| STATE | PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| KANSAS | | 1950 | 1 | 11 |

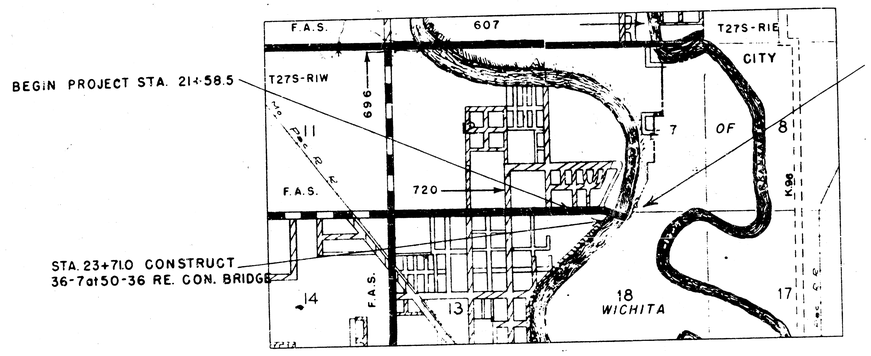
# SEDGWICK COUNTY HIGHWAY DEPARTMENT

BRIDGE NO. 616-25-2371

INDEX OF SHEETS


| SHEET NO. | |
|---|---|
| 1 | TITLE 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 |


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 |
| ADDITONS | | FT. | MILES |
| GROSS LENGTH OF PROJECT | | FT. | MILES |

PLANS PREPARED BY

DATE

APPROVED

COUNTY ENGINEER

DATE 12-14-50

APPROVED DATE 12-18-50

ENGINEER OF SECONDARY ROADS

APPROVED 12-17-50 DATE

STATE HIGHWAY ENGINEER

13th Street
616-25.

| State | | Fiscal Year | Sheet No. | Total Sheets |
|---|---|---|---|---|
| Kansas | | 1940 | 2 | 11 |

Sec 12-T27S-R1W

Sta. 17+44.5 Iron Pin P.I
62.75' N.W. to S.E. Cor. of Brick Bldg.
37.00' N.E. to 14" Elm
39.00' W. to E. Face of Brick Bldg.
18.00' E. to E. Face of 2 Story Hse

Sec 7-T27S-R2E

MERIDIAN AVE.

+10 Hse Ent. | +94 Hse Ent. | +141 Hse Ent. | +234 Hse Ent. | +290 Hse Ent. | +318 Hse Ent. | +416 Hse Ent. | +433 Hse Ent. | +531 E. St. Clair St. | +618 Hse Ent. | +708 Hse Ent. | +744 Hse Ent. | +857 Hse Ent. | +887 Atkinson Ave. | +988 Hse Ent. | +1105 Hse Ent. | +1136 Hse Ent. | +1230 Hse Ent. | +1288 Hse Ent. | +1312 E. Cleveland Ave.

Sta. 0+00 Sec. Cor.
31.1' N.W. to x on curb
45.4' S.W. " " " "
21.45' S.E. " " " "
36.95' N.E. " " " "

Wheat | Farm Yard | Pasture | Pasture

Hse. | 100 Hse Ent. | 112 Fld Ent.

Δ = 17°30'
D = 9°24'
R = 1300.00'
T = 200.00'
L = 397.73'

Sta. 15+44.5 PC

Sta. 15+44.5 Iron Pin P.C.
23.4' N. to St. Sign Post
33.7' N. to 8" Elm
34.2' N.W. to Pipe of Gas Meter
48.7' N.E. to H.L.P

Sta. 19+42.23 Iron Pin P.T.
1.0' S. to Line of N. Bri. Truss

Sta. 19+42.23 PT

Sta. 23+71 Construct
36'-7@50'-36' R.C.B.

Arkansas River

Δ = 17°21'
D = 8°44'
R = 656.04'
T = 100.00'
L = 198.74'

TH#1 | TH#2 | TH#3

Store | Store Bldg. | Hse.

+13 6" gas line
6' underground
60' S. of C.L. of Brg.

+45 E. Percy Ave | +78 Driveway | +100 Driveway | +140 Driveway | +180 Driveway | +194 E. Cookson Ave

+117 Sta. 24+03.98 PT
+180 6"x6" Water Main Insp. Box
Sta. 27+40.08 PT
= Sta. 28+21

+141 E. Allen | +162 Driveway

Sec 13-T27S-R1W

Sec 18-T27S-R1E

BM#1 Elevation 1305.02
Square cut top curb 16' N. & 31' E. NW cor. Sec 13

BM#2 Elevation 1309.80
60# Spike in Tel. Pole
24' E. Sta. 17+61

BM#3 Elevation 1312.13
USC&GS Stndrd Tablet
34' SE of S.E. cor. Bridge

SCALE
Horiz. 1" = 100'
Vert. 1" = 10'

1310
1305
1300
1295
1290

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

PLAT | SURVEYED | DRAWN | TRACED | CHECKED | NOTE BOOK REFERENCE | NO. | ELEVATIONS REFER TO WATER WORKS DATUM

PROFILE | SURVEYED | DRAWN | TRACED | CHECKED | NOTE BOOK REFERENCE | NO. | ELEVATIONS REFER TO WATER WORKS DATUM

PLATE 1—PLAN-PROFILE O. P. W. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

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

Sec. 12-T27S-R1W

Sec. 7-T27S-R1E

Sec. 18-T27S-R1E

See 13-T27S-R1W

P.C.

P.I.

P.T.

STAKE

River

Big Arkansas

BENCH MARKS
B.M. #2 - 60° in T.P. 24' rt. Sta. 17+61 El. 1309.80
B.M. #3 - U.S.C. & G. Std. tablet 54' S.E. of cor. of bridge El. 1312.13

Note: For traverse details see revised sheet 19 (1949) River Improvement Map - Big Arkansas River.

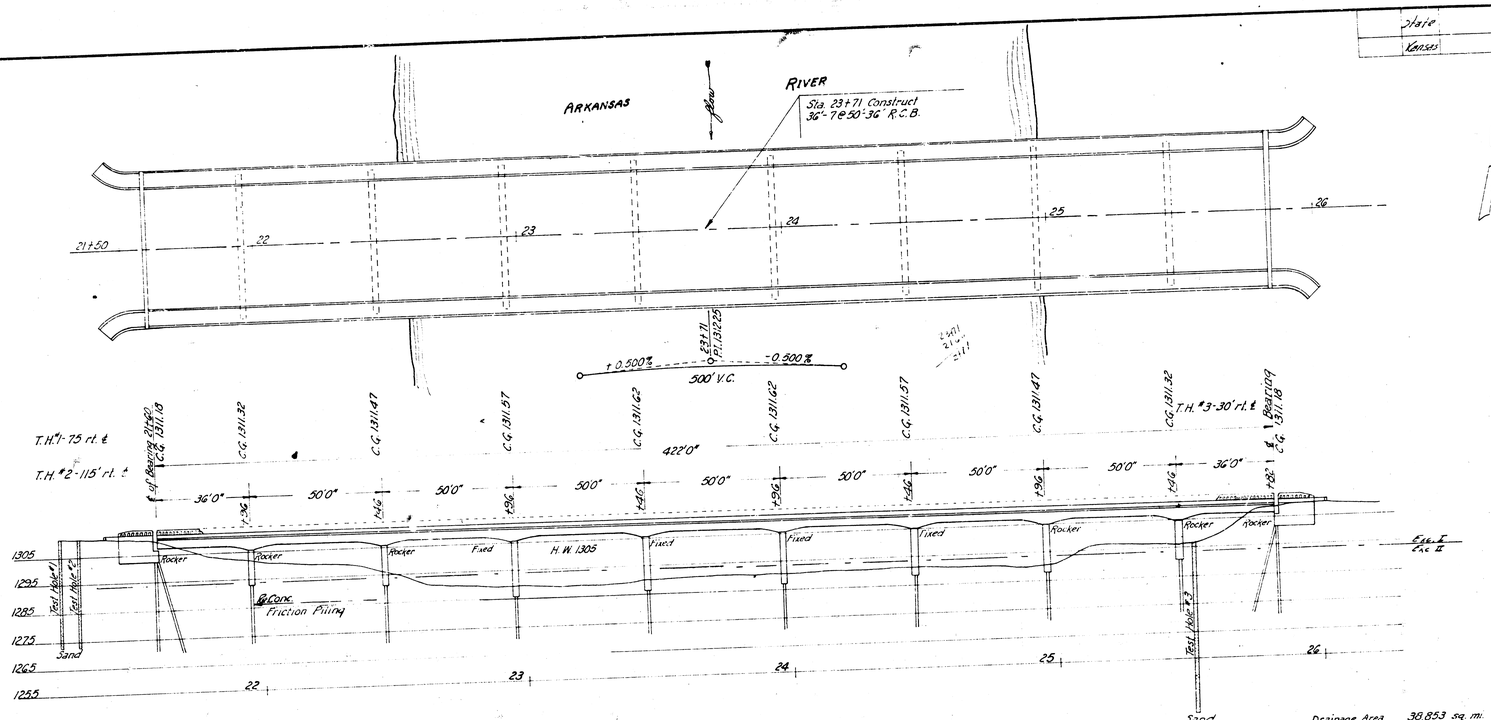
Scale 1" = 50'

Topographical Map
Vicinity, Bridge No. 616-23-2356 - (13th St.)

PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

| REVISED | SCALE | DESIGNED | TRACED | CHECKED | SHEET NO. |
|---|---|---|---|---|---|
| | 1" = 50' | | Shumate | | |
| | DATE | | | | |
| | PLANFILE | | TOTAL SHEETS | | |

| State | Fiscal Year | Sheet No. | Total Sheets |
|---|---|---|---|
| Kansas | 1950 | 9 | 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 60d in T.P. 24' rt. Sta 17+61
Elev. 1309.80

B.M. #3 U.S.C. & G.S. std. tablet
54' S.E. of S.E. cor. of bri. Elev. 1312.13

## SUMMARY OF QUANTITIES

| | |
|---|---|
| Excavation Class I | 407 cu. yds. |
| Excavation Class II | 329 cu. yds. |
| Concrete Class A (AE) | 1707.5 cu. yds. |
| Reinforcing Steel | 270 034 lbs. |
| Structural Steel | |
| Bearing Devices | 27,612 lbs. |
| Re. Conc. Piling | 7,960 lin. ft. |
| Cast Iron | 1574 lbs. |
| 2" Conduit | 926 lin. ft. |

## 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 STRUCTURE: To be removed by SEDGWICK COUNTY.

SOUNDINGS: Taken with ¾" 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.

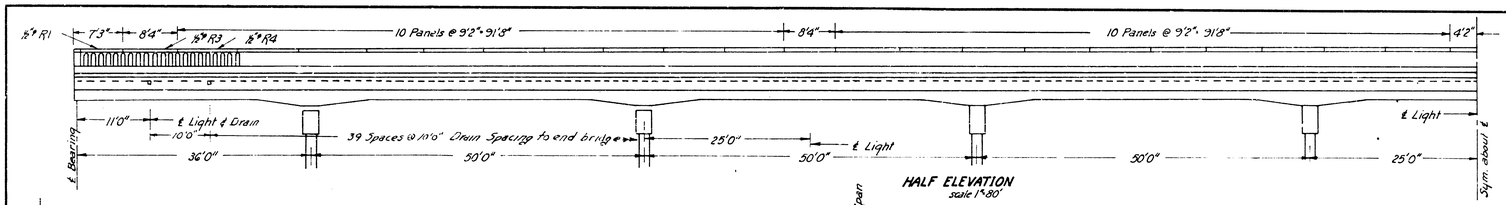
LIGHTING: Conduit, pull boxes and pole anchor bolts to be installed at time of construction. Poles, wiring etc. to be installed at a later date, and are not a part of this project.

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

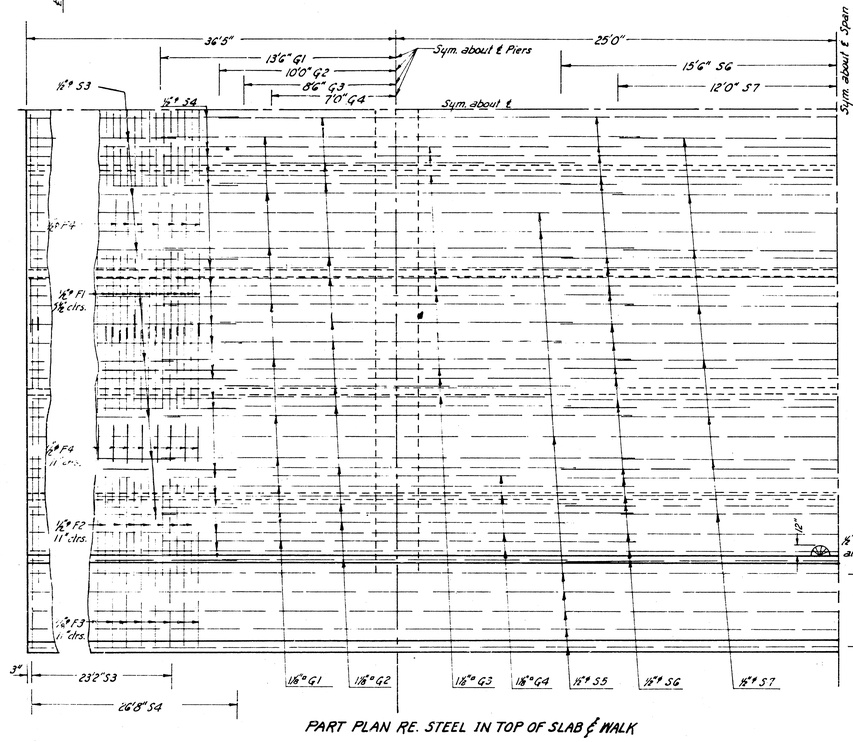
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
COUNTY ENGINEER

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

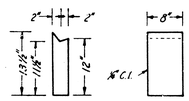
| State | Fiscal Year | Sheet No. | Total Sheets |
|---|---|---|---|
| Kansas | 1930 | 5 | 11 |



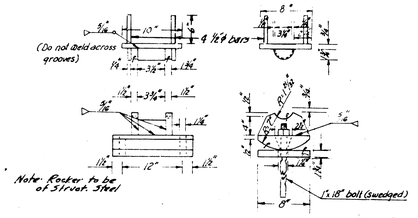

**HALF ELEVATION**
scale 1"=80'



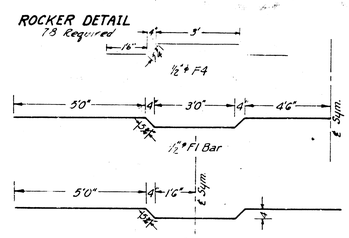

**PART PLAN RE. STEEL IN TOP OF SLAB & WALK**

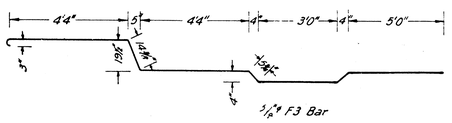



**CAST IRON DRAIN**
Computed wt. 19.2 lbs.
8% Required




**ROCKER DETAIL**
7/8 Required




## SUMMARY OF QUANTITIES
SPANNING SUPERSTRUCTURE

| | |
|---|---|
| Concrete Class A (AE) | 1062 Cu. Yds. |
| Reinforcing Steel | 241 030 Lbs. |
| Cast Iron | 1574 Lbs. |
| Rocker Steel | 27 612 Lbs. |

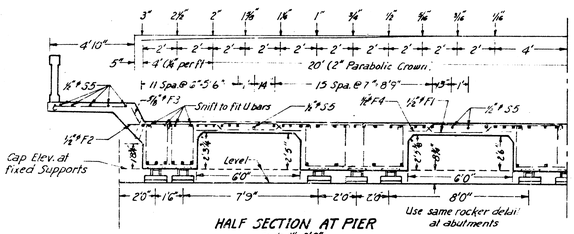
## GENERAL NOTES

LOADING: H-20-44 A.A.S.H.O.
DESIGN STRESS: Fs = 18,000 p.s.i.; fc = 1000 p.s.i. n=10
CONCRETE: Class A (AE) to be used throughout. Bevel all exposed edges with ¾" Δ moulding unless otherwise noted.
FALSEWORK: Falsework shall be in place for entire unit until all the concrete has attained its design strength. Construction joints shown on sheet No. are optional with the Bridge Contractor but if used shall be made only at the locations shown or as approved by the Engineer. Pouring sequence to be designated by Engineer subject to type of falsework used by Bridge Contractor.
FIELD PAINT: All accessible parts of cast iron drains and rockers shall recieve one coat of tinted aluminum paint followed by one coat of aluminum paint after erection. The same shall apply to light pull boxes.

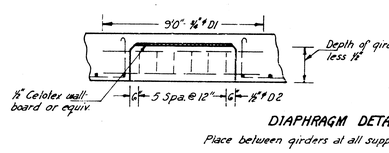
## STEEL TABLE
TOP OF SLAB & WALK

| BAR | SIZE | NO. | LENGTH | WEIGHT |
|---|---|---|---|---|
| G1 | 18" ø | 160 | 27'0" | 18,576 |
| G2 | " | 208 | 20'0" | 17,888 |
| G3 | " | 144 | 17'0" | 10,526 |
| G4 | " | 64 | 14'0" | 3,855 |
| *F1 | ½" | 922 | 26'11" | 16 615 |
| *F2 | ½" | 922 | 13'5½" | 8 339 |
| *F3 | ⅜" ø | 922 | 19'3" | 18, 937 |
| S3 | 16" | 32 | 23'2" | 997 |
| S4 | " | 88 | 26'8" | 926 |
| S5 | " | 126 | 48'0" | 4,008 |
| S6 | " | 208 | 31'0" | 6,397 |
| S7 | " | 112 | 24'0" | 1,800 |
| D1 | ⅝" | ~~160~~ 240 | 9'0" | ~~1,443~~ 2160 |
| *D2 | ½" | ~~240~~ 160 | 3'8" | ~~480~~ 320 |

