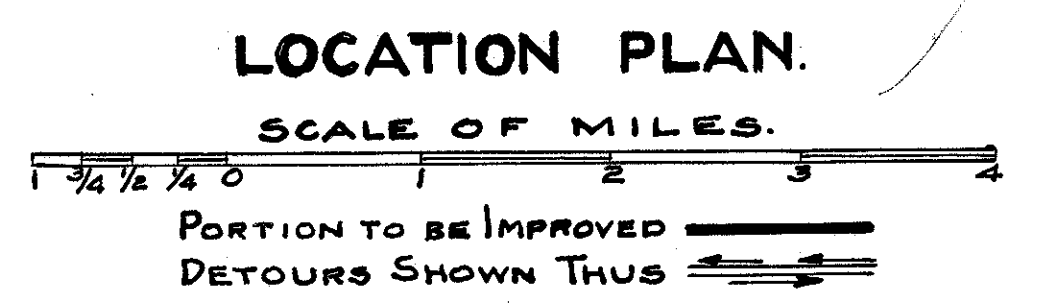
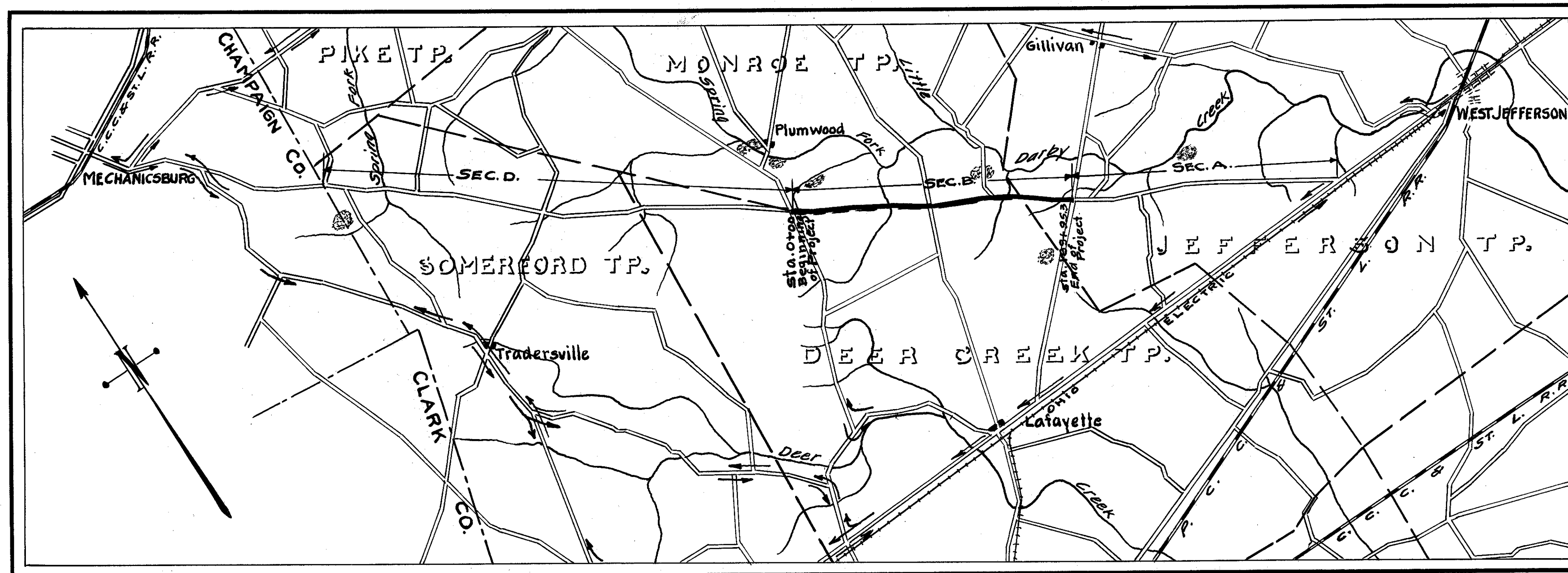


**STATE OF OHIO**  
**DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS**  
**DIVISION OF HIGHWAYS**  
 BUREAU OF CONSTRUCTION  
**URBANA - WEST JEFFERSON ROAD**  
 I.C.H. NO. 188 SECTION B. PET. NO. 4138.  
**MADISON COUNTY**  
**MONROE, DEER CREEK AND JEFFERSON TOWNSHIPS**  
 FEBRUARY, 1923.

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- CONVENTIONAL SIGNS:**
- County Line -----
  - Township Line -----
  - Property Line -----
  - Center Line -----
  - Fence-wire or board -----
  - Fence-hedge -----
  - Telephone or Telegraph TTTT LLLL
  - Steam Rail Road -----
  - Electric Rail Road -----
  - Gravel Pit -----



The Standard Specifications of the Department of Highways and Public Works, Division of Highways of Ohio in force on the date of contract will govern this improvement.

I hereby approve these plans and declare that the making of this improvement will require the closing to traffic of the highway and that detours will be provided as shown on the plan and estimates.

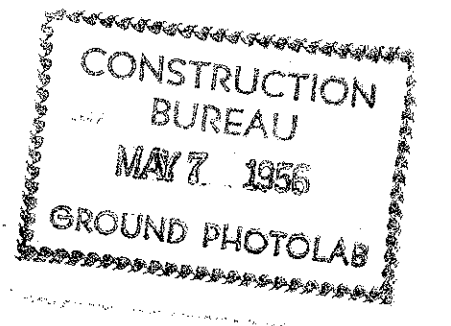
Approved: J.H. Asher  
 Date: May 2nd 1923 Resident Engineer.

Approved: \_\_\_\_\_  
 Date, \_\_\_\_\_ Division Engineer.

Approved: \_\_\_\_\_  
 Date, \_\_\_\_\_ Chief Highway Engineer.

Approved: \_\_\_\_\_  
 Date, \_\_\_\_\_ Director of Highways and Public Works.

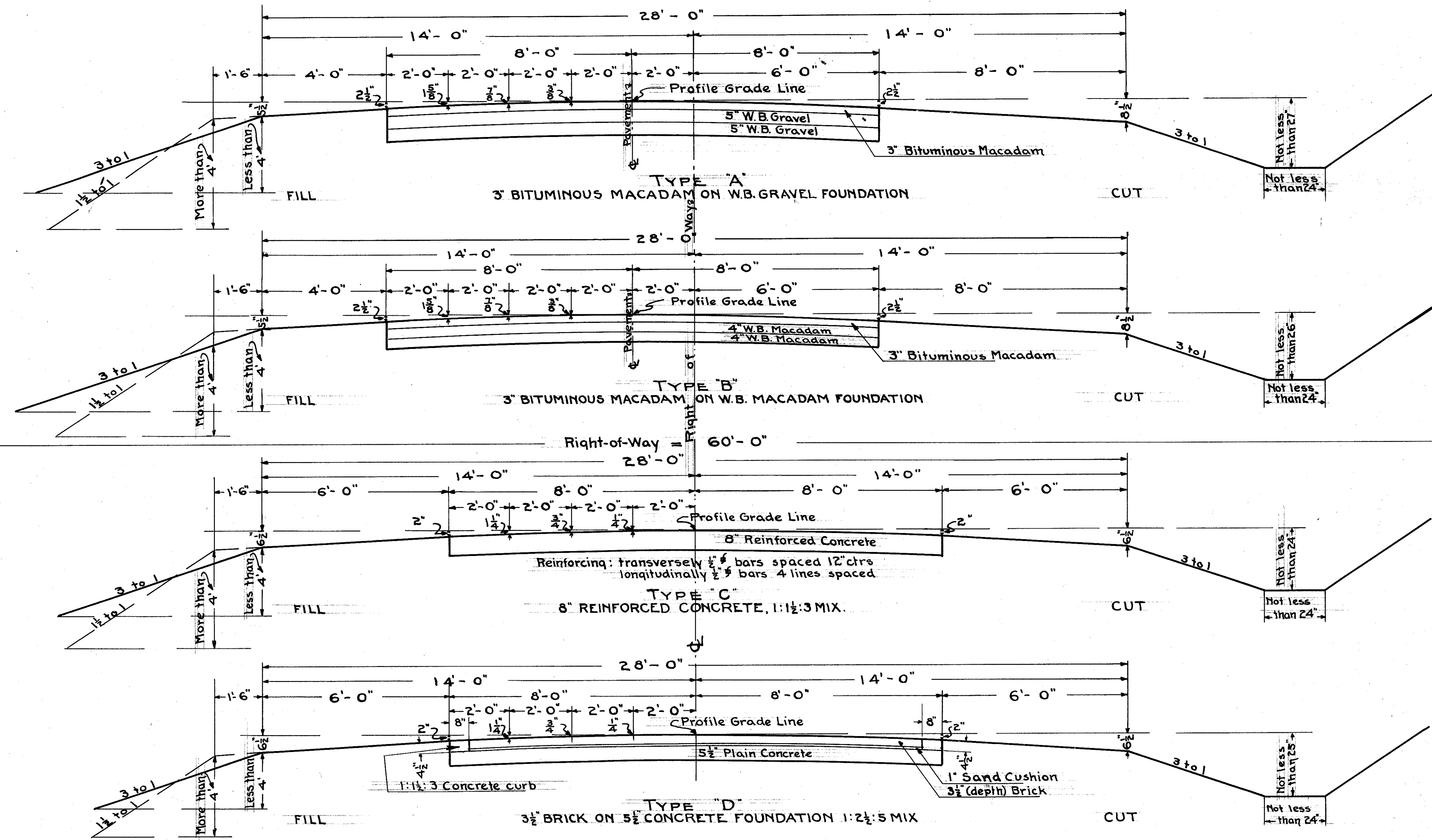
File  
D-5



We, the Commissioners of Madison County hereby approve these plans and certify that the right of way 60 feet wide, is available for the construction, maintenance and repair of the above highway.

\_\_\_\_\_  
 \_\_\_\_\_  
 Date, \_\_\_\_\_ County Commissioners.

**SCALES:**  
 Plan 1"=100'  
 Profile (Vertical) 1"=10'  
 Profile (Horizontal) 1"=100'  
 Cross Sections 1"=5'



TYPICAL SECTIONS  
SCALE 1" = 2'

NOTE: - Details of pavement for the different types shall be completed in accordance with the specifications for the type determined upon for the specific project. The subgrade for the specific type used shall be completed in accordance with the specifications in force on date of contract.

Type "E." Guard rail to be erected one (1) foot inside of the berm, where called for in plans, on the out side of curves, at culverts or bridges more than five (5) feet high and at all points where the side ditch grade is more than six (6) feet below the center line of the finished grade.

