

09/08/99

See Sheet 1-A For Index of Sheets

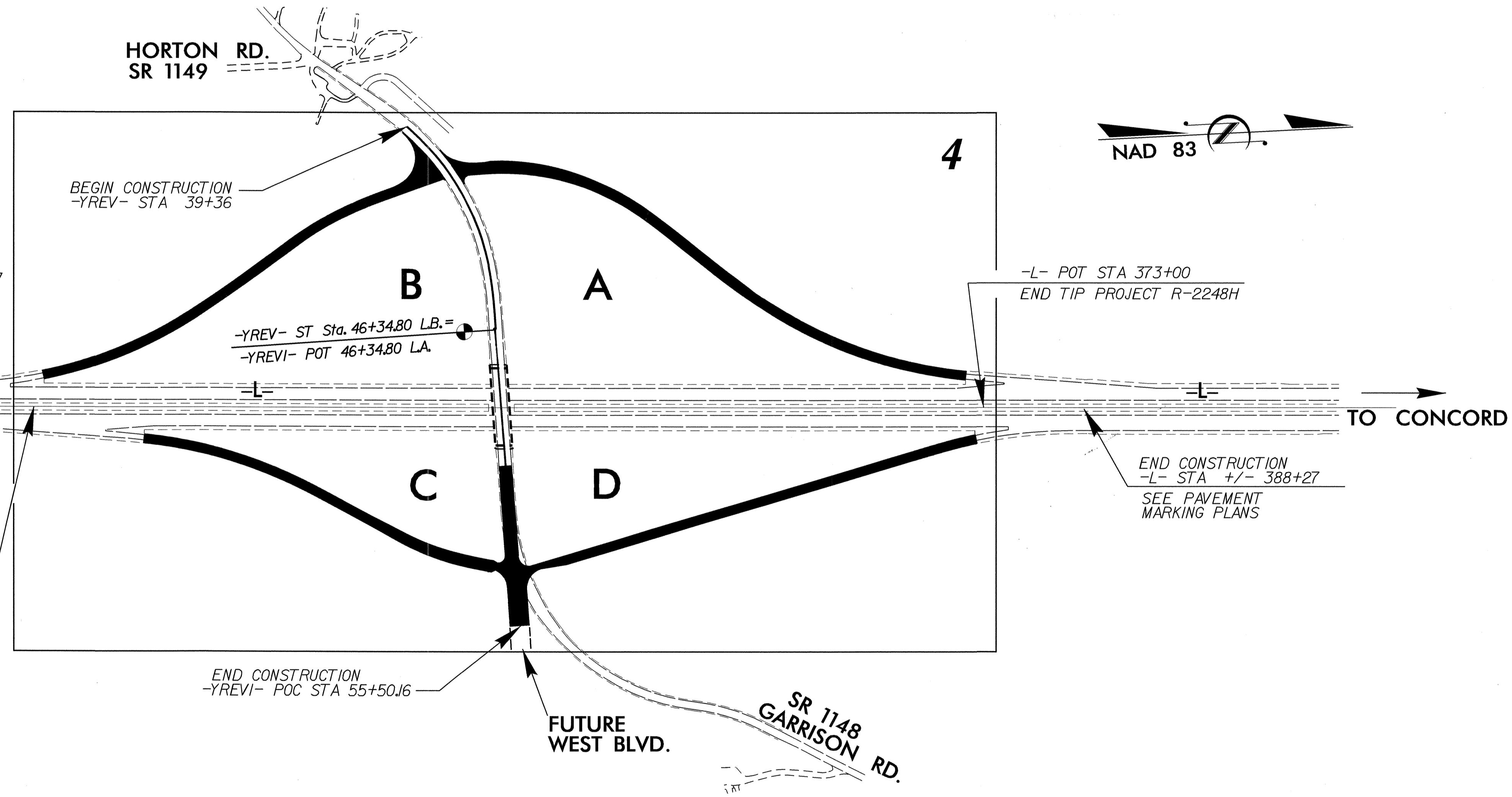
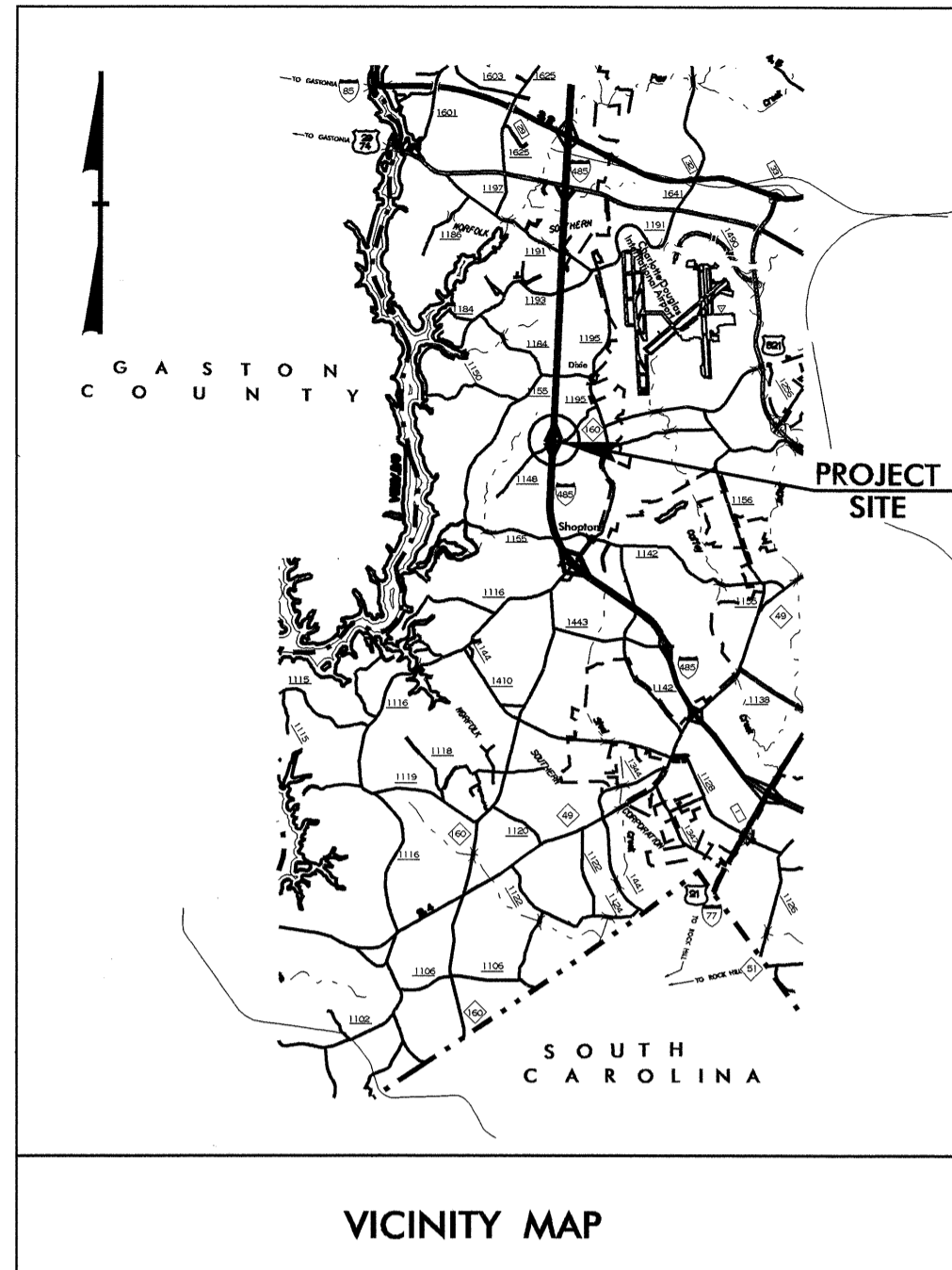
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MECKLENBURG COUNTY

LOCATION: I-485 / GARRISON ROAD (SR 1148)
INTERCHANGE

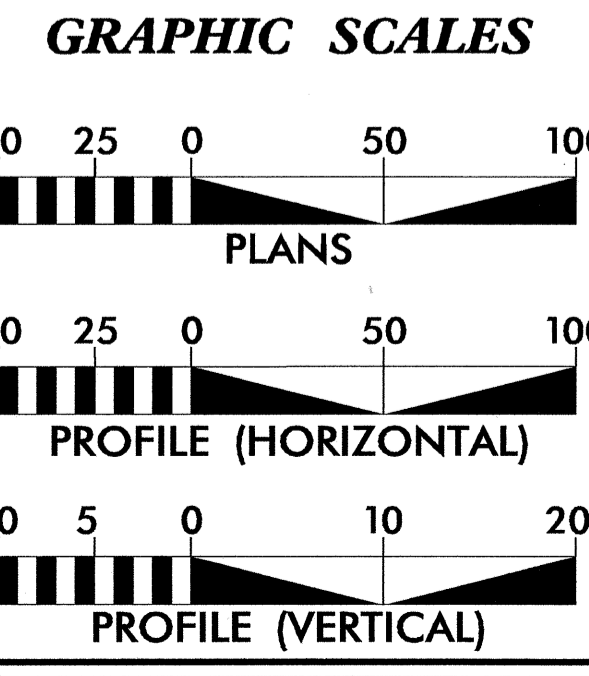
TYPE OF WORK: GRADING, PAVING AND SIGNING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2248H	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34410.1.28		PE	
34410.2.26		UTIL.	
34410.3.30		CONST.	



