Form 413 Rev. 1959

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT ROAD R/W LINE
LIMITED ACCESS
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
STEAM RAILROAD
ELECTRIC RAILROAD
RAILROAD RIGHT-OF-WAY LINE
CREEK
RAPIDS OR WATERFALL
DRY RUN
DRAINAGE DITCH
HIGH TENSION LINE
POWER POLE LINE
TELEPHONE OR TELEGRAPH LINE
TELEPHONE CONDUIT
GUARD RAIL
WIRE FENCE
RAILROAD SNOW FENCE
BOARD OR HIGHWAY SNOW FENCE
STONE WALL OR FENCE
GAS MAIN
WATER PIPE
SEWER PIPE
DRAIN TILE
GRAVEL PIT
SAND PIT
CLAY PIT
ROCK QUARRY
SPRINGS
MARSH

TIMBER
BRUSH
ORCHARD
ROCK LEDGE
SAND
EDGE OF CUT
TOE OF EMBANKMENT
CATCH BASIN
MANHOLE
DROP INLET
FIRE HYDRANT
ARC LAMP
OTHER LAMPS (State Kind)
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
CATTLE GUARD
OVERHEAD (Highway Over)
UNDERPASS (Highway Under)
ABUTMENT, WALL & PIER
BRIDGE
CULVERT
BUILDING (One Story Frame)
C-CONCRETE S-STONE T-TILE B-BRICK ST.-STUCCO
HEDGE
IRON PIPE
STONE MONUMENT
WOOD STAKE OR HUB
MEANDER CORNER

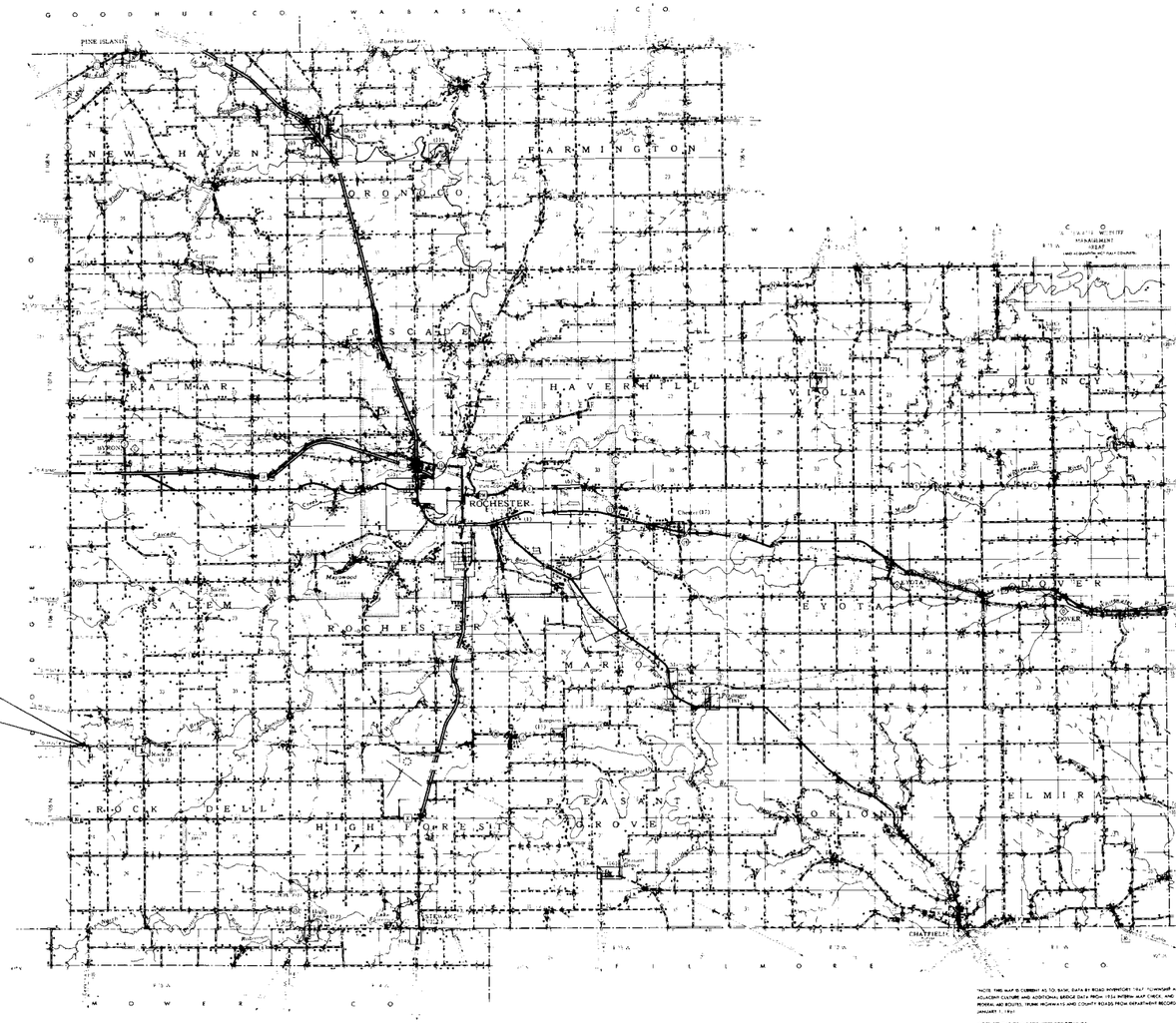






NOTE: SECTION NUMBERS READ FROM THE SOUTH





End of Bridge
Sta. 26+36.5

Beginning of Bridge
Sta. 24+97.5

—SPECIFICATIONS—

THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED MAY 1, 1959, AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON MARCH 26, 1959, SHALL GOVERN.

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR BRIDGE NO 55511

County State Aid Highway No. 26

LAND TIE: A POINT 1,822 FEET EAST AND 163 FEET NORTH OF THE S.W. CORNER SECTION 6 TWP 105N R15W
Give proper reference to Sections, Township and Range

GROSS LENGTH	FEET	MILES
BRIDGES LENGTH	139 FEET	.0263 MILES
EXCEPTIONS LENGTH	FEET	MILES
NET LENGTH	139 FEET	.0263 MILES

SCALES
PLAN, 1 Inch=200 Feet
PROFILE, Horz. 1 Inch=200 Feet, Vert. 1 Inch=20 Feet
WORKING PLANS: Horz. 1 Inch=100 Feet; Vert. 1 Inch=10 Feet; Cross-Section 1 Inch= Feet

LAYOUT
Scale, 1 Inch= Feet

S.A.P. 55-626-02

INDEX OF SHEETS

Sheet No 1 Title Sheet
" 2 General Plan & Elevation
" 3 Deck Layout
" 4 Abutment Details
" 5 Pier Details
" 6 Slab Reinforcing Plan & Longitudinal Sections
" 7 Framing Plan & Beam Span Elevations
" 8 Structural Details & Expansion Device
" 9 Standard Details
" 10 Standard Details
" 11 Standard Details
" 12 Bridge Survey

ALL FEDERAL, STATE AND LOCAL LAWS WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

D. A. Sullivan COUNTY ENGINEER DATE 8-14-63

Olmsted COUNTY REG. NO 1207

RECOMMENDED FOR APPROVAL Claude V. Johnson 8/27/1963 DISTRICT ENGINEER S.A.

RECOMMENDED FOR APPROVAL ASST. BRIDGE ENGINEER 19

APPROVED 10-23 1963 ASST. STATE AID ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

Minn. Proj. No. State Proj. No. State Aid Project No. 55-626-02

OLMSTED County, Minnesota County Proj. No. Plan No. Sheet No. 1 of 12 Sheets

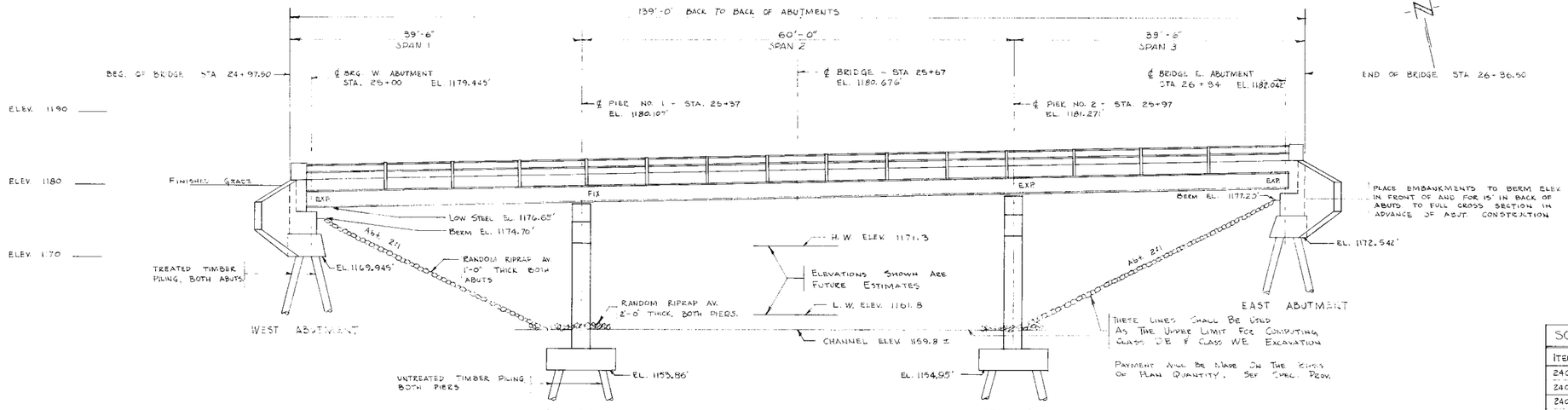
H. A. ROGERS CO. Minneapolis

DESIGN DATA

1961 A.A.S.H.O. SPECIFICATIONS
2 LANES H-20-44 LOADING
f_s REINF. STEEL = 20,000 PSI
f_c = 1600 P.S.I. n = 8
f_s = 20000 p.s.i STRUCTURAL STEEL M.H.D. 3306
f_s = 18000 p.s.i STRUCTURAL STEEL M.H.D. 3305

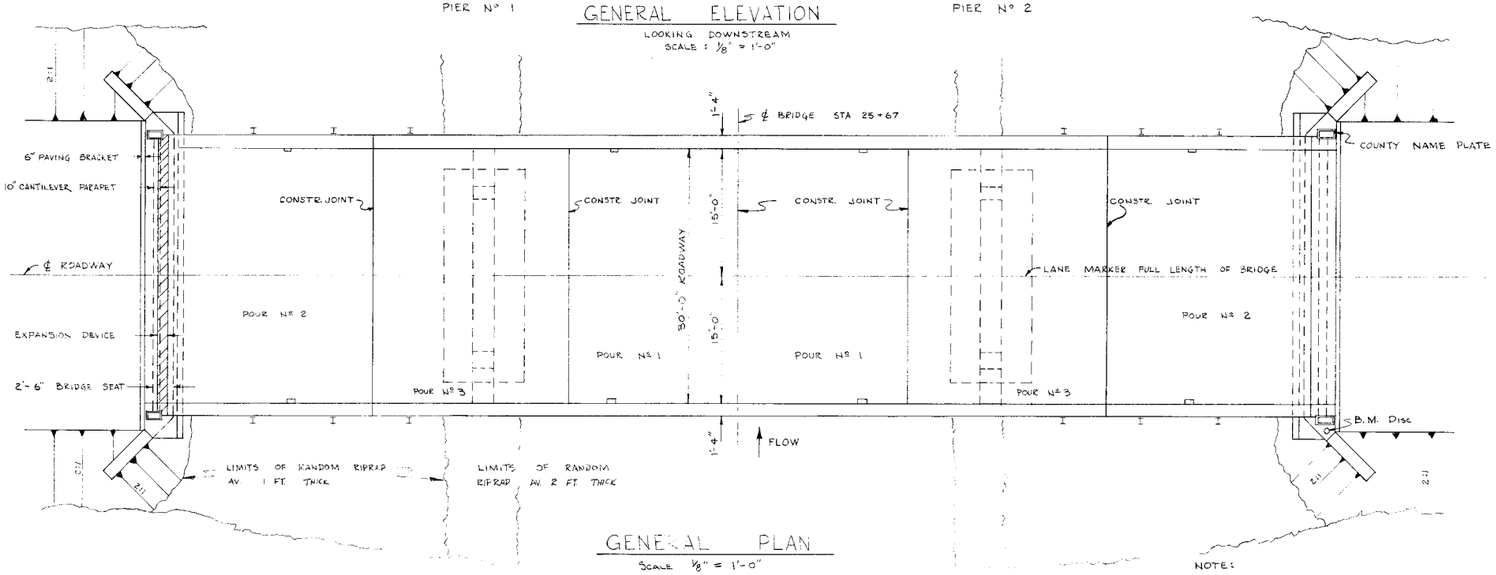
LIST OF SHEETS

1	TITLE SHEET
2	GENERAL PLAN AND ELEVATION
3	DECK LAYOUT
4	ABUTMENT DETAILS
5	PIER DETAILS
6	SLAB REINFORCING PLAN AND LONGITUDINAL SECTIONS
7	FRAMING PLAN AND BEAM SPAN ELEVATIONS
8	STRUCTURAL DETAILS AND EXPANSION DEVICE
9	STANDARD DETAILS
10	STANDARD DETAILS
11	STANDARD DETAILS
12	BRIDGE SURVEY



GENERAL ELEVATION

LOOKING DOWNSTREAM
SCALE : 1/8" = 1'-0"



GENERAL PLAN

SCALE 1/8" = 1'-0"

NOTE:
LIMITS OF RIPRAP SHOWN ARE APPROXIMATE ONLY.
EXACT LIMITS TO BE DETERMINED BY ENGINEER IN FIELD.

