TIP PROJECT: B-4255

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

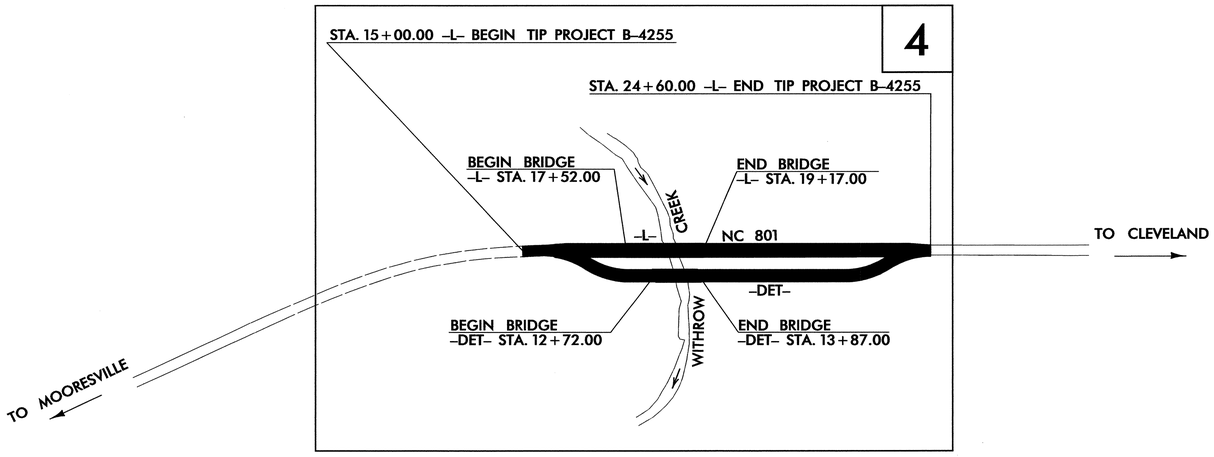
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

ROWAN COUNTY

LOCATION: BRIDGE NO. 28 OVER WITHROW CREEK ON NC 801

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE

NC GRID NAD 83



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4255	EC-1	

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

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
	Streambank Reforestation	
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	
1630.01	Riser Basin	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	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	
1630.04	Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A OR A
1632.02	Type B	B OR B
1632.03	Type C	C OR C

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

GRAPHIC SCALE

0
PLANS
0
PROFILE (HORIZONTAL)
0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Prepared In the Office of:

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

2006 STANDARD SPECIFICATIONS

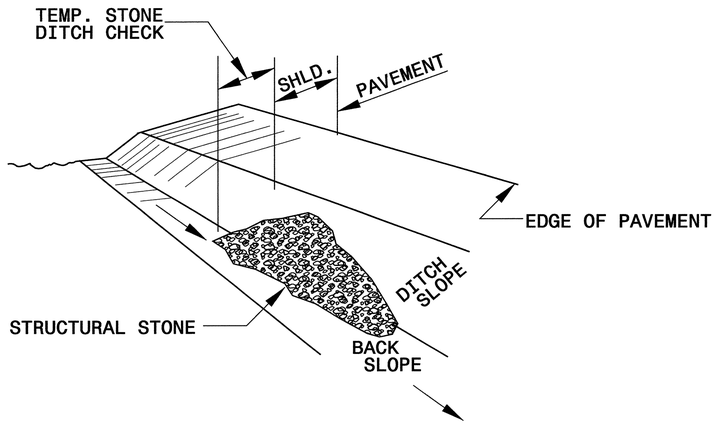
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated July 18, 2006 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence
1606.01 Special Sediment Control Fence
1607.01 Gravel Construction Entrance
1622.01 Temporary Berms and Slope Drains
1630.03 Temporary Silt Ditch
1630.05 Temporary Diversion
1630.06 Special Stilling Basin
1632.03 Rock Inlet Sediment Trap Type C
1633.01 Temporary Rock Silt Check Type A
1634.02 Temporary Rock Sediment Dam Type B
1635.02 Rock Pipe Inlet Sediment Trap Type B

PROJECT REFERENCE NO.	SHEET NO.
B-4255	EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

