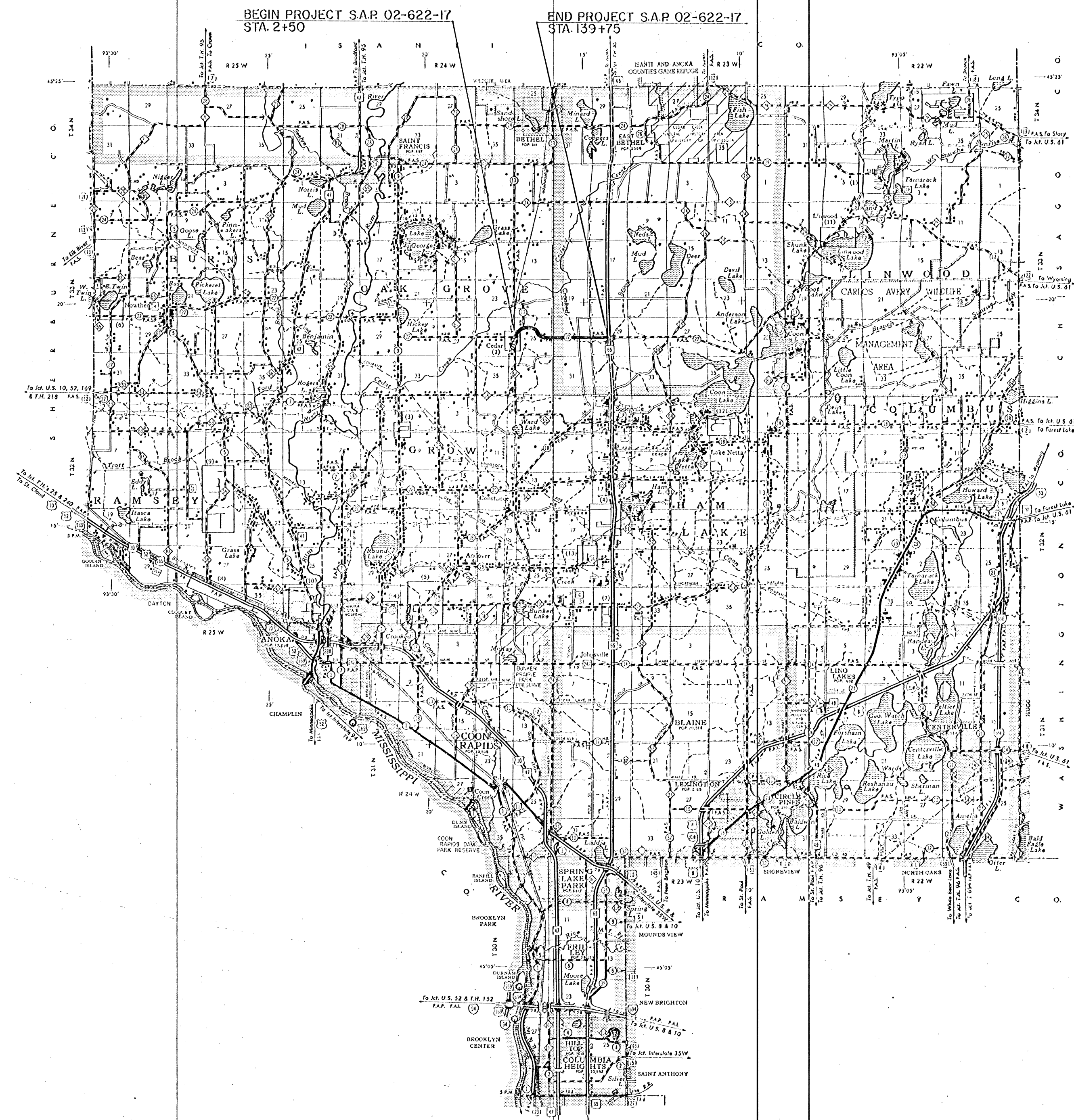
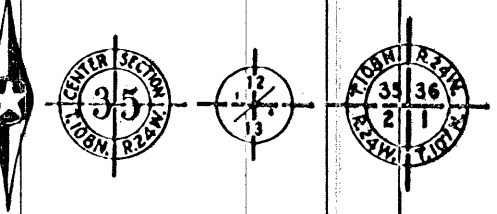


CONVENTIONAL SIGNS

| | |
|-------------------------------------|-----|
| STATE LINE | --- |
| COUNTY LINE | --- |
| TOWNSHIP OR RANGE LINE | --- |
| SECTION LINE | --- |
| QUARTER LINE | --- |
| SIXTEENTH LINE | --- |
| RIGHT OF WAY LINE | --- |
| PRESENT RIGHT OF WAY LINE | --- |
| CENTRAL OF ACCESS LINE | --- |
| PROPERTY LINE (Except Line 10) | --- |
| VACATED PLATTED PROPERTY | --- |
| CORPORATE OR CITY LIMITS | --- |
| TRUNK HIGHWAY CENTER LINE | --- |
| RETAINING WALL | --- |
| RAILROAD | --- |
| RAILROAD RIGHT OF WAY LINE | --- |
| RIVER OR CREEK | --- |
| DRAINAGE DITCH | --- |
| ELECTRIC POWER LINE | --- |
| TELEPHONE OR TELEGRAPH LINE | --- |
| JOINT TELEPHONE AND POWER | --- |
| CONDUIT | --- |
| TELEPHONE CABLE - AERIAL | --- |
| TELEPHONE CABLE - UNDERGROUND | --- |
| POWER CABLE - UNDERGROUND | --- |
| GAS MAIN | --- |
| CULVERT | --- |
| DRAINAGE | --- |
| GUARD RAIL | --- |
| BARBED WIRE FENCE | --- |
| WOODEN WIRE FENCE | --- |
| CISAIN LINK FENCE | --- |
| RAILROAD SNOW FENCE | --- |
| STONE WALL OR FENCE | --- |
| HEDGE | --- |
| WATER PIPE | --- |
| SEWER PIPE | --- |
| DRAIN TILE | --- |
| SPRINGS | --- |
| MARSH | --- |
| TIMBER | --- |
| ORCHARD | --- |
| BRUSH | --- |
| NURSERY | --- |
| CATCH BASIN | --- |
| MANHOLE | --- |
| PILE WASTEWATER | --- |
| STREET LIGHT | --- |
| RAILROAD CROSSING SIGN | --- |
| RAILROAD CROSSING BELL | --- |
| ELECTRIC WARNING SIGN | --- |
| CROSSING GATE | --- |
| CATTLE GUARD | --- |
| OVERPASS (Highway Over) | --- |
| UNDERPASS (Highway Under) | --- |
| BRIDGE | --- |
| BUILDING (One Story Frame) | --- |
| F FRAME C CONCRETE | --- |
| S STONE T TILE | --- |
| B BRICK ST-STUCCO | --- |
| IRON PIPE OR ROD | --- |
| MONUMENT (STONE, CONCRETE OR METAL) | --- |
| WOODEN HUB | --- |
| GRAVEL PIT | --- |
| SAND PIT | --- |
| BORROW PIT | --- |
| ROCK QUARRY | --- |
| MEANDER CORNER | --- |



Fed. Proj. No. _____

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
CONSTRUCTION PLAN FOR GRADING, BASE & BITUMINOUS SURFACING

County State Aid Highway No. 22

Between JCT. CSAH 22 & C.R. 67 And STATE TH. 65

From A POINT 388.00' EAST & 63.49' SOUTH OF THE W. 1/4 OF SEC. 25, T.33N, R.24W To A POINT 20.29' WEST OF THE CENTER SECTION 29, T.32N, R.23W

Give proper reference to Sections, Township and Range

| | | | | |
|-------------------|-----------|------|-------|-------|
| GROSS LENGTH | 13,809.77 | FEET | 2.616 | MILES |
| BRIDGES-LENGTH | 0 | FEET | 0 | MILES |
| EXCEPTIONS-LENGTH | 0 | FEET | 0 | MILES |
| NET LENGTH | 13,809.77 | FEET | 2.616 | MILES |

INDEX OF SHEETS

Sheet No. 1. Title Sheet & Layout Map

- " No. 2-4 Est. Quantities & Typical Sec.
- " No. 5-9 Plan & Profile
- " No. 10-22 Cross Sections
- " No. 23 Road Approach
- " No. 24 Super-elevation
- " No. 25 Road Obliteration

SCALES

INDEX MAP 1" = 2 MI.

PLAN 1" = 100'

PROFILE 1" = 100' HORIZ. 1" = 10' VERT.

CROSS-SECTION 1" = 10'

EQUATIONS

P.O.T. 11+21.86 = P.O.T. 5+00

OR P.T. 30+77.46 = P.O.T. 30+82.95

P.O.T. 44+68.40 = P.O.T. 50+00

DESIGN DESIGNATION

ADT (CURRENT YEAR) 1100

ADT (FUTURE YEAR) 1900

T (HEAVY COMMERCIAL) 150-300

9 Ton Design SOIL FACTOR 50%

Design Speed 60 MPH

Design Speed not achieved at:

STA. 4+62 TO STA. 50+06 MPH 50

STA. 63+75 TO STA. 67+25 MPH 50

SPECIFICATIONS

THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", DATED JAN. 1, 1978, SHALL GOVERN.

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Lawrence K. Kuntz
COUNTY ENGINEER DATE *May 3, 1977*

ANOKA COUNTY REG. NO. 6549

RECOMMENDED FOR APPROVAL *W. E. W...* 12-17-77
DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL *Robert D. O...* 12-17-77

APPROVED *12/13/77* 1977 *Barth M. ...*
STATE AID ENGINEER

Minn. Proj. No. _____ County Proj. No. _____
State Proj. No. _____ S. A. P. 02-622-17

STATEMENT OF ESTIMATED QUANTITIES 02-622-17

| ITEM NO. | ITEM | UNIT | TOTAL EST. QUANTITIES | TOTAL FINAL QUANTITIES |
|------------|--|----------|-----------------------|------------------------|
| 2031.503 | FIELD LABORATORY, TYPE D | EACH | 1 | |
| 2101.501 | CLEARING | ACRE | 1.85 | |
| 2101.502 | CLEARING | TREE | 56 | |
| 2101.506 | GRUBBING | ACRE | 0.95 | |
| 2101.507 | GRUBBING | TREE | 46 | |
| 2104.501 | REMOVE CULVERT PIPE | LIN. FT. | 276 | |
| 2104.521 | SALVAGE CULVERT PIPE | LIN. FT. | 120 | |
| 2104.521 | SALVAGE FENCE | LIN. FT. | 2623 | |
| 0557.604 | INSTALL FENCE | LIN. FT. | 2317 | |
| ① 2105.501 | COMMON EXCAVATION (P) | CU. YD. | 46,104 | |
| 2105.505 | MUCK EXCAVATION | CU. YD. | 25,561 | |
| 2105.523 | COMMON BORROW (EV) | CU. YD. | 8,765 | |
| 2105.531 | SALVAGED BITUMINOUS MIXTURE (EV) (P) | CU. YD. | 3,147 | |
| 2105.535 | SALVAGED TOPSOIL (LV) | CU. YD. | 10,200 | |
| 2105.535 | SALVAGED TOPSOIL IN STOCKPILE | CU. YD. | 5,000 | |
| 2105.535 | SALVAGED AGGREGATE (EV) | CU. YD. | 6,455 | |
| ② 2130.501 | WATER | M. GAL. | 300 | |
| ③ 2211.501 | AGGREGATE BASE, CLASS 5 | TON | 16,455 | |
| 2331.504 | BITUMINOUS MATERIAL FOR MIXTURE | TON | 391 | |
| 2331.510 | BINDER COURSE MIXTURE | TON | 1085 | |
| ⑤ 2331.514 | BASE COURSE MIXTURE | TON | 3705 | |
| 2341.504 | BITUMINOUS MATERIAL FOR MIXTURE | TON | 290 | |
| ⑥ 2341.508 | WEARING COURSE MIXTURE | TON | 4470 | |
| 2357.502 | BITUMINOUS MATERIAL FOR TACK COAT | GALLON | 4300 | |
| 2501.501 | CULVERT EXCAVATION, CLASS U | CU. YD. | 622 | |
| 2501.511 | 15" CM PIPE CULVERT | LIN. FT. | 378 | |
| 2501.511 | 18" CM PIPE CULVERT | LIN. FT. | 156 | |
| 2501.511 | 30" CM PIPE CULVERT | LIN. FT. | 84 | |
| 2501.511 | 42" CM PIPE CULVERT | LIN. FT. | 82 | |
| 2501.511 | 48" CM PIPE CULVERT | LIN. FT. | 36 | |
| 2501.511 | 24" RC PIPE CULVERT CLASS 3 | LIN. FT. | 234 | |
| 2501.515 | 15" CM PIPE APRONS | EACH | 26 | |
| 2501.515 | 18" CM PIPE APRONS | EACH | 6 | |
| 2501.515 | 24" CM PIPE APRONS | EACH | 2 | |
| 2501.515 | 30" CM PIPE APRONS | EACH | 2 | |
| 2501.515 | 42" CM PIPE APRONS | EACH | 2 | |
| 2501.515 | 48" CM PIPE APRONS | EACH | 2 | |
| 2501.515 | 24" RC PIPE APRONS | EACH | 6 | |
| 2501.521 | 85" SPAN CM PIPE ARCH CULVERT | LIN. FT. | 90 | |
| 2501.525 | 85" SPAN CM PIPE ARCH APRONS | EACH | 4 | |
| 2501.571 | INSTALL 15" CM PIPE CULVERT | LIN. FT. | 88 | |
| 2575.501 | ROADSIDE SEEDING (P) | ACRE | 20 | |
| 2575.502 | SEED, MIXTURE 3 | POUND | 800 | |
| 2575.505 | SODDING | SQ. YD. | 10,667 | |
| 2575.511 | MULCH MATERIAL TYPE 1 | TON | 40 | |
| 2575.519 | DISC ANCHORING (P) | ACRE | 20 | |
| 2575.531 | COMMERCIAL FERTILIZER, ANALYSIS 10-10-10 | TON | 4.6 | |

- ① INCLUDES 8,482 CU. YD. SUBCUT FOR COMPACTION & UNIFORMITY OF SOILS
- ② FOR DUST CONTROL
- ③ INCLUDES 945 TON FOR ROAD APPROACHES & 500 TON FOR ENTRANCES
- ④ INCLUDES 390 TONS FOR ROAD APPROACHES & 530 TON FOR RIGHT TURN LANES
- ⑤ INCLUDES 415 TONS FOR ROAD APPROACHES
- ⑥ INCLUDES 370 TONS FOR ROAD APPROACHES, 530 TONS FOR RIGHT TURN LANES & 530 TONS FOR ENTRANCES.
- ⑦ FOR REMOVAL OF SURCHARGE MATERIAL STA. 116+00 TO 139+75

FORM 21167 - 2-65

CLEARING AND GRUBBING

| STATION (TO STATION) | LOC. | CLEARING TREE [ACRE] | GRUBBING TREE [ACRE] |
|----------------------|---------------|----------------------|----------------------|
| 12+60 - 13+05 | 50-52 RT. | .05 | .05 |
| 15+68 | 45' RT. | 1 | 1 |
| 26+21 | 15' LT. | 1 | 1 |
| 26+38 | 12' LT. | 1 | 1 |
| 28+12 | 48' RT. | 1 | 1 |
| 30+68 - 32+20 | 54'-75' LT. | 10 | 10 |
| 34+32 - 34+66 | 45' - 60' LT. | .05 | .05 |
| 40+00 - 42+66 | 47'-72' RT. | .05 | .05 |
| 42+84 - 44+68 | 32'-60' RT. | .15 | .15 |
| 44+32 | 56' LT. | 1 | 1 |
| 44+55 | 43' LT. | 1 | 1 |
| 50+22 - 53+05 | 24'-54' LT. | 12 | 12 |
| 50+53 - 52+01 | 31'-49' RT. | 10 | 10 |
| 63+43 - 63+88 | 41' RT. | 4 | 4 |
| 64+59 - 67+75 | 37'-68' LT. | .30 | .30 |
| 64+73 | 25' RT. | 1 | 1 |
| 65+26 - 66+02 | 31'-45' RT. | 11 | 9 |
| 66+90 - 67+06 | 34 RT. | 2 | 2 |
| 78+35 - 78+84 | 50'-60' LT. | .05 | .05 |
| 80+08 - 80+54 | 47'-57' LT. | .05 | .05 |
| 90+05 - 90+80 | 47'-53' LT. | .05 | .05 |
| 92+25 | 42' LT. | 1 | 1 |
| 92+84 - 92+90 | 48'-51' LT. | 3 | 2 |
| 97+18 - 97+38 | 39' RT. | 2 | 2 |
| 98+15 - 99+22 | 35'-40' RT. | 3 | 3 |
| 111+59 - 111+91 | 32'-44' RT. | 5 | 4 |
| 117+40 | 29' RT. | 1 | 1 |
| 125+46 - 127+25 | 22'-46' RT. | .15 | 0 |
| 128+31 - 134+69 | 23'-48' RT. | .60 | 0 |
| 131+20 - 133+50 | 30'-46' LT. | .15 | 0 |
| 136+71 - 136+77 | 30' RT. | 5 | 0 |
| TOTALS = | | 56 | 46 |

MHD 21166 (2/73)

The following Standard Plates, approved by the Federal Highway Administration, shall apply on this project.

| PLATE NO. | DESCRIPTION |
|-----------|---|
| 0003A | SPECIFICATION REFERENCE TO STANDARD PLATES |
| 3000 H | REINFORCED CONCRETE PIPE |
| 3006 C | GASKET JOINT FOR RC PIPE |
| 3040 E | CORRUGATED METAL PIPE CULVERT |
| 3100 F | CONCRETE APRON FOR REINFORCED CONCRETE PIPE |
| 3122 H | METAL APRON FOR CM PIPE - PIPE ARCH CULVERT |
| 3123 H | METAL APRON FOR CM PIPE |
| 3145 A | CONCRETE PIPE JOINT TIES |
| 8000 G | STANDARD BARRICADES |
| 9000 B | APPROACHES AND ENTRANCES |
| 9102 C | SODDING AT PIPE CULVERT ENDS |

BASIS OF PLANNED QUANTITIES

- 2211 AGGREGATE BASE CLASS - 5, 145 LBS./CU. FT. COMPACTED.
- 2331 PLANT MIXED BASE COURSE, BITUMINOUS MIXTURE 165 LBS. S. Y. PER 1/2" THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 4.5% BY WT.
- 2331 PLANT MIXED BINDER COURSE, BITUMINOUS MIXTURE 165 LBS./ S. Y. PER 1/2" THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 5.5% BY WT.
- 2341 PLANT MIXED WEARING COURSE, BITUMINOUS MIXTURE 165 LBS./ S. Y. PER 1/2" THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 6.5% BY WT.
- 2357 BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER S. Y.
- 2575 ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENTS PLUS 10%.

SALVAGE & INSTALL FENCE

| STATION | LOC. | SALVAGE | INSTALL | REMARKS |
|-----------------|-------|---------|---------|------------|
| 15+55 - 18+04 | LT. | 320 | 249 | |
| 41+66 - 42+66 | RT. | 120 | 100 | |
| 64+59 - 66+06 | RT. | 167 | 147 | |
| 66+28 | RT. | 20 | 00 | LINE FENCE |
| 67+75 | LT. | 30 | 00 | LINE FENCE |
| 74+58 - 84+75 | LT. | 1062 | 1017 | |
| 85+10 - 86+91 | LT. | 221 | 181 | |
| 93+40 - 97+97 | LT. | 482 | 457 | |
| 100+52 - 120+51 | 8 LT. | 186 | 166 | |
| 102+36 - 102+51 | 1 LT. | 15 | 15 | |

TOTAL = 2,623' 2,317'

SPECIAL DETAILS

EXCAVATED MUCK MATERIAL SHALL BE USED TO CONSTRUCT SLOPES ADJACENT TO MUCK EXCAVATION AREAS, AS TOPSOIL THROUGHOUT THE PROJECT, AND APPROXIMATELY 5,000 CU. YDS. OF THE REMAINING MUCK MATERIAL, WHICH WILL BE COMPENSATED FOR UNDER ITEM 2105.535, SHALL BE STOCKPILED FOR FUTURE USE BY THE COUNTY.