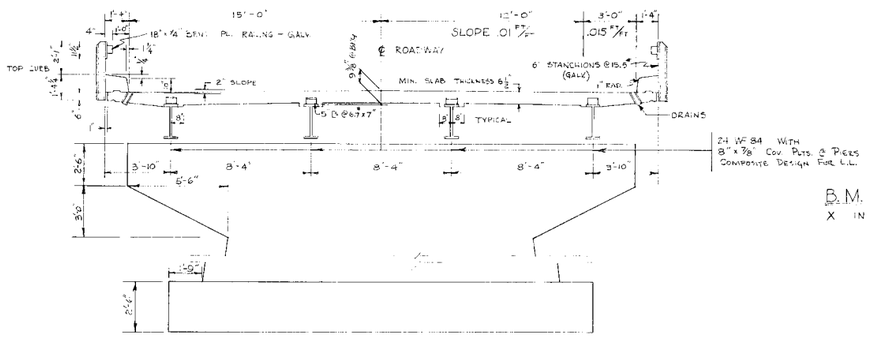
SCHEDULE OF QUANTITIES FOR ENTIRE STRUCTURE

ITEM Nº.	ITEM	UNIT	QUANTITY
2401.501	CONCRETE (MIX Nº 1A47)	CU. YD.	68.
2401.501	CONCRETE (MIX Nº 3Y47)	CU. YD.	227
2401.501	CONCRETE (MIX Nº 3Y60)	CU. YD.	11
2401.521	CLASS D.E EXCAVATION	CU. YD.	119
2401.522	CLASS W.E EXCAVATION	CU. YD.	103
2402.546	FLOOR DRAINS (TYPE I)	UNIT	8
2402.577	STANDARD NAME PLATES	UNIT	ONE
2402.593	FIXED BEARING ASSEMBLIES (TYPE 'C')	UNIT	4
2402.594	EXPANSION BEARING ASSEMBLIES (TYPE 'A')	UNIT	12
2481.501	THREE-PLY JOINT WATERPROOFING	LIN. FT.	14
2452.507	CAST-IN-PLACE CONCRETE PILING DELIVERED	LIN. FT.	400
2452.508	CAST-IN-PLACE CONCRETE PILING DRIVEN	LIN. FT.	380
2452.503	TREATED TIMBER PILING DELIVERED	LIN. FT.	520
2452.504	TREATED TIMBER PILING DRIVEN	LIN. FT.	488
2452.519	CAST-IN-PLACE CONCRETE TEST PILES IN PL. 25 FT. LG.	PILE	4
2452.517	TREATED TIMBER TEST PILES IN PLACE 35 FT. LG.	PILE	2
2452.517	TREATED TIMBER TEST PILES IN PLACE 40 FT. LG.	PILE	2
2476.501	PAINTING METAL STRUCTURES	STRUCTURE	ONE
2511.501	RANDOM RIPRAP CLASS A	CU. YD.	245
401.641	FURNISHING REINFORCEMENT BARS	POUND	50320
* 401.741	PLACING REINFORCEMENT BARS	POUND	50320
* 402.621	FURNISHING STRUCTURAL STEEL (3306)	POUND	20000
* 402.621	FURNISHING STRUCTURAL STEEL (3306)	POUND	52320
* 402.799	ERECTING STRUCTURAL METALS	POUND	72320

MISCELLANEOUS QUANTITIES

* 2442.501	REMOVE OLD BRIDGE	BRIDGE	ONE
* 109.621	OBLITERATING OLD ROAD	ACRE	1.8
* 2108.511	CHANNEL EXCAVATION CLASS A	CU. YD.	2052

* SEE SPECIAL PROVISIONS



TRANSVERSE SECTION THRU DECK

SCALE : ¼" = 1'-0"

B.M. EL. 1172.25
X IN W. ABUT. OF EXISTING BRIDGE

MATERIAL SPECIFICATIONS - YEAR CODE

M.H.D. SPEC. NO.	MATERIAL SPEC.
3305	3305-59
3306	3306-63
3314	3314-59
3316	3316-59
3321	3321-59
3329	* 3329-59
3335	3335-59

*EXCEPT AS MODIFIED IN THE PLANS

CONSTRUCTION NOTES

"SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED MAY 1, 1959 AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON MARCH 20, 1959 SHALL GOVERN.

KEYWAY SIZES ARE NOMINAL.

SLAB POURING SEQUENCES SHALL BE AS INDICATED ON THE PLAN AND THE CURB SHALL BE PLACED AFTER ENTIRE ROADWAY SLAB HAS BEEN PLACED.

FOR CONCRETE JOINT SEALER SEE SPECIAL PROVISIONS.

FOR ELIMINATION OF JOINTS IF FINISHING MACHINE IS USED SEE SPECIAL PROVISIONS.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Sidney Sanstone #5325
DATE 8-12-63

PLANS PREPARED BY
AGNEBERG · SANKSTONE · ASSOCIATES
1418 FIRST AVE. N.E., ROCHESTER, MINN.

C. S. A. H. Nº 26
BRIDGE No. 5551
OVER SOUTH FORK ZUMBRO RIVER
1.6 MILES WEST OF ROCK DELL

GENERAL PLAN & ELEVATION

39'-6" - 60' - 39'-6" BEAM SPAN - 30 FT ROADWAY
SEC 6 TWP 106 W R 15 W
ROCK DELL TWP OLMSTED CO.

APPROVED _____
DATE _____
OLMSTED COUNTY ENGINEER

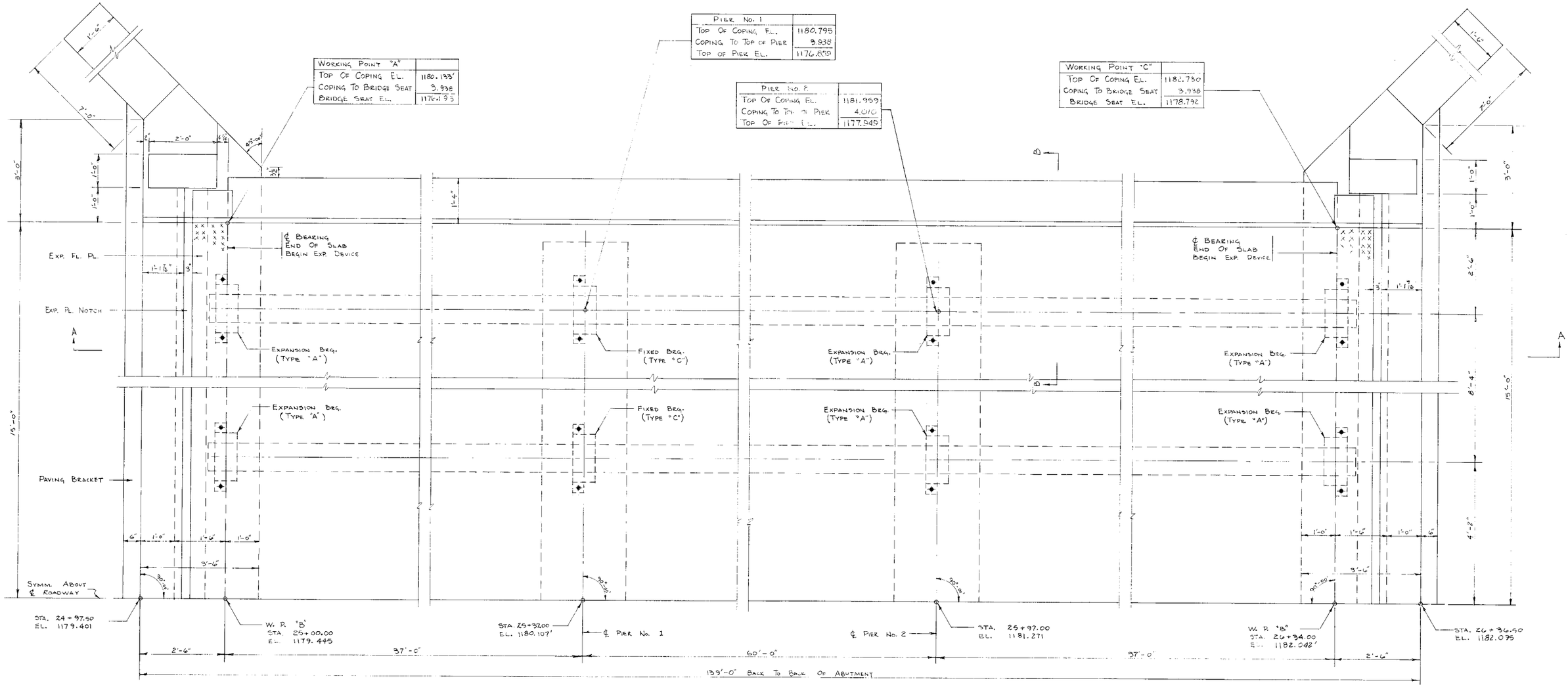
APPROVED
STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
ASST. BRIDGE ENGINEER
DATE 12-27-63

Working Point "A"	
Top Of Coping El.	1180.135'
Coping To Bridge Seat	3.938
Bridge Seat El.	1176.197

Pier No. 1	
Top Of Coping El.	1180.795
Coping To Top of Pier	3.938
Top of Pier El.	1176.857

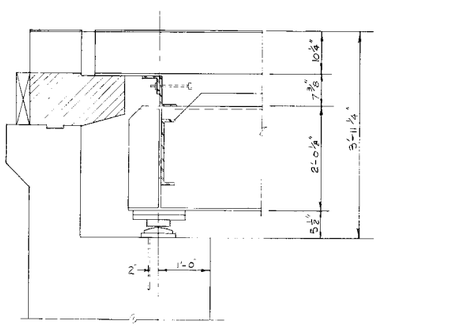
Pier No. 2	
Top Of Coping El.	1181.959
Coping To Top of Pier	4.010
Top of Pier El.	1177.949

Working Point "C"	
Top Of Coping El.	1182.730
Coping To Bridge Seat	3.938
Bridge Seat El.	1178.792

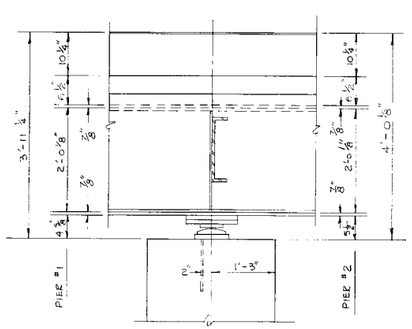


PART PLAN

Scale: 3/16" = 1'-0"



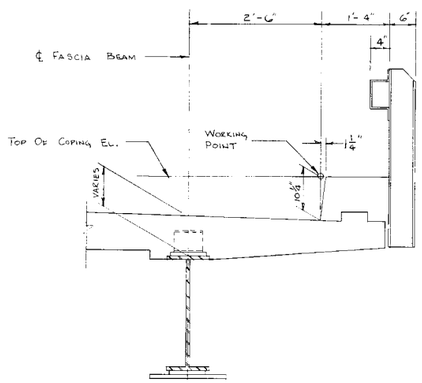
ABUTMENTS



PIERS 1 & 2

Section A-A

Showing Beak-ups For Fascia Beams



Section B-B

PLANS PREPARED BY
AGNEBERG · SANKSTONE · ASSOC.
1418 First Ave. N.E., Rochester, Minn.

C. S. A. H. № 26
BRIDGE No. 55511
DECK LAYOUT

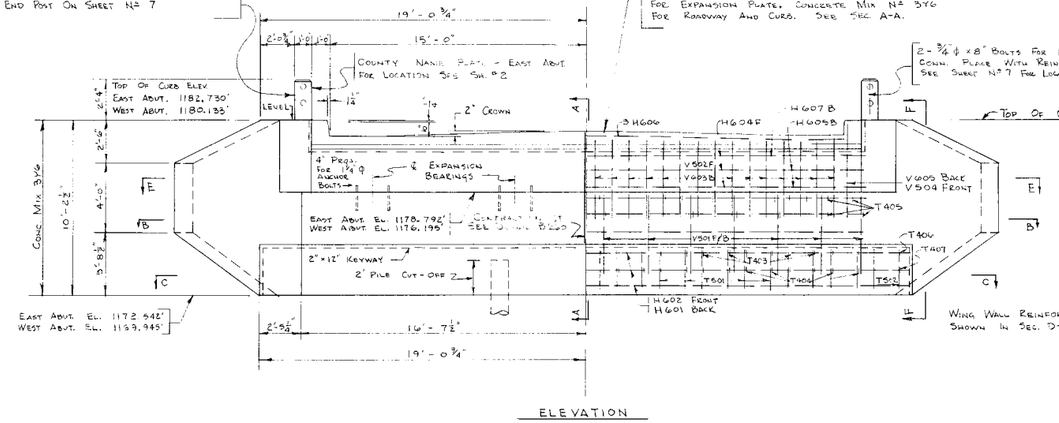
APPROVED 10-23-63

Sheet 3 Of 12 Sheets | 55511

Vertical Edges Of Concrete End Posts To Be Finished To A ½" Bevel, Using Finished Wood Strips In Forms. Posts To Be Vertical. Concrete Mix To Be 3Y60. ½" Crown On Top Of Post For Drainage. See Detail Of End Post On Sheet № 7

Concrete Outlined With Cross Hatching To Be Placed After Expansion Device Is In Place, And Floor Slab Completed. Provide Notch For Expansion Plate. Concrete Mix № 3Y6 For Roadway And Curb. See Sec. A-A.

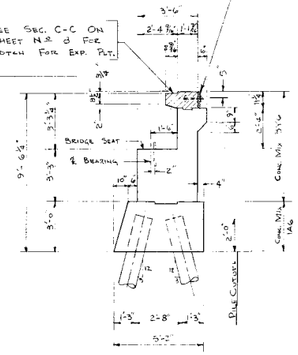
3"x12" Plank. Top Of Plank To Be Trimmed Flush With Transverse Crown Of Top Surface Of Concrete Roadway For Full Width Between Cut To Cut Of Curbs. Secure With ¾"x9" Sq. Hd. Bolts. Each With Sq. Nut & Cut Washer. See Plan For Spacing.



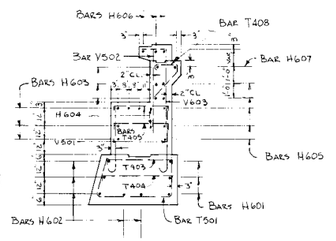
ELEVATION

Wing Wall Reinforcement Shown In Sec. D-D

See Sec. C-C On Sheet № 8 For Notch For Exp. Plt.

