TIP PROJECT: B-4534

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4534	EC-1	

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

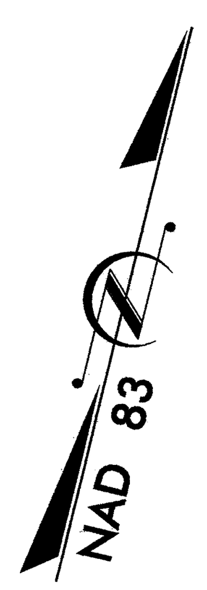
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

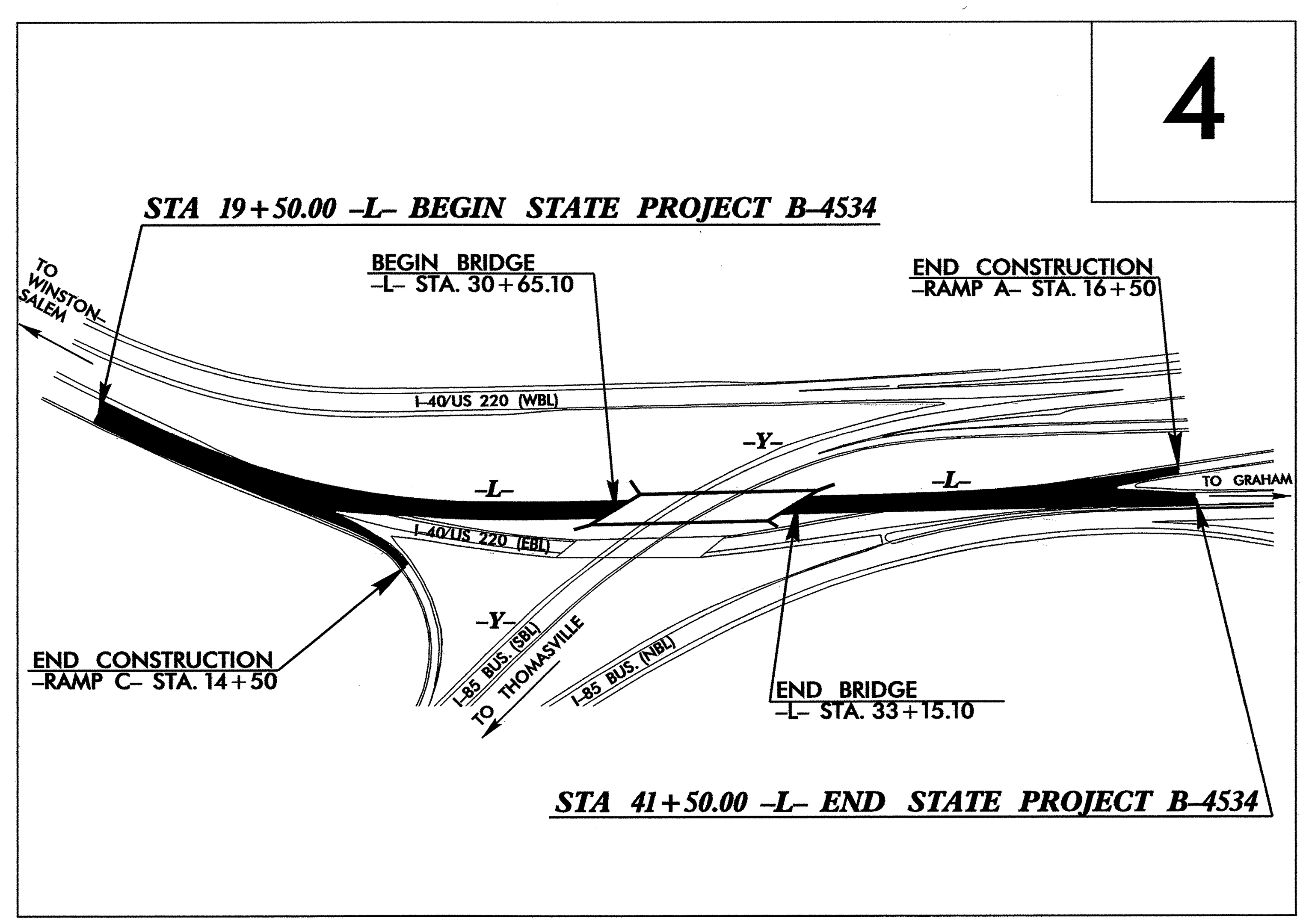
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

GUILFORD COUNTY

LOCATION: BRIDGE NO. 336 ON I-40 & US 220 EBL OVER I-85 SBL

TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, STRUCTURES, AND RETAINING WALLS





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	
1630.01	Riser Basin	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
	Wattle	
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
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.

