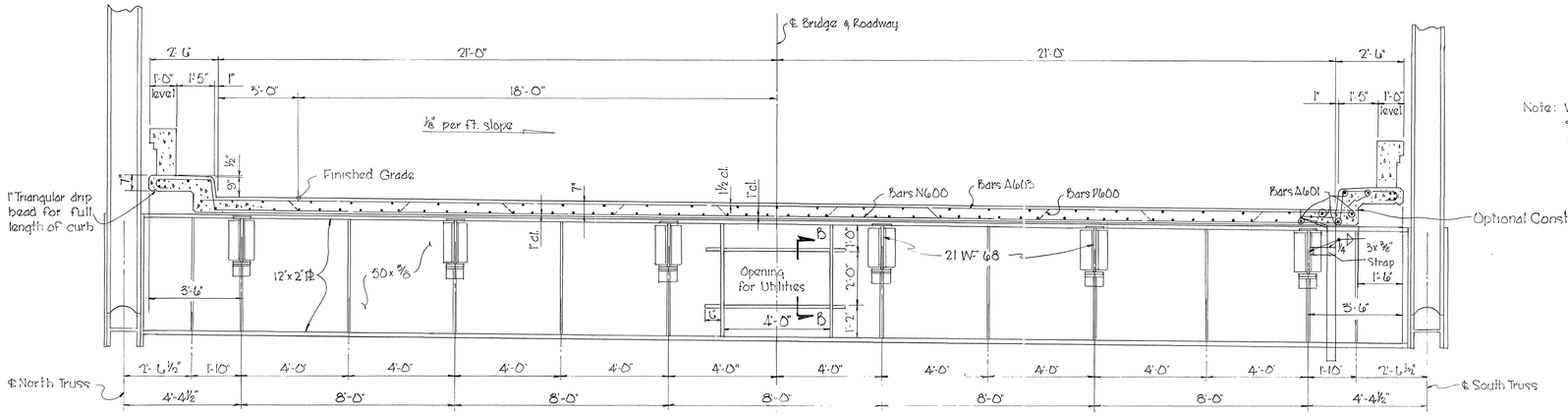
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-159-3207-04	19		

REVISIONS

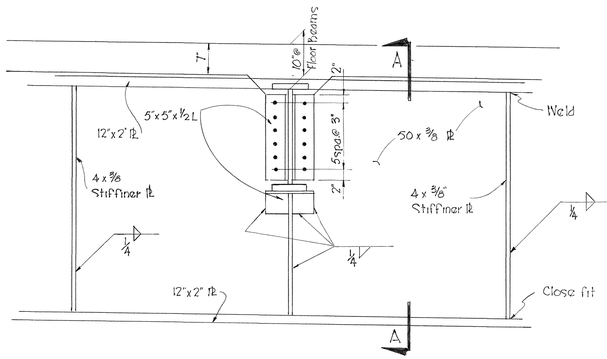
NO.	DATE	BY	BRIEF DESCRIPTION
1	21 Mar 68	JPC	Steel Quant's A602 Bars
2	17 Sept 68	JPC	Added Pay Items for Rock Fill



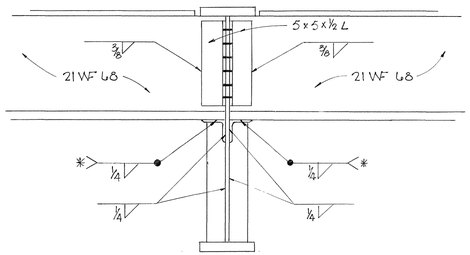
Note: When pouring curb, provisions shall be made for setting steel for parapet.

TYPICAL CROSS SECTION

Looking Forward on Survey

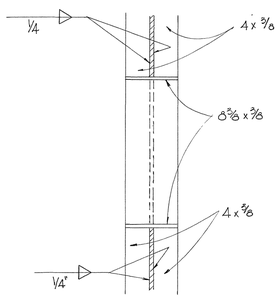


STRINGER CONNECTION

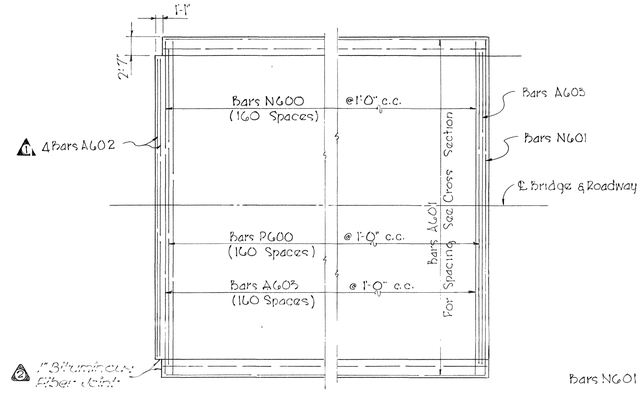


SECTION A-A

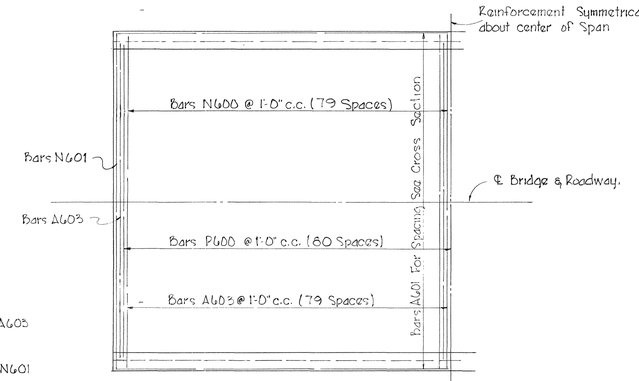
* Field Welding to be completed after bolting of all floor beams and stringers has been completed.



SECTION B-B

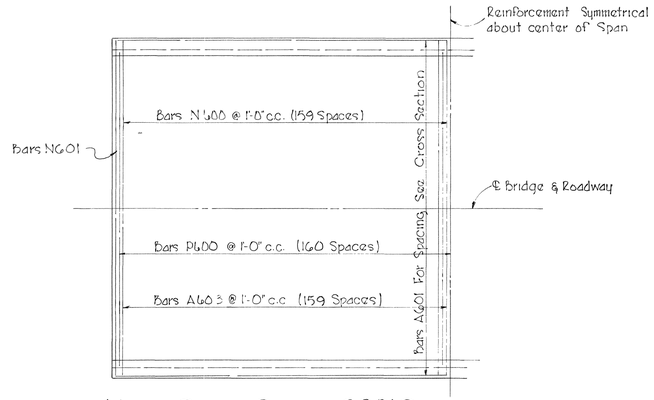


PLAN OF SLAB - SPAN 1



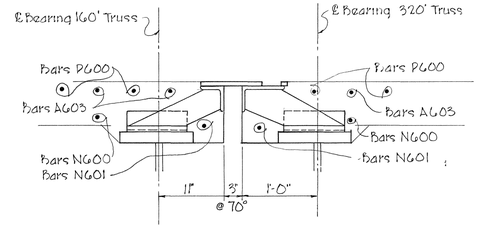
HALF SLAB PLAN - 160' SPAN

SPAN 3

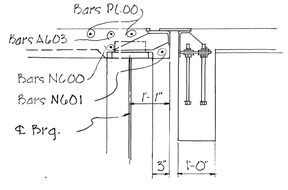


HALF SLAB PLAN - 320' SPAN

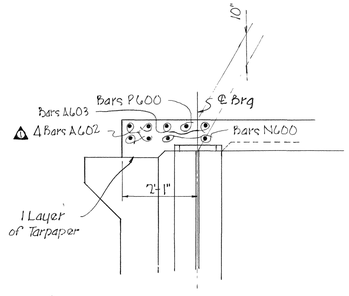
SPAN 2



DETAIL @ PIERS 1 & 2



DETAIL @ PIER 3



DETAIL @ ABUT. 1

ESTIMATED QUANTITIES

Class 'A' Concrete 704.6 C.Yds.
Reinforcing Steel 228,841 Lbs.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

SUPERSTRUCTURE DETAILS

STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY R. Dishner DATE Sept. '67
DRAWN BY R. Chester DATE Sept. '67
TRACED BY DATE
CHECKED BY DATE

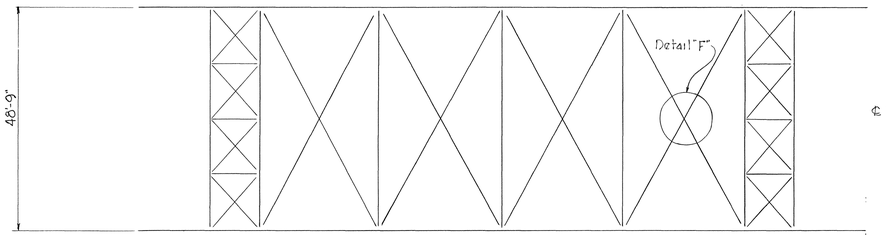
CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

K-72-13

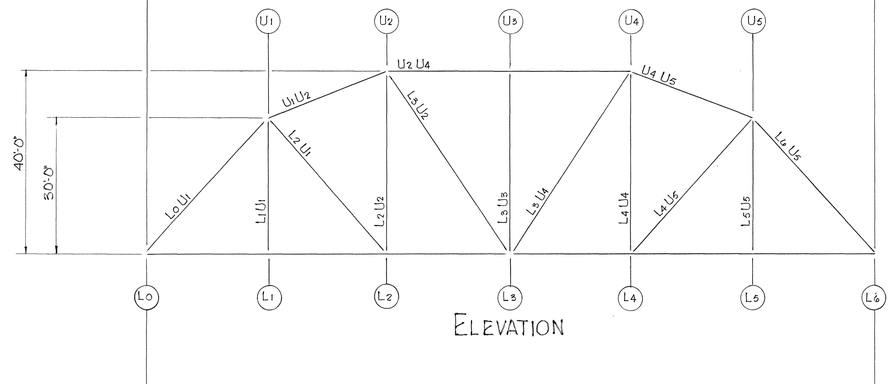
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	19159-3207-04	19		

REVISIONS

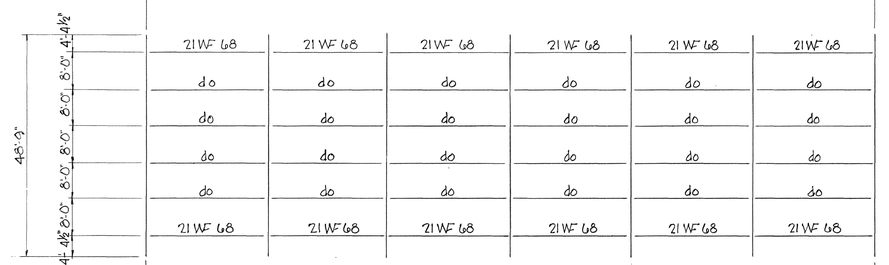
NO.	DATE	BY	BRIEF DESCRIPTION



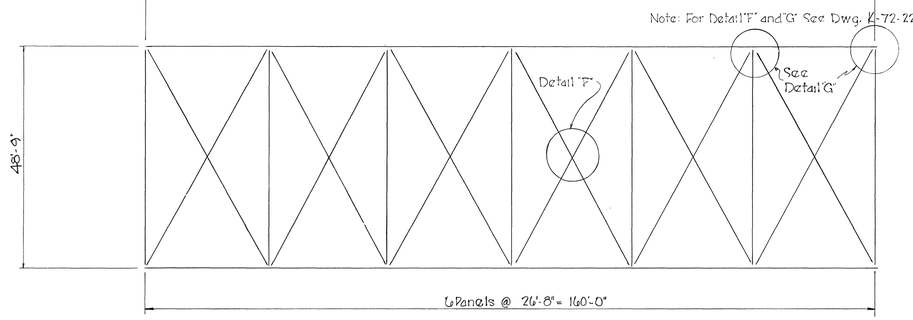
PLAN OF TOP CHORD BRACING



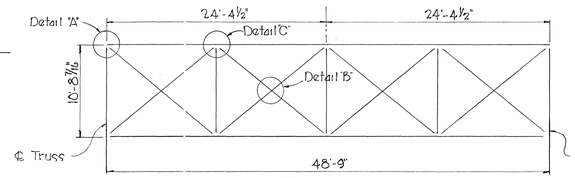
ELEVATION



PLAN OF STRINGERS & FLOOR BEAMS



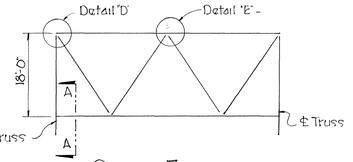
PLAN OF BOTTOM CHORD BRACING



PORTAL

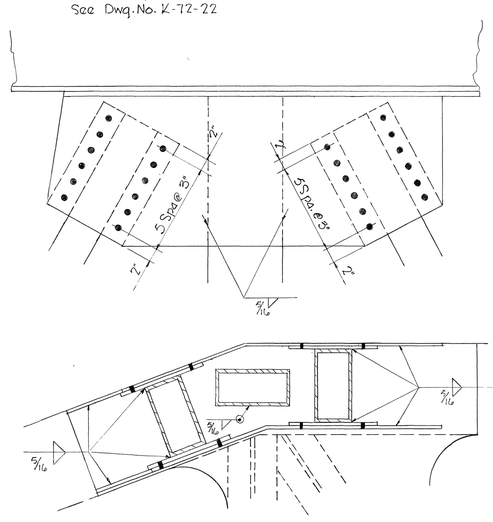
Typical @ Each End

For Details 'A','B' & 'C'
See Dwg. No. K-72-22



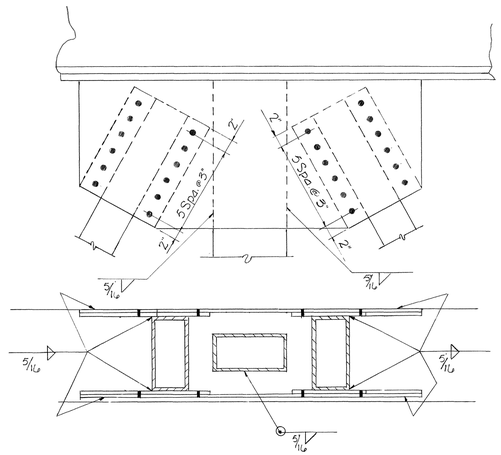
SWAY FRAME

For Details 'D' & 'E' also Section A-A
See Dwg. No. K-72-22



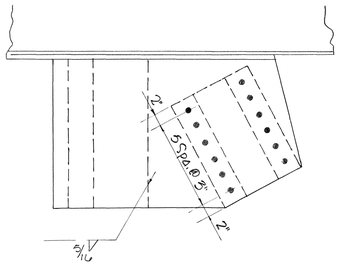
SWAY FRAME CONNECTION @ U2 & U4

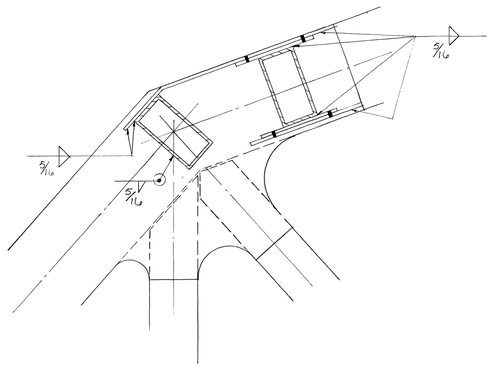
Similar for Connections @ U10, U12, U14, & U16



SWAY FRAME CONNECTION @ U3

Similar for Connections @ U9, U11, U13, U15, & U17





PORTAL CONNECTION @ U1 & U5

Similar for Connections @ U8 & U18

NOTES:

Structural Steel: To be ASTM A36 unless otherwise noted.

Welding: AWS Current Specifications and Special Provisions Regarding Welded Structures. The Cost of Radiographic and Magnetic Partical Inspection is to be included in the price bid for structural steel.

