

09/08/99

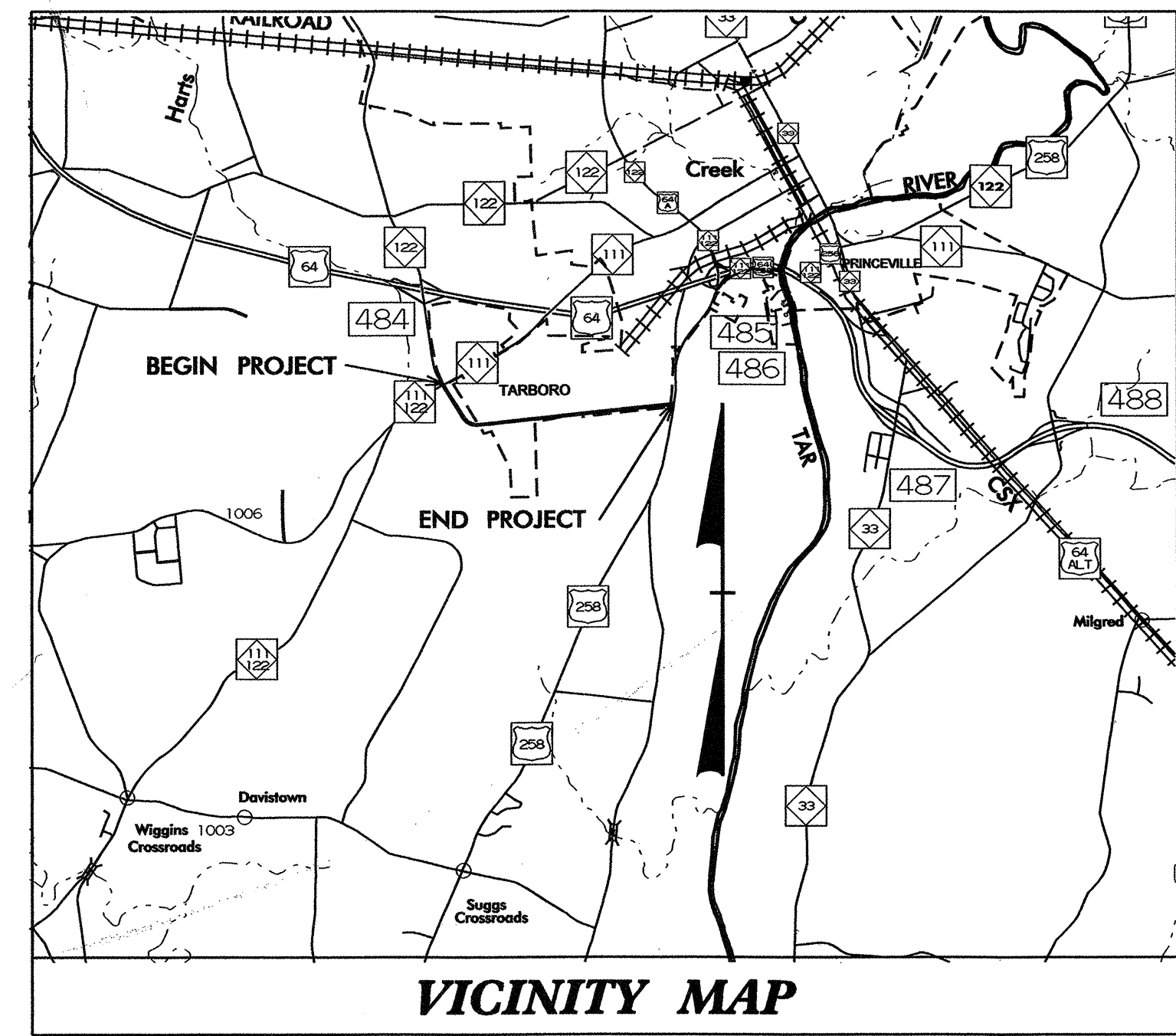
10

01-AUG-2006 10:25
g:\nc\dy\at\dy\at\dy\at\4434\4434-Tsh-6864.dgn
gethridge AT NCDOT-C7487EE3A

TIP PROJECT: R-4434

CONTRACT: C201190

See Sheet 1-A For Index of Sheets



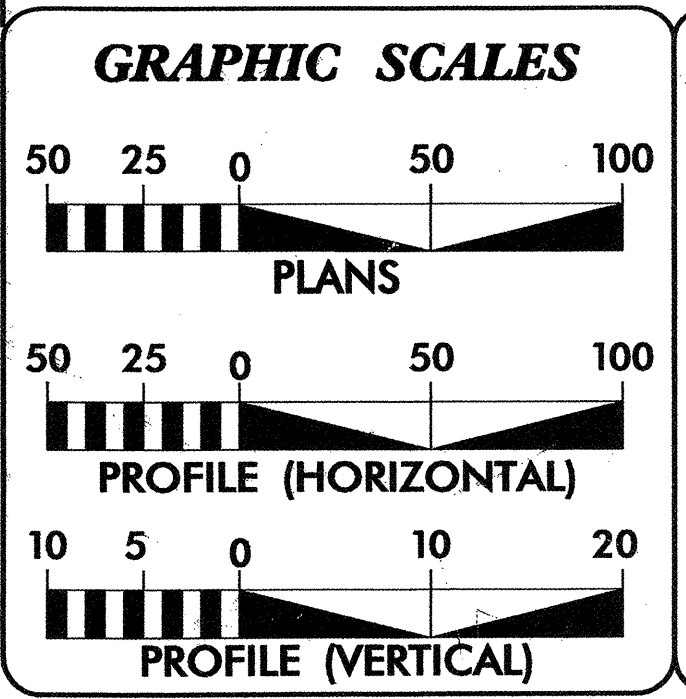
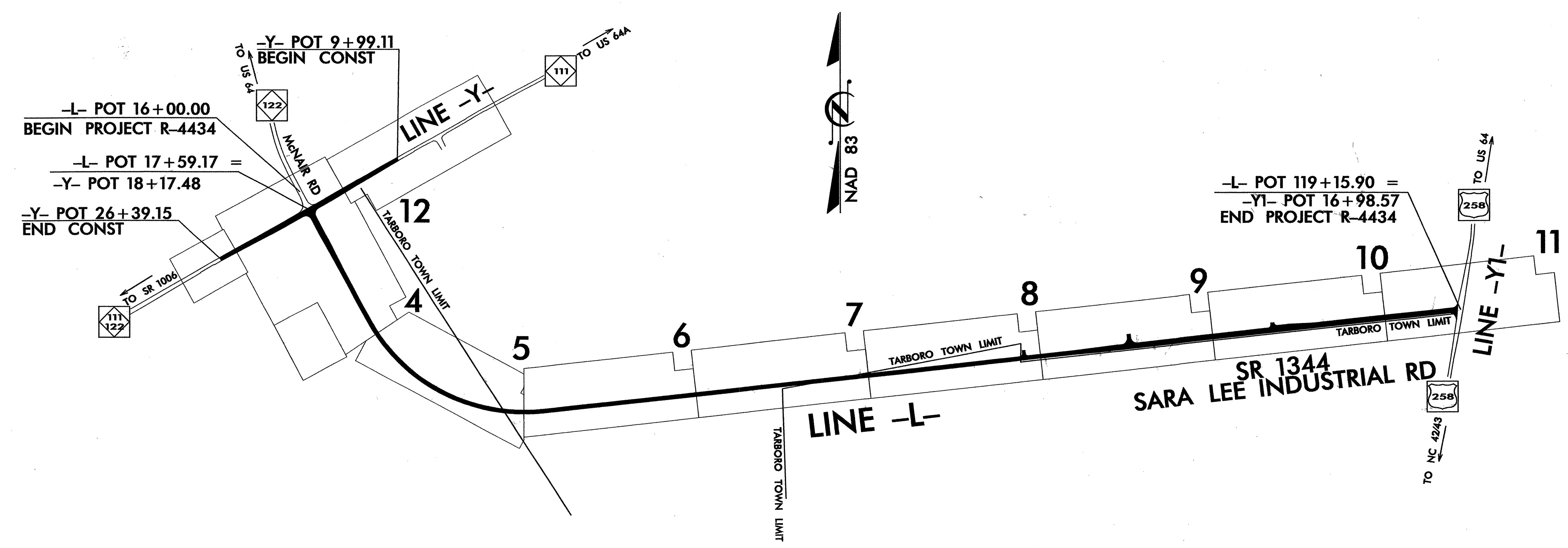
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

EDGECOMBE COUNTY

**LOCATION: McNAIR ROAD EXTENSION FROM
NC 117/22 TO US 258.**

**TYPE OF WORK: CLEARING & GRUBBING, GRADING, DRAINAGE,
PAVING, CURB & GUTTER AND TRAFFIC SIGNALS.**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R 4434	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35600.1.1		PE	
35600.2.1		RW & UTILITY	
35600.3.1		CONST.	



DESIGN DATA

ADT 2006 =	4500
ADT 2025 =	7200
DHV =	10%
D =	60%
T =	7% *
V =	60MPH
* TTST 3%	DUAL 4%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-4434 = 1.954 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
Division 4 DDC
509 Ward Blvd., Wilson NC, 27895

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
AUGUST 6, 2004

LETTING DATE:
November 21, 2006

R. E. GREENE, JR., PE
PROJECT ENGINEER

J. C. CAULEY, PLS
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

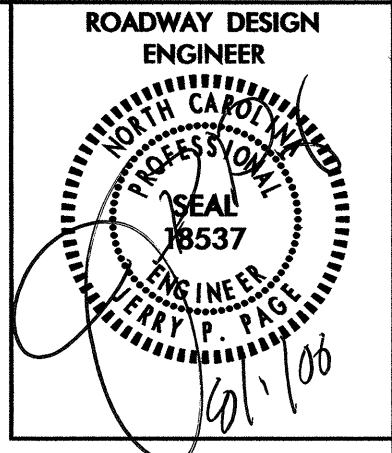
R.C. Aug
SIGNATURE: 8-7-06

ROADWAY DESIGN ENGINEER

J.P. P...
SIGNATURE: 8/10/06

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX OF SHEETS

INDEX OF SHEETS
R-4434

SHEET NUMBER	SHEET TITLE SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS
1-B	CONVENTIONAL SYMBOLS
1-C	CENTERLINE COORDINATE LIST
2 THRU 2-A	TYPICAL SECTIONS, PAVEMENT SCHEDULE, AND WEDGING DETAIL
3	SUMMARY OF QUANTITIES
3-A THRU 3-B	DRAINAGE SUMMARY
3-C	PAVEMENT REMOVAL SUMMARY AND EARTHWORK SUMMARY
3-D	RIGHT OF WAY AREA DATA SHEET
4 THRU 13	PLAN AND PROFILE SHEETS
TCP-1 THRU TCP-6	TRAFFIC CONTROL PLANS
PM-1 THRU PM-5	PAVEMENT MARKING PLANS
EC-1 THRU EC-21	EROSION CONTROL PLANS
SIG-1 THRU SIG-11	SIGNAL PLANS
UC-0 THRU UC-5	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-5	UTILITY BY OTHERS PLANS
X	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-79	CROSS-SECTIONS

GENERAL NOTES: 2006 SPECIFICATIONS
EFFECTIVE: 07-18-06
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

GRADING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED OR FUTURE SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD 111.

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

SIDE ROADS:
THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

DRIVEWAYS:
DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3" RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:
STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:
NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE Edgecombe-Martin EMC-Power Trans.
Sprint-Telephone, Town of Tarboro-Power Distribution, Piedmont Natural Gas
Aldelphia-CATV, Cox Communications-CATV, and Town of Tarboro-Water
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

2006 ROADWAY STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 18, 2006 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method 111
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superlevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation - Method 'A'
300.02	Method of Pipe Installation - Method 'B'
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method 1
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.02	Driveway Turnout - Radius Type
848.05	Wheelchair Ramp - Curb Cut
876.02	Guide for Rip Rap at Pipe Outlets

EFF. 07-18-06

8/17/99

01-AUG-2006 11:34
d:\pdu\pdu\du\4434\4434.tsh_ddc4.dgn
destidoc AT NCDOT-C7487EE3A

10/25/05

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	→
Property Monument	□
Parcel/Sequence Number	(23)
Existing Fence Line	×-×-×-×
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	WLB
Proposed Wetland Boundary	WLB
Existing Endangered Animal Boundary	EAB
Existing Endangered Plant Boundary	EPB

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or UG Tank Cap	○
Sign	○
Well	○
Small Mine	⋈
Foundation	□
Area Outline	□
Cemetery	+
Building	□
School	□
Church	+
Dam	▬

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	JS
Buffer Zone 1	BZ 1
Buffer Zone 2	BZ 2
Flow Arrow	←
Disappearing Stream	→
Spring	○
Swamp Marsh	⋈
Proposed Lateral, Tail, Head Ditch	←
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	□
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

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 Marker	-----
Existing Control of Access	○
Proposed Control of Access	○
Existing Easement Line	E
Proposed Temporary Construction Easement	E
Proposed Temporary Drainage Easement	TDE
Proposed Permanent Drainage Easement	PDE
Proposed Permanent Utility Easement	PUE

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Wheel Chair Ramp	WCR
Curb Cut for Future Wheel Chair Ramp	CCFR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	⊗

VEGETATION:

Single Tree	⊕
Single Shrub	⊙
Hedge	-----
Woods Line	-----
Orchard	⊕
Vineyard	Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
UG Power Cable Hand Hole	PH
H-Frame Pole	●
Recorded UG Power Line	P
Designated UG Power Line (S.U.E.*)	P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
UG Telephone Cable Hand Hole	PH
Recorded UG Telephone Cable	T
Designated UG Telephone Cable (S.U.E.*)	T
Recorded UG Telephone Conduit	TC
Designated UG Telephone Conduit (S.U.E.*)	TC
Recorded UG Fiber Optics Cable	T FO
Designated UG Fiber Optics Cable (S.U.E.*)	T FO

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded UG Water Line	W
Designated UG Water Line (S.U.E.*)	W
Above Ground Water Line	A/G Water

TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊕
UG TV Cable Hand Hole	PH
Recorded UG TV Cable	TV
Designated UG TV Cable (S.U.E.*)	TV
Recorded UG Fiber Optic Cable	TV FO
Designated UG Fiber Optic Cable (S.U.E.*)	TV FO

GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded UG Gas Line	G
Designated UG Gas Line (S.U.E.*)	G
Above Ground Gas Line	A/G Gas

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
UG Sanitary Sewer Line	SS
Above Ground Sanitary Sewer	A/G Sanitary Sewer
Recorded SS Forced Main Line	FSS
Designated SS Forced Main Line (S.U.E.*)	FSS

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown UG Line	UTIL
UG Tank; Water, Gas, Oil	□
A/G Tank; Water, Gas, Oil	□
UG Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

CENTERLINE COORDINATE LIST

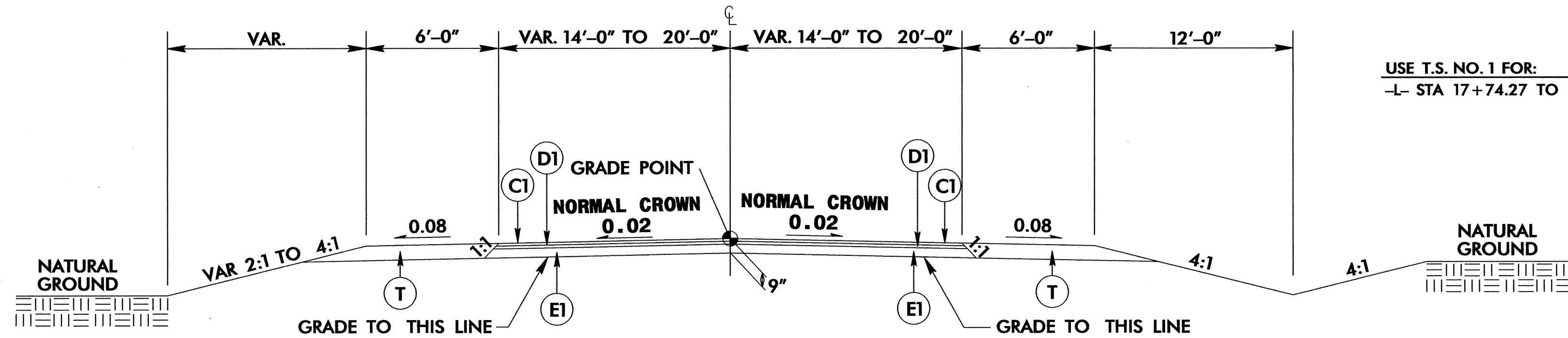
Disclaimer: This coordinate list is provided for the convenience of interested contractors and is intended for use during the project bidding process only. Coordinates are localized to this particular project and any conversion to state grid coordinates or other formats will be the responsibility of the recipient. While every effort has been made to provide up-to-date, accurate information, NCDOT makes no express guarantee as to the validity or potential for revision of this information prior to project letting.

