

| STATE  | PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|--------|-------------|-------------|-----------|--------------|
| KANSAS |             | 1950        | I         | II           |

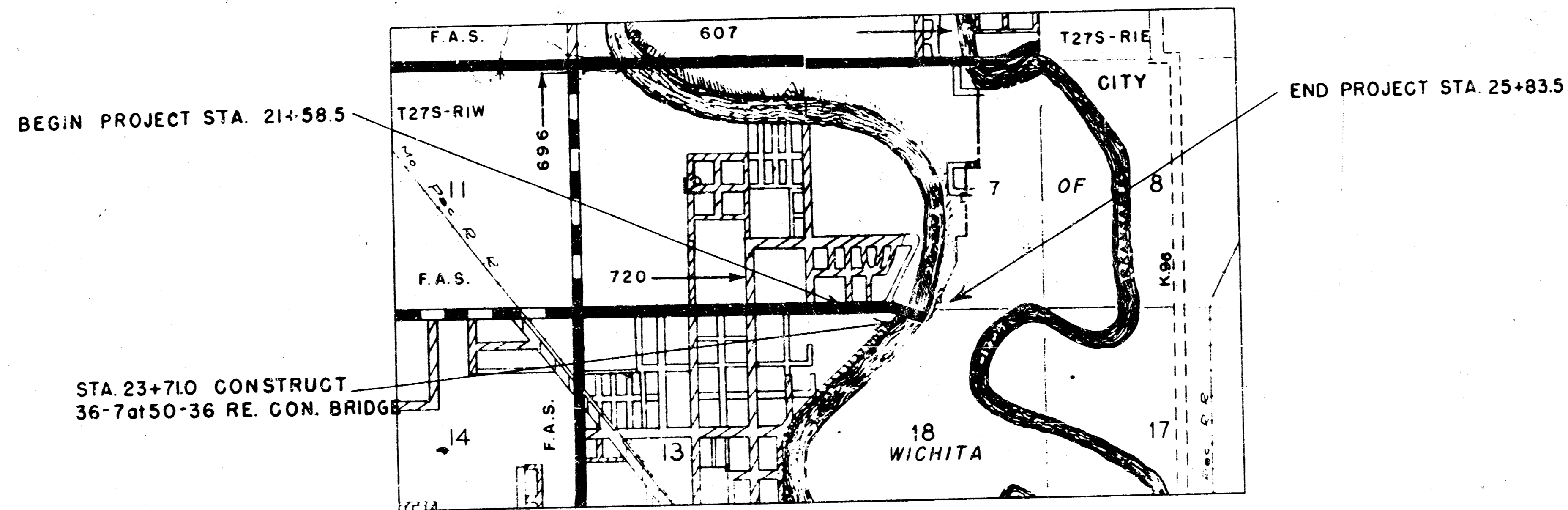


**INDEX OF SHEETS**

| SHEET NO. | TITLE                |
|-----------|----------------------|
| 1         | T.T.L. SHEET         |
| 2         | PLAN & PROFILE       |
| 3         | TOPOGRAPHY           |
| 4         | CONSTRUCTION LAYOUT  |
| 5-6       | SLAB & GIRDER DETAIL |
| 7         | ABUTMENT DETAIL      |
| 8         | PIER DETAIL          |
| 9         | AUXILIARY DETAIL     |
| 10        | LIGHTING DETAIL      |
| 11        | PILING DETAIL        |

BRIDGE NO. 616-25-2371

6,158 V.P.D. 1950



**CONVENTIONAL SIGNS**

- COUNTY LINE
- SECTION LINE
- WIRE FENCE
- HEDGE ROW
- RAILROADS
- SURVEY LINE
- RIGHT OF WAY
- TELEPHONE POLE
- POWER POLE
- TRAVELED WAY

|                         |       |     |    |       |
|-------------------------|-------|-----|----|-------|
| NET LENGTH OF PROJECT   | 425.0 | FT. | 08 | MILES |
| NET LENGTH OF BRIDGES   | 425.0 | FT. | 08 | MILES |
| NET LENGTH OF ROAD      |       | FT. |    | MILES |
| EXCEPTIONS              |       | FT. |    | MILES |
| ADDITIONS               |       | FT. |    | MILES |
| GROSS LENGTH OF PROJECT |       | FT. |    | MILES |

PLANS PREPARED BY

DATE

APPROVED DATE 12-18-50

*Walter Johnson*

ENGINEER OF SECONDARY ROADS

APPROVED

*Rufus Cook*

COUNTY ENGINEER

DATE 12-14-50

APPROVED 12-18-50 DATE

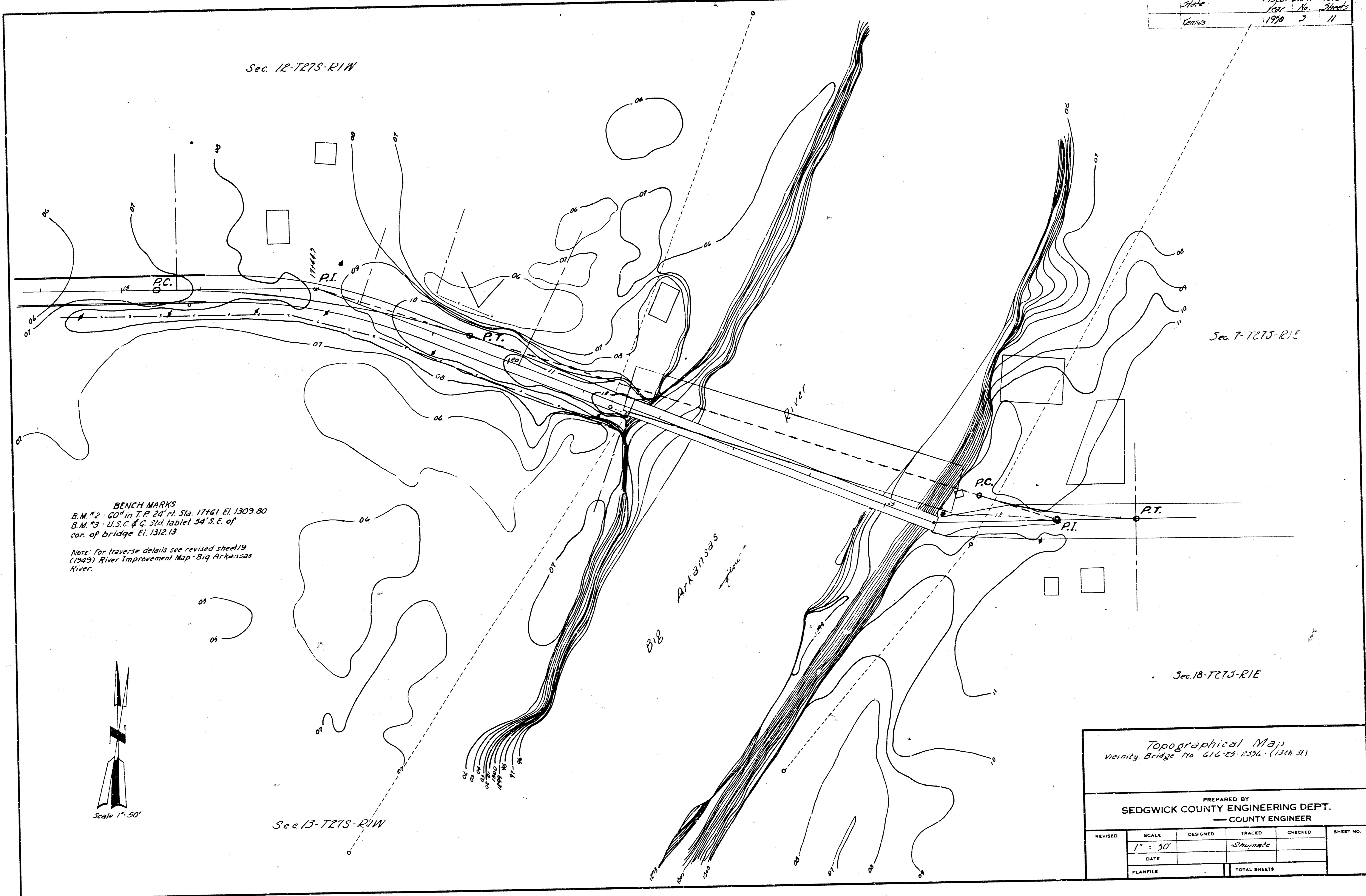
*R. Keeling*

STATE HIGHWAY ENGINEER

13th Street  
616-25

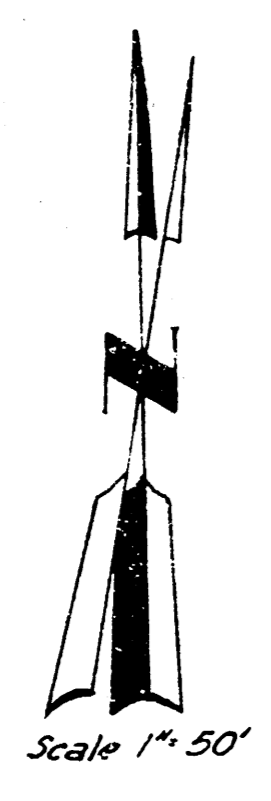


|        |             |           |              |
|--------|-------------|-----------|--------------|
| State  | Fiscal Year | Sheet No. | Total Sheets |
| Kansas | 1970        | 3         | 11           |



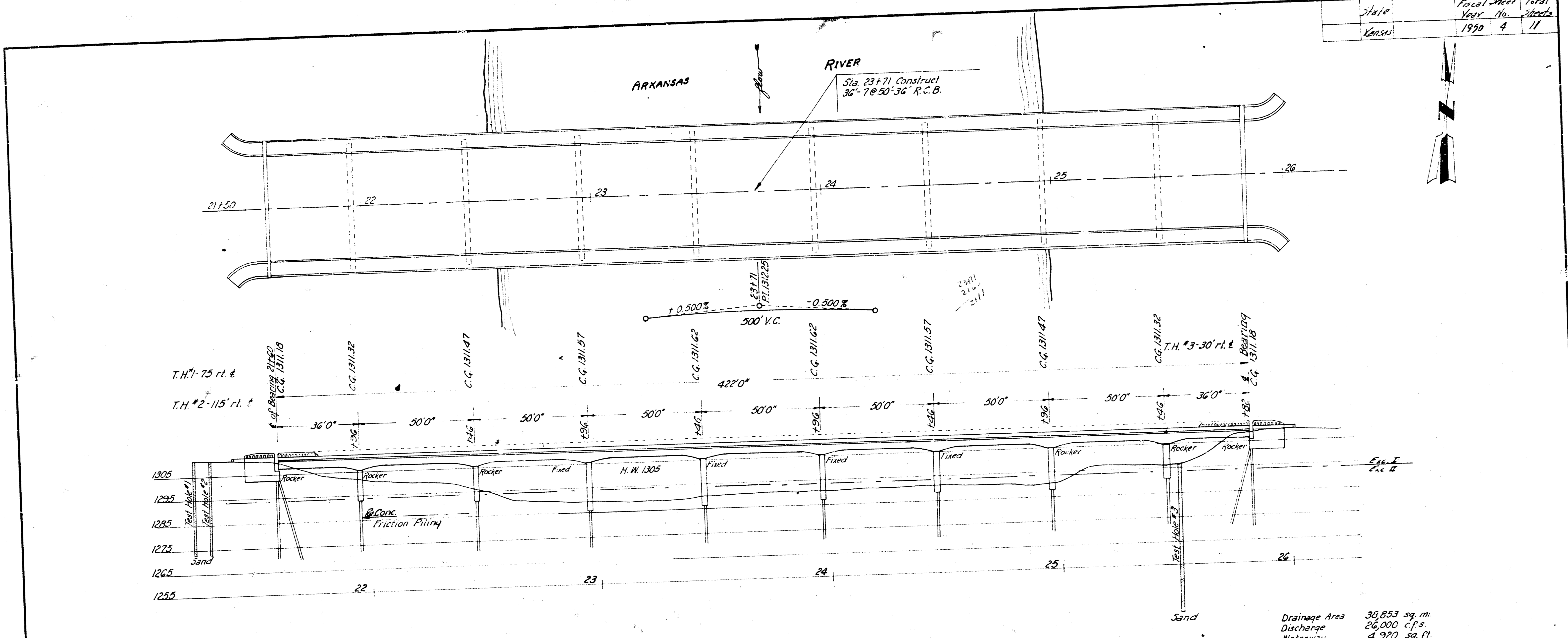
**BENCH MARKS**  
 B.M. #2 - 60" in T.P. 24' Pl. Sta. 17161 El. 1309.80  
 B.M. #3 - U.S.C. & G. 3161 label 54' S.E. of  
 cor. of bridge El. 1312.13

*Note: For traverse details see revised sheet 19  
 (1969) River Improvement Map - Big Arkansas  
 River.*



|  |          |          |              |         |           |
|--|----------|----------|--------------|---------|-----------|
| Topographical Map<br>Vicinity Bridge No. 616-23-2336 (13th St)             |          |          |              |         |           |
| PREPARED BY<br><b>SEDGWICK COUNTY ENGINEERING DEPT.</b><br>COUNTY ENGINEER |          |          |              |         |           |
| REVISED  | SCALE    | DESIGNED | TRACED       | CHECKED | SHEET NO. |
|  | 1" = 50' |          | Shaymade     |         |           |
|  | DATE     |          |              |         |           |
|  | PLANFILE |          | TOTAL SHEETS |         |           |

|        |             |           |              |
|--------|-------------|-----------|--------------|
| State  | Fiscal Year | Sheet No. | Total Sheets |
| Kansas | 1950        | 4         | 11           |



**PLAN AND ELEVATION**  
 36'-7@50'-36' CONTINUOUS CONCRETE SPANS ON CONCRETE ENCASED STEEL TYPE BENT PIERS, 48' ROADWAY OPEN ABUTMENTS, 4' SIDEWALKS.

**BENCH MARKS**  
 B.M. #2 60" in T.P. 24' rt. Sta 17+61 Elev. 1309.80  
 B.M. #3 U.S.C. & G.S. steel tablet 34' S.E. of S.E. cor. of bri. Elev. 1312.13

Drainage Area 38,853 sq. m.  
 Discharge 26,000 c.f.s.  
 Waterway 4,320 sq. ft.