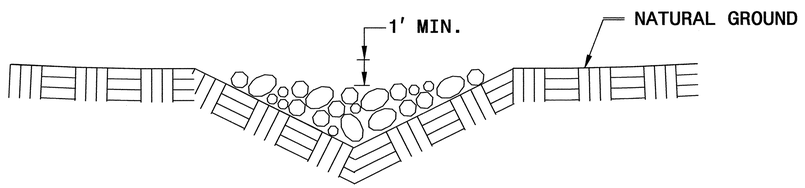


ISOMETRIC VIEW

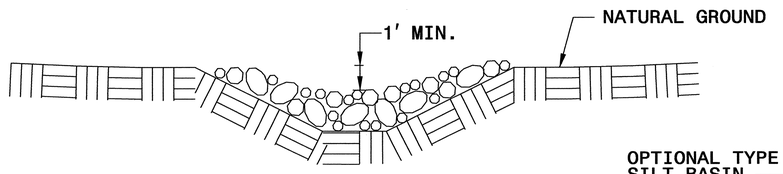
NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

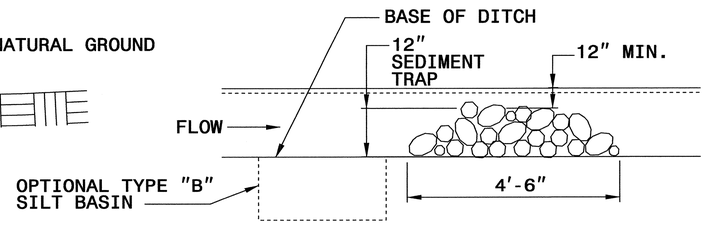
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION
VEE DITCH