POINT #	LINE	STATION	NORTHING(Y)	EASTING(X)
1	L	17+59.17	776,519.2152	2,419,141.0560
2	L	18+00.00	776,483.1933	2,419,160.2788
3	L	18+50.00	776,439.0813	2,419,183.8187
4	L	19+00.00	776,394.9693	2,419,207.3587
5	L	19+50.00	776,350.8573	2,419,230.8987
6	L	20+00.00	776,306.7453	2,419,254.4387
7	L	20+50.00	776,262.6333	2,419,277.9786
8	L	21+00.00	776,218.5212	2,419,301.5186
9	L	21+50.00	776,174.4092	2,419,325.0586
10	L	22+00.00	776,130.2972	2,419,348.5986
11	L	22+50.00	776,086.1852	2,419,372.1385
12	L	23+00.00	776,042.0732	2,419,395.6785
13	L	23+50.00	775,997.9612	2,419,419.2185
14	L	24+00.00	775,953.8492	2,419,442.7585
15	L	24+50.00	775,909.7372	2,419,466.2984
16	L	25+00.00	775,865.6251	2,419,489.8384
17	L	25+50.00	775,821.5131	2,419,513.3784
18	L	26+00.00	775,777.4011	2,419,536.9184
19	L	26+50.00	775,733.2891	2,419,560.4583
20	L	27+00.00	775,689.1771	2,419,584.0183
21	L	27+50.00	775,645.0651	2,419,607.5583
22	L	28+00.00	775,601.9531	2,419,631.0983
23	L	28+50.00	775,557.8411	2,419,654.6383
24	L	29+00.00	775,513.7291	2,419,678.1783
25	L	29+50.00	775,469.6171	2,419,701.7183
26	L	30+00.00	775,425.5051	2,419,725.2583
27	L	30+50.00	775,381.3931	2,419,748.7983
28	L	31+00.00	775,337.2811	2,419,772.3383
29	L	31+50.00	775,293.1691	2,419,795.8783
30	L	32+00.00	775,249.0571	2,419,819.4183
31	L	32+50.00	775,204.9451	2,419,842.9583
32	L	33+00.00	775,160.8331	2,419,866.4983
33	L	33+50.00	775,116.7211	2,419,890.0383
34	L	34+00.00	775,072.6091	2,420,013.5783
35	L	34+50.00	775,028.4971	2,420,037.1183
36	L	35+00.00	775,014.3851	2,420,112.1838
37	L	35+50.00	775,014.2731	2,420,154.9510
38	L	36+00.00	775,051.2293	2,420,198.5980
39	L	36+50.00	775,028.3775	2,420,243.0656
40	L	37+00.00	775,007.0917	2,420,288.3056
41	L	37+50.00	774,987.3977	2,420,334.2609
42	L	38+00.00	774,969.3194	2,420,380.8755
43	L	38+50.00	774,952.8790	2,420,428.0927
44	L	39+00.00	774,938.0965	2,420,475.8548
45	L	39+50.00	774,924.9899	2,420,524.1038
46	L	40+00.00	774,913.5751	2,420,572.7808
47	L	40+50.00	774,903.8661	2,420,621.8265
48	L	41+00.00	774,895.8746	2,420,671.1811
49	L	41+50.00	774,889.6105	2,420,720.7846
50	L	42+00.00	774,885.0813	2,420,770.5765
51	L	42+50.00	774,882.2926	2,420,820.4962
52	L	43+00.00	774,881.2478	2,420,870.4827
53	L	43+50.00	774,881.9481	2,420,920.4753
54	L	44+00.00	774,884.3767	2,420,970.4139
55	L	44+50.00	774,888.2592	2,421,020.2617
56	L	45+00.00	774,893.1158	2,421,070.0248
57	L	45+50.00	774,898.4629	2,421,119.7380
58	L	46+00.00	774,903.8944	2,421,169.4421
59	L	46+50.00	774,909.3260	2,421,219.1462
60	L	47+00.00	774,914.7576	2,421,268.8503
61	L	47+50.00	774,920.1891	2,421,318.5544
62	L	48+00.00	774,925.6207	2,421,368.2586

POINT #	LINE	STATION	NORTHING(Y)	EASTING(X)
63	L	48+50.00	774,931.0522	2,421,417.9627
64	L	49+00.00	774,936.4838	2,421,467.6668
65	L	49+50.00	774,941.9154	2,421,517.3709
66	L	50+00.00	774,947.3469	2,421,567.0750
67	L	50+50.00	774,952.7785	2,421,616.7791
68	L	51+00.00	774,958.2100	2,421,666.4832
69	L	51+50.00	774,963.6416	2,421,716.1873
70	L	52+00.00	774,969.0732	2,421,765.8914
71	L	52+50.00	774,974.5047	2,421,815.5955
72	L	53+00.00	774,979.9363	2,421,865.2996
73	L	53+50.00	774,985.3678	2,421,915.0037
74	L	54+00.00	774,990.7994	2,421,964.7078
75	L	54+50.00	774,996.2310	2,422,014.4119
76	L	55+00.00	775,001.6625	2,422,064.1160
77	L	55+50.00	775,007.0941	2,422,113.8201
78	L	56+00.00	775,012.5256	2,422,163.5242
79	L	56+50.00	775,017.9572	2,422,213.2284
80	L	57+00.00	775,023.3888	2,422,262.9325
81	L	57+50.00	775,028.8203	2,422,312.6366
82	L	58+00.00	775,034.2519	2,422,362.3407
83	L	58+50.00	775,039.6834	2,422,412.0448
84	L	59+00.00	775,045.1150	2,422,461.7489
85	L	59+50.00	775,050.5466	2,422,511.4530
86	L	60+00.00	775,055.9781	2,422,561.1571
87	L	60+50.00	775,061.4097	2,422,610.8612
88	L	61+00.00	775,066.8412	2,422,660.5653
89	L	61+50.00	775,072.2728	2,422,710.2694
90	L	62+00.00	775,077.7044	2,422,759.9735
91	L	62+50.00	775,083.1359	2,422,809.6776
92	L	63+00.00	775,088.5675	2,422,859.3817
93	L	63+50.00	775,093.9990	2,422,909.0858
94	L	64+00.00	775,099.4306	2,422,958.7899
95	L	64+50.00	775,104.8622	2,423,008.4940
96	L	65+00.00	775,110.2937	2,423,058.1982
97	L	65+50.00	775,115.7253	2,423,107.9023
98	L	66+00.00	775,121.1568	2,423,157.6064
99	L	66+50.00	775,126.5884	2,423,207.3105
100	L	67+00.00	775,132.0200	2,423,257.0146
101	L	67+50.00	775,137.4515	2,423,306.7187
102	L	68+00.00	775,142.8831	2,423,356.4228
103	L	68+50.00	775,148.3146	2,423,406.1269
104	L	69+00.00	775,153.7462	2,423,455.8310
105	L	69+50.00	775,159.1778	2,423,505.5351
106	L	70+00.00	775,164.6093	2,423,555.2392
107	L	70+50.00	775,170.0409	2,423,604.9433
108	L	71+00.00	775,175.4725	2,423,654.6474
109	L	71+50.00	775,180.9040	2,423,704.3515
110	L	72+00.00	775,186.3356	2,423,754.0556
111	L	72+50.00	775,191.7671	2,423,803.7597
112	L	73+00.00	775,197.1987	2,423,853.4638
113	L	73+50.00	775,202.6303	2,423,903.1679
114	L	74+00.00	775,208.0618	2,423,952.8720
115	L	74+50.00	775,213.4934	2,424,002.5761
116	L	75+00.00	775,218.9249	2,424,052.2803
117	L	75+50.00	775,224.3565	2,424,101.9844
118	L	76+00.00	775,229.7881	2,424,151.6885
119	L	76+50.00	775,235.2196	2,424,201.3926
120	L	77+00.00	775,240.6512	2,424,251.0967
121	L	77+50.00	775,246.0827	2,424,300.8008
122	L	78+00.00	775,251.5143	2,424,350.5049
123	L	78+50.00	775,256.9459	2,424,400.2090
124	L	79+00.00	775,262.3774	2,424,449.9131

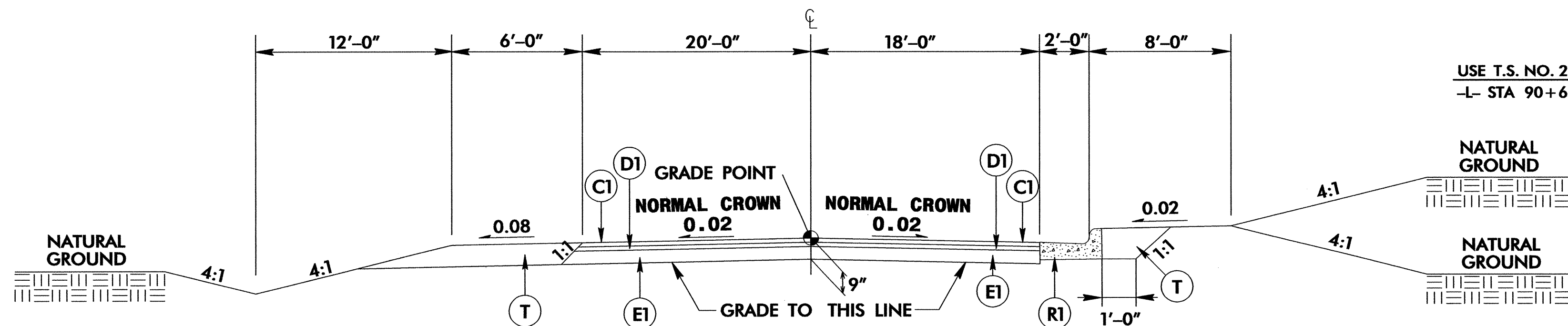
POINT #	LINE	STATION	NORTHING(Y)	EASTING(X)
125	L	79+50.00	775,267.8090	2,424,499.6172
126	L	80+00.00	775,273.2405	2,424,549.3213
127	L	80+50.00	775,278.6721	2,424,599.0254
128	L	81+00.00	775,284.1037	2,424,648.7295
129	L	81+50.00	775,289.5352	2,424,698.4337
130	L	82+00.00	775,294.9668	2,424,748.1378
131	L	82+50.00	775,300.3983	2,424,797.8419
132	L	83+00.00	775,305.8299	2,424,847.5460
133	L	83+50.00	775,311.2615	2,424,897.2501
134	L	84+00.00	775,316.6930	2,424,946.9542
135	L	84+50.00	775,322.1246	2,424,996.6583
136	L	85+00.00	775,327.5561	2,425,046.3624
137	L	85+50.00	775,332.9877	2,425,096.0665
138	L	86+00.00	775,338.4193	2,425,145.7706
139	L	86+50.00	775,343.8508	2,425,195.4747
140	L	87+00.00	775,349.2824	2,425,245.1788
141	L	87+50.00	775,354.7139	2,425,294.8829
142	L	88+00.00	775,360.1455	2,425,344.5870
143	L	88+50.00	775,365.5771	2,425,394.2911
144	L	89+00.00	775,371.0086	2,425,443.9952
145	L	89+50.00	775,376.4402	2,425,493.6993
146	L	90+00.00	775,381.8717	2,425,543.4035
147	L	90+50.00	775,387.3033	2,425,593.1076
148	L	91+00.00	775,392.7349	2,425,642.8117
149	L	91+50.00	775,398.1664	2,425,692.5158
150	L	92+00.00	775,403.5980	2,425,742.2199
151	L	92+50.00	775,409.0295	2,425,791.9240
152	L	93+00.00	775,414.4611	2,425,841.6281
153	L	93+50.00	775,419.8927	2,425,891.3322
154	L	94+00.00	775,425.3242	2,425,941.0363
155	L	94+50.00	775,430.7558	2,425,990.7404
156	L	95+00.00	775,436.1873	2,426,040.4445
157	L	95+50.00	775,441.6189	2,426,090.1486
158	L	96+00.00	775,447.0505	2,426,139.8527
159	L	96+50.00	775,452.4820	2,426,189.5568
160	L	97+00.00	775,457.9136	2,426,239.2609
161	L	97+50.00	775,463.3451	2,426,288.9650
162	L	98+00.00	775,468.7767	2,426,338.6692
163	L	98+50.00	775,474.2083	2,426,388.3733
164	L	99+00.00	775,479.6398	2,426,438.0774
165	L	99+50.00	775,485.0714	2,426,487.7815
166	L	100+00.00	775,490.5030	2,426,537.4856
167	L	100+50.00	775,495.9345	2,426,587.1897
168	L	101+00.00	775,501.3661	2,426,636.8938
169	L	101+50.00	775,506.7976	2,426,686.5979
170	L	102+00.00	775,512.2292	2,426,736.3020
171	L	102+50.00	775,517.6608	2,426,786.0061
172	L	103+00.00	775,523.0923	2,426,835.7102
173	L	103+50.00	775,528.5239	2,426,885.4143
174	L	104+00.00	775,533.9554	2,426,935.1184
175	L	104+50.00	775,539.3870	2,426,984.8225
176	L	105+00.00	775,544.8186	2,427,034.5266
177	L	105+50.00	775,550.2501	

