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09/08/99

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

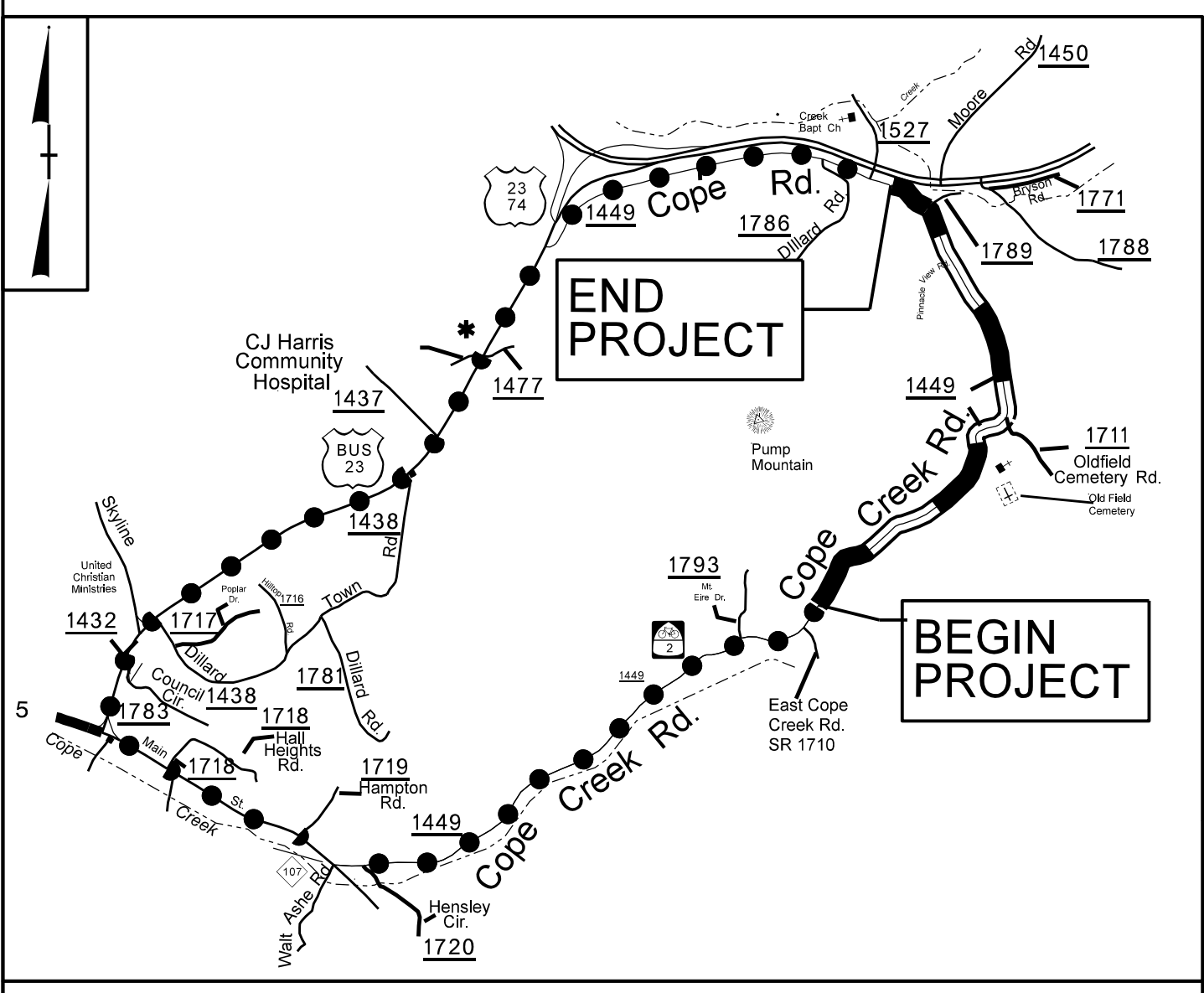
JACKSON COUNTY

LOCATION: SR 1449 (COPE CREEK ROAD) FROM
SR 1710 (EAST COPE CREEK ROAD) TO US 23/74
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND WALLS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5206	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42974.1.1		P.E.	
42974.2.1		RW	
42974.3.3		CONST	

PROJECT: R-5206

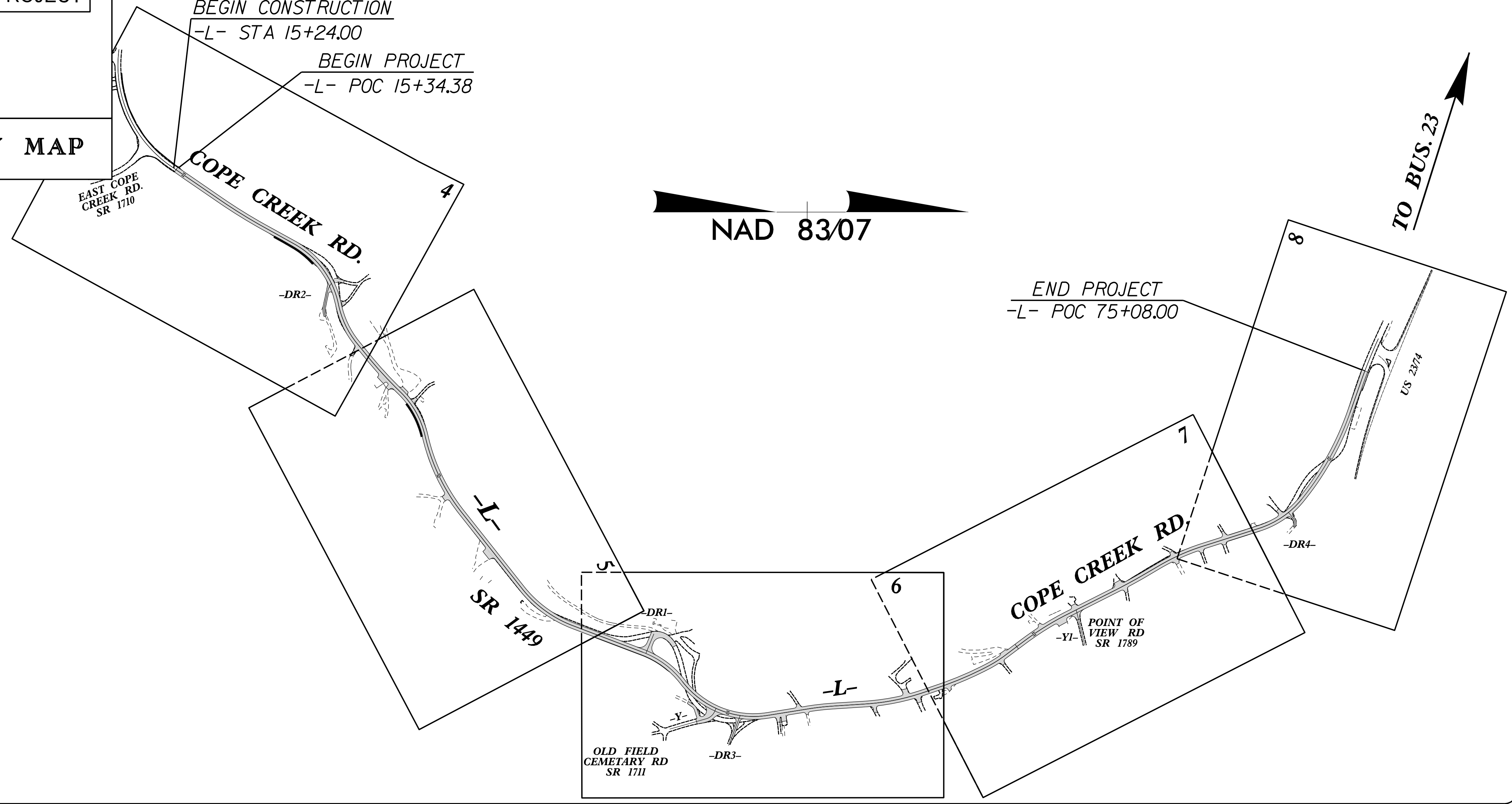
CONTRACT: C203491



DETOUR VICINITY MAP

TO SYLVIA

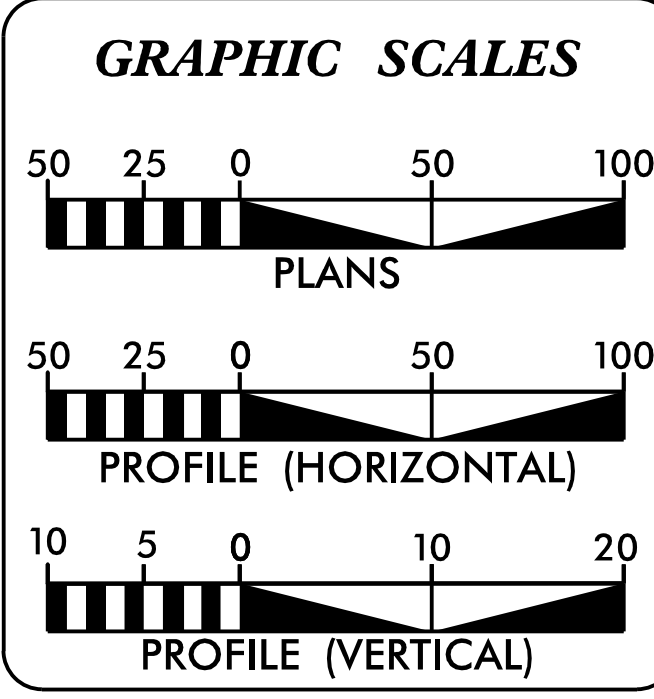
BEGIN CONSTRUCTION
-L- STA 15+24.00
BEGIN PROJECT
-L- POC 15+34.38



NAD 83/07

TO BUS. 23

END PROJECT
-L- POC 75+08.00



DESIGN DATA

ADT 2012 =	3250
ADT 2032 =	4350
DHV =	12 %
D =	60 %
T =	1 %
V =	35 MPH

PROJECT LENGTH

LENGTH ROADWAY PROJECT R-5206 = 1.131 Miles

SEPI
ENGINEERING & CONSTRUCTION
1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: JUNE 15, 2012	STEVE SCOTT, PE PROJECT ENGINEER
LETTING DATE: JULY 21, 2015	BEN CRAWFORD, PE PROJECT DESIGNER
NCDOT CONTACT	STEPHEN WILLIAMS DIVISION PROJECT MANAGER-NCDOT

HYDRAULICS ENGINEER

DocuSigned by:
David Webb
SIGNATURE:

ROADWAY DESIGN ENGINEER

DocuSigned by:
Steve Scott
SIGNATURE:

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

\$\$\$\$\$ SYSTEM \$\$\$\$\$\$
\$\$\$\$\$ DGN \$\$\$\$\$\$
\$\$\$\$\$ USERNAME \$\$\$\$\$\$

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. R-5206 SHEET NO. 1B SEPI ENGINEERING & CONSTRUCTION

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

Table listing symbols for State Line, County Line, Township Line, City Line, Reservation Line, Property Line, Existing Iron Pin, Property Corner, Property Monument, Parcel/Sequence Number, Existing Fence Line, Proposed Woven Wire Fence, Proposed Chain Link Fence, Proposed Barbed Wire Fence, Existing Wetland Boundary, Proposed Wetland Boundary, Existing Endangered Animal Boundary, Existing Endangered Plant Boundary, Existing Historic Property Boundary, Known Soil Contamination: Area or Site, Potential Soil Contamination: Area or Site.

BUILDINGS AND OTHER CULTURE:

Table listing symbols for Gas Pump Vent or U/G Tank Cap, Sign, Well, Small Mine, Foundation, Area Outline, Cemetery, Building, School, Church, Dam.

HYDROLOGY:

Table listing symbols for Stream or Body of Water, Hydro, Pool or Reservoir, Jurisdictional Stream, Buffer Zone 1, Buffer Zone 2, Flow Arrow, Disappearing Stream, Spring, Wetland, Proposed Lateral, Tail, Head Ditch, False Sump.

RAILROADS:

Table listing symbols for Standard Gauge, RR Signal Milepost, Switch, RR Abandoned, RR Dismantled.

RIGHT OF WAY:

Table listing symbols for Baseline Control Point, Existing Right of Way Marker, Existing Right of Way Line, Proposed Right of Way Line, Proposed Right of Way Line with Iron Pin and Cap Marker, Proposed Right of Way Line with Concrete or Granite RW Marker, Proposed Control of Access Line with Concrete CA Marker, Existing Control of Access, Proposed Control of Access, Existing Easement Line, Proposed Temporary Construction Easement, Proposed Temporary Drainage Easement, Proposed Permanent Drainage Easement, Proposed Permanent Drainage / Utility Easement, Proposed Permanent Utility Easement, Proposed Temporary Utility Easement, Proposed Aerial Utility Easement, Proposed Permanent Easement with Iron Pin and Cap Marker.

ROADS AND RELATED FEATURES:

Table listing symbols for Existing Edge of Pavement, Existing Curb, Proposed Slope Stakes Cut, Proposed Slope Stakes Fill, Proposed Curb Ramp, Existing Metal Guardrail, Proposed Guardrail, Existing Cable Guiderail, Proposed Cable Guiderail, Equality Symbol, Pavement Removal.

VEGETATION:

Table listing symbols for Single Tree, Single Shrub, Hedge, Woods Line.

Table listing symbols for Orchard, Vineyard.

EXISTING STRUCTURES:

Table listing symbols for MAJOR: Bridge, Tunnel or Box Culvert, Bridge Wing Wall, Head Wall and End Wall; MINOR: Head and End Wall, Pipe Culvert, Footbridge; Drainage Box: Catch Basin, DI or JB; Paved Ditch Gutter; Storm Sewer Manhole; Storm Sewer.

UTILITIES:

Table listing symbols for POWER: Existing Power Pole, Proposed Power Pole, Existing Joint Use Pole, Proposed Joint Use Pole, Power Manhole, Power Line Tower, Power Transformer, U/G Power Cable Hand Hole, H-Frame Pole, Recorded U/G Power Line, Designated U/G Power Line (S.U.E.*); TELEPHONE: Existing Telephone Pole, Proposed Telephone Pole, Telephone Manhole, Telephone Booth, Telephone Pedestal, Telephone Cell Tower, U/G Telephone Cable Hand Hole, Recorded U/G Telephone Cable, Designated U/G Telephone Cable (S.U.E.*), Recorded U/G Telephone Conduit, Designated U/G Telephone Conduit (S.U.E.*), Recorded U/G Fiber Optics Cable, Designated U/G Fiber Optics Cable (S.U.E.*).

WATER:

Table listing symbols for Water Manhole, Water Meter, Water Valve, Water Hydrant, Recorded U/G Water Line, Designated U/G Water Line (S.U.E.*), Above Ground Water Line.

TV:

Table listing symbols for TV Satellite Dish, TV Pedestal, TV Tower, U/G TV Cable Hand Hole, Recorded U/G TV Cable, Designated U/G TV Cable (S.U.E.*), Recorded U/G Fiber Optic Cable, Designated U/G Fiber Optic Cable (S.U.E.*).

GAS:

Table listing symbols for Gas Valve, Gas Meter, Recorded U/G Gas Line, Designated U/G Gas Line (S.U.E.*), Above Ground Gas Line.

SANITARY SEWER:

Table listing symbols for Sanitary Sewer Manhole, Sanitary Sewer Cleanout, U/G Sanitary Sewer Line, Above Ground Sanitary Sewer, Recorded SS Forced Main Line, Designated SS Forced Main Line (S.U.E.*).

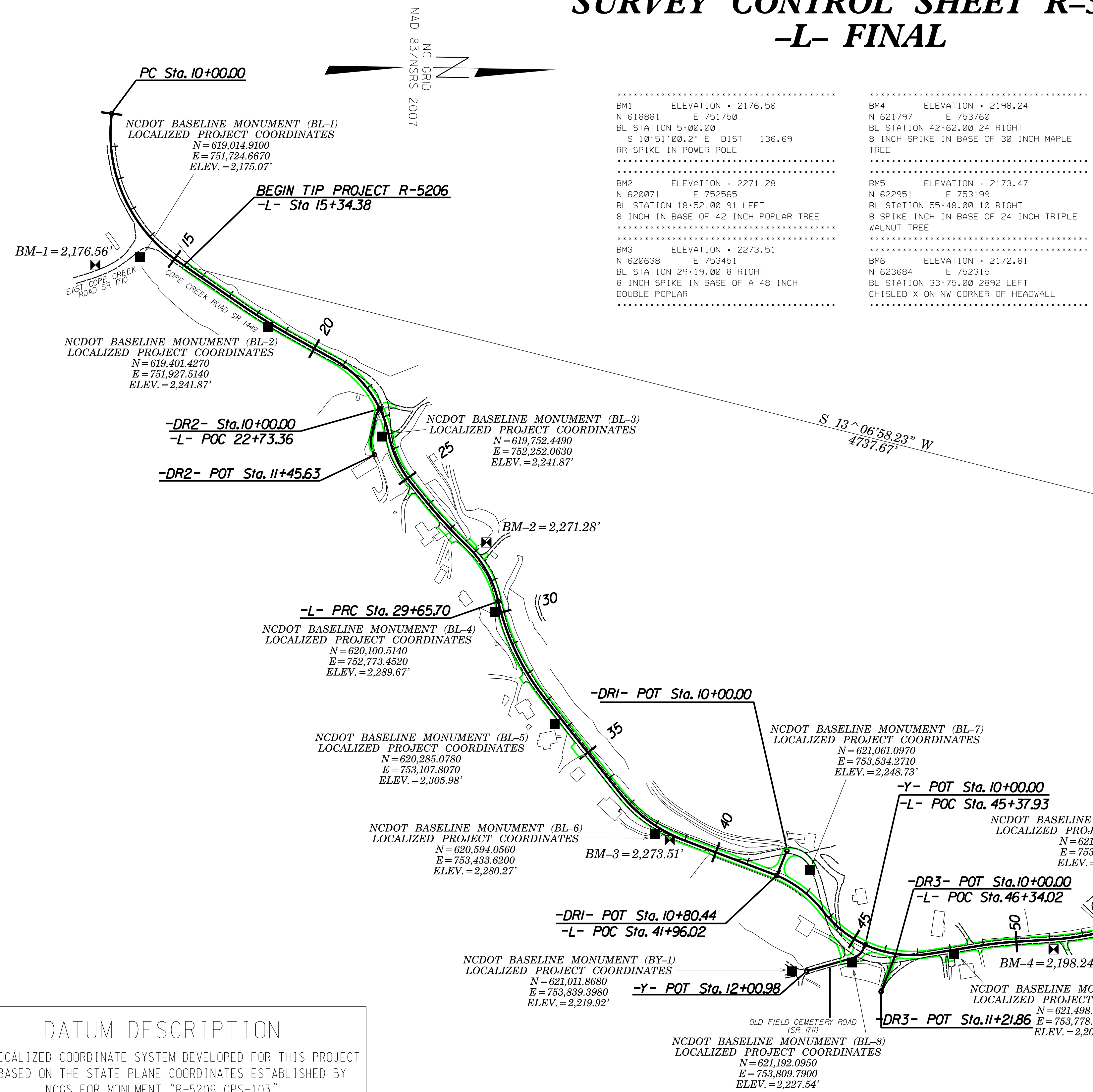
MISCELLANEOUS:

Table listing symbols for Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line, U/G Tank; Water, Gas, Oil, Underground Storage Tank, Approx. Loc., A/G Tank; Water, Gas, Oil, Geoenvironmental Boring, U/G Test Hole (S.U.E.*), Abandoned According to Utility Records, End of Information.

6/22/09

SURVEY CONTROL SHEET R-5206 -L- FINAL

PROJECT REFERENCE NO.	SHEET NO.
42974.1.1	1C-1
Location and Surveys	



BM1 ELEVATION = 2176.56 N 618881 E 751750 BL STATION 5+00.00 S 10°51'00.2" E DIST 136.69 RR SPIKE IN POWER POLE	BM4 ELEVATION = 2198.24 N 621797 E 753760 BL STATION 42+62.00 24 RIGHT 8 INCH SPIKE IN BASE OF 30 INCH MAPLE TREE
BM2 ELEVATION = 2271.28 N 620071 E 752565 BL STATION 18+52.00 91 LEFT 8 INCH IN BASE OF 42 INCH POPLAR TREE	BM5 ELEVATION = 2173.47 N 622951 E 753199 BL STATION 55+48.00 10 RIGHT 8 SPIKE INCH IN BASE OF 24 INCH TRIPLE WALNUT TREE
BM3 ELEVATION = 2273.51 N 620638 E 753451 BL STATION 29+19.00 8 RIGHT 8 INCH SPIKE IN BASE OF A 48 INCH DOUBLE POPLAR	BM6 ELEVATION = 2172.81 N 623684 E 752315 BL STATION 33+75.00 2892 LEFT CHISLED X ON NW CORNER OF HEADWALL

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1	619014.9100	751724.6670	2175.07	14+23.44	63.36 RT
2	BL-2	619401.4270	751927.5140	2201.89	18+45.71	12.51 RT
3	BL-3	619752.4490	752252.0630	2241.87	23+57.87	19.80 RT
4	BL-4	620100.5140	752773.4520	2289.67	29+93.43	16.80 RT
5	BL-5	620285.0780	753107.8070	2305.98	33+70.49	25.01 RT
6	BL-6	620594.0560	753433.6200	2300.27	38+14.22	21.40 RT
7	BL-7	621061.0970	753534.2710	2248.73	42+69.59	62.94 LT
8	BL-8	621192.0950	753809.7900	2227.54	45+26.27	65.07 RT
9	BL-9	621498.8750	753778.6830	2206.47	48+09.23	11.92 RT
10	BL-10	621958.7920	753713.3280	2198.73	52+73.33	11.87 RT
11	BL-11	622335.4950	753543.7300	2186.23	56+83.67	12.65 RT
12	BL-12	622608.7660	753374.4880	2182.40	60+08.86	21.88 RT
13	BL-13	622906.8940	753206.3320	2176.02	63+49.93	19.31 RT
14	BL-14	623259.8670	753061.1400	2164.18	67+36.76	15.78 RT
15	BL-15	623559.5050	752778.8670	2162.24	71+47.98	20.28 RT
16	BL-16	623702.3070	752423.8270	2171.27	75+28.23	25.75 RT

BY1 POINT	DESC.	NORTH	EAST	ELEVATION	Y STATION	OFFSET
88	BL-8	621192.0950	753809.7900	2227.54	10+62.62	12.39 LT
17	BY-1	621011.8680	753839.3980	2219.92	OUTSIDE PROJECT LIMITS	

BY2 POINT	DESC.	NORTH	EAST	ELEVATION	Y1 STATION	OFFSET
112	BL-12	622608.7660	753374.4880	2182.40	10+19.47	12.84 LT
18	BY-2	622644.1100	753509.6350	2194.93	OUTSIDE PROJECT LIMITS	

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "R-5206 GPS-103" WITH NAD 83/07 STATE PLANE GRID COORDINATES OF NORTHING: 623,760.7670(++) EASTING: 752,822.3070(++) ELEVATION: 2,160.25(++)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99977546

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "R-5206 GPS-103" TO -L- STATION 15+34.38 IS S 13°06'58.23" W 4,737.67'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS NAVD 88

GEOID MODEL - G03NC
NOTE: DRAWING NOT TO SCALE

NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: [HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)
- THE FILES TO BE FOUND ARE AS FOLLOWS: R-5206_LS_CONTROL.TXT
- SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

⊙ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT. PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

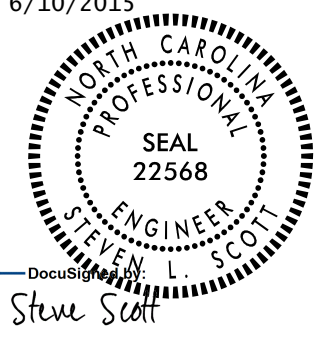
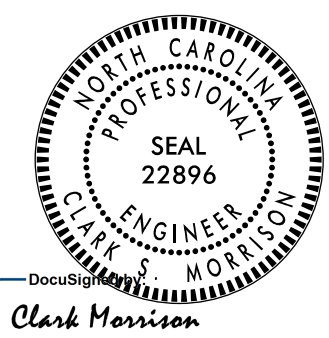