APPROXIMATELY 10,200 CU. YDS. OF THE EXCESS MUCK MATERIAL SHALL BE UTILIZED AS TOPSOIL. THE MATERIAL SHALL BE SPREAD TO A UNIFORM 3" MINIMUM DEPTH OVER THE LENGTH OF THE PROJECT. THIS WORK SHALL BE COMPENSATED FOR UNDER ITEM 2105.535, SALVAGED TOPSOIL.

ANY REMAINING MUCK MATERIAL MAY BE SPREAD UNIFORMLY ON SLOPES OR SHALL BE DISPOSED OF BY THE CONTRACTOR IN OTHER AREAS AS APPROVED BY THE ENGINEER.

MUCK MATERIAL MAY BE STOCKPILED ADJACENT TO EXCAVATION AREAS DURING CONSTRUCTION OPERATIONS. BUT PRIOR TO COMPLETION OF FINAL GRADING OPERATIONS, PEAT FIELDS AND SWAMPS MUST BE RESTORED TO ORIGINAL GROUND ELEVATIONS AND EXCESS MATERIAL REMOVED BY THE CONTRACTOR.

SALVAGED BITUMINOUS MIXTURE QUANTITIES ARE COMPUTED AS THE VOLUME OF BITUMINOUS IN ITS ORIGINAL POSITION, BASED ON AVERAGE DEPTH OF 0.3' AND AVERAGE WIDTH OF 24'.

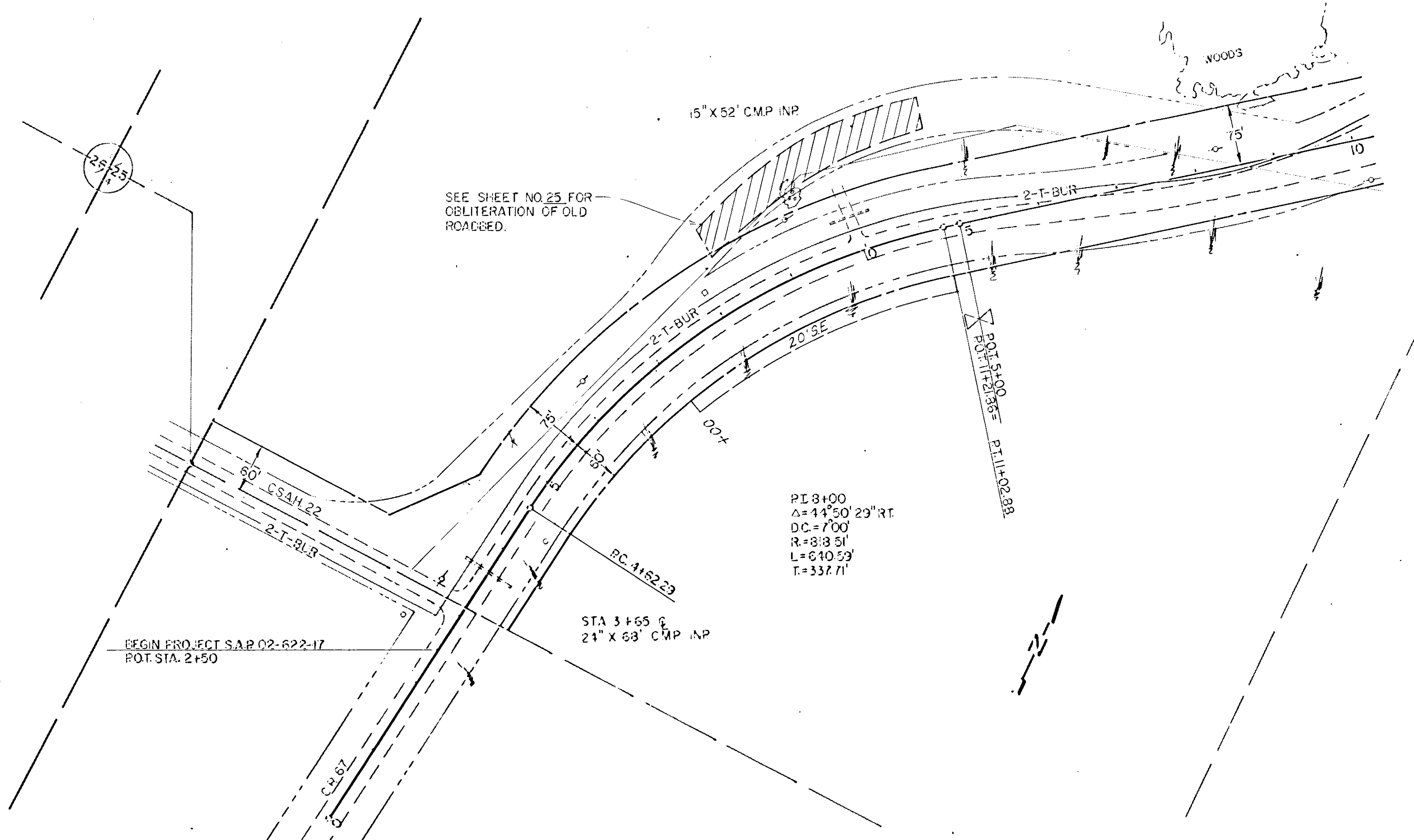
SODDING

| STATION | LOC. | S. Y. |
|-----------------|--------------|-------|
| 37+00 - 38+60 | DIT. BOT. | 178 |
| 41+00 - 41+93 | 22'-57' LT. | 263 |
| 42+07 - 44+07 | 22'-55' LT. | 540 |
| 44+23 - 44+68 | 22'-57' LT. | 155 |
| 43+00 - 43+54 | 22'-52' RT. | 132 |
| 43+70 - 44+68 | 22'-60' RT. | 232 |
| 50+00 - 51+81 | 22'-57' LT. | 669 |
| 51+95 - 53+20 | 22'-57' LT. | 486 |
| 50+00 - 50+31 | 22'-40' RT. | 48 |
| 50+47 - 52+60 | 22'-48' RT. | 588 |
| 60+00 - 60+08 | 22'-32' RT. | 9 |
| 60+24 - 62+50 | 22'-35' RT. | 314 |
| 62+62 - 64+20 | 22'-35' RT. | 256 |
| 64+44 - 67+32 | 22'-45' RT. | 705 |
| 67+44 - 68+76 | 22'-38' RT. | 297 |
| 69+14 - 69+50 | 22'-47' RT. | 108 |
| 75+00 - 75+47 | 22'-46' RT. | 112 |
| 75+59 - 77+25 | 22'-56' RT. | 423 |
| 77+37 - 78+00 | 22'-54' RT. | 217 |
| 87+00 - 87+84 | 22'-48' RT. | 233 |
| 87+96 - 88+30 | 22'-50' RT. | 88 |
| 97+00 - 98+00 | DIT. BOT. L. | 111 |
| 98+00 - 100+12 | 22'-50' LT. | 610 |
| 100+40 - 102+21 | 22'-48' LT. | 518 |
| 25+00 - 26+74 | 22'-66' RT. | 358 |
| 26+88 - 100+12 | 22'-66' RT. | 894 |
| 108+60 - 109+37 | 22'-52' RT. | 242 |
| 109+49 - 110+79 | 22'-45' RT. | 292 |
| 110+91 - 113+08 | 22'-44' RT. | 404 |
| 113+20 - 113+40 | 22'-42' RT. | 17 |
| 113+60 - 114+39 | 22'-44' LT. | 195 |
| 114+51 - 115+00 | 22'-48' LT. | 114 |
| CULVERT ENDS | | 799 |

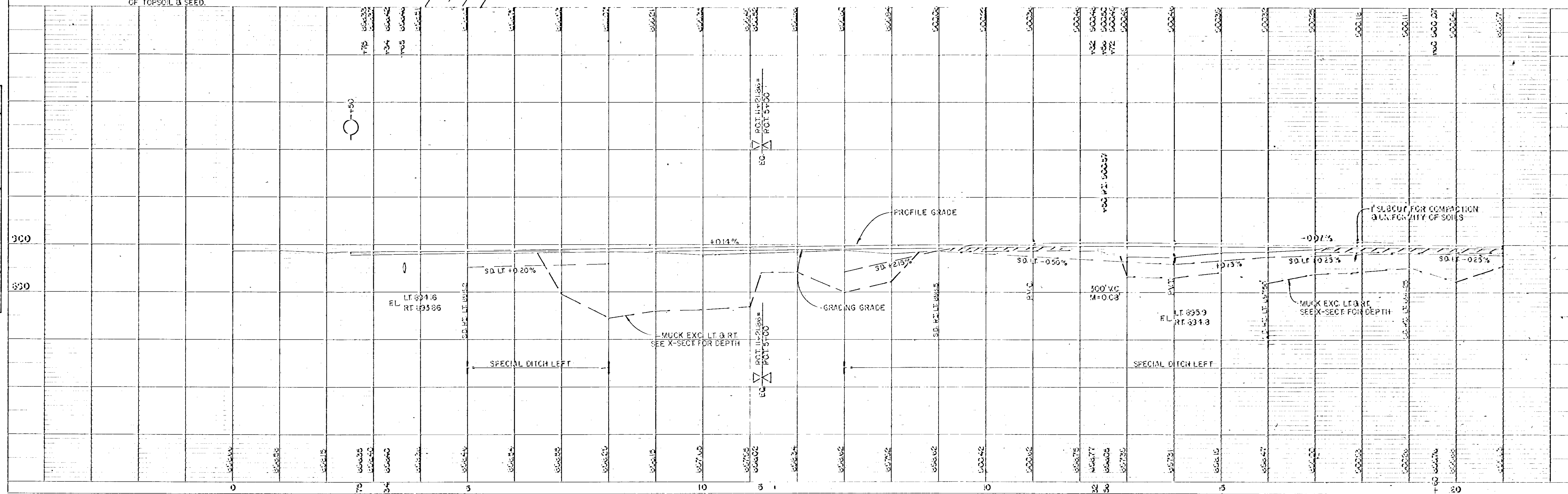
TOTALS = 10,667

PT. OF WAY CHECKED

STRUCTURE INDICATING CHORD



ROAD OBLITERATION COVER WITH A 3" MIN. OF TOPSOIL & SEED.



HIGHWAY FEDERAL AID DISTRICT
 PLATE 1-SINGLE PLAN AND PROFILE LINE & DOT

ROAD OBLITERATION
COVER WITH A 3" MIN.
OF TOPSOIL & SEED.

NOTE: SEE SHEET 23 FOR CSAH 13
ROAD APPROACH CONSTRUCTION

END CONSTRUCTION 4+00

LRD. APPROACH
PI. 0+67.30
 $\Delta = 28^{\circ}07'$ RT.
D.C. = 307.00'
R. = 190.99'
L. = 93.72'
T. = 47.82'

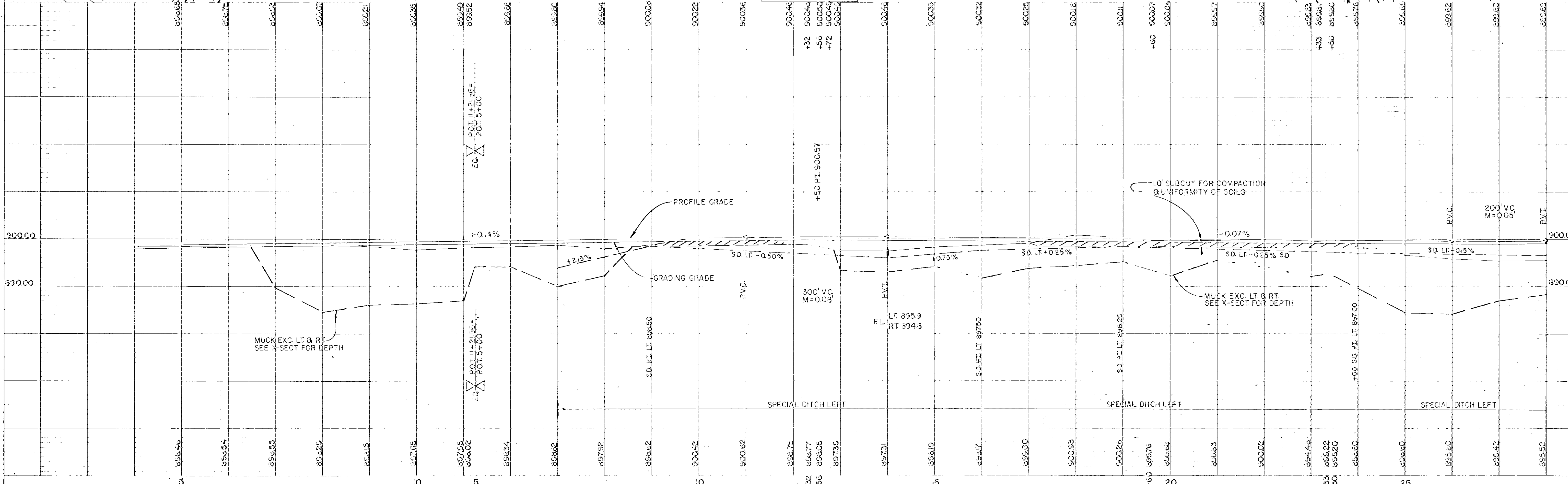
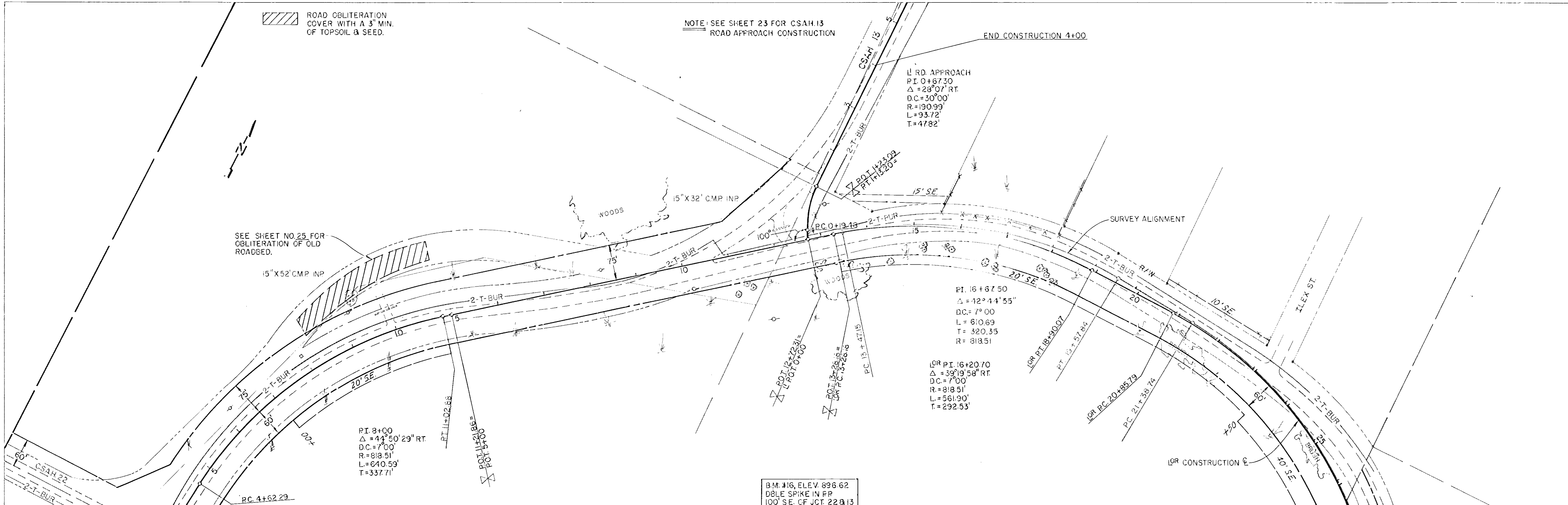
SEE SHEET NO. 25 FOR
OBLITERATION OF OLD
ROADBED.

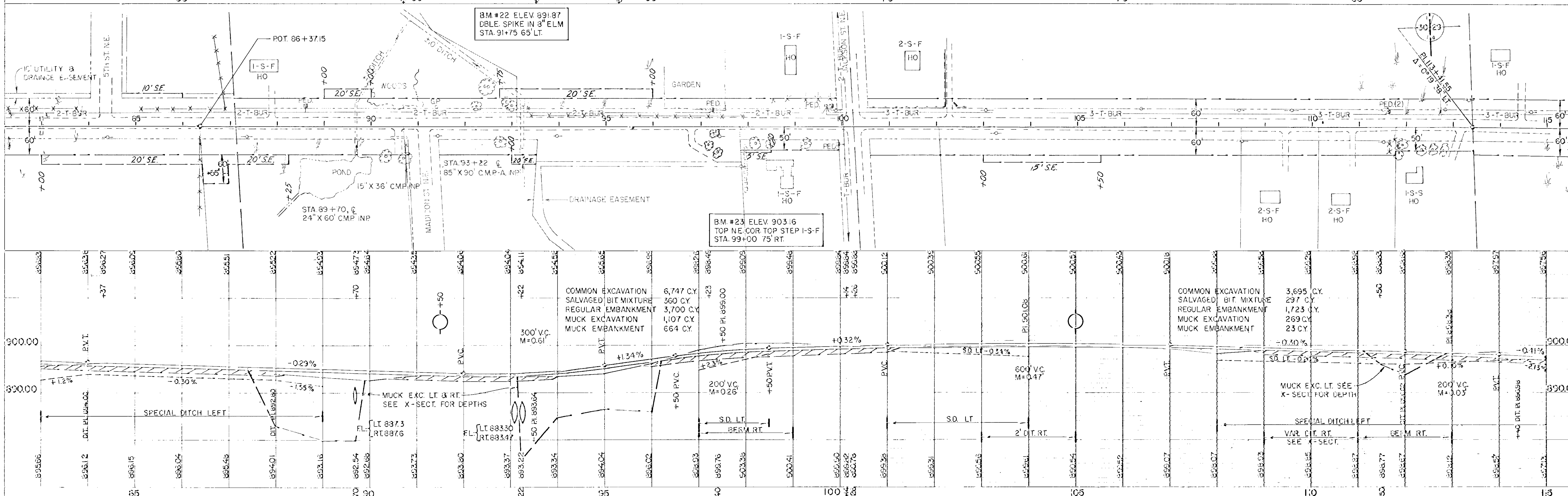
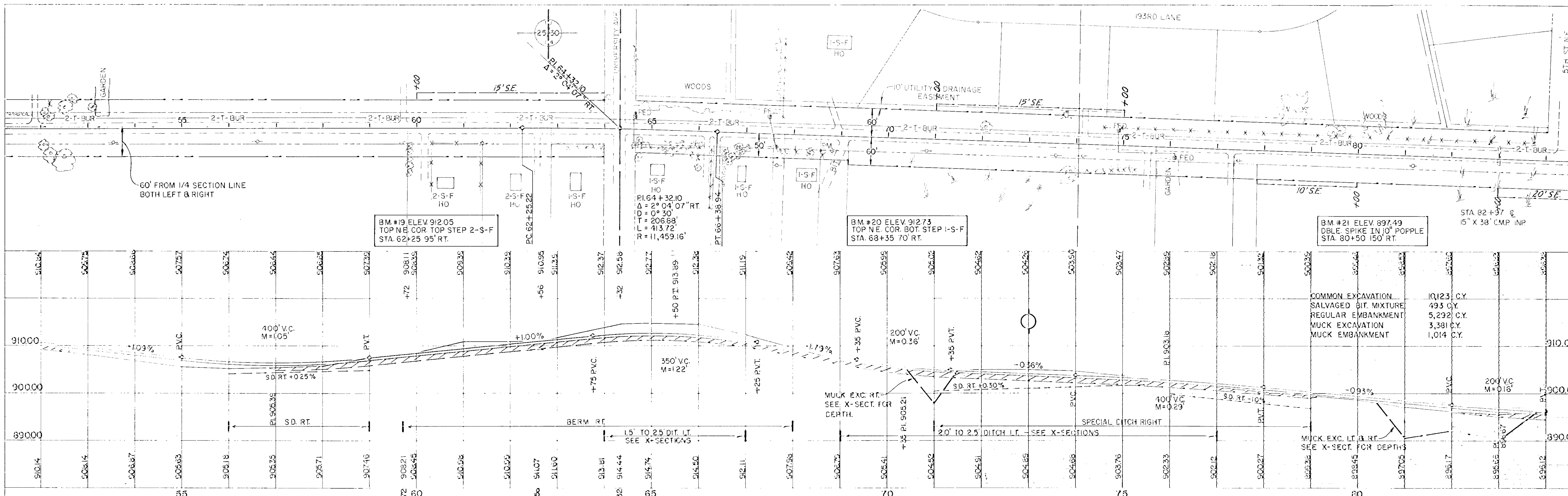
PI. 16+67.50
 $\Delta = 12^{\circ}44'55''$
D.C. = 7^{\circ}00'
L. = 610.69
T. = 320.35
R. = 818.51

LR PI. 16+20.70
 $\Delta = 39^{\circ}19'58''$ RT.
D.C. = 7^{\circ}00'
R. = 818.51
L. = 561.90'
T. = 292.53'

PI. 8+00
 $\Delta = 44^{\circ}50'29''$ RT.
D.C. = 7^{\circ}00'
R. = 818.51
L. = 640.59'
T. = 337.71'

B.M. #16, ELEV. 896.62
DBLE SPIKE IN FP
100 SE. OF JCT. 22 & 13





BM #19 ELEV 912.05
TOP NE. COR. TOP STEP 2-S-F
STA. 62+25 95' RT.