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	1632.02	Rock Inlet Sediment Trap Type B
1607.01	Gravel Construction Entrance	1632.03	Rock Inlet Sediment Trap Type C
1622.01	Temporary Berms and Slope Drains	1633.01	Temporary Rock Silt Check Type A
1630.05	Temporary Diversion	1634.02	Temporary Rock Sediment Dam Type B

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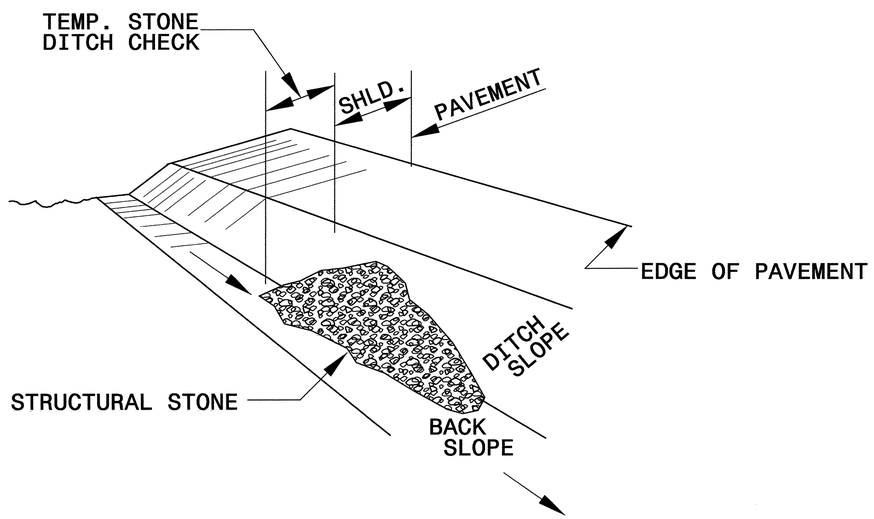
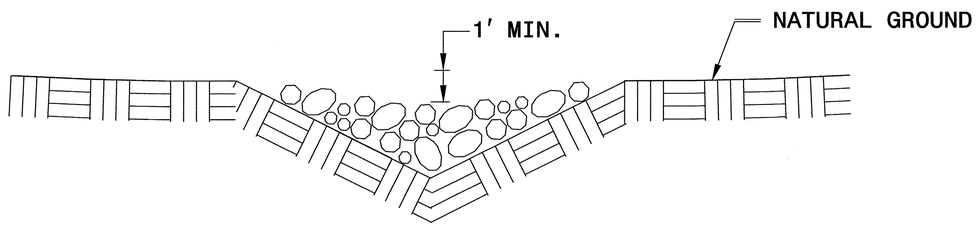
PROJECT REFERENCE NO.	SHEET NO.
B-4534	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

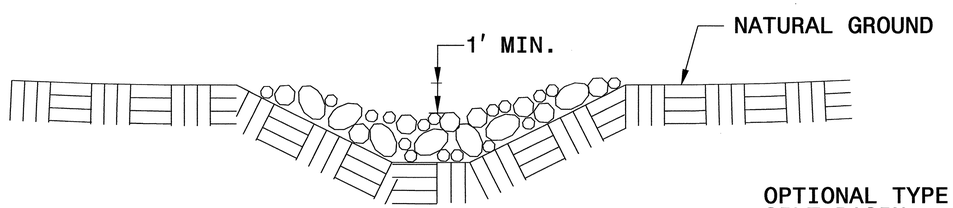
TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH

