+36	7+36	RT	140
18	-RPA2-	9+83	21+50	RT	895
18	-RPA2-	20+00	21+50	LT	85
18	-RPB2-	14+08	21+83	RT	440
18	-RPB2-	9+50	20+78	LT	865
18	-RPC2-	1+54	10+21	RT	665
18	-RPC2-	6+94	7+42	LT	35
18	-RPD2-	8+30	15+66	LT	500
18	-LPC2-	2+64	3+20	RT	60
20	-L-	973+50	977+50	RT	2480
20-22	-L-	971+00	996+87	MED	1895
21	-L-	979+00	983+50	RT	2295
21	-L-	978+50	987+50	LT	690
21	-L-	978+50	989+00	RT	885
21	-L-	985+00	989+75	LT	335
22	-L-	993+50	995+00	RT	105
22	-L-	993+00	996+87	LT	300
22	-L-	994+00	996+87	RT	220
22	-L-	32+15	49+21	LT	1135
22	-L-	32+15	46+59	RT	970
22	-L-	41+34	48+56	RT	505

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-3B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
22	-L-	52+49	65+77	RT	890
22	-L-	55+77	60+37	LT	310
22	-L-	53+15	56+43	RT	230
22	-L-	59+71	64+96	RT	370
22(A-D)	-L-	32+15	65+76	MED	2985
23	-Y1-	24+00	32+50	LT	665
25	-Y2-	46+70	48+50	RT	95
25	-PXROAD-	25+50	34+50	LT	470
			SUBTOTAL		56,670
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					439,130
			TOTAL		495,800
			TOTAL SAY		496,000

MATTING FOR EROSION CONTROL

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

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-3C
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
10	-L-	830+85	832+50	LT	115
10	-L-	839+60	840+90	LT	95
13	-L-	870+00	874+00	LT	280
13	-L-	877+50	878+00	RT	70
14	-L-	882+00	884+45	LT	175
18	-LPA2-	2+62	3+50	RT	60
18	-LPA2-	5+70	6+80	RT	75
18	-LPC2-	4+02	9+38	RT	360
			SUBTOTAL		1230
		ADDITIONAL PSRM TO BE INSTALLED			1537
			TOTAL		2767
			TOTAL SAY		2800

PERMANENT SOIL REINFORCEMENT MAT

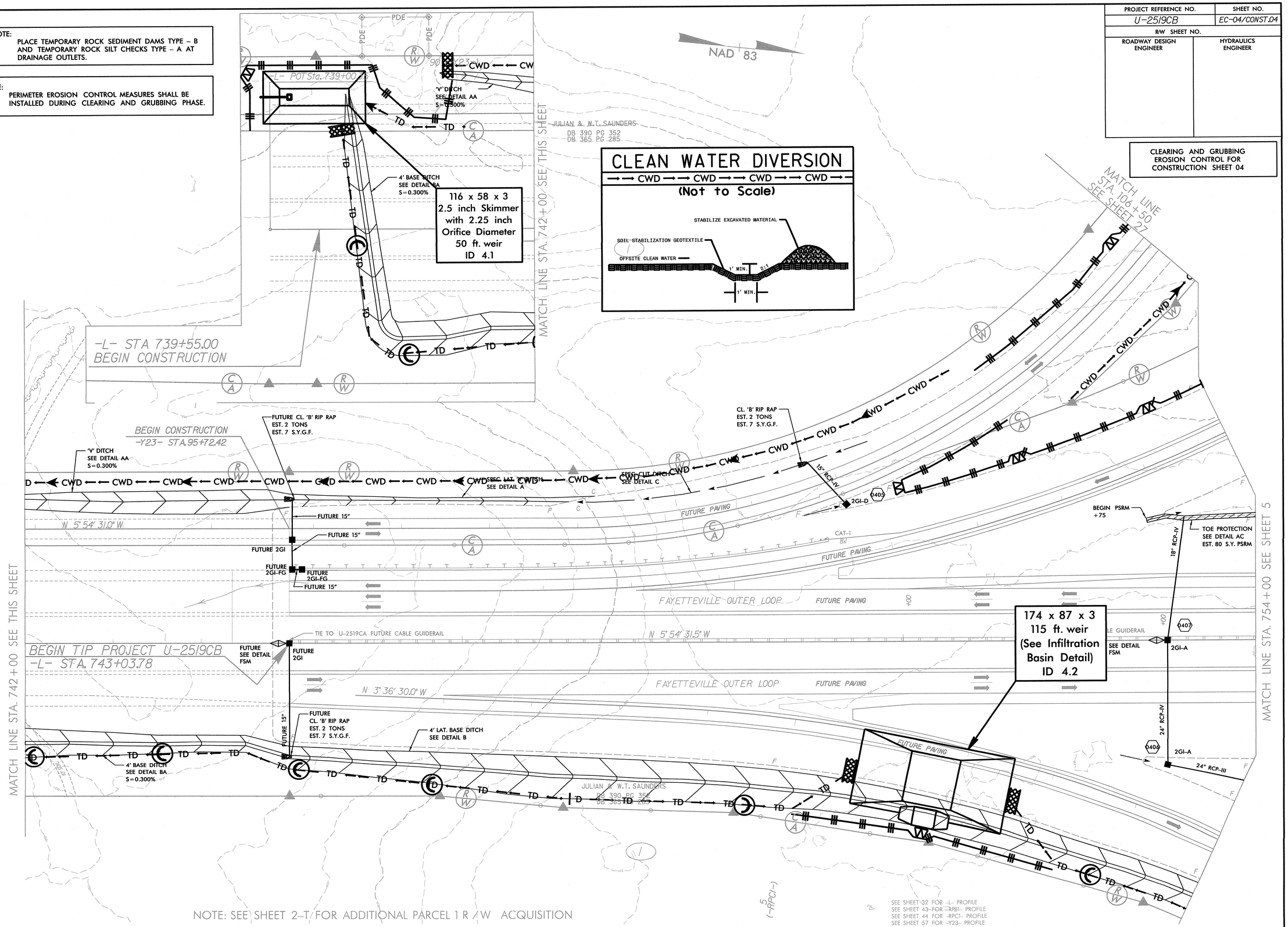
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-04/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 04

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



CLEAN WATER DIVERSION
CWD → CWD → CWD → CWD → CWD
(Not to Scale)
STABILIZE EXCAVATED MATERIAL
SOIL STABILIZATION GEOTEXTILE
OFFSITE CLEAN WATER
1' MIN.
2:1
1' MIN.

NOTE: SEE SHEET 2-T FOR ADDITIONAL PARCEL 1 R/W ACQUISITION

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-05/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 05

MATCH LINE STA. 242+50 SEE SHEET 28

MATCH LINE STA. 754+00 SEE SHEET 4

MATCH LINE STA. 781+00 SEE SHEET 6

MATCH LINE STA. 257+50 SEE SHEET 29

NAD 83

JULIAN & W.T. SAUNDERS
DB 390 PG 352
DB 365 PG 285

FT. BRAGG MILITARY RESERVATION

DANGER TREE AREA

FUTURE PAVING

FUTURE M-350

M-350

GRAU-350

FUTURE GRAU-350

245 (~YS~)

10 (~LPA~)

5 (~LPA~)

250n (~YS~)

Sta. 771+80.00
BEGIN PAVING

Sta. 751+00.00
BEGIN PAVING

TOP OF BERM EL.= 243.50

165 x 45 x 3
2.5 inch Skimmer
with 2.375 inch
Orifice Diameter
37 ft. weir
ID 5.3

134 x 67 x 3
3.0 inch Skimmer
with 2.625 inch
Orifice Diameter
67 ft. weir
ID 5.1

140 x 70 x 3
3 inch Skimmer
with 2.75 inch
Orifice Diameter
62 ft. weir
ID 5.2

130 x 40 x 3
2 inch Skimmer
with 2.0 inch
Orifice Diameter
32 ft. weir
ID 5.5

110 x 35 x 3
2 inch Skimmer
with 1.625 inch
Orifice Diameter
27 ft. weir
ID 5.4

150 x 50 x 3
2.5 inch Skimmer
with 2.375 inch
Orifice Diameter
42 ft. weir
ID 5.6

SPEC. CUT DITCH SEE DETAIL E

SPEC. LAT. "V" DITCH SEE DETAIL A

"V" DITCH SEE DETAIL G EST. 59 C.Y.D.D.E. Sa= 0.0005%

SPEC. MEDIAN DITCH NO PROFILE

SPEC. MEDIAN DITCH SEE PROFILE

SPEC. GRADING SEE DETAIL F

SPEC. CUT DITCH SEE DETAIL E

SPEC. LAT. DITCH SEE DETAIL B

4' LAT. BASE DITCH SEE DETAIL B

4' SPEC. CUT BASE DITCH SEE DETAIL D

TOE PROTECTION SEE DETAIL AC EST. 320 S.Y. PSRM

TOE PROTECTION SEE DETAIL AC EST. 550 S.Y. PSRM

CONC. FLUME

REMOVE CB & PLUG 15" RCP

REMOVE CB CONSTRUCT TB18

REMOVE CB COLLAR & EXTEND 15" RCP-III

CL. "B" RIP RAP EST. 1 TON EST. 5 S.Y.G.F.

CL. "B" RIP RAP EST. 2 TONS EST. 11 S.Y.G.F.

CL. "B" RIP RAP EST. 3 TONS EST. 7 S.Y.G.F.

CL. "B" RIP RAP EST. 2 TONS EST. 10 S.Y.G.F.

CL. "B" RIP RAP EST. 2 TONS EST. 7 S.Y.G.F.

CL. "B" RIP RAP EST. 1 TON EST. 5 S.Y.G.F.

★ TRAFFIC SIGNAL

SEE SHEETS 32 & 33 FOR –L– PROFILE
SEE SHEET 42 FOR –RPA1– PROFILE
SEE SHEET 43 FOR –RPB1– PROFILE
SEE SHEET 44 FOR –RPC1– PROFILE
SEE SHEET 45 FOR –RPD1– PROFILE
SEE SHEET 46 FOR –LPA1– & –LPC1– PROFILES
SEE SHEET 47 FOR –Y5– PROFILE
FOR STRUCTURE PLANS,
SEE SHEET S-1 THRU S-

BRIDGE SKETCH

PAVEMENT REMOVAL

GRAPHIC SCALE
0
PLANS

LOCATION:
–L– FAYETTEVILLE OUTER LOOP
AT
–Y5– SR 1400 (CLIFFDALE ROAD)

TIP NO.: U-2519CB COUNTY: CUMBERLAND

DESIGNED BY:

CHECKED BY: DATE:

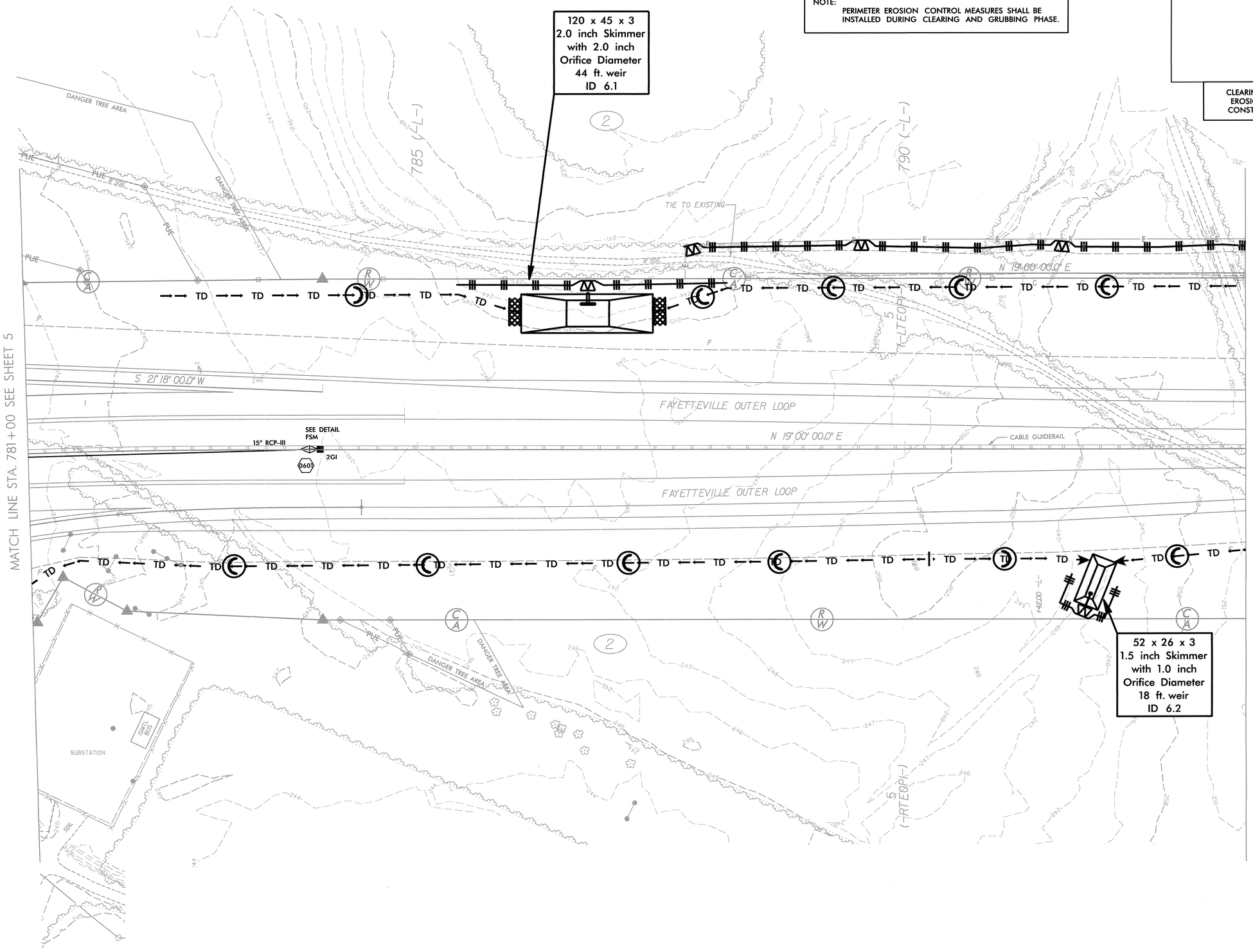
4/15/2020
DOLAN,DEBORAH,M,SMITH,CHARLES,HOLLY,PFLUGRATH,JOSEPH,CRAIG,JOHN,PATRICK

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-06/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 06



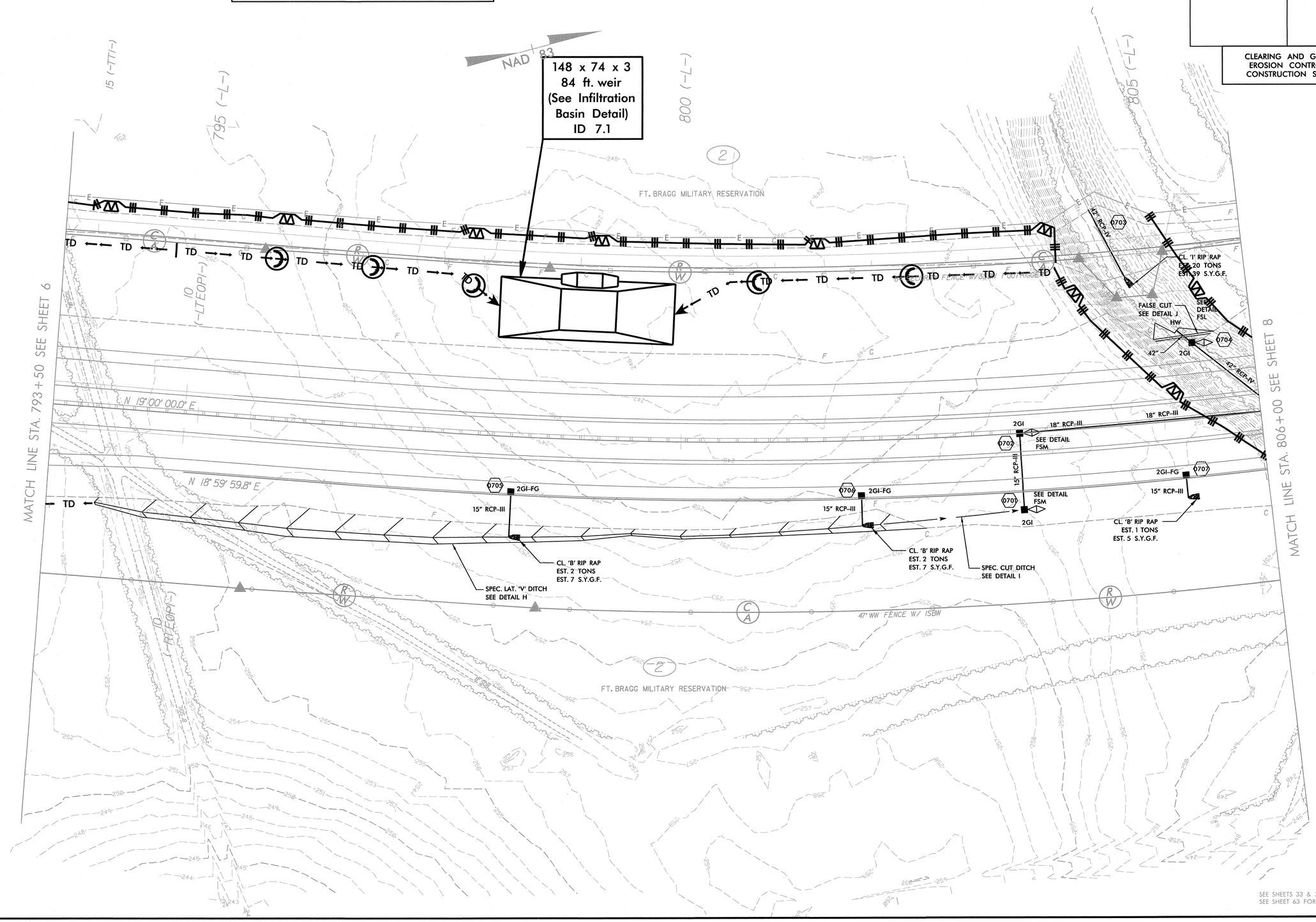
SEE SHEET 33 FOR -L- PROFILE
SEE SHEET 42 FOR -RPA1- PROFILE
SEE SHEET 45 FOR -RPD1- PROFILE
SEE SHEET 63 FOR -TT1- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-07/CONST.07
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 07

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



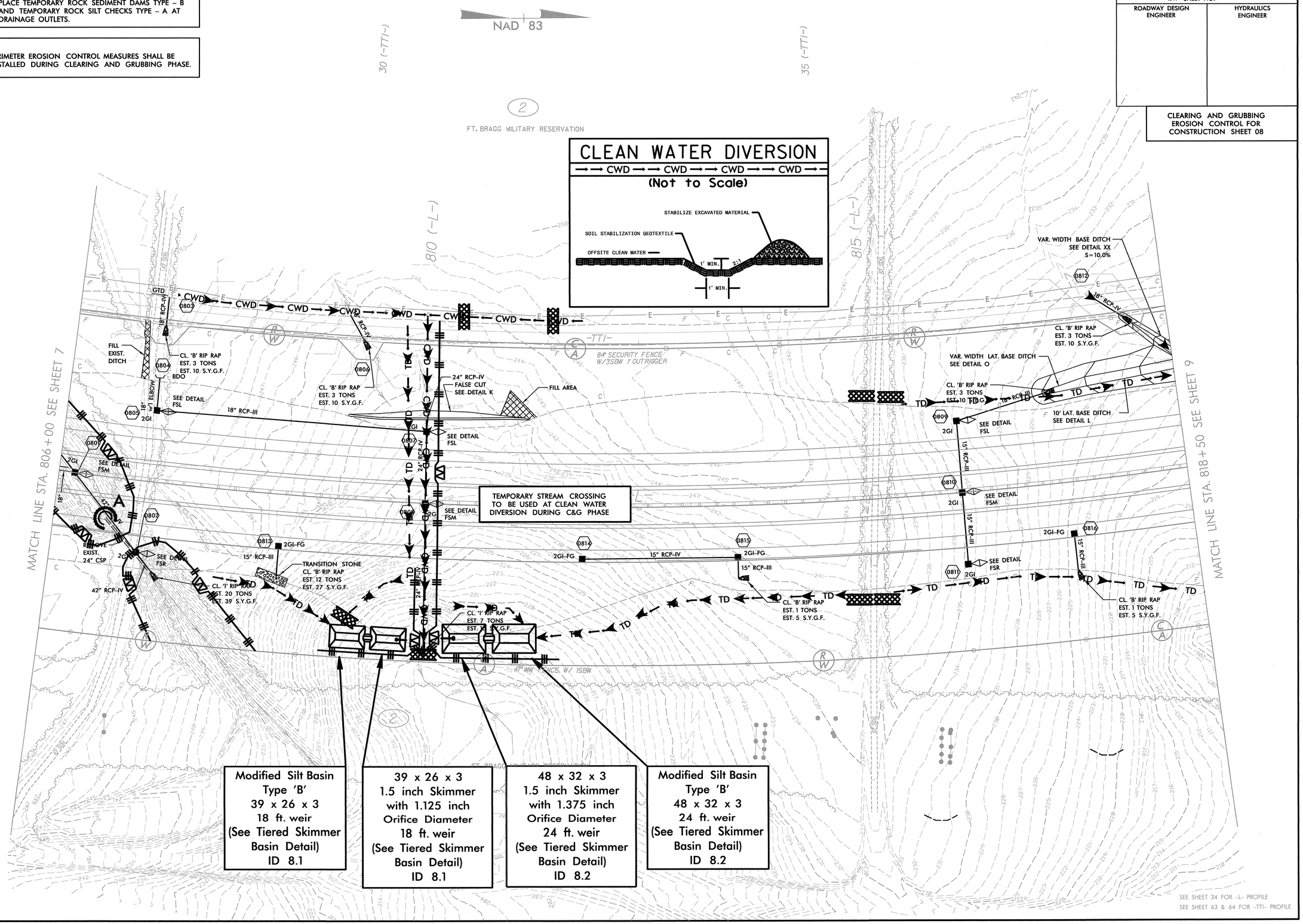
SEE SHEETS 33 & 34 FOR -L- PROFILE
SEE SHEET 63 FOR -TT1- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-08/CONST.08
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



SEE SHEET 34 FOR -L- PROFILE
SEE SHEET 63 & 64 FOR -TTI- PROFILE

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

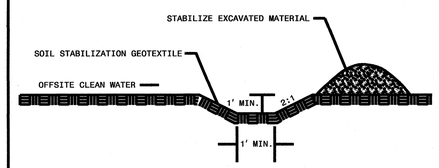
NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

CLEAN WATER DIVERSION

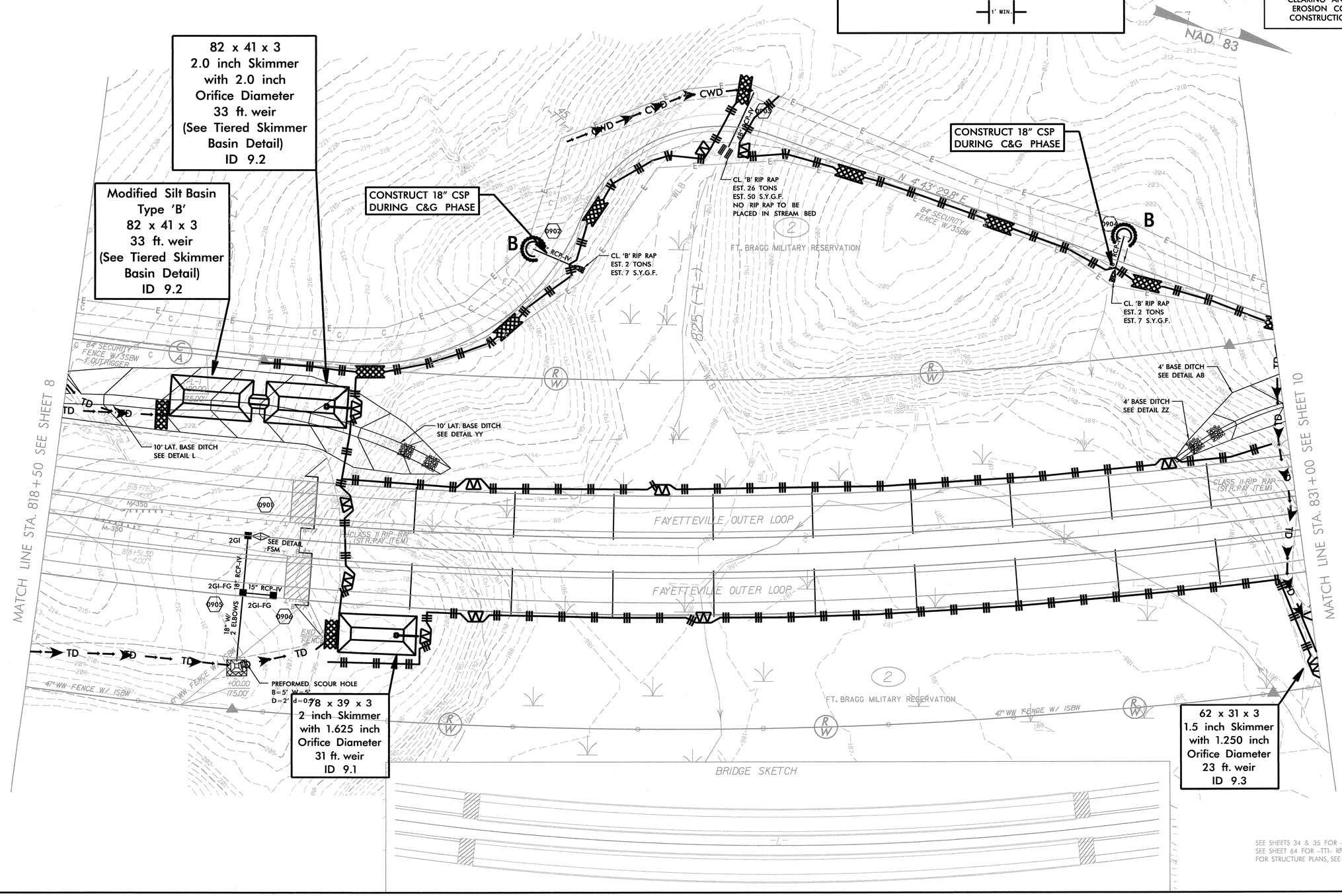
→→ CWD →→ CWD →→ CWD →→ CWD →→

(Not to Scale)



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-09/CONST.09
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 09



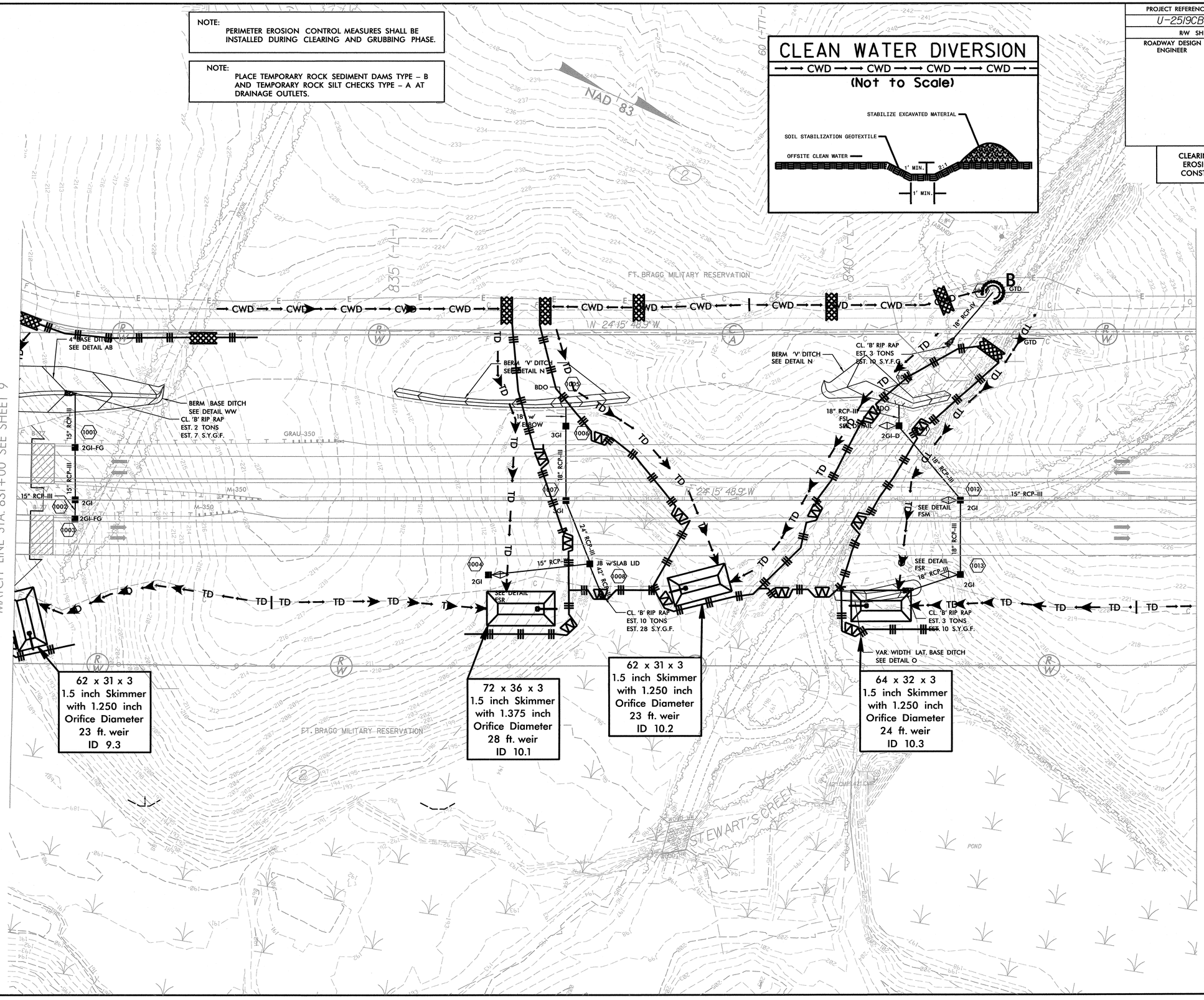
SEE SHEETS 34 & 35 FOR -L- PROFILE
SEE SHEET 64 FOR -TT1- RPROFILE
FOR STRUCTURE PLANS, SEE SHEETS S-1 THRU S-

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-10/CONST.10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 10

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

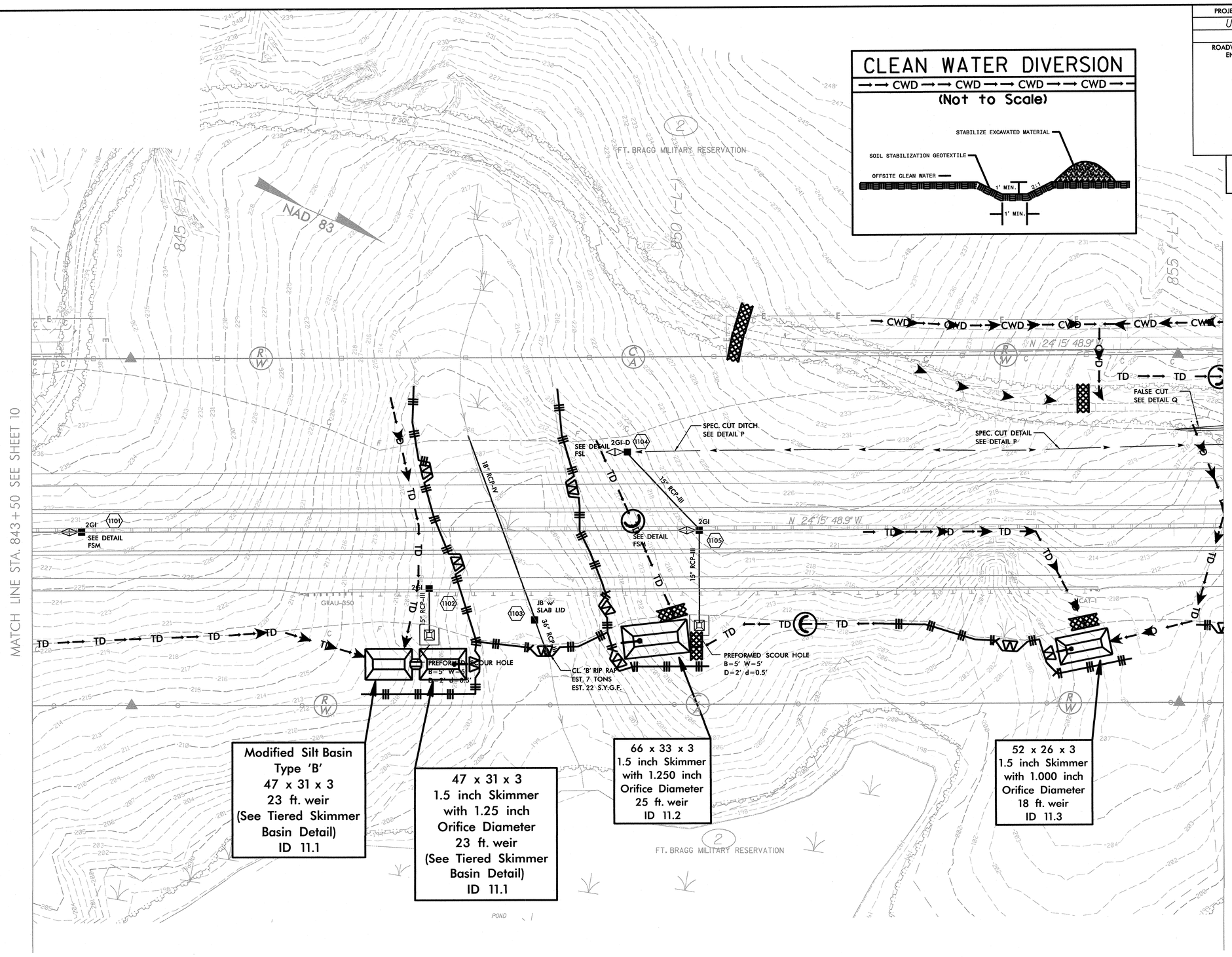
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



SEE SHEET 35 FOR -L- PROFILE
SEE SHEET 64 -TT1- FOR PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-11/CONST.11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11



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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

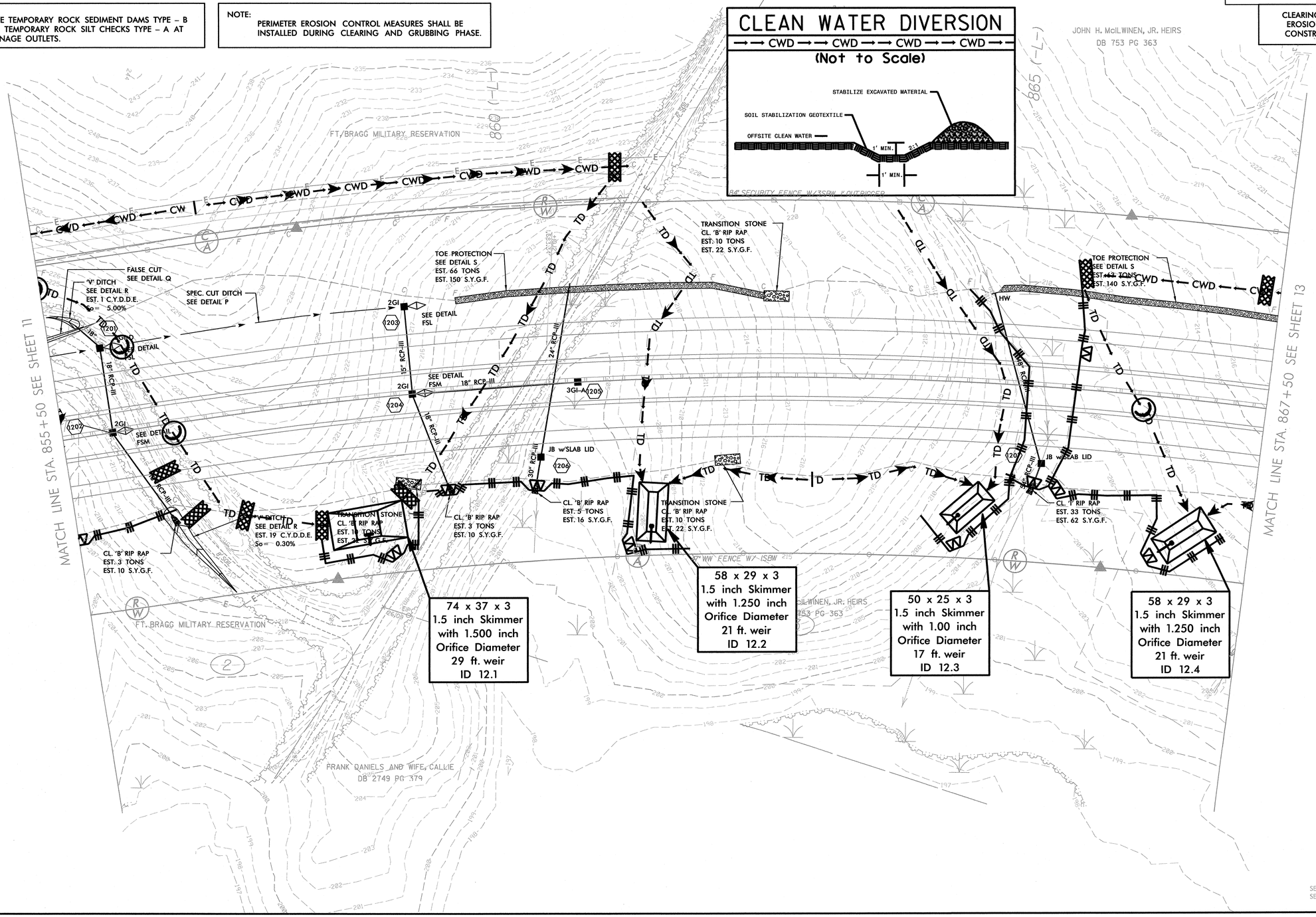
SEE SHEETS 35 & 36 FOR -L- PROFILE
SEE SHEET 64 FOR -TT1- PROFILE
SEE SHEET 65 FOR -TT2- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-12/CONSTJ2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 12

