

| | | | | |
|-------------------|-------------------|-----------------|-------------------|----------|
| CHIEF DRAFTSM. | LOCATING ENGR. | BRIDGE ENGR. | DIVISION ENGR. | B. P. R. |
| mark | | | | |

| | | | | | |
|-----------------------|-------|-----------------------|----------------|--------------|-----------------|
| FED. ROAD DIS. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| 6 | OKLA. | 146 ABCD | 1925 | 1 | 114 |

INDEX OF SHEETS

| | |
|-------------|---|
| SHEET NO. 1 | TITLE PAGE |
| " " | " 2 LOCATION OF PROJECT ON STATE MAP |
| " " | " 3 TYPICAL SECTION—30 FT. BATES |
| " " | " 4 SUMMARY SHEET |
| " " | " 5-45 PLAN & PROFILE |
| " " | " 46 CULVERT PLAN B.C.-5 |
| " " | " 47 " " B.C.-6. |
| " " | " 48 " " B.C.-5A. |
| " " | " 49 " " B.C.-6A. |
| " " | " 50 " " C.P.-2. |
| " " | " 51 " " B.C.-7. |
| " " | " 52 GEN. ELEV. & ABTS. 36' I BEAM. |
| " " | " 53 DETAIL OF I-BEAM I-B3 |
| " " | " 54 GEN. ELEV. & DETAIL ABTS. 40' I-BEAM |
| " " | " 55 " " " 30' " " |
| " " | " 56 " " " 30' " " |
| " " | " 57 " " " 60' STEEL TRUSS. |
| " " | " 58 DETAIL OF 60' STEEL TRUSS |
| " " | " 59 DETAIL OF STD. GUARD RAIL |
| " " | " 60-114 CROSS SECTIONS |

46A
47A
49A
50A43A
44A
45A

STATE OF OKLAHOMA
DEPARTMENT OF HIGHWAYS

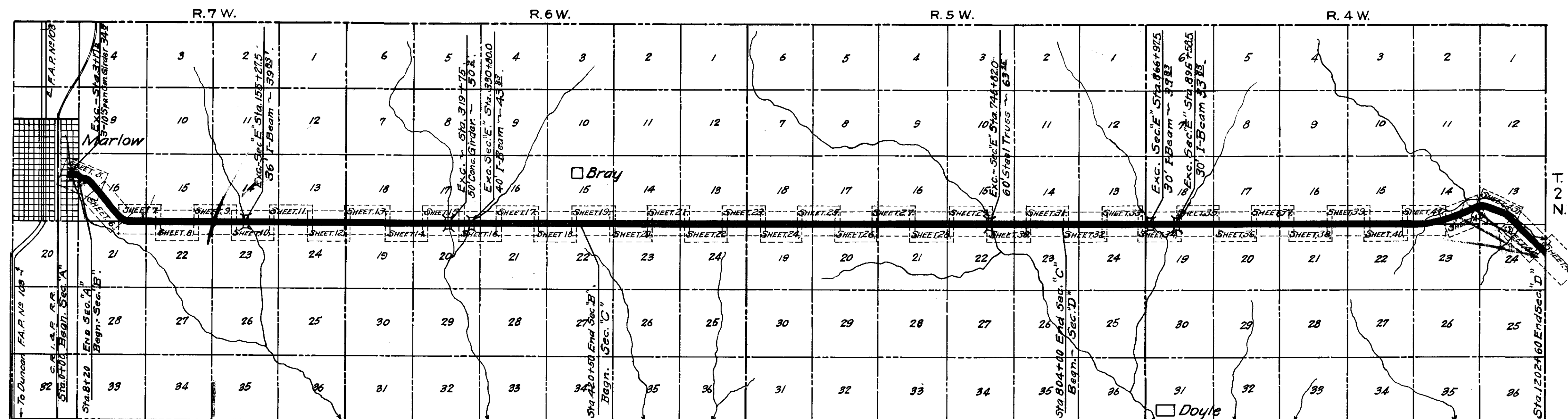
PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY
FEDERAL AID PROJECT No. 146 ABCDE

29-69-12

STEPHENS COUNTY

SCALES

PLAN 1"=100'
PROFILE (HOR. 1"=100'
VER. 1"=10'
CROSS SECTIONS 1"=5'



CONVENTIONAL SIGNS

- PROPOSED ROAD
- RAILROADS
- RANGE & TOWNSHIP LINES
- SECTION LINES
- QUARTER SECTION LINES
- FENCES
- BASE LINE
- RIGHT-OF-WAY LINES
- GROUND LINE
- GRADE LINE
- TRAVELLED ROADS
- CULVERTS & BRIDGES
- TELEPHONE & TELEGRAPH
- POWER LINES
- BUILDINGS
- UNLOADING POINTS
- OIL WELLS

LAYOUT MAP

SCALE 1" = 1 MILE.

| | |
|---|-------------------------------------|
| GROSS LENGTH SEC. A | 820 ⁰ FT. = 0.155 MILES. |
| EXC. 3-10' SPAN CONC. GIRDER LEAVE | 34 ² " = 0.006 " |
| NET LENGTH SEC. A | 785 ² " = 0.149 " |
| GROSS LENGTH SEC. B | 41230 ⁰ " = 7.808 " |
| EXC. { 36' I-BEAM SEC. E 39 ⁸³ FT. 50' CONC. GIRDER IN PLACE 50 ²⁰ " 40' I-BEAM (SEC. E) 43 ⁸³ " | 133 ⁸⁵ " = 0.025 " |
| NET LENGTH SEC. B | 41096 ¹⁴ " = 7.783 " |
| GROSS LENGTH SEC. C | 38350 ⁰ " = 7.263 " |
| EXC. 60' TRUSS 63 ²⁵ " | 63 ²⁵ " = 0.012 " |
| NET LENGTH SEC. C | 38286 ¹⁵ " = 7.251 " |
| GROSS LENGTH SEC. D | 39860 ⁷⁰ " = 7.549 " |
| EXC. 30' I-BEAM 33 ⁸³ " | 67 ⁶⁶ " = 0.012 " |
| 30' I-BEAM 33 ⁸³ " | |
| NET LENGTH SEC. D | 39793 ⁰³ " = 7.536 " |
| GROSS LENGTH SEC. E | 214 ⁶⁸ " = 0.040 " |
| 36' I-BEAM 39 ⁸³ " | |
| 40' I-BEAM 43 ⁸³ " | |
| 60' TRUSS 63 ²⁵ " | |
| 30' I-BEAM 33 ⁸³ " | |
| 30' I-BEAM 33 ⁸³ " | |
| NET LENGTH SEC. E | 214 ⁶⁸ " = 0.040 " |

EXAMINED AND APPROVED
This Day of 1926
STATE HIGHWAY ENGINEER

EXAMINED AND APPROVED
This Day of 1926
CHAIRMAN
STATE HIGHWAY COMMISSION

RECOMMENDED FOR APPROVAL
This Day of 1926
SENIOR HIGHWAY ENGINEER
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL
This Day of 1926
DISTRICT ENGINEER
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL
CHIEF ENGINEER
BUREAU OF PUBLIC ROADS

APPROVED
CHIEF OF BUREAU OF PUBLIC ROADS

SUMMARY SHEET

146 1985 4 114

SUMMARY OF DRAINAGE STRUCTURES

| Open No | Station | Sheet No. PVP | Design | Size & LENGTH | 1/2" 4 REINF. CONC. STEEL | CONC. PIPE 18" 24" 30" | D.A. Area | C. | Remarks. |
|--|---------|---------------|--------|----------------|----------------------------|------------------------|-----------|--------|---------------------------------|
| Sec. A-Unit 1 | | | | | | | | | |
| 1 | 3+17.5 | 5 | | Leave in place | | | | | 5-10 Spns. Rdy Leave |
| Sec. B-Unit 1 | | | | | | | | | |
| 2 | 28+15 | 6 | 46 | BC-5 | 10x7x42.5 Conc. Cul. | 82.90 | 6730 | | Nothing in place |
| 3 | 66+37 | 7 | 46 | " | 4x3x30 " " | 14.90 | 1269 | | Remove 2x12x21 wood br. |
| 4 | 69+90 | 7 | 50 | CP-2 | 30"x30" 45° HW | 268 | 61 | 32 | Nothing in place |
| 5 | 76+15 | 7 | 48 | BC-5A | 2-10'x5'x30' Rdy. | 82.69 | 7142 | 640 | Remove 12'x18' wood br. |
| 6 | 118+75 | 9 | 46 | BC-5 | 3x2x30 Rdy. Conc. Cul. | 9.78 | 851 | 15 | Nothing in place |
| 7 | 129+29 | 9 | 47 | BC-6 | 8'x7'x38" " " | 634 | 4615 | 225 | Remove 14'x16' wood br. |
| 9 | 169+23 | 10 | 48 | BC-5A | 2x5x2x35 " " | 364 | 3100 | 125 | Wood Cul. |
| 10 | 183+00 | 11 | 46 | BC-5 | 5x2x30 " " " | 1456 | 1324 | 80 | Nothing in place |
| 11 | 241+12 | 13 | 46 | BC-5 | 5x4x30 Rdy. | 2221 | 1688 | 58 | Remove 3x16 " " |
| 12 | 248+54 | 13 | 46 | " | 3x3x34 " " " | 1337 | 1123 | 30 | " 2'x2'x28" " |
| 13 | 269+40 | 14 | 47 | BC-6 | 3x3x70 " " " | 2269 | 2064 | 30 | " 4' GI Pipe " |
| 14 | 278+10 | 14 | 50 | CP-2 | 30"x30" 45° HW | 268 | 61 | 32 | Nothing in place |
| 15 | 283+60 | 14 | 50 | " | 24'x30" " " " | 204 | 57 | 8 | " " " |
| 16 | 304+90 | 15 | 47 | BC-6 | 3x2x56 " " " | 1555 | 1449 | 20 | Remove 3' Wood Bridge |
| 19 | 340+68 | 16 | 50 | CP-2 | 30"x30" 45° HW | 268 | 61 | 32 | " 3'x1 1/2'x26' Wood Cul. |
| 20 | 363+25 | 17 | 46 | BC-5 | 3x3x30 " " " | 1233 | 1018 | 40 | " 2'x12'x14 " " |
| 21 | 377+12 | 17 | 50 | CP-2 | 30"x34" " " " | 268 | 61 | 36 | " 4'x12'x15 " " |
| 22 | 389+37 | 18 | 47 | BC-6 | 4x3x55 " " " | 2301 | 2107 | 40 | " 4'x52' GI Pipe |
| 23 | 393+83 | 18 | 50 | CP-2 | 18' Conc. Pipe 26' Rdy. 30 | 3.10 | 44 | 28 | Nothing in place |
| 24 | 404+00 | 18 | 50 | CP-2 | 30"x30' Rdy. 45° HW | 268 | 61 | 32 | " " " |
| 25 | 420+20 | 19 | 46 | BC-5 | 6x2x30 Rdy " " | 1772 | 1593 | 40 | Remove 3'x2' Wood Cul. |
| TOTAL SEC. B-Unit 1 | | | | | 15016 | 36479 | 28 | 32 | 164 |
| Sec. C-Unit 1 REVISED JANUARY 1927 | | | | | | | | | |
| 26 | 429+16 | 19 | 47 | BC-6 | 10'x10'x63'-0" Rdy. | 147.19 | 10446 | 660 | Remove 14'x63' Wood Br. |
| 27 | 445+00 | 19 | 46 | BC-5 | 4'x3'x30'-0" Rdy. | 14.90 | 1269 | 40 | Remove 3x3 Wood Cul. |
| 28 | 447+40 | 20 | 48 | BC-5A | Dbl 5'x2'x30'-0" Rdy. | 28.22 | 2512 | 75 | " 2'x2'x28 " " |
| 29 | 461+42 | 20 | 47 | BC-6 | 5'x5'x66'-0" Rdy. | 51.98 | 3768 | 96 | " 4'x38 GI Pipe " |
| 30 | 466+68 | 20 | 47 | " | 5'x4'x66'-0" Rdy. | 41.30 | 3359 | 80 | " 4'x45 GI.P. " |
| 31 | 486+75 | 21 | 47 | " | 5'x4'x47'-0" Rdy. | 31.59 | 2505 | 80 | " 3'x41 GI.P. " |
| 32 | 504+10 | 21 | 50 | CP-2 | 30"x30'-4" Rdy. 45° Hdws | 2.93 | 61 | 32 | Nothing in place |
| 33 | 517+00 | 22 | 47 | BC-6 | 10'x10'x62'-0" Rdy. | 149.00 | 10582 | 460 | Remove 60'x12' Wood Br. 35 Lf |
| 34 | 529+50 | 22 | 50 | CP-2 | 30"x34'-4" Rdy. 45° Hdws | 2.93 | 61 | 36 | Nothing in place |
| 35 | 537+35 | 23 | 50 | CP-2 | 24'x38'-4" Rdy. 45° Hdws | 2.20 | 57 | 40 | " " " |
| 36 | 544+26 | 23 | 47 | BC-6 | 8'x8'x54'-0" Rdy. | 92.25 | 6494 | 360 | 1. 10'x10'x46 Conc. Cul. Remove |
| 37 | 573+80 | 24 | 46 | BC-5 | 6'x2'x30'-0" Rdy. | 17.72 | 1593 | 55 | Nothing in place. |
| 38 | 591+10 | 24 | 46 | " | 3'x3x30 " " | 12.33 | 1018 | 30 | " " " |
| 39 | 616+85 | 25 | 47 | BC-6 | 6'x6'x47'-0" Rdy. | 51.86 | 3405 | 170 | Remove 42'x51 GI Pipe. |
| 40 | 639+90 | 26 | 46 | BC-5 | 4'x3'x30'-0" Rdy. | 14.90 | 1269 | 55 | Nothing in place. |
| 41 | 644+21 | 26 | 46 | " | 5x4x30 " " | 2221 | 1688 | 80 | " " " |
| 42 | 647+75 | 26 | 46 | " | 3x3x30 " " | 1233 | 1018 | 32 | " " " |
| 43 | 664+67 | 27 | 47 | BC-6 | 6'x4'x48'-0" Rdy. | 37.28 | 3020 | 77 | Remove 36'x60 GI.P. |
| 44 | 672+60 | 27 | 50 | CP-2 | 30'x46'-4" Rdy. 45° Hdws | 2.93 | 61 | 48 | " 2'x2'x21 Wood Cul. |
| 45 | 682+90 | 27 | 47 | BC-6 | 3'x3'x56'-0" Rdy. | 19.06 | 1699 | 26 | " 30'x41 GI.P. |
| 46 | 699+00 | 28 | 46 | BC-5 | 6'x4'x30'-0" Rdy. | 25.61 | 1968 | 94 | Nothing in place |
| 47 | 770+70 | 28 | 46 | " | 3'x3x30 " " | 1233 | 1018 | 35 | " " " |
| 48 | 725+15 | 29 | 46 | " | 6'x4'x36'-0" Rdy. | 29.10 | 2277 | 95 | Remove 4x13 Wood Box |
| 49 | 731+60 | 29 | 50 | CP-2 | 24'x30'-4" Rdy. 45° Hdws | 2.20 | 57 | 8 | Nothing in place |
| 51 | 750+50 | 30 | 48 | BC-5A | Dbl 6'x3'x31'-0" Rdy. | 41.64 | 3514 | Relief | " " " |
| 52 | 763+30 | 30 | 50 | CP-2 | 24'x34'-4" Rdy. 45° Hdws | 2.20 | 57 | 36 | " " " |
| 53 | 784+42 | 31 | 51 | BC-7 | Tr 10'x6'x22'-0" Rdy. | 82.35 | 8232 | 1220 | Remove 14x22 Wood Br. |
| 31A | 199+55 | 27 | 50 | CP-2 | 18'x26'-4" Rdy. 90° Hdws | 3.10 | 44 | 28 | Nothing in place |
| 47A | 713+50 | 28 | 50 | " | 24'x38'-4" Rdy. 45° Hdws | 2.20 | 57 | 40 | Remove 2x2 box |
| TOTAL SEC. C-Unit 1 | | | | | 955.84 | 73159 | 28 | 148 | 116 |
| | | | | | | | | 35.13 | 66.67 |

SUMMARY OF GRADING QUANTITIES

| STATION | EMB. Cu.Yds. | EXCAVATION Cu. Yds. | | | | OVER-HAUL Cu.Yds. | BORROW Cu.Yds. | WASTE Cu.Yds. | RIP RAP Sq.Yds. | GUARD RAIL LIN. Ft. |
|---------------------------------------|---------------------|---------------------|------------------|--------------------|-------------------|----------------------|-------------------|-------------------|--------------------|------------------------|
| | | EARTH | LOOSE ROCK | SOLID ROCK | CHANNEL | | | | | |
| Sec. A-Unit 1 | | | | | | | | | | |
| 0+00 ~ 8+20 | 472 ⁶ | 477 ¹ | | | | 12 ² | | 4 ⁵ | | |
| Sec. B-Unit 1 | | | | | | | | | | |
| 8+20 ~ 29+00 | 1625 ³ | 1294 ³ | | | 16 ³ | 260 ² | 364 ² | 50 ² | | |
| 29+00 ~ 42+50 | 1477 ² | 1204 ² | | | 168 ³ | 675 ² | 105 ² | | | |
| 42+50 ~ 67+35 | 1220 ² | 1322 ³ | | | | 890 ² | | 101 ² | | |
| 67+35 ~ 83+00 | 3126 ³ | 2556 ⁴ | | | | 1225 ² | 569 ² | | | |
| 83+00 ~ 111+10 | 3428 ² | 2792 ² | | | | 160 ² | 636 ² | | | |
| 111+10 ~ 139+00 | 6119 ¹ | 5709 ³ | | 310 ⁵ | 45 ² | 4850 ² | 100 ² | | | 250 ² |
| 139+00 ~ 155+07 ⁵⁰ | 6910 ³ | 3251 ¹ | | 643 ⁴ | | 2900 ² | 3015 ² | | | 910 ² |
| 155+07 ⁴² ~ 178+75 | 5211 ² | 3899 ² | 277 ² | 692 ⁵ | 250 ² | 7220 ² | 1134 ² | | | 910 ² |
| 178+75 ~ 208+40 | 3163 ² | 3163 ² | | | 30 ² | 870 ² | | 30 ² | | |
| 208+40 ~ 233+75 | 2873 ³ | 2773 ³ | | | | 3800 ² | 100 ² | | | |
| 233+75 ~ 264+25 | 3510 ¹ | 3486 ² | | | | 625 ² | 23 ³ | | | |
| 264+25 ~ 295+00 | 3752 ² | 3860 ³ | | | | 520 ² | 70 ² | 108 ¹ | | |
| 295+00 ~ 327+00 | 6180 ² | 12222 ² | | | 750 ² | 5260 ² | 316 ² | 7108 ² | | |
| 327+00 ~ 353+00 | 7041 ² | 4017 ² | | | 1443 ² | 425 ² | 1581 ² | | | 350 ² |
| 353+00 ~ 396+00 | 5261 ² | 6293 ⁵ | | | | 2400 ² | | 32 ² | | |
| 396+00 ~ 420+50 | 2376 ² | 2409 ² | | | | 1050 ² | | 33 ² | | |
| | 63,277 ² | 59,255 ¹ | 277 ² | 1,646 ² | 2702.6 | 33,130 ² | 8015 ⁴ | 7462 ² | | 2420 ² |
| Sec. C-Unit 1 REVISED JANUARY 1927 | | | | | | | | | | |
| 420+50 to 447+10 | 5174.7 | 5174.7 | | | | 1990.0 | | | | 240 |
| 447+10 to 478+40 | 5203.2 | 5103.2 | | | | 3805.0 | 100.0 | | | 510 |
| 478+40 to 505+30 | 3517.7 | 3517.7 | | | | 1685.0 | | | | 270 |
| 505+30 to 533+40 | 8319.9 | 7625.9 | | | 285.0 | 8050.0 | 409.0 | | | 740 |
| 533+40 to 560+30 | 5212.1 | 5212.1 | | | | 80.0 | | | | 370 |
| 560+30 to 590+45 | 3101.1 | 2601.1 | | | | 665.0 | 500.0 | | | |
| 590+45 to 620+80 | 2620.7 | 2500.7 | | | | 1290.0 | 120.0 | | | 100 |
| 620+80 to 656+80 | 4789.7 | 4789.7 | | | | 1950.0 | | | | |
| 656+80 to 692+00 | 6522.0 | 6324.0 | | | | 765.0 | 198.0 | | | 580 |
| 692+00 to 722+20 | 5331.2 | 3165.2 | 66.0 | | | 3100.0 | 2100.0 | | | 150 |
| 722+20 to 746+50 | 5133.8 | 3849.9 | | | | 3760.0 | 1283.9 | | | 300 |
| 746+50 to 772+60 | 8918.1 | 4315.0 | | 206.0 | | 5000.0 | 4397.1 | | | 1580 |
| 772+60 to 804+00 | 9678.6 | 5869.0 | | 130.0 | | 4300.0 | 3680.6 | | | 600 |
| | | | | | | 36540.0 | | | | 5640 |
| TOTALS | 73523.8 | 60048.2 | 66.0 | 336.0 | 285.0 | 18788.6 | | | | |

SUMMARY OF CURVE WIDENING-Unit 2

| SEC. | CURVE NO. | LOCATION | D° DEGREE | W= WIDENING | X= RUN OFF | LENGTH CURVE | TOTAL L.C. | A= LENGTH LUNE TO WIDEN | B= LENGTH LUNE ON WIDEN | (A+B) W= Area Sq. Ft. | Surfacing Sq. Yds. |
|--|-----------|------------------------|-----------|-------------|------------|--------------|------------|-------------------------|-------------------------|-----------------------|--------------------|
| A | 1 | 6108.2 to 8148.2 | 10°-0' | 2.5 | 75 | 240 | 390 | 100 | 190 | 725.0 | 80.55 |
| B | 2 | 10+13.1 to 12+53.2 | 10°-0' | 2.5 | 75 | 240 | 390 | 100 | 190 | 725.0 | 80.55 |
| " | 3 | 15+20.5 to 20+40.5 | 10°-0' | 2.5 | 75 | 520 | 670 | 100 | 470 | 1425.0 | 153.33 |
| " | 4 | 56+36.2 to 62+53.2 | 8°-0' | 1.5 | 65 | 647.2 | 777.2 | 65 | 647.2 | 1069.25 | 118.18 |
| " | 5 | 522+98.2 to 324+98.2 | 1°-0' | | | | | | | None | |
| D | 6 | 1080+42.1 to 1085+42.1 | 4°-0' | | | | | | | | |
| " | 7 | 1120+42.1 to 1123+42.1 | 4°-0' | | | | | | | | |
| " | 8 | 1135+10.1 to 1139+46.1 | 10°-0' | 2.5 | 75 | 444.1 | 594.1 | 100 | 394.1 | 1236.15 | 137.41 |
| " | 9 | 1157+53.2 to 1161+53.2 | 6°-0' | 0.5 | 55 | 377.2 | 487.2 | 55 | 377.2 | 216.25 | 24.04 |
| TOTAL | | | | | | | | | | | |
| 5397.15 Sq. Ft. or 599.69 Sq. Yds. Surfacing for Lanes on Curves | | | | | | | | | | | |

SUMMARY SHEET

146 1925 4A 114
Revised July 19, 1926
May 11, 1927
Sept 15, 1927

SUMMARY OF DRAINAGE STRUCTURES

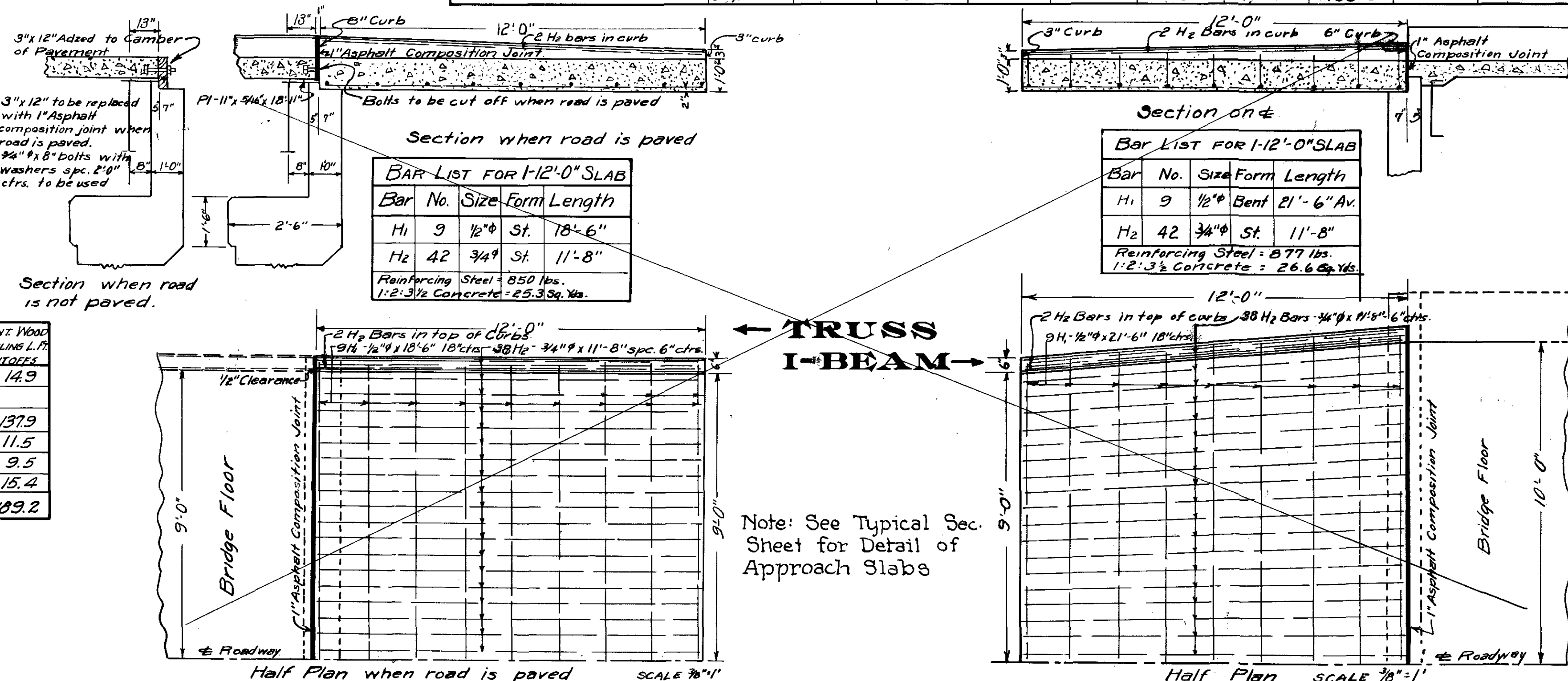
| No. | STATION | SHEET No. P & P | DESIGN | STRUCTURE | 1:2:4 CONC. | REINFOR. STEEL | CONC. PIPE 18" 24" 30" | D.A. (AGERS) | C | REMARKS |
|---------------|---------|--------------------|--------|-----------|--------------------------|-------------------|---------------------------|-----------------|--------|----------------------------|
| Sec. D-Unit 1 | | | | | | | | | | |
| 54 | 808+00 | 32 | 50 | C.P.2 | 30"x34" Rdy. 45°HW | 2.93 | 61 | | 36 | 12.7 Nothing in place |
| 55 | 815+90 | 32 | 46 | BC-5 | 8'x6'x36" | 5078 | 3805 | | 160 | 9 Remove 14'x18" Wood Curb |
| 56 | 840+15 | 33 | 47 | BC-6 | 3'x3'x46" | 1647 | 1437 | | 28 | 7 " 10'x14" " " |
| 58 | 883+30 | 34 | 47 | BC-5 | 6'x3'x30" | 2220 | 1810 | | 75 | 7 Nothing in place |
| 60 | 913+15 | 35 | 50 | C.P.2 | 30"x30" 45°HW | 2.93 | 61 | | 32 | 10 " " " |
| 61 | 923+29 | 35 | 50 | " | 18"x26" Rdy. SD 90° | 3.10 | 44 | 28 | Relief | " " " |
| 62 | 924+00 | 35 | 50 | " | 30"x30" 45° | 2.93 | 61 | | 32 | 10 " " " |
| 63 | 938+35 | 36 | 47 | BC-6 | 5'x4'x48" | 3210 | 2550 | | 73 | 75 Remove 6'x4' |
| 64 | 945+65 | 36 | 47 | " | 8'x5'x63" 0 1/2 60° Skew | 81.26 | 6307 | | 185 | 75 Nothing in place |
| 65 | 958+88 | 37 | 47 | " | 3'x3'x49" | 17.25 | 1516 | | 35 | 7 Remove 30" Pipe |
| 66 | 972+07 | 37 | 47 | " | 5'x4'x60" | 38.23 | 3089 | | 65 | 8 " 36"x31" " |
| 67 | 987+41 | 38 | 46 | BC-5 | 6'x5'x39" | 38.28 | 2731 | | 30 | 8 2-36" " |
| 68 | 1012+80 | 38 | 50 | C.P.2 | 30"x30" 45°HW | 2.93 | 61 | | 32 | 10.7 Nothing in place |
| 69 | 1025+96 | 39 | 47 | BC-6 | 6'x6'x49" | 53.46 | 3713 | | 135 | 8 Remove 36" Pipe |
| 70 | 1029+13 | 39 | 50 | C.P.2 | 18"x26" SD 90°HW | 3.10 | 44 | 28 | Relief | Nothing in place |
| 71 | 1044+80 | 39 | 47 | BC-6 | 5'x5'x45" Rdy. | 38.59 | 2733 | | 100 | 8 Remove 30" Pipe |
| 72 | 1060+20 | 40 | 50 | C.P.2 | 30"x30" 45°HW | 2.93 | 61 | | 32 | 10.7 Nothing in place |
| 73 | 1069+20 | 40 | 50 | " | 30"x30" " " | 2.93 | 61 | | 32 | 10.7 " " " |
| 74 | 1092+15 | 41 | 49 | BC-6A | 2-10'x8'x52' 9 1/2" | 198.26 | 16900 | | 50 | 10 " " " |
| 75 | 1105+25 | 41 | 46 | BC-5 | 4'x3'x36" | 1686 | 1470 | | 45 | 75 " " " |
| 76 | 1117+65 | 42 | 47 | BC-6 | 10'x10'x43" | 90.46 | 6392 | | 450 | 3 " " " |
| 77 | 1123+95 | 42 | 46 | BC-5 | 8'x3'x30" | 29.09 | 2620 | | 96 | 45 " " " |
| 78 | 1128+70 | 42 | 48 | BC-5A | 2-8'x3'x30" | 54.22 | 4882 | | 140 | 8 " " " |
| 79 | 1136+38 | 42 | 46 | BC-6 | 5'x4'x66" | 38.23 | 3089 | | 450 | 8 " " " |
| 80 | 1153+20 | 43 | 46 | BC-5A | Doub. 4'x3'x30" Rdy. | 27.79 | 2323 | | 100 | 75 " " " |
| 81 | 1166+00 | 43 | 46 | BC-5 | 5'x4'x31" | 22.70 | 1731 | | 75 | 8 " " " |
| 82 | 1173+00 | 44 | | | Divert to Sta. 1181+40 | | | | | " " " |
| 83 | 1181+40 | 44 | 48 | BC-5A | Doub. 10'x10'x30" Rdy. | 125.97 | 9565 | | 830 | 8 " " " |
| 84 | 1196+10 | 44 | 46 | BC-5 | 4'x2'x30" | 12.27 | 1099 | | 12 | 7 " " " |
| 85 | 1198+90 | 45 | 46 | " | 5'x4'x33" | 23.68 | 1888 | | 75 | 7 " " " |
| TOTAL | | | | | 1051.93 | 82104 | 56 | 196 | | |

Sec. E

| No. | STATION | SHEET No. P & P | STRUCTURE | CONCRETE Cu.Yd. | REINFOR. STEEL LBS. | STRUCT. STEEL LBS. | CONC. HAND RAIL LBS. | UNT. WOOD PLING LBS. | UNT. WOOD FLING LBS. |
|-------|----------|--------------------|-----------|--------------------------------|------------------------|-----------------------|-------------------------|-------------------------|-------------------------|
| 8 | 155+27.5 | 10 | 52-53 | 36'I-Beam 20'Rdy | 26.38 | 188.2 | 12020 | 19,574 | 79.0 |
| 17 | 319+75.0 | 15 | | 50'x20 1/2'Rdy. Leave in place | | | | | |
| 18 | 330+80.0 | 16 | 54-55 | 40'I-Beam | 28.98 | 230.2 | 14,630 | 21,395 | 87.0 |
| 50 | 746+82.0 | 30 | 57-58 | 60' Steel Truss | 27.40 | 219.0 | 15,020 | 45,624 | None |
| 57 | 866+97.5 | 34 | 56-57 | 30'I-Beam | 22.50 | 142.3 | 8,698 | 13,979 | 67.0 |
| 59 | 895+58.5 | 34 | 56-57 | 30'I-Beam | 22.50 | 151.5 | 9,334 | 13,979 | 67.0 |
| TOTAL | | | | 127.76 | 931.2 | 59,702 | 114,551 | 300.0 | 9,197.8 |

SUMMARY OF GRADING QUANTITIES

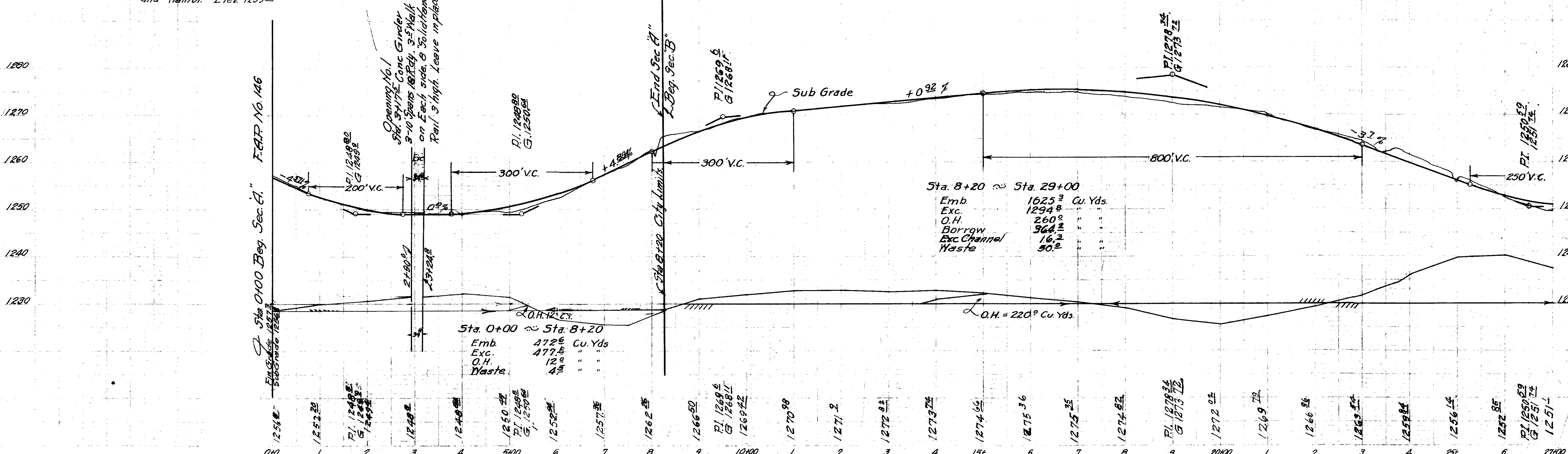
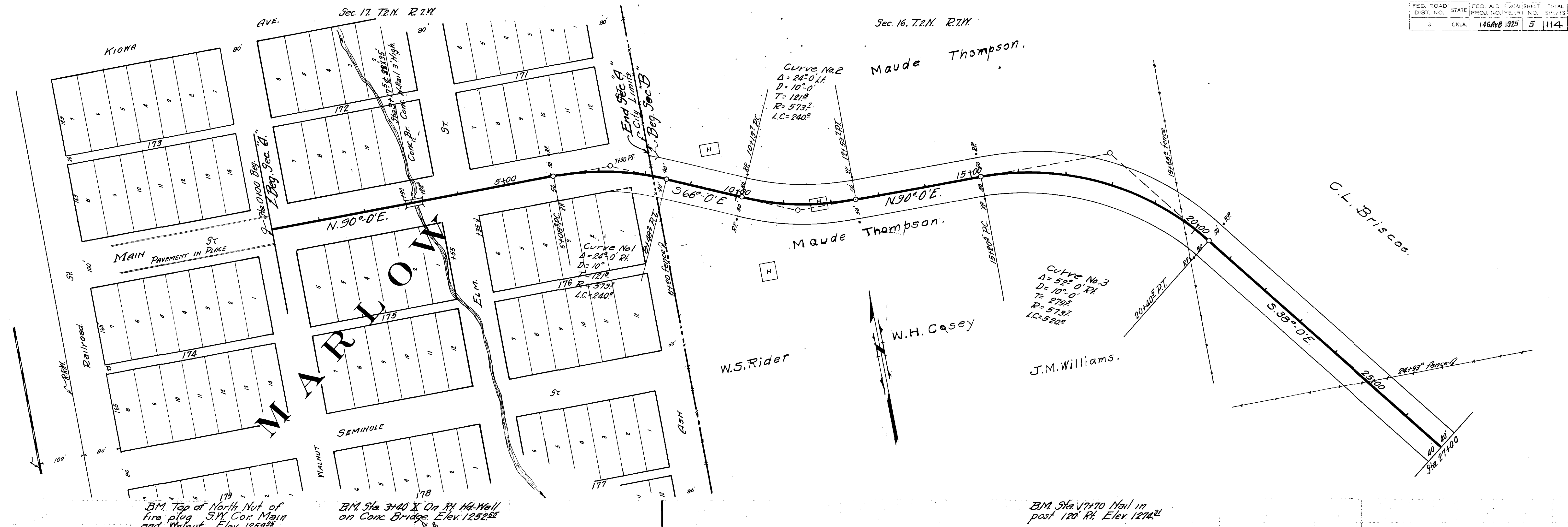
| STATION | EMB. (Cu.Yds) | EXCAVATION (Cu.Yds) | | | | OVER HAUL (Cu.Yds) | BORROW (Cu.Yds) | WASTE (Cu.Yds) | RIP RAP (Sq.Yds) | Unit 2 GUARD RAIL (LIN.FT.) |
|-------------------------|------------------|---------------------|---------|---------|---------|-----------------------|--------------------|-------------------|---------------------|-----------------------------------|
| | | EARTH | L. ROCK | S. ROCK | CHANNEL | | | | | |
| Sec. D-Unit 1 | | | | | | | | | | |
| 804+00 ~ 823+94 | 3208.7 | 3208.7 | | | | 666 | | | | |
| 823+94 ~ 841+00 | 2396.2 | 2147.9 | | | | | 248.3 | | | |
| 841+00 ~ 866+80 2 1/2 | 5270.5 | 2661.3 | 328.9 | 219.4 | | 1200 | 2060.9 | | | 260 |
| 867+14 1/2 ~ 895+41 1/2 | 9307.3 | 7152.6 | | 143.1 | 75° | 3340 | 2011.6 | 75.0 | | 980 |
| 895+81 1/2 ~ 926+00 | 5931.2 | 2219.0 | | | | 525 | 3712.2 | | | 680 |
| 926+00 ~ 946+00 | 3565.0 | 2301.3 | | 1313.7 | | 65 | | 500 | | 200 |
| 946+00 ~ 972+00 | 3668.1 | 2407.4 | | | | | 1260.7 | | | |
| 972+00 ~ 997+50 | 3684.7 | 2482.6 | | | | 1135 | 1222.1 | | | |
| 997+50 ~ 1026+00 | 3493.4 | 2637.1 | | | | 770 | 856.3 | | | |
| 1026+00 ~ 1045+00 | 3088.0 | 2002.8 | | | | 2730 | 1085.2 | | | |
| 1045+00 ~ 1077+00 | 3700.9 | 3510.7 | | 17.4 | | 905 | 172.8 | | | |
| 1077+00 ~ 1104+46 | 5957.9 | 5535.7 | 88.0 | 132.0 | | 800 | 202.2 | | | 220 |
| 1104+46 ~ 1126+15 | 8527.9 | 6505.3 | 307.1 | 153.5 | 26.50 | 4125 | 1297.0 | | | 330 |
| 1126+15 ~ 1163+50 | 10763.0 | 6484.0 | 1250 | 5141.0 | | 8188 | | 987.0 | | |
| 1163+50 ~ 1183+00 | 3868.9 | 3706.1 | | | | 1630 | 162.8 | | | |
| 1183+00 ~ 1202+60 1/2 | 3801.2 | 3877.7 | | | | 705 | | 76.5 | | |
| TOTAL | 80,232.9 | 58,820.2 | 849.0 | 5806.4 | 1653.7 | 26784 | 14,292.1 | 1188.5 | | 2670 |



