This electronic collection of documents is provided for the convenience of the user and is Not a Certified Document –

The documents contained herein were originally issued and sealed by the individuals whose names and license numbers appear on each page, on the dates appearing with their signature on that page.
This file or an individual page shall not be considered a certified document.

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	A01

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

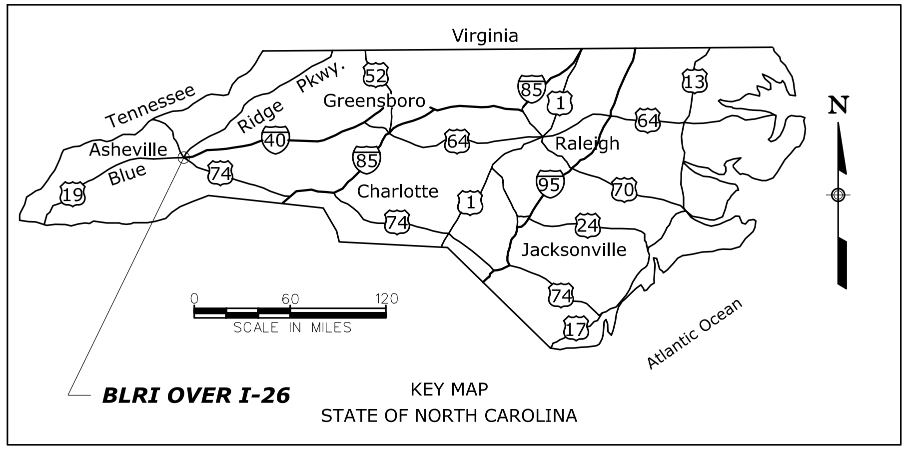
BLUE RIDGE PARKWAY

PLANS FOR PROPOSED

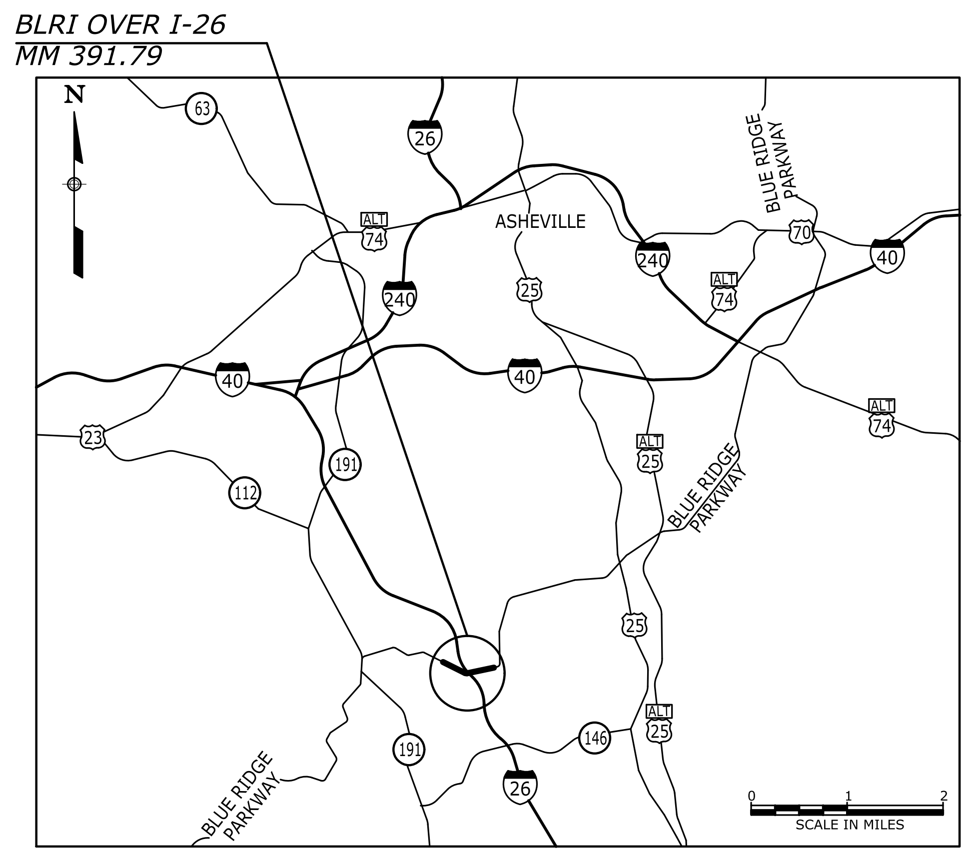
PROJECT BLRI OVER I-26

BLUE RIDGE PARKWAY REALIGNMENT AND REPLACEMENT OF THE BRIDGE OVER I-26 NEAR MILE MARKER (MM) 391.79

BUNCOMBE COUNTY, NORTH CAROLINA



KEY MAP
STATE OF NORTH CAROLINA



INDEX TO SHEETS

811 Know what's below. Call before you dig.

DESCRIPTION OF PROJECT

IMPROVEMENT: Grading, paving, bridge replacement, constructing reinforced soil slopes, drainage improvements and other miscellaneous work

PROJECT LENGTH: 0.69 Mile
LANE MILES: 1.38

ROAD:	WIDTH	SURFACE	BASE	SUBGRADE
Blue Ridge Parkway (New)	20'	1.5" Asphalt	3.5" Asphalt	8" Aggregate
Mountains to Sea Trail	5'	4" Aggregate	N/A	N/A

BRIDGE: I-26 Bridge, 5140-124P , 7/14/2017

DESIGN DESIGNATION:

ADT (2018)	2135
ADT (2048)	4270
DHV	512
D	50/50
%Truck	0%
V (MPH)	50
C/A	None
e(max)	10%

SPECIFICATIONS:

"North Carolina Department of Transportation, Raleigh Standard Specifications for Roads and Structures, January 2018"

Description	Station to Station	Length (miles)	RIP Milepost/ Cycle #
Realignment of Rte 0001DB	500+50 to 530+50	0.58	392.847/Cycle 5
Mountains to Sea Trail 1	600+25.84 to 602+52.04	0.04	
Mountains to Sea Trail 2	700+06.00 to 700+58.41	0.01	
Mountains to Sea Trail 3	800+51.51 to 803+55.52	0.06	

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047055 HRATCH PAKHCHANIAN

DocuSigned by:
SIGNATURE P.E. 3/26/2019

PLANS PREPARED BY

EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA
MARCH 2019

Project Manager	Lead Designer
M. TESSITORE	S. FORONDA

19-Mar-2019 10:46 AM

Abutment	Abut.
Aggregate	aggr.
Ahead	AH
Alternate	alt.
Average daily traffic	ADT
Back	BK
Backslope Anchor Terminal	BAT
Balance point	BP
Bearing	brg.
Beginning	beg.
Bench mark	BM
Broken White	BW
Centerline	℄
Center to center	cc, c-c or c. to c.
Centers	ctrs.
Clear	clr.
Column	col.
Connection	conn.
Construction joint	Constr. jt.
Continuous	cont.
Corrugated metal pipe	CMP
Culvert	culv.
Curve central angle (spiral curve transitions)	Δ_c
Curve total angle (curve delta or deflection)	Δ
Design hourly volume	DHV
Design speed	V
Diagonal	diag.
Diameter	D, dia., or
Diaphragm	diaph.
Distance	dist.
Double Solid Yellow	DSY
Drawing(s)	dwg(s), or drwg(s)
Drop Inlet	DI
East	E
Edge of pavement	EP or EOP
Elevation	elev.
Elevation with number	El. 94.161 [El. 94.16]
Embankment	emb.
End section	ES
Equation	EQ or eq.
Equivalent Single Axle Load	ESAL
Excavation	exc.
Expansion joint	exp. jt.
Flared Anchor Terminal	FAT
Footing	ftg.
Galvanized	galv.
Gage(gauge)	ga.
Gyratory Mix, Asphalt Concrete Pavement	GACP
Headwall	hdwl.
Hexagon	hex.
HIgh water	HW
Inside diameter	ID
Joint	jt.
Lamination	lam.
Latitude	lat.
Left	lt., Lt. or LT
Length of curve(simple curve)	L
Length of curve (spiral curve transition)	Lc
Length of spiral	Ls
Longitudinal(longitude)	long.
Low water	LW
Mainline	M.L.
Material	matl.
Maximum	max.
Mile[Kilometer] post	M.P[K.P.]
Minimum	min.
Monument	mon. or MON
Mechanically stabilized embankment	MSE
Nominal Max. Size Aggregate	NMSA
Normal crown	NC or NCR
North	N
Original ground	OG
Out to out	o. to o.
Outside diameter	OD
On centers	o. c.
Pavement	pvmt.
Plate	pl.
Point of compound curve	PCC
Point of curve	PC
Point of curve to spiral	PCS or CS
Point of intersection	PI
Point of spiral to curve	PSC or SC
Point of spiral to reverse spiral	SRS
Point of spiral to tangent	PST or ST
Point of tangent	PT
Point of tangent to spiral	PS or TS
Point on curve	POC
Point on spiral	POS
Point on tangent	POT
Radius	R
Reinforcement (reinforced)	reinf.
Required	reqd.
Right	Rt., rt.or RT
Right-of-way	R/W
Roadway	Rdwy.
Route	Rte.
Section	Sec.
Solid White	SW
South	S
Spacing, spaces or spaced	spa.
Spiral central angle	s
Standard	std.
Station	Sta.
Steel Backed Timber	SBT
Stiffener	stiff.
Stringer	stgr.
Structure	struc.
Superelevation rate	e
Symmetrical	sym.
Tangent distance (tangent length)	T
Tangent distance (spiral curve transition)	Ts
Temporary benchmark	TBM
Temporary construction easement	TCE
Thread	thd.
Township	T.
Typical	typ.
Vehicle per hour	vph
Vertical point of intersection	VPI
West	W

NATIONAL BOUNDARY
STATE BOUNDARY
COUNTY BOUNDARY
CITY BOUNDARY
TOWNSHIP or RANGE LINE
SECTION LINE
¼ SECTION LINE
1/16 SECTION LINE
NATIONAL PARK or FOREST BOUNDARY
PROPERTY LINE
TRAVERSE POINT (Horizontal & Vertical) Top of Triangle Points North
TRAVERSE POINT (Horizontal)
BRASS CAP
STEEL PIN
HUB & TACK
SPOT ELEVATION
COORDINATE GRID TICK

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE	R/W	R/W
RIGHT-OF-WAY LINE with MONUMENT	R/W	R/W
	FOUND	PROJECTED
SECTION CORNER	36 31 1 6	36 31 1 6
¼ SECTION CORNER	15 22	15 22
1/16 SECTION		
PROPERTY CORNER		No Symbol
PARCEL NUMBER	No Symbol	400
EASEMENT (Permanent - Construction)	P/E	C/E
ROUTE NUMBERS	26 INTERSTATE	25 U.S.
	694 STATE	

SLOPE STAKE — TOP OF CUT / TOE OF FILL / TRANSITION
ROADWAY, EXISTING — EOP / EOG
RAILROAD — SINGLE TRACK / MULTIPLE TRACK
TRAIL
INTERMITTENT DRAINAGE/ SMALL CREEK
SPRING
LARGE CREEK/RIVER
LAKE, POND or RESERVOIR; MARSHLAND
PAVEMENT REMOVAL/ROADWAY OBLITERATION
FULL DEPTH PAVEMENT
SIDEWALK ASPHALT/CONCRETE
MILL AND OVERLAY
OVERLAY
SILT FENCE
DIVERSION BERM
DIVERSION CHANNEL
CHECK DAM
RIPRAP/CULVERT RIPRAP
BORING LOCATION — B-1
TEST PIT — TP-1
NORTH ARROW — N
MATERIAL SOURCE

AREA PATTERN

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	A02

	EXISTING	PROPOSED
FENCE		
GATE with FENCE		
CATTLEGUARD		
GUARDRAIL		
MEDIAN & SIDE (CONCRETE) BARRIER		
SIGNS — POST MOUNTED		
SIGNS — PORTABLE	No Symbol	
RETAINING WALL		wall face
OVERHEAD(POWER POLE) UTILITIES P=Electrical for transmission line E=Electrical for distribution line T=Telephone, E&T=Joint Electrical and Telephone FO=Fibre optics	P	P
SUPPORT POLE with ANCHOR		
TELEPHONE BOOTH or PEDESTAL	TB or TP	TB or TP
STREET LIGHT	or	or
UNDERGROUND UTILITIES G=gas, O=oil, P=power, SS=sanitary sewer, SD=storm drain, T=telephone, W=water E=electrical, FO=fiber optics	W	W
BRIDGE		
PIPE CULVERT (arrow shows flow)		
PIPE CULVERT with END SECTION		
PIPE CULVERT with HEADWALL		
CULVERT with DROP INLET		
BOX CULVERT		
UNDERDRAIN	UD	UD
BUILDING		
TREELINE; TREE		

PROJECT SPECIFIC SYMBOLS AND ABBREVIATIONS:-

PAVEMENT RECONSTRUCTION
AGGREGATE SURFACE
SUPERELEVATION TRANSITION
TEMPORARY RISER BASIN
LOD — LIMITS OF DISTURBANCE
TEMPORARY INLET PROTECTION
PAVED WATERWAY
EROSION CONTROL MATTING
EARTH BERM AT TOP OF CUT
CURB RAMP
7-DAY GROUND STABILIZATION AREA

REINFORCED SOIL SLOPES (RSS)

SY, SQYD	SQUARE YARD
CY, CUYD	CUBIC YARD
CF, CUFT	CUBIC FOOT
VAR.	VARIES
RECP	ROLLED EROSION CONTROL PRODUCT
RC	REINFORCED CONCRETE

SLOPE ROUNDING LIMIT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SYMBOLS AND ABBREVIATIONS

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	A03

N

7 Miles
To Asheville

Brevard Road

To I-40

26

French Broad River

74

10 miles
To Asheville

BENT CREEK

NOTES:

1. Build construction access northeast of the existing road to complete north end of the project. Build construction access southwest to complete the south end of the project.
2. Place gravel construction entrances as directed by the Engineer. Install W14-12A sign in accordance with NCDOT Detail 1101.05.
3. Install 4 portable changeable message signs where directed by the Engineer.
4. For approach road work, use single lane closures with flaggers in accordance with NCDOT Detail 1101.02.

Blue Ridge Parkway

Begin Project
BLRI OVER I-26
STA. 498+00

26

End Project
BLRI OVER I-26
STA. 531+50

TRUCK ENTRANCE

W14-12A

BLUE RIDGE PARKWAY

THE NORTH CAROLINA ARBORETUM

Proposed Blue Ridge Parkway

191

BILTMORE PARK

Clayton Road

Overlook Road

26

74

146

Royal Pines

146

THE FOREST AT BILTMORE PARK

25 Miles
To Balsam

3 Miles
To Mills River

Long Shoals Road

2 Miles
To Avery Creek

15.5 Miles
To Hendersonville

26

Not to scale

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

LOCATION MAP AND TEMPORARY TRAFFIC CONTROL

08-Dec-2018 08:49 PM$TIME$ M:\PROJECTS_STATE_DOT\NC\blri_I26_repo\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_20\TA03-BLRI_I_26_NEPA_loc.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	A04

Datum: NC GRID NAD83 NA 2011

PROJECT SURVEY CONTROL POINT LISTING

POINT NUMBER	NORTHING	EASTING	ELEVATION	TYPE
BY371	655004.538	938175.810	2243.060	MON
BY372	654623.792	938474.475	2257.500	MON
BY373	654524.870	938852.335	2261.290	MON
BY374	654686.559	939364.188	2267.560	MON
BY375	654835.610	939830.367	2262.010	MON
BY376	654961.462	940305.061	2231.330	MON
BY387	655288.784	937780.032	0.000	MON
100	654847.629	938265.226	2248.675	NAIL
101	654491.857	938981.353	2227.582	NAIL
102	654555.528	939425.180	2248.678	NAIL
103	654520.565	939298.840	2204.026	NAIL
104	654610.432	939524.408	2278.638	NAIL
105	654686.625	939728.510	2309.041	NAIL
106	654796.190	939917.154	2254.520	NAIL
107	654848.616	939929.773	2255.828	NAIL
108	654928.353	940162.542	2242.318	NAIL
109	654954.732	938419.566	2247.706	NAIL
110	654604.135	939398.935	2254.016	NAIL
111	654490.393	939723.026	2301.318	NAIL
112	654573.200	939788.788	2304.715	NAIL
113	654575.955	939981.977	2273.636	NAIL
114	654631.816	940125.061	2245.270	NAIL
115	654672.632	940259.176	2216.743	NAIL
116	654775.003	940265.051	2201.265	NAIL
117	654795.038	940483.893	2184.956	NAIL
20911	655236.623	937903.335	2235.069	NAIL

BOREHOLE DATA

POINT NUMBER	NORTHING	EASTING	ELEVATION	TYPE
21104	654502.891	938849.602	2259.870	BOR B1
21105	654488.681	938859.546	2259.915	BOR B2
21106	654487.733	939043.523	2205.572	BOR B4
21107	654501.941	939033.994	2206.379	BOR B3
21108	654734.777	938355.840	2253.423	BOR B9
21173	654524.230	939298.074	2204.042	BOR B5
21174	654516.196	939308.472	2203.464	BOR B6
21175	654574.588	939471.282	2265.822	BOR B7
21212	654632.744	939611.418	2295.994	BOR B8
21213	654674.003	939701.296	2311.122	BOR B10
21214	654722.563	939785.682	2295.379	BOR B11

STAKED CENTERLINE DATA

POINT NUMBER	NORTHING	EASTING	ELEVATION	TYPE	
21126	655285.366	937661.276	2231.292	PK	496+76.41
21125	655282.125	937684.638	2231.445	PK	497+00.00
21124	655278.838	937708.338	2231.633	PK	497+23.93
21123	655274.727	937734.083	2231.930	PK	497+50.00
21122	655263.903	937782.884	2232.657	PK	498+00.00
21121	655249.275	937830.683	2233.402	PK	498+50.00
20910	655230.932	937877.183	2234.150	PK	499+00.00
20909	655208.988	937922.096	2234.941	PK	499+50.00
20908	655183.579	937965.144	2235.862	PK	500+00.00
20907	655154.863	938006.059	2236.950	PK	500+50.00
20906	655128.568	938038.306	2237.989	PK	500+91.62
20905	655123.019	938044.590	2238.203	PK	501+00.00
20904	655088.285	938080.539	2239.553	PK	501+50.00
20903	655050.891	938113.712	2240.880	PK	502+00.00
20902	655011.058	938143.913	2242.316	PK	502+50.00
20901	654969.022	938170.964	2243.673	Spike	503+00.00
20900	654928.753	938192.863	2240.474	Tbar	503+45.85
20899	654925.042	938194.727	2240.243	Spike	503+50.00
20884	654881.181	938218.712	2238.731	Spike	504+00.00
20898	654838.956	938245.474	2236.763	Spike	504+50.00
20897	654798.544	938274.902	2240.805	Spike	505+00.00
20886	654760.113	938306.874	2251.371	Spike	505+50.00
20887	654723.823	938341.256	2259.755	Spike	506+00.00
20888	654689.824	938377.906	2260.580	Spike	506+50.00
20889	654658.258	938416.671	2257.382	Spike	507+00.00
20890	654629.256	938457.390	2256.360	Spike	507+50.00
20891	654602.939	938499.893	2257.903	Spike	508+00.00
20892	654579.416	938544.004	2258.716	Spike	508+50.00
20893	654558.785	938589.540	2259.197	Spike	509+00.00
20894	654541.132	938636.311	2260.055	Spike	509+50.00
20895	654526.530	938684.122	2260.782	Spike	510+00.00
20896	654515.040	938732.775	2257.835	Spike	510+50.00
20912	654507.965	938773.216	2257.168	Tbar	510+91.06
20913	654506.685	938782.064	2257.216	Spike	511+00.00
20914	654500.497	938831.677	2258.278	Spike	511+50.00
20915	654495.966	938881.469	2259.170	Spike	512+00.00
20916	654493.098	938931.385	2240.037	Spike	512+50.00
20917	654491.894	938981.368	2227.580	Spike	513+00.00
20919	654492.357	939031.363	2206.303	Spike	513+50.00
20920	654494.486	939081.316	2190.915	Spike	514+00.00
51450	654498.279	939131.169	-	-	514+50.00
51500	654503.730	939180.869	-	-	515+00.00
51550	654510.836	939230.359	-	-	515+50.00
51600	654519.586	939279.585	-	-	516+00.00
51650	654529.973	939328.492	2212.884	Spike	516+50.00
51700	654541.983	939377.026	2229.404	Spike	517+00.00
51750	654555.604	939425.132	2249.310	Spike	517+50.00
51800	654570.821	939472.758	2265.793	Spike	518+00.00
51850	654587.617	939519.850	2277.449	Spike	518+50.00
51900	654605.973	939566.356	2286.469	Spike	519+00.00
51950	654625.868	939612.225	2296.014	Spike	519+50.00
52000	654647.282	939657.405	2305.182	Spike	520+00.00
52050	654670.189	939701.846	2311.344	Spike	520+50.00
52100	654694.564	939745.500	2305.834	Spike	521+00.00
52129	654709.397	939770.492	2299.974	Tbar	521+29.00
52150	654720.189	939788.433	2294.893	Spike	521+50.00
52200	654745.418	939831.601	2282.439	Spike	522+00.00
52250	654769.872	939875.212	2269.146	Spike	522+50.00
20950	654793.543	939919.253	2254.476	Spike	523+00.00
20951	654816.424	939963.710	2241.778	Spike	523+50.00
20952	654838.508	940008.568	2232.066	Spike	524+00.00
20953	654859.787	940053.813	2229.471	Spike	524+50.00
20956	654880.254	940099.431	2231.599	Spike	525+00.00
20957	654899.904	940145.407	2233.248	Spike	525+50.00
20958	654918.730	940191.727	2233.943	Spike	526+00.00
20921	654936.726	940238.376	2233.378	Spike	526+50.00
20922	654953.886	940285.338	2232.012	Spike	527+00.00
20923	654970.204	940332.600	2229.477	Spike	527+50.00
20924	654985.676	940380.145	2226.242	PK	528+00.00
20925	655000.297	940427.959	2222.462	PK	528+50.00
20926	655014.061	940476.026	2218.712	PK	529+00.00
20927	655026.965	940524.332	2214.888	PK	529+50.00
20928	655033.481	940550.132	2212.898	PK	529+76.61
20929	655039.100	940572.837	2211.223	PK	530+00.00
20930	655045.637	940599.252	2209.302	PK	530+27.21
20931	655051.226	940621.344	2207.643	PK	530+50.00
20932	655064.290	940669.606	2203.975	PK	531+00.00
20933	655078.449	940717.558	2200.436	PK	531+50.00
20934	655093.694	940765.176	2196.865	PK	532+00.00
20935	655094.903	940768.796	2196.588	PK	532+03.82
20936	655110.817	940812.144	2193.114	PK	532+50.00
20937	655130.837	940857.952	2189.295	PK	533+00.00
20938	655153.680	940902.420	2185.666	PK	533+50.00
20939	655176.644	940941.250	2182.504	PK	533+95.12

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SURVEY INFORMATION SHEET

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	A05

Describe Chain BLRI_PW

Chain BLRI_PW contains:
C17 CUR BLRI_PW-1 CUR BLRI_PW-2 CUR BLRI_PW-3 Z1 CUR BLRI_PW-4
CUR BLRI_PW-5 CUR BLRI_PW-6 CUR BLRI_PW-7

Beginning chain BLRI_PW description
==========

Point C17 N 655,285.3657 E 937,661.2762 Sta 496+76.41

Course from C17 to PC BLRI_PW-1 S 82° 06' 11.86" E Dist 47.5124

Curve Data

Curve BLRI_PW-1
P.I. Station 499+13.09 N 655,252.8499 E 937,895.7040
Delta = 33° 10' 35.25" (RT)
Degree = 9° 01' 22.65"
Tangent = 189.1597
Length = 367.6894
Radius = 635.0000
External = 27.5756
Long Chord = 362.5742
Mid. Ord. = 26.4279
P.C. Station 497+23.93 N 655,278.8381 E 937,708.3380
P.T. Station 500+91.62 N 655,128.5678 E 938,038.3060
C.C. N 654,649.8596 E 937,621.0969
Back = S 82° 06' 11.86" E
Ahead = S 48° 55' 36.60" E
Chord Bear = S 65° 30' 54.23" E

Curve Data

Curve BLRI_PW-2
P.I. Station 502+20.38 N 655,043.9686 E 938,135.3756
Delta = 22° 24' 35.39" (RT)
Degree = 8° 48' 53.05"
Tangent = 128.7614
Length = 254.2315
Radius = 650.0000
External = 12.6307
Long Chord = 252.6141
Mid. Ord. = 12.3900
P.C. Station 500+91.62 N 655,128.5678 E 938,038.3060
P.T. Station 503+45.85 N 654,928.7527 E 938,192.8628
C.C. N 654,638.5515 E 937,611.2416
Back = S 48° 55' 36.60" E
Ahead = S 26° 31' 01.21" E
Chord Bear = S 37° 43' 18.91" E

Curve Data

Curve BLRI_PW-3
P.I. Station 507+50.07 N 654,567.0523 E 938,373.3340
Delta = 55° 04' 39.65" (LT)
Degree = 7° 23' 27.14"
Tangent = 404.2239
Length = 745.2121
Radius = 775.2234
External = 99.0582
Long Chord = 716.8488
Mid. Ord. = 87.8347
P.C. Station 503+45.85 N 654,928.7527 E 938,192.8628
P.T. Station 510+91.06 N 654,507.9650 E 938,773.2161
C.C. N 655,274.8615 E 938,886.5342
Back = S 26° 31' 01.21" E
Ahead = S 81° 35' 40.86" E
Chord Bear = S 54° 03' 21.04" E

Point Z1 N 654,507.9650 E 938,773.2161 Sta 510+91.06

Curve Data

Curve BLRI_PW-4
P.I. Station 516+31.81 N 654,428.9202 E 939,308.1626
Delta = 39° 38' 55.67" (LT)
Degree = 3° 49' 10.99"
Tangent = 540.7549
Length = 1,038.0031
Radius = 1,500.0000
External = 94.4955
Long Chord = 1,017.4156
Mid. Ord. = 88.8953
P.C. Station 510+91.06 N 654,507.9650 E 938,773.2161
P.T. Station 521+29.06 N 654,709.3968 E 939,770.4923
C.C. N 655,991.8531 E 938,992.4783
Back = S 81° 35' 40.86" E
Ahead = N 58° 45' 23.47" E
Chord Bear = N 78° 34' 51.30" E

Curve Data

Curve BLRI_PW-5
P.I. Station 525+56.10 N 654,930.8919 E 940,135.5986
Delta = 17° 20' 35.45" (RT)
Degree = 2° 02' 46.60"
Tangent = 427.0395
Length = 847.5477
Radius = 2,800.0000
External = 32.3776
Long Chord = 844.3158
Mid. Ord. = 32.0075
P.C. Station 521+29.06 N 654,709.3968 E 939,770.4923
P.T. Station 529+76.61 N 655,033.4809 E 940,550.1323
C.C. N 652,315.4783 E 941,222.7850
Back = N 58° 45' 23.47" E
Ahead = N 76° 05' 58.92" E
Chord Bear = N 67° 25' 41.20" E

Course from PT BLRI_PW-5 to PC BLRI_PW-6 N 76° 05' 58.92" E Dist 50.6014

Curve Data

Curve BLRI_PW-6
P.I. Station 531+15.56 N 655,066.8617 E 940,685.0145
Delta = 4° 36' 16.97" (LT)
Degree = 2° 36' 26.47"
Tangent = 88.3500
Length = 176.6049
Radius = 2,197.4689
External = 1.7754
Long Chord = 176.5573
Mid. Ord. = 1.7739
P.C. Station 530+27.21 N 655,045.6371 E 940,599.2519
P.T. Station 532+03.82 N 655,094.9028 E 940,768.7965
C.C. N 657,178.7536 E 940,071.3471
Back = N 76° 05' 58.92" E
Ahead = N 71° 29' 41.96" E
Chord Bear = N 73° 47' 50.44" E

Curve Data

Curve BLRI_PW-7
P.I. Station 532+99.93 N 655,125.4068 E 940,859.9367
Delta = 13° 42' 38.33" (LT)
Degree = 7° 10' 01.42"
Tangent = 96.1095
Length = 191.3009
Radius = 799.4321
External = 5.7565
Long Chord = 190.8447
Mid. Ord. = 5.7154
P.C. Station 532+03.82 N 655,094.9028 E 940,768.7965
P.T. Station 533+95.12 N 655,176.6435 E 940,941.2499
C.C. N 655,853.0011 E 940,515.0666
Back = N 71° 29' 41.96" E
Ahead = N 57° 47' 03.63" E
Chord Bear = N 64° 38' 22.79" E

==========
Ending chain BLRI_PW description

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

ALIGNMENT DESCRIPTION

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	A06

Describe Chain BLRI_TRAIL_1

Chain BLRI_TRAIL_1 contains:
175 CUR BLRI_TRAIL_1-1 176

Beginning chain BLRI_TRAIL_1 description
==========

Point 175 N 654,816.424 E 939,963.710 Sta 600+00.00

Course from 175 to PC BLRI_TRAIL_1-1 S 56° 04' 23.71" E Dist 47.058

Curve Data

Curve BLRI_TRAIL_1-1
P.I. Station 601+19.52 N 654,749.714 E 940,062.885
Delta = 27° 09' 35.62" (RT)
Degree = 19° 05' 54.94"
Tangent = 72.467
Length = 142.209
Radius = 300.000
External = 8.628
Long Chord = 140.881
Mid. Ord. = 8.387
P.C. Station 600+47.06 N 654,790.160 E 940,002.756
P.T. Station 601+89.27 N 654,686.280 E 940,097.922
C.C. N 654,541.234 E 939,835.316
Back = S 56° 04' 23.71" E
Ahead = S 28° 54' 48.09" E
Chord Bear = S 42° 29' 35.90" E

Course from PT BLRI_TRAIL_1-1 to 176 S 28° 54' 48.09" E Dist 69.474

Point 176 N 654,625.466 E 940,131.512 Sta 602+58.74

==========
Ending chain BLRI_TRAIL_1 description

Describe Chain BLRI_TRAIL_2

Chain BLRI_TRAIL_2 contains:
177 178

Beginning chain BLRI_TRAIL_2 description
==========

Point 177 N 654,578.497 E 938,650.392 Sta 700+00.00

Course from 177 to 178 S 60° 05' 23.97" E Dist 141.363

Point 178 N 654,508.008 E 938,772.928 Sta 701+41.36

==========
Ending chain BLRI_TRAIL_2 description

Describe Chain BLRI TRAIL 3

Chain BLRI TRAIL 3 contains:
240 CUR BLRI TRAIL 3-1 CUR BLRI TRAIL 3-2 241
Beginning chain BLRI TRAIL 3 description
==========

Point 240 N 654,672.2405 E 939,705.6561 Sta 800+00.00

Course from 240 to PC BLRI TRAIL 3-1 N 28° 23' 19.58" W Dist 38.1624

Curve Data

Curve BLRI TRAIL 3-1
P.I. Station 800+53.05 N 654,718.9147 E 939,680.4313
Delta = 89° 35' 09.38" (RT)
Degree = 381° 58' 18.71"
Tangent = 14.8920
Length = 23.4535
Radius = 15.0000
External = 6.1370
Long Chord = 21.1364
Mid. Ord. = 4.3551
P.C. Station 800+38.16 N 654,705.8136 E 939,687.5117
P.T. Station 800+61.62 N 654,726.0896 E 939,693.4808
C.C. N 654,712.9454 E 939,700.7078
Back = N 28° 23' 19.58" W
Ahead = N 61° 11' 49.80" E
Chord Bear = N 16° 24' 15.11" E

Course from PT BLRI TRAIL 3-1 to PC BLRI TRAIL 3-2 N 61° 11' 49.80" E Dist 265.6346

Curve Data

Curve BLRI TRAIL 3-2
P.I. Station 803+37.99 N 654,859.2474 E 939,935.6656
Delta = 71° 13' 08.82" (RT)
Degree = 381° 58' 18.71"
Tangent = 10.7427
Length = 18.6451
Radius = 15.0000
External = 3.4501
Long Chord = 17.4678
Mid. Ord. = 2.8049
P.C. Station 803+27.25 N 654,854.0716 E 939,926.2519
P.T. Station 803+45.90 N 654,852.0013 E 939,943.5966
C.C. N 654,840.9274 E 939,933.4789
Back = N 61° 11' 49.80" E
Ahead = S 47° 35' 01.39" E
Chord Bear = S 83° 11' 35.80" E

Course from PT BLRI TRAIL 3-2 to 241 S 47° 35' 01.39" E Dist 9.6287

Point 241 N 654,845.5066 E 939,950.7051 Sta 803+55.52

==========
Ending chain BLRI TRAIL 3 description

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

ALIGNMENT DESCRIPTION

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	A07

NEW CURVE DATA:

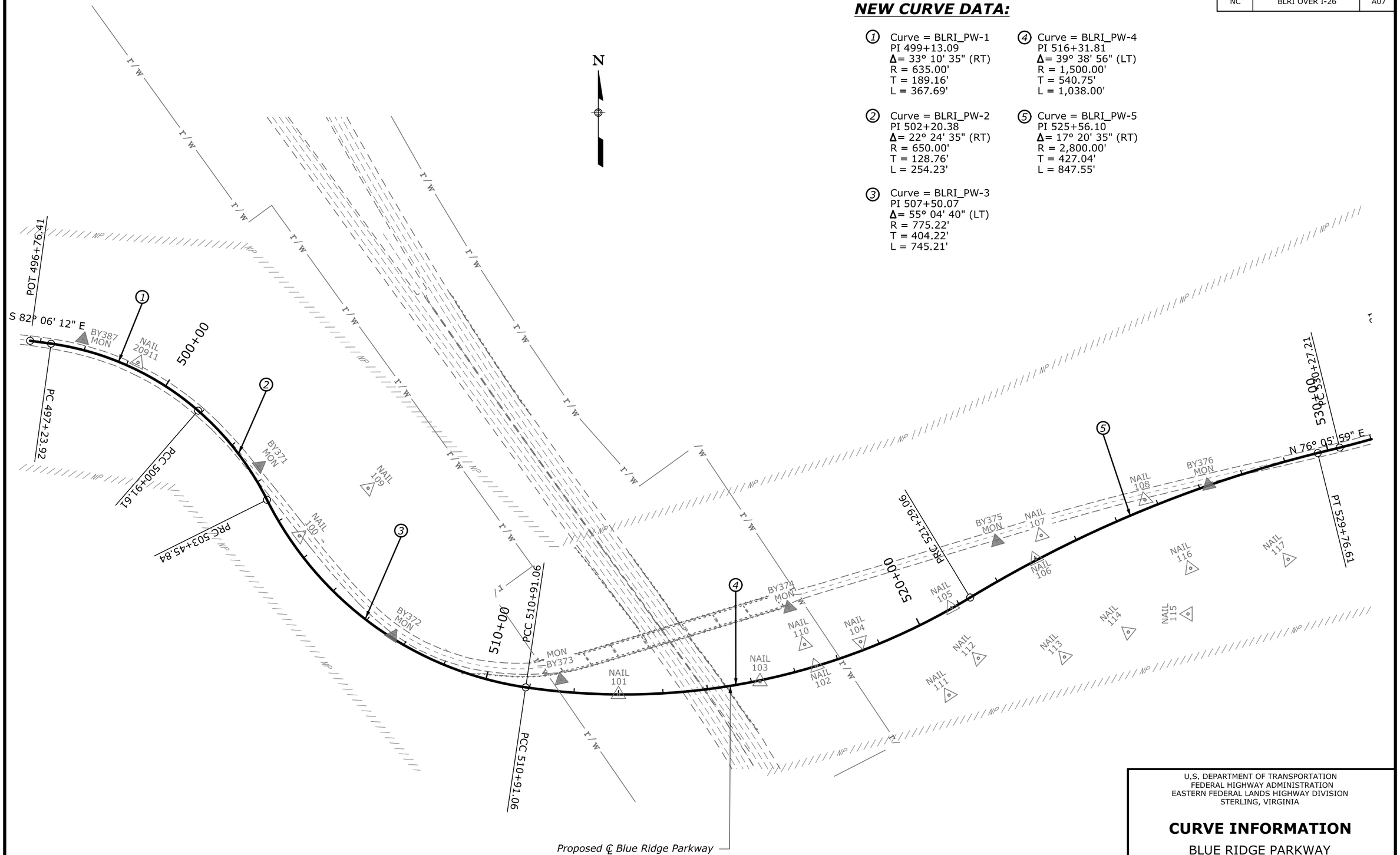
① Curve = BLRI_PW-1
PI 499+13.09
Δ= 33° 10' 35" (RT)
R = 635.00'
T = 189.16'
L = 367.69'

② Curve = BLRI_PW-2
PI 502+20.38
Δ= 22° 24' 35" (RT)
R = 650.00'
T = 128.76'
L = 254.23'

③ Curve = BLRI_PW-3
PI 507+50.07
Δ= 55° 04' 40" (LT)
R = 775.22'
T = 404.22'
L = 745.21'

④ Curve = BLRI_PW-4
PI 516+31.81
Δ= 39° 38' 56" (LT)
R = 1,500.00'
T = 540.75'
L = 1,038.00'

⑤ Curve = BLRI_PW-5
PI 525+56.10
Δ= 17° 20' 35" (RT)
R = 2,800.00'
T = 427.04'
L = 847.55'



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

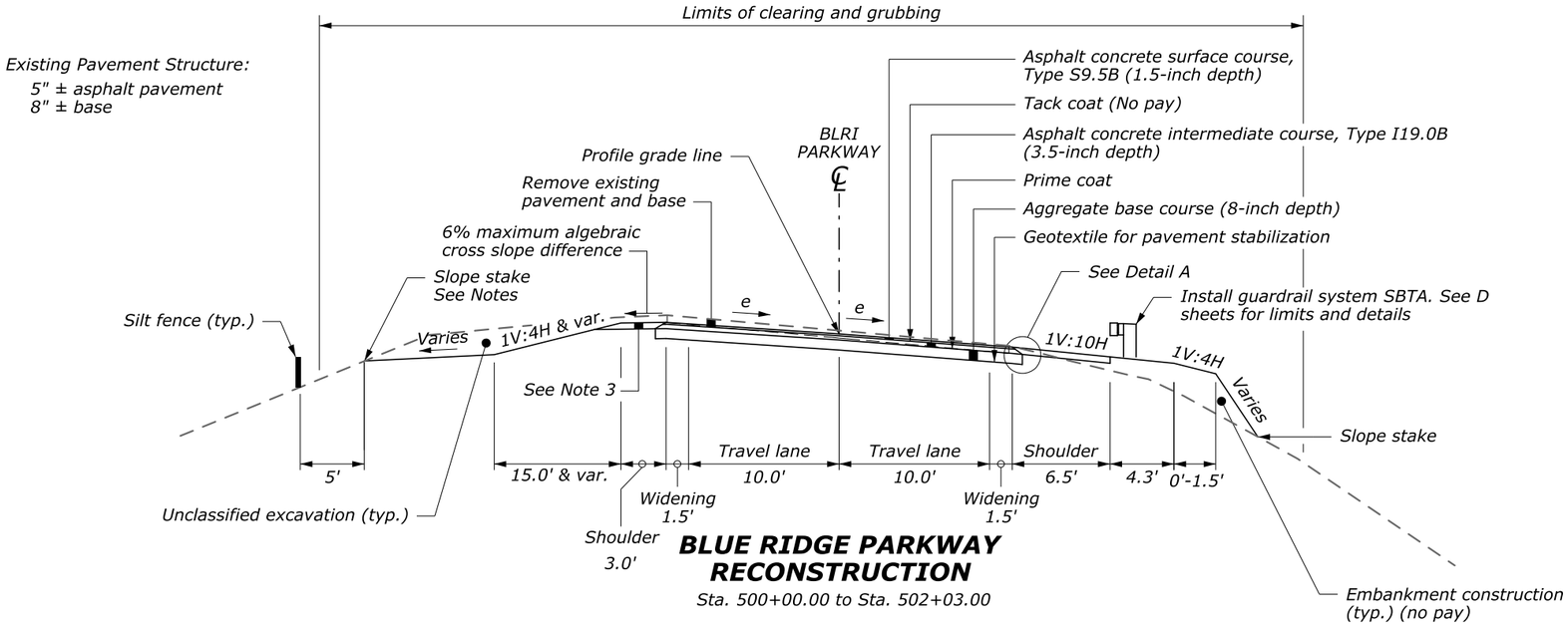
CURVE INFORMATION

BLUE RIDGE PARKWAY

0 100 200
SCALE IN FEET

16-Dec-2018 11:48 AM M:\PROJECTS_STATE_DOT\NC\blri1_I26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\A07-BLRI_I_26_NEPA_Curveinf.odgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	B01

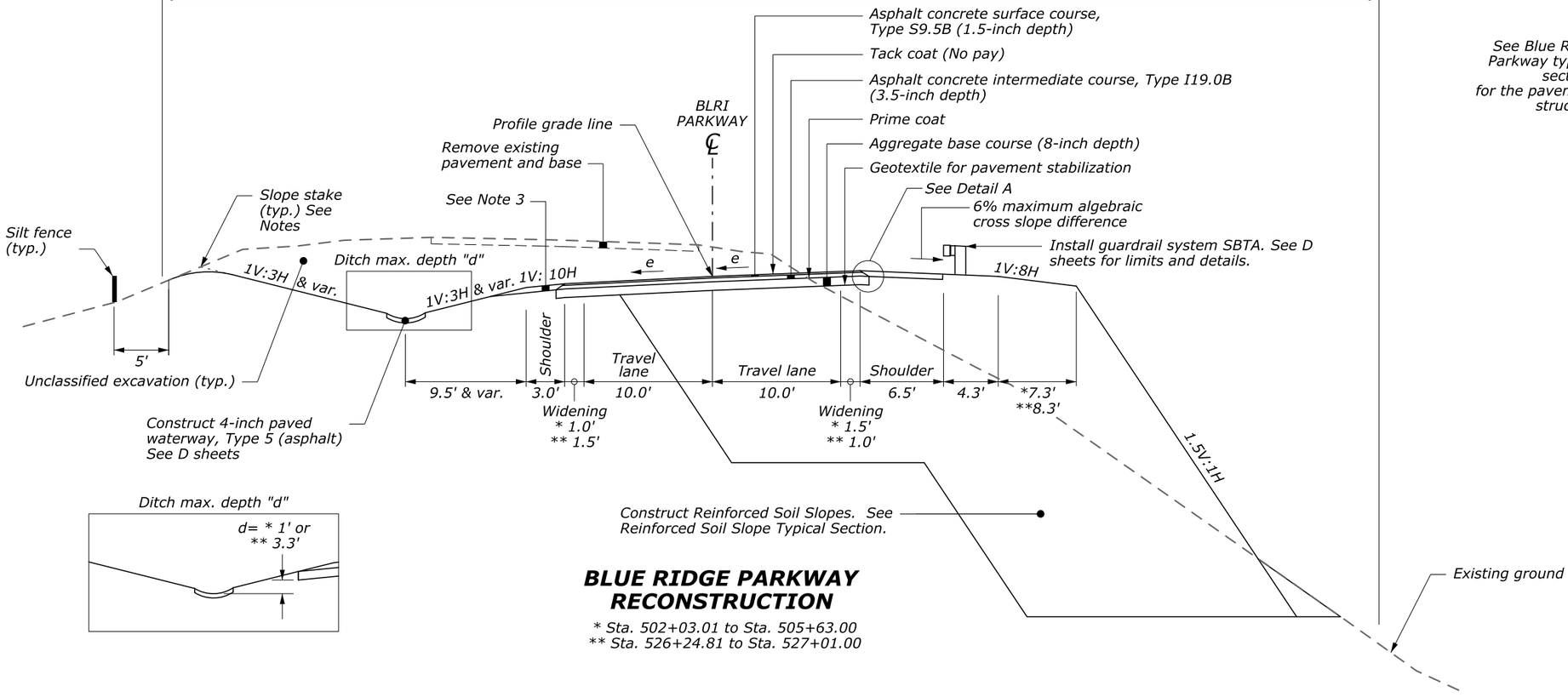


BLUE RIDGE PARKWAY RECONSTRUCTION

Sta. 500+00.00 to Sta. 502+03.00

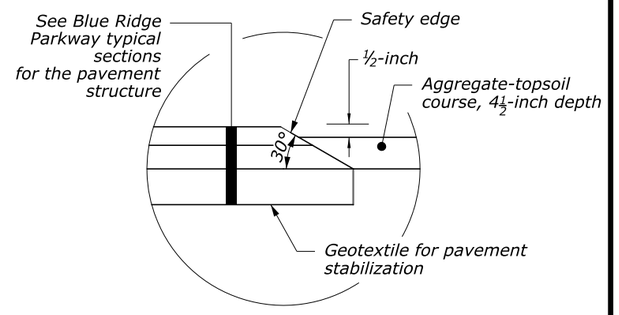
NOTES:

1. Prepare the surface on which the aggregate course is placed according to Articles 225 and 500 of the NCDOT 2018 Standard Specifications.
2. Provide topsoil 6-inch depth and establish turf on all disturbed areas, except aggregate surface areas in accordance with Articles 1060 and 1660 of the NCDOT 2018 Standard Specifications.
3. Place aggregate-topsoil course, 4½-inch on both shoulders.
4. See Slope Rounding of Parkway Setion in the plans for slope stake lengths.



