

PLANS FOR PROPOSED LOCAL AGENCY IMPROVEMENT FEDERAL AID SECONDARY PROJECT

**FAS 78 - SHANNON ROUTE
SECTION 11-00092-00-PV
CARROLL COUNTY
PROJECT NO. RS-0078(110)
JOB NO. C-92-098-12
CONTRACT NO. 85570**

- INDEX OF SHEETS**
1. COVER SHEET
 2. SUMMARY OF QUANTITIES
 3. GENERAL NOTES
 4. TYPICAL SECTIONS
 - 5-6. SCHEDULE OF QUANTITIES
 7. P.E., F.E. SIDE ROAD ENTRANCE SCHEDULE, AR & S.S. PIPE SCHEDULE
 8. HORIZONTAL AND VERTICAL CONTROL, PAVEMENT MARKING SCHEDULE
 9. TYPICAL ENTRANCE DIMENSIONS
 - 10-25. PLAN AND PROFILE
 26. INTERSECTION DETAILED LAYOUT
 - 27-29. BOX CULVERT DETAILS
 30. PRECAST CONCRETE DROP STRUCTURES DETAILS
 - 31-65. CROSS SECTIONS
 66. INLET SPECIAL NO. 5, 79.4b
 67. NOSE TYPE FOR INLET TOP SLAB, 79.4f
 68. RUMBLE RESURFACING, 91.4

*** STANDARDS INSERTED IN PROPOSAL**

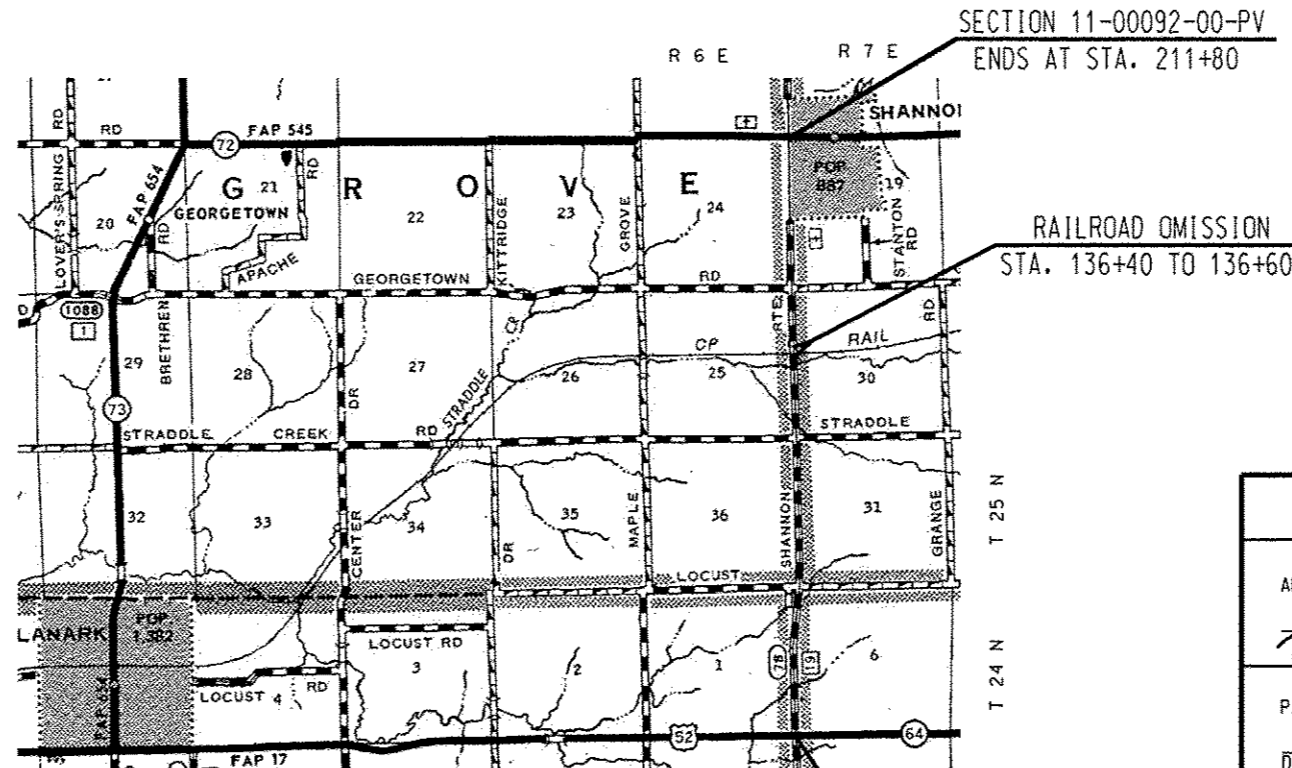
- | | |
|-----------|--|
| 280001-07 | TEMPORARY EROSION CONTROL SYSTEMS |
| 542011 | CONC. END SECTIONS FOR ELLIPTICAL PIPE CULV. 15" THRU 72" EQUIVALENT DIA. |
| 542301-03 | PRECAST REINFORCED CONCRETE FLARED END SECTION |
| 542306-02 | PRECAST REINFORCED CONCRETE ELLIPTICAL FLARED END SECTION |
| 542311-05 | TRAVERSABLE PIPE GRATE |
| 602411-04 | MANHOLE, TY-A, 7' DIAMETER |
| 602601-03 | PRECAST REINFORCED CONCRETE FLAT SLAB TOP |
| 602701-02 | MANHOLE STEPS |
| 604021-02 | BASE, FRAME AND LIDS, TYPE 5 |
| 606001-05 | CONC. CURB, TY-B AND COMBINATION CONC. CURB AND GUTTER |
| 606201-02 | TYPE B GUTTER (INLET, OUTLET & ENTRANCE) |
| 701001-02 | OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY |
| 701006-05 | OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PVMT. EDGE |
| 701201-04 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45MPH |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701306-03 | LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH |
| 701311-03 | LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY |
| 701326-04 | LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH |
| 701901-03 | TRAFFIC CONTROL DEVICES |
| 720011-01 | METAL POSTS FOR SIGNS, MARKERS & DELINEATORS |
| 728001-01 | TELESCOPING STEEL SIGN SUPPORT |
| 729001-01 | APPLICATIONS OF TY A & B METAL POSTS |
| 780001-04 | TYPICAL PAVEMENT MARKINGS |
| BLR 21-9 | TYP. APPL. OF TRAFFIC CONTROL DEVICES ON RURAL LOCAL HIGHWAYS |
| BLR 22-7 | TYP. APPL. OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS |

KNOWN UTILITIES

- MEDIACOM
1-800-874-2991
- FRONTIER TELEPHONE CO.
1-800-921-8104
- COM-ED
1-800-334-7661

DESIGN: MAJOR COLLECTOR, 50 MPH DESIGN SPEED
ADT 1900, 7% TRUCKS

"CALL J.U.L.I.E. BEFORE YOU DIG"
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123



LOCATION MAP

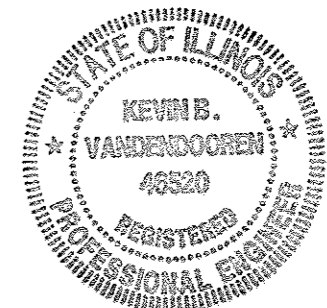
0 1/4 1/2 3/4 1 MILE

NET LENGTH OF SECTION = 21,160.06 FT. = 4.01 MILE

SECTION 11-00092-00-PV
BEGINS AT STA. 0+00

SECTION 11-00092-00-PV
ENDS AT STA. 211+80

RAILROAD OMISSION
STA. 136+40 TO 136+60



EXP. 11/30/2015

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
APPROVED <u>Dec 30 2013</u> <i>Kevin Vanderdooren</i> CARROLL COUNTY ENGINEER
PASSED <u>January 3, 2014</u> <i>Paul A. Voets</i> DISTRICT 2 ENGINEER OF LOCAL ROADS AND STREETS
Releasing for Bid Based on Limited Review <u>January 3, 2014</u> <i>Paul A. Voets</i> Deputy Director of Highways, Region 2 Engineer

SUMMARY OF QUANTITIES

	ITEM	UNIT	QUANTITY
LR400005	CIR-FDR EMULSIFIED ASPHALT	GAL.	183.517
LR400895	FULL-DEPTH RECLAMATION, 9.5"	SO. YD.	52.434
X0326474	DROP STRUCTURE	EACH	3
X6024250	INLETS, SPECIAL, NO. 5	EACH	2
X7010216	TRAFFIC CONTROL AND PROTECTION, SPECIAL	L.SUM	1
Z0013798	CONSTRUCTION LAYOUT	L.SUM	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L.SUM	1
Z0055100	RUMBLE RESURFACING	SO. YD.	91.7
20200100	EARTH EXCAVATION	CU. YD.	6.802
20200500	EARTH EXCAVATION (WIDENING)	CU. YD.	6.736
20400100	BORROW EXCAVATION	CU. YD.	15.330
20900110	POROUS GRANULAR BACKFILL	CU. YD.	1.468
21001000	GEOTECHNICAL FABRIC FOR GROUND STAB.	SO. YD.	10.013
25000200	SEEDING CLASS 2	ACRE	12.1
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	1.089
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	1.089
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	1.089
25100115	MULCH, METHOD 2	ACRE	12.1
28000400	PERIMETER EROSION BARRIER	FOOT	6.076
28000500	INLET & PIPE PROTECTION	EACH	45
35101400	AGGREGATE BASE COURSE, TYPE B	TON.	9.940
35102400	AGGREGATE BASE COURSE, TYPE B, 12"	SO. YD.	13.587
40600100	BITUMINOUS MATERIAL (PRIME COAT)	GAL.	11.989
40600300	AGGREGATE (PRIME COAT)	TON	58
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	9.973
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	5.790
42300400	P. C. CONC. DRIVEWAY PVMT., 8"	SO. YD.	41.5
44000186	HOT-MIX ASPHALT SURFACE REMOVAL, 9"	SO. YD.	7.372
44000200	DRIVEWAY PAVEMENT REMOVAL	SO. YD.	2.575
48101200	AGGREGATE SHOULDERS, TYPE B	TON	6.975
50100300	REMOVAL OF EXISTING STRUCTURES, N1	EACH	1
50100400	REMOVAL OF EXISTING STRUCTURES, N2	EACH	1
50100500	REMOVAL OF EXISTING STRUCTURES, N3	EACH	1
50100600	REMOVAL OF EXISTING STRUCTURES, N4	EACH	1
50100700	REMOVAL OF EXISTING STRUCTURES, N5	EACH	1
50100800	REMOVAL OF EXISTING STRUCTURES, N6	EACH	1
50100900	REMOVAL OF EXISTING STRUCTURES, N7	EACH	1
50101000	REMOVAL OF EXISTING STRUCTURES, N8	EACH	1
50200100	STRUCUTRE EXCAVATION	CU. YD.	441
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	23.940
54003000	CONCRETE BOX CULVERT	CU. YD.	157.5
542A0220	PIPE CULVERTS, CLASS A, TY-1, 15"	FOOT	72
542A0223	PIPE CULVERTS, CLASS A, TY-1, 18"	FOOT	164
542A0226	PIPE CULVERTS, CLASS A, TY-1, 21"	FOOT	60
542A0229	PIPE CULVERTS, CLASS A, TY-1, 24"	FOOT	148
542A0235	PIPE CULVERTS, CLASS A, TY-1, 30"	FOOT	198
542A5473	PIPE CULVERTS, CLASS A, TY-1, E.R.S. 18"	FOOT	226
542A5479	PIPE CULVERTS, CLASS A, TY-1, E.R.S. 24"	FOOT	220
54200213	PIPE CULVERTS, CLASS D, TY-1, 8"	FOOT	20
54200217	PIPE CULVERTS, CLASS D, TY-1, 12"	FOOT	70
54200220	PIPE CULVERTS, CLASS D, TY-1, 15"	FOOT	742
54213660	PRECAST REIN. CONC. FLARED END SECT., 15"	EACH	2
54213663	PRECAST REIN. CONC. FLARED END SECT., 18"	EACH	4
54213666	PRECAST REIN. CONC. FLARED END SECT., 21"	EACH	1

CONSTRUCTION TYPE CODE 0004

SUMMARY OF QUANTITIES

	ITEM	UNIT	QUANTITY
54213669	PRECAST REIN. CONC. FLARED END SECT., 24"	EACH	2
54213675	PRECAST REIN. CONC. FLARED END SECT., 30"	EACH	4
54214503	PRECAST REIN. CONC. FLARED END, E.R.S. 18"	EACH	1
54214509	PRECAST REIN. CONC. FLARED END, E.R.S. 24"	EACH	6
54215547	METAL END SECTIONS 12"	EACH	4
54215550	METAL END SECTIONS 15"	EACH	54
54260311	TRAVERSABLE PIPE GRATE	FOOT	33.5
54263418	CONCRETE END SECTION, STANDARD 542011, 18", 1:4	EACH	1
54263424	CONCRETE END SECTION, STANDARD 542011, 24", 1:4	EACH	2
60224437	MANHOLES, TY-A, 7' DIA., TY-SF, CL	EACH	1
60605000	COMBINATION CONC. CURB & GUTTER, TY-B 6.24	FOOT	182
67000500	ENGINEERS FIELD OFFICE, TY-B	CAL. MO.	7
67100100	MOBILIZATION	L. SUM	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	2.118
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO. FT.	706
Δ 78001100	PAINT, PAVEMENT MARKING- LETTERS AND SYMBOLS	SO. FT.	308
Δ 78001110	PAINT, PAVEMENT MARKING - LINE 4"	FOOT	70,314
Δ 78001180	PAINT, PAVEMENT MARKING - LINE 24"	FOOT	49
Δ 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD.	20
Δ 66900450	SPECIAL WASTE PLANS AND REPORTS	L. SUM	1
Δ 66900530	SOIL DISPOSAL ANALYSIS	EACH	1

Δ SPECIALTY ITEMS

CONSTRUCTION TYPE CODE 0004

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	11-00092-00-PV	CARROLL	68	3

GENERAL NOTES

See cross sections for special ditches and backslopes.

It is estimated that 22,879 cubic yards of earth will be hauled to the job site from outside the project limits.

Placement and compaction of the backfill for the proposed across road culverts shall conform to Section 502.10 of the Standard Specifications, except that the material shall conform to Article 208.02 of the Standard Specifications and shall be compacted to a minimum of 95% density.

Placement and compaction of the backfill for the proposed box culverts shall conform to the Section 209.03, Porous Granular Backfill.

Culvert flows must be maintained throughout the project. Normal flow shall be allowed to pass at the rate it enters the jobsite. High flows shall be allowed to pass without causing damage to upstream properties.

It is anticipated that several mailboxes will require relocation to the approach side of the entrances. When this is done, the contractor shall be required to mount the mailbox on a 4"x4" wood post. This work shall be included in the contract unit price for the EARTH EXCAVATION. There is an estimated 17 mail boxes to be relocated.

The cost of making storm sewer connections to existing drainage pipes shall be included in the contract unit price for the Pipe Culvert being installed.

The contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of

The applicable portions of Article 105.07 of the Standard Specifications shall apply except for the following: The Contractor shall be responsible to locate the vertical depths of the underground utilities which may interfere with construction operations. This work will not be measured or paid for separately, but shall be considered as included in the unit bid price for the item of construction involved.

Per SB699 (90 day utility relocation law), once right-of-way is clear to award the project, a notice will be sent to the utility companies instructing them to have their facilities relocated within 90 days. Estimated date relocation complete = Letting Date + 135 days.

JULIE:

MEDIACOM
FRONTIER TELEPHONE CO.
COM-ED
VILLAGE OF SHANNON

CADD data will be provided to Contractors and Consultants working on this project. This information will be provided upon request as ASCII data files ONLY. If data is required in other formats it will be your responsibility to make these conversions. If any discrepancy or inconsistency arises between the electronic data and the information on the hard copy, the information on the hard copy should be used. Contact Carroll County to request these files.

Utility companies and municipalities whose facilities are shown on the plans or known to be within the construction limits shall be notified by the Contractor of the construction start date.

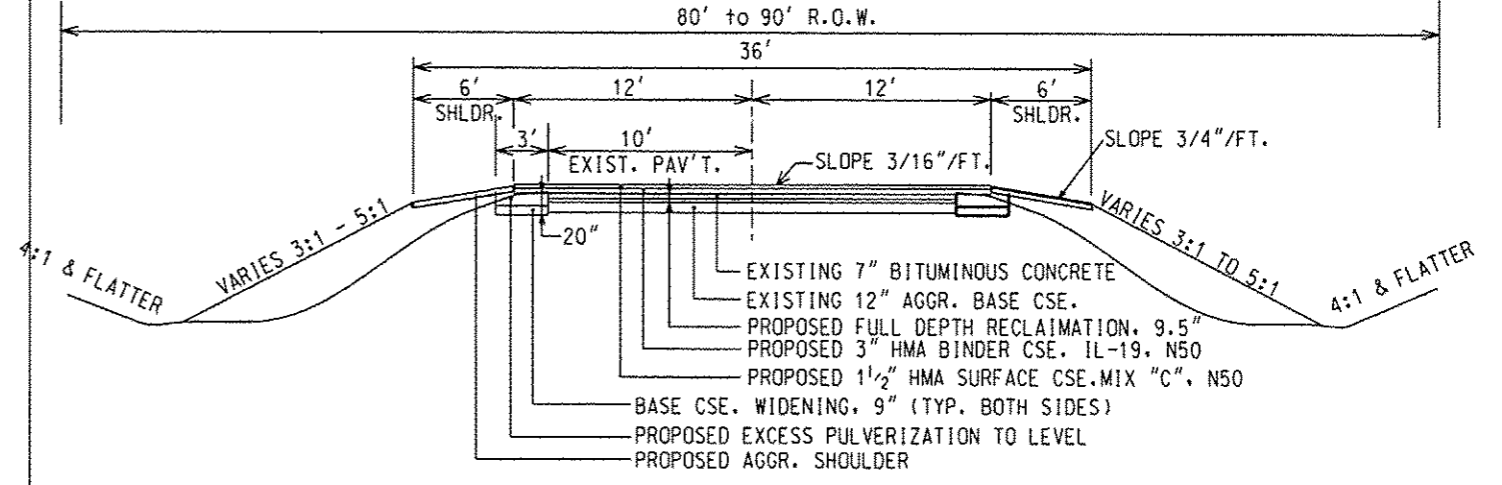
AGGREGATE BASE COARSE, TY-B quantities includes placement of aggregate in field and private entrances to the grade as shown on the cross sections.

For EARTH EXCAVATION, WIDENING, all side road aprons, field entrance aprons and private entrance aprons shall be removed before excavating. HMA removal of these areas are included in DRIVEWAY PAVEMENT REMOVAL.

RESURFACING		
MIXTURE USES:	SURFACE	BINDER
PG:	PG 58-28	PG 58-28
DESIGN AIR VOIDS	4.0 @ N50	3.0 @ N50
MIXTURE COMPOSITION	IL 9.5	IL 12.5 OR 19.0
FRICTION AGGREGATE	C	N/A
20 YEAR ESAL	0.0	0.0
MIX UNIT WEIGHT	112 lbs/sy/in	112 lbs/sy/in

PROPOSED TYPICAL SECTION

STA. 2+00 TO 40+00
STA. 57+50 TO 210+50
80' to 90' R.O.W.

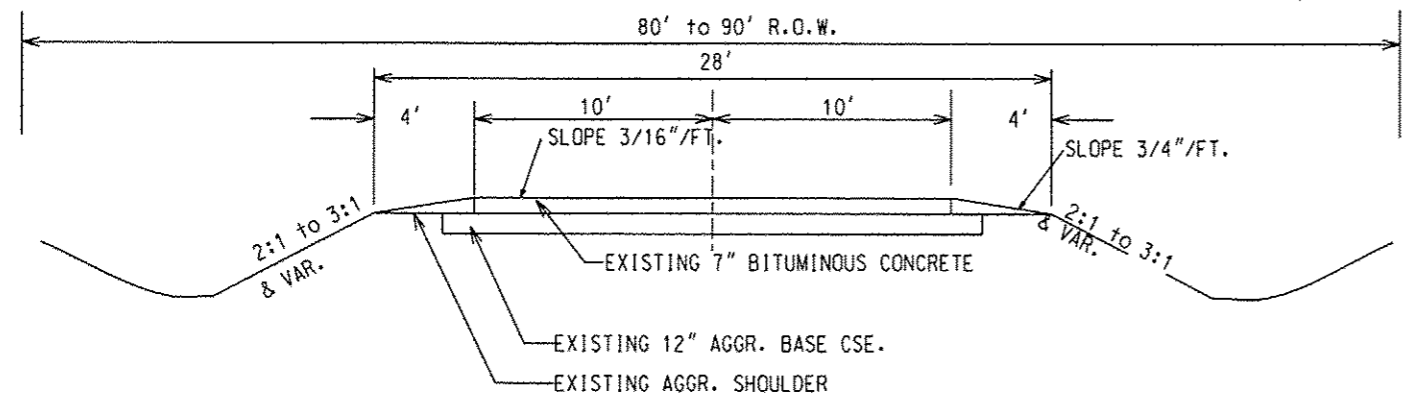


INCLUDES PAVEMENT SUB-BASE WIDENING 3 FEET WIDE BY 20" DEEP, INSTALLATION OF 12" AGGREGATE BASE CSE., TY-B IN THE TRENCH, PULVERIZING THE EXISTING 20" SURFACE 10.5" DEEP, LEVELING THE PULVERIZED SURFACE INTO THE TRENCH AND FULL DEPTH RECLAMATION OF THE SURFACE 8" DEEP BY 26 FEET WIDE. ALSO INCLUDED IS 3" HMA BINDER COARSE & 1 1/2" HMA SURFACE COARSE.

EXISTING TYPICAL SECTION

SHANNON ROUTE

80' to 90' R.O.W.

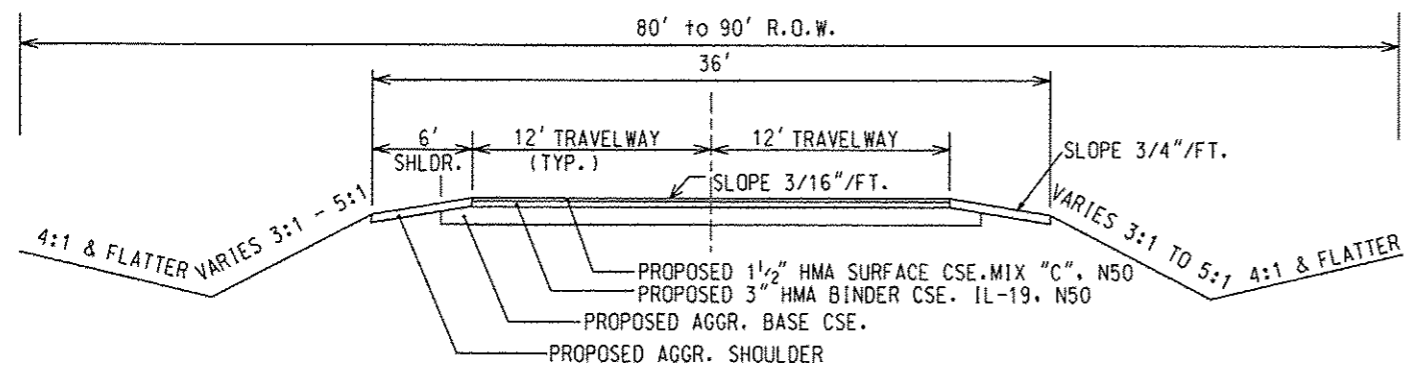


RESURFACING		
MIXTURE USES:	SURFACE	BINDER
PG:	PG 58-28	PG 58-28
DESIGN AIR VOIDS	4.0 @ N50	3.0 @ N50
MIXTURE COMPOSITION	IL 9.5	IL 12.5 OR 19.0
FRICTION AGGREGATE	C	N/A
20 YEAR ESAL	0.0	0.0
MIX UNIT WEIGHT	112 lbs/sy/in	112 lbs/sy/in

PROPOSED TYPICAL SECTION

STA. 0+00 TO 2+00
STA. 40+00 TO 48+72.82
STA. 57+12.59 TO 57+50
STA. 210+50 TO 211+80

80' to 90' R.O.W.



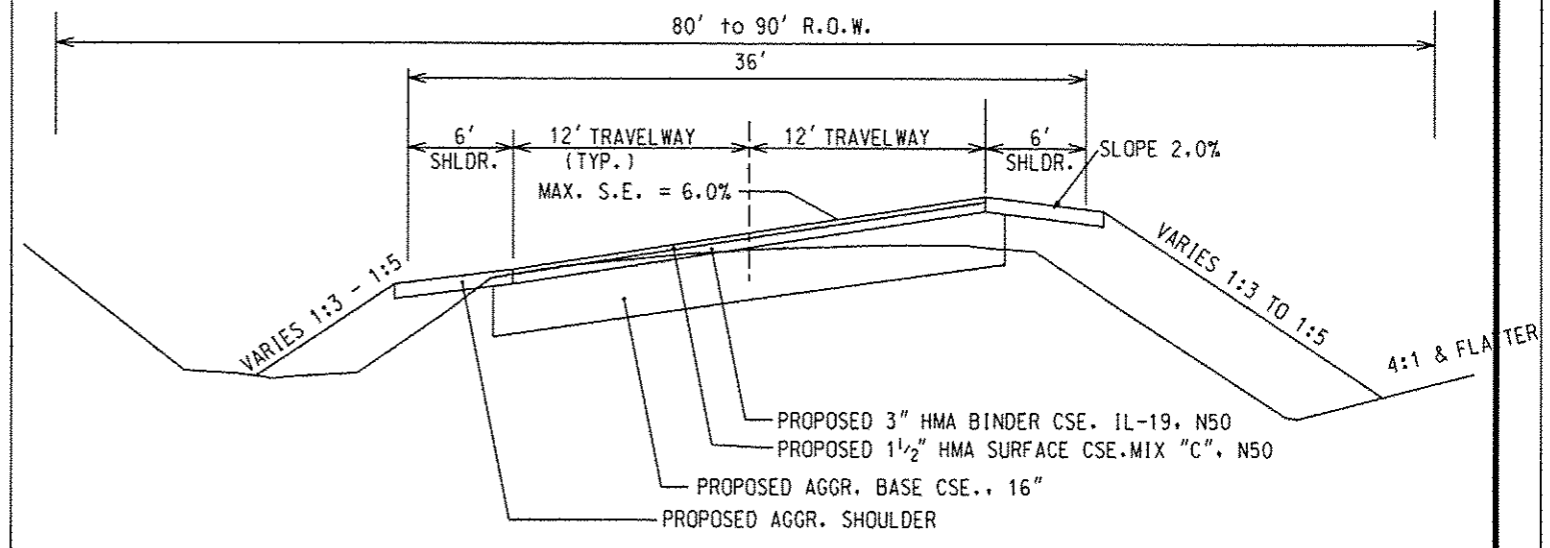
INCLUDES RECONSTRUCTION OF TWO INTERSECTIONS & THE REVERSE CURVES BETWEEN 40+00 TO 57+50 (ON NEW ALIGNMENT), W/ GROUND STABILIZATION FABRIC, 10" OF BREAKER RUN AGGREGATE AND 6" OF AGGREGATE BASE COARSE TY-B, CA-6 OR CA-10, PLACEMENT OF 3" HMA BINDER COURSE & 1 1/2" HMA SURFACE CSE.

RESURFACING		
MIXTURE USES:	SURFACE	BINDER
PG:	PG 58-28	PG 58-28
DESIGN AIR VOIDS	4.0 @ N50	3.0 @ N50
MIXTURE COMPOSITION	IL 9.5	IL 12.5 OR 19.0
FRICTION AGGREGATE	C	N/A
20 YEAR ESAL	0.0	0.0
MIX UNIT WEIGHT	112 lbs/sy/in	112 lbs/sy/in

PROPOSED SUPER-ELEVATED TYPICAL SECTION

STA. 48+72.82 TO 57+12.59

80' to 90' R.O.W.



LR400005 CIR-FDR EMULSIFIED ASPHALT
 LOCATION GAL.
 2+00 TO 40+00 38.422
 57+00 TO 210+50 145.095
 TOTAL 183.517 GAL.

LR400895 FULL-DEPTH RECLAMATION. 9.5"
 LOCATION SO. YD.
 2+00 TO 40+00 10.978
 57+00 TO 201+00 41.456
 TOTAL 52,434 SO. YD.

Z0055100 RUMBLE RESURFACING
 LOCATION SO. YD.
 STA. 5+47 30.56
 STA. 6+72 30.56
 STA. 7+97 30.56
 TOTAL 91.7 SO. YD.

20200100 EARTH EXCAVATION
 LOCATION CU. YD.
 STA. 0+00 - 2+00 634
 STA. 18+75 52
 STA. 46+73 50
 STA. 40+00 - 57+50 2,331
 STA. 201+00 - 211+80 2,442
 TOTAL 5,509 CU. YD.

20200500 EARTH EXCAVATION (WIDENING)
 LOCATION CU. YD.
 STA. 2+00 - 40+00 1,410
 STA. 57+50 - 201+00 5,326
 TOTAL 6,736 CU. YD.

20400100 BORROW EXCAVATION
 LOCATION CU. YD.
 STA. 2+00 - 57+50 265
 STA. 57+50 - 211+80 13,156
 TOTAL 13,421 CU. YD.

20900110 POROUS GRANULAR BACKFILL
 LOCATION CU. YD.
 STA. 18+75 133
 STA. 46+73 142
 TOTAL 275 CU. YD.

21001000 GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
 LOCATION SO. YD.
 STA. 0+00 - 2+00 1.119
 STA. 40+00 - 57+50 5.056
 STA. 201+00 - 210+50 2.744
 STA. 210+50 - 211+80 1.093
 TOTAL 10.013 SO. YD.

35101400 AGGREGATE BASE COURSE. TYPE B CA-10
 LOCATION TON
 STA. 0+00 - 2+00 355
 STA. 18+75 119
 STA. 46+73 119
 STA. 40+00 - 57+50 1,601
 STA. 201+00 - 211+80 1215
 BREAKER RUN STONE

LOCATION SO. YD.
 STA. 0+00 - 2+00 560
 STA. 40+00 - 57+50 2,528
 STA. 201+00 - 211+80 1,919
 TOTAL 8,416 TON

35102400 AGGREGATE BASE COURSE. TY-B. 12" CA-2
 LOCATION SO. YD.
 STA. 2+00 - 40+00 2,533
 STA. 57+50 - 201+00 9,567
 TOTAL 12,100 SO. YD.

40600100 BIT. MATLS. PRIME COAT MC-30
 LOCATION GAL.
 STA. 0+00 - 2+00 392
 STA. 40+00 - 57+50 1,633
 STA. 201+00 - 211+80 1,269
 SIDE ROADS 595
 P.E. & F.E. 840
 CSS-1
 LOCATION GAL.
 STA. 2+00 - 40+00 1,520
 STA. 57+50 - 201+00 5,740
 TOTAL 11,989 GAL.

40603080 HOT MIX ASPHALT BINDER CSE.. IL-19.0. N50
 LOCATION TON
 STA. 0+00 - 2+00 193.5
 STA. 2+00 - 210+50 9,591
 STA. 210+50 - 211+80 188.5
 TOTAL 9,973 TON

40603310 HOT MIX ASPHALT SURFACE CSE.. MIX 'C'. N50
 LOCATION TON
 STA. 0+00 - 2+00 96.6
 STA. 2+00 - 210+50 4795.5
 STA. 210+50 - 211+80 94.0
 TOTAL 4,986 TON

42300400 P.C.C. DRIVEWAY PAVEMENT. 8"
 LOCATION SO. YD.
 STA. 210+84.5 - 211+19.3 41.5
 TOTAL 41.5 SO. YD.

44000186 HOT MIX ASPHALT SURFACE REMOVAL. 9"
 LOCATION SO. YD.
 STA. 0+00 - 2+00 795
 STA. 40+00 - 57+50 3,889
 STA. 201+00 - 211+80 2,688
 TOTAL 7,372 SO. YD.

44000200 DRIVEWAY PAVEMENT REMOVAL
 LOCATION SO. YD.
 P.E. & F.E. 1,312
 SIDE ROADS 1,145
 STA. 211+03 118
 TOTAL 2,575 SO. YD.

48101200 AGGREGATE SHLDR.. TYPE B (CA-10)
 LOCATION TON
 STA. 0+00 - 2+00, LT. & RT. 17
 STA. 2+00 - 210+50, LT. & RT. 6,950
 STA. 210+50 - 211+80, LT. 8
 TOTAL 6,975 TON

REMOVAL OF EXISTING STRUCTURES
 LOCATION EACH
 STA. 12+82 1 EACH
 STA. 18+75 1 EACH
 STA. 46+73 1 EACH
 STA. 121+00 1 EACH
 STA. 177+25 1 EACH
 STA. 196+43 1 EACH
 STA. 205+45 1 EACH
 STA. 211+34 1 EACH

50200100 STRUCTURE EXCAVATION
 LOCATION CU. YD.
 STA. 18+75 215
 STA. 46+73 226
 TOTAL 441 CU. YD.

50800205 REINFORCEMENT BARS. EPOXY CTD.
 LOCATION POUND
 STA. 18+75 10,220
 STA. 46+73 13,720
 TOTAL 23,940 POUND

54003000 CONCRETE BOX CULVERT
 LOCATION CU. YD.
 STA. 18+75 73.5
 STA. 46+73 84.0
 TOTAL 157.5 CU. YD.

54200213 PIPE CULVERT. CLASS D. TY-1. 8"
 LOCATION FOOT
 STA. 18+75 20
 TOTAL 20 FOOT

60605000 COMBINATION CONC. CURB & GUTTER. TYPE-B 6.24
 LOCATION FOOT
 210+74.5, 18' RT. TO 211+70.3, 132' RT. 182
 TOTAL 182 FOOT

78001100 PAINT PVT MK - LETTERS & SYMBOLS
 LOCATION SO. FT.
 131+16, RT. RR-XING 154
 141+84, LT. RR-XING 154
 TOTAL 308 SO. FT.

78001110 PAVEMENT MARKING SCHEDULE

SOLID YELLOW S. BOUND (West Side)	FEET	YELLOW DASHED LINE	FEET	SOLID YELLOW N. BOUND (East Side)	FEET
LT STA 0+30 - 18+62	1832	8+60 - 39+37	3077	RT STA 0+30 - 8+60	830
LT STA 39+37 - 61+58	2221	54+95 - 79+46	2451	RT STA 30+87 - 54+95	2408
LT STA 79+46 - 100+95	2149	89+15 - 127+63	3848	RT STA 69+20 - 89+15	1995
LT STA 121+53 - 134+20	1267	134+20 - 171+16	3696	RT STA 127+63 - 135+07	744
LT STA 171+16 - 193+59	2243	183+24 - 207+99	2475	RT STA 149+61 - 183+24	3363
LT STA 207+99 - 211+50	351			RT STA 207+99 - 211+50	351
	<u>10,063</u>		<u>15,547</u>		<u>9,691</u>
		TOTAL SOLID YELLOW LINES	19,754		
		TOTAL YELLOW DASH LINES / 4 =	3,887		
		TOTAL YELLOW FEET	<u>23,641</u>		

WHITE EDGE LINES			
LT STA	FEET	RT STA	FEET
0+00 - 52+51	5347	0+00 - 52+51	5290
53+71 - 105+44	5188	53+71 - 105+44	5173
106+56 - 158+44	5188	106+56 - 158+44	5188
159+56 - 211+80	5256	159+56 - 185+21	2565
	<u>20,979</u>	RT STA 186+11 - 190+89	478
		RT STA 191+79 - 207+68.5	1589.5
		RT STA 208+83.5 - 211+80	386.5
			<u>20,670</u>
TOTAL WHITE EDGE LINES		41,649	
TOTAL PAINT PVT MK LINE, 4"		65,290 FT	

78001110	PAINT PVT MK LINE, 4"	FOOT
	YELLOW	27,863
	WHITE	42,451
	TOTAL	70,314 FOOT

78001180	PAINT PVT MK LINE, 24"	FOOT
	LOCATION	24.5
	0+30 - STOP BAR	24.5
	211+50 - STOP BAR	24.5
	TOTAL	49 FOOT

PRIVATE AND FIELD ENTRANCE SCHEDULE

LOCATION	REMARKS	WIDTH	SQ. YD.	20400100	35101400	44000200	40603310	20200100	542D0217	542D0220	54215547	54215550
				BORROW EXCAVATION	AGGR. BSE. CSE. TY-8 (8")	DRWY. PVMT. REMOVAL	HMA SURF CSE "C" N50 (3-1/2")	EARTH EXC.	PIPE CULV. CLASS D. TY -1 12"	PIPE CULV. CLASS D. TY -1 15"	METAL END SEC 12"	METAL END SEC 15"
		FOOT		CY YD	TON	SY YD	TON	CY YD	FOOT	FOOT	EACH	EACH
Shannon Rte												
Rt Sta 13+ 00	FE	20	107.2	11.2	44.0		7.0	23.6				
Rt Sta 18+ 00	FE	20	107.2	14.0	44.0		7.0	7.5		44		2
Lt Sta 21+ 10	FE	20	107.2	32.3	44.0		7.0	2.1		46		2
Rt Sta 36+ 59	FE	20	107.2	6.4	44.0	20.9	7.0	19.2		48		2
Rt Sta 38+ 39	PE mb turnout	19	82.3	5.0	33.8	53.2	16.1	8.1				
Rt Sta 39+ 62	FE	12	38.7	6.6	15.9	26.4	7.6	4.1		32		2
Lt Sta 40+ 07	FE											
Rt Sta 65+ 32	PE mb turnout	12	62.6	11.2	27.5	69.4	12.3	20.9		32		2
Lt Sta 66+ 45	FE	20	107.2	22.1	44.0		7.0	13.9		46		2
Rt Sta 74+ 40	PE mb turnout	12	63.5	15.6	26.1	56.2	12.5	12.3		32		2
Rt Sta 78+ 50	PE mb turnout	14	75.4	20.4	31.0		14.8	25.1		36		2
Lt Sta 79+ 46	FE	20	107.2	29.6	44.0	41.8	7.0	13.9				
Rt Sta 86+ 11	PE mb turnout	20	118.1	39.3	48.6	112.6	23.2	19.7		48		2
Rt Sta 87+ 09	FE	12	36.3	19.0	11.9		7.1	4.0		32		2
Lt Sta 91+ 69	PE	12	78.9	32.6	32.4	57.8	15.5	19.3		50		2
Rt Sta 91+ 69	mb turnout	20	21.7		8.9	13.3	4.3	1.9				
Rt Sta 111+ 88	PE mb turnout	20	123.1	46.2	50.9		24.1	34.2		64		2
Lt Sta 111+ 93	FE	20	107.2	41.7	44.0		7.0	29.7		48		2
Rt Sta 113+ 46	FE	20	107.2	9.9	44.0		7.0	23.8		48		2
Lt Sta 123+ 69	PE	20	107.2		44.0	94.0	21.0	23.8				
Rt Sta 123+ 97	PE mb turnout	20	123.1	21.3	50.9	48.3	8.6	20.5				
Rt Sta 129+ 07	PE mb turnout	16	101.2	33.1	41.6	82.2	19.8	22.5		48		2
Lt Sta 131+ 03	FE	20	107.2	45.4	44.0	42.1	7.0	17.8		48		2
Lt Sta 133+ 21	FE	20	107.2	181.6	44.0		7.0	11.9				
Rt Sta 135+ 61	FE	20	107.2	189.6	44.0		7.0	11.9				
Rt Sta 138+ 21	PE mb turnout	14	44.0	4.5	18.1	44.0	8.6	10.3		36		2
Rt Sta 140+ 00	mb turnout	45	21.8	15.7	9.0		4.3	30.2				
Lt Sta 140+ 17	PE	20	107.2	38.2	44.0	71.8	18.0	32.2		50		2
Rt Sta 141+ 73	FE	20	107.2	31.6	44.0	47.0	7.0	10.7		46		2
Rt Sta 154+ 00	PE mb turnout	14	62.4	4.5	25.6	64.6	12.2	20.8				
Rt Sta 165+ 42	FE	20	107.2	98.3	44.0	39.4	7.0	7.8		46		2
Lt Sta 173+ 08	FE	20	107.2		44.0		7.0	23.8				
Lt Sta 174+ 74	FE					39.5		14.8				
Rt Sta 176+ 45	FE	20	107.2	47.8	44.0	43.2	7.0	9.6		46		2
Rt Sta 179+ 26	PE mb turnout	12	89.3	18.9	36.7	46.8	18.0	29.8		32		2
Rt Sta 182+ 08	PE mb turnout	12	89.3	18.9	36.7	46.8	18.0	29.8		36		2
Rt Sta 182+ 85	PE	10	37.7					30.1				
Lt Sta 185+ 14	PE mb turnout	12	89.3	19.6	36.7	62.6	18.0	14.9				
Rt Sta 187+ 71	PE	12	42.5	21.8	17.5	40.4	8.3	7.1		32		2
Rt Sta 193+ 19	FE	10	37.8					30.3				
Rt Sta 196+ 00	FE	20	107.2	28.3	44.0		7.0	23.8		48		2
Lt Sta 196+ 41	FE	20	107.2	16.8	44.0		7.0	23.8				
Rt Sta 197+ 20	PE	19	66.2		27.2		13.0	22.1				
Rt Sta 203+ 22	PE	12	28.2	13.4	11.6	23.6	5.5	9.4				
Rt Sta 204+ 06	PE mb turnout	12	42.5	20.4	17.5	24.2	8.3	14.2	32	32		2
Rt Sta 204+ 89	FE	12	32.1	12.1	13.2		3.7	7.1		32		2
Rt Sta 207+ 15	mb turnout	45	22.0	22.6	9.1		4.3	16.8				
Rt Sta 209+ 12	CE	17	40.4		16.6		7.9	13.5	38			2
Rt Sta 209+ 72	CE	21	44.6		18.3		9.0	14.9				
Rt Sta 210+ 05	CE	12	35.1		14.4		7.1	11.7				
TOTAL				1267.5	1523.7	1312.1	470.1	851.2	70	742	4	52

SIDE ROAD ENTRANCE SCHEDULE

LOCATION	WIDTH	SQ. YD.	20400100	35102400	44000200	40603310	20200100	542A0220	542A0223	542A0229	542A0235	54213660	54213663	54213669	54213675	54215550
			BORROW EXCAVATION	AGGR. BSE. CSE. 12"	DRWY. PVMT. REMOVAL	HMA SURF CSE "C" N50 (3-1/2")	EARTH EXC.	PIPE CULV. CLASS A. TY -1 15"	PIPE CULV. CLASS A. TY -1 18"	PIPE CULV. CLASS A. TY -1 24"	PIPE CULV. CLASS A. TY -1 30"	PRC. FLD. END SEC STD 542301 15"	PRC. FLD. END SEC STD 542301 15"	PRC. FLD. END SEC STD 542301 24"	PRC. FLD. END SEC STD 542301 30"	METAL END SEC. 15"
		FOOT	CY YD	SQ YD	SY YD	TON	CY YD	FOOT	FOOT	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH
LOCUST RD																
Lt Sta 53+ 11		20	252.9	84.9	246.5	227.9	49.6	151.9		164						
Rt Sta 53+ 23		20	219.3	117.6	213.7	146.1	43.0	121.8								
STRADDLE CREEK RD																
Lt Sta 106+ 00		20	203.9	95.7	198.8	155.5	40.0	34.0				64				2
Rt Sta 106+ 02		20	199.5	103.0	194.3	140.6	39.1	44.3				64				2
GEORGETOWN RD																
Lt Sta 158+ 96		25	150.0	55.9	146.1	115.4	29.4	29.5		72						2
Rt Sta 159+ 06		20	169.6	80.4	165	108.5	33.2	30.8								
DIVISION ST																
Rt Sta 185+ 66		27	173.6	44.6	168.9	149.5	34.0	28.9								
SUNSET CT																
Rt Sta 191+ 33		32	169.5			34.1										2
ARCH ST																
Rt Sta 208+ 29		27	158.3	59.6	154.0	101.7	31.0		72			2				
TOTAL			641.7	1487.3	1145.2	333.4	441.2	72	164	72	128	2	4	2	4	2

STORM SEWER SCHEDULE

LOCATION	542A5473	60224437	X8024250	54214503	20900110	
	PIPE CULV. CLASS A. TY -1 E.R.S. 18"	MANHOLES TY-A 7 DIA.	INLET SPECIAL NO. 5	PRC. FLD. END SECT STD 542306 E.R.S. 18"	POROUS GRANULAR BACKFILL	
		FOOT	EACH	EACH	EACH	CU.YD.
Shannon Rte						
Sta 210+ 87 to Sta 211+ 56.5		86	1		1	28.9
Sta 211+ 56.5 to Sta 211+ 68		36		1		13.4
Sta 211+ 68 to Sta 211+ 72		38		1		16.4
TOTAL		160	1	2	1	58.7

ACROSS ROAD PIPE CULVERT SCHEDULE

LOCATION	542A5473	542A0226	542A0229	542A5479	542A0235	54263418	54263424	54213666	54214509	X0326474	20900110	
	PIPE CULV. CLASS A. TY -1 E.R.S. 18"	PIPE CULV. CLASS A. TY -1 21"	PIPE CULV. CLASS A. TY -1 24"	PIPE CULV. CLASS A. TY -1 E.R.S. 24"	PIPE CULV. CLASS A. TY -1 30"	CONC. END SECT. 1:4 STD 542011 E.R.S. 16"	CONC. END SECT. 1:4 STD 542011 E.R.S. 24"	PRC. FLD. END SEC STD 542301 21"	PRC. FLD. END SEC STD 542306 E.R.S. 24"	DROP STRUCT.	POROUS GRANULAR BACKFILL	
		FOOT	FOOT	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH	CU.YD.	
Shannon Rte												
Lt Sta 0+ 18					16.0			1				
Rt Sta 0+ 18					12.0			1				
Sta 12+ 62		60.0						1		1	57.8	
Sta 121+ 00			76.0							1	761.3	
Sta 177+ 25				70.0						1	218.0	
Sta 196+ 43				80.0					2		47.7	
Sta 205+ 45				112.0					4		32.9	
Sta 211+ 50	66.0							1			16.2	
TOTAL		66.0	60.0	76.0	220.0	70.0	1.0	2.0	1.0	6.0	3.0	1133.9