TIP PROJECT: R-2248H

CONTRACT: C202278



DESIGN DATA
I-485

ADT 2010 = 65,700
ADT 2030 = 114,100
DHV = 10 %
D = 60 %
T = 6 % *
V = 70 MPH
* TTST 2% DUAL 4%

FUNCTIONAL CLASSIFICATION:
INTERSTATE

STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2248H = 0.549 MILES
TOTAL LENGTH OF TIP PROJECT R-2248H = 0.549 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: G. E. BREW, PE
PROJECT ENGINEER

LETTING DATE: I. T. YOUNIS
PROJECT DESIGN ENGINEER
AUGUST 17, 2010

HYDRAULICS ENGINEER

W. Alan Cail
SIGNATURE: W. Alan Cail
SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022000

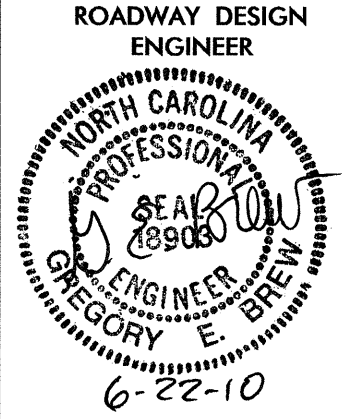
ROADWAY DESIGN ENGINEER

G. E. Brew
SIGNATURE: G. E. Brew
SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18903

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Gregory E. Brew
STATE HIGHWAY DESIGN ENGINEER

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\$\$\$\$\$USERNAME\$\$\$\$\$



8/17/99

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
2 THRU 2A	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2B THRU 2C	DETAIL OF WHEELCHAIR RAMP
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF GUARDRAIL QUANTITIES SUMMARY OF EARTHWORK AND ASPHALT PAVEMENT SUMMARY.
4	PLAN SHEET
5 THRU 9	PROFILE SHEET
TCP-1 THRU TCP-6	TRAFFIC CONTROL PLANS
PMP-1 THRU PMP-8	PAVEMENT MARKING PLANS
EC-1 THRU EC-2	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-23	SIGNING PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS-SECTIONS SUMMARY SHEET
X-1 THRU X-3	CROSS-SECTIONS

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

GRADE LINE:
GRADING AND SURFACING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED 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.

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 PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS 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, AND 560.02

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

GUARDRAIL:
THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

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 DUKE ENERGY
AT&T
TIME WARNER CABLE
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

WHEELCHAIR RAMPS:
WHEELCHAIR RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. THE CONSTRUCTION OF ALL WHEELCHAIR RAMPS SHALL BE IN ACCORDANCE WITH DETAIL FOR WHEELCHAIR RAMP.

2006 ROADWAY ENGLISH STANDARD DRAWINGS

EFF. 07-18-06
REV. 01-02-07

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
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
560.02	Method of Shoulder Construction - High Side of Superelevated Curve - Method II
654.01	Pavement Repairs
846.01	Concrete Curb, Gutter and Curb & Gutter
848.04	Street Turnout
852.01	Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation

09/08/09

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	○ EP
Property Corner	✕
Property Monument	◻ ECM
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 U/G Tank Cap	○
Sign	○ S
Well	○ W
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	○
Wetland	✕
Proposed Lateral, Tail, Head Ditch	▭
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	▭ 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 Drainage / Utility Easement	--- DUE
Proposed Permanent Utility Easement	--- PUE
Proposed Temporary Utility Easement	--- TUE
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	--- C
Proposed Slope Stakes Fill	--- F
Proposed Wheel Chair Ramp	▭ WCR
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	-----

UTILITIES:

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	▭ PH
H-Frame Pole	●
Recorded U/G Power Line	----- P
Designated U/G Power Line (S.U.E.*)	----- P

TELEPHONE:

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

WATER:

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

TV:

TV Satellite Dish	▭
TV Pedestal	▭
TV Tower	⊗
U/G TV Cable Hand Hole	▭ PH
Recorded U/G TV Cable	----- TV
Designated U/G TV Cable (S.U.E.*)	----- TV
Recorded U/G Fiber Optic Cable	----- TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	----- TV FO

GAS:

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

SANITARY SEWER:

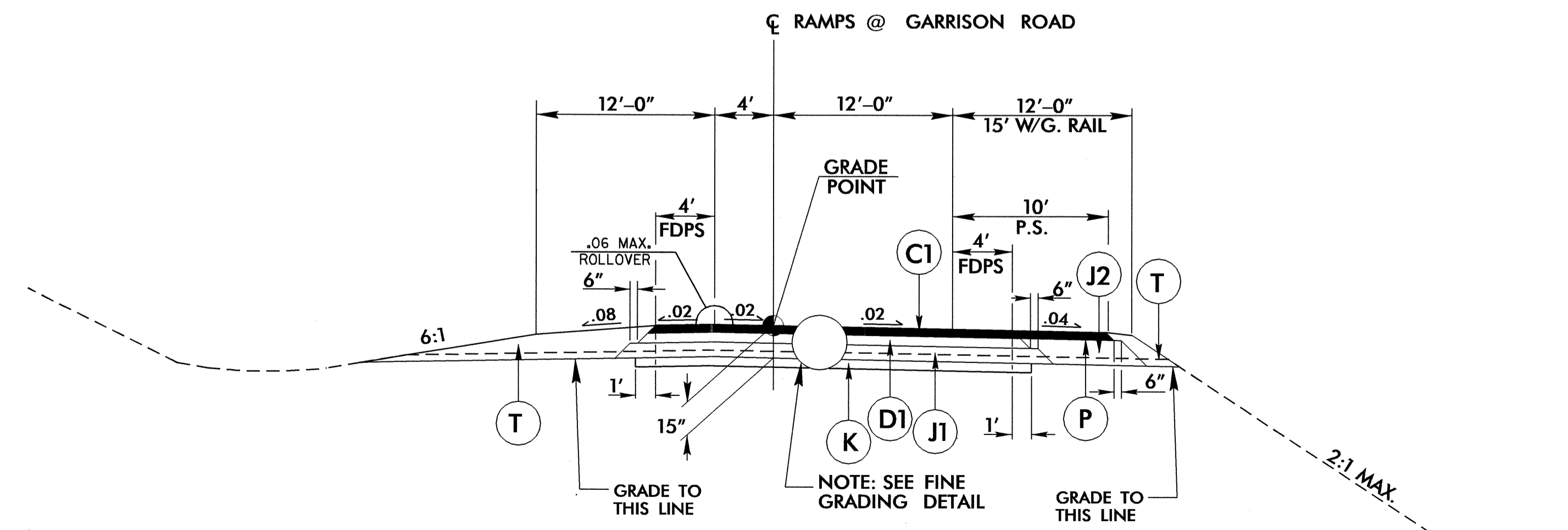
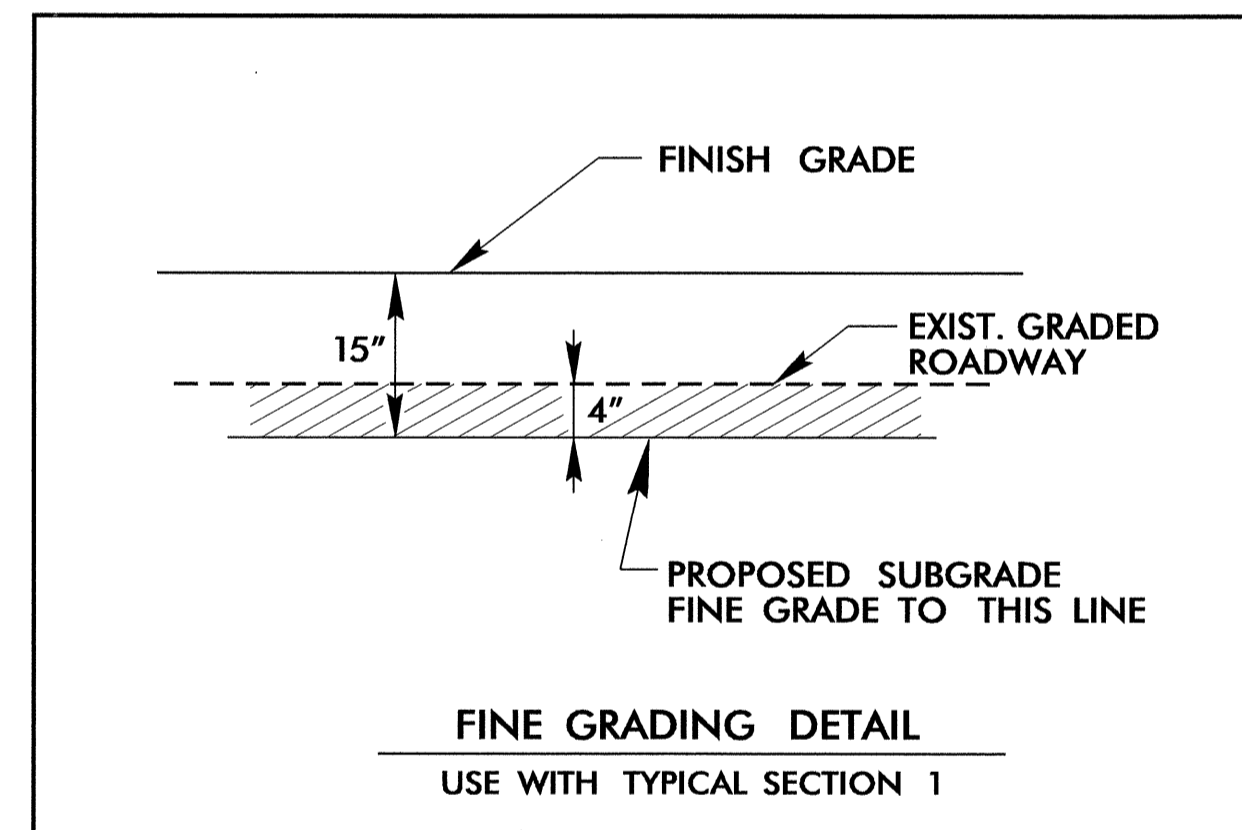
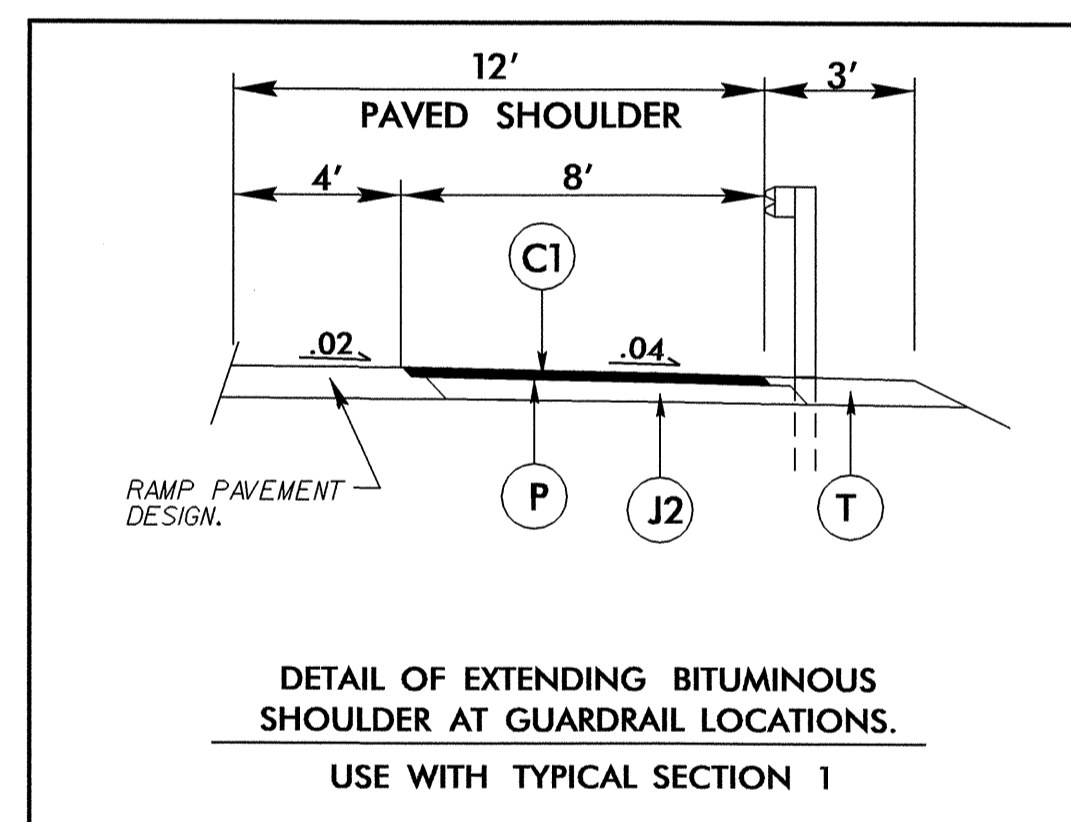
Sanitary Sewer Manhole	⊗
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
Recorded SS Forced Main Line	----- FSS
Designated SS Forced Main Line (S.U.E.*)	----- FSS