BLUE RIDGE PARKWAY RECONSTRUCTION

* Sta. 502+03.01 to Sta. 505+63.00
** Sta. 526+24.81 to Sta. 527+01.00



DETAIL A

Typ. both sides

No scale

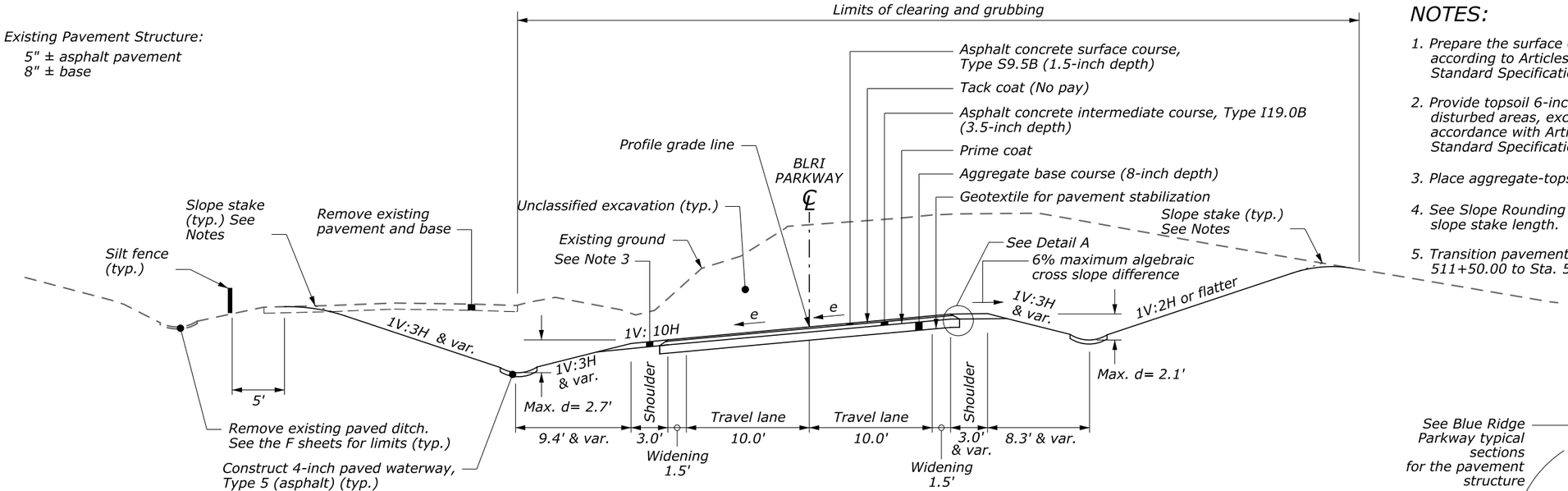
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

TYPICAL SECTIONS

BLUE RIDGE PARKWAY

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	B02

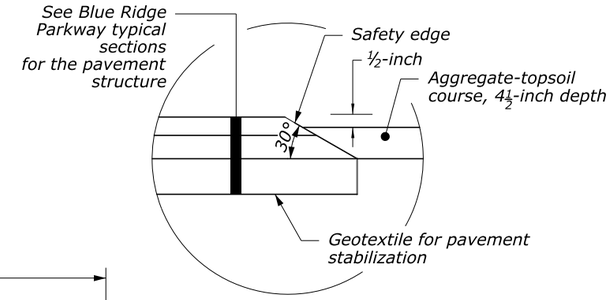


BLUE RIDGE PARKWAY RECONSTRUCTION

Sta. 505+63.01 to Sta. 510+40.39

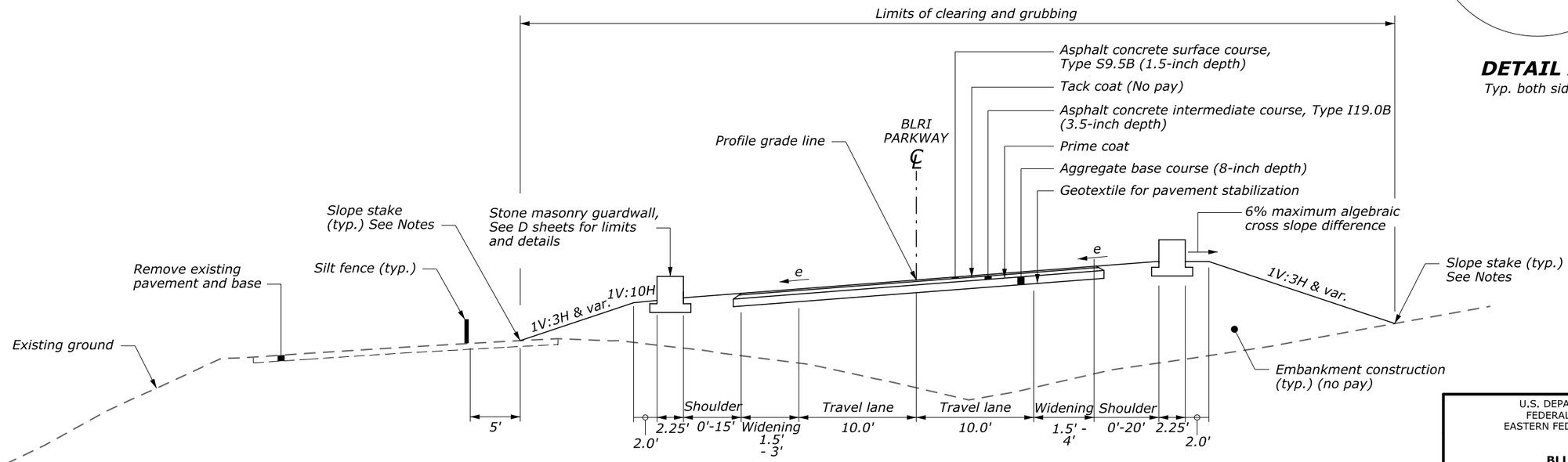
NOTES:

1. Prepare the surface on which the aggregate course is placed according to Articles 225 and 500 of the NCDOT 2018 Standard Specifications.
2. Provide topsoil 6-inch depth and establish turf on all disturbed areas, except aggreagate surface areas in accordance with Articles 1060 and 1660 of the NCDOT 2018 Standard Specifications.
3. Place aggregate-topsoil course, 4½-inch on both shoulders.
4. See Slope Rounding of Parkway Sections in the plans for slope stake length.
5. Transition pavement safety edge to vertical from Sta. 511+50.00 to Sta. 511+68.09.



DETAIL A

Typ. both sides



BLUE RIDGE PARKWAY RECONSTRUCTION

Sta. 510+40.40 to Sta. 511+68.09

No scale

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

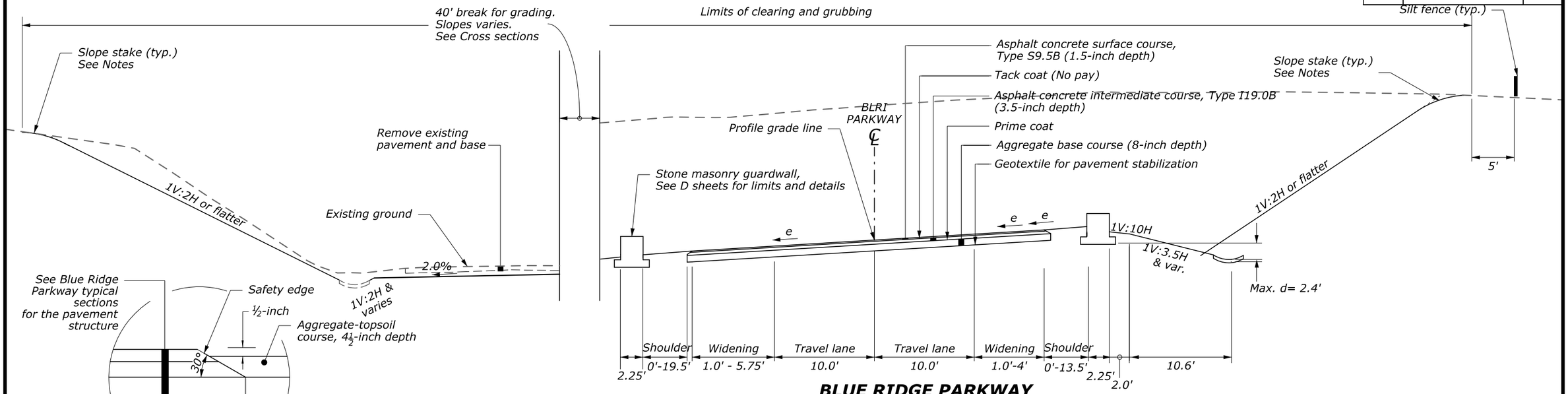
BLUE RIDGE PARKWAY

TYPICAL SECTIONS

BLUE RIDGE PARKWAY

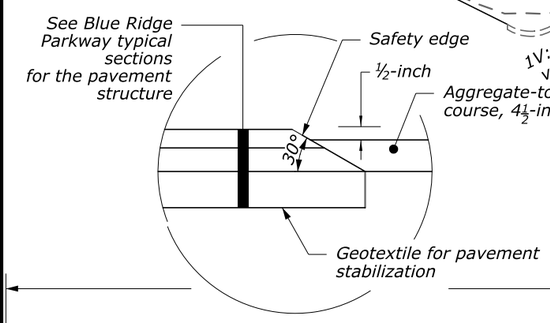
Sheet 2 of 7

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	B03



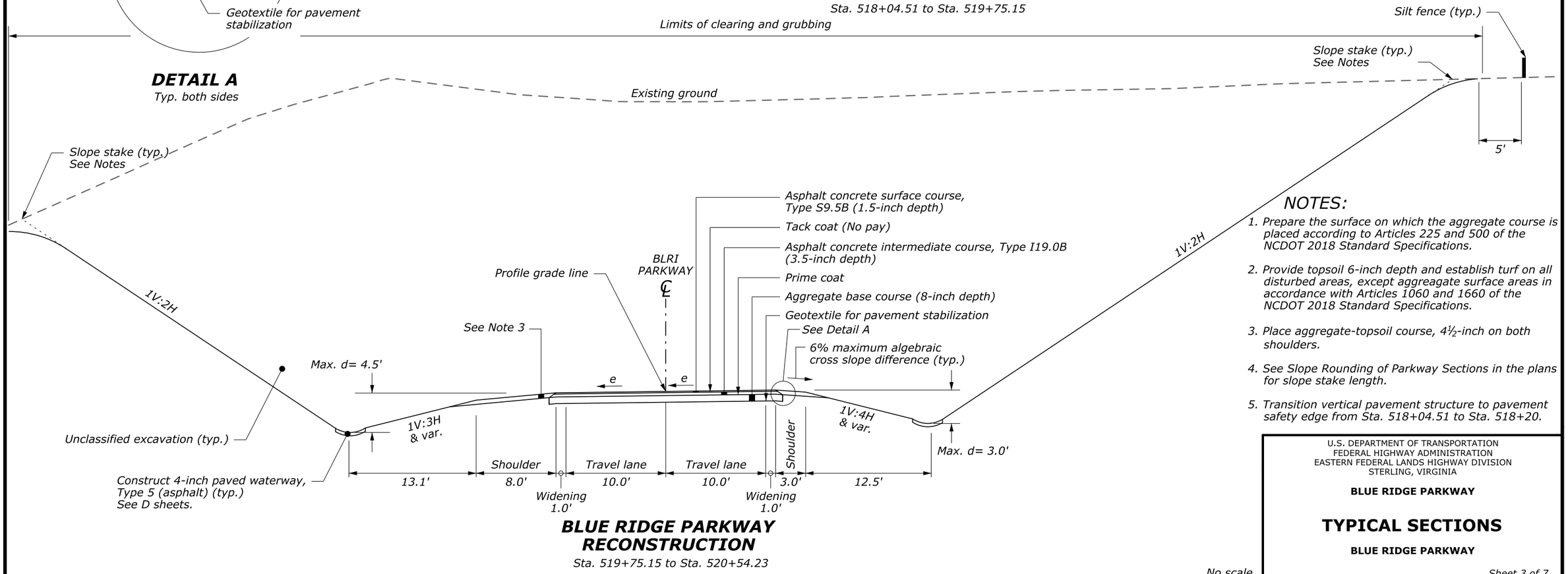
BLUE RIDGE PARKWAY RECONSTRUCTION

Sta. 518+04.51 to Sta. 519+75.15



DETAIL A

Typ. both sides



BLUE RIDGE PARKWAY RECONSTRUCTION

Sta. 519+75.15 to Sta. 520+54.23

NOTES:

1. Prepare the surface on which the aggregate course is placed according to Articles 225 and 500 of the NCDOT 2018 Standard Specifications.
2. Provide topsoil 6-inch depth and establish turf on all disturbed areas, except aggreagate surface areas in accordance with Articles 1060 and 1660 of the NCDOT 2018 Standard Specifications.
3. Place aggregate-topsoil course, 4½-inch on both shoulders.
4. See Slope Rounding of Parkway Sections in the plans for slope stake length.
5. Transition vertical pavement structure to pavement safety edge from Sta. 518+04.51 to Sta. 518+20.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

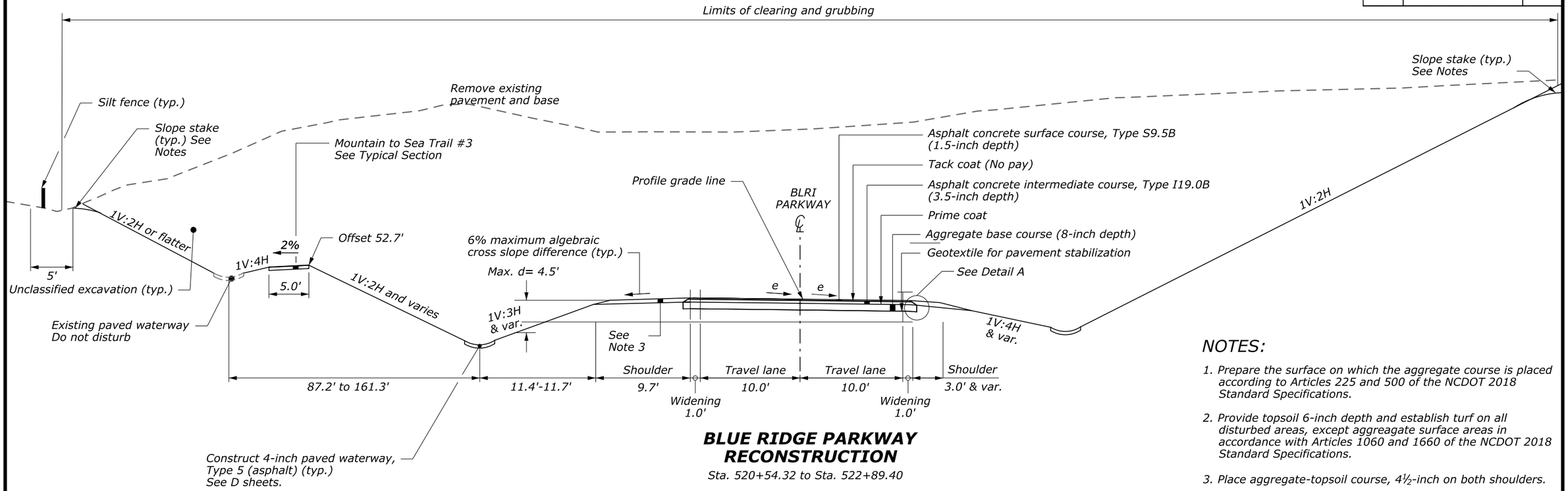
BLUE RIDGE PARKWAY

TYPICAL SECTIONS

BLUE RIDGE PARKWAY

No scale

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	B04

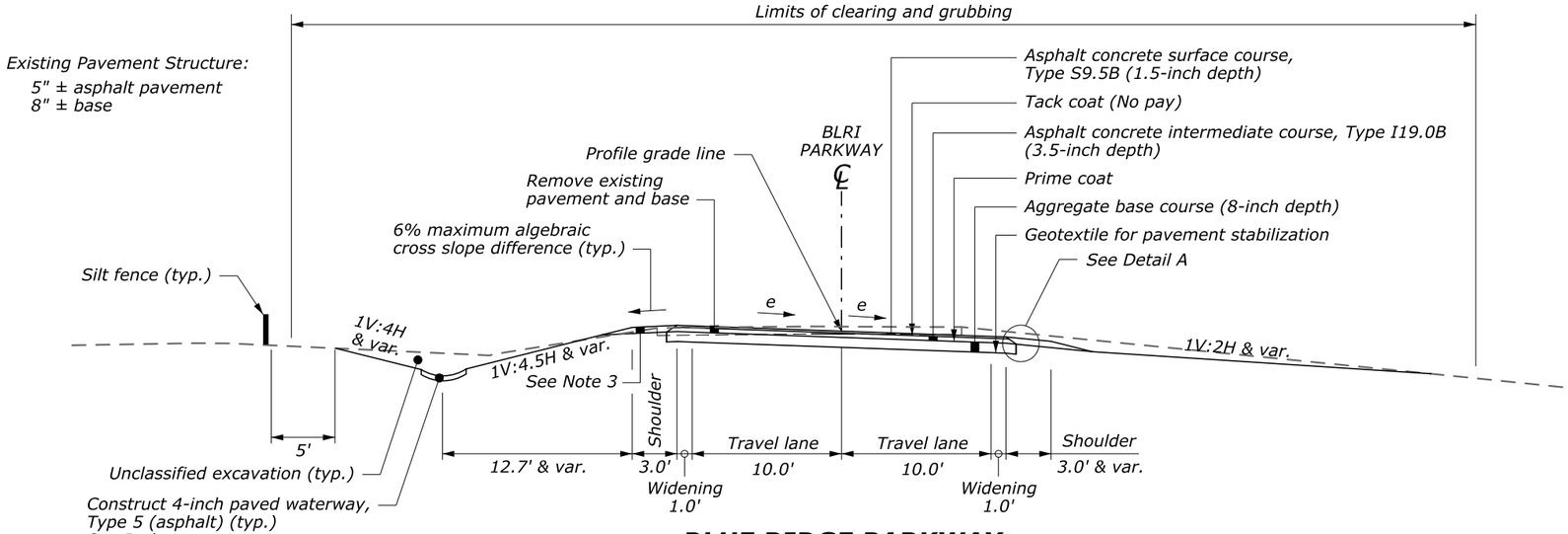


BLUE RIDGE PARKWAY RECONSTRUCTION

Sta. 520+54.32 to Sta. 522+89.40

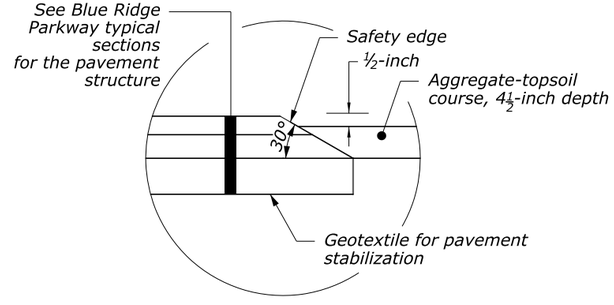
NOTES:

1. Prepare the surface on which the aggregate course is placed according to Articles 225 and 500 of the NCDOT 2018 Standard Specifications.
2. Provide topsoil 6-inch depth and establish turf on all disturbed areas, except aggreagate surface areas in accordance with Articles 1060 and 1660 of the NCDOT 2018 Standard Specifications.
3. Place aggregate-topsoil course, 4½-inch on both shoulders.
4. See Slope Rounding of Parkway Sections in the plans for slope stake length.



BLUE RIDGE PARKWAY RECONSTRUCTION

Sta. 527+01.00 to Sta. 530+50.00



DETAIL A

Typ. both sides

No scale

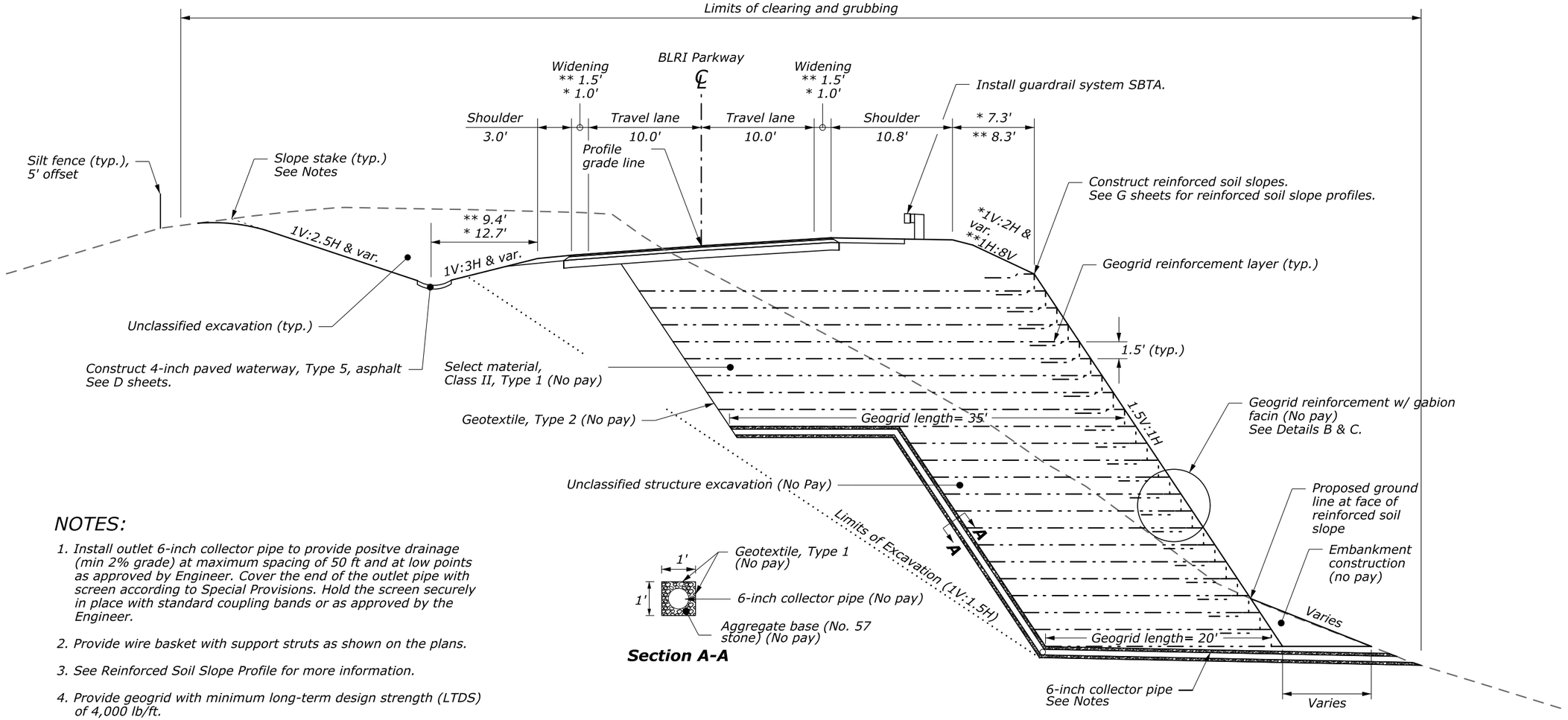
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

TYPICAL SECTIONS

BLUE RIDGE PARKWAY

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	B05

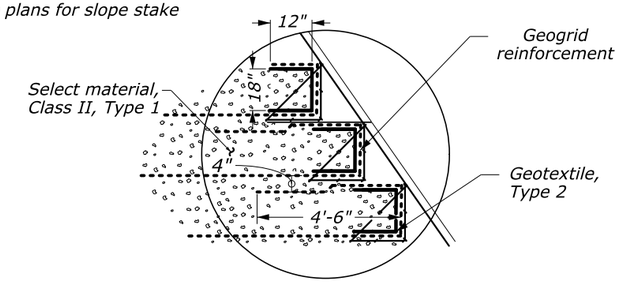


NOTES:

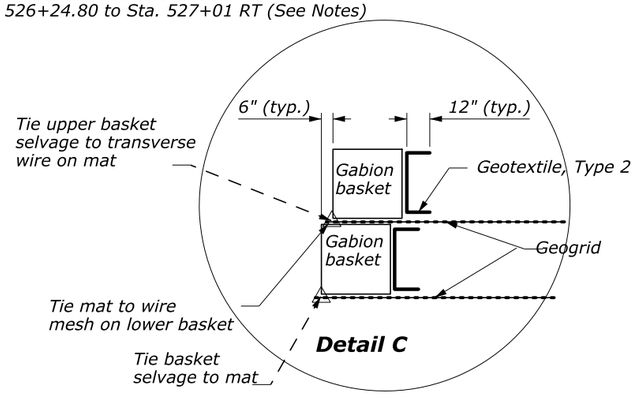
1. Install outlet 6-inch collector pipe to provide positve drainage (min 2% grade) at maximum spacing of 50 ft and at low points as approved by Engineer. Cover the end of the outlet pipe with screen according to Special Provisions. Hold the screen securely in place with standard coupling bands or as approved by the Engineer.
2. Provide wire basket with support struts as shown on the plans.
3. See Reinforced Soil Slope Profile for more information.
4. Provide geogrid with minimum long-term design strength (LTDS) of 4,000 lb/ft.
5. Bench the back slope to accommodate reinforcement length required.
6. Sta. 522+89.40 to Sta. 526+24.80, construct parking area on left. See Parking Area Typical Section for more detail.
7. See Slope Rounding of Parkway Sections in plans for slope stake length.

BLUE RIDGE PARKWAY REINFORCED SOIL SLOPES

* Sta. 502+03 to Sta. 505+63 RT
** Sta. 526+24.80 to Sta. 527+01 RT (See Notes)



Detail B



Detail C

No scale

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

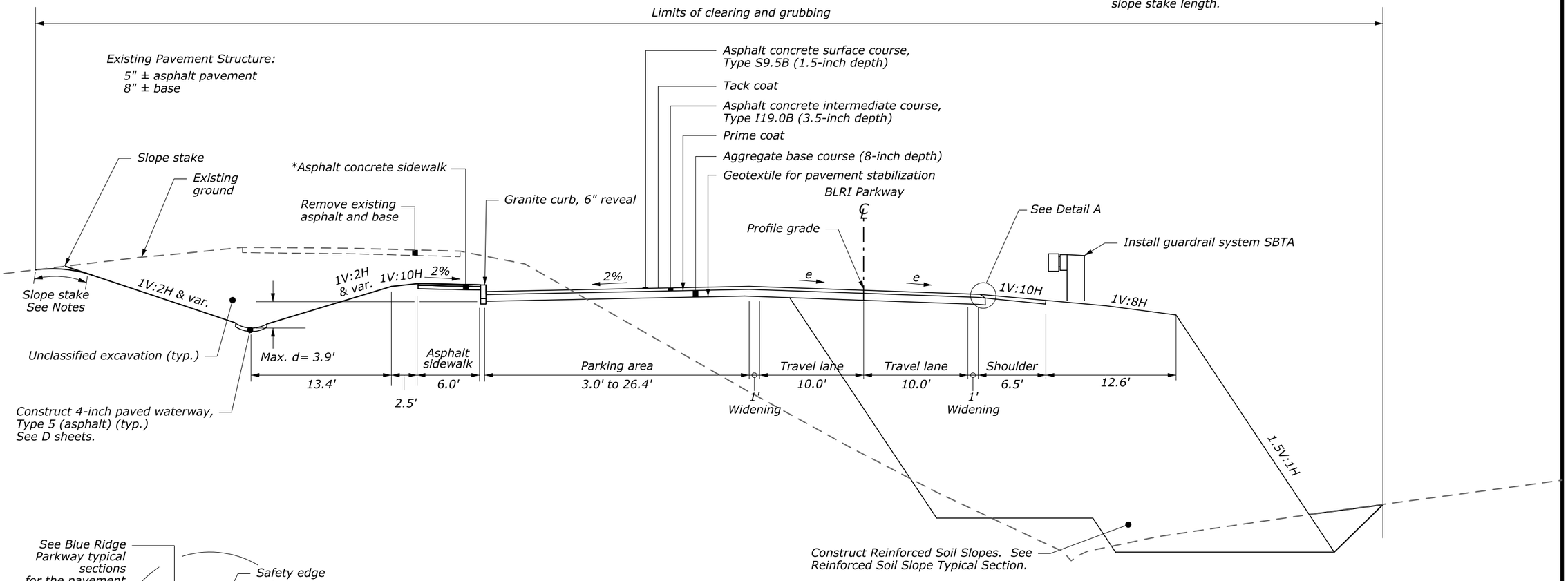
TYPICAL SECTION

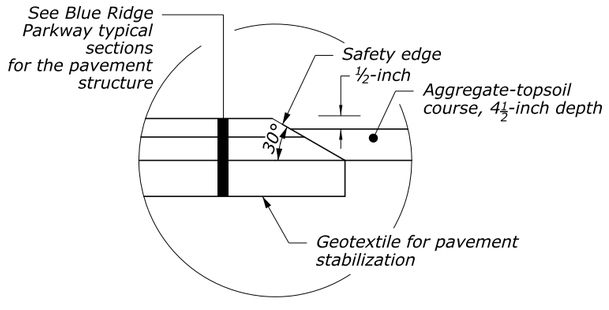
REINFORCED SOIL SLOPE

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	B06

NOTES:

1. Prepare the surface on which the aggregate course is placed according to Article 225 of the NCDOT 2018 Standard Specifications.
2. Provide topsoil 6-inch depth and establish turf on all disturbed areas, except aggreagate surface areas in accordance with Articles 1060 and 1660 of the NCDOT 2018 Standard Specifications.
3. Place aggregate-topsoil course, 4½-inch on both shoulders.
4. See Slope Rounding of Parkway Sections in the plans for slope stake length.





DETAIL A

Typ. both sides

BLUE RIDGE PARKWAY PARKING AREA

Sta. 522+89.40 to Sta. 526+24.80

*Sta. 523+64.70 to Sta. 525+42.50

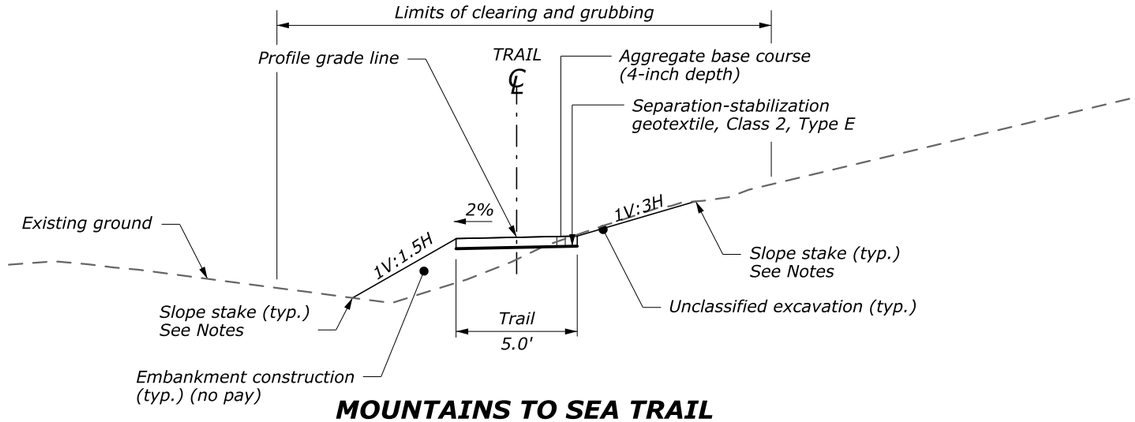
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

TYPICAL SECTION

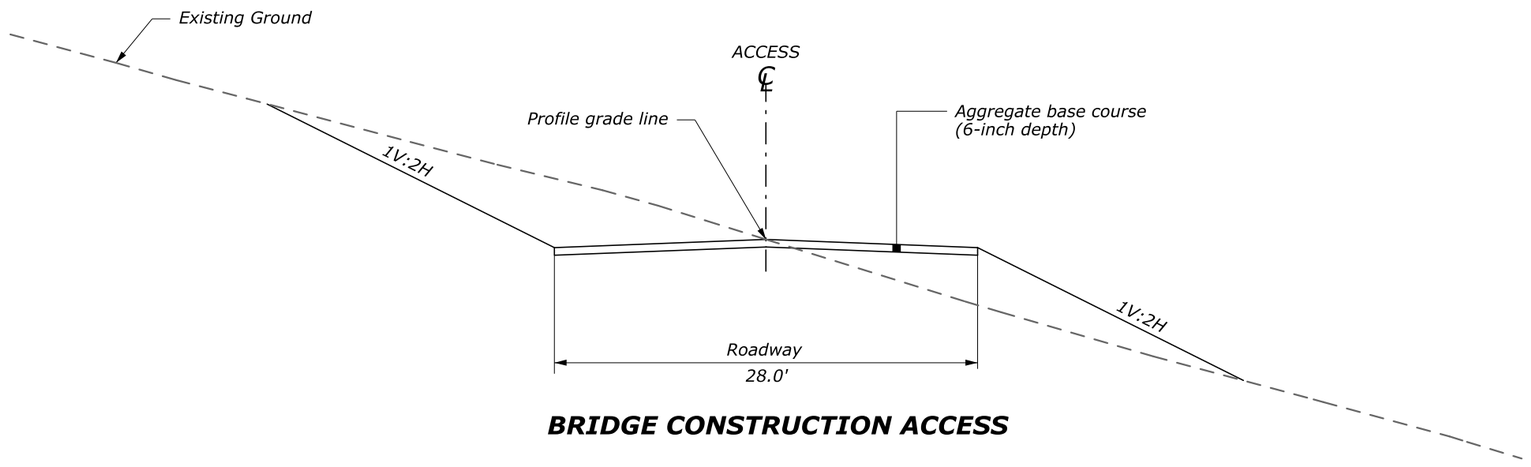
PARKING AREA

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	B07



MOUNTAINS TO SEA TRAIL RECONSTRUCTION

Sta. 600+25.84 to Sta. 602+52.04
Sta. 700+06.00 to Sta. 700+58.19
Sta. 800+21.51 to Sta. 803+55.52



BRIDGE CONSTRUCTION ACCESS

NOTES:

1. Prepare the surface on which the aggregate course is placed according to Articles 225 and 500 of the NCDOT 2018 Standard Specifications.
2. Provide topsoil 6-inch depth and establish turf on all disturbed areas, except aggregate surface areas in accordance with Articles 1060 and 1660 of the NCDOT 2018 Standard Specifications.
3. Place aggregate-topsoil course, 4½-inch on both shoulders.
4. See Slope Rounding of Parkway Sections in the plans for slope stake length.
5. Construct access roads within the limits of construction access with a maximum profile grade of 12% as shown in the plans and directed by the Engineer .
6. Remove temporary fills for construction access and stabilize distrubed areas as directed by the Engineer and according to the Special Provisions.

No scale

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

TYPICAL SECTIONS

MOUNTAINS TO SEA TRAIL CONSTRUCTION ACCESS

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C01

SOIL EROSION CONTROL SUMMARY

Sheet	STATION	SIDE	TEMPORARY INLET PROTECTION, TYPE C (EA)	TEMPORARY INLET PROTECTION, TYPE D (EA)	TEMPORARY SILT FENCE (LF)	STONE FOR EROSION CONTROL, CLASS A (TON)	STONE FOR EROSION CONTROL, CLASS B (TON)	BLRI TEMPORARY SEEDING (LB)	TEMPORARY SLOPE DRAIN (LF)	SILT EXCAVATION (CY)	MATTING FOR EROSION CONTROL (RECP TYPE 2.A) (SY)	MATTING FOR EROSION CONTROL (RECP TYPE 2.B) (SY)	REMARKS
A08		RT											CONSTRUCTION ENTRANCE
		LT				84							
A08		RT				84							CONSTRUCTION ENTRANCE
		LT											
M07	900+98 to 910+49	RT											
		LT									2632		
M08	498+00 to 502+26	RT			430								
		LT											
M08	499+97 to 500+90	RT											
		LT			100								
M08	502+09 to 504+86	RT			305								
		LT											
M09	504+71 to 506+27	RT					1	10	190	69.5			RISER BASIN
		LT											
M09	505+17	RT											
		LT											
M09	505+67	RT											
		LT		1	200								
M09	508+92 to 511+01	RT											
		LT			80								
M10	510+56 to 511+33	RT		1									
		LT											
M10	510+88	RT											
		LT											
M10	511+01	RT											
		LT	1		215								
M10	511+23 to 512+21	RT							215				
		LT	1										
M10	511+96 to 513+88	RT											
		LT			98								
M11	516+76 to 517+04	RT											
		LT			80								
M11	517+69 to 517+82	RT											
		LT											
	Subtotal this sheet		2	2	1,508	168	1	10	405	70	2,632		

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

SOIL EROSION CONTROL (SHEET 1 OF 3)

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C02

SOIL EROSION CONTROL SUMMARY

Sheet	STATION		TEMPORARY INLET PROTECTION, TYPE C	TEMPORARY INLET PROTECTION, TYPE D	TEMPORARY SILT FENCE	STONE FOR EROSION CONTROL, CLASS A	STONE FOR EROSION CONTROL, CLASS B	BLRI TEMPORARY SEEDING	TEMPORARY SLOPE DRAIN	SILT EXCAVATION	MATTING FOR EROSION CONTROL (RECP TYPE 2.A)	MATTING FOR EROSION CONTROL (RECP TYPE 2.B)	REMARKS
			EA	EA	LF	TON	TON	LB	LF	CY	SY	SY	
M11	518+68 to 518+90	RT LT	3										
M11	521+98 to 523+84	RT LT							200				
M12	523+57	RT LT		1									
M12	523+83 to 525+93	RT LT							210				
M12	525+43	RT LT	1										
M12	525+55	RT LT					1	10		69.5			RISER BASIN
M13	525+74 to 528+48	RT LT			300								
M13	527+10	RT LT		1									
M13	528+55 to 530+67	RT LT			235								
M12	600+71 to 602+59	RT LT			210								
M13	527+50 to 531+50	RT LT										859.0	
M13	530+44	RT LT		1									
M14	511+23 to 512+21	RT LT			480								PIERS
M14	511+23 to 512+21	RT LT			215								PIERS
M14	517+69 to 517+82	RT LT			80								PIERS
M21-M26		RT LT			80			160					
Subtotal this sheet			4	3	1,600		1	170	410	70		859	
Subtotal Sheet 1			2	2	1,508	168	1	10	405	70	2,632		
Total			6	5	3,108	168	2	180	815	139	2,632	859	
Rounded Total			6	5	3,325	190	2	220	900	155	2,900	950	

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

SOIL EROSION CONTROL (SHEET 2 OF 3)

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C03

SOIL EROSION CONTROL SUMMARY

Sheet	STATION	SIDE	MATTING FOR EROSION CONTROL (RECP TYPE 2.C) SY	MATTING FOR EROSION CONTROL (RECP TYPE 2.D) SY	MATTING FOR EROSION CONTROL (RECP TYPE 3.B) SY	MATTING FOR EROSION CONTROL (RECP TYPE 4) SY	COIR FIBER MAT SY	RISER BASIN EA	WATTLE LF	COIR FIBER BAFFLE LF	SEEDING AND MULCHING ACR		REMARKS
M07	499+00 to 502+03	RT LT			119						0.9		
M07	500+92 to 503+75	RT LT	777										
M07	502+12 to 505+59	RT LT				825							
M08	502+03 to 510+20	RT LT		3,368									
M08	502+30	RT LT							21				
M08	503+75 to 505+75	RT LT		562					133				
M08	505+17	RT LT					60	1		60			
M08	505+75 to 508+00	RT LT	552						126				
M09	510+13 to 511+85	RT LT	219										
M09	510+20 to 511+83	RT LT	228										
M09	511+14	RT LT							28				
M10	517+89 to 523+61	RT LT		4,845					49				
M10	517+89 to 524+25	RT LT		3,568					112				
M10	518+30	RT LT							77				
M11	524+45 to 527+50	RT LT	1,123						98				
M11	523+68 to 526+75	RT LT				1034							
M11	525+55	RT LT					60	1		60			
M11	526+75 to 528+50	RT LT		397					231				
M14	511+23 to 512+21	RT LT	682										PIERS
M14	517+69 to 517+82	RT LT	325										PIERS
M15		RT LT		1,443									PIERS
Subtotal this sheet			3,906	14,183	119	1,859	120	2	875	120	1		
Total			3,906	14,183	119	1,859	120	2	875	120	1		
Rounded Total			4,300	15,600	130	2,050	135	2	1,000	130	9		

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

SOIL EROSION CONTROL (SHEET 3 OF 3)

BRIDGE SUMMARY

Description	Unit	Quantity
REMOVAL OF EXISTING STRUCTURE AT STA 514+86.3	LPSM	ALL
FOUNDATION EXCAVATION FOR END BENT 1 AT STA 514+86.3	LPSM	ALL
FOUNDATION EXCAVATION FOR END BENT 2 AT STA 514+86.3	LPSM	ALL
FOUNDATION EXCAVATION FOR BENT 1 AT STA 514+86.3	LPSM	ALL
FOUNDATION EXCAVATION FOR BENT 2 AT STA 514+86.3	LPSM	ALL
PDA TESTING	EA	2
GROOVING BRIDGE FLOORS	SF	23,000
CLASS AA CONCRETE (BRIDGE)	CY	490
BRIDGE APPROACH SLAB, STA 514+86.3	LPSM	All
REINFORCING STEEL (BRIDGE)	LB	69,500
PILE DRIVING EQUIPMENT SETUP FOR *** STEEL PILES (HP14X89)	EA	52
HP 14X89 STEEL PILES (HP14X89)	LF	2,912
CALTRANS BARRIER RAIL	LF	1,210
LATEX MODIFIED CONC OVERLAY	CY	110
PLACING & FINISHING OF LATEX MODIFIED CONC OVERLAY	SY	1,970
DISC BEARINGS	LPSM	ALL
MODULAR EXPANSION JOINT SEALS	LPSM	ALL
HIGH STRENGTH CONCRETE	CY	170
PRECAST SEGMENTAL BRIDGE	CY	2,225
STONE MASONRY FOR WINGWALL, PARAPET, AND ABUTMENT	CY	31
POST-TENSIONING STEEL	LB	147,300

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

BRIDGE

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C05

EARTHWORK SUMMARY

SHEET	STATION	UNCLASSIFIED EXCAVATION CY	EMBANKMENT CONSTRUCTION CY	TEMPORARY SHORING SY	REINFORCED SOIL SLOPES SY	GEOGRID SY	SELECT MATERIAL, CLASS II, TYPE 1 TON	UNCLASSIFIED STRUCTURE EXCAVATION CY	REMARKS
D01-D05	498+00 to 530+50		10,226						
D01-D05	500+00 to 530+50	127,520							
B05, D01-D03	502+03 to 505+63				917	21,956	17,188	9,094	
B05, D03-D05	523+98 to 527+01				826	19,918	17,189	9,095	
E01	600+12 to 602+00	4	14						
E02	700+06 to 700+58	8							
N02-N03	498+00 to 530+50			1,261				458	TEMPORARY WIDENING
	Subtotal this Sheet	127,532	10,240	1,261	1,743	41,874	34,377	18,647	
	Rounded Total	140,000	11,500	1,450	1,900	43,800	38,000	20,500	

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

EARTHWORK

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C06

PAVEMENT SUMMARY

SHEET	STATION	REMOVAL OF PAVED WATERWAY, ASPHALT SY	REMOVAL OF EXISTING ASPHALT PAVEMENT SY	GEOTEXTILE FOR PAVEMENT STABILIZATION SY	AGGREGATE BASE COURSE TON	PRIME COAT GAL	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B TON	ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B TON	AGGREGATE TOPSOIL TON	RIGHT OF WAY MARKERS EACH	REMARKS
B04	800+52 to 803+56				28						
D01-D06	500+00 to 530+50			6,726	4,909						
D01-D03	500+00 to 511+68					1,564	843	379	177		
D02	507+69 to 507+69									1	
D03	511+69 to 511+69									1	
D03-D06	518+05 to 530+50					1,583	850	382	189		
D05	527+21 to 527+21									1	
E01	600+26 to 602+52				26						
E02	700+06 to 700+58				6						
E04	522+77 to 526+37				582	352	156	59	21		PARKING AREA
F01-F03	500+00 to 511+71		2,798								
F02	504+92 to 509+35	268									
F03-F05	517+14 to 530+50		3,055								
F04	518+67 to 523+54	135									
N01-N02	900+97 to 910+49			1,307	549		257				
B07					1,568						2 ACCESS ROADS
		403	5,853	8,033	7,668	3,499	2,106	820	387	3	
	Subtotal this Sheet	403	5,853	8,033	7,668	3,499	2,106	820	387	3	
	Rounded Total	425	6,500	9,250	8,400	3,800	2,300	900	425	3	