Field Connections: Shall be ⅞ ϕ high tensile strength bolts ASTM A325 unless otherwise shown. See AASHO Specifications Art. 2.10.20. All field connections are of the friction type.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

TRUSS GEOMETRY SPANS 1 & 3

STATE ROUTE 45 OVER CUMBERLAND RIVER

STATION 118+12.00

DAVIDSON COUNTY

1967

CORRECT _____ BRIDGE ENGINEER

APPROVED _____ STATE HIGHWAY ENGINEER

K-72-14

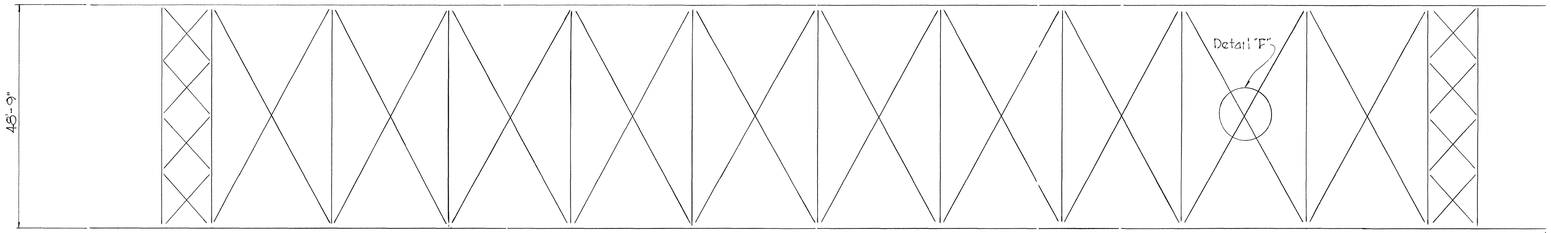
DESIGNED BY R. Dishner DATE Sept. 1967
DRAWN BY R. Chester DATE Sept. 1967
TRACED BY _____ DATE _____
CHECKED BY _____ DATE _____

MICROFILMED

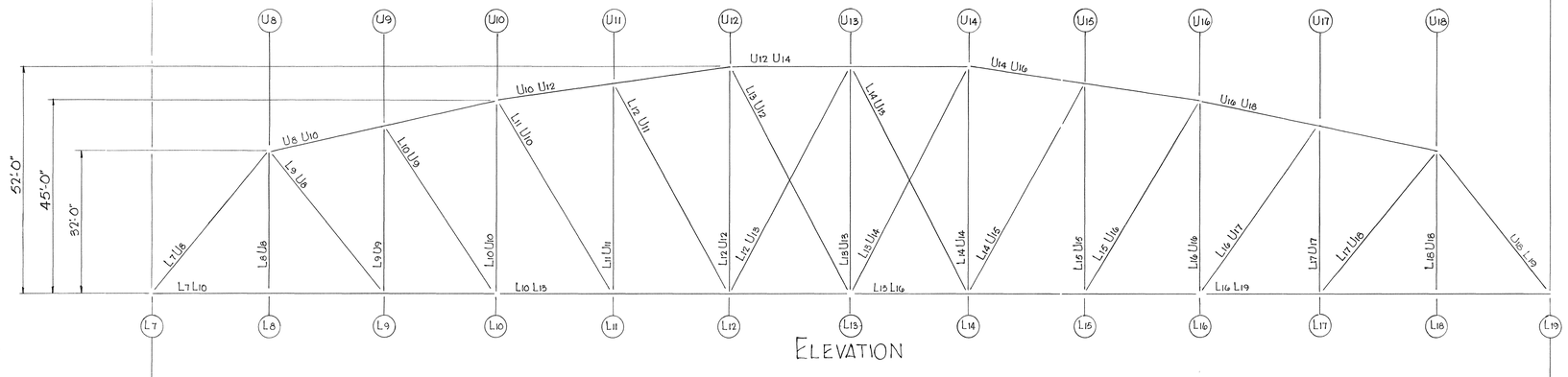
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	1958-3207-04	19		

REVISIONS

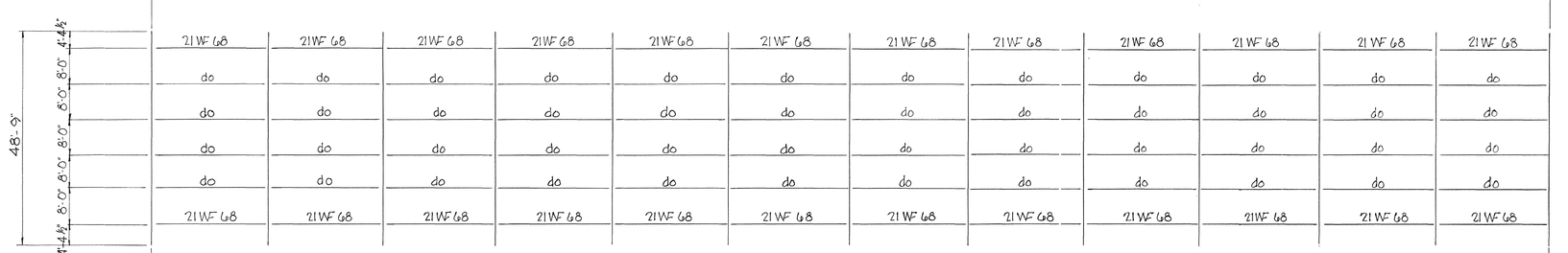
NO.	DATE	BY	BRIEF DESCRIPTION



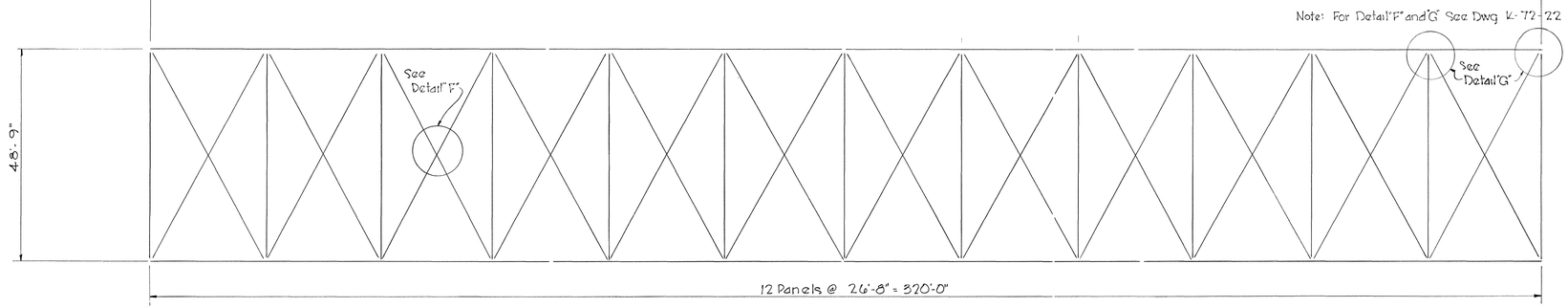
PLAN OF TOP CHORD BRACING



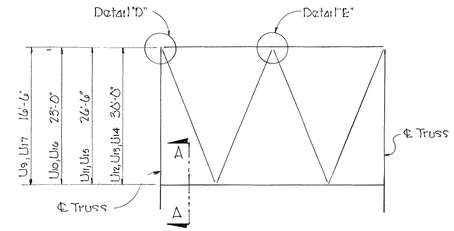
ELEVATION



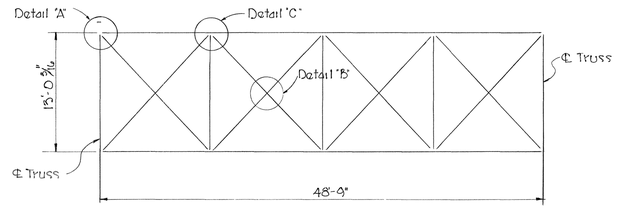
PLAN OF STRINGERS & FLOOR BEAMS



PLAN OF BOTTOM CHORD BRACING



SWAY FRAME
For Details 'D' & 'E', also Section A-A
See Dwg. No. K-72-22



PORTAL
Typical @ Each End
For Details A, B, & C see Dwg No K-72-22

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

TRUSS GEOMETRY SPAN 2
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY R. Dishner DATE
DRAWN BY R. Chester DATE Sept. 1967
TRACED BY DATE
CHECKED BY DATE

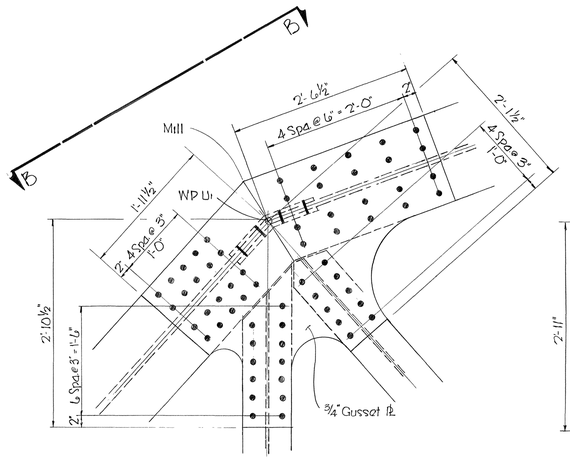
CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

K-72-15

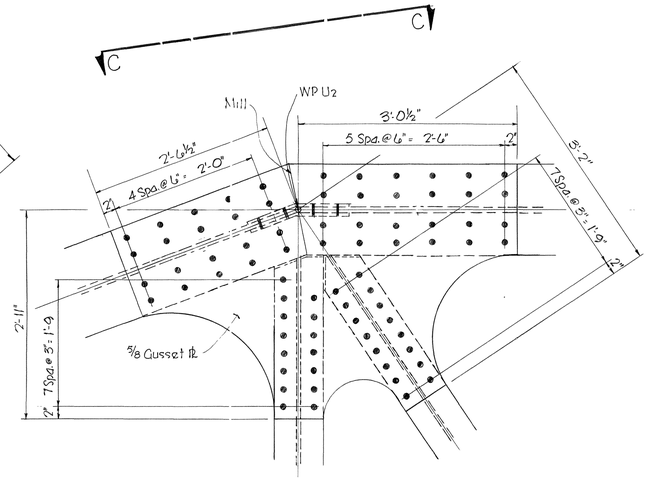
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	IR-59-3207-04	19		

REVISIONS

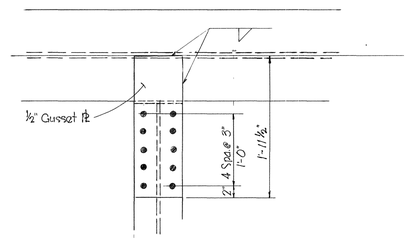
NO.	DATE	BY	BRIEF DESCRIPTION



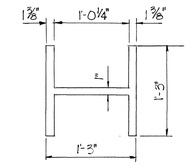
U1
Similar @ U5



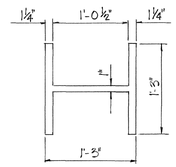
U2
Similar @ U4



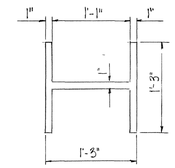
U3



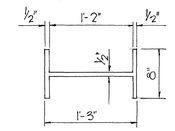
L0 U1 & U5 L6



U1 U2, U2 U4 & U4 U5

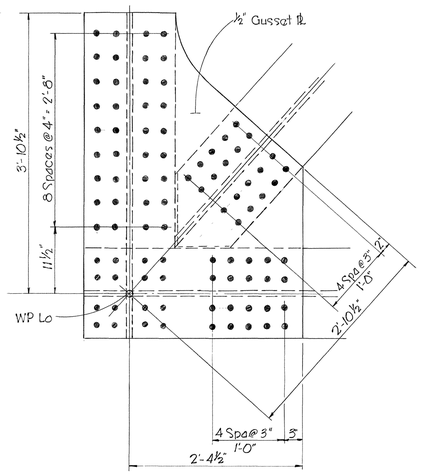


L0 L3 & L3 L6 & Vertical at L0 & L6

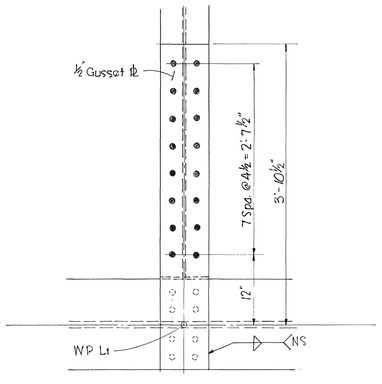


Verticals & Diagonals

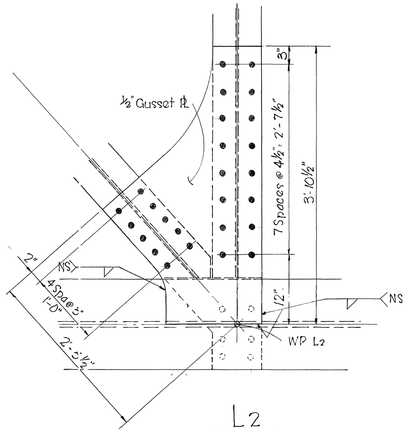
TRUSS MEMBER SECTIONS



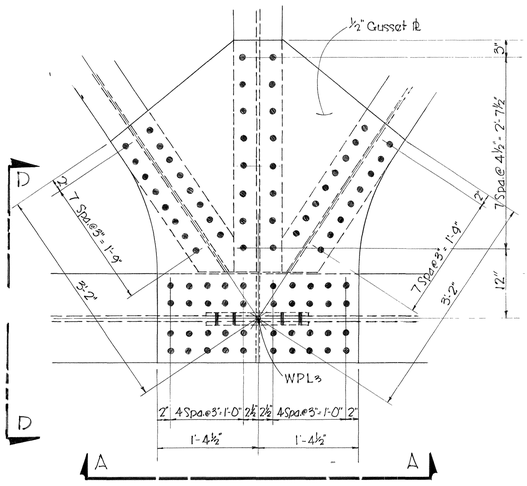
L0
Similar @ L6



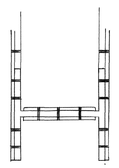
L1
Similar @ L5



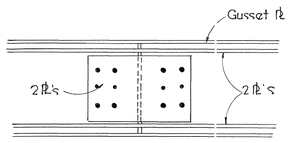
L2
Similar @ L4



L3



SECTION D-D



SECTION A-A
Similar for Sections B-B & C-C

Note: For Size of Weld not noted see Dwg. K-72-22

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

TRUSS CONNECTIONS
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY	R. Dishner	DATE	Sept. '67
DRAWN BY	R. Chester	DATE	Sept. '67
TRACED BY		DATE	
CHECKED BY		DATE	

CORRECT _____ BRIDGE ENGINEER

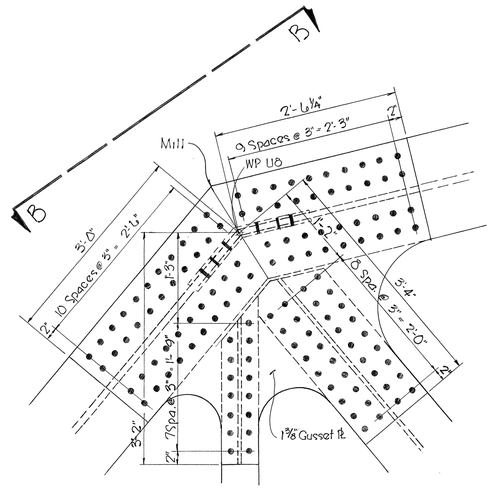
APPROVED _____ STATE HIGHWAY ENGINEER

K-72-16

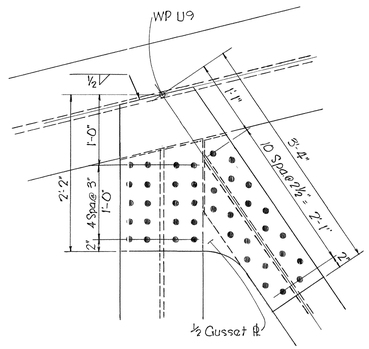
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	1959-3207-04	19		