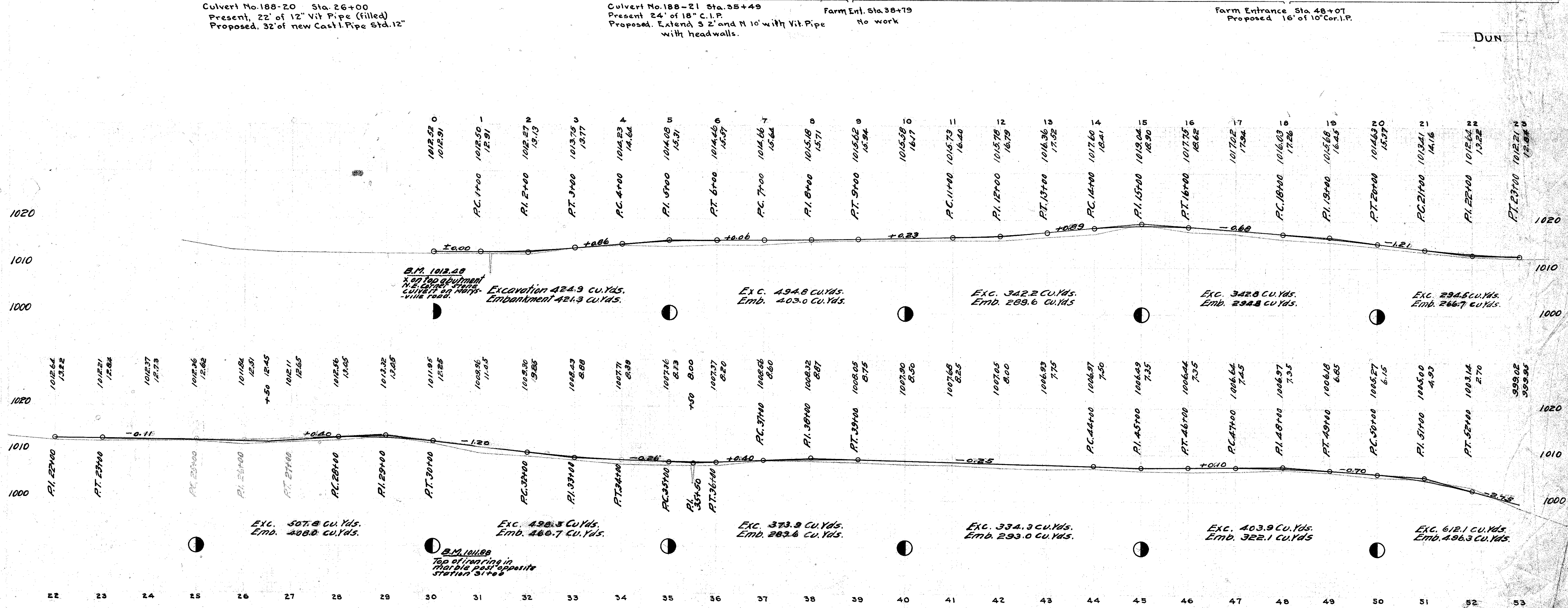
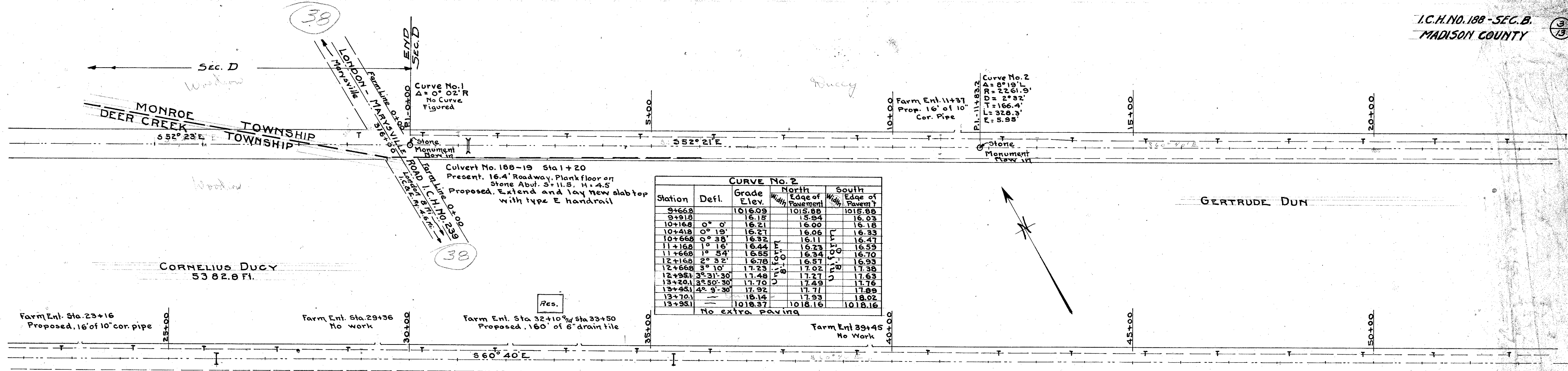
NOTE: Construct all curves in accordance with data given in the tables on alignment sheets, widening and superelevating where so designated.

Pavement center line elevations are given for Type "A" pavement as plotted on Profile.

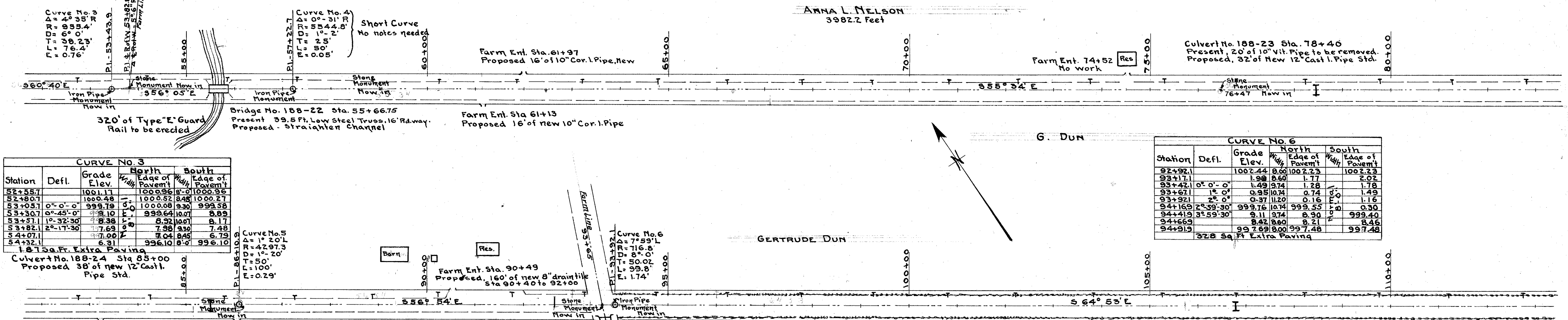
For type "B" lower pavement center line grade 0.05 ft. from the elevations given. For type "C" pavement lower grade 0.20 ft., and for type "D" pavement lower grade 0.15 ft. from the given elevations.

Excavation quantities, calculated from the cross-sections as plotted for type "A" pavement, remain unchanged for each of the other types.







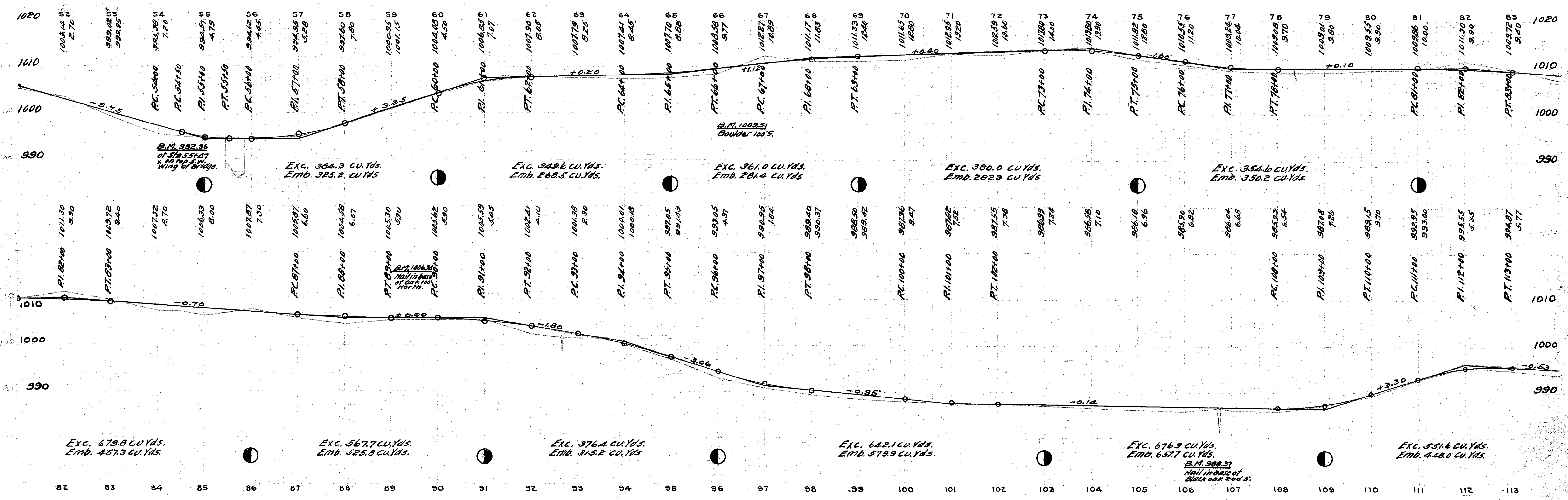


**CURVE NO. 3**

Station	Defl.	Grade Elev.	North Edge of Pavement	South Edge of Pavement
52+55.7		1001.17	1000.96	1000.96
52+60.7		1000.48	1000.52	1000.27
53+05.7	0°-0'-0"	999.79	1000.08	999.58
53+30.7	0°-45'-0"	998.10	999.64	998.99
53+57.1	1°-32'-30"	996.38	999.10	998.17
53+82.1	2°-17'-30"	994.60	998.30	997.48
54+07.1		992.85	997.04	996.79
54+32.1		991.10	995.10	995.10

**CURVE NO. 6**

Station	Defl.	Grade Elev.	North Edge of Pavement	South Edge of Pavement
92+92.1		1002.44	1002.23	1002.23
93+17.1		1001.98	1001.77	1001.77
93+42.1	0°-0'-0"	1001.49	1001.28	1001.28
93+67.1	1°-0'-0"	1001.00	1000.74	1000.74
93+92.1	2°-0'-0"	1000.51	1000.20	1000.20
94+16.9	2°-59'-30"	999.76	999.55	999.55
94+41.9	3°-59'-30"	999.01	998.80	998.80
94+66.9		998.26	998.05	998.05
94+91.9		997.51	997.30	997.30



Exc. 679.8 cu. Yds.  
Emb. 457.3 cu. Yds.

Exc. 567.7 cu. Yds.  
Emb. 325.8 cu. Yds.

Exc. 376.4 cu. Yds.  
Emb. 315.2 cu. Yds.

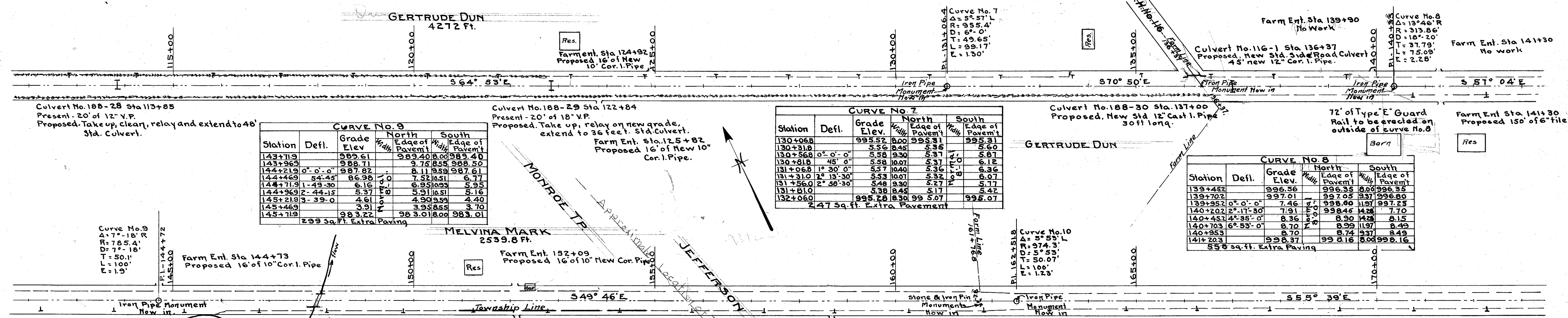
Exc. 642.1 cu. Yds.  
Emb. 579.9 cu. Yds.

Exc. 676.9 cu. Yds.  
Emb. 637.7 cu. Yds.

Exc. 551.6 cu. Yds.  
Emb. 448.0 cu. Yds.

