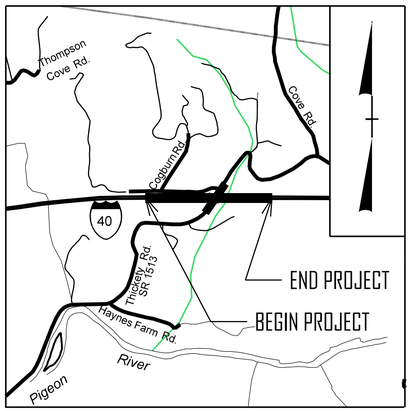
TIP PROJECT: B-5541



VICINITY MAP
NOT TO SCALE

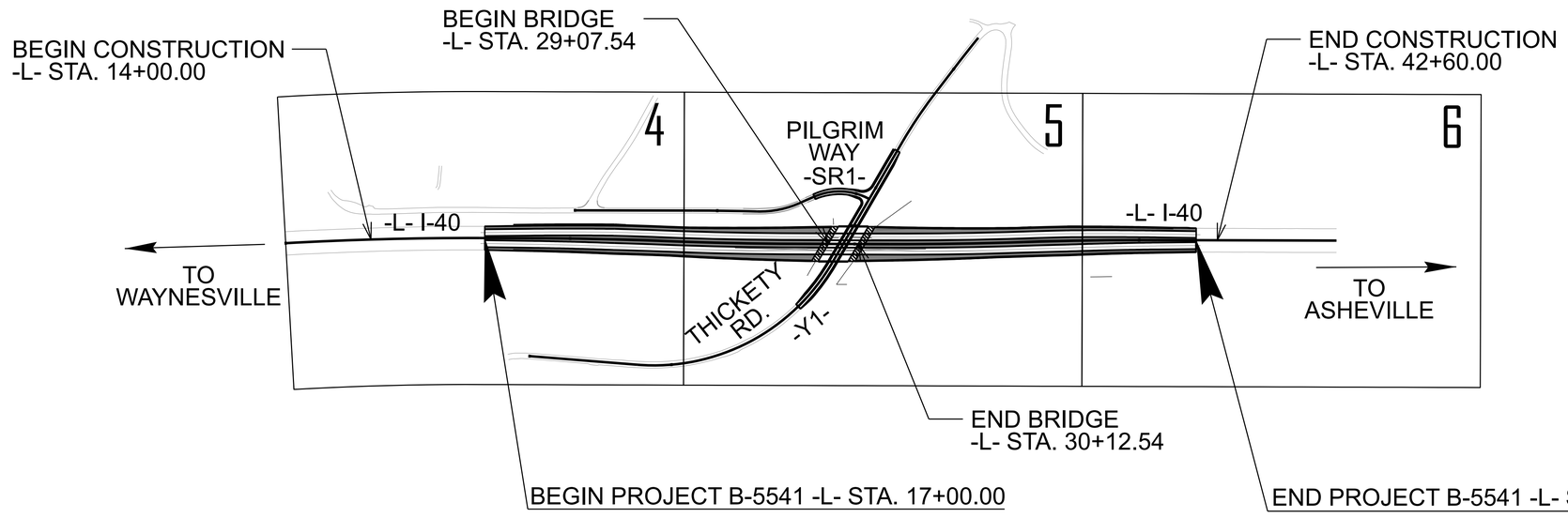
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5541	EC-1	11

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
55041.1.1		P.E

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
HAYWOOD COUNTY

LOCATION: *BRIDGE NO. 430236 OVER SR 1513 ON I-40*
TYPE OF WORK: *GRADING, PAVING, DRAINAGE AND STRUCTURES*

NAD 83
NA 2011



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

THERE IS FULL CONTROL OF ACCESS ON THIS PROJECT.
THERE ARE NO DESIGN EXCEPTIONS ANTICIPATED ON THIS PROJECT.
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

GRAPHIC SCALE

50 25 0 50 100

PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG–010000 GENERAL STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES.