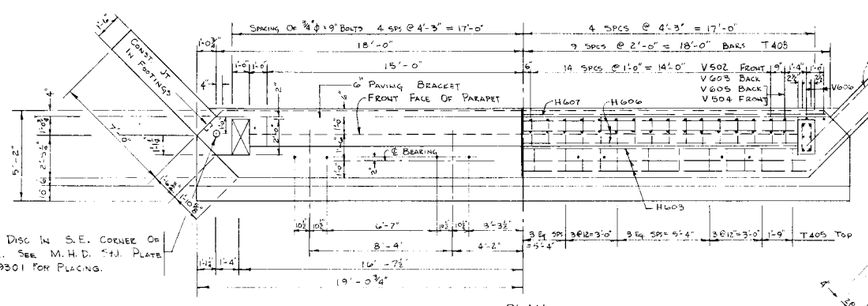


SECTION A-A

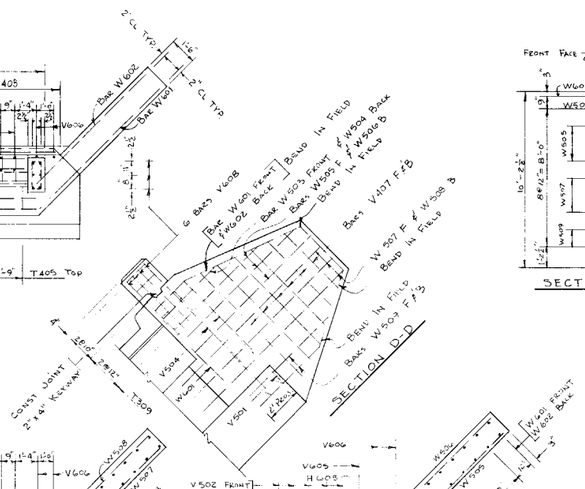


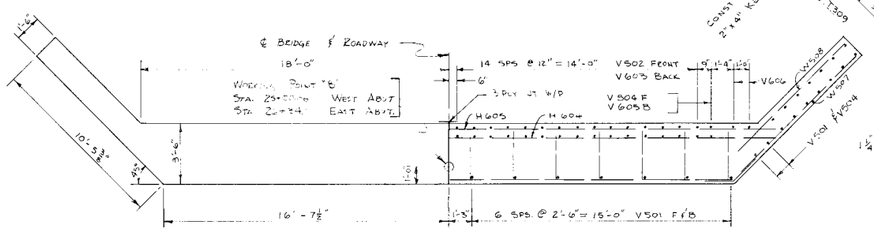
SECTION A-A

Showing Reinforcement

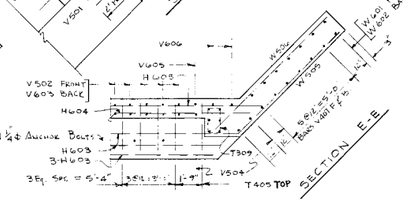


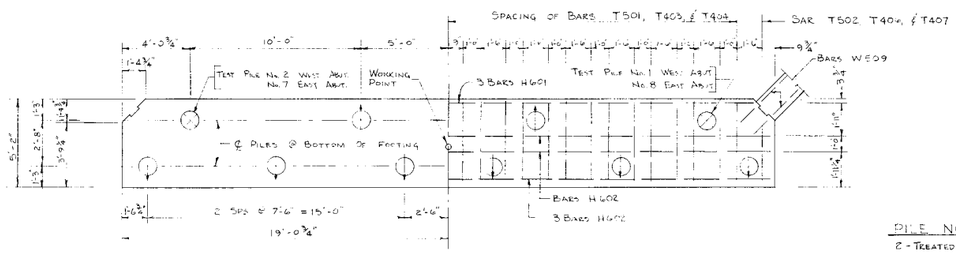
PLAN



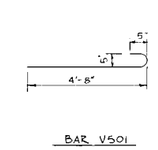


SECTION B-B

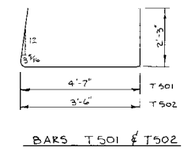




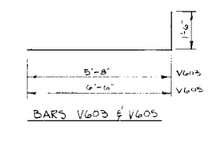
SECTION C-C



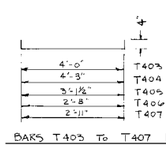
BAR V501



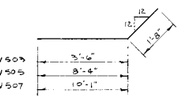
BARS T501 & T502



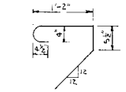
BARS V603 & V605



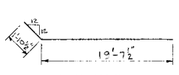
BARS T403 To T407 Incl.



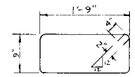
BARS W503, W505 & W507



BAR T408



BAR H605



BAR T309

NOTE: All Bar Dimensions Are Out To Out Of Bar.

Bridge Seat Reinforcing Bars Shall Be Carefully Placed To Avoid Interference With Drilling Holes For Anchor Bolts, Anchor Bolt Holes To Be Drilled And Anchor Bolts Set In Place After Beams Have Been Erected

Bill of Reinforcement Bars for Two Abuts.

Bar	№	Size	Length	Shape	Location
H601	6	6	35'-6"	Straight	Footing - Longit.
H602	10	6	37'-8"	"	" - "
H603	20	6	16'-7½"	"	Bridge Seat - Horizon.
H604	20	6	19'-0"	"	Parapet - Front
H605	20	6	21'-6"	Bent	" - Back
H606	12	6	15'-10½"	Straight	" - Top
H607	4	6	18'-1½"	"	Paving Bracket
T501	56	5	9'-4"	Bent	Footing - Ties
T502	4	5	8'-5"	"	" "
T403	56	4	4'-8"	"	" "
T404	56	4	4'-11"	"	" "
T405	76	4	3'-9"	"	Bridge Seat - Ties
T406	4	4	3'-4"	"	Footing - Ties
T407	4	4	3'-7"	"	" "
T408	38	4	8'-6"	"	Paving Bracket
T309	20	3	5'-8"	"	End Posts
V501	64	5	5'-3"	1-Hook	Bridge Seat - Front & Back
V502	60	5	5'-3"	Straight	Parapet - Front
V603	60	6	7'-2"	Bent	" - Back
V504	12	5	6'-0"	Straight	" - Front
V605	4	6	8'-0"	Bent	" - Back
V606	8	6	6'-6"	Straight	"
* V407	24	4	13'-11"	"	Wing Walls
V608	24	6	5'-0"	"	End Posts
W601	4	6	19'-9"	Bend In Field	Wing Walls - Front
W602	4	6	19'-9"	"	" " - Back
W503	4	5	5'-2"	Bent	" " - Front
W504	4	5	4'-6"	Straight	" " - Back
W505	12	5	10'-0"	Bent	" " - Front
W506	12	5	9'-6"	Straight	" " - Back
W507	12	5	11'-9"	Bent	" " - Front
W508	12	5	10'-0"	Straight	" " - Back
W509	16	5	6'-0"	"	" " - Front & Back

* Cut Two Bars From One In The Field.

Summary of Quantities for Two Abuts.

Concrete Mix № 3Y6	54 Cu. Yd.
Concrete Mix № 1A6	40 Cu. Yd.
Concrete Mix № 3Y60	1 Cu. Yd.
Class D.E. Excavation	119 Cu. Yd.
Reinforcement Bars	7070 Lbs.
Structural Steel (3305)	30 Lbs.
(1) 18 Bolts ¾"x 9" Lg. Sq. Head & Nut & Cut Washer	
(2) 1 County Name Plate, Detail Plate № 2104	
(3) Bench Mark Disc, One Per M.H.D. Std. Plate No. 9300	
Expansion Bearings Mark "A"	8 Units
Three-Ply Joint Waterproofing	14 Lin. Ft.
2 Treated Timber Test Piles In Place 35 Ft long	
2 Treated Timber Test Piles In Place 40 Ft long	
Treated Timber Piling (Exclusive Of Test Piles)	520 Lin. Feet
(4) 4 Pieces 3" x 12" x 19'-0" Planks	

(1) Included In Weight Of Structural Steel
(2) Bridge № 55511 Dated 1964
(3) State Will Furnish Disc. Payment For Placing Disc Will Be Included In Price Bid For Other Items.
(4) Included In Prices Bid For Other Items.

PILE NOTES

2 - Treated Timber Test Piles 40 ft. long East Abut.
2 - " " " " 35 " " West Abut.
8 - " " Piles - Estimated Length - 35 ft. East Abut.
8 - " " " " - 30 ft West Abut.
20 Treated Timber Piles Required For Two Abutments
All Piles To Be Driven To A Minimum Bearing Value Of 24 Tons Per Pile.
Piles Shown Thus ⊙→ To Be Battered 3" In 12" In Direction Indicated By Arrow
Estimated Penetration 2 ft Less Than Length Given.

Computed Pile Loads	Tons/Pile
Dead Load & Earth Pressure	16.09
Live Load	3.85
Total	19.94

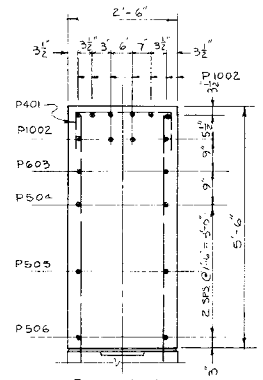
Scale: ¼" = 1'-0"

Plans Prepared By
AGNEBERG · SANKSTONE · ASSOC.
1418 First Ave. N.E., Rochester, Minn.

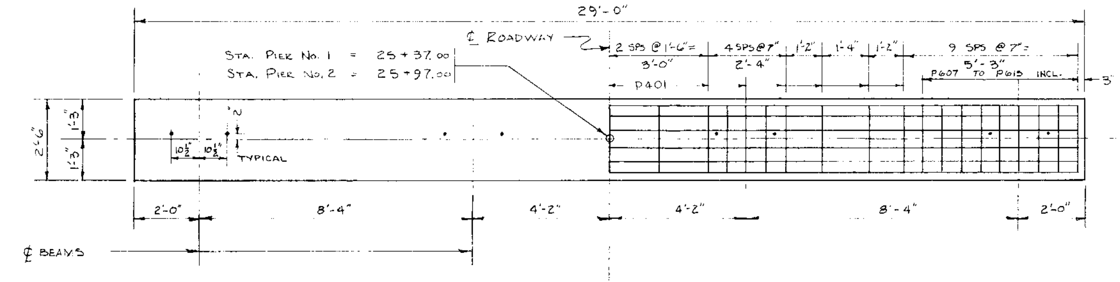
C.S.A.H. № 26
Bridge № 55511
Abutment Details

Approved 10-23-63

Sheet 4 Of 12 Sheets | 55511



SEC. A-A
SCALE : ½" = 1'-0"

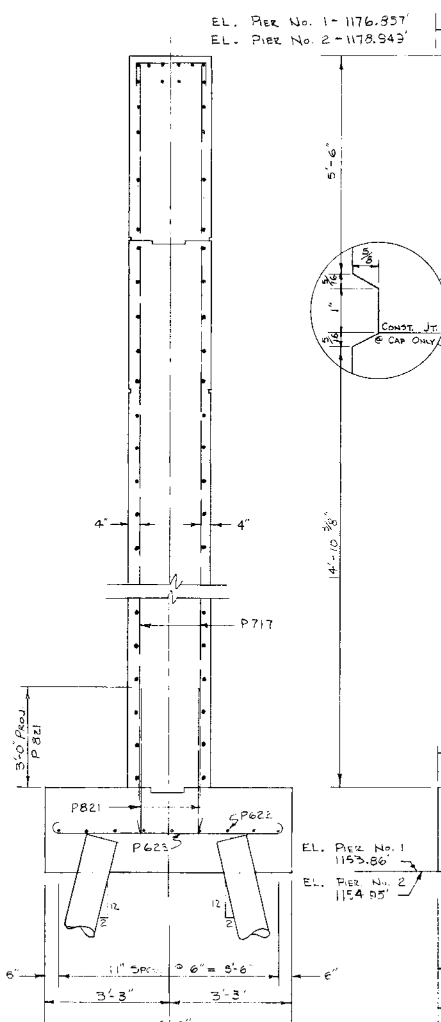


TOP OF PIER

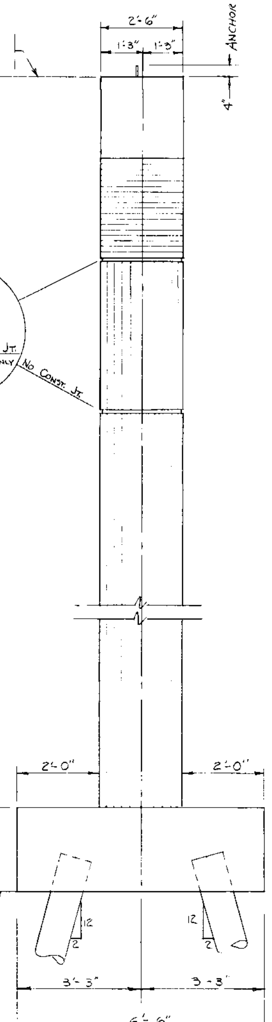
NOTE
BRIDGE SEAT REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH DRILLING HOLES FOR ANCHOR BOLTS. ANCHOR BOLT HOLES SHALL BE DRILLED AND ANCHOR BOLTS GROUTED IN PLACE AFTER GIRDERS HAVE BEEN ERECTED.