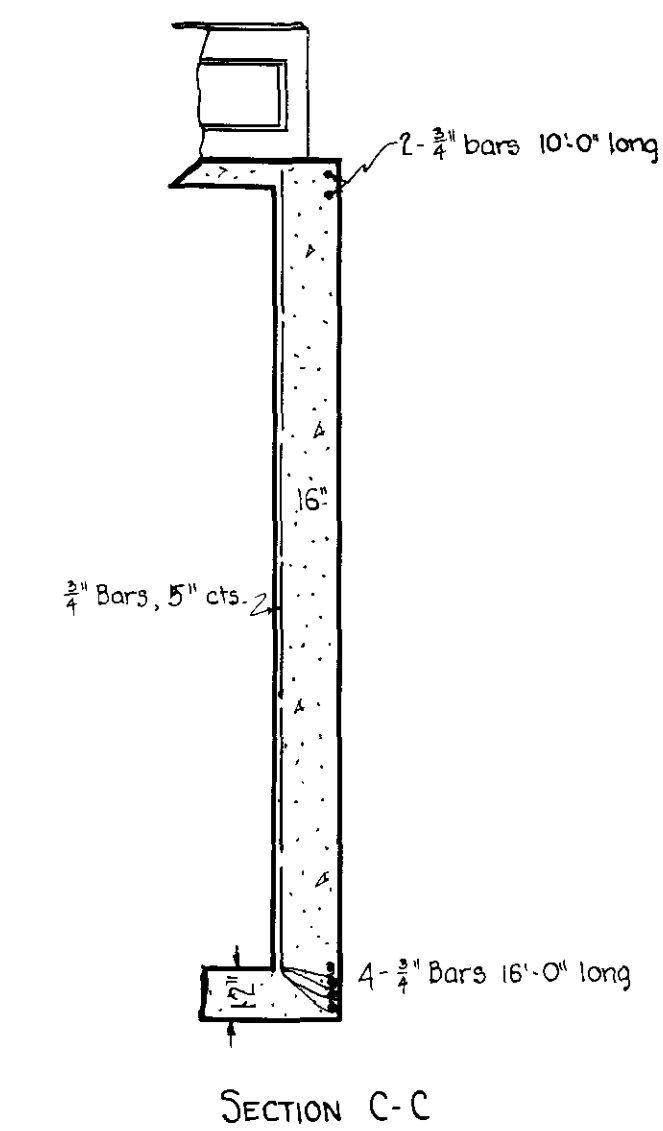
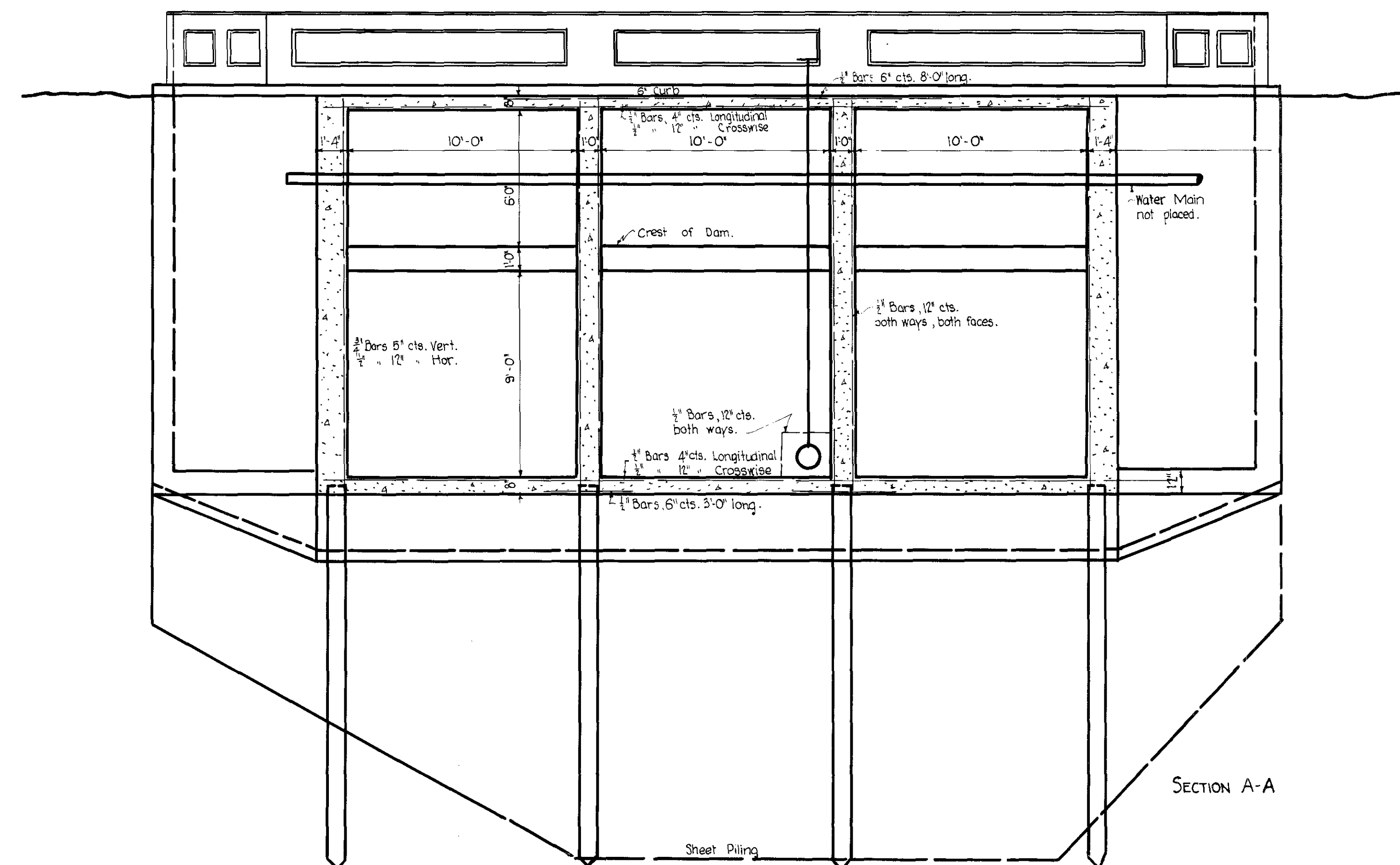
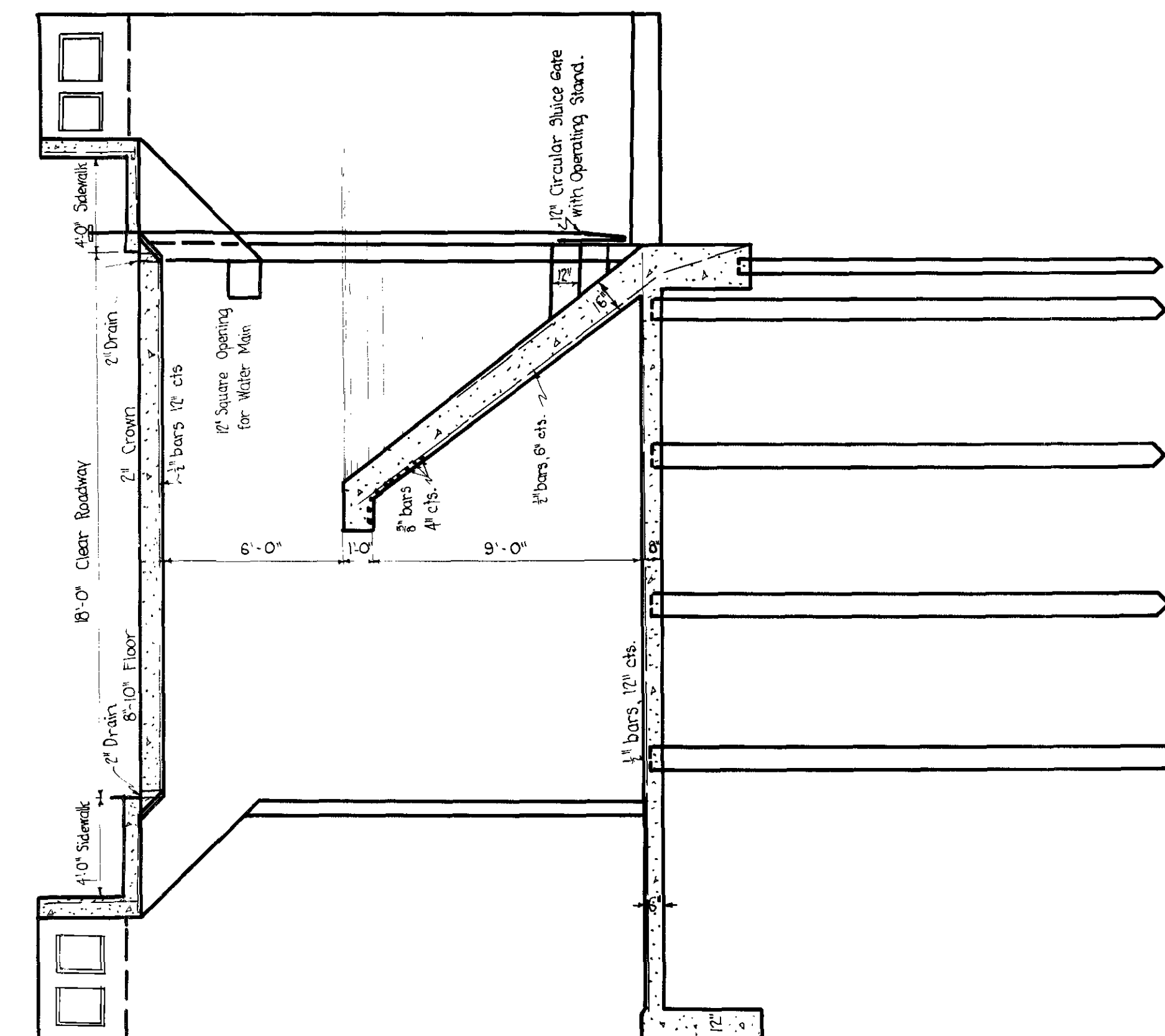
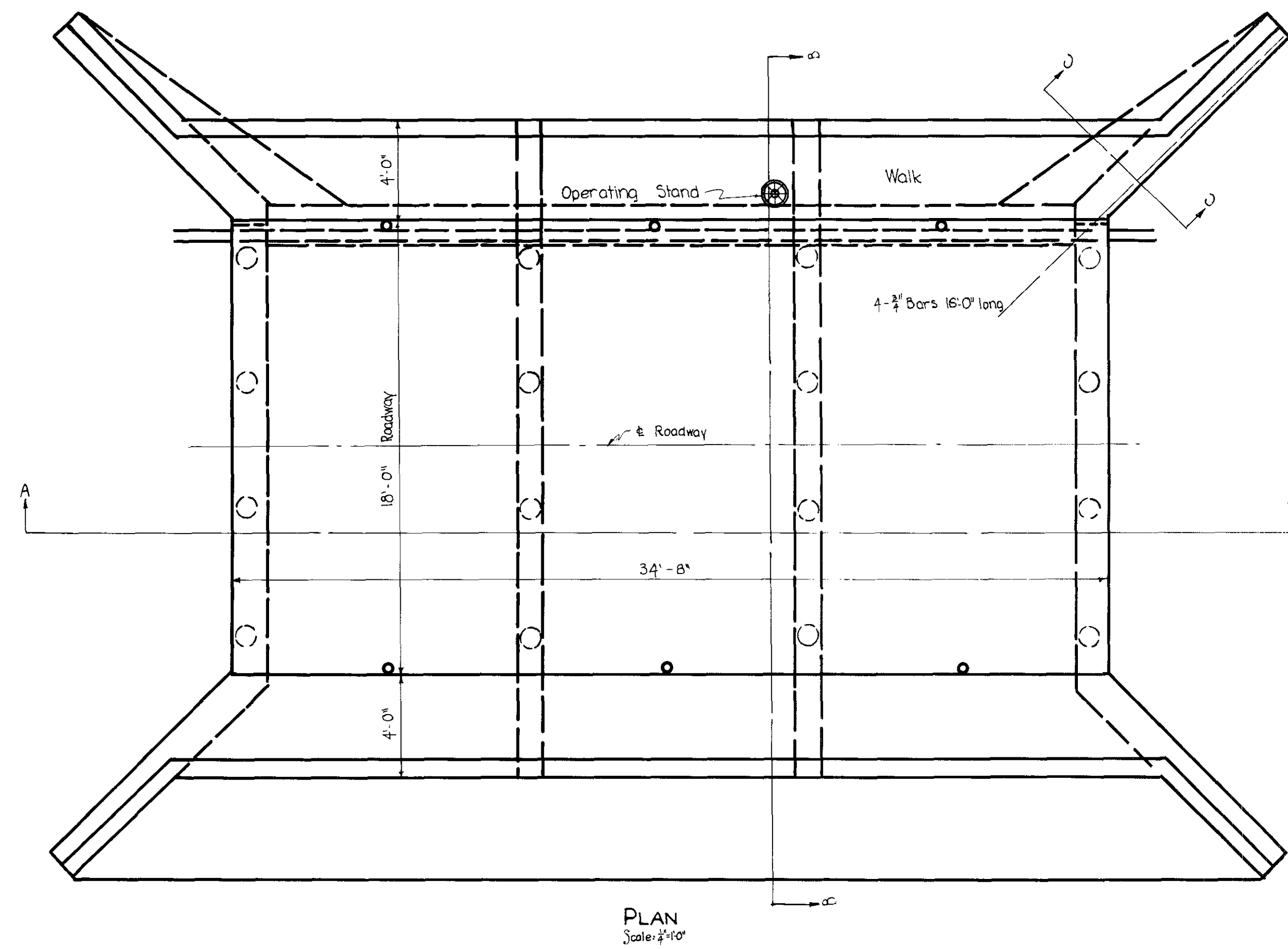
DETAILS OF SLAB APPROACHES

SUMMARY OF PAY QUANTITIES

| SEC. | EXCAVATION (Cu.Yds) | | | | OVER HAUL (Cu.Yds) | BORROW (Cu.Yds) | RIP RAP (Sq.Yds) | GUARD RAIL (LIN.FT.) | CONCRETE (Cu.Yds) | | STEEL (LBS) | CONC. PIPE (LIN.FT.) | CONC. HAND RAIL (LIN.FT.) | UNT. WOOD PLING LBS. | UNIT 2 | | | |
|------|---------------------|---------|---------|---------|-----------------------|--------------------|---------------------|-------------------------|-------------------|---------|-------------|-------------------------|---------------------------------|-------------------------|-----------------------|---------------------------------|---|-------------------|
| | EARTH | L. ROCK | S. ROCK | CHANNEL | | | | | 1:2:3 | 1:2:4 | | | | | GO. RAIL (LIN.FT.) | SURFAC. MATERIAL (Sq.Yds) | REINFORCING STEEL IN RAIL SLAB - LBS. | SECTION MARKER |
| A | 477 | | | | 12 | | | See Unit 2 | | | | | | | | 1,650.95 | 4523 | 2 |
| B | 59,255 | 277 | 1,646 | 2,703 | 33,130 | 8,015 | | | | 450.16 | 36,479 | 28 | 32 | 164 | 2420 | 82,453.94 | 236,437 | 1 |
| C | 60,048 | 66 | 336 | 2,85 | 36,540 | 12,789 | | | 35.13 | 955.84 | 73,159 | 28 | 148 | 116 | 56401 | 76,394.84 | 220,017 | 1 |
| D | 58,820 | 849 | 5,806 | 16,54 | 26,784 | 14,292 | | | | 1051.93 | 82,104 | 56 | 196 | | 2670 | 79,633.34 | 228,931 | 1 |
| E | | | | | | | | | 127.76 | 931.2 | 59,702 | 114,551 | | 300.0 | 9,197.8 | | | |

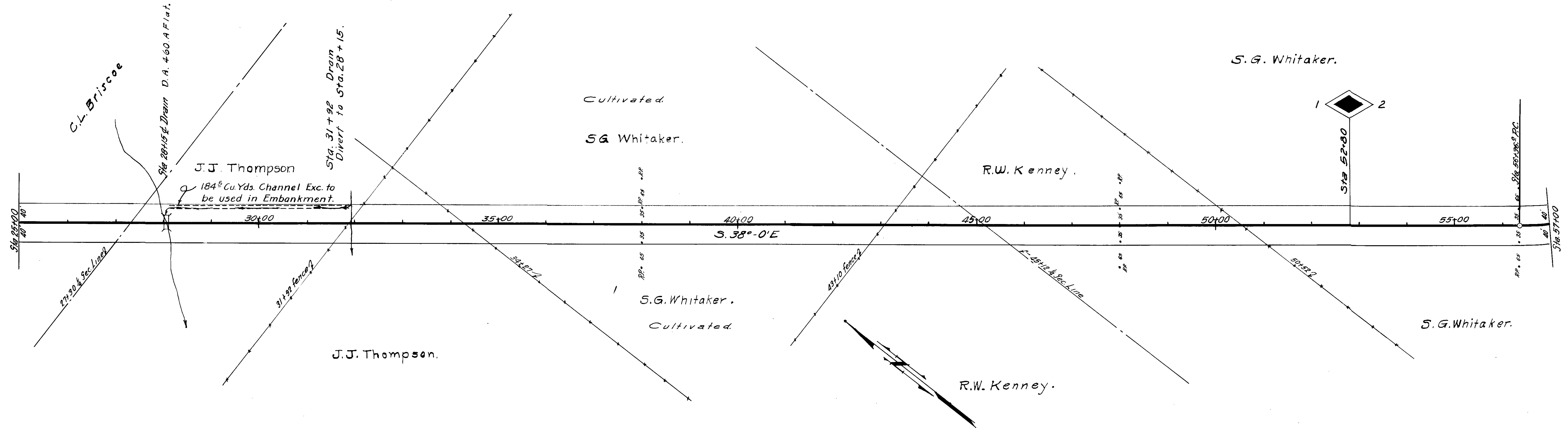


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|------------------------|-------|-----------------------|----------------|--------------|-----------------|
| 6 | OKLA. | 146 - A | 1926 | | |



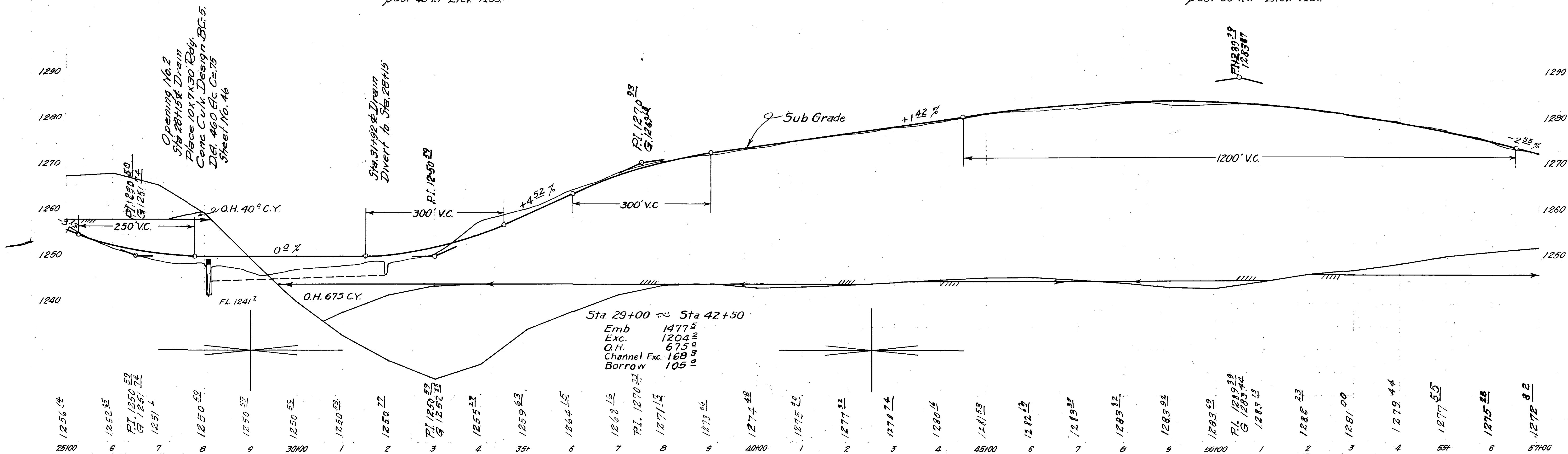
DETAILS OF
COMBINATION BRIDGE & DAM
AT
MARLOW OKLAHOMA
@ STA. 3 + 17.50
FEDERAL AID PROJECT NO. 146 - SEC. 'A'

Sec. 16 T.2N. R.7W.



B.M. Sta. 34+95 Nail in fence post 48 Rt. Elev. 1259.81

B.M. Sta. 51+37 Nail in fence post 65 Rt. Elev. 1281.78

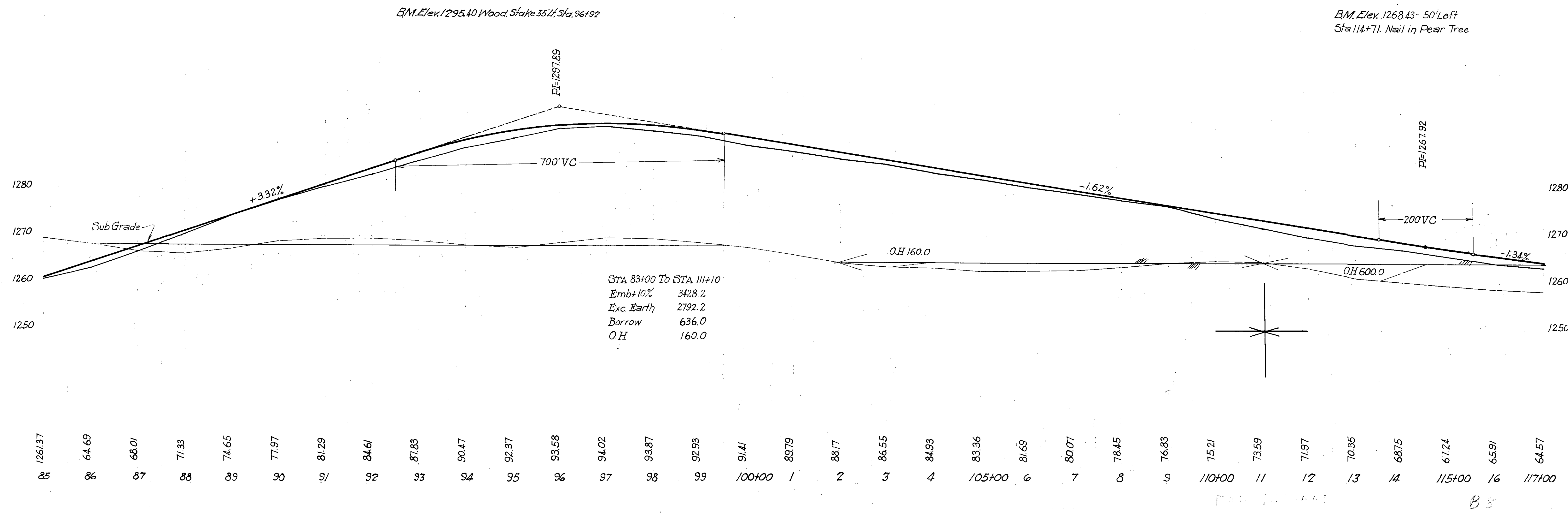
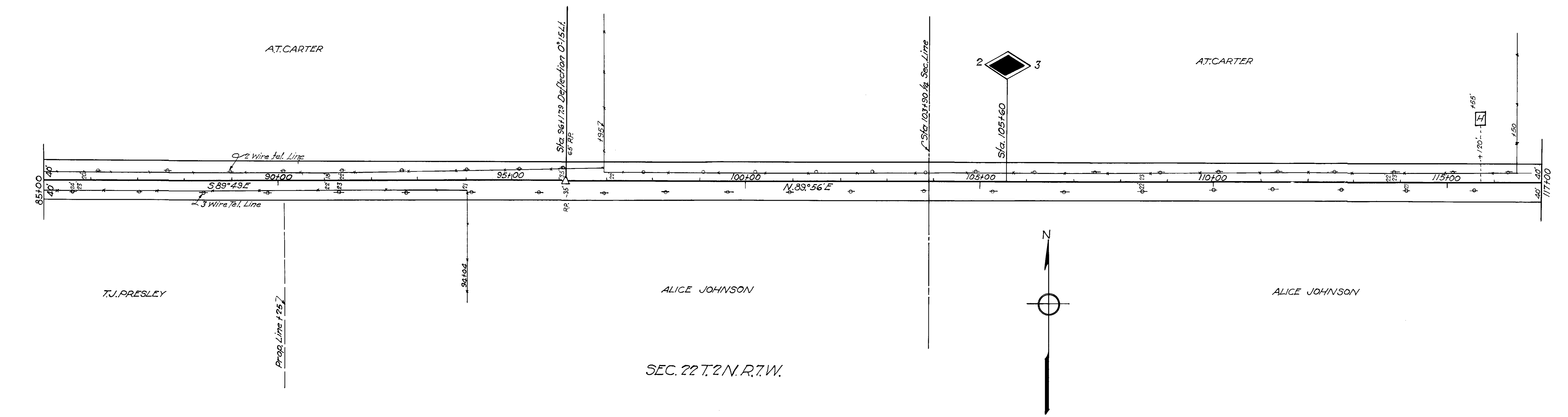


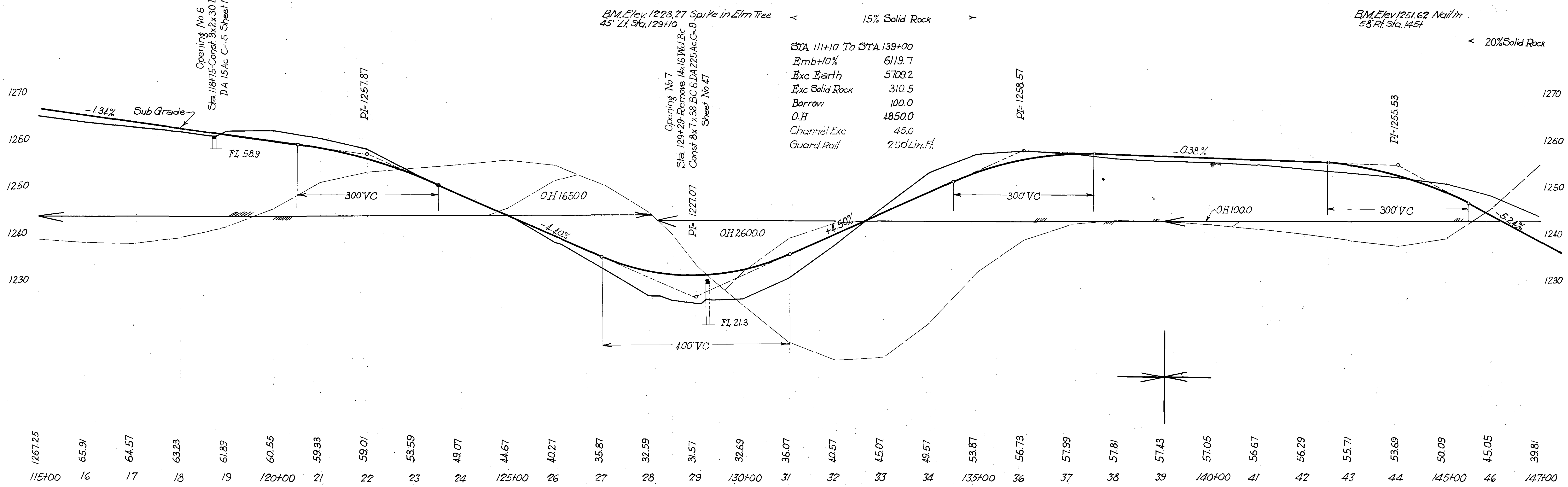
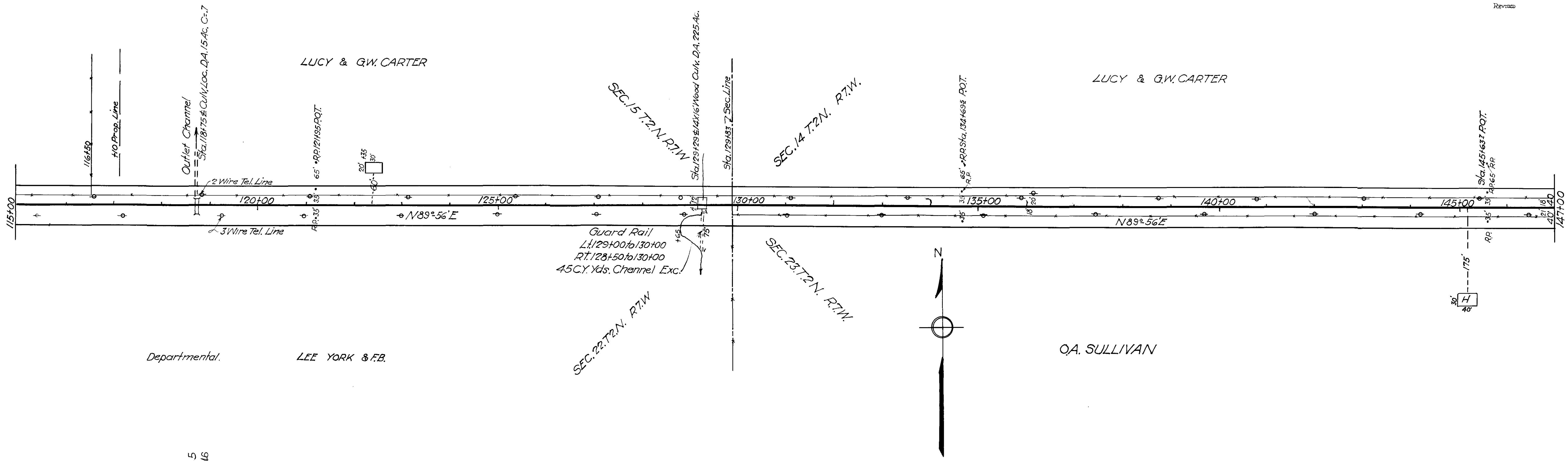
FAP-10-1-1

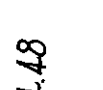
6

SEC. 15 T. 2 N. R. 7 W.

SEC. 22 T. 2 N. R. 7 W.







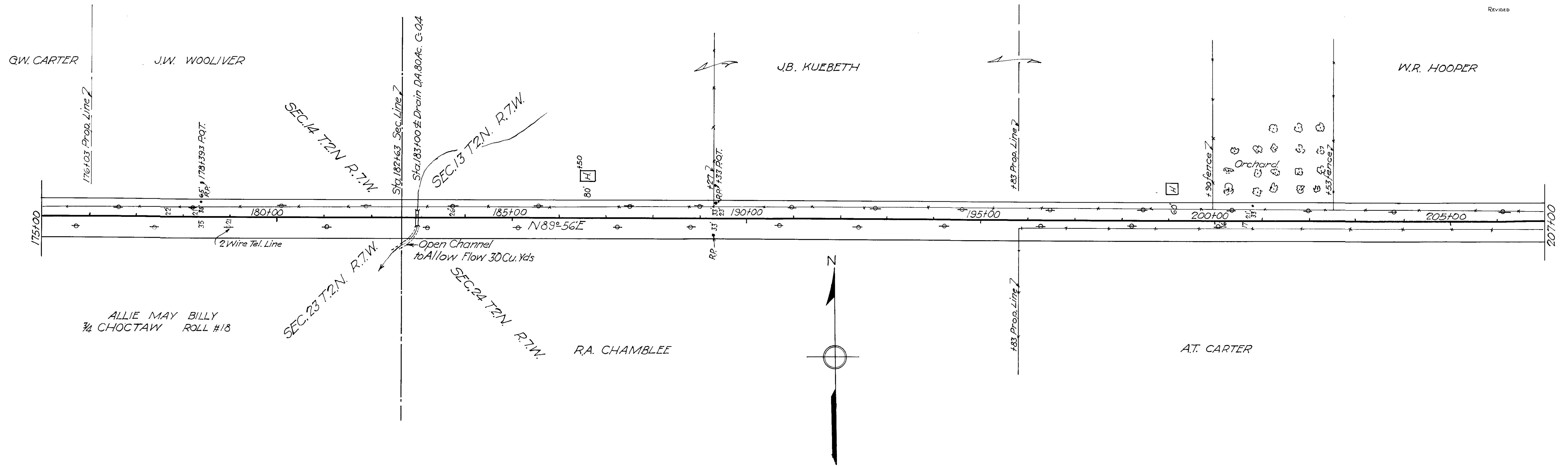
| SHEET ESTIMATE | |
|-------------------------------|--------------|
| Sta. 155+47.42 To Sta. 170+75 | |
| Embt 10%. | 5,211.8 |
| Earth Exc. | 3,899.7 |
| L.R. .. | 277.0 |
| S.R. .. | 692.5 |
| Borrow | 1134.2 |
| O.H. | 7220.0 |
| Channel Exc. | 250.0 |
| Guard Rail | 910' Lin.Ft. |

123456789012345¹²⁰ 1234567890 303303 30345678

Gro

170
170

B10

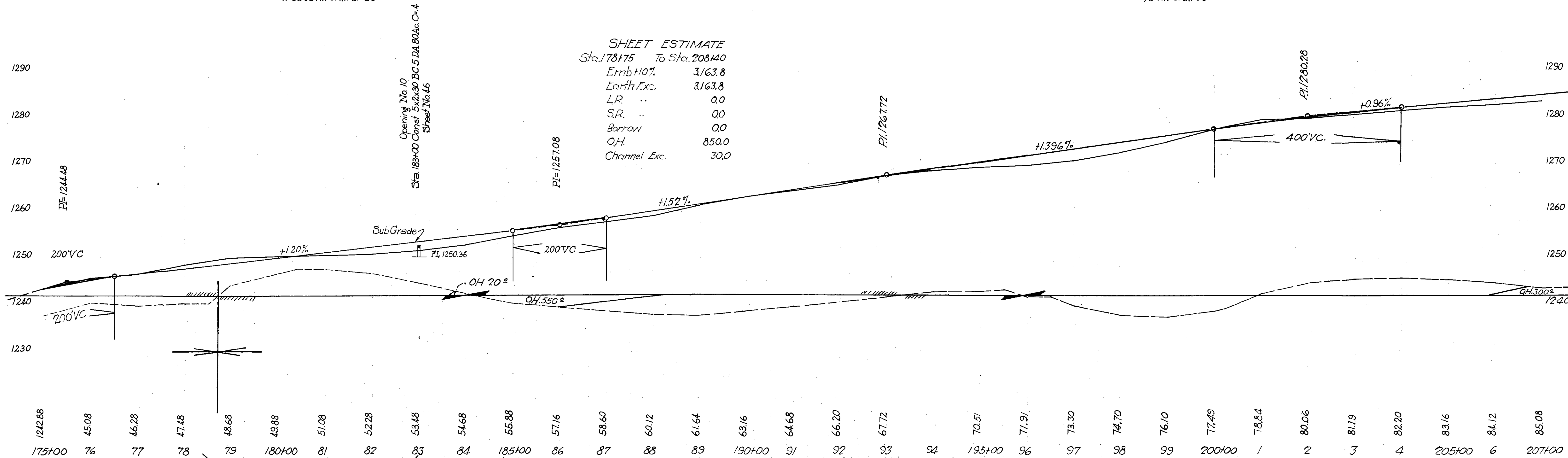


B.M. Elev. 1252.01 Nail in Cottonwood.
Tree 38 ft. Sta. 181+80

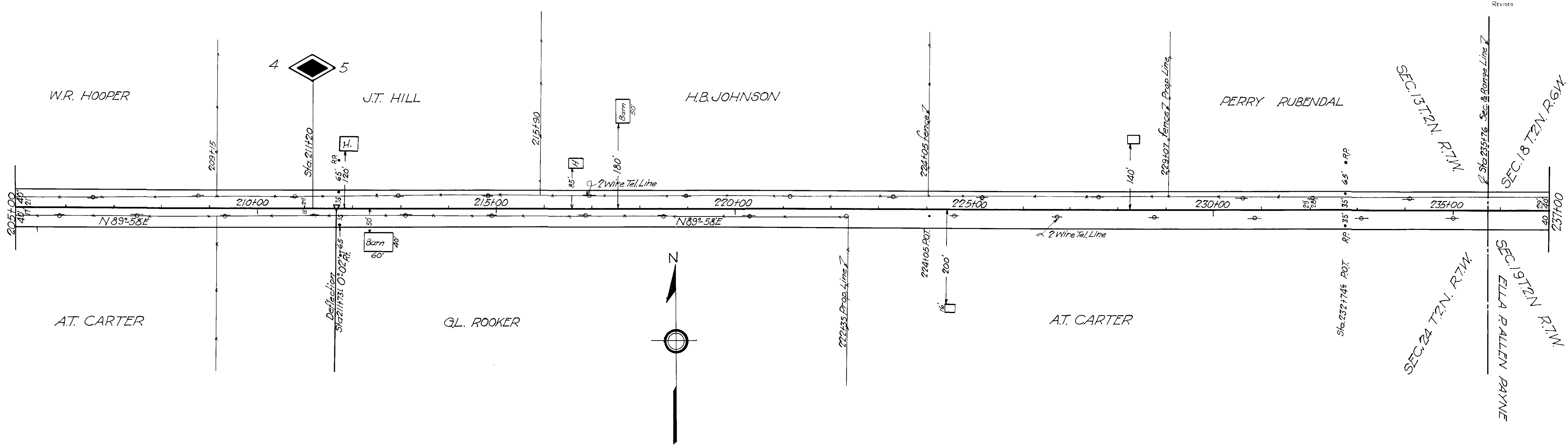
B.M. Elev. 1277.60 Nail in Black Jack
43 ft. Sta. 198+75

SHEET ESTIMATE
Sta. 178+75 To Sta. 208+40

| | |
|--------------|--------|
| Emb +10% | 3163.8 |
| Earth Exc. | 3163.8 |
| L.R. .. | 0.0 |
| S.R. .. | 0.0 |
| Borrow | 0.0 |
| O.H. | 850.0 |
| Channel Exc. | 30.0 |

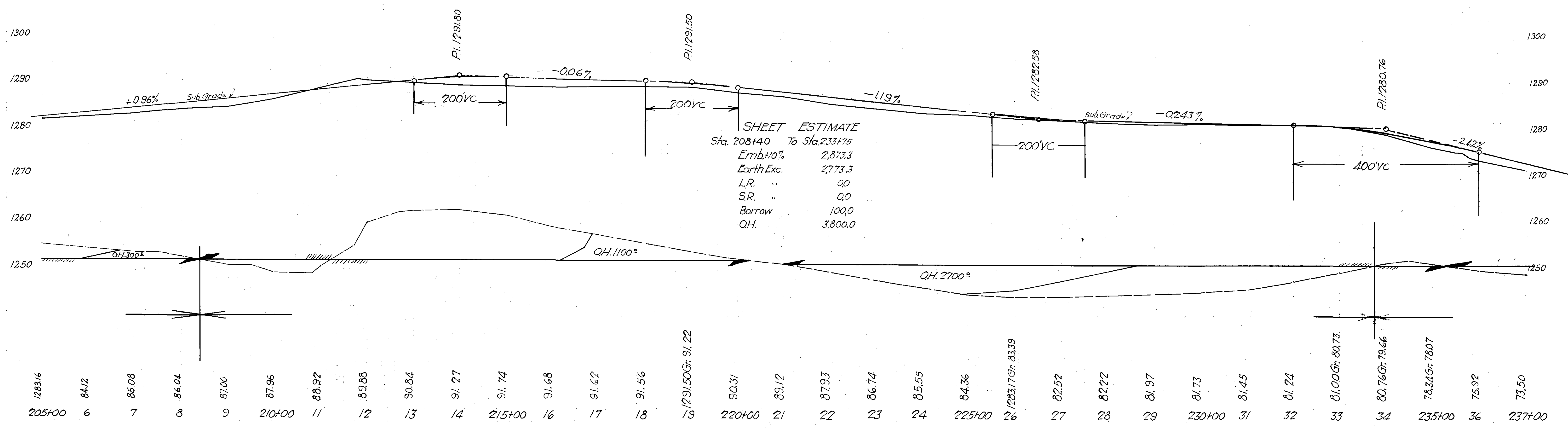


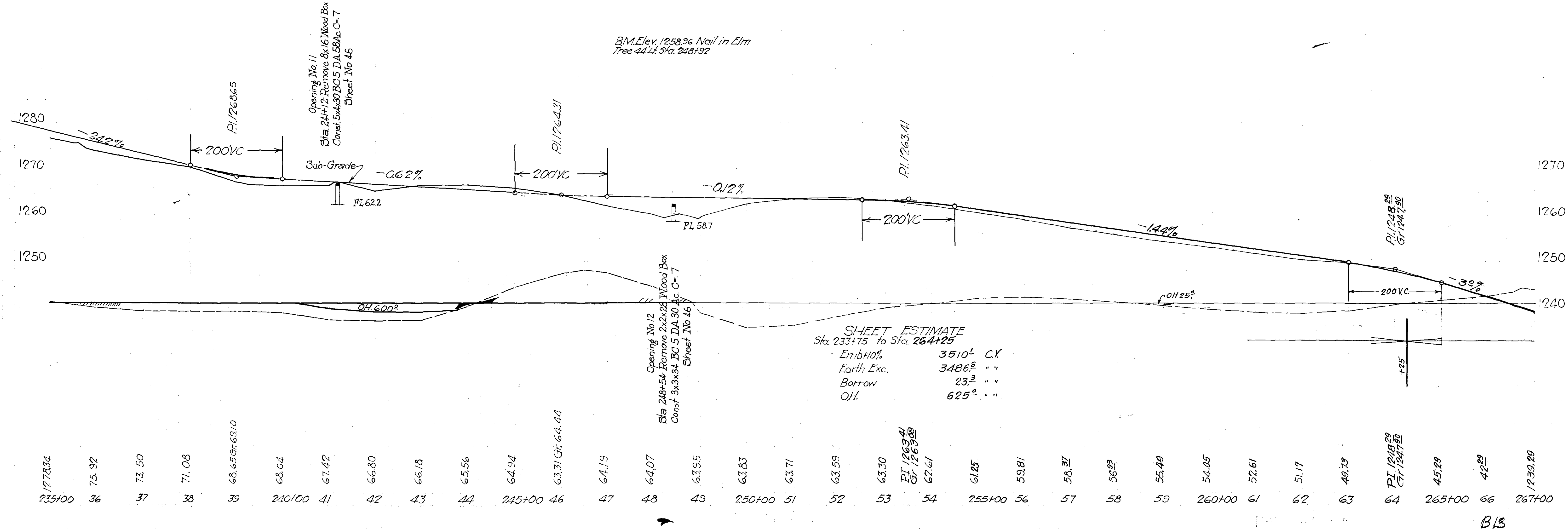
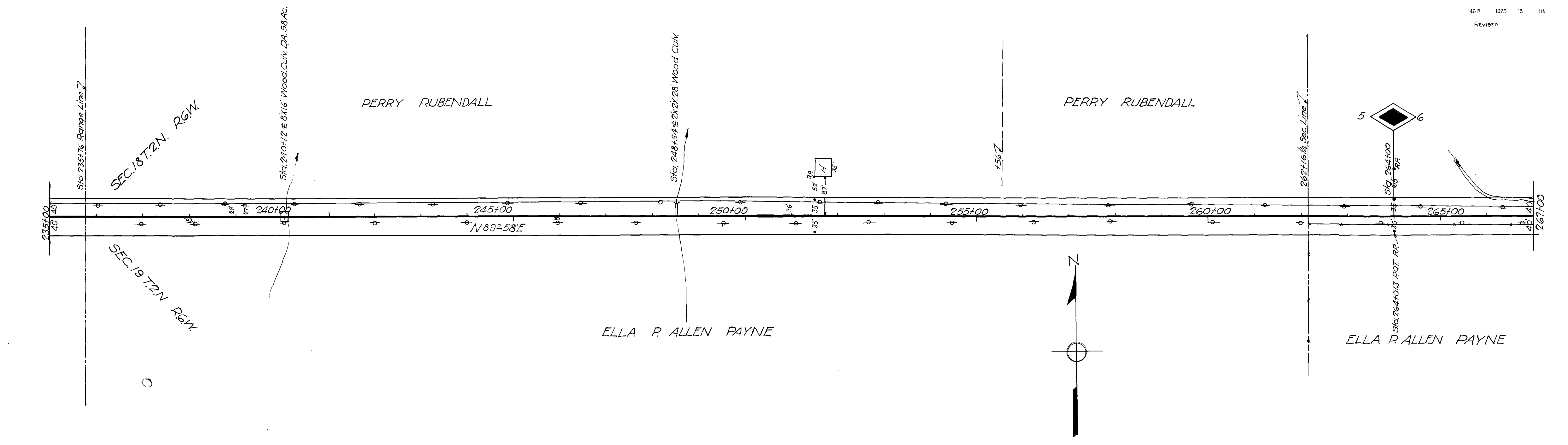
B11

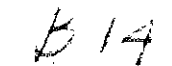
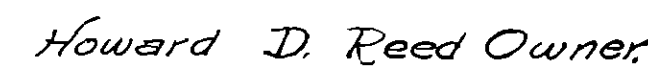


B.M. Elev. 1291.39 Nail in Black
Jack Tree 45' Lt. Sta. 216+63

B.M. Elev. 1282.37 Nail in Locust
Tree 32' Lt. Sta. 228+28

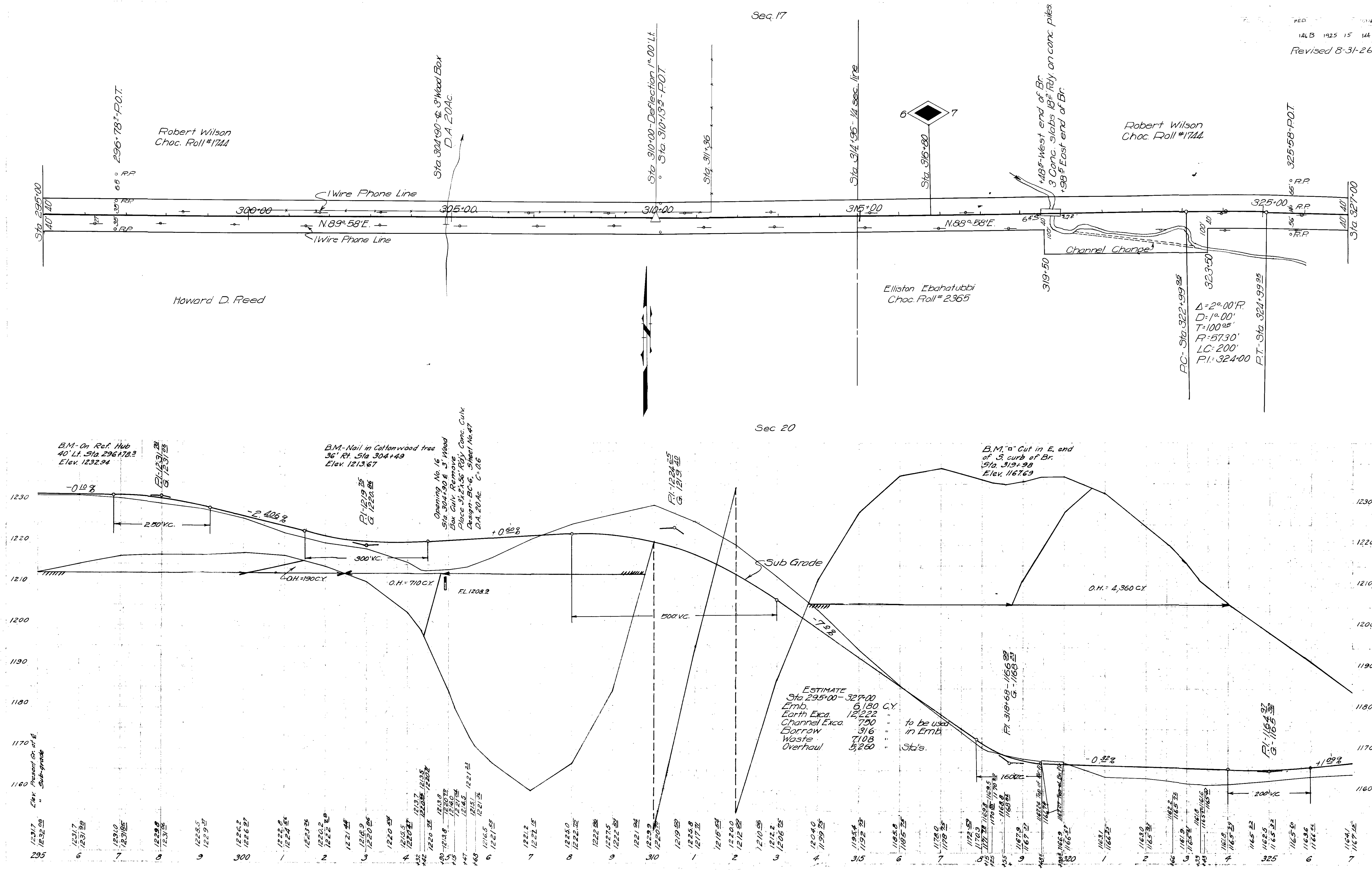


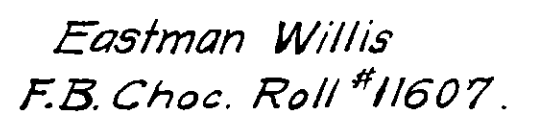




L.H. Teners 8-4-26

J. Arch Bone C. H. Condering 8-4-26





SEC. 16

T.F. Menninger - Owner.

Ada Mullins Owner
Hol. M. Cannon Receiver.

Eastman Willis Owner
F.B. Choctaw, Roll #11607

Jasper R Hill Owner.

Sec 21 TEN R.M.

