

SUMMARY OF BRIDGE QUANTITIES

| BRIDGE NAME<br>LICK CREEK<br>PLATE TITLE | BRIDGE NO. | ITEM                    | APPROACH               | COMMON               | ROCK                 | CLASS "A"     | CLASS "S"     | PRECAST        | PRECAST        | REINFORCED | STEEL BEARING    | STEEL OR ALUMINUM          | STRUCTURAL          | NAME   | TREATED       | REMOVAL                 | TREATED       |
|--|------------|-------------------------|------------------------|----------------------|----------------------|---------------|---------------|----------------|----------------|------------|------------------|----------------------------|---------------------|--------|---------------|-------------------------|---------------|
|  |            |                         | SLABS & GUTTERS TYPE A | EXCAVATION FOR STRS. | EXCAVATION FOR STRS. | CONCRETE (AE) | CONCRETE (AE) | SLAB CURB UNIT | SLAB INT. UNIT | CONCRETE   | PIILING (12BP53) | PLATE GUARD BRIDGE RAILING | STEEL IN BEAM SPANS | PLATES | TIMBER PILING | OF EXISTING BRIDGE STR. | BRIDGE TIMBER |
| LICK CREEK                               | 3673       | End Bent 142            | 2                      | 85.9                 | ---                  | ---           | 25.4          | ---            | ---            | 3640       | 762.0            | ---                        | 1462                | 1      | ---           | ---                     | ---           |
|  |            | Piers 142               | ---                    | 296.0                | ---                  | 123.4         | 24.0          | ---            | ---            | 12,414     | 630.0            | ---                        | ---                 | ---    | ---           | ---                     | ---           |
|  |            | Spans 1, 2, 13          | ---                    | ---                  | ---                  | ---           | 173.4         | ---            | ---            | 40,167     | ---              | 481.0                      | 254,688             | ---    | ---           | ---                     | ---           |
|  |            | Total For Bridge        | 2                      | 381.9                | ---                  | 123.4         | 222.8         | ---            | ---            | 56,221     | 1,392.0          | 481.0                      | 256,150             | 1      | ---           | ---                     | ---           |
|  |            | End Bents 142           | 2                      | 85.9                 | ---                  | ---           | 25.4          | ---            | ---            | 3640       | 776.0            | ---                        | 1462                | 1      | ---           | ---                     | ---           |
| LITTLE RIVER                             | 3674       | Piers 1 thru 8          | ---                    | 1493.3               | 524.3                | 1081.0        | 96.8          | ---            | ---            | 143,478    | ---              | ---                        | ---                 | ---    | ---           | ---                     | ---           |
|  |            | Spans 1-3 thru 9        | ---                    | ---                  | ---                  | ---           | 260.4         | ---            | ---            | 60,606     | ---              | 722.0                      | 280,181             | ---    | ---           | ---                     | ---           |
|  |            | Span 4-6                | ---                    | ---                  | ---                  | ---           | 173.4         | ---            | ---            | 40,167     | ---              | 481.0                      | 255,057             | ---    | ---           | ---                     | ---           |
|  |            | Total For Bridge        | 2                      | 1581.2               | 524.3                | 1081.0        | 556.0         | ---            | ---            | 247,891    | 776.0            | 1203.0                     | 536,700             | 1      | ---           | 100%                    | ---           |
|  |            | End Bents 142           | ---                    | 28.9                 | ---                  | ---           | 8.5           | ---            | ---            | 1,087      | ---              | ---                        | ---                 | ---    | 235.0         | ---                     | ---           |
| CHANNEL CROSSING                         | ---        | Int. Bents 2-7          | ---                    | ---                  | ---                  | ---           | 21.3          | ---            | ---            | 3089       | ---              | ---                        | ---                 | ---    | 812.0         | ---                     | 0.25          |
|  |            | Spans 1 thru 8          | ---                    | ---                  | ---                  | ---           | ---           | 16             | 16             | ---        | ---              | 254.5                      | ---                 | ---    | ---           | ---                     | ---           |
|  |            | Total For Bridge        | ---                    | 28.9                 | ---                  | ---           | 29.8          | 16             | 16             | 4,176      | ---              | 254.5                      | ---                 | ---    | 1047.0        | ---                     | 0.25          |
|  |            | TOTALS FOR JOB NO. 3611 | 4                      | 1992.0               | 524.3                | 1204.4        | 808.6         | 16             | 16             | 308,282    | 2168.0           | 1938.5*                    | 792,850             | 2      | 1047.0        | 100%                    | 0.25          |
|  |            |                         |                        |                      |                      |               |               |                |                |            |                  |                            |                     |        |               |                         |               |

\* For Basis of payment see sheet 24

SUMMARY OF QUANTITIES

| ITEM NO.     | ITEM  | QUAN.     | UNIT      |
|--------------|---|-----------|-----------|
| Sp. # 101    | Clearing  | 110.33    | Acres     |
| Sp. # 101    | Grubbing  | 42.17     | Acres     |
| 103          | Unclassified Excavation   | 89,102    | Cu.Yd.    |
| Sp. # 103    | Unclassified Excavation (Channel Change)                                | 687,337   | Cu.Yd.    |
| 105          | Embankment Material   | 2,41,827  | Cu.Yd.    |
| 107          | Special Compaction of Earthwork   | 2,915,640 | Cu.Yd.    |
| Sp. # 111    | Selected Material (Class SM-2)  | 31,172    | Cu.Yd.    |
| Sp. # 114-1  | Removal and Disposal of Fence   | 845       | Rod       |
| Sp. # 202    | Gravel Base Course (Class GB-3)   | 94,631    | Ton       |
| 501          | Prime Coat  | 40,073    | Gal.      |
| Sp. # 503    | Class 10 Mineral Aggregate in Bituminous Surface Treatment              | 1,845     | Cu.Yd.    |
| Sp. # 503    | Asphalt in Bituminous Surface Treatment                                 | 44,287    | Gal.      |
| 602          | Mineral Aggregate in Asphaltic Concrete Hot Mix Base Course (Type 2)    | 2,487     | Ton       |
| 602          | Asphalt Cement in Asphaltic Concrete Hot Mix Base Course                | 383       | Ton       |
| 605          | Mineral Aggregate in Asphaltic Concrete Hot Mix Surface Course (Type 3) | 5,632     | Ton       |
| 605          | Asphalt Cement in Asphaltic Concrete Hot Mix Surface Course             | 359       | Ton       |
| 701          | Approach Slabs and Gutters (Type A)                                     | 4         | Each      |
| Sp. # 801    | Common Excavation for Structures  | 1,992.2   | Cu.Yd.    |
| Sp. # 801    | Rock Excavation for Structures  | 524.3     | Cu.Yd.    |
| Sp. # 802    | Class "A" (AE) Concrete   | 1,223.6   | Cu.Yd.    |
| Sp. # 802    | Class "S" (AE) Concrete   | 808.6     | Cu.Yd.    |
| Sp. # 802    | 15' Precast Slab Curb Units   | 16        | Unit      |
| Sp. # 802    | 15' Precast Slab Interior Units   | 16        | Unit      |
| 803          | Reinforcing Steel   | 308,796   | Lb.       |
| Sp. # 804    | Steel Bearing Piling (12BP53)   | 2,168     | Lin.Ft.   |
| Sp. # 805-7  | Steel or Aluminum Plate Guard Bridge Railing                            | 1,938.5   | Lin.Ft.   |
| Sp. # 806    | Structural Steel in Beam Spans  | 792,850   | Lb.       |
| 812          | Bridge Name Plates (Type C)   | 2         | Plate     |
| 820          | Treated Timber Piling   | 1,047     | Lin.Ft.   |
| Sp. # 909    | 24" Reinforced Concrete Pipe Culverts (Class III)                       | 62        | Lin.Ft.   |
| Sp. # 909    | 48" Reinforced Concrete Pipe Culverts (Class III)                       | 98        | Lin.Ft.   |
| Sp. # 909    | 48" Reinforced Concrete Pipe Culverts (Class III)                       | 118       | Lin.Ft.   |
| 909          | 18" Corrugated Metal Pipe Culverts                                      | 82        | Lin.Ft.   |
| 909          | 24" Corrugated Metal Pipe Culverts                                      | 64        | Lin.Ft.   |
| 909          | 36" Corrugated Metal Pipe Culverts                                      | 74        | Lin.Ft.   |
| Sp. # 917    | Guard Fence (Type A)  | 49,307.10 | Lin.Ft.   |
| Sp. # 920-4  | Seeding   | 14.50     | Acres     |
| 923          | Right-of-Way Markers  | 159       | Each      |
| 1002         | Removal and Disposal of Concrete Pavement                               | 941       | Sq.Yd.    |
| Sp. # 1008-2 | Maintenance of Traffic  | 30%       | Comp Item |
| Sp. # 1006   | Removal of Existing Bridge Structures                                   | 100%      | Comp Item |
| Sp.          | Riprap  | 189,778   | Cu.Yd.    |
| Sp.          | Backing for Riprap  | 93,260    | Cu.Yd.    |
| Sp.          | Water for Grass   | 210.4     | M-Gal.    |
| Sp.          | Permanent Standard Fixed Barricades                                     | 2         | Each      |
| 819          | Treated Bridge Timber   | 0.25      | MFBM      |

REMOVAL & DISPOSAL OF FENCE

| STATION   | STATION | LOCATION  | LENGTH |
|-----------|---------|-----------|--------|
|           |         |           | RODS   |
| 287+48.00 | 305+45  | Rt. # Lt. | 43     |
| 325+55    | 325+65  | Rt. # Lt. | 12     |
| 329+16    | 329+32  | Rt. # Lt. | 12     |
| 332+97    | 339+09  | Rt. # Lt. | 13     |
| 349+66    | 351+16  | Rt. # Lt. | 15     |
| 359+18    | 350+48  | Rt. # Lt. | 26     |
| 365+46    | 365+40  | Rt. # Lt. | 12     |
| 372+21    | 372+41  | Rt. # Lt. | 9      |
| 365+47    | 378+64  | Rt.       | 30     |
| 379+56    | 379+25  | Rt. # Lt. | 58     |
| 379+10    | 379+50  | Rt. # Lt. | 42     |
| 383+20    | 383+48  | Rt. # Lt. | 12     |
| 415+70    | 424+18  | Rt.       | 52     |
| 431+15    | 431+95  | Rt. # Lt. | 25     |
| 435+28    | 436+45  | Rt. # Lt. | 12     |
| 554+82    | 554+87  | Rt. # Lt. | 15     |
| 563+15    | 563+25  | Rt. # Lt. | 14     |
| 582+50    | 582+50  | Rt.       | 125    |
| 607+00    | 607+00  | Lt.       | 148    |
| 609+88    | 609+88  | Rt.       | 140    |
|           |         |           | 865    |

SEEDING & WATER

| STATION   | STATION | SEEDING | WATER    |
|-----------|---------|---------|----------|
|           |         | ACRES   | M - GAL. |
| 298+43.50 | 318+00  | 2.15    | 51.3     |
| 318+00    | 348+00  | 1.14    | 12.6     |
| 348+00    | 378+00  | 1.60    | 23.2     |
| 378+00    | 408+00  | 1.66    | 24.1     |
| 408+00    | 438+00  | 0.98    | 14.3     |
| 438+00    | 468+00  | 1.20    | 17.4     |
| 468+00    | 498+00  | 1.20    | 17.4     |
| 498+00    | 528+00  | 1.19    | 17.3     |
| 528+00    | 558+00  | 1.20    | 17.4     |
| 558+00    | 588+00  | 1.18    | 17.2     |
| 588+00    | 607+00  | 1.00    | 14.5     |
|           |         | 14.50   | 210.6    |

NOTE: Emulsified asphalt to be applied to all seeded areas.

PERMANENT STANDARD FIXED BARRICADES

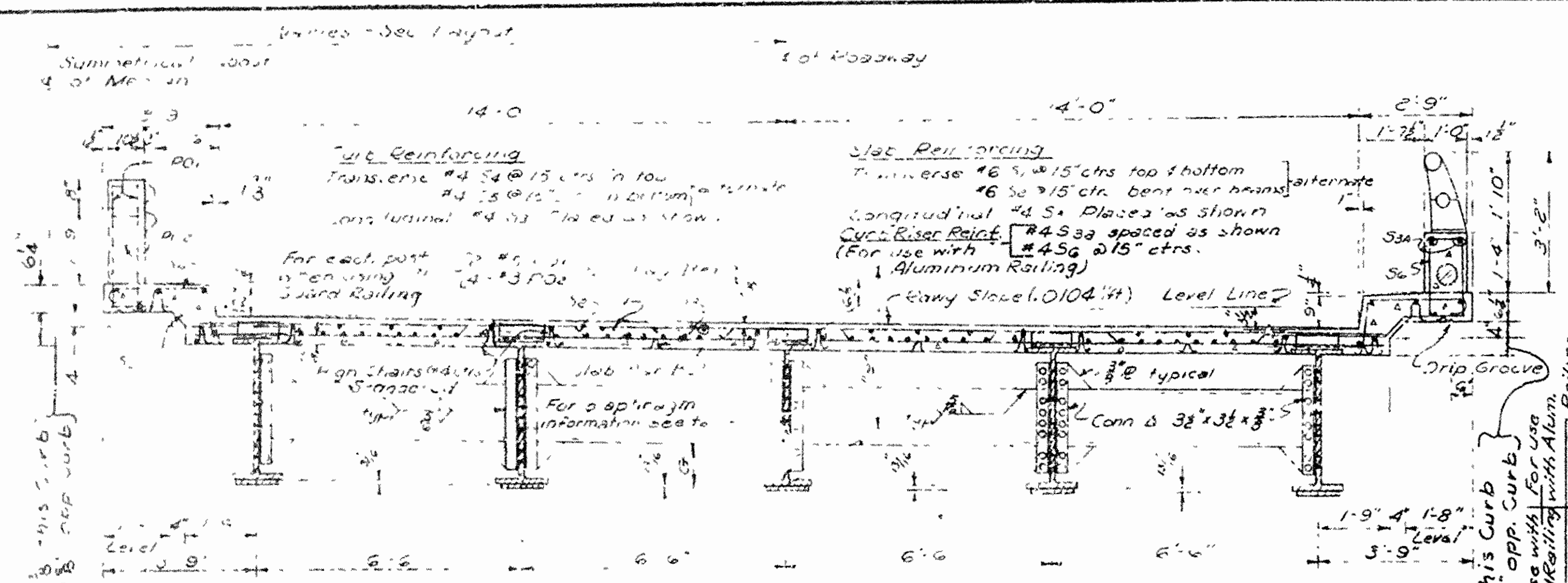
| LOCATION  | NUMBER | LIN. FT. |
|---|--------|----------|
| South End of Existing Little River Bridge<br>• 2 Panels Guard Fence | 1      | 28.5     |
| North End of Existing Little River Bridge<br>• 2 Panels Guard Fence | 1      | 28.5     |
| Total   | 2      | 57.0     |

\* Place Guard Fence 4.0 feet in front of Fixed Barricade.

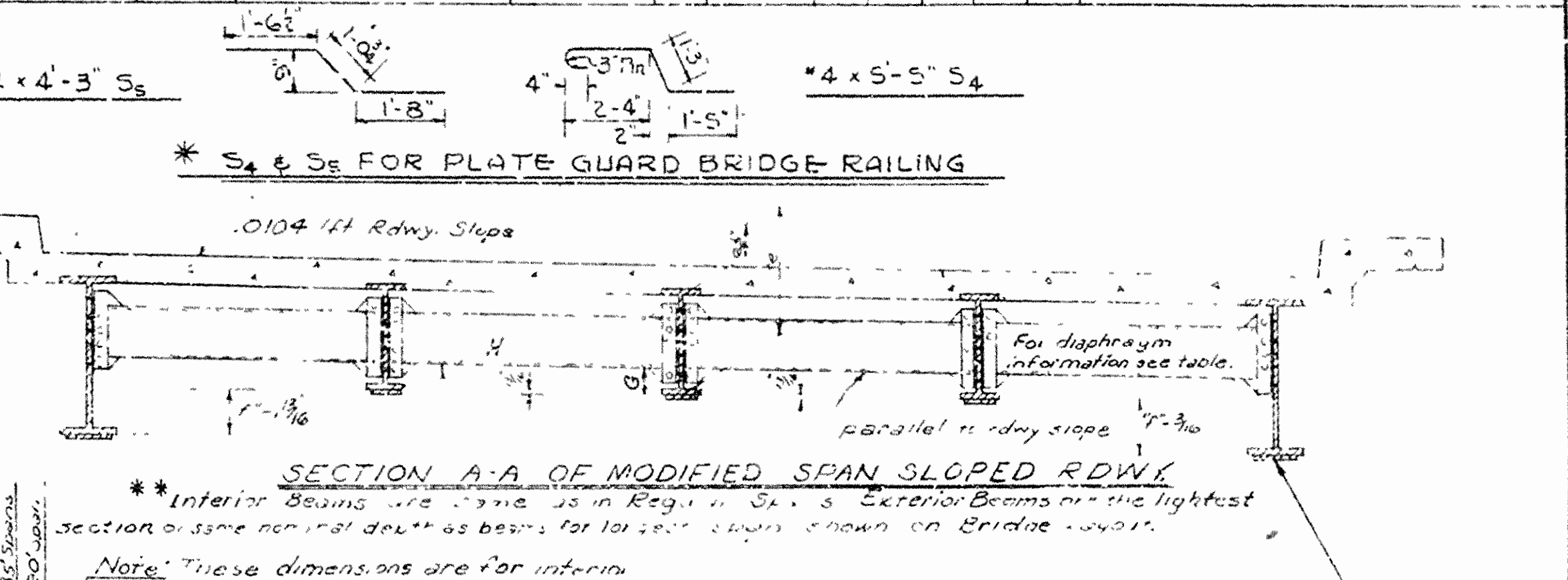
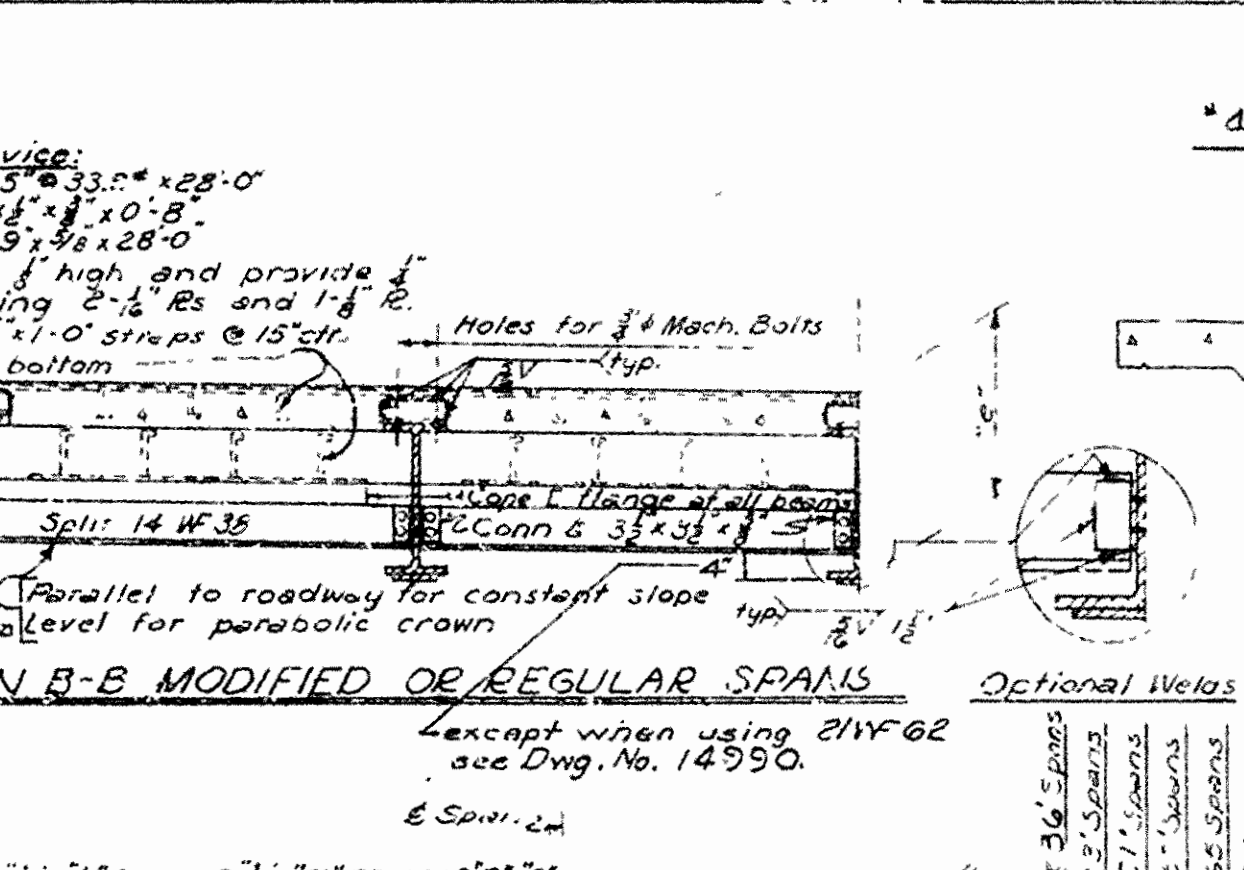
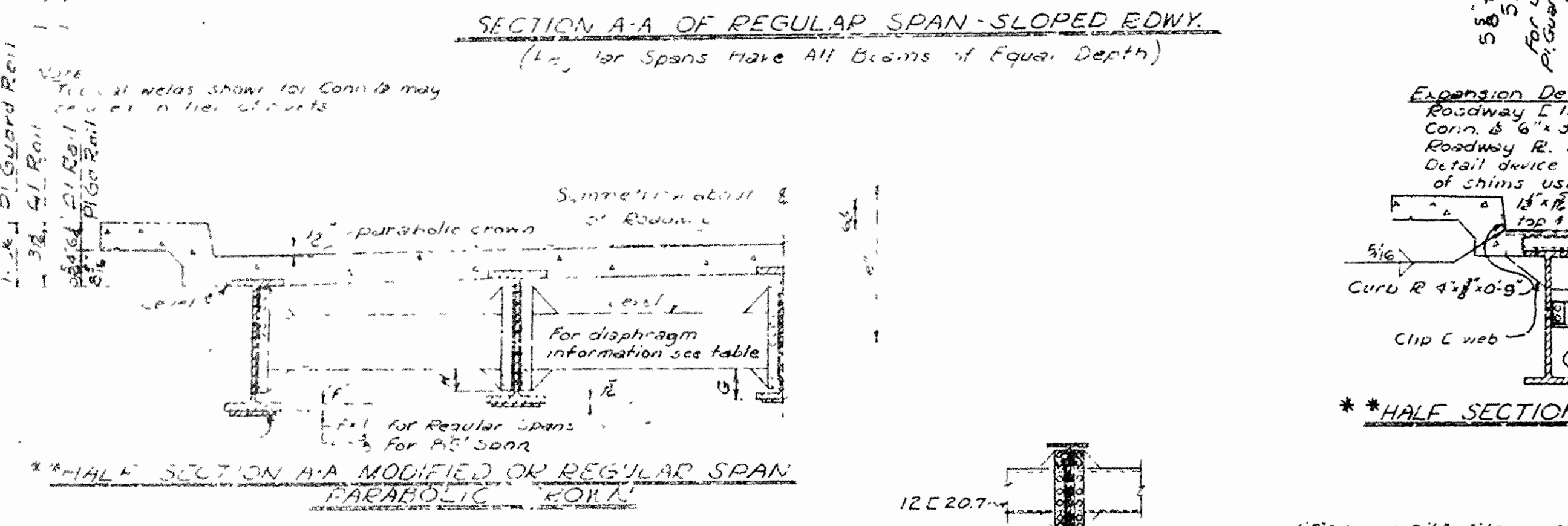
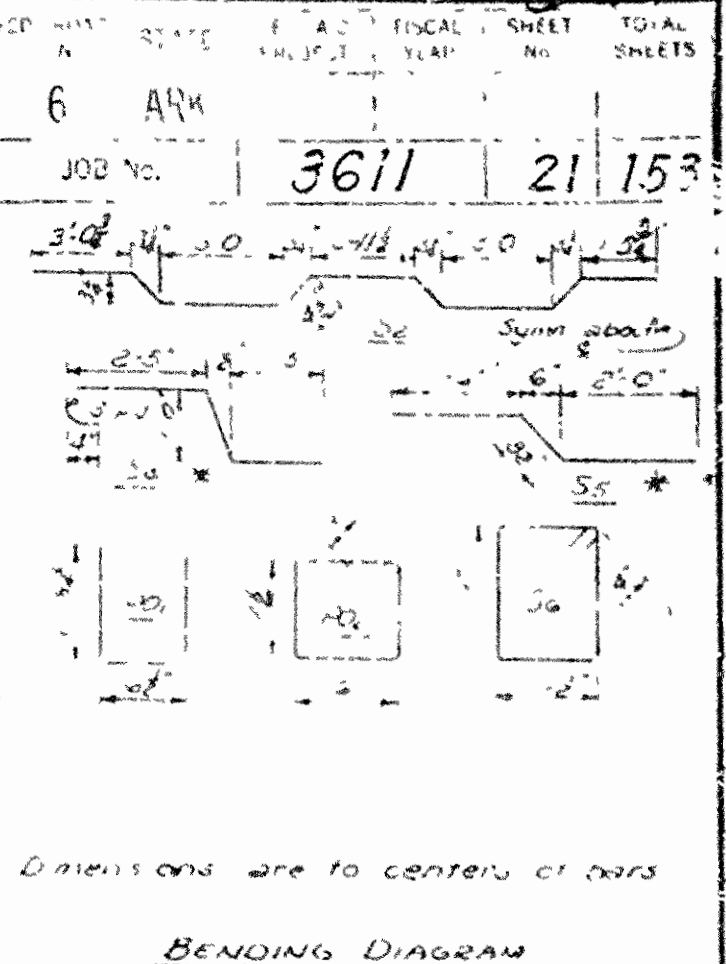




