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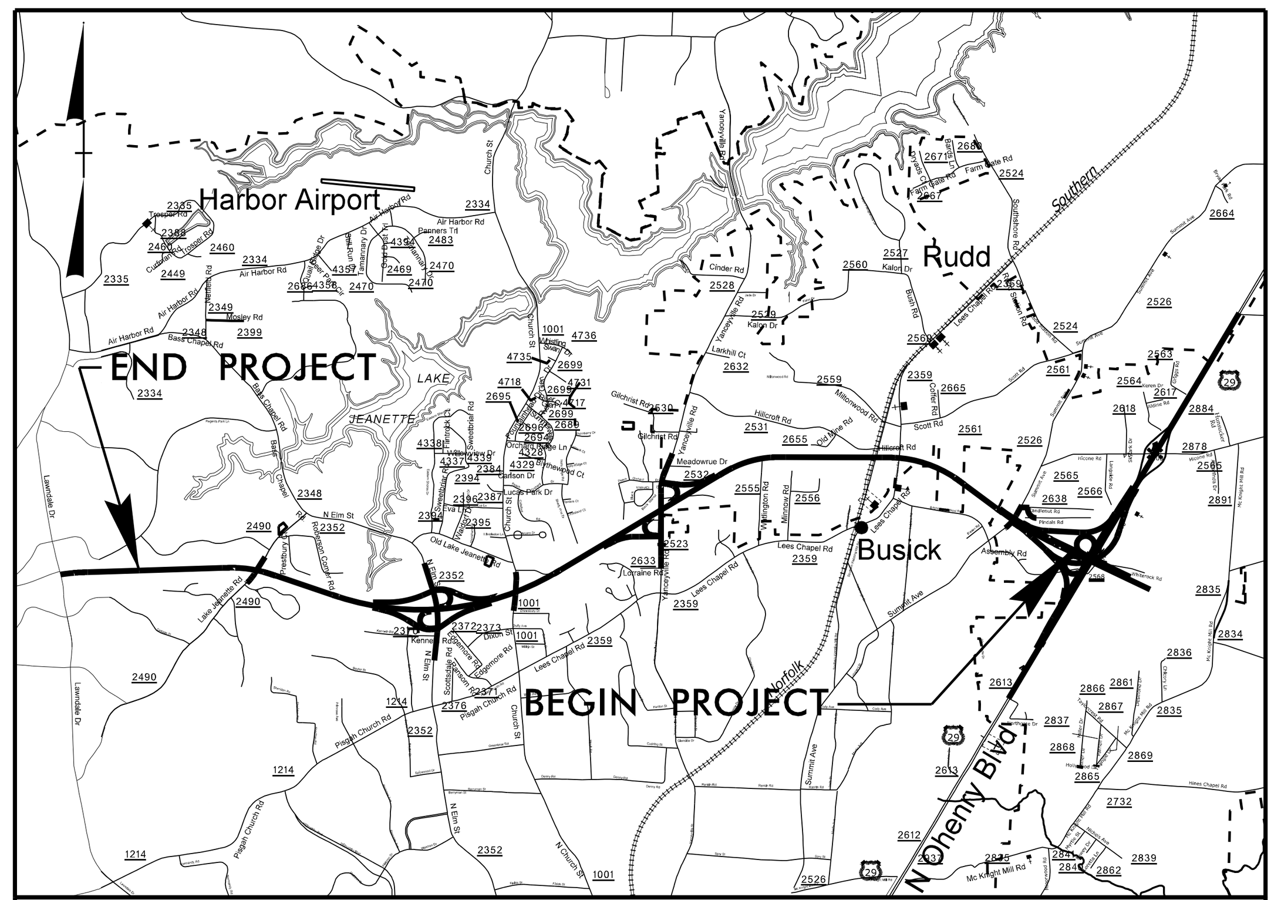
TIP PROJECT: U-2525C

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2525C	EC-1	

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



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

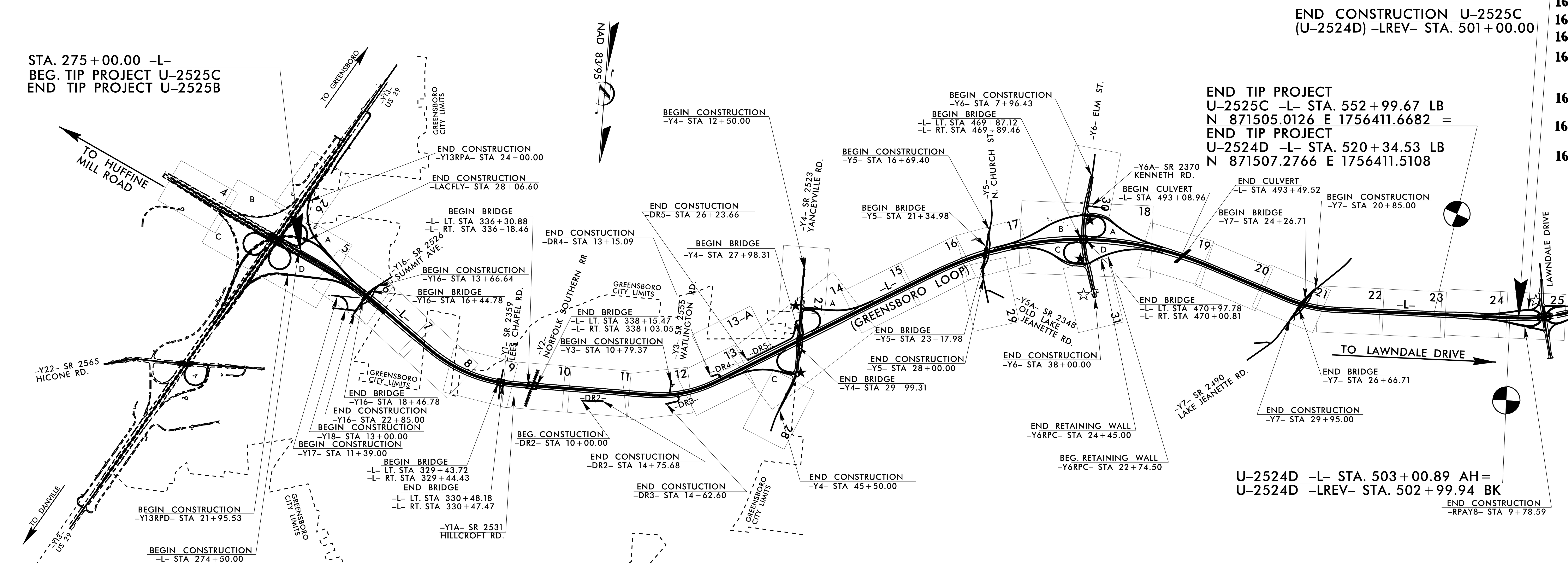
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

GUILFORD COUNTY

LOCATION: *GREENSBORO LOOP FROM US 29 NORTH OF GREENSBORO TO EAST OF LAWNDALE DRIVE*

TYPE OF WORK: *GRADING, DRAINAGE, PAVING, SIGNALS, CULVERTS, STRUCTURES, AND RETAINING WALLS*

★	PROPOSED SIGNAL
☆	REVISED SIGNAL



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF GREENSBORO.
THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

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	SW / 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)

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared In the Office of:

Prepared for the North Carolina Department of Transportation in the Office of:

WETHERILL ENGINEERING
1223 JONES FRANKLIN ROAD
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

Designed by:

Andrew Hollen 3490
NAME LEVEL III CERTIFICATION NO.

Reviewed In the Office of:

ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:

Jennifer Parish

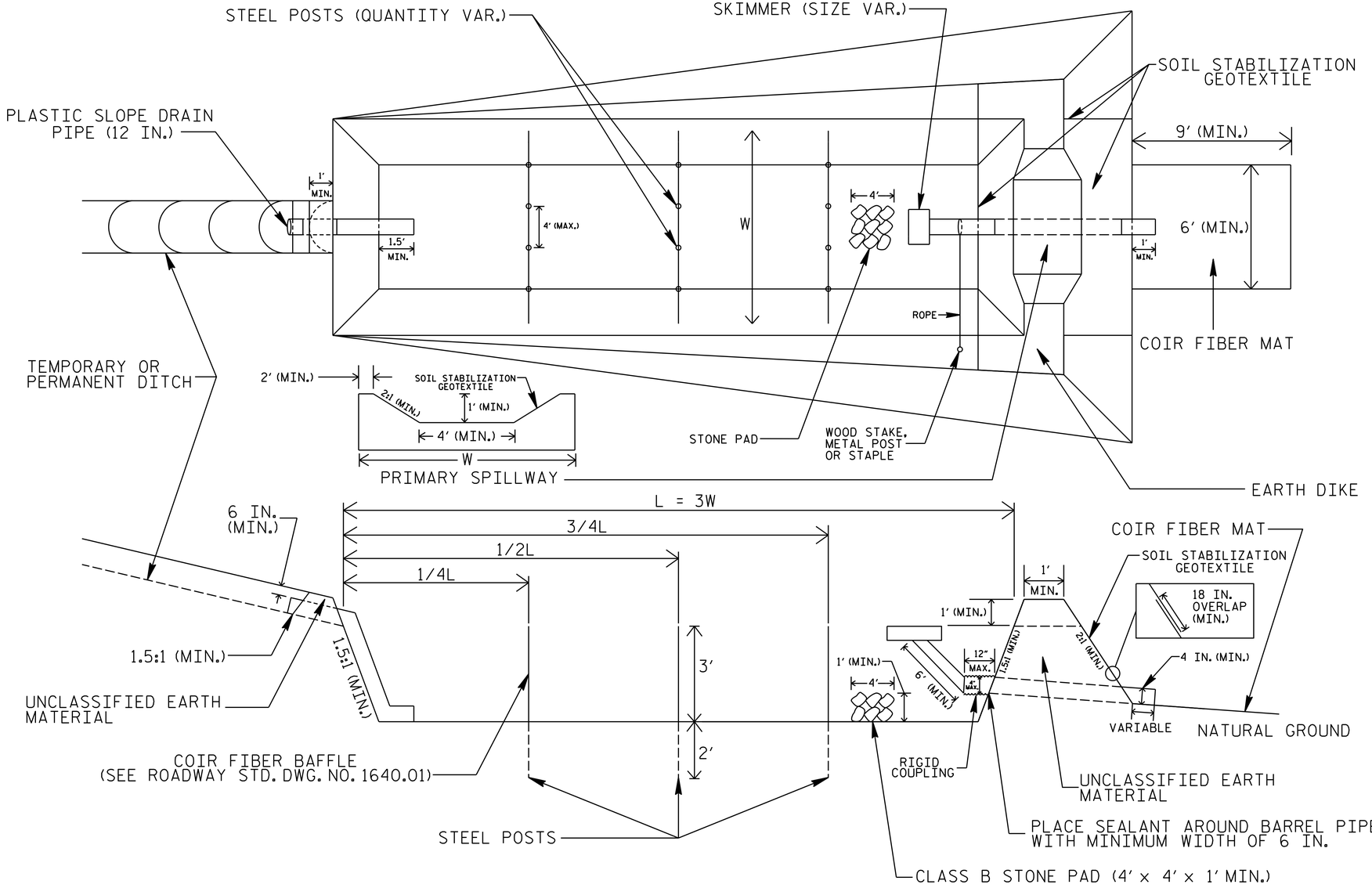
Roadway Standard Drawings

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

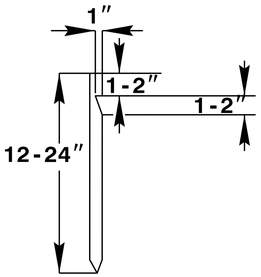
1604.01	Railroad Erosion Control Detail
1605.01	Temporary Silt Fence
1606.01	Special Sediment Control Fence
1607.01	Gravel Construction Entrance
1622.01	Temporary Berms and Slope Drains
1630.01	Riser Basin
1630.02	Silt Basin Type B
1630.03	Temporary Silt Ditch
1630.04	Stilling Basin
1630.05	Temporary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

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

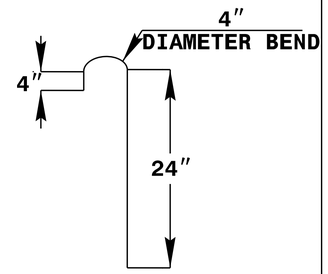
SKIMMER BASIN WITH BAFFLES DETAIL



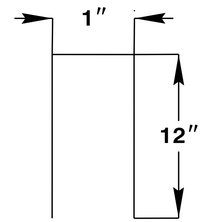
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

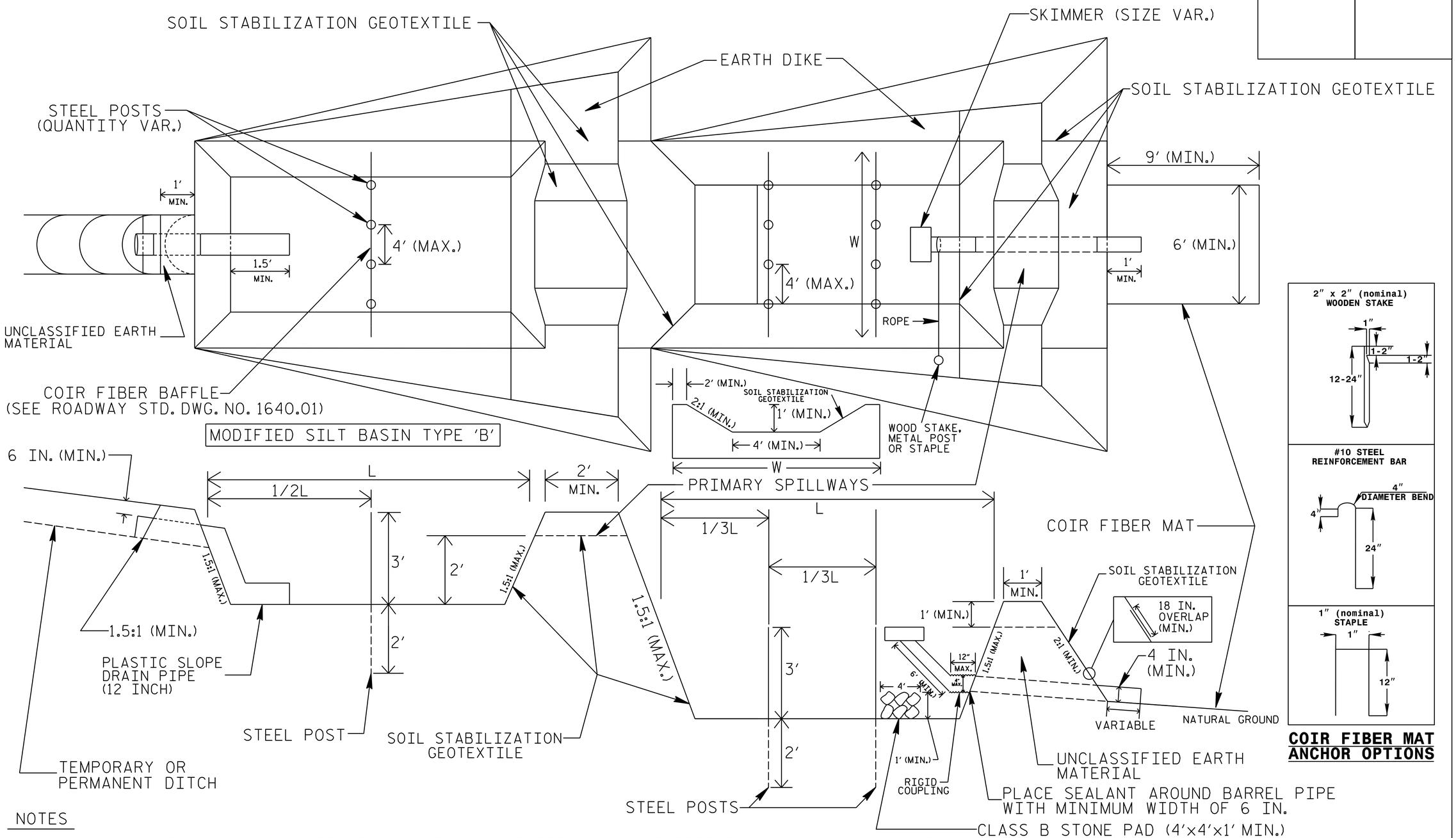
NOTES

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/0.8, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. 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.
U-2525C	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