PROPOSED HORIZONTAL CONTROL

SURVEY CONTROL POINTS

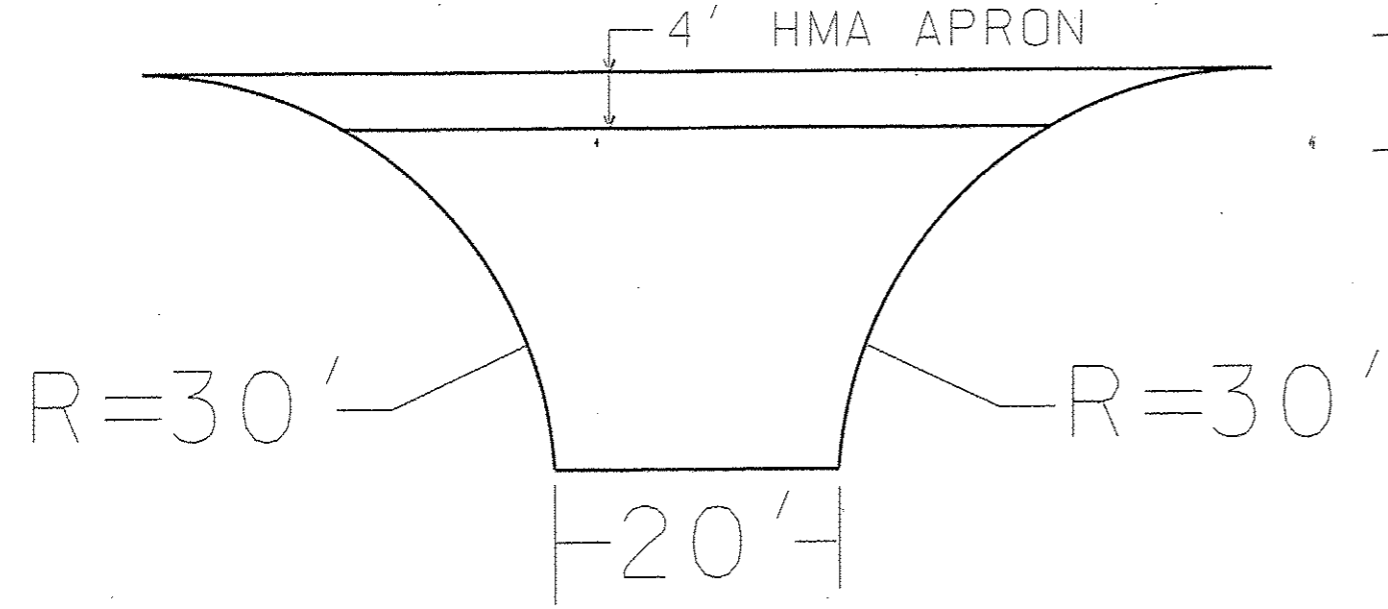
NORTHEAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
10	9999.899	10000.001	100.000
11	10944.704	9892.948	106.174
12	11840.419	9936.491	93.527
13	14040.304	9829.485	113.651
14	14697.171	9844.425	103.056
15	15328.947	10122.952	118.298
16	16647.836	10026.576	135.276
17	17992.539	10056.747	156.566
18	19175.504	9963.494	137.210
19	20622.986	9973.580	74.905
20	21200.194	9908.287	75.028
21	22402.040	9947.723	84.646
22	23326.439	9869.213	55.933
23	24178.287	9912.938	64.118
24	25055.434	9825.245	73.106
25	25396.350	9887.473	77.675
26	25931.772	9791.850	86.726
27	26546.799	9855.206	101.997
28	27313.530	9780.728	122.538
29	28535.445	9832.731	128.823
30	29639.858	9751.976	106.351
31	30847.069	9786.246	93.555
32	31157.718	9709.492	97.190
33	31271.074	9774.618	94.398
34	12023.148	9916.187	94.270
40	20611.212	10607.720	72.717
41	20593.928	9440.637	91.433
42	9999.924	10000.003	99.108
43	13701.964	9877.556	112.858
44	22895.903	9919.098	64.342
45	23306.620	9958.637	48.176
46	31079.205	9976.046	90.970
47	31229.524	9611.024	97.957

P. I. #1	STA 0+00 N = 10040.31 E = 9950.80 COURSE FROM P.I. #1 TO P.I. #2 N01° 25' 00"W - 1586.75 FT	P. I. #14	STA 124+81.62 N = 22487.27 E = 9911.41 I = 00° 02' 06"R COURSE FROM P.I. #14 TO P.I. #15 N01° 16' 28"W - 499.96 FT
P. I. #2	STA 15+86.75 N = 11626.58 E = 9911.57 I = 00° 01' 37"L COURSE FROM P.I. #2 TO P.I. #3 N01° 26' 37"W - 999.94 FT	P. I. #15	STA 129+81.58 N = 22987.11 E = 9900.29 I = 00° 12' 39"R COURSE FROM P.I. #15 TO P.I. #16 N01° 03' 49"W - 600.11 FT
P. I. #3	STA 25+86.69 N = 12626.20 E = 9886.38 I = 00° 02' 54"L COURSE FROM P.I. #3 TO P.I. #4 N01° 29' 31"W - 1100.00 FT	P. I. #16	STA 135+81.69 N = 23587.12 E = 9889.15 I = 00° 10' 55"L COURSE FROM P.I. #16 TO P.I. #17 N01° 14' 44"W - 599.93 FT
P. I. #4	STA 36+86.69 N = 13725.83 E = 9857.74 I = 00° 13' 43"R COURSE FROM P.I. #4 TO P.I. #5 N01° 15' 48"W - 755.11 FT	P. I. #17	STA 141+81.62 N = 24186.91 E = 9876.11 I = 00° 05' 59"R COURSE FROM P.I. #17 TO P.I. #18 N01° 08' 45"W - 1000.12 FT
P. I. #5	STA 39+99.99 N = 14025.79 E = 9850.20 I = 00° 10' 57"R COURSE FROM P.I. #5 TO P.I. #6 N01° 17' 29"W - 447.32 FT	P. I. #18	STA 151+81.74 N = 25186.83 E = 9856.11 I = 00° 03' 28"R COURSE FROM P.I. #18 TO P.I. #19 N01° 05' 17"W - 999.93 FT
P. I. #6	STA 44+37.31 N = 14463.00 E = 9840.12 I = 18° 48' 31"R COURSE FROM P.I. #6 TO P.I. #7 N18° 00' 03"E - 839.08 FT	P. I. #19	STA 161+81.67 N = 26186.58 E = 9837.12 I = 00° 04' 49"L COURSE FROM P.I. #19 TO P.I. #20 N01° 10' 07"W - 700.23 FT
P. I. #7	STA 52+95.33 N = 15286.01 E = 10099.42 I = 19° 14' 28"L COURSE FROM P.I. #7 TO P.I. #8 N01° 42' 39"W - 618.67 FT	P. I. #20	STA 168+81.90 N = 26886.66 E = 9822.84 I = 00° 08' 56"R COURSE FROM P.I. #20 TO P.I. #21 N01° 01' 11"W - 1200.37 FT
P. I. #8	STA 58+95.53 N = 15889.41 E = 10080.95 I = 00° 04' 58"R COURSE FROM P.I. #8 TO P.I. #9 N01° 35' 27"W - 1285.93 FT	P. I. #21	STA 180+82.27 N = 28086.84 E = 9801.48 I = 00° 07' 37"R COURSE FROM P.I. #21 TO P.I. #22 N00° 53' 34"W - 1000.04 FT
P. I. #9	STA 71+81.46 N = 17188.81 E = 10044.65 I = 00° 05' 44"L COURSE FROM P.I. #9 TO P.I. #10 N01° 41' 10"W - 774.16 FT	P. I. #22	STA 190+82.31 N = 29086.76 E = 9785.90 I = 00° 02' 17"R COURSE FROM P.I. #22 TO P.I. #23 N00° 51' 17"W - 1200.03 FT
P. I. #10	STA 79+55.62 N = 17962.63 E = 10021.87 I = 00° 05' 09"R COURSE FROM P.I. #10 TO P.I. #11 N01° 36' 01"W - 1025.93 FT	P. I. #23	STA 202+82.34 N = 30286.66 E = 9768.00 I = 00° 02' 34"L COURSE FROM P.I. #23 TO P.I. #24 N00° 53' 51"W - 199.83 FT
P. I. #11	STA 89+81.55 N = 18986.16 E = 9993.22 I = 00° 16' 06"R COURSE FROM P.I. #11 TO P.I. #12 N01° 19' 54"W - 1647.44 FT	P. I. #24	STA 204+82.18 N = 30486.47 E = 9764.87 I = 00° 09' 04"L COURSE FROM P.I. #24 TO P.I. #25 N01° 02' 55"W - 697.88 FT
P. I. #12	STA 106+28.98 N = 20635.15 E = 9954.93 I = 00° 02' 32"L COURSE FROM P.I. #12 TO P.I. #13 N01° 22' 26"W - 1052.65 FT	P. I. #25	STA 211+80.06 N = 31184.23 E = 9752.10
P. I. #13	STA 116+81.64 N = 21687.50 E = 9929.69 I = 00° 03' 53"R COURSE FROM P.I. #13 TO P.I. #14 N01° 18' 34"W - 799.98 FT		

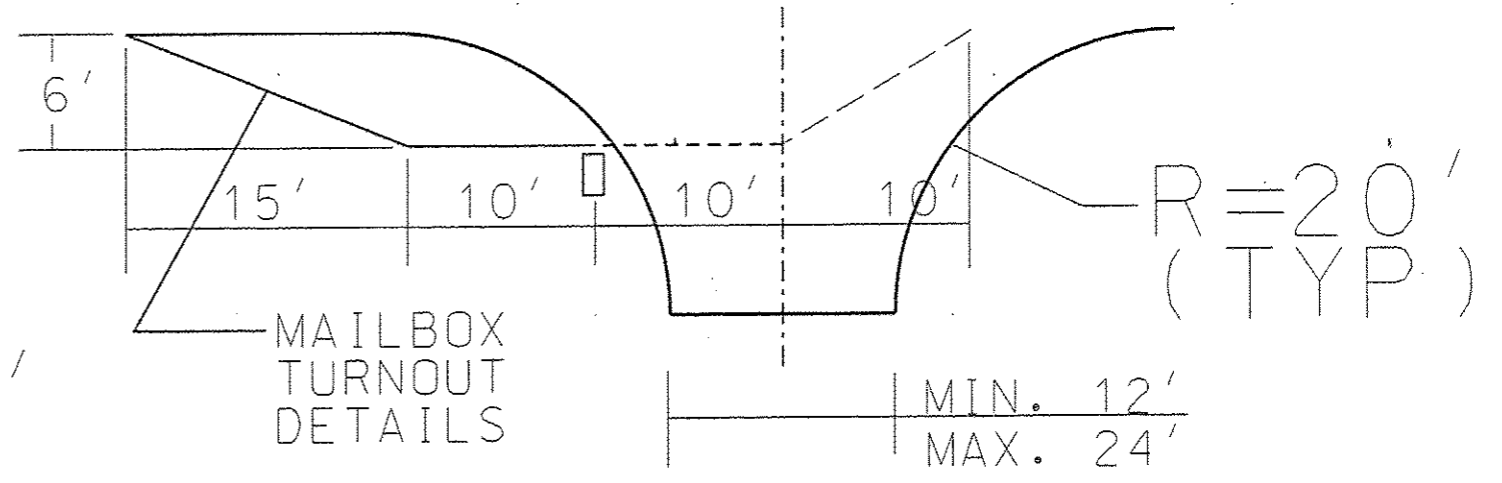
PROPOSED HORIZONTAL CURVES

P. I. #6	STA 44+37.31 N = 14463.00 E = 9840.12 I = 18° 48' 31"R
CIRCULAR	Da = 03° 30' 00" Dc = 03° 30' 02" T = 271.13 R = 1637.02 L = 537.39 C = 534.98 E = 22.30 M = 22.00
P. I. #7	STA 52+95.33 N = 15286.01 E = 10099.42 I = 19° 14' 28"L
CIRCULAR	Da = 03° 30' 00" Dc = 03° 30' 02" T = 277.49 R = 1637.02 L = 549.75 C = 547.17 E = 23.35 M = 23.02

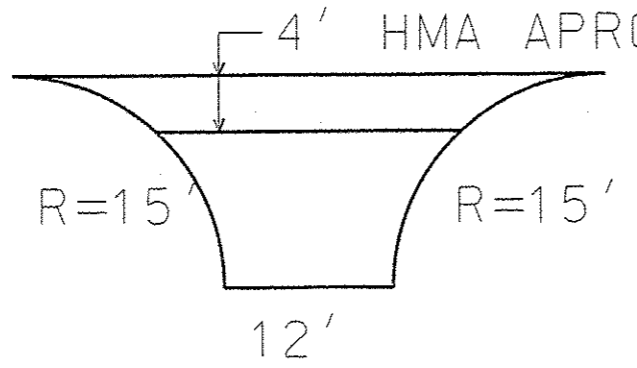
F.E. TY-1 20' THROAT, 8" GRAVEL W/ 4' X 3.5" HMA APRON



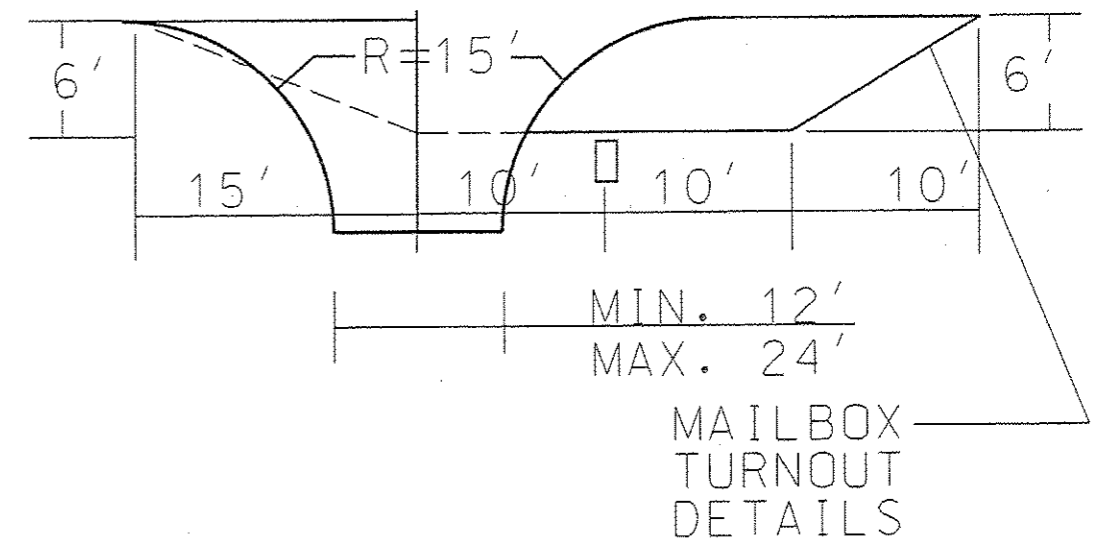
P.E. TY-1 VARIABLE THROAT, 8" GRAVEL W/ 3.5" HMA TO R.O.W.



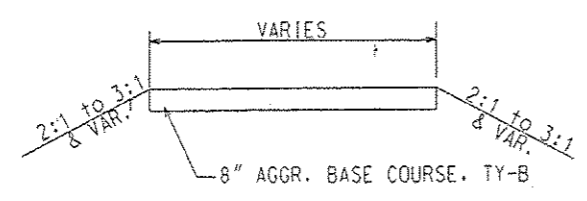
F.E. TY-2, 12' THROAT, 8" GRAVEL W/ 4' X 3.5" HMA APRON



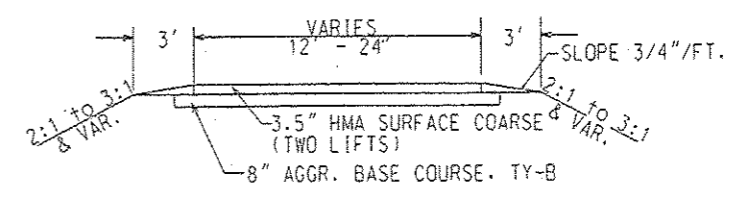
P.E. TY-2 VARIABLE THROAT, 8" GRAVEL W/ 3.5" HMA TO R.O.W.



EXISTING TYPICAL SECTION



TYPICAL SECTION SIDE ROAD AND PRIVATE ENTRANCES



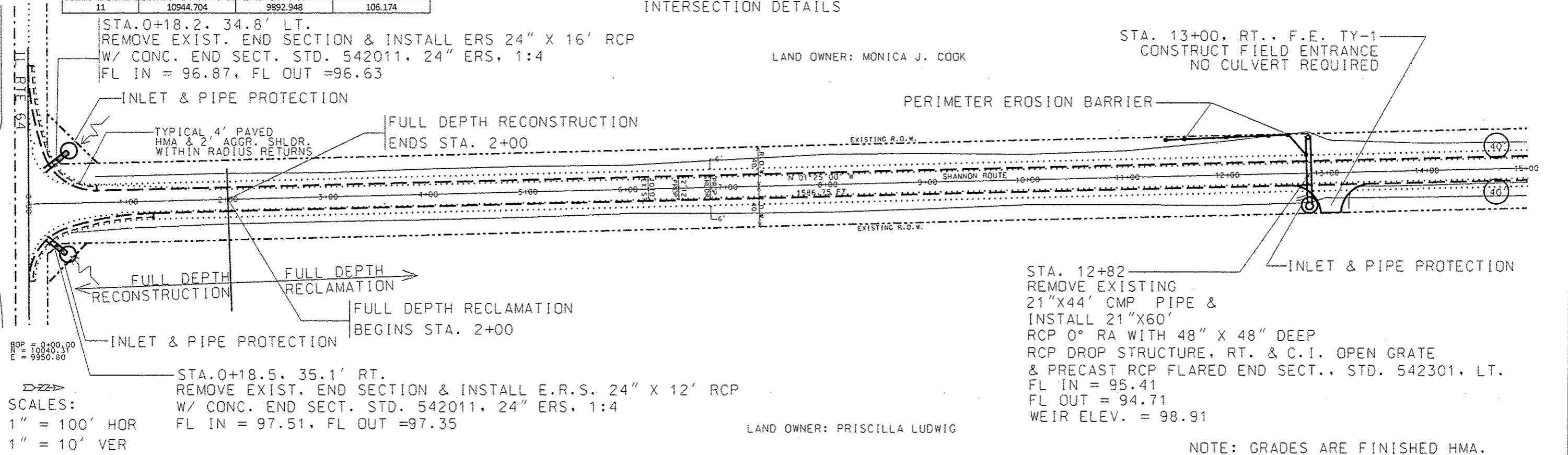
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	11-00092-00-PV	CARROLL	68	10

NORT/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174

SEE SHEET #26 FOR INTERSECTION DETAILS

LAND OWNER: MONICA J. COOK

STA. 13+00, RT., F.E. TY-1
CONSTRUCT FIELD ENTRANCE
NO CULVERT REQUIRED



BOP = 0+00.00
R = 10040.31
E = 9950.80

SCALES:
1" = 100' HOR
1" = 10' VER

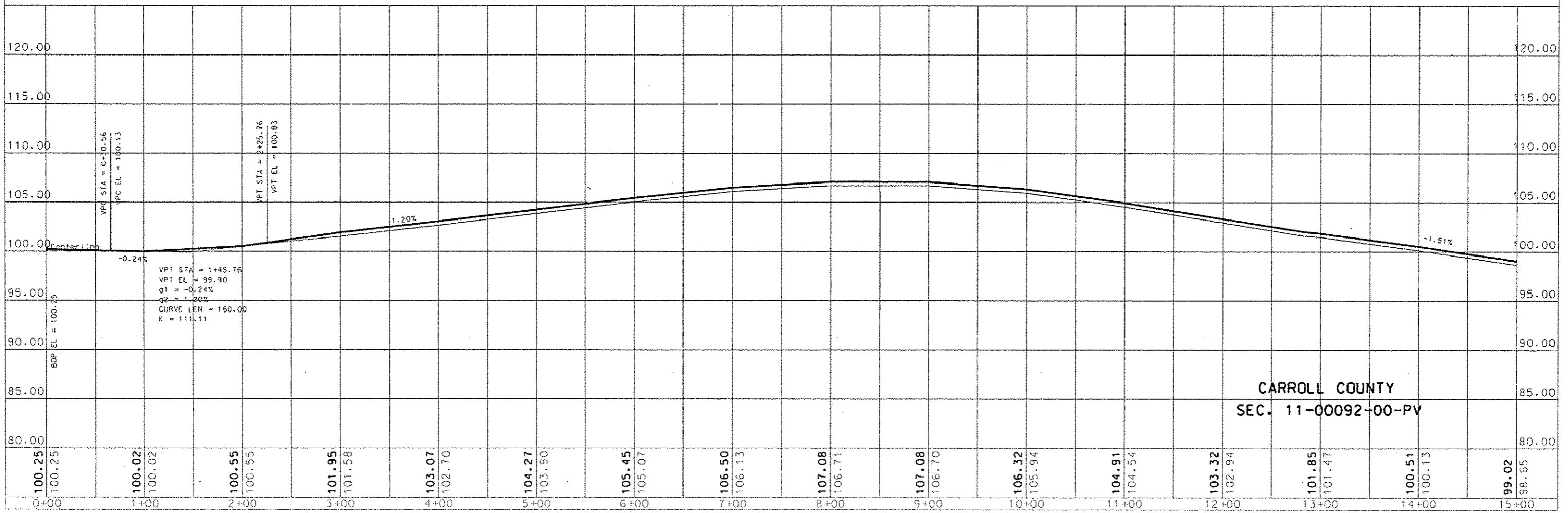
STA. 0+18.2, 34.8' LT.
REMOVE EXIST. END SECTION & INSTALL ERS 24" X 16' RCP
W/ CONC. END SECT. STD. 542011, 24" ERS, 1:4
FL IN = 96.87, FL OUT = 96.63

STA. 0+18.5, 35.1' RT.
REMOVE EXIST. END SECTION & INSTALL E.R.S. 24" X 12' RCP
W/ CONC. END SECT. STD. 542011, 24" ERS, 1:4
FL IN = 97.51, FL OUT = 97.35

STA. 12+82
REMOVE EXISTING
21" X 44' CMP PIPE &
INSTALL 21" X 60'
RCP 0° RA WITH 48" X 48" DEEP
RCP DROP STRUCTURE, RT. & C.I. OPEN GRATE
& PRECAST RCP FLARED END SECT., STD. 542301, LT.
FL IN = 95.41
FL OUT = 94.71
WEIR ELEV. = 98.91

LAND OWNER: PRISCILLA LUDWIG

NOTE: GRADES ARE FINISHED HMA.



CARROLL COUNTY
SEC. 11-00092-00-PV

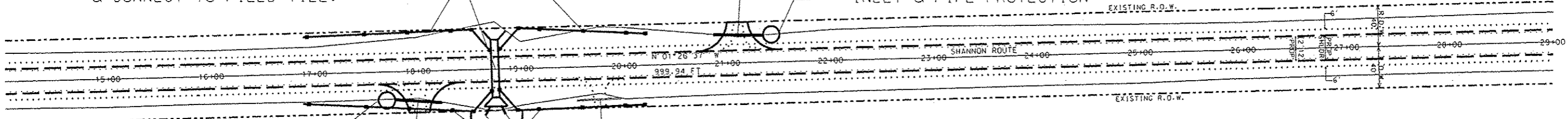
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	11-00092-00-PV	CARROLL	68	11

NORTH/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174

STA. 18+75
 REMOVE EXISTING
 6'X5.5'X46' REIN. CONC. BOX
 INSTALL 7'X 7'X 56'
 REINFORCED CONC. BOX
 W/ DROP STRUCTURE, RT.
 SEE SHEET #27 & 28 FOR DETAILS.
 INSTALL 2 8"X10' CMP DRAINS
 & CONNECT TO FIELD TILE.

PERIMETER EROSION BARRIER
 STA. 21+10, 28' LT., F.E. TY-1
 REMOVE EXISTING 15" X 26' CMP
 & INSTALL 15" X 46' CMP
 WITH FLARED END SECTIONS
 INLET & PIPE PROTECTION

PI Sta = 25+86.69
 N = 12626.20
 E = 9886.38
 I = 00°02'54"L



INLET & PIPE PROTECTION
 STA. 18+00, 30' RT., F.E. TY-1
 REMOVE EXISTING 15" X 26' CMP
 & INSTALL 15" X 44' CMP
 WITH FLARED END SECTIONS

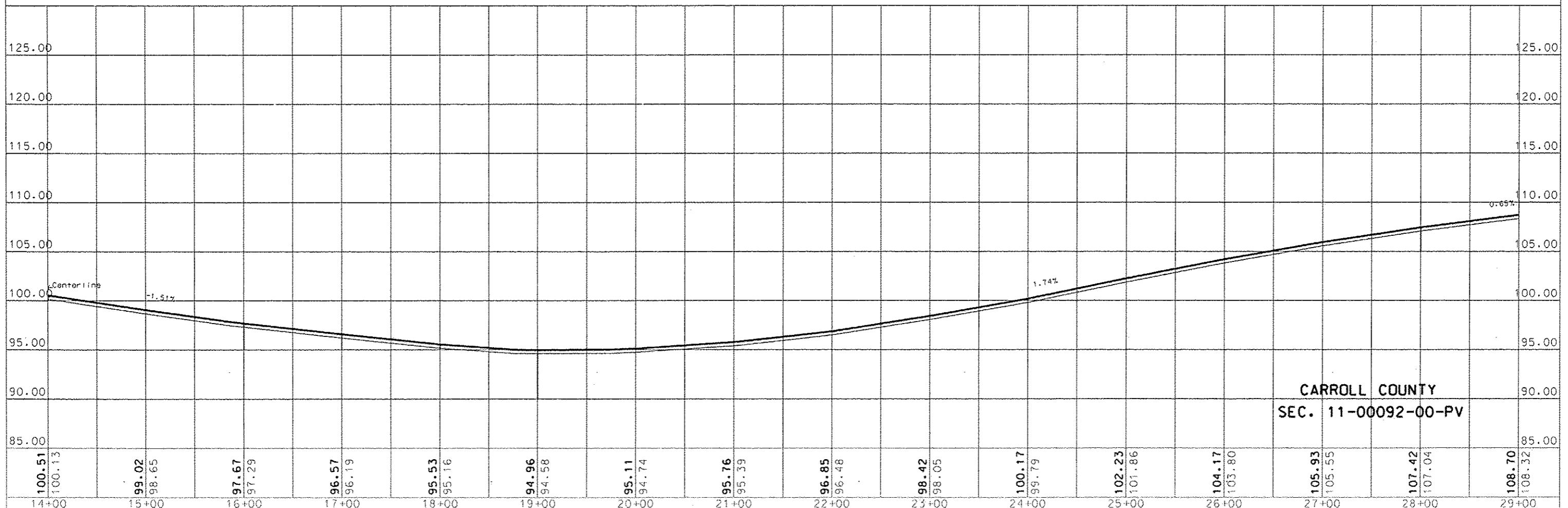
STA. 19+76, 32' RT.
 REMOVE EXISTING FIELD ENTRANCE
 & 15" X 28' CMP
 CONNECT 8" X 10' CMP TO EACH FIELD TILE
 & INSTALL THRU DROP STRUCTURE WALL
 PERIMETER EROSION BARRIER

TEMPORARY CONSTRUCTION
 EASEMENT, 20' X 50'

SCALES:
 1" = 100' HOR
 1" = 10' VER

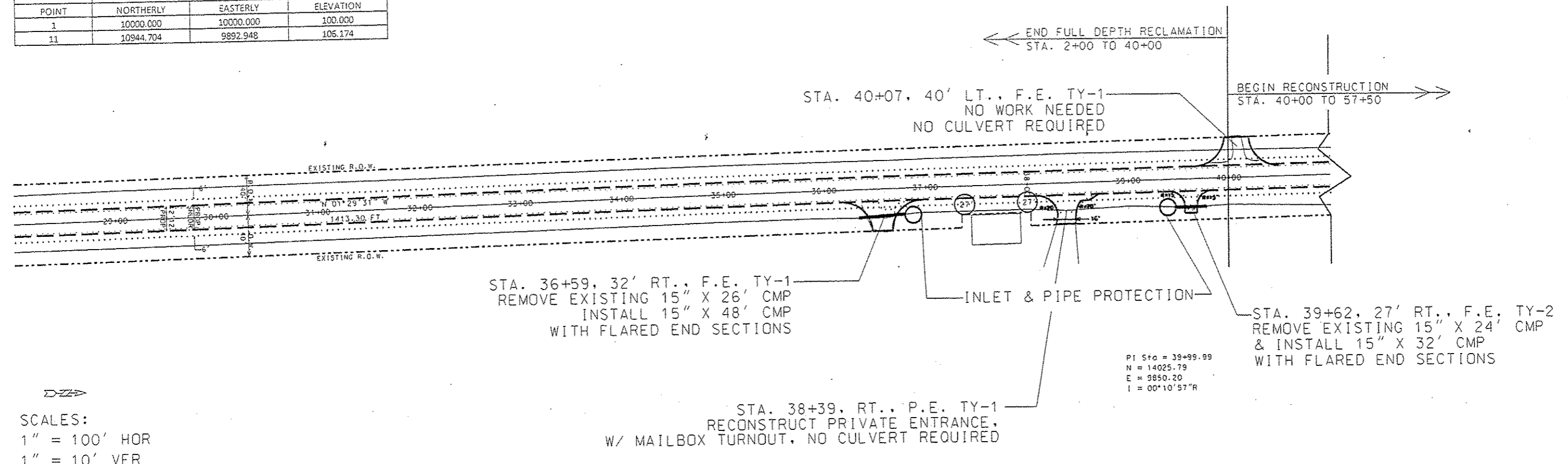
PI Sta = 15+86.75
 N = 11626.58
 E = 9911.57
 I = 00°01'37"L

LAND OWNER: PRISCILLA LUDWIG

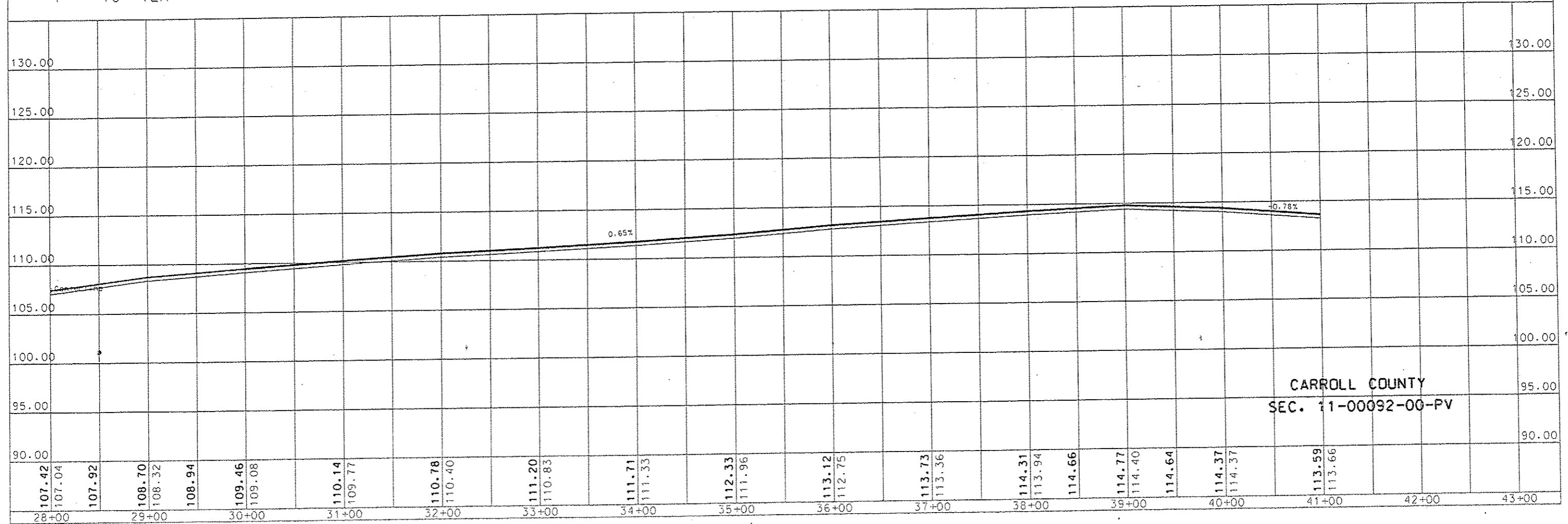


CARROLL COUNTY
 SEC. 11-00092-00-PV

NORTH/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174



SCALES:
 1" = 100' HOR
 1" = 10' VER



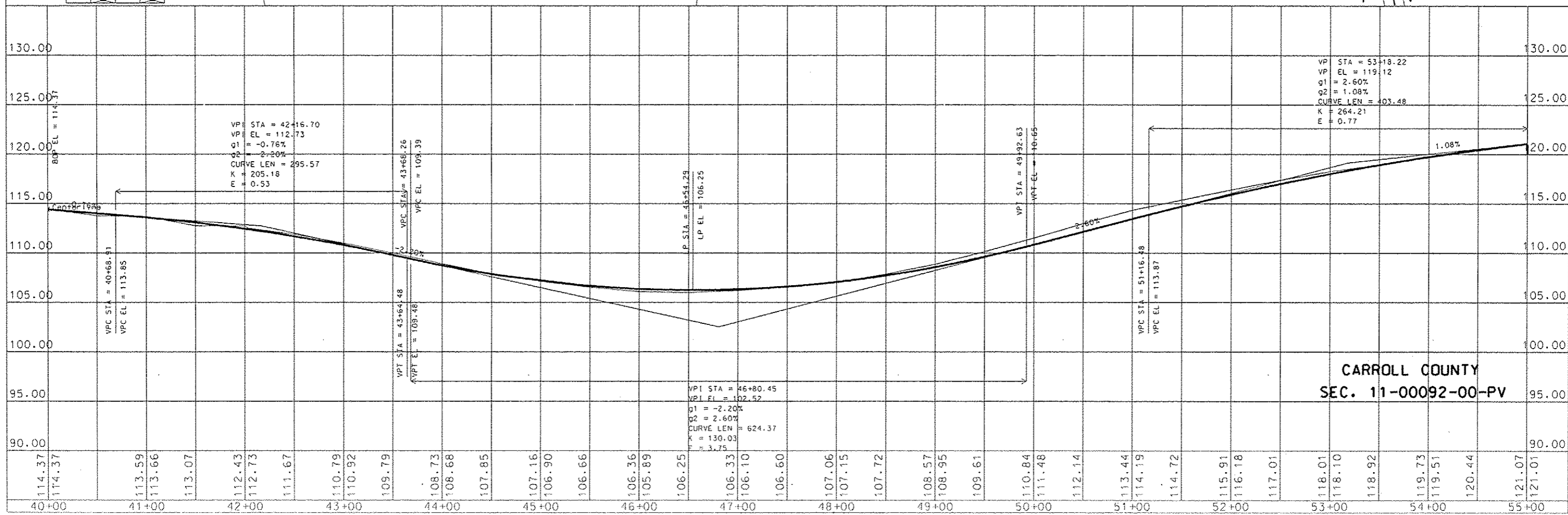
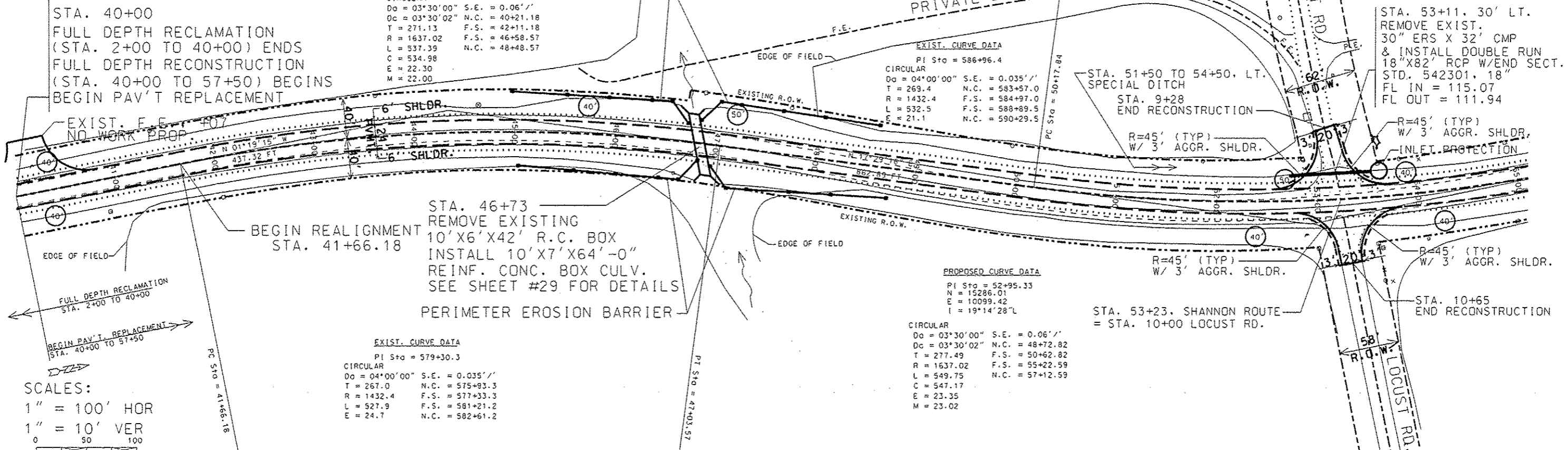
CARROLL COUNTY
 SEC. 11-00092-00-PV

NORT/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174

PROPOSED CURVE DATA

PI Sta = 44+37.31
 N = 14463.00
 E = 9840.12
 I = 18°48'31"R
 CIRCULAR
 Dc = 03°30'00" S.E. = 0.06'/'
 Dc = 03°30'02" N.C. = 40+21.18
 T = 271.13 F.S. = 42+11.18
 R = 1637.02 F.S. = 46+58.57
 L = 537.39 N.C. = 48+48.57
 C = 534.98
 E = 22.30
 M = 22.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	11-00092-00-PV	CARROLL	68	13

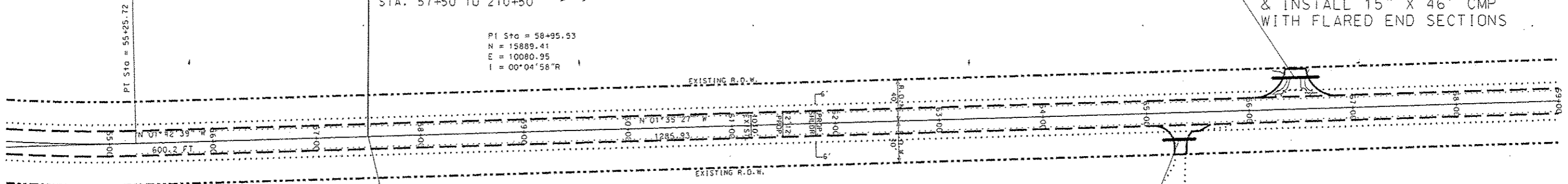


NORTH/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174

END PAV'T. REPLACEMENT
 STA. 40+00 TO 57+50
 FULL DEPTH RECLAMATION
 STA. 57+50 TO 210+50

PI Sta = 58+95.53
 N = 15889.41
 E = 10080.95
 I = 00°04'58"R

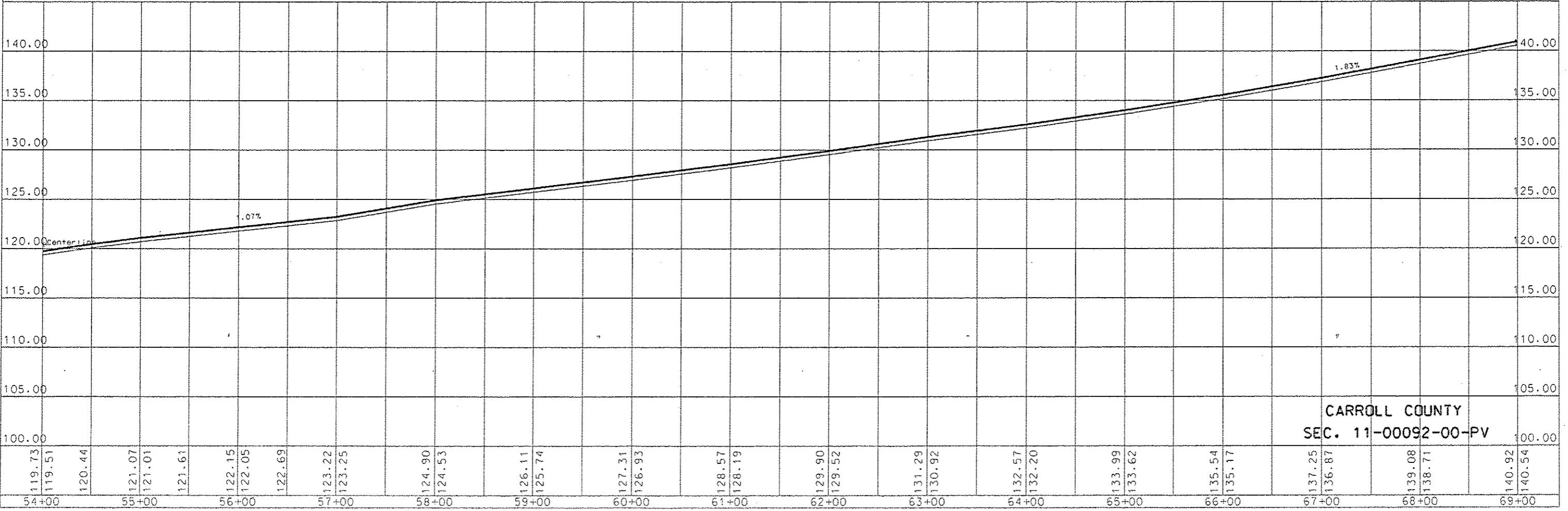
STA. 66+45. 30' LT., F.E. TY-1
 REMOVE EXISTING 15" X 28' CMP
 & INSTALL 15" X 46' CMP
 WITH FLARED END SECTIONS



STA. 57+50
 FULL DEPTH RECONSTRUCTION
 (STA. 40+00 TO 57+50) ENDS
 FULL DEPTH RECLAMATION
 (STA. 57+50 TO 210+50) BEGINS

STA. 65+32. 26' RT., P.E. TY-1
 REMOVE EXISTING 15" X 30' CMP
 & INSTALL 15" X 32' CMP
 WITH FLARED END SECTIONS

SCALES:
 1" = 100' HOR
 1" = 10' VER



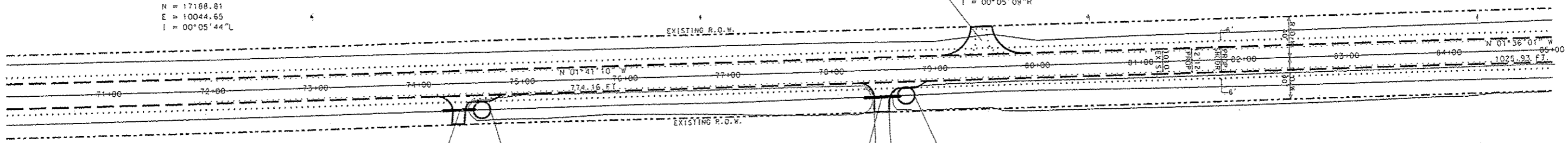
CARROLL COUNTY
 SEC. 11-00092-00-PV

NORT/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174

STA. 79+46, LT. F.E. TY-1
RECONSTRUCT FIELD ENTRANCE
NO CULVERT REQUIRED

PI Sta = 79+55.62
N = 17962.63
E = 10021.87
I = 00°05'09"R

PI Sta = 71+81.46
N = 17188.81
E = 10044.65
I = 00°05'44"L



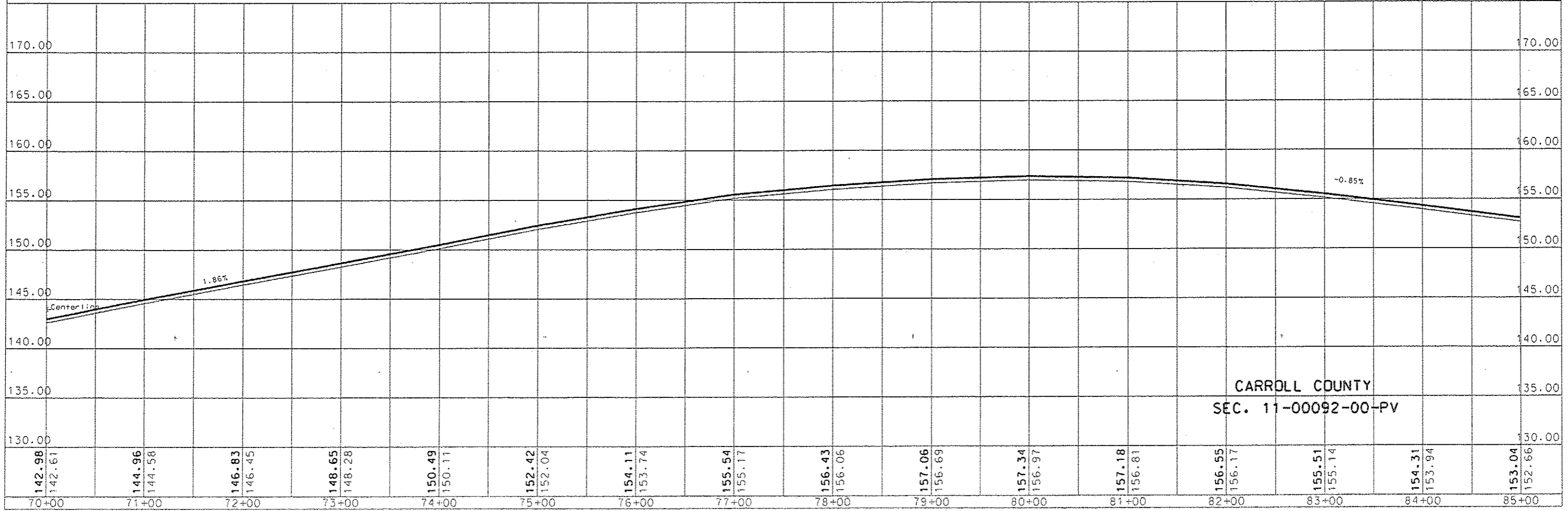
INLET & PIPE PROTECTION

INLET & PIPE PROTECTION

STA. 74+40, 26' RT., P.E. TY-2
REMOVE EXISTING 15" X 30' CMP
& INSTALL 15" X 32' CMP
WITH FLARED END SECTIONS

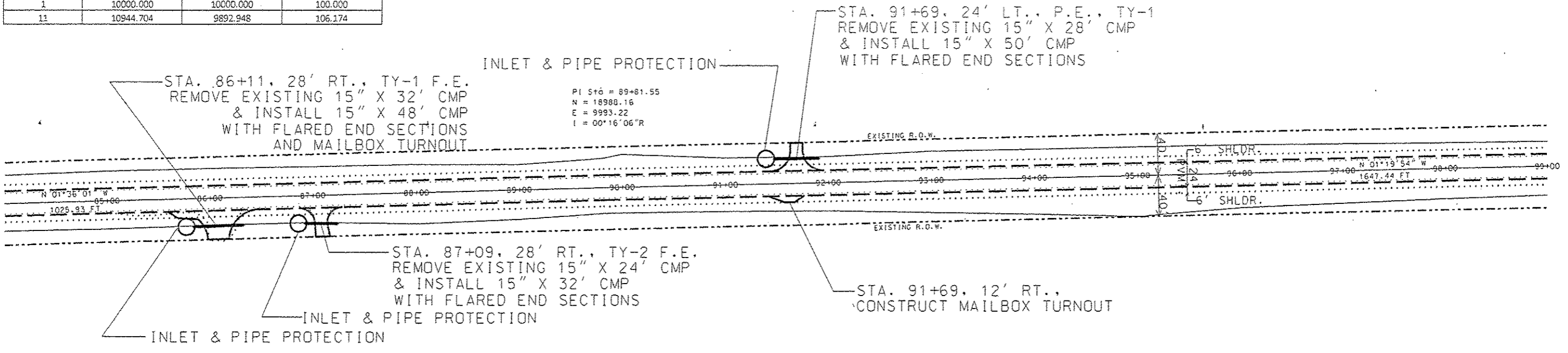
STA. 78+50, 26' RT., P.E. TY-2
REMOVE EXISTING 15" X 30' CMP
& INSTALL 15" X 36' CMP
WITH FLARED END SECTIONS