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

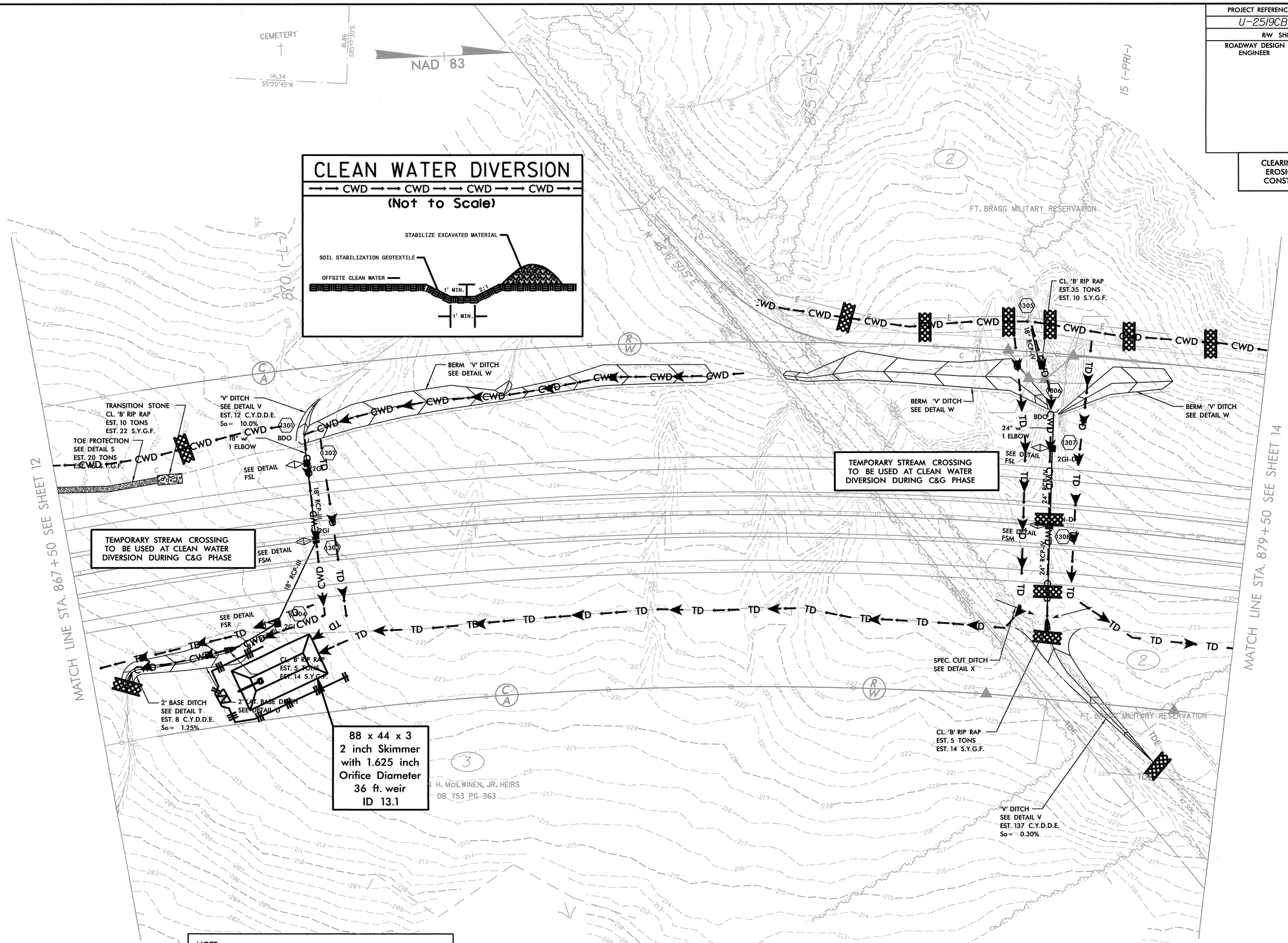
NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 65 FOR -TT2- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-13/CONSTJ3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 13



NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

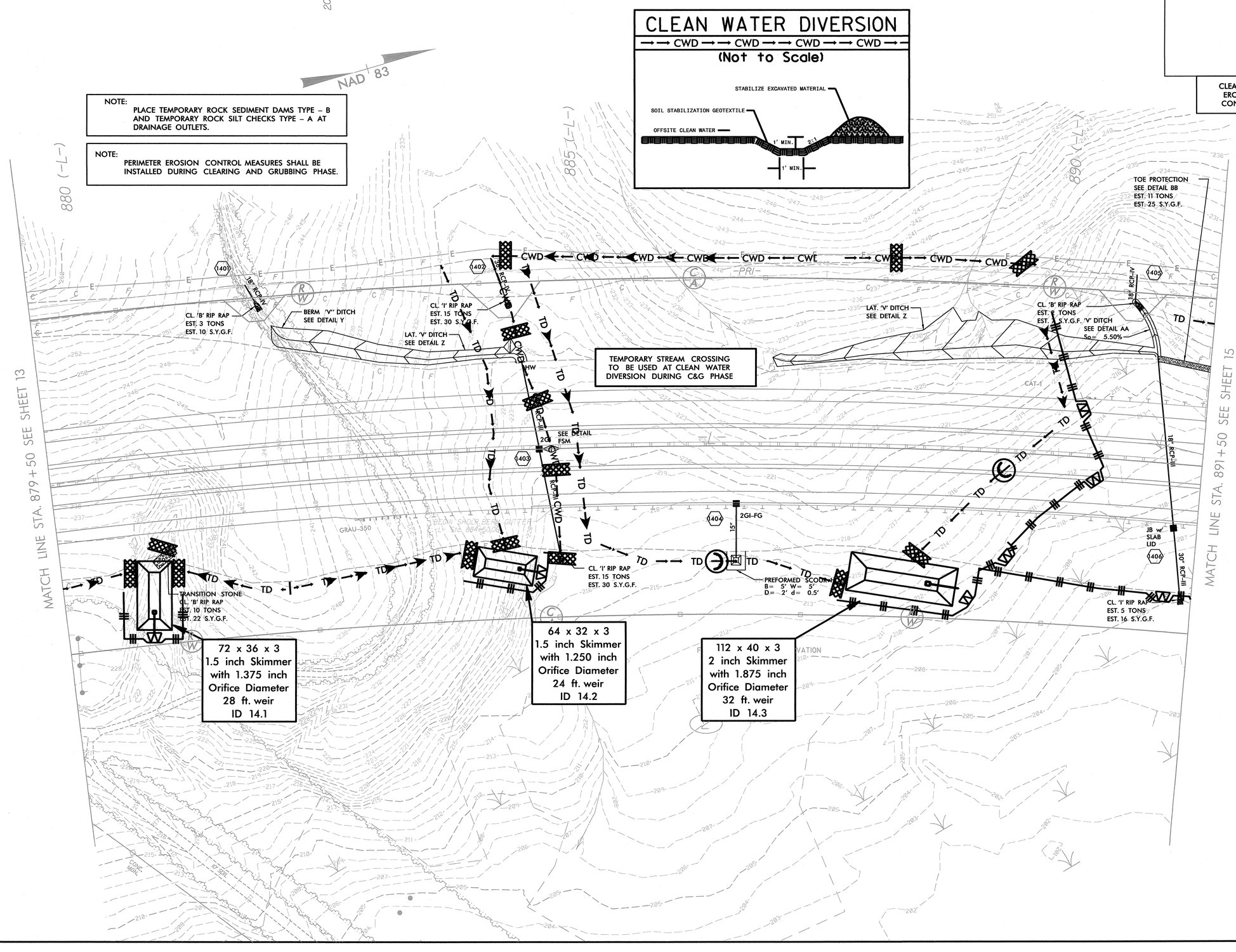
SEE SHEETS 36 & 37 FOR -L- PROFILE
SEE SHEET 59 FOR -PR1- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-14/CONST.14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



SEE SHEET 37 FOR -L- PROFILE
SEE SHEET 59 FOR -PRI- PROFILE

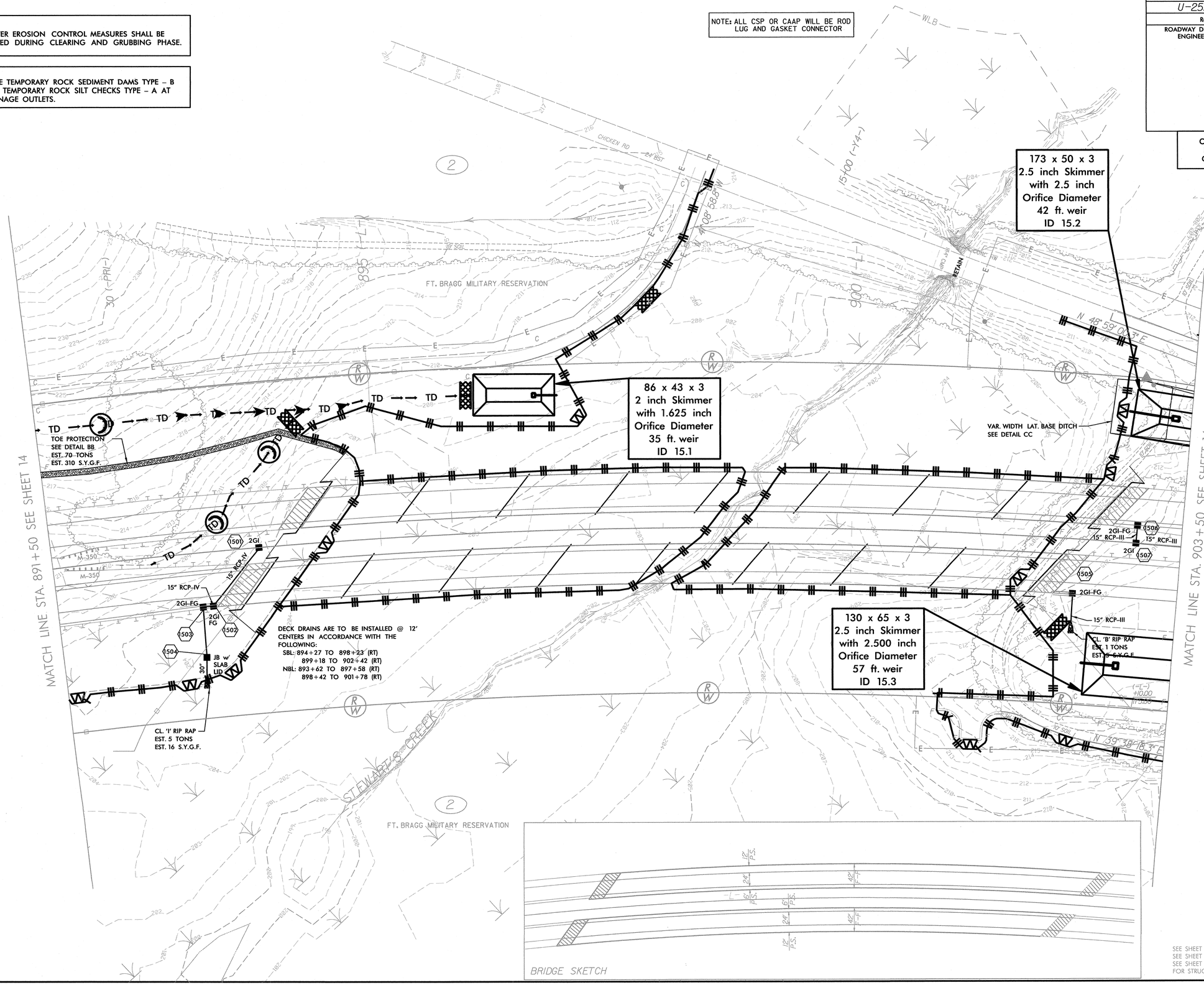
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-15/CONSTJ5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 15

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

NOTE: ALL CSP OR CAAP WILL BE ROD LUG AND GASKET CONNECTOR



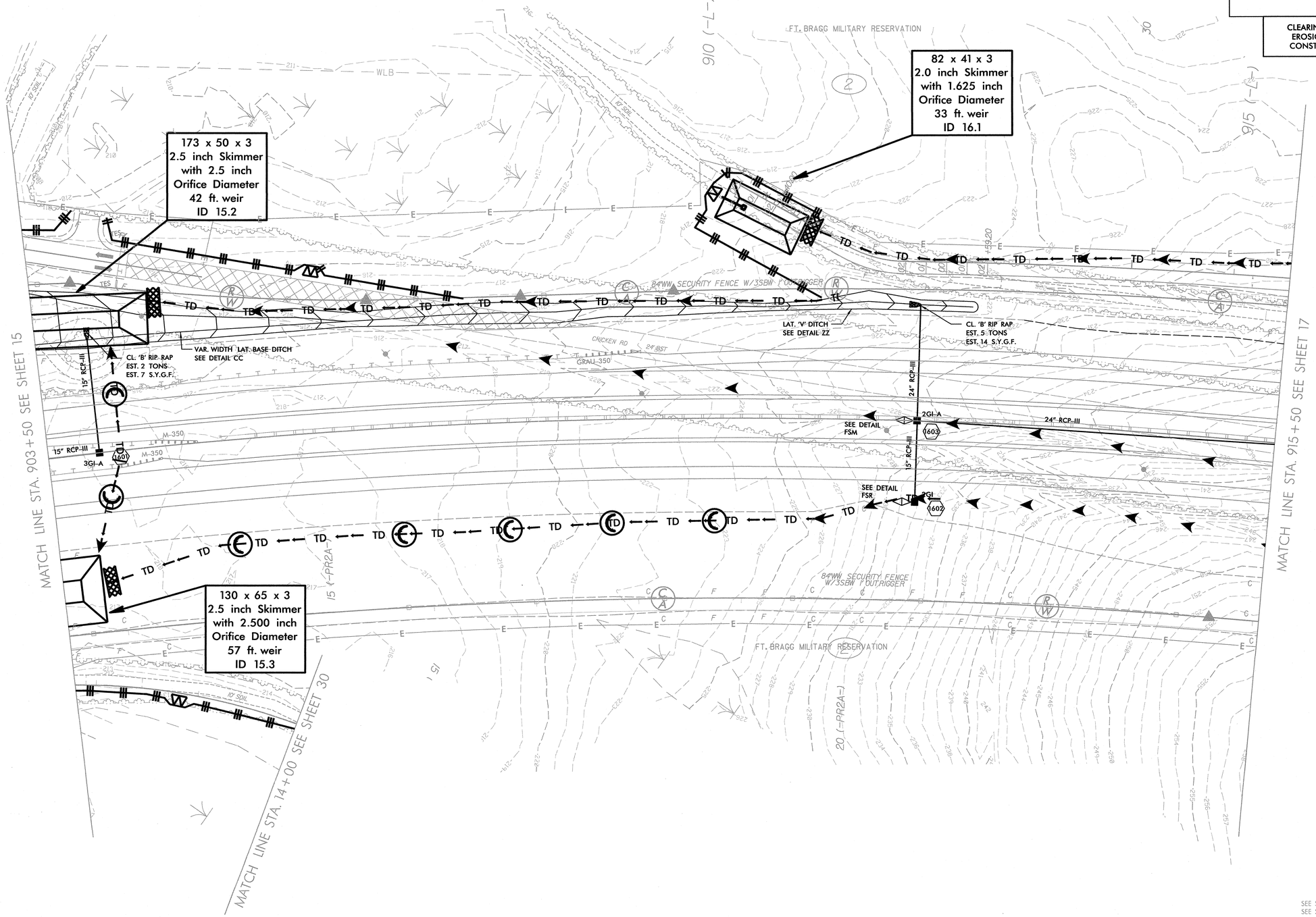
SEE SHEET 37 FOR –L– PROFILE
SEE SHEET 59 FOR –PR1– PROFILE
SEE SHEET 60 FOR –PR2A– PROFILE
FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-16/CONST.J6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 16

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



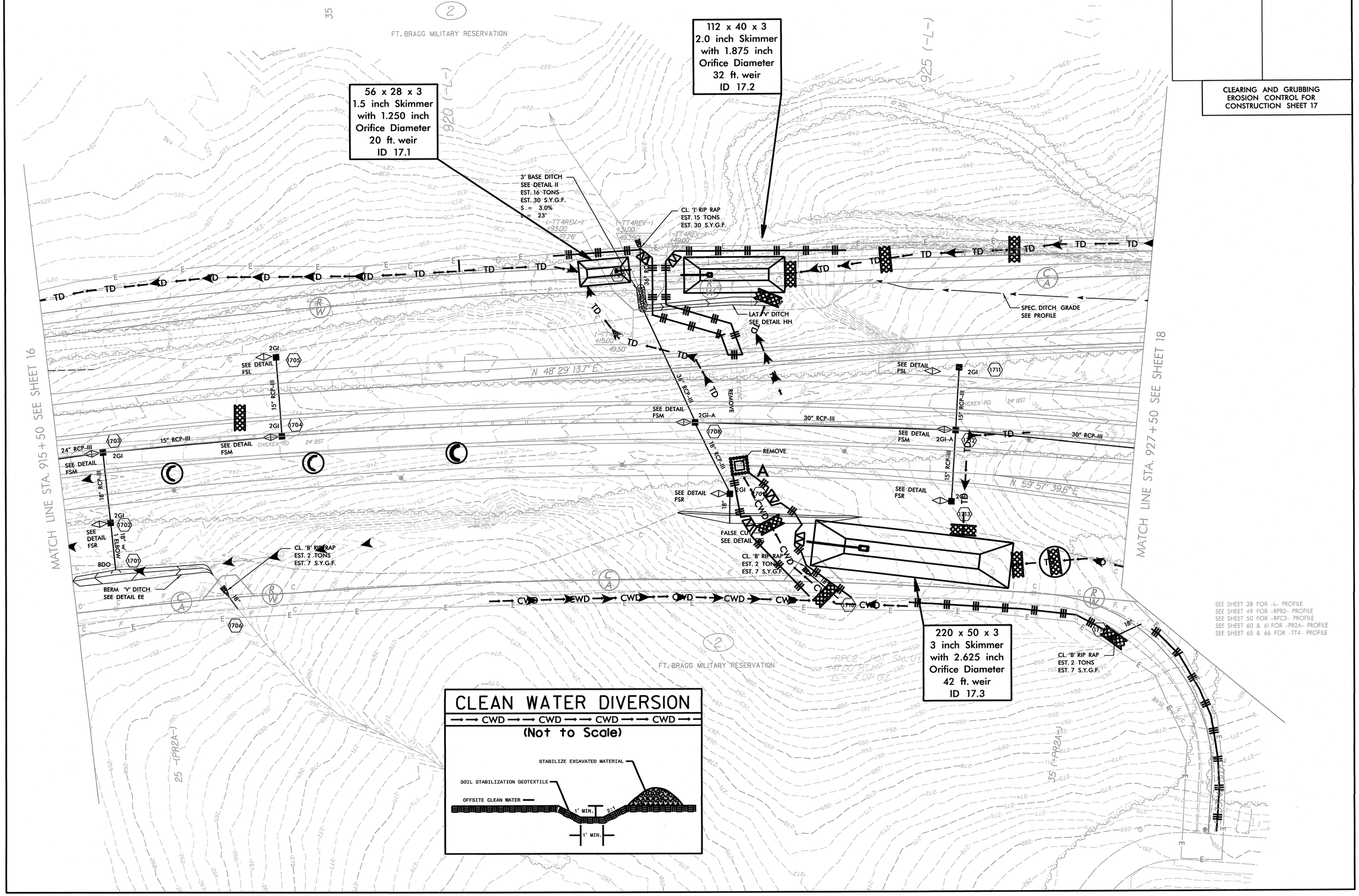
SEE SHEET 37 & 38 FOR -L- PROFILE
SEE SHEET 60 FOR -PR2A- PROFILE
SEE SHEET 65 FOR -TT4- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-17/CONST.17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 17

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



CLEAN WATER DIVERSION

→ → CWD → → CWD → → CWD → → CWD → →

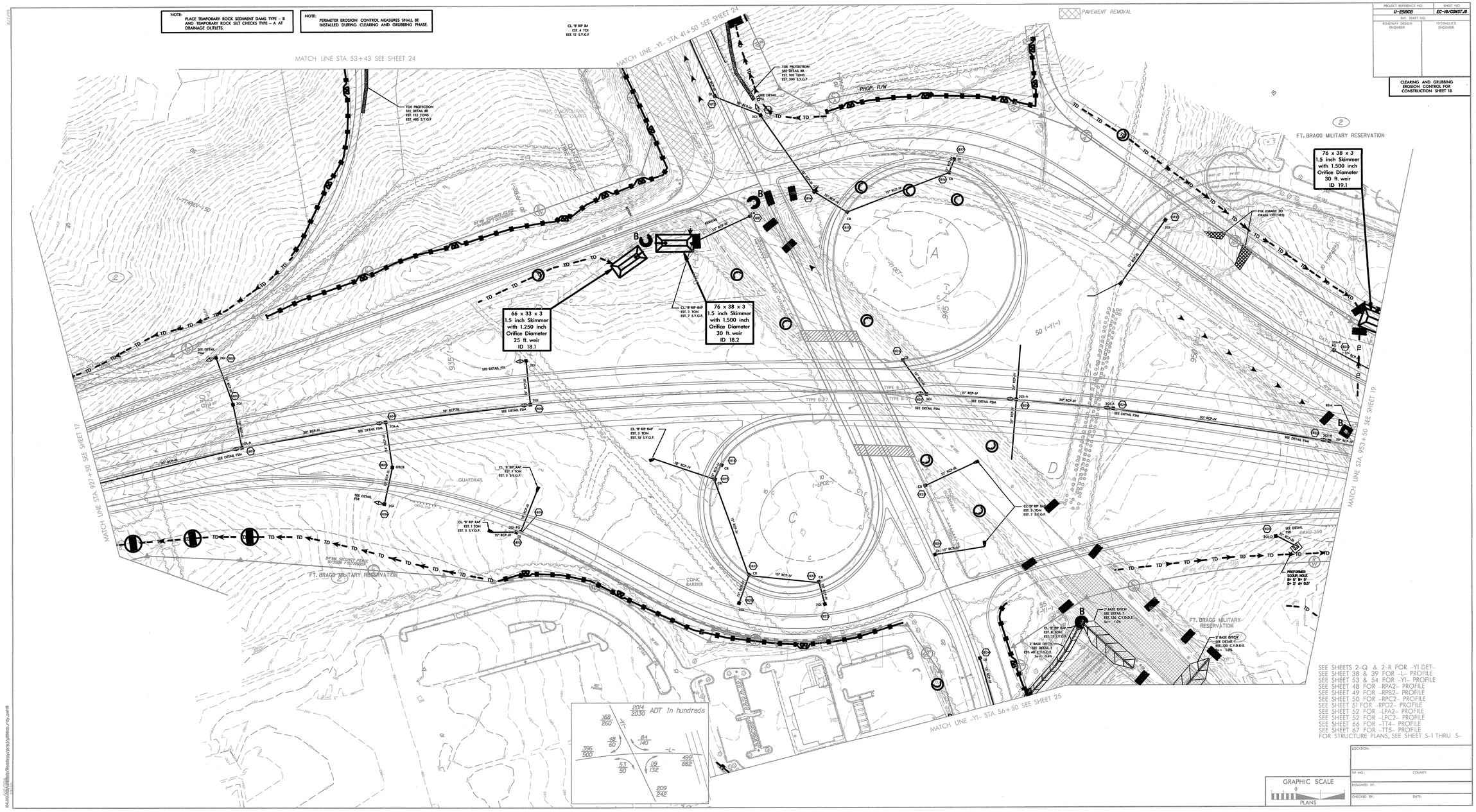
(Not to Scale)

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-18/CONST.18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 18

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

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



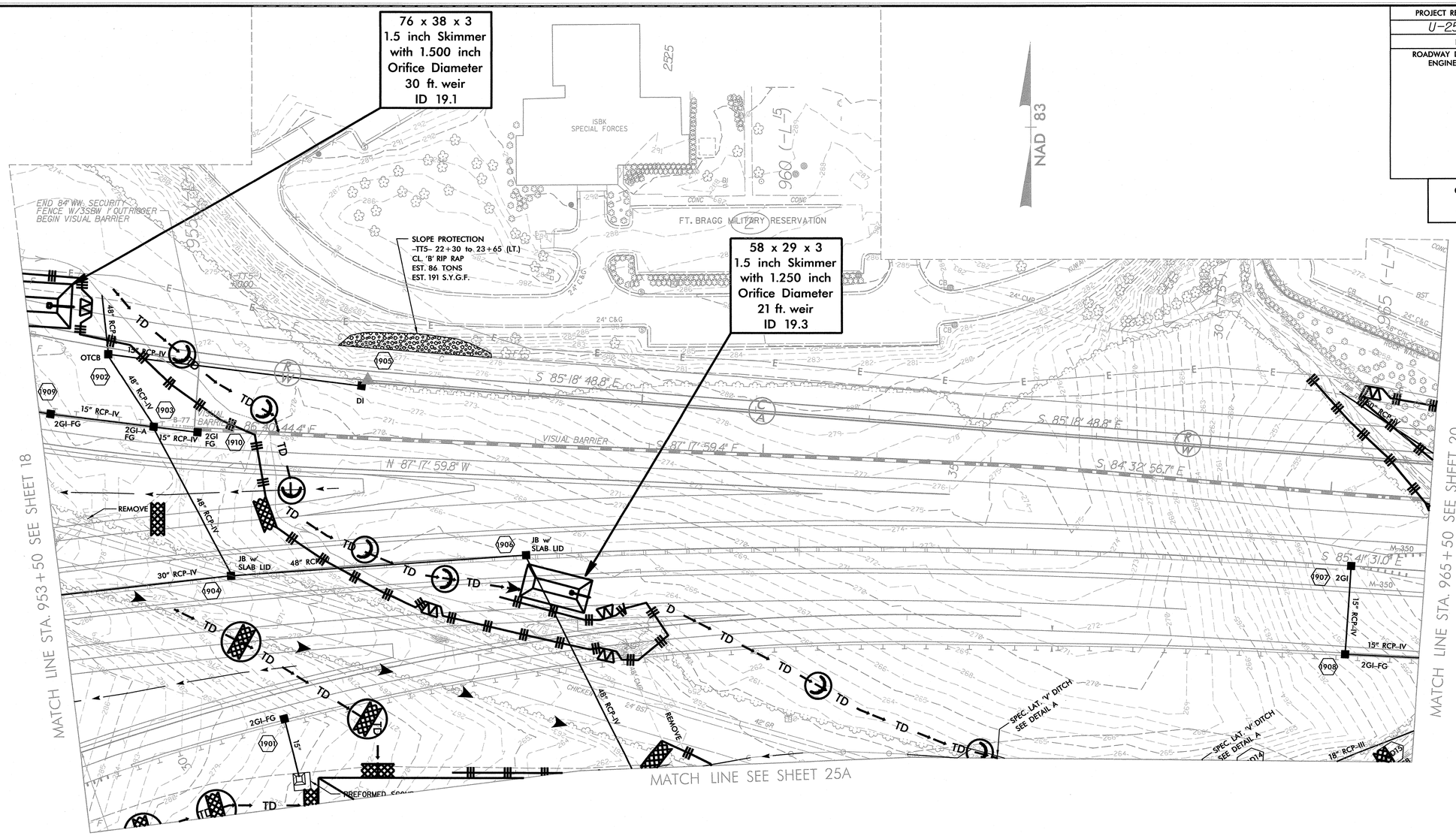
SEE SHEETS 2-Q & 2-R FOR -Y1 DET-
SEE SHEET 38 & 39 FOR -L- PROFILE
SEE SHEET 53 & 54 FOR -Y1- PROFILE
SEE SHEET 48 FOR -RPA2- PROFILE
SEE SHEET 49 FOR -RPB2- PROFILE
SEE SHEET 50 FOR -RPC2- PROFILE
SEE SHEET 51 FOR -RPD2- PROFILE
SEE SHEET 52 FOR -LPA2- PROFILE
SEE SHEET 52 FOR -LPC2- PROFILE
SEE SHEET 66 FOR -TT4- PROFILE
SEE SHEET 67 FOR -TT5- PROFILE
FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-

GRAPHIC SCALE
0
PLANS

LOCATION:	
TIP NO.:	COUNTY:
DESIGNED BY:	
CHECKED BY:	DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-19/CONST.19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 19



NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

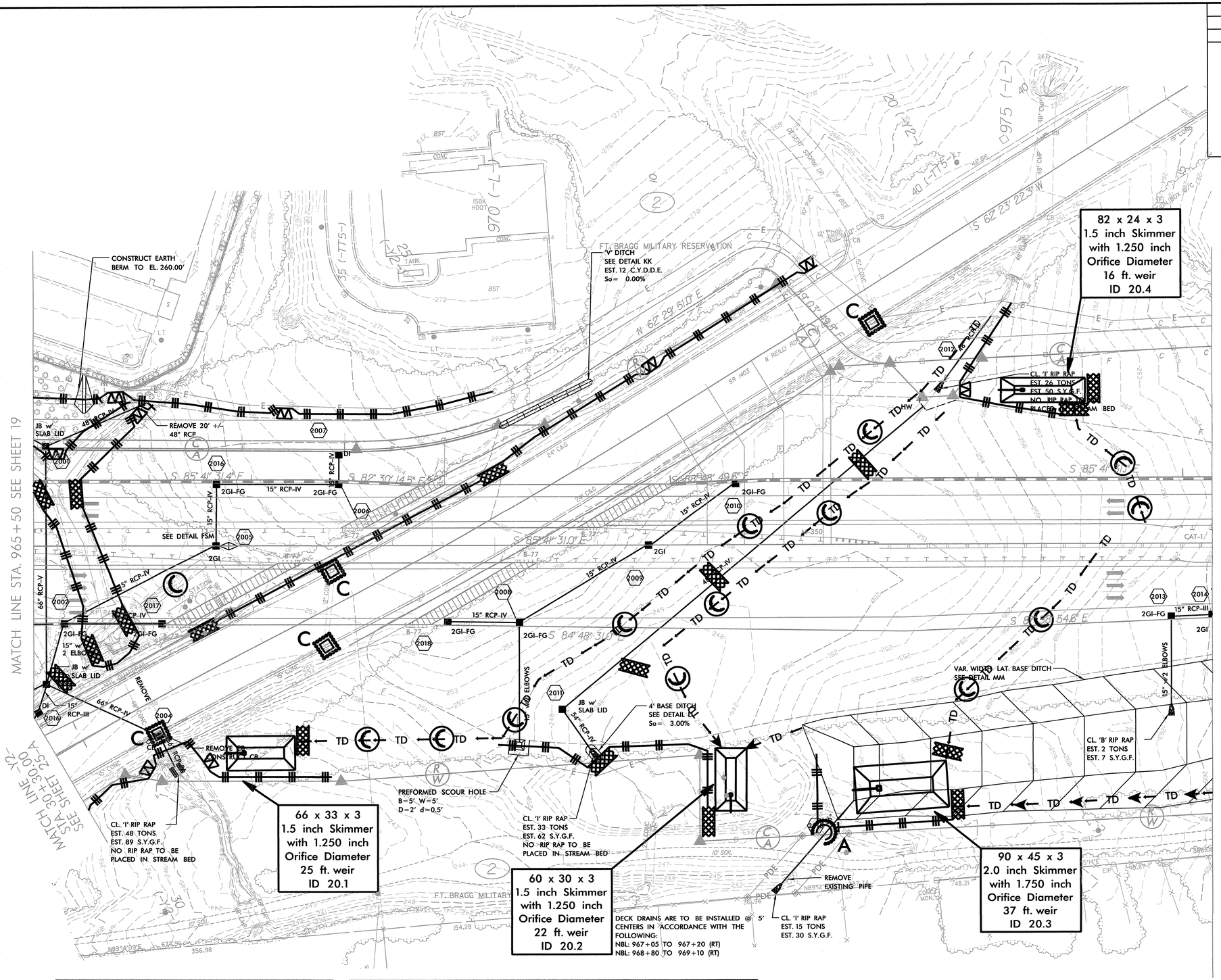
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

SEE SHEETS 39 & 40 FOR -L- PROFILE
SEE SHEET 48 FOR -RPA2- PROFILE
SEE SHEET 51 FOR -RPD2- PROFILE
SEE SHEET 67 & 68 FOR -TT5- PROFILE

104.001.001/U2519cb/Roadway/proj/U2519cb_rdy_psh19

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-20/CONST.20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 20



NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

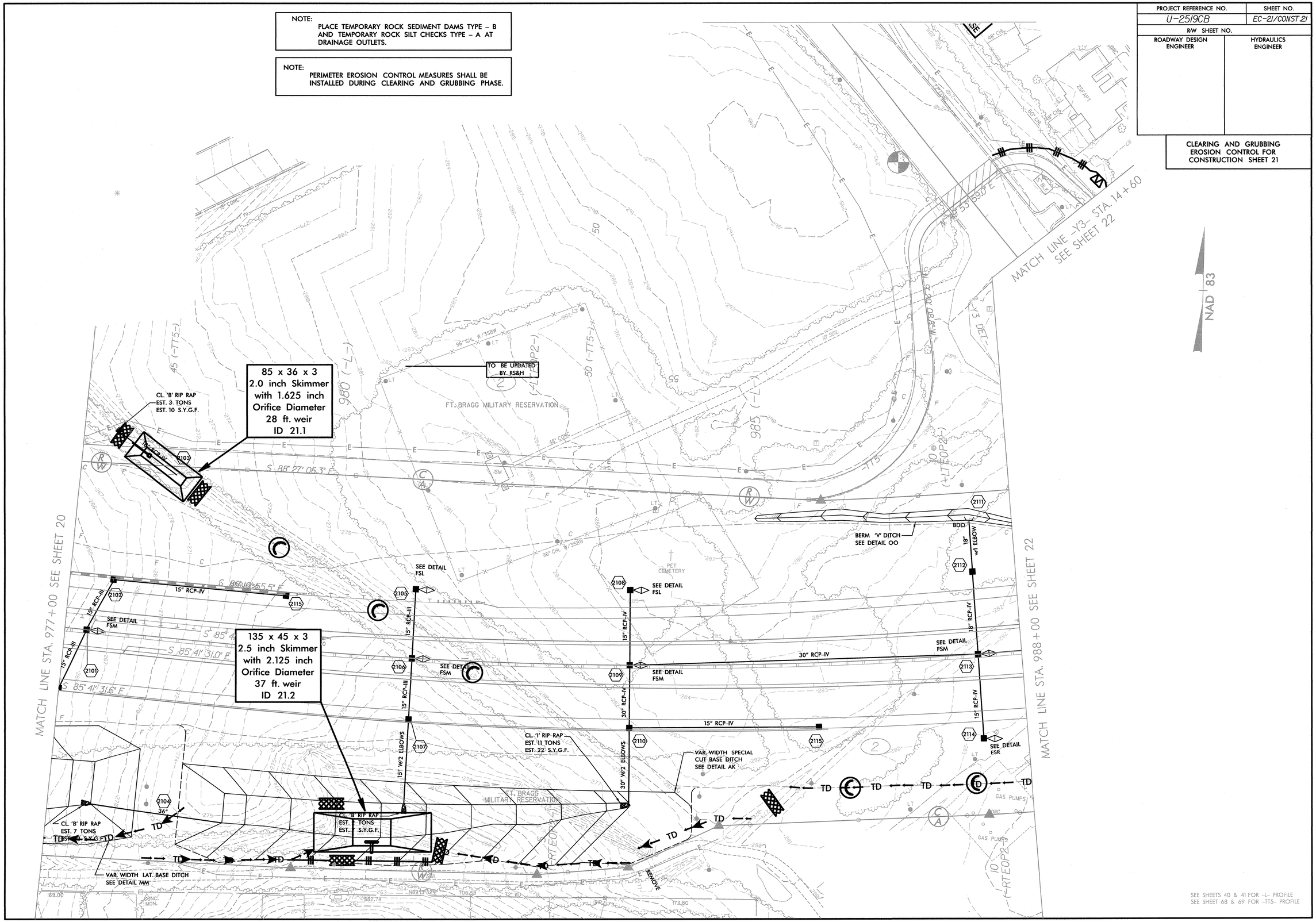
SEE SHEET 40 FOR –L– PROFILE
SEE SHEET 68 FOR –TTS– PROFILE
FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-21/CONST.21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 21

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



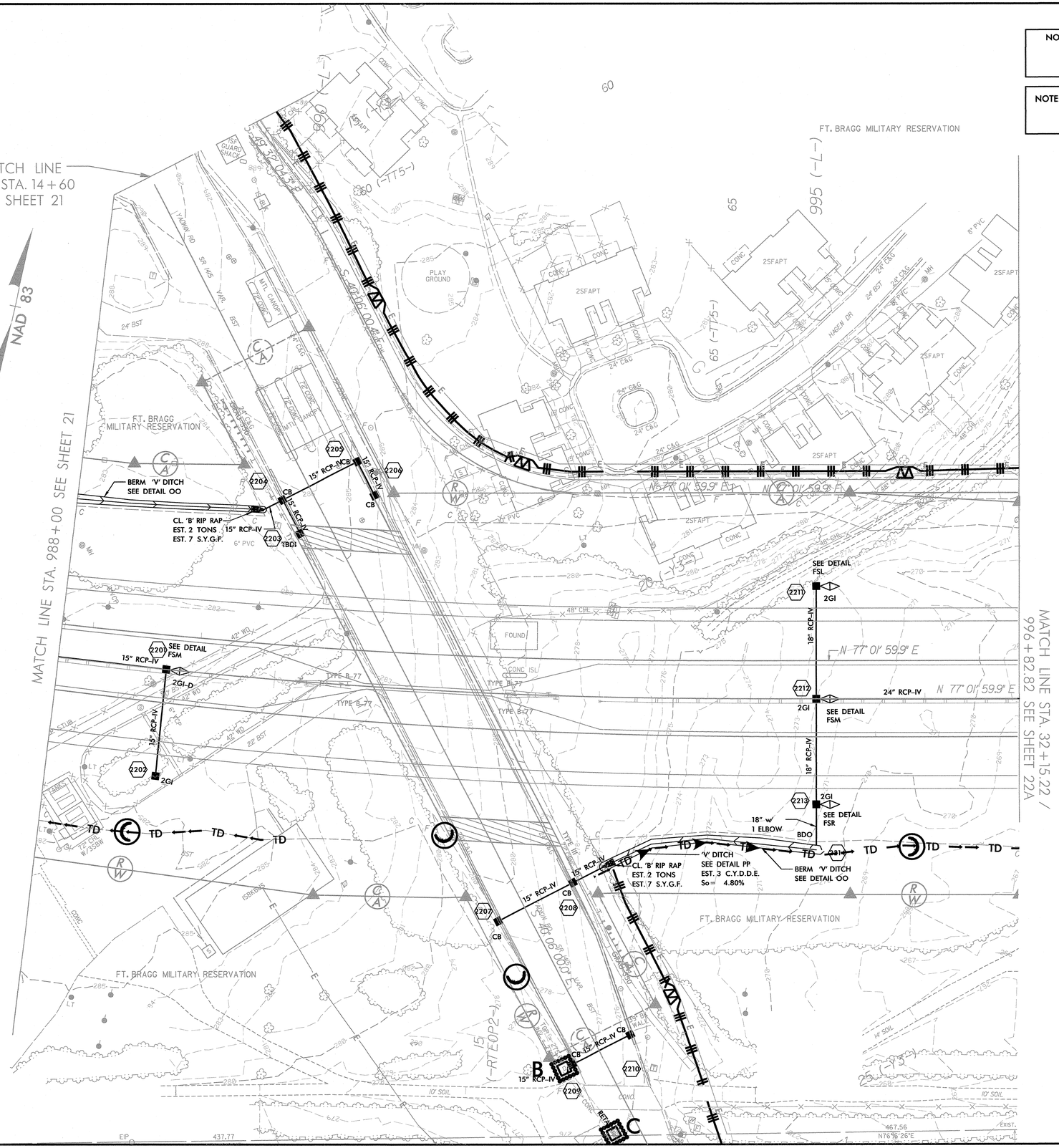
SEE SHEETS 40 & 41 FOR -L- PROFILE
SEE SHEET 68 & 69 FOR -TT5- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-22/CONST.22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

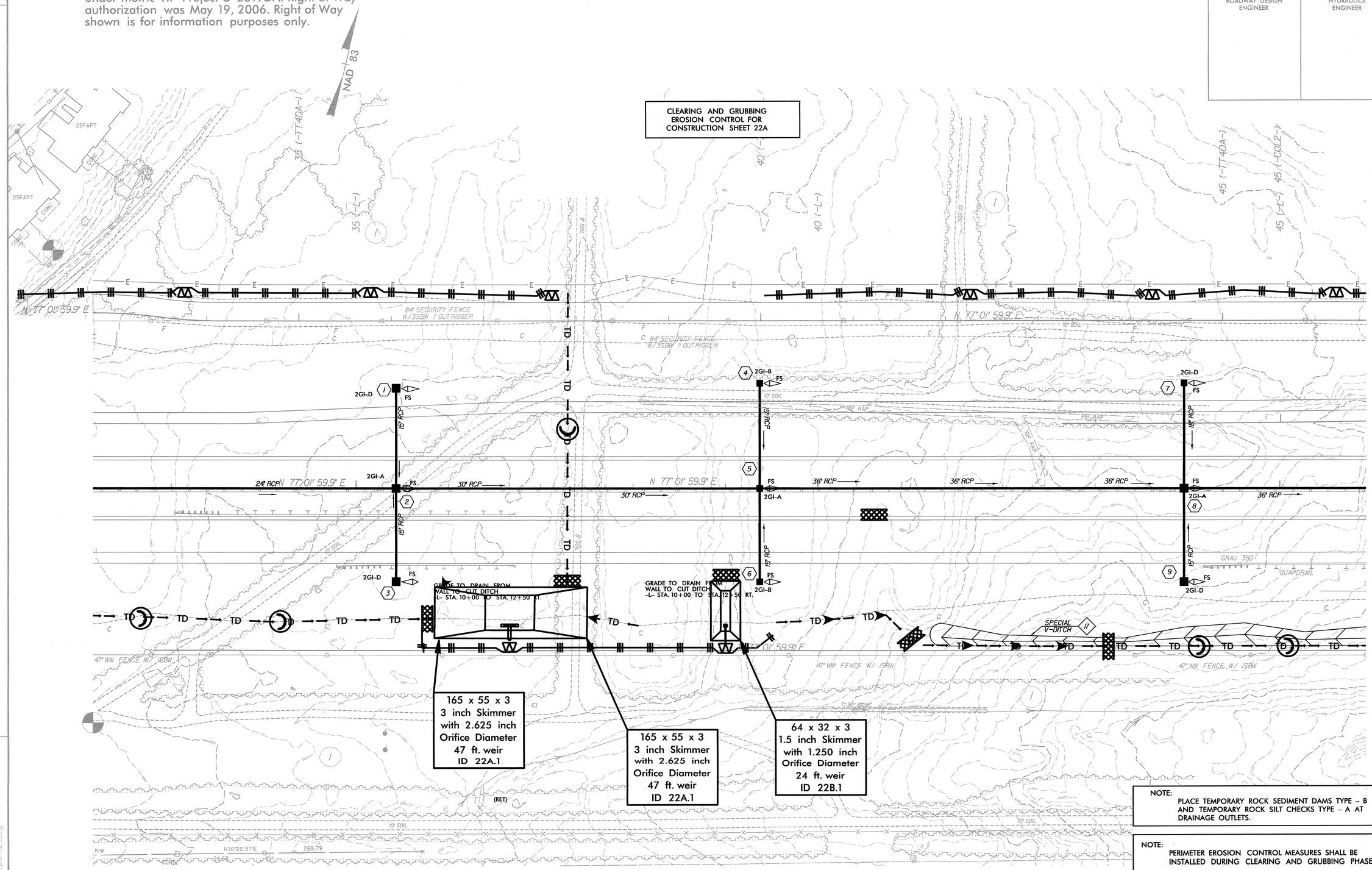
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 22



SEE SHEET 41 FOR -L- PROFILE
SEE SHEET 55 FOR -Y3- PROFILE
SEE SHEET 69 FOR -TI5- PROFILE
FOR STRUCTURE PLANS, SEE SHEETS S-1 THRU S-

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-23/CONST.22A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Right of Way for this Plan Sheet has been acquired under metric TIP Project U-2519DA. Right of Way authorization was May 19, 2006. Right of Way shown is for information purposes only.