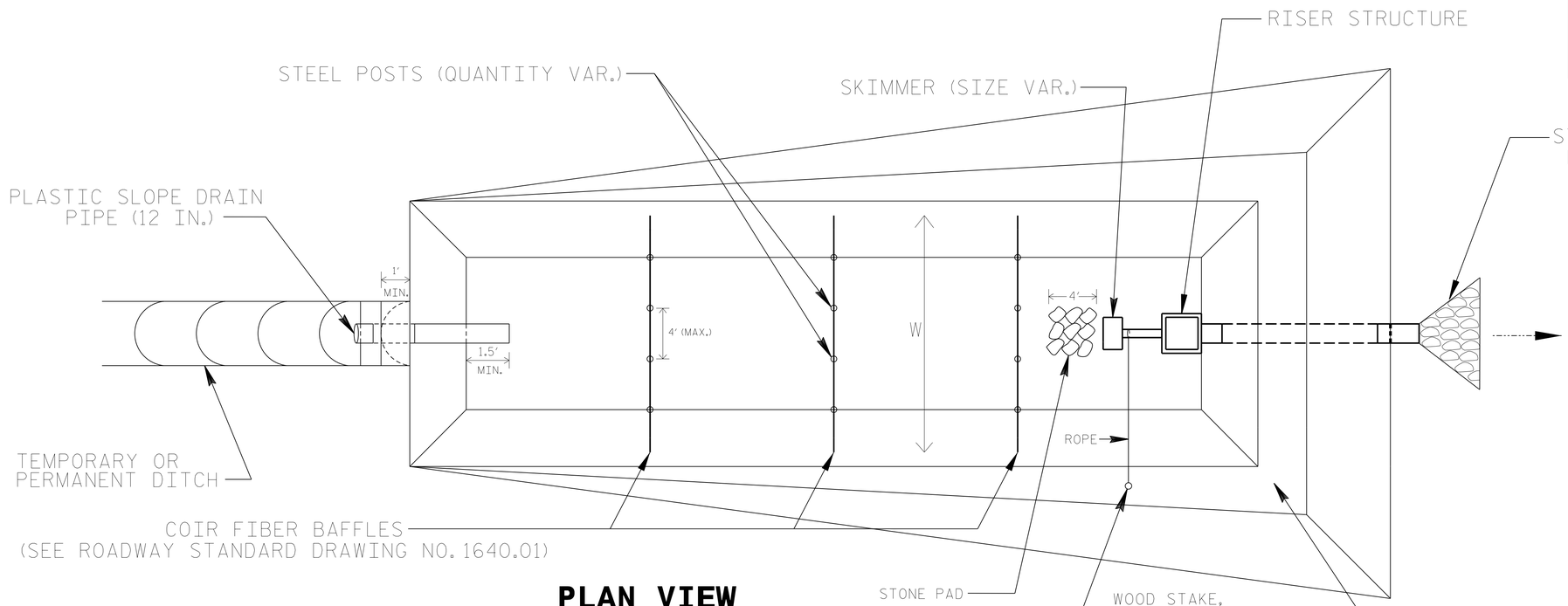
NOTES

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 WEIR LENGTHS (FT.) USING Q/0.8, 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.).

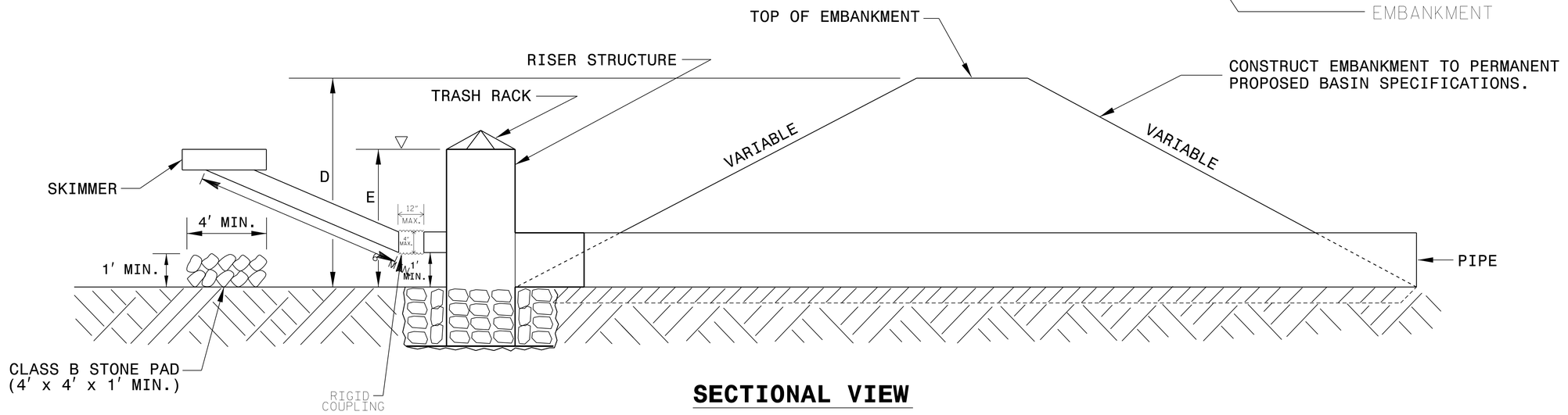
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STORMWATER BASIN WITH SKIMMER



PLAN VIEW



SECTIONAL VIEW

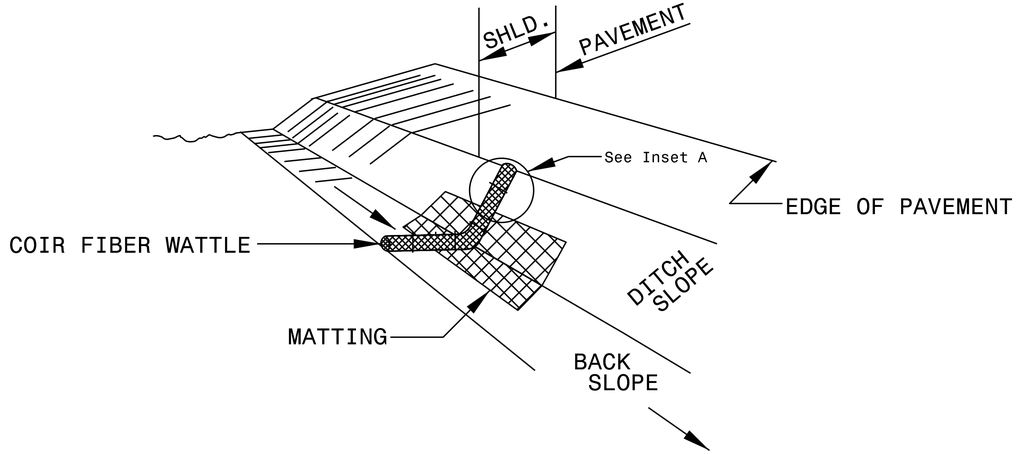
NOTES

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

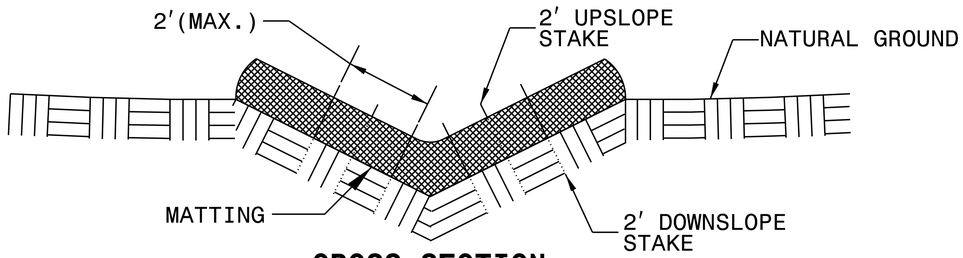
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

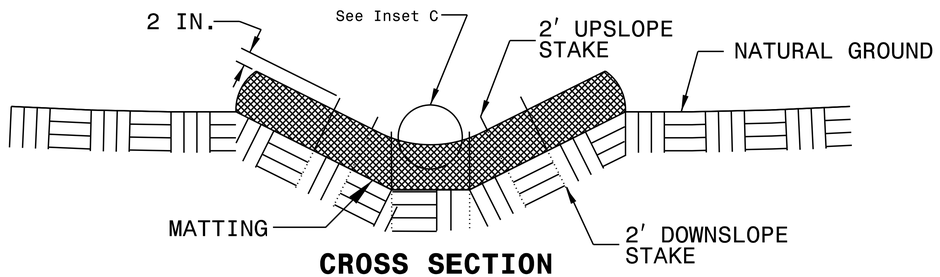
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

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

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

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

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

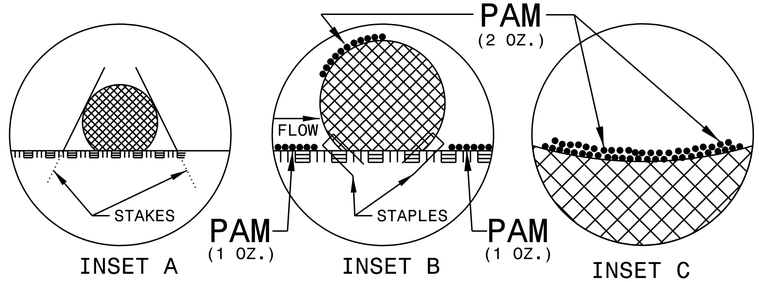
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

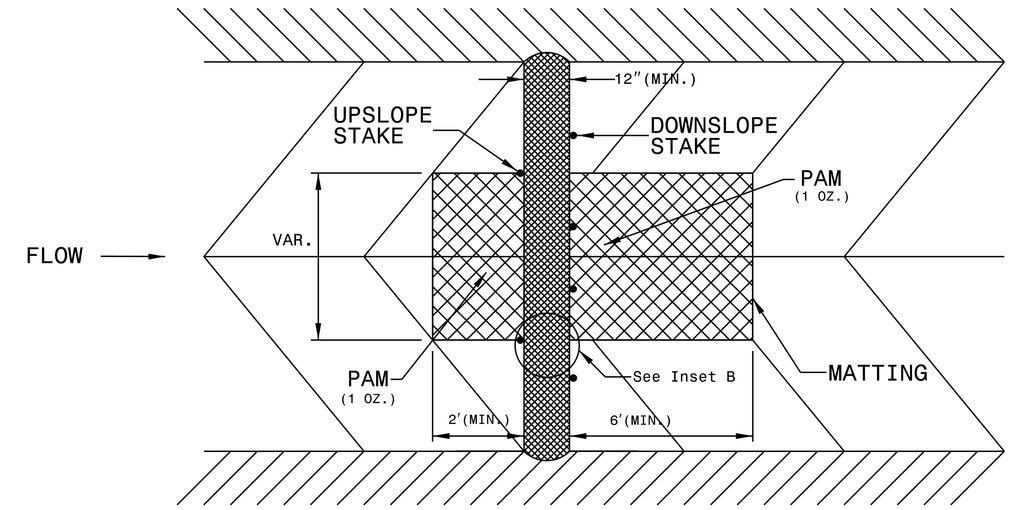
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

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

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

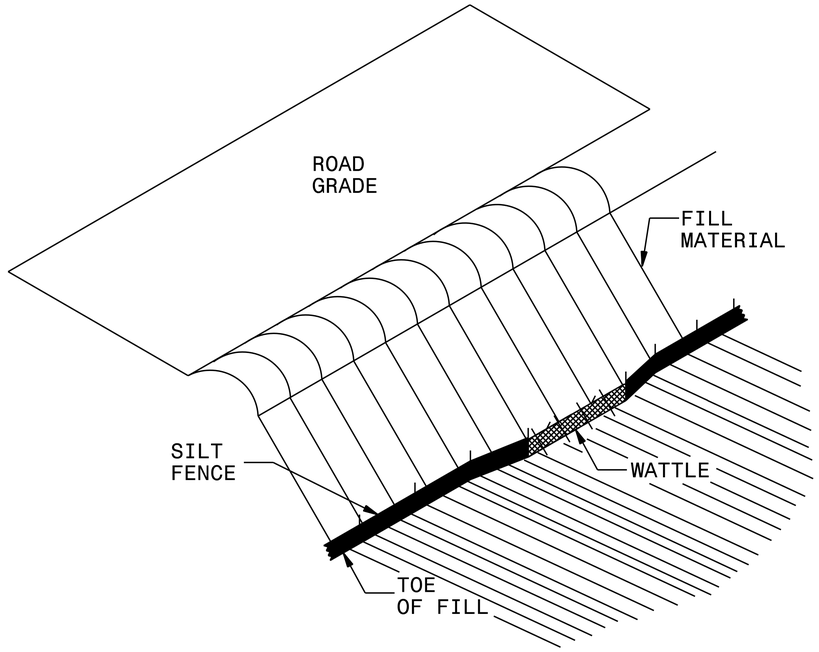




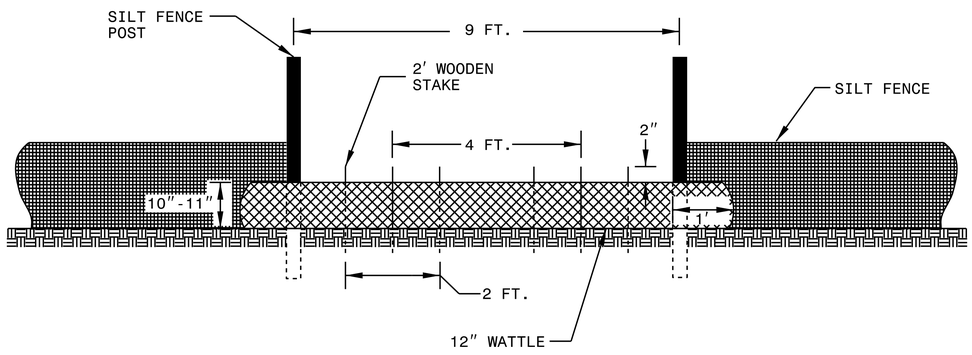
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-2D
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

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

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

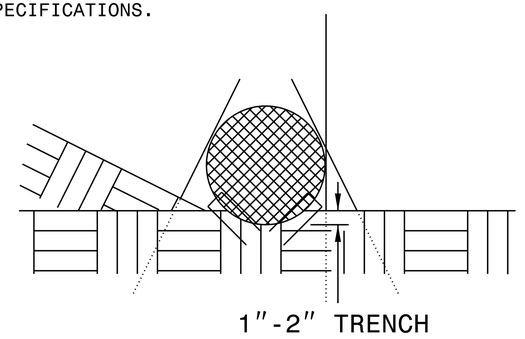
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

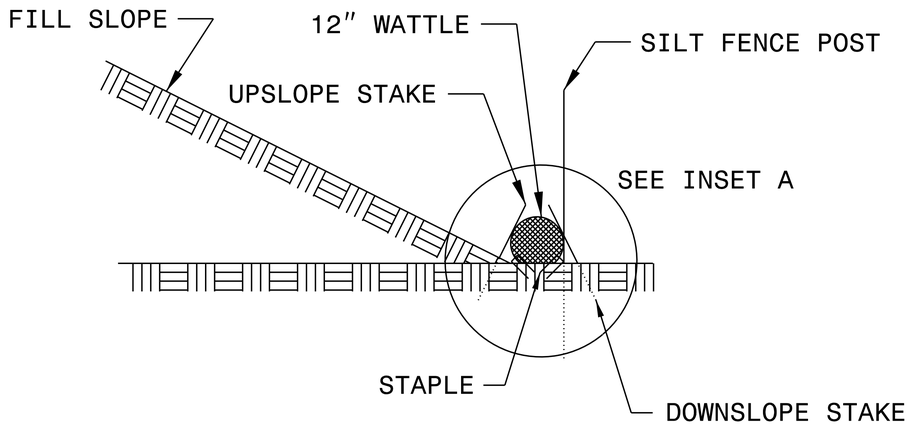
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A