MISCELLANEOUS:

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

FINAL PAVEMENT SCHEDULE			
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	K	SUBGRADE TO BE STABILIZED TO A DEPTH OF 8in WITH LIME AT A RATE OF APPROX. 20lbs. PER SQ. yd.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.		OR SUBGRADE TO BE STABILIZED TO A DEPTH OF 7in WITH PORTLAND CEMENT AT A RATE OF APPROX. 55lbs. PER SQ. yd.
E1	PROP. APPROX. 6.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 370.50 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	P	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.
J1	PROP. 8" AGGREGATE BASE COURSE.	R1	2'-6" CONCRETE CURB AND GUTTER
J2	PROP. VAR. DEPTH AGGREGATE BASE COURSE.	T	EARTH MATERIAL.

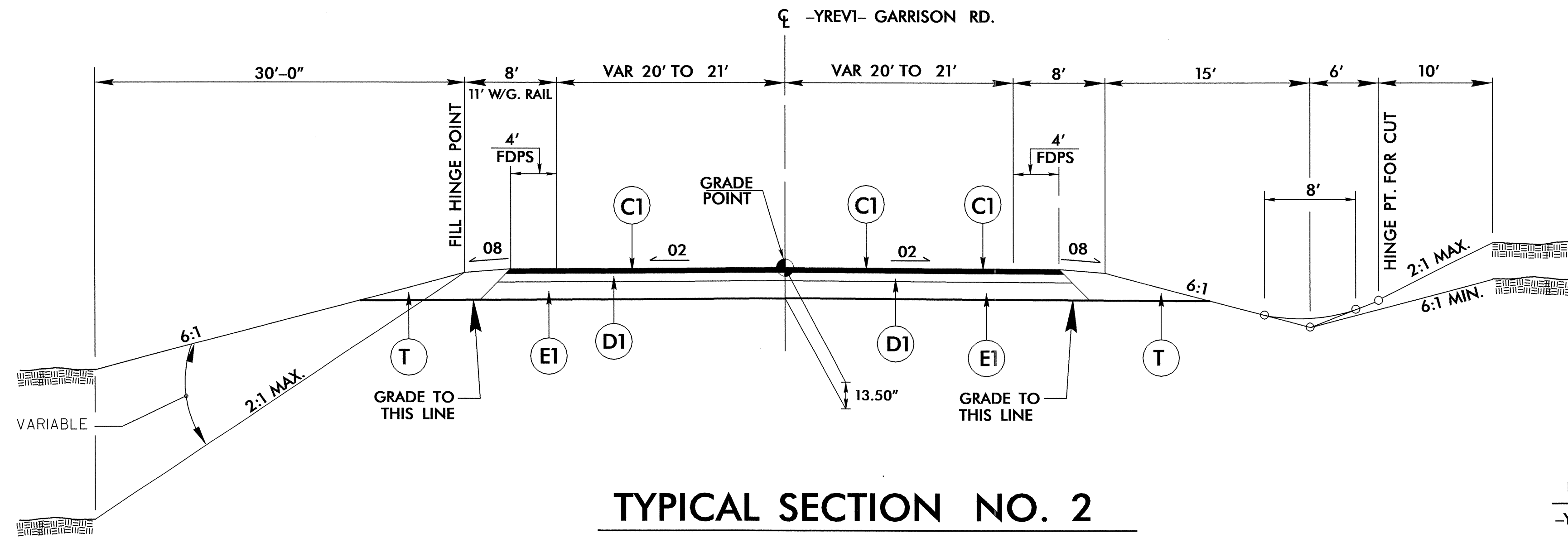
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



USE TYPICAL SECTION NO. 1
 -RPA- STA. 14+19.12 TO 31+38.43
 -RPB- STA. 13+75.66 TO 27+54.44 (REVERSE)
 -RPC- STA. 14+19.12 TO 26+31.19
 -RPD- STA. 13+75.79 TO 27+46.59 (REVERSE)

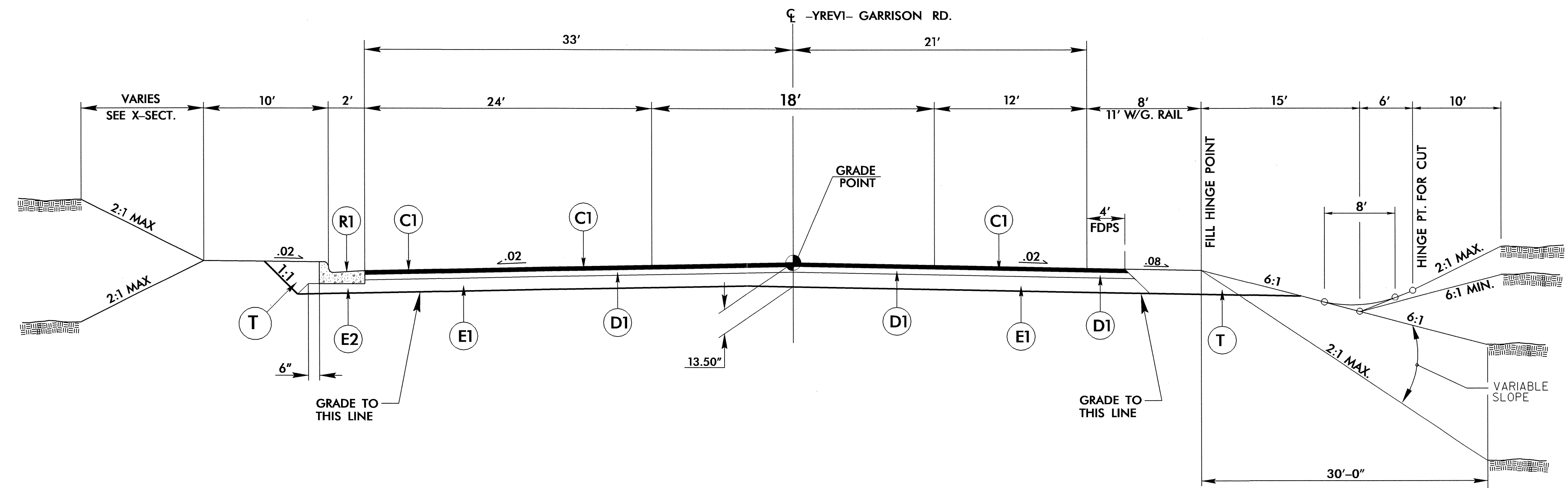
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 \$\$\$\$USERNAME\$\$\$\$