SURVEY CONTROL SHEET R-5206

-FINAL-

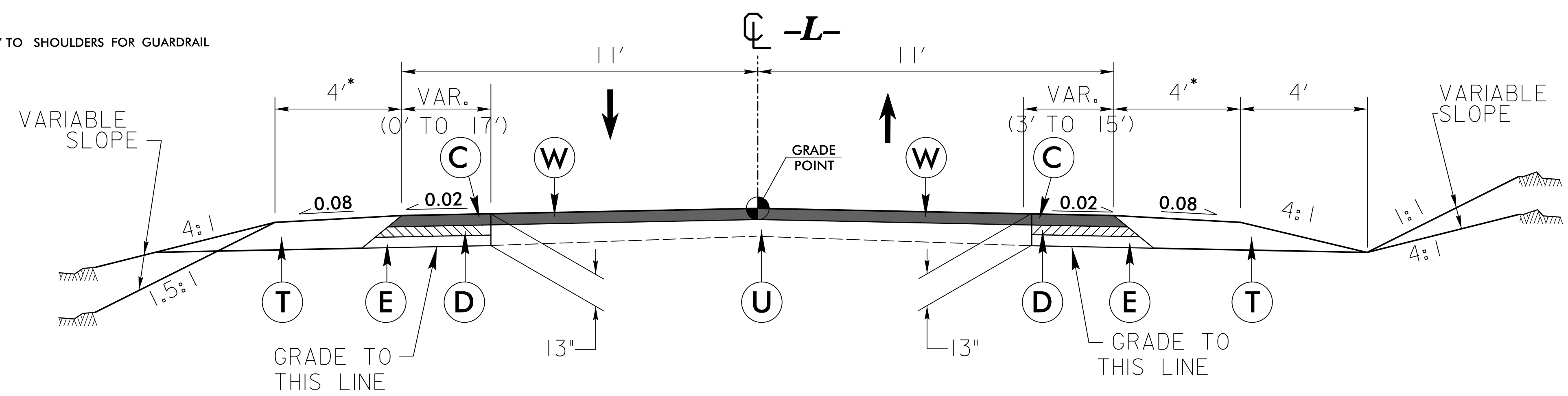
-FINAL- ROW MARKER IRON PIN AND CAP-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	15+70.63	-25.00	619190.7157	751746.3730
L	17+40.05	-25.00	619331.9754	751839.9091
L	19+31.55	-25.00	619494.4035	751936.6119
L	20+63.93	-25.00	619611.2568	751998.8086
L	21+45.81	-25.00	619683.1597	752049.0144
L	22+93.95	-25.00	619775.2124	752177.1457
L	23+57.60	-25.00	619796.1269	752242.0925
L	25+21.26	-25.00	619862.6869	752376.7430
L	25+83.57	-25.00	619902.7174	752424.4324
L	27+68.28	-25.00	620027.8589	752555.9274
L	29+65.70	-25.00	620133.8039	752736.0545
L	32+91.53	-25.00	620273.6865	753015.0525
L	36+57.41	-25.00	620595.8469	753297.7701
L	38+99.27	-25.00	620690.2649	753427.8665
L	40+70.50	-25.00	620851.3657	753485.8765
L	43+71.35	-25.00	621119.9892	753639.4270
L	43+72.99	-25.00	621121.0073	753640.8002
L	47+38.64	-25.00	621422.8862	753754.7566
L	48+94.17	-25.00	621575.9970	753727.4065
L	49+90.15	-25.00	621673.5195	753714.7778
L	51+12.96	-25.00	621795.9352	753704.8663
L	52+68.83	-25.00	621944.7609	753678.9401
L	52+75.15	-16.50	621952.9571	753685.5048
L	53+37.60	-16.50	622011.2962	753666.9245
L	54+02.22	-16.50	622072.1079	753645.0657
L	54+77.12	-16.50	622140.9384	753618.0578
L	56+00.22	-16.50	622250.3282	753565.2035
L	56+77.81	-16.50	622312.9996	753524.2939
L	56+78.68	-25.00	622308.4432	753517.0705
L	57+68.27	-25.00	622379.1670	753462.0740
L	59+62.93	-25.00	622546.2970	753354.3570
L	61+69.56	-25.00	622729.1969	753258.2211
L	63+00.36	-25.00	622841.4753	753194.4295
L	63+57.32	-25.00	622890.0602	753164.6837
L	65+36.26	-25.00	623056.8595	753086.6590
L	67+64.29	-25.00	623272.9819	753013.6955
L	69+23.71	-25.00	623396.8811	752935.9441
L	71+08.19	-25.00	623500.5724	752791.2435
L	72+32.81	-25.00	623556.1666	752682.9648
L	68+81.19	216.57	623517.5177	753151.6792
L	68+91.22	25.00	623406.9740	752994.6558
L	67+64.29	25.00	623288.9086	753061.0669
L	65+36.26	25.00	623072.8582	753134.0304
L	63+57.32	25.00	622916.1679	753207.3262
L	63+00.36	25.00	622867.5830	753237.0721
L	61+69.56	25.00	622752.4621	753302.4787
L	60+05.68	25.00	622607.3961	753378.7365
L	59+62.93	25.00	622586.9319	753389.4941
L	59+62.93	25.00	622594.5630	753398.6246
L	57+68.27	25.00	622409.8603	753501.5446
L	56+78.68	25.00	622339.1364	753556.5411
L	56+00.22	25.00	622270.1330	753601.6730
L	54+02.22	25.00	622086.1457	753684.1194
L	53+37.60	25.00	622025.3340	753705.9781
L	53+19.79	25.00	622008.0178	753711.9983
L	53+00.20	25.00	621988.8255	753718.2010
L	51+12.96	25.00	621799.9703	753754.7032
L	49+90.15	25.00	621677.5546	753764.6148
L	48+94.17	25.00	621584.7893	753776.6273
L	47+38.64	25.00	621431.6785	753803.9775
L	46+51.28	25.00	621338.2666	753808.4929
L	44+24.91	25.00	621119.7778	753712.7347
L	43+72.99	25.00	621081.8823	753671.9327
L	41+84.96	25.00	620942.1141	753571.6964
L	38+99.27	25.00	620673.3254	753474.9096
L	36+57.41	25.00	620467.2111	753329.5077
L	34+25.45	25.00	620319.9767	753150.2720
L	34+17.53	13.87	620323.5496	753137.0884
L	33+49.56	12.90	620281.1554	753083.9540
L	33+48.00	25.00	620270.8117	753090.4211
L	32+91.53	25.00	620234.9707	753046.7201
L	29+65.70	25.00	620085.2530	752748.0050
L	27+68.28	25.00	619993.8210	752592.5529
L	25+83.57	25.00	619864.4524	752456.6161
L	25+21.26	25.00	619824.3428	752408.9261
L	23+57.60	25.00	619747.3896	752252.9032
L	20+63.93	25.00	619587.7641	752042.9458
L	19+31.55	25.00	619470.9189	751980.7492
L	17+40.05	25.00	619304.3706	751881.5982
L	15+71.72	25.00	619164.0165	751788.6616

DUE				
-FINAL- ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	21+07.07	-25.00	619650.6542	752023.1030
L	21+34.02	-52.32	619691.0766	752019.7605
L	21+72.39	-40.99	619715.2148	752057.8041
L	21+73.29	-32.18	619709.5303	752064.6846
L	56+41.93	-16.50	622294.8469	753544.4676
L	56+40.65	-33.94	622274.2336	753530.5783
L	56+42.34	-33.95	622275.5387	753529.7051
L	56+59.51	-16.50	622298.8290	753534.8463
L	69+23.71	-25.00	623396.8811	752935.9441
L	69+98.74	-53.29	623419.0622	752863.9548
L	71+38.93	-37.22	623504.7141	752759.2457
L	71+41.35	-25.00	623516.5589	752763.0566
L	68+89.93	41.82	623416.6876	753008.4544
L	68+46.41	40.94	623376.7880	753036.5417
L	68+46.41	25.00	623368.2208	753023.0966
L	68+80.57	25.00	622673.6862	753343.8894
L	68+80.54	33.50	622677.6171	753351.4296
L	68+68.99	33.58	622667.4280	753356.8672
L	68+59.95	42.15	622663.4174	753368.6603
L	68+60.01	25.00	622655.4901	753353.4547
L	56+88.34	25.00	622346.7631	753550.6104
L	56+87.52	43.70	622357.5972	753555.8750
L	56+62.94	38.22	622333.6755	753577.1848
L	56+62.94	25.00	622325.9020	753566.4886
L	49+98.56	25.00	621685.9388	753693.9359
L	49+98.26	42.51	621687.0532	753781.4153
L	48+94.17	37.50	621586.9871	753788.9312
L	48+94.17	25.00	621584.7893	753776.6273
L	18+05.09	25.00	619399.8605	751917.0571
L	18+03.68	47.79	619346.6716	751935.7039
L	17+86.11	47.44	619331.5953	751925.8849
L	17+86.25	25.00	619343.6661	751906.9700

PDE				
-FINAL- ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	22+25.69	-36.80	619749.4906	752106.4249
L	22+30.51	-65.85	619776.6056	752094.6348
L	22+48.29	-62.63	619785.2164	752114.2839
L	23+13.63	-25.00	619782.9748	752196.7968
L	26+98.55	-25.00	619978.7312	752508.1030
L	26+98.55	-39.27	619988.9145	752498.1118
L	26+98.55	-46.00	619993.7212	752493.3959
L	27+18.24	-46.00	620007.1795	752506.9361
L	27+18.24	-35.36	619999.6775	752514.4858
L	27+18.24	-25.00	619992.3774	752521.8363
L	31+49.42	-25.00	620197.3271	752901.2130
L	31+84.54	-32.04	620220.1335	752927.0735
L	32+91.53	-25.00	620273.6065	753015.0525
L	33+42.37	-25.00	620385.8777	753054.3378
L	34+50.00	-38.93	620384.9588	753128.6610
L	35+57.76	-25.00	620442.5985	753220.7747
L	36+57.41	-25.00	620505.8469	753297.7701
L	37+88.37	-35.71	620603.8430	753371.7723
L	37+88.37	-25.00	620597.0661	753380.6991
L	43+49.54	-36.53	621113.1768	753613.8721
L	44+22.64	-41.38	621163.3691	753662.6195
L	44+55.81	-35.60	621182.0482	753696.0528
L	44+55.81	-25.00	621175.5895	753694.4598
L	54+64.99	-16.50	622129.8998	753622.7016
L	54+64.99	-35.48	622122.6217	753605.1707
L	54+90.40	-35.94	622145.1799	753595.0554
L	54+90.40	-16.50	622152.9743	753612.8595
L	56+42.34	-33.95	622275.5387	753529.7051
L	56+70.26	-33.31	622297.1205	753515.2648
L	56+78.68	-25.00	622308.4432	753517.0705
L	63+82.06	-25.02	622912.0076	753151.6870
L	63+82.06	-32.03	622908.5323	753145.6814
L	64+15.53	-32.31	622938.9957	753128.7395
L	64+15.53	-25.00	622942.3472	753135.2305
L	64+15.53	-42.30	622934.4100	753119.8587
L	64+47.80	-43.50	622964.3988	753103.7967
L	64+47.80	-25.00	622972.2198	753120.5640
L	64+53.69	25.00	622998.5252	753163.4682
L	64+38.01	34.99	623002.6798	753172.5745
L	64+37.65	25.00	622989.3856	753179.5218
L	64+37.65	25.00	622984.4581	753170.0926
L	60+80.57	25.00	622673.6862	753343.8894
L	60+80.39	76.30	622697.4006	753389.3770
L	60+59.84	76.23	622679.1722	753398.8802
L	60+59.95	42.15	622663.4174	753368.6603
L	44+51.07	32.50	621136.4648	753736.8668
L	44+57.79	72.41	621118.1560	753773.1589
L	44+38.32	78.09	621096.0712	753762.6753
L	44+24.91	25.00	621119.7778	753712.7347
L	42+31.00	25.00	620981.1507	753588.8184
L	42+31.00	39.57	620974.4093	753601.7340
L	42+31.00	58.00	620969.5828	753610.9811
L	42+11.00	58.00	620954.2367	753603.5369
L	42+11.00	35.78	620960.0624	753590.5694
L	42+11.00	25.00	620964.4816	753580.7325
L	37+82.46	25.00	620954.0091	753418.6335
L	37+82.46	55.30	620946.7695	753443.5533
L	37+69.25	66.80	620927.8811	753444.1936
L	37+31.37	25.00	620852.4876	753385.4972
L	34+56.83	25.00	620339.8913	753174.5150
L	34+56.83	65.62	620308.5020	753200.3000
L	34+25.45	25.00	620319.9767	753150.2720
L	22+18.00	25.00	619694.9974	752136.4050
L	21+84.82	59.27	619649.6796	752134.6197
L	21+80.23	25.00	619672.4623	752108.7019
L	21+60.66	61.75	619634.1866	752121.9518
L	21+58.57	25.00	619658.4760	752094.3200
L	21+45.39	58.75	6196	

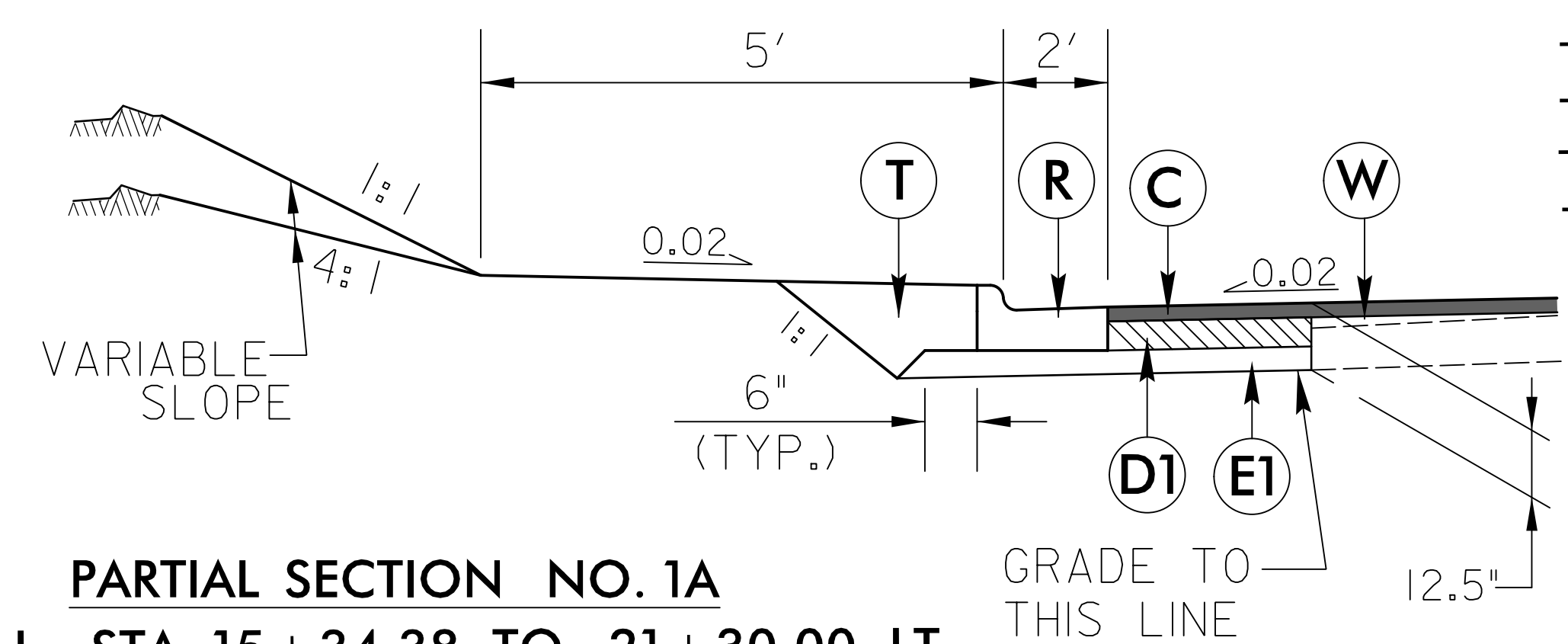
PROJECT REFERENCE NO. R-5206	SHEET NO. 2A-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 6/10/2015 	PAVEMENT DESIGN ENGINEER 6/12/2015 
	

* ADD 3' TO SHOULDERS FOR GUARDRAIL



TYPICAL SECTION NO. 1

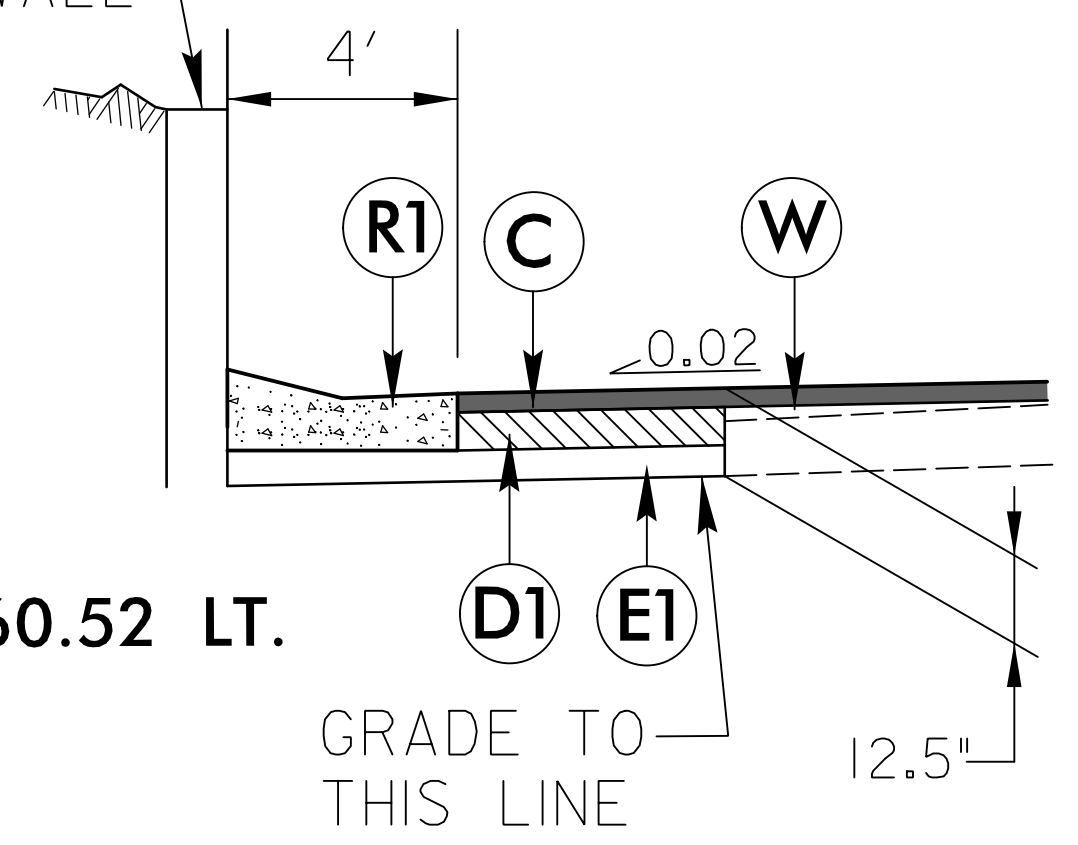
- L- STA. 15 + 34.38 TO 21 + 30.00
- L- STA. 23 + 00.00 TO 28 + 20.00
- L- STA. 30 + 70.00 TO 32 + 20.00
- L- STA. 35 + 25.00 TO 40 + 80.00
- L- STA. 48 + 25.00 TO 69 + 10.00
- L- STA. 71 + 15.19 TO 75 + 08.00



PARTIAL SECTION NO. 1A

- L- STA. 15 + 34.38 TO 21 + 30.00 LT.
- L- STA. 23 + 00.00 TO 27 + 62.59 LT.
- L- STA. 67 + 50.35 TO 68 + 59.96 LT.
- L- STA. 64 + 29.31 TO 64 + 80.00 LT.
- L- STA. 66 + 10.00 TO 66 + 24.23 LT.

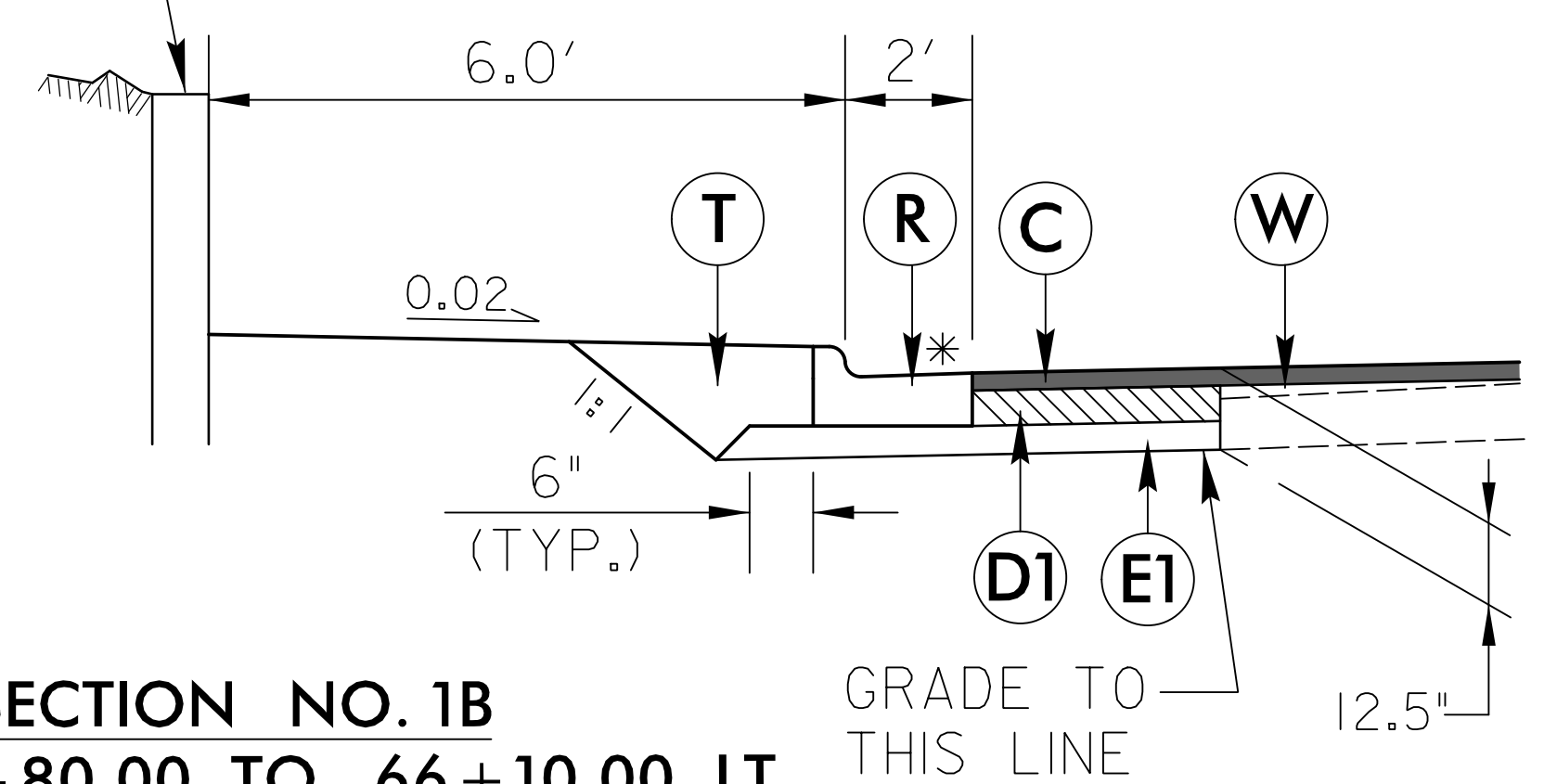
PROPOSED RETAINING WALL



PARTIAL SECTION NO. 1C

- L- STA. 52 + 92.52 TO 56 + 60.52 LT.