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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

REVISIONS

4/15/2014
U2519CB_EC_dsn_psh_23.cg
Dgn: 22.dgn

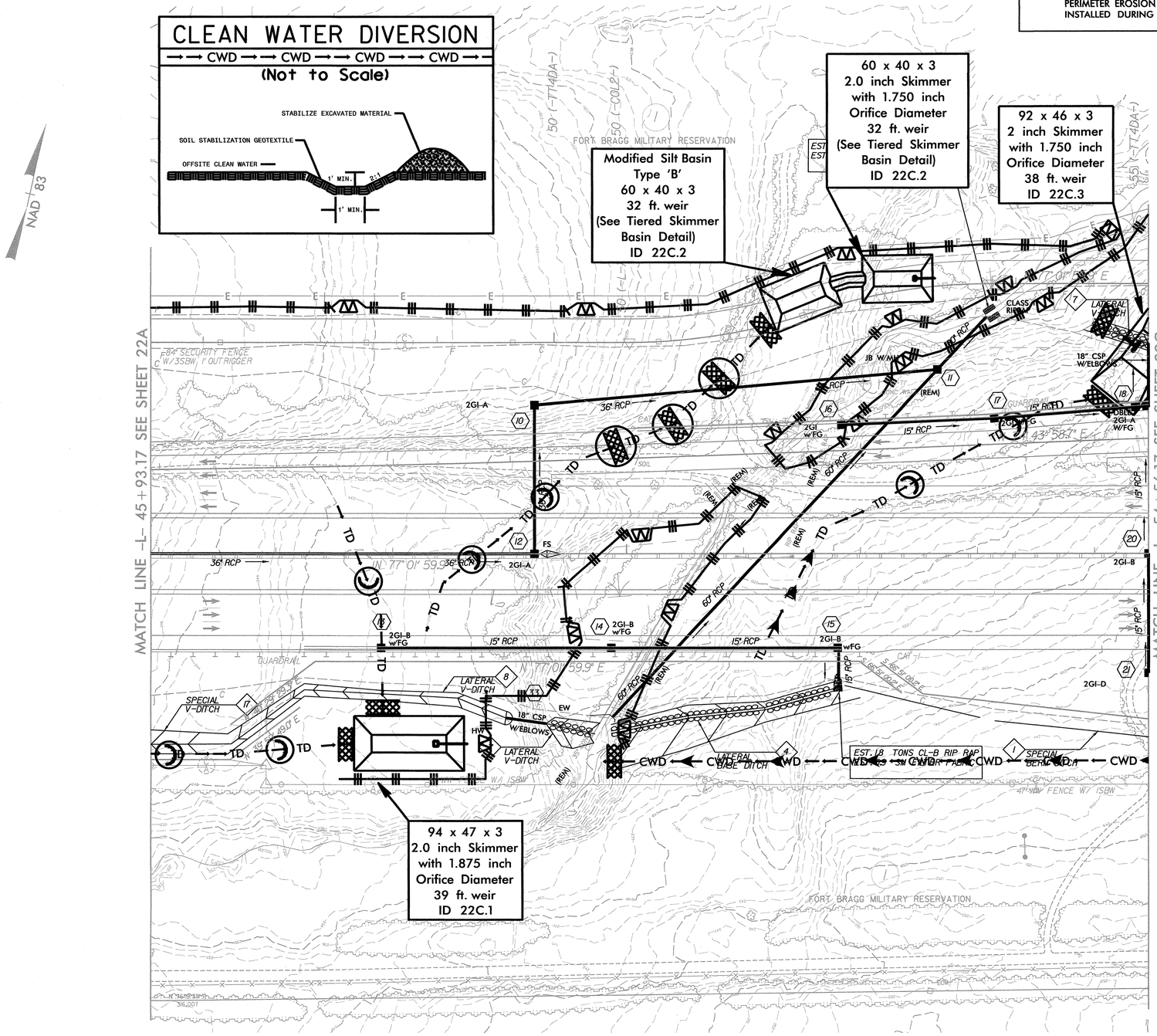
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-24/CONST.22B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 22B

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



SEE SHEET 41A FOR -L- PROFILE
SEE SHEET 74 FOR -COL2- PROFILE
SEE SHEET 70 FOR -TT4DA- PROFILE

REVISIONS

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 22C

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

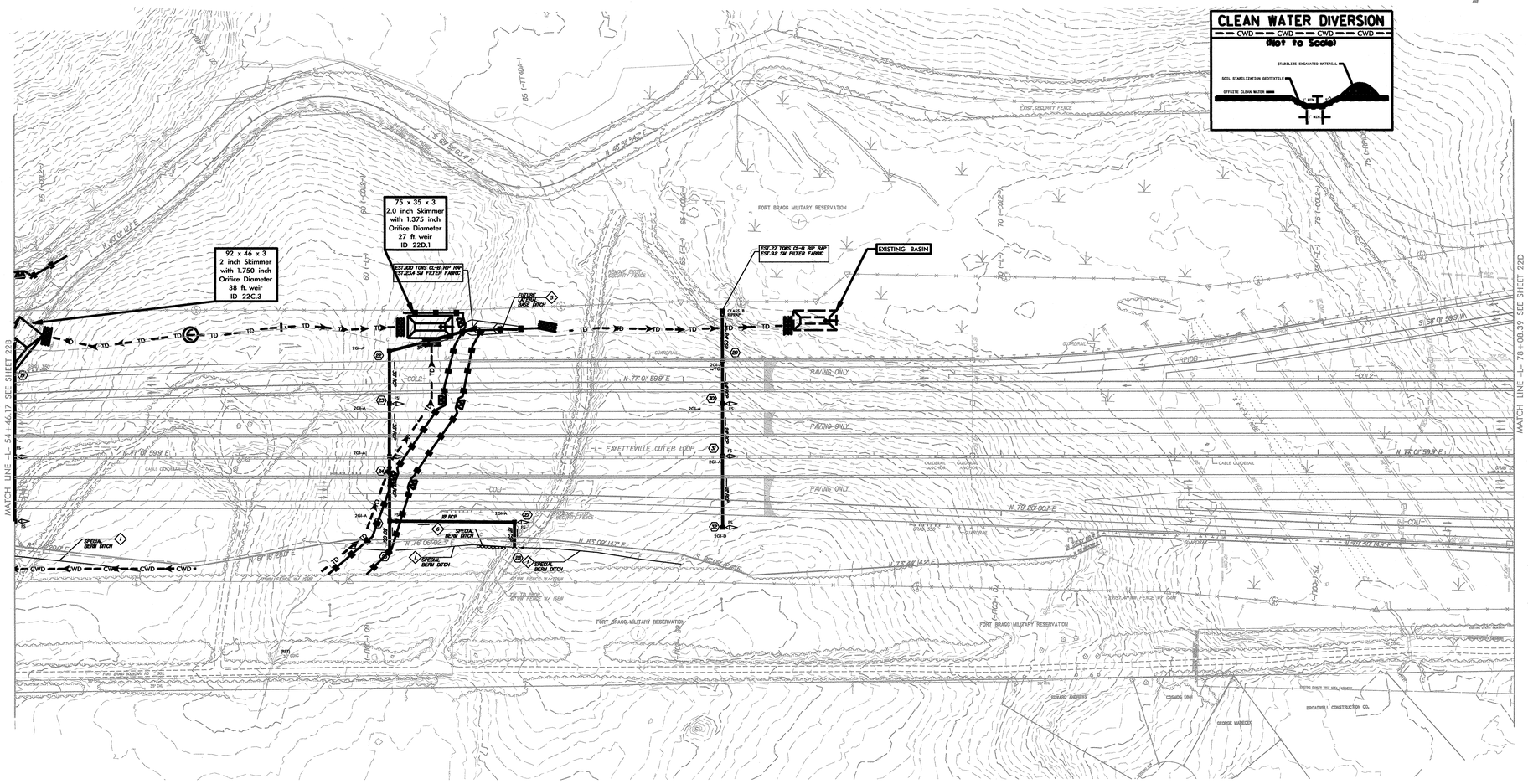
NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-25/CONST.22C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SEE SHEETS 4A-4B FOR -L- PROFILE
SEE SHEET 72 FOR -COL1- PROFILE
SEE SHEETS 74-75 FOR -COL2- PROFILE
SEE SHEET 80 FOR -RPIOR- PROFILE
SEE SHEET 70 FOR -TT4DA- PROFILE

Right of Way for this Plan Sheet has been acquired under metric TIP Project U-2519DA. Right of Way authorization was May 19, 2006. Right of Way shown is for information purposes only.

NAD 83



GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION: FAYETTEVILLE OUTER LOOP FROM SOUTH OF SR 1400 (CLIFFDALE RD.) TO EAST OF ALL AMERICAN FREEWAY	
TIP NO.: U-2519CB	COUNTY: CUMBERLAND
DESIGNED BY:	
CHECKED BY:	DATE:

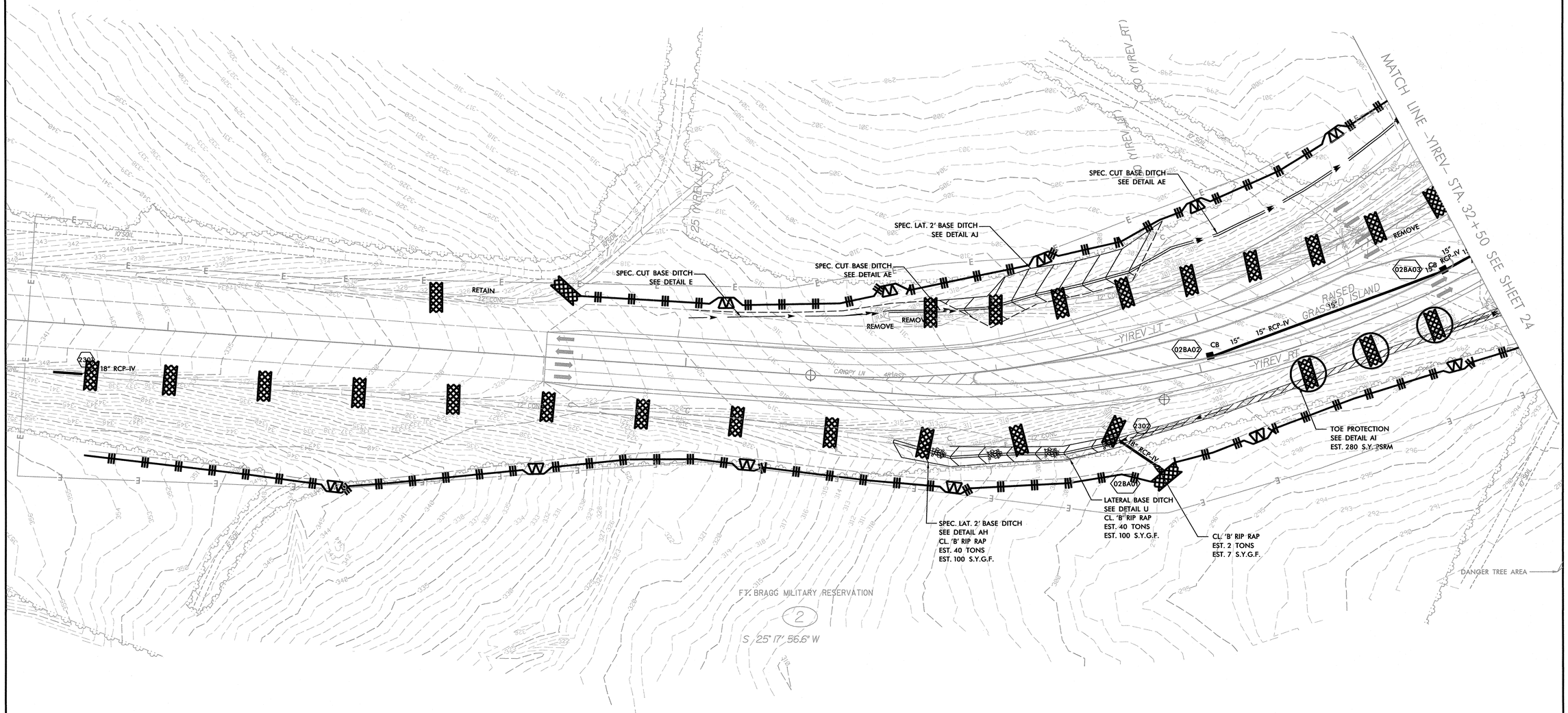
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-26/CONST.23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
EROSION CONTROL SHEET 26 (EC-26) INCORPORATES PROPOSED DESIGN FROM ROADWAY DETAIL SHEET 2-BB

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 23

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



NOTE: ALL CSP OR CAAP WILL BE ROD LUG AND GASKET CONNECTOR

SEE SHEET 71 FOR -Y1 DET-
SEE SHEET 53 FOR -Y1- PROFILE
SEE SHEET 66 & 67 FOR -TT4- PROFILE

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE:
EROSION CONTROL SHEET 27 (EC–27) INCORPORATES PROPOSED DESIGN FROM ROADWAY DETAIL SHEET 2–BC

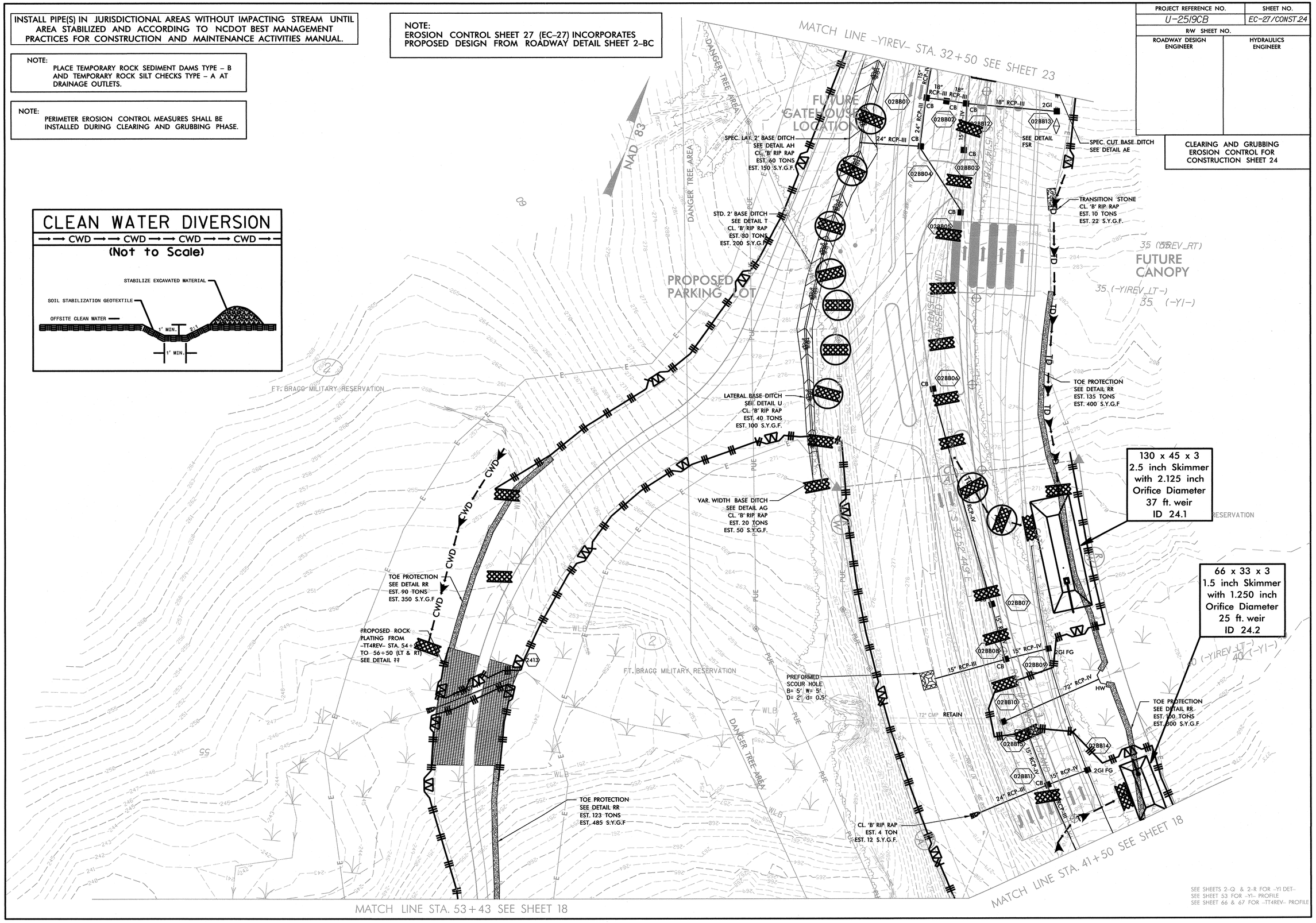
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-27/CONST.24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 24

CLEAN WATER DIVERSION

→→ CWD →→ CWD →→ CWD →→ CWD →→

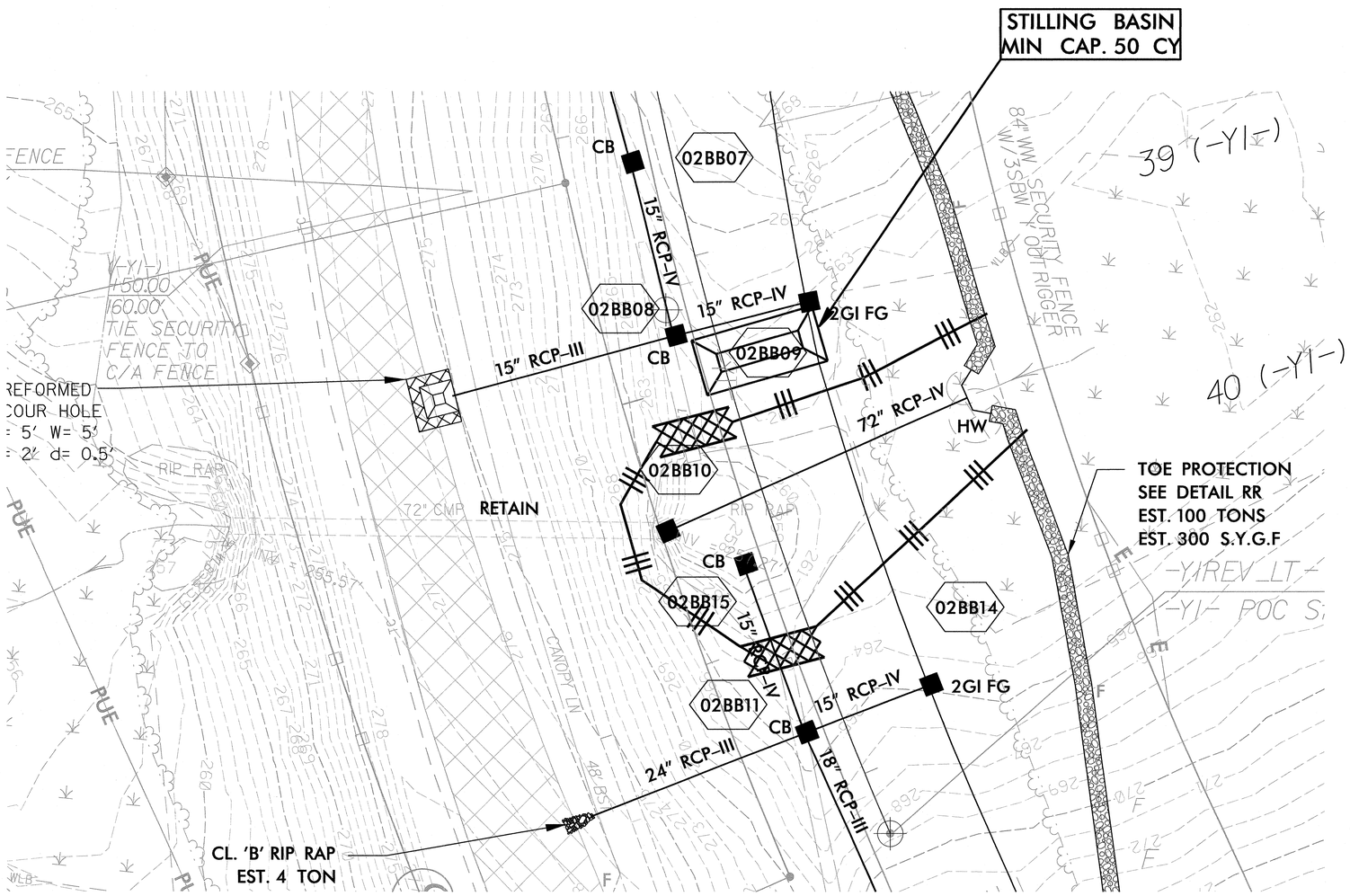
(Not to Scale)



SEE SHEETS 2-Q & 2-R FOR –Y1 DET–
SEE SHEET 53 FOR –Y1– PROFILE
SEE SHEET 66 & 67 FOR –TT4REV– PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-27A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

25 12.5 0 25 50
PLANS



U-2519CB
CUMBERLAND COUNTY

CONSTRUCTION SEQUENCE FOR 72" PIPE
STA. 39+81 -Y1-
UT TO STEWARTS CREEK

PHASE 1

1. INSTALL PERIMETER EROSION CONTROL MEASURES.
2. CONSTRUCT STILLING BASIN (MIN CAPACITY 50 CY).
3. DEWATER CONSTRUCTION AREA AS NECESSARY.
4. INSTALL TBJB, 72" PIPE AND HEADWALL
5. PUMP WATER FROM STILLING BASIN INTO TBJB AS NECESSARY.

BASED ON A SITE VISIT CONDUCTED ON 8-27-13, THERE WAS NO AVERAGE DAILY FLOW AT THIS STREAM CROSSING THEREFORE PUMP AROUND METHOD AS NEEDED WILL BE ADEQUATE. IT SHOULD BE NOTED THAT JUNE, JULY, AND AUGUST OF 2013 RECEIVED WELL ABOVE NORMAL RAINFALL AMOUNTS AND THIS WAS NOT DURING A DROUGHT CONDITION.

REVISIONS

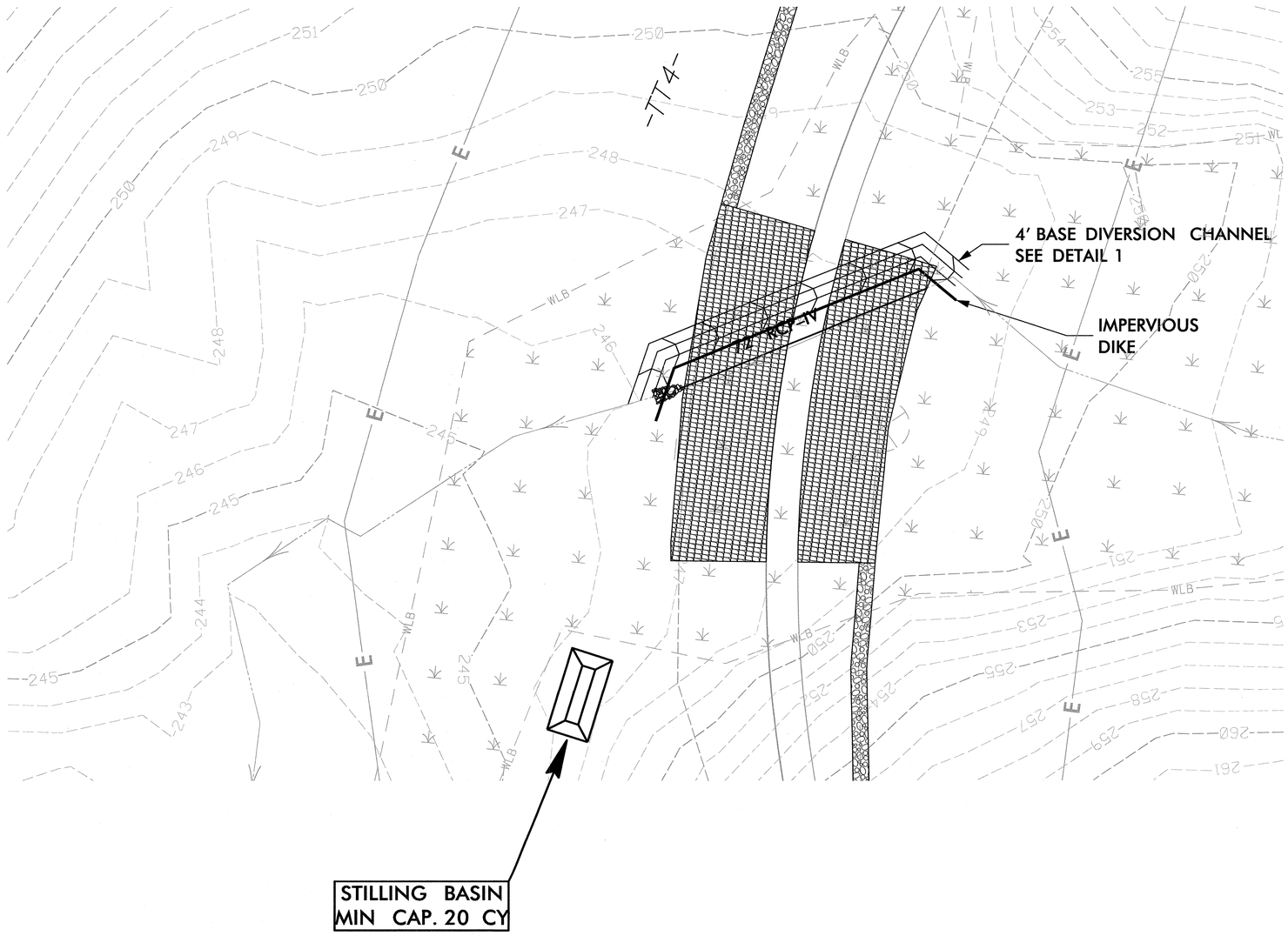
8/17/99

4/15/2014
U2519CB_Hyd_PSH_Const.Seq-Y1
pgtam

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-27B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

25 12.5 0 25 50

PLANS



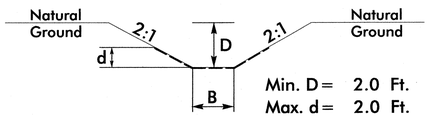
U-2519CB
CUMBERLAND COUNTY

CONSTRUCTION SEQUENCE FOR 72" PIPE
STA. 55+76 -TT4-
UT TO STEWARTS CREEK

PHASE 1

1. CONSTRUCT STILLING BASIN (MIN CAPACITY 20 CY).
2. CONSTRUCT IMPERVIOUS DIKE AND TEMPORARY 4' BASE DIVERSION CHANNEL.
3. DEWATER CONSTRUCTION AREA AS NEEDED.
4. INSTALL 72" PIPE.
5. REMOVE IMPERVIOUS DIKES, DIVERSION CHANNEL, AND STILLING BASIN.

DETAIL 1
TEMPORARY DIVERSION CHANNEL
(Not to Scale)



Min. D = 2.0 Ft.
Max. d = 2.0 Ft.
B = 4.0 Ft.

Type of Liner = Soil Stabilization Geotextile

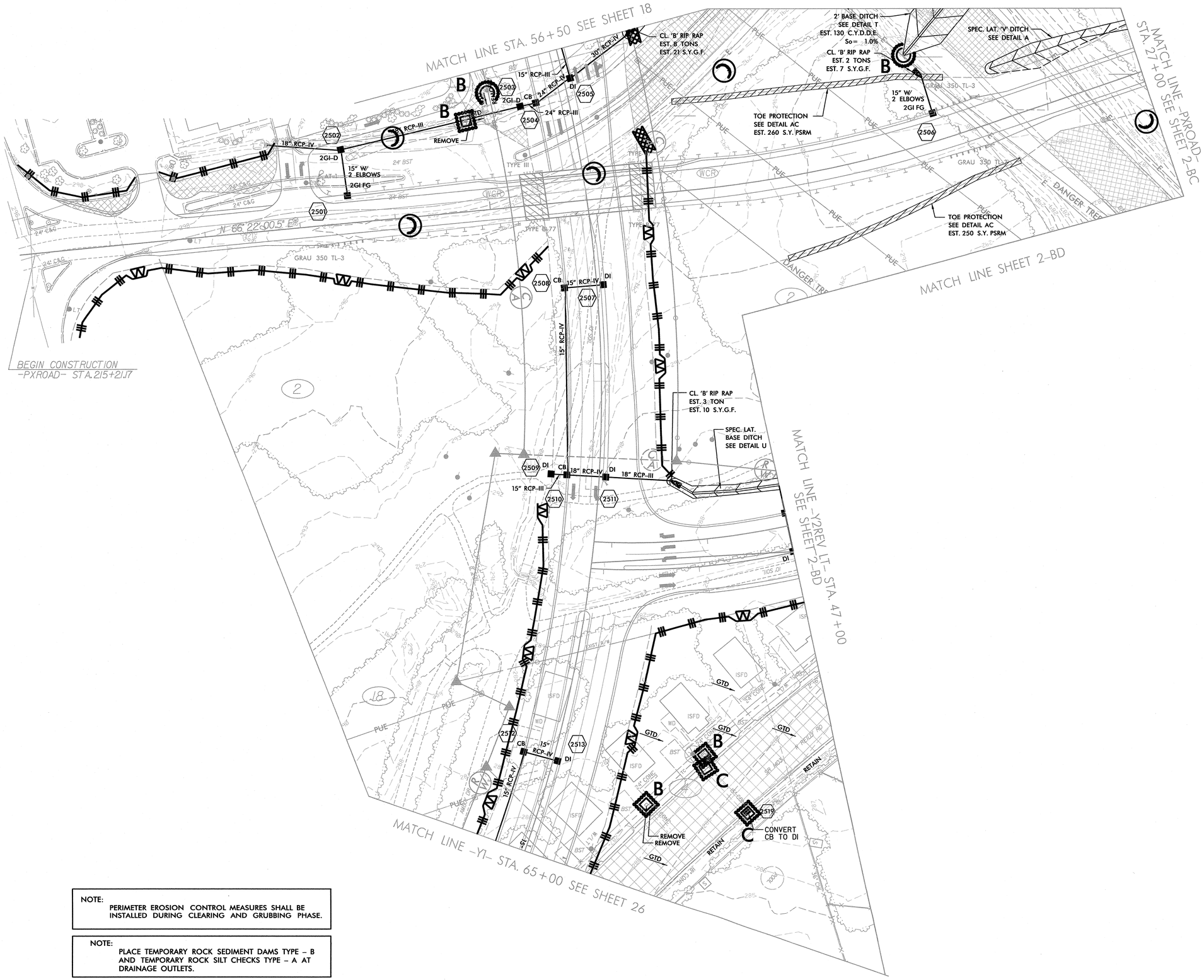
REVISIONS

8/17/99

4/15/2014
U2519CB_Hyd_PSH_Const.Seq-Y4
8:13am

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-28/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 25



NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

SEE SHEET 54 FOR -Y1- PROFILE
SEE SHEET 55 FOR -Y2- PROFILE

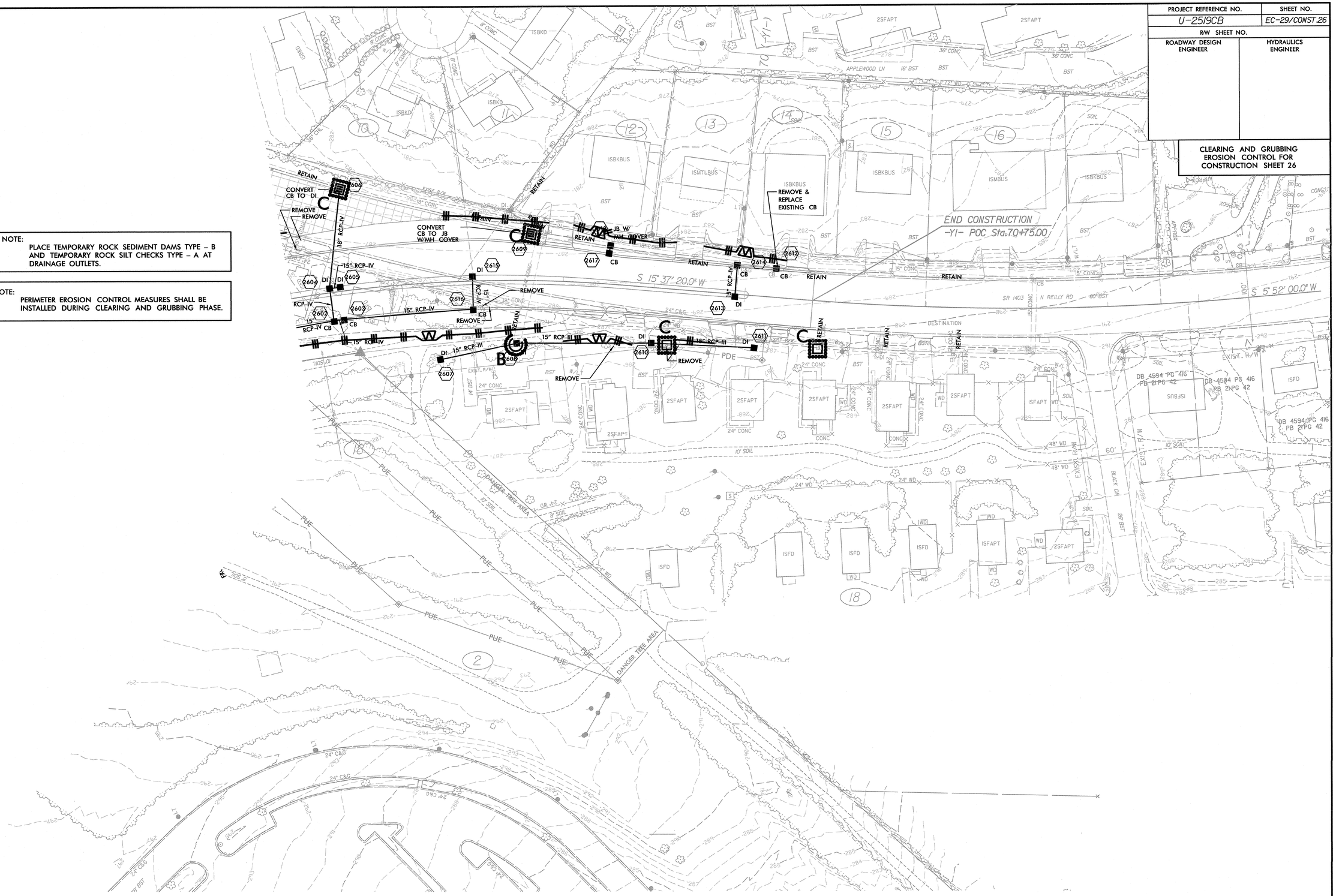
104.00L001/u2519cb/Roadway/proj/u2519cb_rdy_psh25

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-29/CONST.26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

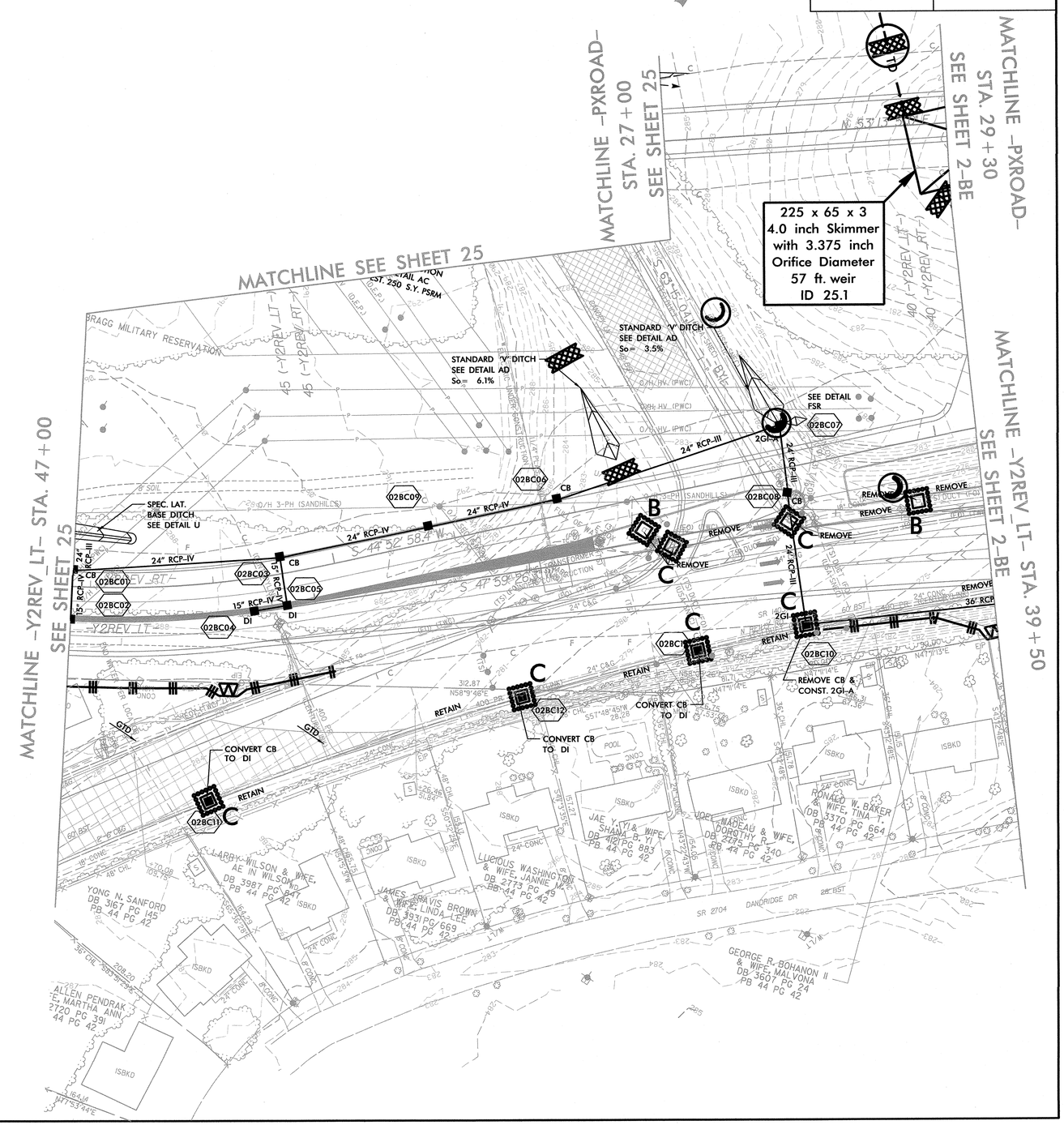
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 26