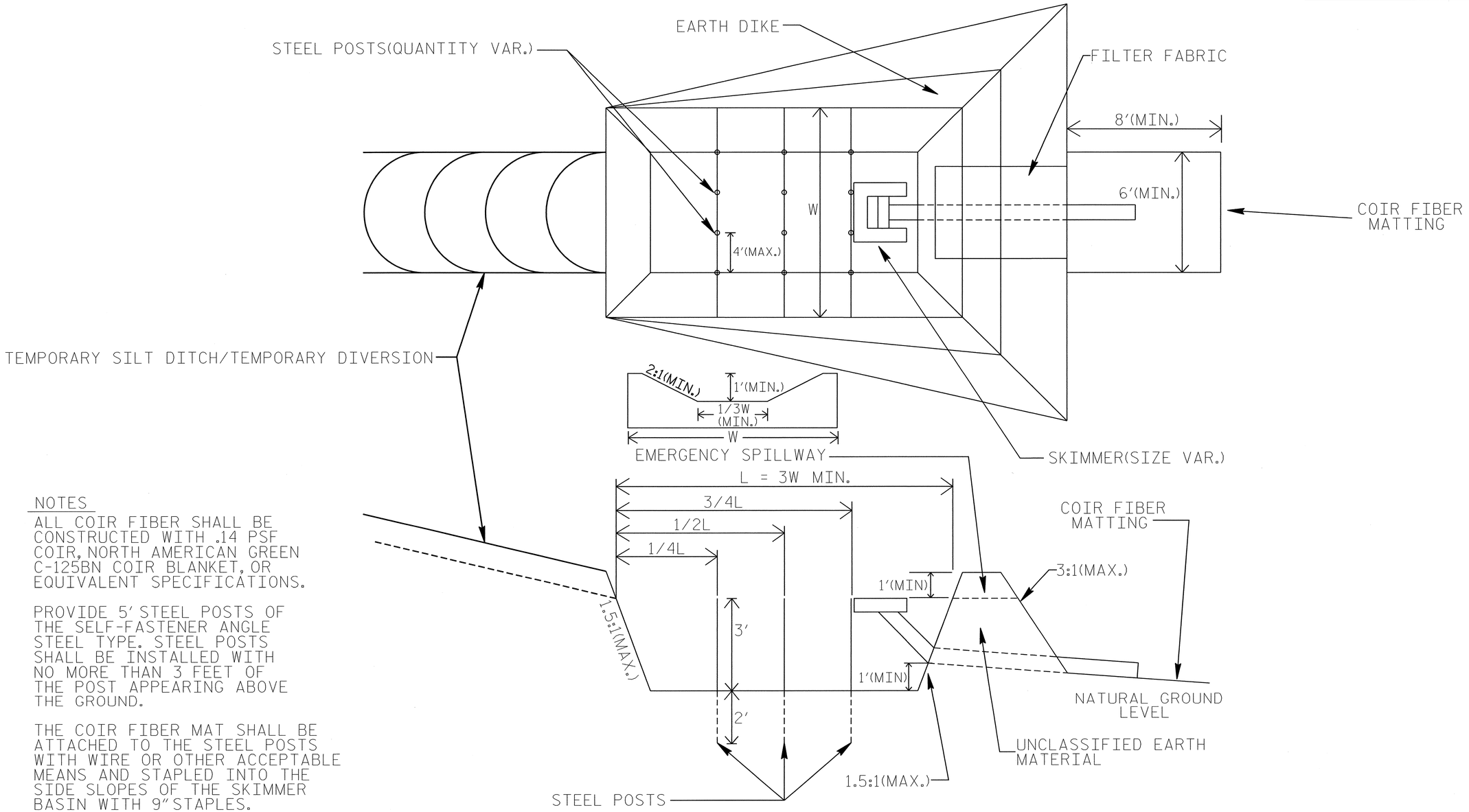
CROSS SECTION
TRAPEZOIDAL DITCH



ELEVATION VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-4255	EC-2A
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL



NOTES

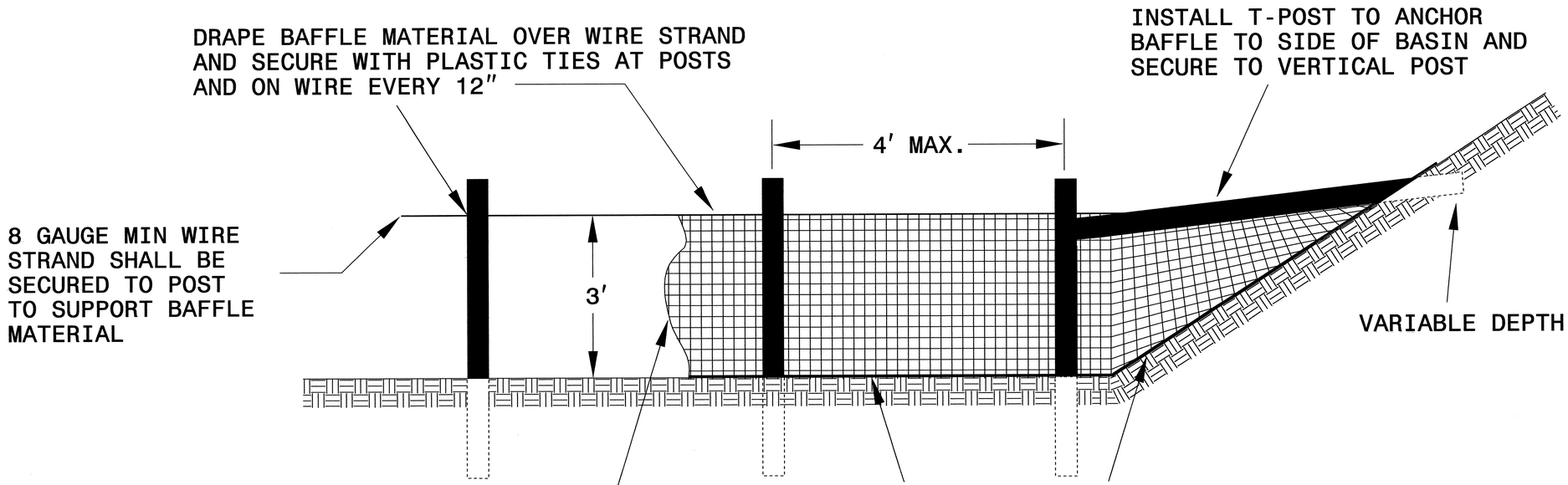
ALL COIR FIBER SHALL BE CONSTRUCTED WITH .14 PSF COIR, NORTH AMERICAN GREEN C-125BN COIR BLANKET, OR EQUIVALENT SPECIFICATIONS.

PROVIDE 5' STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. STEEL POSTS SHALL BE INSTALLED WITH NO MORE THAN 3 FEET OF THE POST APPEARING ABOVE THE GROUND.