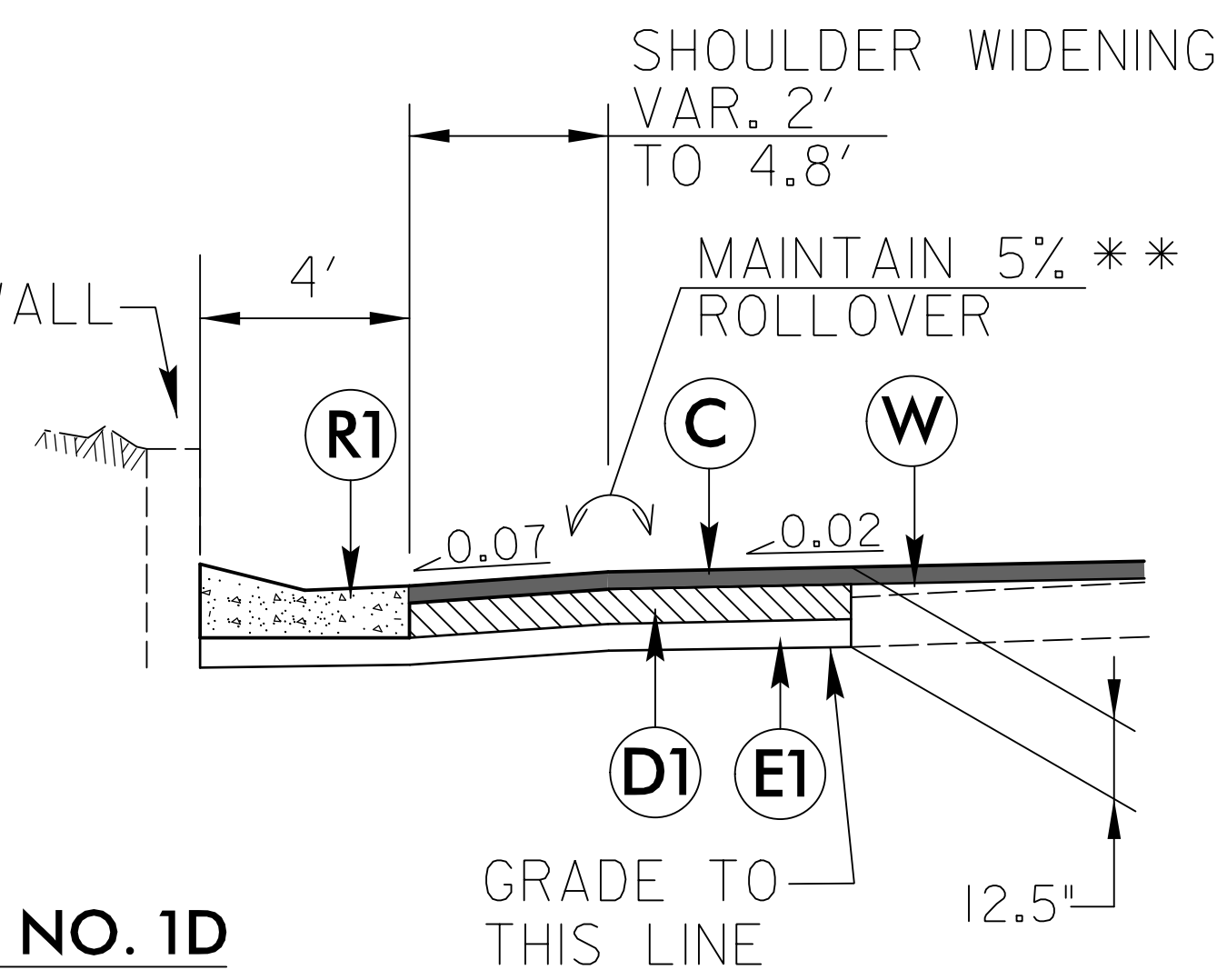
PROPOSED RETAINING WALL



PARTIAL SECTION NO. 1B

- L- STA. 64 + 80.00 TO 66 + 10.00 LT.
- *USE 2% IN THE GUTTER PAN FROM STA. 64 + 80.00 STA. 65 + 56 + .29

EXISTING ROCK WALL



PARTIAL SECTION NO. 1D

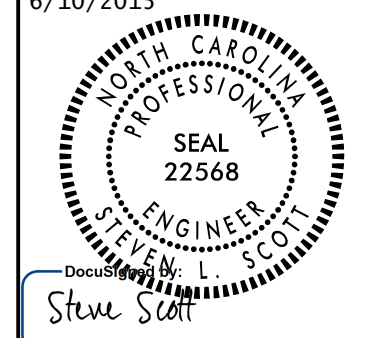
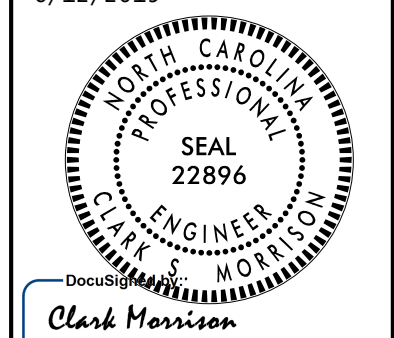

- L- STA. 62 + 50.00 TO 64 + 00.00 LT.
- ** -L- STA. 33 + 50.00 TO 34 + 17.43 RT.

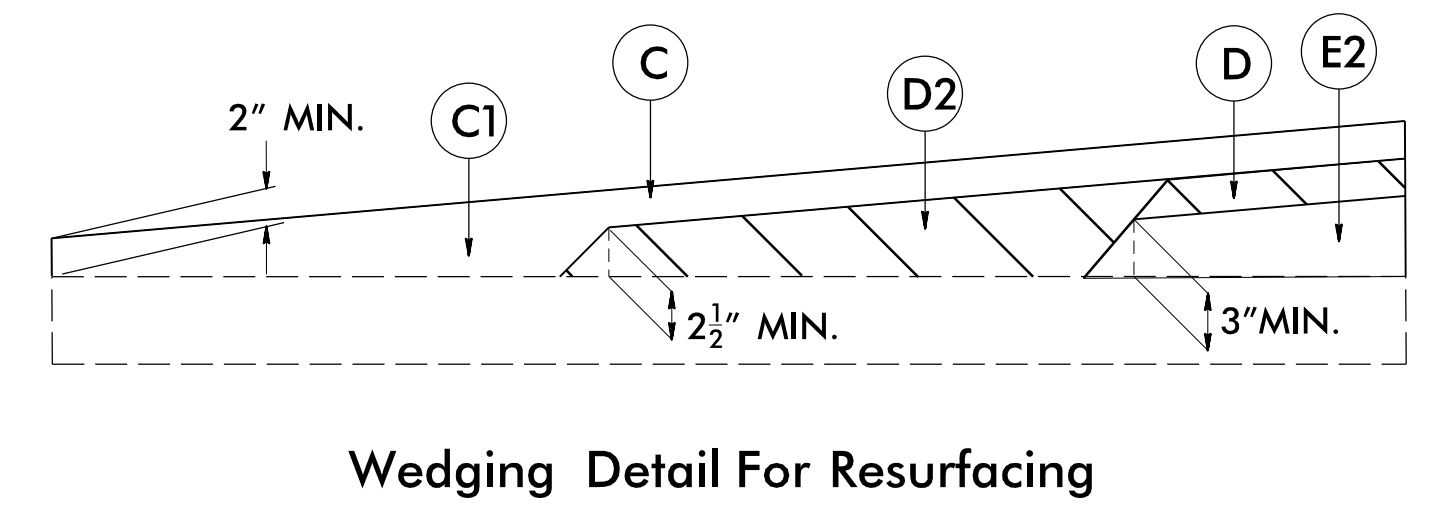
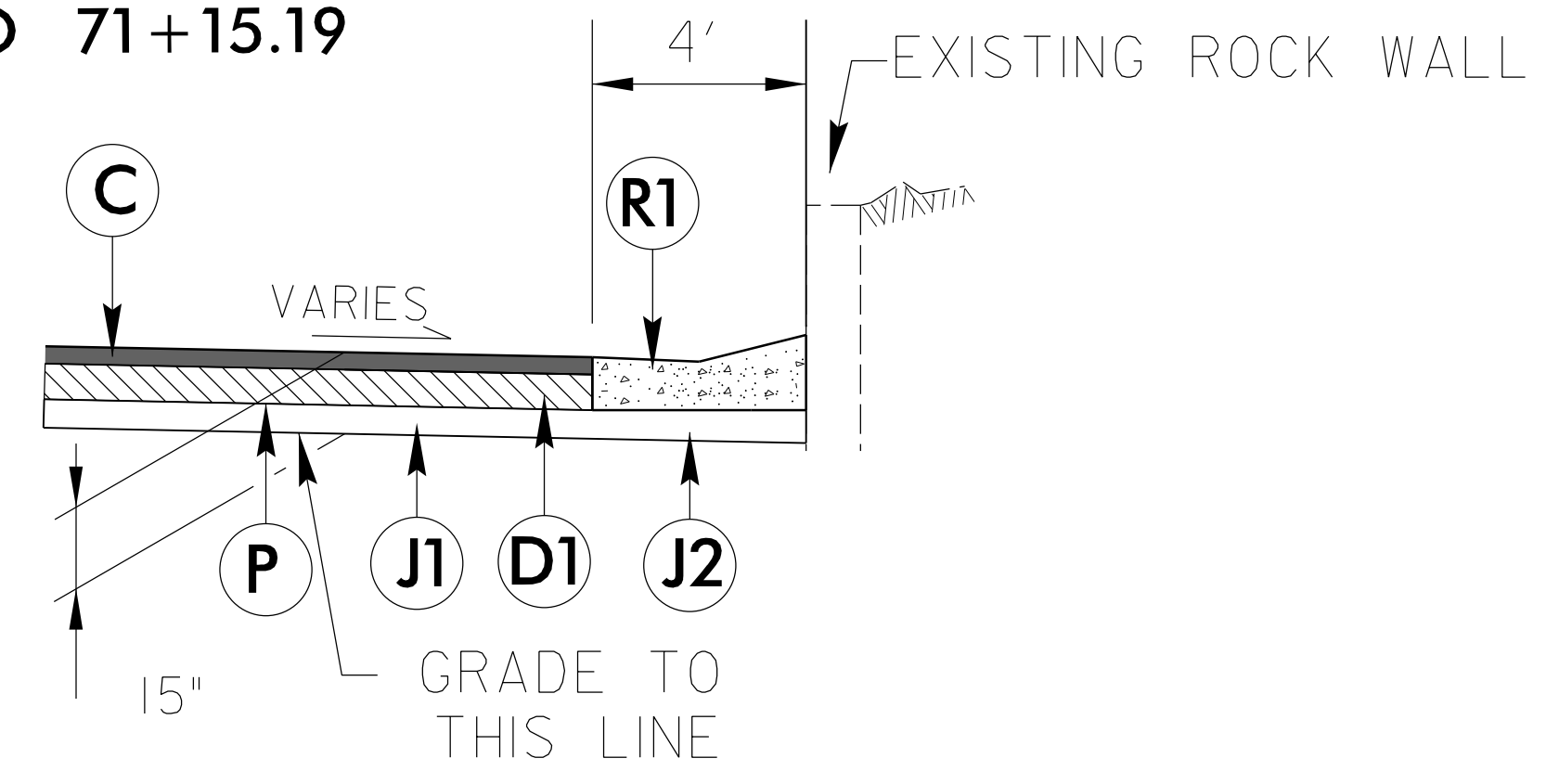
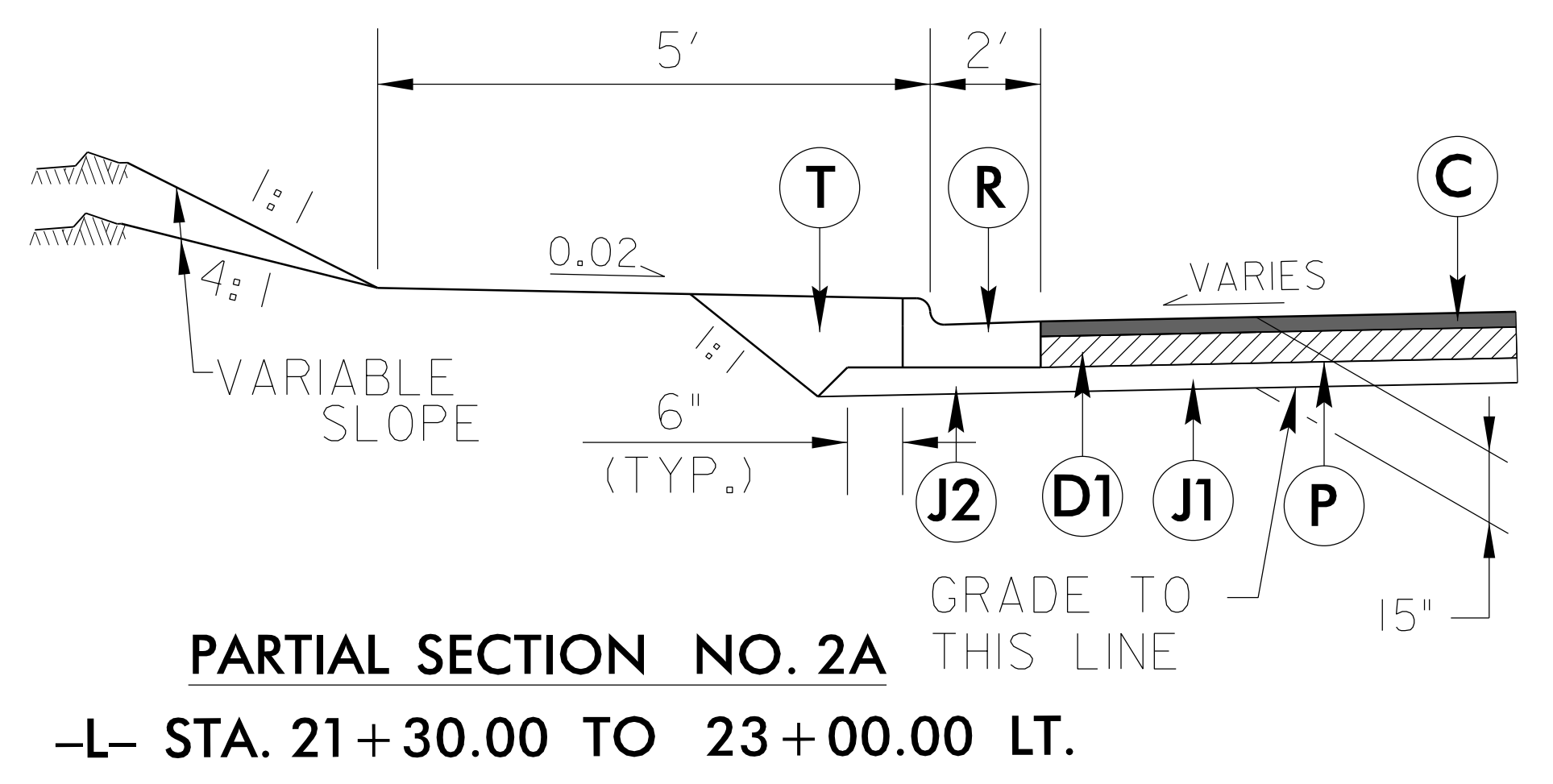
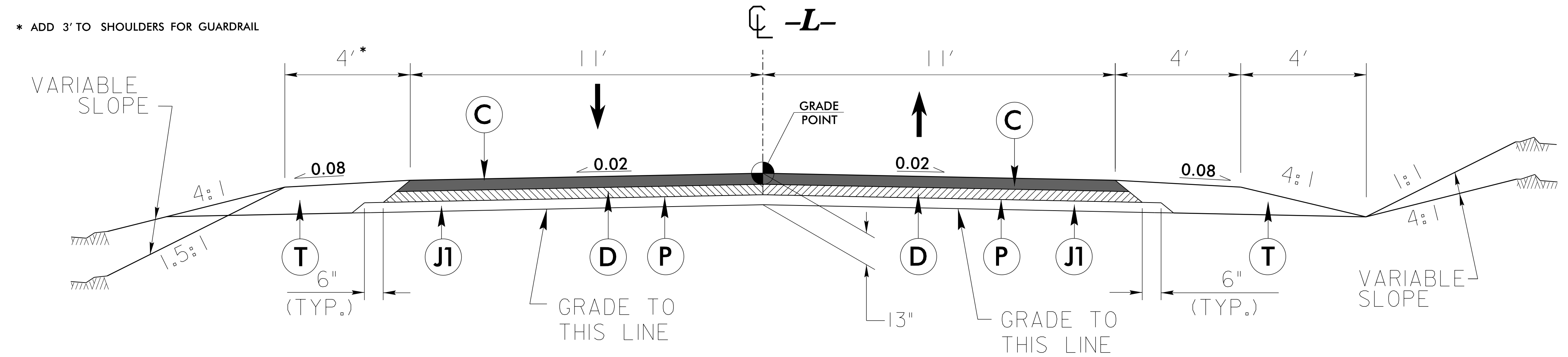
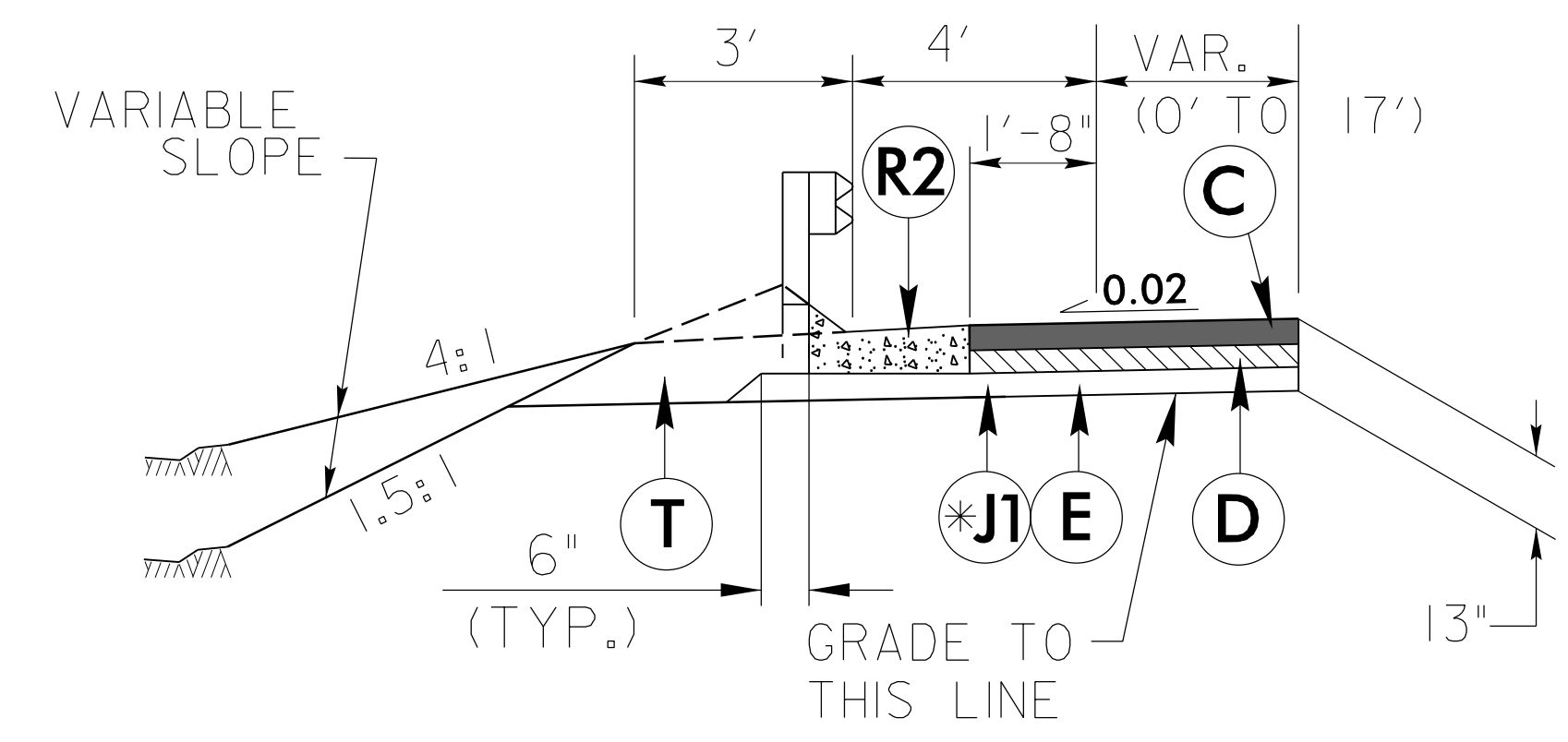
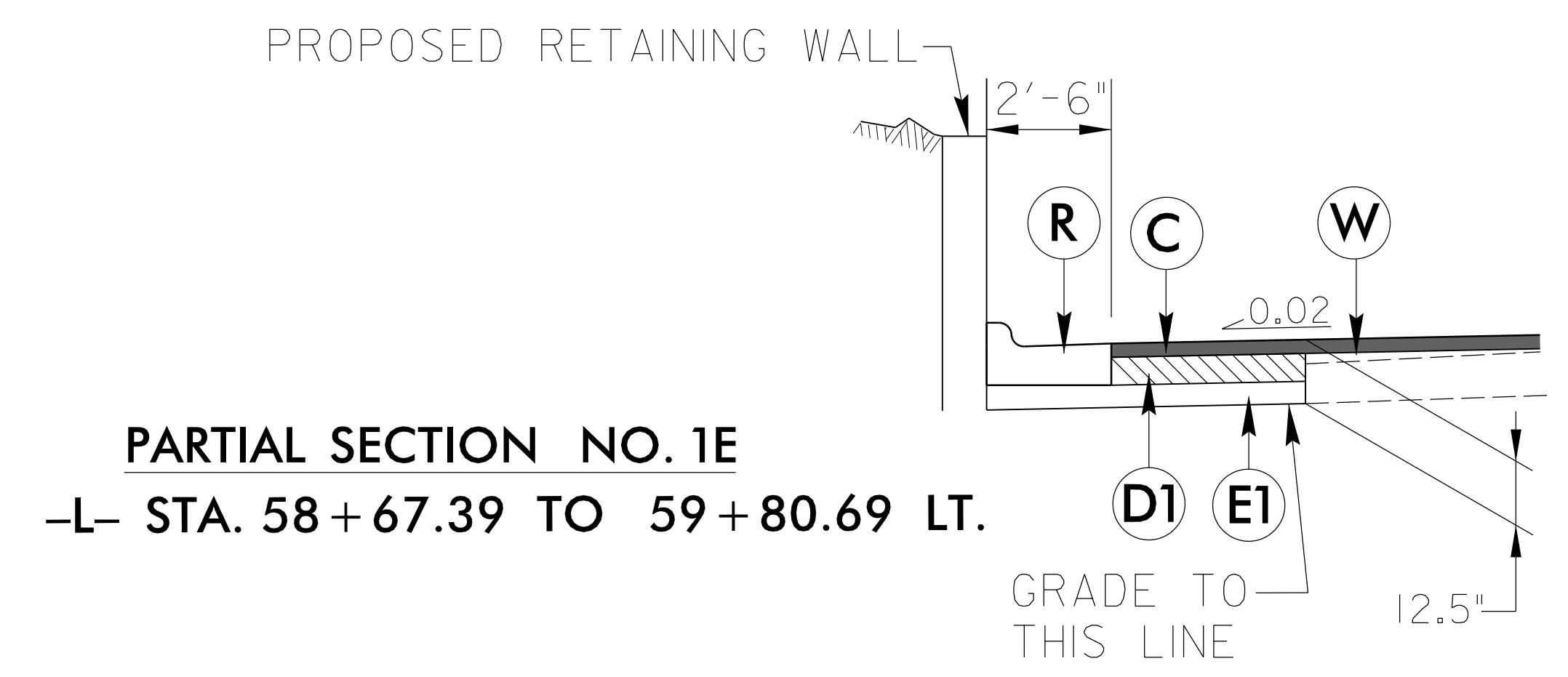
PAVEMENT SCHEDULE	
C	PROP. APP. 2 IN. ASPH. CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS/SY IN
C1	PROP. VAR. DEPTH ASPH. CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS/SY/IN. DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2.0 IN. IN DEPTH
D	PROP. APP. 3 IN. ASPH. CONC. INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS/SY
D1	PROP. APP. 5 IN. ASPH. CONC. INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS/SY IN EACH OF TWO LAYERS
D2	PROP. VAR. DEPTH ASPH. CONC. INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS/SY/IN. DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5 IN. OR GREATER THAN 4 IN. DEPTH
E	PROP. APP. 8 IN. ASPH. CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS/SY IN EACH OF TWO LAYERS
E1	PROP. APP. 5.5 IN. ASPH. CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS/SY
E2	PROP. VAR. DEPTH ASPH. CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS/SY/IN. DEPTH TO BE PLACED IN LAYERS NOT GREATER THAN 5.5 IN. OR LESS THAN 3 IN. DEPTH
J	PROP. 6 IN. AGGREGATE BASE COURSE
J1	PROP. 8 IN. AGGREGATE BASE COURSE
J2	VARIABLE ABC
P	PRIME COAT AT A RATE OF 0.35 GAL/SY
R	2'-6" CURB AND GUTTER
R1	CONC. EXPRESSWAY GUTTER
R2	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