PROJECT REFERENCE NO. R-2248H	SHEET NO. 2-A
ROADWAY DESIGN ENGINEER GREGORY E. BREW	PAVEMENT DESIGN ENGINEER JUN-CHI CHEN
PAVEMENT SCHEDULE	
C1	3" S9.5C
D1	4" I19.0C
E1	6.5" B25.0C
R1	2'-6" C & G
T	EARTH MATERIAL



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
 -YREVI- STA. 50+50.00 TO 51+00.00, TRANSITION FROM EXIST. TO T.S. 2
 -YREVI- STA. 51+00.00 TO 53+33.30



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
 -YREVI- STA. 53+33.30 TO 54+02.00. TRANSITION FROM T.S. 2 TO T.S. 3
 -YREVI- STA. 54+02.00 TO 55+50.16

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22-APR-2010 09:59
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STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR WHEELCHAIR RAMP PROPOSED CURB AND GUTTER	SHEET 1 OF 3 848D05																																																												
<p>NOTES:</p> <ol style="list-style-type: none"> DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FOR AS SHOWN ON THE DETAILS WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP. 																																																														
<table border="1" style="margin: auto;"> <thead> <tr> <th>W</th> <th>A</th> <th>W+A+9"</th> <th>X</th> <th>B</th> </tr> </thead> <tbody> <tr><td>5'</td><td>0.0'</td><td>5.8'</td><td>5.8'</td><td>5.0**</td></tr> <tr><td>6'</td><td>0.0'</td><td>6.8'</td><td>6.8'</td><td>6.0**</td></tr> <tr><td>7'</td><td>0.0'</td><td>7.8'</td><td>7.3'</td><td>6.5**</td></tr> <tr><td>8'</td><td>0.0'</td><td>8.8'</td><td>7.3'</td><td>6.5**</td></tr> <tr><td>5'</td><td>2.0'</td><td>7.8'</td><td>7.8'</td><td>5.0'</td></tr> <tr><td>5'</td><td>2.5'</td><td>8.3'</td><td>8.1'</td><td>4.8'</td></tr> <tr><td>5'</td><td>3.0'</td><td>8.8'</td><td>8.3'</td><td>4.4'</td></tr> <tr><td>5'</td><td>3.5'</td><td>9.3'</td><td>8.4'</td><td>4.1'</td></tr> <tr><td>5'</td><td>4.0'</td><td>9.8'</td><td>8.6'</td><td>3.8'</td></tr> <tr><td>5'</td><td>4.5'</td><td>10.3'</td><td>8.7'</td><td>3.4'</td></tr> <tr><td>5'</td><td>5.0'</td><td>10.8'</td><td>8.9'</td><td>3.1'</td></tr> </tbody> </table>			W	A	W+A+9"	X	B	5'	0.0'	5.8'	5.8'	5.0**	6'	0.0'	6.8'	6.8'	6.0**	7'	0.0'	7.8'	7.3'	6.5**	8'	0.0'	8.8'	7.3'	6.5**	5'	2.0'	7.8'	7.8'	5.0'	5'	2.5'	8.3'	8.1'	4.8'	5'	3.0'	8.8'	8.3'	4.4'	5'	3.5'	9.3'	8.4'	4.1'	5'	4.0'	9.8'	8.6'	3.8'	5'	4.5'	10.3'	8.7'	3.4'	5'	5.0'	10.8'	8.9'	3.1'
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<p>ENGLISH DETAIL DRAWING FOR WHEELCHAIR RAMP PROPOSED CURB AND GUTTER</p>																																																														
SHEET 1 OF 3 848D05																																																														

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR WHEELCHAIR RAMP PROPOSED CURB AND GUTTER	SHEET 2 OF 3 848D05
<p>DETAIL SHOWING TYPICAL LOCATION OF WHEELCHAIR RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS</p>		
<p>ALLOWABLE LOCATIONS</p> <p>DUAL RAMP RADIUS.....ANY</p>		
<p>PROPOSED WHEELCHAIR RAMP</p> <p>PROPOSED OR FUTURE SIDEWALK</p>		
<p>ROADWAY PLAN SYMBOL (WCR) FOR PROPOSED WHEELCHAIR RAMP</p>		
<p>DETAIL SHOWING TYPICAL LOCATION OF WHEELCHAIR RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS</p>		
<p>STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.</p>		
SHEET 2 OF 3 848D05		

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
 Office 919-250-4128 FAX 919-250-4119

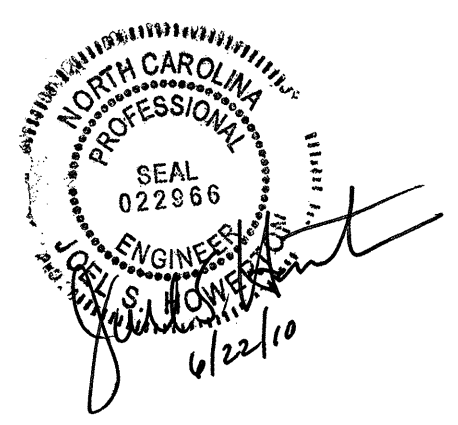
SEE PLATE FOR TITLE

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 MODIFIED BY: *[Signature]* DATE: *[Date]*
 CHECKED BY: *[Signature]* DATE: 4/22/10
 FILE SPEC.: SpecialDetails/EricWard/STDS/848d05.dgn



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STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR WHEELCHAIR RAMP PROPOSED CURB AND GUTTER	SHEET 3 OF 3 848D05
<p>NOTES:</p> <ol style="list-style-type: none"> 1. CONSTRUCT THE WALKING SURFACE WITH SLIP RESISTANCE AND A 70% CONTRASTING COLOR TO THE SIDEWALK. 2. CROSSWALK WIDTHS AND CONFIGURATION VARY BUT MUST CONFORM TO TRAFFIC DESIGN STANDARDS. 3. NORTH CAROLINA GENERAL STATUTE 136-44.14 REQUIRES THAT ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY DISABLED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER POINTS OF PEDESTRIAN FLOW. IN ADDITION, SECTION 228 OF THE 1973 FEDERAL AID HIGHWAY SAFETY ACT REQUIRES PROVISION OF CURB RAMPS ON ANY CURB CONSTRUCTION AFTER JULY 1, 1976 WHETHER A SIDEWALK IS PROPOSED INITIALLY OR IS PLANNED FOR A FUTURE DATE. THE AMERICANS WITH DISABILITIES ACT (ADA) OF 1990 EXTENDS TO INDIVIDUALS WITH DISABILITIES. COMPREHENSIVE CIVIL RIGHTS PROTECTIONS SIMILAR TO THOSE PROVIDED TO PERSONS ON THE BASIS OF RACE, SEX, NATIONAL ORIGIN AND RELIGION UNDER THE CIVIL RIGHTS ACT OF 1964. THESE CURB RAMPS HAVE BEEN DESIGNED TO COMPLY WITH THE CURRENT ADA STANDARDS. 4. PROVIDE WHEELCHAIR RAMPS AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. LOCATE WHEELCHAIR RAMPS AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT. WHERE TWO RAMPS ARE INSTALLED, PLACE NOT LESS THAN 2 FEET OF FULL HEIGHT CURB BETWEEN THE RAMPS. PLACE DUAL RAMPS AS NEAR PERPENDICULAR TO THE TRAVEL LANE BEING CROSSED AS POSSIBLE. 5. DO NOT EXCEED 0.08 (12:1) SLOPE ON THE WHEELCHAIR RAMP IN RELATIONSHIP TO THE GRADE OF THE STREET. 6. CONSTRUCT WHEELCHAIR RAMPS 40" (3'-4") OR GREATER FOR DUAL RAMPS. 7. USE CLASS "B" CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE. 8. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STD. DWG. 848.01. 9. PLACE THE INSIDE PEDESTRIAN CROSSWALK LINES NO CLOSER IN THE INTERSECTION BY BISECTING THE INTERSECTION RADIUS, WITH ALLOWANCE OF A 4' CLEAR ZONE IN THE VEHICULAR TRAVELWAY WHEN ONE RAMP IS INSTALLED. (SEE NOTE 17) 10. COORDINATE THE CURB CUT AND THE PEDESTRIAN CROSSWALK LINES SO THE FLOOR OF THE WHEELCHAIR RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES. PLACE DIAGONAL RAMPS WITH FLARED SIDES SO 24" OF FULL HEIGHT CURB FALLS WITHIN THE CROSSWALK MARKINGS ON EACH SIDE OF THE FLARES. 11. CONSTRUCT THE PEDESTRIAN CROSSWALK A MINIMUM OF 6 FEET. A CROSSWALK WIDTH OF 10 FEET OR GREATER IS DESIRABLE. 12. USE STOP LINES, NORMALLY PERPENDICULAR TO THE LANE LINES, WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT. AN UNUSUAL APPROACH SKEW MAY REQUIRE THE PLACEMENT OF THE STOP LINE TO BE PARALLEL TO THE INTERSECTING ROADWAY. 13. TERMINATE PARKING A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK. 14. PLACE ALL PAVEMENT MARKINGS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION AND THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD. 		
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR WHEELCHAIR RAMP PROPOSED CURB AND GUTTER	SHEET 3 OF 3 848D05



PROJECT SERVICES UNIT STANDARDS AND SPECIAL DESIGN Office 919-250-4128 FAX 919-250-4119	
SEE PLATE FOR TITLE	
ORIGINAL BY: STD.NO.848.05 DATE: 4-22-10 MODIFIED BY: <i>Eric Ward</i> DATE: <i>6/22/10</i> CHECKED BY: <i>Eric Ward</i> DATE: <i>6/22/10</i> FILE SPEC.: S:\SpecialDetails\EricWard\STDs\848005.dgn	