NOTE: RESURFACE WITH C1 FROM -L- STA 16+00.00 TO 17+74.27



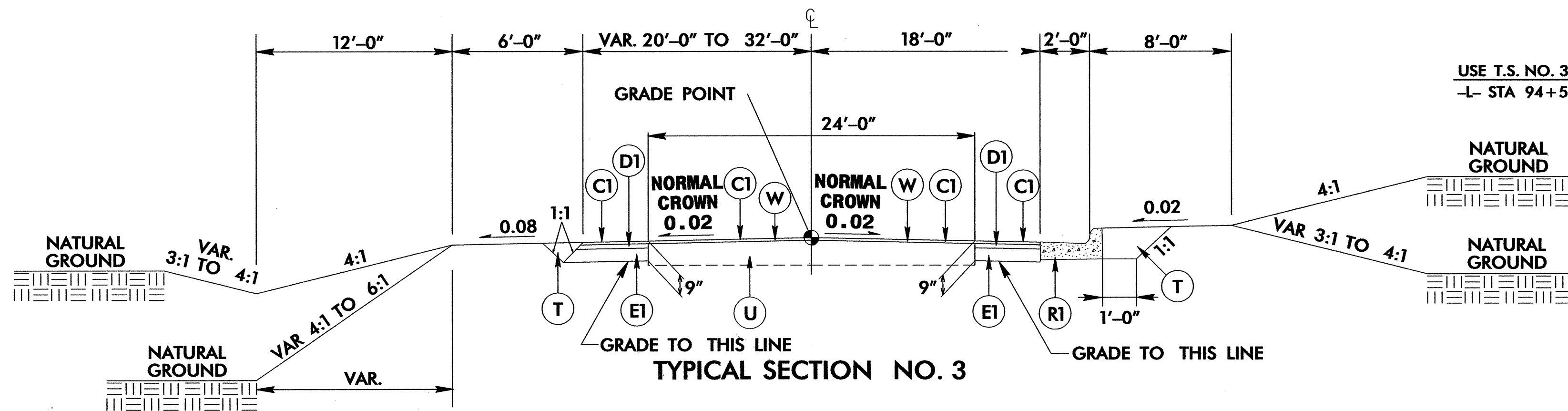
TYPICAL SECTION NO. 1

USE T.S. NO. 1 FOR:
-L- STA 17+74.27 TO 90+65.24



TYPICAL SECTION NO. 2

USE T.S. NO. 2 FOR:
-L- STA 90+65.24 TO 94+50



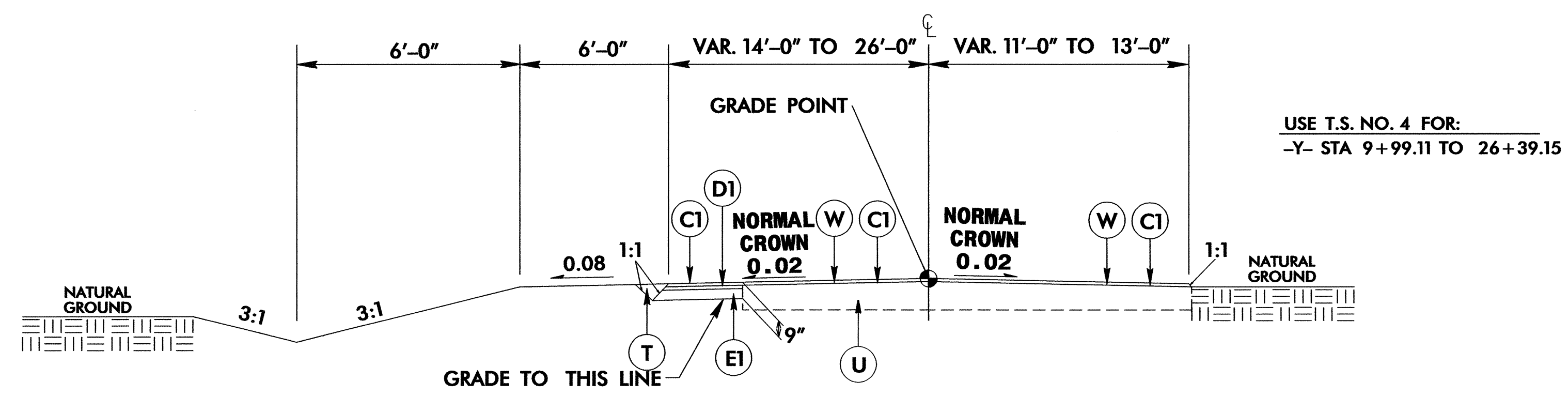
TYPICAL SECTION NO. 3

USE T.S. NO. 3 FOR:
-L- STA 94+50 TO 119+15.90

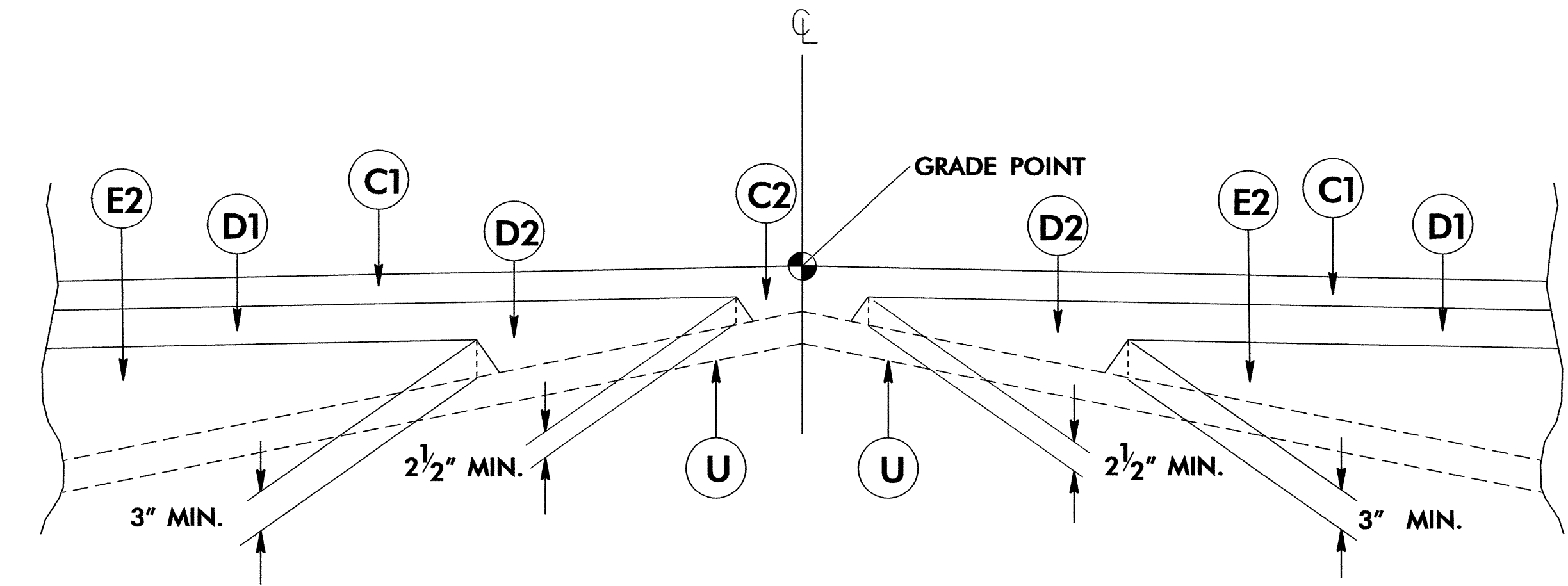
PAVEMENT SCHEDULE

C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
R1	2'-6" CONCRETE CURB AND GUTTER.
U	EXISTING PAVEMENT.
T	EARTH MATERIAL.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING)

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



TYPICAL SECTION NO. 4



DETAIL SHOWING METHOD OF WEDGING

PAVEMENT SCHEDULE	
C1	2" S9.5B
C2	VAR. S9.5B
D1	3" I19.0B
D2	VAR. I19.0B
E1	4" B25.0B
E2	VAR. B37.5B
R1	2'-6" CONC. C&G
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	WEDGING

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201190

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION
000100000-E	200	Lump Sum		CLEARING & GRUBBING . ACRE(S)
000800000-E	200	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
002200000-E	225	19,000	CY	UNCLASSIFIED EXCAVATION
003600000-E	225	1,000	CY	UNDERCUT EXCAVATION
008000000-E	SP	1,000	TON	CLASS IV SUBGRADE STABILIZATION
010600000-E	230	19,200	CY	BORROW EXCAVATION
013400000-E	240	30	CY	DRAINAGE DITCH EXCAVATION
015600000-E	250	900	SY	REMOVAL OF EXISTING ASPHALT PAVEMENT
019600000-E	270	1,500	SY	FABRIC FOR SOIL STABILIZATION
031800000-E	300	375	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
039000000-E	310	112	LF	36" RC PIPE CULVERTS, CLASS III
040200000-E	310	128	LF	48" RC PIPE CULVERTS, CLASS III
040800000-E	310	24	LF	54" RC PIPE CULVERTS, CLASS III
099500000-E	340	357	LF	PIPE REMOVAL
101100000-N	500	Lump Sum		FINE GRADING
122000000-E	545	200	TON	INCIDENTAL STONE BASE
148900000-E	610	9,200	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
149800000-E	610	7,100	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B
151900000-E	610	5,400	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
156000000-E	620	1,060	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
169300000-E	654	110	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
200000000-N	806	22	EA	RIGHT OF WAY MARKERS
225300000-E	840	5	CY	PIPE COLLARS
226400000-E	840	1	CY	PIPE PLUGS
228600000-E	840	16	EA	MASONRY DRAINAGE STRUCTURES
230800000-E	840	1	LF	MASONRY DRAINAGE STRUCTURES
237400000-N	840	1	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)
237400000-N	840	12	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)
237400000-N	840	1	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)
239600000-N	840	2	EA	FRAME WITH COVER, STD 840.54
254900000-E	846	2,900	LF	2'-6" CONCRETE CURB & GUTTER
261200000-E	848	20	SY	6" CONCRETE DRIVEWAY
283000000-N	858	1	EA	ADJUSTMENT OF MANHOLES
284500000-N	858	14	EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES
362800000-E	876	35	TON	RIP RAP, CLASS I
364900000-E	876	70	TON	RIP RAP, CLASS B
365600000-E	876	985	SY	FILTER FABRIC FOR DRAINAGE
365900000-N	SP	1	EA	PREFORMED SCOUR HOLES WITH LEVEL SPREADER AFRON
440000000-E	1110	120	SF	WORK ZONE SIGNS (STATIONARY)
440500000-E	1110	212	SF	WORK ZONE SIGNS (PORTABLE)
441000000-E	1110	30	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
443000000-N	1130	130	EA	DRUMS
443500000-N	1135	30	EA	CONES
444500000-E	1145	112	LF	BARRICADES (TYPE III)
445000000-N	1150	2,880	HR	FLAGGER
451000000-N	SP	60	HR	POLICE
465000000-N	1251	148	EA	TEMPORARY RAISED PAVEMENT MARKERS

ItemNumber	Sec #	Quantity	Unit	Description
468500000-E	1205	20,689	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
468600000-E	1205	29,731	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
469500000-E	1205	312	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)
471000000-E	1205	264	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
472500000-E	1205	36	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
481000000-E	1205	93,640	LF	PAINT PAVEMENT MARKING LINES (4")
483500000-E	1205	144	LF	PAINT PAVEMENT MARKING LINES (24")
485000000-E	1205	400	LF	REMOVAL OF PAVEMENT MARKING LINES (4")
487000000-E	1205	96	LF	REMOVAL OF PAVEMENT MARKING LINES (24")
490000000-N	1251	323	EA	PERMANENT RAISED PAVEMENT MARKERS
532560000-E	1510	63	LF	6" WATER LINE
532580000-E	1510	137	LF	8" WATER LINE
532660000-E	1510	316	LF	16" WATER LINE
557180000-E	1515	1	EA	8" TAPPING VALVE
564320000-E	1515	1	EA	2" WATER METER
5653810000-E	1515	1	EA	RELOCATE 8" DCV BACK-FLOW PREVENTOR
567200000-N	1515	3	EA	RELOCATE FIRE HYDRANT
581000000-E	1530	315	LF	ABANDON 16" UTILITY PIPE
581500000-N	1530	1	EA	REMOVE WATER METER
588200000-N	SP	47	EA	GENERIC UTILITY ITEM CLASS B CONCRETE ENCASEMENT BLOCKS
600000000-E	1605	10,900	LF	TEMPORARY SILT FENCE
600600000-E	1610	780	TON	STONE FOR EROSION CONTROL, CLASS A
601200000-E	1610	1,030	TON	SEDIMENT CONTROL STONE
601500000-E	1615	11.5	ACR	TEMPORARY MULCHING
601800000-E	1620	400	LB	SEED FOR TEMPORARY SEEDING
602100000-E	1620	1.75	TON	FERTILIZER FOR TEMPORARY SEEDING
602400000-E	1622	50	LF	TEMPORARY SLOPE DRAINS
602700000-N	1622	2	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
602900000-E	SP	1,400	LF	SAFETY FENCE
603000000-E	1630	7,605	CY	SILT EXCAVATION
603600000-E	1631	2,525	SY	MATting FOR EROSION CONTROL
603700000-E	SP	20	SY	COIR FIBER MAT
6071030000-E	SP	175	LF	COIR FIBER BAFFLES
6071050000-E	SP	3	EA	** SKIMMER (2")
608400000-E	1660	12	ACR	SEEDING & MULCHING
608700000-E	1660	7	ACR	MOWING
609000000-E	1661	100	LB	SEED FOR REPAIR SEEDING
609300000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
609600000-E	1662	275	LB	SEED FOR SUPPLEMENTAL SEEDING
610800000-E	1665	9	TON	FERTILIZER TOPDRESSING
611400000-N	SP	2	HR	SPECIALIZED HAND MOWING
611700000-N	SP	24	EA	RESPONSE FOR EROSION CONTROL
706000000-E	1705	1,270	LF	SIGNAL CABLE
712000000-E	1705	12	EA	VEHICLE SIGNAL HEAD (12", 3 SECTION)
714400000-E	1705	2	EA	VEHICLE SIGNAL HEAD (12", 5 SECTION)
726400000-E	1710	790	LF	MESSENGER CABLE (3/8")
730000000-E	1715	2,560	LF	UNPAVED TRENCHING (*****) (1, 2")
732400000-N	1716	20	EA	JUNCTION BOX (STANDARD SIZE)

ItemNumber	Sec #	Quantity	Unit	Description
744400000-E	1725	1,720	LF	INDUCTIVE LOOP SAWCUT
745600000-E	1726	4,485	LF	LEAD-IN CABLE (***** (18-2))
745600000-E	1726	360	LF	LEAD-IN CABLE (***** (18-4))
757600000-N	SP	8	EA	METAL STRAIN SIGNAL POLE
761300000-N	SP	8	EA	SOIL TEST
7614100000-E	SP	56	CY	DRILLED PIER FOUNDATION
768400000-N	1750	2	EA	SIGNAL CABINET FOUNDATION
768800000-N	1753	2	EA	CABINET BASE ADAPTER
775600000-N	1751	2	EA	CONTROLLER WITH CABINET (TYPE 2070L, BASE MOUNTED)
778000000-N	1751	9	EA	DETECTOR CARD (TYPE 2070L)
***** BEGIN SCHEDULE AA ***** ***** (3 ALTERNATES) *****				
036600000-E	310	-924	LF	15" RC PIPE CULVERTS, CLASS III
AA1				
037200000-E	310	716	LF	18" RC PIPE CULVERTS, CLASS III
AA1				
037800000-E	310	916	LF	24" RC PIPE CULVERTS, CLASS III
AA1				
038400000-E	310	120	LF	30" RC PIPE CULVERTS, CLASS III
AA1				
*** OR ***				
036600000-E	310	896	LF	15" RC PIPE CULVERTS, CLASS III
AA2				
037200000-E	310	632	LF	18" RC PIPE CULVERTS, CLASS III
AA2				
037800000-E	310	652	LF	24" RC PIPE CULVERTS, CLASS III
AA2				
038400000-E	310	100	LF	30" RC PIPE CULVERTS, CLASS III
AA2				
053600000-E	SP	28	LF	**** HDPE PIPE CULVERTS (15")
AA2				
053600000-E	SP	84	LF	**** HDPE PIPE CULVERTS (18")
AA2				
053600000-E	SP	264	LF	**** HDPE PIPE CULVERTS (24")
AA2				
053600000-E	SP	20	LF	**** HDPE PIPE CULVERTS (30")
AA2				
*** OR ***				
036600000-E	310	896	LF	15" RC PIPE CULVERTS, CLASS III
AA3				
037200000-E	310	632	LF	18" RC PIPE CULVERTS, CLASS III
AA3				
037800000-E	310	652	LF	24" RC PIPE CULVERTS, CLASS III
AA3				
038400000-E	310	100	LF	30" RC PIPE CULVERTS, CLASS III
AA3				
054000000-E	SP	28	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (15", 0.064")
AA3				
054000000-E	SP	84	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (18", 0.064")
AA3				
054000000-E	SP	264	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (24", 0.064")
AA3				
054000000-E	SP	20	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (30", 0.079")
AA3				
***** END SCHEDULE AA *****				

5/28/09
 05-APR-2006 09:55
 C:\p1\4434\4434-4434.tsh.doc4.dgn
 4434-4434-4434.tsh.doc4.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
 LIST OF PIPE, ENDWALLS, ECT. (FOR PIPE 48" & UNDER)

STATION	LOCATION (L,T,RT OR CL)	STRUCTURE NO.	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE)								BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE)								CLASS III R.C. PIPE OR C.S. PIPE OR TYPE IR ALUMINIZED OR HDPE PIPE, TYPE S OR D								15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS		QUANTITIES FOR DRAINAGE STRUCTURES * TOTAL QUANTITY TO BE ORDERED BY C.C. (1.3 X COL. 'E')	FRAME GRATES & HOOD STANDARD 840.03	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LINEAR FEET	REMARKS				
							12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"	30"	36"	42"	48"				R.C.P.	C.S.P.								LINEAR FEET		TYPE OF GRATE	
																																											CU. YDS.	A		B
-L-	109+10	LT 20																																								48				
-L-	110+85	LT 21																																									91			
-L-	112+25	LT 23											16																									0.553				PIPE INVERT 87.6'				
-L-	118+65	LT 29											20																									0.656								
-Y-	9+84	LT 30											32																													31				
-Y-	13+64	LT 31											28																													34				
-Y-	22+08	LT 32											24																													22				
-Y-	23+73	LT 33											8																									0.399				PIPE INVERT 108.1'				
SHEET 3-B TOTAL								92	16	20																																1.608	226			
SHEET 3-A TOTAL								804	632	636	80	112	128												28	84	156	20						16	0.6	14	1	12	1	1	1	2	24	2.579	131	
SHEET 3-B TOTAL								92	16	20																																1.608	226			
GRAND TOTAL								896	632	652	100	112	128												28	84	264	20						16	0.6	14	1	12	1	1	1	2	24	4.187	357	
SAY																																			1.0									5.000	1	
PROJECT TOTAL								896	632	652	100	112	128												28	84	264	20						16	1.0	14	1	12	1	1	1	2	24	5.000	1	357

**STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS**

SUMMARY OF EARTHWORK
 Volumes in Cubic Yard

STATION TO STATION	Uncl. Excav.	UNDERCUT	Embank. +%	Borrow	Waste
-Y- 09+99.11 TO 26+39.15	653		501		152
-L- 18+50.00 TO 43+50.00	2586		6553	4226	259
SUBTOTAL	3239		7054	4226	411
-L- 43+50.00 TO 68+50.00	355		17321	17001	35
SUBTOTAL	355		17321	17001	35
-L- 68+50.00 TO 94+50.00	13464		593		12871
SUBTOTAL	13464		593		12871
-L- 94+50.00 TO 118+50.00	1921		6888	5159	192
SUBTOTAL	1921		6888	5159	192
TOTAL	18979		31856	26386	13509
EARTH WASTE TO REPL. BOR.				-11612	-11612
EST. SHOULDER MATERIAL			3500	3500	
PROJECT TOTAL	18979		35356	18274	1897
ESTIMATE TO REPLACE TOPSOIL ON BORROW				914	
GRAND TOTAL	18979			19188	
SAY	19000			19200	
ESTIMATE OF UNDERCUT		1000			

**SUMMARY OF EXISTING ASPHALT
 PAVEMENT REMOVAL**

LINE	Station	Station	LOC LT/RT/CL	SY
L	92+15.00	94+50.00		856
TOTAL				856
SAY				900

Quantities are approximate only. The Resident Engineer will recross-section the work accurately when the project is staked out. These cross-section notes will be used in computing the final quantities for which the contractor will be paid.