NOT TO SCALE

5/14/09

PROJECT REFERENCE NO. R-5206	SHEET NO. 2A-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 6/10/2015 	PAVEMENT DESIGN ENGINEER 6/12/2015 
	

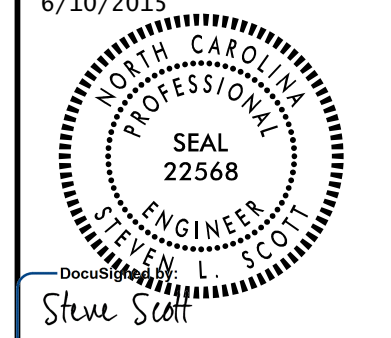
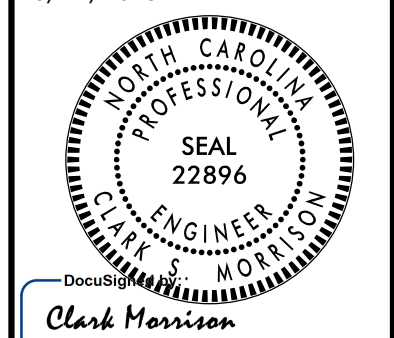



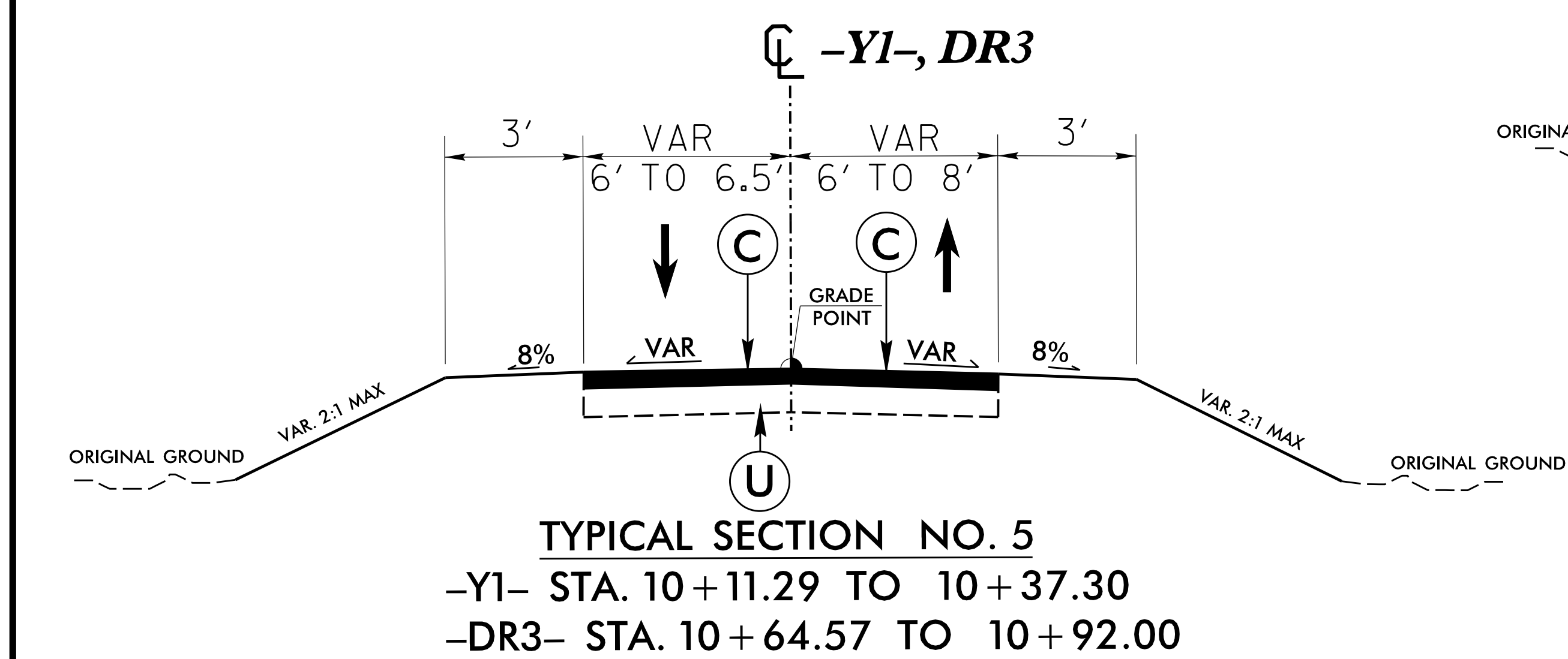
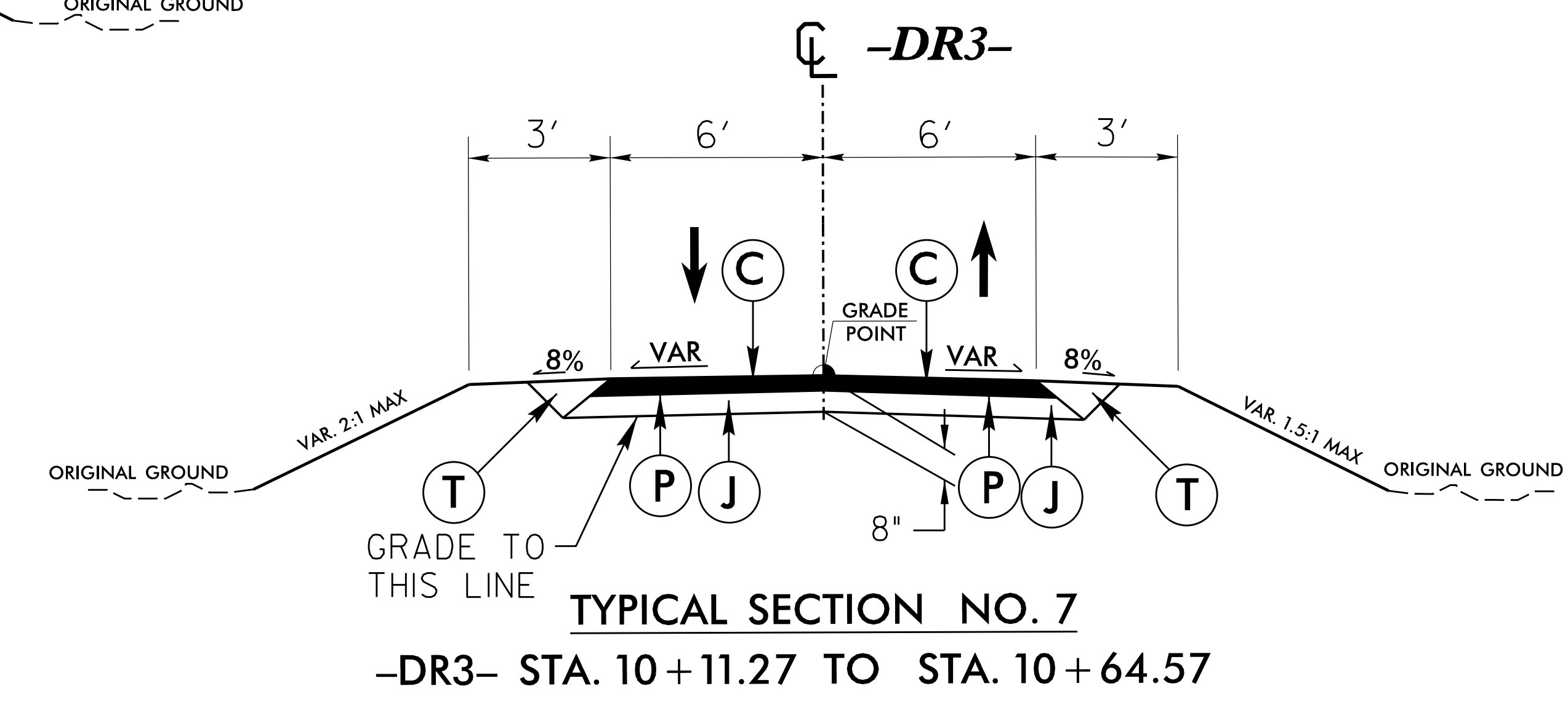
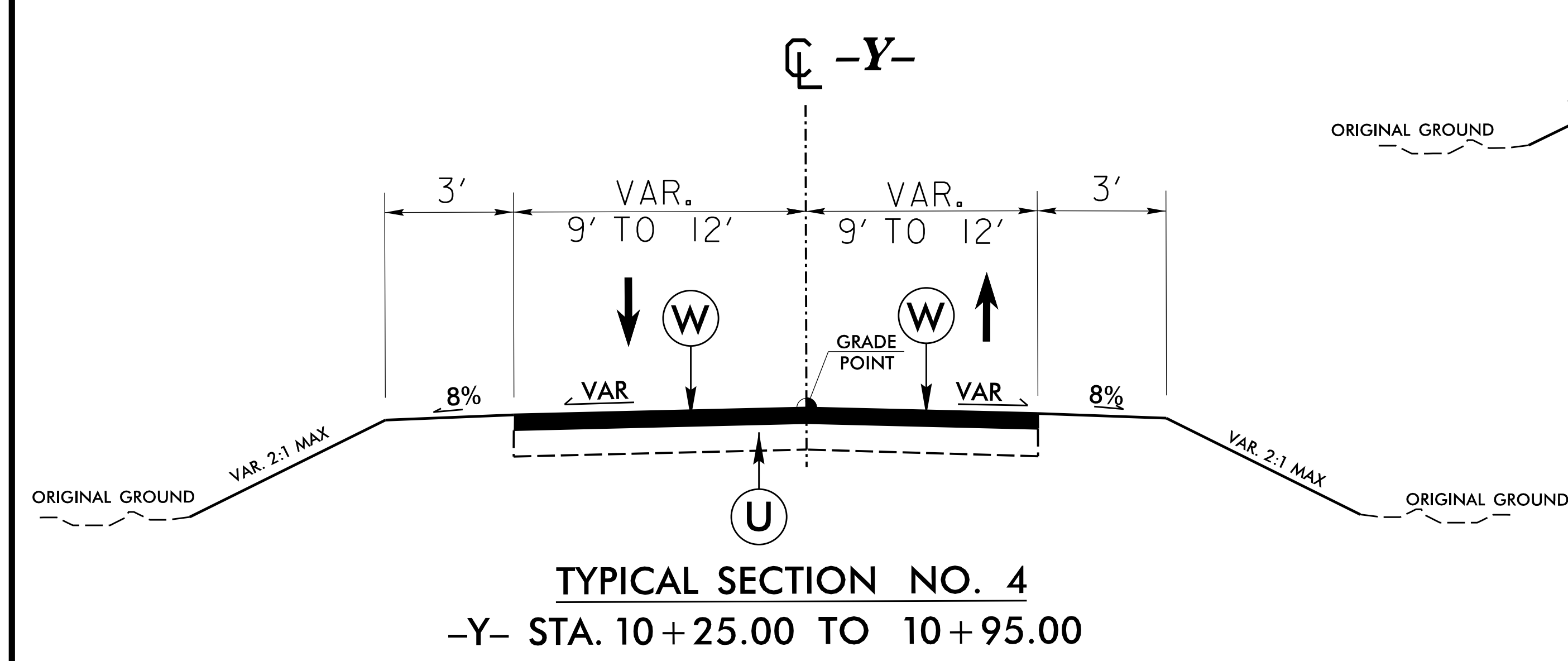
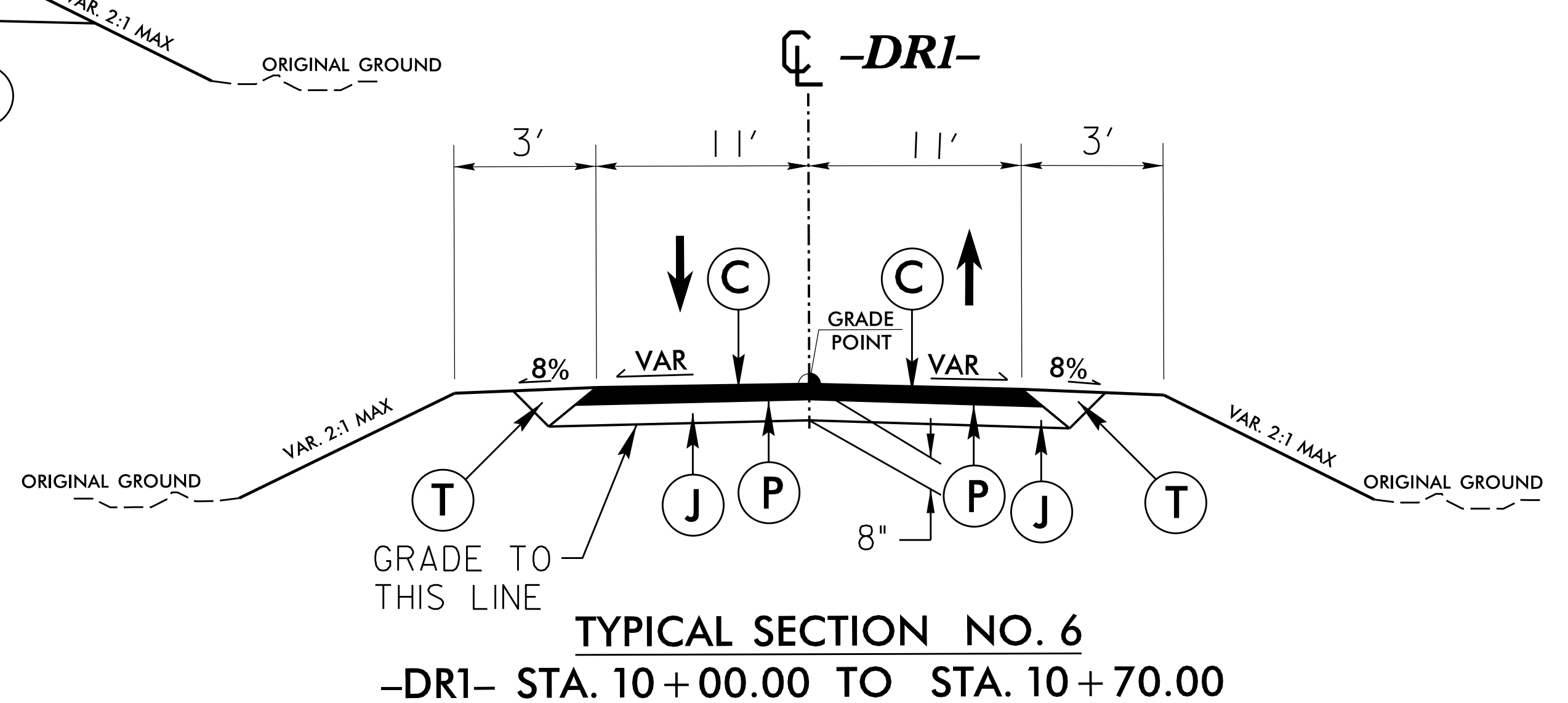
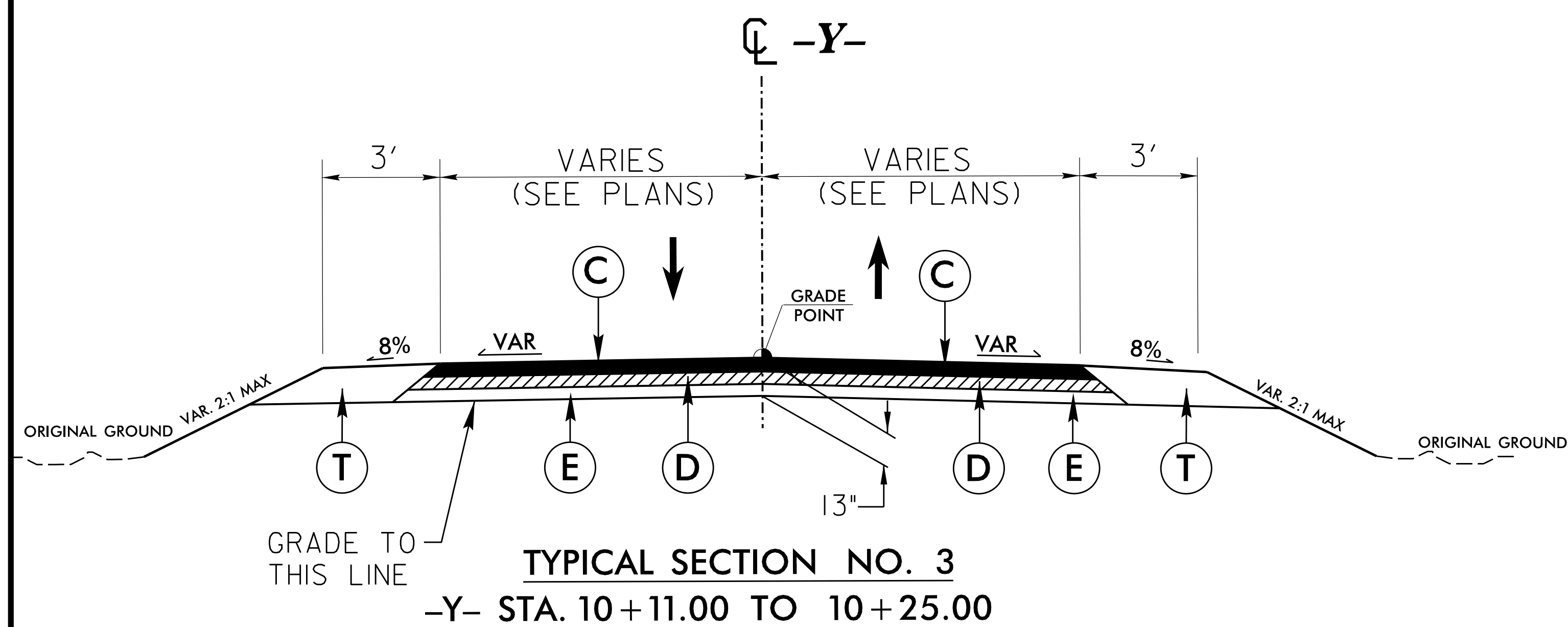
PAVEMENT SCHEDULE	
C	2" S9.5B
C1	VAR. S9.5B
D	3" I19.0B
D1	5" I19.0B
D2	VAR I19.0B
E	8" B25.0B
E1	5.5" B25.0B
E2	VAR B25.0B
J	6" ABC
J1	8" ABC
J2	VAR ABC
P	PRIME COAT
R	2'-6" C & G
R1	EXP GUT
R2	SHLD BERM GUT
T	EARTH MATERIAL
U	EXIST PAVEMENT
W	WEDGING

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

NOT TO SCALE

6/9/2015 P:\o\N5206.RDY_tup.dgn

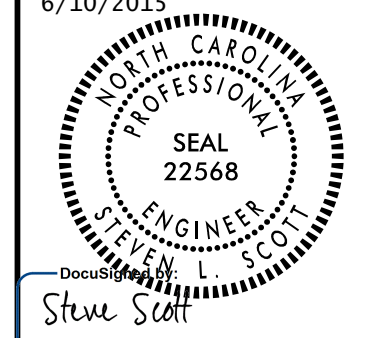
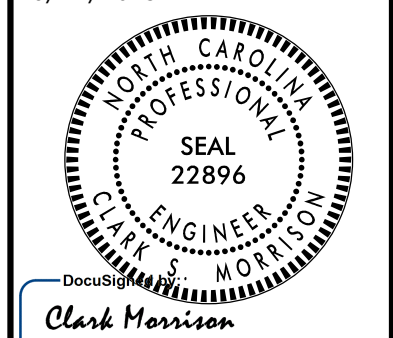

PROJECT REFERENCE NO. R-5206	SHEET NO. 2A-3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 6/10/2015 	PAVEMENT DESIGN ENGINEER 6/12/2015 
	

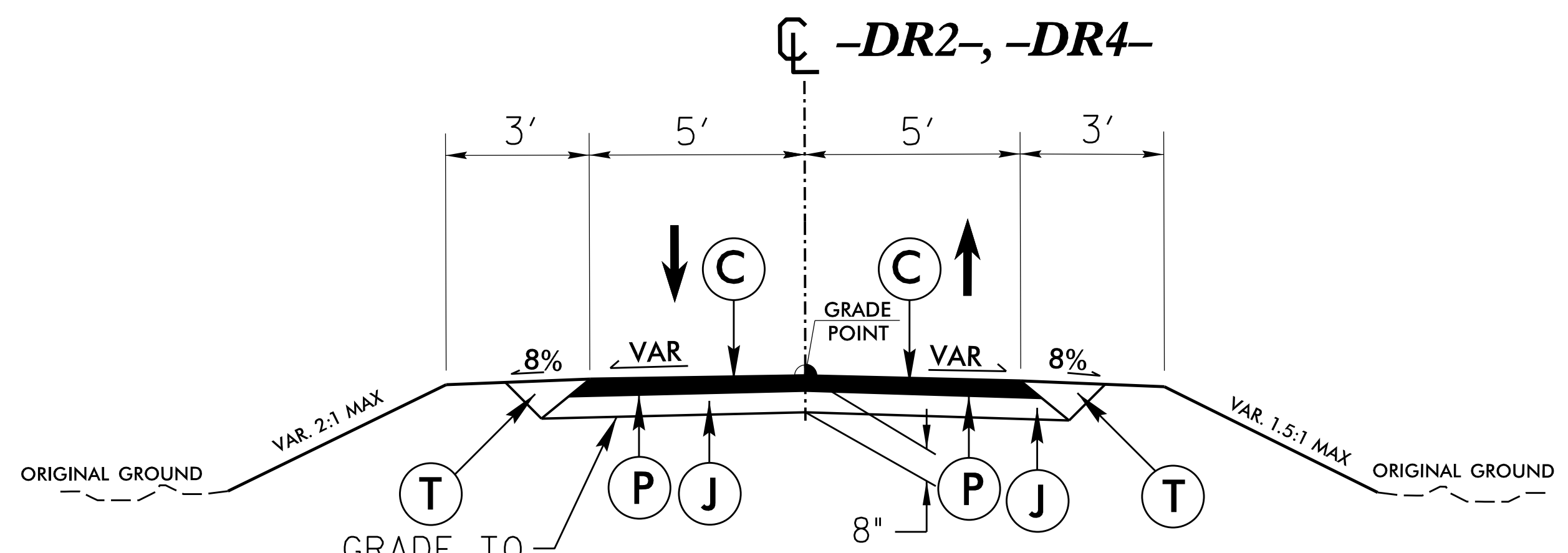


PAVEMENT SCHEDULE	
C	2" S9.5B
C1	VAR. S9.5B
D	3" I19.0B
D1	5" I19.0B
D2	VAR I19.0B
E	8" B25.0B
E1	5.5" B25.0B
E2	VAR B25.0B
J	6" ABC
J1	8" ABC
J2	VAR ABC
P	PRIME COAT
R	2'-6" C & G
R1	EXP GUT
R2	SHLD BERM GUT
T	EARTH MATERIAL
U	EXIST PAVEMENT
W	WEDGING