**SUMMARY OF QUANTITIES**

|                         |                 |
|-------------------------|-----------------|
| Excavation Class I      | 407 cu. yds.    |
| Excavation Class II     | 329 cu. yds.    |
| Concrete Class A (P.C.) | 1707.5 cu. yds. |
| Reinforcing Steel       | 270,034 lbs.    |
| Structural Steel        | 27,612 lbs.     |
| Bearing Devices         | 1,965 lin. ft.  |
| Re. Conc. Piling        | 1574 lbs.       |
| Cast Iron               | 924 lin. ft.    |
| 2" Conduit              |                 |

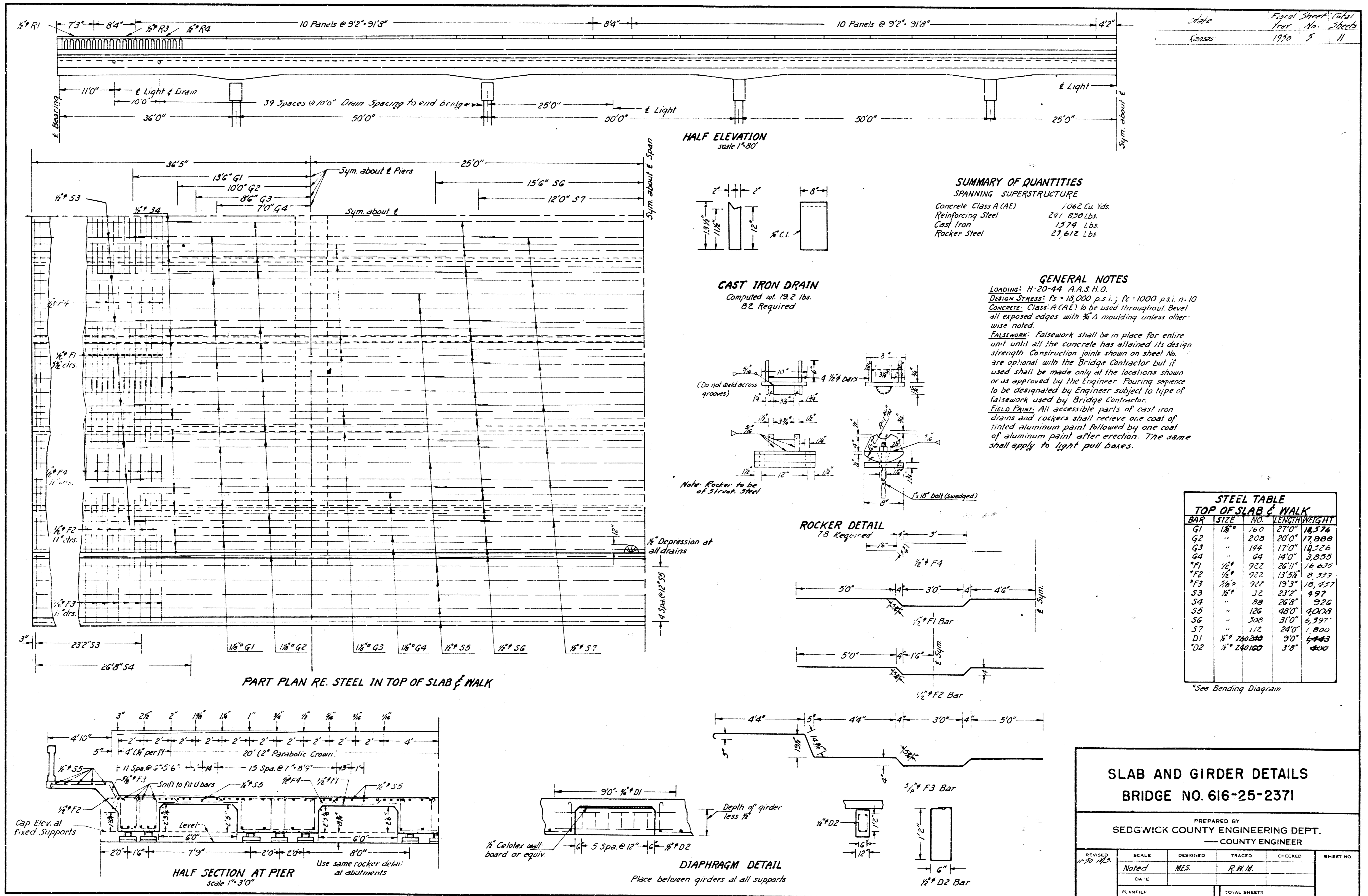
**GENERAL NOTES**

Design: A.A.S.H.O for H-20-44 Loading  
 20,000 p.s.i. Reinforcing Steel (int. gr.)  
 1,000 p.s.i. Concrete.  
 Old Structures: to be removed by Sedgwick County.  
 Soundings: taken with 3/4" jet by Sedgwick County.  
 Embankment: The embankment at the abutments shall be built after completion of the abutments.  
 Piling: Conc. piling shall be driven to a computed bearing value of twenty eight tons per pile. Piling shall be driven to a minimum depth of thirty feet below the bottom of the encasements.  
 Lifting: Conduit, pull boxes and pile anchor bolts to be installed at time of construction. Piles, bridge etc. to be installed at a later date, and are not a part of this project.

**CONSTRUCTION LAYOUT**  
**BRIDGE NO. 616-25-2371**

PREPARED BY  
 SEDGWICK COUNTY ENGINEERING DEPT.  
 COUNTY ENGINEER

|         |          |          |              |         |           |
|---------|----------|----------|--------------|---------|-----------|
| REVISED | SCALE    | DESIGNED | TRACED       | CHECKED | SHEET NO. |
|         | 1"=20'   | M.E.S.   | R.W.M.       |         |           |
|         | DATE     |          |              |         |           |
|         | PLANFILE |          | TOTAL SHEETS |         |           |



Sheet Fiscal Sheet Total  
Nos. 1950 5 11

**STEEL TABLE**  
TOP OF SLAB & WALK

| BAR | SIZE | NO. | LENGTH | WEIGHT |       |
|-----|------|-----|--------|--------|-------|
| G1  | 18"  | 160 | 27'0"  | 18,576 |       |
| G2  | "    | 208 | 20'0"  | 17,888 |       |
| G3  | "    | 144 | 17'0"  | 12,224 |       |
| G4  | "    | 64  | 14'0"  | 3,856  |       |
| F1  | 1/2" | 922 | 26'1"  | 16,632 |       |
| F2  | 1/2" | 922 | 13'5"  | 8,332  |       |
| F3  | 1/2" | 922 | 13'3"  | 8,257  |       |
| S3  | 1/2" | 32  | 23'2"  | 4,97   |       |
| S4  | "    | 88  | 26'8"  | 9,26   |       |
| S5  | "    | 128 | 48'0"  | 4,008  |       |
| S6  | "    | 308 | 31'0"  | 6,397  |       |
| S7  | "    | 112 | 24'0"  | 1,800  |       |
| D1  | 1/2" | 740 | 240    | 90'    | 4,443 |
| D2  | 1/2" | 240 | 120    | 3'8"   | 400   |

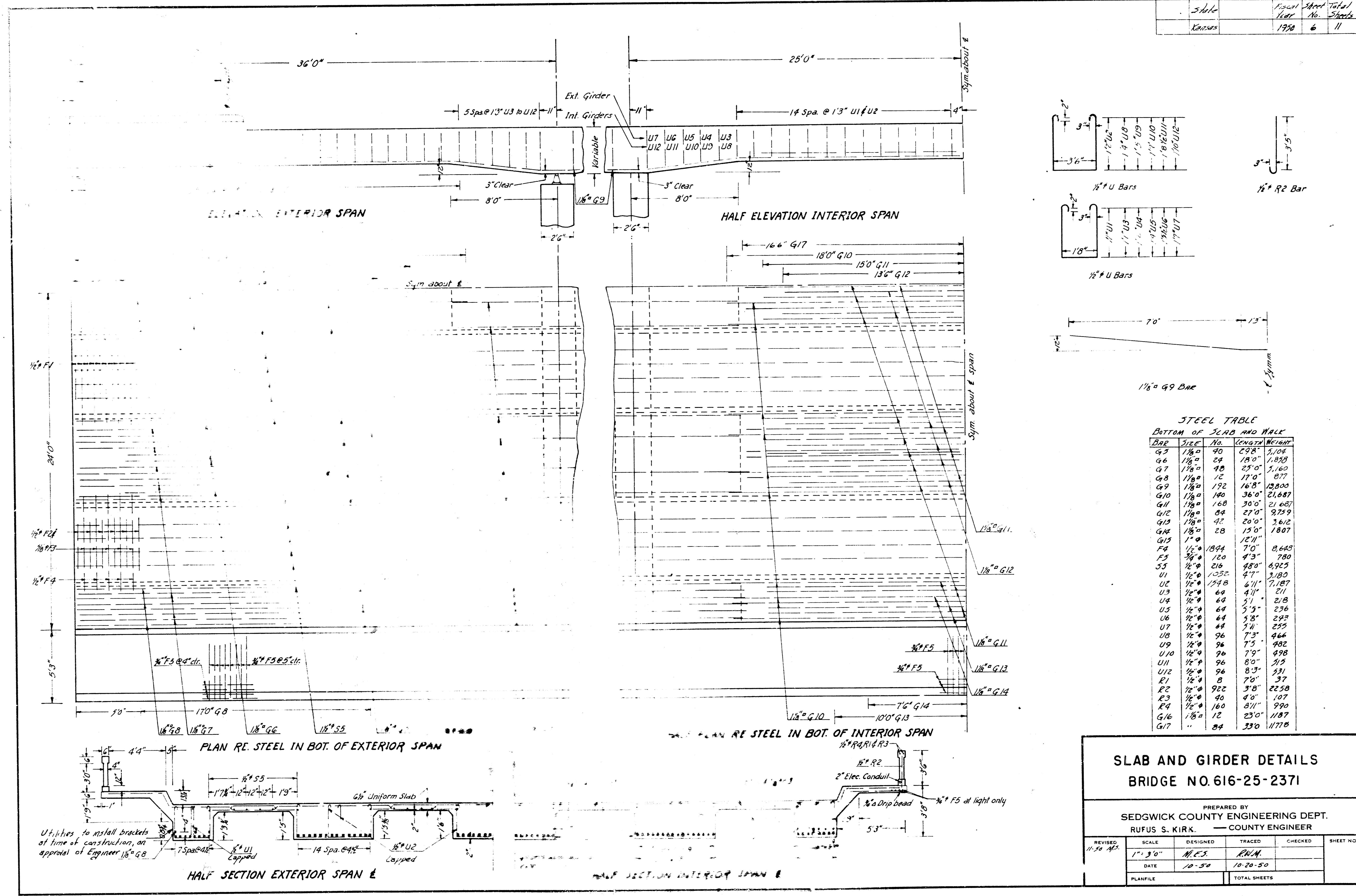
\*See Bending Diagram

**SLAB AND GIRDER DETAILS**  
**BRIDGE NO. 616-25-2371**

PREPARED BY  
SEDGWICK COUNTY ENGINEERING DEPT.  
— COUNTY ENGINEER

| REVISED    | SCALE    | DESIGNED | TRACED | CHECKED      | SHEET NO. |
|------------|----------|----------|--------|--------------|-----------|
| 11-30-1950 | Noted    | MES      | R.W.M. |              |           |
|            | DATE     |          |        |              |           |
|            | PLANFILE |          |        | TOTAL SHEETS |           |

|        |       |       |       |
|--------|-------|-------|-------|
| Sheet  | Final | Sheet | Total |
| Kansas | 1950  | 6     | 11    |



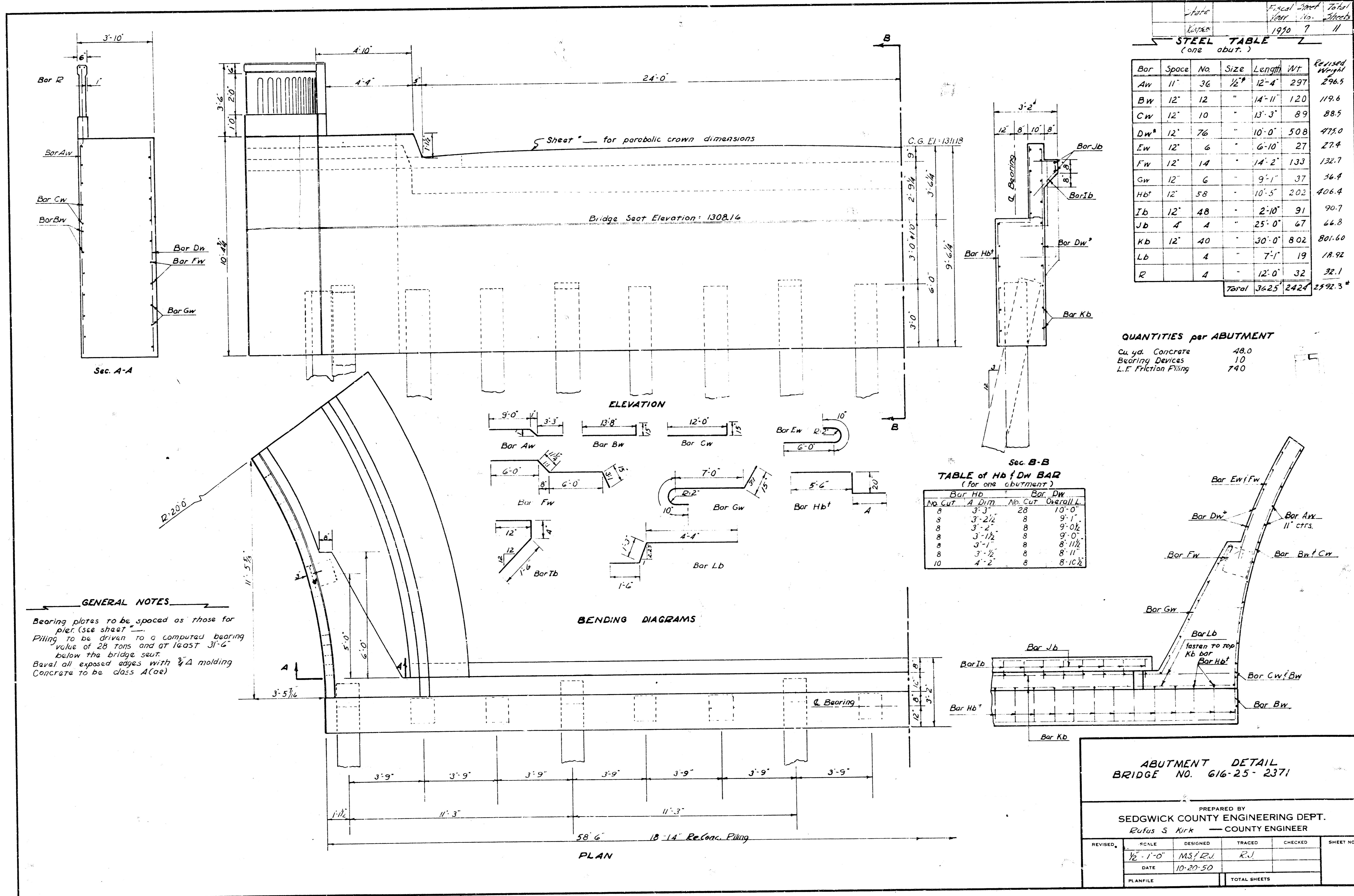
STEEL TABLE  
BOTTOM OF SLAB AND WALL

| SIZE | WT.             | LENGTH | WEIGHT |
|------|-----------------|--------|--------|
| G7   | 18" x 40        | 23'8"  | 3,104  |
| G6   | 18" x 28        | 18'0"  | 1,828  |
| G7   | 18" x 40        | 23'0"  | 3,160  |
| G8   | 18" x 12        | 17'0"  | 877    |
| G9   | 18" x 192       | 16'8"  | 13,800 |
| G10  | 18" x 140       | 36'0"  | 21,887 |
| G11  | 18" x 168       | 30'0"  | 21,457 |
| G12  | 18" x 84        | 27'0"  | 2,759  |
| G13  | 18" x 42        | 20'0"  | 3,612  |
| G14  | 18" x 28        | 15'0"  | 1,807  |
| F4   | 1 1/2" x 18 1/4 | 7'0"   | 8,443  |
| F3   | 3/4" x 12 1/2   | 4'3"   | 730    |
| S3   | 1/2" x 2 1/4    | 48'0"  | 4,923  |
| U1   | 1/2" x 10 1/2   | 47'    | 3,180  |
| U2   | 1/2" x 12 1/2   | 47'    | 7,187  |
| U3   | 1/2" x 6 1/2    | 47'    | 211    |
| U4   | 1/2" x 6 1/2    | 51'    | 218    |
| U5   | 1/2" x 6 1/2    | 53'    | 236    |
| U6   | 1/2" x 6 1/2    | 53'    | 243    |
| U7   | 1/2" x 6 1/2    | 54'    | 253    |
| U8   | 1/2" x 9 1/2    | 7'3"   | 466    |
| U9   | 1/2" x 9 1/2    | 7'5"   | 482    |
| U10  | 1/2" x 9 1/2    | 7'9"   | 498    |
| U11  | 1/2" x 9 1/2    | 8'0"   | 512    |
| U12  | 1/2" x 9 1/2    | 8'3"   | 531    |
| R1   | 1/2" x 8        | 7'0"   | 37     |
| R2   | 1/2" x 9 1/2    | 3'8"   | 2238   |
| R3   | 1/2" x 4 1/2    | 4'0"   | 107    |
| R4   | 1/2" x 1 1/2    | 8'11"  | 990    |
| G16  | 18" x 12        | 23'0"  | 1,877  |
| G17  | "               | 8 1/2  | 330    |
|      |                 |        | 1778   |

**SLAB AND GIRDER DETAILS**  
**BRIDGE NO. 616-25-2371**

PREPARED BY  
**SEDGWICK COUNTY ENGINEERING DEPT.**  
**RUFUS S. KIRK, COUNTY ENGINEER**

|            |           |          |              |         |           |
|------------|-----------|----------|--------------|---------|-----------|
| REVISIONS  | SCALE     | DESIGNED | TRACED       | CHECKED | SHEET NO. |
| 11-50 M.S. | 1" = 3'0" | M.E.S.   | R.W.M.       |         |           |
|            | DATE      | 10-20-50 |              |         |           |
|            | PLANFILE  |          | TOTAL SHEETS |         |           |



