TIP PROJECT: R-3101

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3101	EC-1	

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

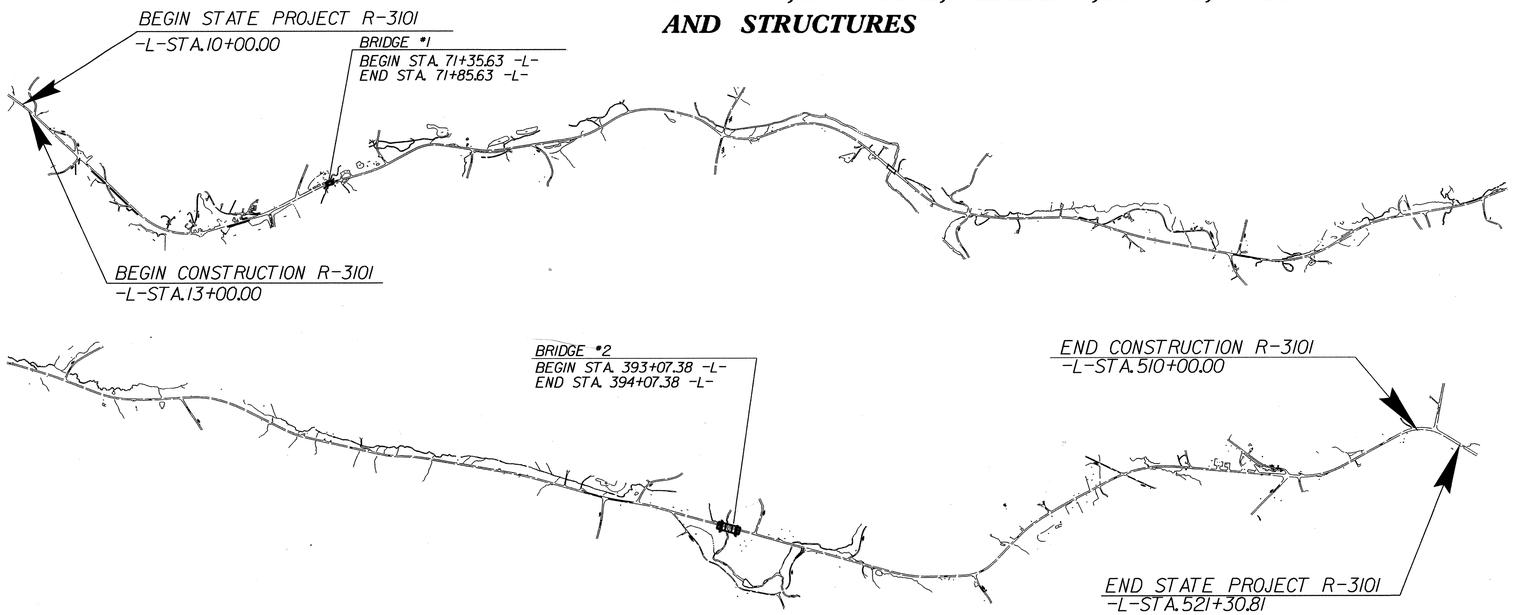
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

ALLEGHANY COUNTY

LOCATION: US 21 FROM SR 1100 (OKLAHOMA RD.) TO SR 1121 (PINE SWAMP RD.)

TYPE OF WORK: GRADING, DRAINAGE, WIDENING, PAVING, RESURFACING AND STRUCTURES



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	EW CFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

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

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

GRAPHIC SCALE

0
PLANS

0
PROFILE (HORIZONTAL)

0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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

Prepared In the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.
Raleigh, NC 27611

2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

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

1604.01	Railroad Erosion Control Detail	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 B	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 Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

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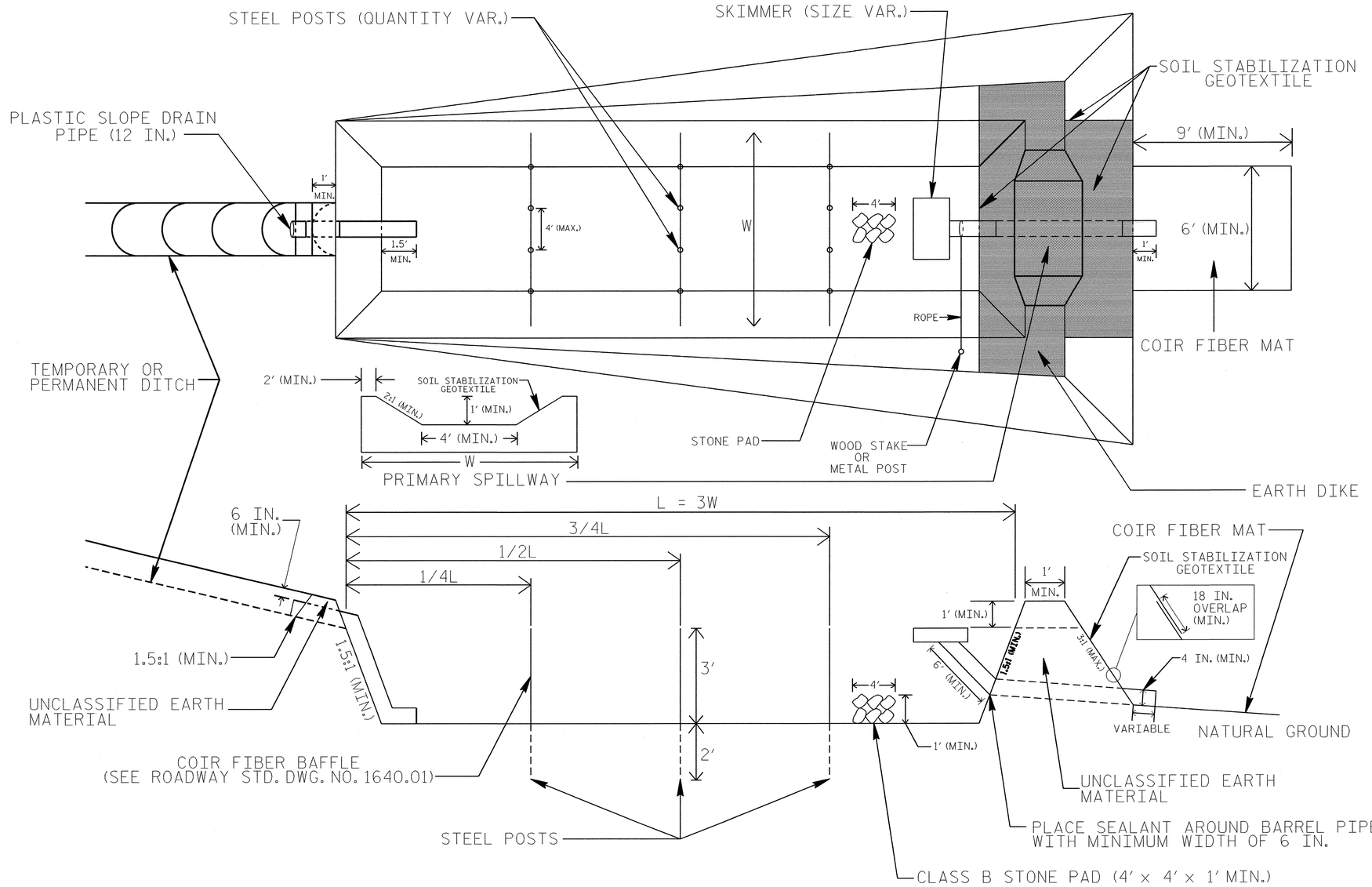
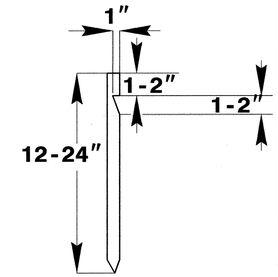
jshandler1 RT REN\24.7.78

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

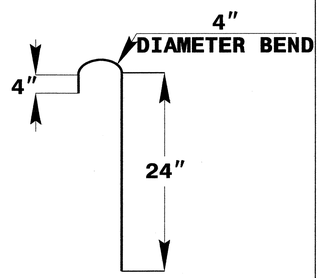
SKIMMER BASIN WITH BAFFLES DETAIL



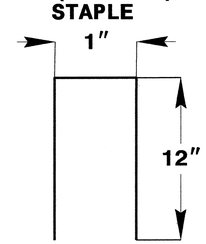
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

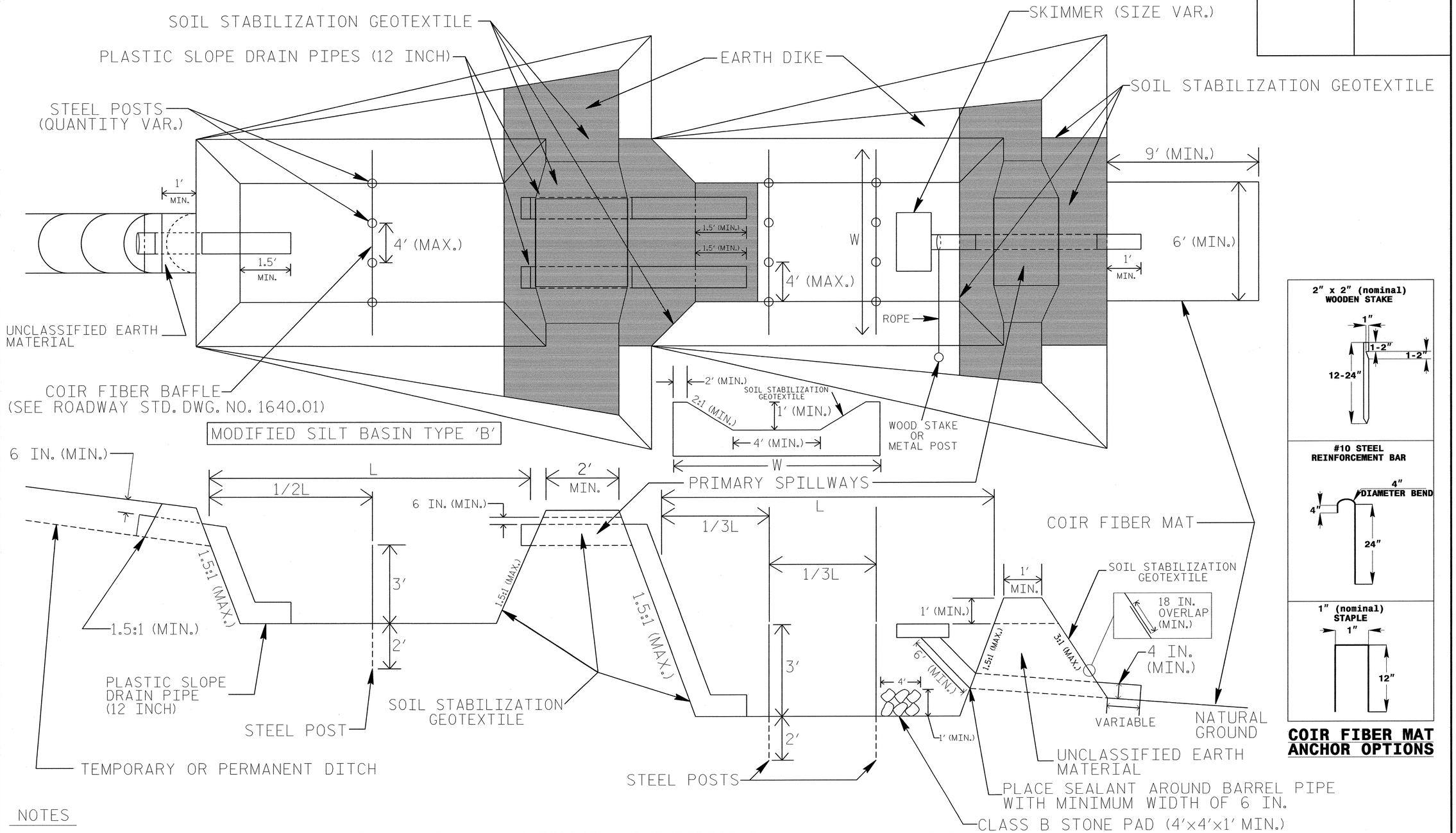
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. SOIL STABILIZATION 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-3101	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TIERED SKIMMER BASIN DETAIL



2" x 2" (nominal) WOODEN STAKE

#10 STEEL REINFORCEMENT BAR

1" (nominal) STAPLE

COIR FIBER MAT ANCHOR OPTIONS

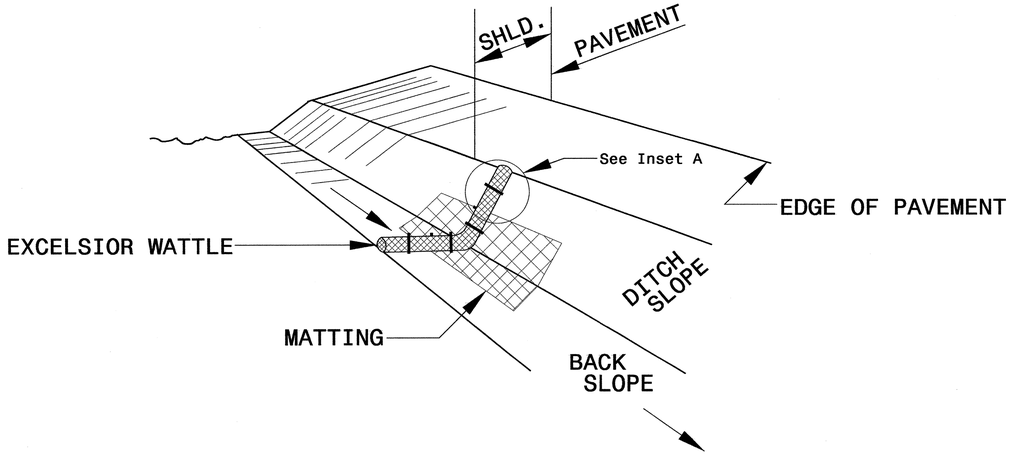
NOTES

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

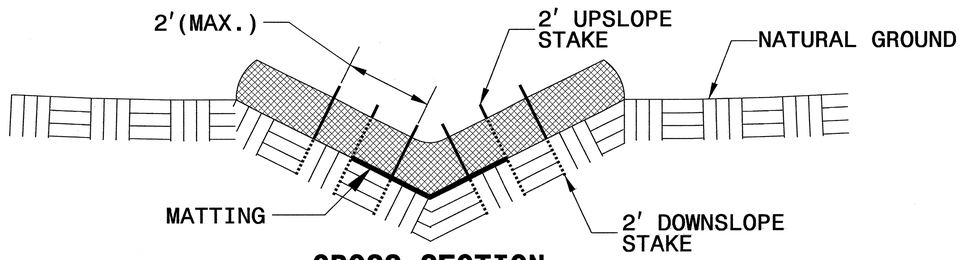
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

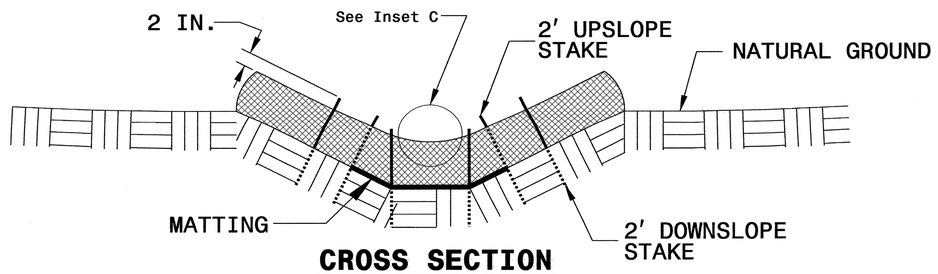
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

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

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

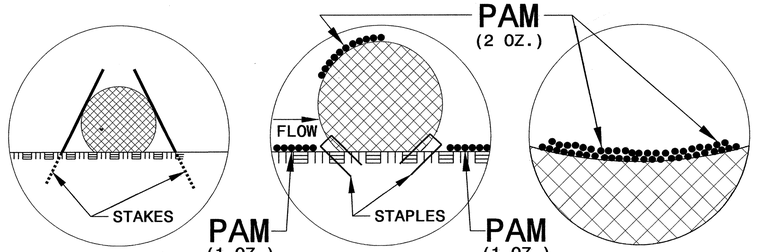
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

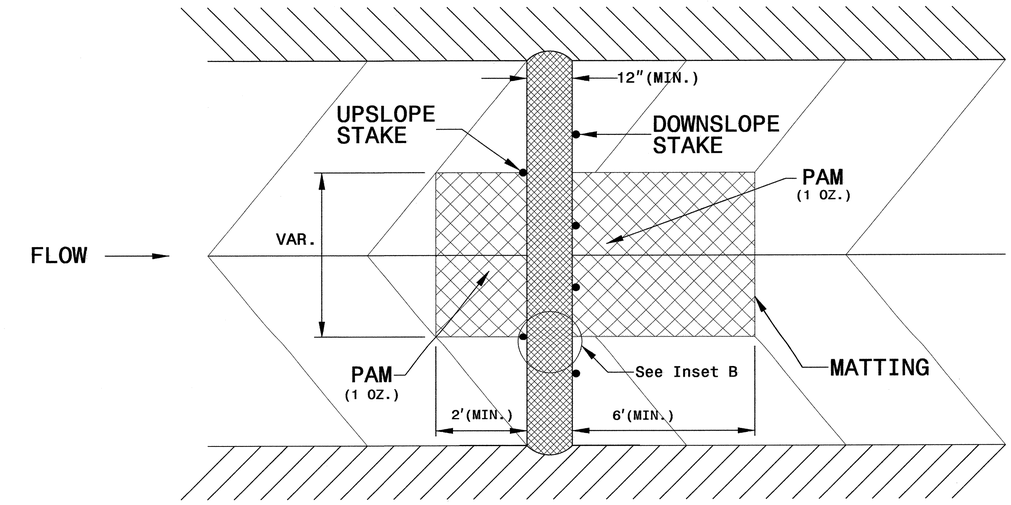
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

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

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

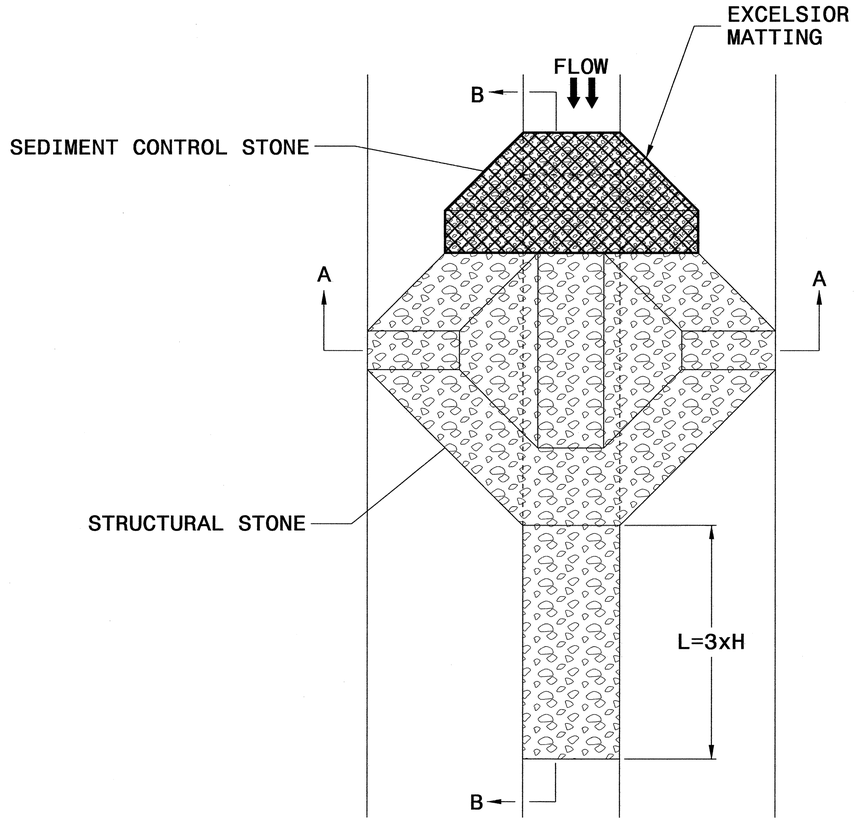




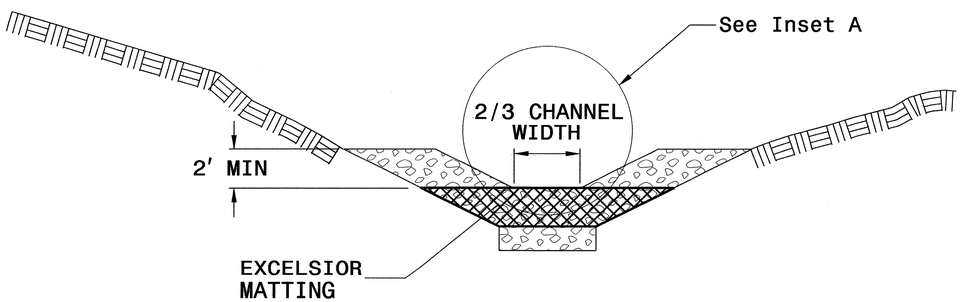
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



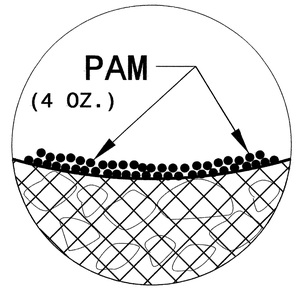
SECTION A-A

NOTES

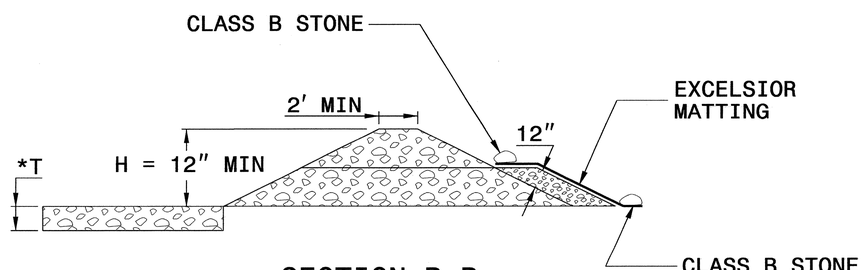
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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

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



INSET A



SECTION B-B

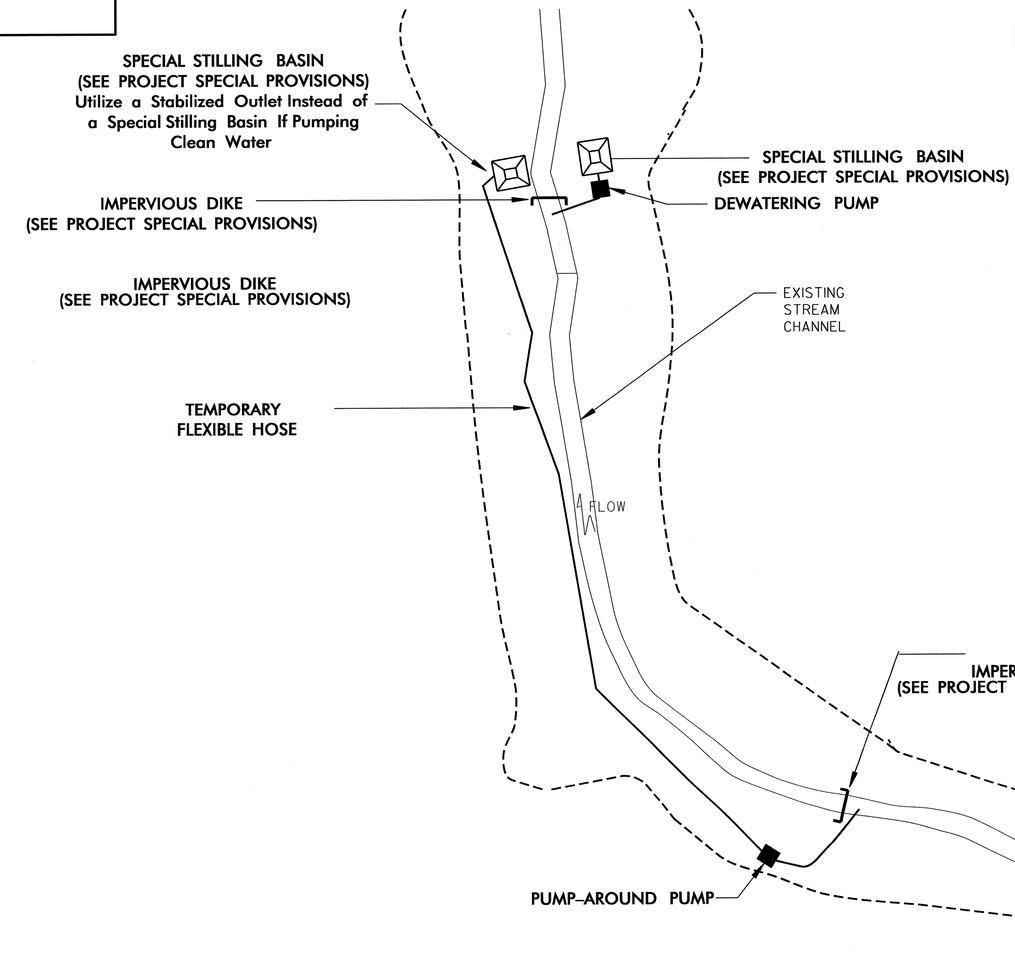
*T = 12" MIN., 18" MAX.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-2D
R/W 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 sufficicient 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.	SHEET NO.
R-3101	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	13+00	18+00	RT	525
4	-L-	13+00	14+50	LT	105
5	-L-	25+00	26+50	RT	105
8	-L-	59+00	66+00	LT	490
8	-L-	65+00	66+00	RT	70
8	-L-	75+00	79+00	RT	105
8	-L-	79+00	86+00	RT	630
8	-Y5-	13+50	14+25	TY	70
10	-L-	86+00	88+50	RT	265
10	-L-	88+50	96+00	RT	525
10	-L-	92+50	93+50	LT	70
12	-L-	113+00	137+00	RT	1,680
14	-L-	140+00	146+00	RT	420
15	-L-	146+00	156+50	RT	735
16	-L-	156+50	163+50	RT	490
17	-L-	181+50	187+50	LT	420
17	-L-	184+00	206+00	RT	1,540
20	-Y11-	10+00	10+50	LT	35
21	-L-	219+00	219+50	RT	35
21	-L-	219+50	225+00	RT	385
21	-L-	220+50	222+00	LT	105
22	-L-	226+00	230+50	LT	315
25	-L-	269+00	277+00	RT	560
25	-L-	269+50	271+00	LT	105
26	-L-	278+50	291+00	RT	1,575
27	-L-	291+50	298+50	RT	490
28	-L-	299+50	307+50	RT	560
28	-L-	305+50	307+50	LT	140
28	-L-	307+50	332+50	RT	2,450
30	-L-	332+50	333+50	RT	70

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
31	-L-	333+50	335+00	RT	105
31	-L-	341+00	350+50	RT	665
32	-L-	348+00	349+00	LT	70
32	-L-	354+00	362+50	RT	595
33	-L-	364+00	364+50	RT	35
33	-L-	364+50	372+50	RT	560
35	-L-	385+00	389+00	RT	280
35	-Y19REV-	11+00	11+50	RT	35
35	-Y19REV-	11+00	11+50	LT	35
35	-Y19REV-	11+50	12+00	LT	35
37	-L-	410+50	414+50	RT	280
37	-L-	412+00	414+00	LT	140
37	-L-	414+00	415+50	LT	150
39	-L-	432+00	437+50	LT	385
39	-L-	432+50	434+50	RT	140
40	-L-	448+50	449+00	RT	35
41	-L-	458+50	460+50	RT	140
41	-L-	459+50	460+50	LT	70
41	-L-	460+50	461+00	RT	35
41	-L-	461+00	463+50	RT	175
41	-L-	463+50	464+00	RT	35
41	-L-	464+00	466+00	RT	140
42	-L-	466+00	468+00	RT	165
43	-L-	478+00	479+00	RT	95
44	-L-	491+00	491+50	RT	35
44	-L-	491+50	493+00	RT	105
				SUBTOTAL	19,610
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					153,270
				TOTAL	172,880
				SAY	173,000

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	-L-	31+00	50+00	LT	1,330
7	-L-	48+50	50+00	RT	105
7	-Y4-	10+50	11+00	RT	35
7	-Y4-	10+50	11+00	LT	35
8	-Y5-	13+25	14+75	LT	105
11	-D1-	10+50	11+00	RT	35
11	-D1-	10+50	11+00	LT	35
12	-Y6-	10+50	11+00	RT	35
12	-Y6-	10+50	11+00	LT	35
20	-L-	206+50	214+00	LT	525
20	-L-	207+00	214+00	RT	490
21	-L-	216+00	219+00	RT	210
21	-Y12REV-	12+50	13+50	RT	70
22	-L-	227+00	231+50	RT	315
22	-L-	232+50	239+00	RT	455
22	-Y13-	11+00	11+50	LT	35
23	-L-	240+00	246+00	RT	420
27	-L-	291+00	291+50	RT	35
33	-L-	363+50	364+00	RT	35
34	-L-	372+50	373+00	RT	35
34	-Y17-	11+00	12+00	RT	70
34	-Y17-	11+00	12+00	LT	70
36	-L-	398+00	400+50	RT	175
37	-L-	416+50	432+00	LT	1,085
37	-D2-	10+50	11+50	RT	70
38	-L-	426+50	427+00	RT	40
38	-L-	427+00	432+50	RT	385
39	-L-	438+00	438+50	RT	35
39	-L-	438+50	440+50	RT	140
39	-L-	439+50	440+00	LT	35

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
40	-L-	444+00	445+50	RT	105
40	-L-	444+50	445+00	LT	35
40	-L-	446+00	448+50	LT	175
40	-L-	449+50	455+50	RT	280
40	-L-	449+50	456+00	LT	245
42	-L-	470+50	474+50	LT	280
42	-L-	473+50	476+00	RT	235
43	-L-	482+00	490+50	LT	595
43	-L-	483+50	491+00	RT	525
45	-L-	501+50	510+00	RT	595
				SUBTOTAL	9,550
	ADDITIONAL PSRM TO BE INSTALLED				1,500
				TOTAL	11,050
				SAY	11,100

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-3B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

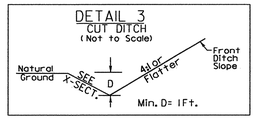
SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

8/17/99

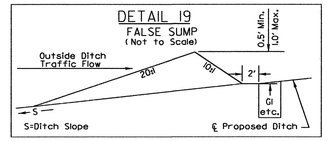
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 3
CUT DITCH
(Not to Scale)



-L- STA. 18+00 TO 18+80 LT

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95

(1) ROARING GAP INCORPORATED

(2) ROARING GAP INCORPORATED

(3) ROARING GAP INCORPORATED

(4) ROARING GAP INCORPORATED

HISTORIC DISTRICT

-L- POT STA.10+00.00

BEGIN TIP R-3101 POT Sta. 10+00.00

BEGIN RESURFACING -Y2- STA. 11+00.00

BEGIN CONSTRUCTION -Y1- STA. 12+50.00

15 x 45 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
6 ft. weir
ID 4.1

3 TONS CLASS 'B' RIP RAP WITH 10 S.Y. FILTER FABRIC

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

GRAU 350

TEAHOUSE AT ROARING GAP HISTORIC PROPERTY

SCRUB

-L- N 36°58'01"E

-L- POT Sta. 14+15.23

-Y1-POT Sta. 13+23.97 = -L-POC Sta. 15+08.63

-Y2-POT Sta. 10+00.00 = -L-POT Sta. 19+16.00

BEGIN RESURFACING -L- POC STA. 12+00.00

BEGIN CONSTRUCTION -L- POC STA. 13+00.00

MATCH LINE -L- STA. 21+00 SHEET 5

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

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

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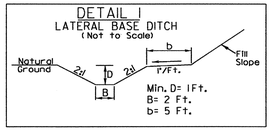
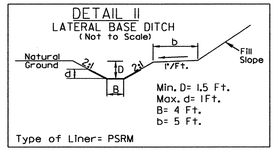
mchandler AT RENVZ7778

8/17/99

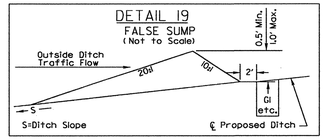
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-5/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L- STA. 22+50 TO 22+80 LT



Type of Liner= PSRM



NAD 83/95

MATCH LINE -L- STA. 21+00 SHEET 4

MATCH LINE -L- STA. 33+00 SHEET 6

25

30

8 WILLIAM A. BURNETTE

42 x 15 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
6 ft. weir
ID 5.2

-Y2-POT Sta. 16+17.56 =
-L-POT Sta. 24+28.00

BEGIN RESURFACING
-Y2- STA.15+00.00

INN KEEPER'S STORE HISTORIC PROPERTY

ROARING GAP INCORPORATED

FGG NEW, LLC

LATERAL BASE DITCH
-L- STA. 27+00 TO 29+23 RT
SEE DETAIL 11

LATERAL BASE DITCH
-L- STA. 22+50 TO 22+80 LT
SEE DETAIL 1

BORE AND JACK

TBDI W/FLAT STEEL GRATE

BLOCK WALL

IS ROCK BUS

FLAG POLE

HISTORIC DISTRICT

GRAU 350

N 8°55'43"E

-Y3-POT Sta. 10+00.00 =
-L-POT Sta. 25+19.00

Beg Retaining Wall
28+00.00 23.00

End Retaining Wall
31+05.00 23.00

DO NOT DISTURB

PLUG AND ABANDON

5 TONS CLASS 'B' RIP RAP WITH 16 S.Y. FILTER FABRIC

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

3 TONS CLASS 'B' RIP RAP WITH 11 S.Y. FILTER FABRIC

22 x 53 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
14 ft. weir
ID 5.1

BEGIN RESURFACING
-Y3- STA.11+25.00

-Y3-POT Sta. 12+07.03 =

FINE NEEDLE ST

ROARING GAP ROAD

WALTER SULLIVAN LINEBERGER, JR. AND PACE B. LINEBERGER
DB 275 PG 863
PB 9 PG 355

HOLLIDAY HISTORIC PROPERTY

ROARING GAP INCORPORATED

ANN W. LINEBERGER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

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

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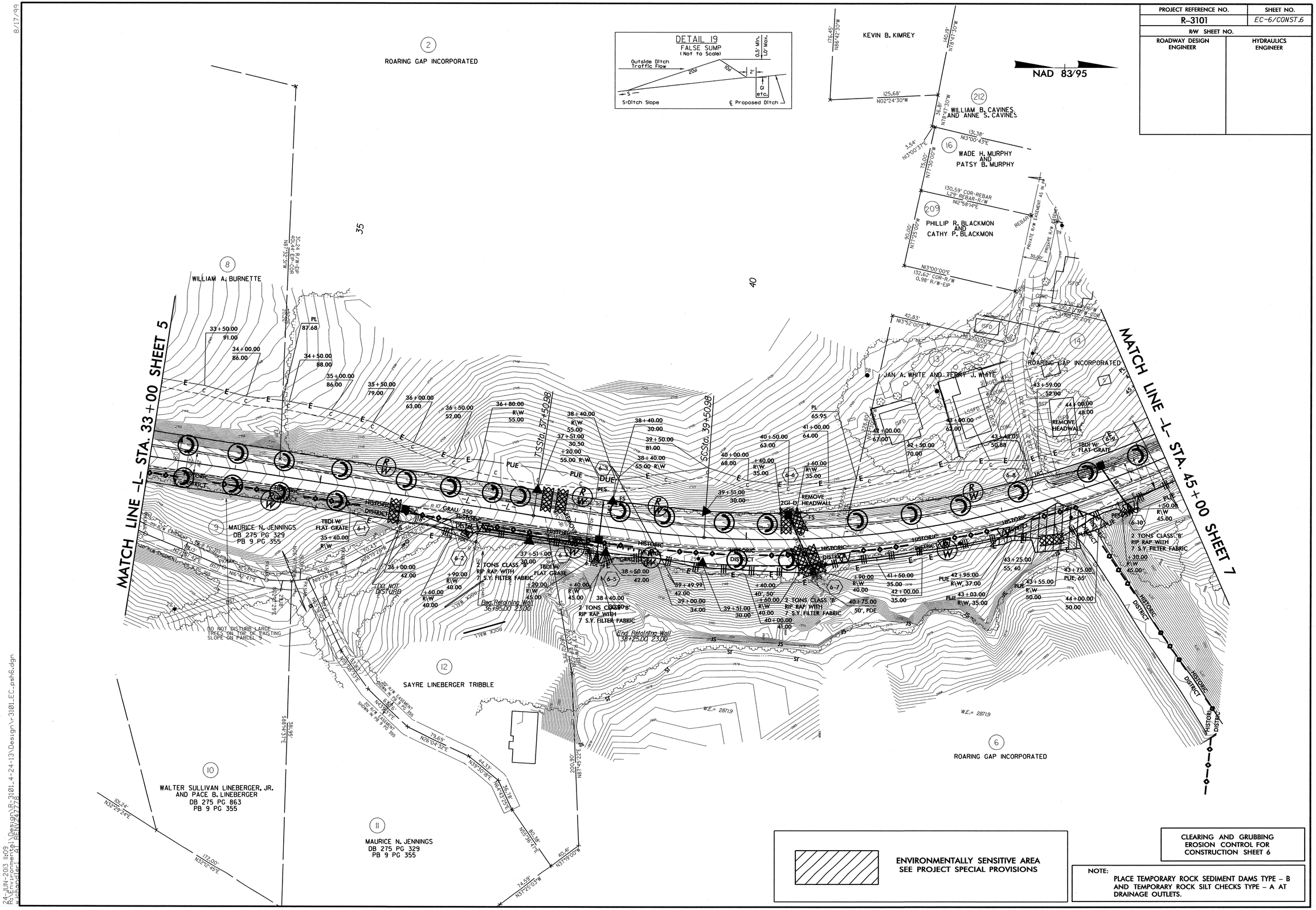
jchandler AT RENN24778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-6/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