BM #20 ELEV 912.73
TOP NE. COR. BOT. STEP I-S-F
STA. 68+35 70' RT.

BM #21 ELEV 897.49
DBLE SPIKE IN 10" POPPLE
STA. 80+50 150' RT.

BM #22 ELEV 891.87
DBLE SPIKE IN 8" ELM
STA. 91+75 65' LT.

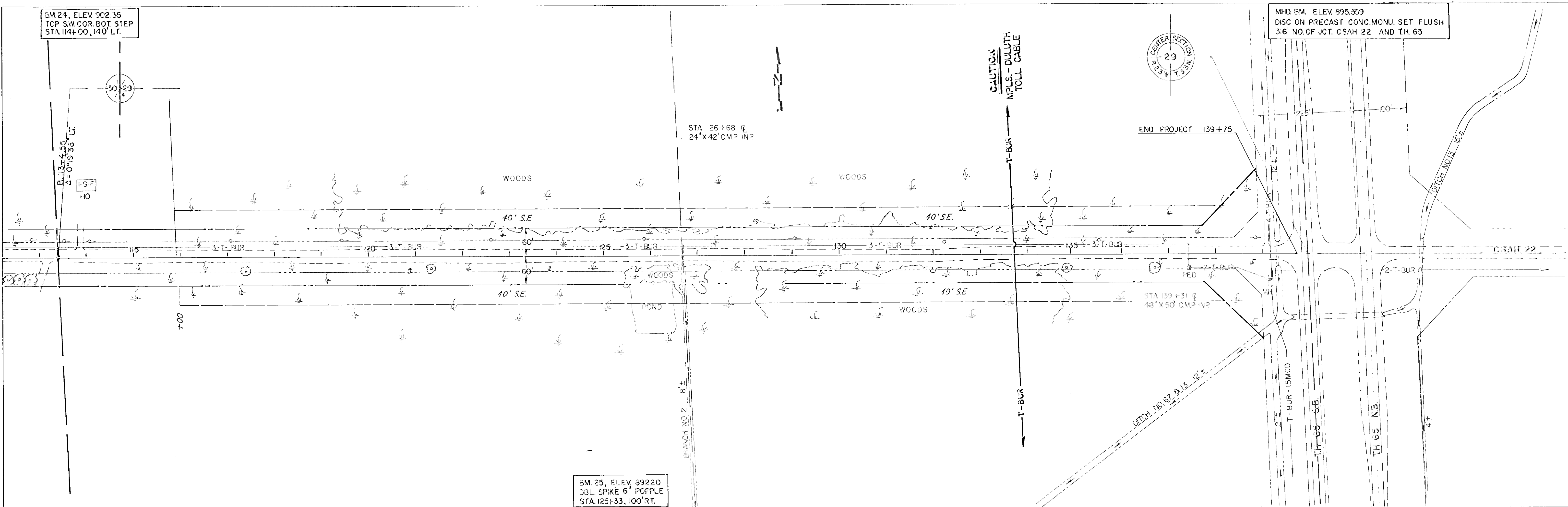
BM #23 ELEV 903.16
TOP NE. COR. TOP STEP I-S-F
STA. 99+00 75' RT.

COMMON EXCAVATION 6,747 C.Y.
SALVAGED BIT MIXTURE 360 C.Y.
REGULAR EMBANKMENT 3,700 C.Y.
MUCK EXCAVATION 1,107 C.Y.
MUCK EMBANKMENT 664 C.Y.

COMMON EXCAVATION 3,695 C.Y.
SALVAGED BIT MIXTURE 297 C.Y.
REGULAR EMBANKMENT 1,723 C.Y.
MUCK EXCAVATION 269 C.Y.
MUCK EMBANKMENT 23 C.Y.

BM 24, ELEV 902.35
TOP SW COR. BOT STEP
STA. 114+00, 140' LT.

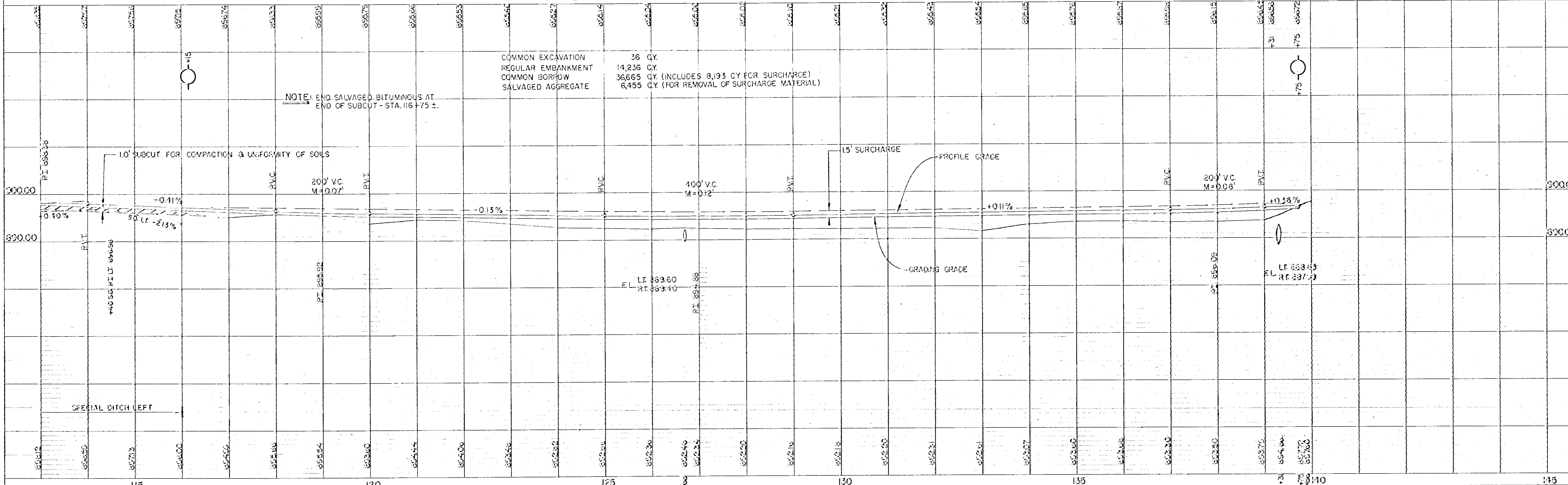
MHD. BM. ELEV. 895.359
DISC ON PRECAST CONC. MONU. SET FLUSH
3/6" NO. OF JCT. CSAH 22 AND TH 65



BM. 25, ELEV. 892.20
DBL. SPIKE 6" POPLLE
STA. 125+33, 100' RT.

| | | |
|--------------------|--------|---|
| COMMON EXCAVATION | 36 | QY. |
| REGULAR EMBANKMENT | 14,236 | QY. |
| COMMON BORROW | 36,665 | QY. (INCLUDES 8,193 CY FOR SURCHARGE) |
| SALVAGED AGGREGATE | 6,455 | QY. (FOR REMOVAL OF SURCHARGE MATERIAL) |

NOTE: END SALVAGED BITUMINOUS AT
END OF SUBCUT - STA. 116+75 ±.



4+00 898.36

EXCAVATION EMBANKMENT

Sub-TOTALS Cu. Yds. Cu. Yds. Sub-TOTALS

3+65 898.36

19 73

FL. 894.16

24" X 66" CMP CULV. INP
F&I 2-24" CMP APRONS

FL. 893.86

3+34 898.40

15 37

3+00 898.40

12 6

2+75 898.35

32 12

BEGIN PROJECT 2+50

8 7

2+00 898.15

1+00 898.58

0+00 898.66

11+00 897.95

EXCAVATION EMBANKMENT

Sub-TOTALS Cu. Yds. Cu. Yds. Sub-TOTALS

10+00 897.65

ENT.

MUCK DEPTH

0 830
MC 520 MF 181

9+00 898.15

MUCK DEPTH

0 728
MC 552 MF 178

8+00 898.29

MUCK DEPTH

19 735
MC 602 MF 176

7+00 898.55

SD 895.80

MUCK DEPTH

59 611
MC 461 MF 143

6+00 898.54

SD 895.60

MUCK DEPTH

78 333
MC 69 MF 23

5+00 898.46

SD 895.20

137 185

131 172

STA 0+00 - STA. 11+00

50

±

50

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL DOT
HYDROLINE
PRINTED IN U.S.A.

50

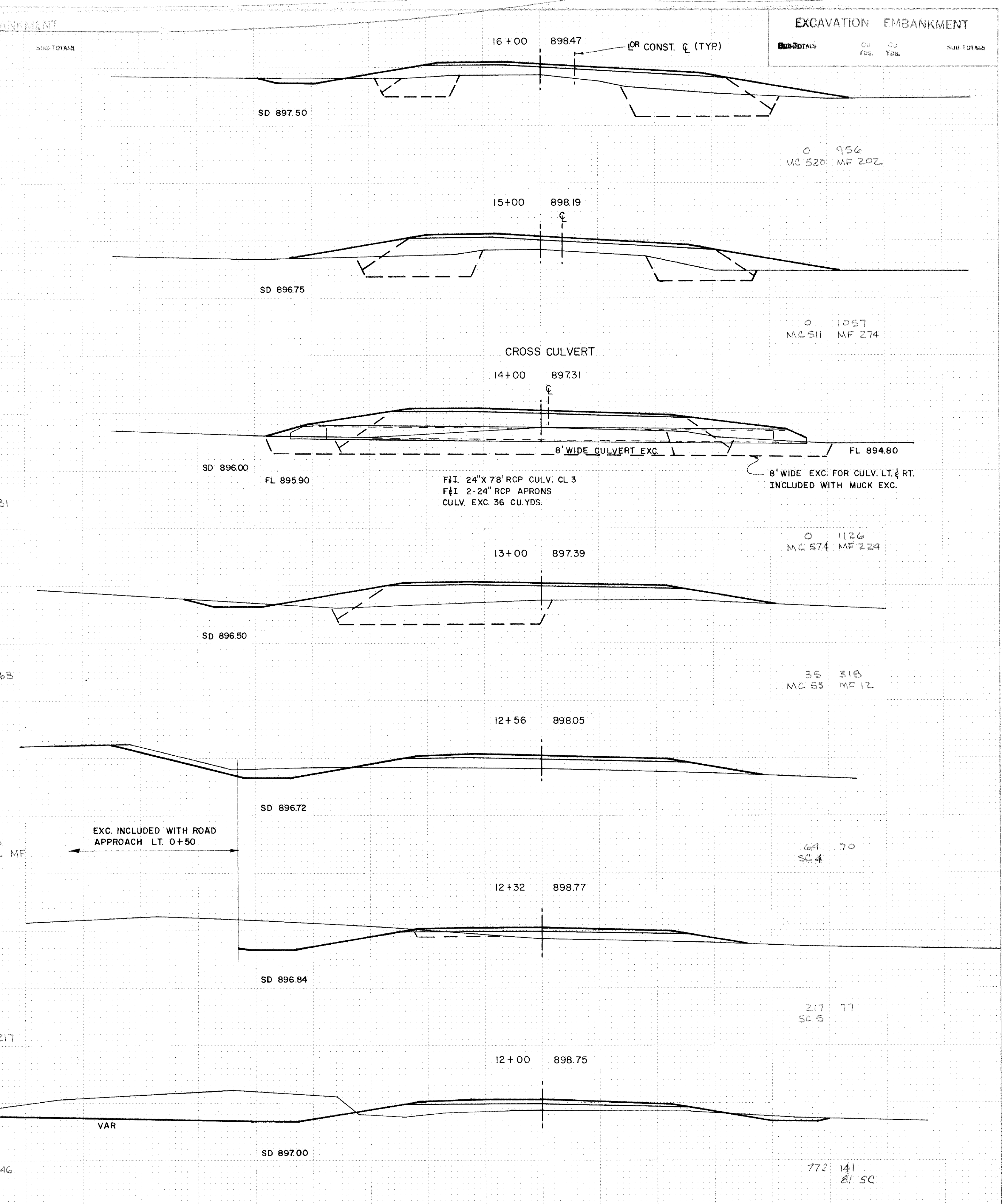
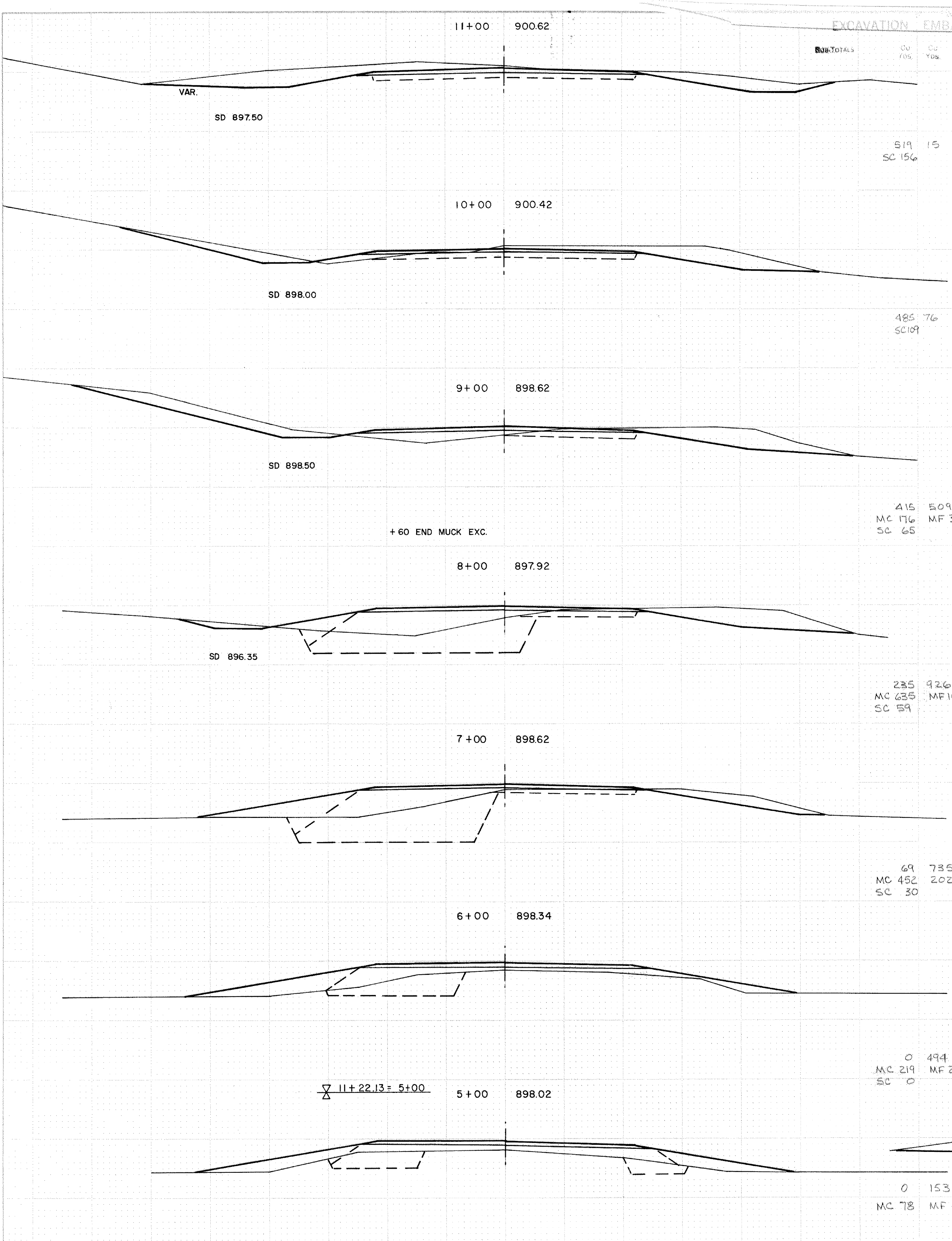
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EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

Sub-TOTALS CU YDS. CU YDS. Sub-TOTALS

Sub-TOTALS CU YDS. CU YDS. Sub-TOTALS



EXCAVATION EMBANKMENT

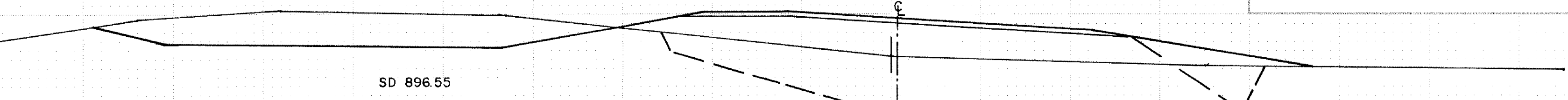
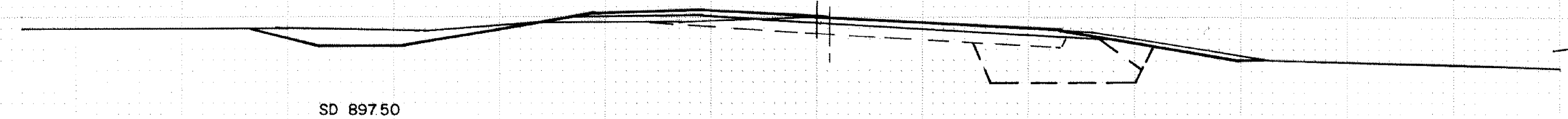
EXCAVATION EMBANKMENT

