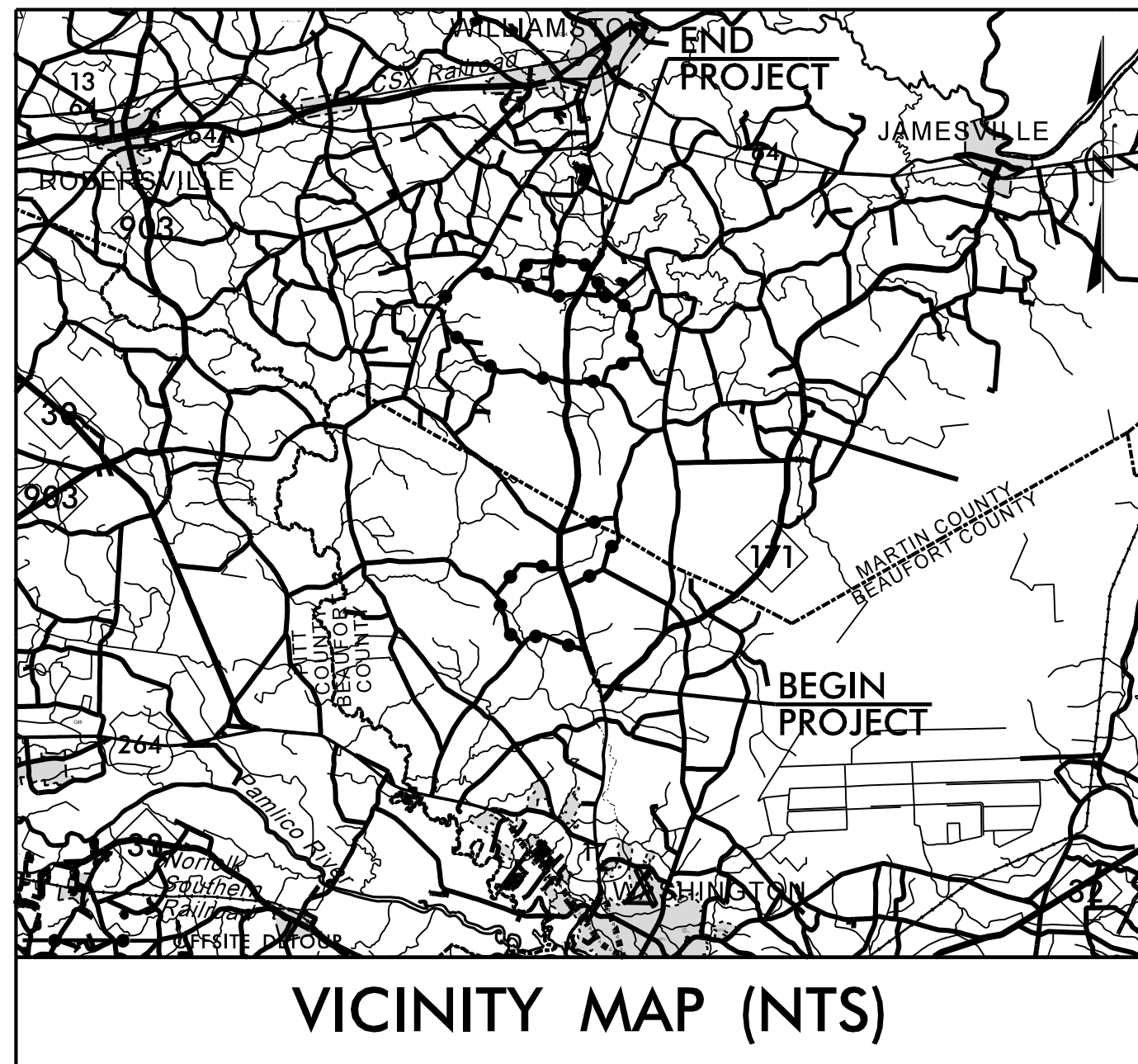


TIP PROJECT: R-2511

CONTRACT:



STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
BEAUFORT & MARTIN COUNTIES

LOCATION: US 17 FROM NORTH OF NC 171 TO
 EXISTING MULTI-LANES SOUTH OF WILLIAMSTON
 TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2511	EC-1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	

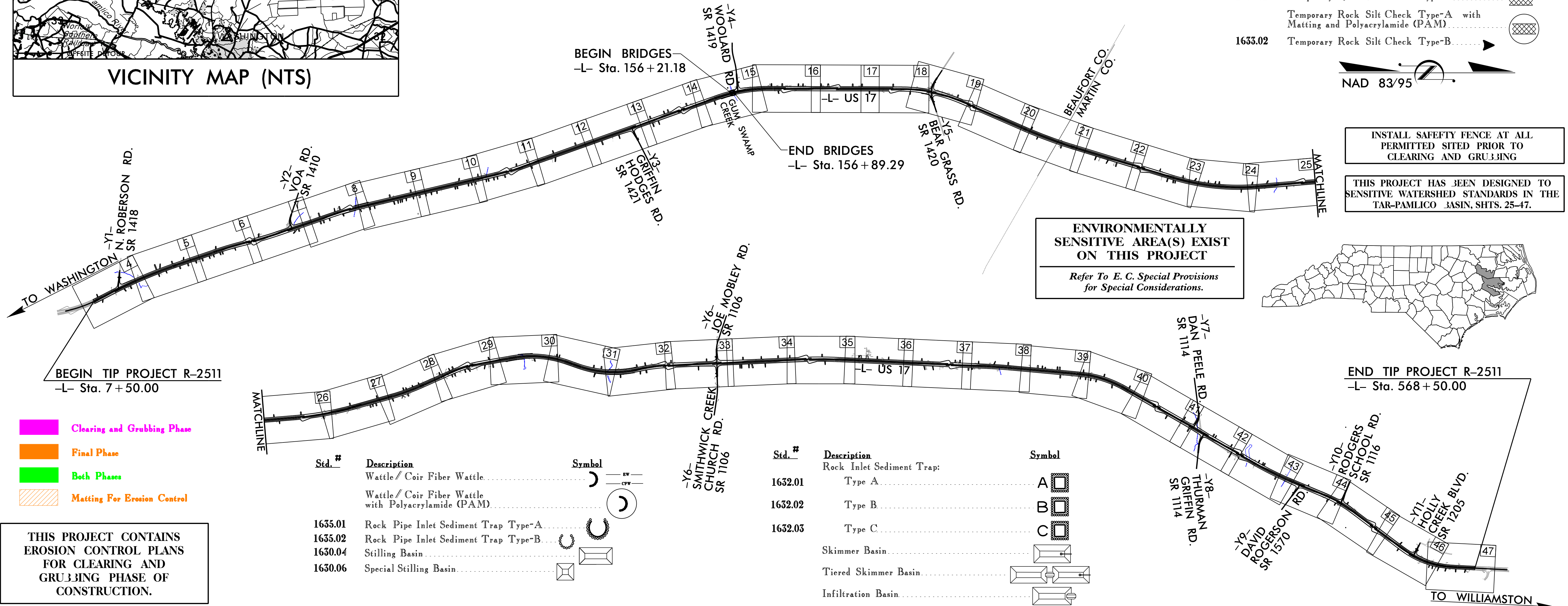
EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
1630.05	Temporary Diversion	--->---
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	---X---
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	▭

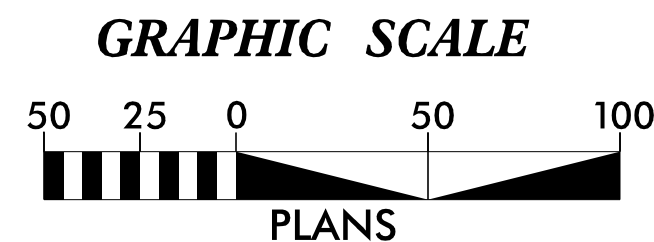


INSTALL SAFETY FENCE AT ALL PERMITTED SITED PRIOR TO CLEARING AND GRUBBING

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS IN THE TAR-PAMLICO BASIN, SHTS. 25-47.



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



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.



Prepared in the Office of:
RUMMEL, KLEPPER & KAHL, LLP
 8601 SIX FORKS ROAD, SUITE 700
 RALEIGH, NORTH CAROLINA 27615
 NC LICENSE NO. F-0112
 1-888-521-4455 OR 919-878-9560

FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 2018 STANDARD SPECIFICATIONS

Designed by:
Robert B. Huskey, P.E. 3493
 NAME LEVEL III CERTIFICATION NO.

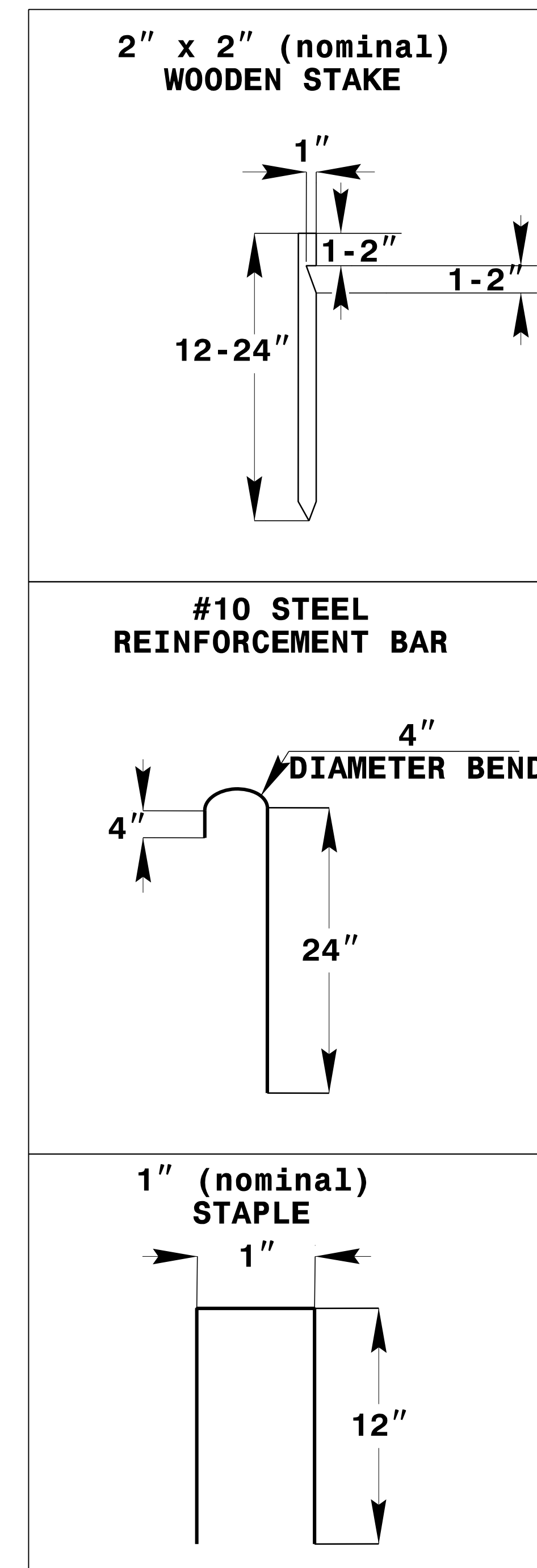
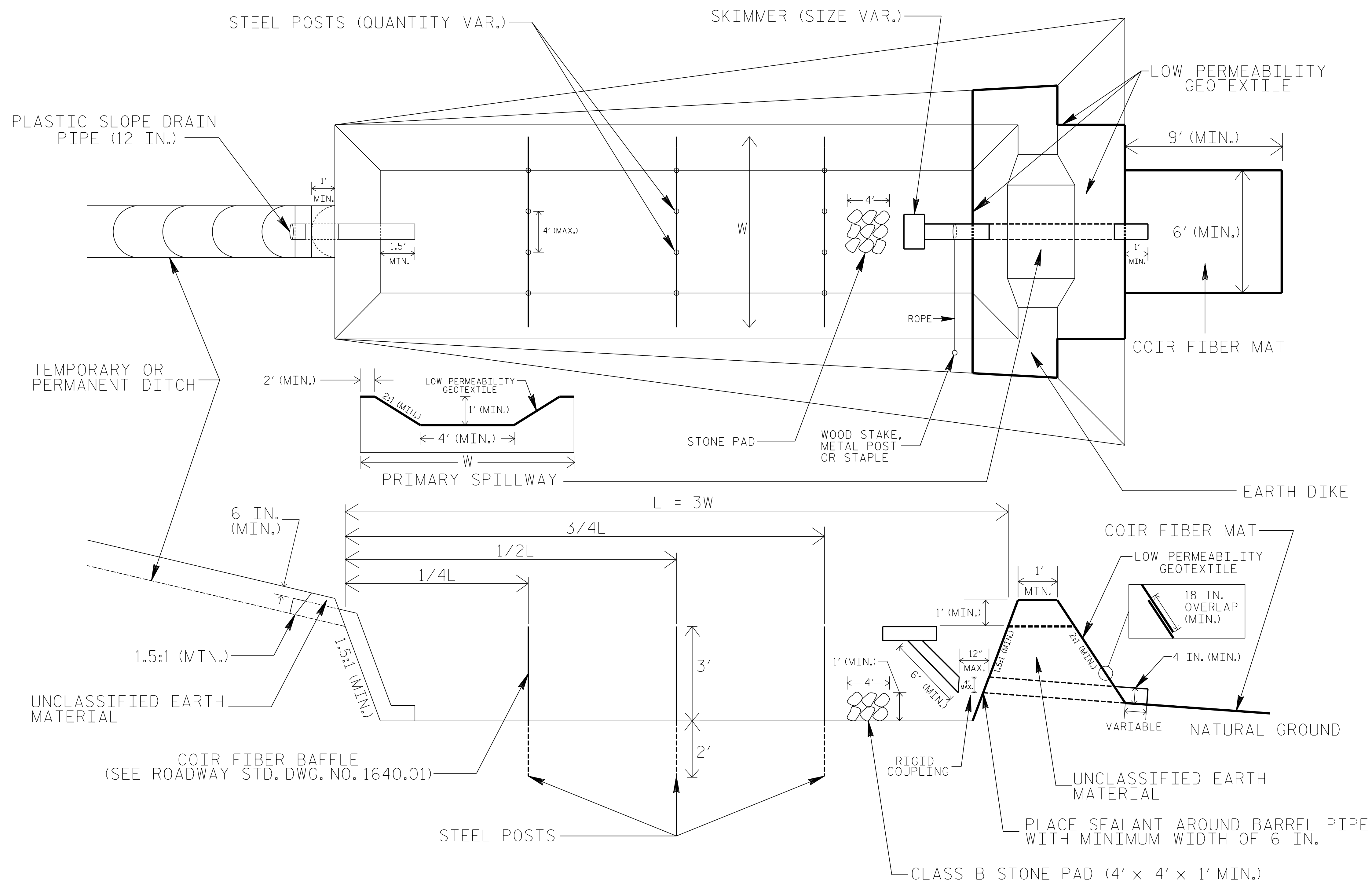
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type 3	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Jaffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

SKIMMER BASIN WITH BAFFLES DETAIL (EAST)

PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-2</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



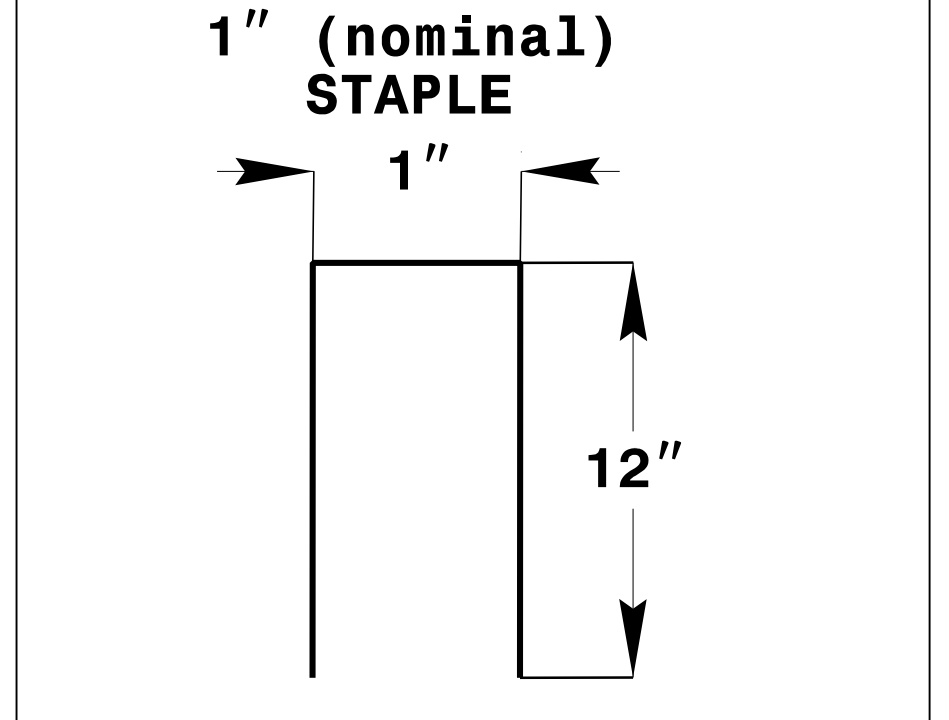
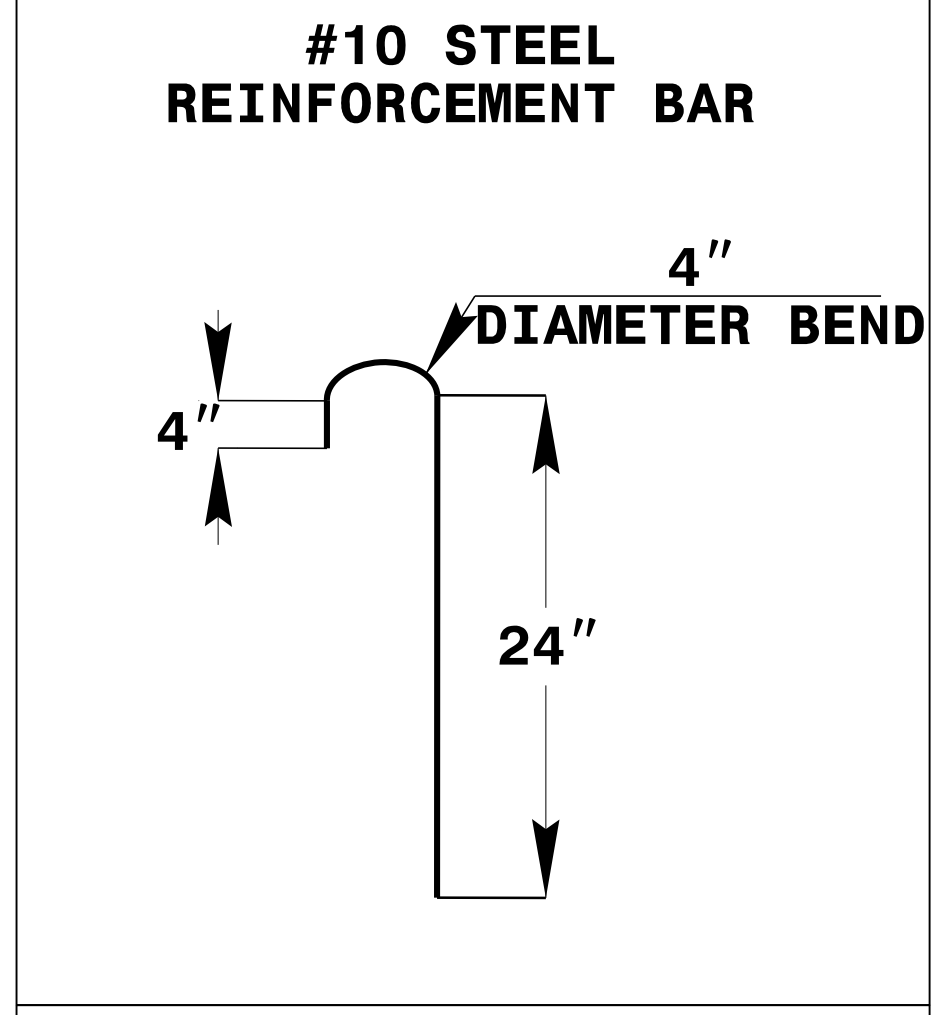
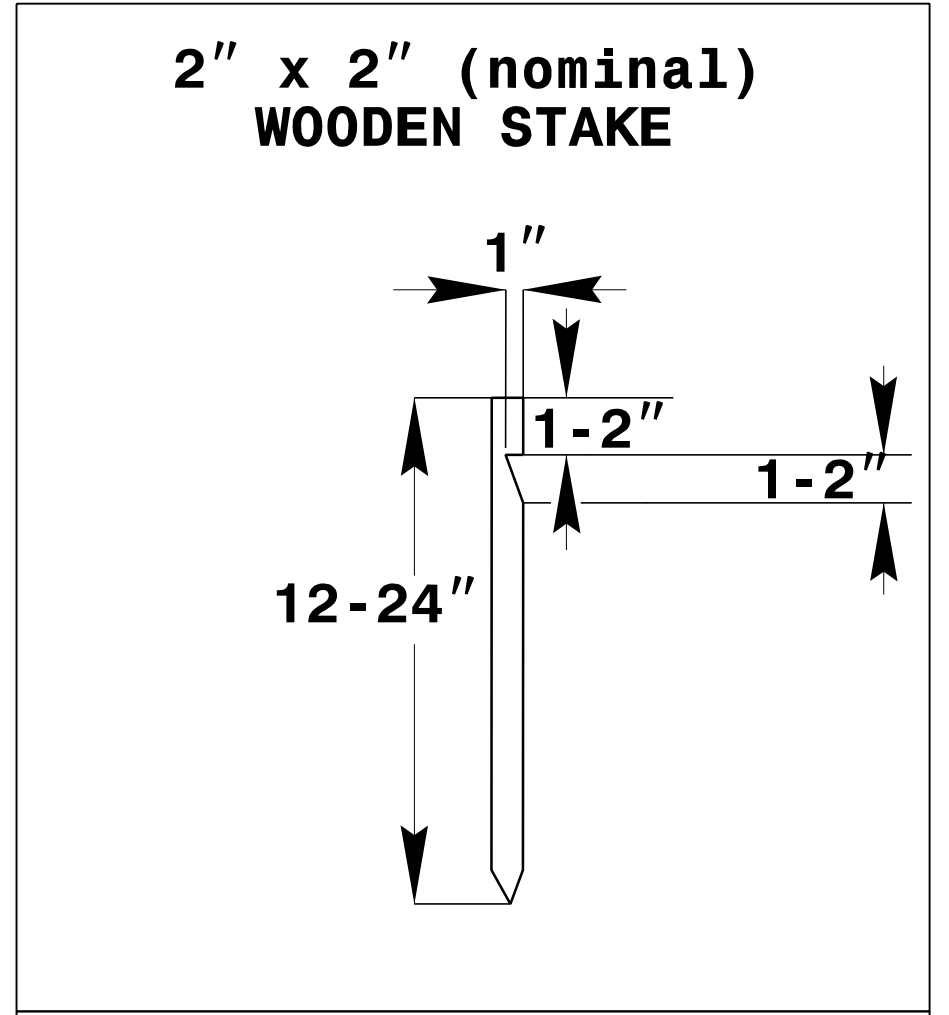
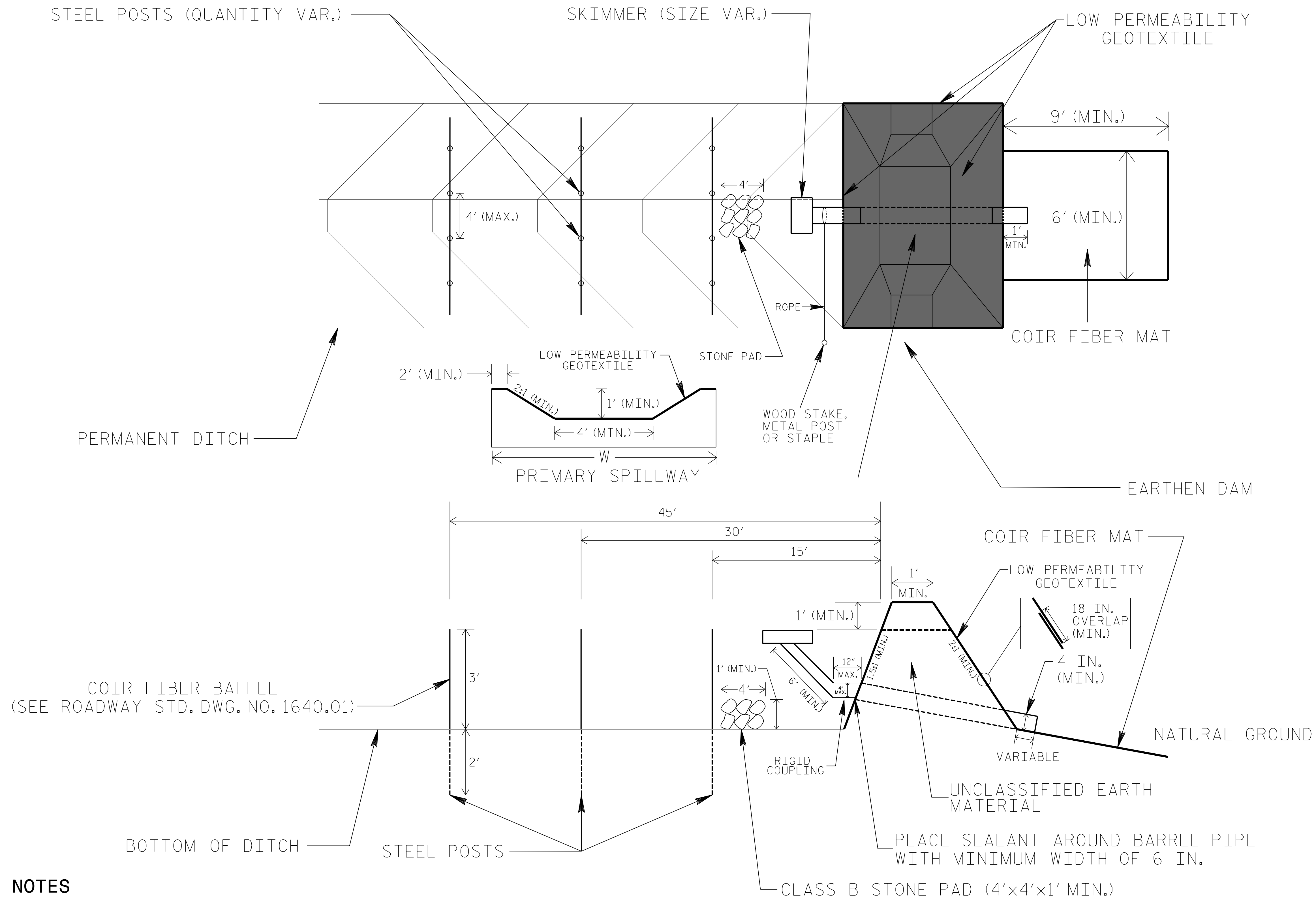
NOTES

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 $Q/0.8$, 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

EARTHEN DAM WITH SKIMMER DETAIL (EAST)

PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-2A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. LIMIT EARTHEN DAM HEIGHT TO 5 FT.
2. DETERMINE PRIMARY SPILLWAY LENGTH (FT.) USING $Q/0.8$, 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.).

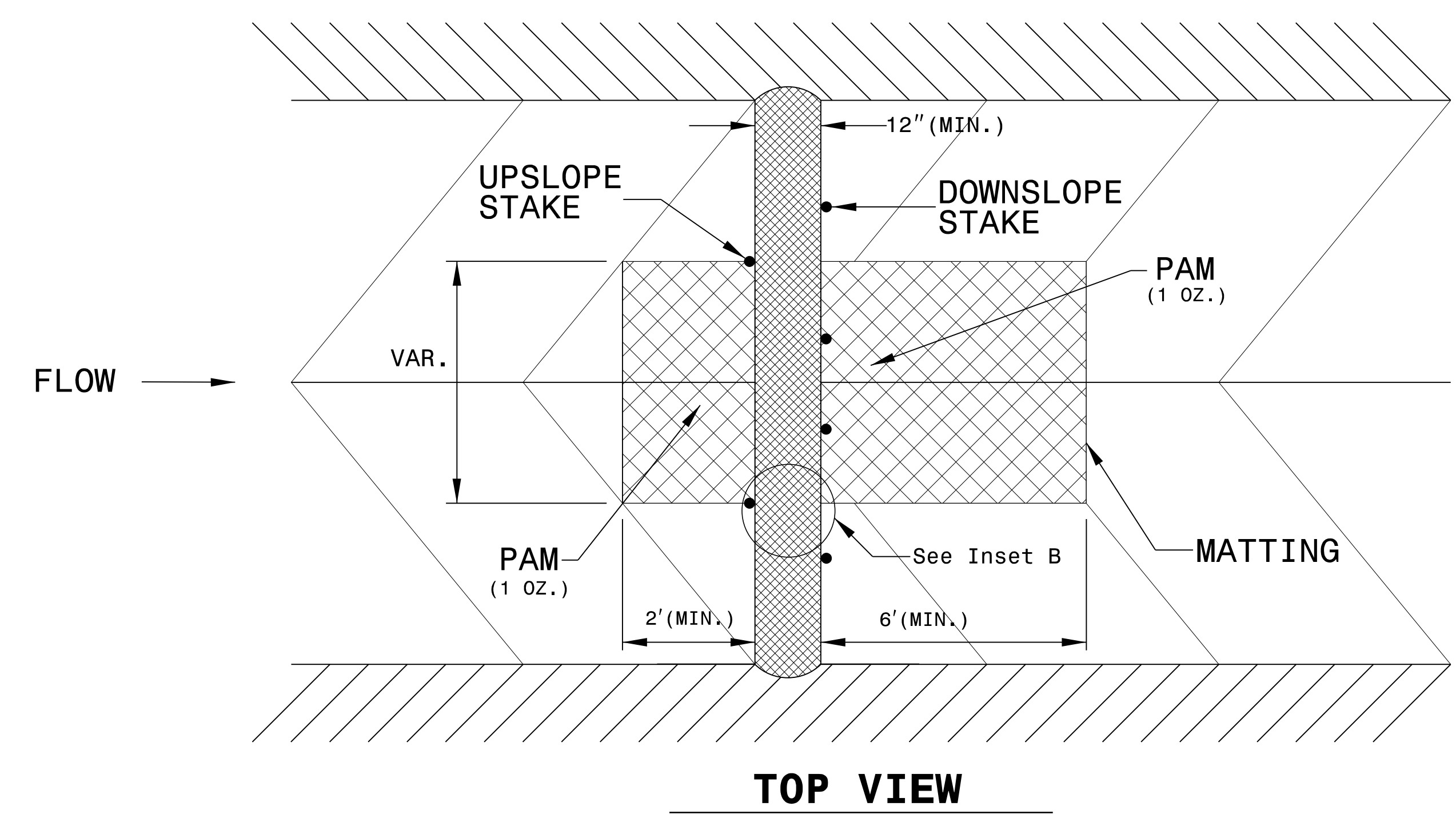
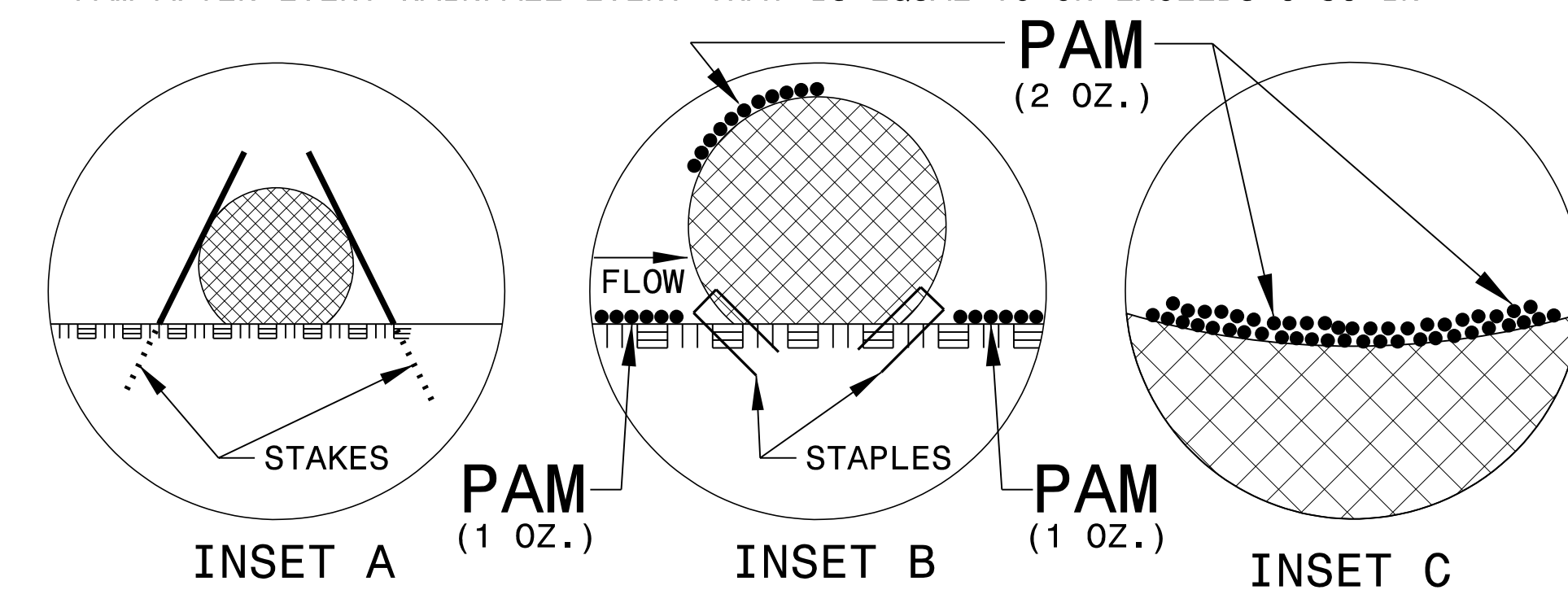
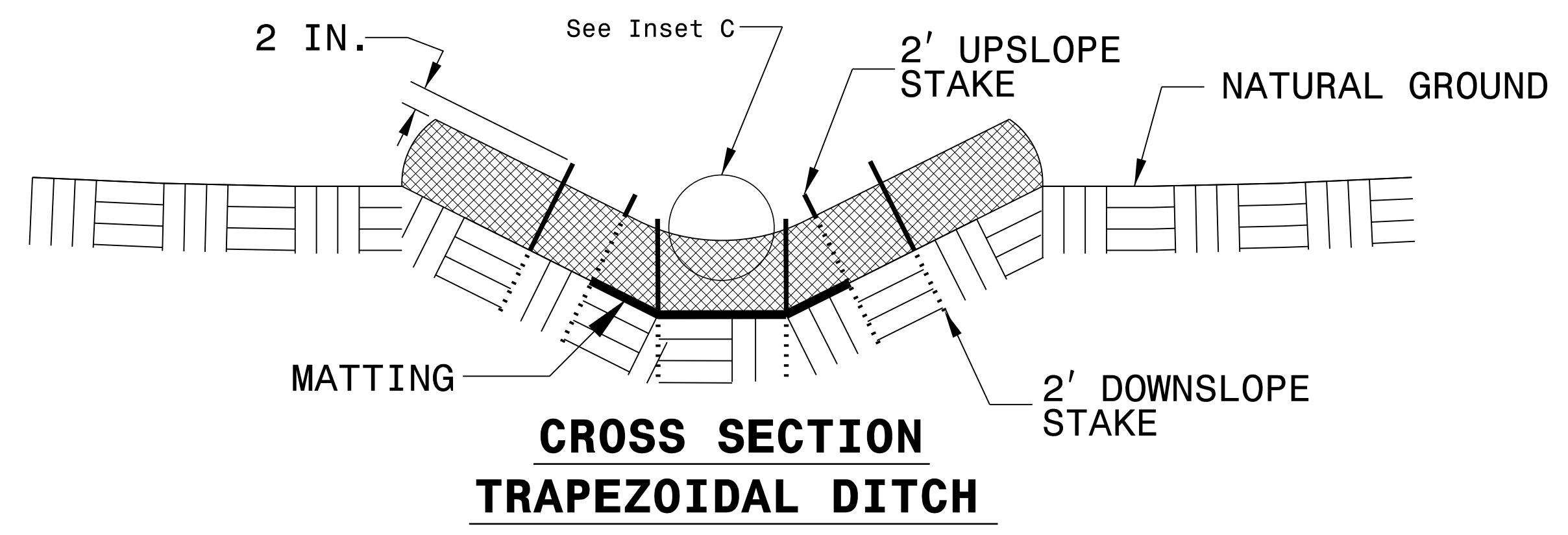
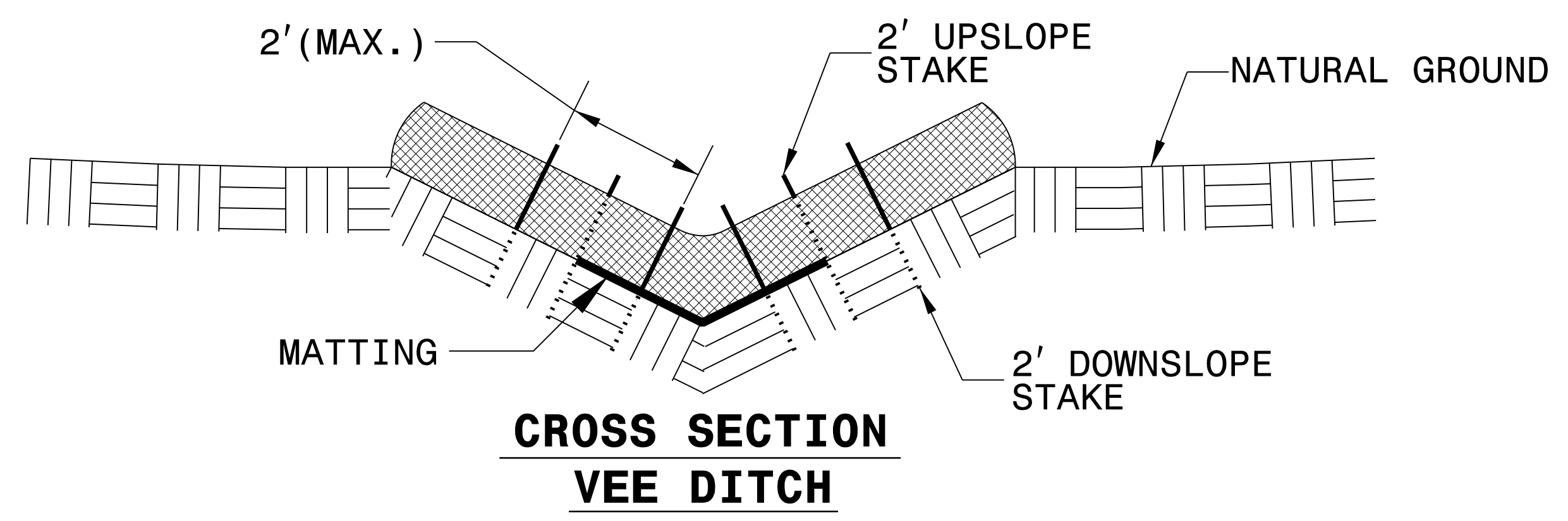
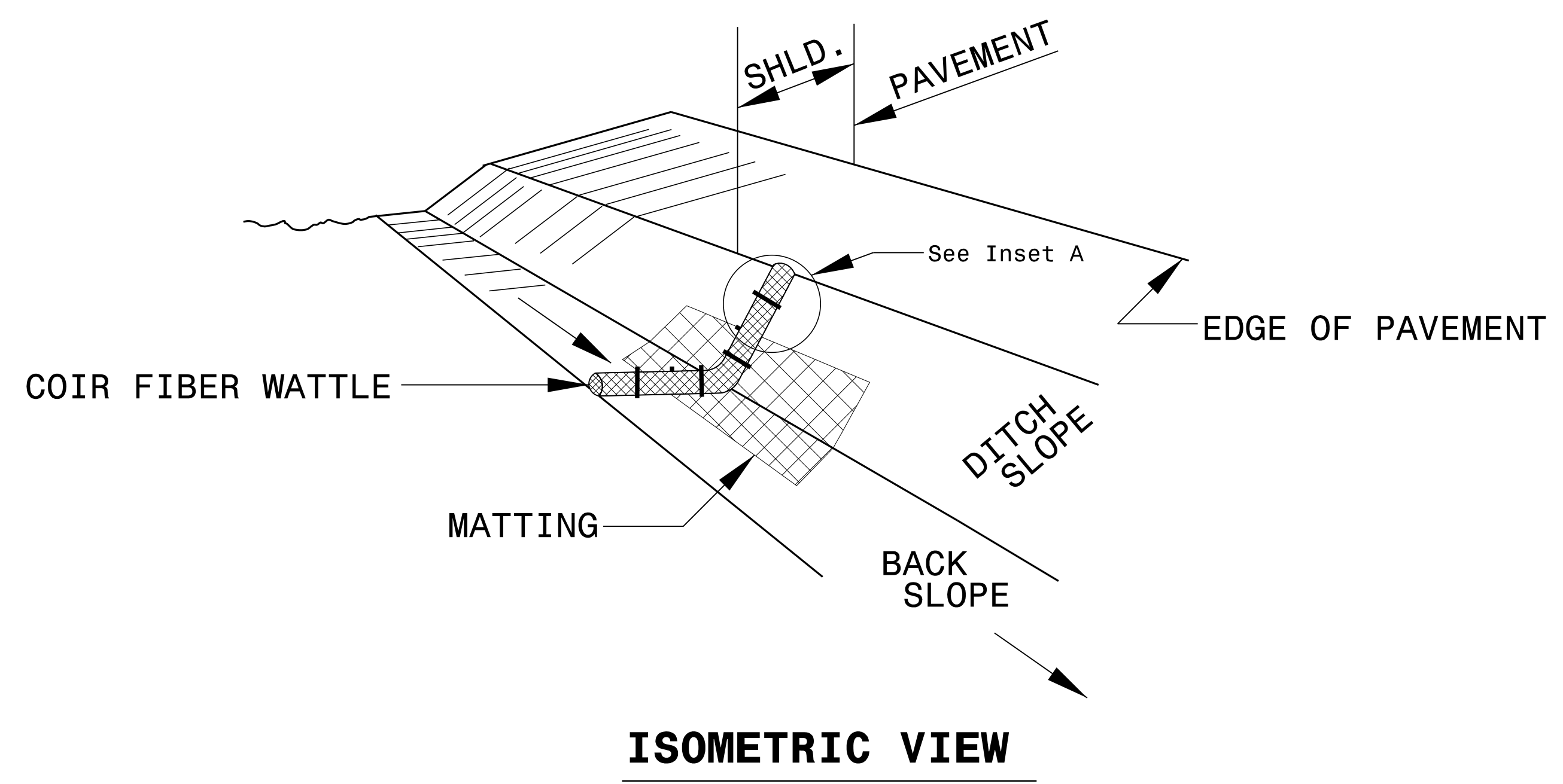
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