B.M. On Ref. Hub
40' Lt. Sta 359+14.5
Elev. 1228.67

B.M. On Ref. Stake
40' Lt. Sta 373+07.1
Elev. 1256.54

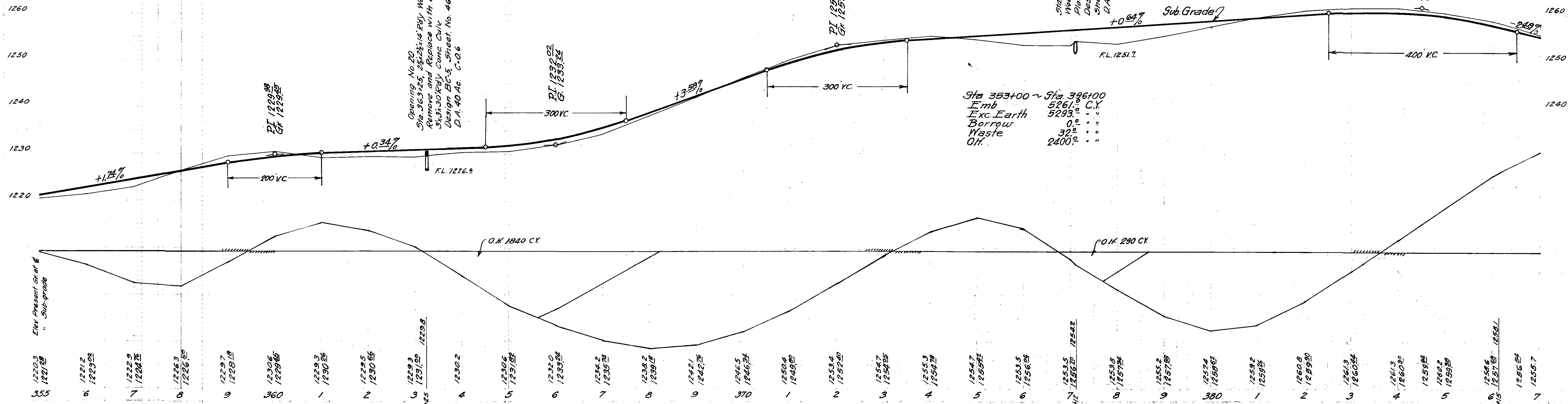
B.M. On Guinea
40' Lt. Sta 382+00
Elev. 1262.75

Opening No. 20
Sta 363+25, 24x24" R.V. Wood Culk
Remove and Replace with a
34x30" R.V. Conc. Culk
Design BC-5, Sheet No. 46
D.A. 40 Ac. C-06

Opening No. 21
Sta 377+12, 42x15" R.V.
Wood Culk. Remove
Place 30x34" R.V. Con Pipe
Design C-P-2, 45" HxW's
Sheet No. 50
D.A. 10 Ac. C-06

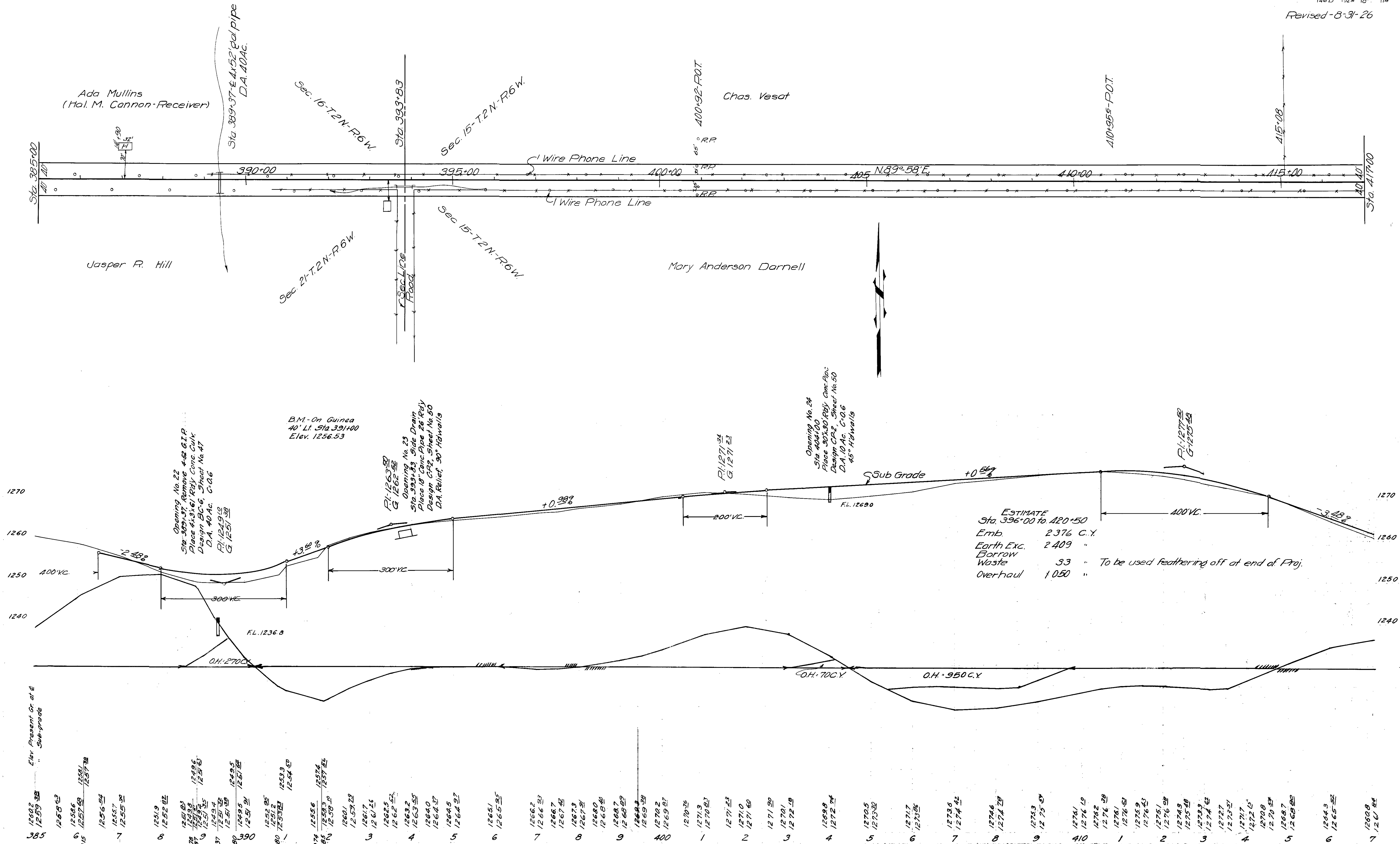
Sta 353+00 ~ Sta 396+00
Emb 5261.0 C.Y.
Exc. Earth 5293.0 " "
Borrow 0.0 " "
Waste 32.0 " "
O.H. 2400.0 " "

Check Bene
C.H. Landmarking 8-10-26



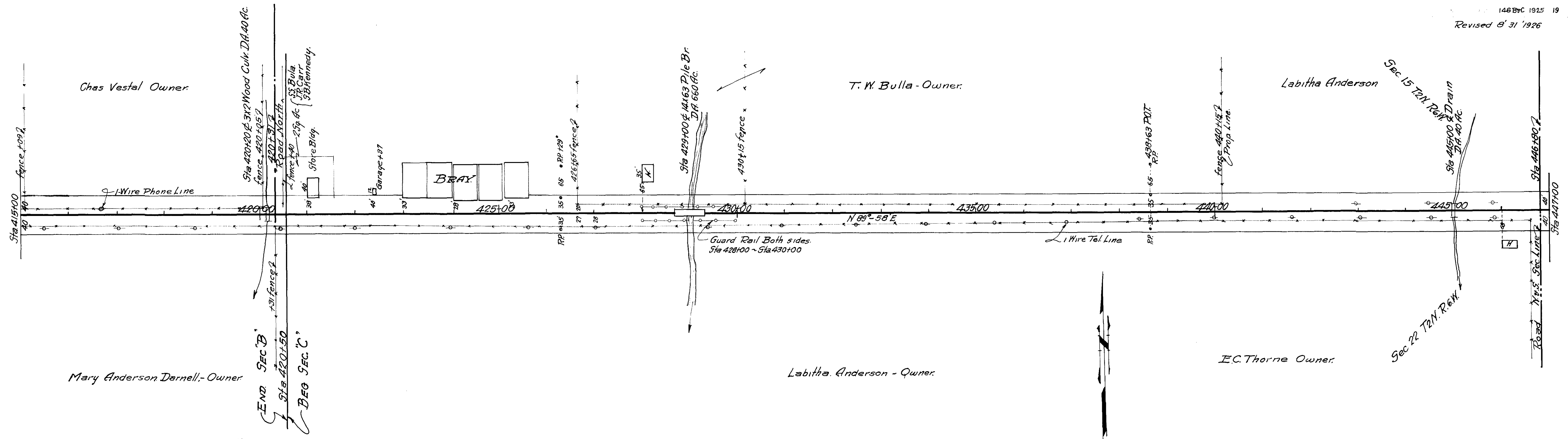
L. H. Towner 8-3-26

Arch. Eng. C. M. Lenderking 8-4-26

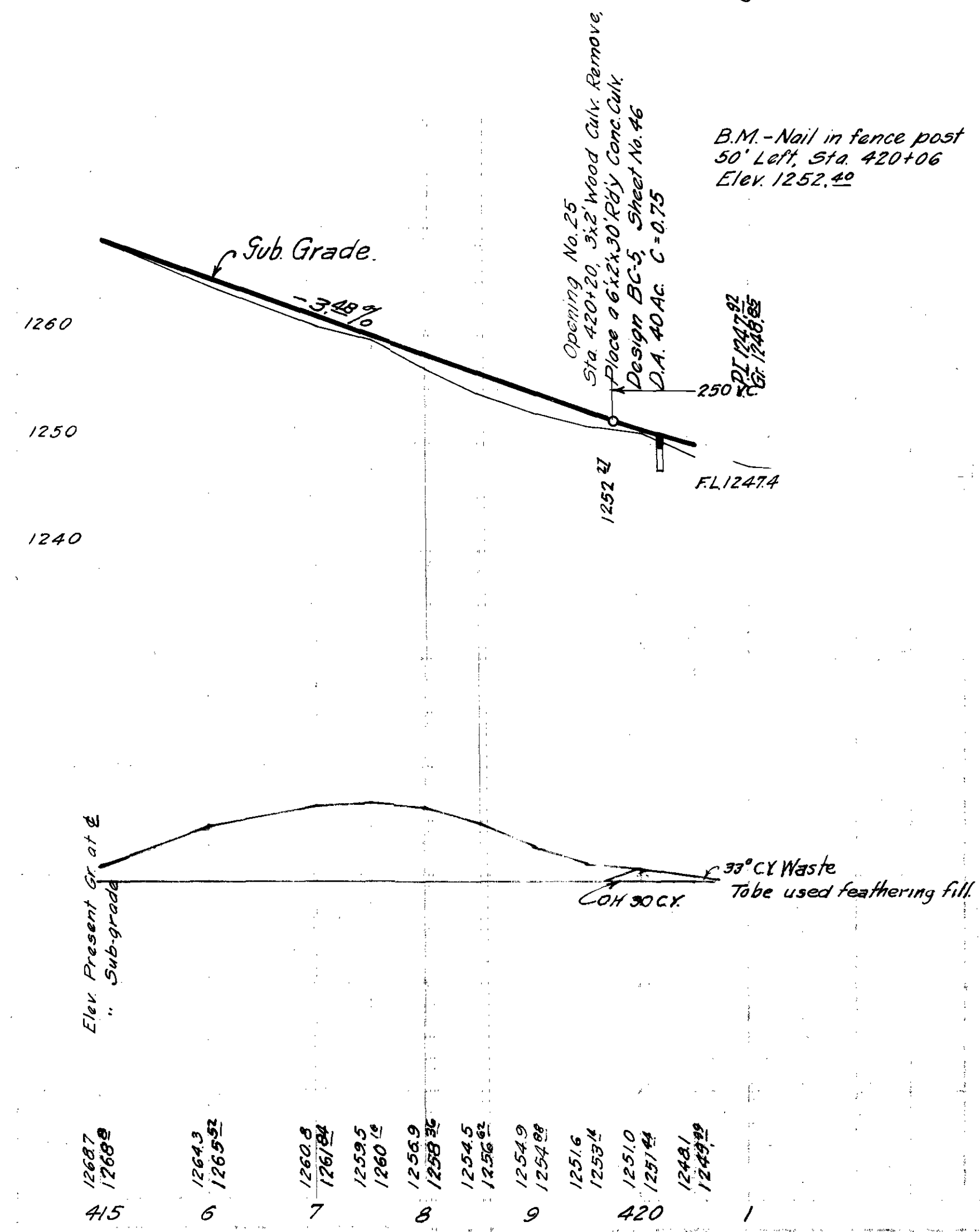


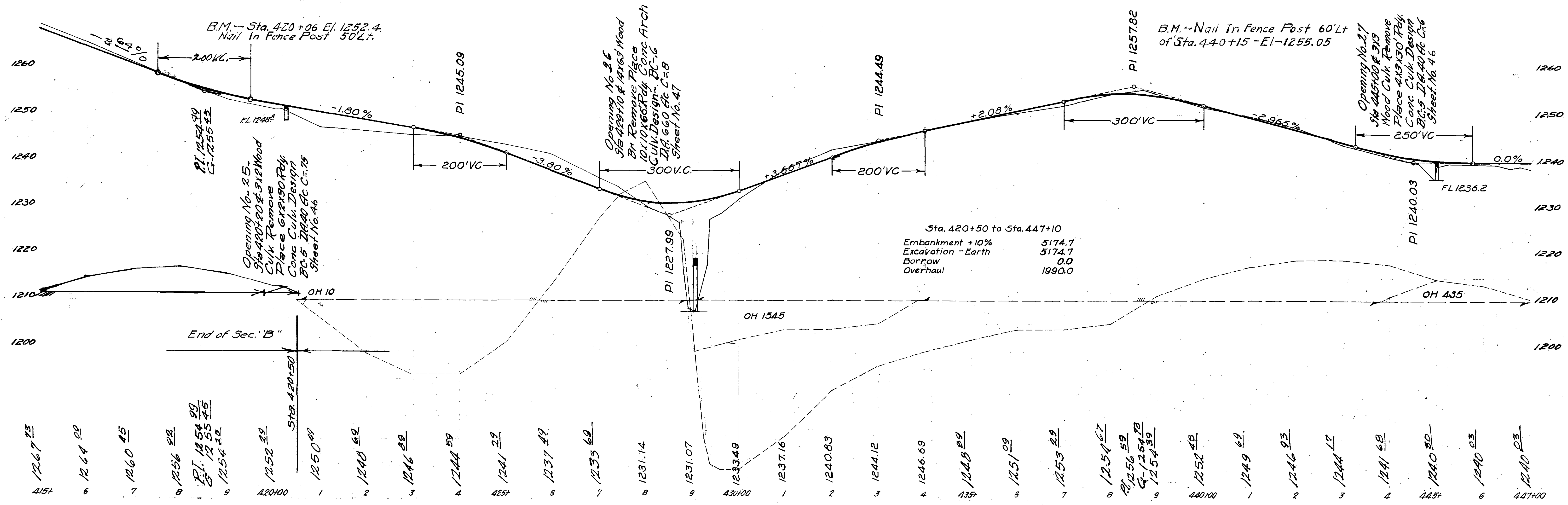
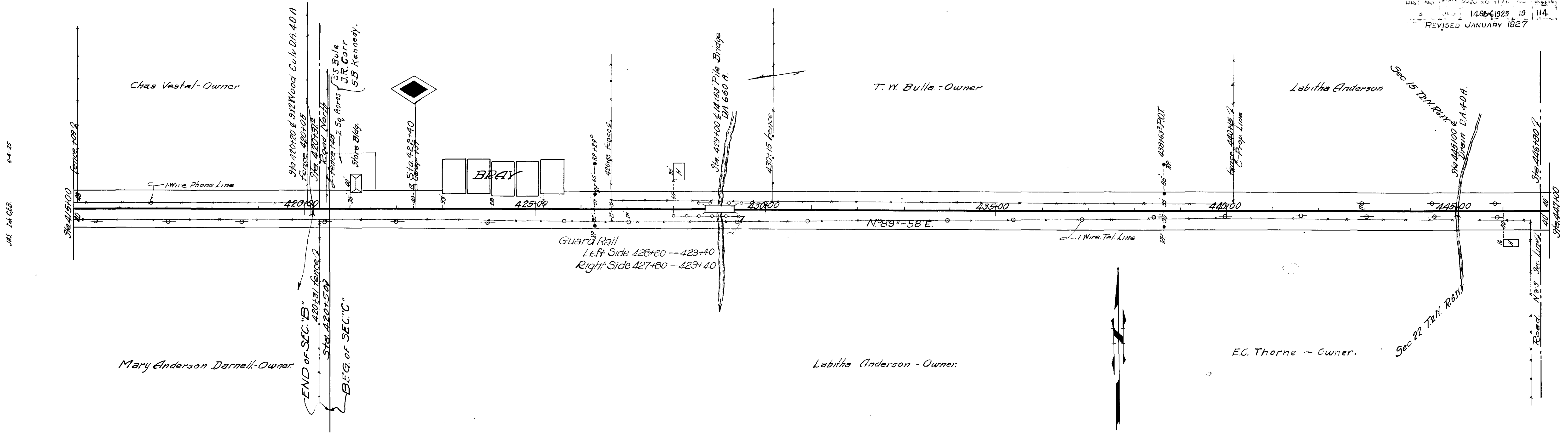
FAP-110-A-E

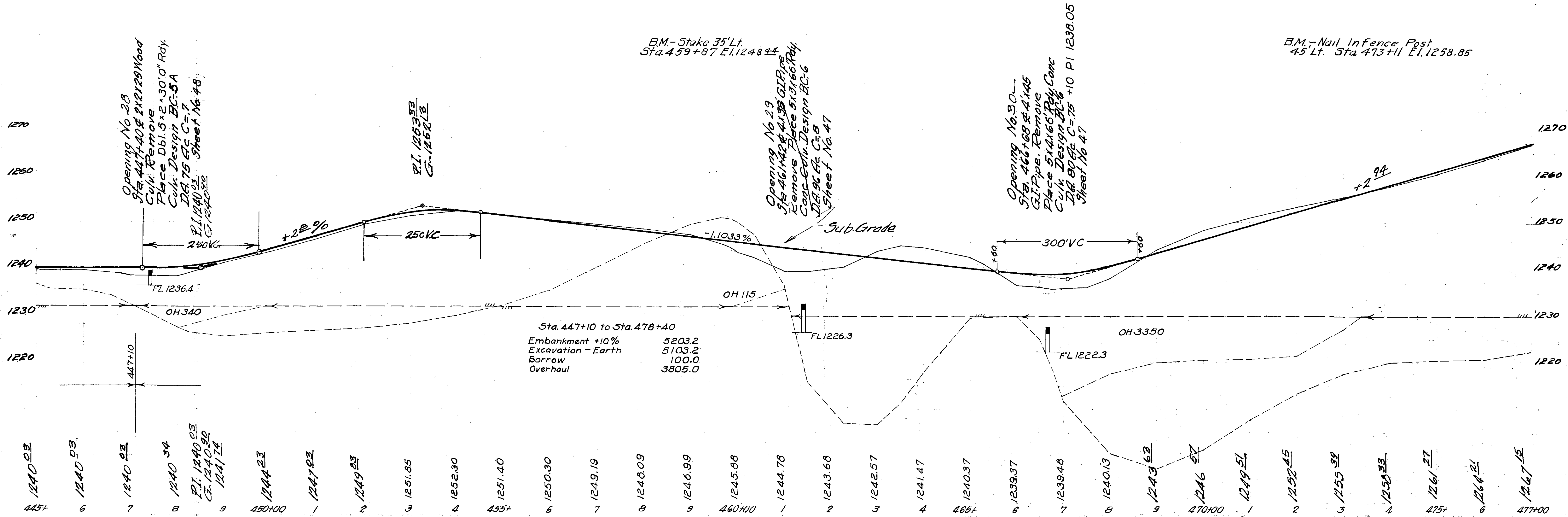
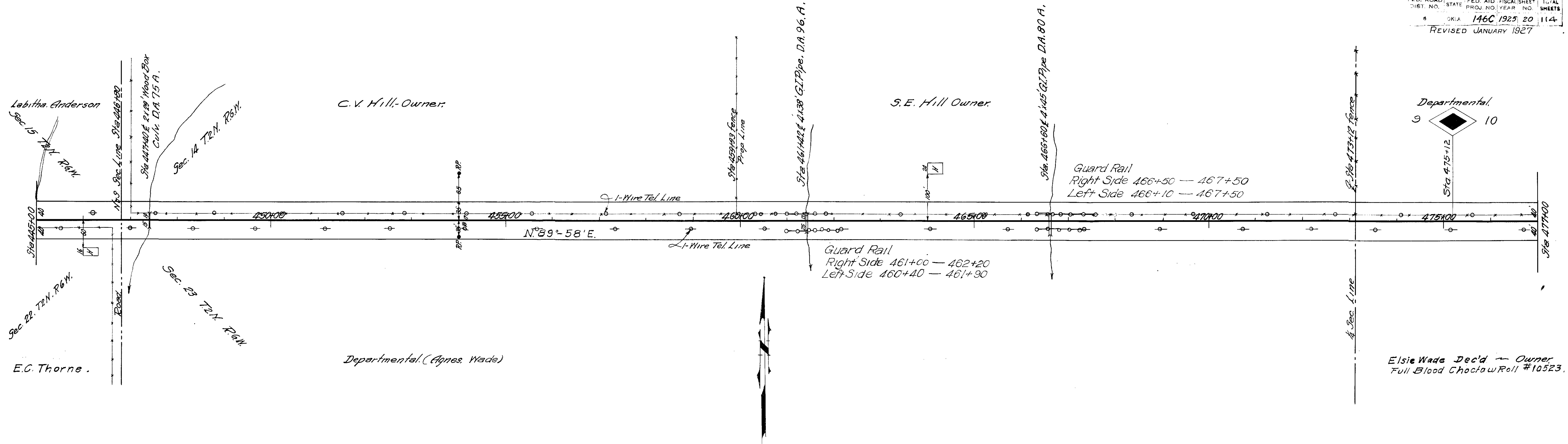
B 18

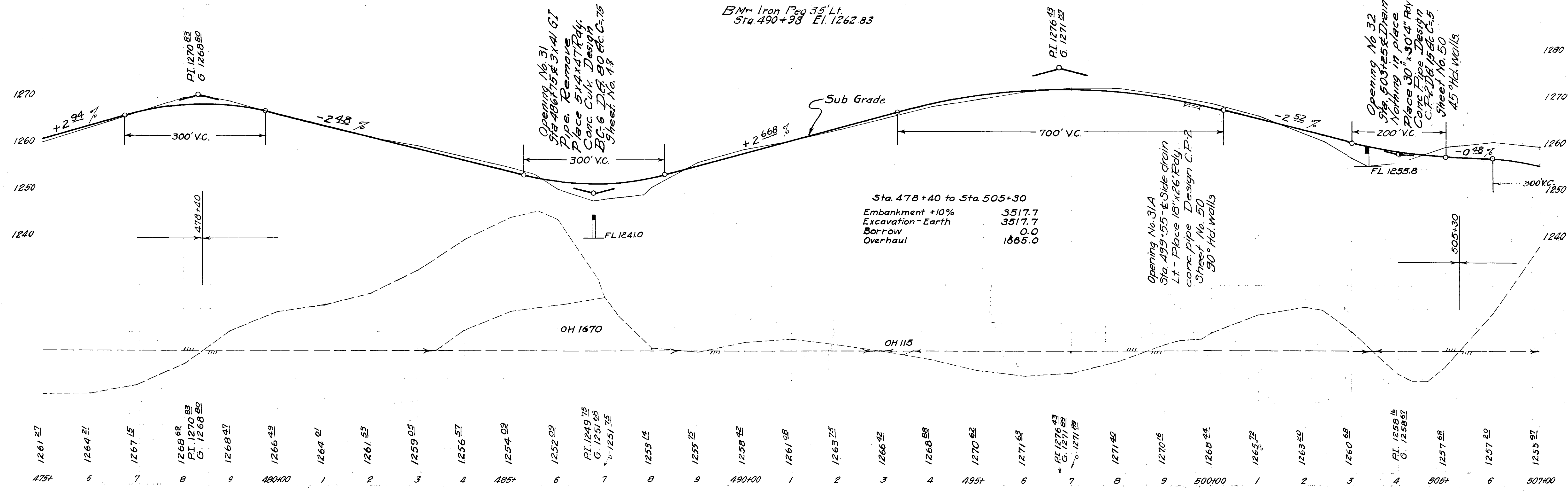
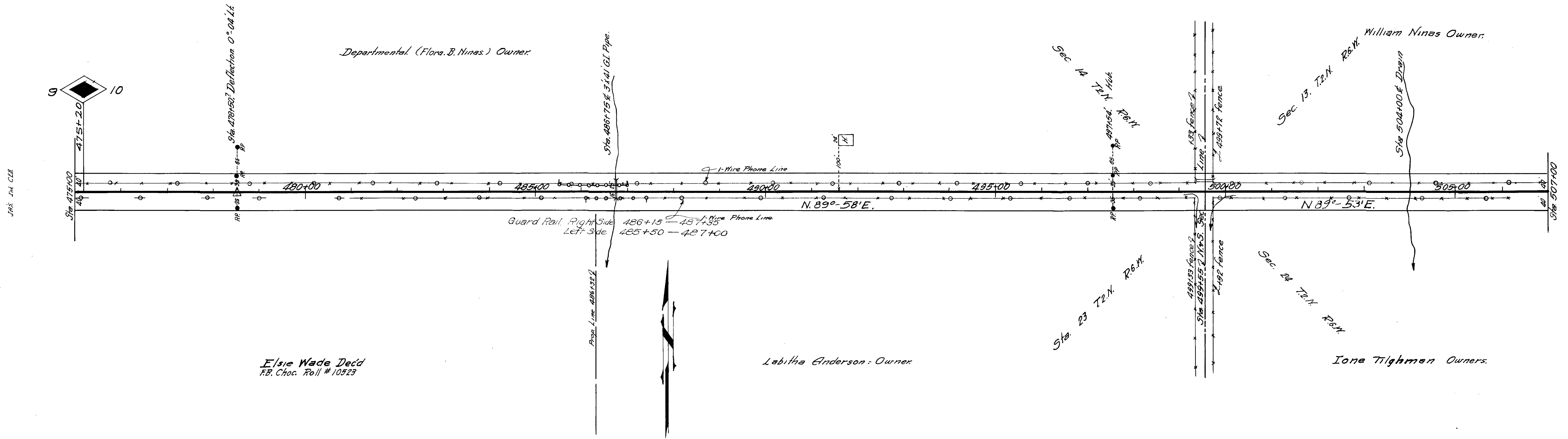


J. Arch. Bone
Civil Engineering
CEB 8-14-26

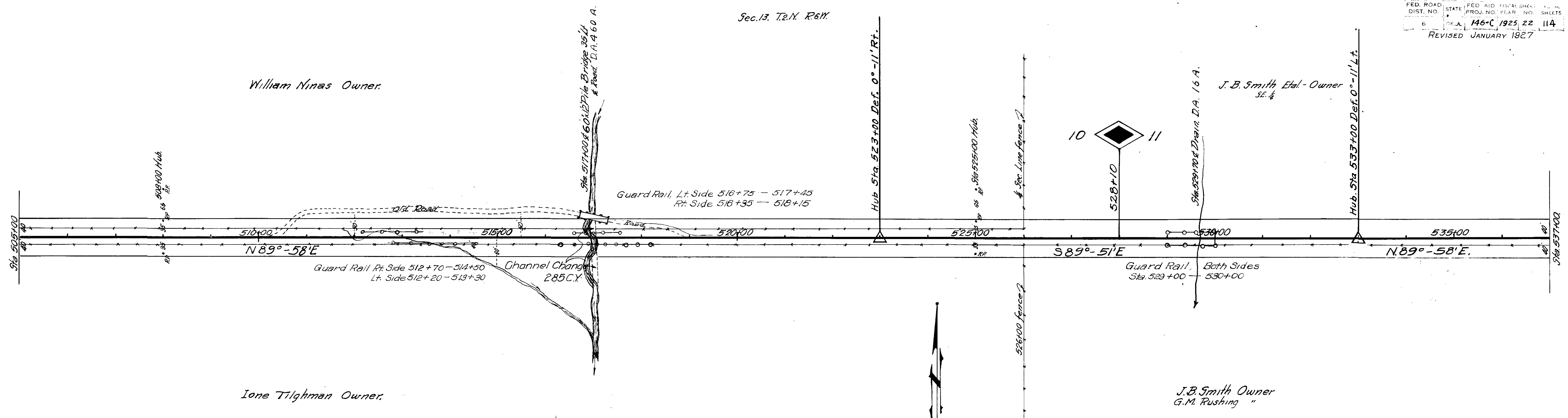




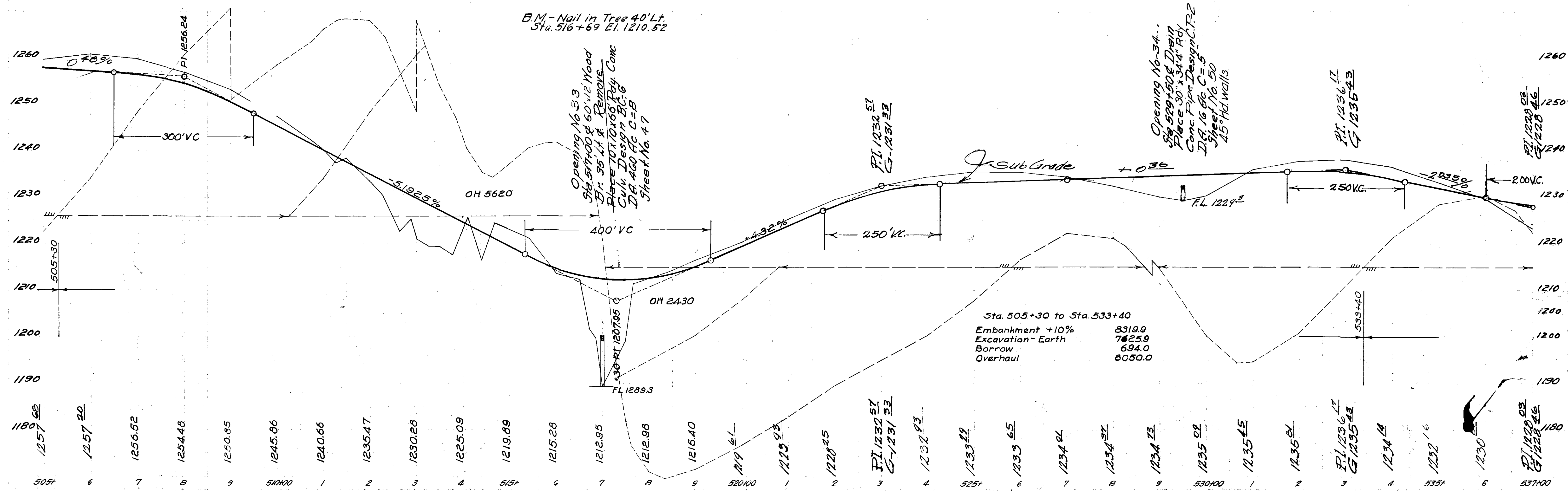


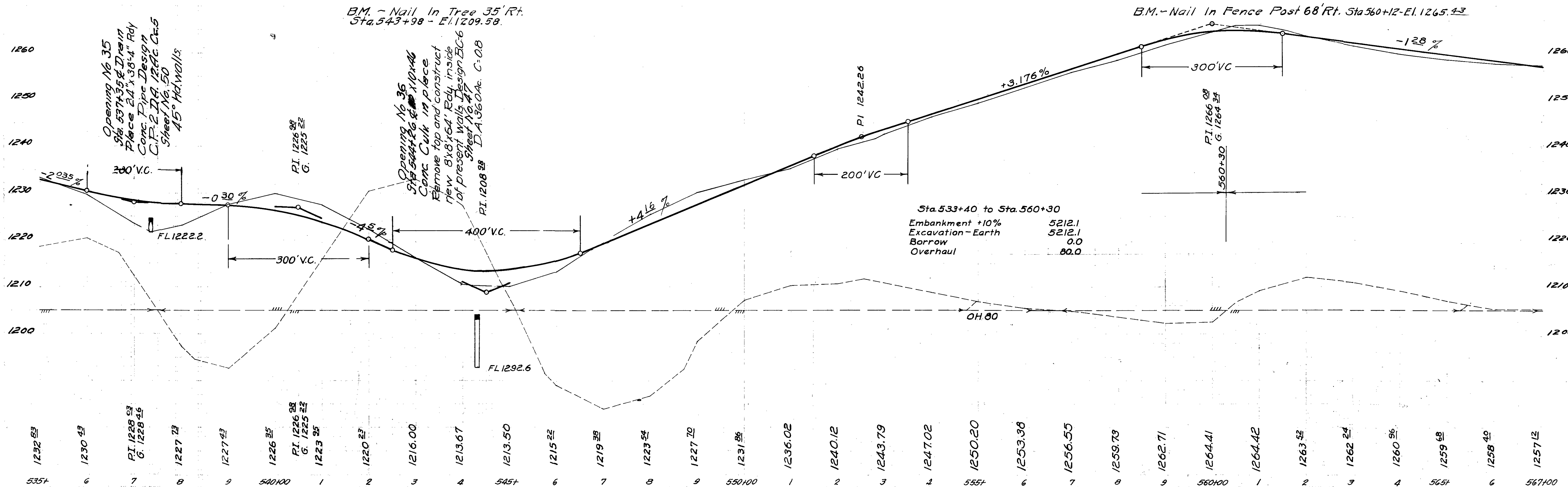
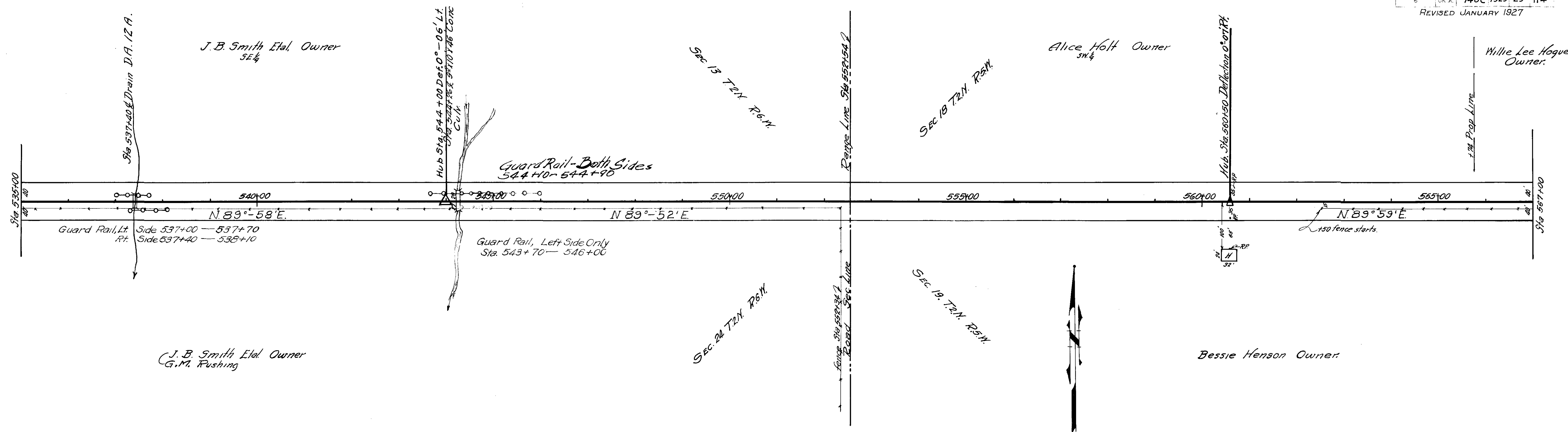


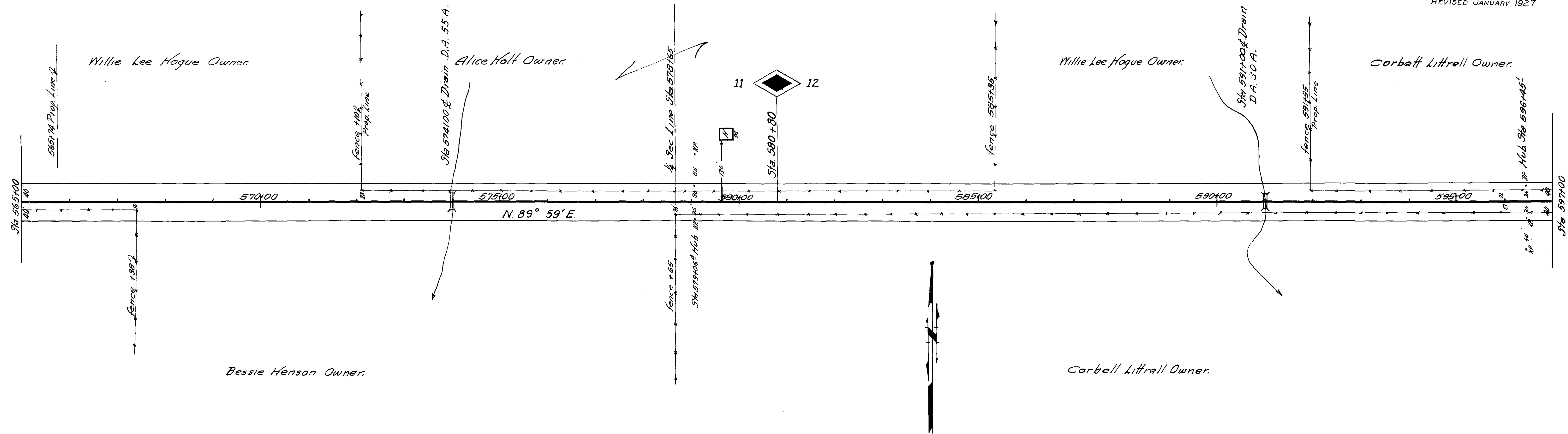
Sec. 13, T.2N. R.6W.



Sec. 24 T.2N. R.6W.

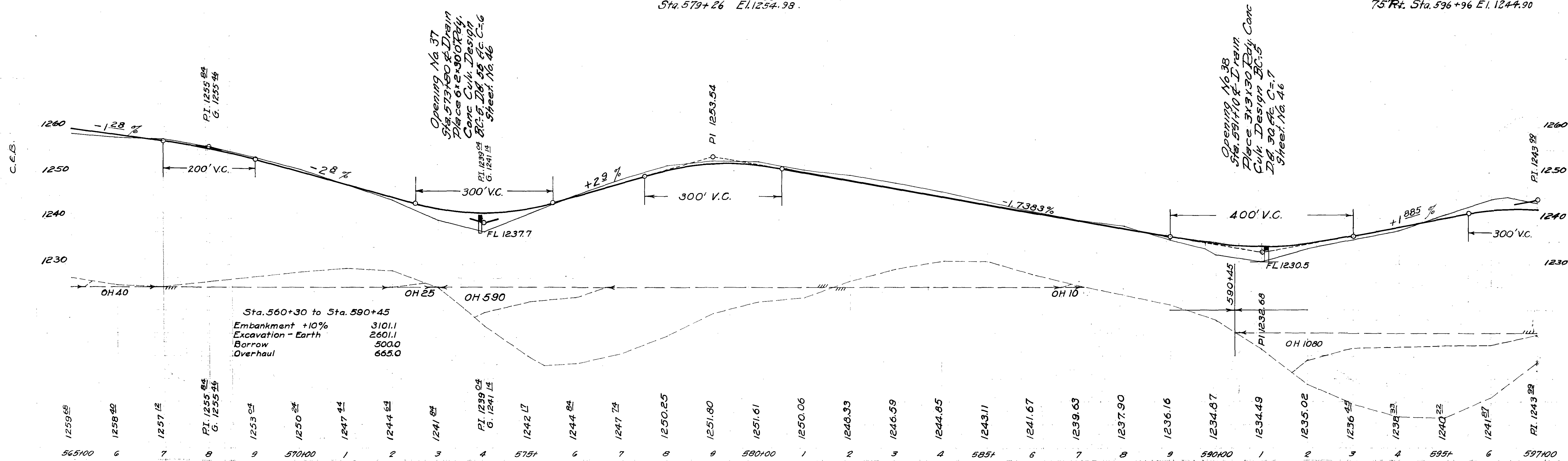




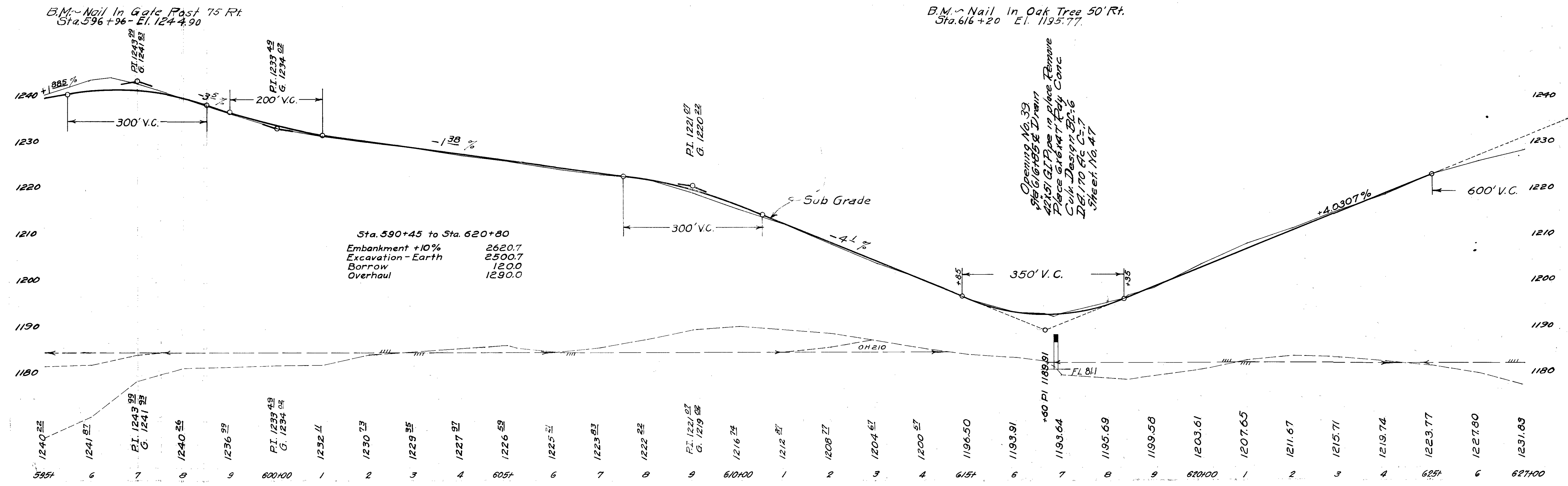
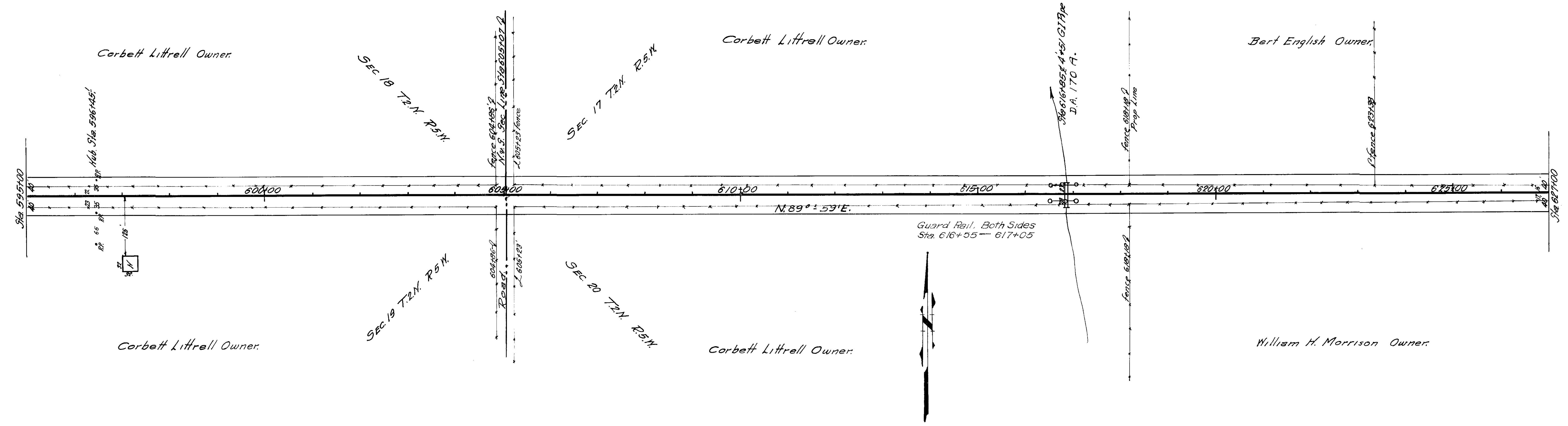


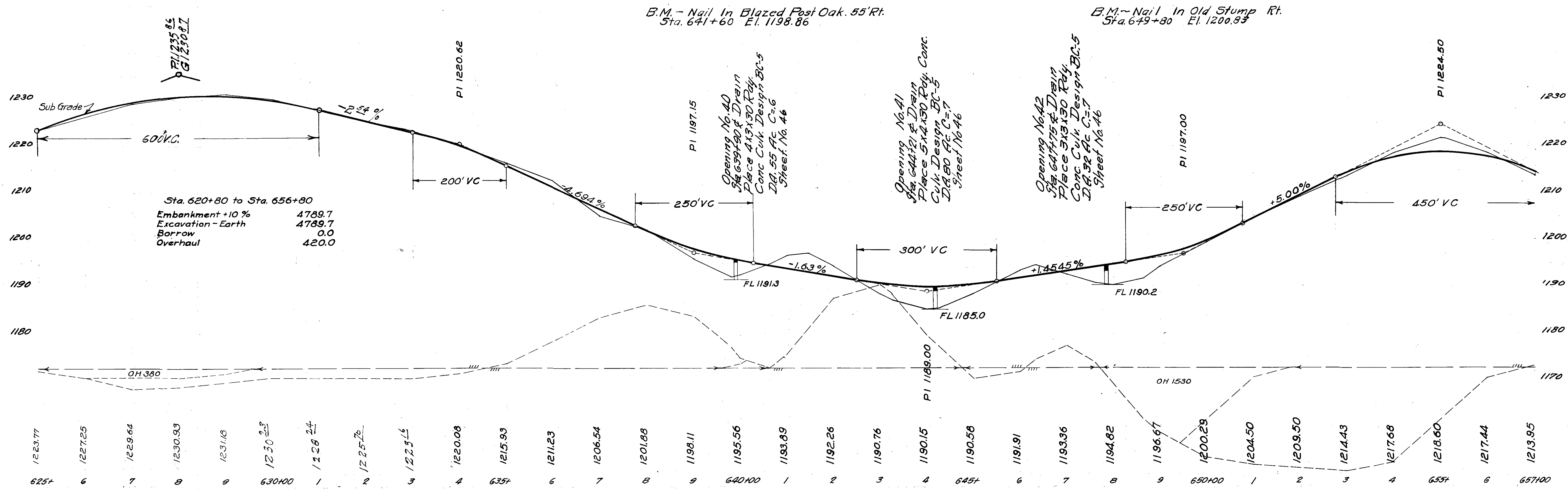
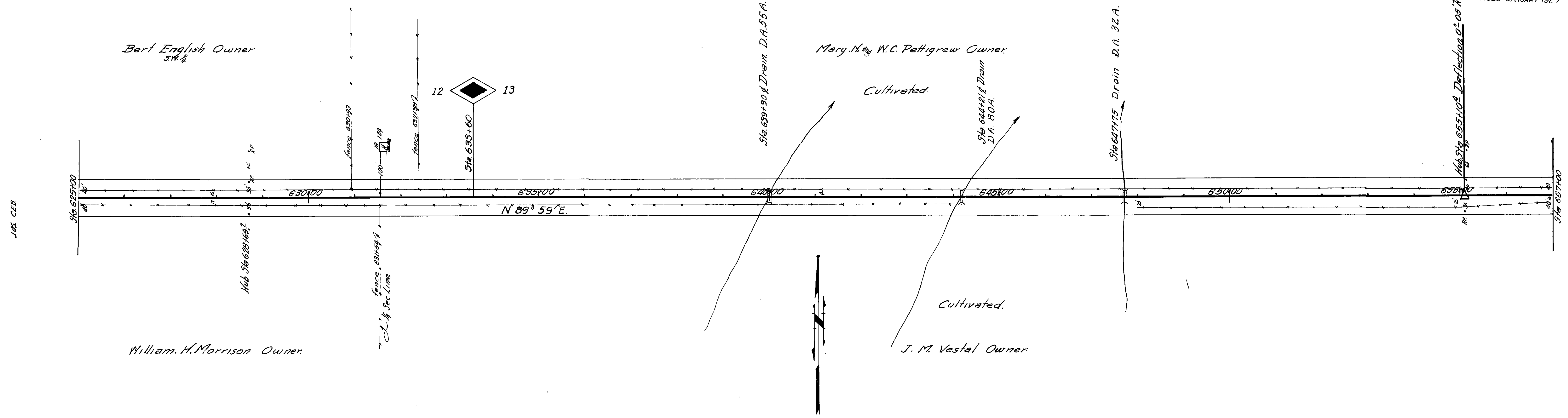
B.M. - Nail In Fence Post 96' Lt.
Sta. 579+26 El. 1254.98