22+00 900.02

27+00 895.42

| Excavation | Emb. | Sub-Totals |
|------------|----------|------------|
| Cu. Yds. | Cu. Yds. | |

| Excavation | Emb. | Sub-Totals |
|------------|----------|------------|
| Cu. Yds. | Cu. Yds. | |



SD 897.50

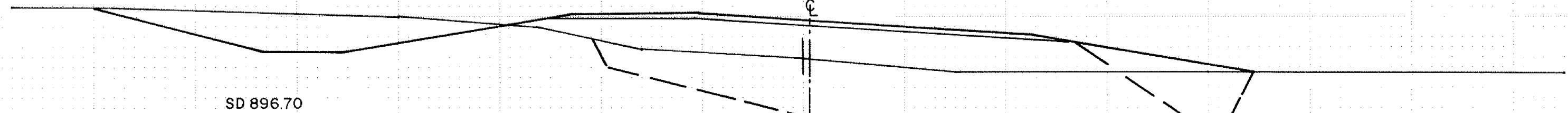
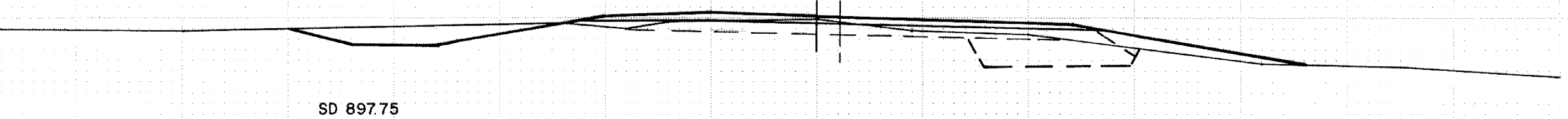
SD 896.55

117 196
MC 165 MF 39
SC 109

524 2033
MC 1339 MF 217

21+00 899.83

26+00 895.80



SD 897.75

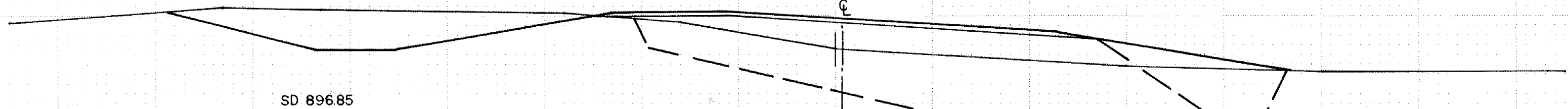
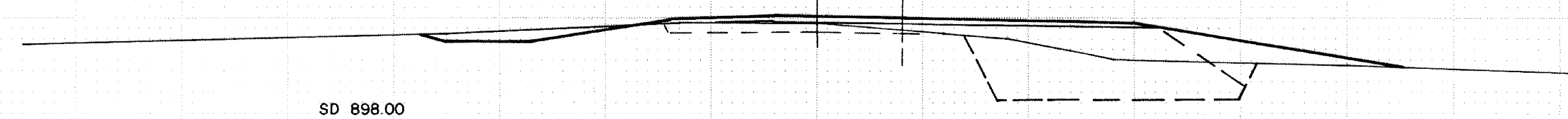
SD 896.70

83 376
MC 239 MF 85
SC 80

385 1902
MC 1594 MF 265

20+00 899.68

25+00 896.60



SD 898.00

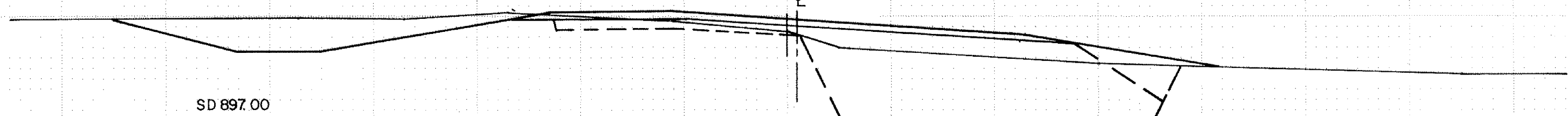
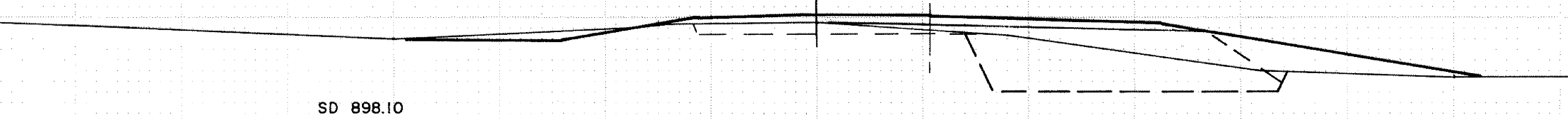
SD 896.85

21 239
MC 159 MF 50
SC 28

356 1324
MC 1141 MF 183
SC 31

19+60 899.76

24+00 898.60



SD 898.10

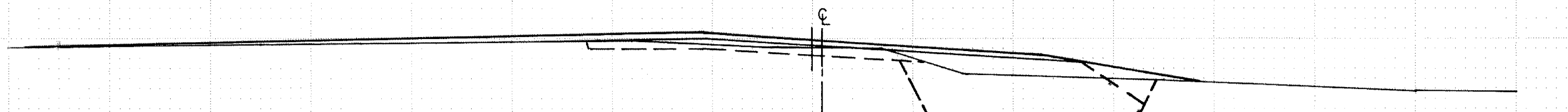
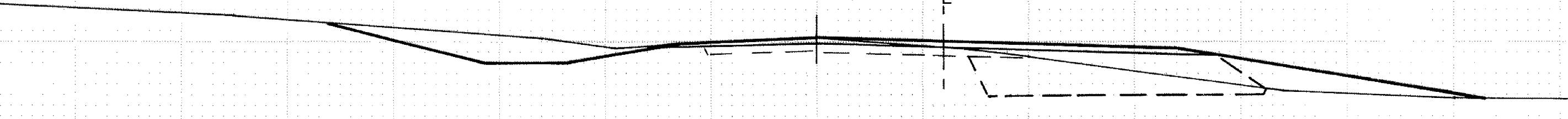
SD 897.00

73 299
MC 191 MF 78
SC 51

76 353
MC 274 MF 31
SC 39

19+00 900.26

23+50 899.20



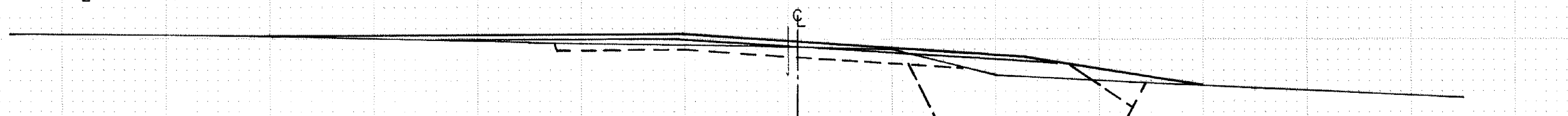
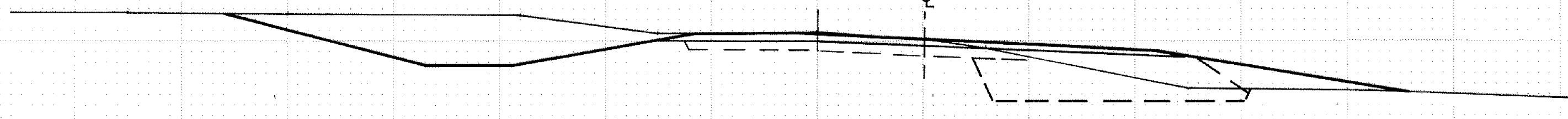
SD 898.25

331 374
MC 244 MF 100
SC 104

0 77
MC 58 MF 8
SC 15

18+00 900.93

23+33 899.22



SD 898.00

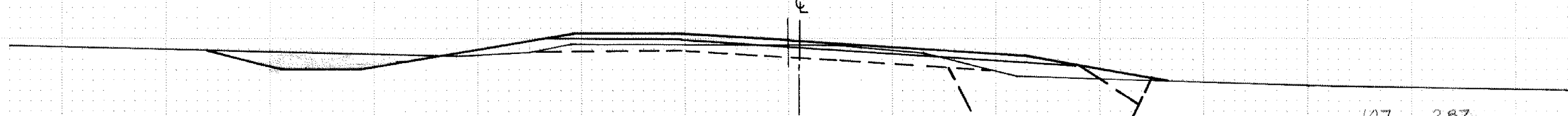
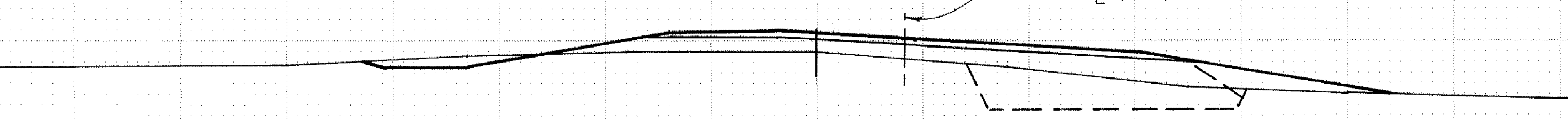
ILEX ST

250 498
MC 241 MF 80
SC 56

15 131
MC 97 MF 15
SC 34

17+00 899.00

23+00 899.48



SD 897.75

SD 897.25

19 800
MC 431 MF 131

107 287
MC 233 MF 30
SC 122

OR CONST. C (TYP)

STA. 17+00 - STA. 27+00

EXCAVATION EMBANKMENT

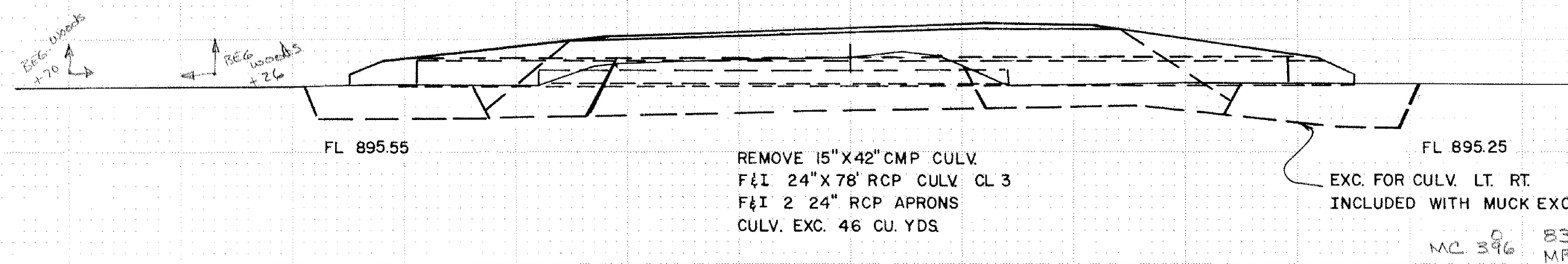
SUB-TOTALS CU YDS. SUB-TOTALS

39+00 901.29

EXCAVATION EMBANKMENT

SUB-TOTALS CU YDS. SUB-TOTALS

34+00 898.14

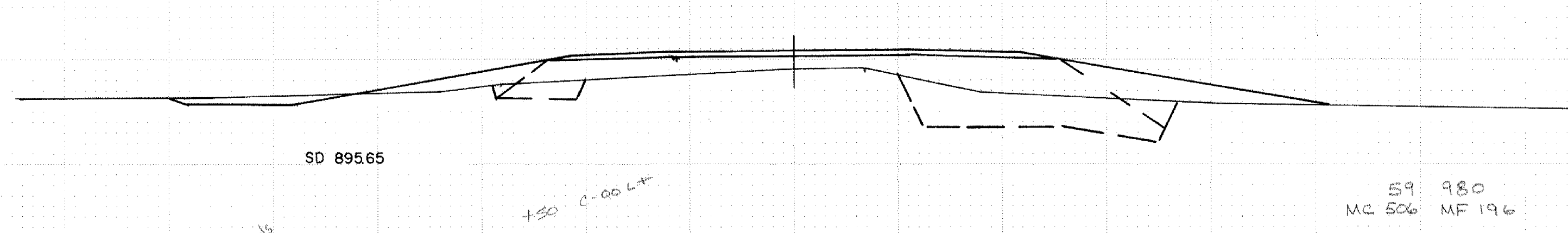


REMOVE 15" X 42" CMP CULV.
F&I 24" X 78" RCP CULV. CL 3
F&I 2 24" RCP APRONS
CULV. EXC. 46 CU. YDS.

FL 895.55
FL 895.25
EXC. FOR CULV. LT. RT.
INCLUDED WITH MUCK EXC.