*See Bending Diagram




**HALF SECTION AT PIER**
scale 1"=3'0"



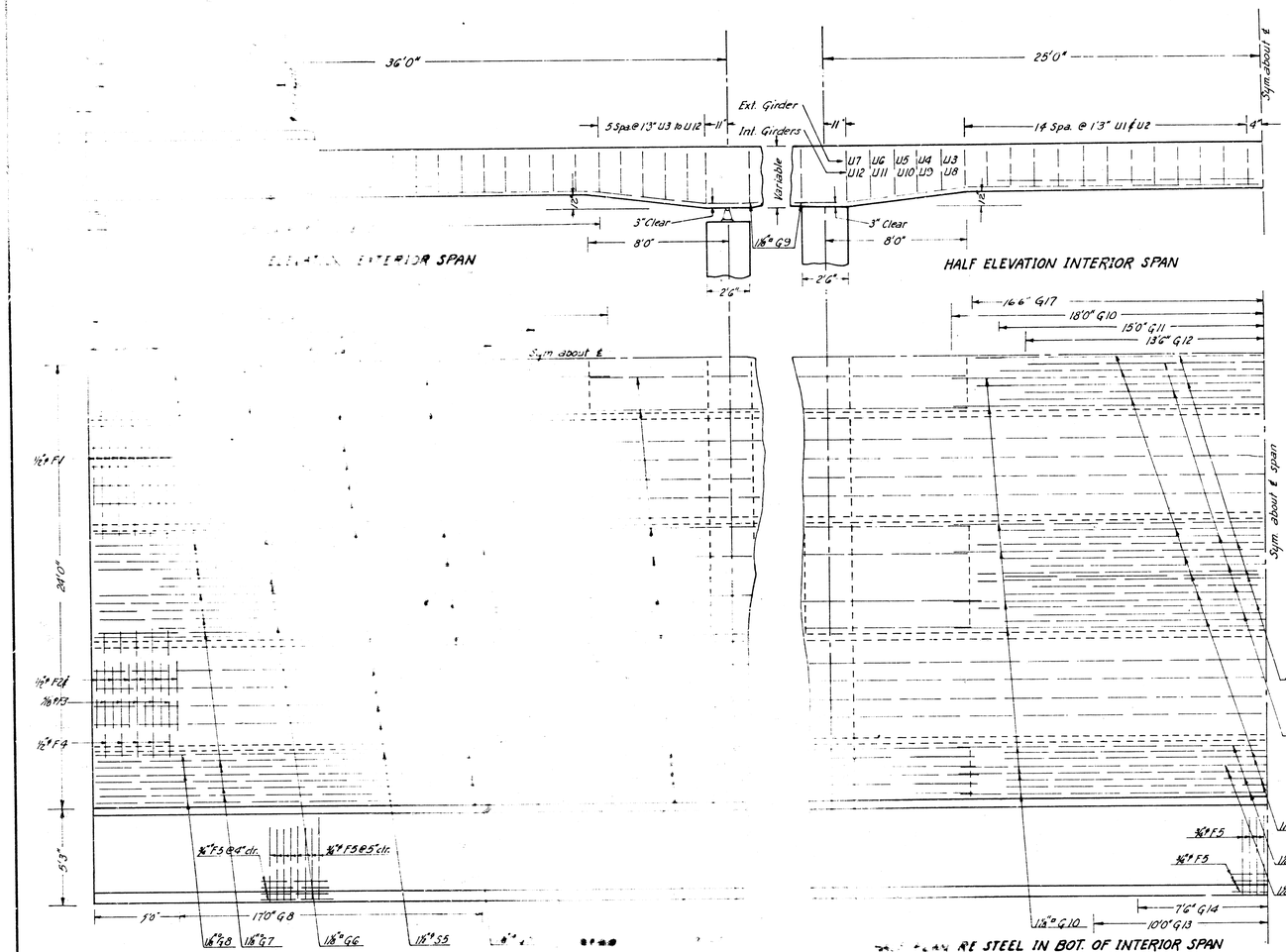

**DIAPHRAGM DETAIL**
Place between girders at all supports

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

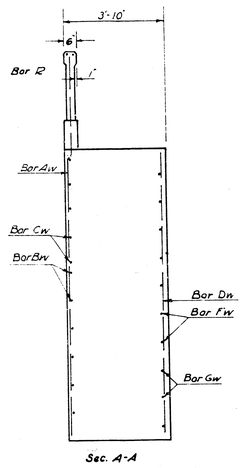
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

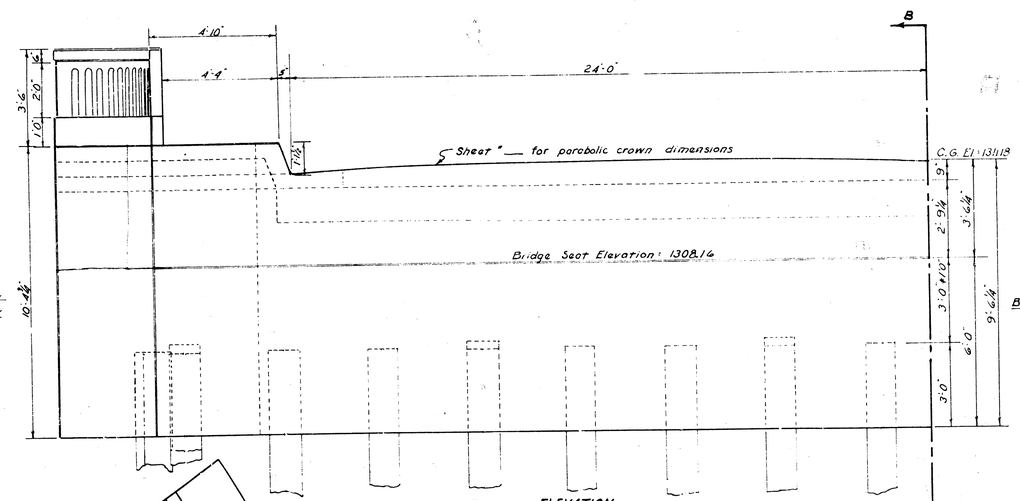
| REVISED 11-30 1931 | SCALE | DESIGNED | TRACED | CHECKED | SHEET NO. |
|---|---|---|---|---|---|
| | Noted | MES. | R.W.M. | | |
| | DATE | | | | |
| | PLANFILE | | TOTAL SHEETS | | |

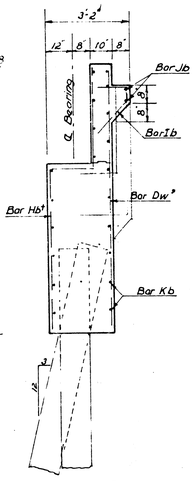
| State | | Fiscal Year | Sheet No. | Total Sheets |
|---|---|---|---|---|
| Kansas | | 1950 | 6 | 11 |