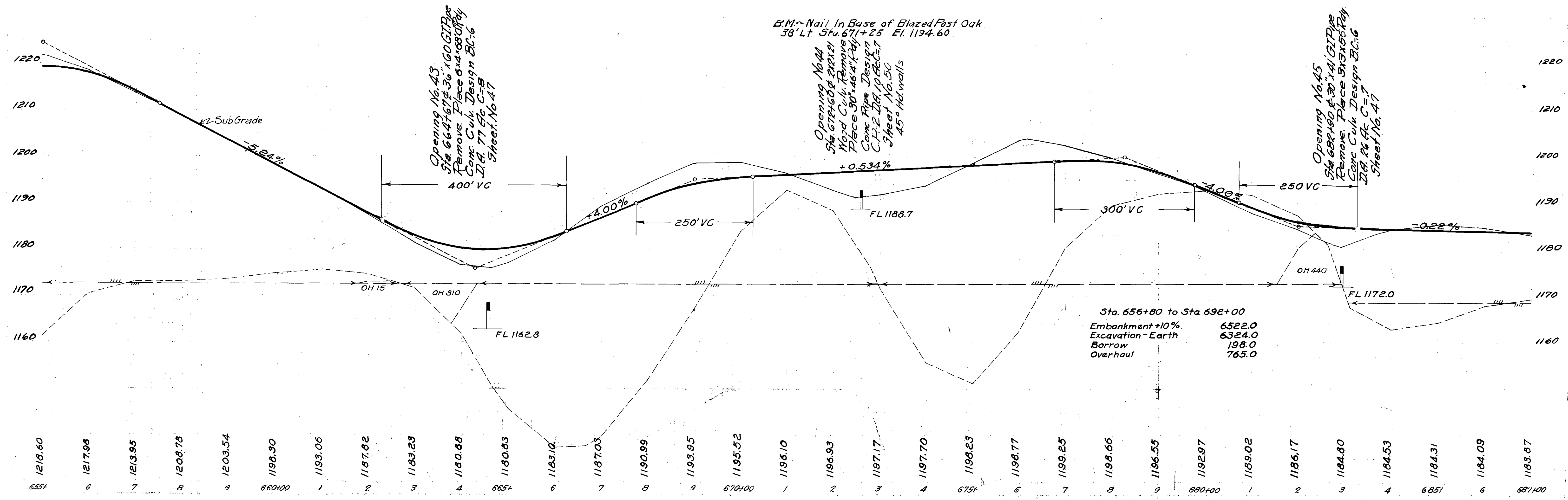
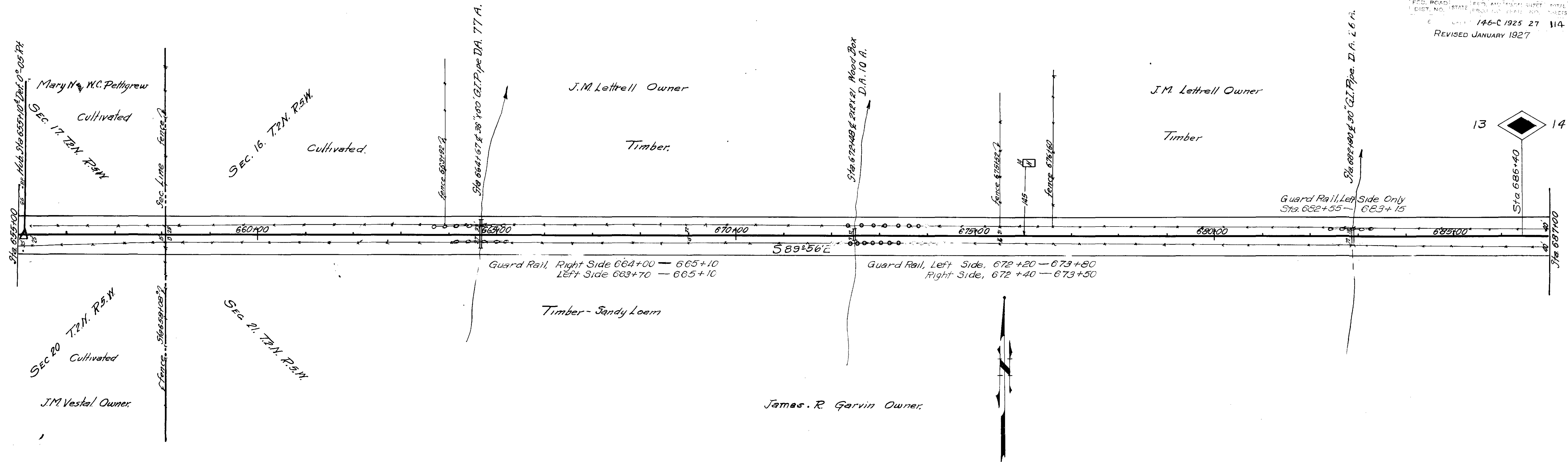
B.M. - Nail In Gate Post
75' Rt. Sta. 596+96 El. 1244.90

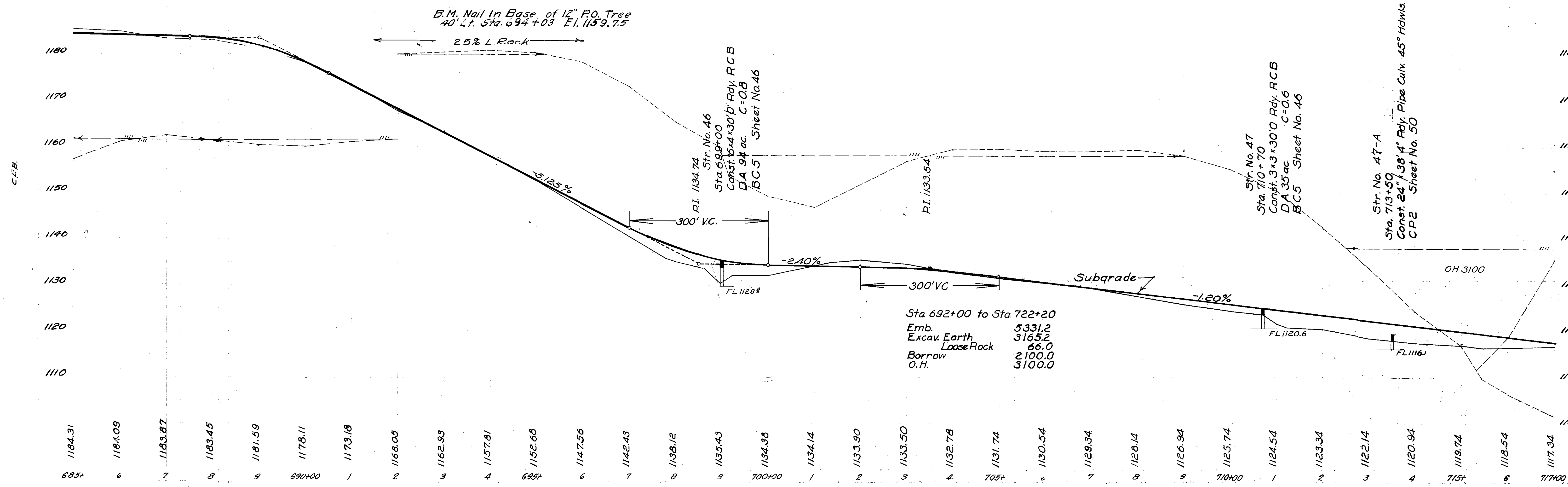
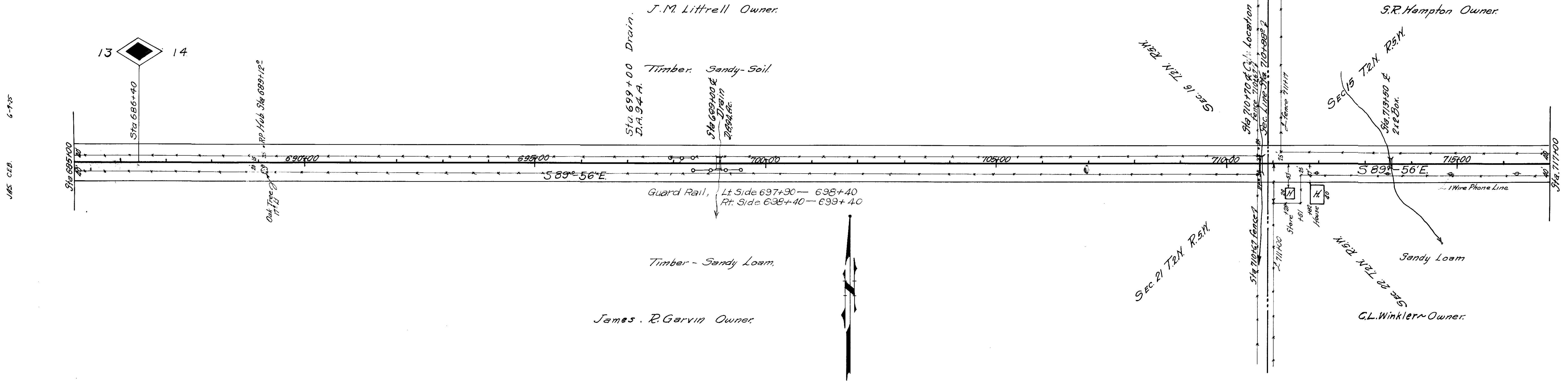


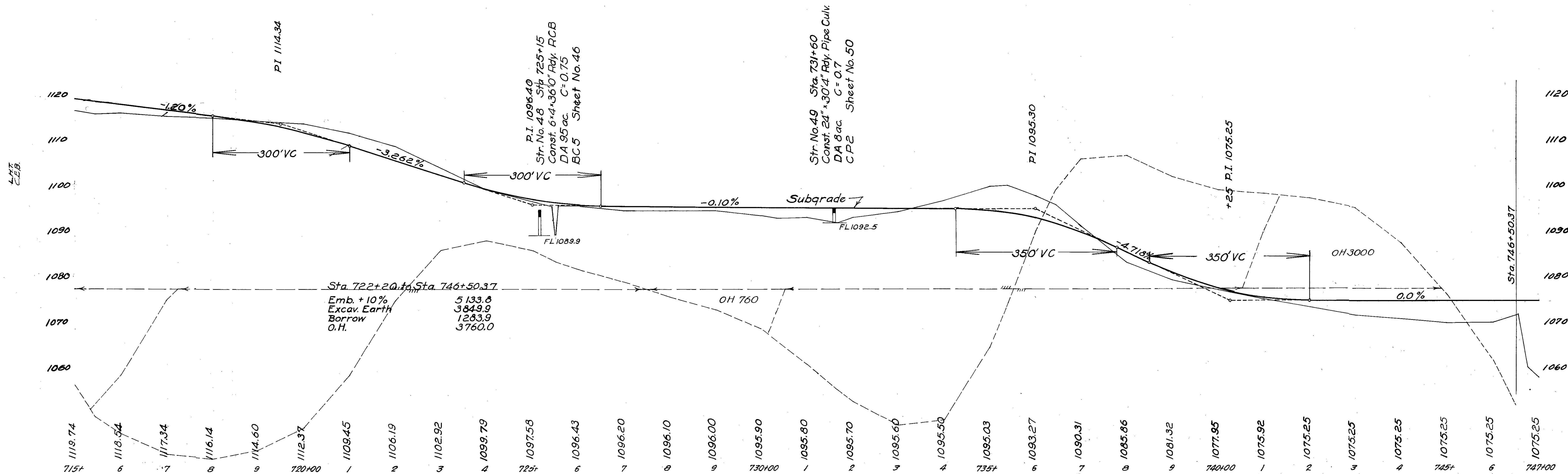
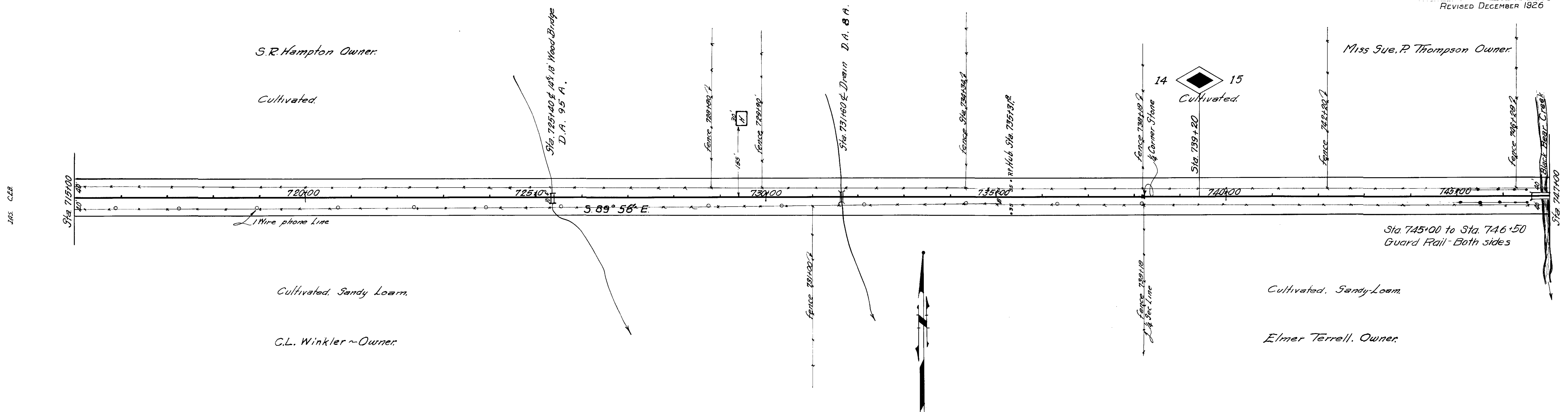
JMS. CEB

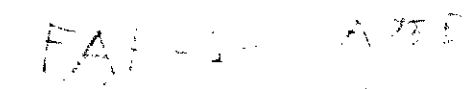
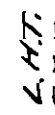


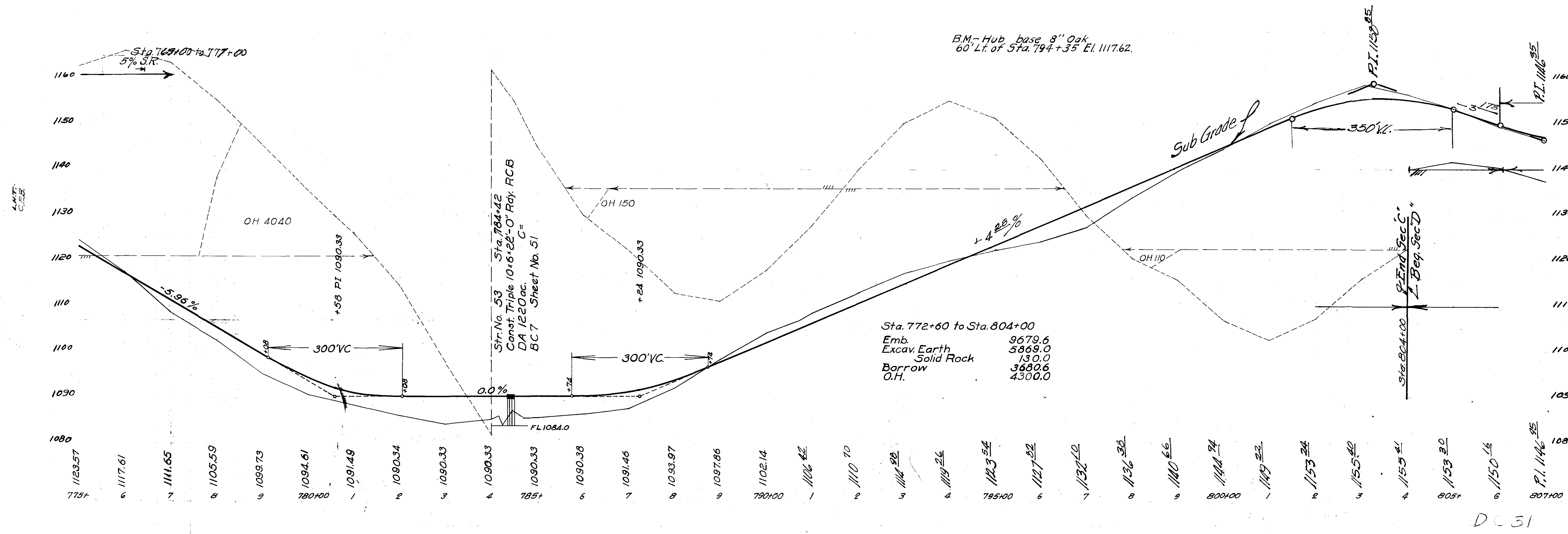
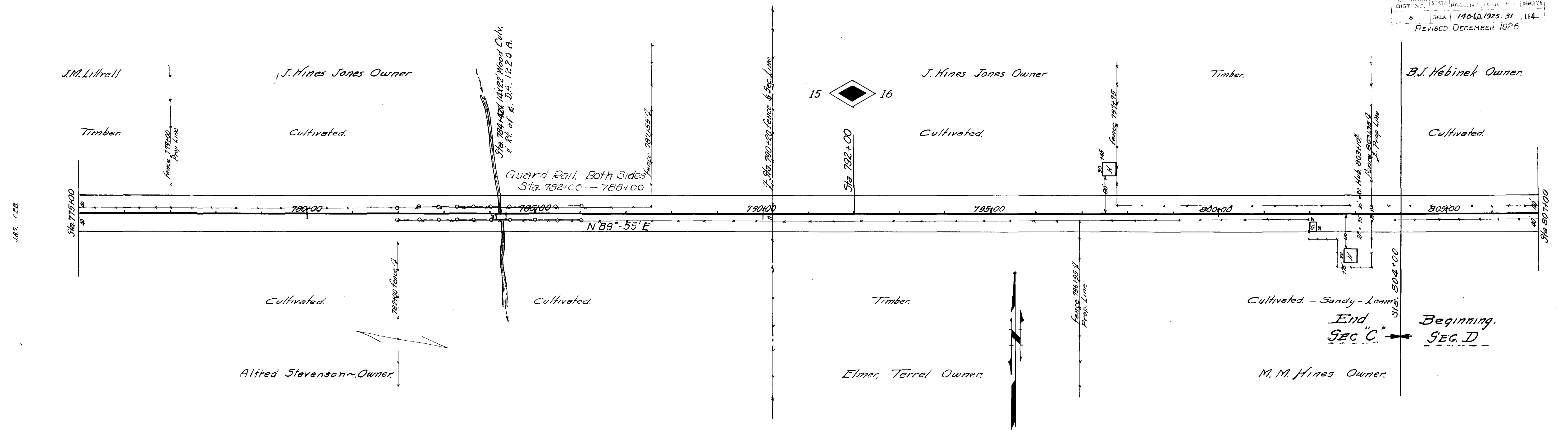






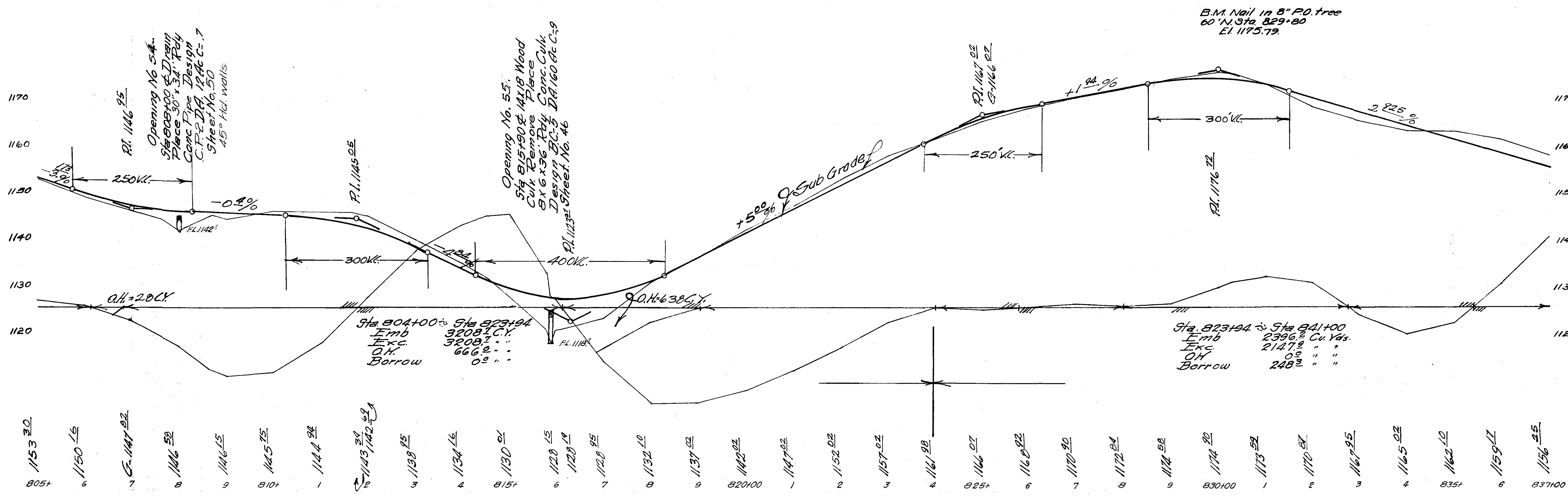
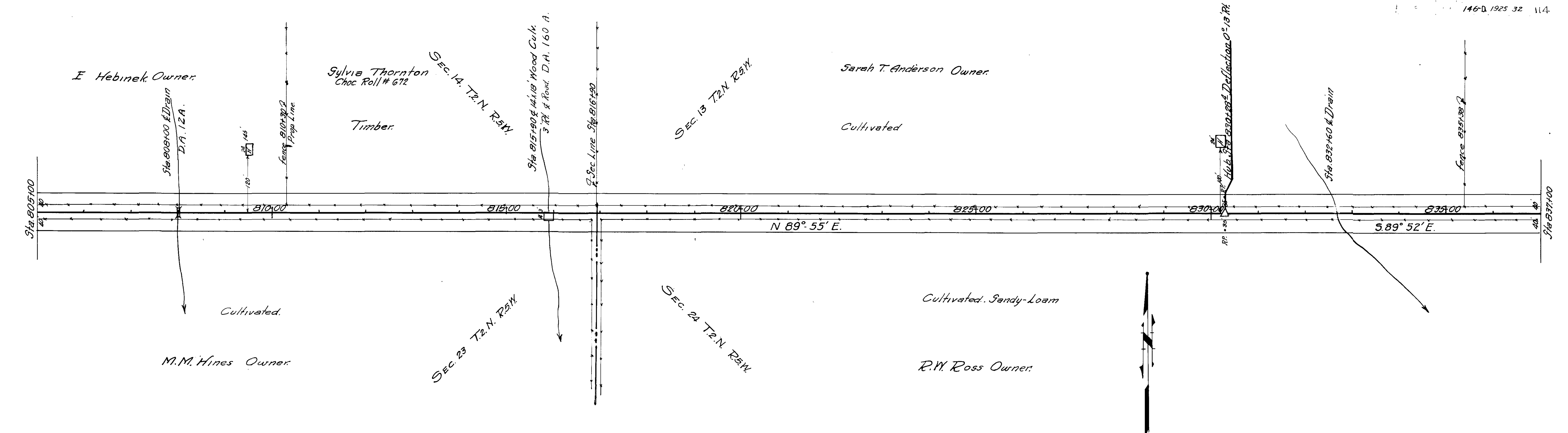






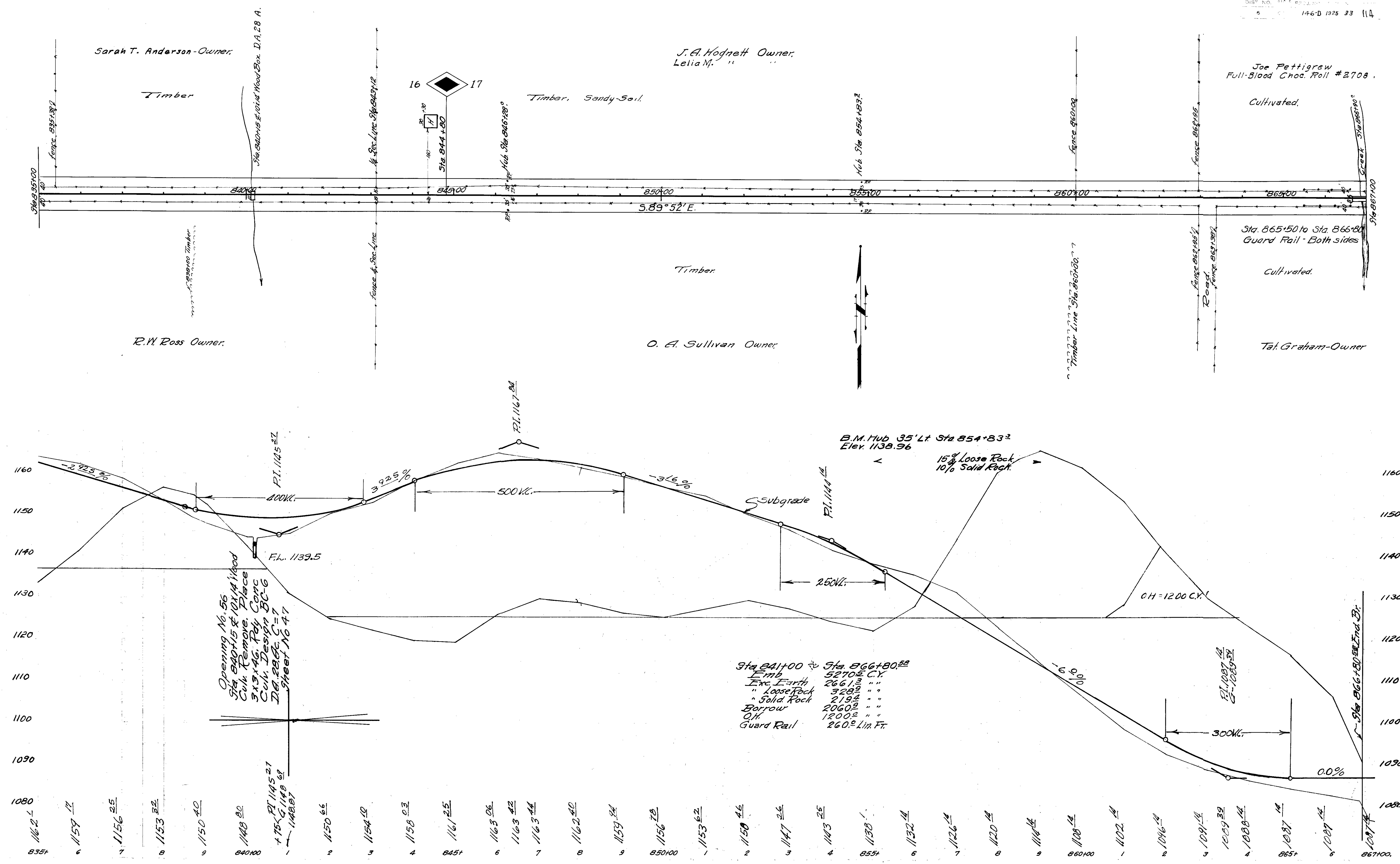
Sta. 805+00

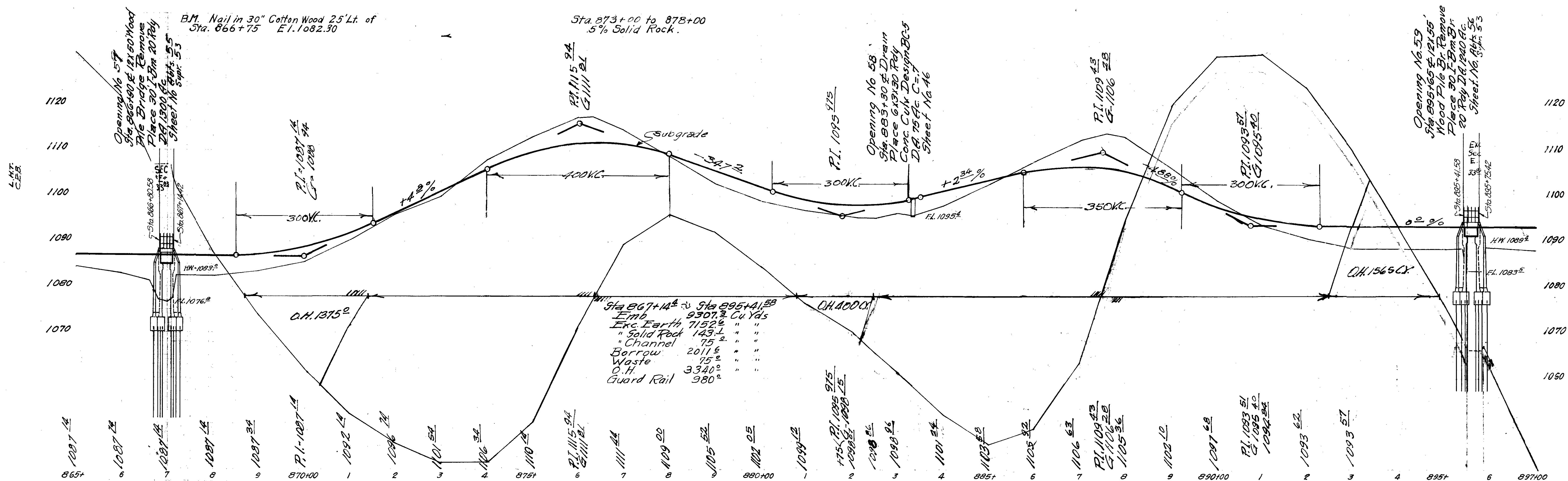
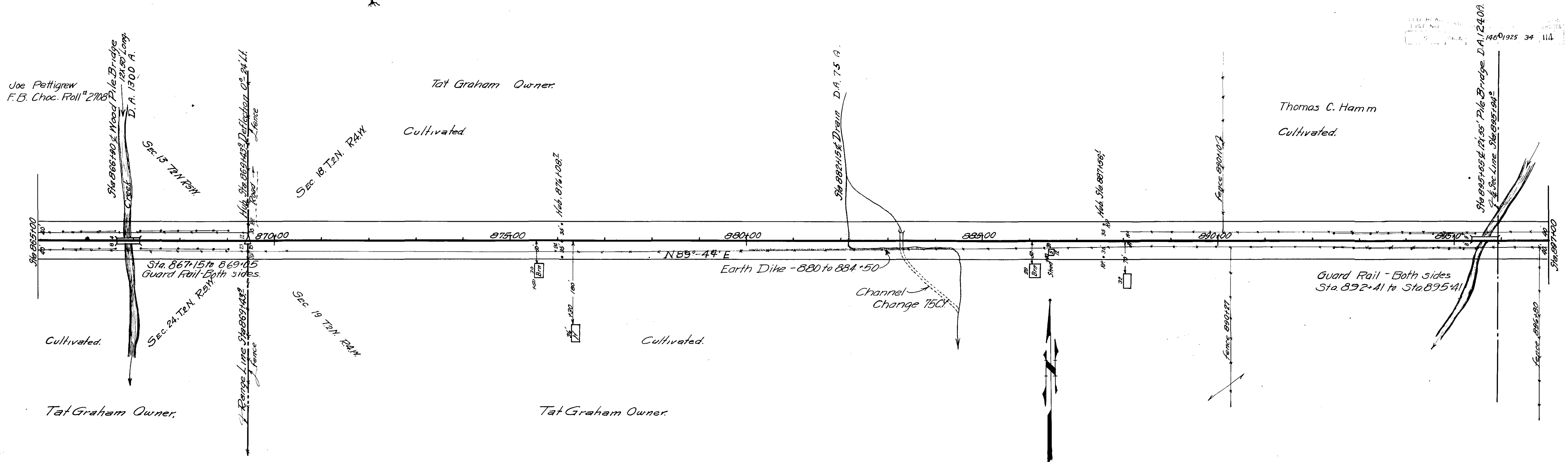
Sta. 837+00



145 C28

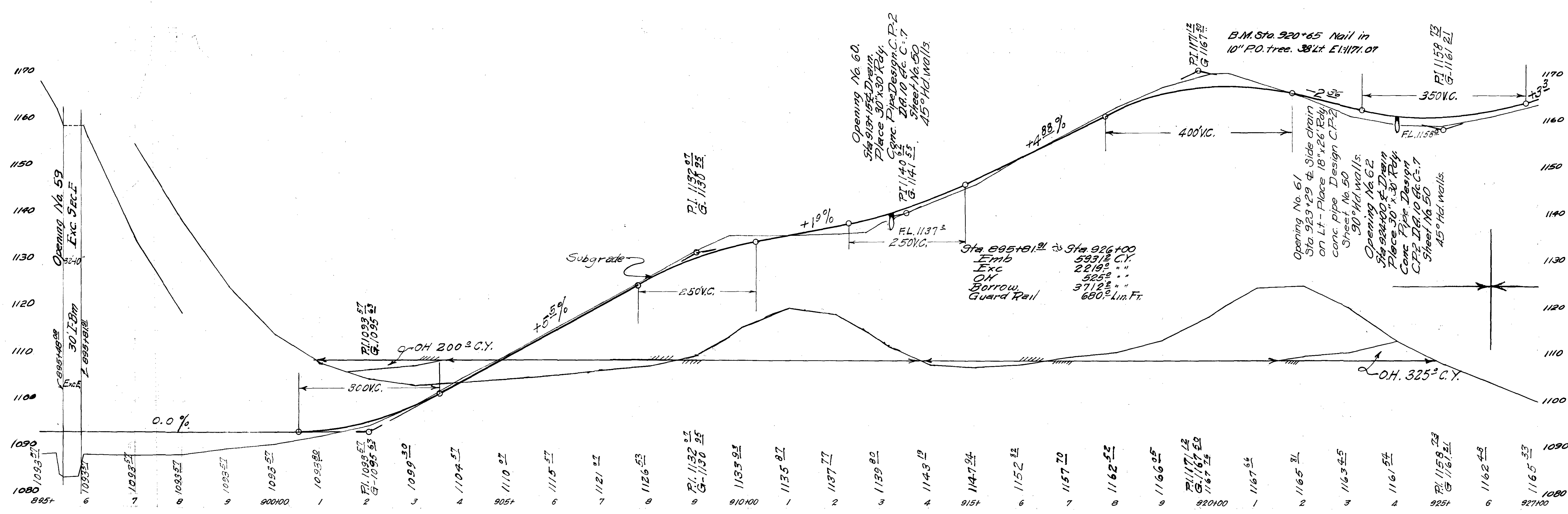
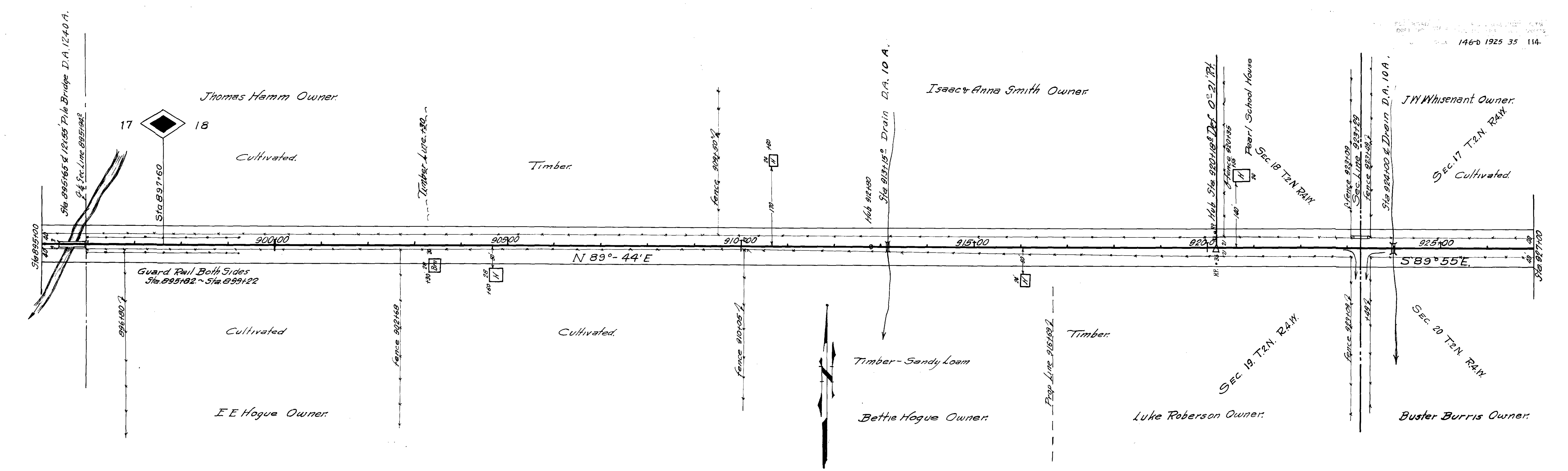
2443

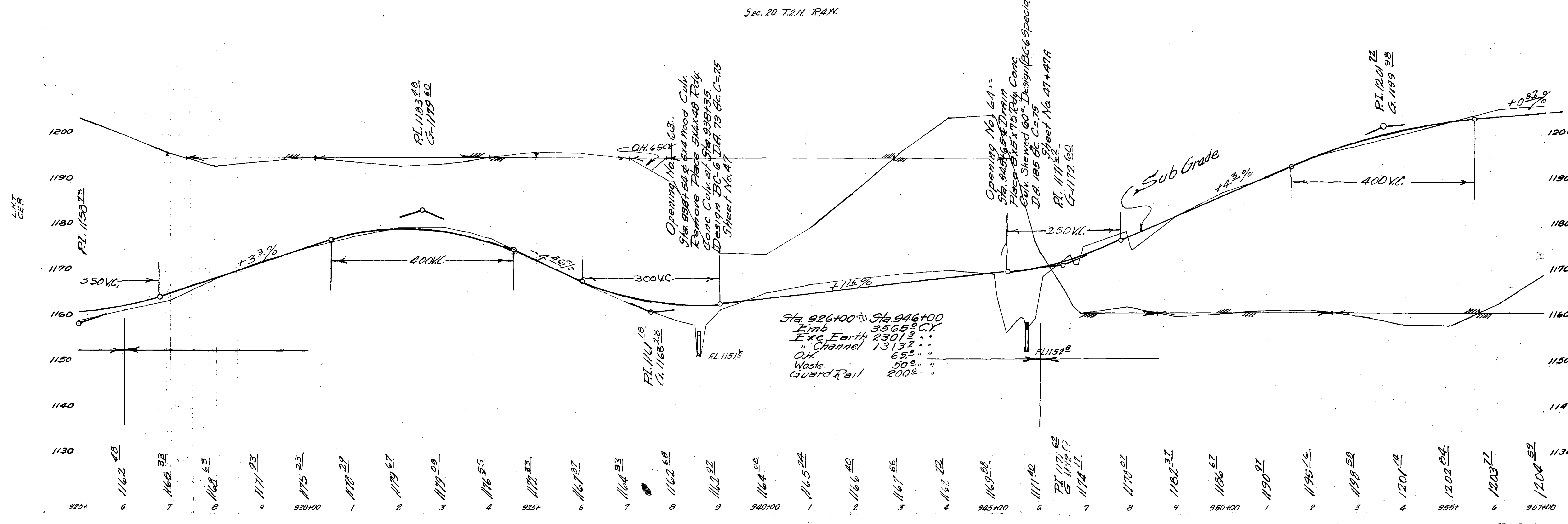
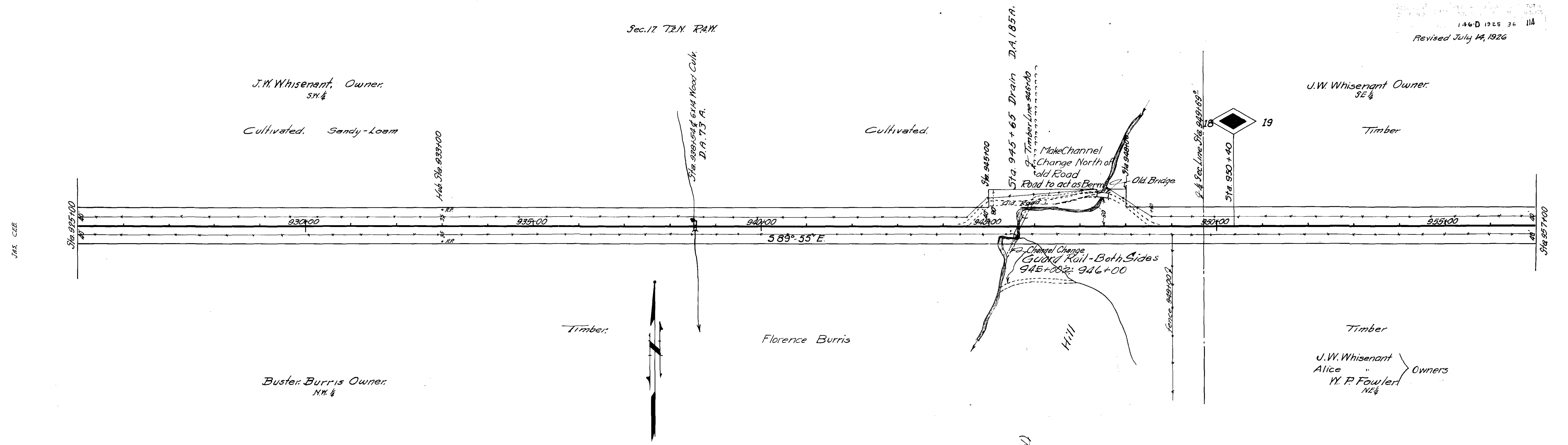


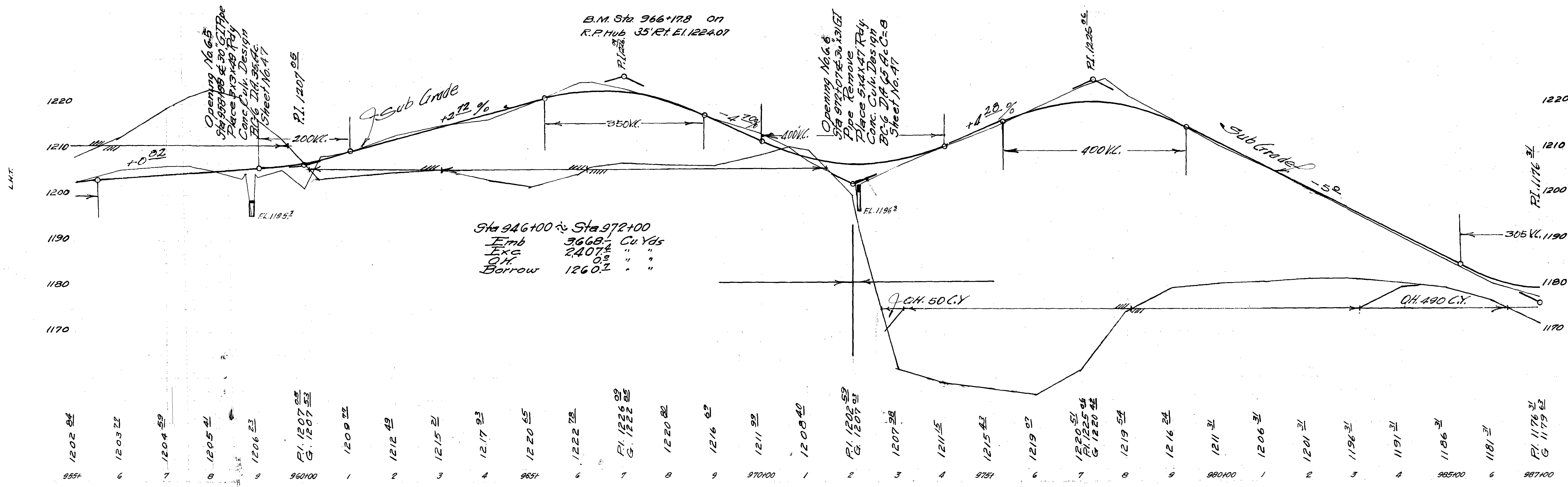
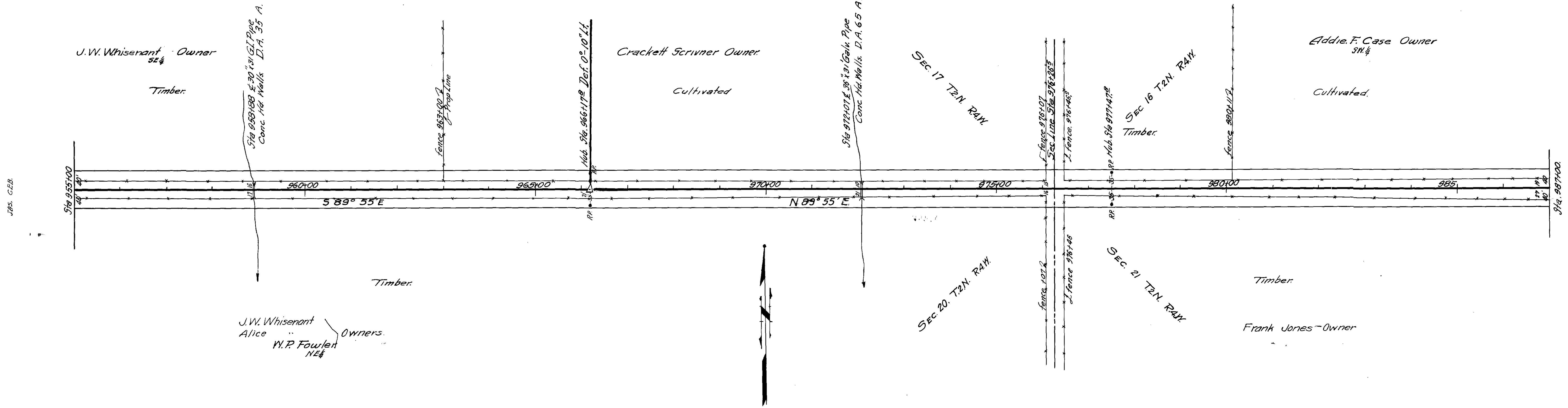


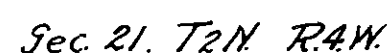
JAS. CLEB

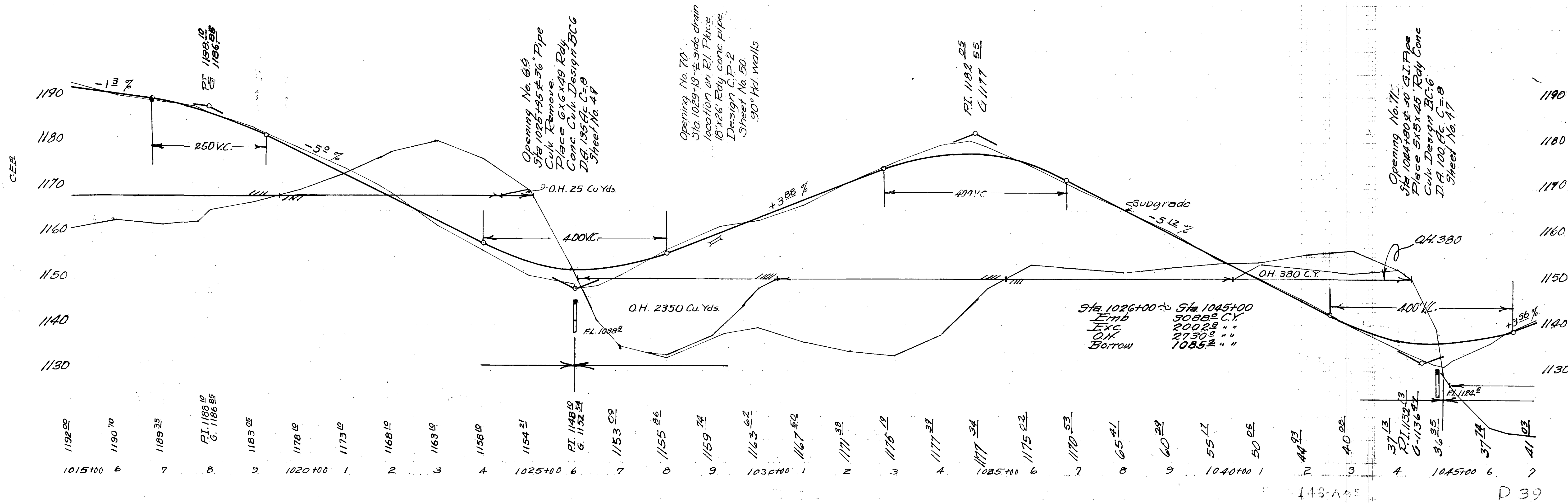
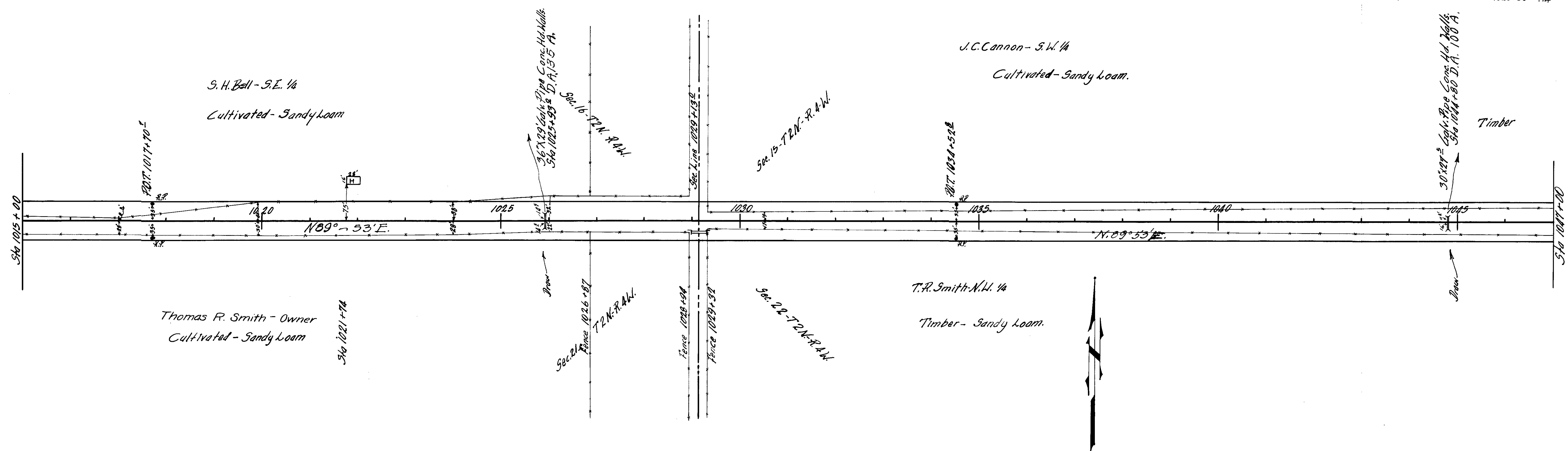
L.M.T.