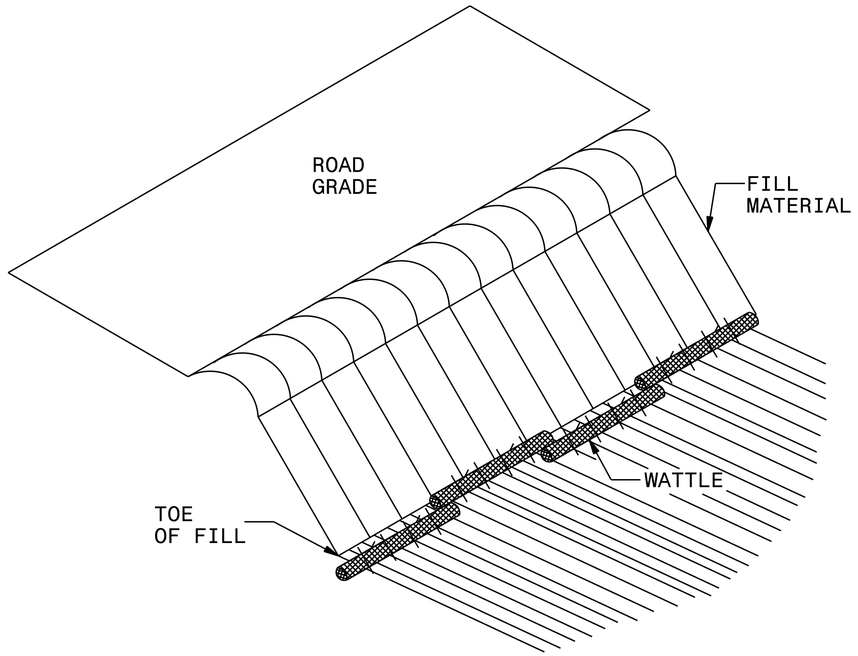




SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-2E
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE BARRIER DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 18 IN. NOMINAL DIAMETER EXCELSIOR WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

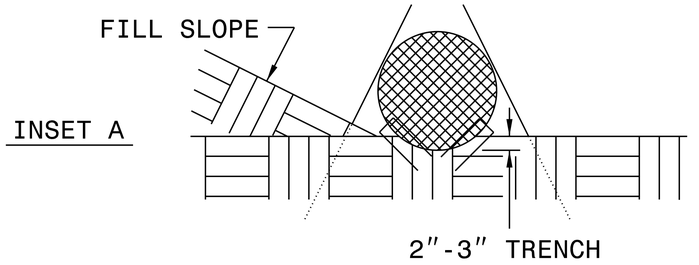
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

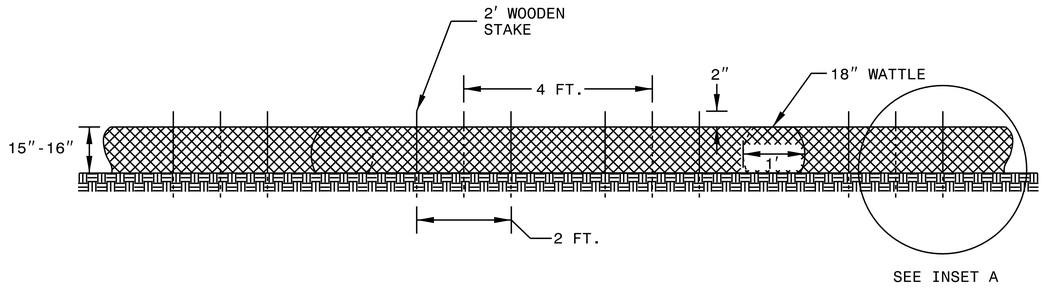
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

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

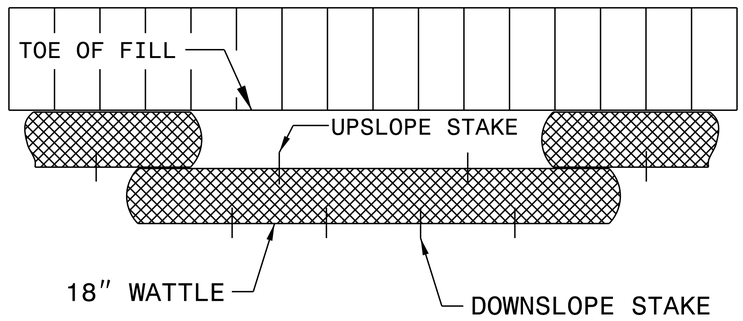
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.





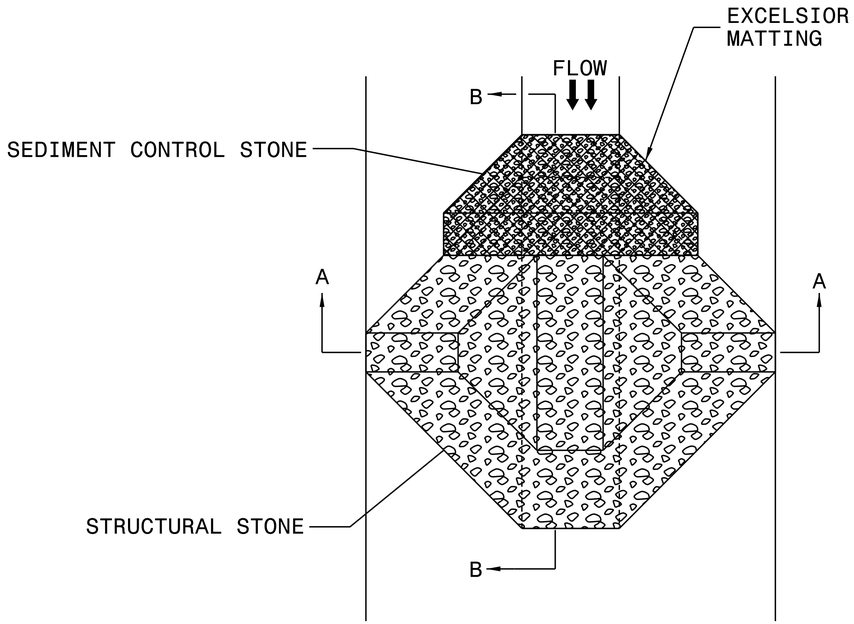
FRONT VIEW



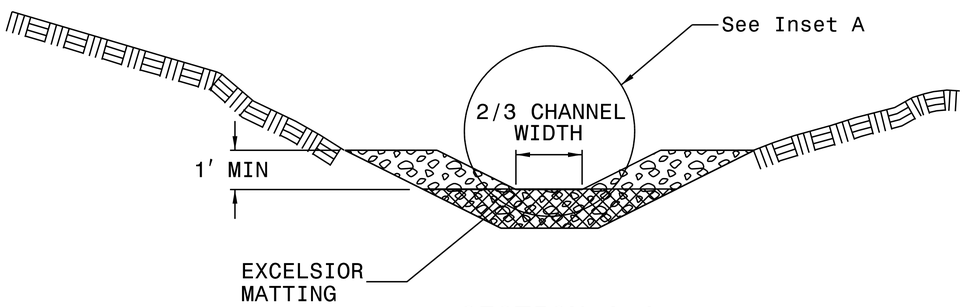
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-2F
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

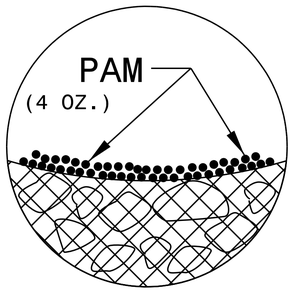
NOTES:

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

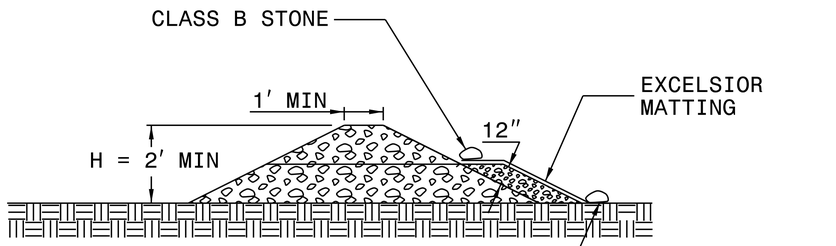
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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

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



INSET A



SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	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)
5	-L-	274+50	276+00	LT	155
5	-L-	276+50	282+50	LT	1610
5	-L-	279+00	279+50	RT	60
5	-L-	280+00	284+00	RT	765
5	-LACFLY-	17+49	19+50	RT	245
7	-L-	304+50	307+00	LT	420
7	-L-	307+00	308+00	LT	155
7	-L-	309+50	313+50	LT	725
8	-L-	309+50	313+50	LT	815
9	-L-	322+50	323+50	LT	205
10	-L-	335+00	336+00	RT	215
10	-L-	342+50	344+50	RT	595
11	-L-	350+50	363+50	LT	7320
11	-L-	349+00	350+50	RT	270
11	-L-	355+50	357+00	RT	220
12	-L-	365+50	368+50	LT	575
13	-L-	380+00	381+50	RT	330
16	-L-	429+50	431+50	LT	240
18	-Y6-	16+26	18+50	RT	545
18	-Y6-	19+80	21+61	RT	545
18	-Y6-	21+73	22+50	RT	145
18	-Y6RPA-	15+59	16+79	RT	200
19	-L-	493+50	494+50	RT	280

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
20	-L-	501+00	504+00	RT	475
20	-L-	504+00	504+50	RT	75
20	-L-	504+00	505+00	LT	160
20	-L-	507+00	509+50	LT	305
22	-L-	528+00	528+50	LT	50
			SUBTOTAL		17700
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					478884
				TOTAL	496584
				SAY	497000

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMNT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
7	-L-	303+35	303+65	RT	20
7	-L-	306+95	307+35	RT	27
9	-L-	322+50	326+00	RT	595
11	-L-	350+50	351+50	RT	250
11	-L-	352+50	353+50	RT	100
11	-L-	357+00	360+00	RT	400
13	-L-	380+00	384+50	LT	1120
13	-L-	382+00	385+50	RT	630
18	-Y6RP0-	22+50	24+53	LT	290
18	-Y6-	15+31	16+24	RT	75
18	-Y6-	22+00	22+82	LT	100
19	-L-	489+00	492+00	LT	460
19	-L-	495+50	500+50	RT	780
20	-L-	507+00	509+50	LT	320
20	-L-	506+00	509+00	RT	435
20	-L-	509+00	511+00	RT	335
22	-L-	528+50	531+00	LT	410
			SUBTOTAL		6327
	ADDITIONAL PSRM TO BE INSTALLED				0
				TOTAL	6327
				SAY	6500

PERMANENT SOIL REINFORCEMENT MAT

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

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-3B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

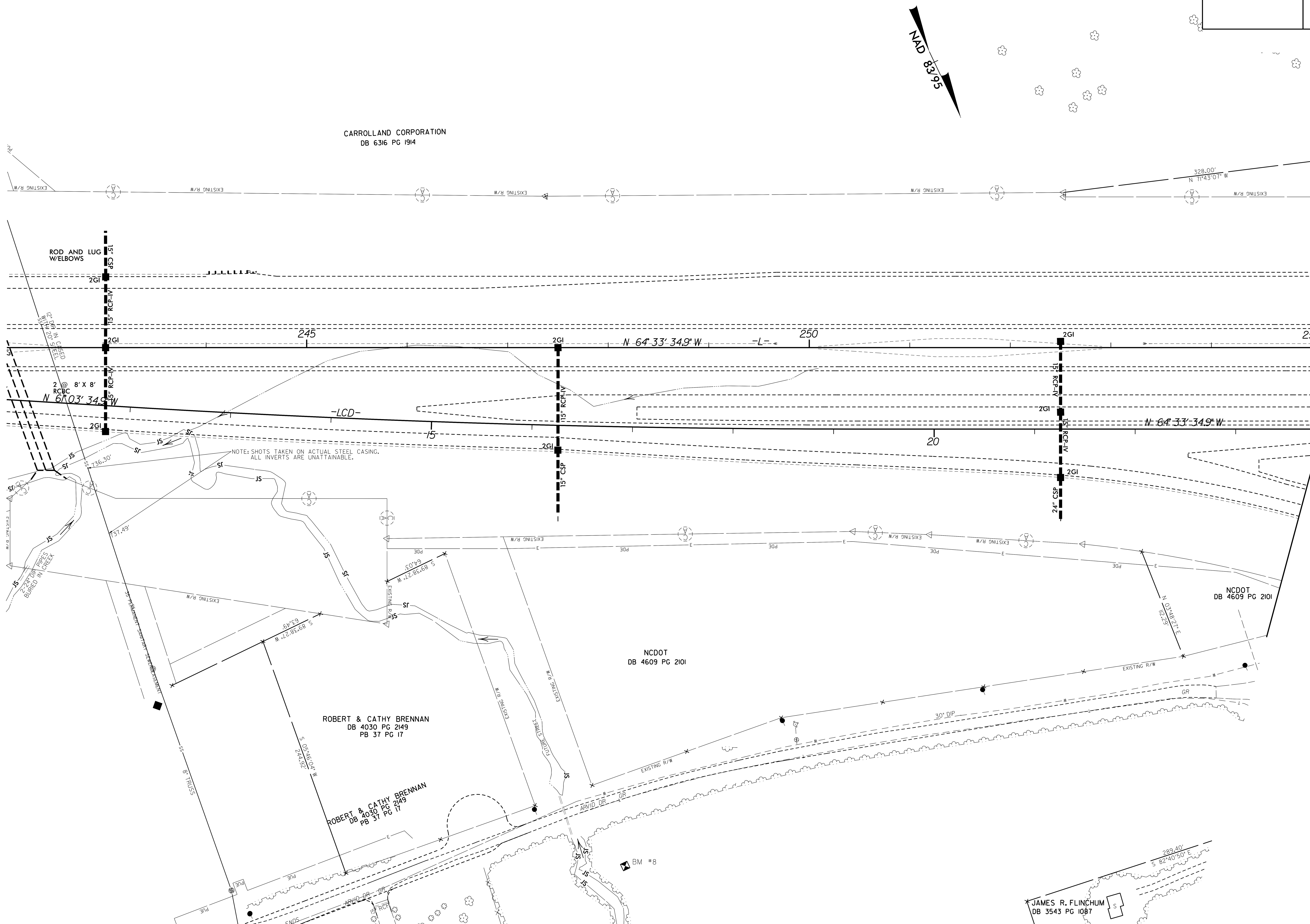
SOIL STABILIZATION TIMEFRAMES

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.

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

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

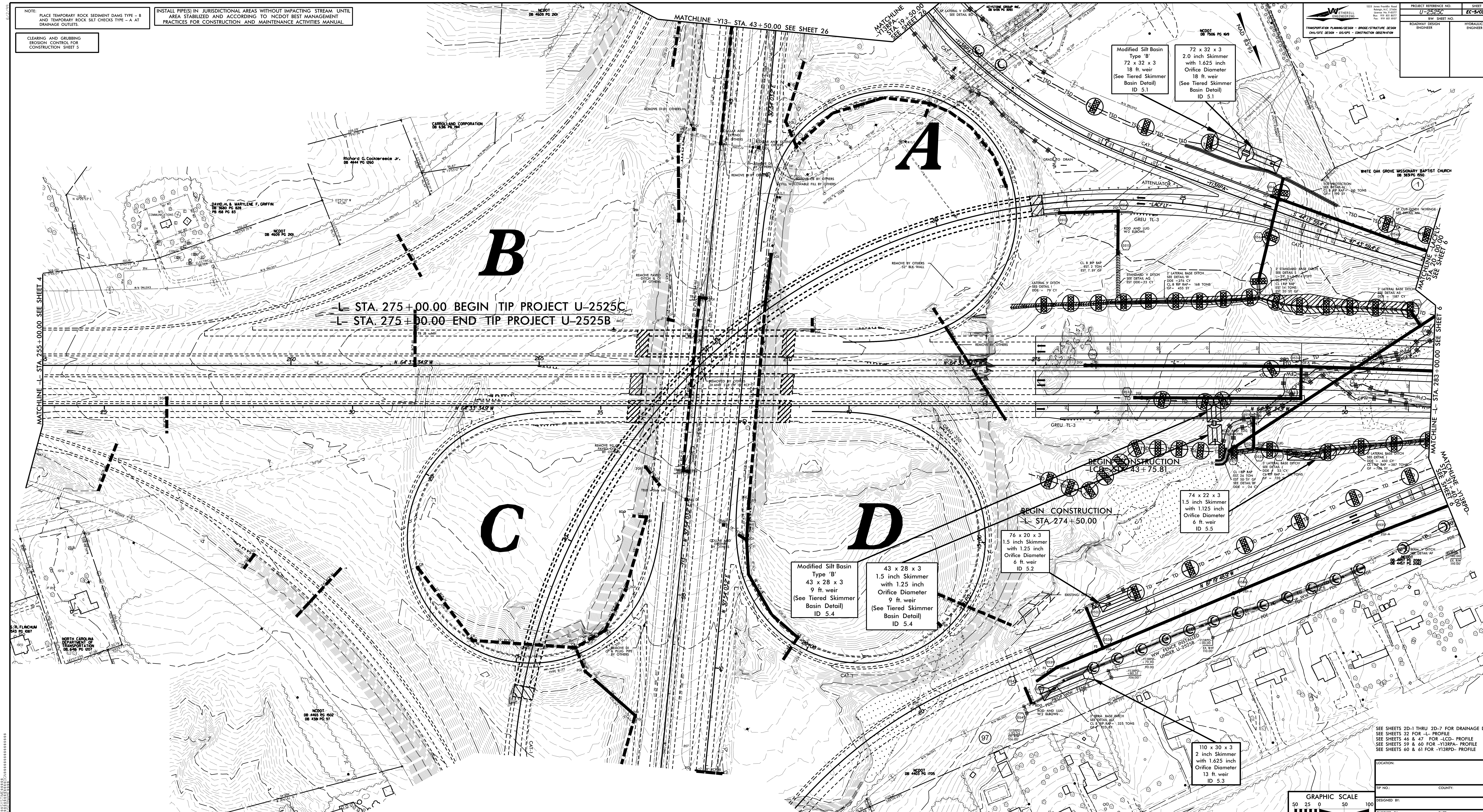
NOTE: PLAN SHEET FOR INFORMATION ONLY



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

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

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5



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

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-5/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEETS 32 FOR -L- PROFILE
SEE SHEETS 46 & 47 FOR -LCD- PROFILE
SEE SHEETS 59 & 60 FOR -Y13RPA- PROFILE
SEE SHEETS 60 & 61 FOR -Y13RPD- PROFILE