N|V|5

NV5 ENGINEERS & CONSULTANTS, INC.
8514 MCALPINE PARK DRIVE, SUITE 135
CHARLOTTE, NC 28211
P: 704.537.7300 www.NV5.com
NC License # F-1333

Prepared in the Office of:
NV5
8514 MCALPINE PARK DRIVE, SUITE 135
CHARLOTTE, NC 28211
NC License #F-1333

Designed by:
WILL WEATHERSBEE 3161
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

PROJECT REFERENCE NO.	SHEET NO.
B-5541	EC-02

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

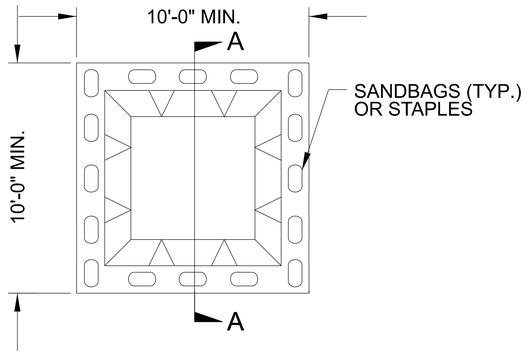
EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	TSD
1630.04	Stilling Basin	
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	
1630.07	Skimmer Basin	
1630.08	Tiered Skimmer Basin	
1630.09	Earthen Dam with Skimmer	
	Infiltration Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C

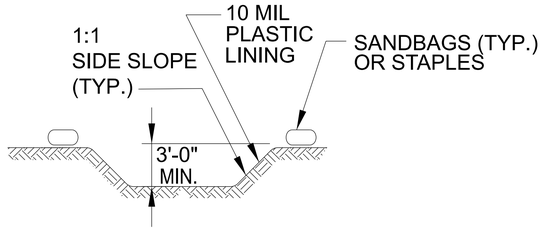
Std. #	Description	Symbol
1633.01	Temporary Rock Silt Check Type A	
1633.02	Temporary Rock Silt Check Type B	
1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1634.01	Temporary Rock Sediment Dam Type A	
1634.02	Temporary Rock Sediment Dam Type B	
1635.01	Rock Pipe Inlet Sediment Trap Type A	A
1635.02	Rock Pipe Inlet Sediment Trap Type B	B
1636.01	Excelsior Wattle Check	
1636.01	Excelsior Wattle Check with Flocculant	
1636.01	Coir Fiber Wattle Check	
1636.01	Coir Fiber Wattle Check with Flocculant	
1636.02	Silt Fence Excelsior Wattle Break	EW
	Silt Fence Coir Fiber Wattle Break	CFW
1636.03	Excelsior Wattle Barrier	EW EW EW
1636.03	Coir Fiber Wattle Barrier	CFW CFW CFW

PROJECT REFERENCE NO.	SHEET NO.
B-5541	EC-02A

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



PLAN



SECTION A-A

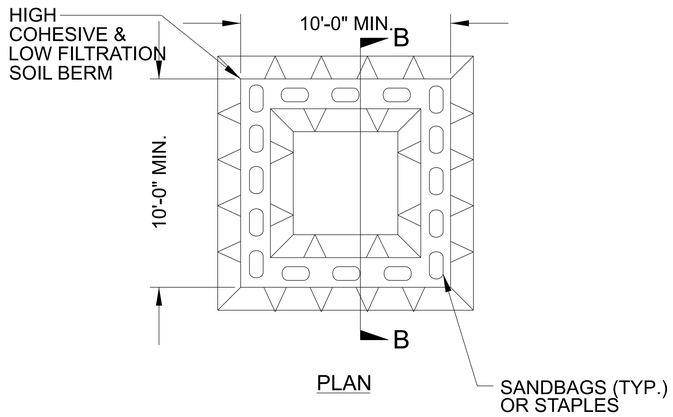
NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