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

PAVEMENT

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C07

DRAINAGE SUMMARY

SHEET	STATION	SIDE	18" RC PIPE CULVERTS, CLASS III (LF)	24" RC PIPE CULVERTS, CLASS III (LF)	18" CS PIPE CULVERTS, 0.064" THICK (LF)	PIPE REMOVAL (LF)	STONE MASONRY HEADWALLS FOR18-INCH PIPE CULVERT (EA)	STONE MASONRY HEADWALLS FOR 24-INCH PIPE CULVERT (EA)	MASONRY DRAINAGE STRUCTURES (INLET, FLH TYPE 4A) (EA)	MASONRY DRAINAGE STRUCTURES (INLET, FLH TYPE 4B) (EA)	MASONRY DRAINAGE STRUCTURES (INLET, FLH TYPE 6A-6) (EA)	CUSTOM 3'X5' CATCH BASIN) (EA)	REMOVAL OF CATCH BASIN (EA)	PAVED WATERWAY, TYPE 5, ASPHALT (SY)	RIPRAP, CLASS I (TON)	RIPRAP, CLASS B (TON)	GEOTEXTILE FOR DRAINAGE (SY)	REMARKS
D01	500+94 to 508+70	RT LT												258	4		12	
D02	505+70 to 510+14	RT LT												154	10		12	
D04	518+04 to 531+50	RT LT												453				
D04	518+04 to 523+58	RT LT												187				
D04	520+65 to 523+92	RT LT												213				Near Trail 1
F02	504+97	RT LT				54							1					
F02	510+88	RT LT				104												
F03	511+20	RT LT				50							1		4		12	
F04	523+51	RT LT				46							1					
F05	526+66	RT LT				71												
F05	530+43	RT LT											1				12	
K01	505+67	RT LT		93				1		1					4		12	
K02	510+88 to 511+03	RT LT		63 96				1 1				2		10	4			
	Subtotal this Sheet			252		325		3		1		2	4	1,275	26		60	

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

DRAINAGE
(SHEET 1 OF 2)

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C08

DRAINAGE SUMMARY

SHEET	STATION	SIDE	18" RC PIPE CULVERTS, CLASS III (LF)	24" RC PIPE CULVERTS, CLASS III (LF)	18" CS PIPE CULVERTS, 0.064" THICK (LF)	PIPE REMOVAL (LF)	STONE MASONRY HEADWALLS FOR 18-INCH PIPE CULVERT (EA)	STONE MASONRY HEADWALLS FOR 24-INCH PIPE CULVERT (EA)	MASONRY DRAINAGE STRUCTURES (INLET, FLH TYPE 4A) (EA)	MASONRY DRAINAGE STRUCTURES (INLET, FLH TYPE 4B) (EA)	MASONRY DRAINAGE STRUCTURES (INLET, FLH TYPE 6A-6) (EA)	CUSTOM 3'X5' CATCH BASIN (EA)	REMOVAL OF CATCH BASIN (EA)	PAVED WATERWAY, TYPE 5, ASPHALT (SY)	RIPRAP, CLASS I (TON)	RIPRAP, CLASS B (TON)	GEOTEXTILE FOR DRAINAGE (SY)	REMARKS
K03	511+56	RT	50									1						
		LT																
K04	518+17	RT	68									1						
		LT																
K05	518+88	RT	44									1						
		LT					1											
K06	525+50	RT	17															
		LT					1				1							
K07	527+10	RT		73				1							4		12.0	
		LT								1								
K08	530+43	RT		73				1							4			
		LT								1								
K09	600+43	RT	90						1						2		8	
		LT					1											
K10	800+12	RT	20				1											
		LT					1											
K11	803+24	RT	30				1											
		LT					1											
M07	505+17	RT			60											2		
		LT																
M07	525+55	RT			60											2		
		LT																
A08		RT															400	CONSTRUCTION ENTRANCES
		LT																
		RT																
		LT																
		RT																
		LT																
		RT																
		LT																
		RT																
		LT																
		RT																
		LT																
		RT																
		LT																
		RT																
		LT																
	Subtotal this Sheet		319	146	120		7	2	1	2	1	3			10	4	420	
	Subtotal Sheet 1			252		325		3		1		2	4	1,275	26		60	
	Total		319	398	120	325	7	5	1	3	1	5	4	1,275	36	4	480	
	Rounded Total		320	405	130	340	7	5	1	3	1	5	4	1,400	40	5	520	

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

DRAINAGE (SHEET 2 OF 2)

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C09

CURBS, SIDEWALKS, RAMPS AND GUARDRAIL SUMMARY

SHEET	STATION	SIDE	GRANITE CURB LF	6'X18" CONCRETE CURB LF	4" CONCRETE SIDEWALK SY	CONCRETE CURB RAMPS EA	REMOVE EXISTING GUARDRAIL LF	GUARDRAIL SYSTEM, STEEL-BACKED TIMBER, TYPE A (SRTA) LF	GUARDRAIL TERMINAL SECTION, TYPE SBT - TANGENT EACH	STONE MASONRY GUARDWALL LF
D01-D02	498+43 to 498+84	RT						657	1	
D01-D02	498+84 to 505+50	RT							1	
D03	510+40 to 511+83	LT		15	77	1				128
D03	510+40 to 511+22	RT								128
D03	511+22 to 511+83	RT								
D04	517+90 to 519+75	RT								171
D04	517+90 to 519+76	LT		12	101	1				171
D05	523+64 to 524+05	RT							1	
D05	527+90 to 528+31	RT							1	
D05	524+05 to 527+90	RT						385		
E04	522+89 to 526+25	LT	349			1				
F02	509+45 to 511+53	LT					218			
D05	523+10 to 523+54	RT						43		
Subtotal this Sheet			349	27	178	3	218	1,085	4	598
Rounded Total			380	35	190	3	230	1,200	4	655

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

CRUBS, SIDEWALKS, RAMPS AND GUARDRAIL

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C10

PAVEMENT STRIPING SUMMARY

SHEET	STATION	SIDE	PAINT PAVEMENT MARKINGS LINES (4", 20 MILS) LF			POLYUREA PAVEMENT MARKINGS LINES (4", 20 MILS) LF					REMARKS
			White	Yellow	Blue	White	Yellow	Blue			
N01	900+98 to 910+49	RT CL LT	855	1,901							TEMPORARY WIDENING
P01-P03	500+00 to 530+50	RT CL LT					6,100				
P03	523+50	RT CL LT				170					EDGE LINE
		RT CL LT									
		RT CL LT									
		RT CL LT									
		RT CL LT									
		RT CL LT									
		RT CL LT									
		RT CL LT									
		RT CL LT									
		RT CL LT									
		RT CL LT									
		RT CL LT									
			855	1,901		170	6,100				
Subtotal This sheet			2,756			6,270					
Rounded Total			2,900			6,600					

Note: All pavement marking lengths are in 4-inch width equivalents.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

PAVEMENT STRIPING

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	C11

PERMANENT AND CONSTRUCTION SIGNS

Sheet No. or Detail No.	MUTCD NO.	SIGN TEXT	PANEL SIZE WIDTH (in)	PANEL SIZE HEIGHT (in)	PANEL SIZE AREA (sqft)	COLOR COMBINATION	QUANTITY	CONTRACTOR FURNISHED, TYPE E SIGN	WORK ZONE SIGNS (STATIONARY) SF	WORK ZONE SIGNS (PORTABLE) SF		REMARKS
NCDOT 1101.01	G20-2	END ROAD WORK	36	18	4.50	BLACK ON ORANGE	2		9.0			
NCDOT 1101.01	W20-1	ROAD WORK AHEAD	36	36	9.00	BLACK ON ORANGE	2		18.0			
A03	SPECIAL	TRUCK ENTRANCE	48	48	16.00	BLACK ON ORANGE	4		64.0			NCDOT W14-12A
NCDOT 1101.02	W20-4	ONE LANE ROAD AHEAD	48	48	16.00	BLACK ON ORANGE	2			32.0		
NCDOT 1101.02	W3-4	BE PREPARED TO STOP	48	48	16.00	BLACK ON ORANGE	2			32.0		
NCDOT 1101.02	W20-7A	FLAGGER (SYMBOL)	48	48	16.00	BLACK ON ORANGE	2			32.0		
NCDOT 1101.02	G20-4	PILOT CAR FOLLOW ME	36	18	4.50	BLACK ON ORANGE	1			4.5		
N03	R4-1	DO NOT PASS	24	30	5.00	BLACK ON WHITE	2		10.0			
N03	W5-1	ROAD NARROWS	36	36	9.00	BLACK ON ORANGE	2		18.0			
N03	W13-1P	XX MPH	24	24	4.00	BLACK ON ORANGE	2		8.0			
P01	W1-2	CURVE RT	36	36	9.00	BLACK ON YELLOW	1	9.0				
P01	W1-2	CURVE LT	36	36	9.00	BLACK ON YELLOW	1	9.0				
P01	W13-1P	XX MPH	24	24	4.00	BLACK ON WHITE	2	8.0				
Subtotal this Sheet					117.5		25	26	127	101		
Rounded Total					*		*	30	135	110		

* For information only For information only

NOTE: Construct and erect all signs in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD), latest edition.

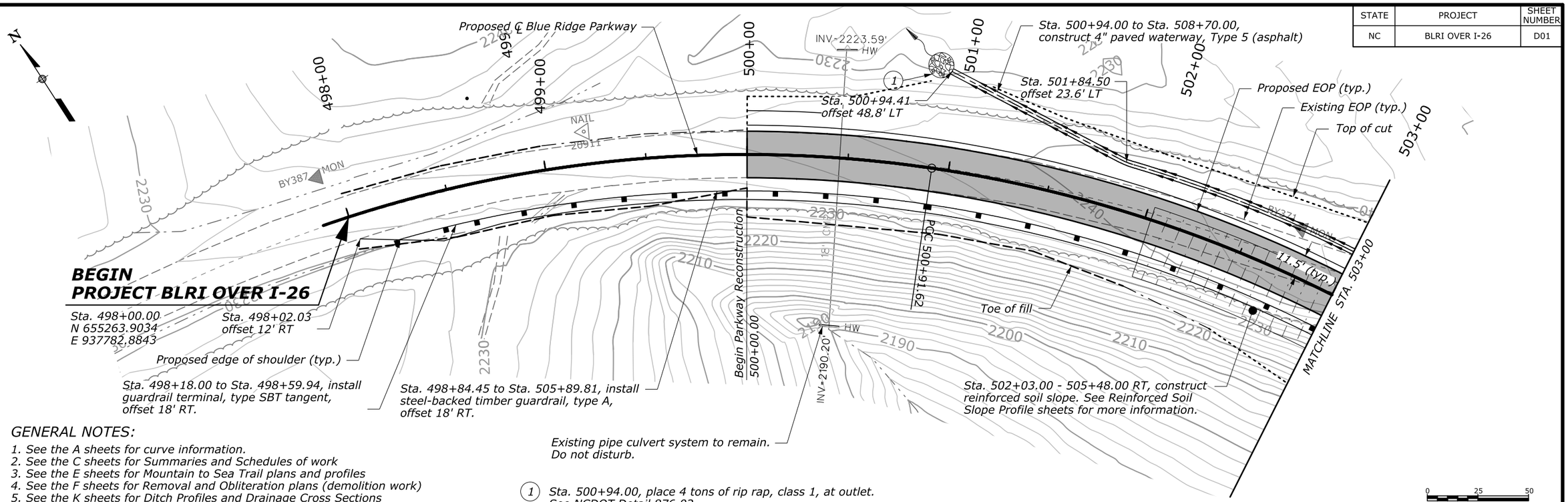
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

SUMMARIES AND SCHEDULES

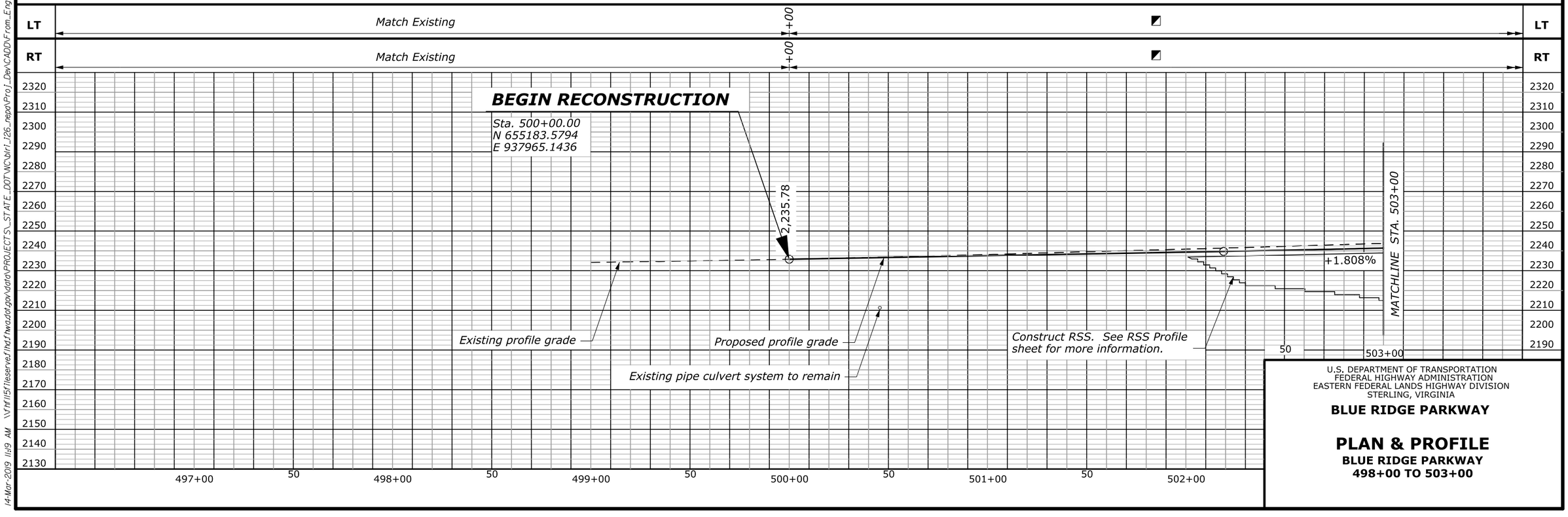
PERMANENT AND CONSTRUCTION SIGNS

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D01



GENERAL NOTES:

1. See the A sheets for curve information.
2. See the C sheets for Summaries and Schedules of work
3. See the E sheets for Mountain to Sea Trail plans and profiles
4. See the F sheets for Removal and Obliteration plans (demolition work)
5. See the K sheets for Ditch Profiles and Drainage Cross Sections
6. See NCDOT 2018 Standard Drawings as specified in the Plans.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

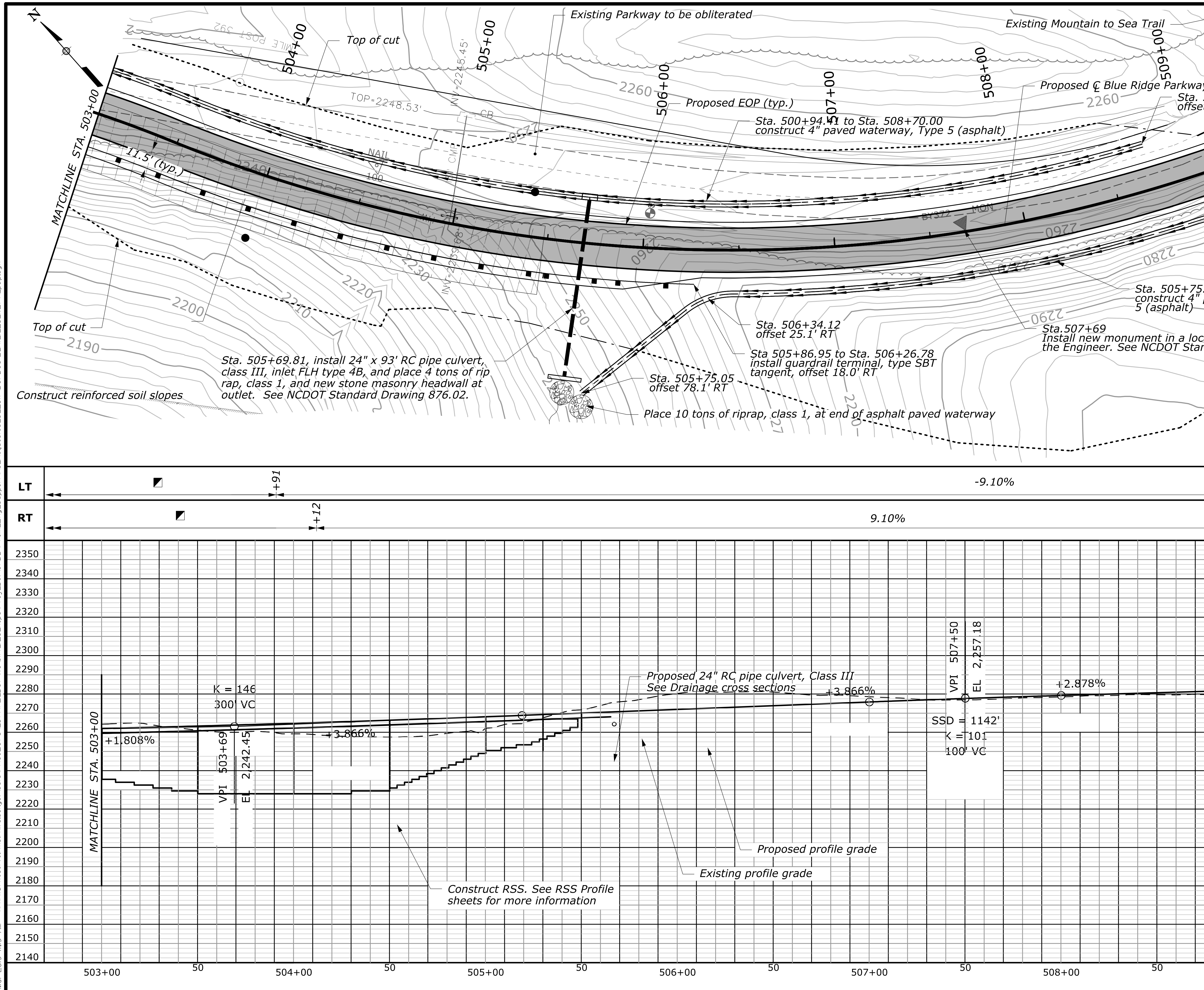
BLUE RIDGE PARKWAY

PLAN & PROFILE

BLUE RIDGE PARKWAY
498+00 TO 503+00

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D02

Curve = BLRI_PW-2
PI 502+20.38
Δ= 22° 24' 35" (RT)
R = 650.00'
T = 128.76'
L = 254.23'



Existing Parkway to be obliterated
Existing Mountain to Sea Trail
Top of cut
504+00
505+00
506+00
507+00
508+00
509+00
Proposed ℄ Blue Ridge Parkway
Proposed EOP (typ.)
Sta. 508+70.00 offset 23.9' LT
Sta. 500+94.51 to Sta. 508+70.00 construct 4" paved waterway, Type 5 (asphalt)
MATCHLINE STA. 503+00
MATCHLINE STA. 509+50
11.5' (typ.)
Proposed edge of shoulder (typ.)
Sta. 505+75.05 to 510+34.00 construct 4" paved waterway, Type 5 (asphalt)
Sta.507+69 Install new monument in a location to be determined by the Engineer. See NCDOT Standard Drawing 806.01.
Sta. 506+34.12 offset 25.1' RT
Sta 505+86.95 to Sta. 506+26.78 install guardrail terminal, type SBT tangent, offset 18.0' RT
Sta. 505+75.05 offset 78.1' RT
Place 10 tons of riprap, class 1, at end of asphalt paved waterway
Sta. 505+69.81, install 24" x 93' RC pipe culvert, class III, inlet FLH type 4B, and place 4 tons of rip rap, class 1, and new stone masonry headwall at outlet. See NCDOT Standard Drawing 876.02.
Construct reinforced soil slopes
Top of cut
2190
2200
2210
2220
2230
2240
2250
2260
2270
2280
2290
TOP=2248.53'
CB
NAIL
MON
0 25 50
SCALE IN FEET
LT
RT
+91
+12
-9.10%
9.10%
K = 146
300' VC
+1.808%
VPI 503+69
EL 2,242.45
+3.866%
Proposed 24" RC pipe culvert, Class III
See Drainage cross sections
VPI 507+50
EL 2,257.18
SSD = 1142'
K = 101
100' VC
+2.878%
Proposed profile grade
Existing profile grade
Construct RSS. See RSS Profile sheets for more information
2350
2340
2330
2320
2310
2300
2290
2280
2270
2260
2250
2240
2230
2220
2210
2200
2190
2180
2170
2160
2150
2140
503+00
50
504+00
50
505+00
50
506+00
50
507+00
50
508+00
50
509+00
50

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

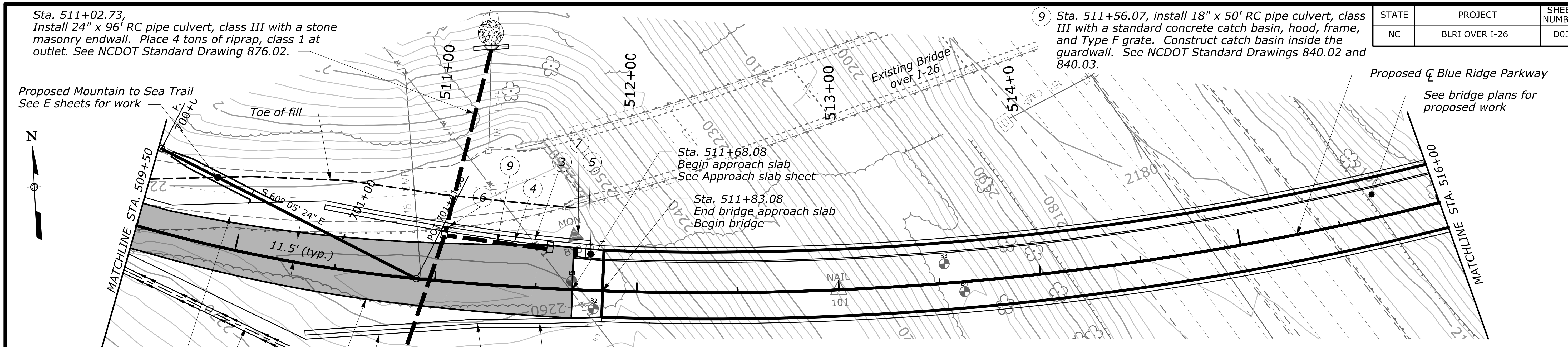
BLUE RIDGE PARKWAY

PLAN & PROFILE

BLUE RIDGE PARKWAY
503+00 TO 509+50

14-Mar-2019 11:19 AM \\fhf1l5f\fileserve\f.hd.fhwa.dot.gov\dfd\PROJECTS_STATE_DOT\NC\blri_I26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\D01-D06-BLRI_I_26_NEPA_p&p.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D03

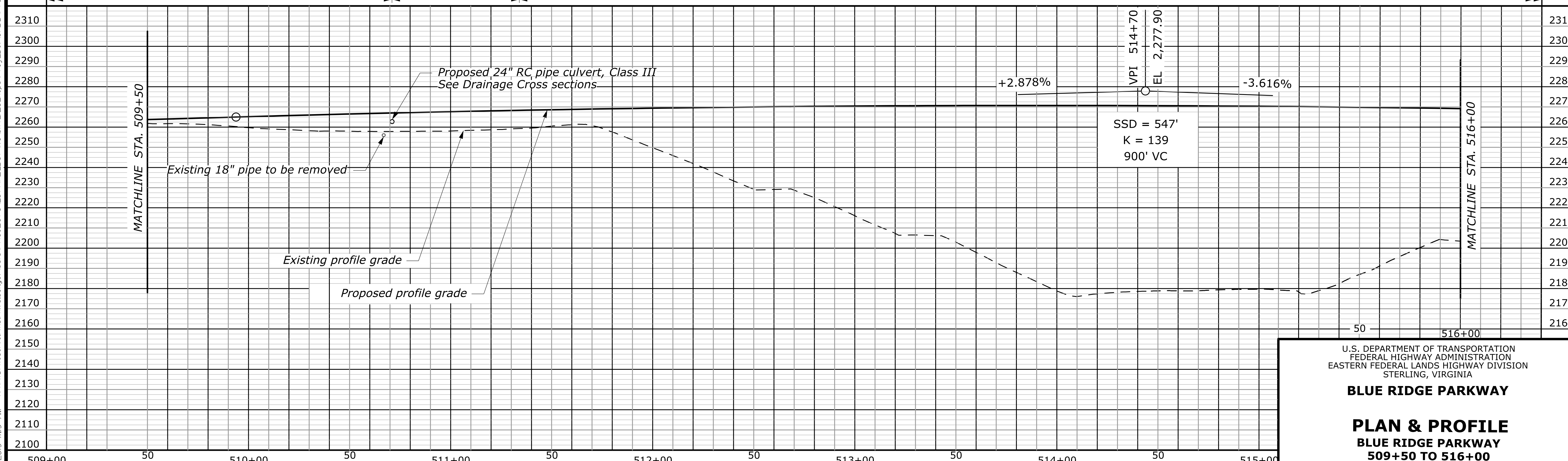


9. Sta. 511+56.07, install 18" x 50' RC pipe culvert, class III with a standard concrete catch basin, hood, frame, and Type F grate. Construct catch basin inside the guardwall. See NCDOT Standard Drawings 840.02 and 840.03.

1. Sta. 510+40.44 to Sta. 511+20.52, construct stone masonry guardwall, offsets 32.4' and 17.3' RT
2. Sta. 511+20.30 to Sta. 511+68.08, construct stone masonry guardwall, end offset 13' RT
3. Sta. 510+40.44 to Sta. 511+37.98, construct stone masonry guardwall, offsets 28.2' and 22' LT
4. Sta. 511+37.98 to Sta. 511+68.08, construct stone masonry guardwall, end offset 20' LT
5. Sta. 511+67.92 to Sta. 511+83.09, construct concrete sidewalk, curb and curb ramp (wheelchair ramp curb taper). Taper ramp to match bridge approach slab sidewalk.
6. Sta. 511+02.73, install concrete catch basin, hood, frame, and Type F grate. Construct catch basin inside the guardwall. See NCDOT Standard Drawings 840.02 and 840.03.
7. Sta. 511+68.24, install new monument in a location to determined by the Engineer. See NCDOT Standard Drawing 806.01.
8. Sta. 505+75.05 to Sta. 510+34.00, construct 4" paved waterway, Type 5 (asphalt)

0 25 50 SCALE IN FEET

LT	-9.10%	+71	+34	-6.00%
RT	9.10%	+71	+34	6.00%



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

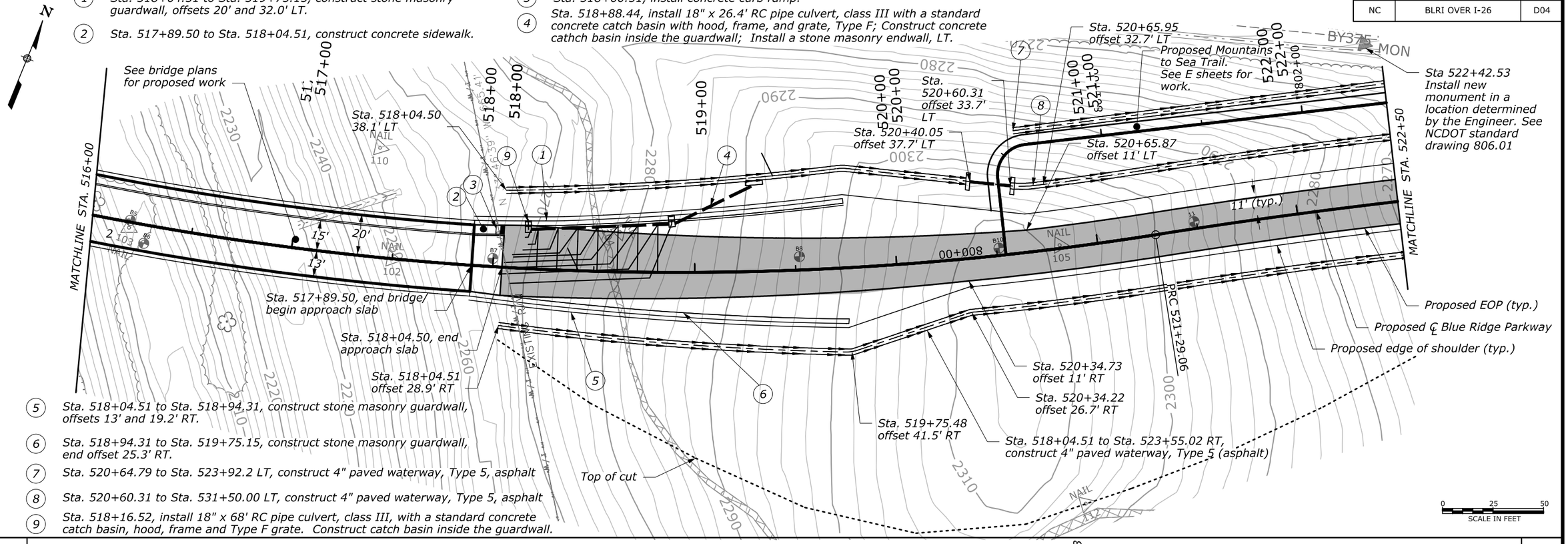
BLUE RIDGE PARKWAY

PLAN & PROFILE

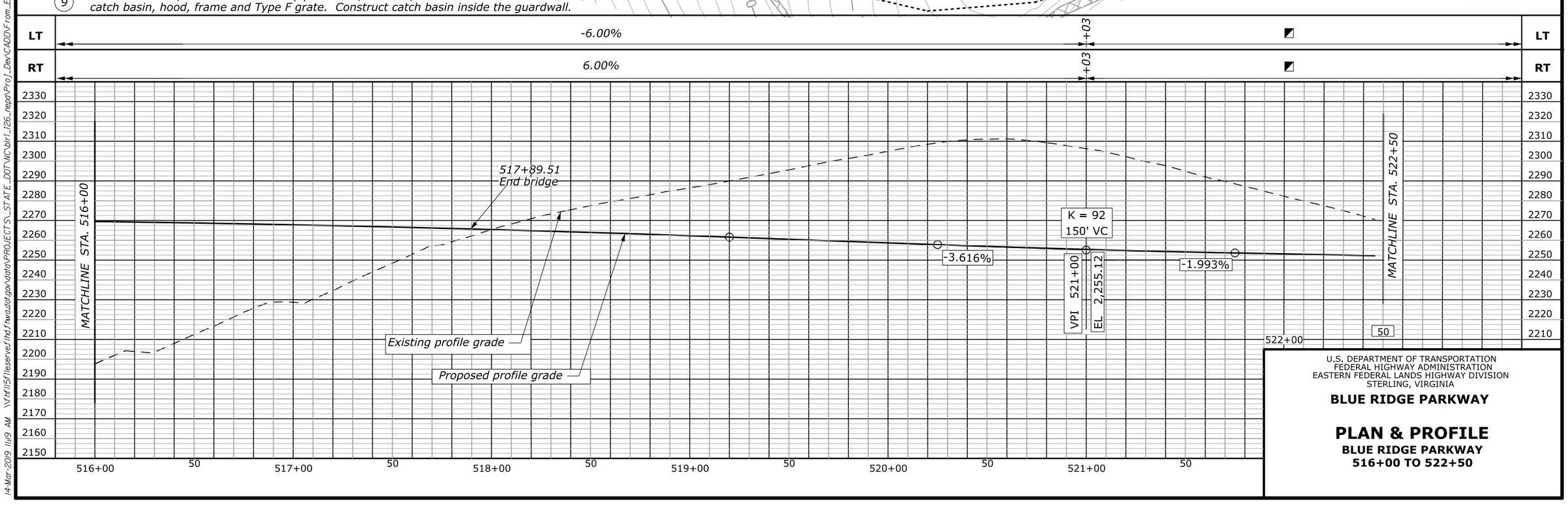
BLUE RIDGE PARKWAY
509+50 TO 516+00

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D04

1. Sta. 518+04.51 to Sta. 519+75.15, construct stone masonry guardwall, offsets 20' and 32.0' LT.
2. Sta. 517+89.50 to Sta. 518+04.51, construct concrete sidewalk.
3. Sta. 518+00.51, install concrete curb ramp.
4. Sta. 518+88.44, install 18" x 26.4' RC pipe culvert, class III with a standard concrete catch basin with hood, frame, and grate, Type F; Construct concrete cathch basin inside the guardwall; Install a stone masonry endwall, LT.



5. Sta. 518+04.51 to Sta. 518+94.31, construct stone masonry guardwall, offsets 13' and 19.2' RT.
6. Sta. 518+94.31 to Sta. 519+75.15, construct stone masonry guardwall, end offset 25.3' RT.
7. Sta. 520+64.79 to Sta. 523+92.2 LT, construct 4" paved waterway, Type 5, asphalt
8. Sta. 520+60.31 to Sta. 531+50.00 LT, construct 4" paved waterway, Type 5, asphalt
9. Sta. 518+16.52, install 18" x 68' RC pipe culvert, class III, with a standard concrete catch basin, hood, frame and Type F grate. Construct catch basin inside the guardwall.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

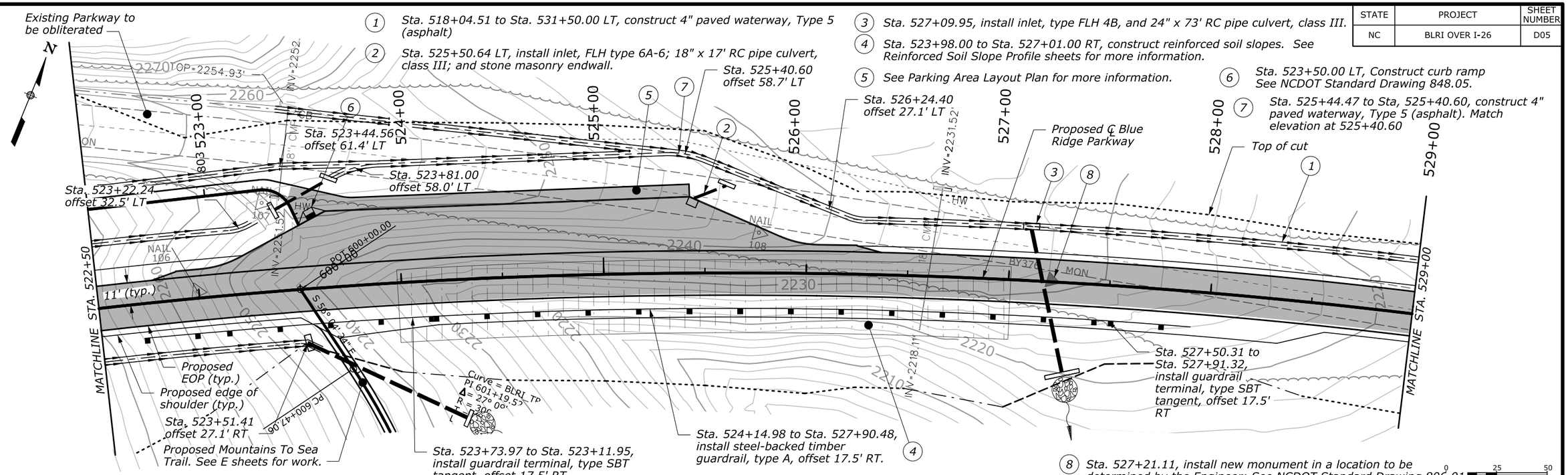
BLUE RIDGE PARKWAY

PLAN & PROFILE

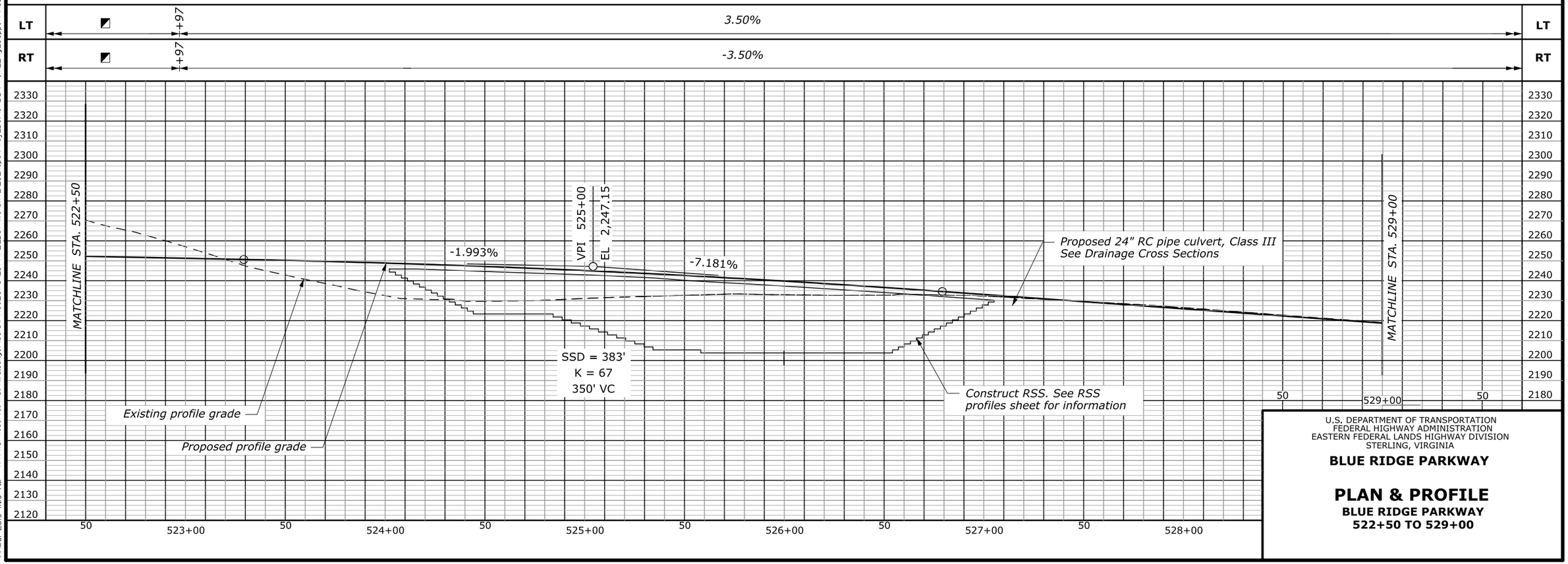
BLUE RIDGE PARKWAY
516+00 TO 522+50

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D05

1. Sta. 518+04.51 to Sta. 531+50.00 LT, construct 4" paved waterway, Type 5 (asphalt)
2. Sta. 525+50.64 LT, install inlet, FLH type 6A-6; 18" x 17' RC pipe culvert, class III; and stone masonry endwall.
3. Sta. 527+09.95, install inlet, type FLH 4B, and 24" x 73' RC pipe culvert, class III.
4. Sta. 523+98.00 to Sta. 527+01.00 RT, construct reinforced soil slopes. See Reinforced Soil Slope Profile sheets for more information.
5. See Parking Area Layout Plan for more information.
6. Sta. 523+50.00 LT, Construct curb ramp See NCDOT Standard Drawing 848.05.
7. Sta. 525+44.47 to Sta, 525+40.60, construct 4" paved waterway, Type 5 (asphalt). Match elevation at 525+40.60



8. Sta. 527+21.11, install new monument in a location to be determined by the Engineer; See NCDOT Standard Drawing 806.01.



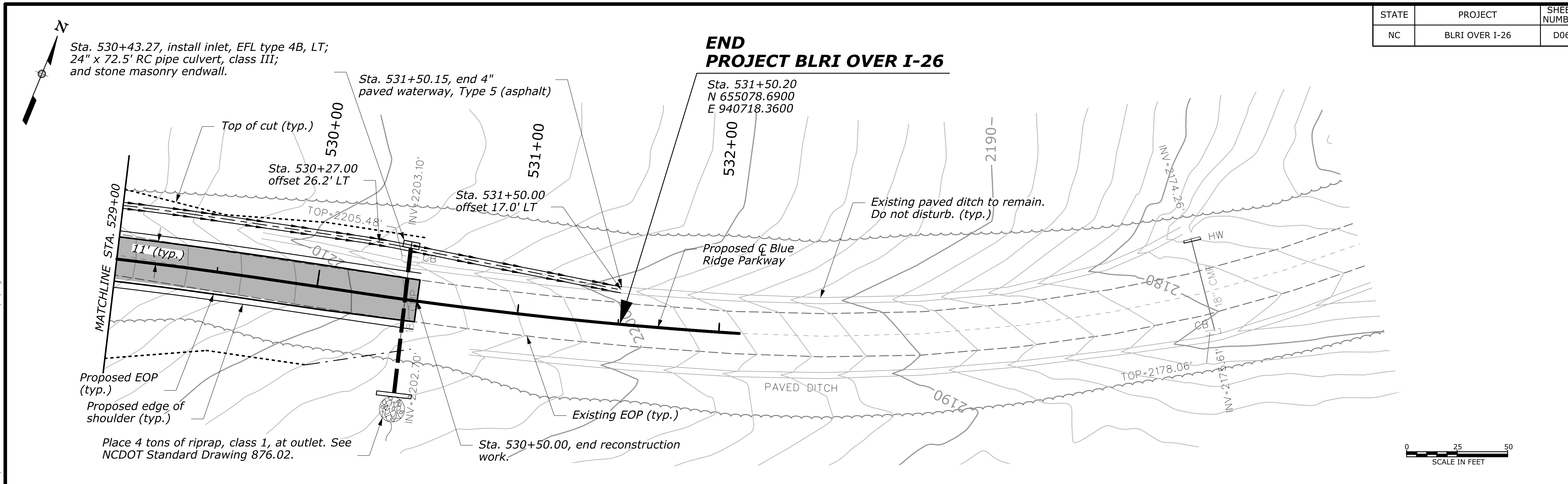
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

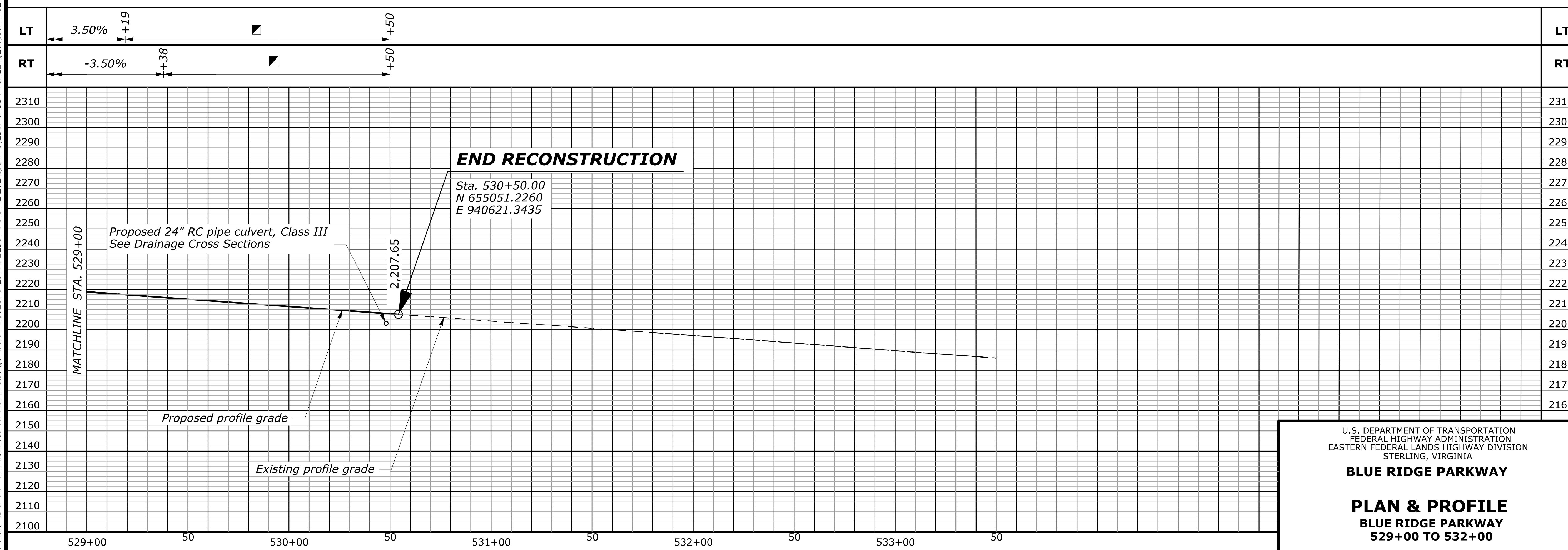
BLUE RIDGE PARKWAY

PLAN & PROFILE

BLUE RIDGE PARKWAY
522+50 TO 529+00

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D06





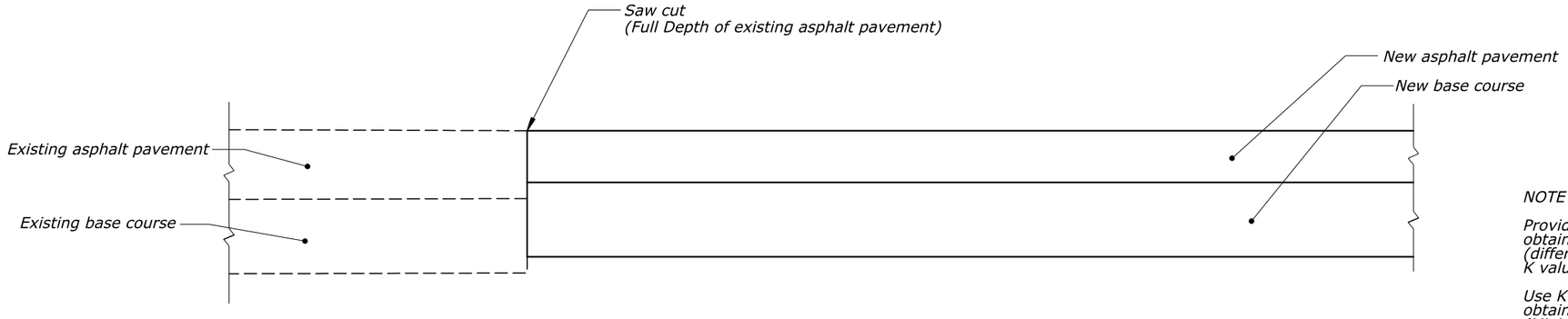
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

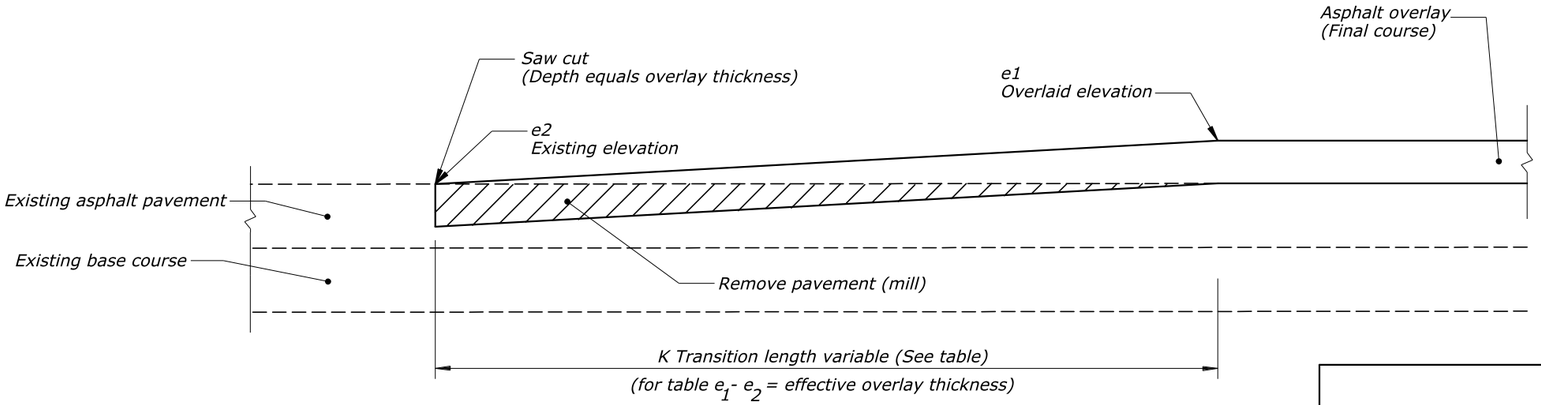
PLAN & PROFILE

BLUE RIDGE PARKWAY
529+00 TO 532+00

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D07



NEW PAVEMENT



OVERLAY

NOTE :

Provide a transition length in feet that is not less than the value obtained by multiplying the effective overlay thickness in inches (difference between the existing and overlaid elevations) by the K value from the Table for the posted speed of the roadway.

