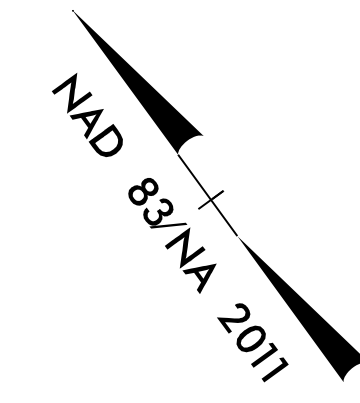


8.17/99
C:\T\PROJECTS\2011\20110817\20110817.DWG

WETHERILL ENGINEERING
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

PROJECT REFERENCE NO.	SHEET NO.
W-5600	EC-27/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

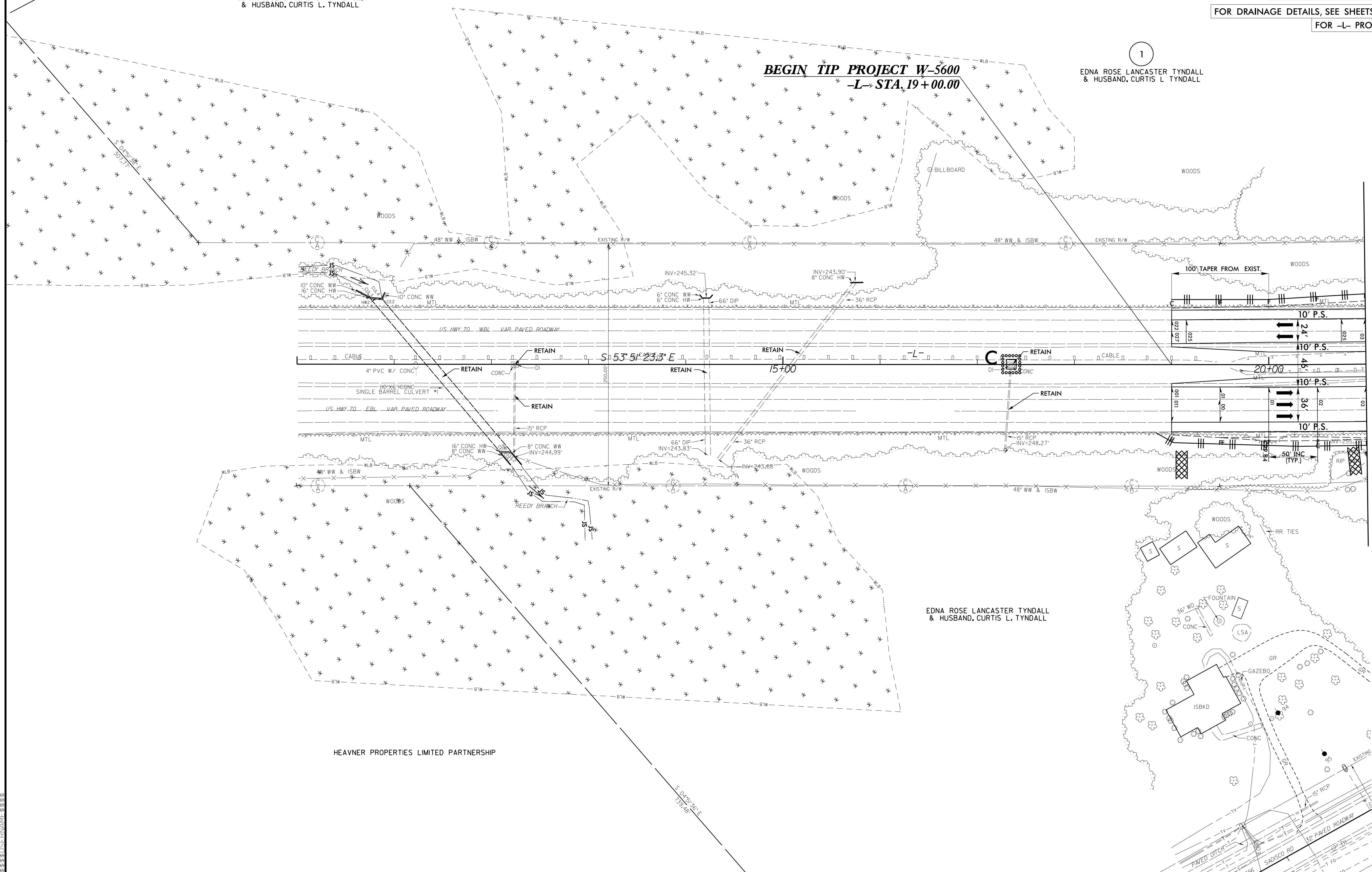


1
EDNA ROSE LANCASTER TYNDALL & HUSBAND, CURTIS L. TYNDALL

1
EDNA ROSE LANCASTER TYNDALL & HUSBAND, CURTIS L. TYNDALL

BEGIN TIP PROJECT W-5600
-L- STA. 19+00.00

FOR DRAINAGE DETAILS, SEE SHEETS: 2D-1 THRU 2D-3
FOR -L- PROFILE, SEE SHEET: 27



MATCHLINE -L- STA. 21+00 SEE SHEET 5

HEAVNER PROPERTIES LIMITED PARTNERSHIP

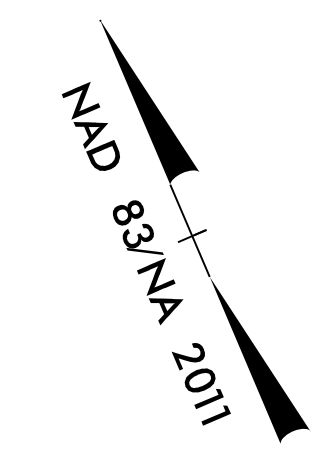
EDNA ROSE LANCASTER TYNDALL & HUSBAND, CURTIS L. TYNDALL

8/17/99

ETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>W-5600</i>	SHEET NO. <i>EC-28/CONST.5</i>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

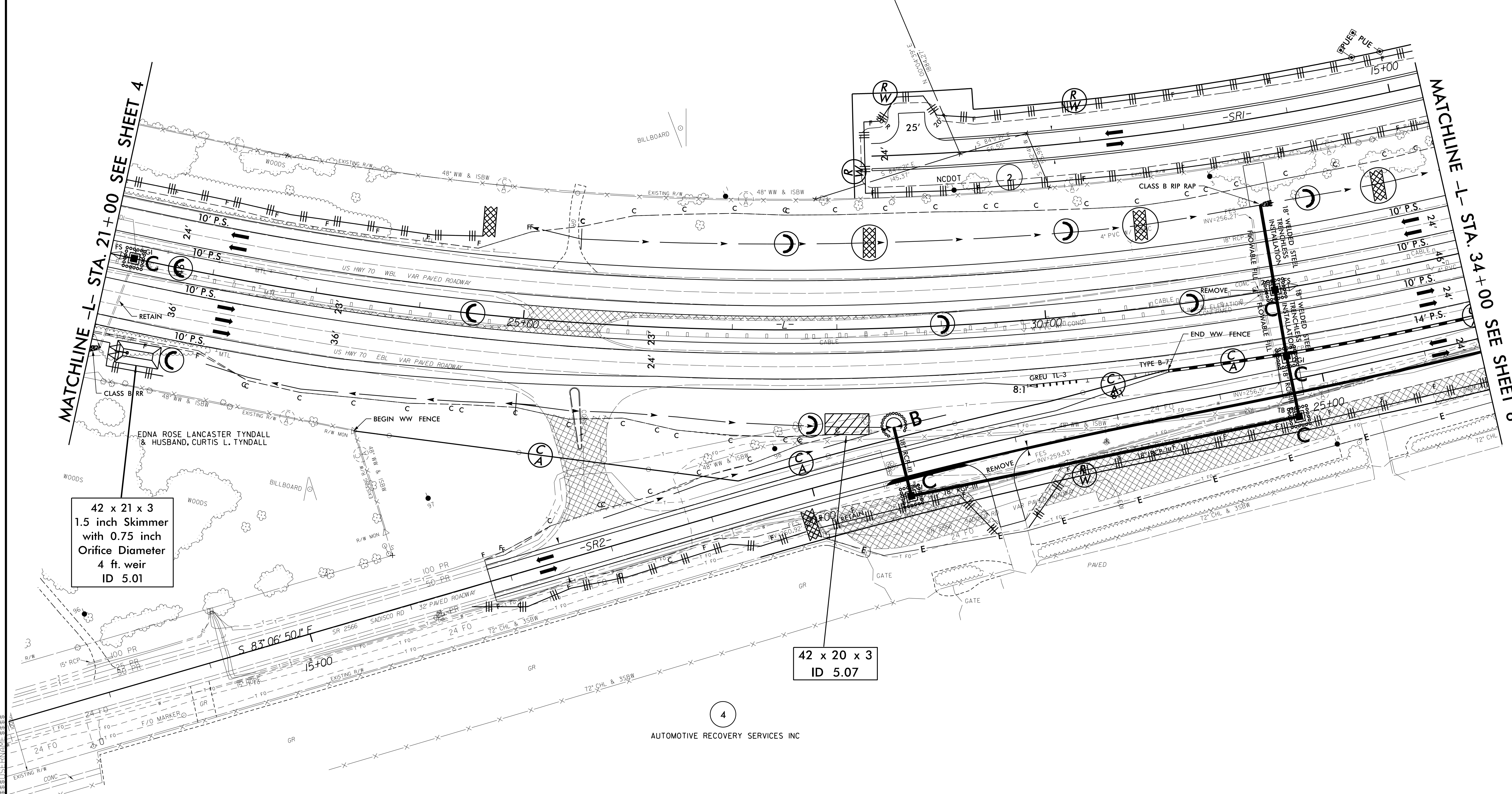


3

SALLIE JANE LANCASTER BOYD

1

EDNA ROSE LANCASTER TYNDALL & HUSBAND, CURTIS L. TYNDALL



MATCHLINE -L- STA. 21+00 SEE SHEET 4

MATCHLINE -L- STA. 34+00 SEE SHEET 6

42 x 21 x 3
 1.5 inch Skimmer
 with 0.75 inch
 Orifice Diameter
 4 ft. weir
 ID 5.01

42 x 20 x 3
 ID 5.07

4

AUTOMOTIVE RECOVERY SERVICES INC

8.17.799
C:\Users\jgibson\OneDrive\Documents\Projects\2017\17082017\17082017.dwg

ETHERILL ENGINEERING
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

PROJECT REFERENCE NO.	W-5600	SHEET NO.	EC-29/CONST.6
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NAD 83/NA 2011

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

SALLIE JANE LANCASTER BOYD

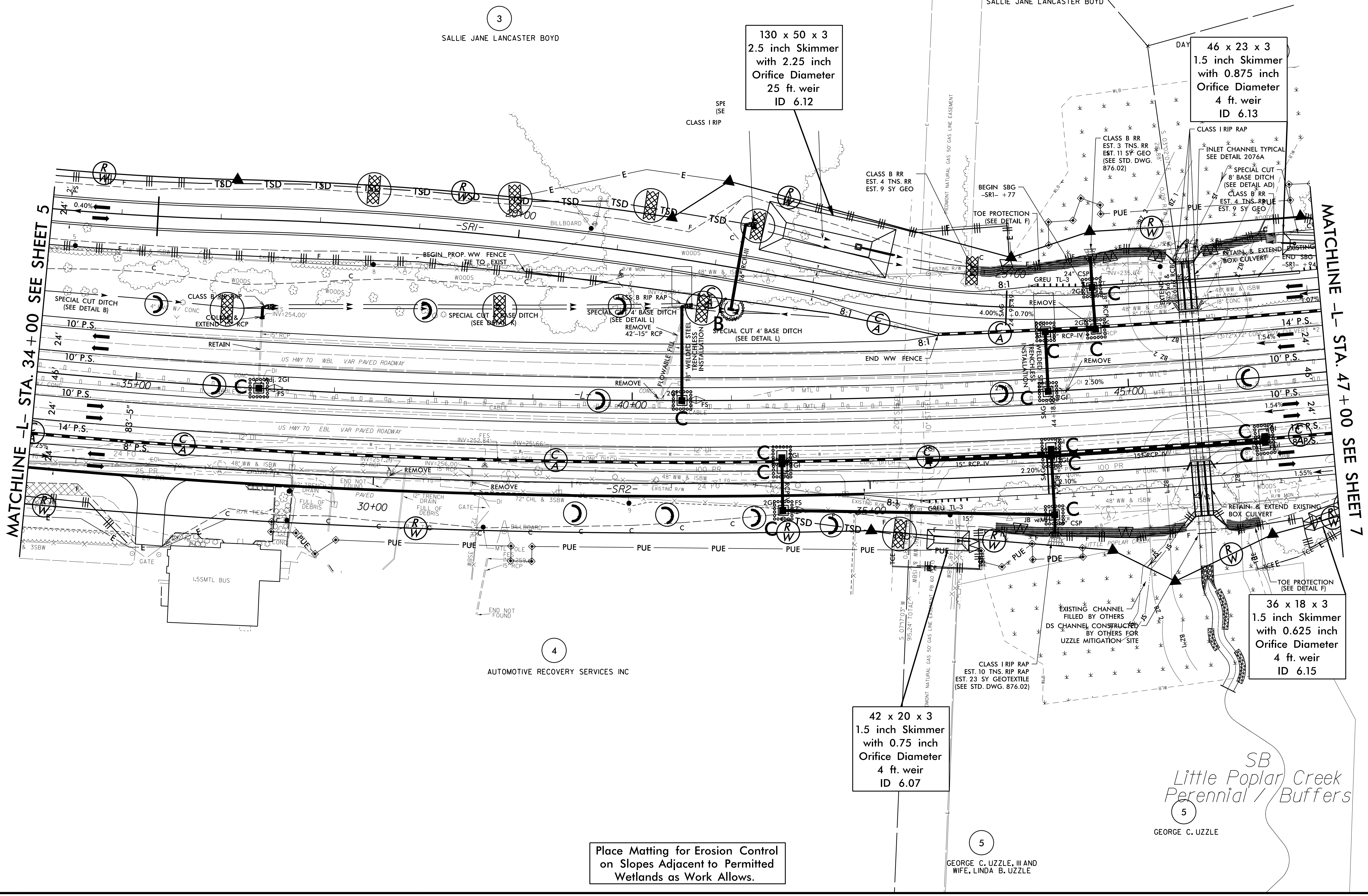
3
SALLIE JANE LANCASTER BOYD

130 x 50 x 3
2.5 inch Skimmer
with 2.25 inch
Orifice Diameter
25 ft. weir
ID 6.12

46 x 23 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 6.13

MATCHLINE -L- STA. 34+00 SEE SHEET 5

MATCHLINE -L- STA. 47+00 SEE SHEET 7



Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

42 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 6.07

36 x 18 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 6.15

5
GEORGE C. UZZLE, III AND WIFE, LINDA B. UZZLE

SB
Little Poplar Creek
Perennial / Buffers
5
GEORGE C. UZZLE

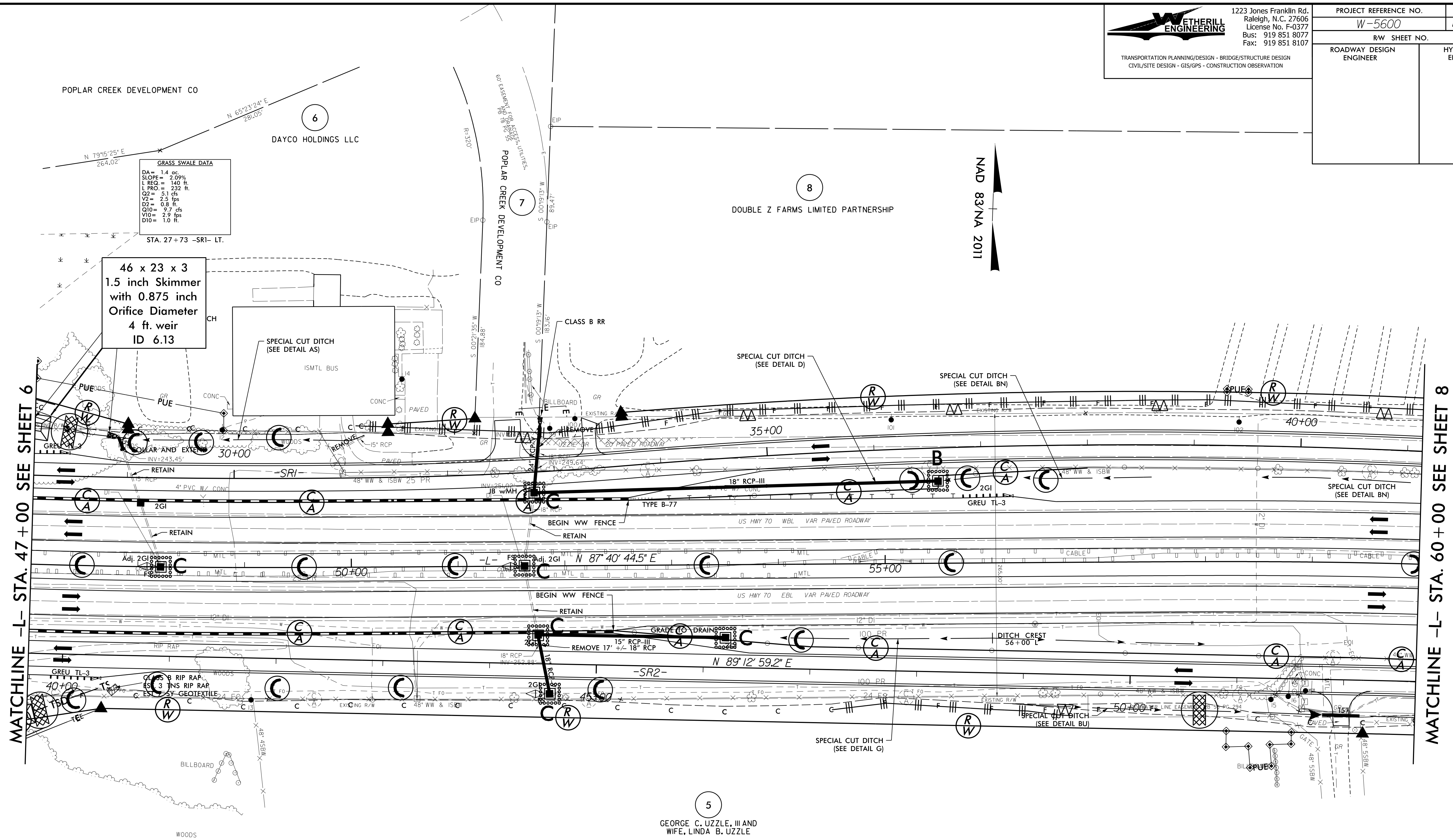


1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

PROJECT REFERENCE NO. W-5600		SHEET NO. EC-30/CONST.7	
RW SHEET NO.		RW SHEET NO.	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