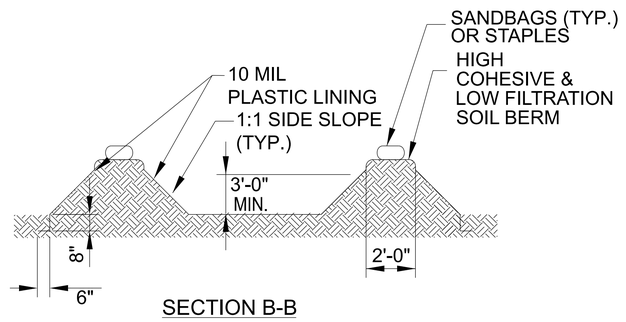
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

NOT TO SCALE



PLAN



SECTION B-B

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-5541	EC-03

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 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

PROJECT REFERENCE NO.	SHEET NO.
B-5541	EC-03A
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-	17+00	19+00	RT	1270
4	-L-	21+75	24+00	RT	1045
5	-L-	24+00	27+00	RT	1125
5	-L-	27+90	29+05	RT	477
5	-L-	29+75	32+85	RT	1805
5	-L-	30+85	32+65	LT	1415
5	-L-	37+65	38+00	RT	175
5	-Y1-	20+00	22+00	RT	1565
5	-Y1-	23+45	26+00	RT	1225
5	-Y1-	24+60	26+00	LT	682
6	-L-	38+00	41+35	RT	1560
				SUBTOTAL	12345
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					
				TOTAL	7655
				SAY	20000

MATTING FOR EROSION CONTROL

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

5/26/20

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.

CUR DATA -L-
PIc 13+40.42
Δc = 03°23'32.5" (RT)
D = 00°29'54.2"
Lc = 680.65
Tc = 340.42
R = 11,495.89
SE = EXIST

-L- PT 16+80.65

-L- PC 18+60.00

-SR1- POB 10+00.00

-L- PRC 23+30.13

RETAIN

RETAIN

RETAIN

INV=2609.35'

455' TRANSITION TO EXISTING

BEGIN TIP PROJECT B-5541
-L- STA. 17+00.00

BEGIN
CONSTRUCTION -L-
STA. 14+00.00

REMOVE AND RESET EXISTING GUARDRAIL
14+00.00 TO 15+21.52 LT

REMOVE AND RESET EXISTING GUARDRAIL
14+00.00 TO 17+11.97 RT

END GUARDRAIL
TIE TO EXISTING
+11.97, 42.39' RT

BEGIN EXPRESSWAY
GUTTER -L- STA. 18+00.00

END EXPRESSWAY GUTTER
BEGIN TRANSITION TO SBG
-L- STA. 21+55.00, 52.67' LT

-SR1-
N79°30'48.6"E

END TRANSITION FROM
EXPRESSWAY GUTTER
BEGIN SBG
-L- STA. 21+95.00, 51.00' LT

N79°34'17.9"E

TYPE T BARRIER

BEGIN 50:1 TAPER
-L- STA. 23+49.46
51.00' RT

DO NOT DISTURB
SIGN SUPPORTS
RT AND LT

REMOVE

REMOVE

BM-I

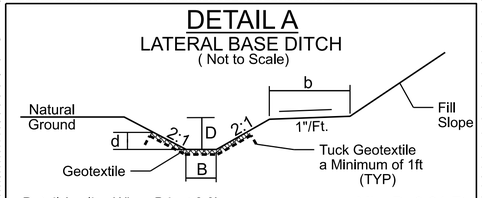
LATERAL BASE DITCH
SEE DETAIL A

CL B RIP RAP
1 TONS
5 SY GEOTEXTILE

CUR DATA -L-
PIc 20+95.09
Δc = 02°04'19.4" (RT)
D = 00°26'26.7"
Lc = 470.13
Tc = 235.09
R = 13,000
SE = 0.02

-Y1-
N83°58'20.7"E

DETAIL A
LATERAL BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0'
for Class I and II Rip-Rap;
And All Widths for Class B Rip-Rap
Type of Liner=2.5 tons of Class II Rip-Rap,
Keyed-In

Min. D=0.31 Ft.
d=1 Ft.
B=5 Ft.
b=5 Ft.