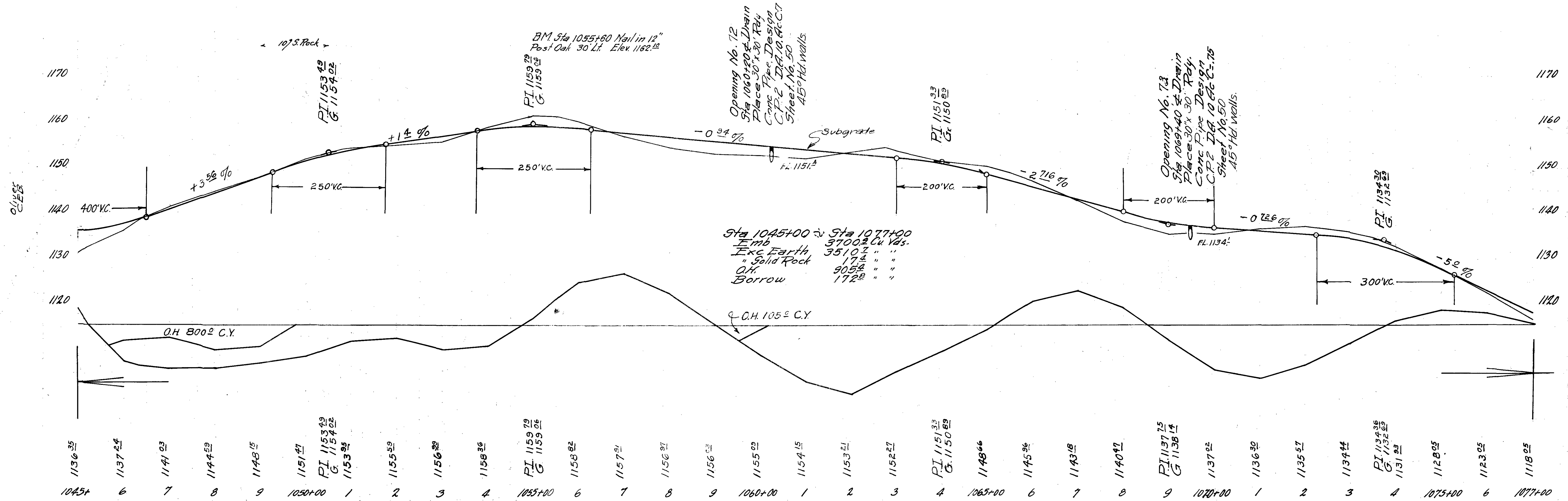
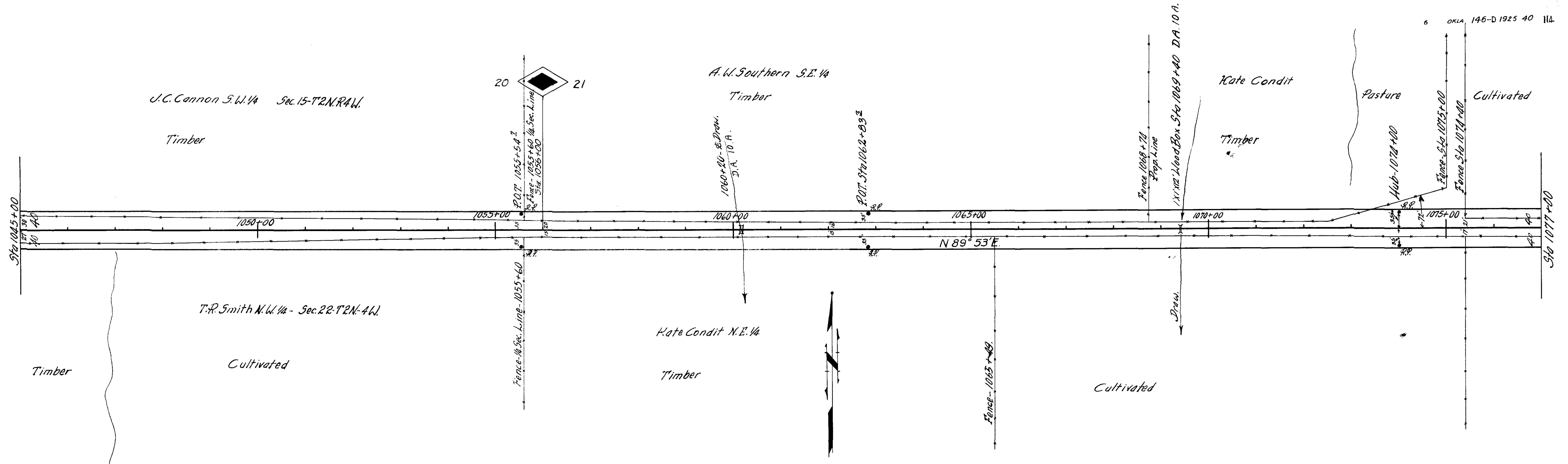






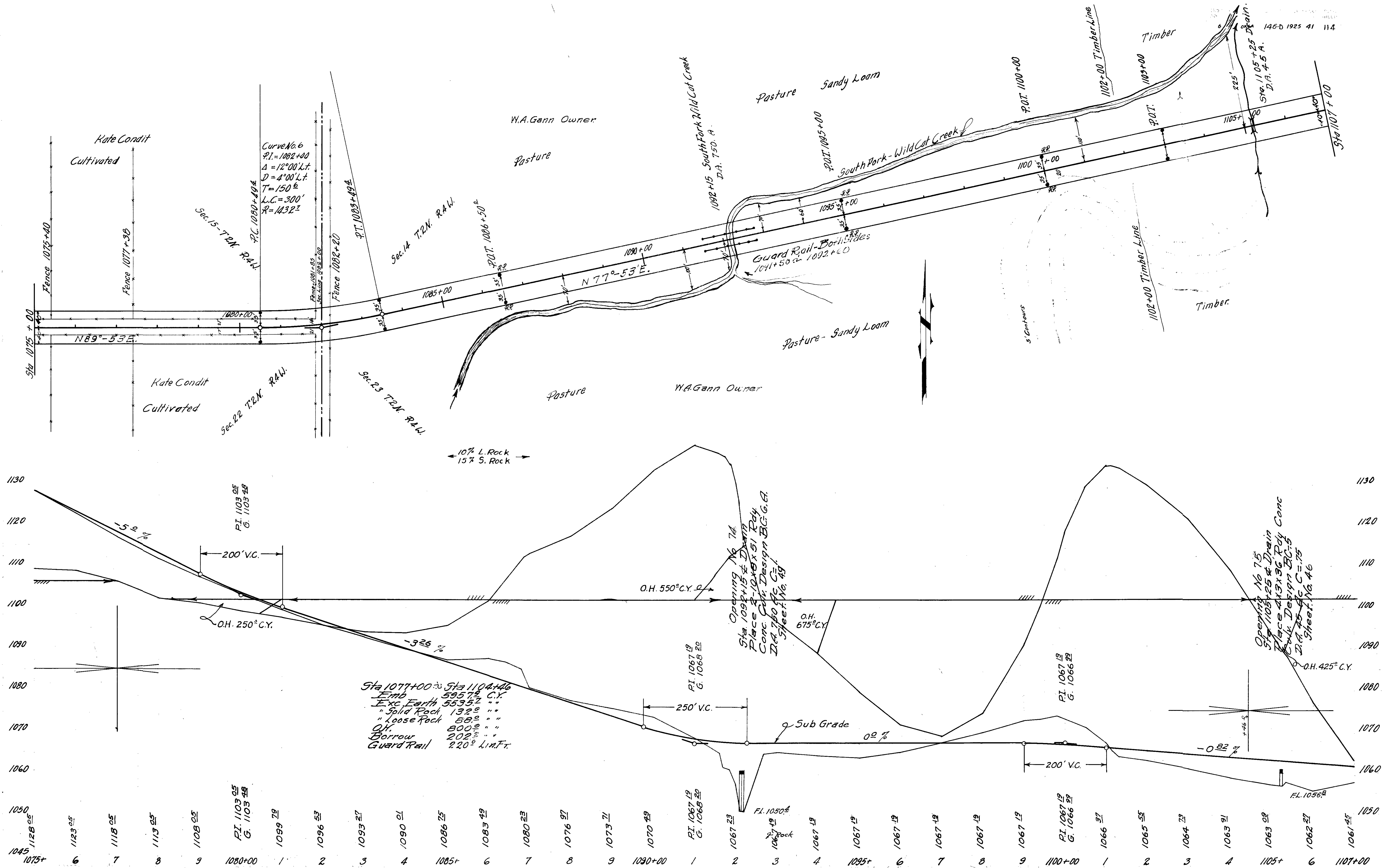






4117 CEB

CEB



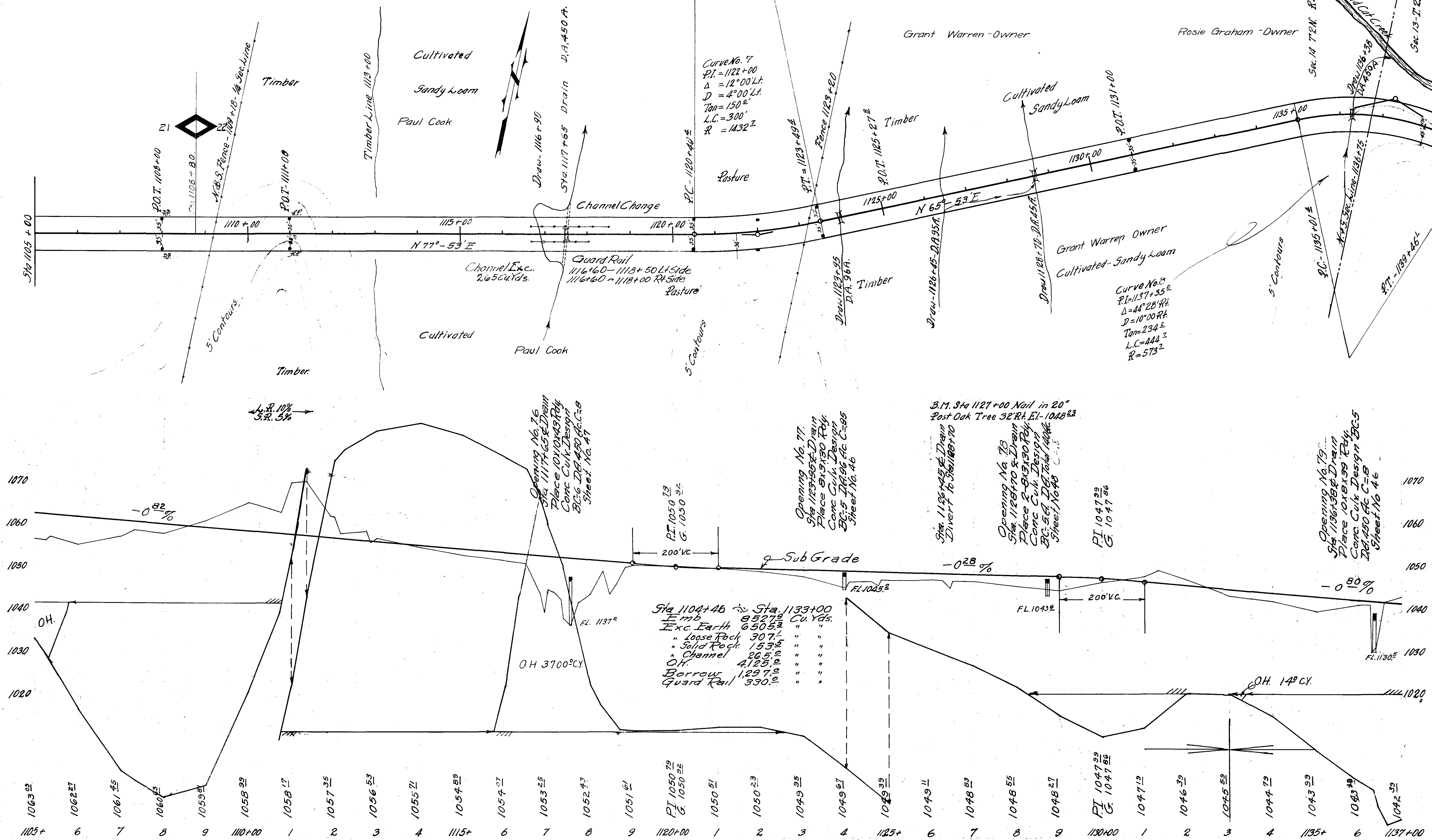
146-D 1925 41 114

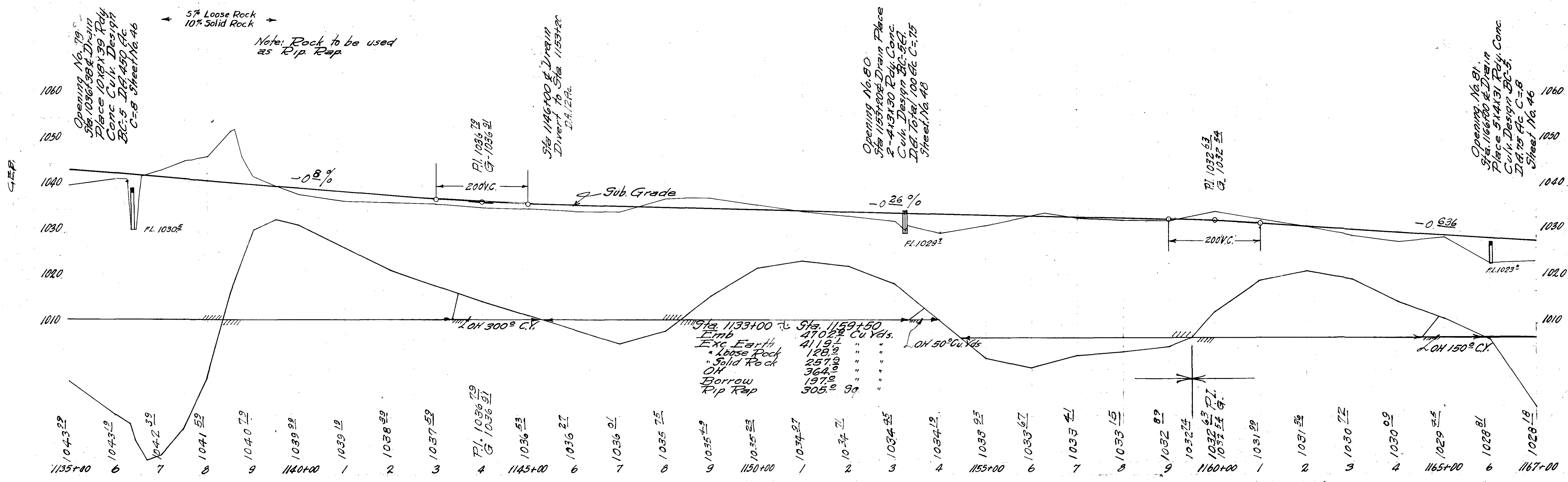
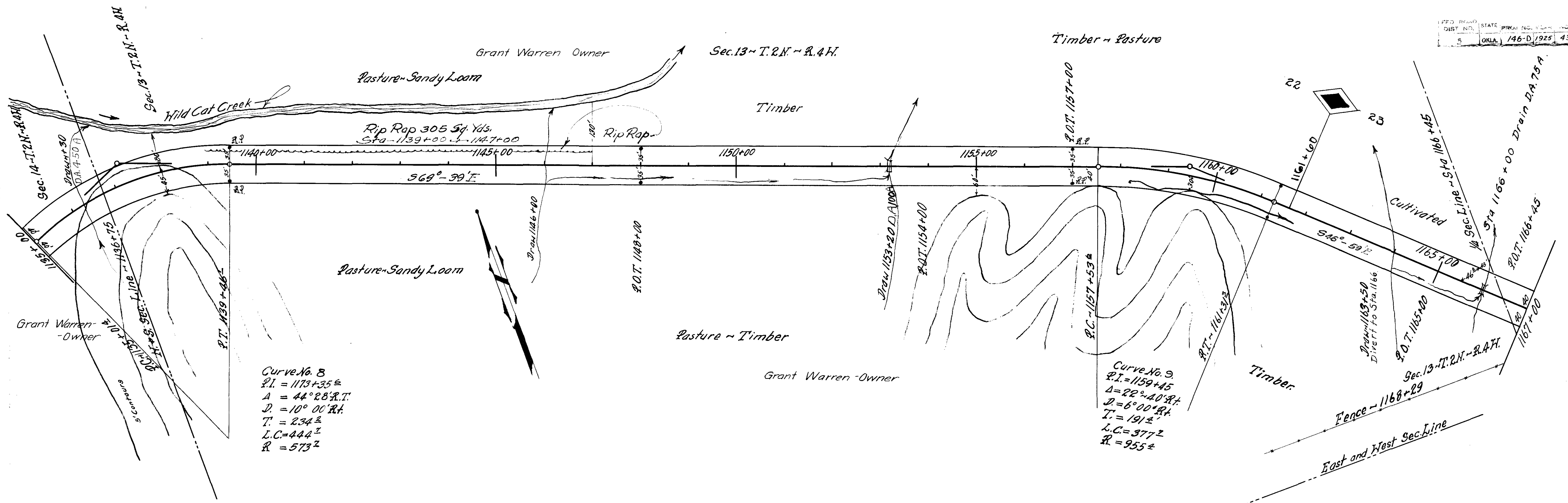
D 71

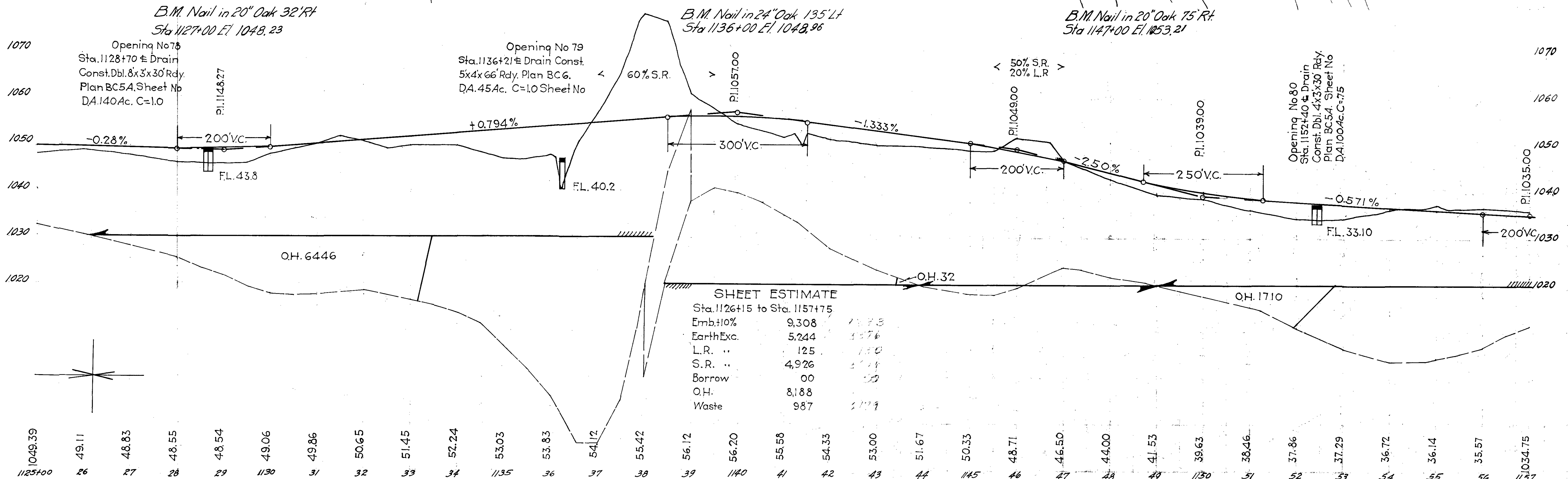
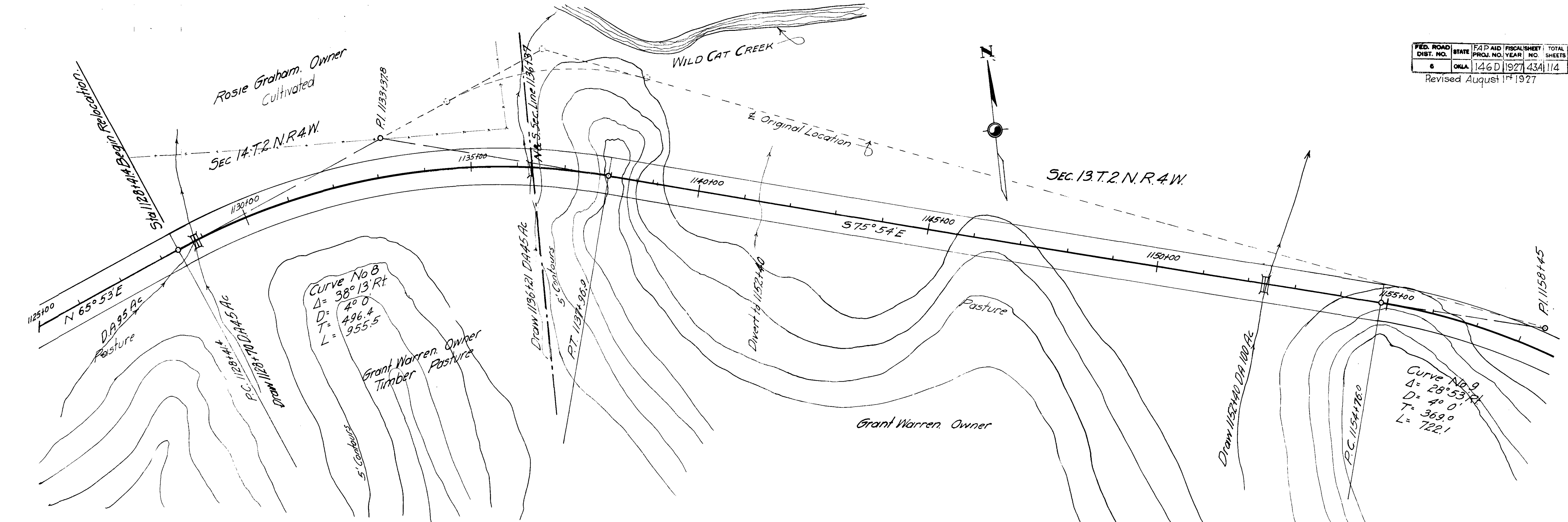
Sec. 14-T.2N-R.4W.

L.H.T. C.E.B.

C.E.B.



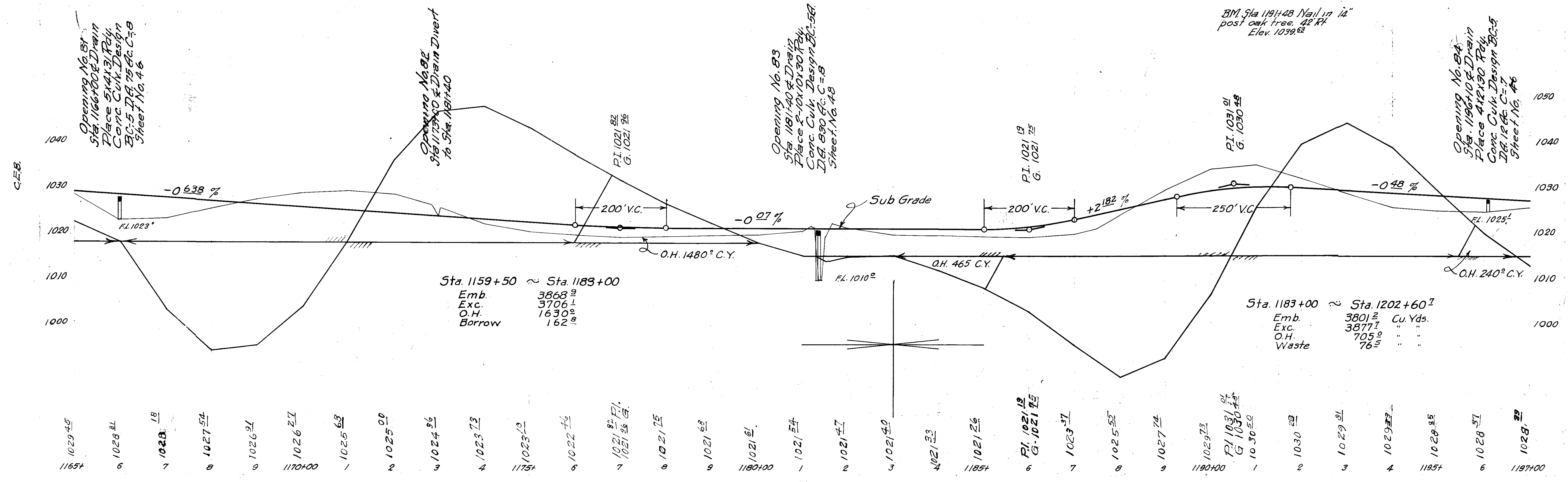
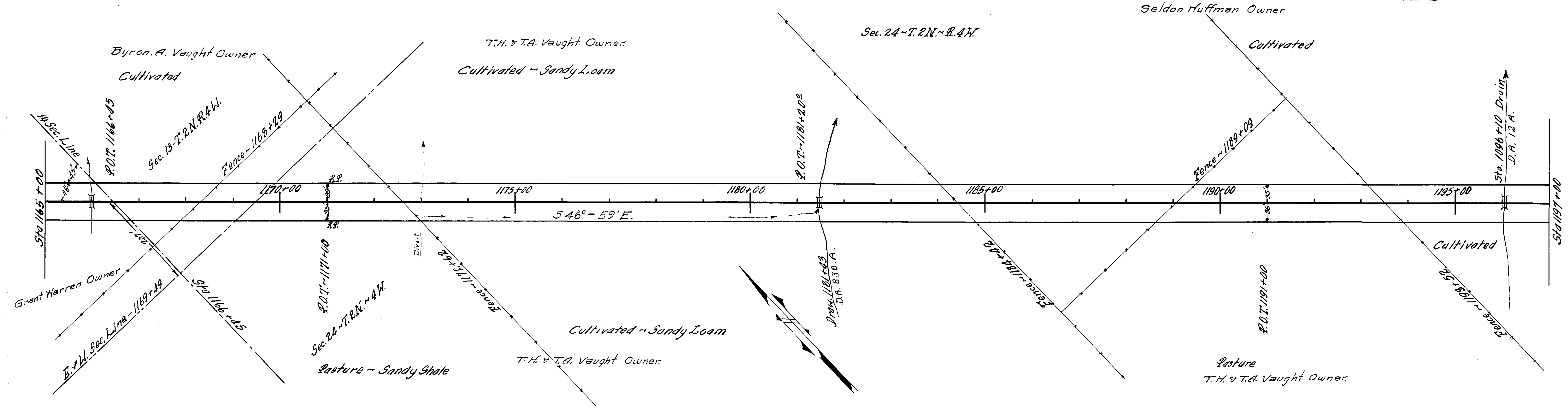


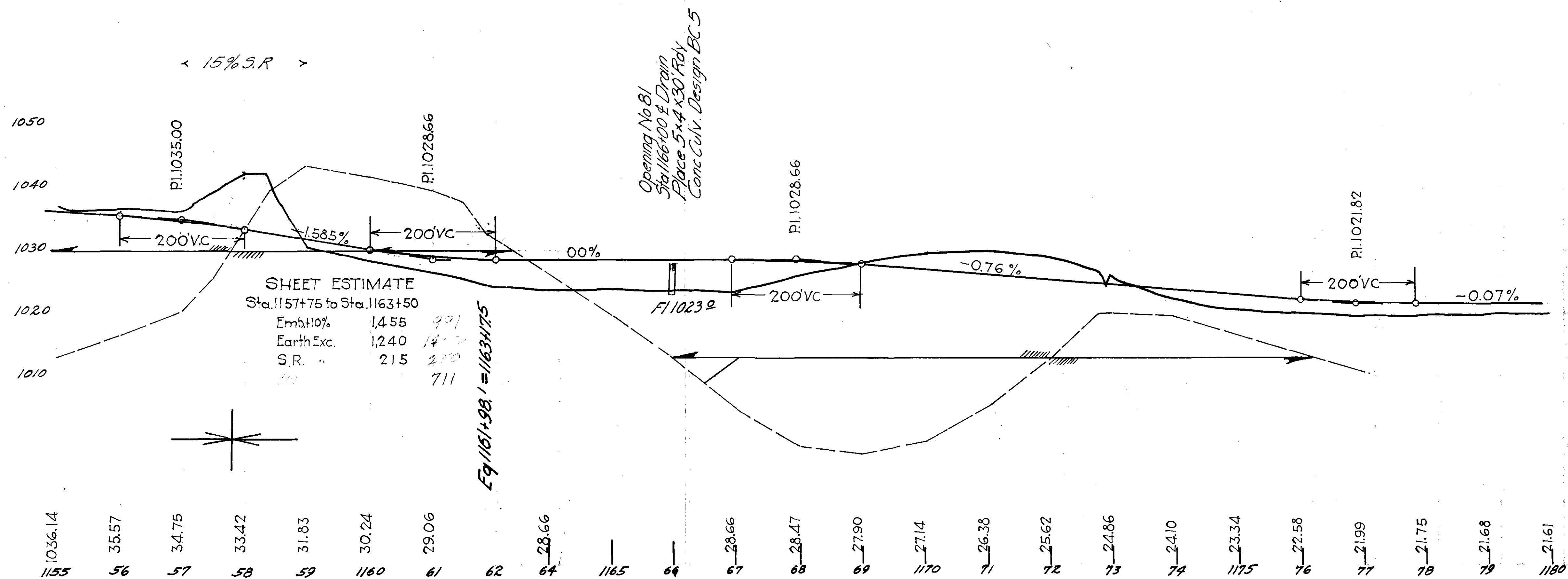
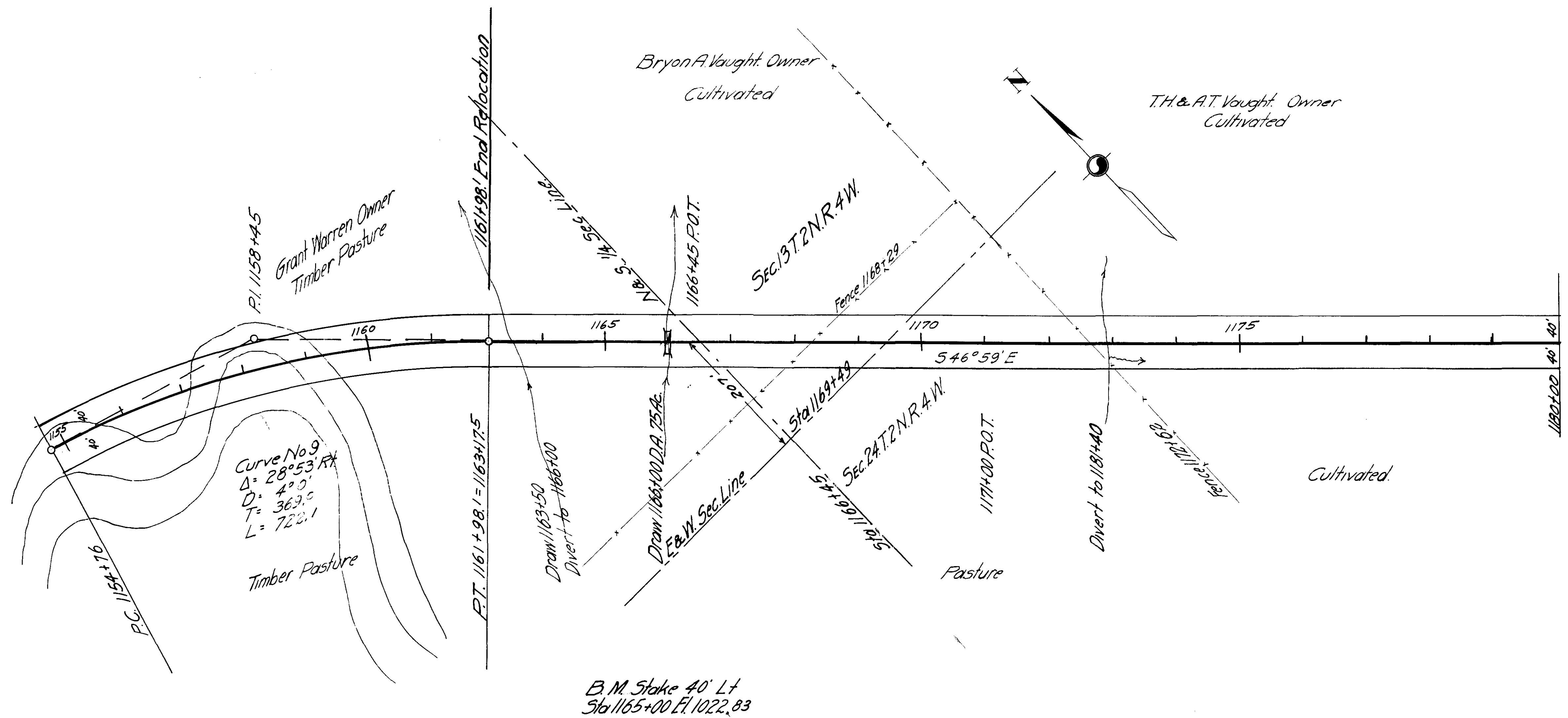


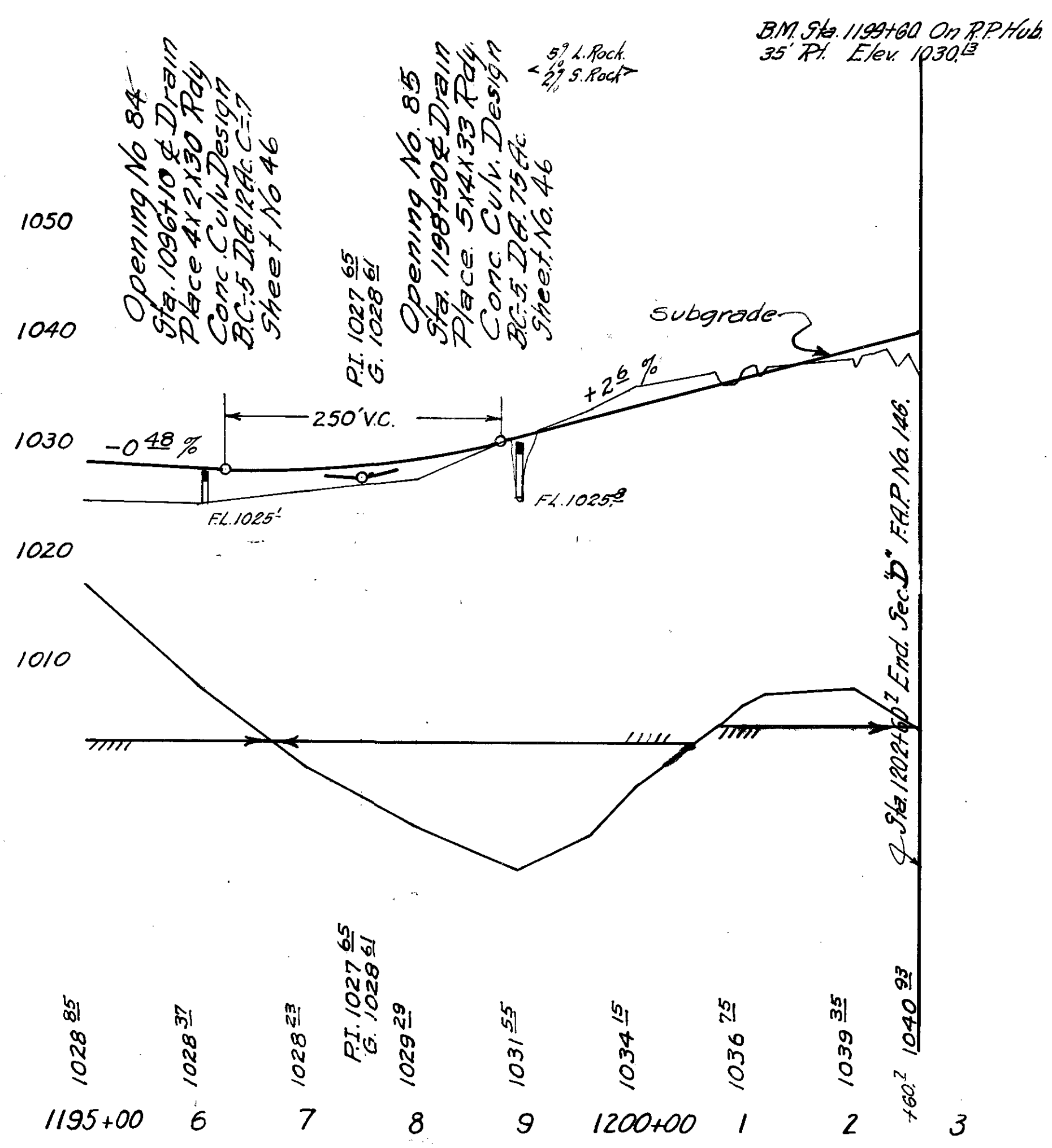
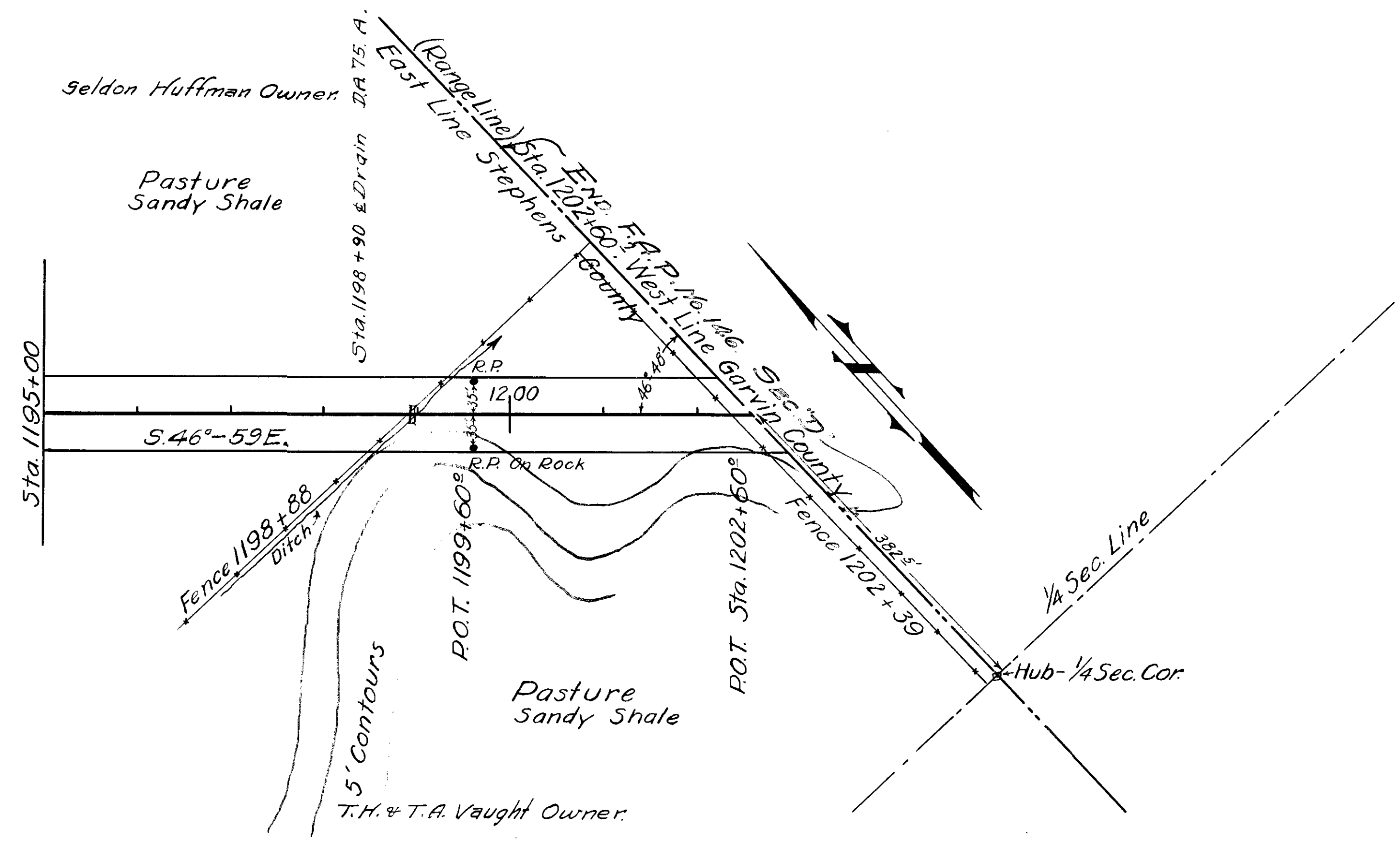
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| 1049.39 | 49.11 | 48.83 | 48.55 | 48.54 | 49.06 | 49.86 | 50.65 | 51.45 | 52.24 | 53.03 | 53.83 | 54.12 | 55.42 | 56.12 | 56.20 | 55.58 | 54.33 | 53.00 | 51.67 | 50.33 | 48.71 | 46.50 | 44.00 | 41.53 | 39.63 | 38.46 | 37.86 | 37.29 | 36.72 | 36.14 | 35.57 | 1034.75 |
| 1125+00 | 26 | 27 | 28 | 29 | 1130 | 31 | 32 | 33 | 34 | 1135 | 36 | 37 | 38 | 39 | 1140 | 41 | 42 | 43 | 44 | 1145 | 46 | 47 | 48 | 49 | 1150 | 51 | 52 | 53 | 54 | 55 | 56 | 1157 |