8/17/99



NAD 83/NA 2011

MATCHLINE -L- STA. 47+00 SEE SHEET 6

MATCHLINE -L- STA. 60+00 SEE SHEET 8

8.17/99

ETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

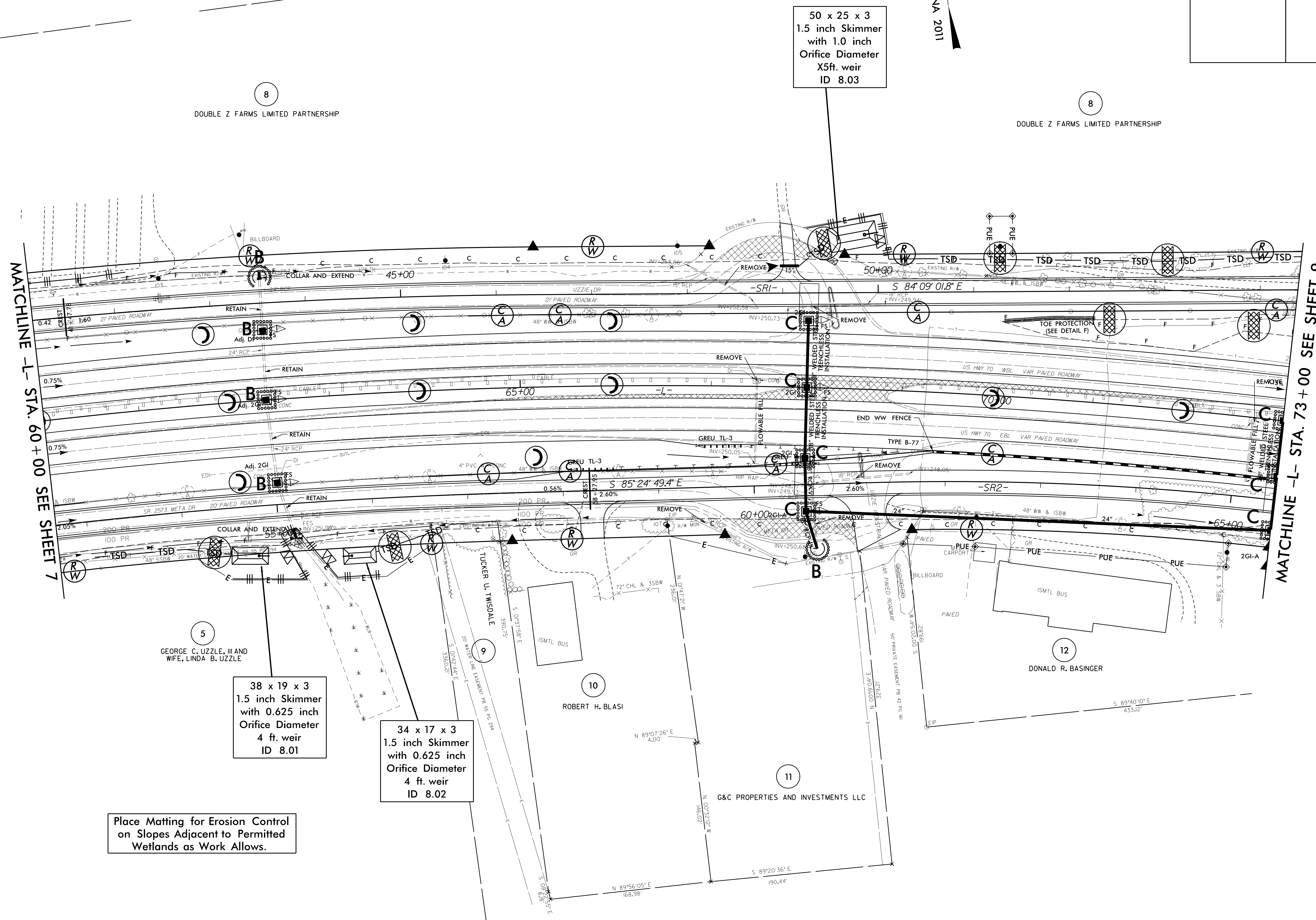
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>W-5600</i>	SHEET NO. <i>EC-31/CONST.B</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NA 2011

8
DOUBLE Z FARMS LIMITED PARTNERSHIP

8
DOUBLE Z FARMS LIMITED PARTNERSHIP



MATCHLINE -L- STA. 60+00 SEE SHEET 7

MATCHLINE -L- STA. 73+00 SEE SHEET 9

ETHERILL ENGINEERING
1223 JONES FRANKLIN RD.
RALEIGH, NC 27606
PH 919 851 8077
FX 919 851 8107
WWW.ETHERILL-ENGINEERING.COM

8.17/99

BEGIN CONSTRUCTION
-Y4- STA. 10+75.00

END CONSTRUCTION
-SRI- STA. 67+00.00

ETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

PROJECT REFERENCE NO. W-5600	SHEET NO. EC-32/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

SC Intermittent/ No Buffers

30 x 14 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
4 ft. weir
ID 9.05

72 x 30 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
8 ft. weir
ID 9.03

50 x 25 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 9.01

44 x 22 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 9.06

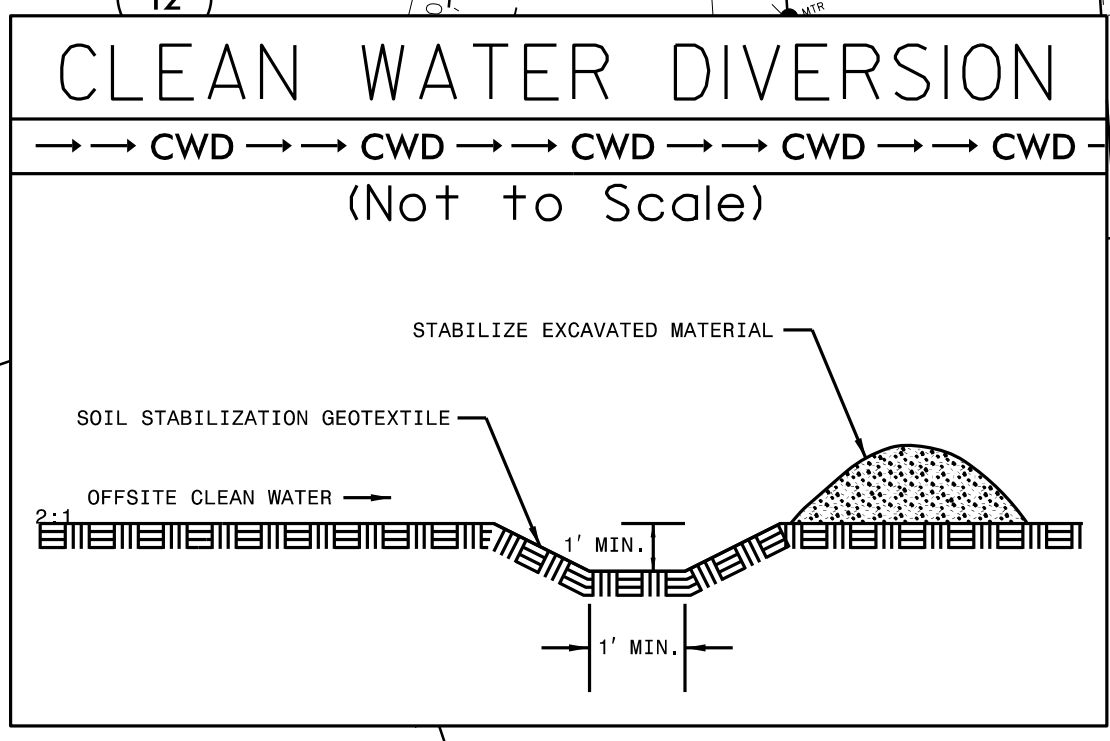
36 x 17 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 9.07

42 x 21 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 9.09

50 x 25 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 9.11

MATCHLINE -L- STA. 73+00 SEE SHEET 8

MATCHLINE -L- STA. 86+00 SEE SHEET 10



61 x 20 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 9.08

SF Perennial / No Buffers

SD Intermittent / Buffers

81 x 30 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
9 ft. weir
ID 9.12

GRASS SWALE DATA

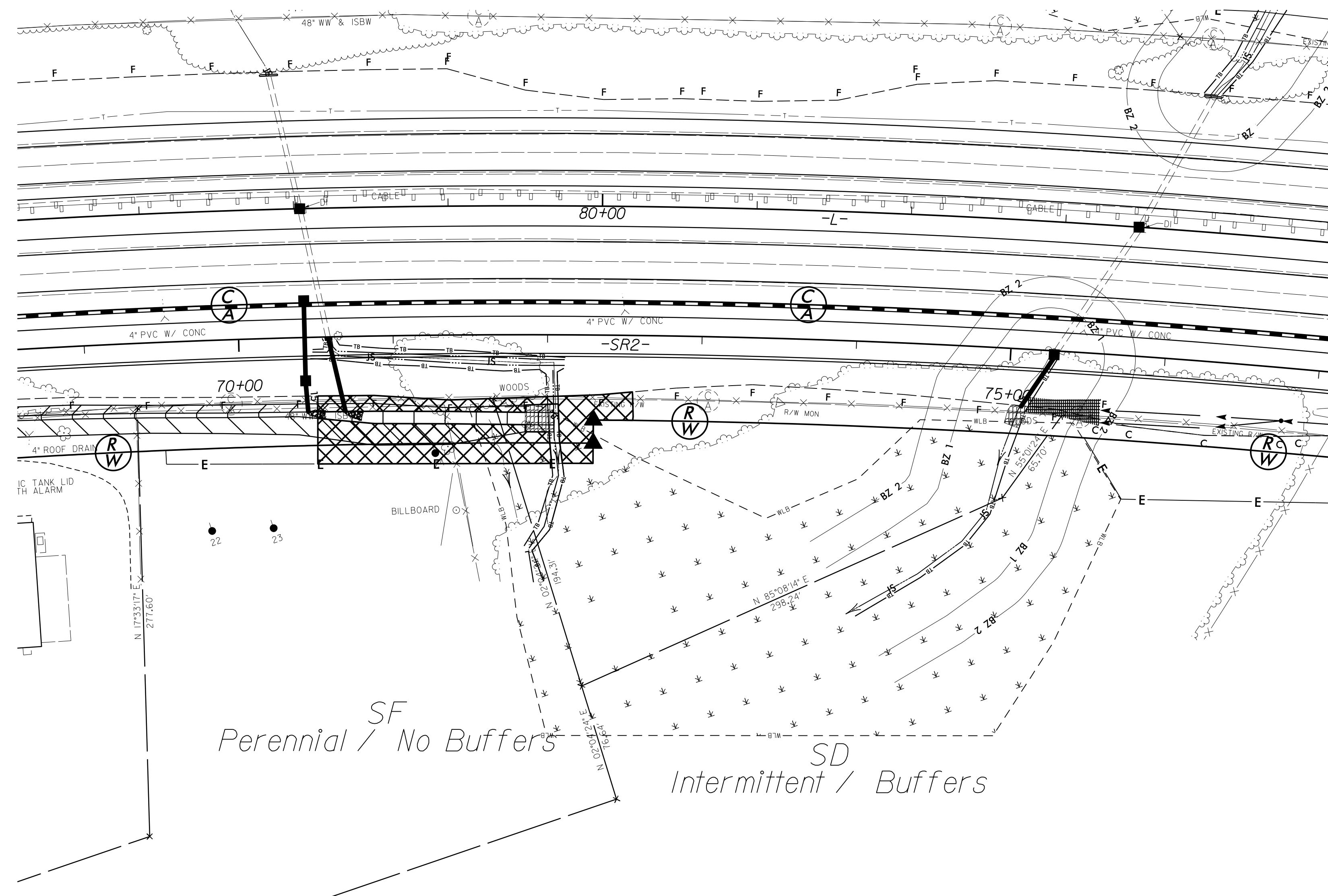
DA=2.22 cfs
SL O.P.=0.5
L REQ.=222 ft.
L PRO.=690 ft.
Q2=8.2 cfs
D2=1.4 ft.
Q10=10.6 cfs
V10=1.5 fps
D10=1.5 ft.

STA. 76+78 -SR2- RT.

8.17/99

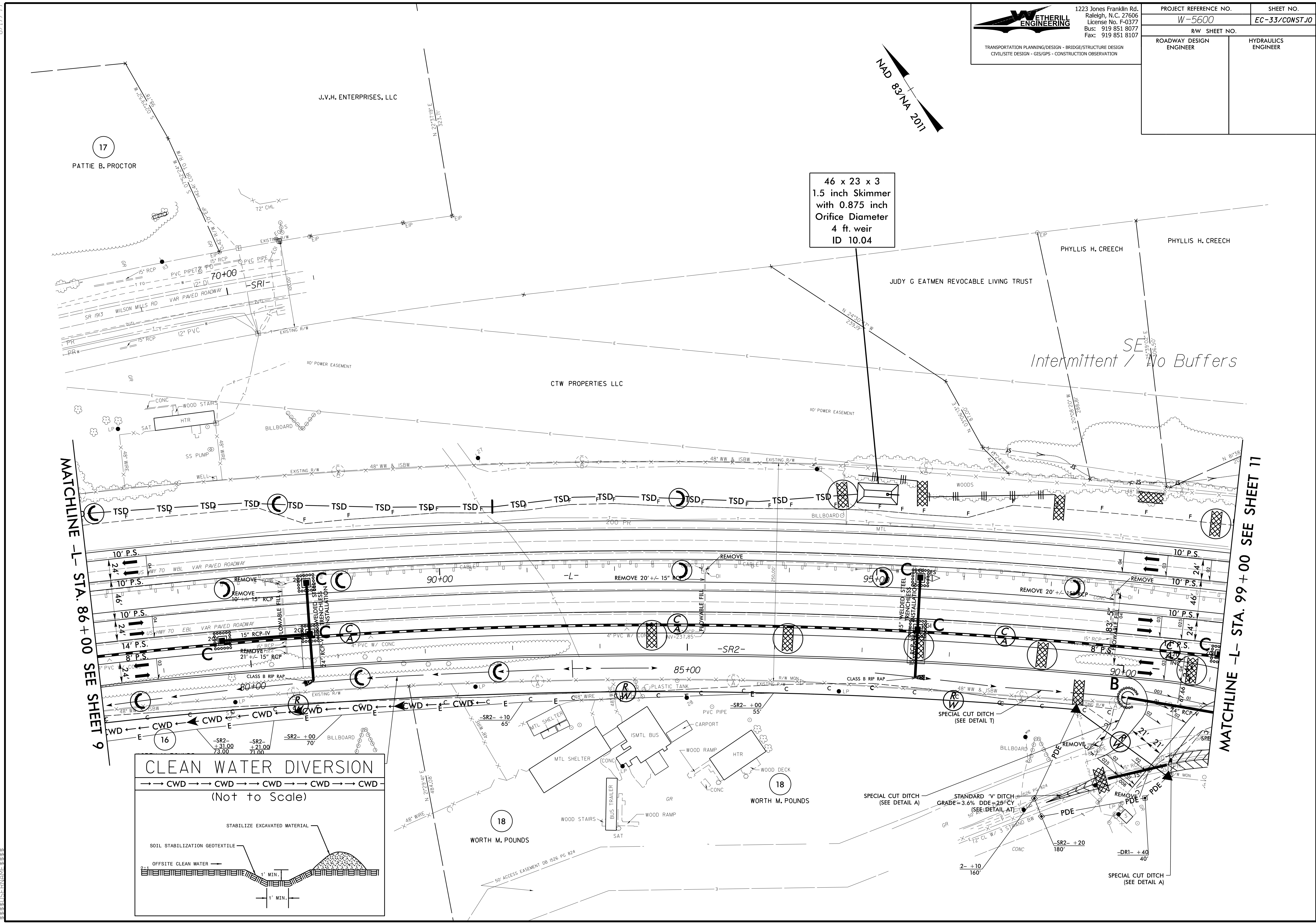
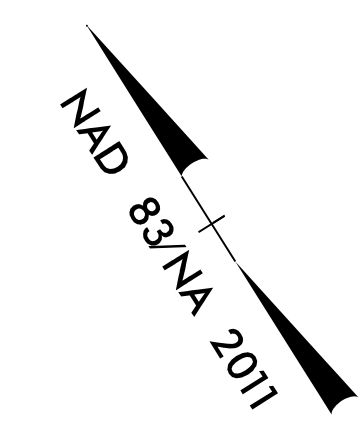
0.15 ACRE STREAMBANK REFORESTATION