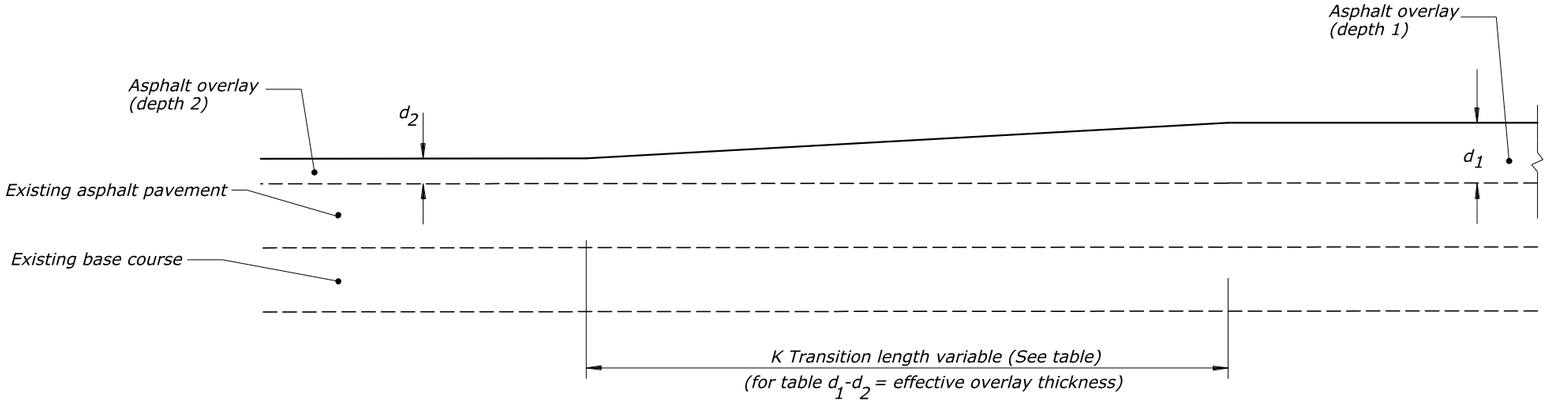
Use K*[e1-e2]=T, or K*[d1-d2]=T (whichever applies), to obtain the transition length.
(Minimum transition length=30 feet)

Example :
If the posted speed is 55 MPH
Effective overlay thickness = 2 inches
Then the minimum transition length =
2 inches x 42.5 ft./in. = 85 feet.

K VALUE TABLE (ft/in)

POSTED SPEED (MPH) *	30	35	40	45	50	55	60	65	70	75
K	30	32.5	35	37.5	40	42.5	45	47.5	50	52.5

* Use a K Value of 30 for speeds less than 30 MPH.



OVERLAY - DEPTH TRANSITIONS

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

PAVEMENT TRANSITIONS

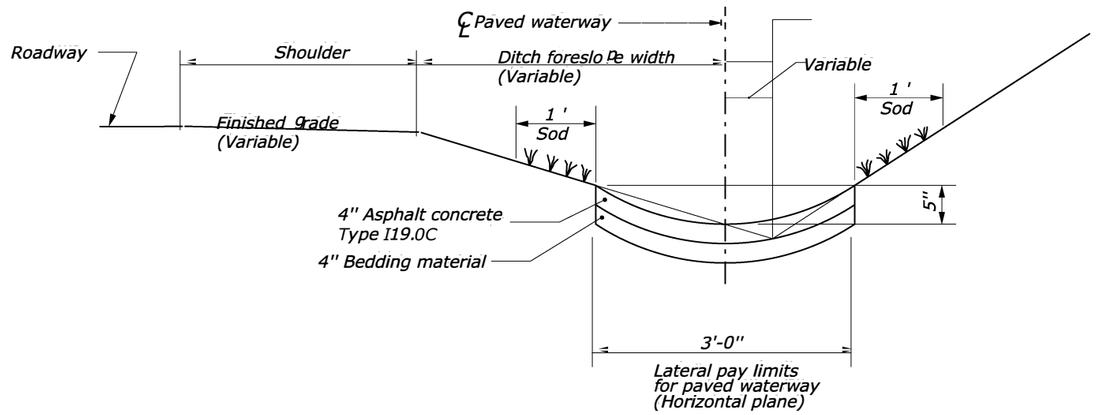
10-Dec-2018 Olsf PM M:\PROJECTS_STATE_DOT\NC\blri_I26_nepo\Proj_Dev\CADD-From_Eng_Support\As_Requested_3_2017\D07-st4010l_detail.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D08

NOTES:

1. The approximate shape of the paved waterway is an arc with a radius of 2.9 feet.

2. At inlets and other special locations, widen and shape paved waterway to drain.



PAVED WATERWAY

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

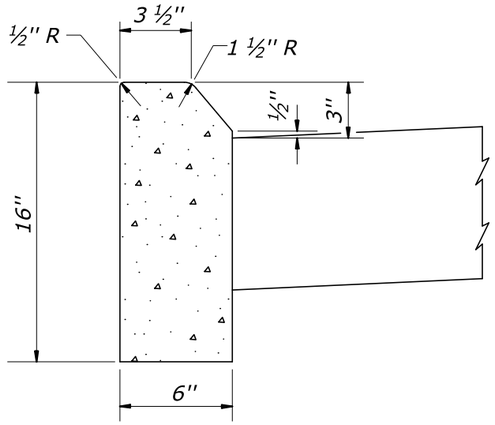
PAVED WATERWAY, TYPE 5 (ASPHALT)

10-Dec-2018 01:18 PM M:\PROJECTS_STATE_DOT\NC\blri_I26_repo\Proj_Dev\CADD-From_Eng_Support\As_Requested_3_2017\D08 sf60802_detail.dgn

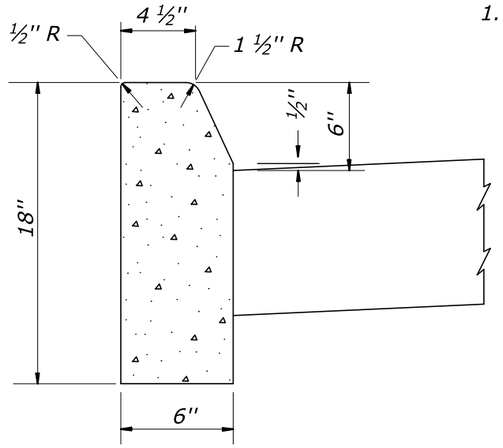
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D09

Note:

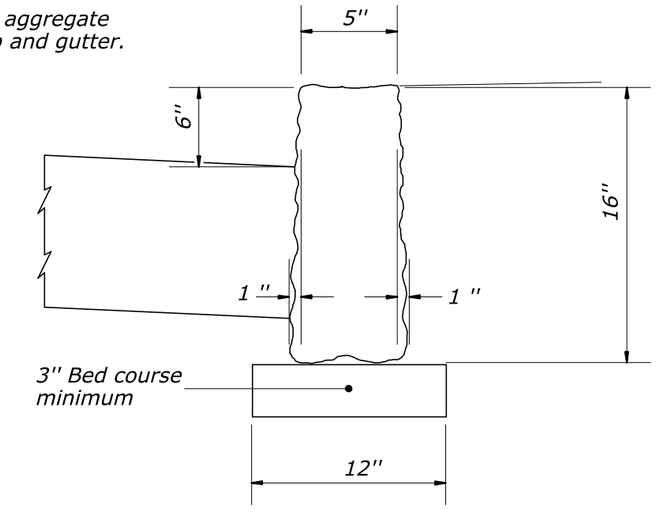
1. Place 3 inches, minimum aggregate bed course under all curb and gutter.



16-INCH DEPTH
(MOUNTABLE)



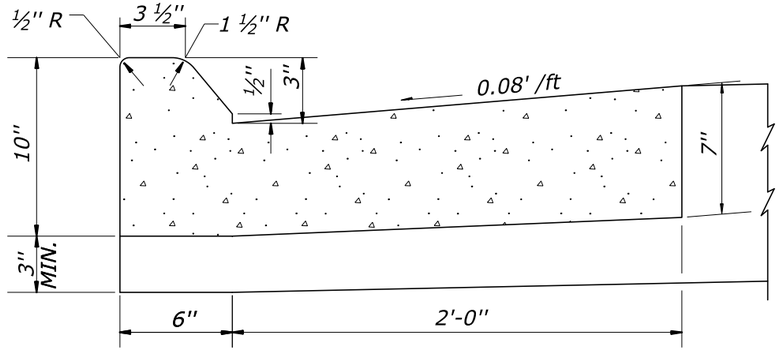
18-INCH DEPTH
(NON- MOUNTABLE)



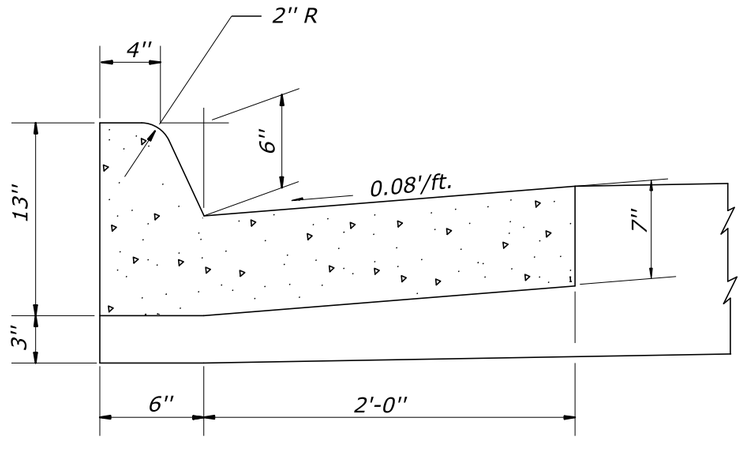
STONE CURB

16-INCH DEPTH
(NON-MOUNTABLE)

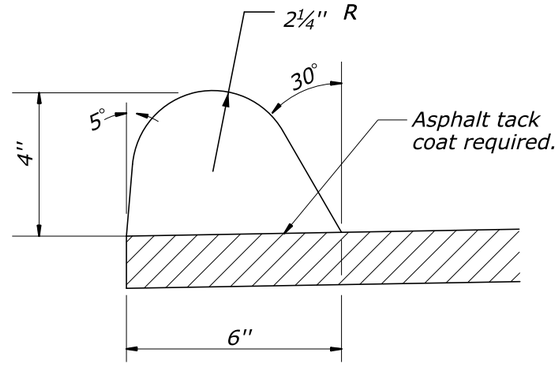
PORTLAND CEMENT CONCRETE CURB



10-INCH DEPTH
(MOUNTABLE)



13-INCH DEPTH
(NON- MOUNTABLE)



ASPHALT CONCRETE CURB

4-INCH DEPTH
(NON-MOUNTABLE)

Asphalt tack coat may be rapid curing liquid asphalt or emulsified asphalt.

PORTLAND CEMENT CONCRETE CURB AND GUTTER

NO SCALE

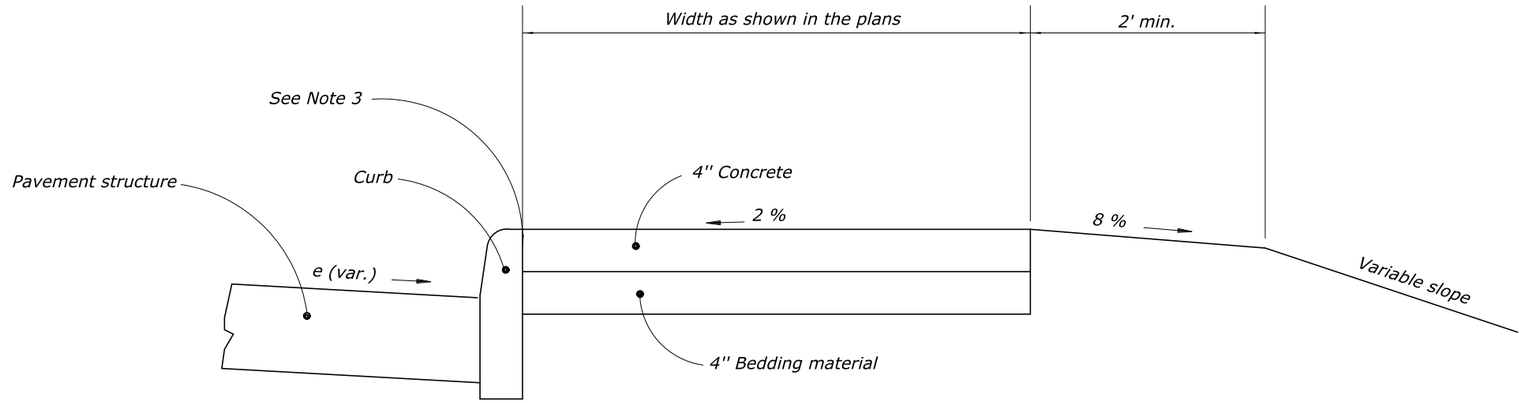
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

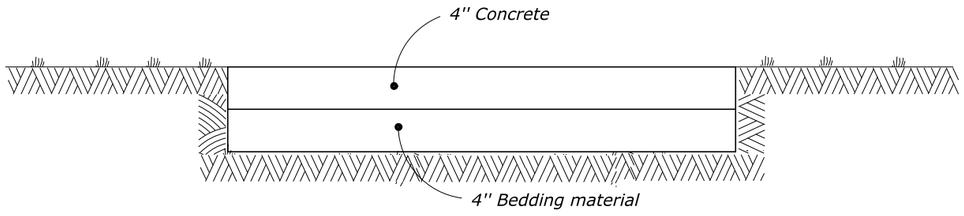
CURBS

10-Dec-2018 01:09 PM M:\PROJECTS_STATE_DOT\NC\blri-126_repo\Proj_Dev\CADD-From_Eng_Support\As_Requested_3_2017\009-st6090i_detail.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D10



SIDEWALK WITH CURB



SIDEWALK

NOTES:

1. Place ¾-inch transverse expansion joints at intervals of not more than 20 feet to match adjacent curb expansion.
2. Place contraction joints at intervals equal to the width of the sidewalk as shown in the plans.
3. Install preformed expansion joint filler conforming to Article 1028-1.

NO SCALE

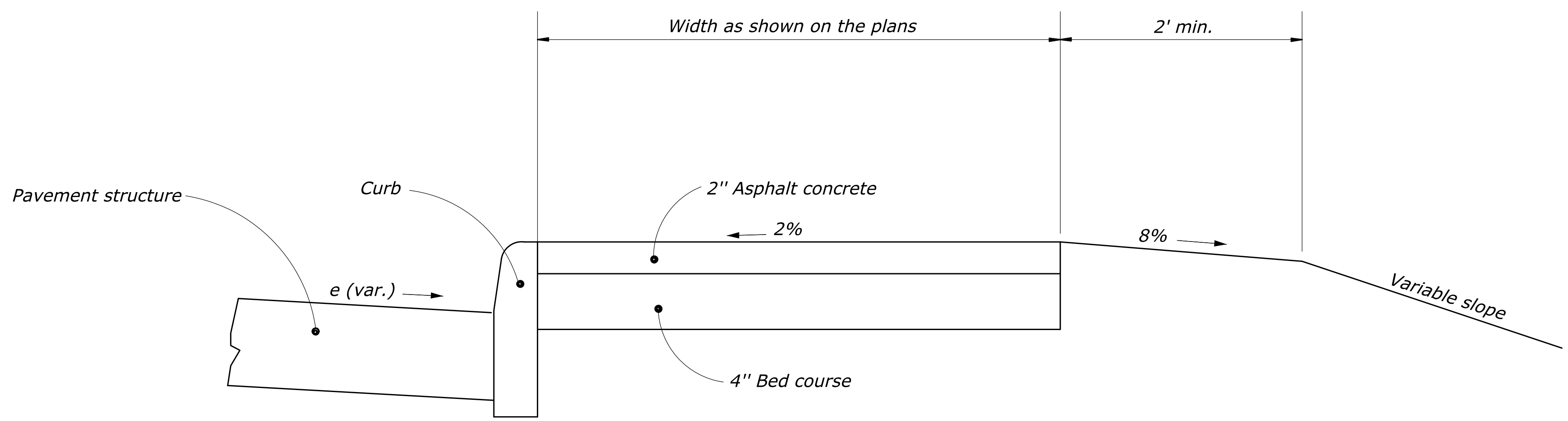
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

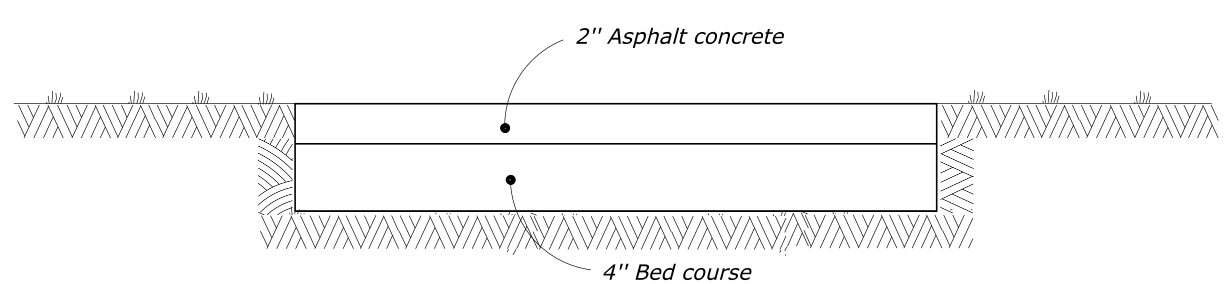
CONCRETE SIDEWALK DETAIL

10-Dec-2018 01:21 PM M:\PROJECTS\...STATE...DOT\NC\blri i-26...nepa\Proj...Dev\CADD\From...Eng...Support\As...Requested...3...2017\DI\0-st6i50i...detail.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D11



SIDEWALK WITH CURB



SIDEWALK

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

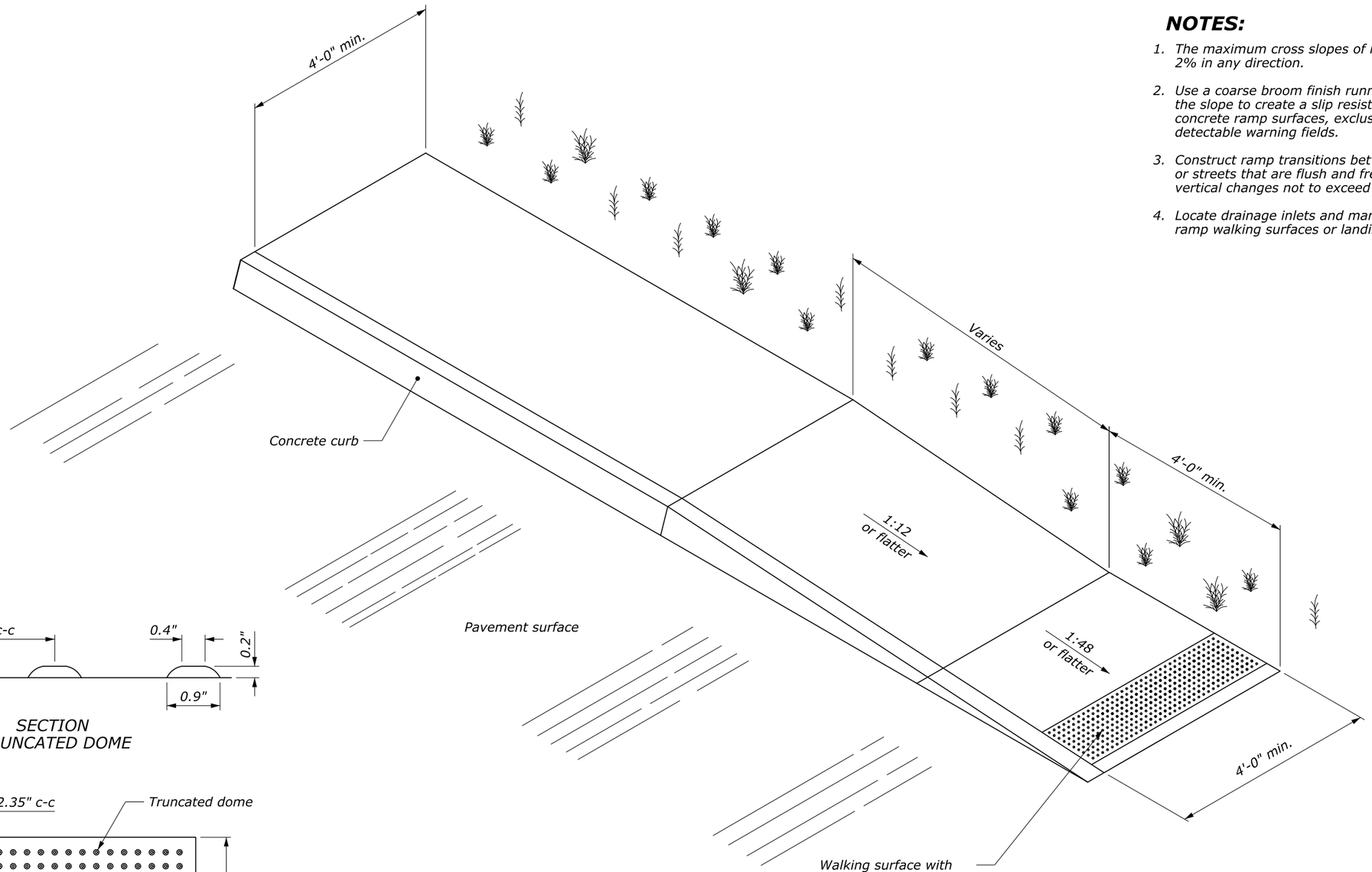
ASPHALT CONCRETE SIDEWALK

10-Dec-2018 01:22 PM M:\PROJECTS_STATE_DOT\NC\blri_i26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\D11-st61502_detail.dgn

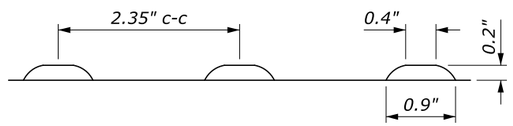
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D12

NOTES:

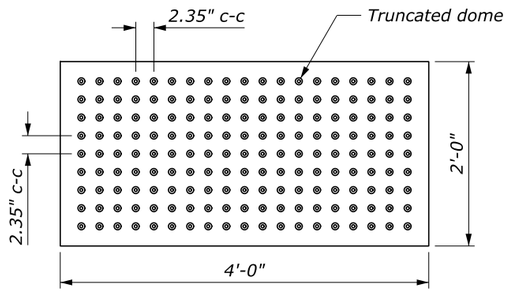
1. *The maximum cross slopes of ramps must not exceed 2% in any direction.*
2. *Use a coarse broom finish running perpendicular to the slope to create a slip resistant surface on concrete ramp surfaces, exclusive of the detectable warning fields.*
3. *Construct ramp transitions between walks, gutters, or streets that are flush and free of abrupt vertical changes not to exceed 2.5 inches.*
4. *Locate drainage inlets and manholes outside of ramp walking surfaces or landings.*



PARALLEL CURB RAMP



SECTION
TRUNCATED DOME



PLAN

DETECTABLE WARNING FIELD WITH TRUNCATED DOMES

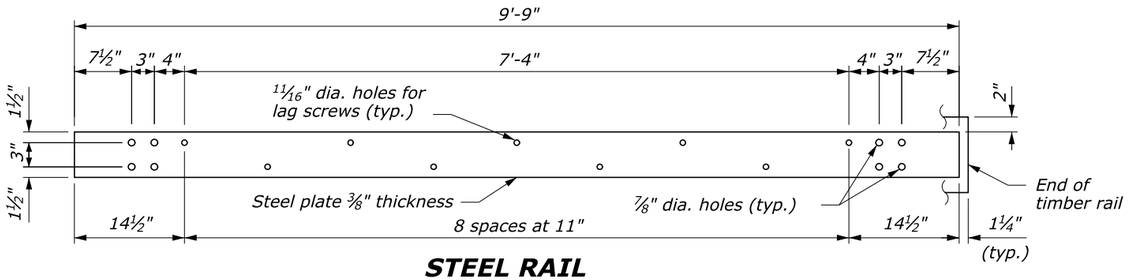
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

CONCRETE CURB RAMP (WHEELCHAIR RAMP CURB TAPER)

10-Dec-2018 01:24 PM M:\PROJECTS_STATE_DOT\NC\blri_I26_repo\Pro|_Dev\CADD\From_Eng_Support\As_Requested_3_20\7\0\12-sht6502.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D13



STEEL RAIL

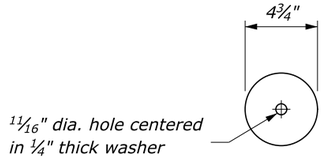
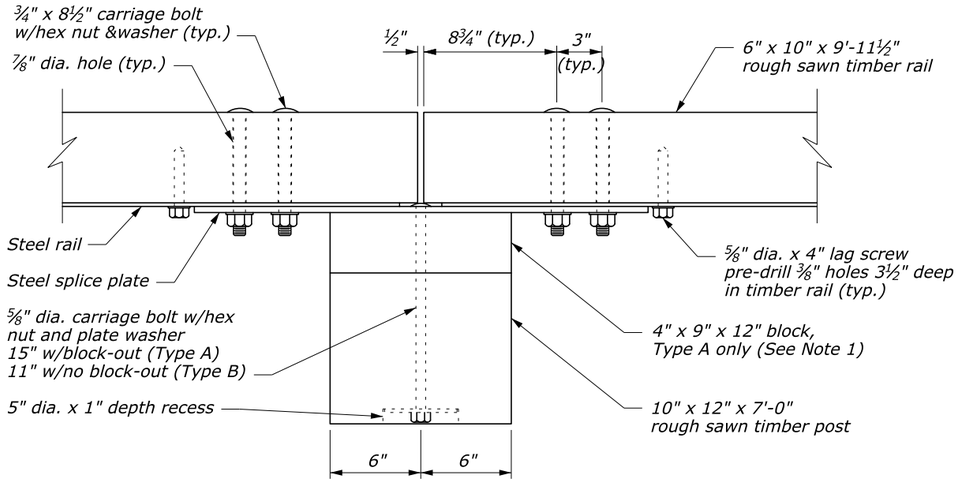


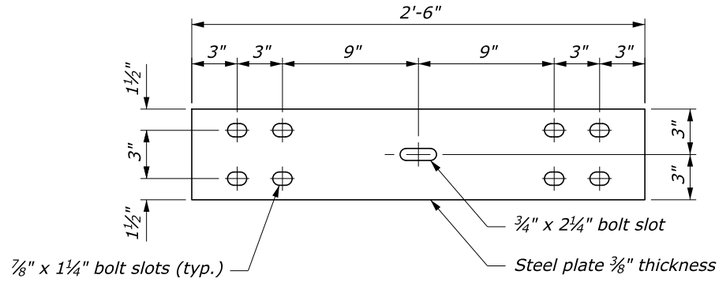
PLATE WASHER

NOTES:

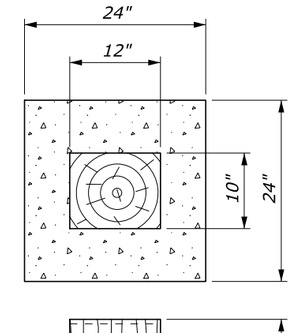
1. Use the Type A, blocked-out, system or the Type B, non-blocked-out, system as specified in the plans.
2. Use weathering steel for all structural steel and fastener hardware as specified.
3. Place guardrail terminal, Type SBT terminal section on both approaches and trailing ends of barrier installations.

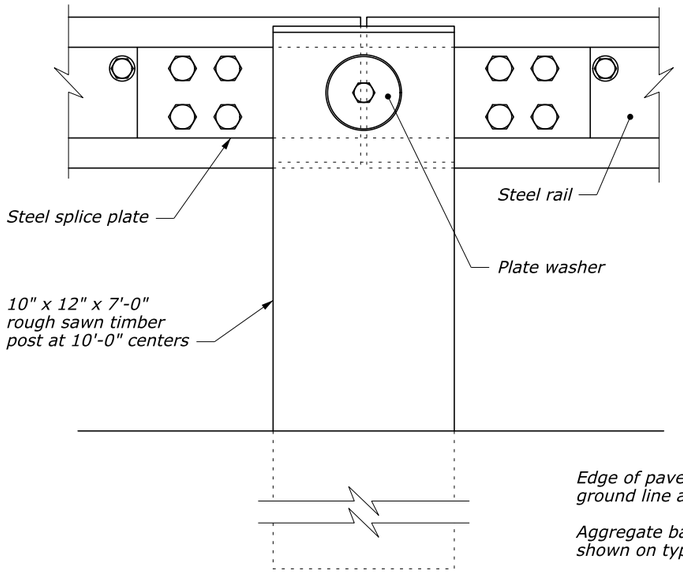


PLAN



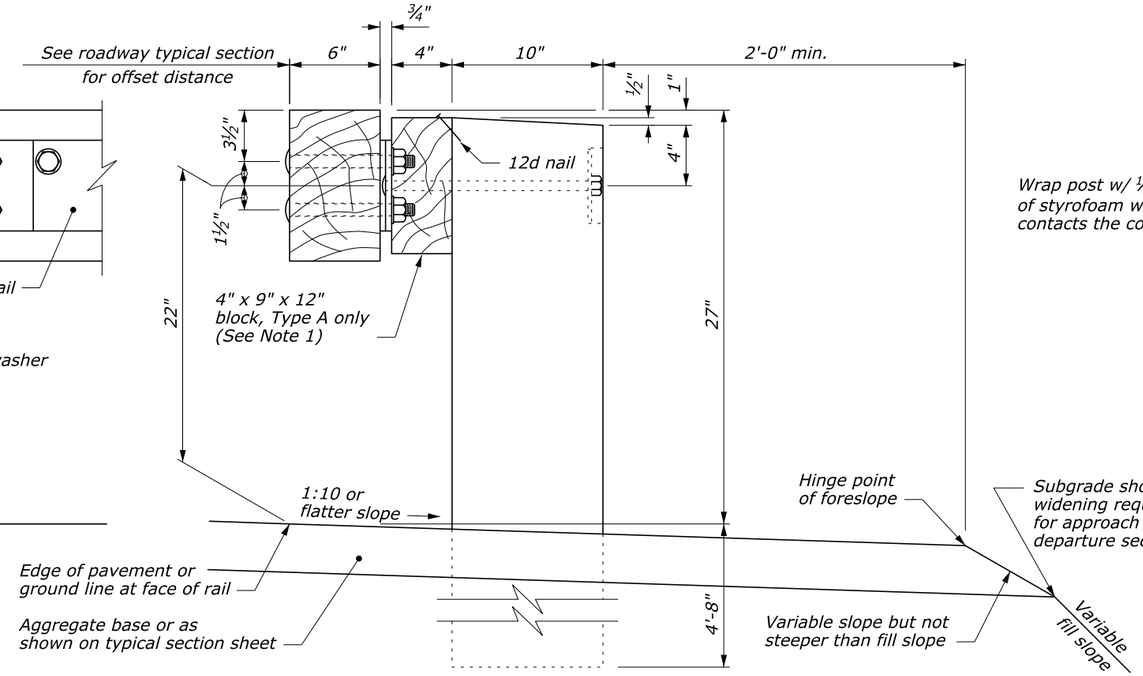
STEEL SPLICE PLATE



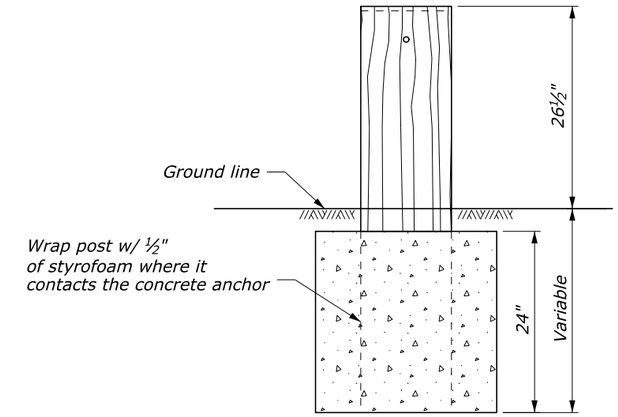


ELEVATION

POST CONNECTION



TYPICAL GUARDRAIL CROSS SECTION



24" dia. round anchor is an acceptable alternative.
Reduced size acceptable in solid rock.

CONCRETE ANCHOR FOR SHORT GUARDRAIL POST

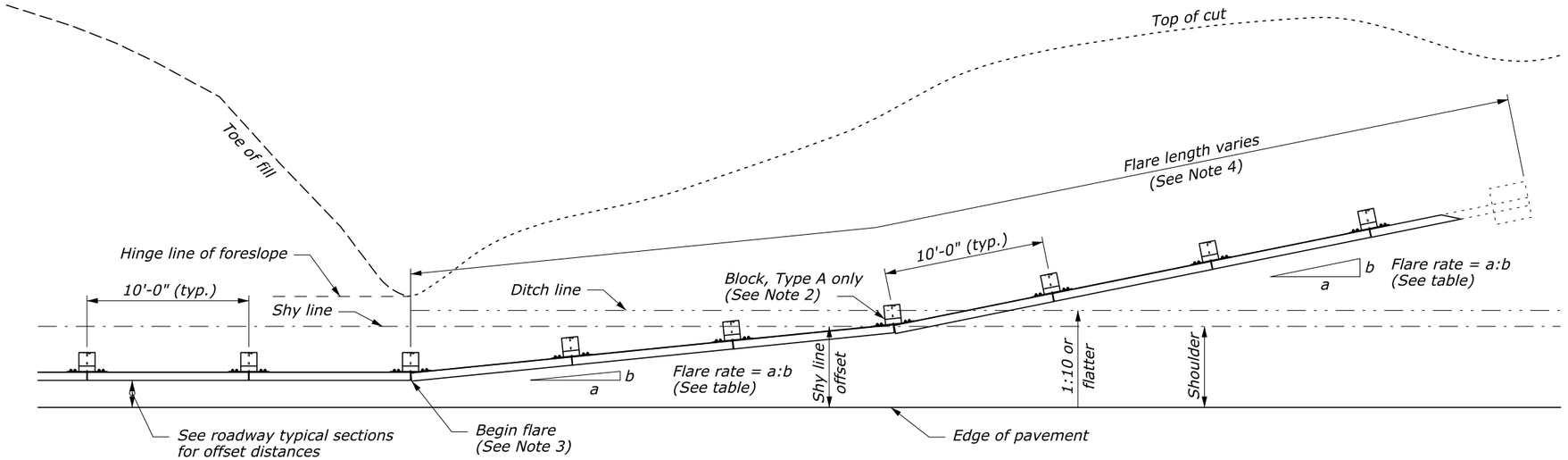
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

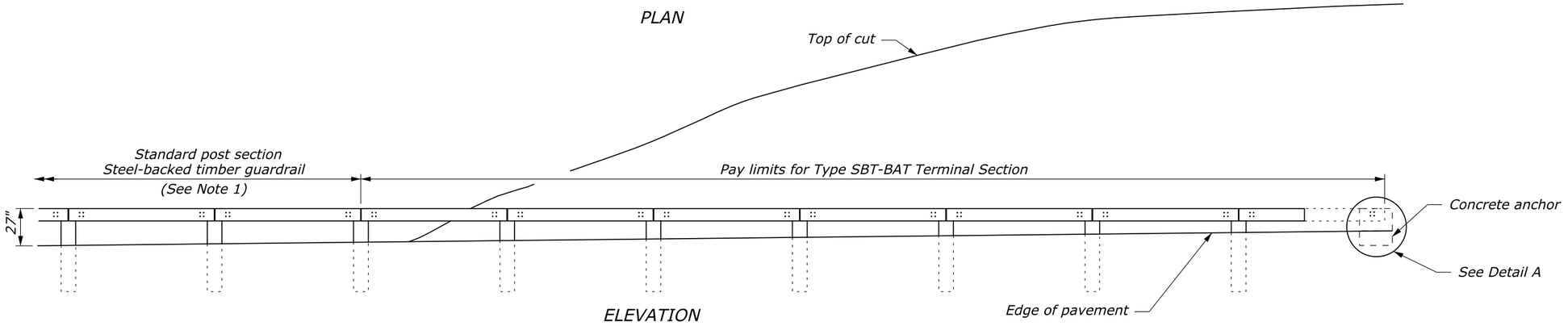
STEEL-BACKED TIMBER GUARDRAIL TYPE A & TYPE B

10-Dec-2018 01:25 PM M:\PROJECTS_STATE_DOT\NC\blri_I26_repo\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\D13\sfd1760.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D14



PLAN



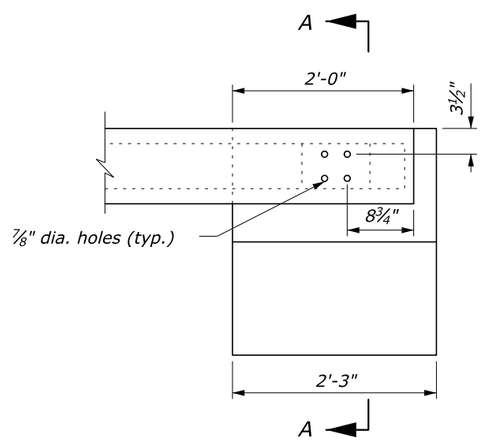
ELEVATION

APPROACH & DEPARTURE FLARE WITH BACK SLOPE ANCHOR TERMINAL (BAT)

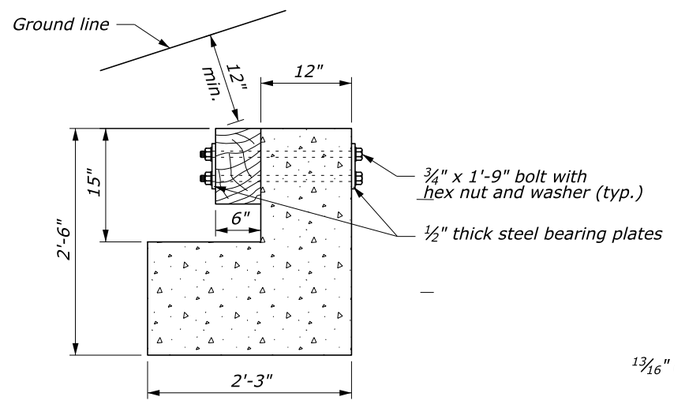
NOTE:

1. *See Standard 617-60, SBTA and SBTB for timber, structural steel, and hardware details.*
2. *On the Type A, blocked-out guardrail, include the blocks in the terminal section, except on the concrete anchor. For the Type B, non-blocked-out guardrail, no blocks are included.*
3. *Begin the cut flares at the nearest post to a transition point between fill and cut as directed by the CO.*
4. *Extend the flare into the cut until a minimum 1-foot cover is obtained over the guardrail end.*

GUARDRAIL FLARE RATE TABLE			
Design Speed (mph)	Shy line offset (ft)	Flare rate inside shy line (a:b)	Flare rate outside shy line (a:b)
60	8.0	26:1	14:1
50	6.5	21:1	11:1
40	5.0	16:1	8:1
30 and less	3.5	13:1	7:1

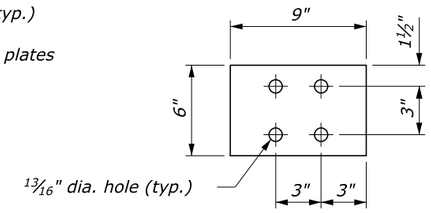


DETAIL A



SECTION A-A

CONCRETE ANCHOR



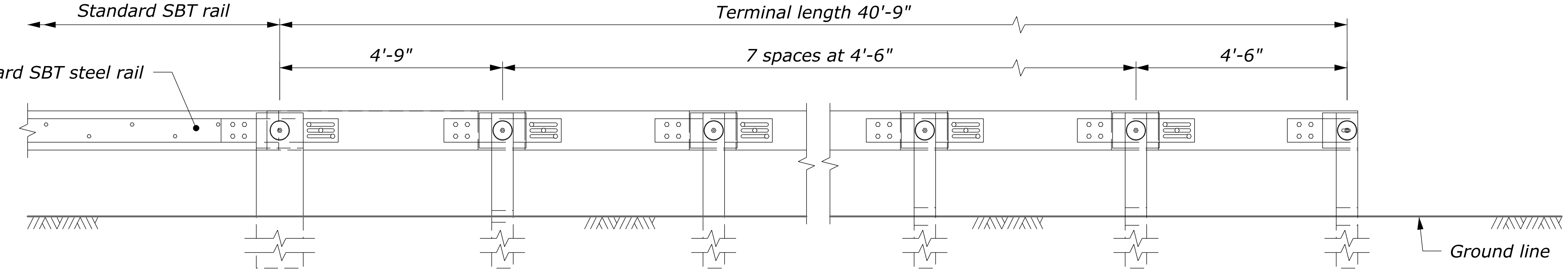
STEEL BEARING PLATE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