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

NOT TO SCALE

PROJECT REFERENCE NO. R-5206	SHEET NO. 2A-4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER 6/10/2015 	PAVEMENT DESIGN ENGINEER 6/12/2015 
	

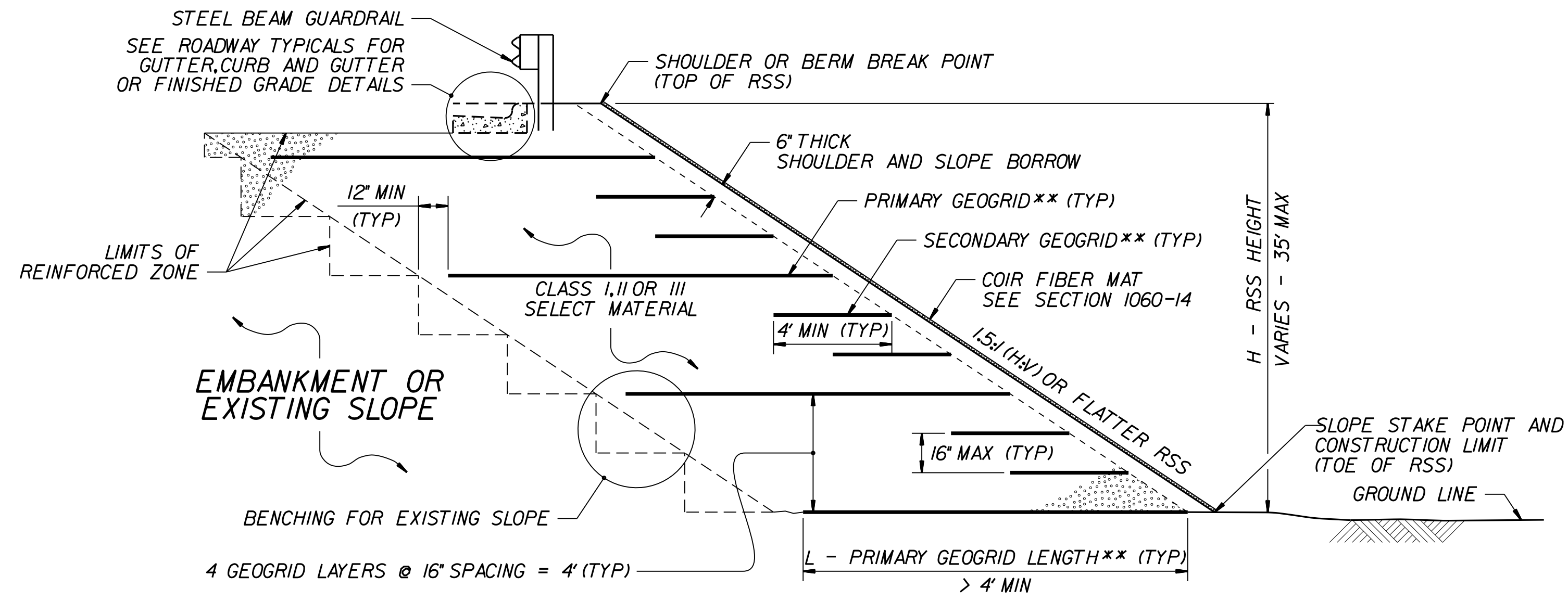


TYPICAL SECTION NO. 8
 -DR2- STA. 10+13.05 TO STA. 11+30.00
 -DR4- STA. 10+11.00 TO STA. 10+62.50

PAVEMENT SCHEDULE	
C	2" S9.5B
C1	VAR. S9.5B
D	3" I19.0B
D1	5" I19.0B
D2	VAR I19.0B
E	8" B25.0B
E1	5.5" B25.0B
E2	VAR B25.0B
J	6" ABC
J1	8" ABC
J2	VAR ABC
P	PRIME COAT
R	2'-6" C & G
R1	EXP GUT
R2	SHLD BERM GUT
T	EARTH MATERIAL
U	EXIST PAVEMENT
W	WEDGING

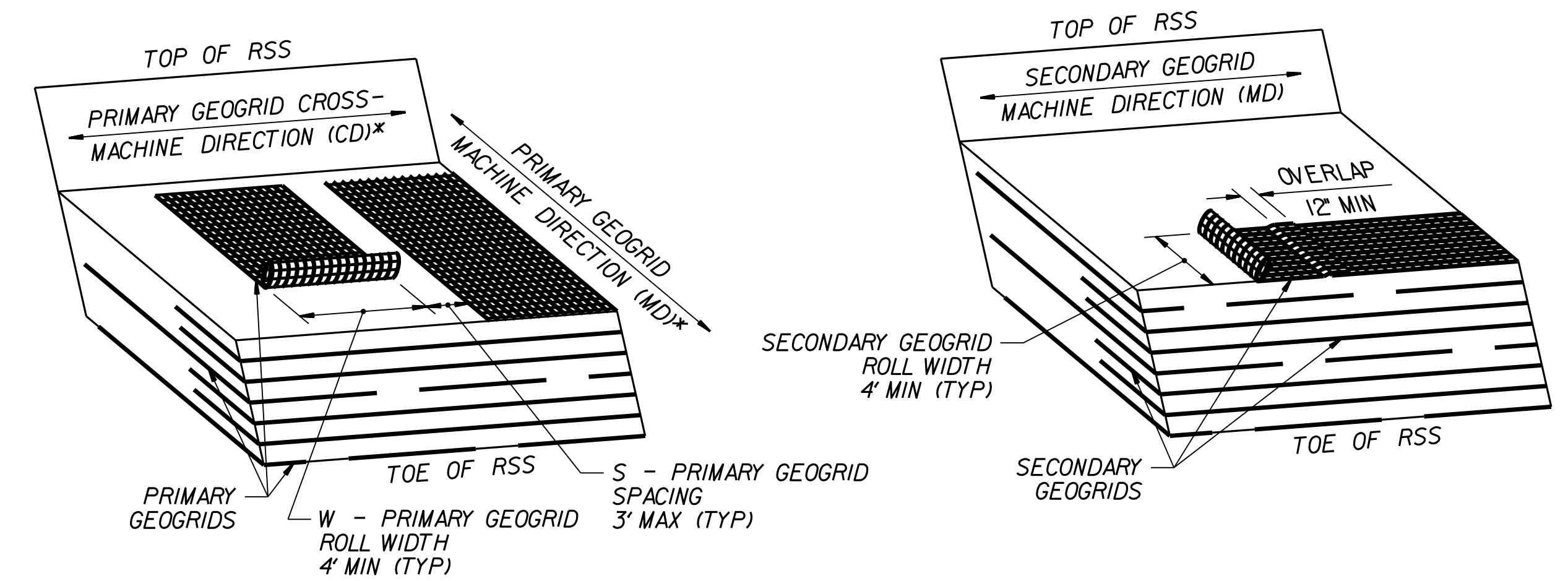
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

NOT TO SCALE



RSS WITH SELECT MATERIAL THAT DOES NOT MEET ARTICLE 1019-2 OF THE STANDARD SPECIFICATIONS

**SEE TABLES ON SHEET 2 AND GEOGRID PLACEMENT DETAILS.

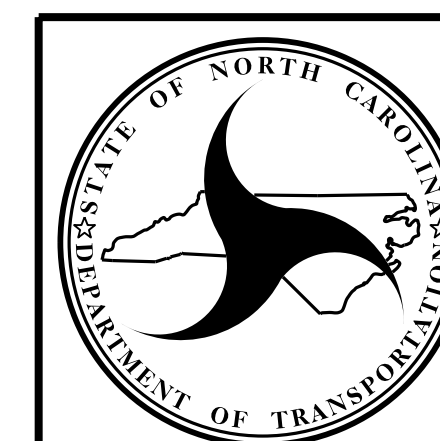


GEOGRID PLACEMENT DETAILS

(% COVERAGE = $\frac{W}{W+S} \times 100 \geq 75\%$)

*SEE NOTES 8 AND 9 ON SHEET 2.

PREPARED BY: EJS	DATE: 5/15/15
REVIEWED BY: SCC	DATE: 5/15/15



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**GEOTECHNICAL
ENGINEERING UNIT**

**REINFORCED SOIL SLOPE
WITH COIR FIBER MATTING
21+00 -L- to 22+50 -L- +/-
10+00 -DR2- to 11-25 -DR2- +/-**

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

GEOGRID TYPE, DIRECTION	H (FT)	0 - < 10		10 - 20		> 20 - 35	
	SELECT MATERIAL CLASS	I	II OR III	I	II OR III	I	II OR III
PRIMARY GEOGRID, MD (SUBSTITUTE SECONDARY GEOGRID FOR PRIMARY GEOGRID FOR 2:1 (H:V) OR FLATTER RSS)	1:1 TO < 1.5:1 (H:V) RSS	600	SEE NOTE 6	1200	SEE NOTE 6	2100	SEE NOTE 6
	1.5:1 TO 1.75:1 (H:V) RSS	500	500	800	500	1100	700
	> 1.75:1 TO < 2:1 (H:V) RSS	500	500	600	500	800	500
SECONDARY GEOGRID, CD	1:1 (H:V) OR FLATTER RSS	185					

LTDS – MINIMUM REQUIRED LONG-TERM DESIGN STRENGTH (LB/FT)

(LTDS IS BASED ON 100% COVERAGE FOR PRIMARY GEOGRID.
SEE NOTE 9 FOR LESS THAN 100% COVERAGE.)

NOTES:

- SEE ROADWAY PLANS AND SUMMARY SHEETS FOR REINFORCED SOIL SLOPE (RSS) LOCATIONS.
- FOR REINFORCED SOIL SLOPES, SEE REINFORCED SOIL SLOPES PROVISION. FOR COIR FIBER MAT, SEE SECTION 1060-14 OF THE STANDARD SPECIFICATIONS. FOR STEEL BEAM GUARDRAIL, SEE SECTION 862 OF THE STANDARD SPECIFICATIONS.
- RSS ARE BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
UNIT WEIGHT, $\gamma = 120$ LB/CF
FRICTION ANGLE, $\phi = 30$ DEGREES
COHESION, $c = 0$ LB/SF
- DO NOT USE RSS IF ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE OR GROUNDWATER IS ABOVE TOE OF RSS.
- DO NOT USE RSS WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS BELOW RSS.
- FOR 1:1 TO < 1.5:1 (H:V) RSS, USE CLASS I SELECT MATERIAL IN THE REINFORCED ZONE THAT MEETS ARTICLE 1019-2 OF THE STANDARD SPECIFICATIONS EXCEPT FOR SELECT MATERIAL THAT MEETS AASHTO M 145 FOR SOIL CLASSIFICATIONS A-4 AND A-5. DO NOT USE A-4 OR A-5 SOIL OR CLASS II OR III SELECT MATERIAL FOR 1:1 TO < 1.5:1 (H:V) RSS.
- GEOGRIDS ARE TYPICALLY APPROVED FOR ULTIMATE TENSILE STRENGTHS IN THE MACHINE DIRECTION (MD) AND CROSS-MACHINE DIRECTION (CD) OR LONG-TERM DESIGN STRENGTHS FOR A 75-YEAR DESIGN LIFE IN THE MD BASED ON MATERIAL TYPE. THE LIST OF APPROVED GEOGRIDS WITH DESIGN STRENGTHS IS AVAILABLE FROM:
connect.ncdot.gov/resources/Materials/Pages/SoilsLaboratory.aspx
DEFINE MATERIAL TYPE FROM THE WEBSITE ABOVE FOR SELECT MATERIAL AS FOLLOWS:

MATERIAL TYPE	SELECT MATERIAL
BORROW	CLASS I SELECT MATERIAL
FINE AGGREGATE	CLASS II OR III SELECT MATERIAL

IF THE WEBSITE DOES NOT LIST A LONG-TERM DESIGN STRENGTH FOR AN APPROVED GEOGRID IN THE MD, DO NOT USE THE GEOGRID FOR PRIMARY GEOGRID. IF THE WEBSITE DOES NOT LIST A LONG-TERM DESIGN STRENGTH FOR AN APPROVED GEOGRID IN THE CD, USE A LONG-TERM DESIGN STRENGTH EQUAL TO THE ULTIMATE TENSILE STRENGTH DIVIDED BY 7 FOR THE SECONDARY GEOGRID.

- DO NOT OVERLAP PRIMARY GEOGRIDS IN THE MD SO OVERLAPS ARE PARALLEL TO THE TOE OF RSS. POLYOLEFIN (e.g., HDPE OR PP) GEOGRIDS MAY BE SPLICED ONCE PER PRIMARY GEOGRID LENGTH IN ACCORDANCE WITH THE GEOGRID MANUFACTURER'S INSTRUCTIONS. USE POLYOLEFIN GEOGRID PIECES AT LEAST 4' LONG. DO NOT SPLICE POLYESTER TYPE (PET) GEOGRIDS.
- FOR PRIMARY GEOGRIDS WITH 100% COVERAGE, PLACE PRIMARY GEOGRIDS SO GEOGRIDS ARE ADJACENT TO EACH OTHER IN THE CD. FOR PRIMARY GEOGRIDS WITH 75% TO LESS THAN 100% COVERAGE,

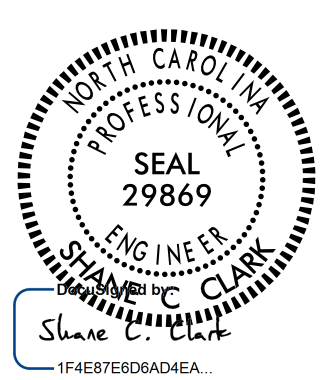
$$\text{MINIMUM REQUIRED LONG-TERM DESIGN STRENGTH} = \text{LTDS BASED ON 100\% COVERAGE} \times (W + S) / W$$

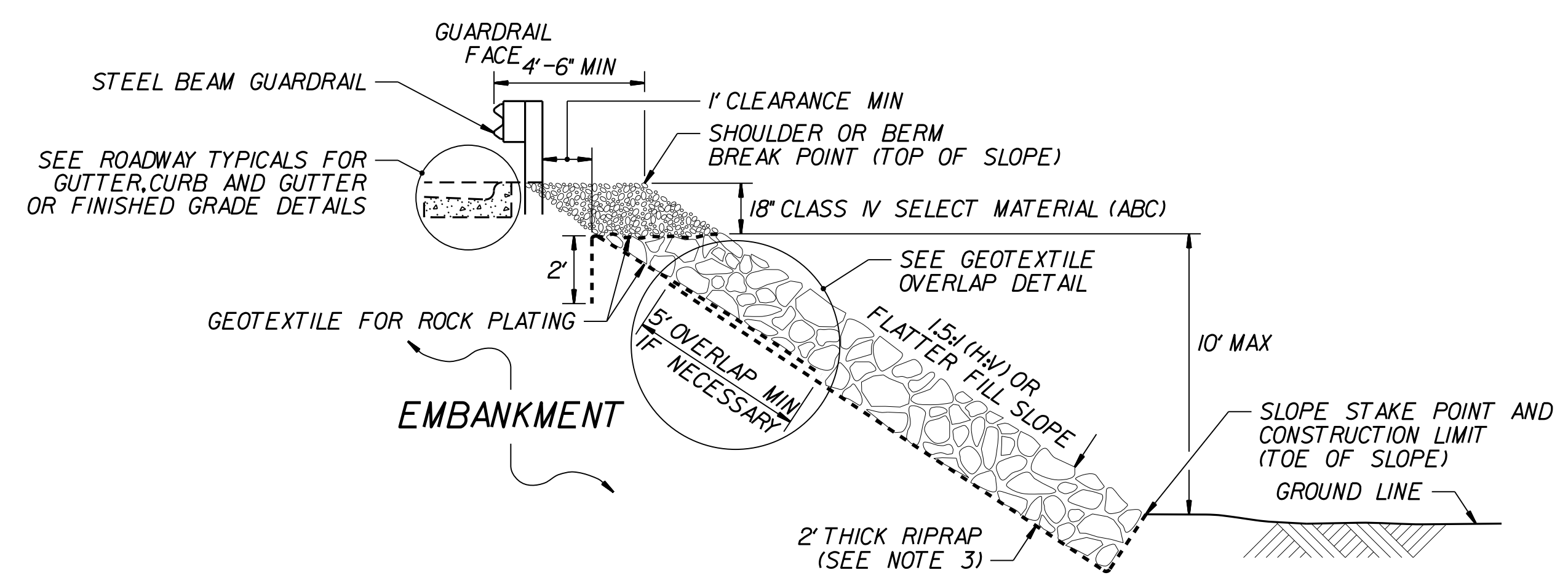
SEE TABLE FOR LTDS BASED ON 100% COVERAGE AND GEOGRID PLACEMENT DETAILS FOR PRIMARY GEOGRID ROLL WIDTH (W) AND SPACING (S). FOR PRIMARY GEOGRIDS WITH LESS THAN 100% COVERAGE, STAGGER PRIMARY GEOGRIDS SO GEOGRIDS ARE CENTERED OVER GAPS IN THE PRIMARY GEOGRID LAYER BELOW. DO NOT USE LESS THAN 75% COVERAGE FOR PRIMARY GEOGRIDS.

- DO NOT PLACE PRIMARY GEOGRIDS UNTIL EXCAVATION DIMENSIONS AND IN-SITU MATERIAL ARE APPROVED.

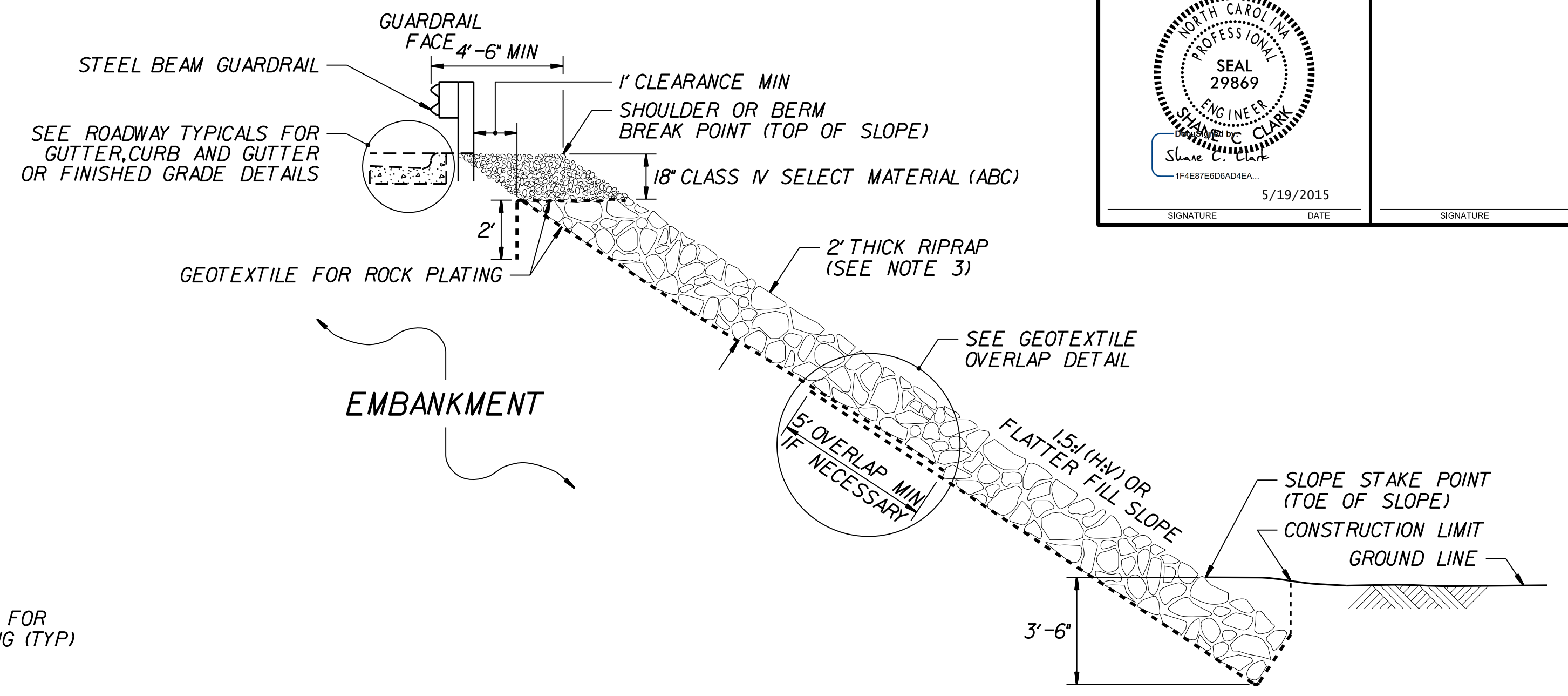
H (FT)	0 - < 10		10 - 20		> 20 - 35	
SELECT MATERIAL CLASS	I	II OR III	I	II OR III	I	II OR III
1:1 TO < 1.5:1 (H:V) RSS	1.25	SEE NOTE 6	1.15	SEE NOTE 6	1.05	SEE NOTE 6
1.5:1 TO 1.75:1 (H:V) RSS	1.20	1.05	1.10	1.00	1.00	0.95
> 1.75:1 TO < 2:1 (H:V) RSS	1.15	0.80	1.05	0.75	0.95	0.70

L / H RATIO (L > 4' MIN)
(IF L ≤ 4', USE SECONDARY GEOGRID INSTEAD OF PRIMARY GEOGRID.)