PROJECT REFERENCE NO.	SHEET NO.
W-5600	EC-32A/CONST.09
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



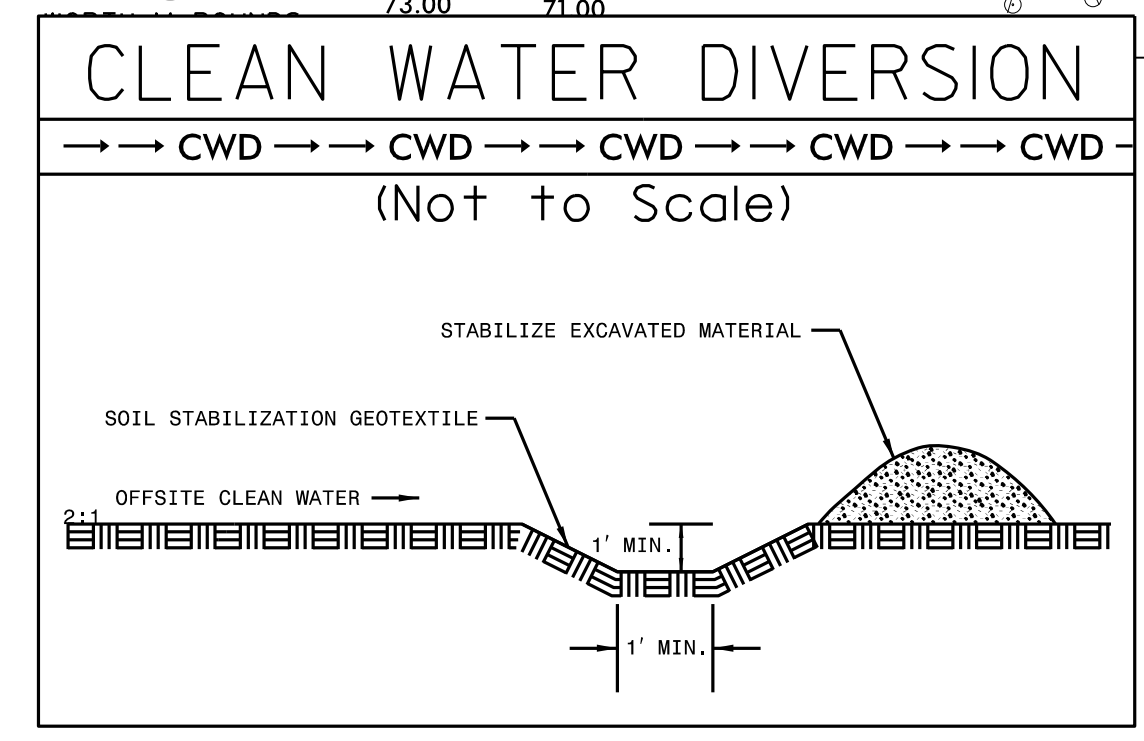
SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

PROJECT REFERENCE NO. W-5600	SHEET NO. EC-33/CONST.10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE -L- STA. 86 + 00 SEE SHEET 9

MATCHLINE -L- STA. 99 + 00 SEE SHEET 11



46 x 23 x 3
 1.5 inch Skimmer
 with 0.875 inch
 Orifice Diameter
 4 ft. weir
 ID 10.04

Intermittent / No Buffers

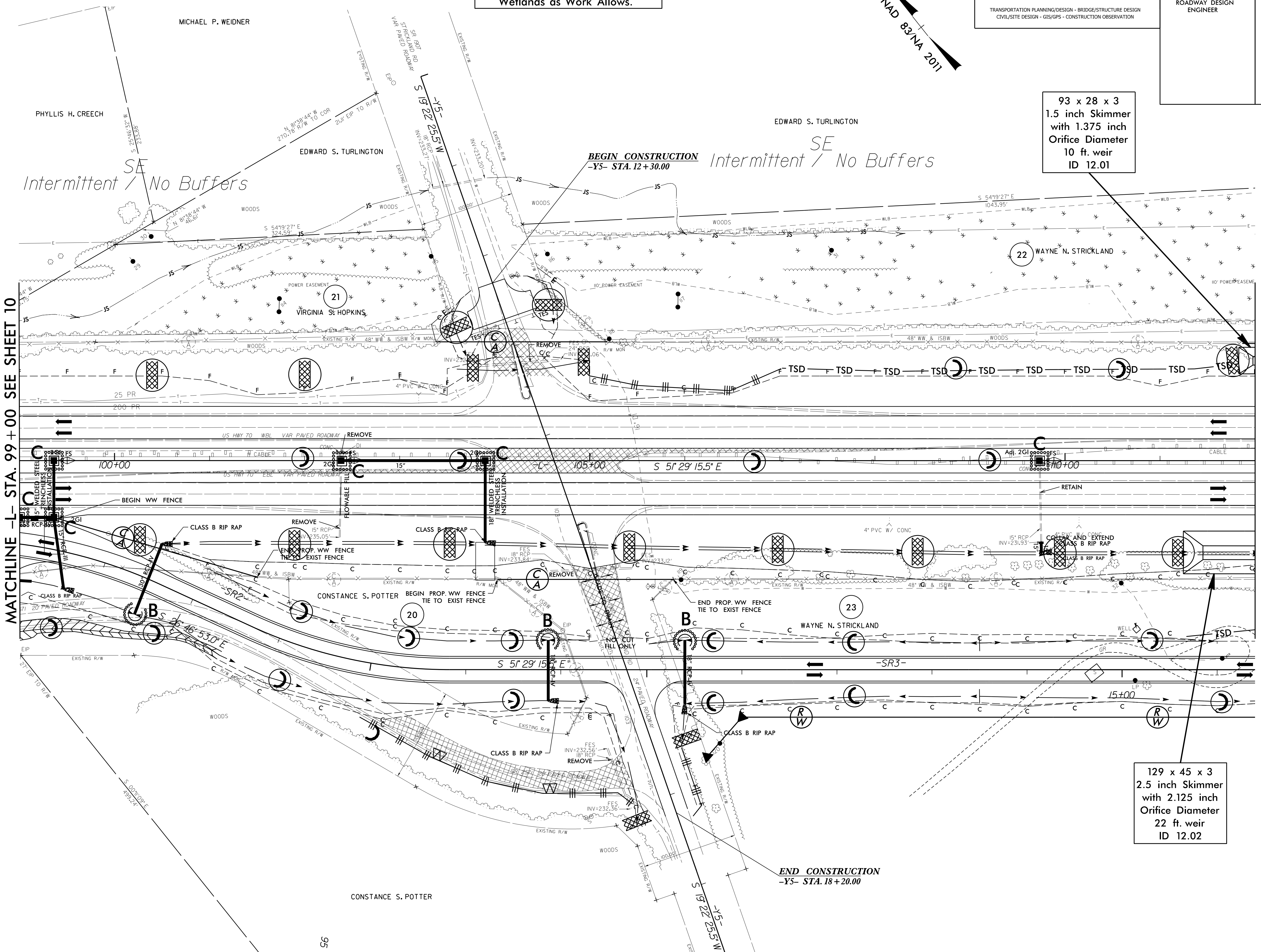
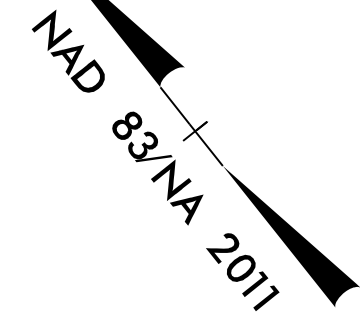
8.17/99

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

ETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
W-5600	EC-34/CONST II
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE -L- STA. 99 + 00 SEE SHEET 10

MATCHLINE -L- STA. 112 + 00 SEE SHEET 12

Intermittent / No Buffers

SE Intermittent / No Buffers

93 x 28 x 3
 1.5 inch Skimmer
 with 1.375 inch
 Orifice Diameter
 10 ft. weir
 ID 12.01

129 x 45 x 3
 2.5 inch Skimmer
 with 2.125 inch
 Orifice Diameter
 22 ft. weir
 ID 12.02

BEGIN CONSTRUCTION -YS- STA. 12 + 30.00

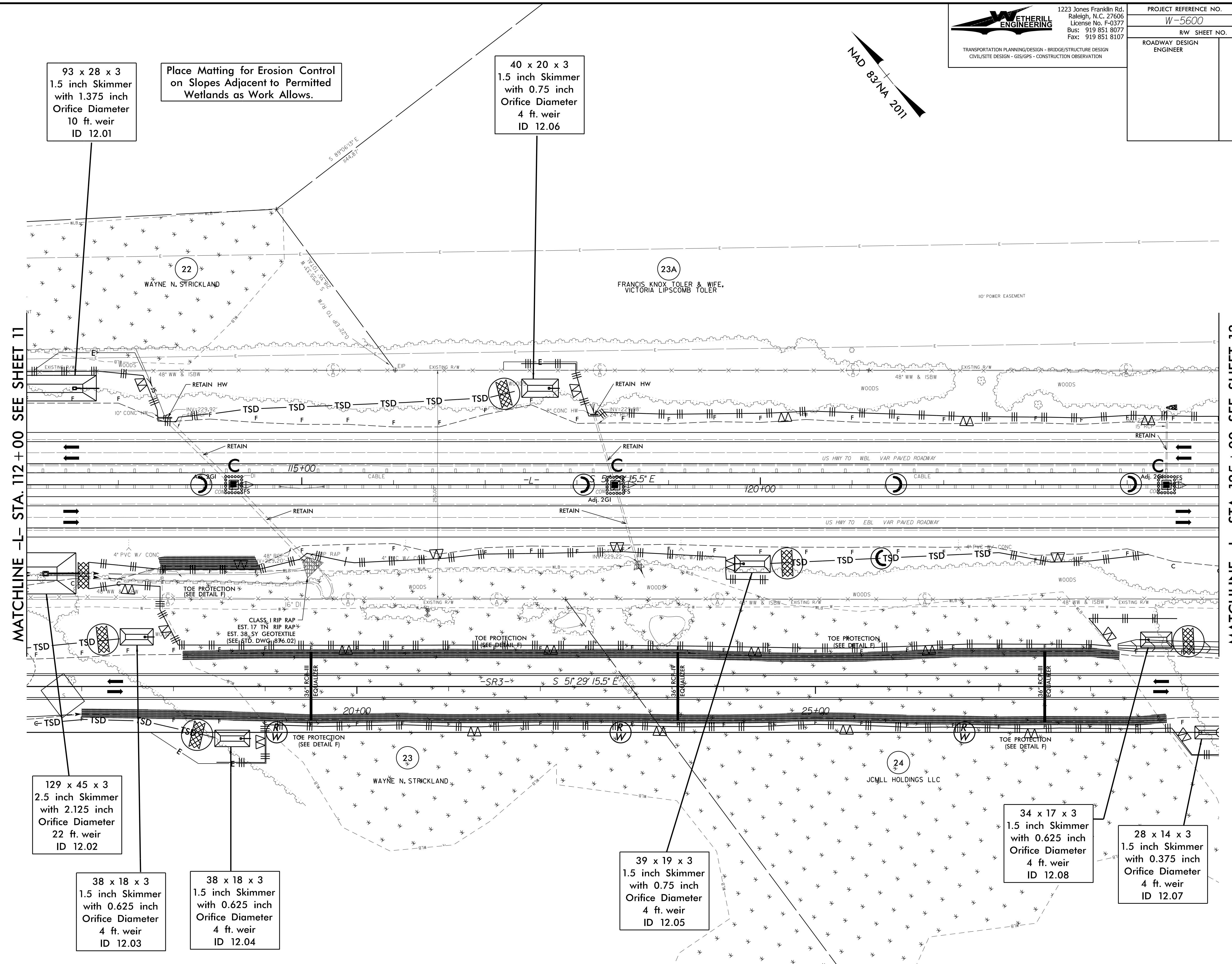
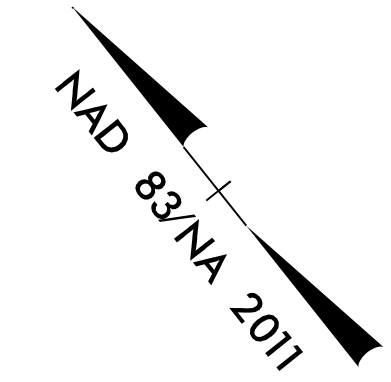
END CONSTRUCTION -YS- STA. 18 + 20.00

