

09/08/99

TIP PROJECT: R-4429C

CONTRACT: C201078

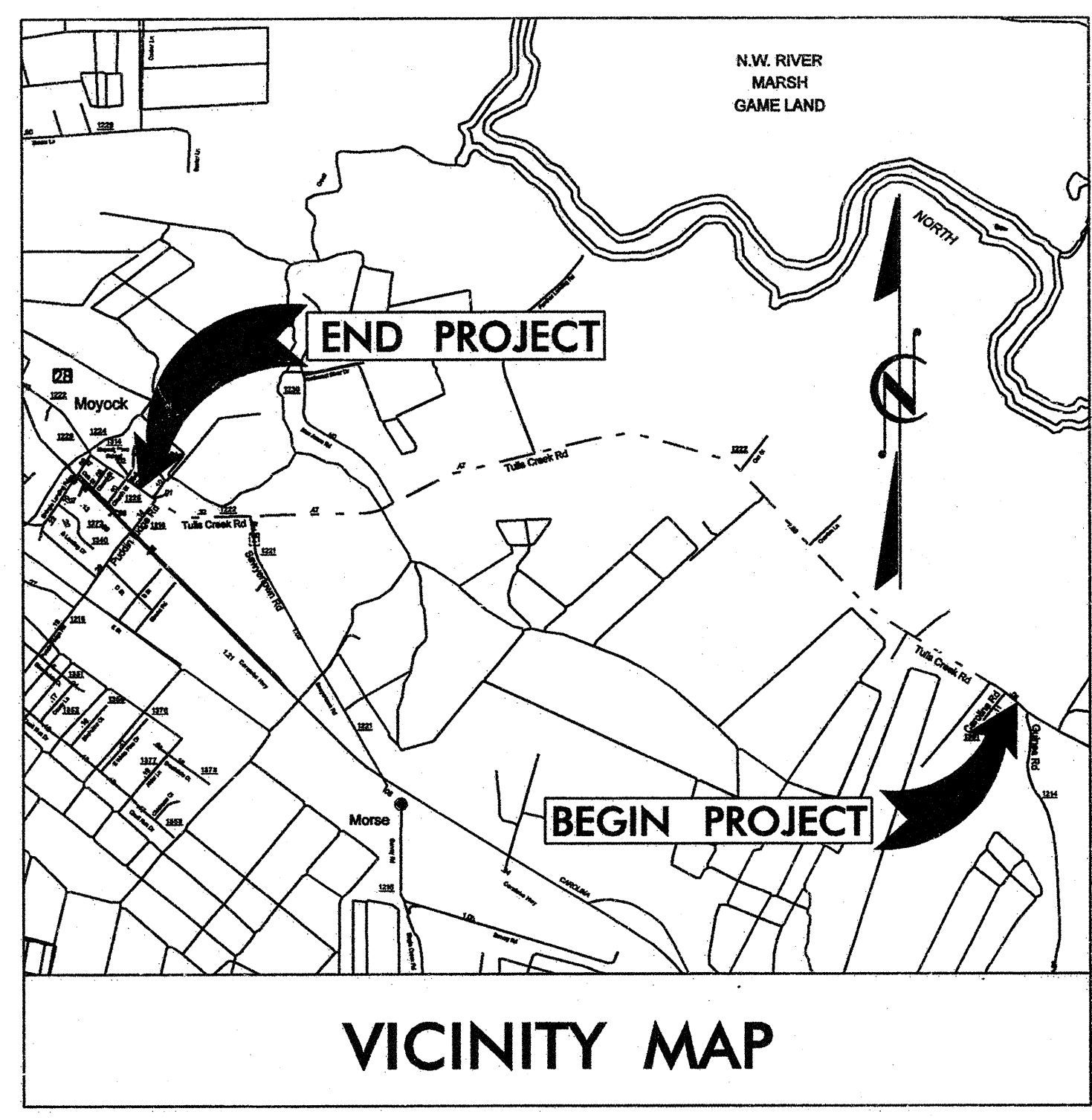
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CURRITUCK COUNTY

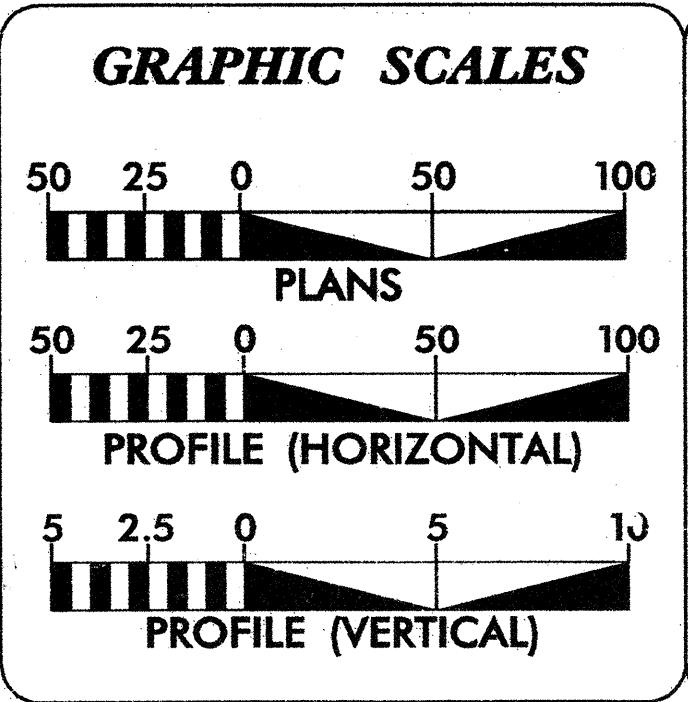
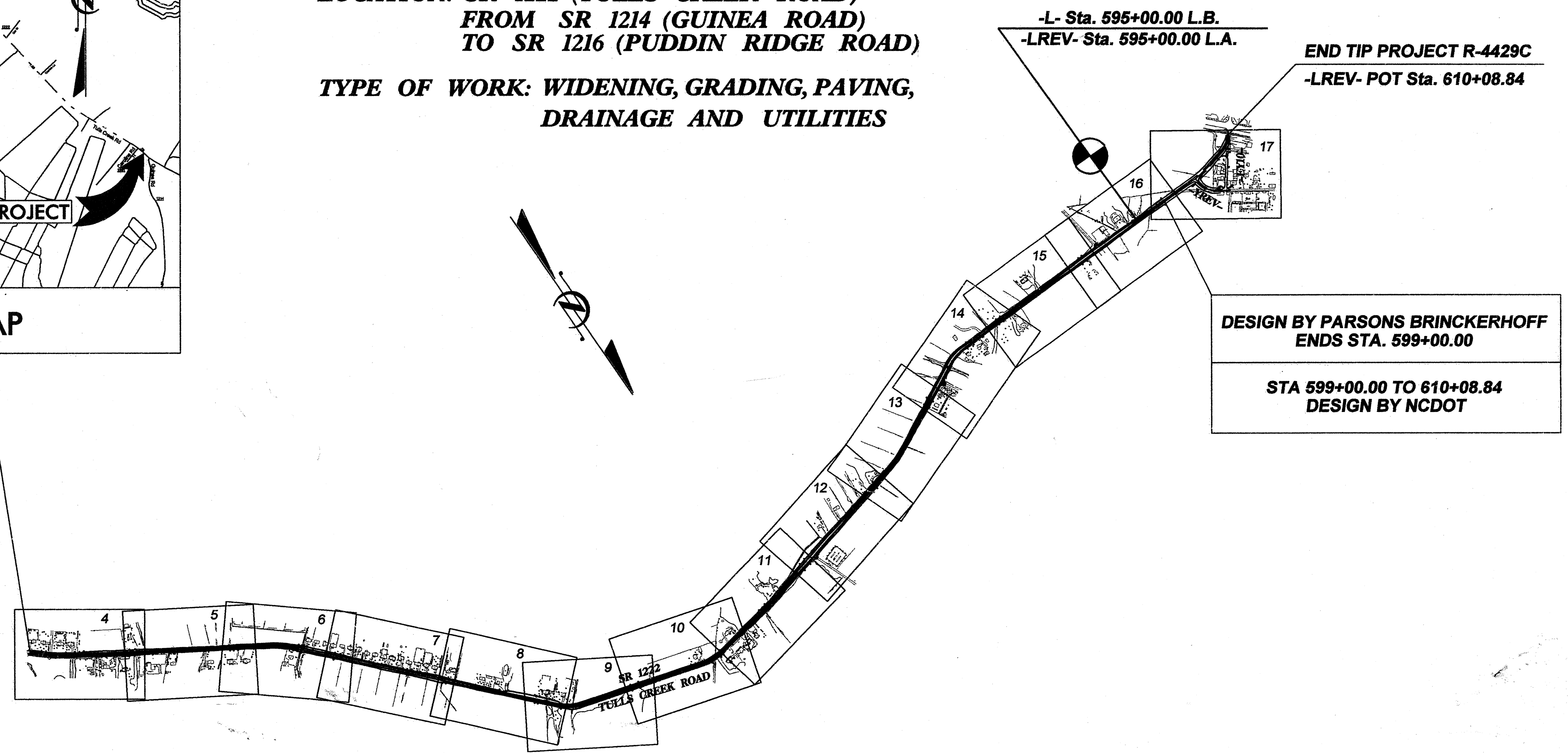
**LOCATION: SR 1222 (TULLS CREEK ROAD)
FROM SR 1214 (GUINEA ROAD)
TO SR 1216 (PUDDIN RIDGE ROAD)**

**TYPE OF WORK: WIDENING, GRADING, PAVING,
DRAINAGE AND UTILITIES**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4429C	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
34622.2.3		RW, UTILITY	
34622.3.5		CONSTR.	



**BEGIN TIP PROJECT R-4429C
-L- POT Sta. 441+19.51**



DESIGN DATA

ADT 2005 = 3800

PROJECT LENGTH

LENGTH ROADWAY PROJECT = 3.199 MILES

LENGTH STRUCTURE PROJECT = 0.000 MILES

TOTAL LENGTH STATE PROJECT = 3.199 MILES

PB PARSONS BRINCKERHOFF
121 WEST TRADE STREET
SUITE 1950
CHARLOTTE, NC 28202

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 21, 2005

LETTING DATE:
AUGUST 21, 2007

GREG HEINZ, P.E.
PROJECT ENGINEER

DAVID GOURLEY, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

Greg Heinz 4-10-07
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

David Gourley 4-11-07
SIGNATURE: P.E.

**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS**

INDEX OF SHEETS

GENERAL NOTES

ROADWAY STANDARD DRAWINGS

PROJECT REFERENCE NO. R-4429C	SHEET NO. 1A
R/W SHEET NO.	

SHEET NO.	SHEET DESCRIPTION
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARDS
1B	CONVENTIONAL SYMBOLS
2 THRU 2B	TYPICAL SECTIONS
2C	DETAIL SHEET
3A THRU 3C	DRAINAGE SUMMARY SHEET
3D	SUMMARY OF EARTHWORK
3E	SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL
4 THRU 17	PLAN SHEETS
18	PROFILE SHEET
EC-1 THRU EC-15	EROSION CONTROL PLANS
UT-1 THRU UT-16	UTILITY SHEETS
UO-1 THRU UO-15	UTILITIES BY OTHERS
X-1 THRU X-16	CROSS SECTIONS

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

GRADE LINE:
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.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II
THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE AREAS IN THE PLANS DESIGNATED SAFETY CLEARING. THE LIMITS ARE AS SHOWN AND THE CLEARING AND GRUBBING IS CONSIDERED A PART OF THE LUMP SUM ITEM FOR CLEARING AND GRUBBING.

SHOULDER CONSTRUCTION:

ASPHALT AND EARTH 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 DETAILS IN PLANS USING 300/900 MM RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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 _____SPRINT_____

_____DOMINION NC POWER_____

_____MEDIACOM_____

_____CURRITUCK CO. WATER DEPT._____

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 OTHERS.

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 AND THE LATEST REVISION THERETO ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS

STD NO.	TITLE
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.06	Method of Grading Sight Distance at Intersections
300.01	Method of Pipe Installation - Method 'A'
310.10	Driveway Pipe Construction
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
654.01	Pavement Repairs
840.00	Concrete Base Pad for Drainage Structures
840.34	Traffic Bearing Junction Box - for use with Pipes 42" and Under
840.35	Traffic Bearing Grated Drop Inlet - Cast Iron Double Frame and Grate
840.36	Traffic Bearing Grated Drop Inlet - Steel (840.37) Double Frame and Grate
840.37	Steel Grate and Frame
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps

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	○ EIP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	(23)
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○-----
Proposed Chain Link Fence	□-----
Proposed Barbed Wire Fence	◇-----
Existing Wetland Boundary	----- WLB
Proposed Wetland Boundary	----- WLB
Existing High Quality Wetland Boundary	----- HO 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	□
River Basin Buffer	----- RBB
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Swamp Marsh	▽
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 Utility Easement	----- PUE

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
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	□

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	○ S
Storm Sewer	----- S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	○ P
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	○ T
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	-----
Designated U/G Water Line (S.U.E.*)	-----
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	----- UTIL
U/G Tank; Water, Gas, Oil	□
A/G Tank; Water, Gas, Oil	□
U/G Test Hole (S.U.E.*)	●
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

PAVEMENT SCHEDULE

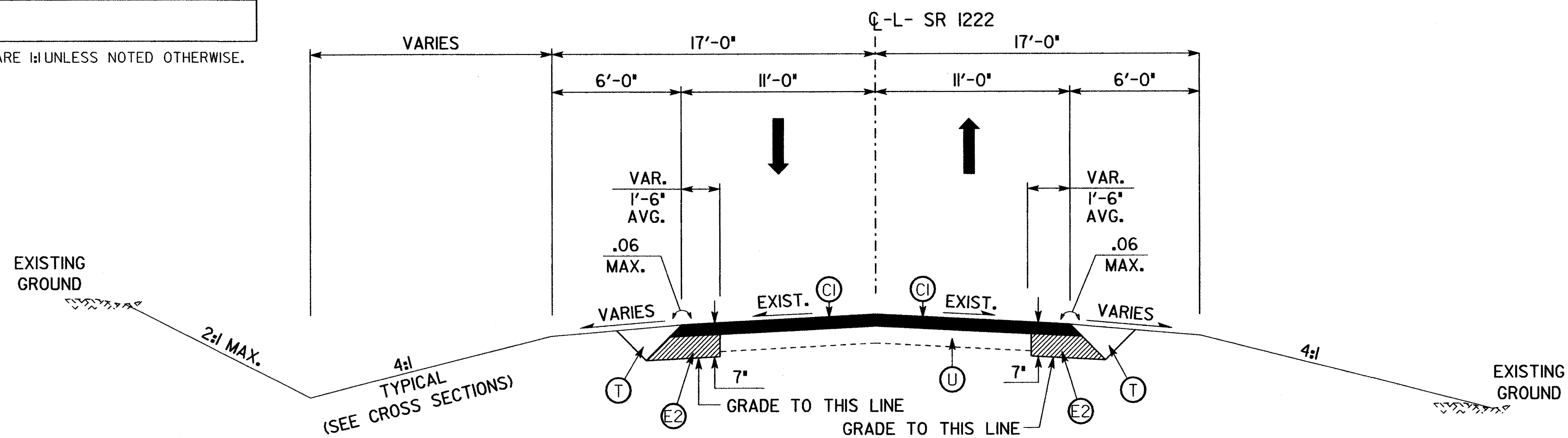
CI	PROP. APPROX. 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS PER SQ. YARD.
DI	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS PER SQ. YARD.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS PER SQ. YARD.
E2	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 616 LBS PER SQ. YARD.
T	EARTH MATERIAL
U	EXISTING PAVEMENT

NOTE: ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS NOTED OTHERWISE.