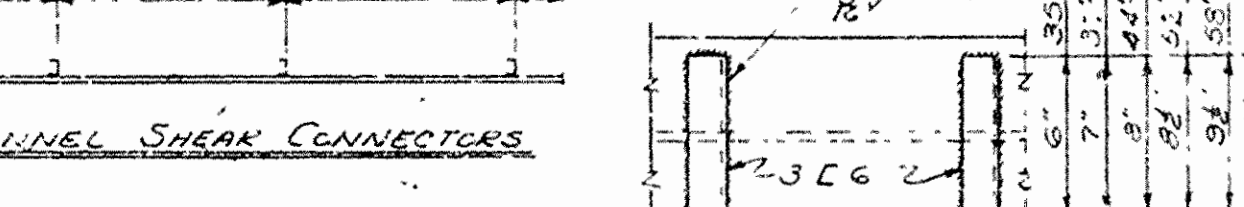




| BAR LIST - ONE SPAN |      | Number Required Each Span |      |
|---------------------|------|---------------------------|------|
| Mark                | Size | Length                    | Pin  |
| S1                  | 6    | 29'-2"                    | Str. |
| S2                  | 6    | 25'-10"                   | 24   |
| S3                  | 4    | 5'-6"                     | Str. |
| S4                  | 4    | 5'-7"                     | Str. |
| S5                  | 4    | 5'-10"                    | Str. |
| S6                  | 4    | 5'-3"                     | 18   |
| S7                  | 4    | 4'-3"                     | 18   |
| S8                  | 4    | 5'-4"                     | 18   |
| S9                  | 4    | 5'-6"                     | Str. |
| PO1                 | 5    | 5'-10"                    | 18   |
| PO2                 | 3    | 2'-8"                     | 18   |



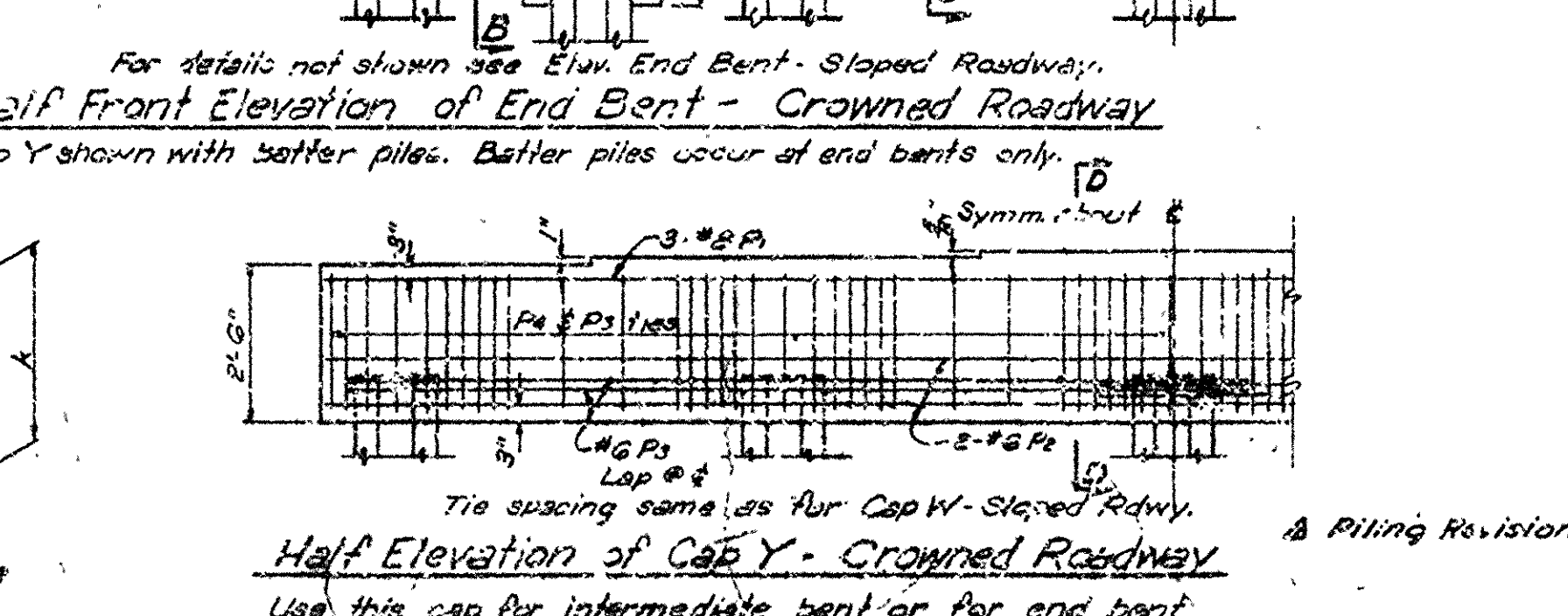
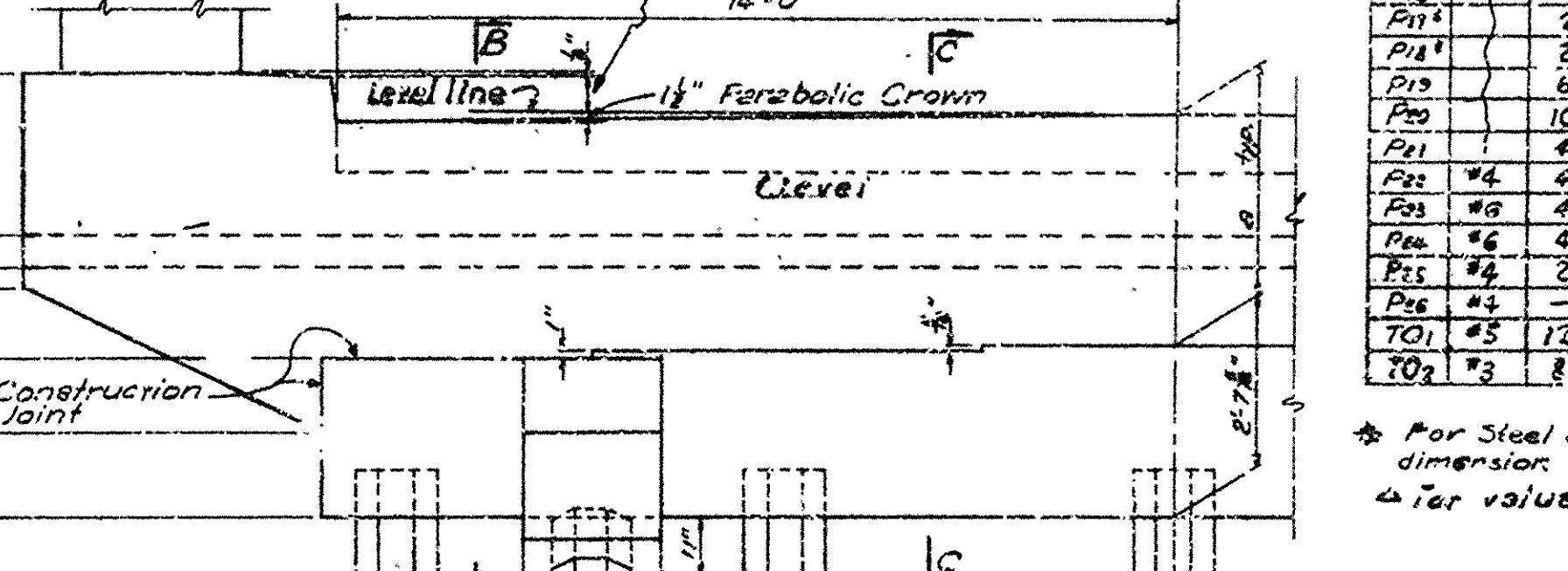
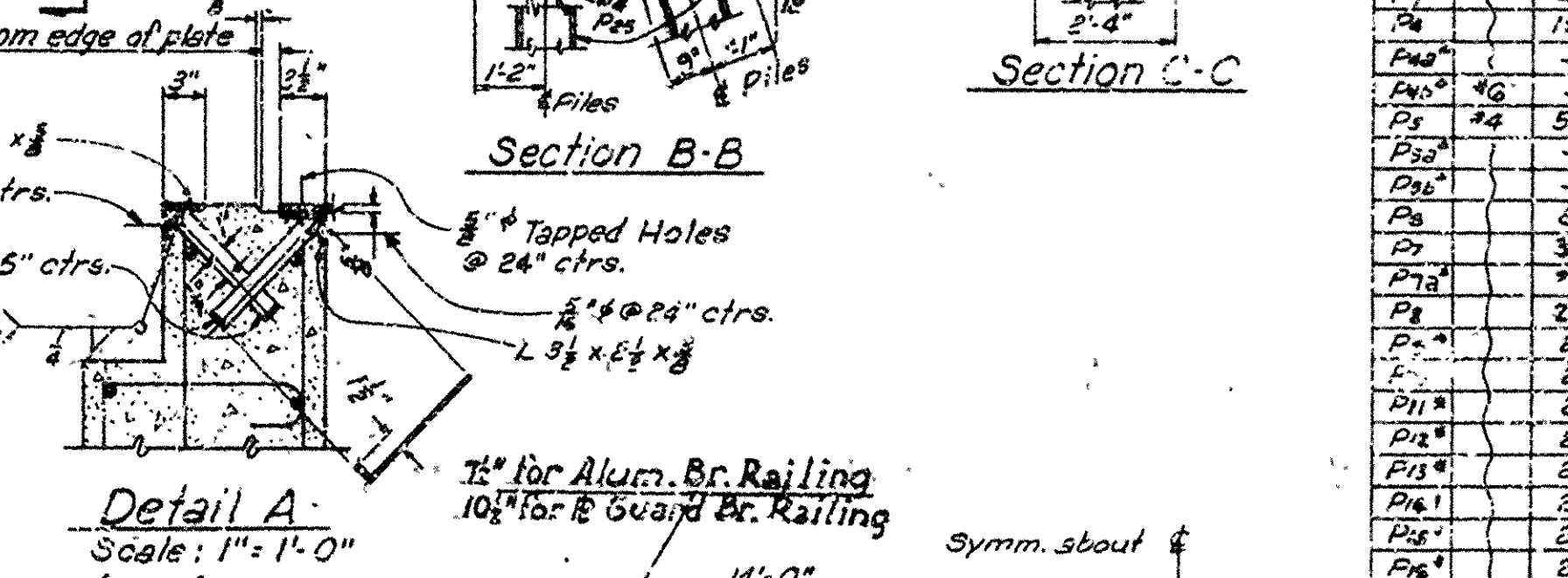
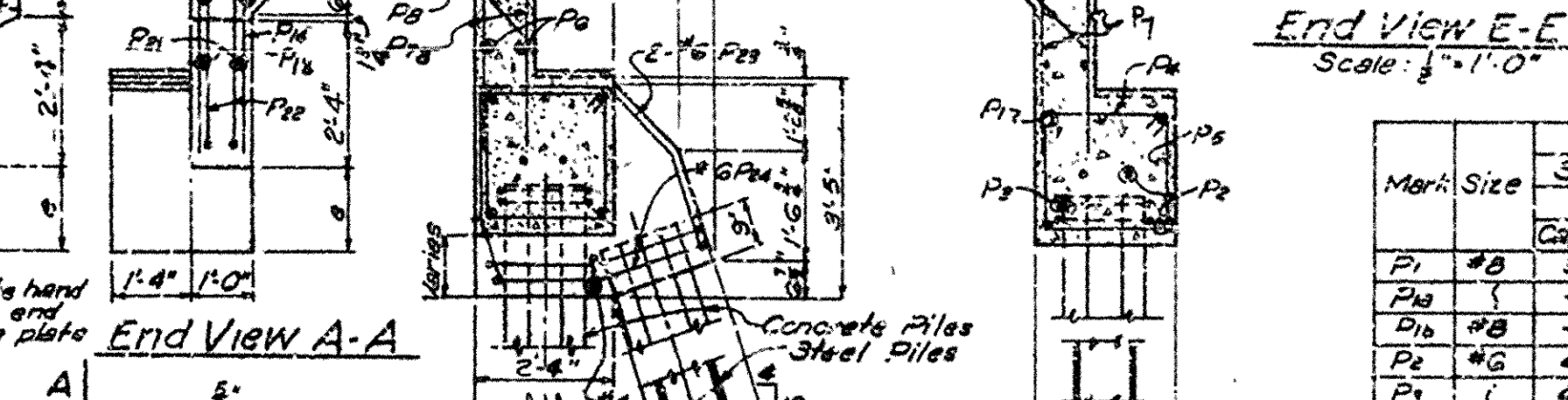
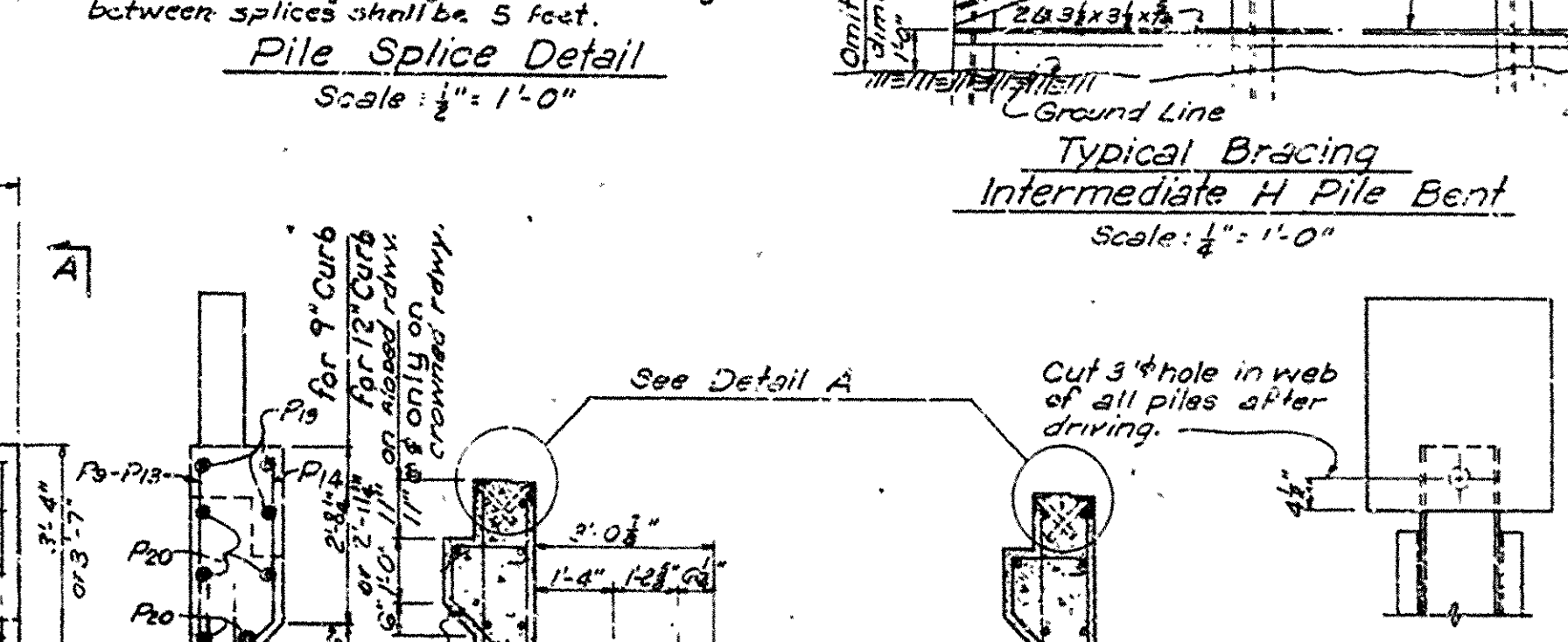
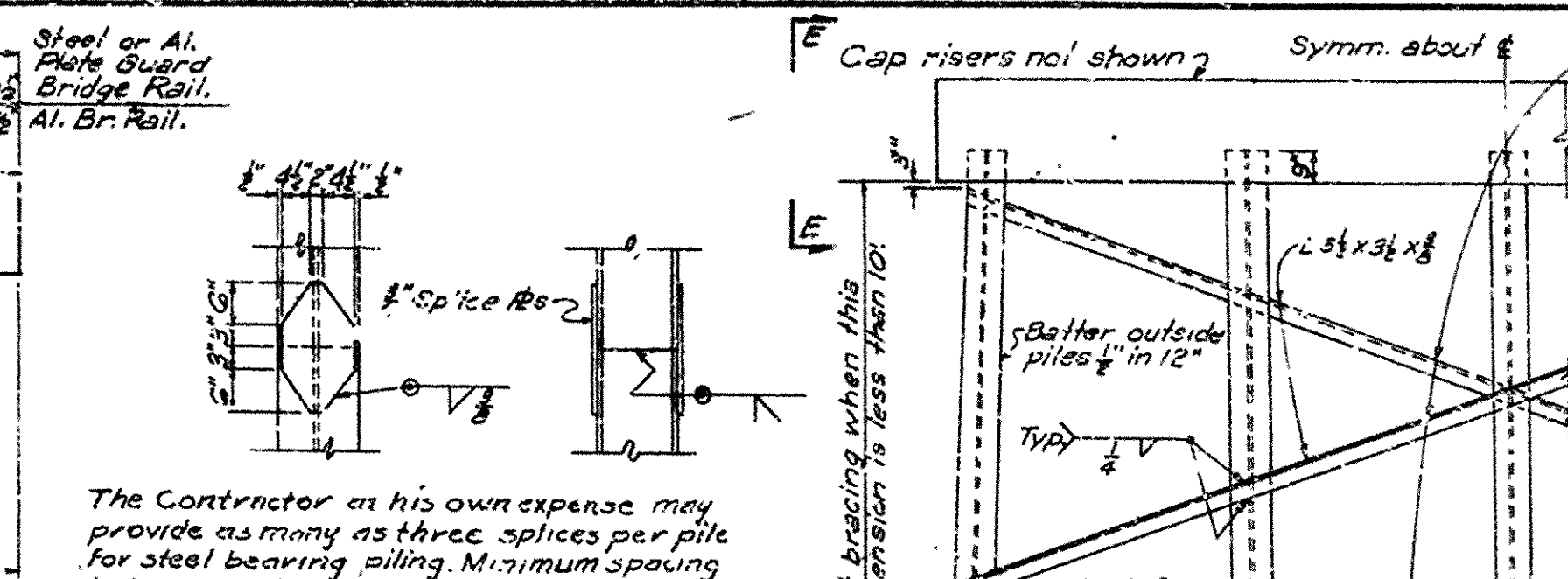
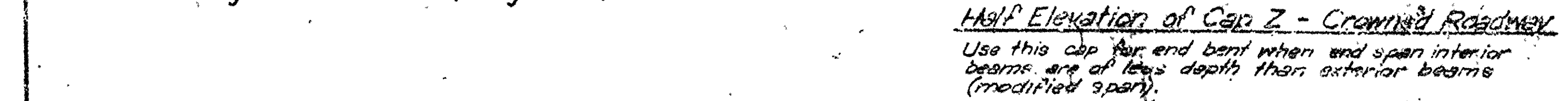
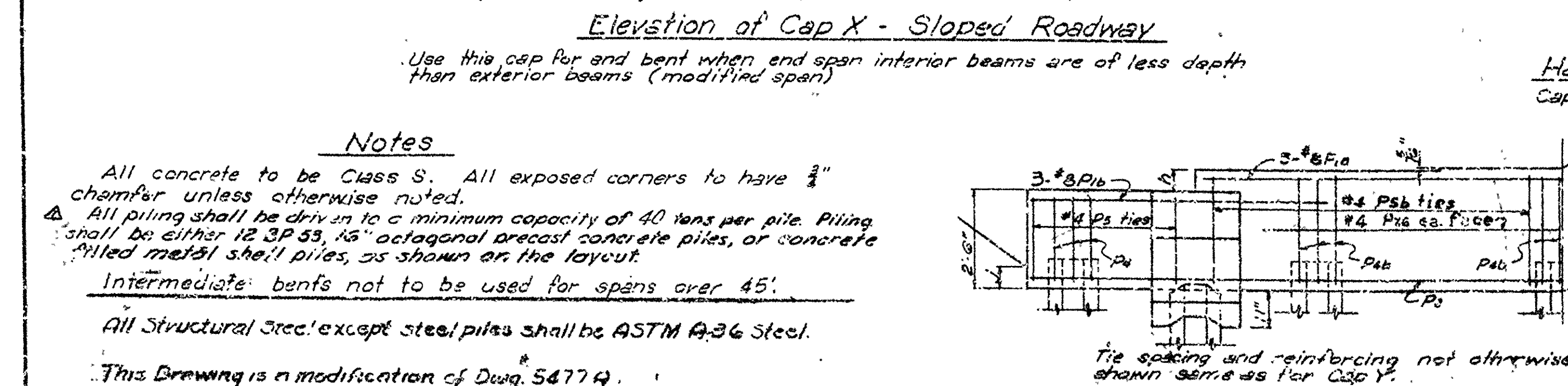
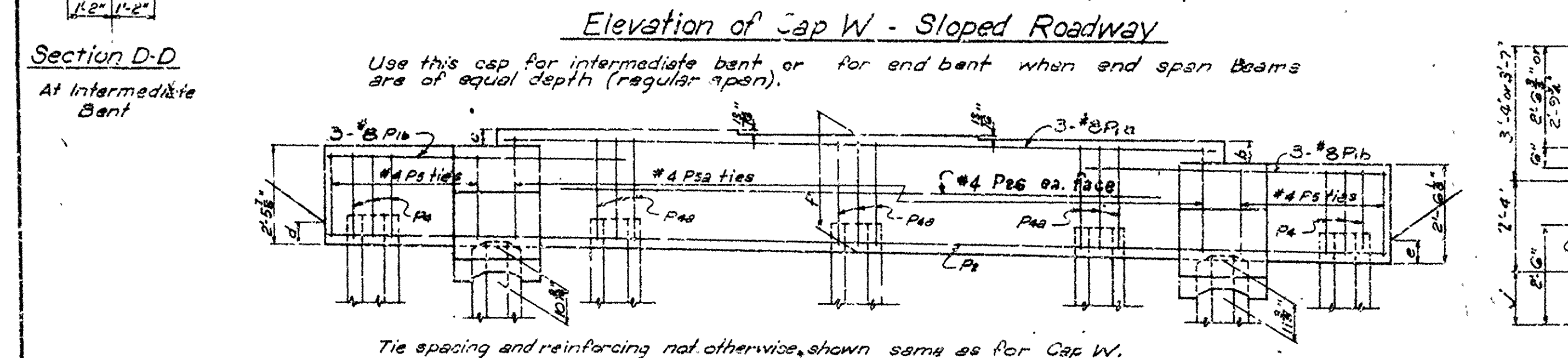
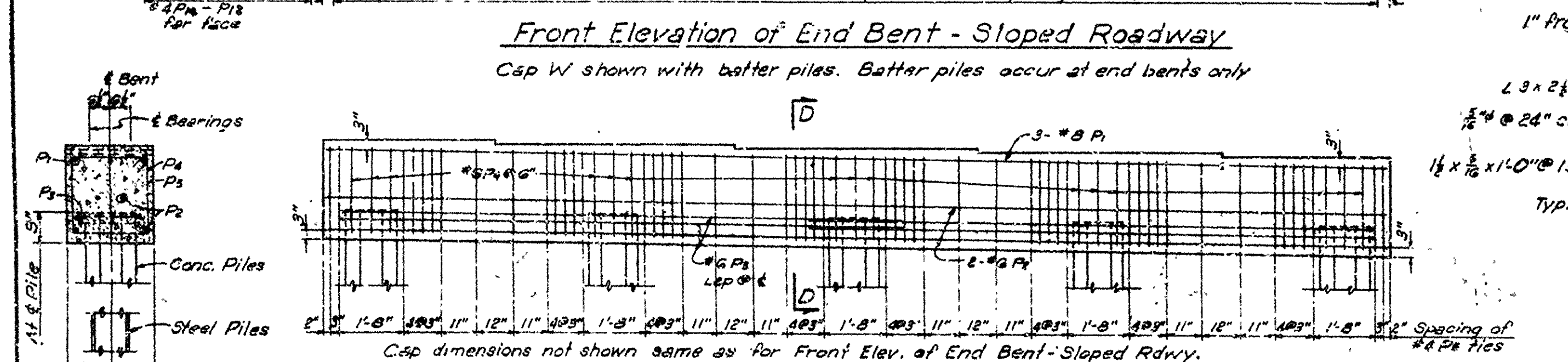
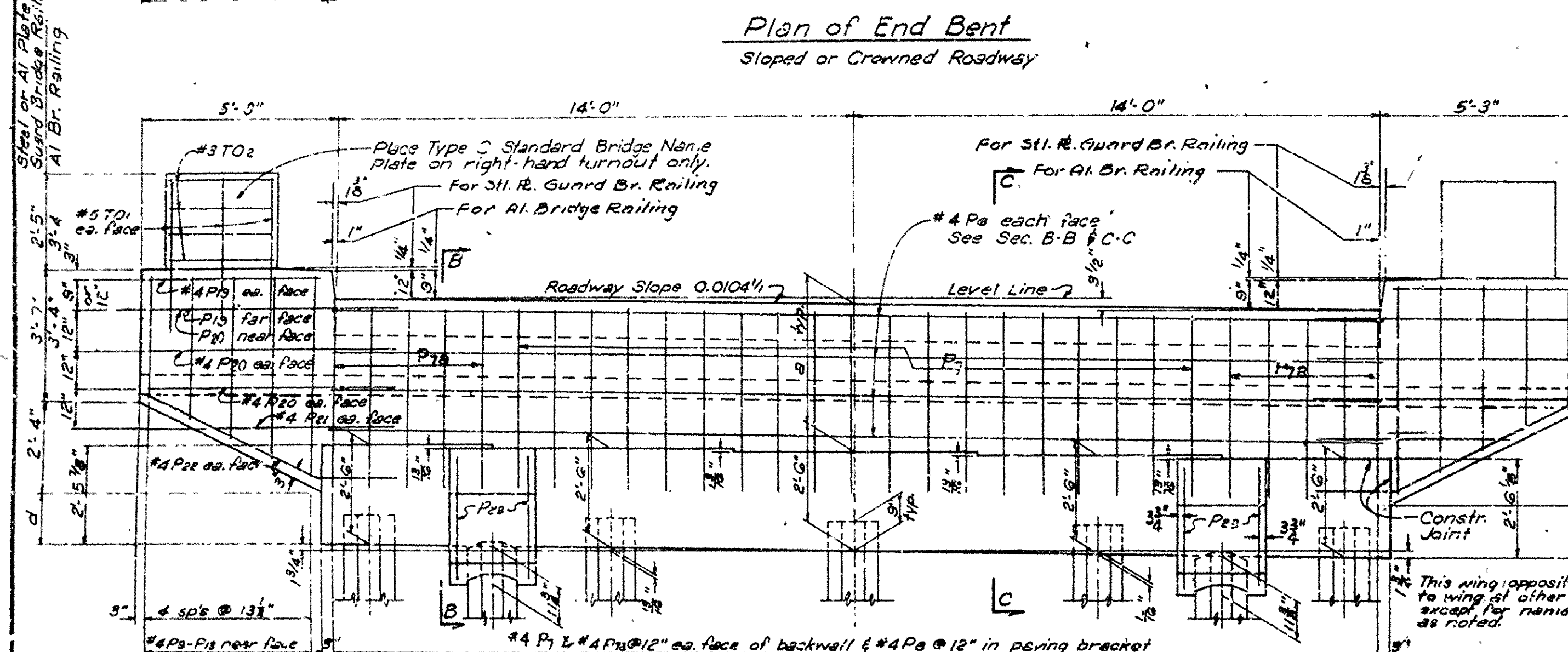
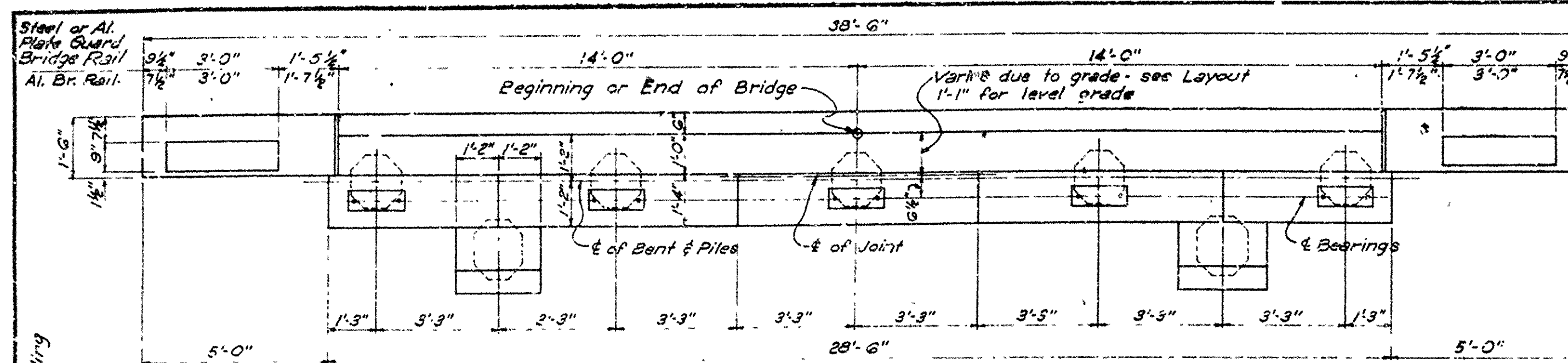
Notes: See drawing No. 14990 for location of Section A-A and Section B-B and Variables a, b, c, and d.