SCALES:
1" = 100' HOR
1" = 10' VER

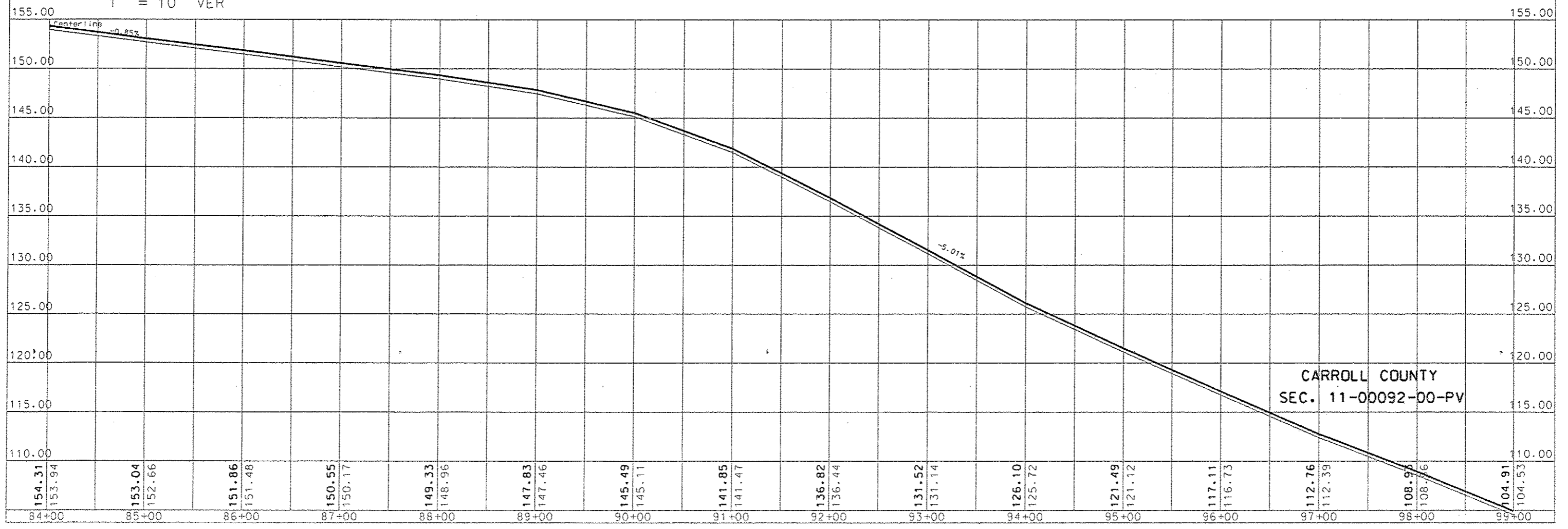


CARROLL COUNTY
SEC. 11-00092-00-PV

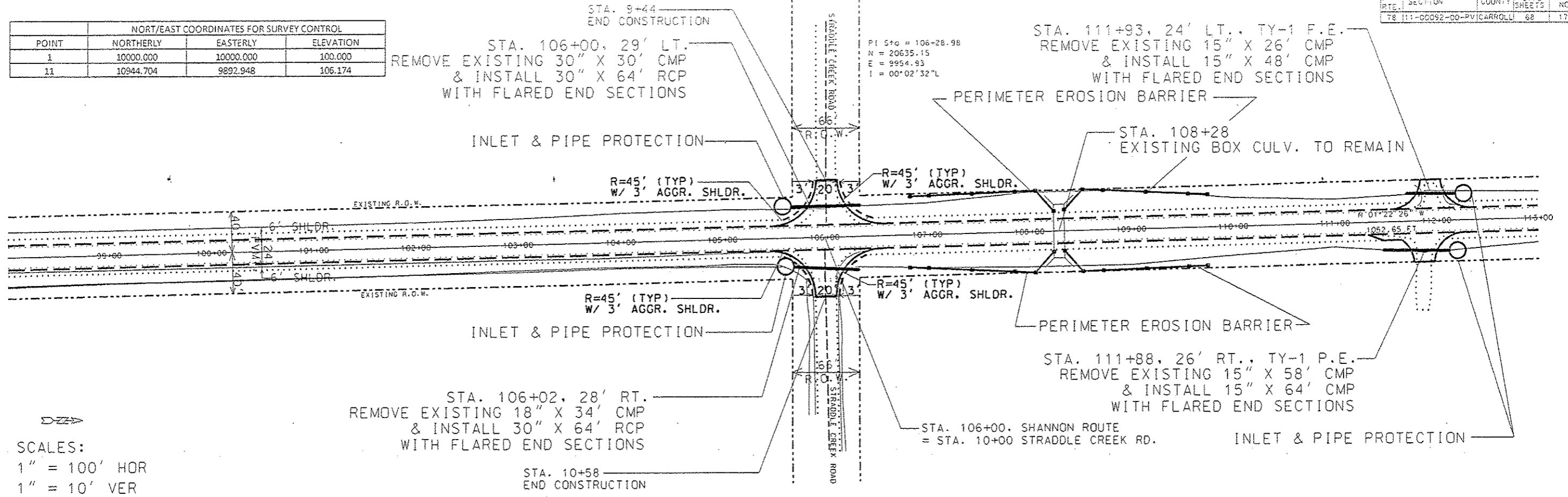
NORTH/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174



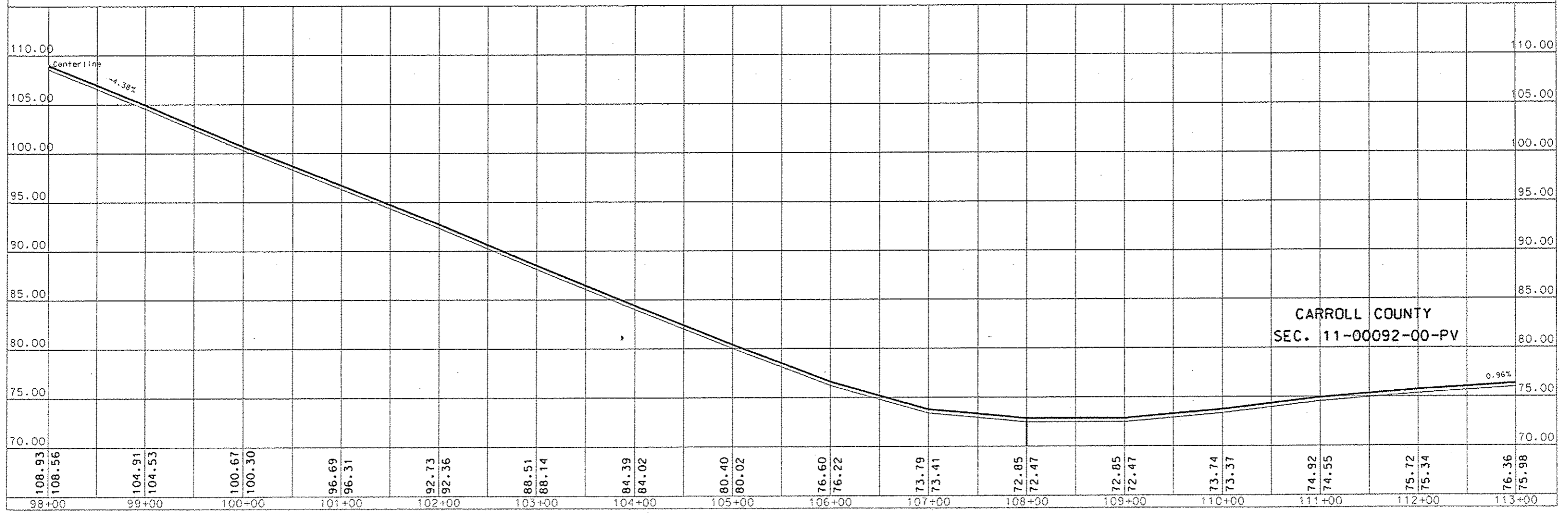
SCALES:
 1" = 100' HOR
 1" = 10' VER



NORT/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174



SCALES:
 1" = 100' HOR
 1" = 10' VER



CARROLL COUNTY
 SEC. 11-00092-00-PV

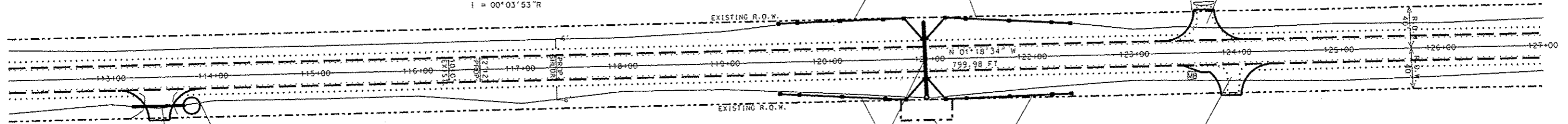
NORT/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174

LAND OWNER: JAMES RUTER

PI Sta = 116+81.64
 N = 21687.50
 E = 9929.69
 I = 00°03'53"R

PERIMETER EROSION BARRIER
 STA. 123+69, LT., TY-1 F.E.
 RE-CONSTRUCT P.E. ENTRANCE
 NO CULVERT REQUIRED

PI Sta = 124+81.62
 N = 22487.27
 E = 9911.41
 I = 00°02'06"R



INLET & PIPE PROTECTION
 STA. 113+46, 29' RT., TY-1 F.E.
 REMOVE EXISTING 21" X 32' CMP
 & INSTALL 24" X 48' CMP
 WITH FLARED END SECTIONS

STA. 121+00
 REMOVE EXISTING
 24" X 66' CMP &
 INSTALL 24" X 76'
 RCP W 48" X 6'
 DROP STRUCTURE
 & C.I. OPEN GRATE, RT.
 FL IN = 70.94
 FL OUT = 70.20
 WEIR ELEV. = 76.44

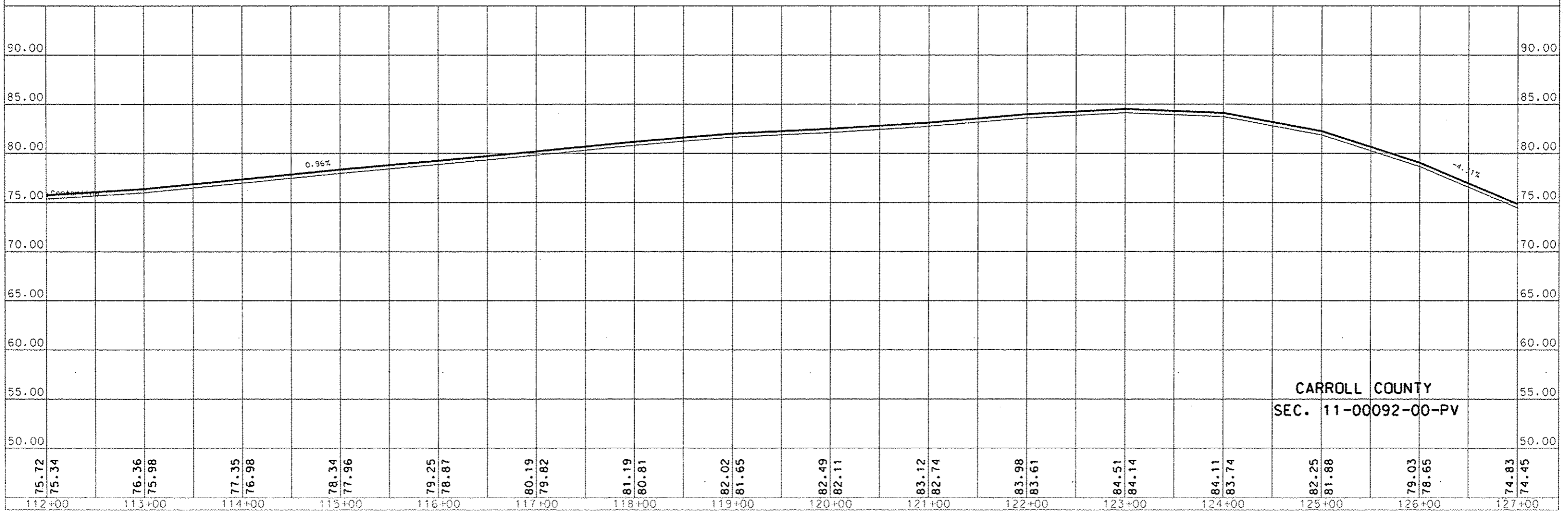
STA. 123+97, RT., CONSTRUCT
 TY-1 F.E. W/M.B. TURNOUT
 NO CULVERT REQUIRED

TEMPORARY CONSTRUCTION
 EASEMENT, 20' X 50'

PERIMETER EROSION BARRIER

LAND OWNER: BRIAN SCHOENY

SCALES:
 1" = 100' HOR
 1" = 10' VER



CARROLL COUNTY
 SEC. 11-00092-00-PV

NORTH/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174

PI Sta = 135+81.89
 N = 23587.12
 E = 9889.15
 I = 00°10'55"L

STA. 131+03. 32' LT., TY-1 F.E.
 REMOVE EXISTING 21" X 32' CMP
 & INSTALL 24" X 48' CMP
 WITH FLARED END SECTIONS

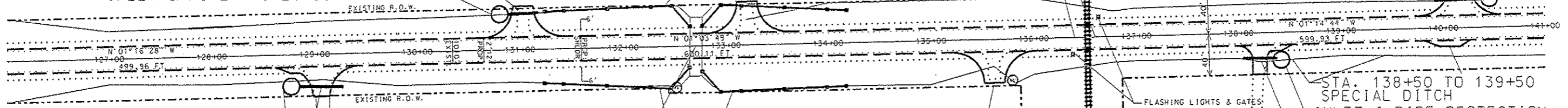
RR CROSSING: STA. 136+47 TO 136+54
 CROSSING SURFACE TO BE WIDENED AND RENEWED
 FULL WIDTH OF NEW ROADWAY BY R.R. CO.
 CROSSING PROTECTION DEVICES TO BE REPLACED BY R.R. CO.
 TO PROVIDE CROSSING WIDTH CONSISTANT W/ PROP. ROADWAY IMPROVEMENT

INLET & PIPE PROTECTION

STA. 140+17. 29' LT., TY-1 F.E.
 REMOVE EXISTING 15" X 32' CMP
 & INSTALL 15" X 50' CMP
 WITH FLARED END SECTIONS

INLET & PIPE PROTECTION

STA. 133+21. 12' LT.
 CONSTRUCT TY-1 F.E.
 NO CULVERT REQUIRED



PI Sta = 129+81.58
 N = 22987.11
 E = 9900.29
 I = 00°12'39"R

STA. 135+61. 12' RT.
 CONSTRUCT TY-1 F.E.
 NO CULVERT REQUIRED

STA. 138+50 TO 139+50
 SPECIAL DITCH
 INLET & PIPE PROTECTION

INLET & PIPE PROTECTION
 STA. 129+07. 29' RT., TY-1 P.E.
 REMOVE EXISTING 15" X 32' CMP
 & INSTALL 15" X 48' CMP
 WITH FLARED END SECTIONS

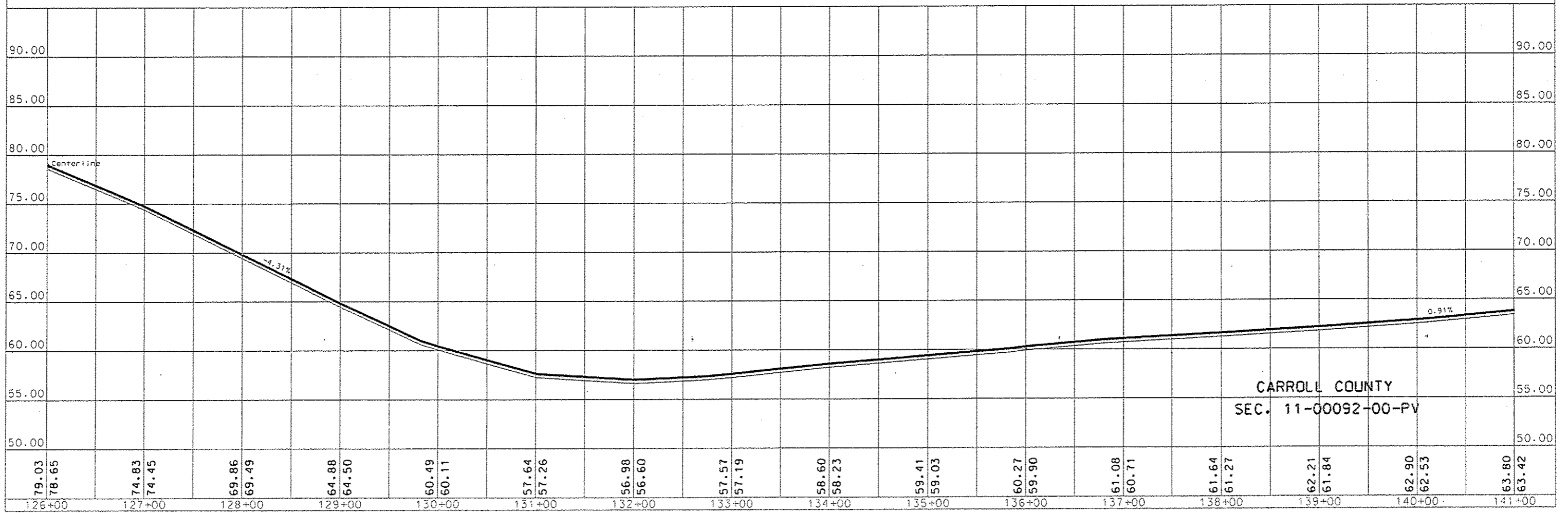
STA. 132+71
 EXISTING BOX CULVERT
 TO REMAIN IN PLACE
 (REPLACED IN 2012)

PERIMETER EROSION BARRIER

STA. 138+21. 29' RT., TY-1 P.E.
 REMOVE EXISTING 15" X 32' CMP
 & INSTALL 15" X 36' CMP
 WITH FLARED END SECTIONS
 AND MAILBOX TURNOUT

STA. 140+00. 12' RT.
 CONSTRUCT MAILBOX TURNOUT

SCALES:
 1" = 100' HOR
 1" = 10' VER



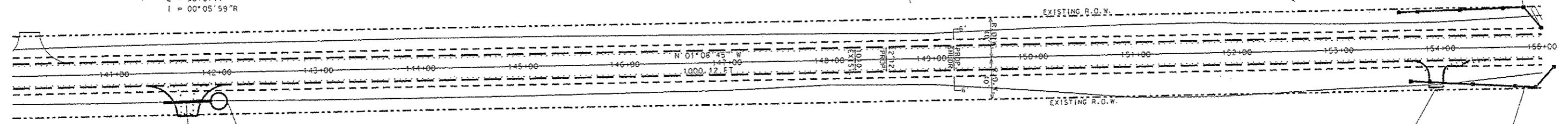
CARROLL COUNTY
 SEC. 11-00092-00-PV

NORTH/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174

PI Sta = 141+81.62
 N = 24186.91
 E = 9876.11
 I = 00°05'59"R

PERIMETER EROSION BARRIER

PI Sta = 151+81.74
 N = 25186.83
 E = 9856.11
 I = 00°03'28"R

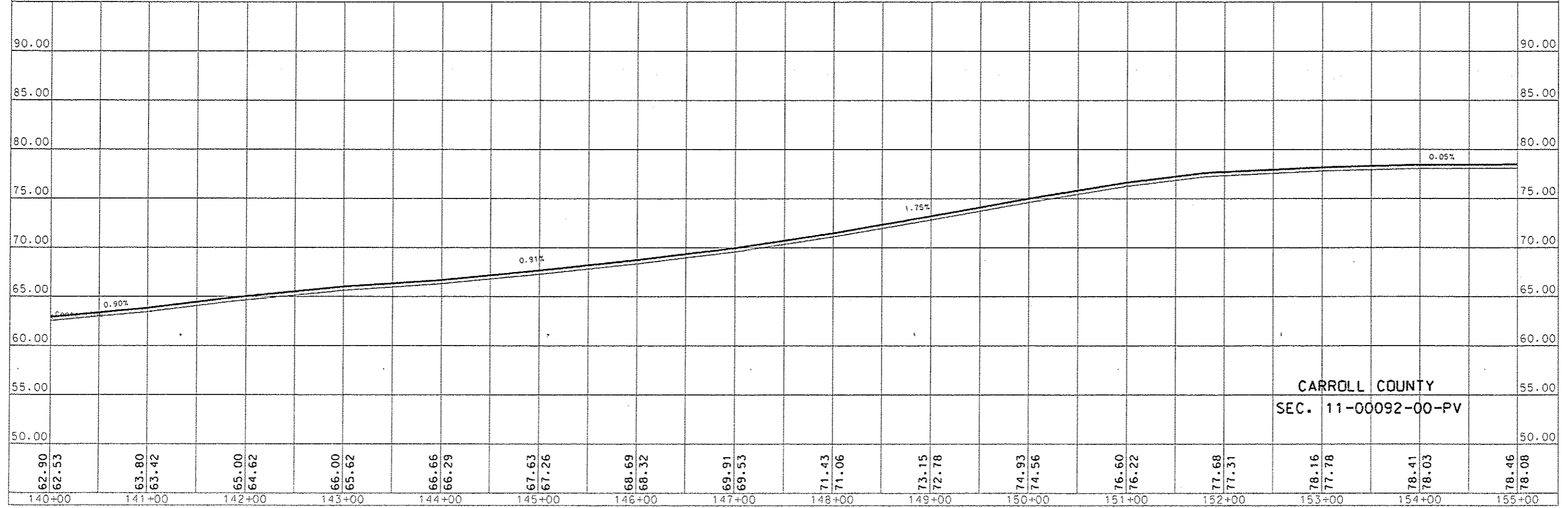


INLET & PIPE PROTECTION

STA. 141+73, 28' RT., F.E. TY-1
 REMOVE EXISTING 15" X 30' CMP
 & INSTALL 15" X 46' CMP
 WITH FLARED END SECTIONS

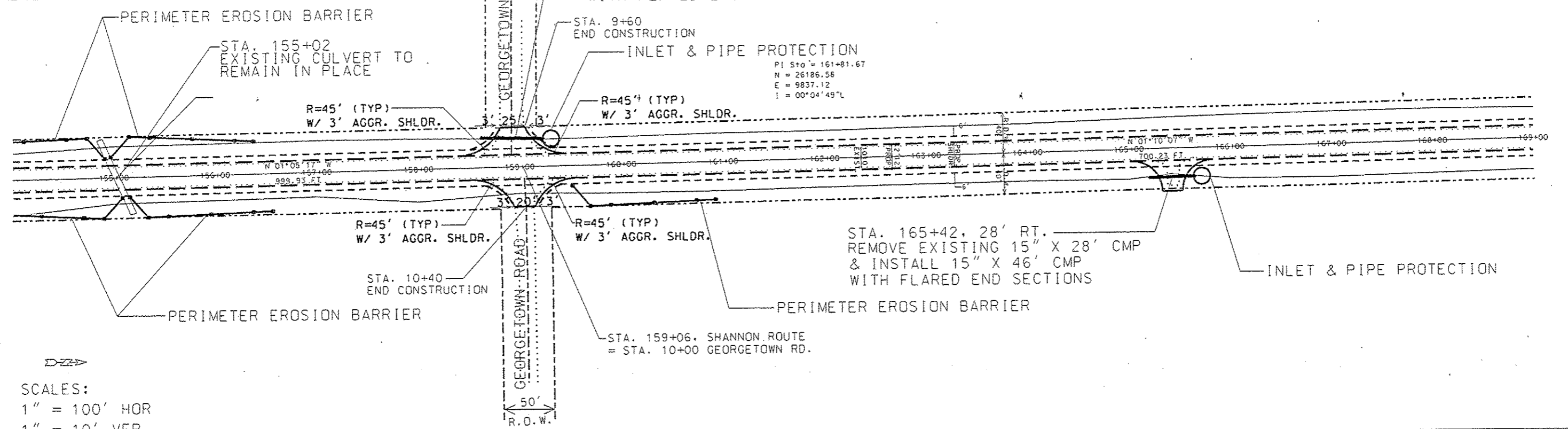
STA. 154+00, RT.
 CONSTRUCT TY-1 P.E.
 W/ MAILBOX TURNOUT
 NO CULVERT REQUIRED
 PERIMETER EROSION BARRIER

SCALES:
 1" = 100' HOR
 1" = 10' VER

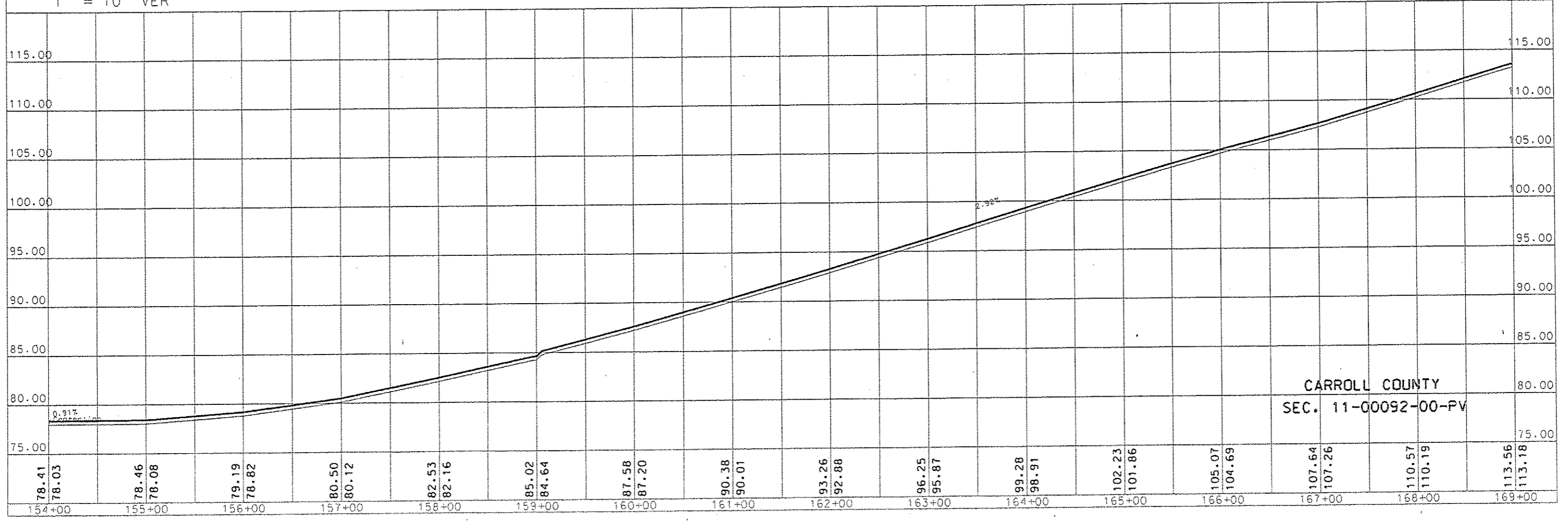


CARROLL COUNTY
 SEC. 11-00092-00-PV

NORT/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174



SCALES:
 1" = 100' HOR
 1" = 10' VER

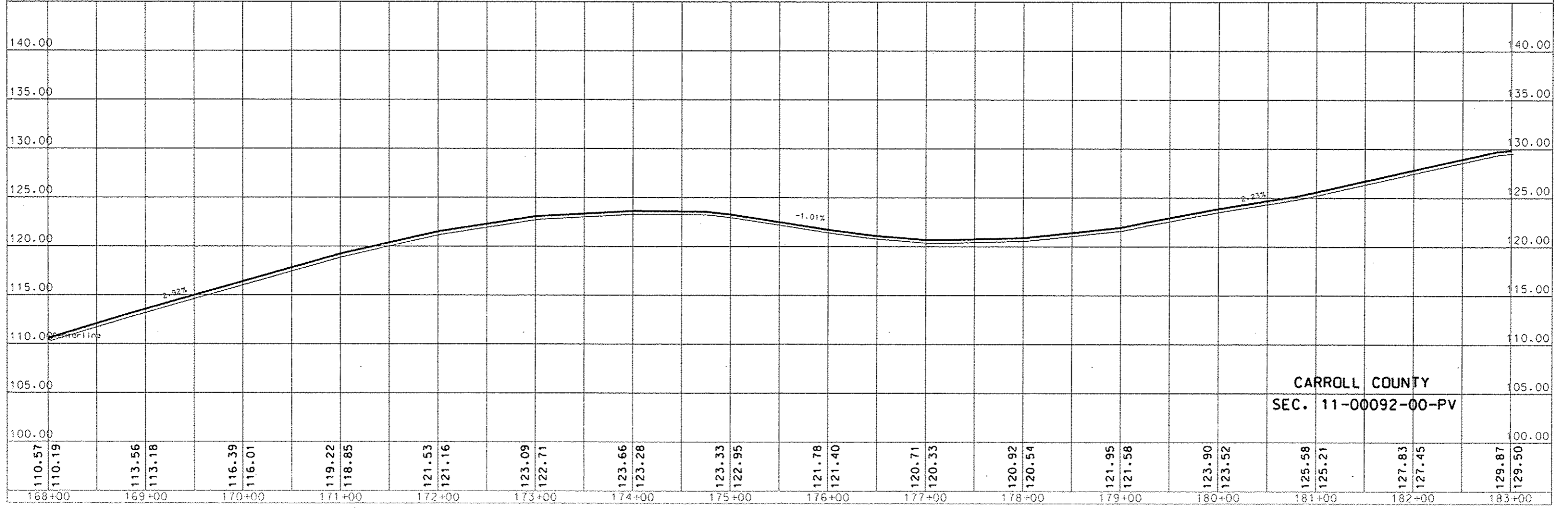
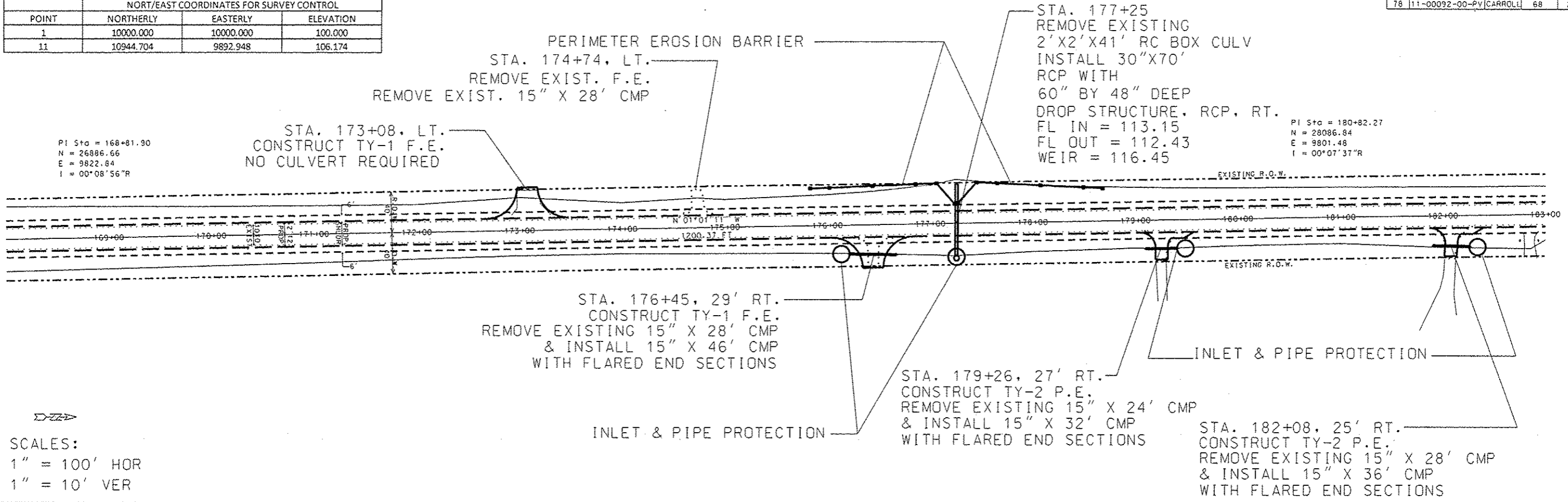


CARROLL COUNTY
 SEC. 11-00092-00-PV

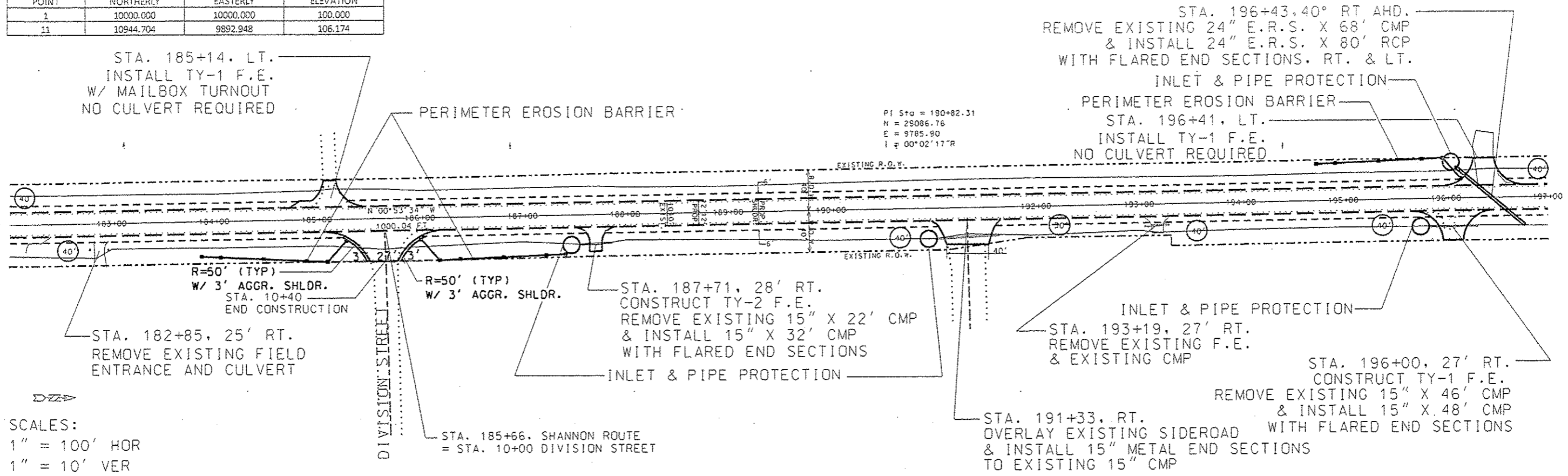
NORT/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174

PI Sta = 168+81.90
 N = 26886.66
 E = 9822.84
 I = 00°08'56"R

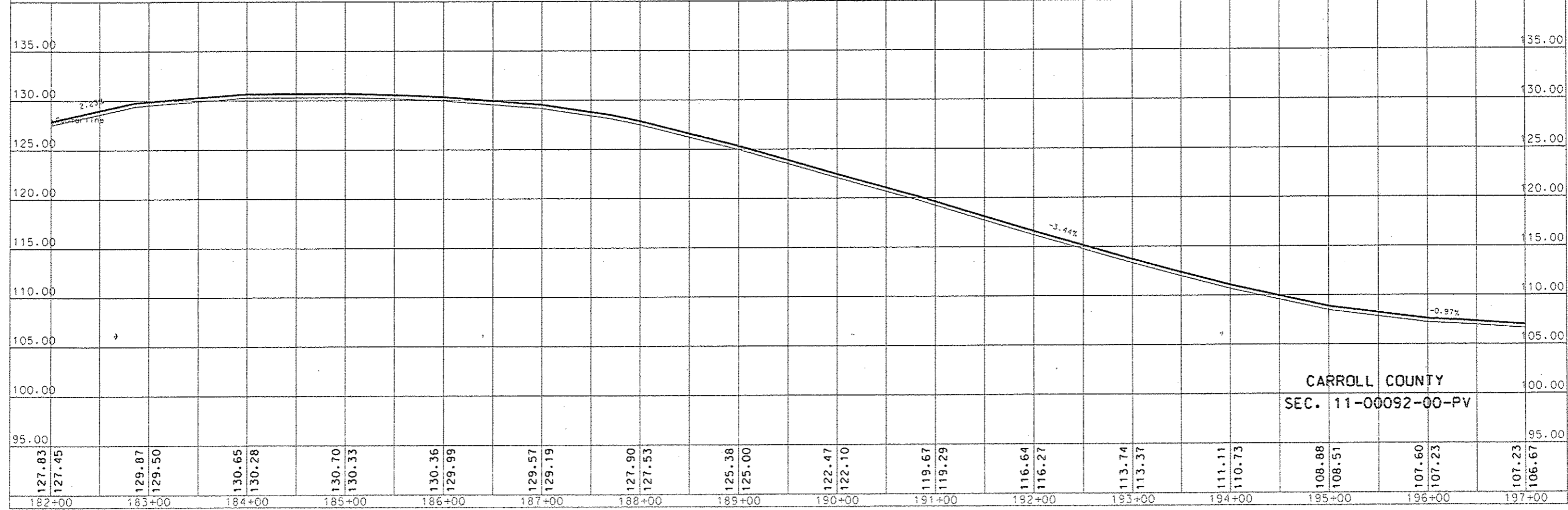
PI Sta = 180+82.27
 N = 28086.84
 E = 9801.48
 I = 00°07'37"R



NORTH/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
1	10000.000	10000.000	100.000
11	10944.704	9892.948	106.174



SCALES:
 1" = 100' HOR
 1" = 10' VER



CARROLL COUNTY
 SEC. 11-00092-00-PV

NORTH/EAST COORDINATES FOR SURVEY CONTROL			
POINT	NORTHERLY	EASTERLY	ELEVATION
30	29639.8584	9751.975812	106.35
31	30847.06934	9786.246492	93.55

INLET & PIPE PROTECTION

STA. 199+00 TO 201+00 - FINISH GRADE RECLAIMED MATERIAL TO PROPOSED GRADES

BEGIN PAV'T. REPLACEMENT
 STA. 201+00 TO 211+80

FULL DEPTH RECLAMATION
 STA. 57+50 TO 201+00

STA. 201+00 FULL DEPTH RECLAMATION
 (STA. 57+50 TO 201+00) ENDS
 FULL DEPTH RECONSTRUCTION
 (STA. 201+00 TO 211+80) BEGINS

STA. 205+45
 REMOVE EXISTING
 30" E.R.S. X 38' CMP &
 INSTALL DOUBLE RUN
 24" E.R.S. X 56'
 RCP CULVERT W/ 4 FLARED ENDS
 STANDARD 542301
 FL IN = 89.01
 FL OUT = 88.73

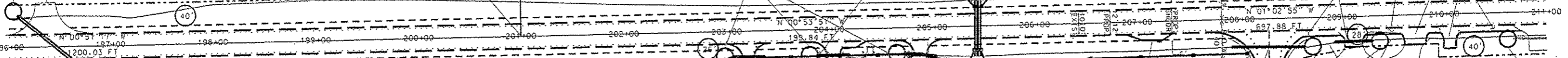
PI Sta = 202+82.34
 N = 30286.66
 E = 9768.00
 I = 00°02'34"L

STA. 203+80, 24' RT.
 INLET & PIPE PROTECTION
 REMOVE TREE

PERIMETER EROSION BARRIER
 STA. 209+72, RT. P.E. TY-1
 STA. 210+05, RT. P.E. TY-1
 RECONSTRUCT ENTRANCE
 NO CULVERTS REQUIRED

PAVED SHOULDER, SPECIAL

STA. 209+12, 24' RT.
 REMOVE EXISTING 12" X 24' CMP
 & INSTALL 12" X 38' CMP
 WITH FLARED END SECTIONS



PERIMETER EROSION BARRIER

STA. 203+22, RT. TY-1 P.E.
 REMOVE EXISTING 15" X 18' CMP
 NO CULVERT REQUIRED

PERIMETER EROSION BARRIER

STA. 207+15, 16' RT.
 CONSTRUCT MAILBOX TURNOUT

R=45
 (TYP.)
 W/3'
 AGGR.
 SHLDR.