10'-0" RCP
 12'-0" RCP
 15'-0" RCP
 18'-0" RCP
 24'-0" RCP
 30'-0" RCP
 36'-0" RCP
 42'-0" RCP
 48'-0" RCP
 54'-0" RCP
 60'-0" RCP
 66'-0" RCP
 72'-0" RCP
 78'-0" RCP
 84'-0" RCP
 90'-0" RCP
 96'-0" RCP
 102'-0" RCP
 108'-0" RCP
 114'-0" RCP
 120'-0" RCP
 126'-0" RCP
 132'-0" RCP
 138'-0" RCP
 144'-0" RCP
 150'-0" RCP
 156'-0" RCP
 162'-0" RCP
 168'-0" RCP
 174'-0" RCP
 180'-0" RCP
 186'-0" RCP
 192'-0" RCP
 198'-0" RCP
 204'-0" RCP
 210'-0" RCP
 216'-0" RCP
 222'-0" RCP
 228'-0" RCP
 234'-0" RCP
 240'-0" RCP
 246'-0" RCP
 252'-0" RCP
 258'-0" RCP
 264'-0" RCP
 270'-0" RCP
 276'-0" RCP
 282'-0" RCP
 288'-0" RCP
 294'-0" RCP
 300'-0" RCP
 306'-0" RCP
 312'-0" RCP
 318'-0" RCP
 324'-0" RCP
 330'-0" RCP
 336'-0" RCP
 342'-0" RCP
 348'-0" RCP
 354'-0" RCP
 360'-0" RCP
 366'-0" RCP
 372'-0" RCP
 378'-0" RCP
 384'-0" RCP
 390'-0" RCP
 396'-0" RCP
 402'-0" RCP
 408'-0" RCP
 414'-0" RCP
 420'-0" RCP
 426'-0" RCP
 432'-0" RCP
 438'-0" RCP
 444'-0" RCP
 450'-0" RCP
 456'-0" RCP
 462'-0" RCP
 468'-0" RCP
 474'-0" RCP
 480'-0" RCP
 486'-0" RCP
 492'-0" RCP
 498'-0" RCP
 504'-0" RCP
 510'-0" RCP
 516'-0" RCP
 522'-0" RCP
 528'-0" RCP
 534'-0" RCP
 540'-0" RCP
 546'-0" RCP
 552'-0" RCP
 558'-0" RCP
 564'-0" RCP
 570'-0" RCP
 576'-0" RCP
 582'-0" RCP
 588'-0" RCP
 594'-0" RCP
 600'-0" RCP
 606'-0" RCP
 612'-0" RCP
 618'-0" RCP
 624'-0" RCP
 630'-0" RCP
 636'-0" RCP
 642'-0" RCP
 648'-0" RCP
 654'-0" RCP
 660'-0" RCP
 666'-0" RCP
 672'-0" RCP
 678'-0" RCP
 684'-0" RCP
 690'-0" RCP
 696'-0" RCP
 702'-0" RCP
 708'-0" RCP
 714'-0" RCP
 720'-0" RCP
 726'-0" RCP
 732'-0" RCP
 738'-0" RCP
 744'-0" RCP
 750'-0" RCP
 756'-0" RCP
 762'-0" RCP
 768'-0" RCP
 774'-0" RCP
 780'-0" RCP
 786'-0" RCP
 792'-0" RCP
 798'-0" RCP
 804'-0" RCP
 810'-0" RCP
 816'-0" RCP
 822'-0" RCP
 828'-0" RCP
 834'-0" RCP
 840'-0" RCP
 846'-0" RCP
 852'-0" RCP
 858'-0" RCP
 864'-0" RCP
 870'-0" RCP
 876'-0" RCP
 882'-0" RCP
 888'-0" RCP
 894'-0" RCP
 900'-0" RCP
 906'-0" RCP
 912'-0" RCP
 918'-0" RCP
 924'-0" RCP
 930'-0" RCP
 936'-0" RCP
 942'-0" RCP
 948'-0" RCP
 954'-0" RCP
 960'-0" RCP
 966'-0" RCP
 972'-0" RCP
 978'-0" RCP
 984'-0" RCP
 990'-0" RCP
 996'-0" RCP
 1002'-0" RCP
 1008'-0" RCP
 1014'-0" RCP
 1020'-0" RCP
 1026'-0" RCP
 1032'-0" RCP
 1038'-0" RCP
 1044'-0" RCP
 1050'-0" RCP
 1056'-0" RCP
 1062'-0" RCP
 1068'-0" RCP
 1074'-0" RCP
 1080'-0" RCP
 1086'-0" RCP
 1092'-0" RCP
 1098'-0" RCP
 1104'-0" RCP
 1110'-0" RCP
 1116'-0" RCP
 1122'-0" RCP
 1128'-0" RCP
 1134'-0" RCP
 1140'-0" RCP
 1146'-0" RCP
 1152'-0" RCP
 1158'-0" RCP
 1164'-0" RCP
 1170'-0" RCP
 1176'-0" RCP
 1182'-0" RCP
 1188'-0" RCP
 1194'-0" RCP
 1200'-0" RCP
 1206'-0" RCP
 1212'-0" RCP
 1218'-0" RCP
 1224'-0" RCP
 1230'-0" RCP
 1236'-0" RCP
 1242'-0" RCP
 1248'-0" RCP
 1254'-0" RCP
 1260'-0" RCP
 1266'-0" RCP
 1272'-0" RCP
 1278'-0" RCP
 1284'-0" RCP
 1290'-0" RCP
 1296'-0" RCP
 1302'-0" RCP
 1308'-0" RCP
 1314'-0" RCP
 1320'-0" RCP
 1326'-0" RCP
 1332'-0" RCP
 1338'-0" RCP
 1344'-0" RCP
 1350'-0" RCP
 1356'-0" RCP
 1362'-0" RCP
 1368'-0" RCP
 1374'-0" RCP
 1380'-0" RCP
 1386'-0" RCP
 1392'-0" RCP
 1398'-0" RCP
 1404'-0" RCP
 1410'-0" RCP
 1416'-0" RCP
 1422'-0" RCP
 1428'-0" RCP
 1434'-0" RCP
 1440'-0" RCP
 1446'-0" RCP
 1452'-0" RCP
 1458'-0" RCP
 1464'-0" RCP
 1470'-0" RCP
 1476'-0" RCP
 1482'-0" RCP
 1488'-0" RCP
 1494'-0" RCP
 1500'-0" RCP
 1506'-0" RCP
 1512'-0" RCP
 1518'-0" RCP
 1524'-0" RCP
 1530'-0" RCP
 1536'-0" RCP
 1542'-0" RCP
 1548'-0" RCP
 1554'-0" RCP
 1560'-0" RCP
 1566'-0" RCP
 1572'-0" RCP
 1578'-0" RCP
 1584'-0" RCP
 1590'-0" RCP
 1596'-0" RCP
 1602'-0" RCP
 1608'-0" RCP
 1614'-0" RCP
 1620'-0" RCP
 1626'-0" RCP
 1632'-0" RCP
 1638'-0" RCP
 1644'-0" RCP
 1650'-0" RCP
 1656'-0" RCP
 1662'-0" RCP
 1668'-0" RCP
 1674'-0" RCP
 1680'-0" RCP
 1686'-0" RCP
 1692'-0" RCP
 1698'-0" RCP
 1704'-0" RCP
 1710'-0" RCP
 1716'-0" RCP
 1722'-0" RCP
 1728'-0" RCP
 1734'-0" RCP
 1740'-0" RCP
 1746'-0" RCP
 1752'-0" RCP
 1758'-0" RCP
 1764'-0" RCP
 1770'-0" RCP
 1776'-0" RCP
 1782'-0" RCP
 1788'-0" RCP
 1794'-0" RCP
 1800'-0" RCP
 1806'-0" RCP
 1812'-0" RCP
 1818'-0" RCP
 1824'-0" RCP
 1830'-0" RCP
 1836'-0" RCP
 1842'-0" RCP
 1848'-0" RCP
 1854'-0" RCP
 1860'-0" RCP
 1866'-0" RCP
 1872'-0" RCP
 1878'-0" RCP
 1884'-0" RCP
 1890'-0" RCP
 1896'-0" RCP
 1902'-0" RCP
 1908'-0" RCP
 1914'-0" RCP
 1920'-0" RCP
 1926'-0" RCP
 1932'-0" RCP
 1938'-0" RCP
 1944'-0" RCP
 1950'-0" RCP
 1956'-0" RCP
 1962'-0" RCP
 1968'-0" RCP
 1974'-0" RCP
 1980'-0" RCP
 1986'-0" RCP
 1992'-0" RCP
 1998'-0" RCP
 2004'-0" RCP
 2010'-0" RCP
 2016'-0" RCP
 2022'-0" RCP
 2028'-0" RCP
 2034'-0" RCP
 2040'-0" RCP
 2046'-0" RCP
 2052'-0" RCP
 2058'-0" RCP
 2064'-0" RCP
 2070'-0" RCP
 2076'-0" RCP
 2082'-0" RCP
 2088'-0" RCP
 2094'-0" RCP
 2100'-0" RCP
 2106'-0" RCP
 2112'-0" RCP
 2118'-0" RCP
 2124'-0" RCP
 2130'-0" RCP
 2136'-0" RCP
 2142'-0" RCP
 2148'-0" RCP
 2154'-0" RCP
 2160'-0" RCP
 2166'-0" RCP
 2172'-0" RCP
 2178'-0" RCP
 2184'-0" RCP
 2190'-0" RCP
 2196'-0" RCP
 2202'-0" RCP
 2208'-0" RCP
 2214'-0" RCP
 2220'-0" RCP
 2226'-0" RCP
 2232'-0" RCP
 2238'-0" RCP
 2244'-0" RCP
 2250'-0" RCP
 2256'-0" RCP
 2262'-0" RCP
 2268'-0" RCP
 2274'-0" RCP
 2280'-0" RCP
 2286'-0" RCP
 2292'-0" RCP
 2298'-0" RCP
 2304'-0" RCP
 2310'-0" RCP
 2316'-0" RCP
 2322'-0" RCP
 2328'-0" RCP
 2334'-0" RCP
 2340'-0" RCP
 2346'-0" RCP
 2352'-0" RCP
 2358'-0" RCP
 2364'-0" RCP
 2370'-0" RCP
 2376'-0" RCP
 2382'-0" RCP
 2388'-0" RCP
 2394'-0" RCP
 2400'-0" RCP
 2406'-0" RCP
 2412'-0" RCP
 2418'-0" RCP
 2424'-0" RCP
 2430'-0" RCP
 2436'-0" RCP
 2442'-0" RCP
 2448'-0" RCP
 2454'-0" RCP
 2460'-0" RCP
 2466'-0" RCP
 2472'-0" RCP
 2478'-0" RCP
 2484'-0" RCP
 2490'-0" RCP
 2496'-0" RCP
 2502'-0" RCP
 2508'-0" RCP
 2514'-0" RCP
 2520'-0" RCP
 2526'-0" RCP
 2532'-0" RCP
 2538'-0" RCP
 2544'-0" RCP
 2550'-0" RCP
 2556'-0" RCP
 2562'-0" RCP
 2568'-0" RCP
 2574'-0" RCP
 2580'-0" RCP
 2586'-0" RCP
 2592'-0" RCP
 2598'-0" RCP
 2604'-0" RCP
 2610'-0" RCP
 2616'-0" RCP
 2622'-0" RCP
 2628'-0" RCP
 2634'-0" RCP
 2640'-0" RCP
 2646'-0" RCP
 2652'-0" RCP
 2658'-0" RCP
 2664'-0" RCP
 2670'-0" RCP
 2676'-0" RCP
 2682'-0" RCP
 2688'-0" RCP
 2694'-0" RCP
 2700'-0" RCP
 2706'-0" RCP
 2712'-0" RCP
 2718'-0" RCP
 2724'-0" RCP
 2730'-0" RCP
 2736'-0" RCP
 2742'-0" RCP
 2748'-0" RCP
 2754'-0" RCP
 2760'-0" RCP
 2766'-0" RCP
 2772'-0" RCP
 2778'-0" RCP
 2784'-0" RCP
 2790'-0" RCP
 2796'-0" RCP
 2802'-0" RCP
 2808'-0" RCP
 2814'-0" RCP
 2820'-0" RCP
 2826'-0" RCP
 2832'-0" RCP
 2838'-0" RCP
 2844'-0" RCP
 2850'-0" RCP
 2856'-0" RCP
 2862'-0" RCP
 2868'-0" RCP
 2874'-0" RCP
 2880'-0" RCP
 2886'-0" RCP
 2892'-0" RCP
 2898'-0" RCP
 2904'-0" RCP
 2910'-0" RCP
 2916'-0" RCP
 2922'-0" RCP
 2928'-0" RCP
 2934'-0" RCP
 2940'-0" RCP
 2946'-0" RCP
 2952'-0" RCP
 2958'-0" RCP
 2964'-0" RCP
 2970'-0" RCP
 2976'-0" RCP
 2982'-0" RCP
 2988'-0" RCP
 2994'-0" RCP
 3000'-0" RCP

8/17/99
C:\PROJECTS\2011\20110817\20110817.DWG

ETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
W-5600	EC-35/CONST.J2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



93 x 28 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
10 ft. weir
ID 12.01

Place Matting for Erosion Control
on Slopes Adjacent to Permitted
Wetlands as Work Allows.

40 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 12.06

MATCHLINE -L- STA. 112 +00 SEE SHEET 11

MATCHLINE -L- STA. 125 +00 SEE SHEET 13

129 x 45 x 3
2.5 inch Skimmer
with 2.125 inch
Orifice Diameter
22 ft. weir
ID 12.02

38 x 18 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 12.03

38 x 18 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 12.04

39 x 19 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 12.05

34 x 17 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
4 ft. weir
ID 12.08

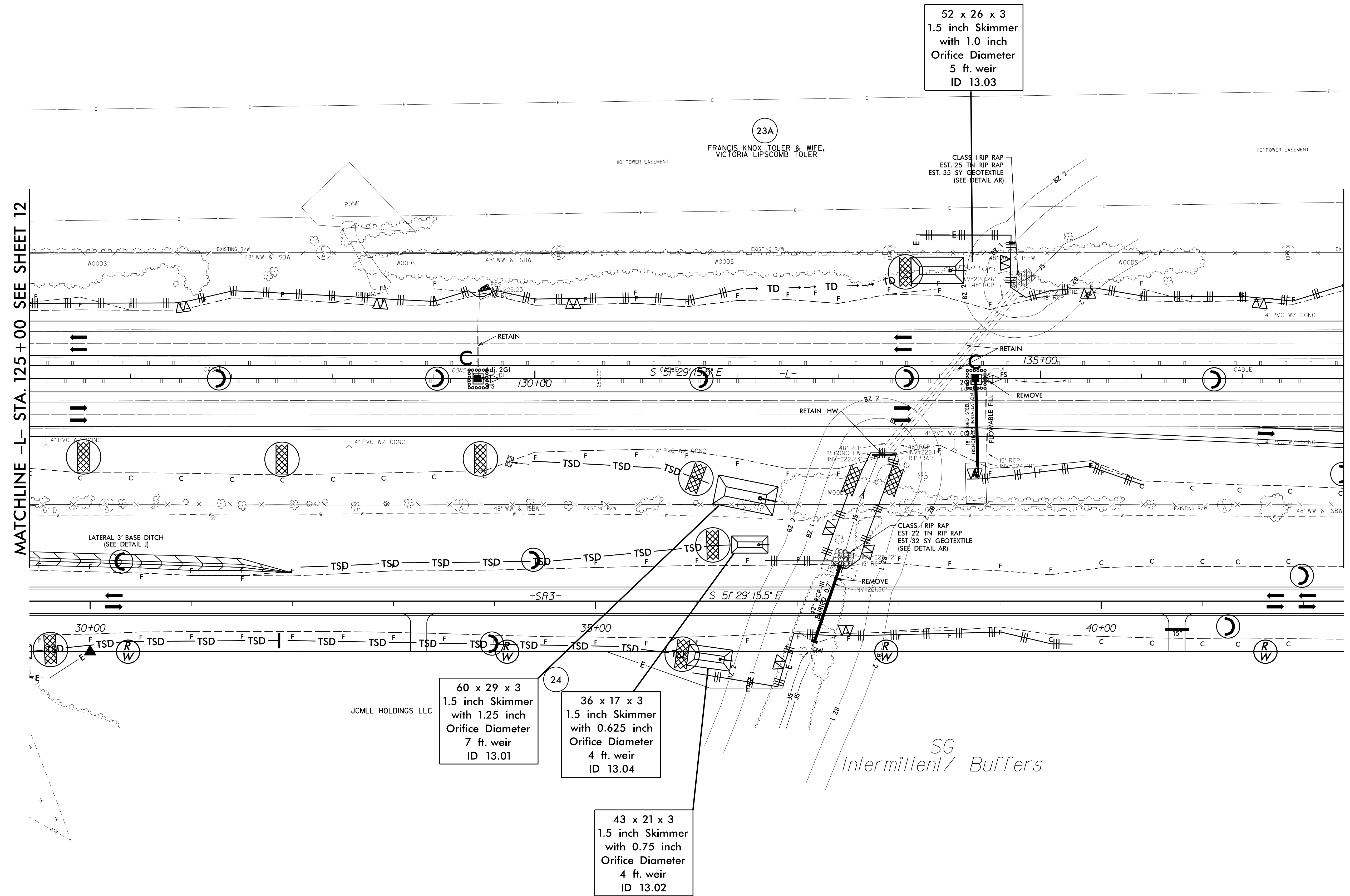
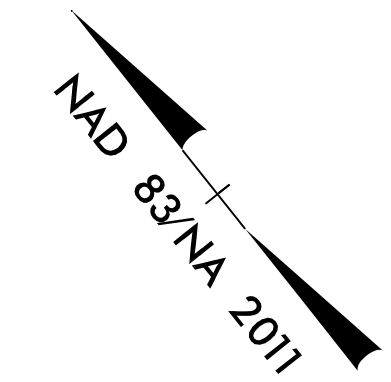
28 x 14 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 12.07

8/17/99

ETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. W-5600	SHEET NO. EC-36/CONST.13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE -L- STA. 125+00 SEE SHEET 12

MATCHLINE -L- STA. 138+00 SEE SHEET 14

SG Intermittent/ Buffers

1. ALL DIMENSIONS UNLESS OTHERWISE NOTED.
 2. ALL DISTANCES ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
 3. ALL STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MDT DESIGN MANUAL.
 4. ALL STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MDT DESIGN MANUAL.
 5. ALL STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MDT DESIGN MANUAL.
 6. ALL STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MDT DESIGN MANUAL.
 7. ALL STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MDT DESIGN MANUAL.
 8. ALL STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MDT DESIGN MANUAL.
 9. ALL STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MDT DESIGN MANUAL.
 10. ALL STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MDT DESIGN MANUAL.