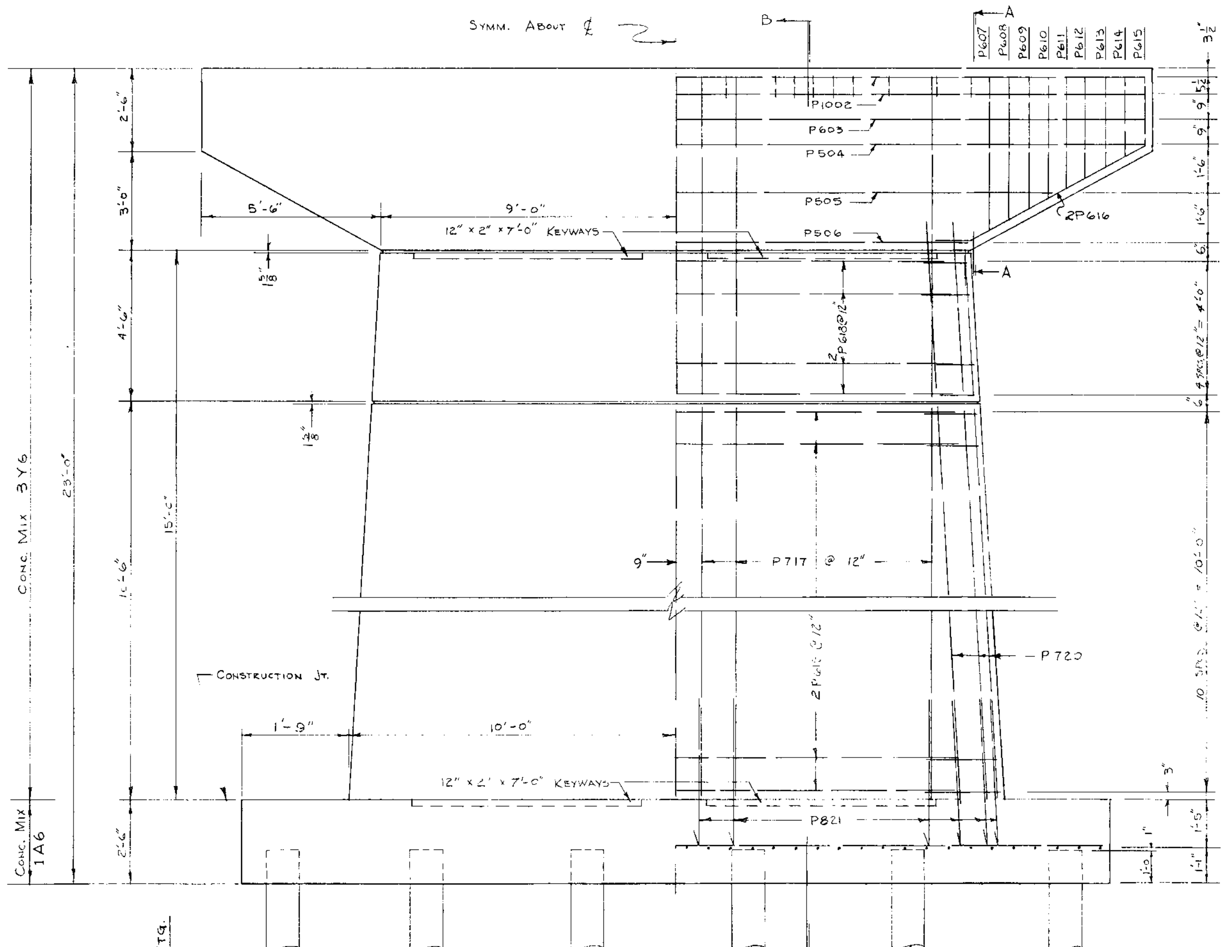
BAR	No.	SIZE	LENGTH	SHAPE	LOCATION
P401	38	4	3'-8"	BENT	CAP - TIES
P1002	20	10	30'-0"	"	" - HORIZONTAL
P603	4	6	28'-6"	STRAIGHT	" "
P504	4	5	28'-6"	"	" "
P505	4	5	23'-9"	"	" "
P506	4	5	18'-0"	"	" "
P607	4	6	11'-7½"	BENT	" - STIRRUPS & TIES
P608	4	6	11'-0"	"	" "
P609	4	6	10'-4½"	"	" "
P610	4	6	9'-9"	"	" "
P611	4	6	9'-1½"	"	" "
P612	4	6	8'-6"	"	" "
P613	4	6	7'-10½"	"	" "
P614	4	6	7'-3"	"	" "
P615	4	6	6'-7½"	"	" "
P616	8	6	8'-6⅜"	"	" - TIES
P717	68	7	20'-2½"	STRAIGHT	SHAFT - VERTICAL
P618	64	6	15'-6"	"	" - HORIZONTAL
P619	64	6	9'-1"	BENT	" "
P720	20	7	16'-6"	STRAIGHT	" - VERTICAL
P821	88	8	5'-6"	BENT	" - DOWELS
P622	24	6	23'-0"	STRAIGHT	FOOTING - LONG WAY
P623	70	6	7'-4"	BENT	" - SHORT WAY

Table: BILL OF REINFORCEMENT BARS FOR TWO PIERS

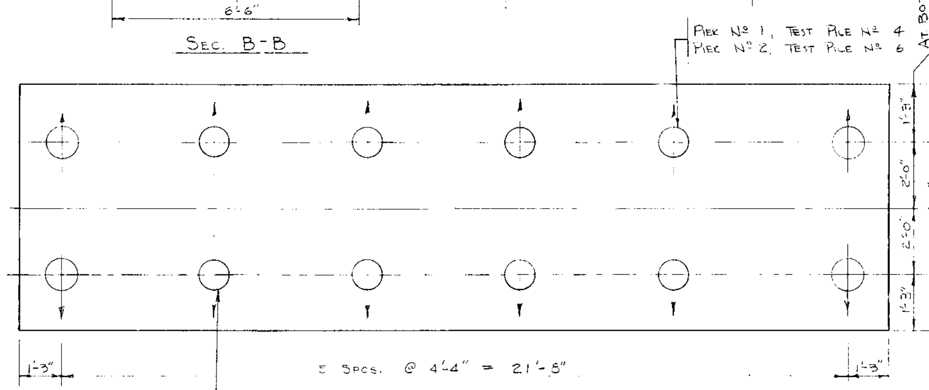


SEC. B-B

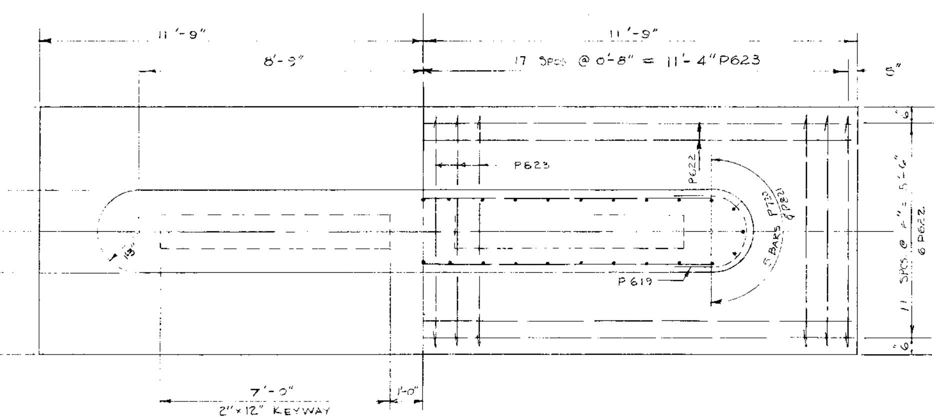




ELEVATION



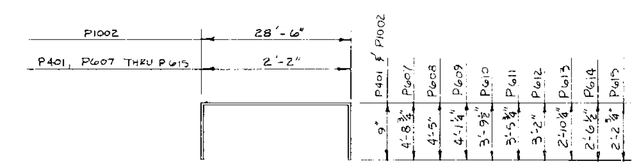
SECTION AT BOTTOM OF FOOTING



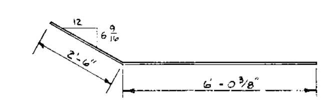
SECTION AT TOP OF FOOTING

SUMMARY OF QUANTITIES FOR TWO PIERS	
CONCRETE MIX No. 1A6	28 CU. YDS.
CONCRETE MIX No. 3Y6	78 CU. YDS.
REINFORCEMENT BARS	12,470 lb.
CLASS W.E. EXCAVATION	103 CU. YDS.
CAST IN PLACE CONCRETE TEST PILES INPL. 25 FT. LG.	4 PILES
* CAST IN PLACE CONCRETE PILING DELIV.	400 LIN. FT.
FIXED BEARINGS MARK "C"	4 UNITS
EXPANSION BEARINGS MARK "A"	4 UNITS

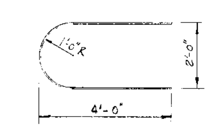
* EXCLUSIVE OF TEST PILES



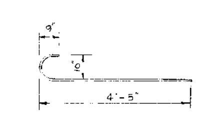
BARS P401, P1002, P607 TO P615 INCL.



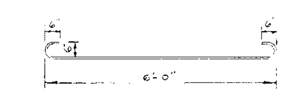
BAR P616



BAR P619



BAR P821



BAR P623

NOTE: ALL BAR DIMENSIONS ARE OUT TO OUT OF BAR.

PILE NOTES
2 CAST-IN-PLACE CONCRETE TEST PILES 25 ft. long - PIER No 1
10 CAST-IN-PLACE CONCRETE PILES EST. LTH. 20 ft long - PIER No 1
2 CAST-IN-PLACE CONCRETE TEST PILES 25 ft. long - PIER No 2
10 CAST-IN-PLACE CONCRETE PILES EST. LTH 20 ft long - PIER No 2
24 CAST-IN-PLACE CONCRETE PILES FOR 2 PIERS
ESTIMATED PENETRATION 1 ft LESS THAN LENGTH GIVEN.
ALL PILES TO BE DRIVEN TO A MINIMUM BEARING OF 35 TONS PER PILE.
PILES MARKED THUS —⊖→ TO BE BATTERED 2" PER ft IN DIRECTION SHOWN.

COMPUTED PILE LOADS	TONS/PILE
DEAD LOAD	14.7 *
LIVE LOAD	5.45*
OVERTURNING	7.5 *
	30.2*

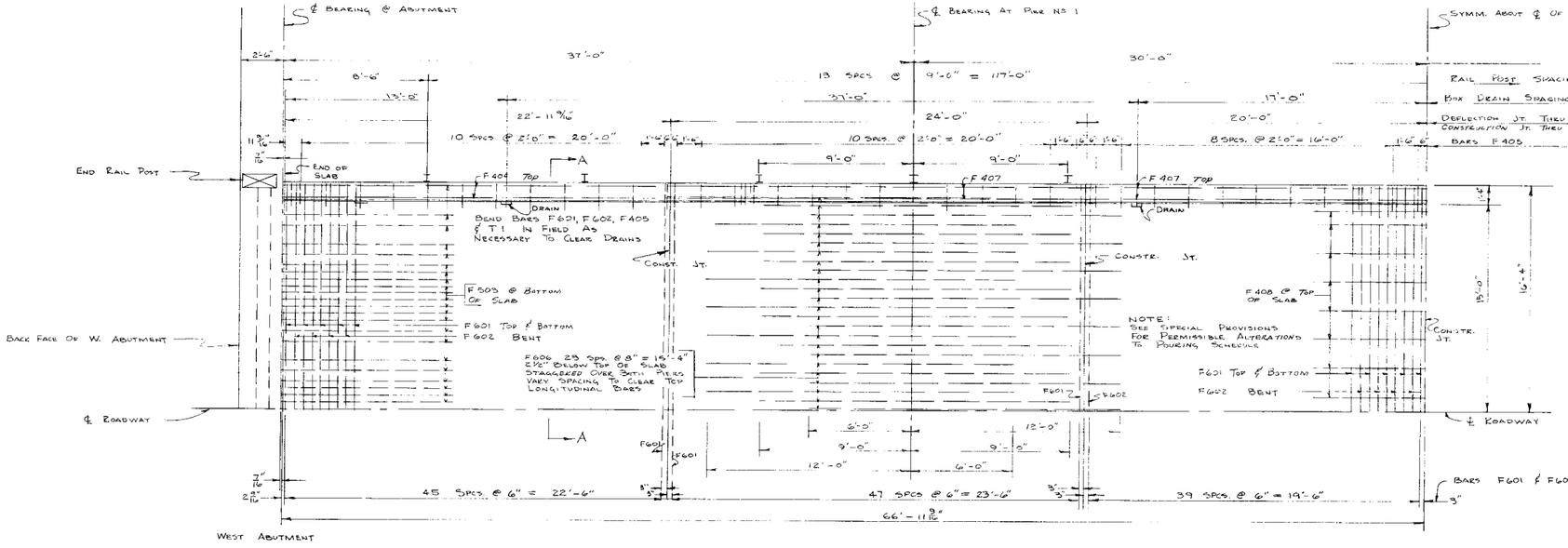
* PILE LOADS SHOWN DIVIDED BY 1.25 FOR GROUP III AASHO LOADING.

PLANS PREPARED BY
AGNEBERG · SANKSTONE · ASSOC.
1418 FIRST AVE N.E., ROCHESTER, MINN.