DITCH, SPECIAL

INLET & PIPE PROTECTION
 STA. 10+40, ARCH STREET
 END CONSTRUCTION

STA. 197+20, 30' RT.
 INSTALL TY-1 F.E.
 NO CULVERT REQUIRED

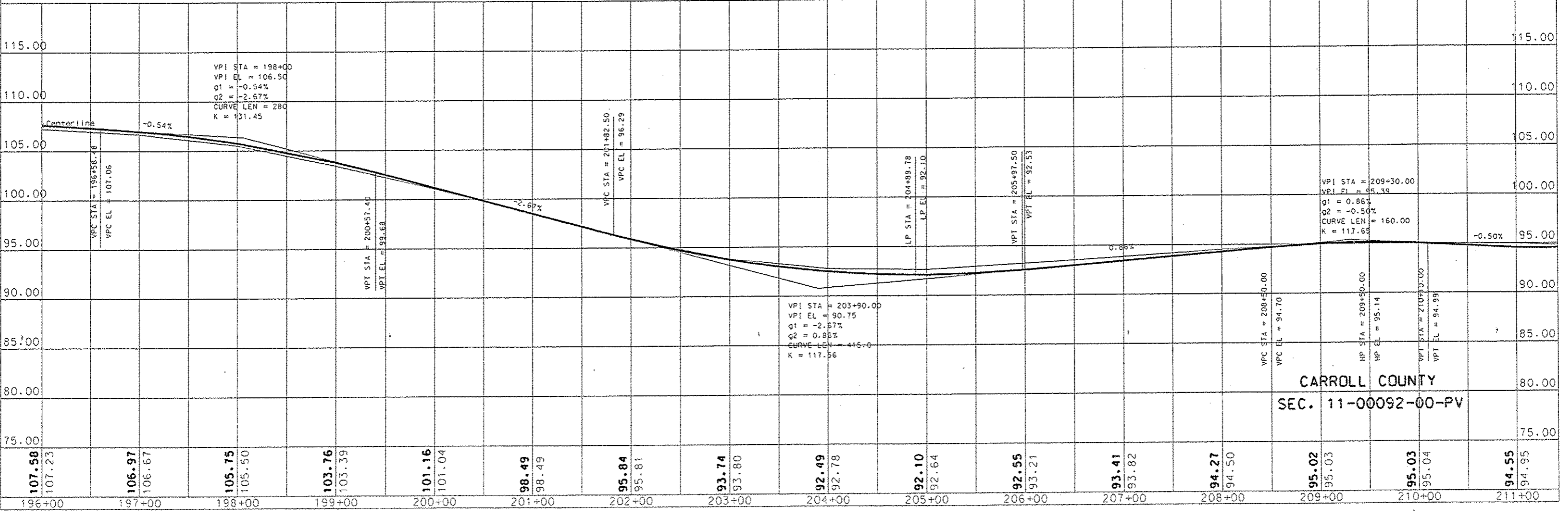
STA. 204+06, 23.2' RT.
 CONSTRUCT TY-1 P.E.
 REMOVE EXISTING 15" X 22' CMP &
 INSTALL 12" X 32' CMP W/ FLARED END
 SECTIONS & MAILBOX TURNOUT

STA. 208+29, 27' RT.
 REMOVE EXISTING 15" X 28' CMP
 & INSTALL 15" X 72' RCP
 WITH FLARED END SECTIONS

STA. 204+89, 26' RT. CONSTRUCT TY-2 F.E.
 REMOVE EXISTING 15" X 22' CMP
 & INSTALL 15" X 32' CMP
 WITH FLARED END SECTIONS

PI Sta = 204+82.18
 N = 30486.47
 E = 9764.87
 I = 00°09'04"L

SCALES:
 1" = 100' HOR
 1" = 10' VER

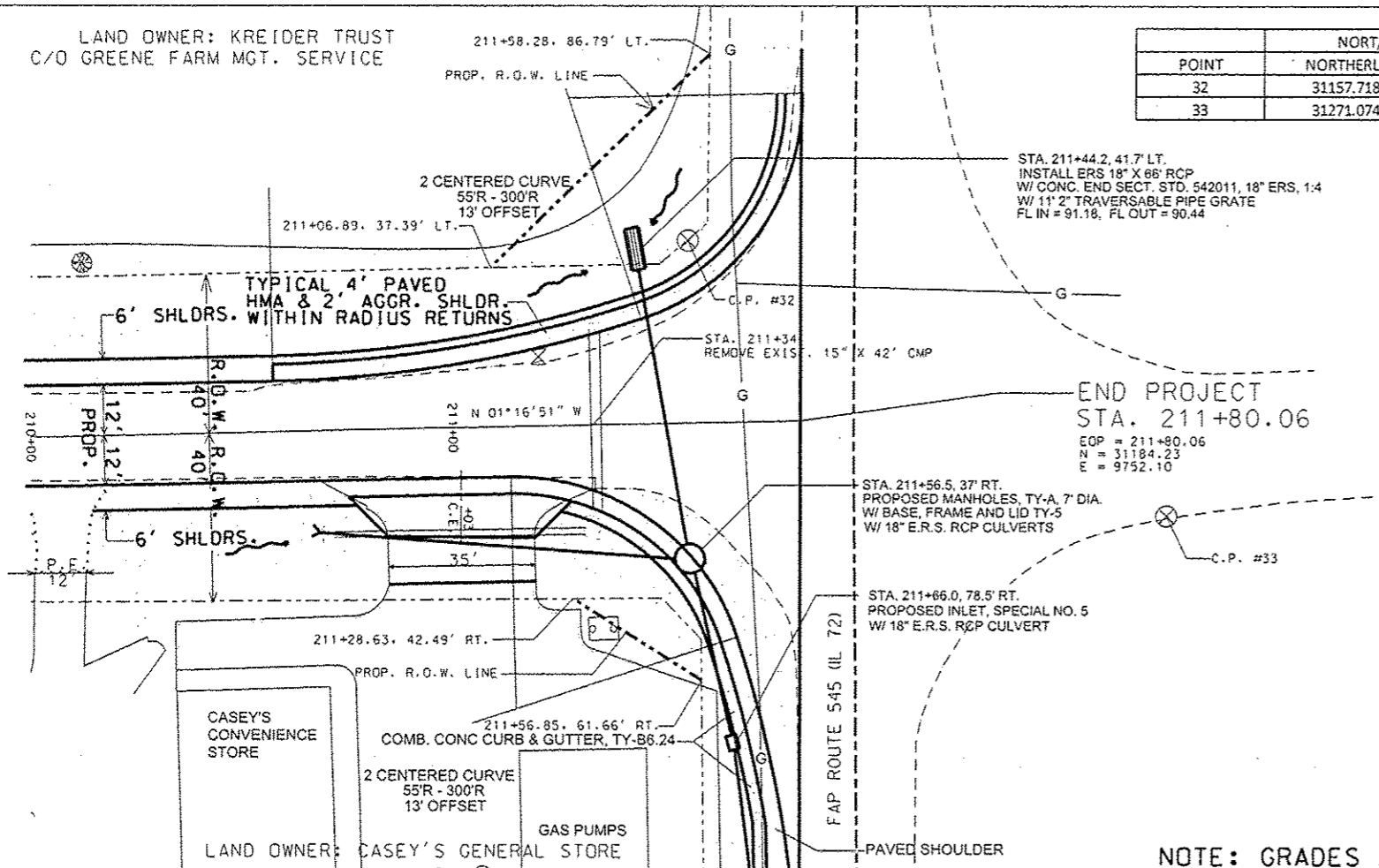


CARROLL COUNTY
 SEC. 11-00092-00-PV

LAND OWNER: KREIDER TRUST
C/O GREENE FARM MGT. SERVICE

POINT	NORT/EAST COORDINATES FOR SURVEY CONTROL		
	NORTHERLY	EASTERLY	ELEVATION
32	31157.718	9709.492	97.190
33	31271.074	9774.618	94.398

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	11-00092-00-PV	CARROLL	68	25

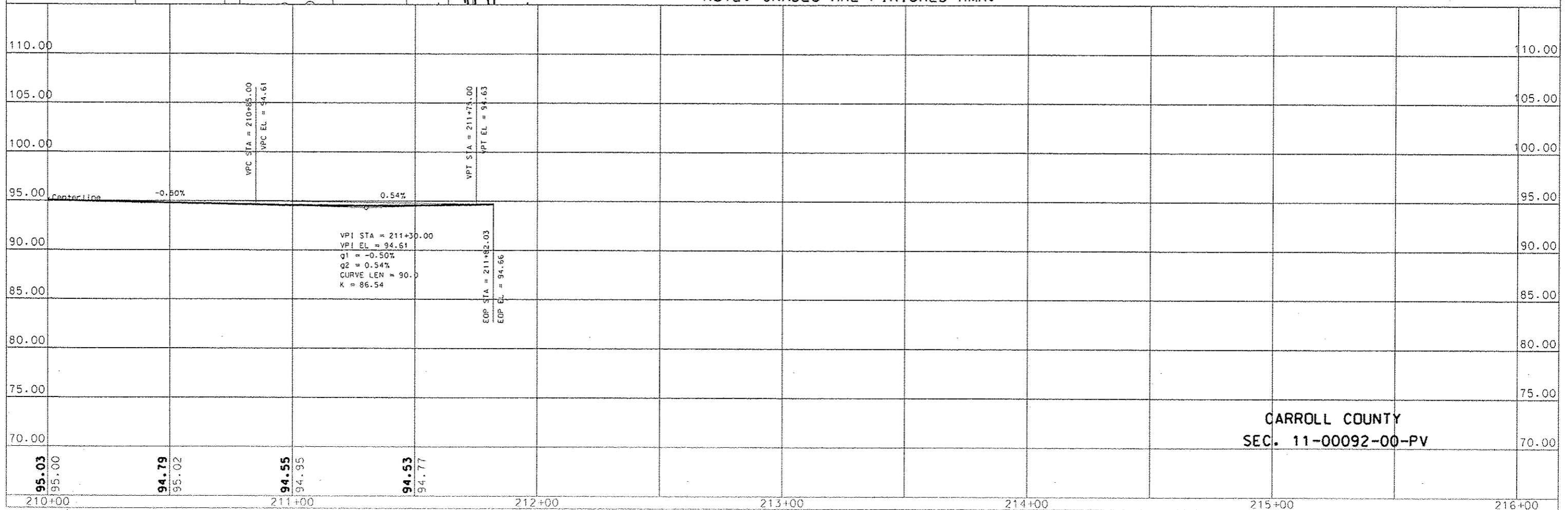


SEE INTERSECTION
DETAIL SHEET NO. 26

END PROJECT
STA. 211+80.06
EOP = 211+80.06
N = 31184.23
E = 9752.10

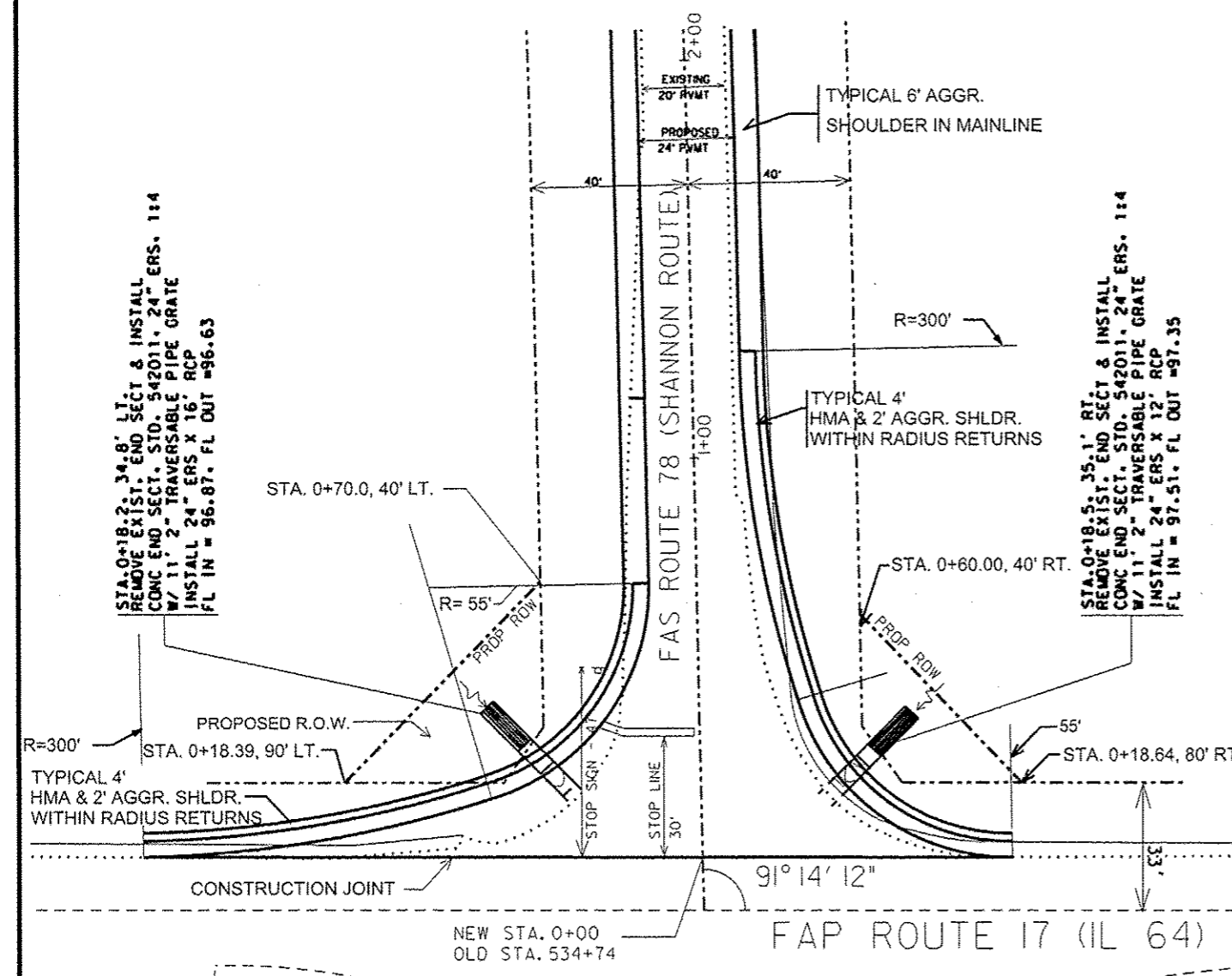
SCALES:
1" = 40' HOR
1" = 10' VER

NOTE: GRADES ARE FINISHED HMA.



CARROLL COUNTY
SEC. 11-00092-00-PV

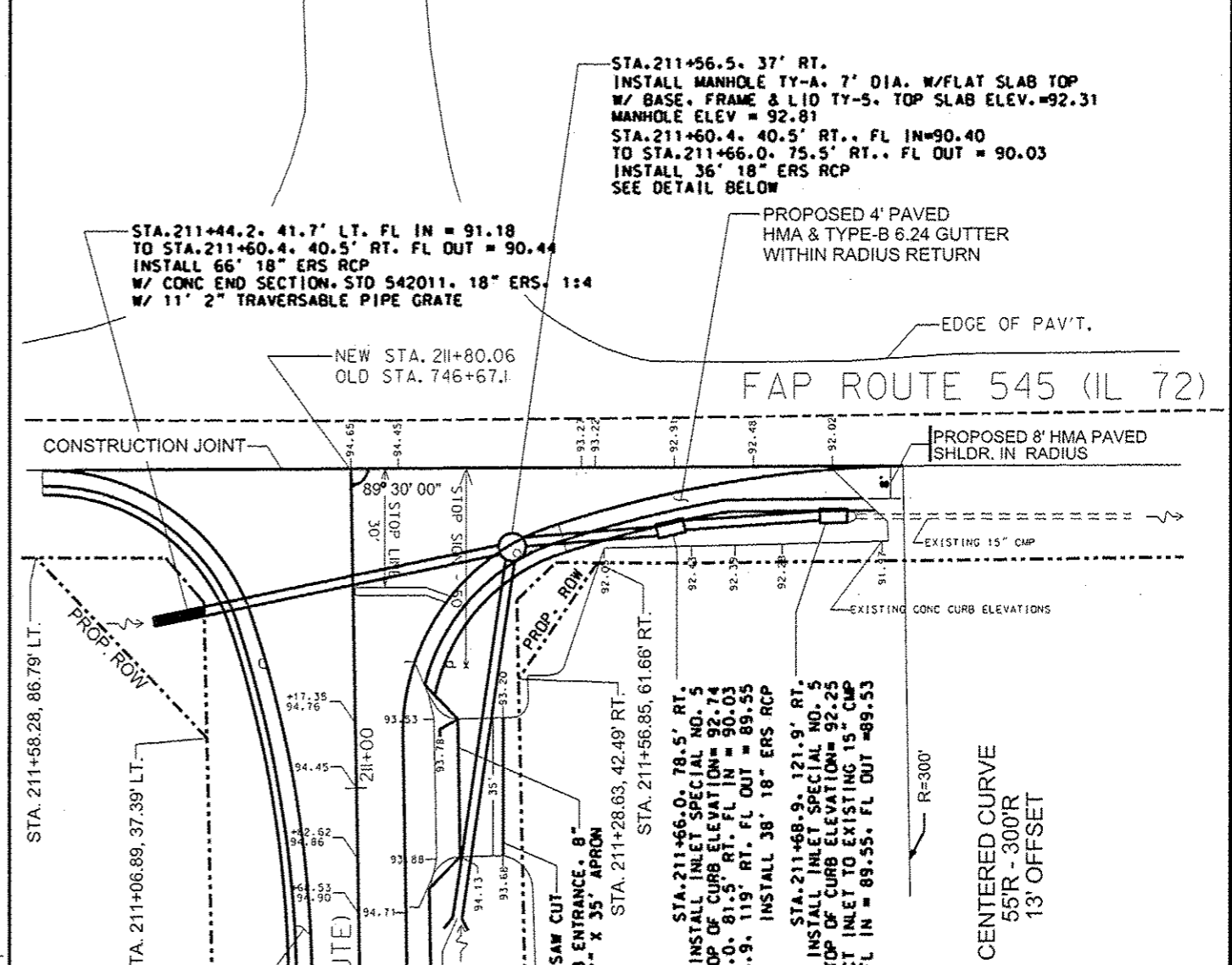
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	11-00092-00-PV	CARROLL	68	26



STA. 0+18.2, 34.8' LT. REMOVE EXIST. CONC END SECT. & INSTALL W/ 11' 2" TRAVERSABLE PIPE GRATE. INSTALL 24" ERS X 16' RCP. FL IN = 96.87. FL OUT = 96.63.

STA. 0+18.5, 35.1' RT. REMOVE EXIST. CONC END SECT. & INSTALL W/ 11' 2" TRAVERSABLE PIPE GRATE. INSTALL 24" ERS X 12' RCP. FL IN = 97.51. FL OUT = 97.35.

SCALE: 1" = 40'



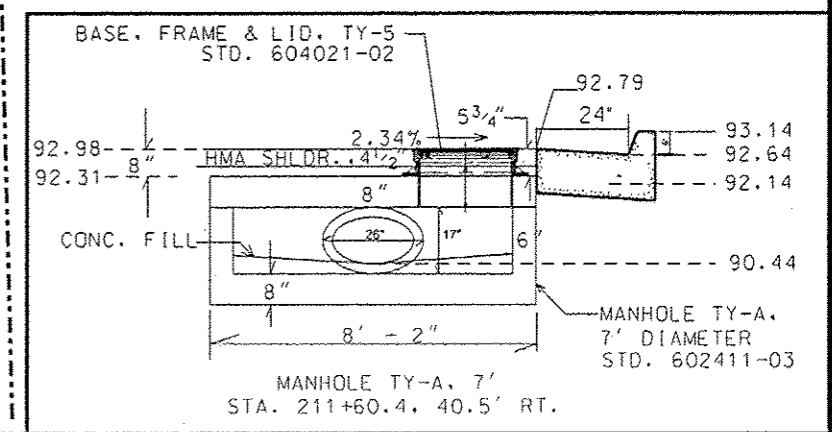
STA. 211+44.2, 41.7' LT. FL IN = 91.18 TO STA. 211+60.4, 40.5' RT. FL OUT = 90.44. INSTALL 66' 18" ERS RCP W/ CONC END SECTION. STD. 542011. 18" ERS. 1:4 W/ 11' 2" TRAVERSABLE PIPE GRATE.

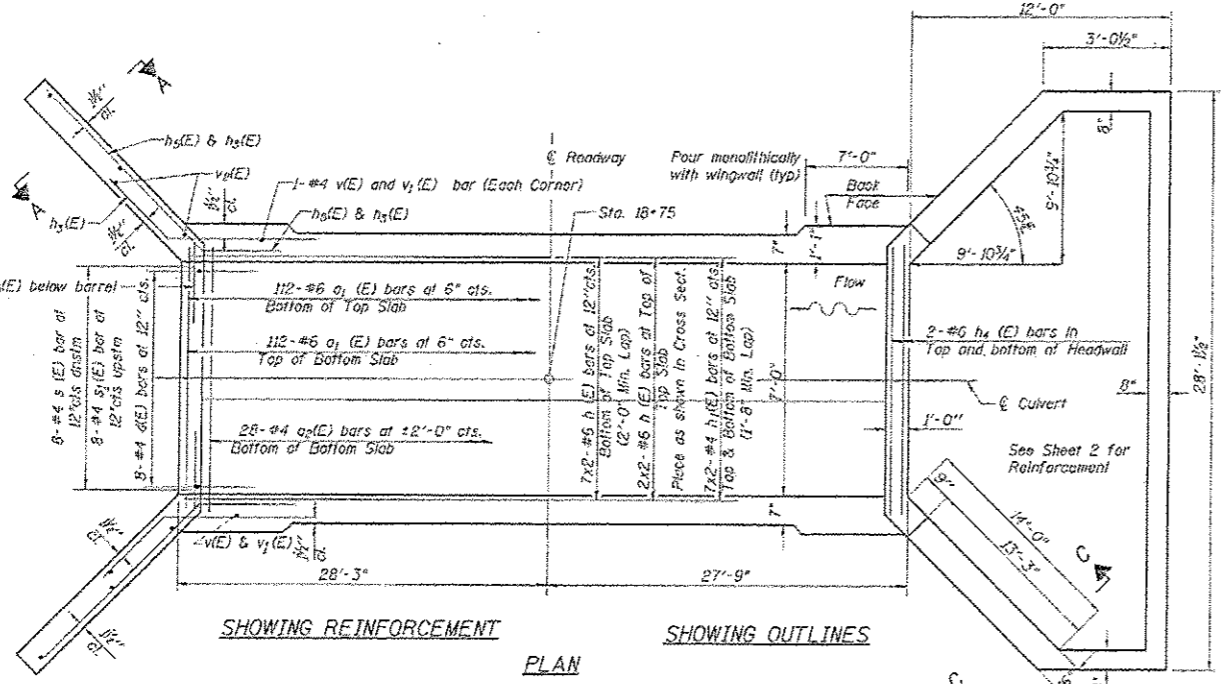
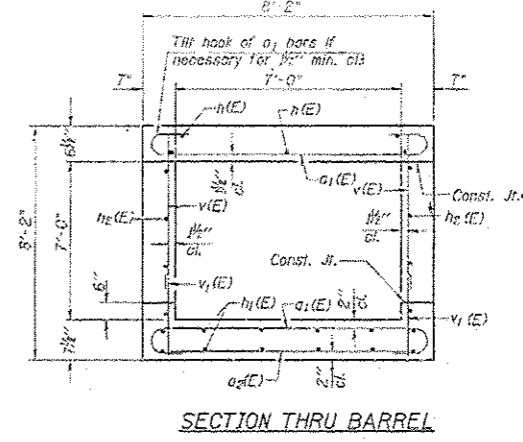
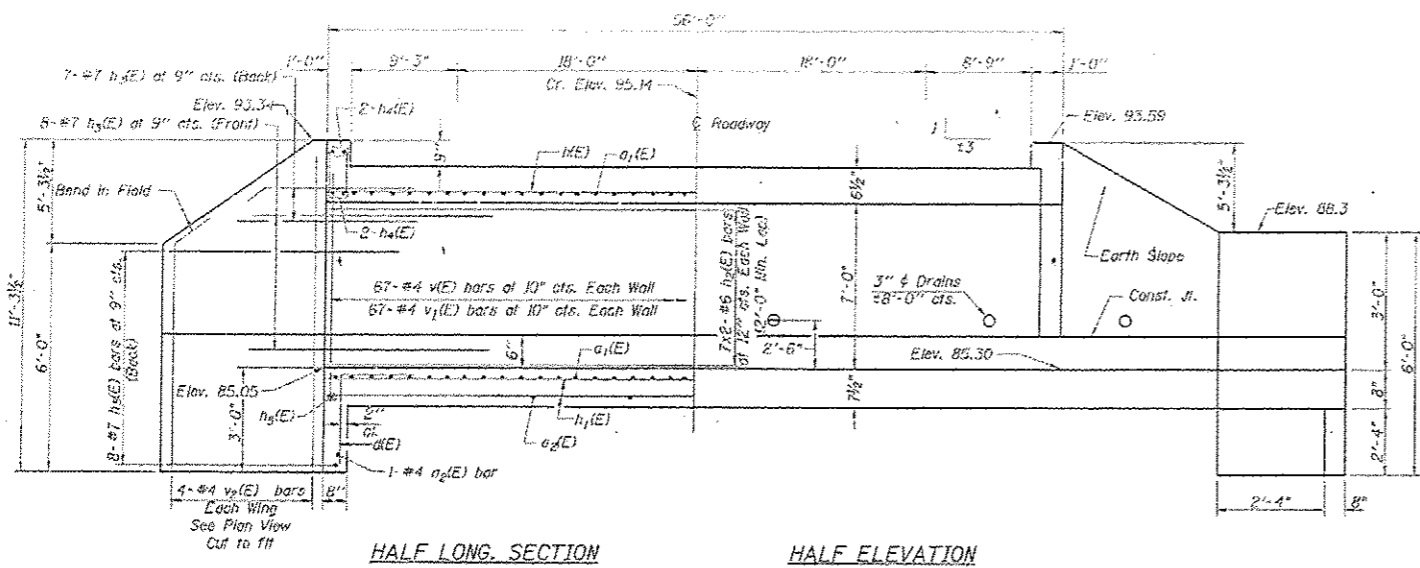
STA. 211+56.5, 37' RT. INSTALL MANHOLE TY-A. 7' DIA. W/ FLAT SLAB TOP W/ BASE, FRAME & LID TY-5. TOP SLAB ELEV. = 92.31. MANHOLE ELEV = 92.81. STA. 211+60.4, 40.5' RT. FL IN = 90.40 TO STA. 211+66.0, 75.5' RT. FL OUT = 90.03. INSTALL 36' 18" ERS RCP. SEE DETAIL BELOW.

FAP ROUTE 545 (IL 72)

TYPICAL 4' HMA & 2' AGGR. SHLDR. WITHIN RADIUS RETURNS

SCALE: 1" = 40'





GENERAL NOTES

EXPOSED EDGES SHALL BE BEVELED 3/4".

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53, GRADE #0.

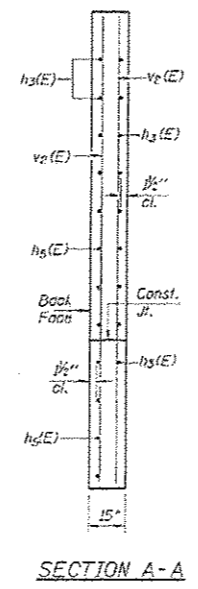
AT LEAST 7 FEET OF BARREL SHALL BE POURED MONOLITHICALLY WITH WINGWALLS.

FOR BACKFILLING AND EMBANKMENT, SEE STANDARD SPECIFICATIONS.

A DEPOSIT OF GRAVEL OR BROKEN STONE SHALL BE PLACED BEHIND DRAIN HOLES, IN ACCORDANCE WITH ARTICLE 603.11 OF THE STANDARD SPECIFICATIONS. A DOUBLE LAYER OF GEOTECHNICAL FILTER FABRIC SHALL BE PLACED AGAINST THE DRAIN HOLE AND AROUND THE DEPOSIT TO PREVENT LEAKAGE OF BACKFILL MATERIAL THROUGH THE 3" DIAMETER OPENING. FILTER FABRIC SHALL BE IN ACCORDANCE WITH SECTION 292 OF THE STANDARD SPECIFICATIONS, WITH THE EXCEPTION THAT UNDER METHOD OF MEASUREMENT AND BASIS OF PAYMENT THIS ITEM WILL BE CONSIDERED INCIDENTAL TO THE CONCRETE BOX CULVERT.

WINGWALL REINFORCEMENT SHALL BE BENT OR CUT TO FIT.

BAR INDICATED THUS 11 x 2 - #6 ETC. INDICATES 11 LINES OF BARS WITH 2 LENGTHS PER LINE.



WENDLER ENGINEERING SERVICES, INC.
Illinois Professional Design
Firm No. 184-000848

RICHARD A. BAUMANN
DIXON, ILLINOIS
ILLINOIS LICENSED STRUCTURAL
ENGINEER NO. 081-004732
EXPIRES 11-30-2014

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	224	#6	9'-2"	U
a2(E)	29	#4	8'-0"	—
d(E)	49	#4	4'-6"	—
d1(E)	70	#4	6'-8"	—
d2(E)	12	#4	4'-8"	—
h(E)	18	#6	29'-0"	—
h1(E)	28	#4	28'-8"	—
h2(E)	28	#6	29'-0"	—
h3(E)	60	#7	8'-0"	—
h4(E)	8	#6	8'-0"	—
h5(E)	36	#7	18'-6"	—
h6(E)	6	#4	6'-0"	—
h7(E)	10	#4	14'-0"	—
h8(E)	12	#4	11'-8"	—
h9(E)	44	#4	15'-0"	—
g1(E)	6	#4	3'-11"	D
g2(E)	8	#4	3'-10"	D
v(E)	138	#4	6'-10"	—
v1(E)	138	#4	2'-3"	—
v2(E)	15	#4	12'-3"	—
Concrete Box Culverts		Cu. Yd.		73.5
Reinforcement Bars		Pound		10220
Epoxy coated				

MIN. BAR LAP

BAR	BARREL	WINGWALL
#4	1'-4"	1'-8"
#5	1'-8"	2'-2"
#6	2'-0"	2'-7"
#7	2'-9"	3'-5"
#8	3'-8"	4'-6"

DESIGN STRESSES
fy = 60,000 psi
fc = 3,500 psi
Design Specifications: 2008 AASHTO

LOADING HL-93

STATION 18+75
SHANNON ROUTE (FAS 78)
CARROLL COUNTY

SCALE: 1" = NONE

REVISIONS

NO.	DATE	BY	DESCRIPTION
1	5/2/2012	BAUMANN	ISSUE FOR PERMITS

wendler
wendler engineering services, inc.
1000 W. BROADWAY
DIXON, ILLINOIS 62521
www.wendlereng.com
Phone: 618-233-8292

BOX CULVERT DETAILS - STA. 18+75
OF
SHANNON ROUTE (FAS 78)
FOR
CARROLL COUNTY

SHEET TITLE
BOX CULVERT DETAILS
STA. 18+75

JOB NUMBER
2120236

DATE
8/31/2012

SHEET NO.
1 of 2

NO.	DATE	REVISIONS
1	8/12/2013	SHEET NUMBER CHANGE

DESIGNED BY	DR	BEN
CHECKED BY	SR	BEN
DATE	8/12/2013	

wendler
 WENDLER ENGINEERING SERVICES, INC.
 GROUND-BREAKING SOLUTIONS
 ENGINEERS - SURVEYORS - SCIENTISTS
 www.wendlereng.com pk 815.238.2281
 Trade Professional Design Firm No. 154-09028

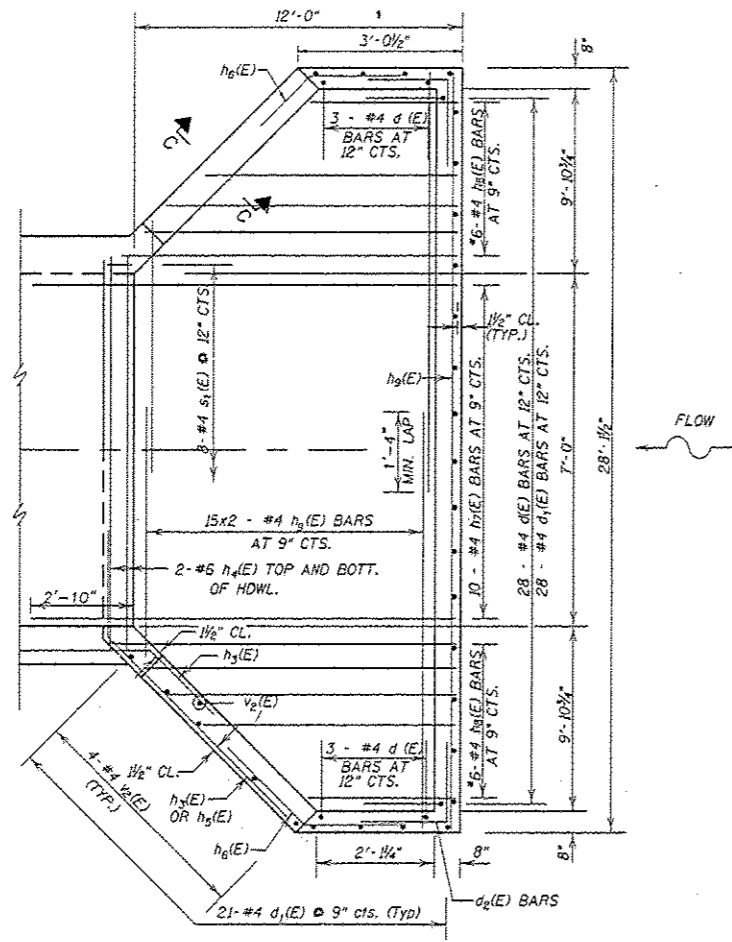
BOX CULVERT DETAILS - STA. 18+75
 OF
 SHANNON ROUTE (FAS 78)
 FOR
 CARROLL COUNTY

SHEET TITLE
 BOX
 CULVERT
 DETAILS
 STA. 18+75

JOB NUMBER
 2120238

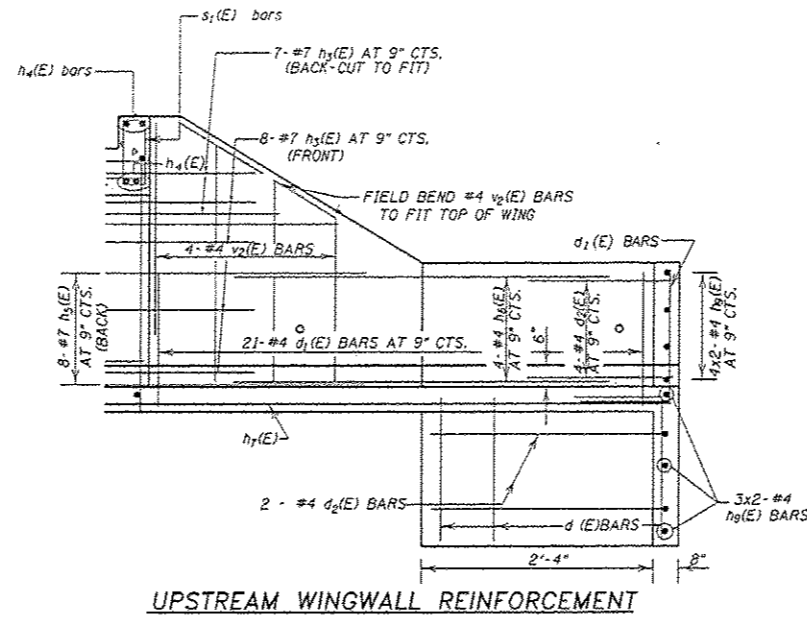
DATE
 8/31/2012

SHEET NO.
 2 of 2

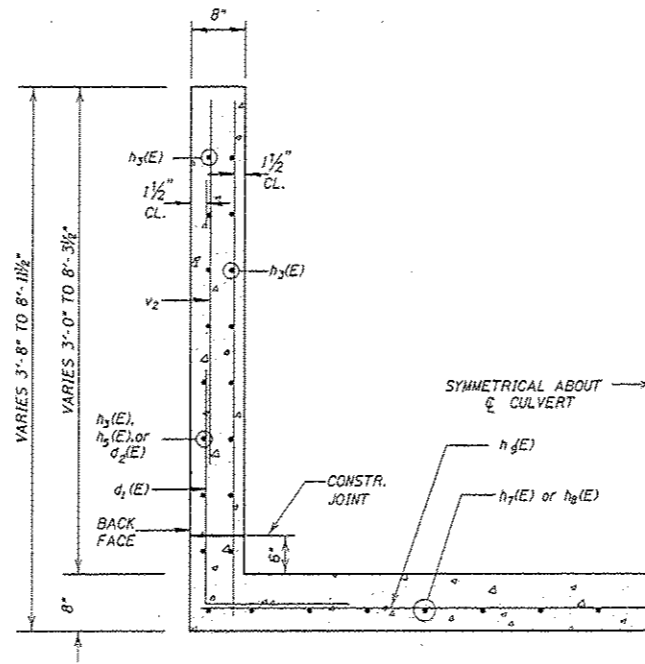


* CUT $h_6(E)$ BARS TO FIT AND USE CUTOFF IN SHORTER END.

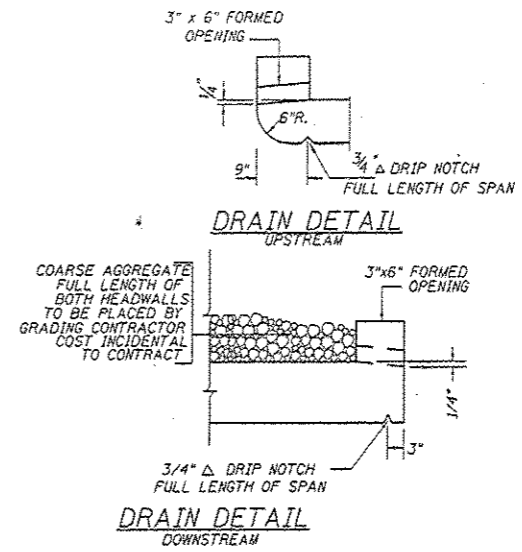
DROP BOX REINFORCEMENT



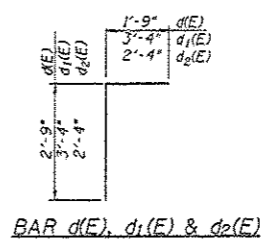
UPSTREAM WINGWALL REINFORCEMENT



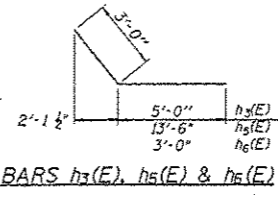
SECTION C-C



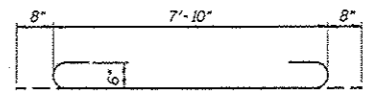
DRAIN DETAIL DOWNSTREAM



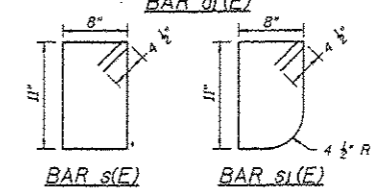
BAR $d_1(E)$, $d_1(E)$ & $d_2(E)$



BARS $h_3(E)$, $h_5(E)$ & $h_6(E)$



BAR $d_1(E)$

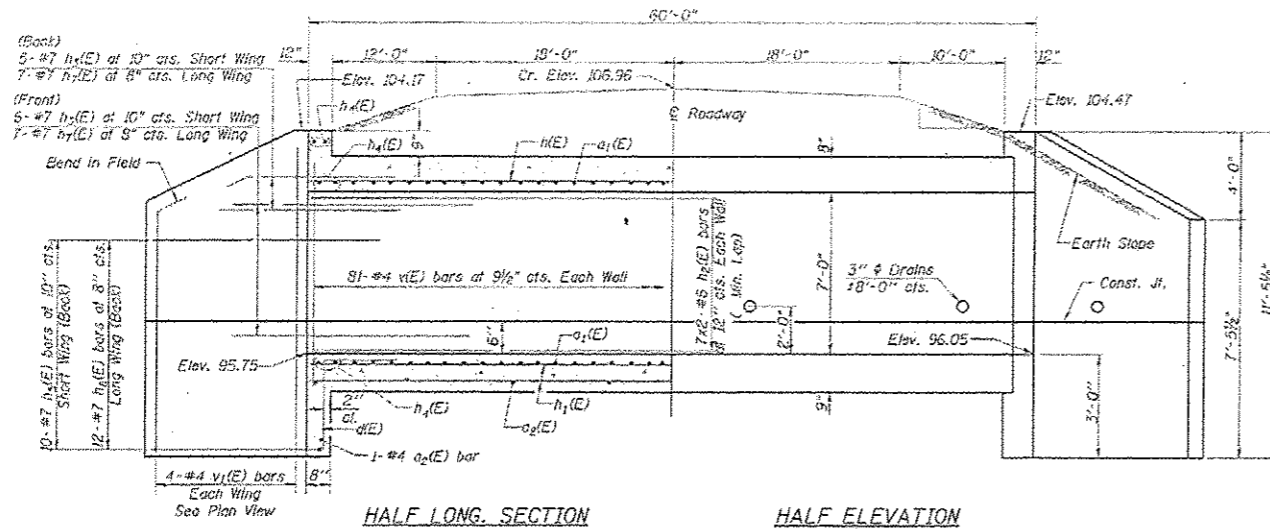


BAR $s_1(E)$

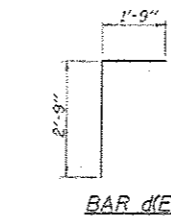
BAR $s_2(E)$

STATION 18+75
 SHANNON ROUTE (FAS 78)
 CARROLL COUNTY

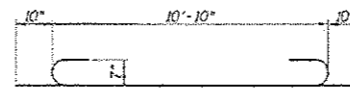
SCALE: 1" = NONE



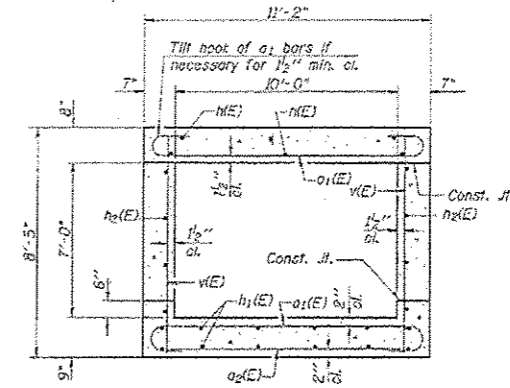
Dimensions of Rt. L's to R Roadway



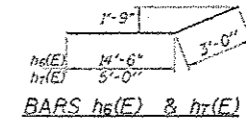
BARS h3(E) & h5(E)



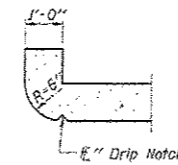
BAR a1(E)



SECTION THRU BARREL



BARS h6(E) & h7(E)



SECTION THRU HEADWALL
(Up Stream End Only)

DESIGN STRESSES

$f_y = 60,000 \text{ psi}$
 $f'_c = 3,500 \text{ psi}$
 Design Specifications 2008 AASHTO

LOADING HL-93

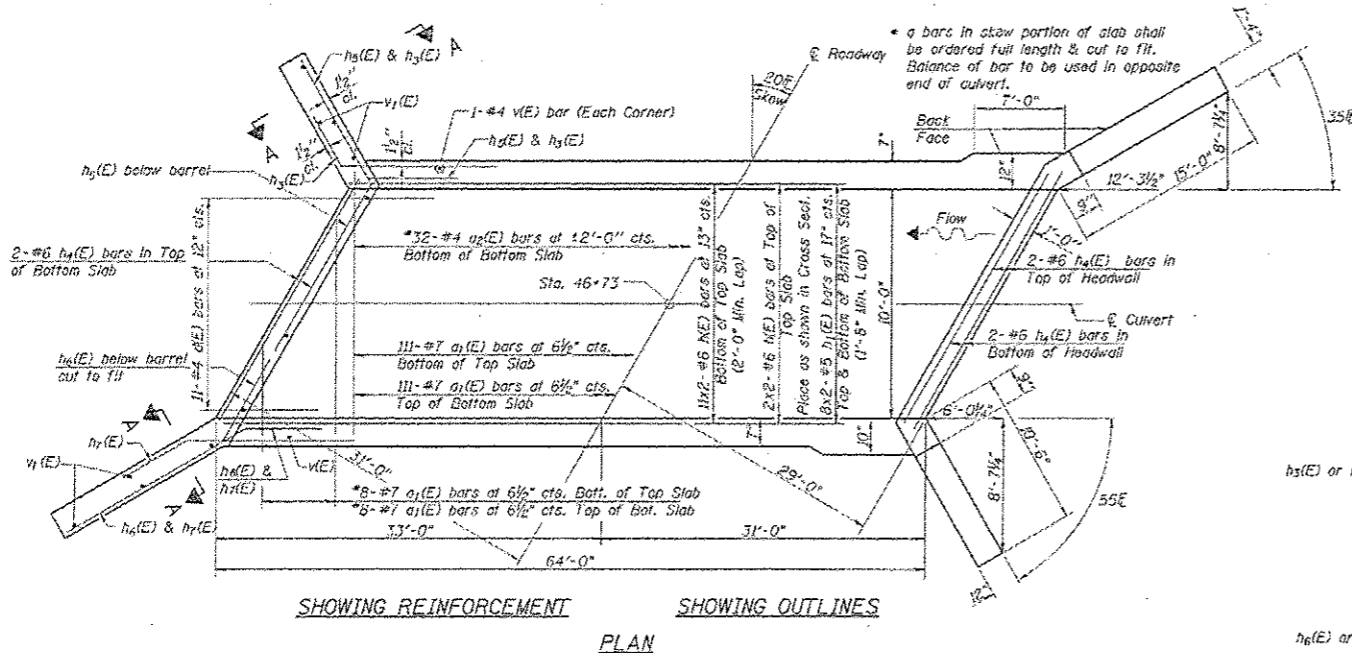
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	238	#7	12'-6"	C
a2(E)	34	#4	10'-10"	
a(E)	22	#4	4'-6"	
h1(E)	28	#6	33'-0"	
h2(E)	32	#5	32'-10"	
h3(E)	28	#5	33'-0"	
h4(E)	22	#7	8'-0"	
h5(E)	12	#6	11'-6"	
h6(E)	22	#7	13'-0"	
h7(E)	28	#7	17'-6"	
h(E)	28	#7	8'-0"	
v1(E)	156	#4	8'-0"	
v2(E)	15	#4	11'-3"	
Concrete Box Culverts		Cu. Yd.	84.0	
Reinforcement Bars		Pound	13,720	

MIN. BAR LAP

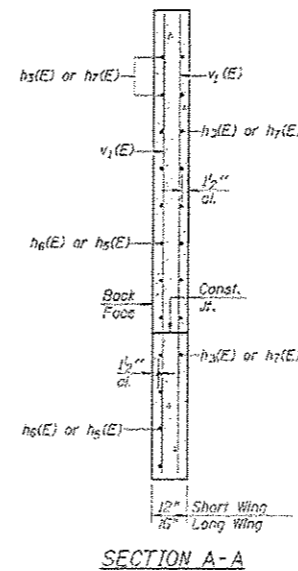
BAR	BARREL	WINC WALL
#4	1'-4"	1'-8"
#5	1'-8"	2'-2"
#6	2'-0"	2'-7"
#7	2'-8"	3'-5"
#8	3'-8"	4'-6"

STATION 46+73
 SHANNON ROUTE (FAS 78)
 CARROLL COUNTY



GENERAL NOTES

- EXPOSED EDGES SHALL BE BEVELED 3/4".
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53, GRADE 60.
- AT LEAST 7 FEET OF BARREL SHALL BE POURED MONOLITHICALLY WITH WINGWALLS.
- FOR BACKFILLING AND EMBANKMENT, SEE STANDARD SPECIFICATIONS.
- A DEPOSIT OF GRAVEL OR BROKEN STONE SHALL BE PLACED BEHIND DRAIN HOLES, IN ACCORDANCE WITH ARTICLE 503.11 OF THE STANDARD SPECIFICATIONS. A DOUBLE LAYER OF GEOTECHNICAL FILTER FABRIC SHALL BE PLACED AGAINST THE DRAIN HOLES AND AROUND THE DEPOSIT TO PREVENT LEAKAGE OF BACKFILL MATERIAL THROUGH THE 3" DIAMETER OPENING. FILTER FABRIC SHALL BE IN ACCORDANCE WITH SECTION 282 OF THE STANDARD SPECIFICATIONS, WITH THE EXCEPTION THAT UNDER METHOD OF MEASUREMENT AND BASIS OF PAYMENT THIS ITEM WILL BE CONSIDERED INCIDENTAL TO THE CONCRETE BOX CULVERT.
- WINGWALL REINFORCEMENT SHALL BE BENT OR CUT TO FIT.
- BAR INDICATED THUS 11 x 2 - #6 ETC. INDICATES 11 LINES OF BARS WITH 2 LENGTHS PER LINE.