REVISIONS

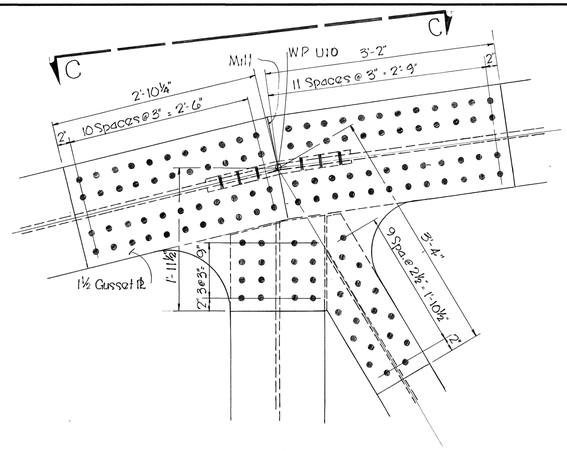
NO.	DATE	BY	BRIEF DESCRIPTION



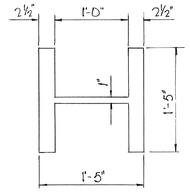
U8
Similar to U18



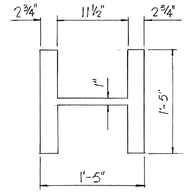
U9
Similar to U17



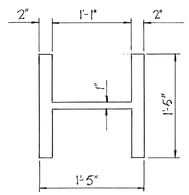
U10
Similar to U16



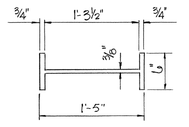
L7 U8 & U18 L19



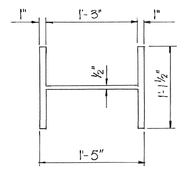
U8 U10 & U16 U18



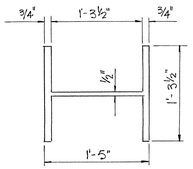
L7 L10 & L16 L19
& Verticals @ L7 & L19



U8 L8 & U18 L18

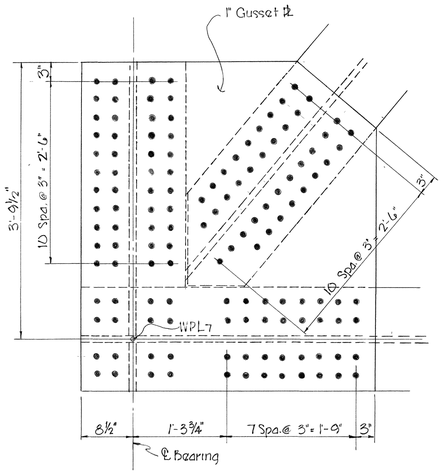


U9 L9 & U17 L17

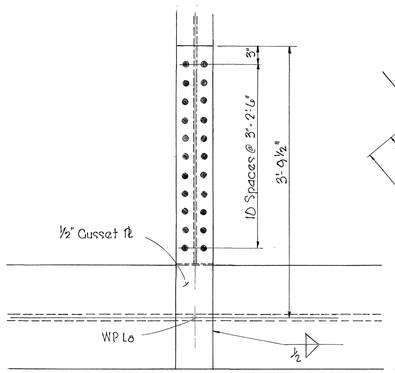


U10 L10 & U16 L16

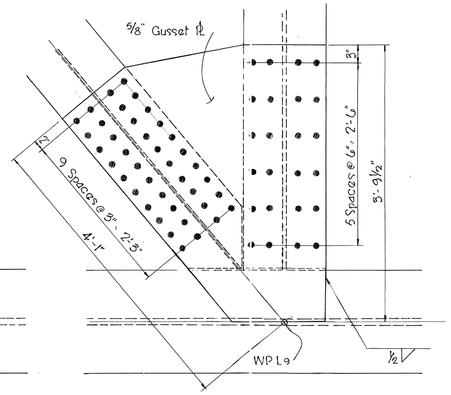
TRUSS MEMBER SECTIONS



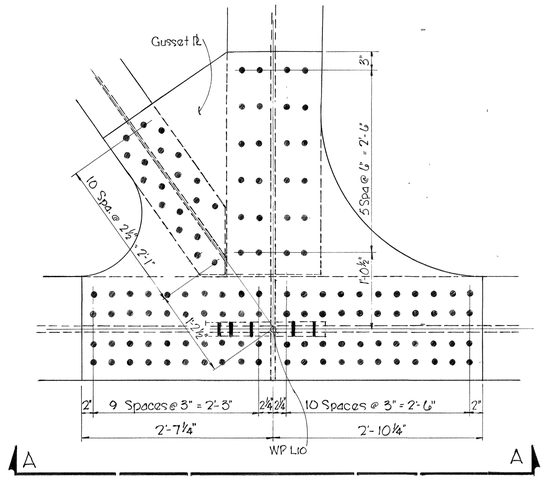
L7
Similar to L19



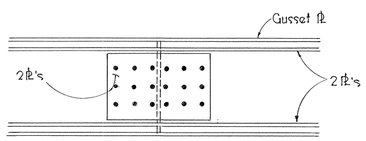
L8
Similar to L18



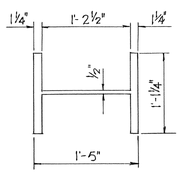
L9
Similar to L17



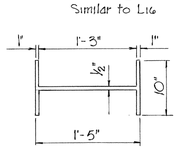
L10
Similar to L16



SECTION A-A
Similar for Sections B-B & C-C



U8 L9 & L17 U18



U9 L10 & U10 L11
L16 U17 & L15 U16

TRUSS MEMBER SECTIONS

Note: For Size of welds not noted see Dwg. K-72-22

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

TRUSS CONNECTIONS
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY R. Dishner DATE Sept. '67
DRAWN BY R. Chester DATE Sept. '67
TRACED BY DATE
CHECKED BY DATE

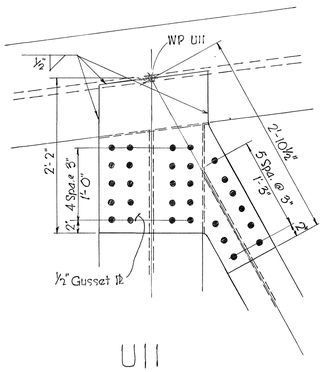
CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

K-72-17

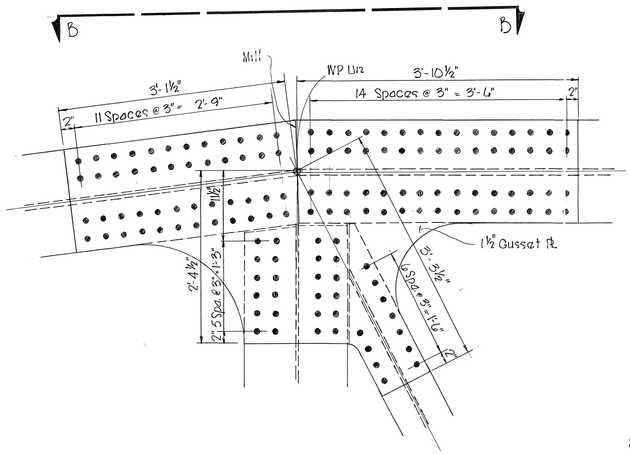
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	19159-3207-04	19		

REVISIONS

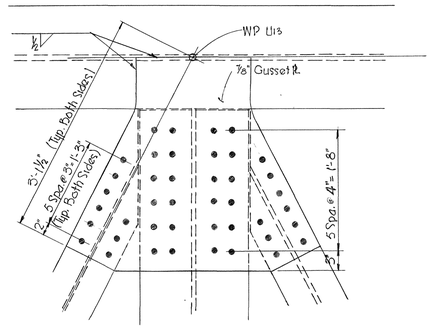
NO.	DATE	BY	BRIEF DESCRIPTION



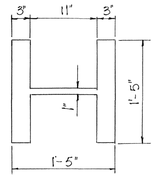
U11
Similar to U15



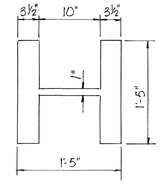
U12
Similar to U14



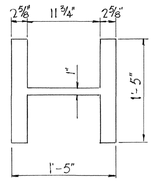
U13



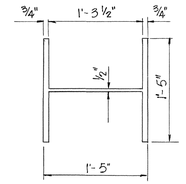
U10 U12 & U14 U16



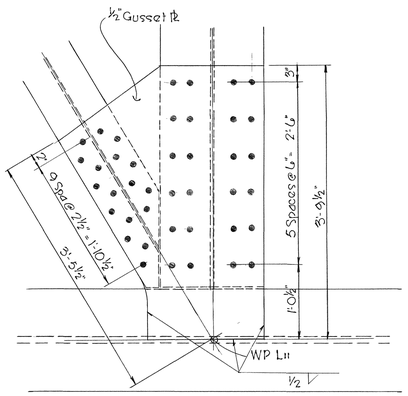
U12 U14



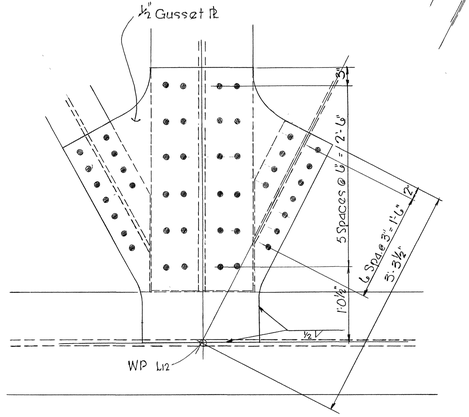
L10 L13 & L12 L16



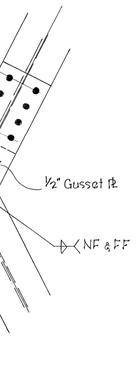
U11 L11 & U12 L12
U14 L14 & U15 L15

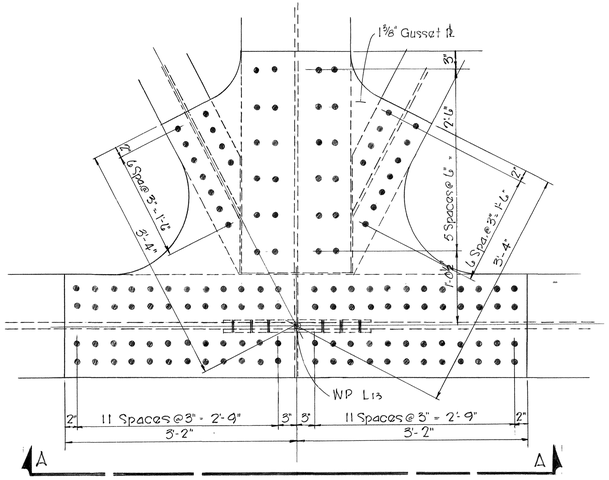


L11
Similar to L8



L12
Similar to L7





Note: For Sections A-A & B-B
See Dwg No.

L13

Note: For Size of Welds not noted see Dwg. K-72-22

TRUSS MEMBER SECTIONS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

TRUSS CONNECTIONS
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY	R. Dishner	DATE	Sept. '67
DRAWN BY	R. Chester	DATE	Sept. '67
TRACED BY		DATE	
CHECKED BY		DATE	

CORRECT _____ BRIDGE ENGINEER

APPROVED _____ STATE HIGHWAY ENGINEER

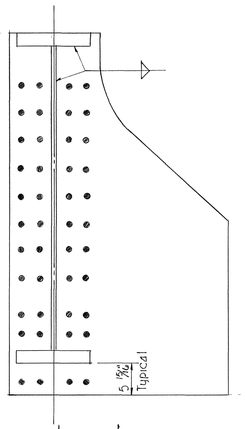
K-72-18

MICROFILMED

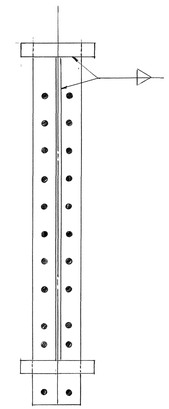
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	19159-3207-04	19		

REVISIONS

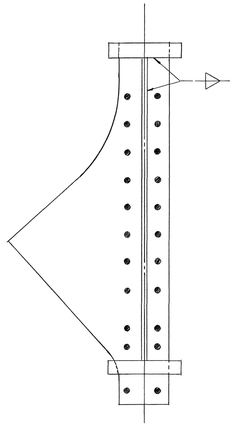
NO.	DATE	BY	BRIEF DESCRIPTION



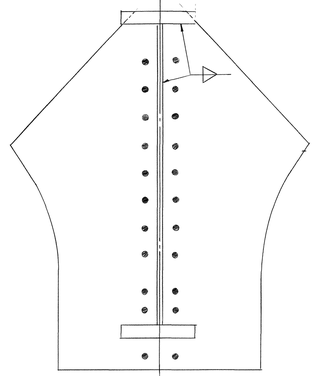
@ L0 & L6



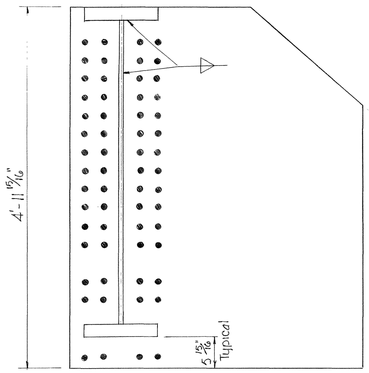
@ L1 & L5



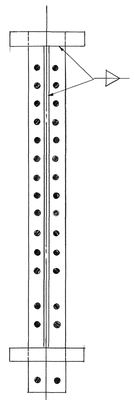
@ L2 & L4



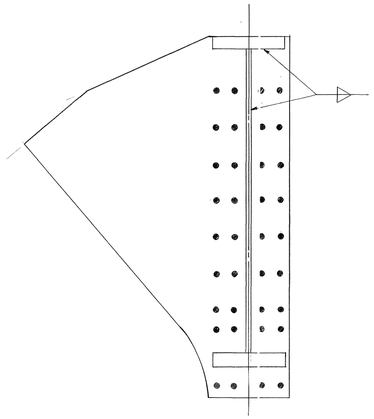
@ L3



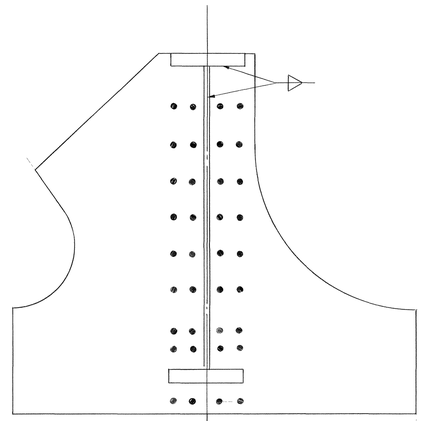
@ L7 & L19



@ L8 & L18



@ L9 & L17



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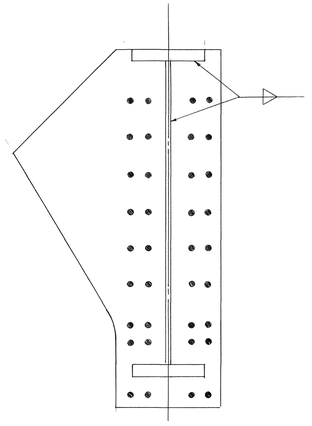
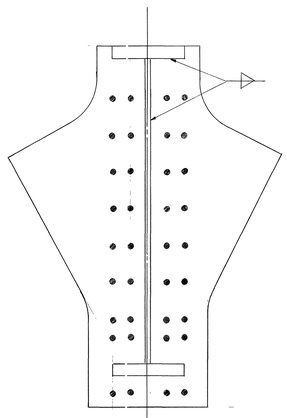
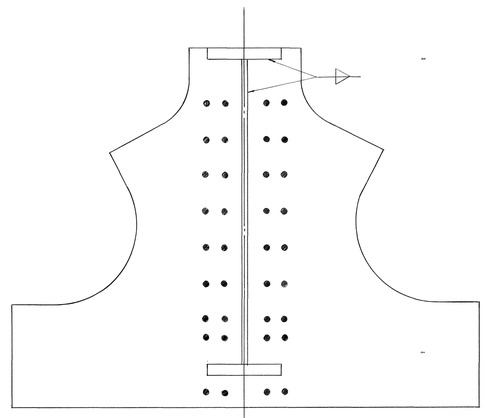


@ L11 & L15



@ L12 & L14



@ L13

Note: For Weld Sizes see Table of Weld Sizes on Dwg. K-72-22

GUSSET PLATE DETAILS FOR ROADWAY SIDE OF NORTH TRUSS (For Details Not Shown see Truss Connection Details)

DESIGNED BY R. Dishner DATE Sept. '67
DRAWN BY R. Chester DATE Sept. '67
TRACED BY DATE
CHECKED BY DATE

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

GUSSET DETAILS
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

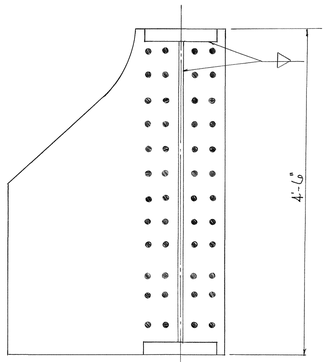
CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

K-72-19

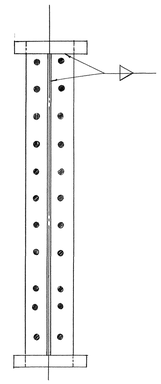
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	1459-3207-04	19		

REVISIONS

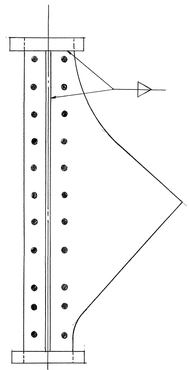
NO.	DATE	BY	BRIEF DESCRIPTION



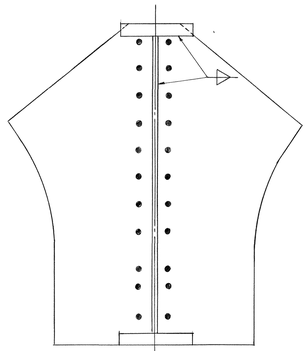
@L0 & L6



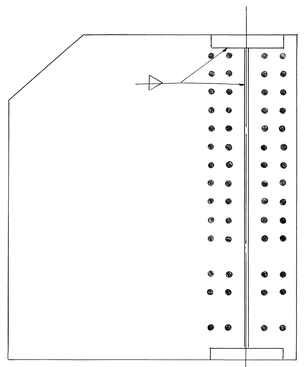
@L1 & L5



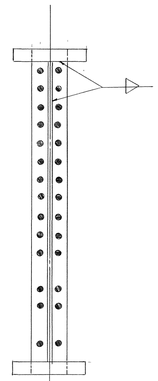
@L2 & L4



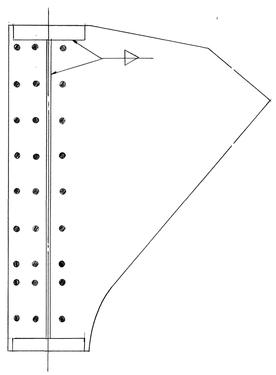
@ L3



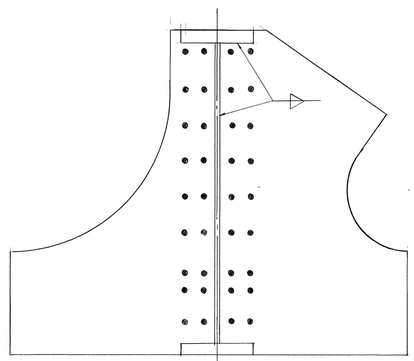
@L7 & L19



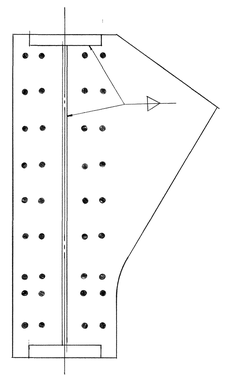
@L8 & L18



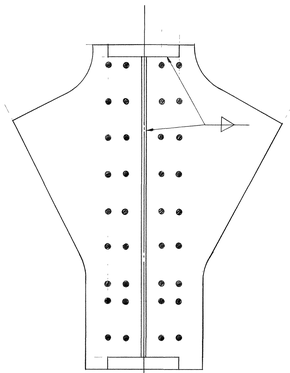
@L9 & L17



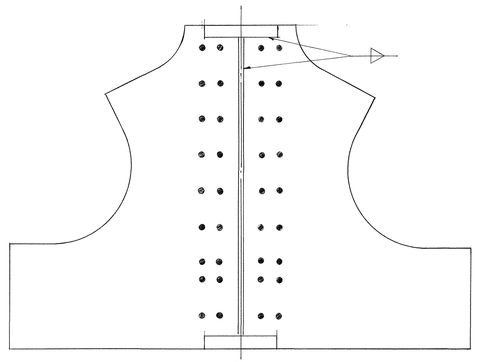
@L10 & L16



@L11 & L15



@L12 & L14



@ L13

Note: For Weld Sizes see Table of Weld Sizes on Dwg K-72-22

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

GUSSET DETAILS
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY R. Dishner DATE Sept. '67
DRAWN BY R. Chester DATE Sept. '67
TRACED BY DATE
CHECKED BY DATE

CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

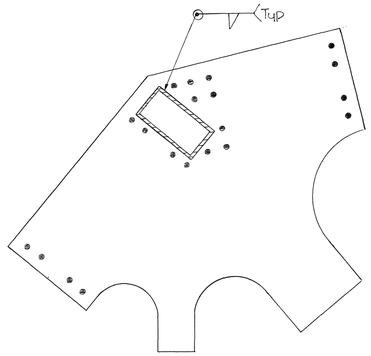
GUSSET PLATE DETAILS FOR ROADWAY SIDE OF SOUTH TRUSS (For Details Not Shown see Truss Connection Details)

K-72-20

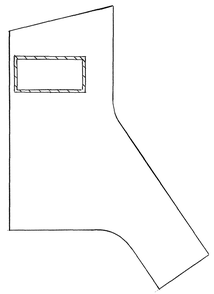
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	1959-3207-04	19		

REVISIONS

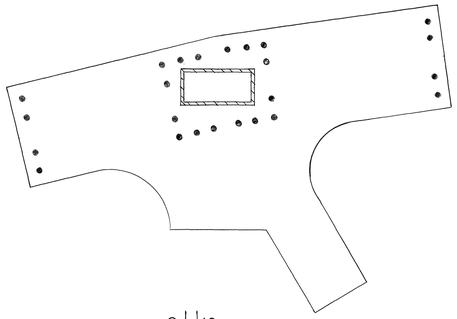
NO.	DATE	BY	BRIEF DESCRIPTION



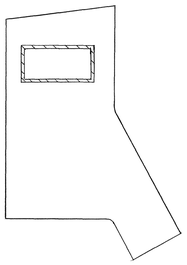
@ U8
Similar @ U18



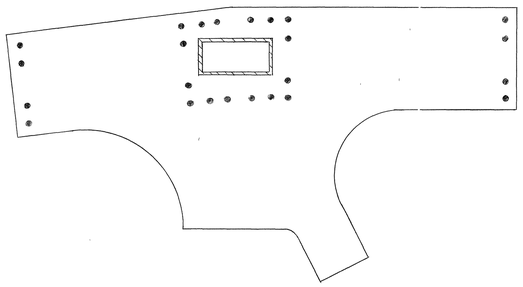
@ U9
Similar @ U17



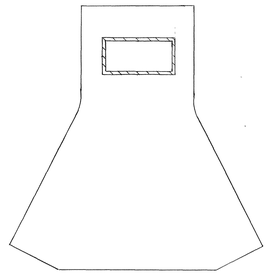
@ U10
Similar @ U16



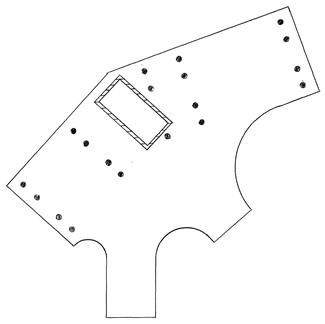
@ U11
Similar @ U15



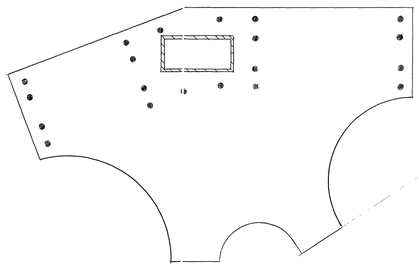
@ U12
Similar @ U14



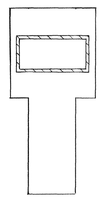
@ U13



@ U1
Similar @ U5



@ U2
Similar @ U4



@ U3

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

GUSSET DETAILS
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

DESIGNED BY R. Dishner DATE
DRAWN BY R. Chester DATE
TRACED BY DATE
CHECKED BY DATE

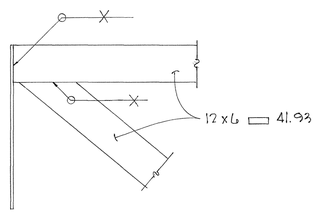
GUSSET PLATE DETAILS FOR ROADWAY SIDE OF TRUSS (For Details Not Shown See Truss Connection Details)

K-72-21

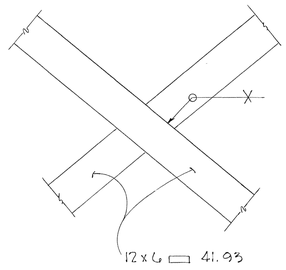
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	1959-3207-04	19		

REVISIONS

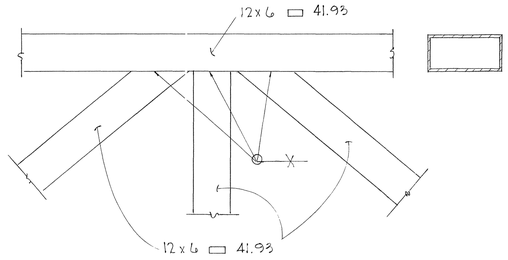
NO.	DATE	BY	BRIEF DESCRIPTION



DETAIL 'A'



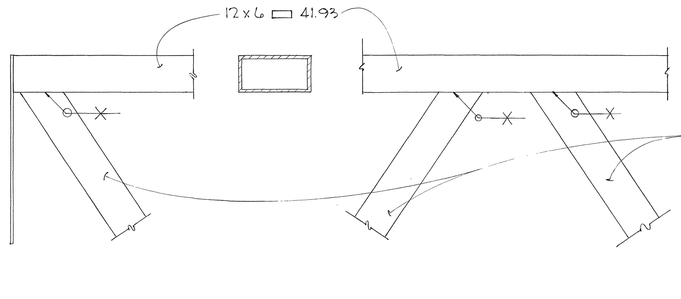
DETAIL 'B'



DETAIL 'C'

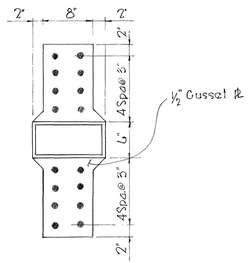
WELD SIZES

Material Thickness of Thicker Part Joined (inches)	Minimum Size of Fillet Weld (inches)
To ¾ inclusive	¼
Over ¾ to ½	5/16
Over 1½ to 2¼	⅜
Over 2¼ to 6	½
Over 6	5/8



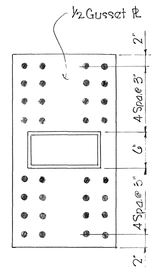
DETAIL 'D'

DETAIL 'E'



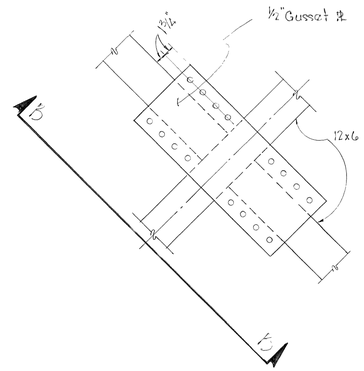
SECTION A-A

Section Typical @ Points U2 L2, U3 L3, & U4 L4
Similar U6 L6 & U16 L16

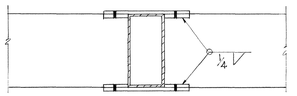


SECTION A-A

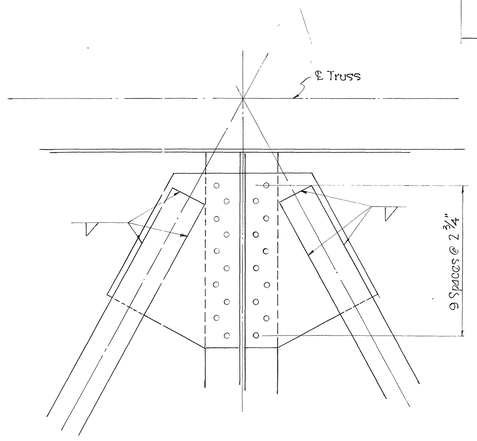
Section Typical @ points U6 L6 thru U16 L16
Similar for Portal Connections



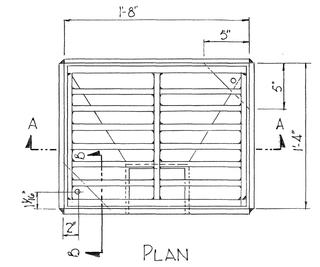
DETAIL "F"



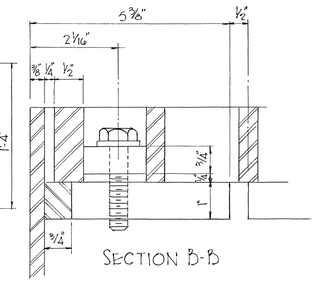
SECTION B-B



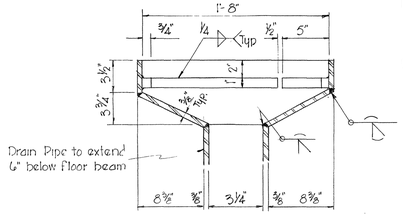
DETAIL "G"



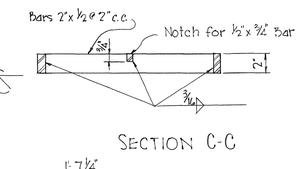
PLAN



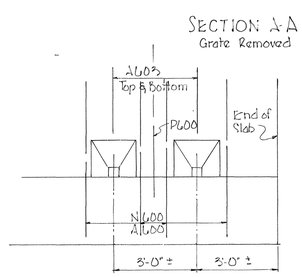
SECTION B-B

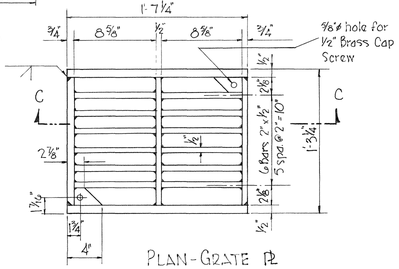


SECTION C-C



SECTION A-A
Grate Removed





PLAN-GRATE PL

DETAILS OF SLAB DRAINAGE
Materials to be ASTM A242 except as noted
2 drains to be placed at low ends of Spans L2 & L3

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

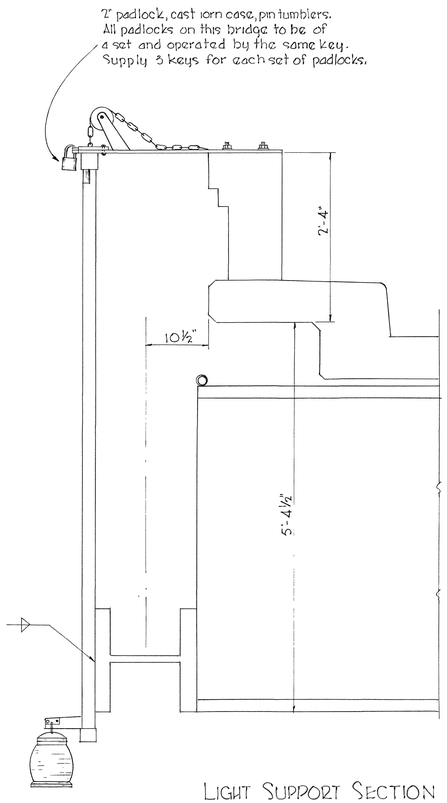
MISCELLANEOUS DETAILS
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY R. Dishner DATE Sept. '67
DRAWN BY R. Chester DATE Oct. '67
TRACED BY DATE
CHECKED BY DATE

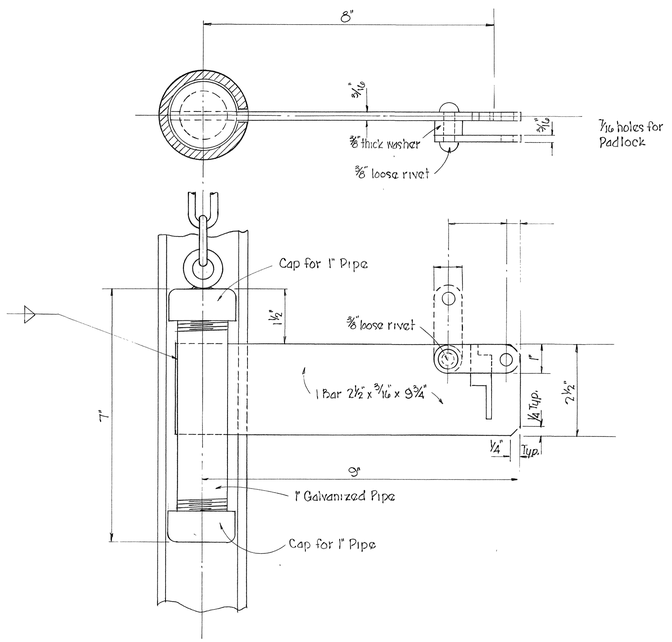
CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

L-72-22

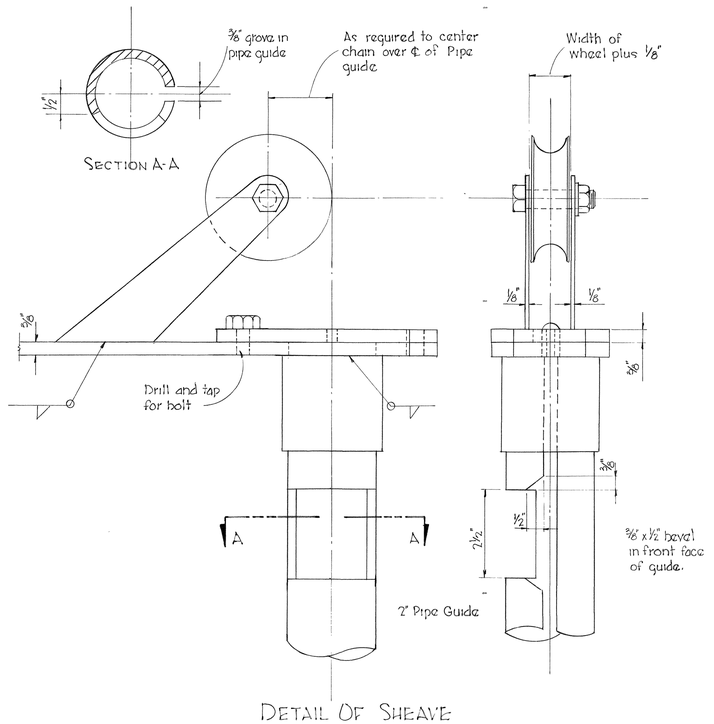
MICROFILMED



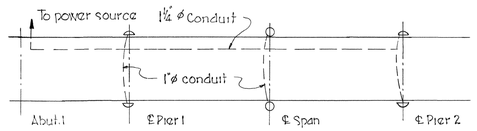
LIGHT SUPPORT SECTION



DETAILS-LIGHT HOLDER

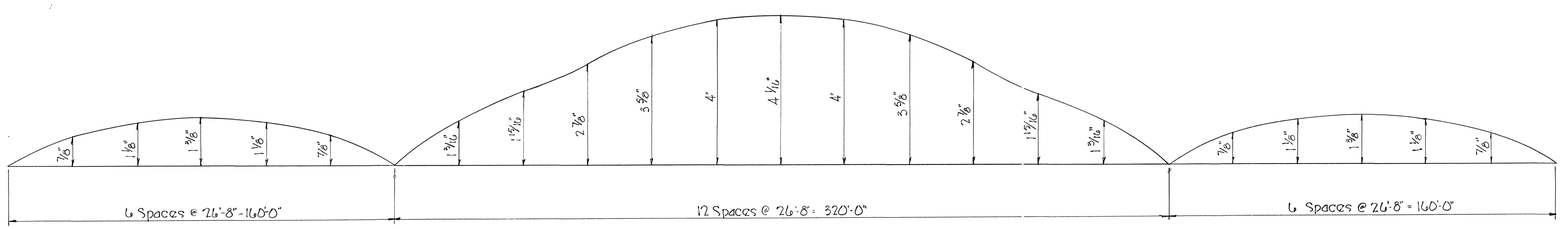


DETAIL OF SHEAVE



NAVIGATION LIGHTING LOCATION

Legend: ⊖ Pier Light - Armspear Mfg Co. No. 603-B 180° Red
○ Channel Light - Armspear Mfg. Co. No. 603 360° Green
Cross - Hinds or Russell & Stoll Co. Type A, Size 8
Navigation Lights meeting the requirements of the U.S. Coast Guard may be used in lieu of Armspear.