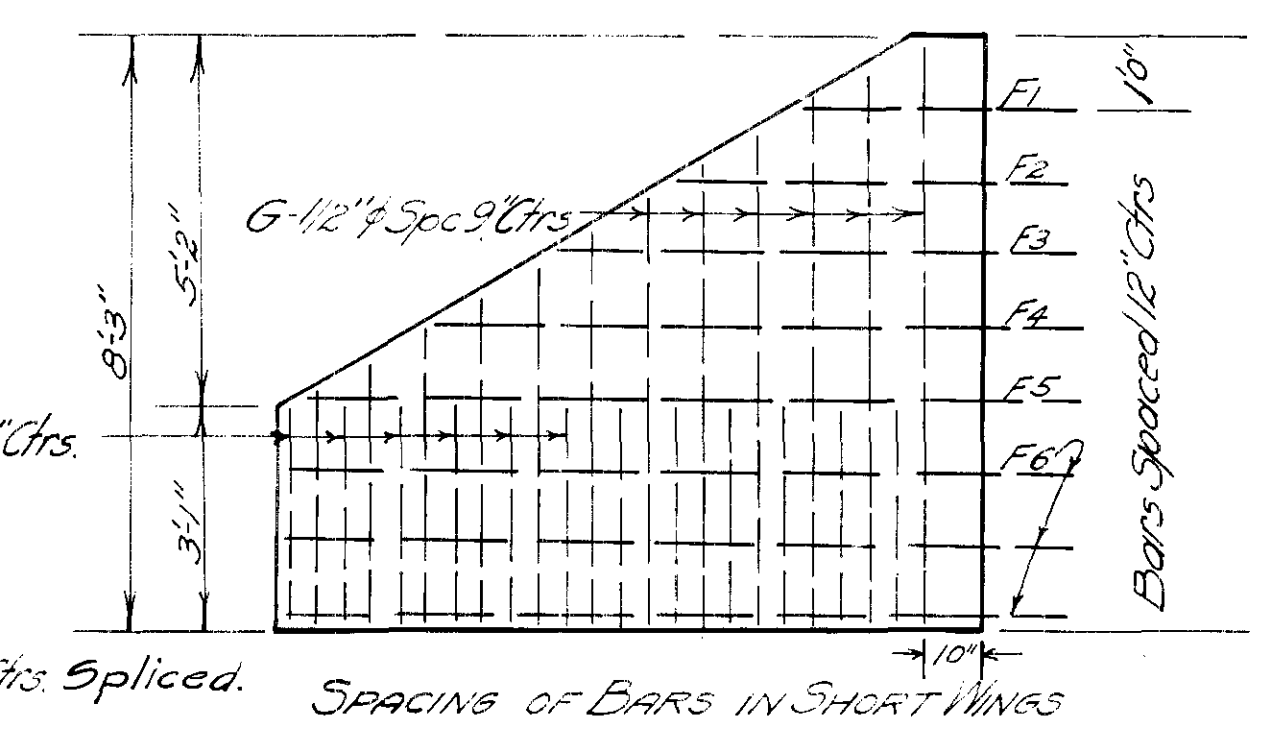
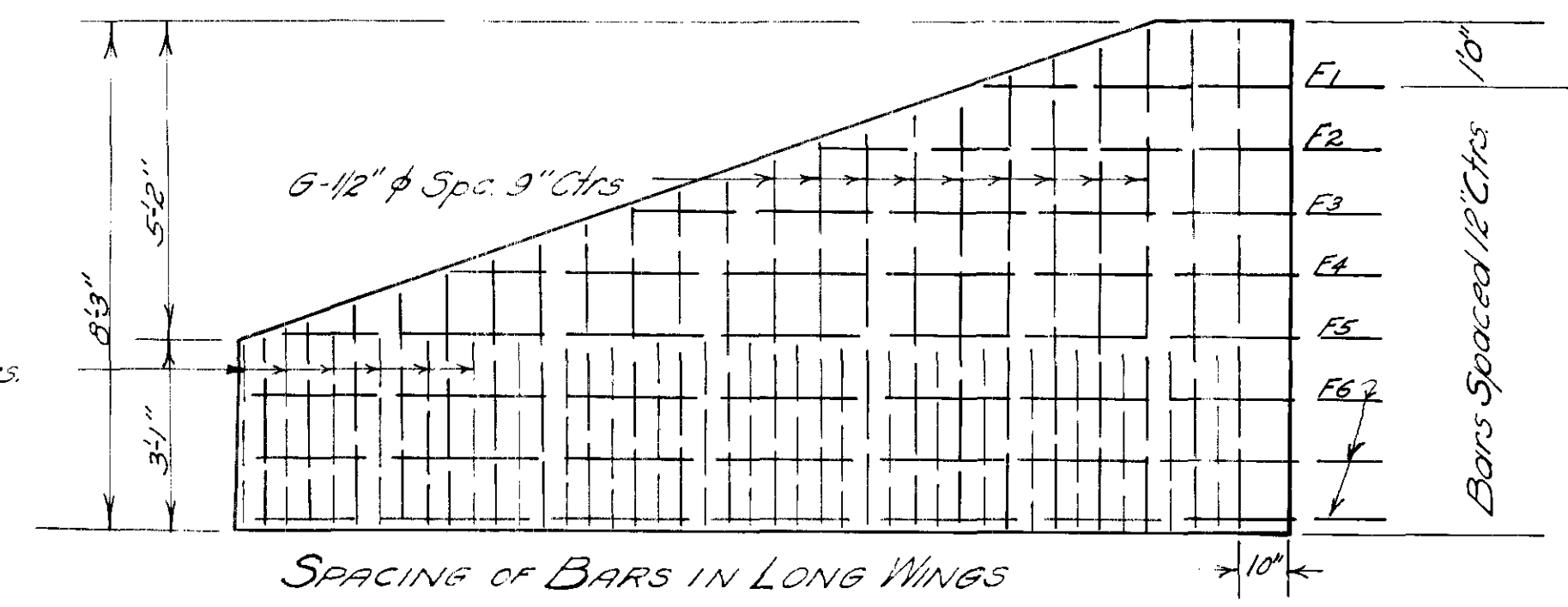
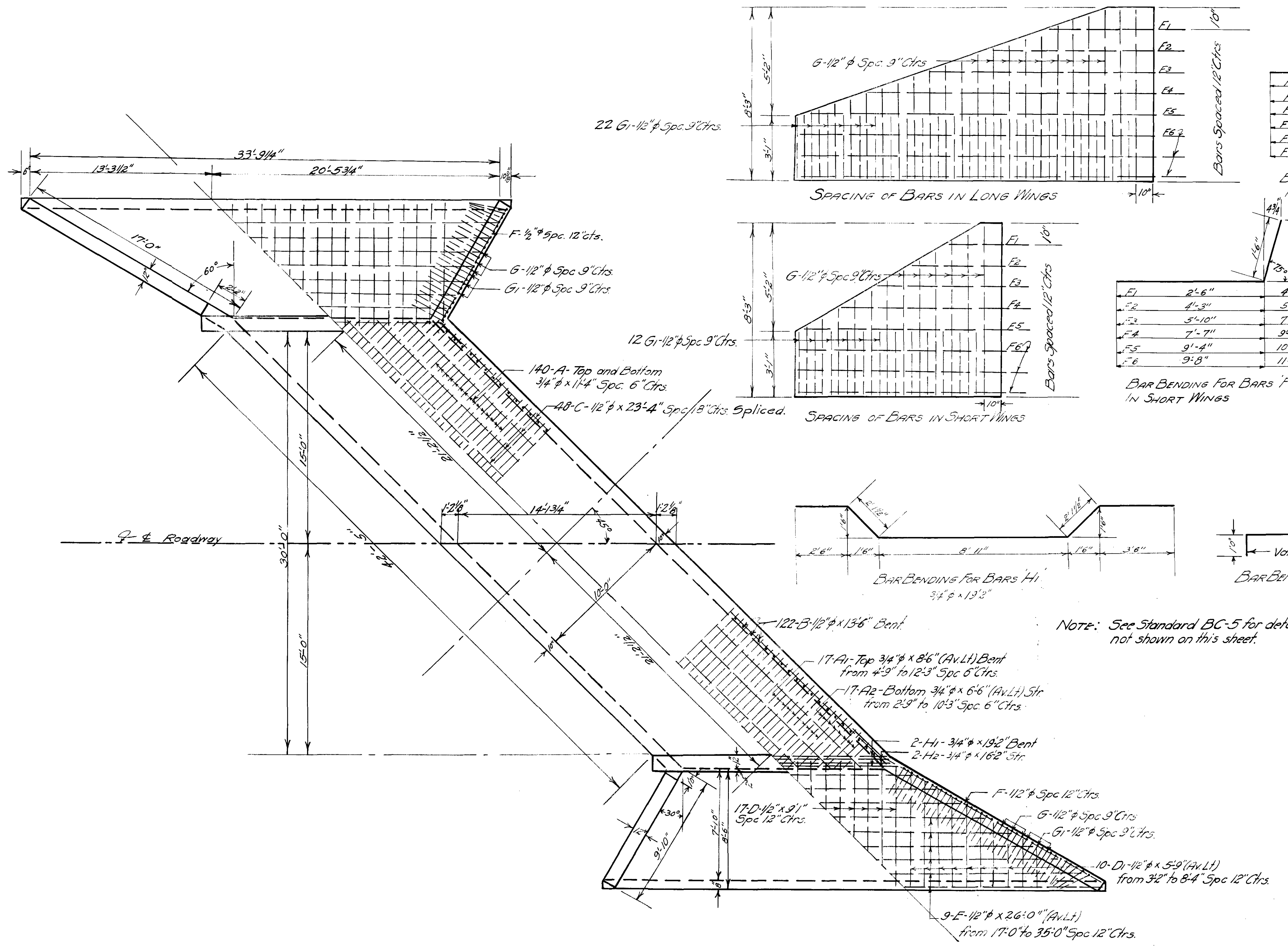
SHEET ESTIMATE

| | | |
|------------------------------|-------|-------|
| Sta. 1126+15 to Sta. 1157+75 | | |
| Embl. 10% | 9,308 | 1,373 |
| Earth Exc. | 5,244 | 3,576 |
| L.R. | 125 | 1,120 |
| S.R. | 4,926 | 2,114 |
| Borrow | 00 | 00 |
| O.H. | 8,188 | |
| Waste | 987 | 2,179 |









BAR BENDING FOR BARS F IN LONG WINGS

| | | |
|----|---------|--------|
| F1 | 6'-2" | 7'-8" |
| F2 | 9'-2" | 10'-8" |
| F3 | 12'-0" | 13'-6" |
| F4 | 14'-10" | 16'-4" |
| F5 | 17'-10" | 19'-4" |
| F6 | 18'-2" | 19'-8" |

BAR BENDING FOR BARS F IN SHORT WINGS

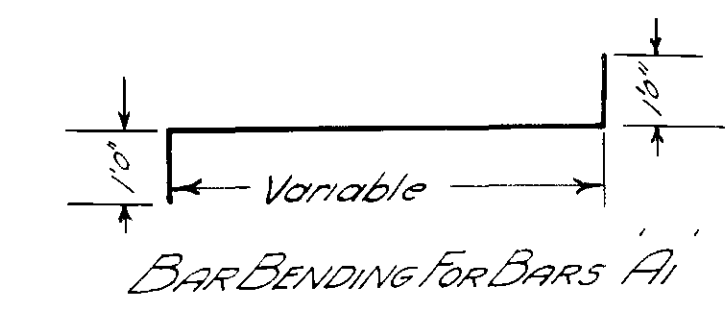
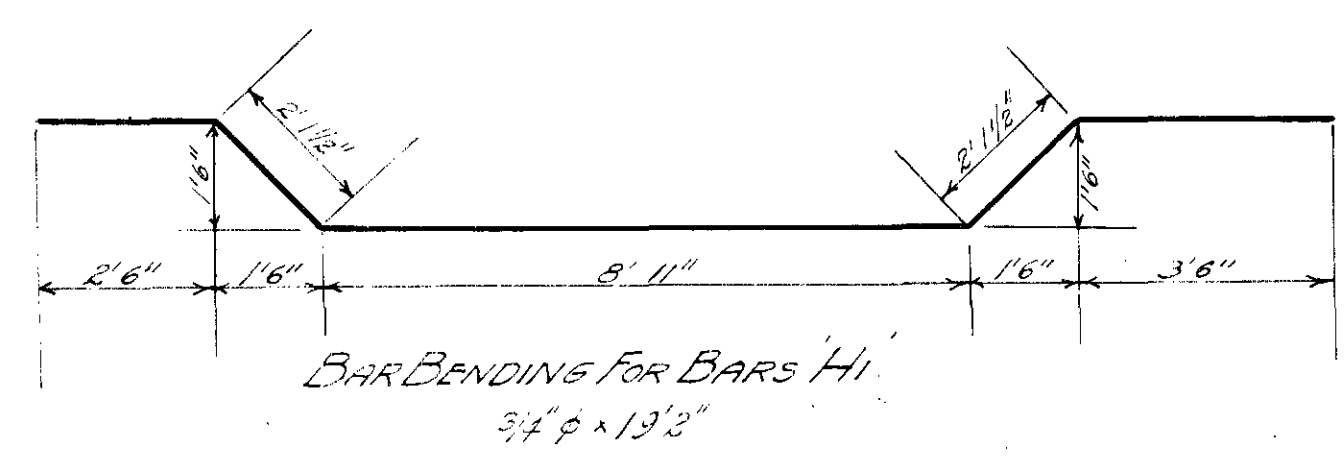
| | | |
|----|--------|---------|
| F1 | 2'-6" | 4'-0" |
| F2 | 4'-3" | 5'-9" |
| F3 | 5'-10" | 7'-4" |
| F4 | 7'-7" | 9'-1" |
| F5 | 9'-4" | 10'-10" |
| F6 | 9'-8" | 11'-2" |

BAR BENDING FOR BARS G IN LONG WINGS

| | | |
|-----------|--------|---------|
| G1 | 3'-10" | 6'-7" |
| G2 | 4'-1" | 7'-5" |
| G3 | 4'-4" | 7'-6" |
| G4 | 4'-7" | 7'-11" |
| G5 | 4'-10" | 7'-7" |
| G6 | 5'-1" | 7'-10" |
| G7 | 5'-4" | 8'-1" |
| G8 | 5'-7" | 8'-4" |
| G9 | 5'-10" | 8'-7" |
| G10 | 6'-1" | 8'-10" |
| G11 | 6'-4" | 9'-1" |
| G12 | 6'-7" | 9'-4" |
| G13 | 6'-10" | 9'-7" |
| G14 | 7'-1" | 9'-10" |
| G15 | 7'-4" | 10'-1" |
| G16 | 7'-7" | 10'-4" |
| G17 | 7'-10" | 10'-7" |
| G18 | 8'-1" | 10'-10" |
| G19 | 8'-4" | 11'-1" |
| G20-21-22 | 8'-7" | 11'-4" |

BAR BENDING FOR BARS G IN SHORT WINGS

| | | |
|-----|--------|--------|
| G1 | 3'-10" | 6'-7" |
| G2 | 4'-1" | 7'-5" |
| G3 | 4'-4" | 7'-6" |
| G4 | 4'-7" | 7'-11" |
| G5 | 5'-1" | 8'-1" |
| G6 | 5'-4" | 8'-4" |
| G7 | 5'-7" | 8'-7" |
| G8 | 6'-1" | 9'-1" |
| G9 | 6'-4" | 9'-4" |
| G10 | 6'-7" | 9'-7" |
| G11 | 7'-1" | 10'-1" |
| G12 | 7'-4" | 10'-4" |
| G13 | 7'-7" | 10'-7" |
| G14 | 8'-1" | 11'-1" |
| G15 | 8'-4" | 11'-4" |

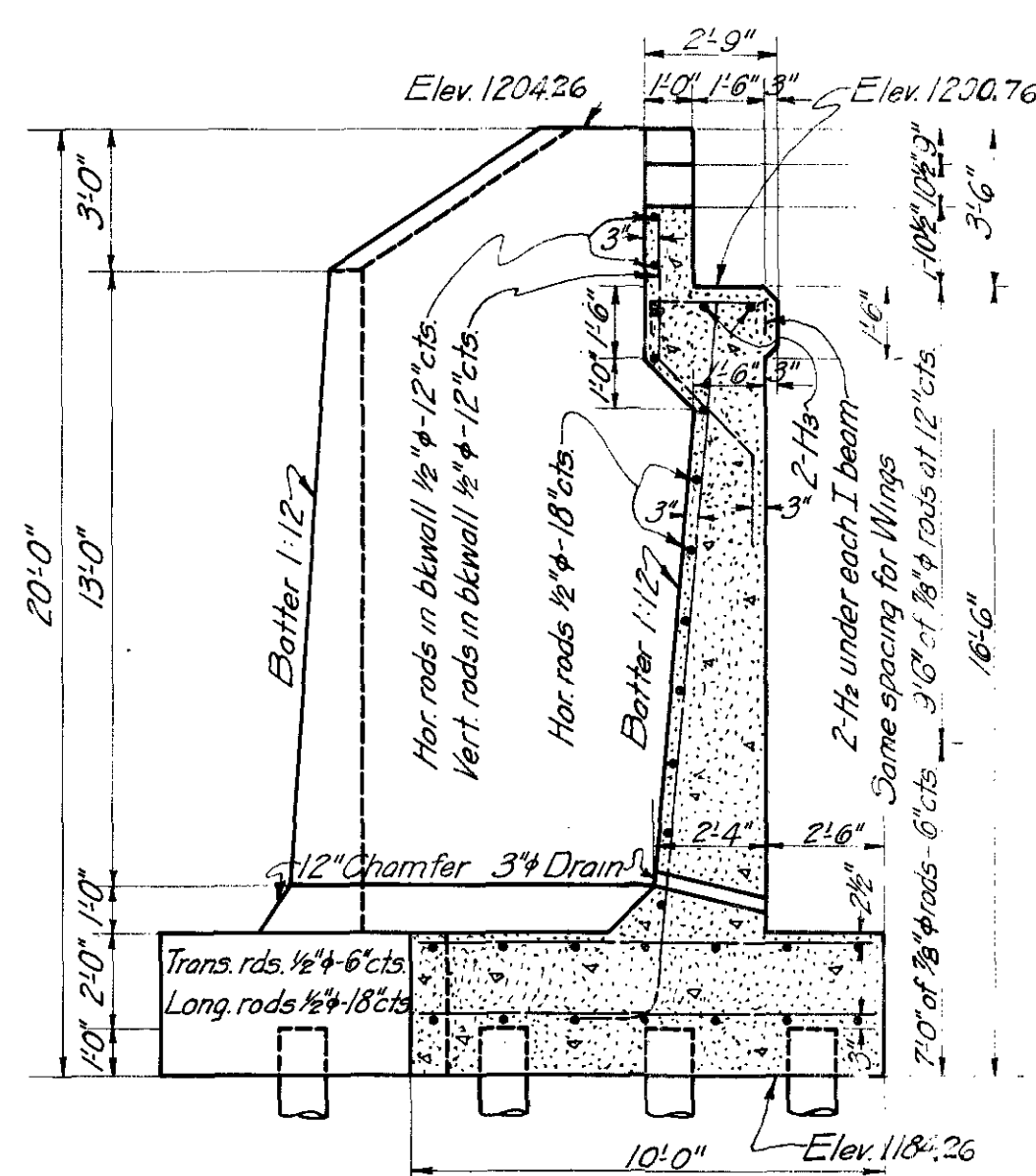


NOTE: See Standard BC-5 for details not shown on this sheet.

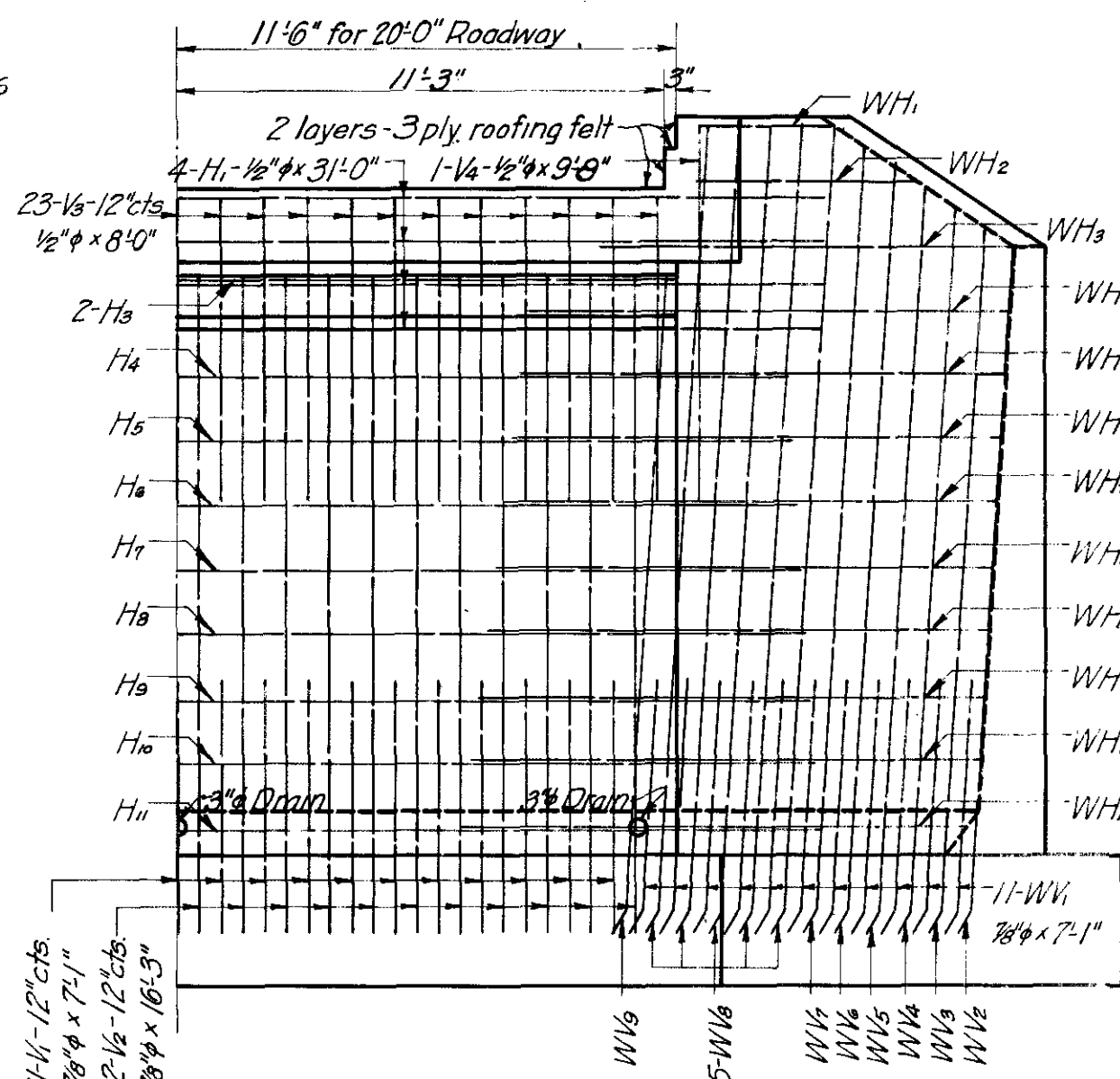
| SUMMARY OF CULVERT QUANTITIES | |
|-------------------------------|-----------------------|
| 1:2:4 Concrete Cu Yds. | Reinforcing Steel Lbs |
| 82.9 | 6,780 |

PLAN
10'x7'x42'5" CONCRETE BOX
SKEWED 45° WITH RDY.
± STA 28+15
F.A. PROJ. No. 146 SEC 'B'

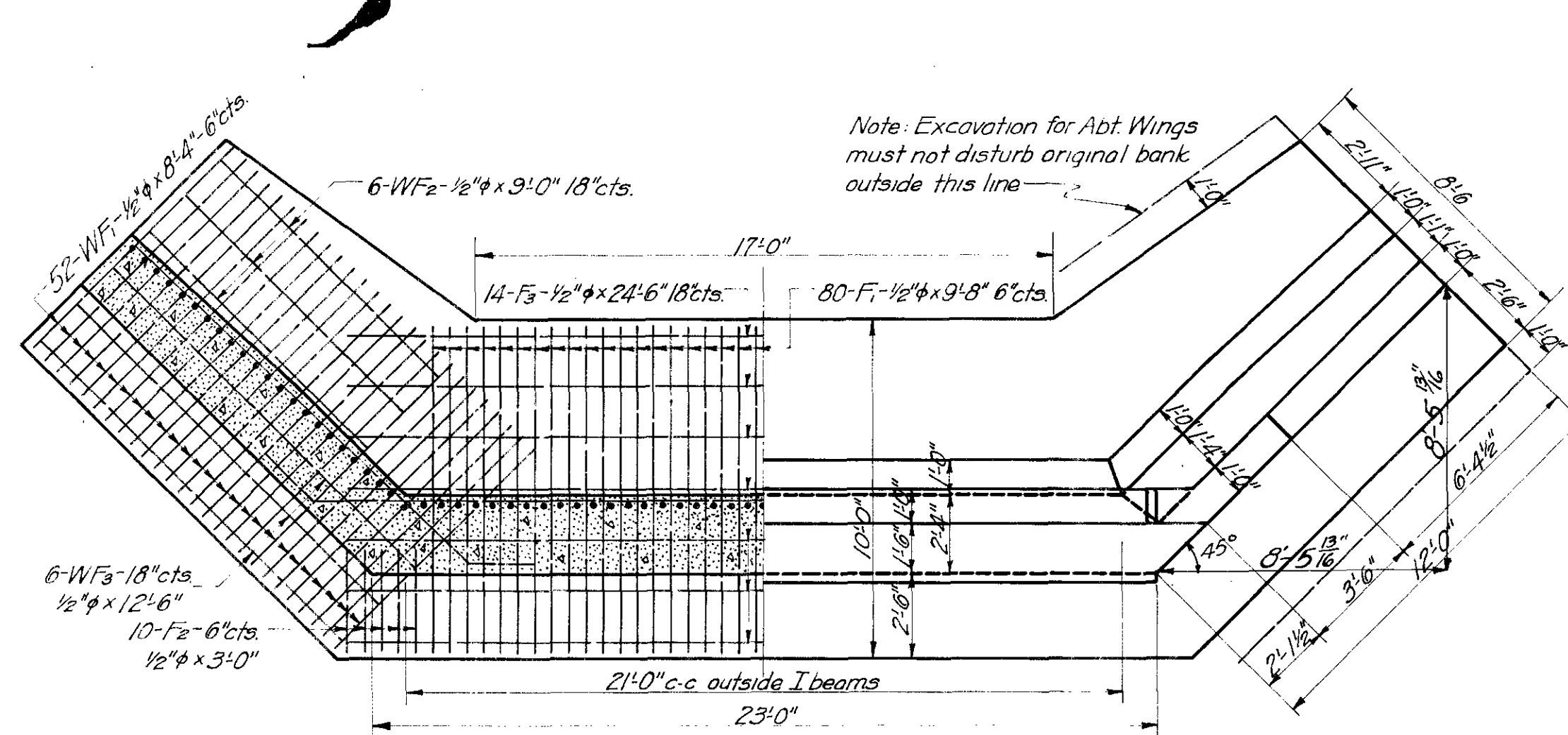
Revised as built Sept. 16, 1927



SECTION OF ABT. ON \mathbb{Z}



HALF ELEVATION

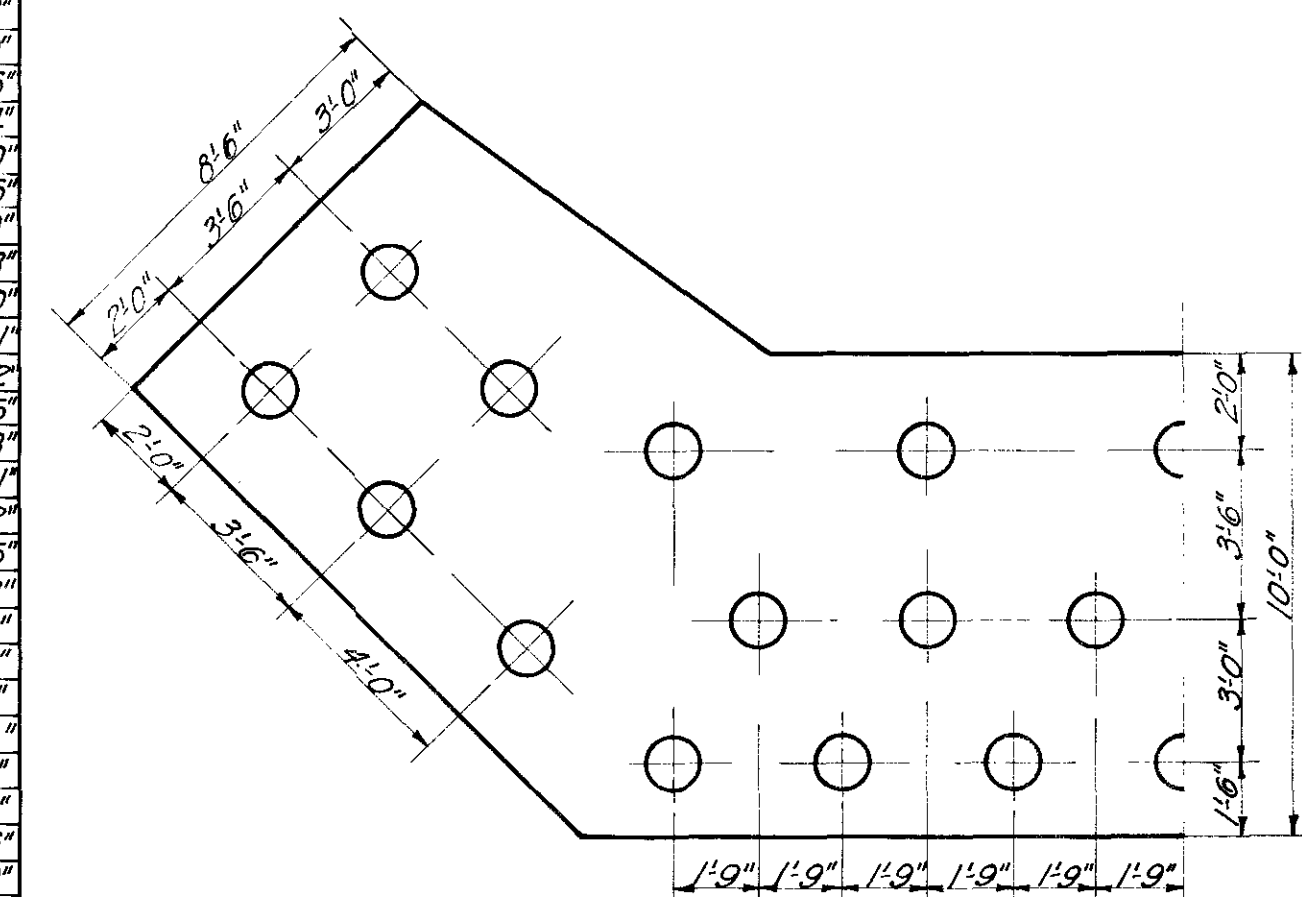


HALF SECTION AT TOP OF CHAMFER

HALF PLAN

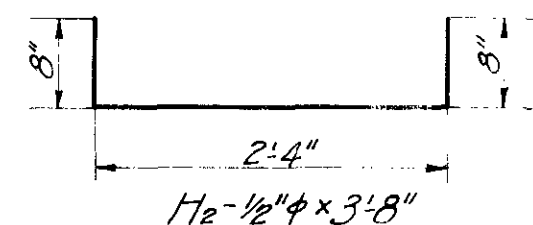
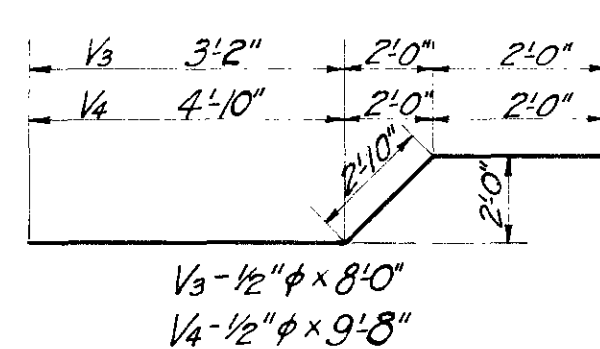
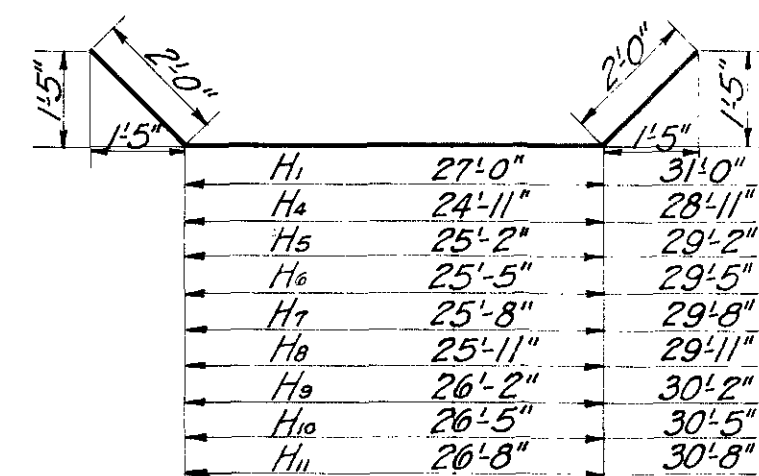
| BAR LIST FOR ONE A.B.T. | | | | |
|-------------------------|----|----------|------|--------|
| MARK | NO | SIZE | FORM | LENGTH |
| F1 | 80 | 1 1/2" φ | St | 9'8" |
| F2 | 20 | " | " | 3'0" |
| F3 | 14 | " | " | 24'6" |
| WF1 | 14 | " | " | 8'4" |
| WF2 | 12 | " | " | 9'0" |
| WF3 | 12 | " | " | 12'6" |
| H1 | 4 | " | Bent | 5'1'0" |
| H2 | 10 | " | " | 3'8" |
| H3 | 2 | " | St | 23'0" |
| H4 | 1 | " | Bent | 28'1" |
| H5 | 1 | " | " | 20'4" |
| H6 | 1 | " | " | 23'8" |
| H7 | 1 | " | " | 29'4" |
| H8 | 1 | " | " | 30'2" |
| H9 | 1 | " | " | 30'5" |
| H10 | 1 | " | " | 30'8" |
| V1 | 21 | 3/8" φ | " | 7'1" |
| V2 | 22 | " | " | 16'3" |
| V3 | 23 | 1/2" φ | " | 8'0" |
| V4 | 2 | " | " | 9'8" |
| WV1 | 22 | 3/8" φ | " | 7'1" |
| WV2 | 2 | " | " | 17'1" |
| WV3 | 2 | " | " | 17'6" |
| WV4 | 2 | " | " | 18'0" |
| WV5 | 2 | " | " | 18'5" |
| WV6 | 2 | " | " | 18'11" |
| WV7 | 2 | " | " | 19'4" |
| WV8 | 10 | " | " | 19'10" |
| WV9 | 2 | " | " | 16'3" |
| WV10 | 2 | " | " | 4'0" |
| WH1 | 2 | 1/2" φ | St | 4'0" |
| WH2 | 2 | " | " | 6'10" |
| WH3 | 2 | " | Bent | 12'4" |
| WH4 | ? | " | " | 14'6" |
| WH5 | 2 | " | " | 14'8" |
| WH6 | 2 | " | " | 14'10" |
| WH7 | 2 | " | " | 15'0" |
| WH8 | 2 | " | " | 15'2" |
| WH9 | 2 | " | " | 15'4" |
| WH10 | 2 | " | " | 15'6" |
| WH11 | 2 | " | " | 15'8" |
| WH12 | 2 | " | " | 15'10" |

PILE SPACING DIAGRAM



| SUMMARY OF QUANTITIES | | | | | | |
|-----------------------|----------|---------|------------|------------|----------------|---------------|
| LOCATION | CONCRETE | C.Y.B. | REINF. | STRUCT. | CONG. HAND | UNT. WOOD |
| | 1:2:3 | 1:2:4 | STEEL LBS. | STEEL LBS. | PAUL. LIN. FT. | PLUMBING LIN. |
| ABTS. | | 188.2 ✓ | 3000 ✓ | | | 1400 ✓ |
| RDY & CURBS | 26.38 ✓ | | 3020 ✓ | | | |
| 36" I.D.M. | | | | 19150 ✓ | 79.0 ✓ | |
| TOTALS | 26.38 | 188.2 | 12020 | 19150 | 79.0 | 1400 |

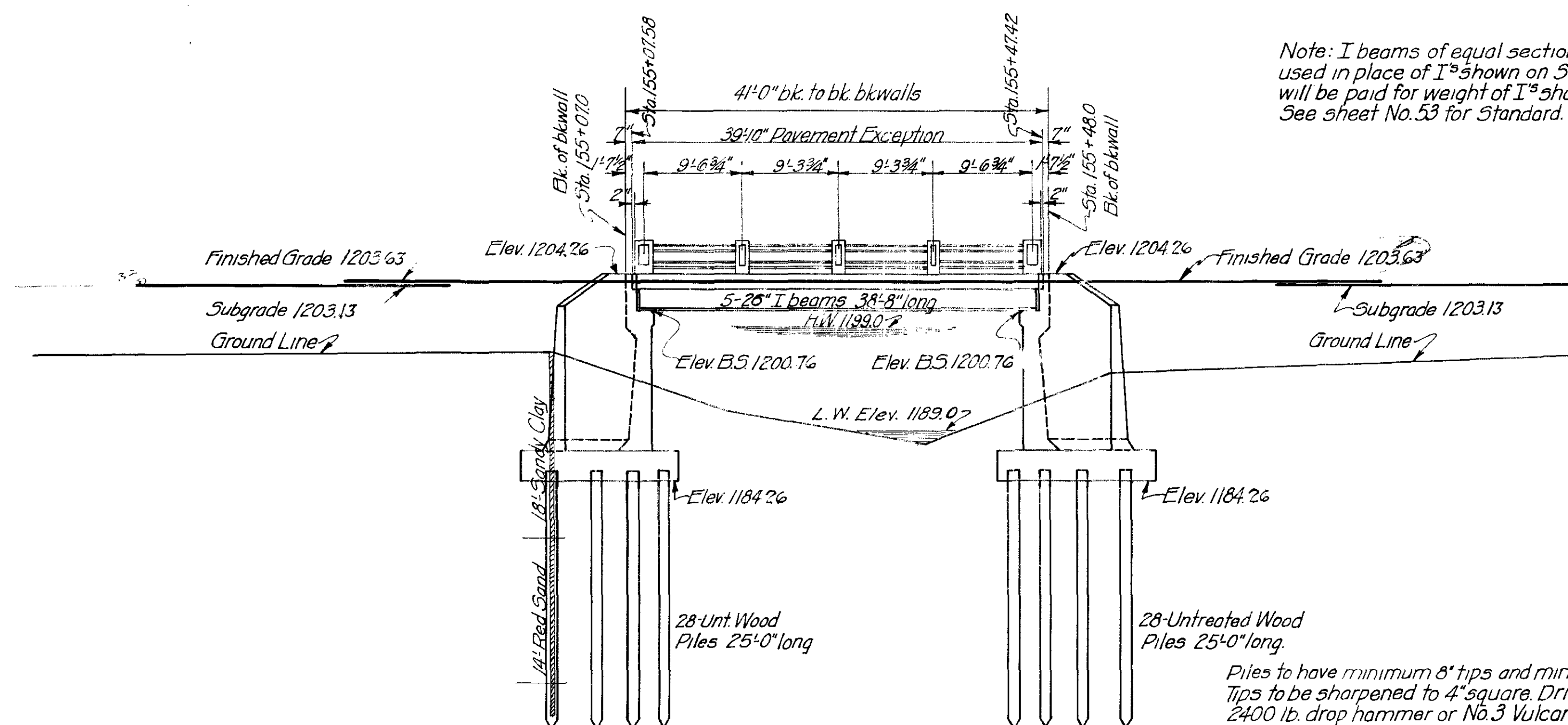
19,574 1346.5
Cutoff's 14.9



| Section | Left Label | Right Label |
|---------|------------|-------------|
| 1 | V1 | 101 |
| 2 | V2 | 102 |
| 3 | VV1 | 103 |
| 4 | VV2 | 104 |
| 5 | VV3 | 105 |
| 6 | VV4 | 106 |
| 7 | VV5 | 107 |
| 8 | VV6 | 108 |
| 9 | VV7 | 109 |
| 10 | VV8 | 110 |

| | | |
|------------------|---------|---------|
| WH ₃ | 10'±4" | 13'±4" |
| WH ₄ | 12'±6" | 14'±6" |
| WH ₅ | 12'±8" | 14'±8" |
| WH ₆ | 12'±10" | 14'±10" |
| WH ₇ | 13'±0" | 15'±0" |
| WH ₈ | 13'±2" | 15'±2" |
| WH ₉ | 13'±4" | 15'±4" |
| WH ₁₀ | 13'±6" | 15'±6" |
| WH ₁₁ | 13'±8" | 15'±8" |
| WH ₁₂ | 13'±10" | 15'±10" |

| PILE LIST | | | | |
|-----------|------------|------------|------------|------------|
| FILE NO. | EAST ABOUT | | WEST ABOUT | |
| | NET LENGTH | NET CUTOFF | NET LENGTH | NET CUTOFF |
| 1 | 24.0' | | 139' | 31' |
| 2 | 25.3' | | 24.5' | |
| 3 | 24.2' | | 22.6' | 1.4' |
| 4 | 24.8' | | 22.2' | 1.4' |
| 5 | 24.7' | | 23.3' | 0.3' |
| 6 | 24.2' | | 24.8' | |
| 7 | 24.3' | | 20.2' | 2.8' |
| 8 | 24.7' | | 25.0' | |
| 9 | 25.0' | | 24.8' | |
| 10 | 23.4' | 0.6' | 23.3' | |
| 11 | 20.5' | 2.5' | 23.5' | |
| 12 | 23.4' | | 24.0' | |
| 13 | 24.8' | | 24.6' | |
| 14 | 24.8' | | 24.8' | |
| 15 | 23.0' | 0.5' | 23.7' | 0.3' |
| 16 | 24.0' | | 26.7' | |
| 17 | 22.8' | 0.7' | 25.0' | |
| 18 | 24.8' | | 24.0' | |
| 19 | 23.9' | | 23.6' | 0.4' |
| 20 | 24.2' | 0.3' | 24.6' | |
| 21 | 24.9' | | 24.1' | |
| 22 | 24.8' | | 23.3' | |
| 23 | 24.7' | | 24.4' | |
| 24 | 24.3' | | 24.5' | |
| 25 | 24.5' | | 24.6' | |
| 26 | 24.7' | | 23.9' | |
| 27 | 24.4' | | 24.8' | |
| 28 | 23.4' | 0.6' | 25.0' | |
| TOTAL | 676.8' | 5.2' | 663.7' | 9.7' |



Note: I beams of equal section modulus may be used in place of I's shown on Standard but Contractor will be paid for weight of I's shown on Standard. See sheet No. 53 for Standard.

Piles to have minimum 8" tips and minimum 12" butts.
Tips to be sharpened to 4" square. Driving piles use
2400 lb. drop hammer or No.3 Vulcan hammer.

CORRECTED AS BUILT
GENERAL ELEV.-DETAIL OF ABTS.
SUMMARY OF QUANTITIES
36" I BEAM SPAN-20' RDWY.
& STA. 155+27.5
F.A. Proj. No. 146 SEC. 'E'

. 1210

1200

1190

1180

1170

1160

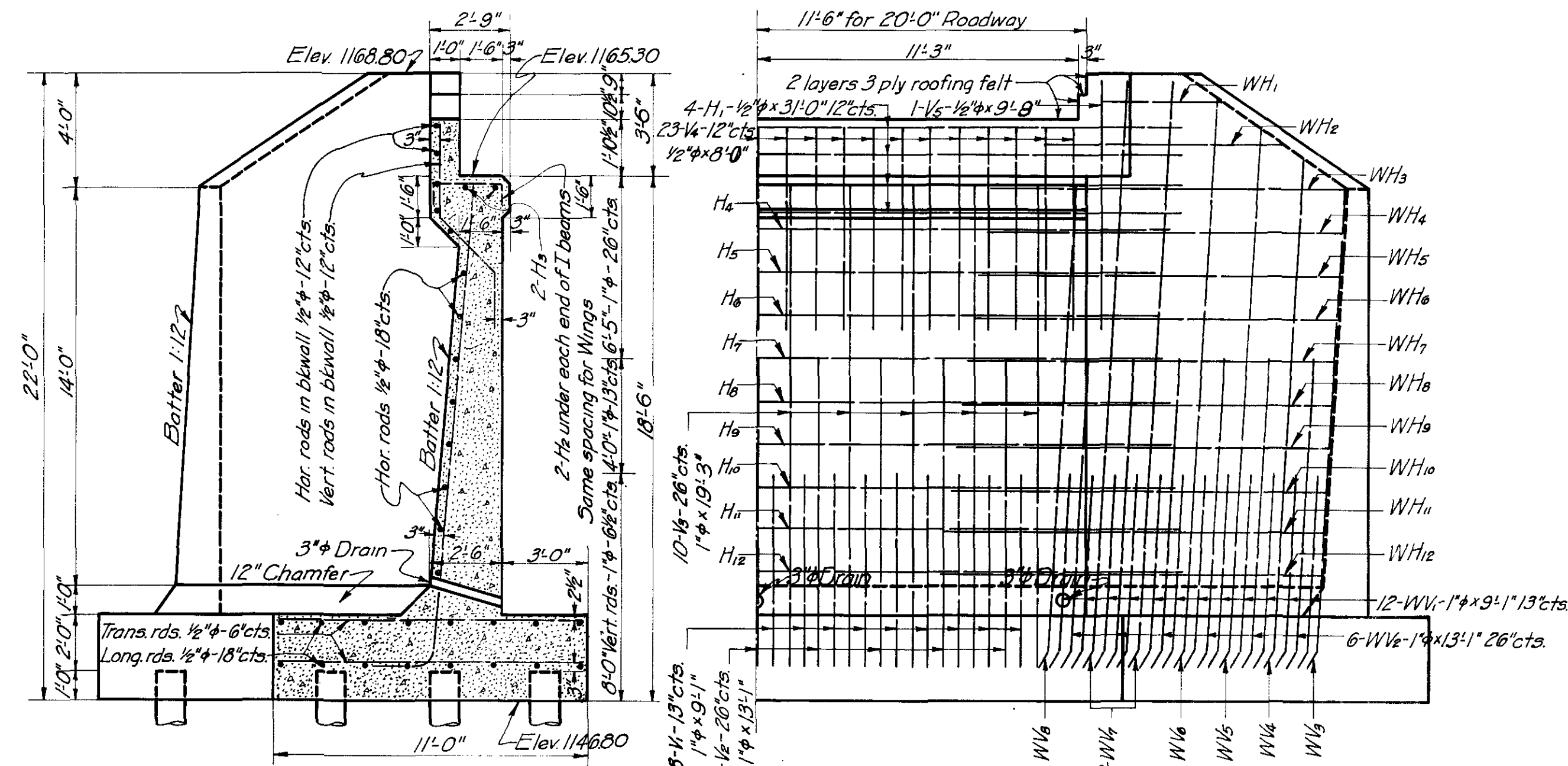
1150

12-4-25

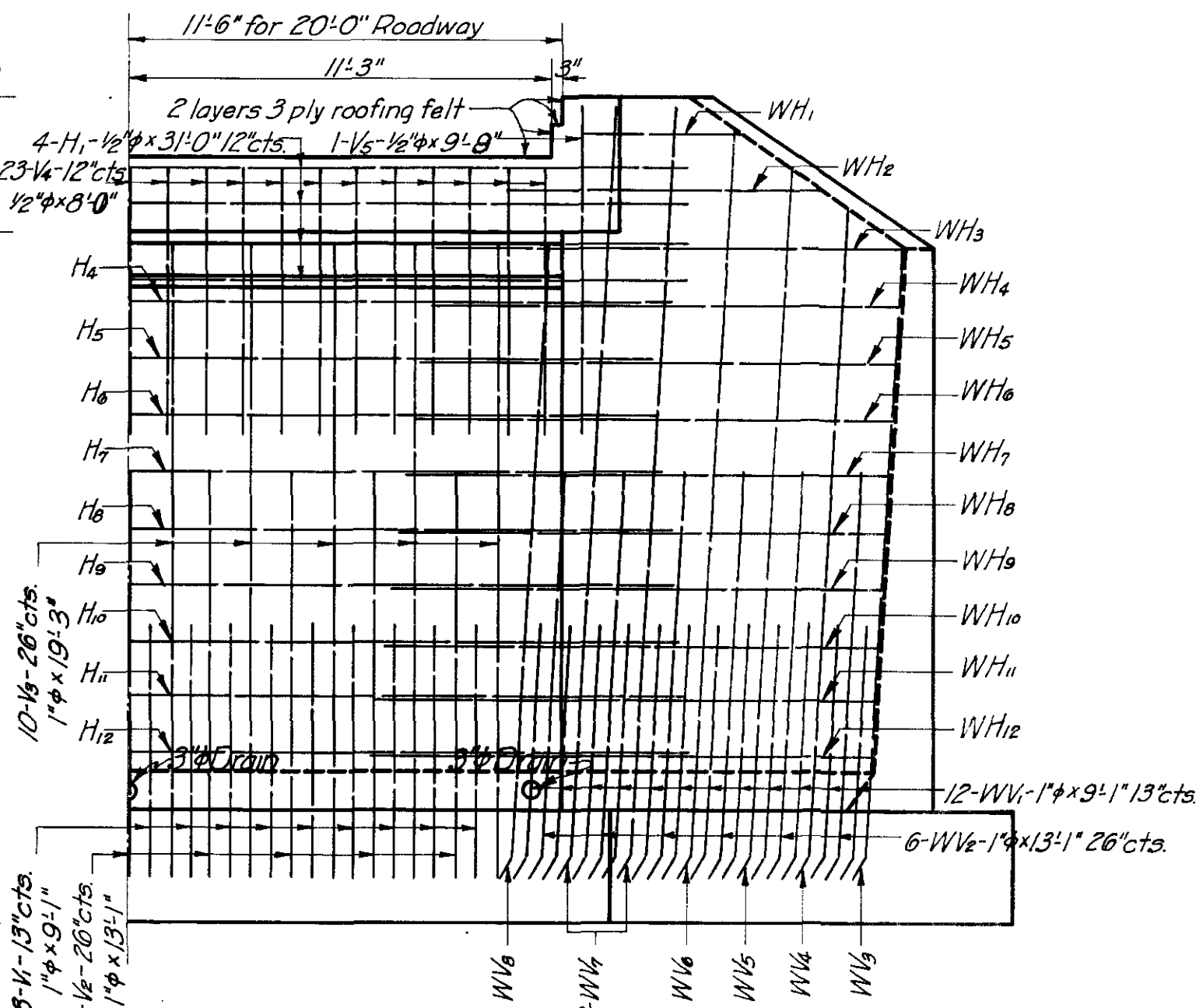
JGP
D.L.M.

d & Traced
Checked

11



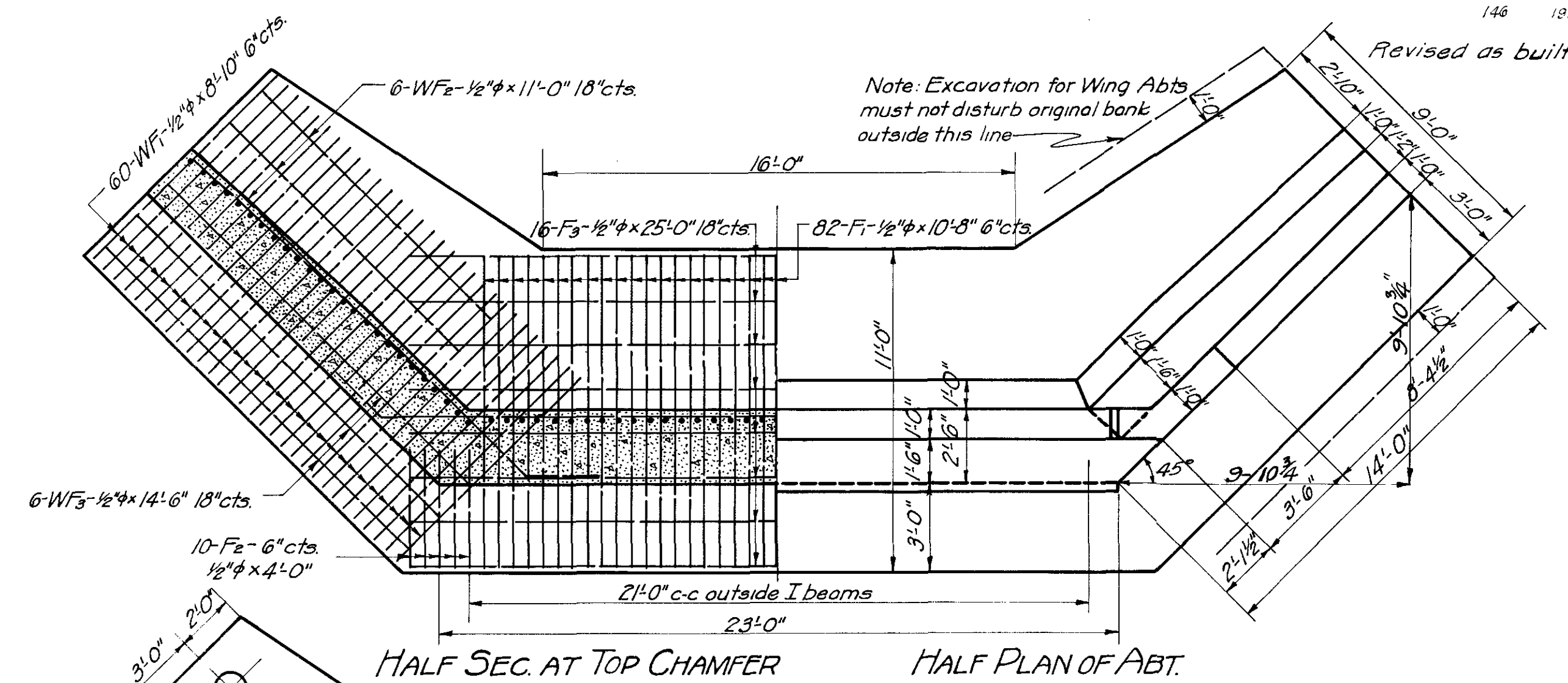
SECTION OF ABT. ON ϕ



HALF ELEVATION OF ABT.