| Span | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
|------|----|----|----|----|----|----|----|----|----|----|----|----|
| 12   | 14 | 9  | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 14   | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  |
| 16   | 12 | 8  | 11 | 13 | 12 | 13 | 10 | 7  | 9  | 8  | 8  | 8  |
| 18   | 10 | 10 | 7  | 1  | 5  | 6  | 6  | 7  | 7  | 7  | 7  | 7  |
| 20   | 7  | 7  | 8  | 9  | 7  | 7  | 7  | 7  | 7  | 7  | 7  | 7  |
| 22   | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  | 6  |
| 24   | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  |
| 26   | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  |
| 28   | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  |
| 30   | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  |
| 32   | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
| 34   | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |

| Deflection of exterior beam is for regular spans only. |              |             |                          |          |  |   |  |              |             |                 |   |          |   |     |            |               |        |        |        |        |
|--|--------------|-------------|--------------------------|----------|--|---|--|--------------|-------------|-----------------|---|----------|---|-----|------------|---------------|--------|--------|--------|--------|
| Span   | REGULAR SPAN |             | NOT SPACING FOR ALUMINUM |          | MODIFIED SPAN EXTERIOR BEAMS REQUIRING COVER PLATE |   | NOT SPACING FOR CHANNEL SHEAR CONNECTORS |              |             | LOAD DEFLECTION |   | STRENGTH | Values of "a" and Dead Load for outside spans of modified spans |     |            |               |        |        |        |        |
|  | BEAM         | COVER PLATE | INTERIOR                 | EXTERIOR | a  | b | c  | BEAM         | COVER PLATE | a               | b |          | c   | INT | EXT.       | SPACING NO. @ | 24WF68 | 24WF68 | 30WF68 | 30WF68 |
| 35   | 21W62        | 6' x 22'0"  | 5' x 13'0"               | 9'4"     | 5'4"   | 2 | 24WF68                                   | 4' x 12'0"   | 5'7"        | 5'8"            | 4 | 2'28"    | 3'  | 3'  | 2' x 17'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 40   | 21W62        | 6' x 23'0"  | 6' x 20'0"               | 6'8"     | 7'0"   | 3 | 24WF68                                   | 4' x 15'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 18'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 45   | 24WF68       | 6' x 27'0"  | 6' x 18'0"               | 7'0"     | 7'0"   | 3 | 24WF68                                   | 4' x 18'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 18'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 50   | 24WF68       | 6' x 28'0"  | 5' x 20'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 19'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 55   | 24WF68       | 6' x 29'0"  | 5' x 21'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 19'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 60   | 24WF68       | 6' x 30'0"  | 5' x 22'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 20'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 65   | 24WF68       | 6' x 31'0"  | 5' x 23'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 20'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 70   | 24WF68       | 6' x 32'0"  | 5' x 24'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 21'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 75   | 24WF68       | 6' x 33'0"  | 5' x 25'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 21'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 80   | 24WF68       | 6' x 34'0"  | 5' x 26'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 22'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 85   | 24WF68       | 6' x 35'0"  | 5' x 27'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 22'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 90   | 24WF68       | 6' x 36'0"  | 5' x 28'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 23'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 95   | 24WF68       | 6' x 37'0"  | 5' x 29'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 23'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 100  | 24WF68       | 6' x 38'0"  | 5' x 30'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 24'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 105  | 24WF68       | 6' x 39'0"  | 5' x 31'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 24'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 110  | 24WF68       | 6' x 40'0"  | 5' x 32'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 25'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 115  | 24WF68       | 6' x 41'0"  | 5' x 33'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 25'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 120  | 24WF68       | 6' x 42'0"  | 5' x 34'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 26'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 125  | 24WF68       | 6' x 43'0"  | 5' x 35'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 26'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 130  | 24WF68       | 6' x 44'0"  | 5' x 36'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 27'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 135  | 24WF68       | 6' x 45'0"  | 5' x 37'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 27'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 140  | 24WF68       | 6' x 46'0"  | 5' x 38'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 28'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 145  | 24WF68       | 6' x 47'0"  | 5' x 39'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 28'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 150  | 24WF68       | 6' x 48'0"  | 5' x 40'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 29'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 155  | 24WF68       | 6' x 49'0"  | 5' x 41'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 29'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 160  | 24WF68       | 6' x 50'0"  | 5' x 42'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 30'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 165  | 24WF68       | 6' x 51'0"  | 5' x 43'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 30'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 170  | 24WF68       | 6' x 52'0"  | 5' x 44'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 31'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 175  | 24WF68       | 6' x 53'0"  | 5' x 45'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 31'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 180  | 24WF68       | 6' x 54'0"  | 5' x 46'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 32'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 185  | 24WF68       | 6' x 55'0"  | 5' x 47'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 32'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 190  | 24WF68       | 6' x 56'0"  | 5' x 48'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 33'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 195  | 24WF68       | 6' x 57'0"  | 5' x 49'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 33'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 200  | 24WF68       | 6' x 58'0"  | 5' x 50'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 34'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 205  | 24WF68       | 6' x 59'0"  | 5' x 51'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 34'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 210  | 24WF68       | 6' x 60'0"  | 5' x 52'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 35'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 215  | 24WF68       | 6' x 61'0"  | 5' x 53'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 35'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 220  | 24WF68       | 6' x 62'0"  | 5' x 54'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 36'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 225  | 24WF68       | 6' x 63'0"  | 5' x 55'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 36'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 230  | 24WF68       | 6' x 64'0"  | 5' x 56'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 37'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 235  | 24WF68       | 6' x 65'0"  | 5' x 57'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 37'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 240  | 24WF68       | 6' x 66'0"  | 5' x 58'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 38'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 245  | 24WF68       | 6' x 67'0"  | 5' x 59'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 38'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 250  | 24WF68       | 6' x 68'0"  | 5' x 60'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 39'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 255  | 24WF68       | 6' x 69'0"  | 5' x 61'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 39'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 260  | 24WF68       | 6' x 70'0"  | 5' x 62'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 40'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 265  | 24WF68       | 6' x 71'0"  | 5' x 63'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 40'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 270  | 24WF68       | 6' x 72'0"  | 5' x 64'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 41'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 275  | 24WF68       | 6' x 73'0"  | 5' x 65'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 41'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 280  | 24WF68       | 6' x 74'0"  | 5' x 66'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 42'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 285  | 24WF68       | 6' x 75'0"  | 5' x 67'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 42'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 290  | 24WF68       | 6' x 76'0"  | 5' x 68'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 43'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 295  | 24WF68       | 6' x 77'0"  | 5' x 69'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 43'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 300  | 24WF68       | 6' x 78'0"  | 5' x 70'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 44'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 305  | 24WF68       | 6' x 79'0"  | 5' x 71'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 44'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 310  | 24WF68       | 6' x 80'0"  | 5' x 72'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 45'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 315  | 24WF68       | 6' x 81'0"  | 5' x 73'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 45'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 320  | 24WF68       | 6' x 82'0"  | 5' x 74'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 46'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 325  | 24WF68       | 6' x 83'0"  | 5' x 75'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 46'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 330  | 24WF68       | 6' x 84'0"  | 5' x 76'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 47'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 335  | 24WF68       | 6' x 85'0"  | 5' x 77'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 47'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 340  | 24WF68       | 6' x 86'0"  | 5' x 78'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 48'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 345  | 24WF68       | 6' x 87'0"  | 5' x 79'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 48'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 350  | 24WF68       | 6' x 88'0"  | 5' x 80'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 49'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 355  | 24WF68       | 6' x 89'0"  | 5' x 81'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 49'6" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 360  | 24WF68       | 6' x 90'0"  | 5' x 82'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"   | 5'7"        | 5'11"           | 4 | 2'28"    | 3'  | 3'  | 2' x 50'0" | 3'            | 3'     | 3'     | 3'     | 3'     |
| 365  | 24WF68       | 6' x 91'0"  | 5' x 83'0"               | 7'10"    | 7'10"  | 3 | 24WF68                                   | 4' x 19'0"</ |             |                 |   |          |   |     |            |               |        |        |        |        |





The lengths of bracing members shall be determined in the field. Each member shall be at a continuous angle and shall be welded to the steel bearing piles as shown. Angle bracing shall be measured and paid for as "Structural Steel in Beam Spans".

JOB NO. 3611

**VARIABLES**

| Span    | Beams    |          | Sloped Roadway |        |        |         |   |            |           | Crowned Roadway |           |            |     |  |
|---------|----------|----------|----------------|--------|--------|---------|---|------------|-----------|-----------------|-----------|------------|-----|--|
|         | Interior | Exterior | a              | b      | c      | d       | e | f          | g         | A               | h         | k          | m   |  |
| 35'-36' | 21W62    | 21W62    | 2-5'           | —      | —      | —       | — | —          | —         | 2'-5 1/2"       | —         | 0-4"       | —   |  |
|         |          | 24W63    |                | 3'-2"  | 2"     | 3'-6"   |   | 2'-11 1/2" | 2"        | 3'-4"           | 3'-6"     | 2'-10 1/2" | 4"  |  |
|         |          | 27W64    |                | 6'-6"  | 4'-8"  | 6'-8"   |   | 2'-11 1/2" | 5"        | 3'-4"           | 3'-6"     | 3'-10 1/2" | 7"  |  |
|         |          | 30W69    |                | 9'-9"  | 7'-2"  | 9'-9"   |   | 3'-5 1/2"  | 8"        | 3'-3"           | 3'-9"     | 3'-3 1/2"  | 10" |  |
|         |          | 33W718   |                | 12'-9" | 10'-6" | 12'-9"  |   | 3'-5 1/2"  | 11"       | 12'-3"          | 12'-8"    | 9'-5 1/2"  | 15" |  |
| 35'-36' | 21W62    | 36W135   | 2'-5 1/2"      | 15'-4" | 13'-2" | 15'-4"  |   | 3'-4 1/2"  | 13"       | 2'-1 1/2"       | 15'-8"    | 9'-5 1/2"  | 15" |  |
| 37'-43' | 24W6710  | 36W135   | 2'-5 1/2"      | —      | —      | —       | — | —          | —         | 2'-5 1/2"       | —         | 3'-6"      | —   |  |
|         |          | 27W64    |                | 3'-2"  | 2'-4"  | 6'-1"   |   | 2'-8 1/2"  | 2"        | 3'-4"           | 3'-6"     | 2'-10 1/2" | 4"  |  |
|         |          | 30W69    |                | 6'-6"  | 4'-8"  | 9'-2"   |   | 2'-11 1/2" | 5"        | 3'-4"           | 3'-6"     | 3'-10 1/2" | 7"  |  |
|         |          | 33W718   |                | 9'-9"  | 7'-2"  | 12'-9"  |   | 3'-5 1/2"  | 8"        | 3'-3"           | 12'-1"    | 3'-4 1/2"  | 10" |  |
| 37'-43' | 24W6710  | 36W135   | 2'-5 1/2"      | 12'-9" | 10'-6" | 12'-9"  |   | 3'-5 1/2"  | 11"       | 2'-5 1/2"       | 12'-3"    | 9'-5 1/2"  | 13" |  |
| 44'-51' | 27W64    | 36W135   | 2'-11 1/2"     | —      | —      | —       | — | —          | —         | 2'-11 1/2"      | —         | 6'-8"      | —   |  |
|         |          | 30W69    |                | 3'-8"  | 2'-4"  | 5'-8"   |   | 2'-8 1/2"  | 2"        | 3'-10"          | 3'-6"     | 2'-10 1/2" | 4"  |  |
|         |          | 33W718   |                | 6'-6"  | 5'-8"  | 12'-9"  |   | 3'-0-0"    | 5"        | 7'-12"          | 3'-10"    | 3'-10"     | 7"  |  |
| 44'-51' | 27W64    | 36W135   | 2'-11 1/2"     | 3'-8"  | 7'-2"  | 12'-9"  |   | 3'-2 1/2"  | 6"        | 3'-10"          | 9'-8"     | 3'-3 1/2"  | 10" |  |
| 52'-55' | 30W69    | 36W135   | 3'-2"          | —      | —      | —       | — | —          | —         | 3'-2 1/2"       | —         | 9'-8"      | —   |  |
|         |          | 33W718   |                | 4'-2"  | 2'-8"  | 12'-11" |   | 2'-11 1/2" | 2"        | 4'-2"           | 12'-1"    | 2'-10 1/2" | 4"  |  |
| 52'-55' | 30W69    | 36W135   | 3'-2"          | 6'-6"  | 4'-8"  | 15'-4"  |   | 2'-11 1/2" | 5"        | 3'-10"          | 4'-2"     | 3'-10"     | 7"  |  |
| 56'-57' | 24W702   | 36W170   | 3'-2"          | —      | —      | —       | — | —          | —         | 3'-2 1/2"       | —         | 5'-3"      | —   |  |
| 56'-57' | 30W708   | 36W170   | 3'-2"          | 3'-2"  | 2'-6"  | 12'-9"  |   | 2'-7"      | 2"        | 3'-2"           | 4'-12"    | 2'-10 1/2" | 4"  |  |
| 56'-57' | 36W135   | 36W170   | 3'-2"          | 6'-8"  | 4'-8"  | 15'-8"  |   | 2'-11 1/2" | 3"        | 3'-2 1/2"       | 6'-15"    | 3'-0-0"    | 7"  |  |
| 58'-60' | 33W718   | 36W170   | 3'-5 1/2"      | —      | —      | 12'-9"  |   | —          | —         | 3'-5 1/2"       | —         | 12'-8"     | —   |  |
| 58'-60' | 33W718   | 36W170   | 3'-5 1/2"      | 3'-8"  | 1'-8"  | 15'-8"  |   | 2'-8 1/2"  | 2'-5 1/2" | 3'-5 1/2"       | 15'-4"    | 2'-5 1/2"  | 3"  |  |
| 65'     | 36W130   | 33W718   | 3'-5 1/2"      | —      | —      | 12'-8"  |   | —          | —         | 3'-5 1/2"       | —         | 12'-4"     | —   |  |
| 65'     | 36W130   | 36W135   | 3'-5 1/2"      | 3'-4"  | 1'-8"  | 15'-8"  |   | 2'-8 1/2"  | 2"        | 3'-5 1/2"       | 3'-5 1/2" | 15'-4"     | 3"  |  |
| 70'     | 36W135   | 36W170   | 3'-5 1/2"      | —      | —      | 15'-4"  |   | —          | —         | 3'-5 1/2"       | —         | 15'-4"     | —   |  |
| 80'     | 36W170   | 36W170   | 3'-8"          | —      | —      | 15'-4"  |   | —          | —         | 3'-9 1/2"       | —         | 15'-4"     | —   |  |