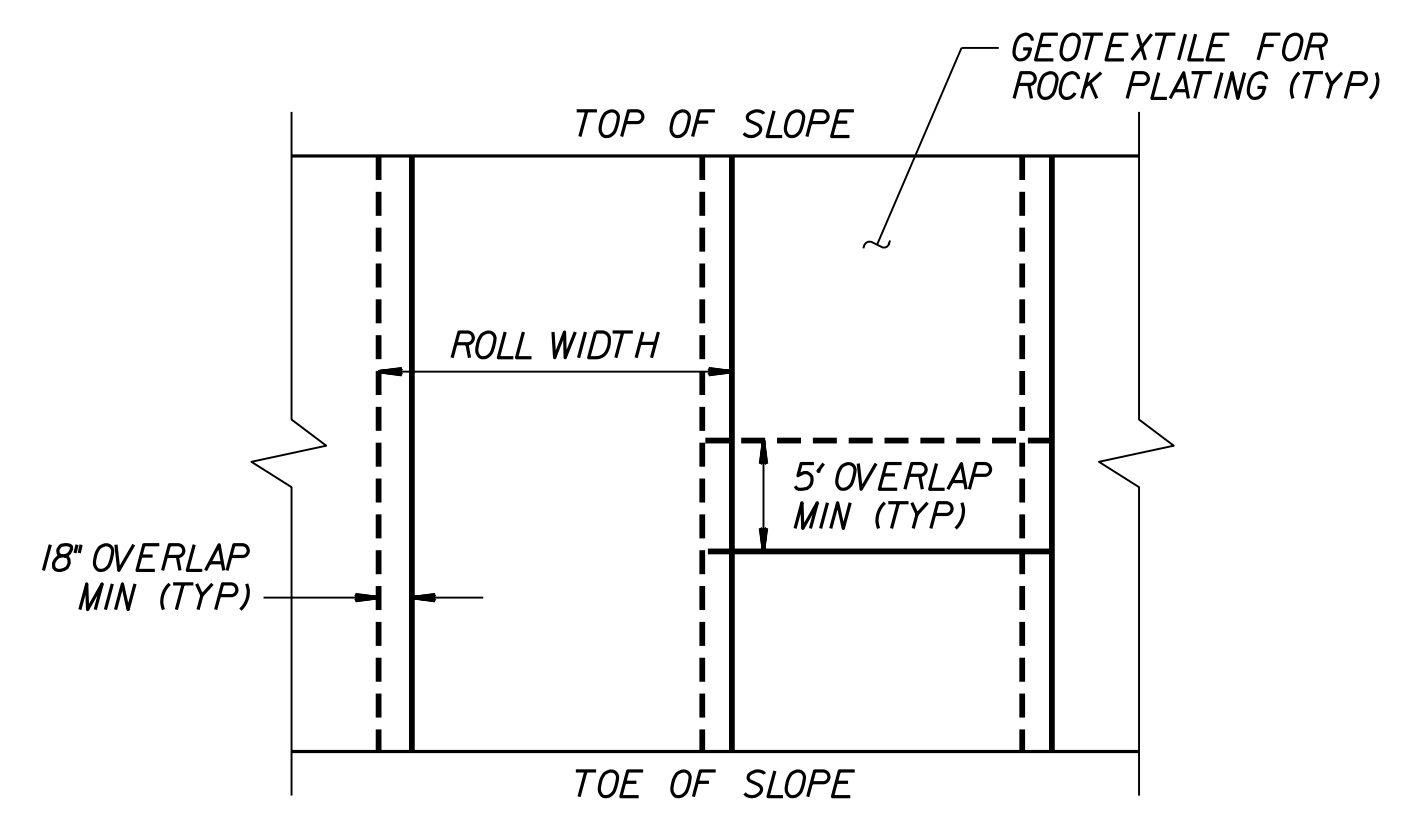
PROJECT REFERENCE NO. R-5206 (WBS 42974.1.1)	SHEET NO. 2G-3
 GEOTECHNICAL ENGINEER SIGNATURE: _____ DATE: 5/19/2015	ENGINEER SIGNATURE: _____ DATE: _____



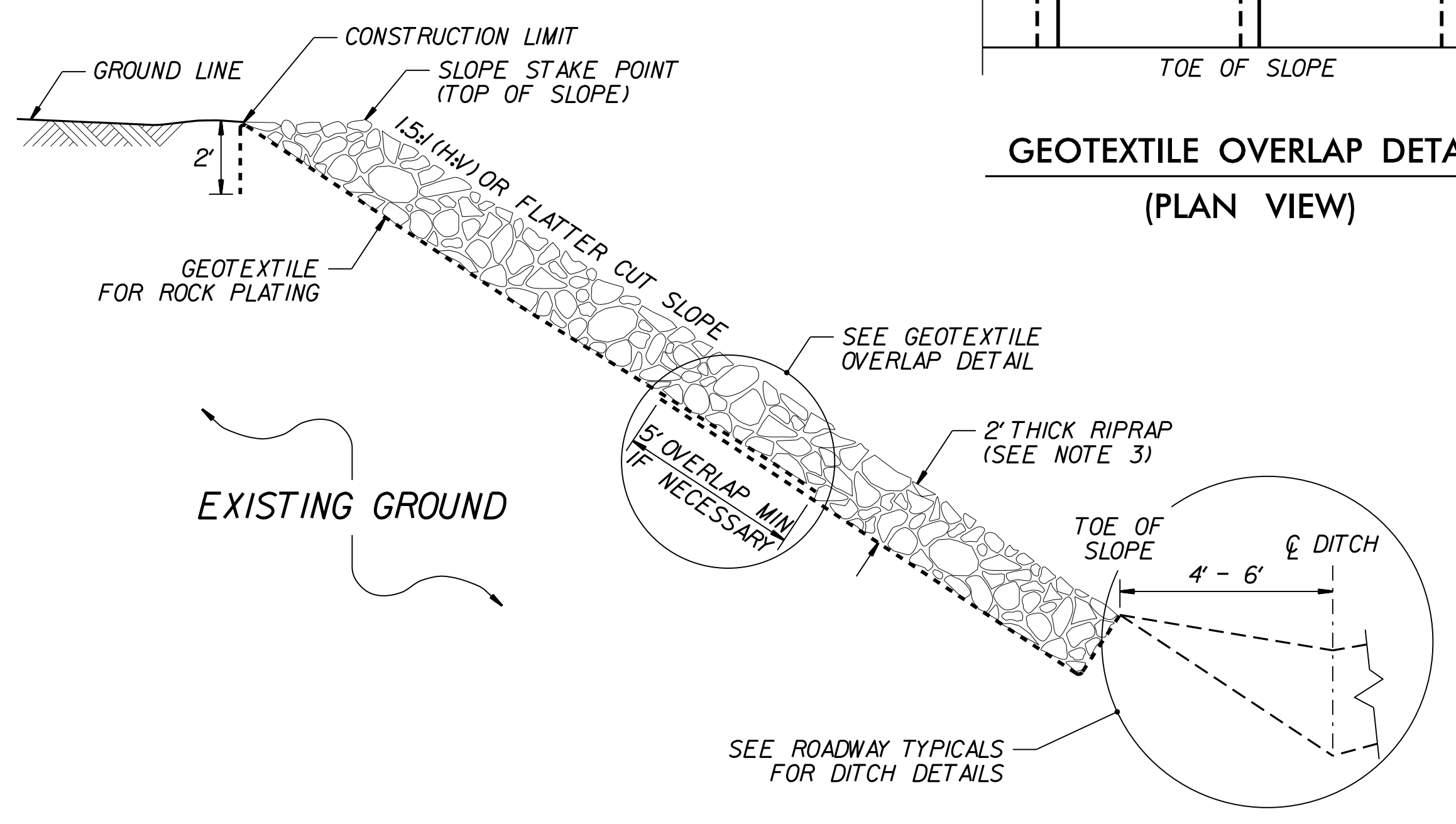
ROCK PLATING DETAIL NO. 1 – TYPICAL SECTION



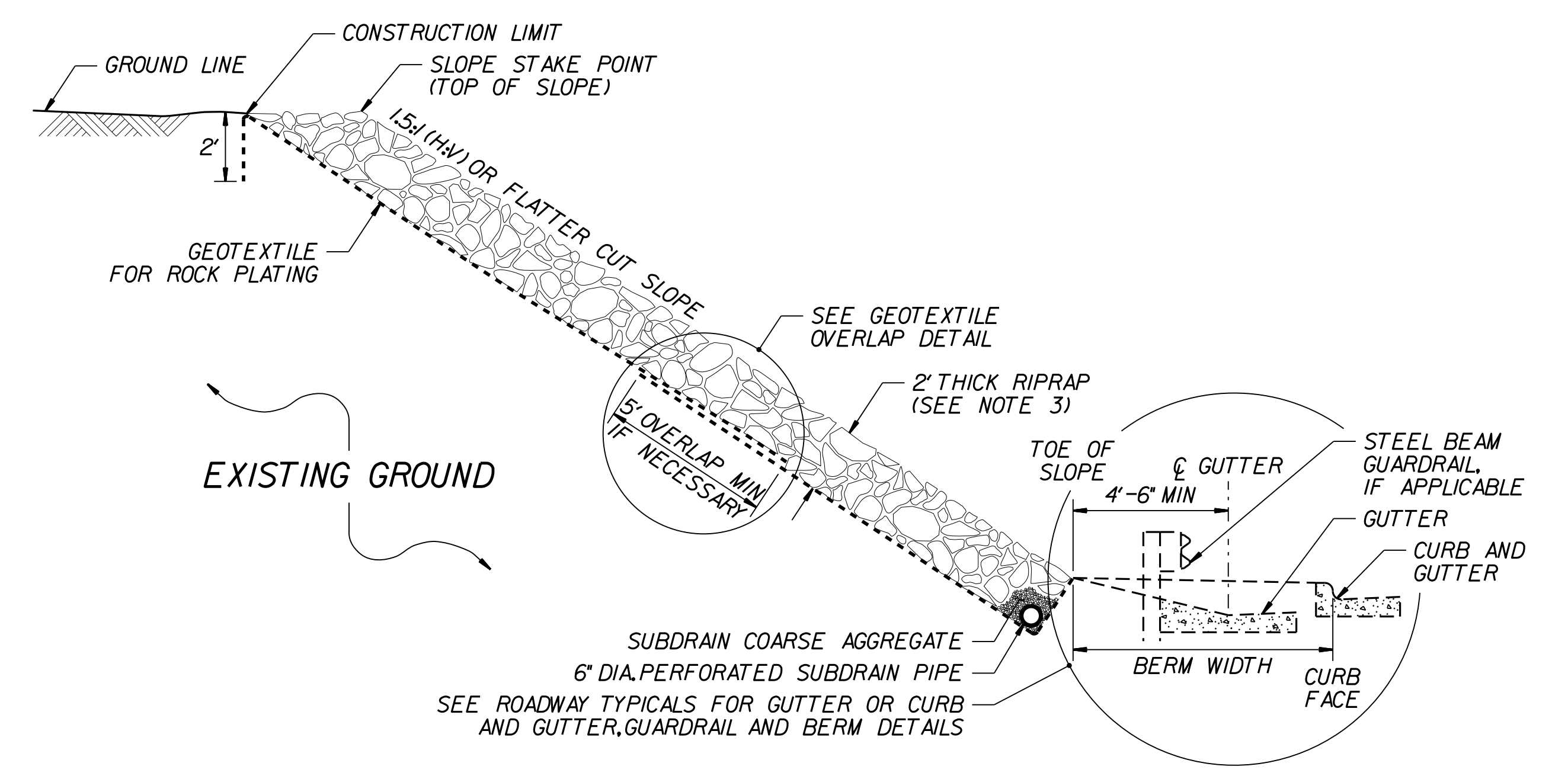
ROCK PLATING DETAIL NO. 2 – TYPICAL SECTION



GEOTEXTILE OVERLAP DETAIL (PLAN VIEW)

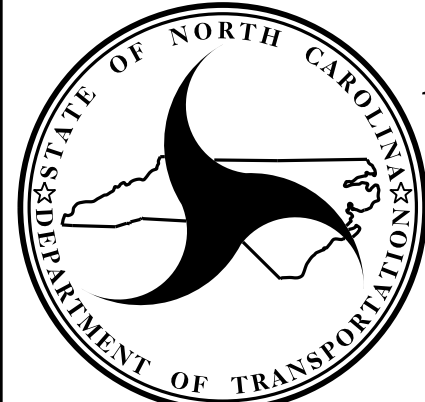


ROCK PLATING DETAIL NO. 3 – TYPICAL SECTION



ROCK PLATING DETAIL NO. 4 – TYPICAL SECTION

- NOTES:**
1. SEE ROADWAY PLANS AND SUMMARY SHEETS FOR ROCK PLATING LOCATIONS.
 2. FOR STANDARD ROCK PLATING, SEE SECTION 275 OF THE STANDARD SPECIFICATIONS.
 3. USE CLASS 1, 2 OR B RIPRAP UNLESS REQUIRED OTHERWISE IN THE ROADWAY SUMMARY SHEETS.



**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**GEOTECHNICAL
ENGINEERING UNIT**

STANDARD DETAIL NO. 1802.01

**STANDARD
ROCK PLATING**

DATE: 2-19-13

COMPUTED BY: _Shane Clark_ DATE: ___5/15/15___
 CHECKED BY: _____ DATE: _____

PROJECT NO. R-5206	SHEET NO. 3G-1
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**STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS**

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
				SD	100
				TOTAL LF:	100

*UD = Underdrain
 *BD = Blind Drain
 *SD = Subsurface Drain

SUMMARY OF ROCK PLATING

LINE	Beginning Slope	Approx. Station	Ending Slope	Approx. Station	Location LT/RT	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	ESTIMATED SY
-L-	1.50:1	69+00	1.50:1	72+00	RT	1	B	825
							TOTAL SY:	825

*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.

SUMMARY OF REINFORCED SOIL SLOPES (RSS)

LINE	Beginning Slope	Approx. Station	Ending Slope	Approx. Station	Location LT/RT	ESTIMATED SY
-L-	1.50:1	21+00	1.50:1	22+50	RT	800
-DR2-	1.50:1	10+00	1.50:1	11+25	RT	725
					TOTAL SY:	1525

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
			ASU		100	200	200		
			TOTAL CY/TONS/SY:		100	200	200*	0	0

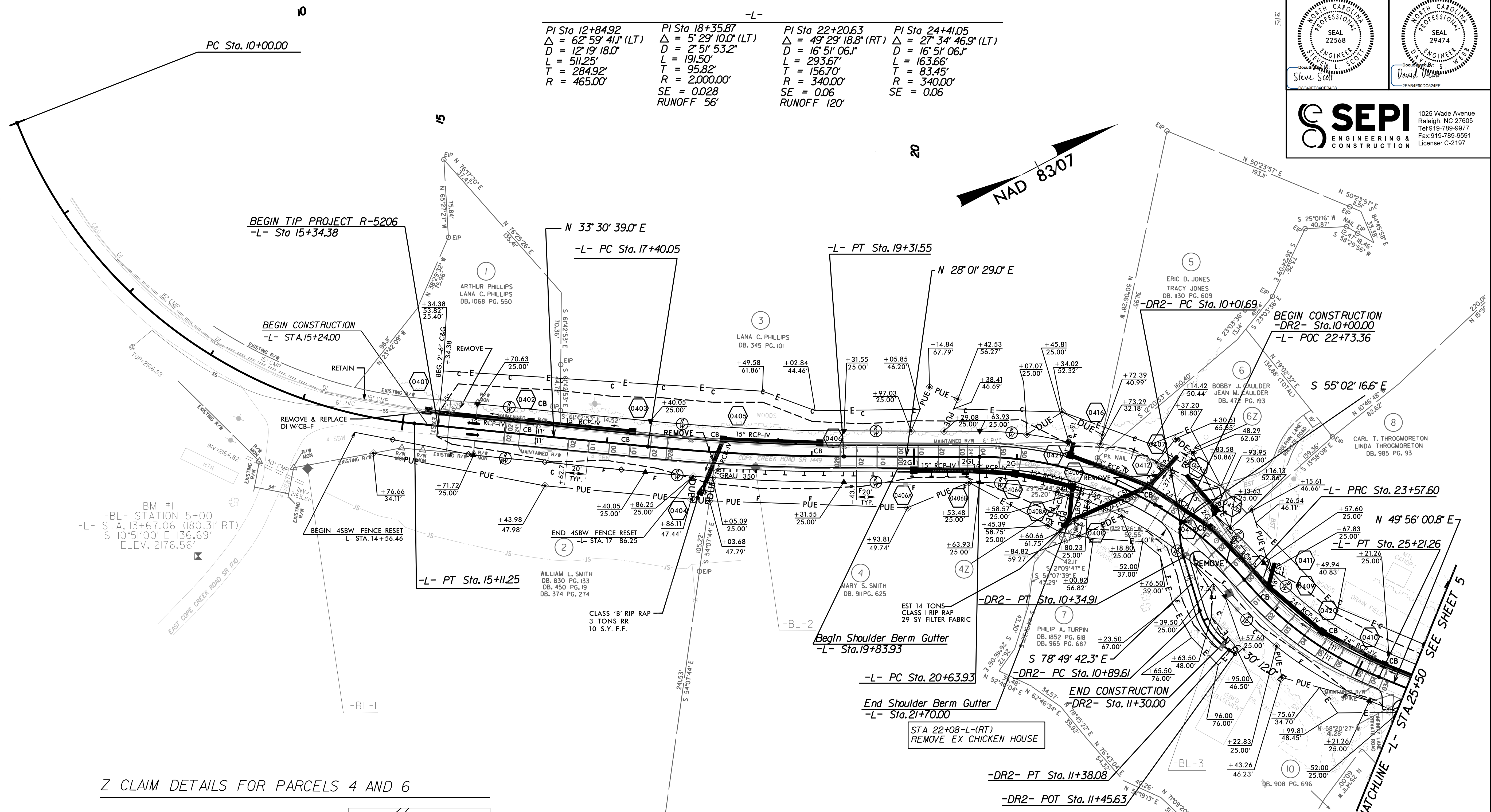
ASU = Aggregate Subgrade, AST = Aggregate Stabilization
 *Total square yards of Geotextile for Soil Stabilization is only the estimated quantity for ASU/AST and may only represent a portion of the geotextile quantity shown in the Item Sheets of the Proposal.

PROJECT REFERENCE NO. R-5206		SHEET NO. 4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 6/10/2015		HYDRAULICS ENGINEER 6/12/2015	

SEPI
ENGINEERING & CONSTRUCTION

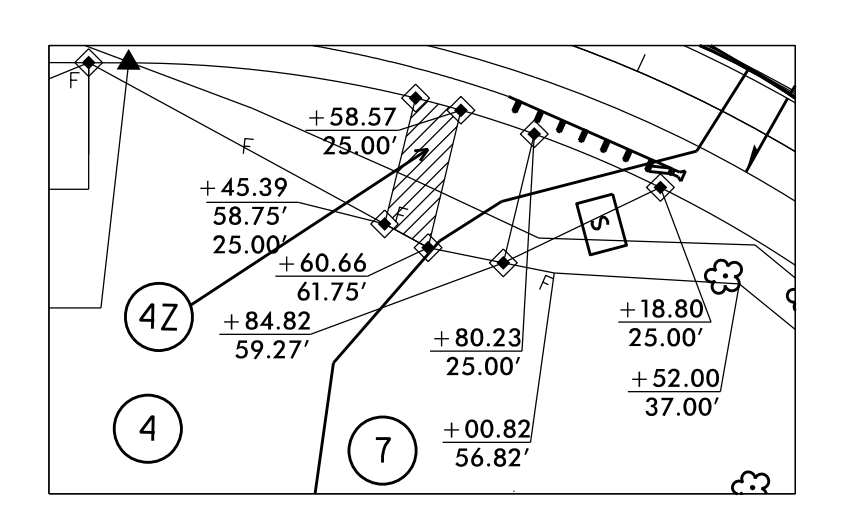
1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

PI Sta 12+84.92 $\Delta = 62^{\circ} 59' 41''$ (LT) $D = 12^{\circ} 19' 18.0''$ $L = 511.25'$ $T = 284.92'$ $R = 465.00'$	PI Sta 18+35.87 $\Delta = 5^{\circ} 29' 10.0''$ (LT) $D = 2^{\circ} 51' 53.2''$ $L = 191.50'$ $T = 95.82'$ $R = 2,000.00'$ $SE = 0.028$ $RUNOFF 56'$	PI Sta 22+20.63 $\Delta = 49^{\circ} 29' 18.8''$ (RT) $D = 16^{\circ} 51' 06.1''$ $L = 293.67'$ $T = 156.70'$ $R = 340.00'$ $SE = 0.06$ $RUNOFF 120'$	PI Sta 24+41.05 $\Delta = 27^{\circ} 34' 46.9''$ (LT) $D = 16^{\circ} 51' 06.1''$ $L = 163.66'$ $T = 83.45'$ $R = 340.00'$ $SE = 0.06$
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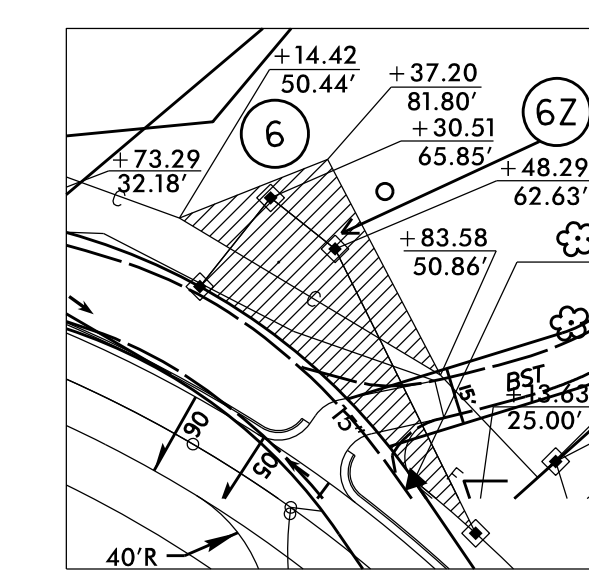


BM #1
-BL- STATION 5+00
STA. 13+67.06 (180.31' RT)
S 10°51'00" E 136.69'
ELEV. 2176.56'

Z CLAIM DETAILS FOR PARCELS 4 AND 6



PARCELS 4 AND 7



PARCEL 6

-DR2- PI Sta 10+18.54 $\Delta = 23^{\circ} 47' 25.7''$ (LT) $D = 71^{\circ} 37' 11.0''$ $L = 33.22'$ $T = 16.85'$ $R = 80.00'$	PI Sta 11+14.86 $\Delta = 39^{\circ} 40' 05.8''$ (LT) $D = 8^{\circ} 51' 04.0''$ $L = 48.46'$ $T = 25.25'$ $R = 70.00'$
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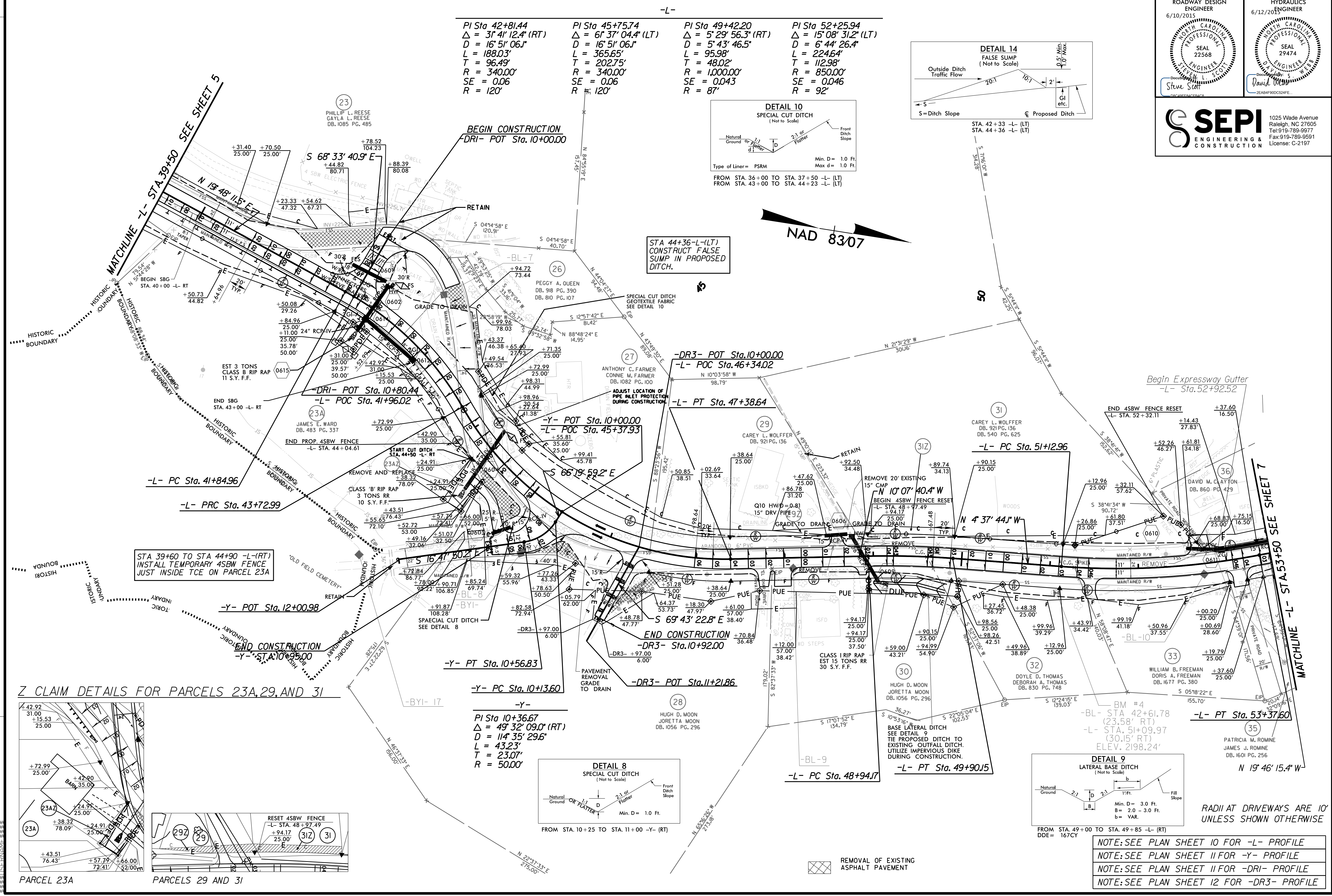
REMOVAL OF EXISTING ASPHALT PAVEMENT