MC 396 839
MF 280

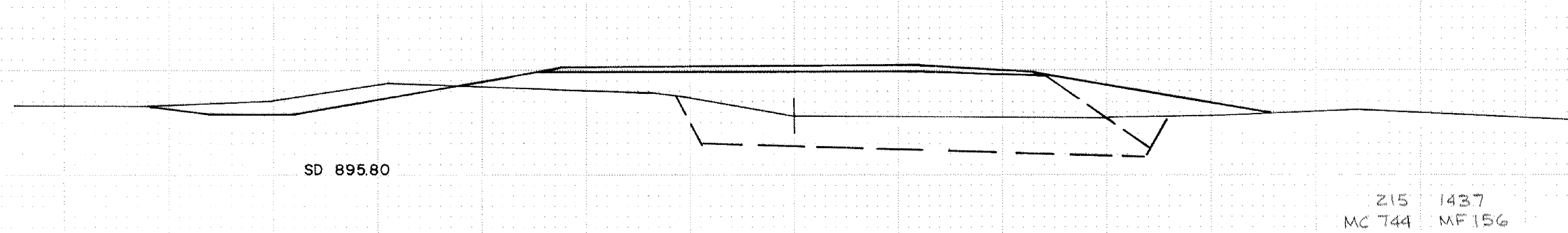
33+00 898.88



SD 895.65

59 980
MC 506 MF 196

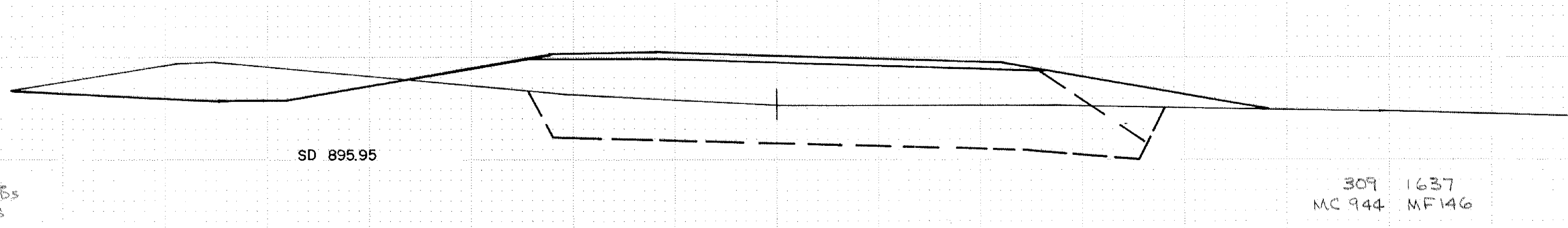
32+00 895.72



SD 895.80

215 1437
MC 744 MF 156

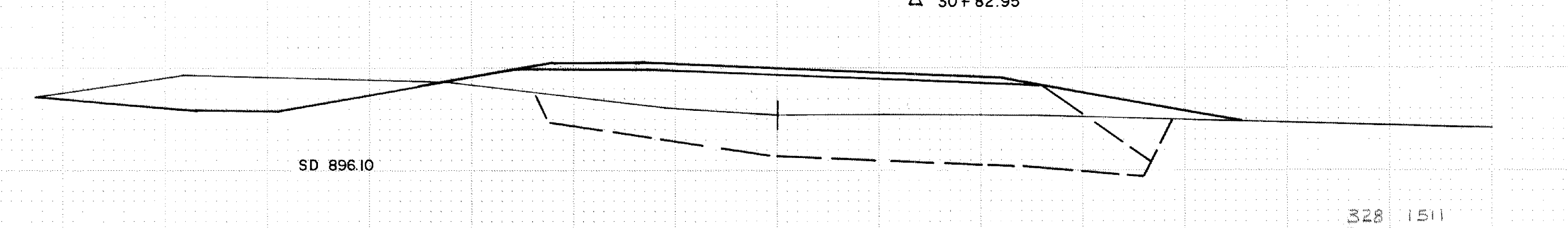
31+00 895.32



SD 895.95

309 1637
MC 944 MF 146

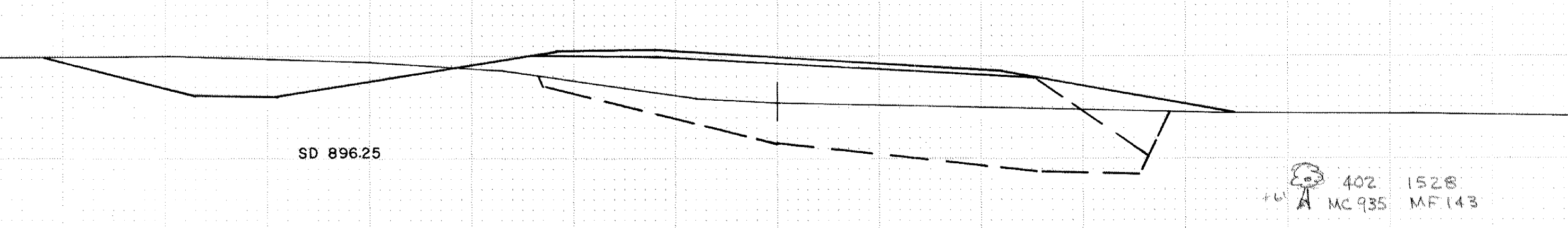
30+00 895.52



SD 896.10

328 1511
MC 922 MF 143

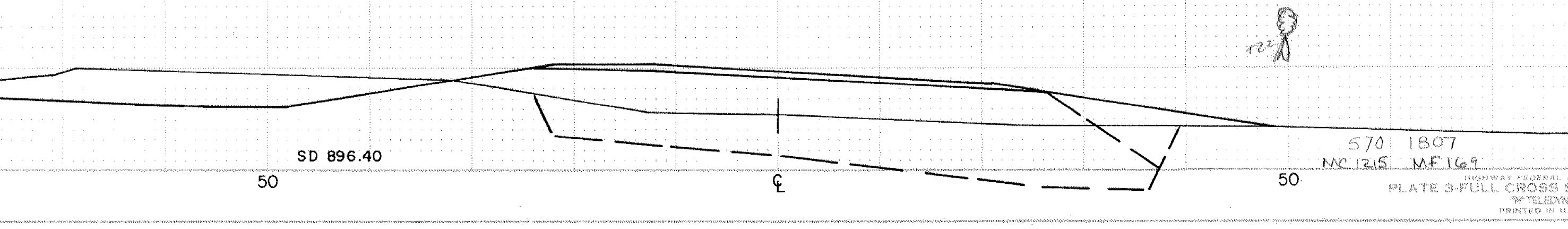
29+00 895.62



SD 896.25

402 1528
MC 935 MF 143

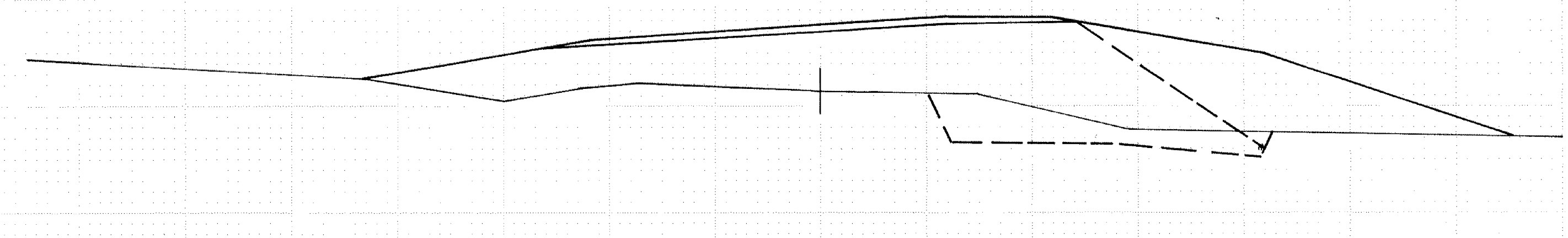
28+00 895.52



SD 896.40

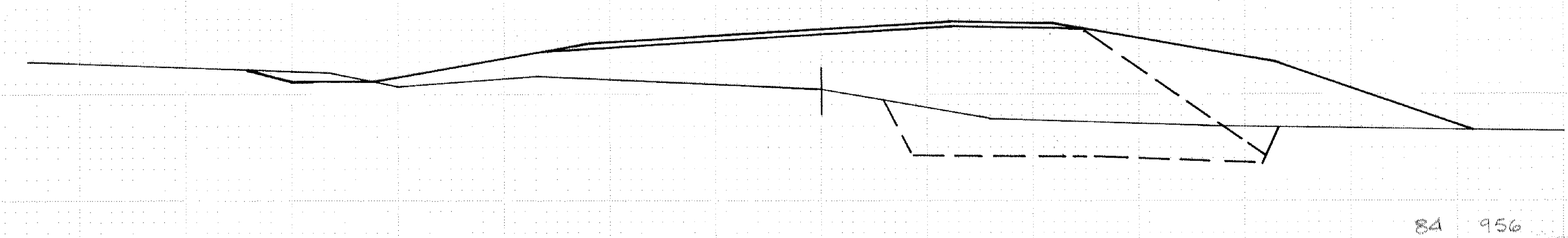
570 1807
MC 1215 MF 169

38+60 900.39



4 707
MC 157 MF 228

38+00 900.29



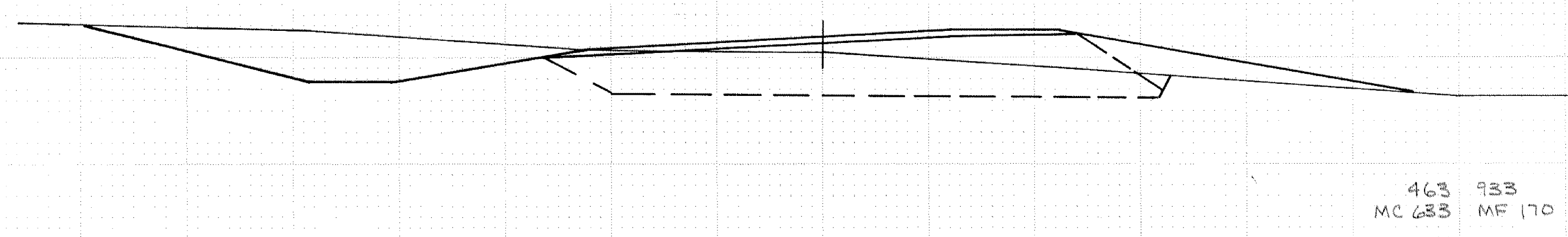
84 956
MC 333 MF 268

BALANCE POINT 38+00

| | | | |
|---|-------------|-------------------------------|------------|
| COMMON EXC. | 10,033 C.Y. | REG. EMB. | 33,410 |
| SUBCUT FOR COMPACTION | + 1,178 | | |
| TOTAL COMMON EXC. | 11,211 | | |
| ① SALVAGED BIT. MIXTURE | - 446 | SALVAGED TOPSOIL IN STOCKPILE | 5,000 C.Y. |
| COMMON EXC. (PAY QUANT) | 10,765 | (FROM EXCESS MUCK MATERIAL) | |
| COMMON BORROW | 45,100 | | |
| MUCK EXC. | 20,130 | MUCK EMB. | 5,497 |
| SALVAGE BIT. MIX. (PAY QUANT) | 1,206 | | |
| CO. ROAD # 13 APPROACH INCLUDED IN QUANTITIES | | 37+00 | 900.49 |

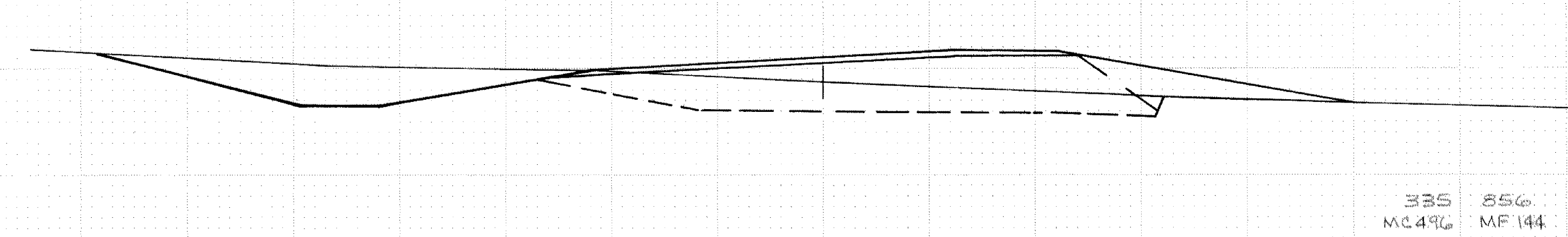
402 1207
MC 689 MF 272

36+00 898.75



463 933
MC 683 MF 170

35+00 898.15



335 856
MC 496 MF 144

① SALVAGED BITUMINOUS MIXTURE IN EXC. AREAS

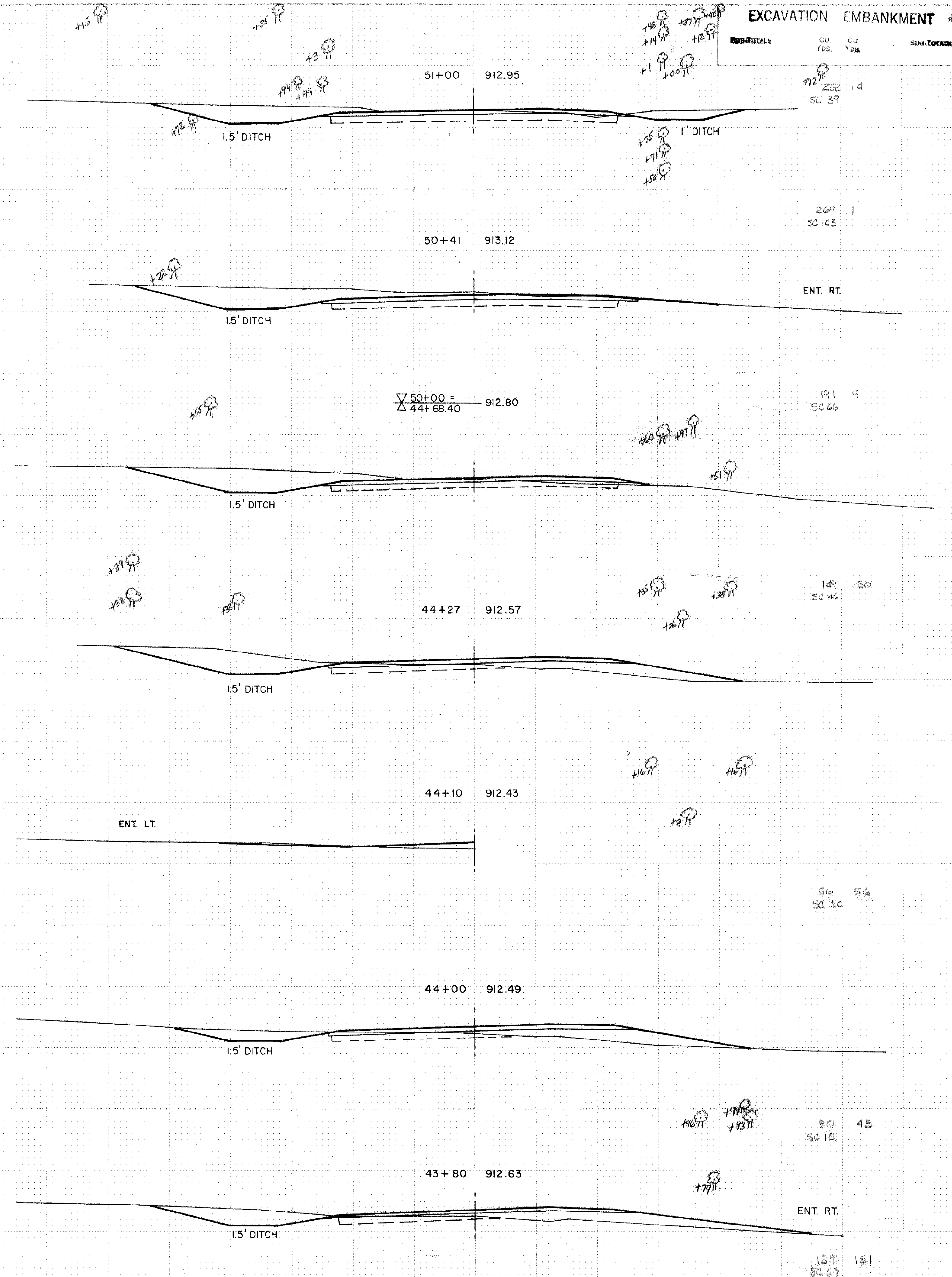
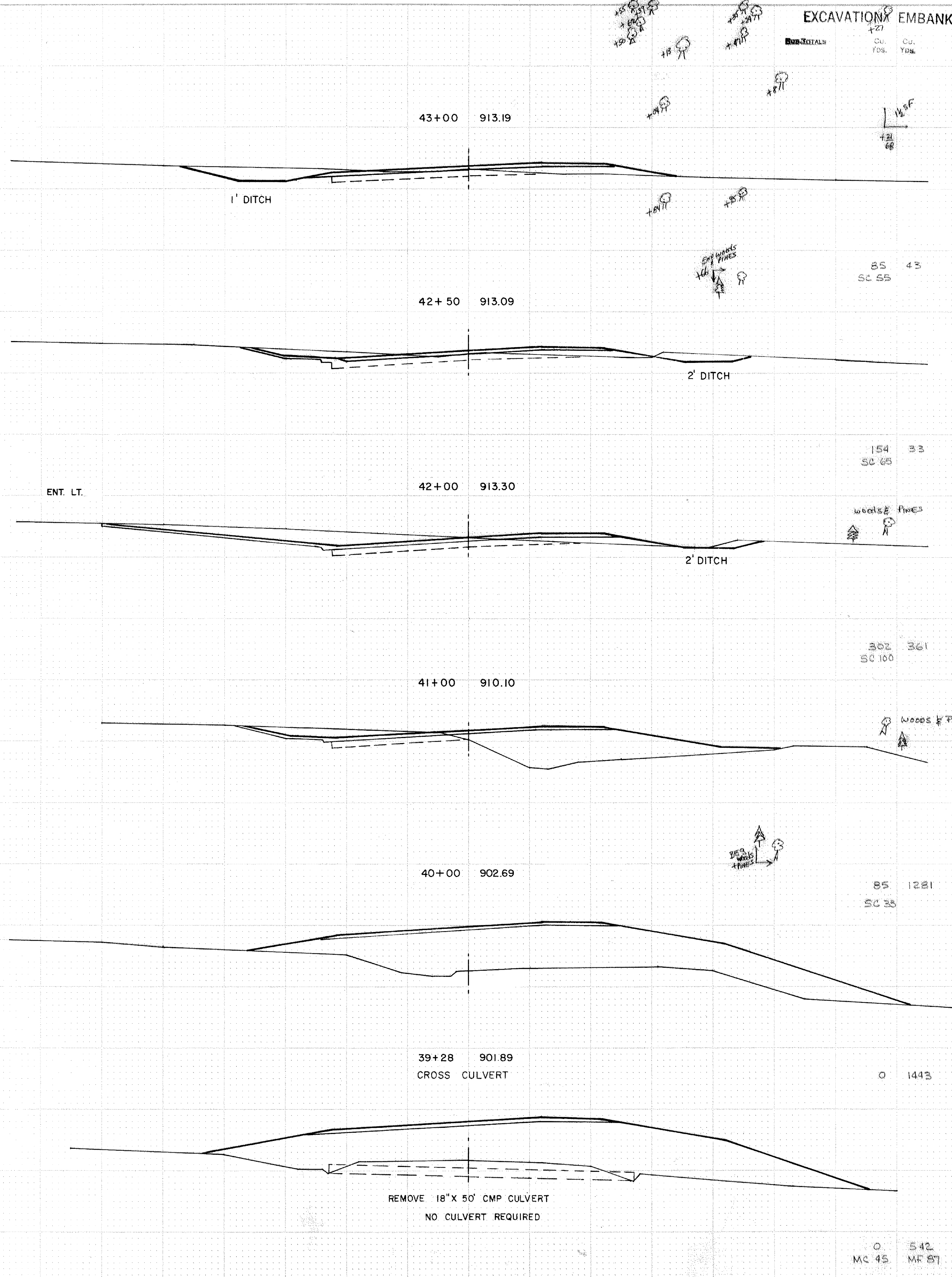
STA. 28+00 - STA. 39+00

S.A.P. 02-622-17

Sheet No. 13 of 25 Sheets

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



| Sub-TOTALS | Cu. Yds. | Cu. Yds. | SUM TOTALS |
|------------|----------|----------|------------|
| | 85 | 43 | SC 55 |
| | 154 | 33 | SC 65 |
| | 302 | 361 | SC 100 |
| | 85 | 1281 | SC 35 |
| | 0 | 1443 | |
| | 0 | 542 | MR 87 |

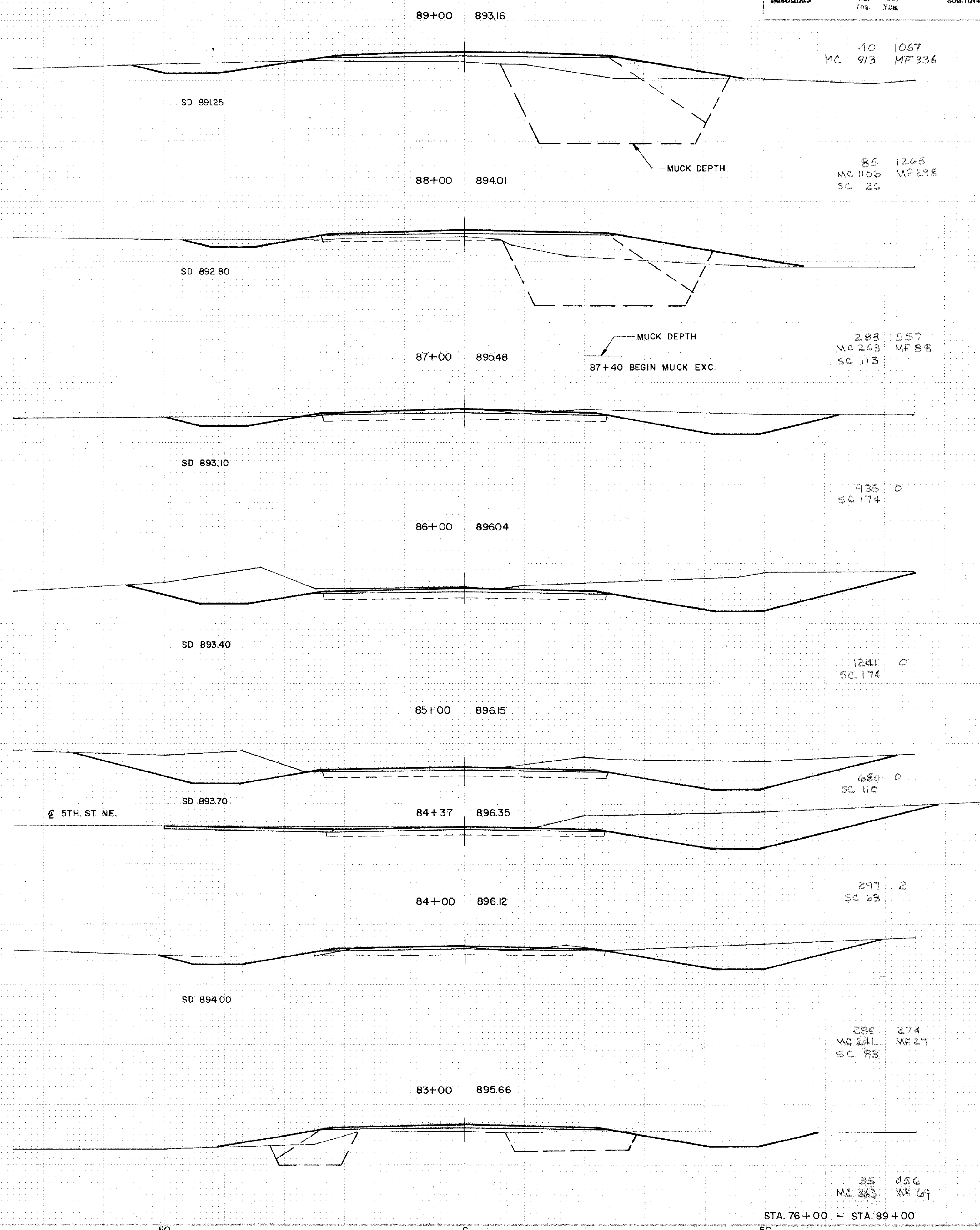
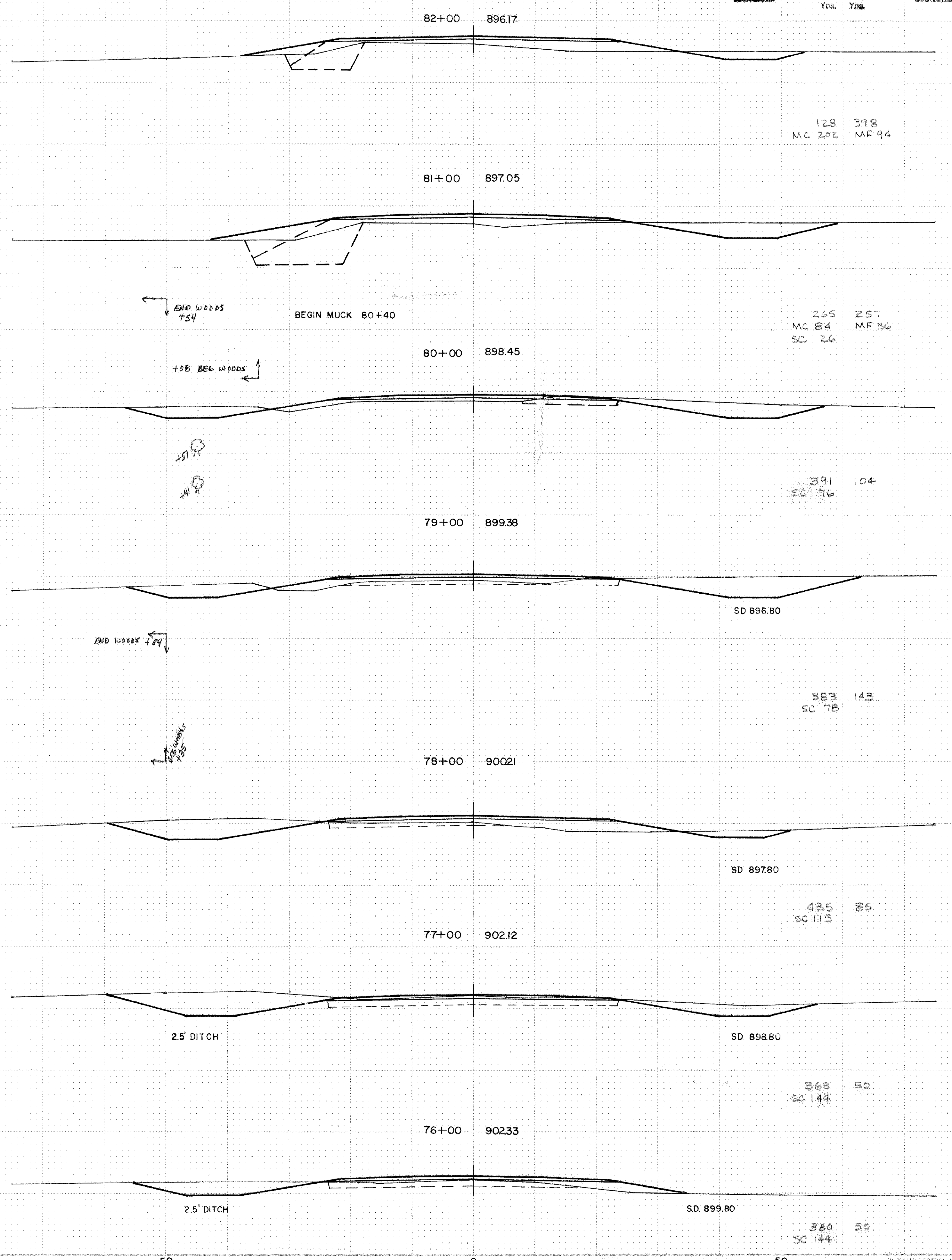
| Sub-TOTALS | Cu. Yds. | Cu. Yds. | SUM TOTALS |
|------------|----------|----------|------------|
| | 112 | 252 | SC 139 |
| | 269 | 1 | SC 103 |
| | 191 | 9 | SC 66 |
| | 149 | 50 | SC 46 |
| | 56 | 56 | SC 20 |
| | 30 | 48 | SC 15 |
| | 139 | 151 | SC 67 |