Date: \_\_\_\_\_  
 Fiscal Year: 1950  
 No. of Sheets: 11

**STEEL TABLE**  
(one abut.)

| Bar          | Space | No. | Size | Length  | WT          | Revised Weight |                |
|--------------|-------|-----|------|---------|-------------|----------------|----------------|
| Aw           | 11"   | 36  | 1/2" | 12'-4"  | 297         | 296.5          |                |
| Bw           | 12"   | 12  | "    | 14'-11" | 120         | 119.6          |                |
| Cw           | 12"   | 10  | "    | 13'-3"  | 89          | 88.5           |                |
| Dw*          | 12"   | 76  | "    | 10'-0"  | 508         | 475.0          |                |
| Ew           | 12"   | 6   | "    | 6'-10"  | 27          | 27.4           |                |
| Fw           | 12"   | 14  | "    | 14'-2"  | 133         | 132.7          |                |
| Gw           | 12"   | 6   | "    | 9'-1"   | 37          | 36.9           |                |
| Hb*          | 12"   | 58  | "    | 10'-5"  | 203         | 406.4          |                |
| Ib           | 12"   | 48  | "    | 2'-10"  | 91          | 90.7           |                |
| Jb           | 4"    | 4   | "    | 25'-0"  | 67          | 66.8           |                |
| Kb           | 12"   | 40  | "    | 30'-0"  | 802         | 801.60         |                |
| Lb           | 4"    | 4   | "    | 7'-1"   | 19          | 18.92          |                |
| R            | 4"    | 4   | "    | 12'-0"  | 32          | 32.1           |                |
| <b>Total</b> |       |     |      |         | <b>3625</b> | <b>2424</b>    | <b>2592.3*</b> |

**QUANTITIES per ABUTMENT**

Cu. yd. Concrete: 48.0  
 Bearing Devices: 10  
 L.F. Friction Piling: 740

**TABLE of Hb & Dw BAR**  
(for one abutment)

| No. Cut | A Dim     | No. Cut | Overall L  |
|---------|-----------|---------|------------|
| 8       | 3'-3"     | 28      | 10'-0"     |
| 8       | 3'-2 1/2" | 8       | 9'-1"      |
| 8       | 3'-2"     | 8       | 9'-0 1/2"  |
| 8       | 3'-1 1/2" | 8       | 9'-0"      |
| 8       | 3'-1"     | 8       | 8'-11 1/2" |
| 8       | 3'-1/2"   | 8       | 8'-11"     |
| 10      | 4'-2"     | 8       | 8'-10 1/2" |

**GENERAL NOTES**

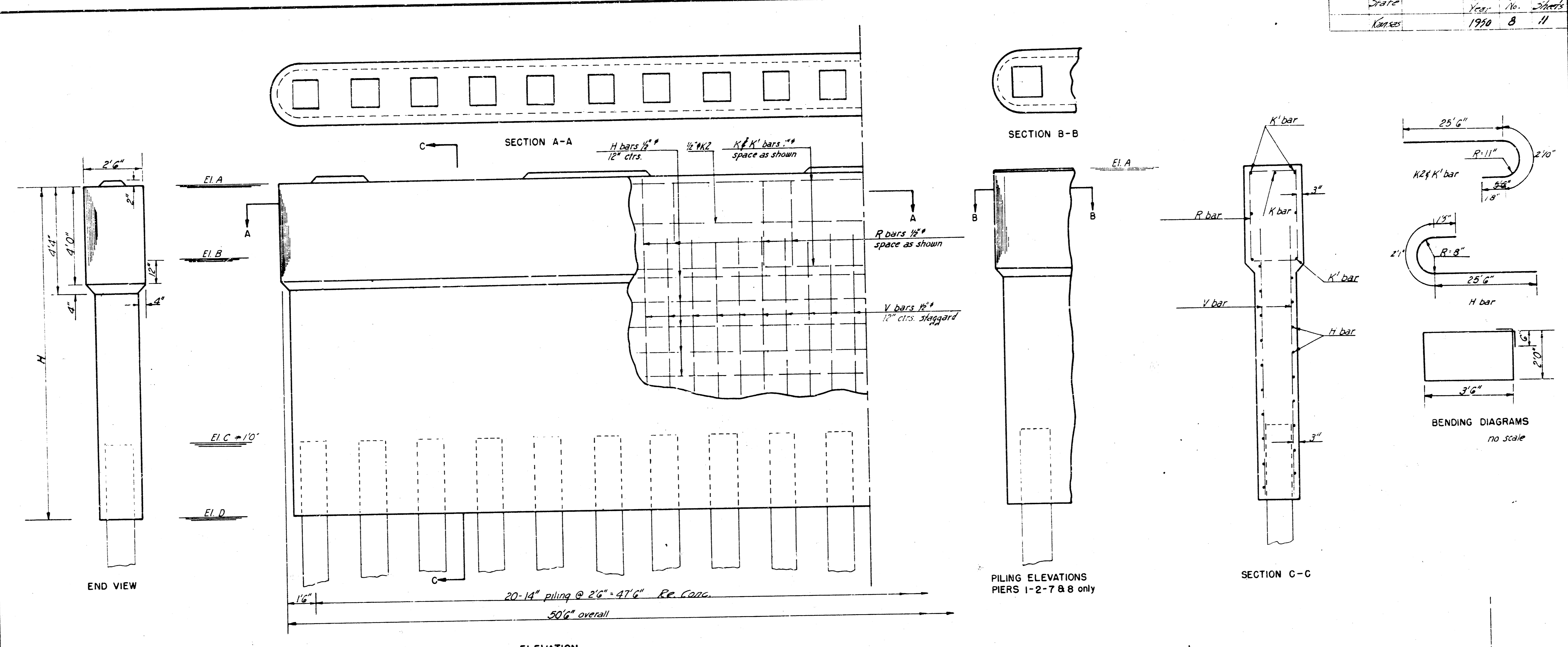
Bearing plates to be spaced as those for pier. (see sheet \_\_\_\_\_)  
 Piling to be driven to a computed bearing value of 28 tons and at least 31'-6" below the bridge seat.  
 Bevel all exposed edges with 3/4" A molding. Concrete to be class A (or)

**ABUTMENT DETAIL**  
BRIDGE NO. 616-25-2371

PREPARED BY  
 SEDGWICK COUNTY ENGINEERING DEPT.  
 Rufus S. Kirk — COUNTY ENGINEER

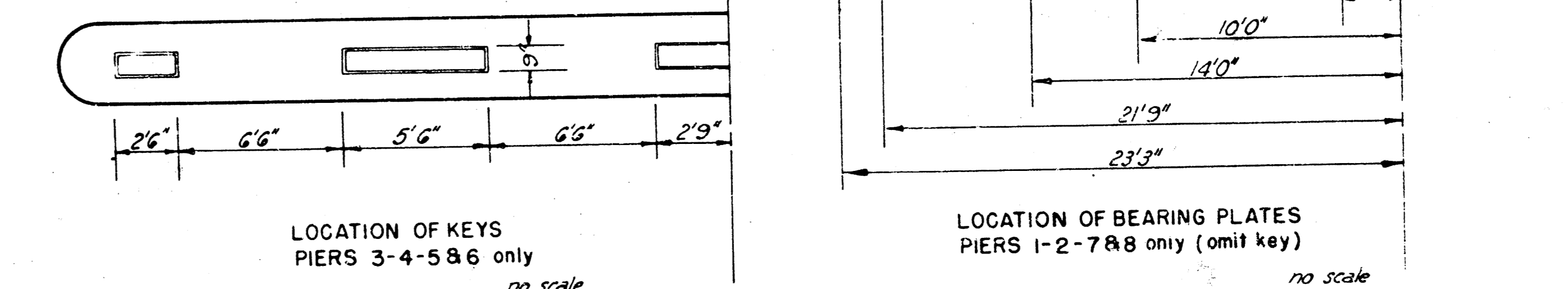
| REVISED | SCALE        | DESIGNED | TRACED | CHECKED | SHEET NO. |
|---------|--------------|----------|--------|---------|-----------|
|         | 1/2" = 1'-0" | MS/RJ    | RJ     |         |           |
|         |              |          |        |         |           |
|         |              |          |        |         |           |
|         |              |          |        |         |           |

PLANFILE: \_\_\_\_\_ TOTAL SHEETS: \_\_\_\_\_



| PIER | TABLE OF ELEVATIONS |             |             |             | TABLE OF STEEL   |                  |                  |                  |                  |                  |                  |                  | QUANTITIES       |                  |                      |                | A   |                    |                 |             |                |           |          |
|------|---------------------|-------------|-------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------------|----------------|-----|--------------------|-----------------|-------------|----------------|-----------|----------|
|      | ELEVATION A         | ELEVATION B | ELEVATION C | ELEVATION D | Number #4 R bars | Length #4 R bars | Number #4 H bars | Length #4 H bars | Number #4 K bars | Length #4 K bars | Number #4 V bars | Length #4 V bars | Number #4 R bars | Length #4 R bars | 8" x 18" Bearing Pl. | L.F. Rest Pile |     | L.F. Friction Pile | Cu Yds Concrete | Lbs. Re-bar | Revised Length | Lb. Rebar |          |
| #1   | 1307.55             | 1304.55     | 1297.55     | 1294.55     | 40               | 120              | 2                | 266              | 8                | 344              | 51               | 106              | 26               | 900              | 10                   | 406            | 810 | 49.62              | 2254            | 13          | 4              | 308       | 1928.3   |
| #2   | 1307.70             | 1304.70     | 1294.70     | 1291.70     | 40               | 120              | 2                | 266              | 8                | 344              | 51               | 136              | 32               | 900              | 10                   | 0              | 0   | 59.78              | 2254            | 16          | 4              | 300       | 2146.7   |
| #3   | 1308.53             | 1305.53     | 1289.53     | 1286.53     | 40               | 120              | 2                | 266              | 8                | 344              | 51               | 196              | 44               | 900              | 0                    | 0              | 0   | 80.13              | 2254            | 22          | 4              | 300       | 2583.6   |
| #4   | 1308.58             | 1305.58     | 1290.58     | 1287.58     | 40               | 120              | 2                | 266              | 8                | 344              | 51               | 186              | 42               | 900              | 0                    | 0              | 0   | 76.74              | 2254            | 21          | 4              | 300       | 2510.8   |
| #5   | 1308.89             | 1305.89     | 1291.89     | 1288.89     | 40               | 120              | 2                | 266              | 8                | 344              | 51               | 176              | 40               | 900              | 0                    | 406            | 0   | 73.35              | 2254            | 20          | 4              | 300       | 2437.9   |
| #6   | 1308.53             | 1303.53     | 1291.53     | 1288.53     | 40               | 120              | 2                | 266              | 8                | 344              | 51               | 176              | 40               | 900              | 0                    | 0              | 0   | 73.35              | 2254            | 20          | 4              | 300       | 2437.9   |
| #7   | 1307.70             | 1304.70     | 1290.70     | 1287.70     | 40               | 120              | 2                | 266              | 8                | 344              | 51               | 176              | 40               | 900              | 10                   | 0              | 0   | 73.35              | 2254            | 20          | 4              | 300       | 2437.9   |
| #8   | 1307.55             | 1304.55     | 1297.55     | 1294.55     | 40               | 120              | 2                | 266              | 8                | 344              | 51               | 146              | 34               | 900              | 10                   | 406            | 0   | 63.18              | 2254            | 17          | 4              | 300       | 2219.5   |
|      |                     |             |             |             | 307              |                  |                  |                  |                  |                  |                  |                  |                  |                  | 40                   | 1216           |     | 549.2              | 2254            | 17          | 4              | 300       | 18,702.6 |

GENERAL NOTES  
 Class A (AC) Concrete shall be used throughout. Bevel all exposed edges with a 1/4" triangular molding unless otherwise noted.  
 All dimensions shown relative to reinforcing steel are to # of bar.