FROM -L- STA. 19+35 TO STA. 18+00 RT

FOR -L- PROFILE SEE SHEET 7, 8, & 9

MATCH LINE -L- STA 24+00.00 SEE SHEET PLAN 005

REVISIONS

B-5541
EC-04 | CONST. 4

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HAYWOOD COUNTY

NAD 83/2011

ROADSIDE ENVIRONMENTAL UNIT

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PREPARED BY

NV5
NV5 ENGINEERS & CONSULTANTS, INC.
8514 MCALPINE PARK CIRCLE, SUITE 135
CHARLOTTE, NC 28211
P: 704.597.7300 www.NV5.com
NC License # C-3339

B-5541

EC-05 | CONST. 5

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HAYWOOD COUNTY

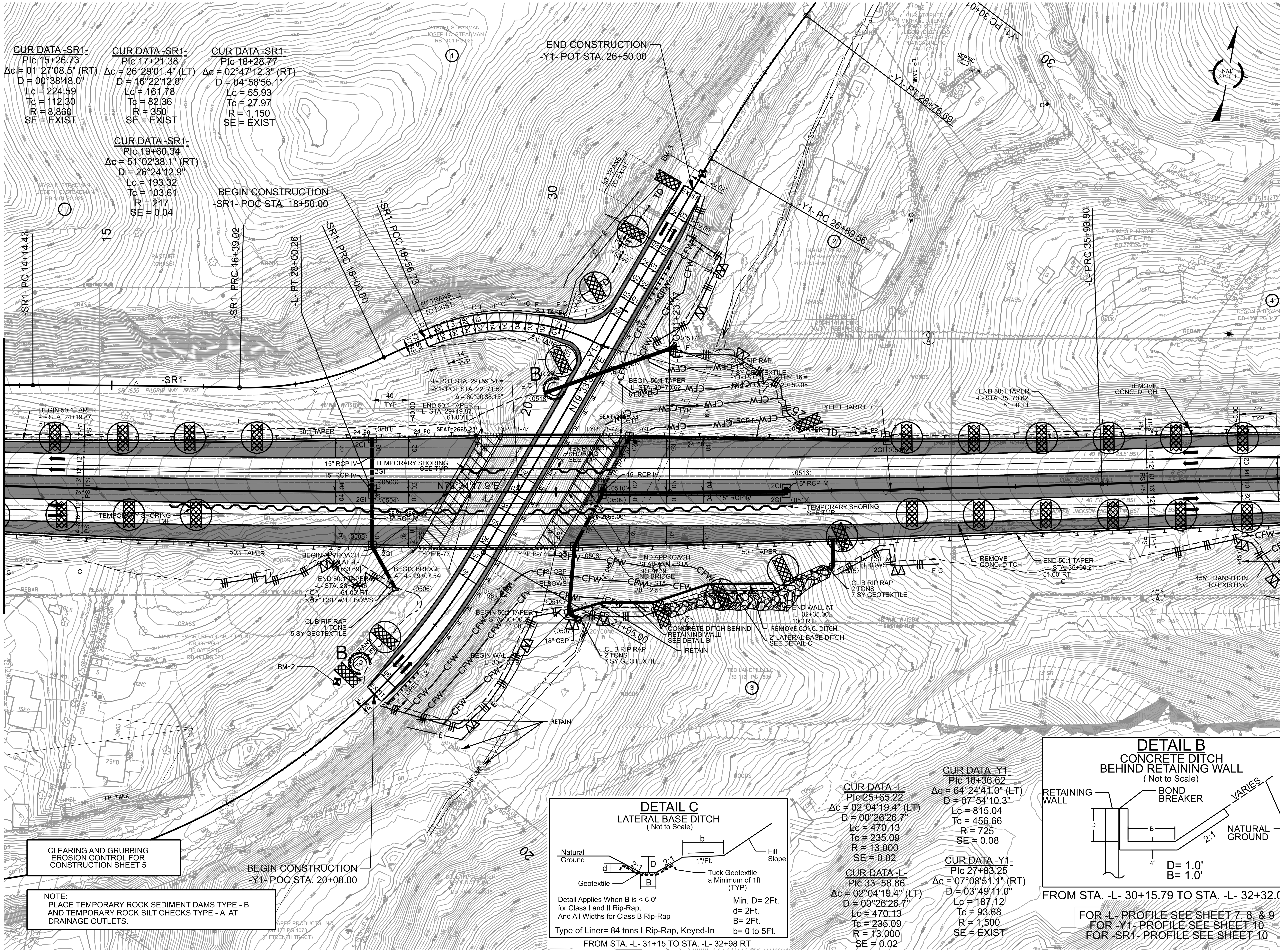
ROADSIDE ENVIRONMENTAL UNIT

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PREPARED BY
NV5

REVISIONS



5/26/20

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.

MATCH LINE -L- STA 38+00.00 SEE SHEET PLAN 005

-L- PT 40+64.03

-L- POE 46+93.72

BM-4

RETAIN

B5541-GI01

B5541-GI02

TYPE T BARRIER

24 FO

40' TYP

GREUTER 8:1 TAPER

EXIST 23.63'

EXIST 24.28'

-L-
N79°34'17.9"E

END TIP PROJECT B-5541
-L- STA. 42+00.00

END CONSTRUCTION