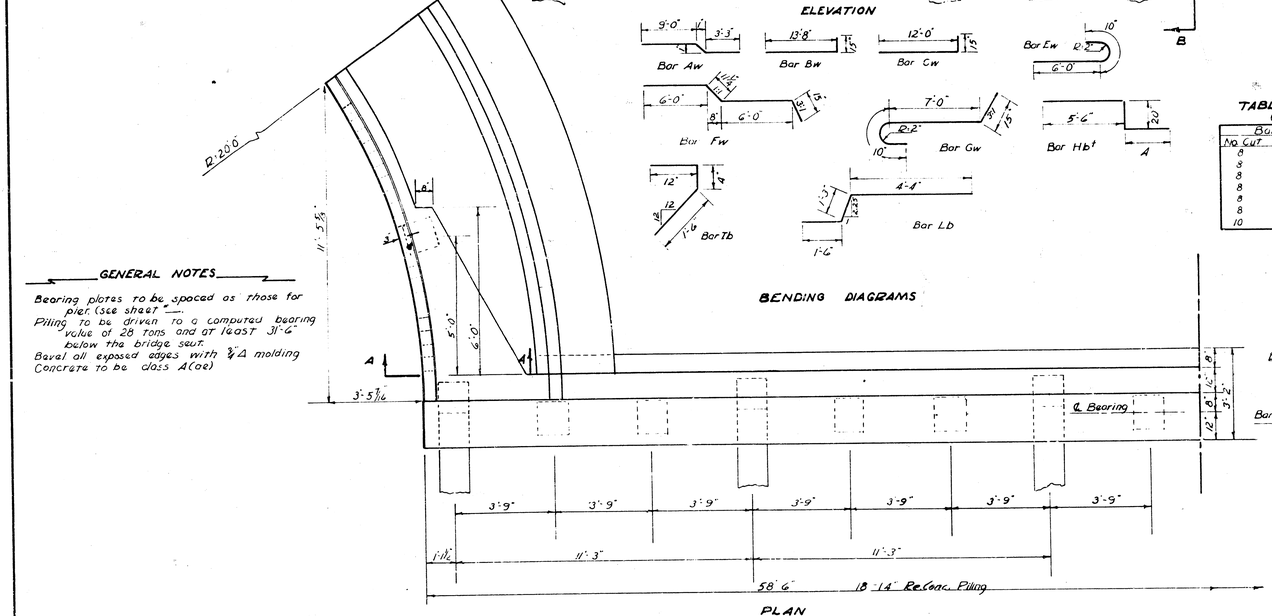

36'0"
25'0"
Sym about ℄
5 Spa. @ 1'3" U3 to U12
11"
Ext. Girder
Int. Girders
11"
14 Spa. @ 1'3" U1 to U2
4"
U7 U6 U5 U4 U3
U12 U11 U10 U9 U8
Variable
1'0"
1'0"
3" Clear
3" Clear
8'0"
8'0"
1⅛" G9
2'6"
2'6"
ELEVATION EXTERIOR SPAN
HALF ELEVATION INTERIOR SPAN
Sym about ℄
16'6" G17
18'0" G10
15'0" G11
13'6" G12
Sym about ℄ span
1½" F1
1½" F2
⅞" F3
½" F4
5'3"
24'0"
⅜" F5 @ 4" ctr.
⅜" F5 @ 5" ctr.
1⅛" G11
1⅛" G12
⅜" F5
1⅛" G11
1⅛" G13
⅜" F5
1⅛" G14
1⅛" G10
7'6" G14
100" G13
5'0"
170" G8
1⅛" G8
1⅛" G7
1⅛" G6
1⅛" G5
PLAN RE. STEEL IN BOT. OF EXTERIOR SPAN
PLAN RE STEEL IN BOT. OF INTERIOR SPAN
6"
4'4"
5"
4"
12"
30"
6"
1'9"
1'
16" S5
1'7⅞"
12"
12"
12"
1'9"
6½" Uniform Slab
1'9"
1'5"
1'5"
1'7⅛"
2"
1'6"
1'9"
1'9"
1'9

| State | Fiscal Year | Sheet No. | Total Sheets |
|---|---|---|---|
| Kansas | 1950 | 7 | 11 |




## STEEL TABLE
(one abut.)

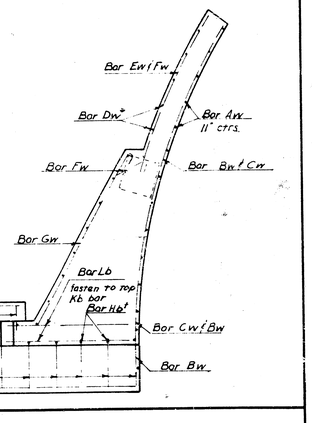
| Bar | Space | No. | Size | Length | Wt. | Revised Weight |
|---|---|---|---|---|---|---|
| Aw | 11" | 36 | ½"ᵠ | 12'-4" | 297 | 296.5 |
| Bw | 12" | 12 | " | 14'-11" | 120 | 119.6 |
| Cw | 12" | 10 | " | 13'-3" | 89 | 88.5 |
| Dw* | 12" | 76 | " | 10'-0" | 508 | 475.0 |
| Ew | 12" | 6 | " | 6'-10" | 27 | 27.4 |
| Fw | 12" | 14 | " | 14'-2" | 133 | 132.7 |
| Gw | 12" | 6 | " | 9'-1" | 37 | 36.9 |
| Hb' | 12" | 58 | " | 10'-5" | 202 | 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 | " | 7'-1" | 19 | 18.92 |
| R | | 4 | " | 12'-0" | 32 | 32.1 |
| | | | Total | 3625 | 2424 | 2592.3# |

## QUANTITIES per ABUTMENT

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

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

| Bar Hb | | Bar Dw | |
|---|---|---|---|
| No. Cut | A Dim. | No. Cut | Overall L. |
| 8 | 3'-3" | 28 | 10'-0" |
| 8 | 3'-2½" | 8 | 9'-1" |
| 8 | 3'-2" | 8 | 9'-0½" |
| 8 | 3'-1½" | 8 | 9'-0" |
| 8 | 3'-1" | 8 | 8'-11½" |
| 8 | 3'-½" | 8 | 8'-11" |
| 10 | 4'-2" | 8 | 8'-10½" |




## 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 ¾" Δ molding
Concrete to be class A(ae)

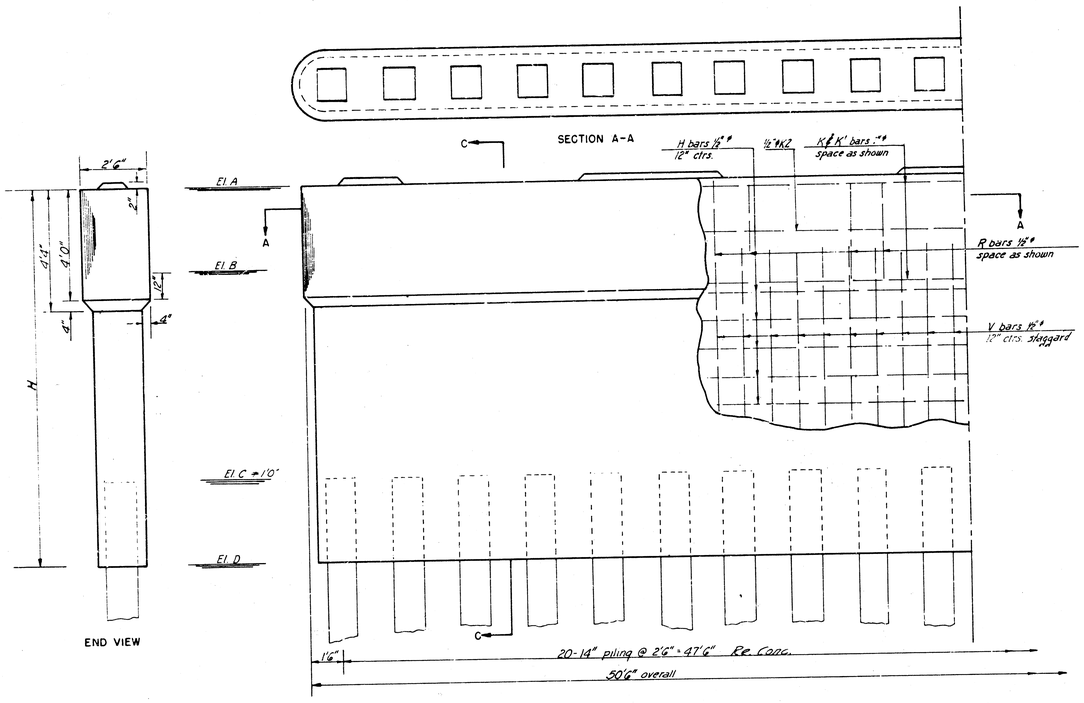
## BENDING DIAGRAMS

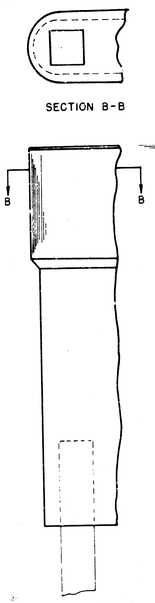
# ABUTMENT DETAIL
# BRIDGE NO. 616-25-2371

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

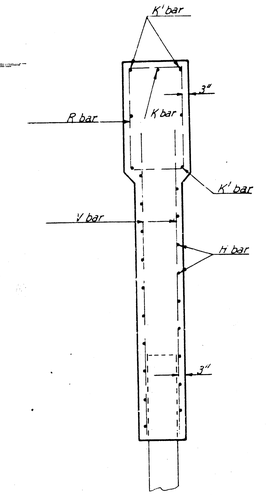
| REVISED | SCALE | DESIGNED | TRACED | CHECKED | SHEET NO. |
|---|---|---|---|---|---|
| | ½" - 1'-0" | M.S. & R.J. | R.J. | | |
| | DATE | 10-20-50 | | | |
| | PLANFILE | | TOTAL SHEETS | | |

| State | Fiscal Year | Sheet No. | Total Sheets |
|---|---|---|---|
| Kansas | 1950 | 8 | 11 |