8/17/99

01-AUC-2006 (0)18
01-V-DIV-Y-DIV-4434-4434-ps-h_04_ddc-4.dgn
01-NC001-67487EE3A

MATCHLINE -Y- 15+00.00 SEE SHEET 12

PROJECT REFERENCE NO. **R-4434** SHEET NO. **4**

RW SHEET NO. **4**

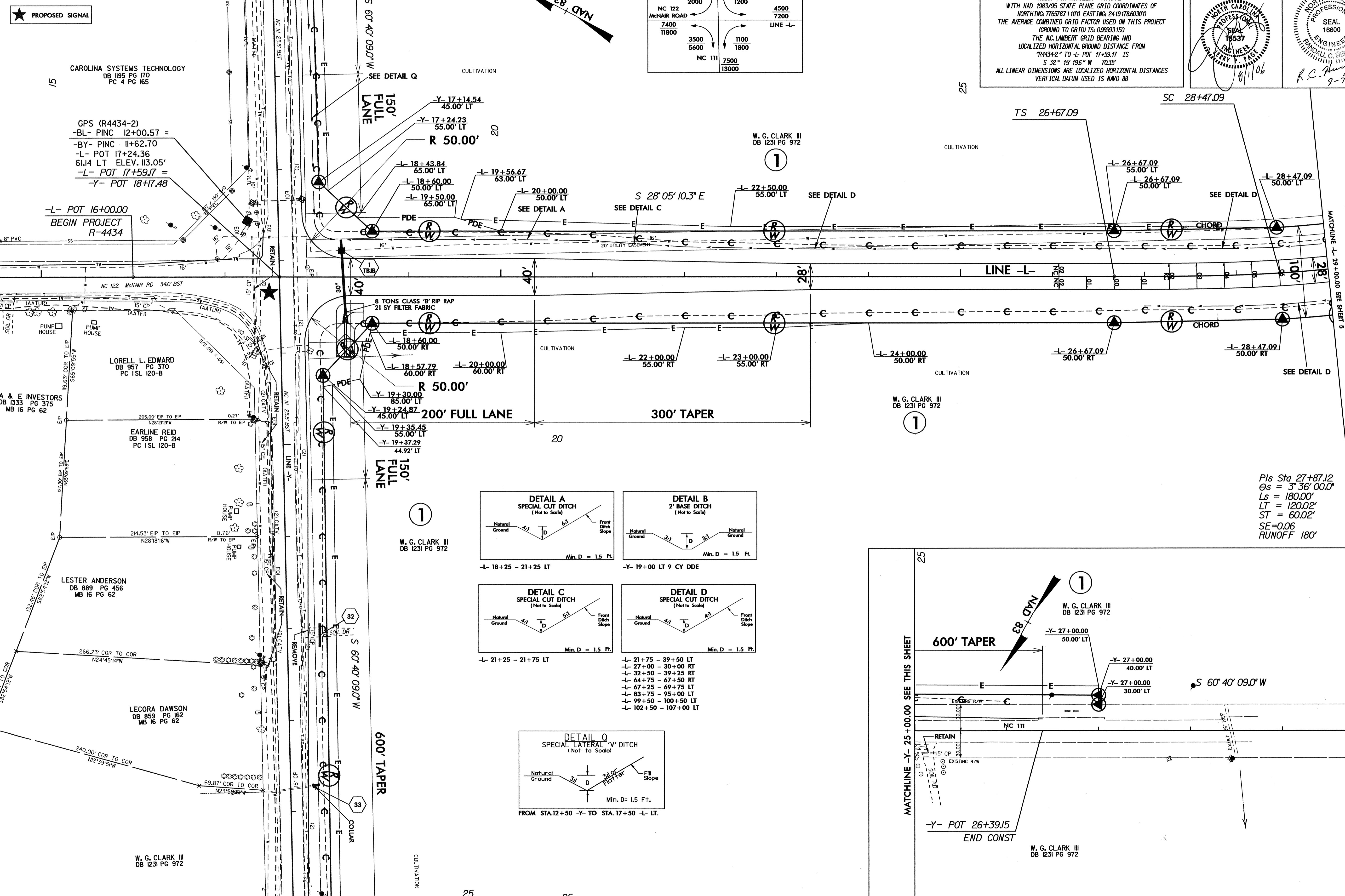
ROADWAY DESIGN ENGINEER
W. G. CLARK III
DB 1231 PG 972
PROFESSIONAL SEAL
16600
8/11/06

HYDRAULIC DESIGN ENGINEER
R. C. HARRIS
DB 1153 PG 972
PROFESSIONAL SEAL
16600
9-7-06

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "R4434-2" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 77657871 (111) EASTING: 2419178603111 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99993150 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "R4434-2" TO -L- POT 17+59.17 IS S 32° 15' 19.6" W 70.35' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAD 88

4800 8800	NC 111	ADT 2006 2025
1200 2000	700 1200	4500 7200
7400 11800	3500 5600	1100 1800
NC 111	7500 13000	LINE -L-



PROPOSED SIGNAL

CAROLINA SYSTEMS TECHNOLOGY
DB 1195 PG 170
PC 4 PG 165

GPS (R4434-2)
-BL- PINC 12+00.57 =
-BY- PINC 11+62.70
-L- POT 17+24.36
61.14 LT ELEV. 113.05'
-L- POT 17+59.17 =
-Y- POT 18+17.48

-L- POT 16+00.00
BEGIN PROJECT
R-4434

LORELL L. EDWARD
DB 957 PG 370
PC 1SL 120-B

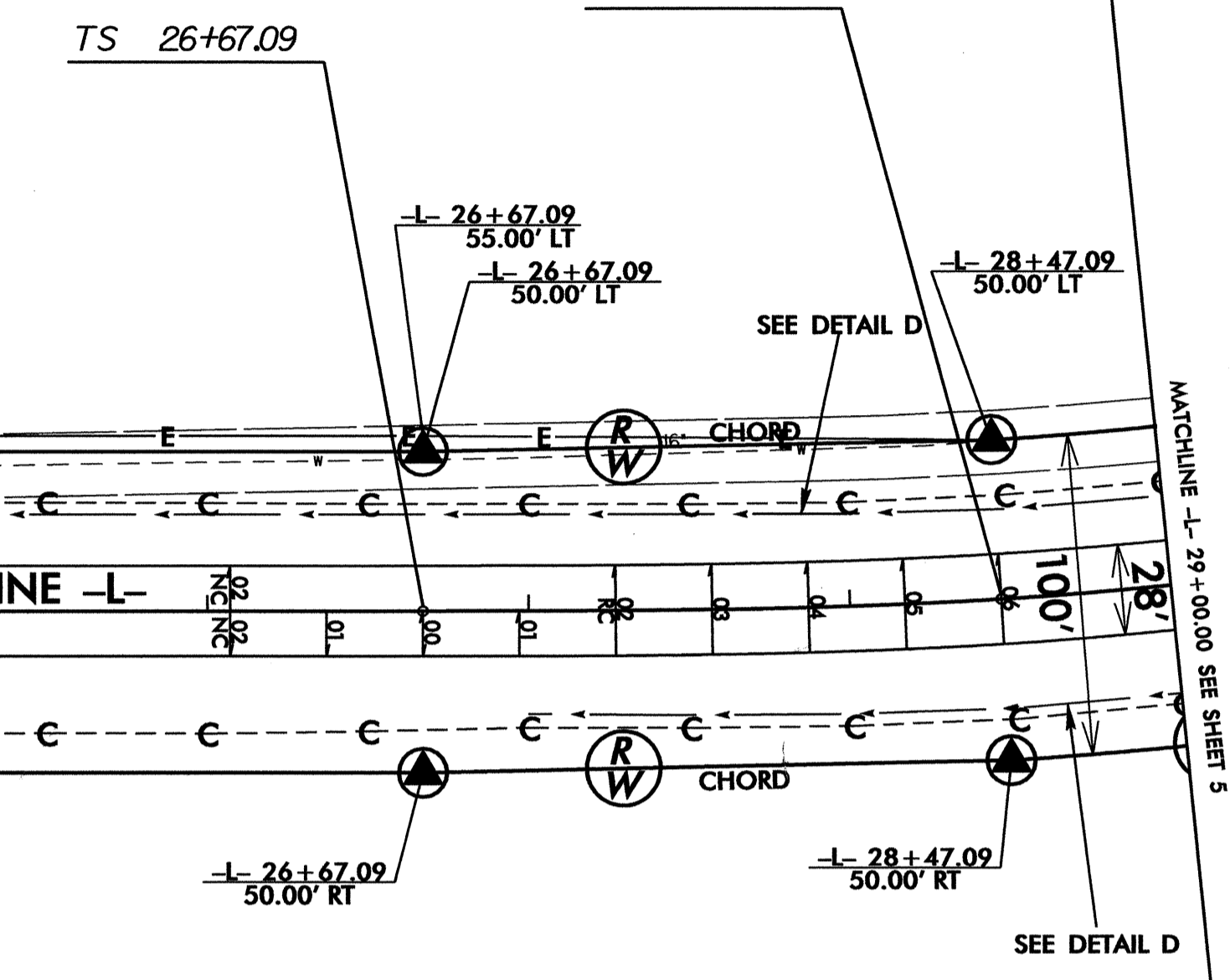
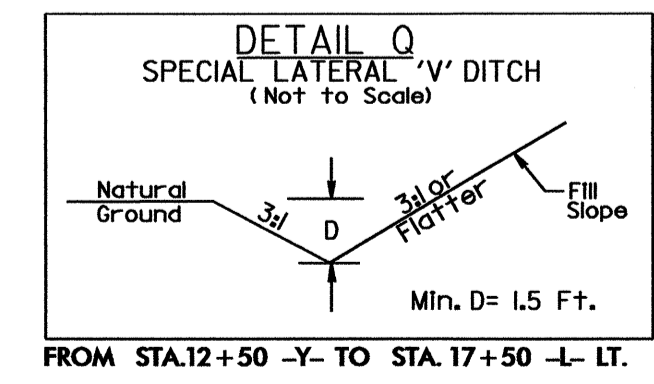
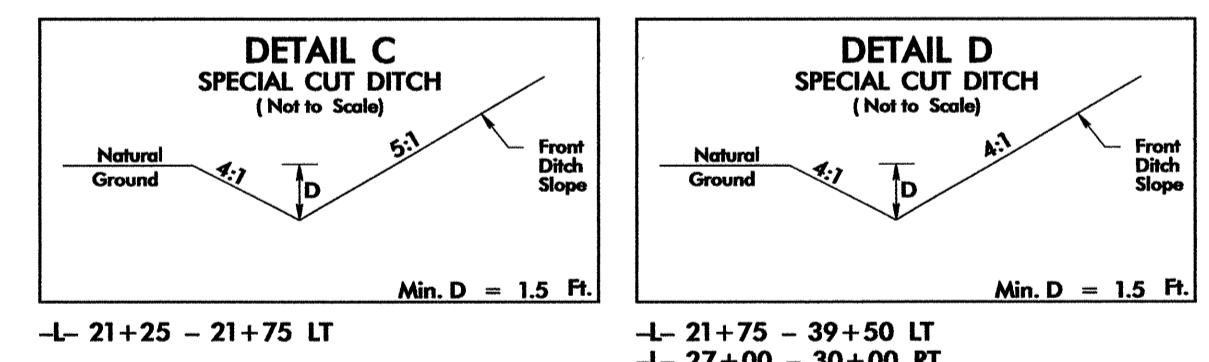
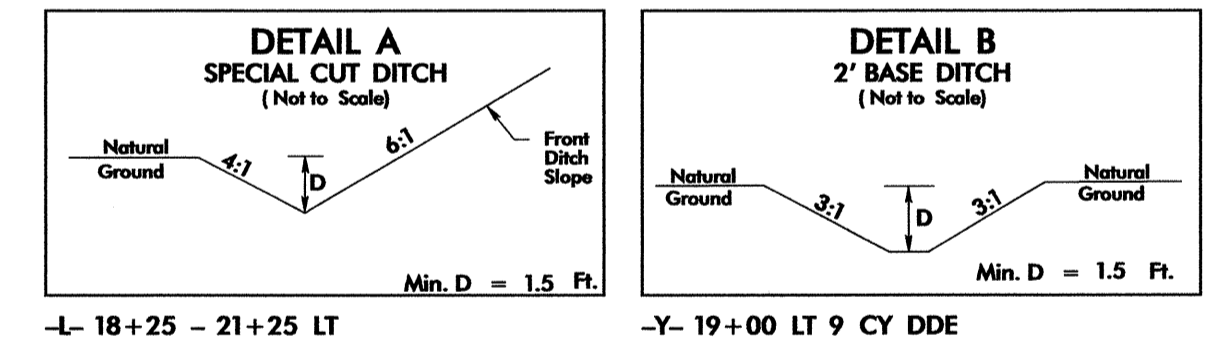
A & E INVESTORS
DB 1333 PG 375
MB 16 PG 62

