

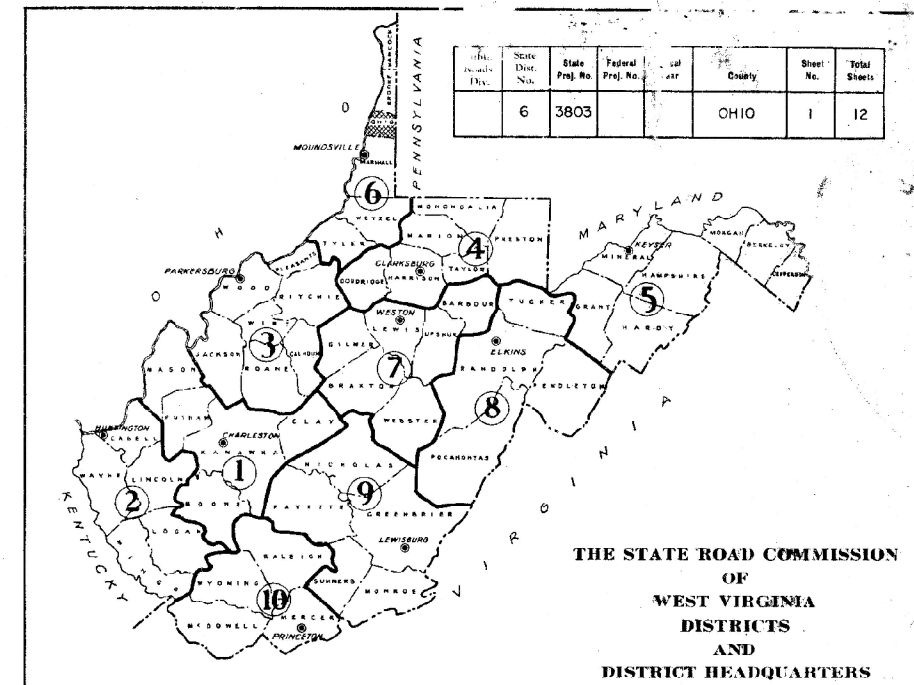
THE STATE ROAD COMMISSION
OF WEST VIRGINIA

PLAN AND PROFILE FOR CONSTRUCTION
OF
STATE ROAD
PROJECT NO. 3803
ROUTE NO. US 40

SIXTH DISTRICT OHIO COUNTY
BRIDGEPORT BRIDGE NO. 1687

Sta. To Sta.
Length = 0.121 Mi. 640.0 Ft.

Plan 1 IN. =
SCALES PROFILE HOR. 1 IN. = VERT. 1 IN. =



TYPE OF CONSTRUCTION
NEW FLOOR AND REPAIRS

GOVERNING SPECIFICATIONS

Specifications for Bridges by the State Road Commission of W. Va. January 1943 with revisions and additions of August 1947 except as noted.

Labor Rates for Ohio County

Special Provisions for projects financed with State Funds dated February 17, 1948.

Special Provisions: Floor Reconstruction and General Repairs dated July, 1949.

3% Transportation Tax Exemption

ROUTE NO. US 40
PROJECT NO. 3803

PREPARED & RECOMMENDED BY
R. L. Jewison, Jr.
BRIDGE ENGINEER

REVIEWED BY
Raymond W. Alpin
STATE INSPECTION ENGINEER

APPROVED BY
[Signature]
STATE ROAD COMMISSIONER

August 16 1949
I HEREBY CERTIFY THAT THIS IS A CORRECT COPY OF THE
PLANS FOR PROJECT 3803
A. Lyle DeShmon
SECRETARY

APPROVED BY OFFICIAL ORDER OF THE STATE ROAD COMMISSION
OF WEST VIRGINIA ENTERED 16 DAY OF August 1949
A. Lyle DeShmon
SECRETARY

LAYOUT
SCALE 1 IN. = FT.