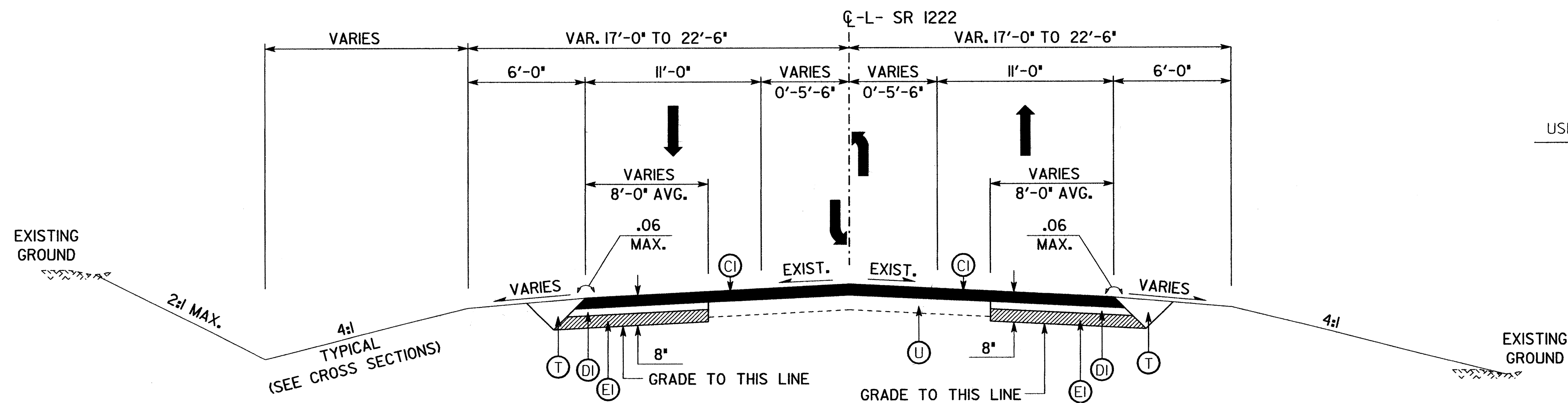
PROJECT REFERENCE NO. R-4429C	SHEET NO. 2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER

USE TYPICAL SECTION NO. 1 FOR THE FOLLOWING:

- L- STA. 441+19.51 TO 535+90.00
- L- STA. 545+90.00 TO 561+20.00
- L- STA. 571+30.00 TO 583+20.00
- LREV- STA. 595+45.00 TO 600+00.00
- YREV- STA. 12+91.43 TO 14+60.99



TYPICAL SECTION No. 1



TYPICAL SECTION No. 2

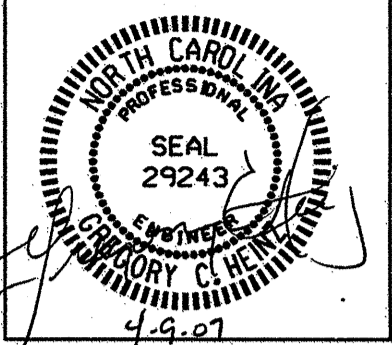
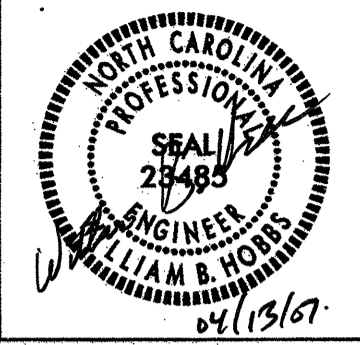
USE TYPICAL SECTION NO. 1 FOR THE FOLLOWING:

- L- STA. 535+90.00 TO 545+90.00
- L- STA. 561+20.00 TO 571+30.00
- L- STA. 583+20.00 TO 593+00.00
- LREV- STA. 593+00.00 TO 595+45.00

PAVEMENT SCHEDULE

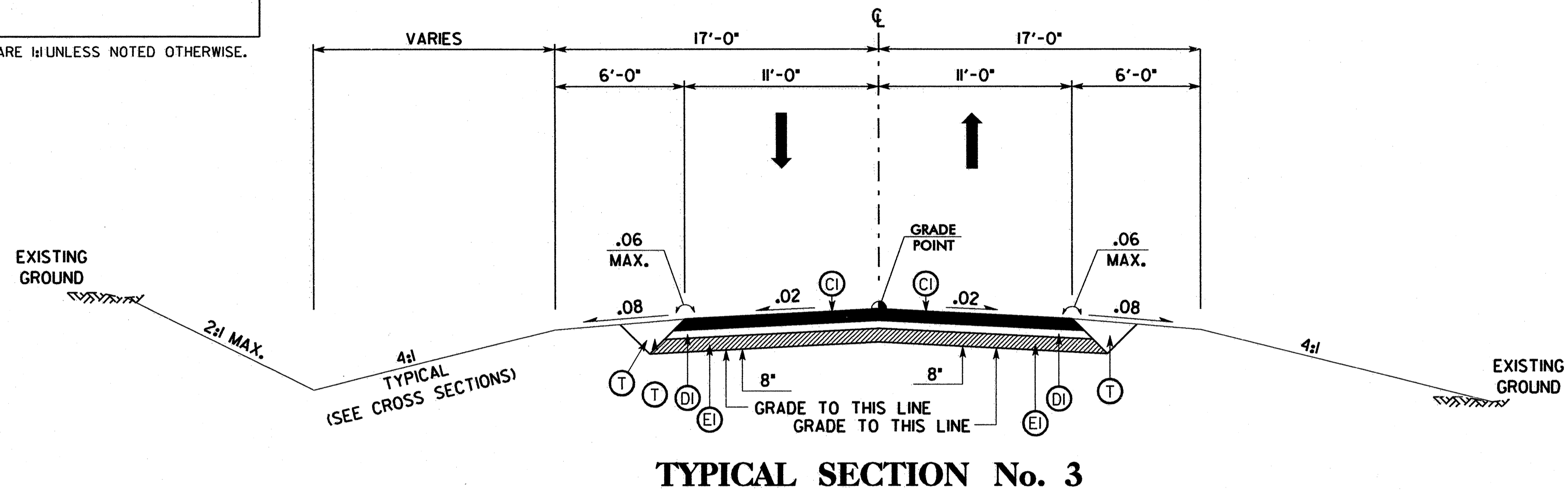
CI	PROP. APPROX. 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS PER SQ. YARD.
DI	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS PER SQ. YARD.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS PER SQ. YARD.
E2	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS PER SQ. YARD.
T	EARTH MATERIAL
U	EXISTING PAVEMENT

NOTE: ALL PAVEMENT EDGE SLOPES ARE UNLESS NOTED OTHERWISE.

PROJECT REFERENCE NO. R-4429C	SHEET NO. 2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 

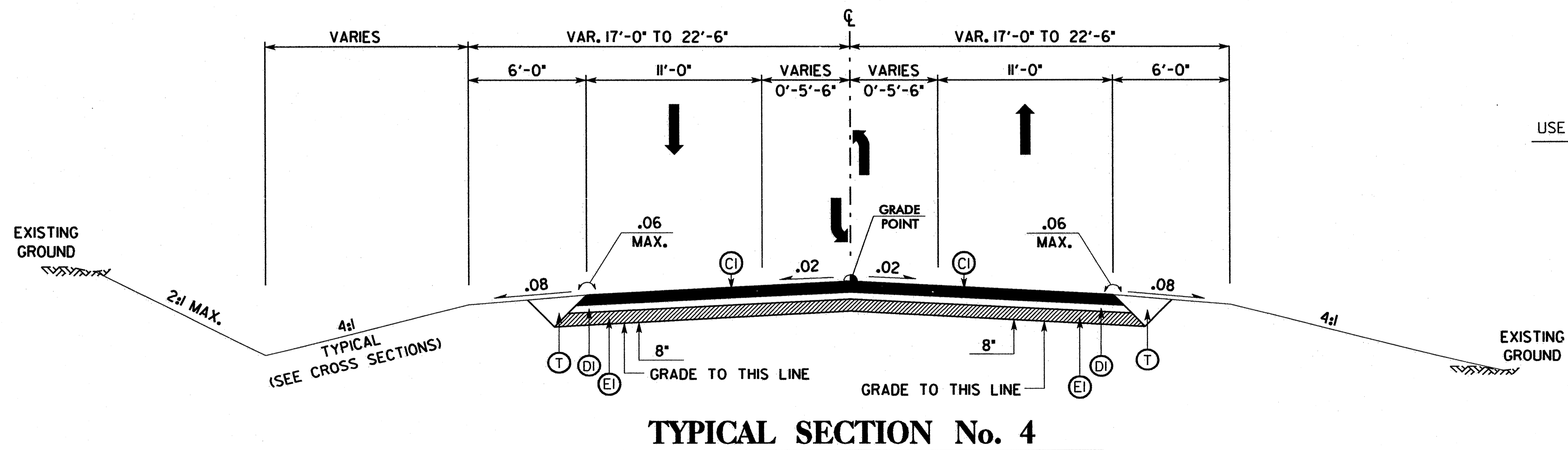
USE TYPICAL SECTION NO. 3 FOR THE FOLLOWING:

- LREV- STA. 599+00.00 TO 600+00.00
- LREV- STA. 609+00.00 TO 610+08.84
- YREV- STA. 10+00.00 TO 12+91.43



USE TYPICAL SECTION NO. 4 FOR THE FOLLOWING:

- LREV- STA. 600+00.00 TO 609+00.00

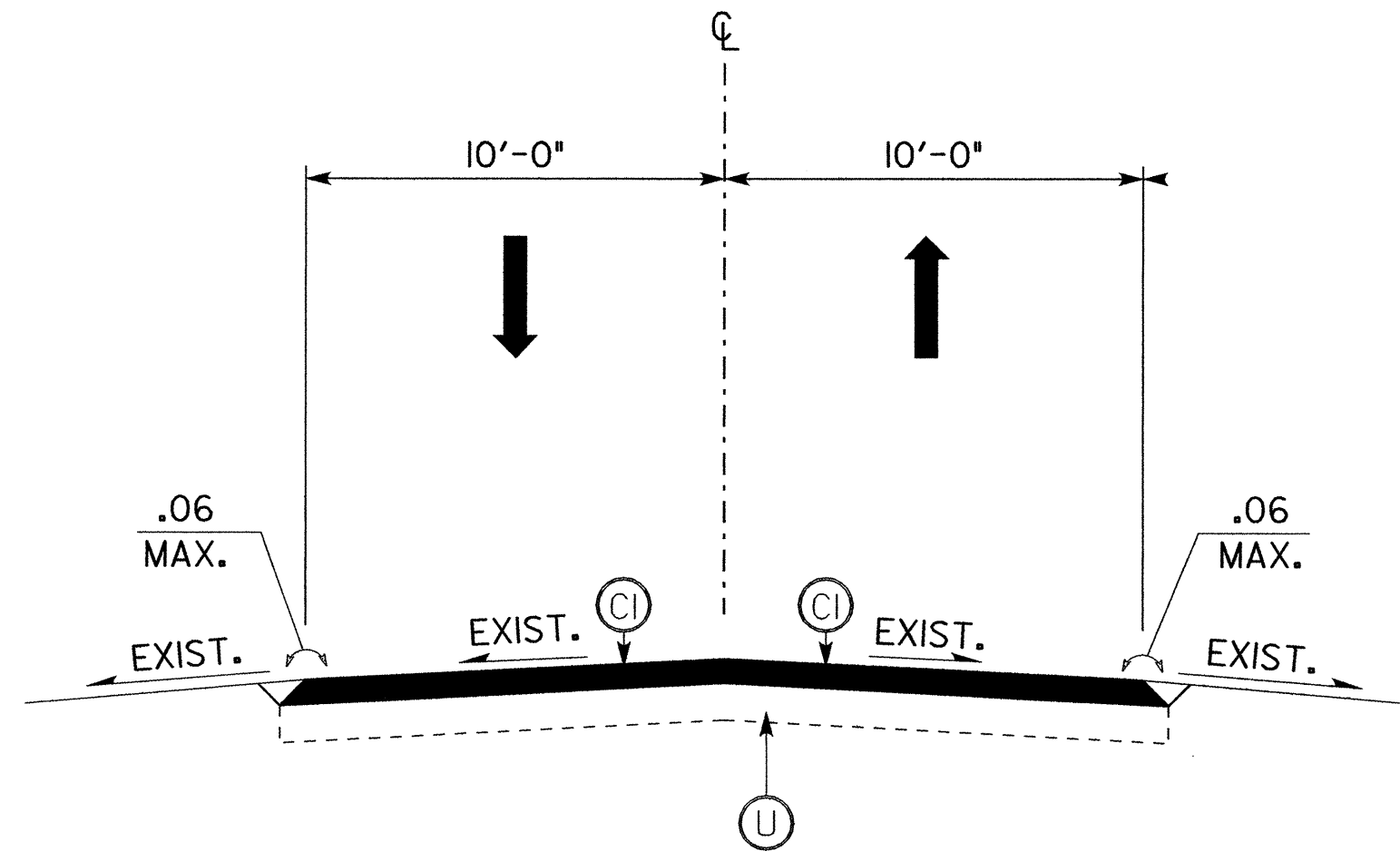


PAVEMENT SCHEDULE

CI	PROP. APPROX. 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS PER SQ. YARD.
DI	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS PER SQ. YARD.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS PER SQ. YARD.
E2	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS PER SQ. YARD.
T	EARTH MATERIAL
U	EXISTING PAVEMENT

NOTE: ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS NOTED OTHERWISE.

PROJECT REFERENCE NO. R-4429C	SHEET NO. 2B
R/W SHEET NO.	
ROADWAY & PAVEMENT DESIGN ENGINEER	



TYPICAL SECTION No. 5

USE TYPICAL SECTION NO. 5 FOR THE FOLLOWING:

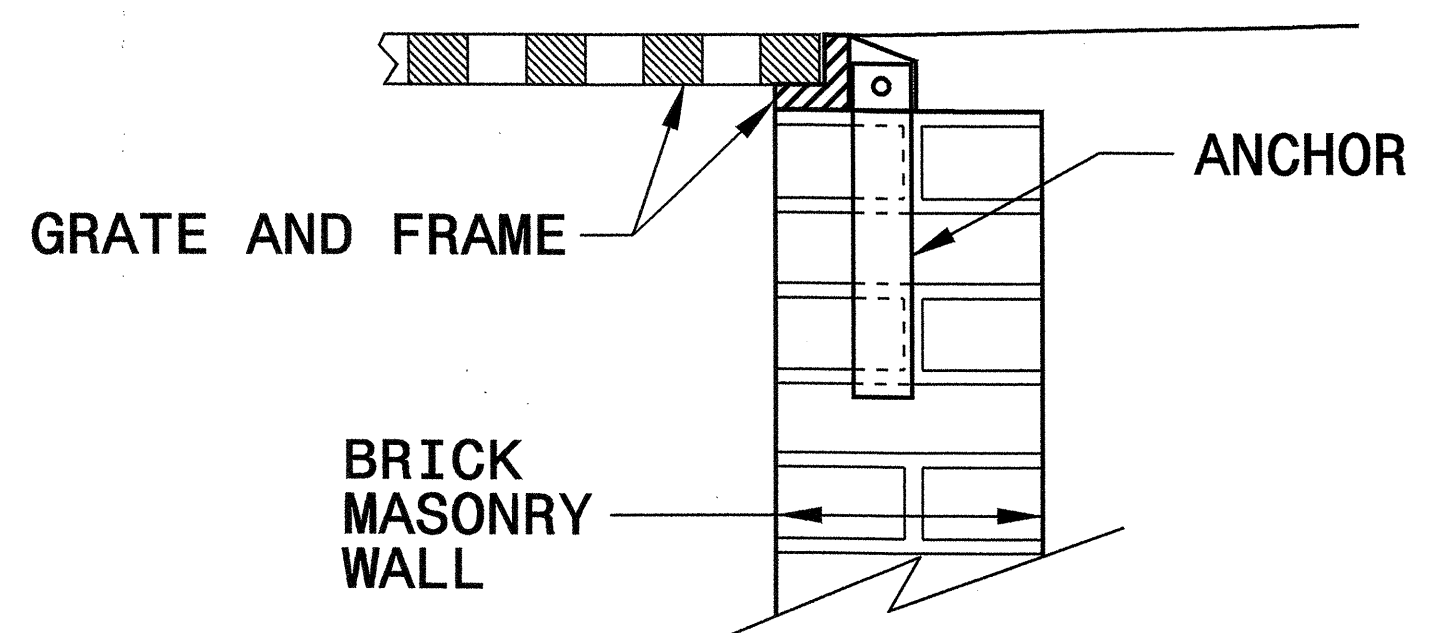
-EY10- STA. 13+06.45 TO 15+62.59

FOR CUL-DE-SAC ON -EY10-, USE PAVEMENT DESIGN FOR TYPICAL SECTION NO. 3

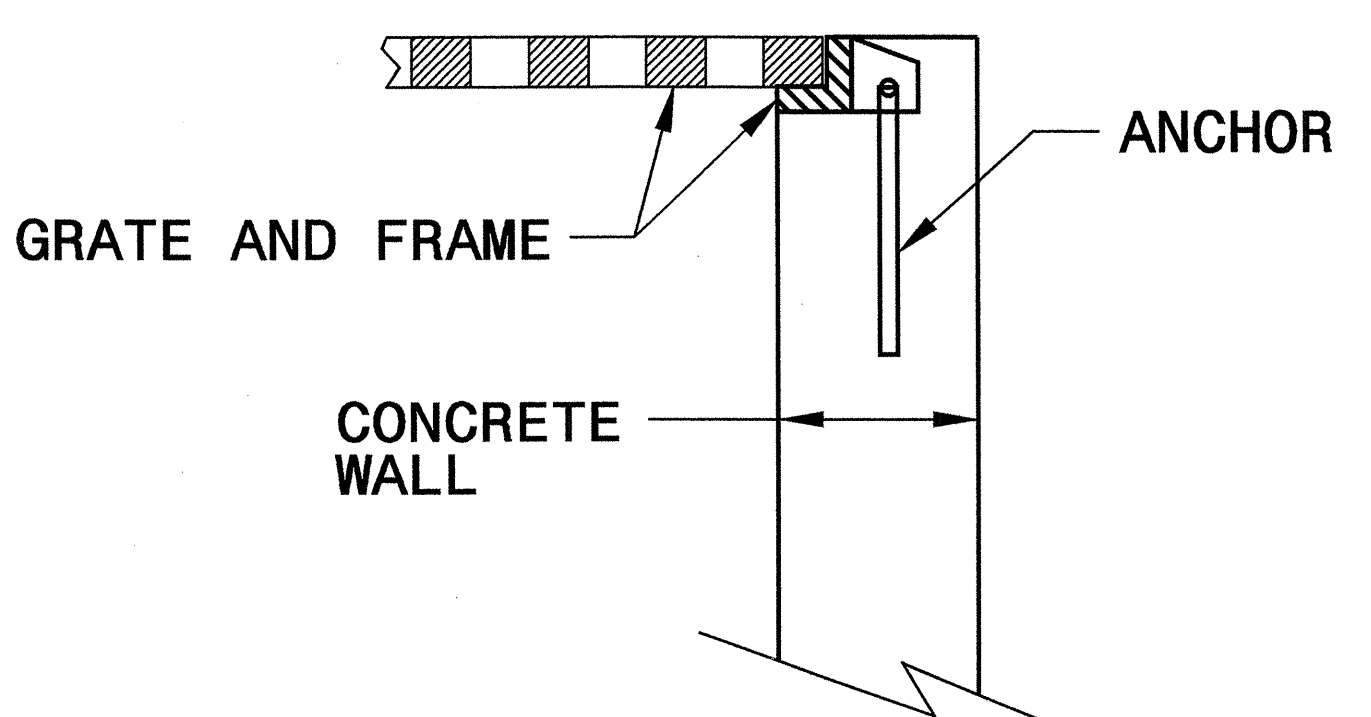
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