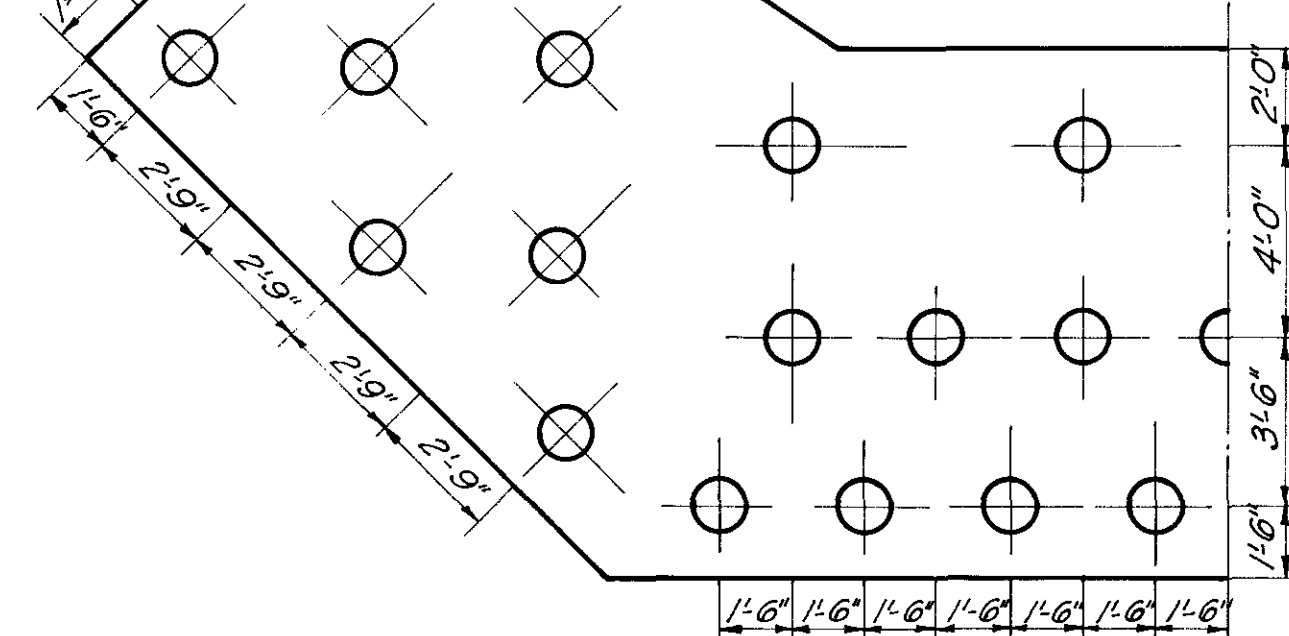
| BAR LIST FOR ONE A.B.T. | | | | |
|-------------------------|-----|--------|-------|------------|
| MARK | No. | SIZE | FORM | LENGTH |
| F ₁ | 20 | 1/2" φ | St. | 10'-8" |
| F ₂ | 20 | " " | " | 4'-0" |
| F ₃ | 16 | " " | " | 25'-0" |
| WF ₁ | 120 | " " | " | 6'-0" |
| WF ₂ | 12 | " " | " | 11'-0" |
| WF ₃ | 12 | " " | " | 14'-6" |
| H ₁ | 4 | " " | Bent | 31'-0" |
| H ₂ | 10 | " " | " | 3'-8" |
| H ₃ | 2 | " " | St. | 23'-0" |
| H ₄ | 1 | " " | Bent. | 30'-0" |
| H ₅ | 1 | " " | " | 29'-2" |
| H ₆ | 1 | " " | " | 29'-5" |
| H ₇ | 1 | " " | " | 29'-8" |
| H ₈ | 1 | " " | " | 29'-11" |
| H ₉ | 1 | " " | " | 30'-2" |
| H ₁₀ | 1 | " " | " | 30'-5" |
| H ₁₁ | 1 | " " | " | 30'-8" |
| H ₁₂ | 1 | " " | " | 30'-11" |
| V ₁ | 18 | 1" φ | " | 9'-1" |
| V ₂ | 9 | " " | " | 13'-1" |
| V ₃ | 10 | " " | " | 19'-3" |
| V ₄ | 23 | 1/2" φ | " | 8'-0" |
| V ₅ | 2 | " " | " | 9'-1" |
| WV ₁ | 24 | 1" φ | " | 9'-1" |
| WV ₂ | 12 | " " | " | 13'-11" |
| WV ₃ | 2 | " " | " | 19'-11" |
| WV ₄ | 2 | " " | " | 20'-1" |
| WV ₅ | 2 | " " | " | 21'-1" |
| WV ₆ | 2 | " " | " | 22'-0" |
| WV ₇ | 2 | " " | " | 22'-0" |
| WV ₈ | 4 | " " | " | 19'-3" |
| WH ₁ | 2 | 1/2" φ | St. | 5'-0" |
| WH ₂ | 2 | " " | Bent | 11'-9" |
| WH ₃ | 2 | " " | " | 16'-7 1/2" |
| WH ₄ | 2 | " " | " | 16'-9" |
| WH ₅ | 2 | " " | " | 16'-10" |
| WH ₆ | 2 | " " | " | 17'-0" |
| WH ₇ | 2 | " " | " | 17'-2" |
| WH ₈ | 2 | " " | " | 17'-3" |
| WH ₉ | 2 | " " | " | 17'-5" |
| WH ₁₀ | 2 | " " | " | 17'-7" |
| WH ₁₁ | 2 | " " | " | 17'-8" |
| WH ₁₂ | 2 | " " | " | 17'-10" |

Reinf. Steel in / Abt.- 5650 lbs.
1:2:4 Conc. in / Abt.- 115.1 cu.yd.
Unt. Wood Piling in / Abt.- 660 lin. ft.



HALF SEC. AT TOP CHAMFER

HALF PLAN OF ABT.



PILE SPACING DIAGRAM

| SUMMARY OF BRIDGE QUANTITIES | | | | | | |
|------------------------------|--------------|---------|-----------|------------------|------------|-----------------|
| LOCATION | CONC. C.Y.D. | | REINF. | STRUCT. | CONC. HAND | UNT. WOOD |
| | 1:2:3 | 1:2:4 | STEEL LBS | STEEL LBS | RAIL LIFT | PIILING LIFT |
| ABUTMENTS | | 230.2 ✓ | 11,300 ✓ | | | 1320 |
| RDW & CURBS | 28.98 ✓ | | 3,330 ✓ | | | |
| 40" I BEAM | | | | 2,510 | 87.0 ✓ | |
| TOTALS | 28.98 | 230.2 | 14,630 ✓ | 2,510 | 87.0 ✓ | 1320 |

2099.5'
Cutoffs 137.9'

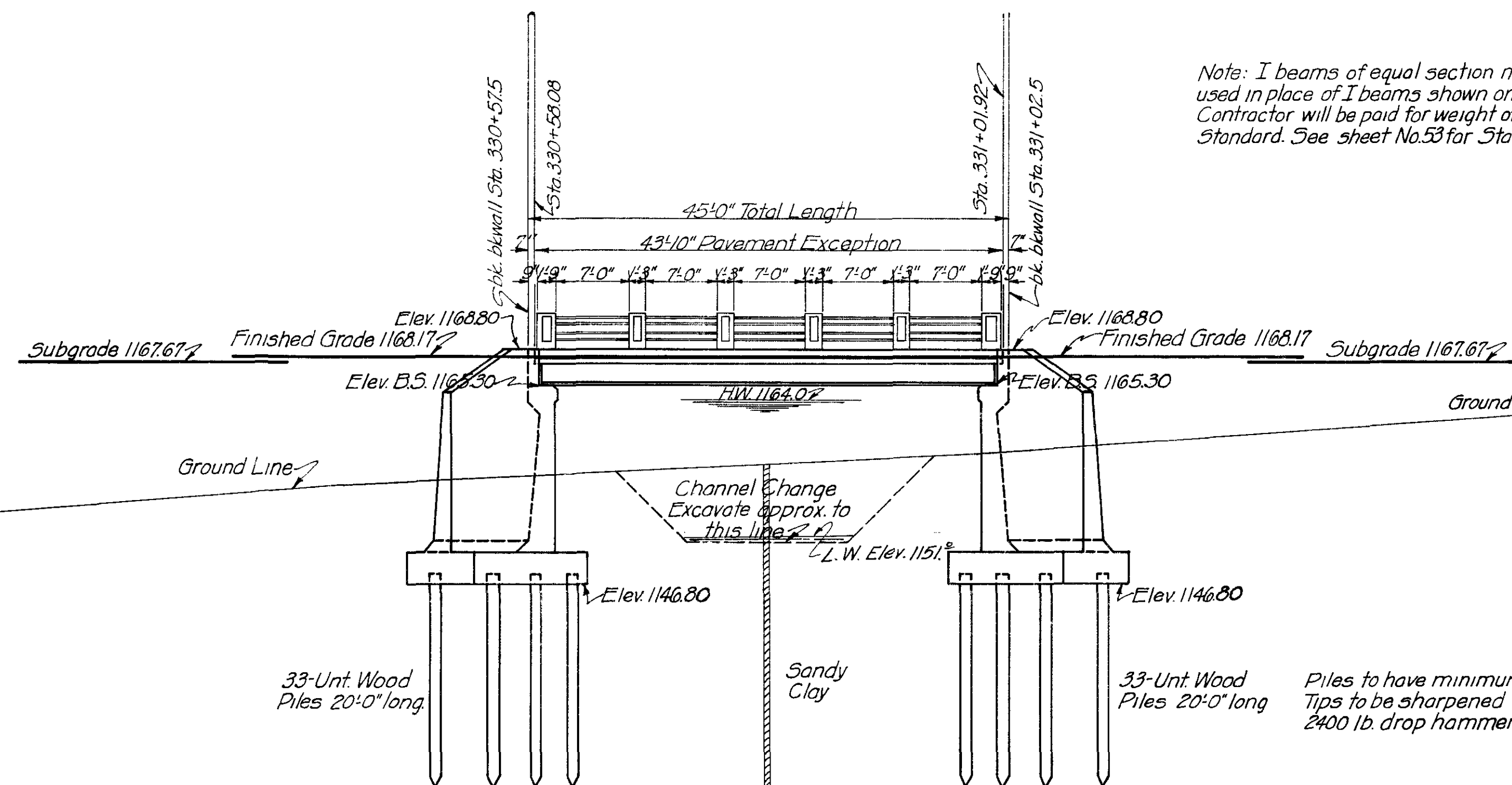
The image contains three technical drawings of a roof structure. The top drawing is a side elevation showing a roof with a 12:12 pitch (indicated by a 12" vertical and 12" horizontal triangle). The roof width is 24'-0". The side wall height is 8'-0". The bottom drawing is an end elevation showing a roof with a 12:12 pitch (indicated by a 12" vertical and 12" horizontal triangle). The roof width is 24'-0". The side wall height is 8'-0". The middle drawing is a table of rafter specifications.

| | | |
|-----|---------|---------|
| H1 | 27'-0" | 3'-0" |
| H4 | 26'-0" | 30'-0" |
| H5 | 25'-2" | 29'-2" |
| H6 | 25'-5" | 29'-5" |
| H7 | 25'-8" | 29'-8" |
| H8 | 25'-11" | 29'-11" |
| H9 | 26'-2" | 30'-2" |
| H10 | 26'-5" | 30'-5" |
| H11 | 26'-8" | 30'-8" |
| H12 | 26'-11" | 30'-11" |

| Station | Elevation |
|----------------|-----------|
| V ₁ | 61.3' |
| V ₂ | 101.3' |
| V ₃ | 161.5' |
| W ₁ | 61.3' |
| W ₂ | 101.3' |
| W ₃ | 161.3' |
| W ₄ | 171.3' |
| W ₅ | 181.3' |
| W ₆ | 191.3' |
| W ₇ | 201.0' |
| W ₈ | 161.5' |

| | | |
|------------------|---------|---------|
| WT ₂ | 9'-0" | 11'-0" |
| WT ₃ | 14'-7" | 16'-7" |
| WT ₄ | 14'-9" | 16'-9" |
| WT ₅ | 14'-10" | 16'-10" |
| WT ₆ | 15'-0" | 17'-0" |
| WT ₇ | 15'-2" | 17'-2" |
| WT ₈ | 15'-3" | 17'-3" |
| WT ₉ | 15'-5" | 17'-5" |
| WT ₁₀ | 15'-7" | 17'-7" |
| WT ₁₁ | 15'-8" | 17'-8" |
| WT ₁₂ | 15'-10" | 17'-10" |

| FILE LIST | | | | |
|-----------|------------|------------|------------|------------|
| FILE NO | EAST ABUT | | WEST ABUT | |
| | NET LENGTH | NET CUTOFF | NET LENGTH | NET CUTOFF |
| 1 | 21.5' | 1.5' | 35.3' | |
| 2 | 21.8' | 1.2' | 30.0' | 3.0' |
| 3 | 21.0' | 6.0' | 33.4' | |
| 4 | 23.8' | 3.2' | 34.8' | |
| 5 | 29.3' | 3.7' | 35.2' | |
| 6 | 28.0' | 5.0' | 34.8' | |
| 7 | 27.9' | 5.1' | 34.8' | |
| 8 | 27.8' | 5.2' | 37.8' | 0.5' |
| 9 | 20.0' | 3.0' | 39.3' | |
| 10 | 29.1' | 3.9' | 39.6' | |
| 11 | 27.4' | 5.6' | 39.6' | |
| 12 | 29.0' | 4.0' | 39.4' | |
| 13 | 28.8' | 4.2' | 34.8' | |
| 14 | 25.7' | 7.3' | 35.0' | |
| 15 | 30.4' | 2.6' | 40.0' | |
| 16 | 27.4' | 5.6' | 39.5' | |
| 17 | 27.4' | 5.6' | 39.4' | |
| 18 | 23.8' | 0.0' | 39.6' | |
| 19 | 22.0' | 1.0' | 39.4' | |
| 20 | 27.9' | 3.1' | 38.7' | |
| 21 | 29.0' | 4.0' | 38.3' | |
| 22 | 26.5' | 6.5' | 32.0' | 6.0' |
| 23 | 26.5' | 6.5' | 32.1' | |
| 24 | 25.5' | 7.5' | 39.2' | |
| 25 | 21.4' | 1.6' | 37.8' | 0.2' |
| 26 | 20.0' | 5.0' | 39.7' | |
| 27 | 25.2' | 8.5' | 37.2' | 0.8' |
| 28 | 29.0' | 4.0' | 37.9' | 0.1' |
| 29 | 23.4' | 0.0' | 36.7' | 1.3' |
| 30 | 23.3' | 0.0' | 35.9' | 0.1' |
| 31 | 25.0' | 0.0' | 38.5' | |
| 32 | 30.5' | 2.5' | 39.5' | |
| 33 | 30.0' | 3.0' | 40.0' | |
| TOTAL | 867.3' | 125.9' | 1232.2' | 12.0' |

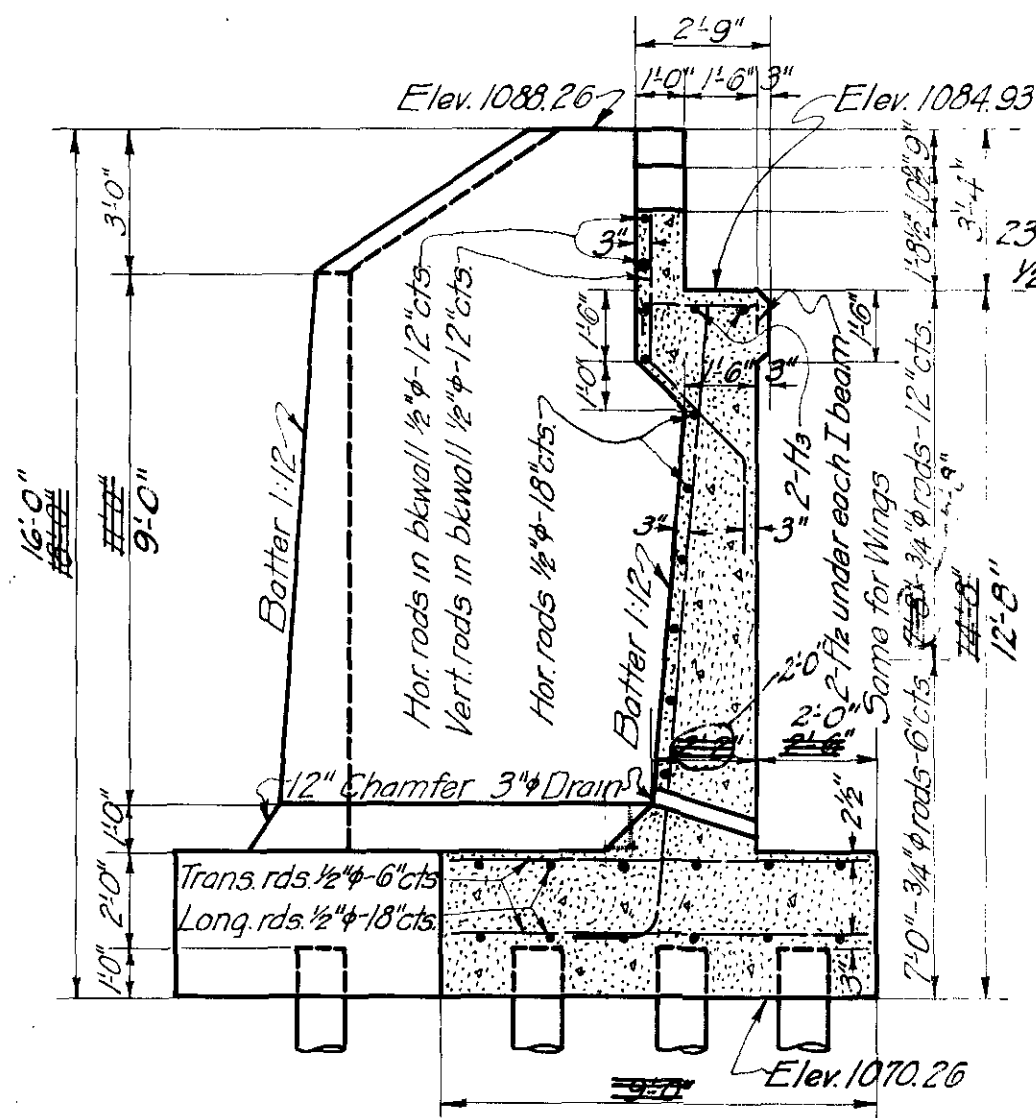


GENERAL ELEVATION
Scale: 1"=10'-0"

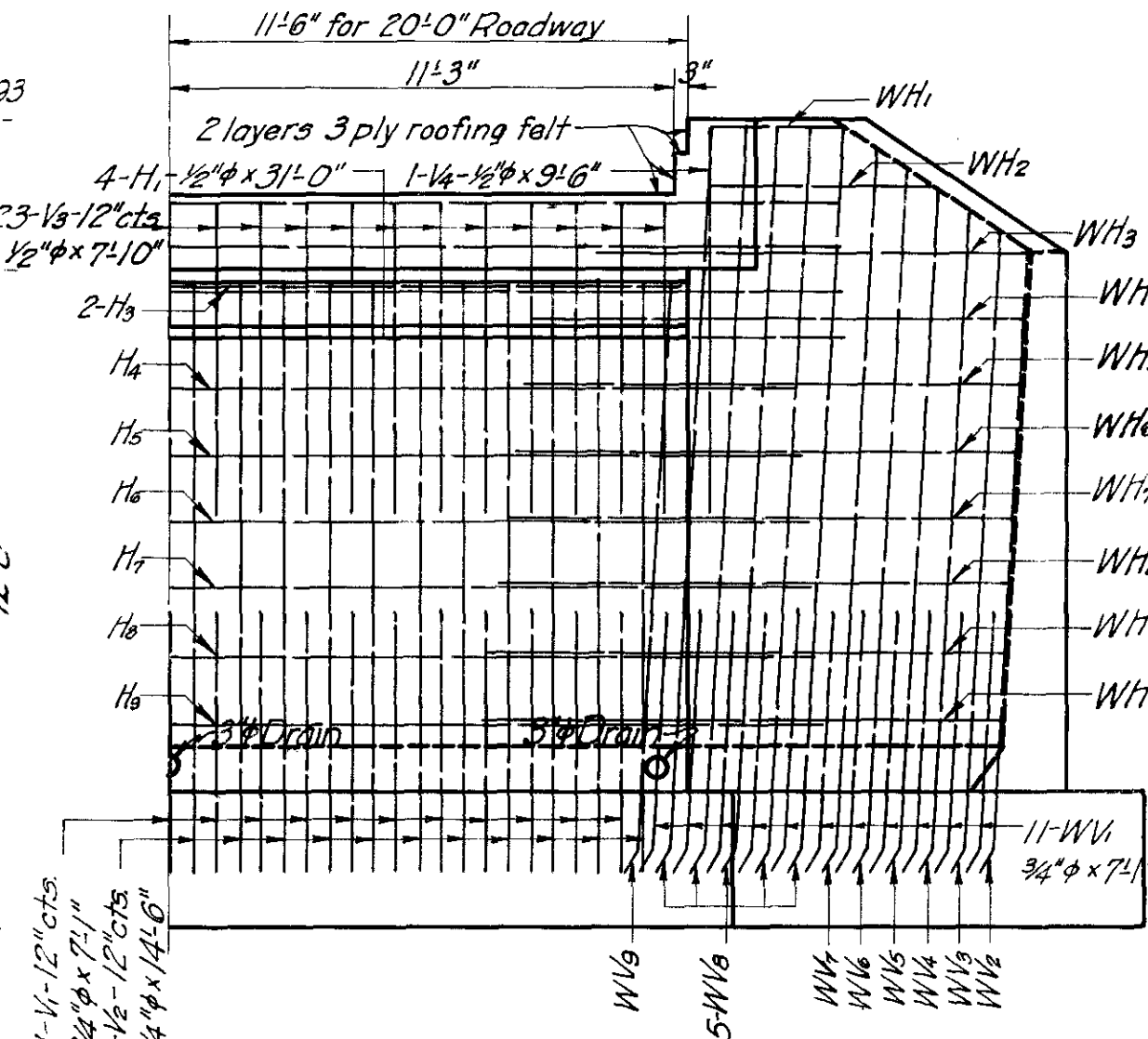
Note: I beams of equal section modulus may be used in place of I beams shown on Standard but Contractor will be paid for weight of I's shown on Standard. See sheet No.53 for Standard.

Built As Planned - See letter of
R.K. Caswell - 11-16-26

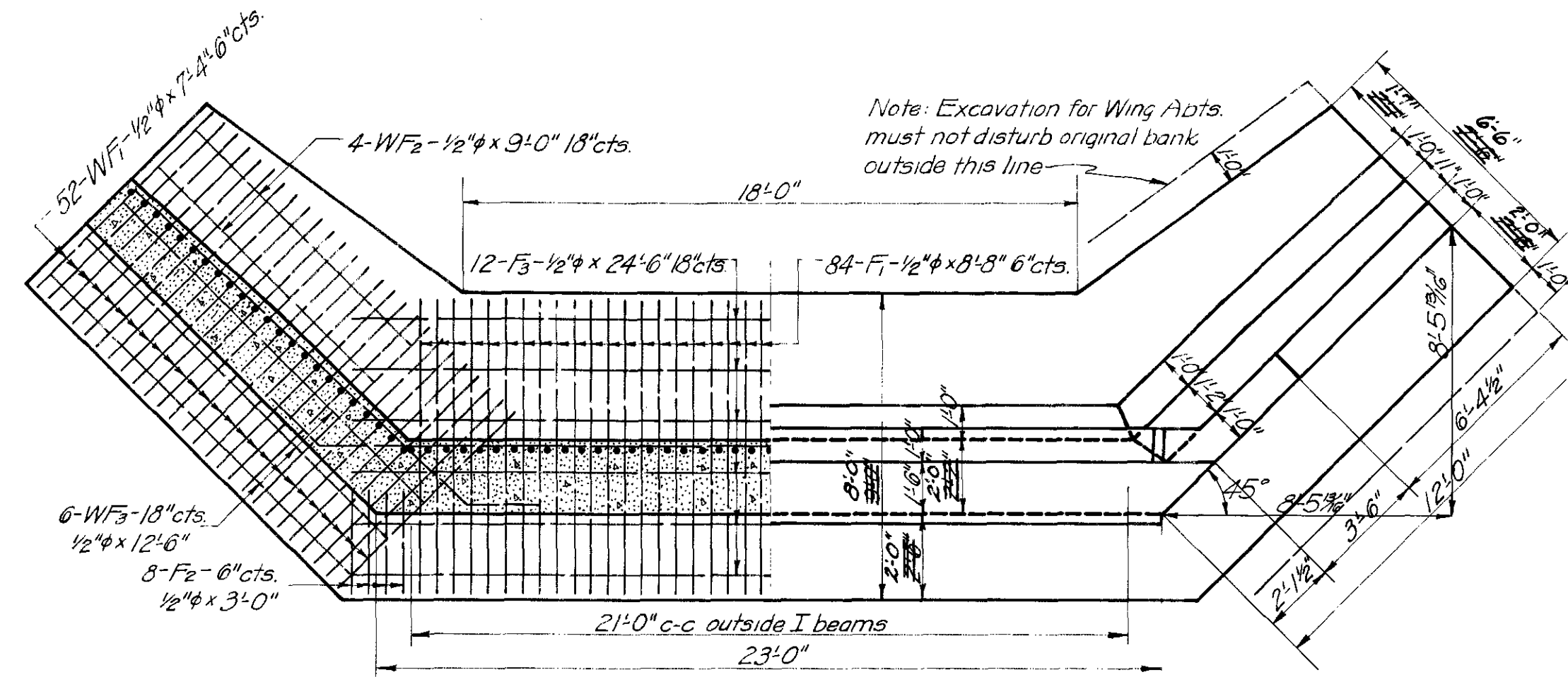
CORRECTED AS BUILT
GENERAL ELEV.-DETAIL ABTS.
SUMMARY OF QUANTITIES
40'I BEAM SPAN-20' RDWY.
@ STA. 330+80.0
F.A. PROJ. No. 146 SEC. 'E'



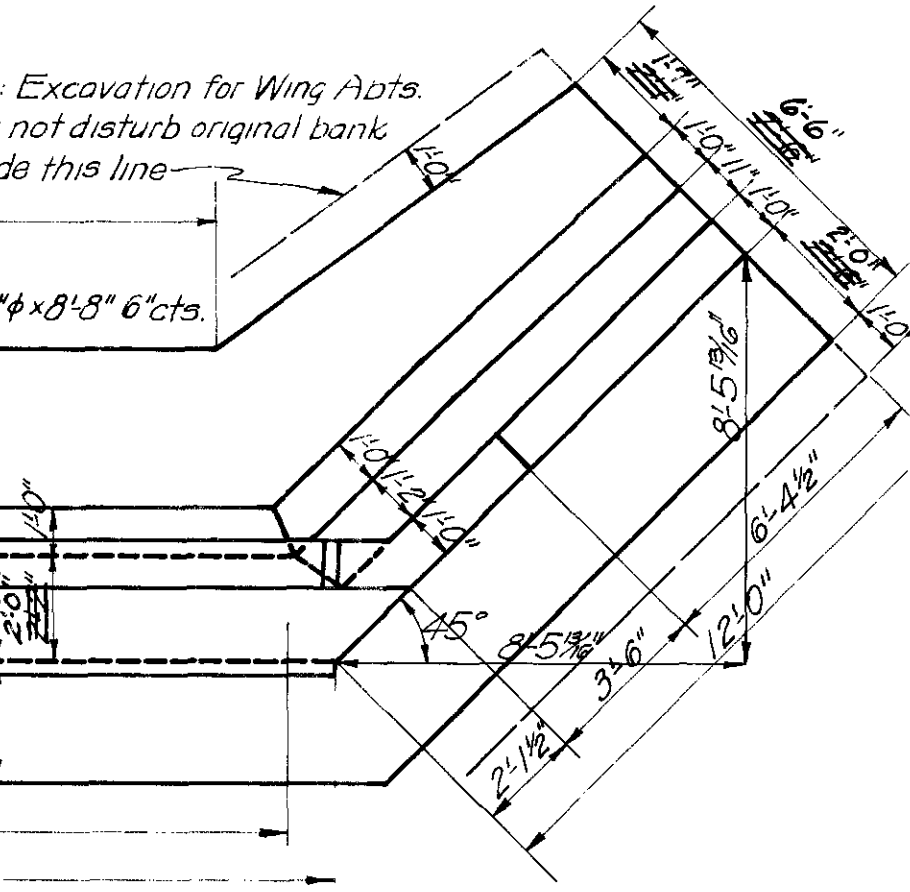
SECTION OF ABT. ON \mathbb{C}



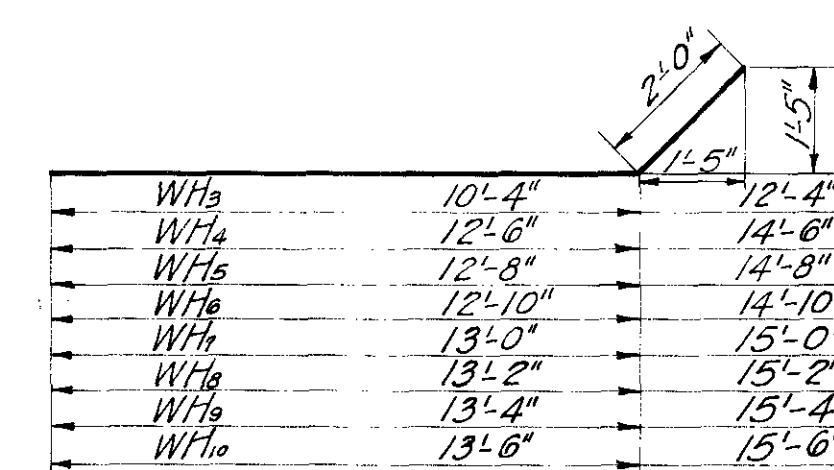
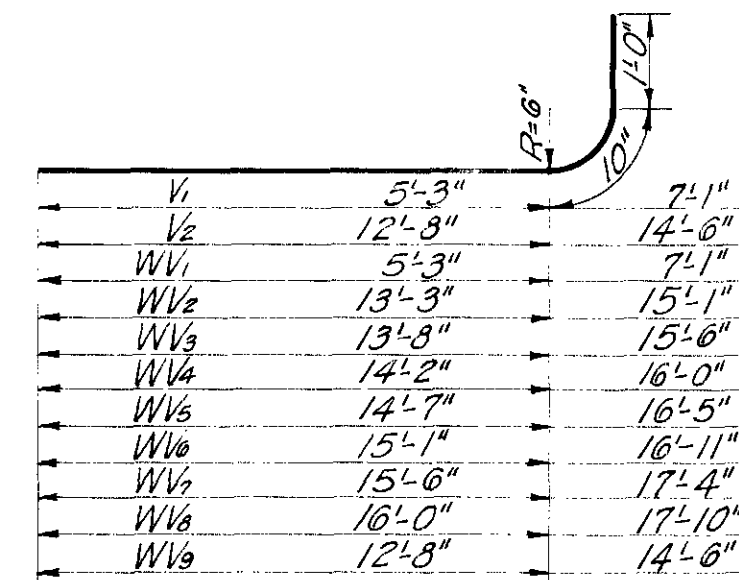
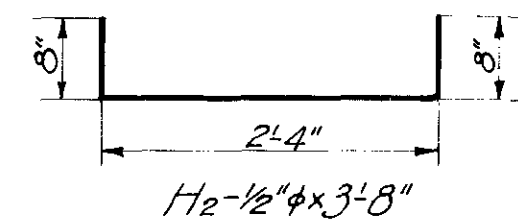
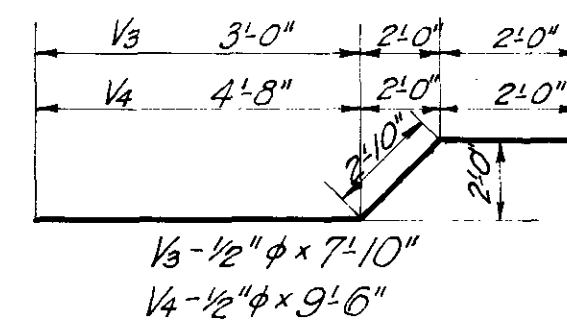
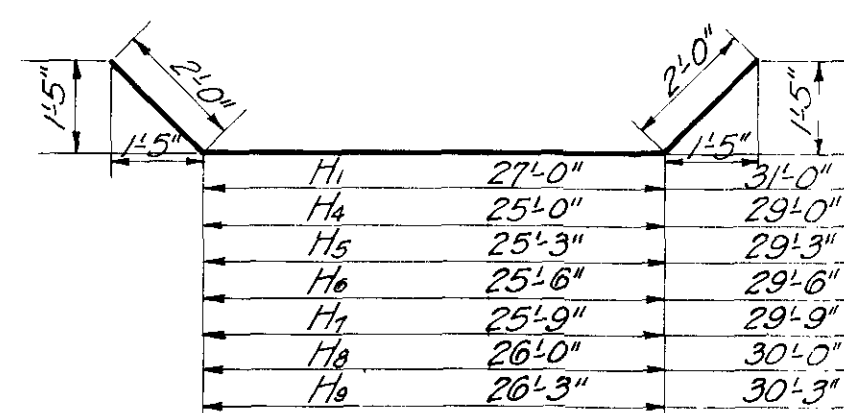
HALF ELEVATION



HALF SECTION AT TOP OF CHAMFER



HALF PLAN

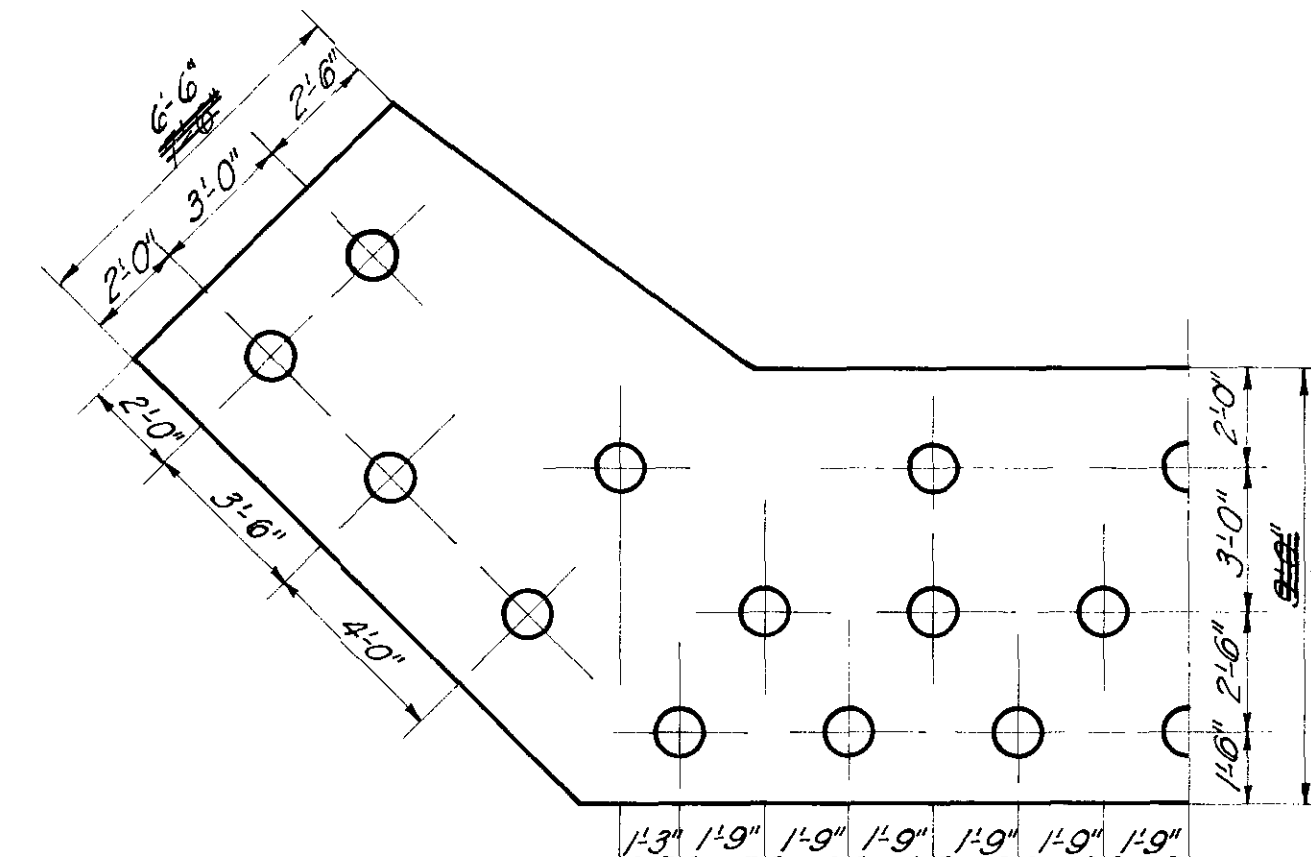


| BAR LIST FOR ONE APT. | | | | |
|-----------------------|-----|--------|------|---------|
| MARK | No | SIZE | FORM | LENGTH |
| F ₁ | 84 | 1/2" φ | St | 9'-0" |
| F ₂ | 16 | " | " | 24'-6" |
| WF ₁ | 104 | " | " | 7'-4" |
| WF ₂ | 8 | " | " | 9'-0" |
| WF ₃ | 12 | " | " | 12'-6" |
| H ₁ | 4 | " | Bent | 31'-0" |
| H ₂ | 10 | " | " | 3'-8" |
| H ₃ | 2 | " | St | 23'-0" |
| H ₄ | 1 | " | Bent | 29'-0" |
| H ₅ | 1 | " | " | 29'-3" |
| H ₆ | 1 | " | " | 29'-6" |
| H ₇ | 1 | " | " | 29'-9" |
| H ₈ | 1 | " | " | 30'-0" |
| H ₉ | 1 | " | " | 30'-3" |
| V ₁ | 21 | 3/4" φ | " | 7'-1" |
| V ₂ | 22 | " | " | 14'-6" |
| V ₃ | 23 | 1/2" φ | " | 7'-0" |
| V ₄ | 2 | " | " | 9'-6" |
| WH ₁ | 2 | " | St | 4'-0" |
| WH ₂ | 2 | " | " | 6'-0" |
| WH ₃ | 2 | " | Bent | 12'-4" |
| WH ₄ | 2 | " | " | 14'-6" |
| WH ₅ | 2 | " | " | 14'-8" |
| WH ₆ | 2 | " | " | 15'-0" |
| WH ₇ | 2 | " | " | 15'-0" |
| WH ₈ | 2 | " | " | 15'-2" |
| WH ₉ | 2 | " | " | 15'-4" |
| WH ₁₀ | 2 | " | " | 15'-6" |
| WV ₁ | 22 | 3/4" φ | " | 7'-1" |
| WV ₂ | 2 | " | " | 15'-1" |
| WV ₃ | 2 | " | " | 15'-6" |
| WV ₄ | 2 | " | " | 16'-0" |
| WV ₅ | 2 | " | " | 16'-5" |
| WV ₆ | 2 | " | " | 16'-11" |
| WV ₇ | 2 | " | " | 17'-4" |
| WV ₈ | 10 | " | " | 17'-10" |
| WV ₉ | 2 | " | " | 14'-6" |

Reinf. Steel in 1 Abt. - ~~3525~~ lbs. 306
1:2:4 Conc. in 1 Abt. - ~~825~~ cu. yd. 71.5
Unt. Wood Piling 1 Abt. - ~~500~~ lin. ft.

1:2:4 Conc. in 1 Abt. - ~~82.5~~ cu. yd. 7.15

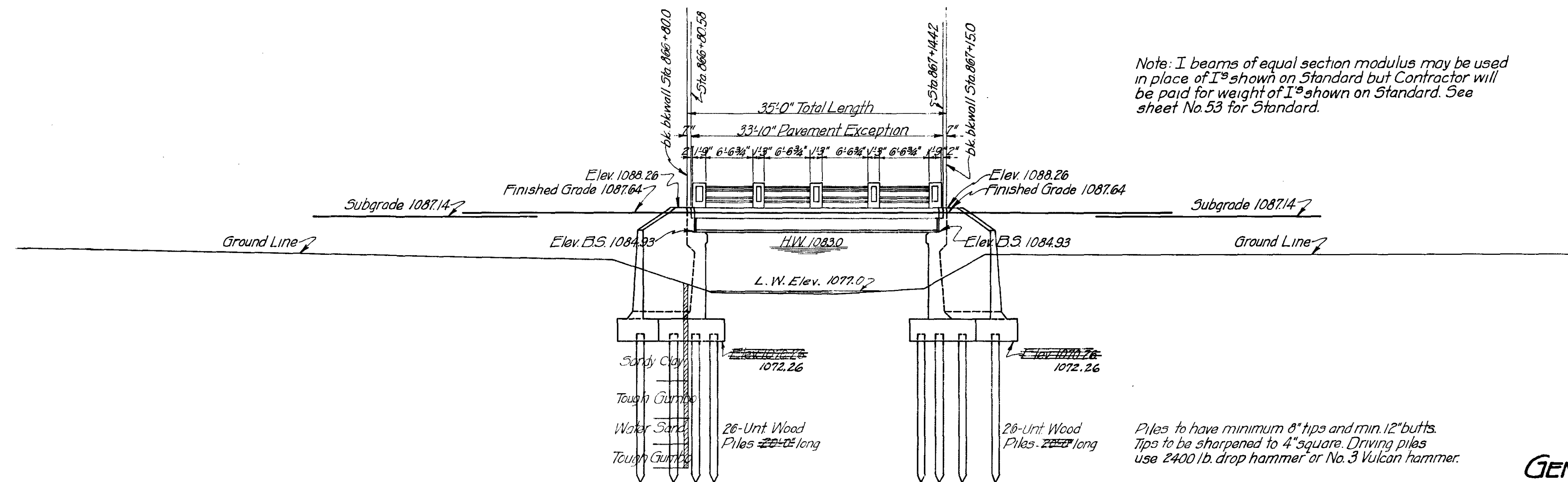
Unt. Wood Piling / Abt. ~~200~~ lin. ft.