CONVENTIONAL SIGNS

- | | |
|-----------------------|-----------------|
| --- State Line | Wall |
| --- County Line | Mash |
| --- Corporation Line | Hedge |
| --- District Line | Drop Inlet |
| --- Right of Way Line | Bridge |
| --- Property Line | Present Culvert |
| --- Fence Line | Proposed |
| --- Guard Rail | Telegraph Pole |
| --- Proposed Road | Trolley Pole |
| --- Traveled Road | Power Pole |
| --- Railroad | Tree |
| --- Electric Railway | Brick Dwelling |
| --- Frame Dwelling | |

INDEX TO SHEETS

No.	Description
1	Title and Layout
2	General Plan and Elevation
3	General Notes and Estimate of Quantities
4 to 12	Bridge Plans

PLANS COMPLETED August 1949

RECOMMENDED FOR APPROVAL DATE

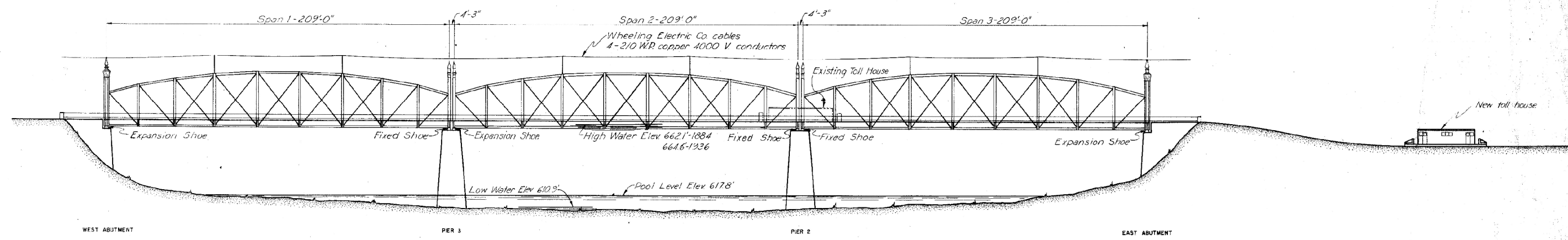
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED DATE

DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

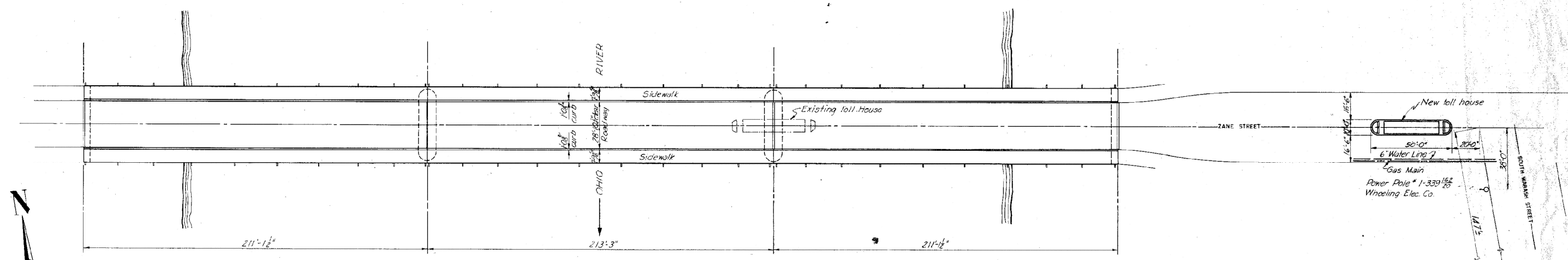
#1687

FEDERAL ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	PROG. YEAR	SHEET NO.	TOTAL SHEETS
				2	12

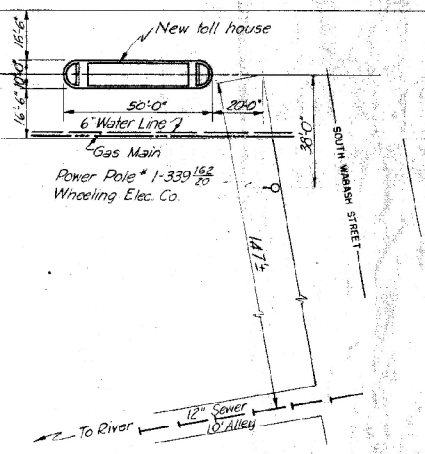
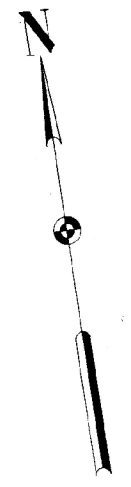


ELEVATION

Note: Water and gas mains servicing the existing toll house shall be removed from Span 3 and capped at the east abutment.
For location of C. & P. Telephone Co. conduits see sheet 4.