EARLINE REID
DB 958 PG 214
PC 1SL 120-B

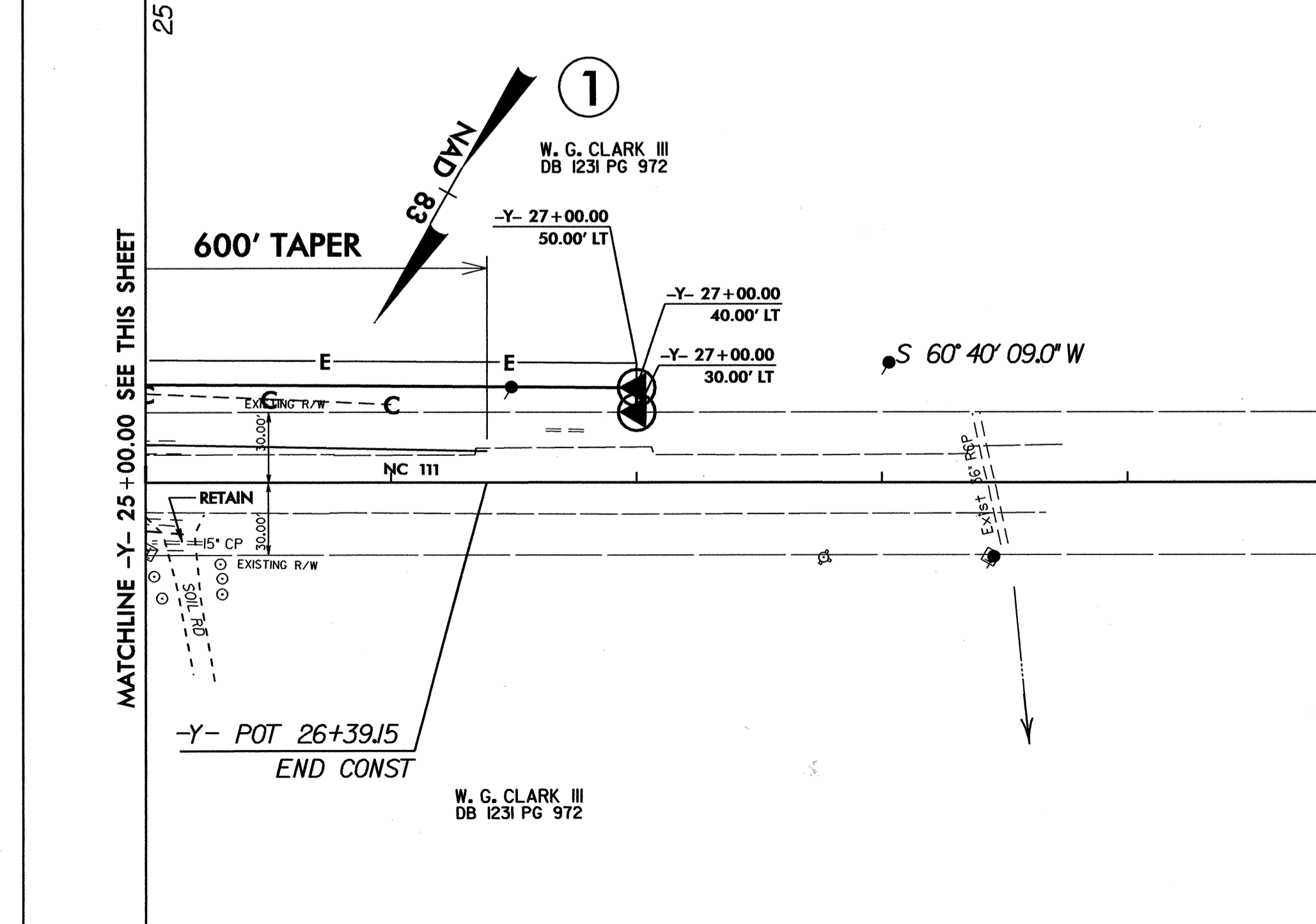
LESTER ANDERSON
DB 889 PG 456
MB 16 PG 62

LECORA DAWSON
DB 859 PG 162
MB 16 PG 62

W. G. CLARK III
DB 1231 PG 972



Pls Sta 27+87.12
@s = 3° 36' 00.0"
Ls = 180.00'
LT = 120.02'
ST = 60.02'
SE = 0.06
RUNOFF 180'

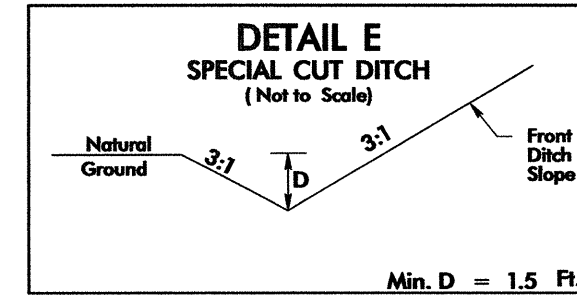
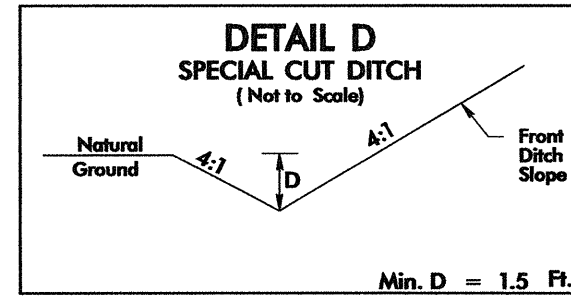


SEE SHEET 13 FOR PROFILE

MATCHLINE -Y- 25+00.00 SEE THIS SHEET

8/17/09

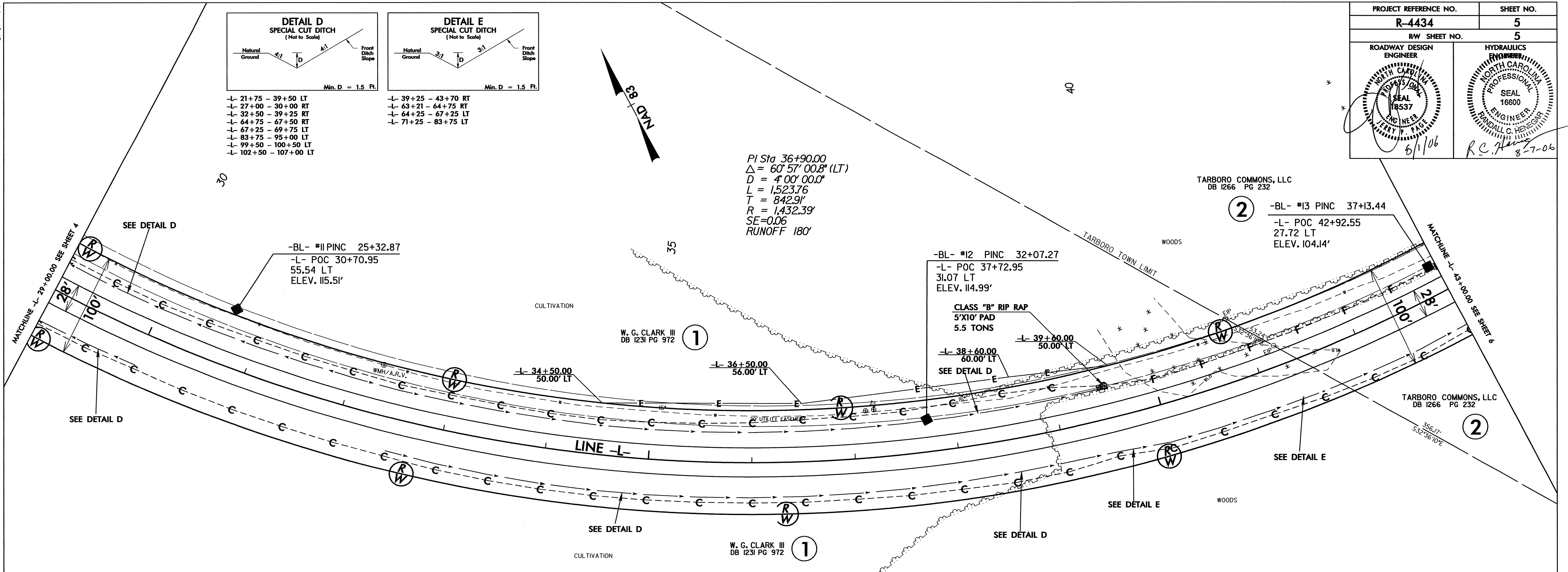
PROJECT REFERENCE NO. R-4434	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS
6/1/06	8-7-06



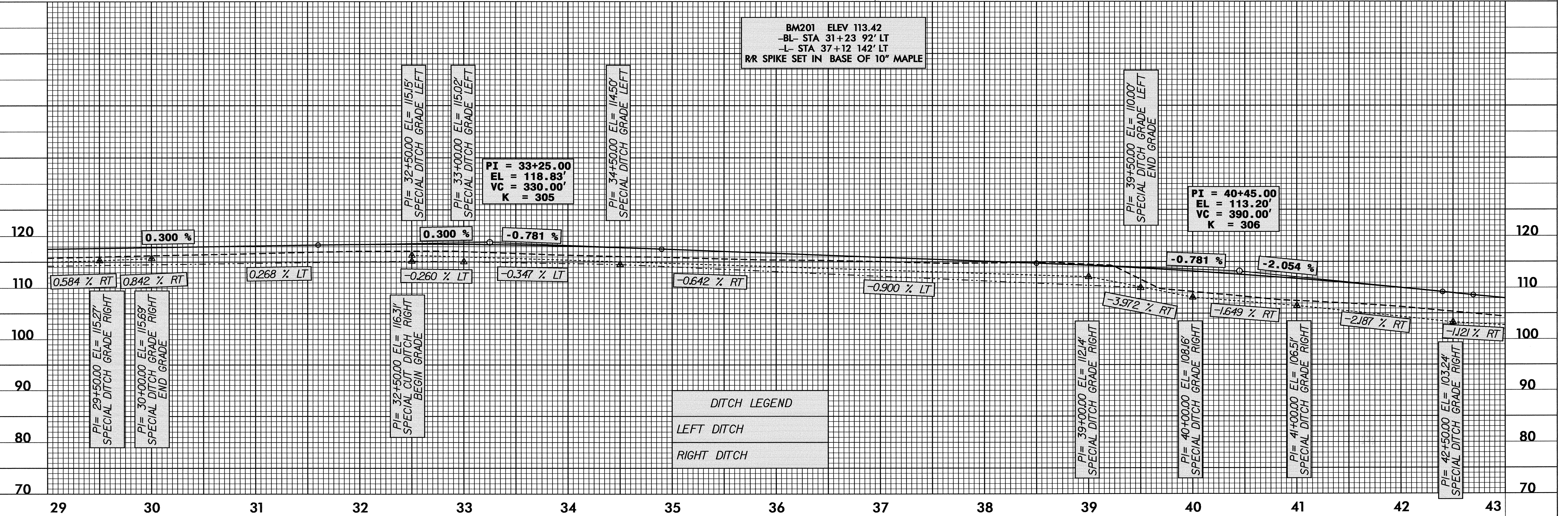
- L- 21+75 - 39+50 LT
- L- 27+00 - 30+00 RT
- L- 32+50 - 39+25 RT
- L- 64+75 - 67+50 RT
- L- 67+25 - 69+75 LT
- L- 83+75 - 95+00 LT
- L- 99+50 - 100+50 LT
- L- 102+50 - 107+00 LT

- L- 39+25 - 43+70 RT
- L- 63+21 - 64+75 RT
- L- 64+25 - 67+25 LT
- L- 71+25 - 83+75 LT

PI Sta 36+90.00
 $\Delta = 60^\circ 57' 00.8''$ (LT)
 $D = 4^\circ 00' 00.0''$
 $L = 1,523.76$
 $T = 842.91'$
 $R = 1,432.39'$
 $SE = 0.06$
 RUNOFF 180'

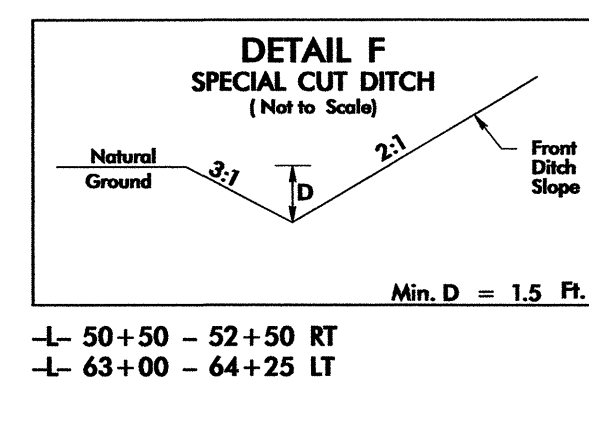
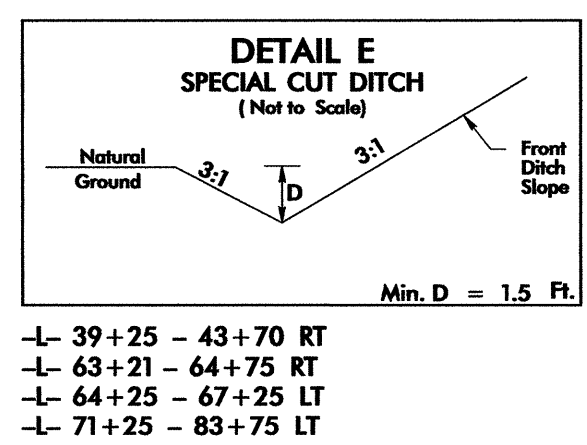
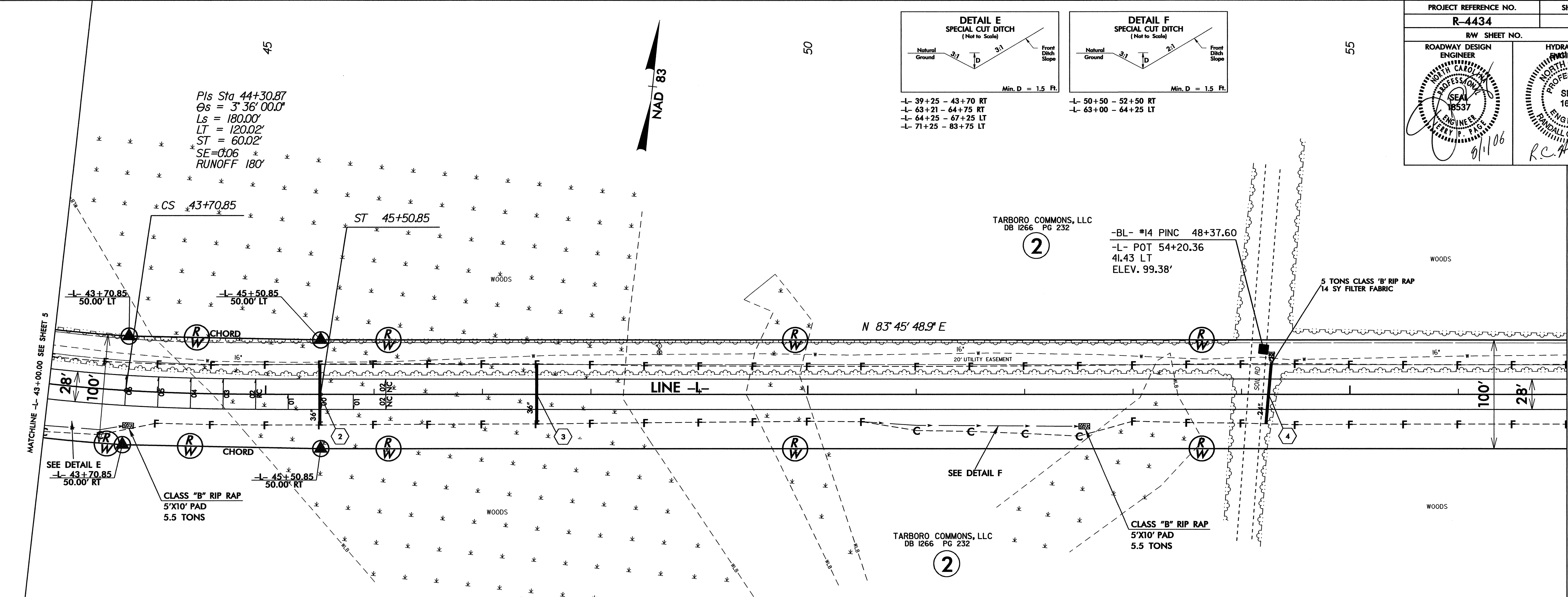


01-AUG-2006 10:15
d:\v\d\p\du\4434\4434.dwg
psh_05.ddc4.dgn
C:\DDOT\07487EE3A
deh513.dwg