NOTES:

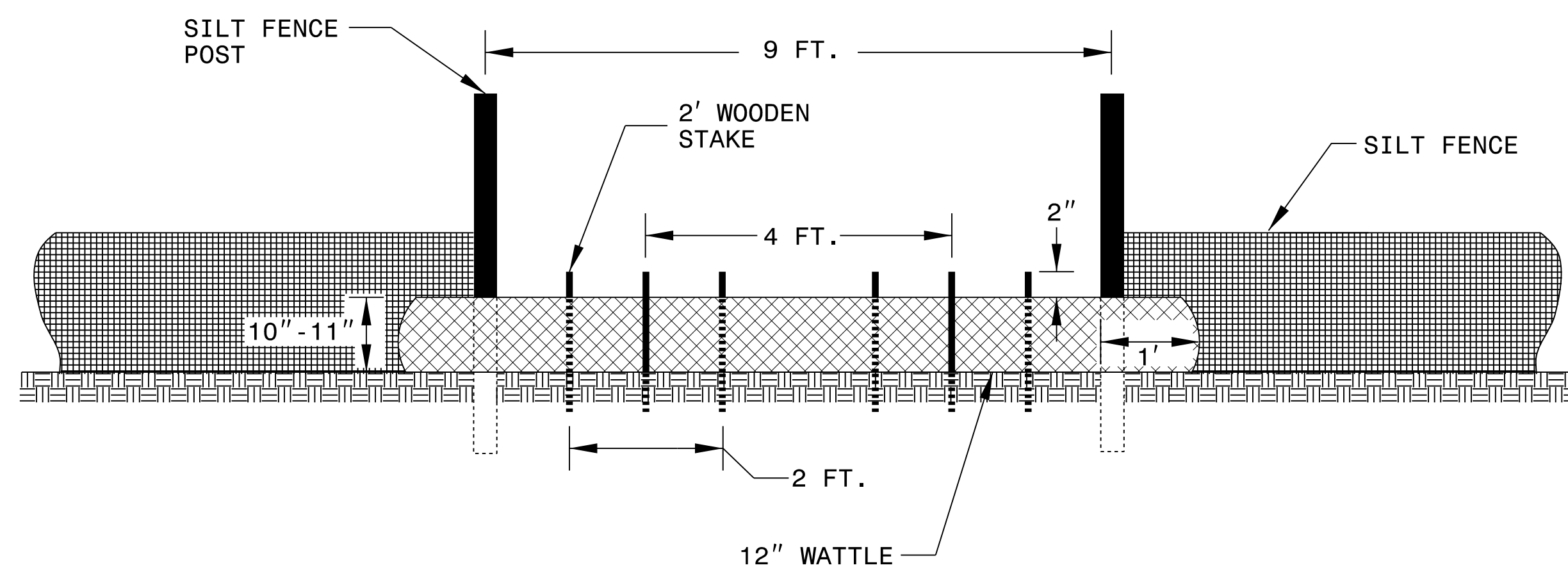
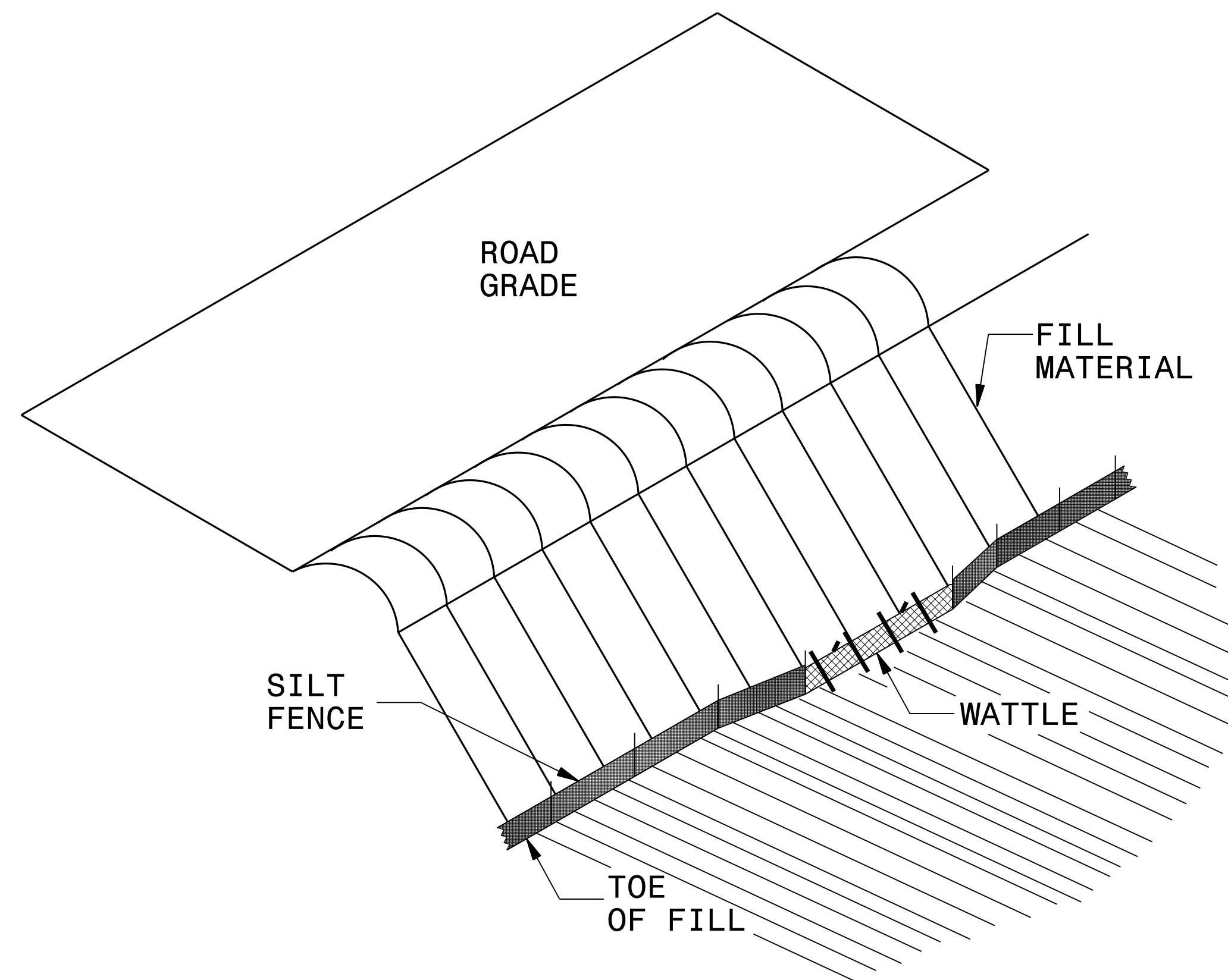
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 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 EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



8/2/2021 R:\Hydraulics\CADD\PSH\Erosion Control\1r-2511-EC.psh_02B.dgn

SILT FENCE COIR FIBER WATTLE BREAK DETAIL

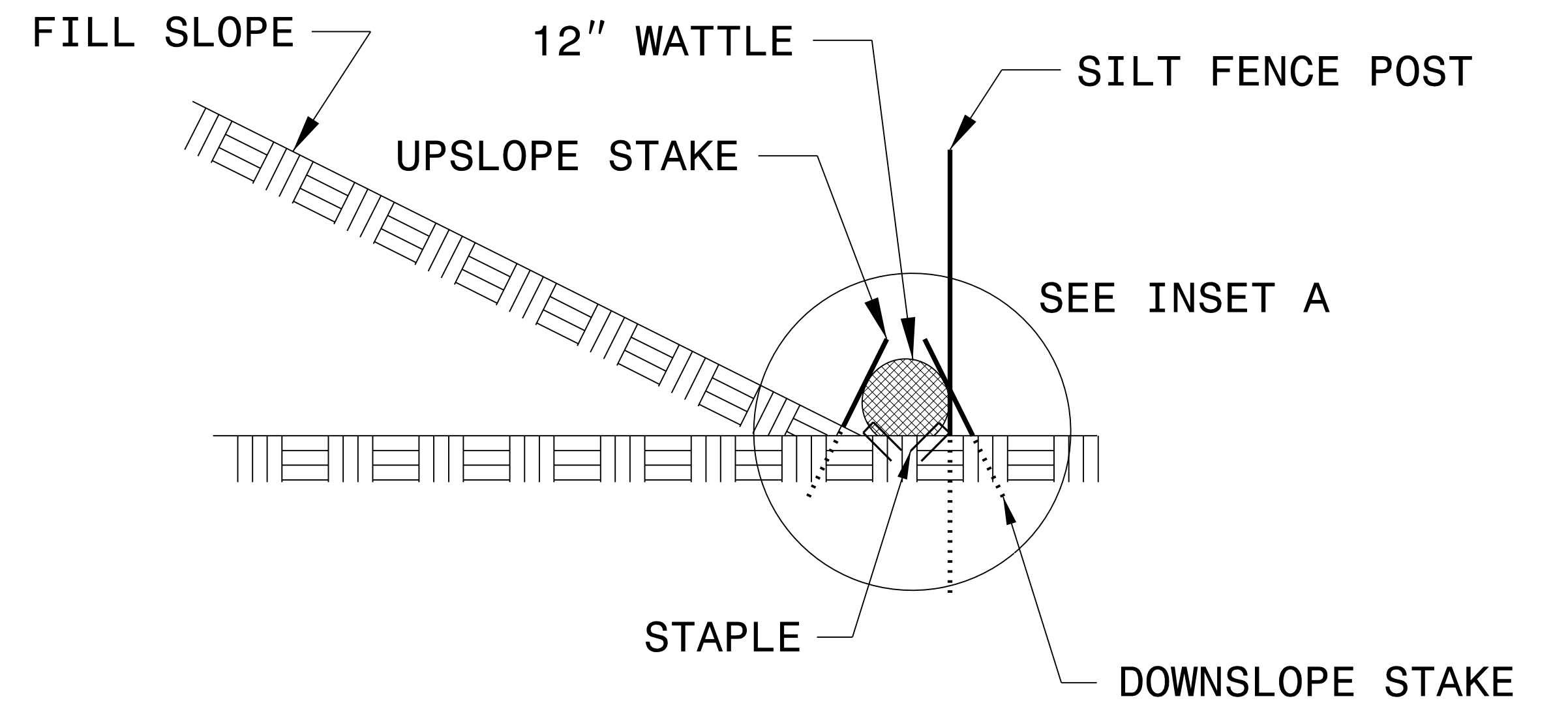
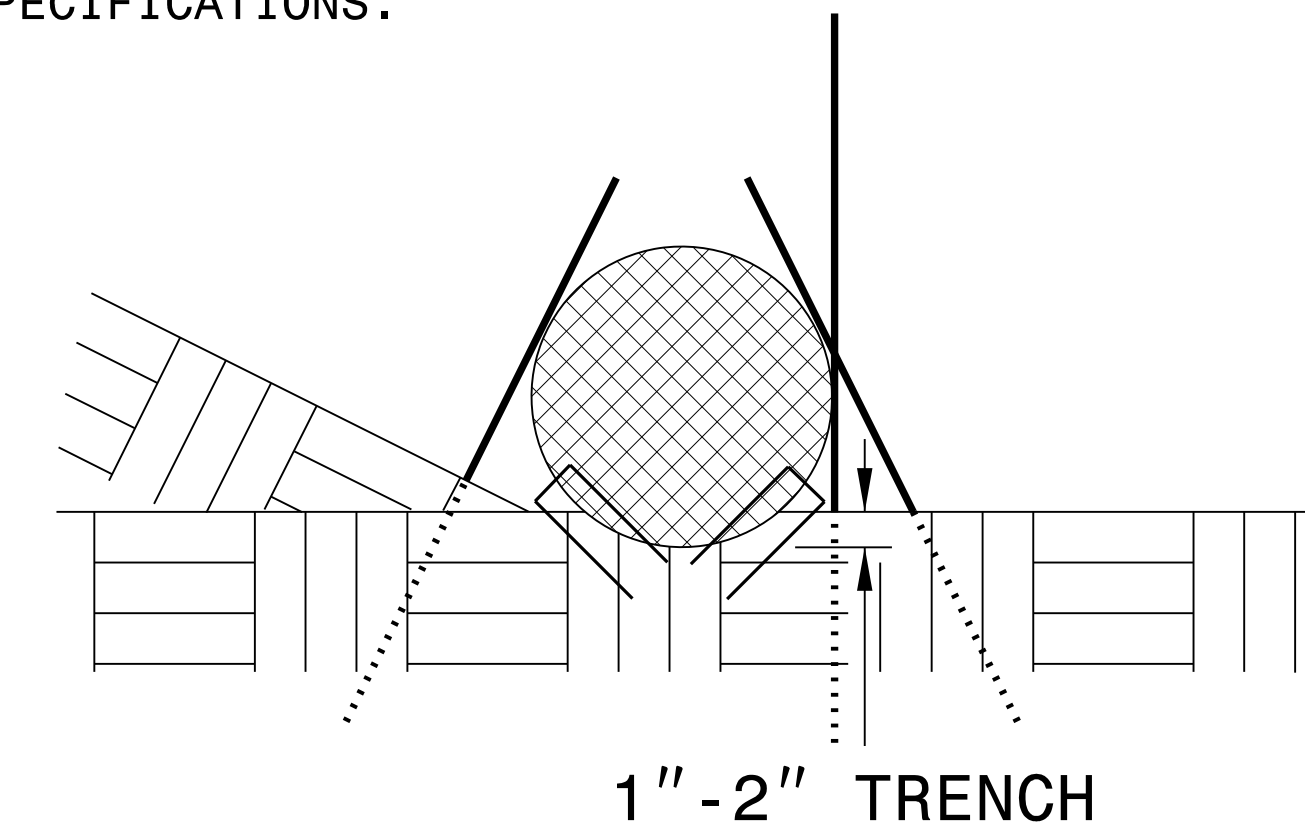
PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-2C</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTES:

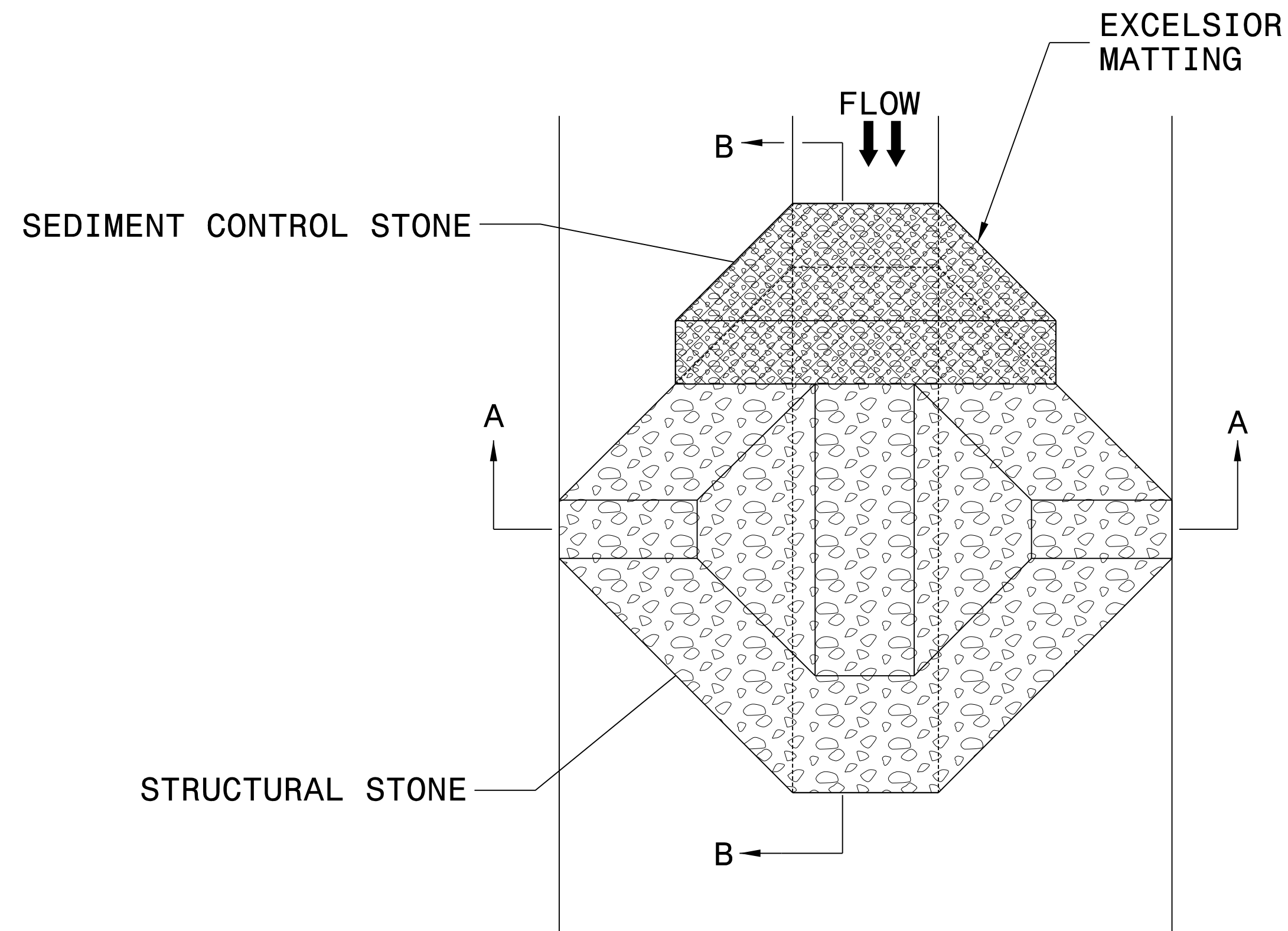
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A

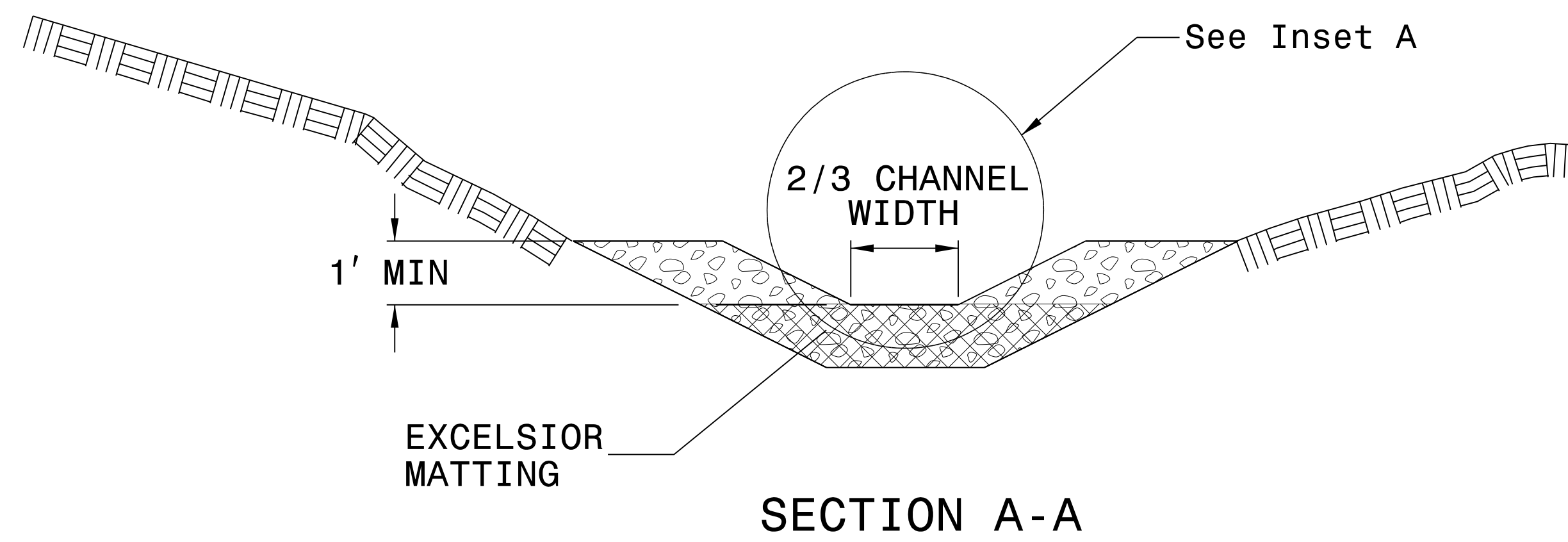


PROJECT REFERENCE NO. R-2511	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



SECTION A-A

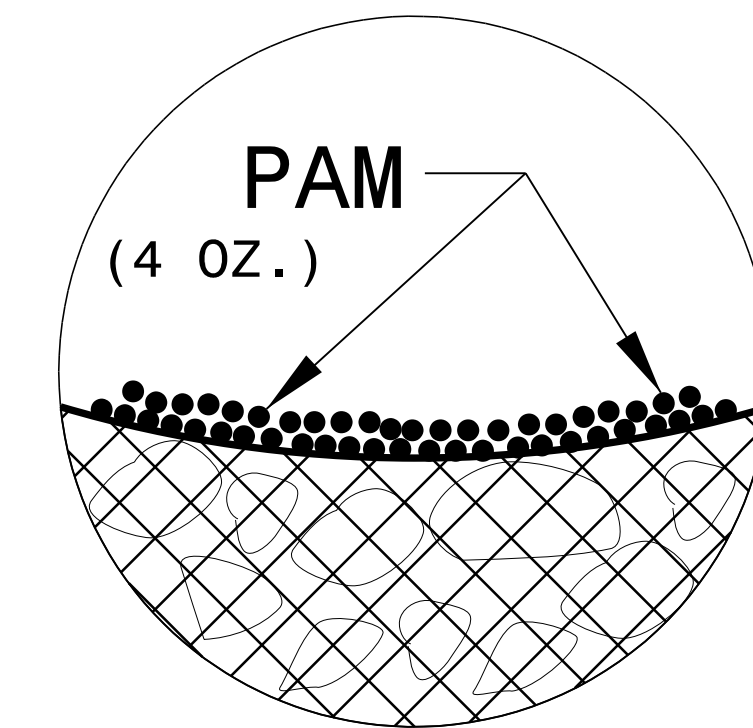
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

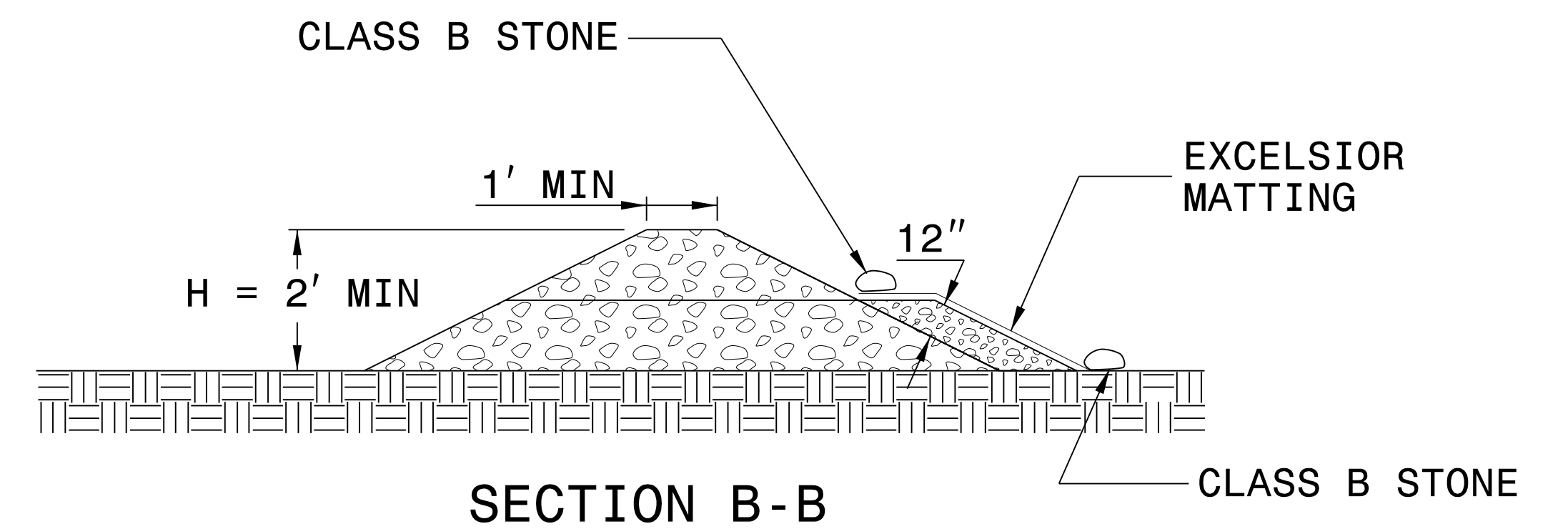
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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 B-B

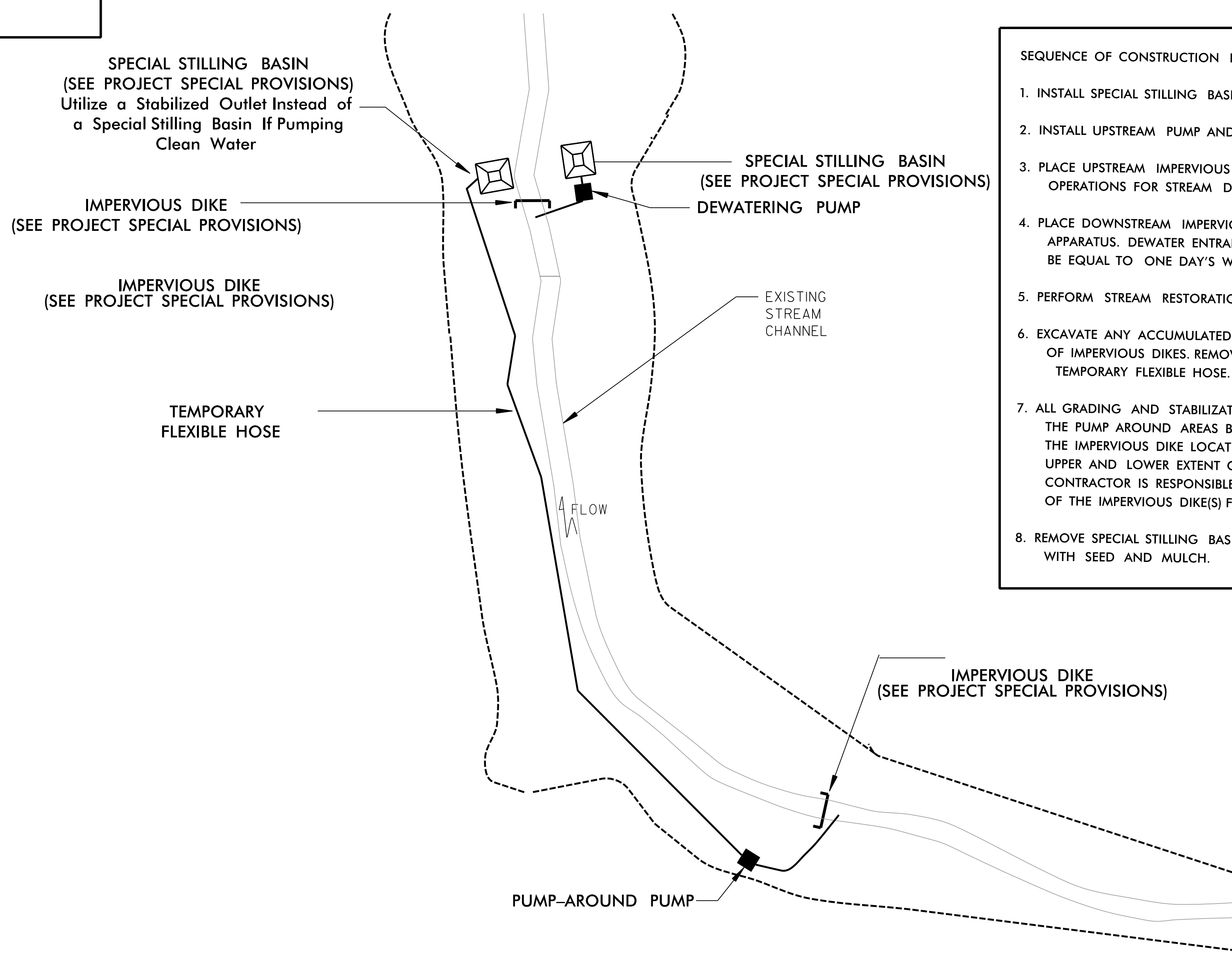
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXAMPLE OF PUMP-AROUND OPERATION

NOTES:

- 1) All excavation shall be performed in only dry or isolated sections of channel.
- 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
- 3) All graded areas shall be stabilized within 24 hours.
- 4) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
- 5) Pumps and hoses shall be of sufficient size to dewater the work area.