EXCAVATION EMBANKMENT

Sub-TOTALS Cu. Yds. Cu. Yds. Sub-TOTALS

EXCAVATION EMBANKMENT

Sub-TOTALS Cu. Yds. Cu. Yds. Sub-TOTALS



12.8 398
MC 202 MF 94

265 257
MC 84 MF 36
SC 26

391 104
SC 76

383 143
SC 78

435 85
SC 115

363 50
SC 144

380 50
SC 144

40 1067
MC 913 MF 336

85 1265
MC 1106 MF 298
SC 26

283 557
MC 263 MF 88
SC 113

935 0
SC 174

1241 0
SC 174

680 0
SC 110

297 2
SC 63

285 274
MC 241 MF 27
SC 83

35 456
MC 363 MF 69

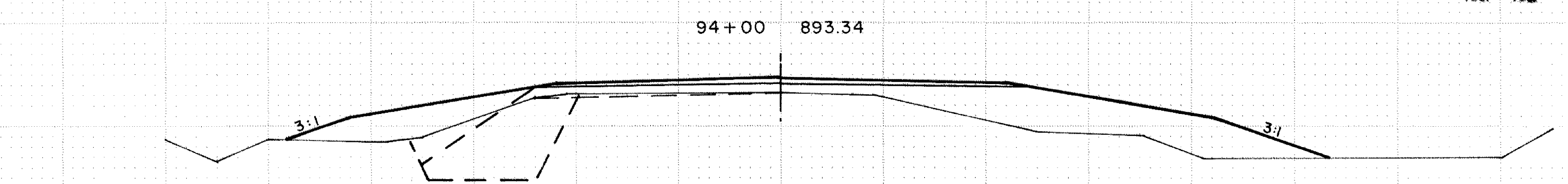
STA. 76+00 - STA. 89+00

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

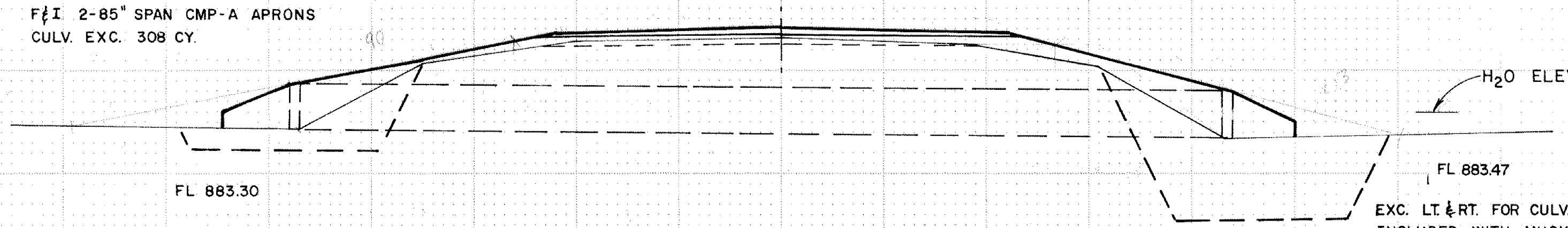
Excavation EMBANKMENT

Excavation EMBANKMENT

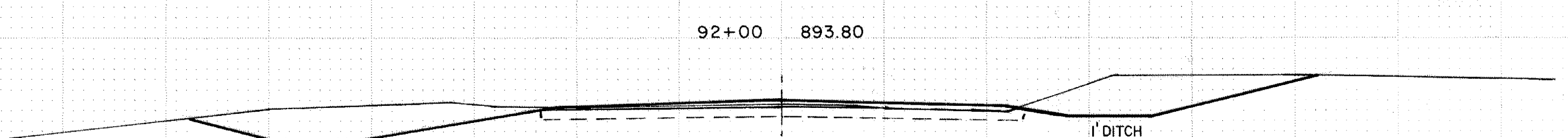
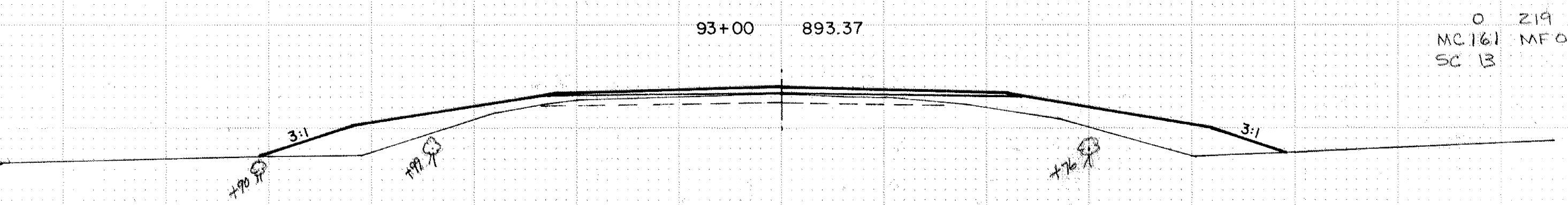


93+22 85" CMP-A CULV. INP. TO REMAIN INP.
 F&I 2-85" SPAN CMP-A APRONS
 93+37 F L 85" SPAN X 90' CMP-A CULV.
 F&I 2-85" SPAN CMP-A APRONS
 CULV. EXC. 308 CY.

CROSS CULVERT
 93+22 893.18

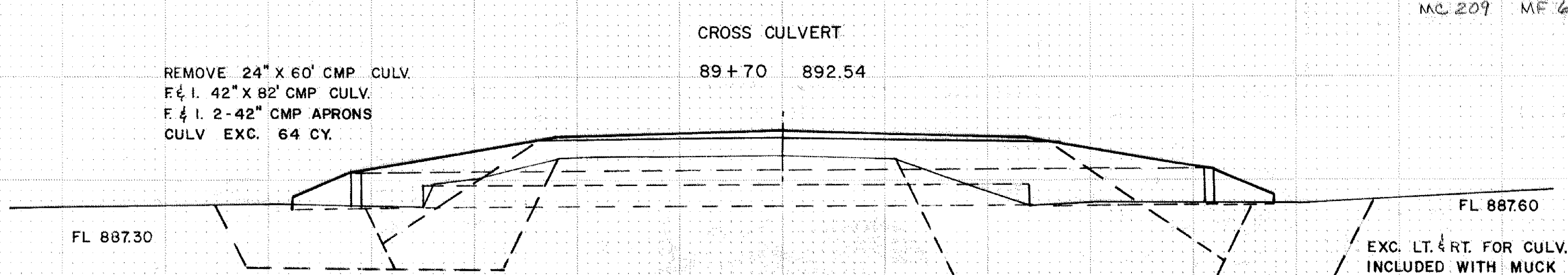
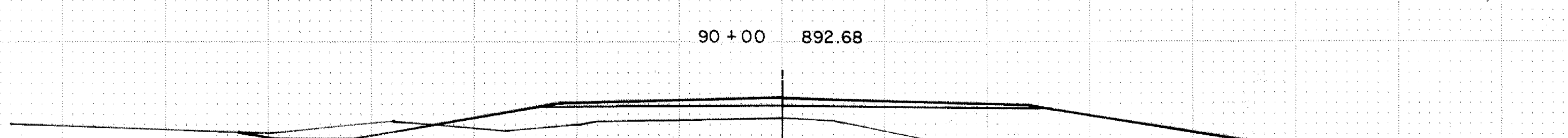
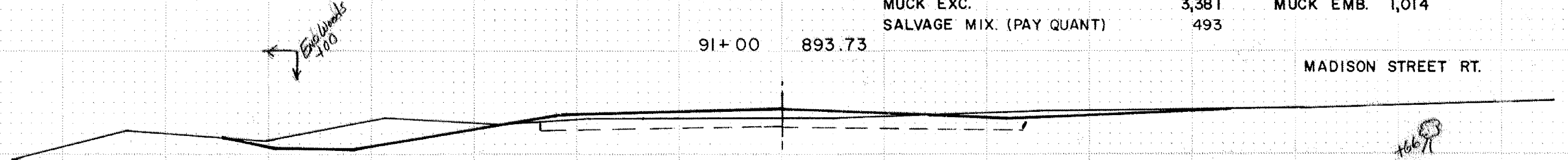


EXC. LT. & RT. FOR CULV.
 INCLUDED WITH MUCK EXC.



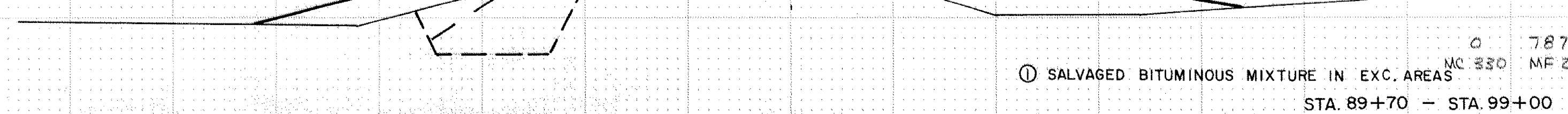
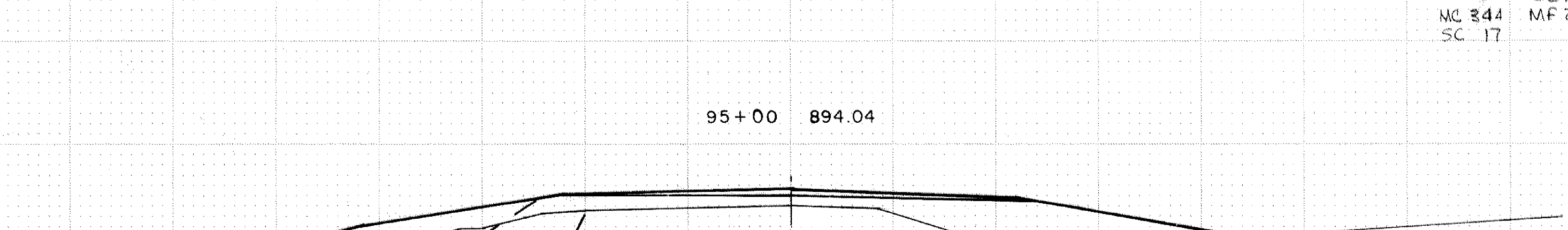
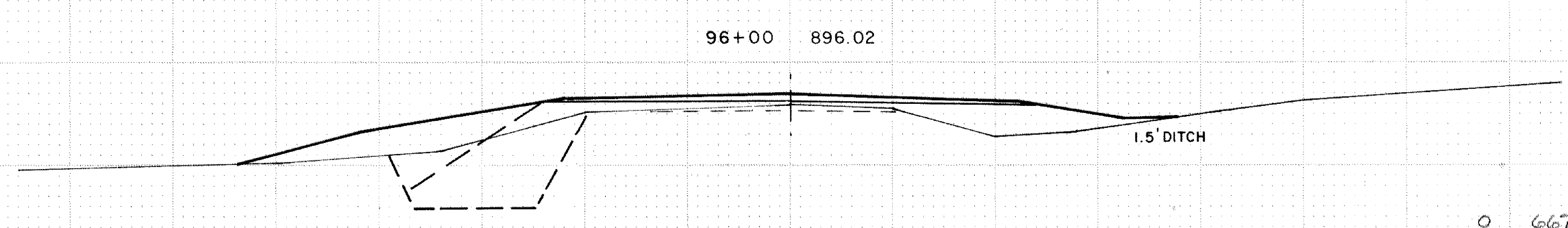
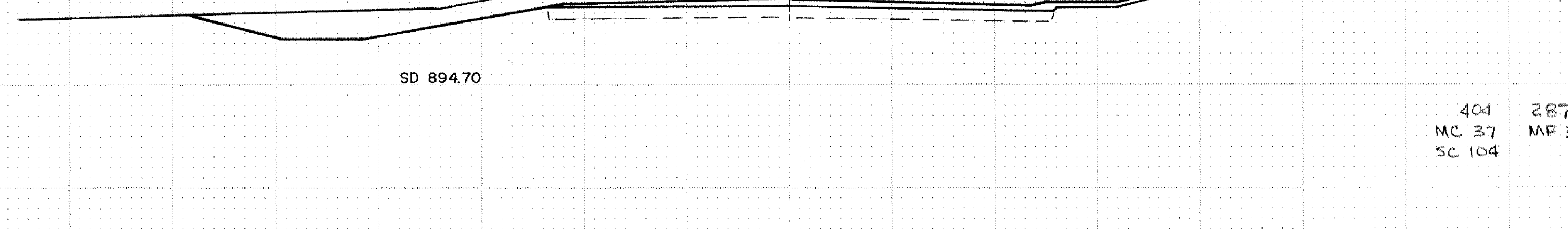
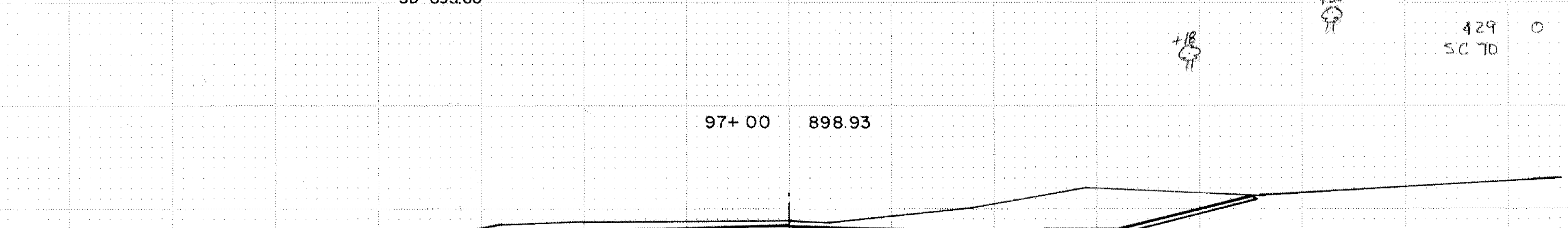
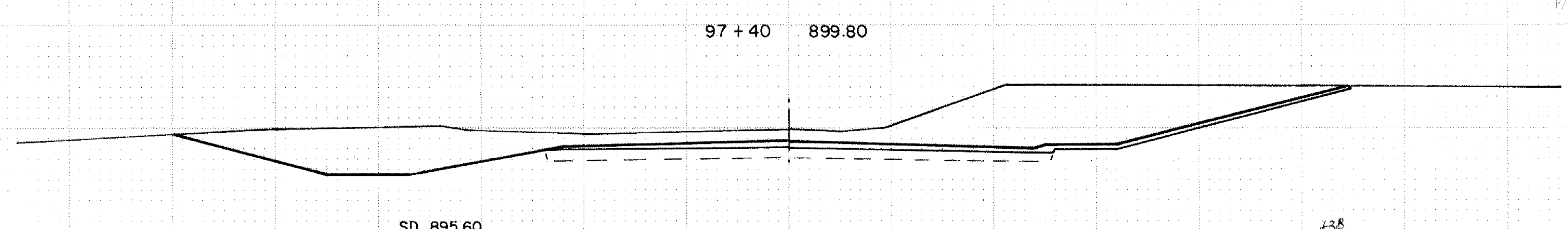
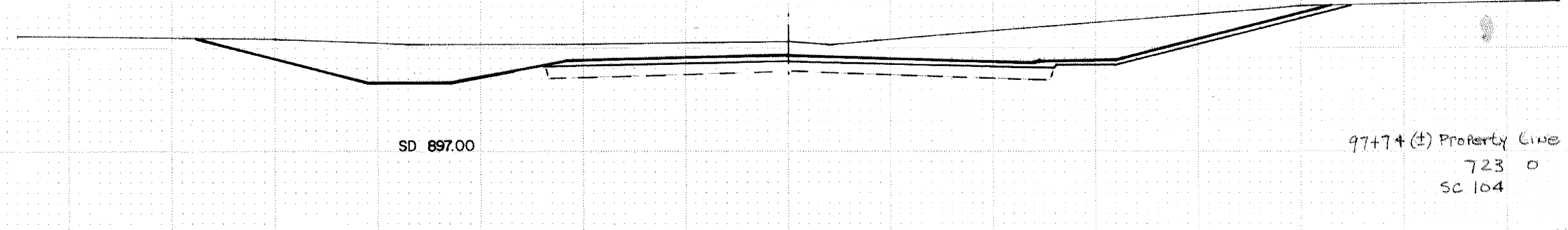
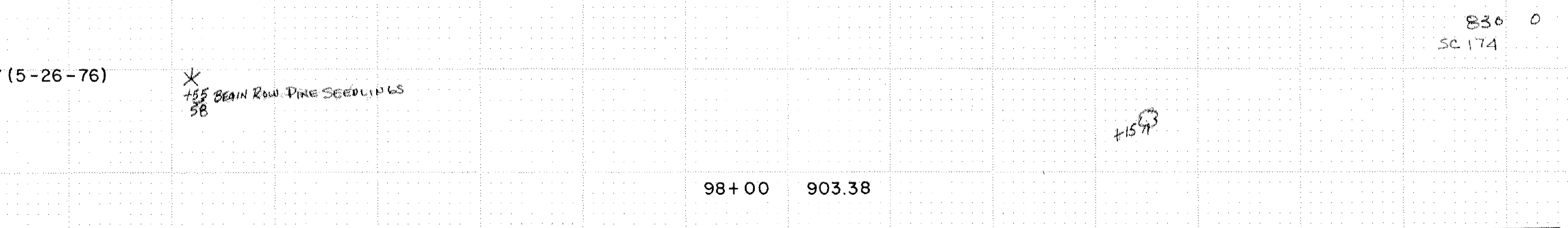
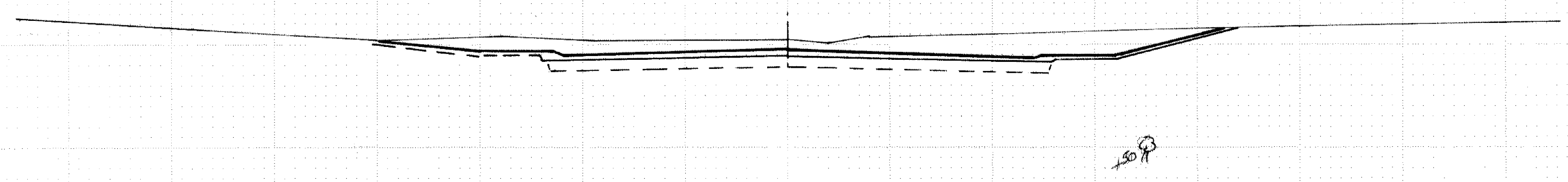
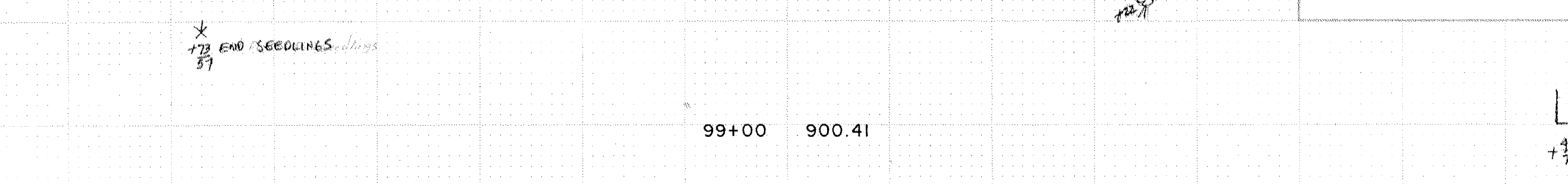
BALANCE POINT 91+50

| | | | |
|--------------------------|-----------|-----------|--------|
| COMMON EXC. | 8598 C.Y. | REG. EMB. | 5292 |
| SUBCUT FOR COMPACTION | + 1848 | | |
| TOTAL COMMON EXC. | 10,446 | | 606 0 |
| ① SALVAGED BIT MIXTURE | - 323 | | SC 174 |
| COMMON EXC. (PAY QUANT) | 10,123 | | |
| MUCK EXC. | 3,381 | MUCK EMB. | 1,014 |
| SALVAGE MIX. (PAY QUANT) | 493 | | |