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

8/17/99

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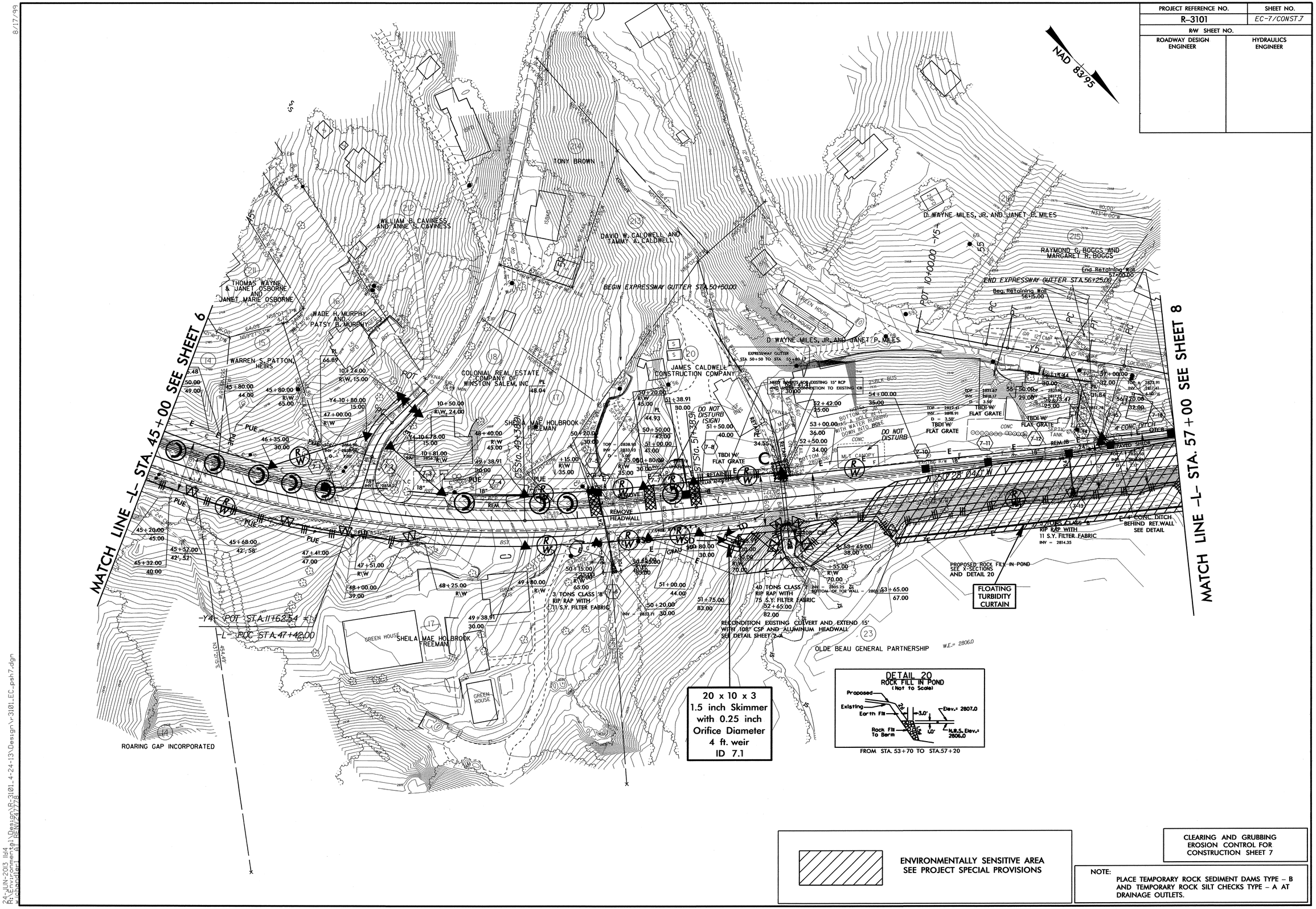
wichandler1 AT RENV247778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-7/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7

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

8/17/99

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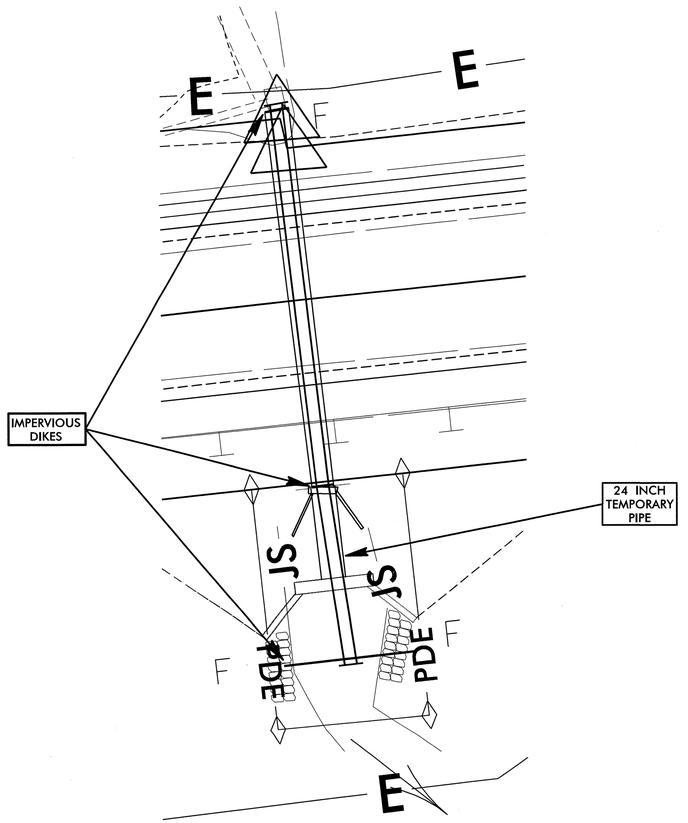
CULVERT CONSTRUCTION SEQUENCE STA. 52 + 41 –L–

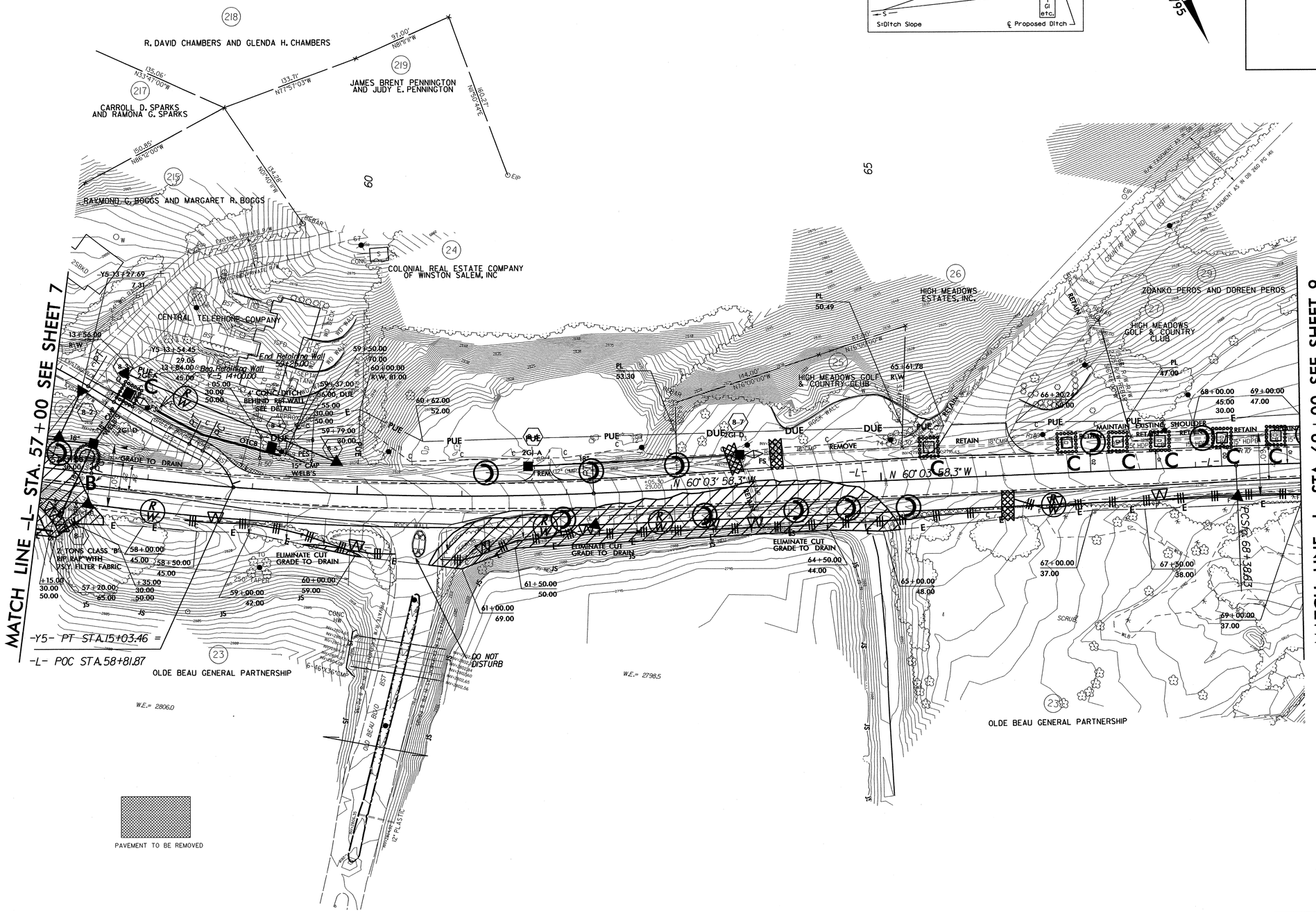
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-8/CONST.1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT/PIPE CONSTRUCTION.
2. CONSTRUCT IMPERVIOUS DIKES AND INSTALL 24 INCH TEMPORARY PIPE, DIVERTING FLOW.
3. CONSTRUCT PROPOSED 9 INCH THICK REINFORCED CONCRETE INVERT (FLOOR) INSIDE THE EXISTING RCBC.
4. REMOVE EXISTING CONCRETE HEADWALL AT OUTLET OF EXISTING RCBC.
5. RECONDITION EXISTING CULVERT AND EXTEND 15 FEET WITH 4 X 9 FOOT RCBC AND CONSTRUCT HEADWALL AND WINGWALLS AT CULVERT OUTLET.
6. CONSTRUCT ANY NECESSARY CHANNEL IMPROVEMENTS.
7. REMOVE IMPERVIOUS DIKES AND 24 INCH TEMPORARY PIPE.
8. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S), AND COMPLETE ROADWAY.

NAD 83'95



PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-9/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 8

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

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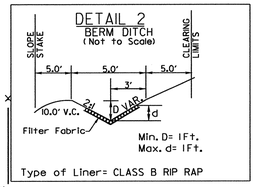
8/17/99

NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-10/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

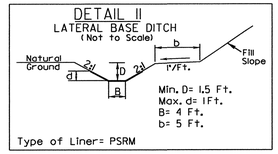
DETAIL 2
BERM DITCH
(Not to Scale)



Min. D= 1Ft.
Max. d= 1Ft.

Type of Liner= CLASS B RIP RAP

DETAIL II
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
Max. d= 1Ft.
B= 4 Ft.
b= 5 Ft.

Type of Liner= PSRM

NAD 83'95

-L- STA. 76+50 TO 82+00 RT

20 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 9.2

36 x 15 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
7 ft. weir
ID 9.1

MATCH LINE -L- STA. 69+00 SEE SHEET 8

MATCH LINE -L- STA. 81+00 SEE SHEET 10

ZDANKO PEROS AND DOREEN PEROS

JAMES S. MASSEY AND NANCY C. MASSEY

HIGH MEADOWS GOLF & COUNTRY CLUB

TRUSTEES OF ANTIOCH METHODIST CHURCH

OLDE BEAU GENERAL PARTNERSHIP

OLDE BEAU GENERAL PARTNERSHIP

MAINTAIN EXISTING SHOULDER

RETAIN

GRAU 350

REMOVE CULVERT

CULVERT #2
2- BARREL
10X10

PTS Sta. 72+60.00

PTS Sta. 77+46.00

BERM DITCH
-L- STA. 76+50 TO 82+00 RT
SEE DETAIL 2

OUTLINE HISTORIC BOUNDARY WITH ORANGE SAFETY FENCE NEAR CONSTRUCTION

HISTORIC BOUNDARY

N 49°50'31.0" W

N 21°50'48.2" E 296.91'

N 30°55'47.2" E 277.09'

N 68°43'57.4" W 400.00'

Excavate Proposed Berm Ditch according to Detail 2 from Sta. 76+50 to Sta. 81+00

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

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

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Blackburn AT REN\2738

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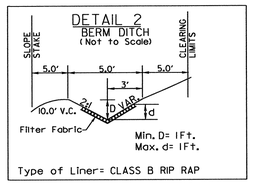
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-II/CONST.JO
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

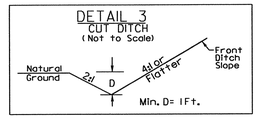
DETAIL 2
BERM DITCH
(Not to Scale)



Type of Liner= CLASS B RIP RAP

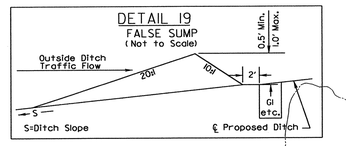
-L- STA. 76+50 TO 82+00 RT

DETAIL 3
CUT DITCH
(Not to Scale)



-L- STA. 85+00 TO 86+50 RT

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95

12 x 28 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
6 ft. weir
ID 10.1

21 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 10.2

20 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 10.3

HIGH MEADOWS

HIGH MEADOWS GOLF & COUNTRY CLUB

JOHN A. HARMON

OLDE BEAU GENERAL PARTNERSHIP

JERRY W. SADDLER

MATCH LINE -L- STA. 81+00 SEE SHEET 9

MATCH LINE -L- STA. 93+00 SEE SHEET 11

Excavate Proposed Berm Ditch according to Detail 2 from Sta. 81+00 to Sta. 82+00

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

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

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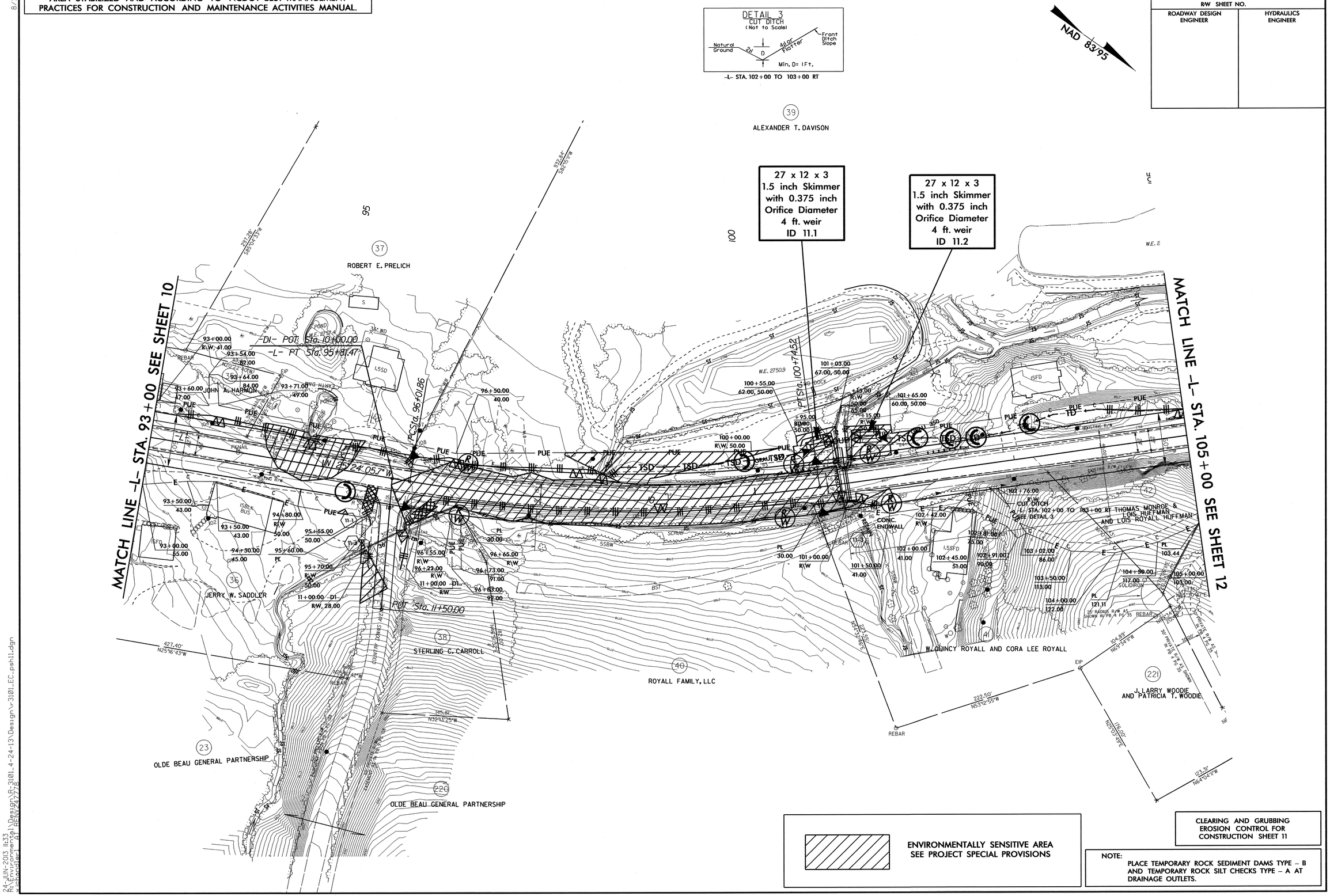
bbeckburn 41 REN/7.5d4

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

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-12/CONST.11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11

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

8/17/99

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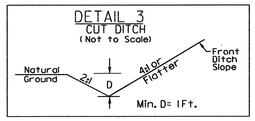
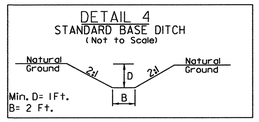
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-13/CONST12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

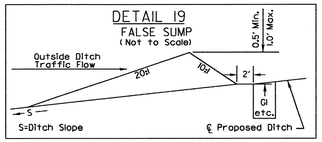
INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



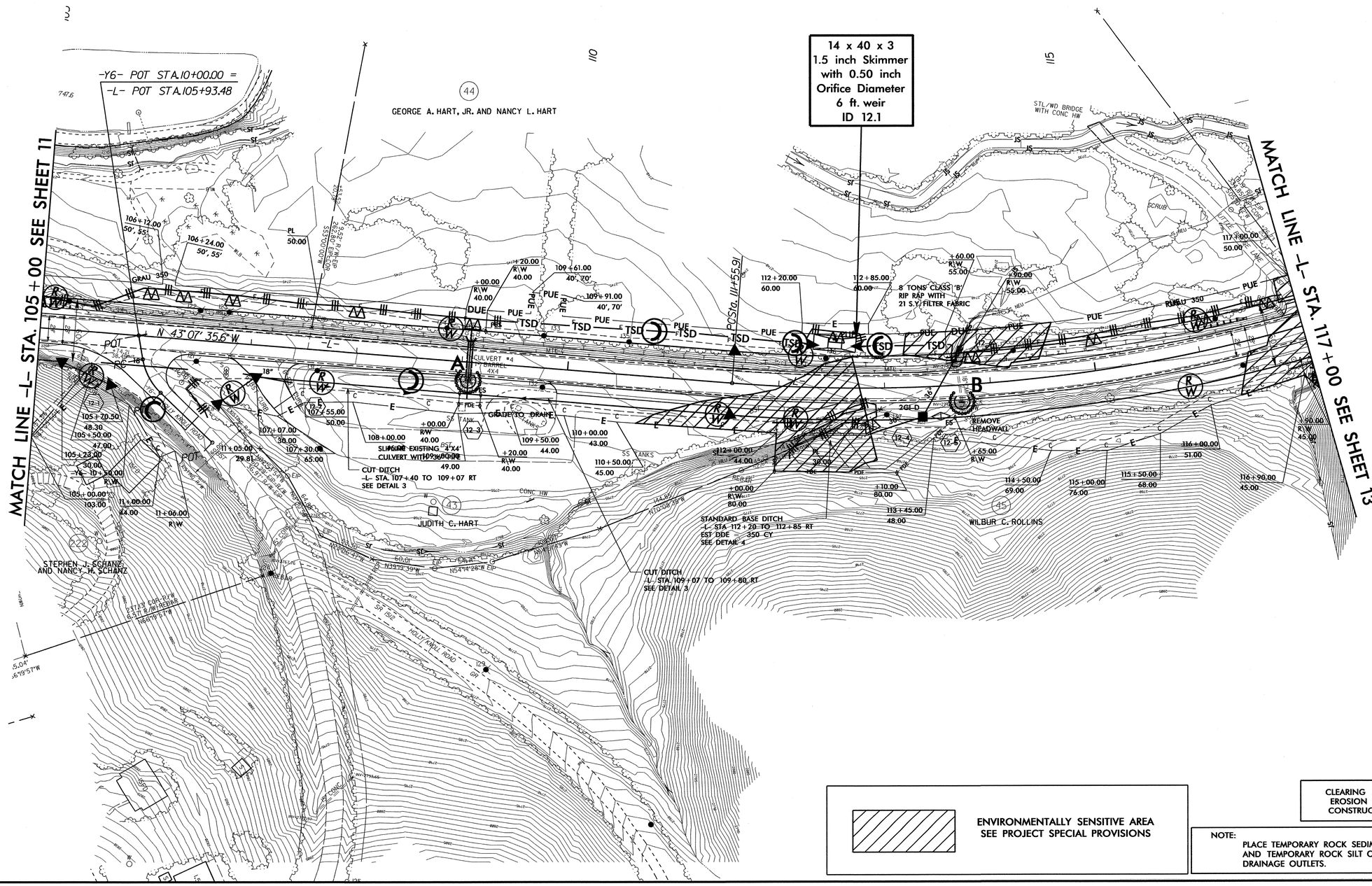
-L- STA. 107+40 TO 109+07 RT



-L- STA 112+20 TO 112+85 RT



NAD 83/95



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12

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

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mcdonald at HNV24778

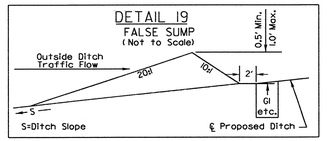
8/17/99

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

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-14/CONST13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

DETAIL 19
FALSE SUMP
(Not to Scale)



14 x 32 x 3 1.5 inch Skimmer with 0.50 inch Orifice Diameter 6 ft. weir ID 13.1

120

125

MATCH LINE -L- STA. 117+00 SEE SHEET 12

MATCH LINE -L- STA. 129+00 SEE SHEET 14

46 J. D. SMITH AND LOUISE BROOKS SMITH DB 153 PG 503

46 J. D. SMITH AND LOUISE BROOKS SMITH DB 153 PG 503

47 DANIEL J. BUCKLE, JR. AND FRANCES S. BUCKLE DB 182 PG 118

45 WILBUR C. ROLLINS DB 91 PG 422

SCRUB

CONC. BRIDGE

117+00.00 50.00 PL 50.79

3 TONS CLASS 'B' RIP RAP WITH 11 S.Y. FILTER FABRIC

117+25.00 45.00 +50.00 R/W

122+56.00 79', 48'

122+46.00 79.00

122+45.00 48.00

122+90.00 45.00

120+45.00 75', 59'

120+55.00 75', 57'

119+80.00 R/W 70.00

119+40.00 75, 66.5

119+90.00 75, PUE

+35.00 R/W 45.00

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

+60.00 R/W 45.00

124+50.00 39.00

+85.00 R/W 45.00

125+45.00 48', 78'

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

125+55.00 48', 78'

+05.00 R/W 45.00

127+50.00 40.00

128+73.00 R/W, 43'

129+00.00 36.00

PUE, TSD, GRAU 350, RW/SBW, EXISTING R/W, EXISTING EOP, EXISTING TOP OF BANK, EXISTING CENTERLINE, EXISTING EDGE OF PAVEMENT, EXISTING EDGE OF GRAVEL, EXISTING EDGE OF WATER, EXISTING EDGE OF SHOULDER, EXISTING EDGE OF WOODS, EXISTING EDGE OF SCRUB, EXISTING EDGE OF MARSH, EXISTING EDGE OF BRIDGE, EXISTING EDGE OF CONCRETE, EXISTING EDGE OF ASPHALT, EXISTING EDGE OF GUARDRAIL, EXISTING EDGE OF FENCE, EXISTING EDGE OF POWER POLE, EXISTING EDGE OF TELEPHONE POLE, EXISTING EDGE OF LIGHT POLE, EXISTING EDGE OF SIGN, EXISTING EDGE OF MAILBOX, EXISTING EDGE OF TREE, EXISTING EDGE OF BUSH, EXISTING EDGE OF GRASS, EXISTING EDGE OF DIRT, EXISTING EDGE OF GRAVEL, EXISTING EDGE OF WATER, EXISTING EDGE OF SHOULDER, EXISTING EDGE OF WOODS, EXISTING EDGE OF SCRUB, EXISTING EDGE OF MARSH, EXISTING EDGE OF BRIDGE, EXISTING EDGE OF CONCRETE, EXISTING EDGE OF ASPHALT, EXISTING EDGE OF GUARDRAIL, EXISTING EDGE OF FENCE, EXISTING EDGE OF POWER POLE, EXISTING EDGE OF TELEPHONE POLE, EXISTING EDGE OF LIGHT POLE, EXISTING EDGE OF SIGN, EXISTING EDGE OF MAILBOX, EXISTING EDGE OF TREE, EXISTING EDGE OF BUSH, EXISTING EDGE OF GRASS, EXISTING EDGE OF DIRT

N 66°38'33.4"W

PC=L-=11+83.00

PT=L-=19+32.21

PC=L-=125+86.20

BDO, 7GI-D, FS, 13-1, 13-2, 13-3, 13-4, 13-5, 13-6, 13-7, 13-8

REMOVE HEADWALL CONC. ENDWALL 30.00 R/W

24" CMP W/ELBOWS +10.00 50.00

INDS 38' N03°53'20"E

120+00.00 180.00

119+50.00 194.00

117+50.00 146.00

118+50.00 212.00

119+00.00 229.00

117+95.00 225.00

PL 223.27

121+50.00 100.00

122+00.00 90.00

122+50.00 107.00

123+00.00 110.00

123+50.00 89.00

124+00.00 76.00

124+50.00 76.00

125+00.00 78.00

126+50.00 97.00

127+50.00 89.00

128+00.00 68.00

128+50.00 74.00

129+00.00 65.00

ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 13

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

24-JUN-2013 11:48
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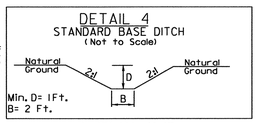
mcooper
ALL REVISIONS 2777.0

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-15/CONST.14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

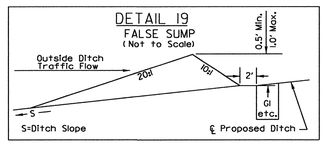
DETAIL 4
STANDARD BASE DITCH
(Not to Scale)



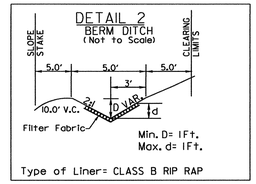
Min. D= 1Ft.
B= 2 Ft.

-L- STA. 139+62 LT

DETAIL 19
FALSE SUMP
(Not to Scale)



DETAIL 2
BERM DITCH
(Not to Scale)



Min. D= 1Ft.
Max. d= 1Ft.

Type of Liner= CLASS B RIP RAP

-L- STA. 133+10 TO 135+40 RT

-Y8- PC Sta. 10+00.00

NAD 83/95

-L- STA. 129+00 SEE SHEET 13

-L- STA. 141+00 SEE SHEET 15

J. D. SMITH AND LOUISE BROOKS SMITH (46)

ROSEMARY MOTSINGER SHAFFNER (49)

JOHN AND ELIZABETH MOTSINGER (52)

DANIEL J. BUCKLE, JR. AND FRANCES S. BUCKLE (47)

JOHNNY JAMES PIERCE AND ANNIE LEE HAYNES (48)

MATTIE ELIZABETH WINESETT (50)

VICTOR ALBERTO MANGIALETTI AND LAURA DARLENE DEFLORIO (51)

JACK RANDALL ELLEDGE (53)

NEW BRIDGE LOCATION

-Y8- STA.15+24.08 =
-L- POC STA.138+43.13

-Y7- STA.10+00.00 =
-L- POC STA.138+39.69

Excavate Proposed Berm Ditch according to Detail 2 from Sta. 133+10 to Sta. 135+40

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14

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

03-JAN-2014 15:26
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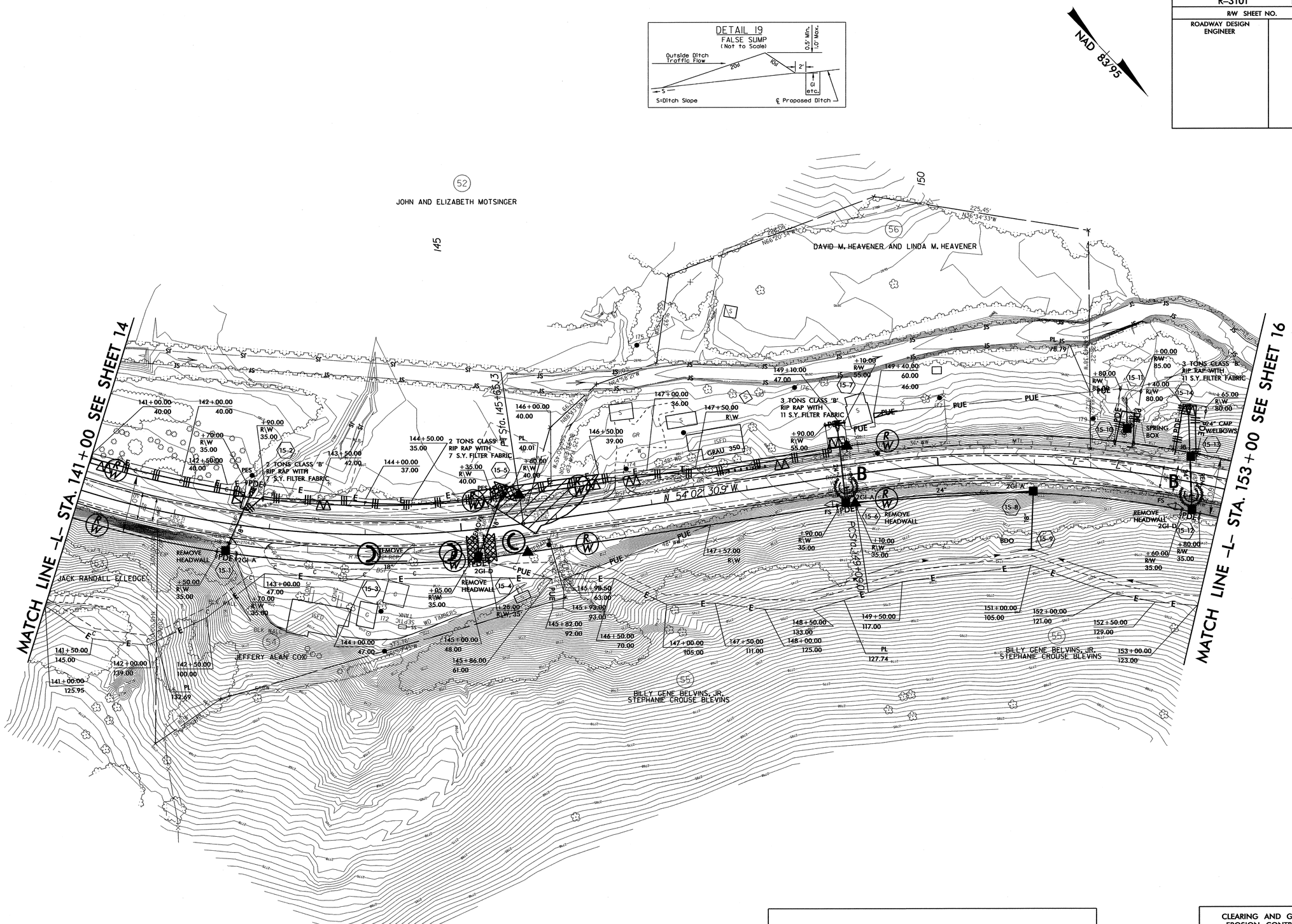
pblackburn
ATT1 REF\r2138d

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-16/CONST.15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 15

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

8/17/99

24-JUN-2013 12:49
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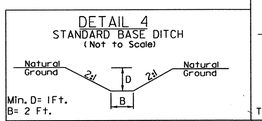
wichandler1 AT RENV247778

8/17/99

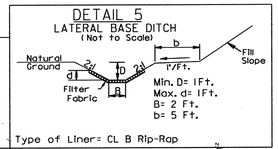
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-17/CONST.16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 4
STANDARD BASE DITCH
(Not to Scale)



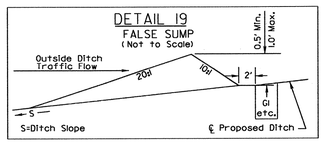
-L- STA 112+20 TO 112+85 RT

DETAIL 5
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CL B Rip-Rap

DETAIL 19
FALSE SUMP
(Not to Scale)



-L- STA. 161+20 TO 162+10 LT

NAD 83/95
233.00'
N02°30'00"E

MATCH LINE -L- STA. 153+00 SEE SHEET 15

MATCH LINE -L- STA. 165+00 SEE SHEET 17

52 JOHN AND ELIZABETH MOTSINGER

52 JOHN AND ELIZABETH MOTSINGER

STANDARD BASE DITCH
-L- STA. 161+20 TO 162+10 LT
EST DDE = 60 CY
SEE DETAIL 4

59 CAROL J. HOLCOMB

END CONSTRUCTION
BEGIN MILL AND RESURFACE
POT Sta. 164+00.00 -L-

156+82.00
41.00

156+33.00
R\W

159+24.00
39.00

159+56.00
R\W

+20.00
R\W
160.00

+05.00
R\W
65.00

16-3

5 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC

BORE AND JACK

GRAU 350

162+73.21
30.00

N 15°28'29.2" W

558W

ISFD

PTS Sta. 159+23.52

PTS Sta. 159+43.52

PL
101.46
157+50.00
111.00

158+00.00
113.00

158+50.00
103.00

159+50.00
73.00

161+00.00
64.00

161+50.00
63.00

162+00.00
53.00

162+50.00
47.00

162+73.10
30.00

+00.00
R\W
40.00

161+73.00
DUE

DUE REMOVE HEADWALL

DUE 2 CMP PUE

REMOVE

162+15.00
R\W
45.00

RETAIN

RETAIN 18" RCP

163+50.00
43.00

163+00.00
52.00

164+00.00
R/W

PT Sta. 162+92.31

154+50.00
85.00

154+00.00
107.00

155+50.00
81.00

156+50.00
90.00

156+00.00
90.00

153+00.00
123.00

WALL

MD WALL

BILLY GENE BELVINS, JR.
STEPHANIE GROUSE BLEVINS

POND

CHERRY LANE COMMUNITY CLUB, INC.

307.73'
N05°30'32"E

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 16

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

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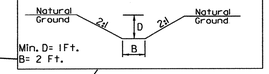
Microstation V8 (NEW) 2778

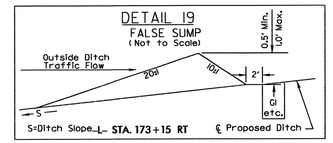
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-18/CONST17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

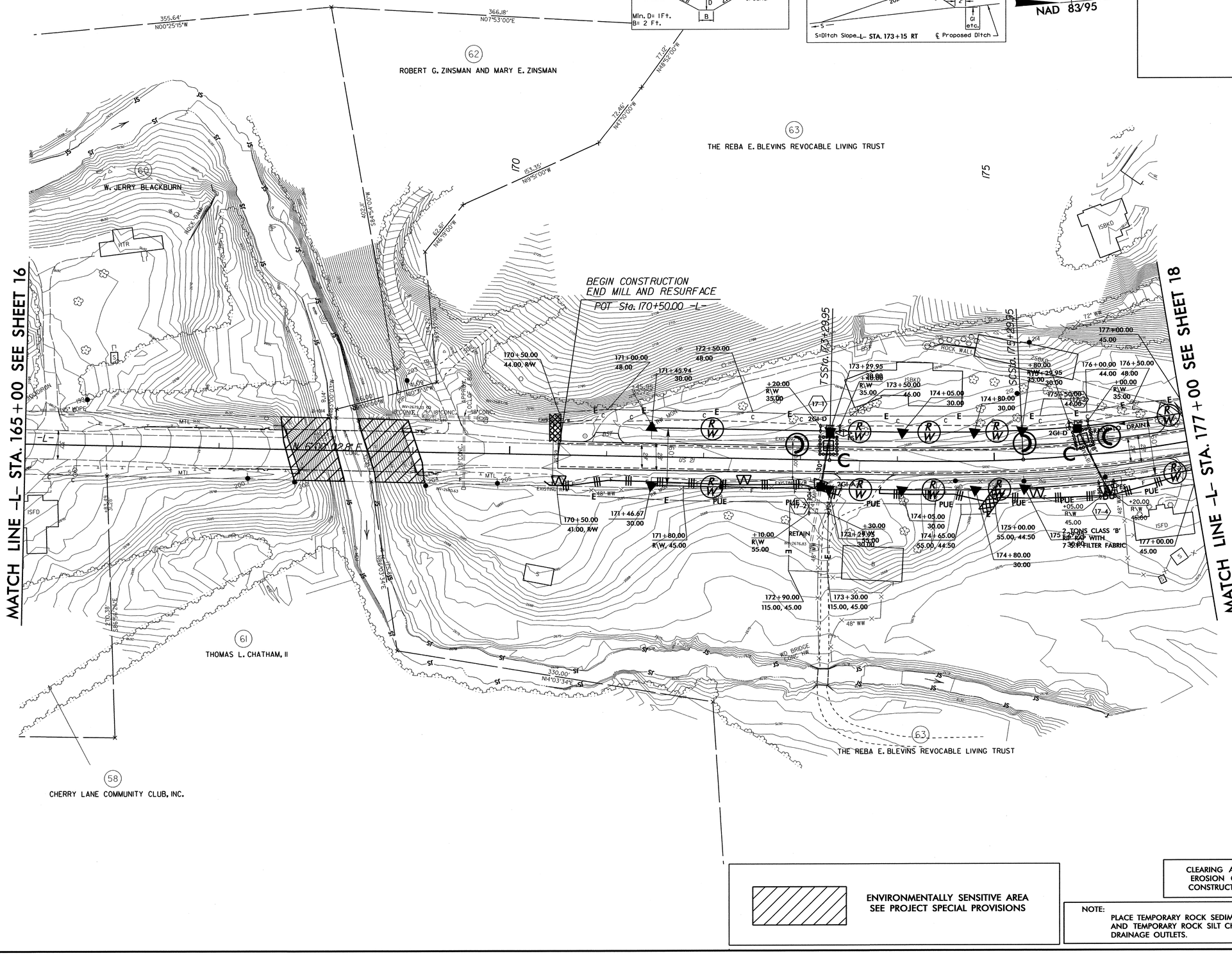
DETAIL 4
STANDARD BASE DITCH
(Not to Scale)



DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 17

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

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mchandler1 RENV2.7.2

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-19/CONST.18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

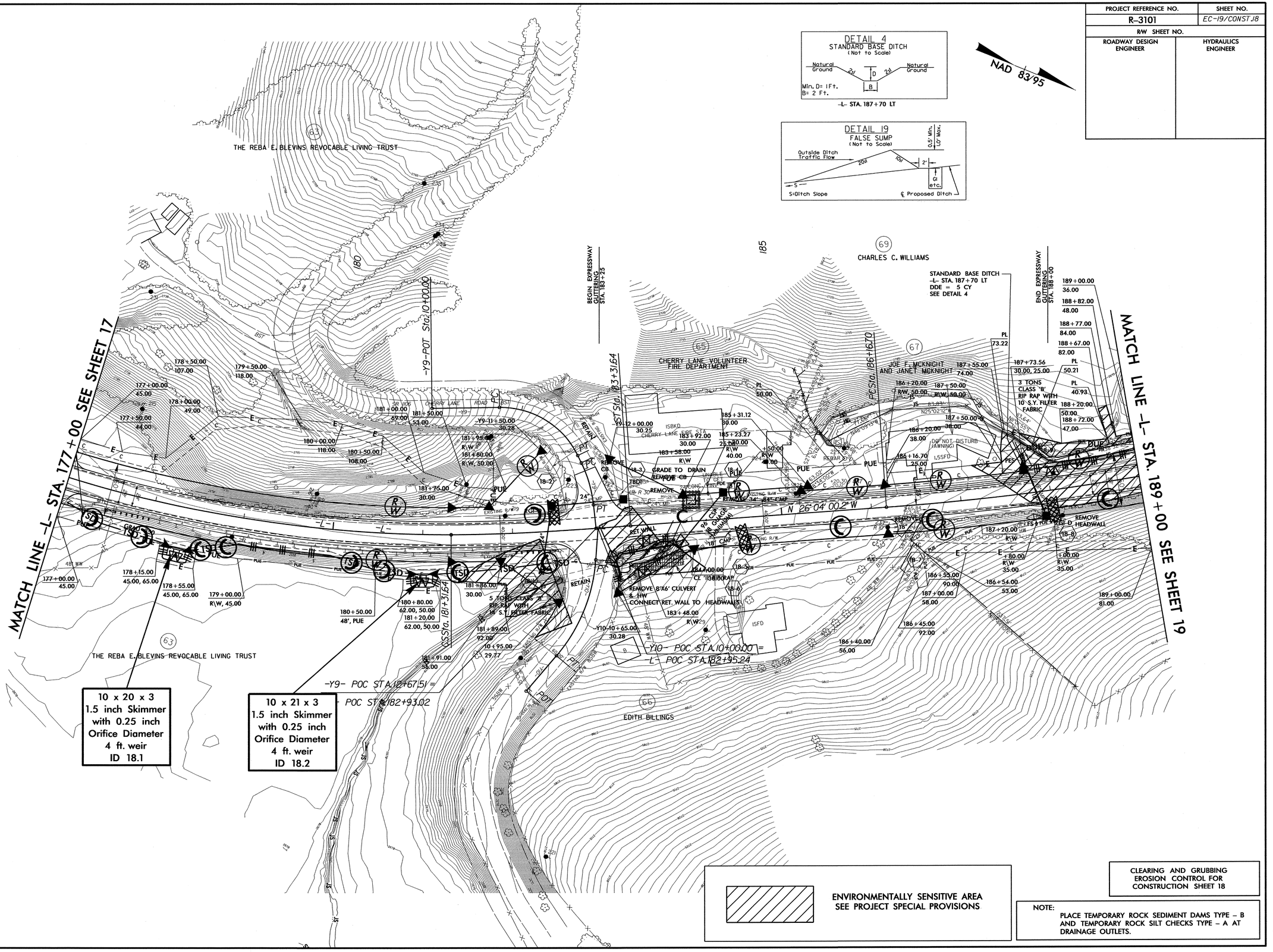
DETAIL 4
STANDARD BASE DITCH
(Not to Scale)

Min. D= 1Ft.
B= 2 Ft.