8/17/99
C:\PROJECTS\2015\2015-08-17\2015-08-17.dwg

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

53 x 26 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 14.04

SH
at / No Buffers

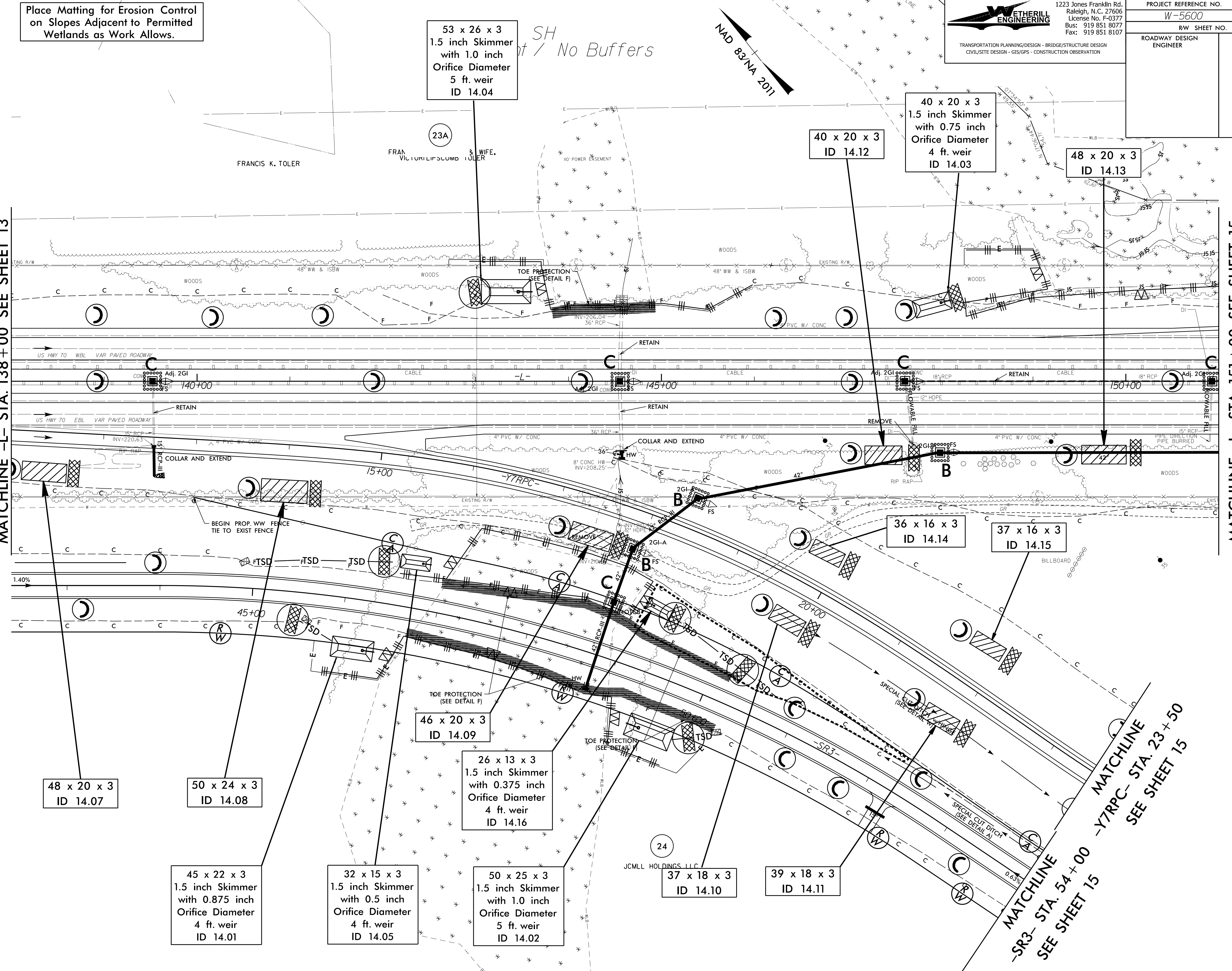
NAD 83/NA 2011

ETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. W-5600	SHEET NO. EC-37/CONST.14
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

MATCHLINE -L- STA. 138+00 SEE SHEET 13

MATCHLINE -L- STA. 151+00 SEE SHEET 15



48 x 20 x 3
ID 14.07

50 x 24 x 3
ID 14.08

45 x 22 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 14.01

32 x 15 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 14.05

46 x 20 x 3
ID 14.09

26 x 13 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 14.16

50 x 25 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 14.02

37 x 18 x 3
ID 14.10

39 x 18 x 3
ID 14.11

40 x 20 x 3
ID 14.12

40 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 14.03

48 x 20 x 3
ID 14.13

36 x 16 x 3
ID 14.14

37 x 16 x 3
ID 14.15

MATCHLINE
-SR3- STA. 54+00
SEE SHEET 15

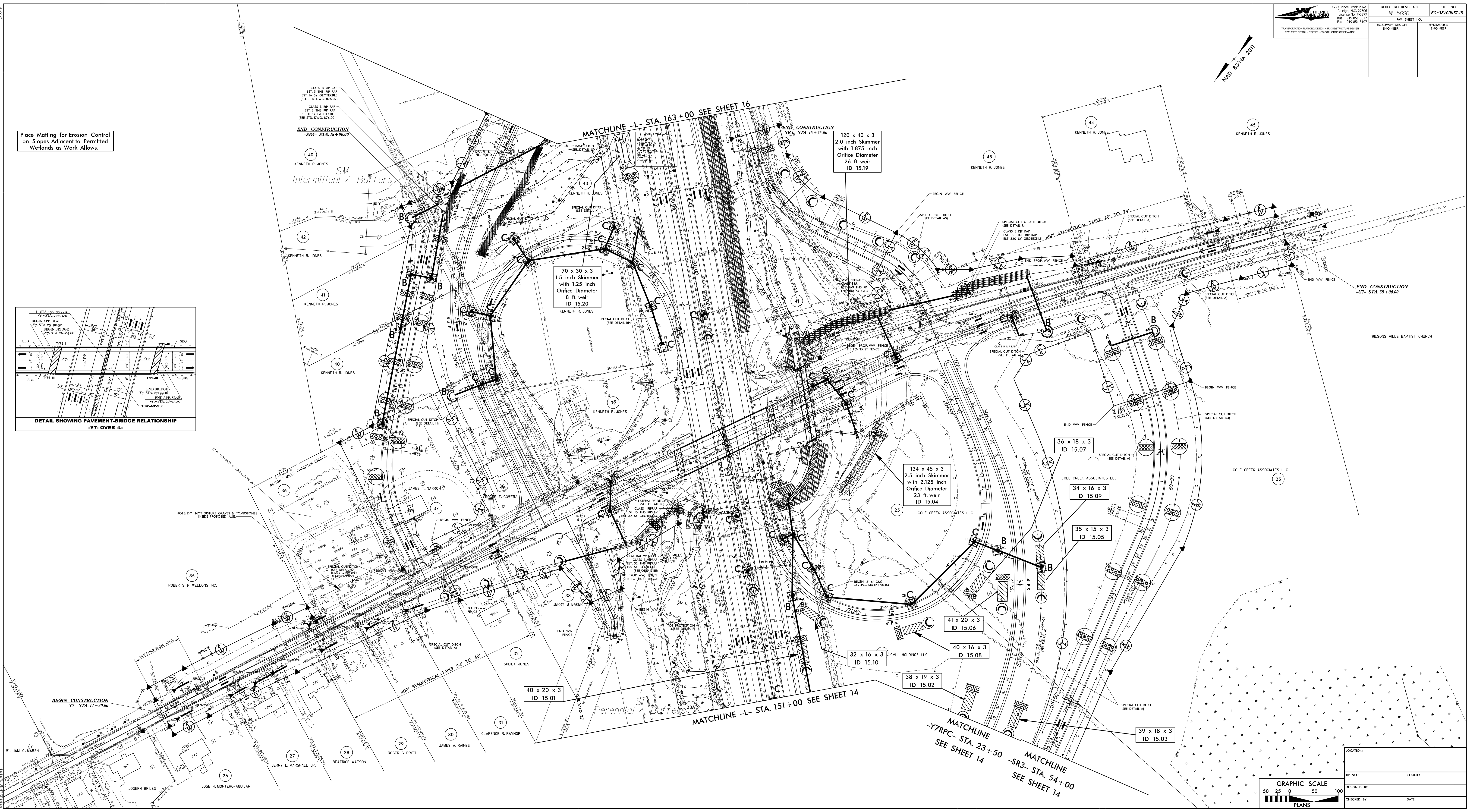
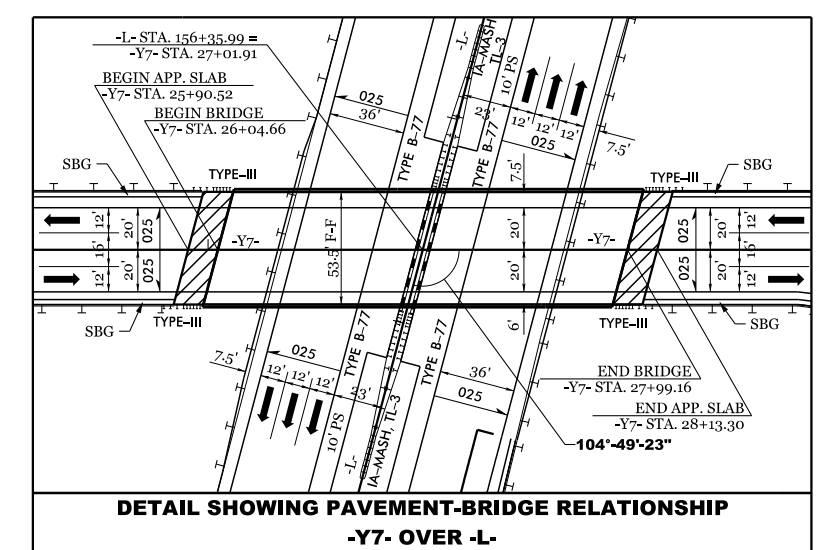
-Y7RPC-
MATCHLINE
STA. 23+50
SEE SHEET 15

6/27/09

	PROJECT REFERENCE NO.	SHEET NO.
	W-5600	EC-38/CONST J5
ROADWAY DESIGN ENGINEER	DRW SHEET NO.	HYDRAULICS ENGINEER



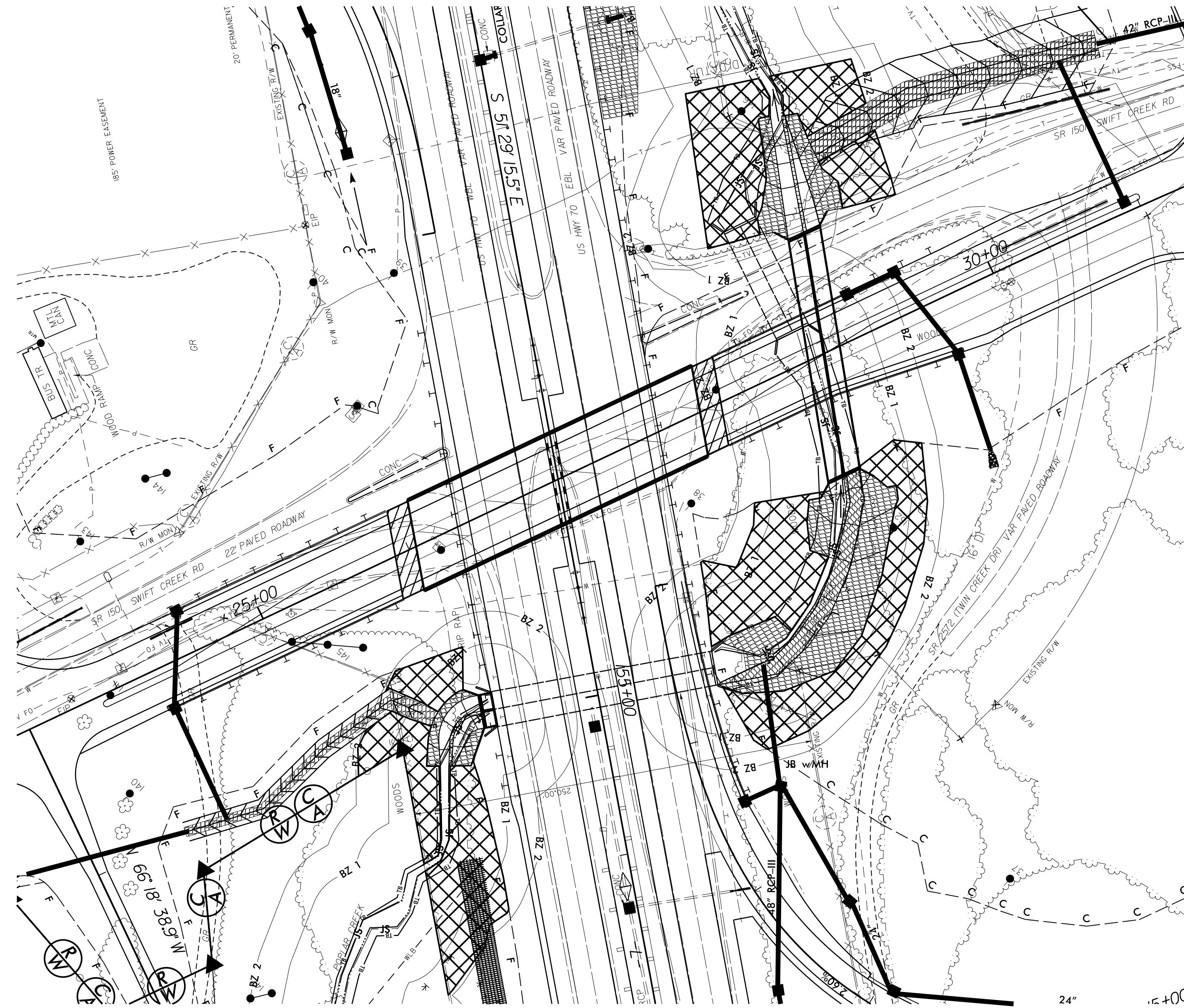
Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.



<p>GRAPHIC SCALE</p> <p>50 25 0 50 100</p> <p>PLANS</p>	<p>LOCATION:</p> <p>TP NO.:</p> <p>DESIGNED BY:</p> <p>CHECKED BY:</p> <p>COUNTY:</p> <p>DATE:</p>
---	--

PROJECT REFERENCE NO.	SHEET NO.
W-5600	EC-38A/CONST.J5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

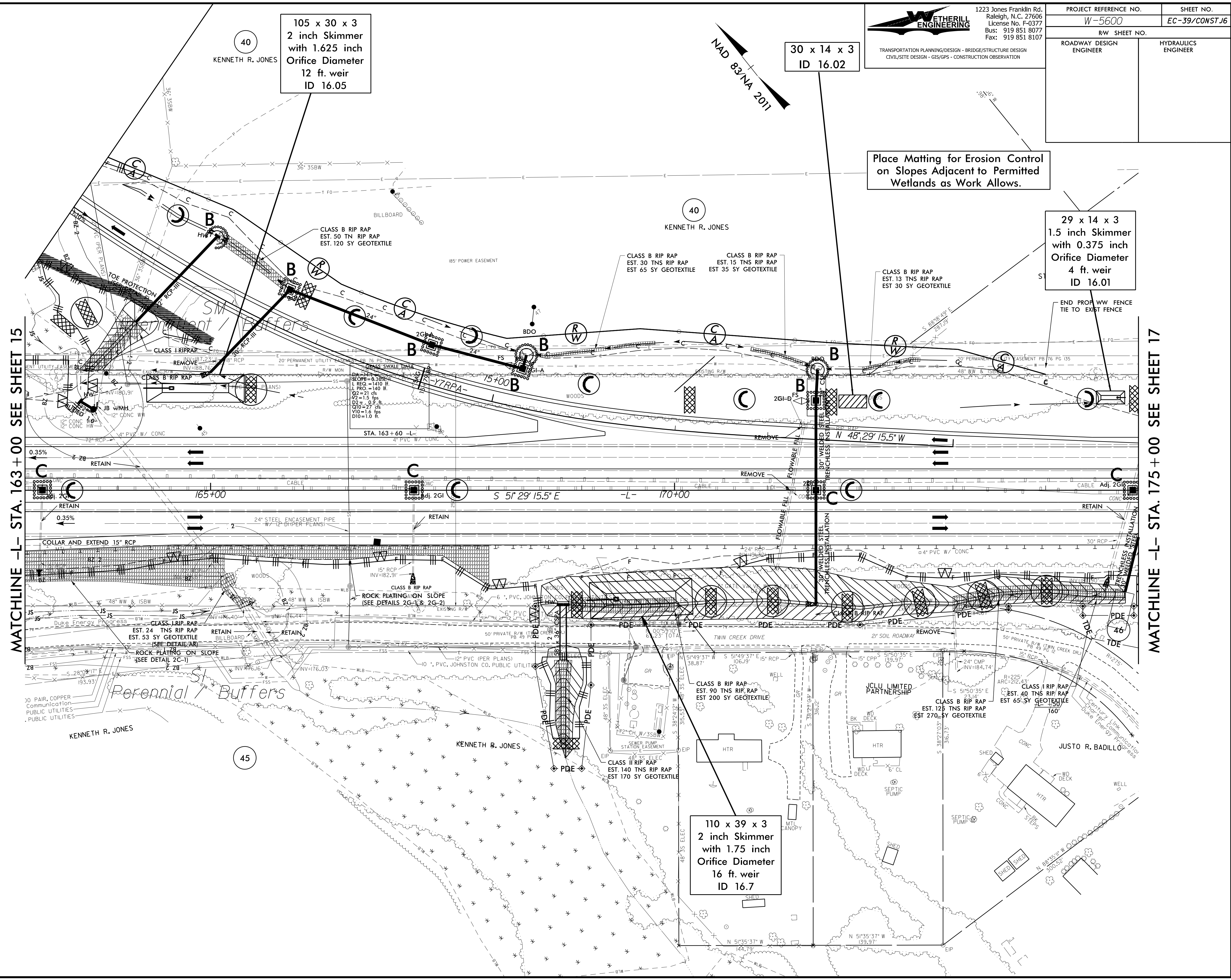
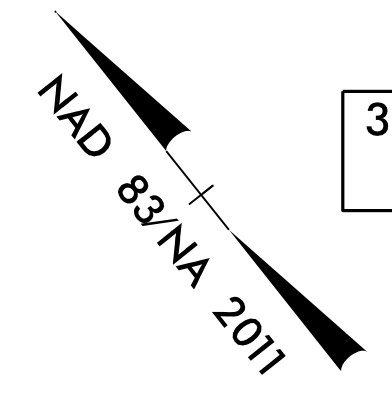
0.55 ACRE STREAMBANK REFORESTATION



SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

8/17/99
C:\PROJECTS\2008\20080817\20080817.DWG

 1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION	PROJECT REFERENCE NO. W-5600	SHEET NO. EC-39/CONST.16
	R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		



MATCHLINE -L- STA. 163+00 SEE SHEET 15

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

105 x 30 x 3
2 inch Skimmer
with 1.625 inch
Orifice Diameter
12 ft. weir
ID 16.05

30 x 14 x 3
ID 16.02

Place Matting for Erosion Control
on Slopes Adjacent to Permitted
Wetlands as Work Allows.