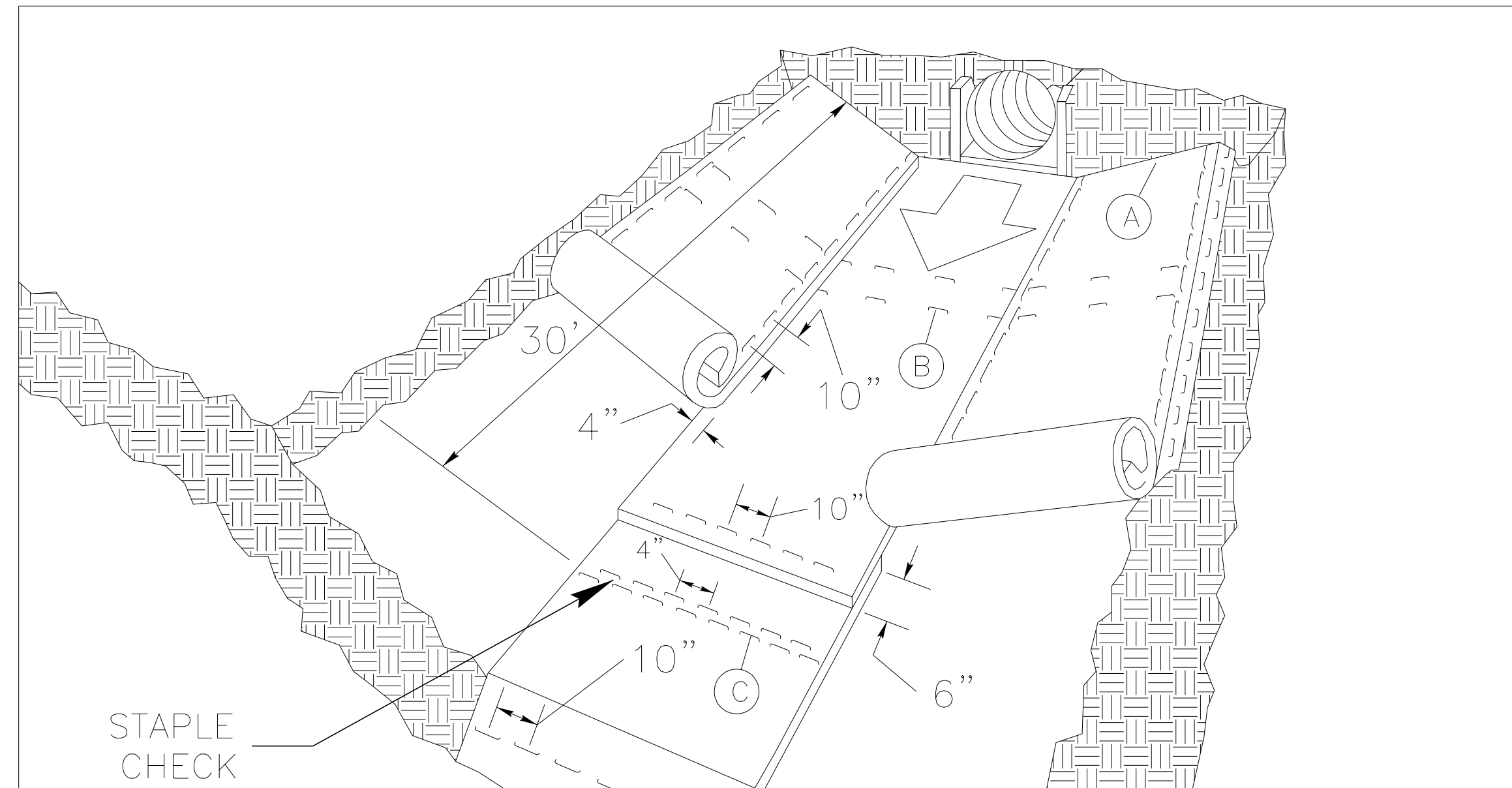


SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. PERFORM STREAM RESTORATION WORK IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. ALL GRADING AND STABILIZATION MUST BE COMPLETED IN ONE DAY WITHIN THE PUMP AROUND AREAS BETWEEN THE IMPERVIOUS DIKES. THE IMPERVIOUS DIKE LOCATIONS AS SHOWN ON THIS SHEET ONLY SHOW THE UPPER AND LOWER EXTENT OF WORK FOR EACH STREAM SEGMENT. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF THE IMPERVIOUS DIKE(S) FOR EACH DAY'S WORK.
8. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-3</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

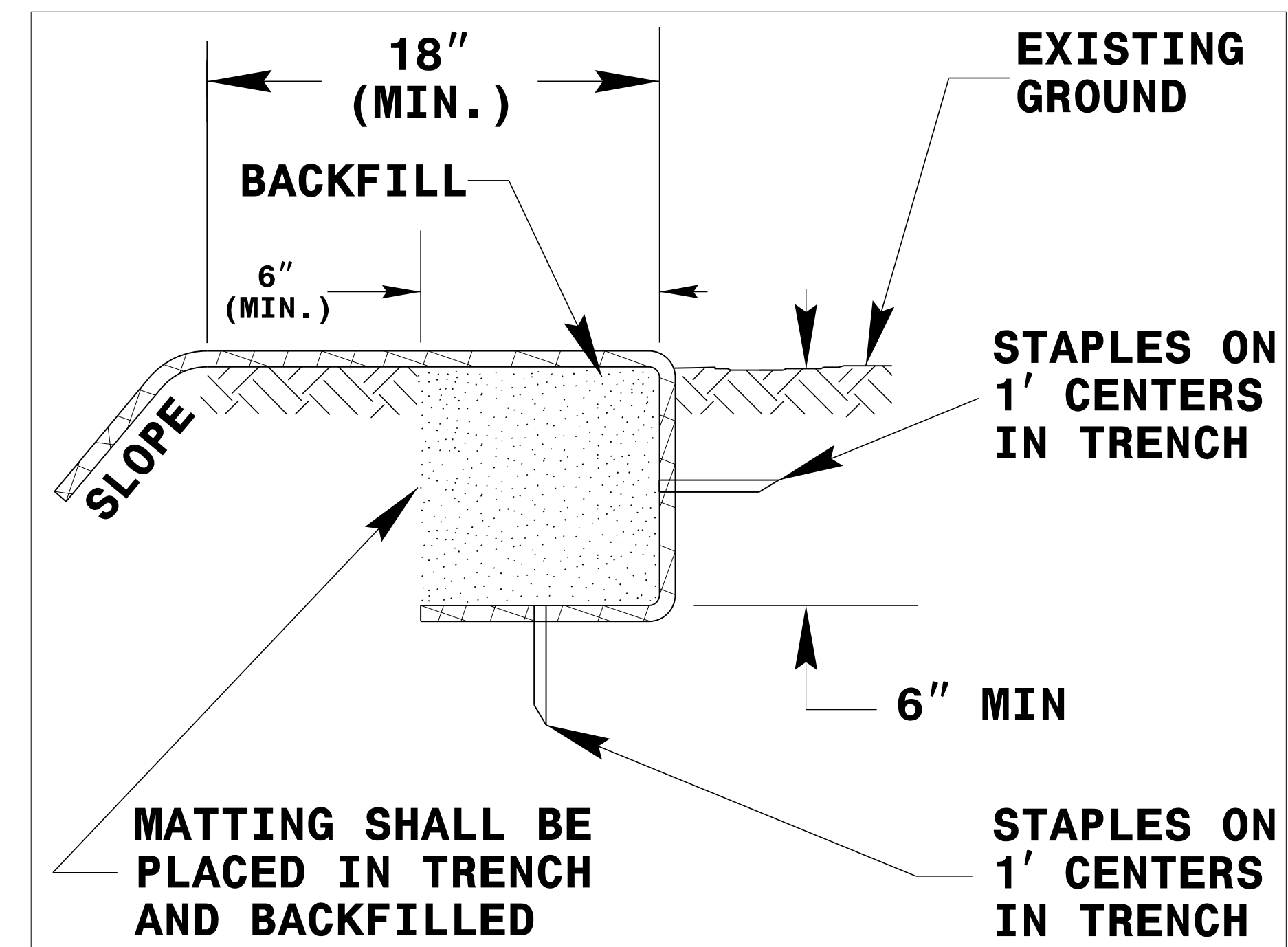
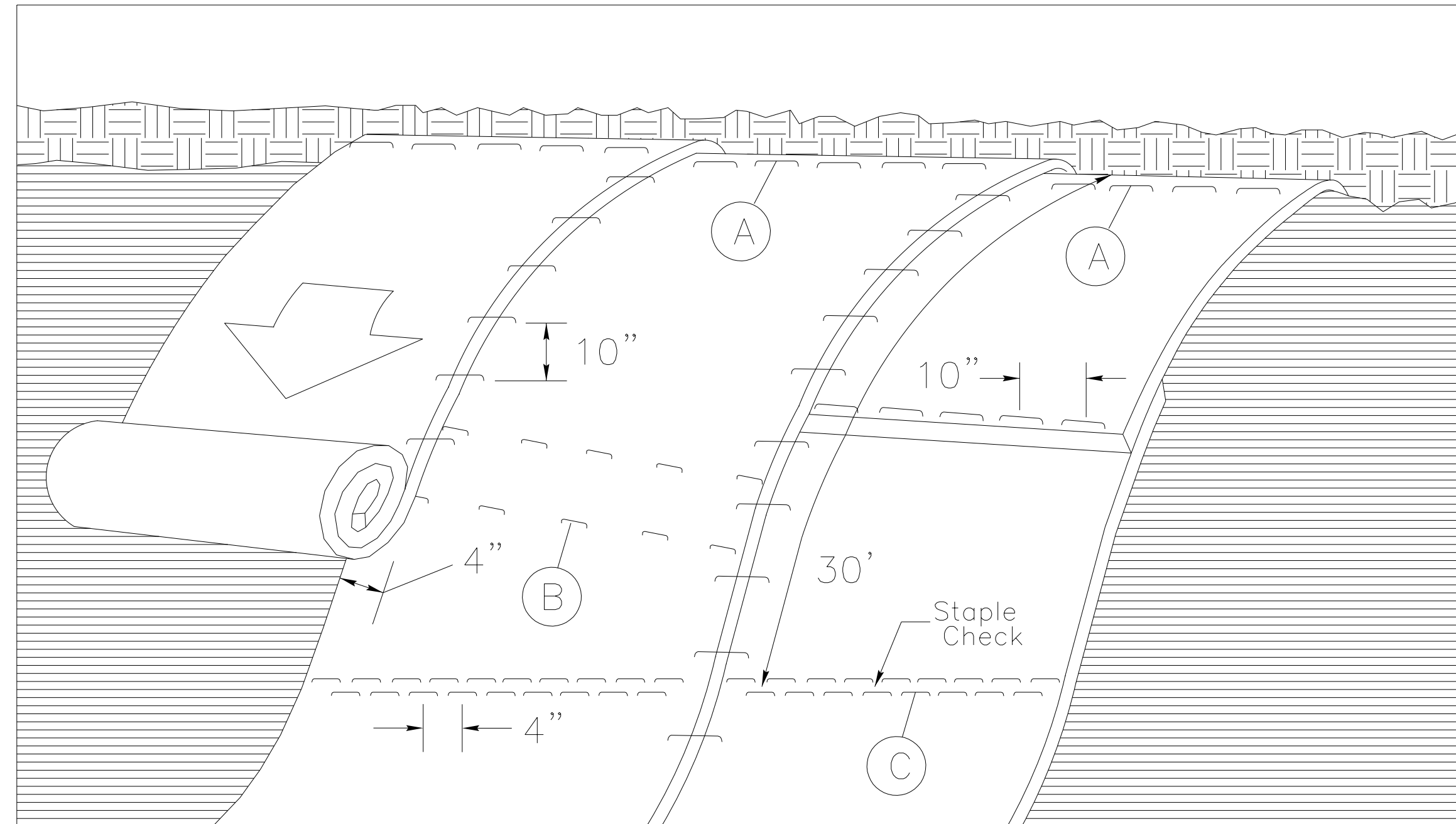


DIAGRAM (A)



MATTING ON SLOPES

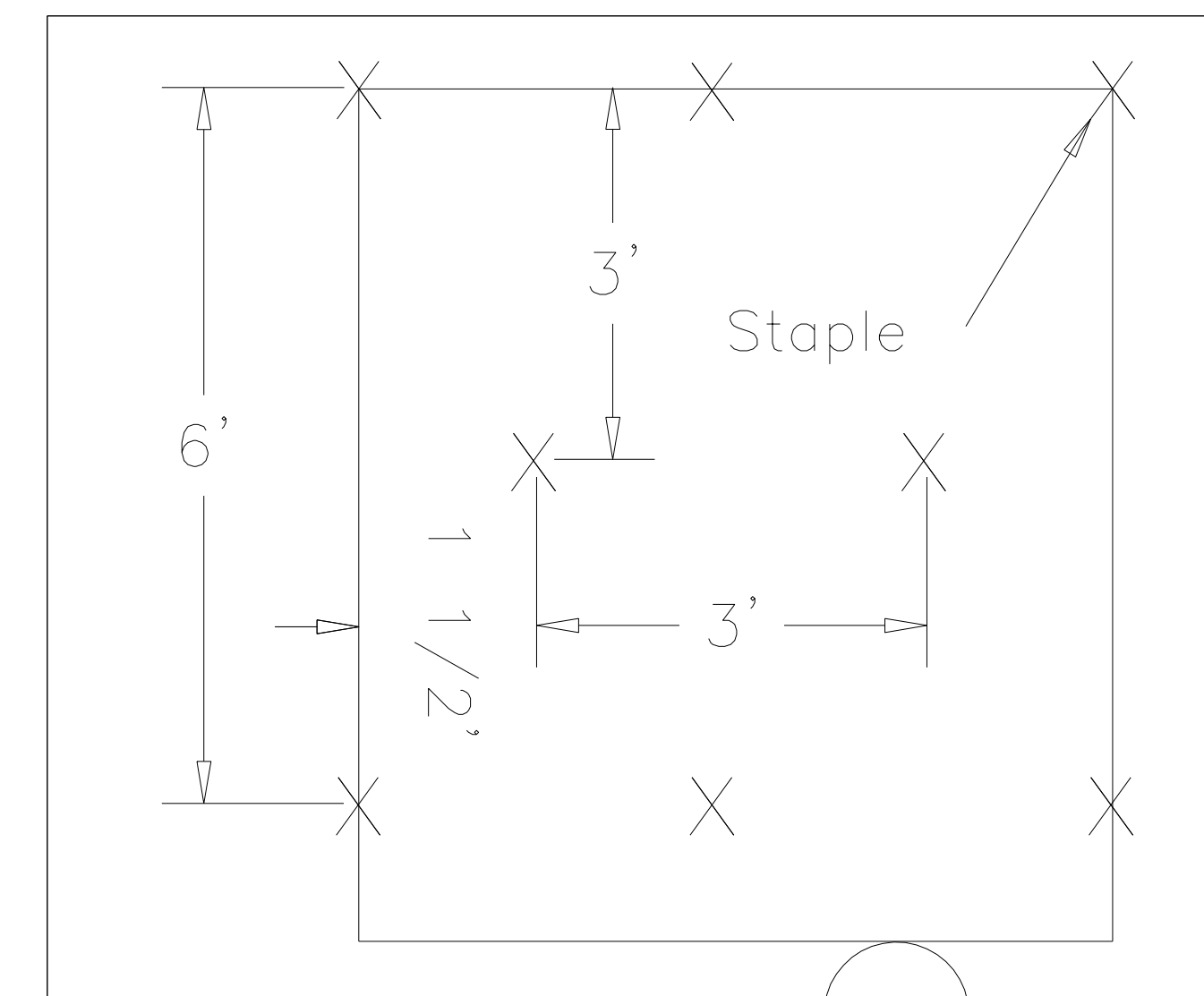


DIAGRAM (B)

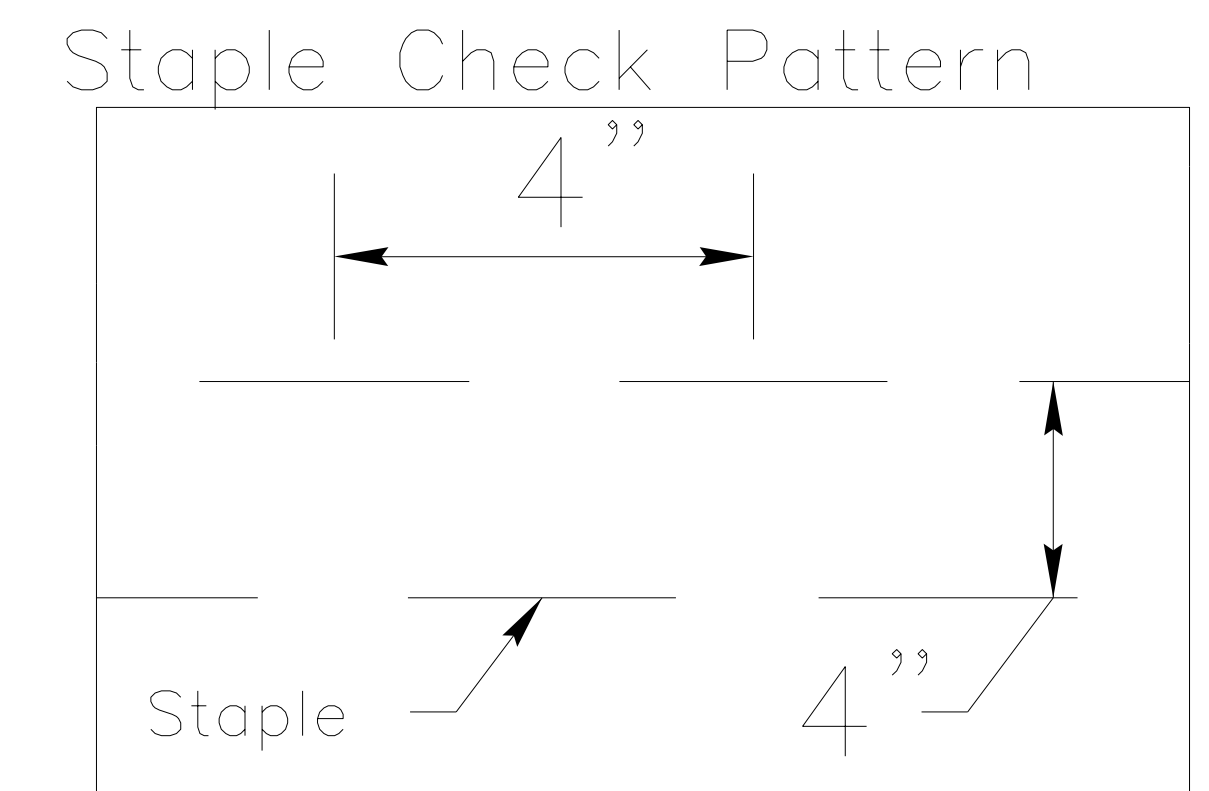


DIAGRAM (C)

NOTES:

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

NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

EROSION CONTROL MATTING IN DITCHES

EROSION CONTROL MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	08+00	12+00	CL	510
4-5	-L-	14+50	22+50	CL	1130
5	-L-	22+50	30+00	CL	1030
7	-L-	47+50	52+50	CL	670
8-9	-L-	69+50	74+00	CL	605
9	-L-	74+00	80+00	CL	805
9-10	-L-	80+00	86+00	CL	805
13-14	-L-	134+00	142+00	CL	1075
14-15	-L-	145+50	152+50	CL	940
18-19	-L-	192+50	199+00	CL	870
19	-L-	202+00	207+50	CL	740
20-21	-L-	216+50	223+50	CL	940
21-22	-L-	233+50	245+50	CL	1610
23	-L-	254+00	257+00	CL	405
23-24	-L-	257+00	263+50	CL	870
26-27	-L-	299+50	305+00	CL	740
27	-L-	305+00	311+00	CL	805
29	-L-	329+00	333+00	CL	540
29-30	-L-	335+50	348+00	CL	1675
30-31	-L-	348+00	354+00	CL	805
31-32	-L-	363+50	368+50	CL	605
32	-L-	368+50	373+00	CL	605
36	-L-	419+50	430+00	CL	1410
36-37	-L-	430+00	436+00	CL	805
38	-L-	446+00	452+50	CL	870
38-39	-L-	452+50	458+50	CL	805
39	-L-	458+50	465+00	CL	870
40	-L-	476+00	480+00	CL	540
41-42	-L-	490+00	496+50	CL	870
43	-L-	511+00	518+00	CL	940

SUBTOTAL 25,890

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
45	-L-	535+00	537+00	CL	270
46	-L-	550+50	553+00	CL	335
46	-L-	555+00	556+00	CL	135
46	-L-	556+00	559+00	CL	405
47	-L-	559+00	562+00	CL	405
47	-L-	562+00	568+50	CL	870
4	-L-	07+50	11+94	RT	505
4	-L-	07+50	12+52	LT	575
4	-L-	11+94	13+00	RT	125
4	-L-	13+00	16+00	RT	345
4	-L-	15+64	17+84	LT	250
4	-L-	16+00	18+48	RT	285
4-5	-L-	17+88	23+50	LT	740
4-5	-L-	18+91	23+50	RT	535
5	-L-	23+50	25+50	RT	230
5	-L-	24+50	28+00	LT	435
5	-L-	25+50	31+85	RT	950
5-6	-L-	30+00	37+00	LT	795
6	-L-	32+50	36+50	RT	455
6	-L-	36+50	42+73	RT	780
6	-L-	37+00	43+22	LT	845
6-7	-L-	42+73	48+75	RT	685
6-7	-L-	43+22	50+50	LT	875
7	-L-	48+75	54+11	RT	610
7	-L-	50+50	52+00	LT	175
7	-L-	52+00	54+10	LT	240
7	-L-	55+00	55+43	LT	60
7-8	-L-	55+43	58+50	LT	350
8	-L-	58+50	63+50	RT	570
8	-L-	58+50	69+53	LT	1400

SUBTOTAL 15,235

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-3B</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

EROSION CONTROL MATTING IN DITCHES

EROSION CONTROL MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
8	-L-	63+50	68+84	RT	670
8-9	-L-	68+88	78+50	RT	1490
8-9	-L-	69+59	74+50	LT	600
9-10	-L-	74+50	85+50	LT	1250
9	-L-	78+50	84+00	RT	625
10	-L-	84+00	90+50	RT	1110
10	-L-	85+50	91+65	LT	700
10	-L-	91+65	92+76	LT	130
10-11	-L-	93+19	99+34	LT	700
10-11	-L-	94+00	98+50	RT	515
11	-L-	98+50	98+94	RT	80
11	-L-	98+94	109+00	RT	1145
11	-L-	99+39	105+90	LT	740
11-13	-L-	108+88	129+00	LT	3490
11-13	-L-	109+45	129+00	RT	2835
13	-L-	128+66	131+00	LT	515
13	-L-	129+90	132+59	RT	195
13-14	-L-	133+75	136+29	RT	180
13-14	-L-	135+50	136+67	LT	300
14	-L-	136+67	143+50	LT	740
14	-L-	138+65	147+50	RT	1010
14-15	-L-	144+50	151+00	LT	1355
14-15	-L-	147+50	154+25	RT	175
15	-L-	151+00	152+50	LT	240
15-18	-L-	158+50	188+50	LT	6225
15-16	-L-	160+20	163+50	RT	1015
16-17	-L-	163+50	187+00	RT	5860
17-18	-L-	187+00	191+50	RT	705
18	-L-	188+50	190+00	LT	175
18	-L-	190+00	194+00	LT	455
SUBTOTAL					35,225

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
18-19	-L-	191+50	200+40	RT	1175
18-19	-L-	194+00	197+50	LT	400
19-20	-L-	202+00	212+27	LT	1510
19	-L-	204+00	205+00	RT	70
19-20	-L-	205+00	212+44	RT	845
20	-L-	212+27	216+50	LT	485
20	-L-	212+44	217+00	RT	520
20-21	-L-	216+50	230+65	LT	1955
20-21	-L-	217+00	229+00	RT	1575
21-22	-L-	230+50	238+50	RT	1130
21-22	-L-	230+65	246+20	LT	2190
22	-L-	238+50	240+50	RT	230
22-23	-L-	242+61	251+74	RT	1045
22-23	-L-	246+31	252+40	LT	695
23	-L-	251+74	255+35	RT	410
23	-L-	252+40	253+92	LT	175
23	-L-	254+30	260+64	LT	625
23	-L-	256+00	261+50	RT	435
23	-L-	260+64	262+00	LT	95
24	-L-	263+75	266+20	RT	210
24	-L-	265+71	273+75	LT	1155
24	-L-	266+20	271+00	RT	335
24-25	-L-	273+75	275+00	LT	90
24-25	-L-	274+40	277+00	RT	200
25	-L-	277+00	280+19	RT	225
25	-L-	277+50	280+16	LT	190
25	-L-	280+19	282+00	RT	210
25	-L-	281+08	282+50	LT	170
25-26	-L-	282+00	294+00	RT	1605
25-26	-L-	282+50	288+50	LT	685
SUBTOTAL					20,640

10/14/2021
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Bhuskey

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-3C</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

EROSION CONTROL MATTING IN DITCHES

EROSION CONTROL MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
26	-L-	288+50	292+35	LT	440
26	-L-	292+35	294+00	LT	190
26	-L-	294+00	300+76	LT	770
26	-L-	294+00	299+50	RT	385
26-27	-L-	300+36	305+50	RT	400
26-27	-L-	300+76	306+00	LT	600
27	-L-	305+50	310+00	RT	315
26-27	-L-	306+75	315+00	LT	1330
27-28	-L-	310+00	315+71	RT	650
28	-L-	315+00	315+57	LT	90
28	-L-	315+57	316+50	LT	145
28	-L-	315+71	319+00	RT	230
28	-L-	316+50	320+50	LT	490
28	-L-	320+50	322+50	LT	205
28-29	-L-	322+00	327+50	RT	485
28-29	-L-	322+50	327+30	LT	570
29	-L-	327+30	331+25	LT	585
29	-L-	327+50	329+50	RT	155
29	-L-	329+50	331+50	RT	140
29	-L-	331+25	340+00	LT	1380
29	-L-	331+50	335+50	RT	410
29	-L-	335+50	340+00	RT	515
29-30	-L-	340+00	342+00	LT	385
29-30	-L-	340+00	344+40	RT	945
30-31	-L-	352+50	356+00	RT	320
30-31	-L-	352+50	355+87	LT	385
31	-L-	355+87	363+50	LT	870
31	-L-	356+00	365+50	RT	1385
32	-L-	367+60	368+50	LT	195
32	-L-	368+50	373+00	LT	595

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
32	-L-	370+50	372+50	RT	405
32-33	-L-	372+50	381+00	RT	1075
32-33	-L-	373+00	382+50	LT	1175
33	-L-	381+00	387+00	RT	875
33	-L-	382+50	387+00	LT	660
33	-L-	387+00	389+00	RT	230
33	-L-	387+00	389+20	LT	250
33-34	-L-	390+30	395+00	RT	535
33-34	-L-	390+30	395+00	LT	535
34	-L-	395+00	398+95	RT	450
34	-L-	395+00	398+50	LT	245
34	-L-	398+50	398+91	LT	30
34	-L-	398+91	401+17	LT	330
34	-L-	399+45	401+16	RT	120
34	-L-	401+16	405+70	RT	520
34	-L-	401+17	405+70	LT	320
34-35	-L-	405+94	417+50	RT	1370
34-35	-L-	406+00	416+95	LT	1245
35-36	-L-	416+95	419+53	LT	180
35-36	-L-	417+50	419+66	RT	155
36	-L-	419+53	421+00	LT	105
36	-L-	419+66	421+09	RT	105
36	-L-	421+09	426+30	RT	595
36	-L-	426+50	430+19	RT	260
36-37	-L-	430+19	434+50	RT	300
36-37	-L-	430+25	434+50	LT	485
37	-L-	434+50	435+88	RT	100
37	-L-	434+50	435+80	LT	95
37	-L-	435+88	437+30	RT	100
37	-L-	437+80	442+69	RT	560

SUBTOTAL 15,560

SUBTOTAL 13,410

10/14/2021
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Bhuskey

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-3D</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

EROSION CONTROL MATTING IN DITCHES

EROSION CONTROL MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
37	-L-	439+00	441+00	LT	260
37	-L-	441+00	442+69	LT	120
37-38	-L-	442+69	446+00	RT	235
37-38	-L-	442+69	445+50	LT	320
38	-L-	445+50	452+40	LT	785
38	-L-	446+35	451+00	RT	325
38	-L-	451+00	452+37	RT	100
38	-L-	452+37	453+50	RT	170
38-39	-L-	453+50	458+50	RT	920
39	-L-	458+50	465+15	RT	1195
39	-L-	460+80	461+75	LT	70
39	-L-	463+80	465+15	LT	200
39-40	-L-	465+15	471+90	LT	1000
39-40	-L-	465+15	471+20	RT	690
40	-L-	471+50	475+15	RT	415
40	-L-	475+15	477+46	RT	360
40	-L-	477+46	480+00	RT	260
40	-L-	480+00	481+18	LT	125
40-41	-L-	480+00	486+75	RT	985
40-41	-L-	481+50	486+75	LT	600
41	-L-	486+75	490+00	RT	335
41	-L-	486+75	490+00	LT	230
41	-L-	490+00	493+00	LT	210
41	-L-	490+00	495+00	RT	570
41-42	-L-	493+00	497+50	LT	315
41-42	-L-	495+00	499+75	RT	540
42	-L-	498+75	499+50	LT	90
42	-L-	499+50	502+50	LT	345
42	-L-	501+20	505+00	RT	350
42	-L-	503+50	507+50	LT	455

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
42	-L-	505+00	508+50	RT	360
42-43	-L-	507+50	509+50	LT	230
42-43	-L-	508+50	511+00	RT	255
43	-L-	511+00	512+15	RT	135
43	-L-	513+50	515+00	LT	105
43	-L-	516+00	521+35	LT	660
43	-L-	518+50	521+25	RT	195
43-44	-L-	521+30	523+00	RT	175
43-44	-L-	521+40	526+30	LT	560
44	-L-	523+00	523+90	RT	95
44	-L-	526+70	528+75	LT	235
44-45	-L-	528+75	534+00	LT	600
44	-L-	531+16	532+50	RT	155
44-45	-L-	532+50	533+40	RT	105
45	-L-	533+40	537+00	RT	410
45	-L-	535+16	538+00	LT	200
45	-L-	538+00	541+50	LT	400
45	-L-	541+50	544+97	RT	245
45	-L-	541+50	544+87	LT	400
45-46	-L-	545+00	551+00	LT	730
46	-L-	551+00	554+00	LT	345
46	-L-	551+15	553+00	RT	190
46	-L-	553+00	554+00	RT	105
46	-L-	554+00	556+50	RT	255
46-47	-L-	556+50	560+50	RT	585
46	-L-	557+00	557+43	LT	80
47	-L-	560+50	564+50	RT	585
47	-L-	564+50	567+00	RT	360
47	-L-	567+00	568+00	RT	150
45	-Y10-	11+62	12+50	LT	85

SUBTOTAL 12,120

SUBTOTAL 9,360

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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-3G</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

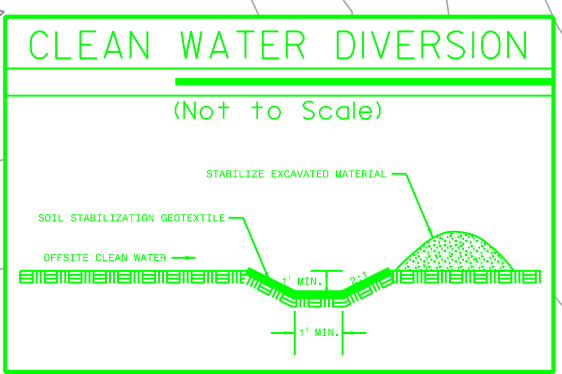
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	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.	R-2511	SHEET NO.	EC-4/CONST.4
RW SHEET NO.		ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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 4
INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE



1.5 inch Skimmer with 1.25 inch Orifice Diameter
4 ft. weir with 4 ft. weir height
ID 4-01
(See Earthen Dam with Skimmer Detail)

1.5 inch Skimmer with 1.0 inch Orifice Diameter
4 ft. weir with 3.25 ft. weir height
ID 4-03
(See Earthen Dam with Skimmer Detail)

2.0 inch Skimmer with 2.0 inch Orifice Diameter
15 ft. weir with 4.25 ft. weir height
ID 4-04
(See Earthen Dam with Skimmer Detail)

Excavate Proposed Ditch from Sta. 7+75 to Sta. 19+00 LT&RT

BEGIN PROJECT R-2511
Begin Construction
-L- CS Sta. 7+50.00

Excavate Proposed Ditch from Sta. 7+75 to Sta. 19+00 LT&RT

68 x 18 x 3
1.5 inch Skimmer with 1.0 inch Orifice Diameter
4 ft. weir
ID 4-02

1.5 inch Skimmer with 1.125 inch Orifice Diameter
4 ft. weir with 3.25 ft. weir height
ID 4-05
(See Earthen Dam with Skimmer Detail)

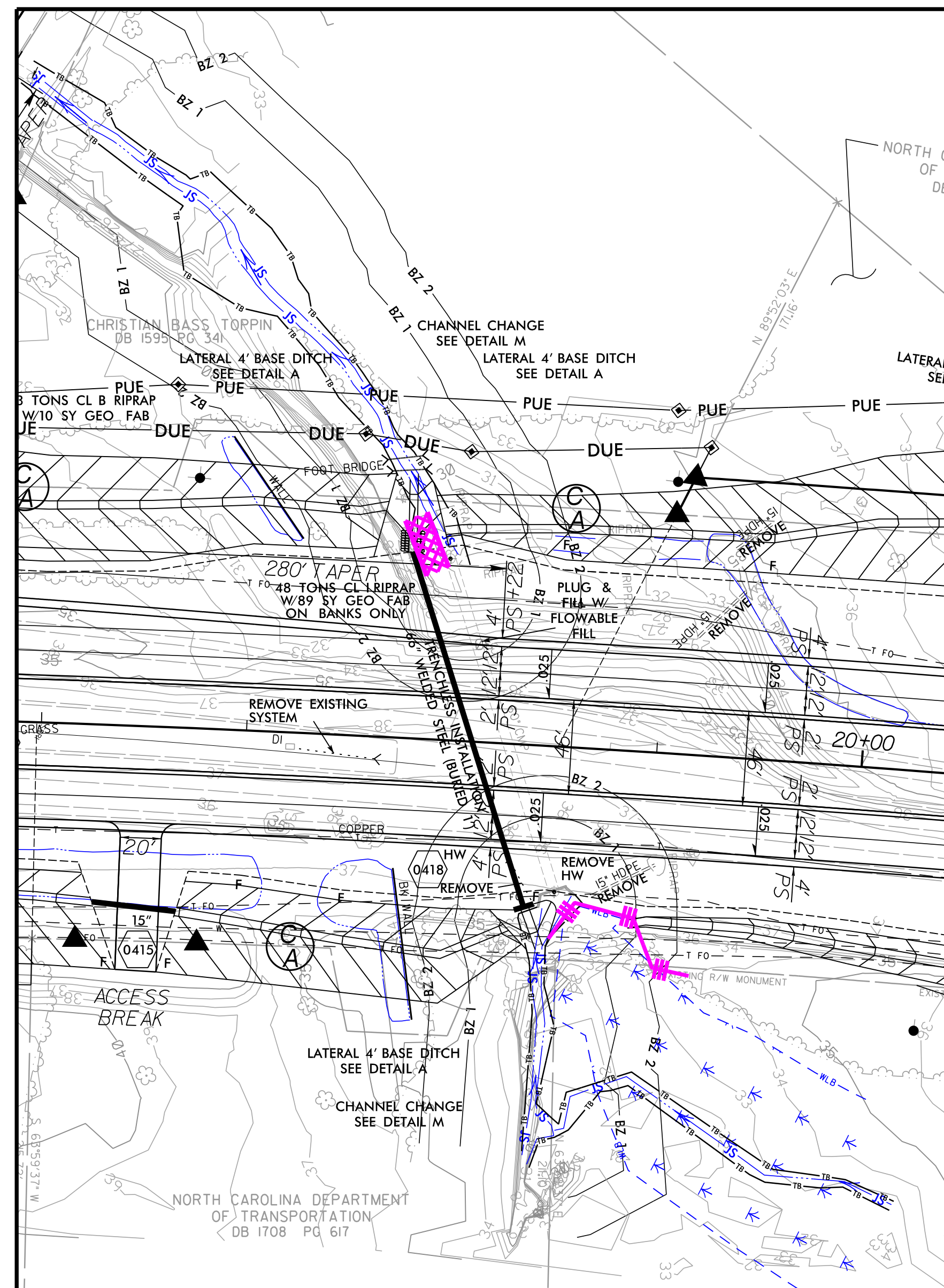
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8/2/2021
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MATCHLINE -L- STA. 19+00 SEE SHEET 5

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PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-04A/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



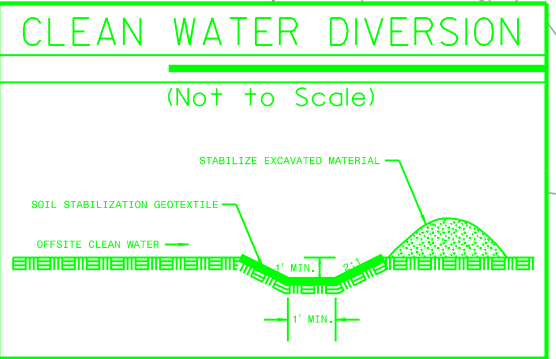
PIPE INSTALLATION SEQUENCE 1 STA. 18+09 -L-

1. MAINTAIN TRAFFICE ON EXISTING ROADWAY.
2. MAINTAIN FLOW THROUGH EXISTING 60" CMP.
3. UTILIZE SPECIAL STILLING BASIN(S) DURING PIPE INSTALLATION AS NEEDED.
4. INSTALL TEMPORARY SILT FENCE AROUND THE JURISDICTIONAL STREAMS, UPSTREAM AND DOWNSTREAM, AS SHOWN.
5. CONSTRUCT ENTRANCE AND RECEIVING PITS IN PREPARATION FOR TRENCHLESS INSTALLATION OF 66" WELDED STEEL PIPE.
6. BORE AND JACK 66" WELDED STEEL PIPE FROM UPSTREAM END.
7. REMOVE BORE PITS ONCE THE 66" WELDED STEEL PIPE IS PROPERLY INSTALLED. STABILIZE DISTURBED AREA AND BACKFILL ACCORDINGLY.
8. PLUG DOWNSTREAM END OF 60" CMP AND REMOVE THE EXISTING 60" CMP HEADWALL FROM THE UPSTREAM END.
9. RE-ROUTE STREAM THROUGH NEW 66" WELDED STEEL PIPE.
10. REMOVE SPECIAL STILLING BASIN.
11. CONSTRUCT PROPOSED ROADWAY, FILL SLOPES AND DITCHES AS SHOWN ON ROADWAY PLANS.