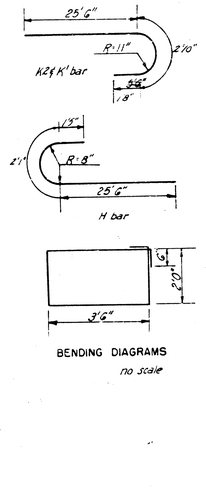



PILING ELEVATIONS
PIERS 1-2-7&8 only




SECTION C-C



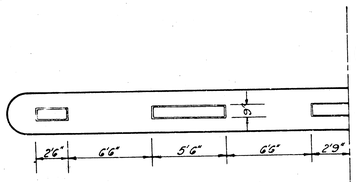

BENDING DIAGRAMS
no scale

| PIER | TABLE of ELEVATIONS | | | | TABLE of STEEL | | | | | | | | | | | | | | QUANTITIES | | | | | | A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ELEVATION A | ELEVATION B | ELEVATION C | ELEVATION D | Number ⅝" R bars | Length ⅝" R bars | Number 1" H bars | Length 1" H bars | Number 1" K' bars | Length 1" K' bars | Number ⅝" V bars | Length ⅝" V bars | Number ⅝" H bars | Length ⅝" H bars | 8"x15"x⅛" Bearing pl. | L.F. Test Pile | L.F. Friction Pile | Cu. Yds. Concrete | Lbs. Re-bars | No. ½" K2 bars | Length | Revised Lb. Rebar |
| #1 | 1307.55 | 1304.55 | 1297.55 | 1294.55 | 40 | 120 | 2 | 26'6 | 8 | ~~3'6~~ | 51 | 10'6 | 26 | ~~5'0~~ | 10 | 406 | 810 | 49.62 | ~~2351~~ | 13 | 4 | 30'0 | 1928.3 |
| #2 | 1307.70 | 1304.70 | 1294.70 | 1291.70 | 40 | 120 | 2 | 26'6 | 8 | ~~3'10~~ | 51 | 13'6 | 32 | ~~5'0~~ | 10 | 0 | -- | 59.73 | ~~2854~~ | 16 | 4 | 30'0 | 2146.7 |
| #3 | 1308.53 | 1305.53 | 1289.53 | 1286.53 | 40 | 120 | 2 | 26'6 | 8 | ~~3'6~~ | 51 | 19'6 | 44 | ~~5'0~~ | 0 | 0 | -- | 80.13 | ~~3259~~ | 22 | 4 | " | 2583.6 |
| #4 | 1308.58 | 1305.58 | 1290.58 | 1287.58 | 40 | 120 | 2 | 26'6 | 8 | ~~3'10~~ | 51 | 18'6 | 42 | ~~5'0~~ | 0 | 0 | -- | 76.14 | ~~3158~~ | 21 | 4 | " | 2510.8 |
| #5 | 1308.58 | 1305.58 | 1291.58 | 1288.58 | 40 | 120 | 2 | 26'6 | 8 | ~~3'10~~ | 51 | 17'6 | 40 | ~~5'0~~ | 0 | 406 | --" | 73.35 | ~~3060~~ | 20 | 4 | " | 2437.9 |
| #6 | 1308.53 | 1303.53 | 1291.53 | 1288.53 | 40 | 120 | 2 | 26'6 | 8 | ~~3'10~~ | 51 | 17'6 | 40 | ~~5'0~~ | 0 | 0 | -- | 73.35 | ~~3060~~ | 20 | 4 | " | 2437.9 |
| #7 | 1307.70 | 1304.70 | 1290.70 | 1287.70 | 40 | 120 | 2 | 26'6 | 8 | ~~3'10~~ | 51 | 17'6 | 40 | ~~5'0~~ | 10 | 0 | -- | 73.35 | ~~3060~~ | 20 | 4 | " | 2437.9 |
| #8 | 1307.55 | 1304.55 | 1293.55 | 1290.55 | 40 | 120 | 2 | 26'6 | 8 | ~~3'10~~ | 51 | 14'6 | 34 | ~~5'0~~ | 10 | 406 | -- | 63.18 | ~~2750~~ | 18 | 4 | " | 2219.5 |
| | | | | | | | | | | | | | | | TOTALS | | | | | | | | 18,702.6 |

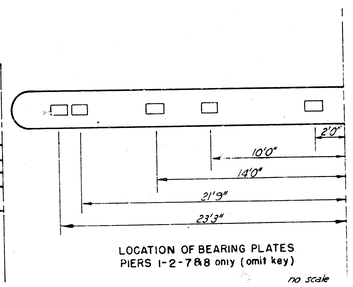
GENERAL NOTES

Class A (AE) Concrete shall be used thruout. Bevel all exposed edges with a ¾" triangular molding unless otherwise noted.

: All dimensions shown relative to reinforcing steel are to ℄ of bar.




LOCATION OF KEYS
PIERS 3-4-5&6 only
no scale



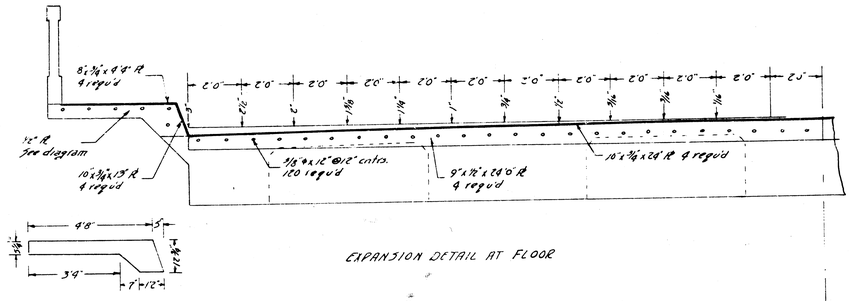

LOCATION OF BEARING PLATES
PIERS 1-2-7&8 only (omit key)
no scale

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

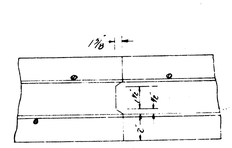
PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
— COUNTY ENGINEER

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

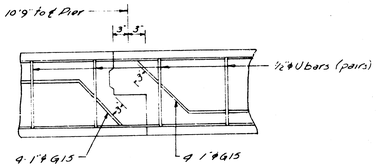
| State | Fiscal Year | Sheet No. | Total Sheets |
|---|---|---|---|
| Kansas | 1950 | 9 | 11 |




EXPANSION DETAIL AT FLOOR

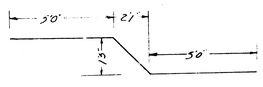



SLAB JOINT

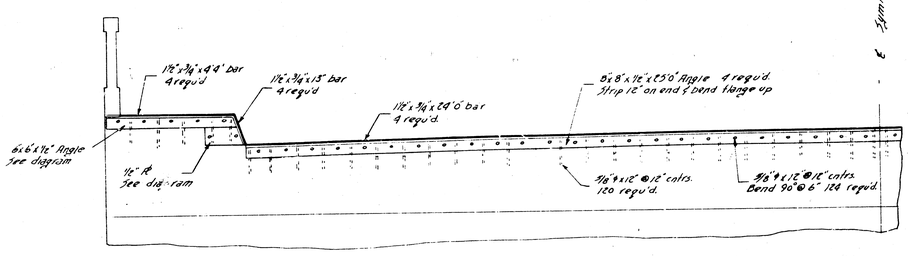



GIRDER JOINT

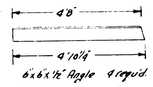
CONSTRUCTION JOINT DETAILS




1"ø Bar G15




EXPANSION DETAIL AT BACKWALL



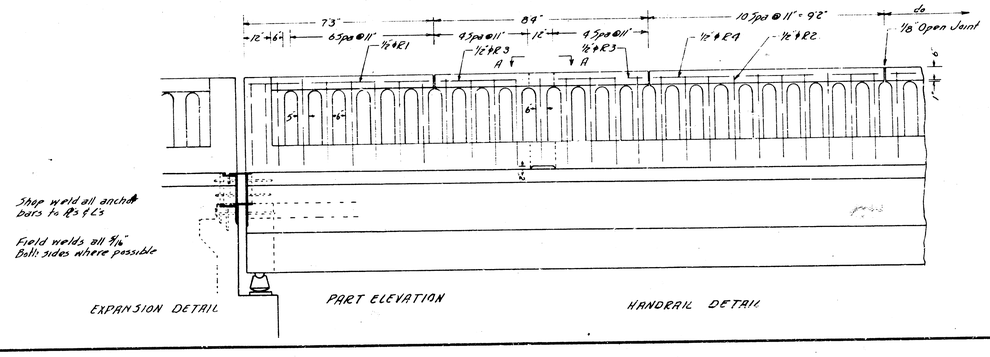

6"x 6"x ½" Angle 4 req'd.




1½" R 4 req'd.




SECTION AA




EXPANSION DETAIL

PART ELEVATION

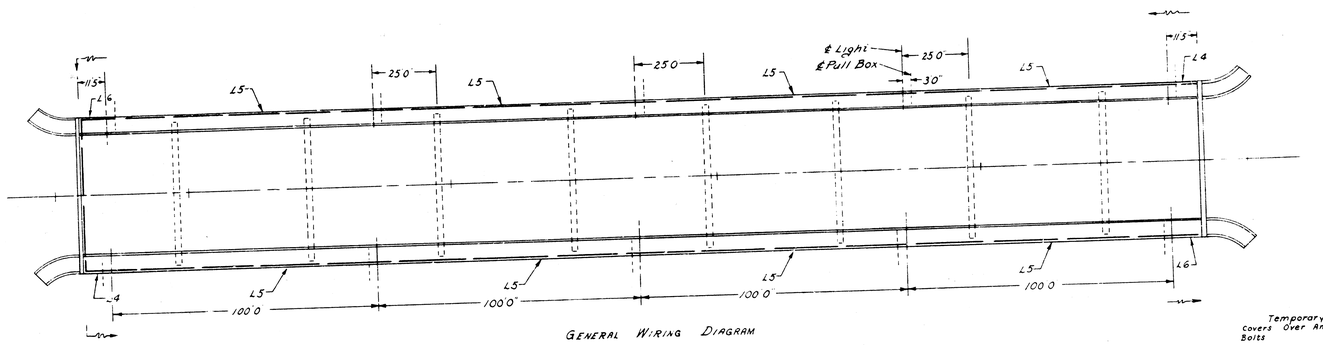
HANDRAIL DETAIL

# AUXILIARY DETAILS
# BRIDGE NO. 616-25-2371

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

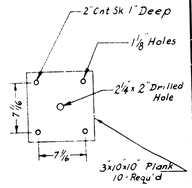
| REVISED | SCALE | DESIGNED | TRACED | CHECKED | SHEET NO. |
|---|---|---|---|---|---|
| | 1"=2'0" | M.E.S. | M.E.S. | | |
| | DATE | | | | |
| | PLANFILE | | TOTAL SHEETS | | |

| State | Fiscal Year | Sheet No. | Total Sheets |
|---|---|---|---|
| Kansas | 1950 | 10 | 11 |