DEAD LOAD DEFLECTION

NOTE: Camber diagram included Dead Load Camber only and should be increased to account for vertical curve.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	19159-3207-04	19		

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SWITCH BOX NOTES:

A moisture proof and water tight grounded control box (Galv.) with hinged door, hasp and keeper to accomodate a padlock shall be bolted to a floor beam in the vicinity of Abutment No.1 on the North side. The box shall be for 60 amp service with switch and circuit breaker. Size of box approximately 16"x16"x6" to allow for future addition of a time switch. All wire within the box to be #14 AWG. Bolt box to beam with galvanized bolts.
All lights to be wired in parallel with #12 AWG wire. Splices shall be made in junction boxes or pull boxes. No splices shall be pulled into conduit.

LIGHTING PAYMENT

The cost of furnishing and placing all navigation lighting fixtures, supports, wiring and all other appurtenances necessary to complete the lighting to be included in Lump Sum for Structural Steel.

DESIGNED BY	R Dishner	DATE	Jan. 68
DRAWN BY	R. Chester	DATE	Jan. 68
TRACED BY		DATE	
CHECKED BY		DATE	

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

NAVIGATION LIGHTING & CAMBER DIAGRAMS

STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

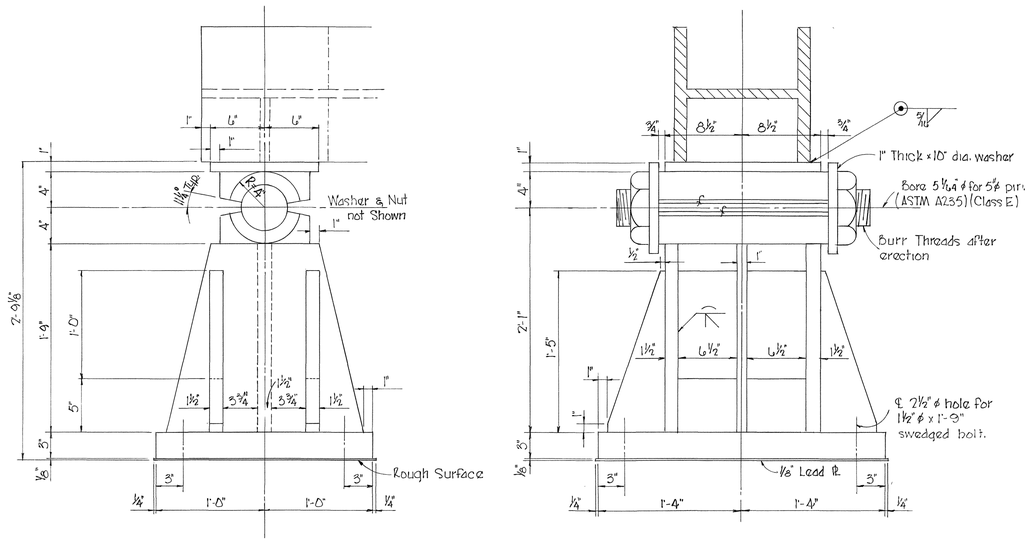
L-72-23

MICROFILMED

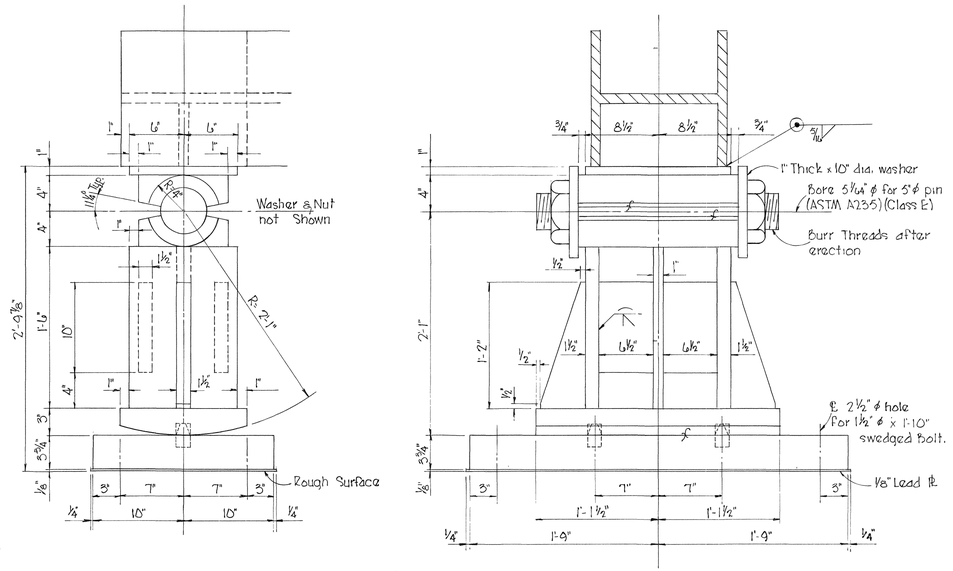
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	1959-3207-04	19		

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



FIXED BEARING FS1
4 Required



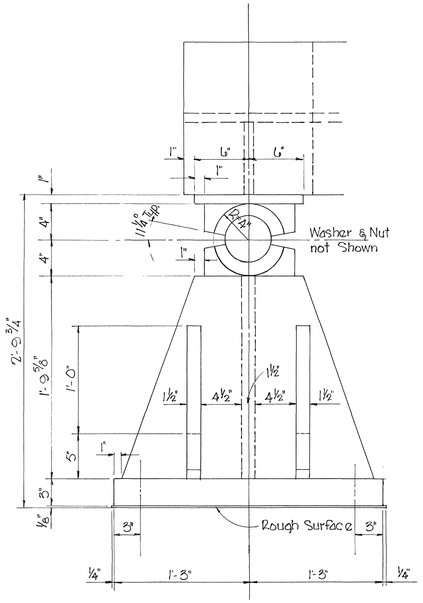
EXPANSION BEARING ES 1
4 Required

Notes:
Vertical members shall be milled for Bearing.

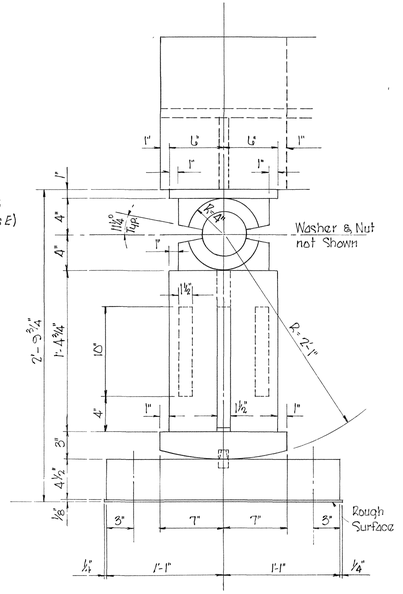
℄ denotes ASA 125.

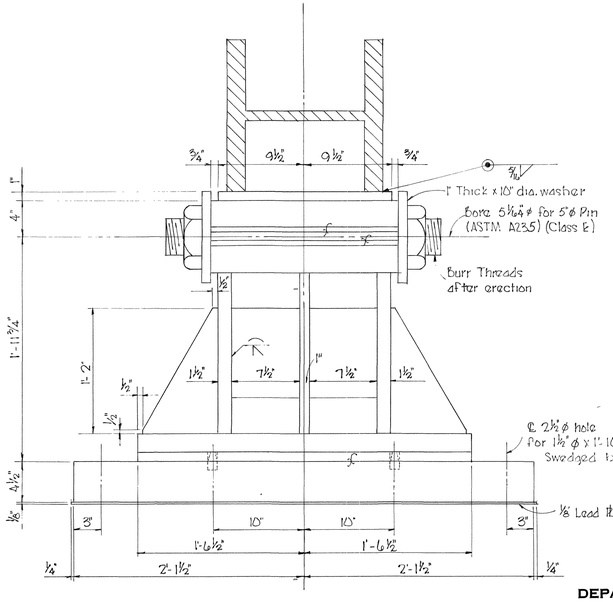
Shoes to be stress relieved before machining.

All material to be ASTM A242 Corrosion Resistant Steel unless otherwise noted.

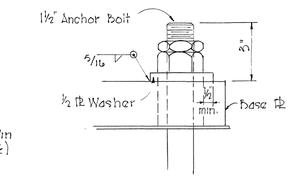


FIXED BEARING FS2
2 Required

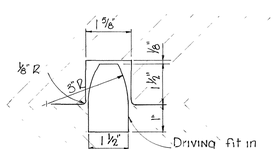




EXPANSION BEARING ES 2
2 Required



ANCHOR BOLT DETAIL
Void space around anchor bolts in plates shall be filled with molten lead before placing nut and washer. Locate 1 5/8" ϕ holes in washer to suit after shoe has been set in correct position. Weld washer to base plate.



PINTLE DETAIL

NOTE: For sizes of fillet welds See dwg. K-72-22

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

BEARING DEVICE DETAILS
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY	R. Dishner	DATE	Sept '67
DRAWN BY	R. Chester	DATE	Sept '67
TRACED BY		DATE	
CHECKED BY		DATE	

CORRECT _____ BRIDGE ENGINEER

APPROVED _____ STATE HIGHWAY ENGINEER

K-72-24

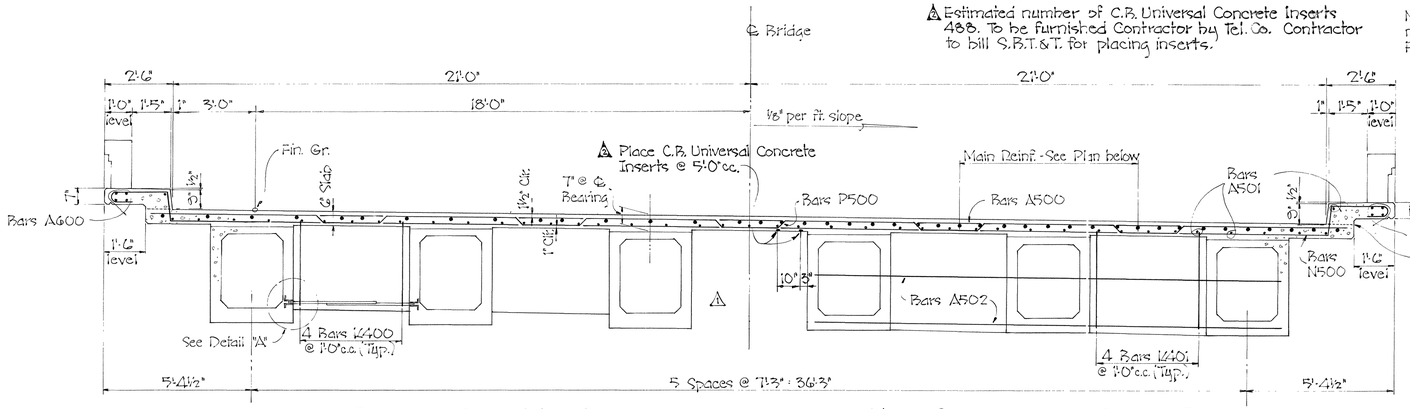
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	1959-3207-04	19		

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	May 2,68	JWS	Removed center diaphragm & Rev. Quantities
2	June 4,68	JWS	Tel. requirements added.

1 Estimated number of C.B. Universal Concrete Inserts 488. To be furnished Contractor by Tel. Co. Contractor to bill S.B.T.&T. for placing inserts.

NOTE: When pouring slab provisions shall be made for setting reinforcement for bridgerailing. For location see std. dwg. 4-36-754 & dwg.

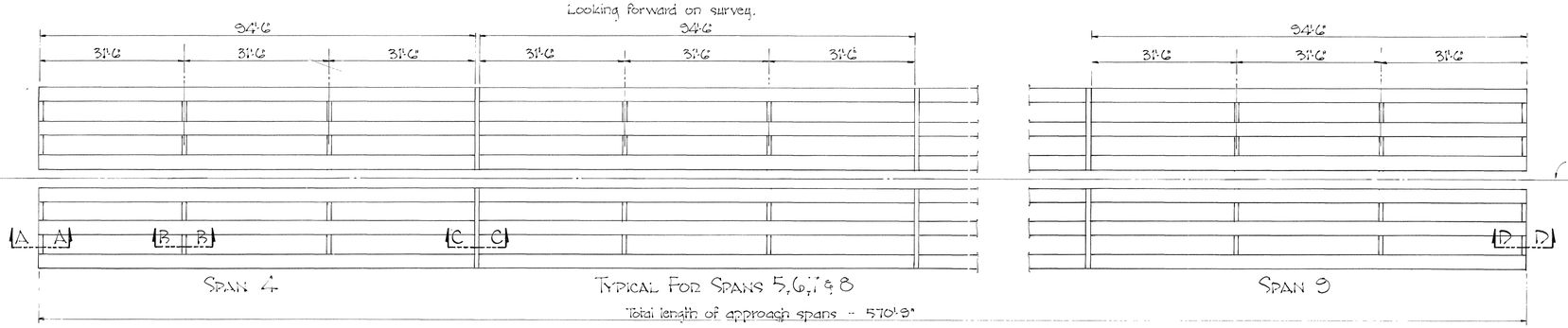


HALF SECTION NEAR MID SPAN

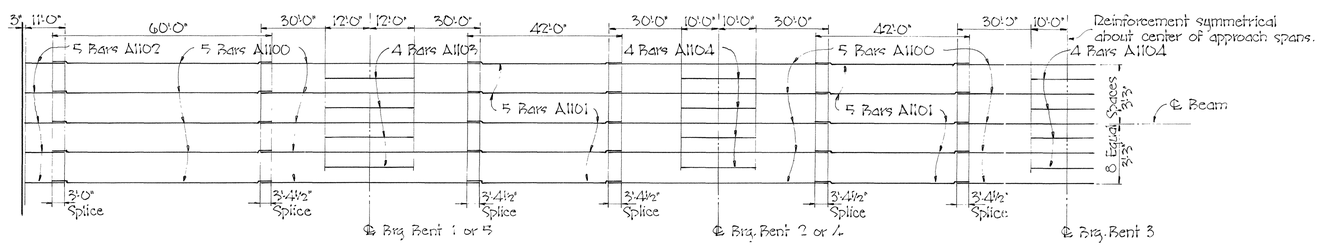
HALF SECTION NEAR BENTS 2-6

TYPICAL CROSS SECTION

Looking forward on survey.

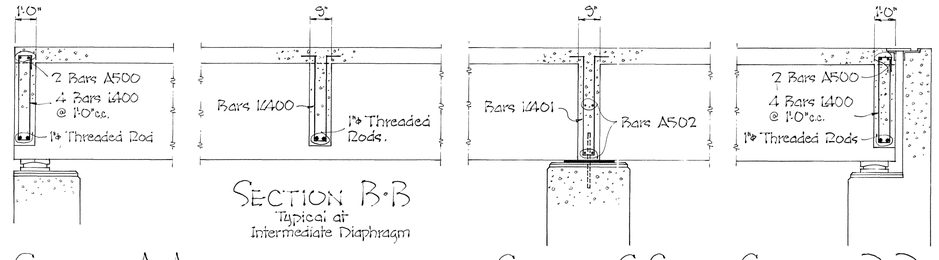


FRAMING PLAN



MAIN REINFORCEMENT - TOP OF SLAB

Typical over all beams.

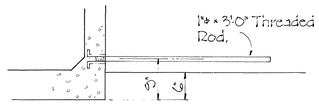


SECTION A-A
Typical at Pier 3

SECTION B-B
Typical at Intermediate Diaphragm

SECTION C-C
Typical at Bents 1-5

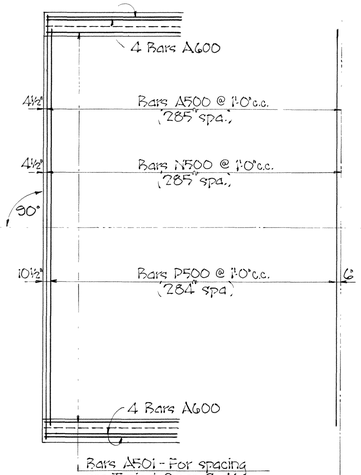
SECTION D-D
Abutment 2



DETAIL "A"

DEAD LOAD CAMBER
Due to Slab & Diaphragms

Reinforcement symmetrical about center of approach spans.