THE COIR FIBER MAT SHALL BE ATTACHED TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE SIDE SLOPES OF THE SKIMMER BASIN WITH 9" STAPLES.

PROJECT REFERENCE NO.	SHEET NO.
B-4255	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY SEDIMENT BAFFLE DETAIL



NOTES:

WIRE STRAND SUPPORT SHALL BE 8 GAUGE MINIMUM WIRE.

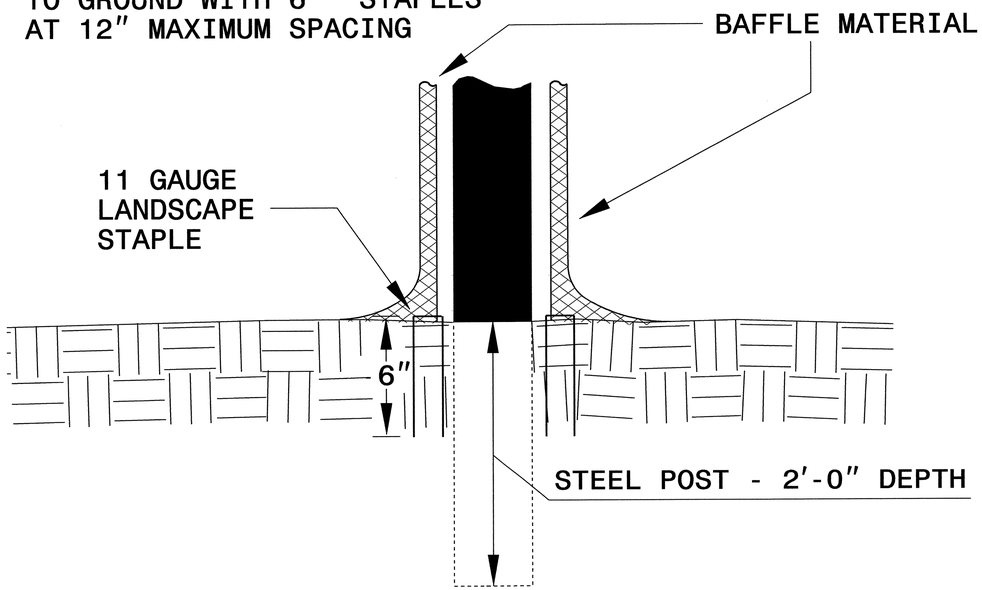
STEEL POST SHALL BE 5′-0″ MIN. IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.

BAFFLE MATERIAL SHALL BE WOVEN COIR FIBER WITH .14 PSF COIR, NORTH AMERICAN GREEN C-125BN COIR BLANKET OR EQUIVALENT MATERIAL SPECIFIED BY THE ENGINEER.

BAFFLE MATERIAL SHALL BE A MINIMUM OF 6′ IN WIDTH DRAPED AND SHALL BE FASTENED ADEQUATELY TO THE WIRE AND SUPPORTS WITH PLASTIC TIES OR AS DIRECTED BY THE ENGINEER.

BAFFLES SHALL BE 3′ IN HEIGHT OR AS DIRECTED BY THE ENGINEER.

BAFFLE MATERIAL SHALL BE SECURED WITH 6″ LANDSCAPE STAPLES AT THE BOTTOM AND SIDES OF THE BASIN AT 12″ MAXIMUM SPACING.



BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 6″ LANDSCAPE STAPLES

-DET-

PI Sta 10+54.95
△ = 33° 05' 08.0" (RT)
D = 30° 58' 14.5"
L = 106.83'
T = 54.95'
R = 185.00'
SE = 06
DS = 25 mph

PI Sta 11+61.78
△ = 33° 05' 08.0" (LT)
D = 30° 58' 14.5"
L = 106.83'
T = 54.95'
R = 185.00'
SE = 06
DS = 25 mph

PI Sta 17+74.64
△ = 33° 05' 07.8" (LT)
D = 30° 58' 14.5"
L = 106.83'
T = 54.95'
R = 185.00'
SE = 06
DS = 25 mph

PI Sta 18+81.47
△ = 33° 05' 07.8" (RT)
D = 30° 58' 14.5"
L = 106.83'
T = 54.95'
R = 185.00'
SE = 06
DS = 25 mph

NC GRID NAD 83

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 2B

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

NOTE:
UTILIZE SPECIAL STILLING BASIN AS NEEDED DURING BRIDGE CONSTRUCTION.