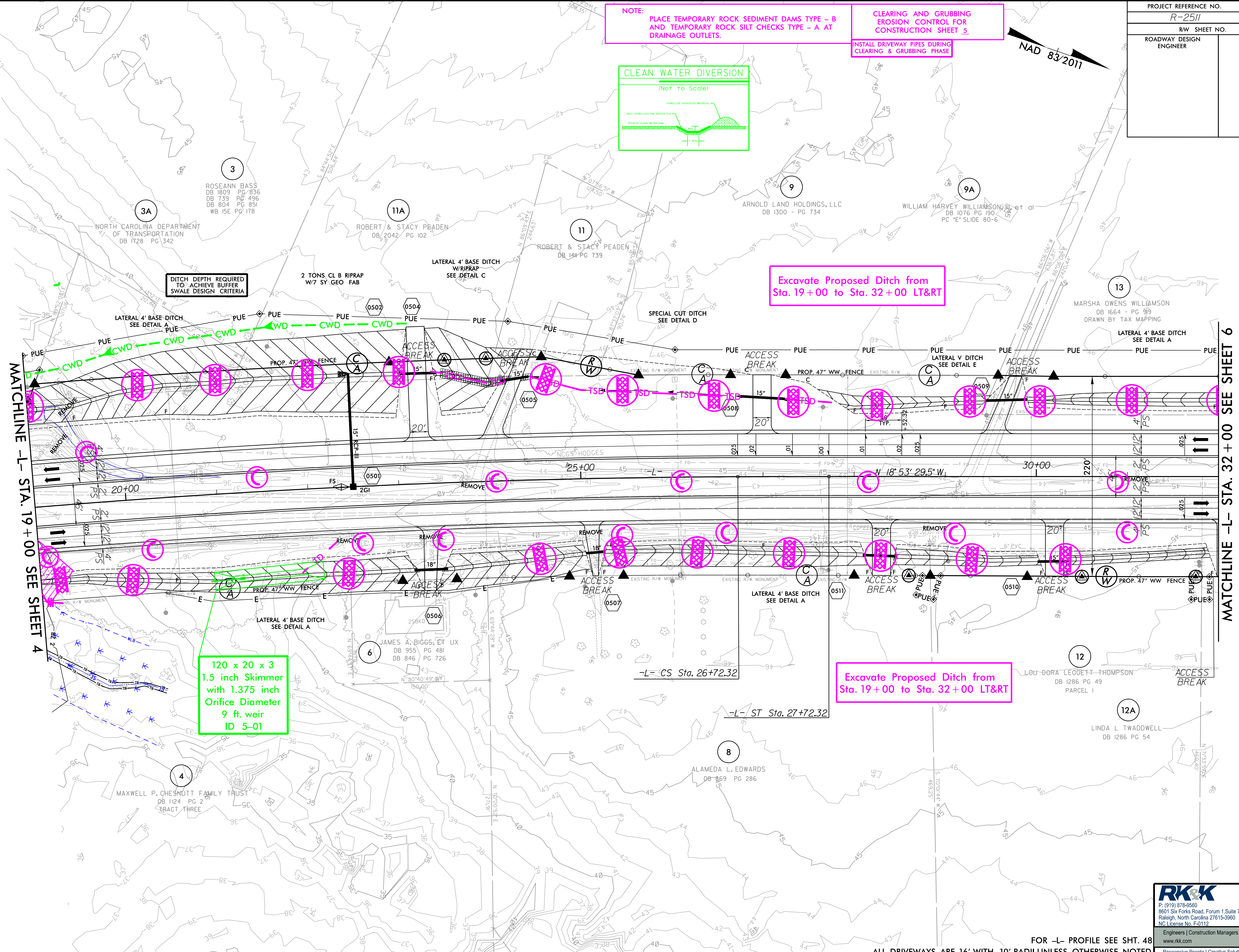
PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-05/CONST.5
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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 5
 INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE



NAD 83/2011



Excavate Proposed Ditch from Sta. 19+00 to Sta. 32+00 LT&RT

Excavate Proposed Ditch from Sta. 19+00 to Sta. 32+00 LT&RT

**120 x 20 x 3
 1.5 inch Skimmer
 with 1.375 inch
 Orifice Diameter
 9 ft. weir
 ID 5-01**

MATCHLINE -L- STA. 19+00 SEE SHEET 4

MATCHLINE -L- STA. 32+00 SEE SHEET 6

8/17/99

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FOR -L- PROFILE SEE SHT. 48
 ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED

PROJECT REFERENCE NO. R-2511	SHEET NO. EC-07/CONST.7
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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 7
INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

Install this pipe during C&G and provide a temporary extension to the earthen dam skimmer.

1.5 inch Skimmer with 1.25 inch Orifice Diameter 5 ft. weir with 4 ft. weir height ID 7-03 (See Earthen Dam with Skimmer Detail)

1.5 inch Skimmer with 0.625 inch Orifice Diameter 4 ft. weir with 2.25 ft. weir height ID 7-02 (See Earthen Dam with Skimmer Detail)

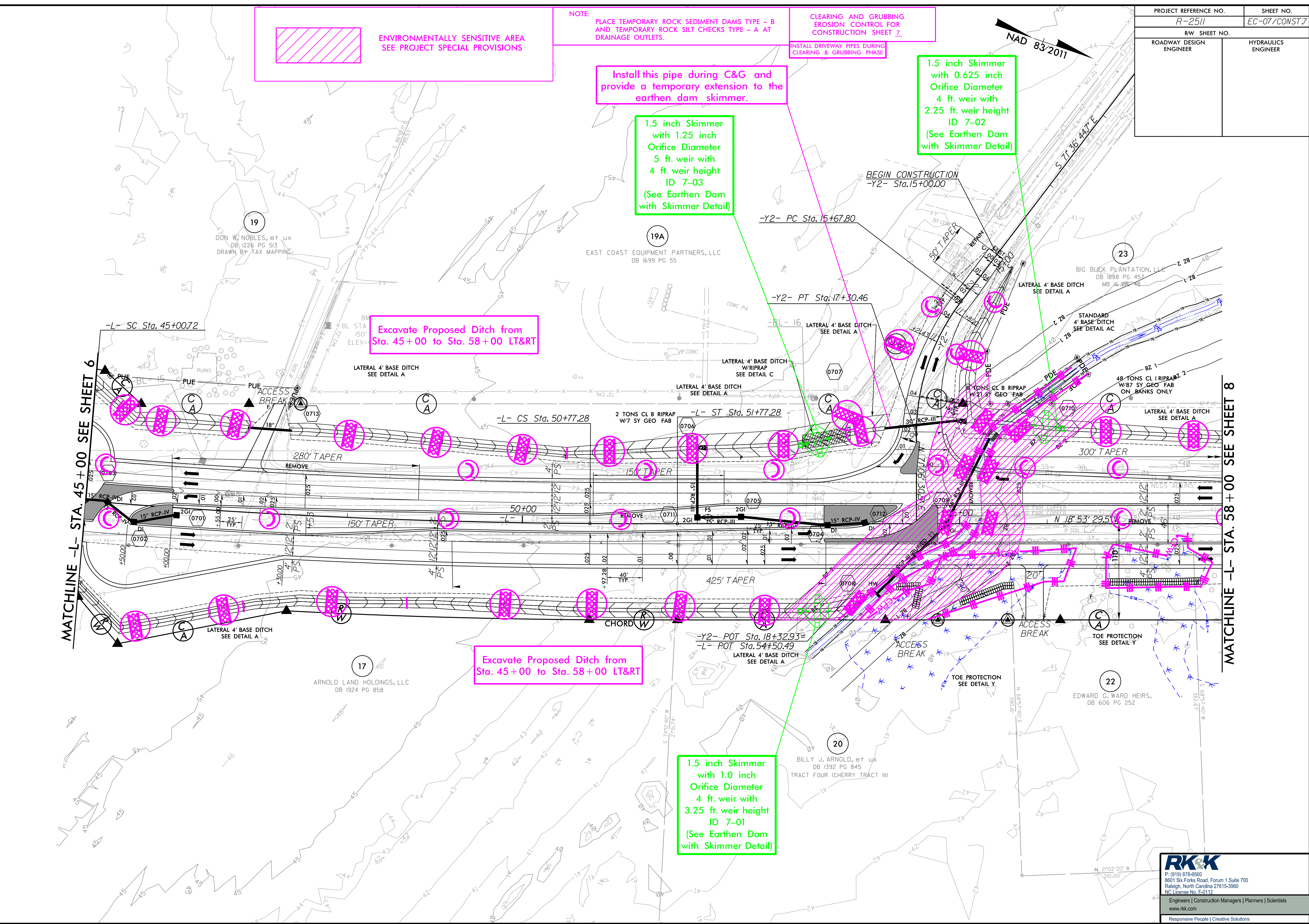
Excavate Proposed Ditch from Sta. 45+00 to Sta. 58+00 LT&RT

Excavate Proposed Ditch from Sta. 45+00 to Sta. 58+00 LT&RT

1.5 inch Skimmer with 1.0 inch Orifice Diameter 4 ft. weir with 3.25 ft. weir height ID 7-01 (See Earthen Dam with Skimmer Detail)

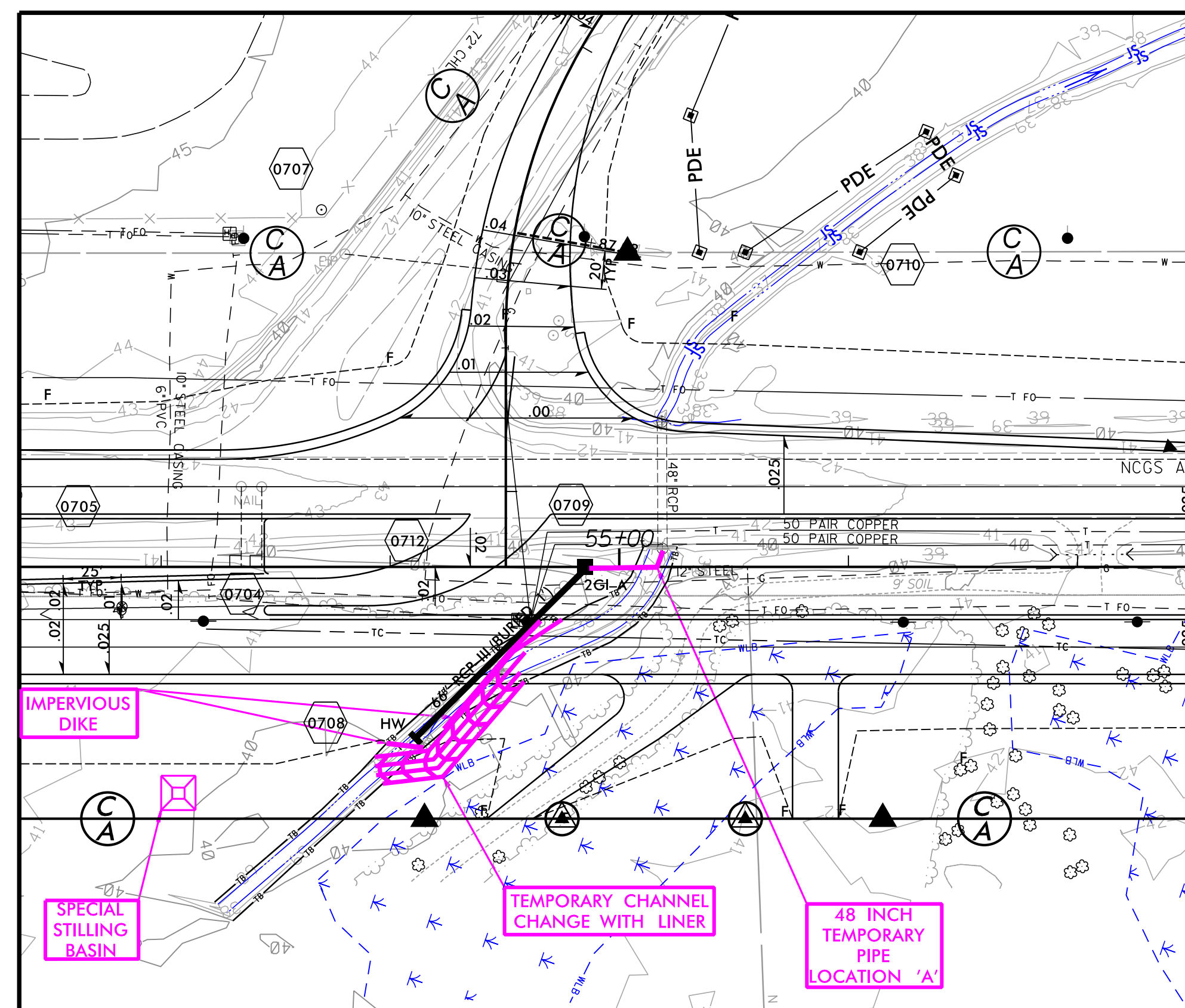
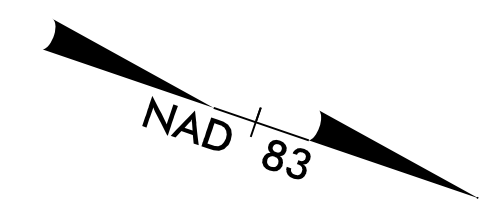
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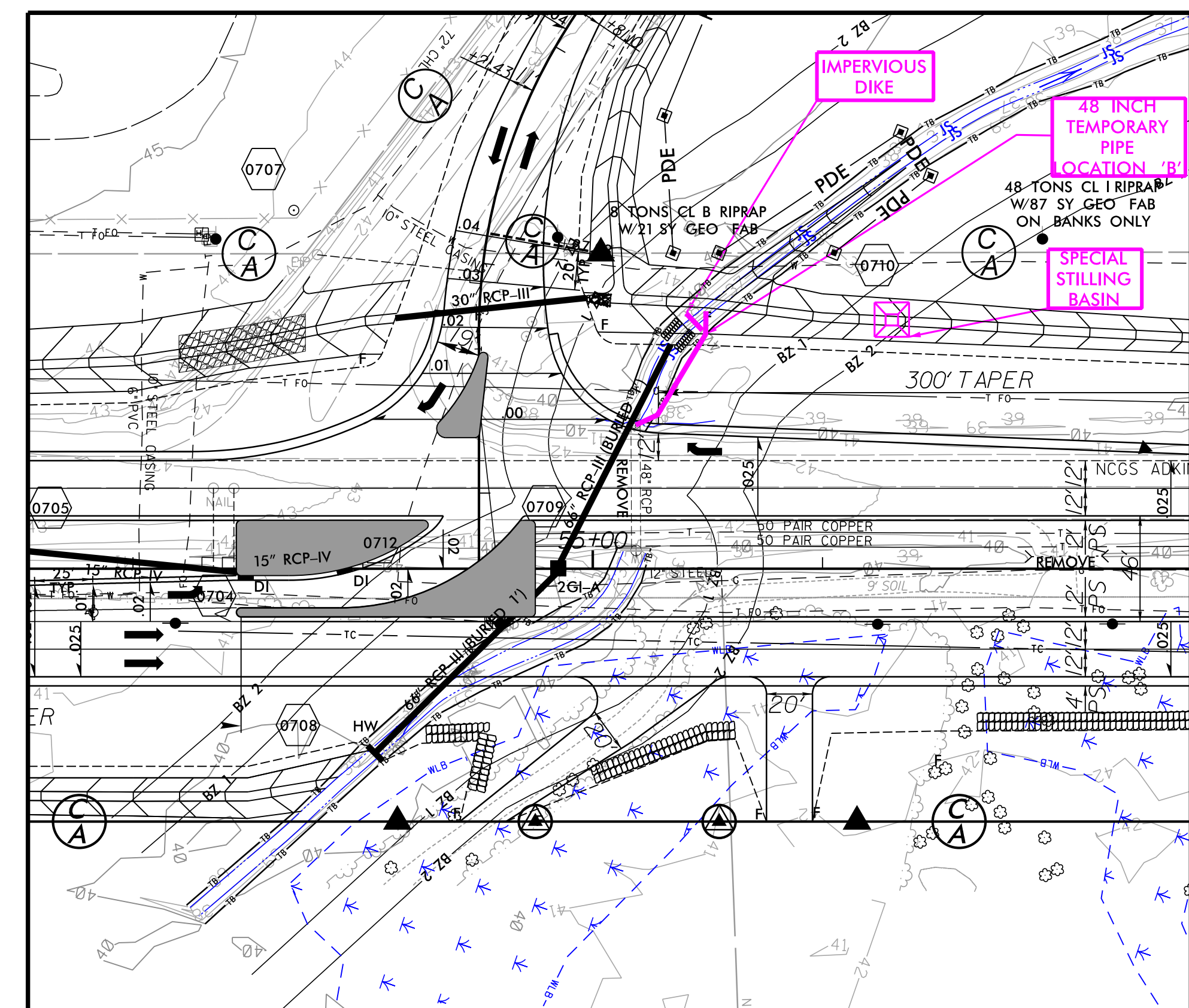
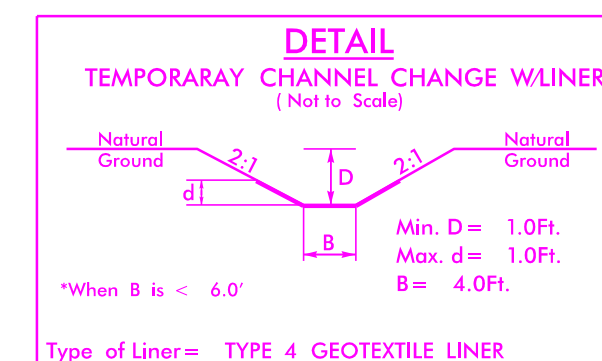
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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-07A/CONST.07
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PIPE INSTALLATION SEQUENCE 1 STA. 54+85 -L-

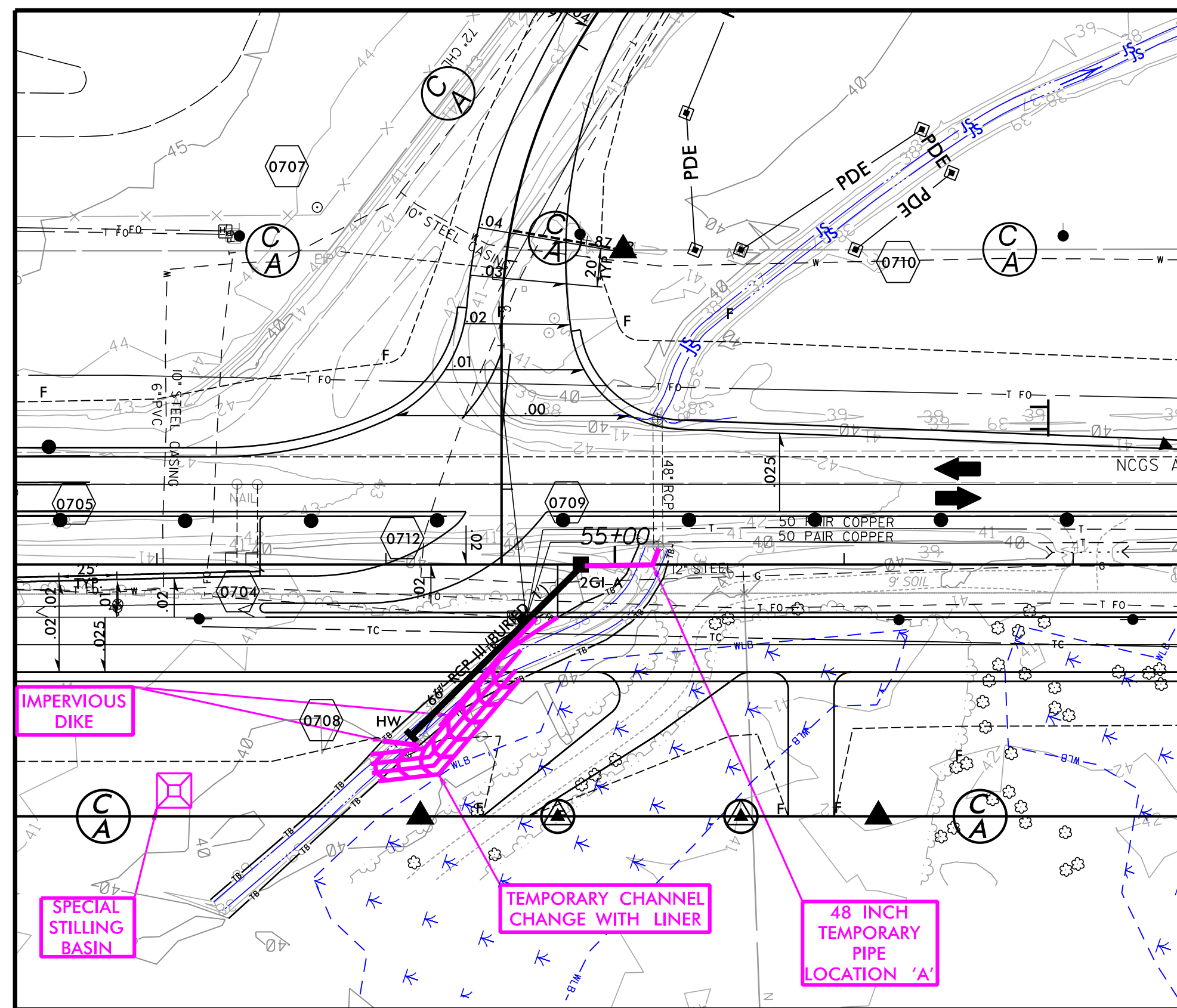
1. MAINTAIN TRAFFIC ON EXISTING PAVEMENT.
2. INSTALL A SPECIAL STILLING BASIN AT THE INLET END OF THE PROPOSED PIPES.
3. INSTALL IMPERVIOUS DIKES AND TEMPORARY CHANNEL CHANGE WITH LINER AS PER DETAIL SHOWN BELOW AT INLET END OF PROPOSED PIPE.
4. RE-ROUTE STREAM THROUGH TEMPORARY CHANNEL CHANGE.
5. INSTALL APPROXIMATELY 104 LF OF 1@66" RC PIPE, HEADWALL AND STRUCT. #0709.
6. INSTALL 48" TEMPORARY PIPE AT LOCATION 'A' FROM STRUCT. #0709 TO EXISTING 48" PIPE IN THE DRY.
7. RE-ROUTE STREAM THROUGH NEW PIPE, NEW STRUCTURE AND TEMPORARY PIPE.
8. REMOVE STILLING BASIN AND IMPERVIOUS DIKES AT INLET END.
9. CONSTRUCT PROPOSED ROADWAY PAVEMENT, FILL SLOPES AND DITCHES AS PER ROADWAY PLANS.



PIPE INSTALLATION SEQUENCE 2 STA. 54+85 -L-

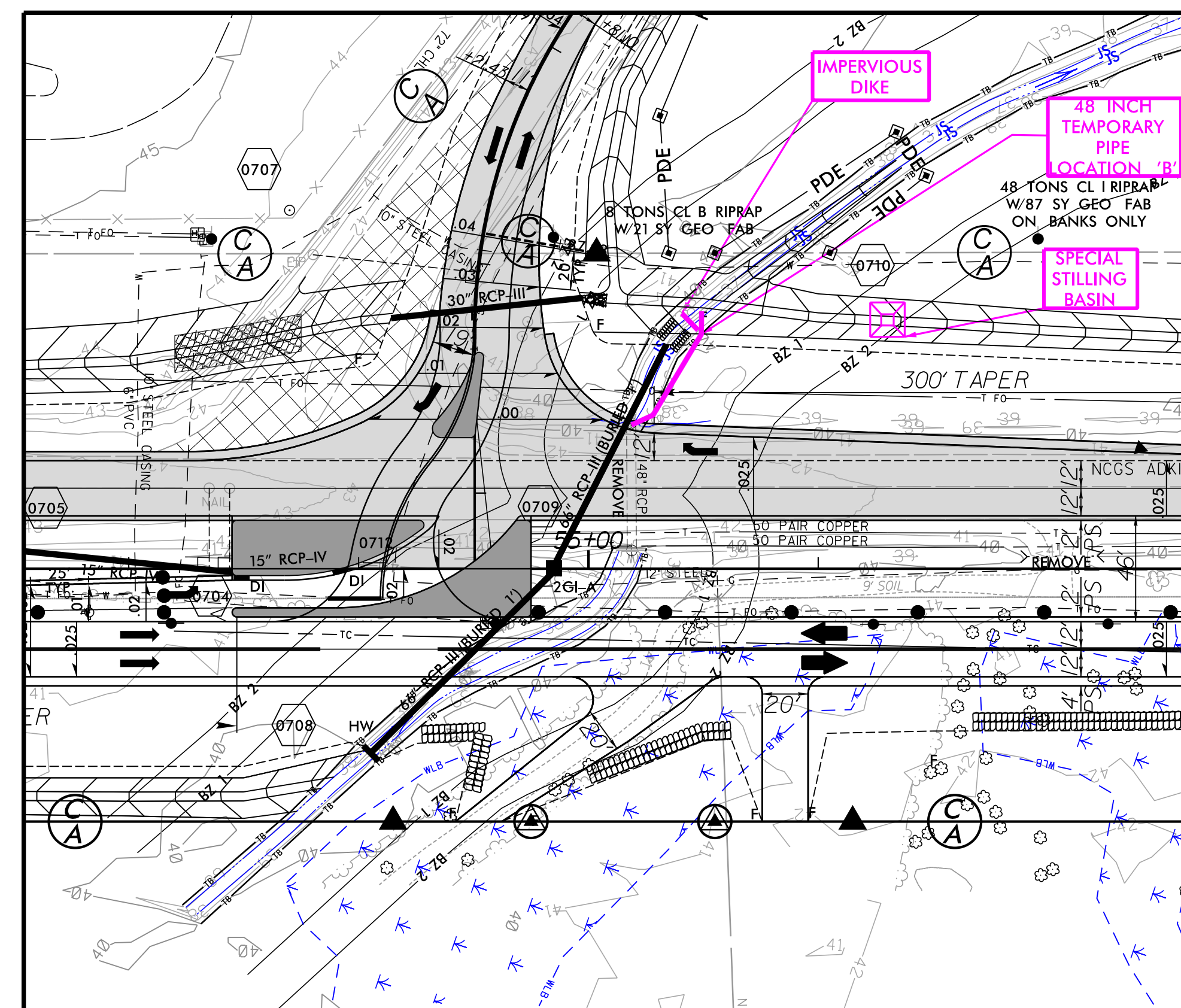
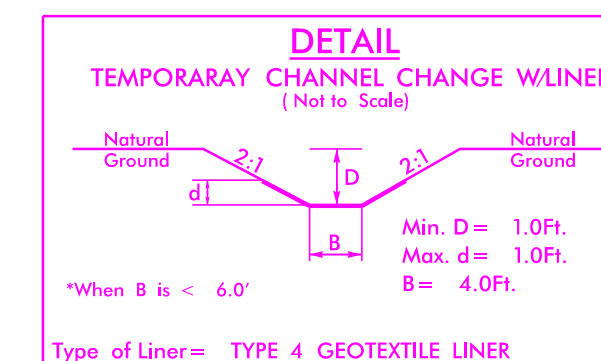
1. SWITCH TRAFFIC TO NEWLY CONSTRUCTED PAVEMENT.
1. UTILIZE A SPECIAL STILLING BASIN AT THE OUTLET END OF THE PROPOSED PIPES.
2. INSTALL IMPERVIOUS DIKES AND TEMPORARY PIPE AT LOCATION 'B' AT INLET END OF PROPOSED PIPES.
3. INSTALL APPROXIMATELY 108LF OF 1@66" RC PIPE.
4. REMOVE TEMPORARY PIPE AT LOCATION 'A', IMPERVIOUS DIKE, STILLING BASIN, AND EXISTING 48" PIPE.
5. RE-ROUTE STREAM THROUGH NEW 66" RC PIPE.
6. CONSTRUCT NEW PAVEMENT, FILL SLOPES AND DITCHES AS PER ROADWAY PLANS.

PROJECT REFERENCE NO. R-2511	SHEET NO. EC-07A/CONST.07
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PIPE INSTALLATION SEQUENCE 1 STA. 54+85 -L-

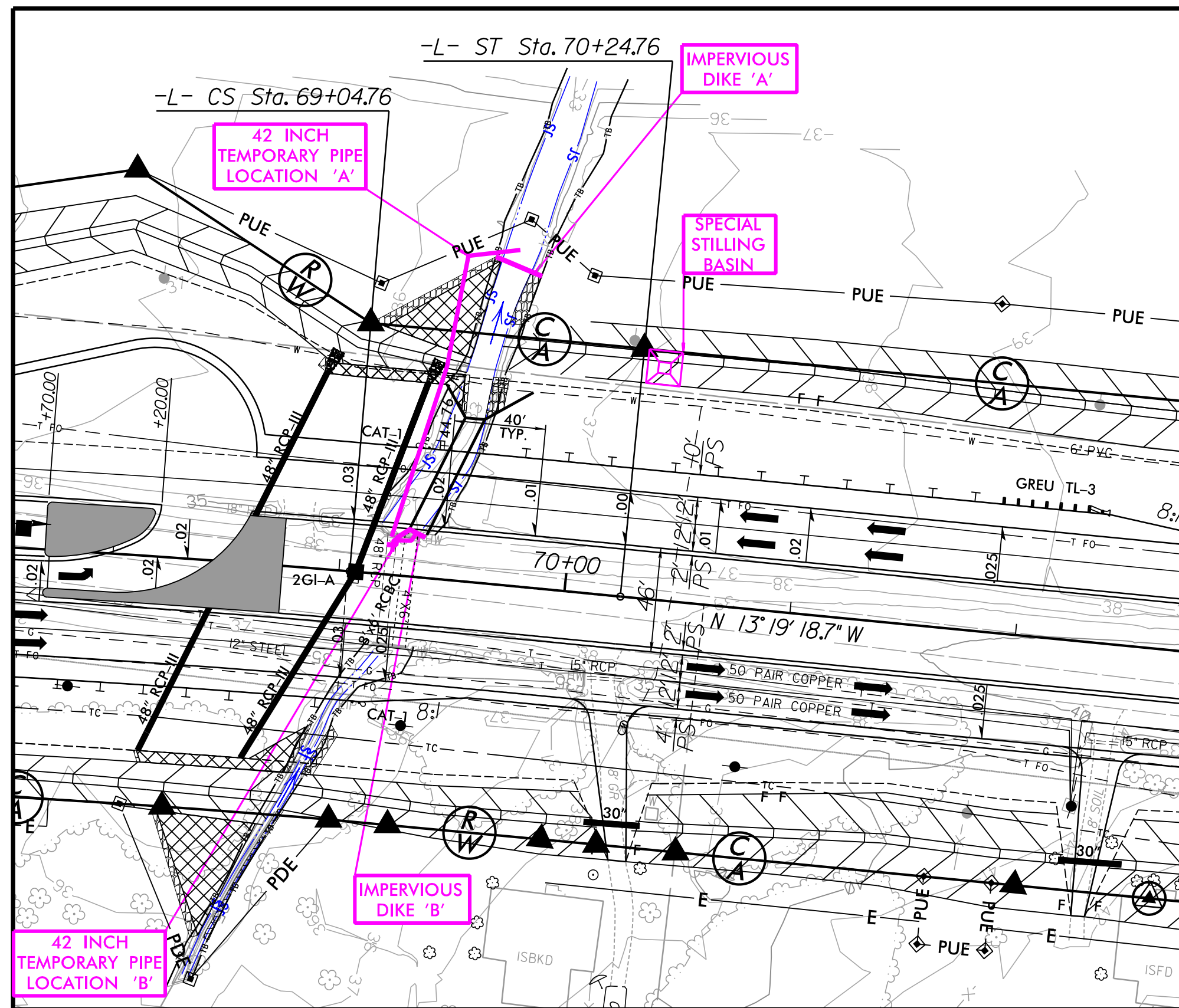
1. MAINTAIN TRAFFIC ON EXISTING PAVEMENT.
2. INSTALL A SPECIAL STILLING BASIN AT THE INLET END OF THE PROPOSED PIPES.
3. INSTALL IMPERVIOUS DIKES AND TEMPORARY CHANNEL CHANGE WITH LINER AS PER DETAIL SHOWN BELOW AT INLET END OF PROPOSED PIPE.
4. RE-ROUTE STREAM THROUGH TEMPORARY CHANNEL CHANGE.
5. INSTALL APPROXIMATELY 104 LF OF 1@66" RC PIPE, HEADWALL AND STRUCT. #0709.
6. INSTALL 48" TEMPORARY PIPE AT LOCATION 'A' FROM STRUCT. #0709 TO EXISTING 48" PIPE IN THE DRY.
7. RE-ROUTE STREAM THROUGH NEW PIPE, NEW STRUCTURE AND TEMPORARY PIPE.
8. REMOVE STILLING BASIN AND IMPERVIOUS DIKES AT INLET END.
9. CONSTRUCT PROPOSED ROADWAY PAVEMENT, FILL SLOPES AND DITCHES AS PER ROADWAY PLANS.



PIPE INSTALLATION SEQUENCE 2 STA. 54+85 -L-

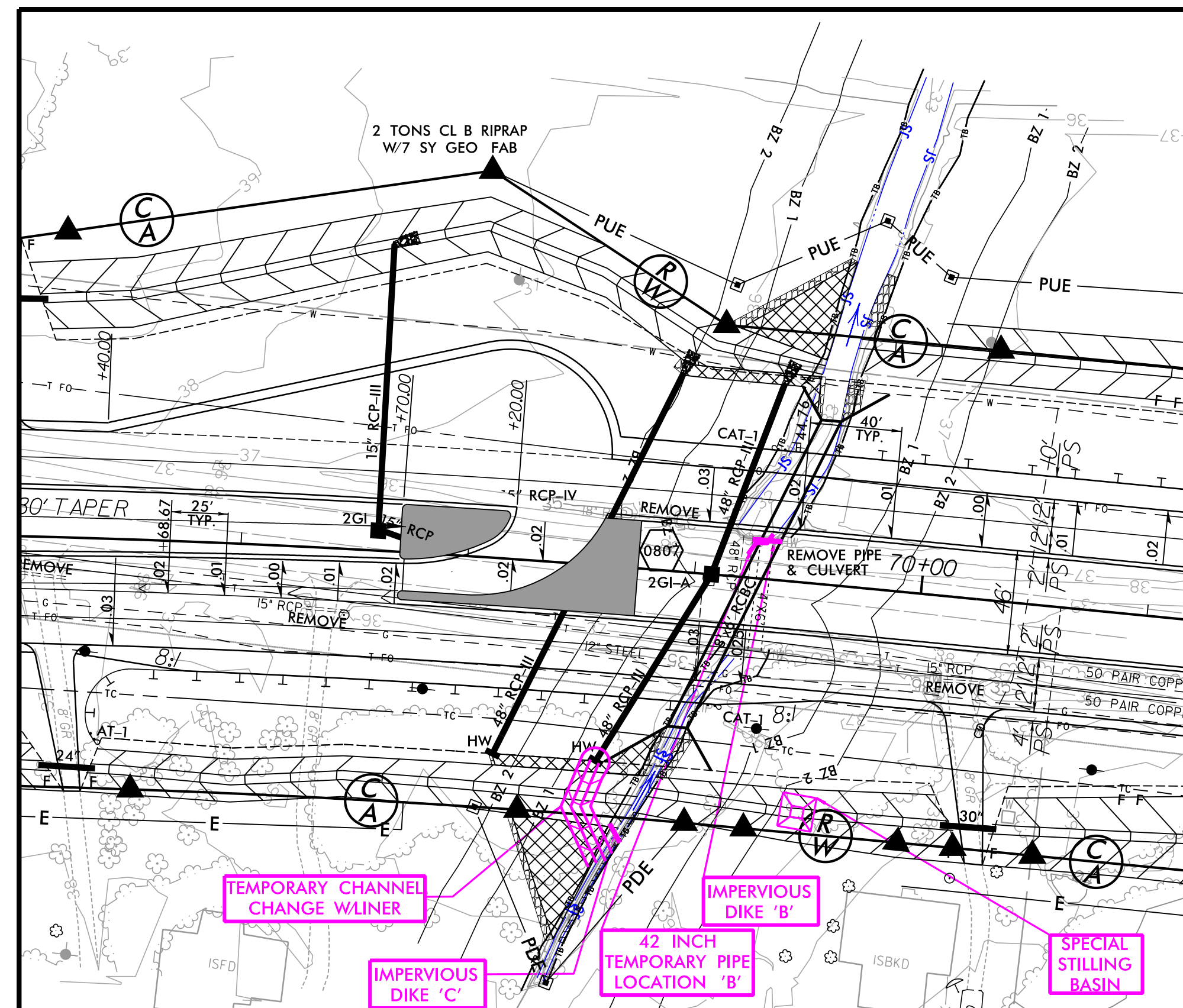
1. SWITCH TRAFFIC TO NEWLY CONSTRUCTED PAVEMENT.
1. UTILIZE A SPECIAL STILLING BASIN AT THE OUTLET END OF THE PROPOSED PIPES.
2. INSTALL IMPERVIOUS DIKES AND TEMPORARY PIPE AT LOCATION 'B' AT INLET END OF PROPOSED PIPES.
3. INSTALL APPROXIMATELY 108LF OF 1@66" RC PIPE.
4. REMOVE TEMPORARY PIPE AT LOCATION 'A', IMPERVIOUS DIKE, STILLING BASIN, AND EXISTING 48" PIPE.
5. RE-ROUTE STREAM THROUGH NEW 66" RC PIPE.
6. CONSTRUCT NEW PAVEMENT, FILL SLOPES AND DITCHES AS PER ROADWAY PLANS.

PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-08A/CONST.06
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



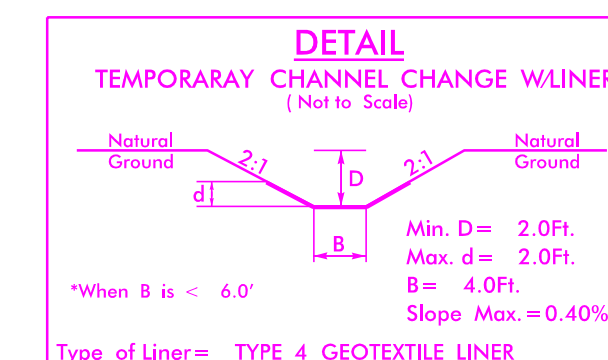
PIPE INSTALLATION SEQUENCE 1 STA. 69+25.5 -L-

1. MAINTAIN TRAFFIC ON EXISTING PAVEMENT.
2. UTILIZE A SPECIAL STILLING BASIN AT THE OUTLET END OF THE PROPOSED CULVERT.
3. INSTALL APPROXIMATELY 152 LF OF TEMPORARY PIPE AT LOCATION 'A'. INSTALL IMPERVIOUS DIKE 'A' AT OUTLET END OF PROPOSED CULVERT.
4. DIVERT STREAM THROUGH TEMPORARY PIPE.
5. INSTALL APPROXIMATELY 57 LF OF 8'x6' RCBC AND WINGWALLS. INSTALL APPROXIMATELY 72 LF OF BOTH 48" RC FLOODPLAIN PIPES AT STA. 68+50 AND STA. 69+10 RESPECTIVELY.
6. REMOVE APPROXIMATELY 6' OF BOTH THE EXISTING 48" RC PIPE AND THE EXISTING RCBC. INSTALL IMPERVIOUS DIKE 'B' AND TEMPORARY 42" PIPE AT LOCATION 'B' FROM EXISTING 48" RC PIPE TO PROPOSED RCBC.
7. DIVERT STREAM THROUGH EXISTING 48" RC PIPE, TEMPORARY PIPE AND NEW RCBC.
8. REMOVE STILLING BASIN, IMPERVIOUS DIKE 'A' AND TEMPORARY PIPE AT LOCATION 'A' AT INLET END.
9. CONSTRUCT PROPOSED ROADWAY PAVEMENT AND FILL SLOPES AS PER ROADWAY PLANS.



PIPE INSTALLATION SEQUENCE 2 STA. 69+25.5 -L-

1. SWITCH TRAFFIC TO NEWLY CONSTRUCTED PAVEMENT.
1. UTILIZE A SPECIAL STILLING BASIN AT THE INLET END OF THE PROPOSED PIPES.
2. INSTALL APPROXIMATELY 115 LF OF 48" RC PIPE AT STA. 68+50 & STA. 69+10, INCLUDING HEADWALLS AND STRUCTURE NO. 0809.
3. INSTALL IMPERVIOUS DIKE 'C' AND APPROXIMATELY 42 LF OF TEMPORARY CHANGE W/LINER AT INLET END OF PROPOSED RCBC. INSTALL AS PER DETAIL BELOW. DIVERT WATER THROUGH TEMPORARY CHANNEL CHANGE AND NEW 48" RC PIPE AT STA. 69+10.
4. REMOVE TEMPORARY PIPE AT LOCATION 'B', IMPERVIOUS DIKE 'B' AND BOTH THE EXISTING 48" RC PIPE AND THE RCBC. INSTALL APPROXIMATELY 94 LF OF 8'x6' RCBC, INCLUDING WINGWALLS AND OUTLET IMPROVEMENTS.
5. REMOVE TEMPORARY CHANNEL CHANGE AT INLET, IMPERVIOUS DIKE 'C', AND STILLING BASIN.
6. DIVERT STREAM THROUGH NEW RCBC.
7. CONSTRUCT NEW PAVEMENT, FILL SLOPES AND DITCHES AS PER ROADWAY PLANS.

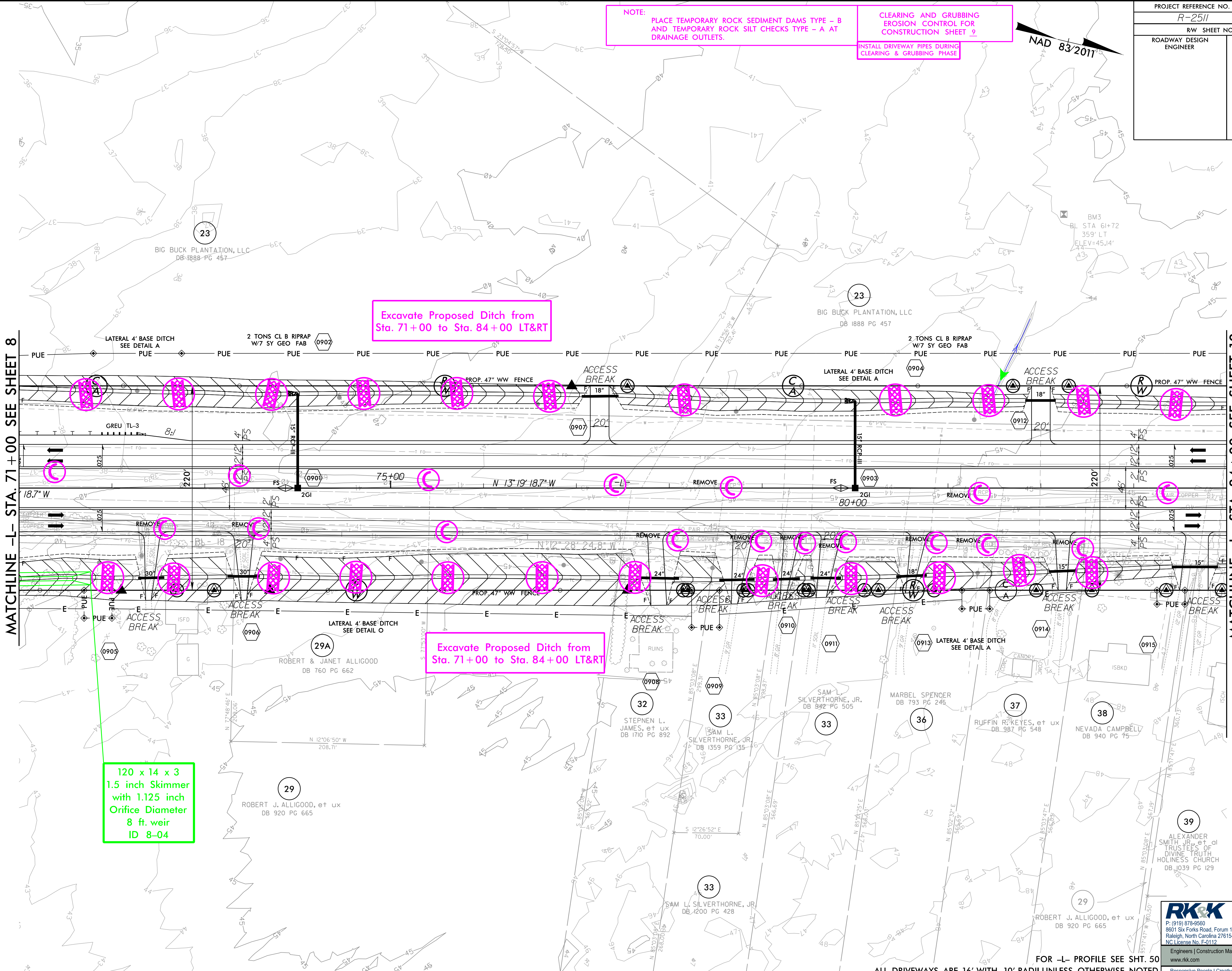
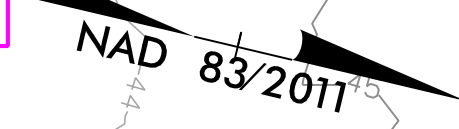


PROJECT REFERENCE NO. R-2511	SHEET NO. EC-09/CONST.9
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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 9

INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE



Excavate Proposed Ditch from Sta. 71+00 to Sta. 84+00 LT&RT

Excavate Proposed Ditch from Sta. 71+00 to Sta. 84+00 LT&RT

120 x 14 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
8 ft. weir
ID 8-04

MATCHLINE -L- STA. 71+00 SEE SHEET 8

MATCHLINE -L- STA. 84+00 SEE SHEET 10

8/17/99

8/2/2021

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FOR -L- PROFILE SEE SHT. 50

ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

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PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-10/CONST.10
RW 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.

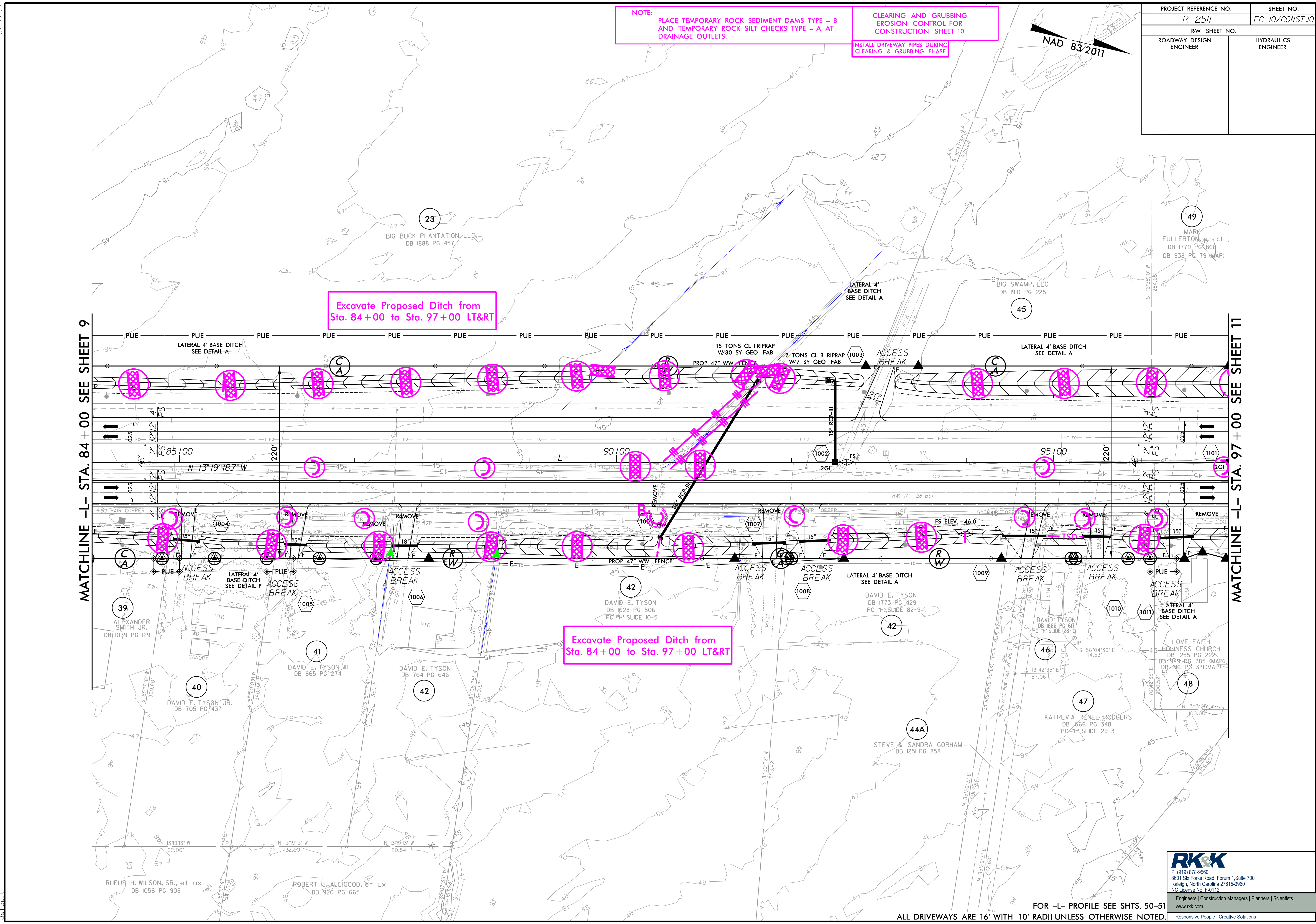
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 10

INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

NAD 83/2011

MATCHLINE -L- STA. 84+00 SEE SHEET 9

MATCHLINE -L- STA. 97+00 SEE SHEET 11



Excavate Proposed Ditch from Sta. 84+00 to Sta. 97+00 LT&RT

Excavate Proposed Ditch from Sta. 84+00 to Sta. 97+00 LT&RT

8/17/99

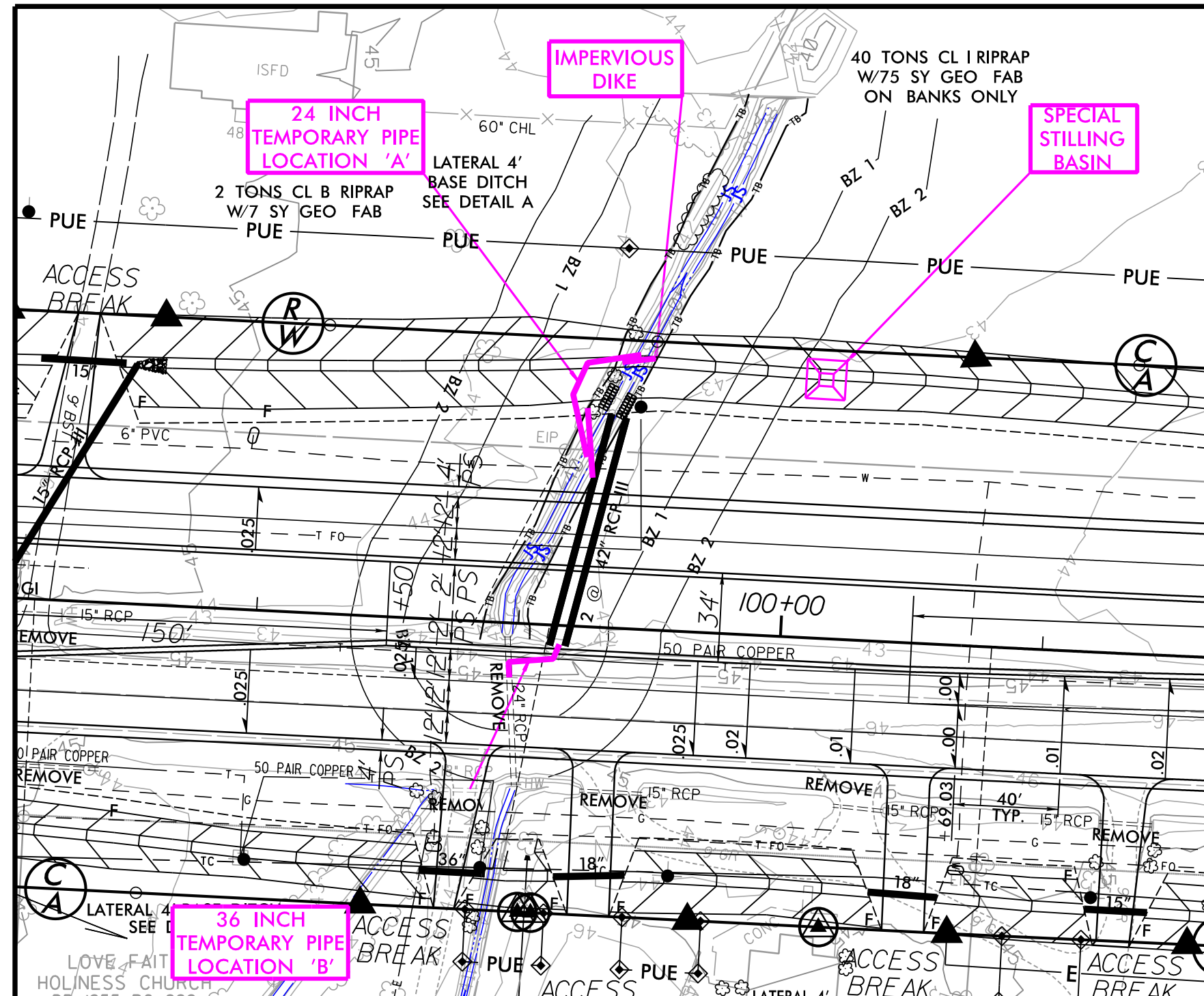
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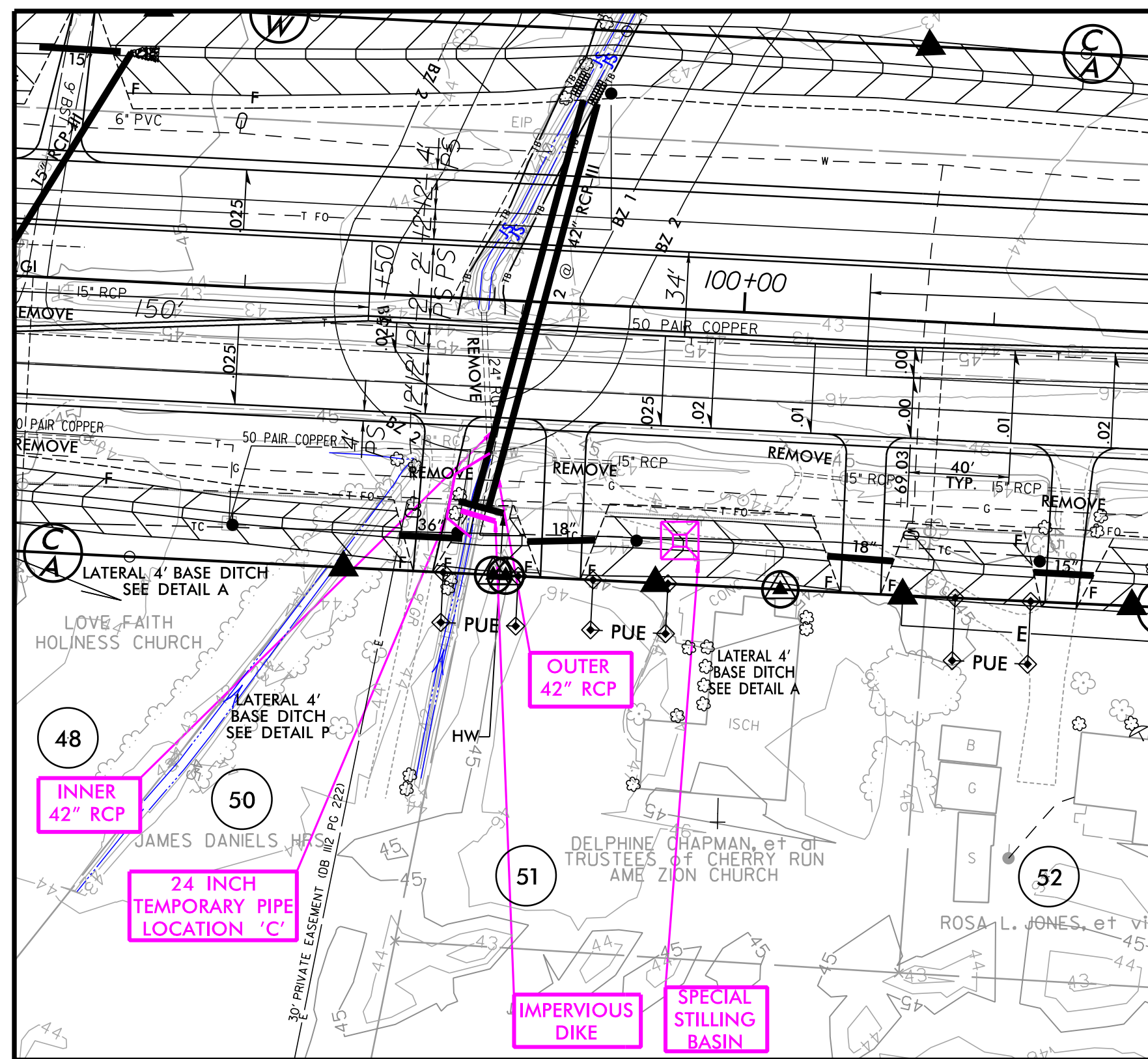
FOR -L- PROFILE SEE SHTS. 50-51
 ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

PROJECT REFERENCE NO. R-2511	SHEET NO. EC-IIA/CONST II
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PIPE INSTALLATION SEQUENCE 1 STA. 99+19 -L-

1. UTILIZE A SPECIAL STILLING BASIN AT THE OUTLET END OF THE PROPOSED PIPES.
2. INSTALL IMPERVIOUS DIKES AND APPROX. 63' OF TEMPORARY PIPE AT LOCATION 'A'.
3. INSTALL TEMPORARY SHORING AS SHOWN ON TRAFFIC CONTROL PLANS. MAINTAIN TRAFFIC ON EXISTING PAVEMENT.
4. INSTALL APPROXIMATELY 92 LF OF 2@42" RC PIPES.
5. REMOVE APPROXIMATELY 10' OF EXISTING 24" PIPE AND INSTALL TEMPORARY PIPE AT LOCATION 'B'.
6. REMOVE STILLING BASIN, IMPERVIOUS DIKE AND TEMPORARY PIPE AT LOCATION 'A'.
7. RE-ROUTE STREAM THROUGH EXISTING, TEMPORARY AND NEW PIPES.
8. CONSTRUCT PROPOSED ROADWAY, FILL SLOPES AND DITCHES AS SHOWN ON ROADWAY PLANS.



PIPE INSTALLATION SEQUENCE 2 STA. 99+19 -L-

1. UTILIZE A SPECIAL STILLING BASIN AT THE INLET END OF THE PROPOSED PIPES.
2. INSTALL APPROXIMATELY 47' OF TEMPORARY PIPE AND IMPERVIOUS DIKE AT LOCATION 'C'.
3. INSTALL APPROXIMATELY 76 LF OF OUTER 42" RC PIPE.
4. REMOVE IMPERVIOUS DIKE AND TEMPORARY PIPE AT LOCATION 'C'. RE-ROUTE STREAM INTO NEW 42" RC PIPE.
5. REMOVE EXISTING 24" PIPE AND TEMPORARY PIPE AT LOCATION 'A', AS SHOWN IN SEQUENCE 1.
6. INSTALL APPROXIMATELY 76 LF OF INNER 42" RC PIPE.
7. RE-ROUTE STREAM THROUGH BOTH NEW 42" RC PIPES.
8. CONSTRUCT ROADWAY, FILL SLOPES AND DITCH AS SHOWN ON ROADWAY PLANS.

8/17/99
 8/4/2021
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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-12/CONST.12
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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
INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

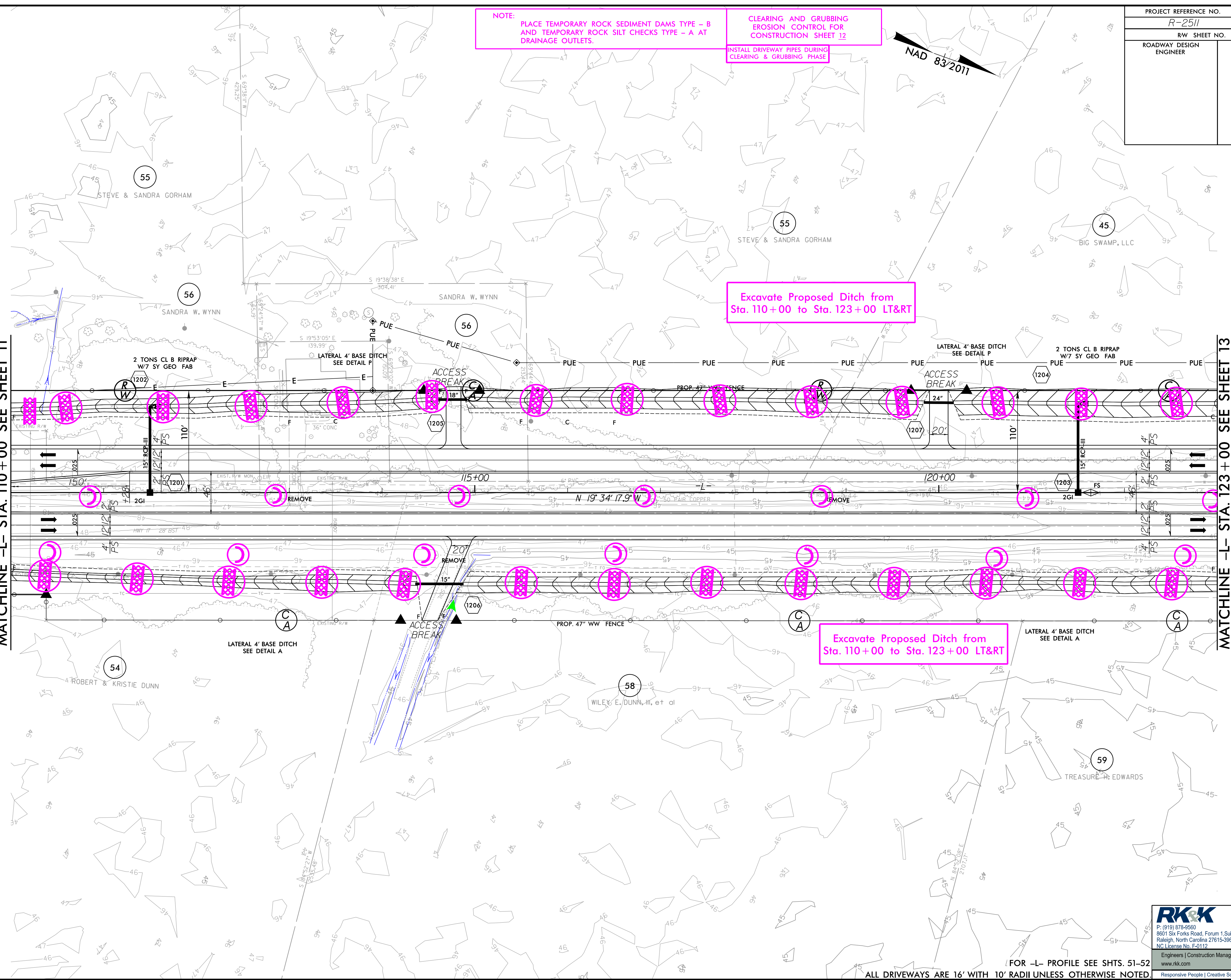


Excavate Proposed Ditch from Sta. 110+00 to Sta. 123+00 LT&RT

Excavate Proposed Ditch from Sta. 110+00 to Sta. 123+00 LT&RT

MATCHLINE -L- STA. 110+00 SEE SHEET 11

MATCHLINE -L- STA. 123+00 SEE SHEET 13



8/17/99

8/2/2021
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FOR -L- PROFILE SEE SHTS. 51-52
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-13/CONST.13
RW 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.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 13
INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE



2.5 inch Skimmer with 2.25 inch Orifice Diameter
18 ft. weir with 3.25 ft. weir height
ID 13-01
(See Earthen Dam with Skimmer Detail)

Excavate Proposed Ditch from Sta. 123+00 to Sta. 136+00 LT&RT

2 inch Skimmer with 2 inch Orifice Diameter
12 ft. weir with 2.75 ft. weir height
ID 13-02
(See Earthen Dam with Skimmer Detail)

Excavate Proposed Ditch from Sta. 123+00 to Sta. 136+00 LT&RT

DITCH REQUIRED TO MAINTAIN 5' MIN. FROM EDGE OF PAVEMENT. DITCH SLOPE OF 0.30% COULD NOT BE MAINTAINED FROM -L- STA. 108+88 TO STA. 131+00 LT IN ORDER TO TIE TO THE EXISTING DRAINAGE OUTFALL

DITCH REQUIRED TO MAINTAIN 5' MIN. FROM EDGE OF PAVEMENT. DITCH SLOPE OF 0.30% COULD NOT BE MAINTAINED FROM -L- STA. 109+45 TO STA. 128+61 RT IN ORDER TO TIE TO THE EXISTING DRAINAGE INFALL

MATCHLINE -L- STA. 123+00 SEE SHEET 12

MATCHLINE -L- STA. 136+00 SEE SHEET 14

8/17/99

8/2/2021
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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-14/CONST.14
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

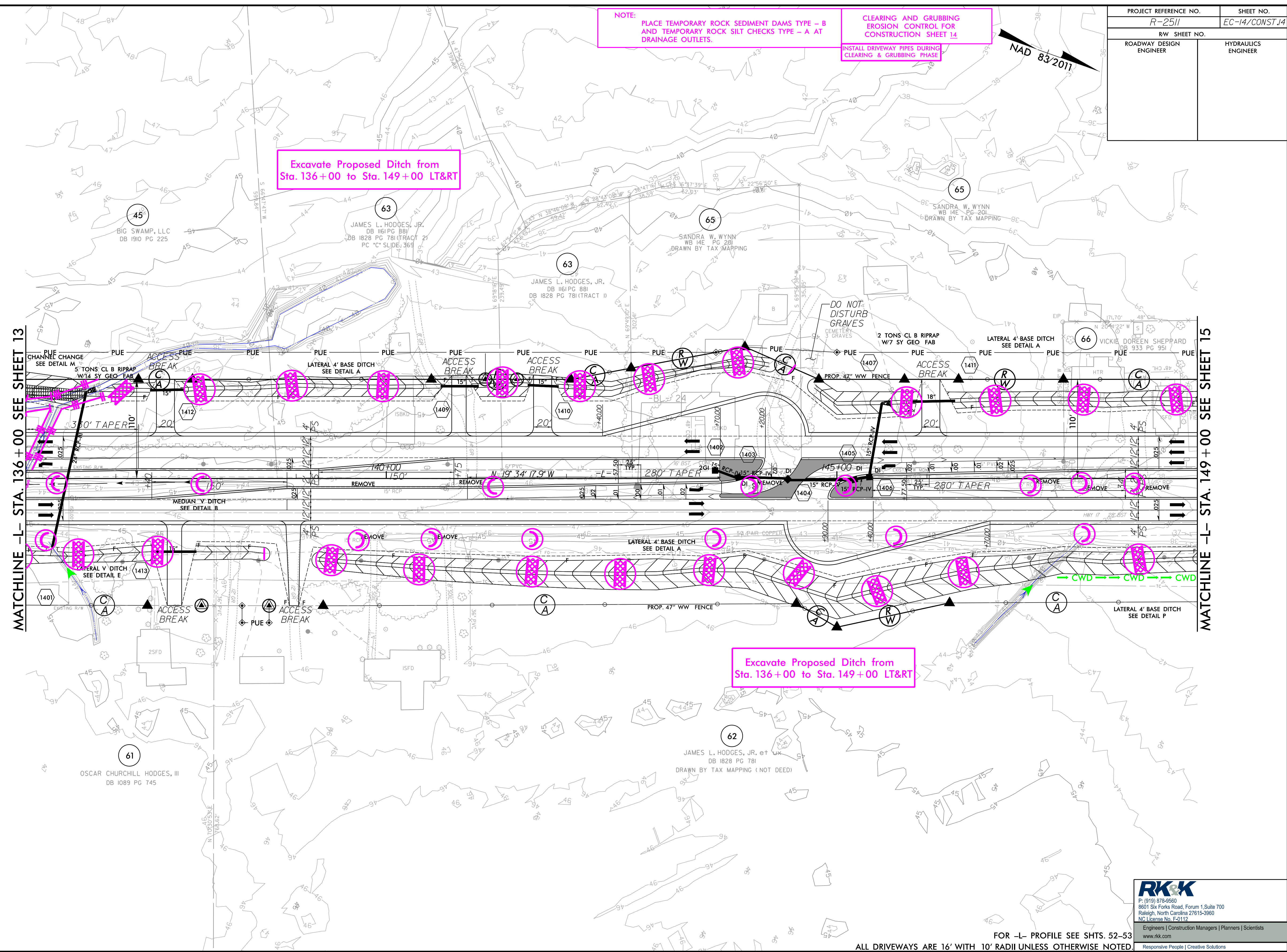
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 14

INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

Excavate Proposed Ditch from Sta. 136+00 to Sta. 149+00 LT&RT

Excavate Proposed Ditch from Sta. 136+00 to Sta. 149+00 LT&RT



MATCHLINE -L- STA. 136+00 SEE SHEET 13

MATCHLINE -L- STA. 149+00 SEE SHEET 15

NAD 83/2011

8/17/99

8/2/2021

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PROJECT REFERENCE NO.	R-2511	SHEET NO.	EC-15/CONST.15
RW 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.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 15
INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

98 x 18 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
5 ft. weir
ID 15-01

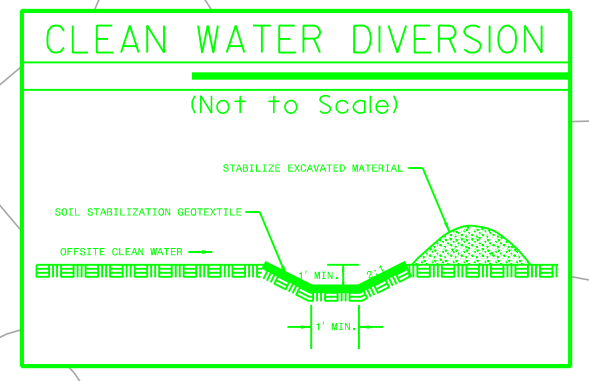
Excavate Proposed Ditch from
Sta. 149+00 to Sta. 162+00 LT&RT

120 x 20 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
18 ft. weir
ID 15-02

120 x 20 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
7 ft. weir
ID 15-03

120 x 20 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
16 ft. weir
ID 15-04

Excavate Proposed Ditch from
Sta. 149+00 to Sta. 162+00 LT&RT



DITCH REQUIRED TO MAINTAIN 5' MIN. FROM EDGE OF PAVEMENT. DITCH SLOPE OF 0.30% COULD NOT BE MAINTAINED FROM -L- STA. 160+20 TO STA. 163+50 RT IN ORDER TO TIE TO THE EXISTING GROUND SHORT OF THE WETLAND.