29 x 14 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 16.01

110 x 39 x 3
2 inch Skimmer
with 1.75 inch
Orifice Diameter
16 ft. weir
ID 16.7

8/17/99
C:\PROJECTS\2008\20080817\20080817.DWG

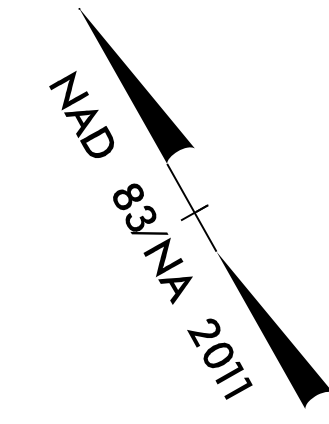
8.17/99

ROBERTS & WELLONS INC.

ETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

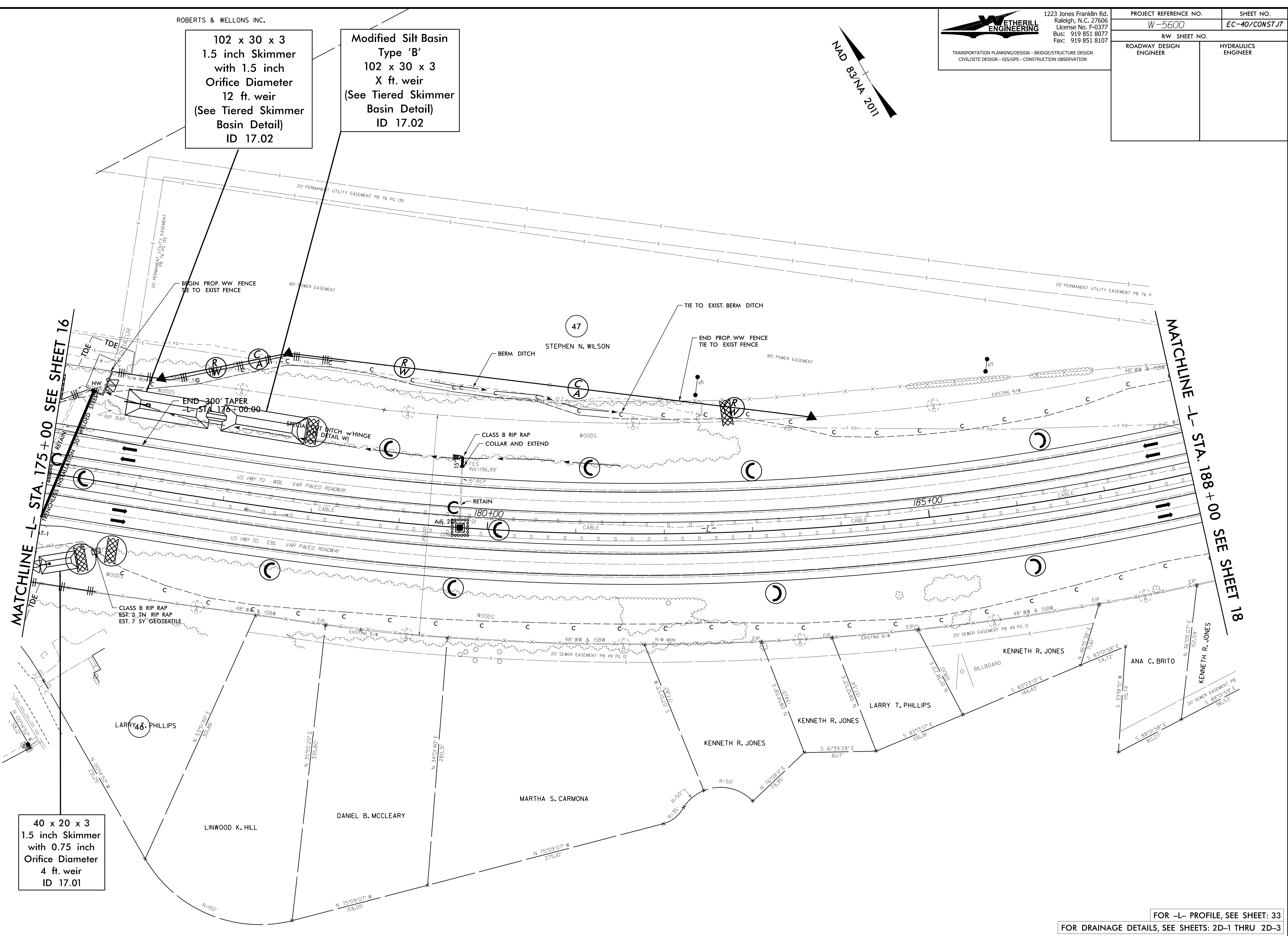
PROJECT REFERENCE NO.	SHEET NO.
W-5600	EC-40/CONST.17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



102 x 30 x 3
 1.5 inch Skimmer
 with 1.5 inch
 Orifice Diameter
 12 ft. weir
 (See Tiered Skimmer
 Basin Detail)
 ID 17.02

Modified Silt Basin
 Type 'B'
 102 x 30 x 3
 X ft. weir
 (See Tiered Skimmer
 Basin Detail)
 ID 17.02

40 x 20 x 3
 1.5 inch Skimmer
 with 0.75 inch
 Orifice Diameter
 4 ft. weir
 ID 17.01



FOR -L- PROFILE, SEE SHEET: 33
 FOR DRAINAGE DETAILS, SEE SHEETS: 2D-1 THRU 2D-3

NAD 83/NA 2011

74 x 24 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
7 ft. weir
ID 18.02

SP
Intermittent / Buffers

48

SELCO CONSTRUCTION INC

MATCHLINE -L- STA. 188+00 SEE SHEET 17

MATCHLINE -L- STA. 201+00 SEE SHEET 19

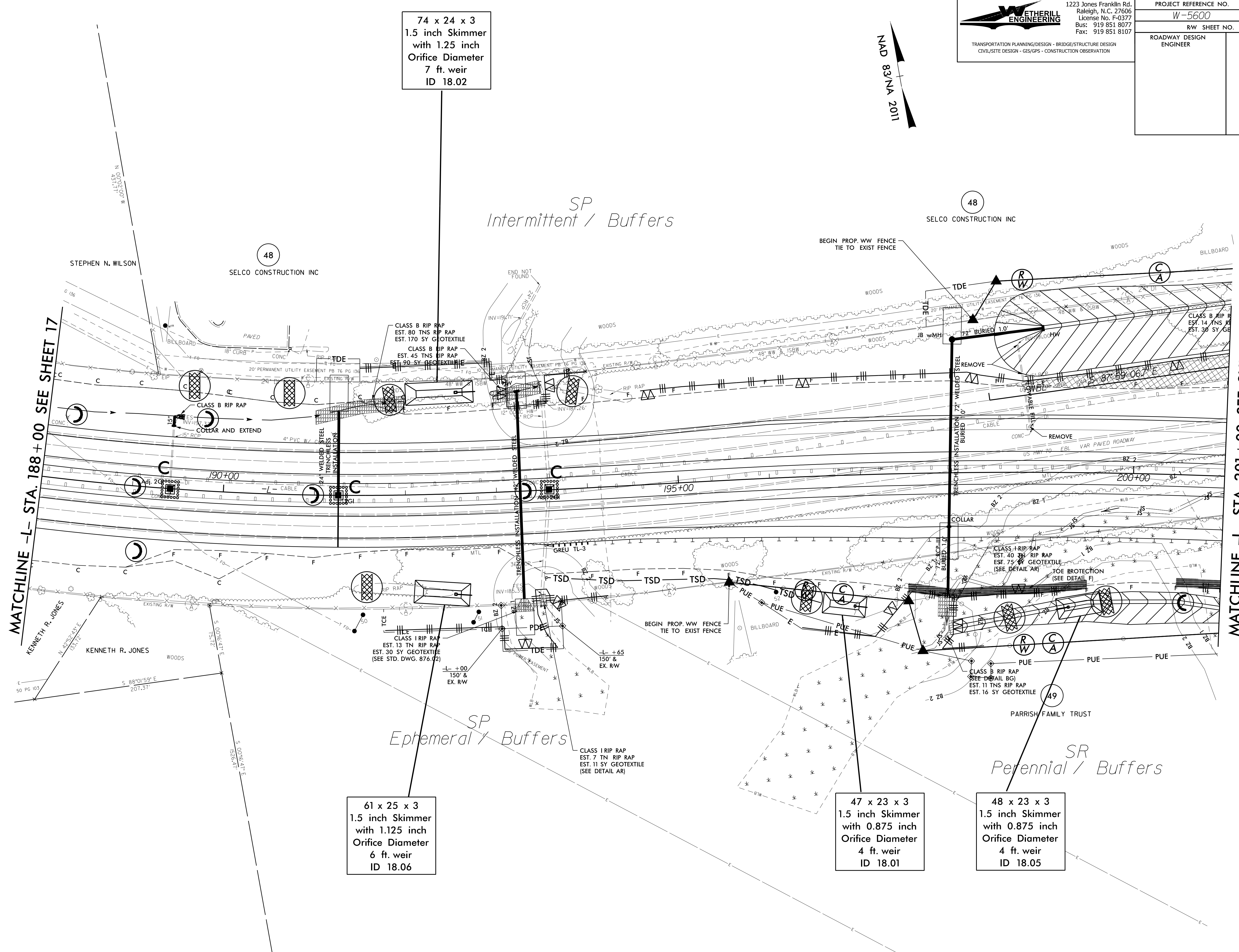
61 x 25 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
6 ft. weir
ID 18.06

SP
Ephemeral / Buffers

47 x 23 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 18.01

SR
Perennial / Buffers

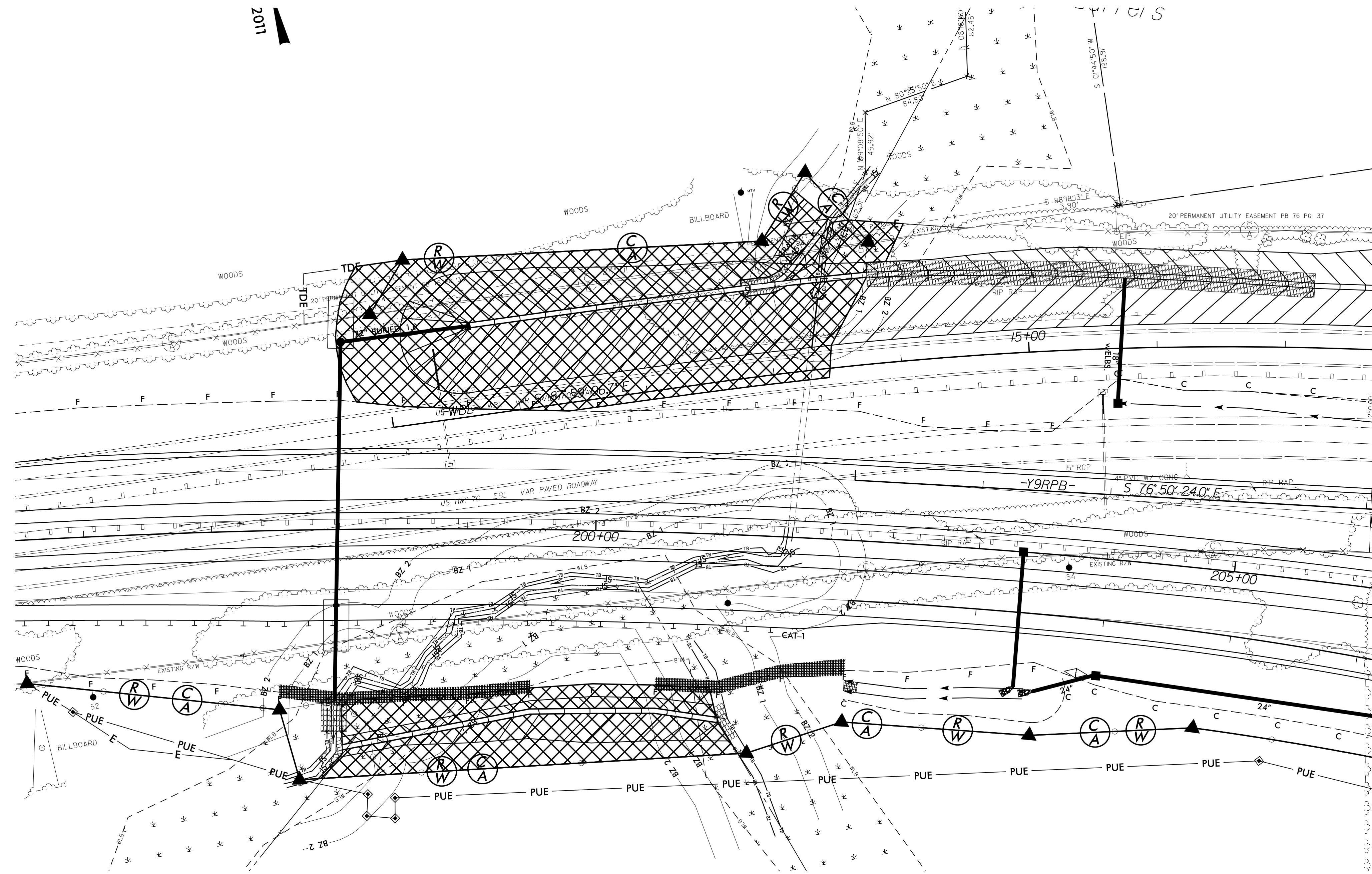
48 x 23 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 18.05



8.17/99
T:\Projects\2018\W-5600\CONST.1B\DWG\18-02.dwg
2018-08-14 10:56:41 AM
ETHERILL ENGINEERING

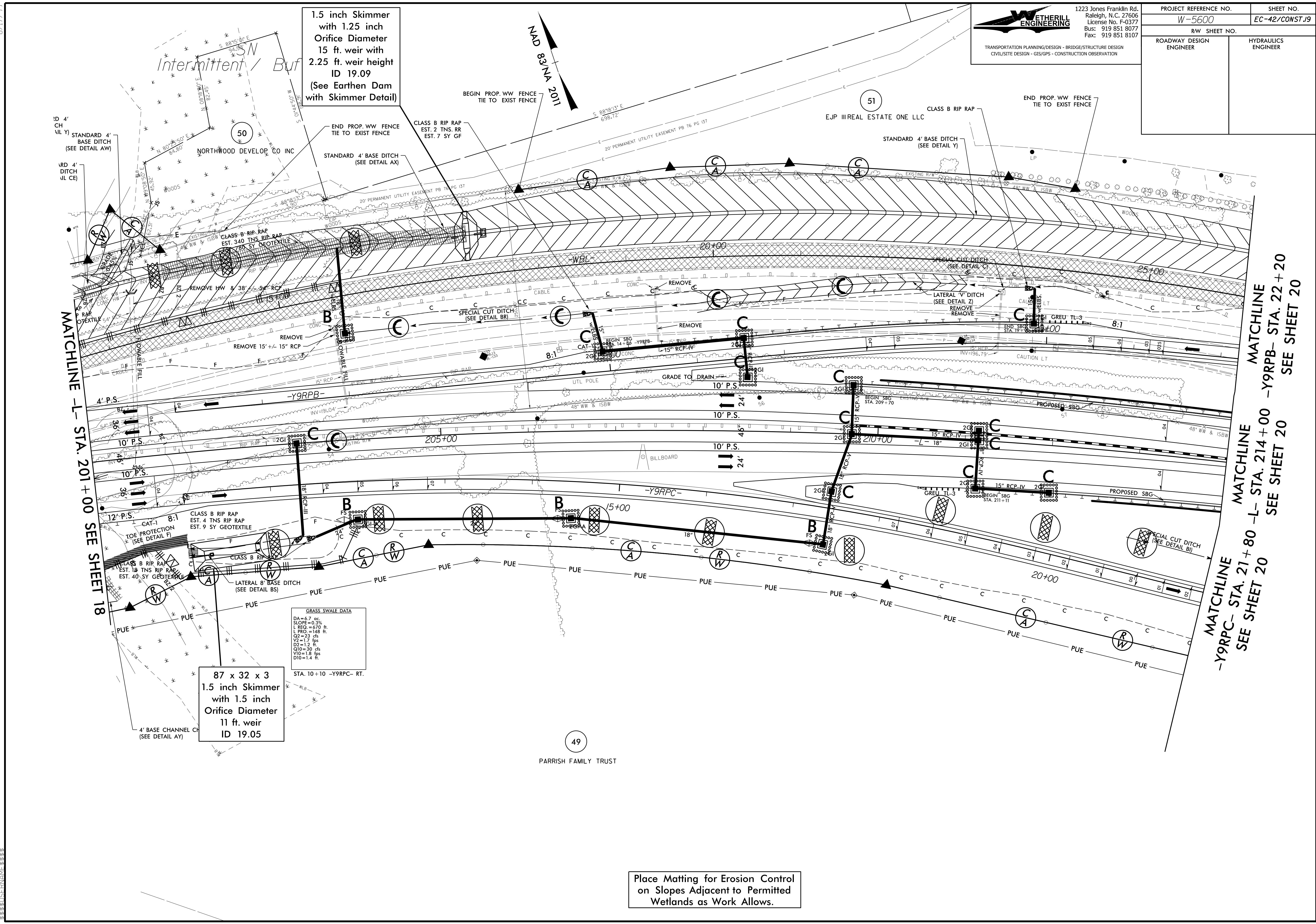
PROJECT REFERENCE NO.	SHEET NO.
W-5600	EC-41A/CONST.1B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1.45 ACRE STREAMBANK REFORESTATION



SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

PROJECT REFERENCE NO. W-5600	SHEET NO. EC-42/CONST.19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