PLAN



THE STATE ROAD COMMISSION
OF WEST VIRGINIA
OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
WHEELING, W. VA.
ROUTE U S. 40 OHIO COUNTY

PROJECT 3803

GENERAL PLAN AND ELEVATION

SCALE 1"=30'
MADE 800 DA E 3-1-49 HOWARD, NEEDLES, TAMMEN & BERGEN
TRGD 800 DATE 3-2-49 KANSAS CITY, MO.
CHNL 304 DA E 3-2-49 775 SHEET 2

35-10-0.00 (1687)

GENERAL NOTES

Specifications for Bridges by the State Road Commission of West Virginia, January 1943 except as noted on plans and in the Special Provisions attached to the proposal.

LOADS
For live loading on roadway, use H20-S16.

MASONRY
All masonry joints in both abutments and piers shall be repointed. See articles 2:3:16 and 2:4:12.

GENERAL NOTES ON STEELWORK

See the specifications for provisions regarding punching, reaming, finishing, assembling, riveting, painting and other shop and field operations. Such provisions shall be clearly noted on the working drawings.

UNIT STRESSES
Floorbeams and stringers are strengthened to limit the basic stresses in the old metal to 18,000 pounds per square inch.

DIMENSIONS
Dimensions given are measured horizontally and at 60°F unless otherwise noted.

WASHERS
Provide suitable washers under nuts of all anchor bolts.

RIVETS
Unless otherwise noted on the drawings, all existing rivets are $\frac{3}{8}$ " ϕ , all new rivets $\frac{1}{2}$ " ϕ and open holes $\frac{1}{16}$ " ϕ .

RIVET SPACING
Where not shown on the design drawings, spacing shall conform to requirements of the design specifications.

REAMING
All $\frac{3}{8}$ " ϕ holes where existing rivets are replaced shall be reamed to $\frac{15}{16}$ " for new $\frac{1}{2}$ " ϕ rivets.

ROADWAY JOINTS
The toothed roadway plates of each roadway expansion joint shall be formed by machine flame cutting of a single wide plate. The cutting shall be made with machines designed to guide the blow pipe so as to give smooth uniform cuts conforming to the prescribed outline. Sections of the joint shall be shop assembled and adjusted to assure proper fitting of the teeth.

ROADWAY GRATING
The roadway grating is designed for H20-S16 live load in accordance with AASHO Specifications 1949. Grating shall be U.S.S. 5" I-Beam Lk or equal and shall be copper bearing.

SIDEWALK GRATING
The sidewalk grating is designed for 85 pounds per square foot live load in accordance with the West Virginia Standard Specifications for Bridges. Grating shall be Blaw-Knox Type J-36 or equal and shall be copper bearing.

HANDRAILING
The existing handrailing shall be straightened and repaired as required.

SANDBLASTING AND CLEANING
All metal work below the floor level shall be sandblasted and cleaned.

FIELD PAINT
The structure shall be completely painted. The paint coats shall be:

Grating: One dip coat of red lead primer and one dip coat of black paint in shop.

New Structural Metal: One red lead shop coat, one tinted red lead field coat and one aluminum field coat.

Old Metal Below Deck Cleaned by Sandblasting: Three coats as for new structural metal.

Old Metal Above Deck: One red lead spot coat on areas cleaned to base metal and one aluminum field coat.

GENERAL NOTES ON CONCRETE AND REINFORCEMENT

UNIT STRESS
Intermediate grade reinforcing steel - 18,000 #/sq. in.
Concrete based on ultimate strength of 3000 #/sq. in. at 14 days.

CLASSES OF CONCRETE
All concrete shall be class "A".

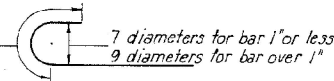
CHAMFERS
A $\frac{3}{8}$ " chamfer strip shall be used on all exposed edges of concrete where other size chamfer strips are not specified. See Article 2:6:8.

FINISH
See Specifications.