C. S. A. H. No 26
BRIDGE No 55511
PIER DETAILS

APPROVED 10-23-63

SHEET 5 OF 12 SHEETS | 55511



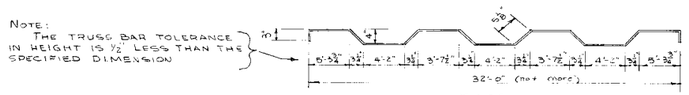
PART QUARTER PLAN
Scale ¼" = 1'-0"

BILL OF REINFORCEMENT BARS FOR SUPERSTRUCTURE

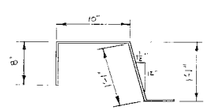
Bar	No	Size	Length	Shape	Location
F601	272	6	52'-3"	Straight	Slab – Transverse
F602	152	6	33'-6"	Bent	" "
*F503	270	5	23'-7"	Straight	" – Longitudinal
F404	8	4	26'-8"	"	Curb – Longitudinal
F405	144	4	3'-3"	Bent	" – Transverse
F606	94	6	18'-0"	Straight	Slab – Over Pier
F407	16	4	19'-8"	"	Curb – Longitudinal
*F408	108	4	23'-7"	"	Slab – Longitudinal

* To Have A Min. 1'-3" Lap & Splice

NOTE: THE TRUSS BAR TOLERANCE IN HEIGHT IS ½" LESS THAN THE SPECIFIED DIMENSION

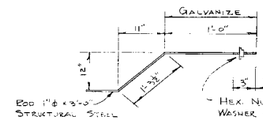


F602

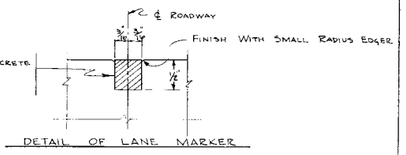


F405

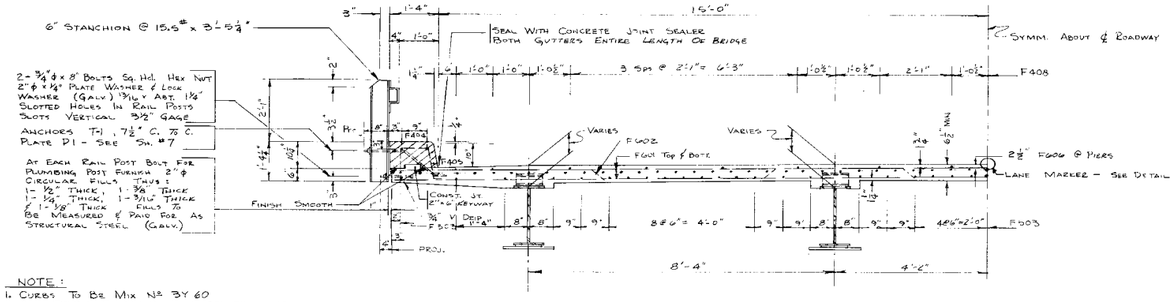
NOTE: ALL BAR DIMENSIONS ARE OUT TO OUT OF BARS



RAIL POST ANCHORS – T1
52 Req'd – 2 @ Each Post

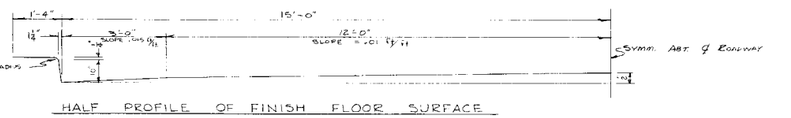


DETAIL OF LANE MARKER

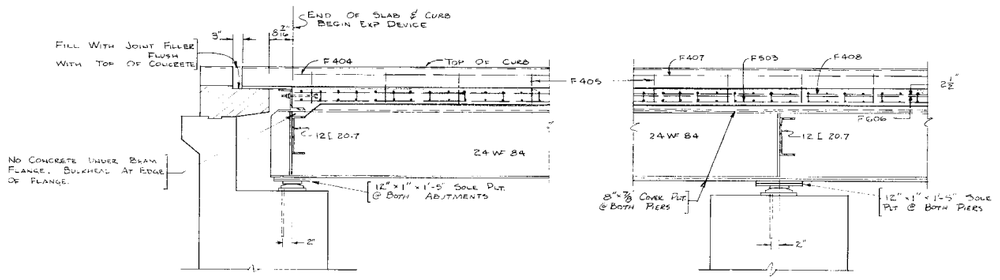


SECTION A-A

NOTE:
1. Curbs To Be Mix No 3Y 60 All Other Concrete In Superstructure To Be Mix No 3Y 47.
2. Drains Not Shown, See Details On Sh. #7

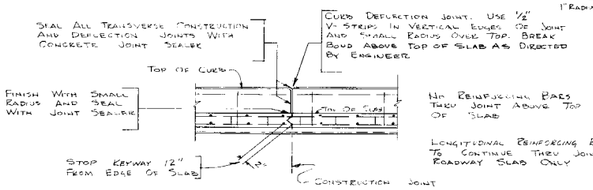


HALF PROFILE OF FINISH FLOOR SURFACE



WEST ABUTMENT AS SHOWN
EAST ABUTMENT OPP. HAND

PIERS No 1 & No 2
AS SHOWN



DETAIL OF SLAB CONSTRUCTION JOINTS AND CURB DEFLECTION JOINTS

SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE

Concrete Mix No. 3Y 60		95 Cu. Yd.
Concrete Mix No. 3Y 60		10 Cu. Yd.
Reinforcement Bars		31 180 lb.
Structural Steel	(3306)	52 225 ② lb.

¾" x 8" Bolts – Sq. Hd. Hex Nut, 2" ϕ x ⅛" R. Wash & Lock Wash – Galv.
Floor Drains – Box Drains – Details Sh. No. 7 ℄ Units
Railing And Stanchion, Railing Posts – Details Sh. No. 7
Railpost Anchors T1 – Details As Re
Structural Steel N.W.D. (3306) 19 970 lb.

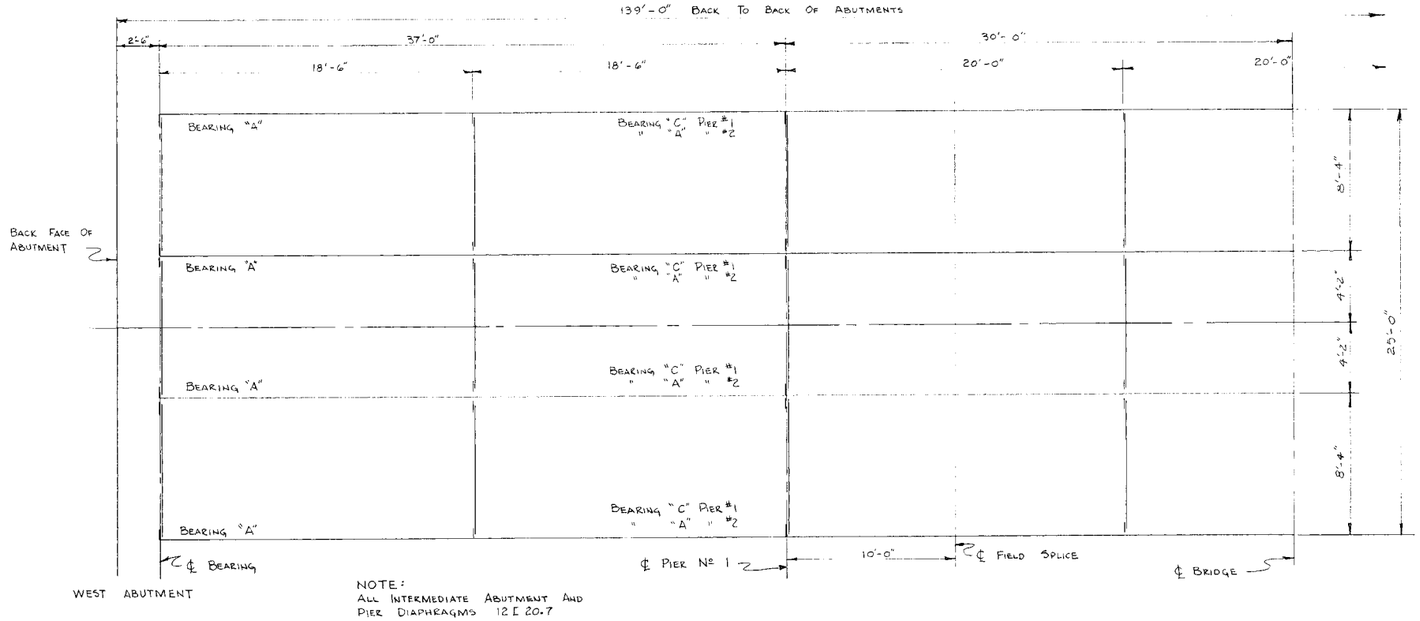
② Included In Weight Of Structural Steel (3306)

PLANS PREPARED BY
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C.S.A.H. No 26
BRIDGE No 55511
SLAB REINFORCEMENT PLAN & LONGIT. SECTIONS

Approved 10-23-63

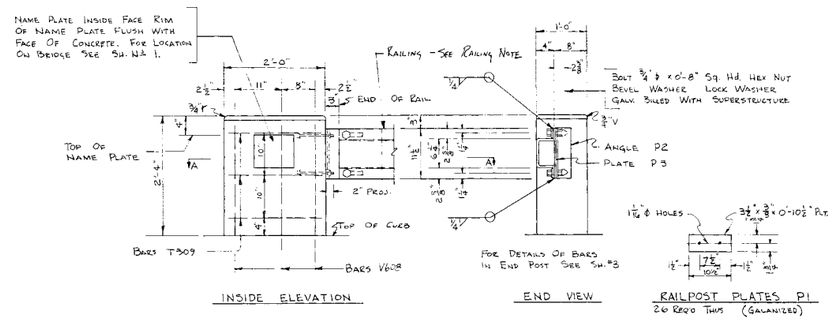
Sheet 6 Of 12 Sheets | 55511



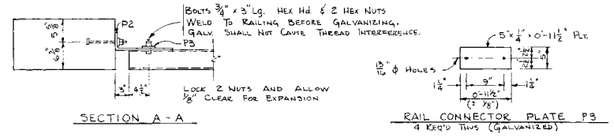
NOTE:
ALL INTERMEDIATE ABUTMENT AND PIER DIAPHRAGMS 12 E 20.7

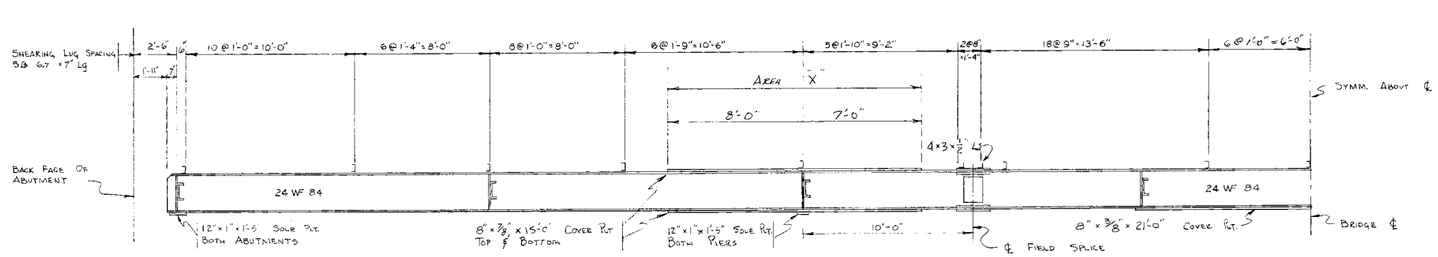
HALF STEEL FRAMING PLAN

LOCATION AND DESCRIPTION OF BEARINGS						
Bearing Mark	Location	Nº Units	Type	Std. Detail	Load Kips	Depth
A	Both Abut.	8	Exp. Type With Guide Bars	B138A	120	4½"
C	Pier Nº 1	4	Fixed Type	B137A	120	3⅜"
A	Nº 2	4	Exp. Type With Guide Bars	B138A	120	4½"

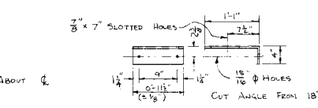


DETAIL OF END RAILPOST

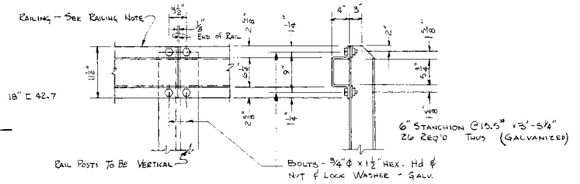




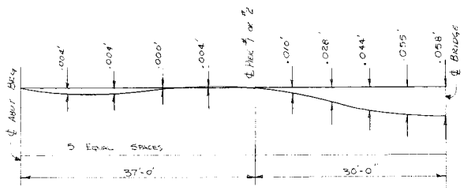
ELEVATION OF BEAMS
Scale ¼" = 1'-0"



RAIL CONNECTOR ANGLE P2
4 Req'd Thus (Galvanized)

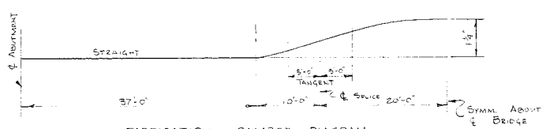


DETAIL OF RAILING CONNECTION TO STEEL INTERMEDIATE POSTS

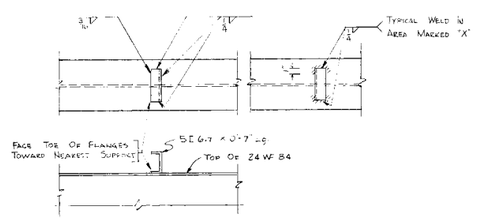


HALF DEFLECTION DIAGRAM

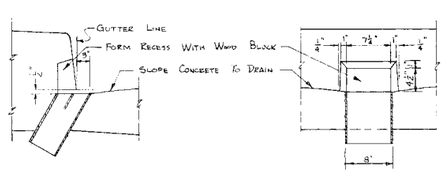
DEFLECTIONS SHOWN ARE FOR WEIGHT OF SLAB CURB & RAILING ONLY. THE ENGINEER WILL TAKE ELEVATIONS AT TOP OF BEAMS AFTER ERECTION AND WILL ALLOW FOR DEFLECTIONS SHOWN TO ENABLE CONTRACTOR TO BUILD FORMS TO CORRECT GRADE AND SPECIFIED SLAB THICKNESS.



FABRICATION CAMBER DIAGRAM



DETAIL OF SHEAR LUGS



DETAIL OF BOX DRAINS
Box Drains To Be As Per M.H.D. Std. Plate Nº B 13B Sheet 11
8 Req'd Thus

RAILING NOTE

RAILING TO BE 18" x ¼" U.M. PLATE BENT TO DIMENSIONS SHOWN WITH ½" INSIDE RADIUS BENDS.
RAILING TO BE CONTINUOUS FOR A MINIMUM OF TWO PANELS AND A MAXIMUM OF THREE PANELS.
LEAVE ⅛" CLEAR OPENING AT JOINTS BETWEEN ENDS OF RAILS.
THE FABRICATOR WILL BE PERMITTED TO SPLICE CONTINUOUS BENT PLATE RAILINGS AT THE ℄ OF RAILPOSTS USING A BUTT WELD GROUND SMOOTH.