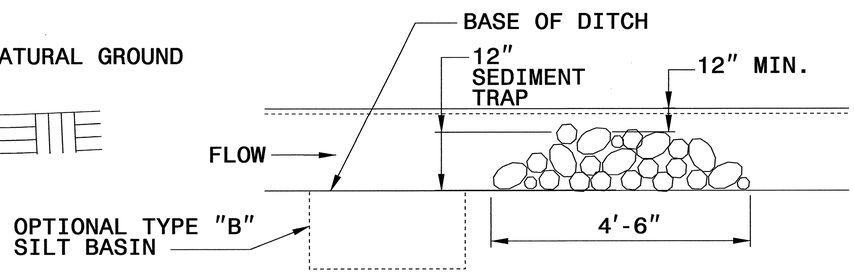


CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

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

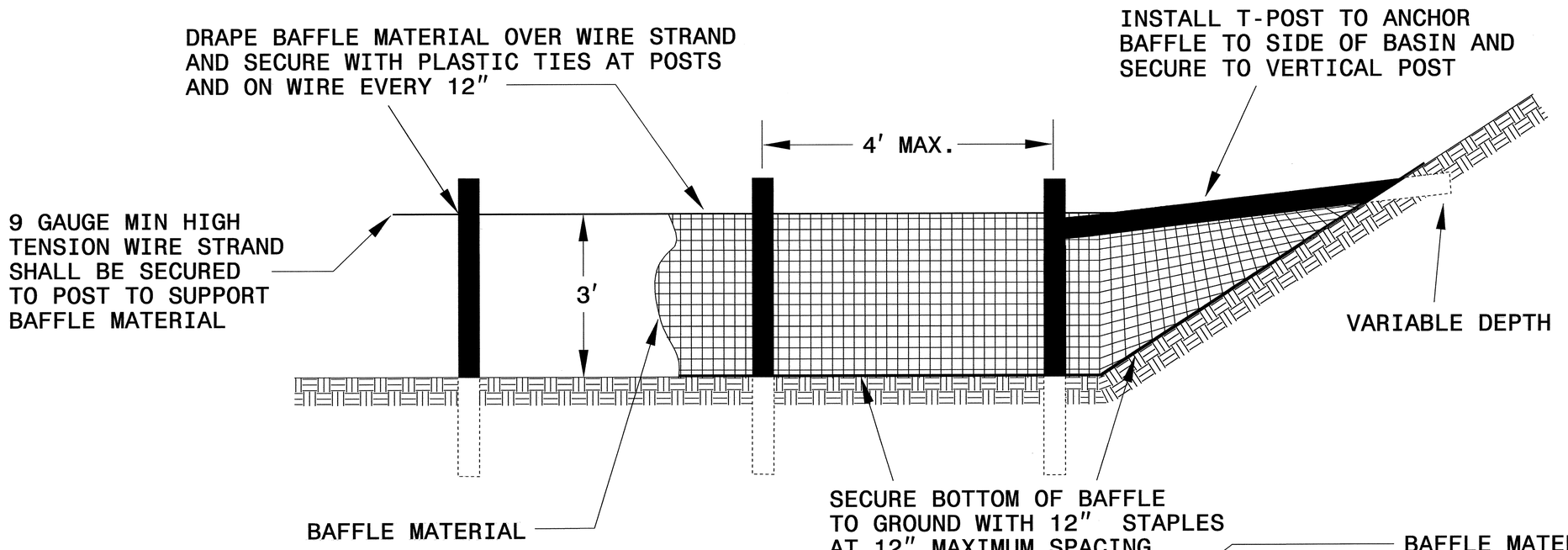
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.

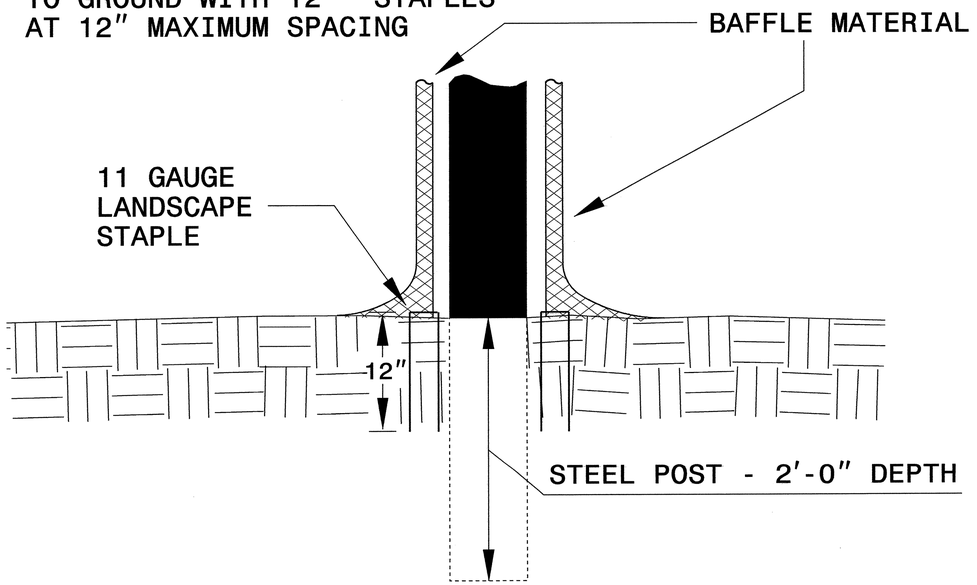


ELEVATION VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-4534	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