BAR SPLICES AND CLEARANCES
Bar laps shall be at least 40 bar diameters unless otherwise noted. Splices shall be avoided where practicable, and shall be subject to the approval of the Engineers. Bars shall, unless otherwise shown, be at least 3" clear from the face of concrete in footings and 2" clear elsewhere except in slabs where bars shall be 1" clear.

BAR BENDS
Reinforcing bar bends, unless otherwise provided, shall be to a radius of $3\frac{1}{2}$ bar diameters for bars having diameter of 1" or less and 4 $\frac{1}{2}$ bar diameters for bars having a diameter of over 1". Stirrup bends shall be 2 bar diameters. Anchorage hooks for bars having a diameter of 1" or less shall be bent to $3\frac{1}{2}$ bar diameters radius and have an overall length of 16 bar diameters; hooks for bars having a diameter of over 1" shall be bent to 4 $\frac{1}{2}$ bar diameters radius and have an overall length of 18 bar diameters. All measurements are to bar centers.

16 diameters for bar 1" or less
18 diameters for bar over 1"



TESTS
The Contractor shall furnish certified copies secured from the manufacturer of results of tests for Autoclave Expansion and chemical analysis for all Portland cement used in this project. These tests shall conform to the A.A.S.H.O. designations T1-42 (Paragraph 5), T107-42, T105-42 and M85-42. Six of the certified copies shall be submitted to the Department of Tests, Mechanical Hall, Morgantown, W. Va.

BAR MATERIAL
The process of manufacture of billet steel reinforcing bars may be in accordance with A.S.T.M. Specifications A15-39.

GENERAL NOTES FOR WELDING

For general requirements for welding, see Specifications. All welds not otherwise indicated shall be $\frac{1}{8}$ " continuous fillet welds. All butt welds shall be continuous. Unless otherwise shown, use square cuts in metal $\frac{1}{4}$ " or less in thickness, single V bevel for thickness $\frac{3}{8}$ " to $\frac{1}{2}$ " and double V bevel for metal $\frac{1}{2}$ " or over. Tack welds, plug, slot or seal welds shall be specifically noted if used.

Working drawings shall show clearly the nature, dimensions and location of all welds.

Typical nomenclature:

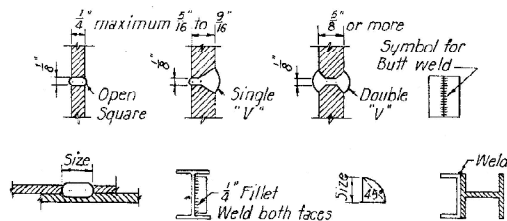
$\frac{1}{8}$ " C.S.W. indicates a $\frac{1}{8}$ " continuous shop fillet weld.

$\frac{1}{4}$ " C.F.W. indicates a $\frac{1}{4}$ " continuous field fillet weld.

$\frac{1}{2}$ " x 2 at 6" S.W. indicates intermittent $\frac{1}{8}$ " shop fillet welds, 2" long at 6" centers.

F.B.W. indicates field butt weld and S.B.W. indicates shop butt weld.

Qualifications for welding operators and electrodes will be required in accordance with the Specifications, except that proper certification of electrodes previously qualified will be acceptable.