-L- STA. 187+70 LT

DETAIL 19
FALSE SUMP
(Not to Scale)

NAD 83/95



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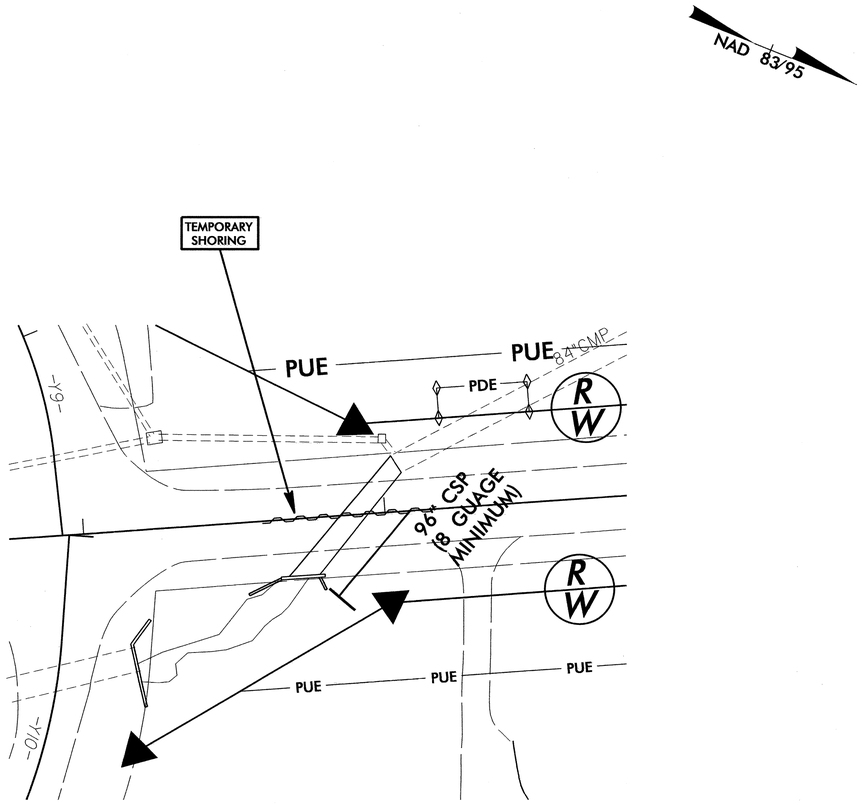
dconnor
Default

CULVERT CONSTRUCTION SEQUENCE STA. 184+08 –L–
(SHEET 1 OF 2)

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-20/CONST18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

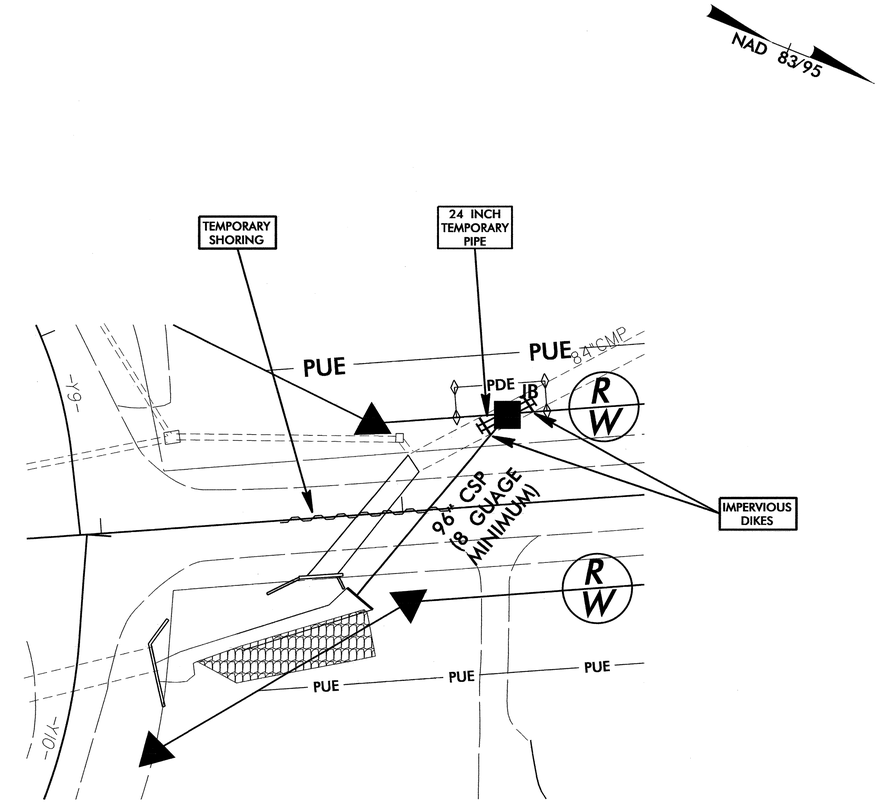
PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT/PIPE CONSTRUCTION.
2. INSTALL TEMPORARY SHORING AND SHIFT TRAFFIC TO THE WEST SIDE.
3. INSTALL PORTION OF PROPOSED 96 INCH CSP.
4. SHIFT TRAFFIC TO THE EAST SIDE.



PHASE II

5. CONSTRUCT IMPERVIOUS DIKES AND INSTALL 24 INCH TEMPORARY PIPE, DIVERTING FLOW.
6. INSTALL REMAINDER OF PROPOSED 96 INCH CSP AND PORTION OF OUTLET CHANNEL IMPROVEMENTS.
7. CONSTRUCT PROPOSED JUNCTION BOX TO CONNECT EXISTING 84 INCH CMP AND PROPOSED 96 INCH CSP.
8. REMOVE IMPERVIOUS DIKES AND TEMPORARY PIPE.
9. SEAL JUNCTION BOX, DIVERTING FLOW THROUGH 96 INCH CSP.
10. COMPLETE OUTLET CHANNEL IMPROVEMENTS.

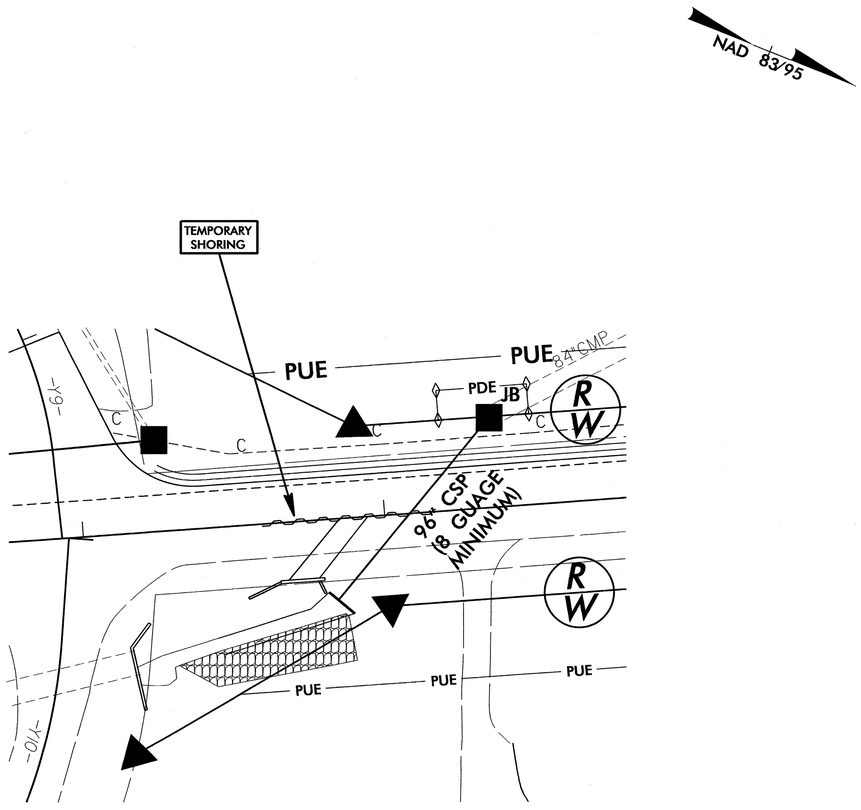


CULVERT CONSTRUCTION SEQUENCE STA. 184+08 –L– (SHEET 2 OF 2)

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-21/CONST18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

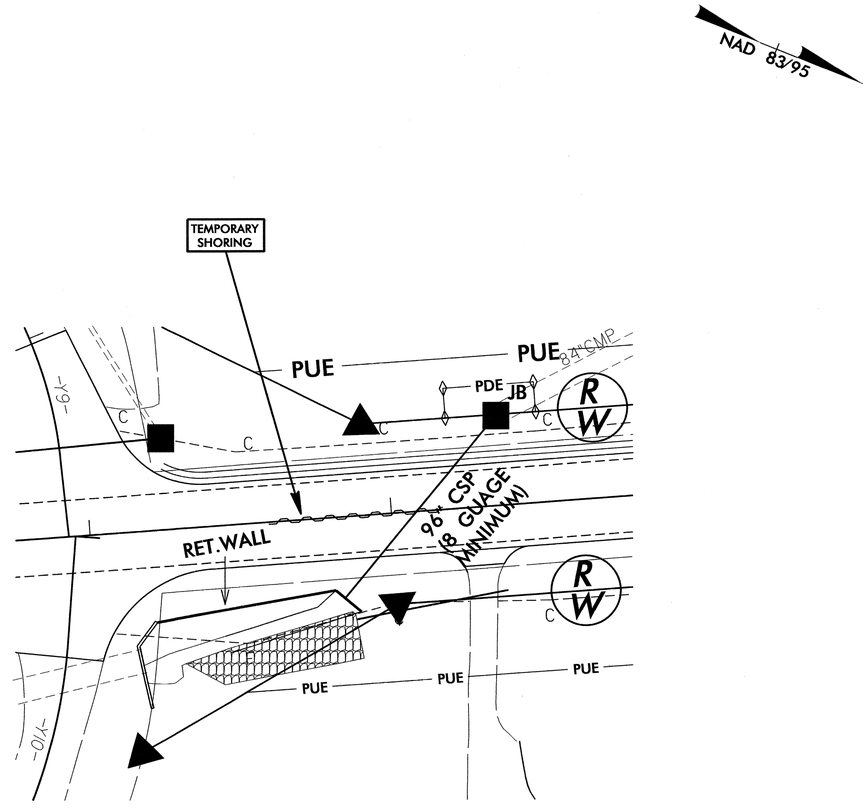
PHASE III

11. REMOVE PORTION OF EXISTING 84 INCH CMP SEALED OFF FROM PROPOSED JUNCTION BOX.
12. REMOVE PORTION OF EXISTING CULVERT.
13. CONSTRUCT PROPOSED ROADWAY ALIGNMENT ON THE WEST SIDE.
14. SHIFT TRAFFIC TO THE WEST SIDE.

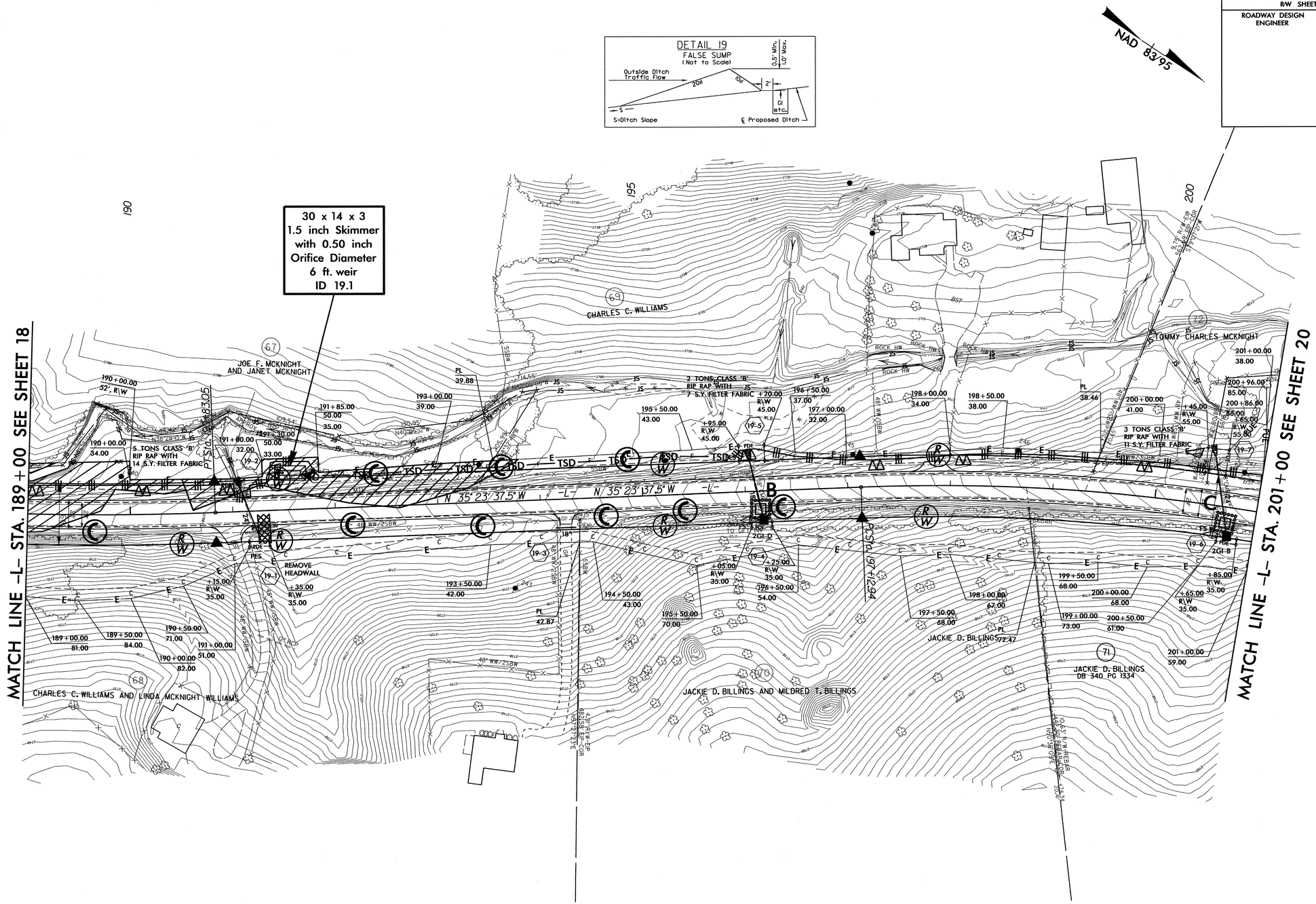


PHASE IV

15. REMOVE REMAINDER OF EXISTING CULVERT.
16. CONSTRUCT RETAINING WALL CONNECTED TO HEADWALLS.
17. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S).
18. REMOVE ANY REMAINING TEMPORARY SHORING.
19. COMPLETE ROADWAY.



PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-22/CONST.19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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.

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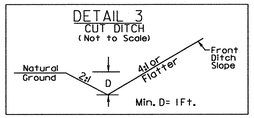
wichandler1 AT RENV247778

8/17/99

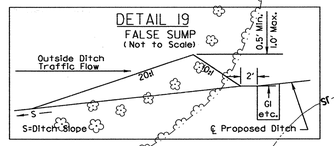
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-23/CONST.20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 3
CUT DITCH
(Not to Scale)



-L- STA. 208+10 TO 208+50 LT

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95

MATCH LINE -L- STA. 201+00 SEE SHEET 19

MATCH LINE -L- STA. 213+00 SEE SHEET 21

BEGIN CONSTRUCTION
POT STA.10+00.00 -Y11-

-Y11- POT STA.12+32.62

-L- POT STA.205+50.00

TOMMY CHARLES MCKNIGHT

JAMES D. MCKNIGHT AND RHUMELL P. MCKNIGHT

JACKIE D. BILLINGS

A. DWANE CAUDLE AND LIBBIE J. CAUDLE

DON S. LAMBIOTTE AND KELLEY R. LAMBIOTTE

HAROLD E. HANKS

GLENN LAVERN SMITH

KATHLEEN SMITH TAYLOR

CHARLES E. BRANCH AND EMILY H. BRANCH

NANCY H. WEST

M. F. TILLEY HEIRS

RICHARD C. WILLIAMS AND LINDA WILLIAMS

ABBE ROSE COX HEIRS

3 TONS CLASS 'B' RIP RAP WITH 10 S.Y. FILTER FABRIC

REMOVE HEADWALL

6 TONS CLASS 'B' RIP RAP WITH 16 S.Y. FILTER FABRIC

BORE AND JACK 36" RCP

PLUG AND ABANDON

CUT DITCH -L- STA. 205+00 TO 206+00 RT SEE DETAIL 3

CUT DITCH -L- STA. 206+62 TO 207+50 SEE DETAIL 3

CUT DITCH -L- STA. 208+10 TO 208+50 LT SEE DETAIL 3

PAVEMENT TO BE REMOVED

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 20

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

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richardet AT RERN2177?8

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PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-24/CONST.21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

DETAIL 4
STANDARD BASE DITCH
(Not to Scale)

Natural Ground — 2H — D — 2H — Natural Ground; B

Min. D= 1Ft.
B= 2 Ft. Type of liner: Coir Fiber

-L- STA. 223+10 TO 223+60 RT

-Y12REV- POT Sta. 10+00.00

WE 2807.D
BEGIN CONSTRUCTION
-Y12REV- POT. Sta. 12+00.00

30 x 14 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
6 ft. weir
ID 21.1

14 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 21.4

Modified Silt Basin
Type 'B'
14 x 10 x 3
(See Tiered Skimmer
Basin Detail)
ID 21.4

22 x 11 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 21.3

MATCH LINE -L- STA. 213+00 SEE SHEET 20

MATCH LINE -L- STA. 225+00 SEE SHEET 22

SOUTHERN REPAIR SERVICE, INCORPORATED

SANDRA VARELA

THE BILLY GENE BLEVINS REVOCABLE LIVING TRUST

BILLY GENE BLEVINS, SR. AND BILLY GENE BLEVINS, JR.

STEVIE MOXLEY

STANDARD BASE DITCH
-L- STA. 223+10 TO 223+60 RT
DDE - 18in RCP
HENRY C. SMITH
BRIDGETOWN KELLY SMITH TRI

-Y12REV- POT STA.15+07.01 =
-L- POT STA.222+75.00

3 TONS CLASS 'B' RIP RAP WITH 11 S.Y. FILTER FABRIC

3 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC

LATERAL BASE DITCH
-L- STA. 213+00 TO 214+50 RT
SEE DETAIL 17

LATERAL BASE DITCH
-L- STA. 214+50 TO 215+50 RT
SEE DETAIL 1

LATERAL BASE DITCH
-L- STA. 215+50 TO 216+25 LT
SEE DETAIL 17

CUT DITCH
-L- STA. 219+00 TO 220+00 RT
SEE DETAIL 3

CONC. ENDWALL

REMOVE HEADWALL

REMOVE 72" RCP

REMOVE DI

SANDY & SUSAN HAMMACK

SOUTHERN REPAIR SERVICE, INCORPORATED

BARRY R. EDWARDS

JOHN E. ROYAL

DETAIL 1
LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 2H — D — 2H — Fill Slope; B; 1'/Ft.

Min. D= 1Ft.
B= 2 Ft.
b= 5 Ft.

-L- STA. 214+50 TO 215+50 RT

DETAIL 3
CUT DITCH
(Not to Scale)

Natural Ground — 2H — D — 4:1 or Flatter — Front Ditch Slope

Min. D= 1Ft.

-L- STA. 219+00 TO 220+00 RT

DETAIL 17
LATERAL BASE DITCH
(Not to Scale)

Natural Ground — 2H — d1 — D — 2H — Fill Slope; b; 1'/Ft.; Filter Fabric; B

Min. D= 1.5 Ft.
Max. d= 1.0 Ft.
B= 2 Ft.
b= 5 Ft.

*When B is < 6.0'

Type of Liner= Class 'I' Rip-Rap

-L- STA. 214+00 TO 214+50 RT
-L- STA. 215+50 TO 216+25 LT

DETAIL 19
FALSE SUMP
(Not to Scale)

Outside Ditch Traffic Flow — 20H — 10H — 2' ; 0.5' Min. 1.0' Max.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 21

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

24-JUN-2013 13:43
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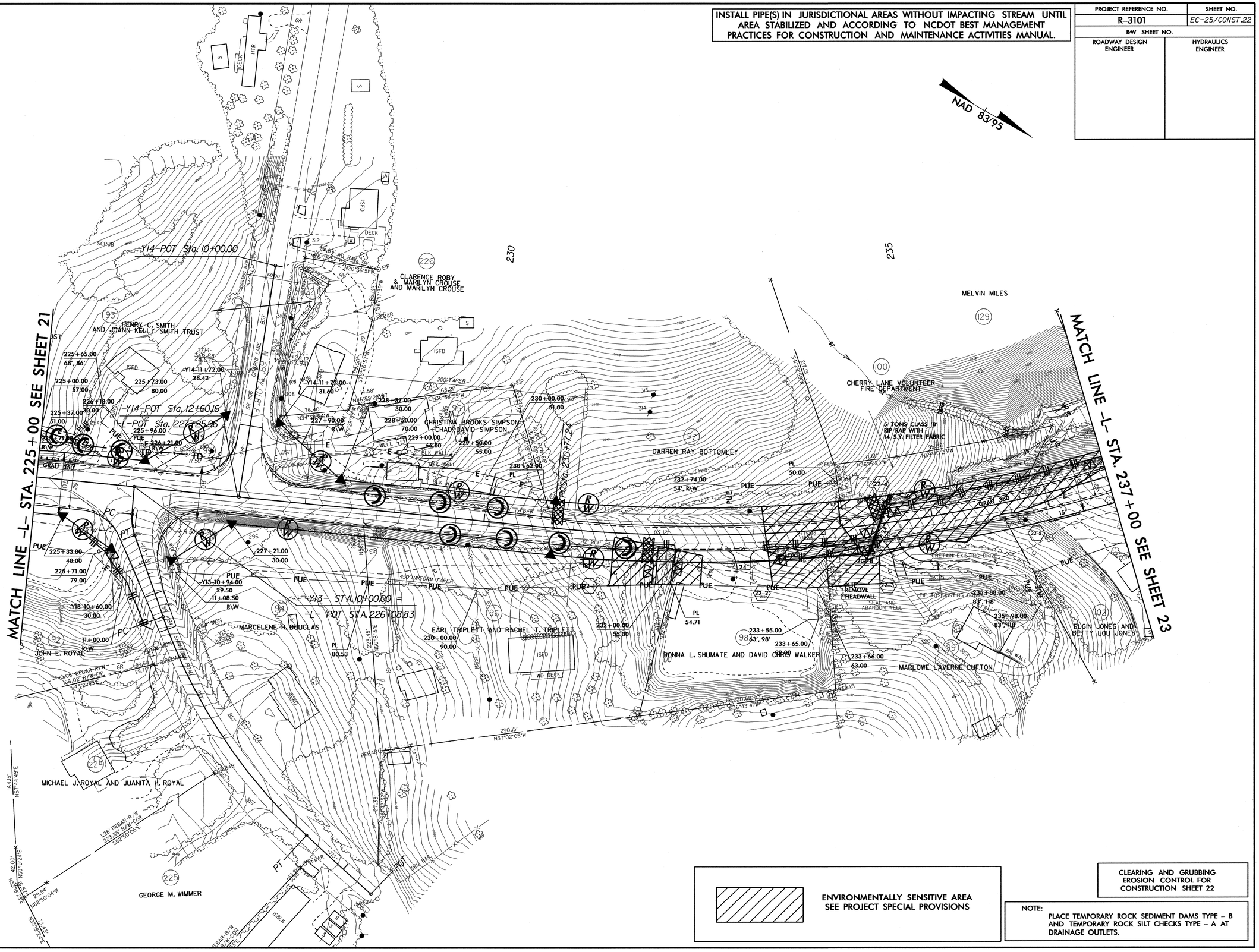
MicroStation V8 2004 Edition (08.05.07.443)

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

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-25/CONST.22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 22

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

8/17/99

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wichandler1 AT RENV247778

8/17/99

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

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-26/CONST.23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE -L- STA. 237+00 SEE SHEET 22

MATCH LINE -L- STA. 249+00 SEE SHEET 24

N 26°38'57" E 294.58'

S 78°06'40" E 363.40'

240

245

REBAR

94.82' N82°09'36"W

EIP

101.38' S02°40'29"W

102.64' S02°40'29"W

END CONSTRUCTION
BEGIN MILL AND RESURFACE
POS Sta. 246+50.00 -L-

PT Sta. 243+06.34

TS Sta. 245+15.84

SC Sta. 247+15.84

N 66° 48' 29.9" W

101 BILLY GENE BLEVINS, SR

102 ELGIN JONES AND BETTY LOU JONES

103 GLENNA BLEVINS

104 BILLY GENE BLEVINS, SR.

105 GLENNA BLEVINS

106 CAROL W. JOHNSON

228 NICOLE ELIZABETH BLEVINS

237+96.00 74.00

238+50.00 84.00

238+37.00 86.00

240+00.00 59.00

240+92.00 60.00

240+97.00 95.00

241+20.00 65.00

241+08.00 94.00

242+00.00 95.00

242+00.00 30.00, 26.00

243+50.00 30.00, 26.00

243+06.34 26.00

243+00.00 95.00

242+50.00 100.00

244+00.00 70', 102'

244+09.00 70', 102'

245+00.00 RW, 60.00

245+15.84 30.00

245+90.00 30.00

246+05.00 65.00

246+65.00 30.00

247+15.84 30.00

248+08.72 30.00

248+31.00 R\W

PUE

RW

GRAU 350

ISFD

POND WE 2776.3

BILL BOARD

24' BLK. WALL

72" BLK. WALL

48" WW (SBR)

3 WD RAIL

29.74' N86°04'22"E

N08°51'25"W

ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 23

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

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mcmanus1 at LENV2778

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-27/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE –L– STA. 261+00 SEE SHEET 24

MATCH LINE –L– STA. 273+00 SEE SHEET 26

BLUE RIDGE PARK WAY

SWANNANOA LANE

PATRICIA P. HOLLOWAY AND ROBERT T. HOLLOWAY

BEGIN CONSTRUCTION
END MILL AND RESURFACE
POT Sta. 269+00.00 -L-

PCSta. 264+12.44

PTSta. 268+92.20

HISTORIC BOUNDARY

268+53.00 R/W

PREVIOUSLY ACQUIRED R/W AND TCE ON PARCEL 107

270+50.00 40.00

270+60.00 R/W, TCE, 45.00 40.00

272+00.00

270+85.00 R/W, TCE, 45.00

272+96.00 45', R/W

PL 37.15

272+76.28 30.00

272+50.00 34.00

PUE 38.00

269+18.32 30.00

269+07.00 58.93

269+45.00 99.00

BRUCE M. ALEXANDER

270+00.00 119.00

PCSta. 270+68.58

272+00.00 129.00

273+00.00 93.00

271+00.00 140.00

271+50.00 140.00

PL 123.32

CHRISTOPHER C. & N. D. SHEPHERD AND MORRIS G. DIXON

N 56° 48' 56.0" W

BLUE RIDGE PARK WAY

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 25

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

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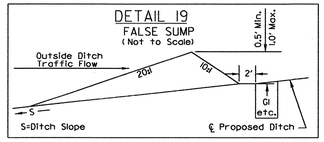
mchandler at RENX2778

8/17/99

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

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-28/CONST.26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 19
FALSE SUMP
(Not to Scale)



10 x 20 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 26.1

28 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 26.2

-Y15-POT Sta. 10+00.00

-Y15-PC Sta. 10+69.82

NAD 83/95

-Y15-PT Sta. 13+95.35

CAROL W. JOHNSON

MATCH LINE -L- STA. 273+00 SEE SHEET 25

MATCH LINE -L- STA. 285+00 SEE SHEET 27

N 42° 29' 52.1" W

-L-

-Y15- 14+20.00 R/W

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

7 TONS CLASS 'B' RIP RAP WITH 22 S.Y. FILTER FABRIC

CONC ENDWALL 26.4

BORE & JACK

GRADE TO DRAIN REM. DI

REMOVE HEADWALL

PT SHR 275+46.94

PCSHR 278+93.35

-Y15-POT Sta. 15+00.22-

-L-POC Sta. 282+74.95

PT Sta. 283+68.93

JAMES L. WOODRUFF

JAMES CLYDE HINCHER AND JANE HINCHER

LINDA BEDSAUL MACK OSBORNE

CALVIN A. MELLOTT

ISBLK

SEPTIC TANK

ISFD

SCRUB

HTR DECK

REBAR

GRAU 350

PUE

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 26

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

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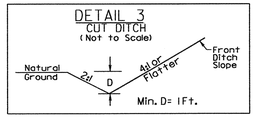
Richard.Hall RENV/217778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-29/CONST.27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS 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.

DETAIL 3
CUT DITCH
(Not to Scale)



-L- STA. 291+35 TO 292+00 RT

NAD 83/95

36 x 14 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
6 ft. weir
ID 27.1

Temporary Rock Sediment Dam Type A
3 ft. weir height

MATCH LINE -L- STA. 285+00 SEE SHEET 26

MATCH LINE -L- STA. 297+00 SEE SHEET 28

285+60.00 47', 65'
286+15.00 50', 65'
286+45.00 R\W 45.00
286+85.00 R\W, 45', 65'
287+50.00 65, 48
288+00.00 46.00
288+50.00 45.00
289+50.00 45.00
290+50.00 39.00
292+50.00 30.00
293+50.00 32.00
294+00.00 34.00
294+30.00 R\W 45.00
294+70.00 R\W 295+00.00 35.00
295+50.00 32.00
296+00.00 75, 54
296+35.00 75, 62
297+00.00 47.00

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC
5 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC
2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

REMOVE HEADWALL
CONC. ENDWALL
CONC. ENDWALL +30.00 R\W 50.00
+50.00 R\W 50.00
+75.00 R\W 35.00
+05.00 R\W 45.00
+30.00 R\W 45.00
+95.00 R\W 35.00

DUKE POWER R/W
SCRUB
BRIAN W. RAINES
CALVIN A. MELLOTT
ALLEGHANY STONE, LLC
SCOTT STOKER AND SHANE STOKER
LORRAINE M. STOKER, ESTATE
ISBKD
DECK
CONC
PUE
PL 44.45
PL 46.67
PL 51.73
PL 53.73
PL 33.12
PL 33.54
PL 45.79
PL 51.08
PL 75.43

DITCH -L- STA. 291+35 TO 292+00 RT SEE DETAIL 3

N 38°34'49" W 450.34'
N 58°38'30" W 450.92'
N 45°06'05" W 198.44'
EIP

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 27

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

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ashandler1 ER\V24.28

8/17/99

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

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-30/CONST.28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 28

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

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MicroStation V8 (REVISED 07-17-2008)

8/17/99

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

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-31/CONST.29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 4
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 2d, D, 2d, Natural Ground; B

Min. D= 1Ft.
B= 2 Ft.

-L- STA. 310+15 TO 310+40 LT
-L- STA. 317+40 LT

DETAIL 19
FALSE SUMP
(Not to Scale)

Outside Ditch Traffic Flow; 20ft; 10ft; 2'; 0.5' Min.; 1.0' Max.; S; Cl etc.

S=Ditch Slope
℄ Proposed Ditch

NAD 83/95

MATCH LINE -L- STA. 309+00 SEE SHEET 28

MATCH LINE -L- STA. 321+00 SEE SHEET 30

HISTORIC BOUNDARY

PROPERTY LINE

RIGHT OF WAY

EXISTING EASEMENT

PROPOSED EASEMENT

126 KRISTEN L. BRAUNIG TRUST

127 SUSAN M. BILLINGS

130 CAROL W. JOHNSON

131 CMH HOMES, INC

125 RICHARD H. SQUIRES, ET AL

128 SHON A. TALLY

134 NORMA T. PRICE
J. PATRICK PRICE

MELANIE JOHNSON WAGONER

468.0'
N11°04'37"W

N 32°57'35.0"W

STANDARD BASE DITCH
-L- STA. 310+15 TO 310+40 LT
DDE = 5 CY
SEE DETAIL 4

STANDARD BASE DITCH
-L- STA. 317+40 LT
DDE = 4 CY
SEE DETAIL 4

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

3 TONS CLASS 'B' RIP RAP WITH 1 S.Y. FILTER FABRIC

REMOVE DI

REMOVE HEADWALL

CONC ENDWALL

PCC STA. 309+60.09

PT STA. 313+60.09

PC STA. 319+20.76

PT STA. 321+00.00

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 29

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

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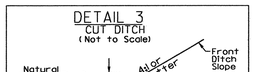
MicroStation V8
REFWS=2177768

8/17/99

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

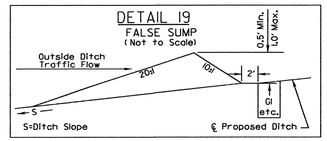
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-32/CONST.30
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 3
CUT DITCH
(Not to Scale)



-L- STA. 321+50 TO 322+50 RT
-L- STA. 331+50 TO 333+50 RT

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95

**30 x 14 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
6 ft. weir
ID 30.2**

MATCH LINE -L- STA. 321+00 SEE SHEET 29

MATCH LINE -L- STA. 333+00 SEE SHEET 31

JOEY J. ROYALL AND DARLA R. ROYALL

TED ROSS AND LILLIAN ROSS

MILTON W. SCOTT AND PEGGY A. SCOTT

CMH HOMES, INC

NOVELLA KIRK

NORMA T. PRICE
J. PATRICK PRICE

**ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS**

**CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 30**

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

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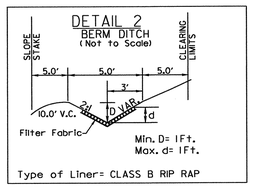
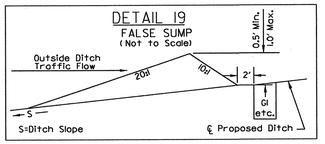
Microstation 8i (WINV8)

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-33/CONST.31
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

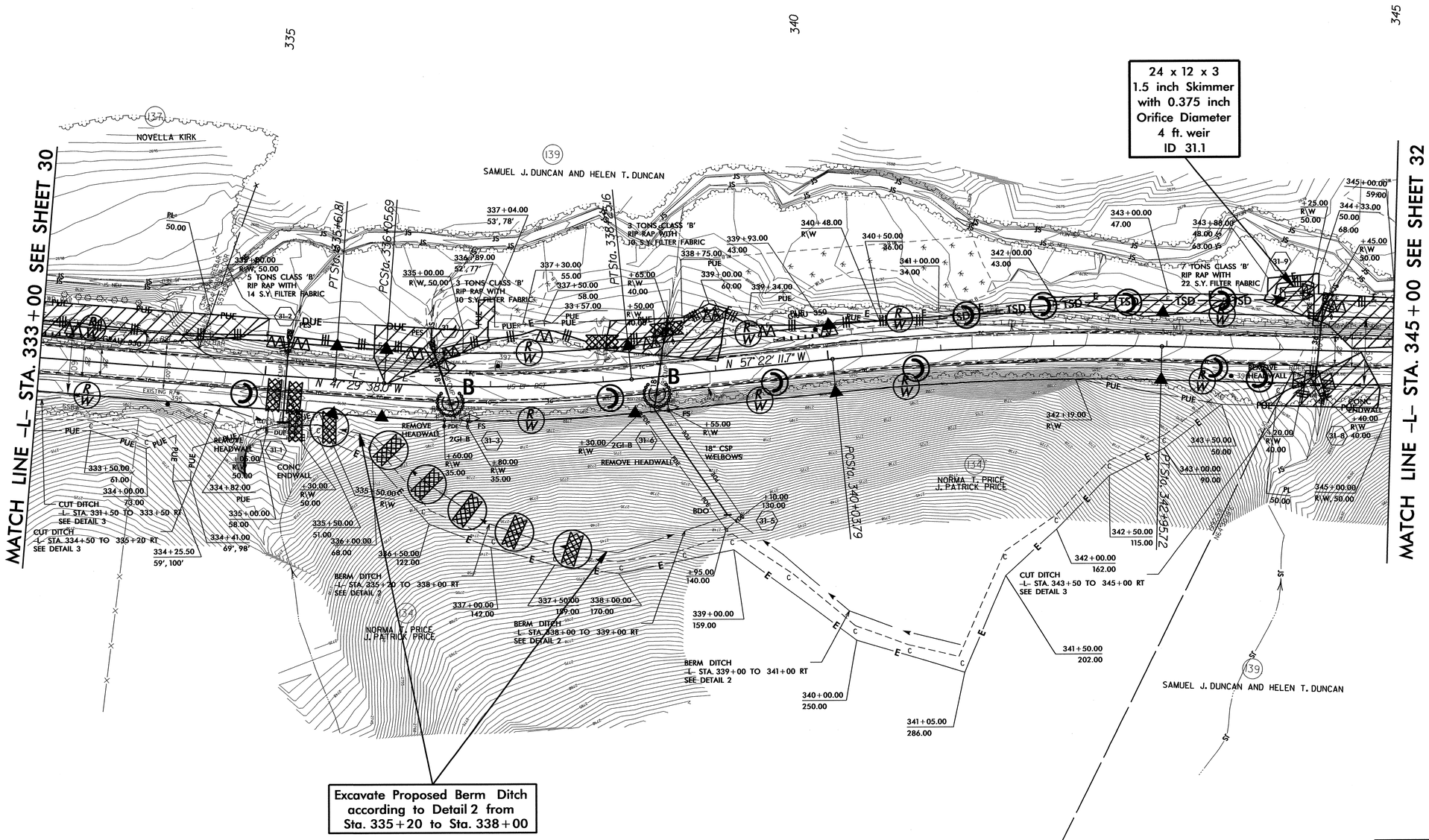
INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.