8/17/19

8/2/2021
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PROJECT REFERENCE NO.	R-2511	SHEET NO.	EC-16/CONST.16
RW 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.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 16

INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

Excavate Proposed Ditch from Sta. 162+00 to Sta. 175+00 LT&RT

Excavate Proposed Ditch from Sta. 162+00 to Sta. 175+00 RT

REMOVE BILLBOARD

DO NOT DISTURB GRAVE

RELOCATE CEMETERY

MATCHLINE -L- STA. 162+00 SEE SHEET 15

MATCHLINE -L- STA. 175+00 SEE SHEET 17

DITCH REQUIRED TO MAINTAIN 5' MIN. FROM EDGE OF PAVEMENT. DITCH SLOPE OF 0.30% COULD NOT BE MAINTAINED FROM -L- STA. 160+20 TO STA. 163+50 RT IN ORDER TO TIE TO THE EXISTING GROUND SHORT OF THE WETLAND

8/17/19

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FOR -L- PROFILE SEE SHT. 53
 ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

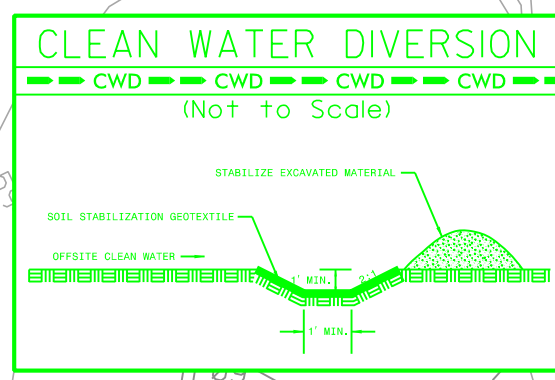
PROJECT REFERENCE NO. R-2511	SHEET NO. EC-19/CONST.19
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 19

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

INSTALL DRIVEWAY PIPES DURING
CLEARING & GRUBBING PHASE

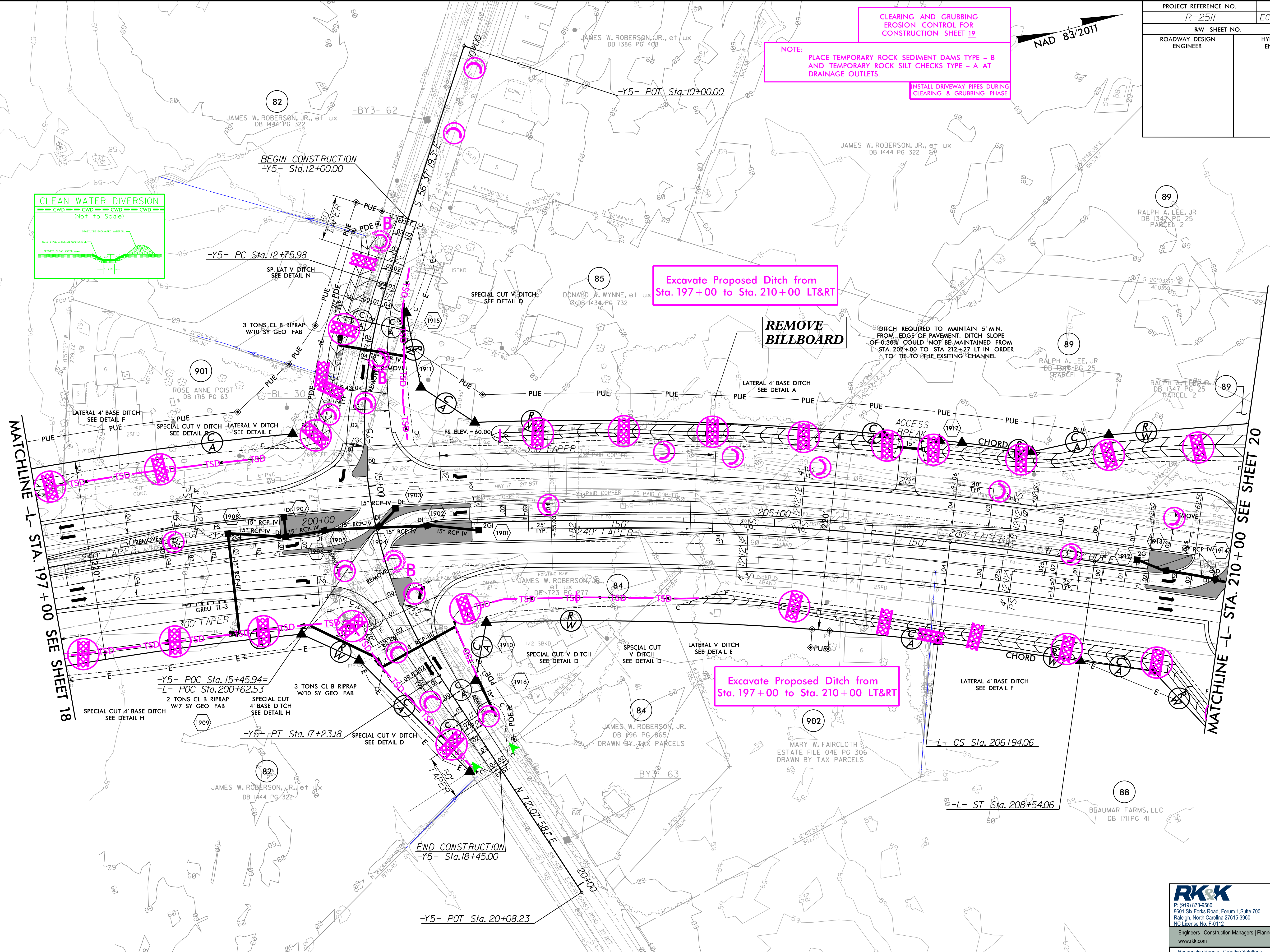
NAD 83/2011



Excavate Proposed Ditch from
Sta. 197+00 to Sta. 210+00 LT&RT

REMOVE
BILLBOARD

Excavate Proposed Ditch from
Sta. 197+00 to Sta. 210+00 LT&RT



MATCHLINE -L- STA. 197+00 SEE SHEET 18

MATCHLINE -L- STA. 210+00 SEE SHEET 20

8/17/19

8/2/2021
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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-20/CONST.20
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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 20

INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE



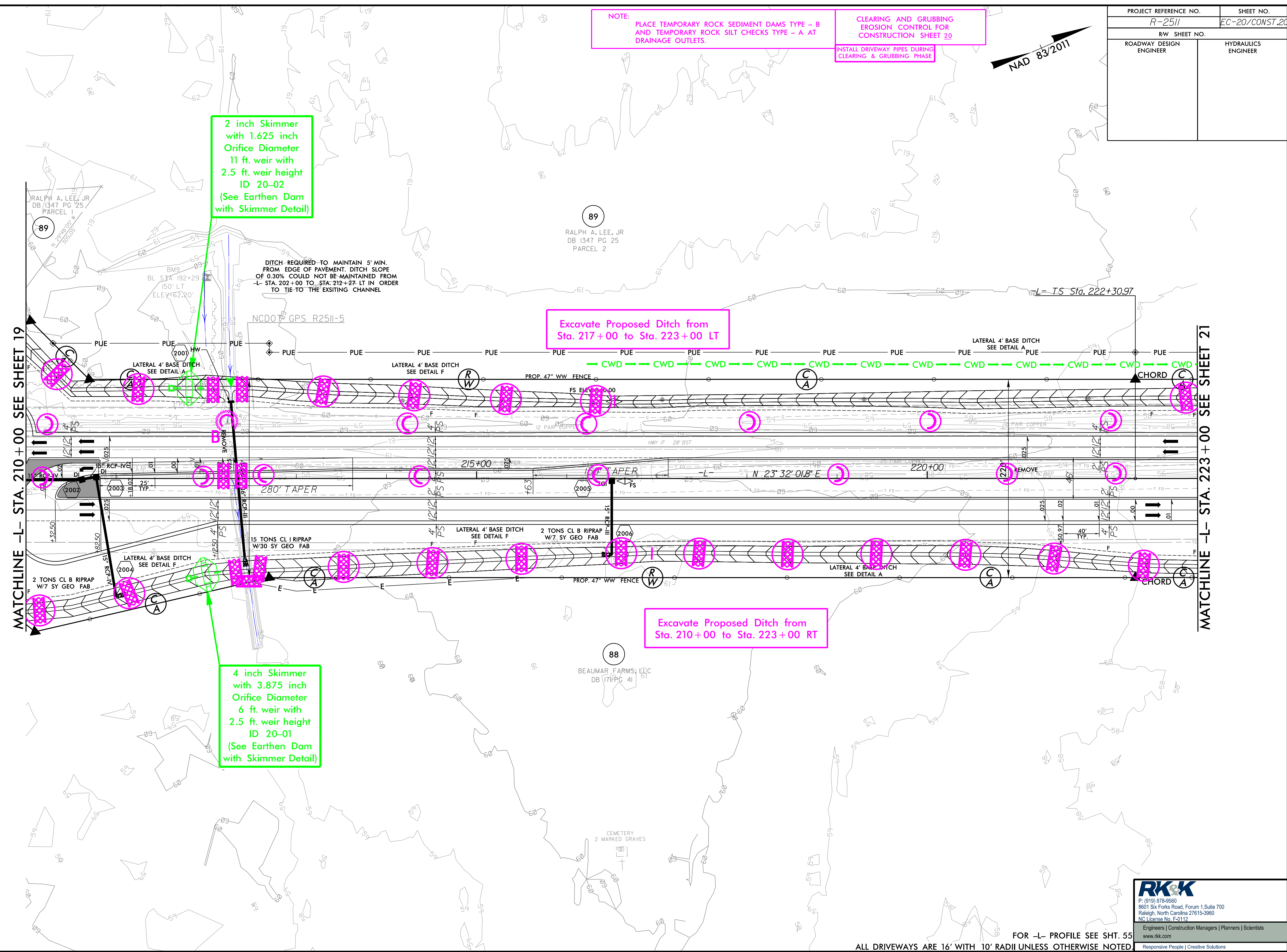
2 inch Skimmer with 1.625 inch Orifice Diameter
11 ft. weir with 2.5 ft. weir height
ID 20-02
(See Earthen Dam with Skimmer Detail)

Excavate Proposed Ditch from Sta. 217+00 to Sta. 223+00 LT

Excavate Proposed Ditch from Sta. 210+00 to Sta. 223+00 RT

4 inch Skimmer with 3.875 inch Orifice Diameter
6 ft. weir with 2.5 ft. weir height
ID 20-01
(See Earthen Dam with Skimmer Detail)

DITCH REQUIRED TO MAINTAIN 5' MIN. FROM EDGE OF PAVEMENT. DITCH SLOPE OF 0.30% COULD NOT BE MAINTAINED FROM -L- STA. 202+00 TO STA. 212+27. LT IN ORDER TO TIE TO THE EXISTING CHANNEL



MATCHLINE -L- STA. 210+00 SEE SHEET 19

MATCHLINE -L- STA. 223+00 SEE SHEET 21

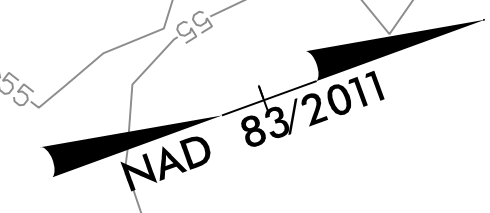
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8/2/2021
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FOR -L- PROFILE SEE SHT. 55
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED

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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-21/CONST.21
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



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 21
INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

120 x 20 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
18 ft. weir
ID 21-02

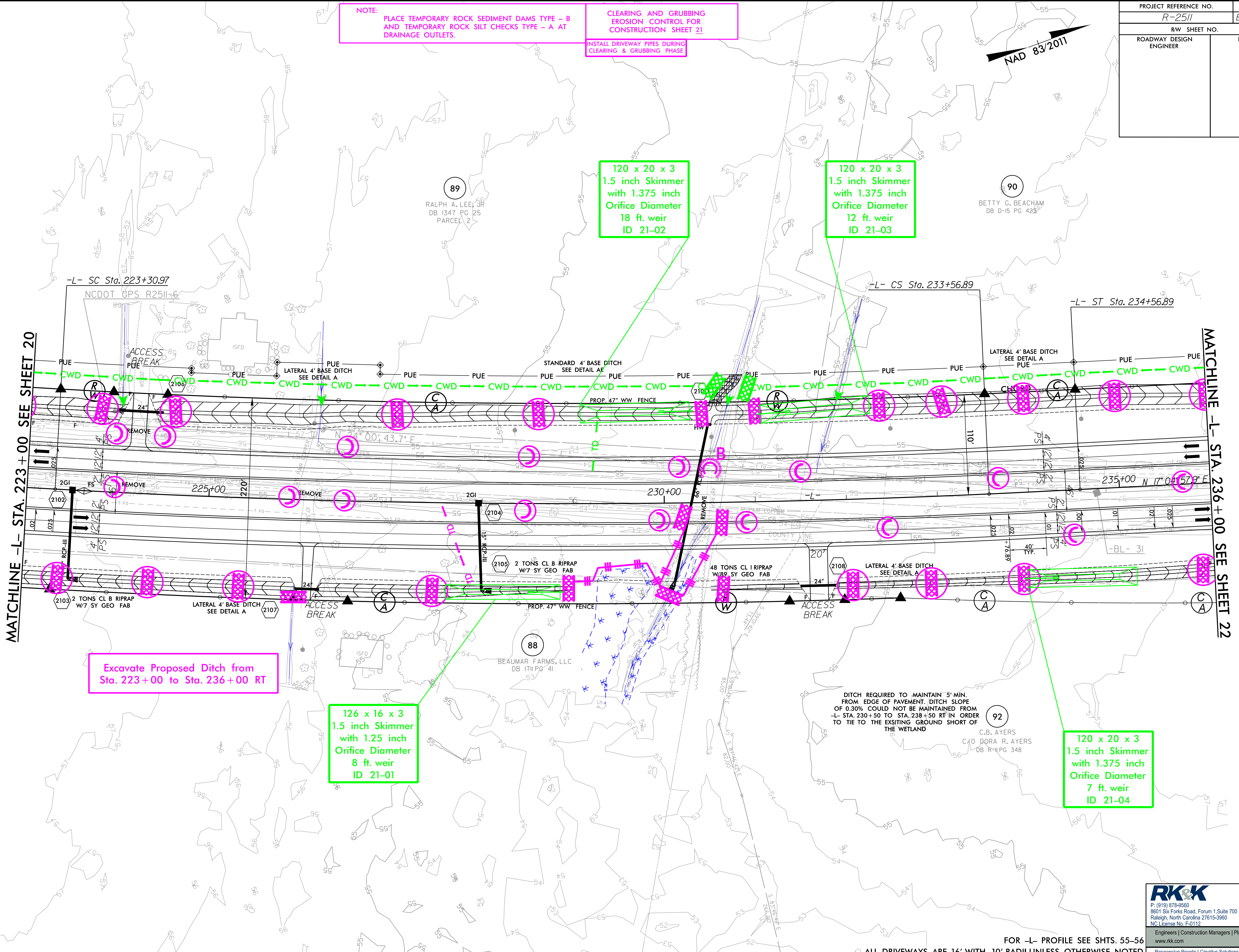
120 x 20 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
12 ft. weir
ID 21-03

Excavate Proposed Ditch from Sta. 223+00 to Sta. 236+00 RT

126 x 16 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
8 ft. weir
ID 21-01

120 x 20 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
7 ft. weir
ID 21-04

DITCH REQUIRED TO MAINTAIN 5' MIN. FROM EDGE OF PAVEMENT. DITCH SLOPE OF 0.30% COULD NOT BE MAINTAINED FROM -L- STA. 230+50 TO STA. 238+50 RT IN ORDER TO TIE TO THE EXISTING GROUND SHORT OF THE WETLAND



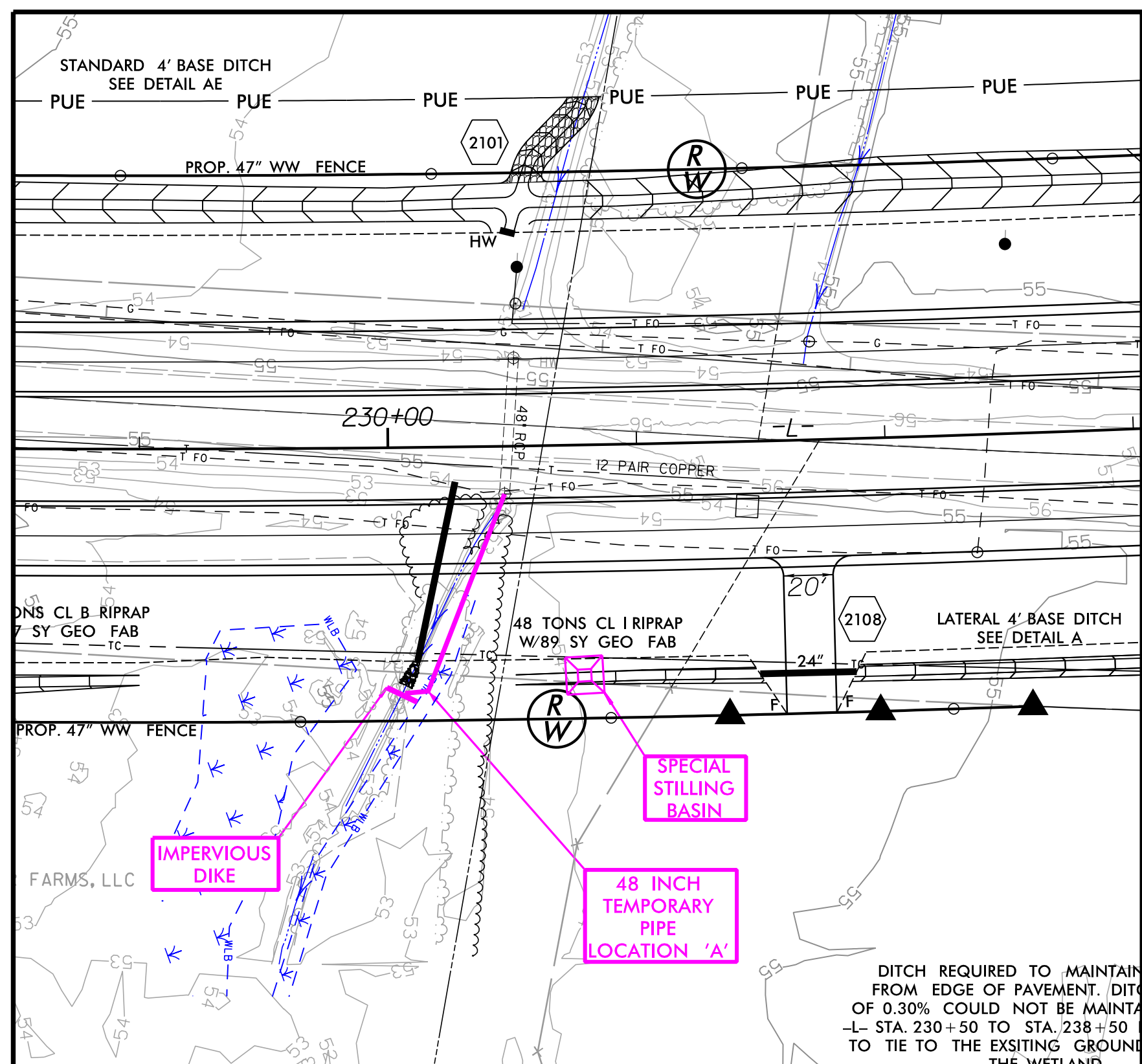
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8/2/2021
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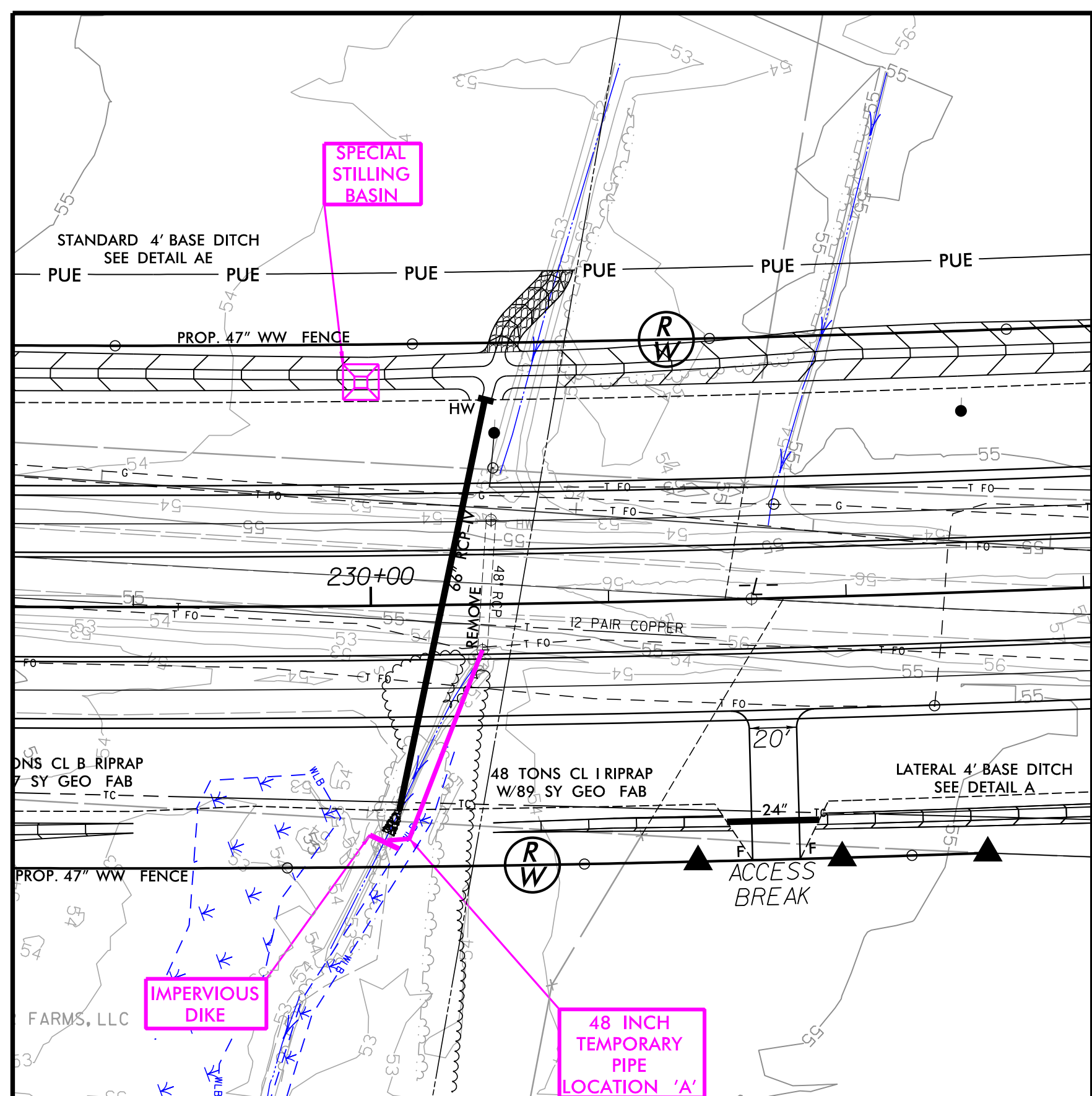
FOR -L- PROFILE SEE SHTS. 55-56
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-21A/CONST.21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PIPE INSTALLATION SEQUENCE 1 STA. 230+65 -L-

1. UTILIZE A SPECIAL STILLING BASIN AT THE OUTLET END OF THE PROPOSED PIPES.
2. INSTALL IMPERVIOUS DIKES AND APPROXIMATELY 95' OF TEMPORARY PIPE AT LOCATION 'A'.
3. DIVERT STREAM THROUGH EXISTING PIPE AND TEMPORARY PIPE.
4. INSTALL APPROXIMATELY 72 LF OF 66" RC PIPE.
5. CONSTRUCT PROPOSED ROADWAY AND FILL SLOPE.
6. SWITCH 2-WAY TRAFFIC TO NEW ROADWAY PAVEMENT.



PIPE INSTALLATION SEQUENCE 2 STA. 230+65 -L-

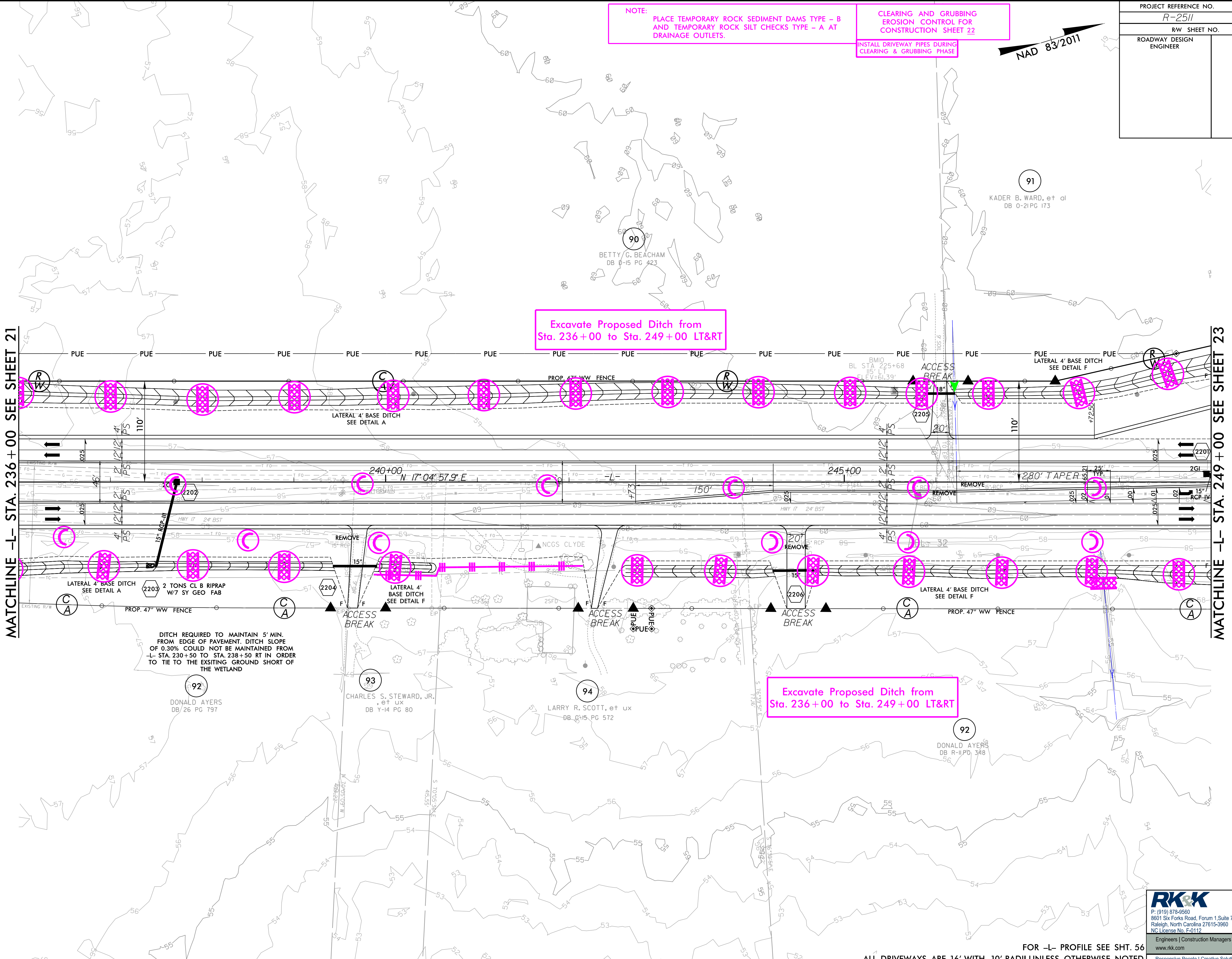
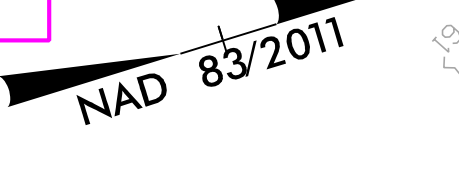
1. UTILIZE A SPECIAL STILLING BASIN AT THE INLET END OF THE PROPOSED PIPES.
2. MAINTAIN STREAM FLOW THROUGH EXISTING AND TEMPORARY PIPE AS SHOWN ON PLAN.
3. INSTALL APPROXIMATELY 108 LF OF 66" RC PIPE.
4. DIVERT STREAM THROUGH NEW 66" RCP.
5. REMOVE EXISTING 48" PIPE AND STILLING BASIN AT INLET END.
6. CONSTRUCT PROPOSED ROADWAY, FILL SLOPES AND DITCHES AS SHOWN ON ROADWAY PLANS.
7. SWITCH TRAFFIC TO NEW PAVEMENT.
8. REMOVE 48" TEMPORARY PIPE AT LOCATION 'A' AND TEMPORARY PAVEMENT AS SHOWN ON TRAFFIC CONTROL PLANS.

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PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-22/CONST.22
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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 22
INSTALL DRIVEWAY PIPES DURING
CLEARING & GRUBBING PHASE



MATCHLINE -L- STA. 236+00 SEE SHEET 21

MATCHLINE -L- STA. 249+00 SEE SHEET 23

Excavate Proposed Ditch from
Sta. 236+00 to Sta. 249+00 LT&RT

Excavate Proposed Ditch from
Sta. 236+00 to Sta. 249+00 LT&RT

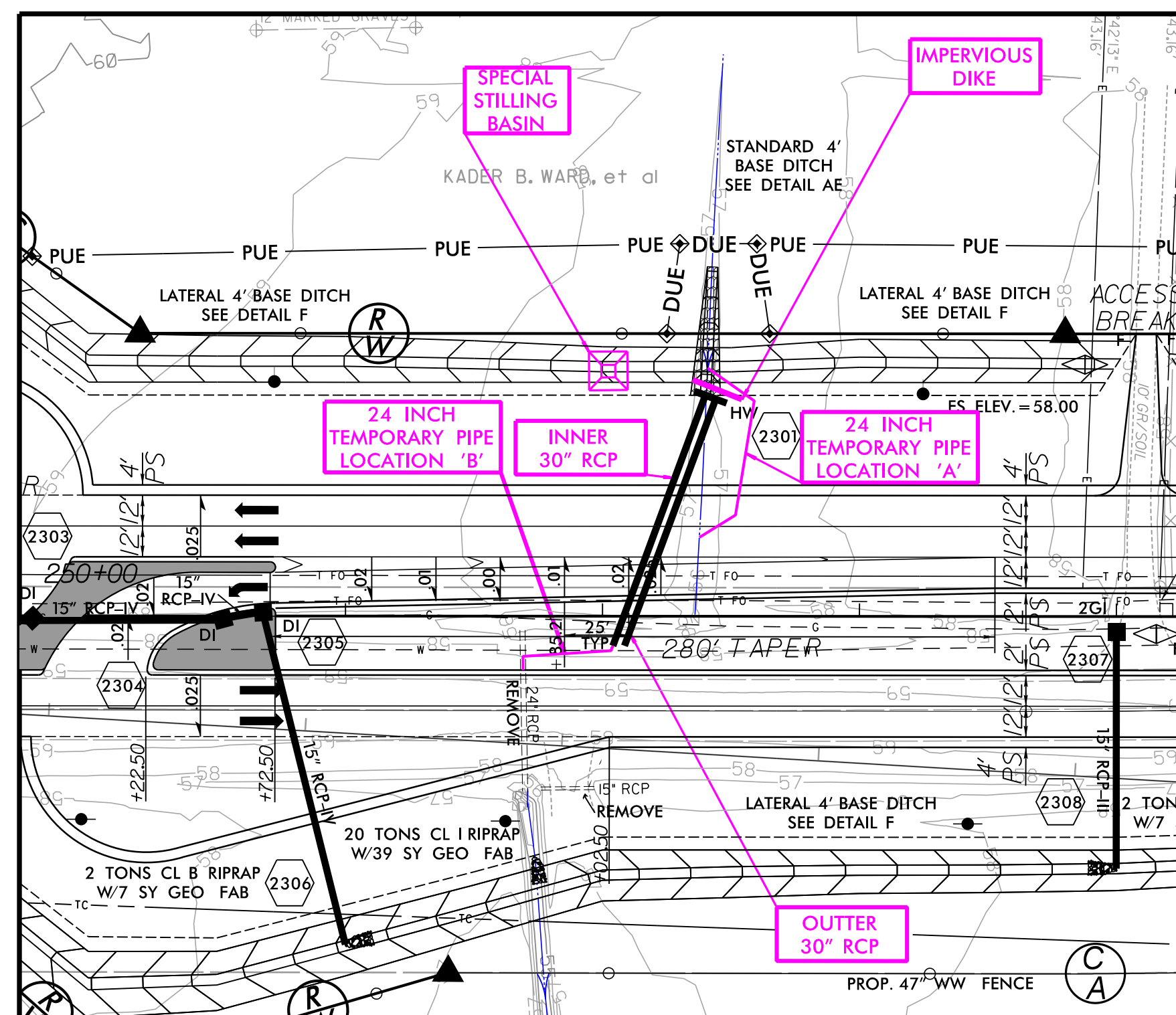
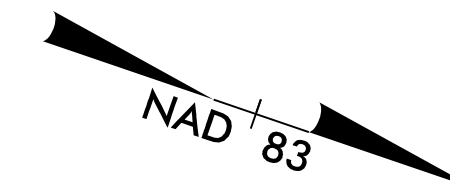
DITCH REQUIRED TO MAINTAIN 5' MIN.
FROM EDGE OF PAVEMENT. DITCH SLOPE
OF 0.30% COULD NOT BE MAINTAINED FROM
L- STA. 230+50 TO STA. 238+50 RT IN ORDER
TO TIE TO THE EXISTING GROUND SHORT OF
THE WETLAND

FOR -L- PROFILE SEE SHT. 56
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

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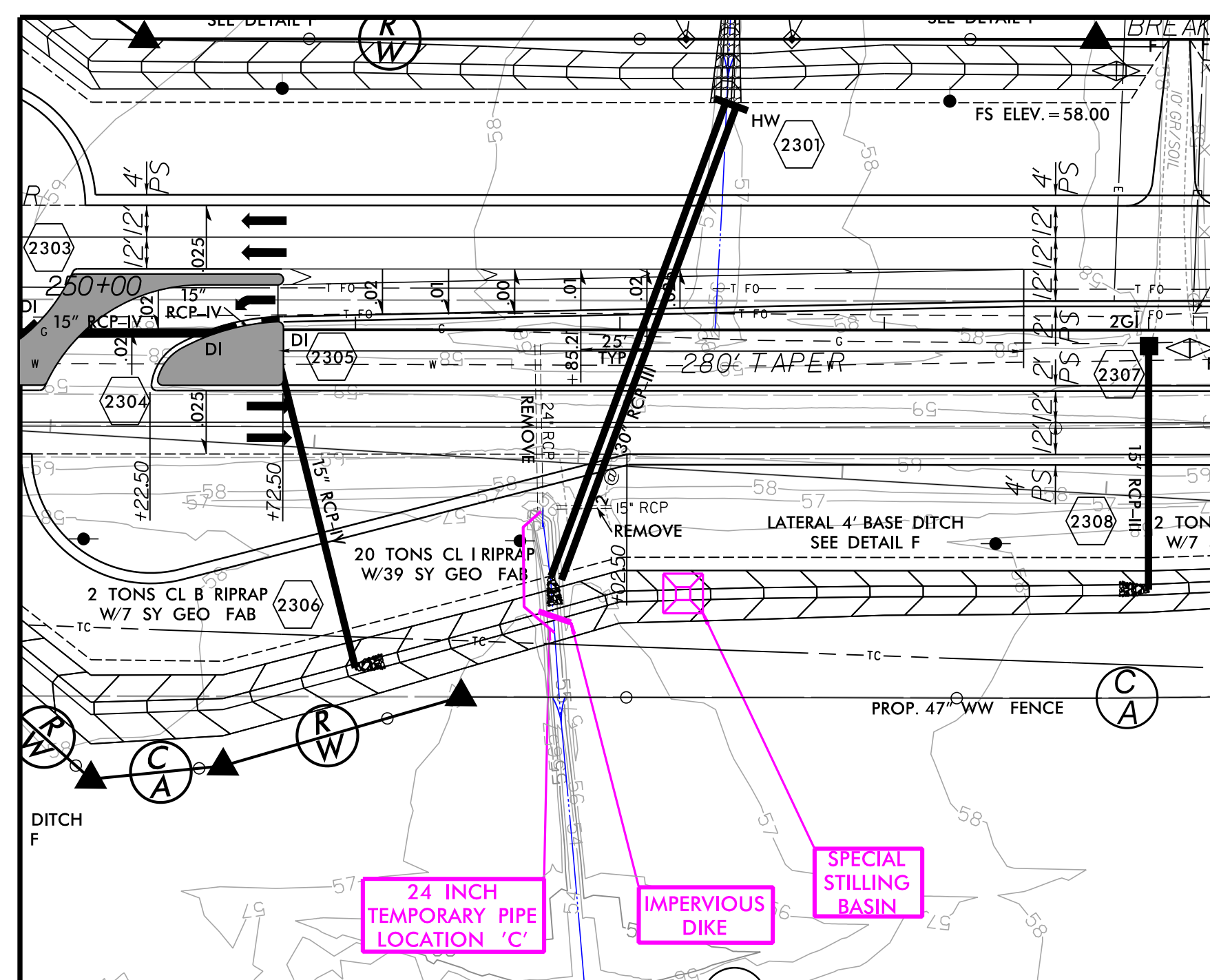
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8/2/2021
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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-23A/CONST.23
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