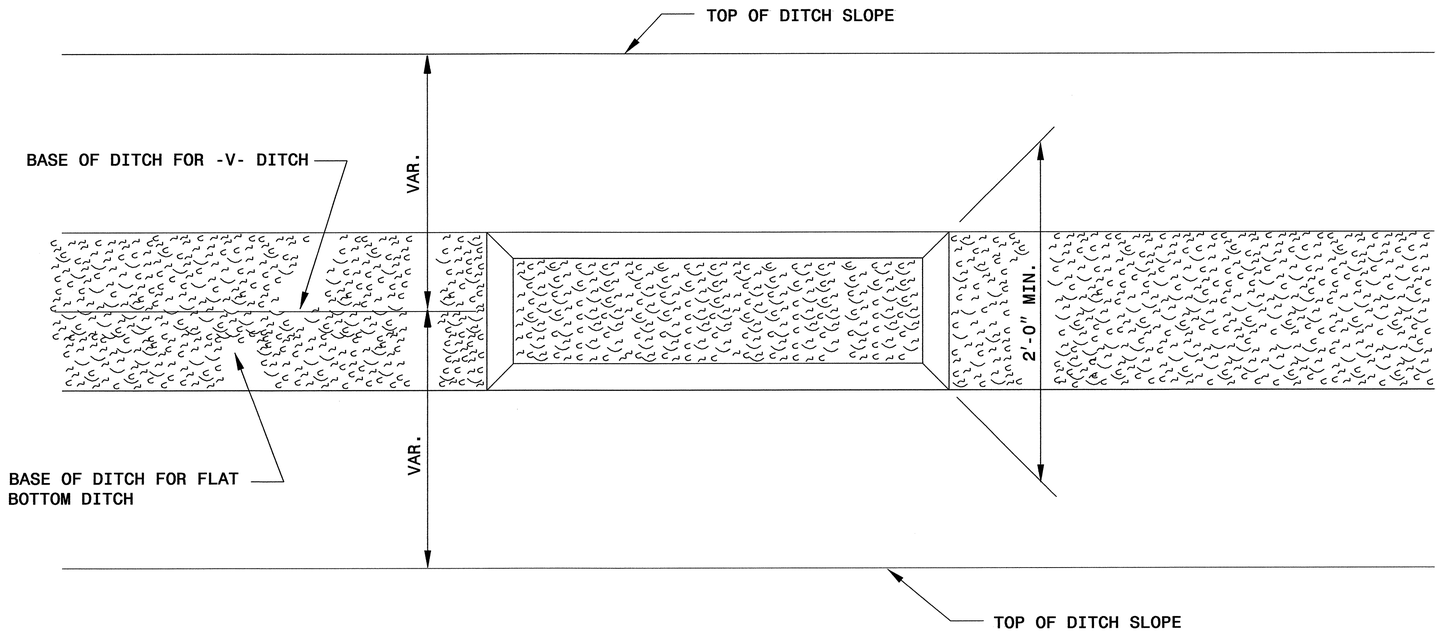


BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12″ LANDSCAPE STAPLES

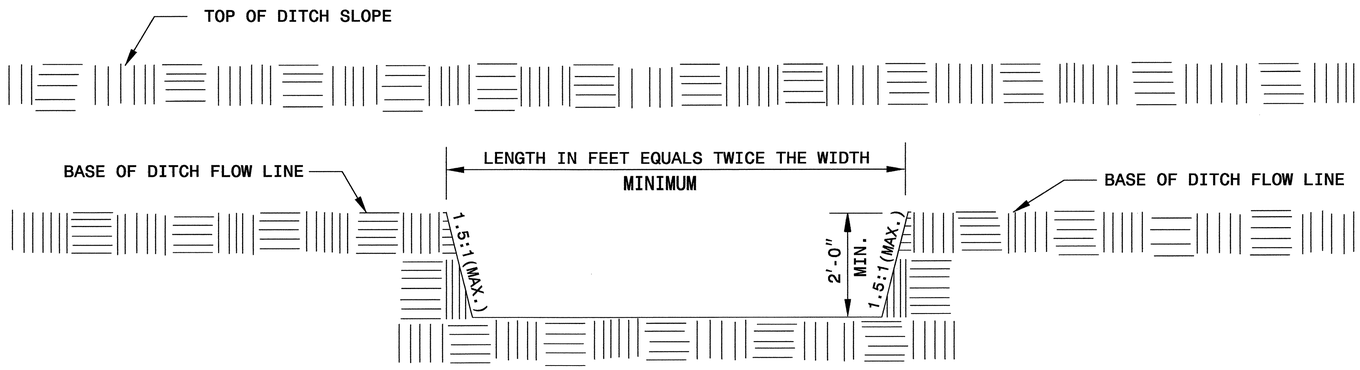
NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.

PROJECT REFERENCE NO.	SHEET NO.
B-4534	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT BASIN 'B' DETAIL



PLAN



ELEVATION

PROJECT REFERENCE NO.	SHEET NO.
B-4534	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	Y	21+91	23+00	LT	115
4	L	36+50	42+00	RT	1105
				SUBTOTAL	1220
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					1255
				TOTAL	2475
				SAY	2500

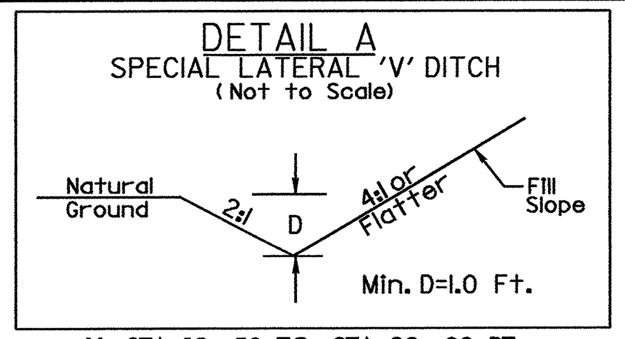
MATTING FOR EROSION CONTROL

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

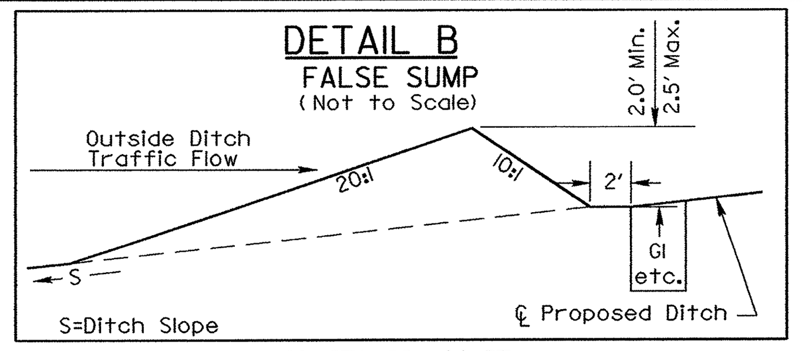
PROJECT REFERENCE NO.	SHEET NO.
B-4534	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