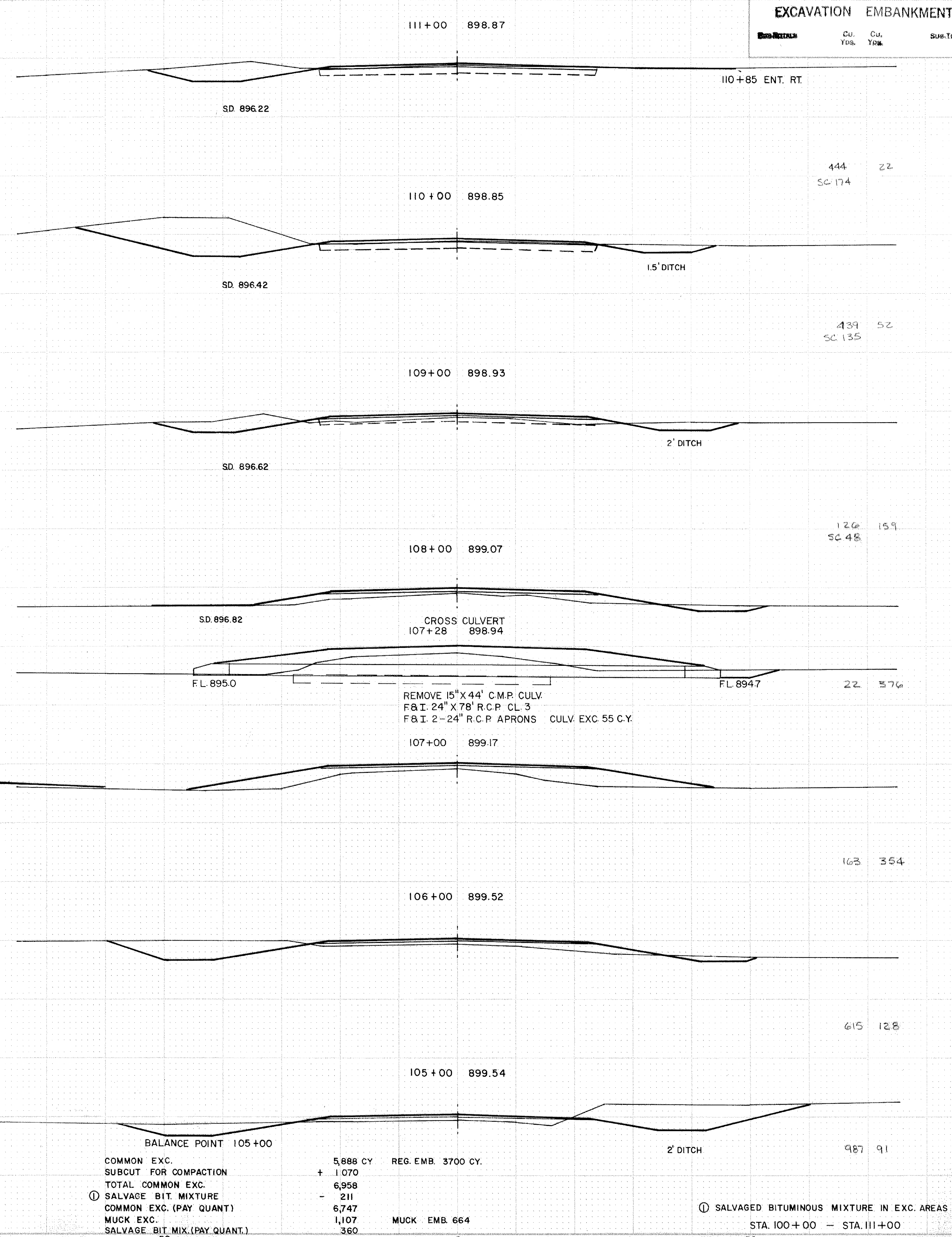
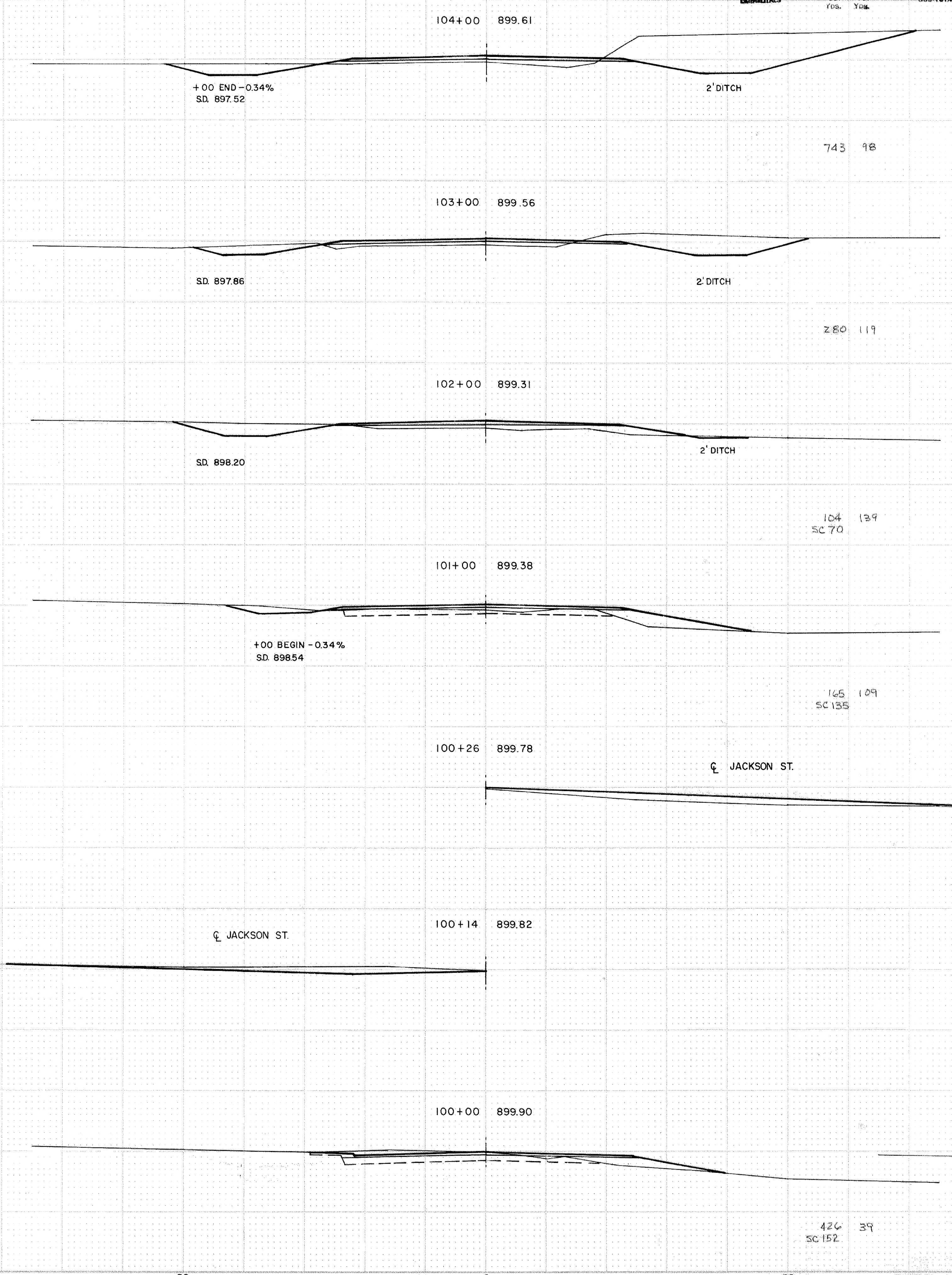
REMOVE 24" X 60' CMP CULV.
 F&I 42" X 82' CMP CULV.
 F&I 2-42" CMP APRONS
 CULV. EXC. 64 CY.

EXC. LT. & RT. FOR CULV.
 INCLUDED WITH MUCK EXC.



① SALVAGED BITUMINOUS MIXTURE IN EXC. AREAS

STA. 89+70 - STA. 99+00



| | | |
|--------------------------------|----------|--------------------|
| COMMON EXC. | 5,888 CY | REG. EMB. 3700 CY. |
| SUBCUT FOR COMPACTION | + 1,070 | |
| TOTAL COMMON EXC. | 6,958 | |
| ① SALVAGE BIT. MIXTURE | - 211 | |
| COMMON EXC. (PAY QUANT.) | 6,747 | |
| MUCK EXC. | 1,107 | MUCK EMB. 664 |
| SALVAGE BIT. MIX. (PAY QUANT.) | 360 | |

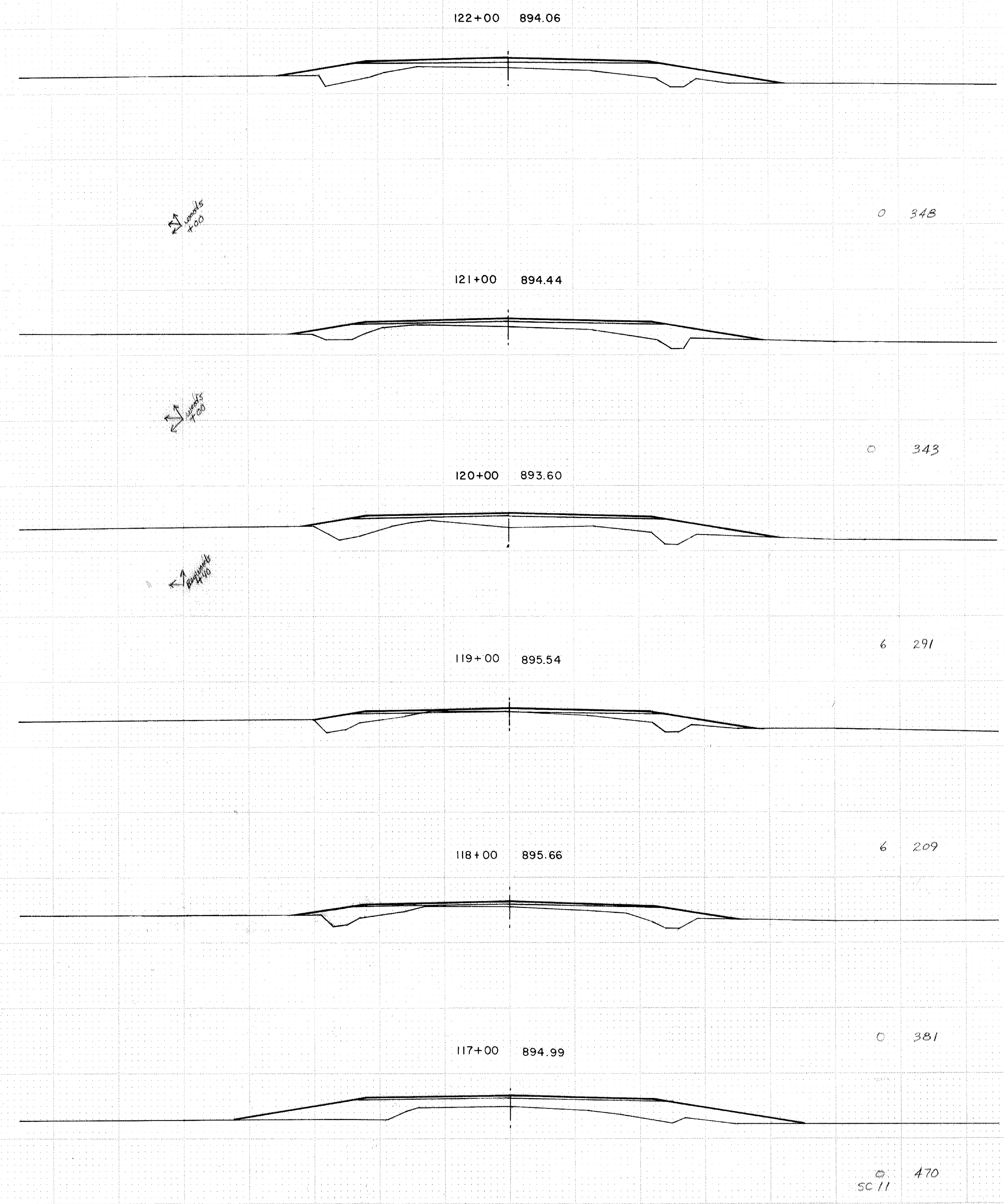
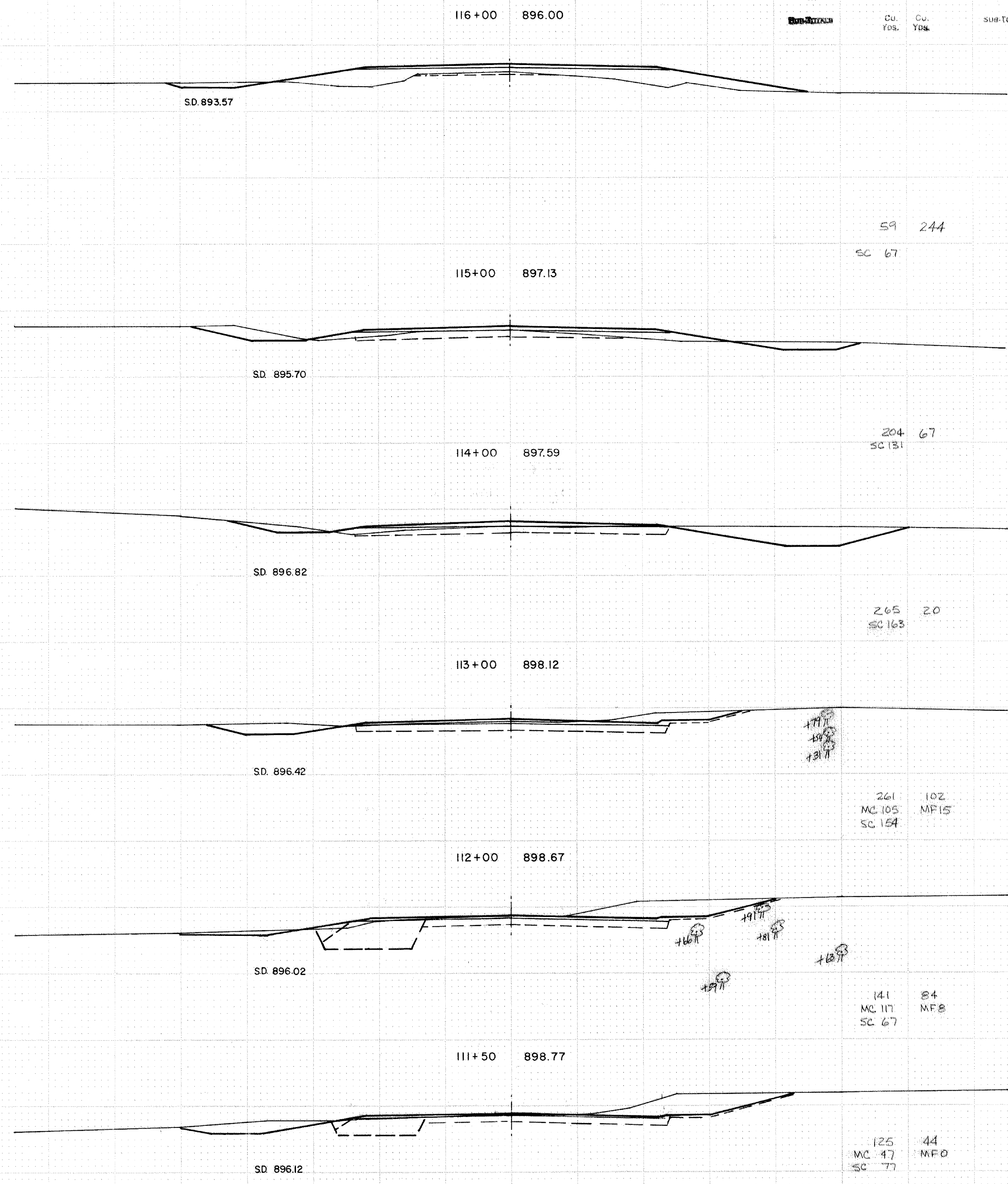
① SALVAGED BITUMINOUS MIXTURE IN EXC. AREAS
STA. 100+00 - STA. 111+00

BALANCE POINT 116+15

| | | |
|----------------------------------|----------|---------------------|
| COMMON EXC. | 2,864 CY | REG. EMB. 1,723 CY. |
| SUBCUT FOR COMPACTION | + 1,027 | |
| TOTAL COMMON EXC. | 3,891 | |
| ① SALVAGE BIT. MIXTURE | - 196 | |
| COMMON EXC. (PAY QUANT) | 3,695 | |
| MUCK EXC. | 269 | MUCK EMB. 23 CY. |
| SALVAGE BIT. MIXTURE (PAY QUANT) | 297 | |

| EXCAVATION | | EMBANKMENT | |
|------------|----------|------------|------------|
| Sub-TOTALS | Cu. Yds. | Cu. Yds. | Sub-TOTALS |

| EXCAVATION | | EMBANKMENT | |
|------------|----------|------------|------------|
| Sub-TOTALS | Cu. Yds. | Cu. Yds. | Sub-TOTALS |



① SALVAGED BITUMINOUS MIXTURE IN EXC. AREAS

STA. 111+50 - STA. 122+00

EXCAVATION EMBANKMENT

| Excavation | Embankment | Sum |
|------------|------------|-----|
| Cu. Yds. | Cu. Yds. | Sum |

EXCAVATION EMBANKMENT

| Excavation | Embankment | Sum |
|------------|------------|-----|
| Cu. Yds. | Cu. Yds. | Sum |

Exc. Woods
x 25

← +50 END WOODS

↑ +46 BEG WOODS

127+00 892.34

133+00 892.61

0 242

0 796

CROSS CULVERT
126+68 892.48

132+00 892.31

FL 889.60

FL 889.40

REMOVE 24"X42" CMP CULV.
F&I 30"X84" CMP CULV.
F&I 2-30 CMP APRONS
CULVERT EXC. 42 CY

0 487

0 841

126+00 892.36

131+00 892.20

0 583

0 826

125+00 892.66

130+00 892.18

0 576

0 750

124+00 892.82

129+00 892.16

0 498

0 713

123+00 893.48

128+00 892.16

0 419

0 689

50

℄

50

PLATE 3-FULL CROSS SECTION-FULL DOT
HIGHWAY FEDERAL AID SHEET
PRINTED IN U.S.A.