GRAPHIC SCALE
50 25 0 50 100
PLANS

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

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-6/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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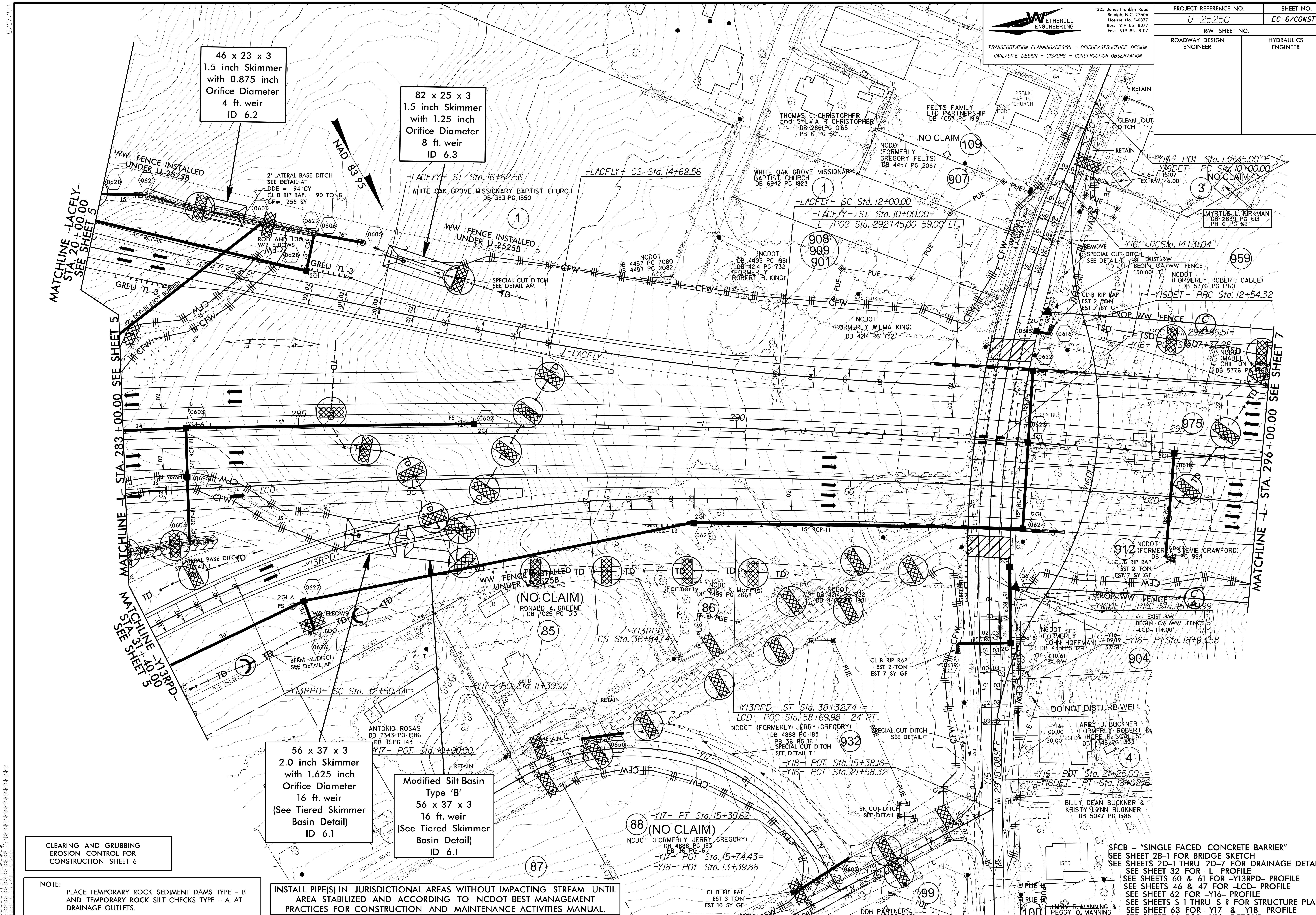
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION



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.

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.

SFCB - "SINGLE FACED CONCRETE BARRIER"
SEE SHEET 2B-1 FOR BRIDGE SKETCH
SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEET 32 FOR -L- PROFILE
SEE SHEETS 60 & 61 FOR -Y13RPD- PROFILE
SEE SHEETS 46 & 47 FOR -LCD- PROFILE
SEE SHEET 62 FOR -Y16- PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS
SEE SHEET 63 FOR -Y17- & -Y18- PROFILE
SEE SHEET 6A FOR -Y16- DETOUR

8/17/99

DETAIL OF –Y16DET– (SUMMIT AVE.)
VDES. = 35 MPH

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-7/CONST.6A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6A

NAD 83/95

BEGIN CONSTRUCTION
–Y16– POT Sta. 13+35.00 =
–Y16DET– PC Sta. 10+00.00

END CONSTRUCTION
Y16– POT Sta. 21+25.00 =
–Y16DET– PT Sta. 18+02.16

–Y16DET– PRC Sta. 12+54.79

–Y16DET– PRC Sta. 15+79.99

POT Sta. 23+44.44

Y16– PT Sta. 18+93.58

–Y16DET– POC Sta. 13+99.02 =
–L– POC Sta. 294+11.87

Y16– PC Sta. 14+31.04

N 52° 20' 50.2" E

N 29° 18' 08.9" E

NO CLAIM

DO NOT DISTURB WELL

SEE SHEET 6 FOR –L–, Y16DET– FOR PLAN VIEW
SEE SHEET 69 FOR –Y16DET– PROFILE

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 7

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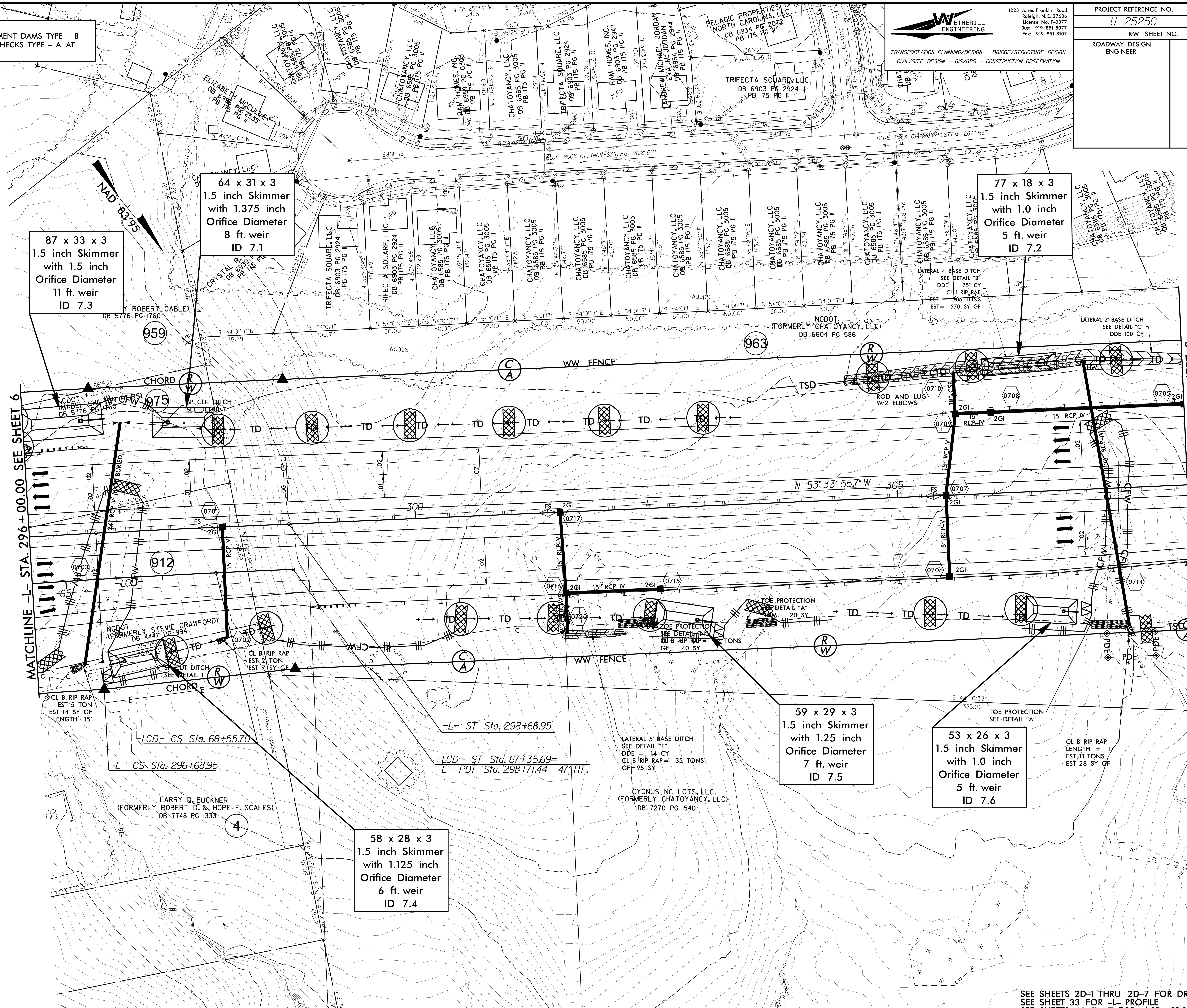
TRANSPORTATION PLANNING/DESIGN – BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN – GIS/GPS – CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-8/CONST.7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SEE SHEETS 2D–1 THRU 2D–7 FOR DRAINAGE DETAILS
SEE SHEET 33 FOR –L– PROFILE
SEE SHEETS 46 & 47 FOR –LCD– PROFILE

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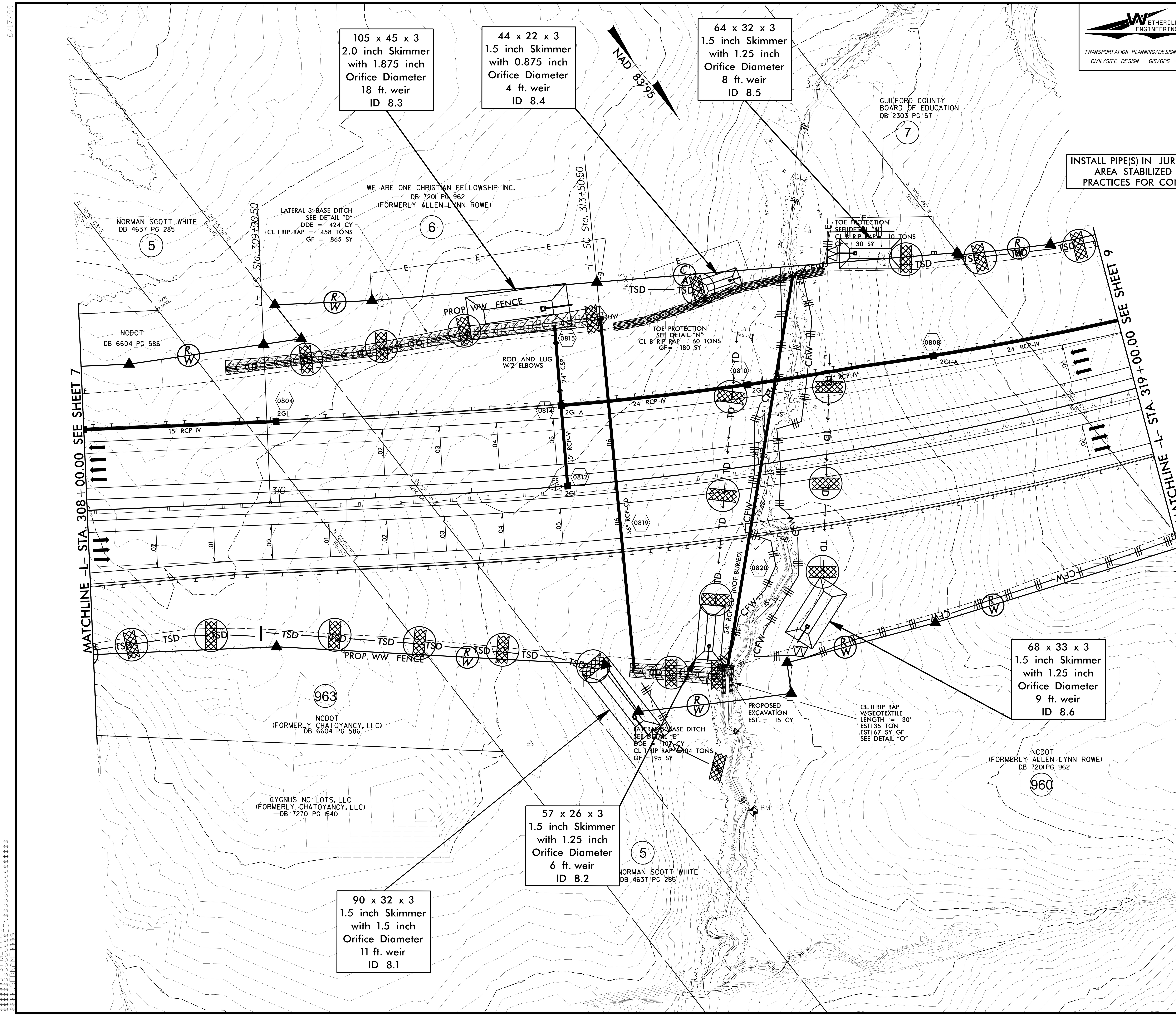
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-9/CONST.8
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.