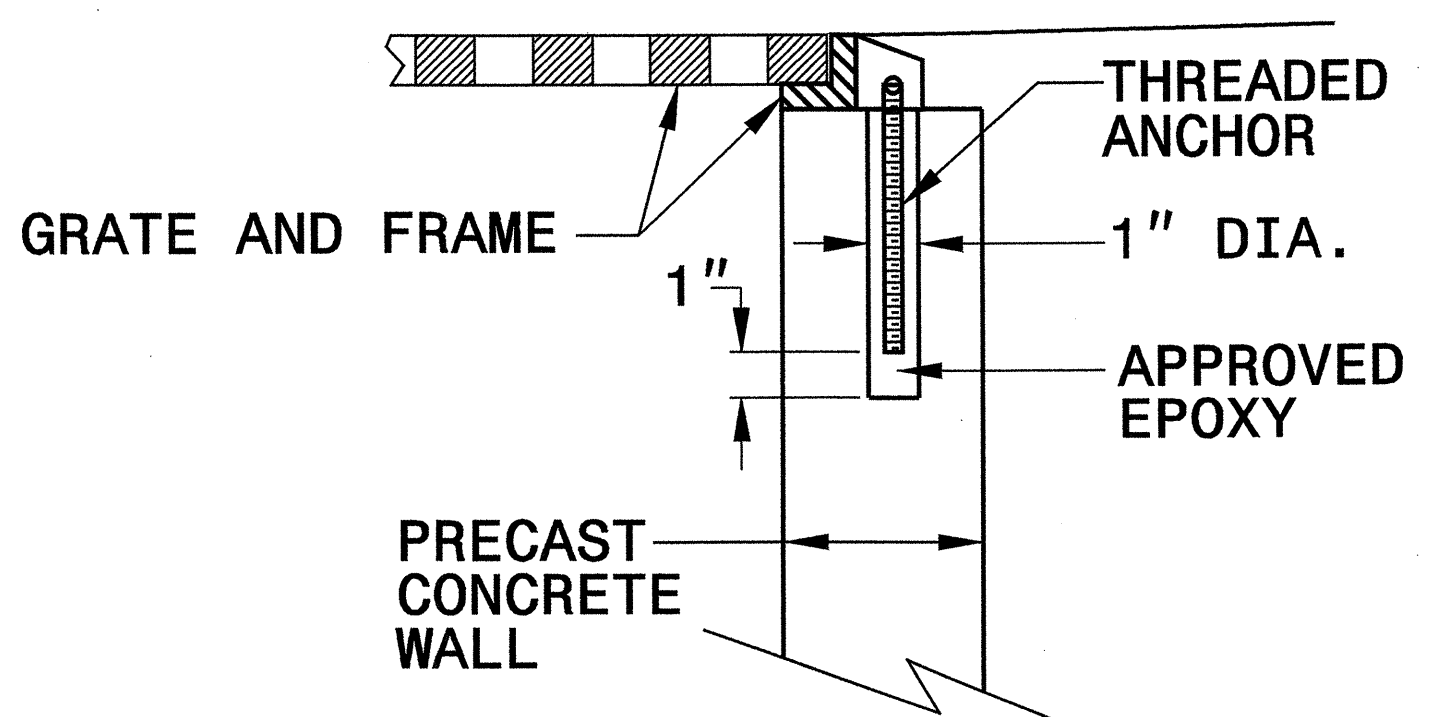
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



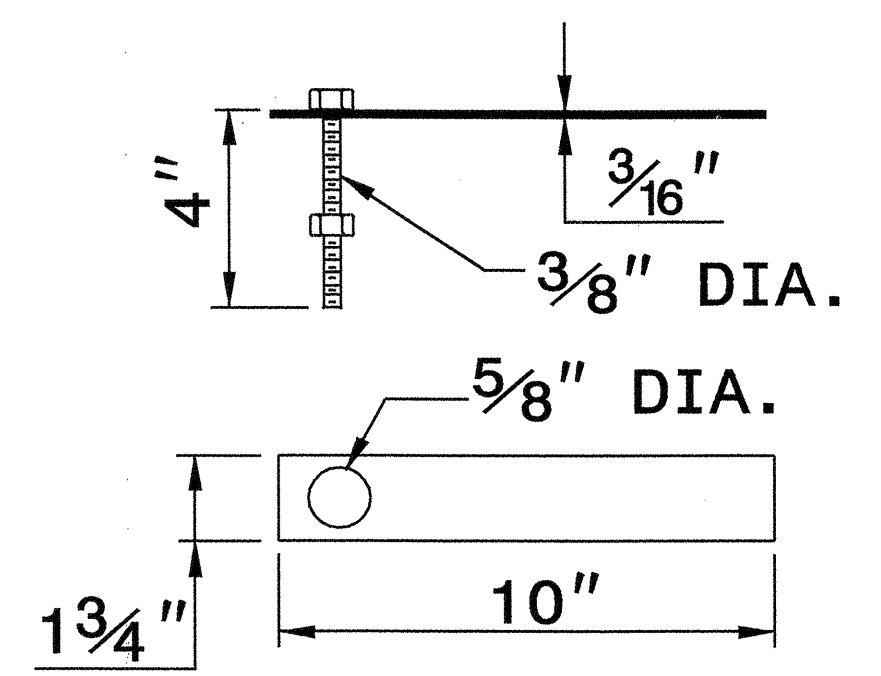
CONCRETE CONSTRUCTION



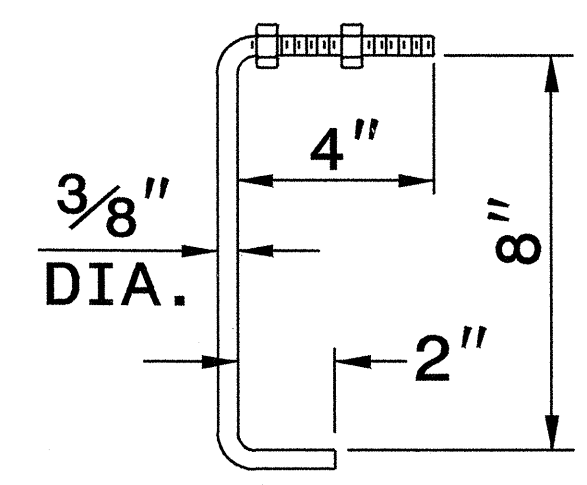
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

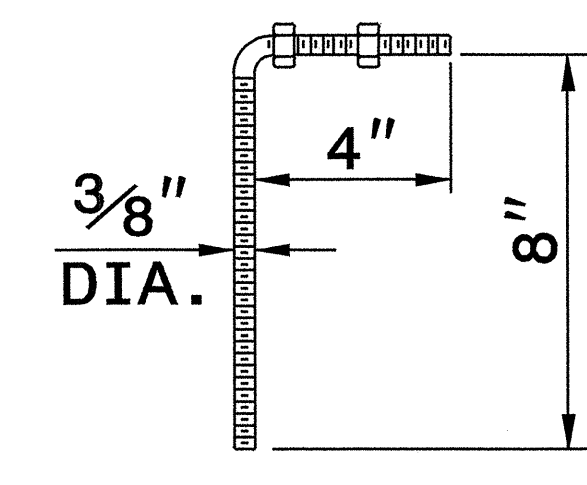
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



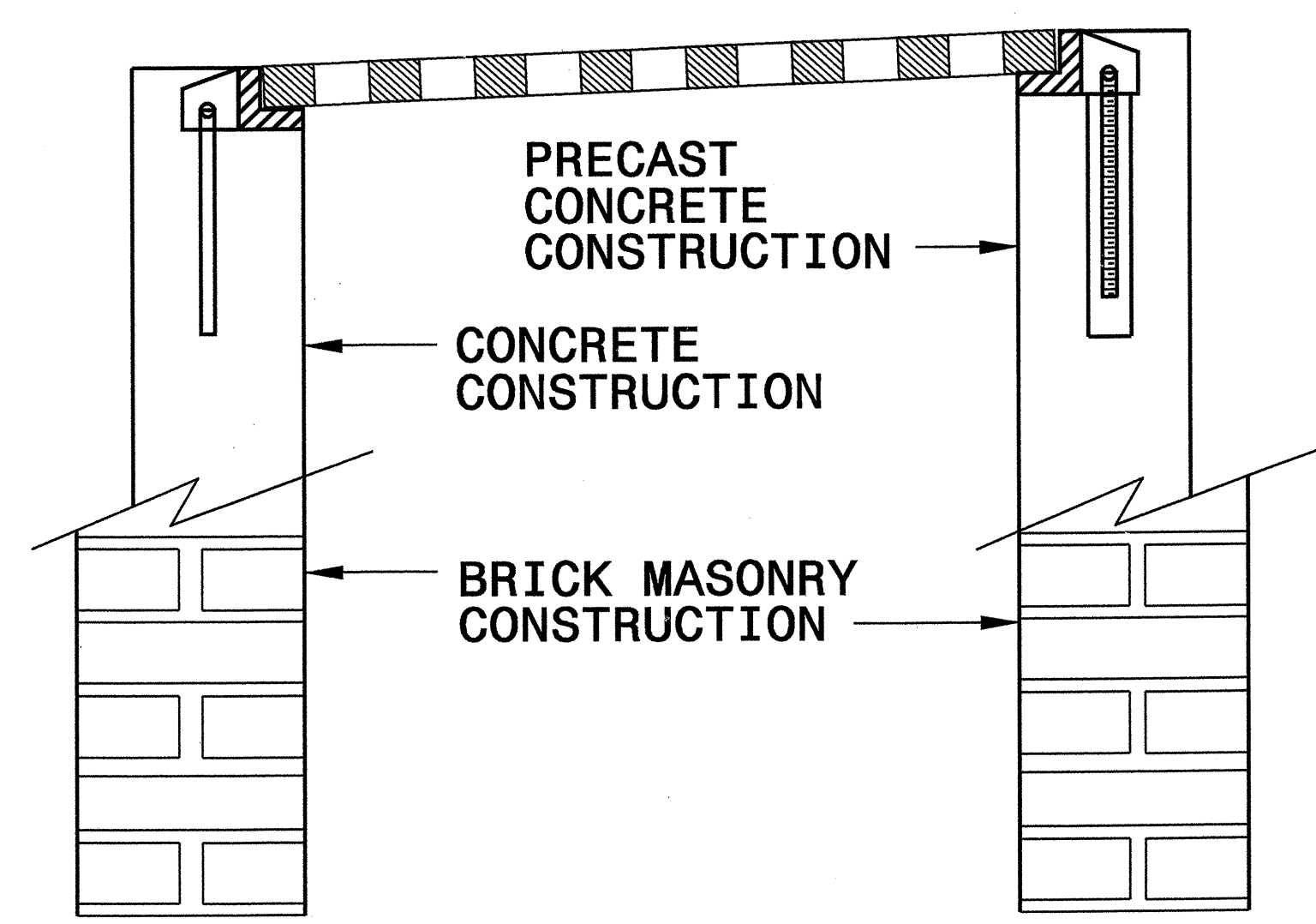
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR



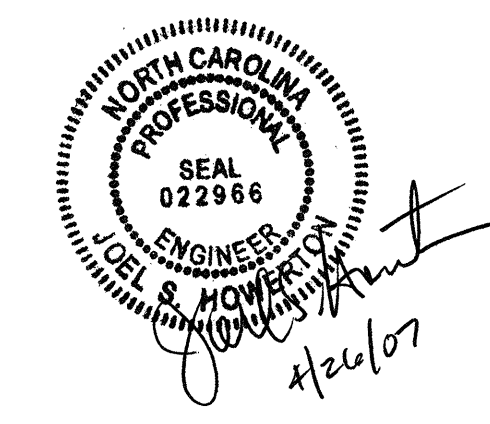
FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

01-MAR-2007 09:04
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J.Hoverton A1 PS2/2/06



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

SEE PLATE FOR TITLE

ORIGINAL BY: 2006 STD 840.25 DATE: 07/18/06
MODIFIED BY: E.E. WARD DATE: 9/25/06
CHECKED BY: DATE:
FILE SPEC.:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201078

ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	2364000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.16	6012000000-E	1610	220	TON	SEDIMENT CONTROL STONE
0001000000-E	200	Lump Sum		CLEARING & GRUBBING .. ACRE(S)	2612000000-E	848	255	SY	6" CONCRETE DRIVEWAY	6015000000-E	1615	18.5	ACR	TEMPORARY MULCHING
0008000000-E	200	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING	3656000000-E	876	935	SY	FILTER FABRIC FOR DRAINAGE	6018000000-E	1620	650	LB	SEED FOR TEMPORARY SEEDING
0022000000-E	225	16,862	CY	UNCLASSIFIED EXCAVATION	4589000000-N	SP	Lump Sum		GENERIC TRAFFIC CONTROL ITEM TRAFFIC CONTROL	6021000000-E	1620	2.75	TON	FERTILIZER FOR TEMPORARY SEEDING
0036000000-E	225	2,215	CY	UNDERCUT EXCAVATION	4685000000-E	1205	33,816	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	6029000000-E	SP	1,700	LF	SAFETY FENCE
0156000000-E	250	1,190	SY	REMOVAL OF EXISTING ASPHALT PAVEMENT	4686000000-E	1205	21,135	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	6030000000-E	1630	1,755	CY	SILT EXCAVATION
0195000000-E	265	3,625	CY	SELECT GRANULAR MATERIAL	4725000000-E	1205	10	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	6036000000-E	1631	3,000	SY	MATTING FOR EROSION CONTROL
0196000000-E	270	3,865	SY	FABRIC FOR SOIL STABILIZATION	4810000000-E	1205	54,951	LF	PAINT PAVEMENT MARKING LINES (4")	6042000000-E	1632	20	LF	1/4" HARDWARE CLOTH
0318000000-E	300	812	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	4900000000-N	1251	220	EA	PERMANENT RAISED PAVEMENT MARKERS	6070000000-N	SP	3	EA	SPECIAL STILLING BASINS
0366000000-E	310	2,160	LF	15" RC PIPE CULVERTS, CLASS III	5325600000-E	1510	173	LF	6" WATER LINE	6071030000-E	SP	2,300	LF	COIR FIBER BAFFLES
0372000000-E	310	552	LF	18" RC PIPE CULVERTS, CLASS III	5325800000-E	1510	230	LF	8" WATER LINE	6084000000-E	1660	17.5	ACR	SEEDING & MULCHING
0378000000-E	310	488	LF	24" RC PIPE CULVERTS, CLASS III	5326000000-E	1510	65	LF	10" WATER LINE	6090000000-E	1661	200	LB	SEED FOR REPAIR SEEDING
0384000000-E	310	160	LF	30" RC PIPE CULVERTS, CLASS III	5326200000-E	1510	16,468	LF	12" WATER LINE	6093000000-E	1661	0.5	TON	FERTILIZER FOR REPAIR SEEDING
0396000000-E	310	228	LF	42" RC PIPE CULVERTS, CLASS III	5540000000-E	1515	3	EA	6" VALVE	6096000000-E	1662	450	LB	SEED FOR SUPPLEMENTAL SEEDING
0995000000-E	340	772	LF	PIPE REMOVAL	5546000000-E	1515	3	EA	8" VALVE	6108000000-E	1665	13	TON	FERTILIZER TOPDRESSING
1011000000-N	500	Lump Sum		FINE GRADING	5552000000-E	1515	1	EA	10" VALVE	6114000000-N	SP	10	HR	SPECIALIZED HAND MOWING
1220000000-E	545	375	TON	INCIDENTAL STONE BASE	5558000000-E	1515	18	EA	12" VALVE	6117000000-N	SP	15	EA	RESPONSE FOR EROSION CONTROL
1245000000-E	SP	6.4	SMI	SHOULDER RECONSTRUCTION	5571800000-E	1515	4	EA	8" TAPPING VALVE					
1489000000-E	610	4,030	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	5648000000-N	1515	15	EA	RELOCATE WATER METER					
1498000000-E	610	1,340	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	5649000000-N	1515	50	EA	RECONNECT WATER METER					
1519000000-E	610	4,510	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	5666000000-E	1515	1	EA	FIRE HYDRANT					
1560000000-E	620	510	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	5672000000-N	1515	6	EA	RELOCATE FIRE HYDRANT					
1693000000-E	654	110	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR	6000000000-E	1605	1,440	LF	TEMPORARY SILT FENCE					
2286000000-N	840	3	EA	MASONRY DRAINAGE STRUCTURES	6006000000-E	1610	275	TON	STONE FOR EROSION CONTROL, CLASS A					
					6009000000-E	1610	505	TON	STONE FOR EROSION CONTROL, CLASS B					

5/28/99

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Blodgett AT DIC0231563

COMPUTED BY: R. COMBS DATE: 4/28/2006
CHECKED BY: D. GOURLEY DATE: 5/1/2006

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.
R-4429C 3B
R / W SHEET NO.



LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

Table with columns for STATION, LOCATION, STRUCTURE NO., TOP ELEVATION, INVERT ELEVATION, SLOPE CRITICAL, CLASS III R.C. PIPE, BITUMINOUS COATED C.S. PIPE TYPE B, ENDWALLS, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD STANDARD, CORR. STEEL ELBOWS NO. & SIZE, CONC. COLLARS CL. 'B' C.Y. STD. 840.72, CONC. & BRCK PIPE PLUG, C.Y. STD. 840.71, PIPE REMOVAL LIN. FT., and REMARKS. Includes a summary row at the bottom and an abbreviations key.

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBANKMENT +%	BORROW	WASTE
-L- STA. 441+00.00 TO 471+00.00	2393	0	1256	0	1137
-L- STA. 471+00.00 TO 501+00.00	2435	0	2344	0	91
-L- STA. 501+00.00 TO 531+00.00	2159	0	1569	0	590
-L- STA. 531+00.00 TO 561+00.00	3158	0	2529	0	629
-L- STA. 561+00.00 TO 591+00.00	3413	0	1316	0	2097
-L- STA. 591+00.00 TO 599+00.00	1104	0	342	0	762
-LREV- STA. 599+00.00 TO 609+50.00	1699	0	1374	0	325
-L- STA. 591+00.00 TO 599+00.00	501	0	118	0	383
TOTAL R-4429C	16862	0	10848	0	6014
GRAND TOTAL R-4429C	16862	0	10848	0	6014

ESTIMATED UNDERCUT = 2215 CY

SELECT GRANULAR MATERIAL = 3625 CY

5/9/06

COMPUTED BY: W. B. Hobbs, PE DATE: 01/107
CHECKED BY: _____ DATE: _____

PROJECT REFERENCE NO. R-4429C SHEET NO. 3E

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

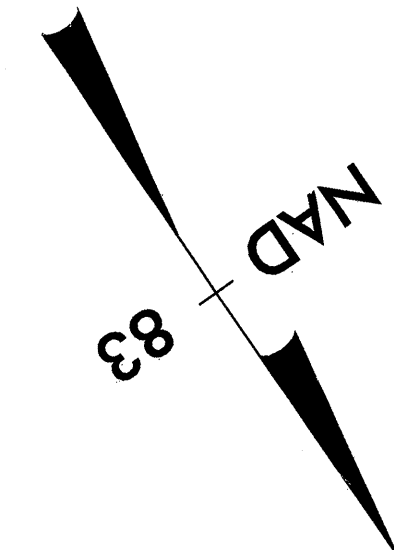
**SUMMARY OF EXISTING
ASPHALT PAVEMENT REMOVAL**

IN SQUARE YARDS

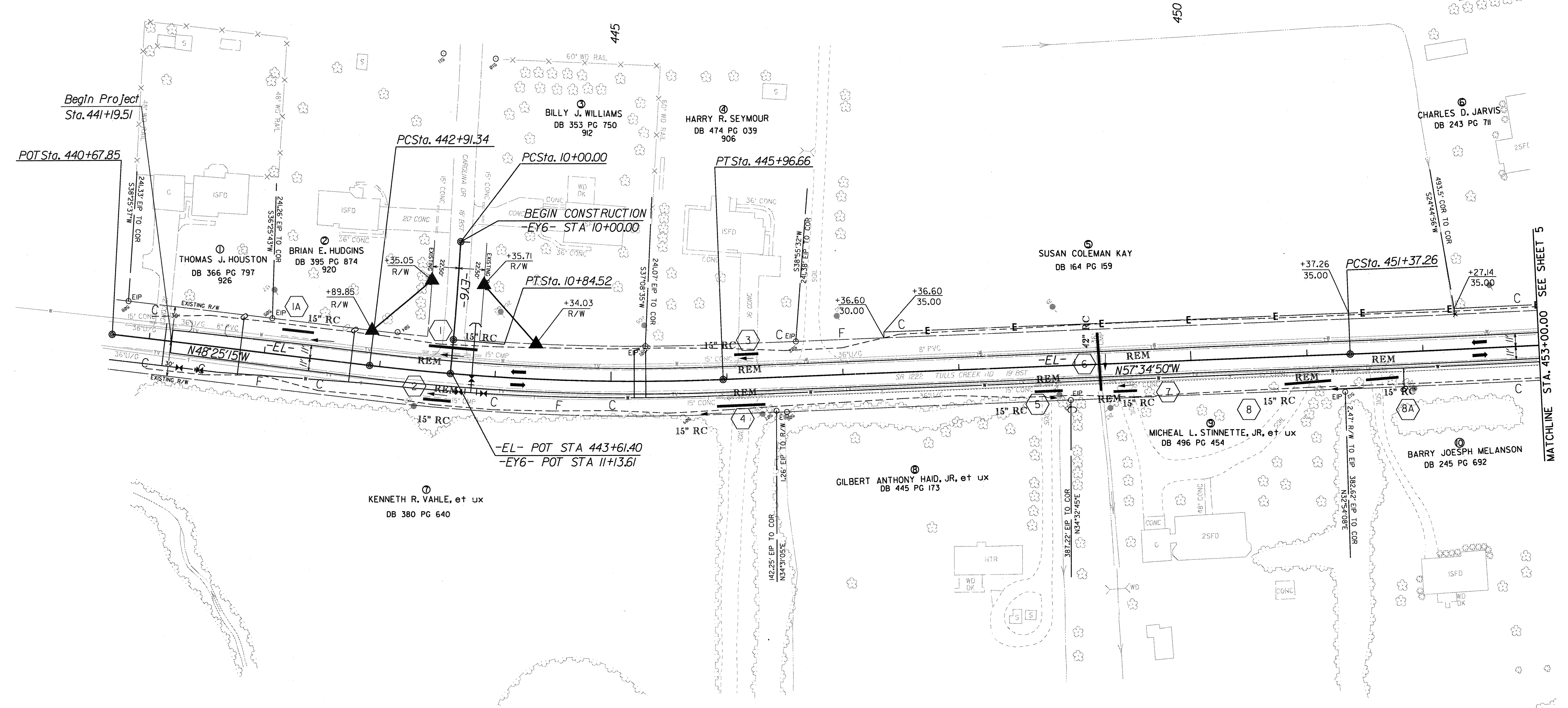
LINE	STATION	STATION	LOCATION L/R/T/CL	AREA SY
-L-	600+70.08	604+53.89	CL	868
-L-	602+86.35	603+45.34	RT	78
-EY10-	9+63.31	9+96.14	RT	23
-EY10-	10+08.58	10+61.97	CL	117
-EY10-	10+74.53	10+99.95	CL	64
-EY10-	11+23.00	11+97.66	RT	36
			SAY	1190

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12-14-2007 13:02
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-EL-	-EL-	-EY6-
PI Sta 444+44.32	PI Sta 452+62.27	PI Sta 10+42.26
$\Delta = 9^{\circ} 09' 34.9" (LT)$	$\Delta = 0^{\circ} 56' 42.2" (LT)$	$\Delta = 1^{\circ} 41' 25.1" (RT)$
D = 3' 00' 00.0"	D = 0' 22' 40.9"	D = 2' 00' 00.0"
L = 305.32'	L = 250.00'	L = 84.52'
T = 152.99'	T = 125.00'	T = 42.26'
R = 1,909.86'	R = 15,156.62'	R = 2,864.79'



PROJECT REFERENCE NO. R-4429C	SHEET NO. 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PB PARSONS BRINCKERHOFF	



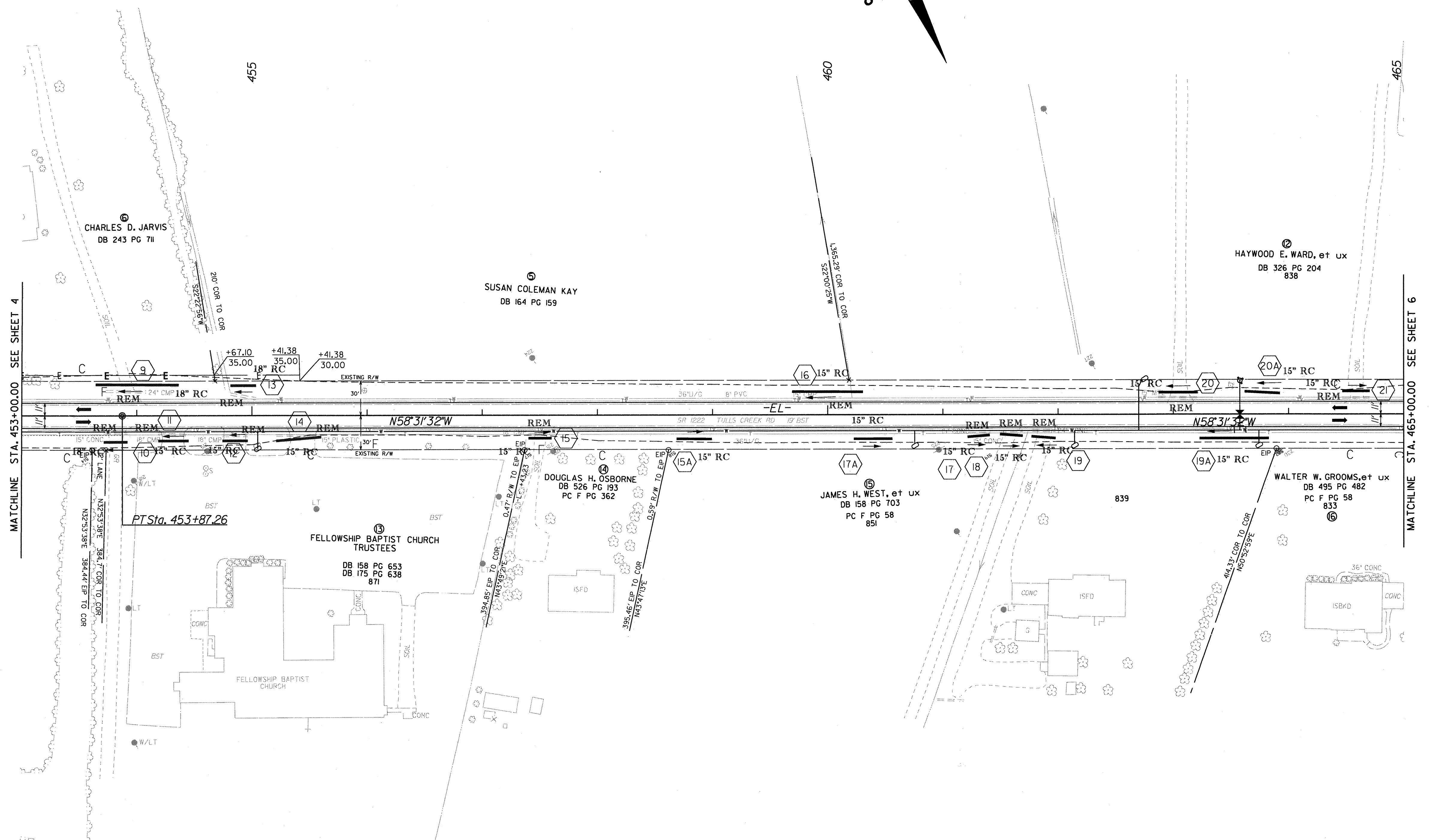
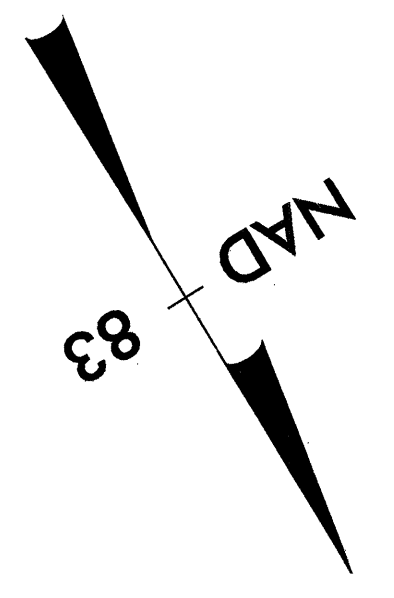
DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "HYDRANT" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 1010625.899 (ft) EASTING: 2860510.122 (ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0001084 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "HYDRANT" TO L- STATION 440+67.85 IS N 64°46' 07" W 17,017.0403 FT. ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

GRADE DITCHES AS FOLLOWS:

- 441+20 (TIE TO EXIST.) ← WATER FLOW ← 446+50 (GRADE BREAK) LEFT SIDE
- 441+20 (TIE TO EXIST.) ← WATER FLOW ← 448+60 (GRADE BREAK) RIGHT SIDE
- 446+50 (GRADE BREAK) → WATER FLOW → 449+20 (CROSS LINE) LEFT SIDE
- 448+60 (GRADE BREAK) → WATER FLOW → 449+20 (OUTLET DITCH) RIGHT SIDE
- 449+20 (CROSS LINE) ← WATER FLOW ← 464+50 (GRADE BREAK) LEFT SIDE
- 449+20 (OUTLET DITCH) ← WATER FLOW ← 455+45 (GRADE BREAK) RIGHT SIDE