B.M. 988.37  
Nail in base of  
black oak 200's.





**CURVE NO. 9**

Station	Defl.	Grade Elev.	North Edge of Pavement	South Edge of Pavement
143+71.9		989.61	989.40	989.40
143+96.9		988.71	988.55	988.50
144+21.9	0° 0' 0"	987.82	987.59	987.61
144+46.9	54.45	86.36	7.52	6.77
144+71.9	1° 43' 30"	6.16	6.35	5.95
144+96.9	2° 44.15	5.37	5.91	5.16
145+21.9	3° 39.0	4.61	4.90	4.40
145+46.9		3.91	3.95	3.70
145+71.9		983.22	983.01	983.01

299 Sq. Ft. Extra Paving

**CURVE NO. 7**

Station	Defl.	Grade Elev.	North Edge of Pavement	South Edge of Pavement
130+06.8		995.52	995.31	995.31
130+31.8		5.56	5.36	5.60
130+56.8	0° 0' 0"	5.58	9.30	5.37
130+81.8	1° 45' 0"	5.58	10.07	5.37
131+06.8	1° 30' 0"	5.57	10.40	5.36
131+31.8	1° 13' 30"	5.53	10.71	5.37
131+56.8	2° 56' 30"	5.48	9.30	5.27
131+81.8		5.38	8.45	5.17
132+06.8		995.28	995.07	995.07

247 Sq. Ft. Extra Paving

**CURVE NO. 8**

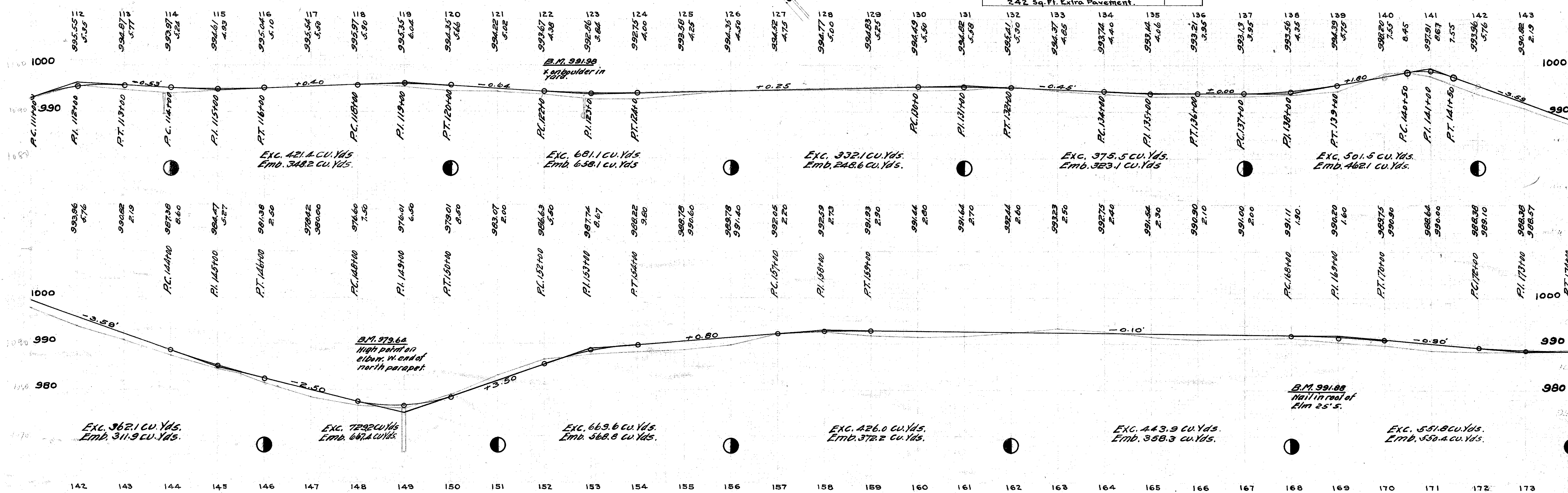
Station	Defl.	Grade Elev.	North Edge of Pavement	South Edge of Pavement
139+45.2		996.56	996.35	996.35
139+70.2		997.01	997.05	997.00
139+95.2	0° 0' 0"	7.46	7.91	7.25
140+20.2	3° 17' 30"	7.91	8.46	7.70
140+45.2	4° 35' 0"	8.36	8.90	8.15
140+70.2	6° 53' 0"	8.70	8.99	8.49
140+95.2		8.70	8.74	8.49
141+20.2		996.37	996.16	996.16

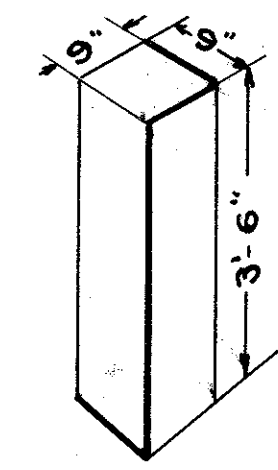
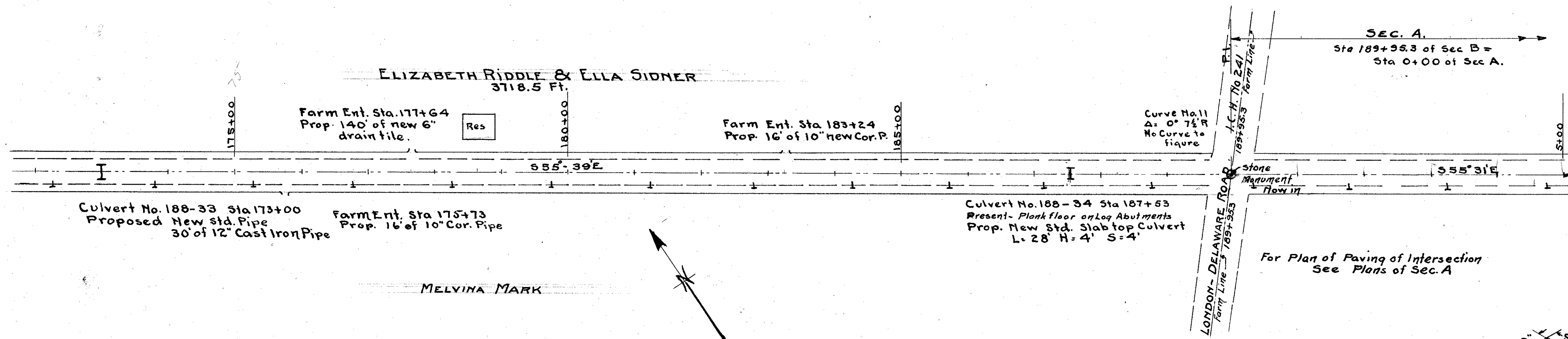
558 Sq. Ft. Extra Paving

**CURVE NO. 10**

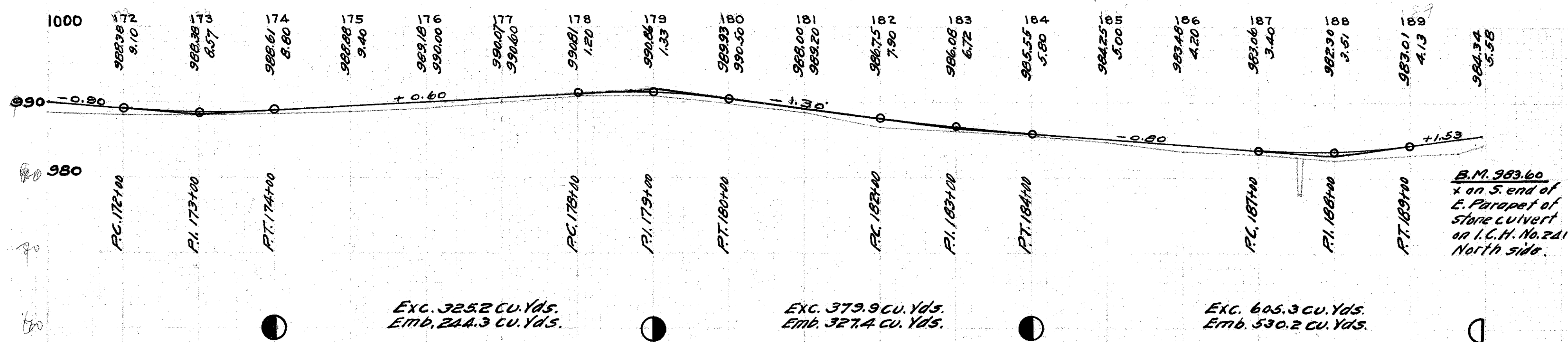
Station	Defl.	Grade Elev.	North Edge of Pavement	South Edge of Pavement
161+51.7		992.65	992.44	992.44
161+76.7		2.66	2.41	2.66
162+01.7	0° 0' 0"	2.60	2.39	2.89
162+26.7	44'-7"	2.57	2.36	3.11
162+51.7	1° 28' 15"	2.55	2.34	3.24
162+76.7	2° 12' 33"	2.52	2.33	3.06
163+01.7	2° 56' 30"	2.50	2.29	2.79
163+26.7		2.47	2.26	2.51
163+51.7		992.45	992.24	992.24