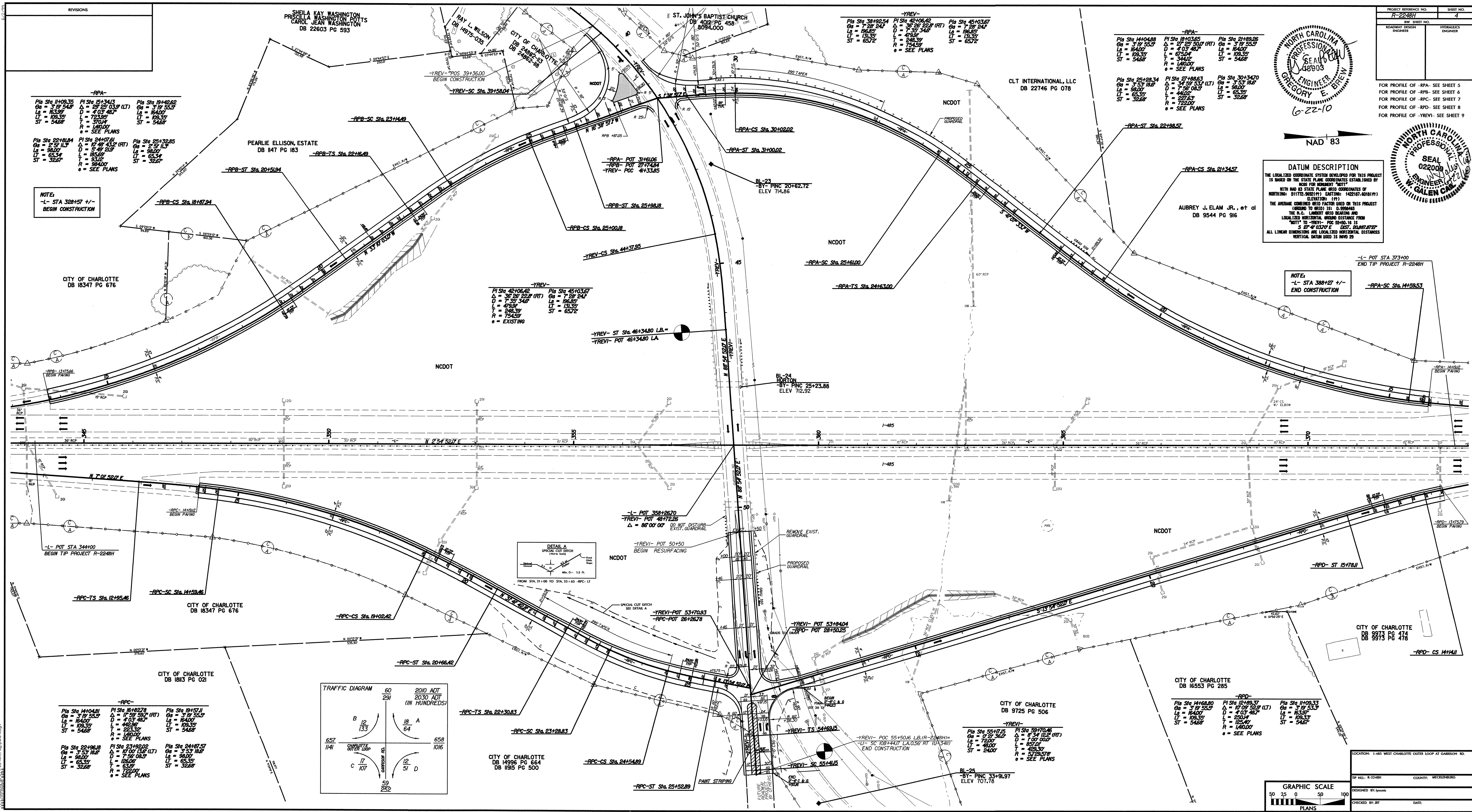
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202278

ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION	465000000-N	1251	60	EA	TEMPORARY RAISED PAVEMENT MARKERS
004300000-N	226	Lump Sum		GRADING	468500000-E	1205	12,277	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING	468600000-E	1205	2,296	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
104400000-E	501	8,950	SY	LIME TREATED SOIL (SLURRY METHOD)	468800000-E	1205	4,288	LF	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)
106600000-E	501	90	TON	LIME FOR LIME TREATED SOIL	469000000-E	1205	540	LF	THERMOPLASTIC PAVEMENT MARKING LINES (6", 120 MILS)
112100000-E	520	11,000	TON	AGGREGATE BASE COURSE	469500000-E	1205	373	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)
117600000-E	542	8,950	SY	SOIL CEMENT BASE	470000000-E	1205	2,314	LF	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)
118700000-E	542	247	TON	PORTLAND CEMENT FOR SOIL CEMENT BASE	471000000-E	1205	92	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
120900000-E	543	2,690	GAL	ASPHALT CURING SEAL	472500000-E	1205	20	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
122000000-E	545	50	TON	INCIDENTAL STONE BASE	477000000-E	1205	1,888	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (IV)
127500000-E	600	1,370	GAL	PRIME COAT	481000000-E	1205	14,520	LF	PAINT PAVEMENT MARKING LINES (4")
149100000-E	610	1,100	TON	ASPHALT CONC BASE COURSE, TYPE B25.0C	485000000-E	1205	5,800	LF	REMOVAL OF PAVEMENT MARKING LINES (4")
150300000-E	610	4,600	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	490000000-N	1251	188	EA	PERMANENT RAISED PAVEMENT MARKERS
152300000-E	610	4,000	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	600000000-E	1605	1,050	LF	TEMPORARY SILT FENCE
156000000-E	620	265	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	600600000-E	1610	160	TON	STONE FOR EROSION CONTROL, CLASS A
156500000-E	620	240	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 70-22	600900000-E	1610	40	TON	STONE FOR EROSION CONTROL, CLASS B
169300000-E	654	25	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR	601200000-E	1610	15	TON	SEDIMENT CONTROL STONE
214300000-E	818	10	TON	BLOTTING SAND	601500000-E	1615	6	ACR	TEMPORARY MULCHING
254900000-E	846	220	LF	2'-6" CONCRETE CURB & GUTTER	601800000-E	1620	200	LB	SEED FOR TEMPORARY SEEDING
260500000-N	848	1	EA	CONCRETE WHEELCHAIR RAMPS	602100000-E	1620	0.75	TON	FERTILIZER FOR TEMPORARY SEEDING
264700000-E	852	180	SY	5" MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED)	602400000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
303000000-E	862	900	LF	STEEL BM GUARDRAIL	602700000-N	1622	4	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
315000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS	603000000-E	1630	50	CY	SILT EXCAVATION
321000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE CAT-1	603600000-E	1631	2,150	SY	MATTING FOR EROSION CONTROL
327000000-N	SP	2	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	604200000-E	1632	15	LF	1/4" HARDWARE CLOTH
337500000-E	SP	150	LF	REMOVE & STOCKPILE EXISTING GUARDRAIL	608400000-E	1660	5	ACR	SEEDING & MULCHING
365600000-E	876	400	SY	FILTER FABRIC FOR DRAINAGE	608700000-E	1660	3	ACR	MOWING
404800000-E	902	2	CY	REINFORCED CONCRETE SIGN FOUNDATIONS	609000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
405400000-E	902	1	CY	PLAIN CONCRETE SIGN FOUNDATIONS	609300000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
406000000-E	903	425	LB	SUPPORTS, BREAKAWAY STEEL BEAM	609600000-E	1662	125	LB	SEED FOR SUPPLEMENTAL SEEDING
406600000-E	903	714	LB	SUPPORTS, SIMPLE STEEL BEAM	610800000-E	1665	3.5	TON	FERTILIZER TOPDRESSING
407200000-E	903	577	LF	SUPPORTS, 3-LB STEEL U-CHANNEL	611450000-N	SP	10	MHR	SPECIALIZED HAND MOWING
409600000-N	904	5	EA	SIGN ERECTION, TYPE D	611700000-N	SP	6	EA	RESPONSE FOR EROSION CONTROL
410200000-N	904	19	EA	SIGN ERECTION, TYPE E					
410800000-N	904	7	EA	SIGN ERECTION, TYPE F					
410900000-N	904	6	EA	SIGN ERECTION, TYPE *** (OVERHEAD) (A)					
410900000-N	904	6	EA	SIGN ERECTION, TYPE *** (OVERHEAD) (B)					
411000000-N	904	4	EA	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (A)					
440000000-E	1110	192	SF	WORK ZONE SIGNS (STATIONARY)					
440500000-E	1110	528	SF	WORK ZONE SIGNS (PORTABLE)					
441000000-E	1110	90	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)					
441500000-N	1115	4	EA	FLASHING ARROW PANELS, TYPE C					
442000000-N	1120	2	EA	CHANGEABLE MESSAGE SIGN					
443000000-N	1130	160	EA	DRUMS					
443500000-N	1135	27	EA	CONES					
444500000-E	1145	144	LF	BARRICADES (TYPE III)					
445000000-N	1150	1,600	HR	FLAGGER					
448000000-N	1165	4	EA	TMA					
451000000-N	SP	50	HR	LAW ENFORCEMENT					

5/28/09

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-RPA-

PI Sta 1109.35 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68	PI Sta 1513.413 GA = 413.41 LA = 109.39 TA = 109.39 ST = 54.68	PI Sta 1914.262 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68
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NOTE:
-L- STA 388+57 +/-
BEGIN CONSTRUCTION