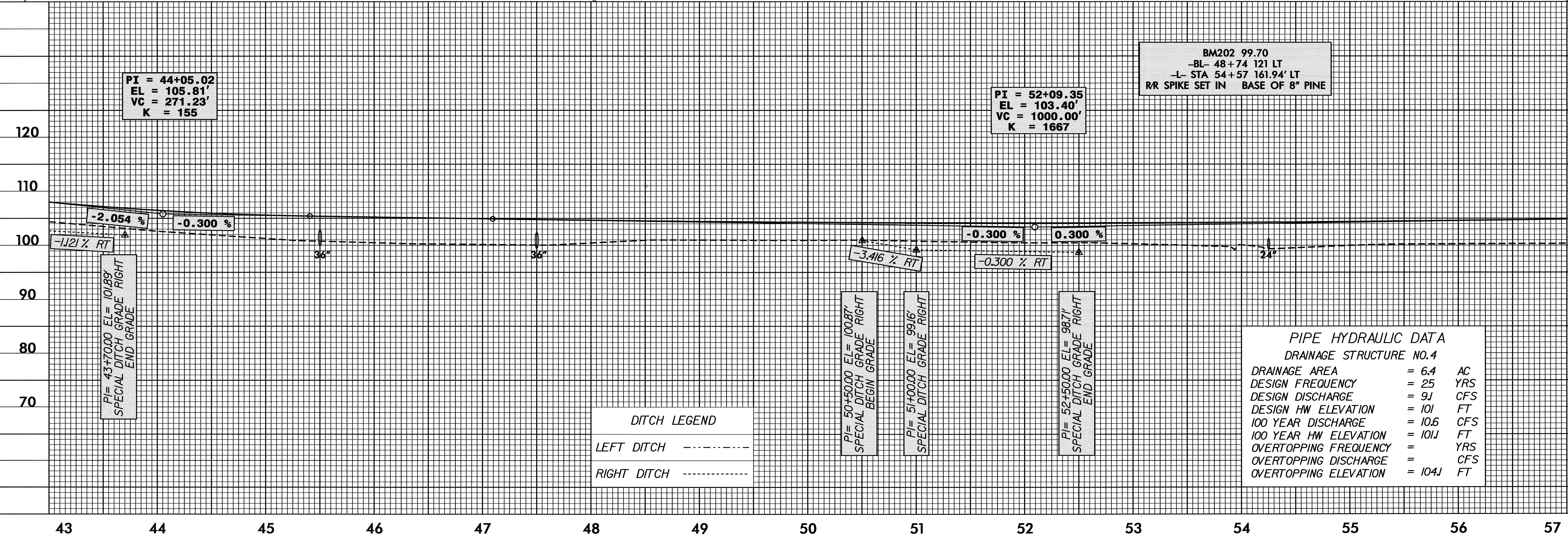


8/17/09

01-AUG-2006 10:14
d:\rdu\rd\du\4434\4434.psh.06_ddc4.dgn
AT NDDOT-C7487E3A
deh5page



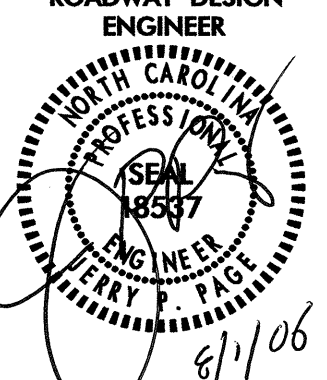
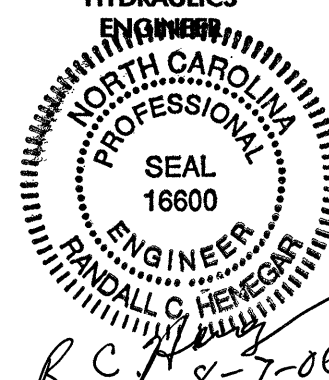
PROJECT REFERENCE NO. R-4434	SHEET NO. 6
RW SHEET NO. 6	
ROADWAY DESIGN ENGINEER SEAL 18537 LEWIS P. TIGHE	HYDRAULICS ENGINEER SEAL 16600 RANDALL C. HENEGAR

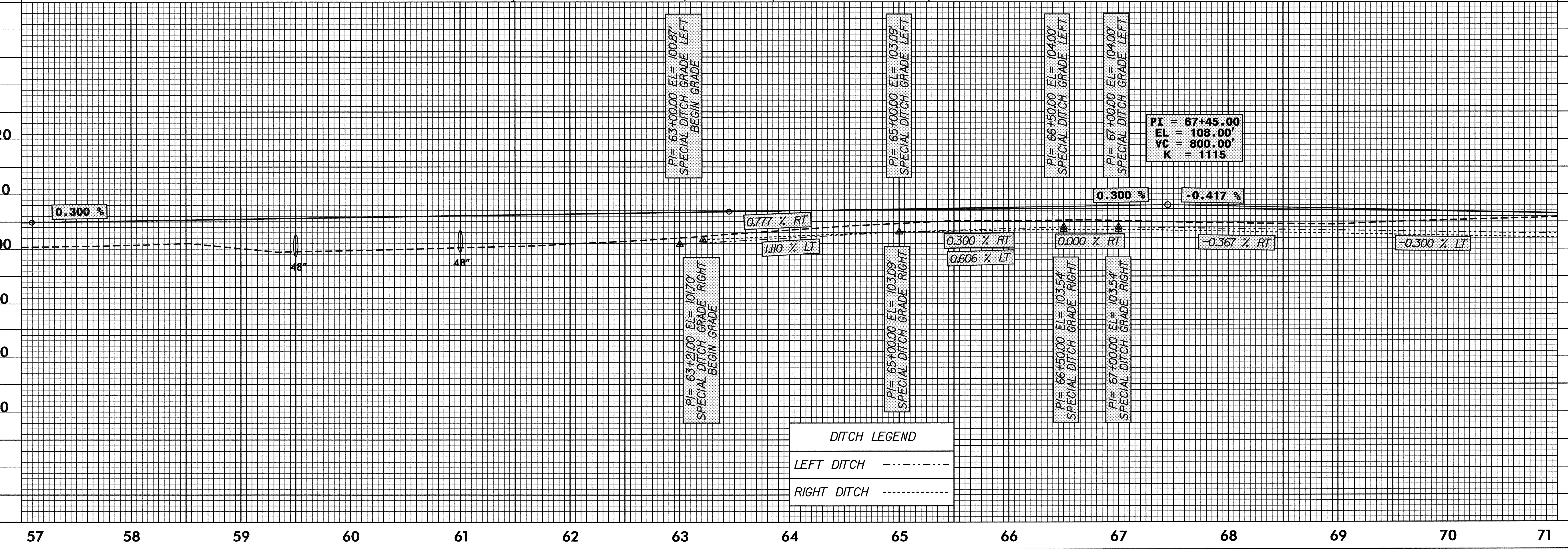
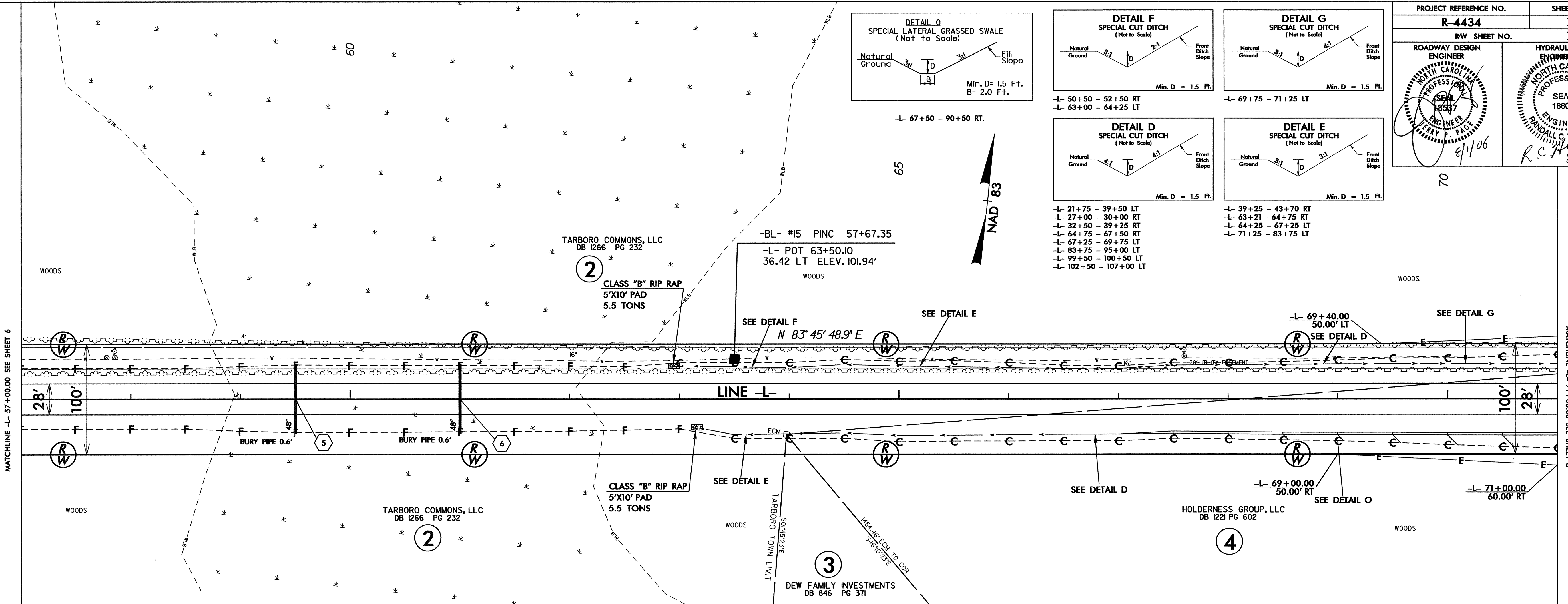


PIPE HYDRAULIC DATA	
DRAINAGE STRUCTURE NO.4	
DRAINAGE AREA	= 6.4 AC
DESIGN FREQUENCY	= 25 YRS
DESIGN DISCHARGE	= 9.1 CFS
DESIGN HW ELEVATION	= 101 FT
100 YEAR DISCHARGE	= 10.6 CFS
100 YEAR HW ELEVATION	= 101.1 FT
OVERTOPPING FREQUENCY	= YRS
OVERTOPPING DISCHARGE	= CFS
OVERTOPPING ELEVATION	= 104.1 FT

8/17/09

01-AUG-2006 10:43
d:\pdu\rcu\rd\4434\4434\psh_07_ddc4.dgn
deshriggs

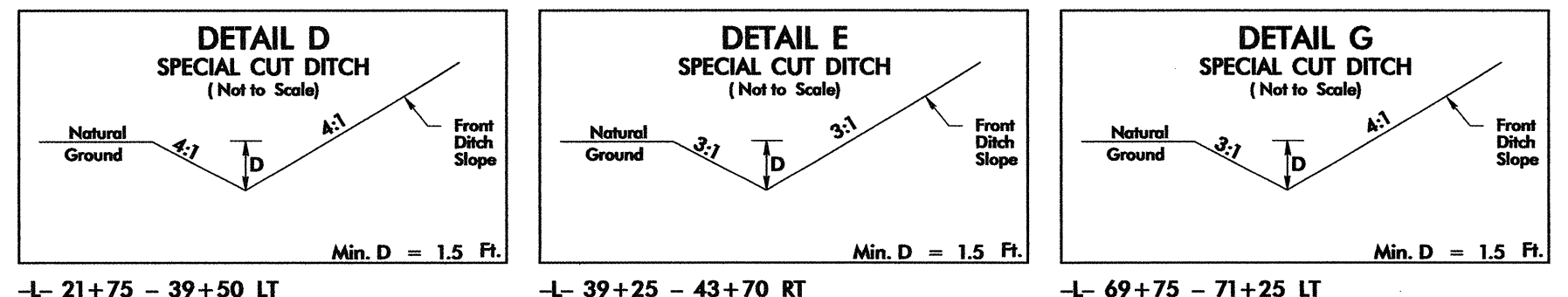
PROJECT REFERENCE NO. R-4434	SHEET NO. 7
RW SHEET NO. 7	
ROADWAY DESIGN ENGINEER  JERRY P. PIGG 8/1/06	HYDRAULICS ENGINEER  RANDALL C. HENGE 8-7-06



DITCH LEGEND

LEFT DITCH	-----
RIGHT DITCH	-----

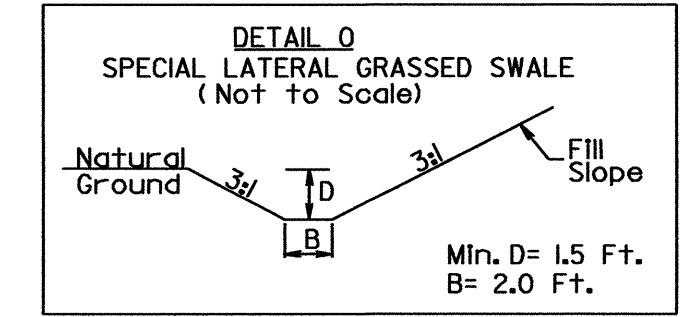
8/17/09
 01-AUG-2006 10:10
 d:\pdu\2006\08\4434\4434.dwg
 AT NED001-67487EE.dwg
 ddb4.dgn



DETAIL D SPECIAL CUT DITCH (Not to Scale)
 Min. D = 1.5 Ft.
 -L- 21+75 - 39+50 LT
 -L- 27+00 - 30+00 RT
 -L- 32+50 - 39+25 RT
 -L- 44+75 - 67+50 RT
 -L- 67+25 - 69+75 LT
 -L- 83+75 - 95+00 LT
 -L- 99+50 - 100+50 LT
 -L- 102+50 - 107+00 LT

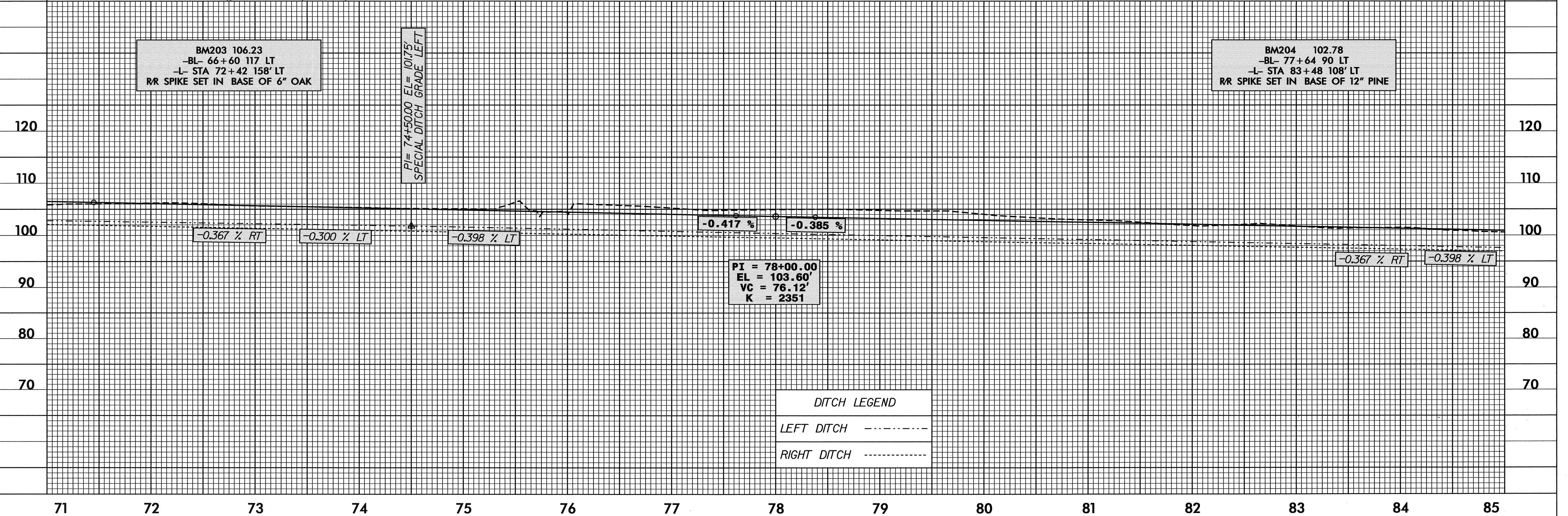
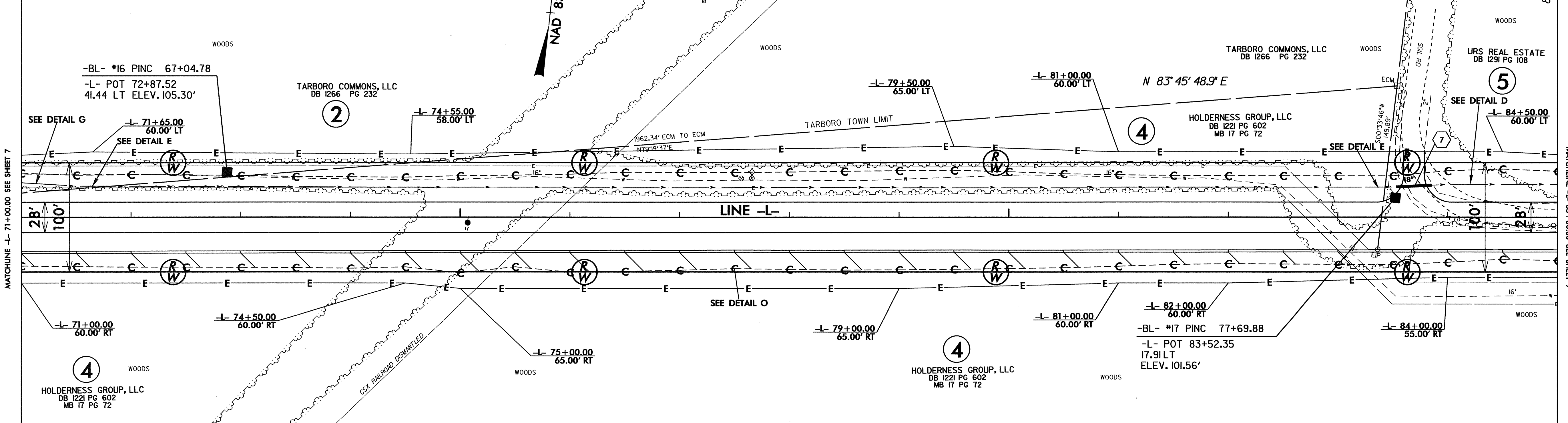
DETAIL E SPECIAL CUT DITCH (Not to Scale)
 Min. D = 1.5 Ft.
 -L- 39+25 - 43+70 RT
 -L- 63+21 - 64+75 RT
 -L- 64+25 - 67+25 LT
 -L- 71+25 - 83+75 LT

DETAIL G SPECIAL CUT DITCH (Not to Scale)
 Min. D = 1.5 Ft.
 -L- 69+75 - 71+25 LT



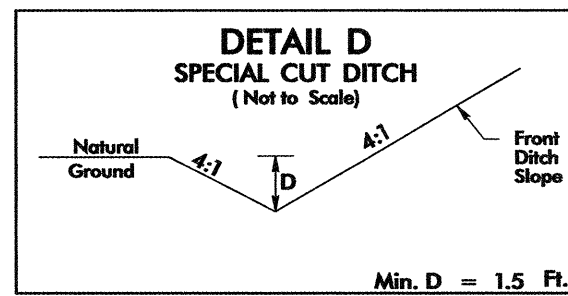
DETAIL O SPECIAL LATERAL GRASSED SWALE (Not to Scale)
 Min. D = 1.5 Ft.
 B = 2.0 Ft.
 -L- 67+50 - 90+50 RT.