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 2BD	PROJECT REFERENCE NO.	SHEET NO.
	U-2519CB	EC-30/CONST.2BD
	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

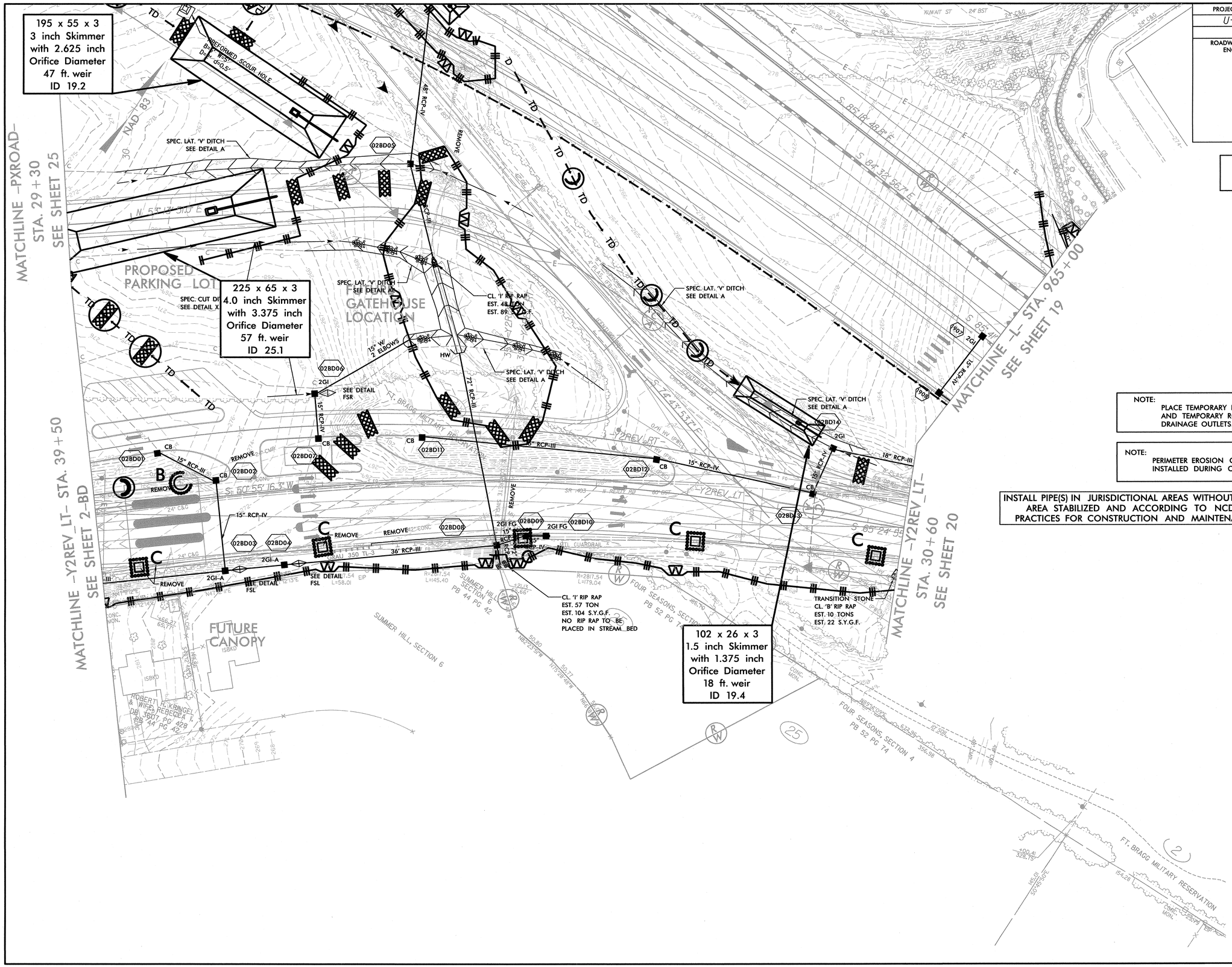


NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-31/CONST.2BE
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 2BE



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

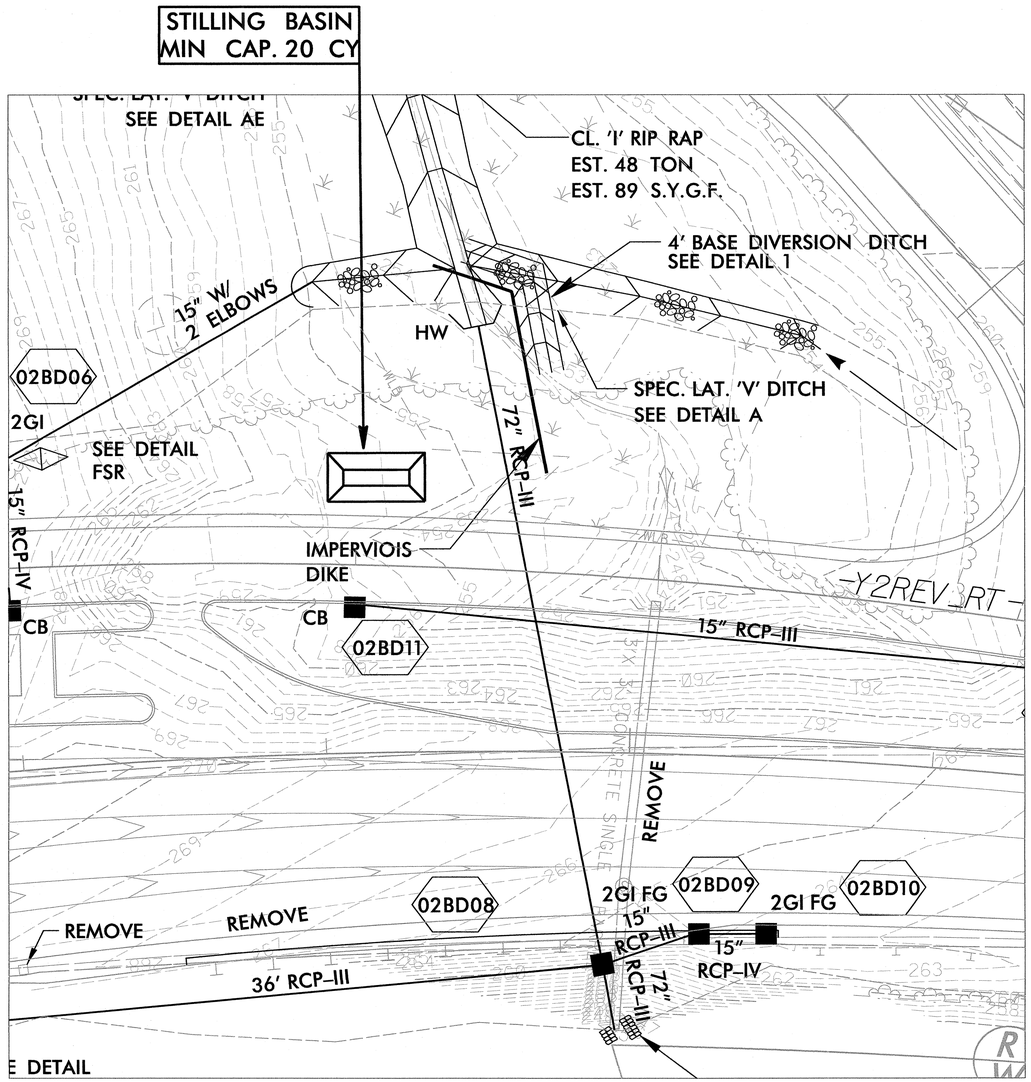
NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-31A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

25 12.5 0 25 50
PLANS

NAD 83



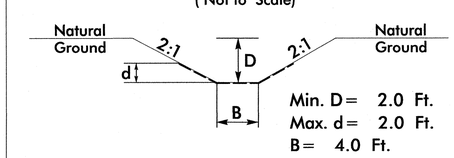
U-2519CB
CUMBERLAND COUNTY

CONSTRUCTION SEQUENCE FOR 72" PIPE
STA. 35+22.5 -Y2REV-

PHASE 1

1. CONSTRUCT STILLING BASIN (MIN CAPACITY 20 CY).
2. CONSTRUCT IMPERVIOUS DIKE AND TEMPORARY 4' BASE DIVERSION CHANNEL.
3. DEWATER CONSTRUCTION AREA AS NEEDED.
4. INSTALL 72" PIPE.
5. REMOVE IMPERVIOUS DIKE, DIVERSION CHANNEL, AND STILLING BASIN.

DETAIL 1
TEMPORARY DIVERSION CHANNEL
(Not to Scale)



Min. D= 2.0 Ft.
Max. d= 2.0 Ft.
B= 4.0 Ft.

Type of Liner= Soil Stabilization Geotextile

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-32/CONST.27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 27

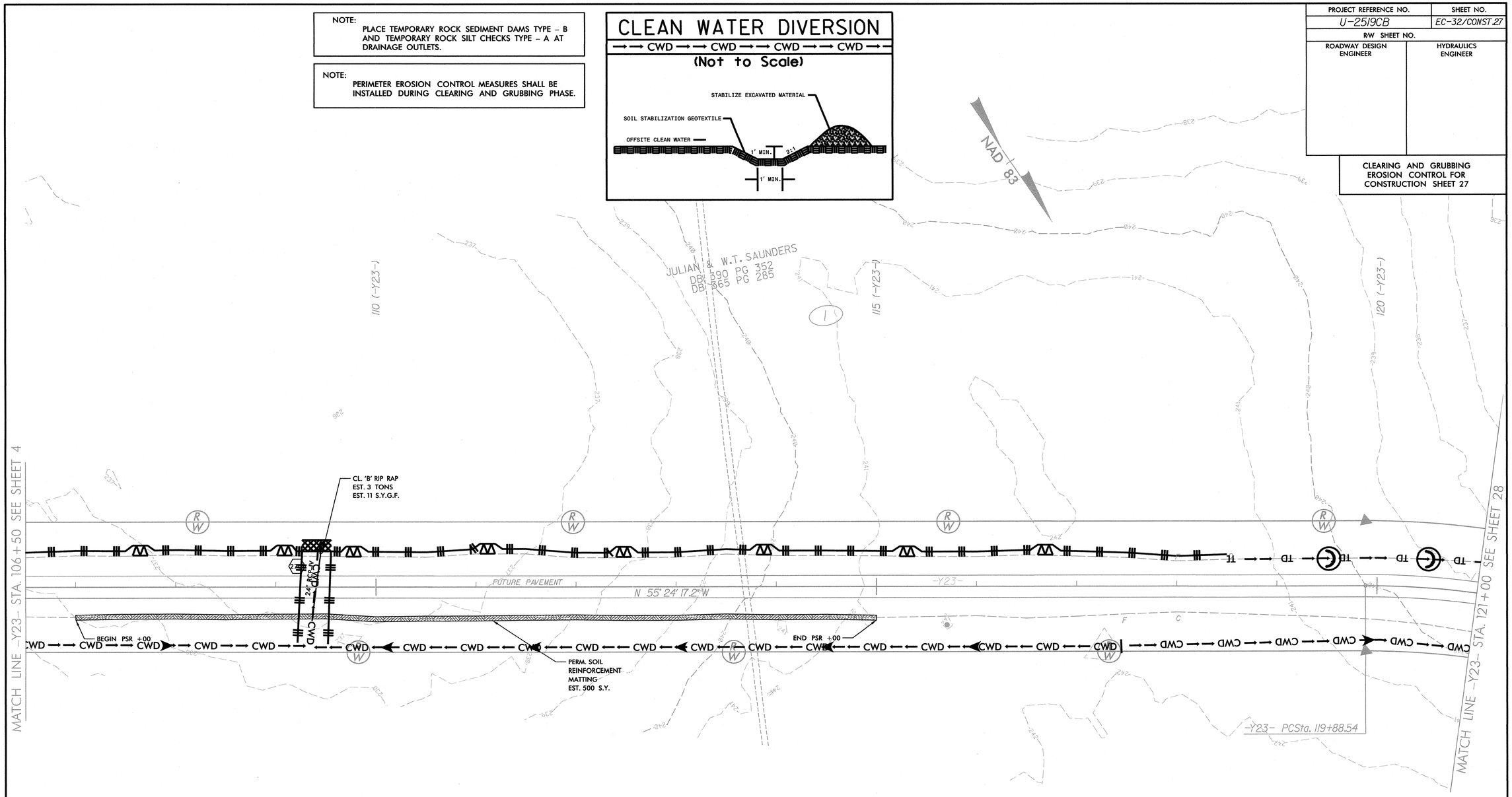
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

CLEAN WATER DIVERSION

→→ CWD →→ CWD →→ CWD →→ CWD →→

(Not to Scale)

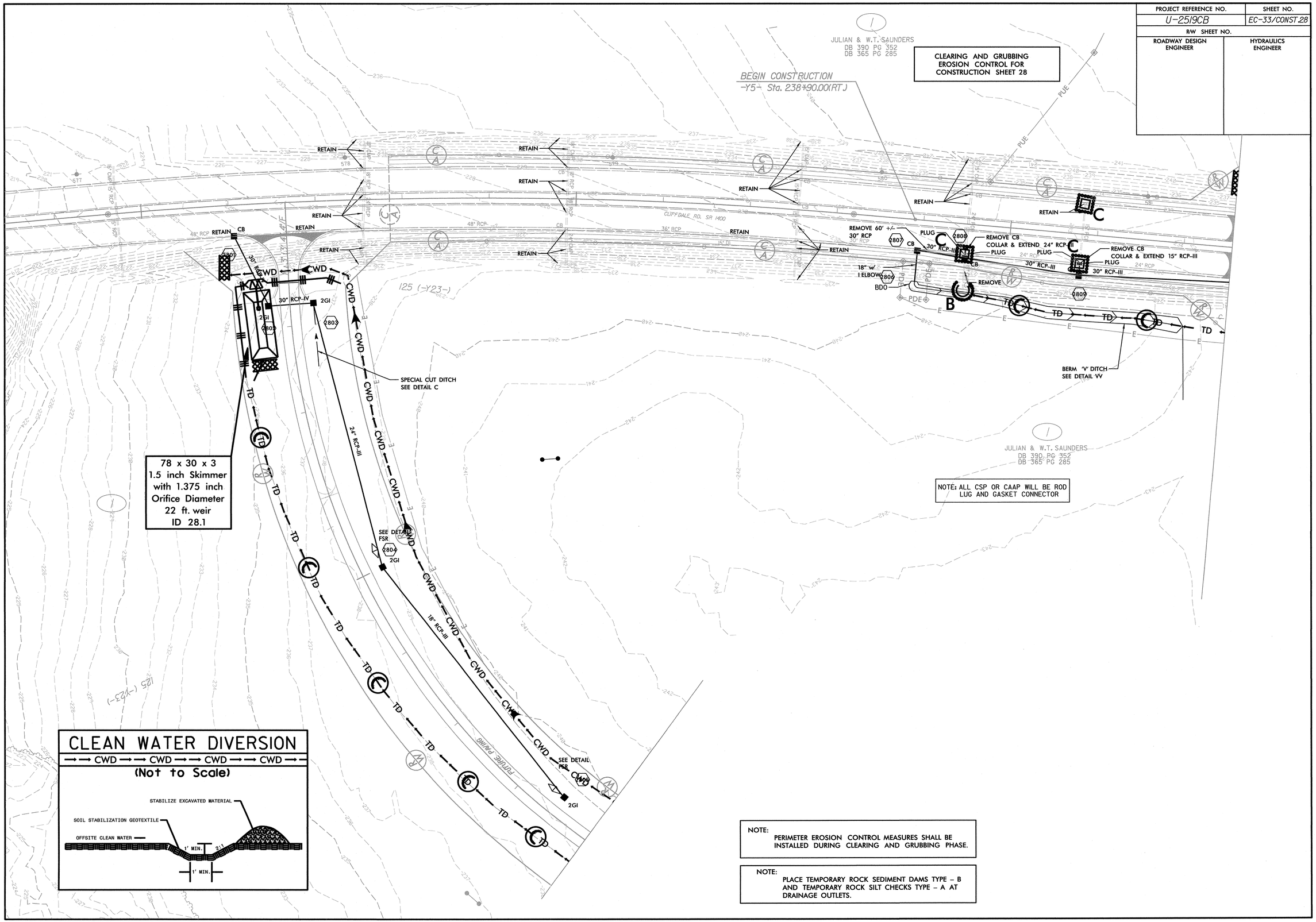


SEE SHEET 57 & 58 FOR -Y23- PROFILE

104.001.001/u2519cb/Roadway/proj/u2519cb rdy pshs27

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-33/CONST.28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 28



CLEAN WATER DIVERSION

→→ CWD →→ CWD →→ CWD →→ CWD →

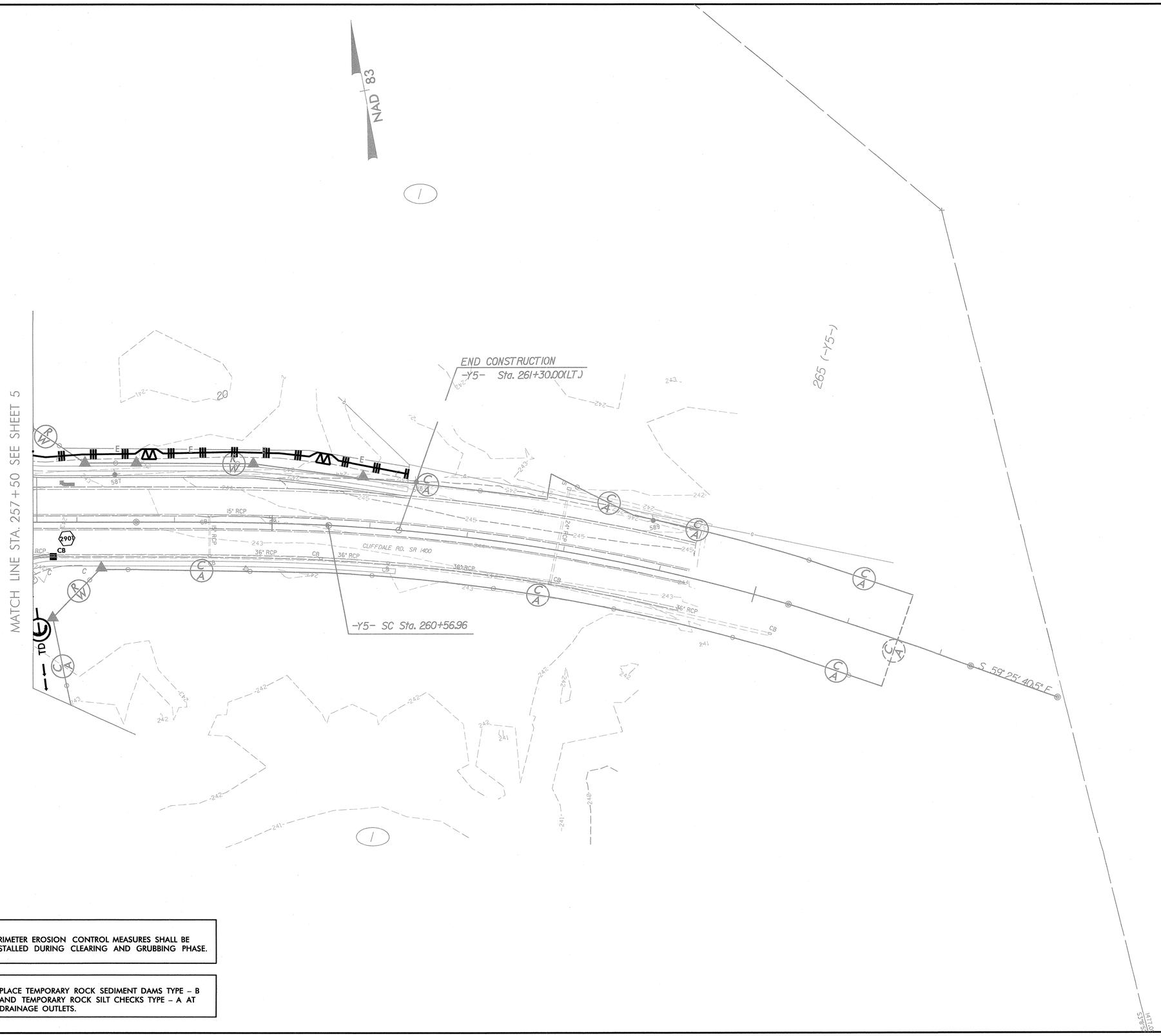
(Not to Scale)

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-34/CONST.29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 29



NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

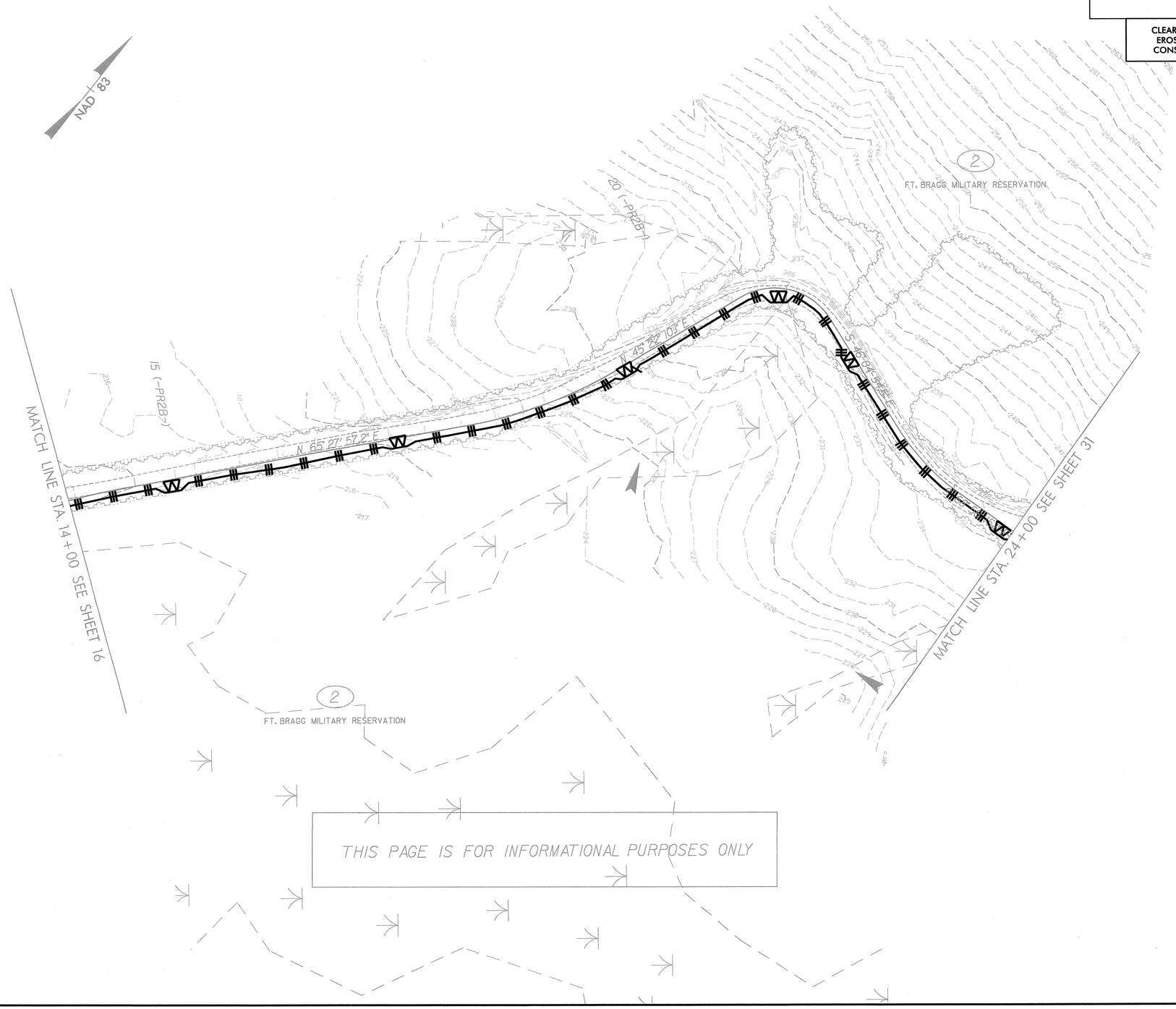
SEE SHEET 47 FOR -Y5- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-35/CONST.30
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 30

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



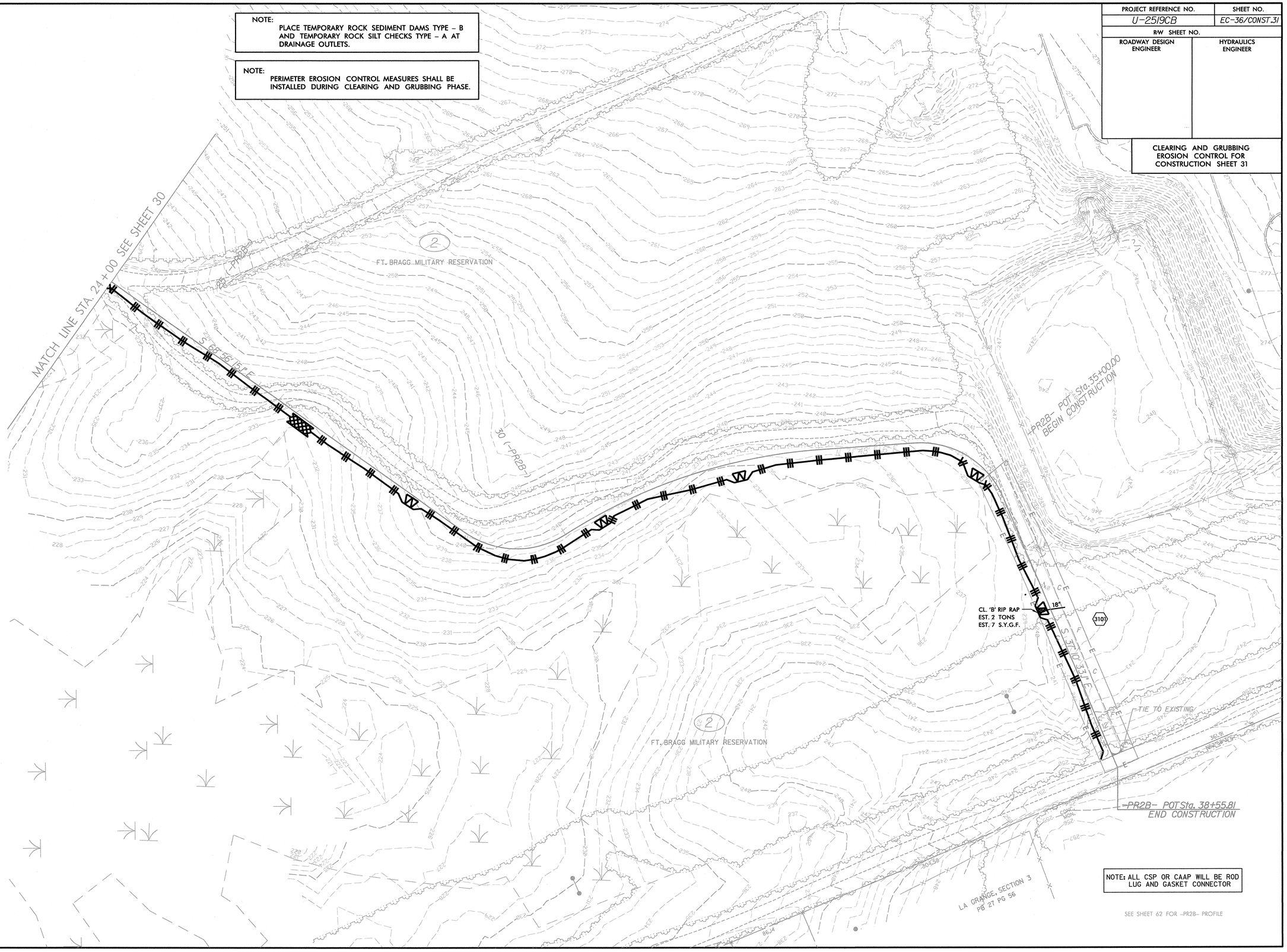
THIS PAGE IS FOR INFORMATIONAL PURPOSES ONLY

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-36/CONST.31
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 31

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

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



NOTE: ALL CSP OR CAAP WILL BE ROD LUG AND GASKET CONNECTOR

SEE SHEET 62 FOR -PR2B- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-37/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

NAD 83

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 104+00 –Y23– LT to Sta. 106+50 –Y23– LT
Sta. 102+00 –Y23– RT to Sta. 106+50 –Y23– RT

CLEAN WATER DIVERSION

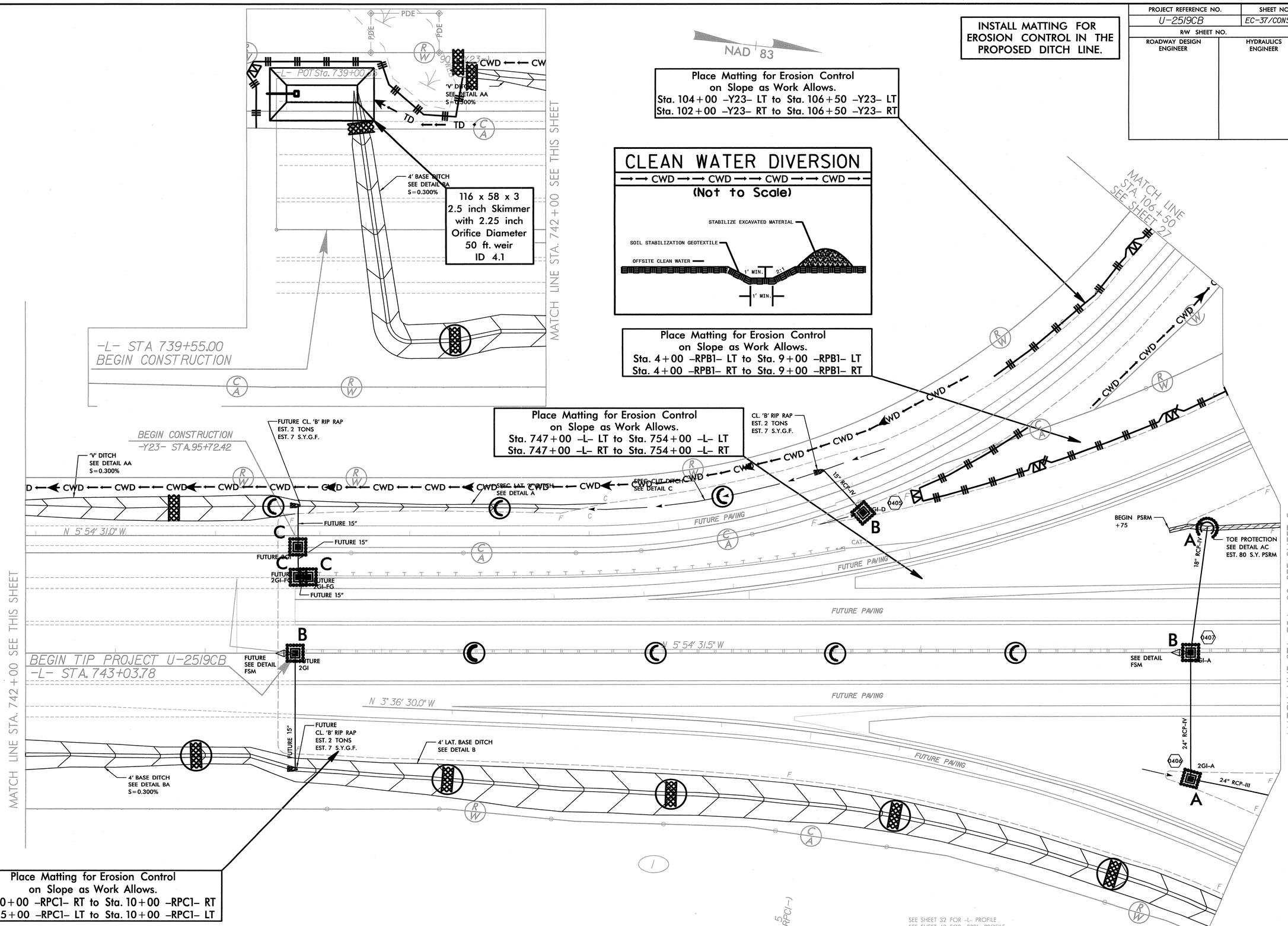
→→ CWD →→ CWD →→ CWD →→ CWD →→

(Not to Scale)

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 4+00 –RPB1– LT to Sta. 9+00 –RPB1– LT
Sta. 4+00 –RPB1– RT to Sta. 9+00 –RPB1– RT

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 747+00 –L– LT to Sta. 754+00 –L– LT
Sta. 747+00 –L– RT to Sta. 754+00 –L– RT

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 0+00 –RPC1– RT to Sta. 10+00 –RPC1– RT
Sta. 5+00 –RPC1– LT to Sta. 10+00 –RPC1– LT

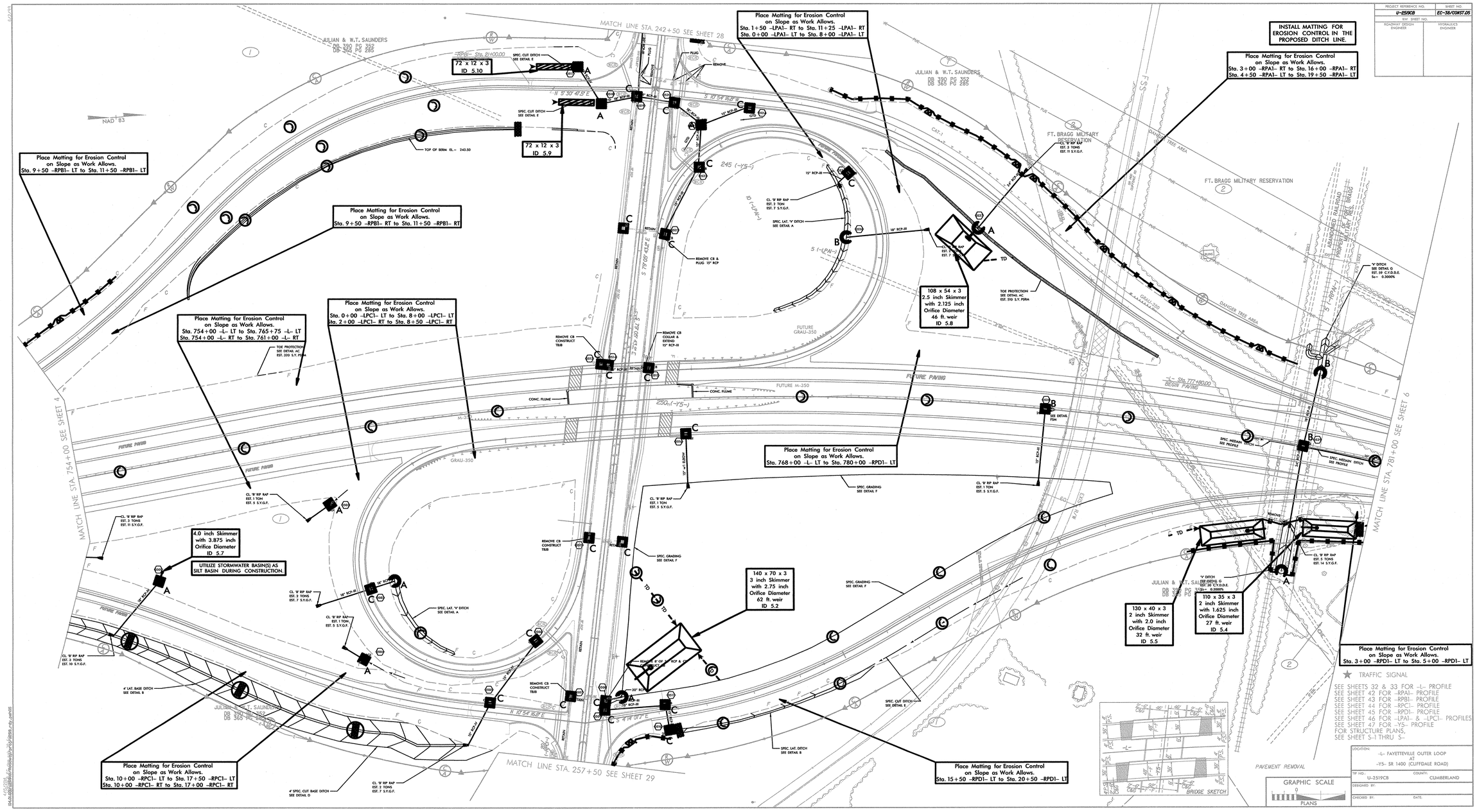


NOTE: SEE SHEET 2-T FOR ADDITIONAL PARCEL 1 R/W ACQUISITION

SEE SHEET 32 FOR -L- PROFILE
SEE SHEET 43 FOR -RPB1- PROFILE
SEE SHEET 44 FOR -RPC1- PROFILE
SEE SHEET 57 FOR -Y23- PROFILE