SECTION A-A

WENDLER ENGINEERING SERVICES, INC.
 Illinois Professional Design Firm No. 184-000849



RICHARD A. BAUMANN
 DIXON, ILLINOIS
 ENGINEER NO. 181-004732
 EXPIRES 11-30-2014

REVISIONS	
NO.	DESCRIPTION

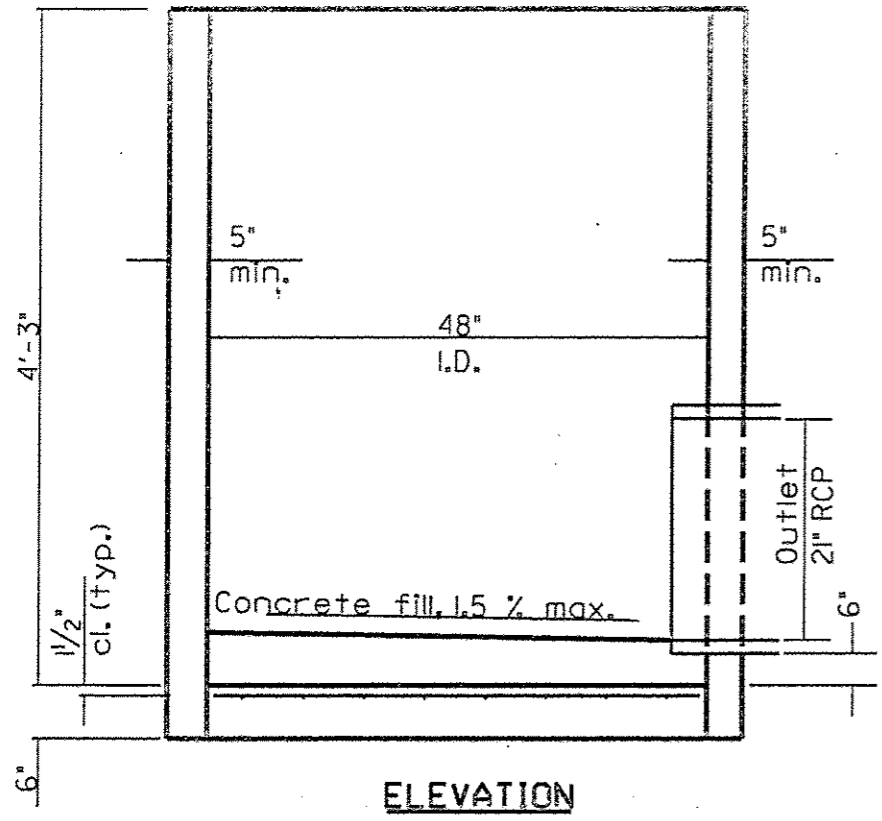
wendler
 WENDLER ENGINEERING SERVICES, INC.
 ENGINEERING SOLUTIONS
 PROFESSIONAL DESIGNERS
 www.wendlereng.com ph: 815.263.2211
 Illinois Professional Design Firm No. 184-000849

BOX CULVERT DETAILS - STA. 46+73
 OF
 SHANNON ROUTE (FAS 78)
 FOR
 CARROLL COUNTY

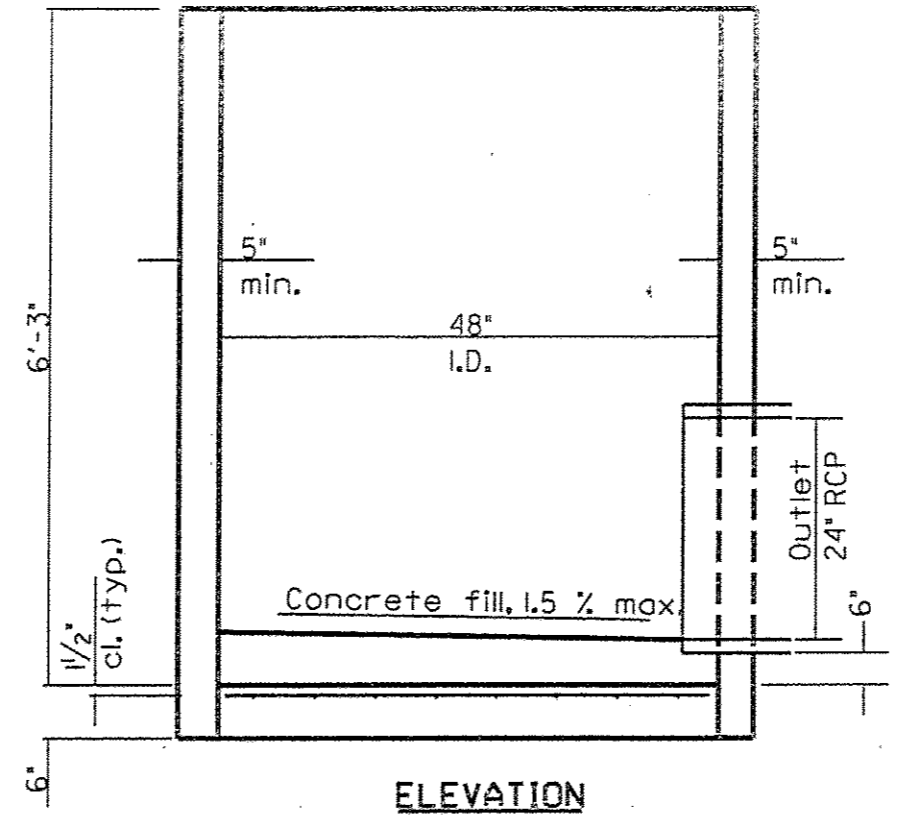
SHEET TITLE
 BOX
 CULVERT
 DETAILS
 STA. 46+73

JOB NUMBER
 2120239
 DATE
 8/5/2012
 SHEET NO.

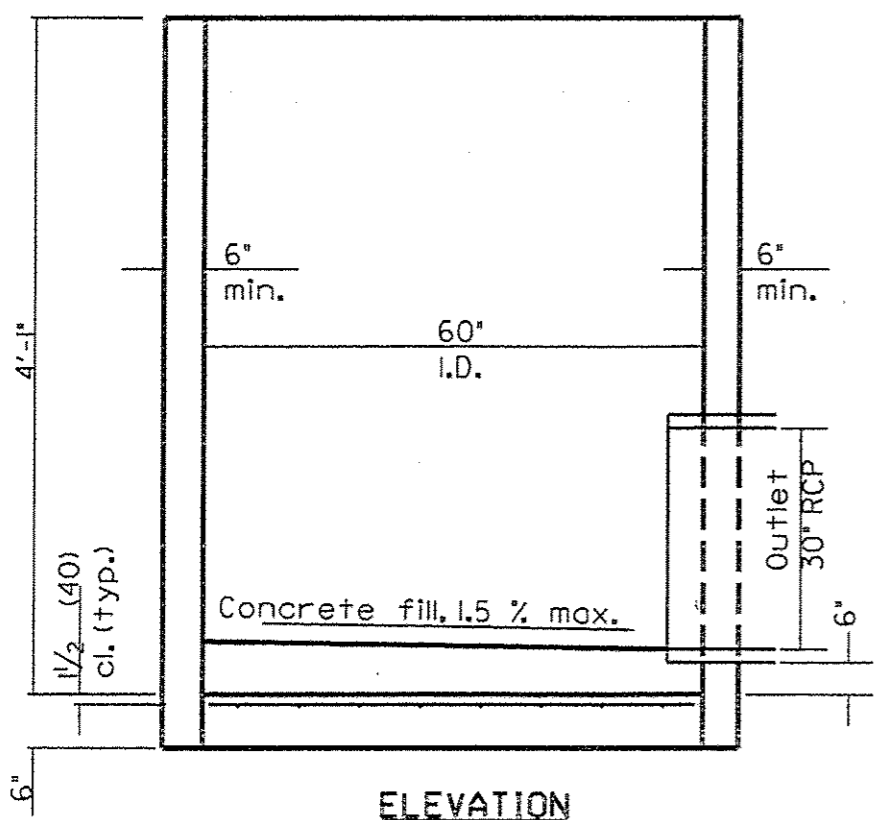
1 of 1



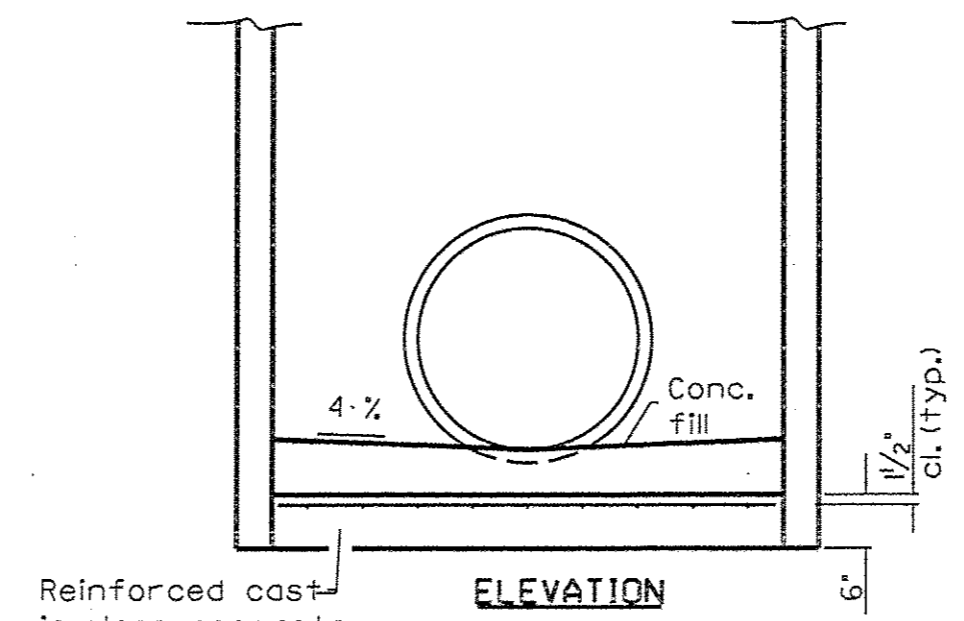
ELEVATION
12+82



ELEVATION
121+00



ELEVATION
177+25



Reinforced cast-in-place concrete
ELEVATION
TYPICAL CONCRETE FILL

GENERAL NOTES

Joint configuration and dimensions of flat slab top shall match and fit the riser joint detail.

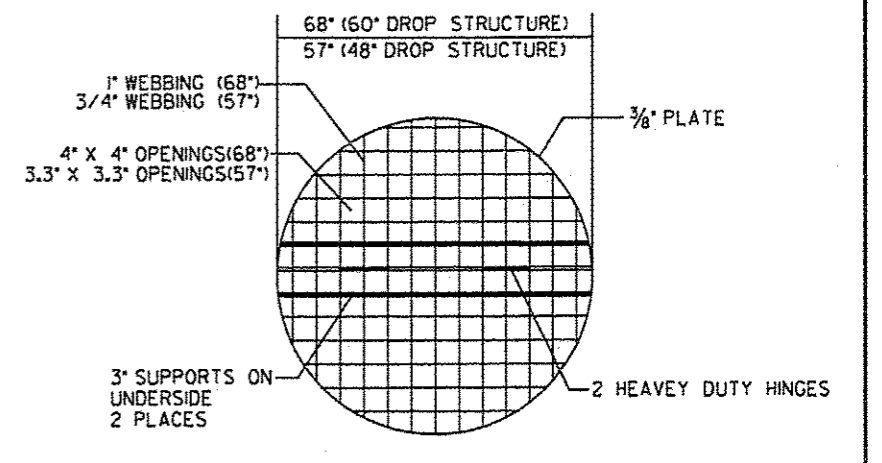
Lifting devices shall be approved by the Engineer.

Bottom slabs shall be reinforced with a minimum of 0.37 sq. in./ft. (780 sq. mm /m) in both directions with a maximum spacing of 10 (250).

Bottom slabs may be connected to the riser as determined by the fabricator; however, only a single row of reinforcement around the perimeter may be utilized.

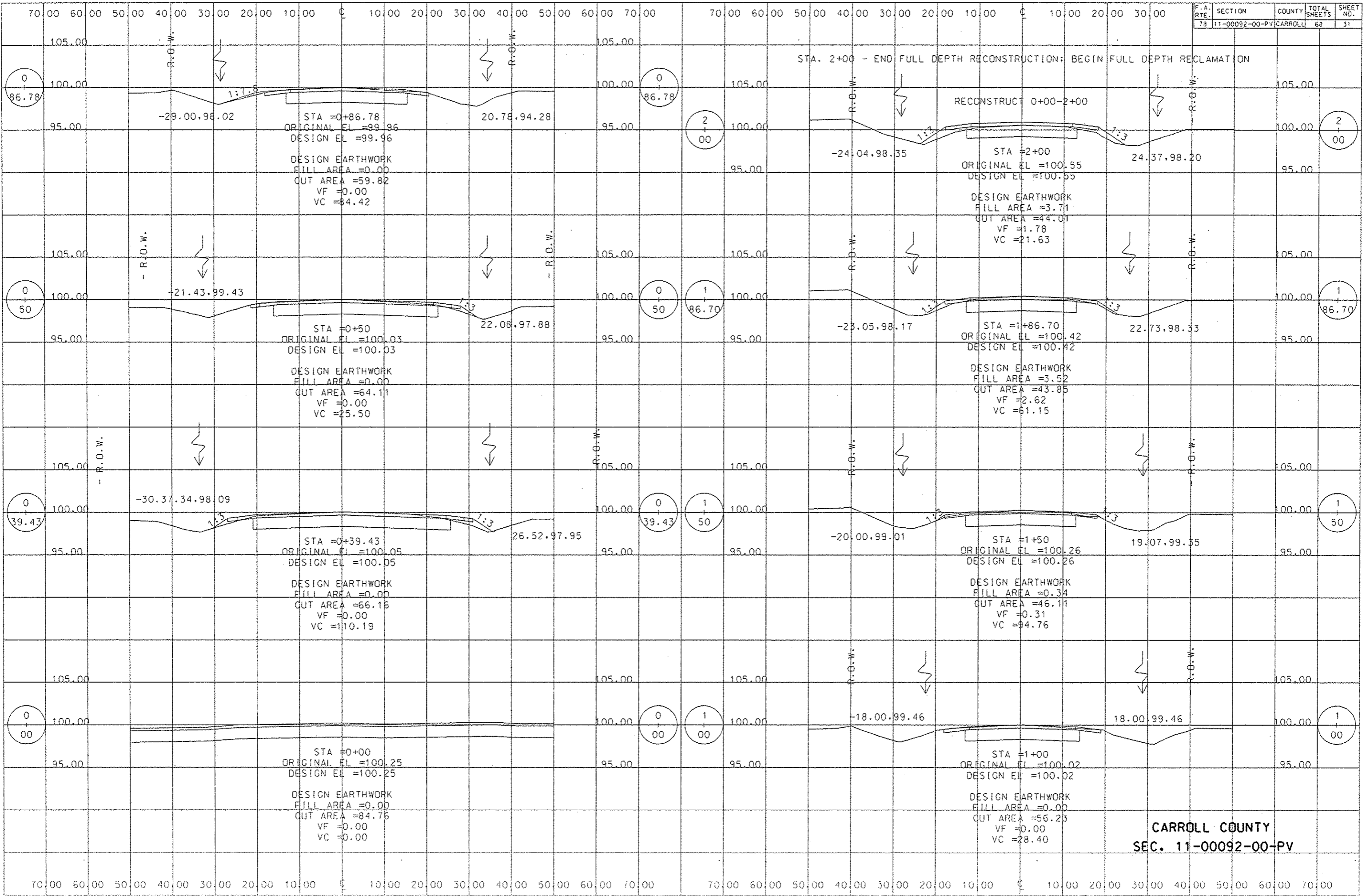
See Standard 602701 for details of manhole steps.

All dimensions are in inches (millimeters) unless otherwise shown.

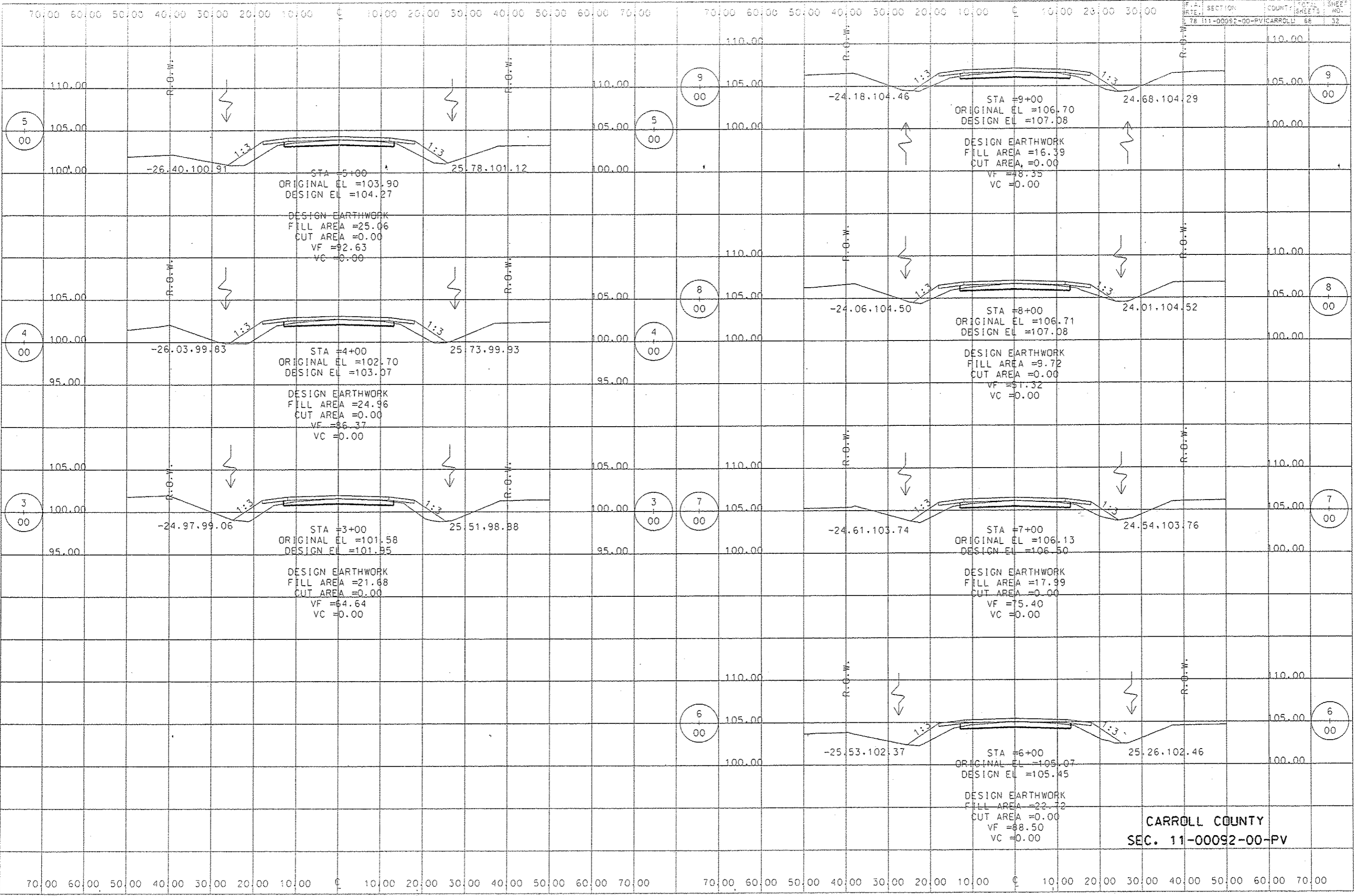


TYPICAL OPEN GRATING
(ALL MATERIAL TO BE GALVANIZED)

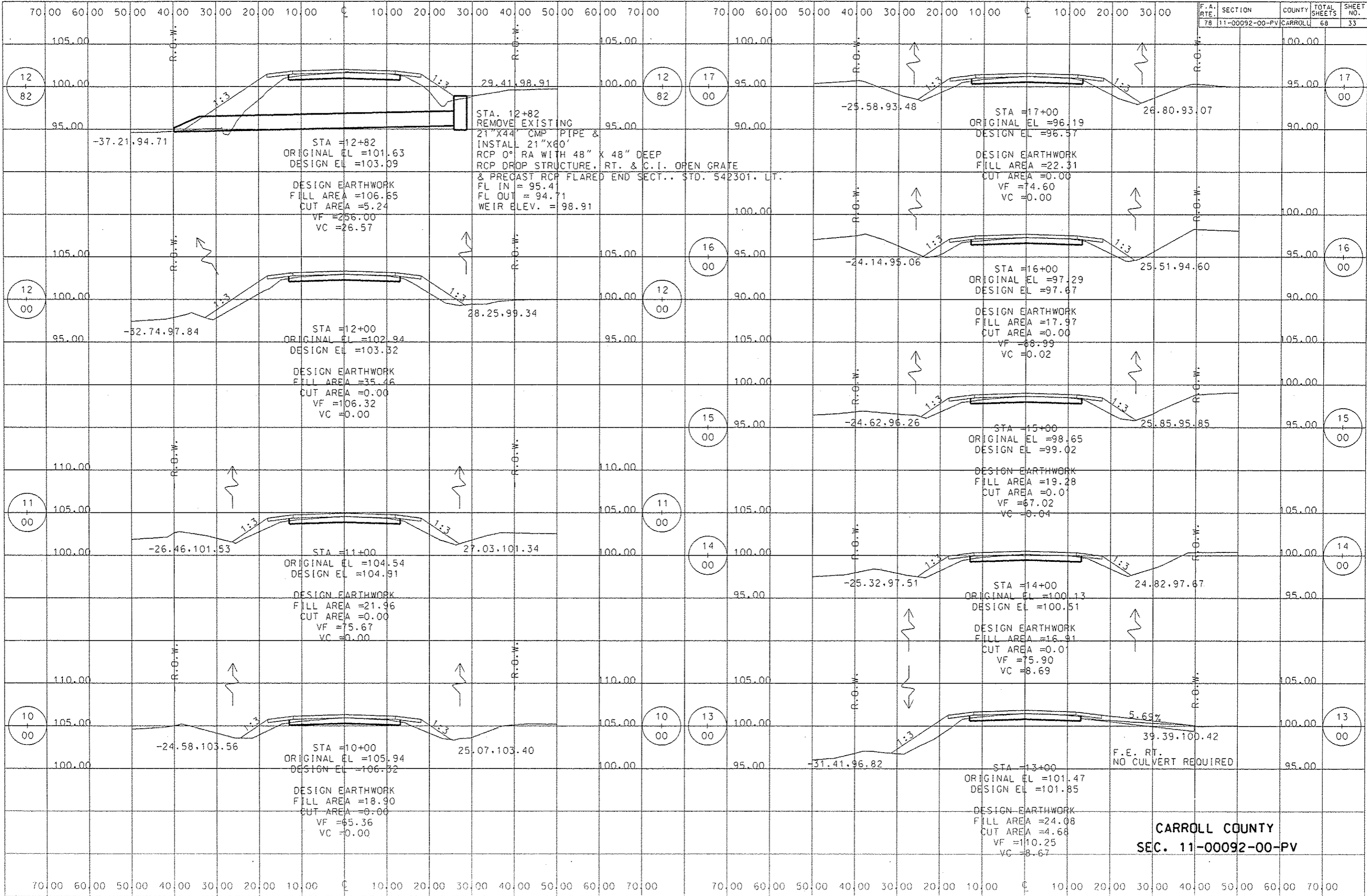
**PRECAST CONCRETE
DROP STRUCTURES**

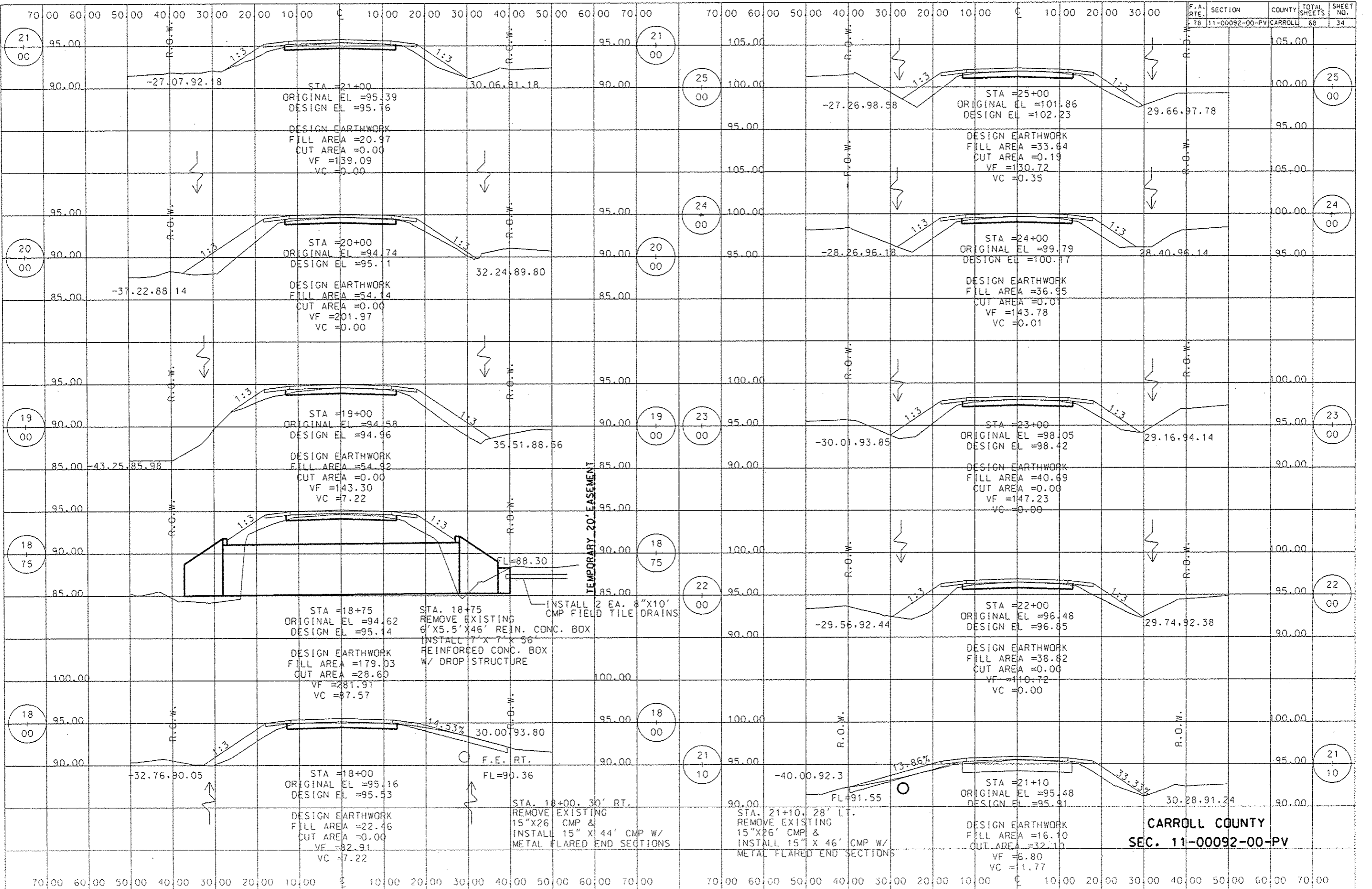


**CARROLL COUNTY
SEC. 11-00092-00-PV**



CARROLL COUNTY
 SEC. 11-00092-00-PV





21
00

21
00

25
00

20
00

20
00

24
00

19
00

19
00

23
00

23
00

18
75

18
75

22
00

22
00

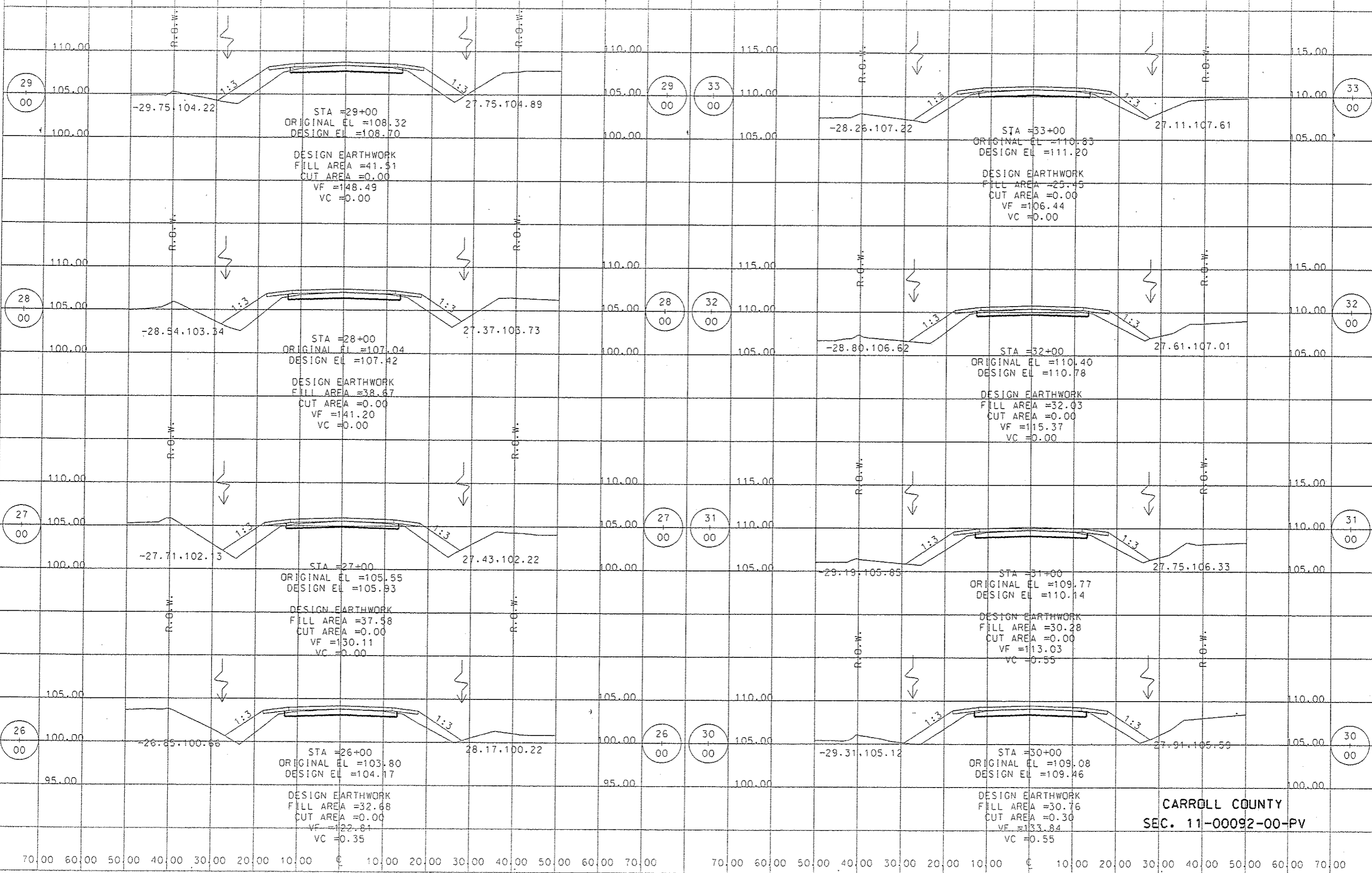
18
00

18
00

21
10

21
10

CARROLL COUNTY
 SEC. 11-00092-00-PV



STA =29+00
 ORIGINAL EL =108.32
 DESIGN EL =108.70
 DESIGN EARTHWORK
 FILL AREA =41.51
 CUT AREA =0.00
 VF =148.49
 VC =0.00

STA =33+00
 ORIGINAL EL =110.83
 DESIGN EL =111.20
 DESIGN EARTHWORK
 FILL AREA =25.45
 CUT AREA =0.00
 VF =106.44
 VC =0.00

STA =28+00
 ORIGINAL EL =107.04
 DESIGN EL =107.42
 DESIGN EARTHWORK
 FILL AREA =38.67
 CUT AREA =0.00
 VF =141.20
 VC =0.00

STA =32+00
 ORIGINAL EL =110.40
 DESIGN EL =110.78
 DESIGN EARTHWORK
 FILL AREA =32.03
 CUT AREA =0.00
 VF =115.37
 VC =0.00

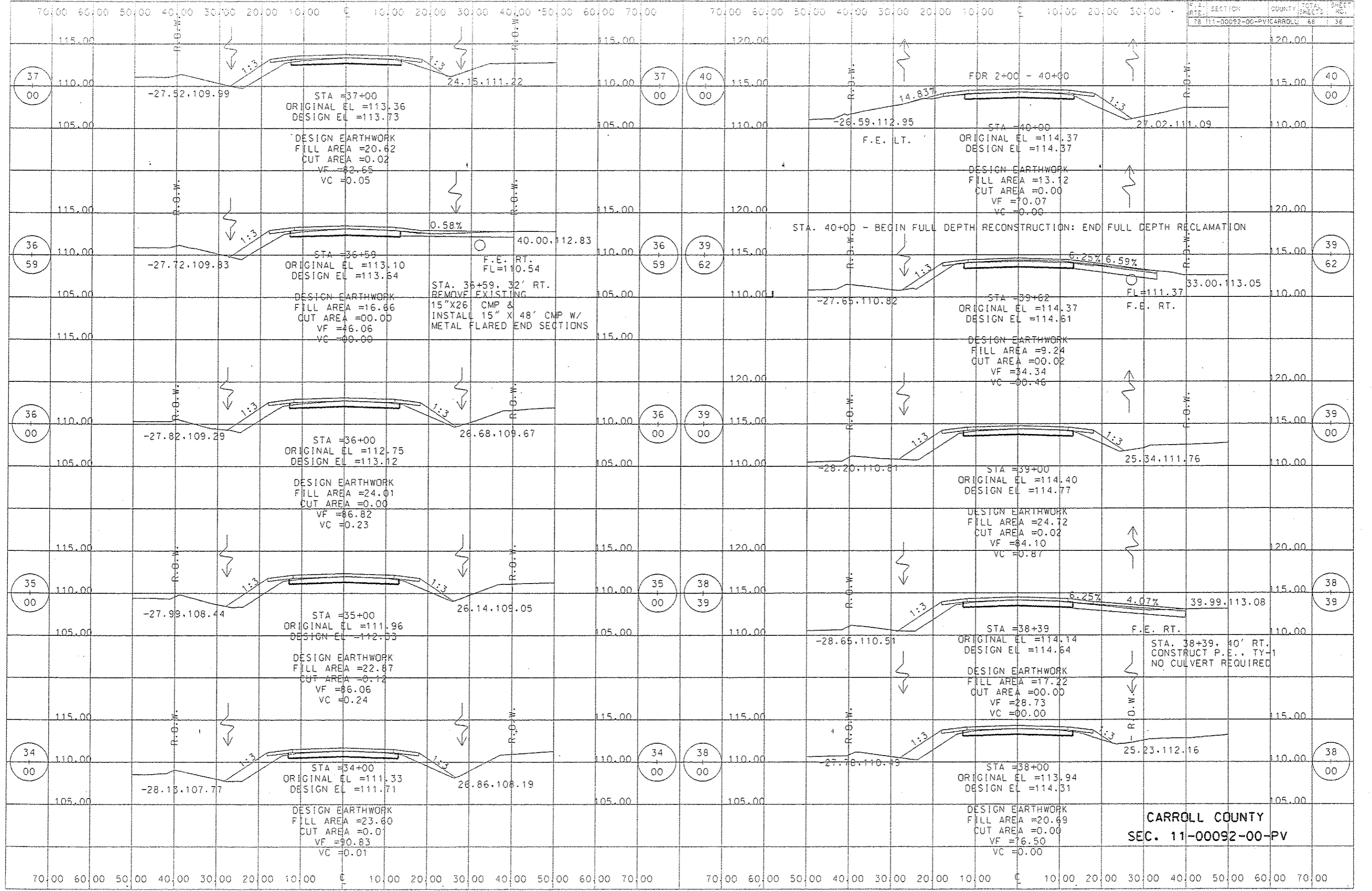
STA =27+00
 ORIGINAL EL =105.55
 DESIGN EL =105.93
 DESIGN EARTHWORK
 FILL AREA =37.58
 CUT AREA =0.00
 VF =130.11
 VC =0.00

STA =31+00
 ORIGINAL EL =109.77
 DESIGN EL =110.14
 DESIGN EARTHWORK
 FILL AREA =30.28
 CUT AREA =0.00
 VF =113.03
 VC =0.55

STA =26+00
 ORIGINAL EL =103.80
 DESIGN EL =104.17
 DESIGN EARTHWORK
 FILL AREA =32.68
 CUT AREA =0.00
 VF =122.81
 VC =0.35

STA =30+00
 ORIGINAL EL =109.08
 DESIGN EL =109.46
 DESIGN EARTHWORK
 FILL AREA =30.76
 CUT AREA =0.30
 VF =133.84
 VC =0.55

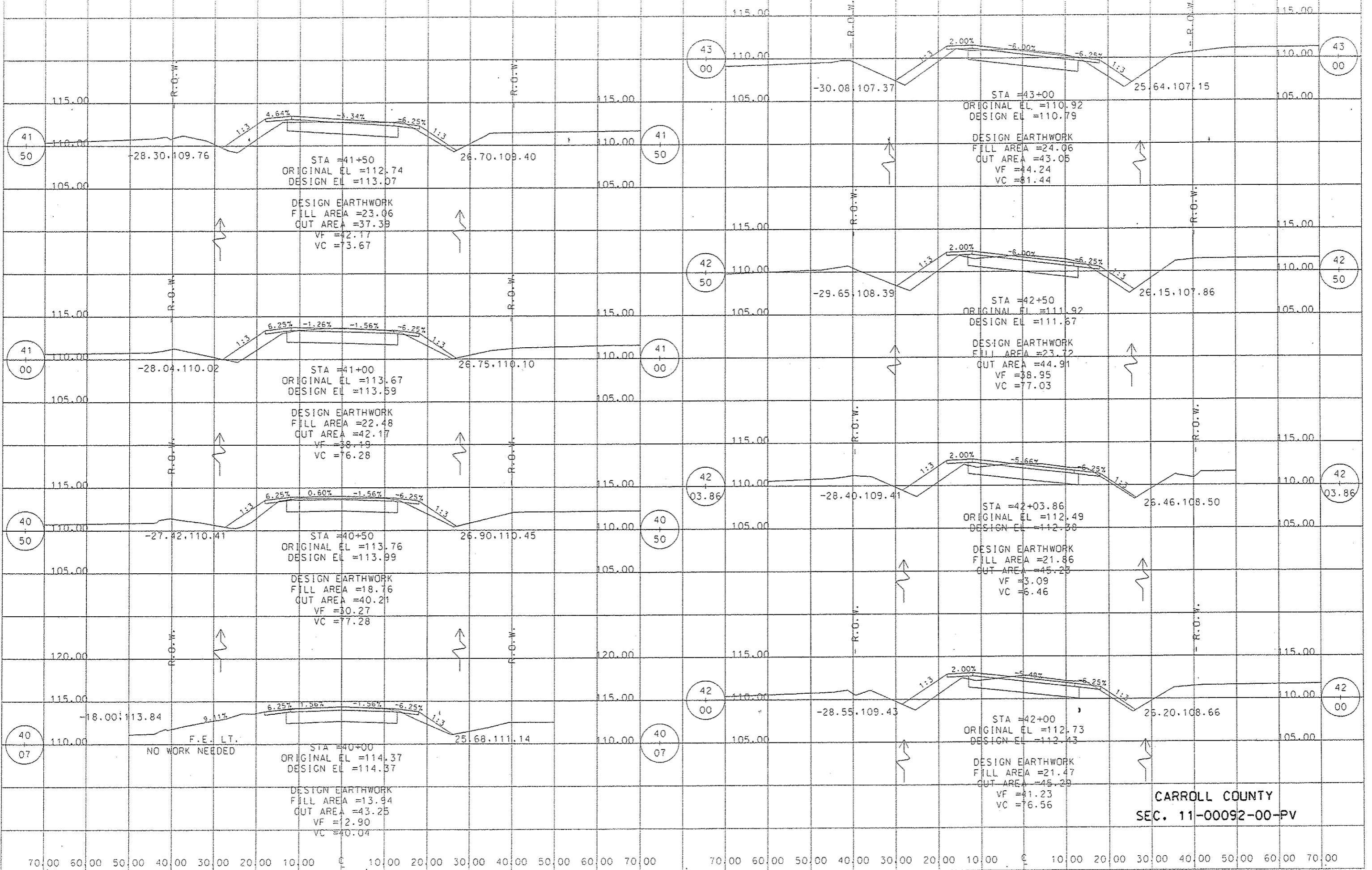
CARROLL COUNTY
 SEC. 11-00092-00-PV



CARROLL COUNTY
 SEC. 11-00092-00-PV

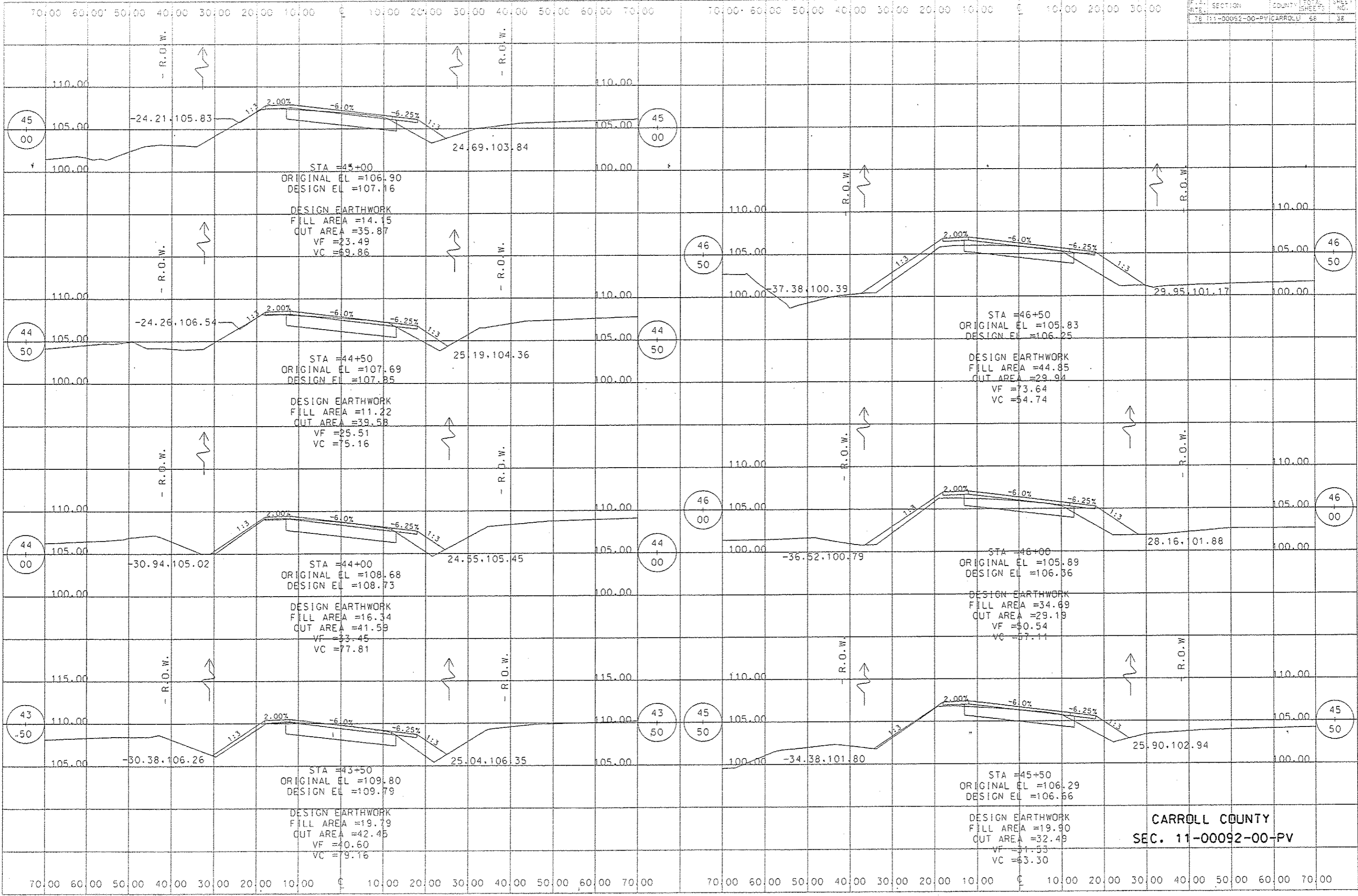
70 00 60 00 50 00 40 00 30 00 20 00 10 00 0 10 00 20 00 30 00 40 00 50 00 60 00 70 00

70 00 60 00 50 00 40 00 30 00 20 00 10 00 0 10 00 20 00 30 00 40 00 50 00 60 00 70 00