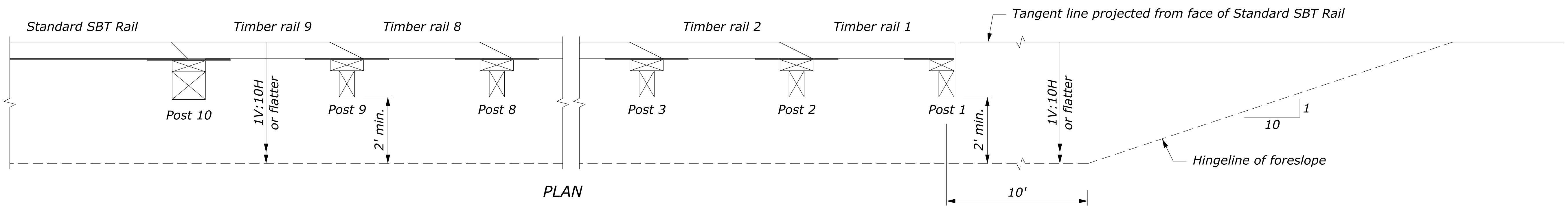
BLUE RIDGE PARKWAY

STEEL-BACKED TIMBER GUARDRAIL TERMINAL SECTION TYPE SBT-BAT

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D15



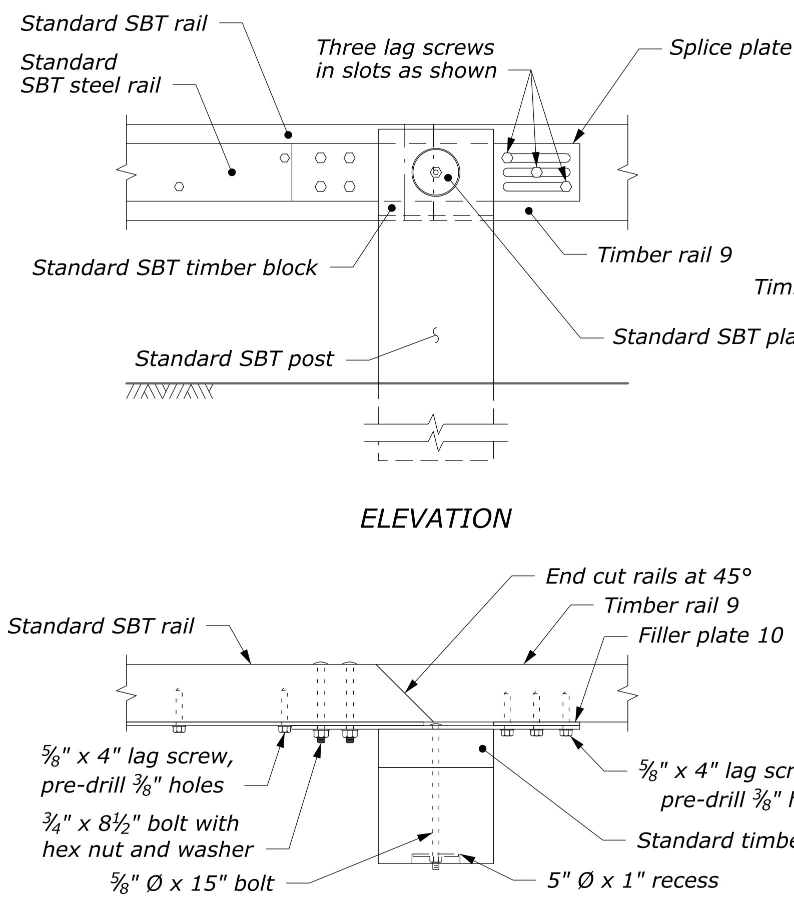
ELEVATION



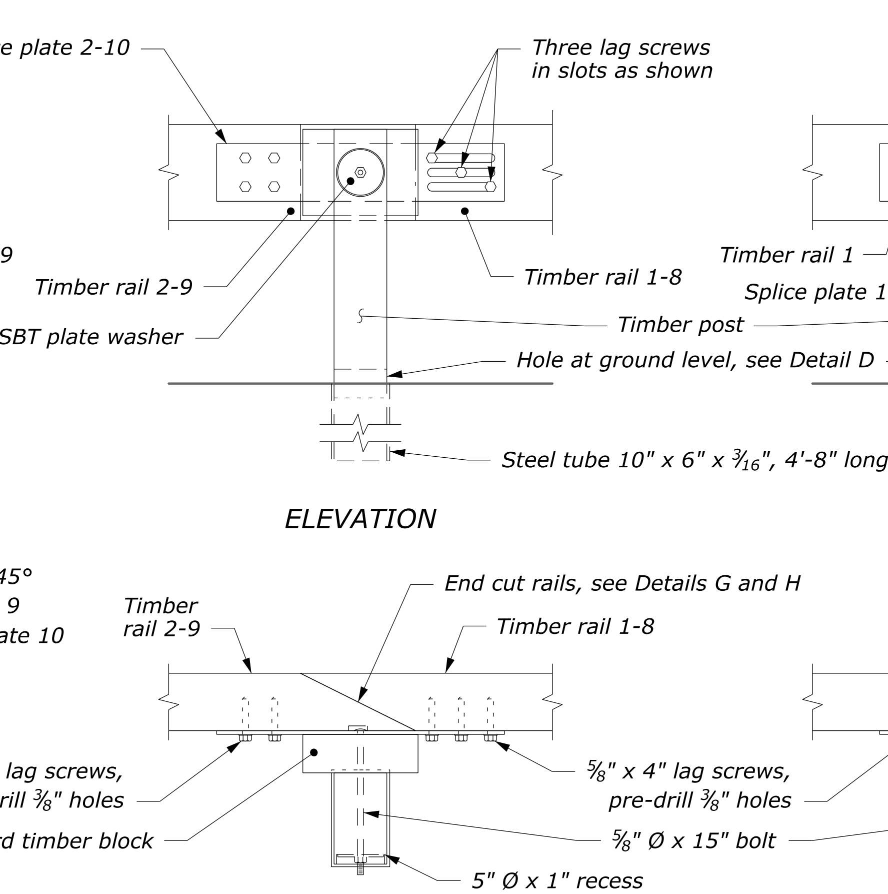
PLAN

NOTES:

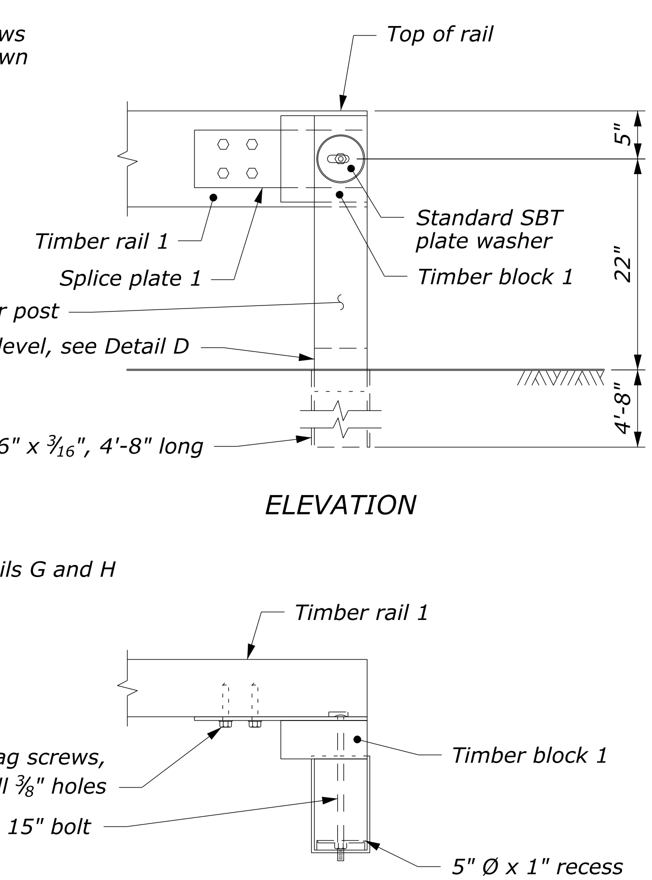
1. See Steel-backed timber guardrail Type A and B detail for further information.
2. Use the weathering steel for all steel backing plates and fastener hardware.



POST/RAIL CONNECTION AT POST 10
DETAIL A



POST/RAIL CONNECTION AT POSTS 2-9
DETAIL B



POST/RAIL CONNECTION AT POST 1
DETAIL C

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

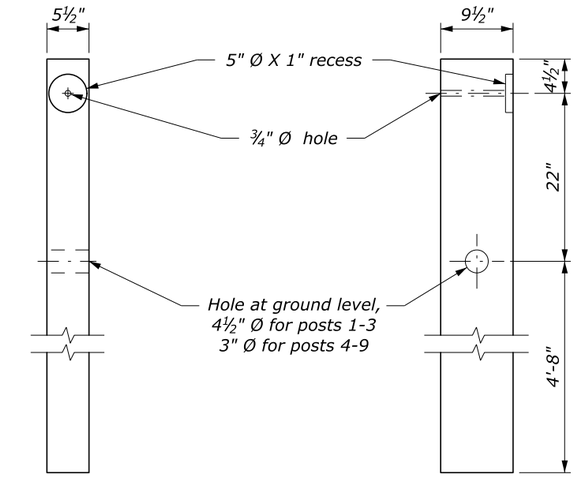
BLUE RIDGE PARKWAY

GUARDRAIL TERMINAL, TYPE SBT TANGENT
Sheet 1 of 2

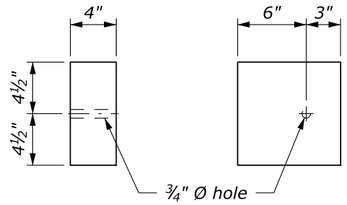
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D16

NOTE:

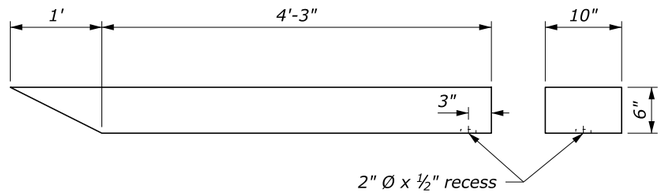
Use the weathering steel for all steel backing plates and fastener hardware.



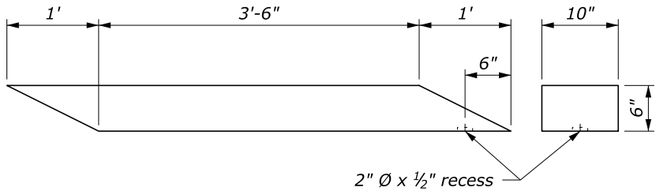
TIMBER POSTS 1 - 9
DETAIL D



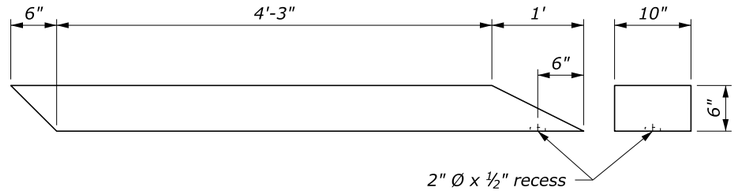
TIMBER BLOCK 1
DETAIL E



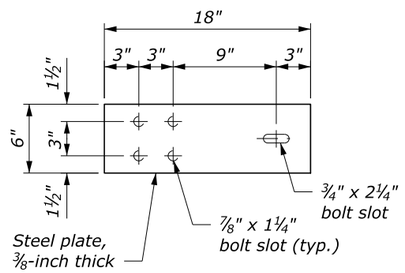
TIMBER RAIL 1
DETAIL F



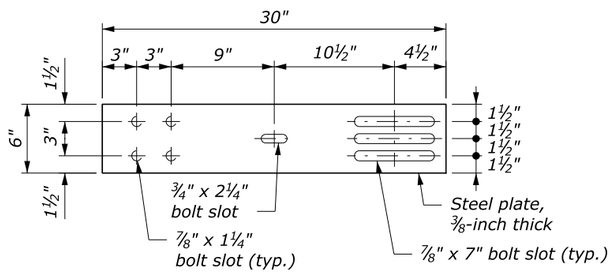
TIMBER RAILS 2-8
DETAIL G



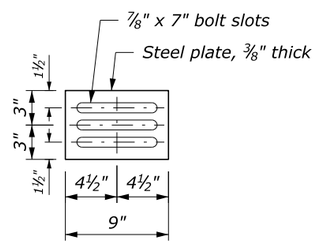
TIMBER RAIL 9
DETAIL H



SPLICE PLATE 1
DETAIL I



SPLICE PLATE 2-10
DETAIL J



FILLER PLATE 10
DETAIL K

NO SCALE

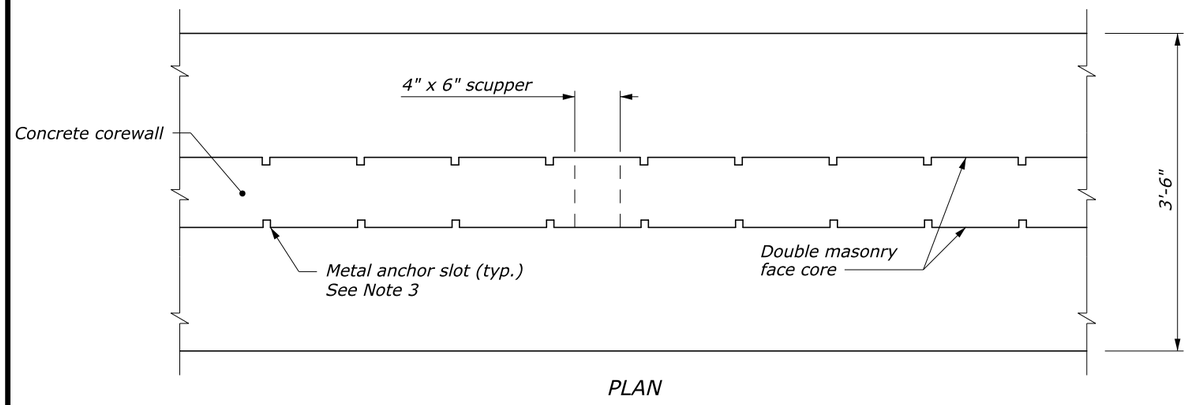
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

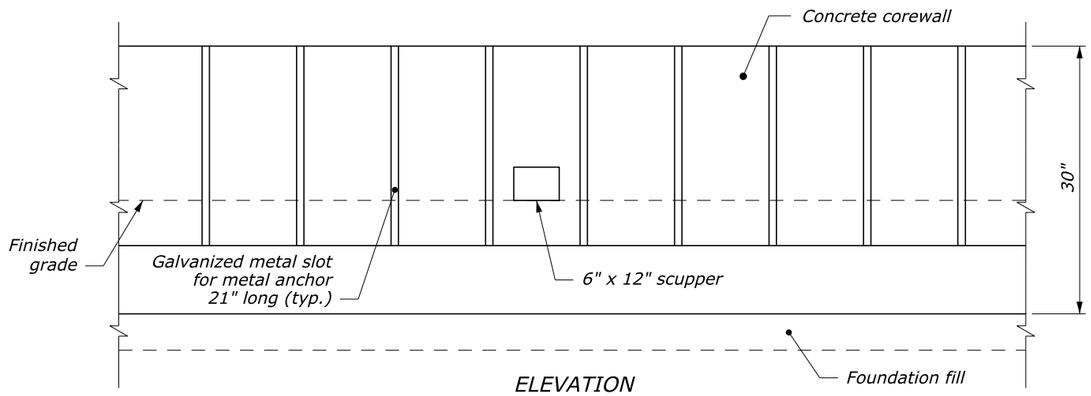
GUARDRAIL TERMINAL, TYPE SBT TANGENT
Sheet 2 of 2

10-Dec-2018 03:9 PM M:\PROJECTS_STATE_DOT\NC\blri_I26_nepa\Pro_Den\CADD\From_Eng_Support\As_Requested_3_2017\D\5016-S16I769_EFL_TEMP.dgn

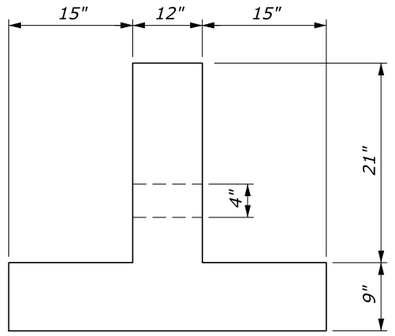
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D17



PLAN



ELEVATION

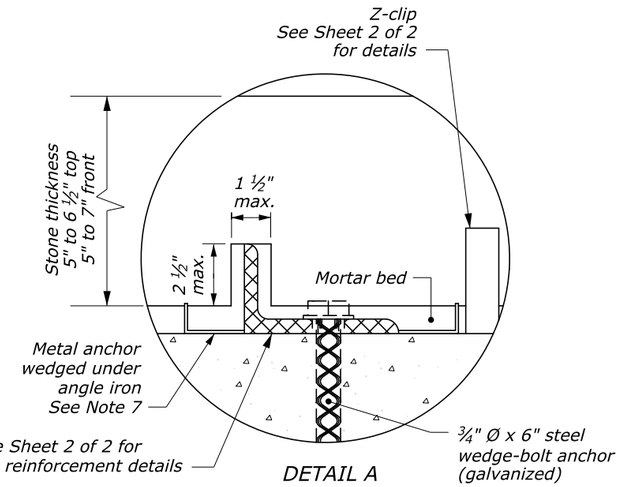


END VIEW

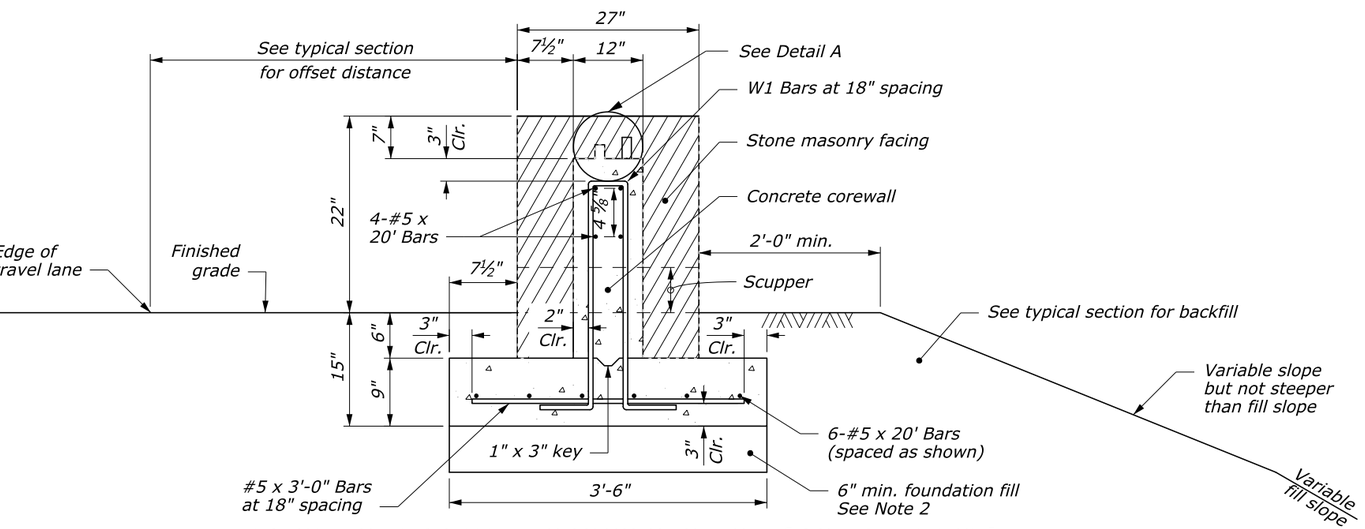
PRECAST CONCRETE COREWALL

NOTES:

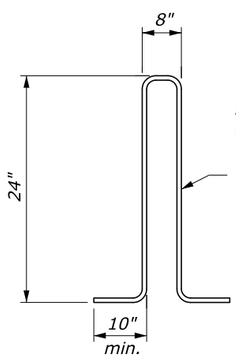
1. Form contraction joints in the corewall at 20' intervals.
2. The depth of foundation fill may be less than 6" as directed by by the Engineer, when the foundation is on either rock fill or solid rock.
3. Set galvanized metal slots with anchors for the stone work on 2' spacing. Use 16 gage galvanized 1" x 5-1/2" metal anchors. Equivalent attachment systems are allowed with the approval of the Engineer.
4. Kerf (sawcut) the capstones placed on top of the barrier to allow for their placement over the steel angle.
5. Construct masonry faces with Class B masonry according to Special Provision SP08-R877, Stone Masonry.
6. Flare guardwall ends outside the clear zone according to the Roadside Design Guide.
7. Install metal anchor for concrete placed before stone according to Special Provision SP08-R877, Stone Masonry.
8. Add scuppers for roadway drainage as directed by the Engineer.
9. Top angle of z-clip to engage a recess cut in stone.



DETAIL A



TYPICAL GUARDWALL CROSS SECTION (DOUBLE FACE)



W1 BAR
BENDING DIAGRAM

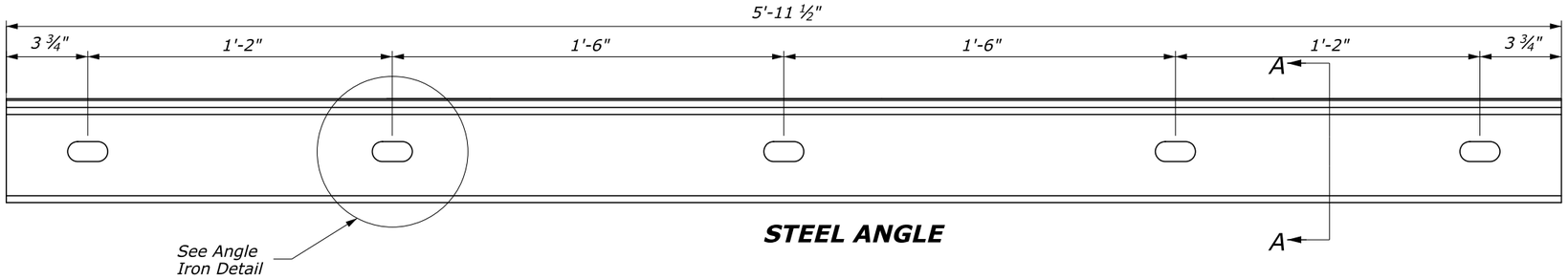
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

TL-2 STONE MASONRY GUARDWALL (DOUBLE FACE)

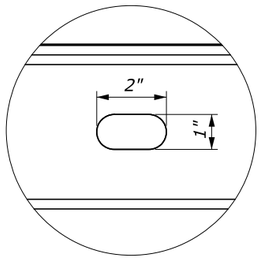
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D18



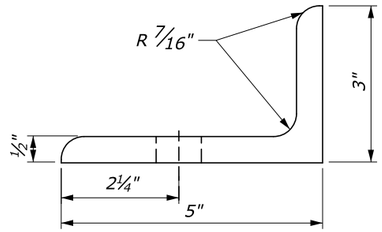
STEEL ANGLE

NOTES:

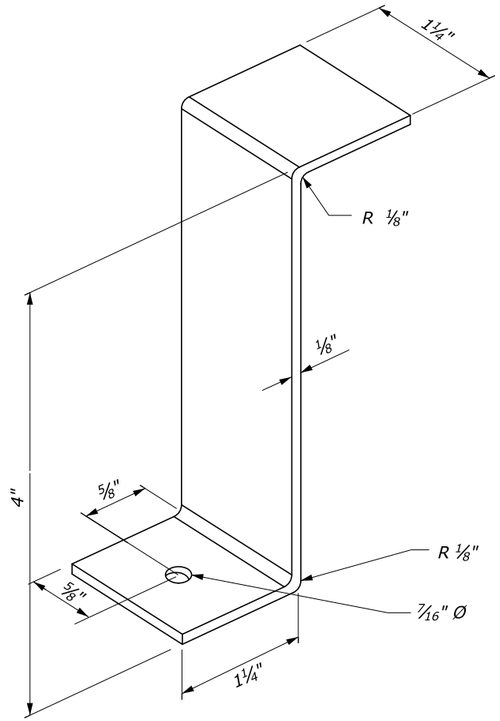
1. Angles are used to provide lateral shear resistance for the stone masonry placed on top of the inner core wall.
2. Spacing between all angles is approximately ½".
3. Install metal anchors for concrete placed before stone according to Special Provision SP08-R877, Stone Masonry.



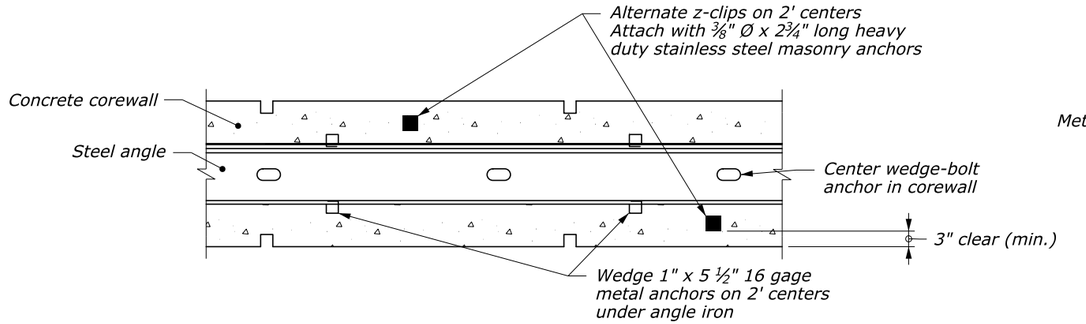
ANGLE IRON DETAIL



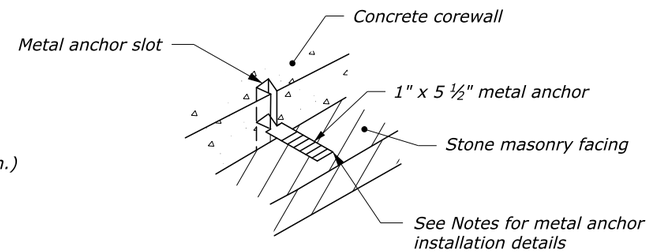
SECTION A-A
L5 x 3 x ½ - ASTM A36
Galvanize after fabrication



ASTM A304 STAINLESS STEEL Z-CLIP



TOP REINFORCEMENT DETAIL



METAL ANCHOR DETAIL

NO SCALE

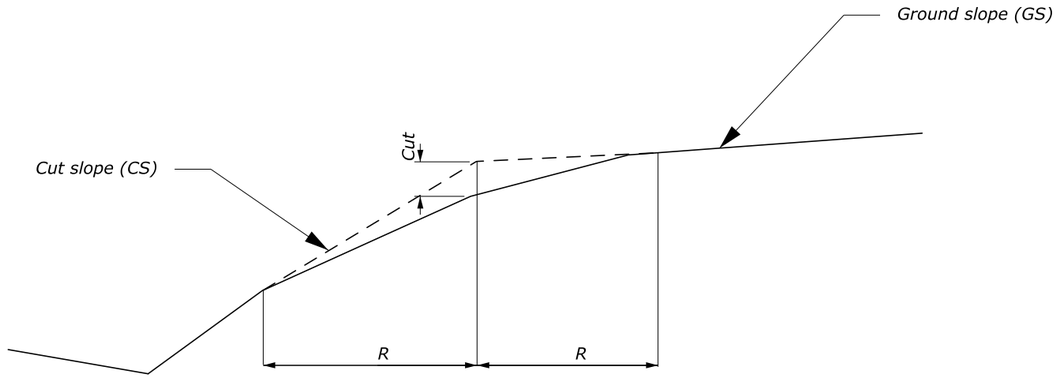
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

TL-2 STONE MASONRY GUARDWALL (DOUBLE FACE)

10-Dec-2018 03:22 PM M:\PROJECTS_STATE_DOT\WCOlrl_I26_repo\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_20\TO\T-sfe20504_detail.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D19



R = 20 (1/CS ± 1/GS)
Cut = R^2/ 80 or from Table

Note: Use plus for minus ground slope and vice versa

R [ft]	*Cut [ft]*
4	*0.2*
5	*0.3*
6	*0.5*
7	*0.6*
8	*0.8*
9	*1.0*
10	*1.3*
11	*1.5*
12	*1.8*
13	*2.1*
14	*2.5*
15	*2.8*
16	*3.2*
17	*3.6*
18	*4.1*
19	*4.5*
20 (max)	*5.0*

Example:

Cut slope 2:1
Ground slope 10:1 (plus)

*R = 20 (1/2 -1/10) = 20*0.4 = 8 ft*

Cut = 0.8 ft from table or r^2/80 =64/80= 0.8ft

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

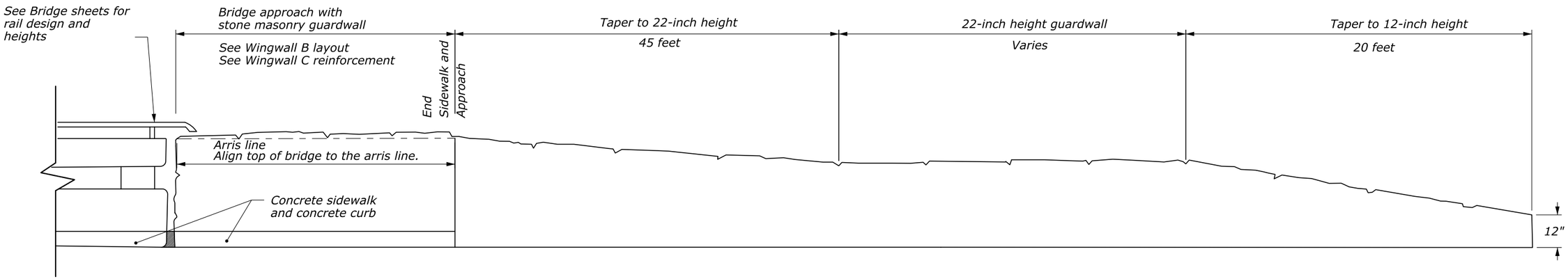
SLOPE ROUNDING FOR PARKWAY SECTIONS

10-Dec-2018 03:31 PM M:\PROJECTS_STATE_DOT\NC\blri_I26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_20\7\DI8-NPS_SlopeRounding.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	D20

NOTES:

1. *See plans for guardwall locations.*
2. *The top of the wall is measures from the arris line.*
3. *Match taper rate guardwall on the opposite side of the roads.*



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

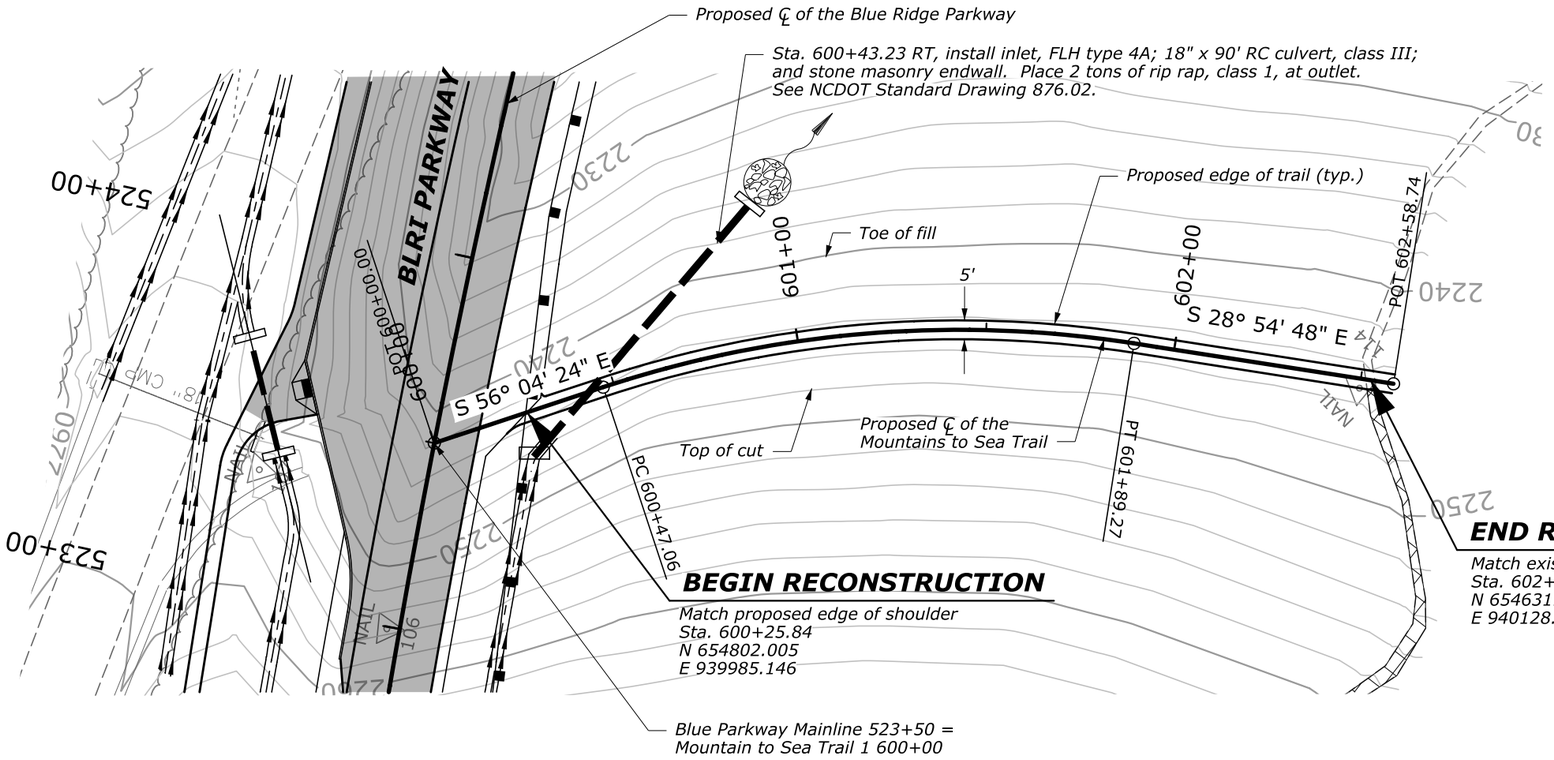
RAIL TRANSITION

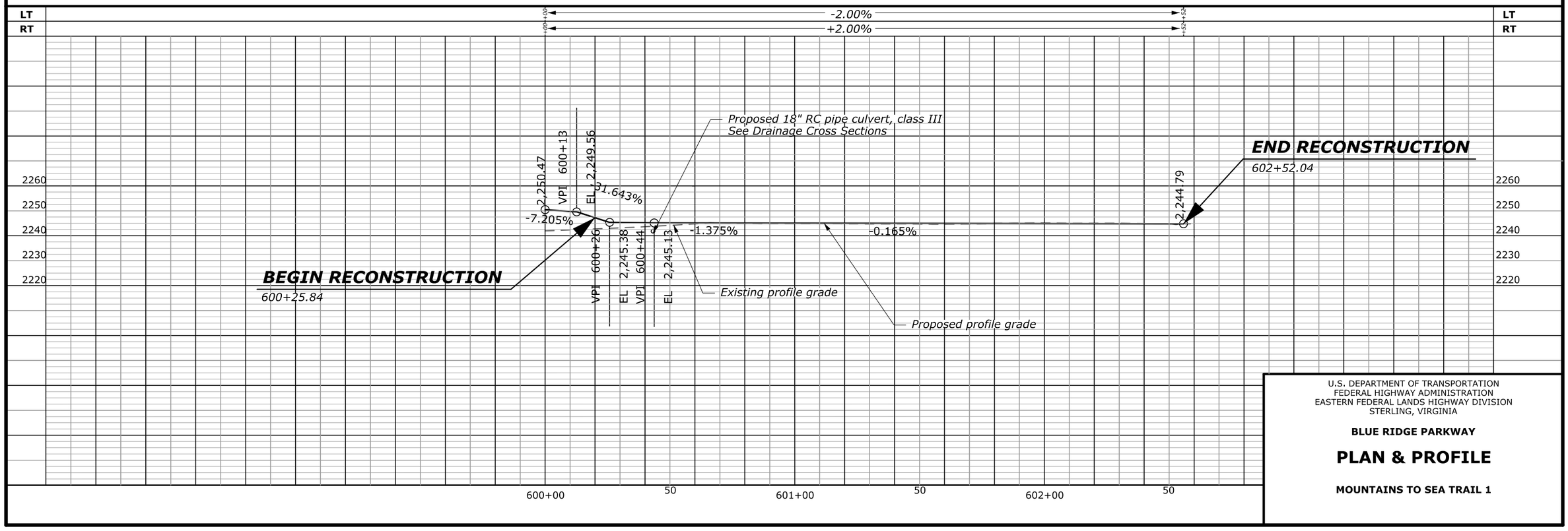
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	E01

Curve = BLRI_TRAIL_1-1
PI 601+19.52
Δ= 27° 09' 36" (RT)
R = 300.00'
T = 72.47'
L = 142.21'

NOTES:

1. See F sheets for Removals and Obliteration plans (demolition work).
2. See K sheets for ditch profiles and pipe culvert cross sections.





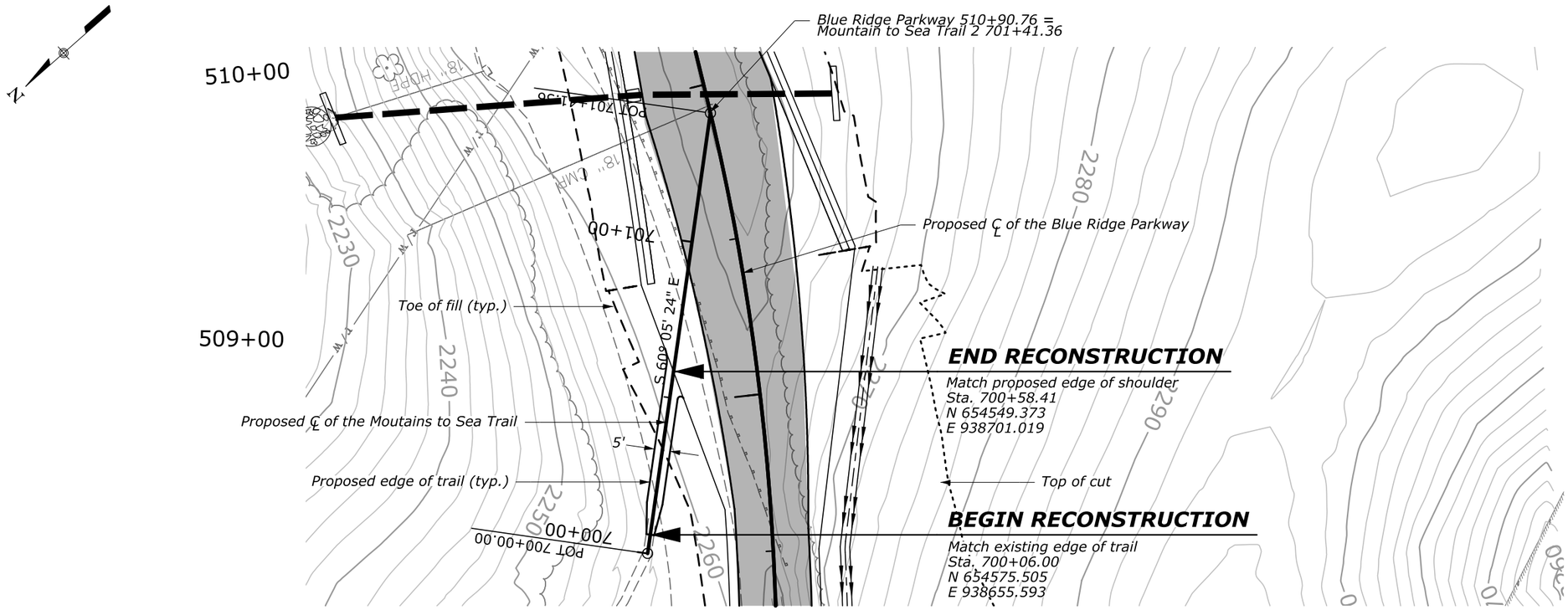
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

PLAN & PROFILE

MOUNTAINS TO SEA TRAIL 1

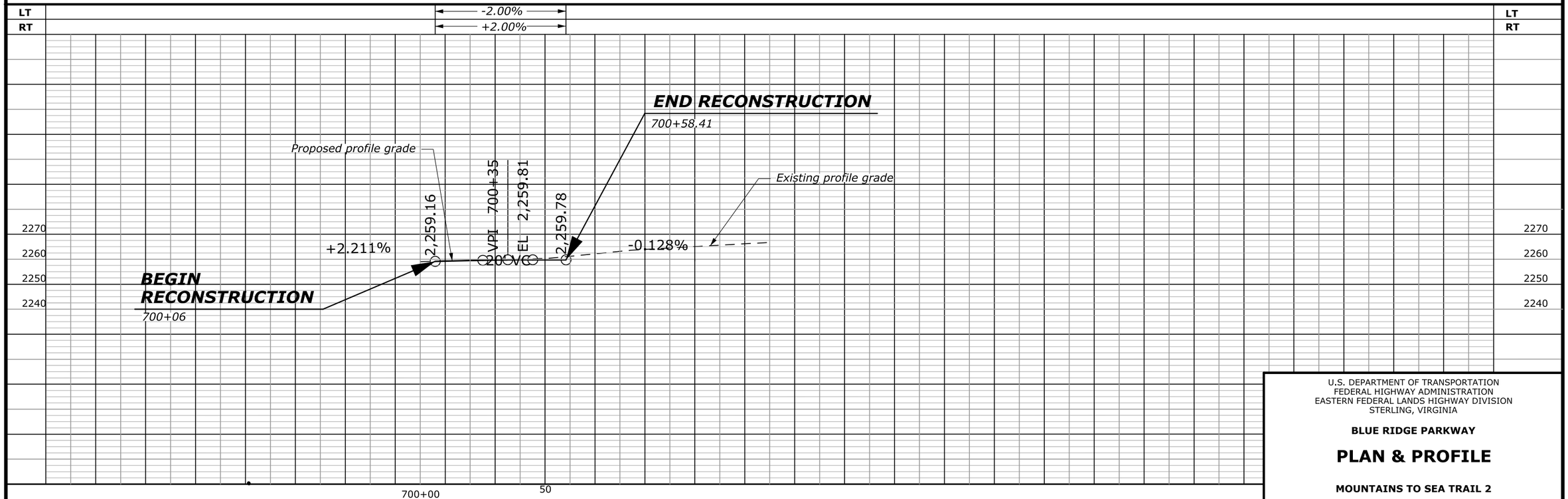
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	E02



NOTE:

See F sheets for Removals and Obliteration plans (demolition work).

0 25 50
SCALE IN FEET



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

PLAN & PROFILE

MOUNTAINS TO SEA TRAIL 2

11-Dec-2018 10:41 AM M:\PROJECTS_STATE_DOT\NC\blri_I-26_nepo\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\E02-BLRI_I-26_south_trail_p&p.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	E03

800+34
18" x 20' RC culvert, Class III and new stone masonry endwalls RT/LT
See Drainage Cross Sections

Construct 4" paved waterway, Type 5 asphalt

803+43
18" x 20' RC culvert, Class III and new stone masonry endwalls RT/LT
See Drainage Cross Sections

Curve = BLRI_TRAIL_3-1
PI 800+53.05
Δ= 89° 35' 09" (RT)
R = 15.00'
T = 14.89'
L = 23.45'

Curve = BLRI_TRAIL_3-2
PI 803+37.99
Δ= 71° 13' 09" (RT)
R = 15.00'
T = 10.74'
L = 18.65'

END CONSTRUCTION
803+55.52
Match proposed edge of shoulder
N 654845.51
E 939950.71

PAVED DITCH
BY375
MON
N 655000
N 61° 11' 50" E
N 74° 10' 38" E
S 41° 35' 01" E
N 28° 23' 09" W
PC 800+38.16
BT 800+61.62
PT 803+45.90
PC 803+27.23
POT 803+55.52
NAIL 105
NAIL 106
NAIL 108
B10
11
801+00
802+00
803+00
2300
2290
2280
2270
2260
2250
2240
2230
2220
2210
2200

Blue Ridge Parkway Sta 520+54.32 = Mountain to Sea Trail Sta 800+00

Proposed ℄ of Blue Ridge Parkway

BEGIN CONSTRUCTION
800+21.51
Match proposed edge of shoulder
N 654691.17
E 939695.43

NOTES:

1. See F sheets for Removals and Obliterations plans (demolition work).
2. See K sheets for ditch profile and drainage cross sections.

Scale In Feet: 0 25 50

LT -2.00%
RT -2.00%

BEGIN CONSTRUCTION
800+21.51

Existing ground

18" RC pipe culvert, Class III
See Drainage cross sections

Proposed profile grade

Proposed 18" RC pipe culvert, Class III
See Drainage cross sections

END CONSTRUCTION
803+55.52

VPI 800+35
EL 2,255.40
-2.606%
-2.606%
20' VC
VPI 801+25
EL 2,253.05
-1.732%
-1.732%
100' VC
VPI 802+35
EL 2,251.14
-0.508%
2,250.53

2330 2320 2310 2300 2290 2280 2270 2260 2250 2240 2230 2220 2210 2200 2190 2180 2170 2160

800+00 50 801+00 50 802+00 50 803+00 50

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

PLAN & PROFILE

MOUNTAIN TO SEA TRAIL 3

12-Dec-2018 04:22 AM\x:\PROJECTS_STATE_DOT\NC\blri_I26_nepo\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2018\E03-BLRI_I_26_north_trail3_pl&pdgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	E04

N

2270

2260

2240

2200

Sta. 522+89.43 to Sta. 526+24.80 LT, install 348' of granite curb.

Sta. 522+89.43
Offset 14' LT
Elev. 2251.63'

Sta. 522+77.37'
Offset 11' LT
Elev. 2251.86'

803+00

Proposed mountain to Sea Trail #3

Sta. 523+51.44
Offset 31.8' LT
Elev. 2250.53'

Sta. 523+56.2, construct curb ramp. See NCDOT Standard Drawing 848.05.

Top of cut

Sta. 523+46.9 to Sta. 525+42.3 LT, construct asphalt sidewalk.

Sta. 525+42.5
Offset 37.4' LT
Elev. 2243.15'

Sta. 523+64.8
Offset 37.4' LT
Elev. 2250.08'

R= 23'

R= 15'

R= 50'

6'

R= 50'

Sta. 526+24.80
Offset 14' LT
Elev. 2238.82'

Sta. 526+36.86
Offset 11' LT
Elev. 2237.60'

11'

11'

Proposed ℄ Blue Ridge Parkway

Toe of Cut (typ.)