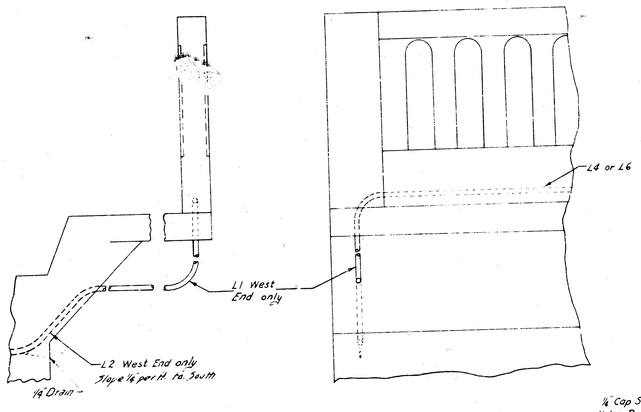



GENERAL WIRING DIAGRAM

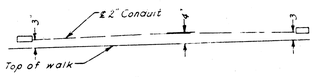





Temporary Covers Over Anchor Bolts



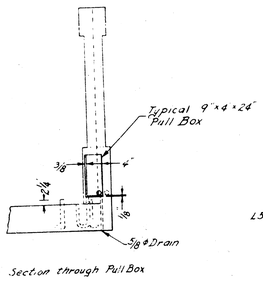

DETAIL AT ENDS OF BRIDGE



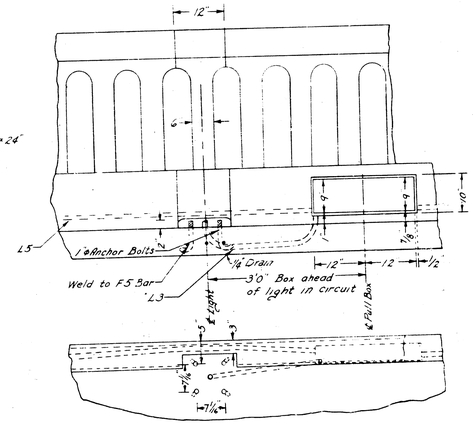

Typical Slope of Conduit between Pull Boxes

| CONDUIT TABLE | | | |
|---|---|---|---|
| Symbol | No | Length | Total Lgth |
| L1 | 2 | 4 1½ | 8'3 |
| L2 | 1 | 53 4½ | 53' 4½" |
| L3 | 10 | 1 10½ | 18' 9" |
| L4 | 2 | 8' 1½ | 16' 3" |
| L5 | 8 | 100' 2 | 801' 9" |
| L6 | 2 | 14 1½ | 28' 3" |
| | | Total | 928' 2½ |

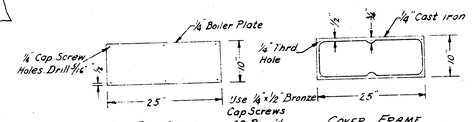
All conduit 2" non metallic




Section through Pull Box

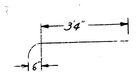



DETAIL AT PULL BOX AND LIGHT

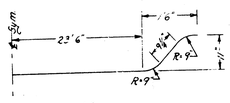



PULL BOX COVER 10 Req'd

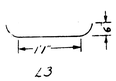
COVER FRAME 10 Req'd



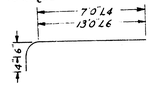

L1

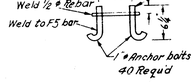



L2




L3



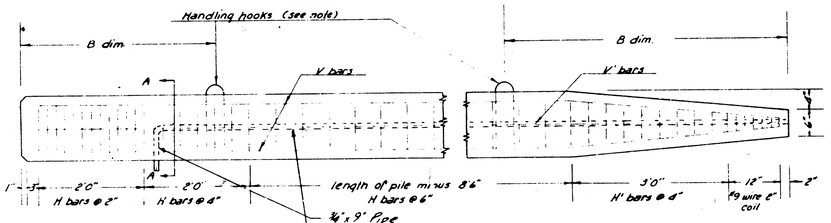

# LIGHTING DETAILS
# BRIDGE NO. 616-25-2371

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

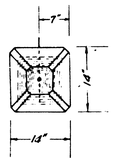
| REVISED | SCALE | DESIGNED | TRACED | CHECKED | SHEET NO. |
|---|---|---|---|---|---|
| | | M.E.S. | C.D.H. | | |
| | DATE | 10-50 | 11-25-50 | | |
| | PLANFILE | | TOTAL SHEETS | | |

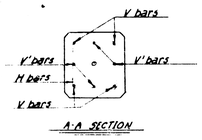
| State | | Fiscal Year | Sheet No | Total Sheets |
|---|---|---|---|---|
| Kansas | | 1950 | 11 | 11 |

## PLAN VIEW



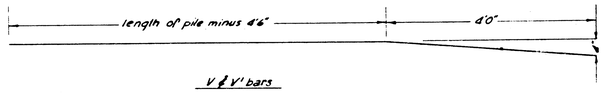

Note: Handling hooks are to be 1'-2'9" rebars with loops large enough to accomodate attaching hooks.



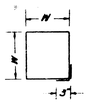




A-A SECTION

## BENDING DIAGRAM




V & V' bars




W dim. in H bars = 10" in H' bars decrease by decrements of 4"

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 attained 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 4 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

| 20'6" PILE | | | | | 32'6" PILE | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Bar | V | V' | H | H' | Bar | V | V' | H | H' |
| Number | 4 | | 43 | 9 | Number | 4 | | 67 | 9 |
| Size | #6 | | #4 | #6 | Size | #6 | | #4 | #6 |
| Length | 20'0" | | 4'0" | Var. | Length | 32'0" | | 4'0" | Var. |
| B dim. | 6'3" | | | | B dim. | 6'9" | | | |
| Total Steel | 1584# | | | | Total Steel | 3038# | | | |
| Concrete | 1.04 Cu Yds. | | | | Concrete | 1.65 Cu Yds. | | | |

| 24'6" PILE | | | | | 36'6" PILE | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Bar | V | V' | H | H' | Bar | V | V' | H | H' |
| Number | 4 | | 51 | 9 | Number | 4 | | 75 | 9 |
| Size | #6 | | #4 | #6 | Size | #6 | | #4 | #6 |
| Length | 24'0" | | 4'0" | Var. | Length | 36'0" | | 4'0" | Var. |
| B dim. | 5'1" | | | | B dim. | 7'7" | | | |
| Total Steel | 1874# | | | | Total Steel | 3334# | | | |
| Concrete | 1.25 Cu Yds. | | | | Concrete | 1.86 Cu Yds. | | | |

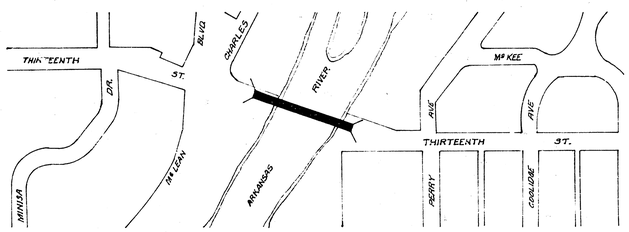
| 28'6" PILE | | | | | 40'6" PILE | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Bar | V | V' | H | H' | Bar | V | V' | H | H' |
| Number | 4 | | 59 | 9 | Number | 4 | 4 | 83 | 9 |
| Size | #6 | | #4 | #6 | Size | #6 | #6 | #4 | #6 |
| Length | 28'0" | | 4'0" | Var. | Length | 40'0" | 40'0" | 4'0" | Var. |
| B dim. | 5'11" | | | | B dim. | 8'5" | | | |
| Total Steel | 2174# | | | | Total Steel | 4154# | | | |
| Concrete | 1.45 Cu Yds. | | | | Concrete | 2.06 Cu Yds. | | | |

# CONCRETE PILING 14" X 14"

PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
H.J. GREELEY ——— COUNTY ENGINEER

| REVISED | SCALE | DESIGNED | TRACED | CHECKED | SHEET NO |
|---|---|---|---|---|---|
| | 1"=1'0" | Baskett | Marion | T.L.G. | |
| | DATE | 12-47 | | 2-7-47 | |
| | 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:

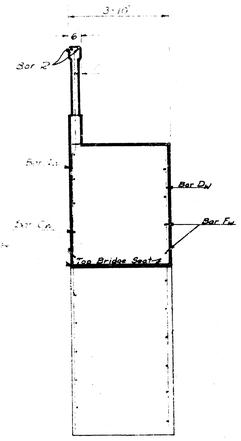
1. THE LUMP SUM BID ITEM OF "ABUTMENT REPAIR" SHALL INCLUDE ALL COSTS OF:
   A. REMOVAL & RECONSTRUCTION OF WEST ABUTMENT & WINGWALLS AS DETAILED.
   B. REMOVAL & REPLACEMENT OF CONCRETE PAVEMENT, CONCRETE CURBS, & CONCRETE SIDEWALK.
   C. REPAIR OF EAST ABUTMENT PARAPET WALL.
   D. EXCAVATION & COMPACTION OF EMBANKMENT AS REQUIRED.
   E. INSTALLATION OF 5" NEOPRENE CELL EXPANSION DEVICE.
   F. REMOVAL & REPLACEMENT OF BRIDGE ROCKERS & ROCKER PLATES AT BOTH ABUTMENTS.
   G. EPOXY REPAIR OF THE FRACTURES IN THE WEST ABUTMENT BELOW THE BRIDGE SEAT.
2. LOADING H-20-44 A.A.S.H.O. DESIGN STRESS $f_s$ 20,000 psi. $f'_c$ 3000 psi n = 9. CLASS A-AE CONCRETE TO BE USED THROUGHOUT. BEVEL ALL EXPOSED EDGES WITH ¾" Δ MOULDING UNLESS OTHERWISE NOTED.
3. 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 CONTRACTORS EXPENSE.
4. 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.)
5. SHOP PAINTING OF ALL STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN SECTIONS F2-5(a), Q, & $Q_2$ OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION".
6. FIELD PAINTING OF ALL STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN SECTION F2-6(e) OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION."
7. ALL STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN SECTION U5-2 OF THE "STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF KANSAS 1966 EDITION."
8. 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."
9. 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.
10. 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."
11. CONTRACTOR TO BLOCK OUT FOR PROPOSED ELECTRICAL CONDUITS AT WEST ABUTMENT. CONTRACTOR TO CONTACT KANSAS GAS & ELECTRIC COMPANY FOR LOCATION OF CONDUITS.



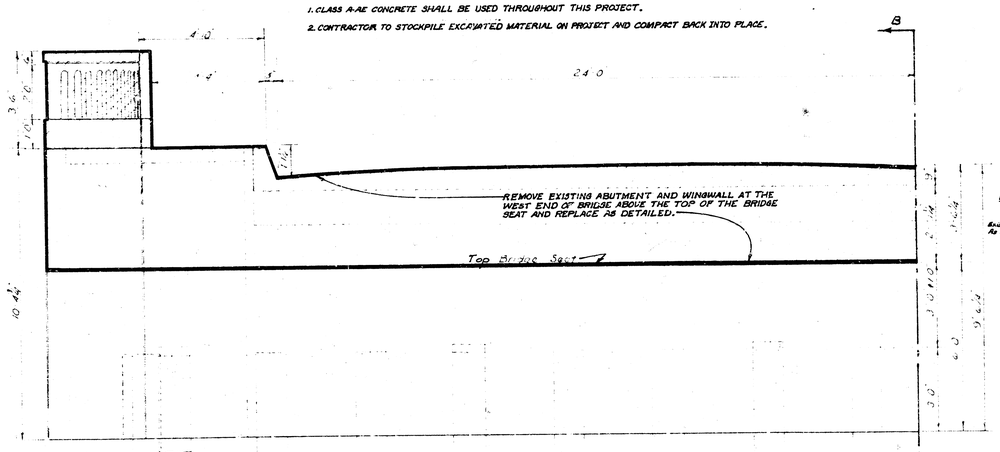



1. CLASS A-AE CONCRETE SHALL BE USED THROUGHOUT THIS PROJECT.

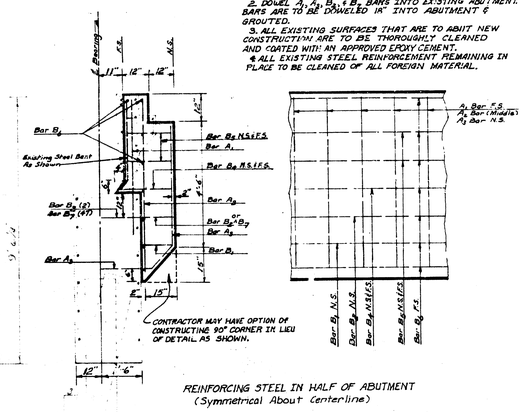
2. CONTRACTOR TO STOCKPILE EXCAVATED MATERIAL ON PROJECT AND COMPACT BACK INTO PLACE.




Sec A-A



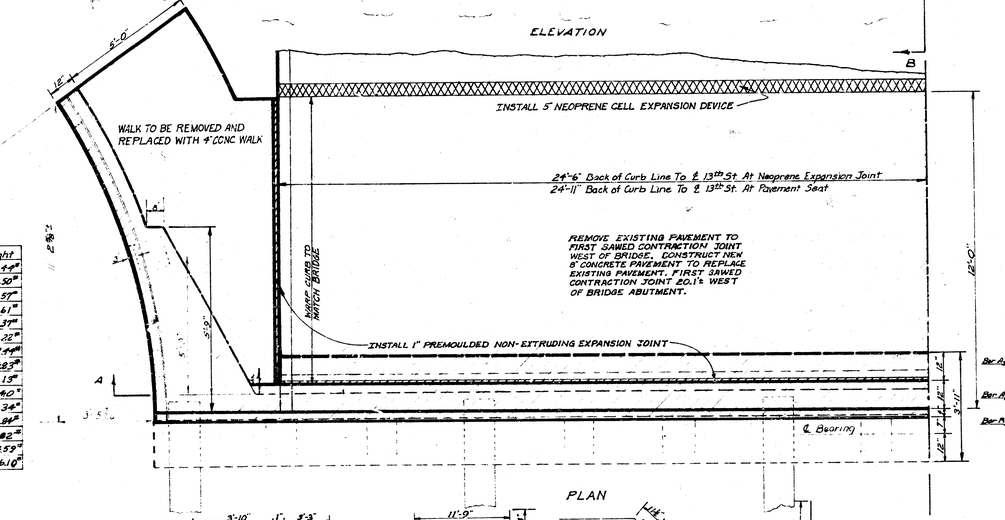

NOTES:
1. ALL VERTICAL REINF. STEEL IN THE WINGWALLS & PARAPET WALL IS TO BE SAWED TO TIE THE REINF. STEEL TOO IN THE NEW CONSTRUCTION.
2. DOWEL $A_1$, $A_2$, $B_1$, & $B_2$ BARS INTO EXISTING ABUTMENT. BARS ARE TO BE DOWELED 18" INTO ABUTMENT & GROUTED.
3. ALL EXISTING SURFACES THAT ARE TO ABUT NEW 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.







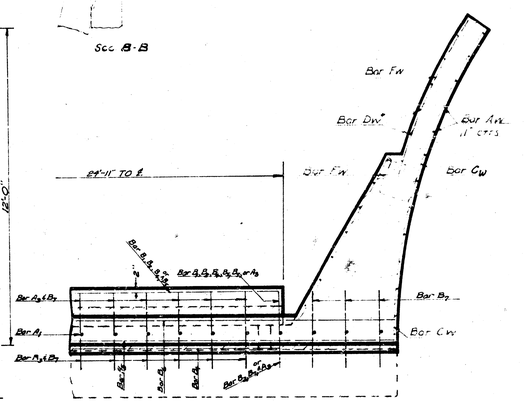
REINFORCING STEEL IN HALF OF ABUTMENT
(Symmetrical About Centerline)



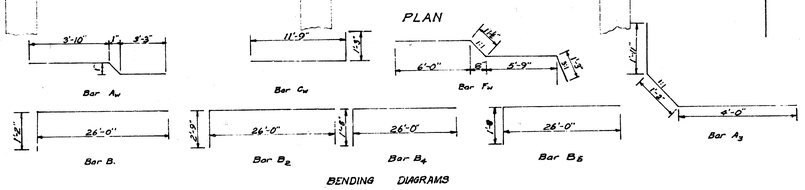

STEEL TABLE
(WEST ABUT.)

| Bar | Space | No. | Size | Length | Weight |
|---|---|---|---|---|---|
| $A_1$ * | 15" | 47 | ⅞" | 4'-8" | 302.44# |
| $A_2$ * | 15" | 40 | ¾" | 6'-2" | 370.50# |
| $A_3$ | 15" | 40 | ¾" | 7'-11" | 430.57# |
| $B_1$ | | 2 | ¾" | 27'-2" | 81.61# |
| $B_2$ | | 2 | ¾" | 28'-9" | 86.37# |
| $B_3$ | | 4 | ¾" | 27'-8" | 166.22# |
| $B_4$ | 12" | 8 | ¾" | 27'-8" | 332.44# |
| $B_5$ * | 12" | 16 | ¾" | 26'-0" | 624.83# |
| $B_7$ * | 15" | 47 | ¾" | 2'-9" | 194.13# |
| R | | 9 | ½" | 11'-9" | 34.40# |
| $A_W$ | 11" | 36 | ½" | 7'-2" | 172.34# |
| $C_W$ | 12" | 10 | ½" | 13'-0" | 86.84# |
| $D_W$ * | 12" | 28 | ½" | 4'-0" | 74.82# |
| $F_W$ | 12" | 8 | ½" | 13'-11½" | 74.53# |
| | | | | Total | 3056.10# |