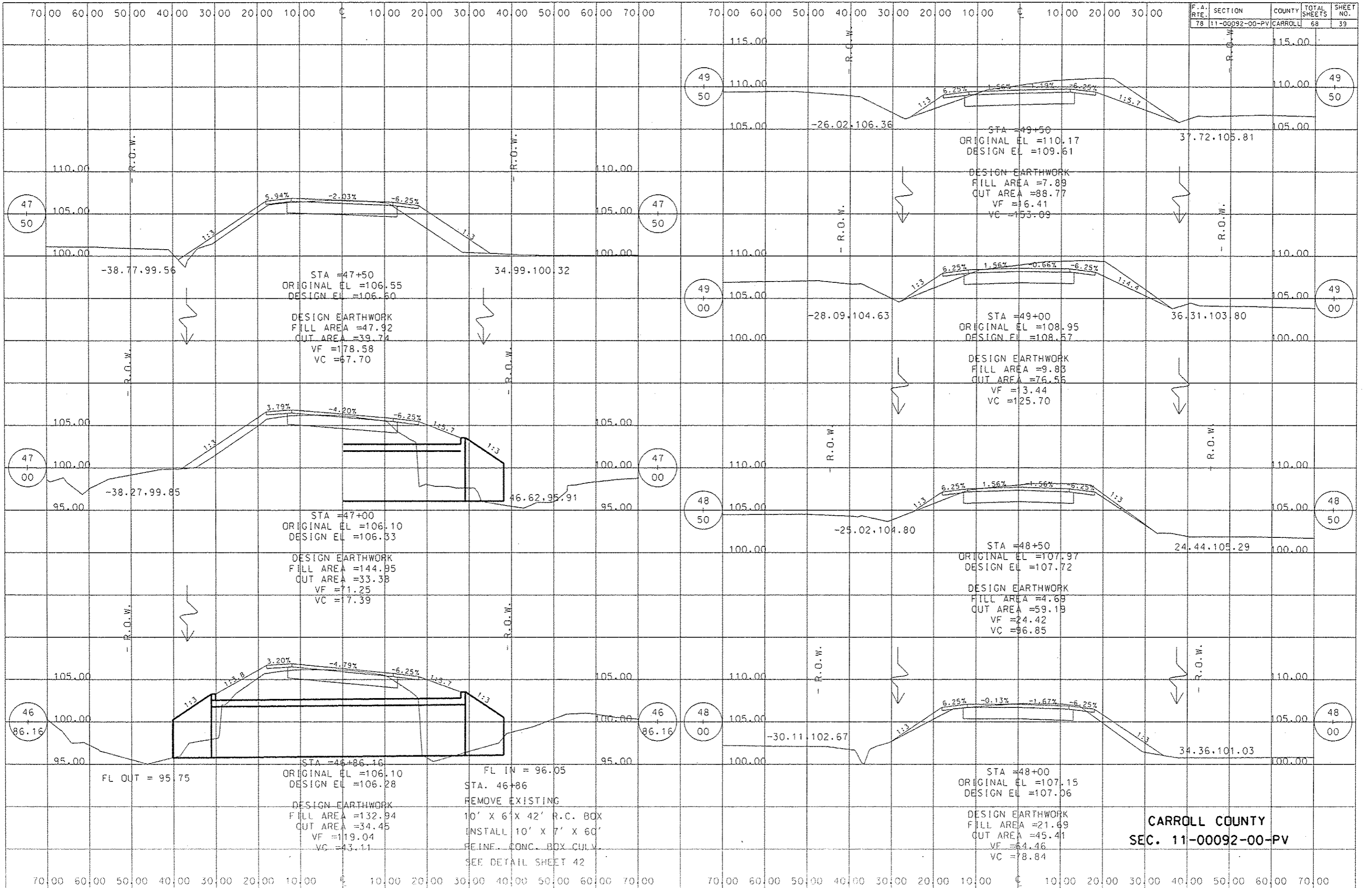


CARROLL COUNTY
SEC. 11-00092-00-PV

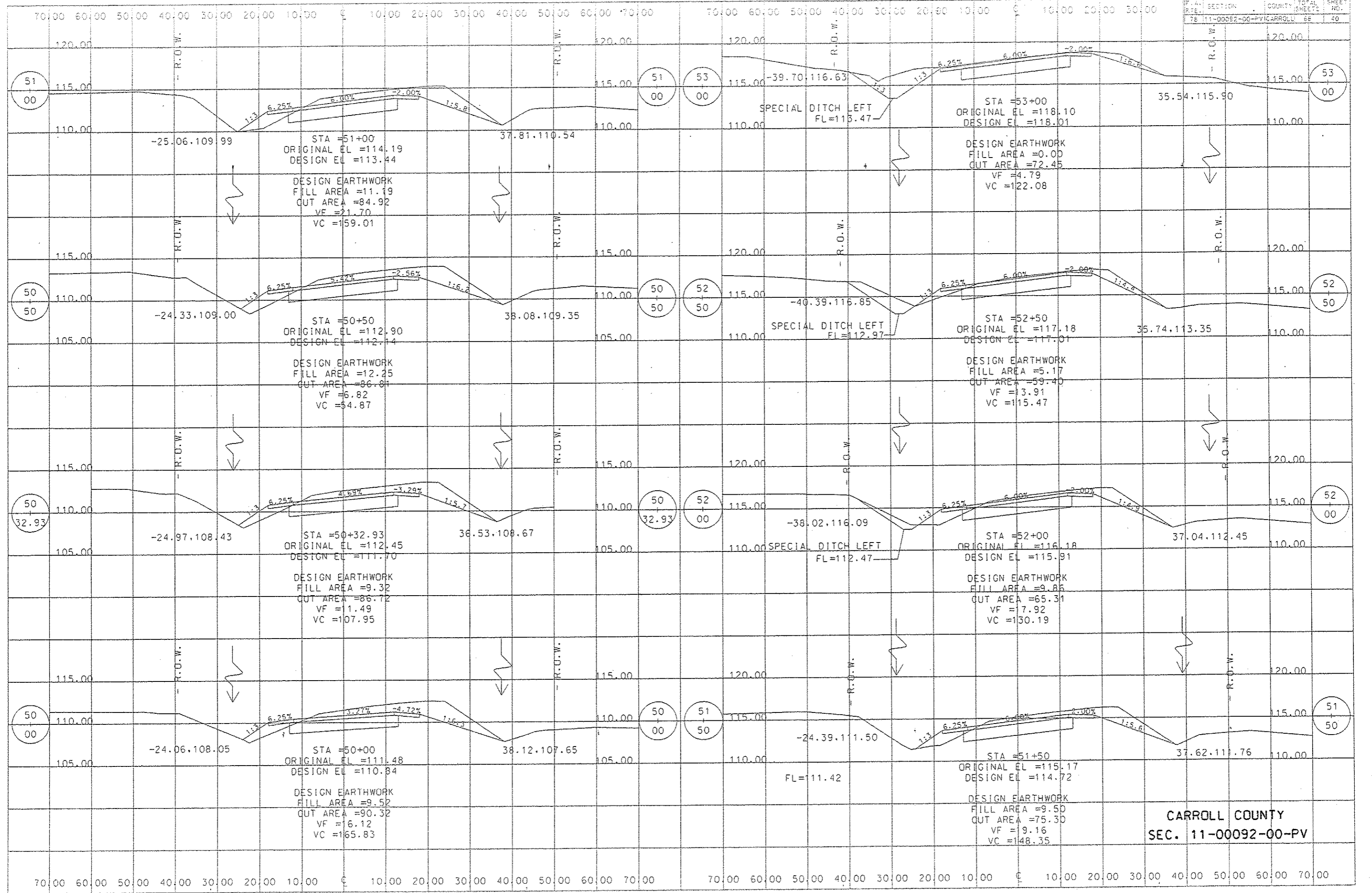
70 00 50 00 40 00 30 00 20 00 10 00 0 10 00 20 00 30 00 40 00 50 00 60 00 70 00



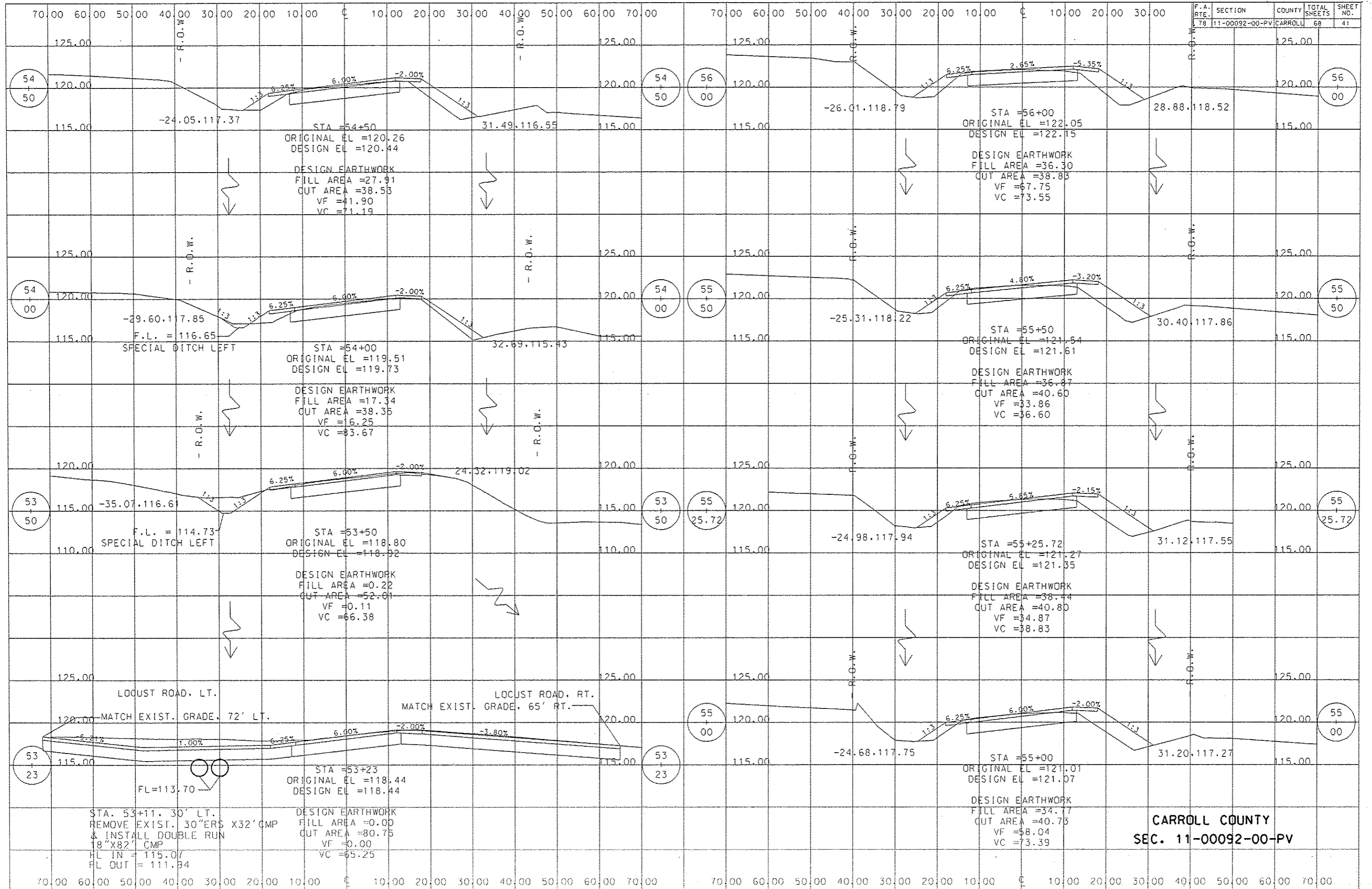
CARROLL COUNTY
SEC. 11-00092-00-PV



**CARROLL COUNTY
SEC. 11-00092-00-PV**



CARROLL COUNTY
 SEC. 11-00092-00-PV



CARROLL COUNTY
SEC. 11-00092-00-PV

STA. 53+11.30' LT.
 REMOVE EXIST. 30"ERS X32' CMP
 & INSTALL DOUBLE RUN
 18"X82" CMP
 HL IN = 115.07
 FL OUT = 111.94

DESIGN EARTHWORK
 FILL AREA = 0.00
 CUT AREA = 80.75
 VF = 0.00
 VC = 65.25

DESIGN EARTHWORK
 FILL AREA = 34.77
 CUT AREA = 40.73
 VF = 38.04
 VC = 73.39

DESIGN EARTHWORK
 FILL AREA = 0.22
 CUT AREA = 52.01
 VF = 0.11
 VC = 66.38

DESIGN EARTHWORK
 FILL AREA = 38.44
 CUT AREA = 40.80
 VF = 34.87
 VC = 38.83

DESIGN EARTHWORK
 FILL AREA = 17.34
 CUT AREA = 38.35
 VF = 6.25
 VC = 83.67

DESIGN EARTHWORK
 FILL AREA = 36.87
 CUT AREA = 40.60
 VF = 33.86
 VC = 36.60

DESIGN EARTHWORK
 FILL AREA = 27.91
 CUT AREA = 38.53
 VF = 41.90
 VC = 71.19

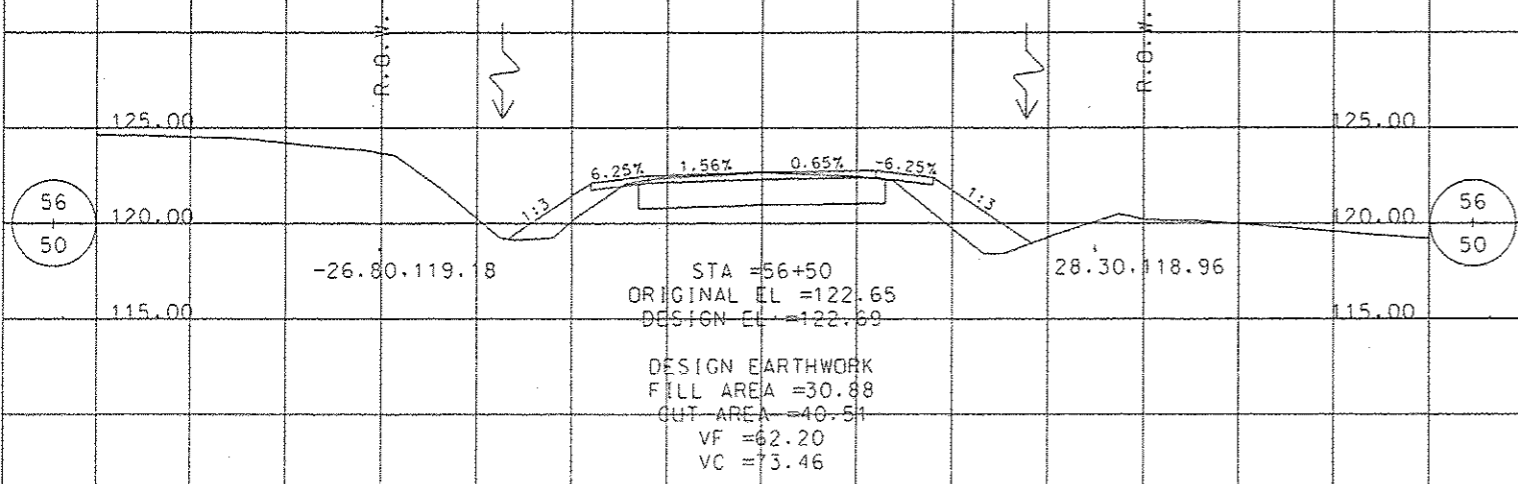
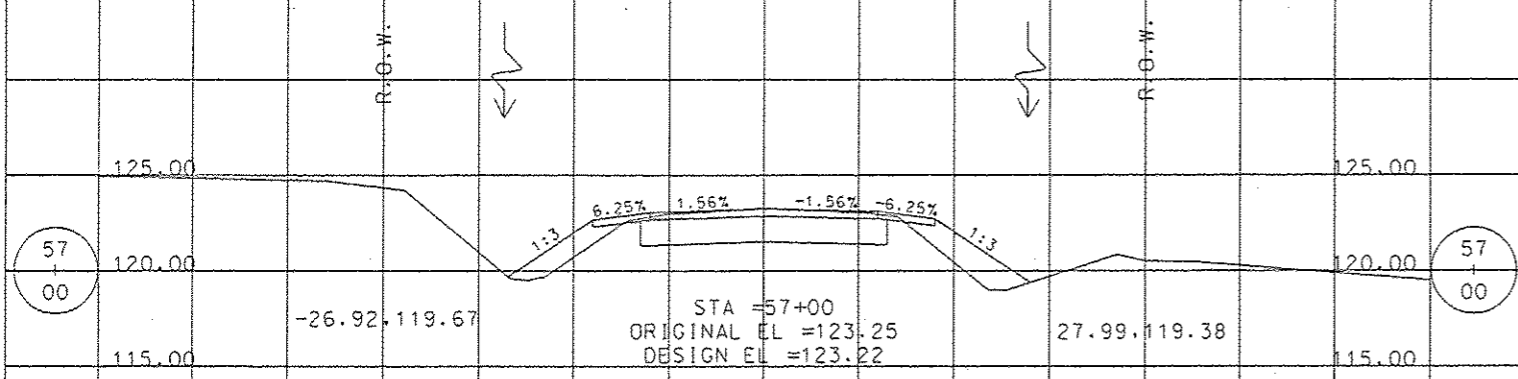
DESIGN EARTHWORK
 FILL AREA = 36.30
 CUT AREA = 38.83
 VF = 67.75
 VC = 73.55

70:00 60:00 50:00 40:00 30:00 20:00 10:00 0 10:00 20:00 30:00 40:00 50:00 60:00 70:00

70:00 60:00 50:00 40:00 30:00 20:00 10:00 0 10:00 20:00 30:00 40:00 50:00

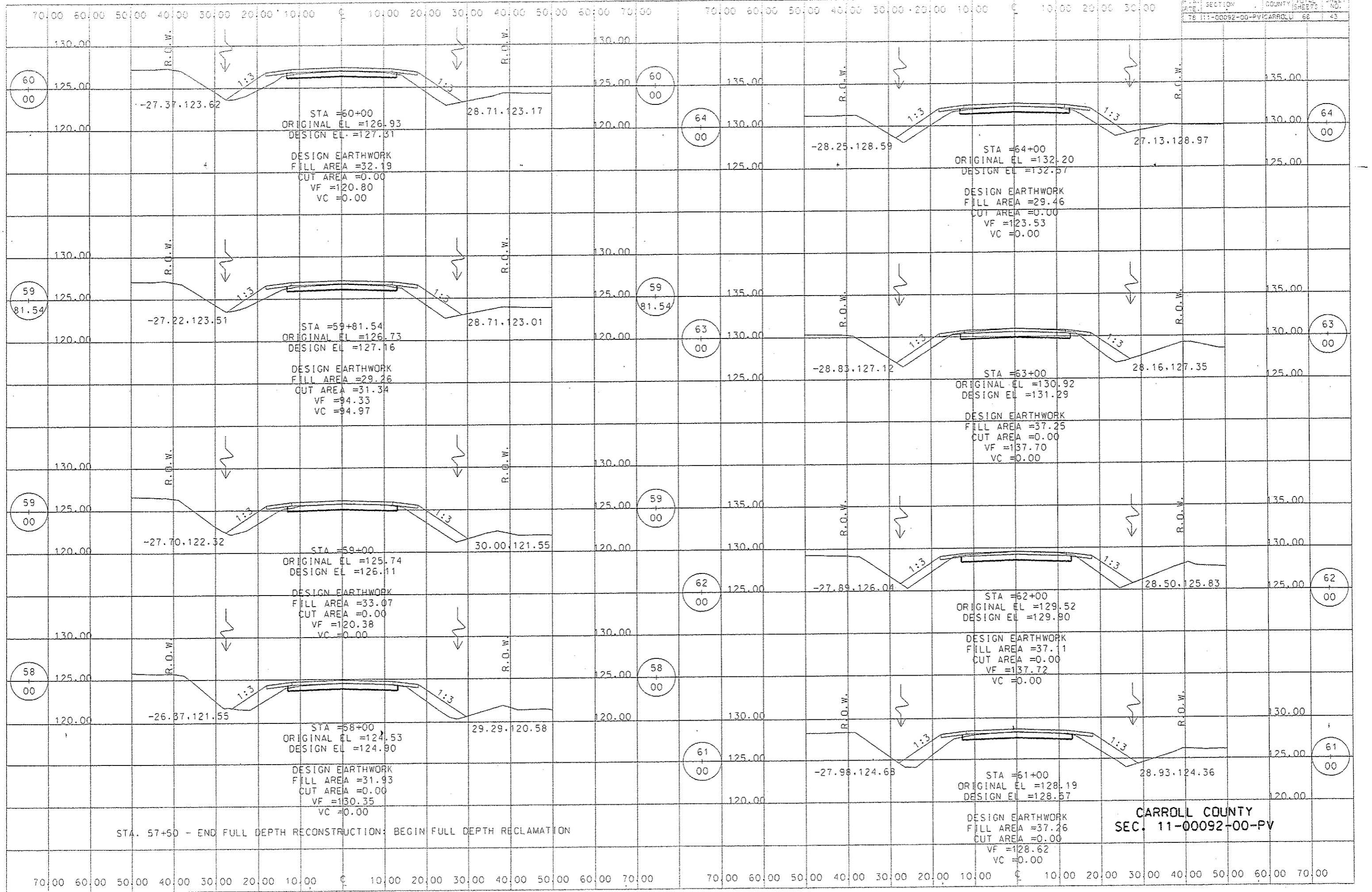
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78 11-00092-00-PV10-PROLU 68		68	42

STA. 57+50 - END FULL DEPTH RECONSTRUCTION; BEGIN FULL DEPTH RECLAMATION



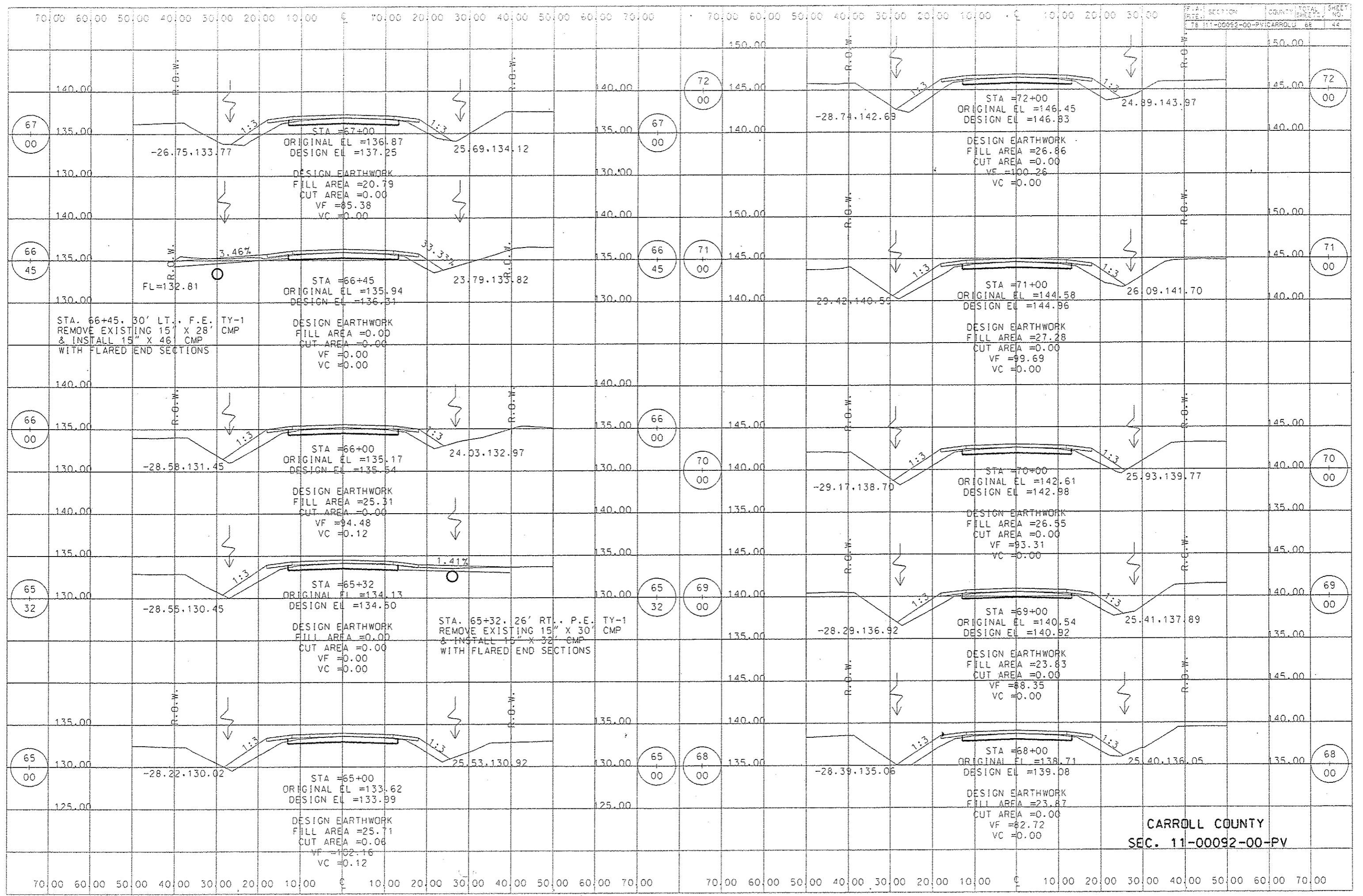
CARROLL COUNTY
SEC. 11-00092-00-PV

70:00 60:00 50:00 40:00 30:00 20:00 10:00 0 10:00 20:00 30:00 40:00 50:00 60:00 70:00 70:00 60:00 50:00 40:00 30:00 20:00 10:00 0 10:00 20:00 30:00 40:00 50:00 60:00 70:00

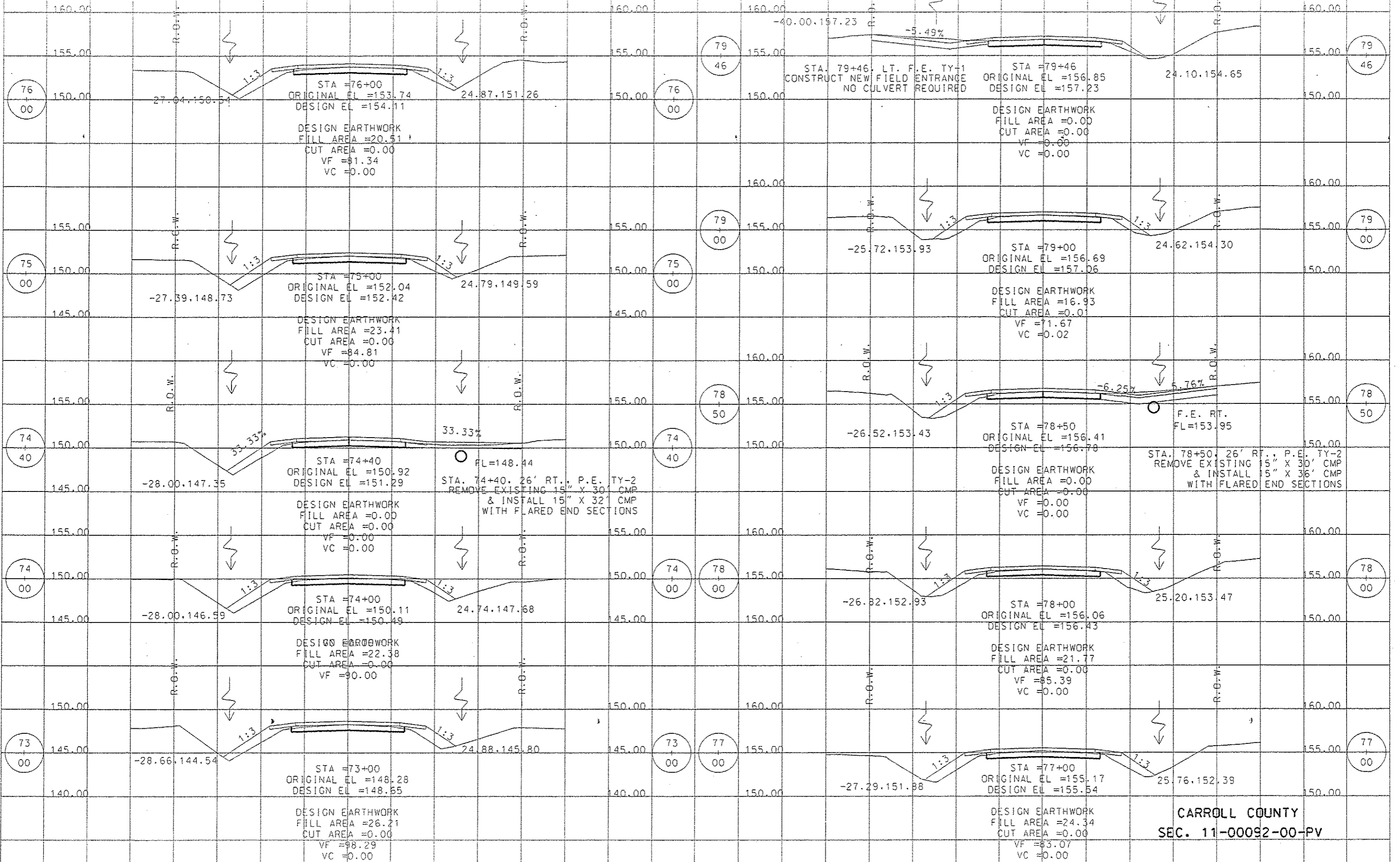


STA. 57+50 - END FULL DEPTH RECONSTRUCTION; BEGIN FULL DEPTH RECLAMATION

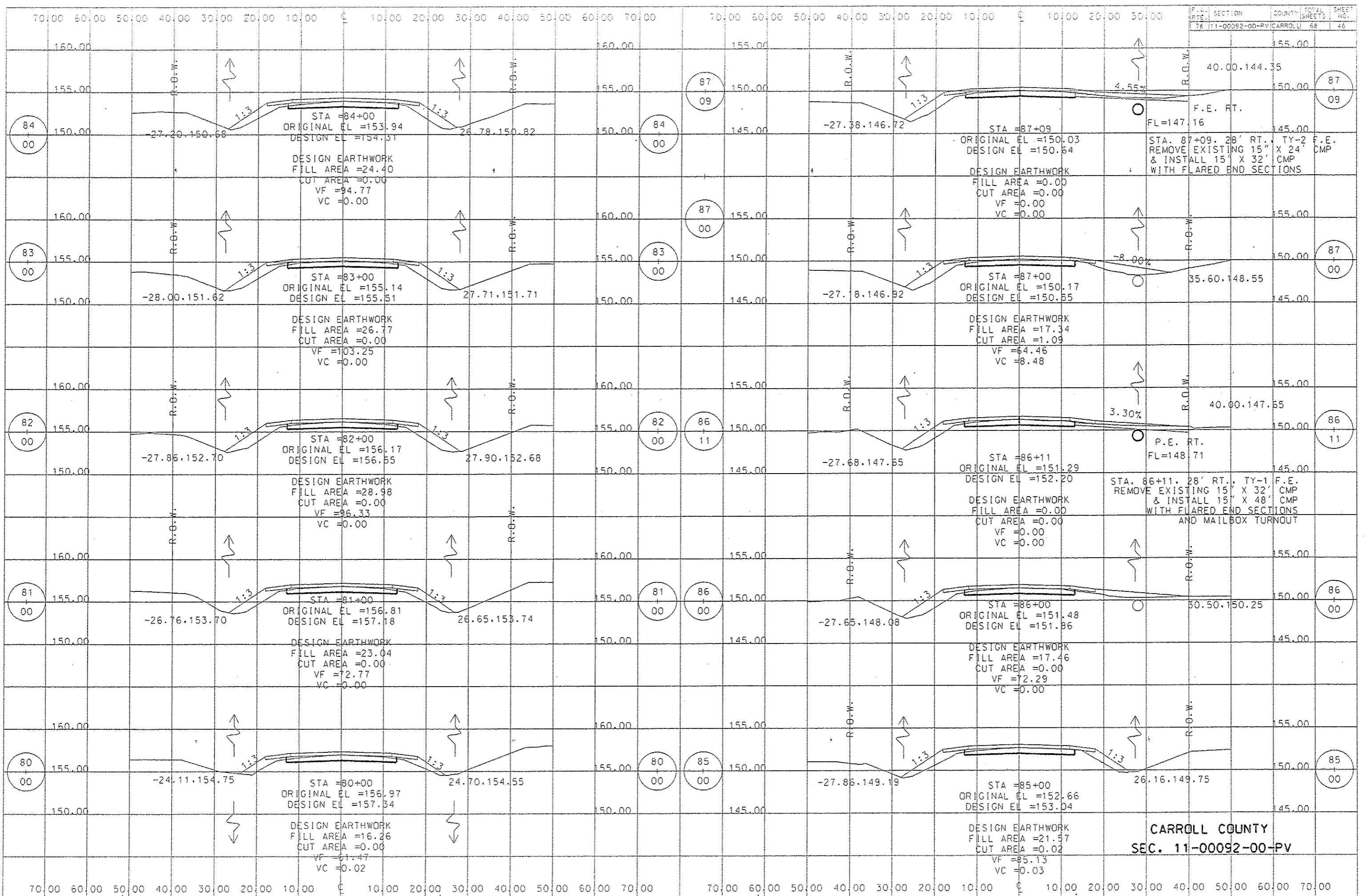
CARROLL COUNTY
 SEC. 11-00092-00-PV



CARROLL COUNTY
 SEC. 11-00092-00-PV



CARROLL COUNTY
 SEC. 11-00092-00-PV



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	11-00092-00-PV	CARROLL	48	46

40.00.144.35

F.E. RT.
FL=147.16

STA. 87+09. 28' RT., TY-2 F.E.
REMOVE EXISTING 15" X 24" CMP
& INSTALL 15" X 32" CMP
WITH FLARED END SECTIONS

35.60.148.55

P.E. RT.
FL=148.71

STA. 86+11. 28' RT., TY-1 F.E.
REMOVE EXISTING 15" X 32" CMP
& INSTALL 15" X 48" CMP
WITH FLARED END SECTIONS
AND MAILBOX TURNOUT

40.00.147.55

P.E. RT.
FL=148.71

STA. 86+11. 28' RT., TY-1 F.E.
REMOVE EXISTING 15" X 32" CMP
& INSTALL 15" X 48" CMP
WITH FLARED END SECTIONS
AND MAILBOX TURNOUT

50.50.150.25

P.E. RT.
FL=148.71

STA. 86+11. 28' RT., TY-1 F.E.
REMOVE EXISTING 15" X 32" CMP
& INSTALL 15" X 48" CMP
WITH FLARED END SECTIONS
AND MAILBOX TURNOUT

26.16.149.75

P.E. RT.
FL=148.71

STA. 86+11. 28' RT., TY-1 F.E.
REMOVE EXISTING 15" X 32" CMP
& INSTALL 15" X 48" CMP
WITH FLARED END SECTIONS
AND MAILBOX TURNOUT

CARROLL COUNTY
SEC. 11-00092-00-PV

DESIGN EARTHWORK
FILL AREA =21.57
CUT AREA =0.02
VF =85.13
VC =0.03

DESIGN EARTHWORK
FILL AREA =16.26
CUT AREA =0.00
VF =61.47
VC =0.02

DESIGN EARTHWORK
FILL AREA =17.34
CUT AREA =1.09
VF =64.46
VC =8.48

DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =0.00
VF =0.00
VC =0.00

DESIGN EARTHWORK
FILL AREA =17.46
CUT AREA =0.00
VF =72.29
VC =0.00

DESIGN EARTHWORK
FILL AREA =17.46
CUT AREA =0.00
VF =72.29
VC =0.00

DESIGN EARTHWORK
FILL AREA =17.46
CUT AREA =0.00
VF =72.29
VC =0.00

DESIGN EARTHWORK
FILL AREA =0.00
CUT AREA =0.00
VF =0.00
VC =0.00

DESIGN EARTHWORK
FILL AREA =17.34
CUT AREA =1.09
VF =64.46
VC =8.48

DESIGN EARTHWORK
FILL AREA =24.40
CUT AREA =0.00
VF =94.77
VC =0.00

DESIGN EARTHWORK
FILL AREA =26.77
CUT AREA =0.00
VF =103.25
VC =0.00

DESIGN EARTHWORK
FILL AREA =28.98
CUT AREA =0.00
VF =96.33
VC =0.00

DESIGN EARTHWORK
FILL AREA =23.04
CUT AREA =0.00
VF =72.77
VC =0.00

DESIGN EARTHWORK
FILL AREA =16.26
CUT AREA =0.00
VF =61.47
VC =0.02

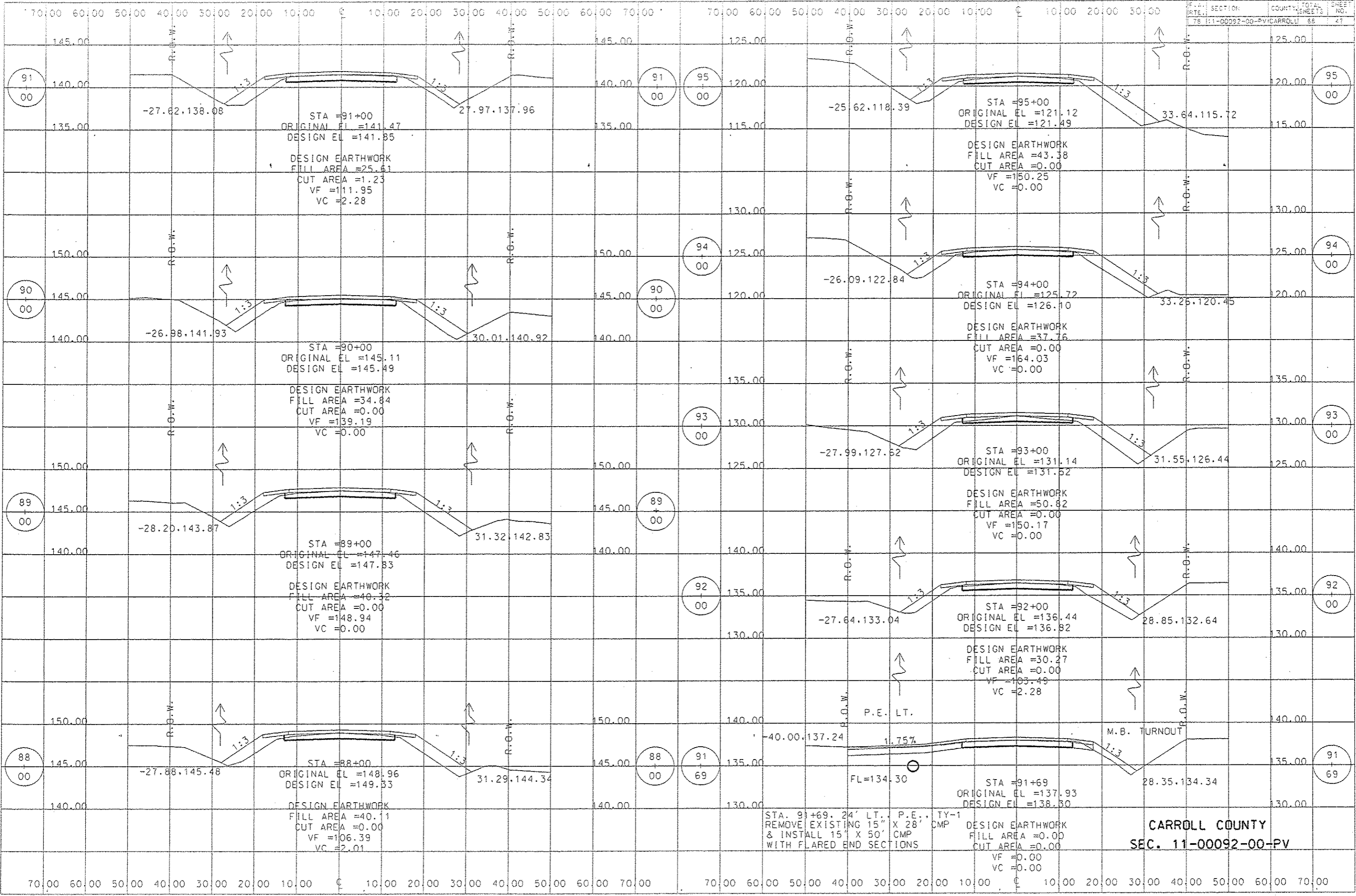
DESIGN EARTHWORK
FILL AREA =23.04
CUT AREA =0.00
VF =72.77
VC =0.00

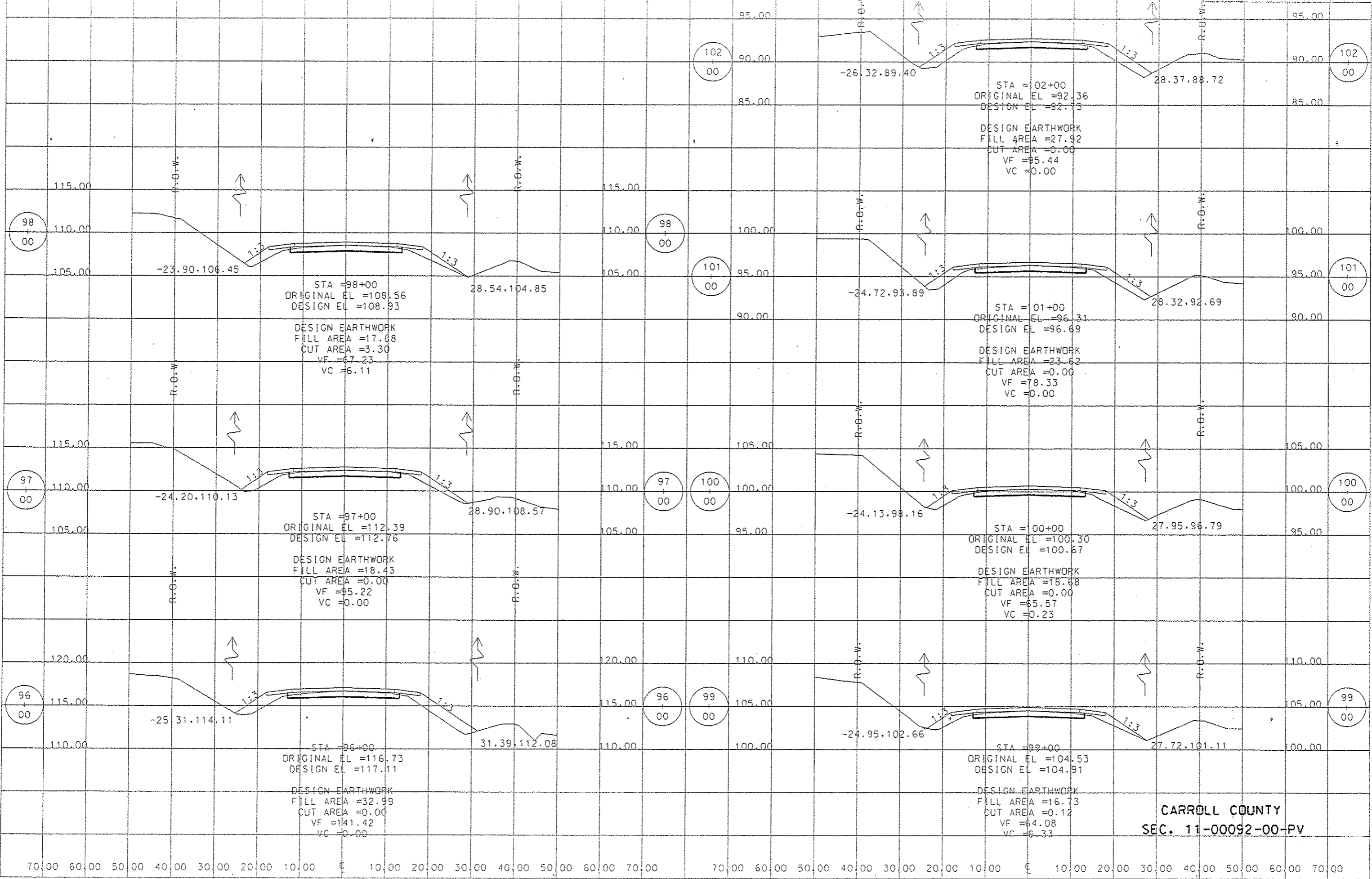
DESIGN EARTHWORK
FILL AREA =23.04
CUT AREA =0.00
VF =72.77
VC =0.00

DESIGN EARTHWORK
FILL AREA =23.04
CUT AREA =0.00
VF =72.77
VC =0.00

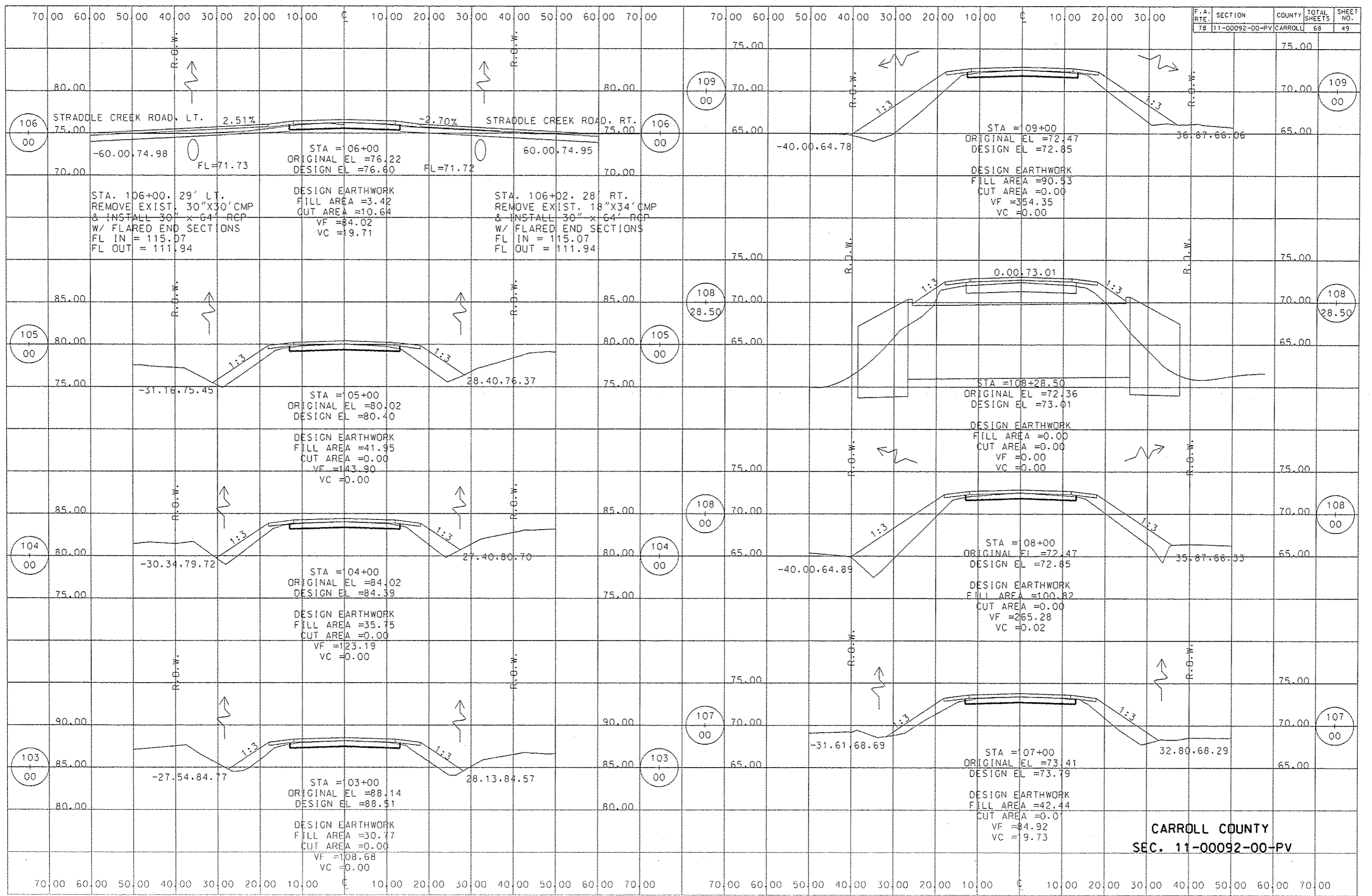
DESIGN EARTHWORK
FILL AREA =23.04
CUT AREA =0.00
VF =72.77
VC =0.00