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 8



105 x 45 x 3
2.0 inch Skimmer
with 1.875 inch
Orifice Diameter
18 ft. weir
ID 8.3
44 x 22 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 8.4
64 x 32 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
8 ft. weir
ID 8.5
NAD 83/95
GUILFORD COUNTY
BOARD OF EDUCATION
DB 2303 PG 57
WE ARE ONE CHRISTIAN FELLOWSHIP INC.
DB 7201 PG 962
(FORMERLY ALLEN LYNN ROWE)
NORMAN SCOTT WHITE
DB 4637 PG 285
LATERAL 3' BASE DITCH
SEE DETAIL "D"
DDE = 424 CY
CL I RIP RAP = 458 TONS
GF = 865 SY
TOE PROTECTION
SEE DETAIL "M"
CL B RIP RAP = 10 TONS
GF = 30 SY
PROP WW FENCE
NCDOT
DB 6604 PG 586
TOE PROTECTION
SEE DETAIL "N"
CL B RIP RAP = 60 TONS
GF = 180 SY
ROD AND LUG
W/2 ELBOWS
24" CSP
15" RCP-IV
24" RCP-IV
15" RCP-V
36" RCP-CD
54" RCP-CD (NOT BURIED)
2GI
2GI-A
MATCHLINE -L- STA. 308+00.00 SEE SHEET 7
MATCHLINE -L- STA. 319+00.00 SEE SHEET 9
-L- TS Sta. 309+90.50
-L- SC Sta. 313+50.50
PROP. WW FENCE
963
NCDOT
(FORMERLY CHATOYANCY, LLC)
DB 6604 PG 586
LATERAL BASE DITCH
SEE DETAIL "E"
DDE = 107 CY
CL I RIP RAP = 104 TONS
GF = 195 SY
PROPOSED
EXCAVATION
EST. = 15 CY
CL II RIP RAP
W/GEOTEXTILE
LENGTH = 30'
EST 35 TON
EST 67 SY GF
SEE DETAIL "O"
68 x 33 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
9 ft. weir
ID 8.6
NCDOT
(FORMERLY ALLEN LYNN ROWE)
DB 7201 PG 962
960
CYGNUS NC LOTS, LLC
(FORMERLY CHATOYANCY, LLC)
DB 7270 PG 1540
57 x 26 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
6 ft. weir
ID 8.2
NORMAN SCOTT WHITE
DB 4637 PG 285
90 x 32 x 3
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
11 ft. weir
ID 8.1

SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEET 33 FOR -L- PROFILE

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

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

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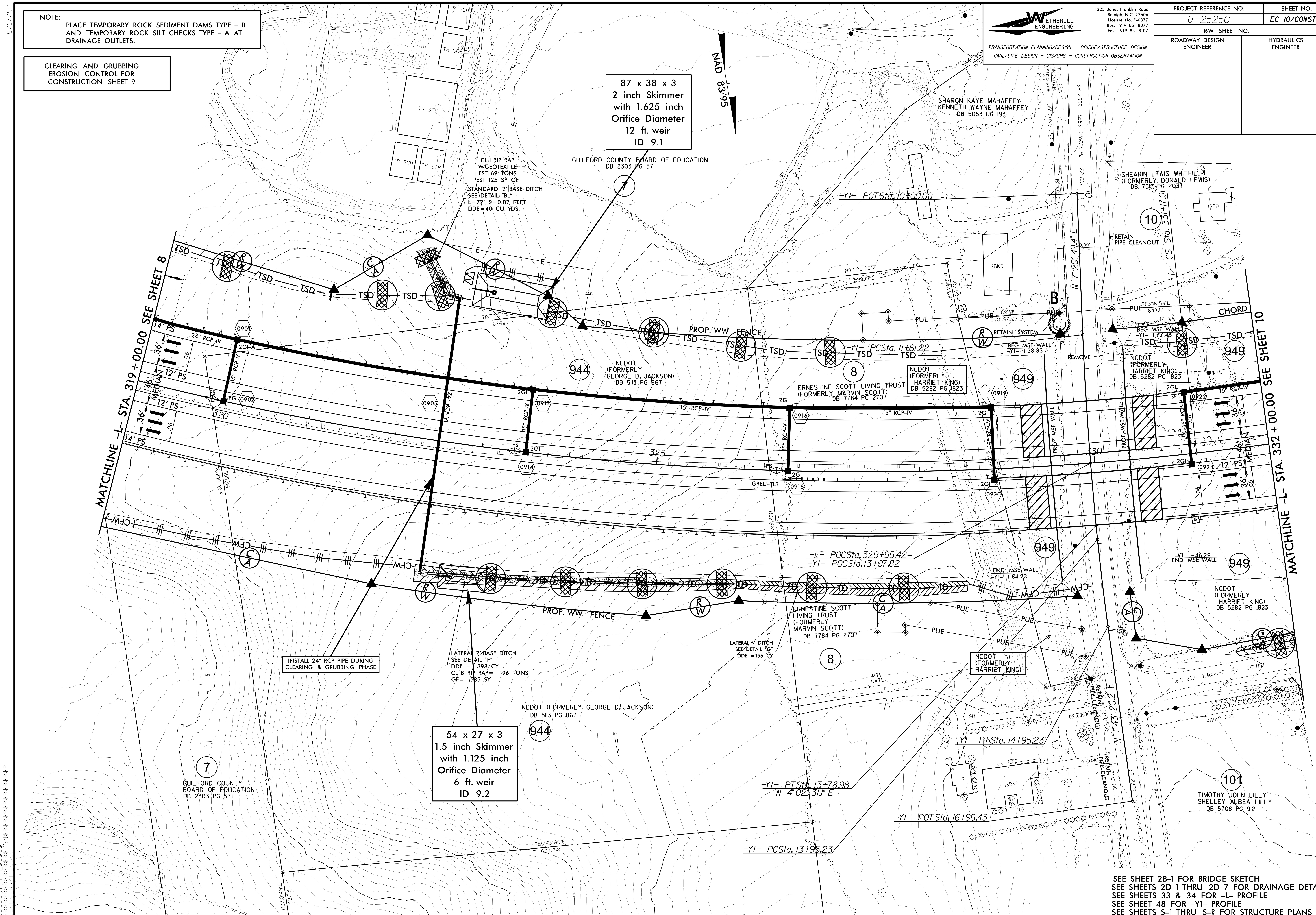
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN – BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN – GIS/GPS – CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-10/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



87 x 38 x 3
2 inch Skimmer
with 1.625 inch
Orifice Diameter
12 ft. weir
ID 9.1
54 x 27 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
6 ft. weir
ID 9.2
NAD 83/95
GUILFORD COUNTY BOARD OF EDUCATION
DB 2303 PG 57
CL I RIP RAP
W/GEOTEXTILE
EST 69 TONS
EST 125 SY GF
STANDARD 2' BASE DITCH
SEE DETAIL "BL"
L=72', S=0.02 FT/FT
DDE= 40 CU. YDS.
SHARON KAYE MAHAFFEY
KENNETH WAYNE MAHAFFEY
DB 5053 PG 193
SHEARIN LEWIS WHITFIELD
(FORMERLY DONALD LEWIS)
DB 7515 PG 2037
MATCHLINE -L- STA. 319+00.00 SEE SHEET 8
MATCHLINE -L- STA. 332+00.00 SEE SHEET 10
NCDOT
(FORMERLY
GEORGE D. JACKSON)
DB 5113 PG 867
ERNESTINE SCOTT LIVING TRUST
(FORMERLY MARVIN SCOTT)
DB 7784 PG 2707
NCDOT
(FORMERLY
HARRIET KING)
DB 5282 PG 1823
PROP. WW FENCE
-Y1- POT Sta. 10+00.00
-Y1- PC Sta. 11+61.22
-L- POC Sta. 329+95.42=
-Y1- POC Sta. 13+07.82
-Y1- PT Sta. 14+95.23
-Y1- PT Sta. 13+78.98
N 4°02'31" E
-Y1- POT Sta. 16+96.43
-Y1- PC Sta. 13+95.23
INSTALL 24" RCP PIPE DURING
CLEARING & GRUBBING PHASE
LATERAL 2' BASE DITCH
SEE DETAIL "F"
DDE = 398 CY
CL B RIP RAP= 196 TONS
GF= 535 SY
LATERAL V DITCH
SEE DETAIL "G"
DDE =156 CY
NCDOT (FORMERLY GEORGE D. JACKSON)
DB 5113 PG 867
TIMOTHY JOHN LILLY
SHELLEY ALBEA LILLY
DB 5708 PG 912
RETAIN PIPE CLEANOUT
SR 2359 LEES CHAPEL RD
SR 2531 HILLCROFT RD

SEE SHEET 2B–1 FOR BRIDGE SKETCH
SEE SHEETS 2D–1 THRU 2D–7 FOR DRAINAGE DETAILS
SEE SHEETS 33 & 34 FOR –L– PROFILE
SEE SHEET 48 FOR –Y1– PROFILE
SEE SHEETS S–1 THRU S–? FOR STRUCTURE PLANS

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-11/CONST10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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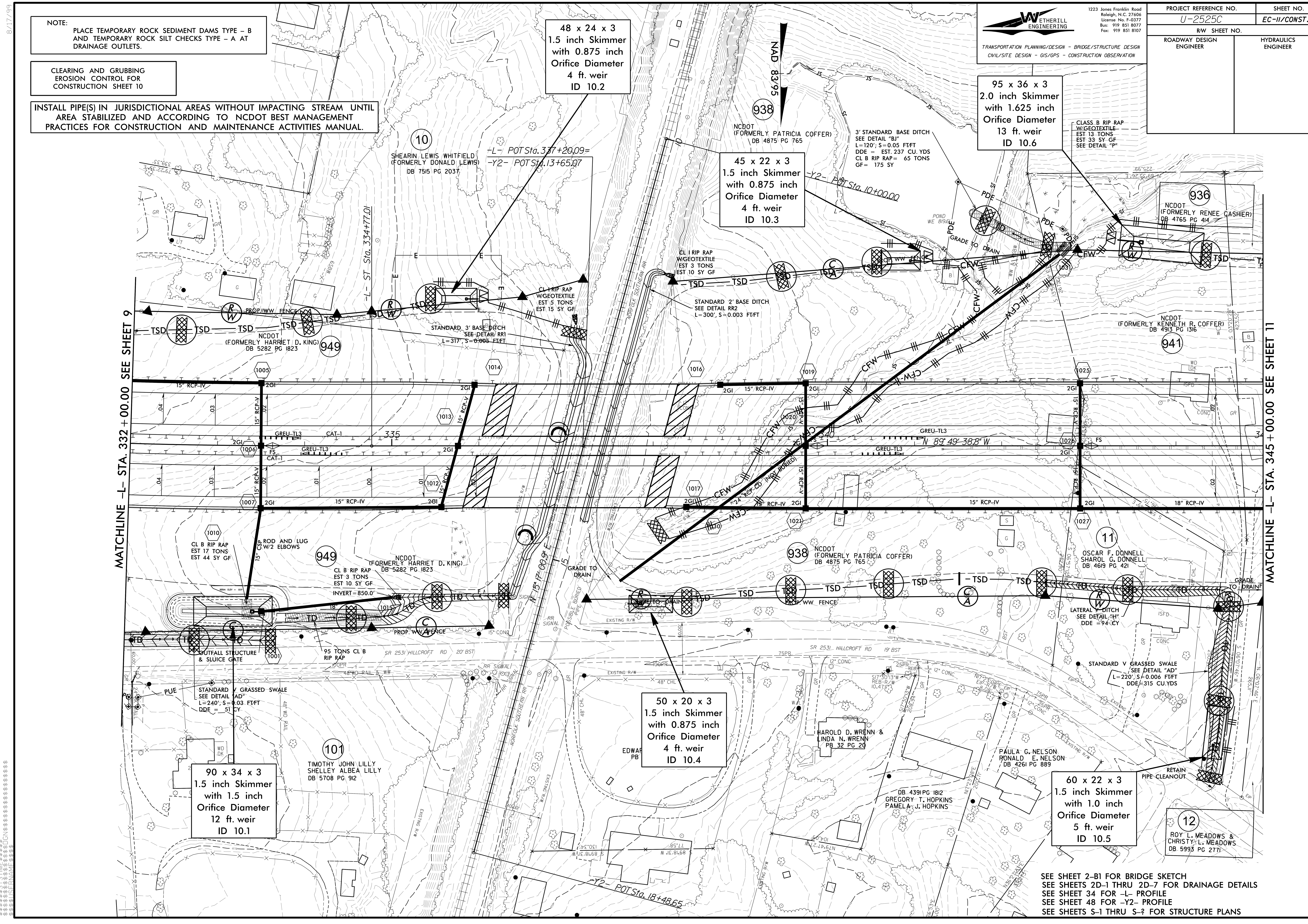
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

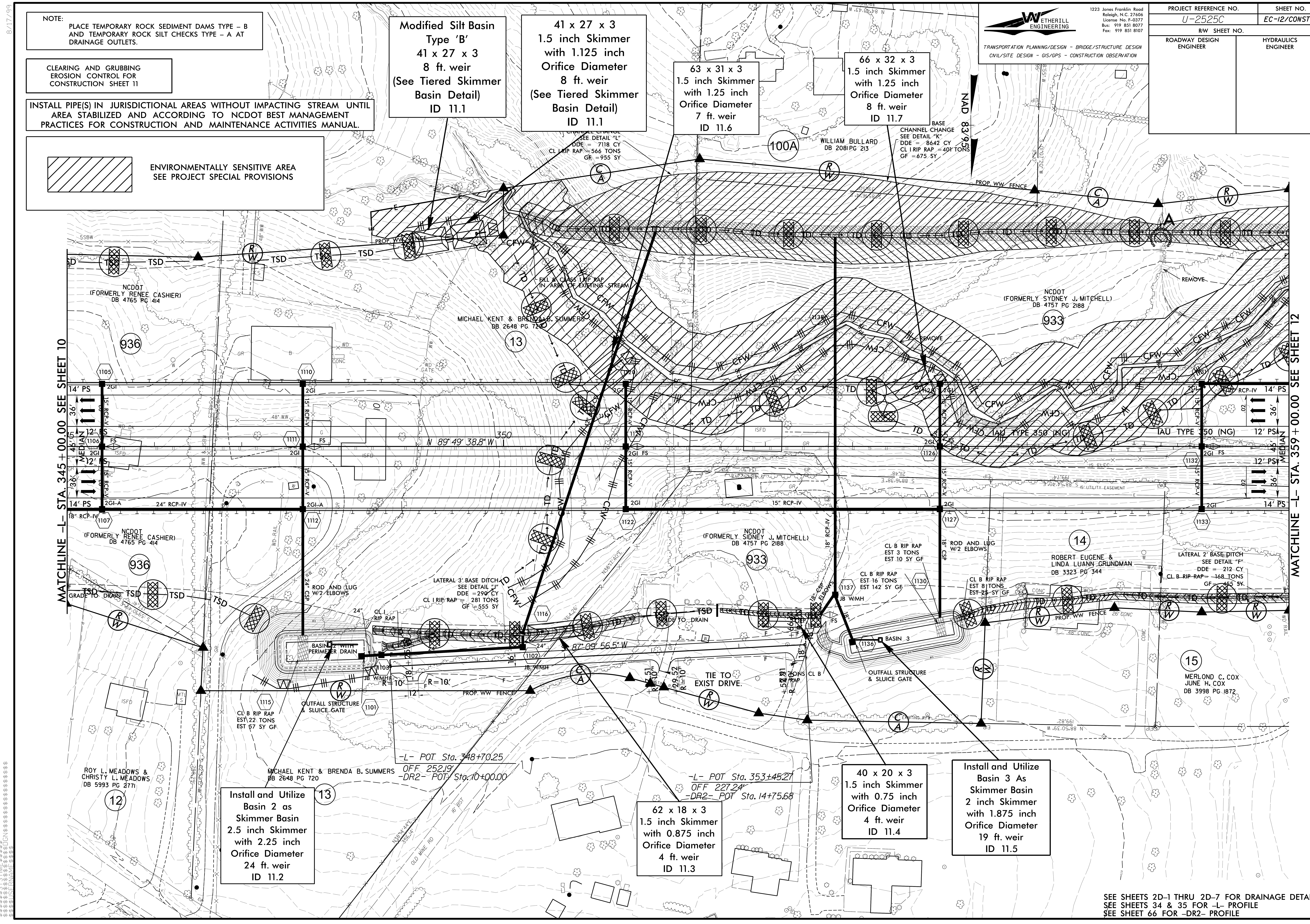
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 10

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



SEE SHEET 2-B1 FOR BRIDGE SKETCH
SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEET 34 FOR -L- PROFILE
SEE SHEET 48 FOR -Y2- PROFILE
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS


NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 11
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
Modified Silt Basin Type 'B' 41 x 27 x 3 8 ft. weir (See Tiered Skimmer Basin Detail) ID 11.1
41 x 27 x 3 1.5 inch Skimmer with 1.125 inch Orifice Diameter 8 ft. weir (See Tiered Skimmer Basin Detail) ID 11.1
63 x 31 x 3 1.5 inch Skimmer with 1.25 inch Orifice Diameter 7 ft. weir ID 11.6
66 x 32 x 3 1.5 inch Skimmer with 1.25 inch Orifice Diameter 8 ft. weir ID 11.7
WETHERILL ENGINEERING
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION
PROJECT REFERENCE NO. U-2525C
SHEET NO. EC-12/CONSTJI
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
NAD 83/95
WILLIAM BULLARD DB 2081 PG 213
NCDOT (FORMERLY RENEE CASHIER) DB 4765 PG 414
MICHAEL KENT & BRENDA B. SUMMERS DB 2648 PG 720
NCDOT (FORMERLY SYDNEY J. MITCHELL) DB 4757 PG 2188
ROBERT EUGENE & LINDA LUANN GRUNDMAN DB 3323 PG 344
MERLOND C. COX JUNE H. COX DB 3998 PG 1872
ROY L. MEADOWS & CHRISTY L. MEADOWS DB 5993 PG 2771
MATCHLINE -L- STA. 345+00.00 SEE SHEET 10
MATCHLINE -L- STA. 359+00.00 SEE SHEET 12
N 89° 49' 38.8" W
IAU TYPE 350 (NG)
BASIN 2 WITH PERIMETER DRAIN
BASIN 3
OUTFALL STRUCTURE & SLUICE GATE
TIE TO EXIST DRIVE.
PROP. WW FENCE
-L- POT Sta. 348+70.25 OFF 252.19' -DR2- POT Sta. 10+00.00
-L- POT Sta. 353+45.27 OFF 227.24' -DR2- POT Sta. 14+75.68
Install and Utilize Basin 2 as Skimmer Basin 2.5 inch Skimmer with 2.25 inch Orifice Diameter 24 ft. weir ID 11.2
62 x 18 x 3 1.5 inch Skimmer with 0.875 inch Orifice Diameter 4 ft. weir ID 11.3
40 x 20 x 3 1.5 inch Skimmer with 0.75 inch Orifice Diameter 4 ft. weir ID 11.4
Install and Utilize Basin 3 As Skimmer Basin 2 inch Skimmer with 1.875 inch Orifice Diameter 19 ft. weir ID 11.5
SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEETS 34 & 35 FOR -L- PROFILE
SEE SHEET 66 FOR -DR2- PROFILE