NOTES:

1. See Blue Ridge Parkway cross sections for additional information.
2. See K sheets for ditch profiles and drainage cross sections.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

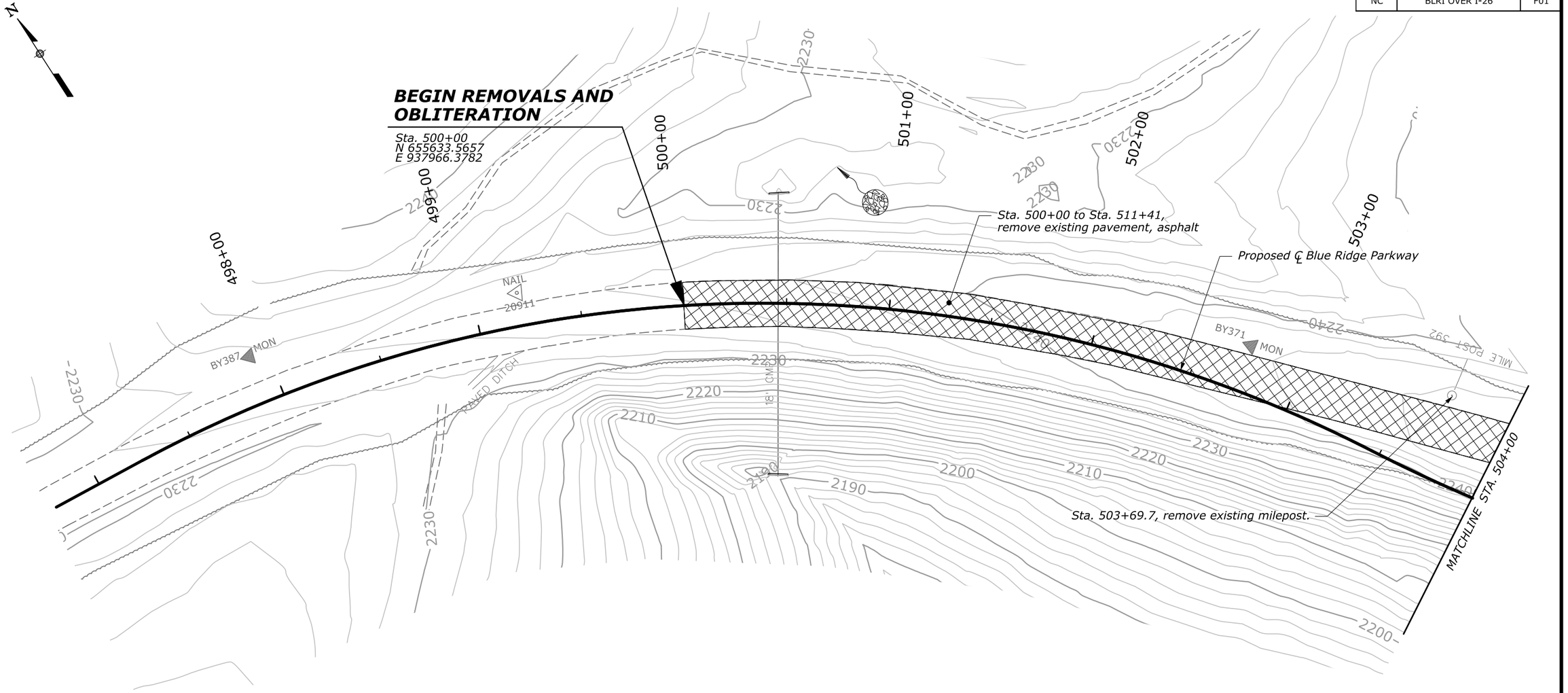
PLAN

PARKING AREA LAYOUT

0 15 30
SCALE IN FEET

11-Dec-2018 03:12 PM M:\PROJECTS_STATE_DOT\NC\blri_I26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\E04-BLRI_I_26_ParkingArea.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	F01



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

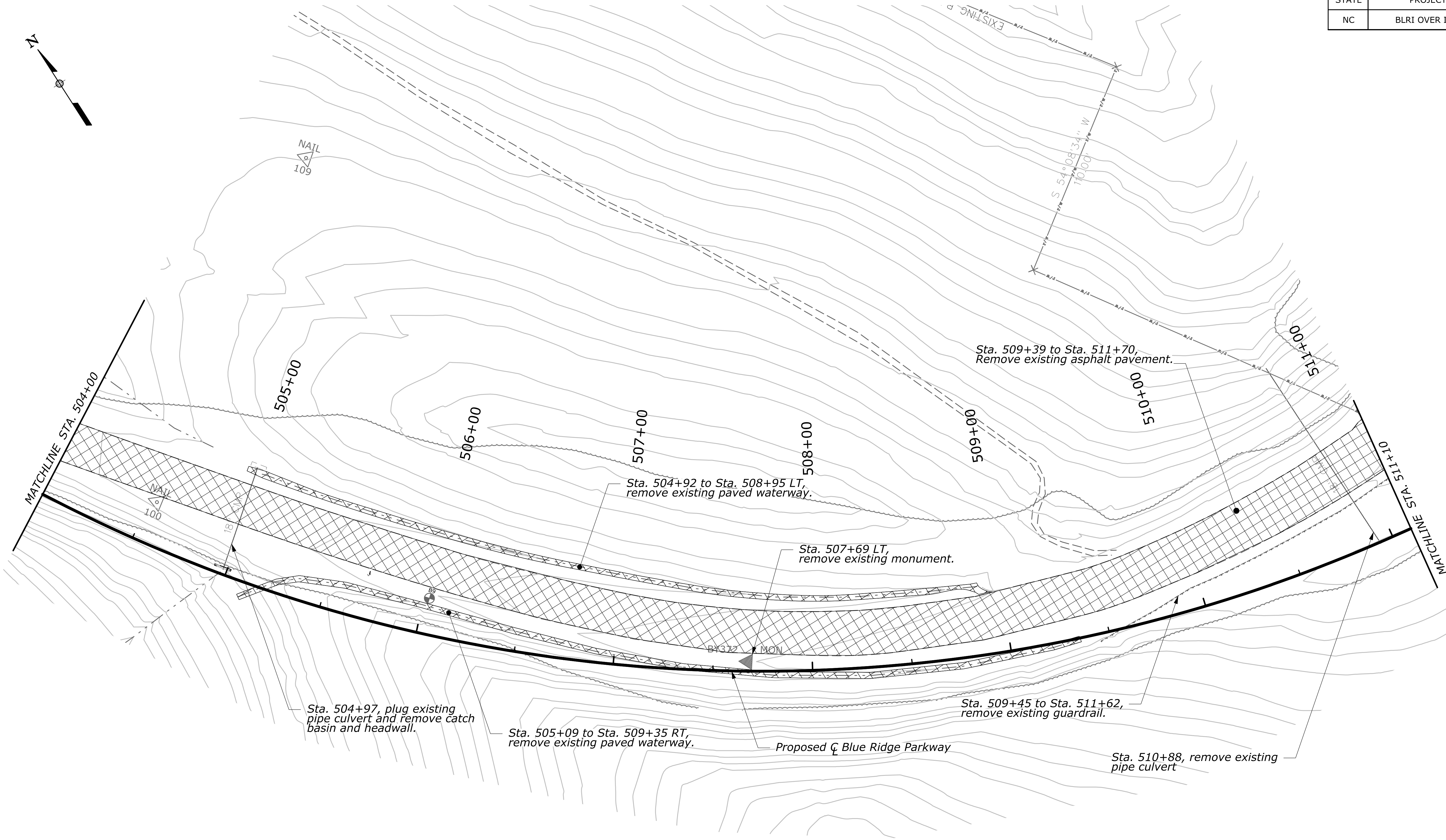
BLUE RIDGE PARKWAY

REMOVALS AND OBLITERATION PLAN

0 25 50
SCALE IN FEET

16-Dec-2018 05:09 PM M:\PROJECTS_STATE_DOT\NC\blri_126_repo\Proj\Dev\CADD\From_Eng_Support\As_Requested_3_2017\NC\blri-F05-BLRI_I_26_NEPA_Removals.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	F02



N
NAIL 109
NAIL 100
MATCHLINE STA. 504+00
MATCHLINE STA. 511+10
505+00
506+00
507+00
508+00
509+00
510+00
511+00
EXISTING
S 54°08'34" W
100.00
BY332 MON
Sta. 509+39 to Sta. 511+70, Remove existing asphalt pavement.
Sta. 504+92 to Sta. 508+95 LT, remove existing paved waterway.
Sta. 507+69 LT, remove existing monument.
Sta. 504+97, plug existing pipe culvert and remove catch basin and headwall.
Sta. 505+09 to Sta. 509+35 RT, remove existing paved waterway.
Proposed ℄ Blue Ridge Parkway
Sta. 509+45 to Sta. 511+62, remove existing guardrail.
Sta. 510+88, remove existing pipe culvert

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

REMOVALS AND OBLITERATION PLAN

0 25 50
SCALE IN FEET

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	F03

Sta. 517+14 to Sta. 525+90, obliterate existing roadway

Remove existing bridge See Bridge Plans

Sta. 511+20, remove existing pipe culvert, headwall, and catch basin.

Sta. 509+39 to Sta. 511+70, obliterate existing roadway.

MATCHLINE STA. 511+10

MATCHLINE STA. 518+20

Sta. 511+69 LT, remove existing monument

Proposed ℄ Blue Ridge Parkway

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

REMOVALS AND OBLITERATION PLAN

SCALE IN FEET

11-Dec-2018 09:12 AM M:\PROJECTS_STATE_DOT\NC\blri_I-26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\F01-F05-BLRI_I_26_NEPA_Removals.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	F04

N

Sta. 517+14 to Sta. 525+90, obliterate existing roadway.

Sta. 518+67 to Sta. 523+35 LT, remove existing paved waterway.

Sta. 523+51, remove existing pipe culvert, catch basin, and headwall.

519+00

520+00

521+00

522+00

523+00

524+00

MATCHLINE STA. 518+20

MATCHLINE STA. 525+00

EXISTING

Proposed ℄ Blue Ridge Parkway

Sta. 518+07 to Sta. 524+41, obliterate existing trail.

TOP=2254.93'

INV=2252.47'

INV=2251.52'

CB

HW

MON

NAIL 104

NAIL 105

NAIL 106

NAIL 107

NAIL 111

NAIL 113

2270 2280 2290 2300 2310 2260 2250 2240 2230 2220 260 50

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

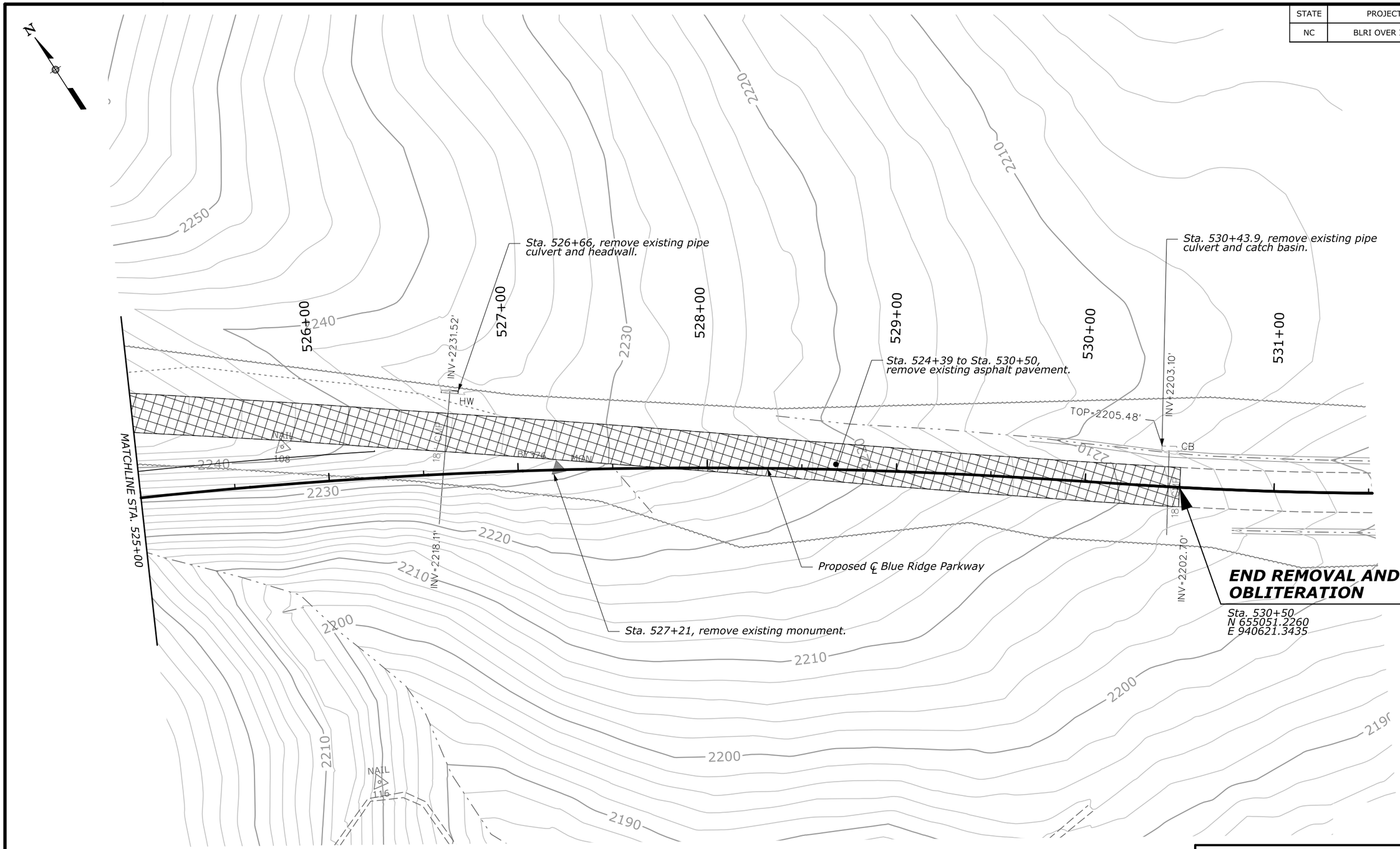
BLUE RIDGE PARKWAY

REMOVALS AND OBLITERATION PLAN

0 25 50
SCALE IN FEET

11-Dec-2018 10:19 AM M:\PROJECTS_STATE_DOT\NC\blri_i26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\F01i-F05-BLRI_I_26_NEPA_RemovalsAdgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	F05



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

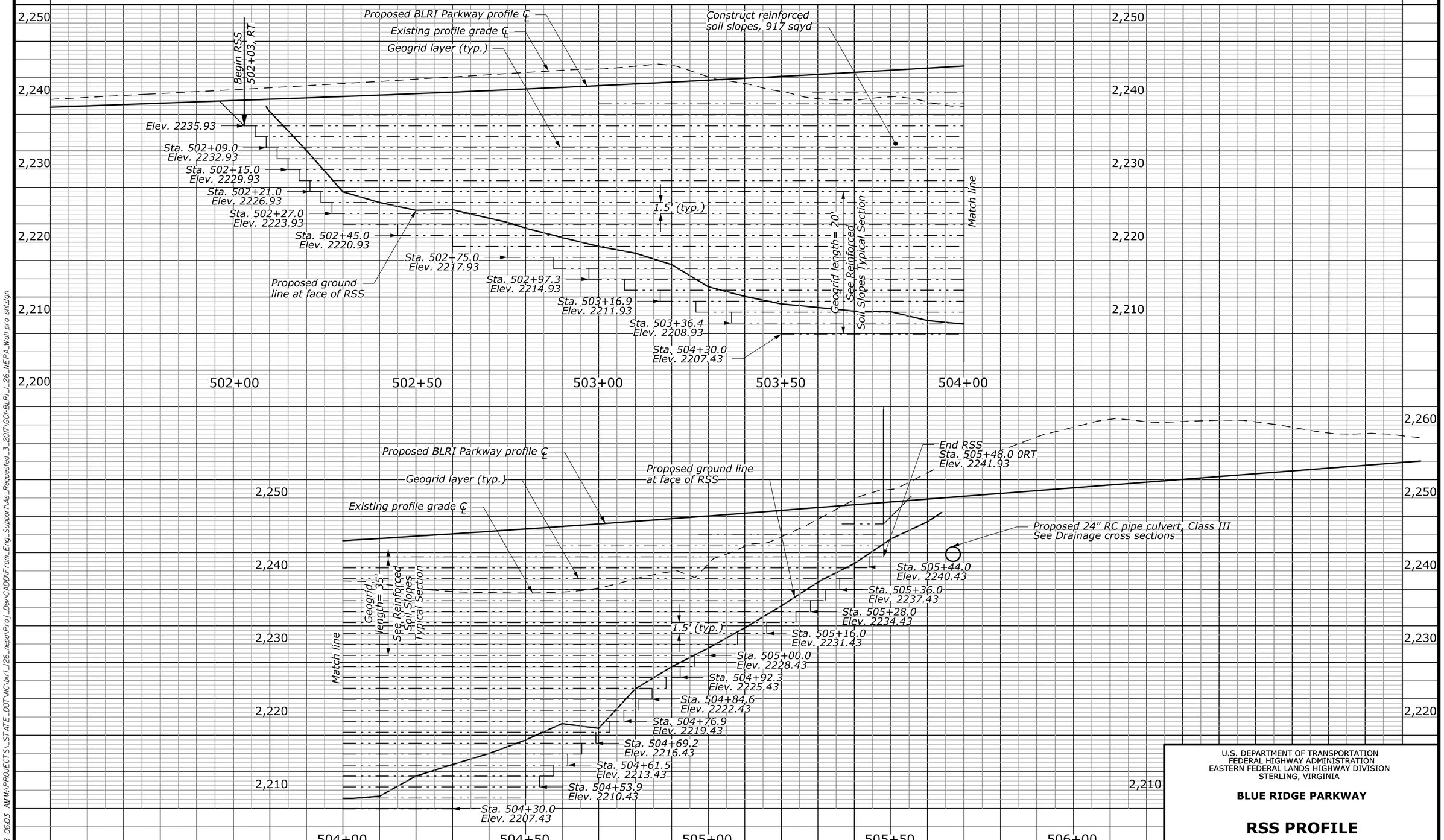
BLUE RIDGE PARKWAY

REMOVALS AND OBLITERATION PLAN

0 25 50
SCALE IN FEET

11-Dec-2018 09:57 AM M:\PROJECTS_STATE_DOT\NC\blri_i26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_20\F\F01-F05-BLRI_I_26_NEPA_Removalsdgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	G01



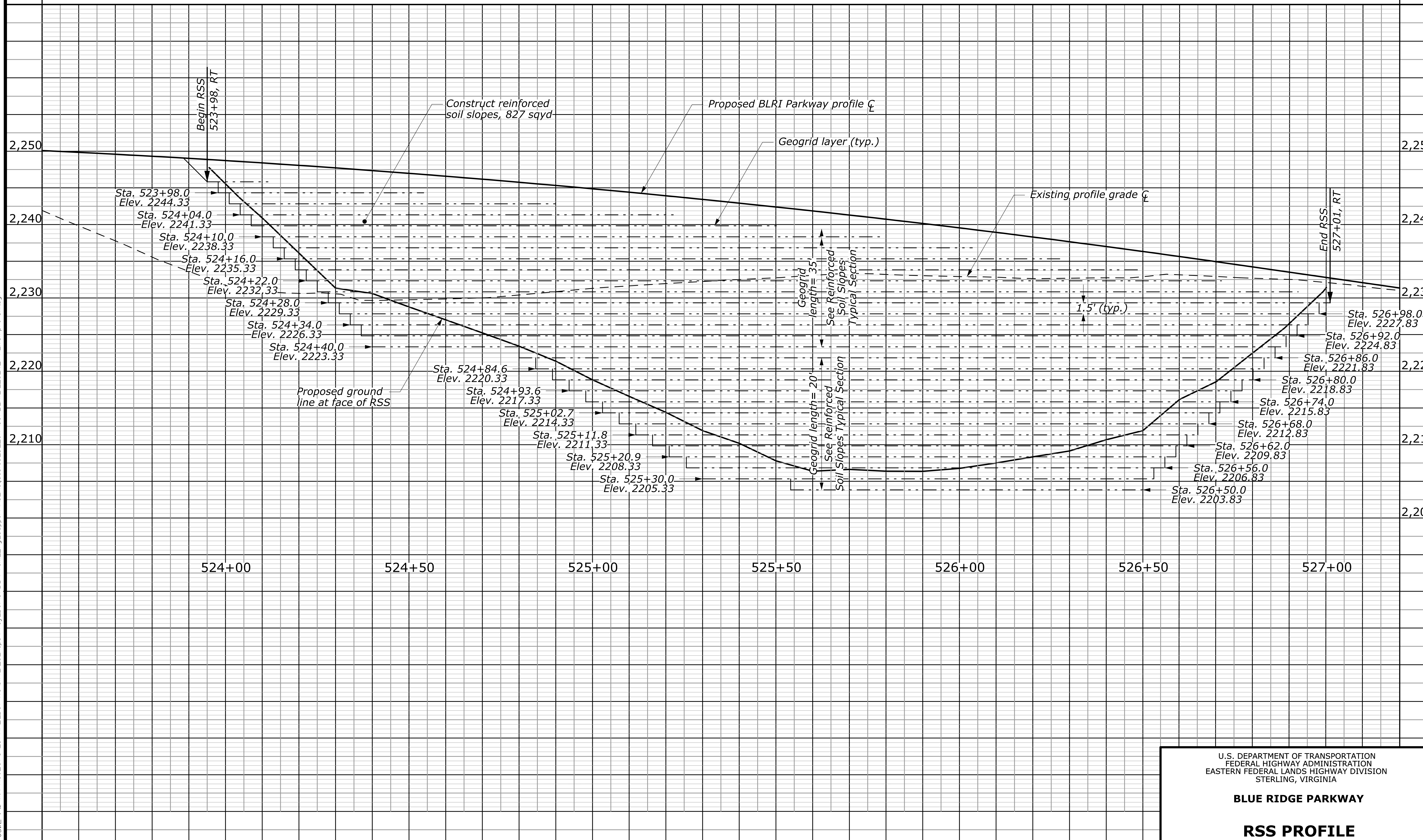
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

RSS PROFILE

502+03 TO 505+63, RT

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	G02



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

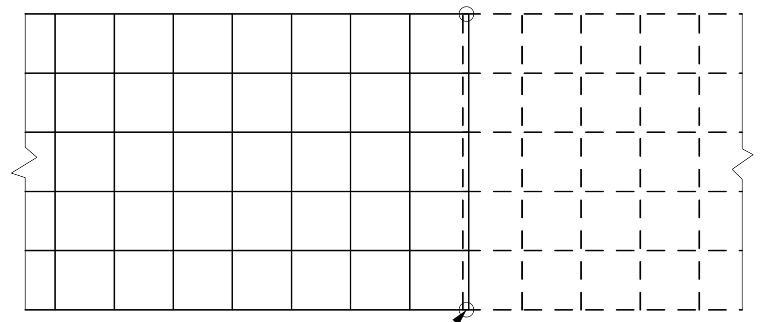
BLUE RIDGE PARKWAY

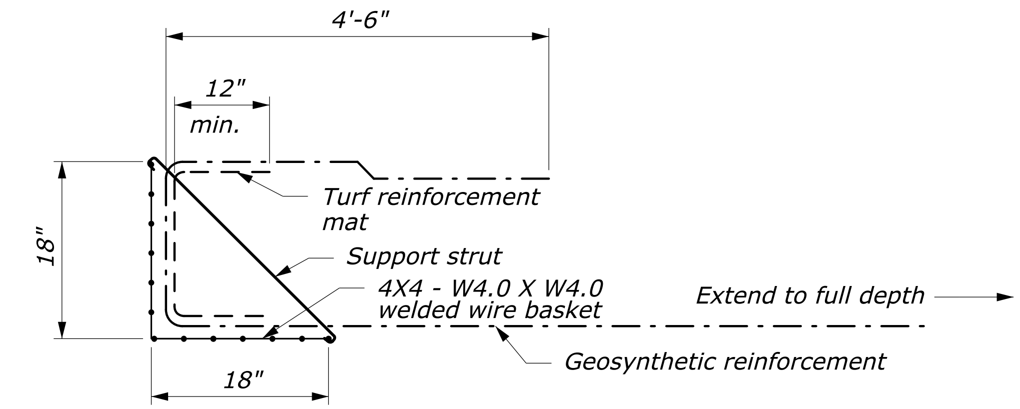
RSS PROFILE

523+98 TO 527+01, RT

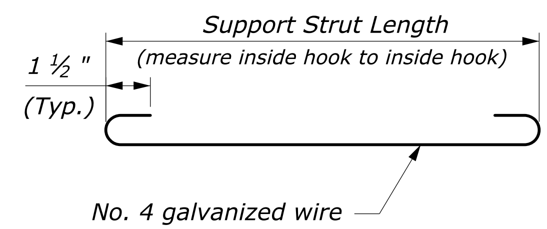
16-Dec-2018 05:12 PM M:\PROJECTS_STATE_DOT\NC\blri_I26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\G01-BLRI_I_26_NEPA_Wall pro sht.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	G03

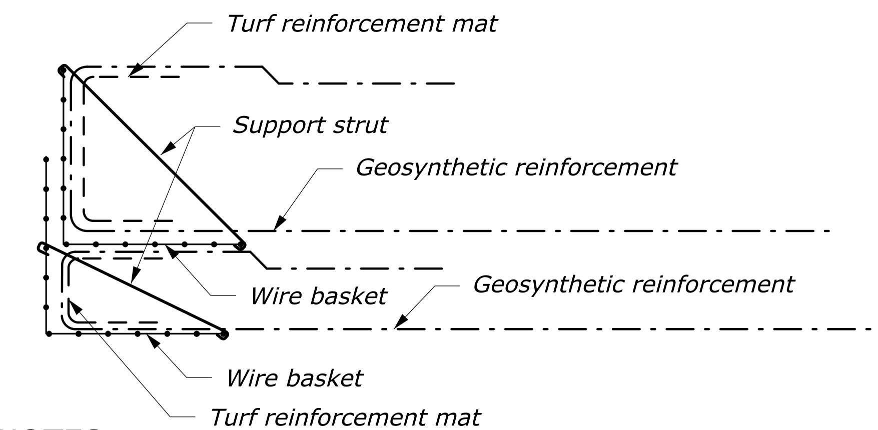




WIRE BASKET DETAIL



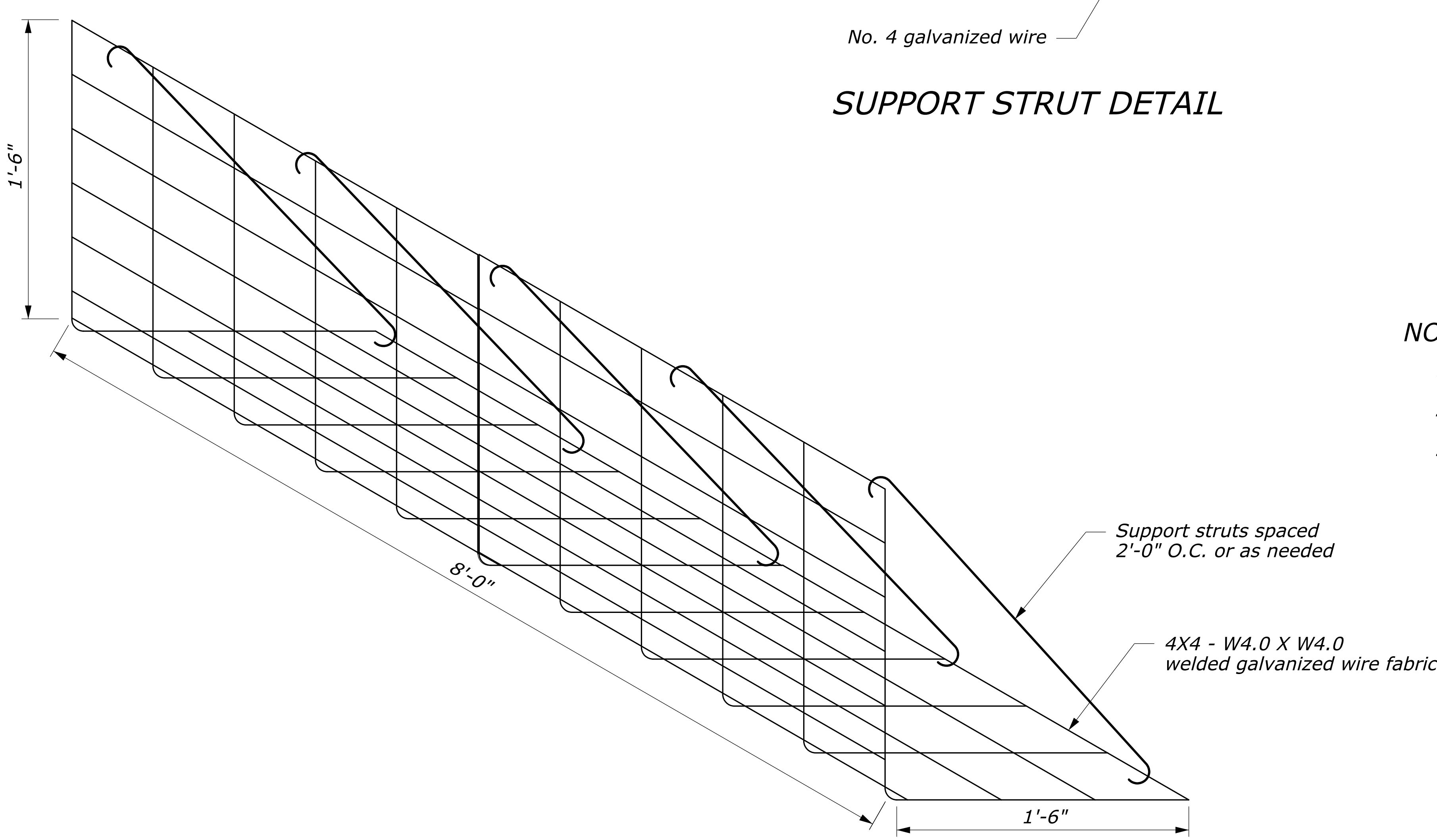
SUPPORT STRUT DETAIL



NOTES:

1. Set topmost wire basket inside wire basket below.
2. Adjust height to follow grade of top of wall.
3. Use Natina color treatment for welded wire basekts provide mottled, rustic brown finish. Do not apply treatment in the field.

TOP WIRE BASKET DETAIL



WIRE BASKET ISOMETRIC VIEW

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

WIRE BASKET DETAILS

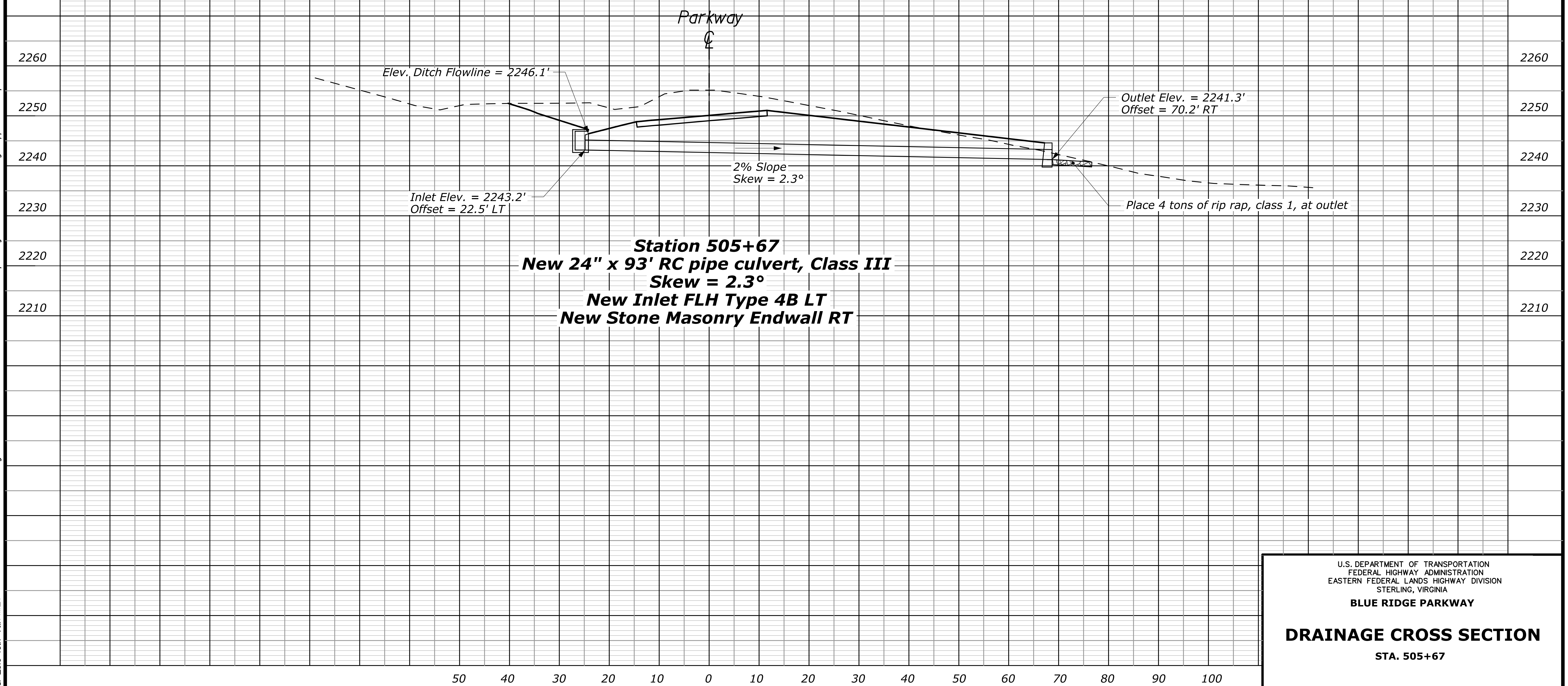
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K01

HYDRAULIC DATA:

Drainage area = 0.52 acres
Design frequency = 50 year
Design discharge = 3.6 cfs

NOTES:

1. See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.
2. See NCDOT 2018 Roadway Standard Drawing 876.02 for rip rap.



Station 505+67
New 24" x 93' RC pipe culvert, Class III
Skew = 2.3°
New Inlet FLH Type 4B LT
New Stone Masonry Endwall RT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

DRAINAGE CROSS SECTION

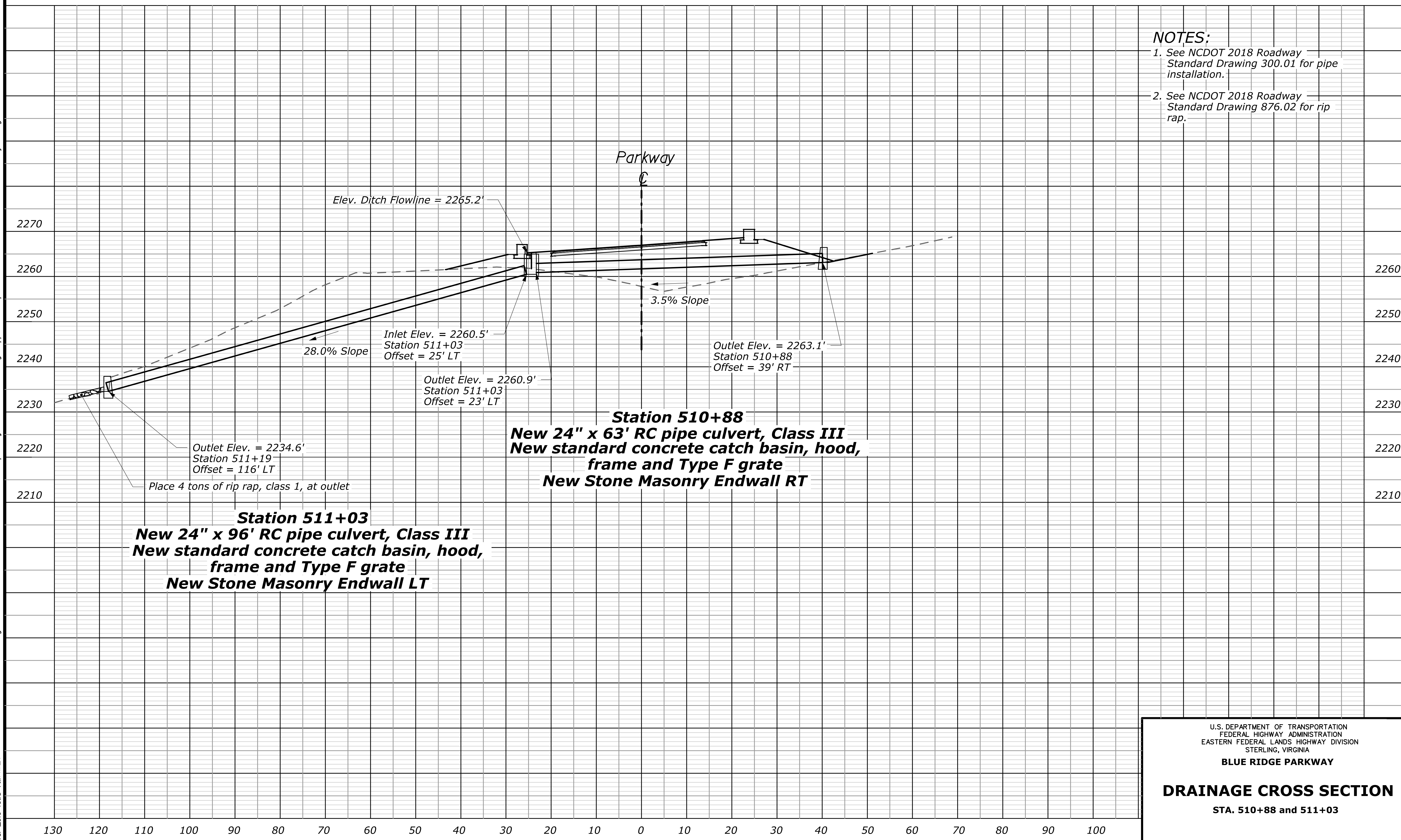
STA. 505+67

\\hf115f1lserve\fhd\fwa.dot.gov\data\PROJECTS_STATE_DOT\NC\blri_I26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\K01-K11-BLRI_I_26_NEPA_hyd_xs.dgn
19-Mar-2019 10:17 A#TIME$

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K02

NOTES:

1. See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.
2. See NCDOT 2018 Roadway Standard Drawing 876.02 for rip rap.



Station 510+88
New 24" x 63' RC pipe culvert, Class III
New standard concrete catch basin, hood, frame and Type F grate
New Stone Masonry Endwall RT

Station 511+03
New 24" x 96' RC pipe culvert, Class III
New standard concrete catch basin, hood, frame and Type F grate
New Stone Masonry Endwall LT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

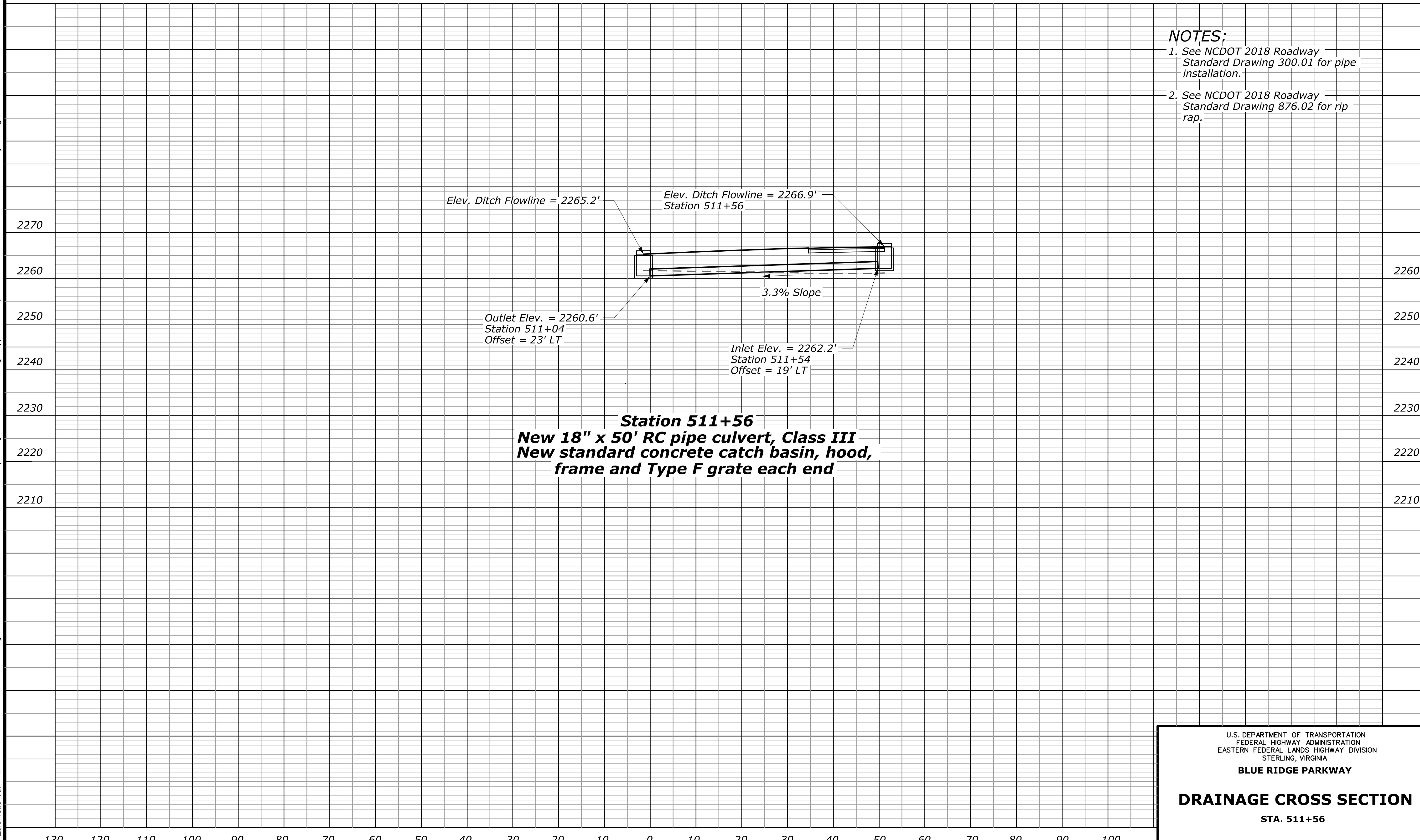
BLUE RIDGE PARKWAY

DRAINAGE CROSS SECTION

STA. 510+88 and 511+03

19-Mar-2019 10:18 AM$TIME$ \\hf115fileserve\fhd.fhwa.dot.gov\data\PROJECTS_STATE_DOT\NC\blri_I26_repo\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\K01-K11-BLRI_I_26_NEPA_hyd_xs.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K03



Station 511+56
New 18" x 50' RC pipe culvert, Class III
New standard concrete catch basin, hood, frame and Type F grate each end

NOTES:
1. See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.
2. See NCDOT 2018 Roadway Standard Drawing 876.02 for rip rap.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

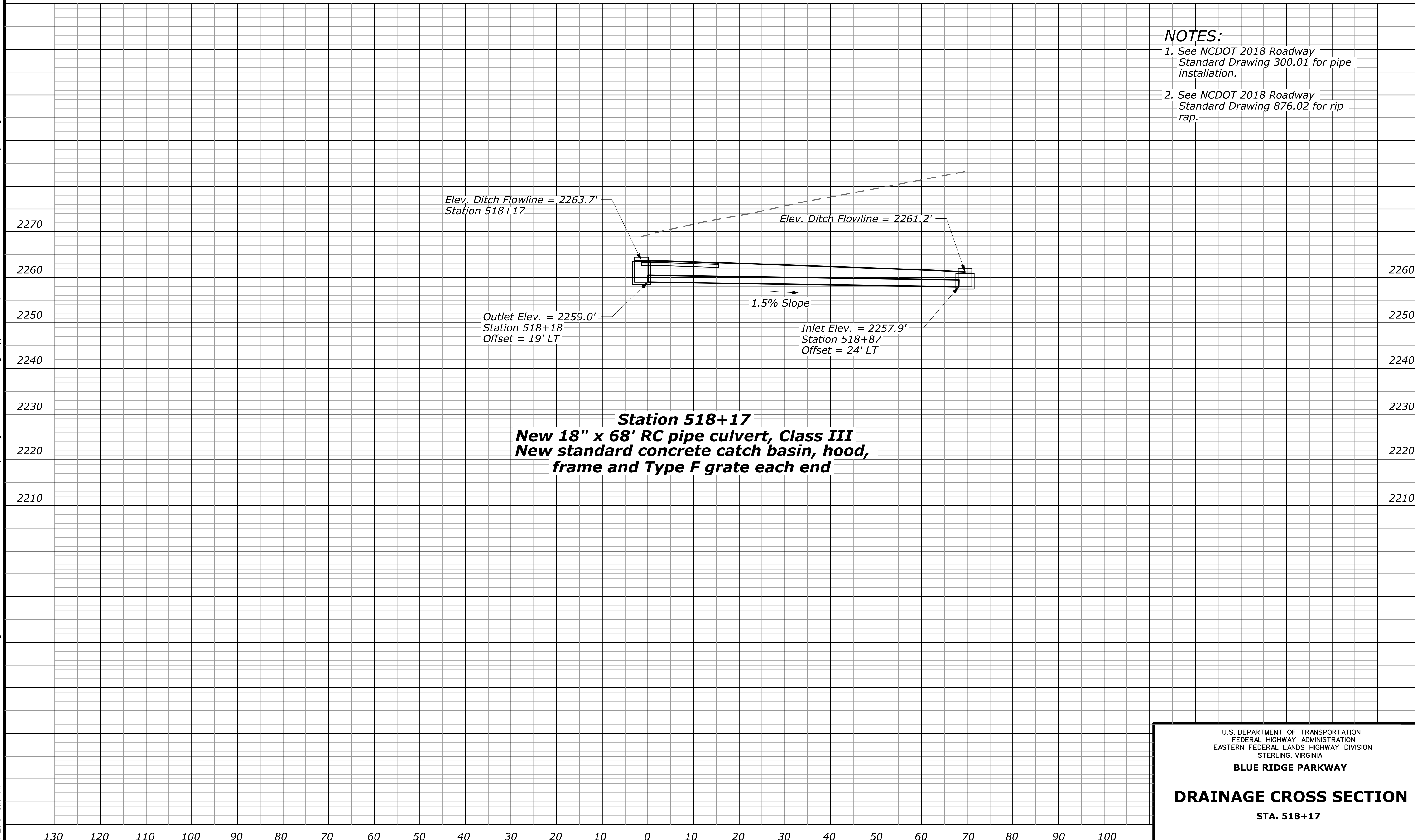
BLUE RIDGE PARKWAY

DRAINAGE CROSS SECTION

STA. 511+56

19-Mar-2019 10:18 AM \\hf115f1leserve1\hd1\fwa.dot.gov\data\PROJECTS_STATE_DOT\NC\blrl_i26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\K01-K11-BLRI_I_26_NEPA_hyd_xs.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K04



Station 518+17
New 18" x 68' RC pipe culvert, Class III
New standard concrete catch basin, hood, frame and Type F grate each end

NOTES:

1. See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.
2. See NCDOT 2018 Roadway Standard Drawing 876.02 for rip rap.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

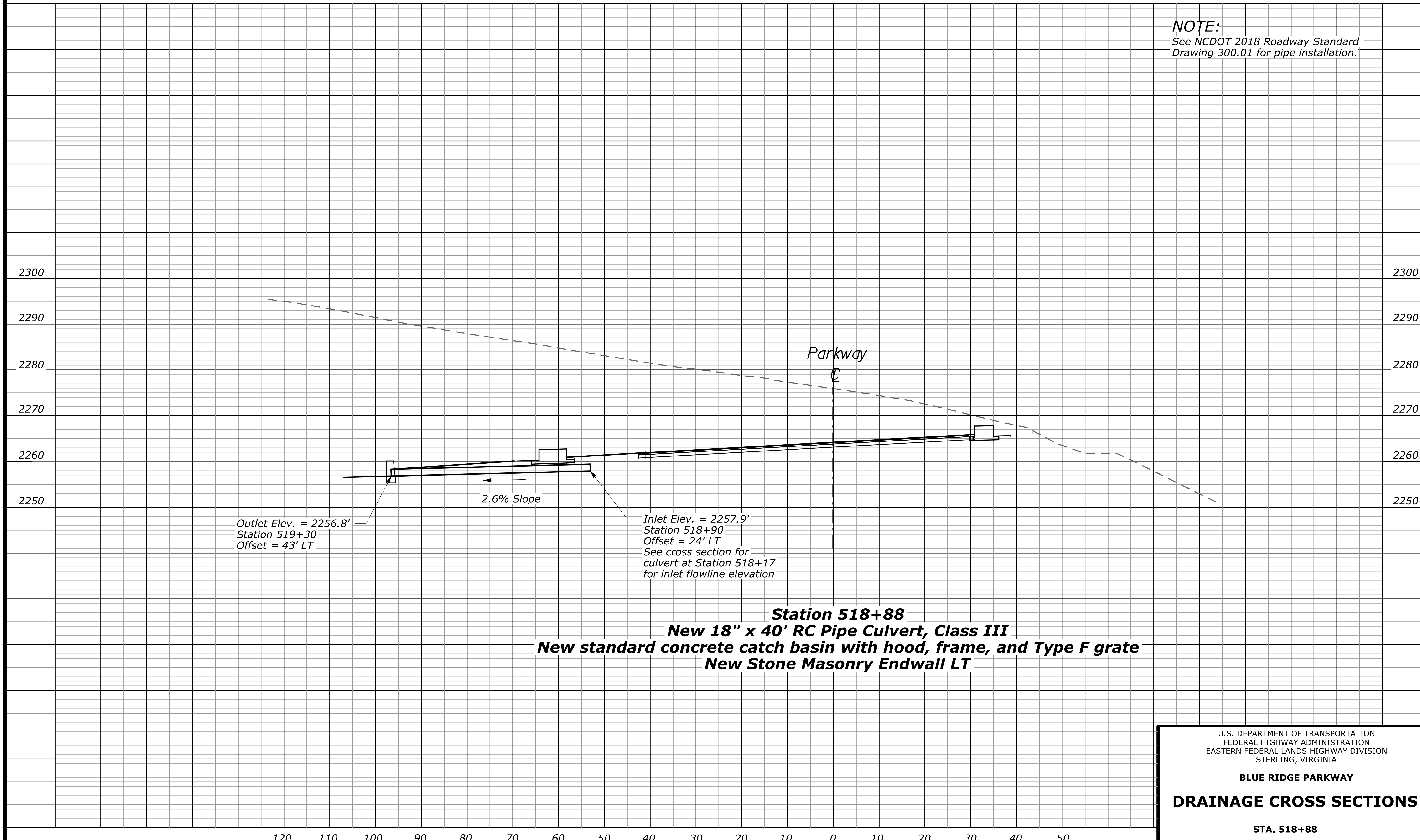
DRAINAGE CROSS SECTION

STA. 518+17

19-Mar-2019 10:19 AM$TIME$ \\hf115f1leserve1\hd\fwa.dot.gov\data\PROJECTS_STATE_DOT\NC\blrl_I26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\K01-K11-BLRI_I_26_NEPA_hyd_xs.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K05

NOTE:
See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.