-L- STA. 335+20 TO 338+00 RT
-L- STA. 338+00 TO 339+00 RT
-L- STA. 339+00 TO 341+00 RT

NAD 83/95



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 31

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

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bblackburn AT RENV271384

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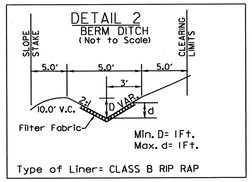
INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-34/CONST.32
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

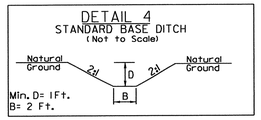
DETAIL 2
BERM DITCH
(Not to Scale)



Type of Liner= CLASS B RIP RAP

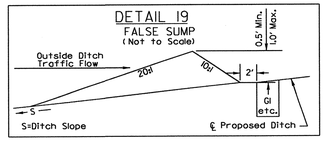
-L- STA. 350+50 TO 354+00 RT

DETAIL 4
STANDARD BASE DITCH
(Not to Scale)



-L- STA. 305+03 LT

DETAIL 19
FALSE SUMP
(Not to Scale)



10 x 21 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 32.2

10 x 21 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 32.3

MATCH LINE -L- STA. 345+00 SEE SHEET 31

MATCH LINE -L- STA. 357+00 SEE SHEET 33

SAMUEL J. DUNCAN AND HELEN T. DUNCAN (139)

RICK MEDINA (140)

PAUL T. ENTERPISES, INC (141)

SAMUEL J. DUNCAN AND HELEN T. DUNCAN (139)

N 50° 04' 18.0" W

S 54°49'31" E 397.15'

S 51°12'20" E

S 41°58'42" E 184.98'

510.49'
N45°58'42"W

SLIPLINE EXISTING 60.00" CULVERT WITH 54.00" CCFRPM PIPE 74.00

BERM DITCH -L- STA. 350+50 TO 354+00 RT 139.00 SEE DETAIL 143.00

STANDARD BASE DITCH -L- STA. 305+03 LT DDE 4 CY SEE DETAIL 4

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

8 TONS CLASS 'B' RIP RAP WITH 21 S.Y. FILTER FABRIC

REMOVE HEADWALL

GRADE TO DRAIN

SEPTIC TANK

DECK

ISBKD

Excavate Proposed Berm Ditch according to Detail 2 from Sta. 350+50 to Sta. 354+00

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 32

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

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blackburn
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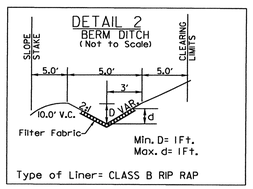
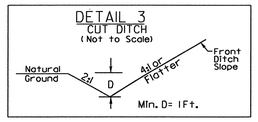
RENV271384

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

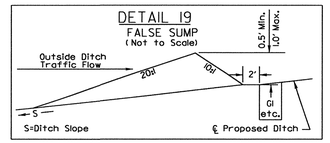
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-35/CONST.33
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

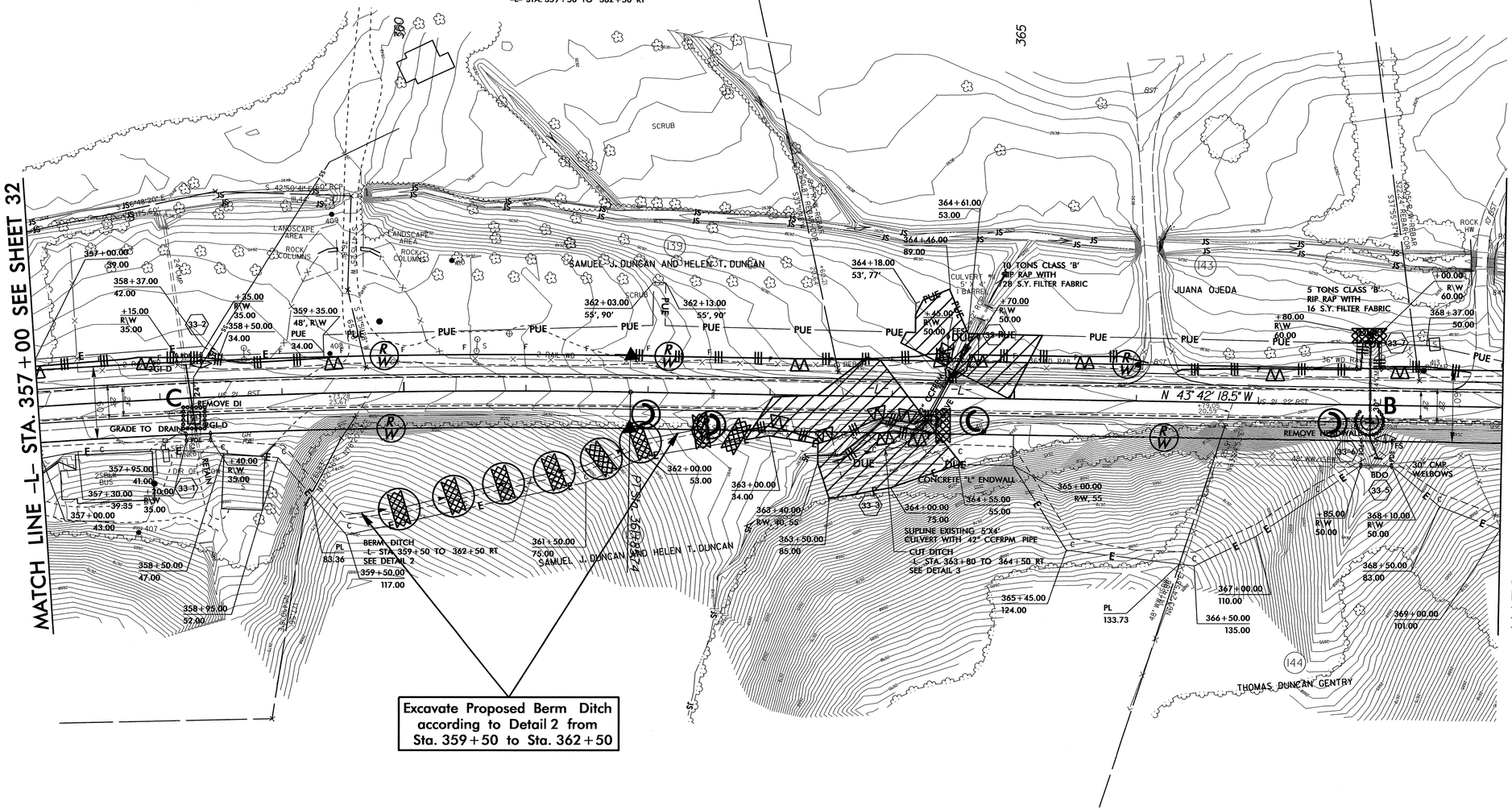


-L- STA. 359+50 TO 362+50 RT



-L- STA. 363+80 TO 364+50 RT





ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 33

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

8/17/99

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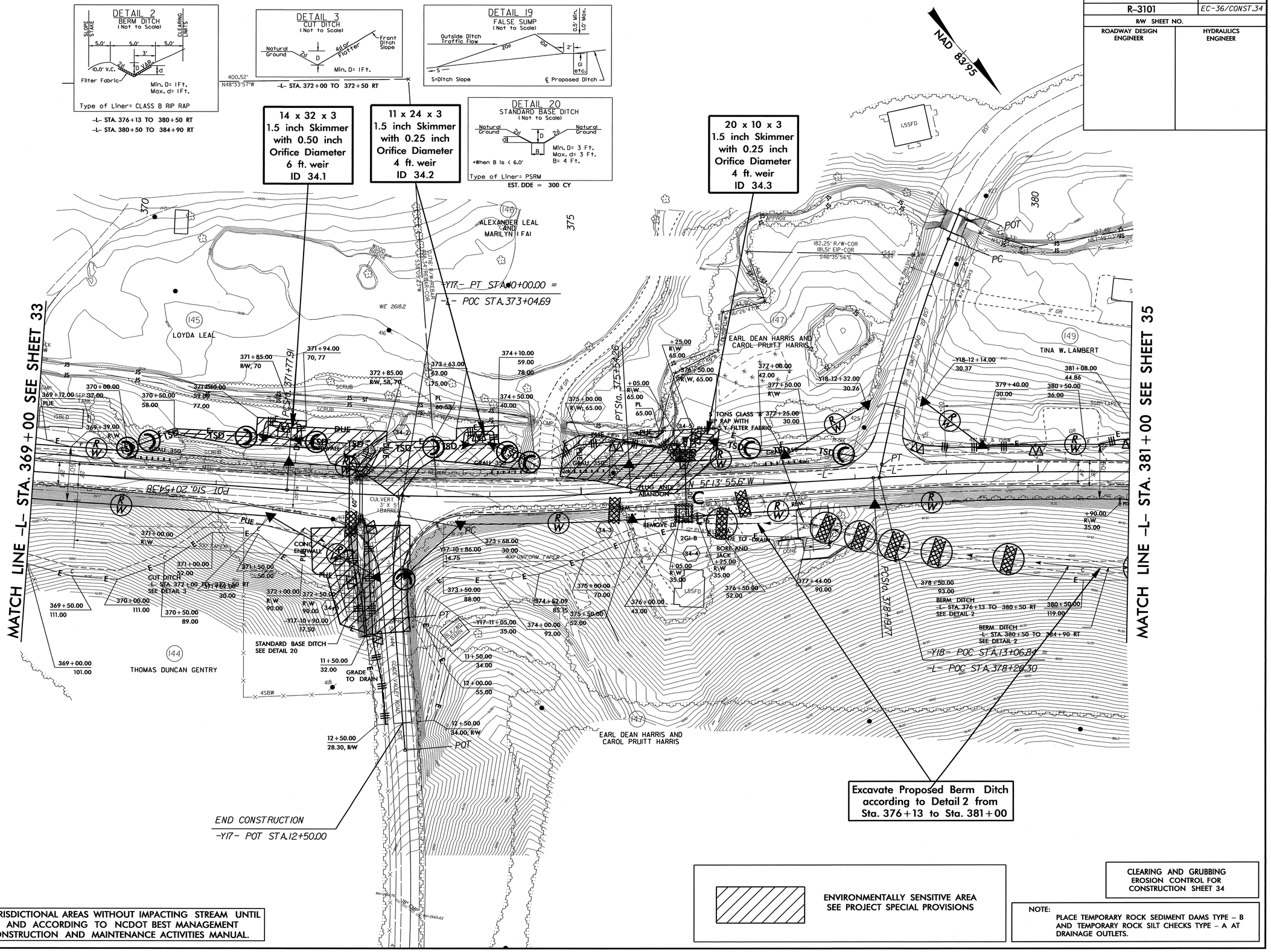
bblackburn AT RENV271384

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-36/CONST.34
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS 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.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

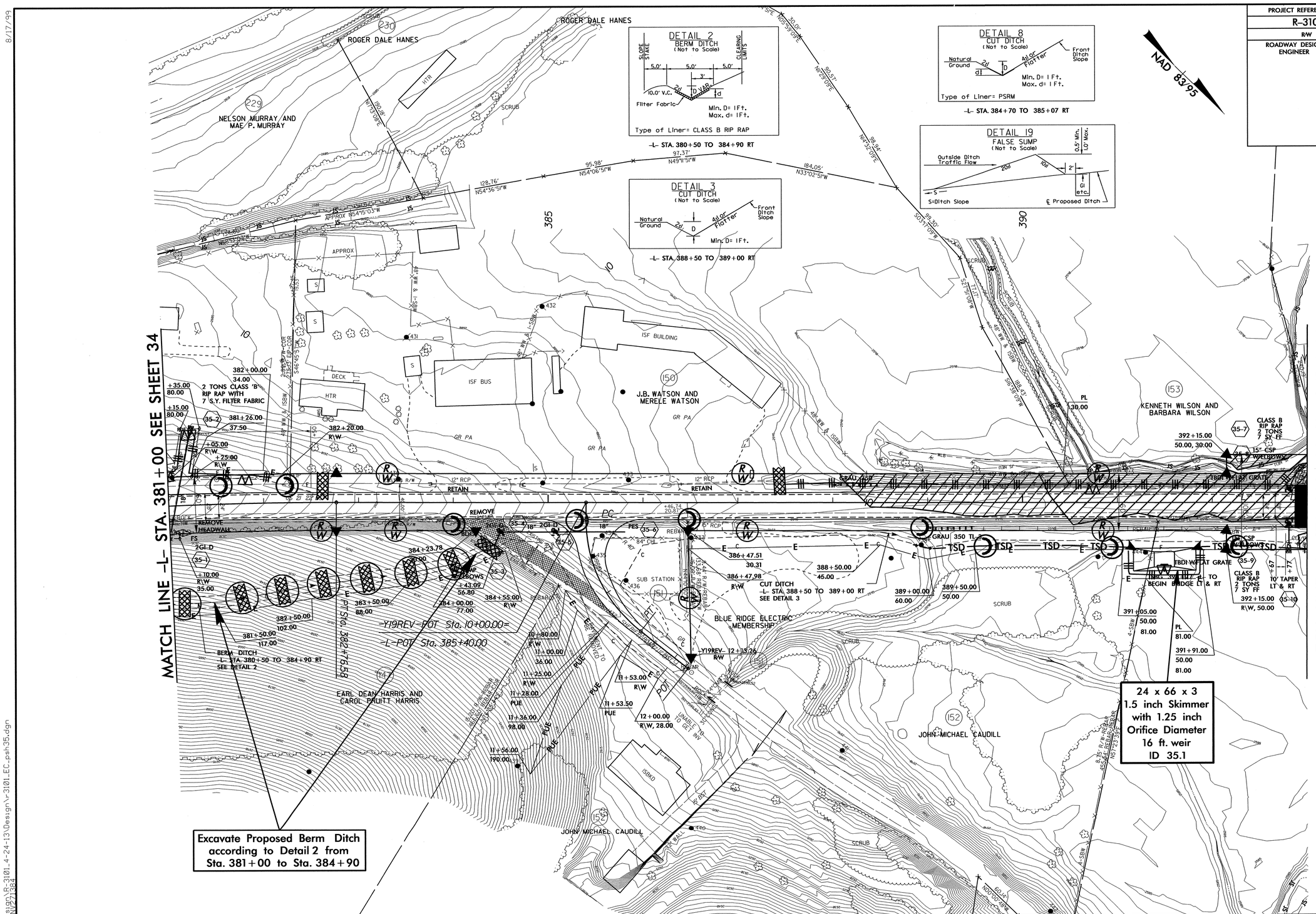
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 34

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

8/17/99

10-JAN-2014 07:58
R:\Environmental\Design\R-3101_4-24-13\Design\r3101_EC_psh34.dgn
bblackburn AT RENV271384

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-37/CONST.35
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 35

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

8/17/99

10-JAN-2014 08:01
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bblackburn AT RENV271384

8/17/99

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 36

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

PROJECT REFERENCE NO.	SHEET NO.
R–3101	EC–38/CONST.36
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE –L– STA. 393+00 SEE SHEET 35

MATCH LINE –L– STA. 405+00 SEE SHEET 37

-Y20-POT Sta. 10+00.00

-Y20-POT Sta. 12+15.73=
-L-POT Sta. 397+92.67

Y20 11+20.00
24.83

Y20 11+18.00
25.16

399+05.00
30.00

395+00.00
50.00, 30.00

396+83.00
30.00

PL
50.00CL 'II' RIP/RAP
(STRUCTURAL PAY ITEM)

CL 'II' RIP/RAP
(STRUCTURAL PAY ITEM)

395+00.00
R\W, 50.00

PL
50.00

395+62.00
50.00
63.00

396+06.00
50.00
63.00

396+50.00
50.00

397+00.00
43.00

397+50.00
41.00

398+00.00
45.00

399+50.00
52.00

400+50.00
51.00

401+00.00
49.00

402+00.00
39.00

402+50.00
49.00

403+39.00
54.00
71.00

404+00.00
77.00

404+00.00
180.00

404+83.00
89.00

PL
42.44

PL
30.00

DORIS GREENE

CLIFF E. TARLTON AND NINA H. TARLTON

PHILIP S. HORTON AND PAMELA HORTON

BREMCO SUBSTATION

BLUE RIDGE ELECTRIC MEMBERSHIP CORPORATION

LORRAINE H. STOKER ESTATE

JOE ISTOKER AND

GLADE CREEK

N 44°22'47.5" W

10 x 23 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 36.1

40 x 15 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
7 ft. weir
ID 36.2

NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

24-JUN-2013 15:23
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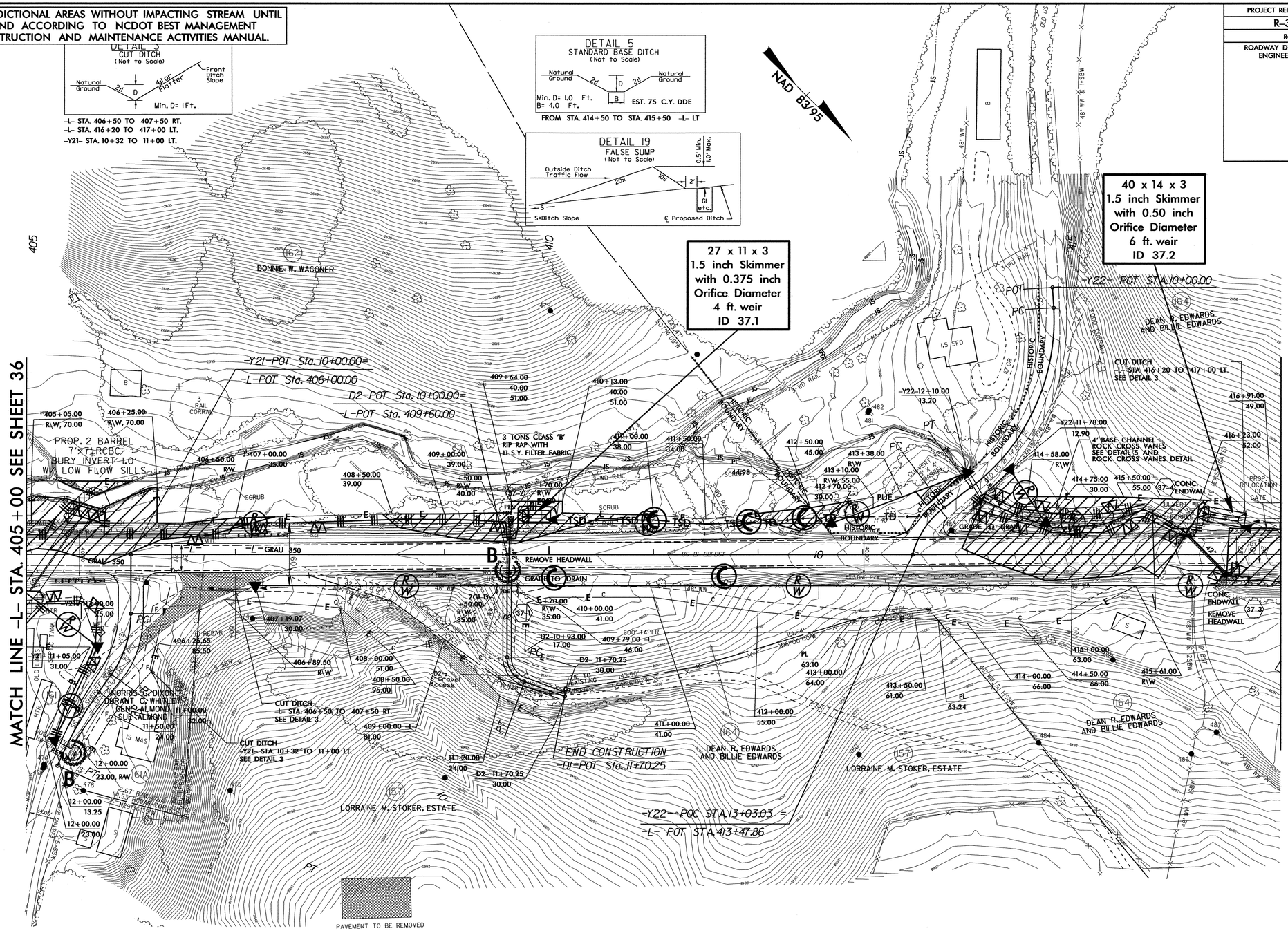
Highway Projects AT RENV247778

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

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-39/CONST.37
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 37

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

8/17/99

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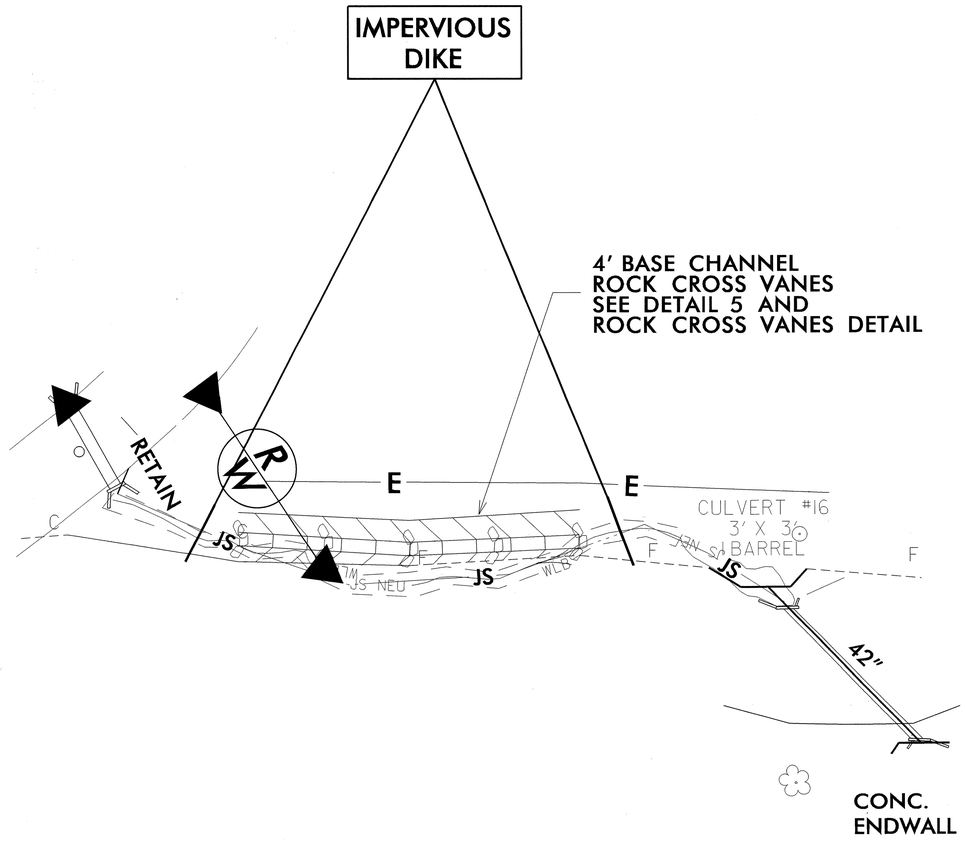
R:\Environmental\Design\R-3101_4-24-13\Design\r3101_EC_psh37.dgn
wichandler1 AT RENV247778

CHANNEL CONSTRUCTION SEQUENCE STA. 415+00 –L–

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-39A/CONST.37
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

1. INSTALL IMPERVIOUS DIKES.
2. UTILIZE PUMPAROUND OPERATION TO DIVERT STREAM FLOW IN ACCORDANCE WITH SHEET EC–2D.
3. CONSTRUCT 4' CHANNEL AND INSTALL ROCK CROSS VANES.
4. PERMANENTLY STABILIZE CHANNEL.
5. REMOVE IMPERVIOUS DIKES AND DIVERT STREAM FLOW TO NEW CHANNEL.



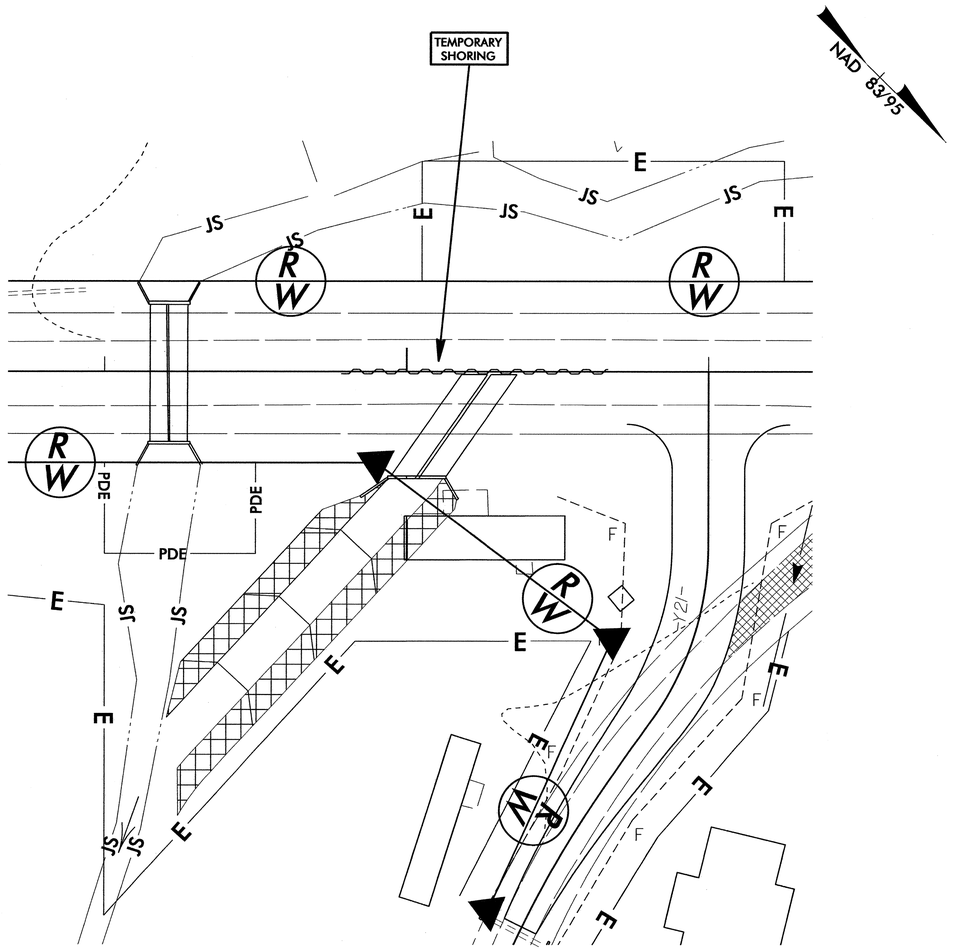
NOTE: PUMP–AROUND OPERATION SHALL BE INCIDENTAL TO OTHER EROSION CONTROL PAY ITEMS.

CULVERT CONSTRUCTION SEQUENCE STA. 405+28 –L–
(SHEET 1 OF 2)

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-40/CONST.37
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

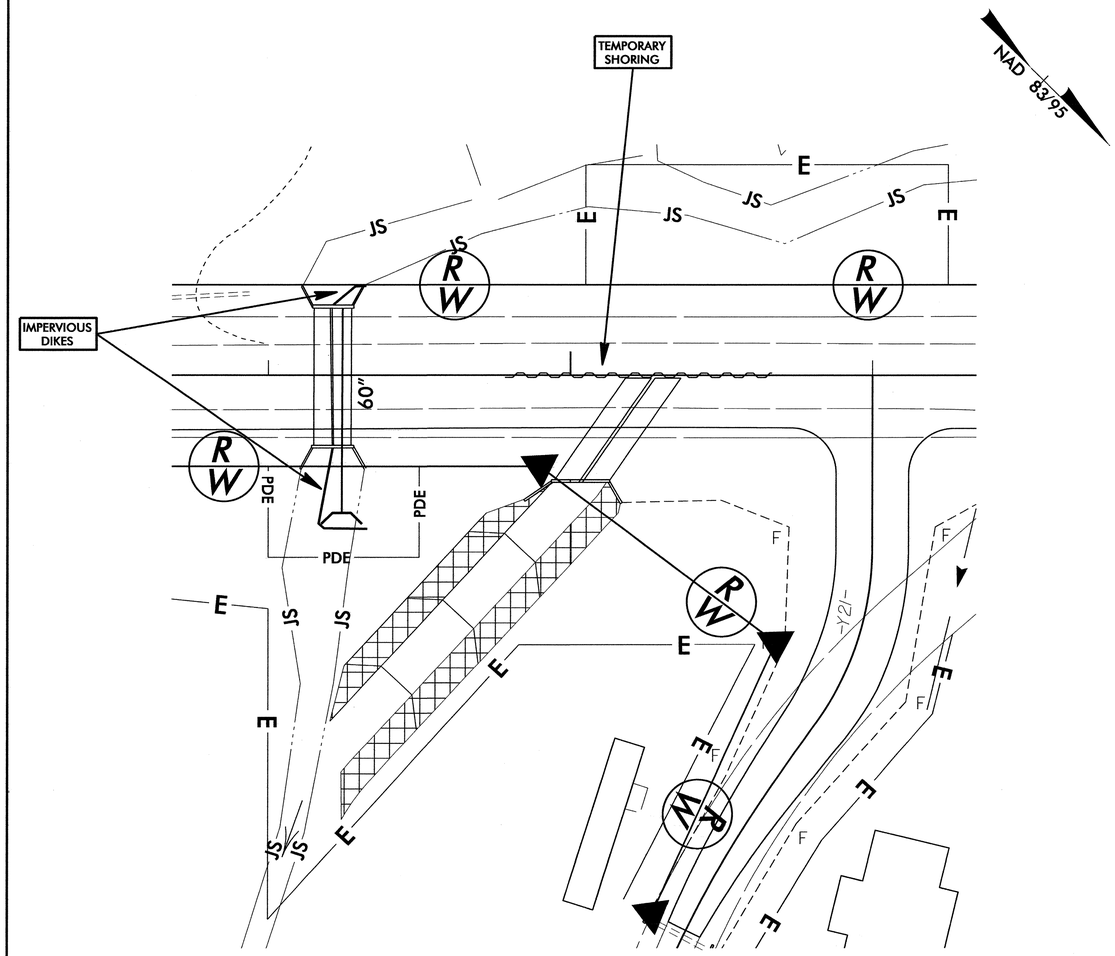
PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. INSTALL TEMPORARY SHORING AND SHIFT TRAFFIC TO THE WEST SIDE.
3. CONSTRUCT PORTION OF PROPOSED CULVERT AND PORTION OF OUTLET CHANNEL IMPROVEMENTS.



PHASE II

4. CONSTRUCT IMPERVIOUS DIKES, DIVERTING FLOW.
5. INSTALL 60 INCH PIPE AND ENDWALL.
6. REMOVE IMPERVIOUS DIKES AND DIVERT FLOW THROUGH 60 INCH PIPE.
7. FILL IN EXISTING CULVERT BARREL(S).
8. CONSTRUCT PORTION OF PROPOSED ROADWAY AND SHIFT TRAFFIC TO THE EAST SIDE.

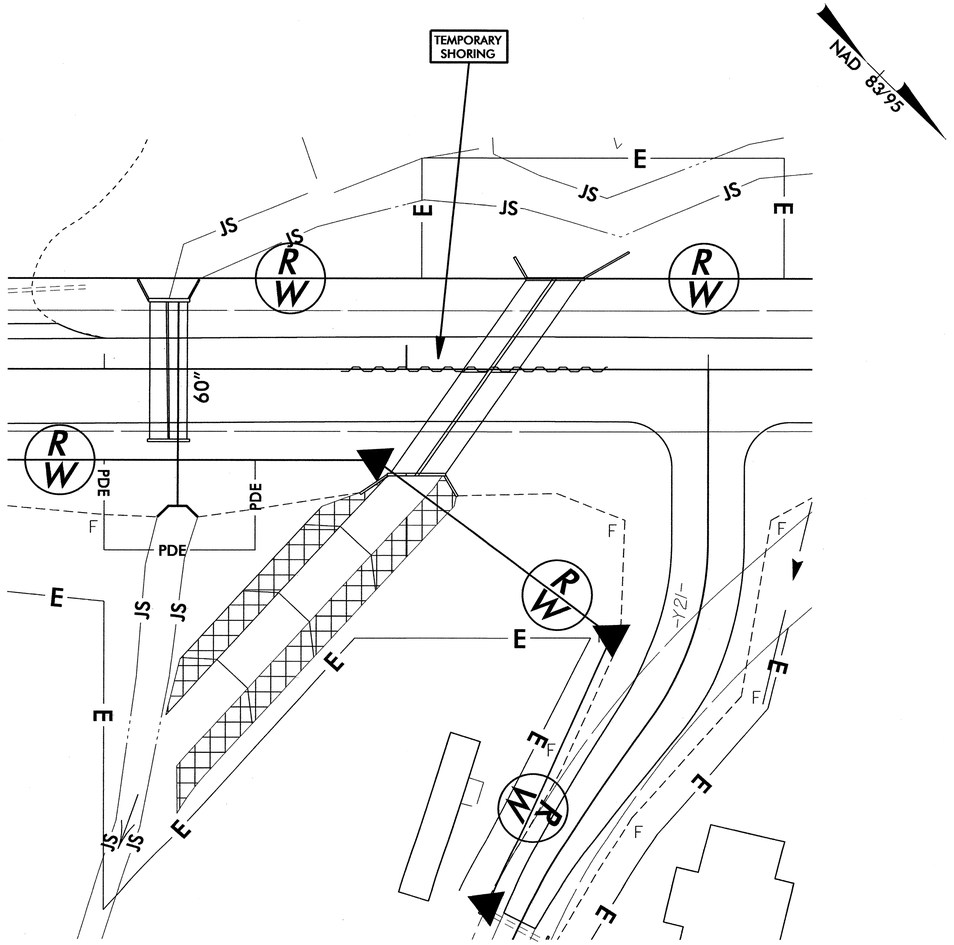


CULVERT CONSTRUCTION SEQUENCE STA. 405+28 –L–
(SHEET 2 OF 2)

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-41/CONST.37
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

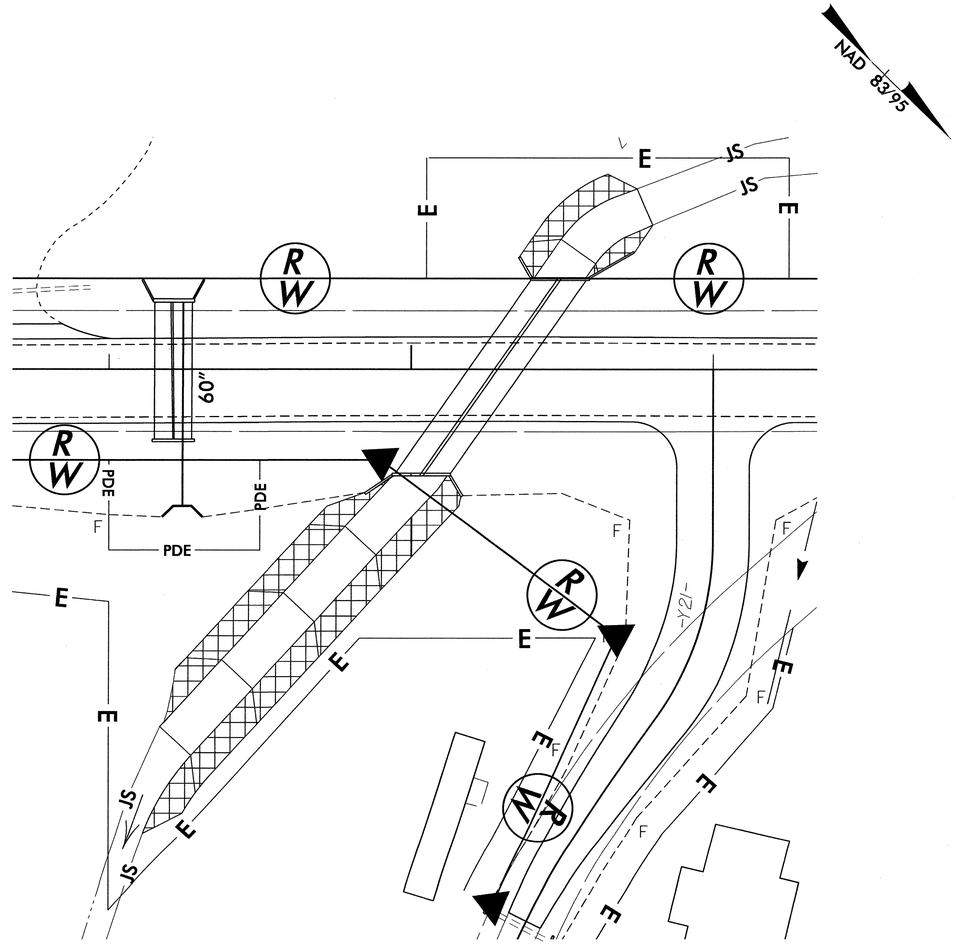
PHASE III

9. CONSTRUCT REMAINDER OF PROPOSED CULVERT.
10. CONSTRUCT PROPOSED ROADWAY ALIGNMENT ON THE WEST SIDE.

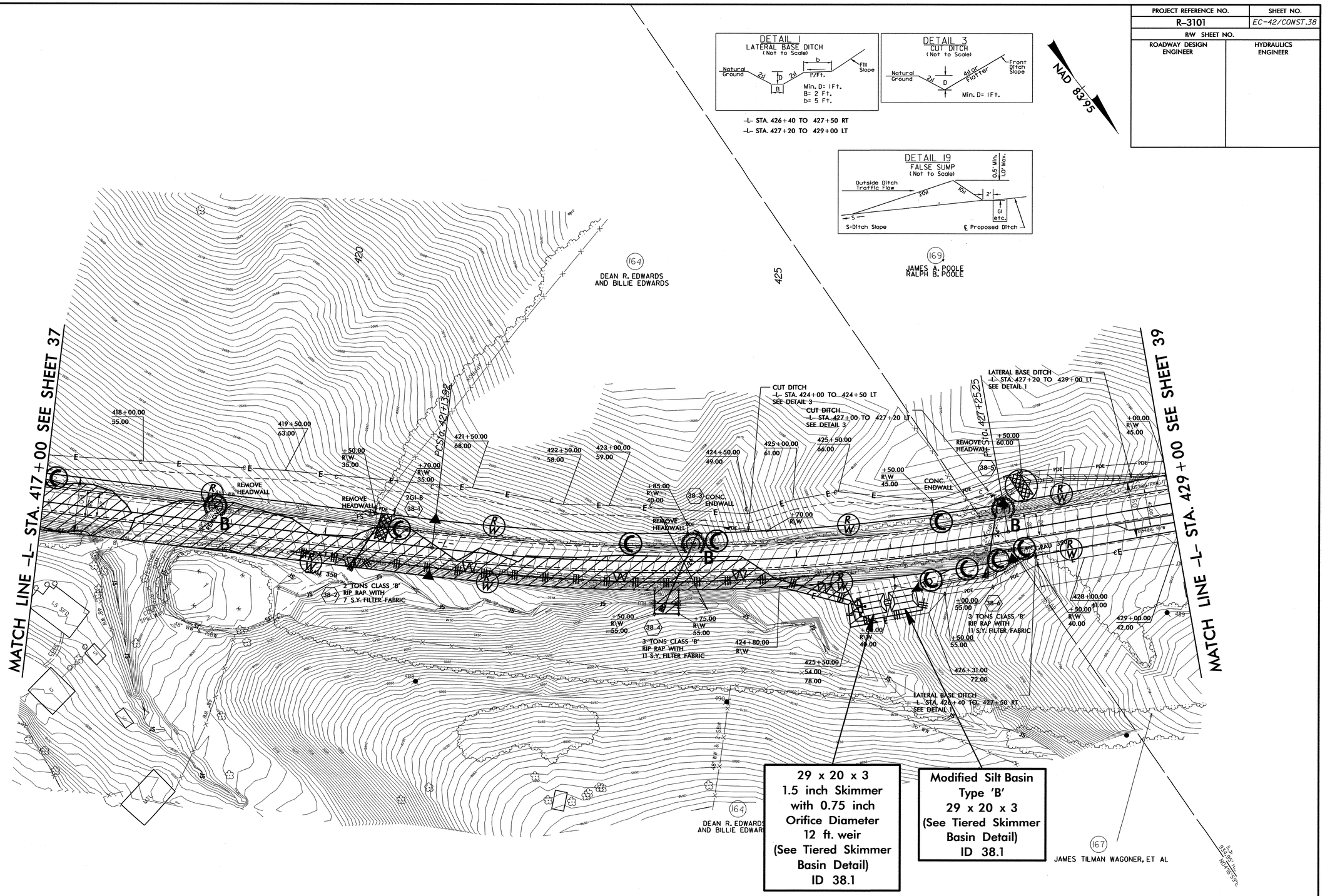


PHASE IV

11. COMPLETE OUTLET CHANNEL IMPROVEMENTS FOR PROPOSED CULVERT.
12. CONSTRUCT INLET CHANNEL IMPROVEMENTS FOR PROPOSED CULVERT, AND DIVERT FLOW THROUGH CULVERT.
13. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S).
14. REMOVE ANY REMAINING TEMPORARY SHORING.
15. COMPLETE ROADWAY.



PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-42/CONST.38
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 38

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

8/17/99

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wichandler1 AT RENV247778

8/17/99

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 39

PROJECT REFERENCE NO.	SHEET NO.
R–3101	EC-43/CONST.39
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE –L– STA. 429+00 SEE SHEET 38

MATCH LINE –L– STA. 441+00 SEE SHEET 40

69 x 34 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
22 ft. weir
ID 39.1

N 6°11'28.9" W

S 73°42'37" W

JAMES A. POOLE
RALPH B. POOLE
DB 50 PG 58
DB 51 PG 159
DB 66 PG 504

JAMES TILMAN WAGONER, ET AL
DB 72 PG 377
WILL 10-E-22
WILL 10-E-73

ROBERT L. PRESNELL, JR.
AND PAULA C. PRESNELL
DB 242 PG 845

LORRAINE M. STOKER, ESTATE
WB 12-E-123
REMAINDER OF
DB 69 PG 528

RUSSELL O. EDWARDS AND HELEN EDWARDS
DB 69 PG 445
PB 1 PG 65

-Y23- STA.10+00.00 POT =
-L- STA.434+31.35 POC

SPECIAL CUT DITCH
SEE DETAIL 6

CLASS 'B' RIP RAP
8 TONS
21 S.Y. F.F.

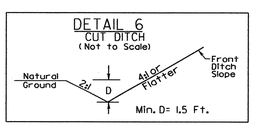
NO DEFINED CHANNEL
EXIST. PIPE SILTED 50%
REMOVE & REPLACE

CLASS 'B' RIP RAP
3 TONS
9 S.Y. F.F.

2' BASE LATERAL DITCH
SEE DETAIL 7

2' BASE LATERAL DITCH
SEE DETAIL 17

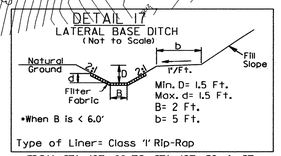
DETAIL 6
CUT DITCH
(Not to Scale)



Min. D= 1.5 Ft.

FROM STA. 433+50 TO STA. 434+00 –L– RT

DETAIL 17
LATERAL BASE DITCH
(Not to Scale)

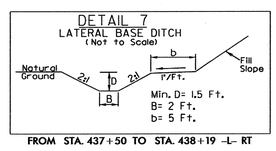


Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.
•When B is < 6.0'

Type of Liner= Class 'I' Rip-Rap

FROM STA. 437+00 TO STA. 437+50 –L– RT

DETAIL 7
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 2 Ft.
b= 5 Ft.

FROM STA. 437+50 TO STA. 438+19 –L– RT

24-JUN-2013 15:40
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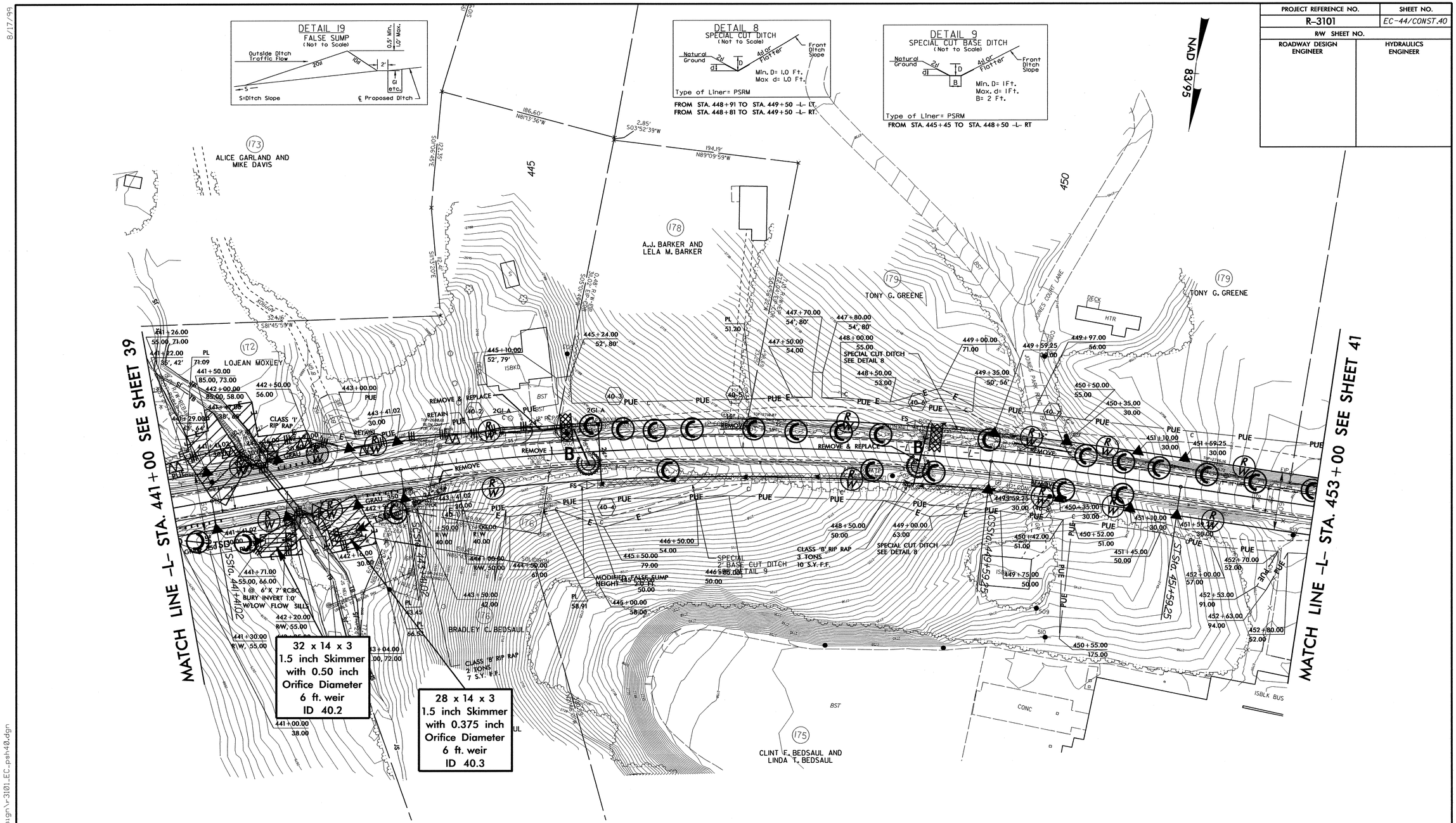
Richandler
PERV247778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-44/CONST.40
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 40

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

8/17/99

25-JUN-2013 07:20
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w.ichandler1 AT RENV247778

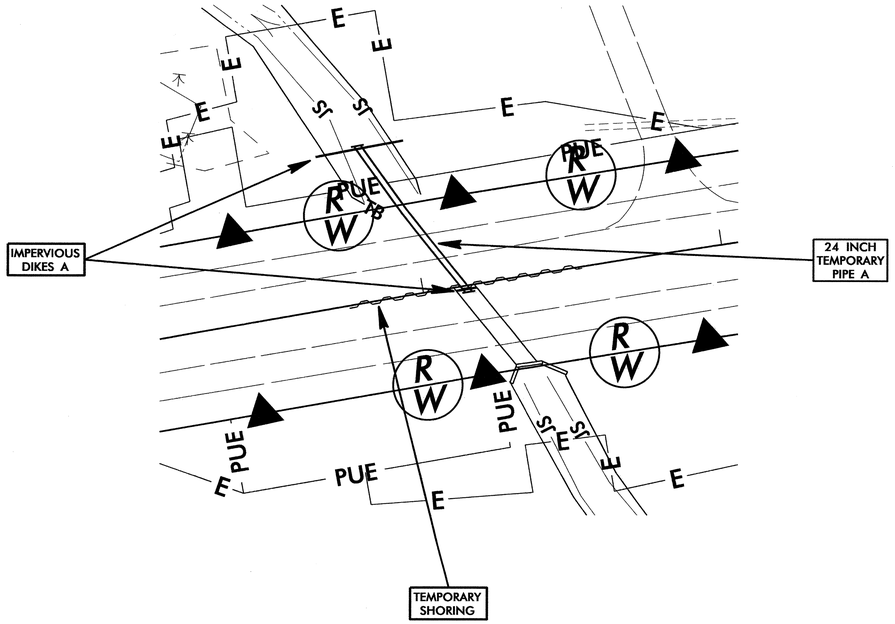
CULVERT CONSTRUCTION SEQUENCE STA. 442+14 –L–
(SHEET 1 OF 2)

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-45/CONST.40
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. INSTALL TEMPORARY SHORING AND SHIFT TRAFFIC TO THE NORTH SIDE.
3. CONSTRUCT IMPERVIOUS DIKES A AND INSTALL 24 INCH TEMPORARY PIPE A, DIVERTING FLOW.
4. REMOVE PORTION OF EXISTING CULVERT.

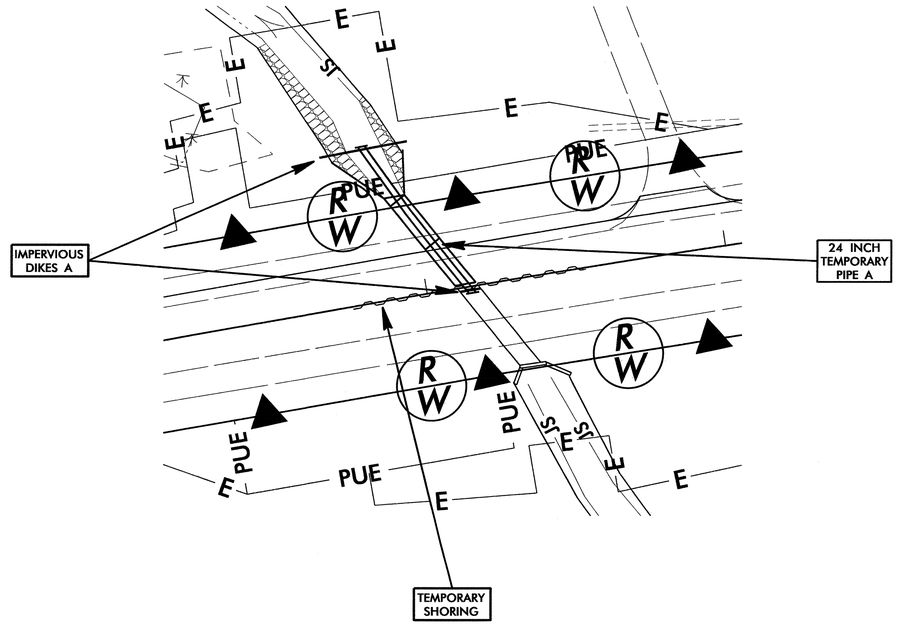
NAD 83/95



PHASE II

5. CONSTRUCT PORTION OF PROPOSED CULVERT AND OUTLET CHANNEL IMPROVEMENTS.
6. CONSTRUCT PORTION OF PROPOSED ROADWAY OVER PROPOSED CULVERT AND SHIFT TRAFFIC TO THE SOUTH SIDE.
7. REMOVE IMPERVIOUS DIKES A AND TEMPORARY PIPE A.

NAD 83/95

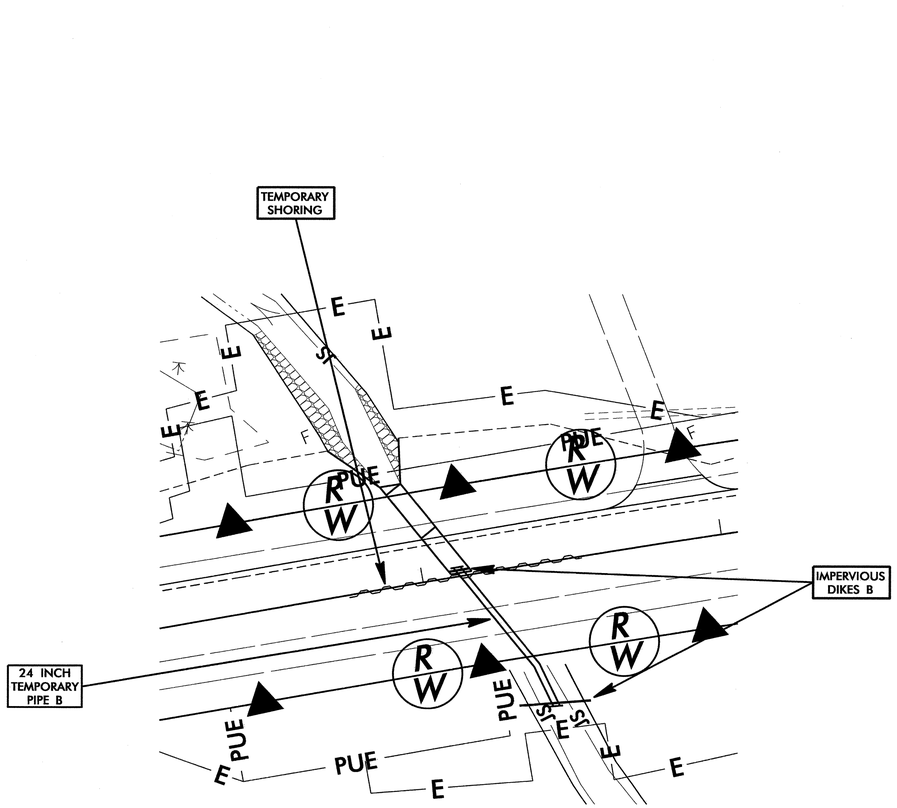


CULVERT CONSTRUCTION SEQUENCE STA. 442+14 –L–
(SHEET 2 OF 2)

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-46/CONST.40
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

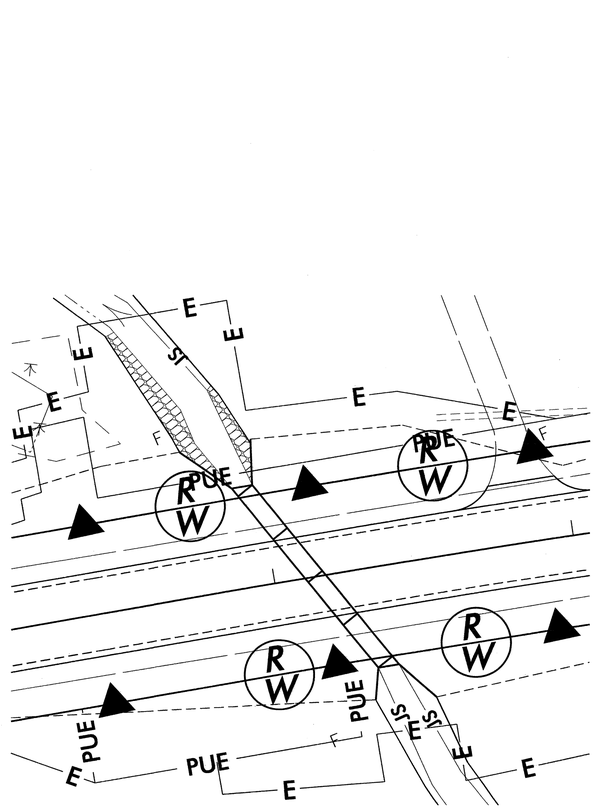
PHASE III

8. CONSTRUCT IMPERVIOUS DIKES B AND INSTALL 24 INCH TEMPORARY PIPE B, DIVERTING FLOW.
9. REMOVE REMAINDER OF EXISTING CULVERT.

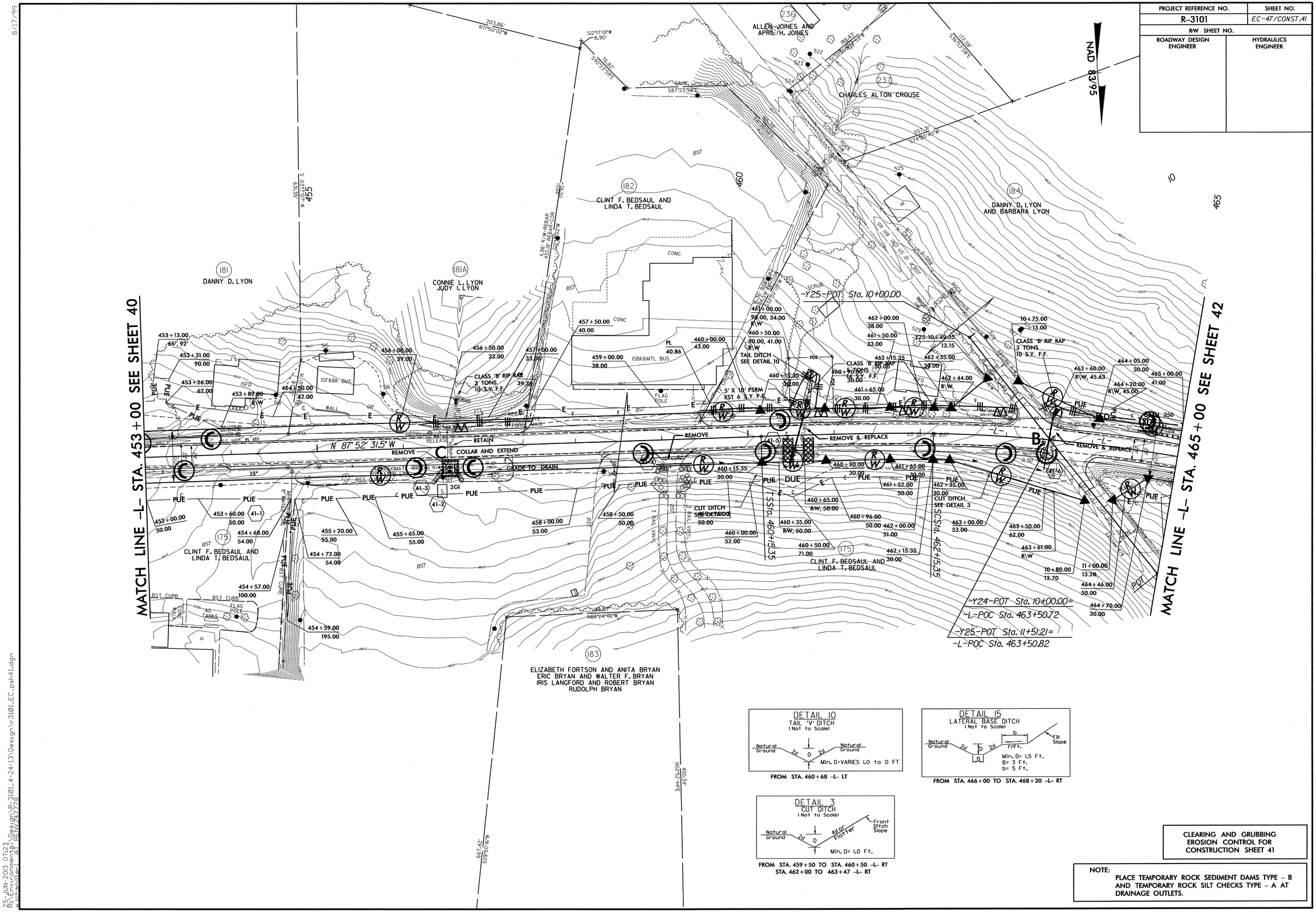


PHASE IV

10. CONSTRUCT REMAINDER OF PROPOSED CULVERT AND ANY NECESSARY INLET CHANNEL IMPROVEMENTS.
11. REMOVE IMPERVIOUS DIKES B AND 24 INCH TEMPORARY PIPE B, ALLOWING FLOW THROUGH CULVERT.
12. CONSTRUCT ROADWAY OVER INLET PORTION OF PROPOSED CULVERT.
13. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S).
14. REMOVE ANY REMAINING TEMPORARY SHORING.
15. COMPLETE ROADWAY.



PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-47/CONST.41
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



DETAIL 10
TAIL 'V' DITCH
(Not to Scale)
Natural Ground
Min. D=VARIES 1.0 to 0 FT
FROM STA. 460+68 -L- LT

DETAIL 15
LATERAL BASE DITCH
(Not to Scale)
Natural Ground
Fill Slope
Min. D= 1.5 Ft.
B= 3 Ft.
b= 5 Ft.
FROM STA. 466+00 TO STA. 468+30 -L- RT

DETAIL 3
CUT DITCH
(Not to Scale)
Natural Ground
Front Ditch Slope
Min. D= 1.0 Ft.
FROM STA. 459+50 TO STA. 460+50 -L- RT
STA. 462+00 TO 463+47 -L- RT

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 41

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

8/17/99

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wichandler1 AT RENV247778

8/17/99

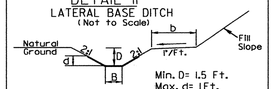
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 42

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

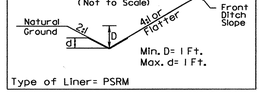
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-48/CONST.42
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL II
LATERAL BASE DITCH
(Not to Scale)



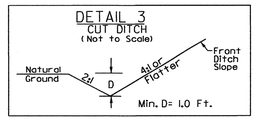
Min. D= 1.5 Ft.
Max. d= 1Ft.
B= 4 Ft.
b= 5 Ft.
Type of Liner= PSRM
FROM STA. 476+00 TO STA. 477+00 –L– RT

DETAIL 8
CUT DITCH
(Not to Scale)



Min. D= 1 Ft.
Max. d= 1 Ft.
Type of Liner= PSRM
FROM STA. 474+66 TO STA. 477+00 –L– LT

DETAIL 3
CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.
FROM STA. 465+50 TO STA. 466+00 –L– RT

26 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 42.1

36 x 18 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
10 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 42.5

Modified Silt Basin
Type 'B'
36 x 18 x 3
10 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 42.5

28 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 42.3

50 x 20 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
12 ft. weir
ID 42.2

MATCH LINE –L– STA. 465+00 SEE SHEET 41

MATCH LINE –L– STA. 477+00 SEE SHEET 43

NAD 83/95

GEORGE L. BRYAN
AND ELIZABETH H. BRYAN

BARBARA LYON

DELMER A. BRYAN AND
JUANITA G. BRYAN

SR 1119 NARROW ROAD (2-LANE)

CLASS 'I' RIP RAP
38 TONS
78 S.Y. F.F.

CLASS 'B' RIP RAP
EST 2 TONS 7 S.Y. F.F.

CLASS 'B' RIP RAP
5 TONS
14 S.Y. F.F.

RIP RAP @ EMBANKMENT
CLASS 'I' RIP RAP
SEE DETAIL

WETLANDS OBLITERATED BY OUTSIDE CONTRACTOR

POSSIBLE EXIST. JB

CUT DITCH SEE DETAIL 3

3' BASE CHANNEL ROCK CROSS VANES SEE DETAILS

3' BASE LATERAL DITCH SEE DETAIL 15

4' BASE CUT DITCH SEE DETAIL 13

3' BASE LATERAL DITCH SEE DETAIL 18

4' BASE LATERAL DITCH PSRM SEE DETAIL 11

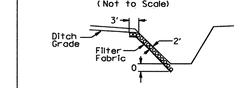
DETAIL 13
STANDARD BASE DITCH
(Not to Scale)

Min. D= 3 Ft.
B= 3 Ft.
EST. 174 C.Y. DDE
FROM STA. 468+76 TO STA. 469+50 –L– RT

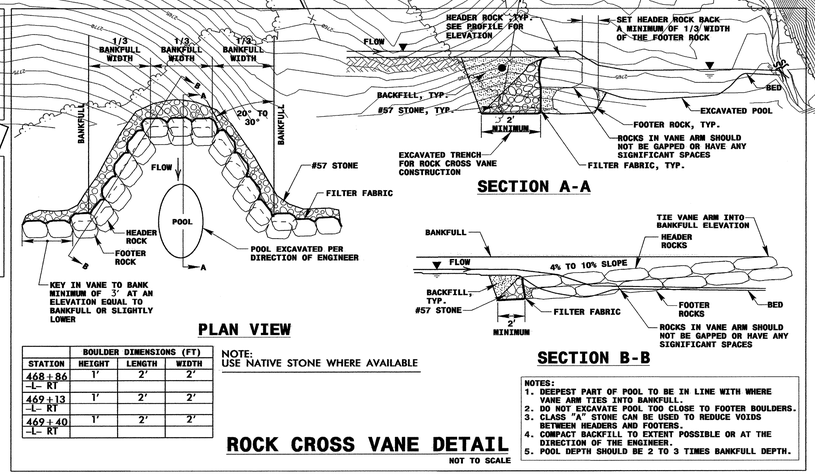
DETAIL 18
LATERAL BASE DITCH
(Not to Scale)

Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.
FROM STA. 475+00 TO STA. 476+00 –L– RT

DETAIL 12
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= 40 TONS CL I Rip-Rap
Filter Fabric= 44 sy
FROM STA. 473+15 TO STA. 473+41 –L– RT



	BOULDER DIMENSIONS (FT)		
STATION	HEIGHT	LENGTH	WIDTH
468+86 –L– RT	1'	2'	2'
469+13 –L– RT	1'	2'	2'
469+40 –L– RT	1'	2'	2'

NOTE:
USE NATIVE STONE WHERE AVAILABLE

ROCK CROSS VANE DETAIL
NOT TO SCALE

NOTES:
1. DEEPEST PART OF POOL TO BE IN LINE WITH WHERE VANE ARM TIES INTO BANKFULL.
2. DO NOT EXCAVATE POOL TOO CLOSE TO FOOTER BOULDERS.
3. CLASS "A" STONE CAN BE USED TO REDUCE VOIDS BETWEEN HEADERS AND FOOTERS.
4. COMPACT BACKFILL TO EXTENT POSSIBLE OR AT THE DIRECTION OF THE ENGINEER.
5. POOL DEPTH SHOULD BE 2 TO 3 TIMES BANKFULL DEPTH.

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.

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Richard.Carter
w/Handcarter A1 REN/247728

8/17/99

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 43

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-49/CONST.43
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

-Y27-POT Sta. 10+00.00

-Y26-POT Sta. 13+21.41

MATCH LINE -L- STA. 477+00 SEE SHEET 42

MATCH LINE -L- STA. 489+00 SEE SHEET 44

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richardson
PREVIEW

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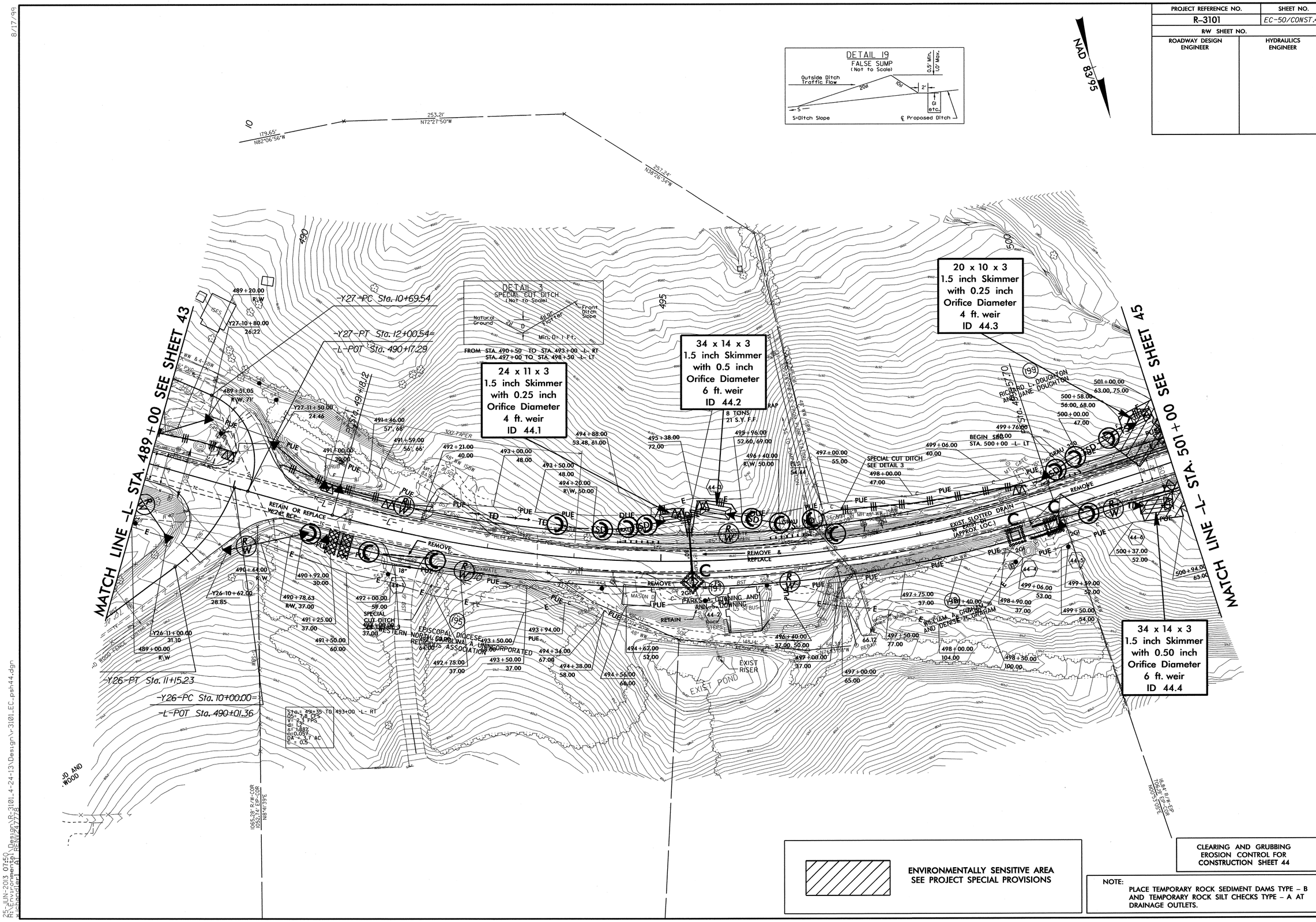
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-50/CONST.44
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 44

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

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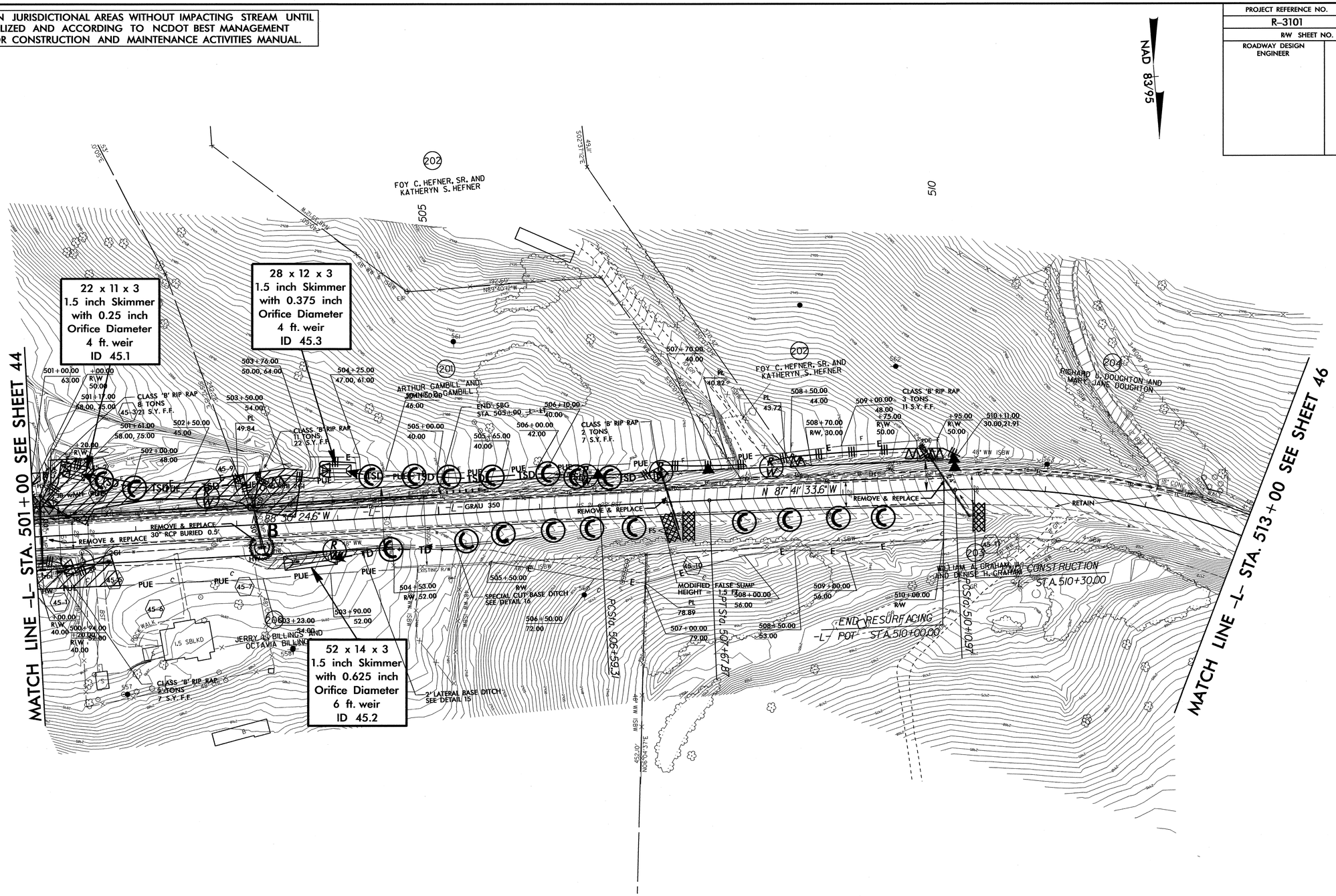
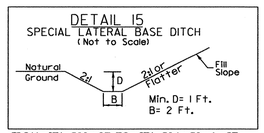
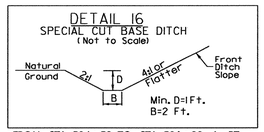
INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-51/CONST.45
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER





FROM STA. 503+27 TO STA. 504+50 -L- RT



FROM STA. 504+50 TO STA. 506+00 -L- RT

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 45

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

8/17/99

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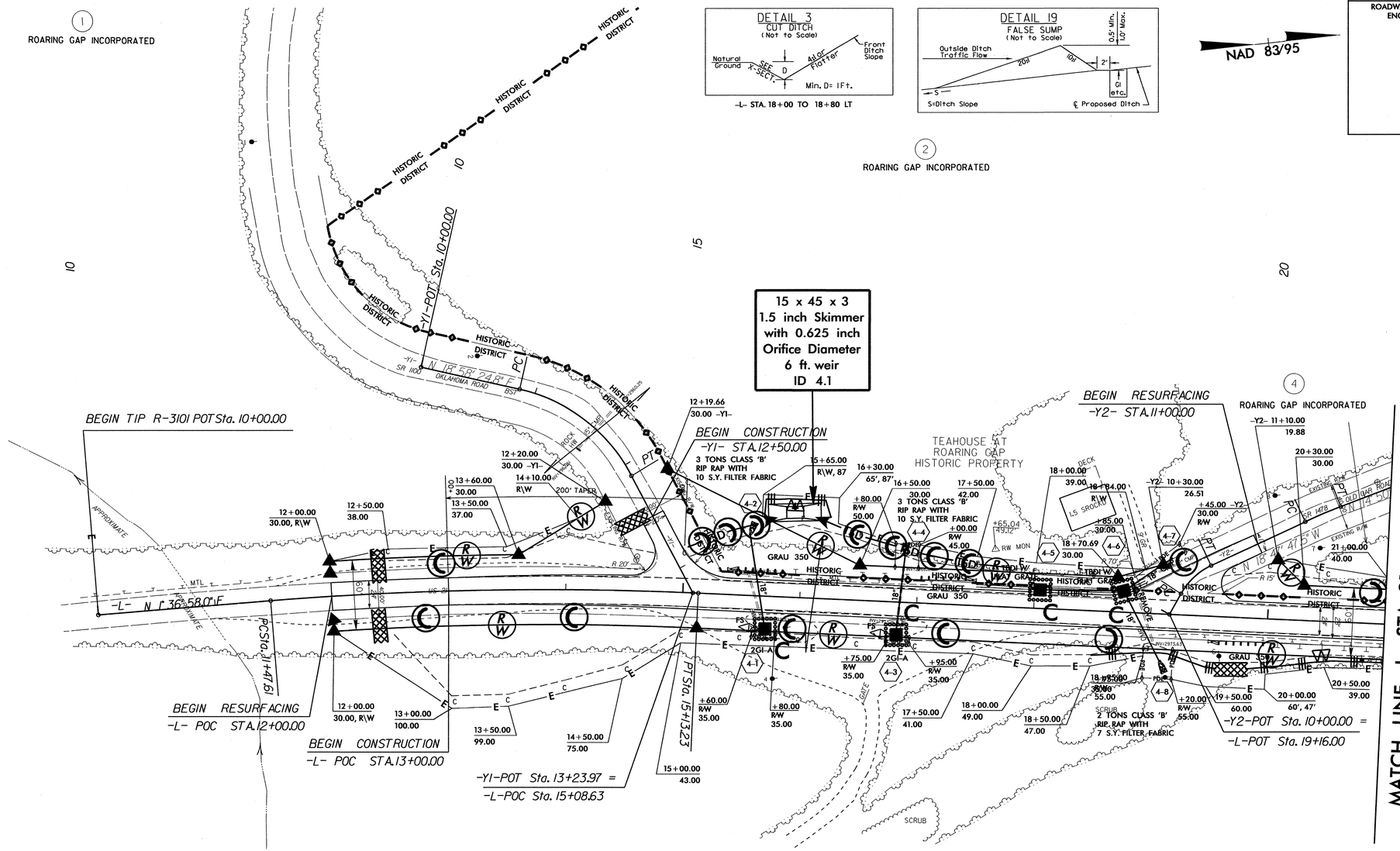
wichandler1 AT RENV247778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-52/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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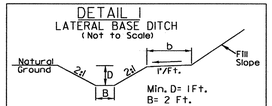
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-53/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

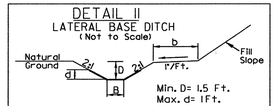
DETAIL I
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1Ft.
B= 2 Ft.
b= 5 Ft.