PART SLAB PLAN

ESTIMATED QUANTITIES

Spans 4-9

Class 'A' Concrete	575.9	Cu. Yds.
Reinforcing Steel	229,395	Lbs.

* For cast in place structure.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

SUPERSTRUCTURE DETAILS - RIGHT LANE

STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY J.W. Southerland DATE
DRAWN BY J.W. Southerland DATE
TRACED BY DATE
CHECKED BY DATE

CORRECT Hyde Allen Buick
BRIDGE ENGINEER

APPROVED
STATE HIGHWAY ENGINEER

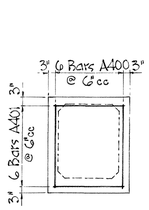
L-72-25

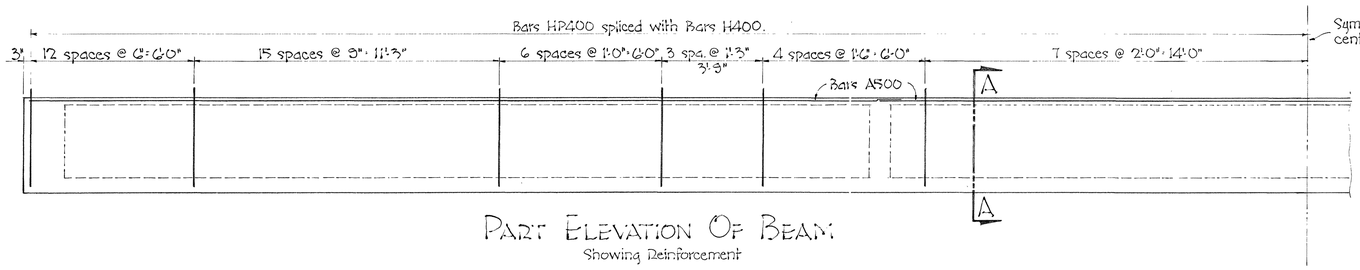
MICROFILMED

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	19159-3207-04	19		

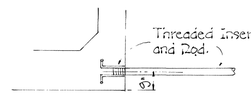
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	JWS	3/27/68	Dimension.

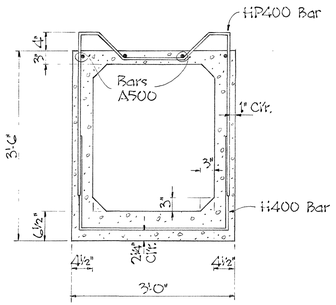




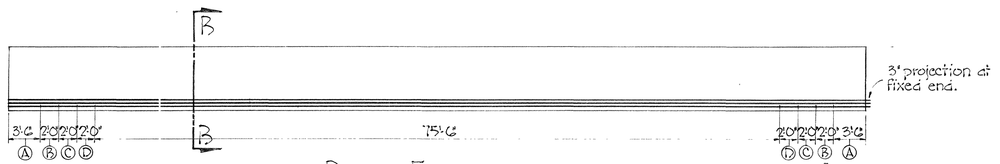
Part Elevation Of Beam
Showing Reinforcement



Insert Details

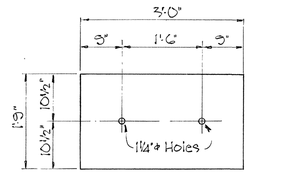


Section A-A



Beam Elevation
Showing Strand Details.

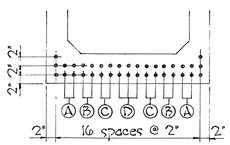
NOTE: Bond is to be broken on strands at points A, B, C & D indicated above. For number of strands see Section B-B.



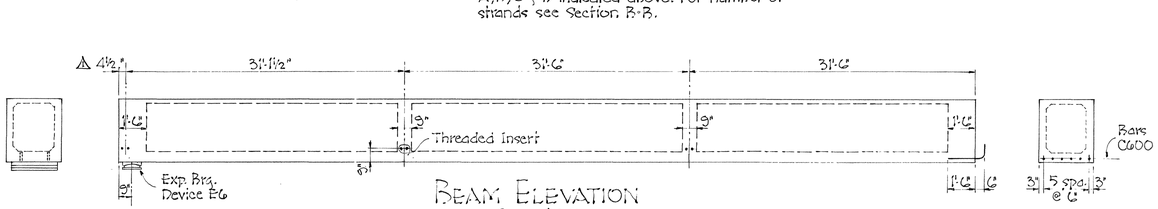
Bearing Pad Detail
30 Required

Bill Of Steel Per B'M.

Bar	Spans 4 & 3			Spans 2 & 3		
	Size	No.	Length	Size	No.	Length
A100	#4	12	3'-0"	#4	12	3'-0"
A401	#4	14	2'-0"	#4	14	2'-0"
A500	#5	12	32'-3"	#5	12	32'-3"
C600	#6	6	2'-10"	#6	12	2'-10"
H400	#4	95	6'-3"	#4	95	6'-3"
HP400	#4	95	31'-2"	#4	95	31'-2"

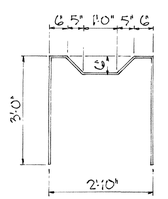


Section B-B

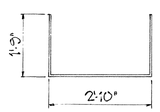


Beam Elevation
Spans 4 & 3

Beam Elevation
Spans 5-8



Bars HP400



Bars H400

Bars C800

See Bill of Steel for length.

Bars A

Estimated Quantities Per B'M.

Beam Location	Class 'A' Concrete Cu. Yds.	Reinforcing Steel Lbs.	Prestressing Steel Lbs.	Threaded Inserts No. Req'd.	Threaded Rods No. Req'd.
Spans 4 & 3	15.9	1,450	1,791	*	*
Spans 5-8	15.9	1,476	1,796	**	**

*3 Inserts & 6 Rods required for fascia beams and 6 Insert & 12 Rods required for interior beams.
**2 Inserts & 4 Rods required for fascia beams and 4 Inserts & 8 Rods required for interior beams.

Notes

1. The top of all beams are to be rough floated. At approximately the time of initial set the top of the beams shall be scrubbed transversely with a coarse wire brush to remove all laitance and to produce a rough surface.
2. Size 17 coarse aggregate will be permitted in the concrete.
3. Mild reinforcing steel to be intermediate or hard grade.
4. All prestressing strands to be ½"ø 7 wire uncoated, stress-relieved type 270 K.
5. An initial force of 28,810 lbs. shall be applied to each strand in all beams.
6. After the beam is removed from the prestress bed, Bars C600 shall be bent horizontally a sufficient amount to permit Bars C600 of adjoining beams to mesh when in an erection position.
7. The strands shall be left projecting 3"± from the end of the beams as shown this sheet. There shall be no protective coating placed on the end of the beams or on projecting strands.
8. Threaded inserts for diaphragm connection are to be Richmond Type DT1 or equal. Threaded rods are to provide a 1'-0" splice.
9. Neoprene pads at fixed ends of beams are to be 1'-3" × 3'-0" × 1" with 1¼"ø holes.
10. Bearing Device at expansion end of beam shall be Std. Type EG, dwg. no. 1415-60, with Dimension "a" changed to C.

DESIGNED BY J.W. Sutherland DATE
DRAWN BY JWS DATE
TRACED BY DATE
CHECKED BY DATE

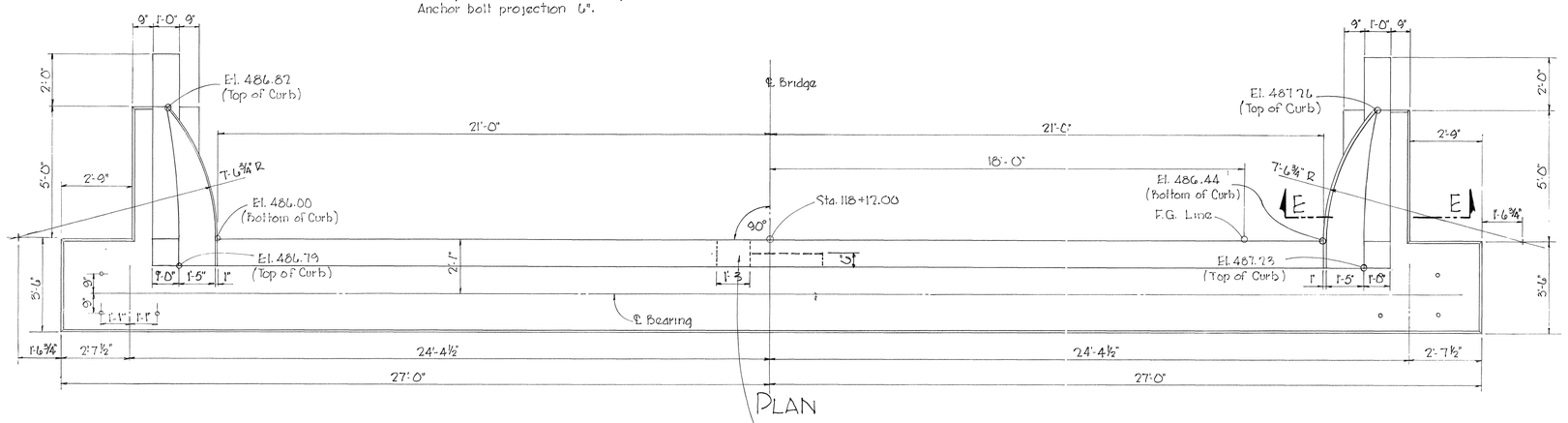
STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

Prestressed Beam Details
State Route 45
Over Cumberland River
Station 118+12.00
Davidson County
1967

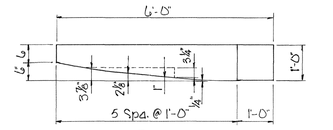
CORRECT A. W. Den Hartog, BRIDGE ENGINEER
APPROVED C. D. Kay, STATE HIGHWAY ENGINEER

K-72-26

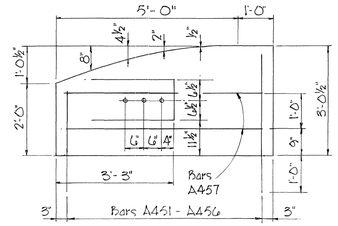
Note: When pouring abutment beam provisions shall be made for setting anchor bolts for bearings. Anchor bolt projection 6".



PLAN

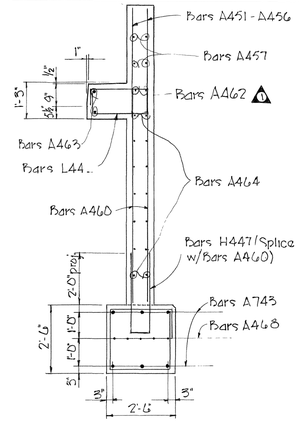


PLAN

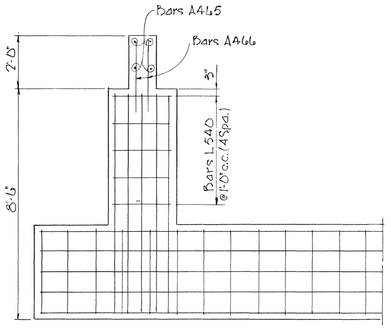


ELEVATION

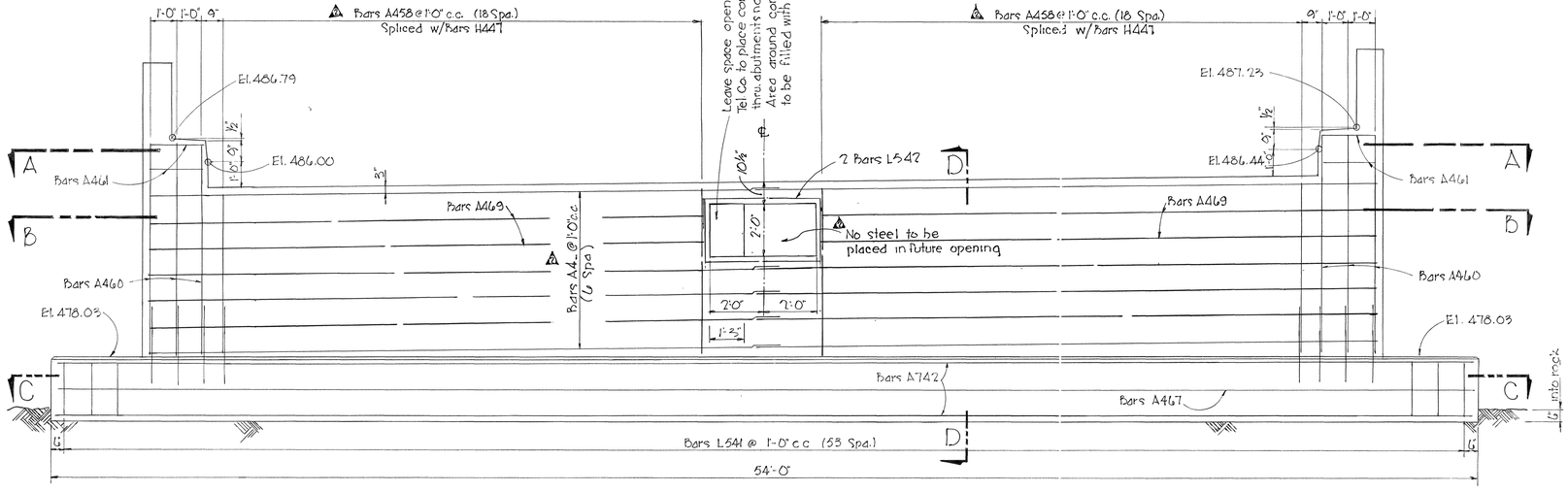
WINGPOST DETAILS



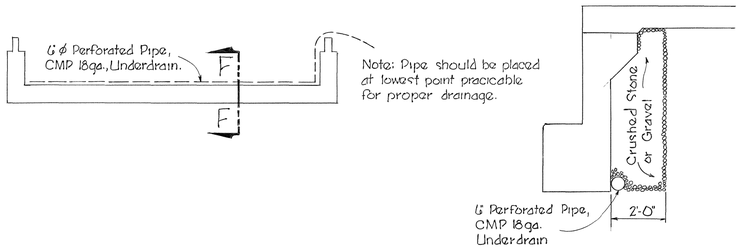
SECTION E-E



PART SECTION C-C

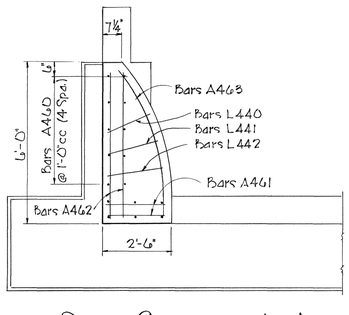


ELEVATION
Looking Back on Survey

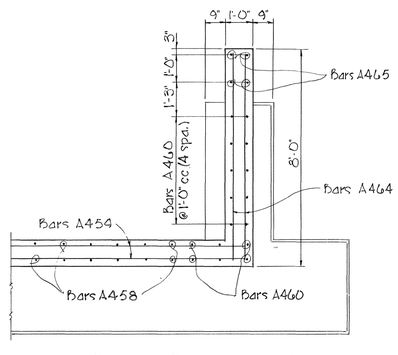


SECTION F-F

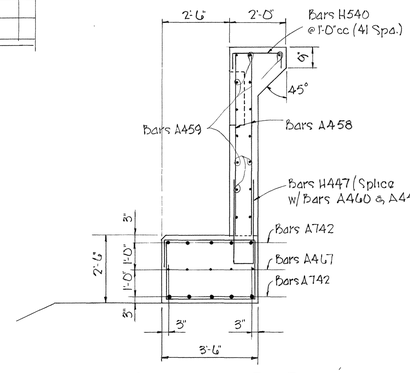
⚠3 ESTIMATED QUANTITIES
Class 'A' Concrete 40.2 Cu.Yds.
Reinforcing Steel 3911 Lbs.