PROJECT REFERENCE NO.	SHEET NO.
B-4255	EC-3/CONST.2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR -DET- PROFILE SEE SHEET 5

25 x 9 x 3
4' weir

24 x 8 x 3
4' weir

34 x 10 x 3
4' weir

-DET- PC Sta. 10+00.00

MARY M. BARBER
D.B. 582 PG. 60

WITHROW CREEK

JOHN E. GRAY AND WIFE SUE H. GRAY
D.B. 581 PG. 617

REBECCA JANE BARBER FLOYD AND JOYCE ANN BARBER
D.B. 333 PG. 696
(HISTORICAL PROPERTY)

-DET- PC Sta. 17+19.69
-DET- PT Sta. 19+33.35
-DET- PRC Sta. 18+26.52

TOE PROTECTION
SEE DETAIL A
EST. 35 TON
EST. 109 SY FF

TOE PROTECTION
SEE DETAIL A
EST. 30 TON
EST. 90 SY FF

RETAIN

RETAIN & EXTEND 24"

RETAIN EXIST. DITCH DURING DETOUR

24" CONC. / ABANDONED TELEPHONE MANHOLE

COLLAR

REMOVE

TEMP. COLLAR

TEMP. 24" CMP

GRAU 350

50' TAPER

N 22° 27' 05.4" E
-DET-

CLASS 'B' RIP RAP
EST. 5 TONS
EST. 14 SY FF

SPECIAL BASE DITCH
SEE DETAIL C
EST. 115 TON
EST. 245 SY FF

LATERAL BASE DITCH
SEE DETAIL B
DDE 50 CY
EST. 40 TON
EST. 115 SY FF

-DET- PRC Sta. 11+06.83

-DET- PT Sta. 12+13.66

TIE DIKE TO DETOUR ROADWAY EMBANKMENT

BEGIN BRIDGE
-DET- Sta. 12+72.00

CLASS 'II' RIP RAP
STRUCTURE PAY ITEM

END BRIDGE
-DET- Sta. 13+87.00

JOHN E. GRAY AND WIFE SUE H. GRAY
D.B. 581 PG. 617

EARL W. KOONTZ AND WIFE THELMA B. KOONTZ
NO DEED LISTED

24 x 8 x 3
4' weir

78 x 28 x 3
2.5 inch Skimmer
with 2.0 inch
Orifice Diameter
12 ft. weir

DETAIL A
TOE PROTECTION
(Not to Scale)

NATURAL GROUND
Fill Slope
d
Filter Fabric
d = 1.0 Ft.
Type of Liner = CLASS B

-DET- STA. 11+60.96 TO 12+45 LT
-DET- STA. 13+79 TO 14+75 LT

DETAIL B
LATERAL BASE DITCH
(Not to Scale)

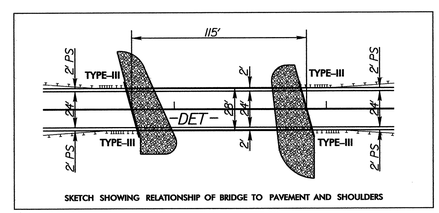
2:1
b
1'/Ft.
2%
D
2%
Natural Ground
Filter Fabric
B
Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.
b = 5.0 Ft.
Type of Liner = CLASS B

-DET- STA. 16+25 TO 17+11.67 RT

DETAIL C
SPECIAL BASE DITCH
(Not to Scale)

4:1
D
2%
Natural Ground
Filter Fabric
B
Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.
Type of Liner = CLASS B

-DET- STA. 17+11.67 TO 19+23.35 RT



SKETCH SHOWING RELATIONSHIP OF BRIDGE TO PAVEMENT AND SHOULDERS

$TIME$
$DATE$
$FILE$

PROJECT REFERENCE NO.	SHEET NO.
B-4255	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