-YREV-

PI Sta 42+06.42 GA = 32.28 LA = 4.33 TA = 7.29 ST = 754.59	PI Sta 45+03.67 GA = 7.29 LA = 131.35 TA = 131.35 ST = 637.2
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-YREV-

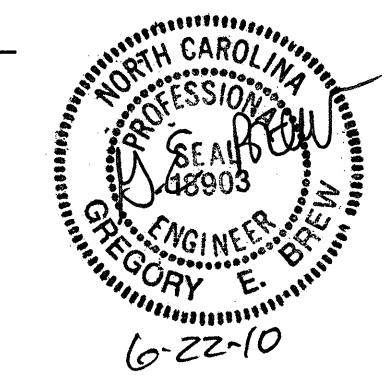
PI Sta 38+02.54 GA = 7.29 LA = 131.35 TA = 131.35 ST = 637.2	PI Sta 40+06.42 GA = 32.28 LA = 4.33 TA = 7.29 ST = 754.59	PI Sta 45+03.67 GA = 7.29 LA = 131.35 TA = 131.35 ST = 637.2
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-RPA-

PI Sta 14+04.88 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68	PI Sta 18+03.65 GA = 27.29 LA = 4.33 TA = 7.29 ST = 754.59	PI Sta 21+09.26 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68
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-RPA-

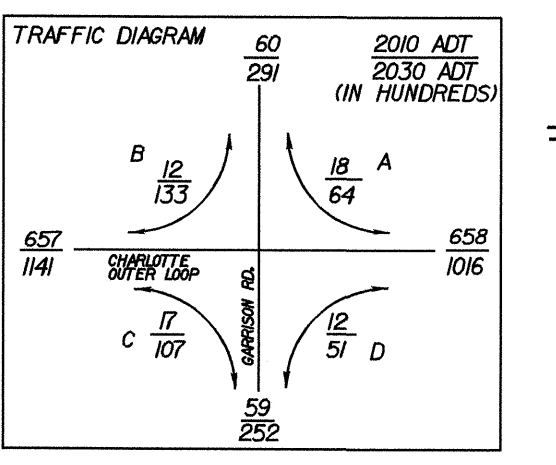
PI Sta 25+28.34 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68	PI Sta 27+08.63 GA = 34.59 LA = 4.33 TA = 7.29 ST = 754.59	PI Sta 30+34.70 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68
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DATUM DESCRIPTION
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY THE N.C. LARGEST GRID BEARING AND LOCALIZED HORIZONTAL ORIGIN DISTANCE FROM "NOT" 13-YREVI- PG 2940.14 IS 5 27' 4" 03.07' E (DST. 25,887.872)'. ALL LINEAR DIMENSIONS ARE LOCAL HORIZONTAL DISTANCES. VERTICAL DATUM USED IS NAVD 83.

PROJECT REFERENCE NO. R-2248H
SHEET NO. 4

FOR PROFILE OF -RPA- SEE SHEET 5
FOR PROFILE OF -RFB- SEE SHEET 6
FOR PROFILE OF -RPC- SEE SHEET 7
FOR PROFILE OF -YREV- SEE SHEET 8
FOR PROFILE OF -YREVI- SEE SHEET 9



-RPC-

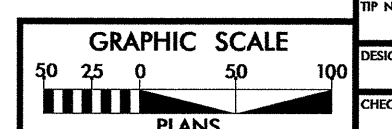
PI Sta 14+04.88 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68	PI Sta 18+02.78 GA = 17.29 LA = 4.33 TA = 7.29 ST = 754.59	PI Sta 19+17.11 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68
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-YREV-

PI Sta 55+12.15 GA = 0.37 LA = 7.29 TA = 7.29 ST = 2400	PI Sta 59+10.6 GA = 6.34 LA = 1.01 TA = 6.34 ST = 2400	PI Sta 59+10.6 GA = 6.34 LA = 1.01 TA = 6.34 ST = 2400
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-RFB-

PI Sta 14+04.88 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68	PI Sta 18+03.65 GA = 27.29 LA = 4.33 TA = 7.29 ST = 754.59	PI Sta 19+17.11 GA = 319.54 LA = 63.54 TA = 109.39 ST = 54.68
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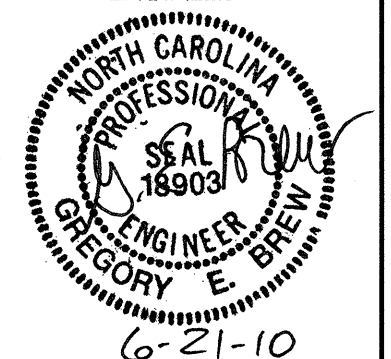


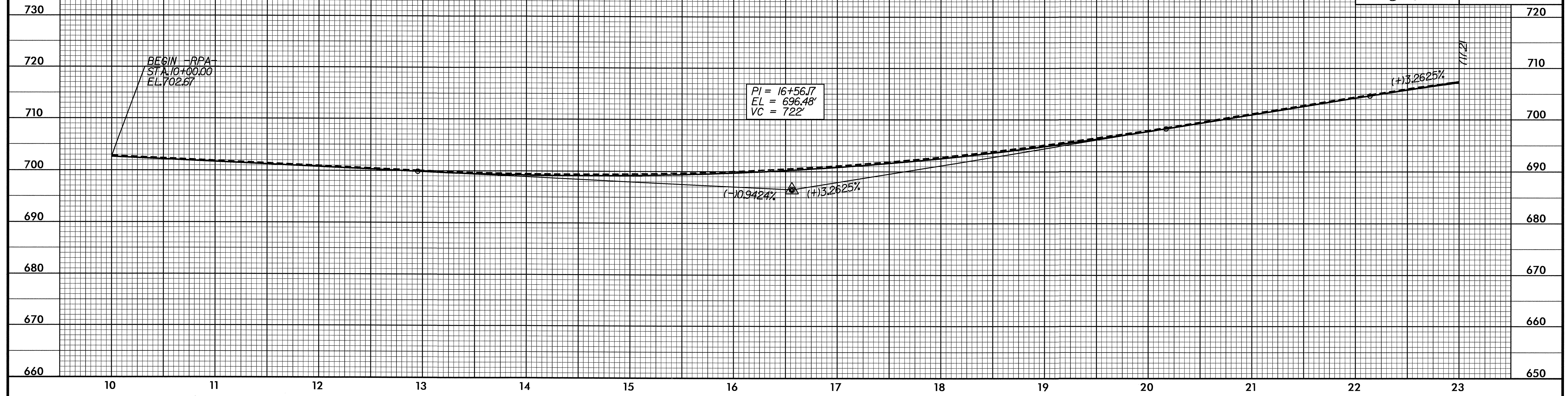
LOCATION: I-485 WEST CHARLOTTE GARDEN LOOP AT CARRISON RD.
DESIGNED BY: JET
CHECKED BY: JET
DATE:

5/28/99

-BL-24 'HORTON' ELEV 712.92

-RPA-

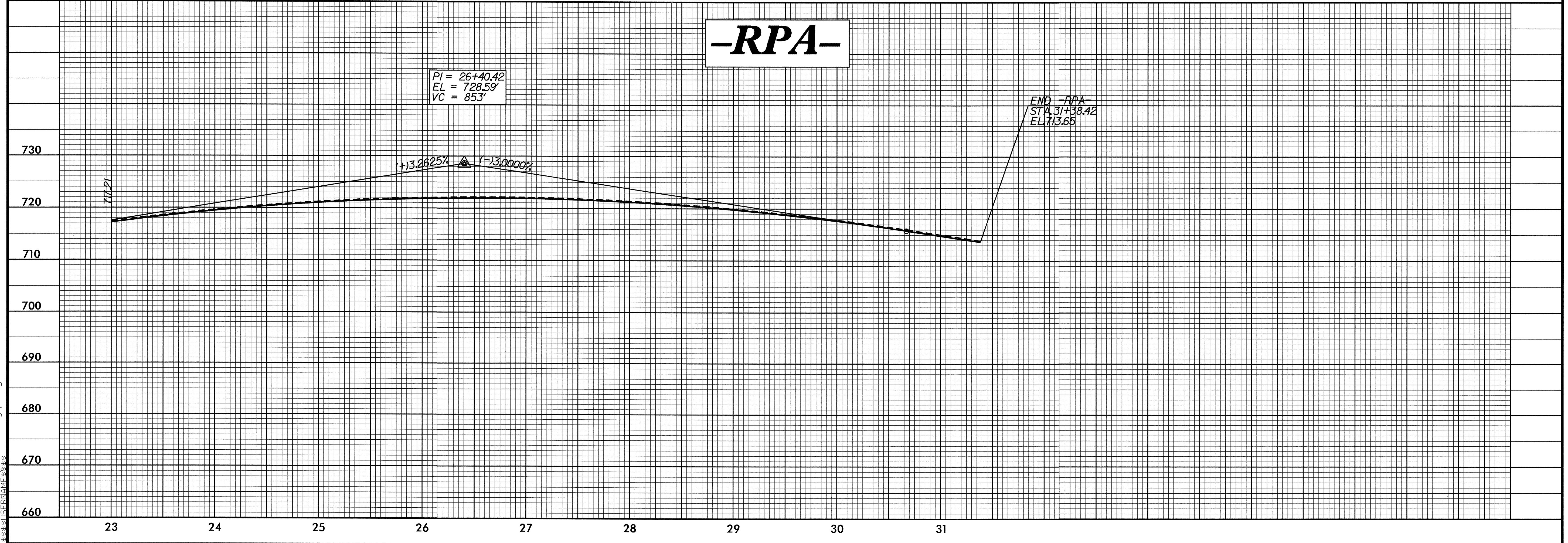
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 NORTH CAROLINA PROFESSIONAL ENGINEER SPAL 18903 GREGORY E. BIEW 6-21-10	