50

℄

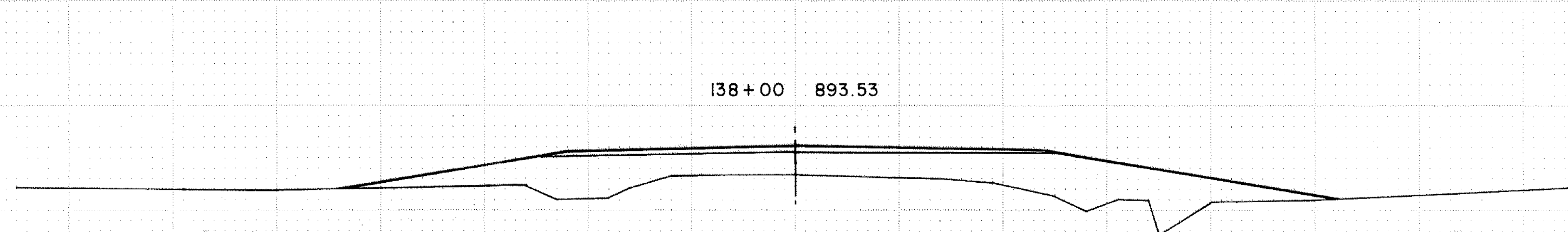
STA 123+00 - STA 133+00

EXCAVATION EMBANKMENT

| EXCAVATION | CU. YDS. | CU. YDS. | SUB-TOTALS |
|------------|----------|----------|------------|
|------------|----------|----------|------------|

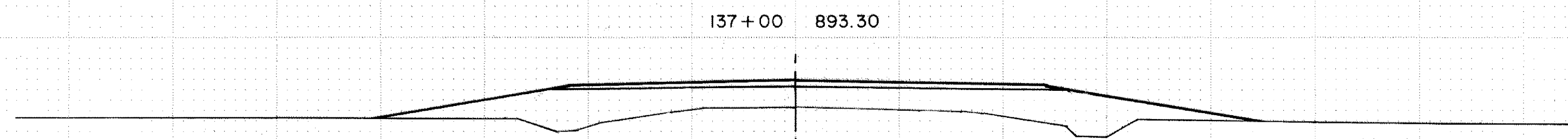
EXCAVATION EMBANKMENT

| EXCAVATION | CU. YDS. | CU. YDS. | SUB-TOTALS |
|------------|----------|----------|------------|
|------------|----------|----------|------------|



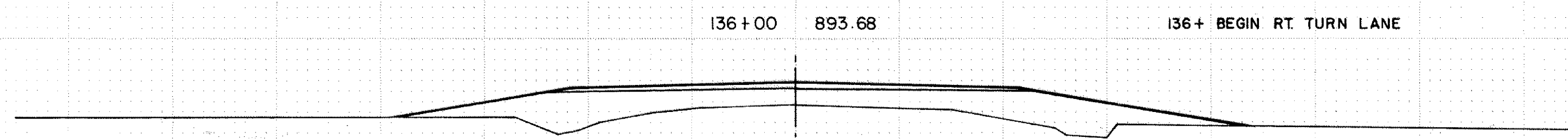
138+00 893.53

0 779



137+00 893.30

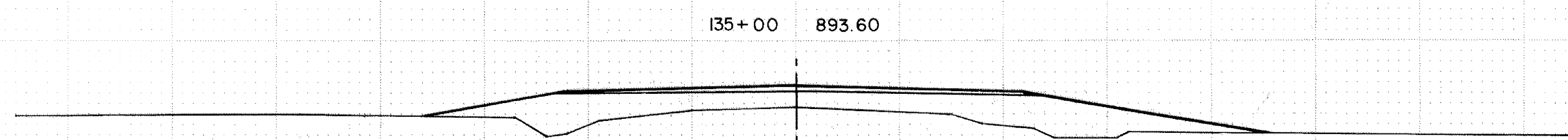
0 620



136+00 893.68

136+ BEGIN RT. TURN LANE

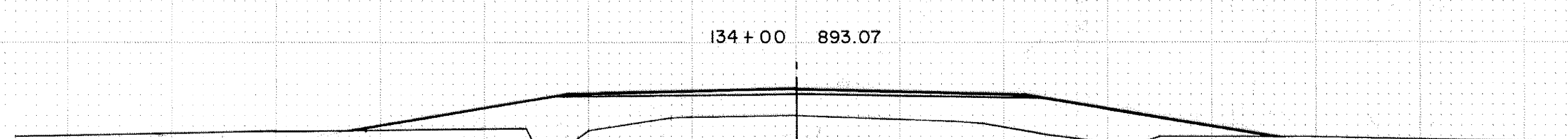
0 602



135+00 893.60

0 670

→ +69' END WOODS



134+00 893.07

0 741

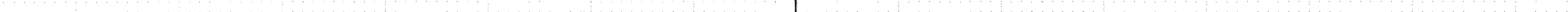
℄ SOUTHBOUND TH 65

140+00 897.60



WEST EDGE SOUTHBOUND T.H. 65

139+86 897.28



WEST EDGE BIT. SHOULDER T.H. 65

139+75 896.72



BALANCE POINT 139+75

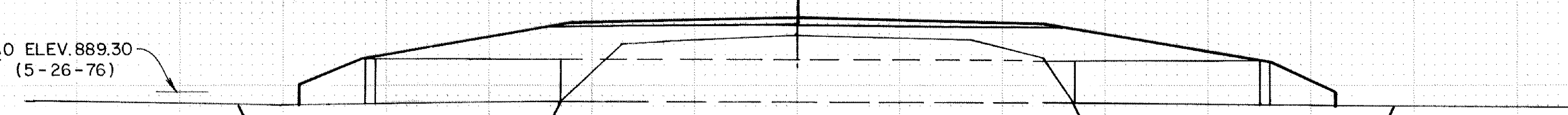
| | |
|--------------------------|------------|
| COMMON EXC. (PAY QUANT.) | 36 CY. |
| REG. EMBANKMENT | 14,236 CY. |
| COMMON BORROW | 36,665 CY. |
| SALVAGE AGGREGATE | 6,455 CY. |

24 323

CROSS CULVERT

139+31 894.86

H₂O ELEV. 889.30
(5-26-76)



EXTEND 48" CMP CULV LT. & RT.

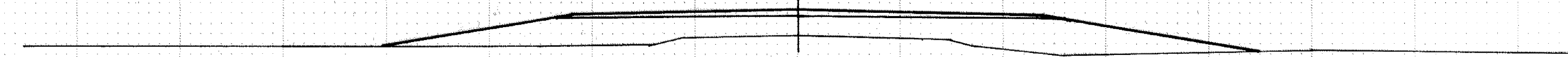
FL 888.63

FL 887.99

F I 48" X 18' LT. & 48" X 18' RT.
F I 2-48" METAL APRONS
CULVERT EXC. 71 CY.

0 330

139+00 893.79



0 780

STA. 134+00 - STA. 140+00

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

2+00 903.98

| Sub-TOTALS | Exc. Yds. | Emb. Yds. | Sub-TOTALS |
|------------|-----------|-----------|------------|
| | 457 | 200 | |
| | MC 53 | MF 23 | |

| Sub-TOTALS | Exc. Yds. | Emb. Yds. | Sub-TOTALS |
|------------|-----------|-----------|------------|
| | | | |
| | | | |

2' DITCH

457 200
MC 53 MF 23

5+71 907.77

195TH LANE

1+00 899.38

350 225
MC 94 MF 40

2' DITCH

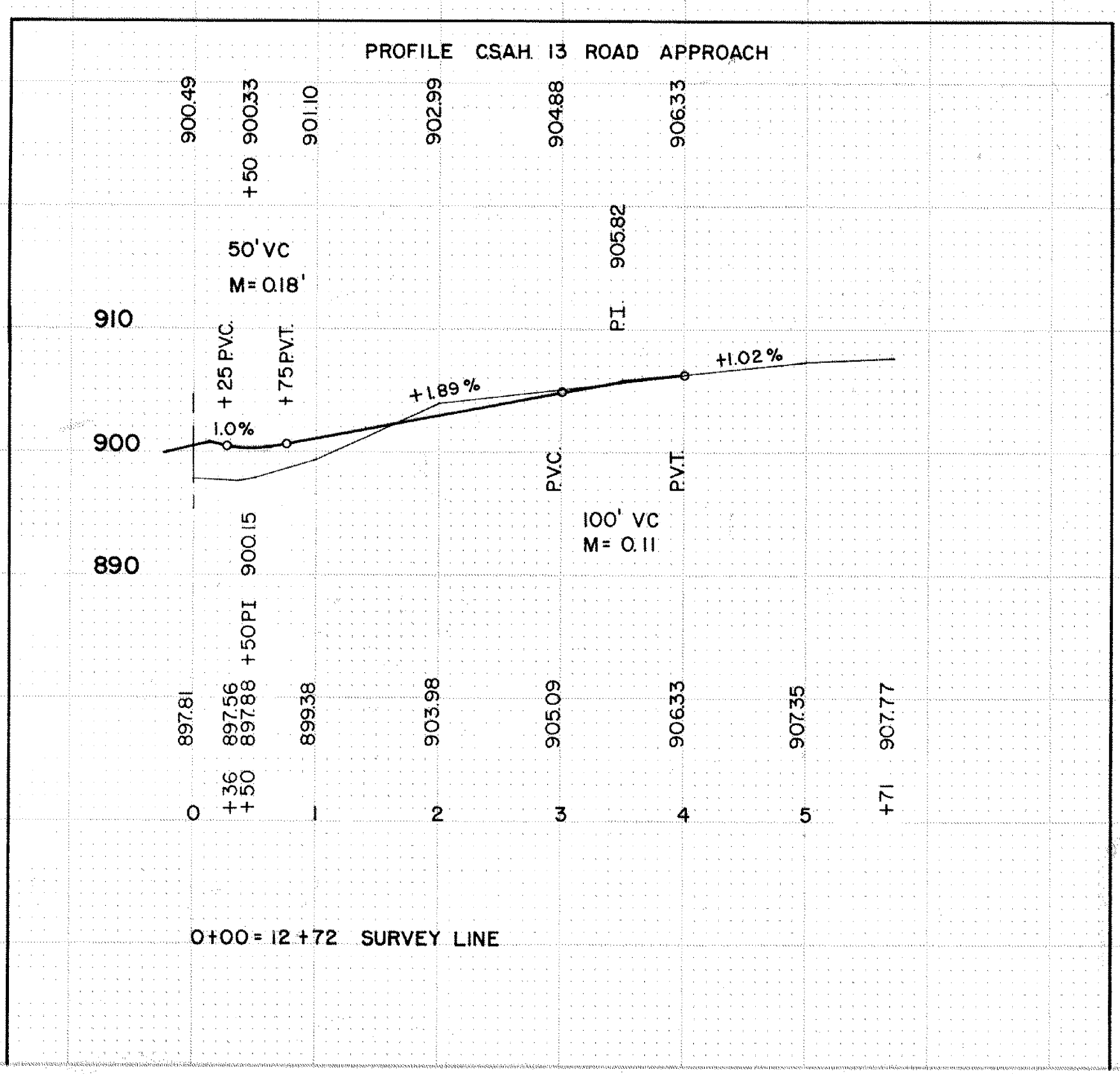
5+00 907.35

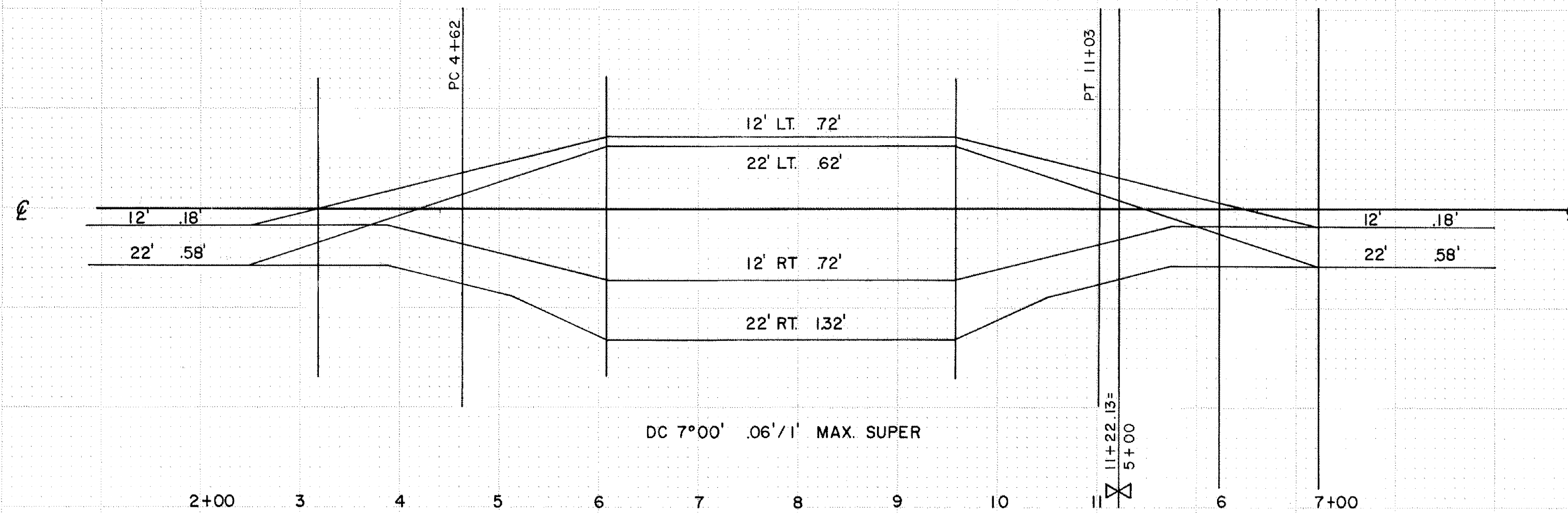
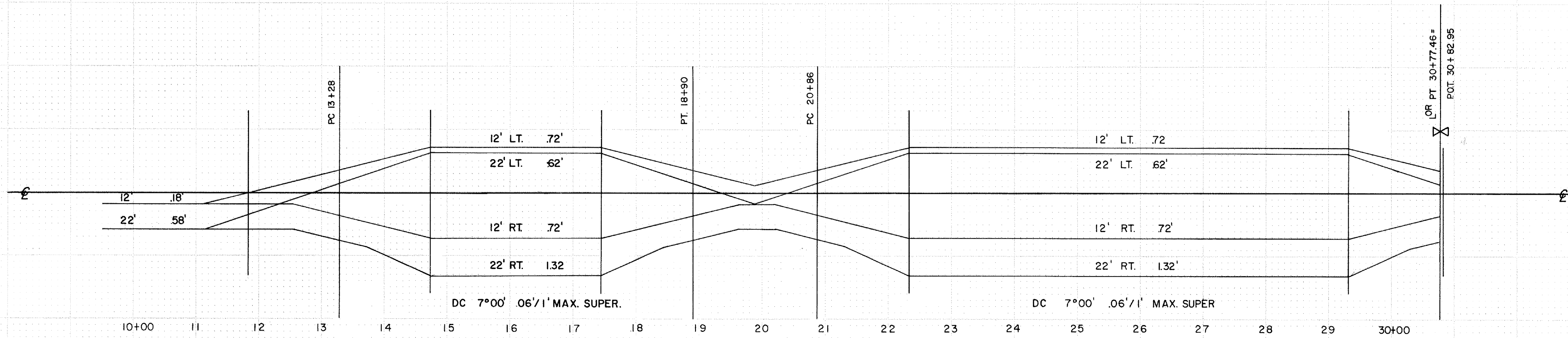
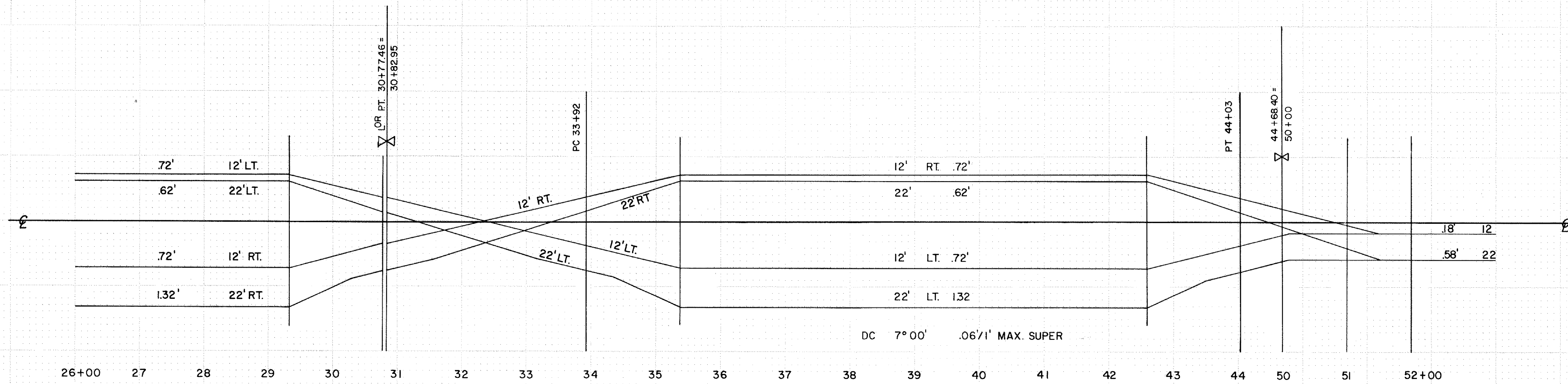
0+50 897.88

2' DITCH

4+00 906.33

3+00 905.09





SUPERELEVATION FOR CURVES
 VERT. 1" = 1'
 SCALE:
 HORZ. 1" = 100'

fed. Proj. No.

8+00 897.92

7+00 898.62

6+00 898.34

$\frac{5+00}{11+21.86} = 897.95$

END CONSTRUCTION STA. 11+00

10+00 897.65

9+00 898.15

BEGIN CONSTRUCTION STA. 8+25

NOTE: EXCAVATION & TOPSOIL QUANTITIES INCLUDED WITH FIRST BALANCE ON MAINLINE ROADWAY.

8+00 898.29

ROAD OBLITERATION
STA 8+25 - 11+00 LT.

175

150

100

50

CSAH 22

State Proj. No.

S.A.P. 02-622-17

Sheet No. 25 of 25 Sheets