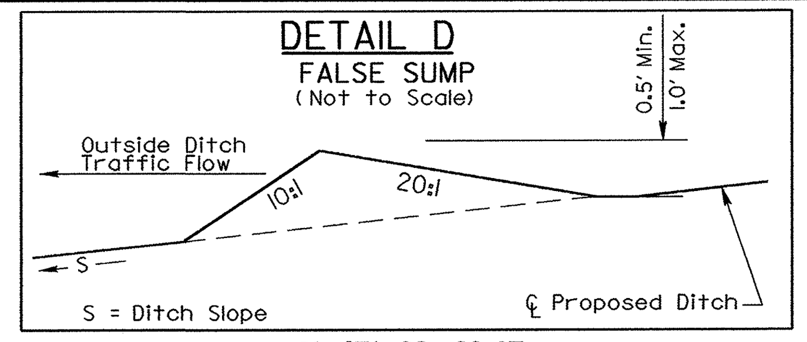
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



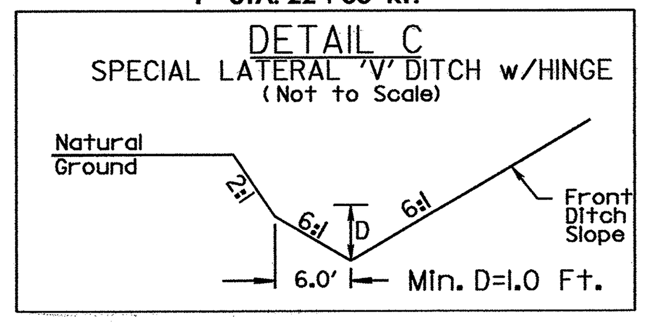
-Y- STA. 19+50 TO STA. 23+00 RT.
-Y- STA. 21+91 TO STA. 23+00 LT., 109' @ 0.3%



-Y- STA. 22+66 RT.



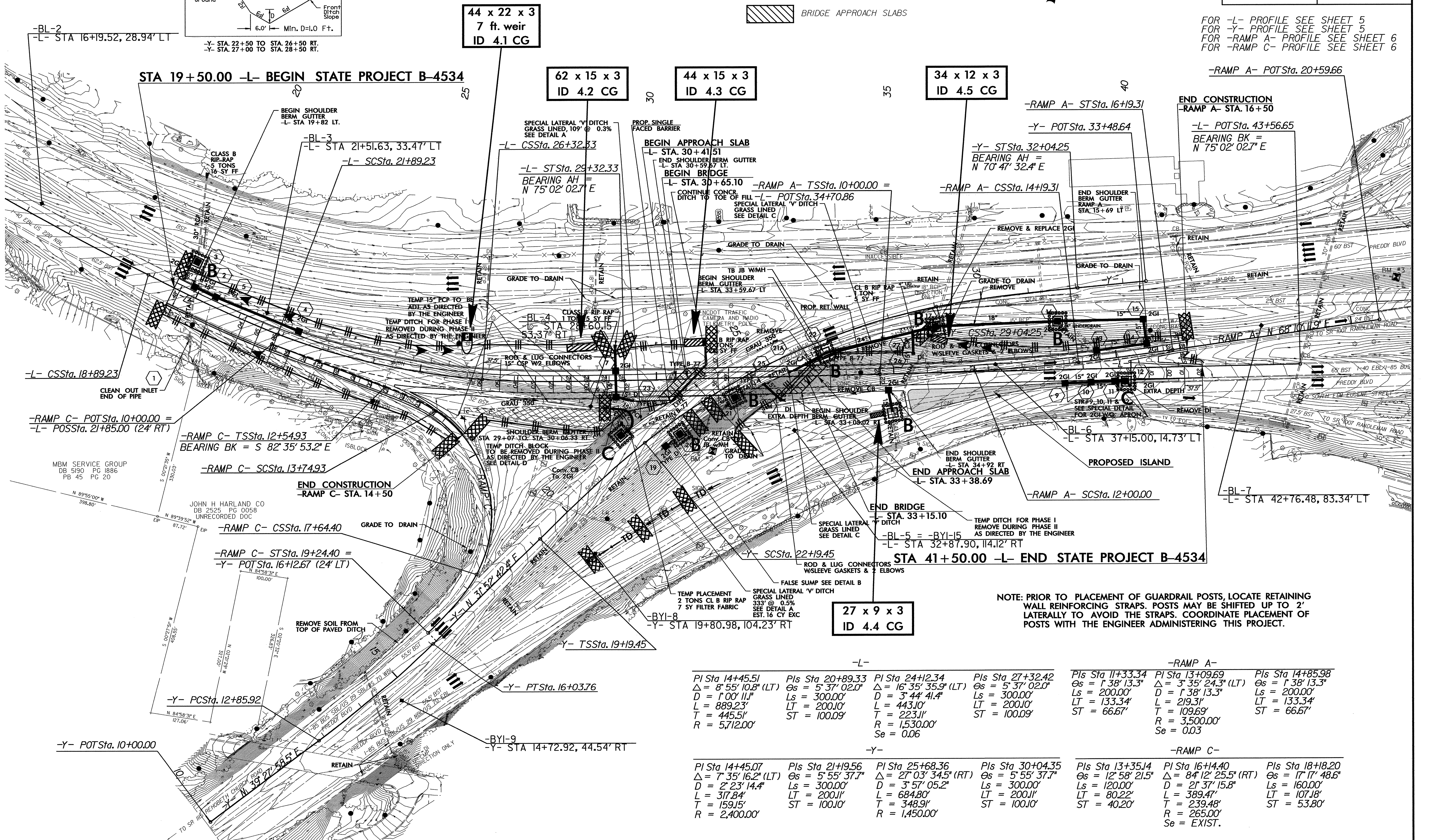
-Y- STA. 23+00 LT.