* INDICATES STRAIGHT BARS



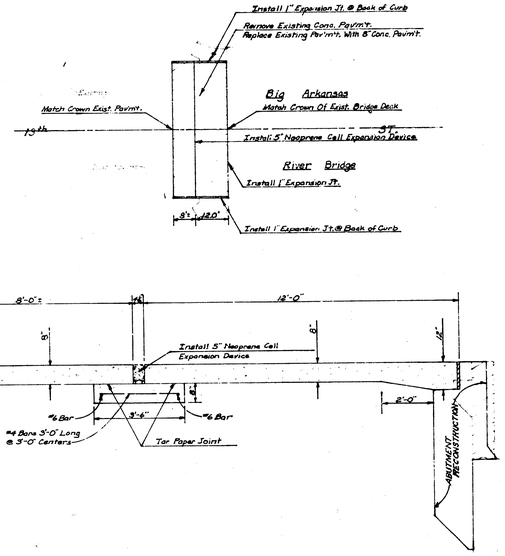

Sec B-B

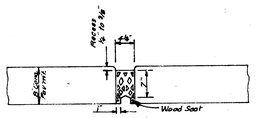



BENDING DIAGRAMS

BRIDGE ABUTMENT REPAIR
PROJ. NO. DAKB 512018

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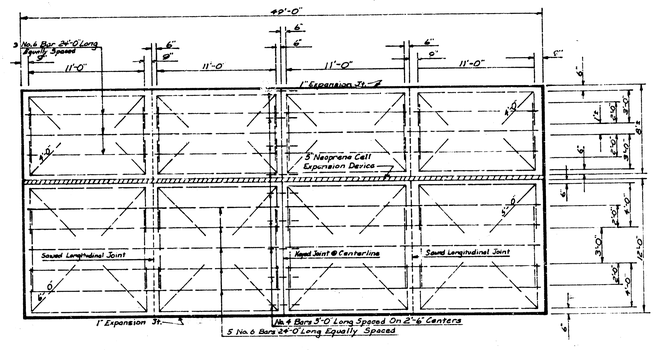


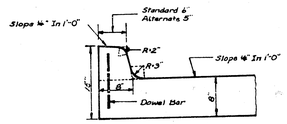

Install 5" Wide Preformed Open Cell Neoprene Joint Seal, Use "H" Series Delastic Bridge Seal Catalog No. H-5000, D.S. Brown Co. Or An Approved Equal.

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

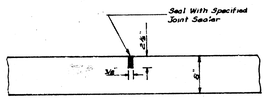



STEEL PATTERN FOR 8" CONCRETE PAVEMENT



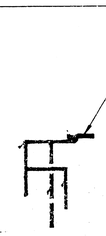

DETAIL OF INTEGRAL CURB

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" Centers.

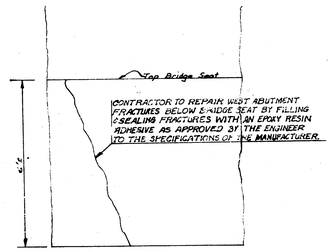



DETAIL OF SAWED LONGITUDINAL JOINT

Contractor To Remove Existing Concrete As Needed To Weld 2½"x ⅜"x 24" (2 Needed) Structural Steel Bar To Existing 1⅝"x ⅜" Structural Steel Bar. Pressure Grout Concrete Under New Bar As Needed To Fill Voids. Use 60" Single-Vee Groove Weld (A.I.S.C. Specifications) To Weld Bars. Bars To Be Welded Such That Top Of New Bar Is On The Same Plane As The Existing Bar.



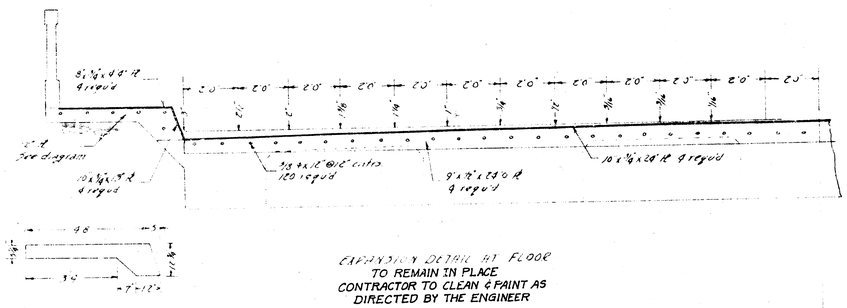
EAST ABUTMENT PARAPET WALL



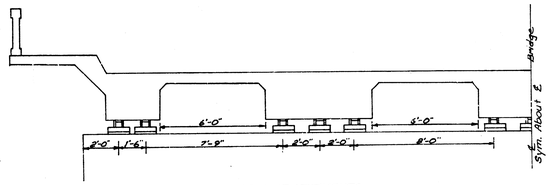

WEST BRIDGE SEAT REPAIR DETAIL

REGISTERED 6363 ARKANSAS

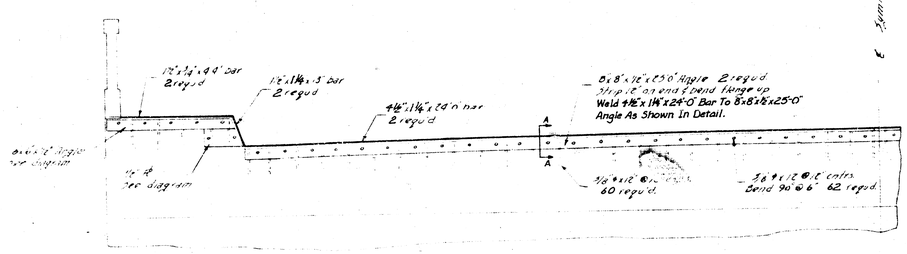
BRIDGE ABUTMENT REPAIR
PROJ. NO. DAKB 572018



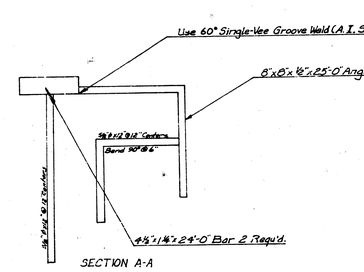

EXPANSION DETAIL AT FLOOR
TO REMAIN IN PLACE
CONTRACTOR TO CLEAN & PAINT AS
DIRECTED BY THE ENGINEER

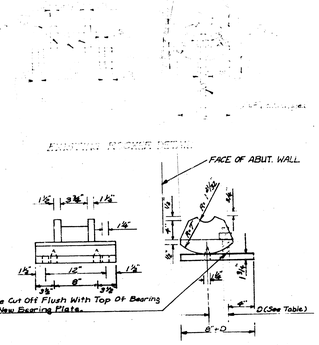



ROCKER DETAIL AT ABUTMENTS
HALF SECTION AT ABUTMENTS
CONTRACTOR SHALL REPLACE ALL ROCKER AND
ROCKER BEARING PLATES AT BOTH ABUTMENTS
AS DETAILED.



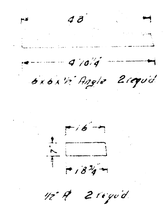

EXPANSION DETAIL AT BACKWALL
CONTRACTOR TO REPLACE EXISTING AS
DETAILED.

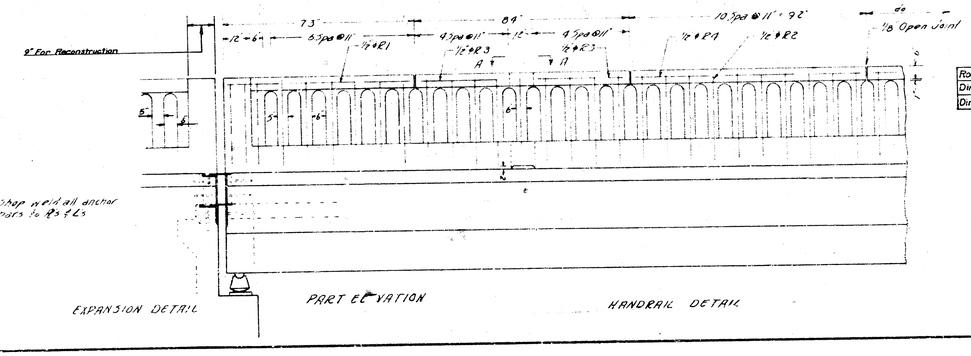



PROPOSED ROCKER DETAIL

| Rocker Number | End | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | End | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimension D (inches) | N | 1 9/16" | 1 9/16" | 1 5/16" | 1 5/16" | 1 1/16" | 1 1/16" | 1 3/16" | 1 3/16" | 1 1/16" | 1 1/16" | 1 3/16" | 1 1/16" | 1 3/16" | S | West Abutment |
| Dimension DX | N | 2 3/16" | 1 7/16" | 2 7/16" | 2 7/16" | 2 7/16" | 2 7/16" | 2 3/16" | 2 1/16" | 2 7/16" | 2 1/16" | 2 3/16" | 2 3/16" | 1 7/16" | S | East Abutment |
| | NORTH | | | | | | | | | | | | | SOUTH | | |




EXPANSION DETAIL PART ELEVATION HANDRAIL DETAIL

BRIDGE ABUTMENT REPAIR
PROJ. NO. DAKB 572018

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LARRY W. LAURSEN 6363 REGISTERED LANDSCAPE ARCHITECT ARIZONA U.S.A.

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