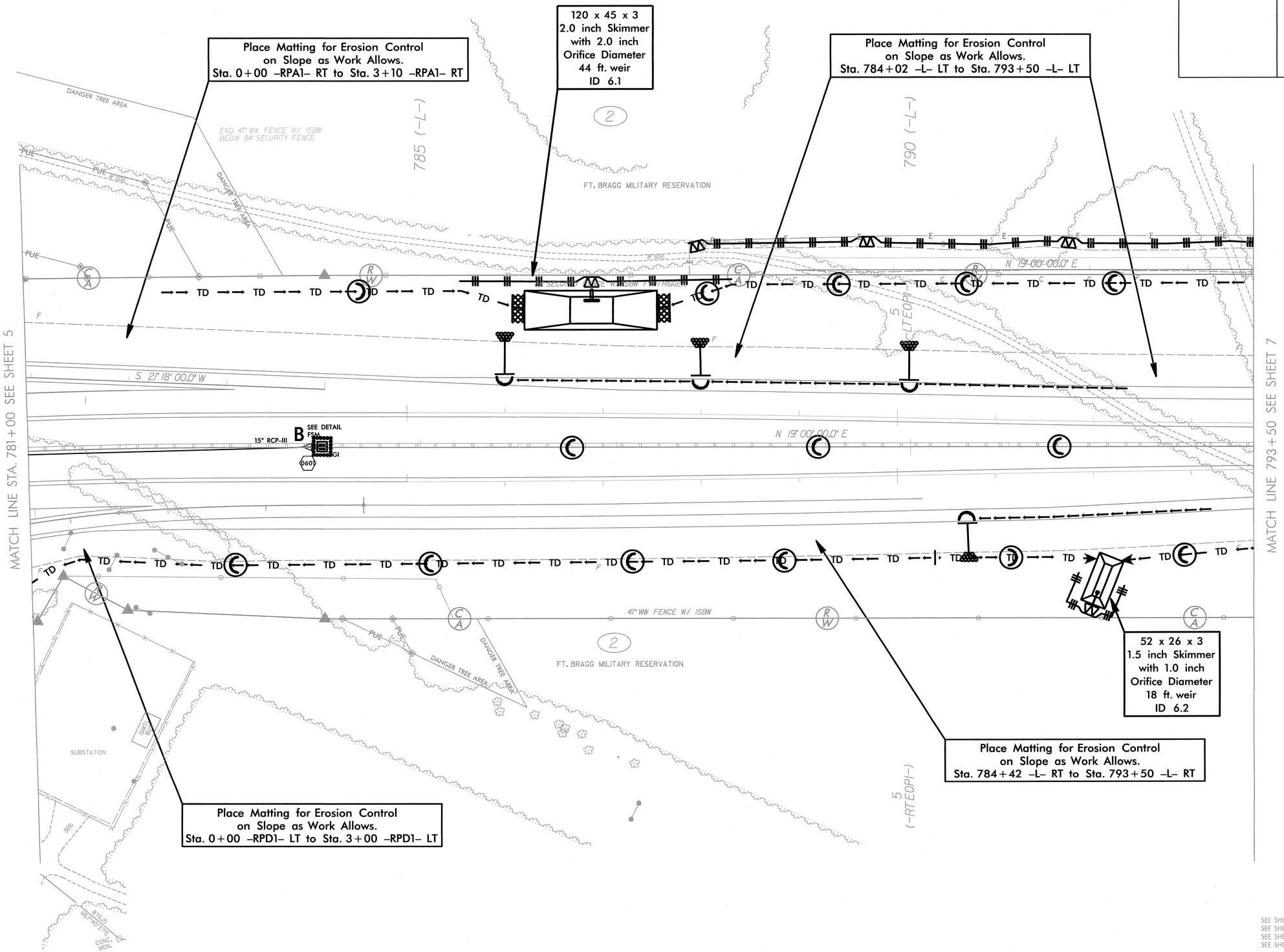
104.00.001/u2519cb/Roadway/proj/u2519cb_rdy_psh04

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-38/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



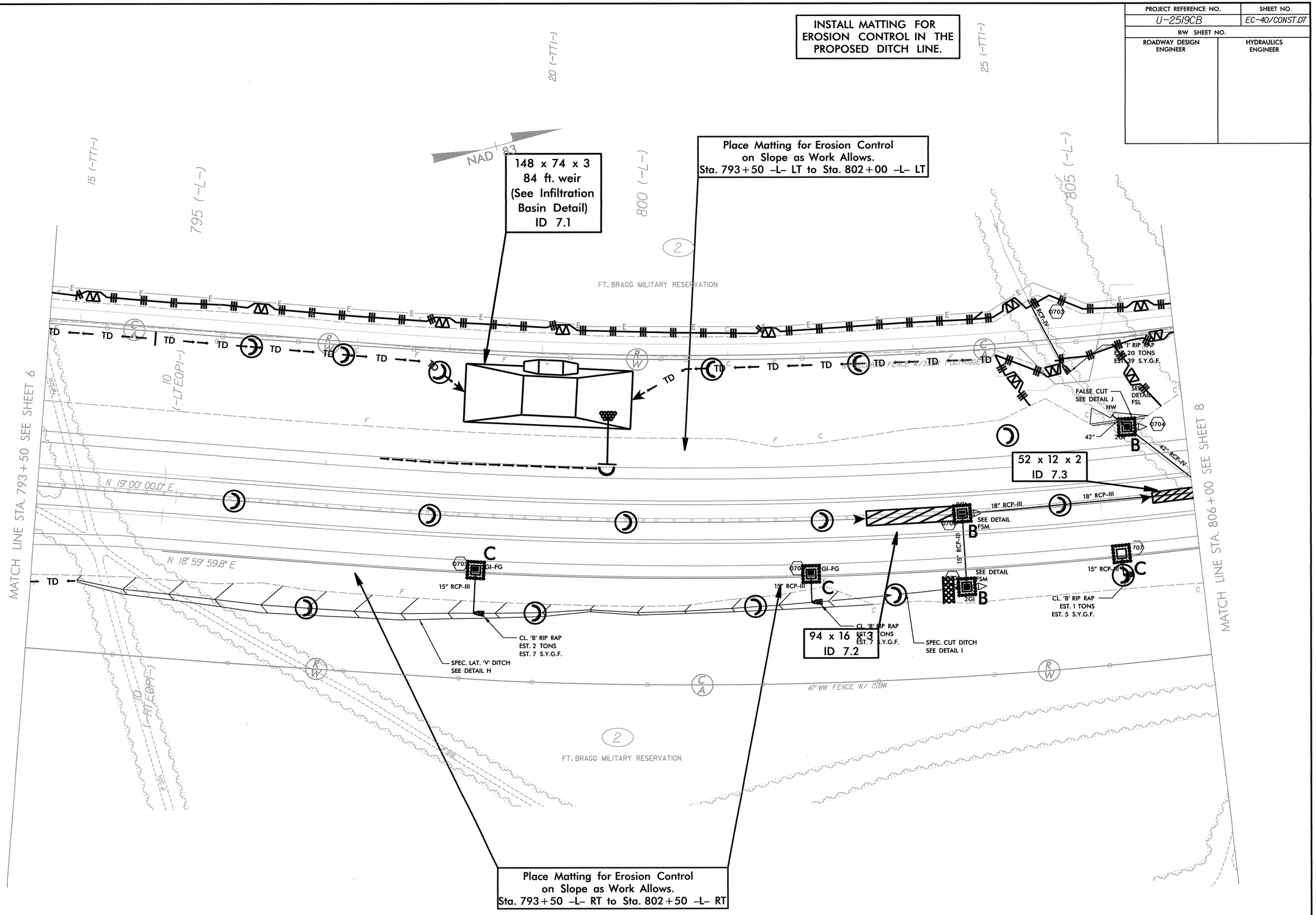
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-39/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



SEE SHEET 33 FOR -L- PROFILE
SEE SHEET 42 FOR -RPA1- PROFILE
SEE SHEET 45 FOR -RPD1- PROFILE
SEE SHEET 63 FOR -TT1- PROFILE

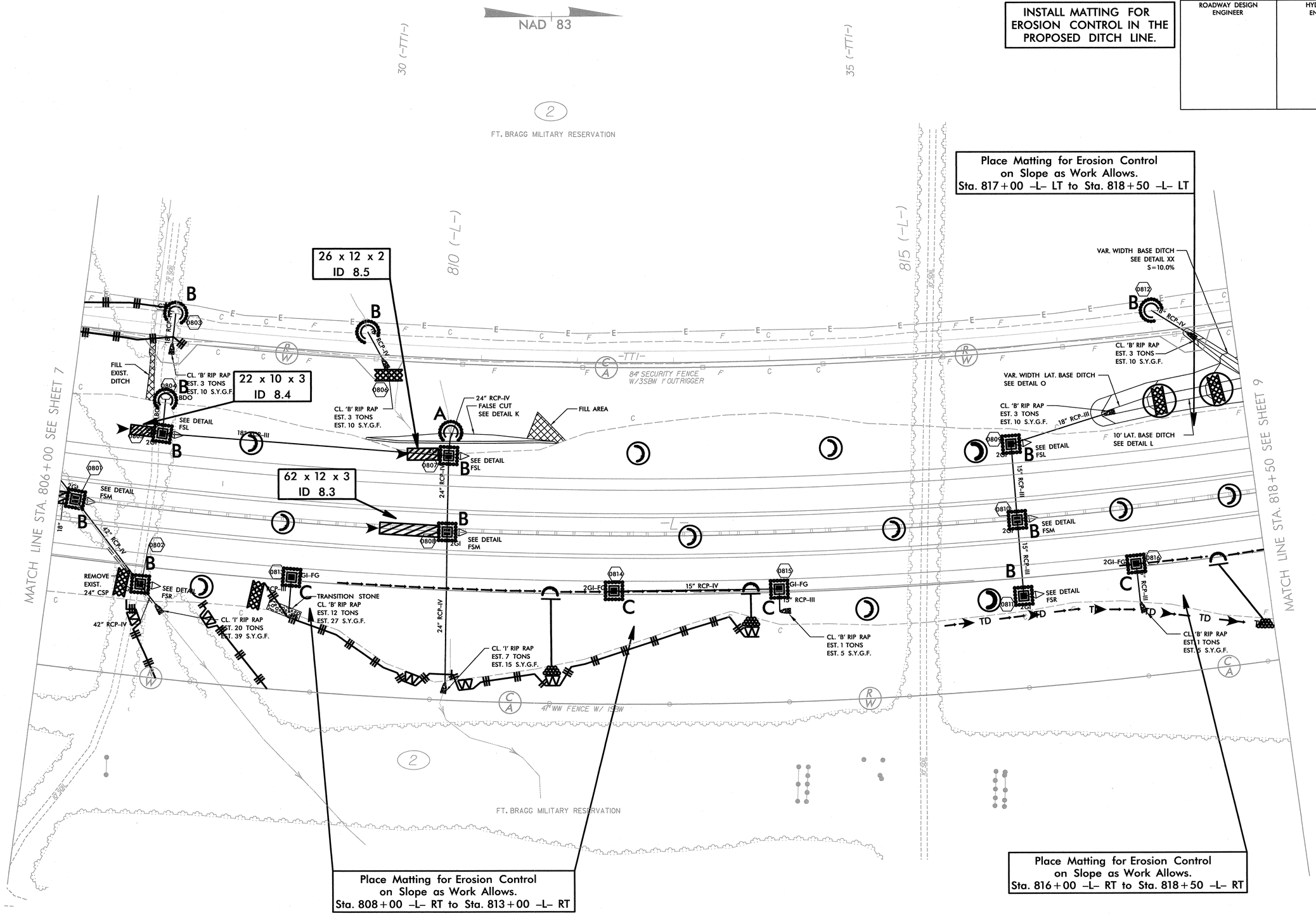
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-40/CONST.07
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SEE SHEETS 33 & 34 FOR -L- PROFILE
SEE SHEET 63 FOR -TT1- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-41/CONST.08
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



SEE SHEET 34 FOR -L- PROFILE
SEE SHEET 63 & 64 FOR -TTI- PROFILE

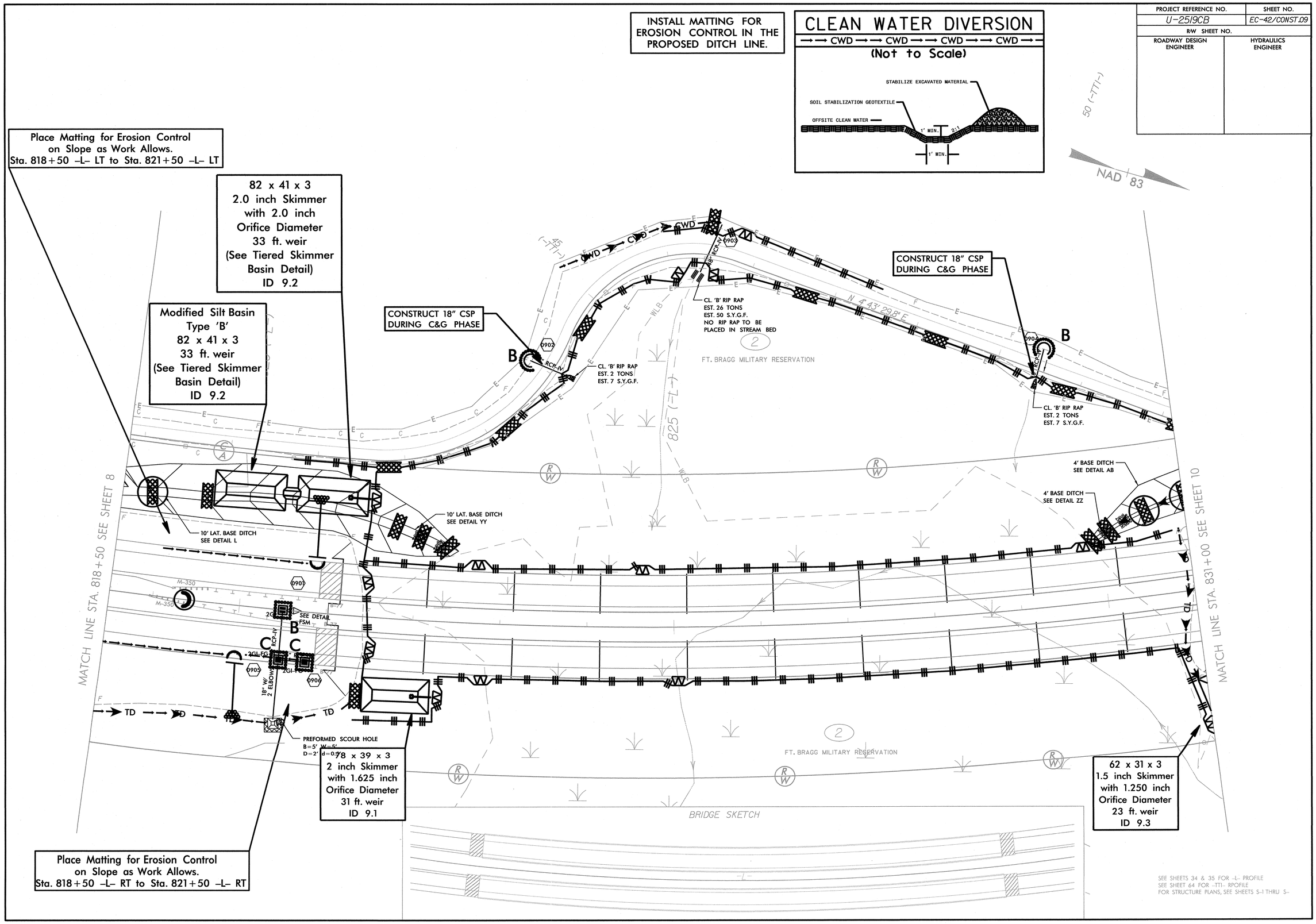
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-42/CONST.09
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

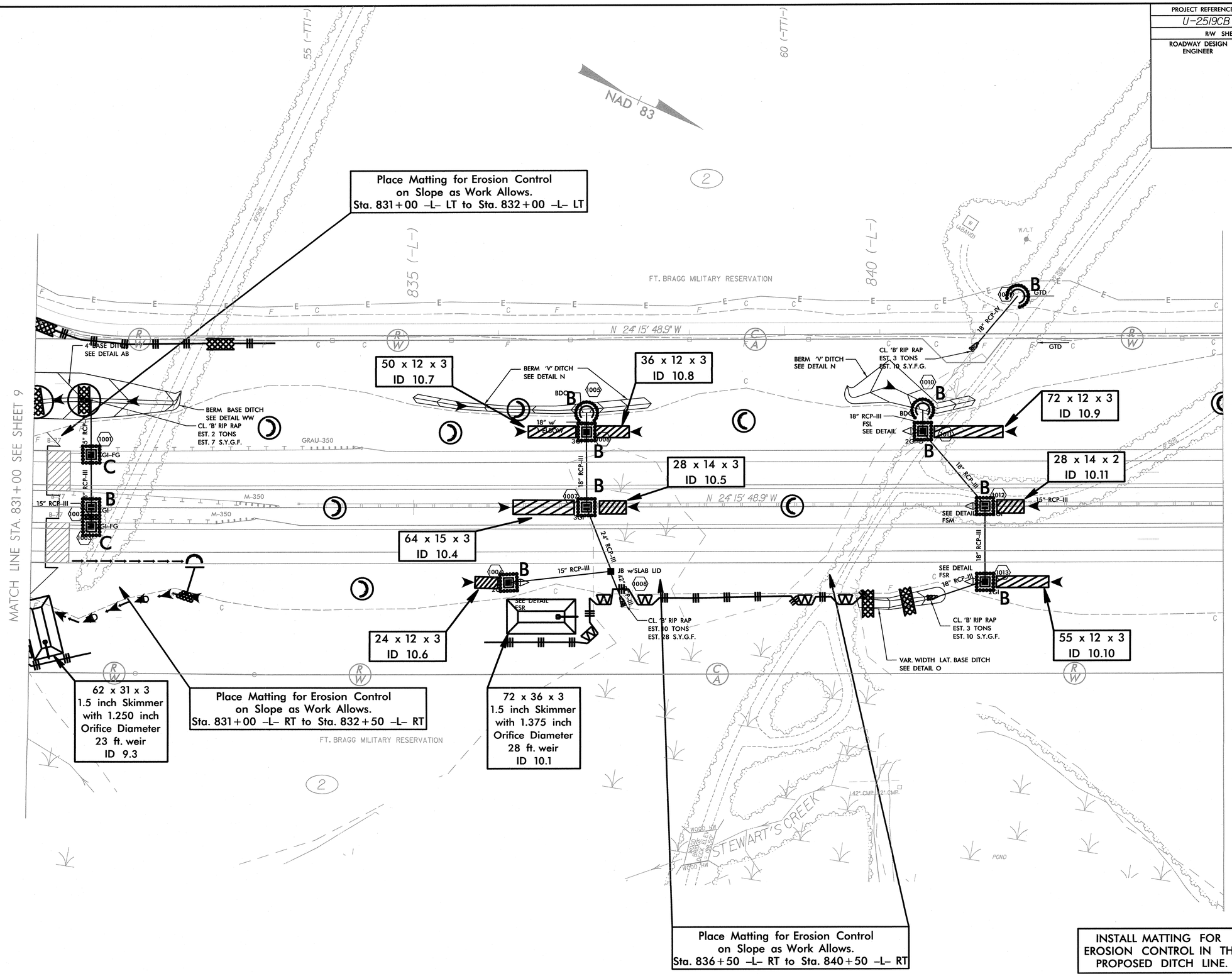
CLEAN WATER DIVERSION

→→ CWD →→ CWD →→ CWD →→ CWD →→

(Not to Scale)



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-43/CONSTJO
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

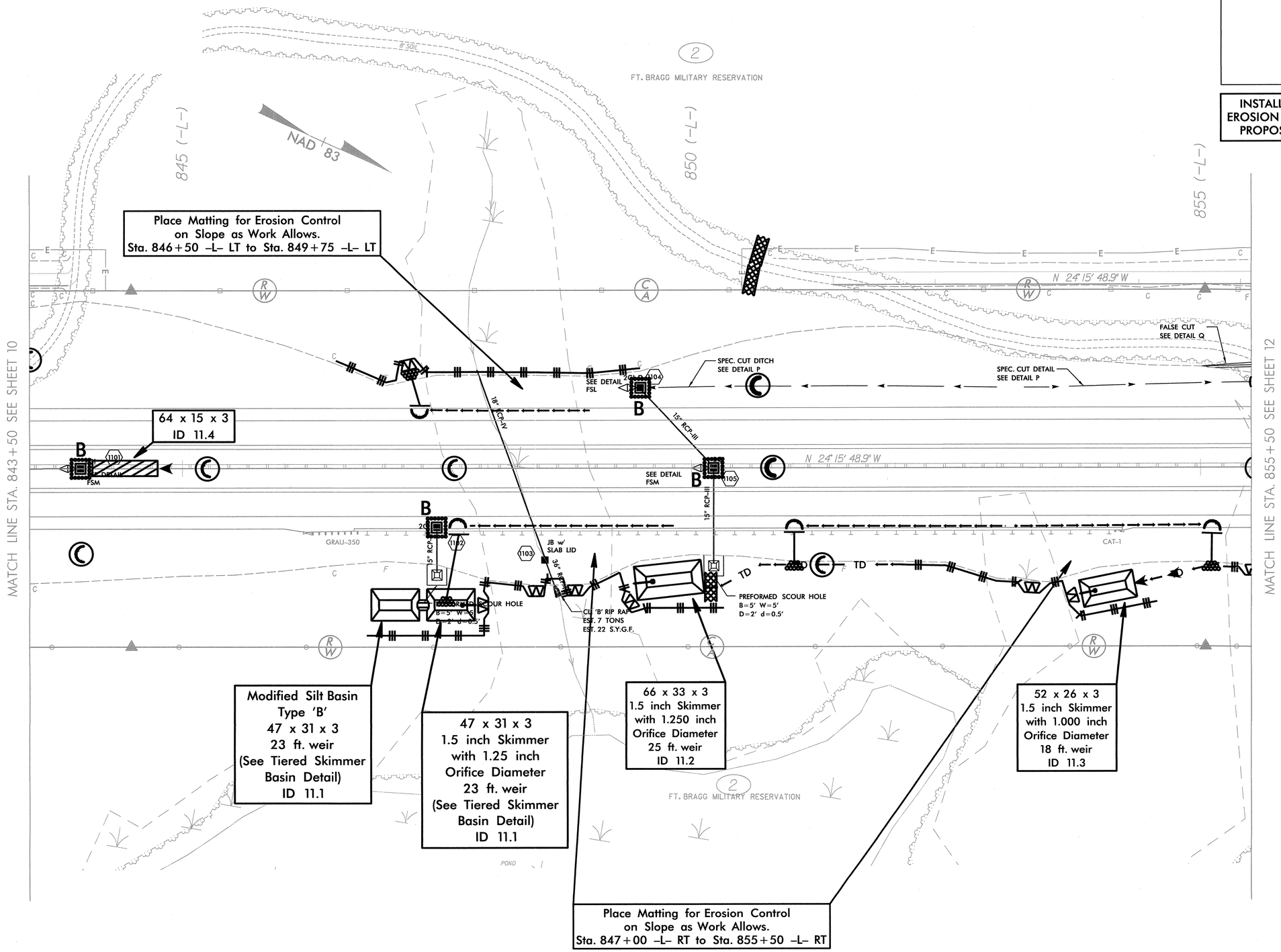


INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

SEE SHEET 35 FOR -L- PROFILE
SEE SHEET 64 -TTI- FOR PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-44/CONST J1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

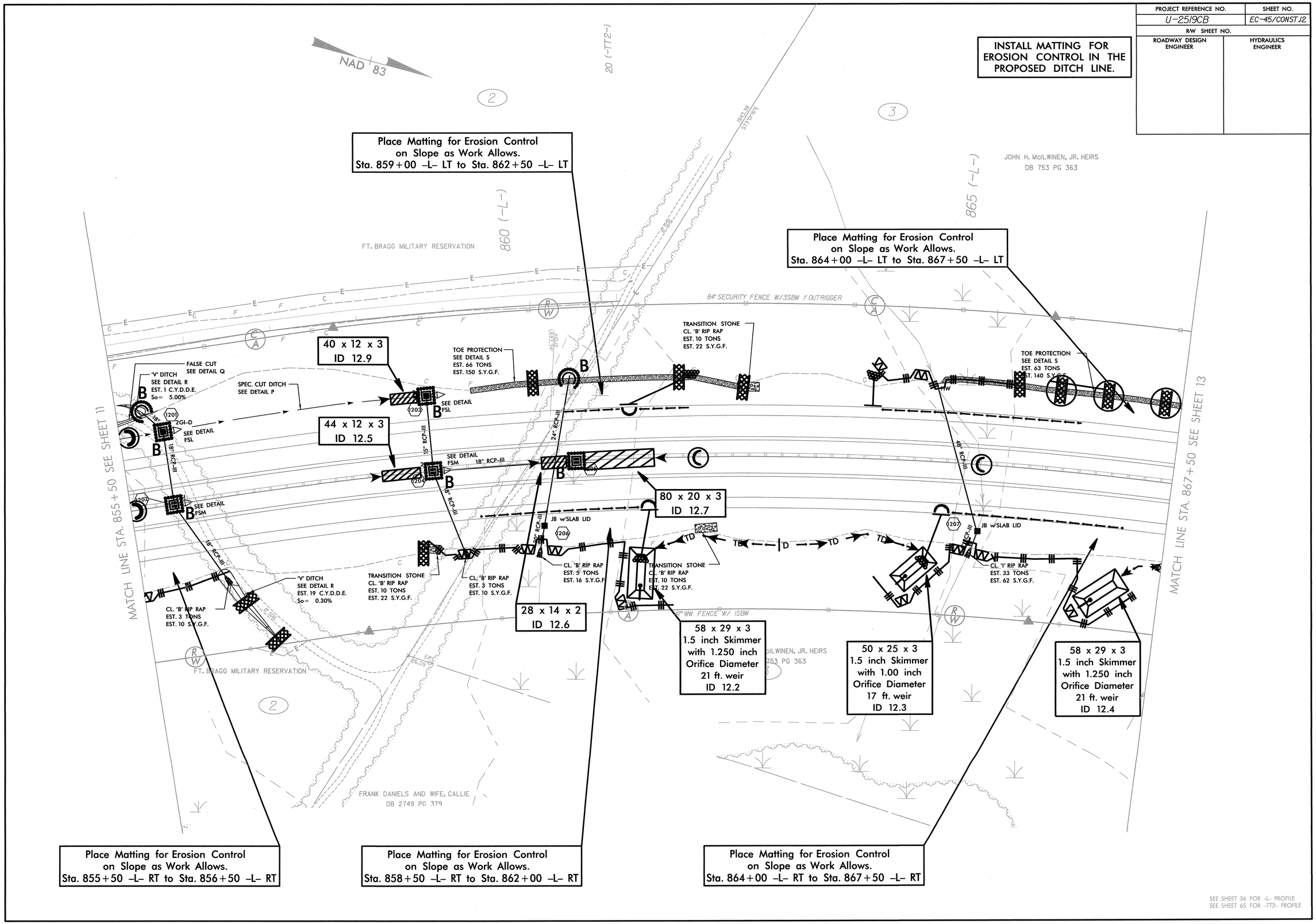
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



SEE SHEETS 35 & 36 FOR -L- PROFILE
SEE SHEET 64 FOR -TT1- PROFILE
SEE SHEET 65 FOR -TT2- PROFILE

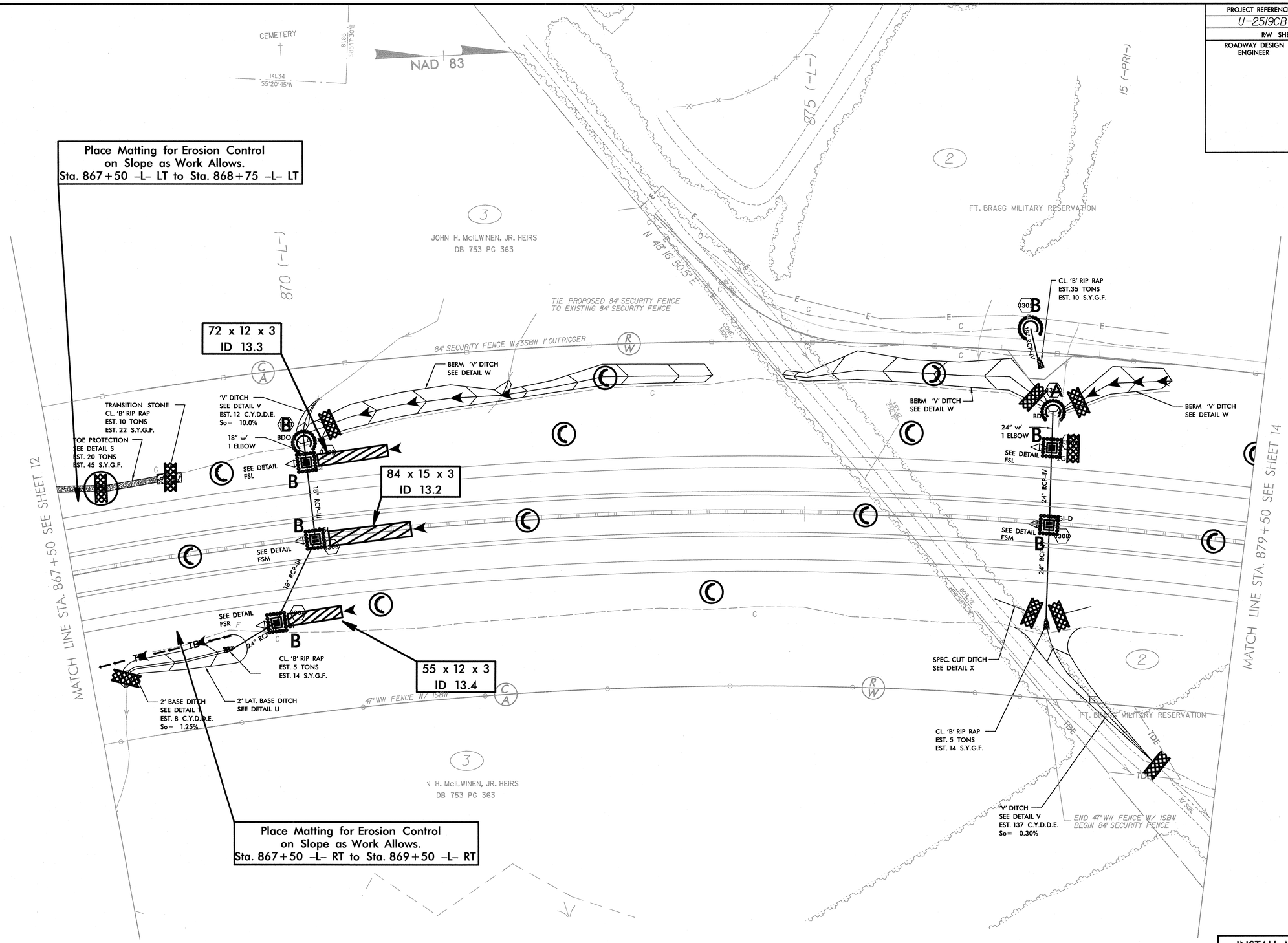
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-45/CONST12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



SEE SHEET 36 FOR -L- PROFILE
SEE SHEET 65 FOR -TT2- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-46/CONSTJ3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

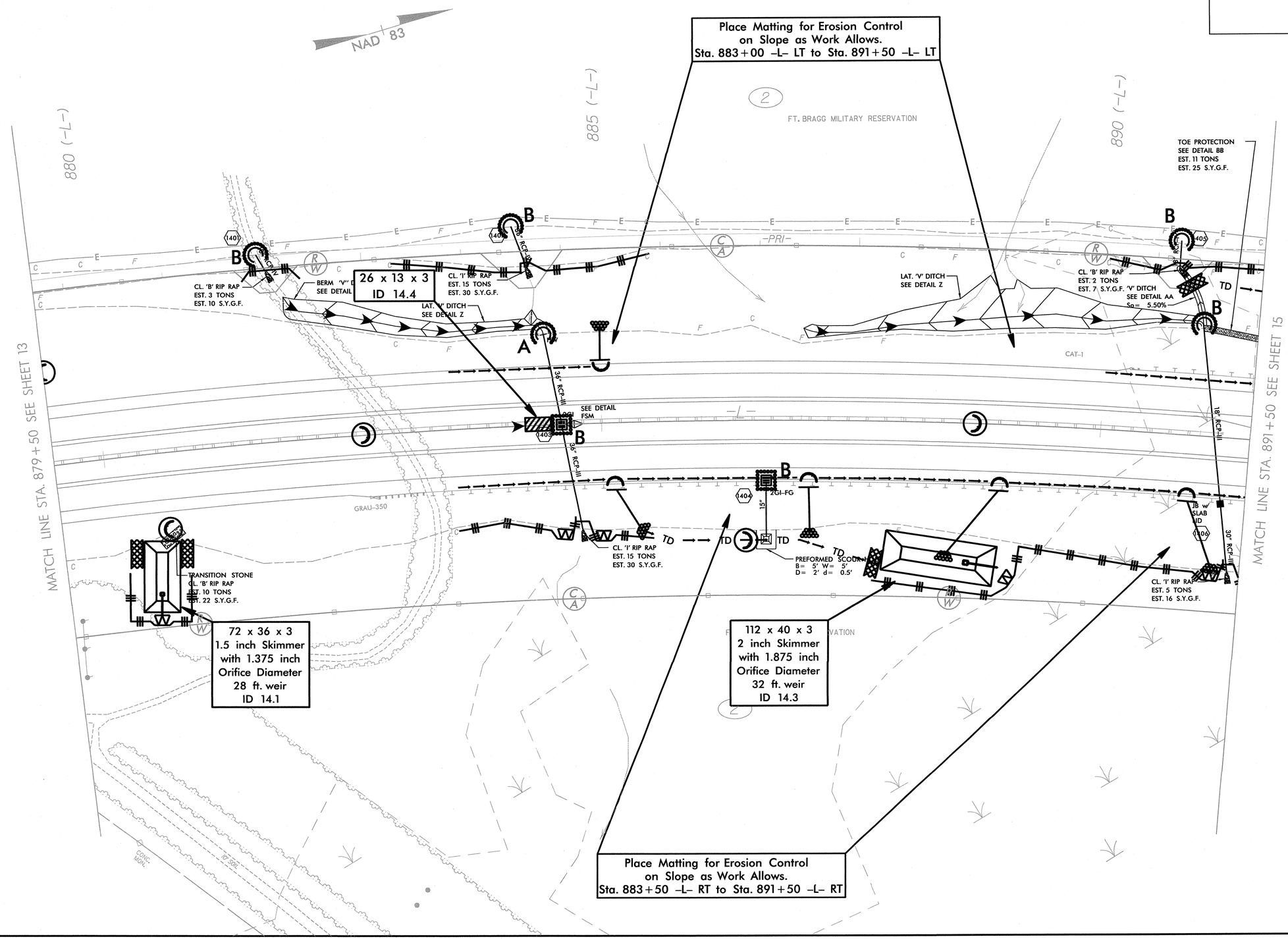


INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

SEE SHEETS 36 & 37 FOR -L- PROFILE
SEE SHEET 59 FOR -PRI- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-47/CONST.14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

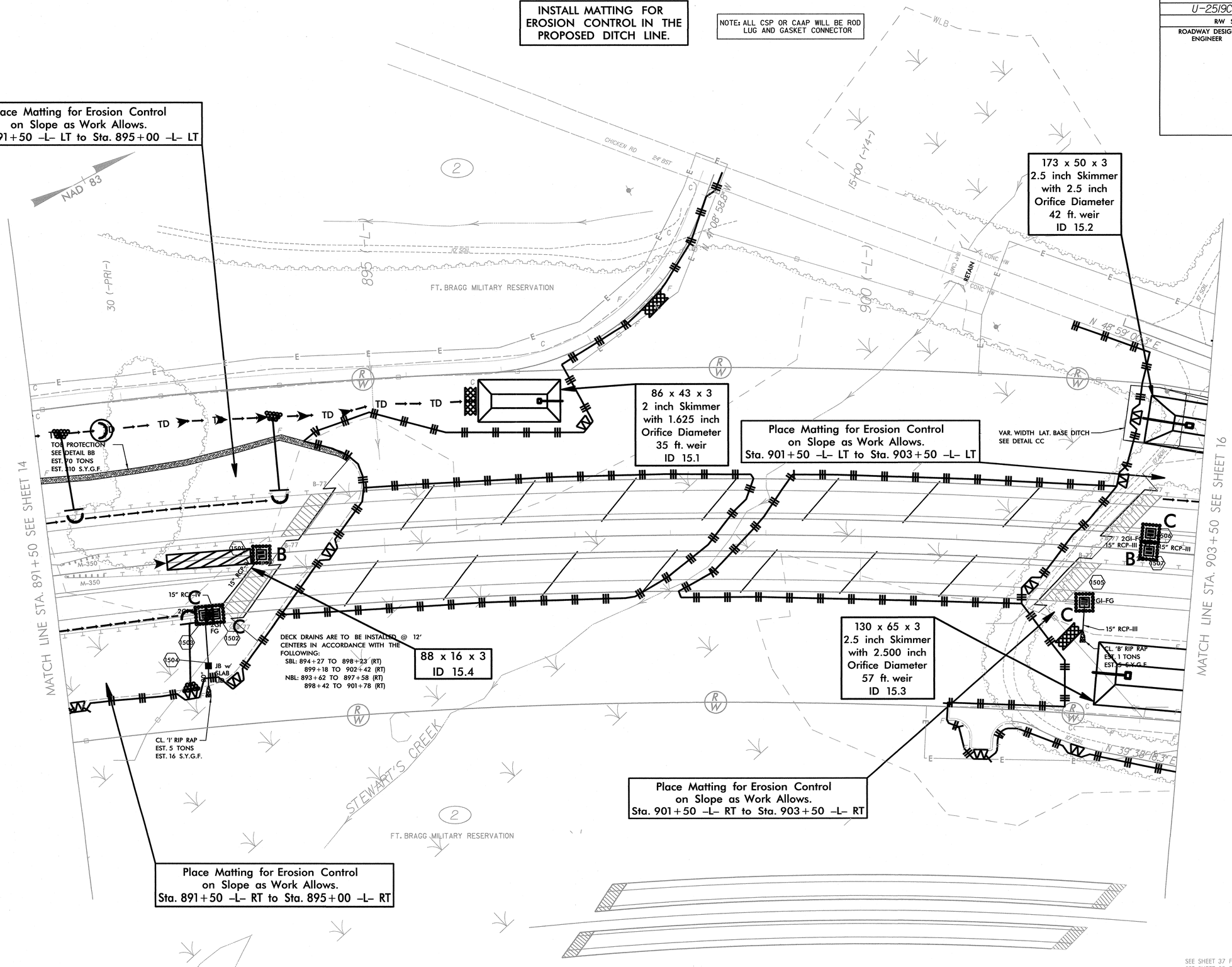


SEE SHEET 37 FOR -L- PROFILE
SEE SHEET 59 FOR -PRI- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-48/CONST J5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

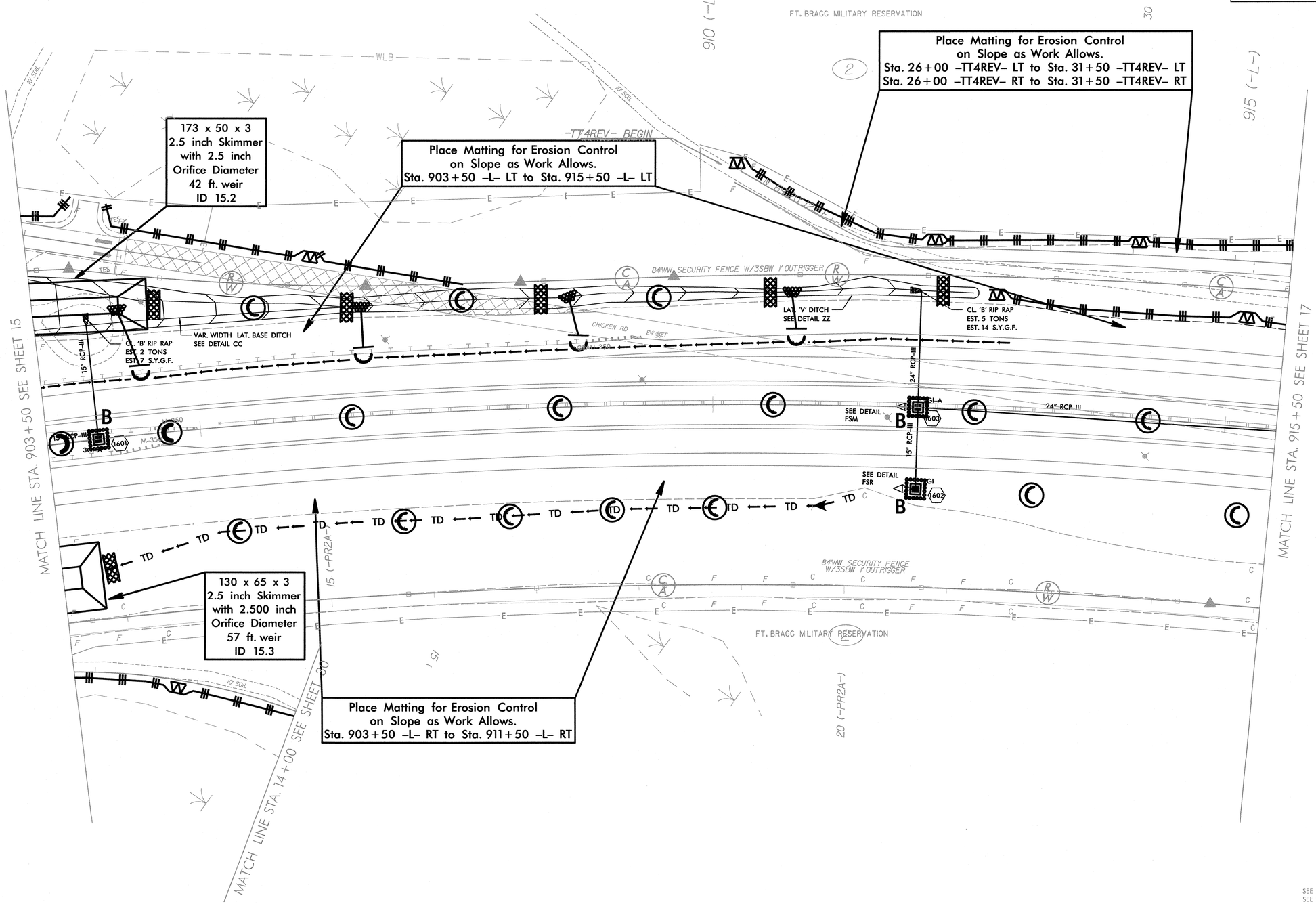
NOTE: ALL CSP OR CAAP WILL BE ROD LUG AND GASKET CONNECTOR



SEE SHEET 37 FOR –L– PROFILE
SEE SHEET 59 FOR –PR1– PROFILE
SEE SHEET 60 FOR –PR2A– PROFILE
FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-49/CONST J6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