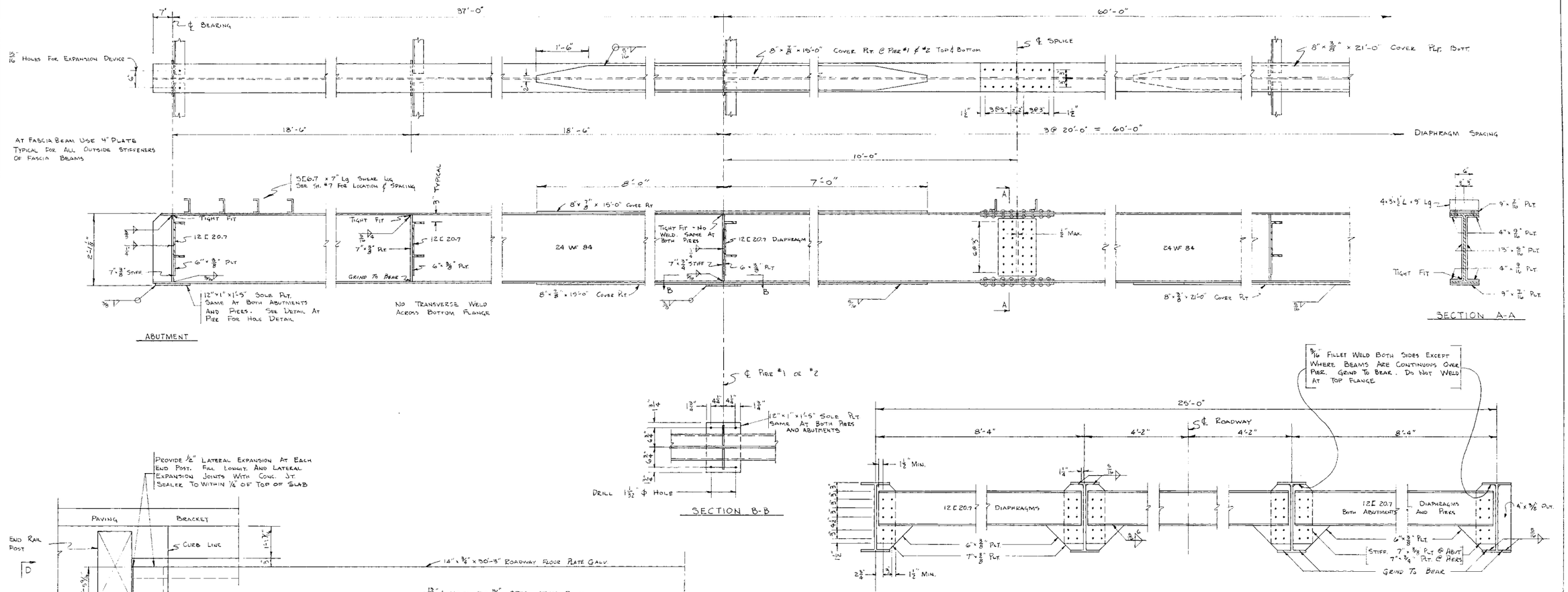
ALL RAILINGS, POSTS, BOLTS, AND ALL FITTINGS TO BE MEASURED AND PAID FOR AS STRUCTURAL STEEL, (3305).
GALVANIZE STRUCTURAL STEEL ITEMS AFTER FABRICATION AS PER M.H.D. 3394.
GALVANIZE BOLTS, NUTS, WASHERS FILLS AND ANCHORS T1 AS PER M.H.D. 3392.

PLANS PREPARED BY
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C. S. A. H. Nº 26
BRIDGE Nº 55511

FRAMING PLAN AND BEAM SPAN ELEVATIONS

APPROVED 10-22-63



NOTE : FOR EXPANSION DEVICE
GALVANIZE ROADWAY AND CURB PLATES ONLY AFTER FABRICATION PER MHD 3394
REPAIR GALVANIZED SURFACES DAMAGED AFTER WELDING PER M.H.D. 2471.3L3
ROADWAY FLOOR PLATES SHALL BE RAISED PATTERN SIMILAR TO INLAND STEEL COMPANY'S LARGE PATTERN, U.S. STEEL SECTION B-300, ALAN WOOD COMPANY'S SUPER DIAMOND OR EQUAL.

CONSTRUCTION NOTES

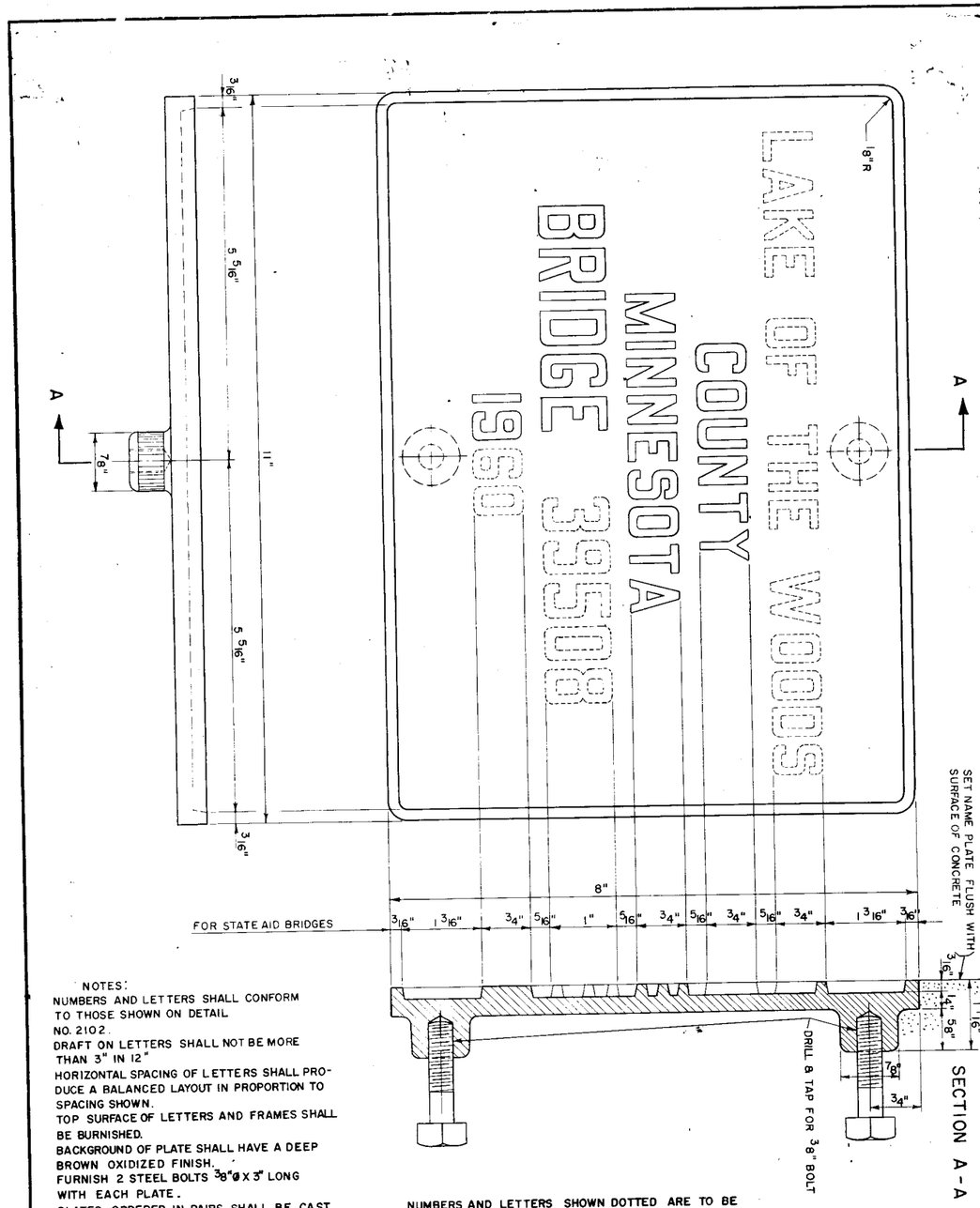
ALL RIVETS TO BE ⅞" ϕ, ALL HOLES 15/16" ϕ UNLESS OTHERWISE NOTED.
ALL FIELD CONNECTIONS TO BE RIVETED, EXCEPT AS NOTED.
PAINT ALL STRUCTURAL STEEL EXCEPT GALVANIZED MATERIAL AS FOLLOWS:
SHOP COAT - RED LEAD AS PER M. H. D. 3506
1ST FIELD COAT - ALUMINUM M.H.D 3527
2ND FIELD COAT - ALUMINUM MHD 3528

ALL DIAPHRAGM SPACING ARE DIMENSIONED TO ℄ OF PLATES.
WF BEAMS, SPLICES, AND COVER PLATES SHALL BE STRUCTURAL STEEL M. H. D. 3306
ALL OTHER STEEL SHALL CONFORM TO M.H.D 3305 (STRUCTURAL STEEL)
WELD COVER PLATES AS FOLLOWS:
START COVER PLATE WELDS AT CENTER OF PLATE AND PROCEED SIMULTANEOUSLY ON BOTH SIDES OF PLATE TOWARD EITHER END.
DO NOT TACK WELD. USE C CLAMPS AND RELEASE CLAMP AS WELDING PROCEEDS TO RELIEVE STRESS.
SPECIAL REAMING AS PER M.H.D 2471.3E1b WILL BE REQUIRED FOR THE RIVETED BEAM SPLICES. HOLES SHALL BE SUBPUNCHED OR DRILLED 1/16" ϕ AND REAMED TO 15/16" ϕ IN ASSEMBLED POSITION. THE SECTION TO BE ASSEMBLED FOR REAMING SHALL BE FROM ABUTMENT TO ABUTMENT. ALL OTHER HOLES MAY BE FULL PUNCHED AS PER M.H.D 2471.3E1a

PLANS PREPARED BY
AGNEBERG · SANKSTONE · ASSOC.
1418 FIRST AVE. N.E., ROCHESTER, MINN.

C. S. A. H. Nº 26
BRIDGE Nº 55511
STRUCTURAL DETAILS & EXPANSION DEVICE
APPROVED 10-23-63

SHEET 8 OF 12 SHEETS | 55511



NOTES:
NUMBERS AND LETTERS SHALL CONFORM TO THOSE SHOWN ON DETAIL NO. 2102.
DRAFT ON LETTERS SHALL NOT BE MORE THAN 3" IN 12"
HORIZONTAL SPACING OF LETTERS SHALL PRODUCE A BALANCED LAYOUT IN PROPORTION TO SPACING SHOWN.
TOP SURFACE OF LETTERS AND FRAMES SHALL BE BURNISHED.
BACKGROUND OF PLATE SHALL HAVE A DEEP BROWN OXIDIZED FINISH.
FURNISH 2 STEEL BOLTS 3/8"Ø X 3" LONG WITH EACH PLATE.
PLATES ORDERED IN PAIRS SHALL BE CAST FROM THE SAME HEAT.

NUMBERS AND LETTERS SHOWN DOTTED ARE TO BE OBTAINED FROM BRIDGE PLANS.

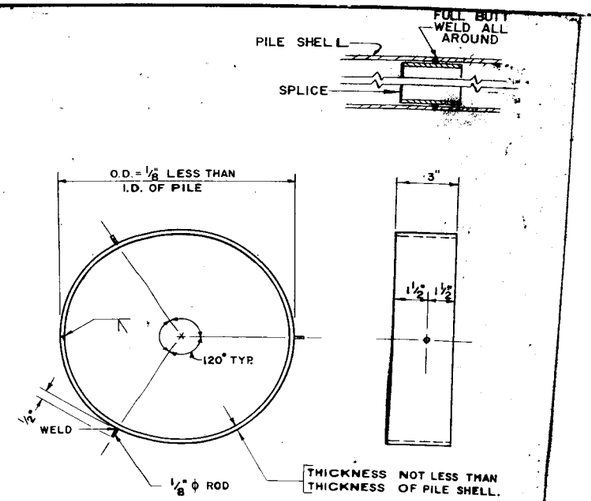
SPECIFICATION REFERENCE 2471.3 H, 3327 (BRONZE CASTINGS TYPE 2)

APPROVED 1959 BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS BRIDGE NAME PLATE FOR COUNTY BRIDGES	REVISIONS	DETAIL NO. 2104

ABCDEFGHIJKLMN
OPQRSTUVWXYZ
1234567890

NOTE:
ALL DIMENSIONS FOR 3/4" HIGH LETTERS AND NUMBERS SHALL BE IN DIRECT PROPORTION TO THOSE SHOWN ABOVE FOR THE 1" HIGH LETTERS AND NUMBERS. THE THICKNESS OF THE LETTERS AND NUMBERS SHALL BE 5/16".

APPROVED 7/3 1959 BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS LETTERS FOR BRIDGE NAME PLATES	REVISIONS	DETAIL NO. 2102



ALL STRUCTURAL STEEL AS PER MHD 3305
ALL WELDING AS PER MHD 2471.3J

APPROVED 5-23-58 BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS SPLICES FOR CAST IN PLACE CONCRETE PILES	REVISIONS 6/2/59	DETAIL NO. B220

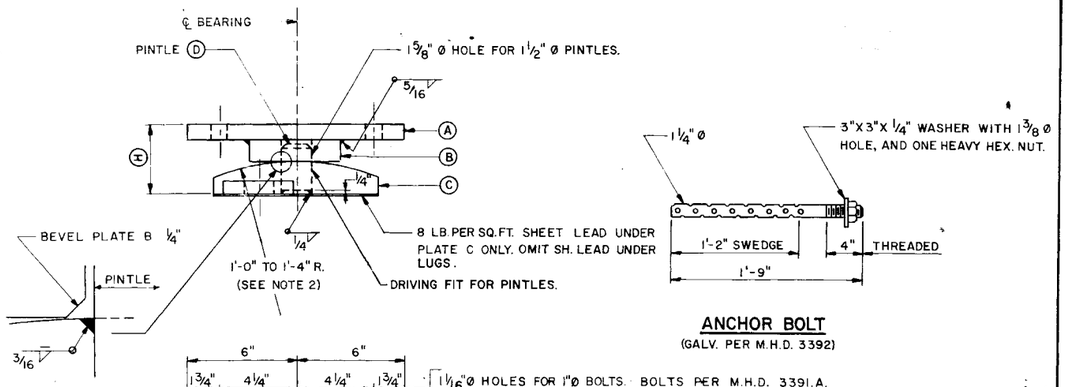
STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

BRIDGE NO.