242 Sq. Ft. Extra Paving





SECTION MARKER  
Sta 189+95.3 required  
1:2:4 Concrete





AREAS CU.YDS  
 - + - +  
 16.4 12.4 38.5 53.3

13.2 16.4 31.1 32.6

36.0 12.9 0.4 28.1

12.8 14.0 40.0 53.2

8.8 18.0 51.1 57.4

18.8 13.0 77.0 50.0

22.8 14.0 83.7 51.9

22.4 14.0 116.3 43.0

40.4 32.1 36.3 37.8

33.2 11.2 136.3 80.7

15.6 32.4 51.8 120.0

12.4 32.4 52.1 121.5

16.8 33.2 104.4 83.9

39.6 13.2 112.1 42.4

22.0 37.6 3.0 65.4

12.0 25.6 32.0 32.4

8.0 46.5 13.3 28.6

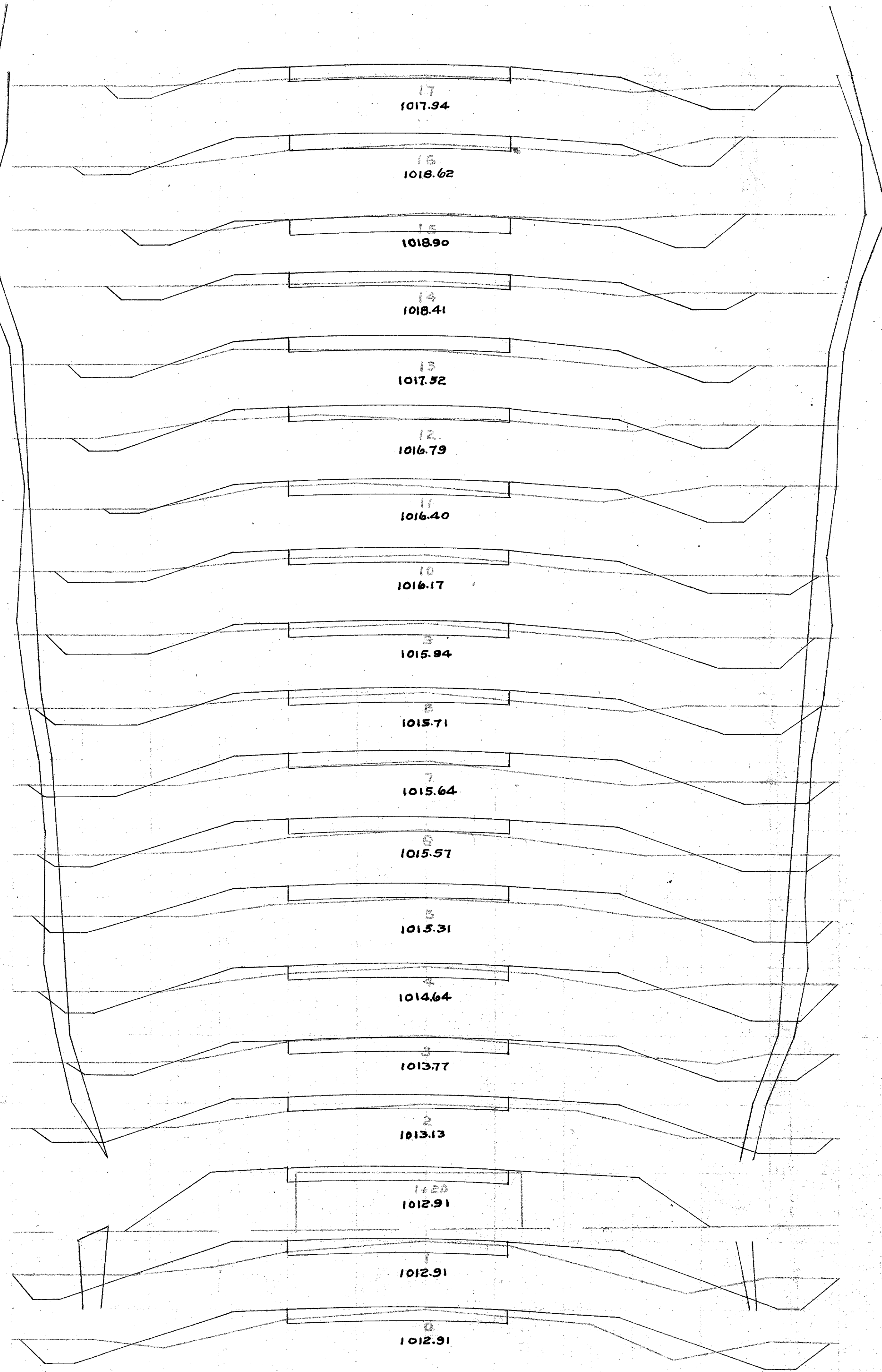
27.8 30.8 98.1 106.6

25.2 26.8

Exc. - 342.2 CU.YDS  
 Emb. 283.6 CU.YDS

Exc. - 294.8 CU.YDS  
 Emb. 403.0 CU.YDS

Exc. - 422.9 CU.YDS  
 Emb. 427.9 CU.YDS



AREAS CU.YDS.  
 - + - +

13.0 33.2 73.7 123.6

26.8 27.4 111.9 66.7

33.6 8.6 97.8 45.2

19.2 15.8 78.1 77.4

10.2 26.0 118.5 53.3

53.8 44.2 77.4 8.3

63.0 - 155.6 53.6

20.4 30.8 64.4 110.4

14.4 23.6 31.5 126.7

2.6 38.8 38.9 107.0

18.4 19.0 61.1 73.7

14.6 20.8 57.1 59.6

13.0 11.4 51.5 45.2

12.8 12.8 54.8 23.3

14.8 9.2 70.0 28.9

23.0 6.4 71.5 31.3

15.6 13.2 51.1 87.0

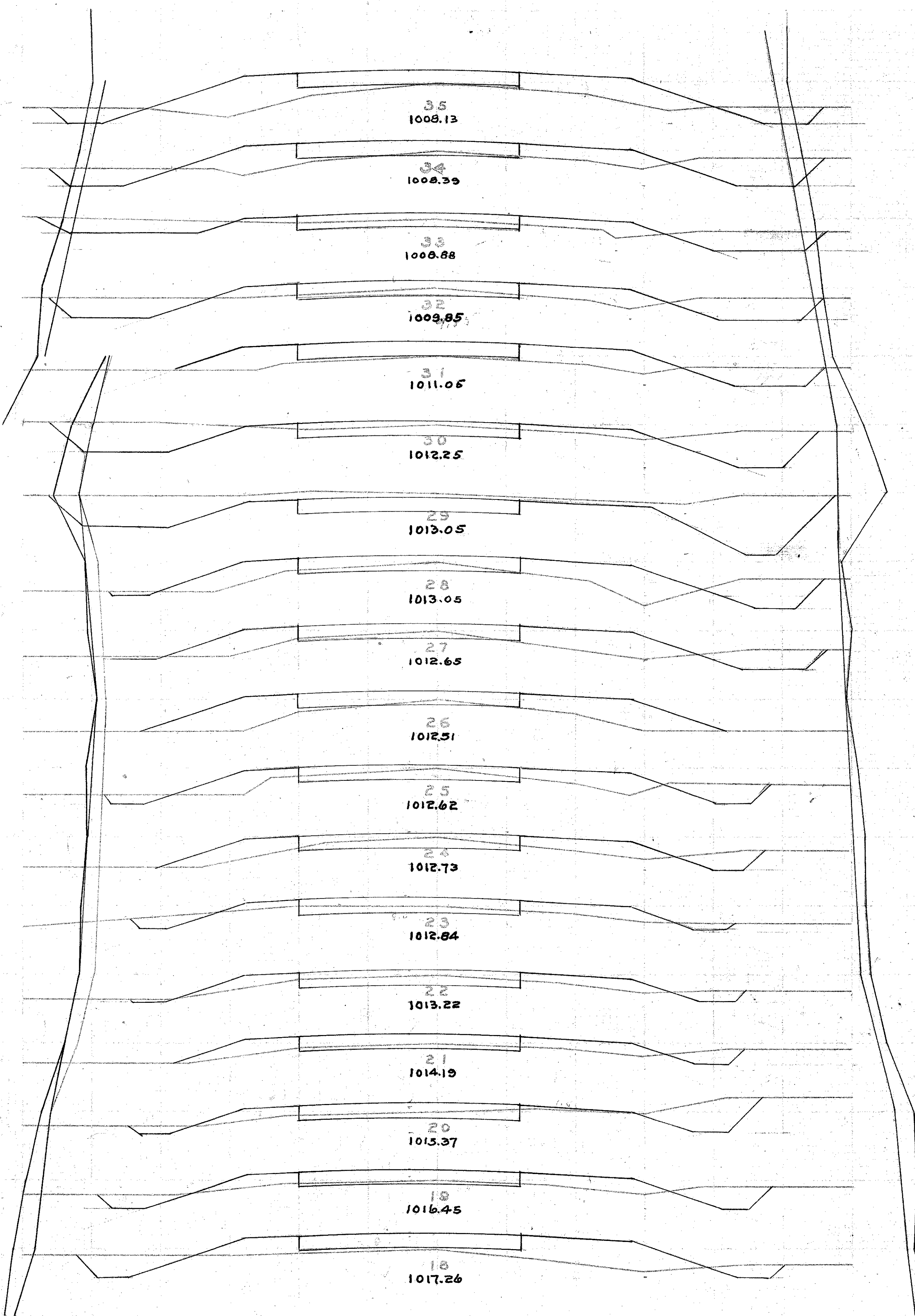
12.0 33.8 52.6 85.6

Exc. 498.3 CU.YDS  
 Emb. 460.7 CU.YDS

Exc. 597.8 CU.YDS  
 Emb. 408.0 CU.YDS

Exc. 294.5 CU.YDS  
 Emb. 266.7 CU.YDS

Exc. 328.0 CU.YDS  
 Emb. 234.8 CU.YDS



AREAS CU. YDS.  
- + - +

32.8 5.3 236.3 10.8  
96.8 231.1 3.7  
28.0 2.0 70.7 51.8  
Exc. 612.1 CU. YDS.  
Emb. 496.3 CU. YDS.

102 26.0 63.3 71.6

24.0 14.8 115.5 40.4

38.4 6.8 108.9 50.7  
Exc. 203.9 CU. YDS.  
Emb. 322.1 CU. YDS.

20.4 20.8 59.6 81.5

11.8 23.2 56.3 78.9

18.6 19.4 82.2 64.8

25.8 15.6 78.1 65.2  
Exc. 324.1 CU. YDS.  
Emb. 239.0 CU. YDS.

16.4 18.6 57.0 66.3

14.4 17.2 57.8 42.9

16.8 9.2 53.2 27.8

15.2 5.8 57.8 34.4

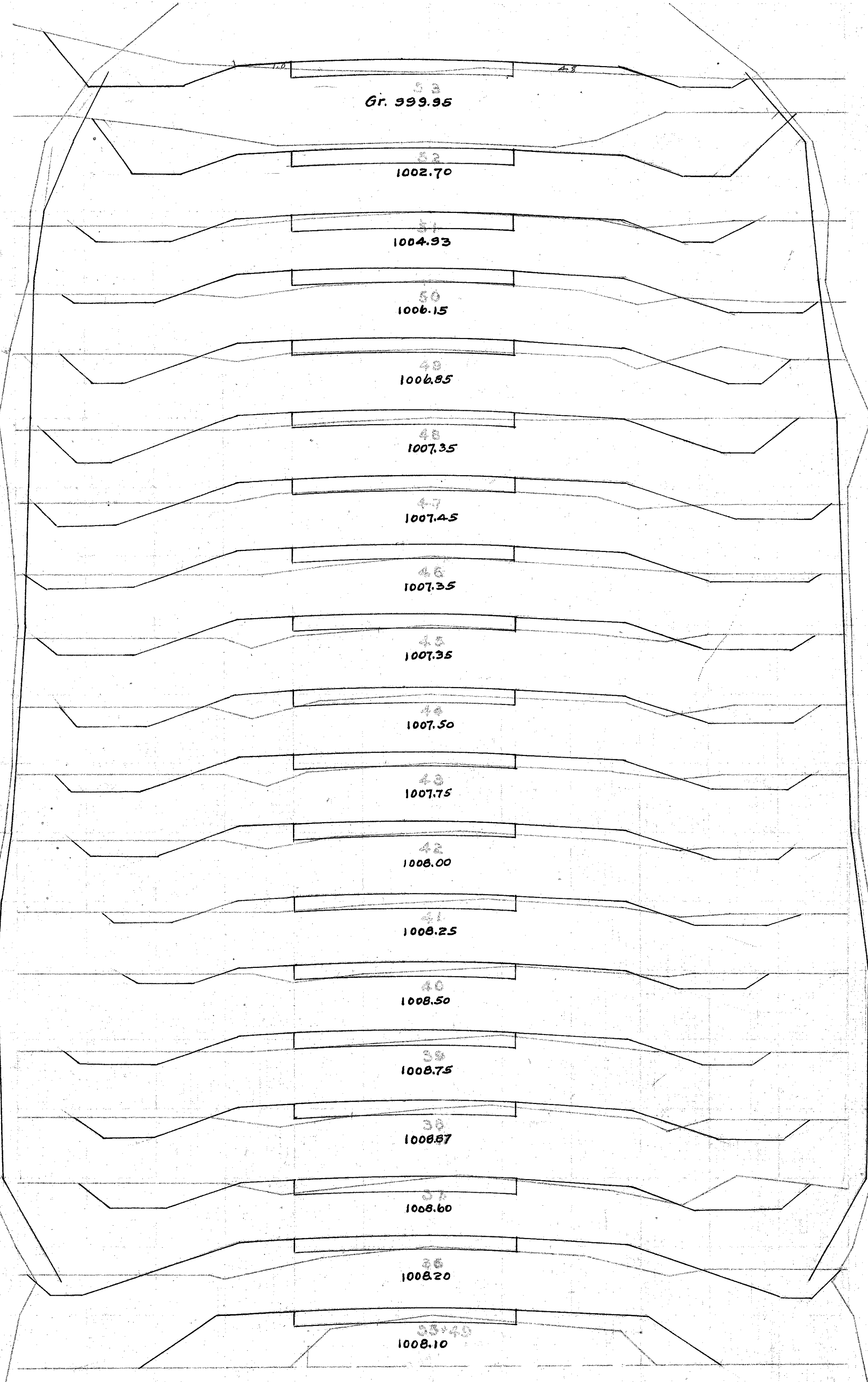
16.0 12.3 74.8 53.3

24.4 16.0 106.3 42.2

39.6 6.8 117.4 74.1  
Exc. 373.8 CU. YDS.  
Emb. 289.6 CU. YDS.