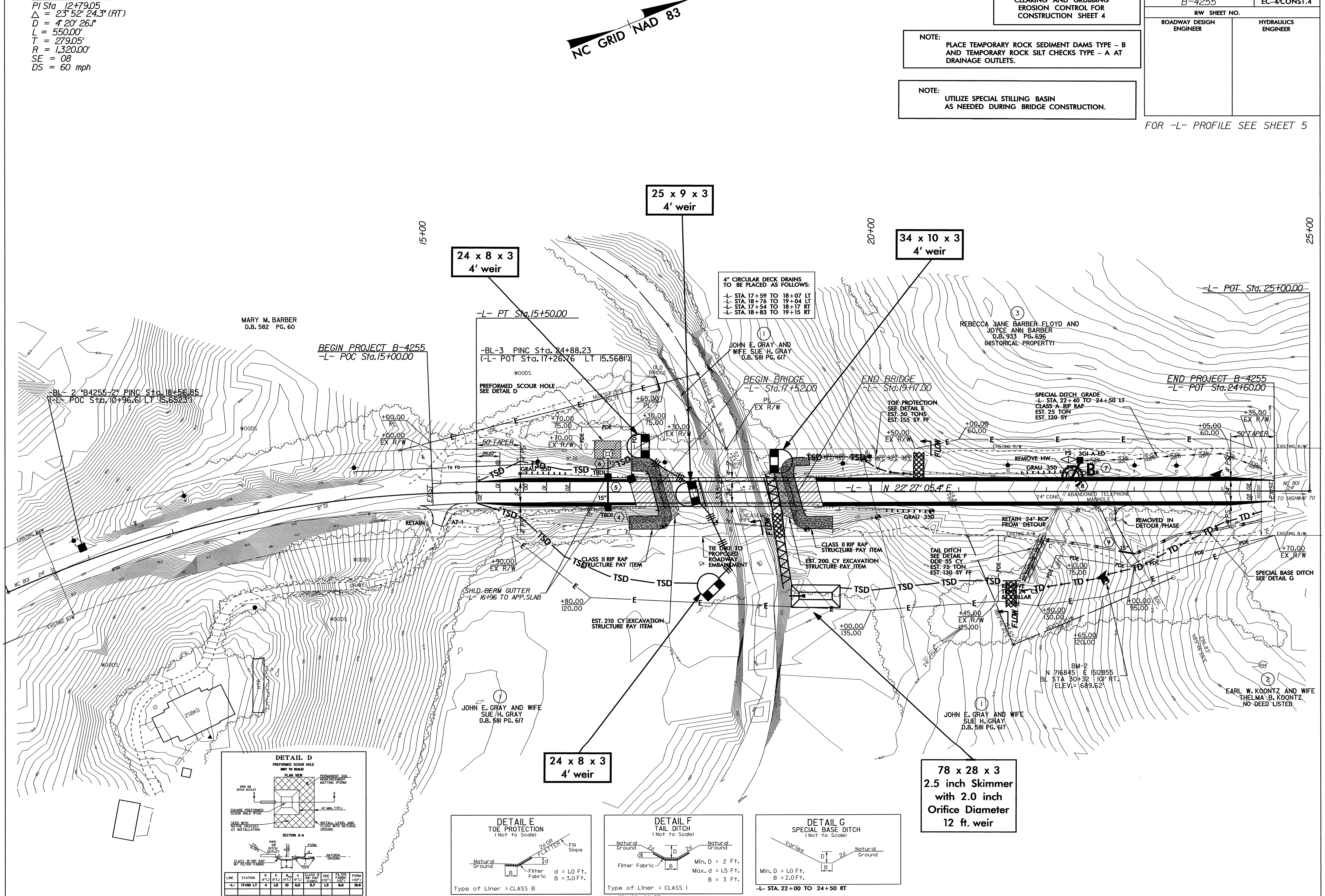
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

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

NOTE:
UTILIZE SPECIAL STILLING BASIN AS NEEDED DURING BRIDGE CONSTRUCTION.