-Y- STA. 22+50 TO STA. 26+50 RT.
-Y- STA. 27+00 TO STA. 28+50 RT.

BRIDGE APPROACH SLABS

FOR -L- PROFILE SEE SHEET 5
FOR -Y- PROFILE SEE SHEET 5
FOR -RAMP A- PROFILE SEE SHEET 6
FOR -RAMP C- PROFILE SEE SHEET 6



NOTE: PRIOR TO PLACEMENT OF GUARDRAIL POSTS, LOCATE RETAINING WALL REINFORCING STRAPS. POSTS MAY BE SHIFTED UP TO 2' LATERALLY TO AVOID THE STRAPS. COORDINATE PLACEMENT OF POSTS WITH THE ENGINEER ADMINISTERING THIS PROJECT.

-L-

PI Sta 14+45.51	PIs Sta 20+89.33	PI Sta 24+12.34	PIs Sta 27+32.42
△ = 8° 55' 10.8" (LT)	Θs = 5° 37' 02.0"	△ = 16° 35' 35.9" (LT)	Θs = 5° 37' 02.0"
D = 1° 00' 11.1"	Ls = 300.00'	D = 3° 44' 41.4"	Ls = 300.00'
L = 889.23'	LT = 200.10'	L = 443.10'	LT = 200.10'
T = 445.51'	ST = 100.09'	T = 223.11'	ST = 100.09'
R = 5,712.00'		R = 1,530.00'	
		Se = 0.06	

-RAMP A-

PIs Sta 11+33.34	PI Sta 13+09.69	PIs Sta 14+85.98
Θs = 1° 38' 13.3"	△ = 3° 35' 24.3" (LT)	Θs = 1° 38' 13.3"
Ls = 200.00'	D = 1° 38' 13.3"	Ls = 200.00'
LT = 133.34'	L = 219.31'	LT = 133.34'
ST = 66.67'	T = 109.69'	ST = 66.67'
	R = 3,500.00'	
	Se = 0.03	

-Y-

PI Sta 14+45.07	PIs Sta 21+19.56	PI Sta 25+68.36	PIs Sta 30+04.35
△ = 7° 35' 16.2" (LT)	Θs = 5° 55' 37.7"	△ = 27° 03' 34.5" (RT)	Θs = 5° 55' 37.7"
D = 2° 23' 14.4"	Ls = 300.00'	D = 3° 57' 05.2"	Ls = 300.00'
L = 317.84'	LT = 200.11'	L = 684.80'	LT = 200.11'
T = 159.15'	ST = 100.10'	T = 348.91'	ST = 100.10'
R = 2,400.00'		R = 1,450.00'	

-RAMP C-

PIs Sta 13+35.14	PI Sta 16+14.40	PIs Sta 18+18.20
Θs = 12° 58' 21.5"	△ = 84° 12' 25.5" (RT)	Θs = 17° 17' 48.6"
Ls = 120.00'	D = 21° 37' 15.8"	Ls = 160.00'
LT = 80.22'	L = 389.47'	LT = 107.18'
ST = 40.20'	T = 239.48'	ST = 53.80'
	R = 265.00'	
	Se = EXIST.	