20.2 33.2 23.6 82.6

4.8 56.4 18.3 88.5



AREAS CU. YDS.  
- + - +

9.8 18.0 170.0  
82.0 151.8 66.6  
6.8 36.0 114.3  
Exc. 361.9 CU. YDS.  
Emb. 261.4 CU. YDS.

26.8 3.7 105.2

30.0 31.8 91.9

15.2 13.6 94.1 48.5  
Exc. 349.8 CU. YDS.  
Emb. 268.5 CU. YDS.

35.6 6.6 106.3 15.5

21.8 1.8 78.1 7.4

20.4 2.2 72.6 10.0

18.8 3.2 99.6 12.1

35.0 2.8 113.7 33.4

26.4 10.0 71.1 156.3

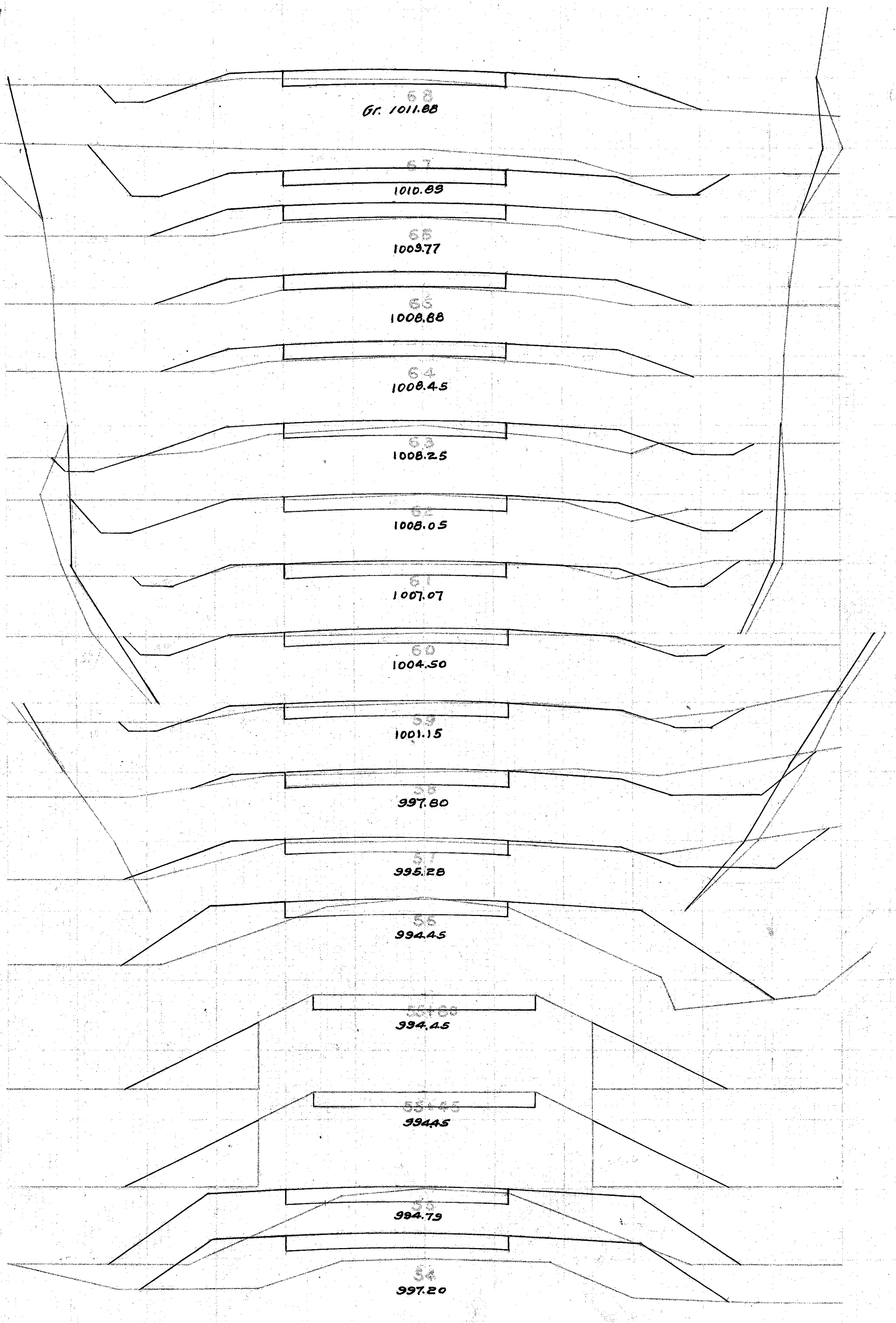
12.4 74.4 6.3 26.8  
Exc. 384.3 CU. YDS.  
Emb. 325.2 CU. YDS.

16.0 46.4

16.0 47.6 21.0 97.6

9.2 62.6 17.0 274.1

78.4 57.0 153.9





AREAS CU.YDS.  
- + - +  
37.6 11.6 182.4 21.4

62.0 114.8 144.8

78.0 222.2

42.0 108.9 77.7

58.4 256.3

80.0 199.8 13.0

27.9 7.0 79.4 45.5

15.0 17.6 33.0 70.1

2.8 24.6 25.9 74.8

13.2 15.8 56.3 53.7

17.2 13.2 93.0 40.7

33.0 8.8 67.0 57.4

6.2 22.0 43.0 53.3

20.0 6.8 73.3 23.0

19.6 5.6 64.4 136

15.2 5.0 63.5 20.0

22.3 5.8 75.0 55.9

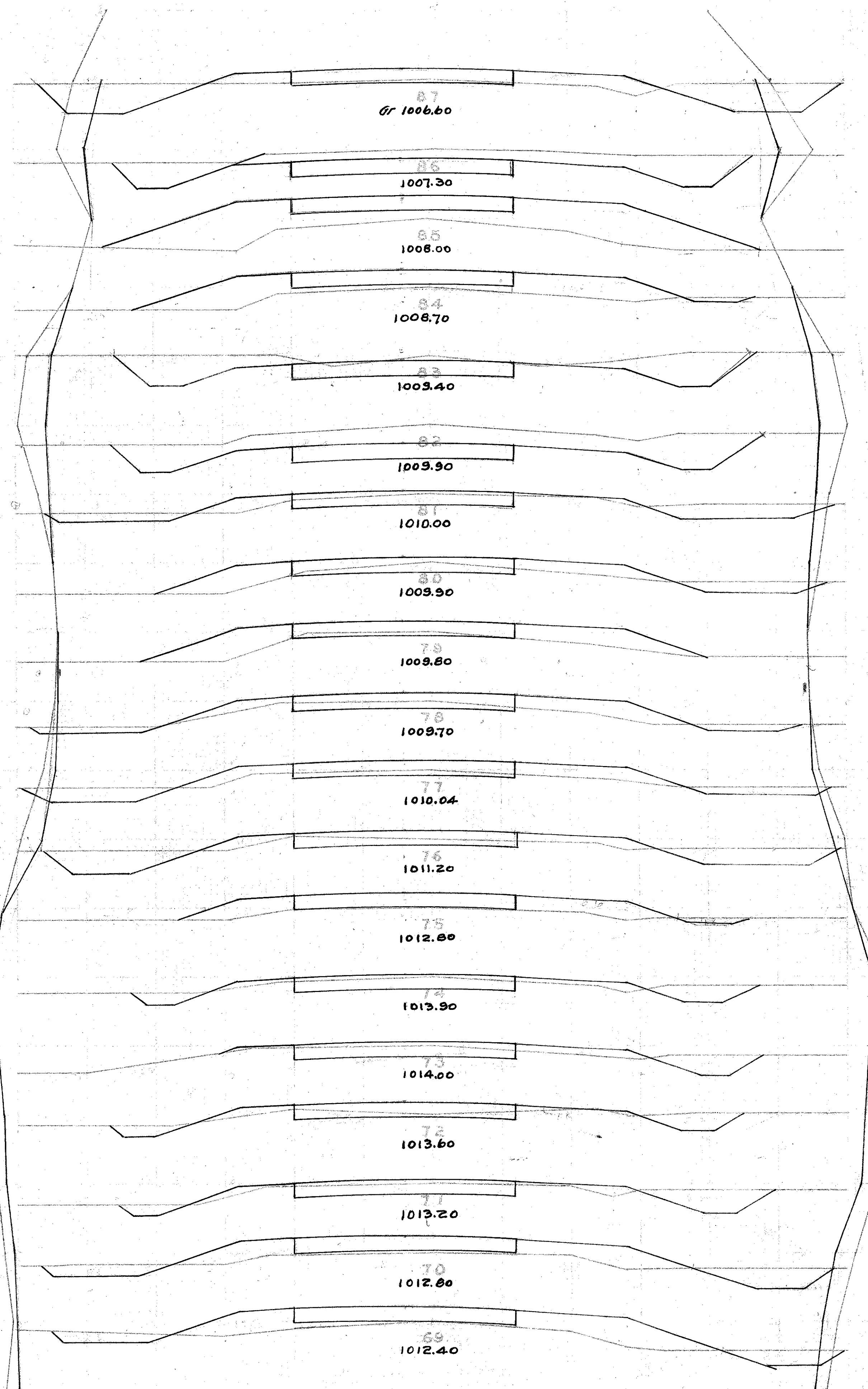
18.2 24.4 54.8 114.4

11.4 35.2 39.2 98.5

Exc. 679.8 CU.YDS.  
Emb. 457.3 CU.YDS.

Exc. 354.6 CU.YDS.  
Emb. 350.2 CU.YDS.

Exc. 390.0 CU.YDS.  
Emb. 282.2 CU.YDS.