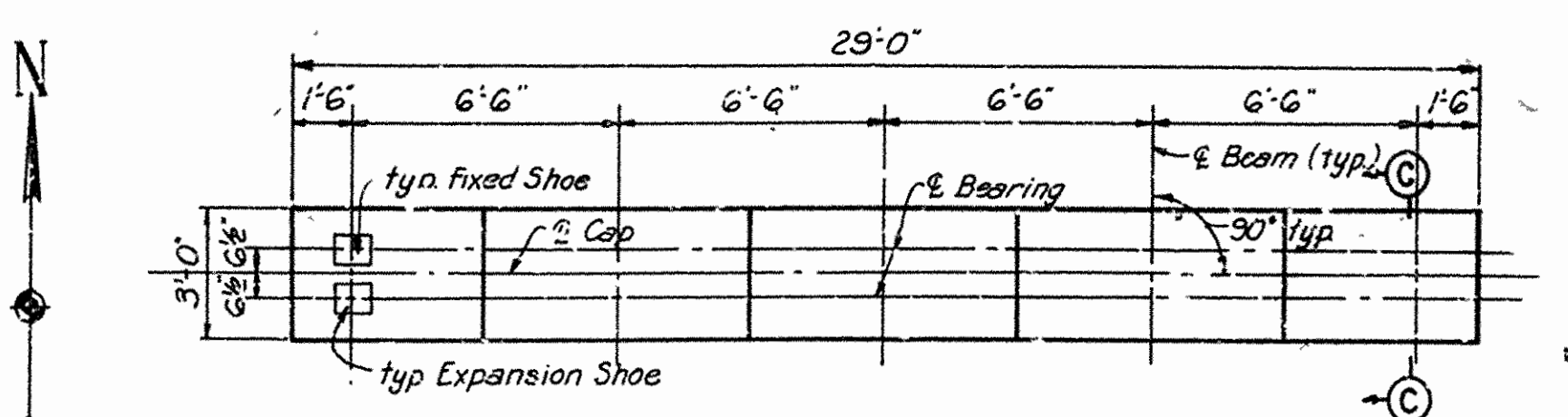
[illegible]

\* For Steel or Aluminum Plate Guard Bridge Railing add 3. to lengths of bars  $P_3$  to  $P_{10}$ . Increase dimension A 3" for bars  $P_4$  to  $P_{10}$ .  
 \* For values of "g" and "m" see table of variable dimensions

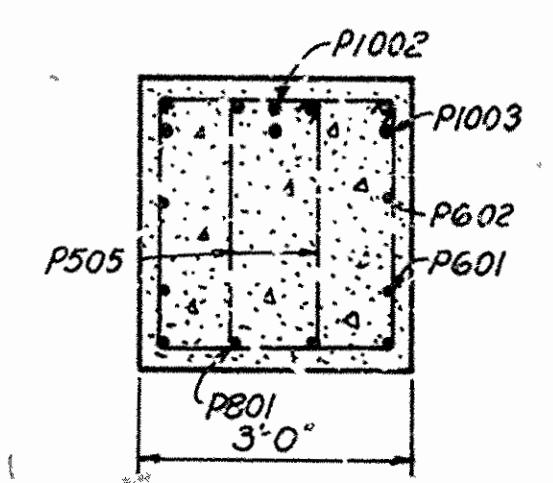
DETAILS OF STANDARD PILE BENTS  
FOR 35' TO 80' COMPOSITE I-BEAM SPANS  
28' CLEAR ROADWAY 1'-6" OR 1'-7 $\frac{1}{2}$ " CURBS

Roadway:  $1\frac{1}{2}$ " Parabolic Crown or 0.0104 % Slope --  
ROUTE SEC.  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: GAW DATE: 3-8-62  
CHECKED BY: GAW DATE: 3-8-62  
SCALE:  $\frac{3}{8}" = 1' - 0"$   
as noted  
BRIDGE NO. 3673 DRAWING NO. 20-12529

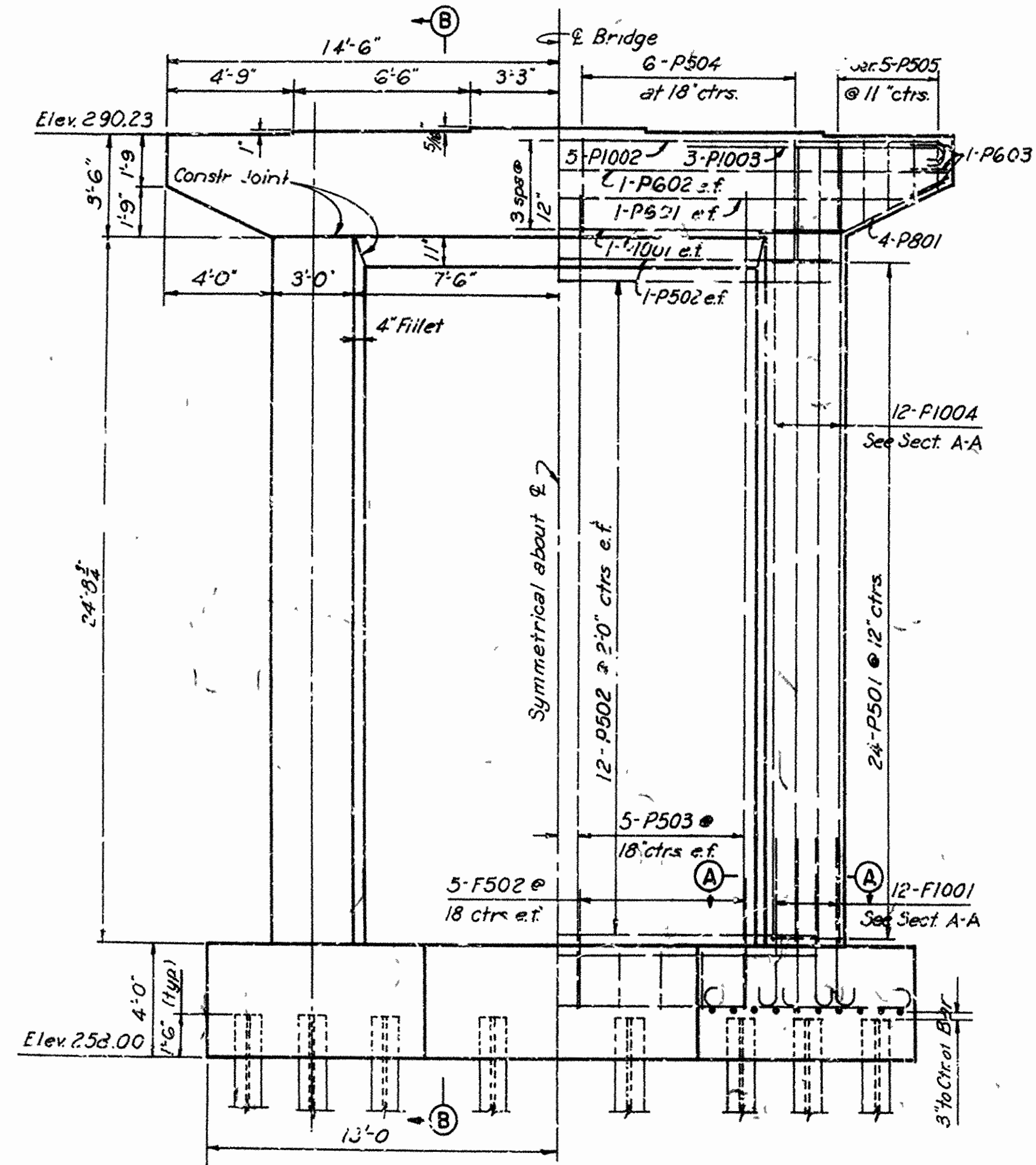




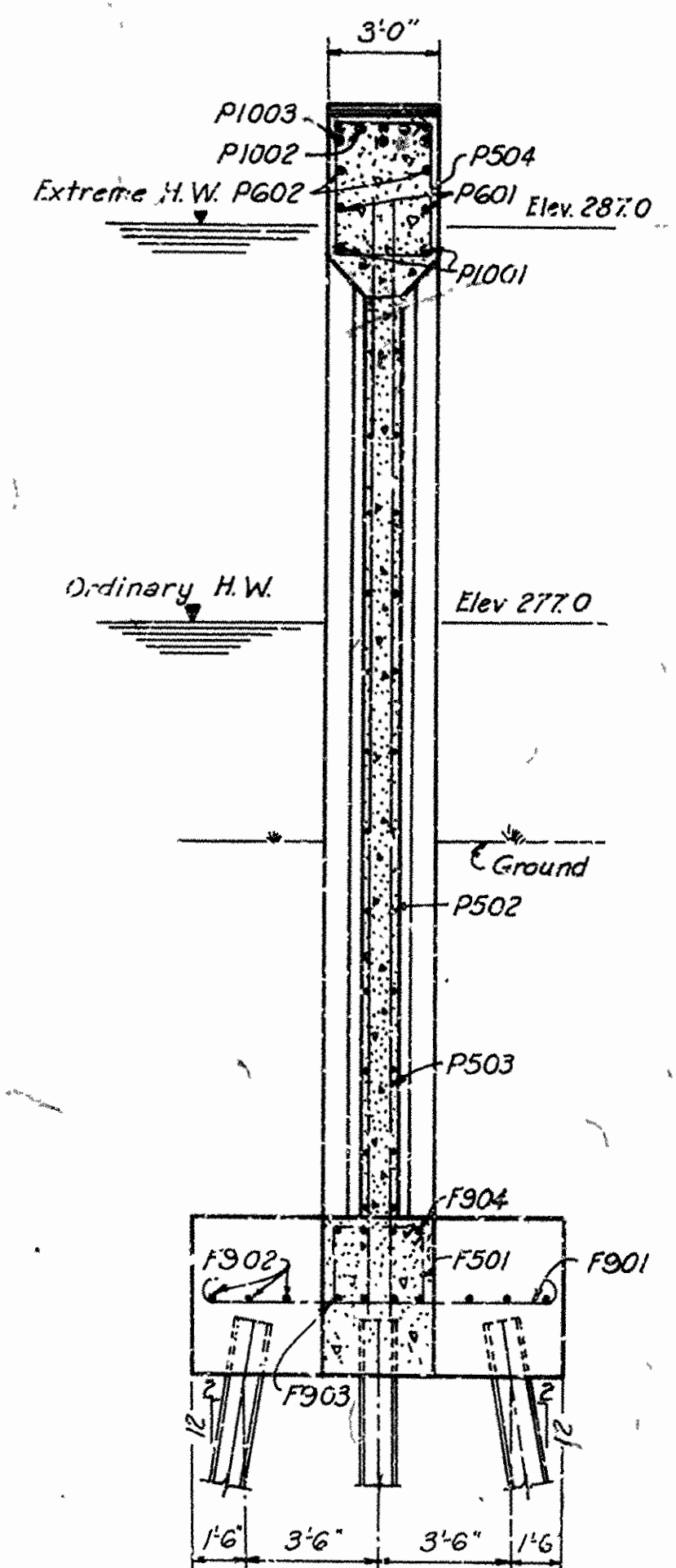
PLAN CAP BEAM



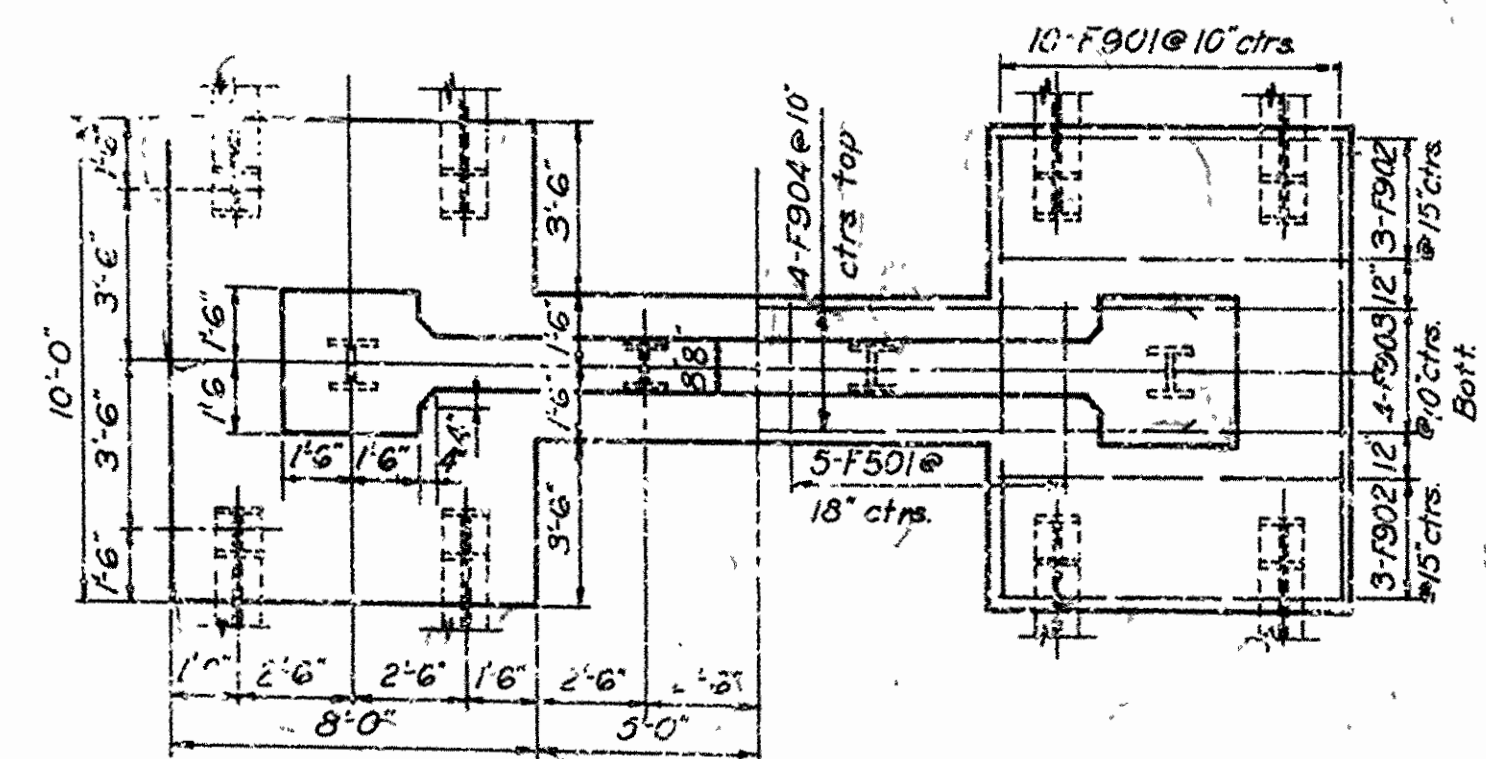
SECTION C-C  
Scale 1/2" = 1'-0"



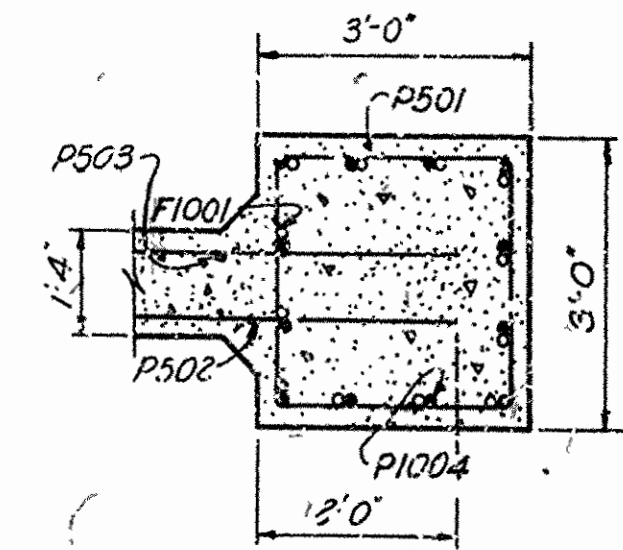
PIER ELEVATION  
Scale 1/4" = 1'-0"



SECTION B-B  
Scale 1/4" = 1'-0"

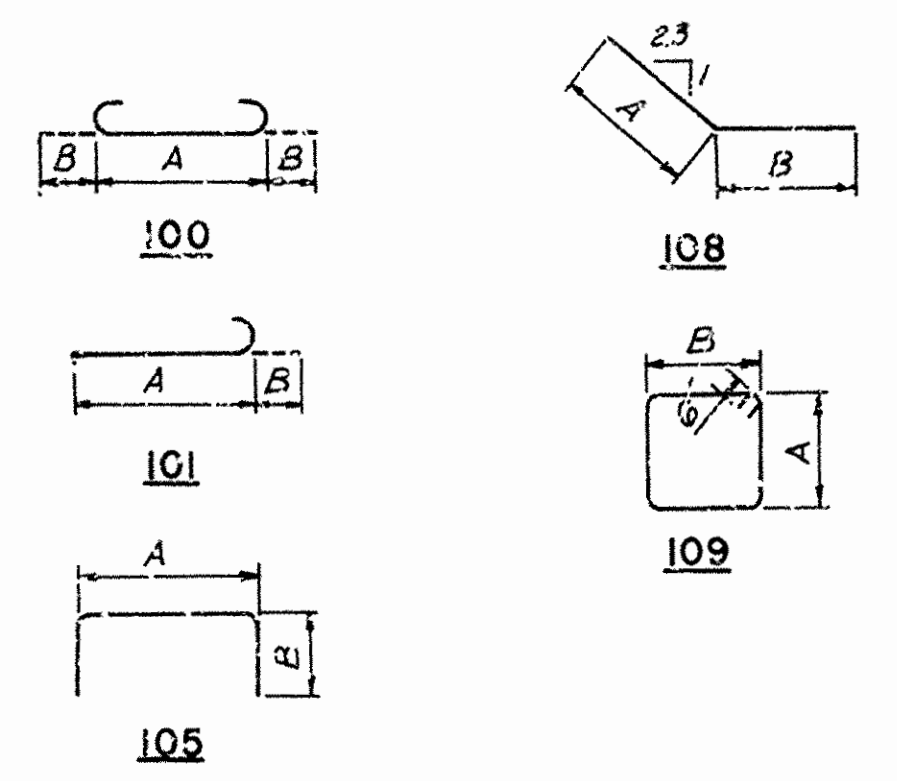


FOOTING PLAN  
Scale 1/4" = 1'-0"



SECTION A-A  
Scale 1/2" = 1'-0"

| REINFORCING BAR LIST |      |          |              |      |             |           |                    |       |  |
|----------------------|------|----------|--------------|------|-------------|-----------|--------------------|-------|--|
| MARK                 | SIZE | NUMBER   | LENGTH       | TYPE | DIMENSIONS  |           | WEIGHT<br>(POUNDS) |       |  |
|                      |      |          |              |      | A           | B         |                    |       |  |
| FOOTING REINFORCING  |      |          |              |      |             |           |                    |       |  |
| F501                 | 5    | 10       | 10'-0"       | 100  | 2'-0"       | 2'-6"     |                    |       |  |
| F502                 | 5    | 20       | 4'-0"        | Str. |             |           |                    |       |  |
| F901                 | 9    | 20       | 12'-0"       | 100  | 9'-6"       | 1'-3"     |                    |       |  |
| F902                 | 9    | 12       | 10'-0"       | 100  | 7'-6"       | 1'-3"     |                    |       |  |
| F903                 | 9    | 4        | 28'-0"       | 100  | 25'-6"      | 1'-3"     |                    |       |  |
| F904                 | 9    | 4        | 19'-0"       | Str. |             |           |                    |       |  |
| F1001                | 10   | 24       | 7'-8"        | 101  | 6'-3"       | 1'-5"     |                    |       |  |
|                      |      |          |              |      |             |           | total for 2 Piers  | 5864  |  |
|                      |      |          |              |      |             |           | total Per Pier     | 2932  |  |
| PIERS REINFORCING    |      |          |              |      |             |           |                    |       |  |
| P501                 | 5    | 48       | 11'-6"       | 109  | 2'-7 1/2"   | 2'-7 1/2" |                    |       |  |
| P502                 | 5    | 26       | 19'-0"       | Str. |             |           |                    |       |  |
| P503                 | 5    | 20       | 26'-0"       | Str. |             |           |                    |       |  |
| P504                 | 5    | 12       | 12'-6"       | 109  | 3'-1 1/2"   | 2'-7 1/2" |                    |       |  |
| P505                 | 5    | 4 Ser. 5 | 7'-6"-10'-8" | 109  | 1'-6"-3'-1" | 7'-9"     |                    |       |  |
| P601                 | 6    | 2        | 25'-6"       | Str. |             |           |                    |       |  |
| P602                 | 6    | 2        | 28'-6"       | Str. |             |           |                    |       |  |
| P603                 | 6    | 6        | 7'-6"        | 105  | 2'-6"       | 2'-6"     |                    |       |  |
| P801                 | 8    | 8        | 7'-7"        | 108  | 4'-3"       | 3'-4"     |                    |       |  |
| P1001                | 10   | 2        | 20'-6"       | Str. |             |           |                    |       |  |
| P1002                | 10   | 5        | 31'-4"       | 100  | 28'-6"      | 1'-5"     |                    |       |  |
| P1003                | 10   | 6        | 12'-11"      | 101  | 11'-6"      | 1'-5"     |                    |       |  |
| P1004                | 10   | 24       | 27'-9"       | Str. |             |           |                    |       |  |
|                      |      |          |              |      |             |           | total for 2 Piers  | 12414 |  |
|                      |      |          |              |      |             |           | total Per Pier     | 6207  |  |



Notes:  
For type and placement of shoes see layout sheet 19  
Pier 2 shown, Pier 1 similar except both shoes  
Fixed. For details of Anchor Bolt placement see  
Common Detail Sheet (Std. Draw. 10990).  
Use Class 3 Concrete (4000 p.s.i.) for Cap Beam.  
Use Class A Concrete (4500 p.s.i.) for Shafts, webs  
and Footings.  
Chamfer all exposed corners 1/4".  
Piling shall be 12 BP53 and shall be driven to a  
minimum bearing of 4.5 tons per pile.  
All clearance to main Reinforcing 3", except as shown.  
Use 40 Diameters lap for all bar splices.