1.5 inch Skimmer
 with 1.25 inch
 Orifice Diameter
 15 ft. weir with
 2.25 ft. weir height
 ID 19.09
 (See Earthen Dam
 with Skimmer Detail)

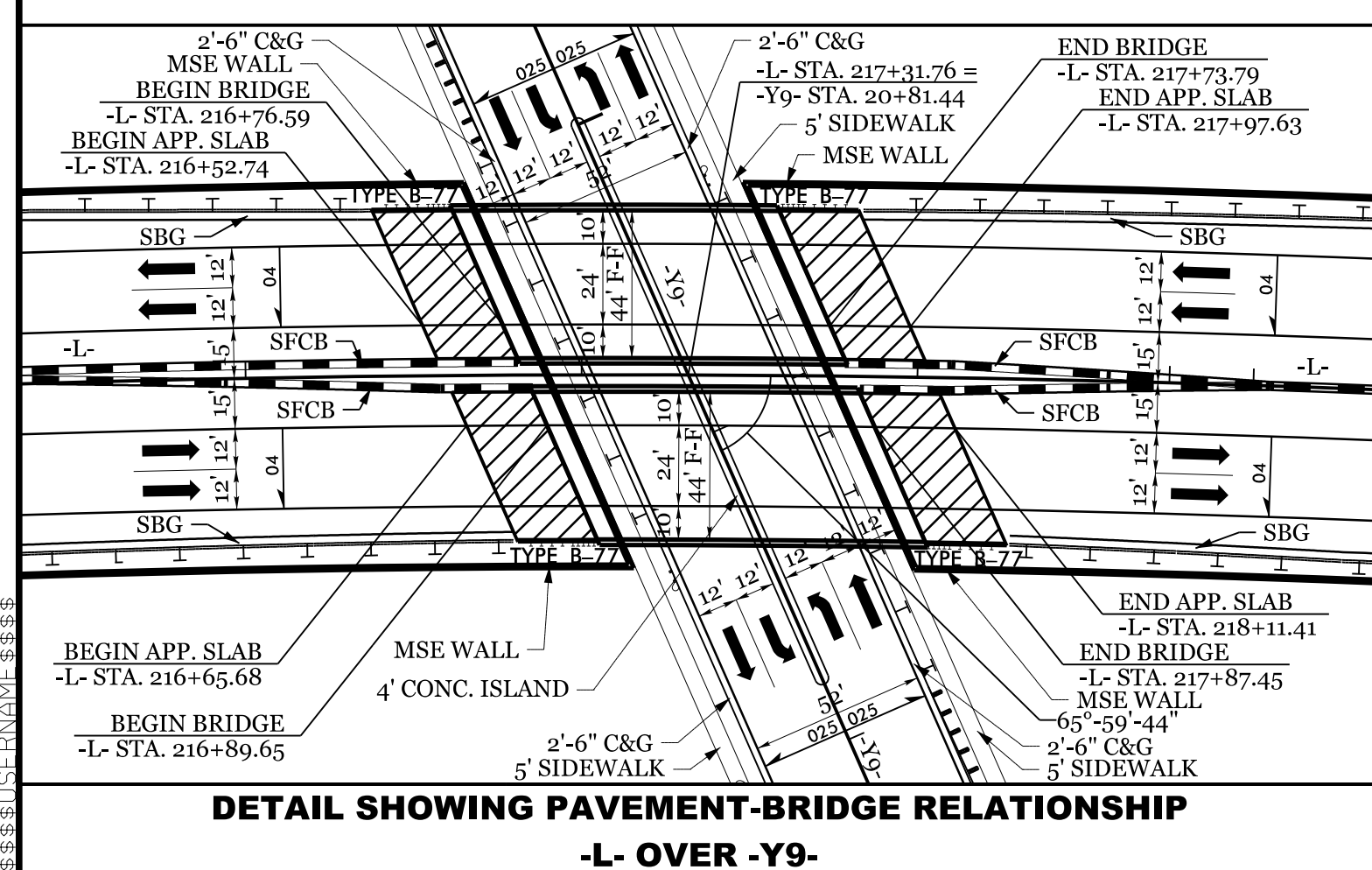
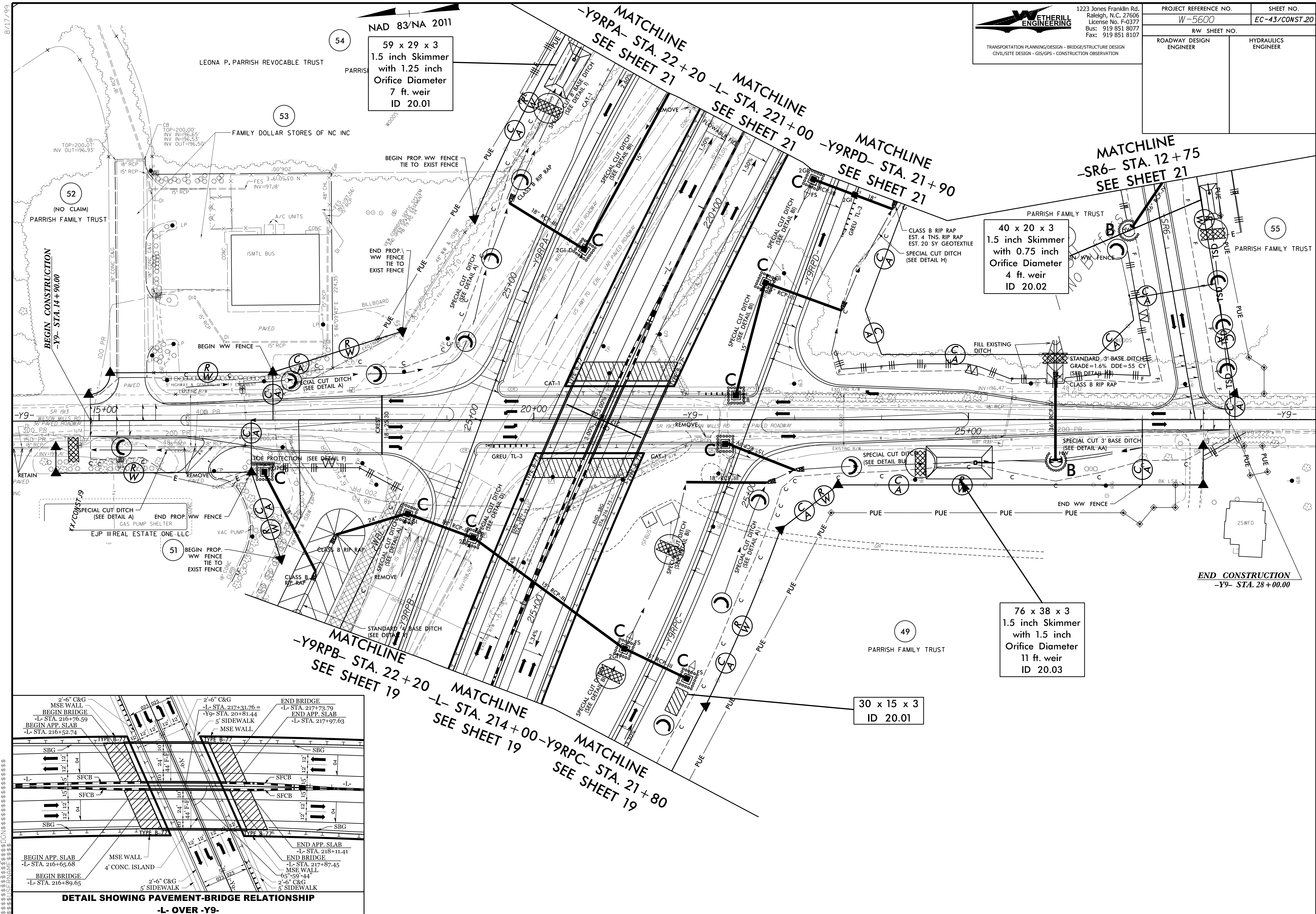
87 x 32 x 3
 1.5 inch Skimmer
 with 1.5 inch
 Orifice Diameter
 11 ft. weir
 ID 19.05

GRASS SWALE DATA
 DA=6.7' oc.
 SLOPE=0.3%
 L REQ.=670 ft.
 L PRO.=148 ft.
 C2=2.25 cfs
 V2=1.7 fps
 D2=1.2 ft.
 Q10=30 cfs
 V10=1.8 fps
 D10=1.4 ft.

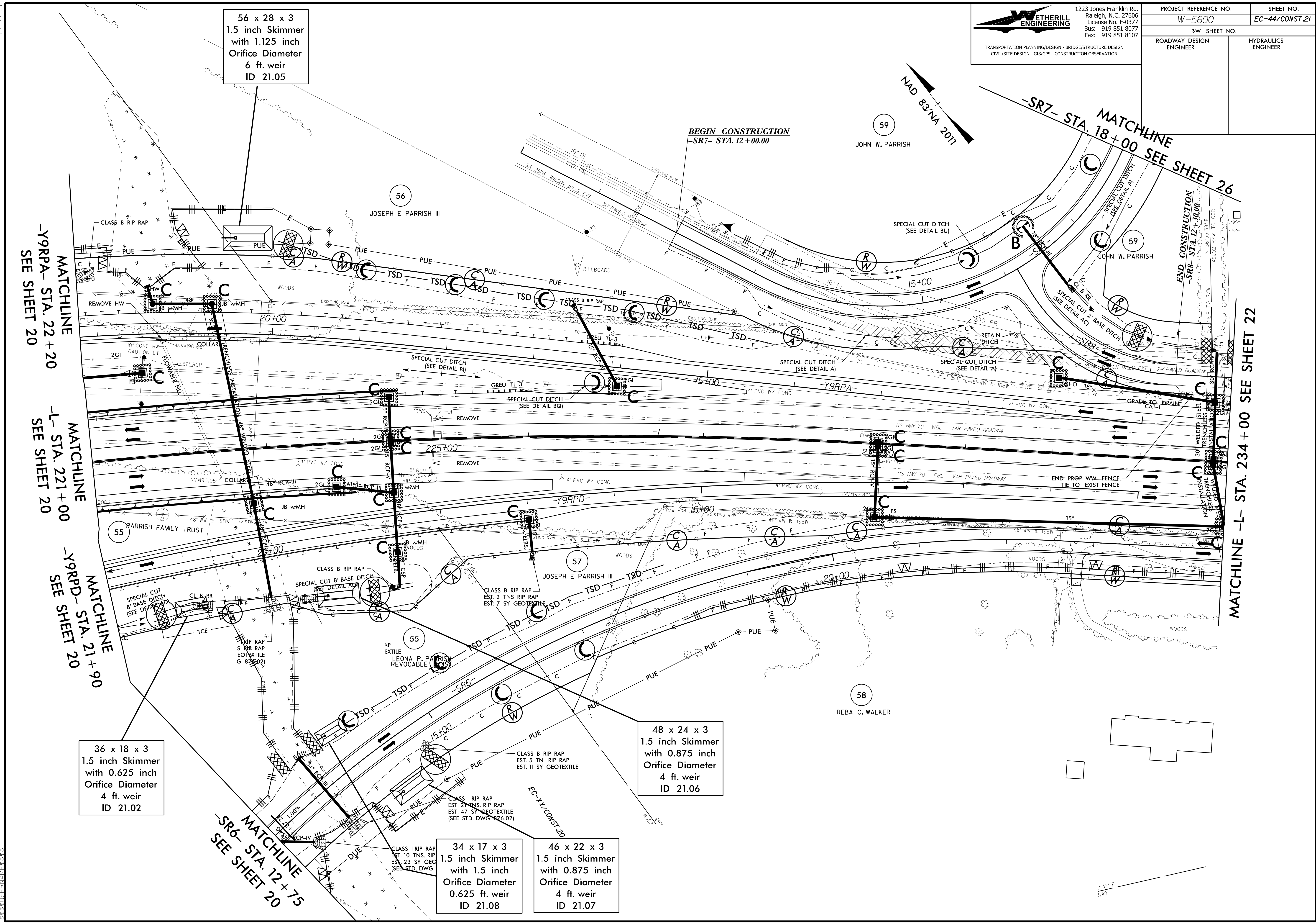
Place Matting for Erosion Control
 on Slopes Adjacent to Permitted
 Wetlands as Work Allows.

8.17/99
 MATCHLINE - STA. 201 + 00 SEE SHEET 18
 MATCHLINE - STA. 21 + 80 - Y9RPC- RT. SEE SHEET 20
 MATCHLINE - STA. 214 + 00 - Y9RPB- STA. 22 + 20 SEE SHEET 20
 MATCHLINE - STA. 22 + 20 SEE SHEET 20

PROJECT REFERENCE NO. W-5600	SHEET NO. EC-43/CONST.20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8.17.99
 49
 50
 51
 52
 53
 54
 55



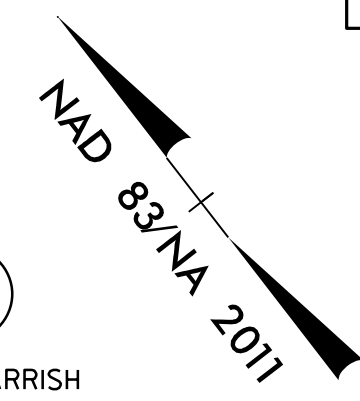
56 x 28 x 3
 1.5 inch Skimmer
 with 1.125 inch
 Orifice Diameter
 6 ft. weir
 ID 21.05

36 x 18 x 3
 1.5 inch Skimmer
 with 0.625 inch
 Orifice Diameter
 4 ft. weir
 ID 21.02

48 x 24 x 3
 1.5 inch Skimmer
 with 0.875 inch
 Orifice Diameter
 4 ft. weir
 ID 21.06

34 x 17 x 3
 1.5 inch Skimmer
 with 1.5 inch
 Orifice Diameter
 0.625 ft. weir
 ID 21.08

46 x 22 x 3
 1.5 inch Skimmer
 with 0.875 inch
 Orifice Diameter
 4 ft. weir
 ID 21.07



8.17/99

MATCHLINE
 -Y9RPA- STA. 22+20
 SEE SHEET 20

MATCHLINE
 -L- STA. 221+00
 SEE SHEET 20

MATCHLINE
 -Y9RPD- STA. 21+90
 SEE SHEET 20

MATCHLINE
 -SR6- STA. 12+75
 SEE SHEET 20

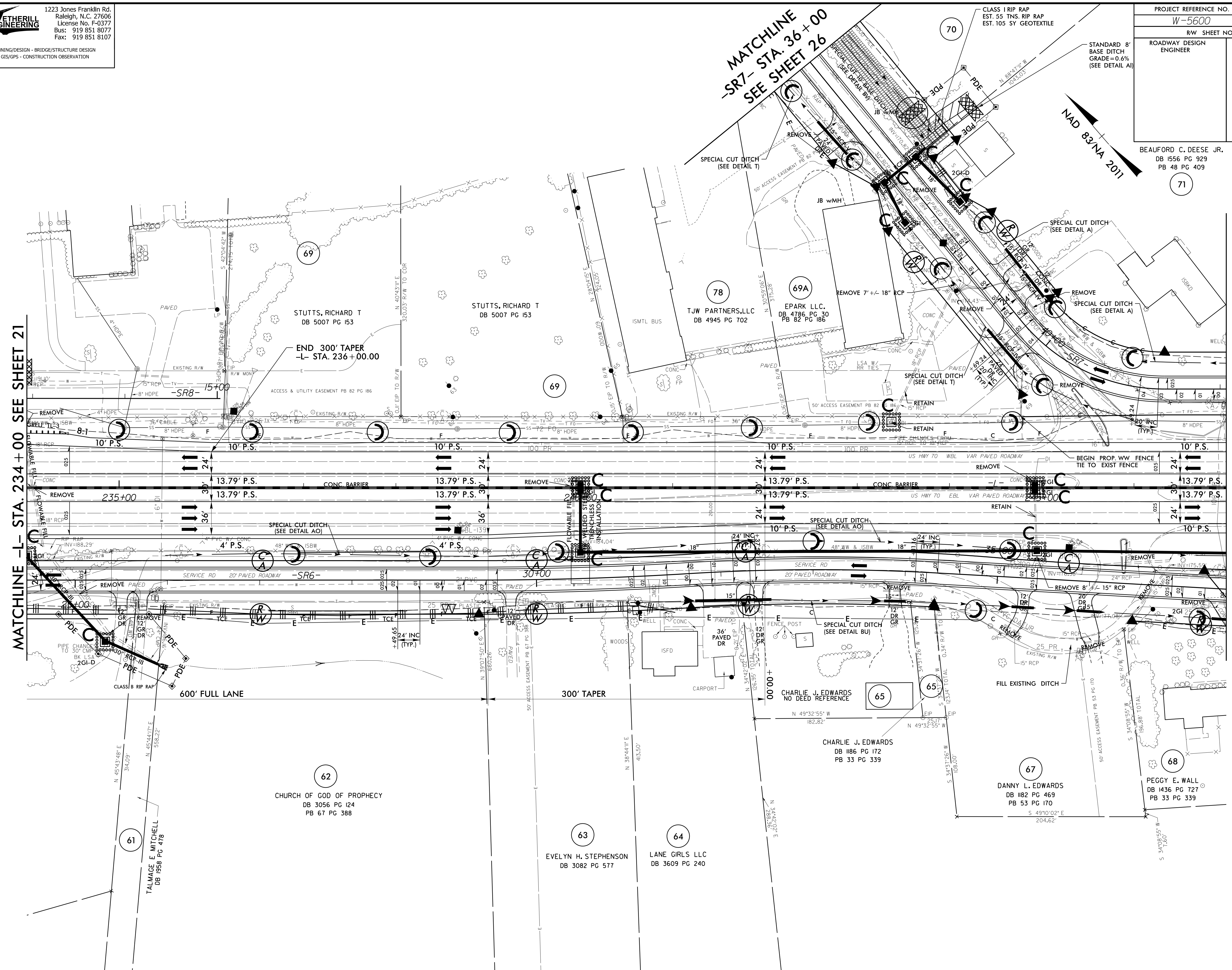
MATCHLINE -L- STA. 234+00 SEE SHEET 22

MATCHLINE
 -SR7- STA. 18+00
 SEE SHEET 26

END CONSTRUCTION
 -SR8- STA. 12+30.00

3'41" E
 3.48'