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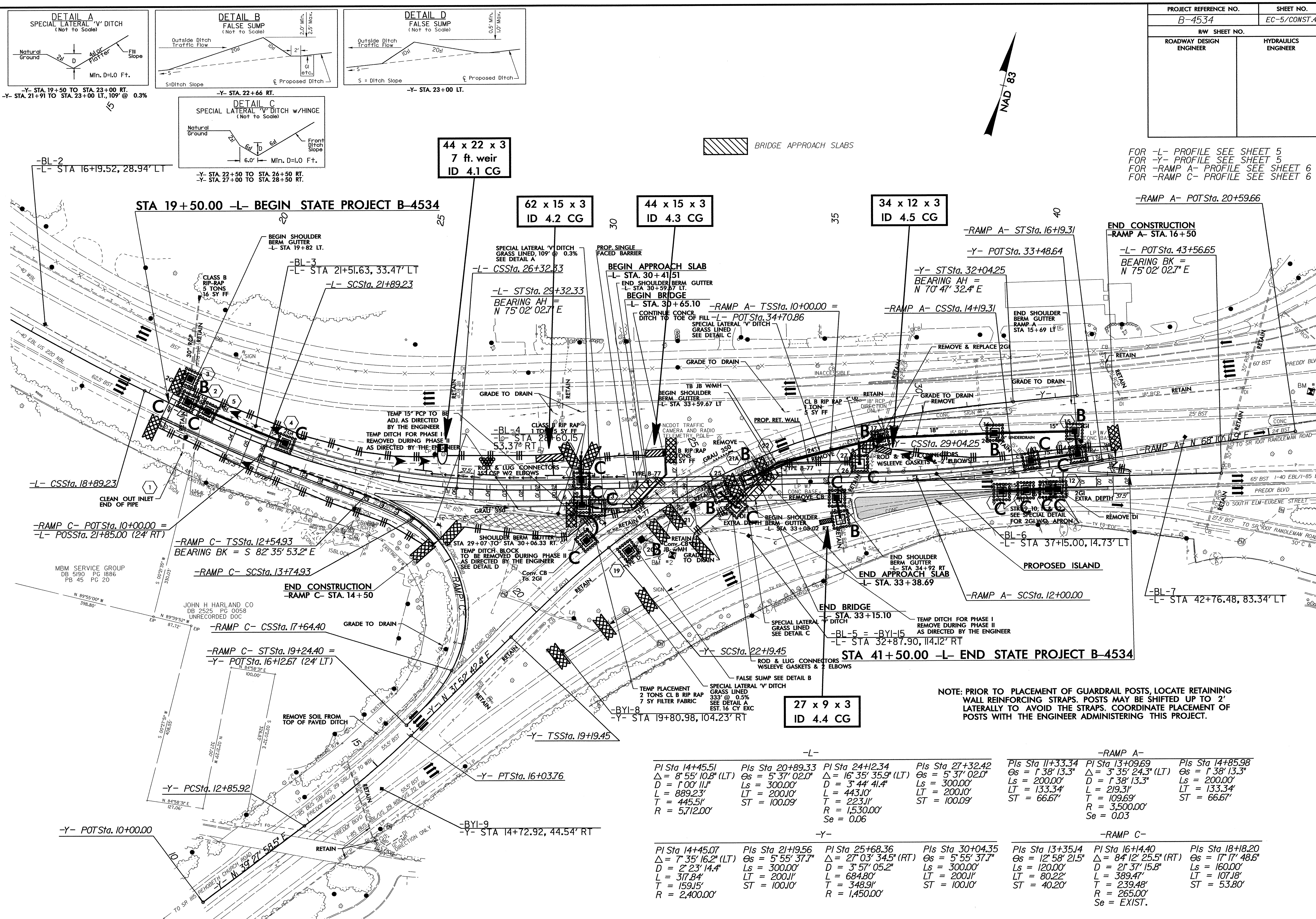
PROJECT REFERENCE NO.	SHEET NO.
B-4534	EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8/17/99
DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
Fill Slope
Min. D=1.0 Ft.
-Y- STA. 19+50 TO STA. 23+00 RT.
-Y- STA. 21+91 TO STA. 23+00 LT., 109' @ 0.3%
DETAIL B
FALSE SUMP
(Not to Scale)
Outside Ditch
Traffic Flow
S=Ditch Slope
℄ Proposed Ditch
-Y- STA. 22+66 RT.
DETAIL D
FALSE SUMP
(Not to Scale)
Outside Ditch
Traffic Flow
S = Ditch Slope
℄ Proposed Ditch
-Y- STA. 23+00 LT.
DETAIL C
SPECIAL LATERAL 'V' DITCH w/HINGE
(Not to Scale)
Natural Ground
Front Ditch Slope
6.0'
Min. D=1.0 Ft.
-Y- STA. 22+50 TO STA. 26+50 RT.
-Y- STA. 27+00 TO STA. 28+50 RT.
NAD 83
BRIDGE APPROACH SLABS
FOR -L- PROFILE SEE SHEET 5
FOR -Y- PROFILE SEE SHEET 5
FOR -RAMP A- PROFILE SEE SHEET 6
FOR -RAMP C- PROFILE SEE SHEET 6
44 x 22 x 3
7 ft. weir
ID 4.1 CG
62 x 15 x 3
ID 4.2 CG
44 x 15 x 3
ID 4.3 CG
34 x 12 x 3
ID 4.5 CG
27 x 9 x 3
ID 4.4 CG
-BL-2
-L- STA 16+19.52, 28.94' LT
STA 19+50.00 -L- BEGIN STATE PROJECT B-4534
STA 41+50.00 -L- END STATE PROJECT B-4534
-BL-3
-L- STA 21+51.63, 33.47' LT
-L- SCSta. 21+89.23
-L- CSSta. 26+32.33
-L- STSta. 29+32.33
BEARING AH = N 75° 02' 02.7" E
BEGIN APPROACH SLAB
-L- STA. 30+41.51
BEGIN BRIDGE
-L- STA. 30+65.10
-RAMP A- TSSta. 10+00.00 = -L- POTSta. 34+70.86
-RAMP A- CSSta. 14+19.31
-RAMP A- STSta. 16+19.31
-Y- POTSta. 33+48.64
-Y- STSta. 32+04.25
BEARING AH = N 70° 47' 32.4" E
END CONSTRUCTION
-RAMP A- STA. 16+50
-L- POTSta. 43+56.65
BEARING BK = N 75° 02' 02.7" E
-RAMP A- POTSta. 20+59.66
-L- CSSta. 18+89.23
-RAMP C- POTSta. 10+00.00 = -L- POSSta. 21+85.00 (24' RT)
-RAMP C- TSSta. 12+54.93
BEARING BK = S 82° 35' 53.2" E
-RAMP C- SCSta. 13+74.93
END CONSTRUCTION
-RAMP C- STA. 14+50
-RAMP C- CSSta. 17+64.40
-RAMP C- STSta. 19+24.40 = -Y- POTSta. 16+12.67 (24' LT)
-Y- PCSta. 12+85.92
-Y- POTSta. 10+00.00
-Y- PTSta. 16+03.76
-Y- TSSta. 19+19.45
-Y- SCSta. 22+19.45
-Y- CSSta. 29+04.25
-BYI-8
-Y- STA 19+80.98, 104.23' RT
-BYI-9
-Y- STA 14+72.92, 44.54' RT
-BL-4
-L- STA 28+60.15, 53.37' RT
-BL-5 = -BYI-15
-L- STA 32+87.90, 114.12' RT
-BL-6
-L- STA 37+15.00, 14.73' LT
-BL-7
-L- STA 42+76.48, 83.34' LT
END APPROACH SLAB
-L- STA. 33+38.69
END BRIDGE
-L- STA. 33+15.10
-RAMP A- SCSta. 12+00.00
PROPOSED ISLAND
MBM SERVICE GROUP
DB 5190 PG 1886
PB 45 PG 20
JOHN H HARLAND CO
DB 2525 PG 0058
UNRECORDED DOC
GRADE TO DRAIN
REMOVE SOIL FROM TOP OF PAVED DITCH
TEMP PLACEMENT 2 TONS CL B RIP RAP 7 SY FILTER FABRIC
SPECIAL LATERAL 'V' DITCH GRASS LINED 333' @ 0.5% SEE DETAIL A EST. 16 CY EXC
FALSE SUMP SEE DETAIL B
ROD & LUG CONNECTORS W/SLEEVE GASKETS & 2 ELBOWS
TEMP DITCH FOR PHASE I REMOVE DURING PHASE II AS DIRECTED BY THE ENGINEER
CLEAN OUT INLET END OF PIPE
RAMP C