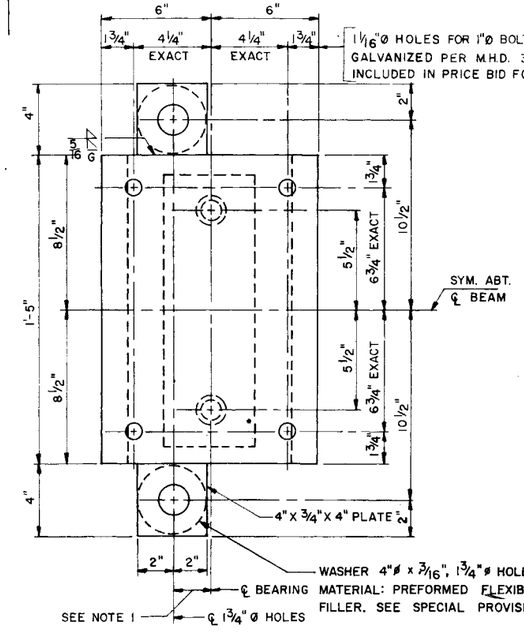
DETAILS

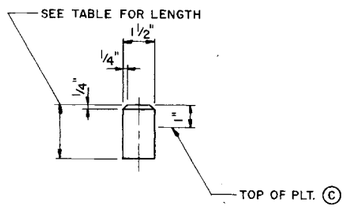
APPROVED:

SHEET OF SHEETS



ANCHOR BOLT
(GALV. PER M.H.D. 3392)





PINTLE D

NOTES:

1 — POSITION OF ANCHOR BOLTS SHOWN IS FOR SQUARE BRIDGES.
REVISE POSITION OF ANCHOR BOLT HOLES FOR SKEW TO PERMIT DRILLING HOLES IN BRIDGE SEAT WITH END DIAPHRAMS IN PLACE.

PINTLE D SHALL COMPLY WITH M.H.D. 3314, TYPE II.

ALL OTHER STRUCTURAL STEEL AS PER M.H.D. 3305.

2 — MACHINE TOP OF PLATE C TO RADIUS SHOWN AND TO 250 MICRO.

PLATES SHALL BE FLAT AFTER WELDING AND FABRICATION.

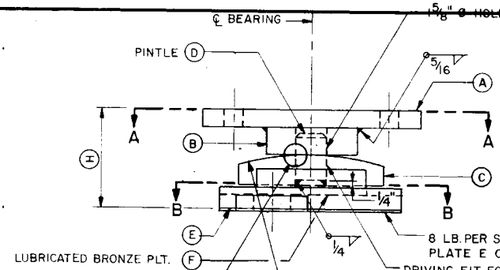
GALVANIZE AFTER FABRICATION PER M.H.D. 3394, NO PAINT.

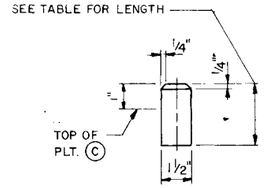
PAYMENT FOR BEARING ASSEMBLY SHALL INCLUDE ALL MATERIAL SHOWN ON THIS DETAIL.

LOAD KIPS	A	B	C △	D	H (MIN.)	CODE
200	12"X1"X 1'-5"	5"X1 1/4"X1'-3"	12"X2 1/2"X1'-5"	1 1/2"ØX3 1/4"	4 1/16"	B137-200
160	12"X1"X1'-5"	5"X1 1/4"X1'-3"	10"X 2" X1'-5"	1 1/2"ØX2 3/4"	4 3/16"	B137-160
120	12"X 7/8"X1'-5"	5"X1 1/4"X1'-3"	8"X1 1/2"X1'-5"	1 1/2"ØX2 1/4"	3 9/16"	B137-120

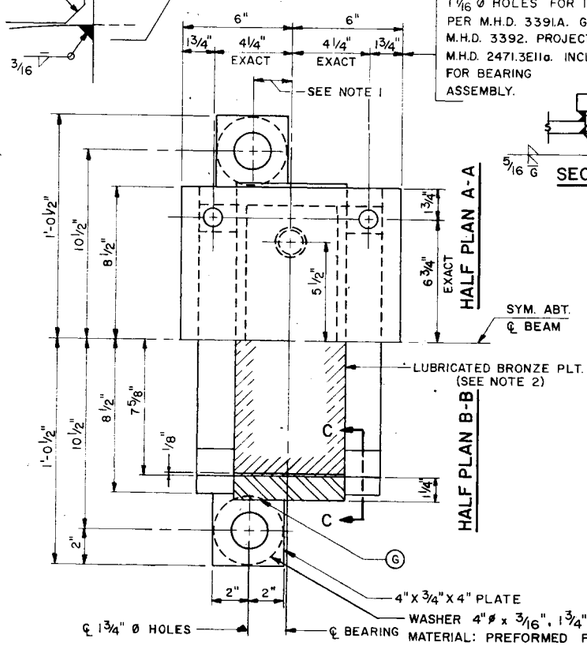
△ FINISHED THICKNESS OF PLATE C MAY BE 1/16" LESS THAN THICKNESS SHOWN.

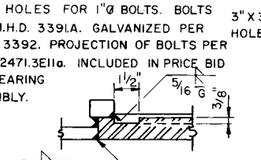
APPROVED MAY 17, 1960	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS	REVISIONS	DETAIL NO.
A. C. LaBonte BRIDGE ENGINEER	FIXED BEARING ASSEMBLY FOR BEAMS WITH 9" TO 10 1/2" FLANGE	5/11/60-A 9/26/61-B 5/22/63 8/28/63	B137



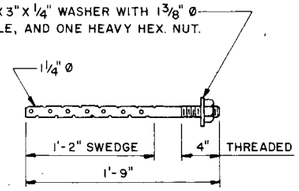


PINTLE D





SECTION C-C



ANCHOR BOLT
(GALV. PER M.H.D. 3392)

NOTES:

1 — POSITION OF ANCHOR BOLTS SHOWN IS FOR SQUARE BRIDGES.
REVISE POSITION OF ANCHOR BOLT HOLES FOR SKEW TO PERMIT DRILLING HOLES IN BRIDGE SEAT WITH END DIAPHRAGMS IN PLACE.

PINTLE D SHALL COMPLY WITH M.H.D. 3314, TYPE II.

ALL OTHER STRUCTURAL STEEL PER M.H.D. 3305.

2 — BRONZE TO BE ROLLED ALUMINUM BRONZE PLATE A.S.T.M. B169, ALLOY D, SOFT TEMPER, MILL FINISH; OR CAST ALUMINUM BRONZE A.S.T.M. B148, ALLOY 9C OR 9D.* FOR LUBRICATION SEE M.H.D. 3329.

3 — MACHINE TOP OF PLATE C TO RADIUS SHOWN AND TO 250 MICRO. MACHINE BOTTOM TO 125 MICRO.

FINISH RECESS IN PLATE E TO 250 MICRO.

PLATES SHALL BE FLAT AFTER WELDING AND FABRICATION.

GALVANIZE AFTER FABRICATION AND BEFORE BRONZE IS FITTED IN PLACE PER M.H.D. 3394, NO PAINT.

LOAD KIPS	A	B	C △	D	E	F*	G	H (MIN.)	CODE
200	12"X1"X1'-5"	5"X1 1/4"X1'-3"	9"X 2" X1'-3"	1 1/2"Ø X 3"	12"X1 1/2"X1'-5"	7"X 1/2"X1'-3"	1 1/4"X1"X7"	5 13/16"	B138-200
160	12"X1"X1'-5"	5"X1 1/4"X1'-3"	8"X1 3/4"X1'-3"	1 1/2"Ø X2 3/4"	10"X1 1/4"X1'-5"	6"X 1/2"X1'-3"	1 1/4"X1"X6"	5 5/16"	B138-160
120	12"X 7/8"X1'-5"	5"X1 1/4"X1'-3"	6"X1 1/4"X1'-3"	1 1/2"Ø X 2"	8"X 1" X1'-5"	4"X 1/2"X1'-3"	1 1/4"X1"X4"	4 7/16"	B138-120

* CAST BRONZE SHALL HAVE MACHINE-FINISHED EDGES TO WIDTH AND LENGTH SHOWN.
BOTTOM SURFACE TO BE MACHINED TO 250 MICRO AND TOP SURFACE TO 125 MICRO.
WIDTH AND LENGTH OF CAST OR WROUGHT BRONZE SHALL BE HELD TO +0.000 AND -0.050 INCH TOLERANCE.
△ FINISHED THICKNESS OF PLATE C MAY BE 1/16" LESS THAN THICKNESS SHOWN.

BRONZE BEARING PLATES SHALL BE BOXED FOR SHIPMENT PER M.H.D. 2471.3K.

PAYMENT FOR BEARING ASSEMBLY SHALL INCLUDE ALL MATERIAL SHOWN ON THIS DETAIL.

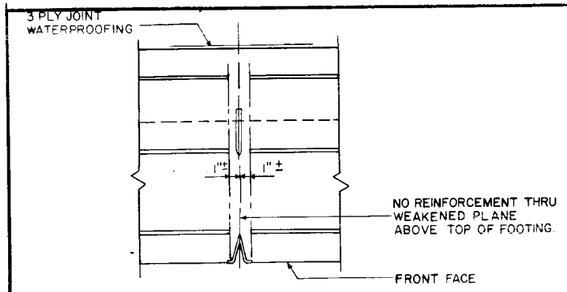
APPROVED MAY 17, 1960	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS	REVISIONS	DETAIL NO.
A. C. LaBonte BRIDGE ENGINEER	EXPANSION BEARING ASSEMBLY FOR BEAMS WITH 9" TO 10 1/2" FLANGE WITH GUIDE BARS	5/11/60-A 9/26/61-B 5/22/63 8/28/63	B138

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

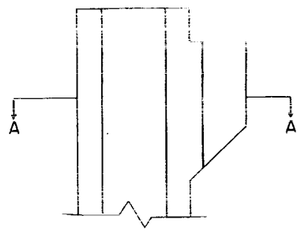
BRIDGE NO.

DETAILS

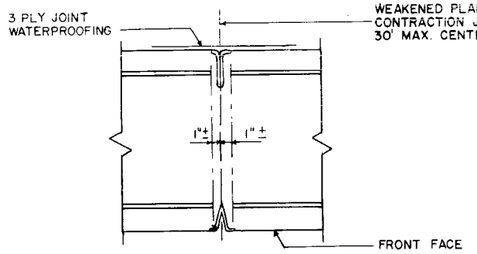
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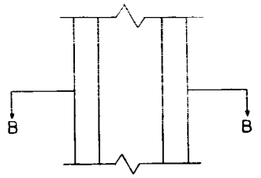
SECTION A-A



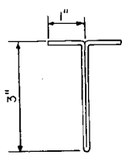
SECTION THRU PAVING BRACKET

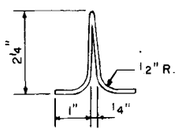


SECTION B-B



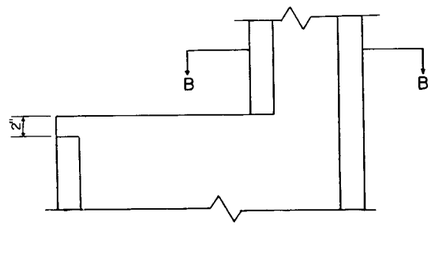
SECTION THRU WALL



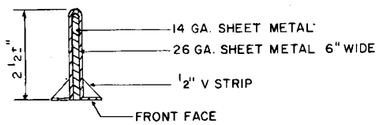


BACK STRIP
8" WIDE

FRONT STRIP
6" WIDE



SECTION THRU BRIDGE SEAT ON PARAPET ABUTMENT



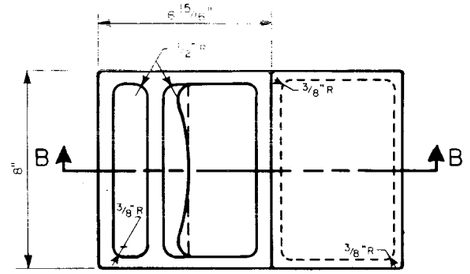
ALTERNATE FRONT STRIP

NOTES
METAL STRIP TO BE 26 GA. GALVANIZED SHEET METAL. M.H.D. 3338
FASTEN TO FORMS WITH 7/8" ROOFING NAILS ABOUT 6" CENTERS.
FRONT STRIP TO BE REMOVED WITH FORMS.
BACK STRIP REMAINS IN PLACE.
ALL METAL IN FRONT FACE TO BE OILED FOR EASY REMOVAL.
COST OF FORMING JOINT TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS.

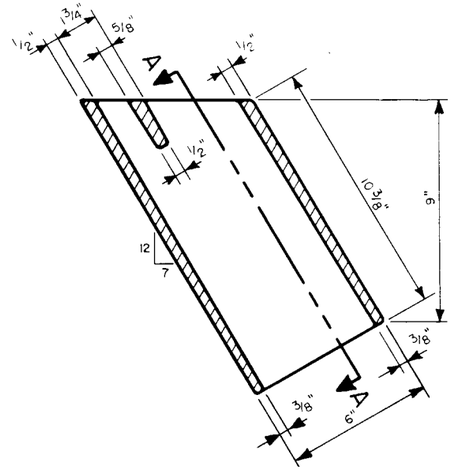
NOTE:
THE METHODS AND MATERIALS INDICATED HEREON SHALL BE CONSIDERED AS SUGGESTED ONLY. VARIATIONS WILL BE PERMITTED, SUBJECT TO APPROVAL BY THE ENGINEER, BUT MUST PROVIDE DUMMY JOINTS OF A DEPTH NOT LESS THAN THE DEPTH SHOWN, AND A WIDTH AT THE FRONT FACE OF THE ABUTMENT OF NOT GREATER THAN 5/16". THE SEPARATION OF THE HORIZONTAL REINFORCEMENT BARS SHALL BE NOT LESS THAN 1½" NOR MORE THAN 3", CENTERED AS SHOWN, REGARDLESS OF THE PROCEDURE USED FOR FORMING THE DUMMY JOINT.
IF A SUITABLE PLASTIC OR OTHER DURABLE MATERIAL, SATISFACTORY TO THE ENGINEER, IS USED FOR THE FRONT STRIP, THE MATERIAL MAY BE LEFT IN PLACE.