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 12

80 x 39 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
12 ft. weir
ID 12.5

56 x 27 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
6 ft. weir
ID 12.1

56 x 27 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
6 ft. weir
ID 12.2

54 x 26 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 12.6

64 x 31 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
8 ft. weir
ID 12.3

Install and Utilize
Basin 4 As
Skimmer Basin
2.5 inch Skimmer
with 2.375 inch
Orifice Diameter
30 ft. weir
ID 12.4

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-13/CONST J2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE –L– STA. 359+00.00 SEE SHEET 11

MATCHLINE –L– STA. 373+00.00 SEE SHEET 13

–L– POC Sta. 370+50.00
–DR3– POT Sta. 10+00.00
N 12° 38' 08.1" W

–DR3– PC Sta. 11+17.37

–DR3– PT Sta. 11+91.78

–Y3– POT Sta. 10+00.00

POT Sta. 13+20.23

14+62.60

SEE SHEET 66 FOR –DR3– PROFILE
SEE SHEETS 2D–1 THRU 2D–7 FOR DRAINAGE DETAILS
SEE SHEETS 35, 36 FOR –L– PROFILE
SEE SHEET 49 FOR –Y3– PROFILE
SEE SHEETS C–1 THRU C–? FOR CULVERT PLANS

8/17/99

WETHERILL ENGINEERING
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Raleigh, N.C. 27606
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Bus: 919 851 8077
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.
U-2525C
EC-13A/CONST.12

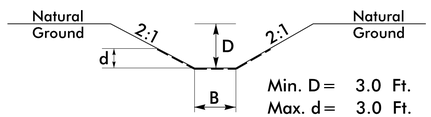
CONSTRUCTION PHASING
CULVERT AT STATION 364+68 –L–

CONSTRUCTION SEQUENCE

1. INSTALL PROPOSED EROSION CONTROL MEASURES
2. INSTALL STILLING BASIN FOR PUMPED EFFLUENT (MIN. VOLUME 150 CY).
3. CONSTRUCT IMPERVIOUS DIKES AND INSTALL TEMPORARY CHANNEL CHANGES WITH LINER (SEE DETAILS).
4. CONSTRUCT PROPOSED CULVERT AND CHANNEL IMPROVEMENTS.
5. REMOVE IMPERVIOUS DIKES, TEMPORARY CHANNEL CHANGES WITH LINER, AND STILLING BASIN AND DIVERT FLOW INTO PROPOSED CULVERT.
6. COMPLETE ROADWAY.

DETAIL 1

TEMPORARY CHANNEL CHANGE WITH LINER
(Not to Scale)

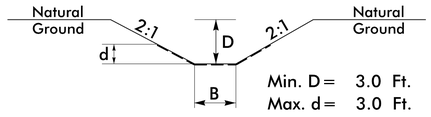


Min. D = 3.0 Ft.
Max. d = 3.0 Ft.
B = 4.0 Ft.

Type of Liner = Geotextile for Soil Stabilization, Type 4

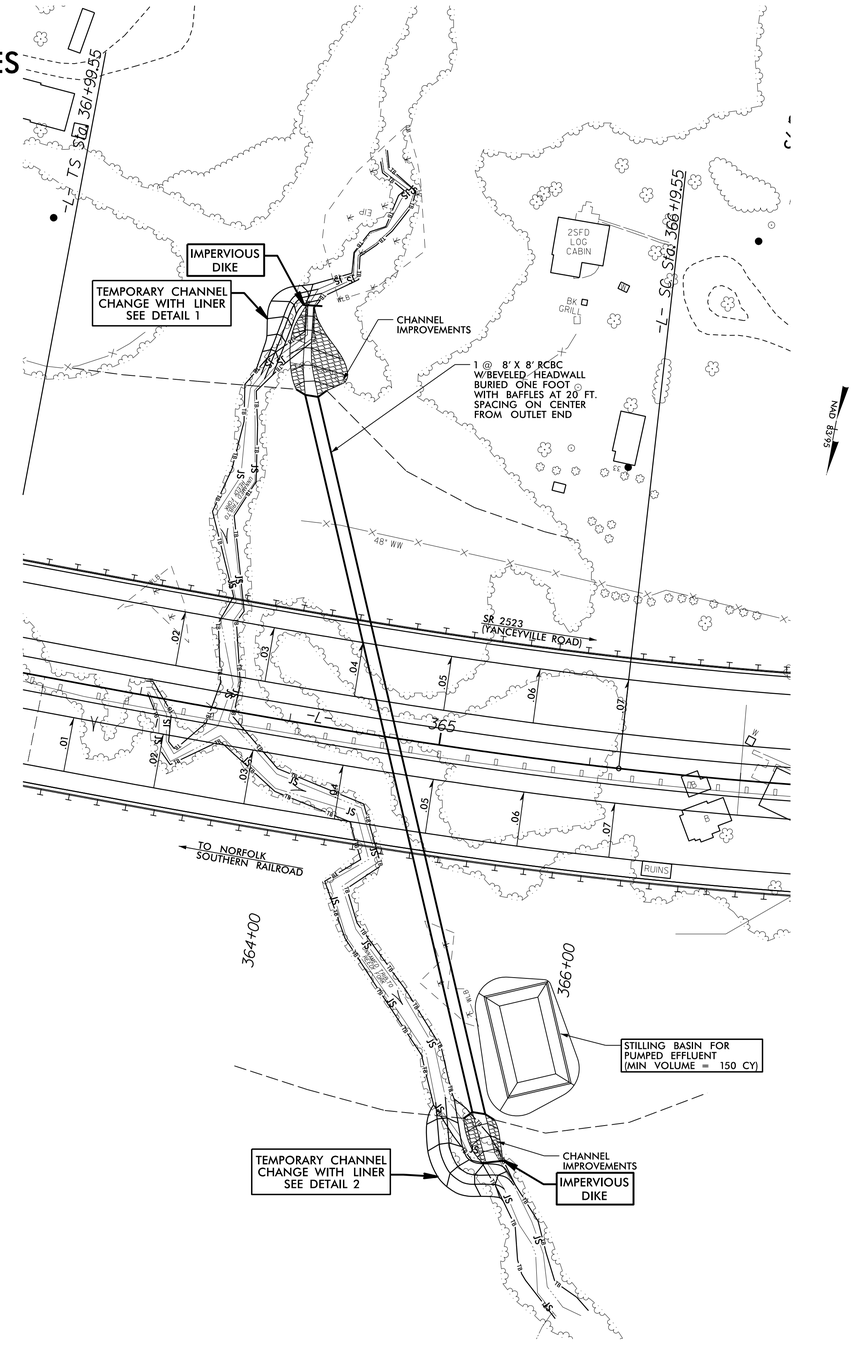
DETAIL 2

TEMPORARY CHANNEL CHANGE WITH LINER
(Not to Scale)



Min. D = 3.0 Ft.
Max. d = 3.0 Ft.
B = 7.0 Ft.

Type of Liner = Geotextile for Soil Stabilization, Type 4

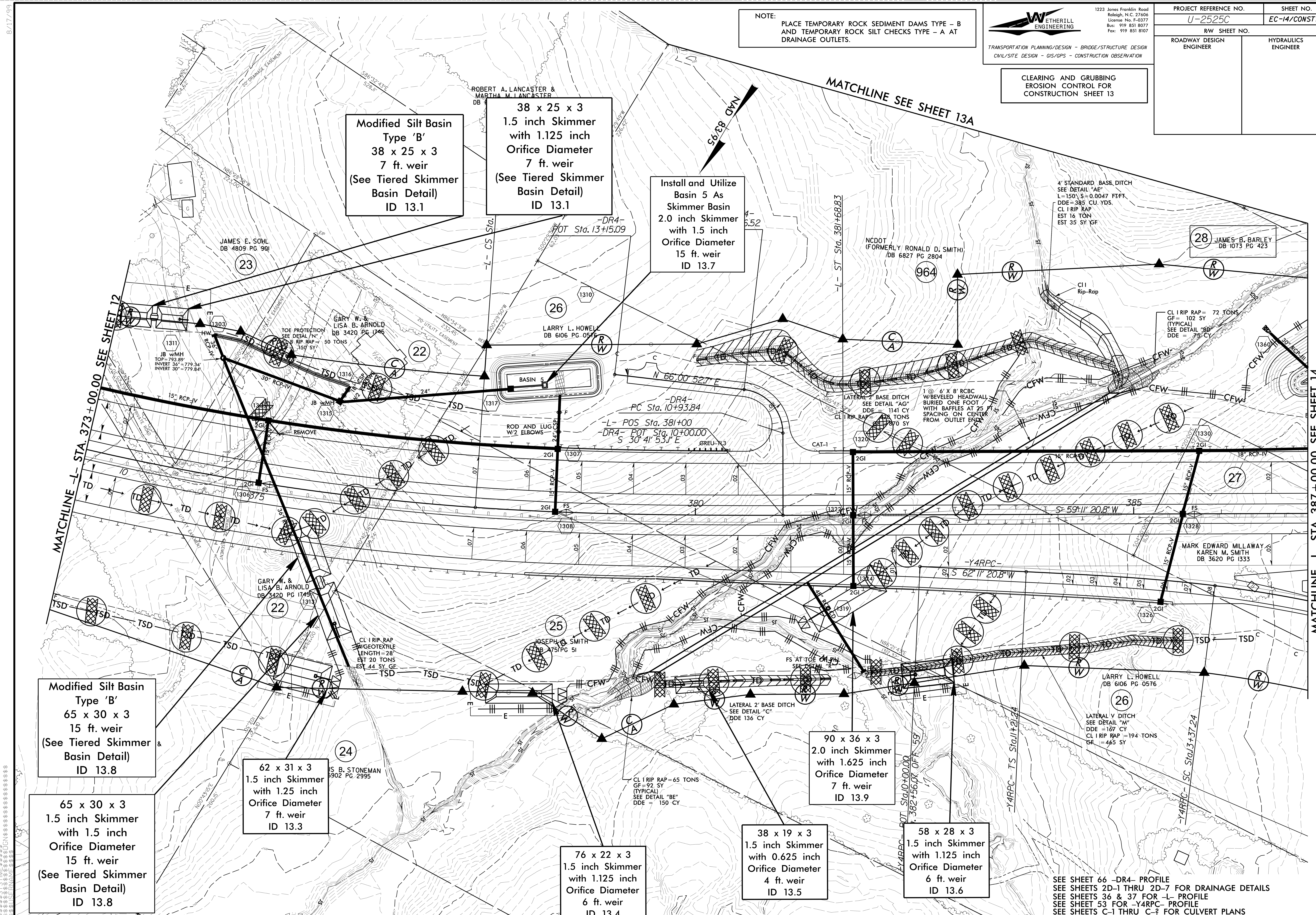


PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-14/CONSTJ3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 13



MATCHLINE SEE SHEET 13A
MATCHLINE -L- STA. 373+00.00 SEE SHEET 12
MATCHLINE -L- STA. 387+00.00 SEE SHEET 14
NAD 83/95
Modified Silt Basin Type 'B' 38 x 25 x 3 7 ft. weir (See Tiered Skimmer Basin Detail) ID 13.1
38 x 25 x 3 1.5 inch Skimmer with 1.125 inch Orifice Diameter 7 ft. weir (See Tiered Skimmer Basin Detail) ID 13.1
Install and Utilize Basin 5 As Skimmer Basin 2.0 inch Skimmer with 1.5 inch Orifice Diameter 15 ft. weir ID 13.7
Modified Silt Basin Type 'B' 65 x 30 x 3 15 ft. weir (See Tiered Skimmer Basin Detail) ID 13.8
65 x 30 x 3 1.5 inch Skimmer with 1.5 inch Orifice Diameter 15 ft. weir (See Tiered Skimmer Basin Detail) ID 13.8
62 x 31 x 3 1.5 inch Skimmer with 1.25 inch Orifice Diameter 7 ft. weir ID 13.3
76 x 22 x 3 1.5 inch Skimmer with 1.125 inch Orifice Diameter 6 ft. weir ID 13.4
38 x 19 x 3 1.5 inch Skimmer with 0.625 inch Orifice Diameter 4 ft. weir ID 13.5
58 x 28 x 3 1.5 inch Skimmer with 1.125 inch Orifice Diameter 6 ft. weir ID 13.6
90 x 36 x 3 2.0 inch Skimmer with 1.625 inch Orifice Diameter 7 ft. weir ID 13.9
ROBERT A. LANCASTER & MARTHA M. LANCASTER
JAMES E. SOHL DB 4809 PG 901
GARY W. & LISA B. ARNOLD DB 3420 PG 1745
LARRY L. HOWELL DB 6106 PG 0576
NCDOT (FORMERLY RONALD D. SMITH) DB 6827 PG 2804
JAMES B. BARLEY DB 1073 PG 423
MARK EDWARD MILLAWAY KAREN M. SMITH DB 3620 PG 1333
JOSEPH D. SMITH DB 4751 PG 51
4' STANDARD BASE DITCH SEE DETAIL "AE" L=150' S=0.0047 FT/FT DDE=385 CU. YDS. CL I RIP RAP EST 16 TON EST 35 SY GF
CL I RIP RAP= 72 TONS GF= 102 SY (TYPICAL) SEE DETAIL "BD" DDE = 75 CY
LATERAL 2' BASE DITCH SEE DETAIL "AG" DDE = 1141 CY
1 @ 6' X 8' RCBC W/BEVELED HEADWALL BURIED ONE FOOT WITH BAFFLES AT 25 FT SPACING ON CENTER FROM OUTLET END
-DR4- POT Sta. 13+15.09
-DR4- PC Sta. 10+93.84
-L- POS Sta. 381+00
-DR4- POT Sta. 10+00.00
S 30°41' 53.1" E
N 66°00' 52.7" E
S 59°11' 20.8" W
S 62°11' 20.8" W
-Y4RPC-
LATERAL 2' BASE DITCH SEE DETAIL "C" DDE 136 CY
CL I RIP RAP=65 TONS GF=92 SY (TYPICAL) SEE DETAIL "BE" DDE = 150 CY
LATERAL V DITCH SEE DETAIL "M" DDE =167 CY CL I RIP RAP =194 TONS GF =465 SY
CL I RIP RAP W/GEOTEXTILE LENGTH=28' EST 20 TONS EST 44 SY GF

SEE SHEET 66 -DR4- PROFILE
SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEETS 36 & 37 FOR -L- PROFILE
SEE SHEET 53 FOR -Y4RPC- PROFILE
SEE SHEETS C-1 THRU C-? FOR CULVERT PLANS

8/17/99

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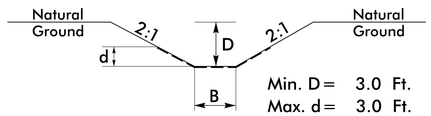
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.
U-2525C
EC-14A/CONST.13

CONSTRUCTION PHASING
CULVERT AT STATION 382+49 –L–

CONSTRUCTION SEQUENCE
1. INSTALL PROPOSED EROSION CONTROL MEASURES
2. UTILIZE SKIMMER BASIN 13.9 FOR PUMPED EFFLUENT
3. CONSTRUCT IMPERVIOUS DIKES AND TEMPORARY CHANNEL CHANGES WITH LINER (SEE DETAILS).
4. CONSTRUCT PROPOSED CULVERT AND CHANNEL IMPROVEMENTS.
5. REMOVE IMPERVIOUS DIKES AND TEMPORARY CHANNEL CHANGES WITH LINER. DIVERT FLOW INTO PROPOSED CULVERT.
6. COMPLETE ROADWAY.