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS

BRIDGE ENGINEER

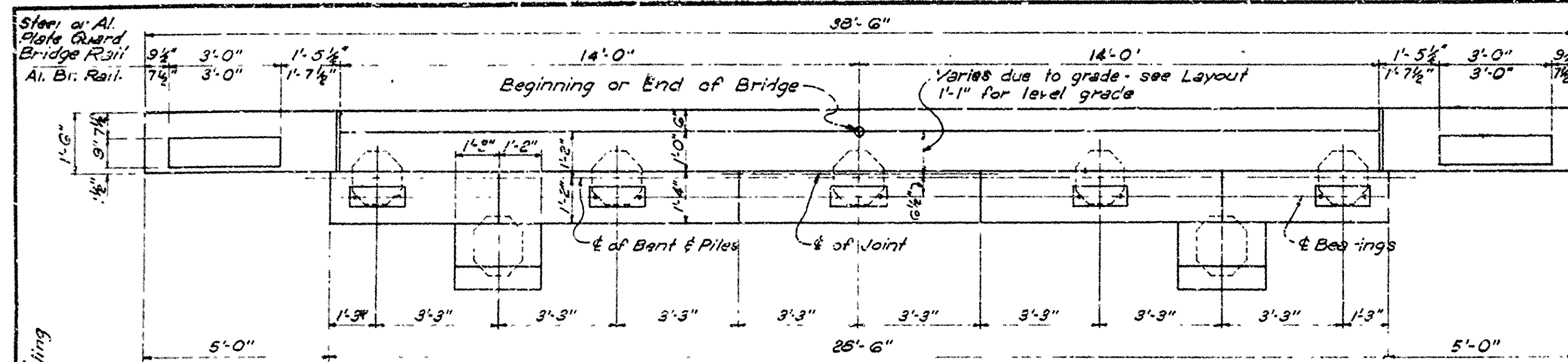
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK ARKANSAS  
MILLWOOD RESERVOIR CROSSING  
U.S. HIGHWAY 71

LICK CREEK PIERS

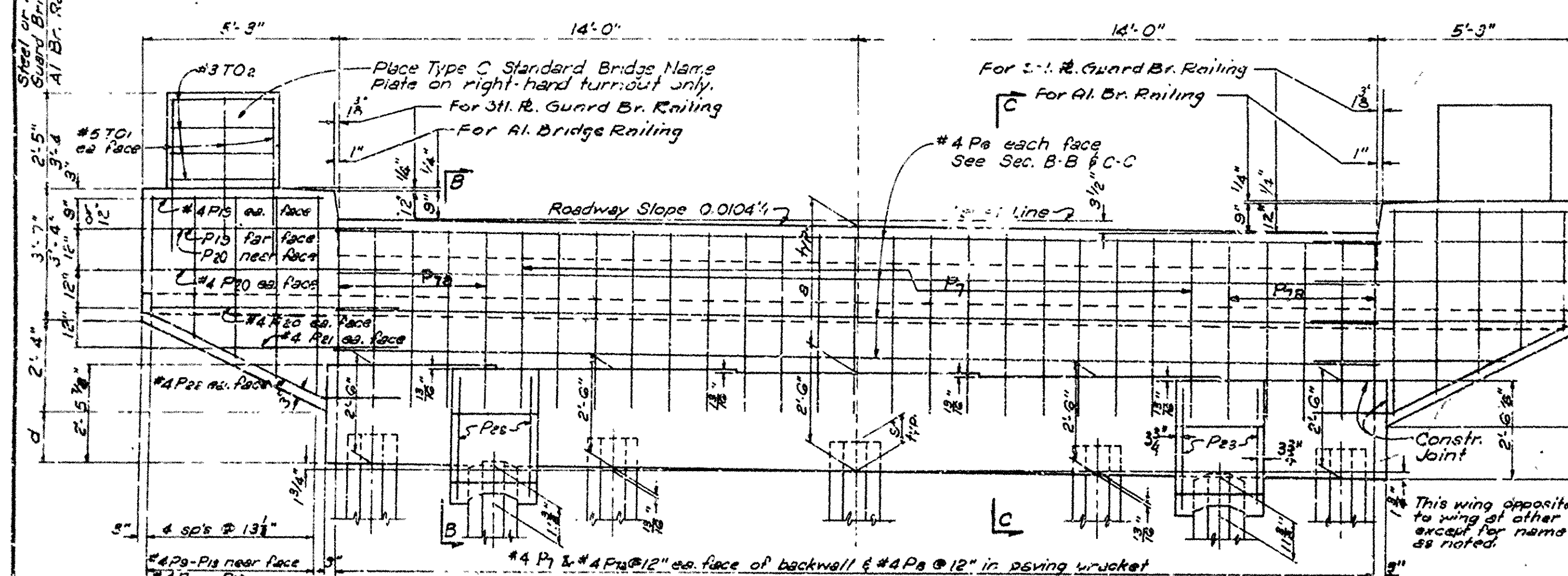
DRAWN BY RCK DATE 11-22-62  
TRACED BY DATE  
BRIDGE NO. 3673

CHECKED BY RM DATE 12-1-62  
SCALE as shown  
DRAWING NO. 22  
12530

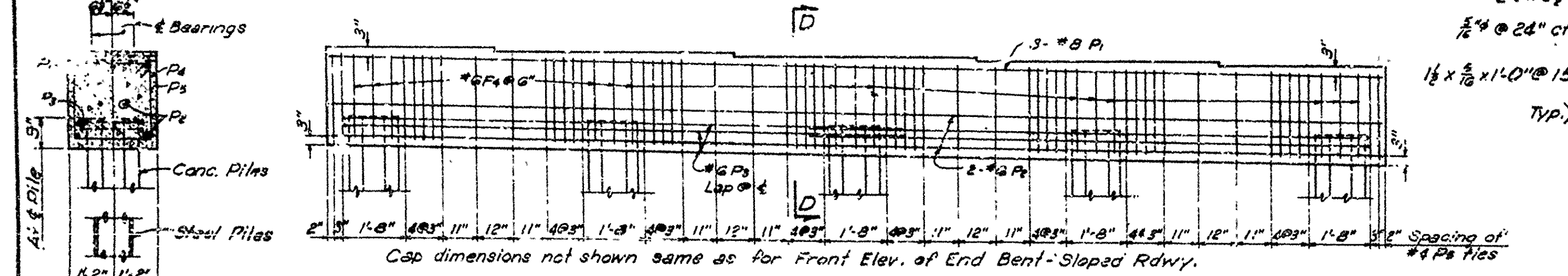




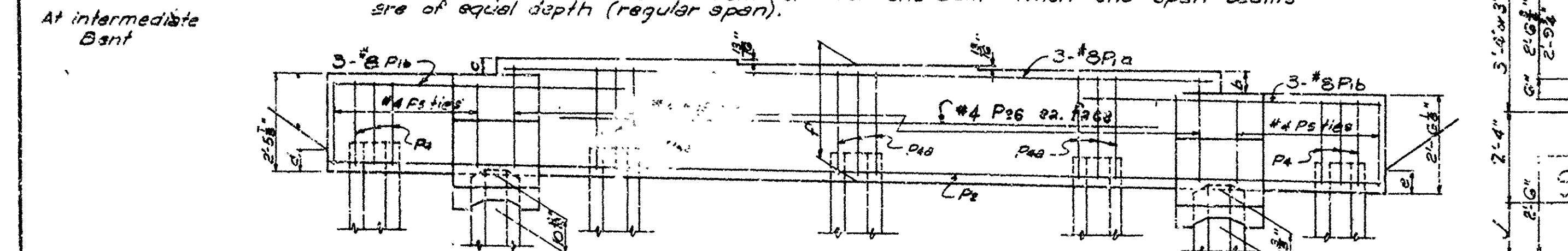
Plan of End Bent  
Sloped or Crowned - Away



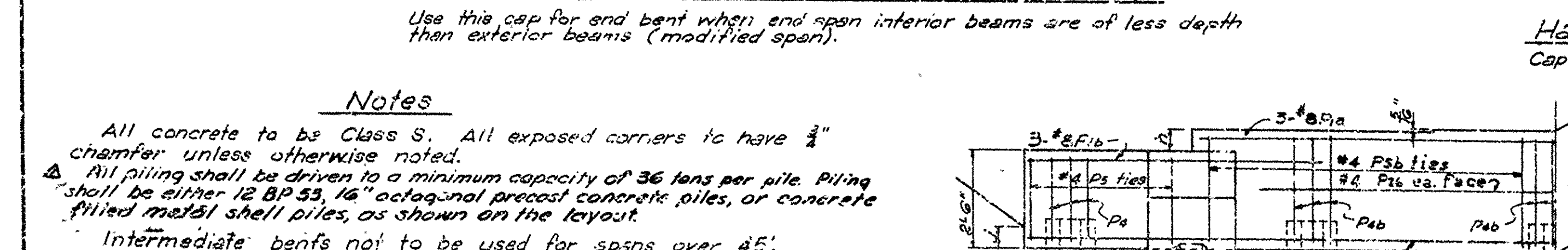
Front Elevation of End Bent - Sloped Roadway  
Cap W shown with batter piles. Batter piles occur at end bents only



Section D-D



Elevation of Cap X - Sloped Roadway

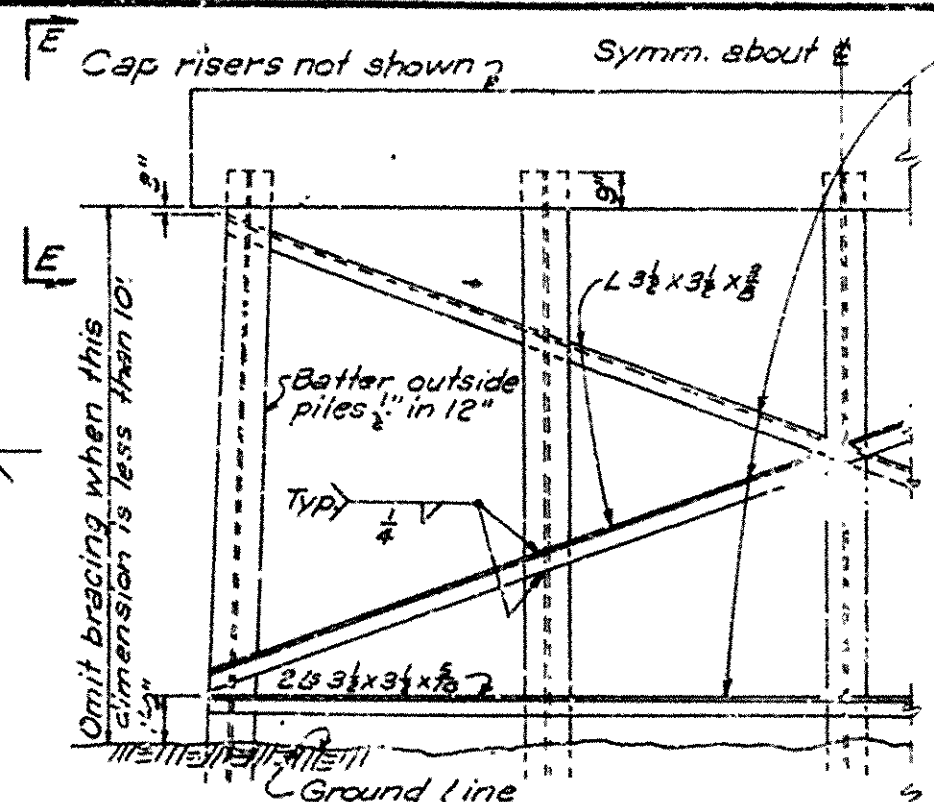


Half Elevation of Cap Z - Crowned Roadway

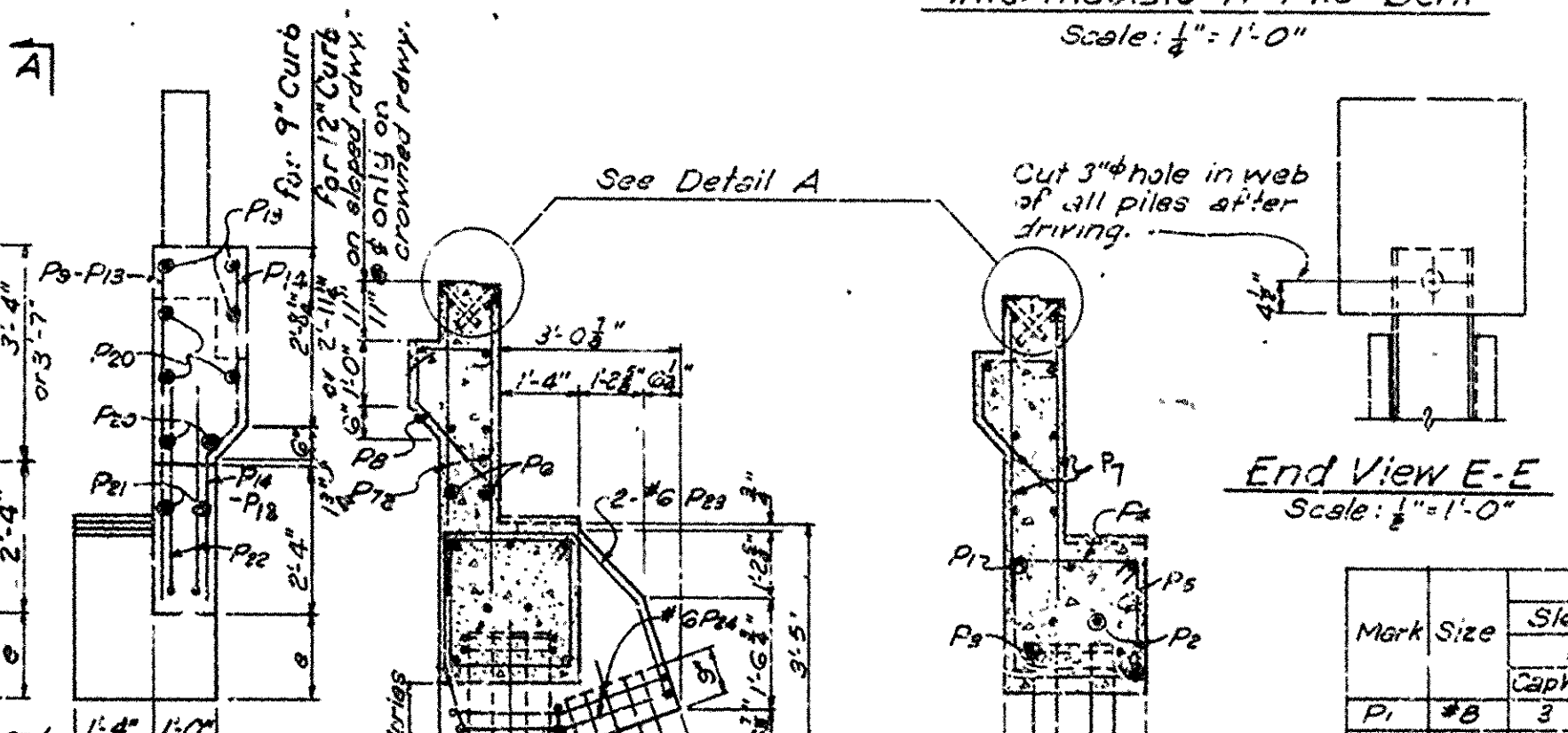


The Contractor at his own expense may provide as many as three splices per pile for steel bearing piling. Minimum spacing between splices shall be 5 feet.

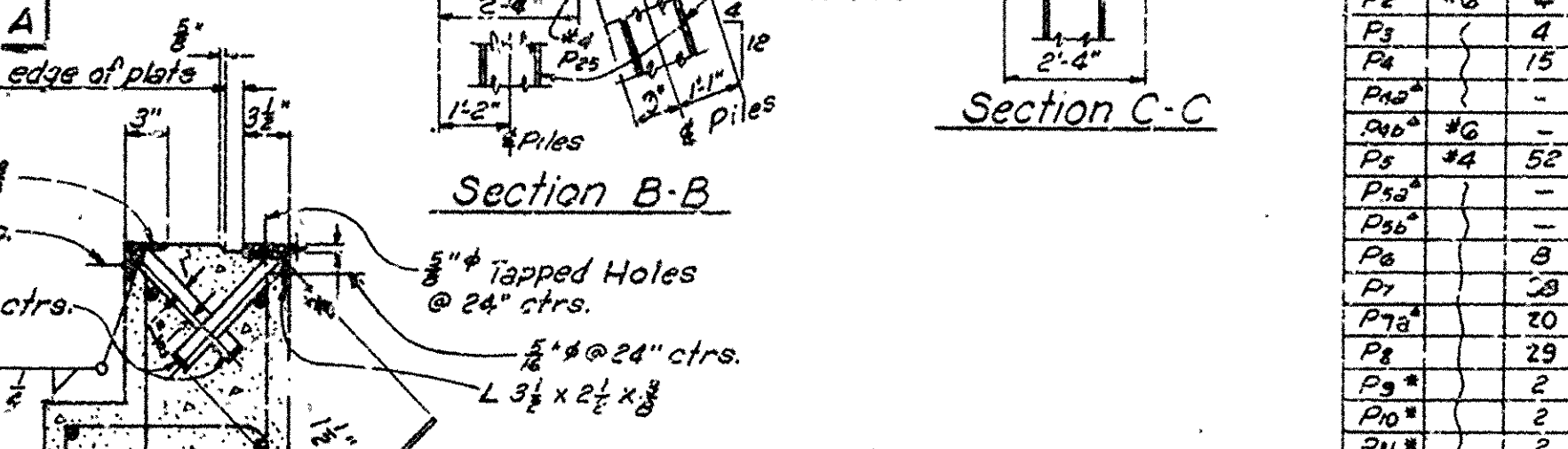
Pile Splice Detail  
Scale:  $\frac{1}{4}" = 1' - 0"$



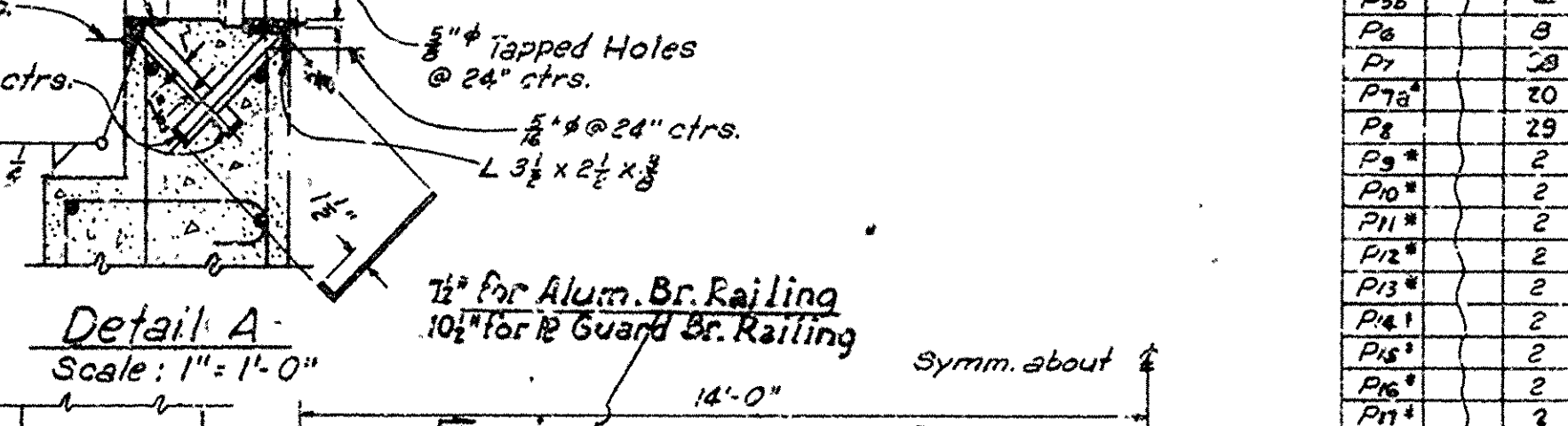
Typical Bracing  
Intermediate H Pile Bent  
Scale: 1" = 1'-0"



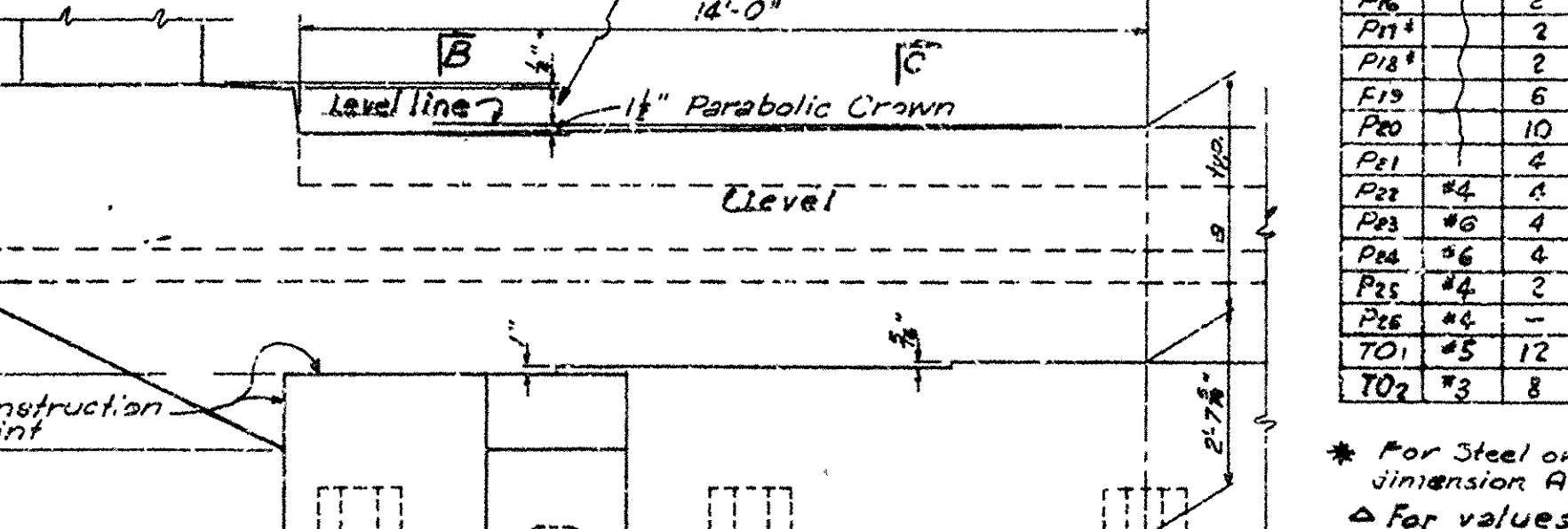
End View A-A



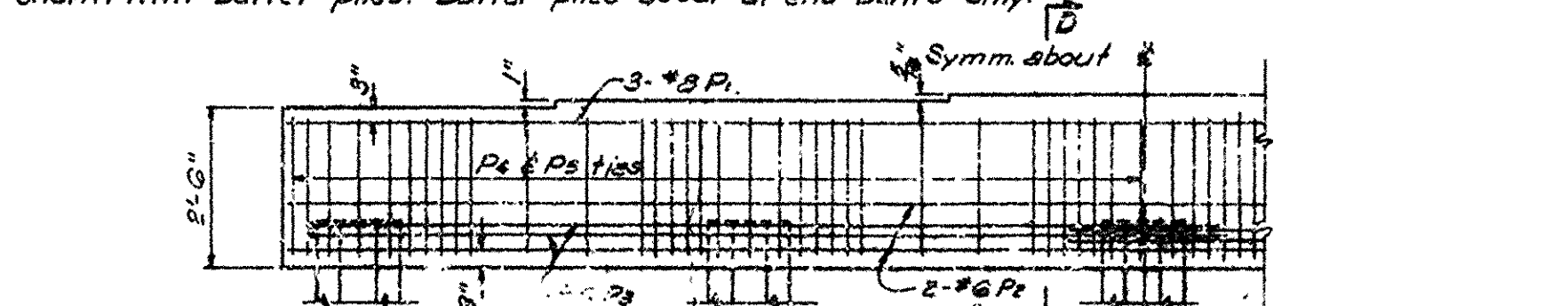
Section B-B



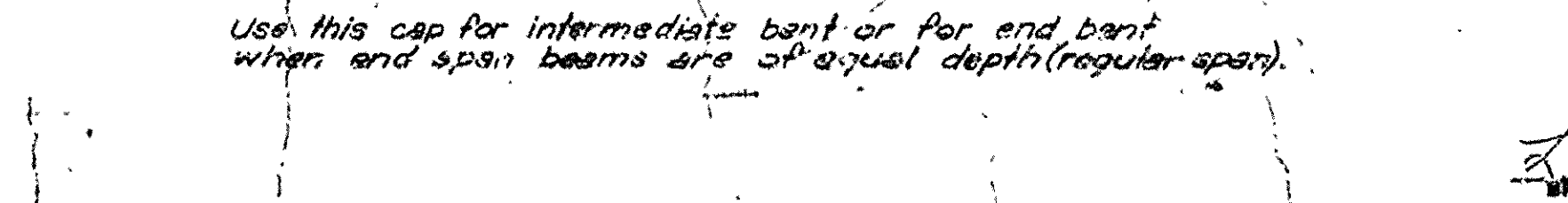
Detail A -  
Scale: 1" = 1'-0"



For details not shown see Elev. End Bent - Sloped Roadway.  
Half Front Elevation of End Bent - Crowned Roadway  
 Cap Y shown with batter piles. Batter piles occur at end bents only.