-L- STA. 46+60.00

TO NC 215
CHAMPION DR

I-40 EB (ANDREW JACKSON HIGHWAY) 4F BST

I-40 WB (ANDREW JACKSON HIGHWAY) 4F BST

REMOVE EXIST GUARDRAIL

END GUARDRAIL
REPLACE EXISTING
+81.47' 42.14' RT

END SBG
-L- STA. 42+00.00
42.14' RT

455' TRANSITION TO EXISTING

CFW

CUR DATA -L-
PIc 38+28.99
Δc = 02°04'19.4" (RT)
D = 00°26'26.7"
Lc = 470.13
Tc = 235.09
R = 13,000
SE = 0.02

BRYSON E/ BRYANT
DB 1097 PG 647

THICKETY BAPTIST CHURCH
DB 357 PG 478

WOODS

NC R/W

EXISTING R/W

48" WW W/ ISBW

NAD 83/2011

FOR -L- PROFILE SEE SHEET 7, 8, & 9

B-5541
EC-06 | CONST. 6

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HAYWOOD COUNTY

ROADSIDE ENVIRONMENTAL UNIT

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PREPARED BY
NIVIS
NVS ENGINEERS & CONSULTANTS, INC.
8514 MCALPINE PARK DRIVE, SUITE 135
CHARLOTTE, NC 28211
P: 704.517.7300 www.NVS.com
NCLicense # C-4339

REVISIONS

5/26/20

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF ROCK INLET SEDIMENT TRAP, TYPE-C AS DIRECTED TO AVOID IMPOUNDMENT OF RUNOFF IN ROADWAY OPEN TO TRAFFIC.