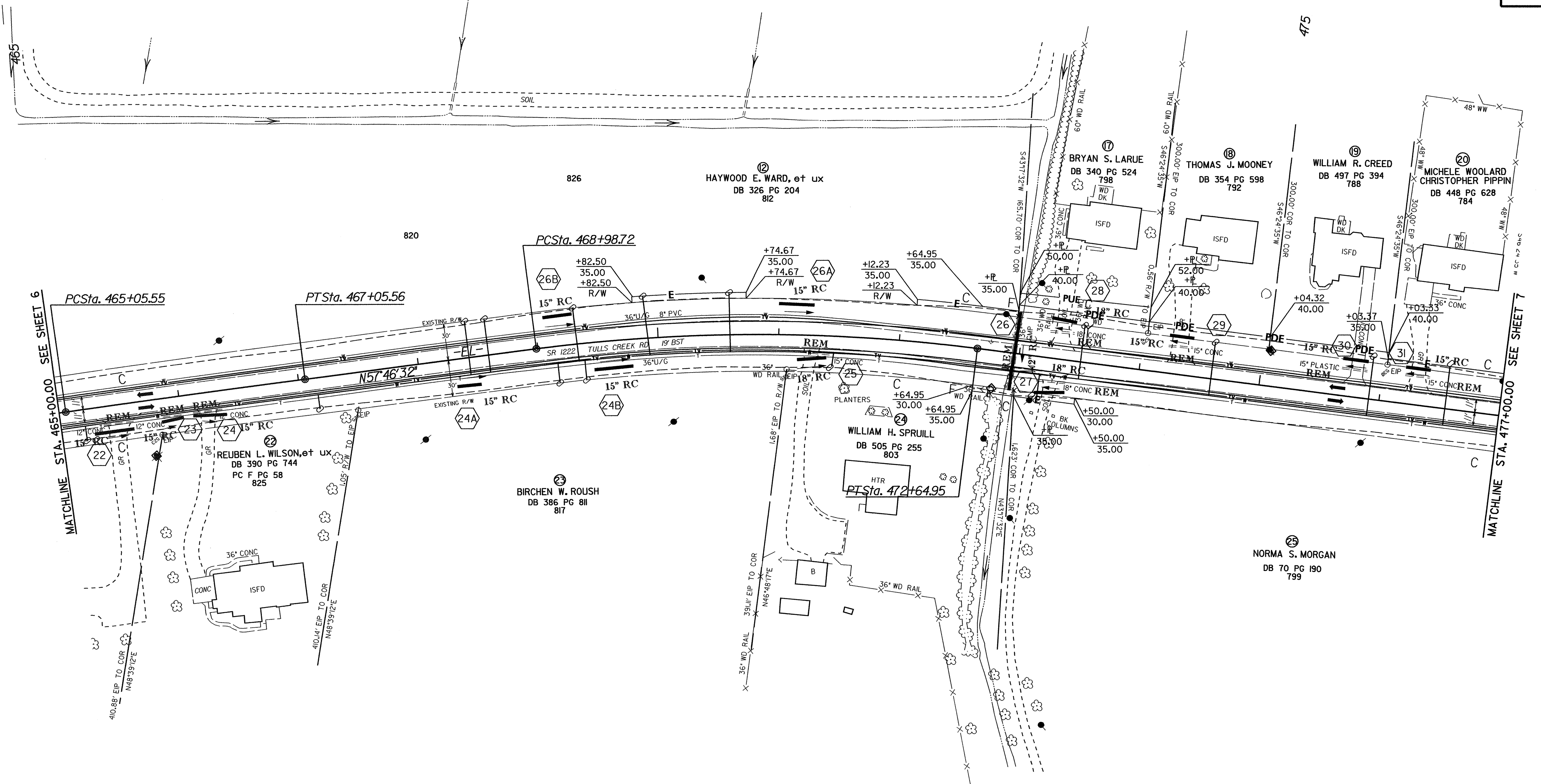
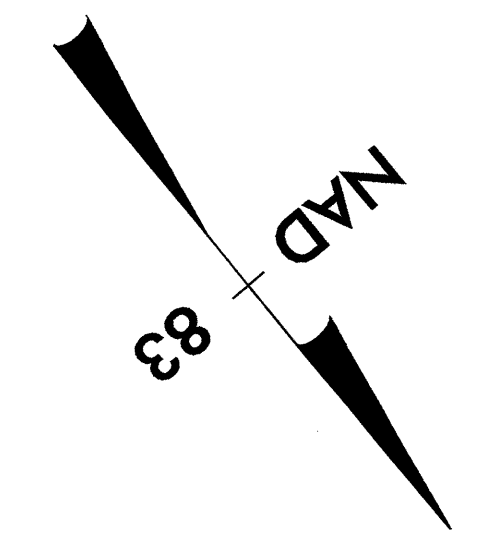
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 6/13/2006



GRADE DITCHES AS FOLLOWS:

- 449+20 (CROSS LINE) ← WATER FLOW ← 464+50 (GRADE BREAK) LEFT SIDE
- 449+20 (OUTLET DITCH) ← WATER FLOW ← 455+45 (OUTLET DITCH) RIGHT SIDE
- 455+45 (GRADE BREAK) → WATER FLOW → 461+75 (OUTLET DITCH) RIGHT SIDE
- 464+50 (GRADE BREAK) → WATER FLOW → 472+95 (CROSS LINE) LEFT SIDE
- 461+75 (OUTLET DITCH) ← WATER FLOW ← 464+00 (GRADE BREAK) RIGHT SIDE
- 464+00 (GRADE BREAK) → WATER FLOW → 472+95 (OUTLET DITCH) RIGHT SIDE

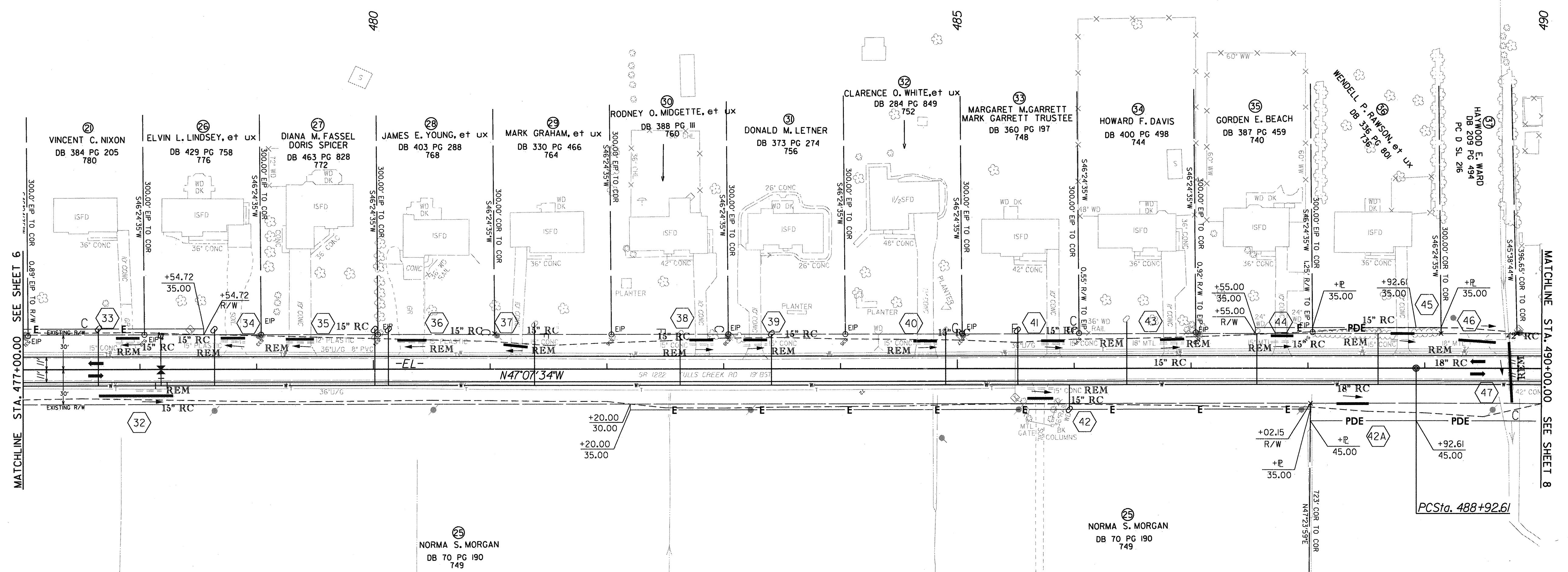
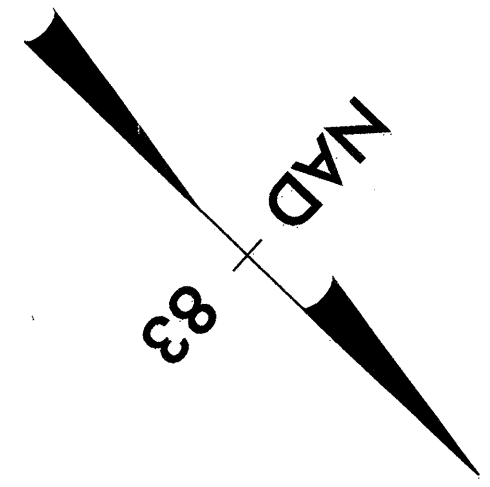
-EL-	-EL-
PI Sta 466+05.56	PI Sta 470+82.84
$\Delta = 0^\circ 44' 59.8''$ (RT)	$\Delta = 14^\circ 38' 58.0''$ (RT)
D = 0' 22' 29.9"	D = 4' 00' 00.0"
L = 200.00'	L = 366.24'
T = 100.00'	T = 184.12'
R = 15,279.79'	R = 1,432.39'



GRADE DITCHES AS FOLLOWS:

- 464+50 (GRADE BREAK) → WATER FLOW → 472+95 (CROSS LINE) LEFT SIDE
- 459+00 (GRADE BREAK) → WATER FLOW → 472+95 (OUTLET DITCH) RIGHT SIDE
- 472+95 (OUTLET DITCH) ← WATER FLOW ← 478+00 (GRADE BREAK) RIGHT SIDE
- 472+95 (CROSS LINE) ← WATER FLOW ← 482+00 (GRADE BREAK) LEFT SIDE
- 478+00 (GRADE BREAK) → WATER FLOW → 489+70 (OUTLET DITCH) RIGHT SIDE

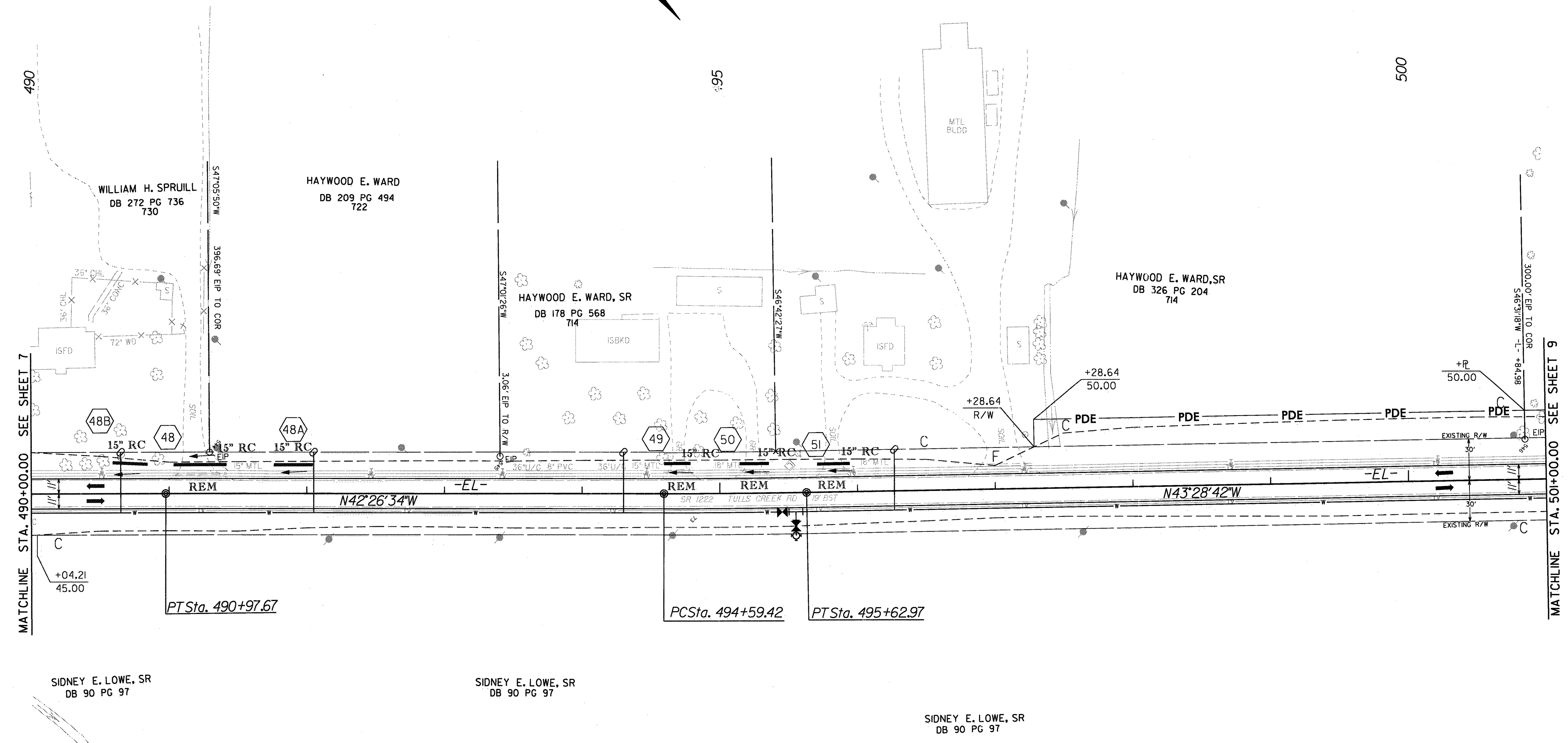
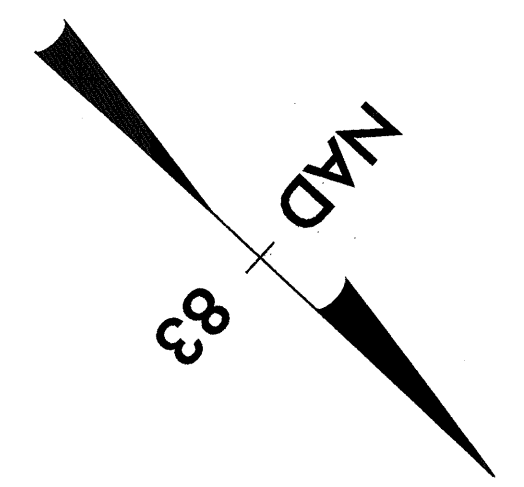
-EL-
 PI Sta 489+95.14
 $\Delta = 0^{\circ} 41' 00.6''$ (RT)
 $D = 0^{\circ} 20' 00.0''$
 $L = 205.05'$
 $T = 102.53'$
 $R = 17,188.73'$



GRADE DITCHES AS FOLLOWS:

- 472+95 (CROSS LINE) ← WATER FLOW ← 482+00 (GRADE BREAK) LEFT SIDE
- 482+00 (GRADE BREAK) → WATER FLOW → 489+70 (CROSS LINE) LEFT SIDE
- 478+00 (GRADE BREAK) → WATER FLOW → 489+70 (OUTLET DITCH) RIGHT SIDE
- 489+70 (CROSS LINE) ← WATER FLOW ← 497+00 (GRADE BREAK) LEFT SIDE
- 489+70 (OUTLET DITCH) ← WATER FLOW ← 497+00 (GRADE BREAK) RIGHT SIDE

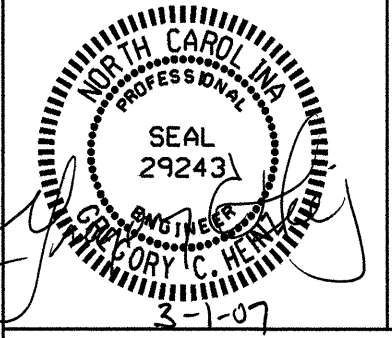
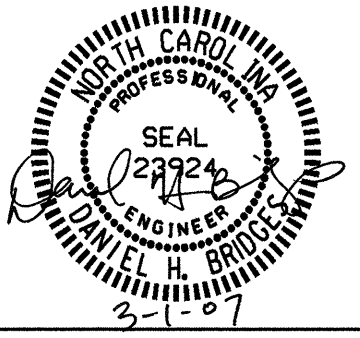
-EL-
 PI Sta. 495+11.19
 $\Delta = 1^{\circ}02'08.0"$ (LT)
 $D = 1^{\circ}00'00.0"$
 $L = 103.56'$
 $T = 51.78'$
 $R = 5,729.58'$

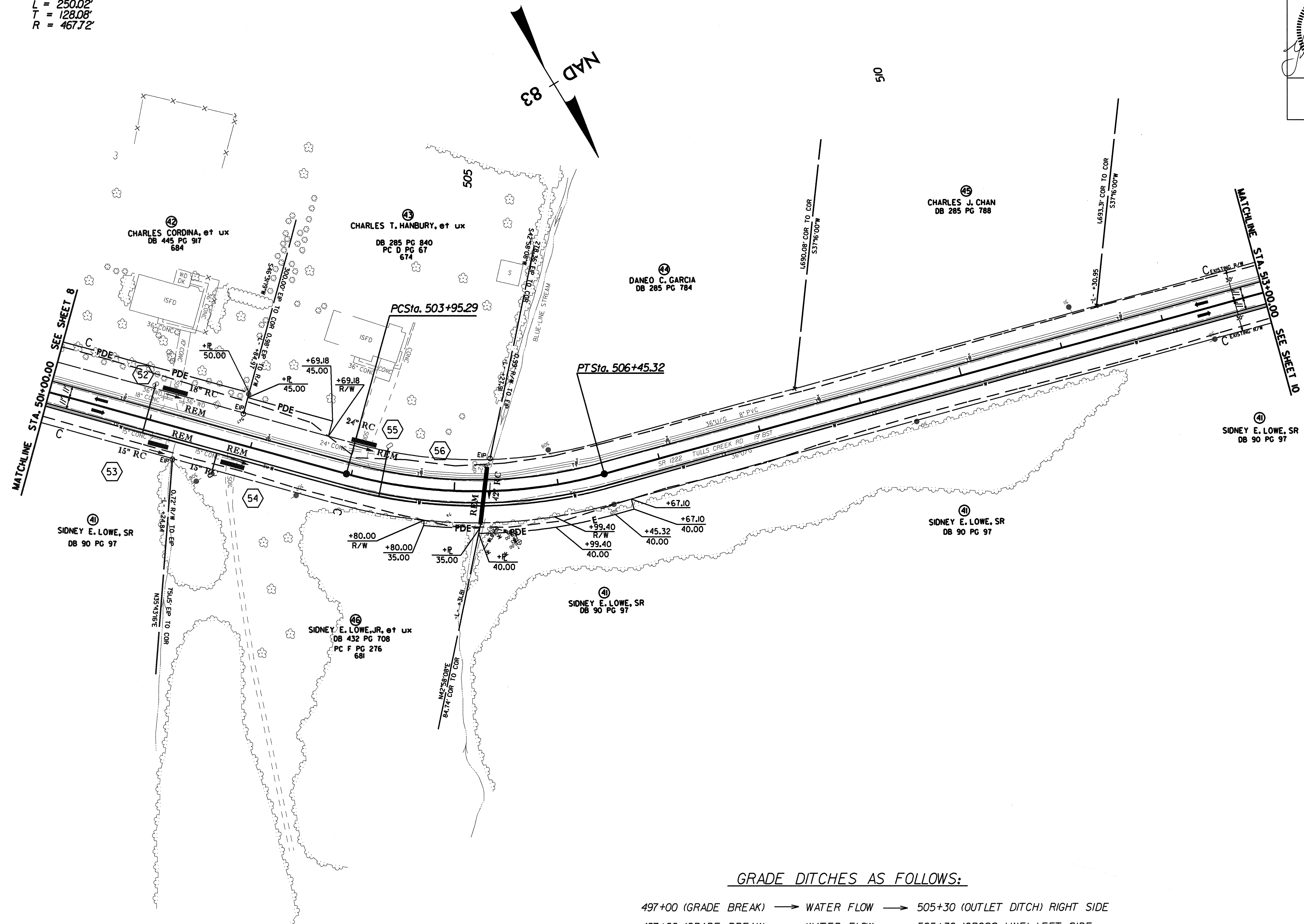


GRADE DITCHES AS FOLLOWS:

- 489+70 (CROSS LINE) ← WATER FLOW ← 497+00 (GRADE BREAK) LEFT SIDE
- 489+70 (OUTLET DITCH) ← WATER FLOW ← 497+00 (GRADE BREAK) RIGHT SIDE
- 497+00 (GRADE BREAK) → WATER FLOW → 505+30 (OUTLET DITCH) RIGHT SIDE
- 497+00 (GRADE BREAK) → WATER FLOW → 505+30 (CROSS LINE) LEFT SIDE

-EL-
 PI Sta 505+23.37
 $\Delta = 30^\circ 37' 40.3" (LT)$
 $D = 12' 15" 00.0"$
 $L = 250.02'$
 $T = 128.08'$
 $R = 467.72'$

PROJECT REFERENCE NO. R-4429C	SHEET NO. 9
R / W SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
PB PARSONS BRINCKERHOFF	

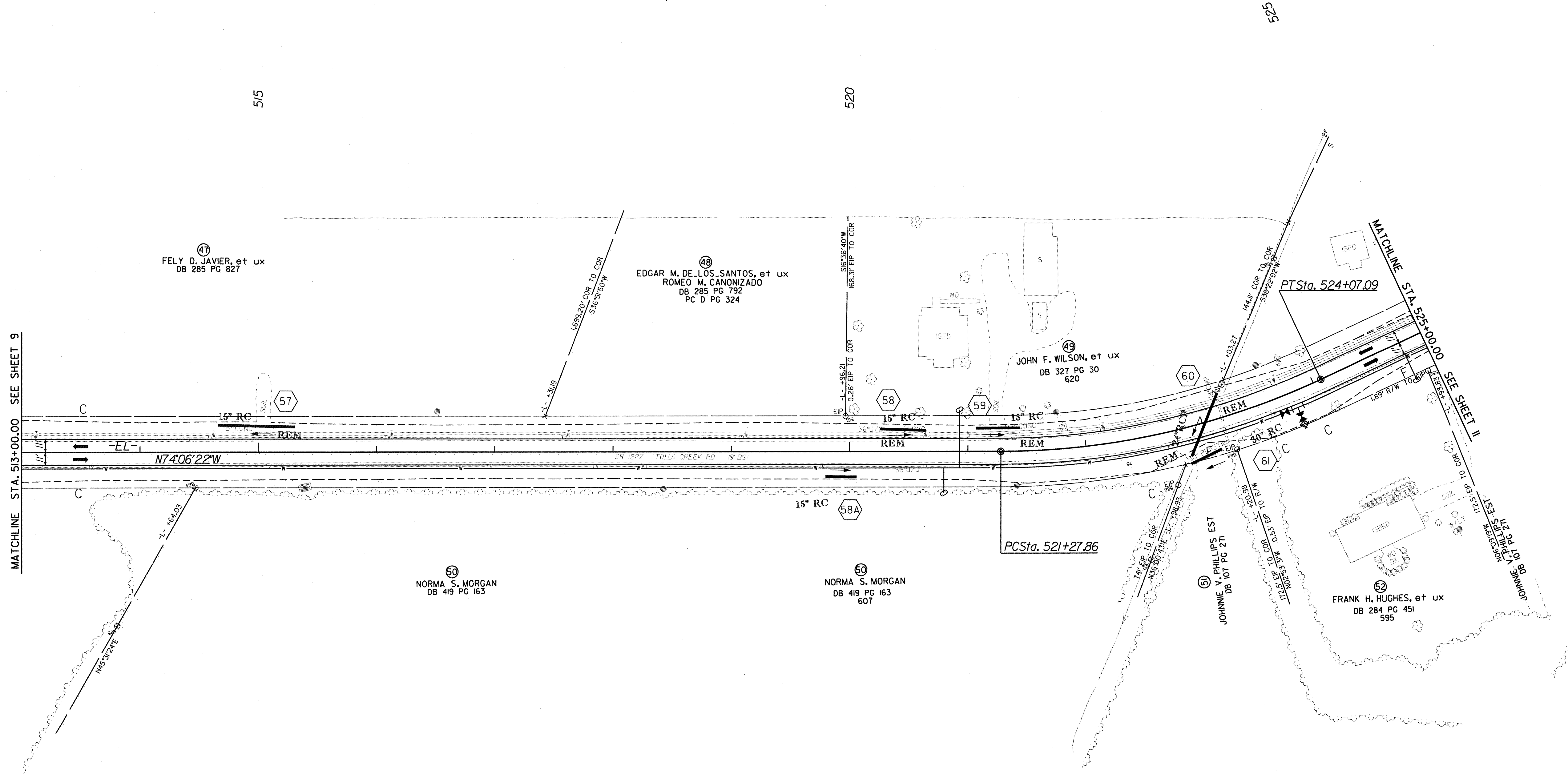
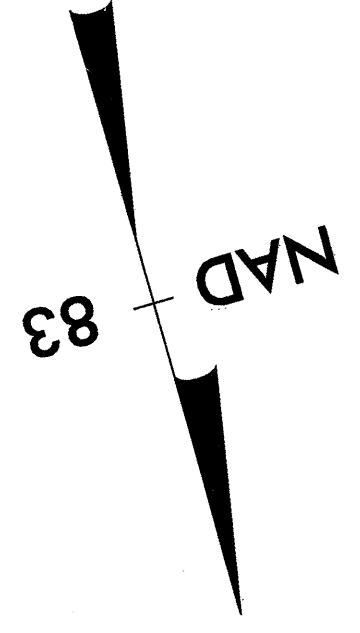


GRADE DITCHES AS FOLLOWS:

- 497+00 (GRADE BREAK) → WATER FLOW → 505+30 (OUTLET DITCH) RIGHT SIDE
- 497+00 (GRADE BREAK) → WATER FLOW → 505+30 (CROSS LINE) LEFT SIDE
- 505+30 (CROSS LINE) ← WATER FLOW ← 517+00 (GRADE BREAK) LEFT SIDE
- 505+30 (OUTLET DITCH) ← WATER FLOW ← 517+00 (GRADE BREAK) RIGHT SIDE



-EL-
 PI Sta 522+69.75
 $\Delta = 25^{\circ}07'49.5''$ (LT)
 $D = 9^{\circ}00'00.0''$
 $L = 279.23'$
 $T = 141.90'$
 $R = 636.62'$



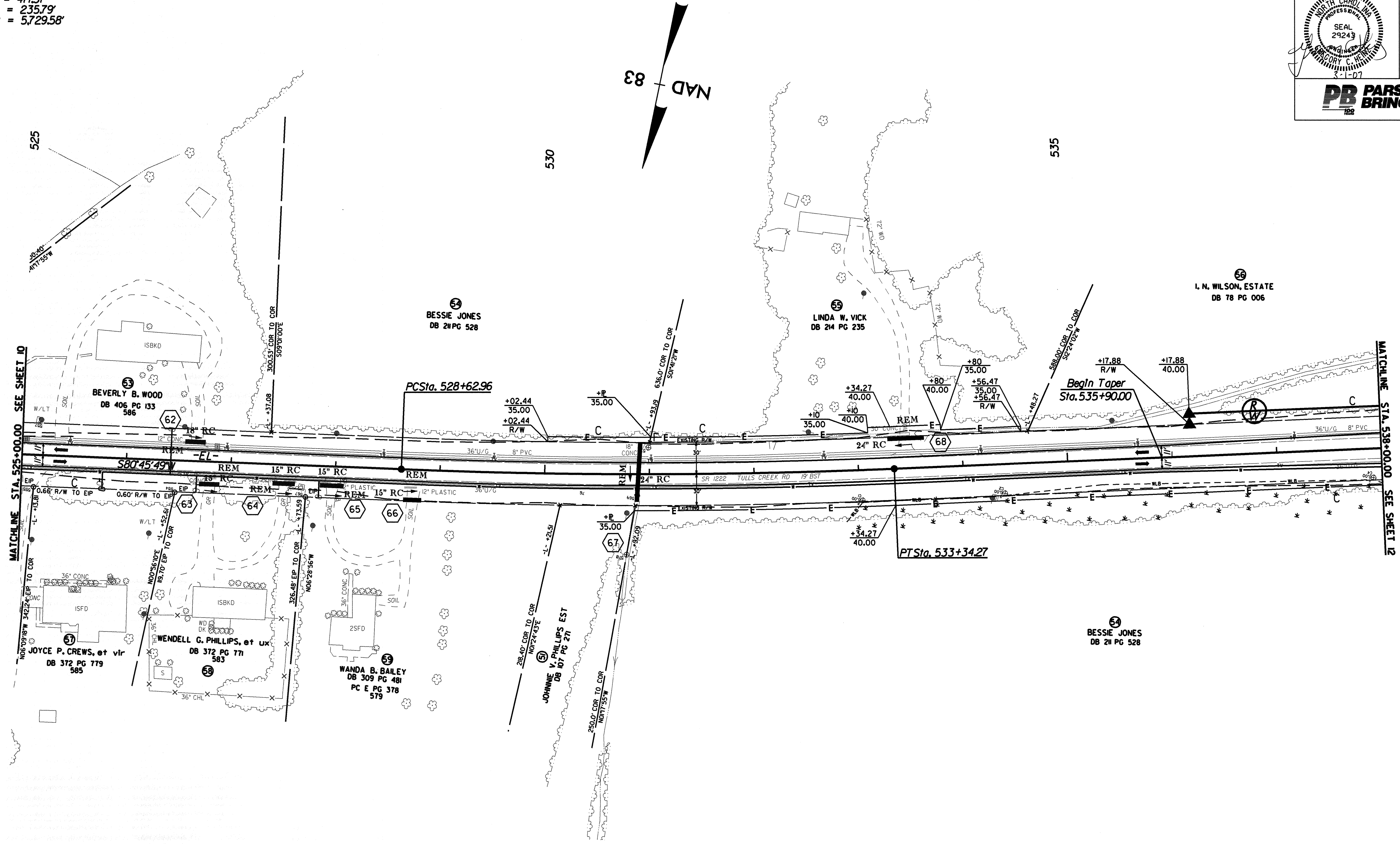
GRADE DITCHES AS FOLLOWS:

- 517+00 (GRADE BREAK) → WATER FLOW → 523+10 (CROSS LINE) LEFT SIDE
- 517+00 (GRADE BREAK) → WATER FLOW → 522+80 (OUTLET DITCH) RIGHT SIDE
- 523+10 (CROSS LINE) ← WATER FLOW ← 525+40 (GRADE BREAK) LEFT SIDE
- 522+80 (OUTLET DITCH) ← WATER FLOW ← 525+40 (GRADE BREAK) RIGHT SIDE

-EL-

PI Sta 530+98.75
Δ = 4° 42' 47.0" (LT)
D = 1'00' 00.0"
L = 471.31'
T = 235.79'
R = 5,729.58'

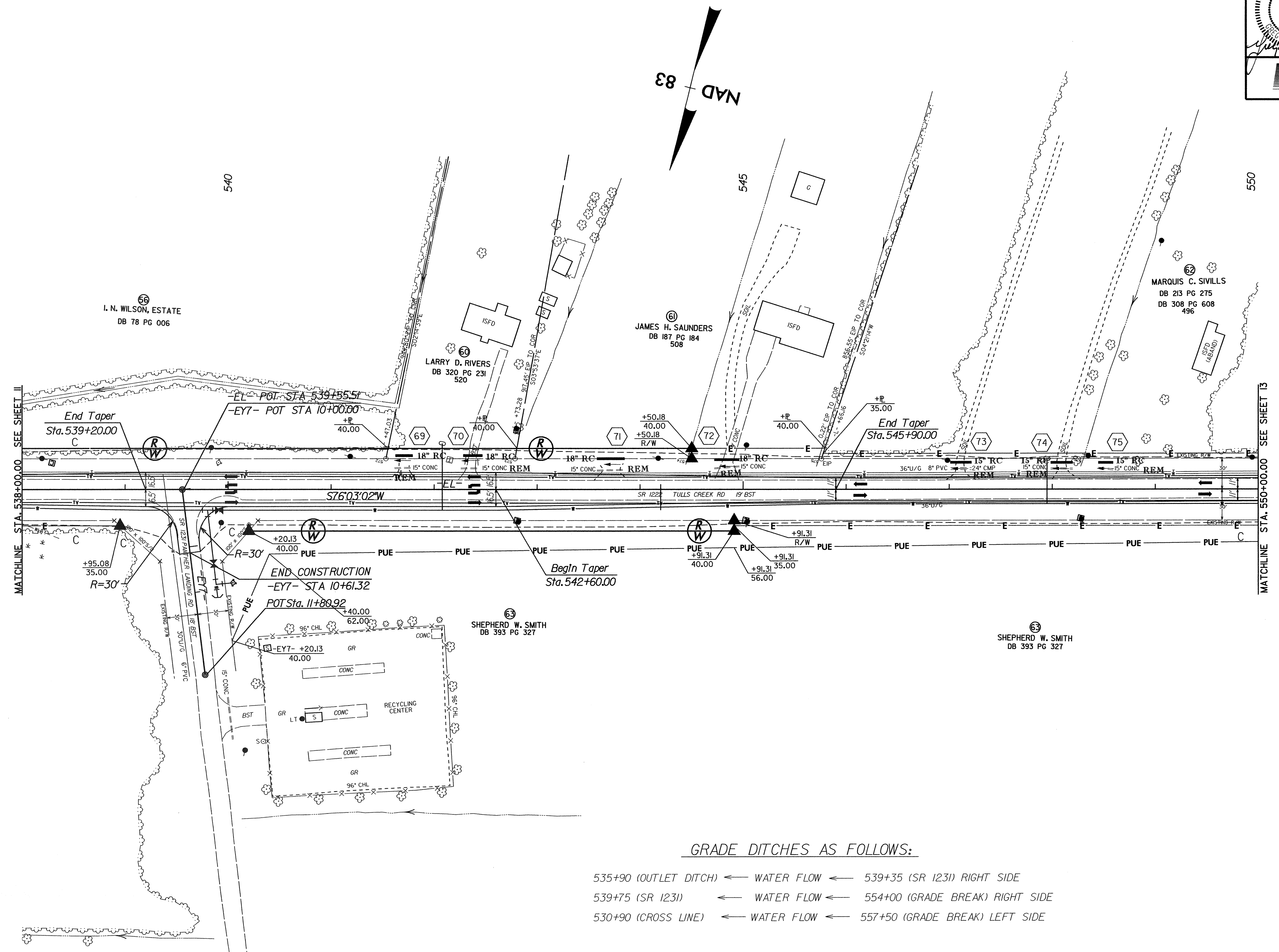
PROJECT REFERENCE NO. R-4429C	SHEET NO. 11
R/W SHEET NO. ---	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PB PARSONS BRINCKERHOFF	



GRADE DITCHES AS FOLLOWS:

- 523+10 (CROSS LINE) ← WATER FLOW ← 525+40 (GRADE BREAK) LEFT SIDE
- 522+80 (OUTLET DITCH) ← WATER FLOW ← 525+40 (GRADE BREAK) RIGHT SIDE
- 525+40 (GRADE BREAK) → WATER FLOW → 530+90 (OUTLET DITCH) RIGHT SIDE
- 525+40 (GRADE BREAK) → WATER FLOW → 530+90 (CROSS LINE) LEFT SIDE
- 530+90 (CROSS LINE) ← WATER FLOW ← 557+50 (GRADE BREAK) LEFT SIDE
- 530+90 (OUTLET DITCH) ← WATER FLOW ← 539+35 (SR 1231) RIGHT SIDE