70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

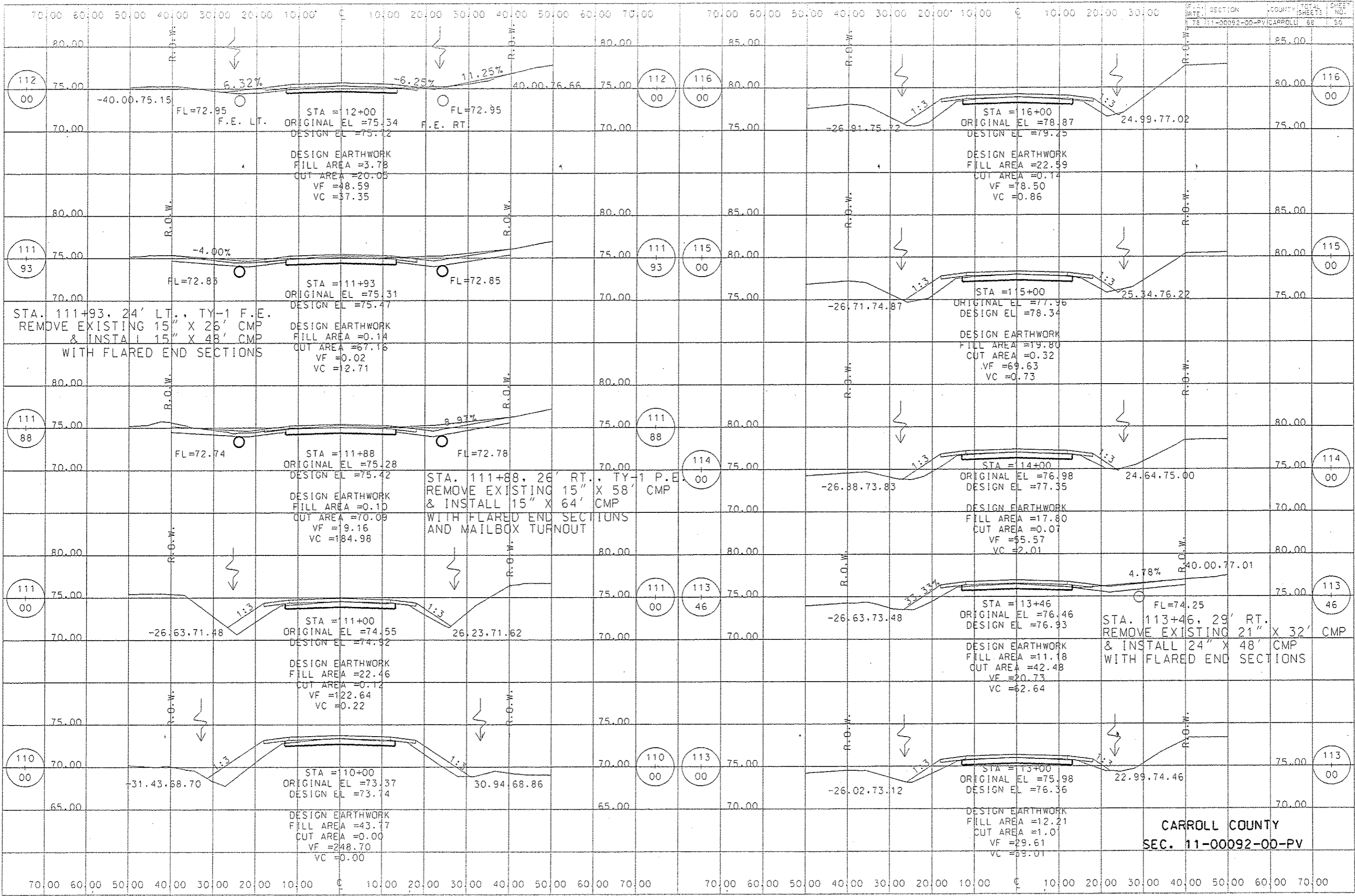




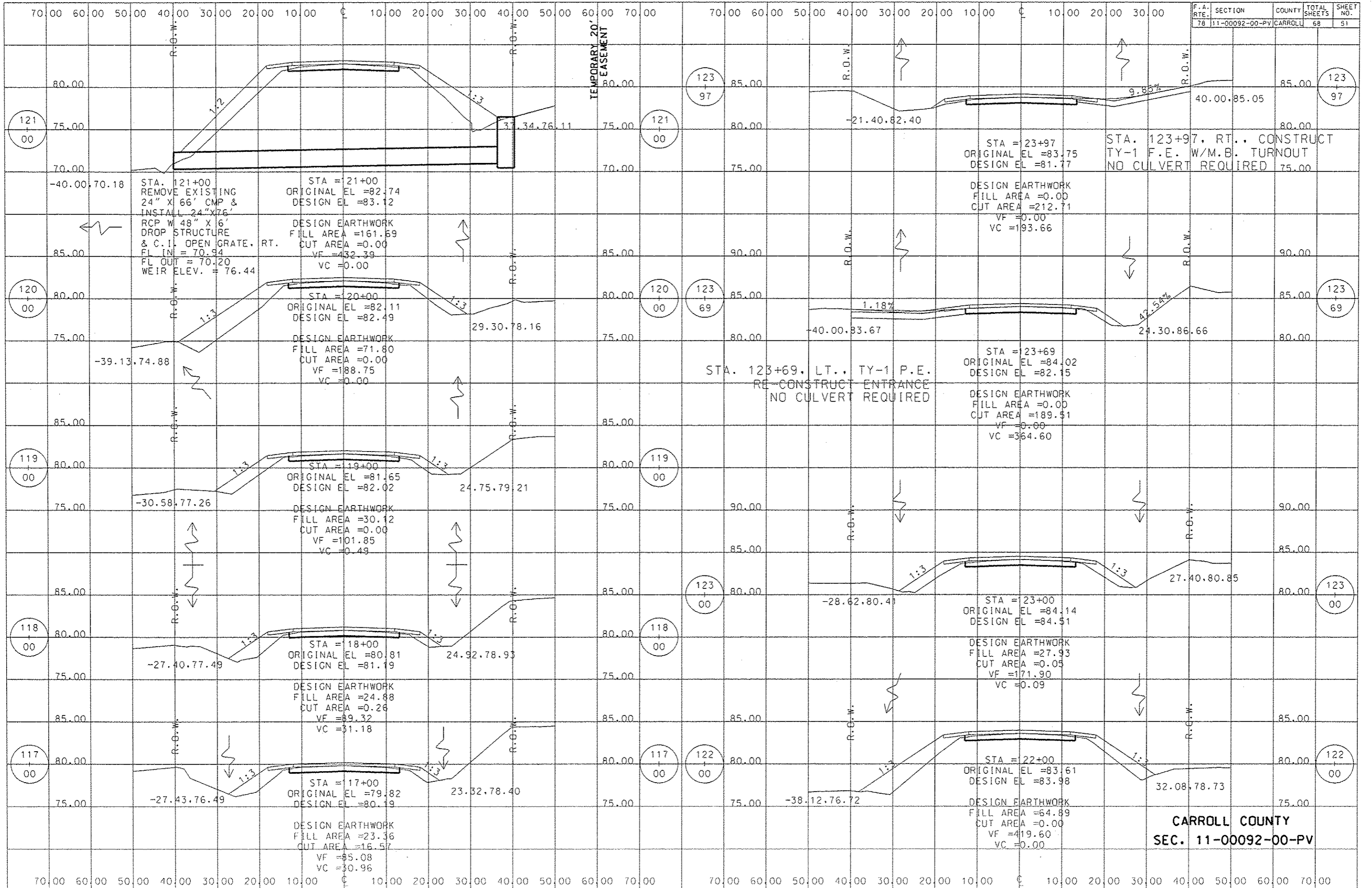
CARROLL COUNTY
 SEC. 11-00092-00-PV



CARROLL COUNTY
SEC. 11-00092-00-PV



CARROLL COUNTY
 SEC. 11-00092-00-PV



STA. 121+00
 REMOVE EXISTING
 24" X 66' CMP &
 INSTALL 24" X 76'
 RCP W/ 48" X 6'
 DROP STRUCTURE
 & C.I. OPEN GRATE, RT.
 FL IN = 70.94
 FL OUT = 70.20
 WEIR ELEV. = 76.44

STA = 21+00
 ORIGINAL EL = 82.74
 DESIGN EL = 83.12
 DESIGN EARTHWORK
 FILL AREA = 161.69
 CUT AREA = 0.00
 VF = 432.39
 VC = 0.00

STA = 120+00
 ORIGINAL EL = 82.11
 DESIGN EL = 82.49
 DESIGN EARTHWORK
 FILL AREA = 71.80
 CUT AREA = 0.00
 VF = 188.75
 VC = 0.00

STA = 119+00
 ORIGINAL EL = 81.65
 DESIGN EL = 82.02
 DESIGN EARTHWORK
 FILL AREA = 30.12
 CUT AREA = 0.00
 VF = 101.85
 VC = 0.49

STA = 118+00
 ORIGINAL EL = 80.81
 DESIGN EL = 81.19
 DESIGN EARTHWORK
 FILL AREA = 24.88
 CUT AREA = 0.26
 VF = 89.32
 VC = 31.18

STA = 117+00
 ORIGINAL EL = 79.82
 DESIGN EL = 80.19
 DESIGN EARTHWORK
 FILL AREA = 23.36
 CUT AREA = 16.57
 VF = 85.08
 VC = 30.96

STA = 23+97
 ORIGINAL EL = 83.75
 DESIGN EL = 81.77
 DESIGN EARTHWORK
 FILL AREA = 0.00
 CUT AREA = 212.71
 VF = 0.00
 VC = 193.66

STA. 123+97, RT.. CONSTRUCT
 TY-1 F.E. W/M.B. TURNOUT
 NO CULVERT REQUIRED

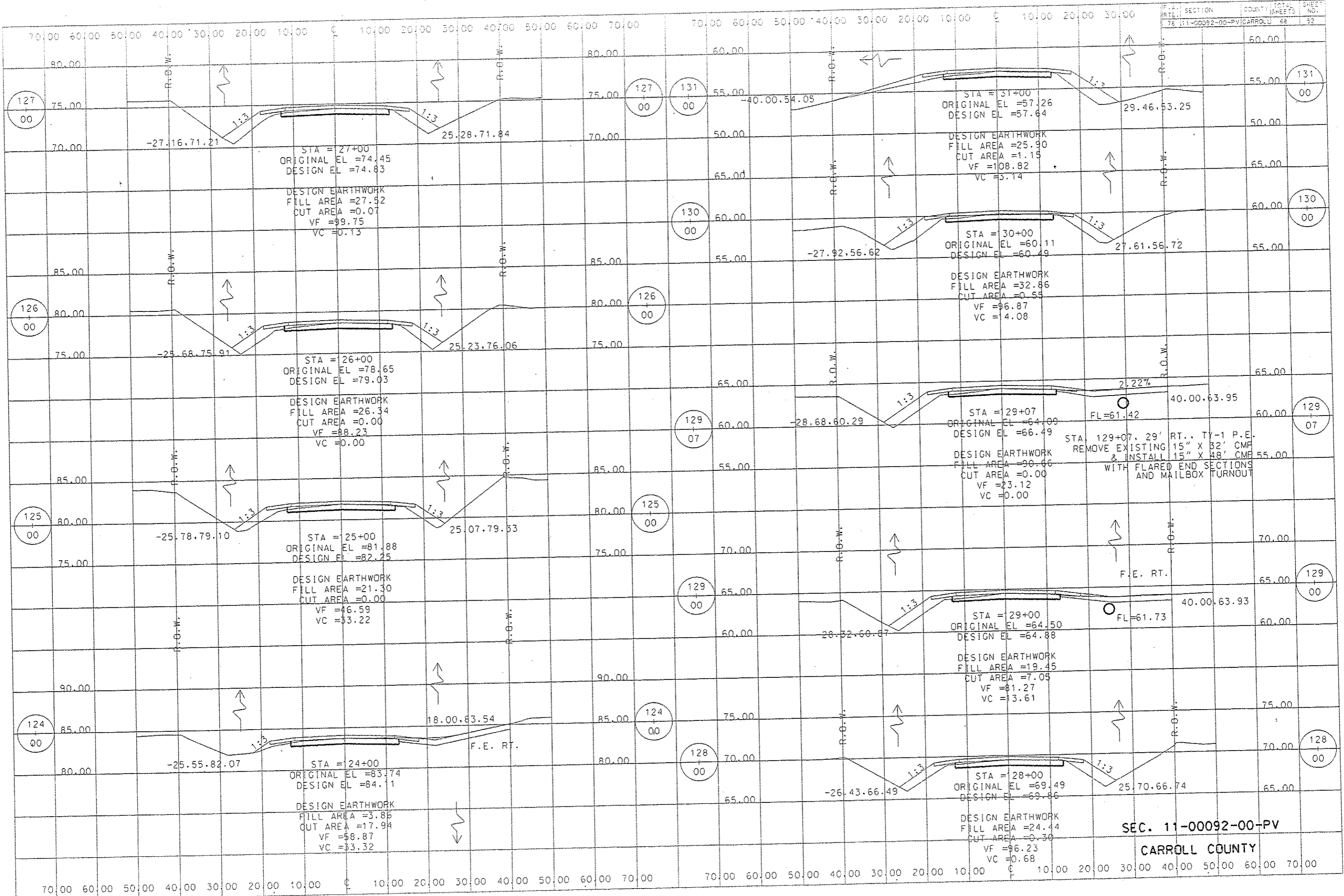
STA. 123+69, LT.. TY-1 P.E.
 RE-CONSTRUCT ENTRANCE
 NO CULVERT REQUIRED

STA = 23+69
 ORIGINAL EL = 84.02
 DESIGN EL = 82.15
 DESIGN EARTHWORK
 FILL AREA = 0.00
 CUT AREA = 189.51
 VF = 0.00
 VC = 364.60

STA = 23+00
 ORIGINAL EL = 84.14
 DESIGN EL = 84.51
 DESIGN EARTHWORK
 FILL AREA = 27.93
 CUT AREA = 0.05
 VF = 171.90
 VC = 0.09

STA = 22+00
 ORIGINAL EL = 83.61
 DESIGN EL = 83.98
 DESIGN EARTHWORK
 FILL AREA = 64.89
 CUT AREA = 0.00
 VF = 419.60
 VC = 0.00

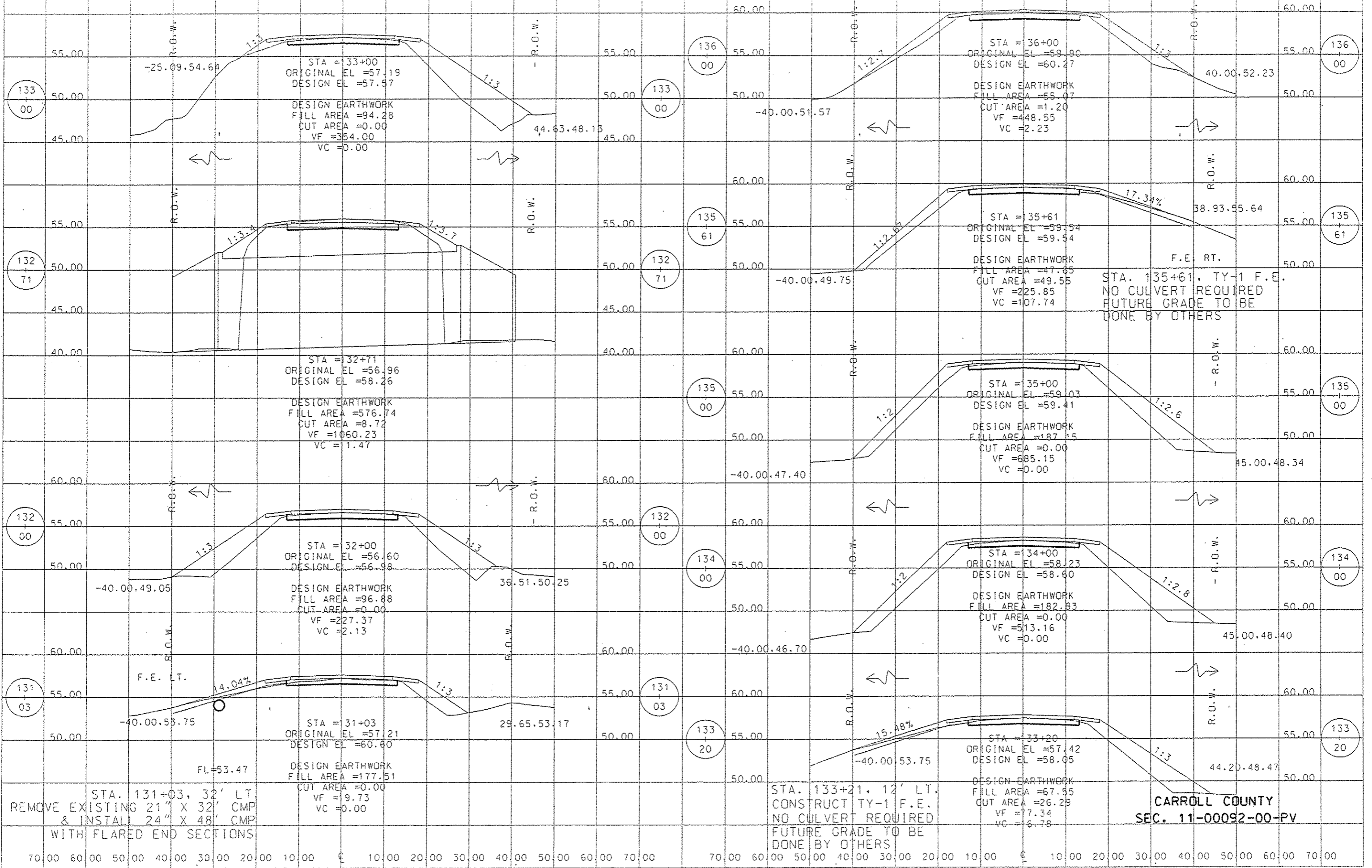
CARROLL COUNTY
SEC. 11-00092-00-PV



SEC. 11-00092-00-PV
 CARROLL COUNTY

70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00



STA = 133+00
 ORIGINAL EL = 57.19
 DESIGN EL = 57.57
 DESIGN EARTHWORK
 FILL AREA = 94.28
 CUT AREA = 0.00
 VF = 354.00
 VC = 0.00

STA = 136+00
 ORIGINAL EL = 59.90
 DESIGN EL = 60.27
 DESIGN EARTHWORK
 FILL AREA = 55.07
 CUT AREA = 1.20
 VF = 448.55
 VC = 2.23

STA = 135+61
 ORIGINAL EL = 59.54
 DESIGN EL = 59.54
 DESIGN EARTHWORK
 FILL AREA = 47.85
 CUT AREA = 49.55
 VF = 225.85
 VC = 107.74

STA. 135+61, TY-1 F.E.
 NO CULVERT REQUIRED
 FUTURE GRADE TO BE
 DONE BY OTHERS

STA = 132+71
 ORIGINAL EL = 56.96
 DESIGN EL = 58.26
 DESIGN EARTHWORK
 FILL AREA = 576.74
 CUT AREA = 8.72
 VF = 1060.23
 VC = 1.47

STA = 135+00
 ORIGINAL EL = 59.03
 DESIGN EL = 59.41
 DESIGN EARTHWORK
 FILL AREA = 187.15
 CUT AREA = 0.00
 VF = 685.15
 VC = 0.00

STA = 132+00
 ORIGINAL EL = 56.60
 DESIGN EL = 56.98
 DESIGN EARTHWORK
 FILL AREA = 96.88
 CUT AREA = 0.00
 VF = 227.37
 VC = 2.13

STA = 134+00
 ORIGINAL EL = 58.23
 DESIGN EL = 58.60
 DESIGN EARTHWORK
 FILL AREA = 182.83
 CUT AREA = 0.00
 VF = 513.16
 VC = 0.00

STA = 131+03
 ORIGINAL EL = 57.21
 DESIGN EL = 60.60
 DESIGN EARTHWORK
 FILL AREA = 177.51
 CUT AREA = 0.00
 VF = 19.73
 VC = 0.00

STA = 133+20
 ORIGINAL EL = 57.42
 DESIGN EL = 58.05
 DESIGN EARTHWORK
 FILL AREA = 67.55
 CUT AREA = 26.29
 VF = 77.34
 VC = 6.78

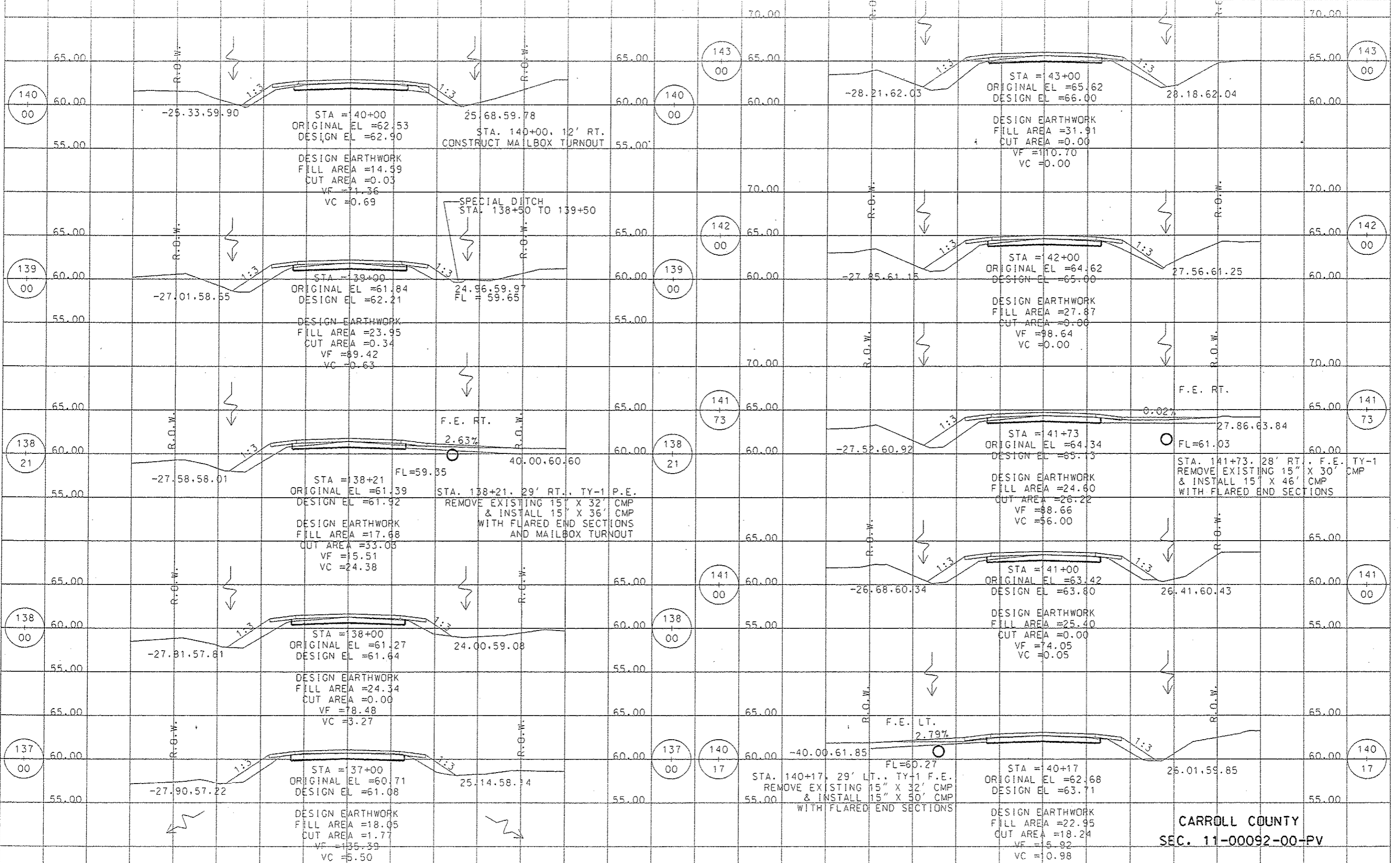
STA. 131+03, 32' LT.
 REMOVE EXISTING 21" X 32' CMP
 & INSTALL 24" X 48' CMP
 WITH FLARED END SECTIONS

STA. 133+21, 12' LT.
 CONSTRUCT TY-1 F.E.
 NO CULVERT REQUIRED
 FUTURE GRADE TO BE
 DONE BY OTHERS

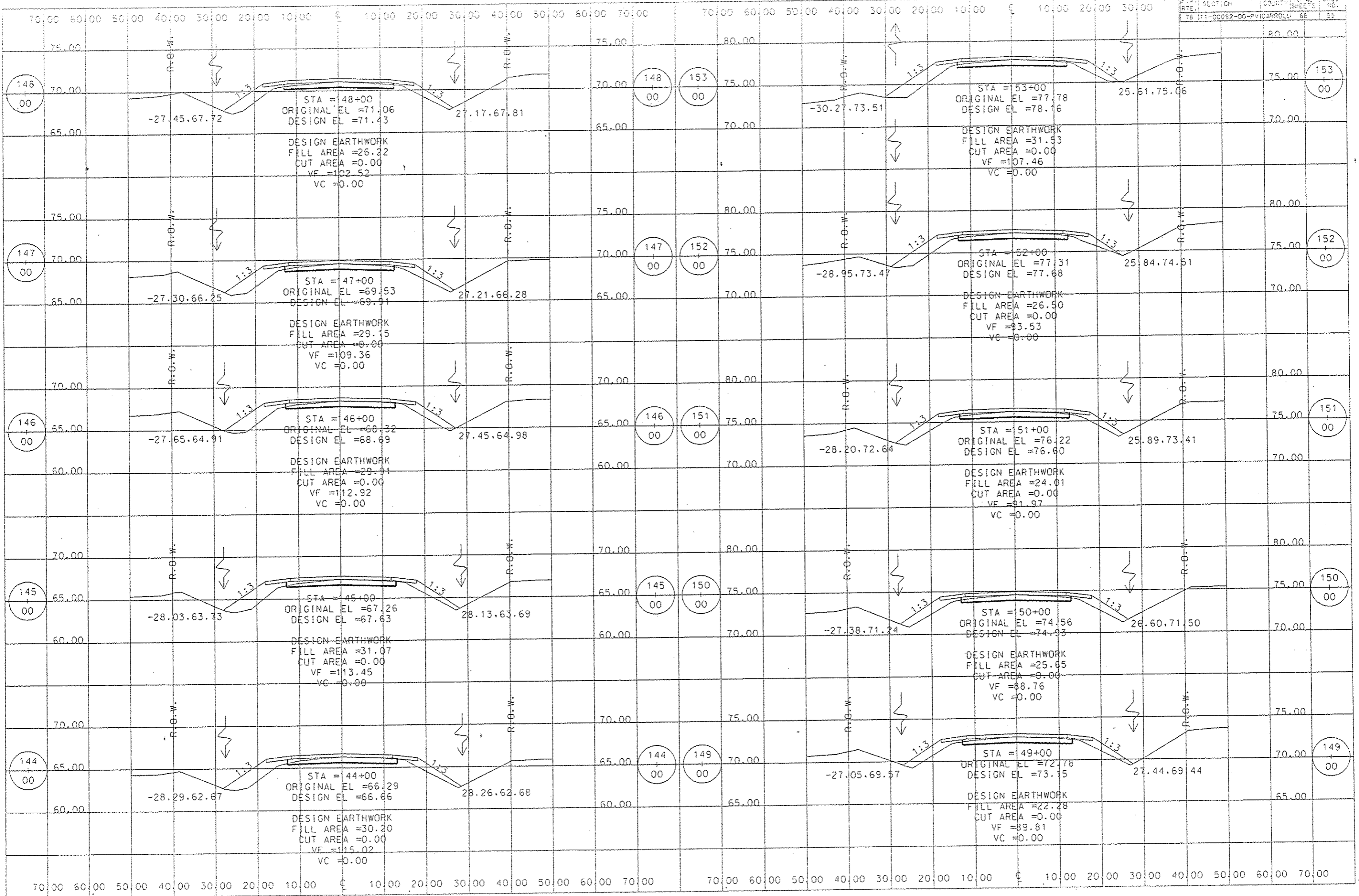
CARROLL COUNTY
 SEC. 11-00092-00-PV

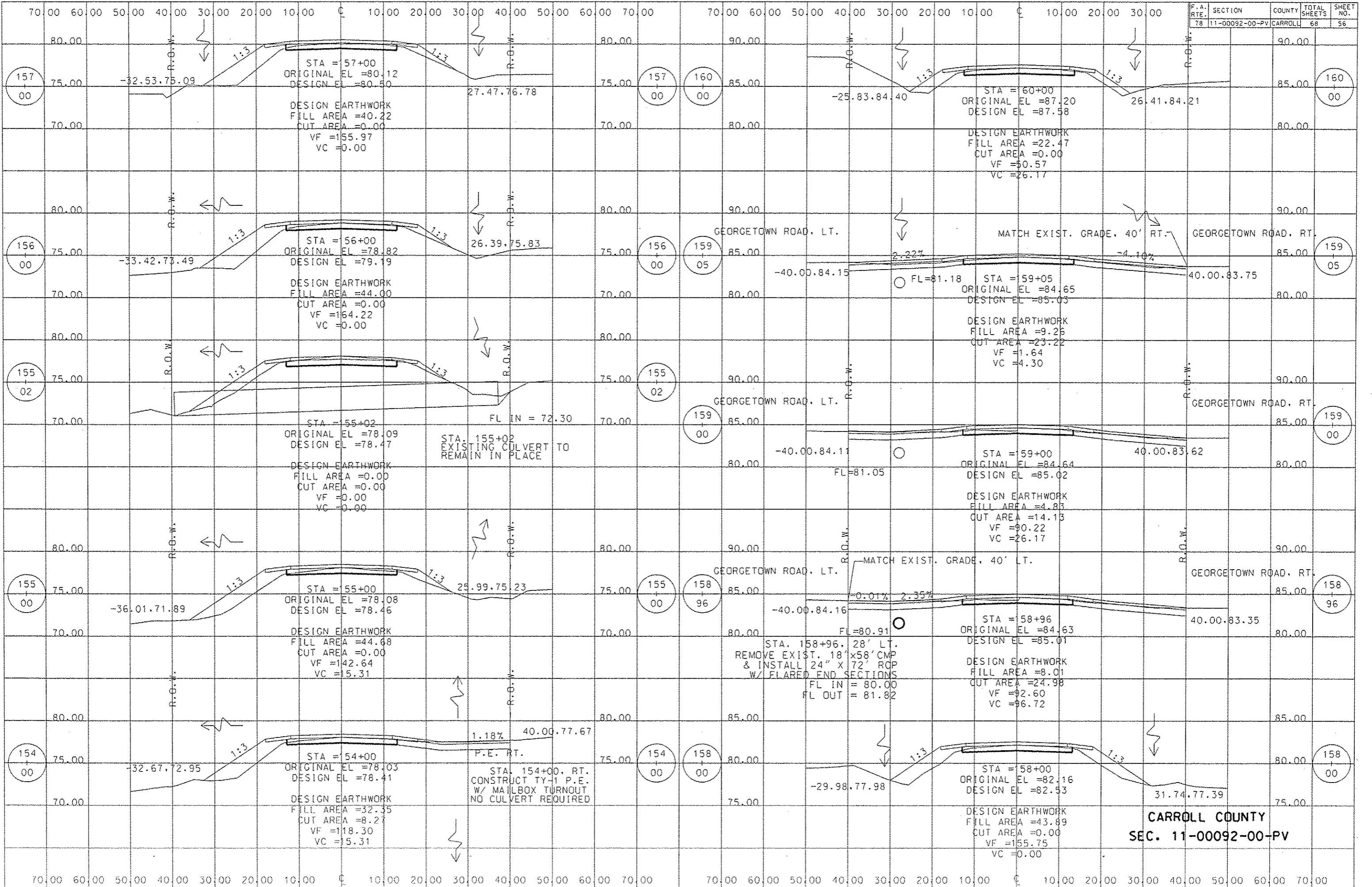
70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