-RPA-

PI = 26+40.42
EL = 728.59'
VC = 853'

END -RPA-
STA. 31+38.42
EL. 713.65



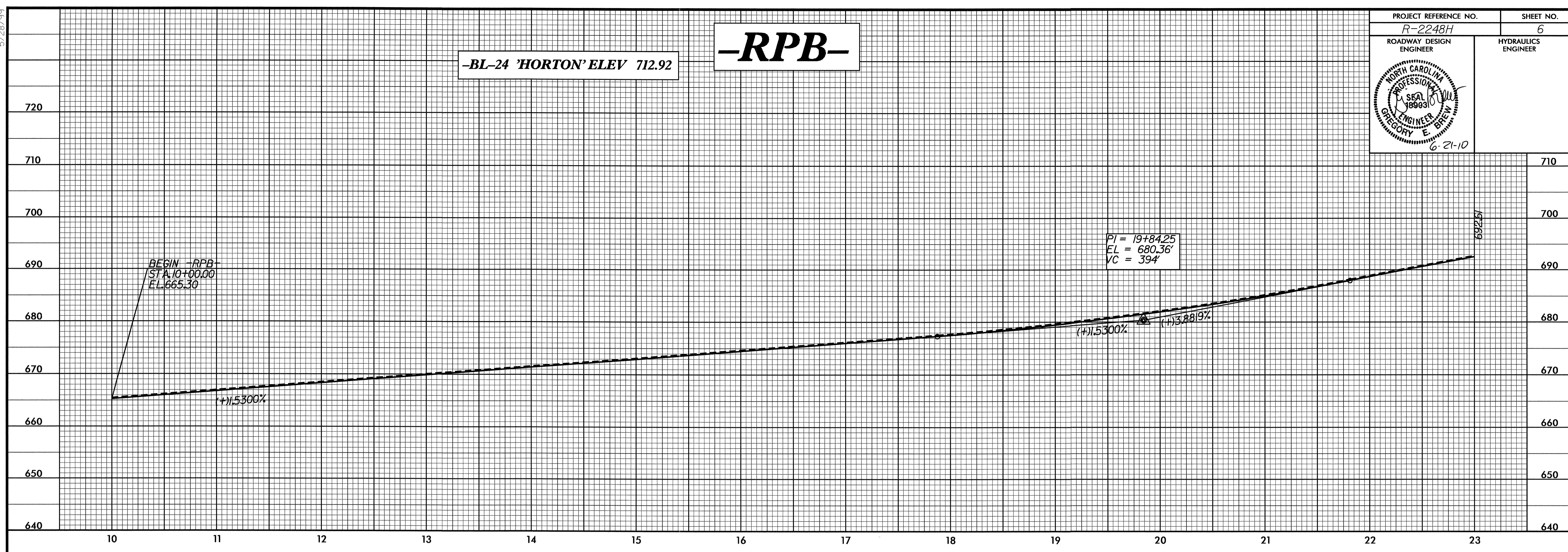
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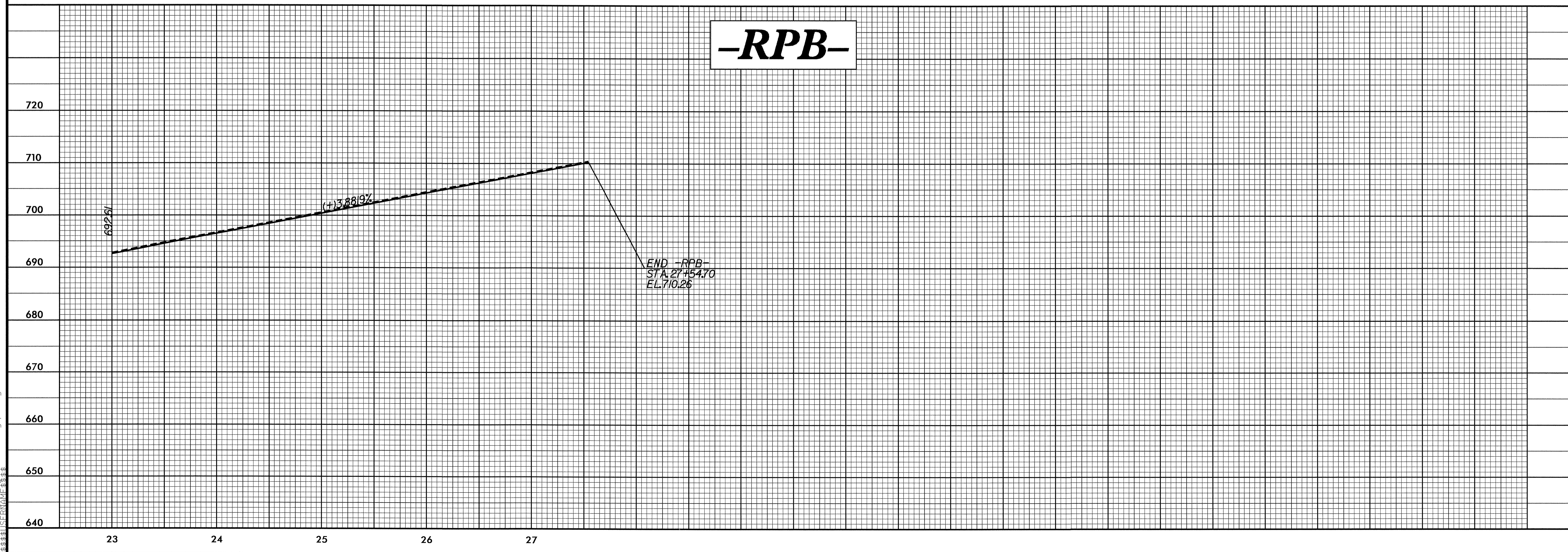
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-BL-24 'HORTON' ELEV 712.92

-RPB-



-RPB-



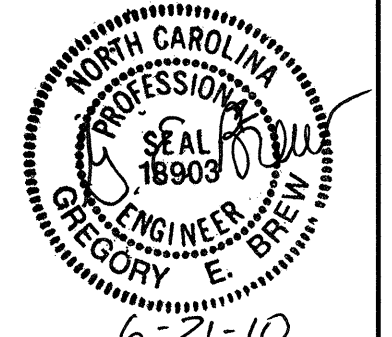
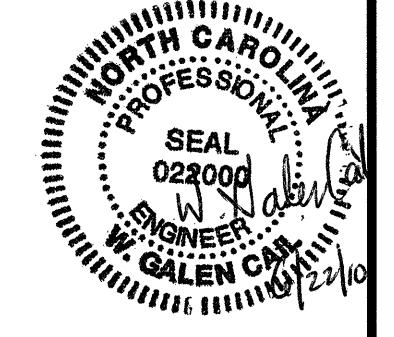
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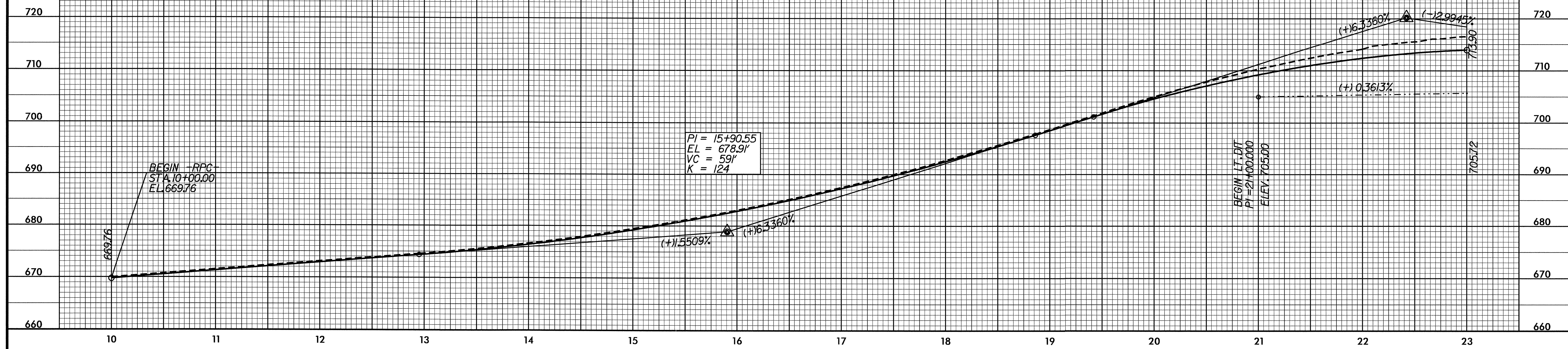
-BL-24 'HORTON' ELEV 712.92