AREAS CU.YDS.  
- + - +

40.8 14.0 111.1 71.8

19.2 24.8 144.4 53.3

56.6 4.0 197.8 37.4

28.6 16.2 84.4 30.0

17.0 32.4 60.0 120.0

15.4 32.4 57.0 107.4

15.4 25.6 34.4 100.0

3.2 28.4 45.9 65.9

21.6 7.2 88.8 13.4

26.4 27.5

16.0 25.7 15.4

5.4 12.8 10.9 38.0

53.2 37.8 111.4

20.6 34.8 160.7 71.1

46.2 3.6 164.1 23.0

42.4 8.8 114.1 73.0

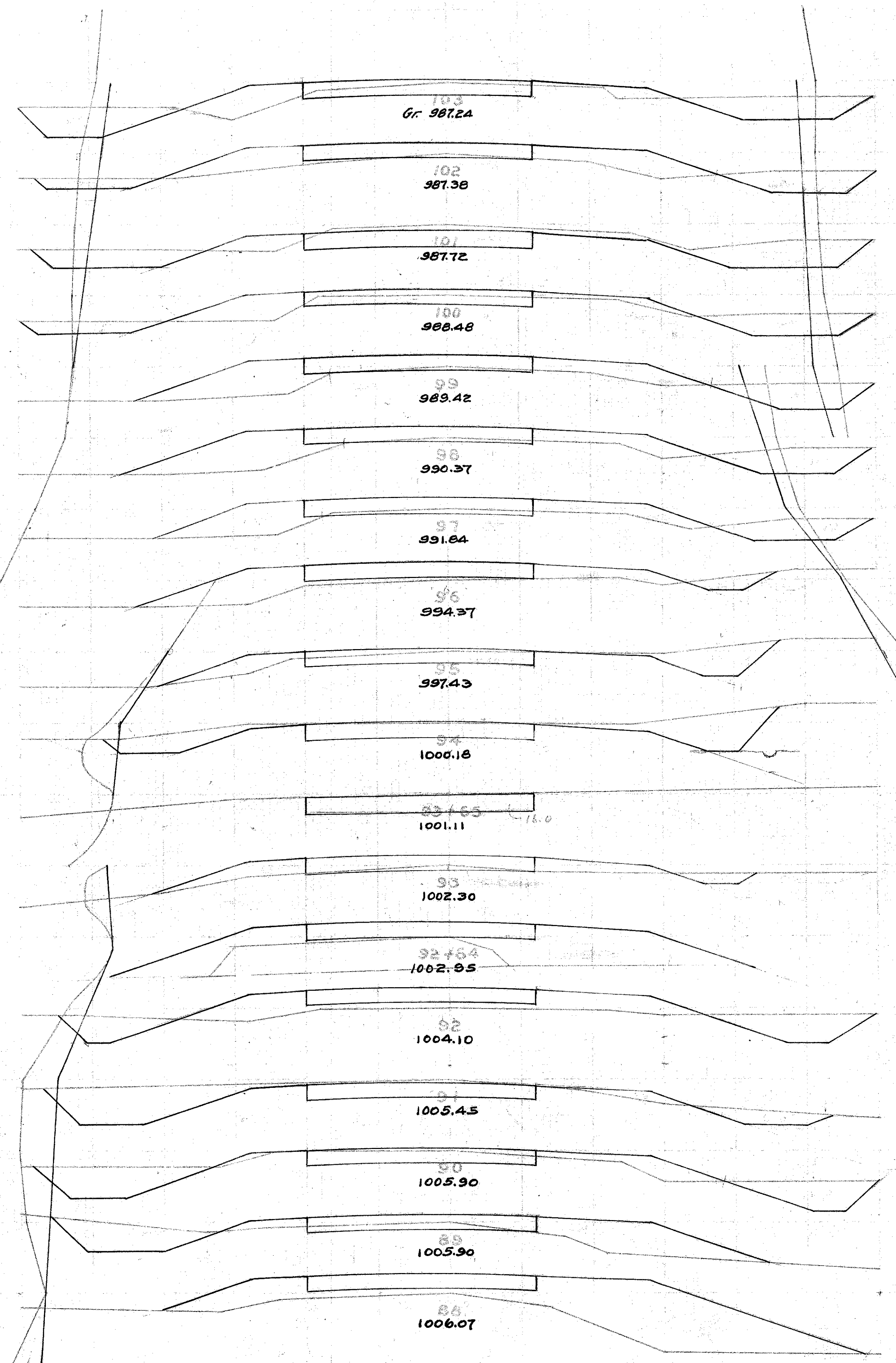
13.2 30.6 35.5 221.8

89.2 69.6 186.6

Exc. 642.1 CU.YDS.  
Emb. 579.9 CU.YDS.

Exc. 976.4 CU.YDS.  
Emb. 375.2 CU.YDS.

Exc. 587.0 CU.YDS.  
Emb. 525.8 CU.YDS.





AREAS CU. YDS.  
- + - +  
140 40.0537 105.2

130 16.8 75.9 444

26.0 7.2 94.4 226

25.0 5.0 81.5 219

130 6.8 68.9 41.5

18.2 15.6 47.0 12.6

7.2 45.2 4.5 38.1

9.0 92.0 56.5 191.4

26.9 31.6 143.5 72.6

50.6 7.6 143.3 27.4

26.8 7.2 80.4 47.6

16.6 18.4 123.4 71.1

50.2 20.0 163.3 84.4

38.0 25.6 80.0 57.0

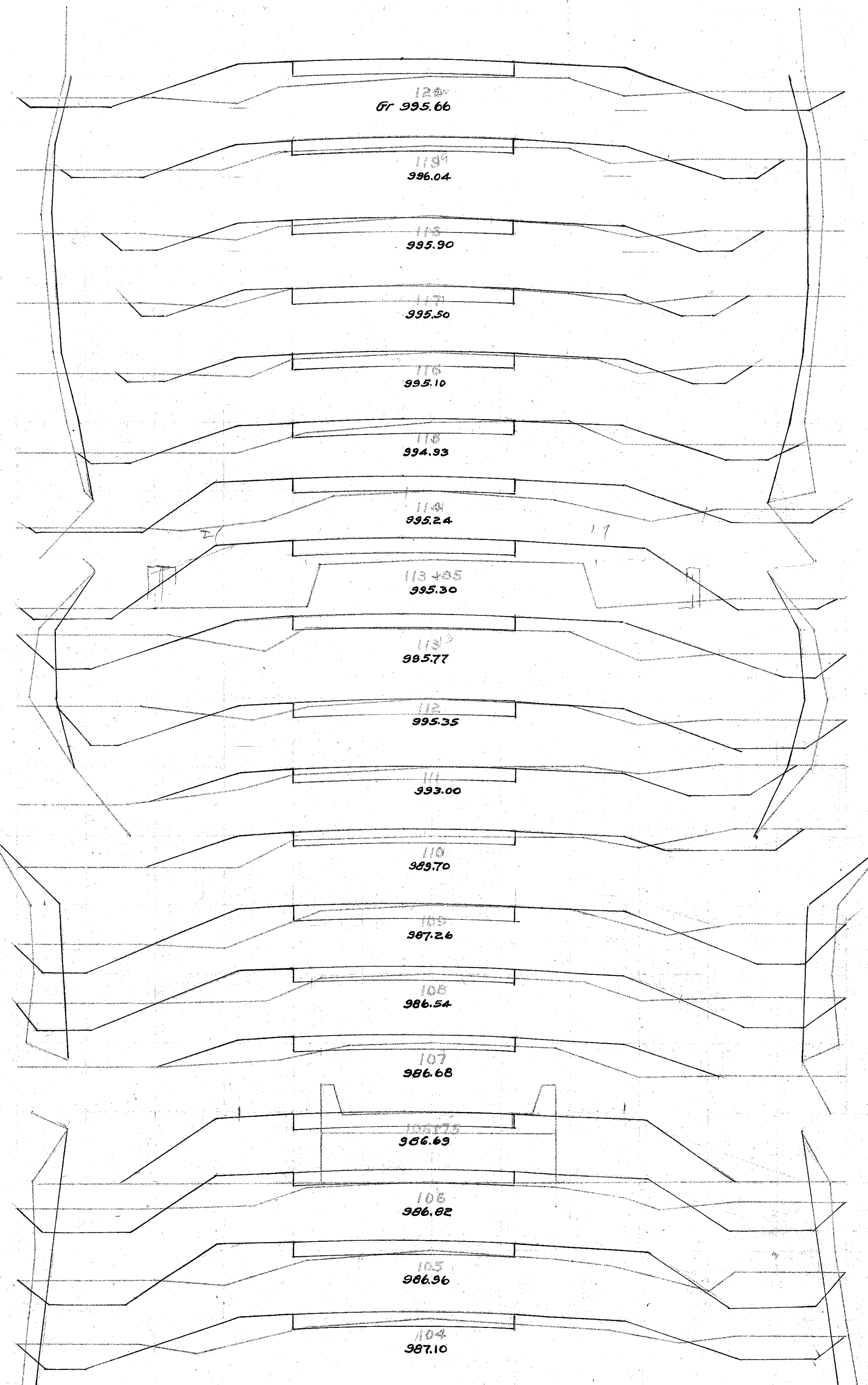
5.6 26.8 9.0 56.5

13.8 95.3 65.2 141.3

31.1 30.0 119.4 148

33.4 32.0 118.1 98.5

30.4 21.2 131.9 65.2



EXC. 221.4 CU. YDS.  
EMB. 348.2 CU. YDS.

EXC. 531.6 CU. YDS.  
EMB. 448.0 CU. YDS.

EXC. 676.9 CU. YDS.  
EMB. 657.7 CU. YDS.

AREAS CU. YDS.  
- + - +

31.6 11.4 39.4 19.0

26.0 16.4 77.0 50.4

15.6 10.8 88.5 45.2

10.6 13.6 64.1 38.9

24.0 7.4 64.4 44.1

10.8 16.4 26.6 82.2

3.6 28.0 12.2 101.9

3.0 27.0 37.7 64.8

17.4 8.0 80.0 30.8

25.8 8.6 78.9 27.7

16.8 6.4 123.3 23.4

49.8 6.4 174.4 38.5

45.4 14.4 135.2 77.0

27.6 27.2 96.3 116.3

24.4 35.6 11.6 32.7

14.6 74.8 70.3 173.0

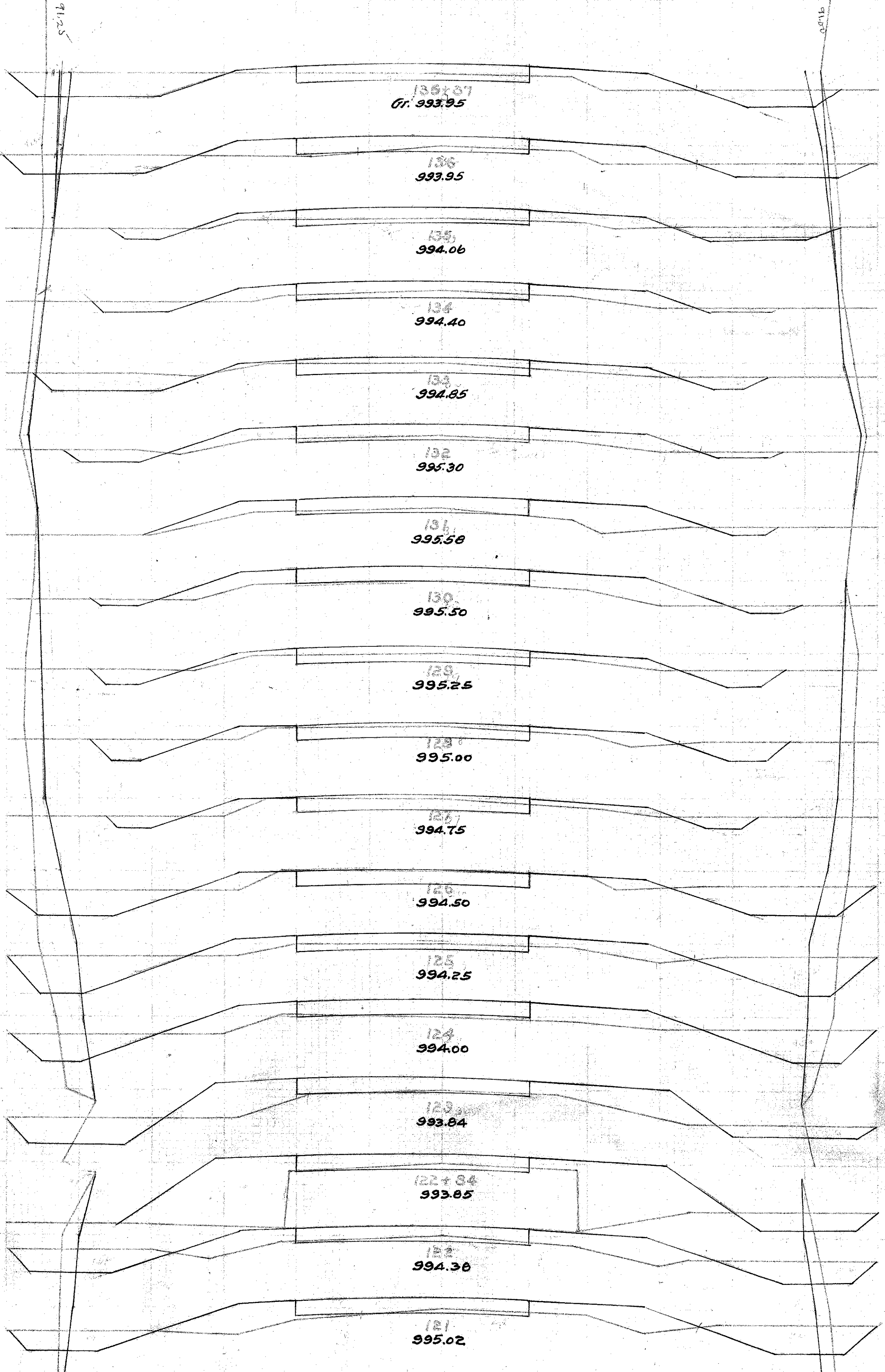
30.6 26.4 107.0 97.7

27.2 26.4 76.3 122.9

EXC. 375.5 CU. YDS.  
EMB. 323.1 CU. YDS.