PROJECT REFERENCE NO. R-4434	SHEET NO. 8
RW SHEET NO. 8	
ROADWAY DESIGN ENGINEER SEAL 8537 8/11/06	HYDRAULICS ENGINEER SEAL 16600 R.C. 8-9-06

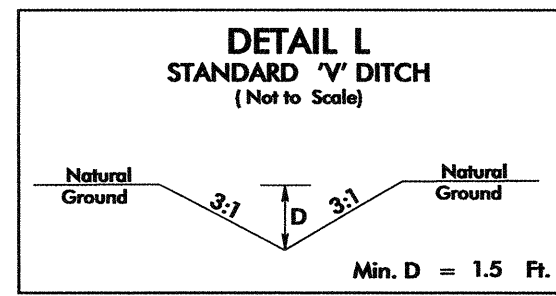


DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	-----

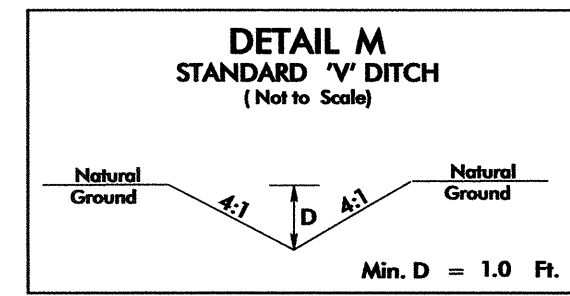
PROJECT REFERENCE NO. R-4434	SHEET NO. 10
R/W SHEET NO. 10	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER



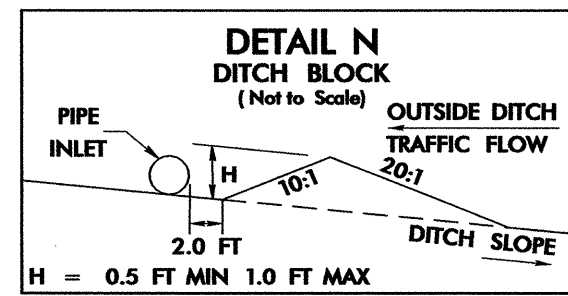
-L- 21+75 - 39+50 LT
 -L- 27+00 - 30+00 RT
 -L- 32+50 - 39+25 RT
 -L- 64+75 - 67+50 RT
 -L- 67+25 - 69+75 LT
 -L- 83+75 - 95+00 LT
 -L- 99+50 - 100+50 LT
 -L- 102+50 - 107+00 LT



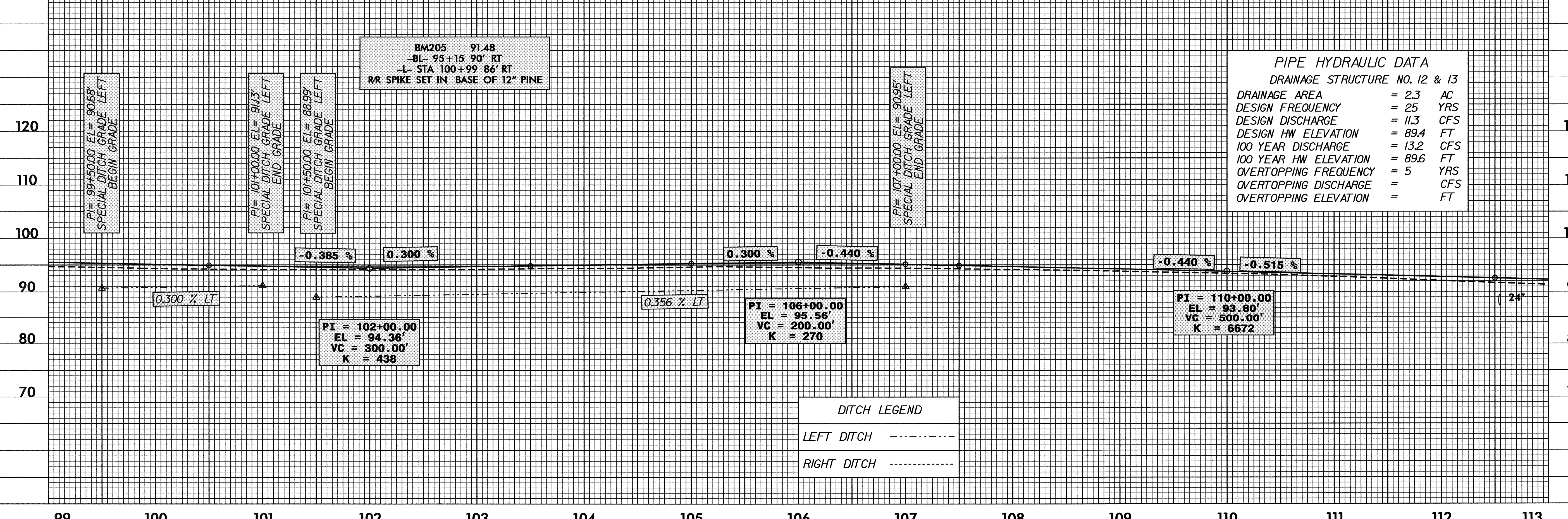
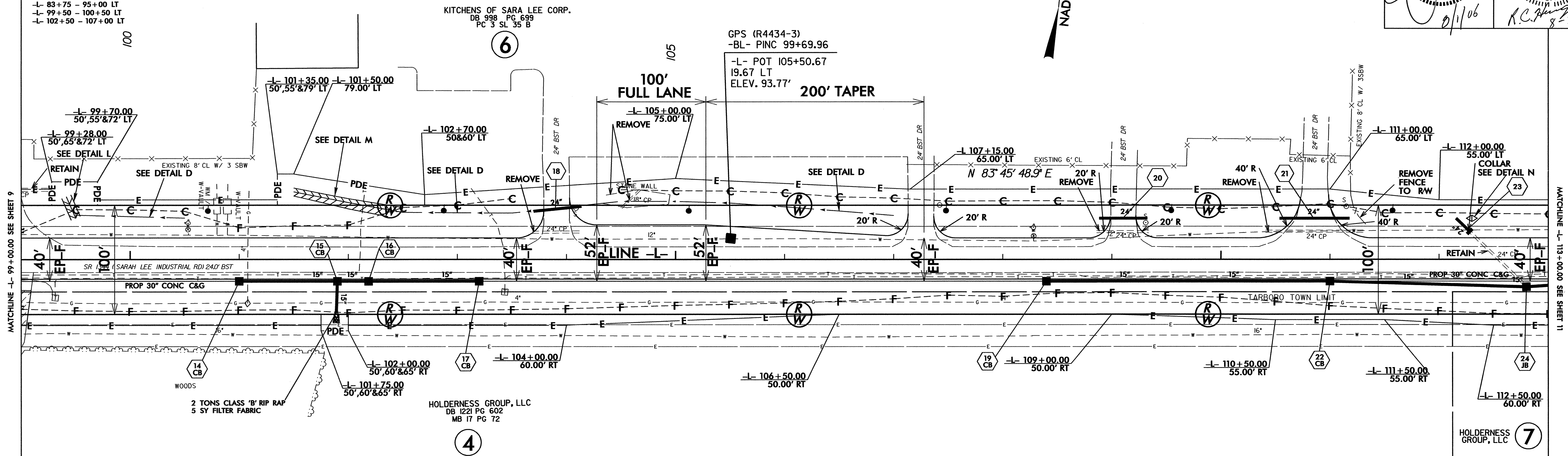
-L- 99+50 LT 6 CY DDE



-L- 101+50 - 102+50 LT 18CY DDE



-L- 112+25 LT

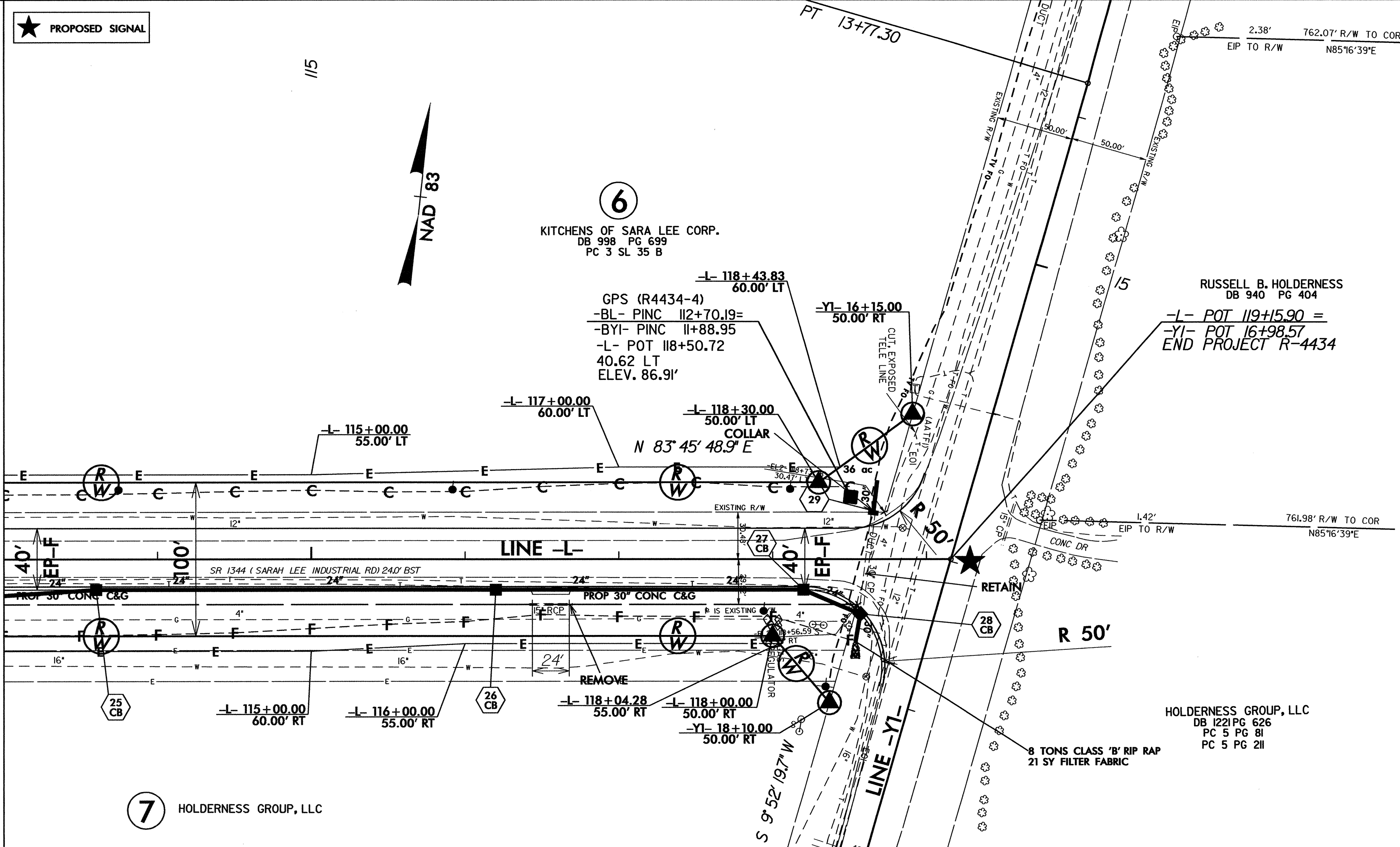


PIPE HYDRAULIC DATA	
DRAINAGE STRUCTURE NO. 12 & 13	
DRAINAGE AREA	= 2.3 AC
DESIGN FREQUENCY	= 25 YRS
DESIGN DISCHARGE	= 11.3 CFS
DESIGN HW ELEVATION	= 89.4 FT
100 YEAR DISCHARGE	= 13.2 CFS
100 YEAR HW ELEVATION	= 89.6 FT
OVERTOPPING FREQUENCY	= 5 YRS
OVERTOPPING DISCHARGE	= CFS
OVERTOPPING ELEVATION	= FT

DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	-----

01-AUG-2006 10:08
 d:\rdu\pdu\rd\4434\4434\psh.10_ddc4.dgn
 dehhf.dgn AT N:\DOT-C7487EE3A

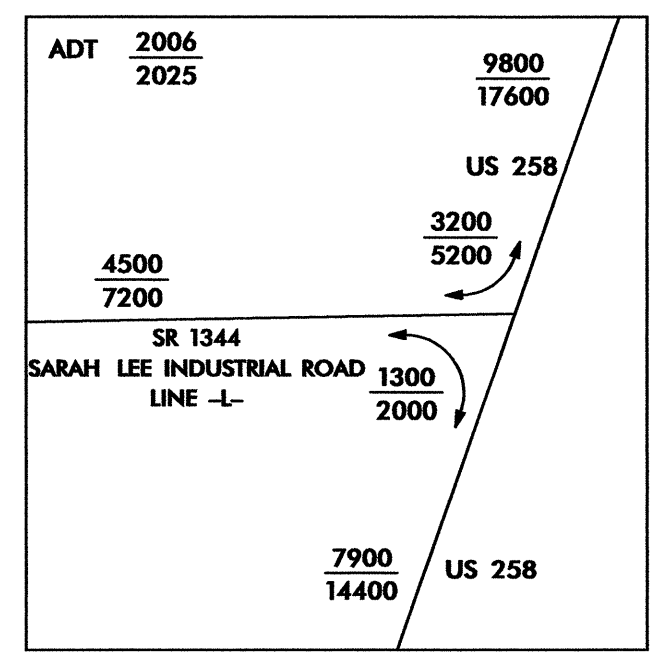
8/17/09



PI Sta 12+65.48
 $\Delta = 2' 15" 51.6" (RT)$
 $D = 1' 00" 44.7"$
 $L = 223.66'$
 $T = 111.84'$
 $R = 5,659.30'$