PIPE INSTALLATION SEQUENCE 1 STA. 252+40 -L-

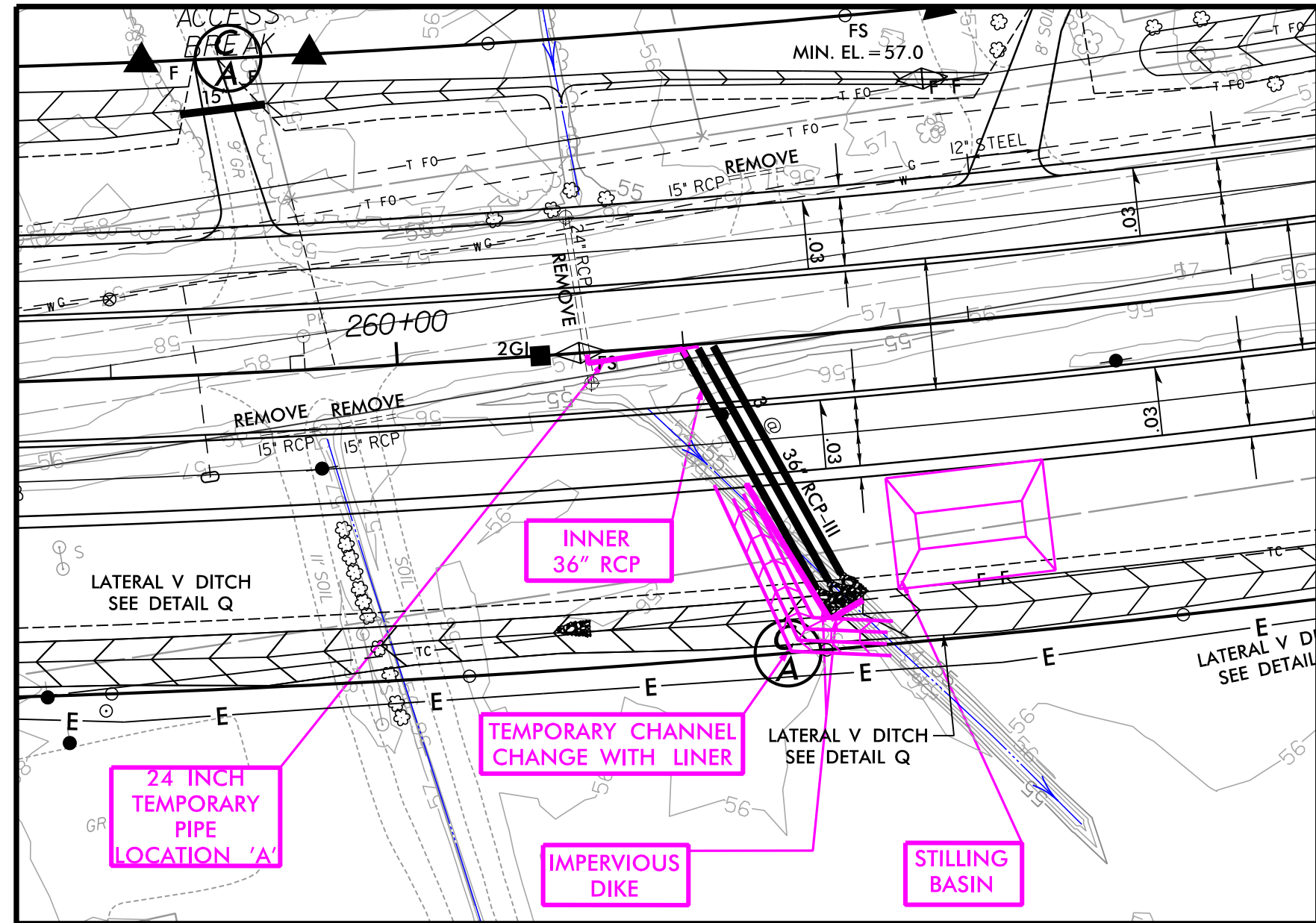
1. UTILIZE A SPECIAL STILLING BASIN AT THE INLET END OF THE PROPOSED PIPES.
2. INSTALL IMPERVIOUS DIKE AND APPROXIMATELY 84' OF TEMPORARY PIPE AT LOCATION 'A'.
3. INSTALL TEMPORARY SHORING AS SHOWN ON TRAFFIC CONTROL PLANS. MAINTAIN TRAFFIC ON EXISTING PAVEMENT.
4. INSTALL APPROXIMATELY 104 LF OF 2@30" RC PIPES. INSTALL TEMPORARY PIPE AT LOCATION 'B' TO CONNECT EXISTING 24" PIPE TO NEW INNER 30" RC PIPE.
5. REMOVE IMPERVIOUS DIKE AND TEMPORARY PIPE AT LOCATION 'A'.
6. RE-ROUTE STREAM THROUGH NEW INNER PIPE.
7. CONSTRUCT PROPOSED ROADWAY, FILL SLOPES AND DITCHES.
8. SWITCH 2-WAY TRAFFIC TO NEW ROADWAY PAVEMENT AS SHOWN ON TRAFFIC CONTROL PLANS.



PIPE INSTALLATION SEQUENCE 2 STA. 252+40 -L-

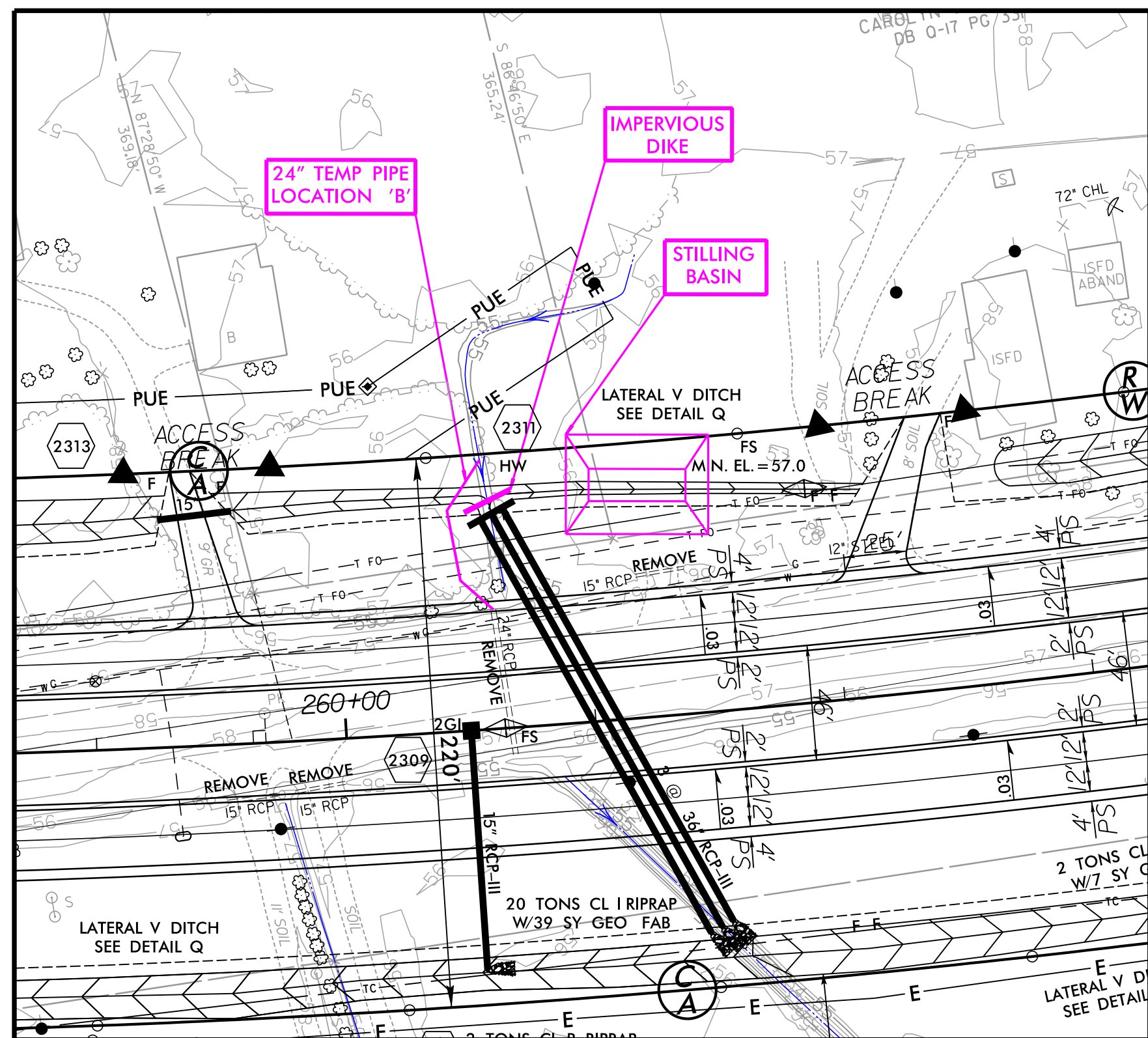
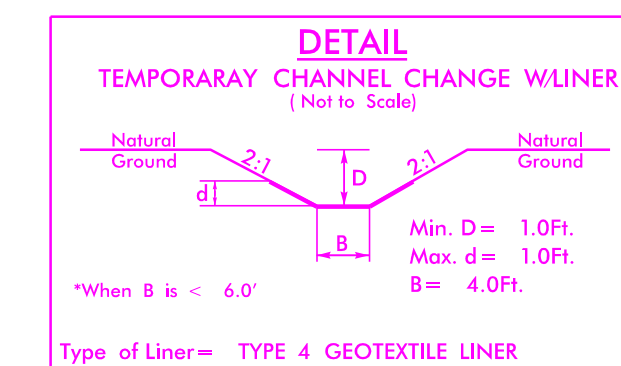
1. UTILIZE A SPECIAL STILLING BASIN AT THE OUTLET END OF THE PROPOSED PIPES.
2. INSTALL IMPERVIOUS DIKES AND TEMPORARY PIPE AT LOCATION 'C'.
3. INSTALL APPROXIMATELY 87 LF OF 2@30" RC PIPES.
4. REMOVE TEMPORARY PIPE AT LOCATION 'B' AS SHOWN IN SEQUENCE 1. REMOVE TEMPORARY PIPE AT LOCATION 'C', IMPERVIOUS DIKE AND STILLING BASIN.
5. RE-ROUTE STREAM THROUGH NEW PIPES.
6. CONSTRUCT PROPOSED ROAD, FILL SLOPES AND DITCHES AS PER ROADWAY PLANS.

PROJECT REFERENCE NO. R-2511	SHEET NO. EC-23B/CONST.23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PIPE INSTALLATION SEQUENCE 1 STA. 261+34 -L-

1. INSTALL A STILLING BASIN WITH A CAPACITY OF 83 CU YD. AT THE OUTLET END OF THE PROPOSED PIPES.
2. INSTALL IMPERVIOUS DIKES AND CHANNEL CHANGE AS PER DETAIL SHOWN BELOW
3. INSTALL TEMPORARY SHORING AS SHOWN ON TRAFFIC CONTROL PLANS.
4. INSTALL APPROXIMATELY 93 LF OF 3@36" RC PIPES. MAINTAIN TRAFFIC ON EXISTING PAVEMENT.
5. INSTALL TEMPORARY PIPE TO CONNECT EXISTING 24" PIPE TO NEW INNER 36" RCP.
6. RE-ROUTE STREAM THROUGH NEW PIPE AND FILL IN EXISTING PIPES WITH FLOWABLE FILL.
7. CONSTRUCT NEW ROADWAY PAVEMENT AND SWITCH 2-WAY TRAFFIC AS PER ROADWAY PLANS.



PIPE INSTALLATION SEQUENCE 2 STA. 261+34 -L-

1. INSTALL A STILLING BASIN WITH A CAPACITY OF 87 CU YD. AT THE INLET END OF THE PROPOSED PIPES.
2. INSTALL IMPERVIOUS DIKES AND TEMPORARY PIPE AT LOCATION 'B'.
3. INSTALL APPROXIMATELY 97 LF OF 3@36" RC PIPES INCLUDING HW.
4. REMOVE TEMPORARY PIPE AT LOCATION 'A' AND LOCATION 'B'. REMOVE IMPERVIOUS DIKE AND BASIN AT INLET OF PROPOSED PIPE.
5. RE-ROUTE STREAM THROUGH NEW PIPES.
6. REMOVE EXISTING 24" RCP.
7. CONSTRUCT NEW ROADWAY AS PER ROADWAY PLANS.

PROJECT REFERENCE NO. R-2511	SHEET NO. EC-25/CONST.25
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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 25

NAD 83/2011

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

INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

132 x 22 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
11 ft. weir
ID 25-03

Excavate Proposed Ditch from Sta. 275+00 to Sta. 288+00 LT&RT

Excavate Proposed Ditch from Sta. 275+00 to Sta. 288+00 LT&RT

1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir with
2.25 ft. weir height
ID 25-01
(See Earthen Dam
with Skimmer Detail)

1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
6 ft. weir with
2.50 ft. weir height
ID 25-02
(See Earthen Dam
with Skimmer Detail)

DO NOT DISTURB ANY GRAVES

MATCHLINE -L- STA. 275+00 SEE SHEET 24

MATCHLINE -L- STA. 288+00 SEE SHEET 26

8/17/99
8/2/2021
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FOR -L- PROFILE SEE SHTS. 57-58
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-26/CONST.26
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

NAD 83/2011

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 26

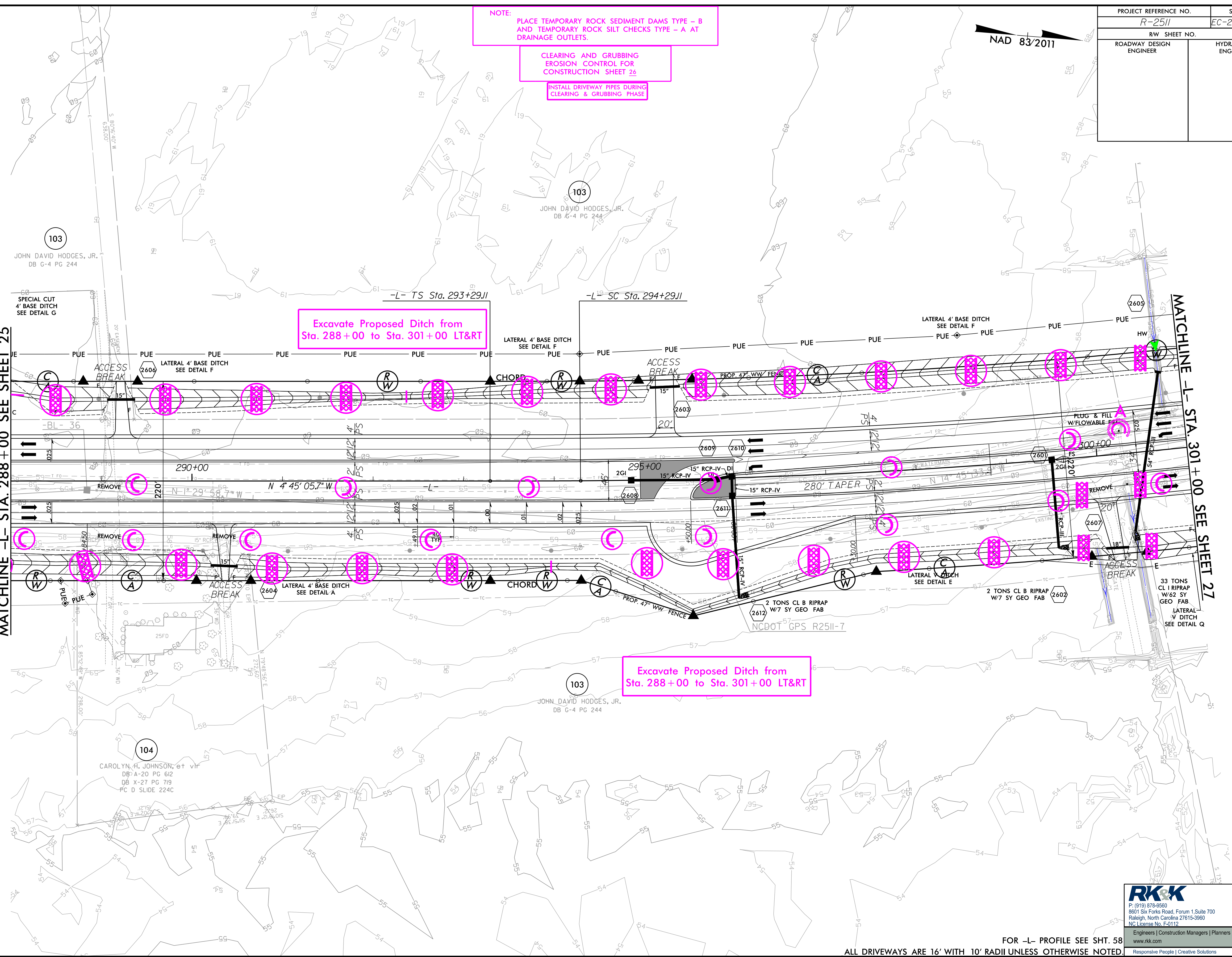
INSTALL DRIVEWAY PIPES DURING
CLEARING & GRUBBING PHASE

Excavate Proposed Ditch from
Sta. 288+00 to Sta. 301+00 LT&RT

Excavate Proposed Ditch from
Sta. 288+00 to Sta. 301+00 LT&RT

MATCHLINE -L- STA. 288+00 SEE SHEET 25

MATCHLINE -L- STA. 301+00 SEE SHEET 27



8/17/99
8/2/2021
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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-27/CONST.27
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

NAD 83/2011

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 27

INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

Excavate Proposed Ditch from Sta. 301+00 to Sta. 314+00 LT&RT

Excavate Proposed Ditch from Sta. 301+00 to Sta. 314+00 LT&RT

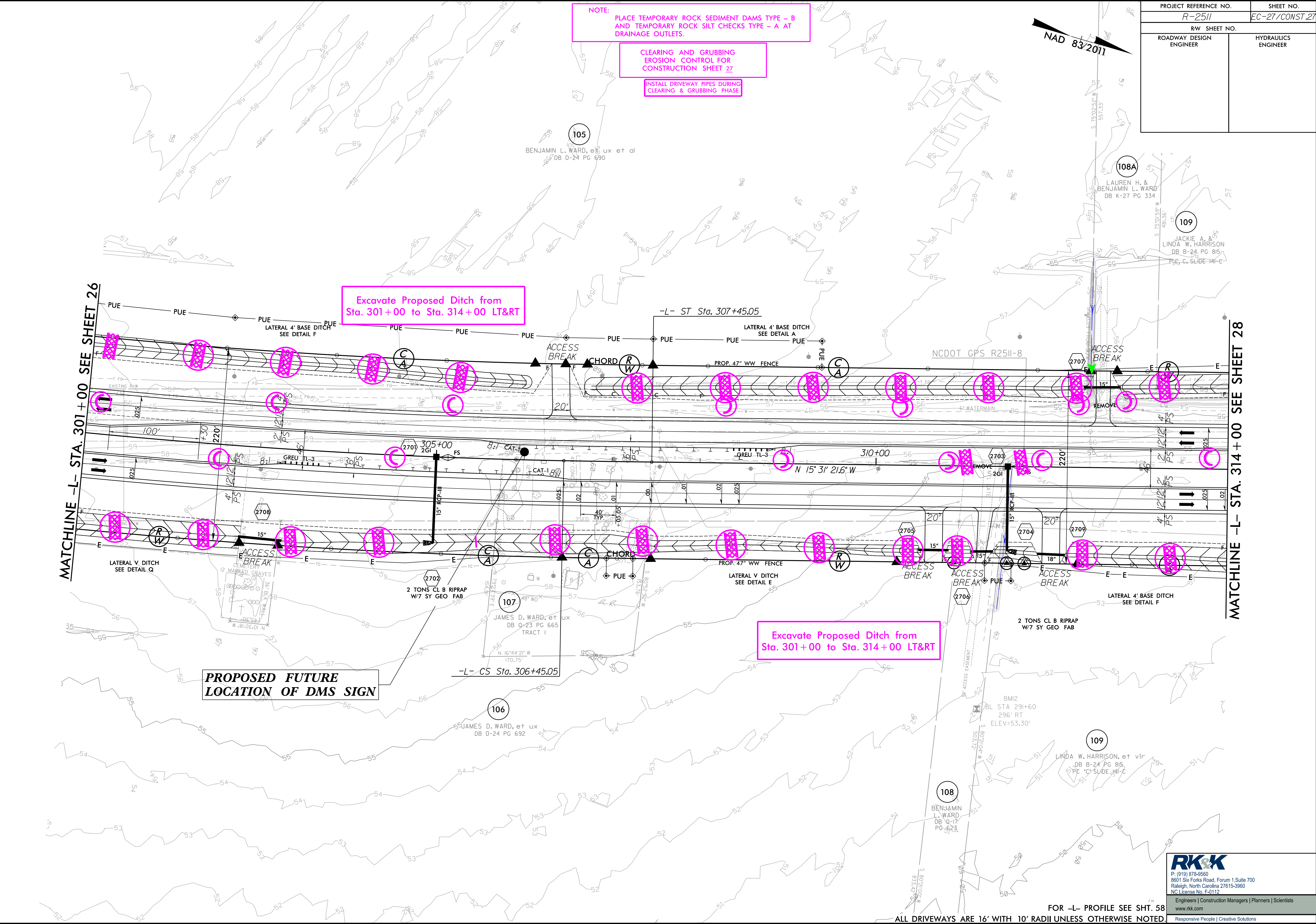
PROPOSED FUTURE LOCATION OF DMS SIGN

MATCHLINE -L- STA. 301+00 SEE SHEET 26

MATCHLINE -L- STA. 314+00 SEE SHEET 28

8/17/99

8/19/2021
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FOR -L- PROFILE SEE SHT. 58
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

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PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-28/CONST.28</i>
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



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

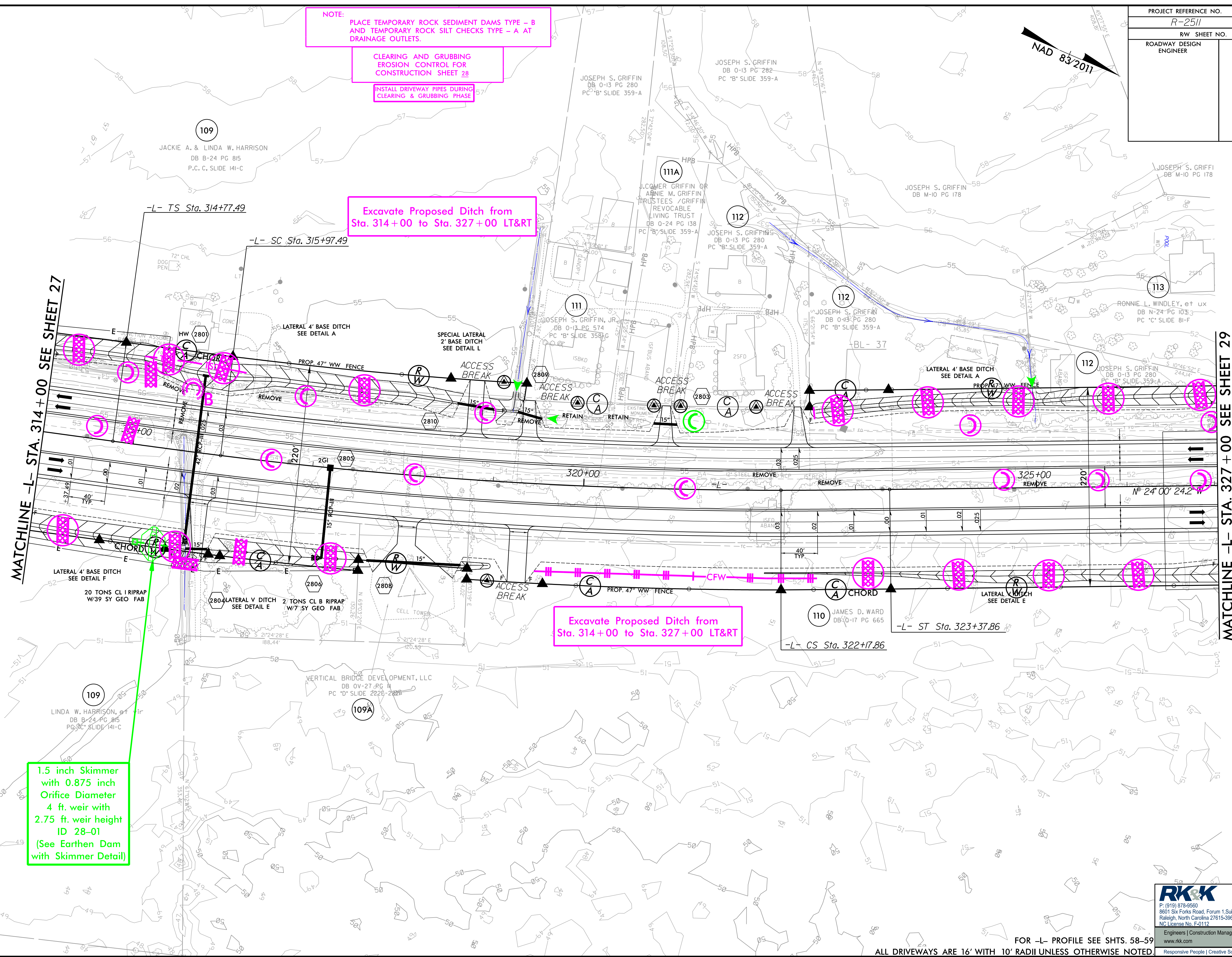
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 28

INSTALL DRIVEWAY PIPES DURING
CLEARING & GRUBBING PHASE

Excavate Proposed Ditch from
Sta. 314+00 to Sta. 327+00 LT&RT

Excavate Proposed Ditch from
Sta. 314+00 to Sta. 327+00 LT&RT

1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir with
2.75 ft. weir height
ID 28-01
(See Earthen Dam
with Skimmer Detail)



MATCHLINE -L- STA. 314+00 SEE SHEET 27

MATCHLINE -L- STA. 327+00 SEE SHEET 29

8/17/19

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FOR -L- PROFILE SEE SHTS. 58-59
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-29/CONST.29
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

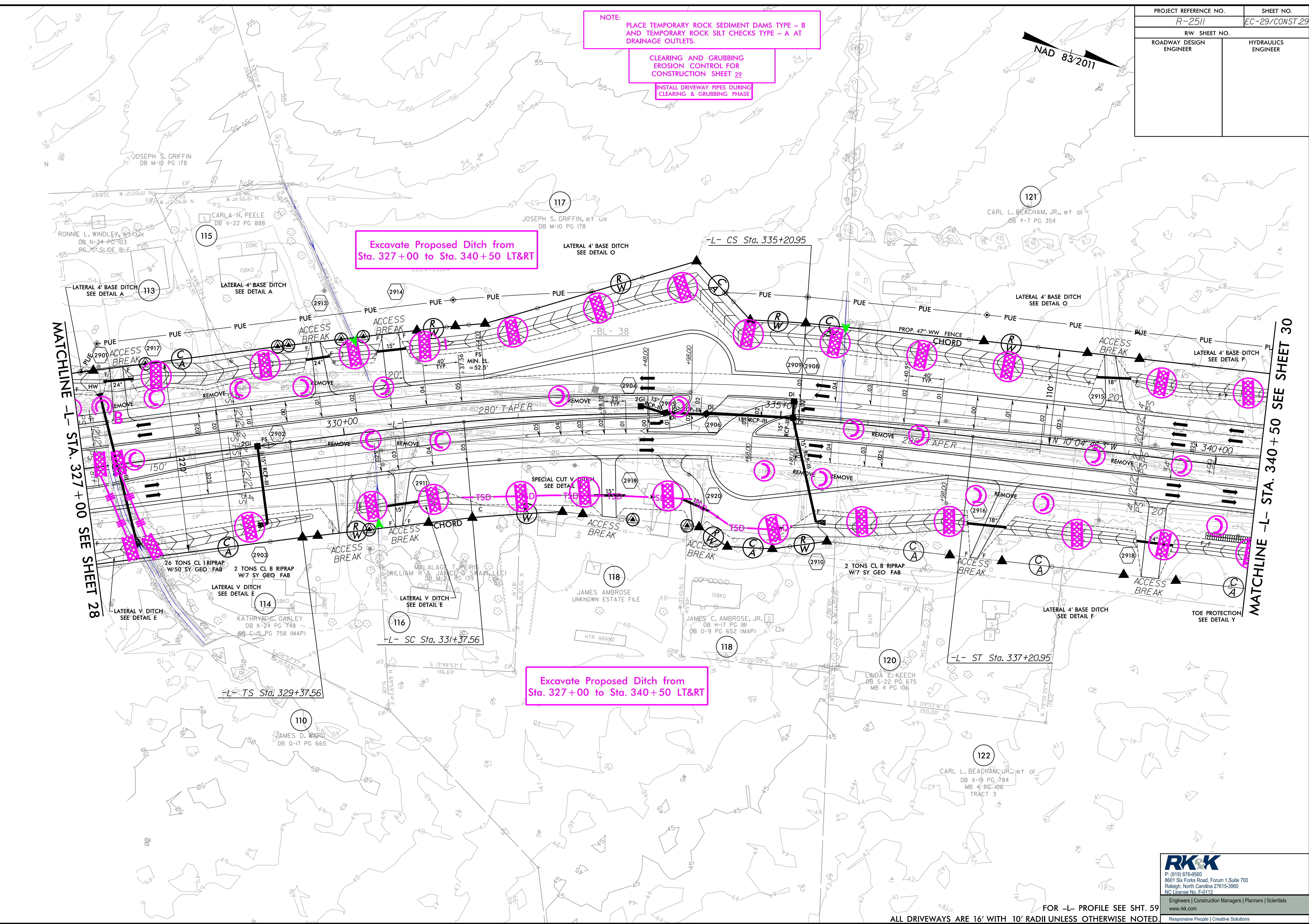
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NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 29
INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

Excavate Proposed Ditch from Sta. 327+00 to Sta. 340+50 LT&RT

Excavate Proposed Ditch from Sta. 327+00 to Sta. 340+50 LT&RT



NAD 83/2011

MATCHLINE -L- STA. 327+00 SEE SHEET 28

MATCHLINE -L- STA. 340+50 SEE SHEET 30

FOR -L- PROFILE SEE SHT. 59
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-30/CONST.30
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

NAD 83/2011

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 30

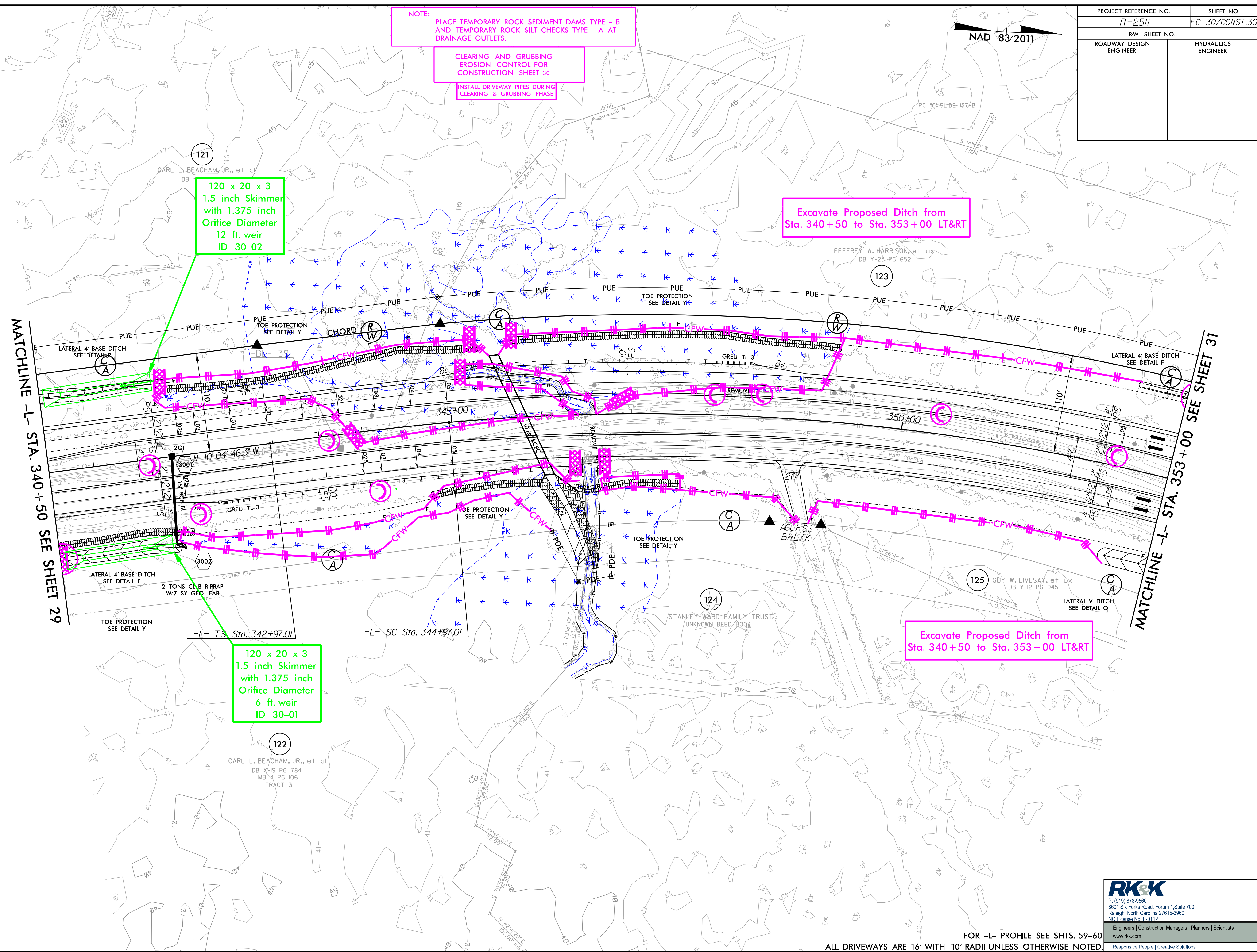
INSTALL DRIVEWAY PIPES DURING
CLEARING & GRUBBING PHASE

120 x 20 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
12 ft. weir
ID 30-02

Excavate Proposed Ditch from
Sta. 340+50 to Sta. 353+00 LT&RT

Excavate Proposed Ditch from
Sta. 340+50 to Sta. 353+00 LT&RT

120 x 20 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
6 ft. weir
ID 30-01