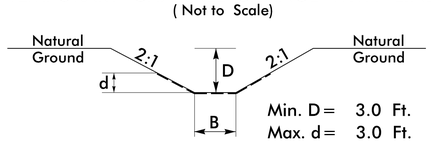
DETAIL 1
TEMPORARY CHANNEL CHANGE WITH LINER
(Not to Scale)



Min. D = 3.0 Ft.
Max. d = 3.0 Ft.
B = 6.0 Ft.

Type of Liner = Geotextile for Soil Stabilization, Type 4

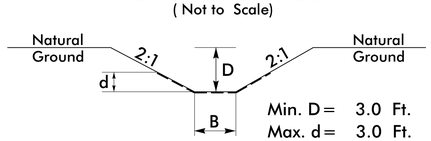
DETAIL 2
TEMPORARY CHANNEL CHANGE WITH LINER
(Not to Scale)



Min. D = 3.0 Ft.
Max. d = 3.0 Ft.
B = 8.0 Ft.

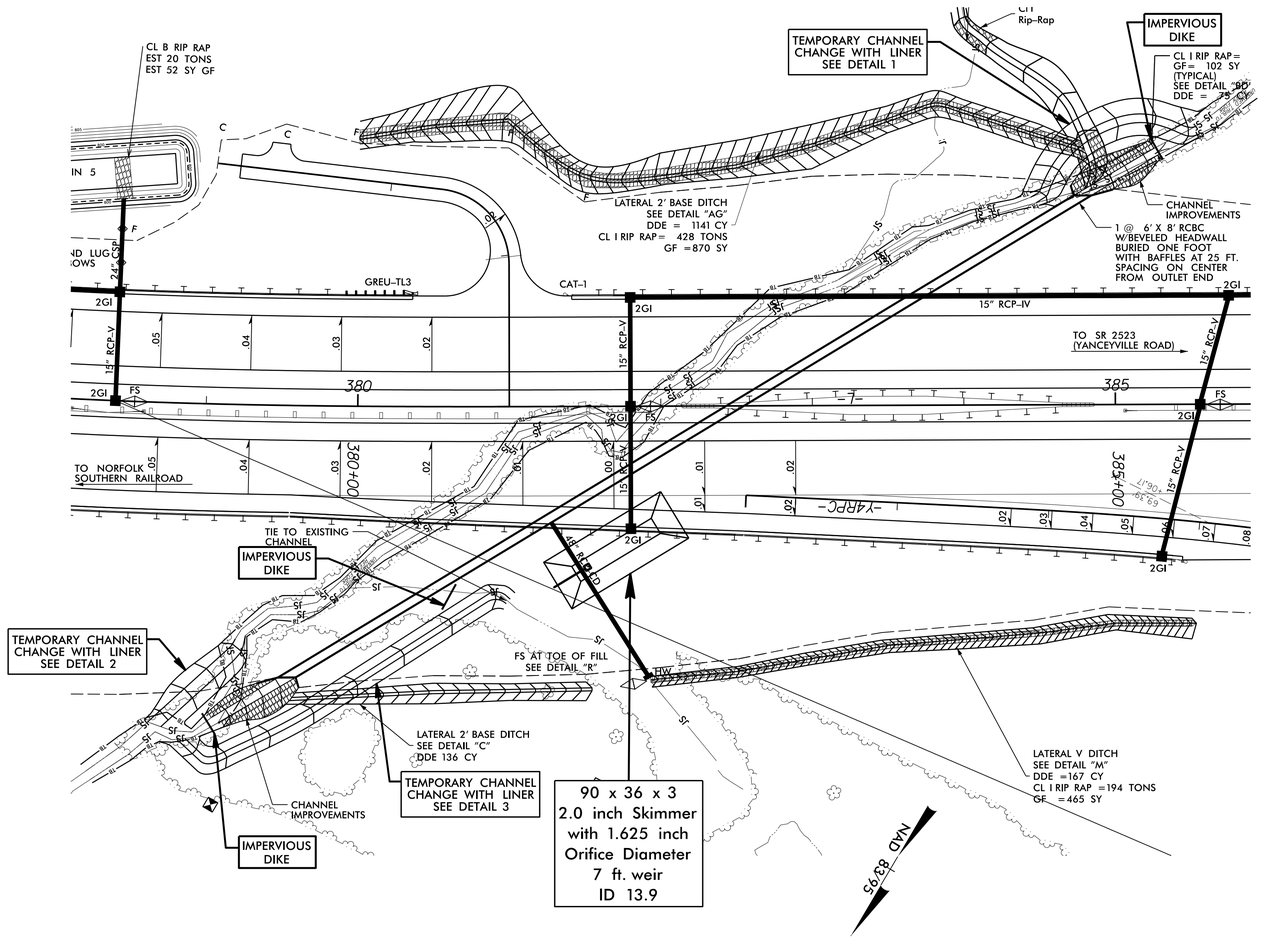
Type of Liner = Geotextile for Soil Stabilization, Type 4

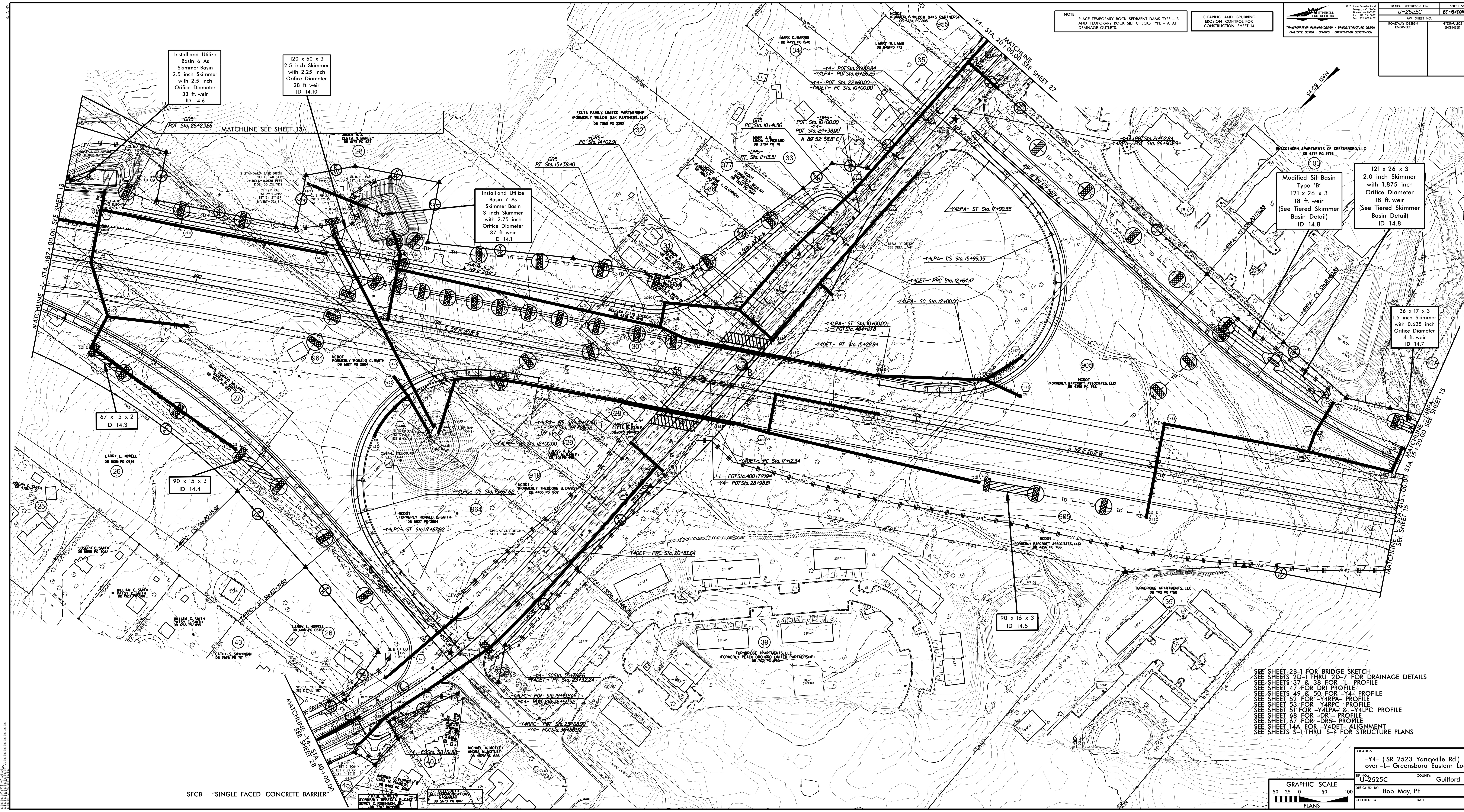
DETAIL 3
TEMPORARY CHANNEL CHANGE WITH LINER
(Not to Scale)



Min. D = 3.0 Ft.
Max. d = 3.0 Ft.
B = 4.0 Ft.

Type of Liner = Geotextile for Soil Stabilization, Type 4





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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 14

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

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-15/CONST.14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SEE SHEET 2B-1 FOR BRIDGE SKETCH
SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEETS 37 & 38 FOR -L- PROFILE
SEE SHEET 47 FOR DR1 PROFILE
SEE SHEETS 49 & 50 FOR -Y4- PROFILE
SEE SHEET 52 FOR -Y4RPA- PROFILE
SEE SHEET 53 FOR -Y4RPC- PROFILE
SEE SHEET 51 FOR -Y4LPA- & -Y4LPC PROFILE
SEE SHEET 68 FOR -DR1- PROFILE
SEE SHEET 67 FOR -DR5- PROFILE
SEE SHEET 14A FOR -Y4DET- ALIGNMENT
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS

GRAPHIC SCALE
50 25 0 50 100
PLANS

LOCATION:
-Y4- (SR 2523 Yancyville Rd.) over -L- Greensboro Eastern Loop

TIP NO.: U-2525C
COUNTY: Guilford
DESIGNED BY: Bob May, PE
CHECKED BY:
DATE:

DETAIL OF –Y4DET– (YANCEVILLE RD.)
VDES. = 40 MPH

WETHERILL ENGINEERING
1223 Jones Franklin Road
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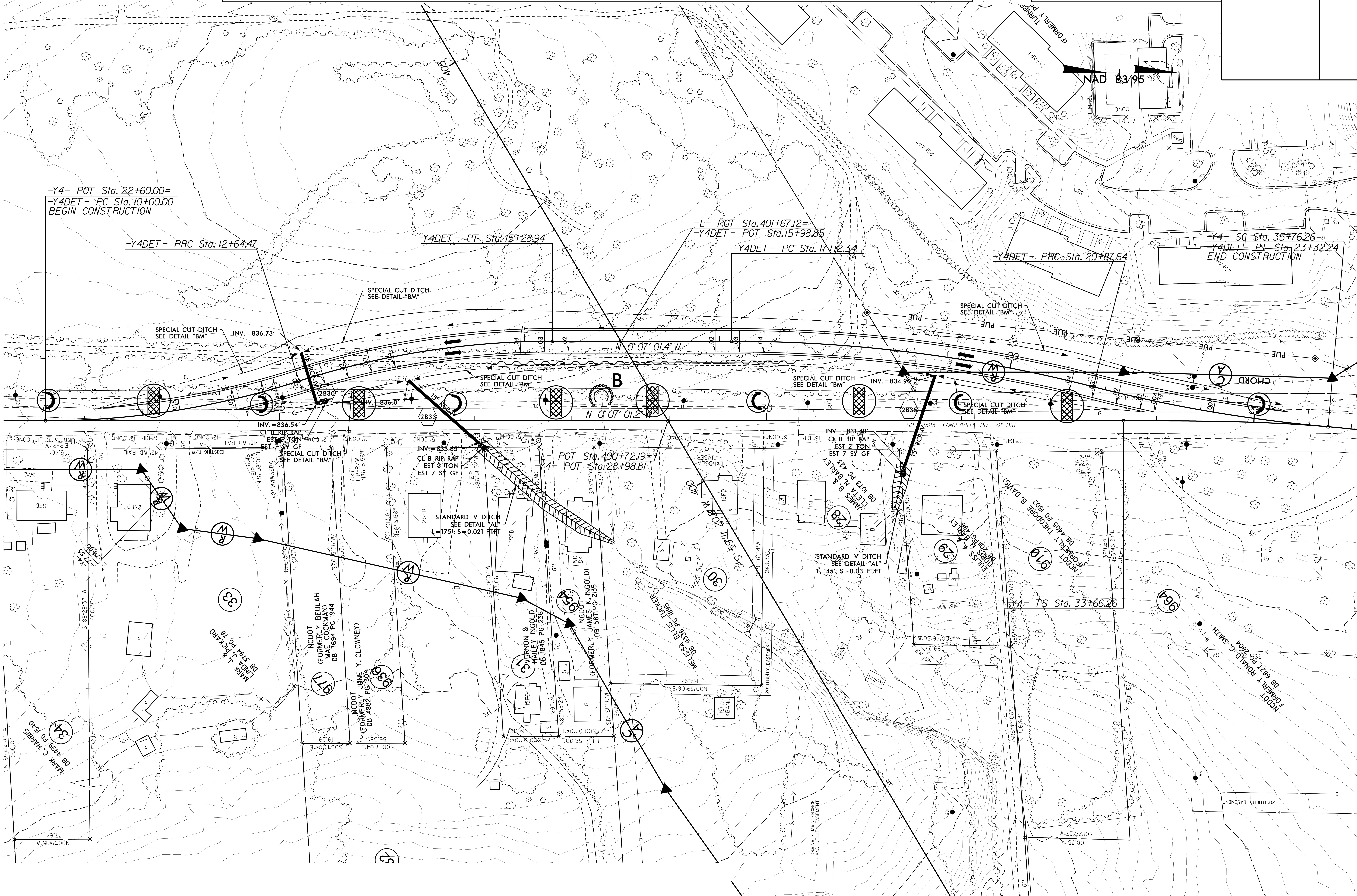
TRANSPORTATION PLANNING/DESIGN – BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN – GIS/GPS – CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-16/CONSTJ4A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14A

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

SEE SHEET 3B-2 FOR TEMP. SHORING SUMMARY
SEE SHEET 14 FOR -L-, -Y4- PLAN VIEW
SEE SHEET 68 FOR -Y4DET- PROFILE

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 15

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

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-17/CONSTJ5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Install and Utilize Basin 9 As Skimmer Basin 3 inch Skimmer with 2.625 inch Orifice Diameter 42 ft. weir ID 15.1

57 x 14 x 3 1.5 inch Skimmer with 0.75 inch Orifice Diameter 4 ft. weir ID 15.2

60 x 30 x 3 1.5 inch Skimmer with 1.25 inch Orifice Diameter 7 ft. weir ID 15.3

38 x 19 x 3 1.5 inch Skimmer with 0.625 inch Orifice Diameter 4 ft. weir ID 15.4

34 x 17 x 3 1.5 inch Skimmer with 0.75 inch Orifice Diameter 4 ft. weir (See Tiered Skimmer Basin Detail) ID 15.5

Modified Silt Basin Type 'B' 34 x 17 x 3 4 ft. weir (See Tiered Skimmer Basin Detail) ID 15.5

79 x 15 x 3 ID 15.6

-Y4RPA- TS Sta J1+64.86

-Y4RPA- POT Sta J0+00.00

-L- POT Sta. 420+06.07 OFF 59'