PART SECTION A-A



PART SECTION B-B



SECTION D-D

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

ABUTMENT NO. 1
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	1959-3207-04	19		

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	21 Mar '68	JRC	Showed Bars A462
2	2 May '68	JRC	Rev. Backwall Steel & added future opening & Rev. Quantities
3	4 June '68	JRC	Telephone requirements added

DESIGNED BY	R. Dishner	DATE	Sept. '67
DRAWN BY	R. Chester	DATE	Oct. '67
TRACED BY		DATE	
CHECKED BY		DATE	

CORRECT _____ BRIDGE ENGINEER

APPROVED _____ STATE HIGHWAY ENGINEER

K-72-27

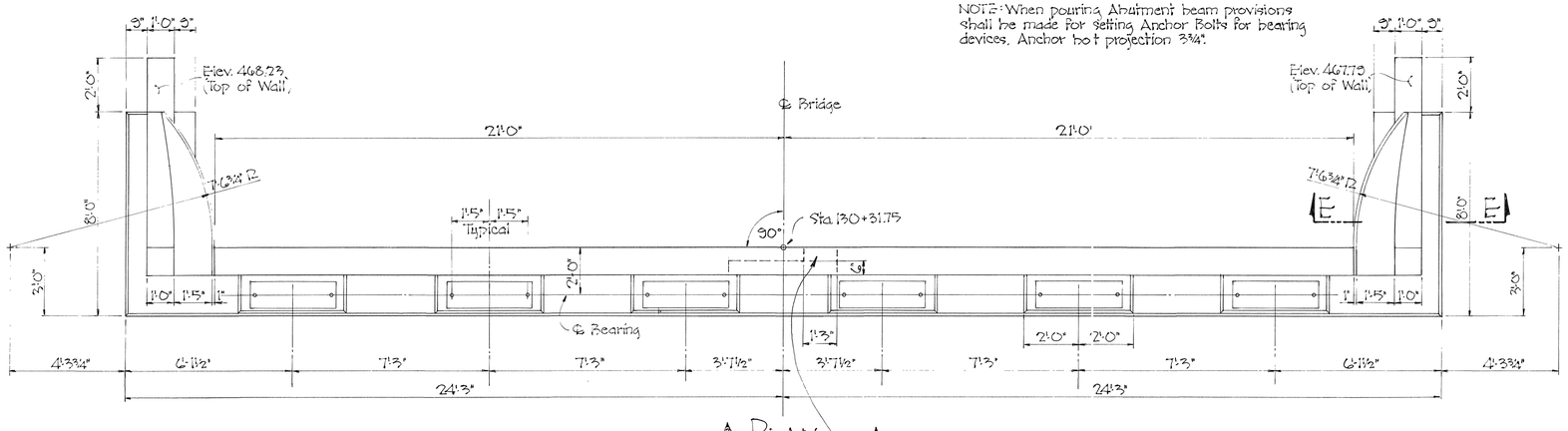
MICROFILMED

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	19159-3207-04	19		

REVISIONS

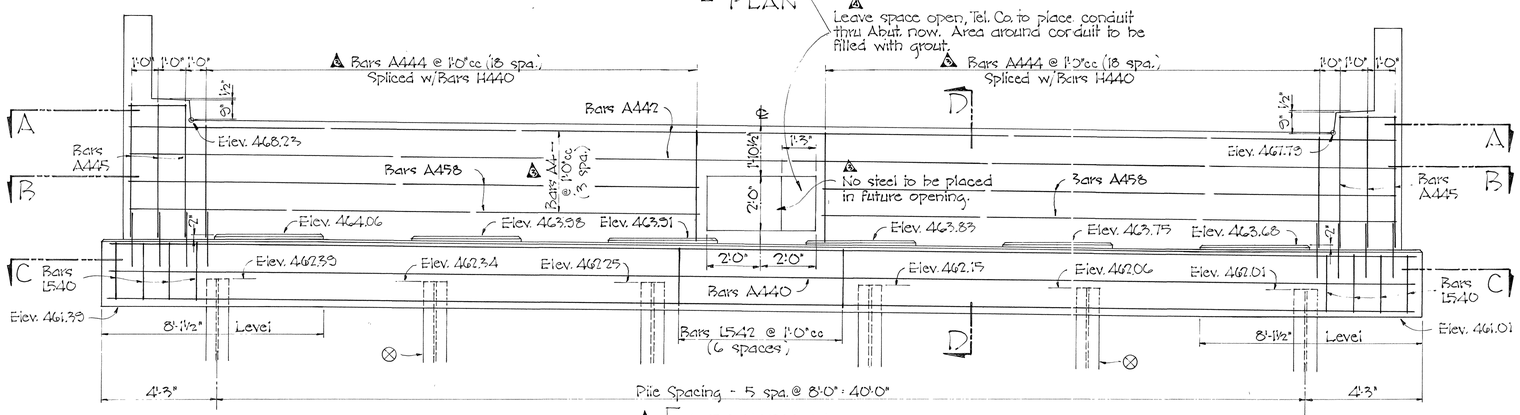
NO.	DATE	BY	BRIEF DESCRIPTION
1	21 Mar. 68	JRC	No Splice in Bars A 442
2	3/27/68	JWS	Elevations & Station
3	May 3, 68	JWS	Rev. backwall steel & added Future opening & Rev. Quantities.
4	June 4 68	JWS	Tel. requirements added.

NOTE: When pouring Abutment beam provisions shall be made for setting Anchor Bolts for bearing devices. Anchor bolt projection 3¾".



A PLAN

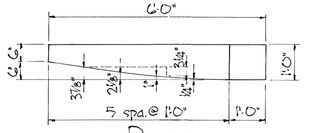
A Leave space open, Tel. Co. to place conduit thru Abut. now. Area around conduit to be filled with grout.



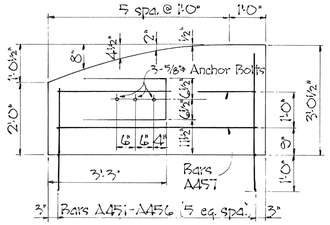
A ELEVATION

Looking forward on survey.

⊗ Batter indicated piles forward 2:12.

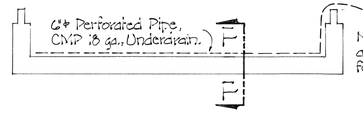


PLAN

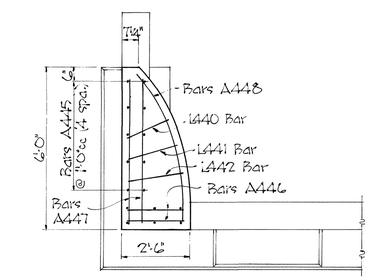


ELEVATION

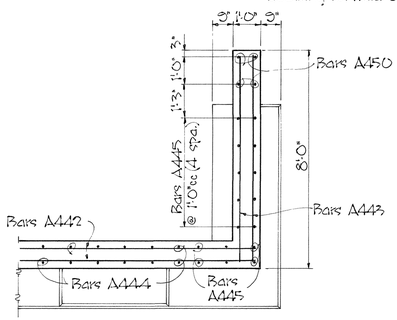
WINGPOST DETAILS



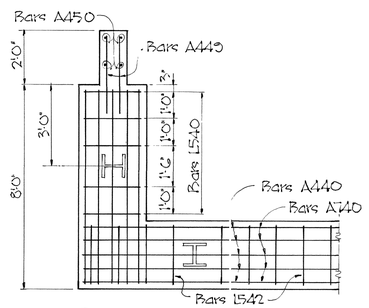
NOTE: Pipe should be placed at lowest point practicable for proper drainage.



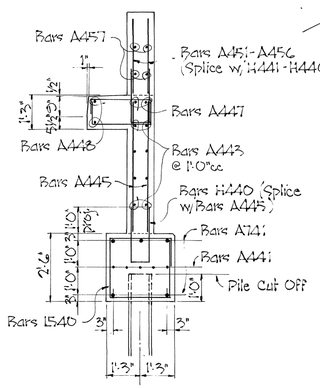
PART SECTION A-A



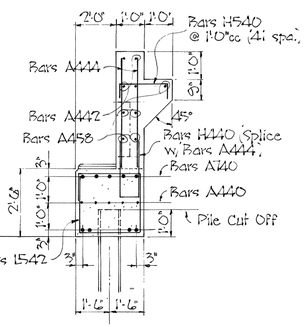
PART SECTION B-B



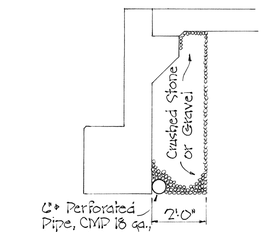
PART SECTION C-C



SECTION E-E



SECTION D-D



SECTION F-F

A ESTIMATED QUANTITIES

Class "A" Concrete 29.9 Cu. Yds.

Reinforcing Steel 2919 Lbs.

STATE OF TENNESSEE

DEPARTMENT OF HIGHWAYS

NASHVILLE

ABUTMENT NO. 2 - RIGHT LANE

STATE ROUTE 45 OVER CUMBERLAND RIVER

STATION 118+12.00

DAVIDSON COUNTY

1967

DESIGNED BY J.W. Southerland DATE

DRAWN BY J.W.S DATE

TRACED BY DATE

CHECKED BY DATE

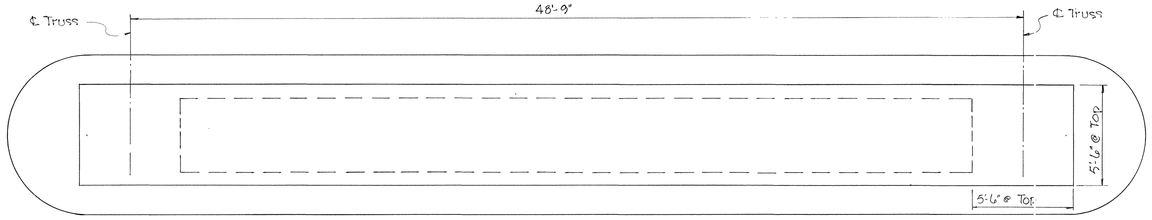
CORRECT _____ BRIDGE ENGINEER

APPROVED _____ STATE HIGHWAY ENGINEER

V-72-78

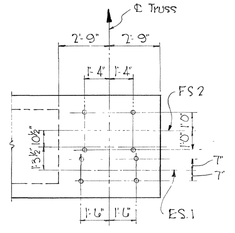
MICROFILMED

Note: When pouring Piers, provisions shall be made for setting anchor bolts for bearing plates.

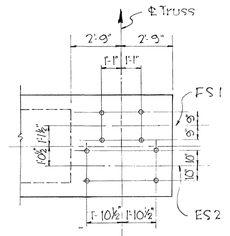


ANCHOR BOLT PROJECTION

Bearing	Projection
ES 1	7"
ES 2	7½
FS 1	6"
FS 2	6"



PIER No. 1



PIER No. 2

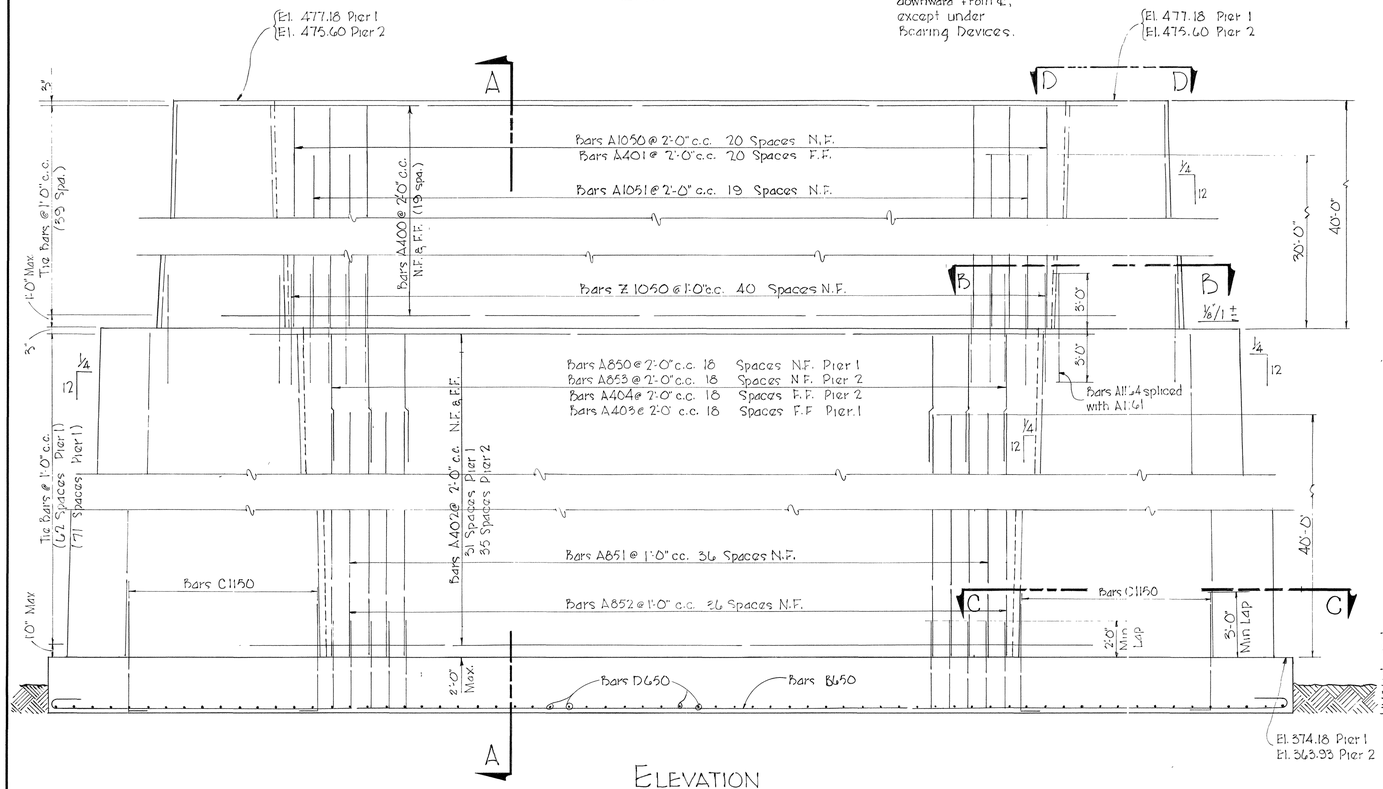
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	1959-3207-04	19		

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	23 Feb 68	J.R.C.	Section BB - Show Void
2	21 Mar 68	J.R.C.	Steel Quant's.

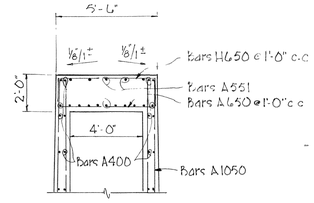
PLAN

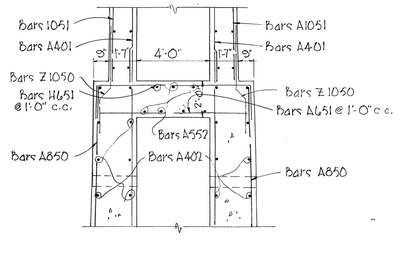
Note: Pier Cap to slope downward from ℄, except under Bearing Devices.

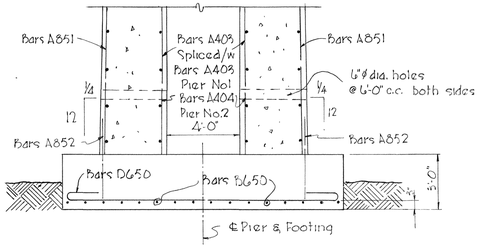


ELEVATION

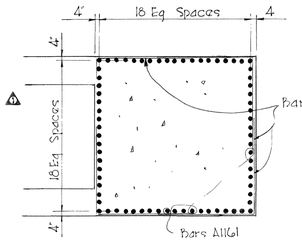
ELEVATION D-D



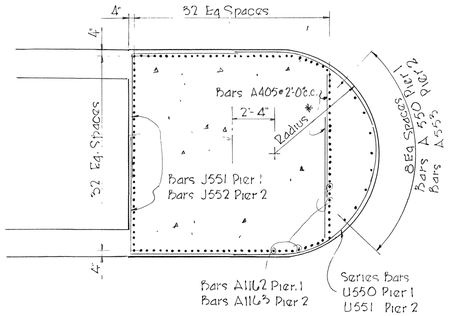




SECTION A-A

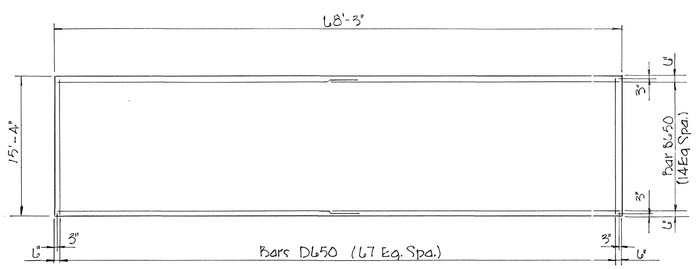


SECTION B-B



SECTION C-C

* Radius - 4'-4" at El. 457.18 Pier 1 & El. 455.60 Pier 2. Radius increases ½" per 1 Foot of Pier height.