Station 518+88
New 18" x 40' RC Pipe Culvert, Class III
New standard concrete catch basin with hood, frame, and Type F grate
New Stone Masonry Endwall LT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

DRAINAGE CROSS SECTIONS

STA. 518+88

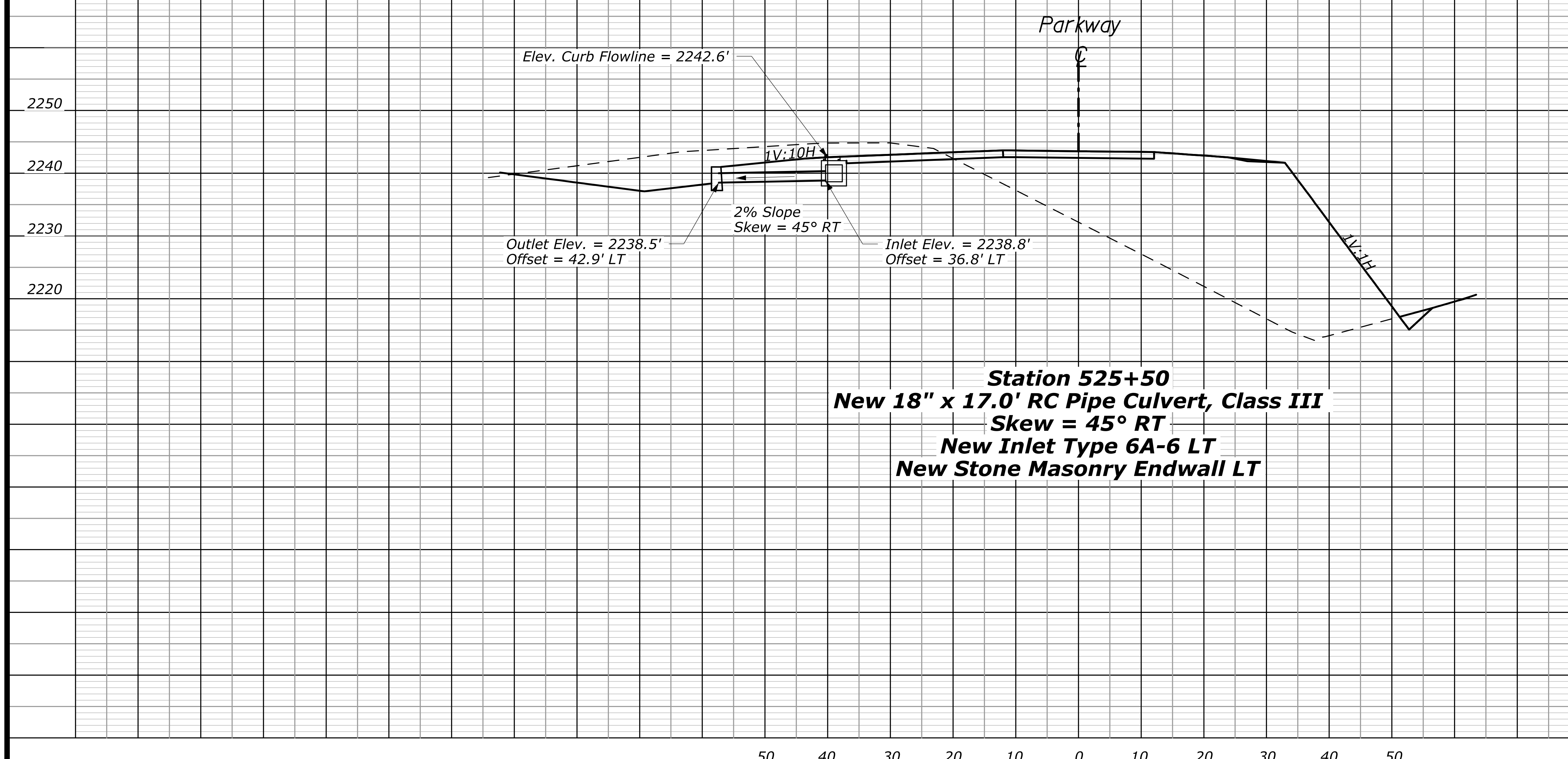
\\fhfl5fileserve\fhd\fwadot.gov\data\PROJECTS_STATE_DOT\NC\blri_126_repo\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_20\7K0\K0-BLRI_I_26_NEPA_hyd_xs.dgn
19-Mar-2019 10:19 AM

HYDRAULIC DATA:

Drainage area = 0.17 ac
Design frequency = 50 year
Design discharge = 1.25 cfs

NOTE:

See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.



Station 525+50
New 18" x 17.0' RC Pipe Culvert, Class III
Skew = 45° RT
New Inlet Type 6A-6 LT
New Stone Masonry Endwall LT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

DRAINAGE CROSS SECTIONS

STA. 525+50

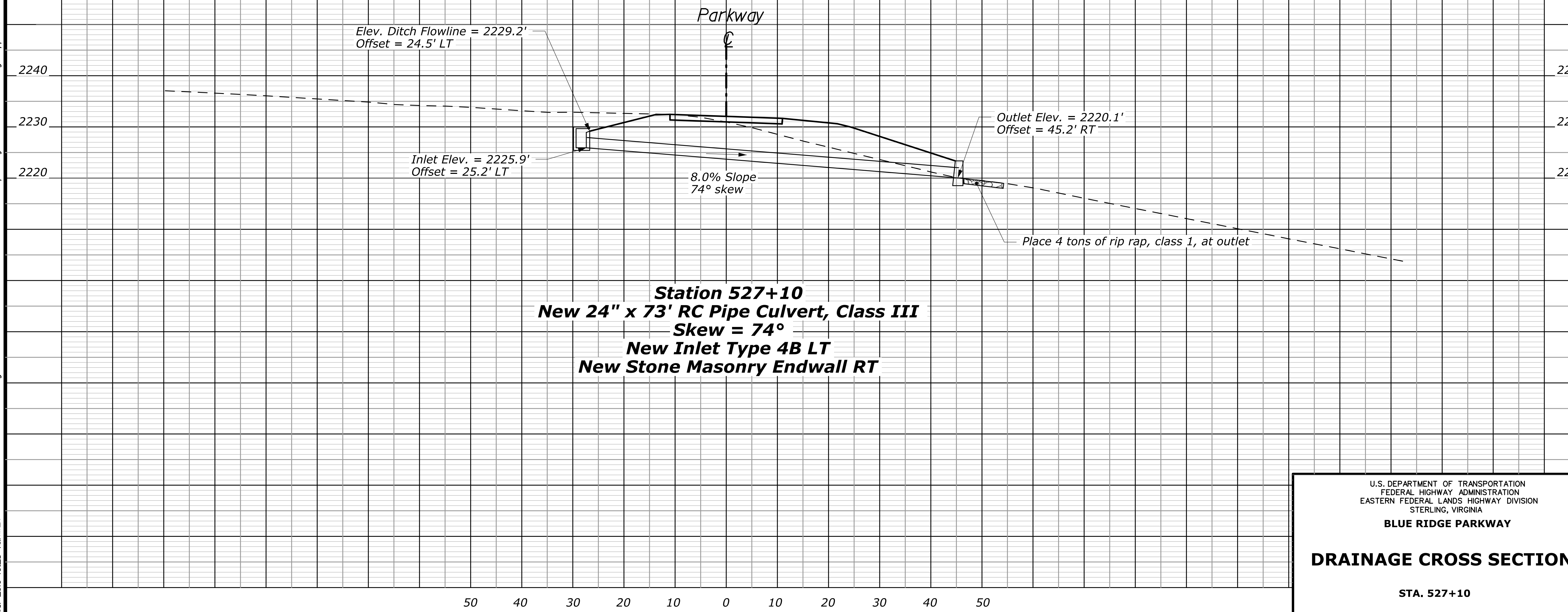
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K07

HYDRAULIC DATA:

Drainage area = 4.02 acres
Design frequency = 50 year
Design discharge = 3.8 cfs

NOTES:

1. See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.
2. See NCDOT 2018 Roadway Standard Drawing 876.02 for rip rap.



Station 527+10
New 24" x 73' RC Pipe Culvert, Class III
Skew = 74°
New Inlet Type 4B LT
New Stone Masonry Endwall RT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

DRAINAGE CROSS SECTIONS

STA. 527+10

19-Mar-2019 10:23 $TIME$ \\hr1115fileserve\fhd\fwa.dot.gov\data\PROJECTS_STATE_DOT\NC\blri_i26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\K01-K11-BLRI_I_26_NEPA_hyd_xs.dgn

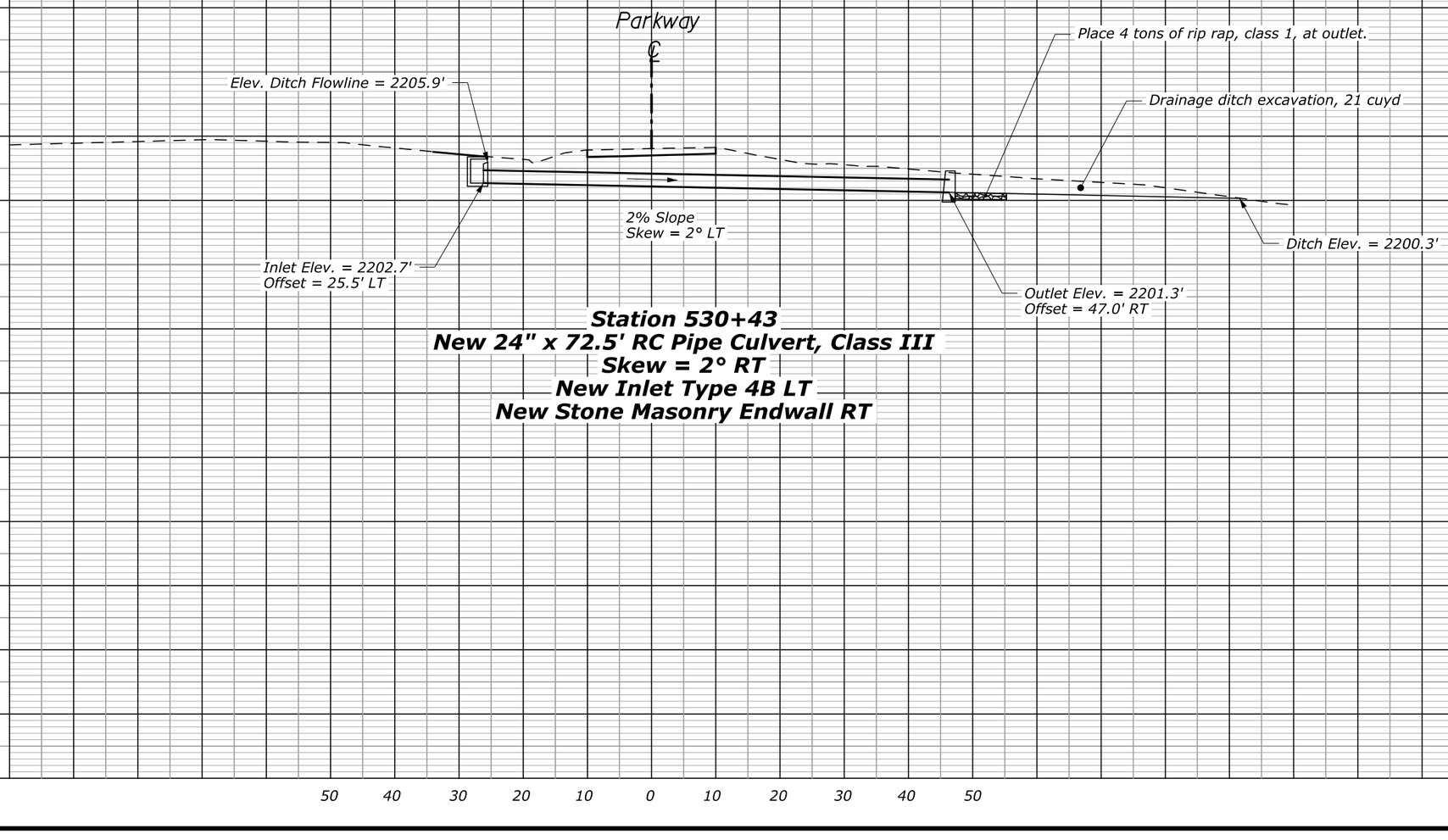
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K08

HYDRAULIC DATA:

Drainage area = 0.33 acres
Design frequency = 50 year
Design discharge = 0.5 cfs

NOTES:

1. *See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.*
2. *See NCDOT 2018 Roadway Standard Drawing 876.02 for riprap.*



Station 530+43
New 24" x 72.5' RC Pipe Culvert, Class III
Skew = 2° RT
New Inlet Type 4B LT
New Stone Masonry Endwall RT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

DRAINAGE CROSS SECTIONS

STA. 530+43

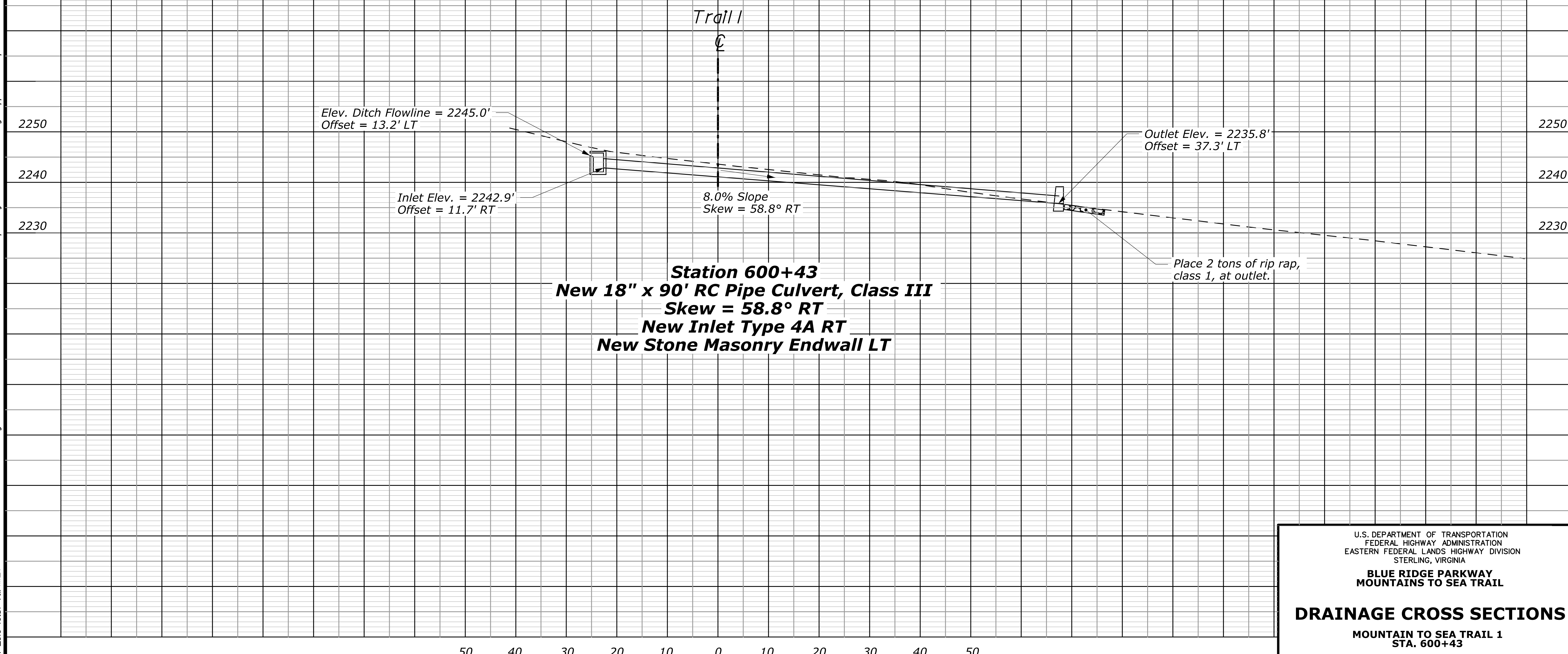
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K09

HYDRAULIC DATA:

Drainage area = 1.04 acres
Design frequency = 50 year
Design discharge = 1.1 cfs

NOTES:

1. See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.
2. See NCDOT 2018 Roadway Standard Drawing 876.02 for riprap.



Station 600+43
New 18" x 90' RC Pipe Culvert, Class III
Skew = 58.8° RT
New Inlet Type 4A RT
New Stone Masonry Endwall LT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY
MOUNTAINS TO SEA TRAIL

DRAINAGE CROSS SECTIONS

MOUNTAIN TO SEA TRAIL 1
STA. 600+43

19-Mar-2019 10:37 AM TIME$ \\hf115fileserve\fhd.fhwa.dot.gov\data\PROJECTS_STATE_DOT\NC\blrl_i26_repo\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\K01-K11-BLRI_I_26_NEPA_hyd_xs.dgn

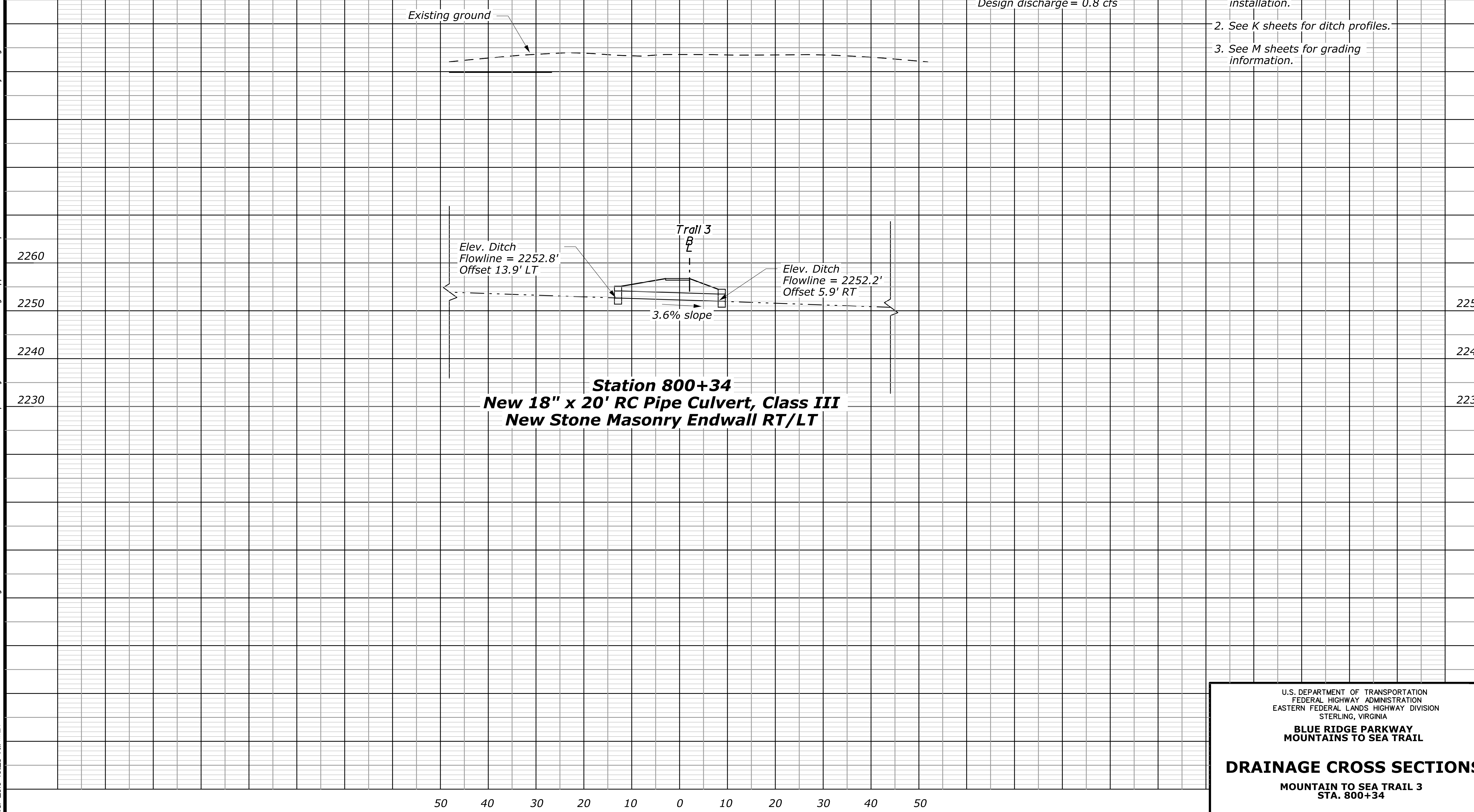
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K10

HYDRAULIC DATA:

Drainage area = 0.54 acres
Design frequency = 50 year
Design discharge = 0.8 cfs

NOTES:

1. See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.
2. See K sheets for ditch profiles.
3. See M sheets for grading information.



Station 800+34
New 18" x 20' RC Pipe Culvert, Class III
New Stone Masonry Endwall RT/LT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY
MOUNTAINS TO SEA TRAIL

DRAINAGE CROSS SECTIONS

MOUNTAIN TO SEA TRAIL 3
STA. 800+34

19-Mar-2019 10:26 $TIME$ \\hf115fileserve\fhd\fhwa.dot.gov\data\PROJECTS_STATE_DOT\NC\blri_i26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\K01-K11-BLRI_I_26_NEPA_hyd_xs.dgn

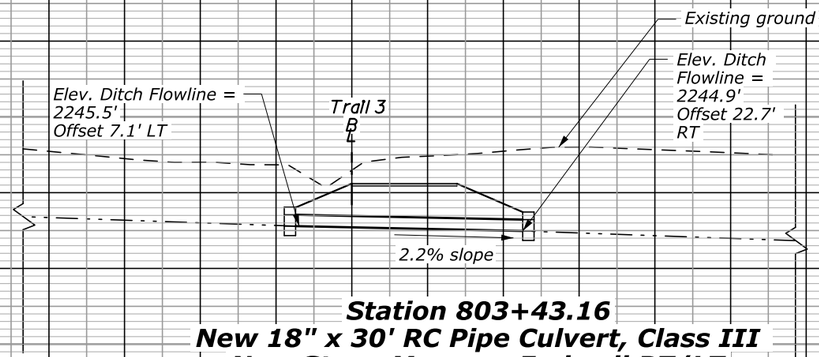
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K11

HYDRAULIC DATA:

Drainage area = 0.43 acres
Design frequency = 50 year
Design discharge= 1.3 cfs

NOTES:

1. *See NCDOT 2018 Roadway Standard Drawing 300.01 for pipe installation.*
2. *See K sheets for ditch profiles.*
3. *See M sheets for grading information.*



Station 803+43.16
New 18" x 30' RC Pipe Culvert, Class III
New Stone Masonry Endwall RT/LT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

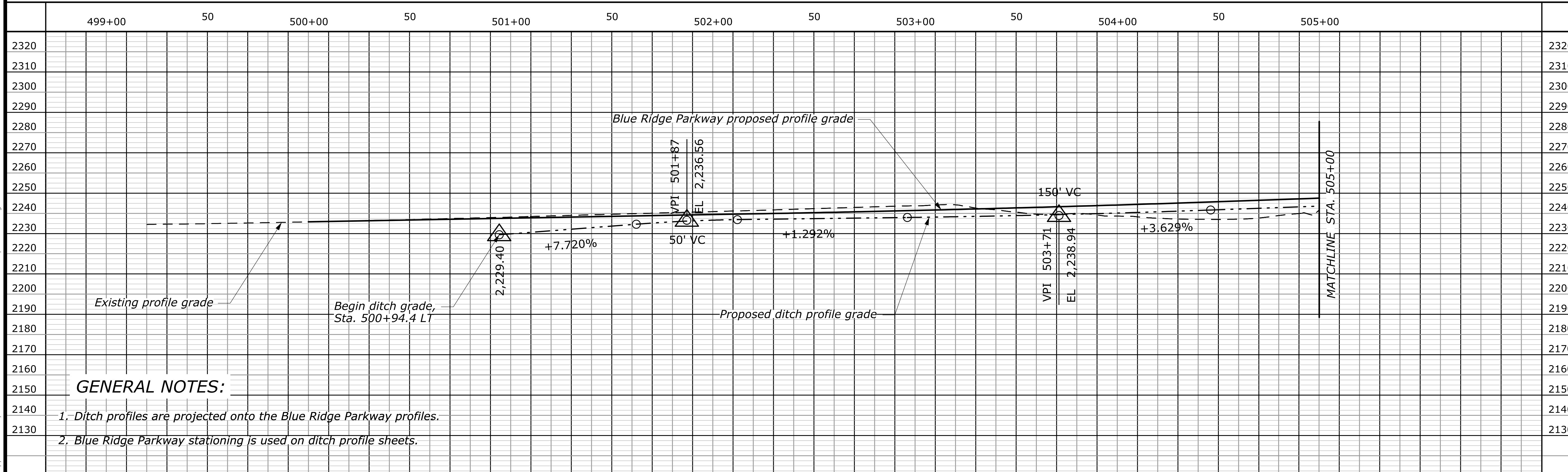
BLUE RIDGE PARKWAY
MOUNTAINS TO SEA TRAIL

DRAINAGE CROSS SECTIONS

MOUNTAIN TO SEA TRAIL 3
STA. 803+43

19-Mar-2019 10:26 ATIME$ \\fhf\l15f1\reserve\fhdf1hwa.dot.gov\data\PROJECTS_STATE_DOT\NC\blrl_I26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_20\NK0I-KII-BLRI_I_26_NEPA_hyd_xs.dgn

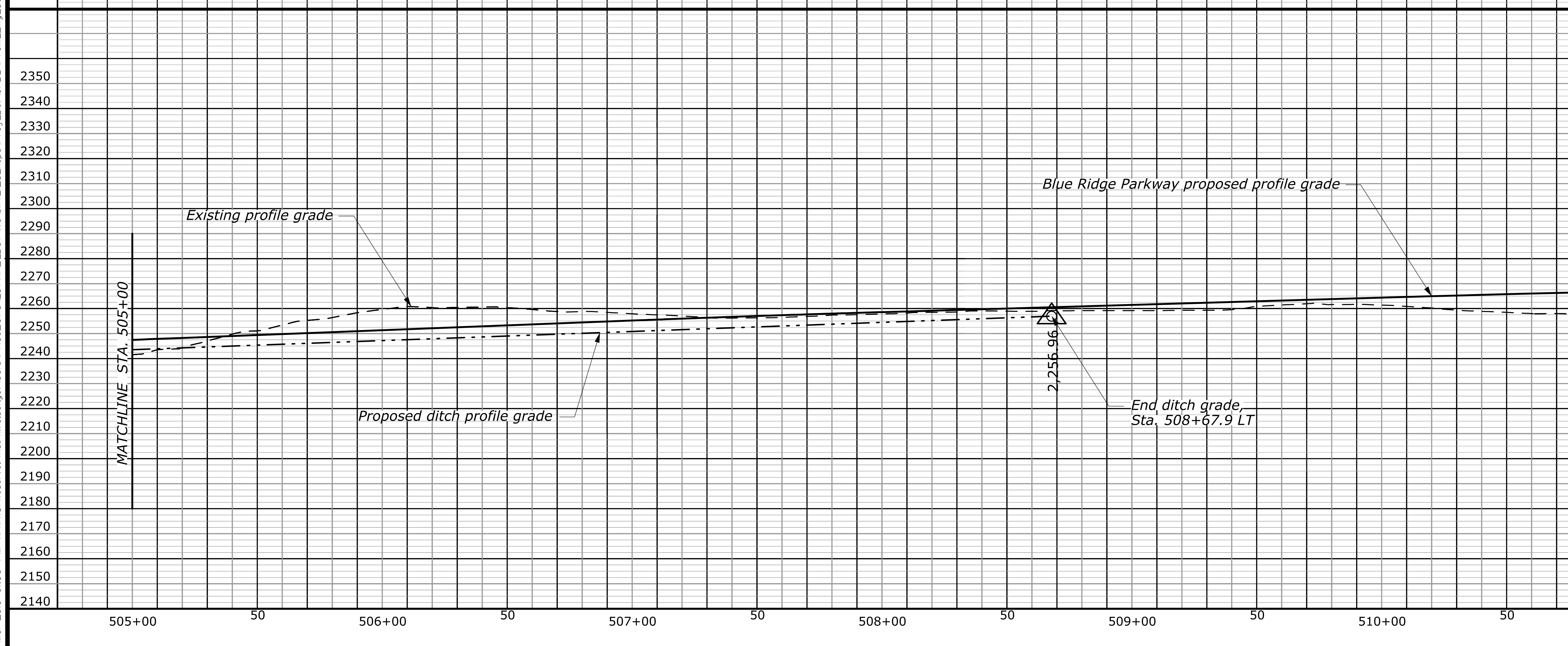
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K12



499+00
50
500+00
50
501+00
50
502+00
50
503+00
50
504+00
50
505+00
2320
2310
2300
2290
2280
2270
2260
2250
2240
2230
2220
2210
2200
2190
2180
2170
2160
2150
2140
2130
Blue Ridge Parkway proposed profile grade
VPI 501+87
EL 2,236.56
50' VC
150' VC
+7.720%
+1.292%
+3.629%
2,229.40
VPI 503+71
EL 2,238.94
MATCHLINE STA. 505+00
Existing profile grade
Begin ditch grade,
Sta. 500+94.4 LT
Proposed ditch profile grade

GENERAL NOTES:

1. Ditch profiles are projected onto the Blue Ridge Parkway profiles.
2. Blue Ridge Parkway stationing is used on ditch profile sheets.



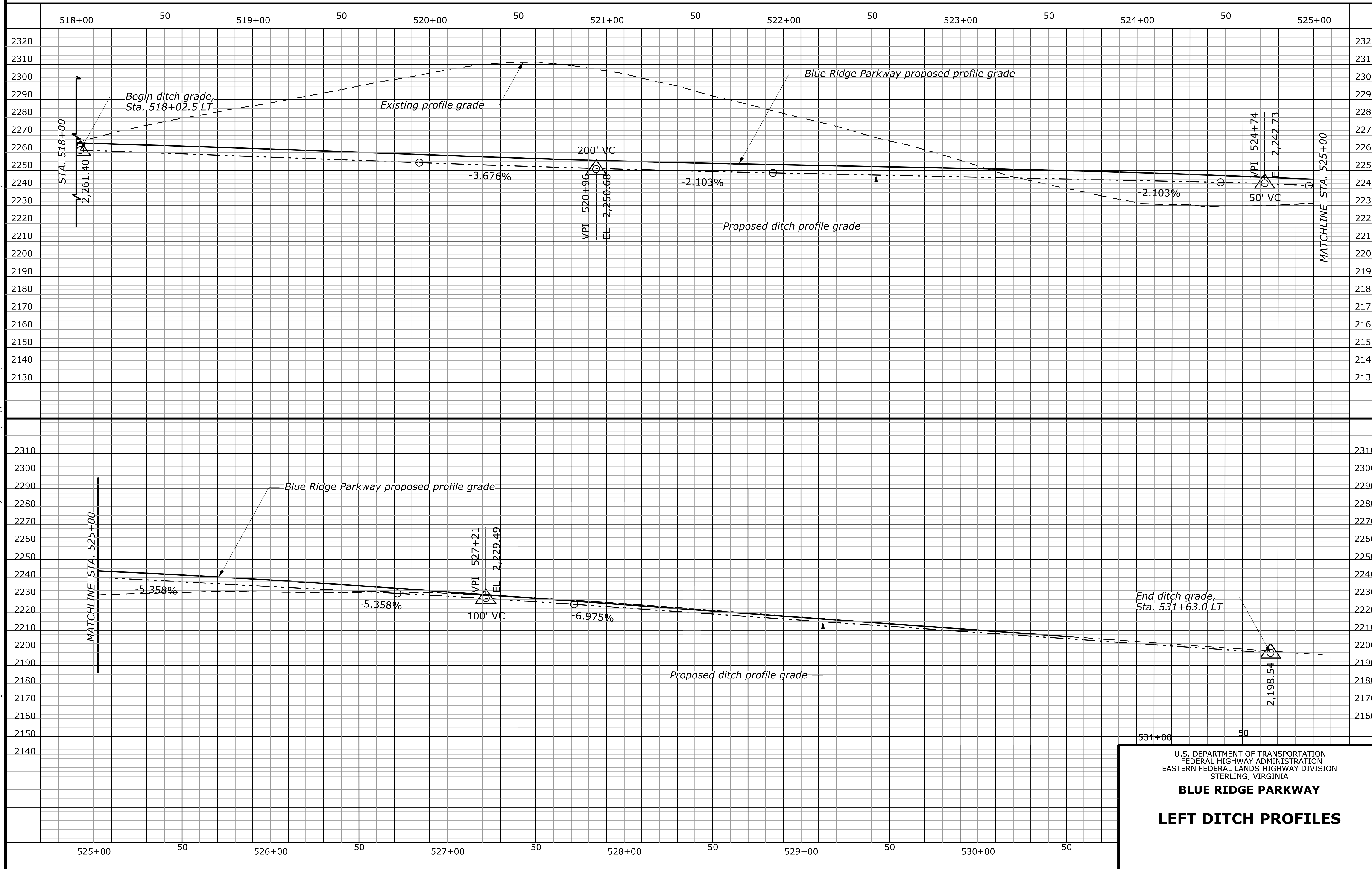
2350
2340
2330
2320
2310
2300
2290
2280
2270
2260
2250
2240
2230
2220
2210
2200
2190
2180
2170
2160
2150
2140
Blue Ridge Parkway proposed profile grade
Existing profile grade
MATCHLINE STA. 505+00
STA. 511+00
2,256.96
End ditch grade,
Sta. 508+67.9 LT
Proposed ditch profile grade
511+00
50
505+00
50
506+00
50
507+00
50
508+00
50
509+00
50
510+00
50

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

LEFT DITCH PROFILES

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K13



Begin ditch grade,
Sta. 518+02.5 LT
Existing profile grade
Blue Ridge Parkway proposed profile grade
STA. 518+00
2,261.40
200' VC
-3.676%
VPI 520+96
EL 2,250.68
-2.103%
Proposed ditch profile grade
VPI 524+74
EL 2,242.73
50' VC
-2.103%
MATCHLINE STA. 525+00
Blue Ridge Parkway proposed profile grade
MATCHLINE STA. 525+00
-5.358%
-5.358%
VPI 527+21
EL 2,229.49
100' VC
-6.975%
Proposed ditch profile grade
End ditch grade,
Sta. 531+63.0 LT
2,198.54

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

LEFT DITCH PROFILES

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K14

505+00 50 506+00 50 507+00 50 508+00 50 509+00 50 510+00 50

2320 2310 2300 2290 2280 2270 2260 2250 2240 2230 2220 2210 2200 2190 2180 2170 2160 2150 2140 2130

Existing profile grade

Blue Ridge Parkway proposed profile grade

Proposed ditch profile grade

MATCHLINE STA. 505+00

2,241.28

+13.171%

VPI 506+45
EL 2,250.50
70' VC

+3.366%

+3.366%

VPI 508+50
EL 2,257.40

+3.411%

+3.411%

VPI 510+51
EL 2,264.25

MATCHLINE STA. 510+50

Begin ditch grade,
Sta. 505+67.5 RT

End ditch grade,
Sta. 510+28.6 RT

2350 2340 2330 2320 2310 2300 2290 2280 2270 2260 2250 2240 2230 2220 2210 2200 2190 2180 2170 2160 2150 2140

Blue Ridge Parkway proposed profile grade

Existing profile grade

End ditch grade,
Sta. 523+64.2 RT

STA. 517+00

2,263.08

-3.126%

-3.126%

2,245.52

STA. 523+80

Proposed ditch profile grade

Begin ditch grade,
Sta. 518+02.5 RT

523+00 50

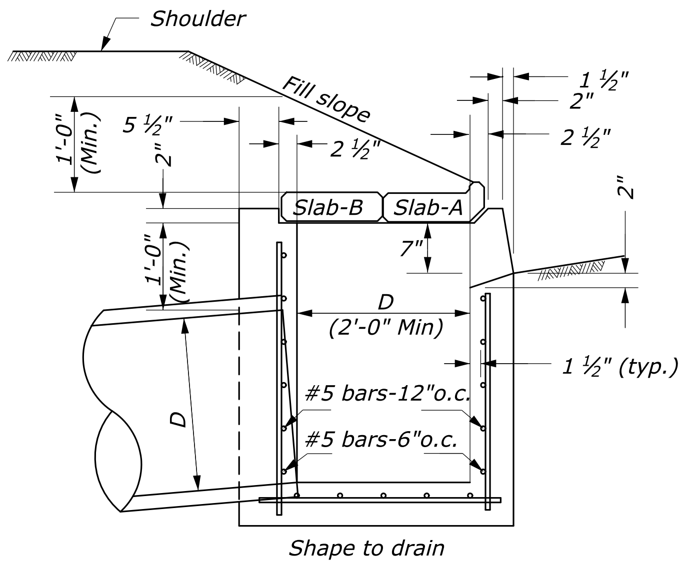
517+00 50 518+00 50 519+00 50 520+00 50 521+00 50 522+00 50

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

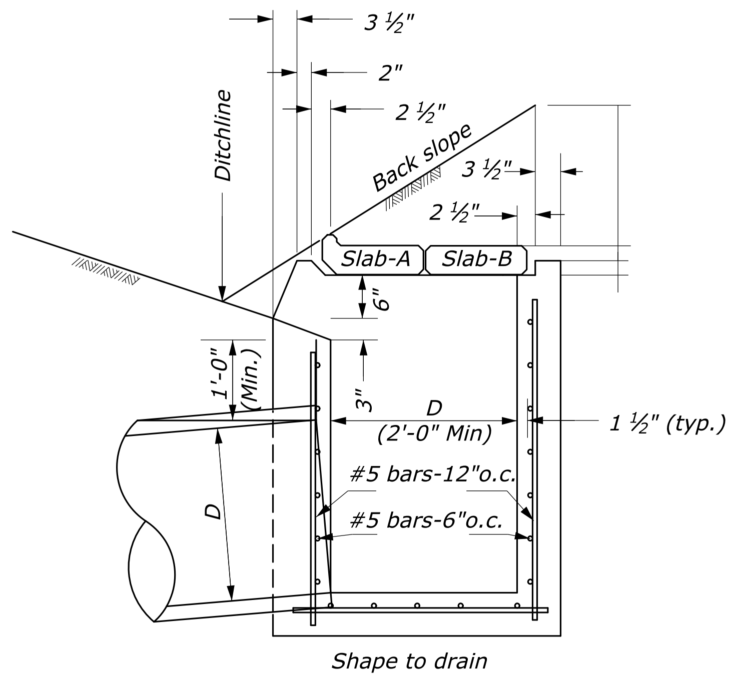
BLUE RIDGE PARKWAY

RIGHT DITCH PROFILES

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K15



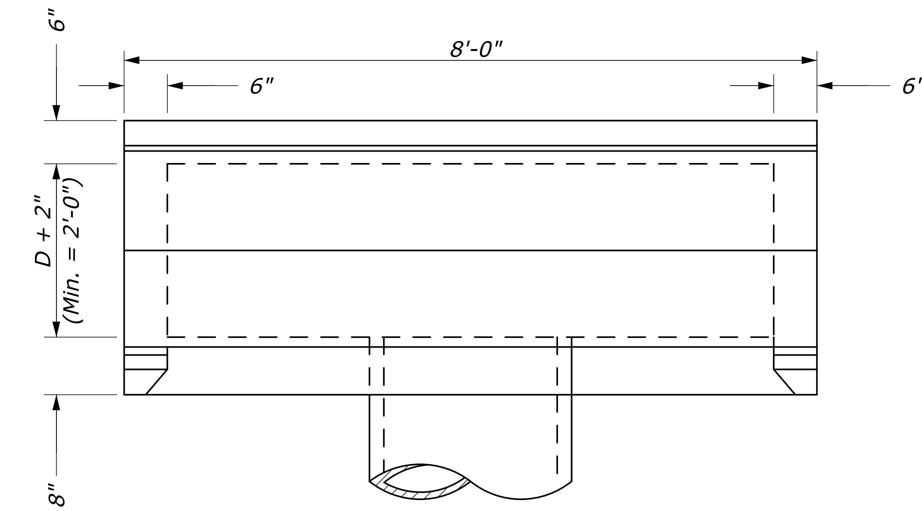
TYPE - 4A



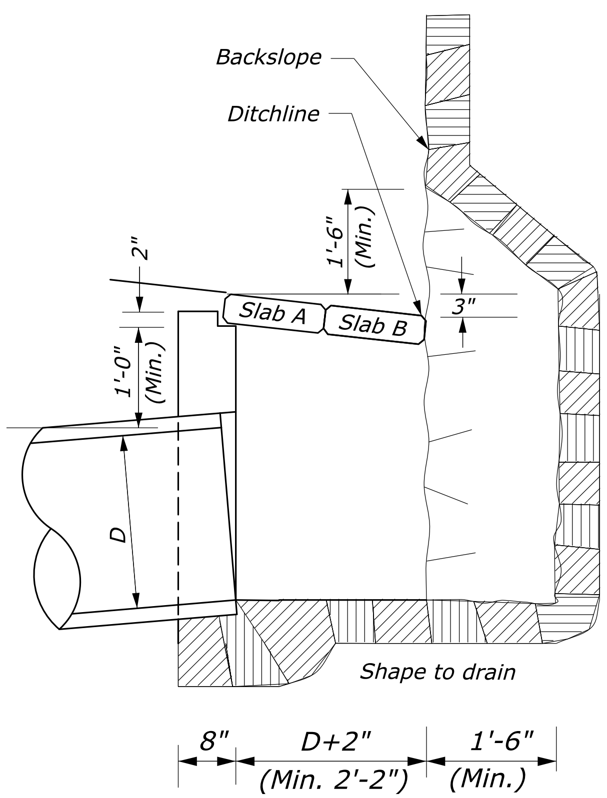
TYPE - 4B

NOTES:

1. At the option of the Contractor, walls less than 4 feet deep may be of concrete or concrete block.
2. Inlets to be parallel to roadway centerline and grade. For pipes on skew, adjust inlets as directed.
3. Ditch or paved waterways to be warped and widened near inlets as directed by the Engineer, to facilitate drainage and to protect slopes at ends of inlets.
4. For payment purposes, one slab A plus one slab B or two slabs B constitute one concrete cover.