-L- STA. 22+50 TO 22+80 LT

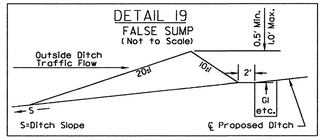
DETAIL II
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
Max. d= 1Ft.
B= 4 Ft.
b= 5 Ft.

Type of Liner= PSRM

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95

42 x 15 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
6 ft. weir
ID 5.2

22 x 53 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
14 ft. weir
ID 5.1

MATCH LINE -L- STA. 21+00 SHEET 4

MATCH LINE -L- STA. 33+00 SHEET 6

-Y2-POT Sta. 16+17.56 =
-L-POT Sta. 24+28.00

BEGIN RESURFACING
-Y2- STA. 15+00.00

-Y3-POT Sta. 10+00.00 =
-L-POT Sta. 25+19.00

BEGIN RESURFACING
-Y3- STA. 11+25.00

-Y3-POT Sta. 12+07.03

INN KEEPER'S STORE
HISTORIC PROPERTY

ROARING GAP INCORPORATED
LATERAL BASE DITCH
-L- STA. 22+50 TO 22+80 LT
SEE DETAIL 1

FGG NEW, LLC

LATERAL BASE DITCH
-L- STA. 27+00 TO 29+23 RT
SEE DETAIL 11

WILLIAM A. BURNETTE

WALTER SULLIVAN LINEBERGER, JR.
AND PACE B. LINEBERGER
DB 275 PG 863
PB 9 PG 355

HOLLIDAY
HISTORIC PROPERTY

ANN W. LINEBERGER

Beg Retaining Wall
28+00.00 23.00

End Retaining Wall
31+05.00 23.00

DO NOT DISTURB

PINE NEEDLE ST

ROARING GAP ROAD

HISTORIC DISTRICT

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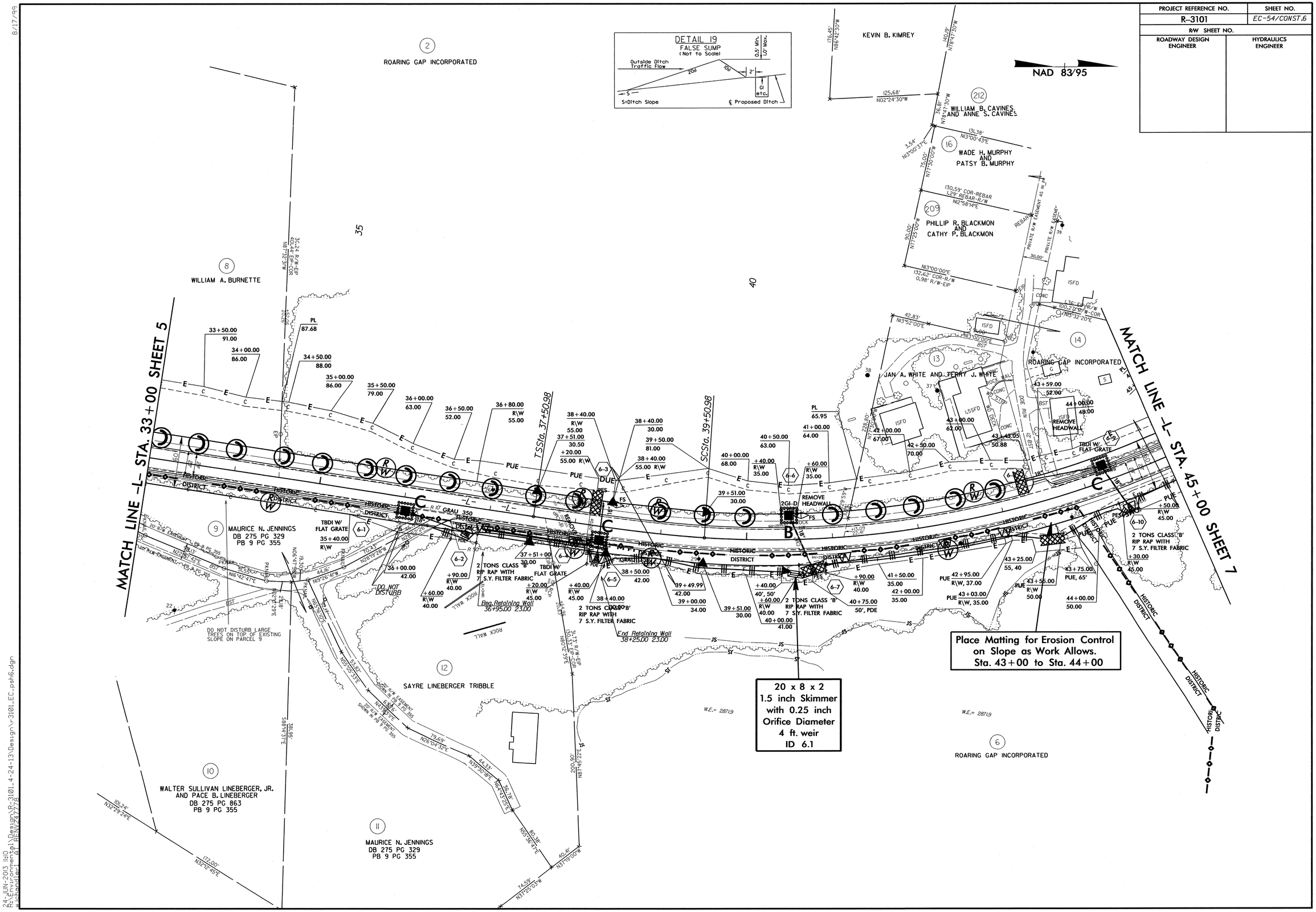
Richard.Allen@BENJAMIN

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-54/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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wichandler1 AT RENV247778

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-55/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE -L- STA. 45+00 SEE SHEET 6

MATCH LINE -L- STA. 57+00 SEE SHEET 8

-Y4- POT STA. 11+62.54

-L- POC STA. 47+42.00

POT 10+00.00 -Y5-

BEGIN EXPRESSWAY GUTTER STA. 50+50.00

END EXPRESSWAY GUTTER STA. 56+25.00

EXPRESSWAY GUTTER STA 50+50 TO STA 55+80 LT

214 TONY BROWN

213 DAVID W. CALDWELL AND TAMMY A. CALDWELL

212 WILLIAM B. CAVINESS AND ANNE S. CAVINESS

211 THOMAS WAYNE & JANET OSBORNE AND JANET MARIE OSBORNE

16 WADE H. MURPHY AND PATSY B. MURPHY

15 WARREN S. PATTON, HEIRS

14 ROARING GAP INCORPORATED

18 COLONIAL REAL ESTATE COMPANY OF WINSTON SALEM, INC

17 SHEILA MAE HOLBROOK FREEMAN

20 JAMES CALDWELL CONSTRUCTION COMPANY

21 D WAYNE MILES, JR. AND JANET P. MILES

218 D. WAYNE MILES, JR. AND JANET P. MILES

215 RAYMOND G. BOGGS AND MARGARET R. BOGGS

23 OLDE BEAU GENERAL PARTNERSHIP W.E.= 2806.0

End Retaining Wall 57+00.00

Beg. Retaining Wall 56+15.00

RECONDITION EXISTING CULVERT AND EXTEND 15' WITH 108" CSP AND ALUMINUM HEADWALL SEE DETAIL SHEET 2-A

3 TONS CLASS 'B' RIP RAP WITH 11 S.Y. FILTER FABRIC

40 TONS CLASS 'B' RIP RAP WITH 75 S.Y. FILTER FABRIC

3 TONS CLASS 'B' RIP RAP WITH 11 S.Y. FILTER FABRIC INV = 2815.35

4' CONC. DITCH BEHIND RET.WALL SEE DETAIL

PROPOSED ROCK FILL IN POND SEE X-SECTIONS AND DETAIL 20

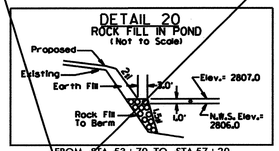
FLOATING TURBIDITY CURTAIN

INSTALL SILT FENCE ABOVE ROCK FILL TO CONTAIN SOIL FILL

20 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 7.1

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 52+00 to Sta. 57+25

DETAIL 20
ROCK FILL IN POND
(Not to Scale)



FROM STA. 53+70 TO STA. 57+20

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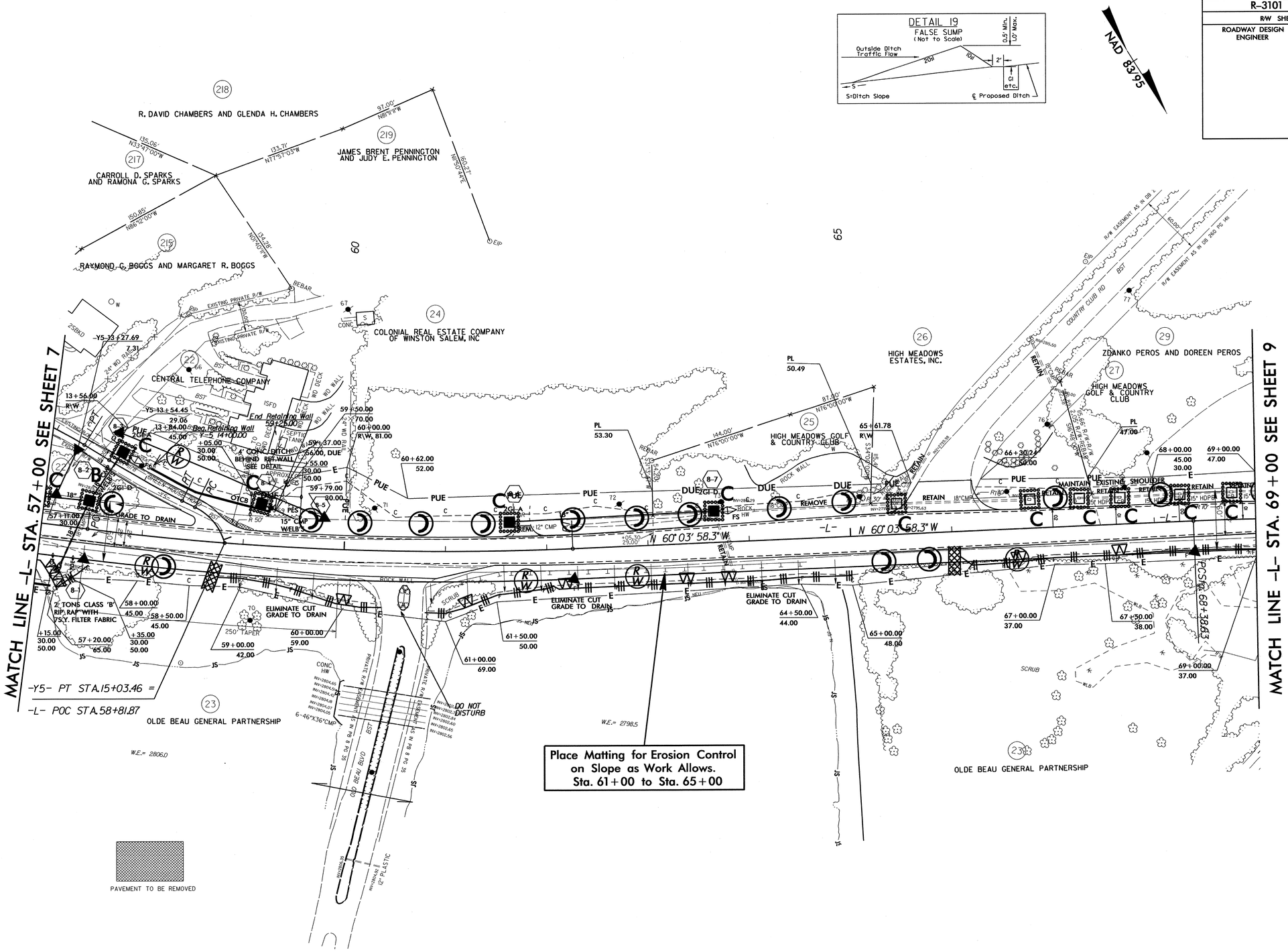
User:rtmeyer
PRFNV2477738

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-56/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Place Matting for Erosion Control on Slope as Work Allows. Sta. 61+00 to Sta. 65+00

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

8/17/99

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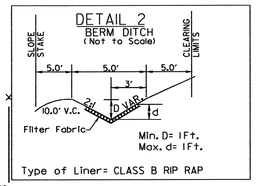
wichandler1 AT RENV247778

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-57/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

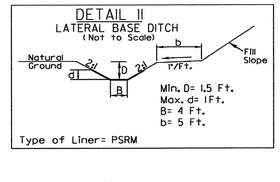
DETAIL 2
BERM DITCH
(Not to Scale)



Min. D= 1Ft.
Max. d= 1Ft.
Type of Liner= CLASS B RIP RAP

-L- STA. 76+50 TO 82+00 RT

DETAIL II
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
Max. d= 1Ft.
B= 4 Ft.
b= 5 Ft.
Type of Liner= PSRM

NAD 83/95

MATCH LINE -L- STA. 69+00 SEE SHEET 8

MATCH LINE -L- STA. 81+00 SEE SHEET 10

20 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 9.2

36 x 15 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
7 ft. weir
ID 9.1

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 72+00 to Sta. 73+10

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

ZDANKO PEROS AND DOREEN PEROS (29)

JAMES S. MASSEY AND NANCY C. MASSEY (31)

HIGH MEADOWS GOLF & COUNTRY CLUB (32)

TRUSTEES OF ANTIOCH METHODIST CHURCH (30)

OLDE BEAU GENERAL PARTNERSHIP (23)

OUTLINE HISTORIC BOUNDARY WITH ORANGE SAFETY FENCE NEAR CONSTRUCTION

1@25', 21" CORED SLAB BRIDGE
45.00@60', 24" CORED SLAB BRIDGE

CULVERT #2
2- BARREL
10X10

MAINTAIN EXISTING SHOULDER

TSD

TBDI W/FLAT GRATE AT-1

REMOVE CULVERT

LATERAL BASE DITCH
-L- STA. 71+55 TO 72+30 RT
SEE DETAIL 11

CLASS B RIP RAP
2' TOPSOIL FILL

BERM DITCH
-L- STA. 76+50 TO 82+00 RT
SEE DETAIL 2

DO NOT DISTURB

PTS Sta. 72+93.05

N 49° 50' 31.0" W

N 27°59'48.5" E 296.0'

N 68°43'51" W 400.00'

N 30°35'47" E 373.08'

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(Copyright) RENWICK 2778

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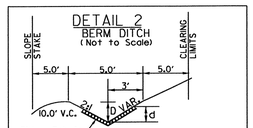
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-58/CONST.JO
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 2
BERM DITCH
(Not to Scale)

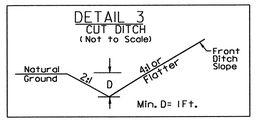


Min. D= 1Ft.
Max. d= 1Ft.

Type of Liner= CLASS B RIP RAP

-L- STA. 76+50 TO 82+00 RT

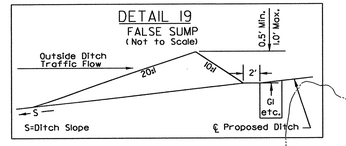
DETAIL 3
CUT DITCH
(Not to Scale)



Min. D= 1Ft.

-L- STA. 85+00 TO 86+50 RT

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95

12 x 28 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
6 ft. weir
ID 10.1

PROVIDE REFORESTATION IN AREAS OF SKIMMER BASIN REMOVAL IN ACCORDANCE WITH SHEET RF-1.

21 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 10.2

20 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 10.3

MATCH LINE -L- STA. 81+00 SEE SHEET 9

MATCH LINE -L- STA. 93+00 SEE SHEET 11

HIGH MEADOWS

GOLF CART PATH BST

15"CMP

3'X5'CMP

ROCK HW

ROCK COLUMN

5 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC

HIGH MEADOWS GOLF & COUNTRY CLUB

(34)

W.E. 2759.3

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

(10-3)

(10-4)

(10-5)

(10-2)

(10-1)

REMOVE HEADWALL

CUT DITCH
-L- STA. 85+00 TO 86+50 RT
SEE DETAIL 3

18" CSP W/ELBOWS

BDO

BERM DITCH
-L- STA. 76+50 TO 82+00 RT
SEE DETAIL 2

DO NOT REMOVE OR DISTURB HEADWALL

(23)

OLDE BEAU GENERAL PARTNERSHIP

(35)

JOHN A. HARMON

(36)

JERRY W. SADDLER

REBAR

BLK C

L5S BUS

PNAIL

N 62° 19' 44.7" W

80+90	81+00.00	85.00	
81+50.00	73.00		
82+00.00	55.00		
82+50.00	76.00		
83+00.00	97.00		
83+50.00	96.00		
83+57.00	47.00		
84+00.00	88.00		
84+50.00	46.00		
85+27.51	30.00		
85+45.00	43.00		
85+80.00	55.00		
86+00.00	69.00		
86+50.00	60.00		
86+60.00	55.00		
86+78.00	30.00		
87+00.00	62.00		
87+27.51	30.00		
87+50.00	73.00		
88+00.00	70.00		
88+50.00	55.00		
89+00.00	42.00		
89+00.00	52.00		
89+20.00	30.00		
89+75.11	30.00		
90+00.00	50.00		
90+50.00	30.00		
91+00.00	60.00		
91+35.00	76.00		
91+46.00	76.00		
91+75.11	30.00		
91+40.00	49.00		
91+00.00	49.00		
90+50.00	43.00		
89+75.11	30.00		
89+50.00	60.00		
91+70.00	58.00		
91+75.11	30.00		
91+44.00	59.00		
93+00.00	55.00		
93+00.00	41.00		

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BLackburn at RENZ7384

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-59/CONST.II
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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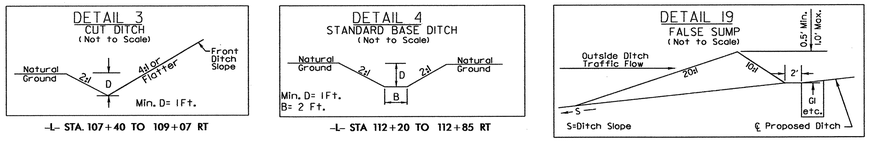
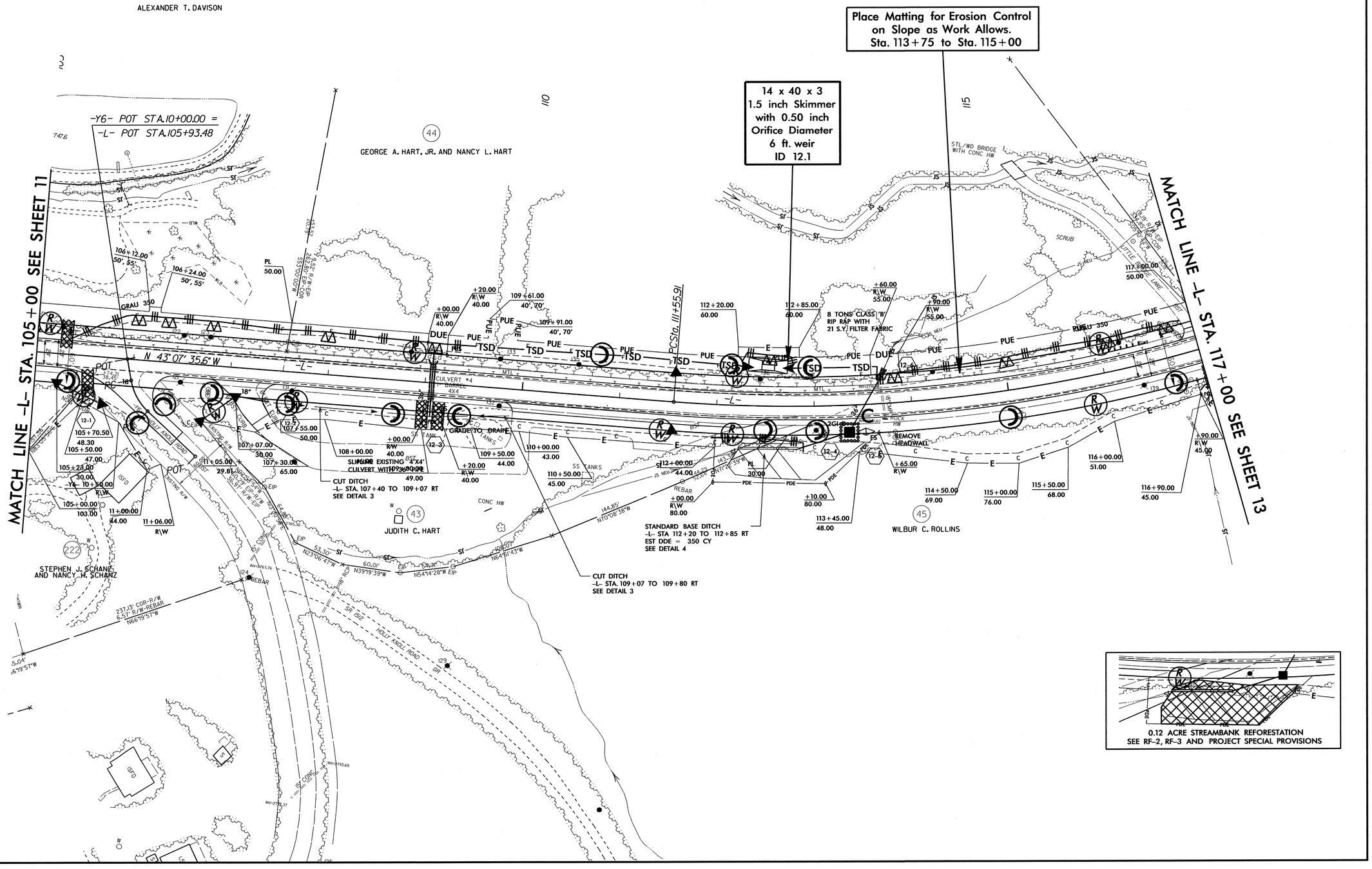
bblackburn AT RENV271384

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-60/CONST.J2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER





0.12 ACRE STREAMBANK REFORESTATION
SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

8/17/99

24-JUN-2013 11:45
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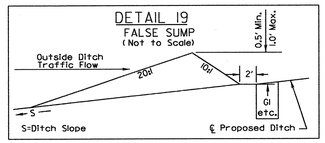
wichandler1 AT RENV247778

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-6I/CONST.J3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

DETAIL 19
FALSE SUMP
(Not to Scale)



14 x 32 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
6 ft. weir
ID 13.1

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 117+10 to Sta. 117+60

MATCH LINE -L- STA. 117+00 SEE SHEET 12

MATCH LINE -L- STA. 129+00 SEE SHEET 14

46
J. D. SMITH AND LOUISE BROOKS SMITH
DB 153 PG 503

45
WILBUR C. ROLLINS
DB 91 PG 422

47
DANIEL J. BUCKLE, JR. AND FRANCES S. BUCKLE
DB 182 PC 118

-L- GRAU 350

N 66° 38' 33.4" W

PI Sta. 118+11.20

PI Sta. 119+32.71

PI Sta. 125+86.20

117+00.00 PL 50.79
50.00
3 TONS CLASS 'B' RIP RAP WITH 11 S.Y. FILTER FABRIC

119+40.00 75, 66.5
119+80.00 R\W 70.00
119+90.00 75, PUE
120+45.00 75', 59'
120+55.00 75', 57'
122+45.00 48.00
122+46.00 79.00
122+56.00 79', 48'
122+90.00 45.00
124+50.00 39.00
125+45.00 48', 78'
125+55.00 48', 78'
127+50.00 40.00
128+73.00 R\W, 43'
129+00.00 36.00

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

REMOVE HEADWALL CONC. ENDWALL 30.00
24" CMP W/ELBOWS +10.00 50.00

117+50.00 146.00
117+95.00 225.00
118+50.00 212.00
119+00.00 229.00
119+50.00 194.00
120+00.00 180.00
121+50.00 100.00
122+00.00 90.00
122+50.00 107.00
123+00.00 110.00
123+50.00 89.00
124+00.00 78.00
124+50.00 76.00
125+00.00 78.00
126+50.00 97.00
127+50.00 89.00
128+00.00 68.00
128+50.00 74.00
129+00.00 65.00
PL 223.27

CONC BRIDGE
SCRUB
HTR
EXISTING R/W
PUE
TSD
JS
ISD
BDO
FS
2GI-D
ROCK
PESH

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Recorded at 11"x17"

8/17/99

24-JUN-2013 11:54
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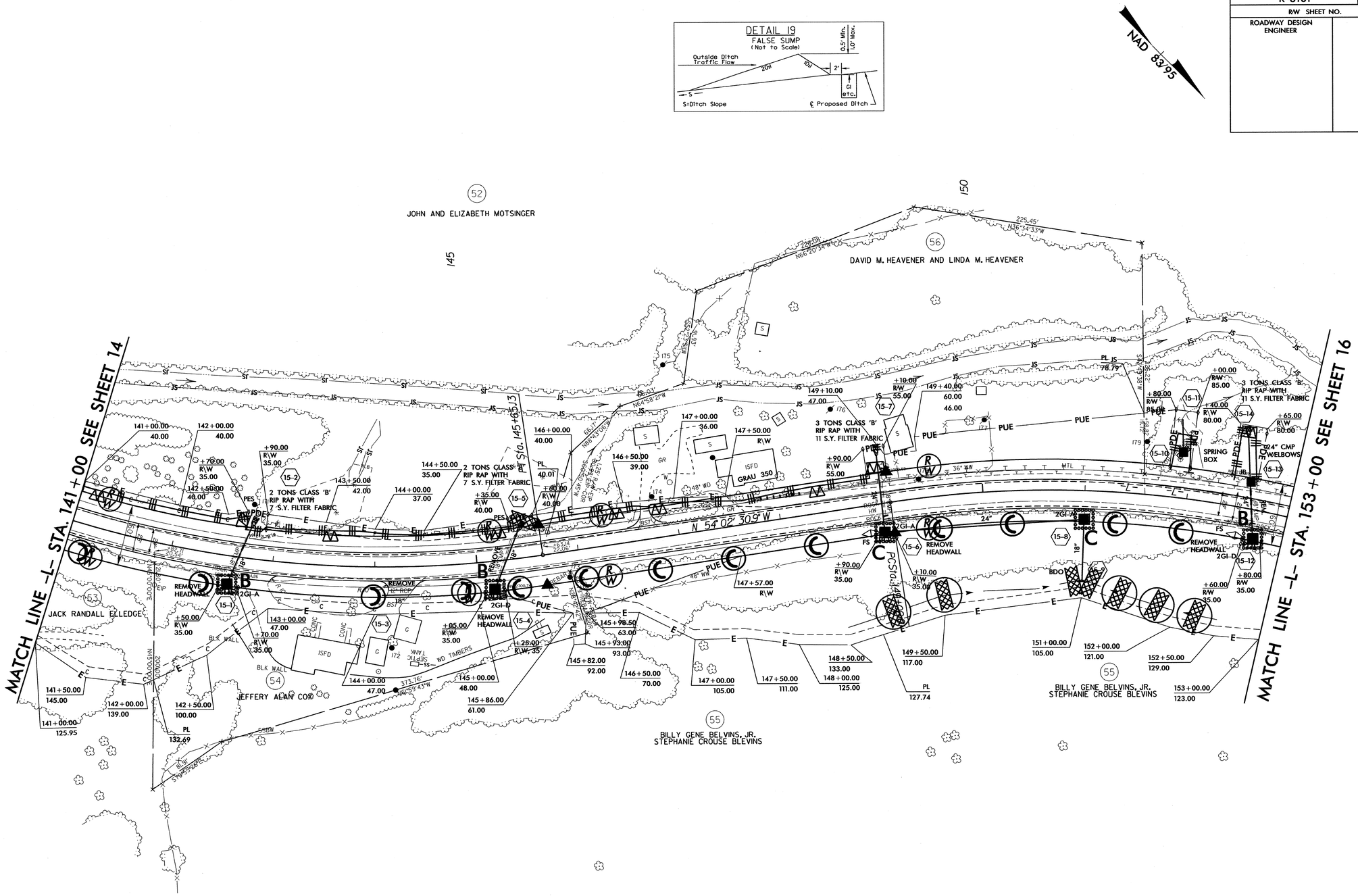
wichandler1 AT RENV247778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-63/CONST J5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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

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wichandler1 AT RENV247778

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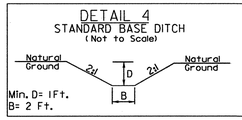
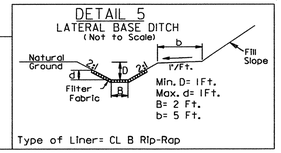
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-64/CONSTJ6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

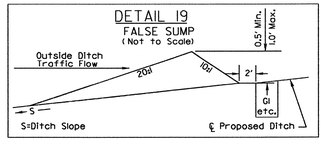
DETAIL 4
STANDARD BASE DITCH
(Not to Scale)



DETAIL 5
LATERAL BASE DITCH
(Not to Scale)



DETAIL 19
FALSE SUMP
(Not to Scale)



-L- STA 112+20 TO 112+85 RT

-L- STA. 161+20 TO 162+10 LT

STANDARD BASE DITCH
-L- STA. 161+20 TO 162+10 LT
EST DDE = 60 CY
SEE DETAIL 4

NAD 83/95

233.00'
N02°30'00"E

MATCH LINE -L- STA. 153+00 SEE SHEET 15

MATCH LINE -L- STA. 165+00 SEE SHEET 17

(52) JOHN AND ELIZABETH MOTSINGER

(59) CAROL J. HOLCOMB

(55) BILLY GENE BELVINS, JR.
STEPHANIE CROUSE BLEVINS

(58) CHERRY LANE COMMUNITY CLUB, INC.

END CONSTRUCTION
BEGIN MILL AND RESURFACE
POT Sta. 164+00.00 -L-

5 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC

BORE AND JACK

GRAU 350

REMOVE HEADWALL

RETAIN 15" CMP

RETAIN 15" RCP

72" WD

PT Sta. 156+33.52

PT Sta. 162+94.31

N 15° 28' 29.2" W

N38°26'42"W 17.71'

S87°30'00"W 282.00'

S82°30'00"E 316.81'

N05°30'39"E 307.73'

S89°59'11"E 220.00'

40' PRIVATE R/W EASEMENT DB 18 PG 127 AND DB 384 PG 124

POND

WD WALL

WALL

48" WMP

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Richandler1 (RENA247778)

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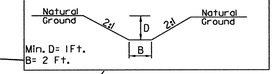
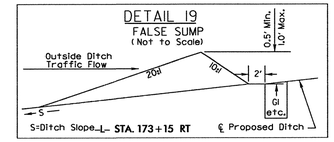
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-65/CONST.17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 4
STANDARD BASE DITCH
(Not to Scale)

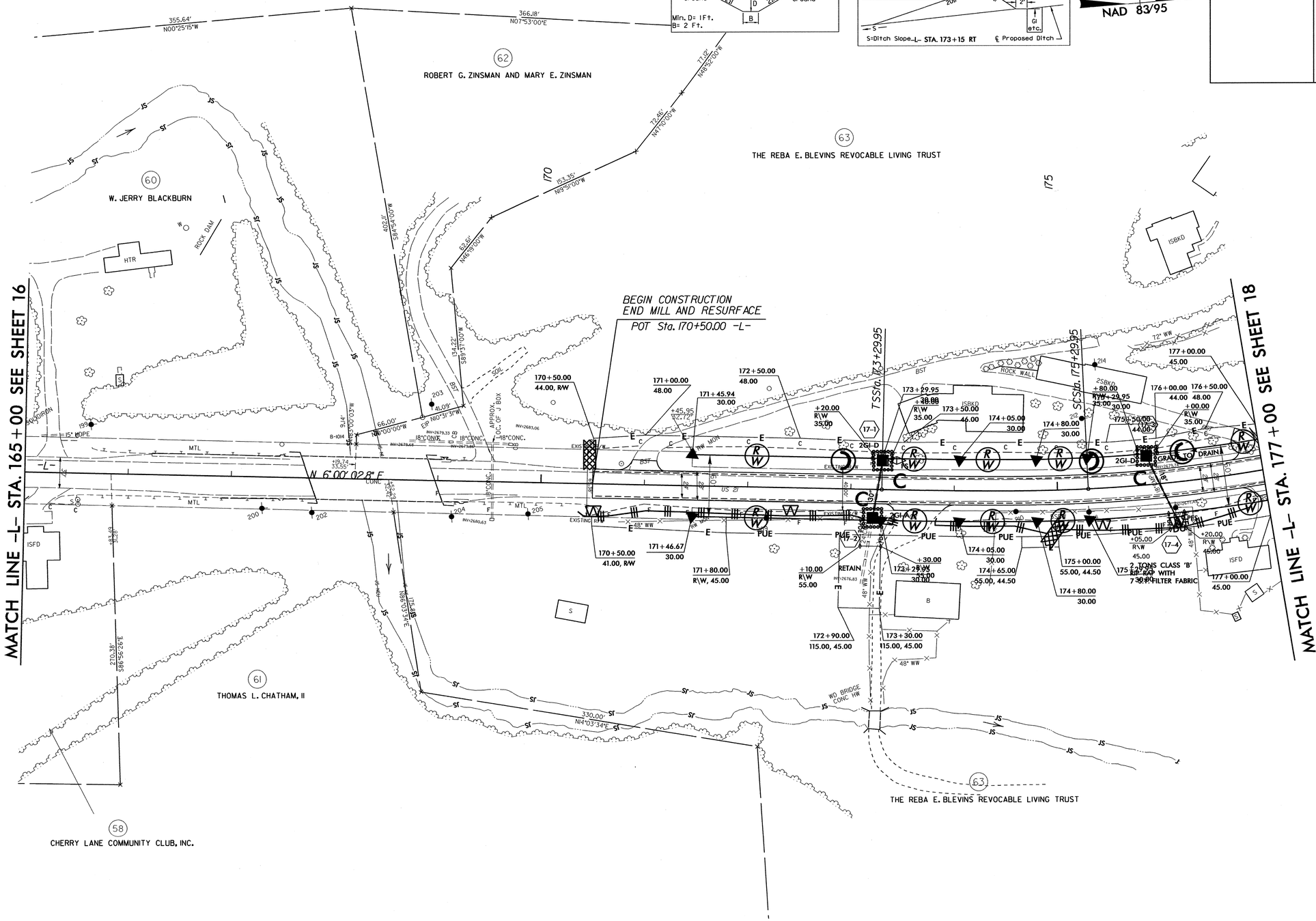


Min. D= 1Ft.
B= 2 Ft.