PROJECT REFERENCE NO.		SHEET NO.	
W-5600		EC-45/CONST.22	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
BEAUFORD C. DEESE JR. DB 1556 PG 929 PB 48 PG 409			



MATCHLINE -L- STA. 234 + 00 SEE SHEET 21

MATCHLINE
-L- STA. 247 + 00
SEE SHEET 23

8.17/99
 C:\T\EC\45\CONST.22\DRAWING\PLAN\EC-45-CONST.22-01.DWG
 PLOTTED: 11/25/2014 10:00:00 AM
 PLOTTER: HP DesignJet 2000

8.17.17.99
C:\Users\jgibson\OneDrive\Documents\2017\17-0000\17-0000.dwg

ETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
W-5600	EC-46/CONST.23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

46 x 23 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 23.02

51 x 25 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 23.03

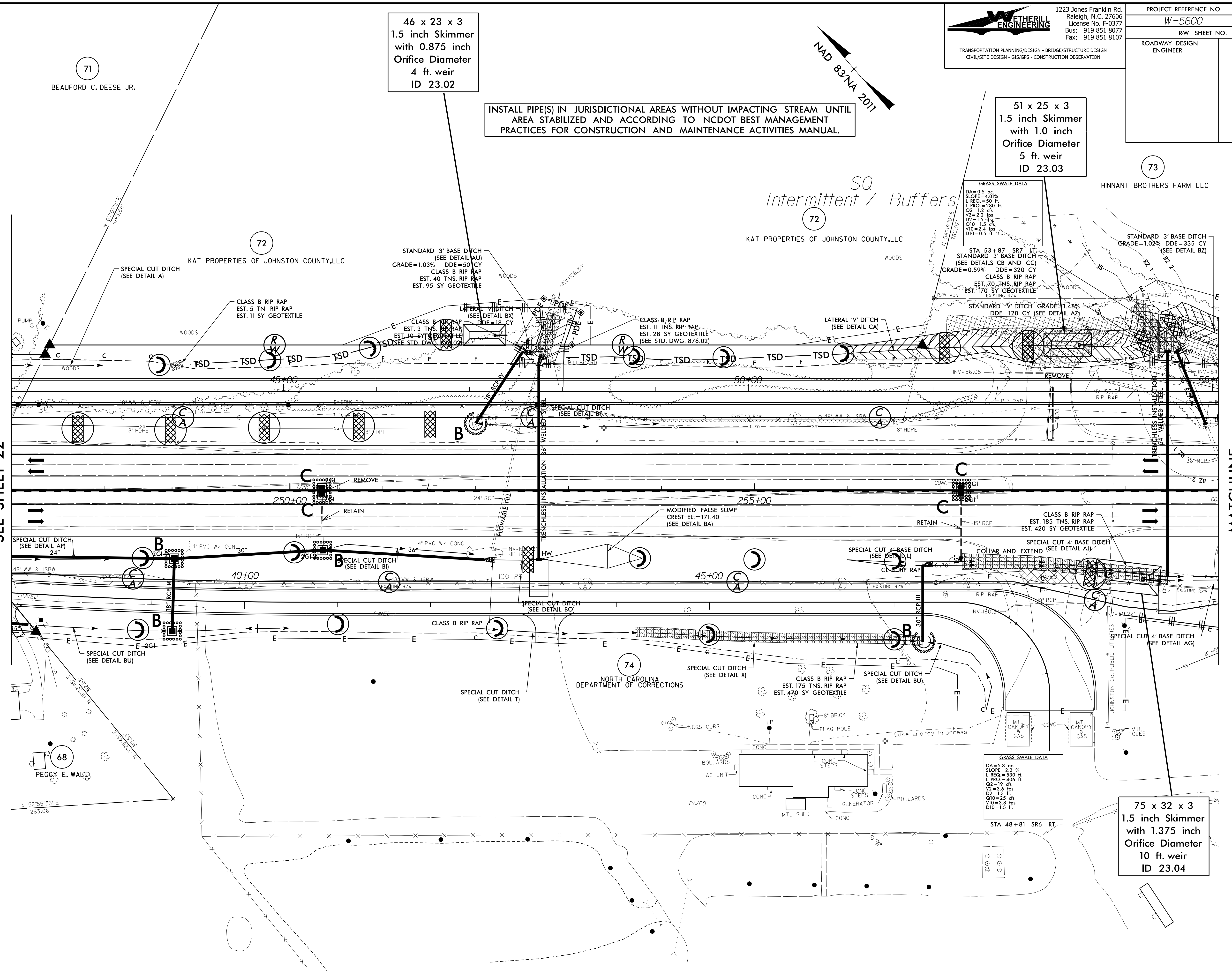
75 x 32 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
10 ft. weir
ID 23.04

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.

SQ
Intermittent / Buffers

MATCHLINE
-L- STA. 247+00
SEE SHEET 22

MATCHLINE
-L- STA. 260+00
SEE SHEET 24



GRASS SWALE DATA
DA=0.5 ac
SLOPE=4.01%
L REQ=50 ft.
L PRO=280 ft.
Q2=1.2 cfs
VZ=2.2 fps
D2=1.5 ft.
Q10=1.3 cfs
V10=2.4 fps
D10=0.5 ft.

STANDARD 3' BASE DITCH
GRADE=1.02%
DDE=335 CY
(SEE DETAIL BZ)

STANDARD 3' BASE DITCH
(SEE DETAILS CB AND CC)
GRADE=0.59%
DDE=320 CY
CLASS B RIP RAP
EST. 170 SY GEOTEXTILE

STANDARD 3' V DITCH
GRADE=1.48%
DDE=120 CY
(SEE DETAIL AZ)

MODIFIED FALSE SUMP
CREST EL.=171.40'
(SEE DETAIL BA)

GRASS SWALE DATA
DA=5.3 ac
SLOPE=2.2%
L REQ=530 ft.
L PRO=406 ft.
Q2=19 cfs
VZ=3.6 fps
D2=1.3 ft.
Q10=3.5 cfs
V10=3.8 fps
D10=1.5 ft.

STA. 48+81 -SR6- RT

71
BEAUFORD C. DEESE JR.

72
KAT PROPERTIES OF JOHNSTON COUNTY, LLC

72
KAT PROPERTIES OF JOHNSTON COUNTY, LLC

73
HINNANT BROTHERS FARM LLC

74
NORTH CAROLINA
DEPARTMENT OF CORRECTIONS

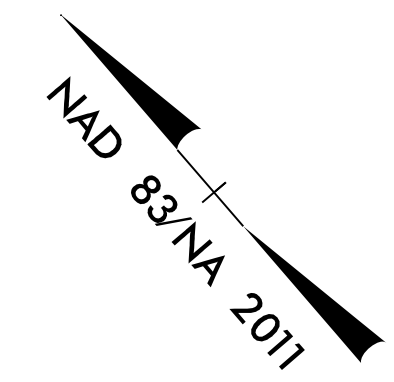
68
PEGGY E. WALL

8/17/99

ETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

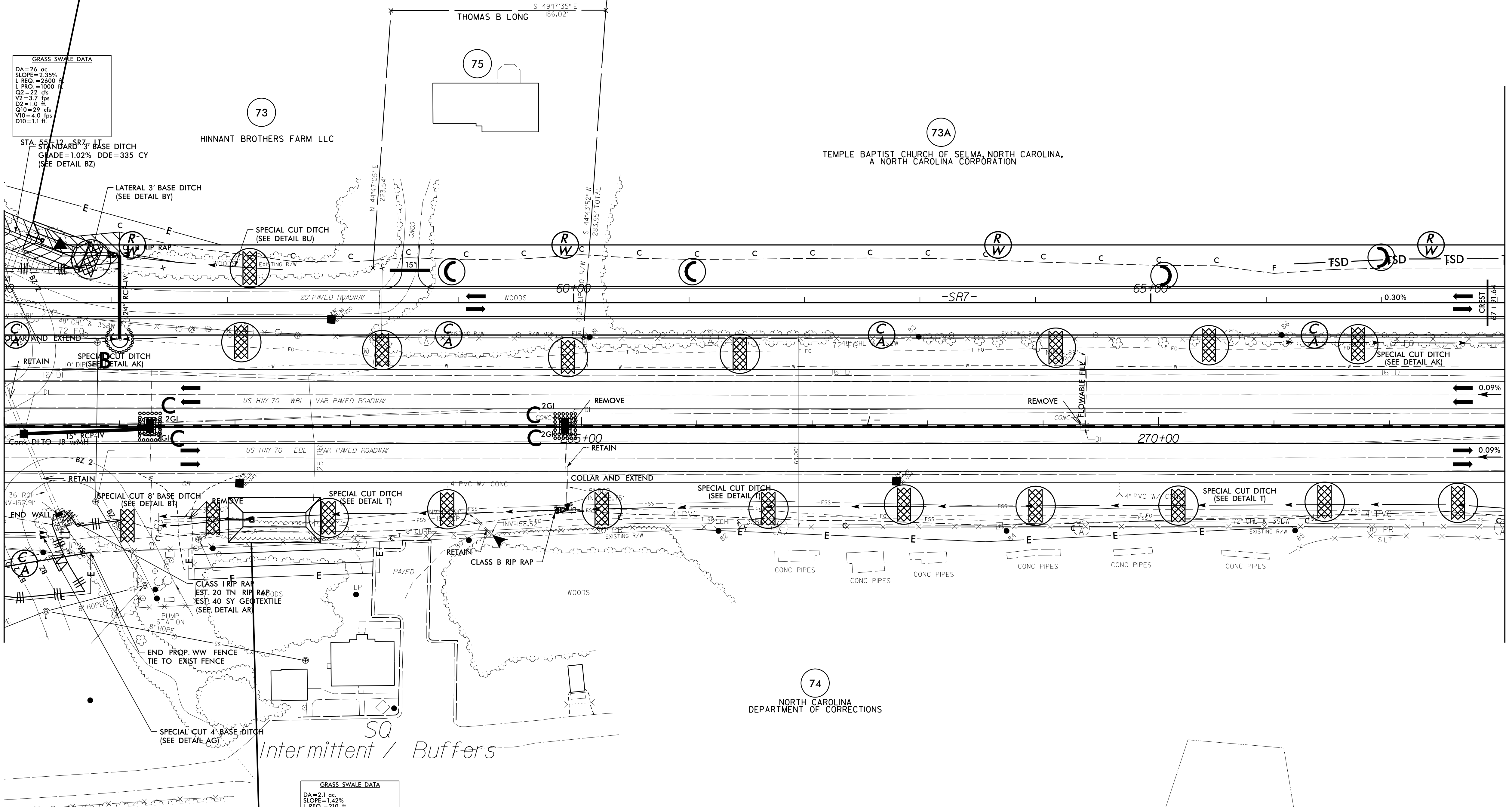
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. W-5600	SHEET NO. EC-47/CONST.24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



52 x 26 x 3
 1.5 inch Skimmer
 with 1.0 inch
 Orifice Diameter
 5 ft. weir
 ID 24.16

GRASS SWALE DATA
 DA=26 ac.
 SLOPE=2.35%
 L REQ.=2600 ft.
 L PRO.=1000 ft.
 Q2=22 cfs
 V2=3.7 fps
 D2=1.0 ft.
 Q10=29 cfs
 V10=4.0 fps
 D10=1.1 ft.



MATCHLINE
 -L- STA. 260+00
 SEE SHEET 23

MATCHLINE
 -L- STA. 273+00
 SEE SHEET 25

GRASS SWALE DATA
 DA=21 ac.
 SLOPE=1.42%
 L REQ.=210 ft.
 L PRO.=1430 ft.
 Q2=6.1 cfs
 V2=2.3 fps
 D2=0.9 ft.
 Q10=7.9 cfs
 V10=2.4 fps
 D10=1.0 ft.

80 x 39 x 3
 2.0 inch Skimmer
 with 1.625 inch
 Orifice Diameter
 12 ft. weir
 ID 24.01

END CONSTRUCTION
 -SR6- STA. 38+00.00

SQ Intermittent / Buffers

8/17/99

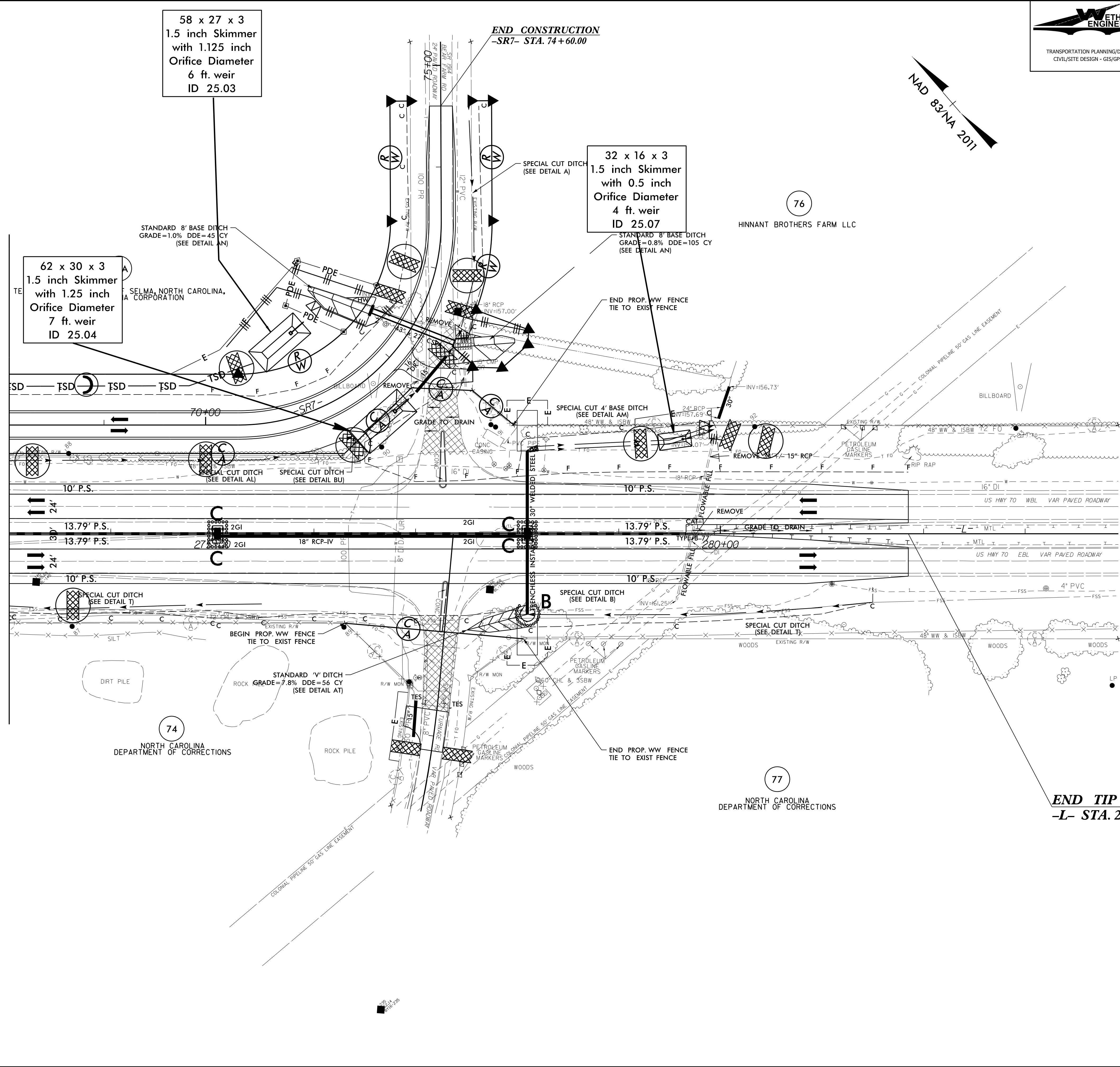
8/17/99

ETHERILL ENGINEERING
 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

PROJECT REFERENCE NO.	SHEET NO.
W-5600	EC-48/CONST.25
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE
 -L- STA. 273+00
 SEE SHEET 24



END TIP PROJECT W-5600
 -L- STA. 281+85.00

FOR -L- PROFILE, SEE SHEET: 37
 FOR -SR7- PROFILE, SEE SHEET: 58
 FOR DRAINAGE DETAILS, SEE SHEETS: 2D-1 THRU 2D-3