RADI AT DRIVEWAYS ARE 10' UNLESS SHOWN OTHERWISE
NOTE: SEE PLAN SHEET 9 FOR -L- PROFILE
NOTE: SEE PLAN SHEET 11 FOR -DR2- PROFILE

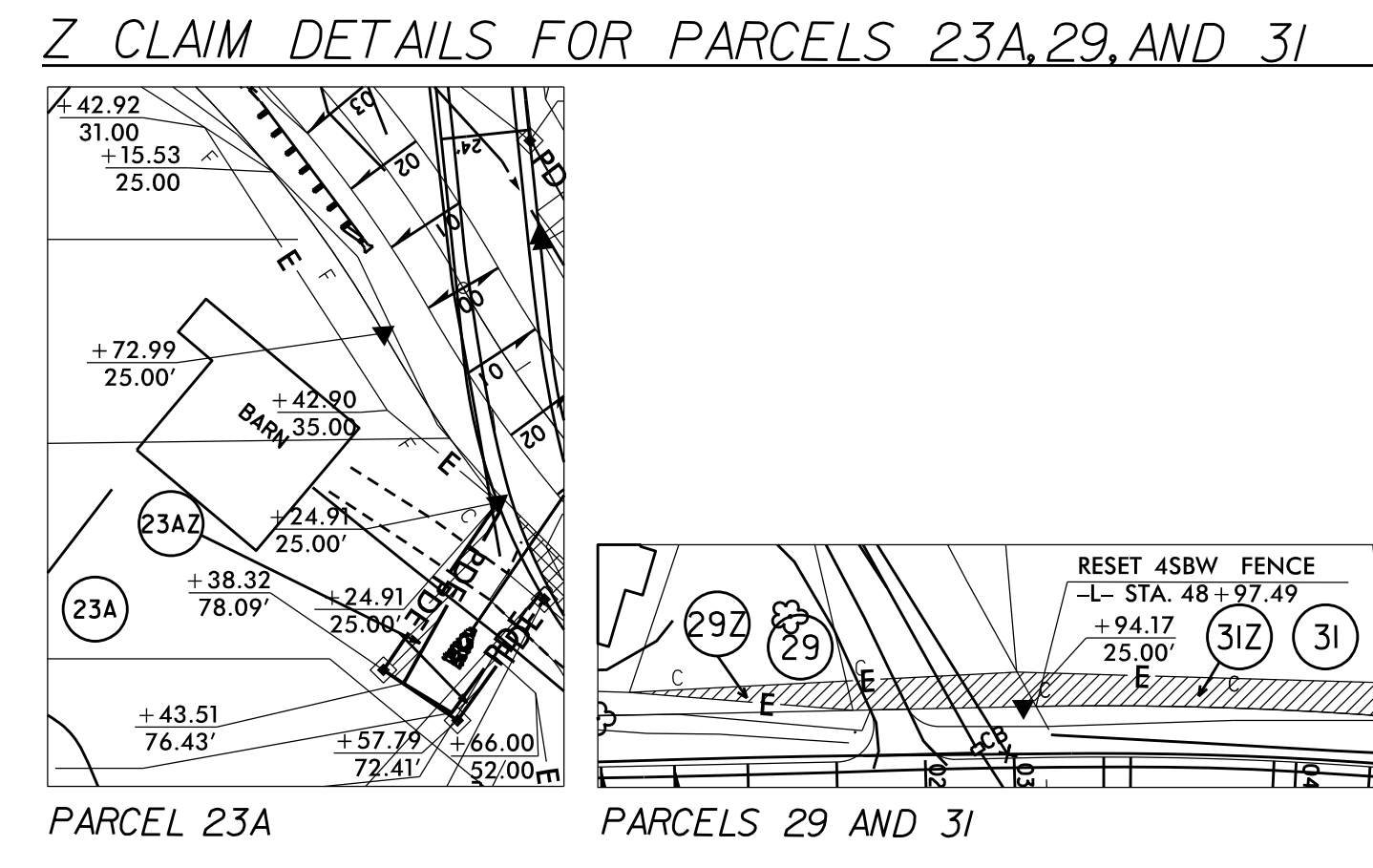
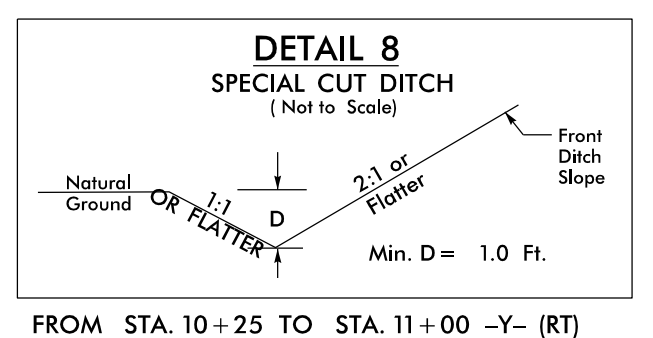
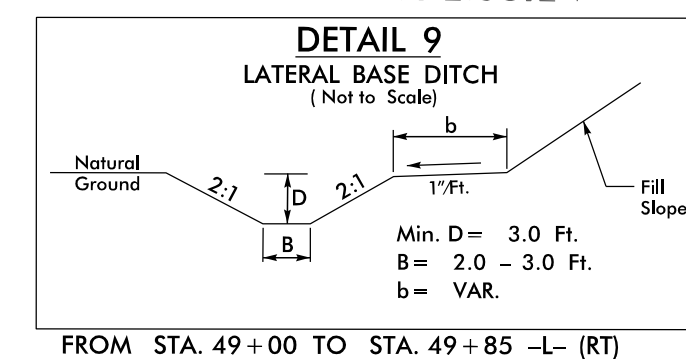
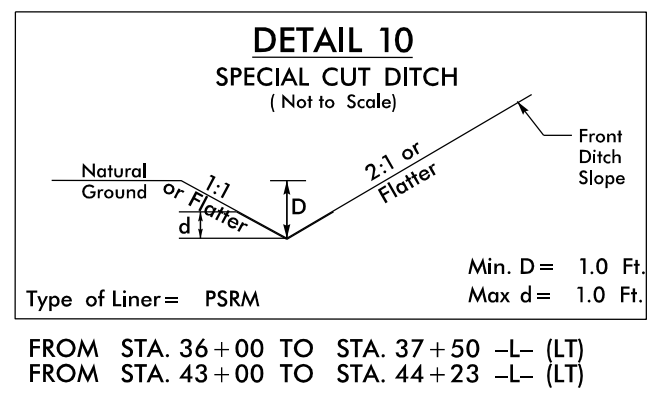
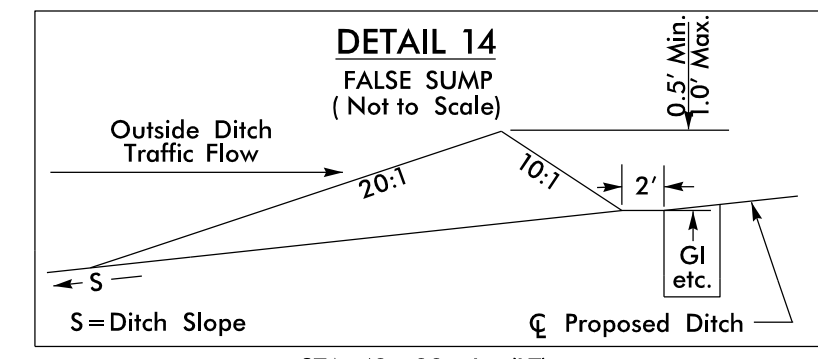
REVISIONS

5/14/14/99

PROJECT REFERENCE NO. R-5206	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 6/10/2015	HYDRAULICS ENGINEER 6/12/2015
1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197	



PI Sta 42+81.44 $\Delta = 31' 41'' 12.4''$ (RT) $D = 16' 51'' 06.1''$ $L = 188.03'$ $T = 96.49'$ $R = 340.00'$ $SE = 0.06$ $R = 120'$	PI Sta 45+75.74 $\Delta = 61' 37'' 04.4''$ (LT) $D = 16' 51'' 06.1''$ $L = 365.65'$ $T = 202.75'$ $R = 340.00'$ $SE = 0.06$ $R = 120'$	PI Sta 49+42.20 $\Delta = 5' 29'' 56.3''$ (RT) $D = 5' 43'' 46.5''$ $L = 95.98'$ $T = 48.02'$ $R = 1000.00'$ $SE = 0.043$ $R = 87'$	PI Sta 52+25.94 $\Delta = 15' 08'' 31.2''$ (LT) $D = 6' 44'' 26.4''$ $L = 224.64'$ $T = 112.98'$ $R = 850.00'$ $SE = 0.046$ $R = 92'$
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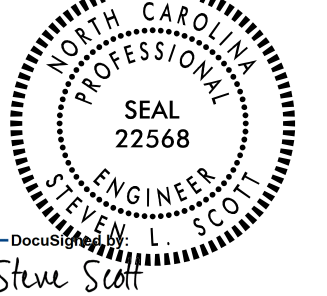
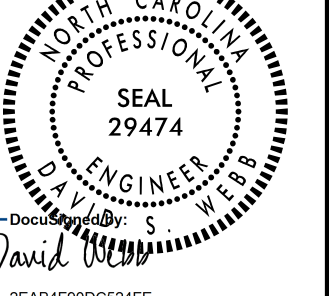

NOTE: SEE PLAN SHEET 10 FOR -L- PROFILE
 NOTE: SEE PLAN SHEET 11 FOR -Y- PROFILE
 NOTE: SEE PLAN SHEET 11 FOR -DRI- PROFILE
 NOTE: SEE PLAN SHEET 12 FOR -DR3- PROFILE

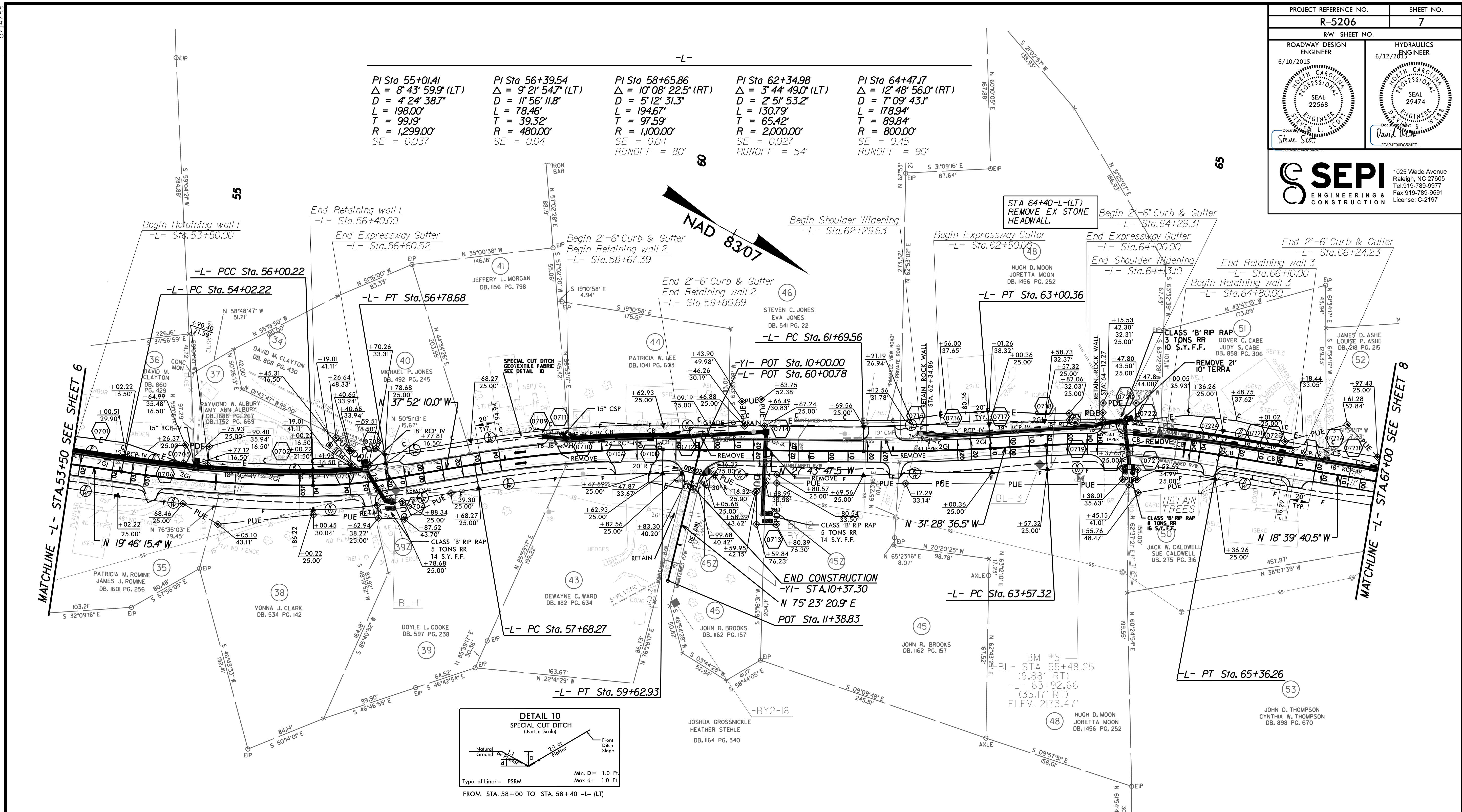
REMOVAL OF EXISTING ASPHALT PAVEMENT

RADIUS AT DRIVEWAYS ARE 10' UNLESS SHOWN OTHERWISE

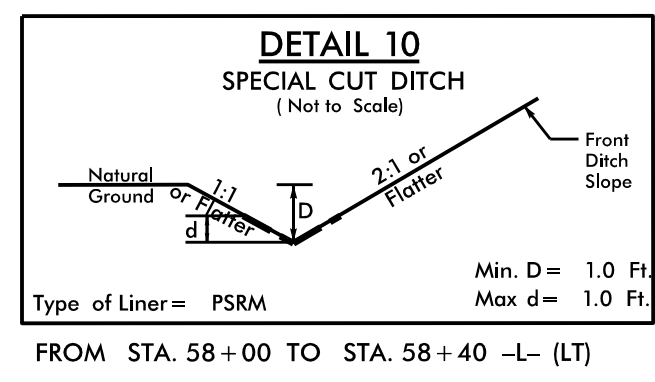
REVISIONS

5/14/15

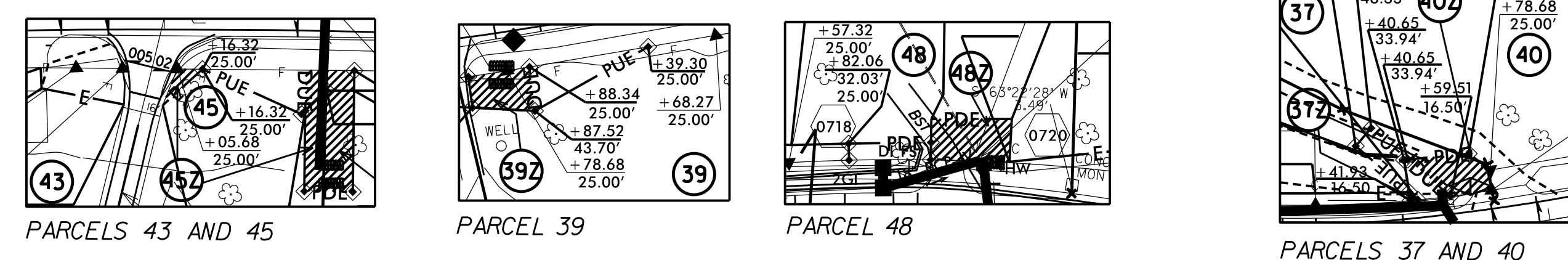
PROJECT REFERENCE NO. R-5206		SHEET NO. 7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 6/10/2015		HYDRAULICS ENGINEER 6/12/2015	
 Steve Slot License: 22568		 David M. Jones License: 29474	
 SEPI ENGINEERING & CONSTRUCTION 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197			



PI Sta 55+01.41 $\Delta = 8' 43" 59.9" (LT)$ $D = 4' 24" 38.7"$ $L = 198.00'$ $T = 99.19'$ $R = 1,299.00'$ $SE = 0.037$	PI Sta 56+39.54 $\Delta = 9' 21" 54.7" (LT)$ $D = 1' 56" 11.8"$ $L = 78.46'$ $T = 39.32'$ $R = 480.00'$ $SE = 0.04$	PI Sta 58+65.86 $\Delta = 10' 08" 22.5" (RT)$ $D = 5' 12" 31.3"$ $L = 194.67'$ $T = 97.59'$ $R = 1,100.00'$ $SE = 0.04$ $RUNOFF = 80'$	PI Sta 62+34.98 $\Delta = 3' 44" 49.0" (LT)$ $D = 2' 51" 53.2"$ $L = 130.79'$ $T = 65.42'$ $R = 2,000.00'$ $SE = 0.027$ $RUNOFF = 54'$	PI Sta 64+47.17 $\Delta = 12' 48" 56.0" (RT)$ $D = 7' 09" 43.1"$ $L = 178.94'$ $T = 89.84'$ $R = 800.00'$ $SE = 0.45$ $RUNOFF = 90'$
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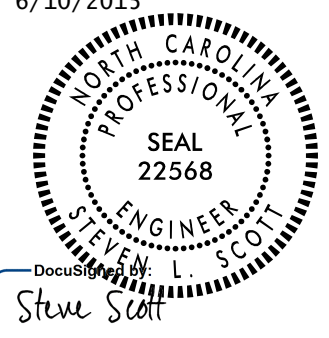
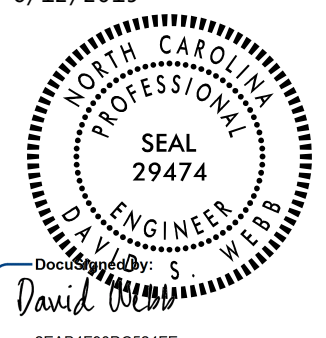



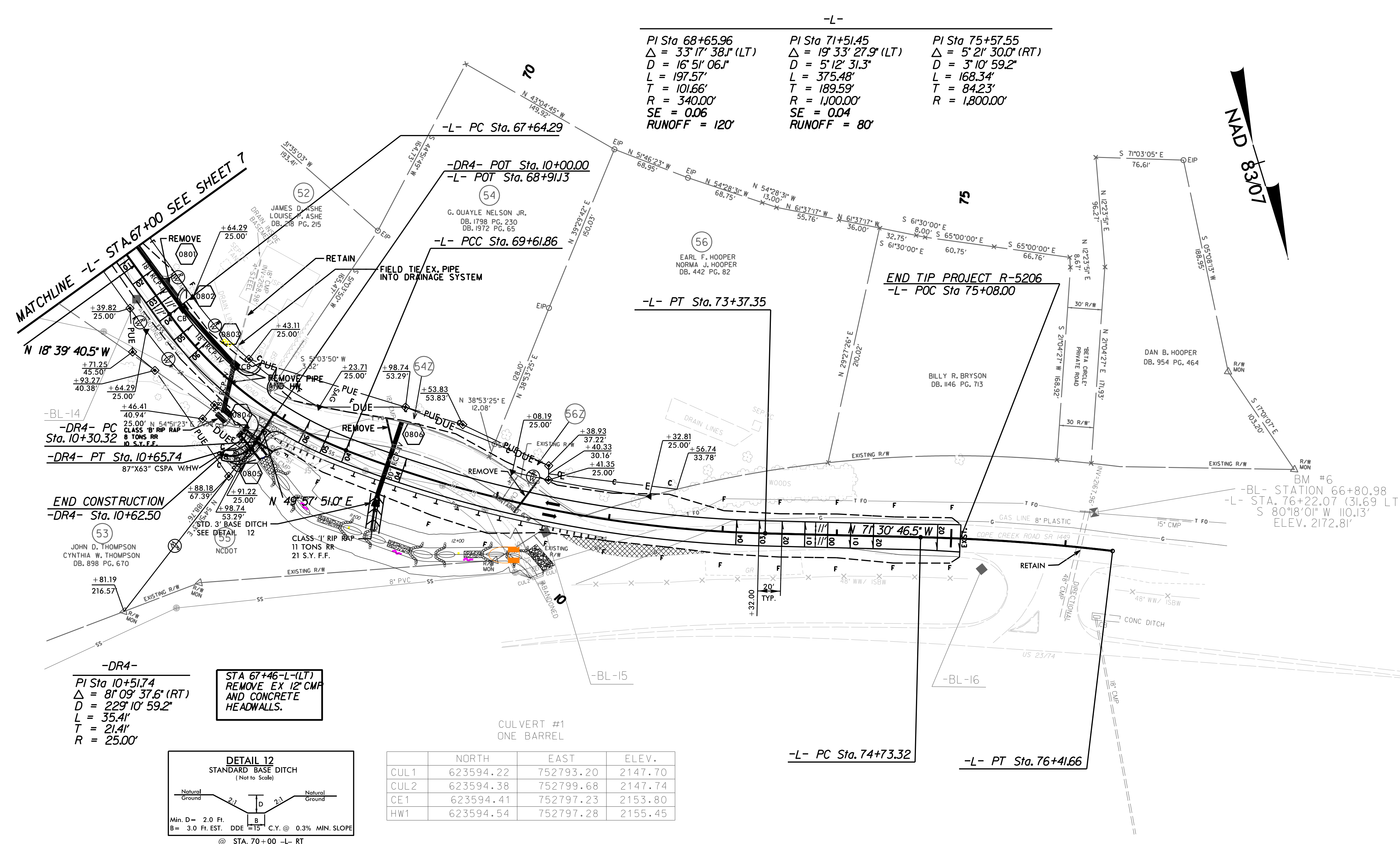
Z CLAIM DETAILS FOR PARCELS 39,45 AND 48



NOTE: SEE PLAN SHEET 10 FOR -L- PROFILE

RADI AT DRIVEWAYS ARE 10' UNLESS SHOWN OTHERWISE

PROJECT REFERENCE NO. R-5206	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 6/10/2015 	HYDRAULICS ENGINEER 6/12/2015 
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-L-

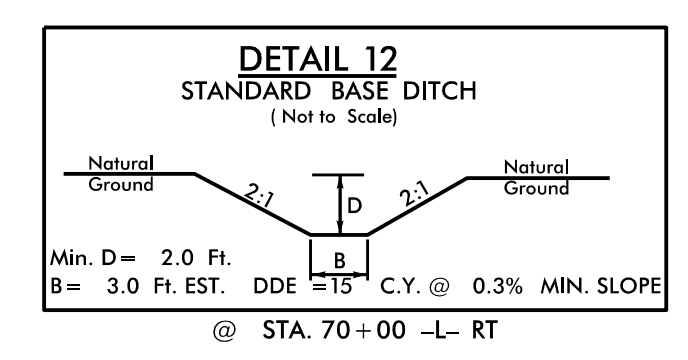
PI Sta 68+65.96 $\Delta = 33' 17' 38.1''$ (LT) $D = 16' 51' 06.1''$ $L = 197.57'$ $T = 101.66'$ $R = 340.00'$ $SE = 0.06$ $RUNOFF = 120'$	PI Sta 71+51.45 $\Delta = 19' 33' 27.9''$ (LT) $D = 5' 12' 31.3''$ $L = 375.48'$ $T = 189.59'$ $R = 1100.00'$ $SE = 0.04$ $RUNOFF = 80'$	PI Sta 75+57.55 $\Delta = 5' 21' 30.0''$ (RT) $D = 3' 10' 59.2''$ $L = 168.34'$ $T = 84.23'$ $R = 1,800.00'$
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MATCHLINE -L- STA. 67+00 SEE SHEET 7

-BL-14
 -DR4- PC Sta. 10+30.32
 -DR4- PT Sta. 10+65.74
 END CONSTRUCTION
 -DR4- Sta. 10+62.50

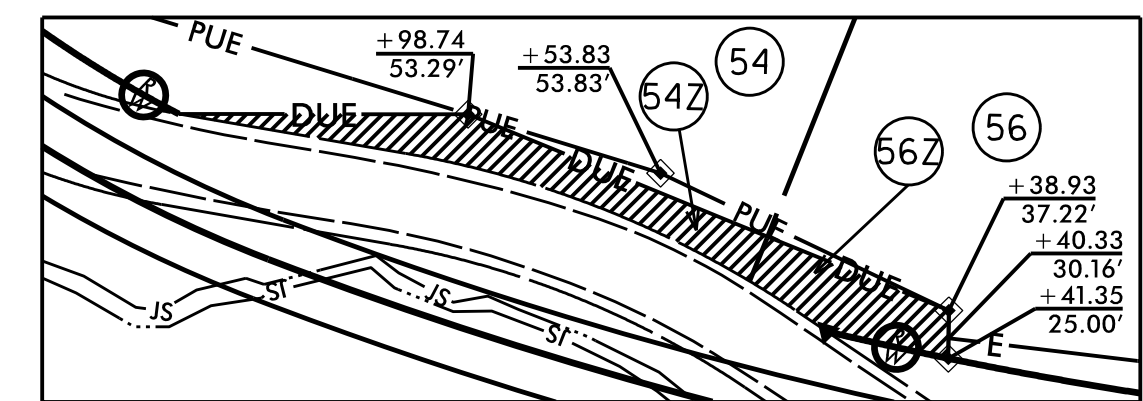
-DR4-
 PI Sta. 10+51.74
 $\Delta = 8' 09' 37.6''$ (RT)
 $D = 229' 10' 59.2''$
 $L = 35.41'$
 $T = 21.41'$
 $R = 25.00'$

STA 67+46-L (LT)
 REMOVE EX. 12' CMP
 AND CONCRETE
 HEADWALLS.