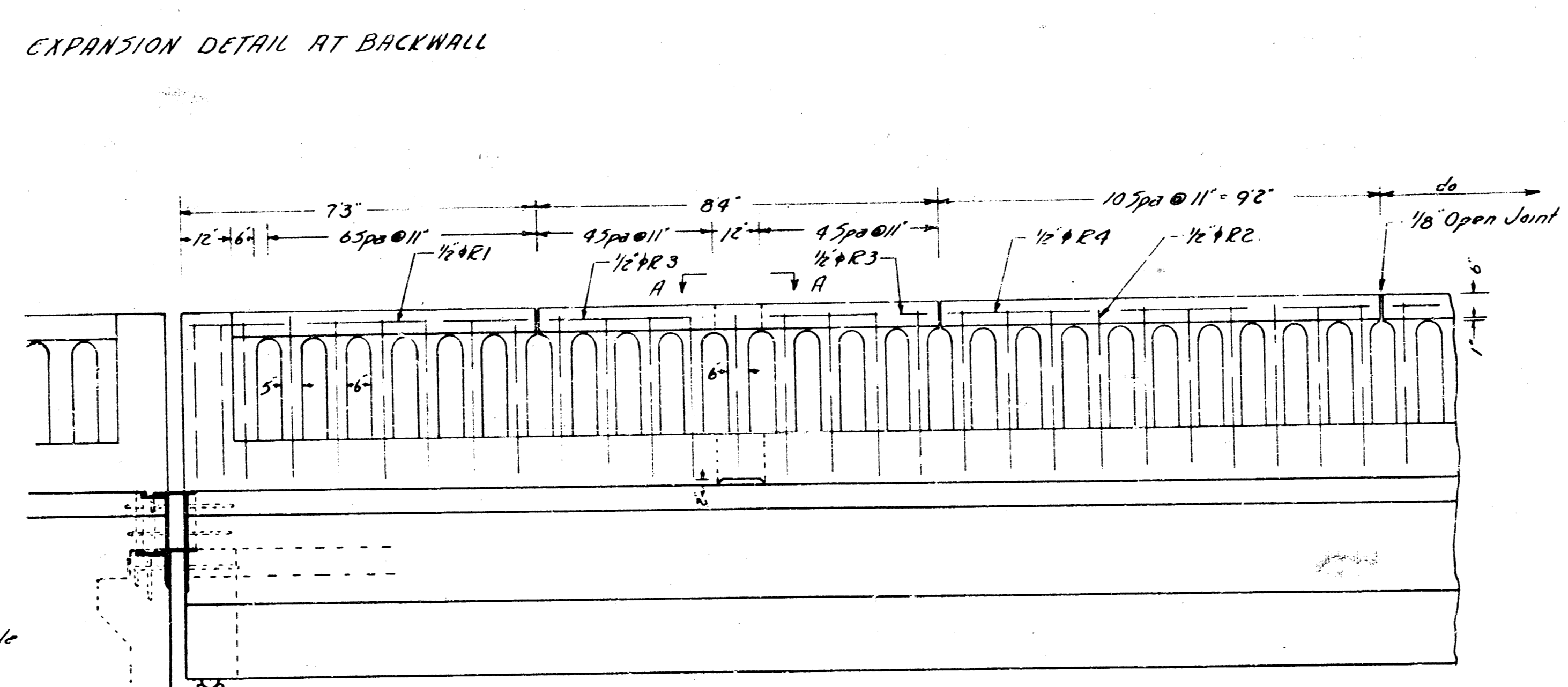
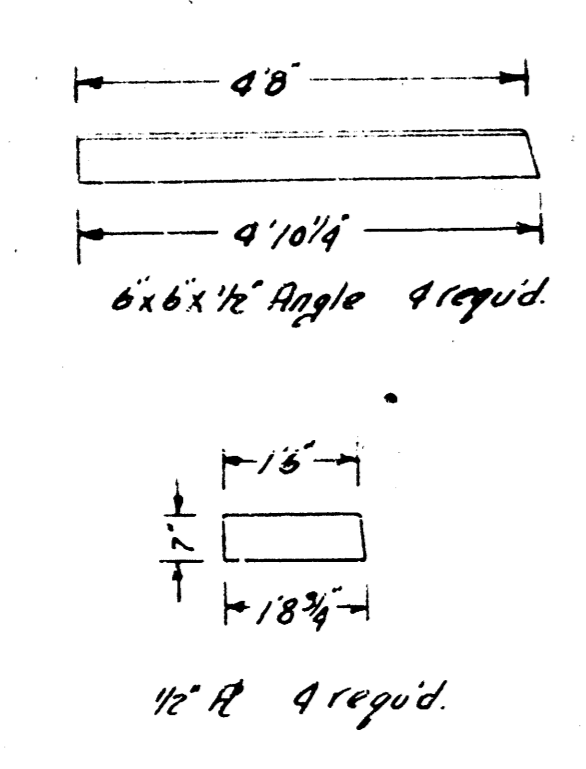
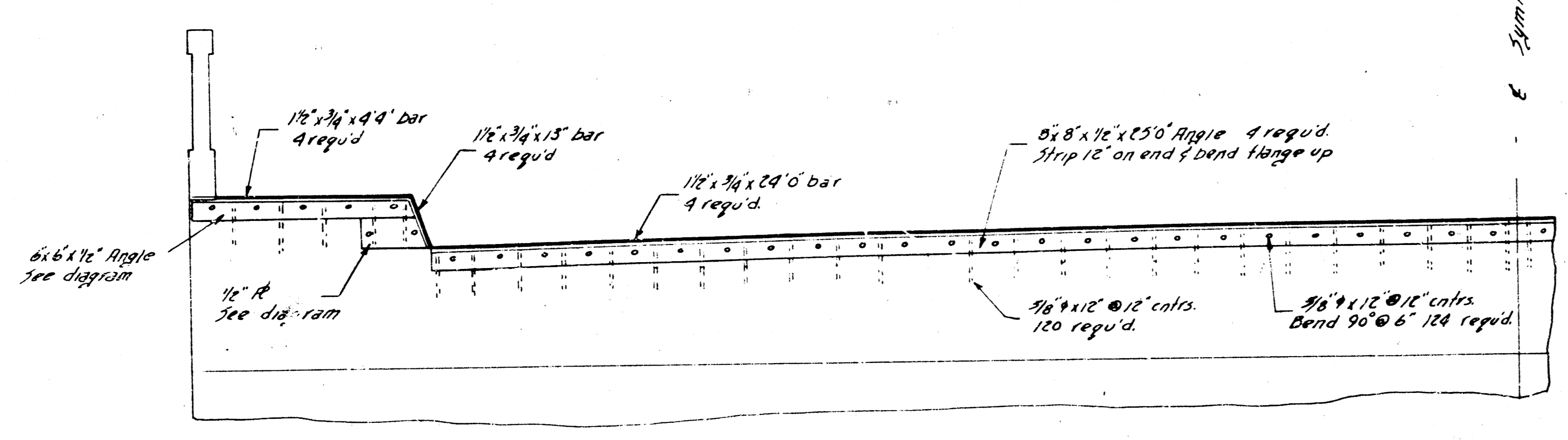
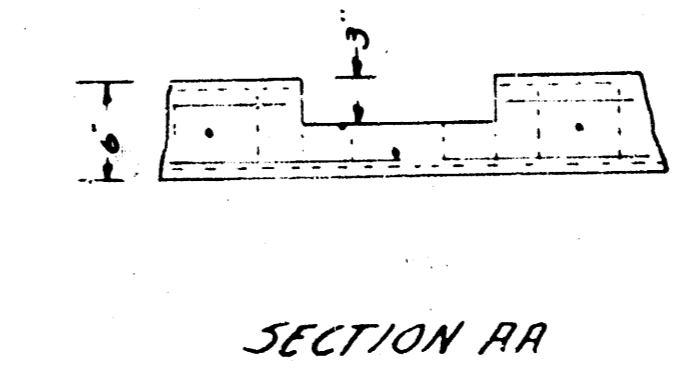
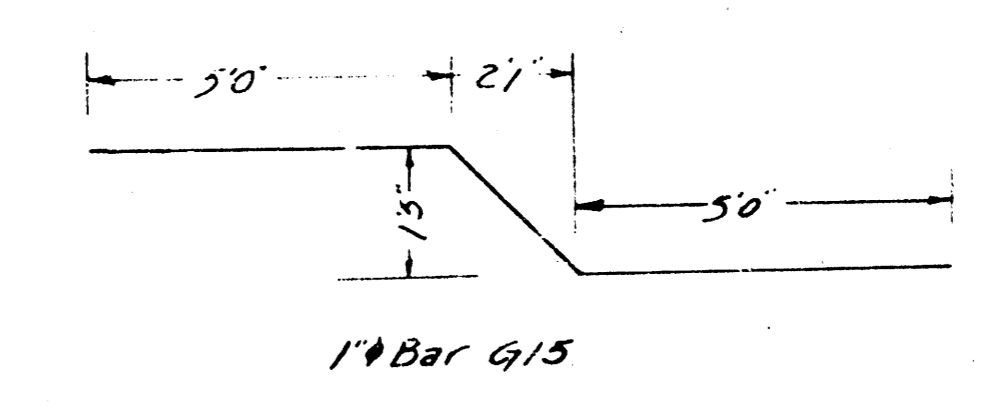
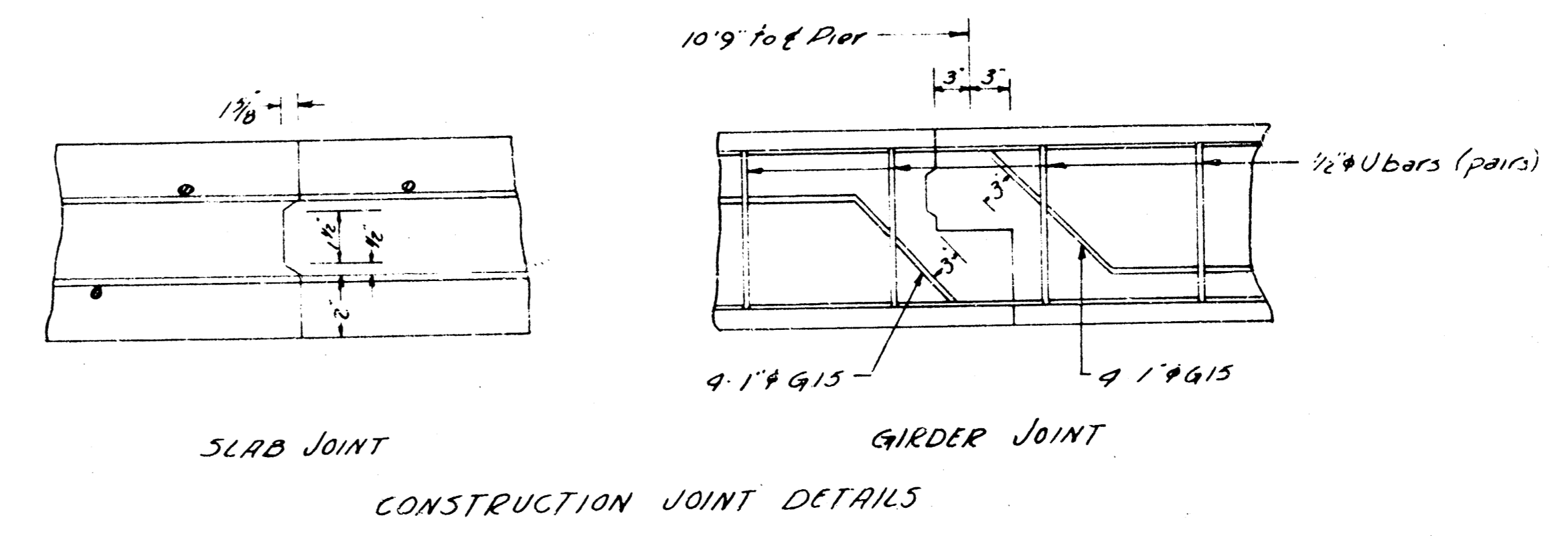
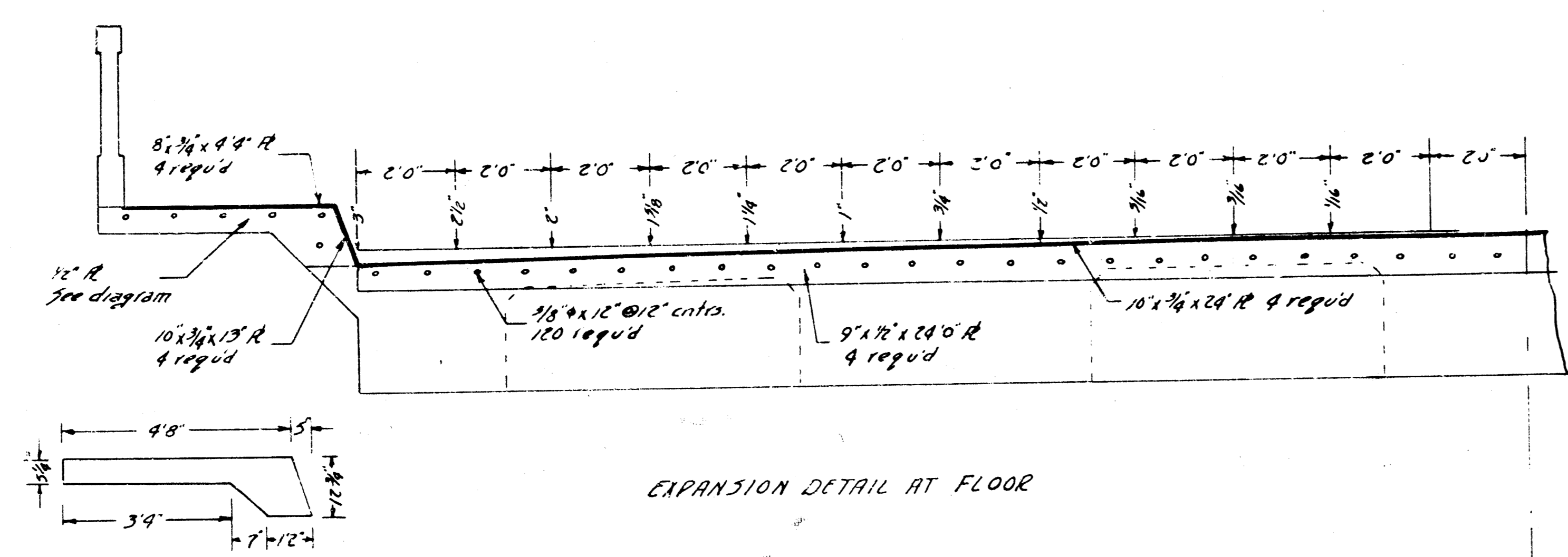


**PIER DETAILS**  
**BRIDGE No. 616-25-2371**

PREPARED BY  
**SEDGWICK COUNTY ENGINEERING DEPT.**  
 COUNTY ENGINEER

|          |              |             |        |              |           |
|----------|--------------|-------------|--------|--------------|-----------|
| REVISION | SCALE        | DESIGNED    | TRACED | CHECKED      | SHEET NO. |
|          | 1/2" = 1'-0" | M.S. & P.J. | R.M.   |              |           |
| DATE     |              |             |        |              |           |
| PLANFILE |              |             |        | TOTAL SHEETS |           |

|        |         |       |       |
|--------|---------|-------|-------|
| Scale  | Figures | Sheet | Total |
| Kansas | 1950    | 9     | 11    |

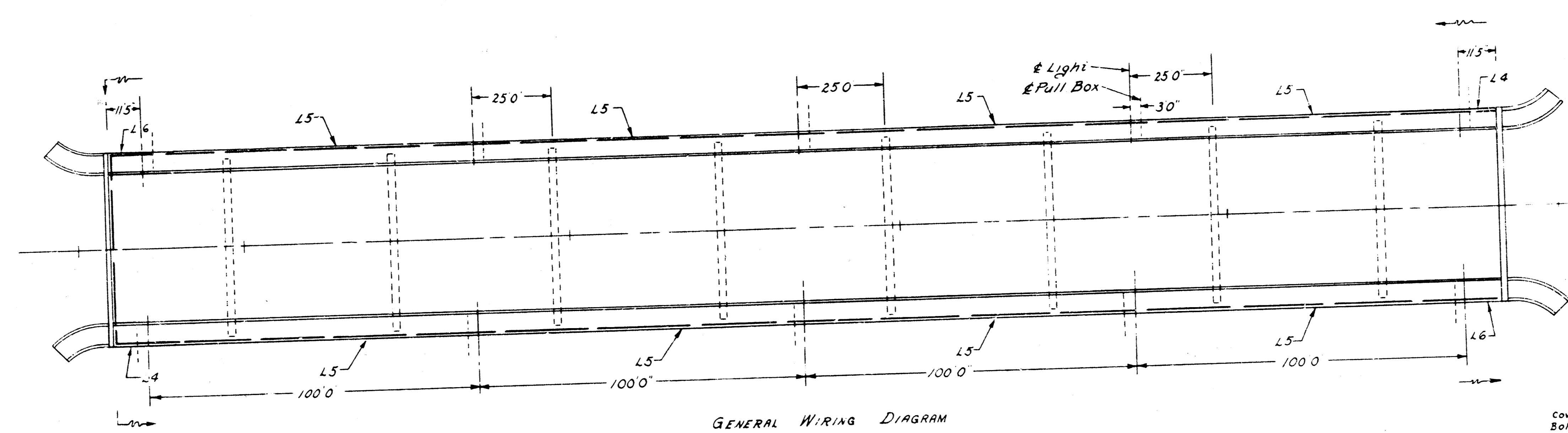


Shop weld all anchor bars to R3 & L3  
Field welds all 3/4" Ball sides where possible