STRIPS TO BE REMOVED SHALL BE OILED OR GREASED AS NECESSARY TO PERMIT REMOVAL WITHOUT SPALLING THE CONCRETE.

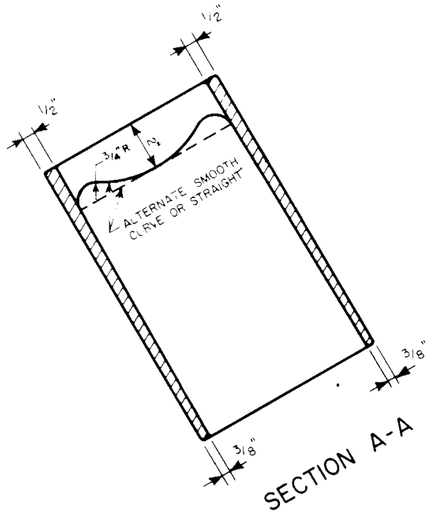
APPROVED ---------- 1963	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS	REVISIONS	DETAIL NO.
BRIDGE ENGINEER	CONTRACTION JOINT		B260



TOP VIEW



SECTION B-B

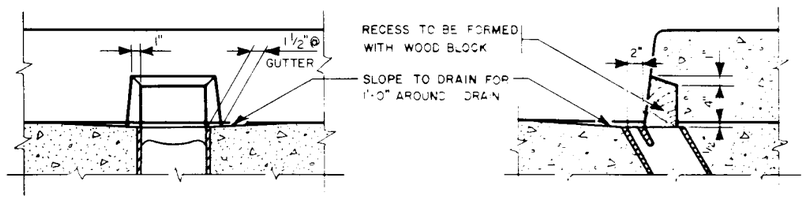


SECTION A-A

MATERIAL:
GRAY IRON CASTING PER M.H.D. 3321, CLASS 25.

HOT-DIP GALVANIZED AS PER M.H.D. 3394. NO PAINT.
SHOP INSPECTION BY M.H.D. BEFORE AND AFTER GALVANIZING.

BOX CASTING BD-13



PLACING DIAGRAM

LEB

APPROVED 10-23 1958	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS	REVISIONS 4-21-59 9-7-62 9-23-63	DETAIL NO.
R. E. LaBonte BRIDGE ENGINEER	CAST IRON FLOOR DRAIN FOR BRIDGES		B13

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

BRIDGE NO.

DETAILS

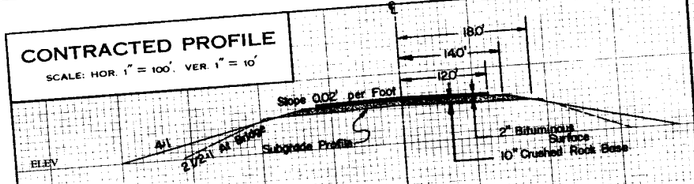
APPROVED:

BRIDGE #2221

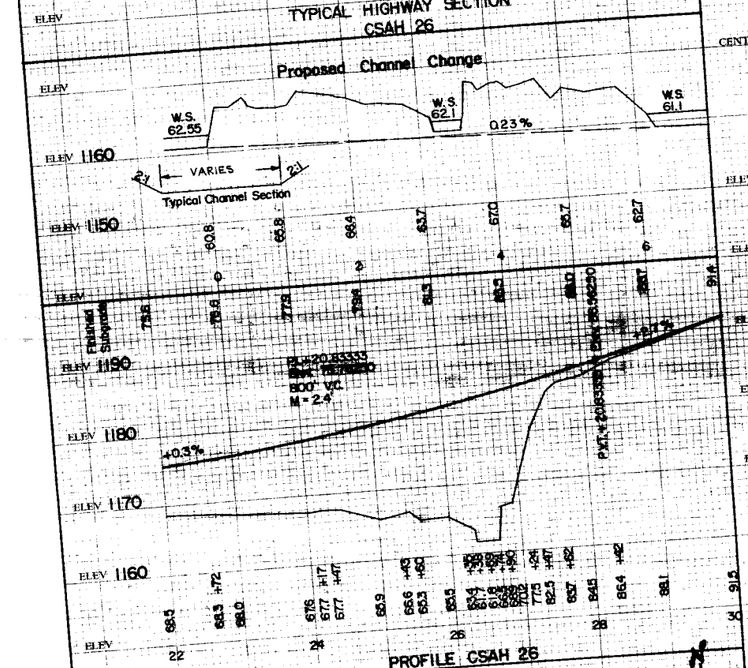
SHEET OF SHEETS

CONTRACTED PROFILE

SCALE: HOR. 1" = 100', VER. 1" = 10'



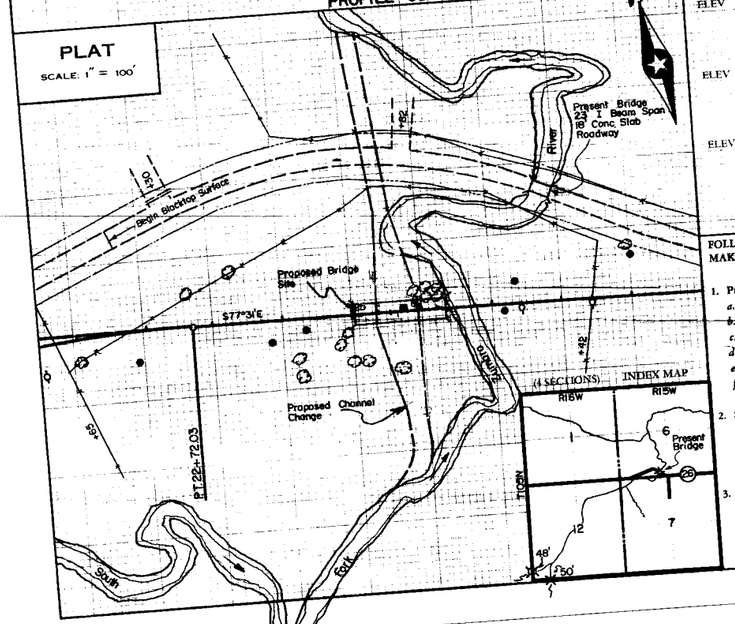
TYPICAL HIGHWAY SECTION
CSAH 26



PROFILE CSAH 26

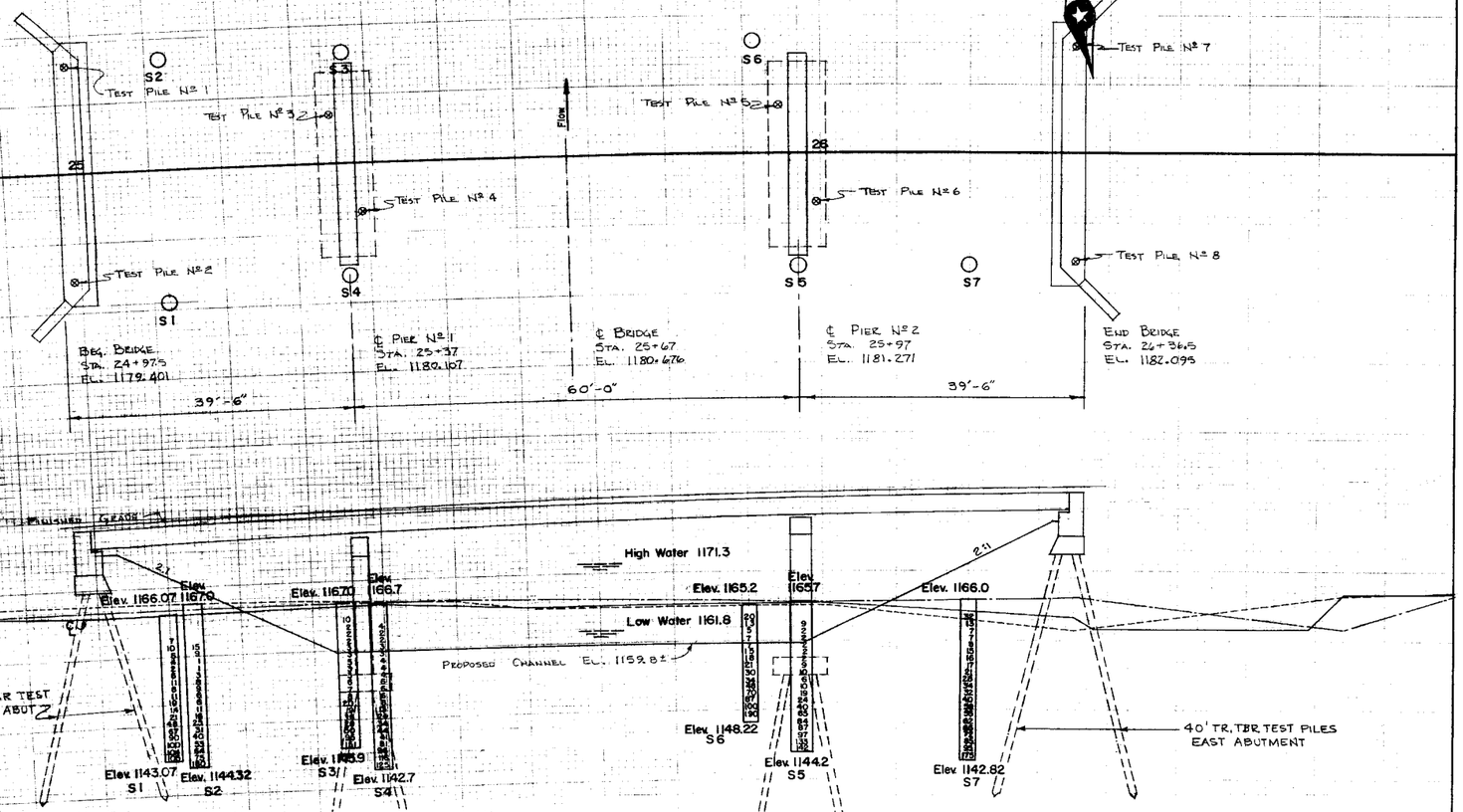
PLAT

SCALE: 1" = 100'



PLAN AND PROFILE

SCALE: 1" = 10'



Soundings Taken with
Std 1/2" Rod 50 Lb Hammer
2 Foot Drop

FOLLOW SEPARATE "INSTRUCTIONS FOR PREPARATION OF BRIDGE SURVEYS" WHEN MAKING BRIDGE SURVEYS.

DATA

1. Preliminary recommendations of Engineer in charge of Bridge Survey:
   a. Net span length and type of bridge: 139 FT.
   b. Width of roadway on bridge: 30'
   c. Number and width of sidewalks, if any: None
   d. Locate center of bridge at station: 25+67
   e. If a skew bridge is recommended, the angle of skew should be: No
   f. Is piling required? Yes
2. Special features: Waterfalls, dams, exceptional floods, ice, driftwood, sliding banks, logging, etc. Subject to driftwood. Channel change necessary because of sliding banks.
3. Changes: In height or length from that of old bridge, and reasons why: Present bridge inadequate as to area of waterway. Elevation of low steel of present bridge 1168.3 and high water elevation 3/29/62 1171.3.

DATA (Contd.)

4. Other bridges in vicinity:
   a. Over same stream (particularly structures which carry high water without overflow of roadway); give location, length, height above water, net cross-sectional area at high water stage and estimated age. 2 branches of the river converge about 1.5 miles upstream. Structure over the one branch being a 48' clear span, low steel 12' above normal water. The other a 50' span with 2 piers, low steel 9' above normal water. Local residents say they are no more than adequate. Downstream 1.5 miles a 75' LT, low steel 10.5' above normal water. High water 3/29/62 within 0.5' of low steel. Elevation of top of water 0.4' higher upstream than downstream the same day.
   c. Reasons why these bridges are, or are not, fair indications of what length the proposed bridge should be. Elevations of water taken 3/29/62 are considered extreme high water.
5. If structure is over a drainage ditch, is ditch gradient liable to be altered? Does not apply.
6. Navigation clearances required, if any: No
7. Information and evidence in regard to high water stages was obtained as follows: Actual elevations taken on water during flood conditions.
8. Must contractor provide for traffic during construction of proposed bridge? Yes
   If so, by what means? Use present Bridge.

HIGH AND LOW WATER ELEVATIONS

Data obtained from Observation on 3/29/62 reflects highest water elevation in the area of this construction to be 1171.3 and the lowest water elevation to be 1161.8. The above figures are for informational purposes only. The state neither warrants nor represents that these figures for high water and low water are in any way indicative of the high water or low water to be expected or encountered during this construction.

SHIPPING POINT

Proposed Bridge is 12.0 miles East of
* HAYFIELD which is the nearest Railroad shipping point.
*(Give name of town, station or siding)

8-14-62 Date — L. J. Sullivan, Project or County Engineer

8/17/62 Date — Edward Johnson, District Engineer S.A.

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

BRIDGE SURVEY

FOR

PROPOSED BRIDGE LOCATED 1.6 MILES West OF Rock Dell (TOWN OR CITY) ON CSAH 26 (T.H., S.A.R. OR C.A.R. NUMBER)

SEC. 6 TWP. 105W R. 15W

TOWNSHIP Rock Dell COUNTY Olmsted

SURVEY MADE DURING MONTH OF February 19 62

SURVEY MADE BY L. J. Sullivan

BRIDGE No. 55511

S.A.P. 55-626-02 (C.S.A.H 26)

Sheet No. 12 of 12 Sheets