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

CUR DATA -L-
PIc 13+40.42
Δc = 03°23'32.5" (RT)
D = 00°29'54.2"
Lc = 680.65
Tc = 340.42
R = 11,495.89
SE = EXIST

-L- PT 16+80.65

-L- PC 18+60.00

-SR1- POB 10+00.00

-L- PRC 23+30.13

MATCH LINE -L- STA 24+00.00 SEE SHEET PLAN 005

-SR1-
N79°30'48.6"E

-L-
N79°34'17.9"E

-Y1-
N83°58'20.7"E

RETAIN

RETAIN

RETAIN

455' TRANSITION TO EXISTING

BEGIN TIP PROJECT B-5541
-L- STA. 17+00.00

BEGIN
CONSTRUCTION -L-
STA. 14+00.00

BEGIN EXPRESSWAY
GUTTER -L- STA. 18+00.00

END EXPRESSWAY GUTTER
BEGIN TRANSITION TO SBG
-L- STA. 21+55.00, 52.67' LT

END TRANSITION FROM
EXPRESSWAY GUTTER
BEGIN SBG
-L- STA. 24+95.00, 51.00' LT

REMOVE AND RESET EXISTING GUARDRAIL
14+00.00 TO 17+11.97 RT

END GUARDRAIL
TIE TO EXISTING
+11.97, 42.39' RT

BEGIN SBG
-L- STA.
18+00.00,
43.84' RT

CL B RIP RAP
1 TONS
5 SY GEOTEXTILE

REMOVE

BM-1

LATERAL BASE DITCH
SEE DETAIL A

DO NOT DISTURB
SIGN SUPPORTS
RT AND LT

REMOVE

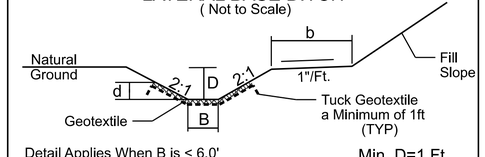
BEGIN 50:1 TAPER
-L- STA. 23+49.46,
51.00' RT

TYPE T BARRIER

CAT-1

FOUNDATION DEBRIS

DETAIL A
LATERAL BASE DITCH
(Not to Scale)



Detail Applies When B is < 6.0'
for Class I and II Rip-Rap;
And All Widths for Class B Rip-Rap
Type of Liner=200 tons of Class II Rip-Rap, Keyed-In. 220 SY Geotextile

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

FROM -L- STA. 19+35 TO STA. 18+00 RT, DDE = 390 CY

CUR DATA -L-
PIc 20+95.09
Δc = 02°04'19.4" (RT)
D = 00°26'26.7"
Lc = 470.13
Tc = 235.09
R = 13,000
SE = 0.02

FOR -L- PROFILE SEE SHEET 7, 8, & 9

KENNETH DANIEL BEST AND WIFE, JENNIFER MORGAN BEST
DB 871 PG 1202
DB 950 PG 1486
DB 397 PG 1269
DB 317 PG 956

MYRA D. STEADMAN
JOSEPH C. STEADMAN
RB 1101 PG 925

KAYLAN WILLIS EVANS
DB 859 PG 2177
DB 831 PG 1526

ELEANOR COFFEY
KRISTIN COFFEY
DB 481 PG 2117
DB 442 PG 814

BALTAZAR S. MENDOZA
DB 854 PG 975
DB 236 PG 589

MARK KYLE FAUST
DB 630 PG 153

LORENA JENKINS
DB 1032 PG 750

B-5541
EC-07 | CONST. 4

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HAYWOOD COUNTY

ROADSIDE ENVIRONMENTAL UNIT

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PREPARED BY
NIVIS
NIVIS ENGINEERS & CONSULTANTS, INC.
8514 MCALPINE PARK DRIVE, SUITE 135
CHARLOTTE, NC 28211
P: 704.537.7300 www.NIVIS.com
NC License # P-1339