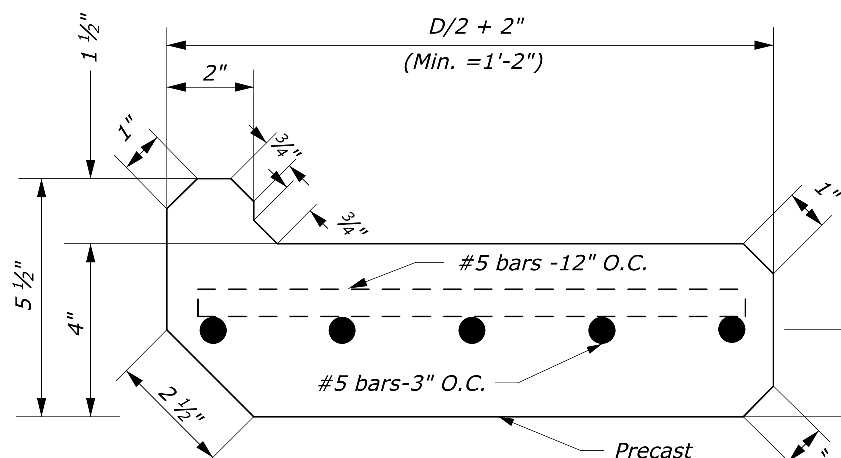
PLAN



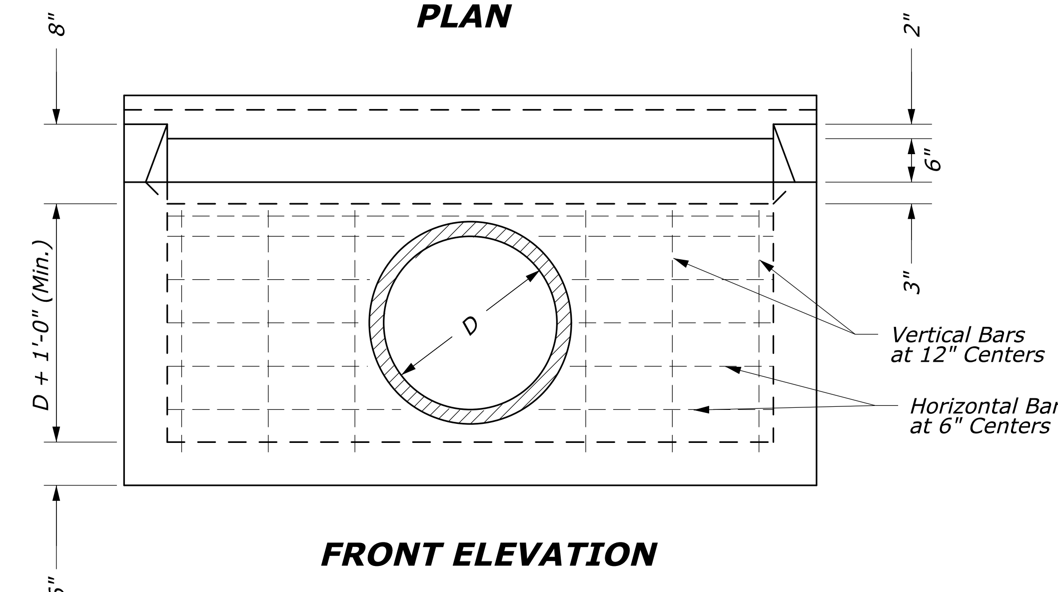
TYPE - 4C

Note:

In rock without backwall or floor. Reinforce same as Type 4A

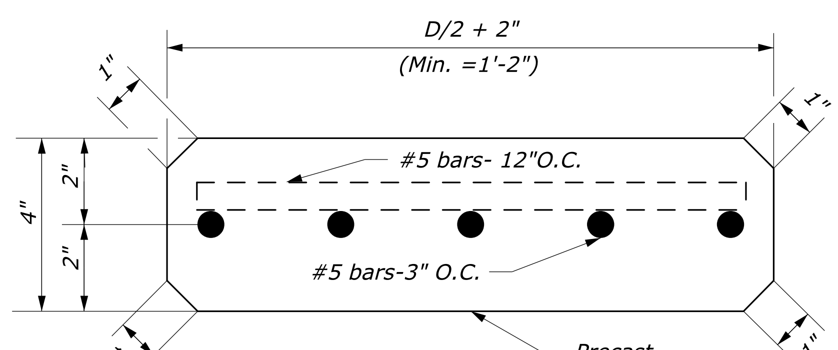


SLAB-A



FRONT ELEVATION

(Type 4B, shown, other types comparable)



SLAB-B

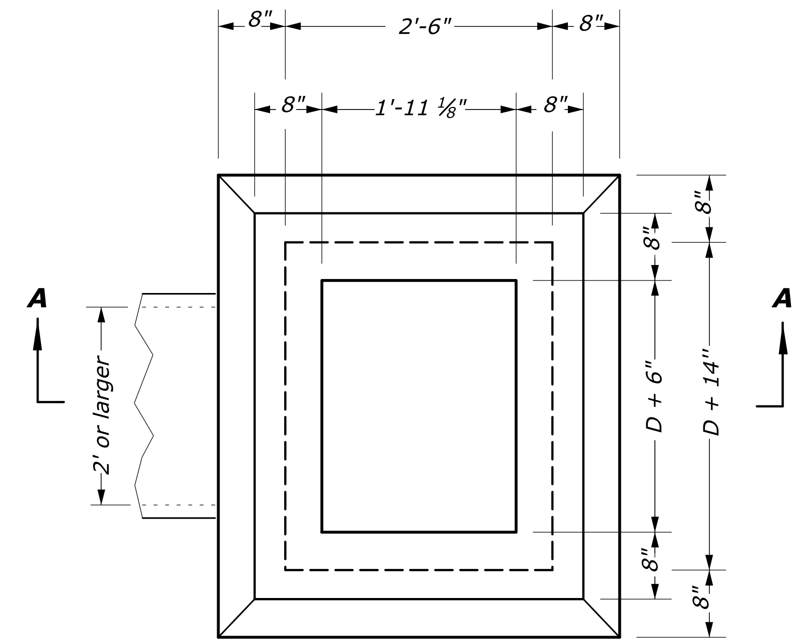
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

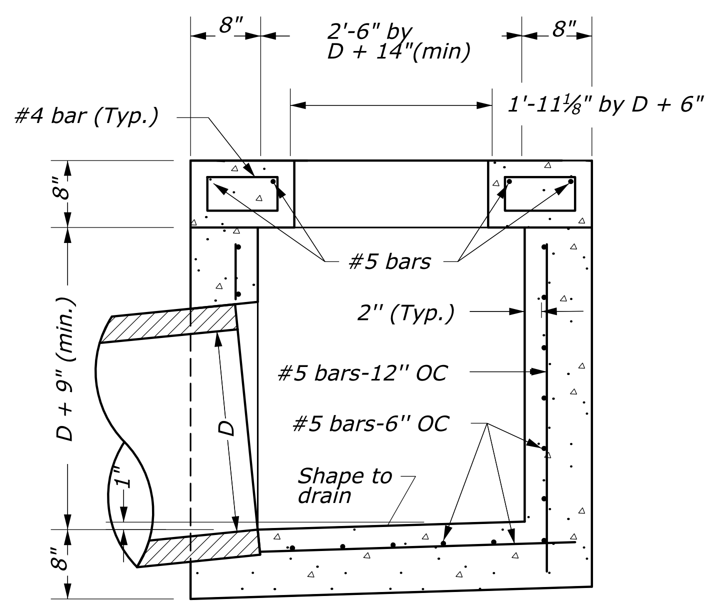
INLET, TYPE 4A, 4B, and 4C

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K16

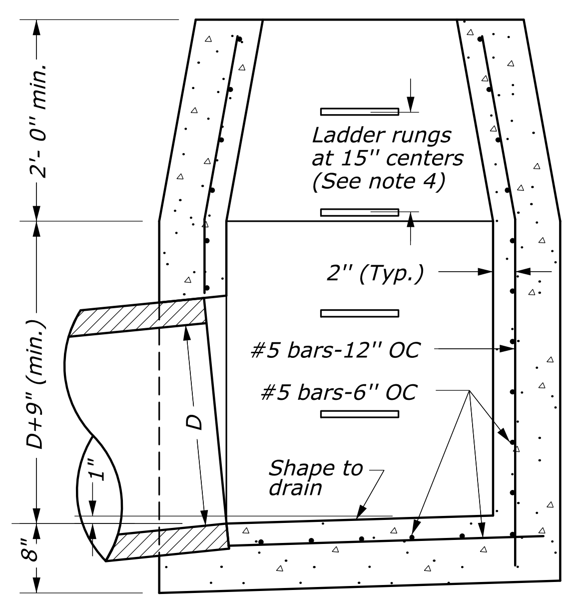


NOTES:

1. At the option of the Contractor walls less than 4 feet may be of either concrete block or concrete as shown.
2. Construct Type 6A-A inlets for pipes 24 inch and larger for "Limited Headroom", unless otherwise directed by the Engineer.
3. Construct inlets parallel to the roadway centerline and grade. For pipes on skew, adapt inlets as directed by the Engineer.
4. Construct ladder rungs of 3/4" round or 3/4" square steel or wrought iron where depth exceeds 4'-0".
5. For frames and gratings, minor variations in design and dimensions are permitted to allow manufacturers standards. All grates are to be bicycle safe.
6. Orient curved vanes toward direction of stormwater flow. In a sump condition, orientation of curved vanes can be in either direction. Contractor is responsible for correct grate orientation towards stormwater flow.
7. Construct Type 6A-6 metal frame and grating for 6" reveal, unless otherwise directed by the Engineer.



Limited headroom

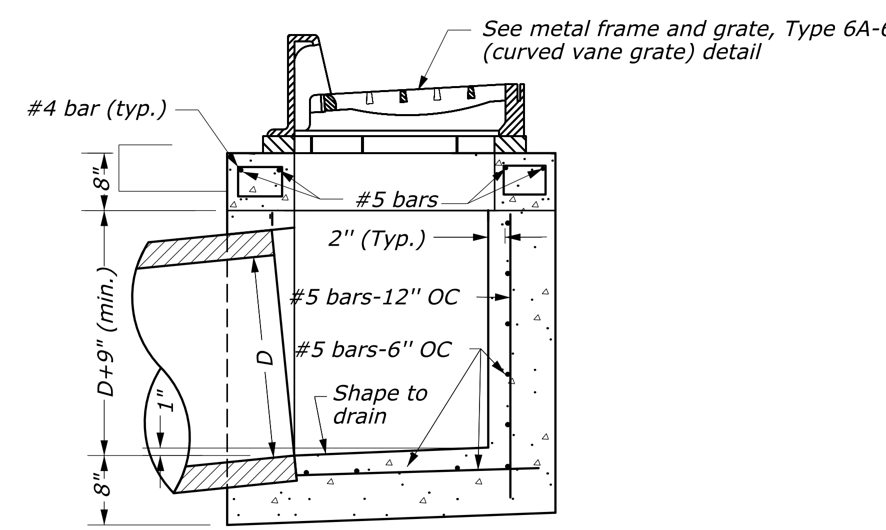


Ample headroom

SECTION A-A

TYPE 6A-6 INLET

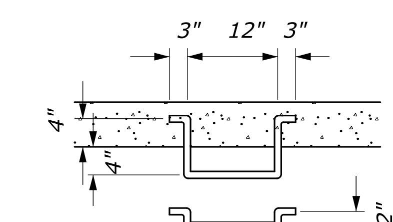
(for 24'' or larger pipes)



SECTION A-A

TYPE 6A-6 INLET

(up to 24'' pipes)



LADDER RUNG

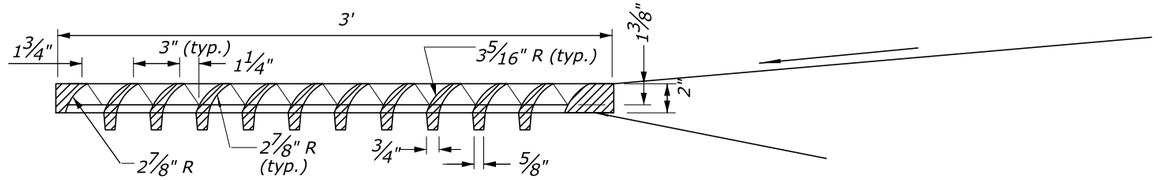
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

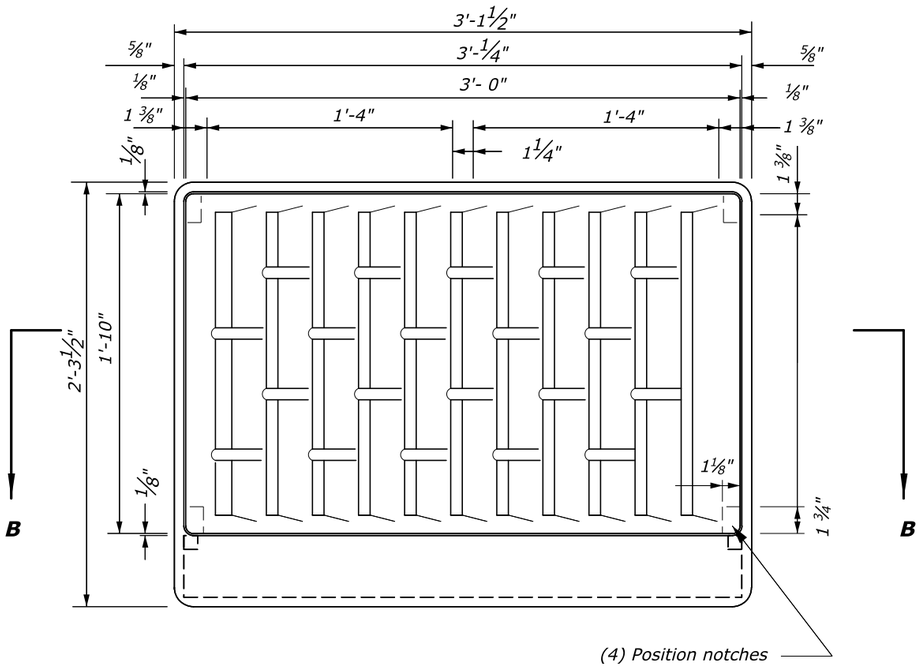
BLUE RIDGE PARKWAY

INLET, TYPE 6A-6

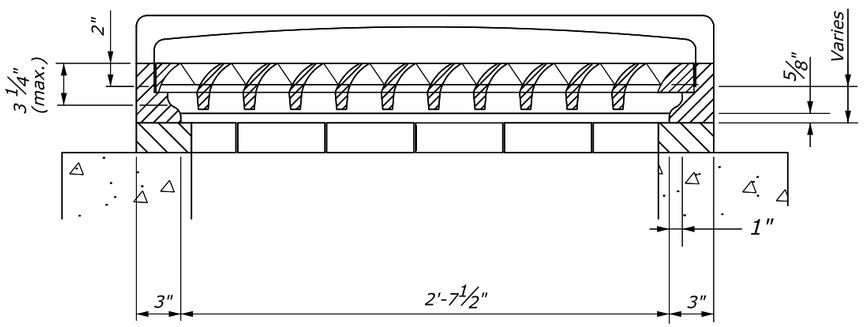
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K17



FRONT ELEVATION GRATE TYPE 6A-6 MOUNTED (CURVED VANE GRATINGS)

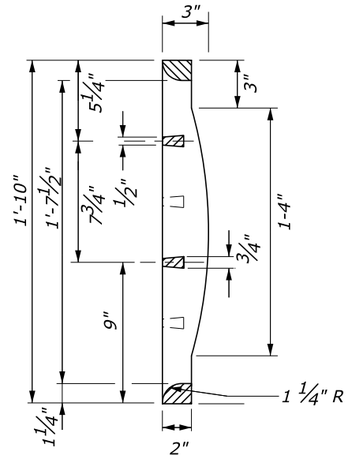


TOP VIEW FRAME GRATE TYPE 6A-6 MODIFIED (CURVED VANE GRATINGS)

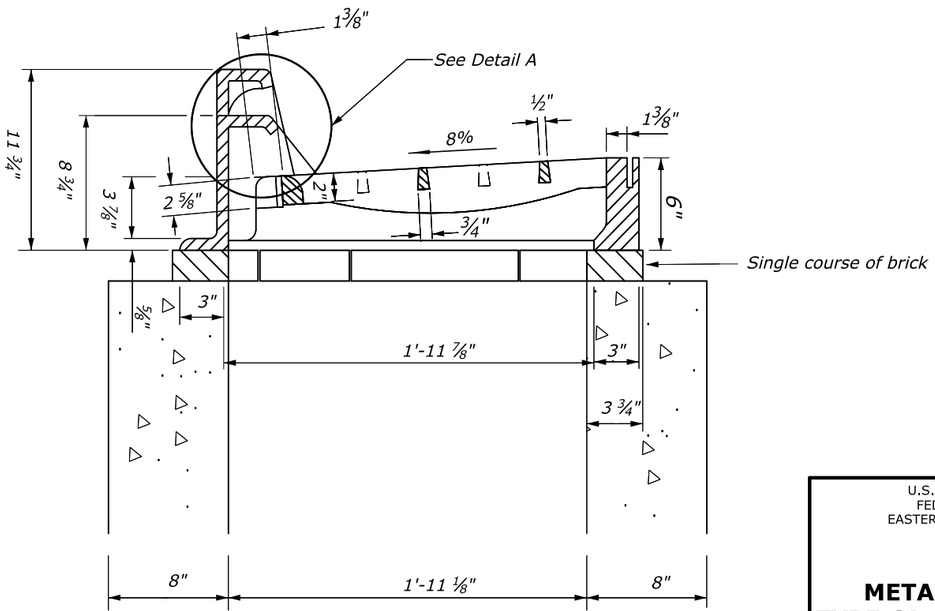


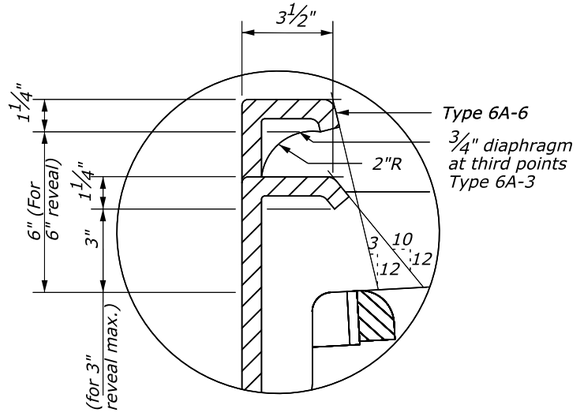
SECTION B-B

METAL FRAMES AND GRATING TYPE 6A-6 MODIFIED



SIDE ELEVATION GRATE TYPE 6A-6 MODIFIED (CURVED VANE GRATINGS)





DETAIL A

NOTES:

1. For frames and gratings, minor variations In design and dimensions are permitted to allow manufacturers standards. All grates are to be bicycle safe.
2. Orient curved vanes toward direction of stormwater flow. In a sump condition, orientation of curved vanes can be in either direction. Contractor is responsible for correct grate orientation towards stormwater flow.

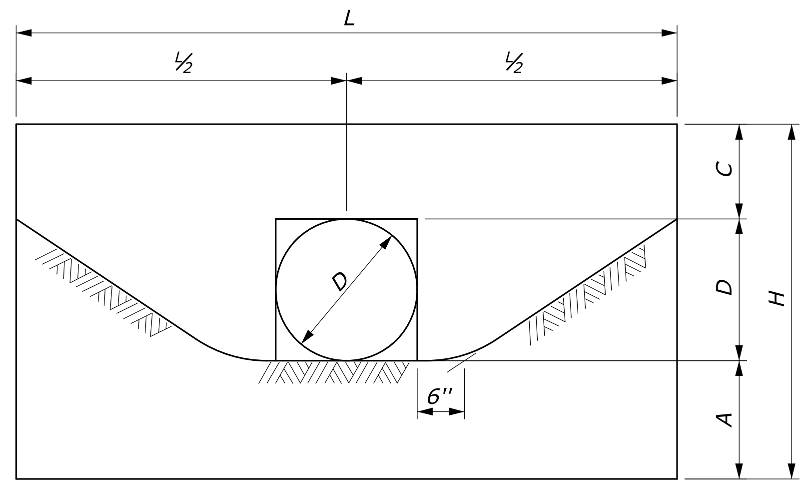
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

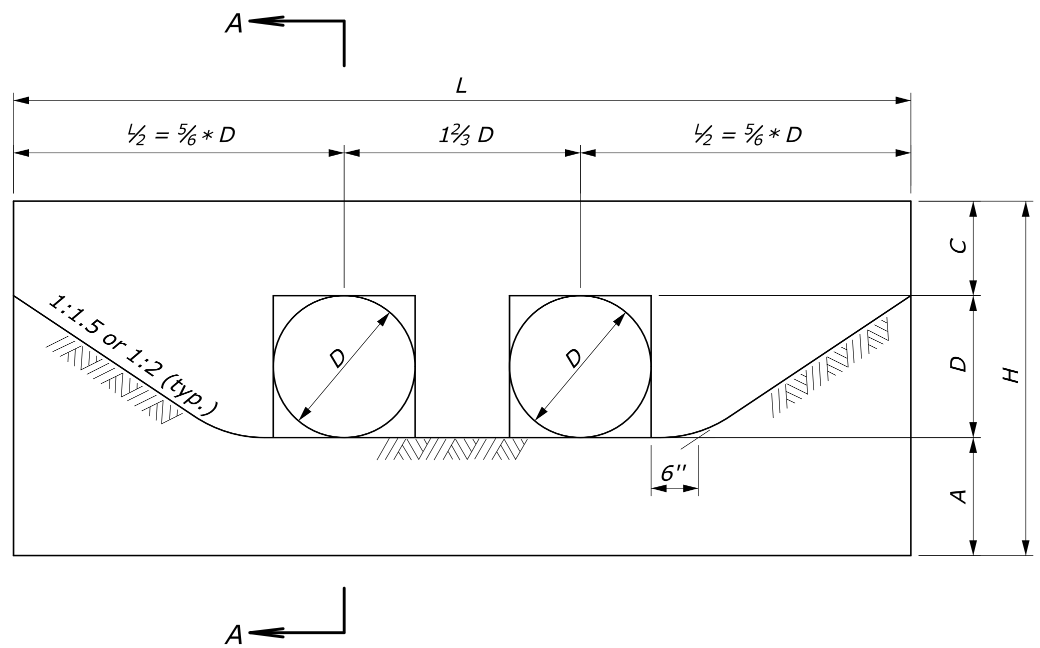
BLUE RIDGE PARKWAY

METAL FRAME AND GRATE, TYPE 6A-6 (CURVED VANE GRATE)

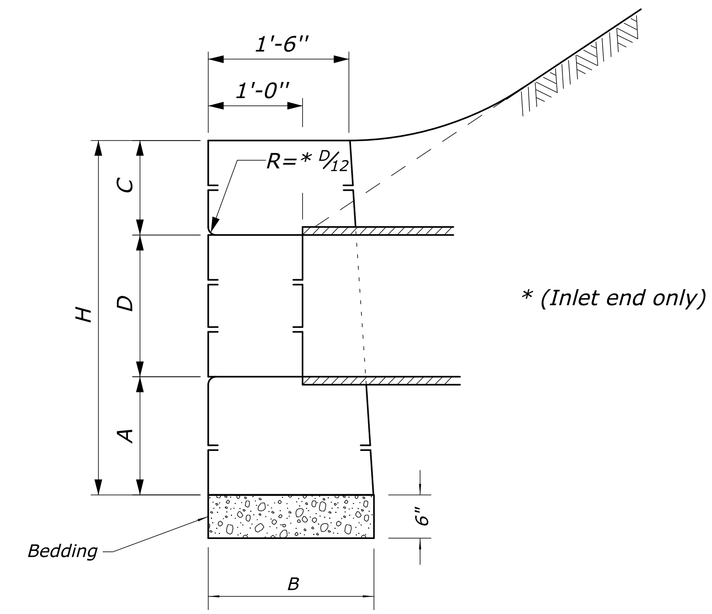
STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	K18



SINGLE



DOUBLE



SECTION A-A

NOTES:

1. All headwalls are oriented parallel to the roadway centerline unless otherwise indicated on the plans or by the Engineer.
2. When pipes are on skew, adapt and lengthen headwalls as directed.
3. Quantities shown in the table are for one headwall with pipe at right angles.
4. Construct headwalls using dimensions shown under values for 1½ :1 slope, unless otherwise designated by the Engineer.
5. Do not exceed the maximum distance of ½-inch between the pipe opening and the face of stone at the vertical horizontal chords of the pipe opening.
6. When constructing headwall, do not place stone joints directly under culverts.

	VALUES FOR 1½: 1 SLOPES								VALUES FOR 2:1 SLOPES							
	SINGLE				DOUBLE				SINGLE				DOUBLE			
D (In.)	18''	24''	30''	36''	18''	24''	30''	36''	18''	24''	30''	36''	18''	24''	30''	36''
L or L'	7'-0''	10'-0''	13'-0''	16'-0''	9'-6''	13'-4''	17'-2''	21'-0''	8'-6''	12'-4''	16'-2''	20'-0''	11'-0''	15'-8''	20'-4''	25'-0''
H	3'-9''	4'-10''	5'-11''	7'-0''	3'-9''	4'-10''	5'-11''	7'-0''	3'-9''	4'-10''	5'-11''	7'-0''	3'-9''	4'-10''	5'-11''	7'-0''
B	1'-9''	2'-0''	2'-5''	2'-10''	1'-9''	2'-0''	2'-5''	2'-10''	1'-9''	2'-0''	2'-5''	2'-10''	1'-9''	2'-0''	2'-5''	2'-10''
A (min.)	1'-3''	1'-6''	1'-9''	2'-0''	1'-3''	1'-6''	1'-9''	2'-0''	1'-3''	1'-6''	1'-9''	2'-0''	1'-3''	1'-6''	1'-9''	2'-0''
C	1'-0''	1'-4''	1'-8''	2'-0''	1'-0''	1'-4''	1'-8''	2'-0''	1'-0''	1'-4''	1'-8''	2'-0''	1'-0''	1'-4''	1'-8''	2'-0''
Stone (CY)	1.45	2.87	5.14''	8.28	1.89	3.66	6.47	10.37	1.78	3.60	6.50	10.53	2.22	4.39	7.83	12.62

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

BLUE RIDGE PARKWAY

STONE MASONRY HEADWALLS FOR SMALL PIPE CULVERTS

19-Mar-2019 10:39 AM \\fhf1I5fileserve.flhd.fhwa.dot.gov\data\PROJECTS_STATE_DOT\NC\blri_i26_nepa\Proj_Dev\CADD\From_Eng_Support\As_Requested_3_2017\K18-NCDOT877A_st6200I_detail.dgn

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	M01

PROJECT DESCRIPTION

This project consists of grading, paving, bridge replacement, constructing reinforced soil slopes, drainage improvements and other miscellaneous work on a 0.58 mile segment of roadway near mile marker 391.79 on the Blue Ridge Parkway.

The receiving water is French Broad River.

SUMMARY

Soil disturbing activities will mainly include roadway grading. The total disturbed area for the project is approximately 9.1 acres.

Approximately 0.97 acre of new impervious asphalt surface will be created by the realigned roadway. The Runoff Coefficient prior to construction is 0.30 (woodland). The Runoff Coefficient after construction will be 0.60.

EROSION AND SEDIMENT CONTROLS

Erosion Control and Turf Establishment measures listed in this narrative are defined and outlined in the NCDOT, Releigh Standard Specifications for Roads & Structures and the Special Provision. The attached Erosion and Sediment Control Plan, M06-M31 provides details regarding the installation of the erosion and sediment controls.

Temporary Best Management Practices (BMP) to reduce erosion as a result of project work will be implemented in conjunction with the construction of this project. These include:

- *Install wire-backed silt fence in all areas of ground disturbance where sheet flow may cause erosion, particularly at the toe of fills. Coordinate the installation, use, and removal of erosion and sediment control measures with roadway activities to assure economical, effective, and continuous erosion and sediment control.*
- *Employ temporary stabilization practices in incremental stages as construction proceeds.*
- *Install all erosion and sediment control measures as directed by the Engineer. Do not modify the type, size, or location of any control or practice without prior approval from the Engineer.*
- *Do not drive construction equipment across flowing waterways.*
- *Do not allow construction vehicles to track sediment outside the project limits.*
- *Do not allow any construction equipment to operate on or access the down-slope side of the perimeter control measures.*
- *Direct storm water to vegetated buffer areas and do not discharge directly into surface waters.*
- *Inspect and maintain regularly all mechanized equipment used in or near surface waters to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.*
- *In general, preserve existing vegetation, trees, and shrubs.*
- *Stockpile topsoil stripped from the construction area in an area that will not interfere with construction phases. Cover stockpiled soil with plastic or surround it with silt fence.*
- *Provide watering for dust control within the construction limits, on active haul roads, and in pits and staging areas.*
- *Solid waste resulting from the construction will consist of construction debris, garbage, and empty containers. Collect and store all waste in dumpsters, or in metal or plastic drums as appropriate.*
- *Hazardous waste will not be generated from normal construction activities. Equipment fueling and maintenance could generate spills, leaks, and hazardous wastes like motor oil, diesel, gasoline, and battery fluid. If feasible, conduct these activities in a covered area to avoid contact with storm water. Store all hazardous waste materials in appropriate and clearly marked containers away from other non-waste materials. Do not dispose of hazardous waste materials into the on-site dumpsters. Dispose of material according to Federal, State, and local regulations.*
- *Report spills large enough to discharge to surface water to the National Response Center (NRC) at 1-800-424-8802 or 1-202-267-2675.*

After the completion of roadway construction and culvert replacement, do the following as directed by the Engineer to permanently stabilize disturbed areas:

- *Where necessary, replace eroded topsoil and re-apply permanent turf establishment to disturbed areas where vegetation has not established*
- *Inspect, clean, and repair all culvert outlet protection, riprap basins, and stabilized riprap slopes*
- *Remove all devices used for dewatering*
- *Remove silt fence after all upslope areas are stabilized and vegetation is well established.*
- *Stabilize all areas that are disturbed due to the removal of sediment control devices*

VEGETATIVE STABILIZATION

Stabilize 9.1 acres as a result of this project. The area will be prepared for turf establishment with topsoil and mulch. In accordance with the Special Provision, apply seed at the rates as shown below:

TABLE 1
TEMPORARY TURF ESTABLISHMENT

SCIENTIFIC NAME	COMMON NAME	RATE [LBS PER AC]
Secale cereal	Cereal rye	20

TABLE 2
PERMANENT VEGETATION ESTABLISHMENT - MEADOW SEED MIX

CATEGORY	SCIENTIFIC NAME	COMMON NAME	LB OF SEED PER ACRE	TOTAL LBS OF SEED FOR 9 ACRES INSTALLED OUTSIDE OF JUNE-OCT	LBS FOR 15% SUPPLY TO NPS (FOR 9 ACRES TOTAL REVEG AREA
Grasses	Elymus virginicus	Virginia wildrye	4.18	37.64	5.65
	Schizachyrium scoparium	Little bluestem	0.43	3.90	0.59
	Andropogon gerardii	Big bluestem	0.73	6.53	0.98
	Tridens flavus	Purpletop	0.37	3.37	0.51
	Juncus tenuis	Pathrush	0.02	0.16	0.02
	Deschampsia flexuosa	Hair grass	0.08	0.75	0.11
	Sorghastrum nutans	Indiangrass	0.80	7.17	1.08
	Panicum anceps	Beaked panic grass	0.21	1.86	0.28
	Dichanthelium clandestinum	Deer tongue	0.48	4.36	0.65
	Saccharum giganteum	Beard grass	0.70	6.27	0.94
Forbes	Parthenium integrifolium	Feverfew	1.24	11.20	1.68
	Monarda fistulosa	Wild bergamot	0.12	1.12	0.17
	Chamaecrista fasciculata	Partridge pea	6.45	58.08	8.71
	Lespedeza capitata	Round-headed bushclover	0.54	4.90	0.74
	Geranium maculatum	Wild geranium	2.18	19.60	2.94
	Penstemon laevigatus	Appalachian beardtongue	0.45	4.09	0.61
	Solidago rugosa	Wrinkle leaf goldenrod	0.03	0.31	0.05
	Rudbeckia triloba	Brown-eyed susan	0.20	1.76	0.26
	Symphyotrichum laevis	Smooth blue aster	0.14	1.24	0.19
	Asclepias syriaca	Common milkweed	1.49	13.44	2.02
	Tradescantia subaspera	Spiderwort	0.80	7.17	1.08
	Desmodium paniculatum	Panicleleaf ticktrefoil	0.70	6.27	0.94
	Senna hebecarpa	Wild senna	1.70	15.30	2.29
	Pycnanthemum muticum	Mountain mint	0.01	0.08	0.01
Shurb	Rosa carolina	Carolina rose	0.87	7.84	1.18
	Ceanothus americanus	New Jersey Tea	0.29	2.58	0.39

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

EROSION & SEDIMENT CONTROL NARRATIVE

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	M02

TABLE 3
ROAD SHOULDER MIX

SCIENTIFIC NAME	COMMON NAME	LBS/ACRE	TOTAL FOR 2.5 ACRES
Agrostis perennans	Autumn bentgrass	0.27	0.68
Deschampsia flexuosa	Hair grass	0.70	1.74
Tridens flavus	Purpletop	5.81	14.52
Juncus tenuis	Pathrush	0.07	0.16
Schizachyrium scoparium	Little bluestem	3.35	8.38
Total		**10**	**25**

In accordance with the Special Provisions, apply mulch at the following rates:

Mulch	Rate (pounds per acre)
Wood Fiber Mulch	5000 (1 to 2 inch mat)

EROSION & SEDIMENT CONTROL CONSTRUCTION SEQUENCE

PHASE I Establish Perimeter Controls

Prior to any clearing, grubbing, and excavation, construct perimeter controls to ensure that disturbed sediment does not leave the project site. Perimeter controls include silt fence and other approved measures outside the construction limits.

PHASE II- Intermediate Controls

Apply intermediate controls during rough grading operations. Construct access roads as directed by the Engineer. Install wire-backed silt fence and special silt fence in areas called out on the Erosion and Sediment Control Plans. Install wattles in ditches along the roadway. Obtain the Engineer's approval before installing any control not specified in the SWPPP/ECN.

The Engineer may direct the installation of certain controls in order to forestall or mitigate potential or existing erosion problems.

Apply temporary turf establishment in completed disturbed areas that will remain exposed for over 7 calendar days, or as directed by the Engineer.

As soon as practical, but not to exceed 7 calendar days, apply permanent turf establishment to the finished slopes according to Section 1660.

At the end of each day's grading operations, shape earthwork to minimize and control erosion from storm runoff.

Do not allow ponded water to encroach into the travel lanes.

Provide silt fence around all stockpiled excavated roadway material.

Apply temporary turf establishment to stockpiles remaining in place longer than 14 days, or when directed by the Engineer.

Only disturb areas that can be stabilized at the end of the day. Apply permanent turf establishment to the finished slopes according to the Special Provisions.

Provide watering for dust control within the construction limits, on active haul roads, in pits and staging areas.

PHASE III- Final Construction / Stabilization

After completion of roadway construction do the following as directed by the Engineer:

- Finish grading, place riprap, and apply permanent turf establishment to any remaining disturbed areas as shown on the Plans and Special Provisions.
- Remove access road and stabilize areas as shown on the Plans.
- Where necessary, replace eroded topsoil and re-apply permanent turf establishment to disturbed areas where vegetation has not established.
- Remove silt fence only after all upslope areas are stabilized and vegetation is well established.
- Remove all other perimeter controls when directed by the Engineer.

Where necessary, replace eroded topsoil and re-apply permanent turf establishment to disturbed areas where vegetation was not established. Inspect, clean and repair inlet protection, riprap basins and stabilized channels.

MAINTENANCE AND INSPECTION PROCEDURES

Silt fence - Inspect for buildup of excess sediment, undercutting, sags, and other failures. If the fabric becomes damaged, repair or replace as necessary. Remove sediment from behind the silt fence when it becomes 0.5 feet deep at the fence.

Wattle Check Dam - Remove sediment at the base of the roll when it has reached 1/3 of the exposed height of the roll, or as directed by the Engineer.

Erosion Control Matting (Rolled Erosion Control Product) - Unroll and lay matting out down slope face (in direction of flow). Anchor at top of slope. Do not stretch matting. For culvert inlets and ditches, install matting along the bottom of the ditches first and then up the side slopes.

Inlet protection - Inspect to ensure that inlet protections remain firmly in place and are not damaged or clogged. Clean clogged inlet protections or replace clogged or damaged inlet protections as necessary.

Gravel construction entrance - Inspect gravel construction entrances every seven days. Check for mud/sediment buildup and pad integrity. Wash, replace, or add stone whenever the entrance fails to perform effectively. Immediately brush or sweep up soil that has been tracked offsite onto the roadway for proper disposal.

Temporary slope drains - Inspect the slope drain and supporting diversion after every rainfall, and promptly make necessary repairs. When the protected area has been permanently stabilized, temporary measures may be removed, materials disposed of properly and all disturbed areas stabilized appropiately. If visible sedimentation is found off-site, take immediate measure to clean up the site.

Temporary riser basin - Inspect basin and riser on a regular basis and after every significant rainfall event (1/2-inch or greater). Inspect riser for proper operation. Remove debris from around the riser or the trash rack. Check the skimmer for proper functioning and verify that it is not clogged with sediment. Make sure the vent pipe on the skimmer is turned upright. Inspect the barrel for seepage around the pipe at outlet. Inspect the embankment, baffles, overflow spillway and outlet for erosion damage. At a minimum, remove sediment when the basin volume reaches 50% of the total storage volume and as needed.

Construction road stabilization - Inspect construction roads and parking areas periodically for condition of surface. Topdress with new gravel as needed. Check road ditches and other seeded areas for erosion and sedimentarion after every significant rainfall event (1/2-inch or greater). Maintain all vegetation in healthy, vigorous condition. Sediment-producing areas should be treated immediately.

Temporary earth berm- Inspect after every rainfall event regardless of storm events and at least once every two weeks. Ensure runoff is diverted at the outl of the earth berm as designed. No vehicular or construction traffic will be allow to travel across or near the earth berms.

Maintain written records of inspection and repairs.

Record the inspection date and summary of findings within 24 hours of completing a site inspection.

Provide the Engineer with copies of the inspection and maintenance records every month, and at the completion of the project.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

EROSION & SEDIMENT CONTROL NARRATIVE

STATE	PROJECT	SHEET NUMBER
NC	BLRI OVER I-26	M03

Major Elements of DWQ Construction General Permit

This document contains the major elements of the recently-revised North Carolina Division of Water Quality (DWQ) Construction General Permit (NCG01) with emphasis placed on those elements that differ from the previous permit (expiration on August 2, 2011). Since the summary list below cannot contain details of every change, the complete Permit should be used to assure full implementation. See: http://portal.ncdenr.org/web/wq/ws/su/construction

1) Ground Stabilization*

Site Area Description	Stabilization Time Frame	Stabilization Time Frame 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 feet in length
• All other areas with slopes flatter than 4:1	14 days	None (except for perimeters and HQW Zones)

* "Extensions of time may be approved by the permitting authority based on weather or other site-specific conditions that make compliance impracticable." (Section II.B(2)(b))

The major change in the Permit from the previous one is the shorter times to apply ground stabilization such as mulch, wheat straw, or grasses. The NC laws and rules relating to the Sediment Act require, in most places, ground stabilization within 21 days. Based on the new EPA requirements and 9-months' work with a permit advisory group, CTAG, the Division and EPA-developed permit, now contains requirements for ground cover within 14, and in some places, 7 days.

2) Building Wastes Handling

- No paint or liquid wastes in stream or storm drains
- Dedicated areas for demolition, construction and other wastes must be located 50' from storm drains and streams unless no reasonable alternatives available.
- Earthen-material stockpiles must be located 50' from storm drains and streams unless no reasonable alternatives available.
- Concrete materials must be controlled to avoid contact with surface waters, wetlands, or buffers.

3) Discharges to Federally-listed Waters

- Requirements are the same as in previous permit.
- The permit allows reduction from the 20 acre minimum if the Director of DWQ determines that other BMPs provide equivalent protection.

4) Inspections

- Same weekly inspection requirements
- Same rain gauge & inspections after 0.5" rain event
- Inspections are only required during "normal business hours"
- Inspection reports must be available on-site during business hours unless a site-specific exemption is approved.
- Records must be kept for 3 years and available upon request.
- Electronically-available records may be substituted under certain conditions.

5) Implementation of New Permit Conditions

- Projects permitted under the previous permit can continue to follow the previously-permitted conditions.
- Complete applications received prior to August 3, 2011 can follow conditions of approved application.
- Applications received after August 2, 2011 must comply with new permit conditions.

6) Conditions in Erosion & Sedimentation Control Plans*

Designation on the plans where the 7 and 14-day ground stabilization requirements of the NPDES permit apply

Designation on the plans where basins that comply with the surface-withdrawal requirements of the NPDES permit are located.

7) Building Wastes Handling

- No paint or liquid wastes in stream or storm drains
- Dedicated areas for demolition, construction and other wastes located 50' from storm drains and streams unless no reasonable alternatives are available.
- Earthen-material stockpiles located 50' from storm drains unless no reasonable alternatives available.
- Concrete materials must be controlled to avoid contact with surface waters, wetlands, or buffers.

8) Sediment Basins

- Outlet structures must withdraw from basin surface unless drainage area is less than 1 acre.
- Use only DWQ-approved flocculants.

* In order for the E&SC Plan to satisfy the conditions of the Construction General permit, it must identify areas where the ground stabilization requirements apply and the location of the basins where the surface-withdrawal requirements apply.

NOTE:
Slope notation in table above is 1H (horizontal) :1V (Vertical).

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

EROSION & SEDIMENT CONTROL NARRATIVE