FOR -L- PROFILE SEE SHEET 5

-L-
PI Sta 12+79.05
△ = 23° 52′ 24.3″ (RT)
D = 4° 20′ 26.1″
L = 550.00′
T = 279.05′
R = 1,320.00′
SE = 08
DS = 60 mph



LINE	STATION	B (FT.)	D (FT.)	W PSR (FT.)	d (FT.)	CLASS B RIP RAP (TONS)	DDE (YD³)	FILTER FABRIC (YD²)	PSRM (YD²)
-L-	17+00 LT	4	1.5	10	0.5	5.7	1.3	8.0	18.9

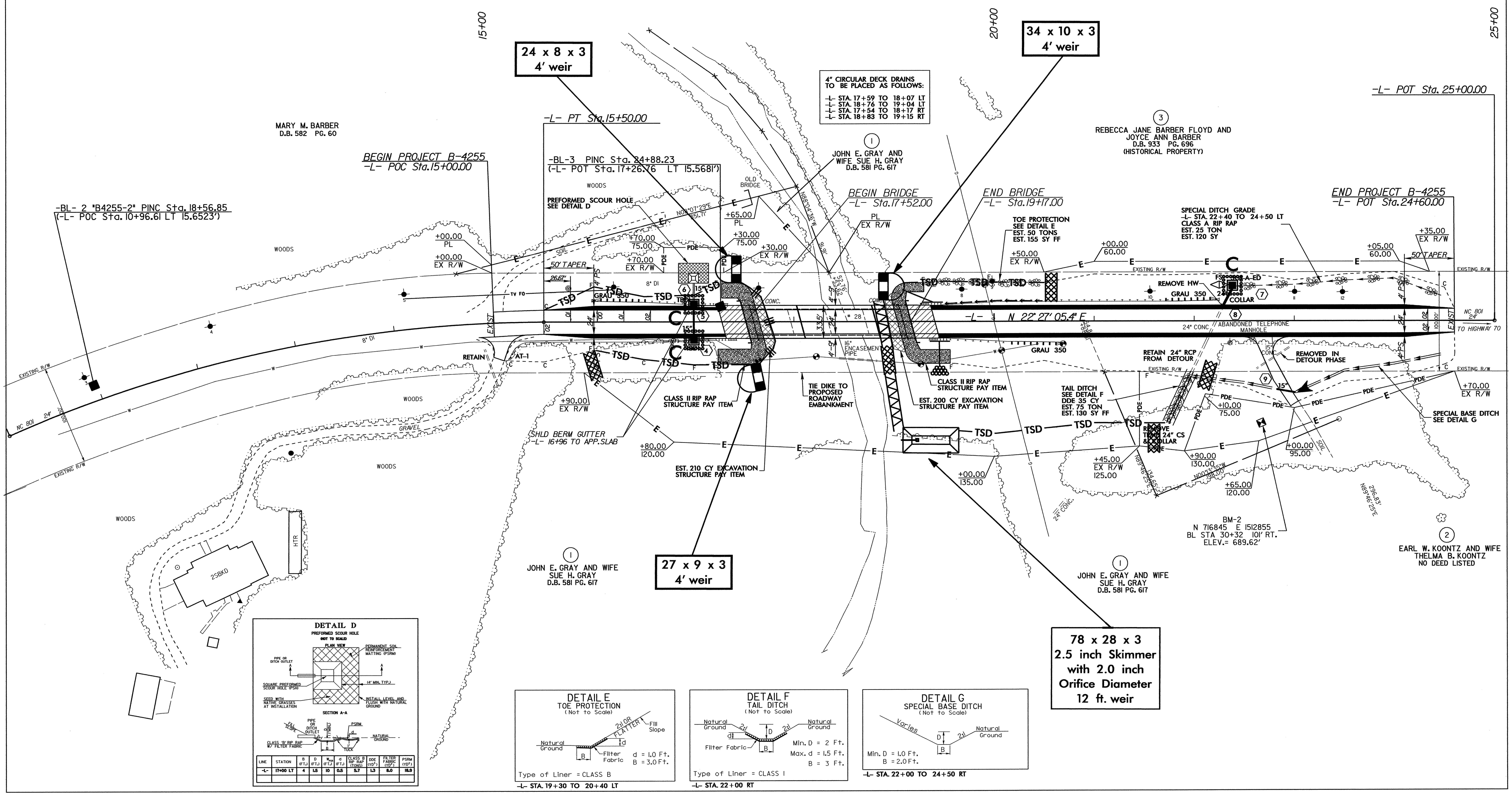
PROJECT REFERENCE NO.	SHEET NO.
B-4255	EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-
PI Sta 12+79.05
Δ = 23° 52′ 24.3″ (RT)
D = 4° 20′ 26.1″
L = 550.00′
T = 279.05′
R = 1,320.00′
SE = .08
DS = 60 mph

NC GRID NAD 83

NOTE:
UTILIZE SPECIAL STILLING BASIN AS NEEDED DURING BRIDGE CONSTRUCTION.