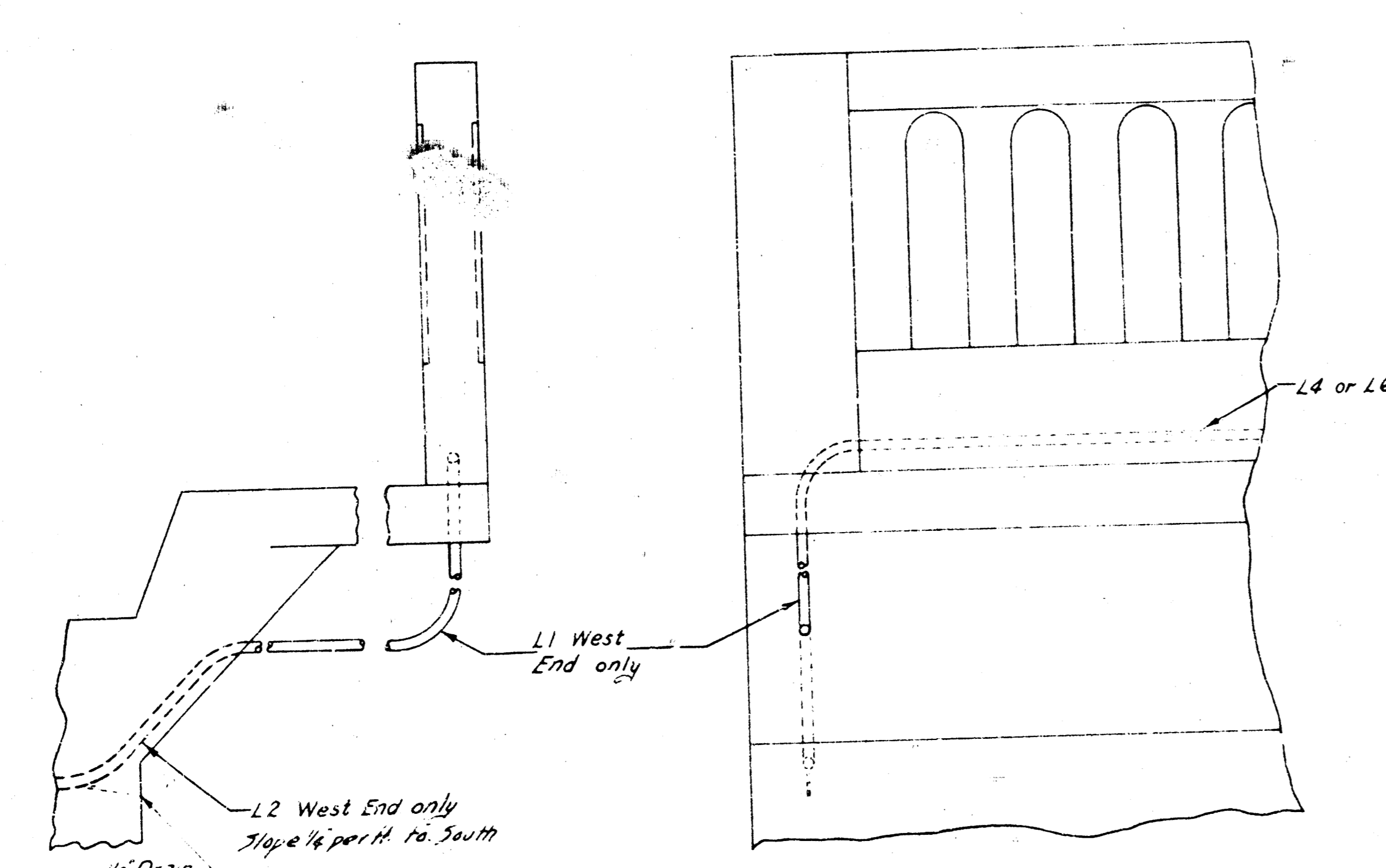
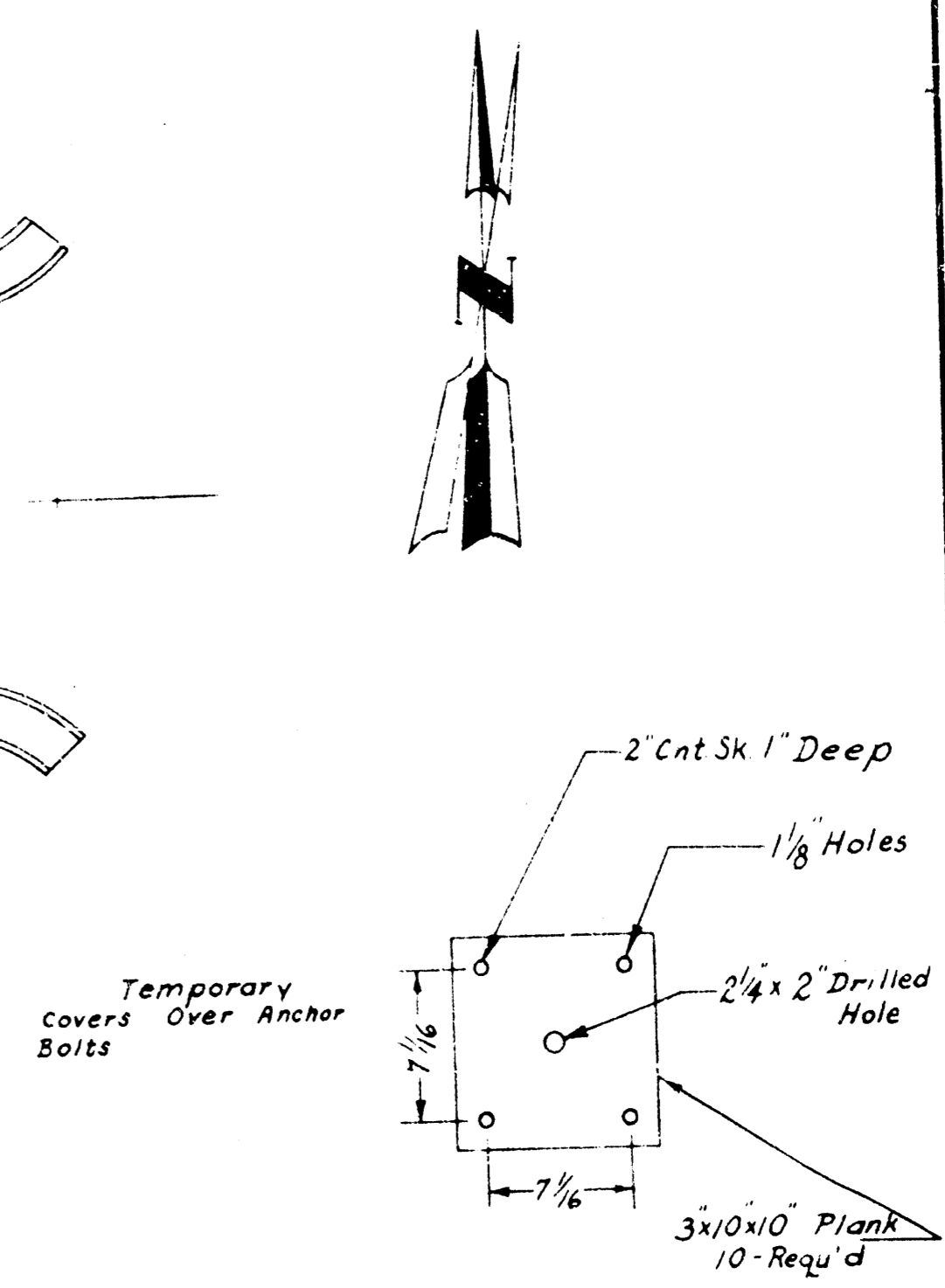
EXPANSION DETAIL PART ELEVATION HANDRAIL DETAIL

| AUXILIARY DETAILS   |            |          |              |           |
|---|------------|----------|--------------|-----------|
| BRIDGE NO. 616-25-2371  |            |          |              |           |
| PREPARED BY<br>SEDGWICK COUNTY ENGINEERING DEPT.<br>RUFUS S. KIRK — COUNTY ENGINEER |            |          |              |           |
| REVISED   | SCALE      | DESIGNED | TRACED       | CHECKED   |
|   | 1" = 2' 0" | MES      | MES          |           |
|   | DATE       |          |              |           |
|   | PLANFILE   |          | TOTAL SHEETS | SHEET NO. |

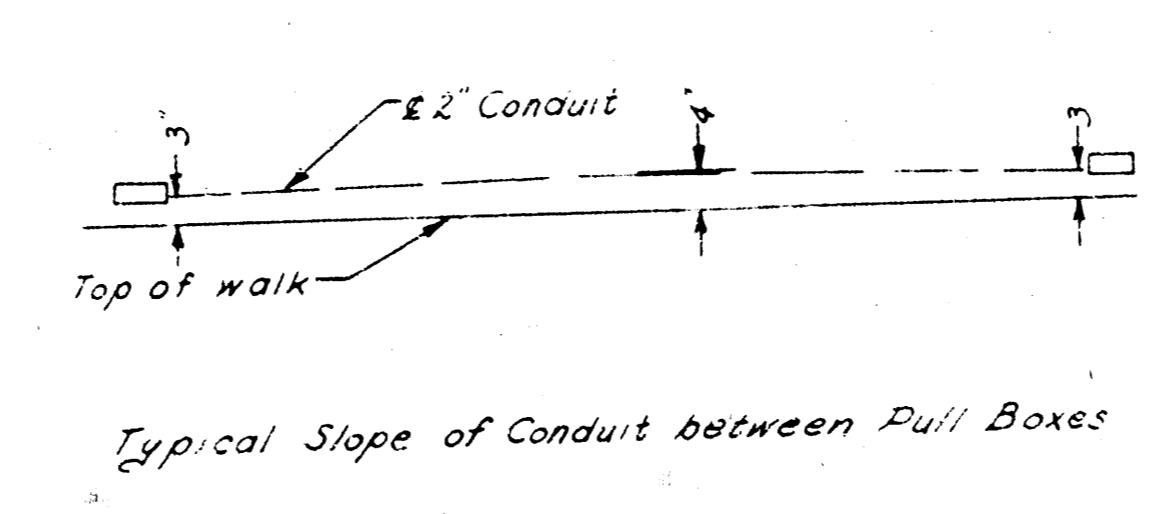
State \_\_\_\_\_ Fiscal Year \_\_\_\_\_  
 1950 10 11



GENERAL WIRING DIAGRAM



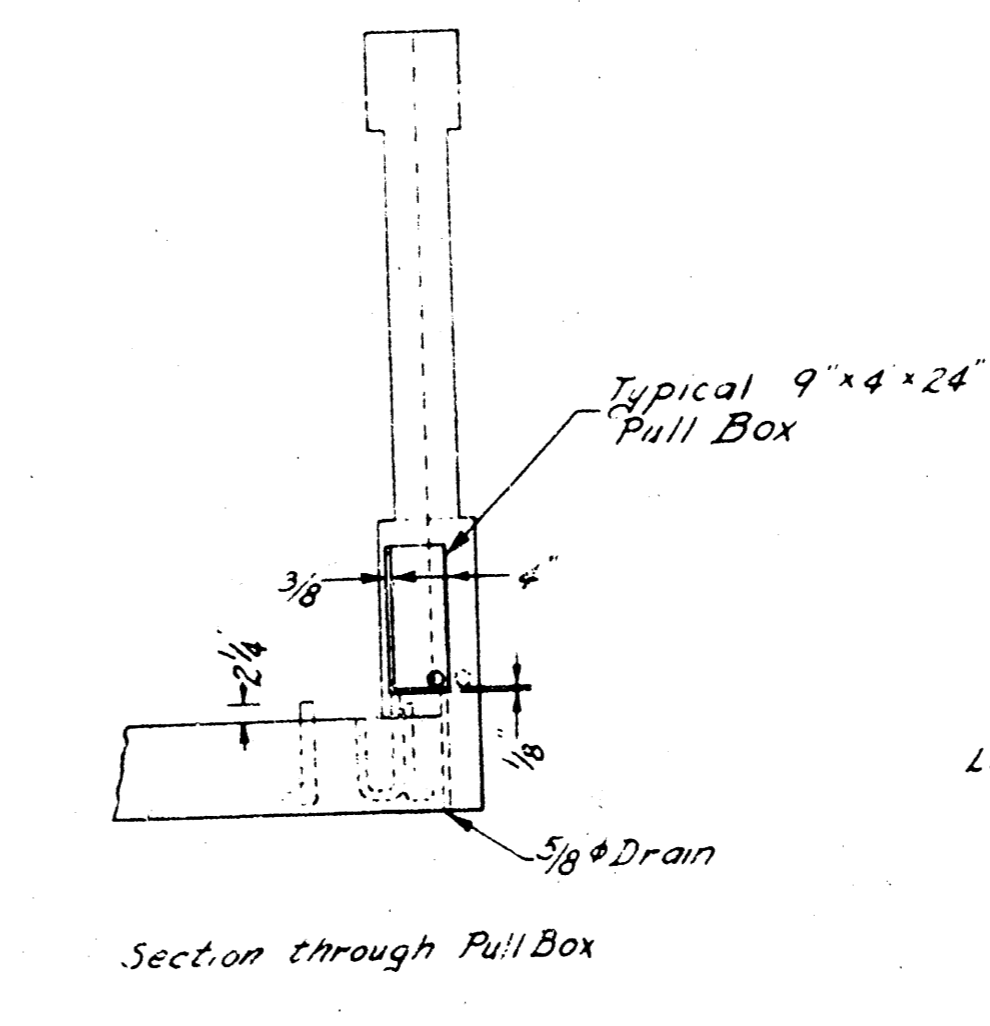
DETAIL AT ENDS OF BRIDGE



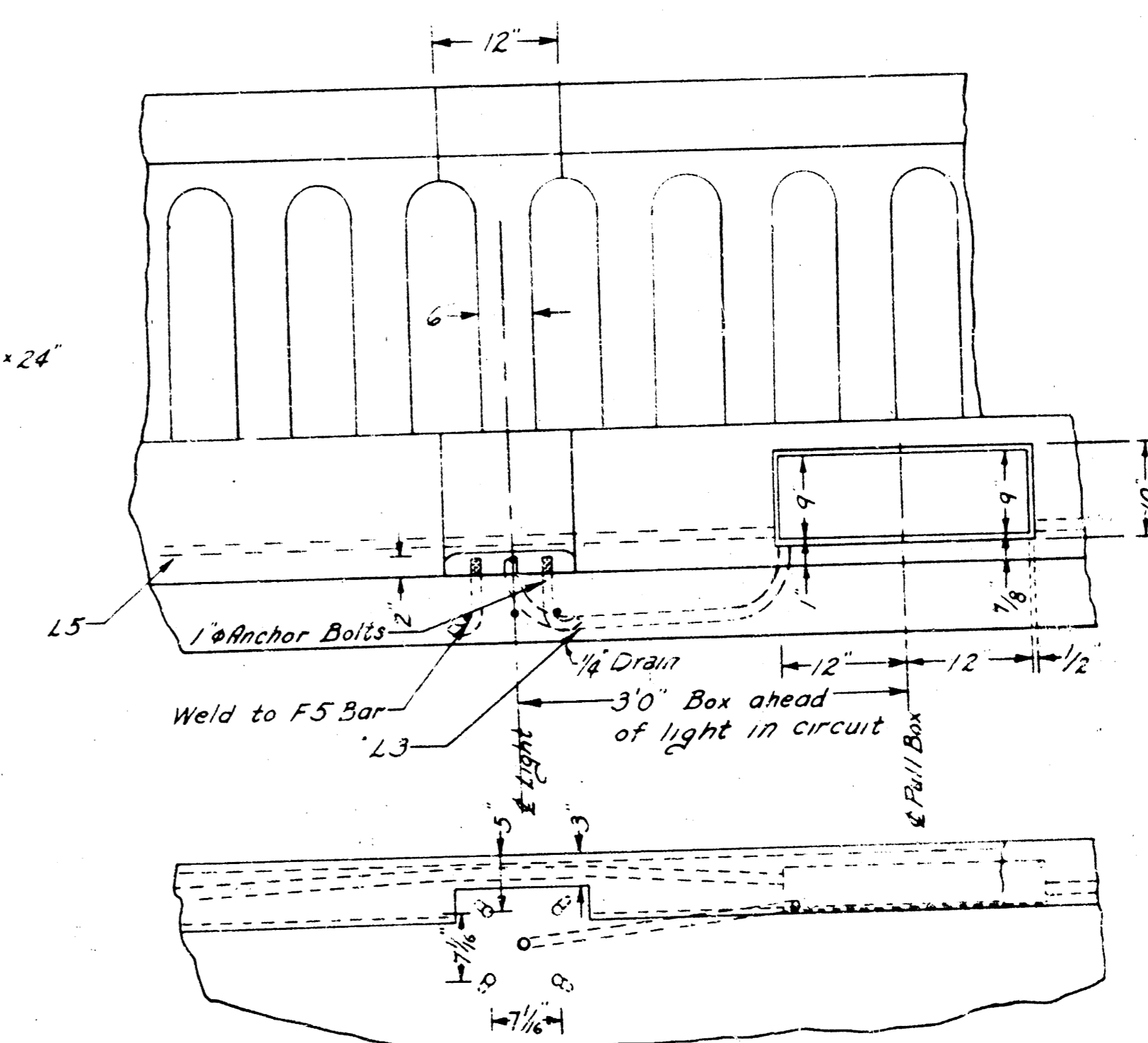
Typical Slope of Conduit between Pull Boxes

| CONDUIT TABLE |     |         |              |
|---------------|-----|---------|--------------|
| SYMBOL        | No. | Length  | Total Length |
| L1            | 2   | 4 1/2   | 8 3/4        |
| L2            | 1   | 53 1/2  | 53 1/2       |
| L3            | 10  | 7 10/16 | 70 10/16     |
| L4            | 2   | 8 1/2   | 16 3/4       |
| L5            | 8   | 100 2   | 801 4        |
| L6            | 2   | 14 1/4  | 28 3/4       |
| Total         |     |         | 928 2 1/2    |

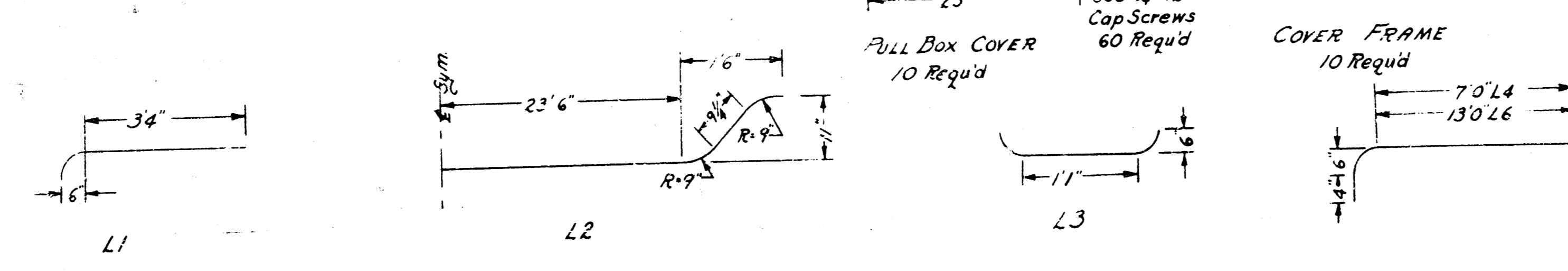
All conduit 2" dia. metal.