REVISIONS

5/26/20

B-5541
EC-08 | CONST. 5

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HAYWOOD COUNTY

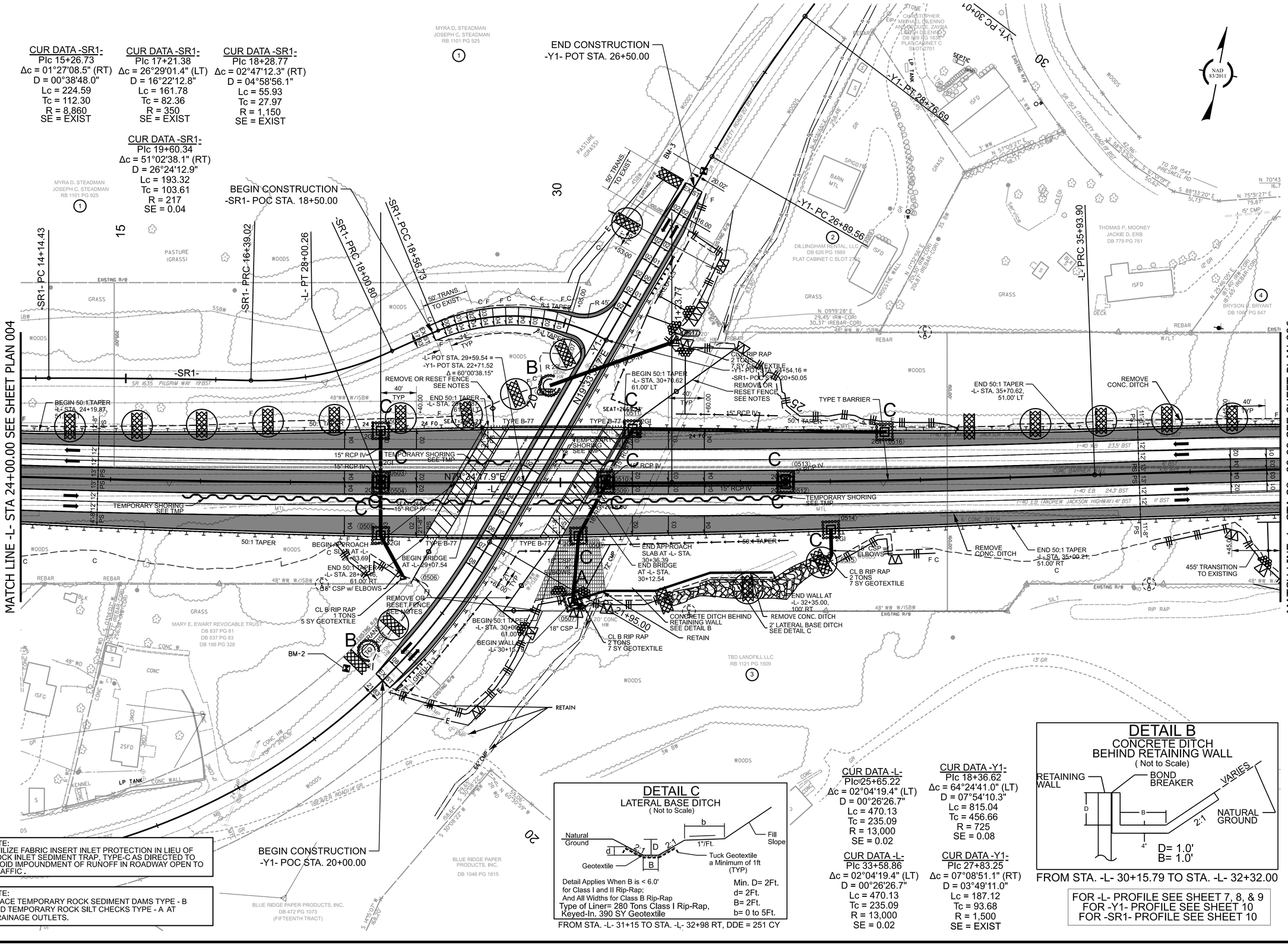
ROADSIDE ENVIRONMENTAL UNIT

ROADWAY DESIGN ENGINEER

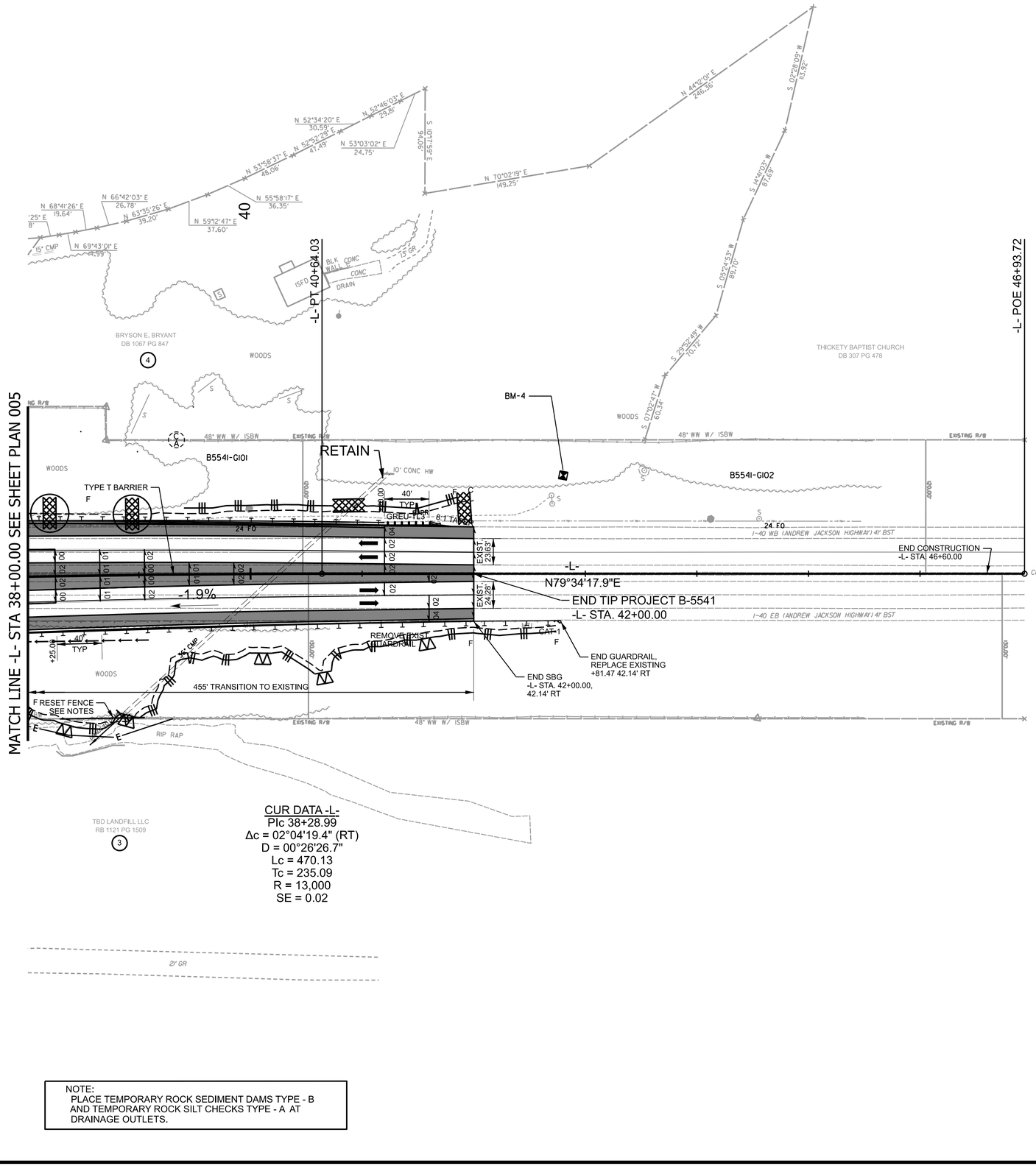
HYDRAULICS ENGINEER

PREPARED BY
NIV15
NVS ENGINEERS & CONSULTANTS, INC.
8514 MCALPINE PARK CIRC, SUITE 135
CHARLOTTE, NC 28211
P: 704.537.7300 www.NVS.com
NCBELS# P-1339

REVISIONS



5/26/20



CUR DATA -L-
PIc 38+28.99
Δc = 02°04'19.4" (RT)
D = 00°26'26.7"
Lc = 470.13
Tc = 235.09
R = 13,000
SE = 0.02

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

FOR -L- PROFILE SEE SHEET 7, 8, & 9

NAD 83/2011

B-5541
EC-09 | CONST. 6

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HAYWOOD COUNTY

ROADSIDE ENVIRONMENTAL UNIT

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PREPARED BY
NIVIS
NVS ENGINEERS & CONSULTANTS, INC.
8514 MCALPINE PARK DRIVE, SUITE 135
CHARLOTTE, NC 28211
P: 704.537.7300 www.NVS.com
NC License # P-1339

REVISIONS