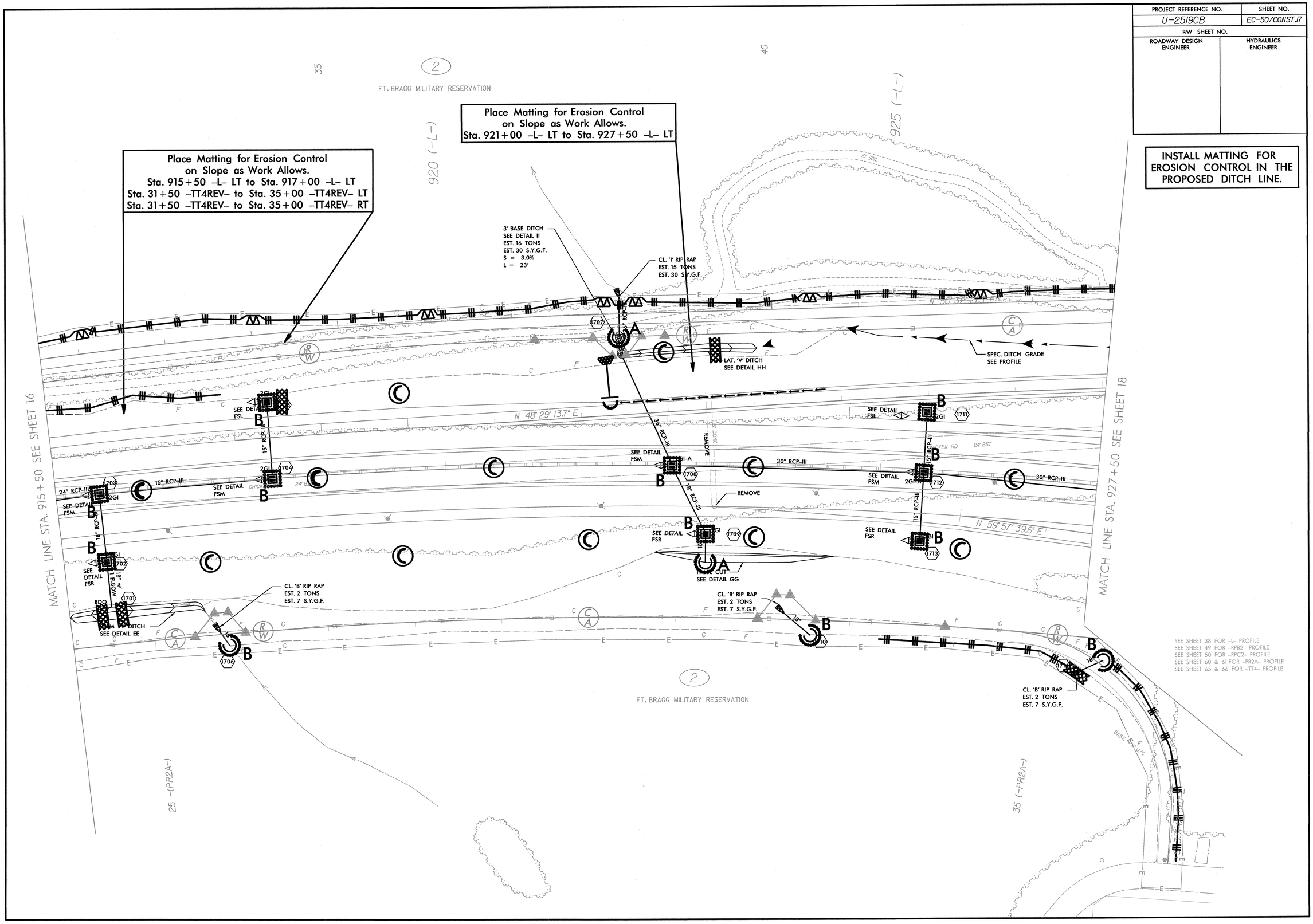
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

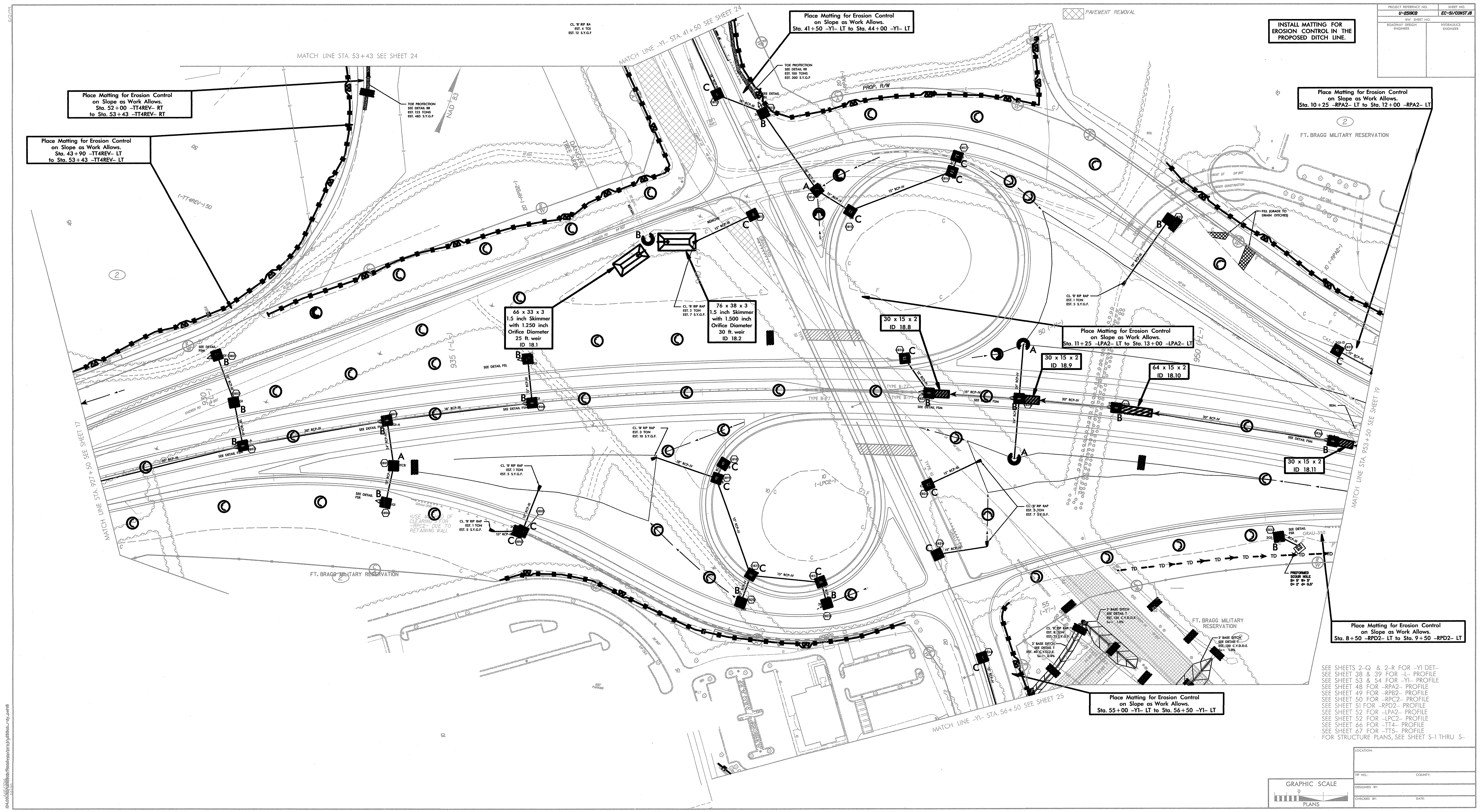


SEE SHEET 37 & 38 FOR –L– PROFILE
SEE SHEET 60 FOR –PR2A– PROFILE
SEE SHEET 65 FOR –TT4– PROFILE

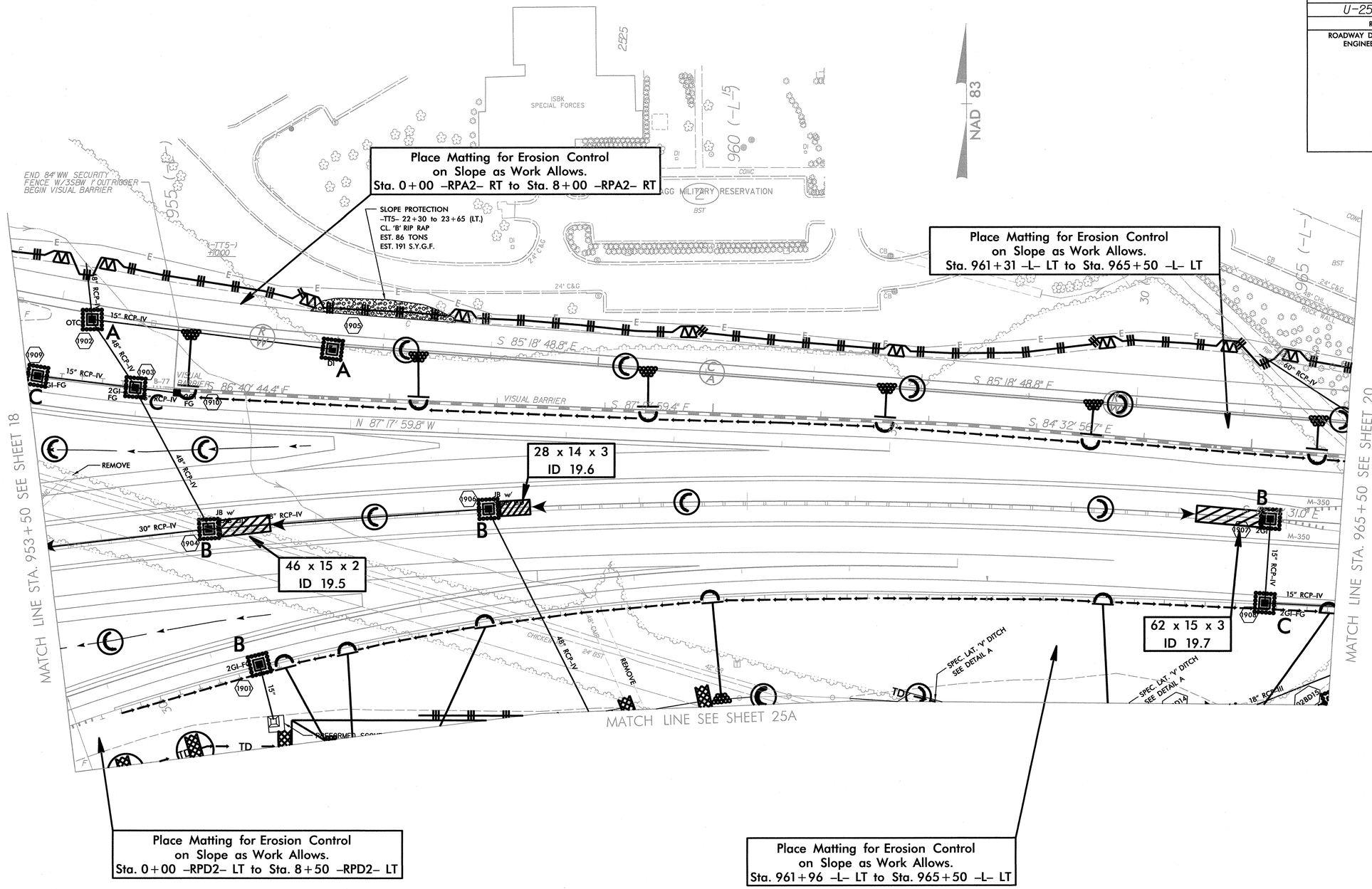
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-50/CONST.17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.




PROJECT REFERENCE NO.
U-2519CB
SHEET NO.
EC-51/CONSTJ8
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PAVEMENT REMOVAL
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.
MATCH LINE STA. 53+43 SEE SHEET 24
MATCH LINE -Y1- STA. 41+50 SEE SHEET 24
MATCH LINE STA. 927+50 SEE SHEET 17
MATCH LINE STA. 953+50 SEE SHEET 19
MATCH LINE -Y1- STA. 56+50 SEE SHEET 25
Place Matting for Erosion Control on Slope as Work Allows. Sta. 52+00 -TT4REV- RT to Sta. 53+43 -TT4REV- RT
Place Matting for Erosion Control on Slope as Work Allows. Sta. 43+90 -TT4REV- LT to Sta. 53+43 -TT4REV- LT
Place Matting for Erosion Control on Slope as Work Allows. Sta. 41+50 -Y1- LT to Sta. 44+00 -Y1- LT
Place Matting for Erosion Control on Slope as Work Allows. Sta. 10+25 -RPA2- LT to Sta. 12+00 -RPA2- LT
Place Matting for Erosion Control on Slope as Work Allows. Sta. 11+25 -LPA2- LT to Sta. 13+00 -LPA2- LT
Place Matting for Erosion Control on Slope as Work Allows. Sta. 8+50 -RPD2- LT to Sta. 9+50 -RPD2- LT
Place Matting for Erosion Control on Slope as Work Allows. Sta. 55+00 -Y1- LT to Sta. 56+50 -Y1- LT
TOE PROTECTION SEE DETAIL RR EST. 123 TONS EST. 485 S.Y.G.F
TOE PROTECTION SEE DETAIL RR EST. 100 TONS EST. 300 S.Y.G.F
CL. 'B' RIP RAP EST. 4 TON EST. 12 S.Y.G.F
66 x 33 x 3 1.5 inch Skimmer with 1.250 inch Orifice Diameter 25 ft. weir ID 18.1
76 x 38 x 3 1.5 inch Skimmer with 1.500 inch Orifice Diameter 30 ft. weir ID 18.2
CL. 'B' RIP RAP EST. 2 TON EST. 7 S.Y.G.F.
30 x 15 x 2 ID 18.8
30 x 15 x 2 ID 18.9
64 x 15 x 2 ID 18.10
30 x 15 x 2 ID 18.11
CL. 'B' RIP RAP EST. 1 TON EST. 5 S.Y.G.F.
CL. 'B' RIP RAP EST. 3 TON EST. 10 S.Y.G.F.
CL. 'B' RIP RAP EST. 2 TON EST. 7 S.Y.G.F.
FILL (GRADE TO DRAIN DITCHES)
PREFORMED SCOUR HOLE B= 5' W= 5' D= 2' d= 0.5'
2' BASE DITCH SEE DETAIL T EST. 130 C.Y.D.D.E. So= 1.0%
CL. 'B' RIP RAP EST. 8 TON EST. 21 S.Y.G.F.
2' BASE DITCH SEE DETAIL T EST. 40 C.Y.D.D.E. So= 0.4%
*USE METHOD OF CLEARING II FOR -RPC2- DUE TO RETAINING WALL
FT. BRAGG MILITARY RESERVATION
NAD 83
PROP. R/W
DANGER TREE AREA
SEE DETAIL FSM
SEE DETAIL FSL
SEE DETAIL FSR
15" RCP-III
18" RCP-III
24" RCP-III
30" RCP-III
15" RCP-IV
18" RCP-IV
24" RCP-IV
30" RCP-IV
TYPE B-77
(-TT4REV-) 50
20 (-RPB2-)
10 (-LPC2-)
10 (-RPA2-)
50 (-Y1-)
55 (-Y1-)
935 (-L-)
930 (-L-)
950 (-L-)
CHICKEN RD
GRAU-350
REM.
TD
SEE SHEETS 2-Q & 2-R FOR -Y1 DET-
SEE SHEET 38 & 39 FOR -L- PROFILE
SEE SHEET 53 & 54 FOR -Y1- PROFILE
SEE SHEET 48 FOR -RPA2- PROFILE
SEE SHEET 49 FOR -RPB2- PROFILE
SEE SHEET 50 FOR -RPC2- PROFILE
SEE SHEET 51 FOR -RPD2- PROFILE
SEE SHEET 52 FOR -LPA2- PROFILE
SEE SHEET 52 FOR -LPC2- PROFILE
SEE SHEET 66 FOR -TT4- PROFILE
SEE SHEET 67 FOR -TT5- PROFILE
FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-
GRAPHIC SCALE
PLANS
LOCATION:
TIP NO.:
COUNTY:
DESIGNED BY:
CHECKED BY:
DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-52/CONST J9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



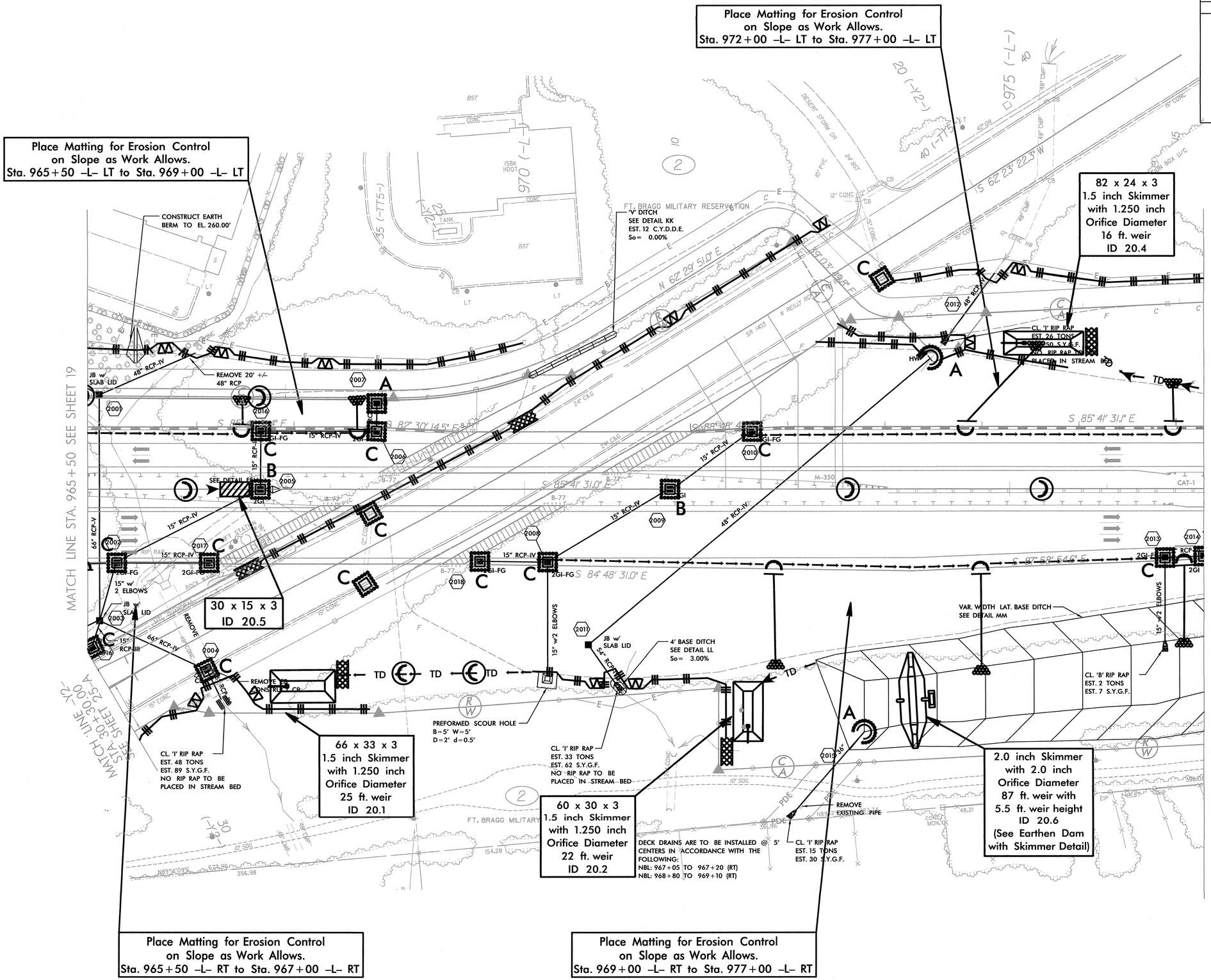
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

SEE SHEETS 39 & 40 FOR -L- PROFILE
SEE SHEET 48 FOR -RPA2- PROFILE
SEE SHEET 51 FOR -RPD2- PROFILE
SEE SHEET 67 & 68 FOR -TT5- PROFILE

104.001.001/u2519cb/Roadway/proj/u2519cb_rdy_psh19

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-53/CONST.20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

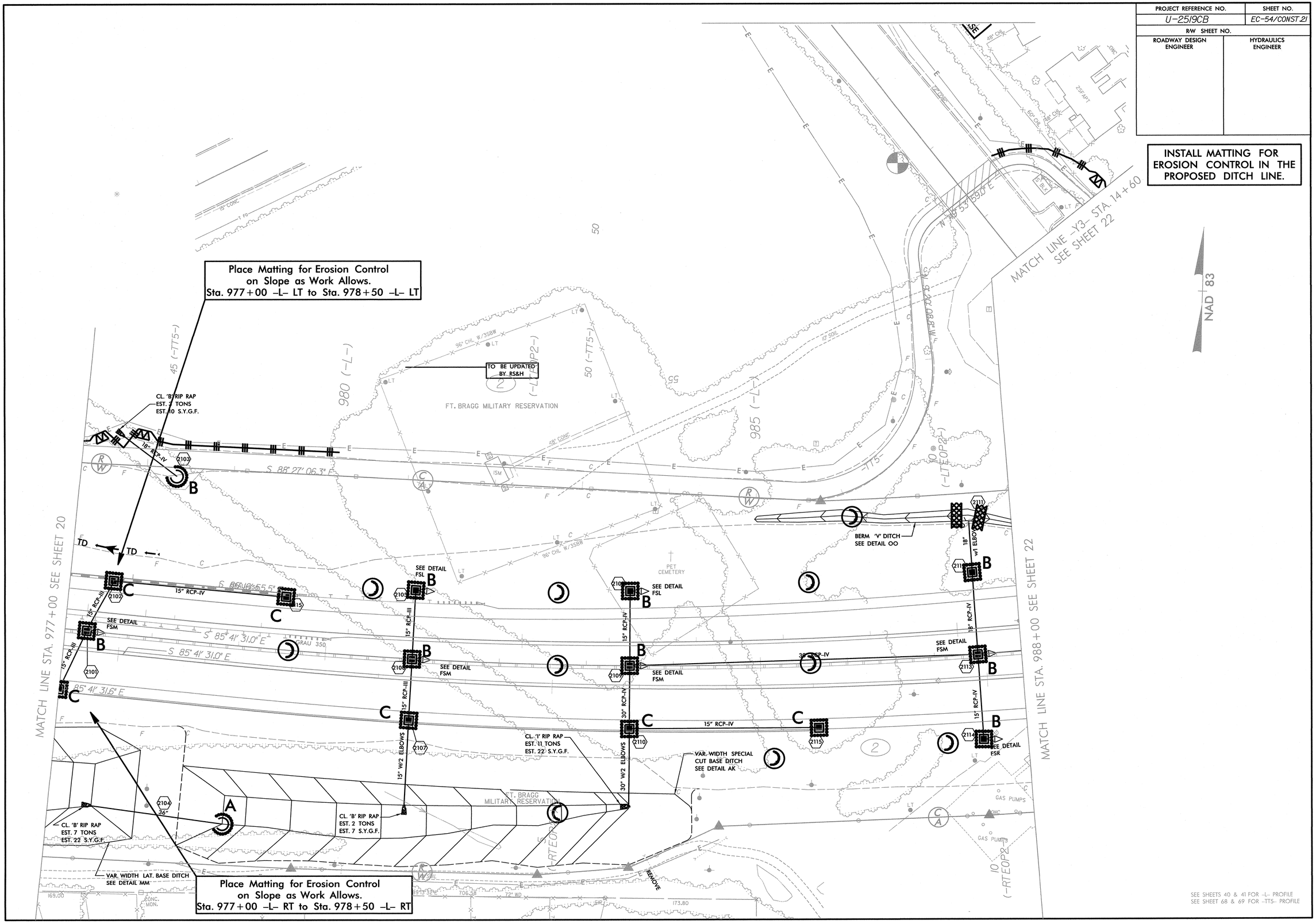
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



SEE SHEET 40 FOR –L– PROFILE
SEE SHEET 68 FOR –TT5– PROFILE
FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-

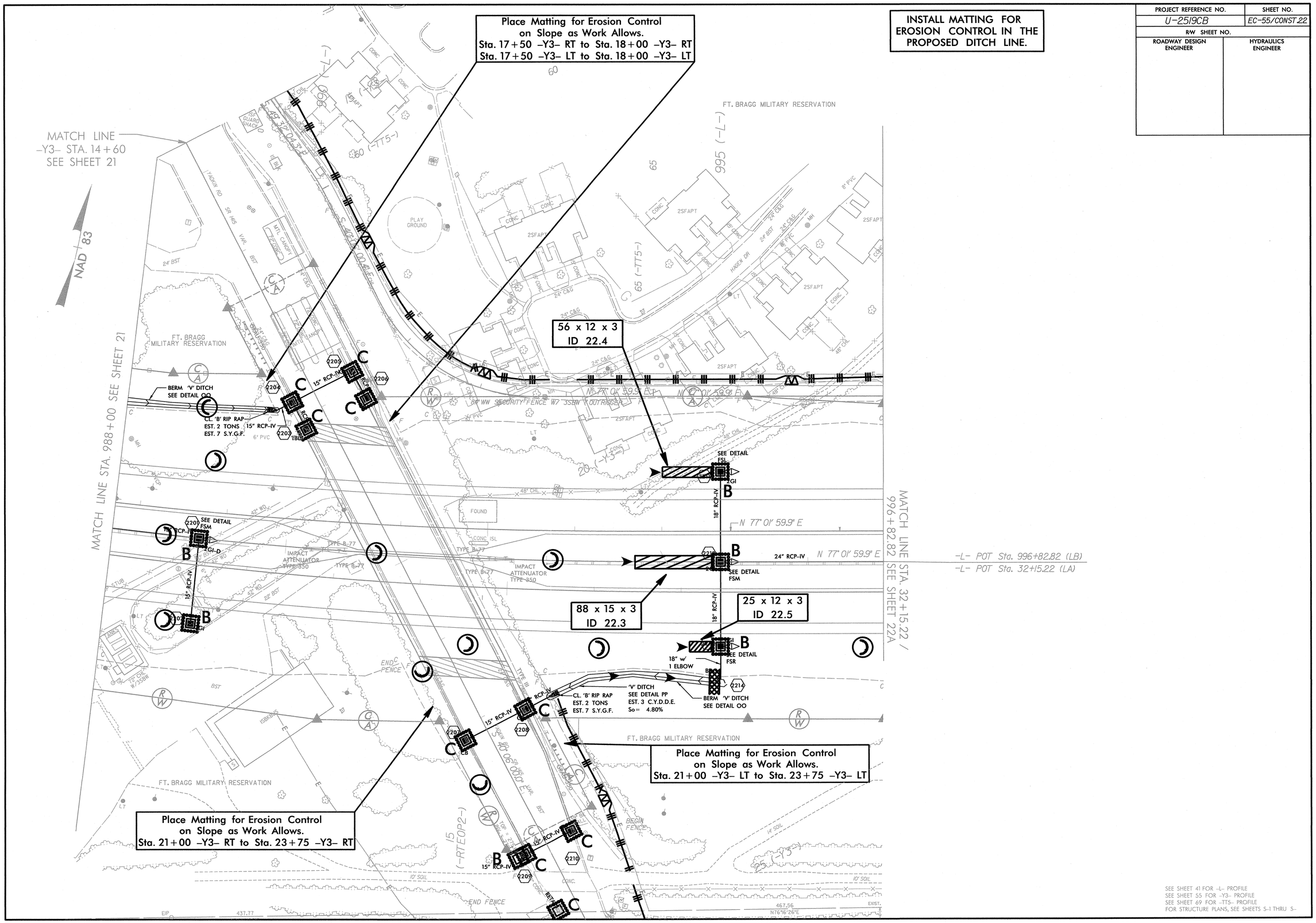
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-54/CONST.21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-55/CONST.22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

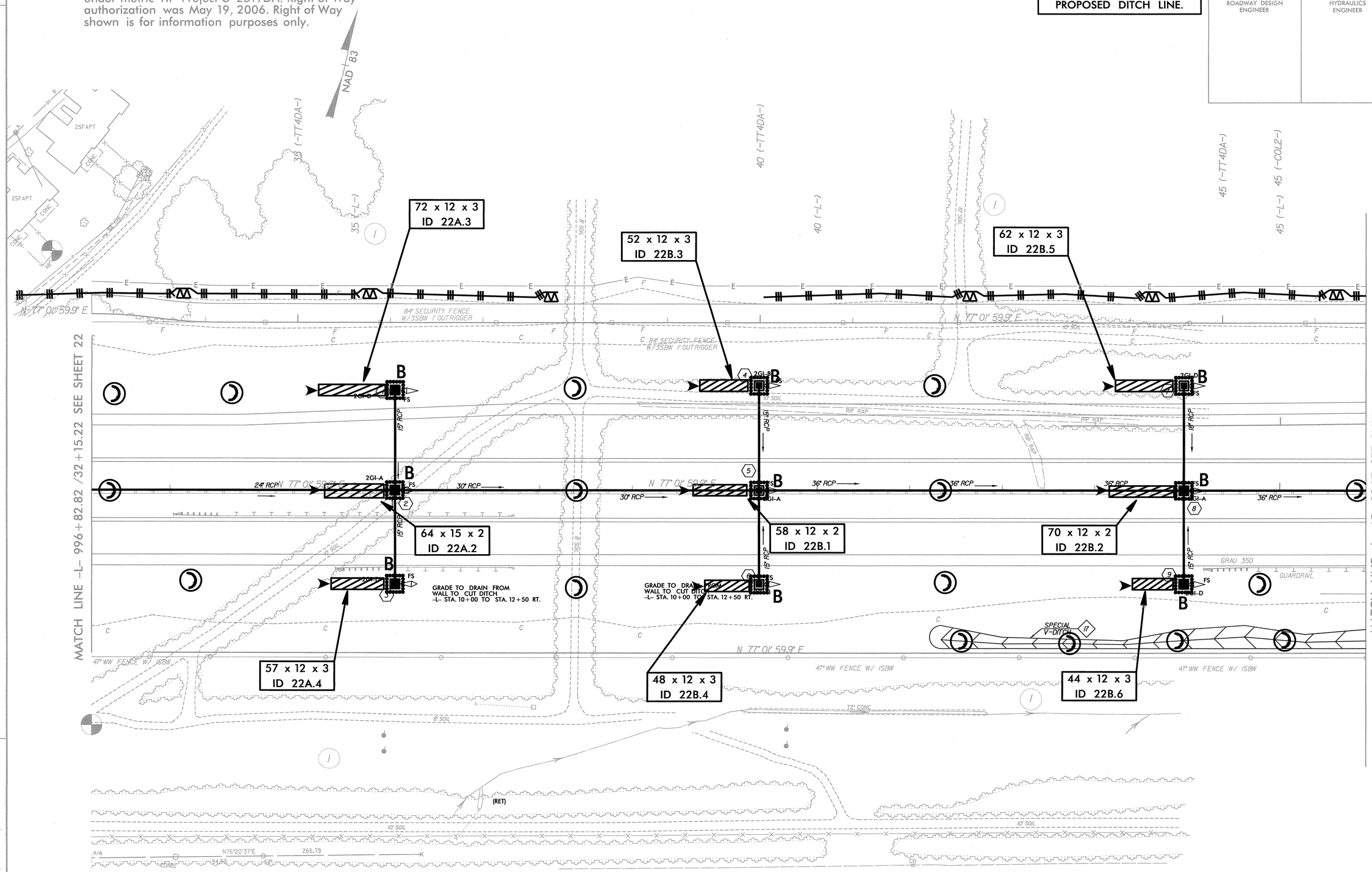


SEE SHEET 41 FOR –L– PROFILE
SEE SHEET 55 FOR –Y3– PROFILE
SEE SHEET 69 FOR –TT5– PROFILE
FOR STRUCTURE PLANS, SEE SHEETS S-1 THRU S-

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-56/CONST.22A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

Right of Way for this Plan Sheet has been acquired under metric TIP Project U-2519DA. Right of Way authorization was May 19, 2006. Right of Way shown is for information purposes only.



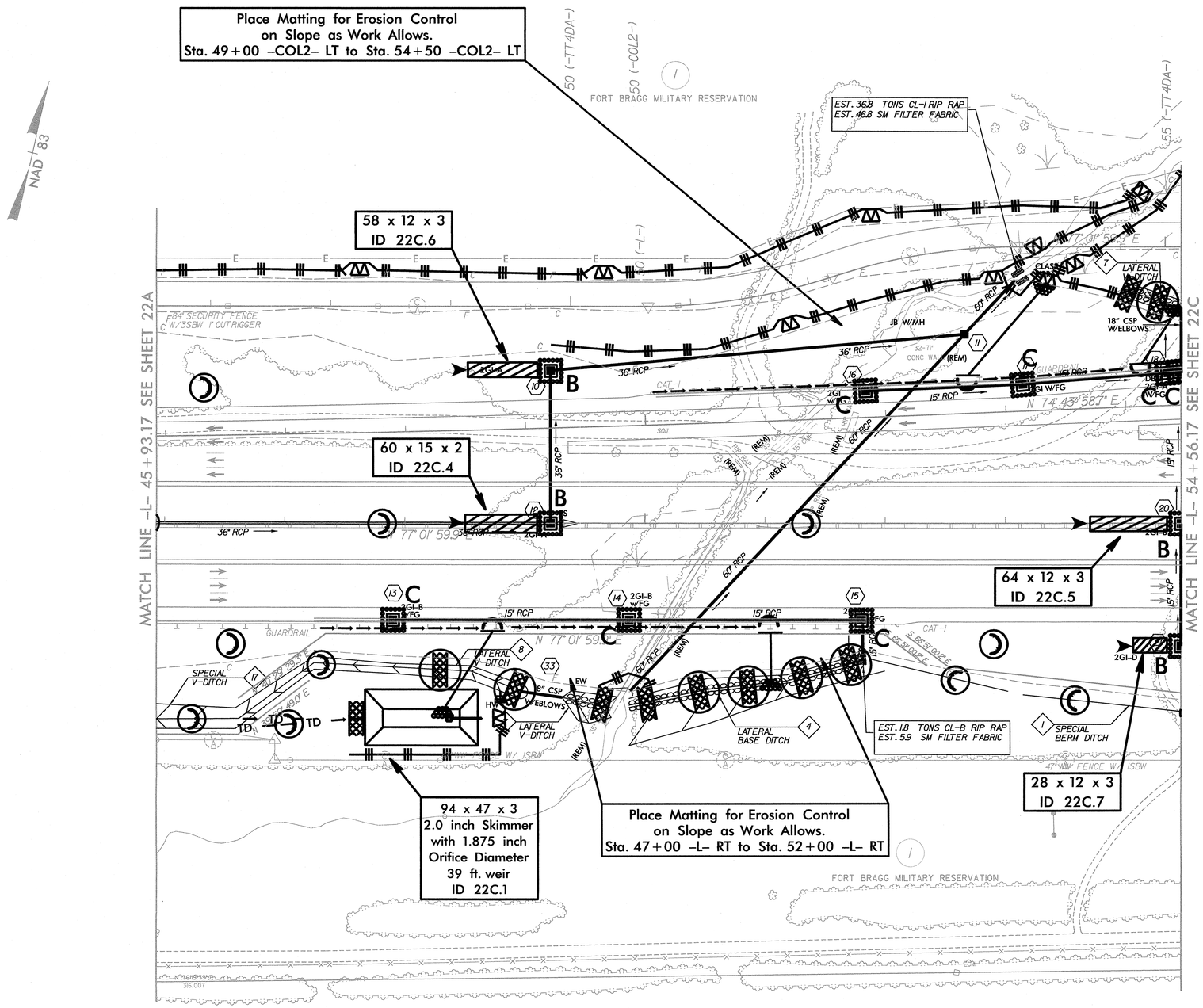
REVISIONS

SEE SHEET 41A FOR -L- PROFILE
SEE SHEET 70 FOR -TT4DA- PROFILE
SEE SHEET 74 FOR -COL2- PROFILE

4/15/2014
U2519CB_EC_dsn_psh_56.fg

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-57/CONST.22B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



SEE SHEET 41A FOR -L- PROFILE
SEE SHEET 74 FOR -COL2- PROFILE
SEE SHEET 70 FOR -TT4DA- PROFILE

REVISIONS

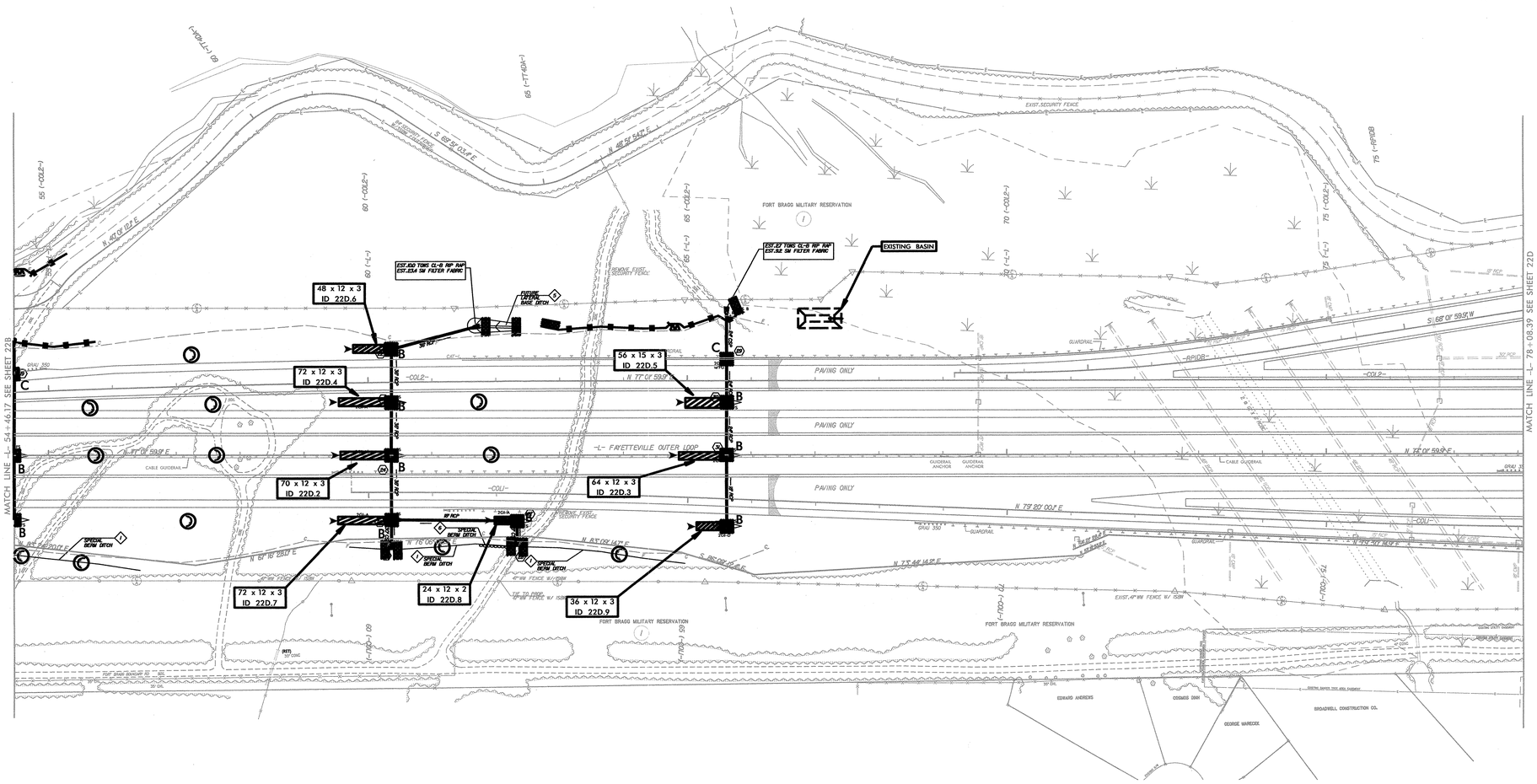
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-5A/CONST.22D
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SEE SHEETS 4A-4B FOR -L- PROFILE
SEE SHEET 7E FOR -COL2- PROFILE
SEE SHEETS 7A-7D FOR -COL2- PROFILE
SEE SHEET 8G FOR -RPIOB- PROFILE
SEE SHEET 7G FOR -TTHD4- PROFILE

NAD 83

Right of Way for this Plan Sheet has been acquired under metric TIP Project U-2519DA. Right of Way authorization was May 19, 2006. Right of Way shown is for information purposes only.



GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION: FAYETTEVILLE OUTER LOOP FROM SOUTH OF SR 1400 (CLIFFDALE RD.) TO EAST OF ALL AMERICAN FREEWAY

TIP NO.: U-2519CB COUNTY: CUMBERLAND

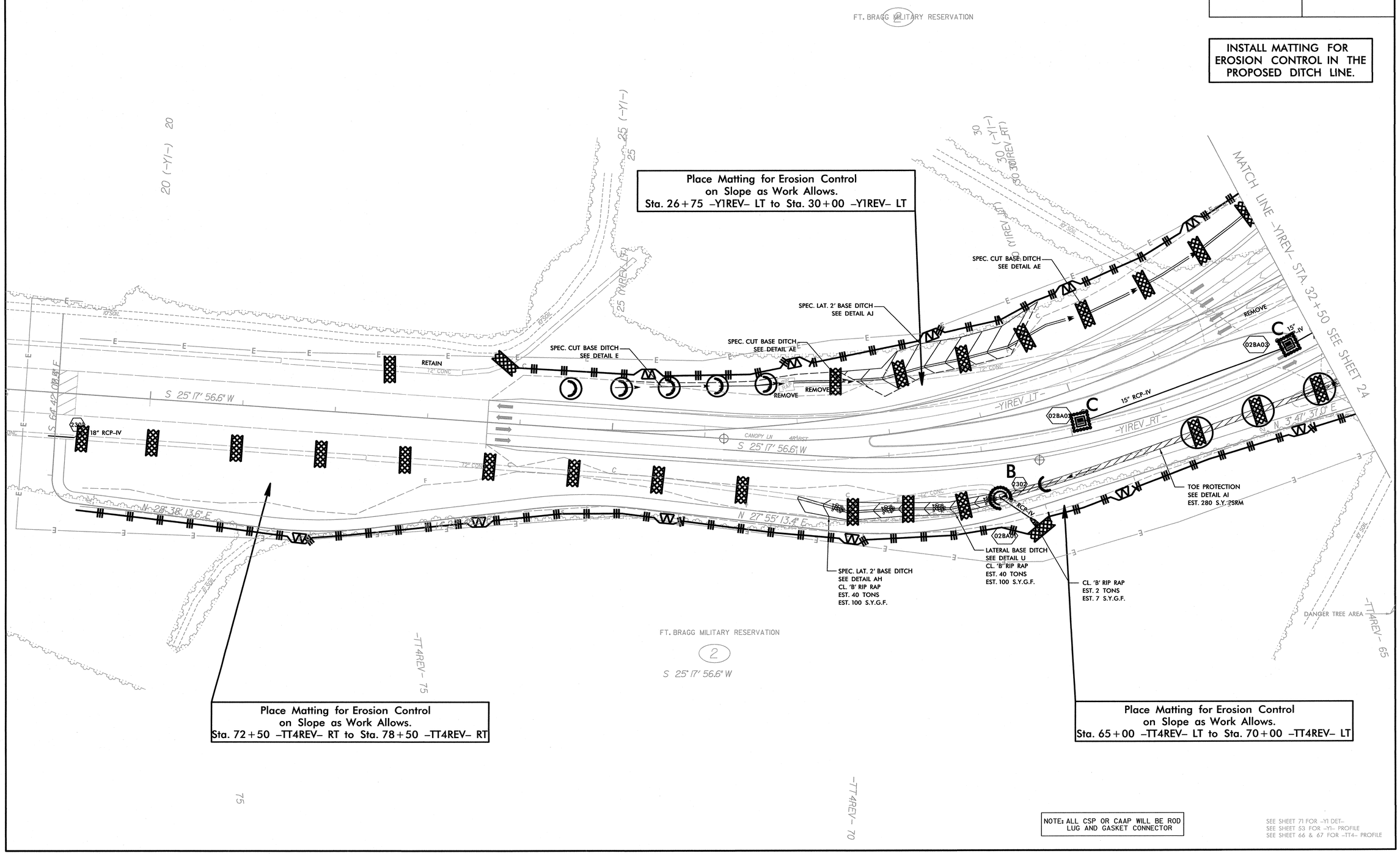
DESIGNED BY:

CHECKED BY: DATE:

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-59/CONST.23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
EROSION CONTROL SHEET 59 (EC-59) INCORPORATES PROPOSED DESIGN FROM ROADWAY DETAIL SHEET 2-BB

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



NOTE: ALL CSP OR CAAP WILL BE ROD LUG AND GASKET CONNECTOR

SEE SHEET 71 FOR -Y1 DET-
SEE SHEET 53 FOR -Y1- PROFILE
SEE SHEET 66 & 67 FOR -TT4- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-60/CONST.24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

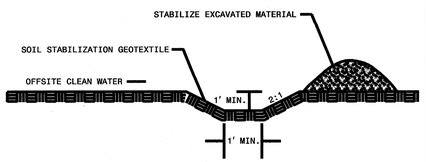
NOTE:
EROSION CONTROL SHEET 60 (EC-60) INCORPORATES PROPOSED DESIGN FROM ROADWAY DETAIL SHEET 2-BC

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

CLEAN WATER DIVERSION

→→ CWD →→ CWD →→ CWD →→ CWD →→

(Not to Scale)



Place Matting for Erosion Control on Slope as Work Allows.
Sta. 32+50 -Y1REV- RT to Sta. 41+50 -Y1REV- RT

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 53+43 -TT4REV- RT to Sta. 65+00 -TT4REV- RT
Sta. 53+43 -TT4REV- LT to Sta. 65+00 -TT4REV- LT

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 32+50 -Y1REV- RT to Sta. 41+50 -Y1REV- RT

MATCH LINE -Y1REV- STA. 32+50 SEE SHEET 23

MATCH LINE STA. 53+43 SEE SHEET 18

MATCH LINE STA. 41+50 SEE SHEET 18

FUTURE GATEHOUSE LOCATION

PROPOSED PARKING LOT

FUTURE CANOPY

DANGER TREE AREA

FT. BRAGG MILITARY RESERVATION

SPEC. LAY. 2' BASE DITCH SEE DETAIL AH CL. 'B' RIP RAP EST. 60 TONS EST. 150 S.Y.G.F.

STD. 2' BASE DITCH SEE DETAIL T CL. 'B' RIP RAP EST. 80 TONS EST. 200 S.Y.G.F.

LATERAL BASE DITCH SEE DETAIL U CL. 'B' RIP RAP EST. 40 TONS EST. 100 S.Y.G.F.

VAR. WIDTH BASE DITCH SEE DETAIL AG CL. 'B' RIP RAP EST. 20 TONS EST. 50 S.Y.G.F.

SPEC. CUT BASE DITCH SEE DETAIL AE

TRANSITION STONE CL. 'B' RIP RAP EST. 10 TONS EST. 22 S.Y.G.F.

TOE PROTECTION SEE DETAIL RR EST. 135 TONS EST. 400 S.Y.G.F

TOE PROTECTION SEE DETAIL RR EST. 90 TONS EST. 350 S.Y.G.F

PROPOSED ROCK PLATING FROM -TT4REV- STA. 54+50 TO 56+50 (LT & RT) SEE DETAIL ??

TOE PROTECTION SEE DETAIL RR EST. 123 TONS EST. 485 S.Y.G.F

PREFORMED SCOUR HOLE B= 5' W= 5' D= 2' d= 0.5'

TOE PROTECTION SEE DETAIL RR EST. 100 TONS EST. 300 S.Y.G.F

CL. 'B' RIP RAP EST. 4 TON EST. 12 S.Y.G.F.

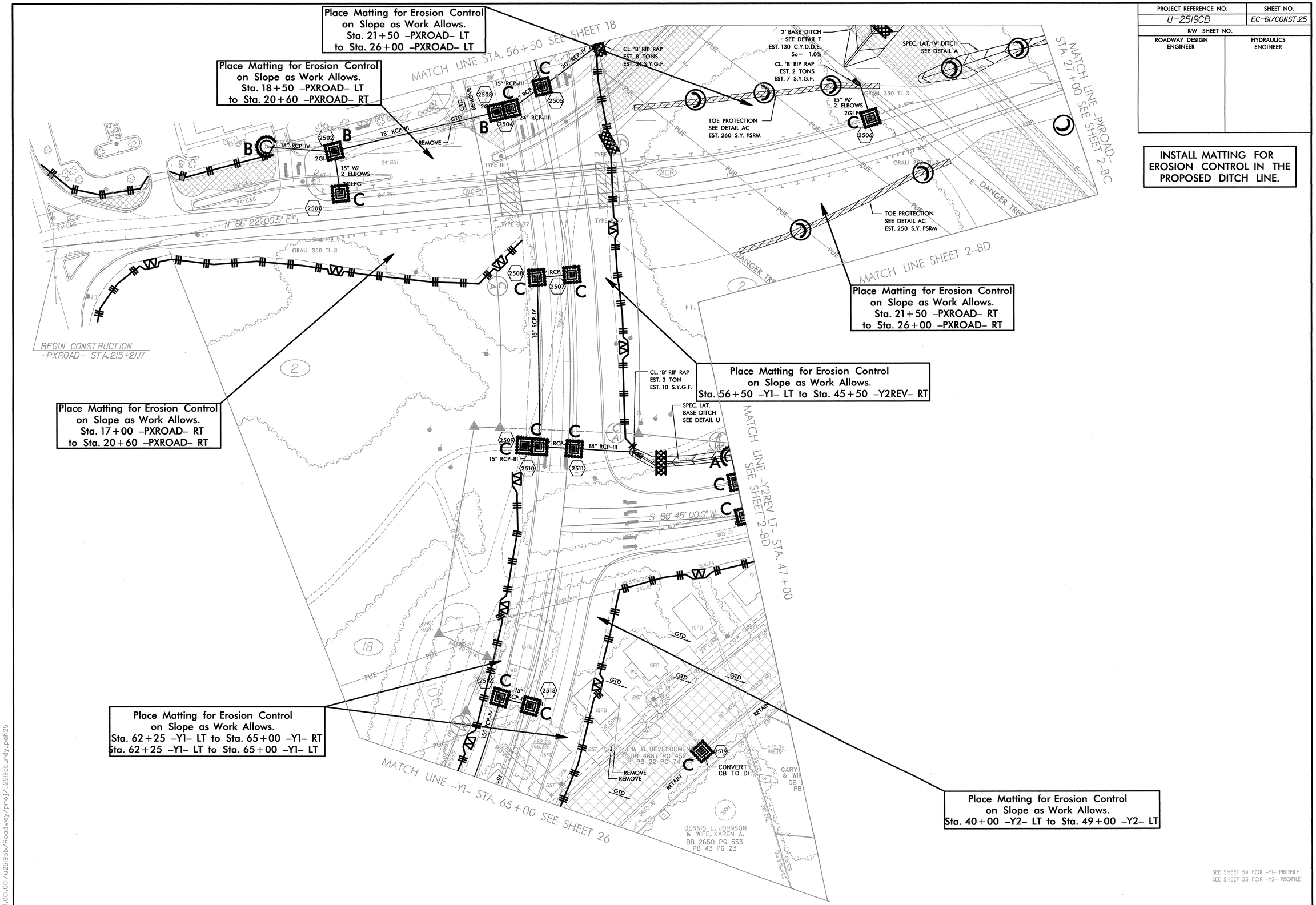
SEE DETAIL FSR

72" CMP RETAIN

SEE SHEETS 2-Q & 2-R FOR -Y1 DET-
SEE SHEET 53 FOR -Y1- PROFILE
SEE SHEET 66 & 67 FOR -TT4REV- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-61/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

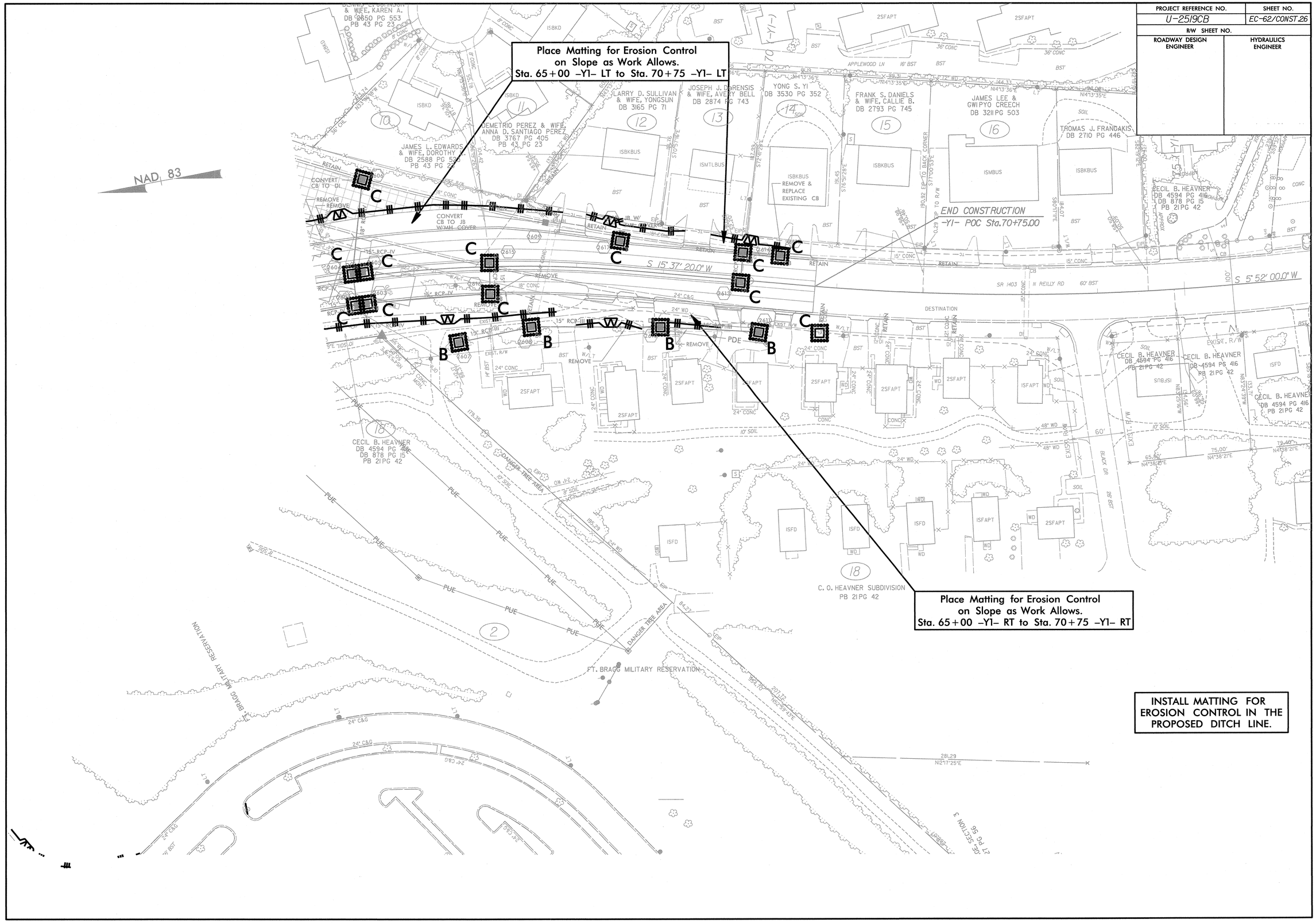
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



SEE SHEET 54 FOR -Y1- PROFILE
SEE SHEET 55 FOR -Y2- PROFILE

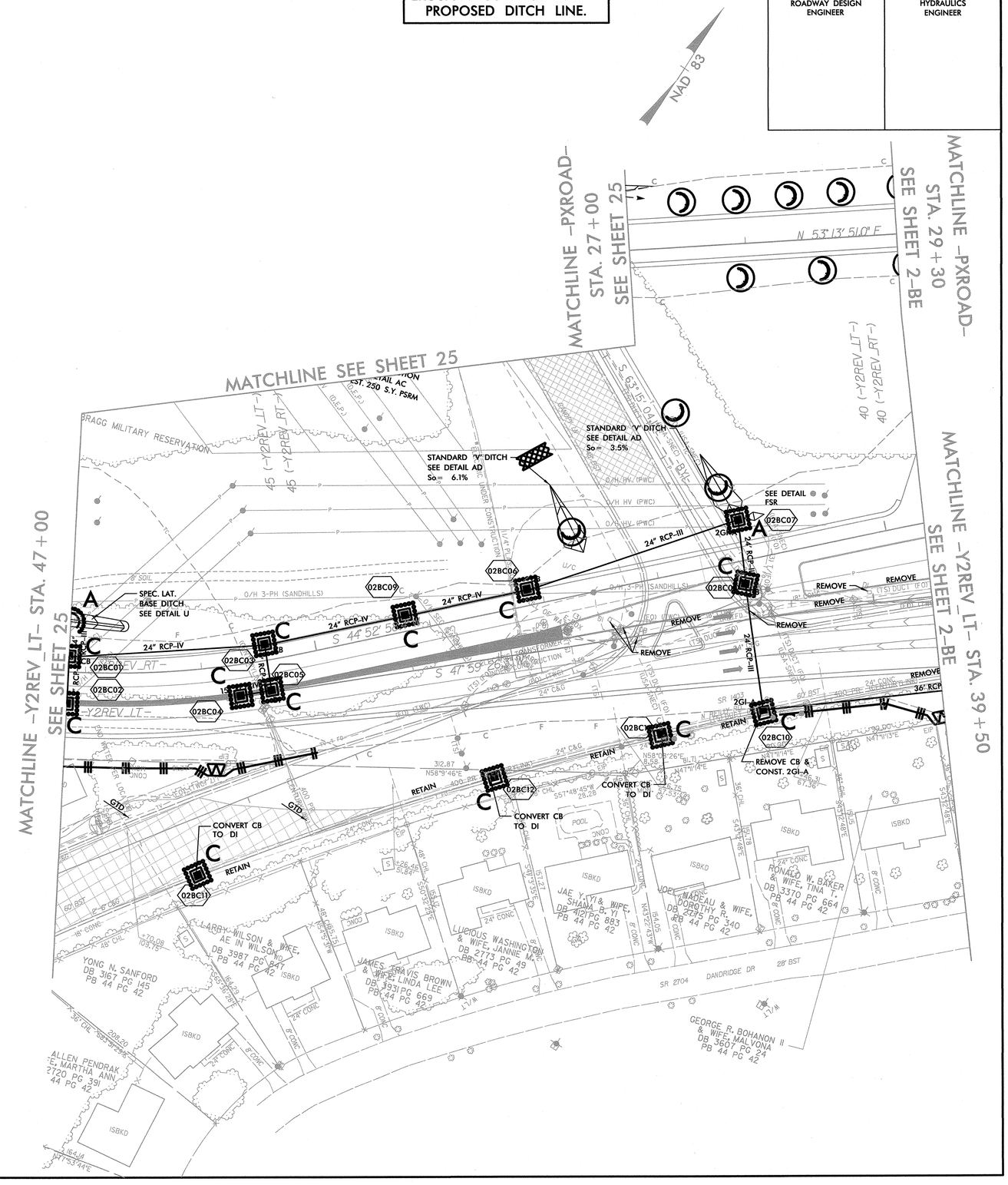
104.00.001/u2519cb/Roadway/proj/u2519cb_rdy.psh25

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-62/CONST.26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



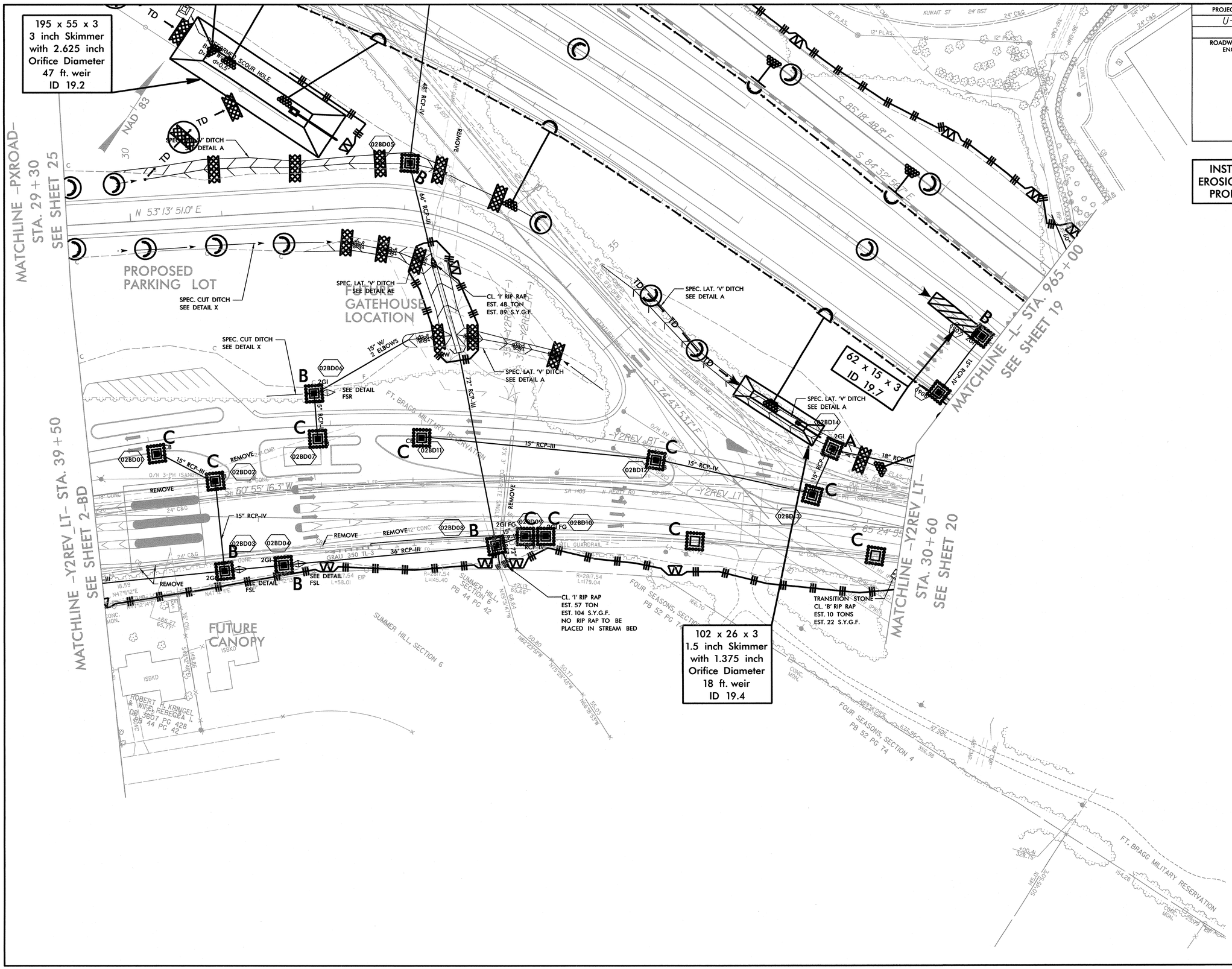
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-63/CONST.2BD
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-64/CONST.2BE
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



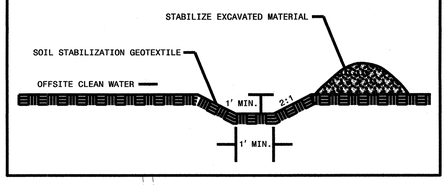
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-65/CONST-27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

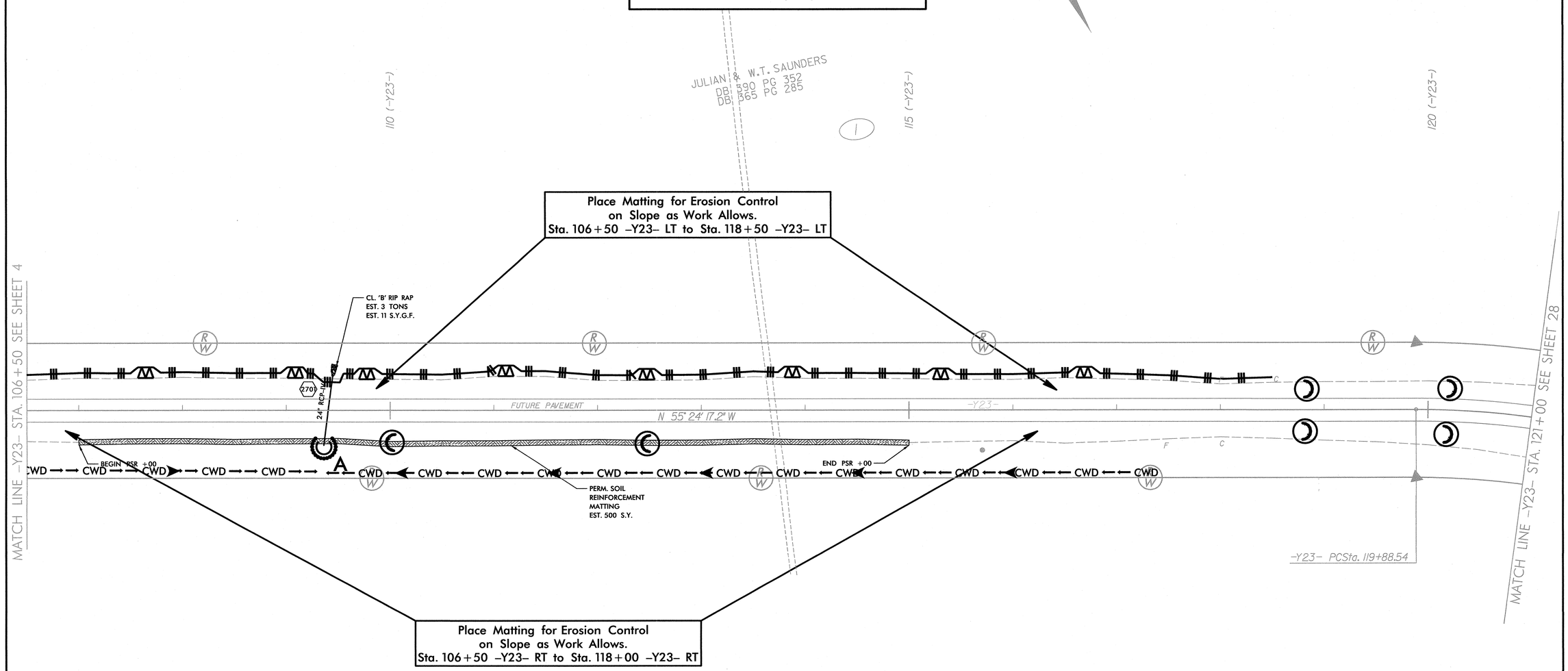
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

CLEAN WATER DIVERSION

→→ CWD →→ CWD →→ CWD →→ CWD →→

(Not to Scale)

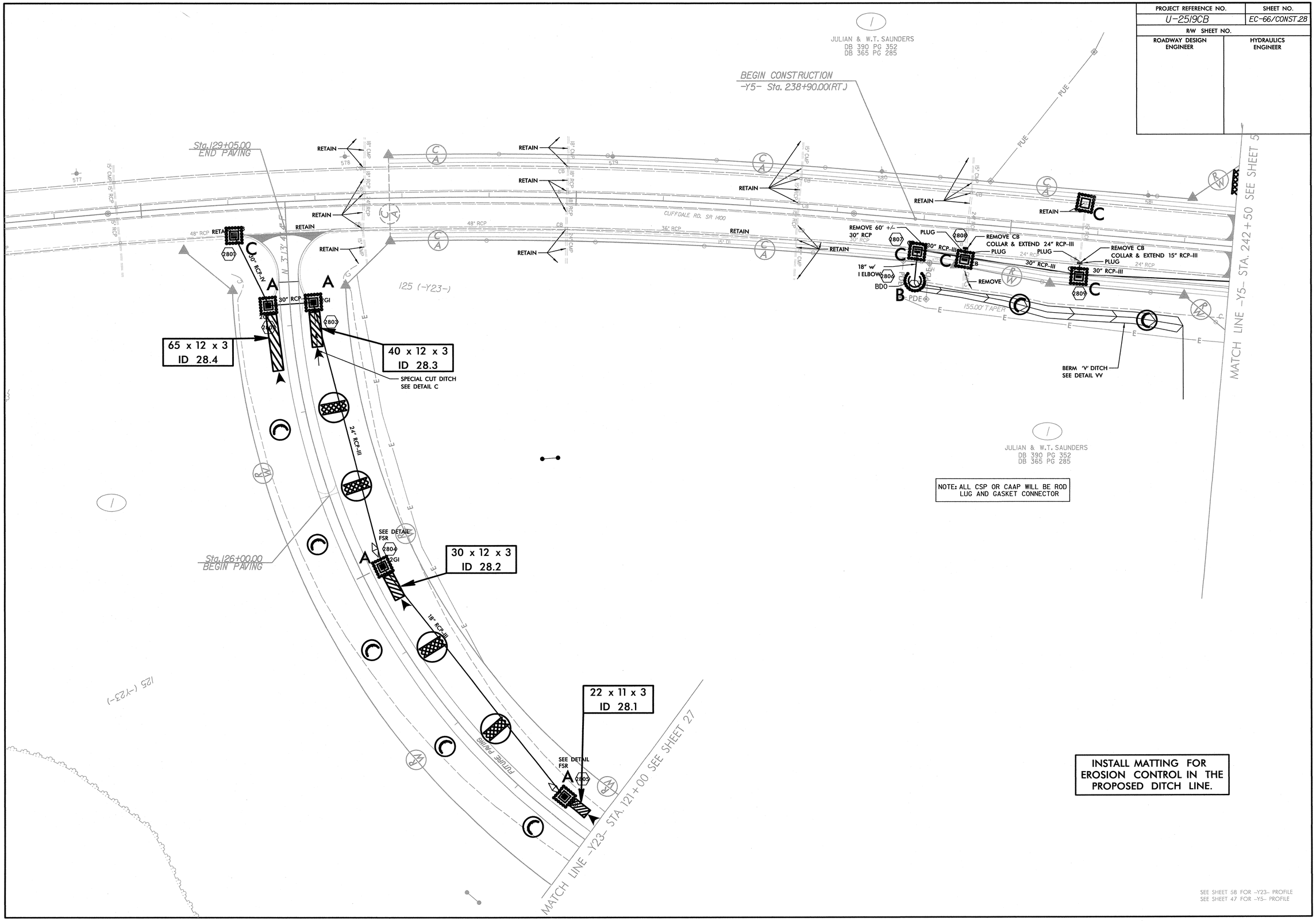




SEE SHEET 57 & 58 FOR -Y23- PROFILE

104.001.001/u2519cb/Roadway/proj/u2519cb rdy pshs27

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-66/CONST.28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



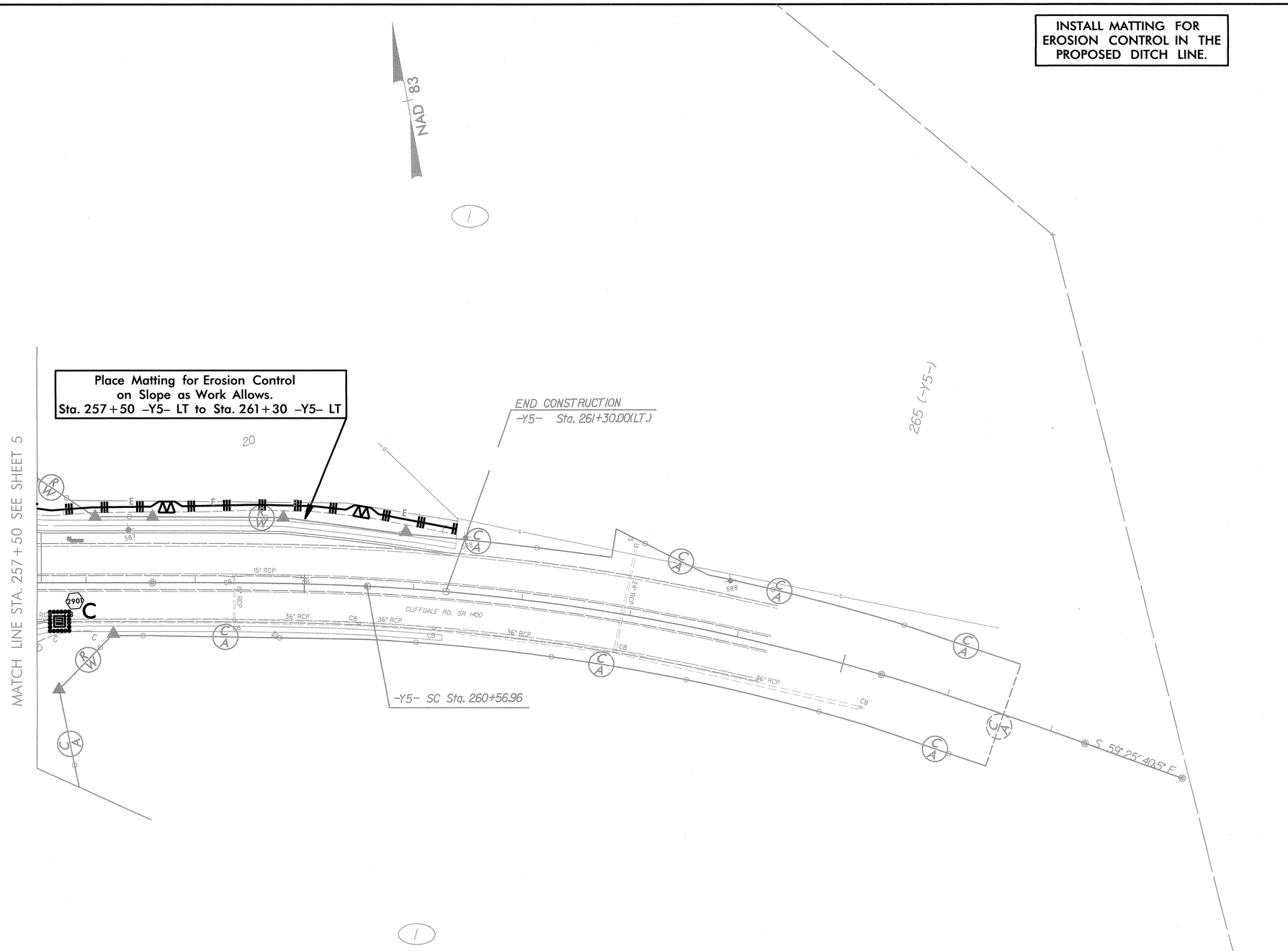
NOTE: ALL CSP OR CAAP WILL BE ROD LUG AND GASKET CONNECTOR

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

SEE SHEET 58 FOR -Y23- PROFILE
SEE SHEET 47 FOR -Y5- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-67/CONST.29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

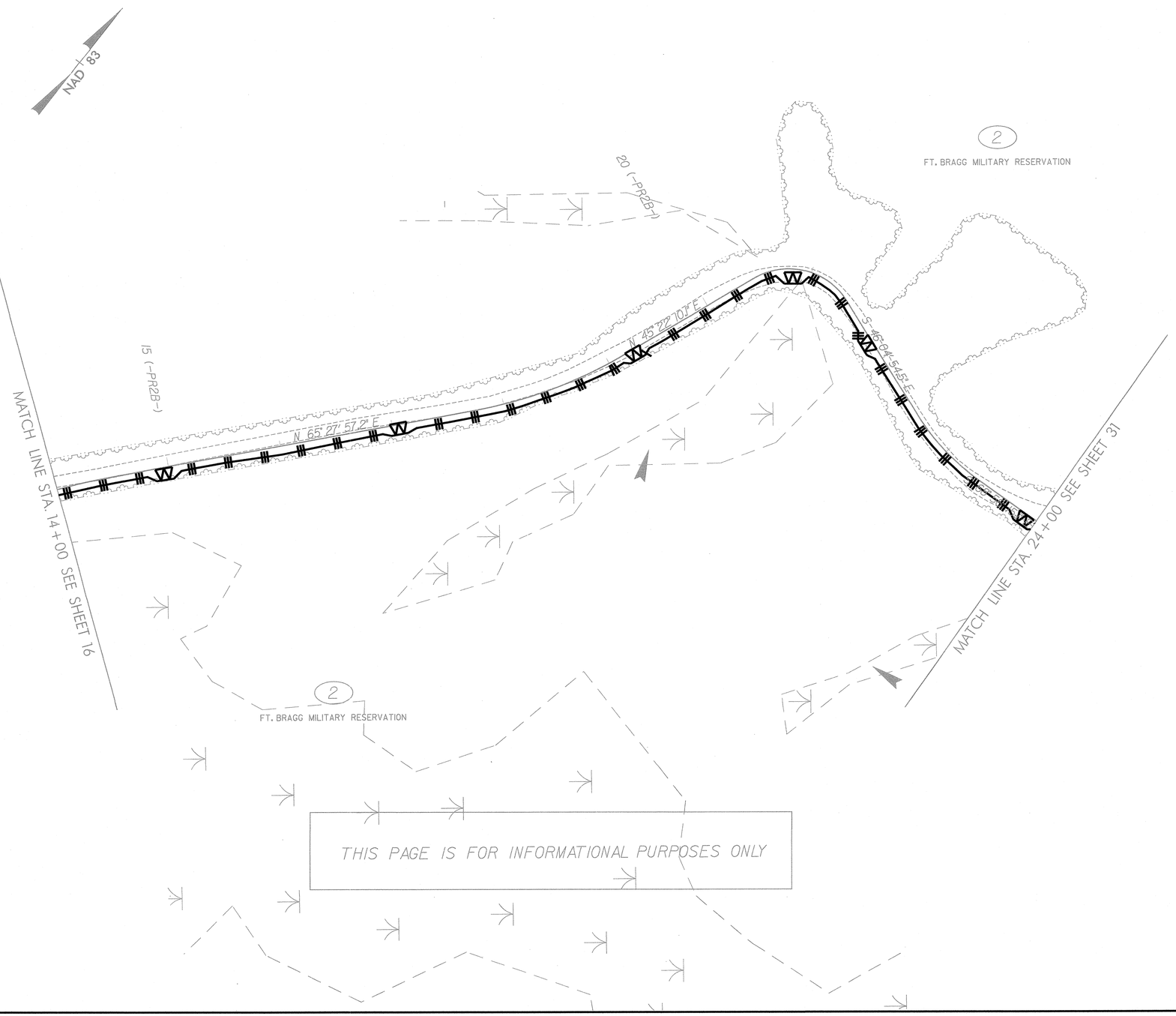
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