-Y4 RPA- N 62° 11' 20.8" E

S 59° 11' 20.8" W

MATCHLINE -L- STA. 415+00.00 SEE SHEET 14

MATCHLINE -L- STA. 429+00.00 SEE SHEET 16

MATCHLINE -Y4RPA- STA. 15+20.00 SEE SHEET 14

SRC NORTHWINDS, INC. (FORMERLY HRATCHFORD, LLC) DB 7209 PG 2776

CITY OF GREENSBORO DB 5691 PG 529

SHARON MCADOO CHAPPELL FAMILY TRUST (FORMERLY ELMER A. MCADOO JR SHARON M. CHAPPELL) DB 7623 PG 90

NCDOT (FORMERLY BARCROFT ASSOCIATES, LLC) DB 4356 PG 766

BARCROFT ASSOCIATES, LLC DB 3372 PG 923

INEZ R. TURNER DB 6719 PG 2981

KEN CONSTANT JANET OPOKU DB 4928 PG 1872

HOWARD L. HUTCHENS & LYUDMILA P. HUTCHENS DB 6057 PG 2353

HARVEST HILL PROPERTY OWNERS ASSOC. (FORMERLY PROJECT HOMESTEAD) DB 4914 PG 362

SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEETS 38 & 39 FOR -L- PROFILE
SEE SHEET 52 FOR -Y4RPA- PROFILE

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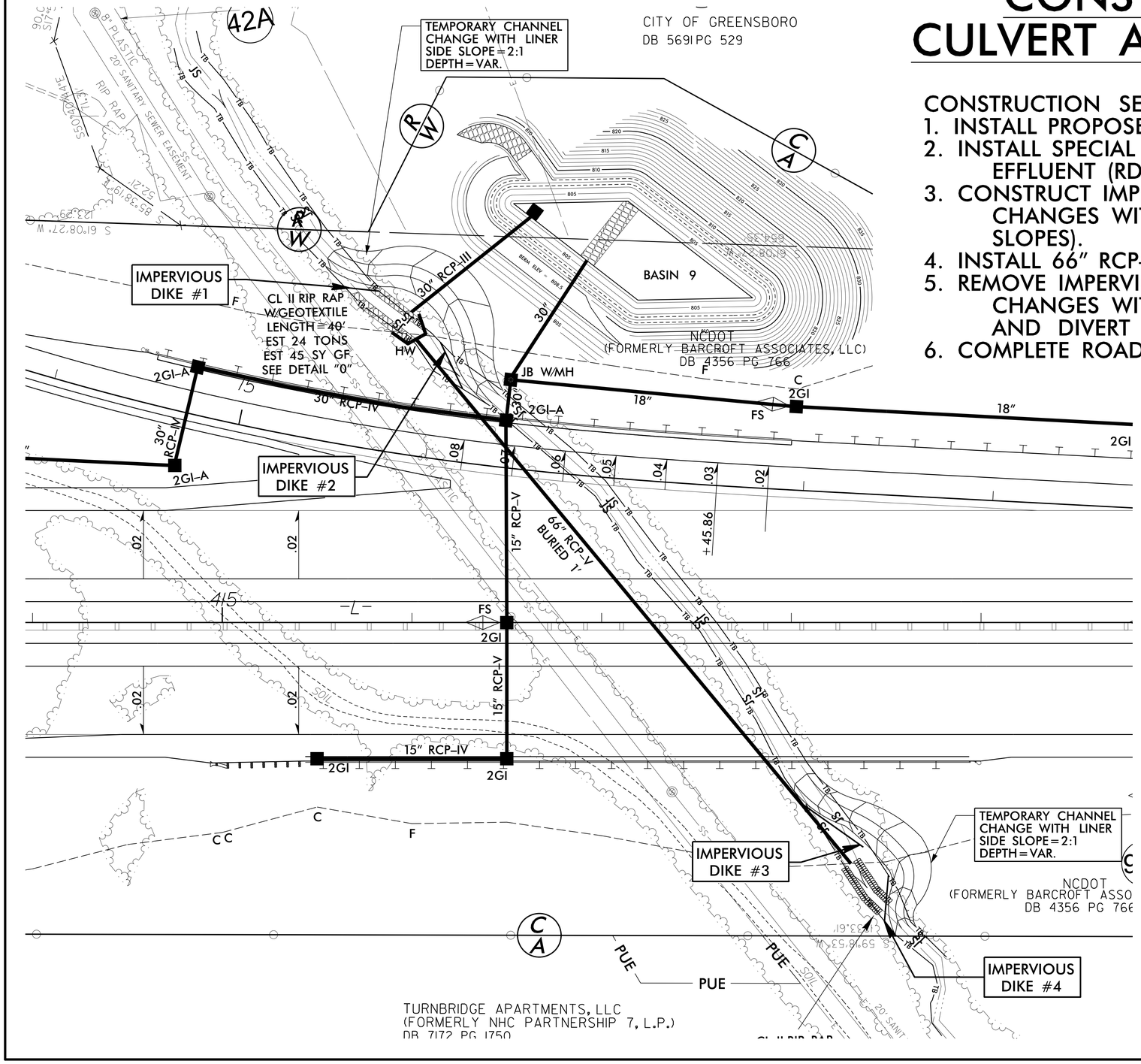
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.
U-2525C
EC-17A/CONST.15

CONSTRUCTION PHASING
CULVERT AT STATION 417+26 –L–



CONSTRUCTION SEQUENCE

1. INSTALL PROPOSED EROSION CONTROL MEASURES
2. INSTALL SPECIAL STILLING BASIN(S) FOR PUMPED EFFLUENT (RDY STD. DWG 1630.06)
3. CONSTRUCT IMPERVIOUS DIKES 1–4 AND TEMPORARY CHANNEL CHANGES WITH LINER (6 FT. BASE, VARIABLE DEPTH, 2:1 SIDE SLOPES).
4. INSTALL 66" RCP–V AND CHANNEL IMPROVEMENTS.
5. REMOVE IMPERVIOUS DIKES 1–4, TEMPORARY CHANNEL CHANGES WITH LINER, AND SPECIAL STILLING BASIN(S) AND DIVERT FLOW INTO 66" RCP–V.
6. COMPLETE ROADWAY

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

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

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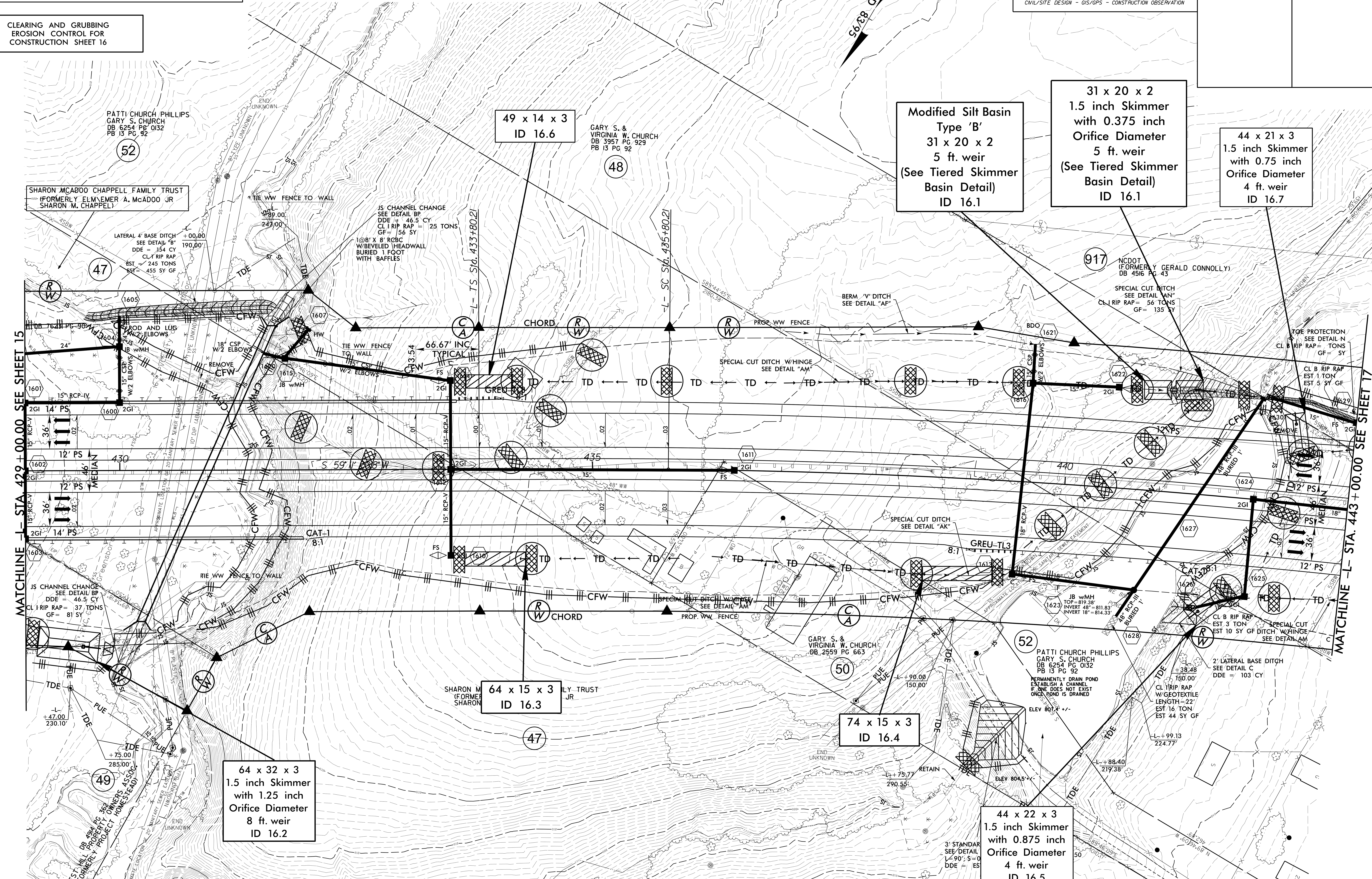
TRANSPORTATION PLANNING/DESIGN – BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN – GIS/GPS – CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-18/CONST.16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 16



SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEET 39 FOR -L- PROFILE
SEE SHEETS C-1 THRU C-? FOR CULVERT PLANS

8/17/99

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

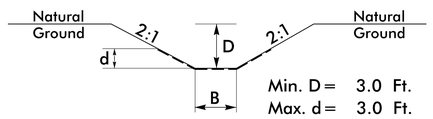
PROJECT REFERENCE NO.
U-2525C
EC-18A/CONST.16

CONSTRUCTION PHASING
CULVERT AT STATION 430+93 –L–

CONSTRUCTION SEQUENCE

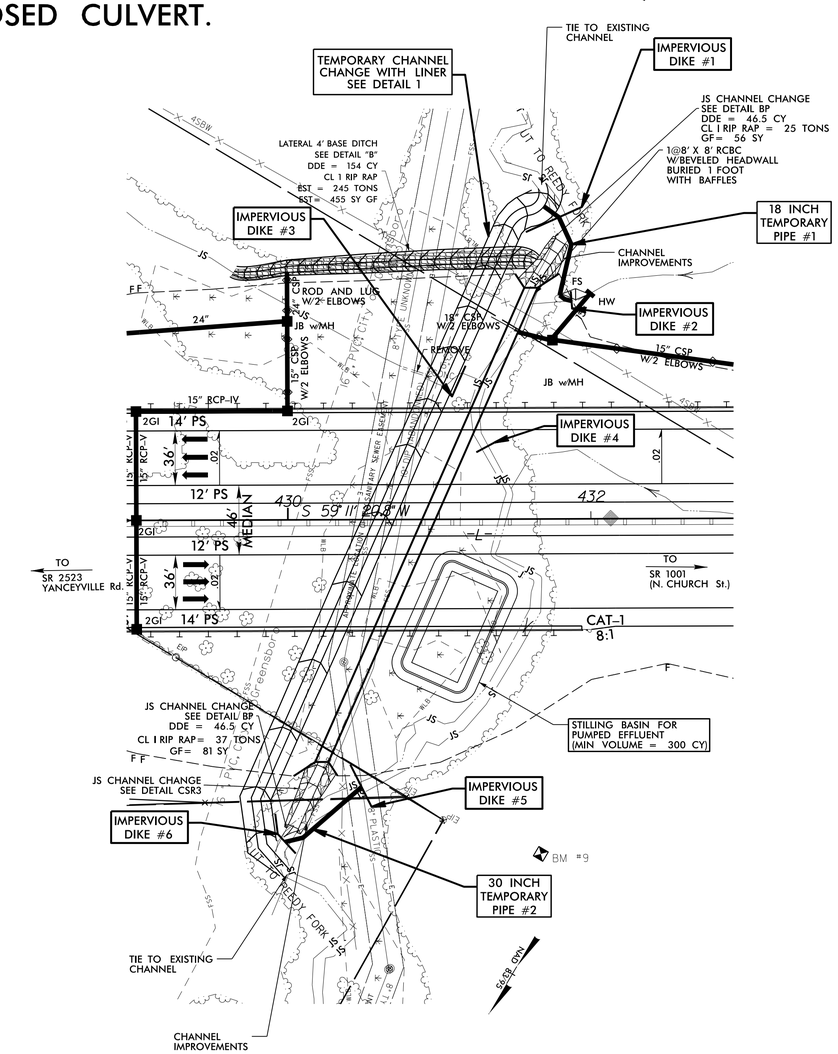
1. INSTALL PROPOSED EROSION CONTROL MEASURES
2. INSTALL STILLING BASIN FOR PUMPED EFFLUENT (MIN. VOLUME 300 CY).
3. CONSTRUCT IMPERVIOUS DIKES 1–6 AND TEMPORARY CHANNEL CHANGE WITH LINER (SEE DETAIL 1) AND INSTALL TEMPORARY PIPES 1 & 2.
4. CONSTRUCT PROPOSED CULVERT, PIPE SYSTEM CONNECTED TO THE PROPOSED CULVERT, AND CHANNEL IMPROVEMENTS.
5. REMOVE IMPERVIOUS DIKES 1–6, TEMPORARY PIPES 1 & 2, TEMPORARY CHANNEL CHANGE WITH LINER, AND STILLING BASIN AND DIVERT FLOW INTO PROPOSED CULVERT.
6. COMPLETE ROADWAY.

DETAIL 1
TEMPORARY CHANNEL CHANGE WITH LINER
(Not to Scale)



Min. D = 3.0 Ft.
Max. d = 3.0 Ft.
B = 6.0 Ft.

Type of Liner = Geotextile for Soil Stabilization, Type 4



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 17

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

PROJECT REFERENCE NO.	SHEET NO.
U-2525C	EC-19/CONST J7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

43 x 21 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
4 ft. weir
ID 17.2

70 x 12 x 2
ID 17.3

92 x 16 x 2
ID 17.1

J. DOUGLAS HENDERSON
DB 4195 PG 342

KINGDOM ENTERPRISES, LLC
(FORMERLY JAY C. & MARJORIE W. CHAMPION)
DB 7622 PG 1240

TYSON PLACE HOMEOWNERS ASSOCIATION INC.
DB 6724 PG 2654
PB 162 PG 36

NCDOT
(FORMERLY GERALD CONNOLLY)
DB 4516 PG 43

TIMOTHY A. McADOO
DB 3805 PG 1007

GARY S. & VIRGINIA W. CHURCH
DB 3957 PG 929
PB 13 PG 92

PATTI CHURCH PHILLIPS
GARY S. CHURCH
DB 6254 PG 0132
PB 13 PG 92

FAMILY TRUST OF GWENDOLYN McADOO JONES
(FORMERLY GWENDOLYN McADOO JONES)
DB 7240 PG 1280

CANTERBURY SCHOOL
DB 5586 PG 1159

-Y5- PCSta. 18+48.70
-Y5- PTSta. 21+44.14
-Y5- PCSta. 25+59.41
-Y5- POC Sta. 26+75.00=
-Y5DET- PI Sta. 19+42.87
-Y5DET- PRC Sta. 11+71.52
-Y5DET- PT Sta. 13+22.27
-Y5DET- PC Sta. 15+72.05
-Y5DET- PRC Sta. 17+33.63
-L- POC Sta. 450+00.00
-Y6RPB- ST Sta. 10+00.00 OFF. 59.00' LT.
-Y6RPB- SRS Sta. 11+50.00
-Y6RPB- SC Sta. 13+00.00
-L- POCSta. 447+77.20=
-Y5- POTSta. 22+29.98
Sta. 17+50.00= PC Sta. 10+00.00
-Y6RPC- ST Sta. 10+00.00 = -L- Sta. 453+75.00, 59' RT
-Y6RPC- SC Sta. 12+16.00

MATCHLINE -L- STA. 443+00.00 SEE SHEET 16
MATCHLINE -Y5- STA. 27+00.00 SEE SHEET 29
MATCHLINE -L- STA. 457+00.00 SEE SHEET 18

SFCB – "SINGLE FACED CONCRETE BARRIER"
SEE SHEET 2B-1 FOR BRIDGE SKETCH
SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEETS 39 & 40 FOR –L– PROFILE
SEE SHEET 54 FOR –Y5– PROFILE
SEE SHEET 58 FOR –Y6RPC– PROFILE
SEE SHEET 64 FOR –Y6RPB– PROFILE
SEE SHEET 17A FOR DETOUR
SEE SHEETS S-1 THRU S-? FOR STRUCTURE PLANS