Section through Pull Box



DETAIL AT PULL BOX AND LIGHT

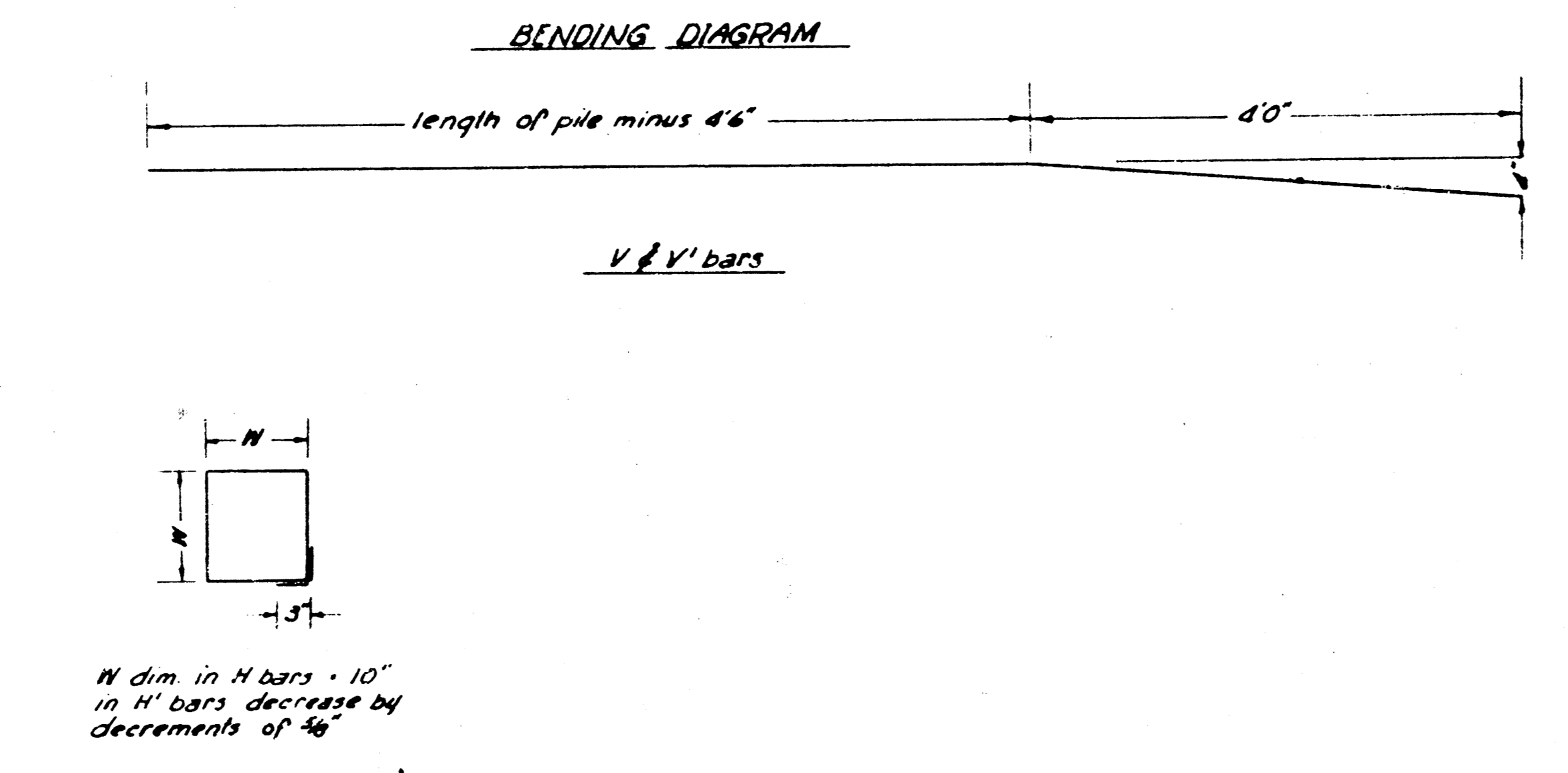
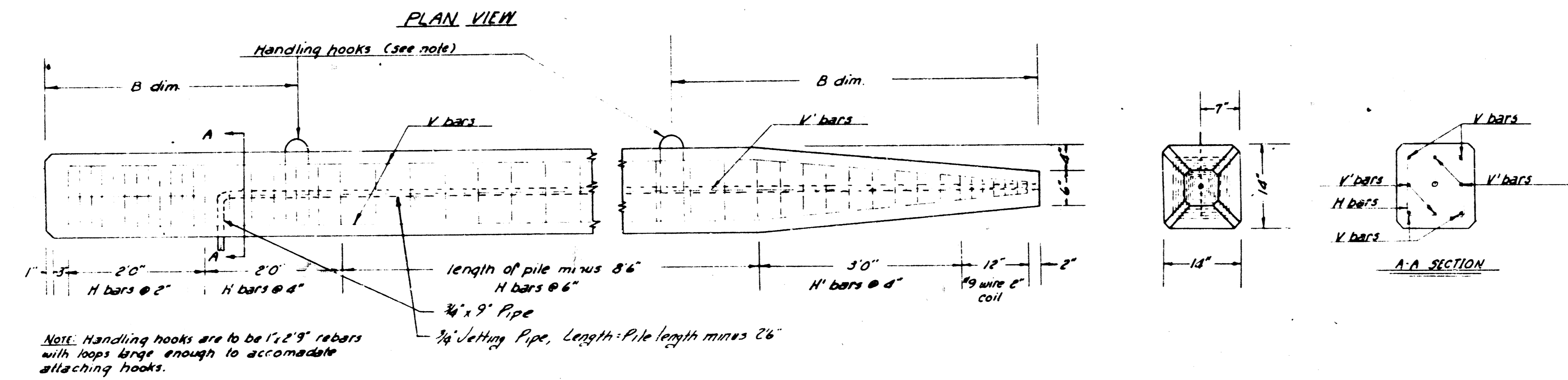


**LIGHTING DETAILS**  
**BRIDGE NO. 616-25-2371**

PREPARED BY  
 SEDGWICK COUNTY ENGINEERING DEPT.  
 RUFUS S. KIRK — COUNTY ENGINEER

| REVISED | SCALE | DESIGNED | TRACED | CHECKED      | SHEET NO. |
|---------|-------|----------|--------|--------------|-----------|
|         |       | MES.     | C.D.H. |              |           |
|         |       | DATE     | 10-50  | 11-25-50     |           |
|         |       | PLANFILE |        | TOTAL SHEETS |           |

|        |             |           |              |
|--------|-------------|-----------|--------------|
| State  | Fiscal Year | Sheet No. | Total Sheets |
| Kansas | 1920        | 11        | 11           |



**GENERAL NOTES:**  
 Piling are to be constructed of class A concrete mix to be of such consistency that the concrete will be thoroughly compacted by tamping & vibrating. Piling are to be lifted with handling hooks (placed at B dim.) only. Top of piling must have a smooth and level surface, where not defined in forming, surface must be leveled by grinding or other suitable methods. All exposed edges are to have a 1" bevel.  
 Piling should remain in forms for 14 days and cured for a minimum of 6 weeks before being driven.  
 Piling are to be painted with suitable coating 5' above & 5' below normal water line.  
 Each pile shall be stamped or marked with the date of its manufacture.  
 All steel shall have 2" cover unless otherwise noted.

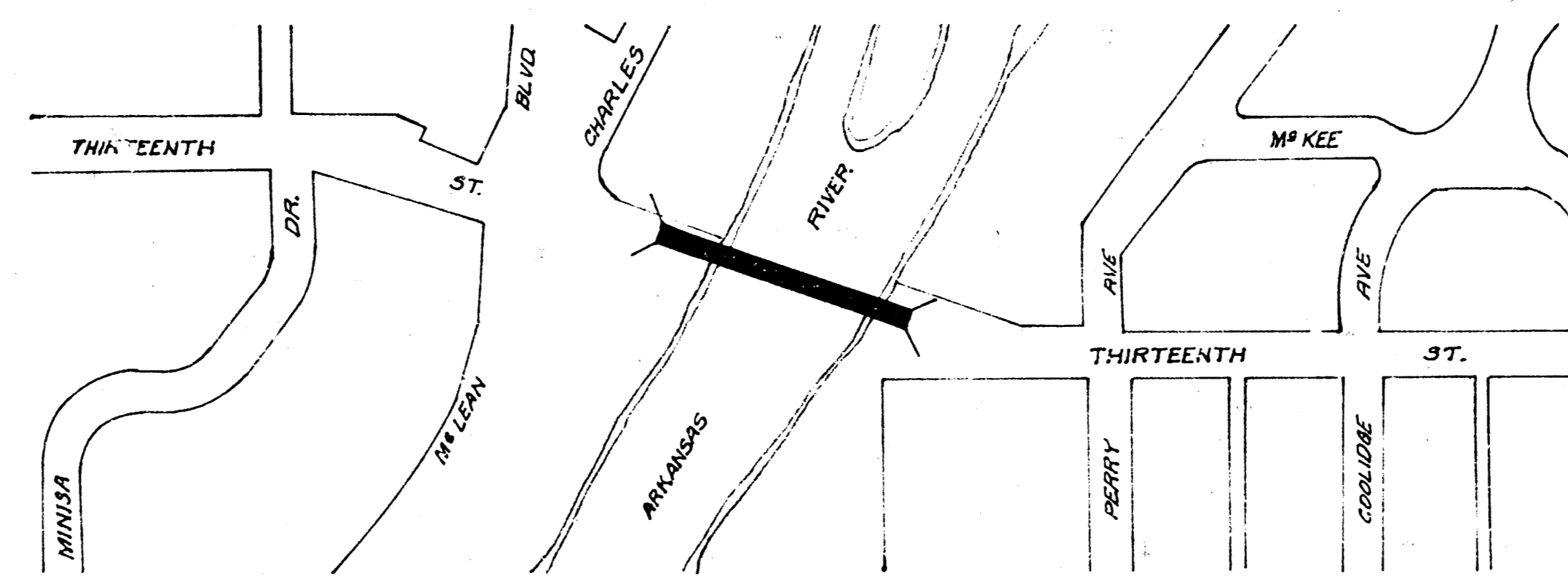
| BILL OF MATERIAL |              |      |      |      |             |              |      |      |      |
|------------------|--------------|------|------|------|-------------|--------------|------|------|------|
| 20' PILE         |              |      |      |      | 32' PILE    |              |      |      |      |
| Bar              | V            | V'   | H    | H'   | Bar         | V            | V'   | H    | H'   |
| Number           | 4            | 4    | 4    | 4    | Number      | 4            | 4    | 4    | 4    |
| Size             | 3/8"         | 3/8" | 3/8" | 3/8" | Size        | 3/8"         | 3/8" | 3/8" | 3/8" |
| Length           | 20'          | 20'  | 20'  | 20'  | Length      | 32'          | 32'  | 32'  | 32'  |
| B dim.           | 14"          | 14"  | 14"  | 14"  | B dim.      | 14"          | 14"  | 14"  | 14"  |
| Total Steel      | 158'         |      |      |      | Total Steel | 302'         |      |      |      |
| Concrete         | 1.04 Cu Yds. |      |      |      | Concrete    | 1.62 Cu Yds. |      |      |      |
| 24' PILE         |              |      |      |      | 36' PILE    |              |      |      |      |
| Bar              | V            | V'   | H    | H'   | Bar         | V            | V'   | H    | H'   |
| Number           | 4            | 4    | 4    | 4    | Number      | 4            | 4    | 4    | 4    |
| Size             | 3/8"         | 3/8" | 3/8" | 3/8" | Size        | 3/8"         | 3/8" | 3/8" | 3/8" |
| Length           | 24'          | 24'  | 24'  | 24'  | Length      | 36'          | 36'  | 36'  | 36'  |
| B dim.           | 14"          | 14"  | 14"  | 14"  | B dim.      | 14"          | 14"  | 14"  | 14"  |
| Total Steel      | 187'         |      |      |      | Total Steel | 322'         |      |      |      |
| Concrete         | 1.21 Cu Yds. |      |      |      | Concrete    | 1.86 Cu Yds. |      |      |      |
| 28' PILE         |              |      |      |      | 40' PILE    |              |      |      |      |
| Bar              | V            | V'   | H    | H'   | Bar         | V            | V'   | H    | H'   |
| Number           | 4            | 4    | 4    | 4    | Number      | 4            | 4    | 4    | 4    |
| Size             | 3/8"         | 3/8" | 3/8" | 3/8" | Size        | 3/8"         | 3/8" | 3/8" | 3/8" |
| Length           | 28'          | 28'  | 28'  | 28'  | Length      | 40'          | 40'  | 40'  | 40'  |
| B dim.           | 14"          | 14"  | 14"  | 14"  | B dim.      | 14"          | 14"  | 14"  | 14"  |
| Total Steel      | 217'         |      |      |      | Total Steel | 415'         |      |      |      |
| Concrete         | 1.41 Cu Yds. |      |      |      | Concrete    | 2.06 Cu Yds. |      |      |      |

**CONCRETE PILING**  
14" X 14"

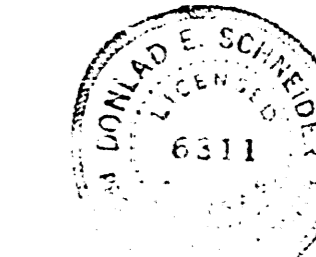
PREPARED BY  
SEDGWICK COUNTY ENGINEERING DEPT.  
H. J. GREELLY COUNTY ENGINEER

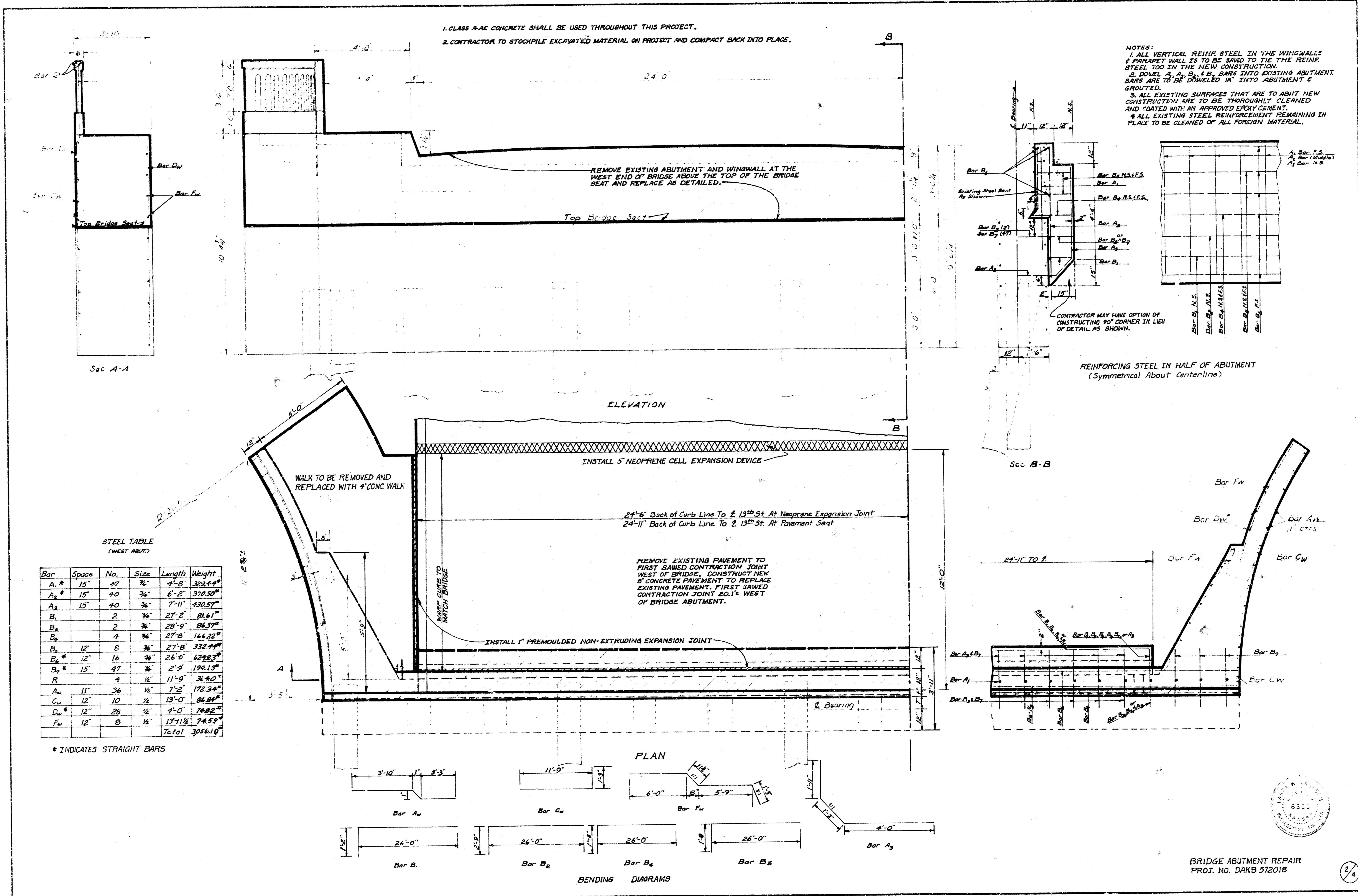
|          |              |          |        |         |           |
|----------|--------------|----------|--------|---------|-----------|
| REVISION | SCALE        | DESIGNED | TRACED | CHECKED | SHEET NO. |
|          | 1"=10'       | Baskell  | Marion | 7.2.16  |           |
|          | DATE         | 12-17    |        | 2-7-21  |           |
| PLANFILE | TOTAL SHEETS |          |        |         |           |