SEE SHEET 47 FOR -Y5- PROFILE

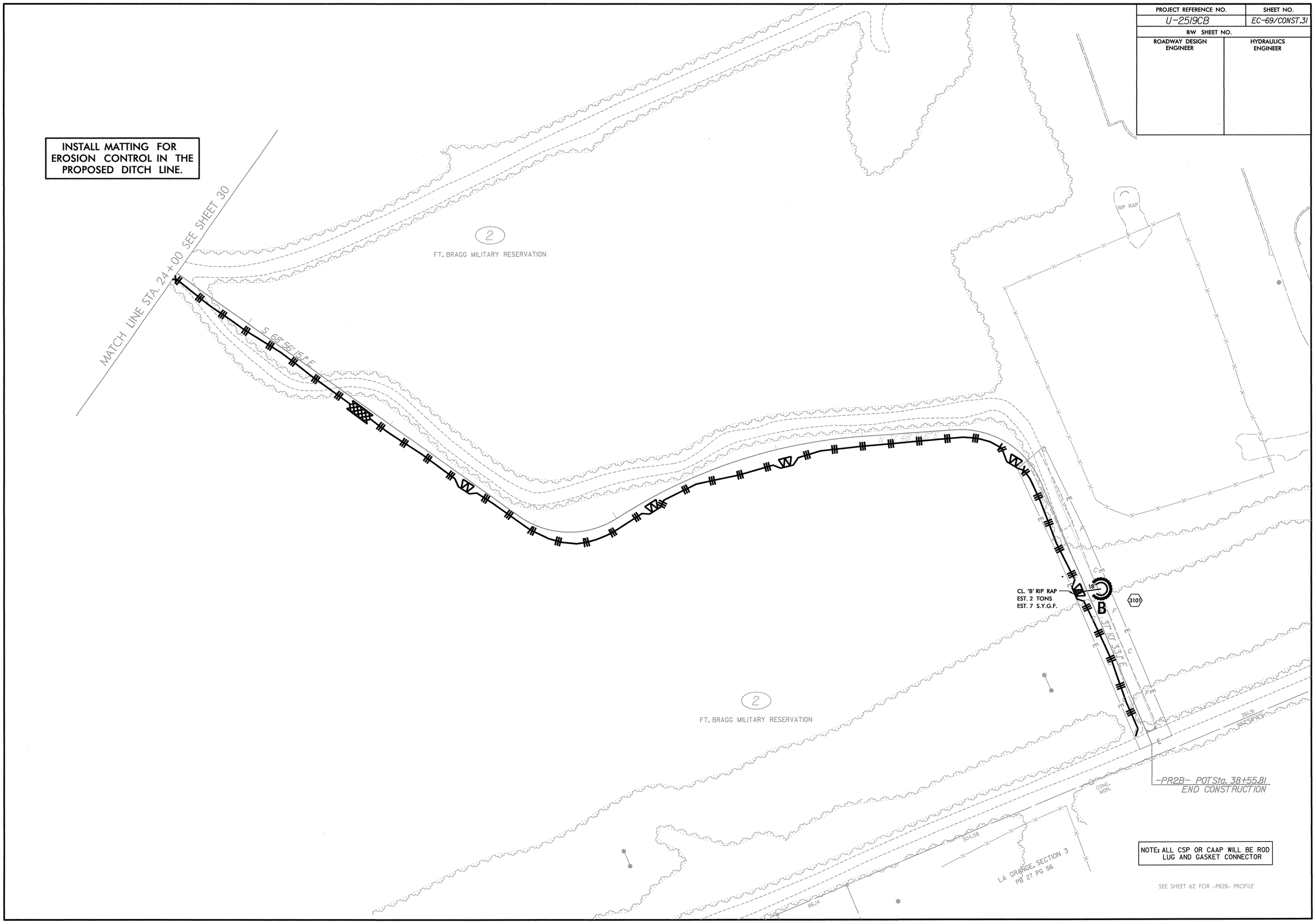
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-68/CONST.30
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



THIS PAGE IS FOR INFORMATIONAL PURPOSES ONLY

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-69/CONST.31
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

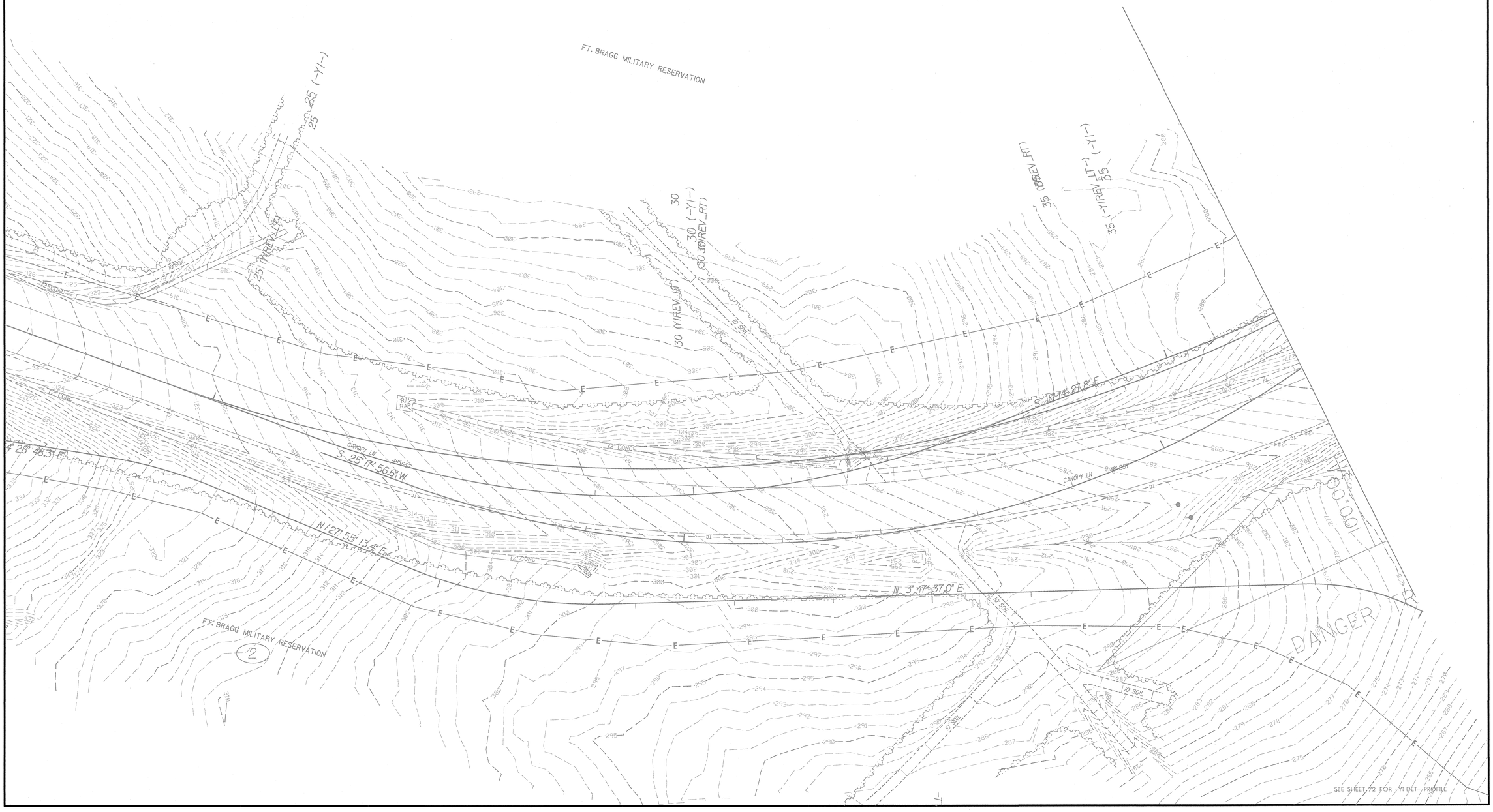


NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

DETAIL OF –Y1– DETOUR

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-70/CONST.2-L
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 2-L

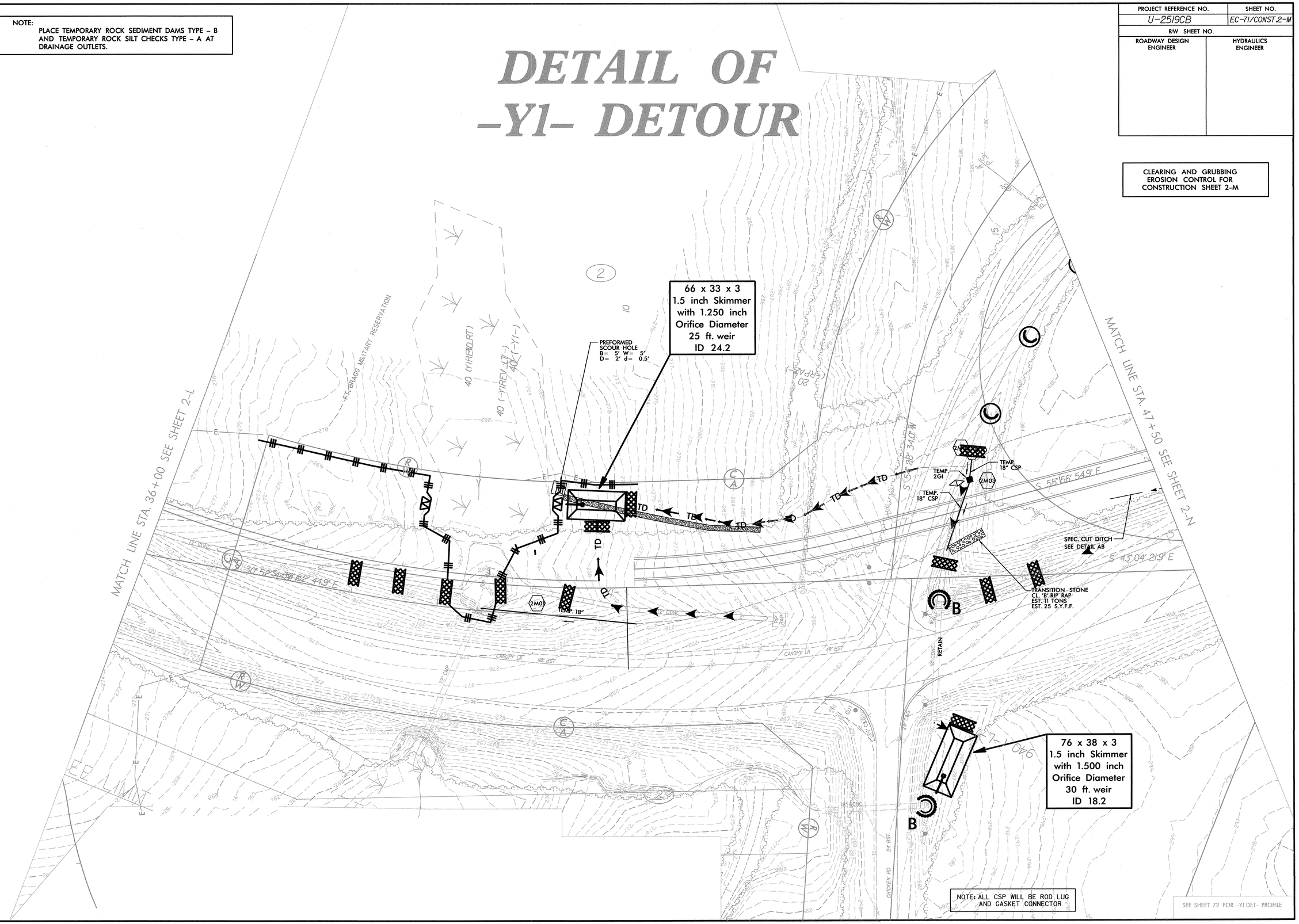


PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-71/CONST.2-M
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

DETAIL OF –Y1– DETOUR

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 2-M



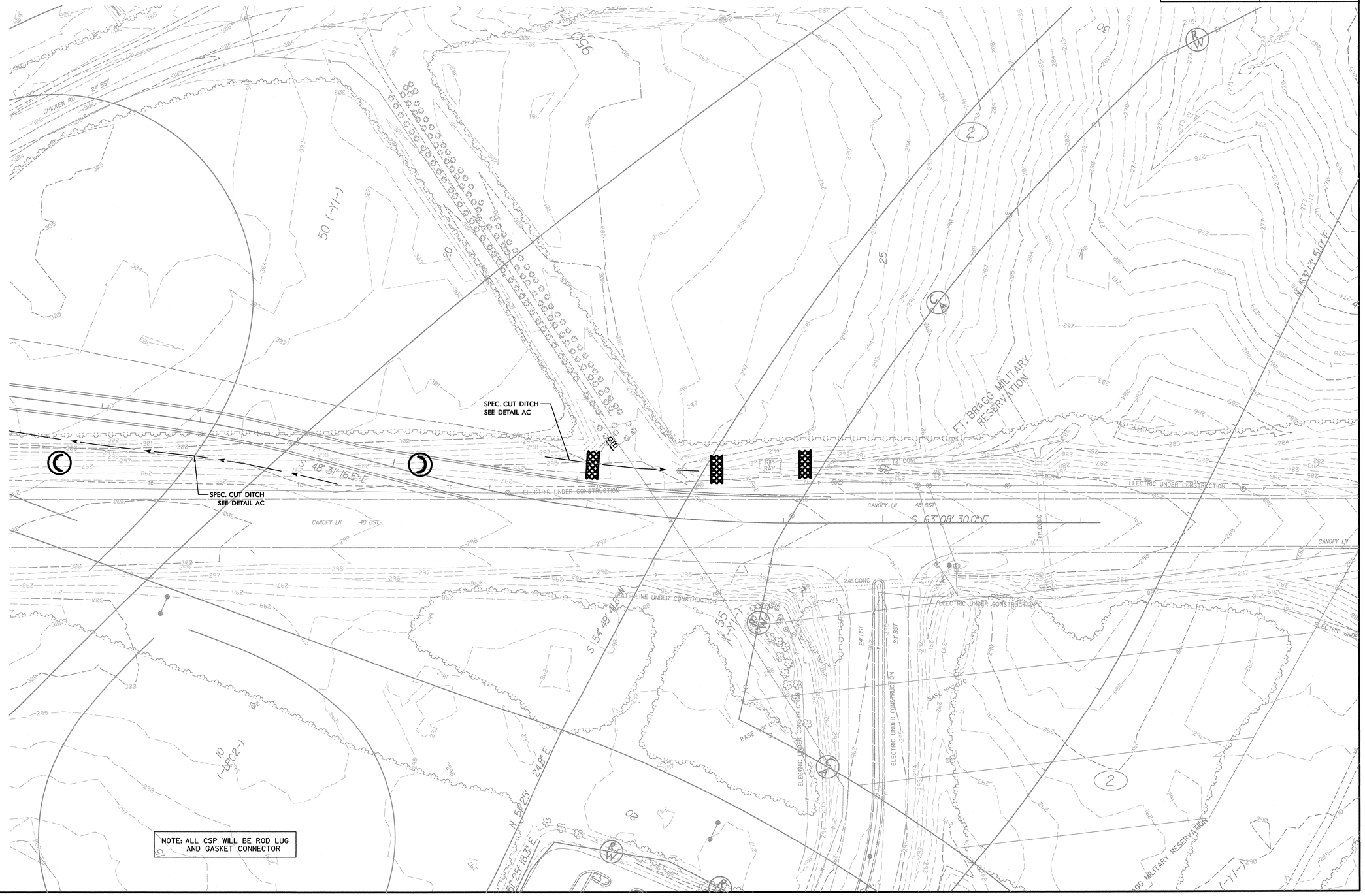
SEE SHEET 72 FOR –Y1 DET– PROFILE

104.001.001/U2519cb/Roadway/proj/U2519cb_rdy_psh02-n

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

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-72/CONST.2-N
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

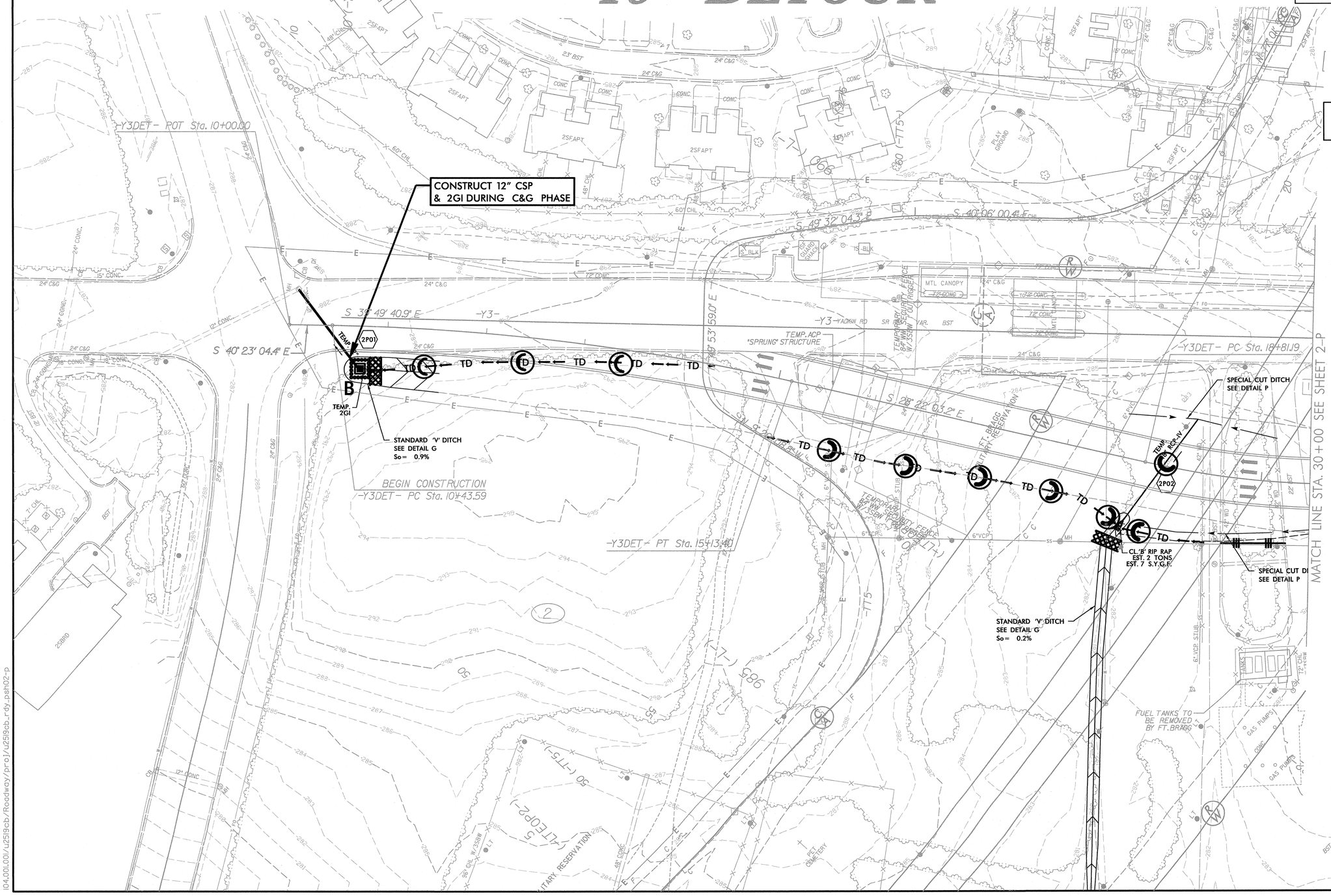
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 2-N



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-73/CONST.2-0
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

DETAIL OF -Y3- DETOUR



CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 2-O

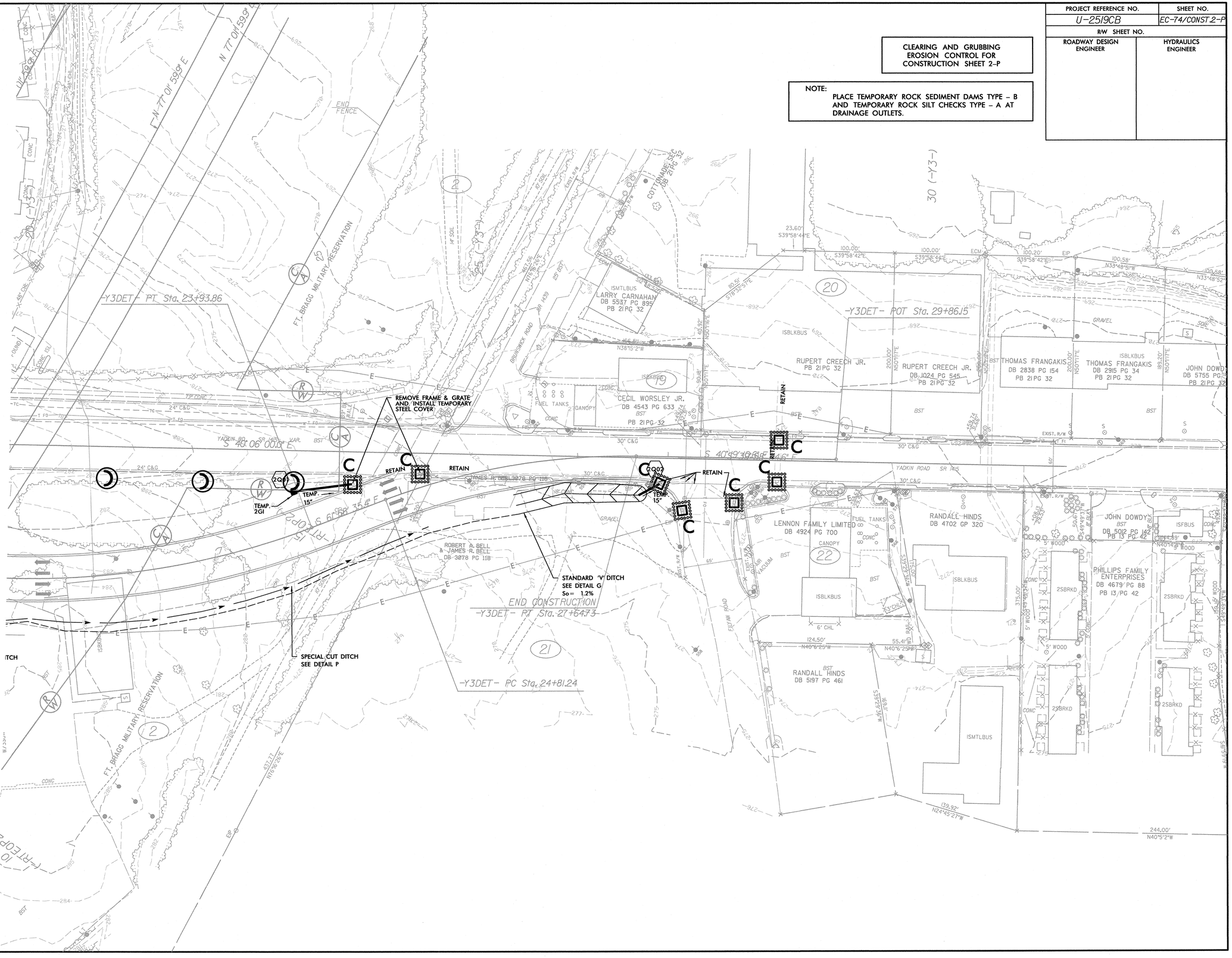
SEE SHEET 73 FOR -Y1 DET- PROFILE

104.001.001/U2519cb/Roadway/pro1/u2519cb_rdy.psh02-p

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-74/CONST.2-P
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 2-P

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



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-75/CONST.2-L
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL OF -Y1- DETOUR

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

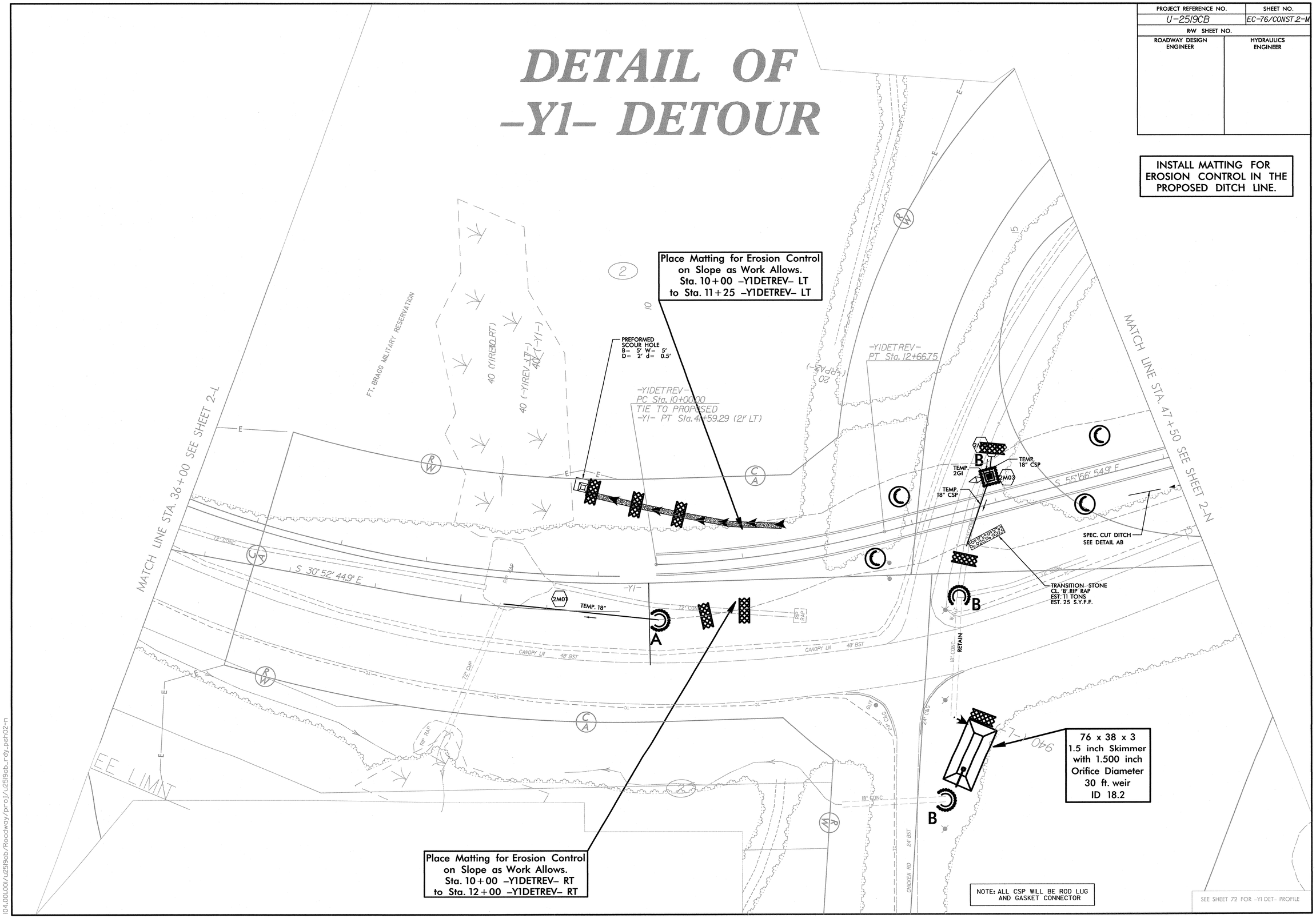
SEE SHEET 72 FOR -Y1 DET- PROFILE

104.001.001/u2519cb/Roadway/proj/u2519cb_rdy_psh02-m

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-76/CONST.2-M
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL OF -Y1- DETOUR

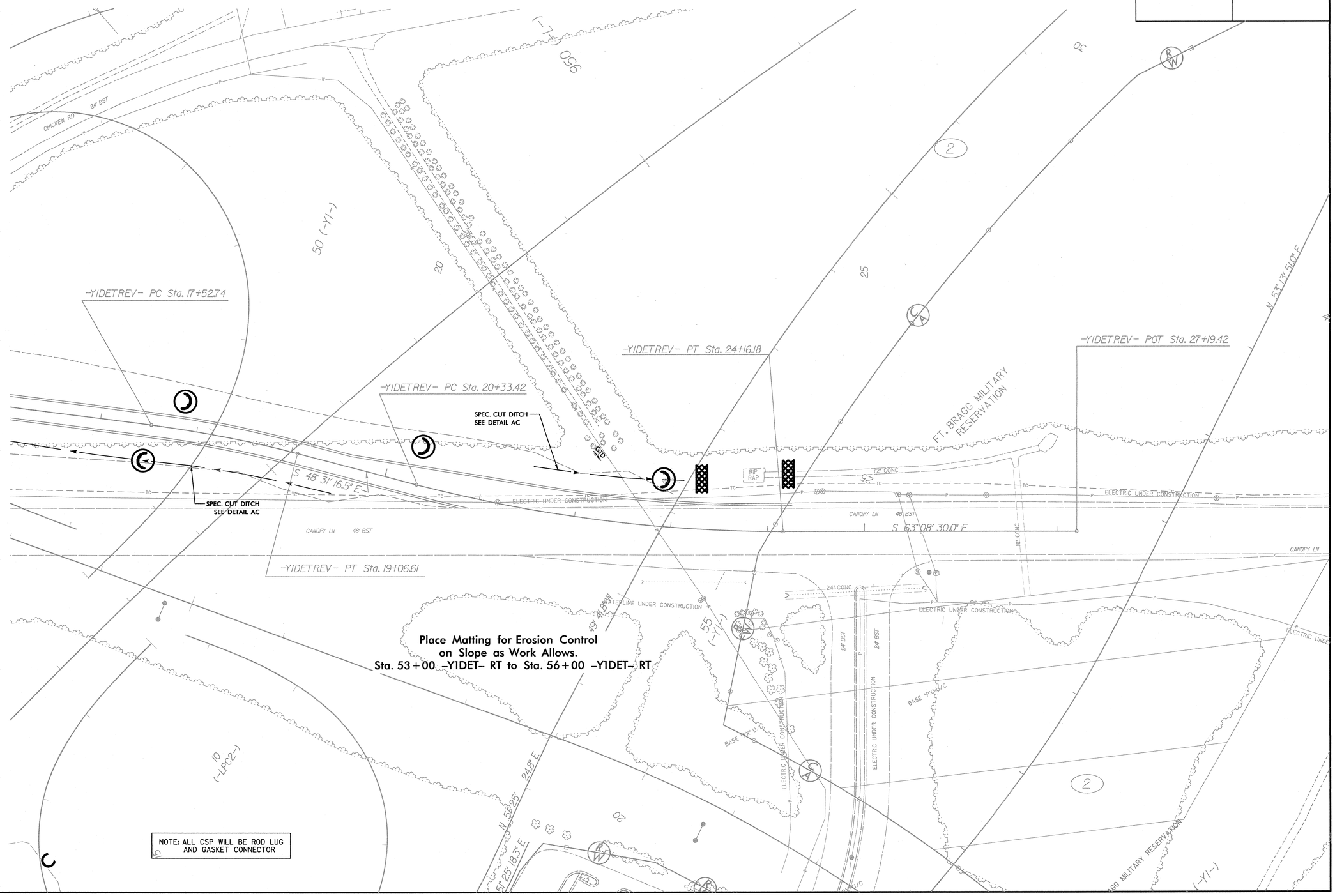
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



104.00L00/U2519cb/Roadway/proj/u2519cb_rdy.psh02-n

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-77/CONST.2-N
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

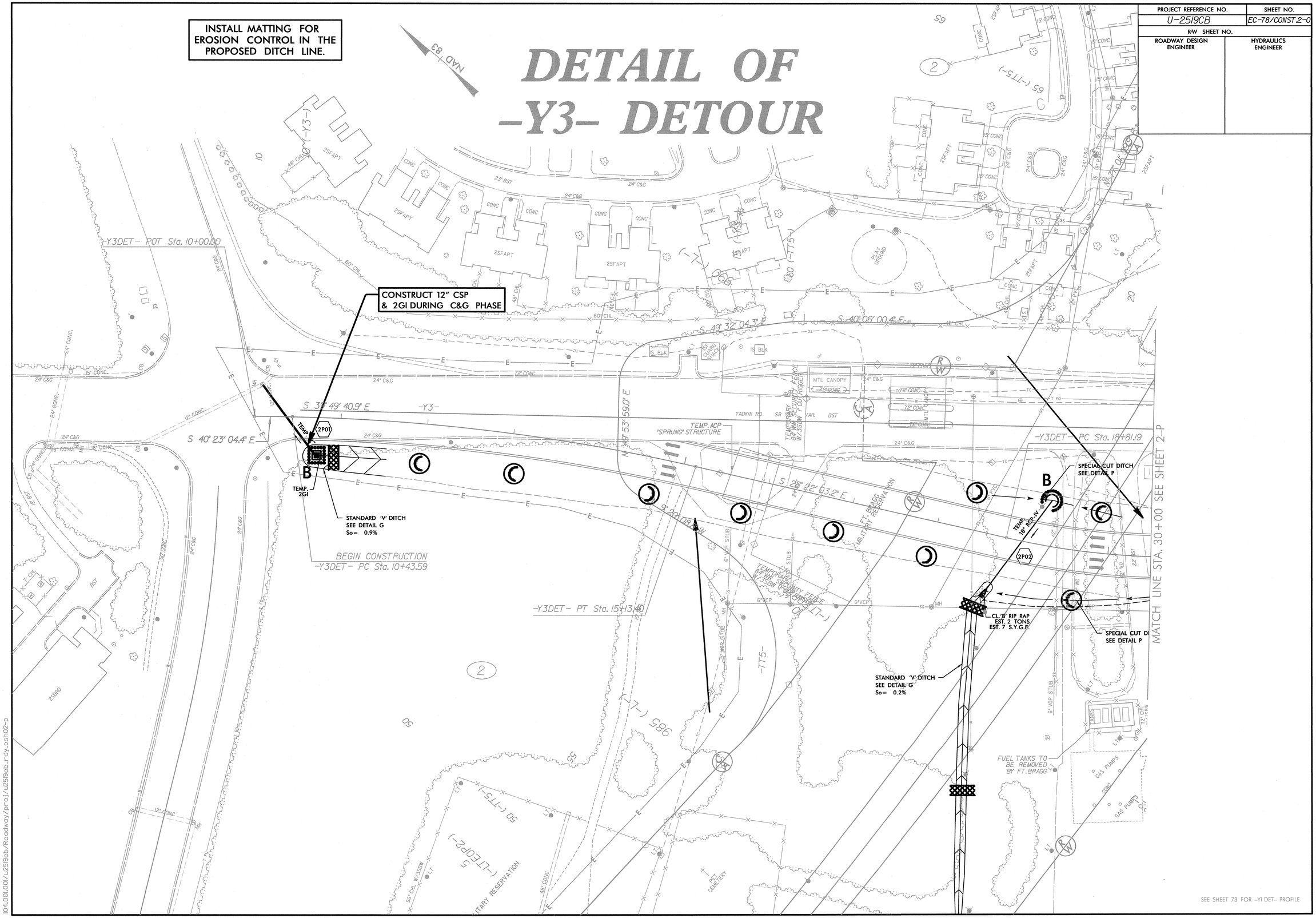
INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



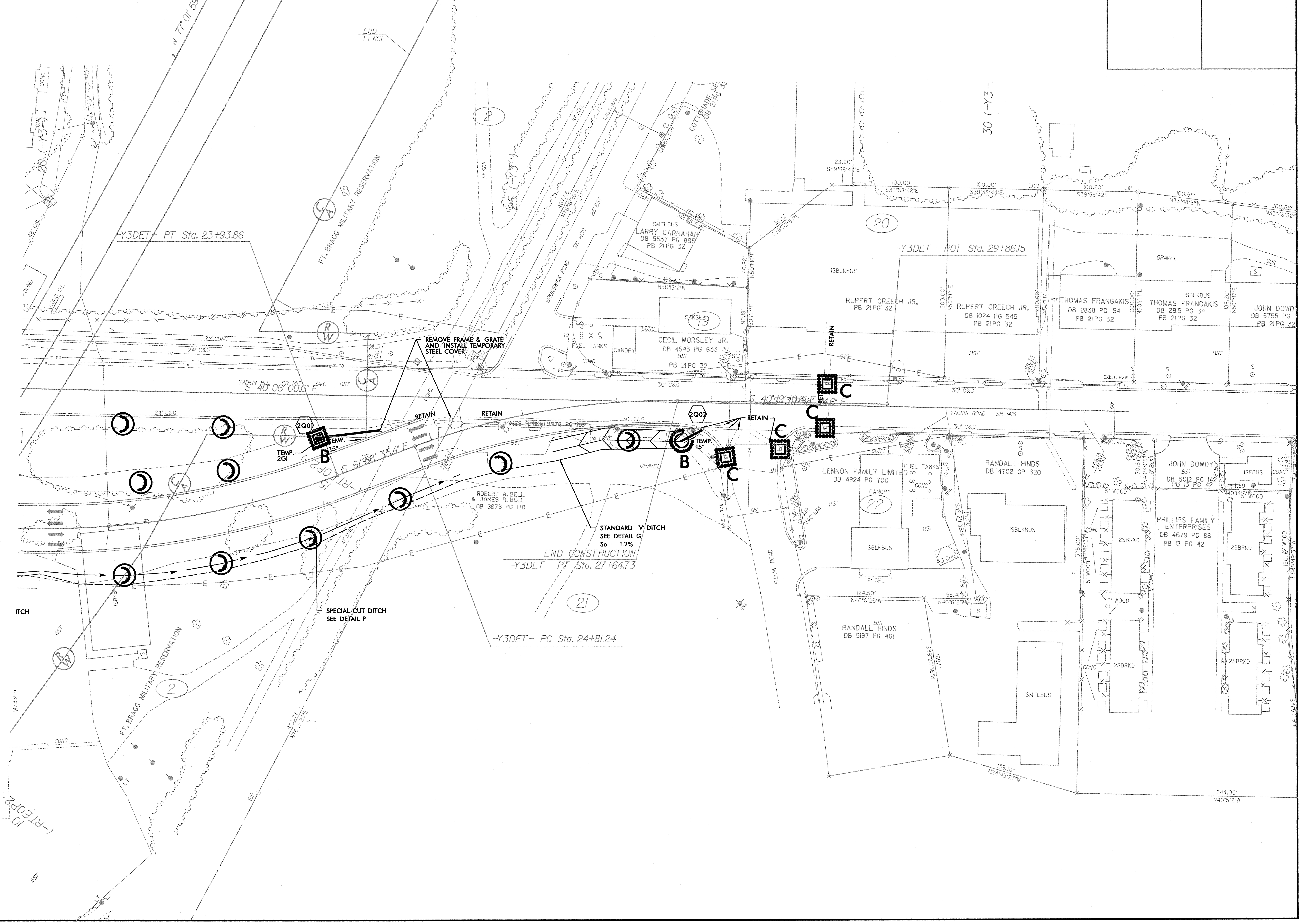
NOTE: ALL CSP WILL BE ROD LUG AND GASKET CONNECTOR

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-78/CONST.2-0
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL OF -Y3- DETOUR



104.001.001/u2519cb/Roadway/proj/u2519cb_rdy.pst02-p

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	EC-79/CONST.2-P
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.