	NORTH	EAST	ELEV.
CUL1	623594.22	752793.20	2147.70
CUL2	623594.38	752799.68	2147.74
CE1	623594.41	752797.23	2153.80
HW1	623594.54	752797.28	2155.45

Z CLAIM DETAILS FOR PARCELS 54, AND 56



PARCELS 54 AND 56

 REMOVAL OF EXISTING ASPHALT PAVEMENT

RADIAT DRIVEWAYS ARE 10' UNLESS SHOWN OTHERWISE

NOTE: SEE PLAN SHEET 11 FOR -L- PROFILE
 NOTE: SEE PLAN SHEET 12 FOR -DR4- PROFILE

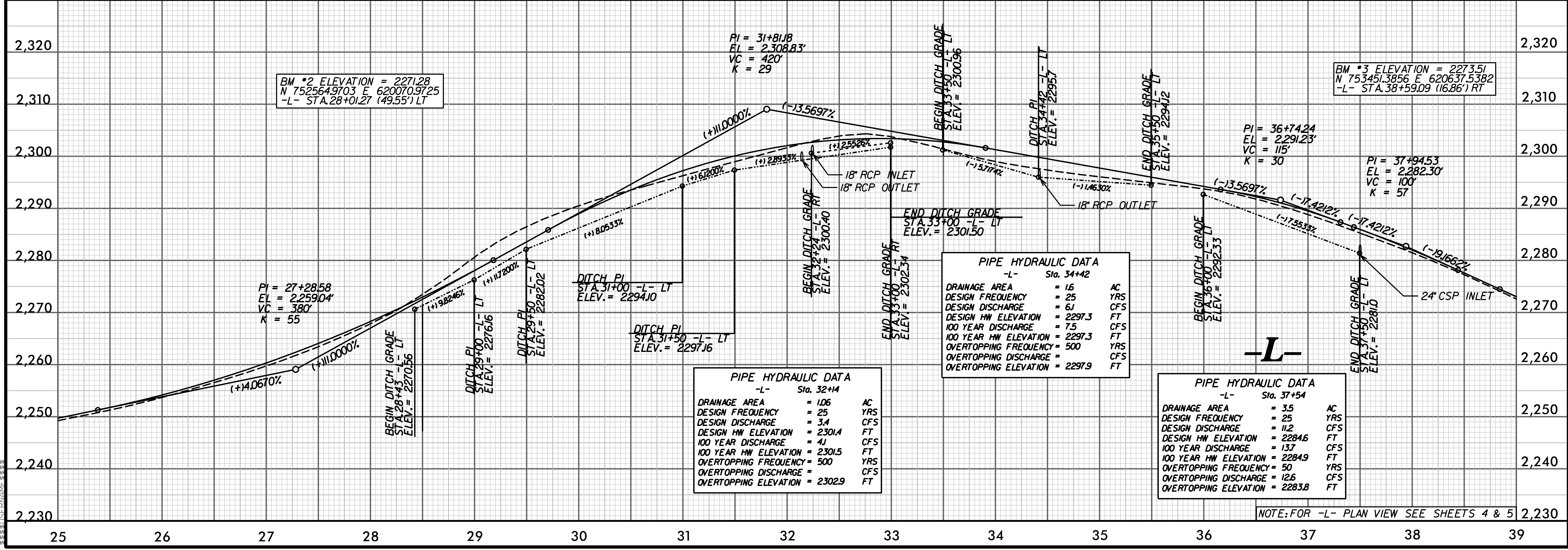
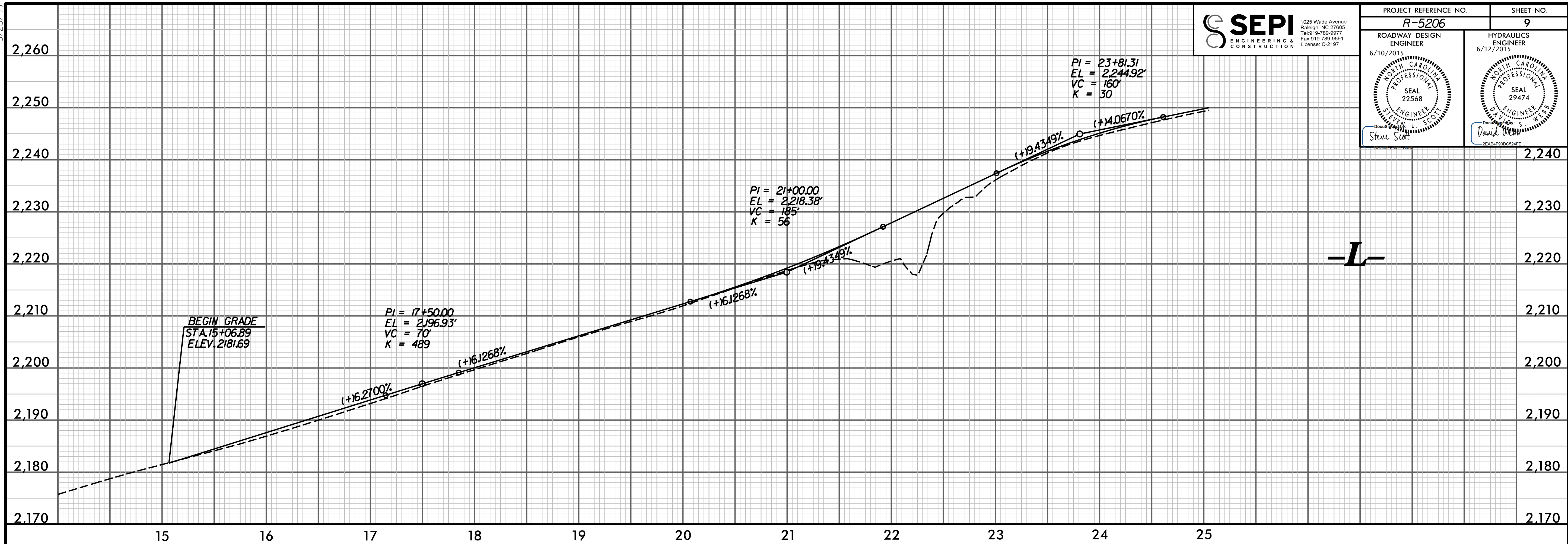
REVISIONS

5/14/99

5/28/19
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PROJECT REFERENCE NO. R-5206	SHEET NO. 9
ROADWAY DESIGN ENGINEER 6/10/2015	HYDRAULICS ENGINEER 6/12/2015
SEAL 22568 STEVE SCOTT	SEAL 29474 DAVID WELLS



NOTE: FOR -L- PLAN VIEW SEE SHEETS 4 & 5

5/28/19



PROJECT REFERENCE NO. R-5206	SHEET NO. 10
ROADWAY DESIGN ENGINEER 6/10/2015	HYDRAULICS ENGINEER 6/12/2015
SEAL 22568 STEVE SCOTT	SEAL 29474 DAVID WELLS

PIPE HYDRAULIC DATA
-L- Sta. 44+31.6

DRAINAGE AREA	= 1J	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 4.2	CFS
DESIGN HW ELEVATION	= 2234.3	FT
100 YEAR DISCHARGE	= 5J	CFS
100 YEAR HW ELEVATION	= 2234.4	FT
OVERTOPPING FREQUENCY	= 10	YRS
OVERTOPPING DISCHARGE	= 3.8	CFS
OVERTOPPING ELEVATION	= 2234.2	FT

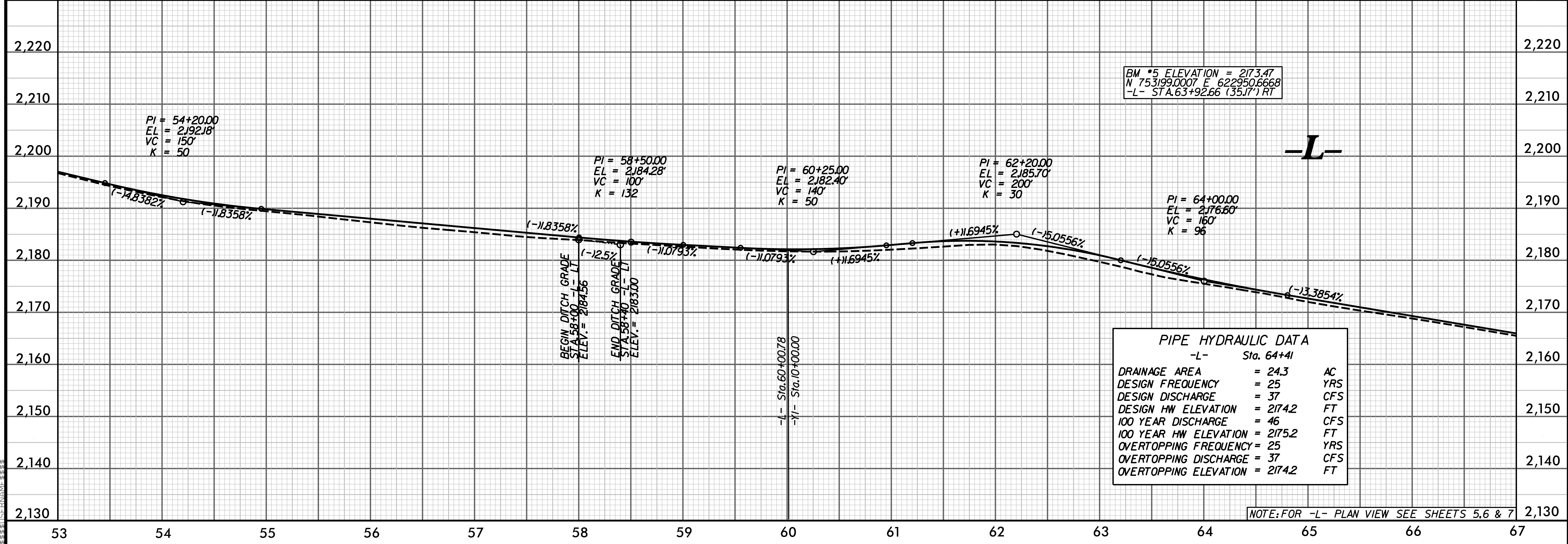
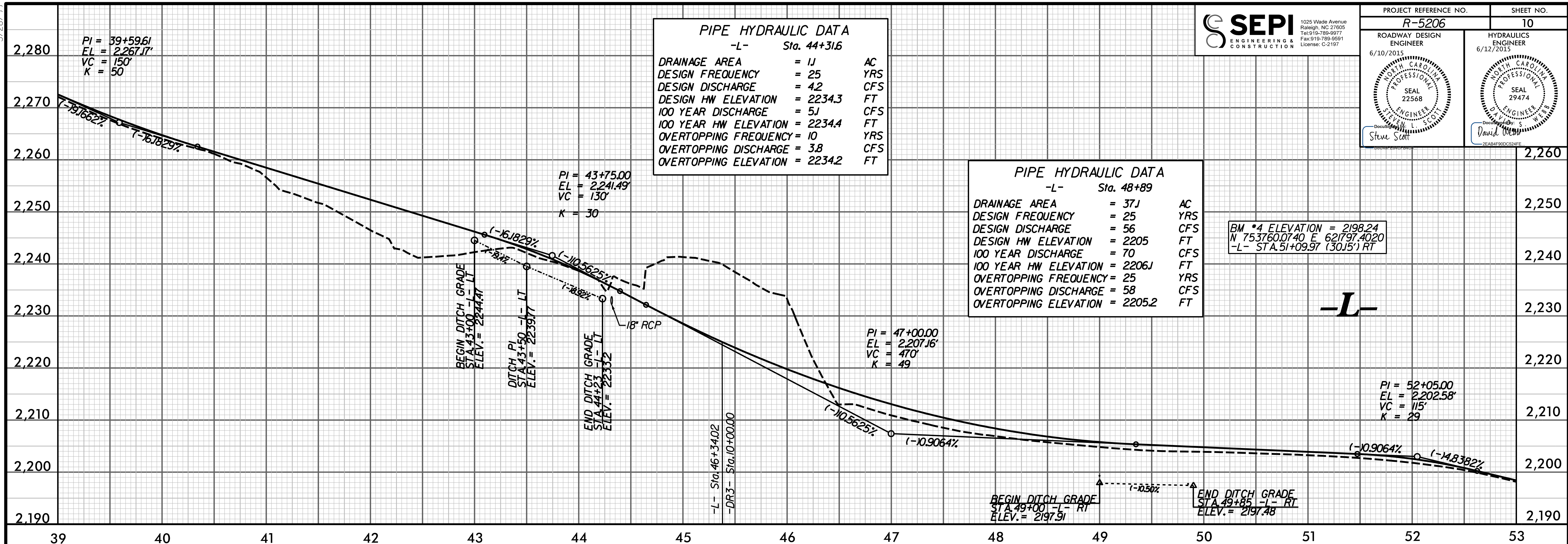
PIPE HYDRAULIC DATA
-L- Sta. 48+89

DRAINAGE AREA	= 37J	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 56	CFS
DESIGN HW ELEVATION	= 2205	FT
100 YEAR DISCHARGE	= 70	CFS
100 YEAR HW ELEVATION	= 2206J	FT
OVERTOPPING FREQUENCY	= 25	YRS
OVERTOPPING DISCHARGE	= 58	CFS
OVERTOPPING ELEVATION	= 2205.2	FT

BM #5 ELEVATION = 2173.47
N 753199.0007 E 622950.6668
-L- STA.63+92.66 (35.17') RT

PIPE HYDRAULIC DATA
-L- Sta. 64+41

DRAINAGE AREA	= 24.3	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 37	CFS
DESIGN HW ELEVATION	= 2174.2	FT
100 YEAR DISCHARGE	= 46	CFS
100 YEAR HW ELEVATION	= 2175.2	FT
OVERTOPPING FREQUENCY	= 25	YRS
OVERTOPPING DISCHARGE	= 37	CFS
OVERTOPPING ELEVATION	= 2174.2	FT



NOTE: FOR -L- PLAN VIEW SEE SHEETS 5, 6 & 7

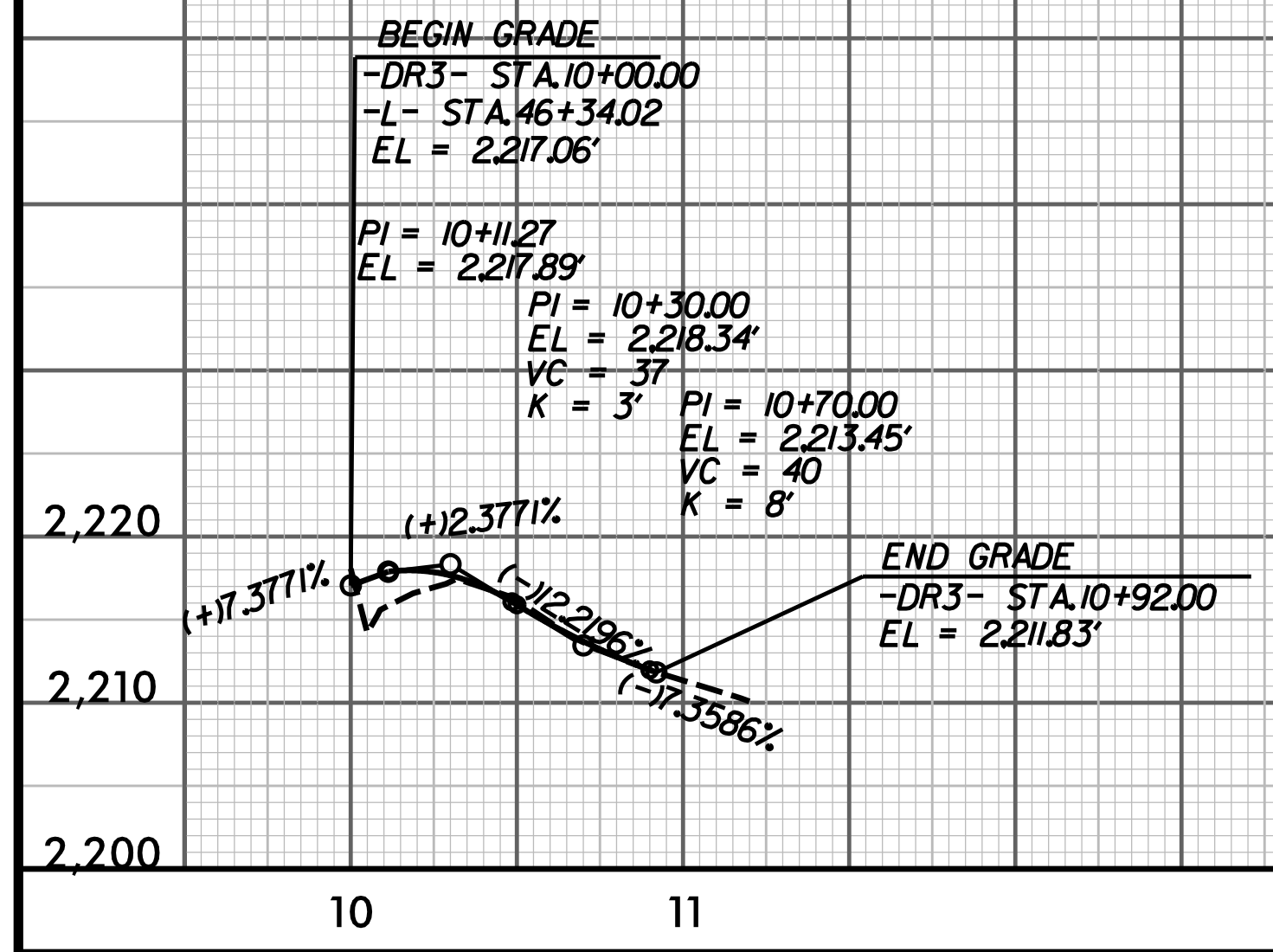
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 David Wells
 29474
 6/12/2015

5/28/99

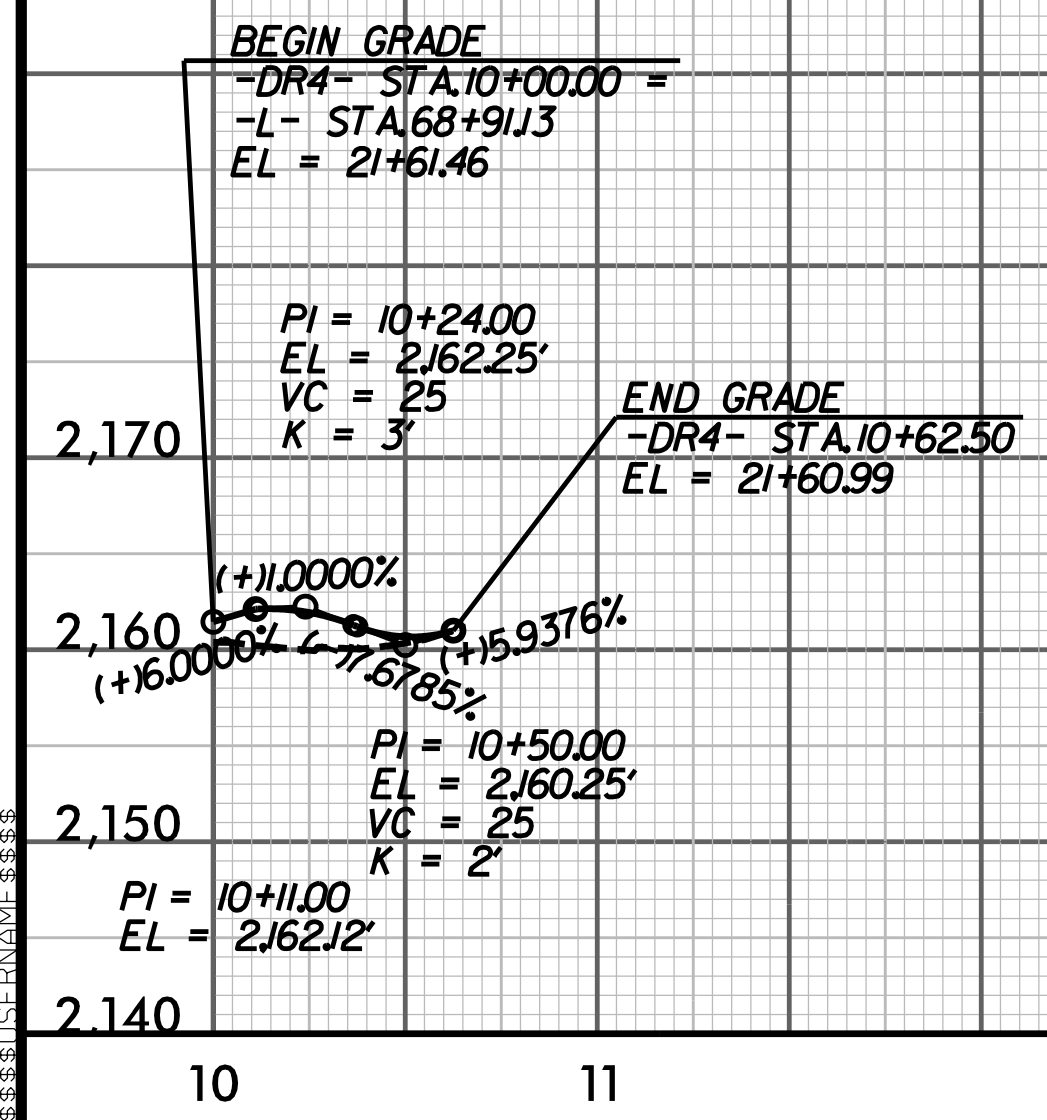


PROJECT REFERENCE NO. R-5206	SHEET NO. 12
ROADWAY DESIGN ENGINEER 6/10/2015	HYDRAULICS ENGINEER 6/12/2015

-DR3-



-DR4-



NOTE: FOR -DR3- PLAN VIEW SEE SHEET 6
 NOTE: FOR -DR4- PLAN VIEW SEE SHEET 8