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95



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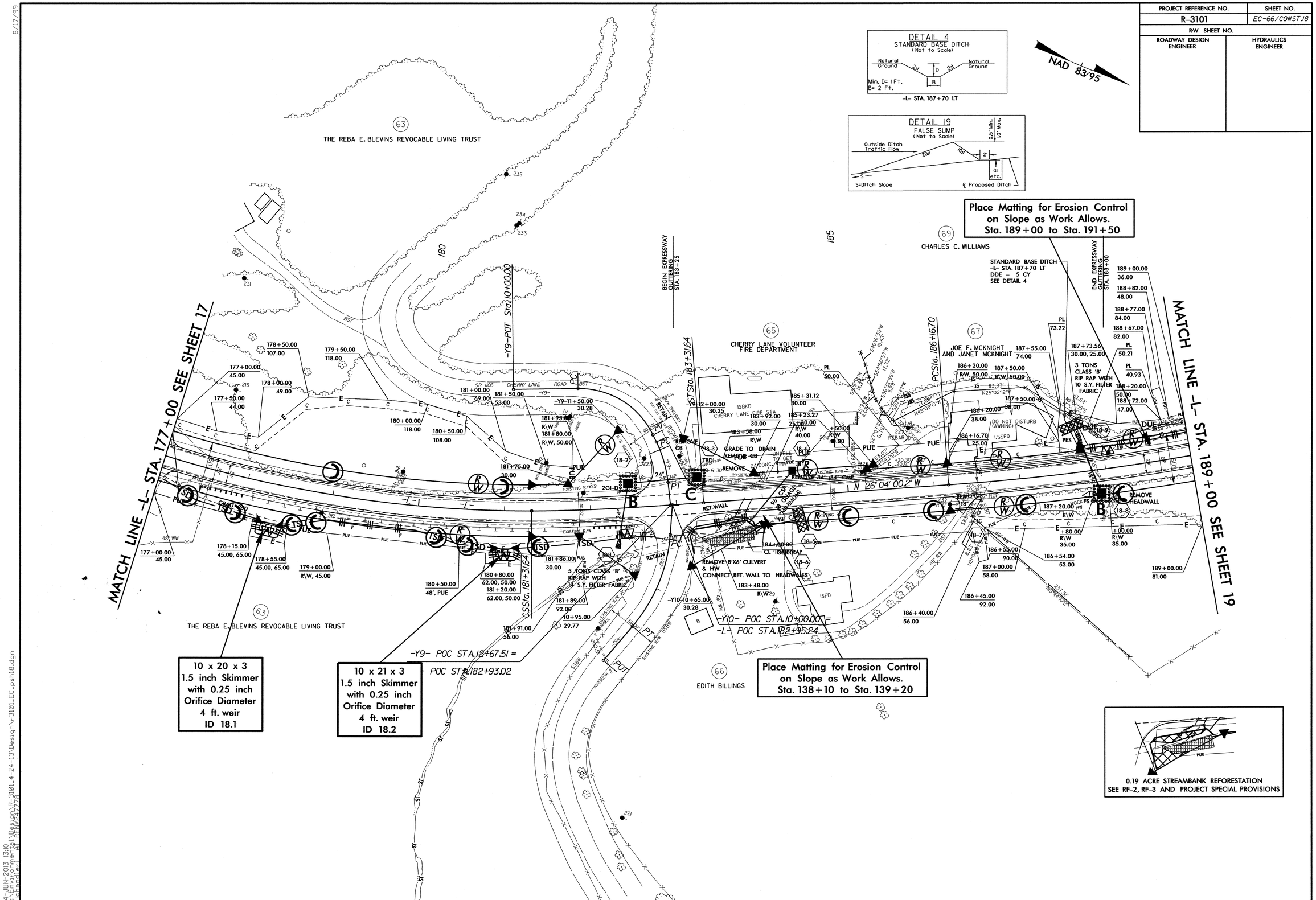
$cdsheet1 1 1 HELVE27778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-66/CONST.18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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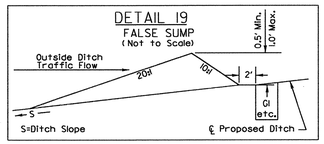
wichandler1 AT RENV247778

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-67/CONSTJ9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

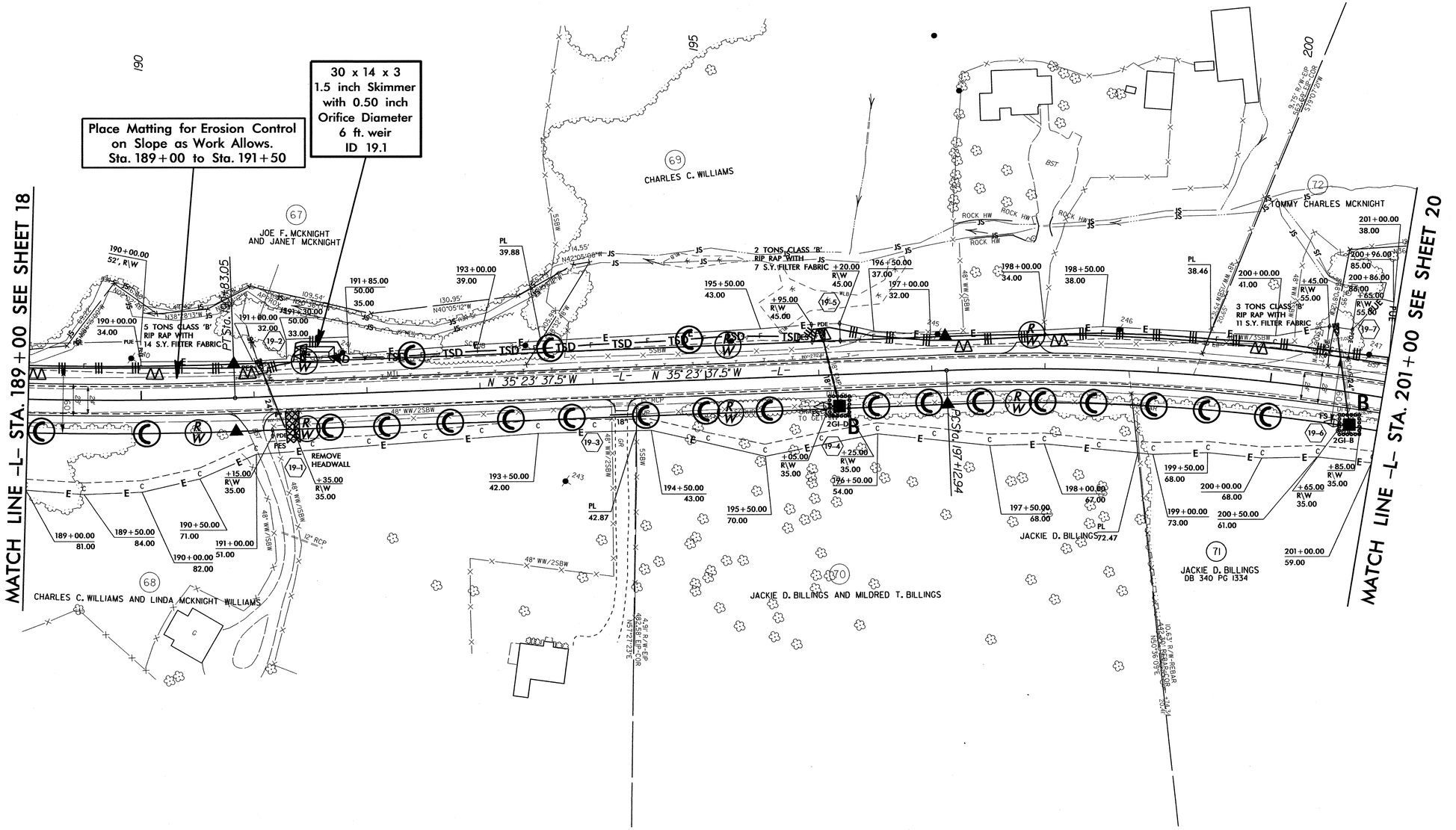
NAD 83/95

DETAIL 19
FALSE SUMP
(Not to Scale)



Place Matting for Erosion Control on Slope as Work Allows. Sta. 189+00 to Sta. 191+50

30 x 14 x 3 1.5 inch Skimmer with 0.50 inch Orifice Diameter 6 ft. weir ID 19.1



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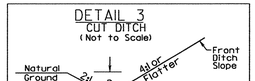
User:cpeel
Plotted at 1"=20'

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-68/CONST.20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

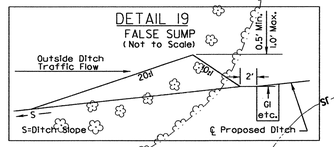
DETAIL 3
CUT DITCH
(Not to Scale)



Min. D= 1Ft.

-L- STA. 208+10 TO 208+50 LT

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95

MATCH LINE -L- STA. 201+00 SEE SHEET 19

MATCH LINE -L- STA. 213+00 SEE SHEET 21

BEGIN CONSTRUCTION
POT STA.10+00.00 -Y11-

-Y11- POT STA.12+32.62 = -L- POT STA.205+50.00

TOMMY CHARLES MCKNIGHT

JAMES D. MCKNIGHT AND RHUMELL P. MCKNIGHT

TOMMY CHARLES MCKNIGHT

DON S. LAMBIOTTE AND KELLEY R. LAMBIOTTE

HAROLD E. HANKS

KATHLEEN SMITH TAYLOR

GLENN LAVERN SMITH

ABBE ROSE COX HEIRS

JACKIE D. BILLINGS

CHARLES E. BRANCH AND EMILY H. BRANCH

NANCY H. WEST

M. F. TILLEY HEIRS

RICHARD C. WILLIAMS AND LINDA WILLIAMS

A. DWANE CAUDLE AND LIBBIE J. CAUDLE

A. DWANE CAUDLE AND LIBBIE J. CAUDLE

N 16°38'53.0"W

3 TONS CLASS 'B' RIP RAP WITH 10 S.Y. FILTER FABRIC

REMOVE HEADWALL

BORE AND JACK 36" RCP

PLUG AND ABANDON

CUT DITCH -L- STA. 205+00 TO 206+00 RT SEE DETAIL 3

CUT DITCH -L- STA. 206+62 TO 207+50 SEE DETAIL 3

CUT DITCH -L- STA. 208+10 TO 208+50 LT SEE DETAIL 3

PAVEMENT TO BE REMOVED

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mcdonald

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-69/CONST.21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 4
STANDARD BASE DITCH
(Not to Scale)

Natural Ground, 2d, D, 2d, Natural Ground; B

Min. D= 1Ft.
B= 2 Ft. Type of liner: Coir Fiber

-L- STA. 223+10 TO 223+60 RT
-Y12REV- POT Sta. 10+00.00

WE 2807.0
BEGIN CONSTRUCTION
-Y12REV- POT Sta. 12+00.00

NAD 83/95

30 x 14 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
6 ft. weir
ID 21.1

14 x 10 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 21.4

Modified Silt Basin
Type 'B'
14 x 10 x 3
(See Tiered Skimmer
Basin Detail)
ID 21.4

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 14+40 to Sta. 14+90

22 x 11 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 21.3

MATCH LINE -L- STA. 213+00 SEE SHEET 20

MATCH LINE -L- STA. 225+00 SEE SHEET 22

SOUTHERN REPAIR SERVICE, INCORPORATED

SANDRA VARELA

THE BILLY GENE BLEVINS REVOCABLE LIVING TRUST

BILLY GENE BLEVINS, SR. AND BILLY GENE BLEVINS, JR.

STEVIE MOXLEY

STANDARD BASE DITCH
-L- STA. 223+10 TO 223+60 RT
DDE - 180 GARY C. SMITH
SRIDEVI KELLY SMITH TR

3 TONS CLASS 'B' RIP RAP WITH 11 S.Y. FILTER FABRIC

5 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC

8 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC

-Y12REV- POT STA.15+07.01 =
-L- POT STA.222+75.00

PT Sta. 215+24.25

REMOVE HEADWALL

CONC. ENDWALL

BORE AND JACK

CUT DITCH
-L- STA. 219+00 TO 220+00 RT
SEE DETAIL 3

LATERAL BASE DITCH
-L- STA. 214+50 TO 215+50 RT
SEE DETAIL 1

LATERAL BASE DITCH
-L- STA. 215+50 TO 216+25 LT
SEE DETAIL 17

LATERAL BASE DITCH
-L- STA. 213+00 TO 214+50 RT
SEE DETAIL 17

SANDY & SUSAN HAMMACK

SOUTHERN REPAIR SERVICE, INCORPORATED

BARRY R. EDWARDS

JOHN E. ROYAL

53 x 9 x 2
ID 21.2

DETAIL 1
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2d, D, 2d, b, 1'/Ft., Fill Slope; B

Min. D= 1Ft.
B= 2 Ft.
b= 5 Ft.

-L- STA. 214+50 TO 215+50 RT

DETAIL 3
CUT DITCH
(Not to Scale)

Natural Ground, 2d, D, 4d of Flatter, Front Ditch Slope

Min. D= 1Ft.

-L- STA. 219+00 TO 220+00 RT

DETAIL 17
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2d, d1, D, 2d, b, 1'/Ft., Fill Slope; Filter Fabric; B

Min. D= 1.5 Ft
Max. d=
B= 2 Ft.
b= 5 Ft.

*When B is < 6.0'

Type of Liner= Class 'I' Rip-Rap

-L- STA. 214+00 TO 214+50 RT
-L- STA. 215+50 TO 216+25 LT

DETAIL 19
FALSE SUMP
(Not to Scale)

Outside Ditch Traffic Flow; 0.5' Min., 1.0' Max.; 20d, 10d, 2'

0.06 ACRE STREAMBANK REFORESTATION
SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-70/CONST.22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE -L- STA. 225+00 SEE SHEET 21

MATCH LINE -L- STA. 237+00 SEE SHEET 23

-Y14-POT Sta. 10+00.00

-Y14-POT Sta. 12+60.16

-L-POT Sta. 227+85.96

-Y13- STA. 10+00.00 = -L- POT STA. 226+08.83

POT Sta. 230+77.24

CLARENCE ROBY & MARILYN CROUSE AND MARILYN CROUSE

HENRY C. SMITH AND JOANN KELLY SMITH TRUST

CHRISTINA BROOKS SIMPSON CHAD DAVID SIMPSON

DARREN RAY BOTTOMLEY

MELVIN MILES

CHERRY LANE VOLUNTEER FIRE DEPARTMENT

5 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC

MARCELENE H. DOUGLAS

EARL TRIPLETT AND RACHEL T. TRIPLETT

DONNA L. SHUMATE AND DAVID CHRIS WALKER

MARLOWE LAVERNE CUFTON

ELGIN JONES AND BETTY LOU JONES

JOHN E. ROYAL

MICHAEL J. ROYAL AND JUANITA H. ROYAL

GEORGE M. WIMMER

SHARPTOWN ROAD

CHERRY LANE

US 70

GRAU 350

SCRUB

ISFD

ISBKD

ISBK

WD DECK

BK WALL

BLK WALL

REMOVE HEADWALL

SEAL AND ABANDON WELL

RETAIN EXISTING DRIVE

TIE TO EXISTING DRIVE

300' TAPER

450' UNIFORM TAPER

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Microstation V8
REF\R-3101_4-24-13\Design\R-3101_4-24-13\Design\r-3101_EC_psh22.dgn

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PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-71/CONST.23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE -L- STA. 237+00 SEE SHEET 22

MATCH LINE -L- STA. 249+00 SEE SHEET 24

END CONSTRUCTION
BEGIN MILL AND RESURFACE
POS Sta. 246+50.00 -L-

S 78°06'40" E
363.40'

N 26°28'57" E
294.95'

S 83°09'13" W
72.26'

N 66° 48' 29.9" W

REBAR

94.82'
N82°09'36"W

EIP

102.36'
S02°40'29"W

362.64'
S84°28'46"W

PTSta. 243+06.34

TSSta. 245+15.84

SCSta. 247+15.84

101 BILLY GENE BLEVINS, SR

102 ELGIN JONES AND BETTY LOU JONES

103 GLENNA BLEVINS

104 BILLY GENE BLEVINS, SR.

106 CAROL W. JOHNSON

228 NICOLE ELIZABETH BLEVINS

237+96.00
73.00

238+37.00
86.00

236+59.00
64.00

240+00.00
59.00

240+92.00
60.00

240+97.00
95.00

241+20.00
65.00

241+08.00
94.00

242+00.00
95.00

242+00.00
30.00, 26.00

242+50.00
100.00

243+00.00
95.00

243+50.00
30.00, 26.00

243+06.34
26.00

244+00.00
70', 102'

244+09.00
70', 102'

245+00.00
RW, 60.00

245+15.84
30.00

245+90.00
30.00

246+05.00
65.00

246+65.00
30.00

247+15.84
30.00

248+08.72
30.00

248+31.00
R\W

PL
67.69

GRAU 350

25MTL BUS

BILL BOARD

MTL CANOPY

ISFD

POND
WE 2776.3

BST

3-WD RAIL

24" BLK WALL

72" BLK WALL

48" WW/25SW

12" HDPE

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PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-72/CONST.25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE -L- STA. 261+00 SEE SHEET 24

MATCH LINE -L- STA. 273+00 SEE SHEET 26

BLUE RIDGE PARK WAY

PATRICIA P. HOLLOWAY AND ROBERT T. HOLLOWAY

BEGIN CONSTRUCTION
END MILL AND RESURFACE
POT Sta. 269+00.00 -L-

PT Sta. 268+92.20

PC Sta. 264+12.44

PC Sta. 270+68.58

BRUCE M. ALEXANDER

CHRISTOPHER C. & N. D. SHEPHERD AND MORRIS C. DIXON

HISTORIC BOUNDARY

WELLMON ROAD BST

8' SOIL DRIVE

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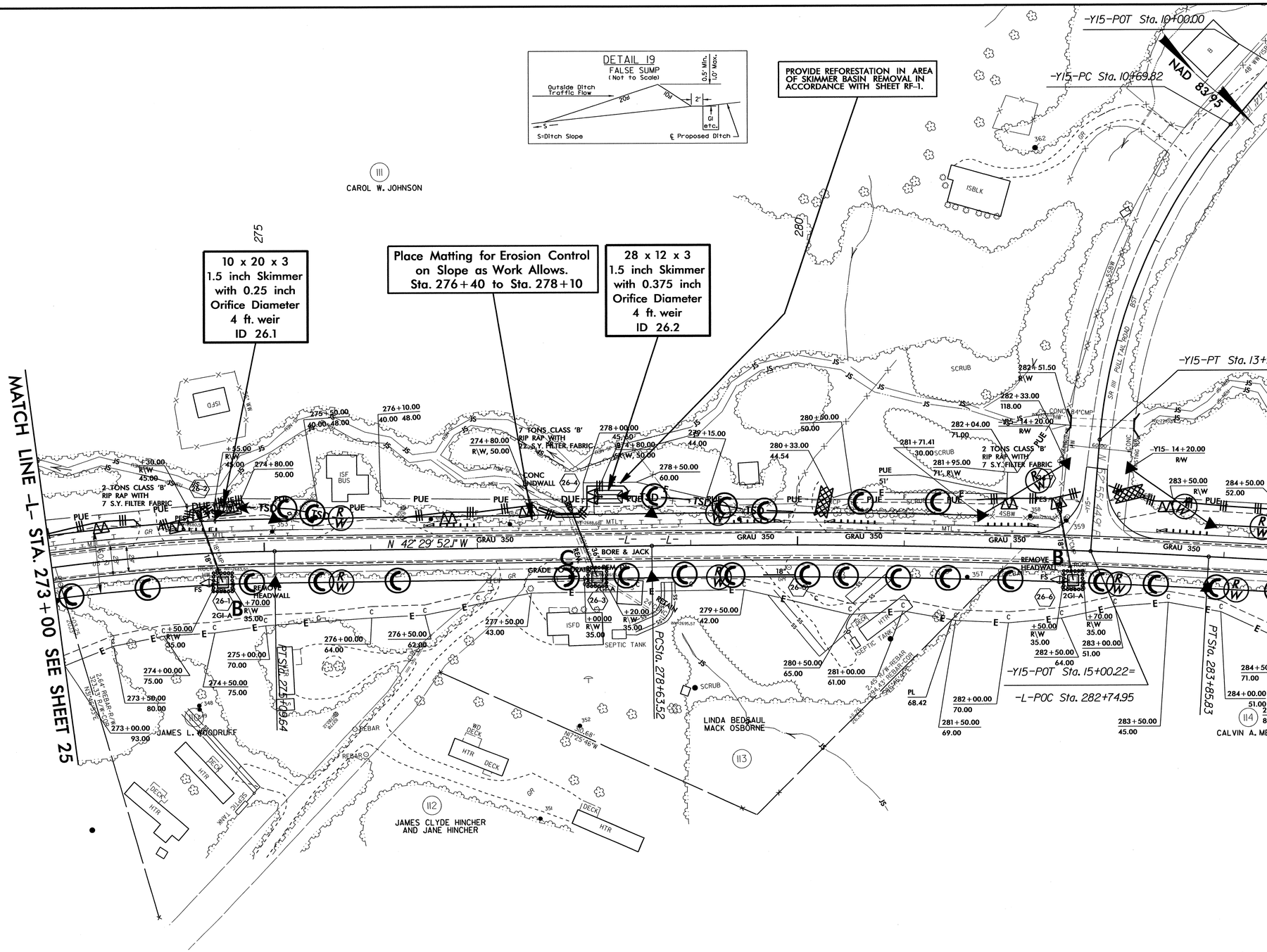
MicroStation J01.11.09.17378

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-73/CONST.26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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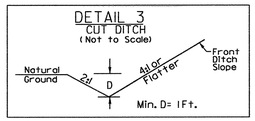
bblackburn AT RENV271384

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-74/CONST.27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 3
CUT DITCH
(Not to Scale)



-L- STA. 291+35 TO 292+00 RT

Place Matting for Erosion Control on Slope as Work Allows. Sta. 285+00 to Sta. 286+60

36 x 14 x 3 1.5 inch Skimmer with 0.50 inch Orifice Diameter 6 ft. weir ID 27.1

Temporary Rock Sediment Dam Type A 3 ft. weir height

NAD 83/95

MATCH LINE -L- STA. 285+00 SEE SHEET 26

MATCH LINE -L- STA. 297+00 SEE SHEET 28

N 38° 34' 49.8" W

N 58° 38' 31.0" W

PCSta. 288+31.04

PTSta. 294+04.24

PCSta. 294+86.04

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

5 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC

REMOVE HEADWALL

CONC. ENDWALL

CONC. ENDWALL +30.00 R\W 50.00

285+60.00 47', 65'

286+15.00 50', 65'

286+85.00 R\W, 45', 65'

287+50.00 65, 48

288+00.00 46.00

288+50.00 45.00

289+50.00 45.00

290+50.00 39.00

292+50.00 30.00

293+50.00 32.00

294+00.00 34.00

294+30.00 R\W

294+70.00 R\W

295+00.00 35.00

295+50.00 32.00

296+00.00 75, 54

296+35.00 75, 52

297+00.00 47.00

+05.00 R\W 45.00

+30.00 R\W 45.00

+95.00 R\W 35.00

+75.00 R\W 35.00

285+00.00 83.00

285+50.00 80.00

286+00.00 67.00

286+50.00 43.00

287+00.00 46.00

287+50.00 58.00

288+00.00 65.00

288+50.00 65.00

289+00.00 60.00

289+50.00 47.00

290+00.00 48.00

290+50.00 40.00

291+00.00 44.00

291+50.00 61.00

292+00.00 44.00

293+00.00 77.00

293+50.00 72.00

294+00.00 60.00

294+50.00 44.00

295+50.00 37.00

296+10.00 R\W, 65.00

296+50.00 76.00

296+60.00 R\W, 65.00

296+93.00 PUE

296+97.00 R\W

296+86.00 PUE

296+83.00 88.00

296+00.00 62.00

PL 44.45

PL 46.67

PL 51.73

PL 33.12

PL 33.54

PL 53.73

PL 51.08

PL 45.79

PL 75.43

-L- STA. 292+35 TO 292+00 RT SEE DETAIL 3

114 CALVIN A. MELLOTT

116 ALLEGHANY STONE, LLC

117 SCOTT STOKER AND SHANE STOKER

118 LORRAINE M. STOKER, ESTATE

119 BRIAN W. RAINES

SCRUB

DUKE POWER R/W

200.00'

198.44' N45°06'05"W

N47°54'37"E 285.50'

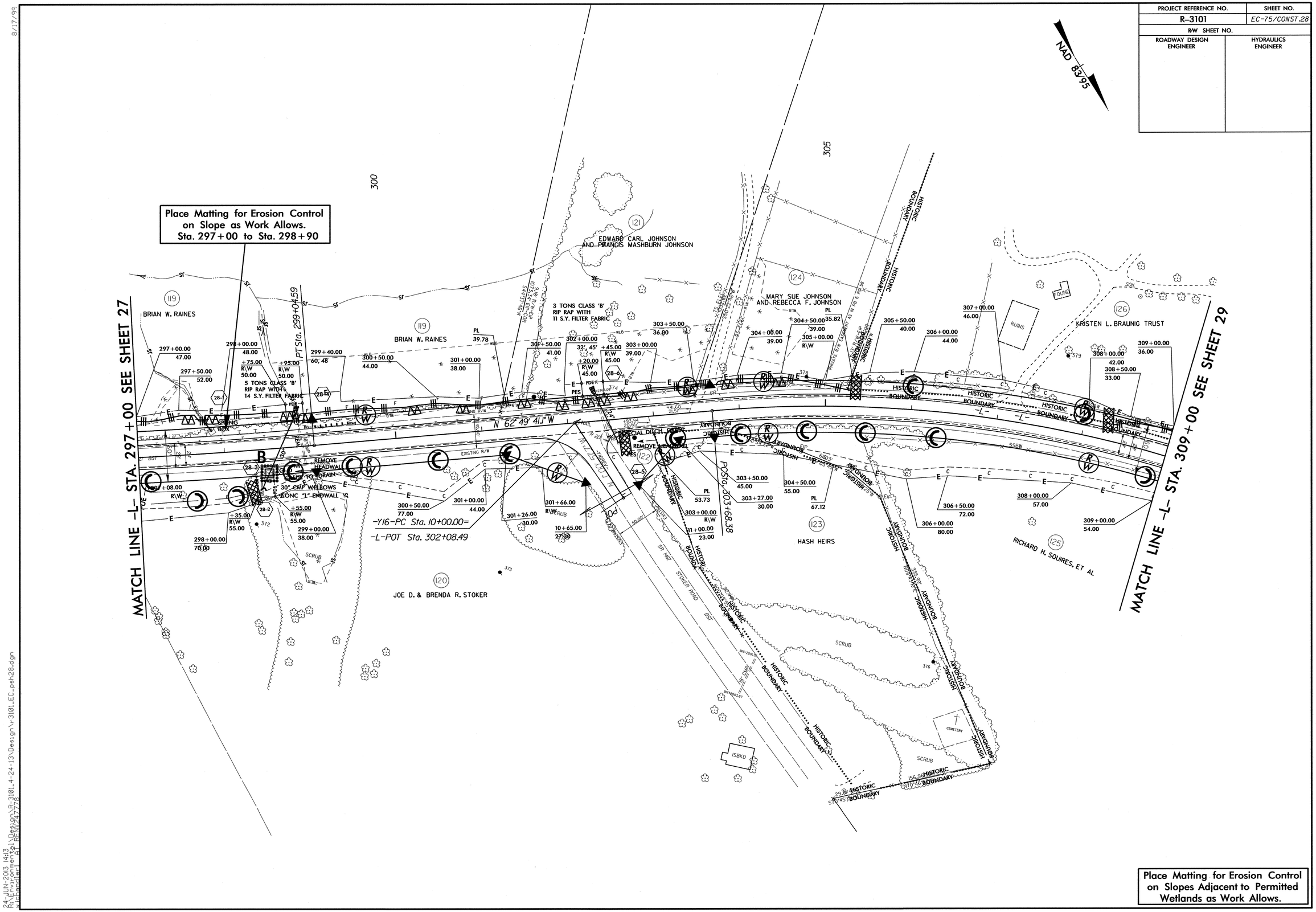
N47°54'37"E 269.56'

N58°38'59"W 184.56'

N58°38'59"W 96.00'

24-JUN-2013 14:07
M:\Environmental\Design\R-3101.4-24-13\Design\r-3101.EC.psh27.dgn
M:\Environmental\DEENVS\27778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-75/CONST.28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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

8/17/99

24-JUN-2013 14:13
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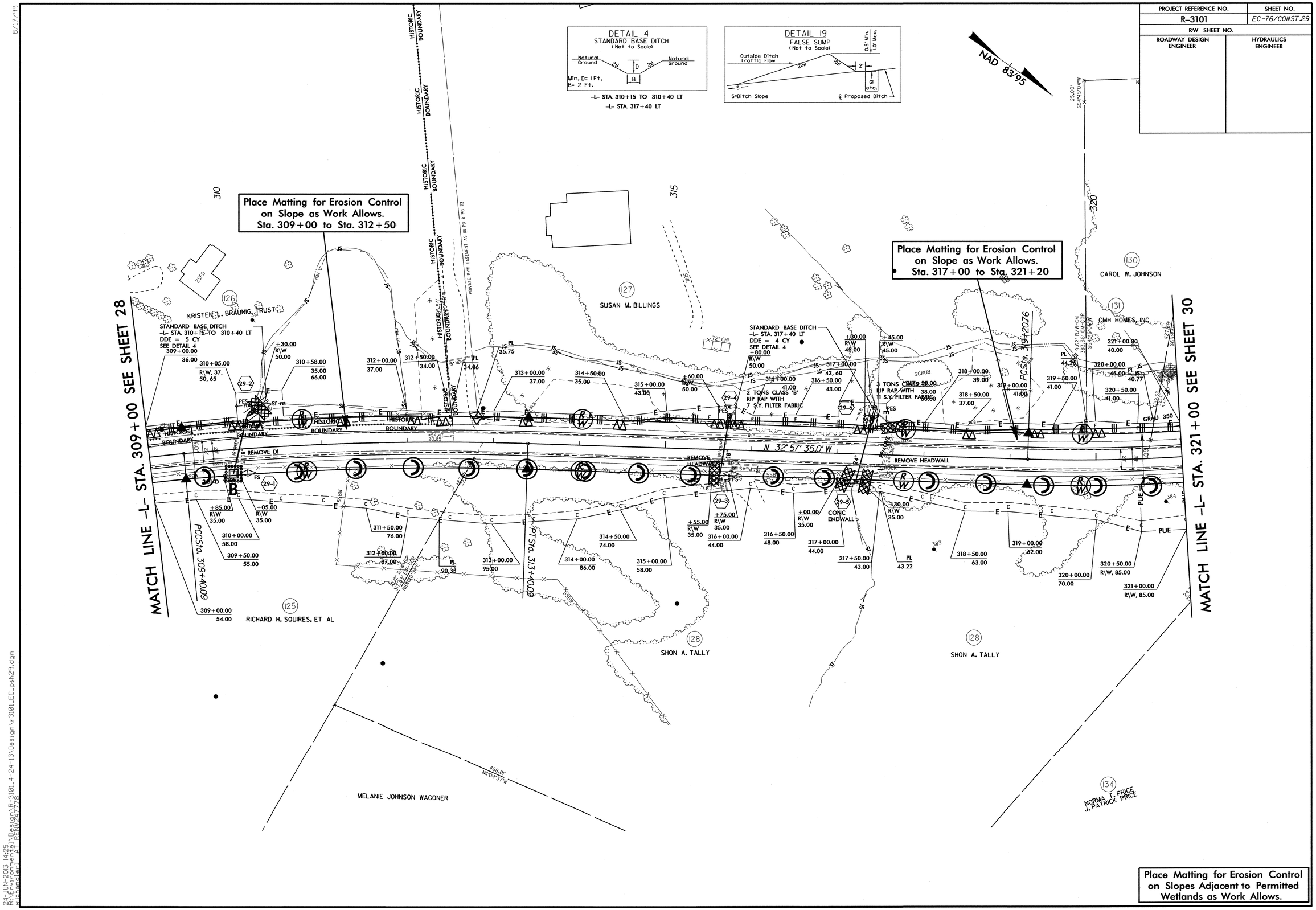
wjchandler1 AT RENV247778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-76/CONST.29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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

8/17/99

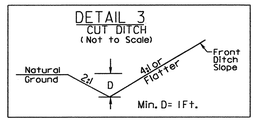
24-JUN-2013 14:25
R:\Environmental\Design\R-3101_4-24-13\Design\r-3101_EC_psh29.dgn
wichandler1 AT RENV247778

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-77/CONST.30
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

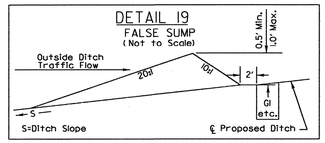
DETAIL 3
CUT DITCH
(Not to Scale)



Min. D= 1Ft.

-L- STA. 321+50 TO 322+50 RT
-L- STA. 331+50 TO 333+50 RT

DETAIL 19
FALSE SUMP
(Not to Scale)



Place Matting for Erosion Control on Slope as Work Allows. Sta. 321+45 to Sta. 322+85

Place Matting for Erosion Control on Slope as Work Allows. Sta. 324+40 to Sta. 325+50

Place Matting for Erosion Control on Slope as Work Allows. Sta. 332+40 to Sta. 333+90

30 x 14 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
6 ft. weir
ID 30.2

MATCH LINE -L- STA. 321+00 SEE SHEET 29

MATCH LINE -L- STA. 333+00 SEE SHEET 31

JOEY J. ROYALL AND DARLA R. ROYALL

CMH HOMES, INC

TED ROSS AND LILLIAN ROSS

MILTON W. SCOTT AND PEGGY A. SCOTT

NOVELLA KIRK

NORMA T. PRICE
J. PATRICK PRICE

-L- GRAU 350

PC Sta. 332+81.83

5 TONS CLASS 'B' RIP RAP WITH 16 S.Y. FILTER FABRIC

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

CUT DITCH
-L- STA. 321+50 TO 322+50 RT
SEE DETAIL 3

CUT DITCH
-L- STA. 331+50 TO 333+50 RT
SEE DETAIL 3

SLIPLINE EXISTING 3'X5' CULVERT WITH 30" CCFRPM PIPE

REMOVE HEADWALL

N 46° 47' 38.4" W

2GI-D
18" CMP W/ELBOWS

CONC. ENDWALL

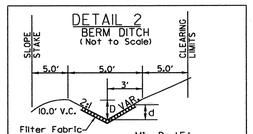
BORE AND JACK

24-JUN-2013 14:29
R:\Environmental\Design\R-3101.4-24-13\Design\r-3101_EC_psh30.dgn
User:rbenzing
Created: Fri Mar 27 17:17:18 2009

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-78/CONST.31
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

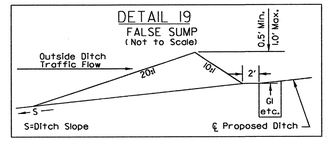
DETAIL 2
BERM DITCH
(Not to Scale)



Min. D= 1Ft.
Max. d= 1Ft.

Type of Liner= CLASS B RIP RAP

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95

-L- STA. 335+20 TO 338+00 RT
-L- STA. 338+00 TO 339+00 RT
-L- STA. 339+00 TO 341+00 RT

Place Matting for Erosion Control on Slope as Work Allows. Sta. 332+40 to Sta. 333+90

Place Matting for Erosion Control on Slope as Work Allows. Sta. 335+50 to Sta. 337+00

Place Matting for Erosion Control on Slope as Work Allows. Sta. 344+30 to Sta. 345+75

24 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 31.1

MATCH LINE -L- STA. 333+00 SEE SHEET 30

MATCH LINE -L- STA. 345+00 SEE SHEET 32

335

340

345

(137) NOVELLA KIRK

(139) SAMUEL J. DUNCAN AND HELEN T. DUNCAN

(134) NORMA T. PRICE
J. PATRICK PRICE

PTSta. 335+61.81

PCSta. 336+05.69

PTSta. 338+42.16

PCSta. 340+03.79

PTSta. 342+95.72

N 41° 29' 38.0" W

N 57° 22' 11.7" W

CUT DITCH
-L- STA. 331+50 TO 333+50 RT
SEE DETAIL 3

CUT DITCH
-L- STA. 334+50 TO 335+20 RT
SEE DETAIL 3

BERM DITCH
-L- STA. 335+20 TO 338+00 RT
SEE DETAIL 2

BERM DITCH
-L- STA. 338+00 TO 339+00 RT
SEE DETAIL 2

BERM DITCH
-L- STA. 339+00 TO 341+00 RT
SEE DETAIL 2

CUT DITCH
-L- STA. 343+50 TO 345+00 RT
SEE DETAIL 3

3 TONS CLASS 'B' RIP RAP WITH 14 S.Y. FILTER FABRIC

3 TONS CLASS 'B' RIP RAP WITH 10 S.Y. FILTER FABRIC

3 TONS CLASS 'B' RIP RAP WITH 10 S.Y. FILTER FABRIC

2 TONS CLASS 'B' RIP RAP WITH 22 S.Y. FILTER FABRIC

REMOVE HEADWALL

CONC ENDWALL

18" CSP W/ELBOWS

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

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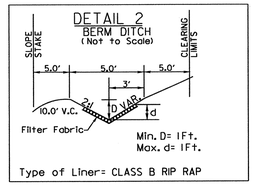
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-79/CONST.32
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

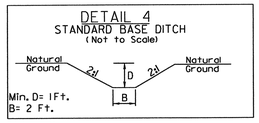
DETAIL 2
BERM DITCH
(Not to Scale)



Type of Liner= CLASS B RIP RAP

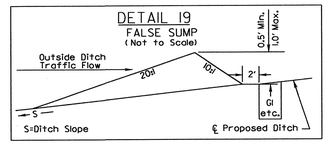
-L- STA. 350+50 TO 354+00 RT

DETAIL 4
STANDARD BASE DITCH
(Not to Scale)



-L- STA. 305+03 LT

DETAIL 19
FALSE SUMP
(Not to Scale)



10 x 21 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 32.2

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 344+30 to Sta. 345+75

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 348+90 to Sta. 351+70

10 x 21 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 32.3

MATCH LINE -L- STA. 345+00 SEE SHEET 31

MATCH LINE -L- STA. 357+00 SEE SHEET 33

SAMUEL J. DUNCAN AND HELEN T. DUNCAN (139)

RICK MEDINA (140)

PAUL T. ENTERPISES, INC (141)

8 TONS CLASS 'B' RIP RAP WITH 21 S.Y. FILTER FABRIC

2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

STANDARD BASE DITCH -L- STA. 305+03 LT DDE 4 CY SEE DETAIL 4

BERM DITCH STA. 350+50 TO 354+00 SEE DETAIL 2

SLIPLINE EXISTING 30"RCP CULVERT WITH 30" CCFRPM PIPE

REMOVE HEADWALL

18" CSP W/ELBOWS

GRADE TO DRAIN

SEPTIC TANK

DECK

ISBKD

SCRUB

CONC ENDWALL

POT ELE=562.77 (60' LT)

PCS to 355+49.09

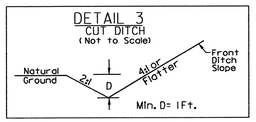
510.49'
N45°58'42"W

10-JAN-2014 07:52
R:\Environmental\Design\R-3101_4-24-13\Design\r-3101_EC_psh32.dgn
Roadbourn, Al (27)384

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-80/CONST.33
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

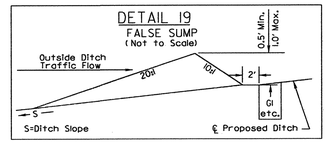
DETAIL 3
CUT DITCH
(Not to Scale)



Min. D= 1Ft.