EXC. 332.1 CU. YDS.  
EMB. 248.6 CU. YDS.

EXC. 681.1 CU. YDS.  
EMB. 638.1 CU. YDS.

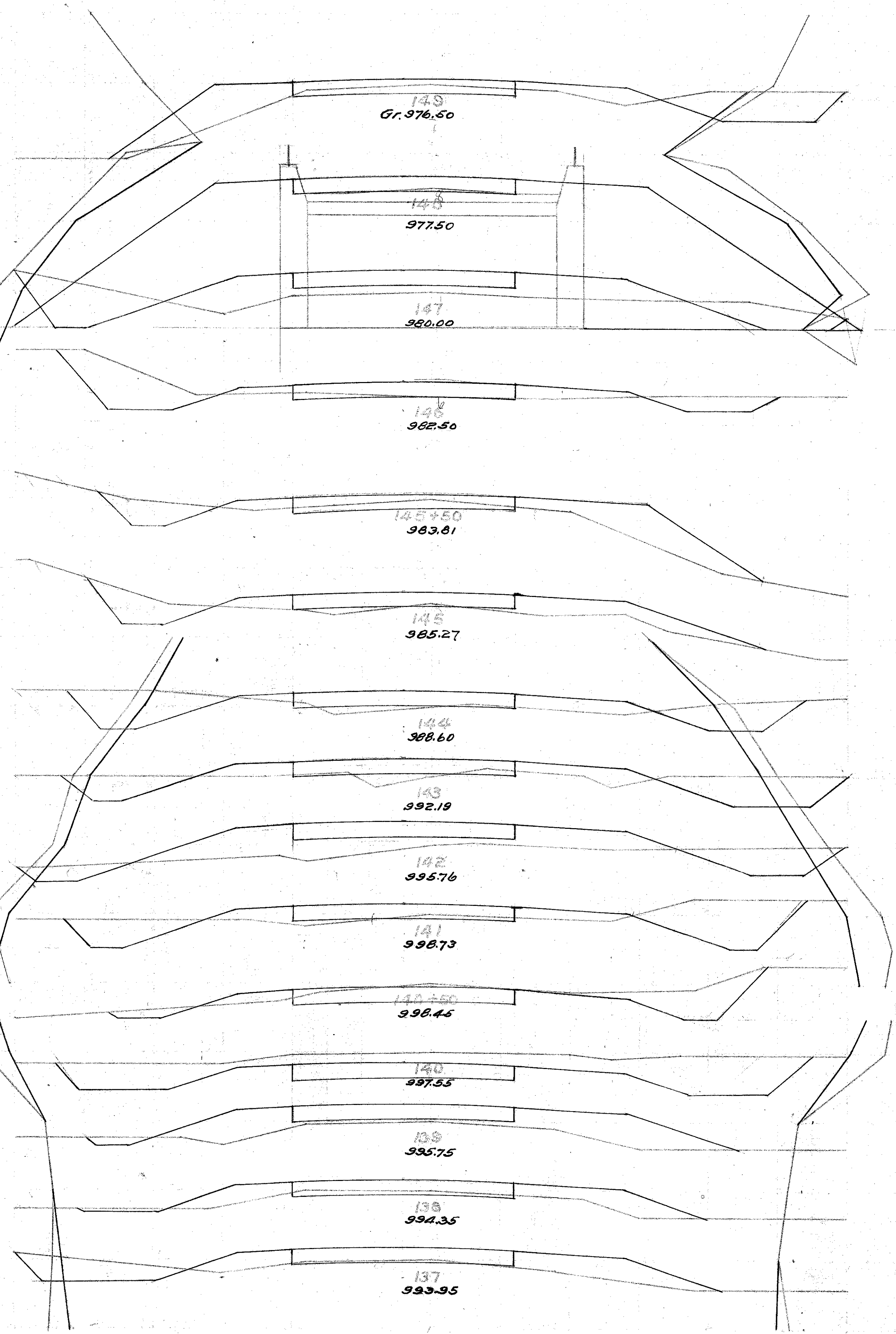




AREAS CU. YDS.  
 - + - +

30.2 38.4 54.0 106.7  
 +25 132.8 123.0  
 132.8 123.0  
 +75 35.3 36.0 38.8 100.0  
 35.3 36.0 122.4 81.8  
 30.8 82.4 37 35.4  
 16.4 300 270 49.1  
 12.8 23.0 74.8 48.9  
 27.6 12.2 124.0 32.6  
 29.4 16.0 32.6 125.9  
 20.6 52.0 114.4 121.5  
 41.2 13.6 67.1 32.6  
 32.8 4.0 106.7 7.0  
 82.4 156.3 852.5  
 2.0 46.0 15.5 126.6  
 6.4 22.4 41.5 89.2  
 16.0 25.0 55.5 43.3

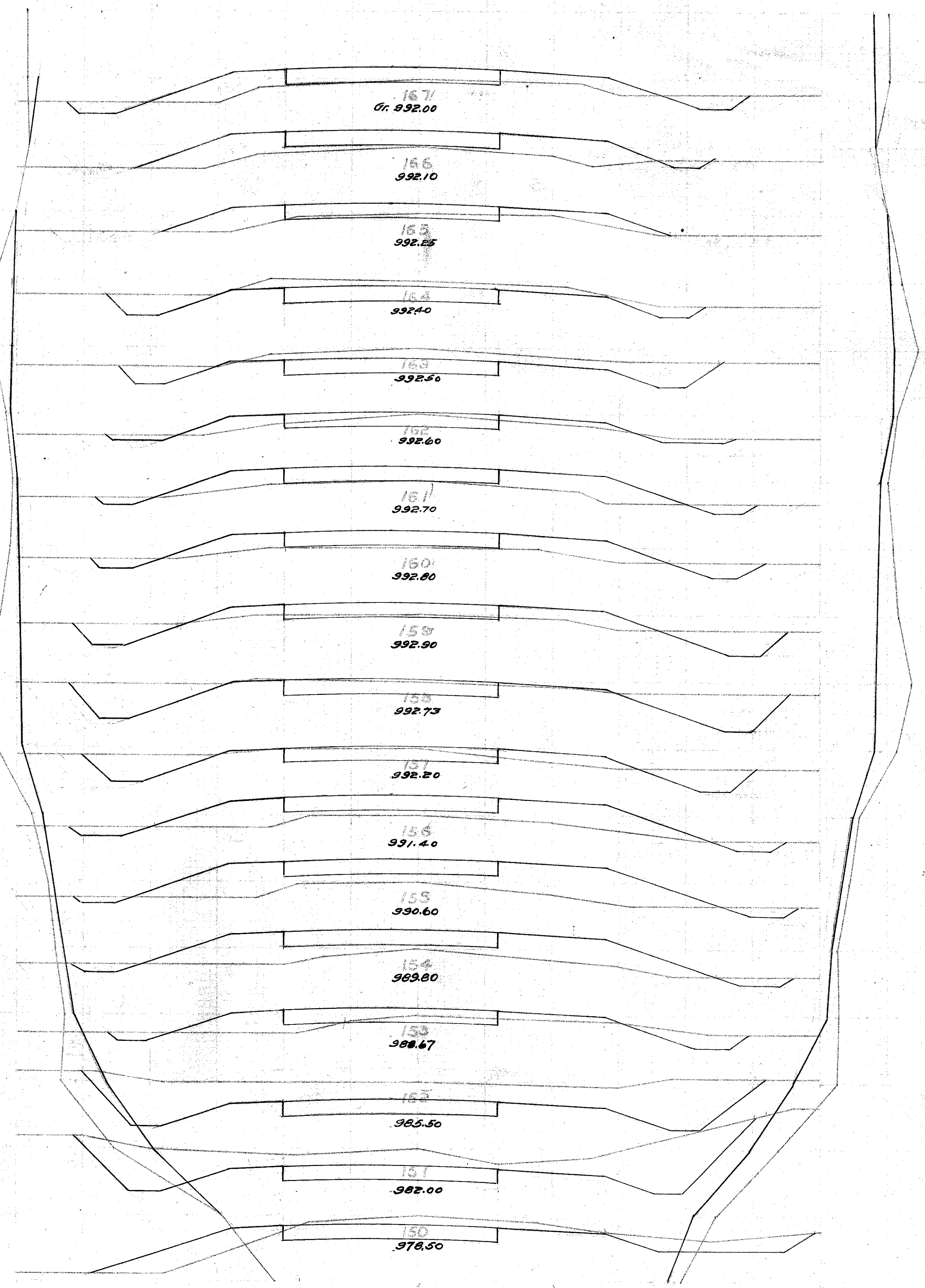
Exc. 729.2 CU. YDS.  
 Emb. 667.4 CU. YDS.  
 Exc. 302.1 CU. YDS.  
 Emb. 311.9 CU. YDS.  
 Exc. 426.0 CU. YDS.  
 Emb. 372.2 CU. YDS.  
 Exc. 669.6 CU. YDS.  
 Emb. 568.8 CU. YDS.



AREAS CU. YDS.  
 - + - +

8.6 232 17.8 109.6  
 1.0 36.0 10.7 103.0  
 4.8 13.6 86.6 36.6  
 42.0 173.9  
 51.9 126.5 18.0  
 13.2 9.7 30.2 65.8  
 3.1 25.8 19.1 36.2  
 7.2 25.6 51.8 74.8  
 21.0 14.8 132.2 30.0  
 50.4 1.4 153.7 15.6  
 32.6 7.0 69.2 30.8  
 4.8 42.0 16.3 194.1  
 4.0 62.8 15.2 210.5  
 4.2 55.2 25.5 129.2  
 11.6 14.6 225.2 27.0  
 110.0 387.4  
 99.2 259.2 29.2  
 40.8 15.8 164.8 103.7

Exc. 443.9 CU. YDS.  
 Emb. 358.3 CU. YDS.  
 Exc. 426.0 CU. YDS.  
 Emb. 372.2 CU. YDS.  
 Exc. 669.6 CU. YDS.  
 Emb. 568.8 CU. YDS.



AREAS CU. YDS.