FOR -L- PROFILE SEE SHEET 5



15+00
20+00
25+00
24 x 8 x 3
4′ weir
34 x 10 x 3
4′ weir
27 x 9 x 3
4′ weir
78 x 28 x 3
2.5 inch Skimmer
with 2.0 inch
Orifice Diameter
12 ft. weir
MARY M. BARBER
D.B. 582 PG. 60
BEGIN PROJECT B-4255
-L- POC Sta.15+00.00
-L- PT Sta.15+50.00
-BL-3 PINC Sta. 24+88.23
(-L- POT Sta. 17+26.76 LT 15.5681′)
-BL- 2 "B4255-2" PINC Sta. 18+56.85
(-L- POC Sta. 10+96.61 LT 15.6523′)
PREFORMED SCOUR HOLE
SEE DETAIL D
4" CIRCULAR DECK DRAINS
TO BE PLACED AS FOLLOWS:
-L- STA. 17+59 TO 18+07 LT
-L- STA. 18+76 TO 19+04 LT
-L- STA. 17+54 TO 18+17 RT
-L- STA. 18+83 TO 19+15 RT
JOHN E. GRAY AND
WIFE SUE H. GRAY
D.B. 581 PG. 617
BEGIN BRIDGE
-L- Sta.17+52.00
END BRIDGE
-L- Sta.19+17.00
REBECCA JANE BARBER FLOYD AND
JOYCE ANN BARBER
D.B. 933 PG. 696
(HISTORICAL PROPERTY)
-L- POT Sta. 25+00.00
END PROJECT B-4255
-L- POT Sta.24+60.00
TOE PROTECTION
SEE DETAIL E
EST. 50 TONS
EST. 155 SY FF
SPECIAL DITCH GRADE
-L- STA. 22+40 TO 24+50 LT
CLASS A RIP RAP
EST. 25 TON
EST. 120 SY
-L- N 22° 27′ 05.4″ E
RETAIN
AT-1
CLASS II RIP RAP
STRUCTURE PAY ITEM
TIE DIKE TO
PROPOSED
ROADWAY
EMBANKMENT
CLASS II RIP RAP
STRUCTURE PAY ITEM
EST. 200 CY EXCAVATION
STRUCTURE PAY ITEM
SHLD BERM GUTTER
-L- 16+96 TO APP.SLAB
EST. 210 CY EXCAVATION
STRUCTURE PAY ITEM
TAIL DITCH
SEE DETAIL F
DDE 35 CY
EST. 75 TON
EST. 130 SY FF
RETAIN 24" RCP
FROM DETOUR
REMOVED IN
DETOUR PHASE
REMOVE HW
ABANDONED TELEPHONE
MANHOLE
SPECIAL BASE DITCH
SEE DETAIL G
BM-2
N 716845 E 1512855
BL STA 30+32 101′ RT.
ELEV.= 689.62′
EARL W. KOONTZ AND WIFE
THELMA B. KOONTZ
NO DEED LISTED
JOHN E. GRAY AND WIFE
SUE H. GRAY
D.B. 581 PG. 617
WOODS
NC 801
TO HIGHWAY 70
DETAIL D
PREFORMED SCOUR HOLE
DETAIL E
TOE PROTECTION
(Not to Scale)
Type of Liner = CLASS B
-L- STA. 19+30 TO 20+40 LT
d = 1.0 Ft.
B = 3.0 Ft.
DETAIL F
TAIL DITCH
(Not to Scale)
Min. D = 2 Ft.
Max. d = 1.5 Ft.
B = 3 Ft.
Type of Liner = CLASS I
-L- STA. 22+00 RT
DETAIL G
SPECIAL BASE DITCH
(Not to Scale)
Min. D = 1.0 Ft.
B = 2.0 Ft.
-L- STA. 22+00 TO 24+50 RT