PROJECT REFERENCE NO. R-4429C	SHEET NO. 12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PB PARSONS BRINCKERHOFF	



GRADE DITCHES AS FOLLOWS:

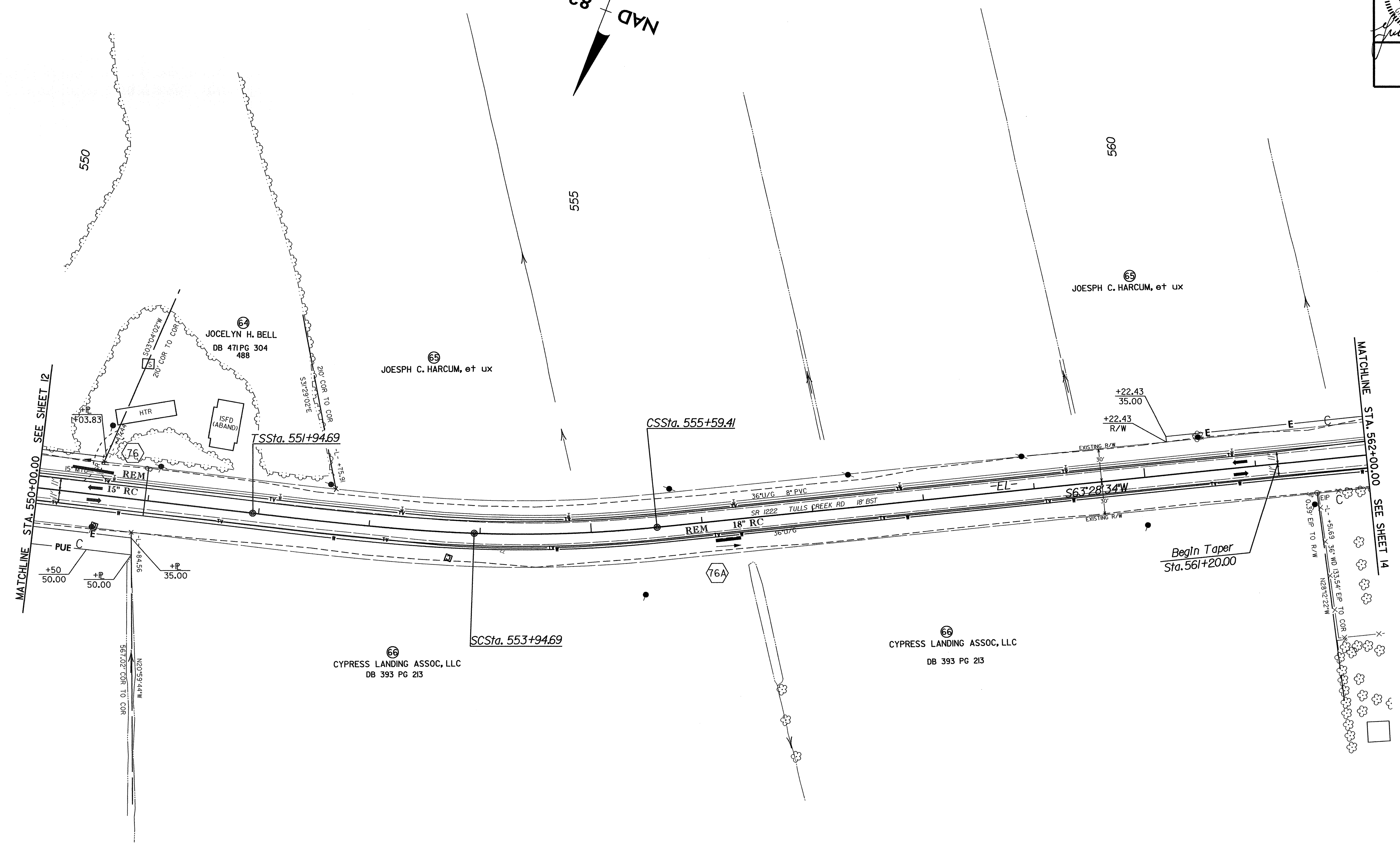
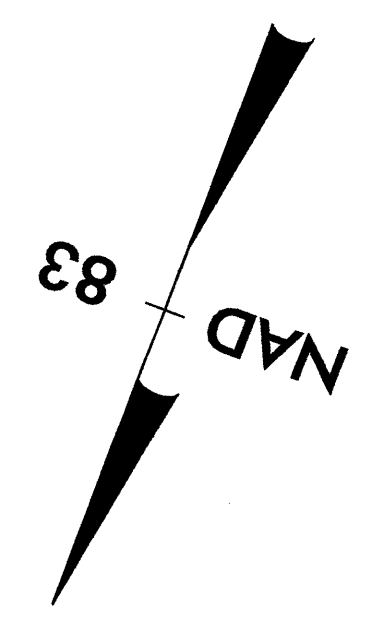
- 535+90 (OUTLET DITCH) ← WATER FLOW ← 539+35 (SR 1231) RIGHT SIDE
- 539+75 (SR 1231) ← WATER FLOW ← 554+00 (GRADE BREAK) RIGHT SIDE
- 530+90 (CROSS LINE) ← WATER FLOW ← 557+50 (GRADE BREAK) LEFT SIDE

dgm
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 \$\$\$DATE\$\$\$

PROJECT REFERENCE NO. R-4429C	SHEET NO. 13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER
PB PARSONS BRINCKERHOFF	

-EL-
Pls Sta 553+28.07
θs = 4° 45' 00.0"
Ls = 200.00'
LT = 133.38'
ST = 66.71'

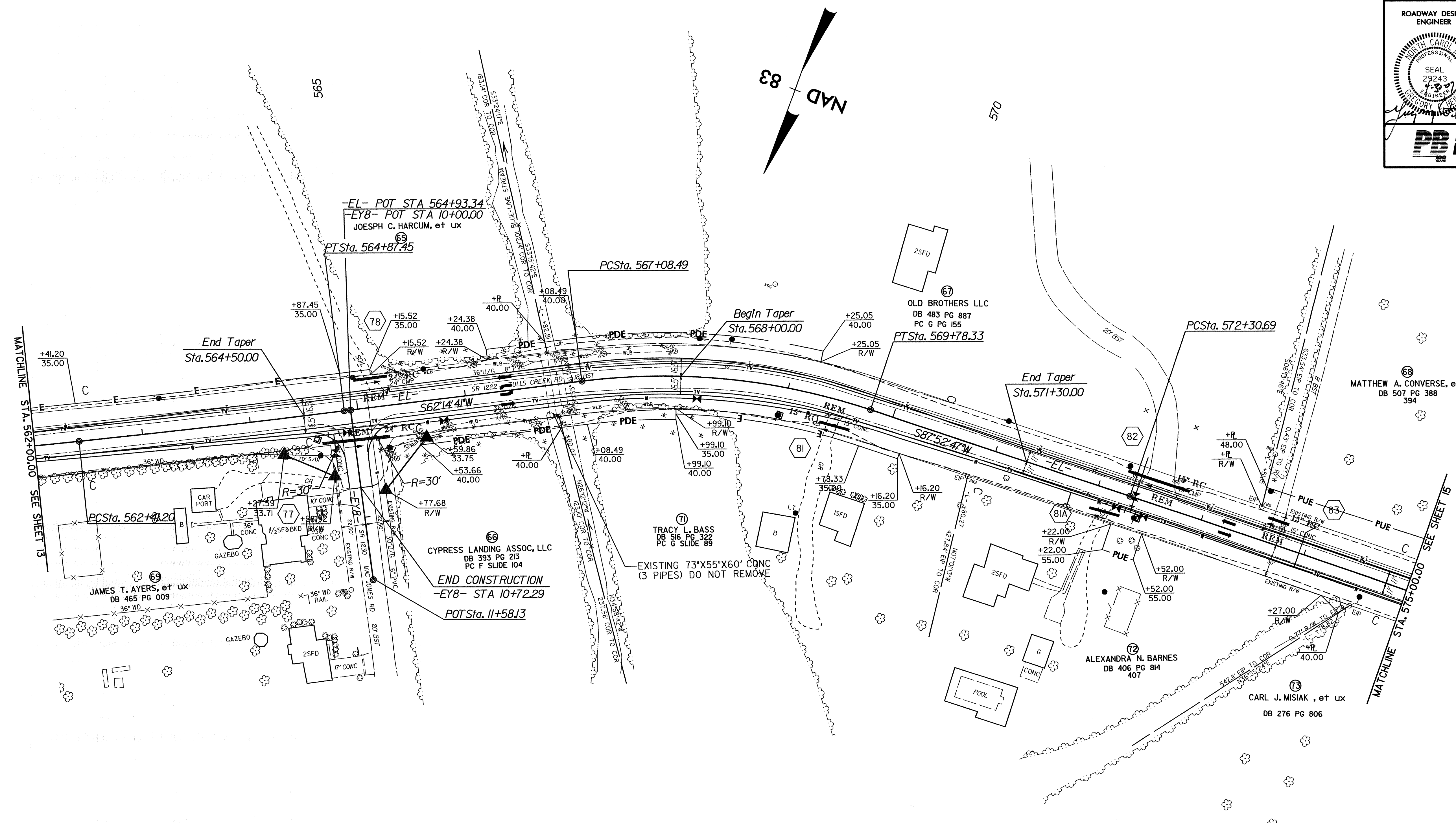
-EL-
Pl Sta 554+77.18
Δ = 7° 49' 27.8" (LT)
D = 4° 45' 00.0"
L = 164.72'
T = 82.49'
R = 1,206.23'



GRADE DITCHES AS FOLLOWS:

- 530+90 (CROSS LINE) ← WATER FLOW ← 557+50 (GRADE BREAK) LEFT SIDE
- 539+75 (SR 1231) ← WATER FLOW ← 554+00 (GRADE BREAK) RIGHT SIDE
- 557+50 (GRADE BREAK) → WATER FLOW → 566+80 (CROSS LINE) LEFT SIDE
- 554+00 (GRADE BREAK) → WATER FLOW → 566+80 (OUTLET DITCH) RIGHT SIDE

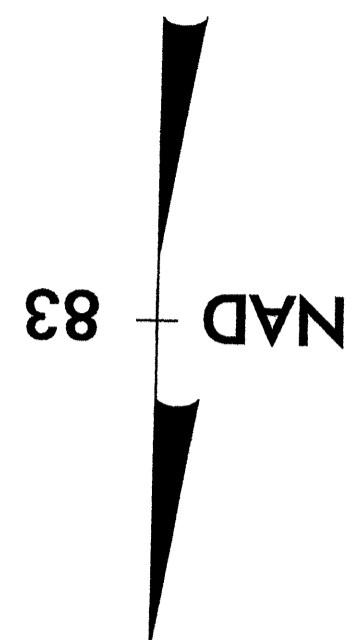
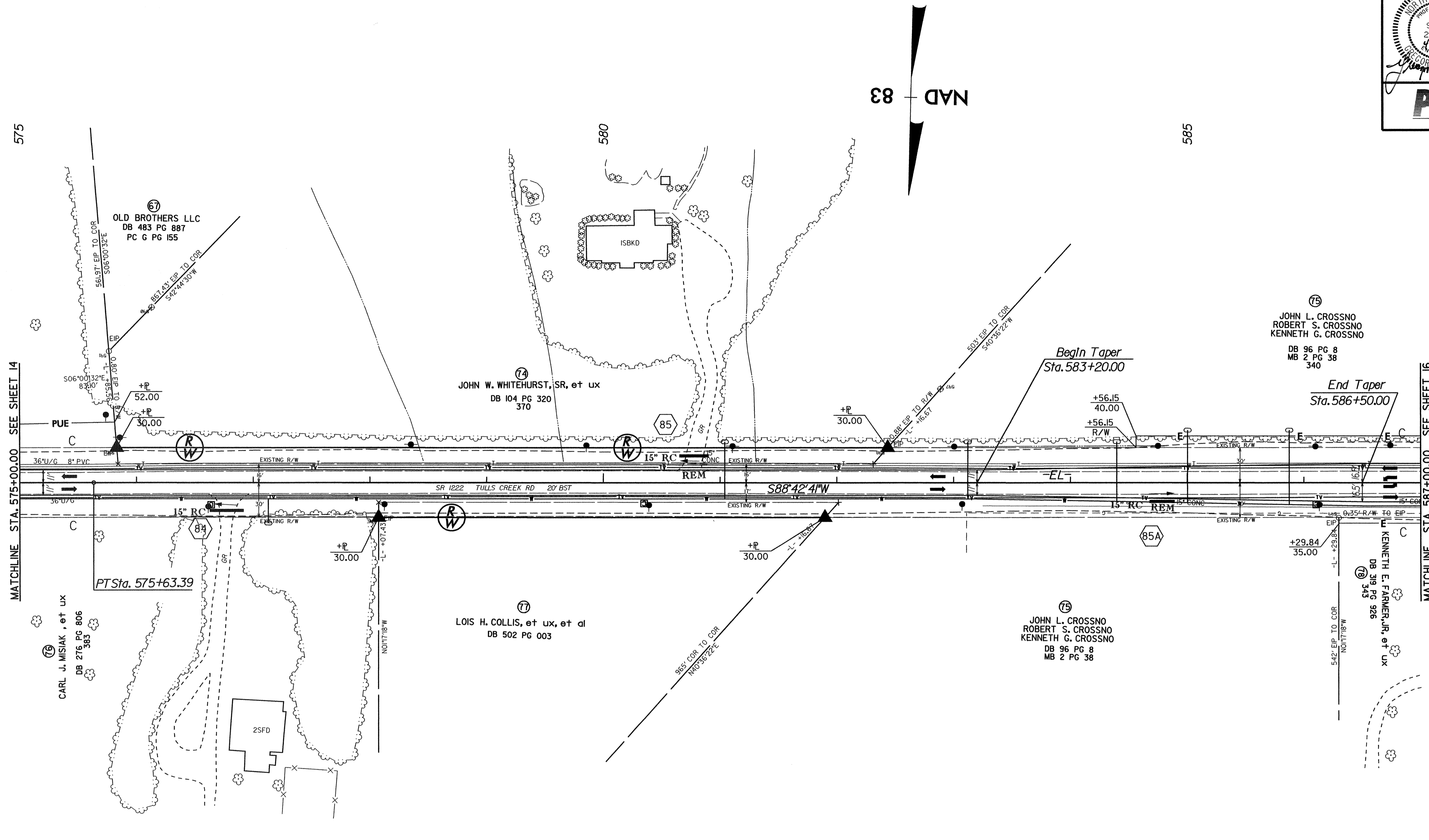
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-EL-	-EL-	-EL-
PI Sta 563+64.33 Δ = 1° 13' 52.4" (LT) D = 0° 30' 00.0" L = 246.24' T = 123.13' R = 11,459.16'	PI Sta 568+45.71 Δ = 25° 38' 05.6" (RT) D = 9° 30' 00.0" L = 269.84' T = 137.22' R = 603.11'	PI Sta 573+97.04 Δ = 0° 49' 54.2" (RT) D = 0° 15' 00.0" L = 332.69' T = 166.35' R = 22,918.31'

GRADE DITCHES AS FOLLOWS:

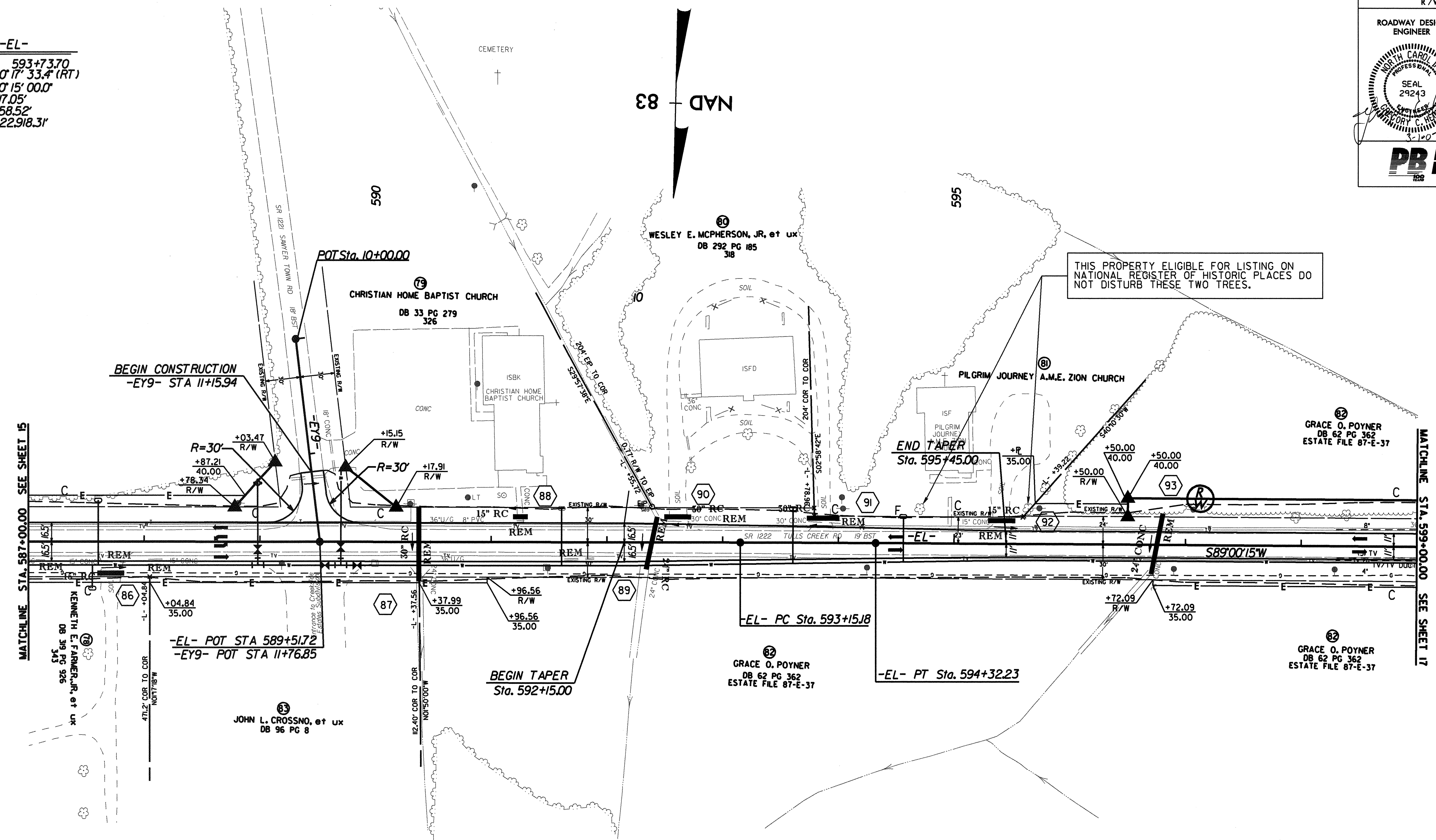
- 557+50 (GRADE BREAK) → WATER FLOW → 566+80 (CROSS LINE) LEFT SIDE
- 554+00 (GRADE BREAK) → WATER FLOW → 566+80 (OUTLET DITCH) RIGHT SIDE
- 566+80 (CROSS LINE) ← WATER FLOW ← 582+50 (GRADE BREAK) LEFT SIDE
- 566+80 (OUTLET DITCH) ← WATER FLOW ← 584+00 (GRADE BREAK) RIGHT SIDE



GRADE DITCHES AS FOLLOWS:

- 566+80 (CROSS LINE) ← WATER FLOW ← 582+50 (GRADE BREAK) LEFT SIDE
- 566+80 (OUTLET DITCH) ← WATER FLOW ← 584+00 (GRADE BREAK) RIGHT SIDE
- 582+50 (GRADE BREAK) → WATER FLOW → 590+40 (CROSS LINE) LEFT SIDE
- 584+00 (GRADE BREAK) → WATER FLOW → 590+40 (OUTLET DITCH) RIGHT SIDE

-EL-
 PI Sta 593+73.70
 $\Delta = 0'17.33.4$ (RT)
 $D = 0'15'00.0$
 $L = 117.05'$
 $T = 58.52'$
 $R = 22.918.31'$

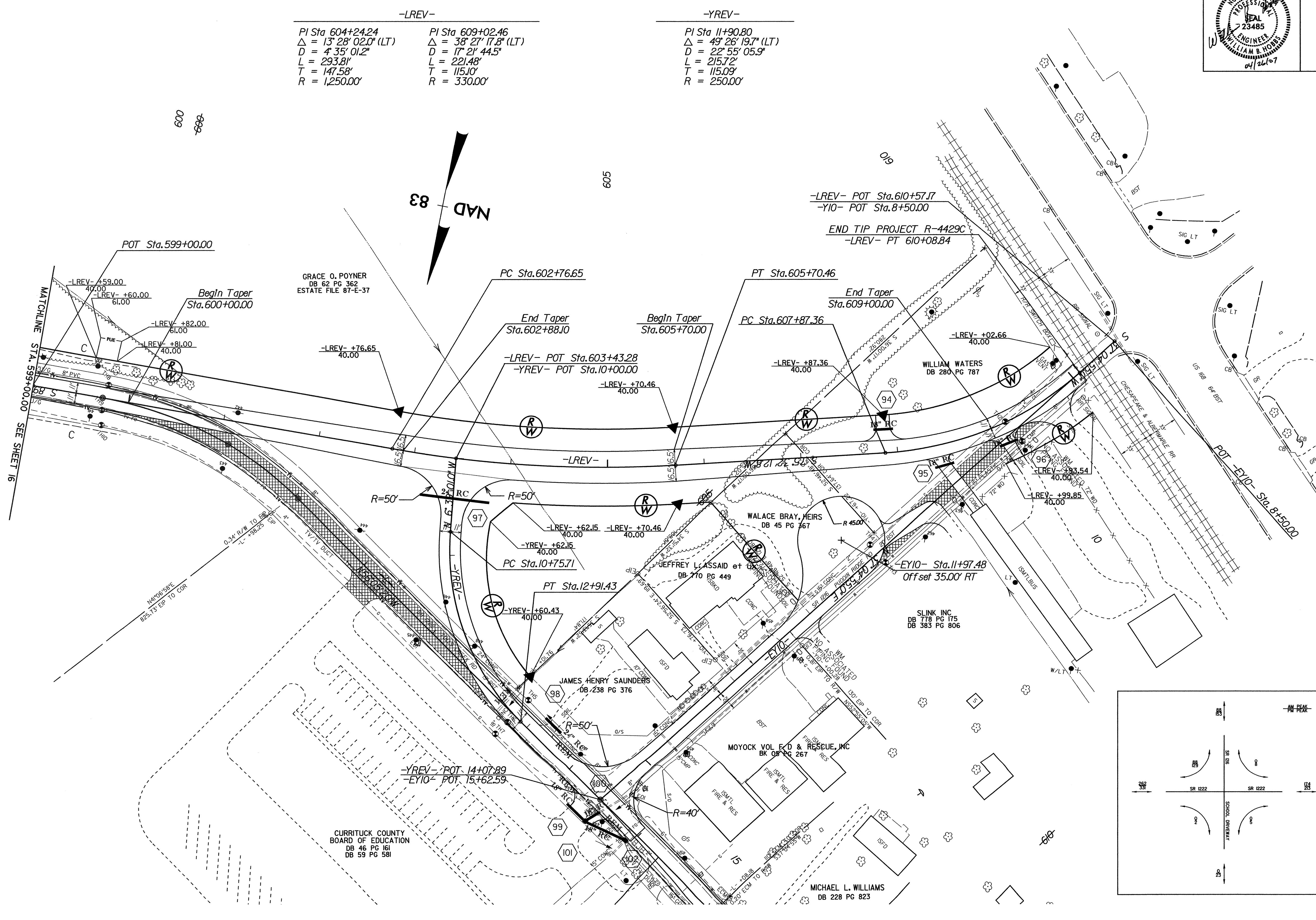


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GRADE DITCHES AS FOLLOWS:

- 582+50 (GRADE BREAK) → WATER FLOW → 590+40 (CROSS LINE) LEFT SIDE
- 584+00 (GRADE BREAK) → WATER FLOW → 590+40 (OUTLET DITCH) RIGHT SIDE
- 590+40 (CROSS LINE) ← WATER FLOW ← 591+25 (GRADE BREAK) LEFT SIDE
- 590+40 (OUTLET DITCH) ← WATER FLOW ← 591+75 (GRADE BREAK) RIGHT SIDE
- 591+25 (GRADE BREAK) → WATER FLOW → 592+45 (CROSS LINE) LEFT SIDE
- 591+75 (GRADE BREAK) → WATER FLOW → 592+35 (OUTLET DITCH) RIGHT SIDE
- 592+35 (OUTLET DITCH) ← WATER FLOW ← 594+00 (GRADE BREAK) RIGHT SIDE
- 592+45 (CROSS LINE) ← WATER FLOW ← 594+00 (GRADE BREAK) LEFT SIDE
- 594+00 (GRADE BREAK) → WATER FLOW → 596+80 (OUTLET DITCH) RIGHT SIDE
- 594+00 (GRADE BREAK) → WATER FLOW → 596+80 (CROSS LINE) LEFT SIDE
- 596+80 (OUTLET DITCH) ← WATER FLOW ← 600+00 (GRADE BREAK) RIGHT SIDE
- 596+80 (CROSS LINE) ← WATER FLOW ← 600+00 (GRADE BREAK) LEFT SIDE

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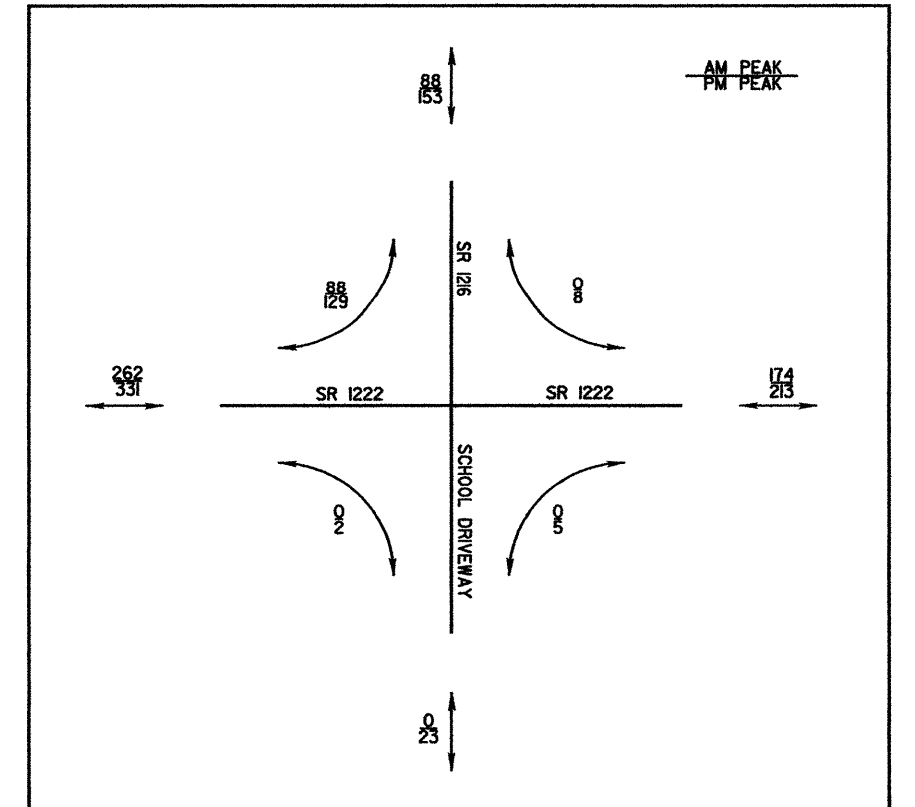


-LREV-

PI Sta 604+24.24	PI Sta 609+02.46
$\Delta = 13^{\circ} 28' 02.0''$ (LT)	$\Delta = 38^{\circ} 27' 17.8''$ (LT)
$D = 4^{\circ} 35' 01.2''$	$D = 17^{\circ} 21' 44.5''$
$L = 293.81'$	$L = 221.48'$
$T = 147.58'$	$T = 115.01'$
$R = 1,250.00'$	$R = 330.00'$

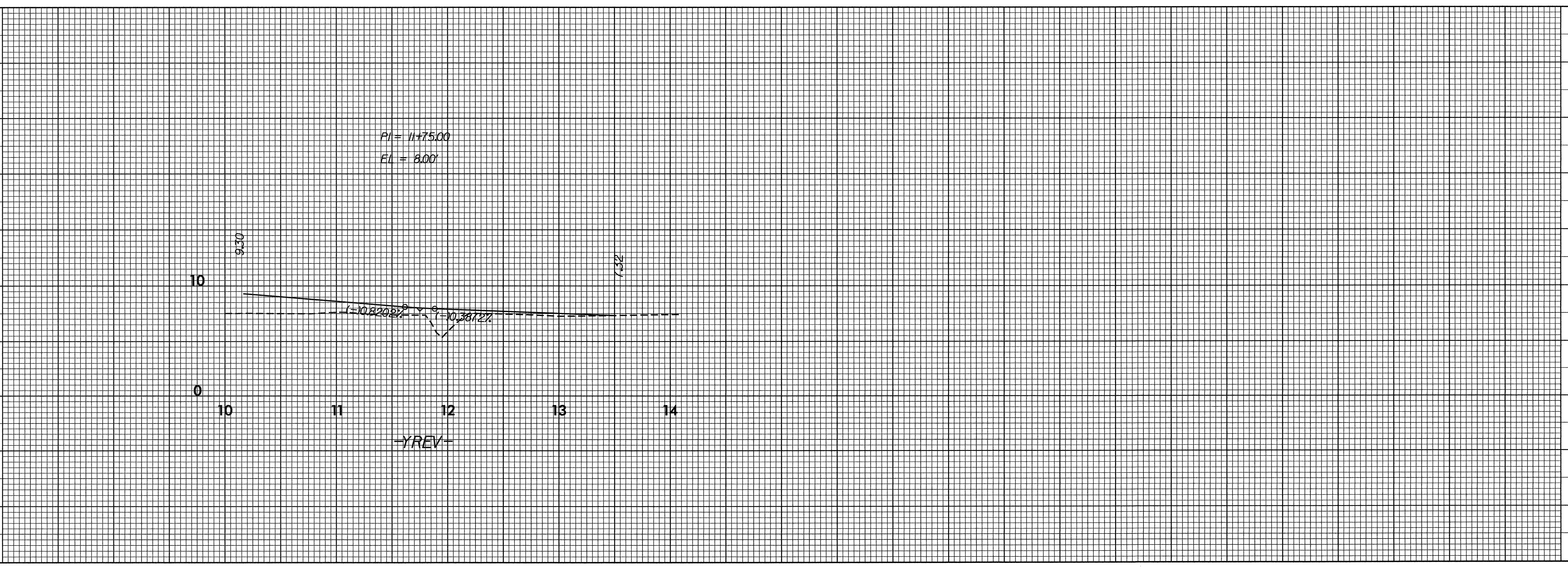
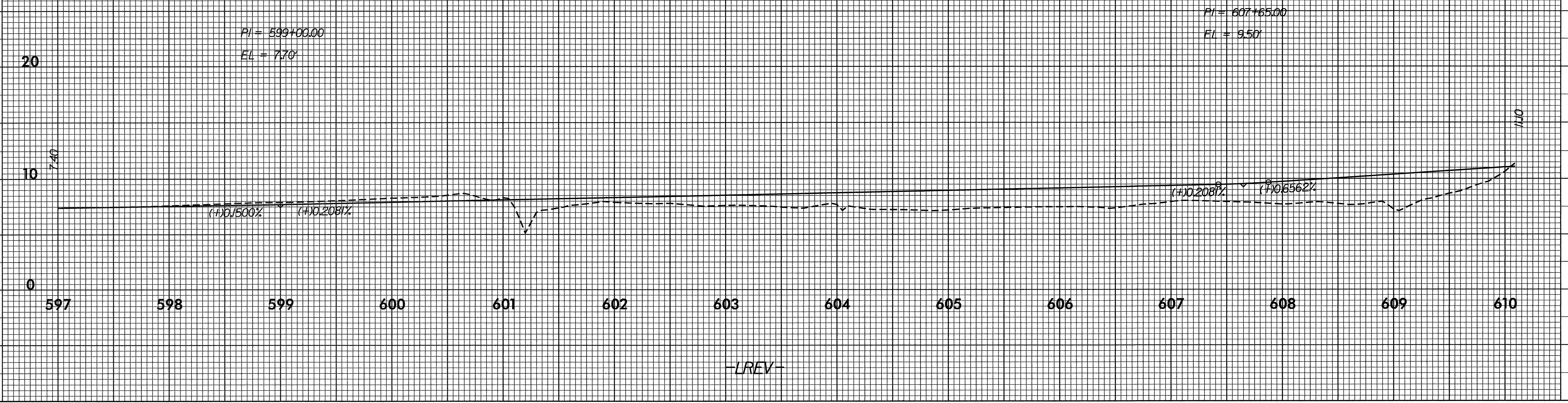
-YREV-

PI Sta 11+90.80
$\Delta = 49^{\circ} 26' 19.7''$ (LT)
$D = 22^{\circ} 55' 05.9''$
$L = 215.72'$
$T = 115.09'$
$R = 250.00'$



5/28/99

PROJECT REFERENCE NO. R-4429C	SHEET NO. 18
ROADWAY DESIGN ENGINEER	



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