13th STREET BRIDGE OVER BIG ARKANSAS RIVER  
 BRIDGE ABUTMENT REPAIR  
 PROJ. NO. DAKB 572018  
 CITY OF WICHITA, KANSAS  
 R. W. LINN, CITY ENGINEER



- GENERAL NOTES:
- THE LUMP SUM BID ITEM OF "ABUTMENT REPAIR" SHALL INCLUDE ALL COSTS OF:
    - REMOVAL & RECONSTRUCTION OF WEST ABUTMENT & WINGWALLS AS DETAILED.
    - REMOVAL & REPLACEMENT OF CONCRETE PAVEMENT, CONCRETE CURBS, & CONCRETE SIDEWALK.
    - REPAIR OF EAST ABUTMENT PARAPET WALL.
    - EXCAVATION & COMPACTION OF EMBANKMENT AS REQUIRED.
    - INSTALLATION OF 5" NEOPRENE CELL EXPANSION DEVICE.
    - REMOVAL & REPLACEMENT OF BRIDGE ROCKERS & ROCKER PLATES AT BOTH ABUTMENTS.
    - EPOXY REPAIR OF THE FRACTURES IN THE WEST ABUTMENT BELOW THE BRIDGE SEAT.
  - LOADING H-20-44 A.A.S.H.O. DESIGN STRESS  $f_c$  2000 psi,  $f_s$  3000 psi
  - CLASS A-6 CONCRETE TO BE USED THROUGHOUT. BEVEL ALL EXPOSED EDGES WITH  $\frac{3}{4}$ " R MOUNDING UNLESS OTHERWISE NOTED.
  - ANY DAMAGE TO THE EXISTING STRUCTURE DUE TO NEGLIGENCE ON THE PART OF THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
  - ALL ACCESSIBLE PARTS OF THE STRUCTURAL STEEL SHALL RECEIVE ONE COAT OF TINTED ALUMINUM PAINT FOLLOWED BY ONE COAT OF ALUMINUM PAINT AFTER ERECTION. (STRUCTURAL STEEL AT ABUTMENTS ONLY.)
  - SHOP PRINTING OF ALL STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN SECTIONS F2-5(C), Q, & Q<sub>2</sub> OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION".
  - FIELD PAINTING OF ALL STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN SECTION F2-6(G) OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION".
  - ALL STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN SECTION US-2 OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION".
  - GROUTING REINFORCING STEEL IN OLD CONCRETE SHALL CONFORM TO PARAGRAPH 66P-17 OF "SUPPLEMENT NUMBER ONE TO THE STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1970 EDITION".
  - THOROUGHLY SWAB THE BRIDGE SEAT BEARING AREA WITH RED LEAD PAINT AND PLACE UPON IT THREE LAYERS OF TWELVE TO FOURTEEN OUNCE DUCK, EACH LAYER BEING THOROUGHLY SWABBED ON ITS TOP SURFACE WITH RED LEAD PAINT. PLACE THE SUPERSTRUCTURE SHOES OR PEDESTALS IN POSITION WHILE THE PAINT IS PLASTIC.
  - FORMWORK, CONCRETE MATERIALS, & CONCRETE PROPORTIONS SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION".
  - CONTRACTOR TO BLOCK OUT FOR PROPOSED ELECTRICAL CONDUITS AT WEST ABUTMENT. CONTRACTOR TO CONTACT KANSAS GAS & ELECTRIC COMPANY FOR LOCATION OF CONDUITS.





1. CLASS A-AC CONCRETE SHALL BE USED THROUGHOUT THIS PROJECT.  
 2. CONTRACTOR TO STOCKPILE EXCAVATED MATERIAL ON PROJECT AND COMPACT BACK INTO PLACE.

NOTES:  
 1. ALL VERTICAL REINFORCING STEEL IN THE WINGWALLS & PARAPET WALL IS TO BE SAVED TO TIE THE REINFORCING STEEL TOO IN THE NEW CONSTRUCTION.  
 2. DOWN  $A_1, A_2, A_3$  BARS INTO EXISTING ABUTMENT. BARS ARE TO BE "DOWELED" 18" INTO ABUTMENT & GROUTED.  
 3. ALL EXISTING SURFACES THAT ARE TO ADJUT NEW CONSTRUCTION ARE TO BE THOROUGHLY CLEANED AND COATED WITH AN APPROVED EPOXY CEMENT.  
 4. ALL EXISTING STEEL REINFORCEMENT REMAINING IN PLACE TO BE CLEANED OF ALL FOREIGN MATERIAL.

REMOVE EXISTING ABUTMENT AND WINGWALL AT THE WEST END OF BRIDGE ABOVE THE TOP OF THE BRIDGE SEAT AND REPLACE AS DETAILED.

Top Bridge Seat

ELEVATION

INSTALL 5' NEOPRENE CELL EXPANSION DEVICE

WALK TO BE REMOVED AND REPLACED WITH 4" CONC WALK

24'-6" Back of Curb Line To 13<sup>th</sup> St. At Neoprene Expansion Joint  
 24'-11" Back of Curb Line To 13<sup>th</sup> St. At Pavement Seat

REMOVE EXISTING PAVEMENT TO FIRST SAWS CUT CONTRACTION JOINT WEST OF BRIDGE. CONSTRUCT NEW 8" CONCRETE PAVEMENT TO REPLACE EXISTING PAVEMENT. FIRST CRACKED CONTRACTION JOINT 20.1' WEST OF BRIDGE ABUTMENT.

INSTALL 1" PREMOULDED NON-EXTRUDING EXPANSION JOINT

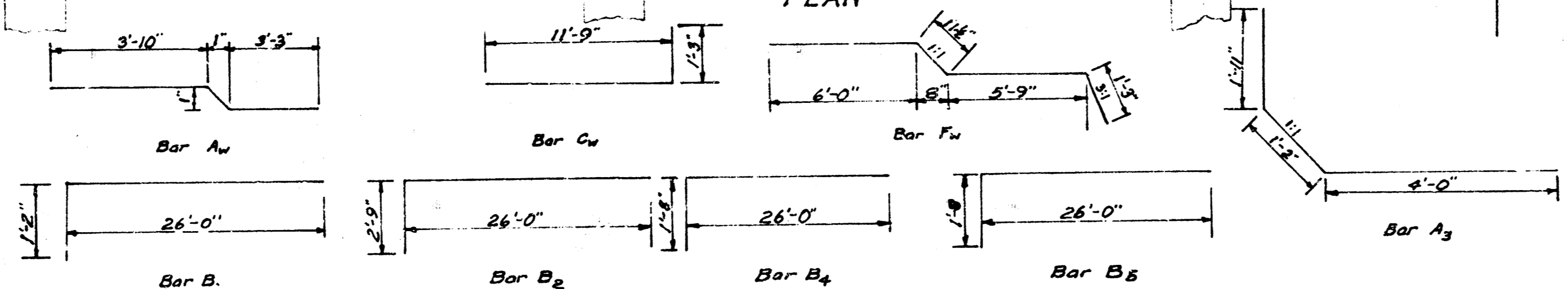
Bearing

STEEL TABLE (WEST ABUT)

| Bar              | Space | No. | Size   | Length     | Weight   |
|------------------|-------|-----|--------|------------|----------|
| A*               | 15"   | 47  | 3/8"   | 4'-8"      | 323.49#  |
| A <sub>1</sub> * | 15"   | 40  | 3/8"   | 6'-2"      | 370.50#  |
| A <sub>2</sub> * | 15"   | 40  | 3/8"   | 7'-11"     | 430.57#  |
| B <sub>1</sub> * | 2     | 36  | 27'-2" | 81.61#     |          |
| B <sub>2</sub> * | 2     | 36  | 28'-9" | 86.37#     |          |
| B <sub>3</sub> * | 4     | 36  | 27'-8" | 144.22#    |          |
| B <sub>4</sub> * | 12"   | 8   | 27'-8" | 332.49#    |          |
| B <sub>5</sub> * | 12"   | 16  | 26'-0" | 622.83#    |          |
| B <sub>6</sub> * | 15"   | 47  | 3/8"   | 2'-9"      | 194.13#  |
| R                | 4     | 16  | 11'-9" | 31.40#     |          |
| A <sub>w</sub> * | 11"   | 36  | 1/2"   | 7'-2"      | 172.34#  |
| C <sub>w</sub> * | 12"   | 10  | 1/2"   | 19'-0"     | 84.86#   |
| D <sub>w</sub> * | 12"   | 28  | 1/2"   | 4'-0"      | 74.82#   |
| F <sub>w</sub> * | 12"   | 8   | 1/2"   | 19'-1 1/2" | 74.59#   |
| Total            |       |     |        |            | 3056.10# |

\* INDICATES STRAIGHT BARS

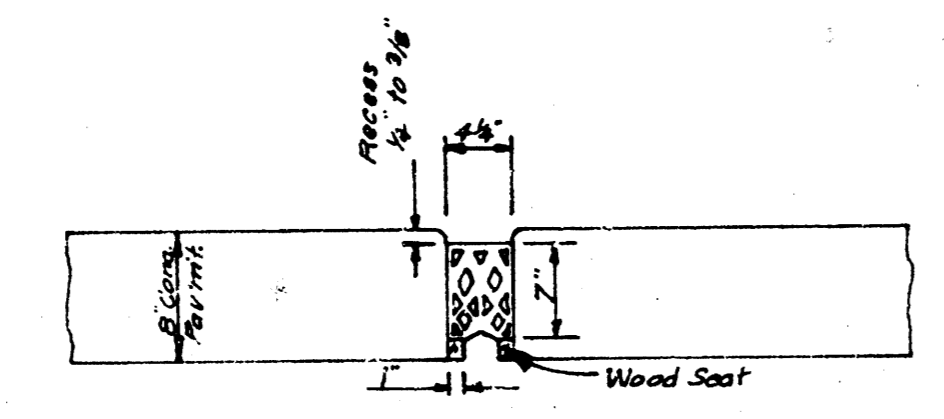
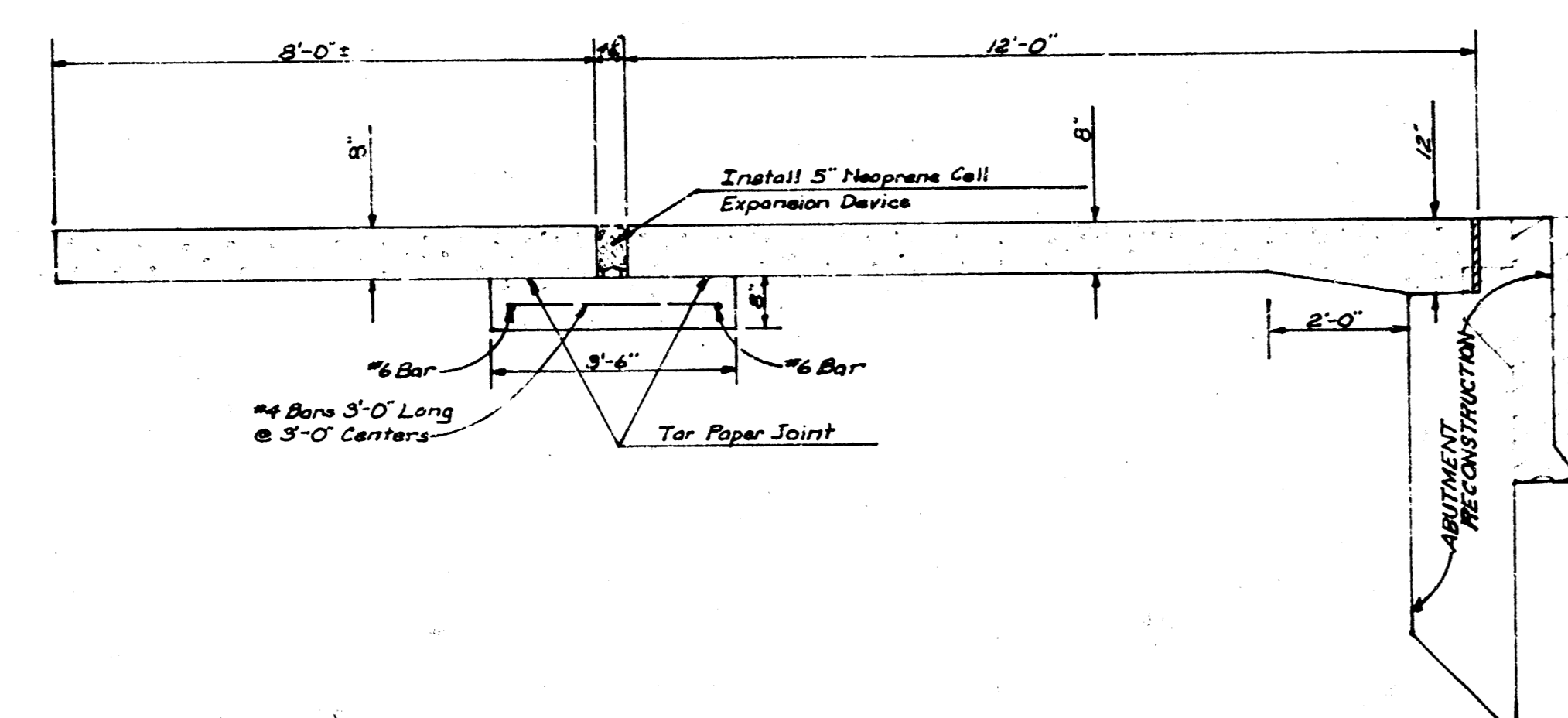
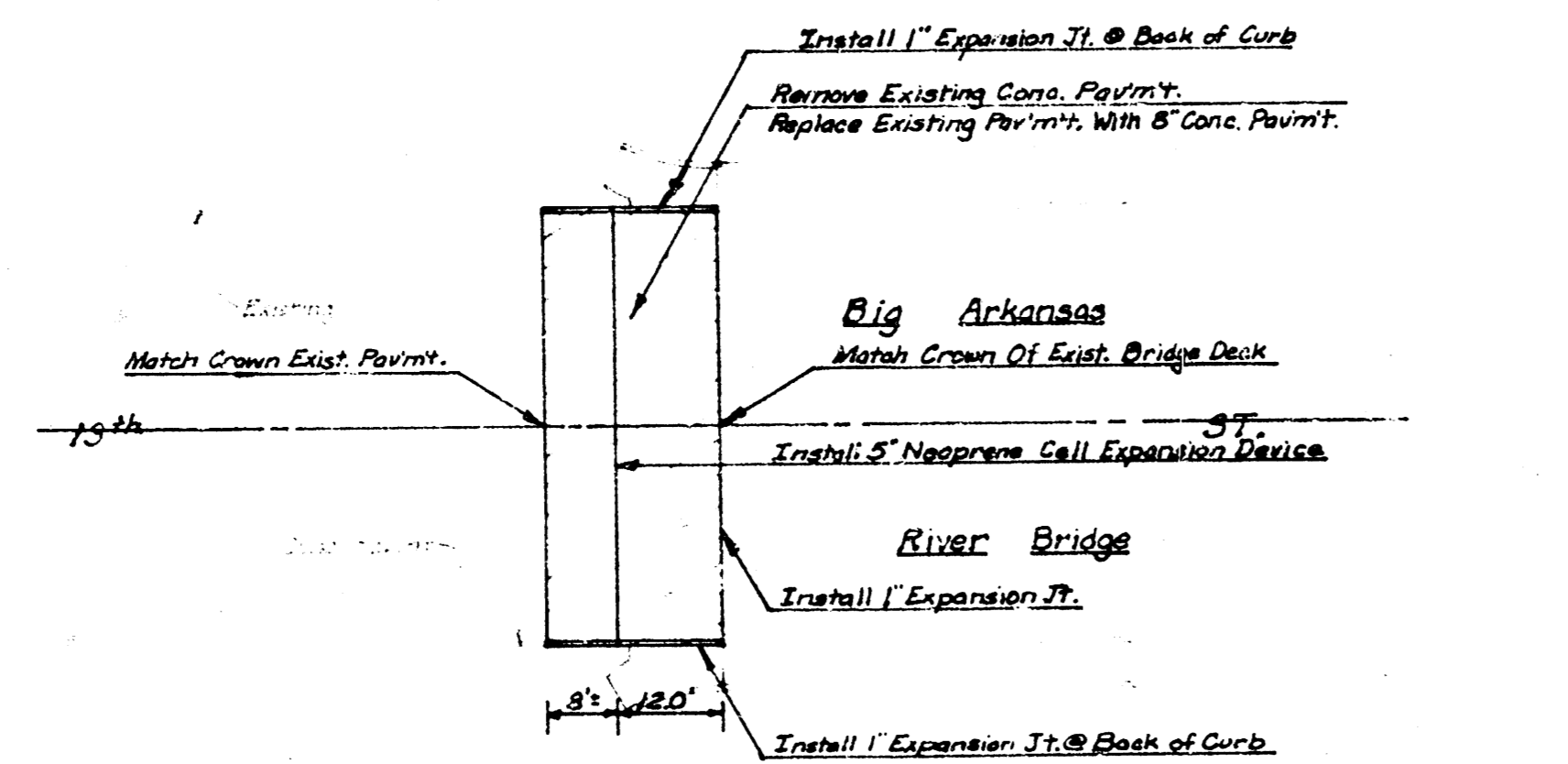
PLAN