PLAN OF FOOTING

ESTIMATED QUANTITIES ②

	Class "A" Concrete Cu. Yds.	Reinforcing Steel Lbs.
Pier 1	1595.0	182,118
Pier 2	1801.0	195,938

DESIGNED BY R Dishner DATE
DRAWN BY R Chester DATE Oct '67
TRACED BY DATE
CHECKED BY DATE

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

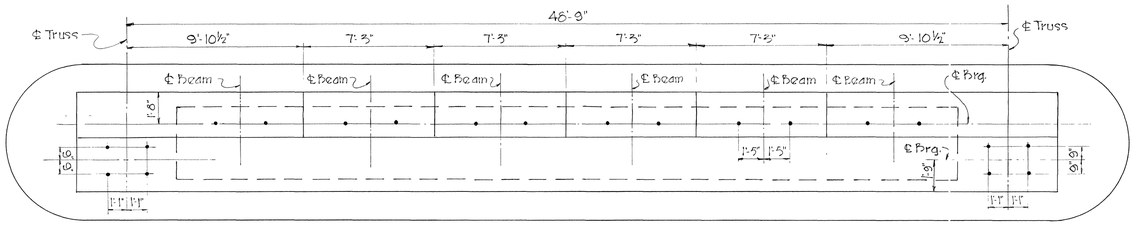
PIERS No. 1 & 2

STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

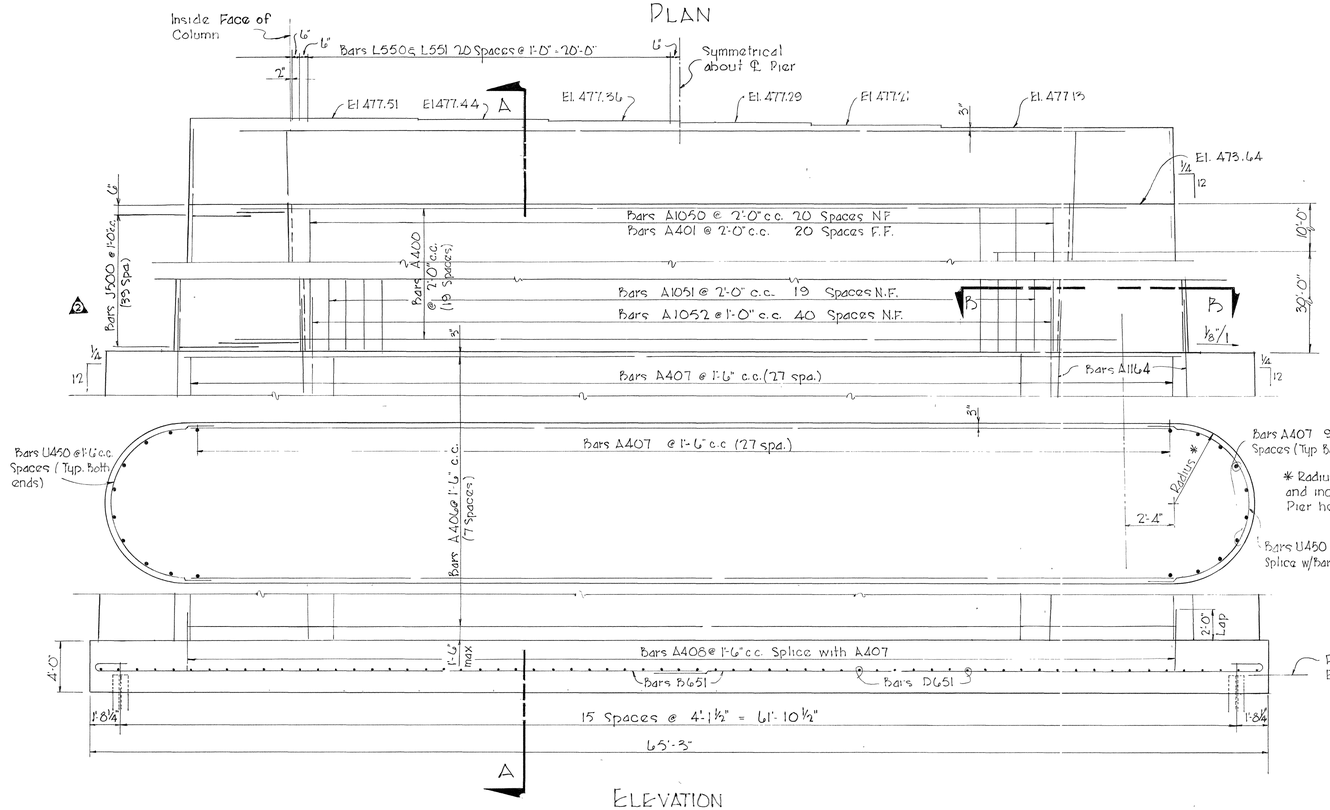
CORRECT W. H. Dickerson BRIDGE ENGINEER
APPROVED W. A. Bugg STATE HIGHWAY ENGINEER

K-72-29

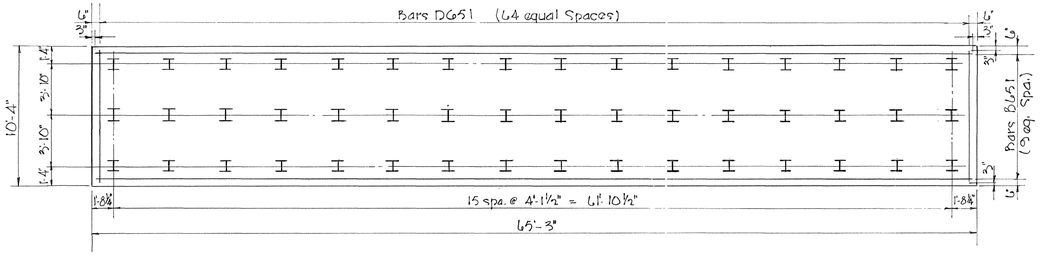
Note: When pouring pier cap, provisions shall be made for setting anchor bolts for bearing plates. Bolt projection for Brg. EG = 3½", Bolt projection for Truss Brg. = 7".



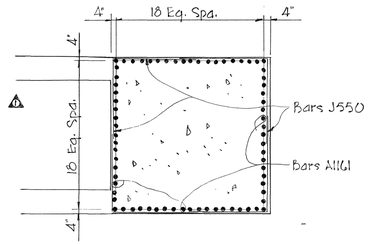
PLAN



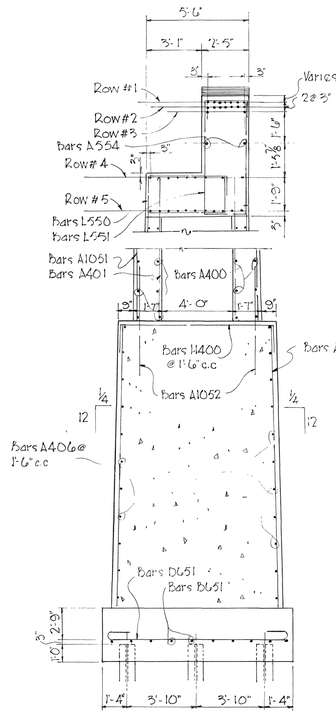
ELEVATION



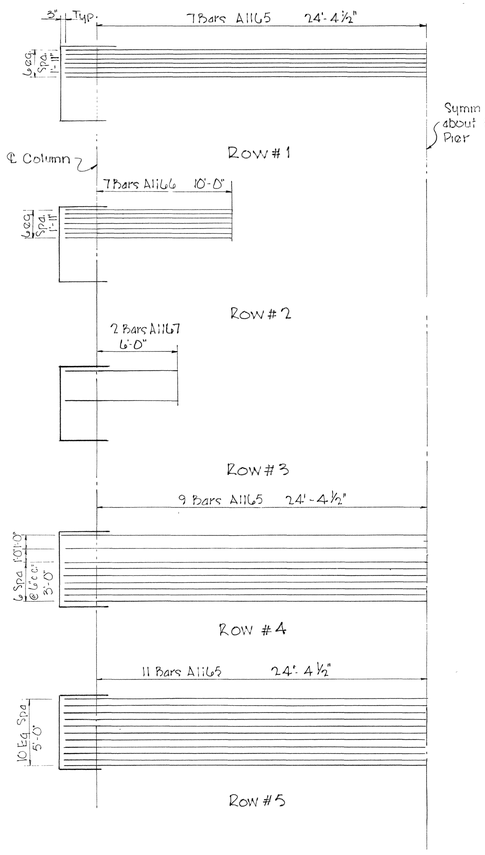
FOOTING PLAN



SECTION B-B



SECTION A-A



ESTIMATED QUANTITIES
Class "A" Concrete 647.1 Cu Yds
Reinforcing Steel 70,186 Lbs.

PLAN SHOWING REINFORCEMENT IN CAP SECTION

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

PIER NO. 3
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

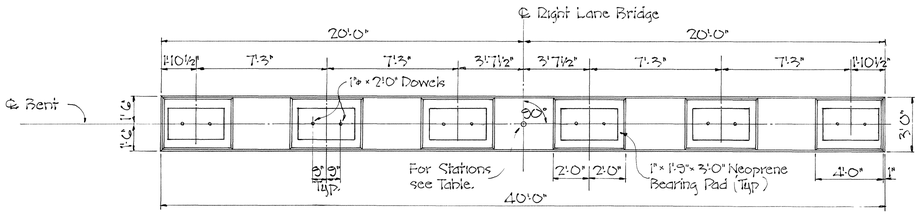
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-59-3207-04	19		

REVISIONS

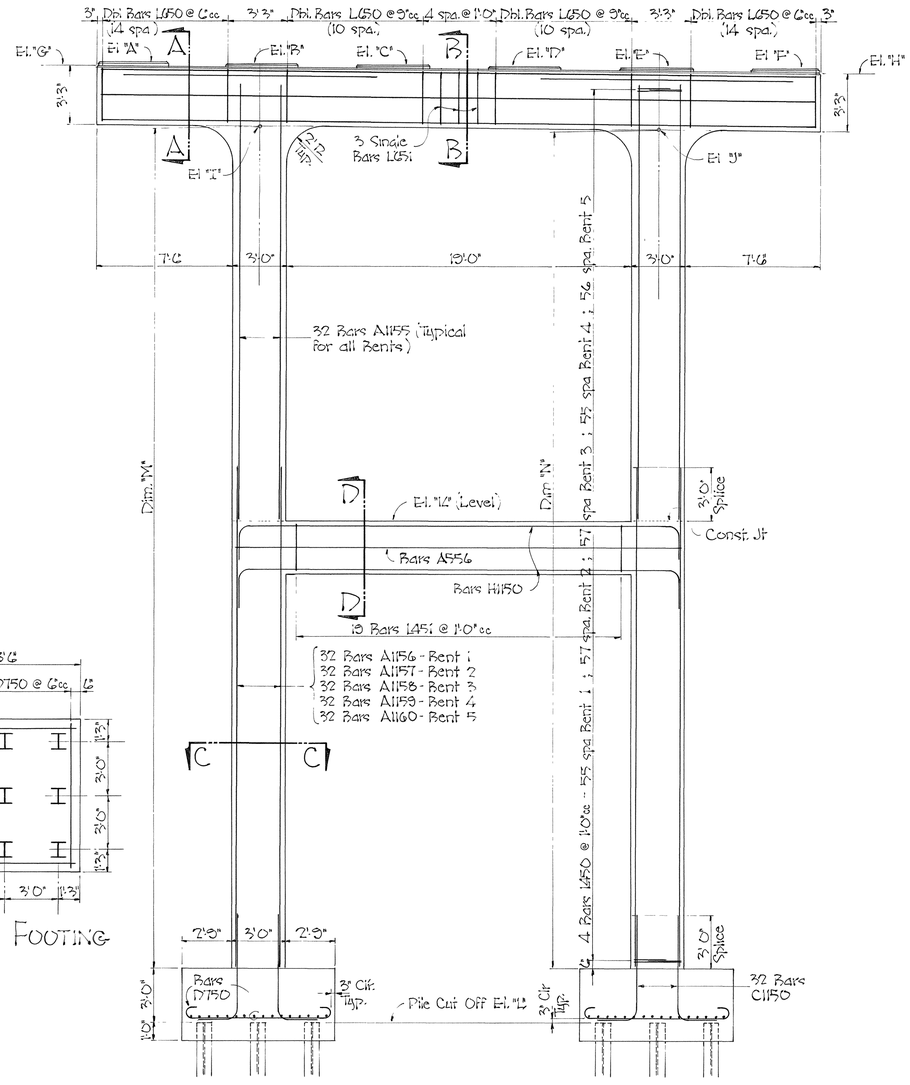
NO.	DATE	BY	BRIEF DESCRIPTION
1	23 Feb 68	J.R.C.	Section B-B Show Void
2	21 Mar 68	J.R.C.	Show J Bar Spacing

DESIGNED BY	R. Dishner	DATE	Nov. '67
DRAWN BY	R. Chester	DATE	Nov. '67
TRACED BY		DATE	
CHECKED BY		DATE	

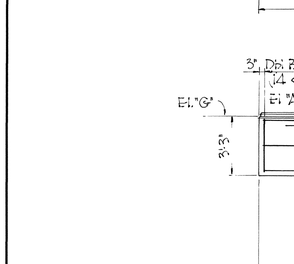
K-72-30



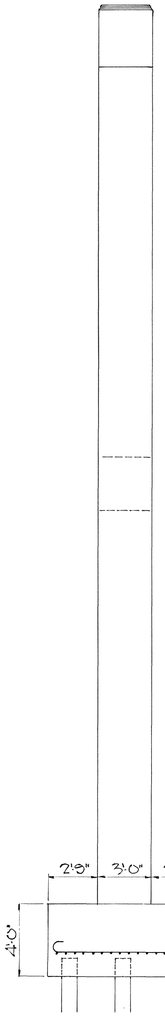
PLAN



FRONT ELEVATION
Looking Forward On Survey.

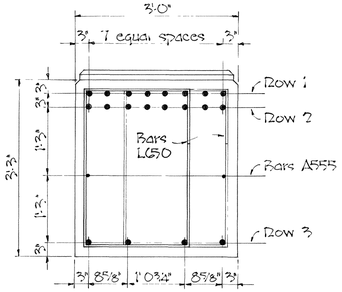


PLAN OF FOOTING

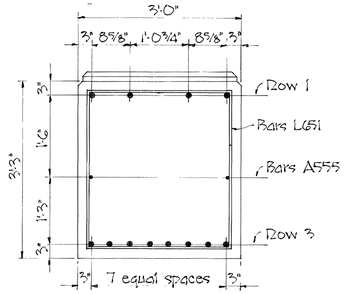


SIDE ELEVATION

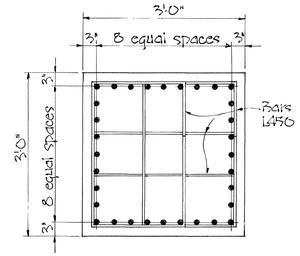
NOTE: When pouring Cap Beam provisions shall be made for setting dowel bars for bearing pads. Dowel bar projection 1'-0"



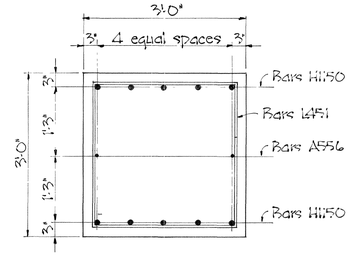
SECTION A-A



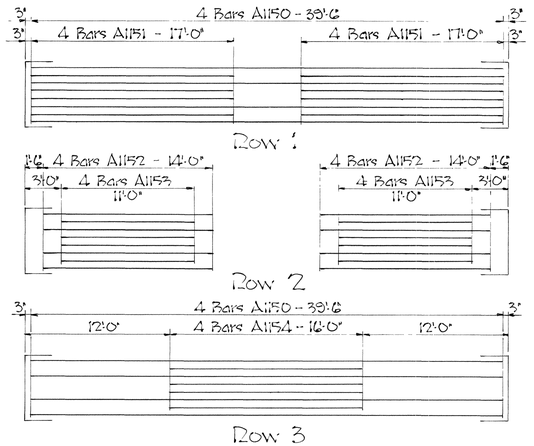
SECTION B-B



SECTION C-C



SECTION D-D

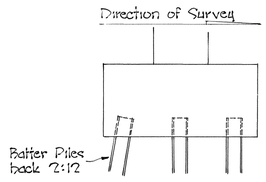


MAIN REINFORCEMENT - CAP BEAM

	Bent 1	Bent 2	Bent 3	Bent 4	Bent 5
Stations	125+54.63	126+49.88	127+45.13	128+40.38	129+35.63
Elevations "A"	475.92	473.55	471.17	468.79	466.40
"B"	475.85	473.48	471.10	468.72	466.33
"C"	475.77	473.40	471.02	468.64	466.25
"D"	475.70	473.33	470.95	468.57	466.18
"E"	475.62	473.25	470.87	468.48	466.10
"F"	475.54	473.17	470.79	468.41	466.02
"G"	475.77	473.40	471.04	468.64	466.25
"H"	475.35	472.38	470.60	468.22	465.83
"I"	472.43	470.06	467.67	465.30	462.91
"J"	472.19	469.82	467.44	465.06	462.67
"K"	447.13	444.82	442.44	440.06	437.67
"L"	416.13	411.82	410.44	408.06	405.67
Dim "M"	53'2¾"	55'2¾"	55'2¾"	52'2¾"	54'2¾"
Dim "N"	53'0"	55'0"	55'0"	53'0"	54'0"

ESTIMATED QUANTITIES

Item	Bent 1	Bent 2	Bent 3	Bent 4	Bent 5
Class "A" Conc - Cu.Yds.	78.4	79.8	79.8	78.4	79.1
Reinforcing Steel - Lbs.	33,844	345?4	345?4	33,844	34,134



SIDE ELEVATION
Bent No 5 Only.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-9159-3207-04	19		

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	2/8/68	JWS	Reinforcement Quantities
2	3/27/68	JWS	Elevations

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

BENTS NO. 1, 2, 3, 4 & 5 - RIGHT LANE
STATE ROUTE 45 OVER CUMBERLAND RIVER
STATION 118+12.00
DAVIDSON COUNTY
1967

DESIGNED BY JWS
DRAWN BY JWS
TRACED BY
CHECKED BY
DATE

CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

K-72-31