Half Elevation of Cap Y - Crowned Roadway



The lengths of bracing members shall be determined in the field. Each member shall be one continuous angle and shall be welded to the steel bearing piles as shown. Angle bracing shall be measured and paid for as "Structural Steel in Beam Spans".

| STRUCTURAL GREEN TREE SPANS |          |          |     |    |       |    |   |         |    |     |                 |     |     |    | VARIABLES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|----------|----------|-----|----|-------|----|---|---------|----|-----|-----------------|-----|-----|----|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Span                        |          | Basins   |     |    | Slope |    |   | Roadway |    |     | Crowned Roadway |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             | Interior | Exterior | a   | b  | c     | d  | e | f       | g  | a   | h               | j   | k   | m  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 35-36                       | 21W62    | 21W62    | 2.5 |    |       |    |   |         |    | 2.5 |                 | 0.9 |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 24W68A   |     | 3  | 2     | 3  |   | 2.9     | 2  |     | 3               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 27W84    |     | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 2   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 30W99    |     | 9  | 7     | 8  |   | 3.2     | 8  |     | 9               | 3   | 5.3 | 10 |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 32W118   |     | 12 | 10    | 11 |   | 3.5     | 11 |     | 12              | 4   | 7.4 | 13 |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 35-36                       | 21W62    | 32W135   | 2.5 | 15 | 12    | 13 |   | 3.6     | 13 | 2.5 | 15              | 15  | 3.9 | 15 |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 37-43                       | 24W68A   | 21W68A   | 2.3 |    |       |    |   |         |    | 2.3 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 27W84    |     | 3  | 2     | 3  |   | 2.9     | 2  |     | 3               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 30W99    |     | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 32W118   |     | 9  | 7     | 8  |   | 3.2     | 8  |     | 9               | 4   | 5.3 | 10 |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 37-43                       | 24W68A   | 32W135   | 2.3 | 12 | 10    | 11 |   | 3.5     | 11 | 2.3 | 12              | 15  | 3.6 | 13 |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 43-51                       | 27W84    | 34W148   | 2.4 |    |       |    |   |         |    | 2.4 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 30W99    |     | 3  | 2     | 3  |   | 2.9     | 2  |     | 3               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 32W118   |     | 6  | 5     | 6  |   | 3.0     | 5  |     | 7               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 44-51                       | 27W84    | 34W135   | 2.1 | 9  | 7     | 8  |   | 3.2     | 8  | 2.1 | 9               | 15  | 3.3 | 10 |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 52-55                       | 30W99    | 32W118   | 3.2 |    |       |    |   |         |    | 3.2 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 34W148   |     | 4  | 2     | 3  |   | 2.9     | 2  |     | 4               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 36W165   |     | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 52-55                       | 30W99    | 32W118   | 3.2 |    |       |    |   |         |    | 3.2 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 34W148   |     | 4  | 2     | 3  |   | 2.9     | 2  |     | 4               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 36W165   |     | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 56-57                       | 30W99    | 32W118   | 3.2 |    |       |    |   |         |    | 3.2 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 34W148   |     | 4  | 2     | 3  |   | 2.9     | 2  |     | 4               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 36W165   |     | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 56-57                       | 30W99    | 32W118   | 3.2 |    |       |    |   |         |    | 3.2 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 34W148   |     | 4  | 2     | 3  |   | 2.9     | 2  |     | 4               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 36W165   |     | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 58-60                       | 30W99    | 32W118   | 3.2 |    |       |    |   |         |    | 3.2 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 34W148   |     | 4  | 2     | 3  |   | 2.9     | 2  |     | 4               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 36W165   |     | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 58-60                       | 30W99    | 32W135   | 3.5 |    |       |    |   |         |    | 3.5 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 34W130   | 3.5 | 3  | 2     | 3  |   | 2.9     | 2  |     | 3               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 36W130   | 3.5 | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 63                          | 30W99    | 32W130   | 3.5 |    |       |    |   |         |    | 3.5 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 34W130   | 3.5 | 3  | 2     | 3  |   | 2.9     | 2  |     | 3               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 36W130   | 3.5 | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 65                          | 30W99    | 32W135   | 3.5 |    |       |    |   |         |    | 3.5 |                 |     |     |    |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 34W135   | 3.5 | 3  | 2     | 3  |   | 2.9     | 2  |     | 3               | 2   | 2.1 | 4  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |          | 36W135   | 3.5 | 6  | 4     | 5  |   | 2.1     | 5  |     | 6               | 3   | 3.4 | 7  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

BAR LIST

| Mark            | Size | Number Per Bent |      |      |               |      |      | Length      | A          | B          | Pin Dia. | Bending Diagram |
|-----------------|------|-----------------|------|------|---------------|------|------|-------------|------------|------------|----------|-----------------|
|                 |      | Sloped Rdwy.    |      |      | Crowned Rdwy. |      |      |             |            |            |          |                 |
|                 |      | End             | Int. | End  | End           | Int. | End  |             |            |            |          |                 |
|                 |      | CapW            | CapX | CapW | CapR          | CapZ | CapY |             |            |            |          |                 |
| P <sub>1</sub>  | #8   | 3               | 3    | 3    | 3             | 3    | 3    | 28'-2"      |            |            | Str.     |                 |
| P <sub>10</sub> | #8   | 3               | 3    | 3    | 3             | 3    | 3    | 19'-2"      |            |            | Str.     |                 |
| P <sub>2</sub>  | #6   | 4               | 4    | 4    | 4             | 4    | 4    | 28'-0"      |            |            | Str.     |                 |
| P <sub>3</sub>  | #6   | 4               | 4    | 4    | 4             | 4    | 4    | 31'-6"      | 1'-7"      | 15'-0"     | 2'-6"    |                 |
| P <sub>4</sub>  | #6   | 15              | 6    | 15   | 6             | 15   | 6    | 6'-11"      | 1'-11 1/2" | 2'-11 1/2" |          |                 |
| P <sub>10</sub> | #8   | 3               | 3    | 3    | 3             | 3    | 3    | 5'-0"       | 2'-6"      | 2'-6"      | 2'-6"    |                 |
| P <sub>10</sub> | #6   | 3               | 3    | 3    | 3             | 3    | 3    | 5'-0"       | 2'-6"      | 2'-6"      | 2'-6"    |                 |
| P <sub>3</sub>  | #4   | 52              | 16   | 52   | 52            | 16   | 52   | 4'-9"       |            | 2'-11 1/2" | 1'-6"    |                 |
| P <sub>15</sub> | #8   | 3               | 3    | 3    | 3             | 3    | 3    | 5'-9"+2'-6" |            | 2'-11 1/2" |          |                 |
| P <sub>15</sub> | #6   | 3               | 3    | 3    | 3             | 3    | 3    | 5'-9"+2'-6" | 1'-11 1/2" | 2'-11 1/2" | 1'-6"    |                 |
| P <sub>6</sub>  | #8   | 3               | 3    | 3    | 3             | 3    | 3    | 28'-0"      |            |            | Str.     |                 |
| P <sub>7</sub>  | #8   | 3               | 3    | 3    | 3             | 3    | 3    | 28'-0"      |            |            | Str.     |                 |
| P <sub>15</sub> | #8   | 20              | 20   | 20   | 20            | 20   | 20   | 8'-11 1/2"  |            |            | Str.     |                 |
| P <sub>8</sub>  | #8   | 29              | 29   | 29   | 29            | 29   | 29   | 8'-11 1/2"  |            |            | Str.     |                 |
| P <sub>9</sub>  | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 4'-0"       |            |            | Str.     |                 |
| P <sub>10</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 3'-0"       |            |            | Str.     |                 |
| P <sub>11</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 3'-0"       |            |            | Str.     |                 |
| P <sub>12</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 4'-0"       |            |            | Str.     |                 |
| P <sub>13</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 4'-6"       |            |            | Str.     |                 |
| P <sub>14</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 5'-0"       |            |            | Str.     |                 |
| P <sub>15</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 3'-3"       | 2'-6"      | 0'-2 1/2"  | 1'-6"    |                 |
| P <sub>16</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 3'-9"       |            | 0'-2 1/2"  | 1'-6"    |                 |
| P <sub>17</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 4'-3"       |            | 1'-2 1/2"  | 1'-6"    |                 |
| P <sub>18</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 4'-9"       |            | 1'-8"      | 1'-6"    |                 |
| P <sub>19</sub> | #8   | 2               | 2    | 2    | 2             | 2    | 2    | 5'-3"       | 2'-6"      | 2'-2 1/2"  | 1'-6"    |                 |
| P <sub>19</sub> | #6   | 6               | 6    | 6    | 6             | 6    | 6    | 4'-11"      |            |            | Str.     |                 |
| P <sub>20</sub> | #6   | 10              | 10   | 10   | 10            | 10   | 10   | 4'-9"       |            |            | Str.     |                 |
| P <sub>21</sub> | #8   | 4               | 4    | 4    | 4             | 4    | 4    | 5'-0"       |            |            | Str.     |                 |
| P <sub>22</sub> | #8   | 4               | 4    | 4    | 4             | 4    | 4    | 7'-3"       |            |            | Str.     |                 |
| P <sub>23</sub> | #6   | 4               | 4    | 4    | 4             | 4    | 4    | 8'-0"       |            |            | Str.     |                 |
| P <sub>24</sub> | #6   | 4               | 4    | 4    | 4             | 4    | 4    | 11'-8"      |            |            | Str.     |                 |
| P <sub>25</sub> | #4   | 2               | 2    | 2    | 2             | 2    | 2    | 5'-4"       | 0'-5"      | 1'-11 1/2" | 1'-6"    |                 |
| P <sub>25</sub> | #4   | 2               | 2    | 2    | 2             | 2    | 2    | 16'-0"      |            |            | Str.     |                 |
| T <sub>01</sub> | #5   | 12              | 12   | 12   | 12            | 12   | 12   | 5'-2"       |            |            | Str.     |                 |
| T <sub>02</sub> | #3   | 8               | 8    | 8    | 8             | 8    | 8    | 6'-11"      | 0'-6"      | 2'-8"      | 1'-6"    |                 |

Dimensions are to c.s. of bars.

\* For Steel or Aluminum Plate Guard Bridge Railing add 3" to lengths of bars  $P_3$  -  $P_{13}$ . Increase dimension A 3" for bars  $P_{14}$  to  $P_{18}$ .  
 Δ For values of 'g' and 'm' see table of variable dimensions

DETAILS OF STANDARD PILE BENTS  
FOR 35' TO 70' COMPOSITE I-BEAM SPANS  
28' CLEAR ROADWAY 1'-6" OR 1'-7 $\frac{1}{2}$ " CURBS

Roadway:  $1\frac{1}{2}$ " Parabolic Crown or 0.0104 % Slope --

# ROUTE SEC. ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.  
 RE - DRAWN BY: EAW DATE: 3-8-62  
 TRACKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ SCALE:  $\frac{3}{8}" = 1'-0"$   
and as noted  
 RE - CHECKED BY: ESL DATE: 6-26-62  
 BRIDGE NO. \_\_\_\_\_ DRAWING NO. 15030A



GENERAL NOTES

All concrete to be Class S. All exposed corners to be chamfered 3/4" unless otherwise noted.  
Field connections to be riveted or bolted with high strength bolts. Rivets 3/4" open rods. A-307 except where noted otherwise.  
Structural shapes of equal or greater strength may be substituted for shapes shown, but payment will be made on the basis of shapes shown or those actually used, whichever is less.  
All welded connections to be 1/4" fillet shop welds except as noted. All welding shall conform to the American Welding Society Standard Specifications for Welded Highway and Railway Bridges, current edition.  
Shop Paint: All structural steel, except surfaces in contact with concrete, shall be given one coat of red lead and raw linseed oil before shipment.  
Field Paint: First coat - red lead and raw linseed oil. Second coat - aluminum paint.  
All steel framing and roadway spans or decks to be painted as follows: Structural steel in beam spans. Bearings shall be finally painted in a manner set forth in the Specifications. This work and material are to be considered as subsidiary to the item "Structural Steel in Beam Spans" and will not be paid for a ready.  
This drawing shows general features of design only. Shop drawings shall be made in accordance with the Specifications, submitted and approved before construction is begun.  
All steel shall be ASTM A36 unless otherwise noted.  
Anchor bolts shall be galvanized to conform to ASTM Specification, Designation A153.

Reinforcing steel to be uniform bars of intermediate or hard grade. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly but will be considered subsidiary to the item "Reinforcing Steel".  
Shop drawings showing details of reinforcing steel, including wire supports, shall be submitted and approved before fabrication is begun.  
All chamfers on concrete riser for rail are to be 1/2".  
Shop drawings showing details of railing shall be submitted and approved before fabrication is begun.  
This aluminum bridge railing, including posts and fasteners, shall be paid for on the unit price bid per linear foot for "Aluminum Bridge Railing".  
A rail connection using set screws is an acceptable alternative and may be supplied at the Contractor's option.  
Outside surfaces of flanges of cast aluminum posts shall be given a No. 220 grit belt finish after which all exposed surfaces of posts shall receive one coat of clear lacquer.  
If Steel or Aluminum Plate Guard Bridge Railing is used it shall be the one shown or a different type as approved by the Engineer. The rail including posts and fasteners shall be paid for on the unit price bid per linear foot for "Steel or Aluminum Plate Guard Bridge Railing".  
Slab Pouring Note:  
Floor slabs may be poured in one continuous operation with a strike off extending over the whole span length, or may be poured in increments with the center one-third to one-half span length poured first. After the center section is poured not less than 24 hours shall elapse before pouring the end sections. End sections may be poured simultaneously if not poured simultaneously, 48 hours shall elapse between end section pours.

SPECIFICATIONS  
Arkansas State Highway Commission Standard Specifications for Highway Construction  
Edition of 1959.

This Drawing is a modification of Dwg No. 5460.

8" thick stringer on side of web to Fig. 44. (See page 1 of 2)

Note: beam buildups are required where modified spans are used, or adjacent regular spans have different plus shoe heights. (See accompanying drawings)

8" thick stringer on side of web to Fig. 44. (See page 1 of 2)

Use When Difference of 1/8" plus shoe heights is or more.

Use When Difference of 1/8" plus shoe heights is or more.

DETAILS OF BEAM BUILDUP. No Scale

DETAILS COMMON TO STANDARD 35'-90'

COMPOSITE I-BEAM SPANS

20', 24', 26', 28' & 40' ROADWAYS

ARKANSAS STATE HIGHWAY COMMISSION

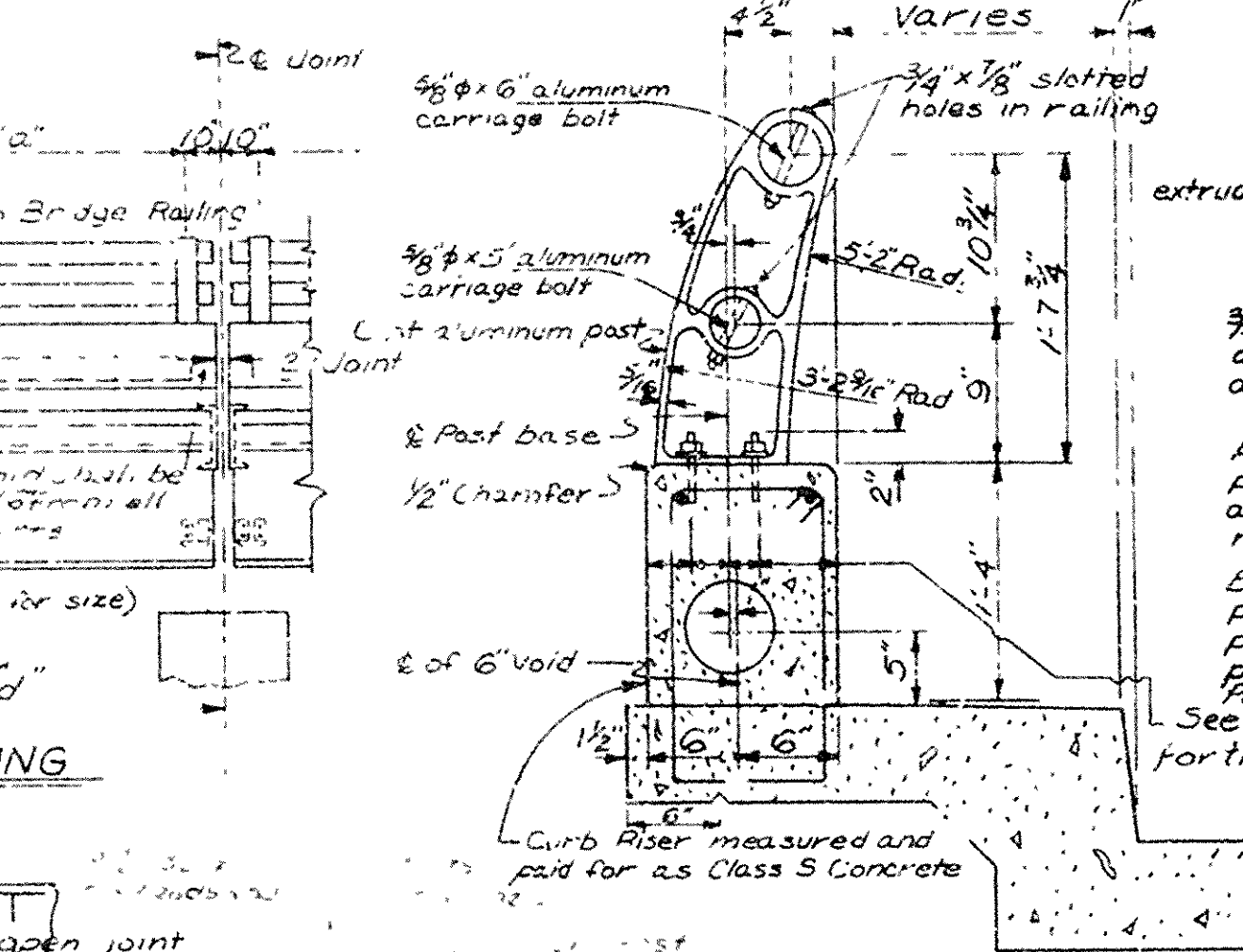
LITTLE ROCK, ARK.  
RE-DRAWN BY: *SM* DATE: 5/20/62  
TRACED BY: *SM* DATE: 5/20/62  
RE-CHECKED BY: *SM* DATE: 5/20/62

BRIDGE NO. \_\_\_\_\_ DRAWING NO. 14990

Rev. Anchor Bolt Spacing - 10-29-62 M.G.  
Rev. Added 40' Roadway - 8-1-62 M.G.  
Rev. Drain Notes - 9-3-62 D.F.  
Rev. Anchor Bolts - 5-22-62 M.G.