MATCHLINE -L- STA. 340+50 SEE SHEET 29

MATCHLINE -L- STA. 353+00 SEE SHEET 31

8/17/99

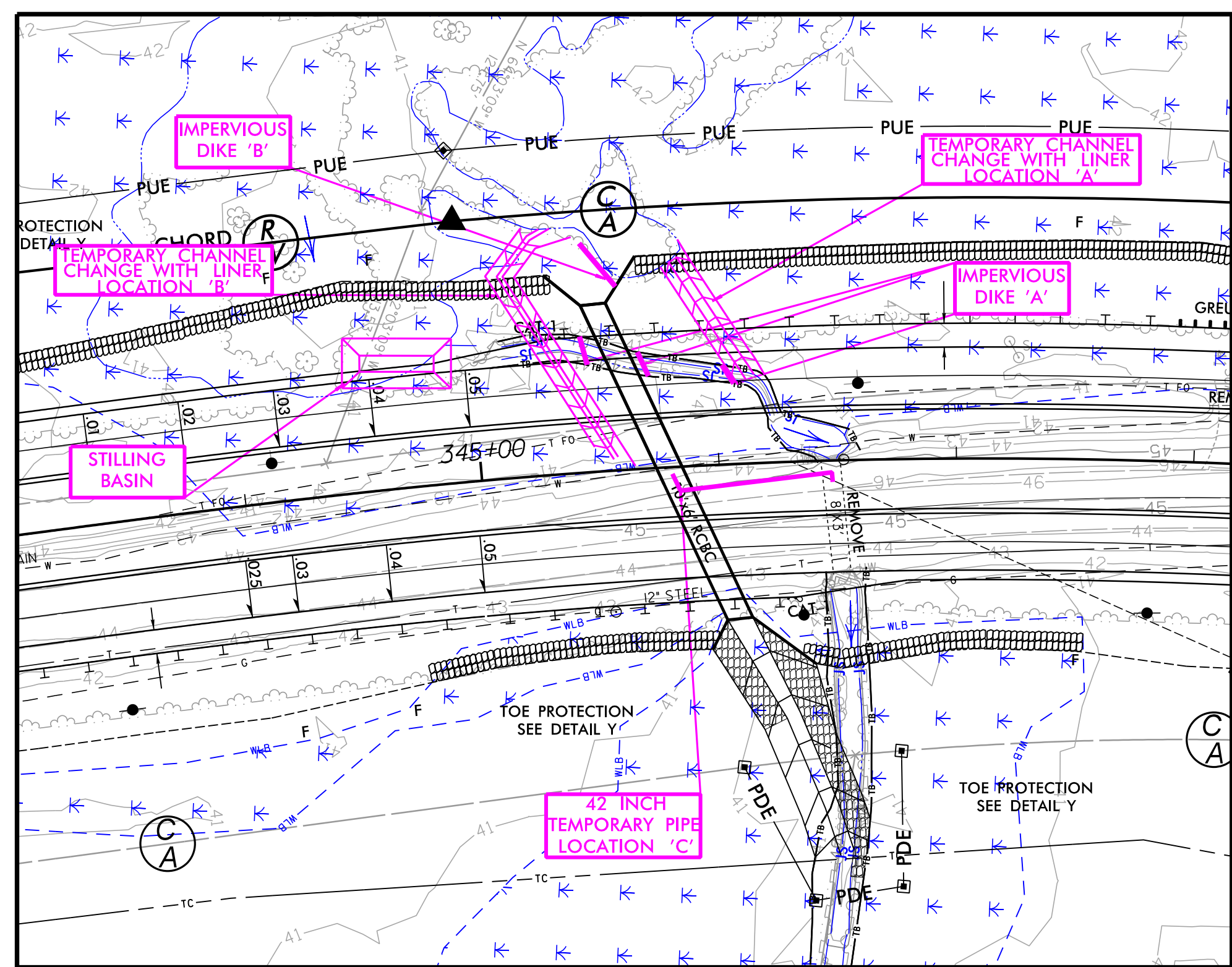
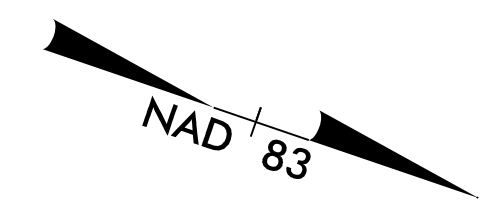
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FOR -L- PROFILE SEE SHTS. 59-60
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

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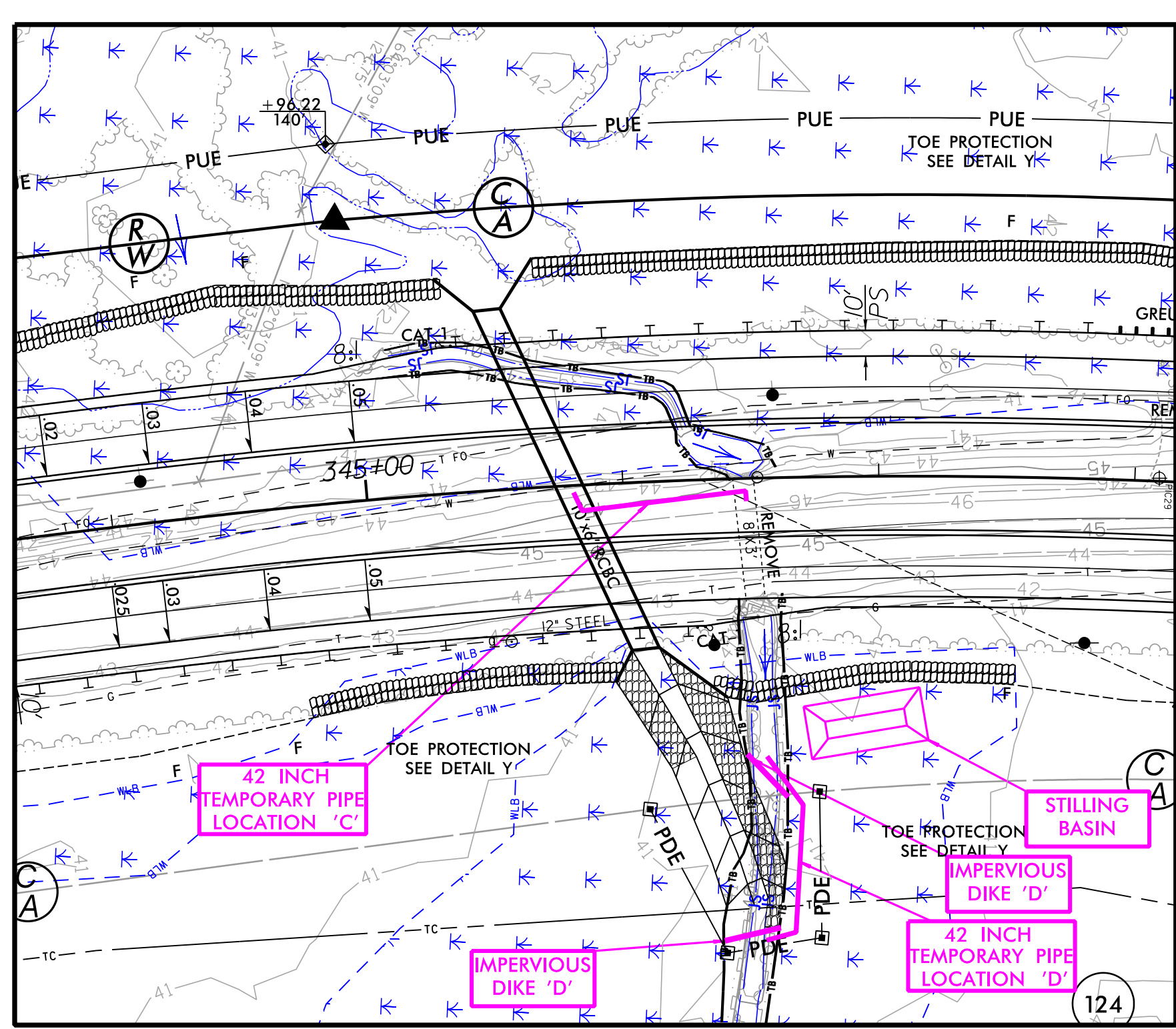
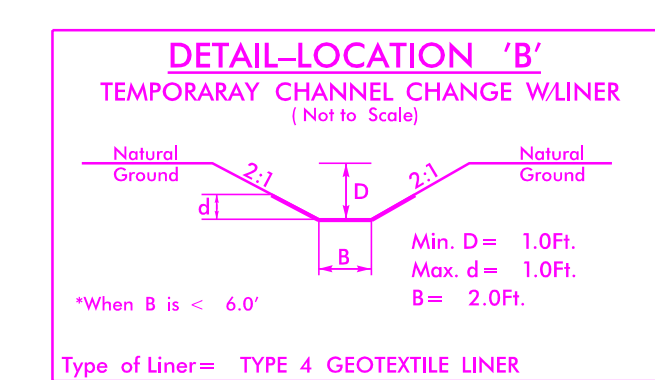
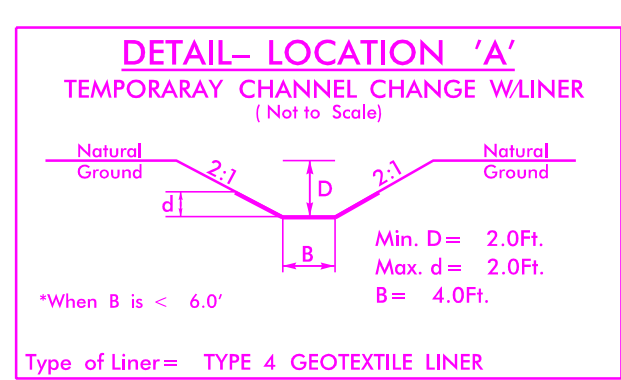
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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-30A/CONST.30
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CULVERT INSTALLATION SEQUENCE 1 STA. 345+79 -L-

1. INSTALL STILLING BASIN WITH CAPACITY 21 CY AT THE INLET END OF THE PROPOSED CULVERT.
2. CONSTRUCT IMPERVIOUS DIKE 'A' AND IMPERVIOUS DIKE 'B'. CONSTRUCT APPROX. 56 LF OF TEMPORARY CHANNEL CHANGE AT LOCATION 'A' AND APPROXIMATELY 120 LF OF TEMPORARY CHANNEL CHANGE AT LOCATION 'B' AS PER DETAILS SHOWN BELOW.
3. CONSTRUCT APPROX. 83 LF OF THE PROPOSED 10'x6' RCBC, INCLUDING WINGWALLS.
4. INSTALL 42" TEMPORARY PIPE AT LOCATION 'C' TO CONNECT PROPOSED RCBC TO EXISTING RCBC. DIVERT STREAM THROUGH NEW RCBC, TEMPORARY PIPE AND EXISTING RCBC.
5. REMOVE IMPERVIOUS DIKES 'A' & 'B'. REMOVE STILLING BASIN. FILL-IN TEMPORARY CHANNEL CHANGES AT LOCATIONS 'A' & 'B'.
5. CONSTRUCT PROPOSED ROADWAY AND EMBANKMENTS AS SHOWN ON ROADWAY PLANS.
6. SWITCH TRAFFIC TO NEWLY CONSTRUCTED PERMANENT PAVEMENT.



CULVERT INSTALLATION SEQUENCE 2 STA. 345+79 -L-

1. INSTALL STILLING BASIN WITH CAPACITY OF 50 CY AT THE OUTLET END OF THE PROPOSED CULVERT.
3. CONSTRUCT IMPERVIOUS DIKE 'D' AT THE OUTLET END OF PROPOSED CULVERT. INSTALL APPROXIMATELY 86 LF OF TEMPORARY PIPE AT LOCATION 'D'.
4. DIVERT STREAM THROUGH TEMPORARY PIPE AT OUTLET END.
5. CONSTRUCT REMAINING 62 LF OF 10'x6' RCBC INCLUDING WINGWALLS AND OUTLET IMPROVEMENTS.
5. REMOVE TEMPORARY PIPE AT LOCATION 'C' & LOCATION 'D'. REMOVE IMPERVIOUS DIKES 'C' AND STILLING BASIN.
7. CONSTRUCT PROPOSED ROADWAY, EMBANKMENTS AND DITCHES AS SHOWN ON ROADWAY PLANS.

B:\17\99
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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-31/CONST.31
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

NAD 83/2011

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 31

INSTALL DRIVEWAY PIPES DURING CLEARING & GRUBBING PHASE

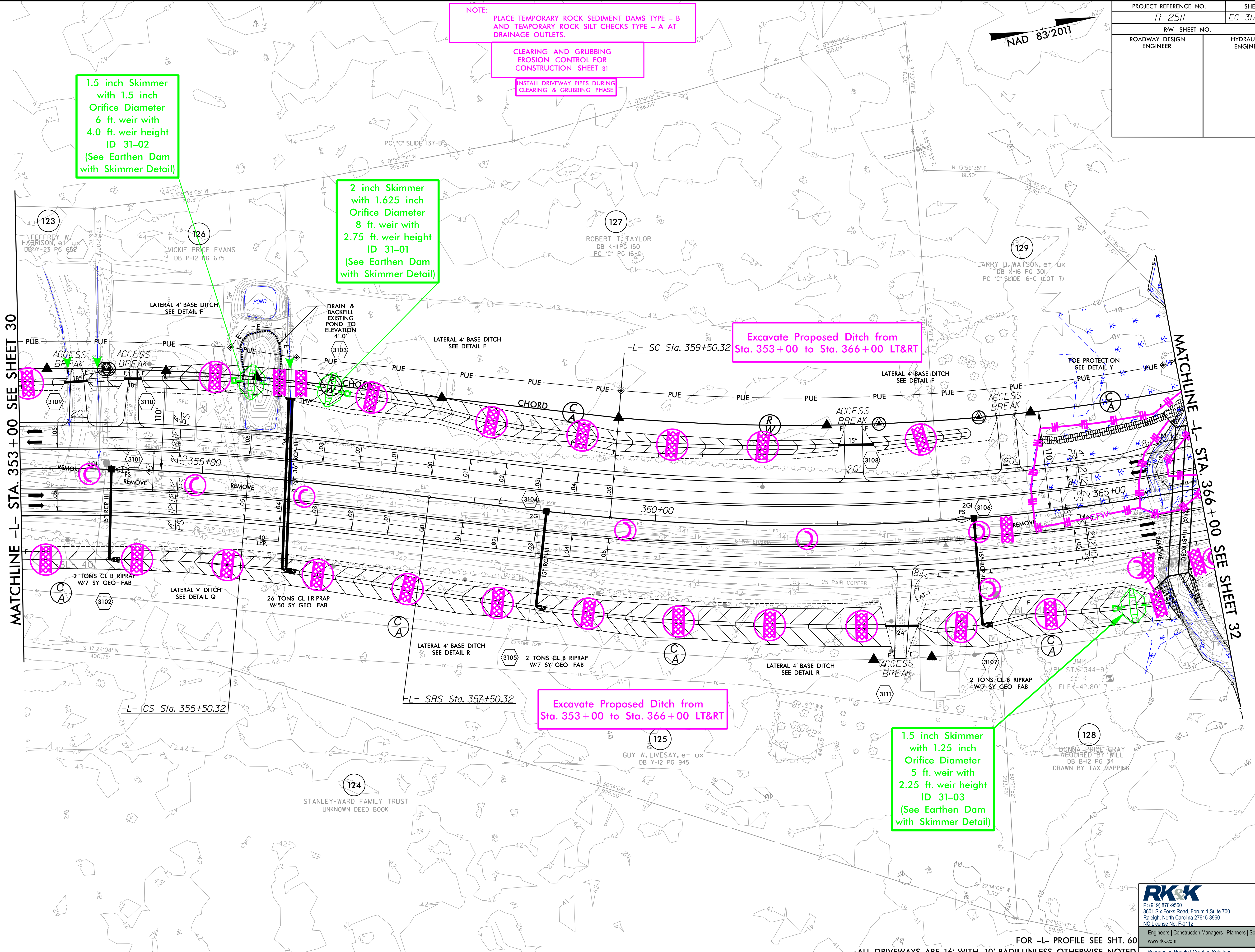
1.5 inch Skimmer with 1.5 inch Orifice Diameter 6 ft. weir with 4.0 ft. weir height ID 31-02 (See Earthen Dam with Skimmer Detail)

2 inch Skimmer with 1.625 inch Orifice Diameter 8 ft. weir with 2.75 ft. weir height ID 31-01 (See Earthen Dam with Skimmer Detail)

Excavate Proposed Ditch from Sta. 353+00 to Sta. 366+00 LT&RT

Excavate Proposed Ditch from Sta. 353+00 to Sta. 366+00 LT&RT

1.5 inch Skimmer with 1.25 inch Orifice Diameter 5 ft. weir with 2.25 ft. weir height ID 31-03 (See Earthen Dam with Skimmer Detail)



MATCHLINE -L- STA. 353+00 SEE SHEET 30

MATCHLINE -L- STA. 366+00 SEE SHEET 32

8/17/99

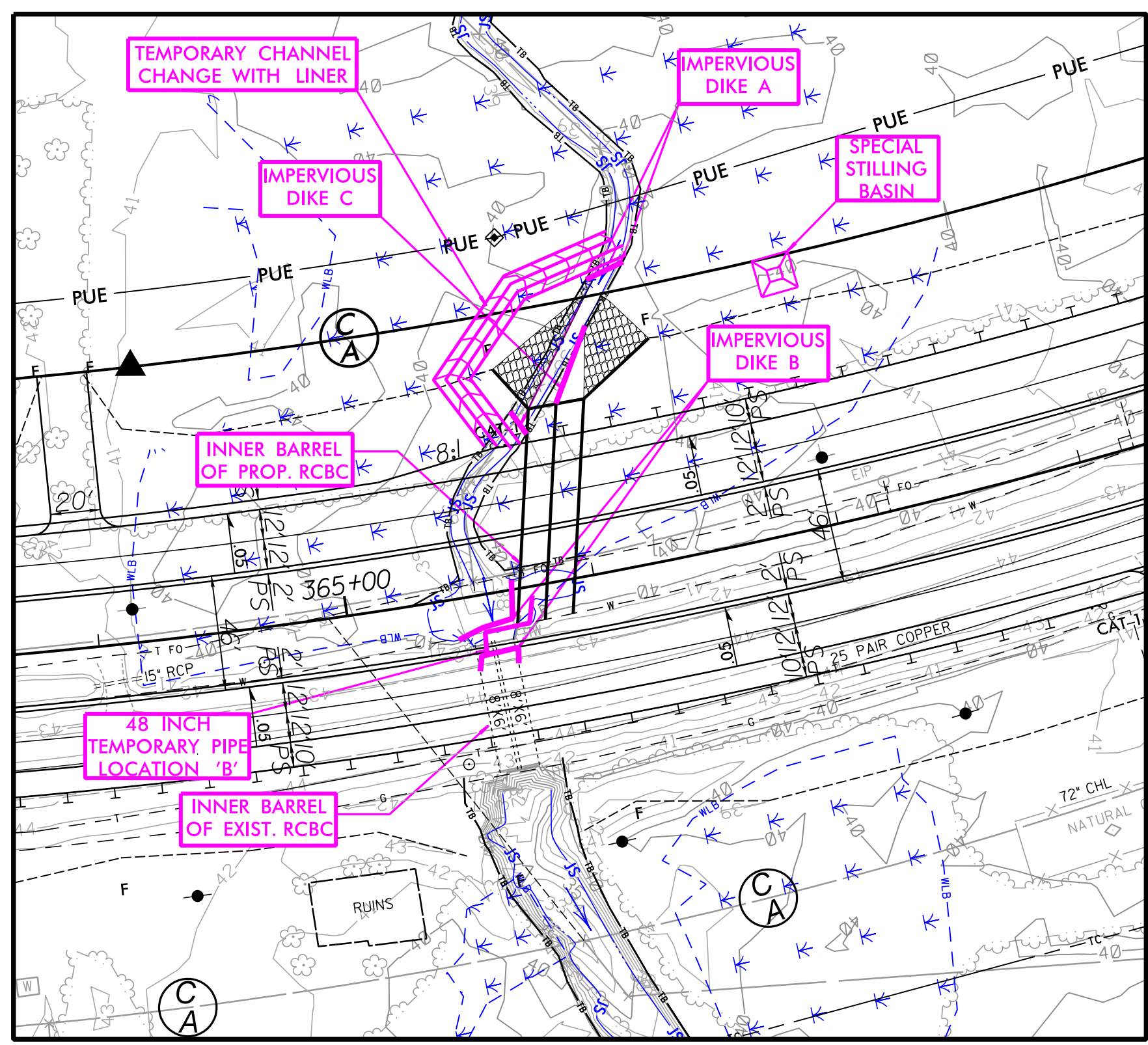
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FOR -L- PROFILE SEE SHT. 60
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.

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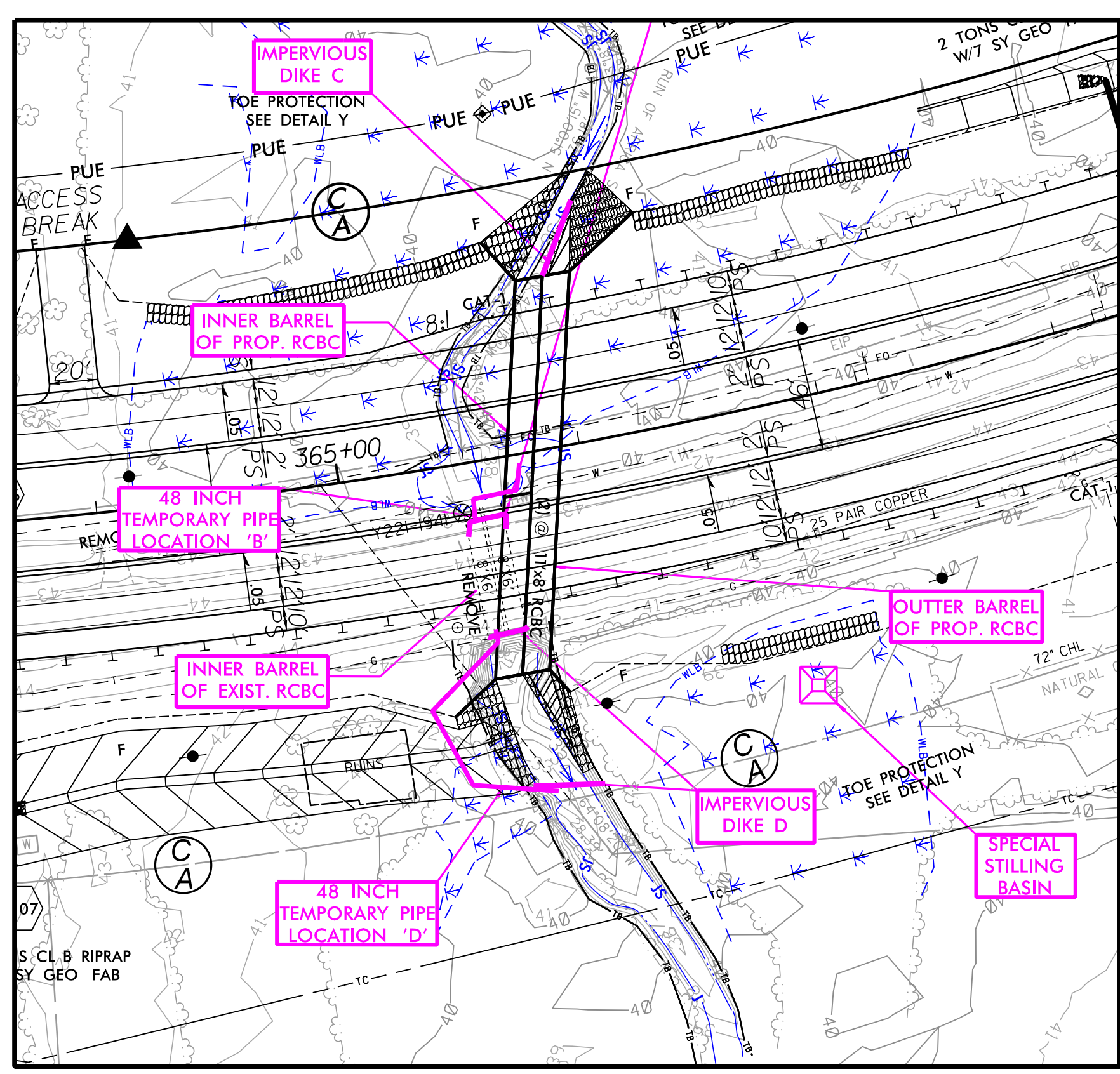
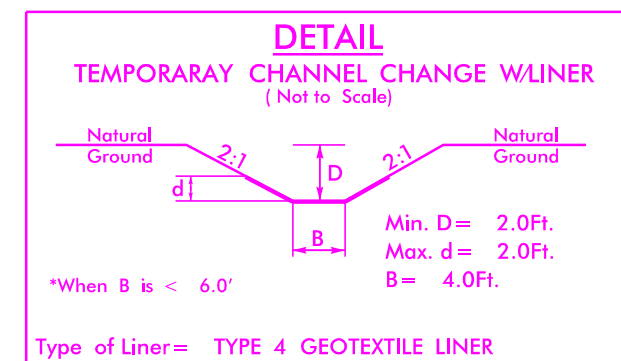
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PROJECT REFERENCE NO. R-2511	SHEET NO. EC-31A/CONST.31
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CULVERT INSTALLATION SEQUENCE 1 STA. 365+81 -L-

1. UTILIZE SPECIAL STILLING BASIN AT THE INLET END OF PROPOSED CULVERT.
2. INSTALL IMPERVIOUS DIKES 'A'. INSTALL APPROXIMATELY 125 LF OF TEMPORARY CHANNEL CHANGE W/LINER AS SHOWN IN DETAIL BELOW.
3. DIVERT FLOW THROUGH TEMPORARY CHANNEL CHANGE.
4. CONSTRUCT APPROXIMATELY 87 LF OF THE PROPOSED 2@11'x8' RCBC, INCLUDING INLET CHANNEL IMPROVEMENTS.
5. INSTALL IMPERVIOUS DIKE 'C' AT INLET OF PROPOSED RCBC. INSTALL TEMPORARY 48" PIPE AT LOCATION 'B' AND IMPERVIOUS DIKE 'B' TO TIE INNER BARREL OF PROPOSED RCBC TO INNER BARREL OF EXISTING RCBC. DIVERT STREAM THROUGH INNER BARREL OF NEW RCBC AND INNER BARREL OF EXISTING RCBC.
6. REMOVE IMPERVIOUS DIKE 'A' AND FILL-IN TEMPORARY CHANNEL CHANGE.
7. CONSTRUCT PROPOSED ROADWAY AND EMBANKMENTS AS SHOWN IN ROADWAY PLANS.
8. SWITCH TRAFFIC TO NEWLY CONSTRUCTED PAVEMENT.

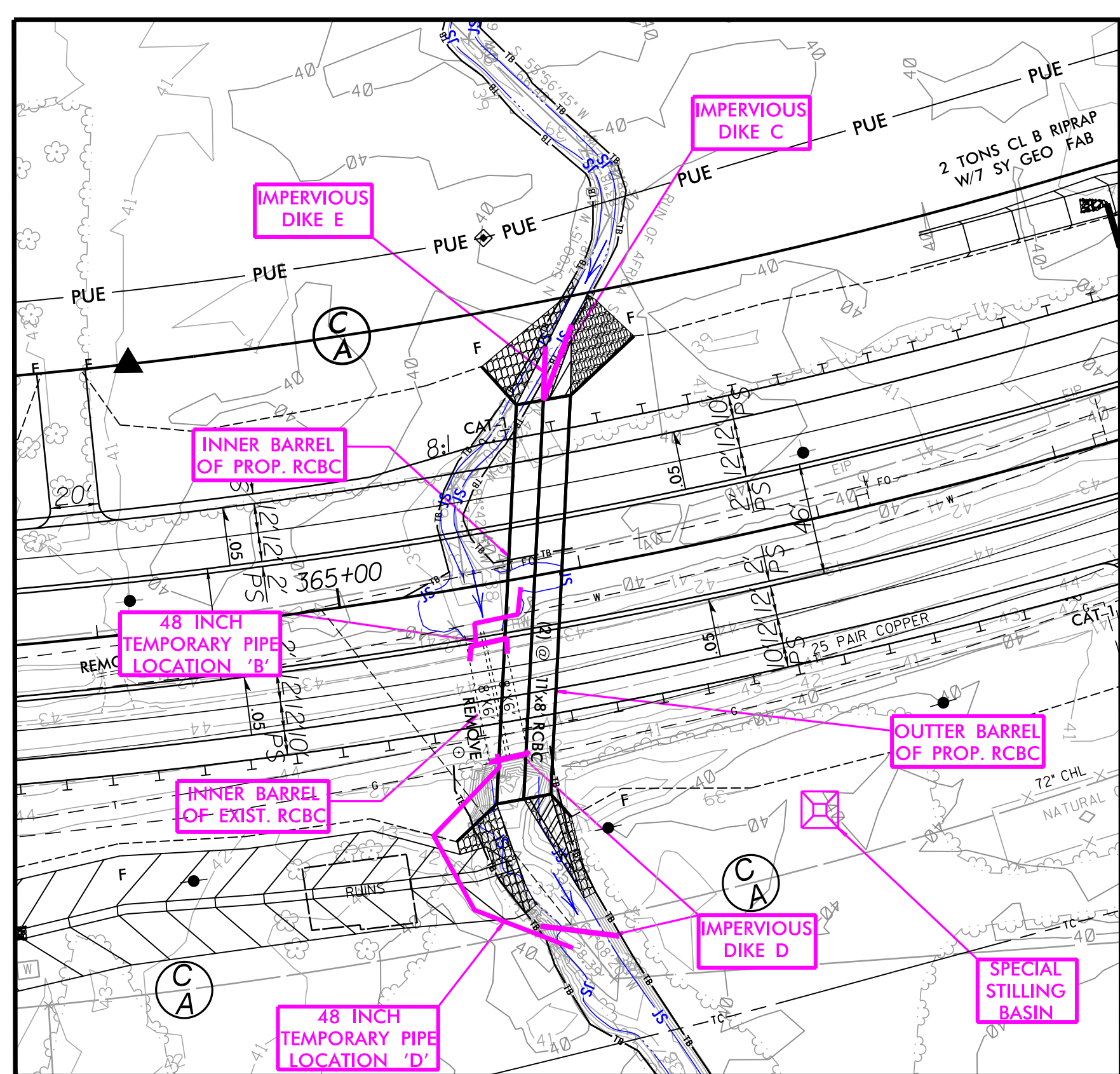
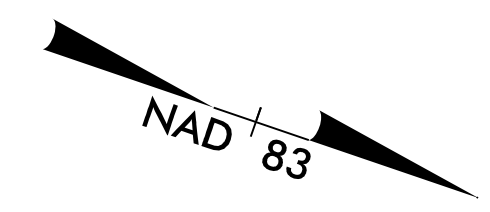


CULVERT INSTALLATION SEQUENCE 2 STA. 365+81 -L-

1. UTILIZE SPECIAL STILLING BASIN AT OUTLET END OF PROPOSED CULVERT.
3. INSTALL IMPERVIOUS DIKE 'D' AND APPROXIMATELY 125' OF 48" TEMPORARY PIPE AT LOCATION 'D'. DIVERT STREAM FROM OUTLET OF INNER BARREL OF EXISTING RCBC THROUGH NEW TEMPORARY PIPE AT OUTLET.
4. REMOVE THE OUTER BARREL OF THE EXISTING RCBC.
5. CONSTRUCT THE REMAINING 77 LF OF THE OUTER BARREL OF THE 11'x8' RCBC, INCLUDING WINGWALLS. CONSTRUCT THE OUTLET CHANNEL IMPROVEMENTS.
6. SEE INSTALLATION SEQUENCE 3 ON SHEET 31B.

8/17/99
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S: CL B RIPRAP SY GEO FAB

PROJECT REFERENCE NO. <i>R-2511</i>	SHEET NO. <i>EC-31B/CONST.31</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CULVERT INSTALLATION SEQUENCE 3 STA. 365+81 -L-

1. REMOVE IMPERVIOUS DIKE 'C' AND INSTALL IMPERVIOUS DIKE 'E' AT INLET OF PROPOSED RCBC.
2. DIVERT STREAM THROUGH OUTER BARREL OF NEW 11'x8' RCBC.
3. REMOVE IMPERVIOUS DIKE 'B' AND TEMPORARY 48" PIPE AT LOCATION 'B'. REMOVE INNER BARREL OF EXISTING RCBC. REMOVE TEMPORARY PIPE AT LOCATION 'D'. REMOVE IMPERVIOUS DIKE 'D'.
4. CONSTRUCT REMAINING 77 LF OF INNER BARREL OF THE PROPOSED 11'x8' RCBC, INCLUDING WINGWALL AT OUTLET.
5. REMOVE IMPERVIOUS DIKE 'E' AND STILLING BASIN AT OUTLET END OF PROPOSED RCBC. DIVERT STREAM THROUGH BOTH BARRELS OF NEW RCBC.
6. CONSTRUCT PROPOSED ROADWAY, EMBANKMENTS AND SITCHES AS SHOWN ON ROADWAY PLANS.

8/17/99

8/4/2021 \\hydraulics\CADD\PSH\Erosion_Control\2511_EC_PSH_31B.dgn

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PROJECT REFERENCE NO.	SHEET NO.
R-2511	EC-32/CONST.32
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/2011

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 32

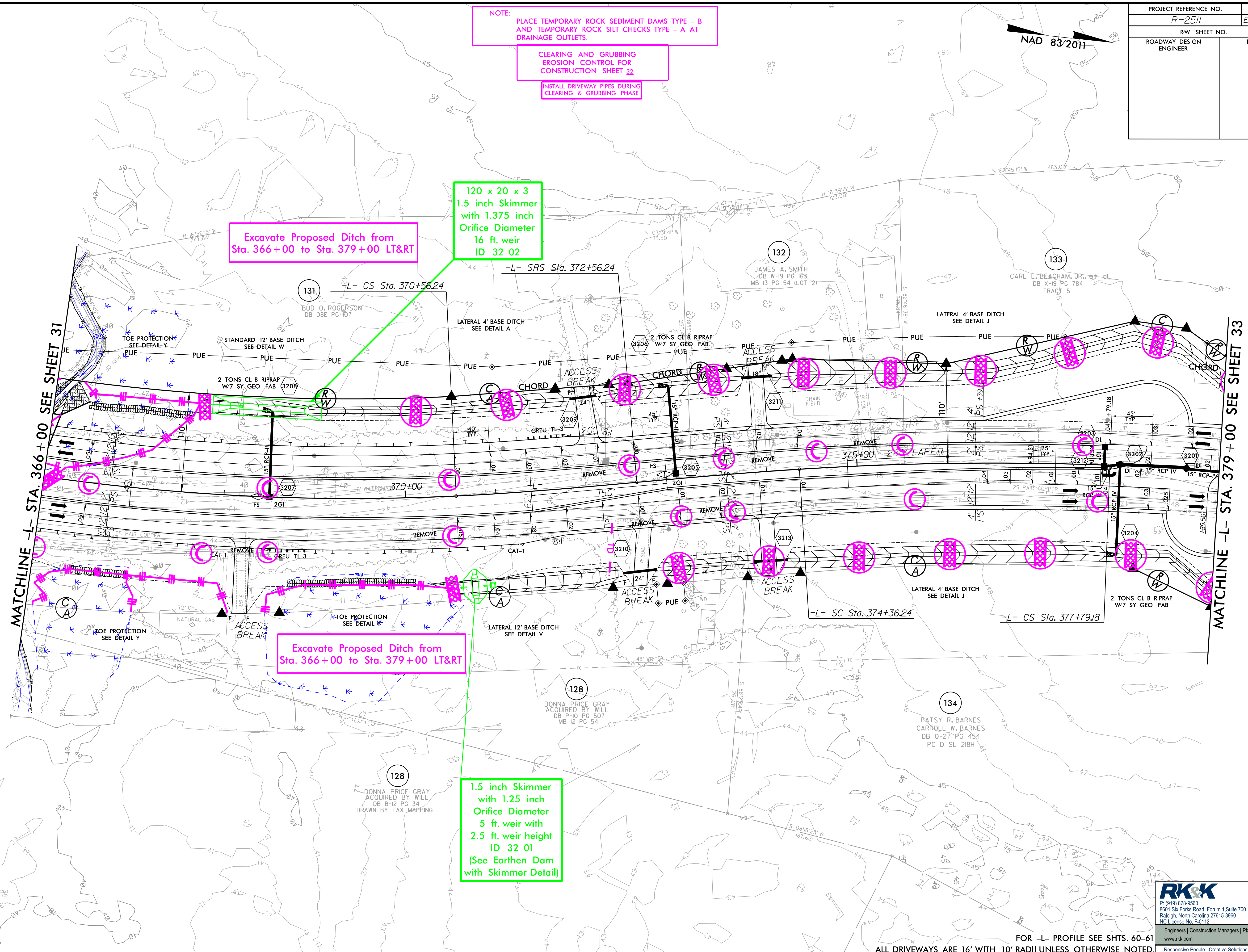
INSTALL DRIVEWAY PIPES DURING
CLEARING & GRUBBING PHASE

Excavate Proposed Ditch from
Sta. 366+00 to Sta. 379+00 LT&RT

120 x 20 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
16 ft. weir
ID 32-02

Excavate Proposed Ditch from
Sta. 366+00 to Sta. 379+00 LT&RT

1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
5 ft. weir with
2.5 ft. weir height
ID 32-01
(See Earthen Dam
with Skimmer Detail)



MATCHLINE -L- STA. 366+00 SEE SHEET 31

MATCHLINE -L- STA. 379+00 SEE SHEET 33

8/17/99
8/14/2021
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FOR -L- PROFILE SEE SHTS. 60-61
ALL DRIVEWAYS ARE 16' WITH 10' RADII UNLESS OTHERWISE NOTED.