BENDING DIAGRAMS

REINFORCING STEEL IN HALF OF ABUTMENT (Symmetrical About Centerline)

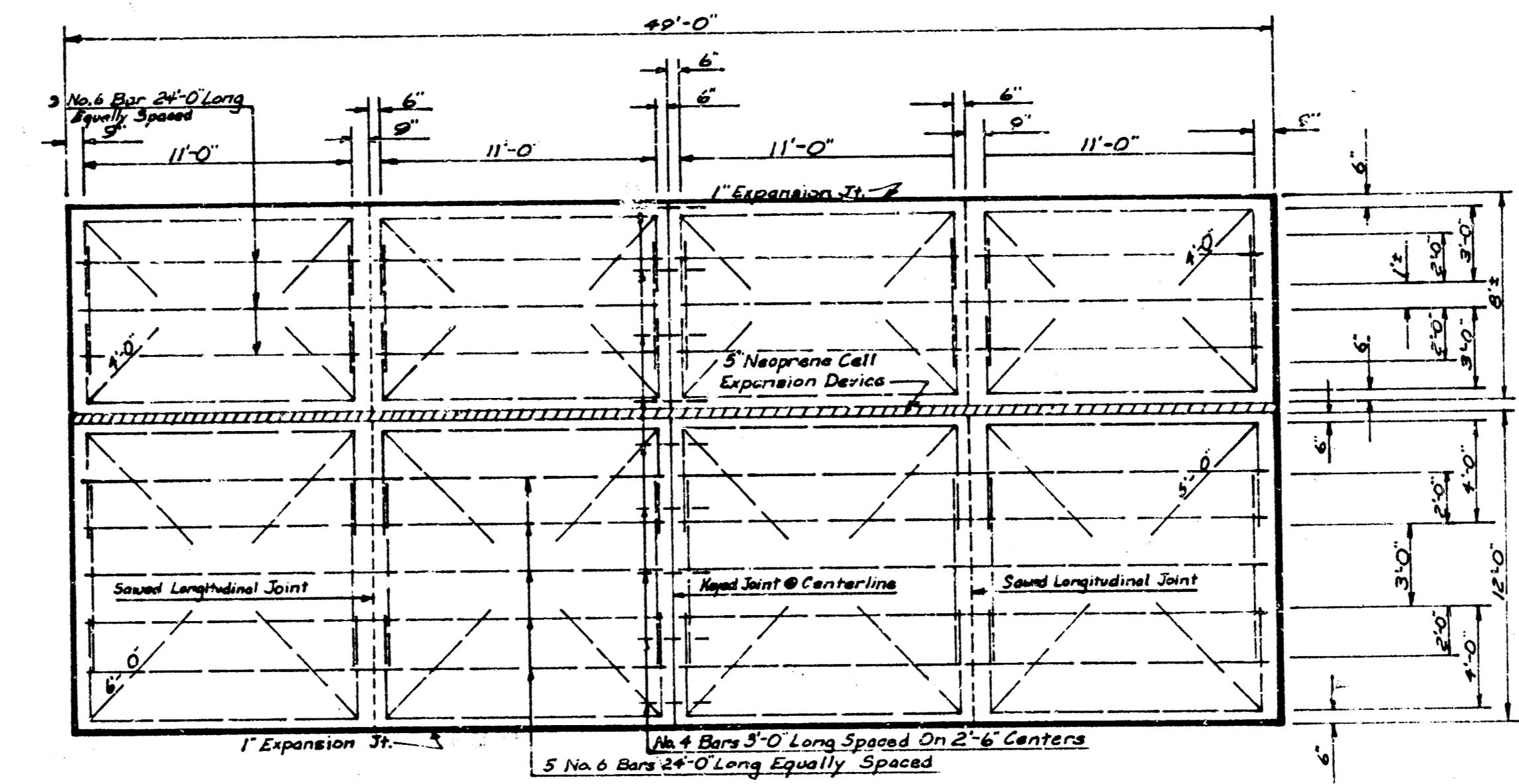
BRIDGE ABUTMENT REPAIR  
 PROJ. NO. DAKB 572018



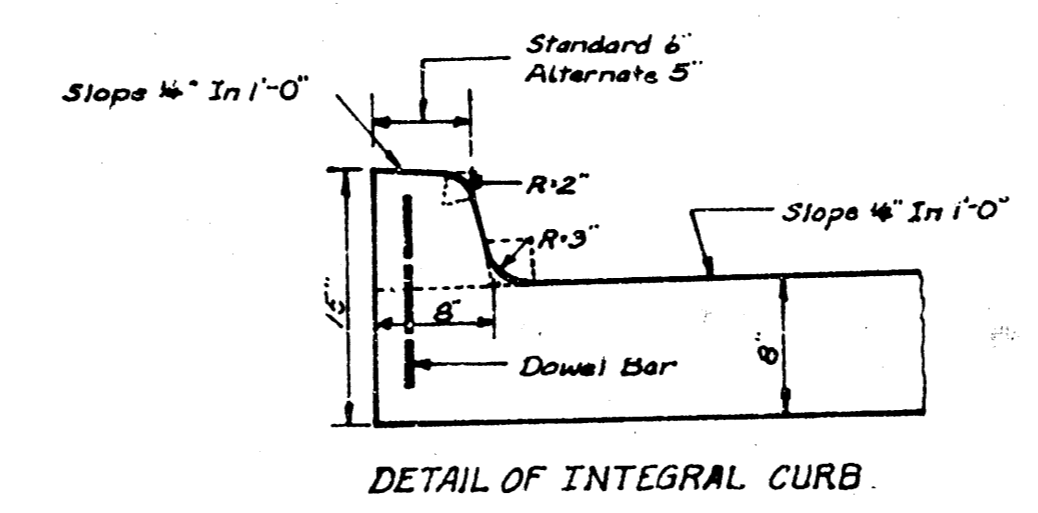
Install 5" Wide Preformed Open Cell Neoprene Joint Seal. Use "H" Series Delsatic Bridge Seal Catalog No. H-3000, D.S. Brown Co. Or An Approved Equal.

The Neoprene Joint Material Shall Be Machine Installed With Equipment Capable Of Placing The Strips At The Specified Depth Without Increasing Or Decreasing The Length As Taken From The Roll Or Box By More Than 5%. No Splices Will Be Permitted Across The Roadway. 6' Long Sections Are To Be Installed Vertical In The Curb Section Of The Roadway Pavement. The Seals Shall Be Secured In Place With An Approved Lubricant Adhesive Which Shall Cover Both Sides Of The Seal Over The Full Contact Area.

EXPANSION DEVICE DETAILS

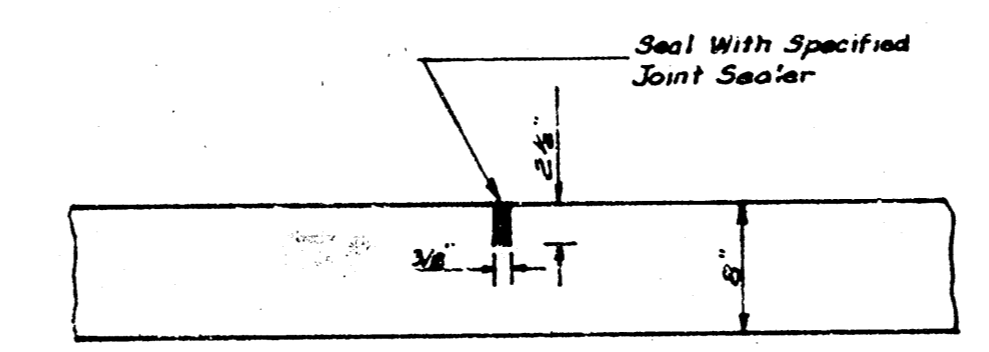


STEEL PATTERN FOR 8\"/>



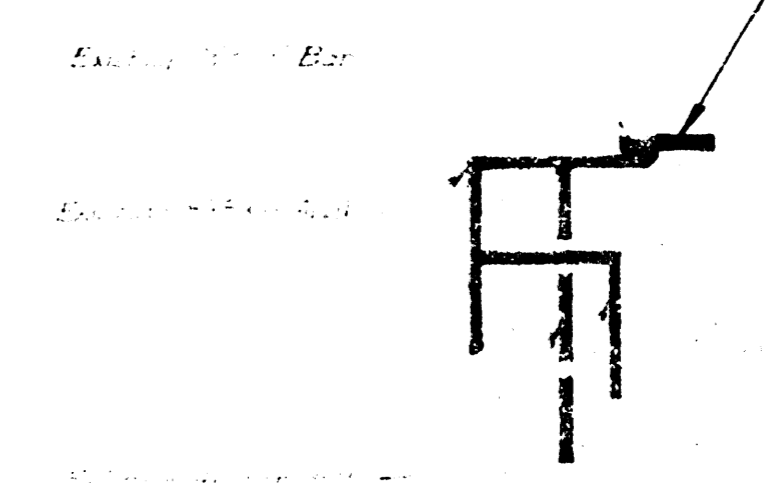
DETAIL OF INTEGRAL CURB

Integral Curb Shall Be Cut Through To The Pavement In Uniform Lengths Of Not More Than Ten Foot Intervals Between Expansion Joints. Expansion Joints Having The Same Thickness As The Expansion Joints In The Pavement Shall Be Constructed In The Integral Curb At The Specified Locations. Number 4 Or Number 6 Dowels Shall Be Installed In The Integral Curb As Shown On Approximately 2'-6\"/>

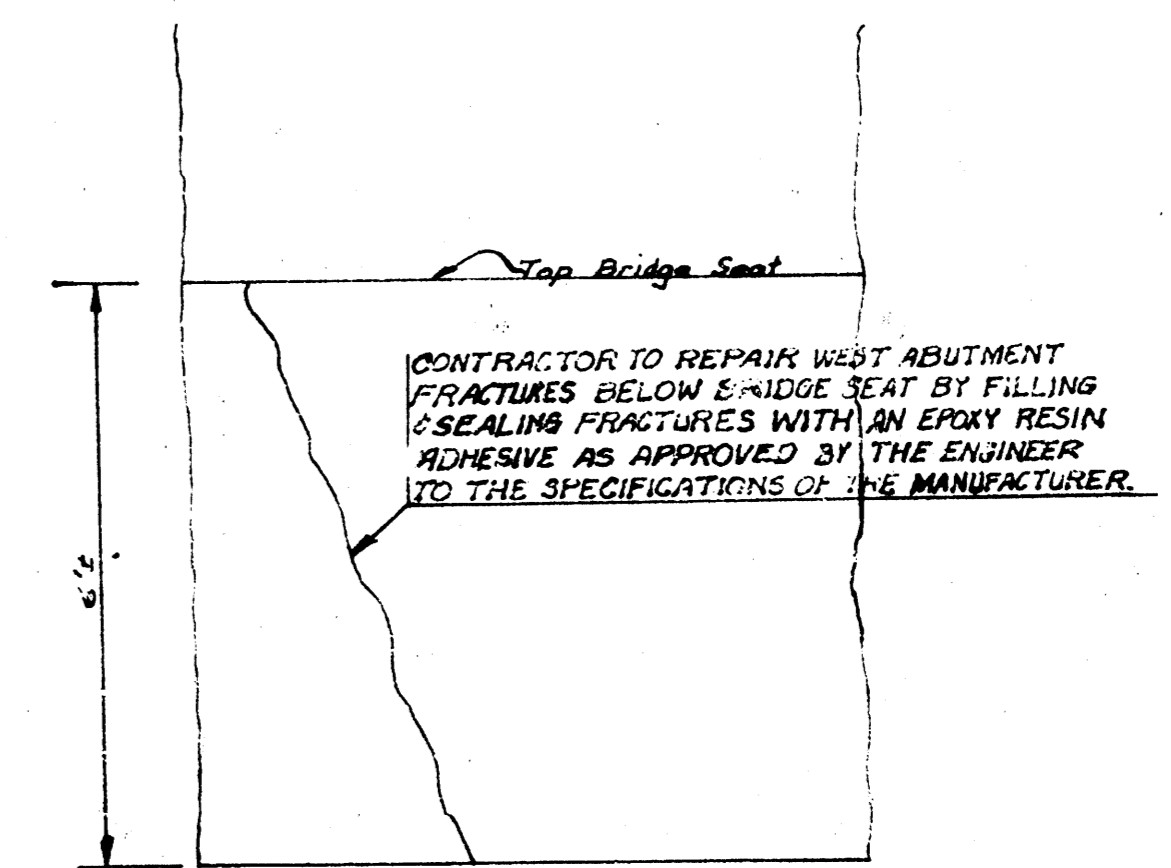


DETAIL OF SAWED LONGITUDINAL JOINT

Contractor To Remove Existing Concrete As Needed To Weld 2# 1/2\"/>



EAST ABUTMENT PARAPET WALL



WEST BRIDGE SEAT REPAIR DETAIL



BRIDGE ABUTMENT REPAIR  
PROJ. NO. DAKB 572018