- + - +

29.6 8.2 104.4 33.0

26.8 9.4 77.0 61.1

14.8 23.6 65.9 104.7

20.8 30.8 73.7 82.2

19.0 13.6 58.9 50.4

12.4 13.6 65.5 42.6

23.0 9.4 71.3 35.9

15.8 10.0 46.6 57.0

9.4 20.8 45.5 64.4

13.2 14.0 96.3 44.4

36.8 10.0 104.1 48.1

19.4 16.0 53.6 76.6

12.8 25.2 53.6 107.8

14.4 33.2 104.1 113.3

36.8 28.0 128.9 104.0

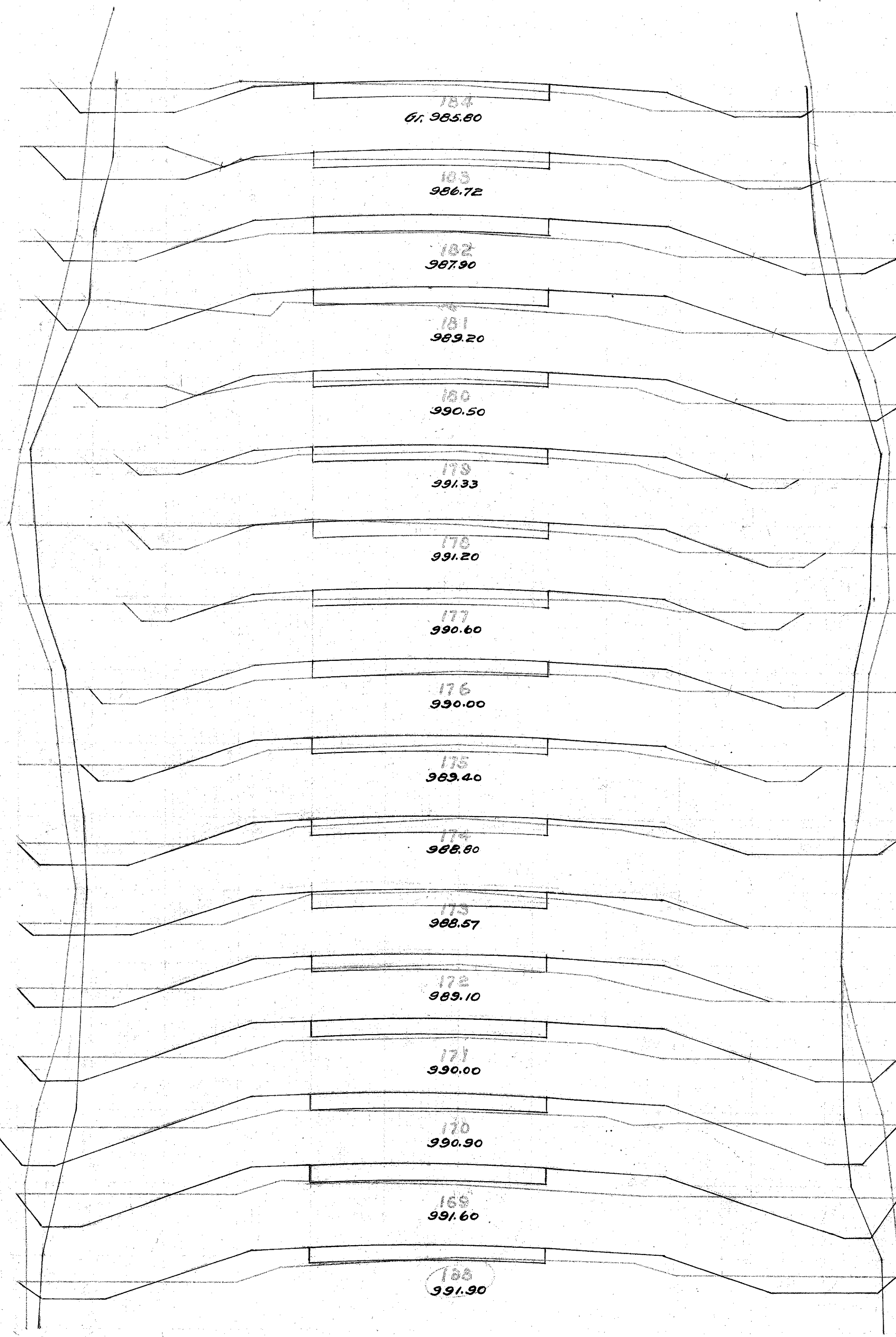
32.8 28.2 95.5 104.4

18.8 26.0 34.4 91.1

FIG. 379.9 CU. YDS.  
EMB. 327.2 CU. YDS.

FIG. 325.2 CU. YDS.  
EMB. 244.3 CU. YDS.

FIG. 531.8 CU. YDS.  
EMB. 550.4 CU. YDS.



AREAS CU. YDS.

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24.8 12.0 27.0 26.7

23.8 36.4 56.4 87.2

23.0 36.0 71.9 120.0

15.8 28.8 50.0 75.5

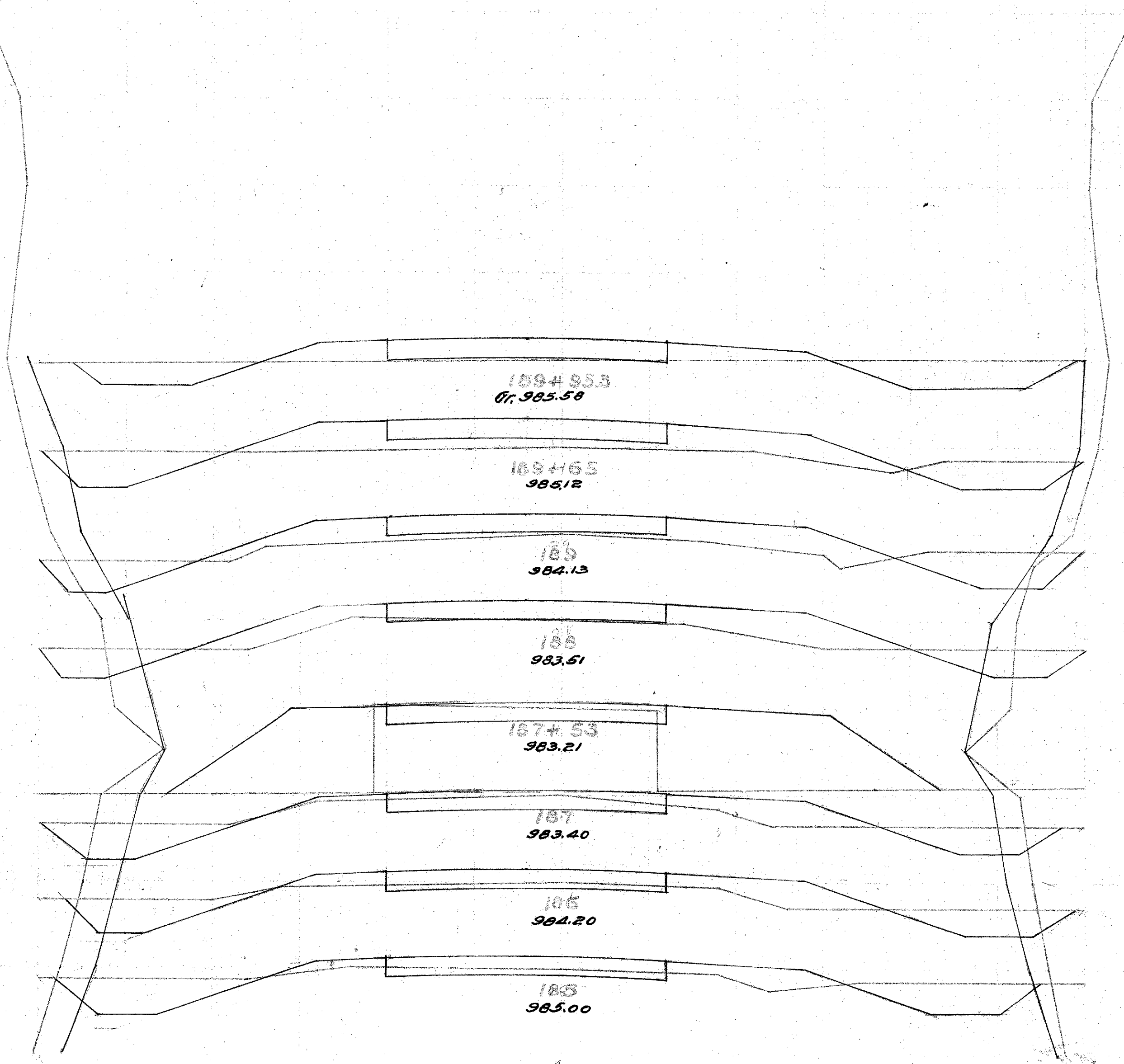
11.2 58.0 44.4 71.5

34.0 138.1 18.9 37.4

30.2 17.2 118.9 54.1

34.0 12.0 117.8 37.8

FIG. 605.3 CU. YDS.  
EMB. 530.2 CU. YDS.





SUMMARY OF QUANTITIES

BRIDGE, CULVERTS AND GUARD RAIL

STATION	TYPE	SIZE	EXCAVATION Cu. Yd.	CONCRETE CUBIC YARDS				REIN- FORCING STEEL LBS.	STONE MASONRY REPORT Cu. Yd.	VITRIFIED PIPE RELAY 12' & 18'	NEW PIPE					GUARD RAIL			REMARKS		
				1:3:6	1:2:5	1:2:4	1:2:3				COR.	IRON CAST	VITRIFIED	12"	15"	18"	PLANK 2"x6"x16'	POSTS		CAR- RIAGE BOLTS & WASHERS	FENCING NAILS 16 d.
1+20	Slab Top Br.	H=3 1/2, S=1 1/2 Rdway 24'	14																		Ext. Abutmts. Lay Slab top with Type E H-rail.
11+83																					
26+00	Std. Pipe	12 in.	8			1.3						32'									Remove old V.P. Const. New culvert.
35+49	Std. Pipe	18 in.	2	1.8		2.7									12'						Extend old C.I. with V.P. S. 2', N. 10'.
55+67	Thru Truss Br.															640	44	124	17		
78+40	Std. Pipe	12 in.	4			1.3						32'									Remove old V.P. Const. New culvert.
85+50	Std. Pipe	12 in.	5			1.3						38'									Remove old V.P. Const. new culvert
92+64	Vit. Pipe	14 in.	3																		Take out old V.P. Fill trench.
93+65	Std. Side Road	15 in.	12			2.9							36'								Const. new side road culvert.
106+75	Arch with slab top Ext.	H=4' S=6' L=28'	15	13.8		3.2															Ext. with std. slab top. Break off old parapets.
113+85	Std. Pipe	12 in.	14	5.0		2.0				16'				32'							Take up old V.P. Clean good pipe. Relay & Extend.
122+84	Std. Pipe	18 in.	13	5.3		2.7				6'					30'						Take up old V.P. Relay good pipe & Ext. on new grade
136+37	Std. Pipe	12 in.	7			2.6					45'										New Side Road Culvert.
137+00	Std. Pipe	12 in.	5			1.3						30'									New Culvert.
140+33	E. Guard Rail															144	11	23	5 lb		On outside of curve, Leave gateway 139+95 to 140+70
148+00	Skew Arch	S=10' Roadway 20'	10		6.6	6.7										608	41	115	15		Extend wings and const. curtain wall.
173+00	Std. Pipe	12 in.	4			1.3						30'									New Culvert.
187+53	Std. Slab Top	H=4' S=4' L=28'	22		23.7	4.0															New Slab Top.

STATION	SIDE	LENGTH Feet 10"	EXCAVATION Cu. Yd.	STATION	SIDE	LENGTH Feet 10"	EXCAVATION Cu. Yd.
				Bro. Ford		112'	7.2
11+37	North	16'	0.5	124+92	North	16'	1.5
23+16	North	16'	0.6	144+73	North	16'	1.6
48+07	South	16'	1.5	152+09	South	16'	2.2
61+13	South	16'	0.6	152+09	North	16'	2.2
61+97	North	16'	1.0	158+60	South	16'	1.2
83+19	South	16'	1.2	175+73	South	16'	0.6
123+82	South	16'	1.8	183+24	North	16'	1.2
Carried For'd		112'	7.2	TOTAL		224'	17.7

STATION	SIDE	LENGTH		AVE. DEPTH FEET	EXCAVATION Cu. Yd.	CONCRETE HEAD- WALL 2 1/2 x 4 x 1' Cu. Yd.
		6" Tile	8" Tile			
32+10						
33+50	North	160'		2.0	12	0.4
87+50	South		500'	2.7	50	0.4
90+40						
92+00	North	160'		2.0	12	0.4
141+30	South	150'		2.7	15	0.4
177+64	North	160'		2.0	12	0.4
TOTAL		630'	500'		101	2.0

Roadway  
Excavation 16 150 cu. yd.  
Pavement 33 905 sq. yd.  
Guard Rail 696 lin. ft.  
Berms & Ditches 18 900 lin. ft.