PILE SPACING DIAGRAM

| SUMMARY OF QUANTITIES | | | | | | |
|-----------------------|------------------|---------------------------|--------------------------|----------------------------|-------------|---------------------------|
| LOCATION | CONCRETE CUYD | REINF STEEL LB | STRUCT STEEL LB | CONC. HND | UNT Wood | |
| | 1:2:3 | 1:2:4 | | RAIL LINF | PILING LINF | |
| ABTS. | 165.0 | 165.0 | 6,138 | #013 | | |
| RY & CURBS | 22.50 | 142.3 | 2,560 | | | |
| 30" I.B.M | | | #020 | 67.0 | | |
| TOTALS | 22.50 | 165.0 142.3 | 3613 8,699 | 74020 13,979 | 67.0 | #013 1807.1 |
| | | | | | | CUTOFFS 9.5 |

| PILE LIST | | | | |
|-----------|------------|------------|------------|------------|
| PILE NO. | WEST ABT. | | EAST ABT. | |
| | NET LENGTH | NET CUTOFF | NET LENGTH | NET CUTOFF |
| 1 | 36.0' | | 33.7' | |
| 2 | 35.0' | | 34.3' | |
| 3 | 34.2' | | 35.3' | |
| 4 | 35.0' | | 36.3' | |
| 5 | 35.0' | | 33.1' | .5' |
| 6 | 35.4' | | 35.5' | |
| 7 | 33.6' | | 35.2' | |
| 8 | 35.6' | | 35.3' | |
| 9 | 35.2' | | 36.5' | |
| 10 | 35.6' | | 36.8' | |
| 11 | 35.3' | | 35.0' | |
| 12 | 35.1' | | 35.3' | |
| 13 | 36.1' | | 33.0' | |
| 14 | 33.6' | | 35.8' | |
| 15 | 36.0' | | 35.3' | |
| 16 | 35.7' | | 34.1' | .5' |
| 17 | 35.0' | | 26.5' | 1.5' |
| 18 | 33.1' | | 36.0' | 2.0' |
| 19 | 35.0' | | 36.7' | |
| 20 | 35.2' | | 36.6' | 1.0' |
| 21 | 35.0' | | 35.5' | |
| 22 | 35.2' | | 32.9' | .5' |
| 23 | 35.2' | | 31.5' | 2.0' |
| 24 | 35.1' | | 32.2' | |
| 25 | 35.2' | | 32.9' | .5' |
| 26 | 35.1' | | 32.5' | 1.0' |
| Total | 912.3 | 0. | 894.8 | 9.5 |



GENERAL ELEVATION
SCALE: 1"=10'-0"

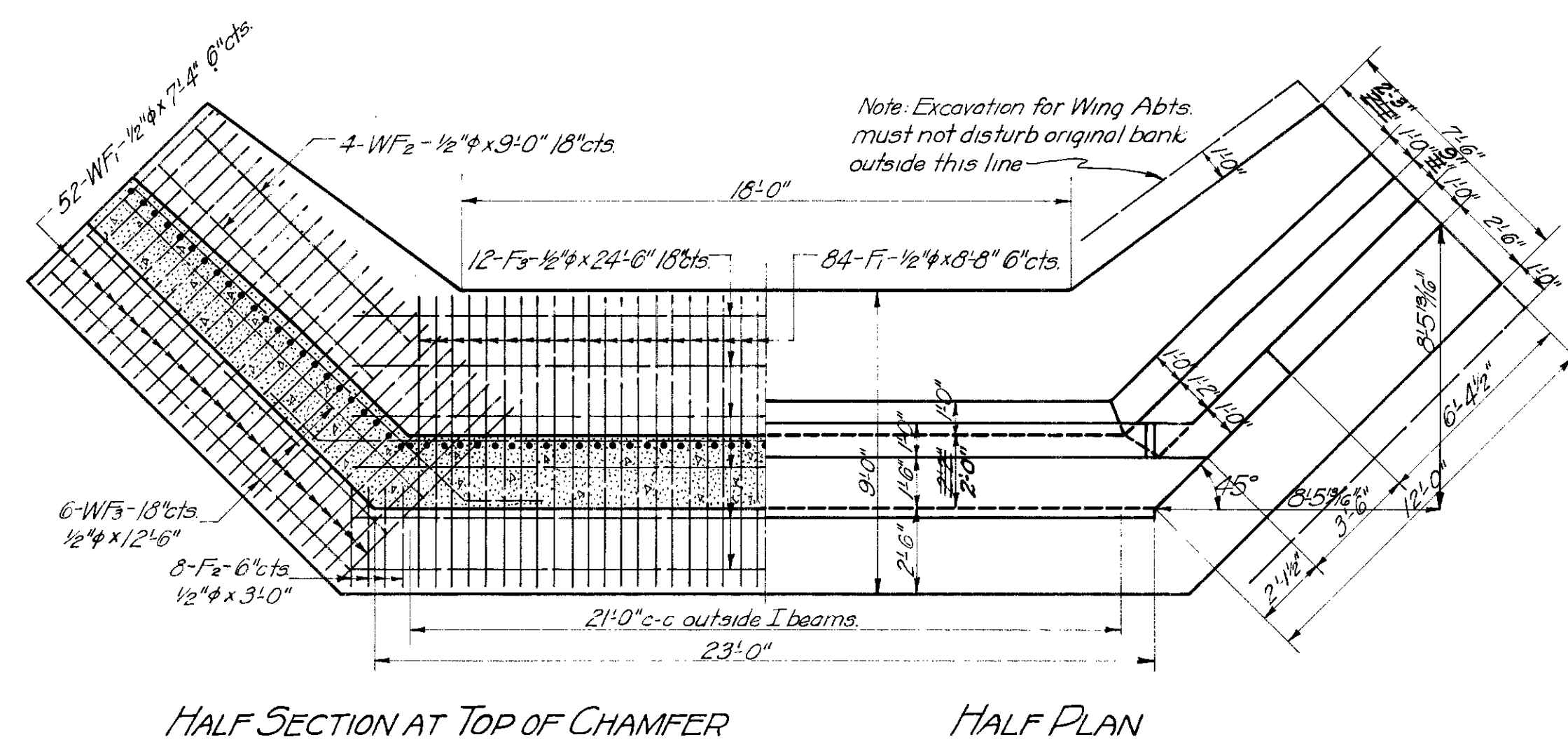
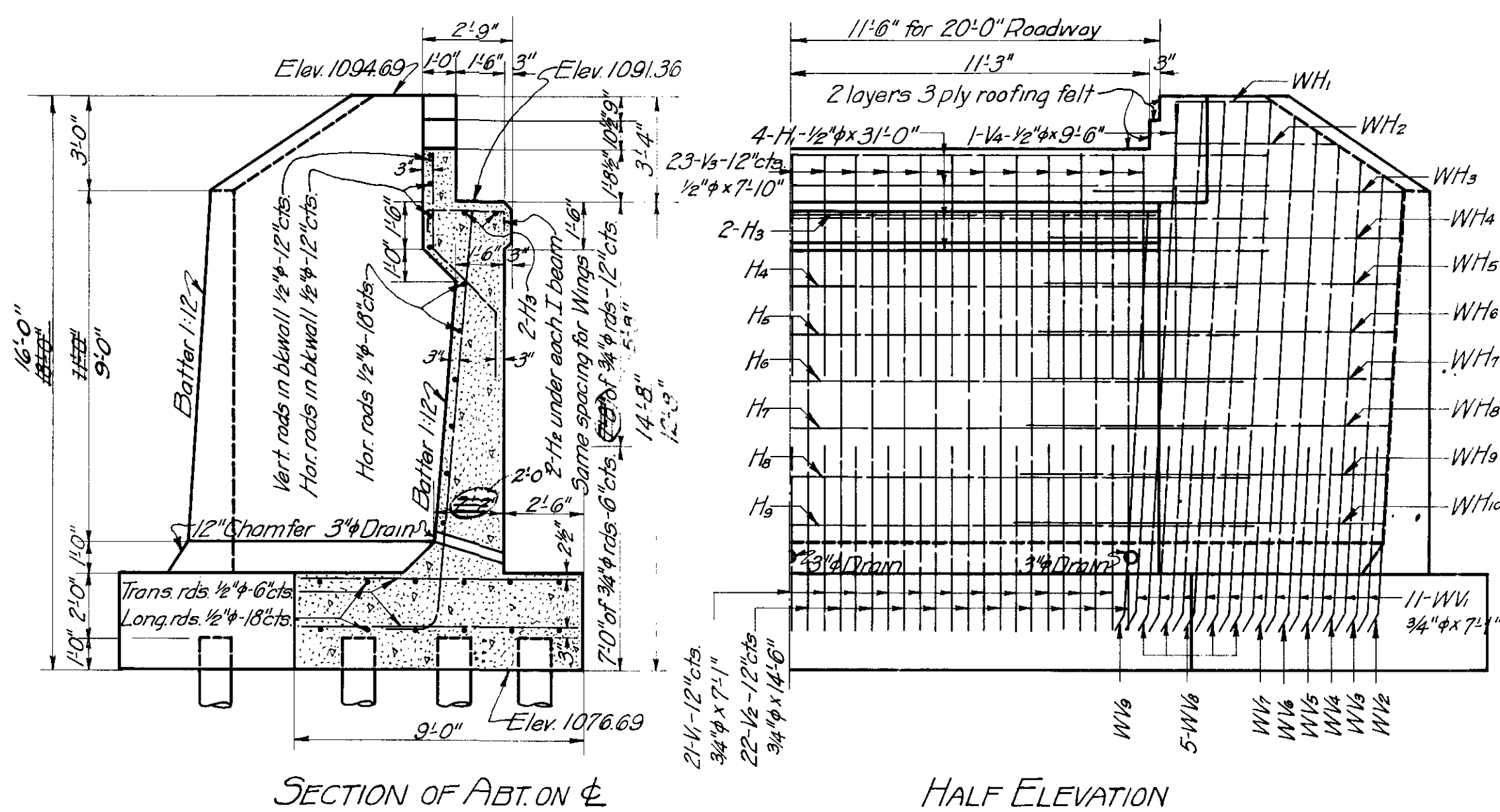
SCALE: 1"=10'-0"

Note: I beams of equal section modulus may be used in place of I's shown on Standard but Contractor will be paid for weight of I's shown on Standard. See sheet No.53 for Standard.

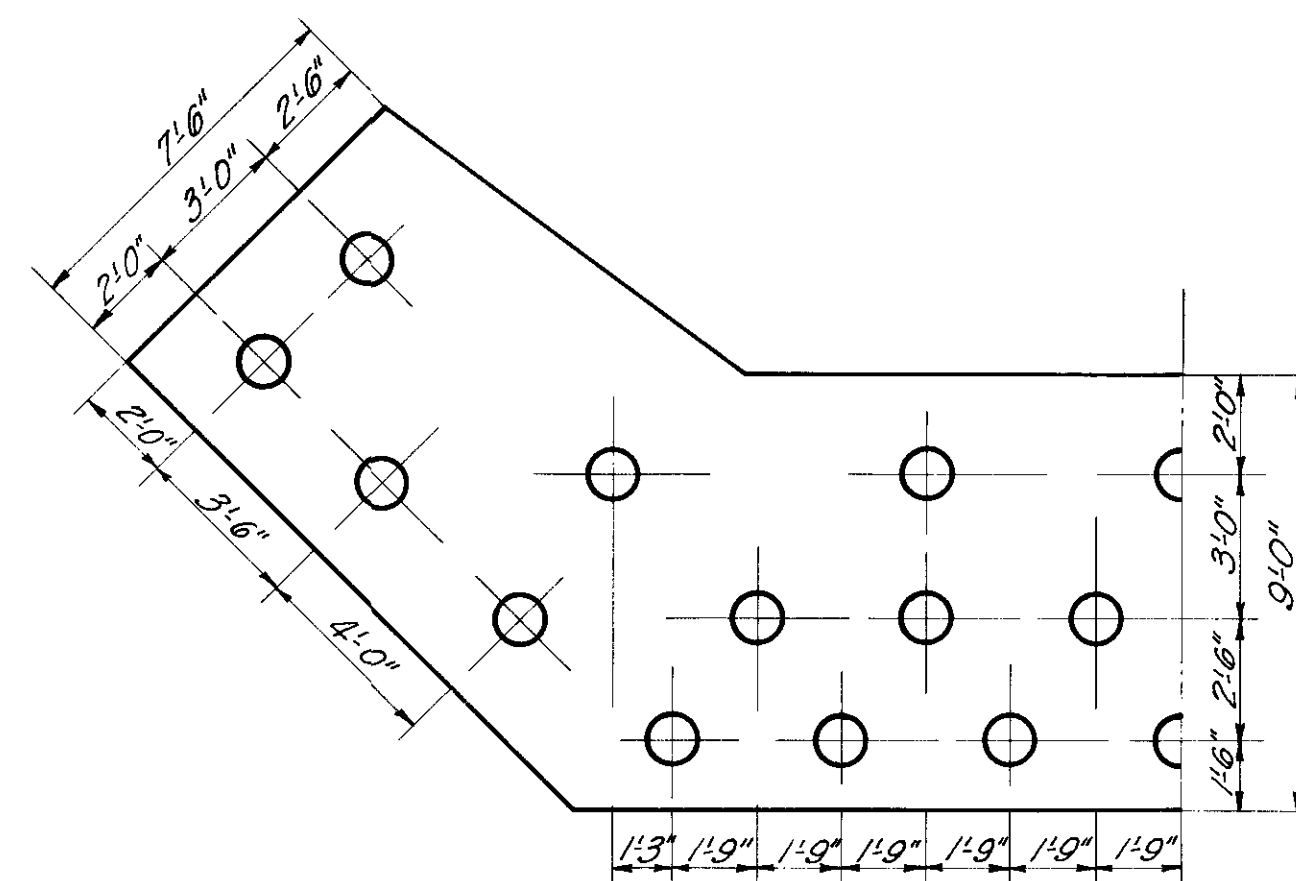
Piles to have minimum 8" tips and min. 12" butts.
Tips to be sharpened to 4" square. Driving piles
use 2400 lb. drop hammer or No. 3 Vulcan hammer.

CORRECTED AS BUILT
GENERAL ELEV.-DETAIL ABTS.
SUMMARY OF QUANTITIES
30'-I BEAM SPAN-20' RDWY.
± STA. 866+97.5
F.A. PROJ. No. 146 SEC. 'E'

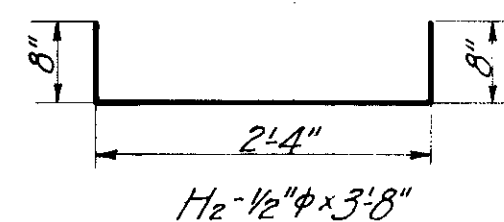
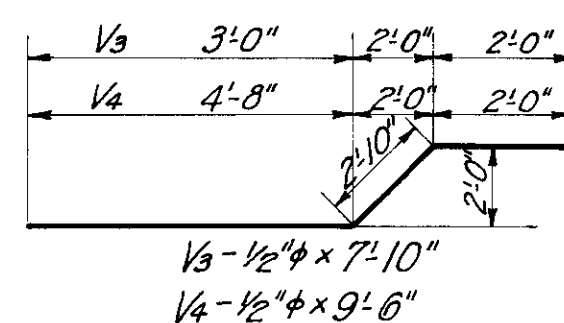
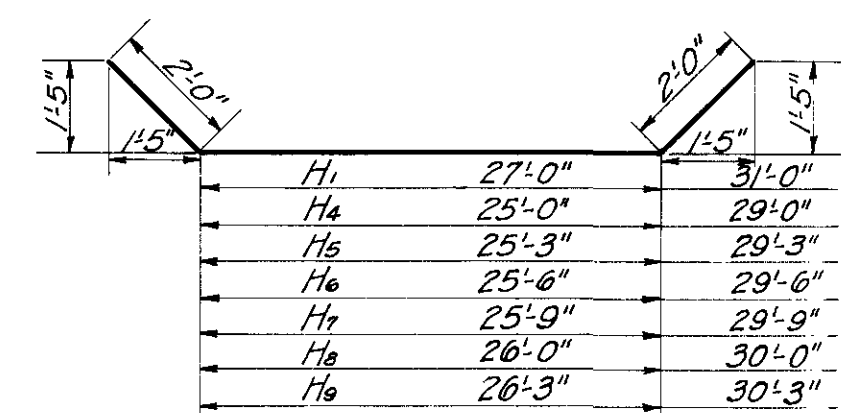
Corrected as built Sept. 16, 1927



| BAR LIST FOR ONE APT. | | | | |
|-----------------------|-----|-------|------|---------|
| MARK | No. | SIZE | FORM | LENGTH |
| F ₁ | 84 | 1/2"φ | St | 8'-8" |
| F ₂ | 16 | " | " | 3'-0" |
| F ₃ | 12 | " | " | 24'-6" |
| WF ₁ | 104 | " | " | 7'-4" |
| WF ₂ | 8 | " | " | 9'-0" |
| WF ₃ | 12 | " | " | 12'-6" |
| H ₁ | 4 | " | Bent | 31'-0" |
| H ₂ | 10 | " | " | 3'-8" |
| H ₃ | 2 | " | St | 23'-0" |
| H ₄ | 1 | " | Bent | 29'-0" |
| H ₅ | 1 | " | " | 29'-3" |
| H ₆ | 1 | " | " | 29'-6" |
| H ₇ | 1 | " | " | 29'-9" |
| H ₈ | 1 | " | " | 30'-0" |
| H ₉ | 1 | " | " | 30'-3" |
| V ₁ | 21 | 3/4"φ | " | 7'-1" |
| V ₂ | 22 | " | " | 14'-6" |
| V ₃ | 23 | 1/2"φ | " | 7'-0" |
| V ₄ | 2 | " | " | 9'-6" |
| WH ₁ | 2 | " | St | 4'-0" |
| WH ₂ | 2 | " | " | 6'-10" |
| WH ₃ | 2 | " | Bent | 12'-4" |
| WH ₄ | 2 | " | " | 14'-6" |
| WH ₅ | 2 | " | " | 12'-8" |
| WH ₆ | 2 | " | " | 14'-10" |
| WH ₇ | 2 | " | " | 15'-0" |
| WH ₈ | 2 | " | " | 15'-2" |
| WH ₉ | 2 | " | " | 15'-4" |
| WH ₁₀ | 2 | " | " | 15'-6" |
| WV ₁ | 22 | 3/4"φ | " | 7'-1" |
| WV ₂ | 2 | " | " | 15'-1" |
| WV ₃ | 2 | " | " | 15'-6" |
| WV ₄ | 2 | " | " | 16'-0" |
| WV ₅ | 2 | " | " | 16'-5" |
| WV ₆ | 2 | " | " | 16'-11" |
| WV ₇ | 2 | " | " | 17'-4" |
| WV ₈ | 10 | " | " | 17'-0" |
| WV ₉ | 2 | " | " | 14'-6" |



| SUMMARY OF QUANTITIES. | | | | | | |
|------------------------|---------------|---------------------------|--------------------------|---------------------------|-------------------|---|
| LOCATION | CONCRETE CURB | REINF. STEEL LB. | STRUCT. STEEL LB. | CONC. IN RAIL LINT. | WOOD PILING LINT. | |
| ABTS. | 1:2-3 | 1:2-4 | | | | |
| RYS & CURBS. | 22.50 | 155.0 151.5 | 7050 2,560 | 6,774. | | 1040 |
| 30" I.B.M. | | | | 1025 | 670 | |
| TOTALS. | 22.50 | 155.0 151.5 | 9010 9,334 | 1025 13,979 | 670 | 1040 1735. Cut-offs 15.4 |

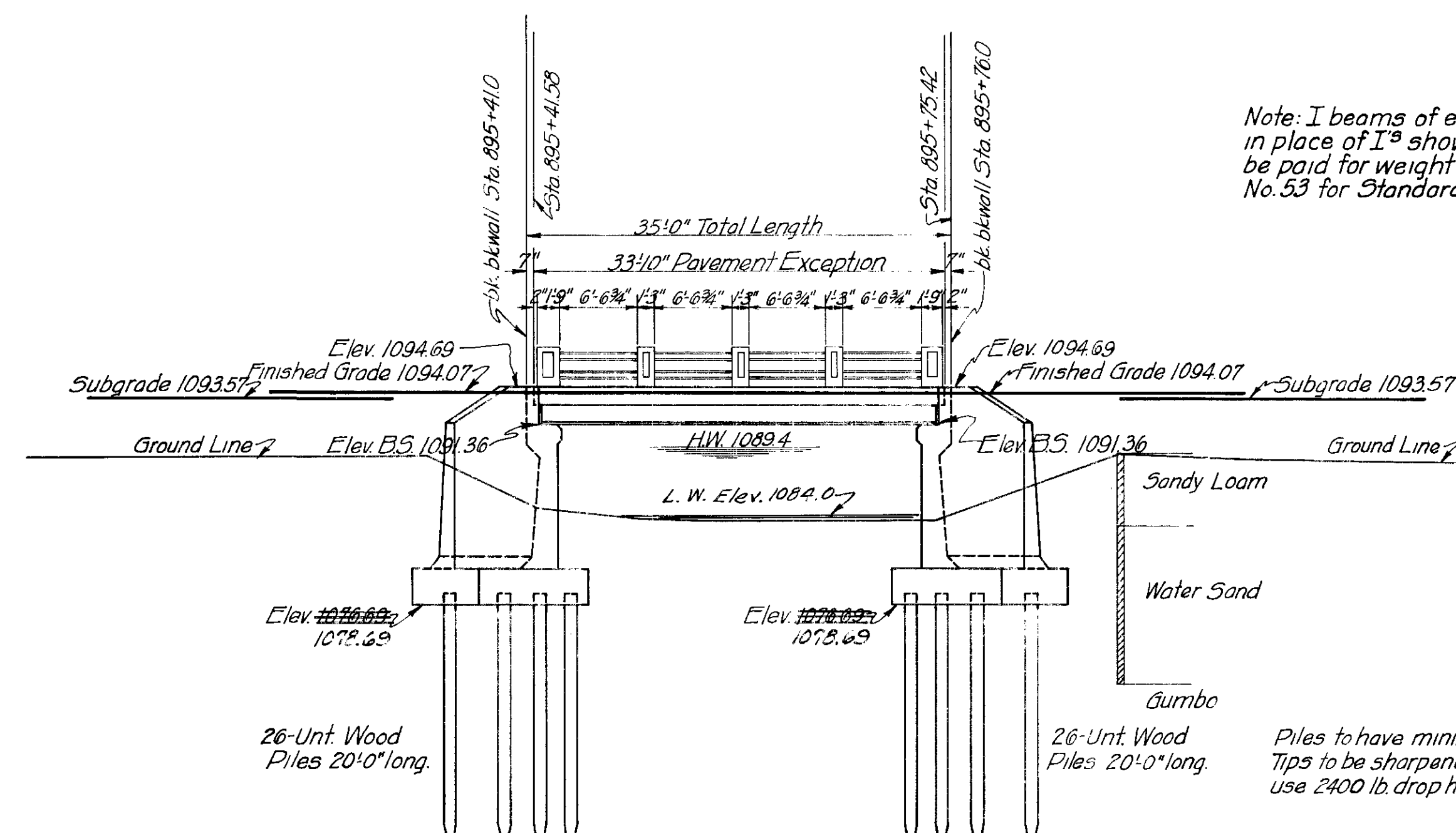


The diagram shows a 90-degree bend in a pipe. The dimensions are: 10" for the straight section, 10" for the radius of the bend, and 14" for the thickness of the pipe wall. The stress values are listed in a table below the diagram.

| | | |
|--------|------------------|-------------------|
| V_1 | $5^{\circ}.3''$ | $7^{\circ}.1''$ |
| V_2 | $12^{\circ}.8''$ | $14^{\circ}.6''$ |
| WV_1 | $5^{\circ}.3''$ | $7^{\circ}.1''$ |
| WV_2 | $13^{\circ}.3''$ | $15^{\circ}.1''$ |
| WV_3 | $13^{\circ}.8''$ | $15^{\circ}.6''$ |
| WV_4 | $14^{\circ}.2''$ | $16^{\circ}.0''$ |
| WV_5 | $14^{\circ}.7''$ | $16^{\circ}.5''$ |
| WV_6 | $15^{\circ}.1''$ | $16^{\circ}.11''$ |
| WV_7 | $15^{\circ}.6''$ | $17^{\circ}.4''$ |
| WV_8 | $16^{\circ}.0''$ | $17^{\circ}.10''$ |
| WV_9 | $12^{\circ}.8''$ | $14^{\circ}.6''$ |

| Member | Length |
|------------------|--------|
| WT ₆ | 10'4" |
| WT ₄ | 12'6" |
| WT ₅ | 12'8" |
| WT ₆ | 12'10" |
| WT ₇ | 13'0" |
| WT ₈ | 13'2" |
| WT ₉ | 13'4" |
| WT ₁₀ | 13'6" |

| PILE LIST | | | | |
|-----------|------------|------------|------------|------------|
| PILE NO. | WEST | ABT. | EAST ABT. | |
| | NET LENGTH | NET CUTOFF | NET LENGTH | NET CUTOFF |
| 1 | 34.2 | | 34.0 | |
| 2 | 34.4 | | 33.6 | |
| 3 | 33.5 | | 33.9 | |
| 4 | 32.8 | | 33.8 | |
| 5 | 34.3 | | 33.3 | |
| 6 | 33.8 | | 33.4 | |
| 7 | 33.4 | | 33.2 | |
| 8 | 34.0 | | 32.8 | |
| 9 | 32.6 | | 33.5 | |
| 10 | 33.8 | | 33.5 | |
| 11 | 33.2 | | 33.3 | |
| 12 | 33.6 | | 33.6 | |
| 13 | 34.2 | | 33.2 | |
| 14 | 34.4 | | 33.5 | |
| 15 | 33.7 | | 33.7 | |
| 16 | 33.5 | | 23.3 | 32 |
| 17 | 32.7 | | 33.2 | |
| 18 | 33.9 | | 31.5 | 6.5 |
| 19 | 32.4 | | 33.7 | |
| 20 | 34.2 | | 34.3 | 37 |
| 21 | 32.5 | | 33.8 | |
| 22 | 34.2 | | 33.3 | |
| 23 | 33.6 | | 33.1 | |
| 24 | 34.4 | | 33.2 | |
| 25 | 33.1 | | 33.2 | |
| 26 | 30.4 | 2.0 | 33.1 | |
| Total | 671.0 | 2.0 | 664.0 | 13.4 |



Note: I beams of equal section modulus may be used in place of I^s shown on Standard but Contractor will be paid for weight of I^s shown on Standard. See sheet No. 53 for Standard.

Piles to have minimum 8" tips and min. 12" butts.
Tips to be sharpened to 4" square. Driving piles
use 2400 lb. drop hammer or No. 3 Vulcan hammer.

GENERAL ELEVATION
SCALE: 1"=10'-0"

CORRECTED AS BUILT
GENERAL ELEV.-DETAIL ABTS.
SUMMARY OF QUANTITIES
30'-I BEAM SPAN-20' RDWY.
+ STA. 895+58.5
F.A. PROJ. No. 146 SEC. 'E'

V.G.P.
D.I.M.

and Traced
Checked

1100

1090

1080

1070

1060

1050

1100

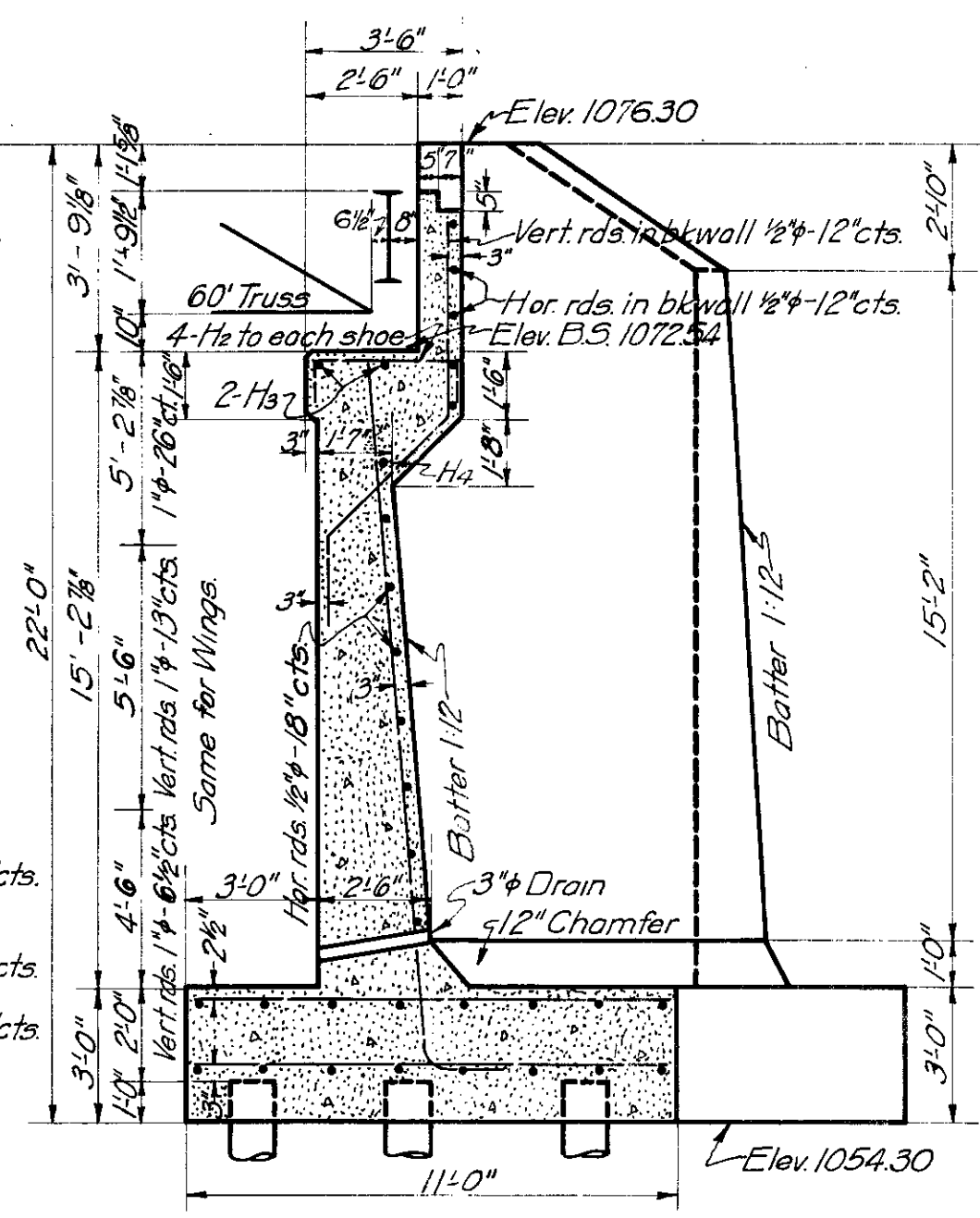
1090

1080

1070

1060

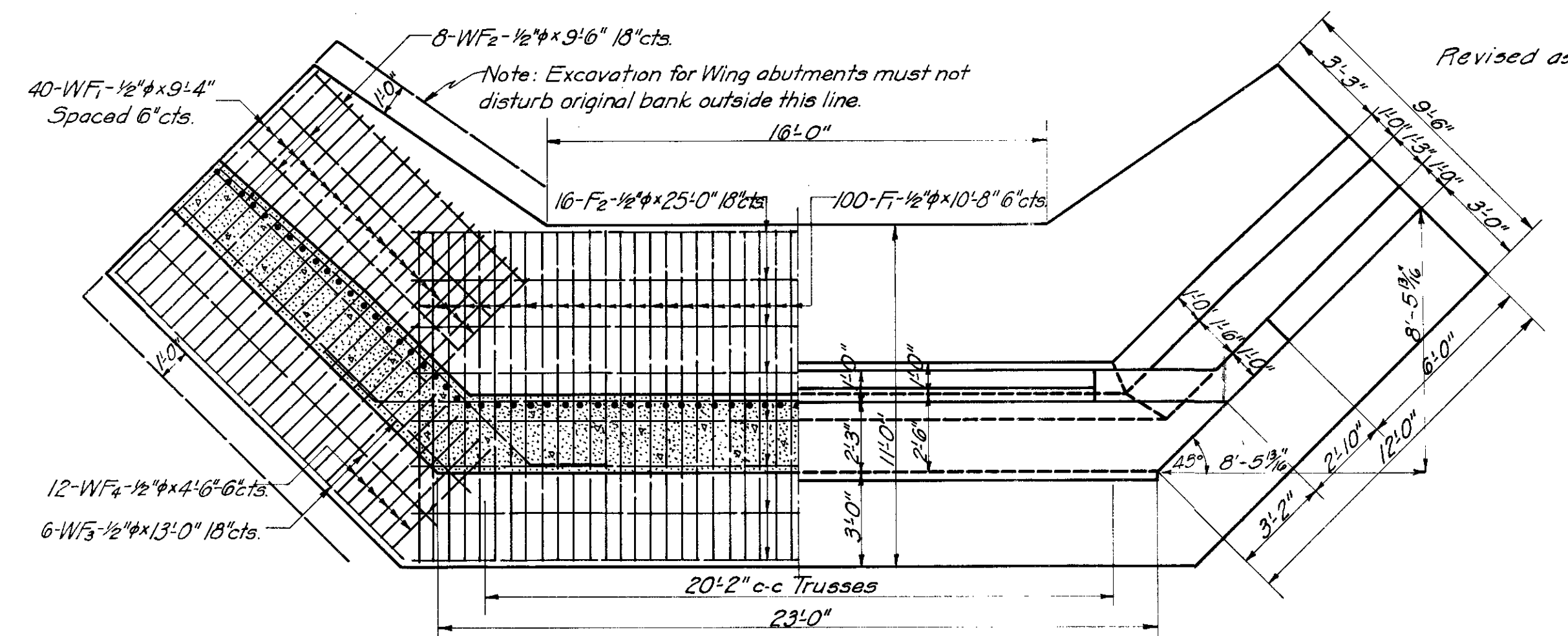
10.50



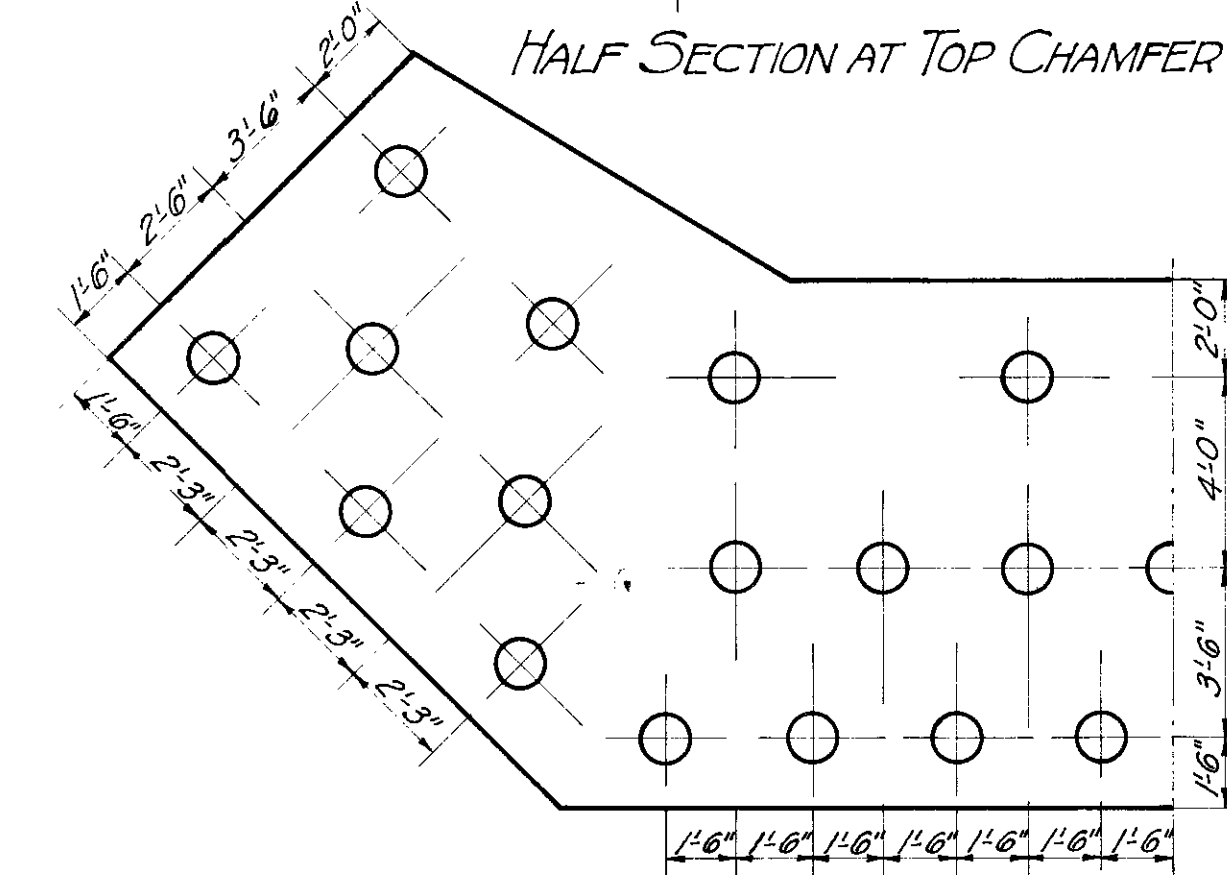
SECTION OF ABT ON \mathbb{C}

| BAR LIST FOR ONE ABUT. | | | | |
|------------------------|-----|--------|------|---------|
| MARK | NO. | SIZE | FORM | LENGTH |
| F ₁ | 100 | 1/2" φ | St. | 10'-8" |
| F ₂ | 16 | " | " | 25'-0" |
| WF ₁ | 80 | " | " | 9'-4" |
| WF ₂ | 16 | " | " | 9'-6" |
| WF ₃ | 12 | " | " | 13'-0" |
| WF ₄ | 24 | " | " | 4'-6" |
| H ₁ | 4 | " | Bent | 32'-6" |
| H ₂ | 8 | " | " | 4'-6" |
| H ₃ | 2 | " | St | 23'-0" |
| H ₄ | 1 | " | Bent | 29'-1" |
| H ₅ | 1 | " | " | 29'-4" |
| H ₆ | 1 | " | " | 29'-7" |
| H ₇ | 1 | " | " | 29'-10" |
| H ₈ | 1 | " | " | 30'-1" |
| H ₉ | 1 | " | " | 30'-4" |
| H ₁₀ | 1 | " | " | 30'-7" |
| H ₁₁ | 1 | " | " | 30'-10" |
| V ₁ | 20 | 1" φ | " | 8'-7" |
| V ₂ | 10 | " | " | 14'-1" |
| V ₃ | 11 | " | " | 19'-1" |
| V ₄ | 20 | 1/2" φ | " | 9'-5" |
| V ₅ | 6 | " | " | 10'-11" |
| WW ₁ | 20 | 1" φ | " | 8'-7" |
| WW ₂ | 10 | " | " | 14'-1" |
| WW ₃ | 2 | " | " | 20'-2" |
| WW ₄ | 2 | " | " | 21'-3" |
| WW ₅ | 2 | " | " | 22'-4" |
| WW ₆ | 4 | " | " | 22'-11" |
| WW ₇ | 2 | " | " | 19'-1" |
| WH ₁ | 2 | 1/2" φ | " | 7'-2" |
| WH ₂ | 2 | " | " | 10'-6" |
| WH ₃ | 2 | " | " | 12'-4" |
| WH ₄ | 2 | " | " | 14'-6" |
| WH ₅ | 2 | " | " | 14'-8" |
| WH ₆ | 2 | " | " | 14'-10" |
| WH ₇ | 2 | " | " | 15'-0" |
| WH ₈ | 2 | " | " | 15'-2" |
| WH ₉ | 2 | " | " | 15'-4" |
| WH ₁₀ | 2 | " | " | 15'-6" |
| WH ₁₁ | 2 | " | " | 15'-8" |
| WH ₁₂ | 2 | " | " | 15'-10" |

Reinforcing Steel in / Abt.-5460 lbs
1:2:4 Concrete in / Abt.- 109.5 cu.yd
Unt. Wood Piling in / Abt.-825 lin.ft.



HALF PLAN

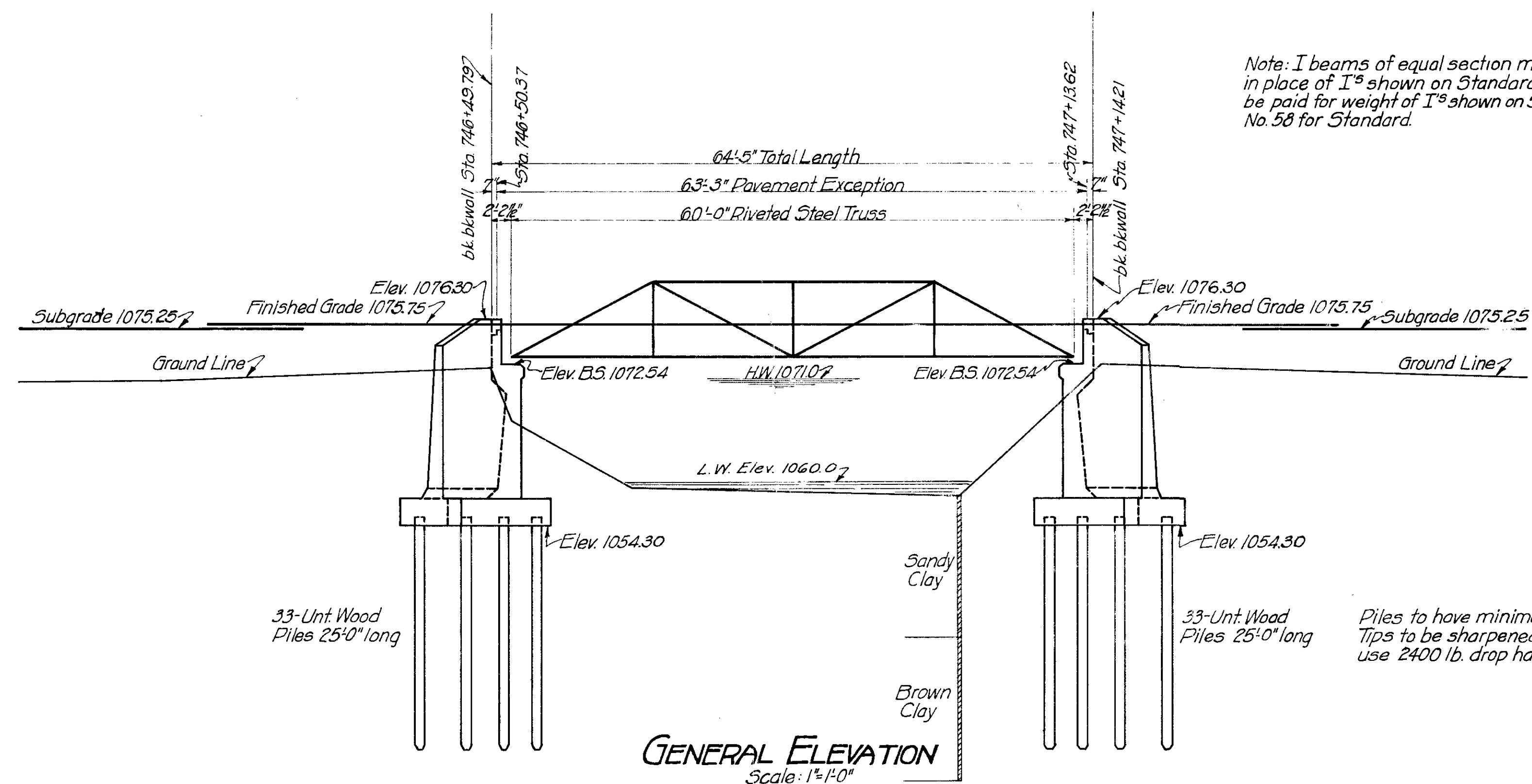


PILE DIAGRAM

| SUMMARY OF BRIDGE QUANTITIES | | | | | |
|------------------------------|---------------|-------|-------------|-------------------|-----------------|
| LOCATION | CONCRETE CYLS | | REINFORCING | STRUCTURAL UNITS | WOOD |
| | 12'3" | 12'4" | STEEL LBS | STEEL LBS | PLING LIN.FT |
| ABUTMENTS | | 219.0 | 10,920 | | #652 |
| FLOOR & CURBS | 274 | | 4,100 | | |
| 60' TRUSS | | | | #2,000 | |
| TOTALS | 274 | 219.0 | 15,020 | #6,000 | #652 |

45,624 2,209.7
Cutoffs = 11.5

| PILE NO. | WEST ABT. | | EAST ABT. | |
|----------|------------|------------|------------|------------|
| | NET LENGTH | NET CUTOFF | NET LENGTH | NET CUTOFF |
| 1 | 32.0 | | 34.2 | |
| 2 | 33.7 | | 34.5 | |
| 3 | 24.5 | | 33.9 | |
| 4 | 33.5 | | 34.3 | |
| 5 | 33.4 | | 34.0 | |
| 6 | 33.7 | | 33.5 | |
| 7 | 33.7 | | 33.5 | |
| 8 | 33.5 | | 34.0 | |
| 9 | 33.4 | | 33.5 | |
| 10 | 33.1 | | 33.7 | |
| 11 | 32.0 | | 33.7 | |
| 12 | 32.3 | 1.0 | 32.0 | 1.0 |
| 13 | 33.5 | | 34.2 | |
| 14 | 34.0 | | 34.1 | |
| 15 | 33.3 | | 33.8 | |
| 16 | 34.1 | | 33.8 | |
| 17 | 34.3 | | 34.0 | |
| 18 | 30.5 | 3.0 | 32.8 | .5 |
| 19 | 32.0 | 1.0 | 34.3 | |
| 20 | 34.5 | | 33.5 | |
| 21 | 33.5 | | 33.5 | |
| 22 | 33.7 | | 32.0 | 1.0 |
| 23 | 34.4 | | 33.5 | |
| 24 | 32.9 | 1.0 | 34.6 | |
| 25 | 33.7 | | 32.5 | 1.0 |
| 26 | 31.1 | 1.0 | 34.3 | |
| 27 | 34.8 | | 34.0 | |
| 28 | 33.7 | | 34.8 | |
| 29 | 34.0 | | 34.0 | |
| 30 | 34.3 | | 33.5 | |
| 31 | 34.1 | | 32.0 | 1.0 |
| 32 | 34.4 | | 33.5 | |
| 33 | 34.2 | | 33.8 | |
| TOTAL | 1039.4 | 7.0 | 1111.3 | 4.5 |



Note: I beams of equal section modulus may be used in place of I^s shown on Standard but Contractor will be paid for weight of I^s shown on Standard. See sheet No. 58 for Standard.

*Piles to have minimum 8" tips and min. 12" butts.
Tips to be sharpened to 4" square. Driving piles
use 2400 lb. drop hammer or No. 3 Vulcan hammer.*

CORRECTED AS BUILT
GENERAL ELEV.-DETAIL ABTS.
SUMMARY OF QUANTITIES
60' STEEL TRUSS-18' RDWY.
& STA. 746+82.0
F.A. PROJ. No. 146 SEC. 'E'