-RPC-

DITCH LEGEND
LEFT DITCH

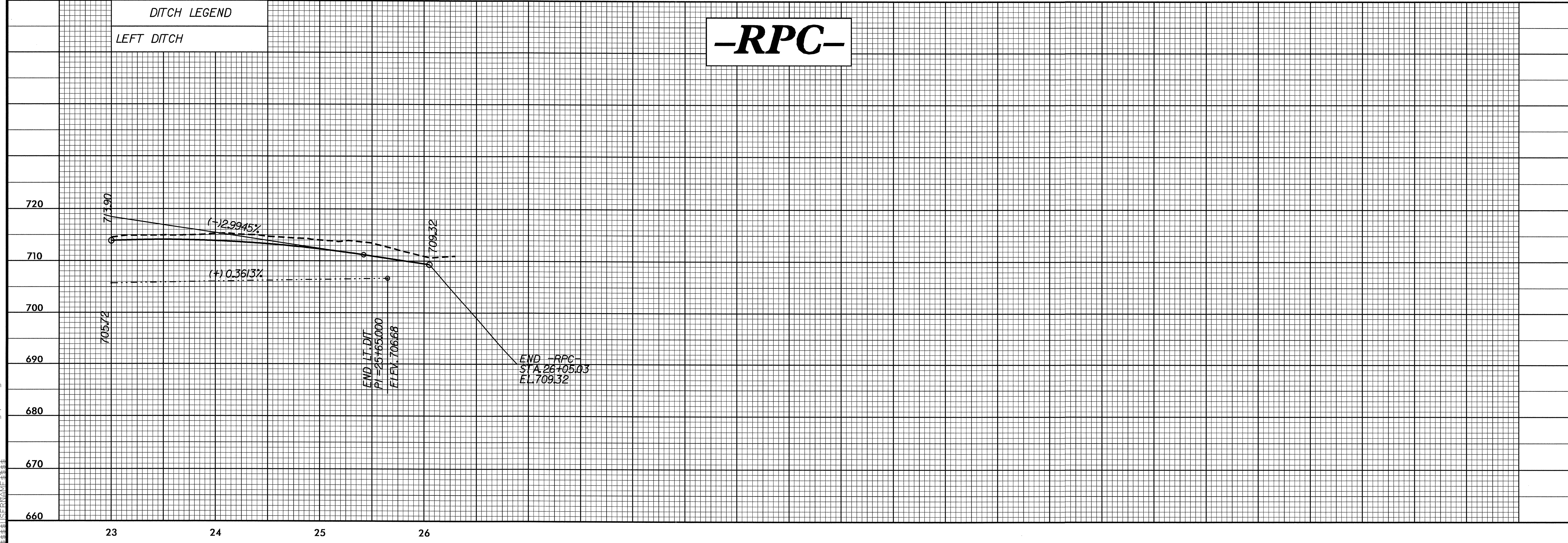
PROJECT REFERENCE NO.	SHEET NO.
	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
6-21-10	

PI = 22+42.00
EL = 720.19'
VC = 600'
K = 64



DITCH LEGEND
LEFT DITCH

-RPC-



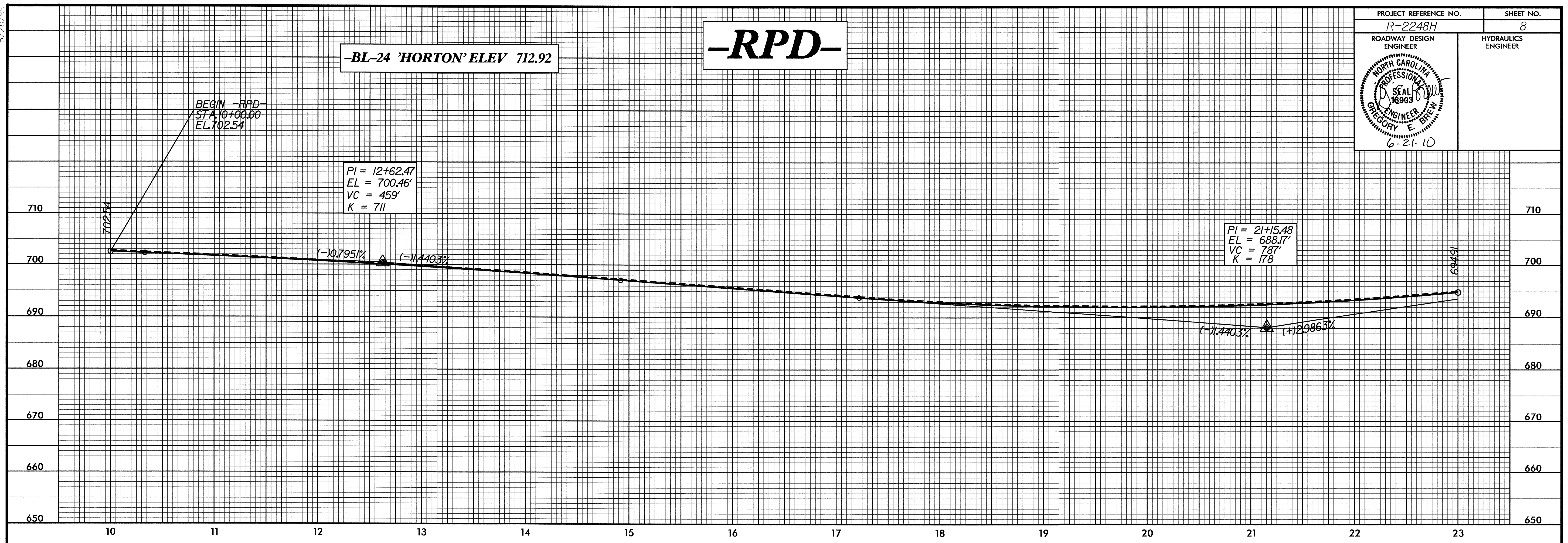
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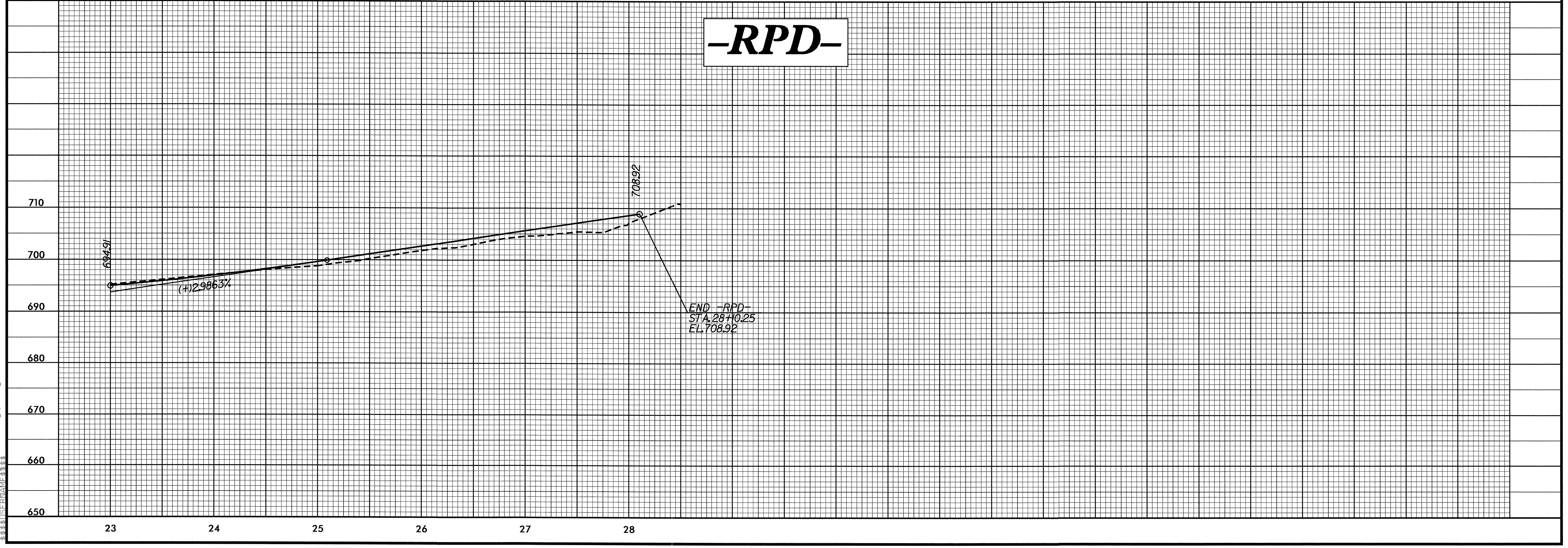
PROJECT REFERENCE NO. R-2248H	SHEET NO. 8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-BL-24 'HORTON' ELEV 712.92

-RPD-



-RPD-



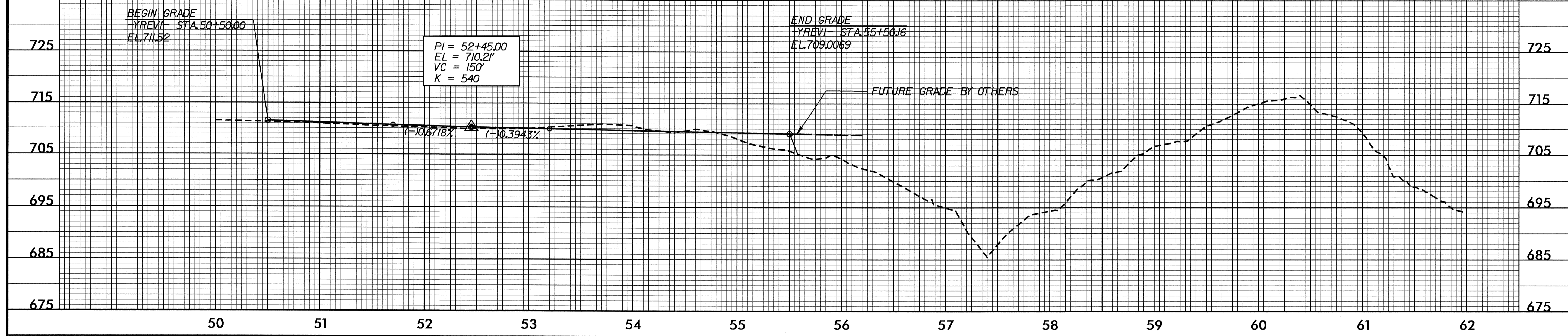
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PROJECT REFERENCE NO. R-2248H	SHEET NO. 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-BL-24 'HORTON' ELEV 712.92

-YREVI-



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