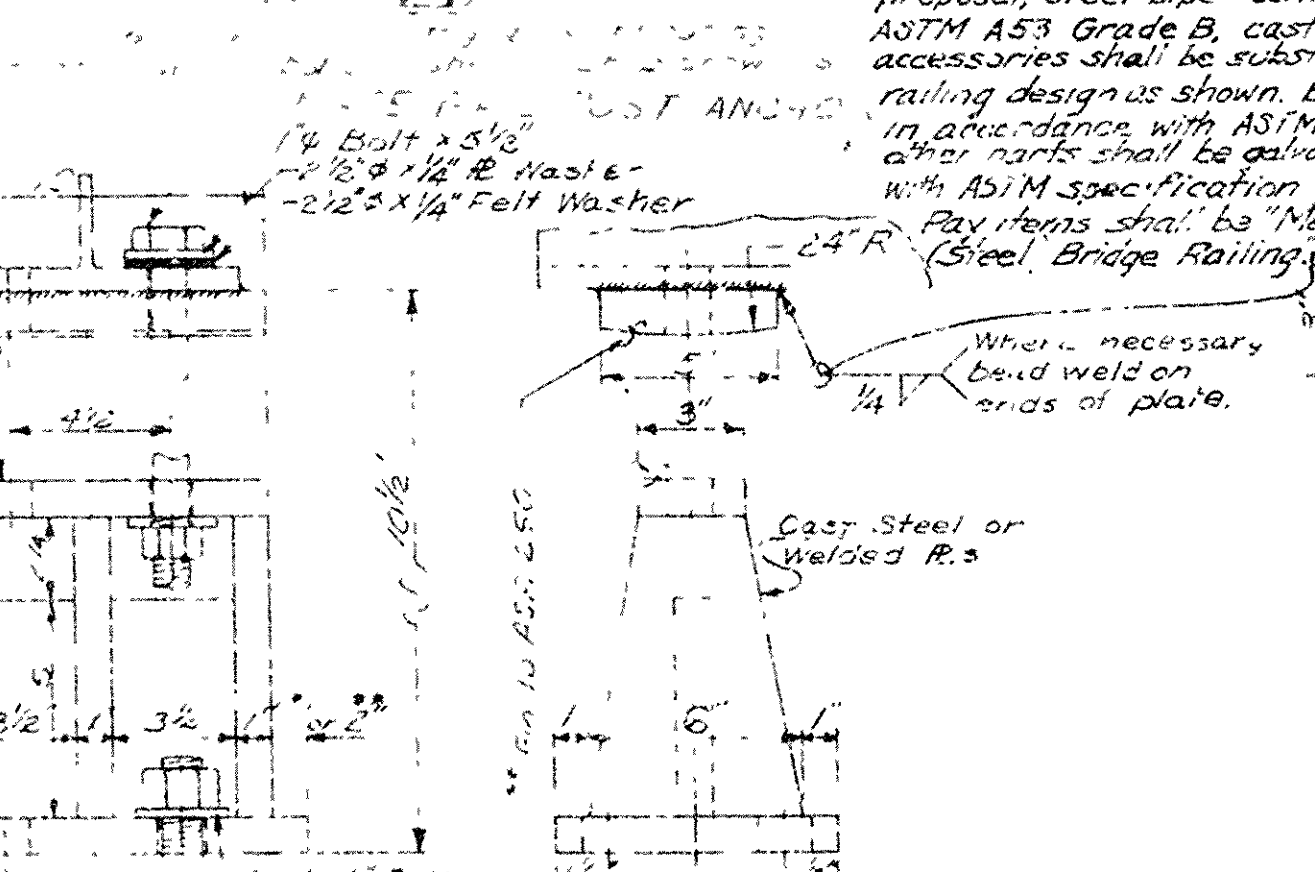
ELEVATION SHOWING PLATE GUARD RAILING

Scale: 1/2" = 1'-0"



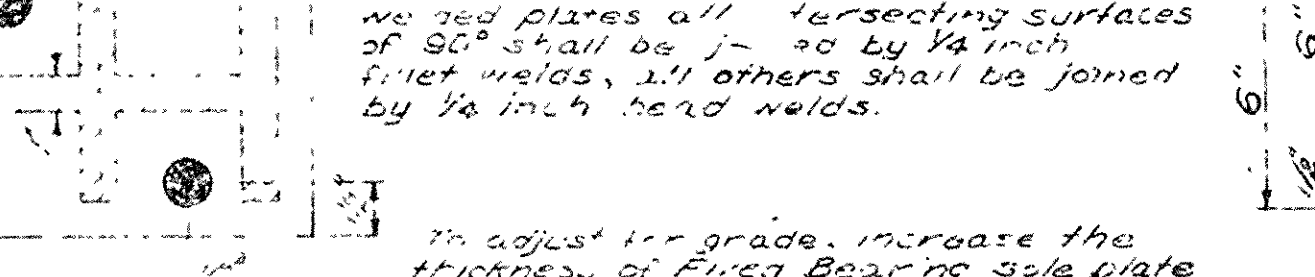
ELEVATION SHOWING ALUMINUM RAILING

Scale: 1/4" = 1'-0"



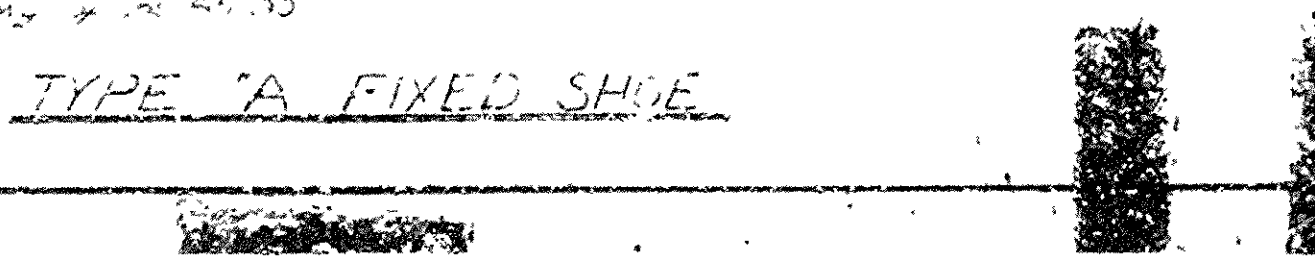
PLAN OF OPEN JOINT

Scale: 1/4" = 1'-0"



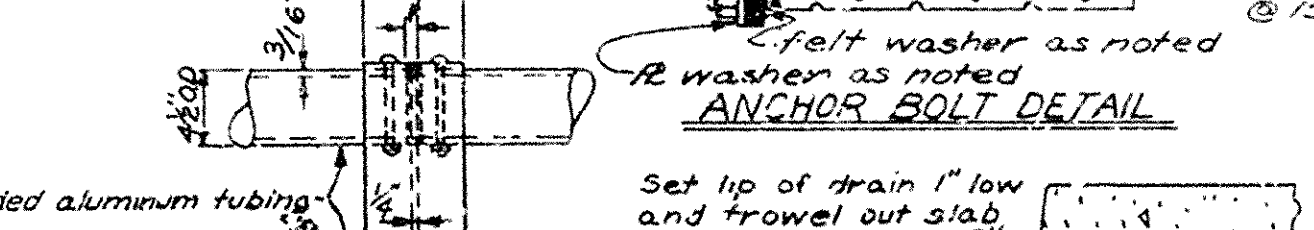
DETAILS OF ALUMINUM RAILING

Scale: 1" = 1'-0"



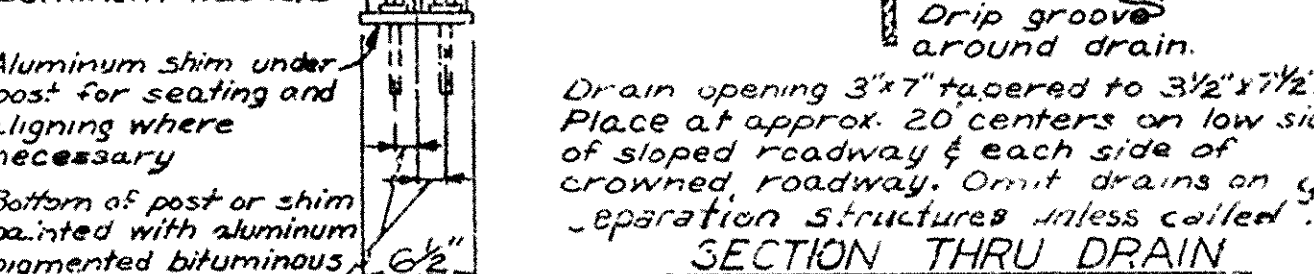
ANCHOR BOLT DETAIL

Scale: 3/4" = 1'-0"



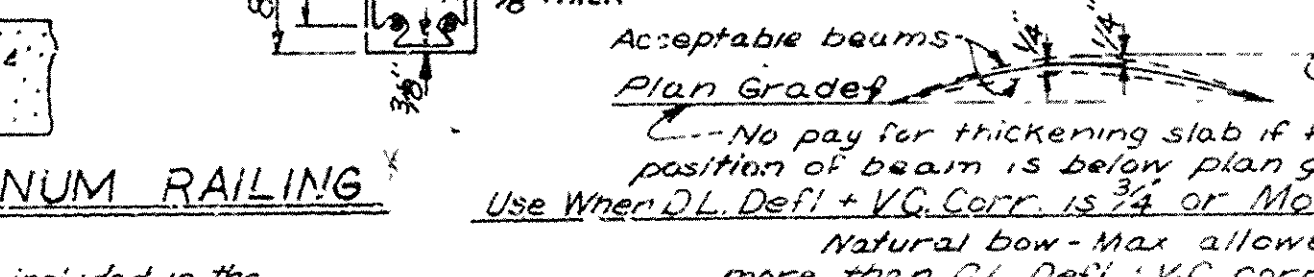
SECTION THRU DRAIN

Scale: 3/4" = 1'-0"



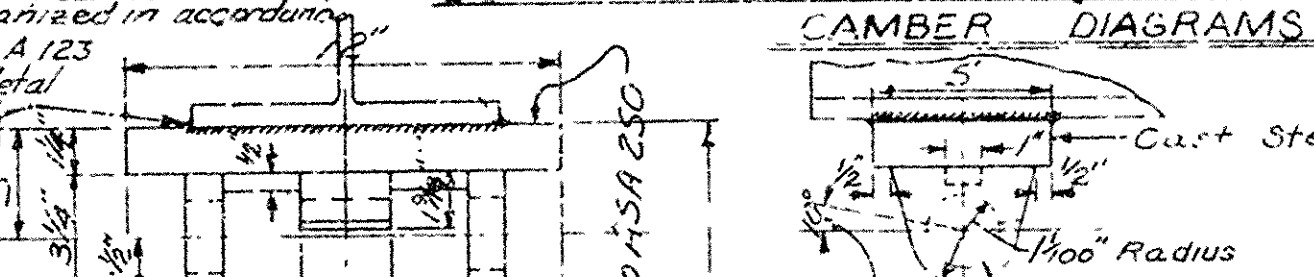
CAMBER DIAGRAMS

Scale: 1" = 1'-0"



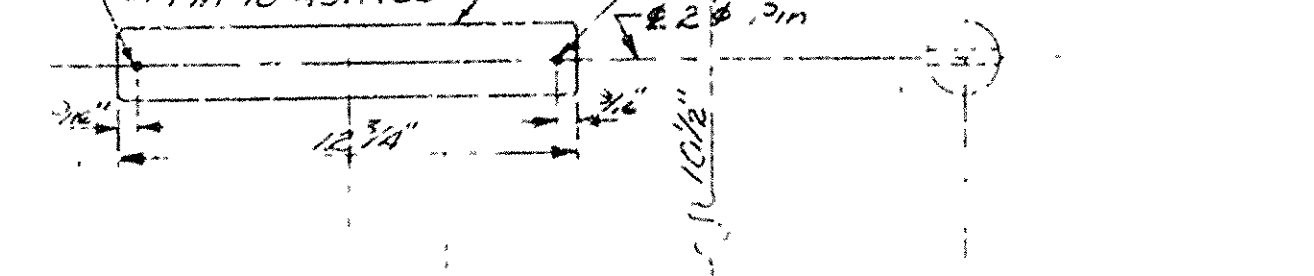
JOINT AT END BENT

Scale: 1/4" = 1'-0"



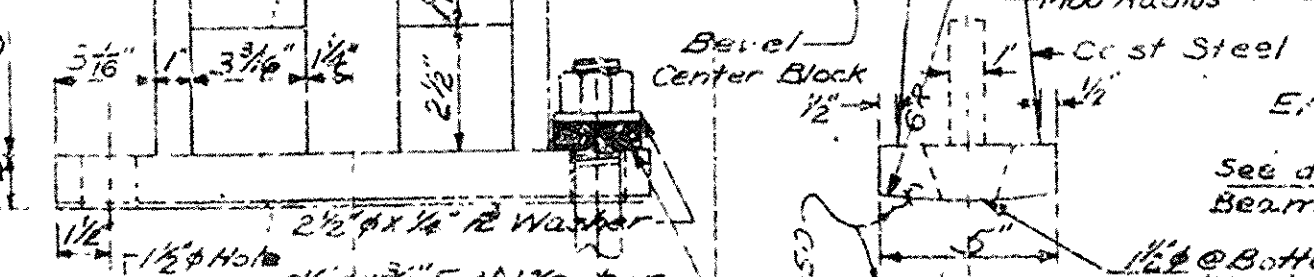
JOINT AT INT. BENT

Scale: 1/4" = 1'-0"



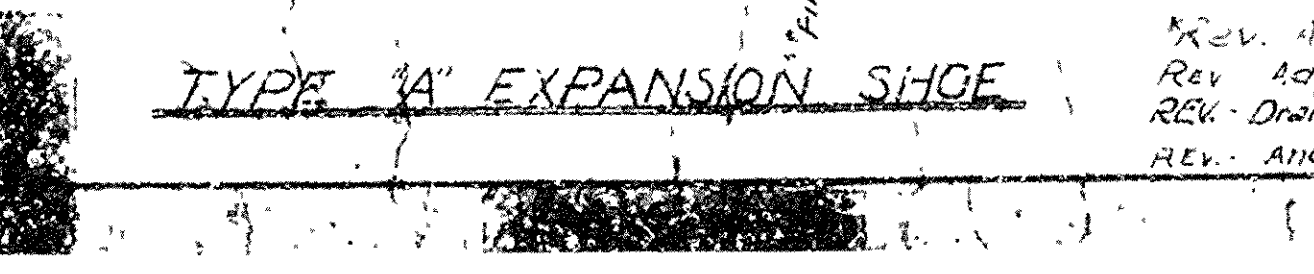
JOINT AT END BENT SHOWING MODIFIED SPAN

Scale: 1/4" = 1'-0"



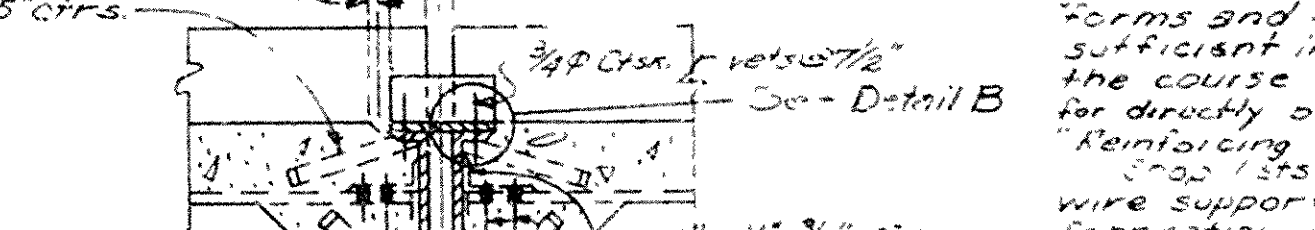
JOINT AT INT. BENT SHOWING MODIFIED AND REGULAR SPAN

Scale: 1/4" = 1'-0"



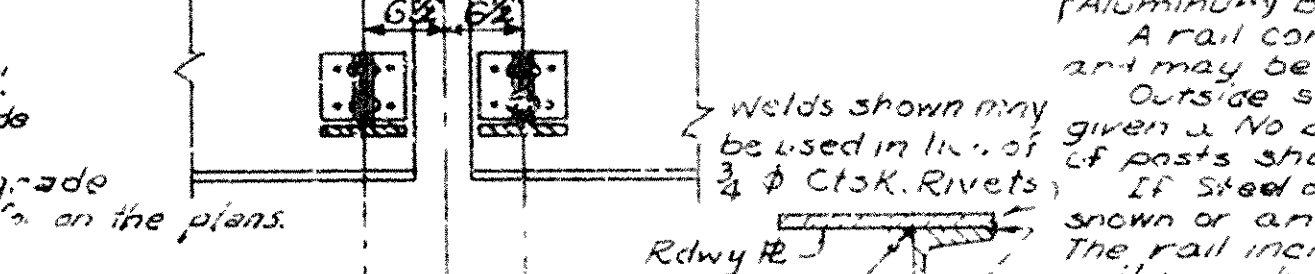
JOINT AT END BENT

Scale: 3/4" = 1'-0"



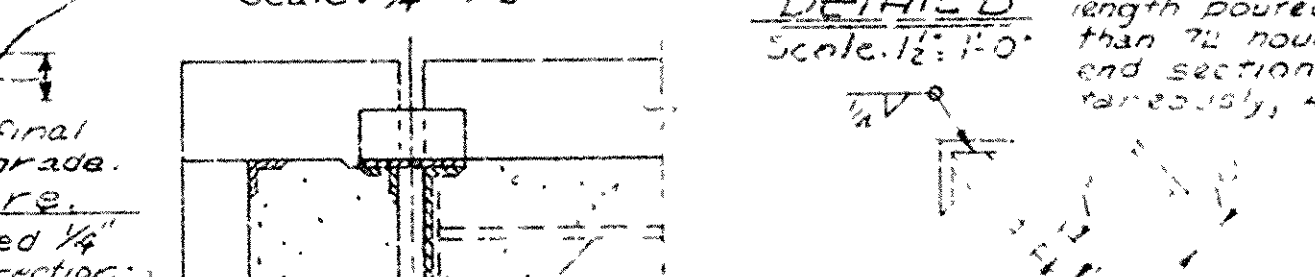
JOINT AT INT. BENT

Scale: 1/4" = 1'-0"



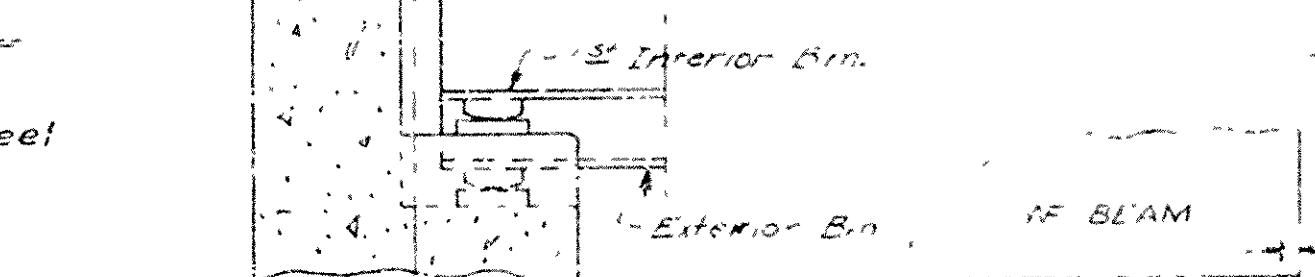
JOINT AT END BENT

Scale: 1/4" = 1'-0"



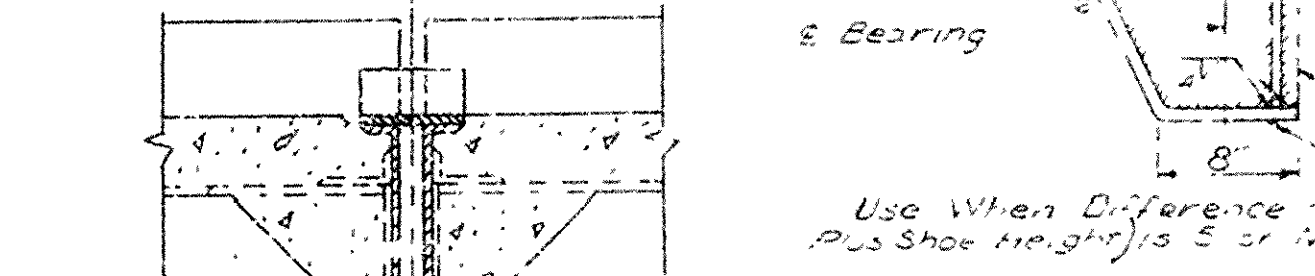
JOINT AT INT. BENT

Scale: 1/4" = 1'-0"



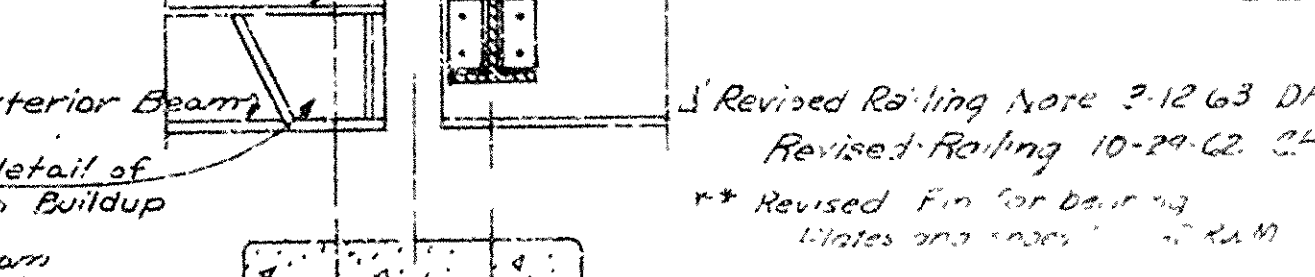
JOINT AT END BENT

Scale: 1/4" = 1'-0"



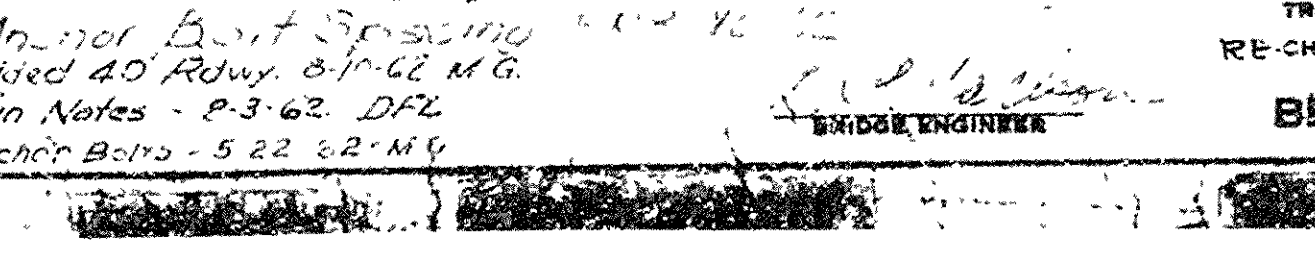
JOINT AT INT. BENT

Scale: 1/4" = 1'-0"