NOTE: PRIOR TO PLACEMENT OF GUARDRAIL POSTS, LOCATE RETAINING WALL REINFORCING STRAPS. POSTS MAY BE SHIFTED UP TO 2' LATERALLY TO AVOID THE STRAPS. COORDINATE PLACEMENT OF POSTS WITH THE ENGINEER ADMINISTERING THIS PROJECT.

-L-

PI Sta 14+45.51	PIs Sta 20+89.33	PI Sta 24+12.34	PIs Sta 27+32.42
△ = 8° 55' 10.8" (LT)	Θs = 5° 37' 02.0"	△ = 16° 35' 35.9" (LT)	Θs = 5° 37' 02.0"
D = 1° 00' 11.1"	Ls = 300.00'	D = 3° 44' 41.4"	Ls = 300.00'
L = 889.23'	LT = 200.10'	L = 443.10'	LT = 200.10'
T = 445.51'	ST = 100.09'	T = 223.11'	ST = 100.09'
R = 5,712.00'		R = 1,530.00'	
		Se = 0.06	

-RAMP A-

PIs Sta 11+33.34	PI Sta 13+09.69	PIs Sta 14+85.98
Θs = 1° 38' 13.3"	△ = 3° 35' 24.3" (LT)	Θs = 1° 38' 13.3"
Ls = 200.00'	D = 1° 38' 13.3"	Ls = 200.00'
LT = 133.34'	L = 219.31'	LT = 133.34'
ST = 66.67'	T = 109.69'	ST = 66.67'
	R = 3,500.00'	
	Se = 0.03	

-Y-

PI Sta 14+45.07	PIs Sta 21+19.56	PI Sta 25+68.36	PIs Sta 30+04.35
△ = 7° 35' 16.2" (LT)	Θs = 5° 55' 37.7"	△ = 27° 03' 34.5" (RT)	Θs = 5° 55' 37.7"
D = 2° 23' 14.4"	Ls = 300.00'	D = 3° 57' 05.2"	Ls = 300.00'
L = 317.84'	LT = 200.11'	L = 684.80'	LT = 200.11'
T = 159.15'	ST = 100.10'	T = 348.91'	ST = 100.10'
R = 2,400.00'		R = 1,450.00'	

-RAMP C-

PIs Sta 13+35.14	PI Sta 16+14.40	PIs Sta 18+18.20
Θs = 12° 58' 21.5"	△ = 84° 12' 25.5" (RT)	Θs = 17° 17' 48.6"
Ls = 120.00'	D = 21° 37' 15.8"	Ls = 160.00'
LT = 80.22'	L = 389.47'	LT = 107.18'
ST = 40.20'	T = 239.48'	ST = 53.80'
	R = 265.00'	
	Se = EXIST.	

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