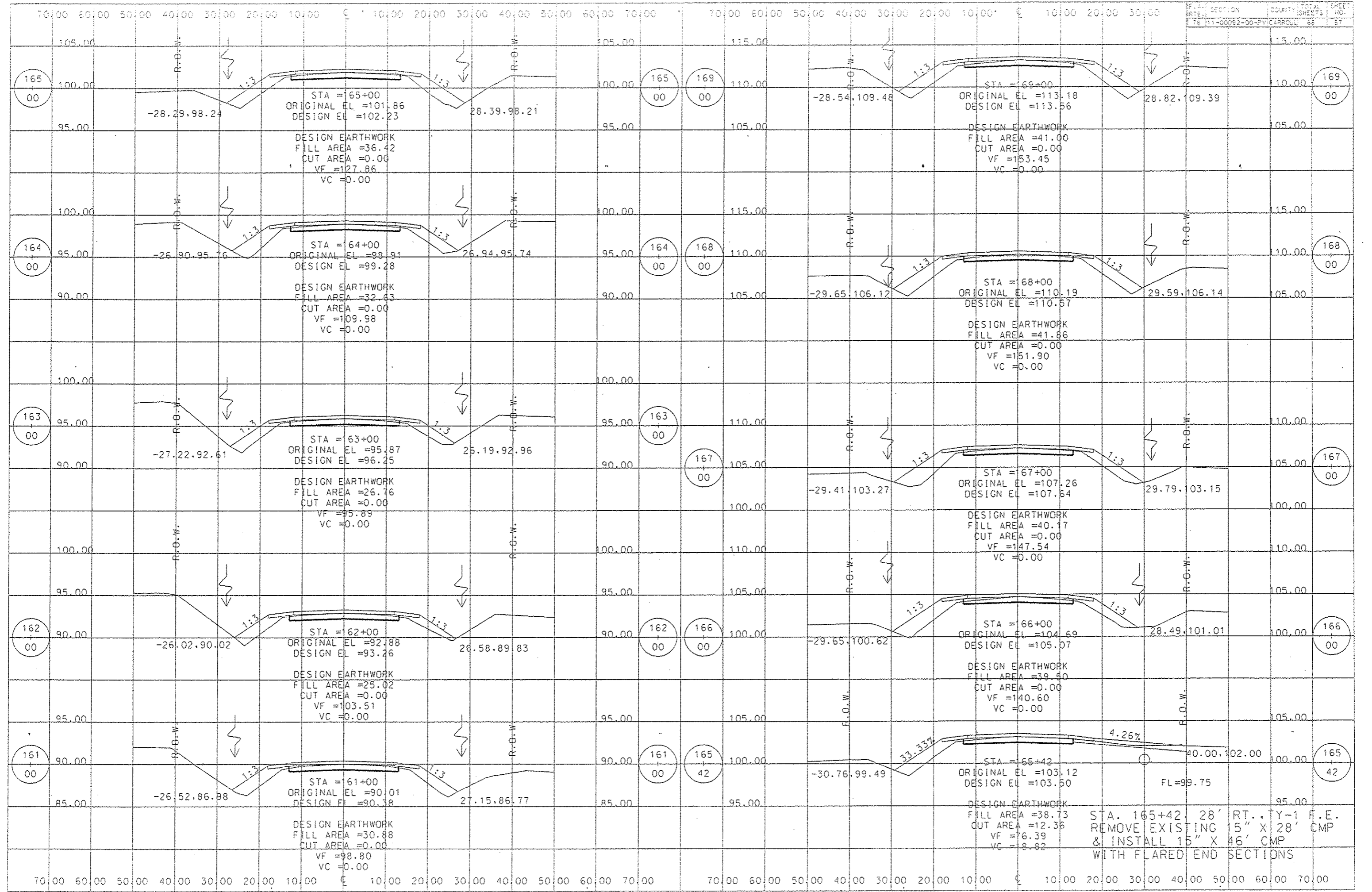


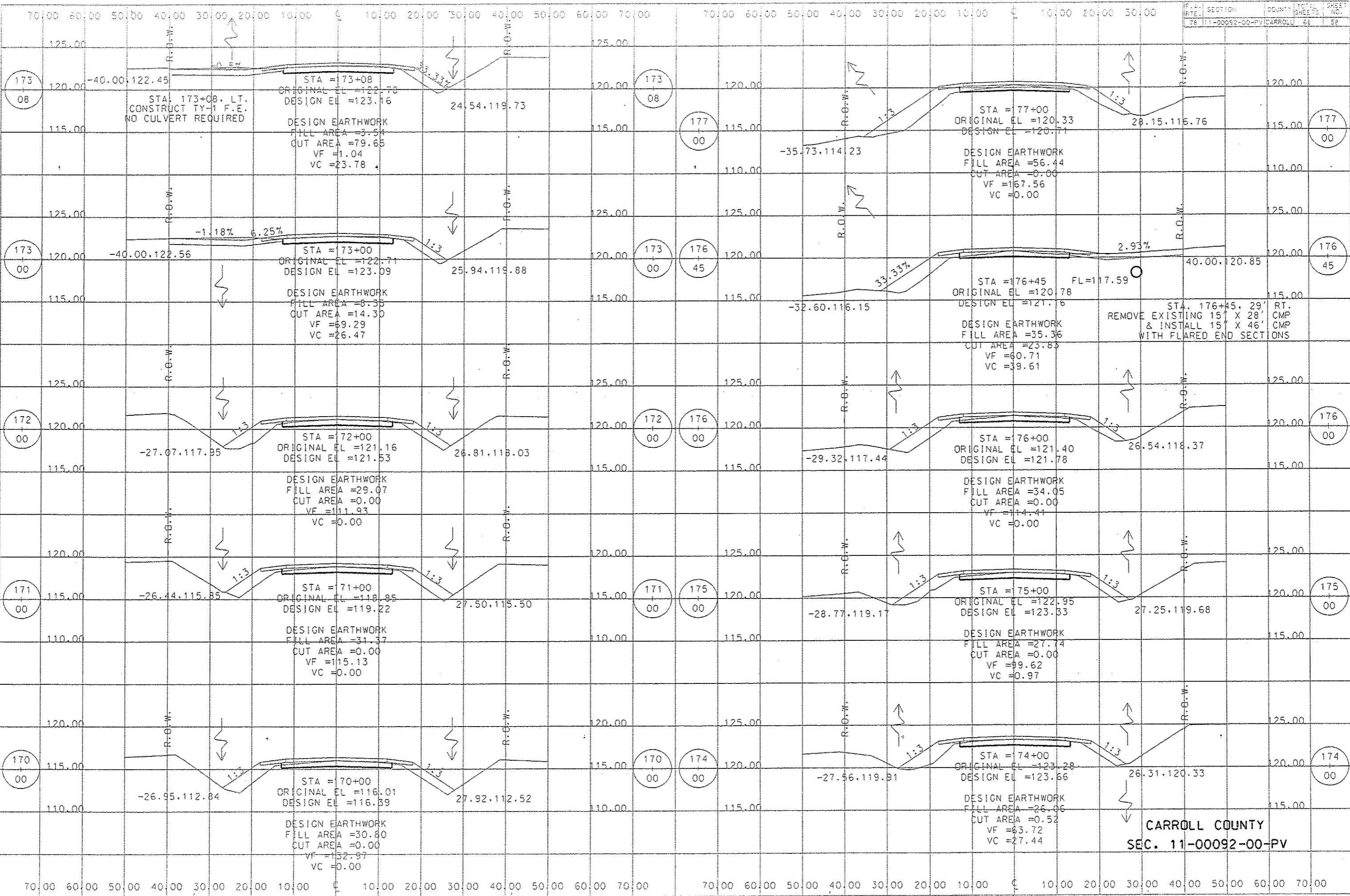
CARROLL COUNTY
SEC. 11-00092-00-PV



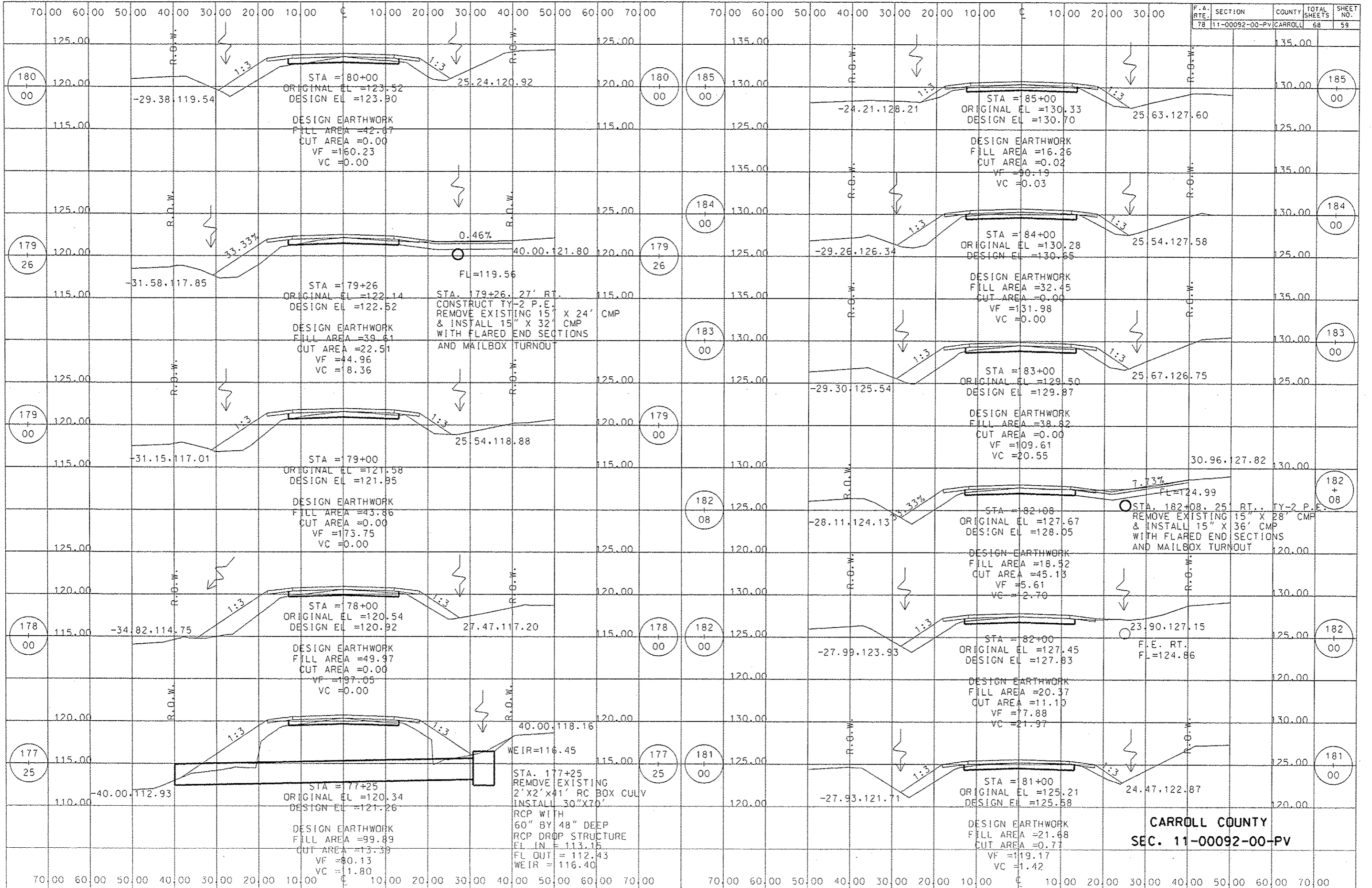


CARROLL COUNTY
SEC. 11-00092-00-PV

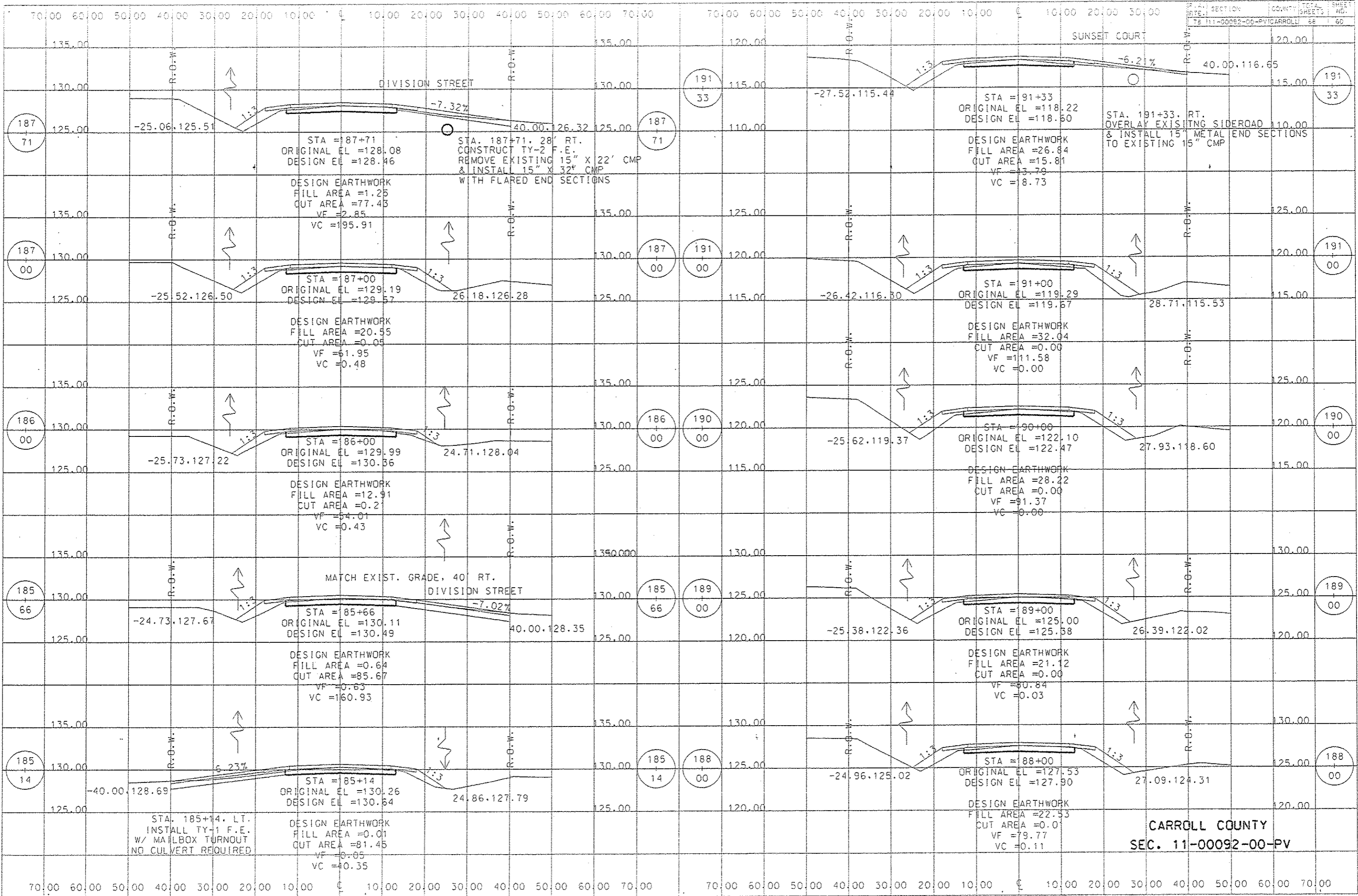




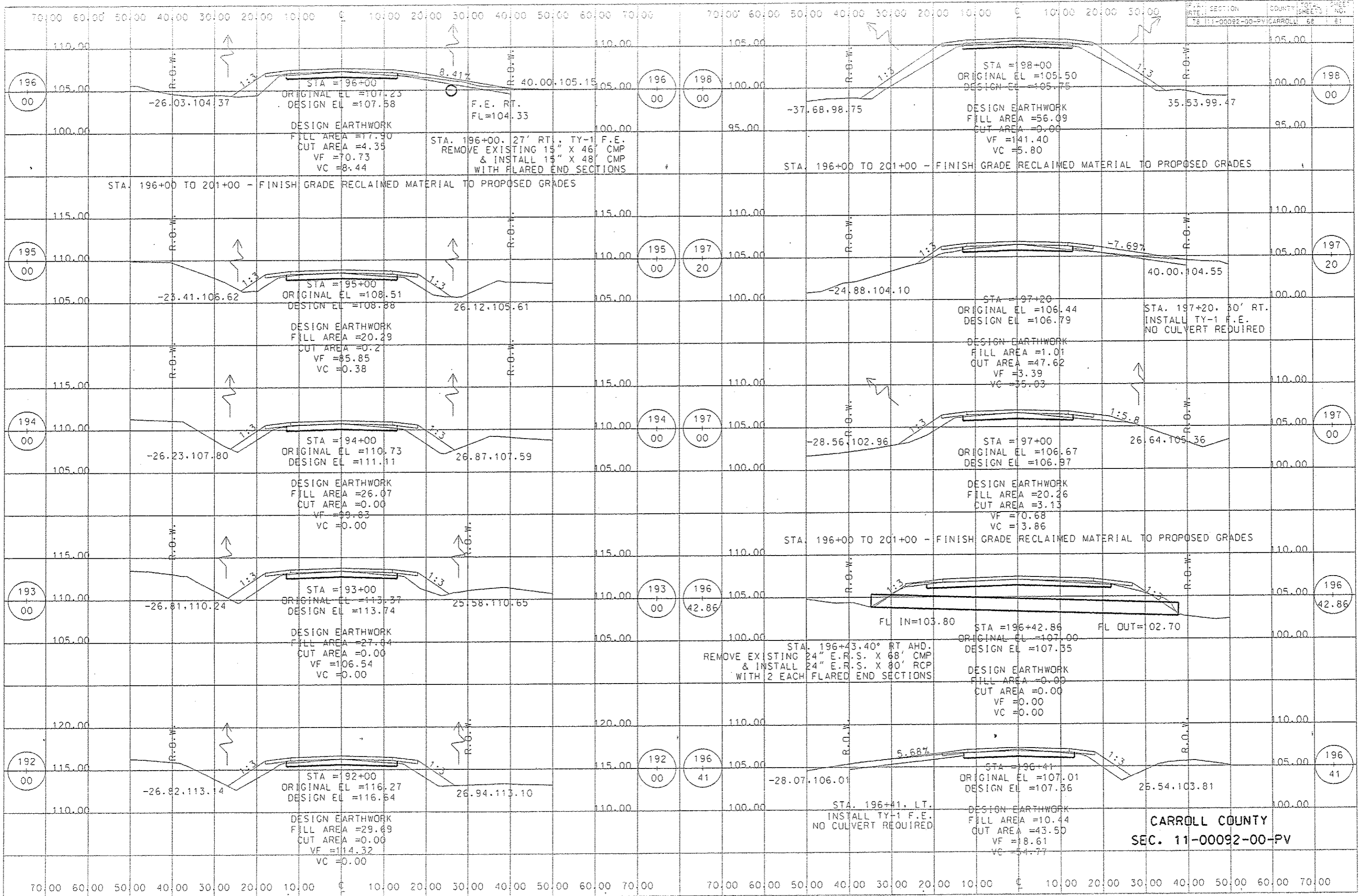
CARROLL COUNTY
 SEC. 11-00092-00-PV



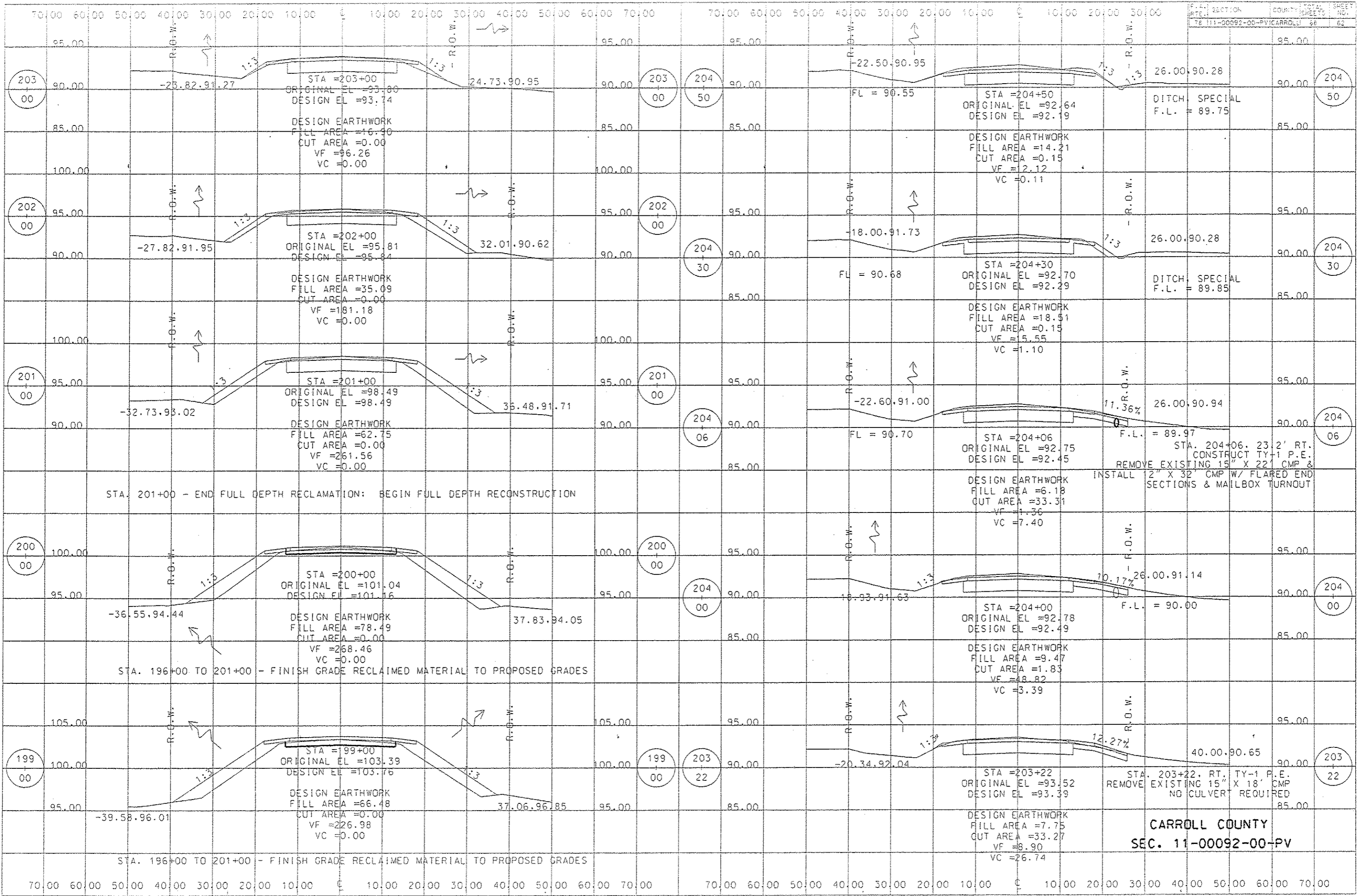
CARROLL COUNTY
SEC. 11-00092-00-PV



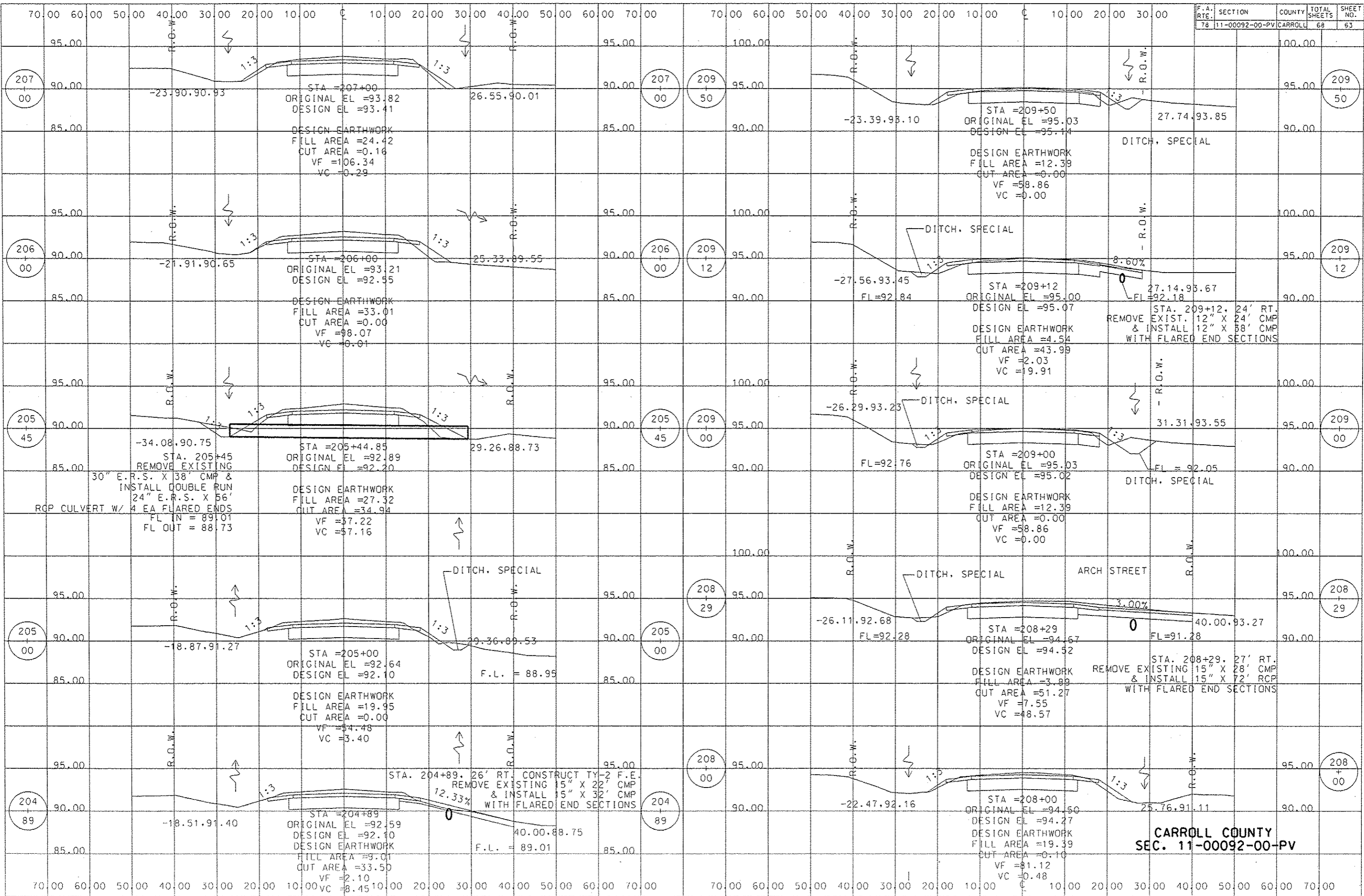
CARROLL COUNTY
 SEC. 11-00092-00-PV



CARROLL COUNTY
 SEC. 11-00092-00-PV



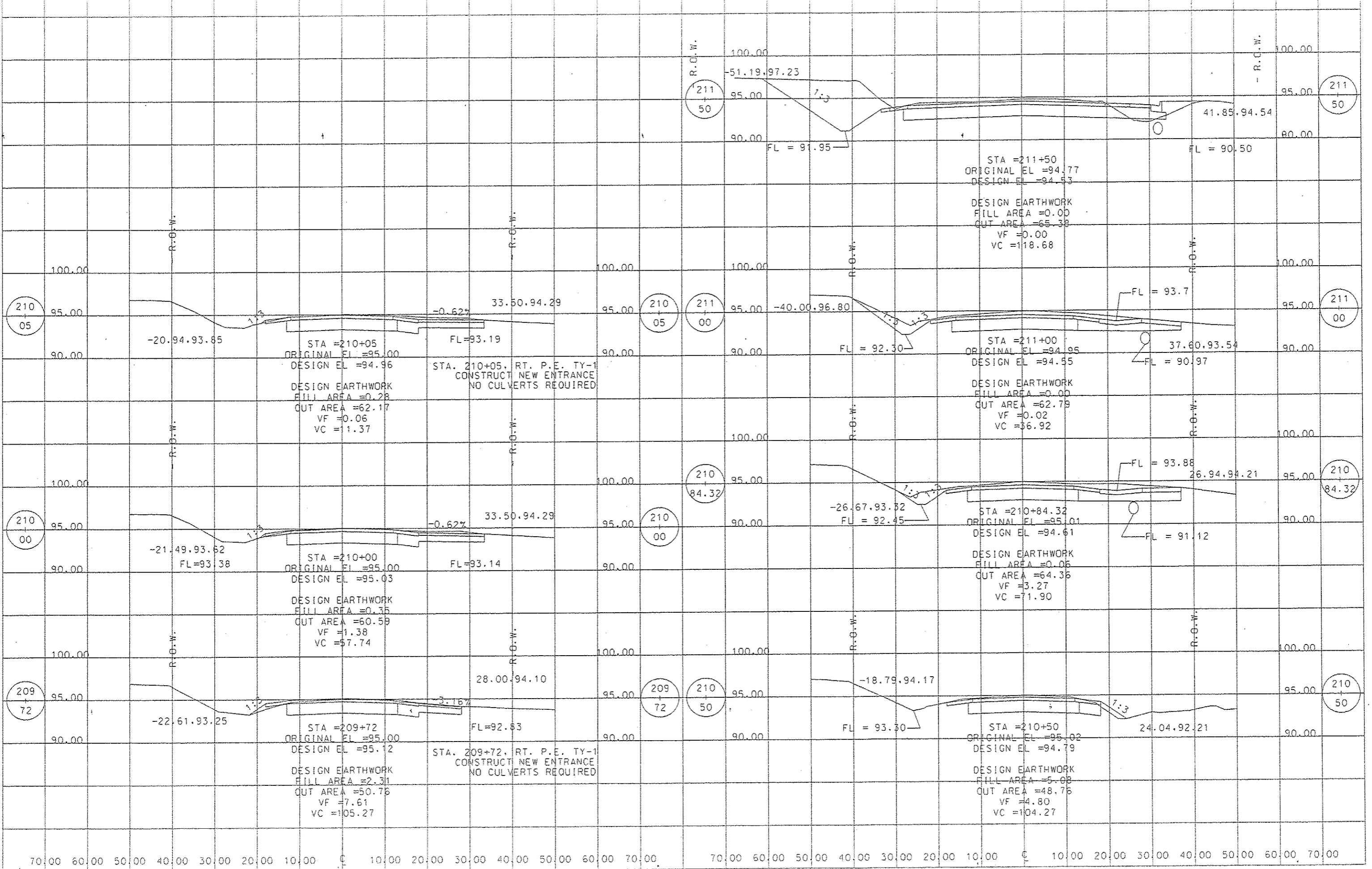
CARROLL COUNTY
 SEC. 11-00092-00-PV



CARROLL COUNTY
SEC. 11-00092-00-PV

70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

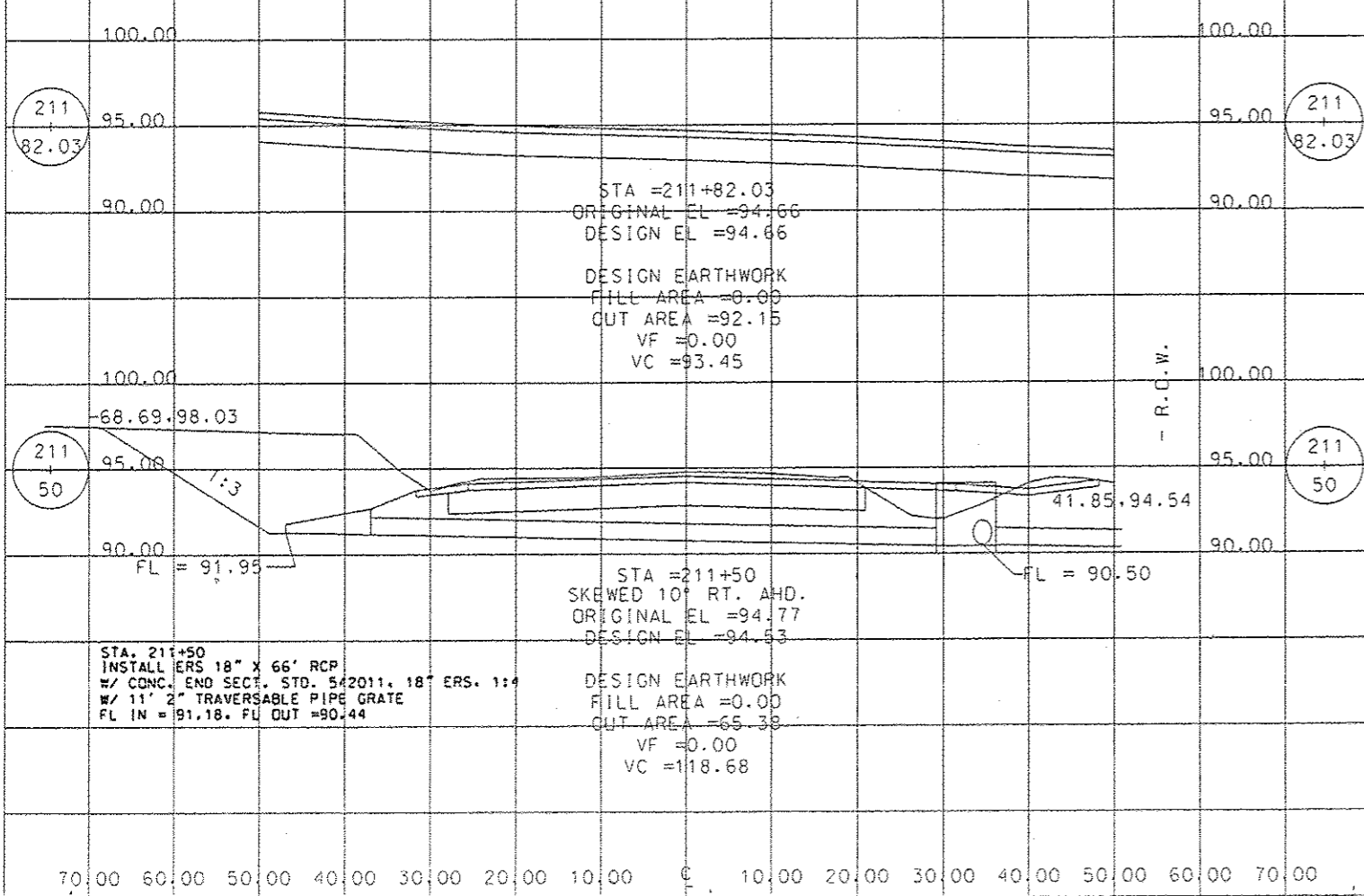


70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00 70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11-00092-00-PV	CARROLL	68	55



STA =211+82.03
 ORIGINAL EL =94.66
 DESIGN EL =94.66
 DESIGN EARTHWORK
 FILL AREA =0.00
 CUT AREA =92.15
 VF =0.00
 VC =93.45

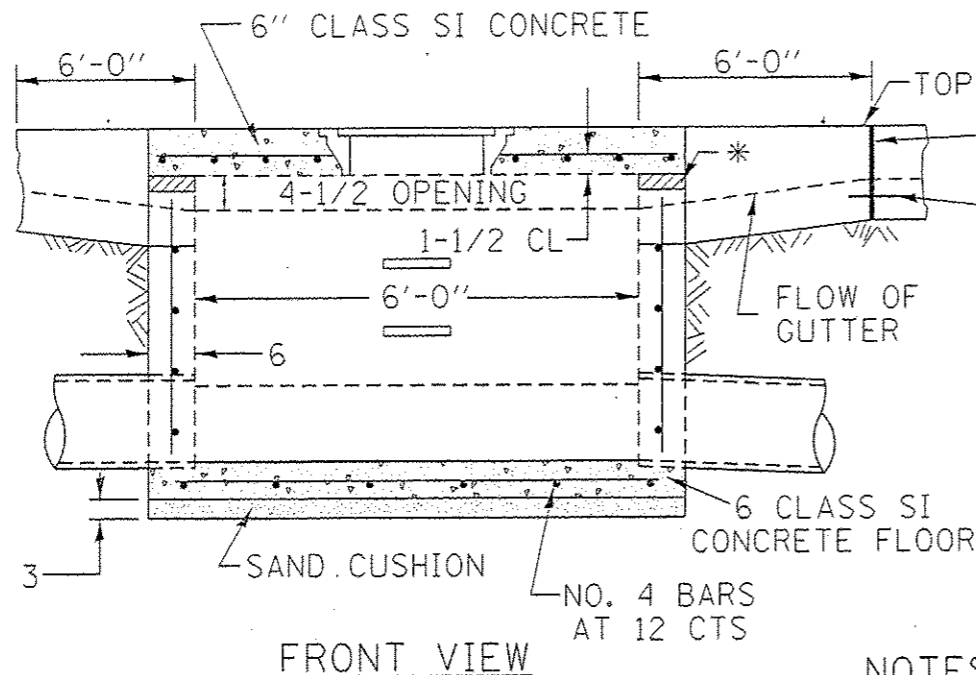
STA =211+50
 SKEWED 10° RT. AHD.
 ORIGINAL EL =94.77
 DESIGN EL =94.53
 DESIGN EARTHWORK
 FILL AREA =0.00
 CUT AREA =65.38
 VF =0.00
 VC =118.68

STA. 211+50
 INSTALL ERS 18" X 66" RCP
 W/ CONC. END SECT. STD. 542011, 18" ERS. 1:4
 W/ 11' 2" TRAVERSABLE PIPE GRATE
 FL IN = 91.18. FL OUT =90.44

CARROLL COUNTY
 SEC. 11-00092-00-PV

70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00 70.00 60.00 50.00 40.00 30.00 20.00 10.00 0 10.00 20.00 30.00 40.00 50.00 60.00 70.00

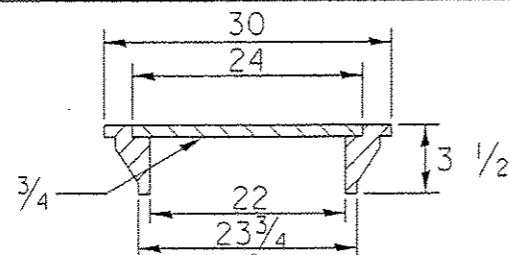
INLET SPECIAL NO. 5



FRONT VIEW

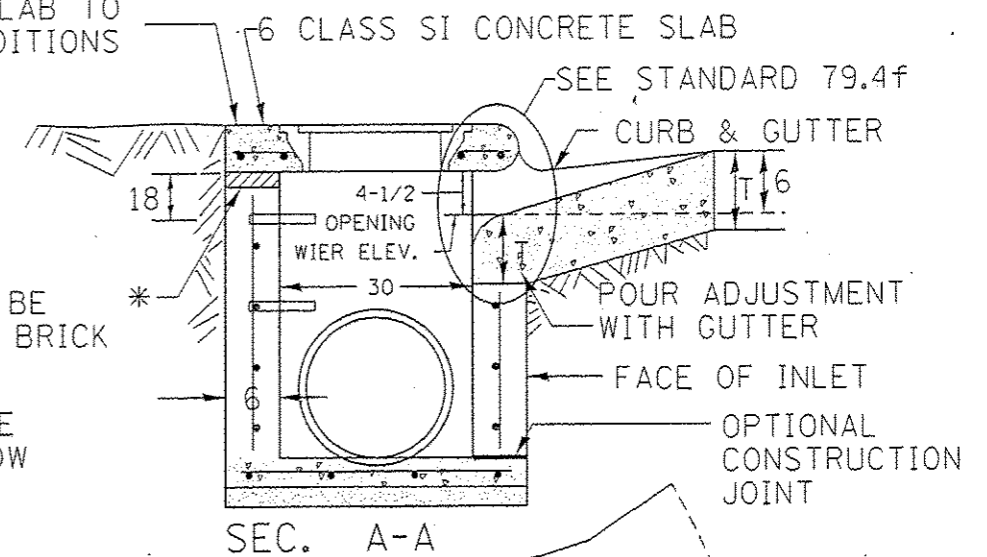
SEE STANDARD 602701 FOR DETAILS OF STEPS.
 1" PREFORMED EXPANSION JOINTS AS SHOWN SHALL BE PROVIDED ON EACH SIDE OF INLET.
 CLASS SI CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT.
 THE SIDE WALLS MAY BE BUILT AS PRECAST SEGMENTAL SECTIONS.
 REINFORCEMENT FOR INLET SPECIAL NO. 5 SHALL BE ACCORDING TO DISTRICT STANDARD 79.4g

LIGHT WEIGHT MANHOLE CASTING

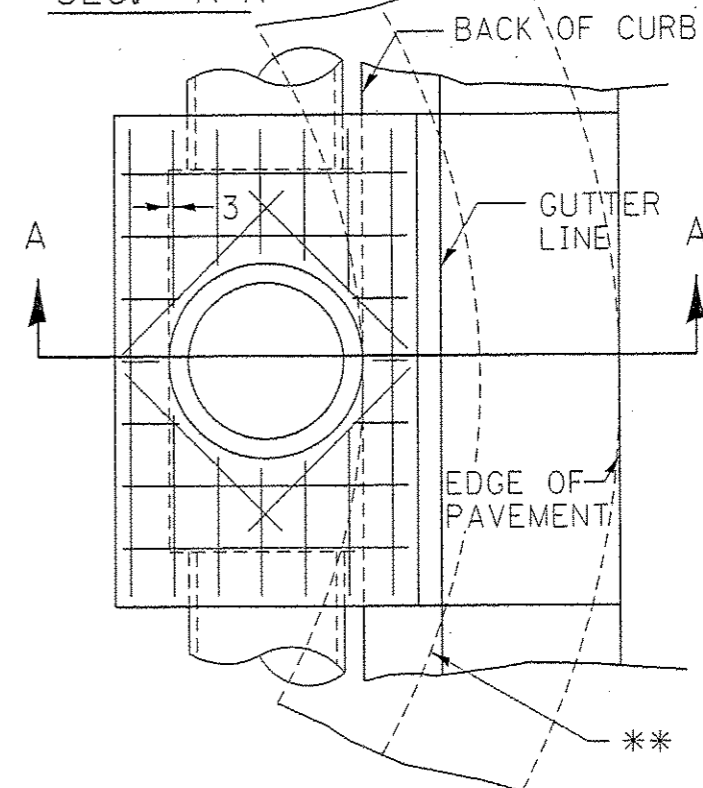


TOTAL WEIGHT 160 LBS.

SLOPE TOP SLAB TO MATCH FINAL CONDITIONS



SEC. A-A



STEPS AT 12 TO 16 CTS.

* THE WALL ADJUSTMENTS SHALL BE MADE WITH CONCRETE BUILDING BRICK OR CLASS SI CONCRETE.

THE HEIGHT OF THE BOX MAY BE CONSTRUCTED 6 SHORT TO ALLOW FOR FIELD ADJUSTMENTS.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

NOTES

STEPS SHALL BE OMITTED WHEN DEPTH OF INLET IS LESS THAN 5 FOOT

THE INLET SHALL BE CAST IN PLACE OR PRECAST.

EXCEPT AS NOTED HEREON INLET SPECIAL NO. 5 SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS.

THE CONTRACT UNIT PRICE EACH FOR INLET SPECIAL NO. 5 SHALL INCLUDE THE COST OF FURNISHING AND INSTALLING THE FRAME, LID, REINFORCEMENT BARS, FLOOR AND TOP SLABS, CAST IRON STEPS (IF USED).

THE CURB AND GUTTER WILL BE PAID FOR SEPARATELY AND WILL BE MEASURED THROUGH THE INLET.

THE CURB AND GUTTER ADJACENT TO AND 6 FOOT ON EITHER SIDE OF THE INLET SHALL BE CONSTRUCTED AS SHOWN WITH NO ADDITIONAL COMPENSATION FOR THE TRANSITION.

ALL PIPE UNDERDRAIN CONNECTIONS WHEN SPECIFIED SHALL BE DONE IN ACCORDANCE WITH ART. 601 OF THE STANDARD SPECIFICATIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER (FOOT) FOR PIPE UNDERDRAINS (SPECIAL) OF THE DIAMETER SPECIFIED WHICH PRICE SHALL INCLUDE THE CAT OR CA16 AND THE CONNECTION TO THE INLET.

** WHEN INLET IS CONSTRUCTED IN RETURN, THE TOP OF SLAB SHALL CONFORM TO THE RADIUS OF THE RETURN.

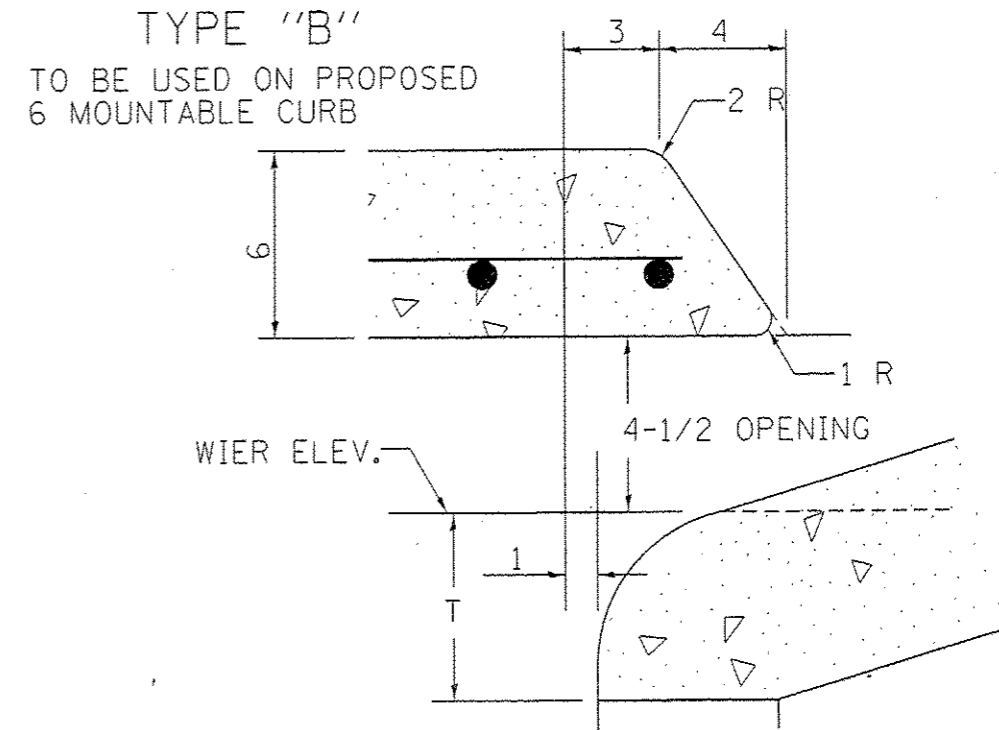
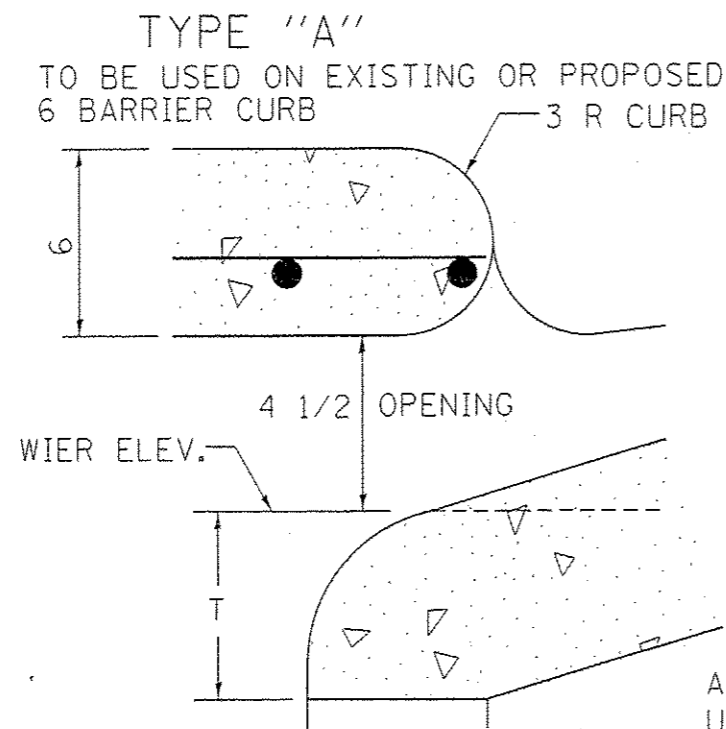
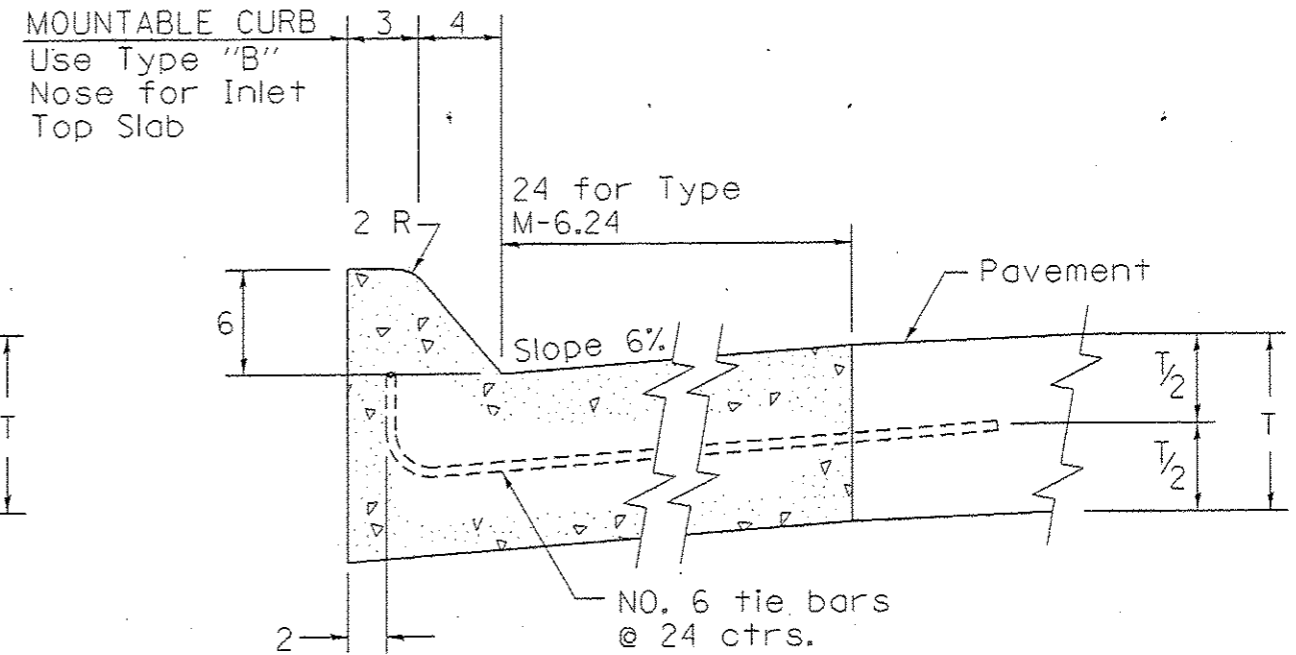
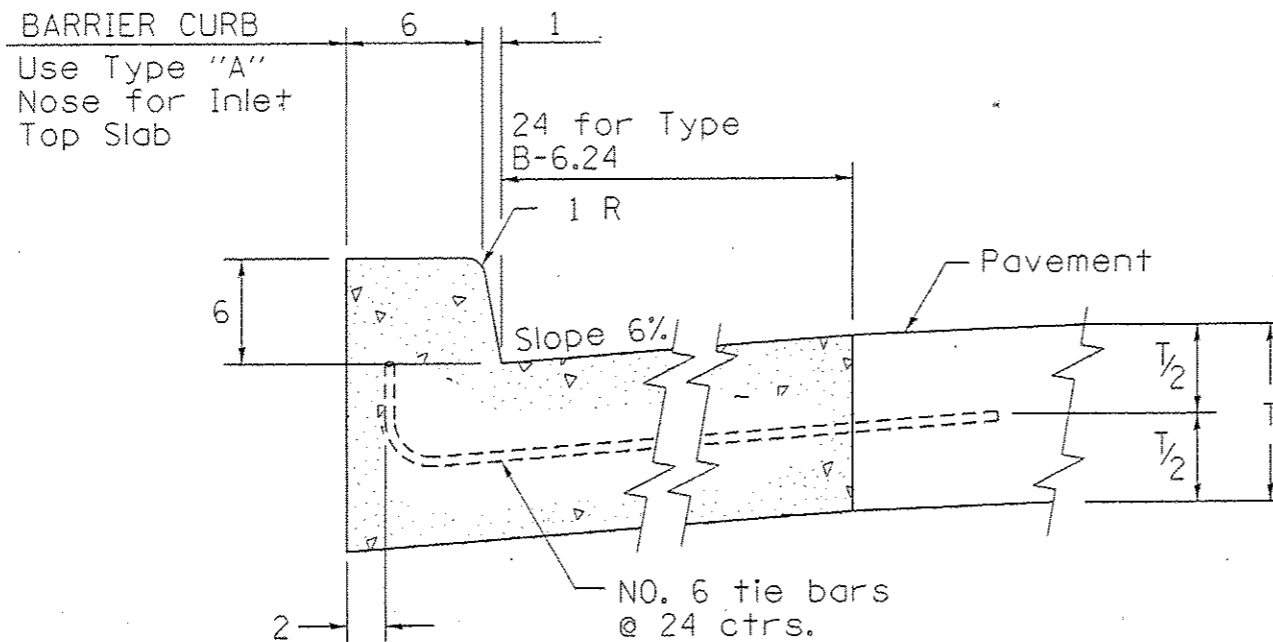
REVISED - 10-04-11	REGION 2 / DISTRICT 2 STANDARD			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
REVISED -				78	11-00092-00-PV	CARROLL	68	66	
REVISED -				CONTRACT NO.					
REVISED -				SCALE: 1:0000 / in.	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.

PLOT DATE = Tue Oct 09 09:37:03 2012

INLET SPECIAL NO. 5

79.4b

NOSE TYPE FOR INLET TOP SLAB



ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE NOTED.

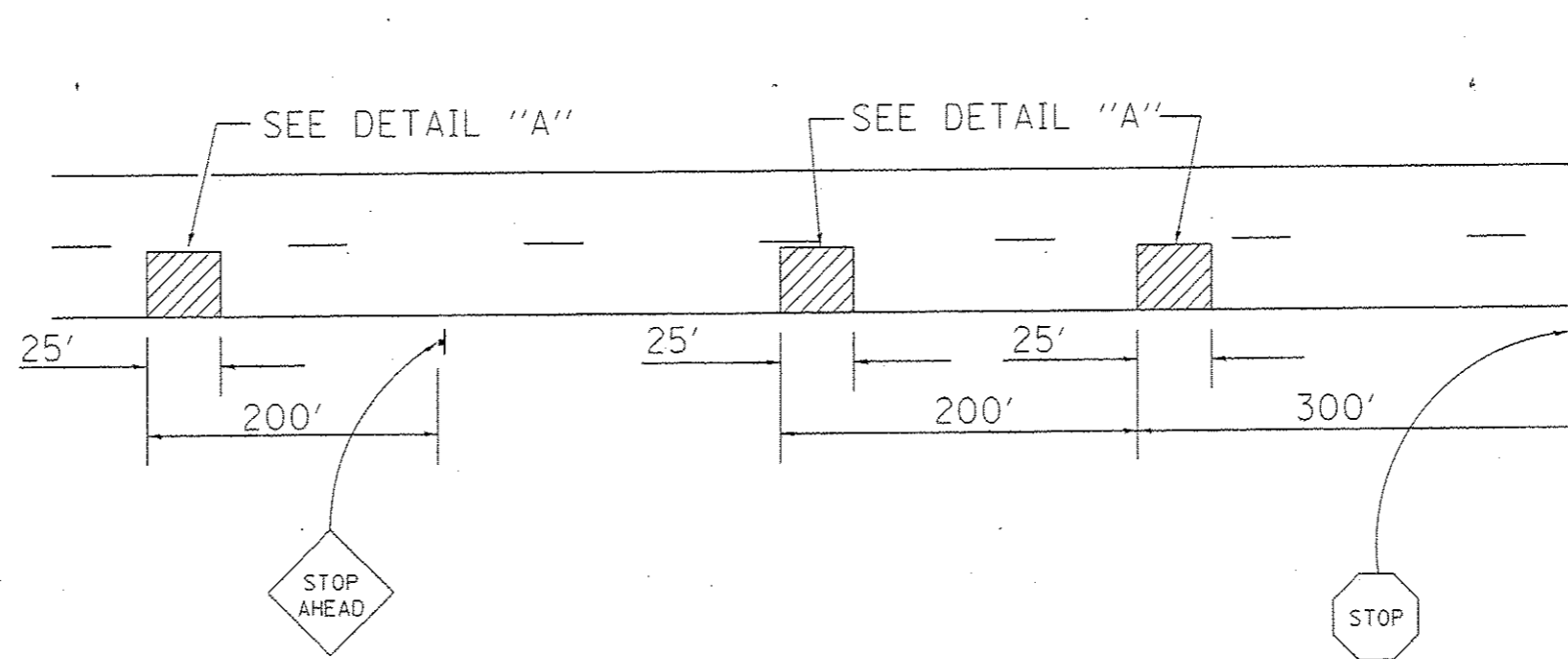
REVISED - 10-05-11	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -					78	11-00092-00-PV	CARROLL	68	67
REVISED -					CONTRACT NO.				
REVISED -					SCALE: 1.0000' / in.	SHEET NO.	OF	SHEETS	STA.

PLOT DATE = Tue Oct 09 09:37:06 2012

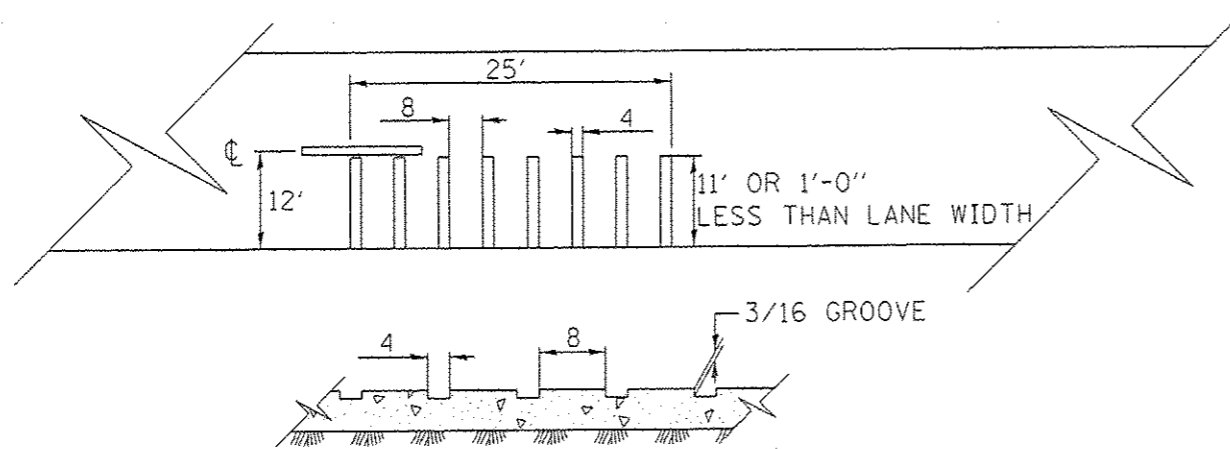
NOSE TYPE FOR INLET TOP SLAB

79.4f

RUMBLE RESURFACING



GROOVED



DETAIL "A"

NOTES

THE GROOVES SHALL BE CONSTRUCTED WITH A MILLING MACHINE CAPABLE OF COLD MILLING THE EXISTING SURFACE IN THE PATTERN SHOWN.

RUMBLE RESURFACING SHALL BE MEASURED FOR PAYMENT IN PLACE AND THE AREA COMPUTED IN SQUARE YARDS. THE LENGTH SHALL BE THE DISTANCE FROM OUTSIDE EDGE TO OUTSIDE EDGE OF THE GROOVE WHICH WILL BE APPROXIMATELY 25'. THE WIDTH SHALL BE 1' LESS THAN LANE WIDTH.

RUMBLE STRIPS SHALL BE CONSTRUCTED AS SHOWN AND PAID FOR PER SQUARE YARD AS RUMBLE RESURFACING..

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

PLOT DATE = Tue Mar 19 11:40:24 2013

REVISED - 10-05-11	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -					78	11-00092-00-PV	CARROLL	68	68
REVISED -					CONTRACT NO.				
REVISED -					SCALE: 1.0000' / in.	SHEET NO.	OF	SHEETS	STA.

RUMBLE RESURFACING

91.4