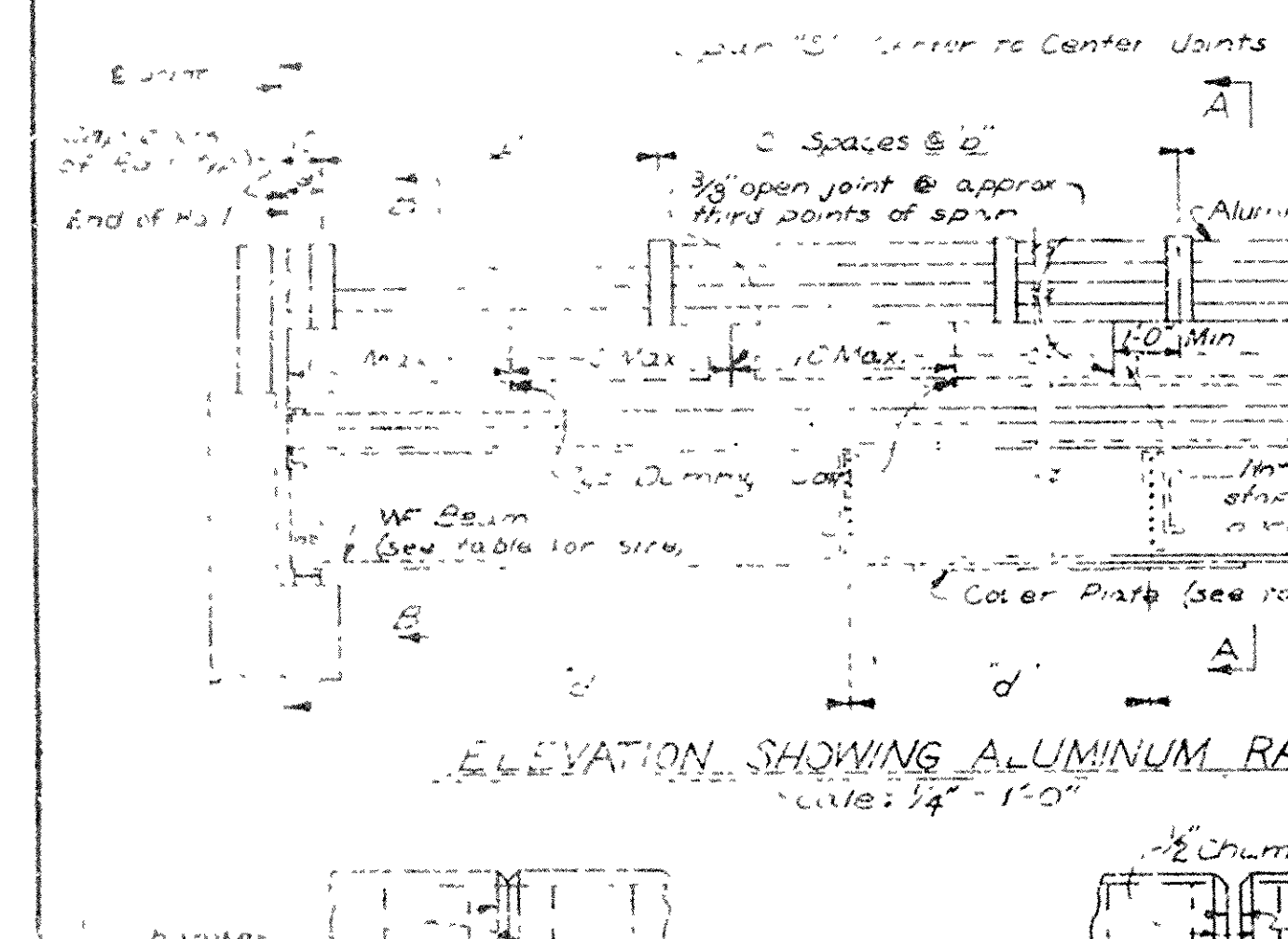
JOINT AT END BENT

Scale: 1/4" = 1'-0"



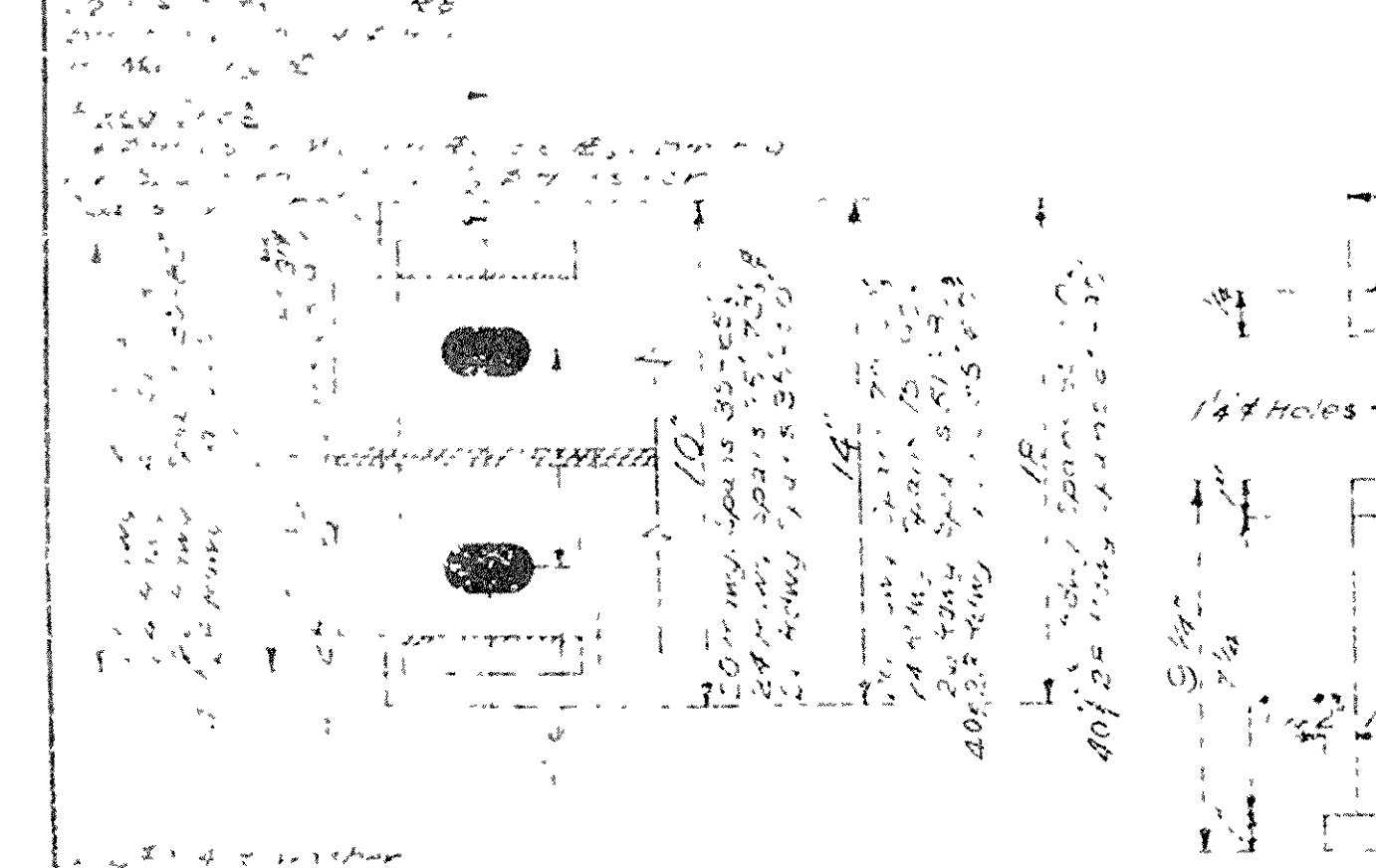
ELEVATION SHOWING PLATE GUARD RAILING

Scale: 1/2" = 1'-0"



ELEVATION SHOWING ALUMINUM RAILING

Scale: 1/4" = 1'-0"



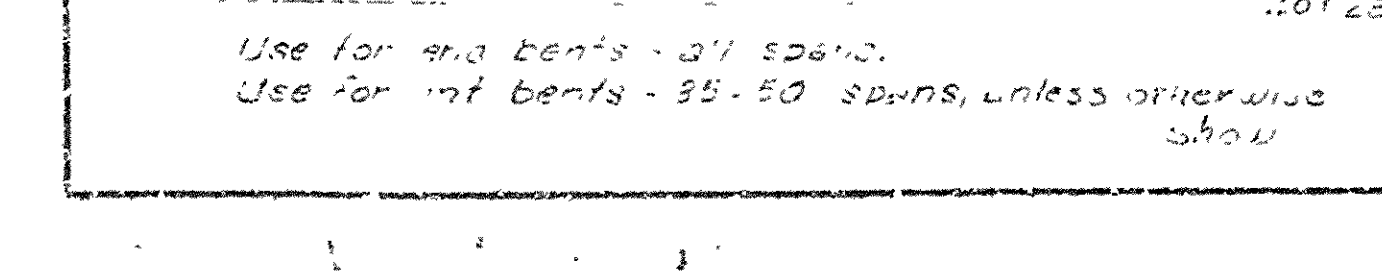
PLAN OF OPEN JOINT

Scale: 1/4" = 1'-0"



DETAILS OF ALUMINUM RAILING

Scale: 1" = 1'-0"



TYPE "E" FIXED OR EXPANSION SHOE

Use for end bents - 31' spans.  
Use for int bents - 35'-50' spans, unless otherwise shown.

TYPE "A" FIXED SHOE

Use for end bents - 31' spans.  
Use for int bents - 35'-50' spans, unless otherwise shown.

TYPE "A" EXPANSION SHOE

Use for end bents - 31' spans.  
Use for int bents - 35'-50' spans, unless otherwise shown.

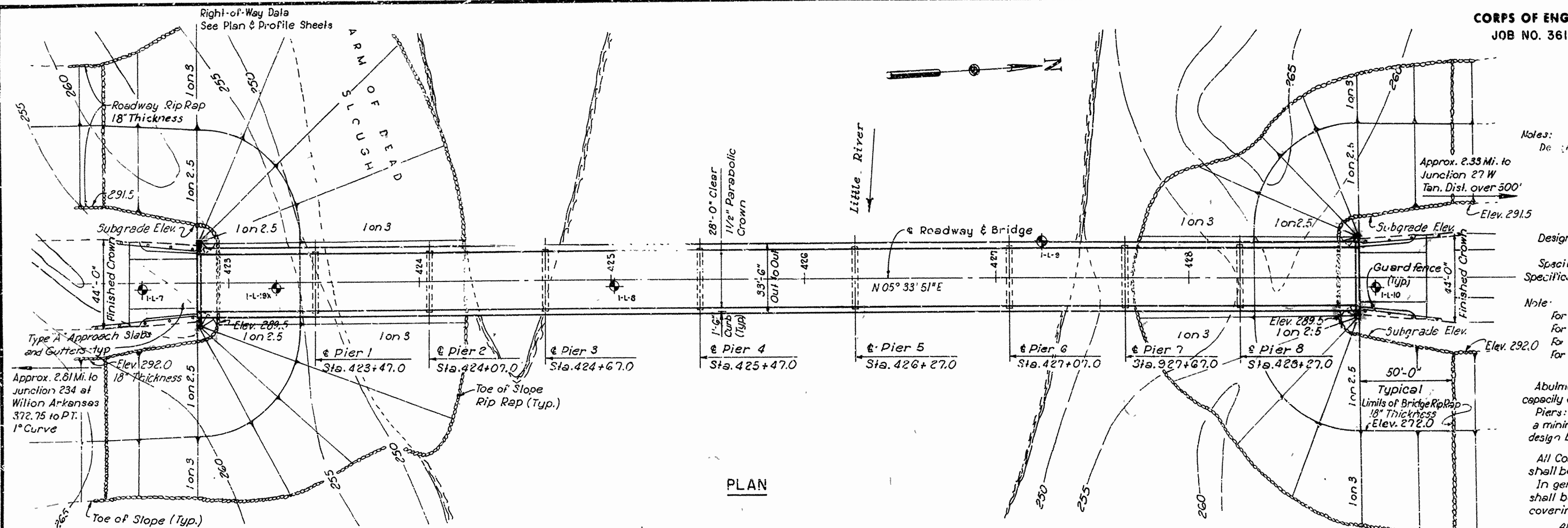
TYPE "A" EXPANSION SHOE

Use for end bents - 31' spans.  
Use for int bents - 35'-50' spans, unless otherwise shown.

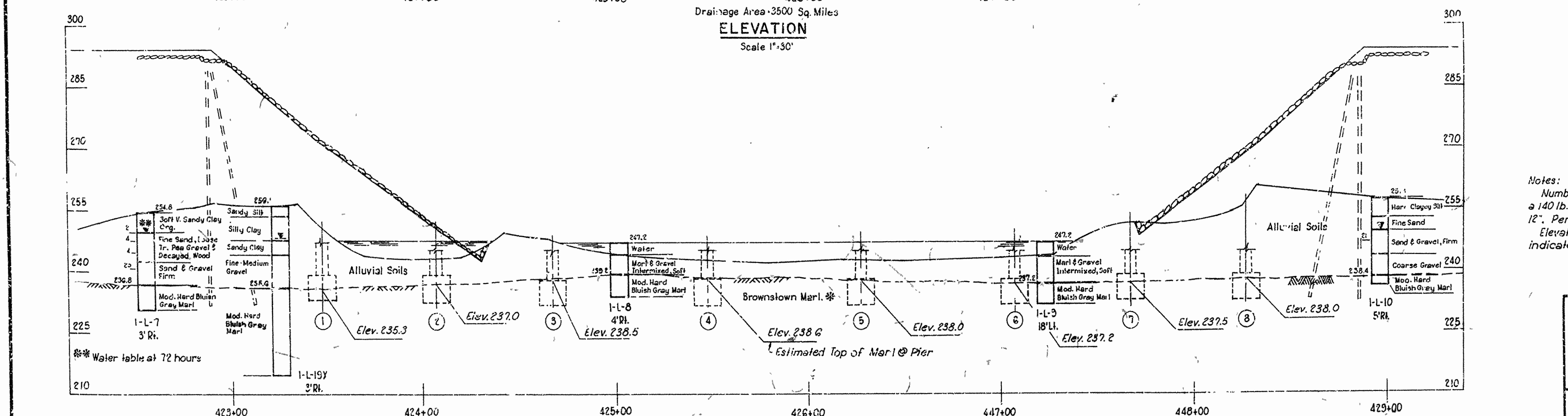
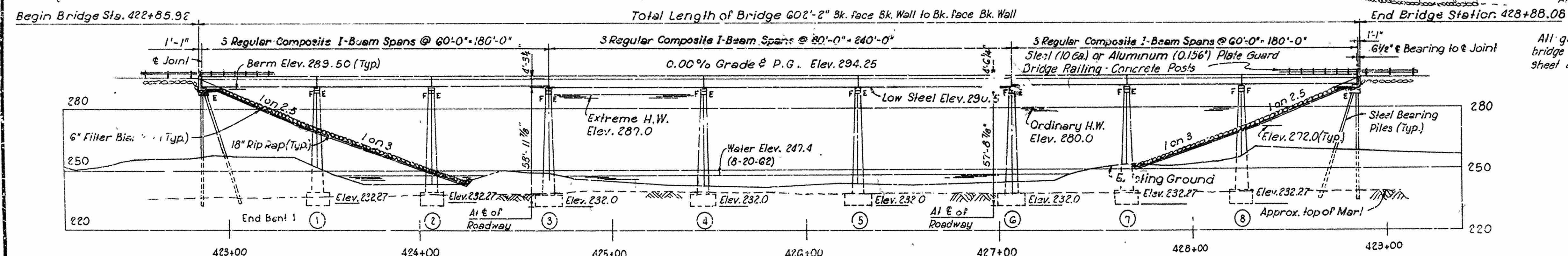
TYPE "A" EXPANSION SHOE

Use for end bents - 31' spans.  
Use for int bents - 35'-50' spans, unless otherwise shown.





Notes:  
Design Specifications A.A.S.H.O. 1961  
Unit Stresses:  
Class 4 Concrete (n=15) 840 P.S.I.  
Class 3 Concrete (n=10) 1200 P.S.I.  
Reinforcing Steel 20,000 P.S.I.  
Structural Steel (A-36) 20,000 P.S.I.  
Design Loading A.A.S.H.O. H 20-S16-44  
Specifications Arkansas State Highway Commission Standard  
Specifications for Highway Construction Edition of 1959  
Note:  
For Details of End Bents See Drwg #20  
For Details of Piers See Drwg #27  
For Details of Superstructure See Drwg #15030 and #14990  
For Details of Approach Slabs See Drwg #1398  
Abutments: All piling shall be 12BP53 Steel Bearing Piles with bearing capacity of 36 tons per pile driven a minimum of 3' into Marl.  
Piers: All footings shall be set into firm undisturbed Marl; Piers 1, 2, 7, & 8 a minimum of 3 feet; Piers 3, 4, 5 & 6 a minimum of 5 feet. Maximum design bearing pressure on Marl 50 tons per sq. ft.  
All Concrete shall be air entrained.  
All guardrail shall be steel or aluminum plate guard bridge railing; for details see standard drawing #14990 sheet 24.



Notes:  
Numbers on the left of test borings indicate the number of blows of a 140 lb. hammer dropped 30" required to drive a 2" standard split barrel 12". Penetration less than 12" is denoted by 70% (blows per penetration). Elevations to left of borings indicate top of firm Marl. The symbol (V) indicates water table at 24 hours unless another time is shown.

|  |  |
|--|--|
| <b>ARKANSAS STATE HIGHWAY COMMISSION</b><br>LITTLE ROCK, ARKANSAS<br><b>MILLWOOD RESERVOIR CROSSING</b><br>U.S. HIGHWAY 71 |  |
| LAYOUT OF BRIDGE OVER LITTLE RIVER<br>PROFILE OF BORINGS   |  |
| DRAWN BY <i>ELV</i> DATE <i>12-7-62</i><br>TRACED BY _____ DATE _____<br>BRIDGE NO. 3614                                   | CHECKED <i>LAH</i> DATE <i>1-15-63</i><br>SCALE <i>As shown</i><br>DRAWING NO. <i>26-12531</i> |

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS

B.M. U.S.G.S.  
Chiseled "a" in Curb @ S.W. Corner of  
Existing Bridge over Little River @ U.S. 71  
Elev. 280.75.

PROFILE  
Scale 1"=15'  
H=1"=30'

\*Based on Examination of Core Samples and Correlation  
with Geologic Studies in Area, this formation is believed  
to be the Brownstown Marl belonging to the Taylor Series  
or Upper Cretaceous Deposits.

BRIDGE ENGINEER





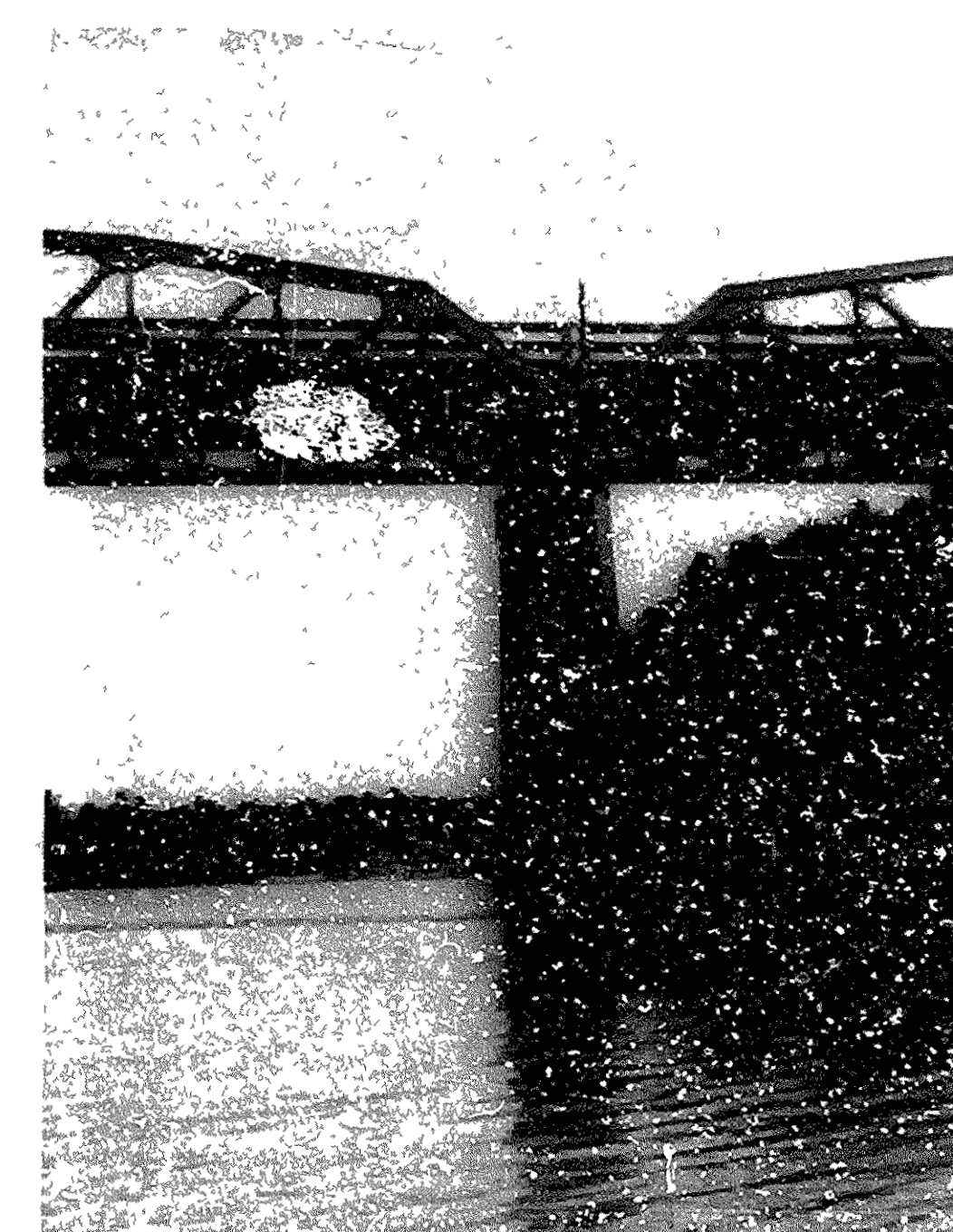




BRIDGE NO 1757  
VIEW LOOKING NORTH



BRIDGE NO 1757  
UNDERSIDE VIEW LOOKING NORTH



BRIDGE NO 1757  
GENERAL VIEW OF PIER



BRIDGE NO 1757  
GENERAL VIEW



BRIDGE NO 1757  
GENERAL VIEW

*Note:*  
The bridge pictured on this sheet is to be demolished as a part of the construction contract.  
Complete plans for this Bridge are available and may be examined at the office of the Arkansas State Highway Commission, Little Rock, Arkansas.  
The photographs are intended solely to present general views of the structure. This bridge must be examined by the contractor to determine exact conditions to be met during demolition.  
See Special Provisions.

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS

BRIDGE ENGINEER

|                                   |                                 |
|-----------------------------------|---------------------------------|
| ARKANSAS STATE HIGHWAY COMMISSION |                                 |
| LITTLE ROCK ARKANSAS              |                                 |
| MILLWOOD RESERVOIR CROSSING       |                                 |
| U.S. 71                           |                                 |
| EXISTING BRIDGE ON U.S. 71        |                                 |
| DRAWN BY <i>ELI</i>               | CHECKED <i>ELI</i> DATE 1/21/63 |
| TRACED BY                         | SCALE                           |
| BRIDGE NO. 3674                   | DRAWING NO. 35                  |
|                                   | 12533                           |