PROJECT REFERENCE NO. R-4434	SHEET NO. 11
RW SHEET NO. 11	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER

9/1/06 RC 9-27-06



BM206 91.51
 -BYI- 9+55 87' LT
 RR SPIKE SET IN ROOT OF 40" OAK

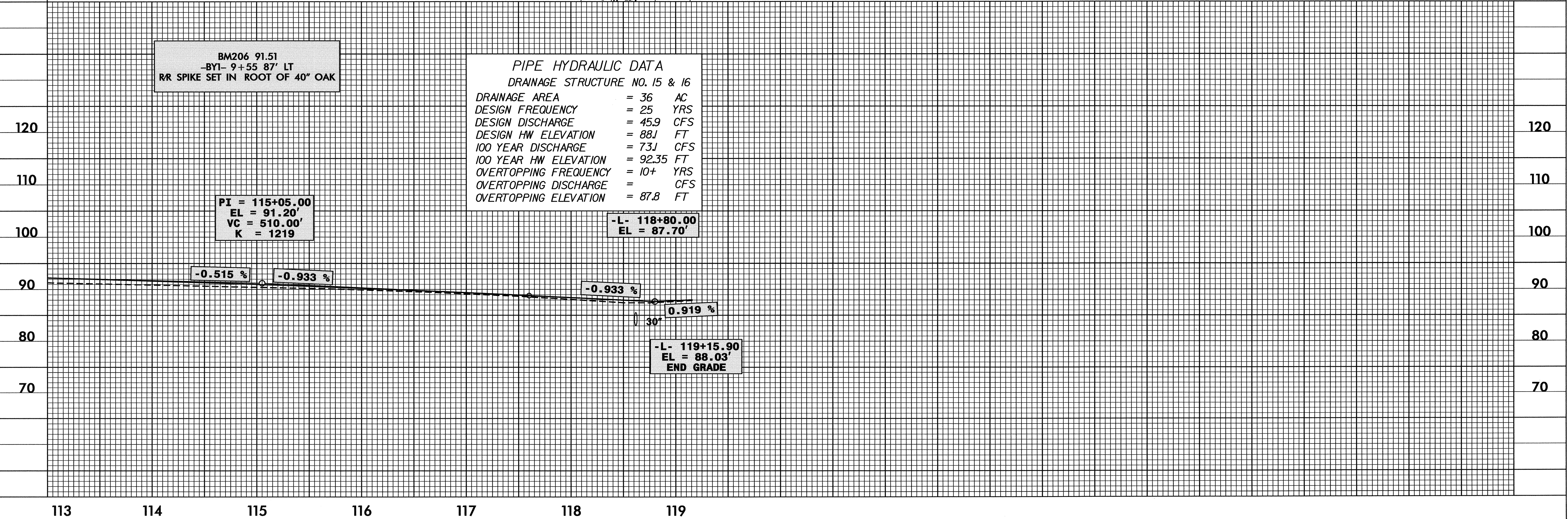
PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO. 15 & 16

DRAINAGE AREA	= 36 AC
DESIGN FREQUENCY	= 25 YRS
DESIGN DISCHARGE	= 45.9 CFS
DESIGN HW ELEVATION	= 88.1 FT
100 YEAR DISCHARGE	= 73.1 CFS
100 YEAR HW ELEVATION	= 92.35 FT
OVERTOPPING FREQUENCY	= 10+ YRS
OVERTOPPING DISCHARGE	= CFS
OVERTOPPING ELEVATION	= 87.8 FT

PI = 115+05.00
 EL = 91.20'
 VC = 510.00'
 K = 1219

-L- 118+80.00
 EL = 87.70'

-L- 119+15.90
 EL = 88.03'
 END GRADE



Q:\AUG-2006\10\06
 d:\pdu\rd\rd\4434\rd\4434\psh\11.ddc4.dgn
 AT NEDOT-C7487E3A

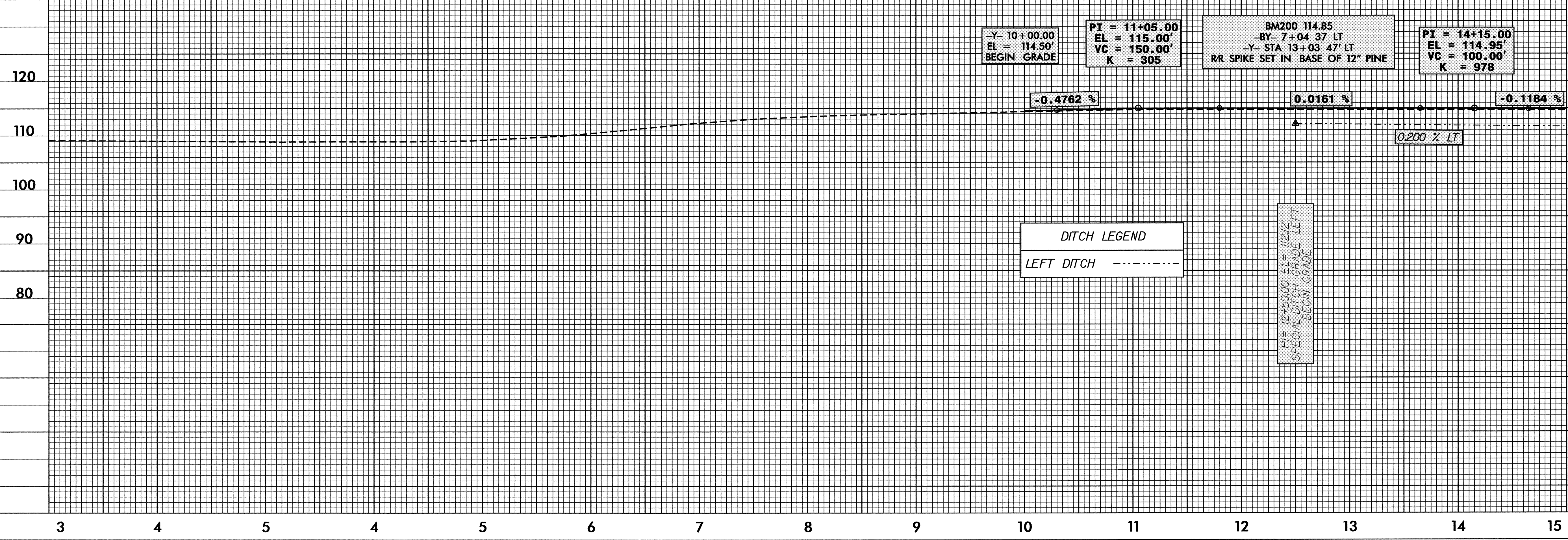
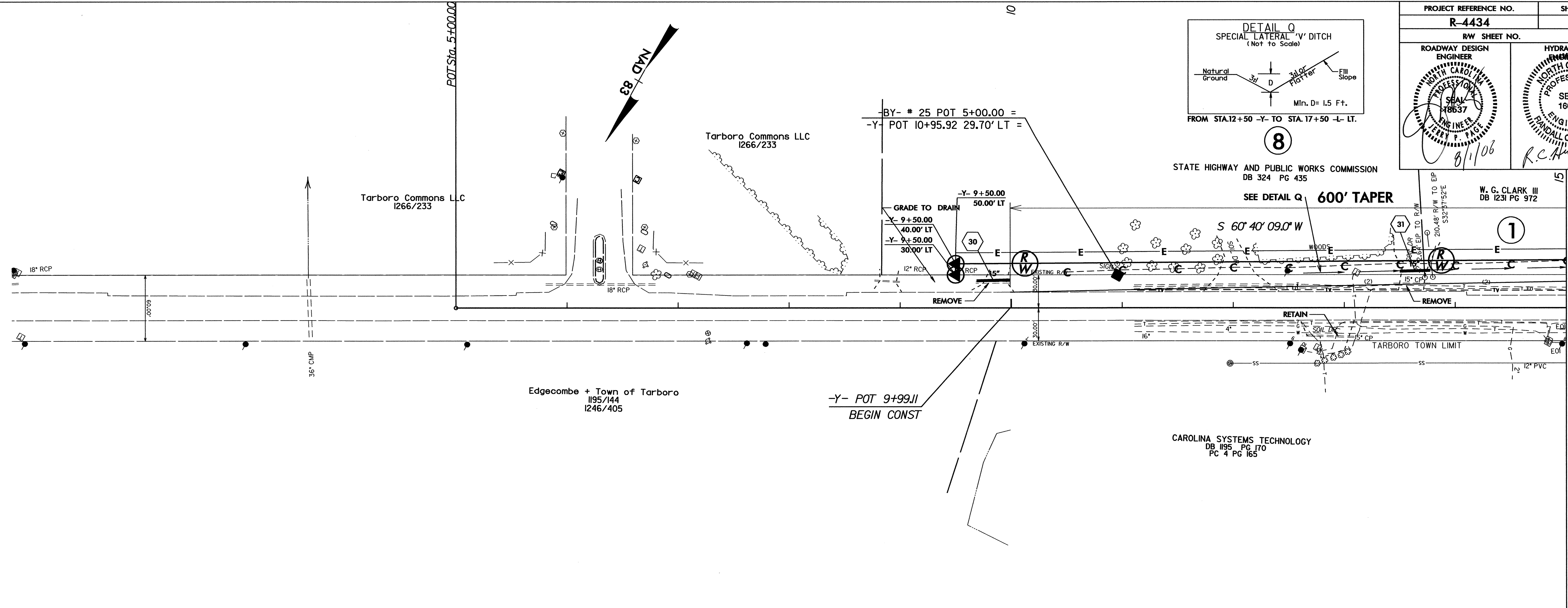
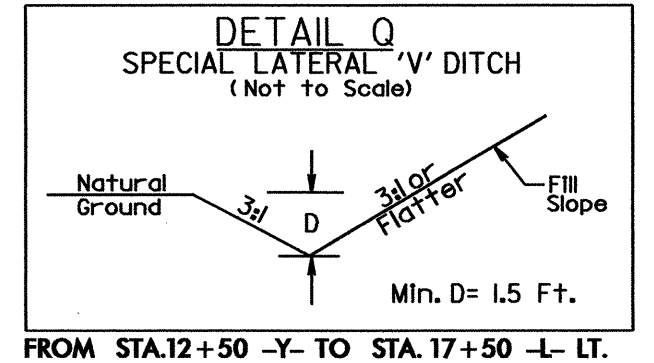
8/17/99

01-AUG-2006 10:04
C:\Program Files\AutoCAD\Drawings\4434\4434.dwg
dethr1.dwg AT NC001-67487EE3A

PROJECT REFERENCE NO. R-4434	SHEET NO. 12
RW SHEET NO. 12	
ROADWAY DESIGN ENGINEER SHAL 18637	HYDRAULICS ENGINEER R.C. HARRIS 16800

STATE HIGHWAY AND PUBLIC WORKS COMMISSION
DB 324 PG 435

W. G. CLARK III
DB 1231 PG 972



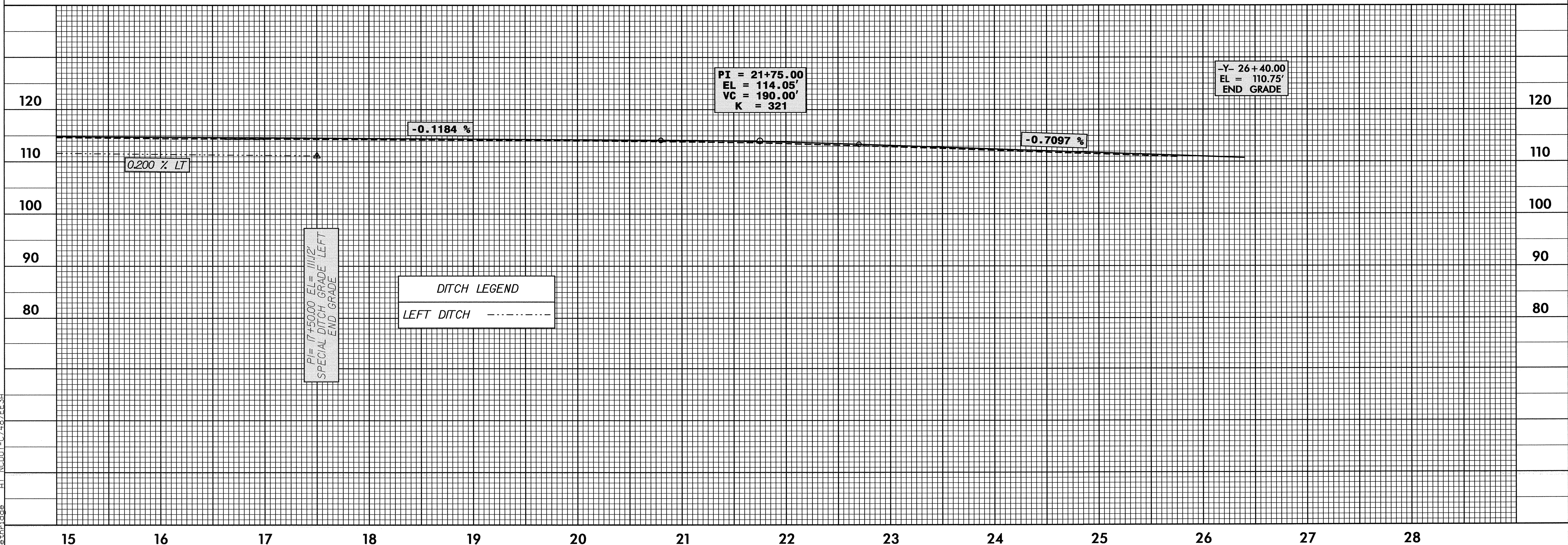
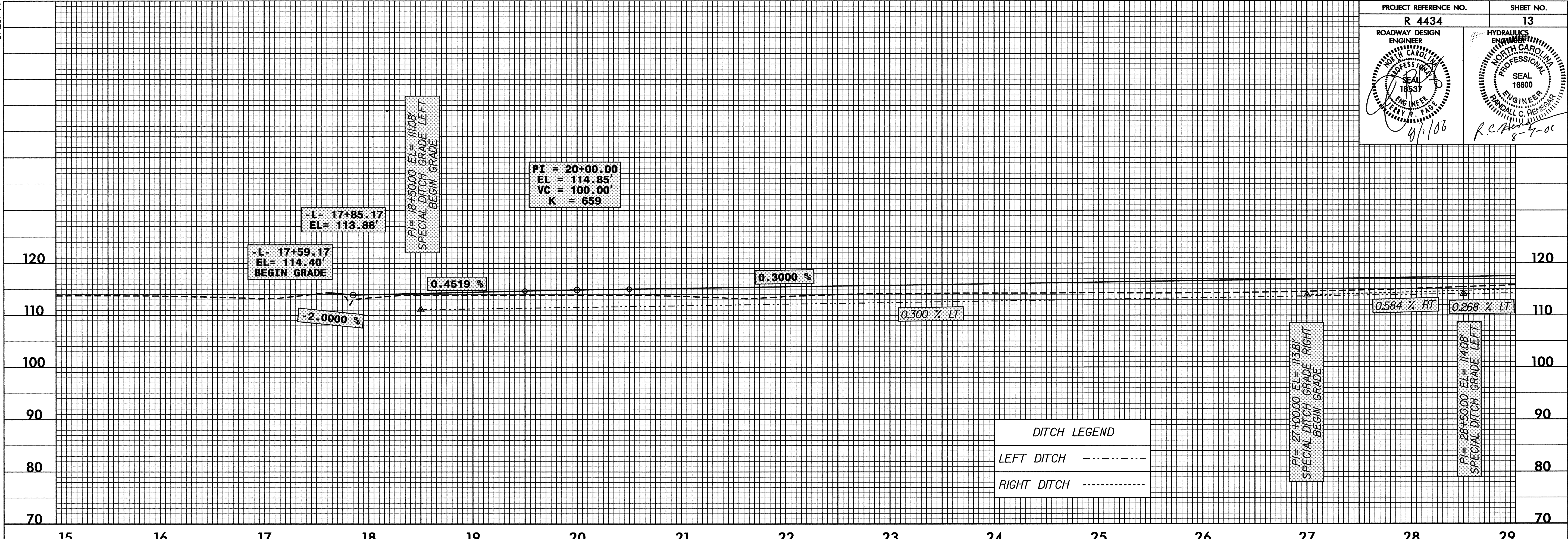
DITCH LEGEND
LEFT DITCH - - - - -

PI = 12+50.00 EL = 112.12'
SPECIAL DITCH GRADE LEFT
BEGIN GRADE

MATCHLINE -Y- 15+00.00 SEE SHEET 4

5/28/99

PROJECT REFERENCE NO. R 4434	SHEET NO. 13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



01-AUG-2006 10:02
d:\p01\cdu\99\4434\4434.dwg
at 13.000000
d:\p01\cdu\99\4434\4434.dwg