-L- STA. 363+80 TO 364+50 RT

DETAIL 19
FALSE SUMP
(Not to Scale)



Place Matting for Erosion Control on Slope as Work Allows. Sta. 363+20 to Sta. 365+00

NAD 83/95

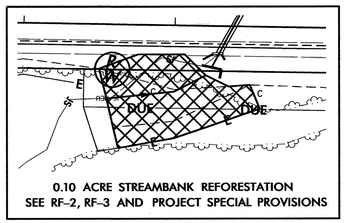
S 38°29'49" W 80.35'
S 35°01'24" W 23.67'
100.52'
N 45°45'45" W

MATCH LINE -L- STA. 357+00 SEE SHEET 32

MATCH LINE -L- STA. 369+00 SEE SHEET 34

SCRUB
LANDSCAPE AREA
ROCK COLUMNS
SAMUEL J. DUNCAN AND HELEN T. DUNCAN
JUANA OJEDA
THOMAS DUNCAN GENTRY
CULVERT #1 5' X 4' I BARREL
CULVERT #2 5' X 4' I BARREL
SUPLINE EXISTING 5'X4' CULVERT WITH 42" CCFRPM PIPE
CUT DITCH -L- STA. 363+80 TO 364+50 RT SEE DETAIL 3
CONCRETE "L" ENDWALL
10 TONS CLASS 'B' RIP RAP WITH 128 S.Y. FILTER FABRIC
5 TONS CLASS 'B' RIP RAP WITH 16 S.Y. FILTER FABRIC
REMOVE DI
GRADE TO DRAIN
RETAIN
30" CMP W/ELBOWS
PTS Sta. 360+88.74
N 43° 42' 18.5" W
S 42°50'41" E 60' RCP
S 6°48'20" E
S 17°55'57" W 174.67'
N 18°20'25" E 117.58'
N 25°07'35" E 117.58'
N 71°52'35" W 118.83'
N 43°42'18.5" W 100.00'
N 63°24'55" E 133.73'
N 43°42'18.5" W 100.00'

0.10 ACRE STREAMBANK REFORESTATION
SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS



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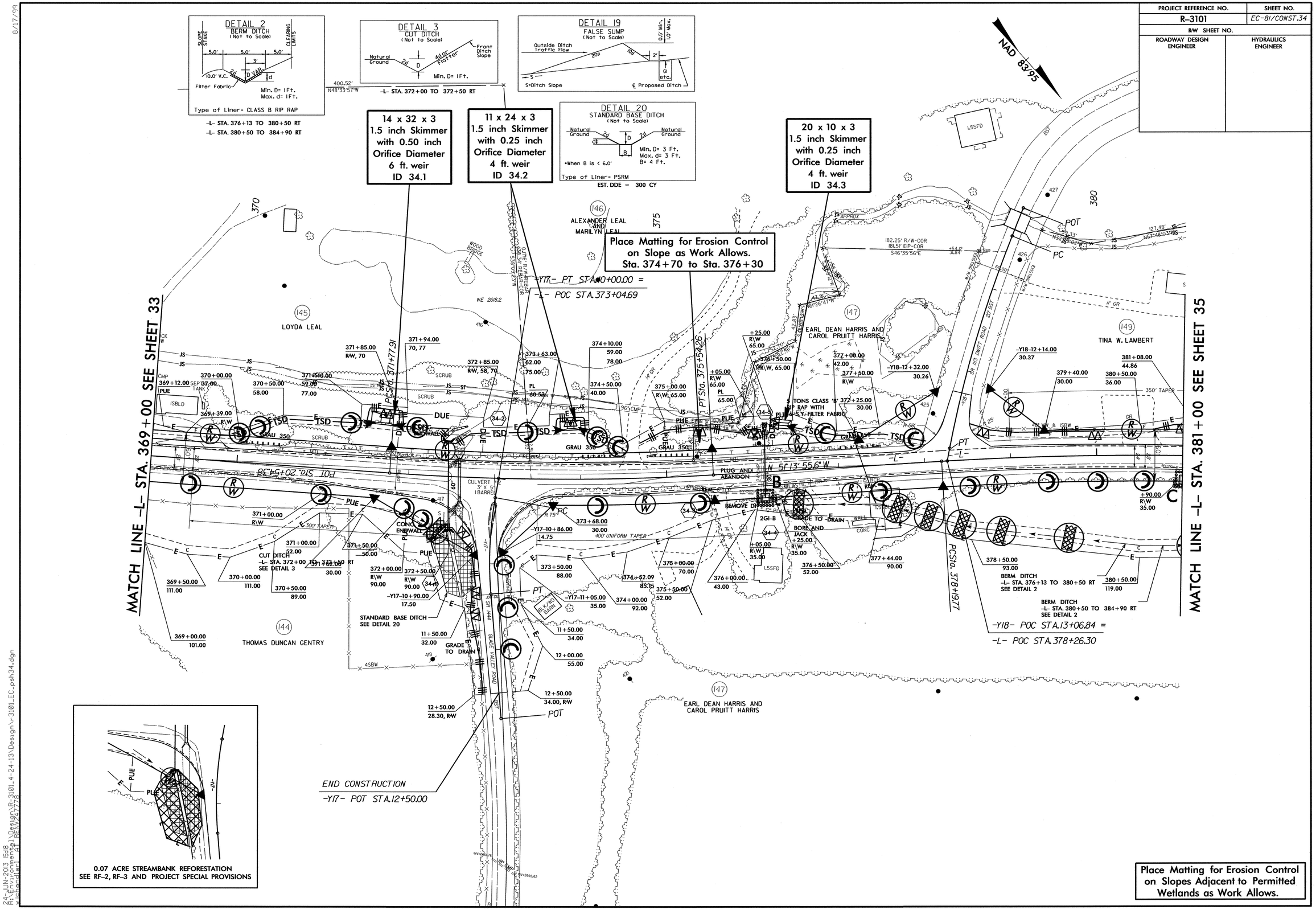
rchandler1
REV 24.7.7.8

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-81/CONST.34
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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

8/17/99

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wichandler1 AT RENV247778

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-82/CONST.35
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE –L– STA. 381+00 SEE SHEET 34

MATCH LINE –L– STA. 393+00 SEE SHEET 36

NAD 83/95

ROGER DALE HANES

NELSON MURRAY AND MAE P. MURRAY

EARL DEAN HARRIS AND CAROL PRUITT HARRIS

J.B. WATSON AND MERELE WATSON

KENNETH WILSON AND BARBARA WILSON

JOHN MICHAEL CAUDILL

JOHN MICHAEL CAUDILL

JOHN MICHAEL CAUDILL

BLUE RIDGE ELECTRIC MEMBERSHIP

SUB STATION

ISF BUILDING

ISF BUS

HTR

DECK

SCRUB

GR PA

APPROX

DETAIL 2
BERM DITCH
(Not to Scale)

Type of Liner= CLASS B RIP RAP

–L– STA. 380+50 TO 384+90 RT

DETAIL 3
CUT DITCH
(Not to Scale)

–L– STA. 388+50 TO 389+00 RT

DETAIL 8
CUT DITCH
(Not to Scale)

Type of Liner= PSRM

–L– STA. 384+70 TO 385+07 RT

DETAIL 19
FALSE SUMP
(Not to Scale)

S=Ditch Slope

382+00.00 34.00 2 TONS CLASS 'B' RIP RAP WITH 7 S.Y. FILTER FABRIC

381+26.00 37.50

382+20.00 R\W

BERM DITCH –L– STA. 380+50 TO 384+90 RT SEE DETAIL 2

383+50.00 88.00

384+23.78 R\W

384+00.00 77.00

384+55.00 R\W

381+50.00 117.00

382+50.00 102.00

-Y19REV-POT Sta. 10+00.00=

-L-POT Sta. 385+40.00

PT Sta. 382+76.58

10+80.00 R\W

11+00.00 36.00

11+25.00 R\W

11+28.00 PUE

11+36.00 98.00

11+56.00 190.00

11+53.00 R\W

11+53.50 PUE

12+00.00 R\W, 28.00

386+47.51 30.31

386+47.98 R\W

388+50.00 45.00

389+00.00 60.00

389+50.00 50.00

391+05.00 50.00 81.00

391+91.00 50.00 81.00

392+15.00 50.00, 30.00

392+15.00 R\W, 50.00

PL 130.00

PL 81.00

CLASS B RIP RAP 2 TONS 7 SY FF

15" CSP W/ELBOWS

TBDI W/FLAT GRATE

24 x 66 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
16 ft. weir
ID 35.1

12" RCP

15" RCP

18" RCP

RETAIN

REMOVE

REMOVE HEADWALL

2GI-D FS

CMP ELBOWS

CULV

TSD

GRAU 350 TL-3

GRAU 260

REBAR

PC

PT

POT

PUE

ISBKD

72" WALL

EAUM

4-SBW

48" WW & ISBW

24" WW & ISBW

MBS-I & WW-48"

8.75 R/W REBAR
465.74' REBAR
N61°23'39"E

24-JUN-2013 15:21
R:\Raw Data\Projects\R-3101\Design\R-3101_4-24-13\Design\r-3101_EC_psh35.dgn
Microstation J, BERN, 247778

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-83/CONST.36
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE -L- STA. 393+00 SEE SHEET 35

MATCH LINE -L- STA. 405+00 SEE SHEET 37

NAD 83/95

-Y20-POT Sta. 10+00.00

-Y20-POT Sta. 12+15.73=
-L-POT Sta. 397+92.67

-Y20- 11+20.00
24.83

-Y20- 11+18.00
25.16

395+00.00
50.00, 30.00

396+83.00
30.00

399+05.00
30.00

PL
50.00CL 'II' RIP RAP
(STRUCTURAL PAY ITEM)

CL 'II' RIP RAP
(STRUCTURAL PAY ITEM)

395+00.00
R\W, 50.00

PL
50.00

395+62.00
50.00
63.00

396+06.00
50.00
63.00

396+50.00
50.00

397+00.00
43.00

397+50.00
41.00

398+00.00
45.00

399+50.00
52.00

400+50.00
51.00

401+00.00
49.00

402+00.00
39.00

402+50.00
49.00

403+39.00
54.00
71.00

404+00.00
77.00

404+00.00
180.00

404+83.00
89.00

PL
42.44

PL
30.00

PL
30.00

DORIS GREENE (154)

CLIFF E. TARLTON AND NINA H. TARLTON (159)

PHILIP S. HORTON AND PAMELA HORTON (160)

JOE STOKER AND (161)

LORRAINE V. STOKER ESTATE (157)

BREMCO SUBSTATION (156)

BLUE RIDGE ELECTRIC MEMBERSHIP CORPORATION

SR 1118 MACEDONIA CHURCH ROAD 20' BST

US 21 22' BST

N 44°22'47.5" W

N 42°25'56" W

S 29°38'04" W

S 25°29'38" W

S 27°29'04" W

S 27°29'04" W

S 05°00'05" E

N 38°32'49" E

N 47°55'36" E

N 27°55'36" W

N 47°55'36" E

IS MTL BUS

TIMBER POST

GR PA

REBAR

RETAIN

15" RCP

FILL & ABANDON
BARREL

REINFORCED
CONC. ENDWALL

CULVERT #4
2 BARREL
6'X7'

SCRUB

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 394+15 to Sta. 394+90

Place Matting for Erosion Control
on Slope as Work Allows.
Sta. 404+00 to Sta. 405+85

10 x 23 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 36.1

40 x 15 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
7 ft. weir
ID 36.2

0.10 ACRE STREAMBANK REFORESTATION
SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

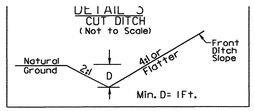
NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

24-JUN-2013 15:24
H:\Environment\Design\R-3101_4-24-13\Design\r-3101_EC_psh36.dgn
RENVS2\277778

8/17/99

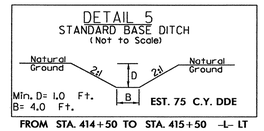
PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-84/CONST.37
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 3
CUT DITCH
(Not to Scale)



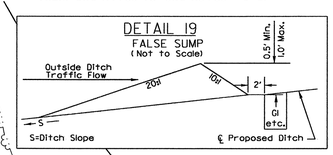
-L- STA. 406+50 TO 407+50 RT.
-L- STA. 416+20 TO 417+00 LT.
-Y21- STA. 10+32 TO 11+00 LT.

DETAIL 5
STANDARD BASE DITCH
(Not to Scale)



FROM STA. 414+50 TO STA. 415+50 -L- LT

DETAIL 19
FALSE SUMP
(Not to Scale)



NAD 83/95

Place Matting for Erosion Control on Slope as Work Allows. Sta. 413+90 to Sta. 416+30

40 x 14 x 3 1.5 inch Skimmer with 0.50 inch Orifice Diameter 6 ft. weir ID 37.2

27 x 11 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir ID 37.1

MATCH LINE -L- STA. 405+00 SEE SHEET 36

MATCH LINE -L- STA. 417+00 SEE SHEET 38

-Y21-POT Sta. 10+00.00=
-L-POT Sta. 406+00.00

-D2-POT Sta. 10+00.00=
-L-POT Sta. 409+60.00

-Y22- POT STA.10+00.00

PROP. 2 BARREL 7'x7' RCBC BURY INVERT 1.0' W/ LOW FLOW SILLS

3 TONS CLASS 'B' RIP RAP WITH 11 S.Y. FILTER FABRIC

REMOVE HEADWALL

GRADE TO DRAIN

CUT DITCH -L- STA. 406+50 TO 407+50 RT. SEE DETAIL 3

CUT DITCH -Y21- STA. 10+32 TO 11+00 LT. SEE DETAIL 3

CUT DITCH -L- STA. 416+20 TO 417+00 LT. SEE DETAIL 3

4' BASE CHANNEL ROCK CROSS VANES SEE DETAIL 5 AND ROCK CROSS VANES DETAIL

CONC. ENDWALL

PROP. RELOCATION OF GATE

CULVERT *1 3 X 3 BARREL

CONC. ENDWALL

REMOVE HEADWALL

END CONSTRUCTION
-D1-POT Sta. 11+70.25

-Y22- POC STA.13+03.03 =
-L- POT STA.413+47.86

(162) DONNIE W. WAGONER

(164) DEAN R. EDWARDS AND BILLIE EDWARDS

(157) LORRAINE M. STOKER, ESTATE

(161) NORRIS C. DIXON, DURANT C. WHITLEY, GENO ALMOND, SUE ALMOND

(161A)

1.5 SFD

HISTORIC BOUNDARY

3-WD RAIL

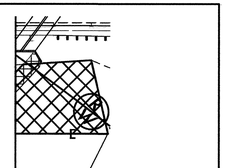
WOOD CORRAL

3 RAIL CORRAL

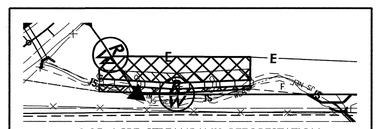
SCRUB

Place Matting for Erosion Control on Slope as Work Allows. Sta. 404+00 to Sta. 405+85

PAVEMENT TO BE REMOVED



0.06 ACRE STREAMBANK REFORESTATION
SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS



0.05 ACRE STREAMBANK REFORESTATION
SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

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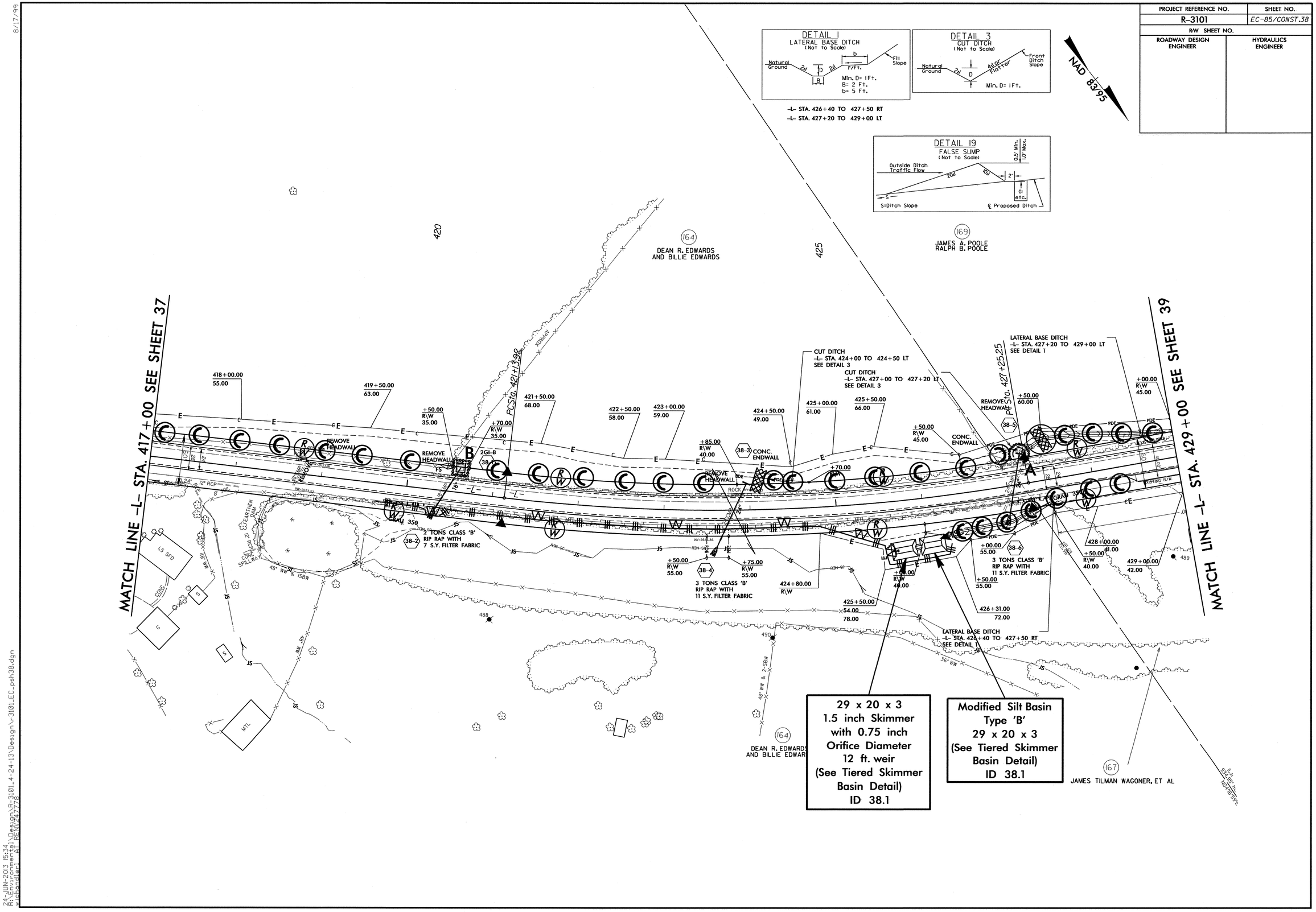
Michael Hall RENV21778

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-85/CONST.38
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-86/CONST.39
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE -L- STA. 429+00 SEE SHEET 38

MATCH LINE -L- STA. 441+00 SEE SHEET 40

Place Matting for Erosion Control on Slope as Work Allows. Sta. 440+50 to Sta. 442+75

69 x 34 x 3 1.5 inch Skimmer with 1.375 inch Orifice Diameter 22 ft. weir ID 39.1

N 61° 11' 28.9" W

S 73° 42' 51" W

US 21 22' BST

-L-

-Y23-

JAMES TILMAN WAGONER, ET AL
DB 72 PG 377
WILL 10-E-22
WILL 10-E-73

JAMES A. POOLE
RALPH B. POOLE
DB 50 PG 58
DB 51 PG 159
DB 66 PG 504

ROBERT L. PRESNELL, JR. AND PAULA C. PRESNELL
DB 242 PG 845

LORRAINE M. STOKER, ESTATE
WB 12-E-123
REMAINDER OF
DB 69 PG 528

RUSSELL O. EDWARDS AND HELEN EDWARDS
DB 69 PG 445
PB 1 PG 65

SPECIAL CUT DITCH SEE DETAIL 6

CLASS 'B' RIP RAP 8 TONS 21 S.Y. F.F.

NO DEFINED CHANNEL EXIST. PIPE SILTED 50%

REMOVE & REPLACE

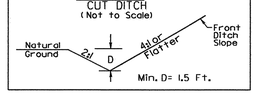
CLASS 'B' RIP RAP 3 TONS 9 S.Y. F.F.

2' BASE LATERAL DITCH SEE DETAIL 7

2' BASE LATERAL DITCH SEE DETAIL 17

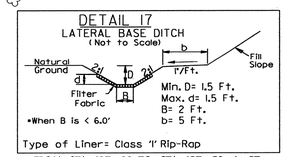
Sta.= 437+00 to 438+19 -L- RT
Q= 15 CFS
V= 2.6 FPS
I= ?
d= 4.58'
n= ?
C= 0.35
dc = 3.3 dc

DETAIL 6
CUT DITCH
(Not to Scale)



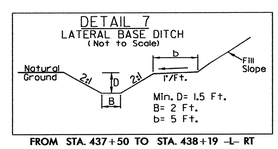
FROM STA. 433+50 TO STA. 434+00 -L- RT

DETAIL 17
LATERAL BASE DITCH
(Not to Scale)



FROM STA. 437+00 TO STA. 437+50 -L- RT

DETAIL 7
LATERAL BASE DITCH
(Not to Scale)



FROM STA. 437+50 TO STA. 438+19 -L- RT

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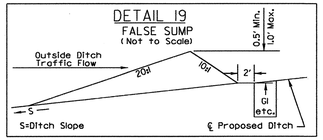
Microstation SS8 REN/217778

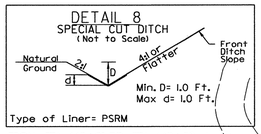
8/17/95

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-87/CONST.40
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 19
FALSE SUMP
(Not to Scale)

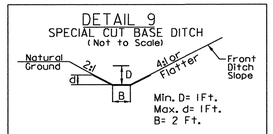


DETAIL 8
SPECIAL CUT DITCH
(Not to Scale)



Type of Liner= PSRM
FROM STA. 448+91 TO STA. 449+50 -L- LT.
FROM STA. 448+81 TO STA. 449+50 -L- RT.

DETAIL 9
SPECIAL CUT BASE DITCH
(Not to Scale)



Type of Liner= PSRM
FROM STA. 445+45 TO STA. 448+50 -L- RT

NAD 83/95

Place Matting for Erosion Control on Slope as Work Allows. Sta. 440+50 to Sta. 442+75

32 x 14 x 3
1.5 inch Skimmer
with 0.50 inch
Orifice Diameter
6 ft. weir
ID 40.2

28 x 14 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
6 ft. weir
ID 40.3

MATCH LINE -L- STA. 441+00 SEE SHEET 39

MATCH LINE -L- STA. 453+00 SEE SHEET 41

ALICE GARLAND AND MIKE DAVIS (173)

LOJEAN MOXLEY (172)

A.J. BARKER AND LELA M. BARKER (178)

BRADLEY C. BEDSAUL (176)

CLINT F. BEDSAUL AND LINDA T. BEDSAUL (175)

TONY G. GREENE (179)

TONY G. GREENE (179)

445

450

I86.60' N81°13'36"W

2.85' S03°52'39"W

I94.19' N89°09'59"W

I58.45' N86°43'36"E

S03°50'40"E 122.35'

S81°45'59"W 324.16'

N82°46'01"W 350.78'

441+26.00
55.00, 71.00

441+22.00
35', 42'

PL 71.09

441+50.00
85.00, 73.00

442+00.00
89.00, 58.00

442+47.00
38', 85'

442+50.00
56.00

443+00.00
PUE

443+41.02
30.00

441+29.00
25', 64'

CLASS 'I' RIP RAP

RETAIN

REMOVE & REPLACE

2GI-A

REMOVE

441+41.02
30.00

441+71.00
55.00, 66.00
1 @ 6' X 7' RCBC
BURY INVERT 1.0'
W/LOW FLOW SILLS

442+20.00
RW, 55.00

441+30.00
R\W, 55.00

441+00.00
38.00

443+04.00
.00, 72.00

442+10.00
30.00

442+50.00
R/W
40.00

443+00.00
R/W
40.00

443+50.00
42.00

444+00.00
RW, 50.00

444+50.00
61.00

PL 43.45

PL 66.55

CLASS 'B' RIP RAP
2 TONS
7 S.Y. F.F.

445+10.00
52', 79'

445+24.00
52', 80'

PL 58.91

445+50.00
79.00

445+00.00
58.00

MODIFIED FALSE SUMP
HEIGHT 1.5
22 Ft.
50.00

446+50.00
54.00

SPECIAL
2' BASE CUT DITCH
SEE DETAIL 9

446+85.00
50.00

447+70.00
54', 80'

447+80.00
54', 80'

447+50.00
54.00

448+00.00
55.00

SPECIAL CUT DITCH
SEE DETAIL 8

448+50.00
53.00

448+50.00
50.00

449+00.00
63.00

SPECIAL CUT DITCH
SEE DETAIL 8

CLASS 'B' RIP RAP
3 TONS
10 S.Y. F.F.

449+00.00
71.00

449+35.00
50', 56'

449+59.25
30.00

449+97.00
56.00

450+50.00
55.00

450+35.00
30.00

450+42.00
51.00

450+52.00
51.00

451+45.00
50.00

449+75.00
50.00

451+10.00
30.00

451+59.25
30.00

452+70.00
52.00

452+00.00
57.00

452+53.00
91.00

452+63.00
94.00

452+80.00
52.00

450+55.00
175.00

ST Sta. 449+59.25

ST Sta. 451+59.25

JONES COURT LANE

JONES PARK ROAD

DECK

HTR

ISBKD

CONC

ISBLK BUS

BST

ISS NOT IN MH

509

510

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PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-88/CONST.41
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE -L- STA. 453+00 SEE SHEET 40

MATCH LINE -L- STA. 465+00 SEE SHEET 42

181 DANNY D. LYON

181A CONNIE L. LYON
JUDY L. LYON

182 CLINT F. BEDSAUL AND
LINDA T. BEDSAUL

183 ELIZABETH FORTSON AND ANITA BRYAN
ERIC BRYAN AND WALTER F. BRYAN
IRIS LANGFORD AND ROBERT BRYAN
RUDOLPH BRYAN

184 DANNY D. LYON
AND BARBARA LYON

236 ALLEN JOINES AND
APRIL H. JOINES

237 CHARLES ALTON CROUSE

175 CLINT F. BEDSAUL AND
LINDA T. BEDSAUL

-Y25-POT Sta. 10+00.00

-Y24-POT Sta. 10+00.00=
-L-POC Sta. 463+50.72

-Y25-POT Sta. 11+51.21=
-L-POC Sta. 463+50.82

DETAIL 10
TAIL 'V' DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, Natural Ground
Min. D=VARIES 1.0 to 0 FT

FROM STA. 460+68 -L- LT

DETAIL 15
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, B, 2:1, b, 1':1', Fill Slope
Min. D= 1.5 Ft.
B= 3 Ft.
b= 5 Ft.

FROM STA. 466+00 TO STA. 468+30 -L- RT

DETAIL 3
CUT DITCH
(Not to Scale)

Natural Ground, 2:1, D, As or Flatter, Front Ditch Slope
Min. D= 1.0 Ft.

FROM STA. 459+50 TO STA. 460+50 -L- RT
STA. 462+00 TO 463+47 -L- RT

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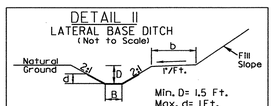
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-89/CONST.42
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NAD 83/95

DETAIL II
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
Max. d= 1Ft.
B= 4 Ft.
b= 5 Ft.

Type of Liner= PSRM

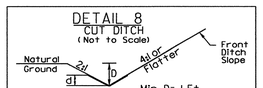
FROM STA. 476+00 TO STA. 477+00 -L- RT

DETAIL 3
CUT DITCH
(Not to Scale)

Min. D= 1.0 Ft.

FROM STA. 465+50 TO STA. 466+00 -L- RT

DETAIL 8
CUT DITCH
(Not to Scale)



Min. D= 1 Ft.
Max. d= 1 Ft.

Type of Liner= PSRM

FROM STA. 474+66 TO STA. 477+00 -L- LT

26 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 42.1

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 467+30 to Sta. 468+20

36 x 18 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
10 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 42.5

Modified Silt Basin
Type 'B'
36 x 18 x 3
10 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 42.5

50 x 20 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
12 ft. weir
ID 42.2

28 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 42.3

Place Matting for Erosion Control on Slope as Work Allows.
Sta. 468+00 to Sta. 470+15

MATCH LINE -L- STA. 465+00 SEE SHEET 41

MATCH LINE -L- STA. 477+00 SEE SHEET 43

GEORGE L. BRYAN
AND ELIZABETH H. BRYAN

BARBARA LYON

DELMER A. BRYAN AND
JUANITA G. BRYAN

WETLANDS
OBLITERATED BY
OUTSIDE CONTRACTOR

CLASS 'I' RIP RAP
38 TONS
78 S.Y. F.F.

CLASS 'B' RIP RAP
EST 2 TONS 7 S.Y. F.F.

CLASS 'B' RIP RAP

CLASS 'B' RIP RAP
5 TONS
14 S.Y. F.F.

RIP RAP @ EMBANKMENT
CLASS 'I' RIP RAP
SEE DETAIL

REMOVE

CUT DITCH
SEE DETAIL 3

3' BASE LATERAL DITCH
SEE DETAIL 15

3' BASE CHANNEL
ROCK CROSS VANES
SEE DETAILS

4' BASE CUT DITCH
SEE DETAIL 13

4' BASE LATERAL DITCH
SEE DETAIL 18

4' BASE LATERAL DITCH
PSRM
SEE DETAIL 11

CUT DITCH
SEE DETAIL

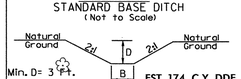
POSSIBLE
EXIST/JB

ISBKD

SR 1113 NARROW ROAD 12' EAST

SR 1118 NARROW ROAD 12' WEST

DETAIL 13
STANDARD BASE DITCH
(Not to Scale)

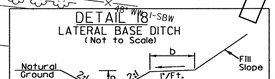


Min. D= 3 Ft.
B= 3 Ft.

EST. 174 C.Y. DDE

FROM STA. 468+76 TO STA. 469+50 -L- RT

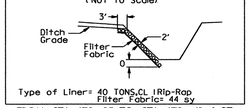
DETAIL 18
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
B= 4 Ft.
b= 5 Ft.

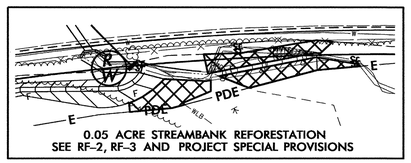
FROM STA. 475+00 TO STA. 476+00 -L- RT

DETAIL 12
RIP RAP AT EMBANKMENT
(Not to Scale)

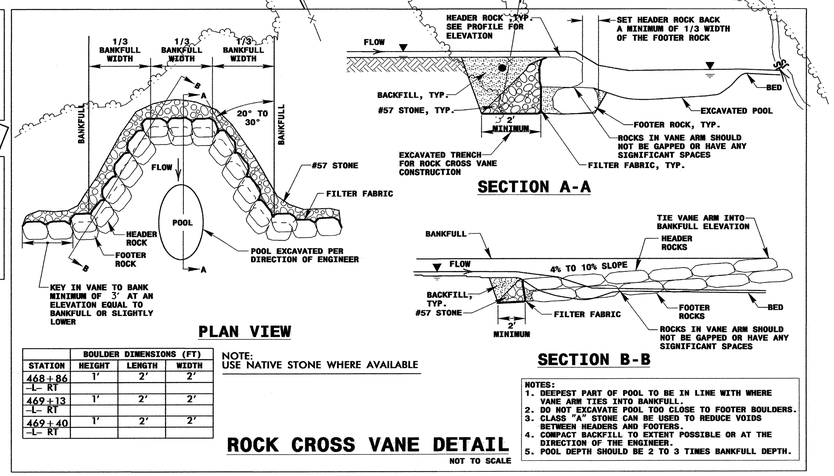


Type of Liner= 40 TONS,CL I Rip-Rap
Filter Fabric= 44 sy

FROM STA. 473+15 TO STA. 473+41 -L- RT



0.05 ACRE STREAMBANK REFORESTATION
SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS



PLAN VIEW

STATION	BOULDER DIMENSIONS (FT) HEIGHT	LENGTH	WIDTH
468+86 -L- RT	1'	2'	2'
469+13 -L- RT	1'	2'	2'
469+40 -L- RT	1'	2'	2'

NOTE:
USE NATIVE STONE WHERE AVAILABLE

ROCK CROSS VANE DETAIL
NOT TO SCALE

NOTES:
1. DEEPEST PART OF POOL TO BE IN LINE WITH WHERE VANE ARM TIES INTO BANKFULL.
2. DO NOT EXCAVATE POOL TOO CLOSE TO FOOTER BOULDERS.
3. CLASS "A" STONE CAN BE USED TO REDUCE VOIDS BETWEEN HEADERS AND FOOTERS.
4. COMPACT BACKFILL TO EXTENT POSSIBLE OR AT THE DIRECTION OF THE ENGINEER.
5. POOL DEPTH SHOULD BE 2 TO 3 TIMES BANKFULL DEPTH.

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Richard Penny (rlpenny)

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-90/CONST.43
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8.17.99

NAD 83/95

-Y27-POT Sta. 10+00.00

-Y26-POT Sta. 13+21.41

MATCH LINE -L- STA. 477+00 SEE SHEET 42

MATCH LINE -L- STA. 489+00 SEE SHEET 44

-L-

N 54° 55' 25.6" W

WILLIAM CHARLES BILLINGS AND LARRY DEAN BILLINGS

BRADY SEAN PROFITT AND MITZI D. PROFITT

ISF GRACE COMMUNITY CHURCH

FOXFIRE REALTY

GRANVILLE PAUL WAGONER AND SUE D. WAGONER

ROBERT L. JOHNSON AND RUTH C. JOHNSON
MICHAEL E. JOHNSON AND DEBRA P. JOHNSON
ROBERT W. JONSON

JON N. EDWARDS AND LISA A. EDWARDS

INDEPENDENCE OIL AND L.P. GAS, INC. A VIRGINIA CORPORATION

GUL K. THADANI AND VICKI C. THADANI

PHILENA DENNIS

FRED TEDDER AND BONNIE TEDDER

LARRY T. ATWOOD AND JOYCE M. ATWOOD

SR 1120 MACEDONIA CHURCH ROAD

SR 1428 SHILOH CHURCH ROAD

GRAU 350

PDE

PUE

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w.schneider1 (Final)

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-91/CONST.44
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3101	EC-92/CONST.45
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

MATCH LINE -L- STA. 501+00 SEE SHEET 44

MATCH LINE -L- STA. 513+00 SEE SHEET 46

22 x 11 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 45.1

28 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 45.3

52 x 14 x 3
1.5 inch Skimmer
with 0.625 inch
Orifice Diameter
6 ft. weir
ID 45.2

FOY C. HEFNER, SR. AND KATHERYN S. HEFNER

ARTHUR GAMBILL AND SONNIE O. GAMBILL

JERRY G. BILLINGS AND OCTAVIA BILLINGS

RICHARD L. DOUGHTON AND MARY JANE DOUGHTON

WILLIAM AL GRAHAM, JR. AND DENISE H. GRAHAM

CONSTRUCTION -L- STA. 510+30.00

END RESURFACING -L- POT STA. 510+00.00

-L- GRAU 350

N 88° 30' 24.6" W

N 87° 41' 33.6" W

114.46' N89°50'30"W

192.69' N89°40'12"W

340.28' S89°21'15"E

370.45' S00°01'01"E

452.10' N06°04'37"E

REMOVE & REPLACE 30" RCP BURIED 0.5'

REMOVE & REPLACE

RETAIN

CLASS 'B' RIP RAP 8 TONS 21 S.Y. F.F.

CLASS 'B' RIP RAP 11 TONS 22 S.Y. F.F.

CLASS 'B' RIP RAP 2 TONS 7 S.Y. F.F.

CLASS 'B' RIP RAP 3 TONS 11 S.Y. F.F.

CLASS 'B' RIP RAP 2 TONS 7 S.Y. F.F.

SPECIAL CUT BASE DITCH SEE DETAIL 16

2' LATERAL BASE DITCH SEE DETAIL 15

MODIFIED FALSE SUMP HEIGHT = 1.5 Ft.

PCSta. 506+59.31

PTSta. 507+87.87

PCSta. 510+10.97

501+00.00 +00.00 63.00 R\W 50.00

501+17.00 58.00, 75.00

501+61.00 58.00, 75.00

502+00.00 48.00

502+50.00 45.00

503+00.00 34.00 PL 49.84

503+50.00 54.00

503+76.00 50.00, 64.00

504+25.00 47.00, 61.00

504+53.00 R/W 52.00

503+90.00 52.00

503+23.00 54.00

500+94.00 +20.00 R/W 52.80 40.00

+00.00 R\W 40.00

+20.00 R\W 40.00

505+00.00 40.00

505+50.00 RW

505+65.00 40.00

506+00.00 42.00

506+10.00 40.00

506+50.00 72.00

507+00.00 79.00

507+70.00 40.00 PL 40.82

508+00.00 56.00

508+50.00 44.00 PL 43.72

508+50.00 53.00

508+70.00 R/W, 30.00

509+00.00 48.00 +75.00 R\W 50.00

509+00.00 56.00

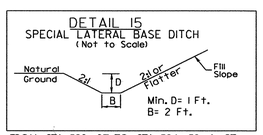
510+00.00 R/W

+95.00 R\W 50.00

510+11.00 30.00,21.91

END SBG STA. 505+00 -L- LT

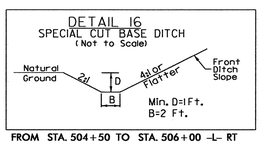
DETAIL 15
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D= 1 Ft.
B= 2 Ft.

FROM STA. 503+27 TO STA. 504+50 -L- RT

DETAIL 16
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D=1 Ft.
B=2 Ft.

FROM STA. 504+50 TO STA. 506+00 -L- RT

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