ESTIMATED QUANTITIES

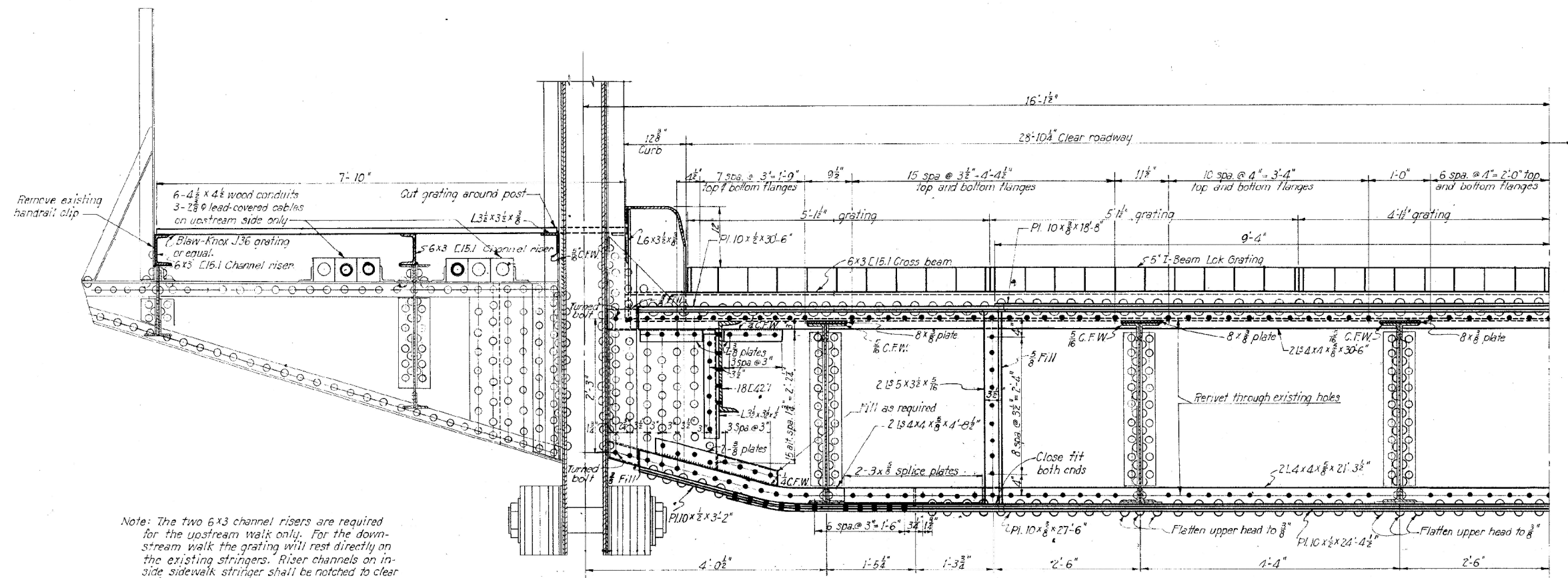
Item	Description	Quantity	Unit
68	Repainting Old Masonry	1000*	Lin. Ft.
71	Concrete, Class A	41	Cu. Yds.
78	Reinforcement Bars	4,000	Lbs.
91A	New Fabricated Structural Steel	470,000	Lbs.
91B	Open Steel Grating for Roadway	18,250	Sq. Ft.
91C	Open Steel Grating for Sidewalks	9,900	Sq. Ft.
91D	Special Metal for Sidewalk over Telephone Conduits		Lump Sum
92A	Jacking for Repair of Shoes	4	Each
92B	Replacing Masonry Plates of Fixed Shoes	2	Each
92C	Repair of Lower Expansion Shoes	2	Each
95	Cleaning and Painting		Lump Sum
128A	Removal and Disposal of Timber		Lump Sum
128B	Removal and Disposal of Rails		Lump Sum
128C	Removal and Disposal of Structural Metalwork (60 tons)		Lump Sum
128D	Removal and Disposal of Toll House		Lump Sum
128E	Removal and Disposal of Utility Appurtenances		Lump Sum
128F	Removal and Disposal of Stone Masonry, Etc.		Lump Sum
132	New Toll House and Appurtenances		Lump Sum
133	Maintenance of Traffic		Lump Sum

* For Bid Purposes Only.
* Estimated weight of Special Metal for Sidewalk over Telephone Conduits = 19,120*

THE STATE ROAD COMMISSION
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OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
WHEELING, W. VA.
ROUTE U. S. 40 OHIO COUNTY

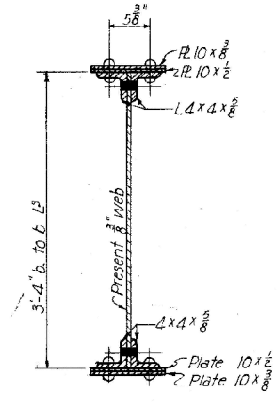
GENERAL NOTES AND QUANTITIES

FEDERAL ROAD DISTRICT NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
				4	12



Note: The two 6x3 channel risers are required for the upstream walk only. For the downstream walk the grating will rest directly on the existing stringers. Riser channels on inside sidewalk stringer shall be notched to clear existing intermediate supports for the telephone conduits, see detail.

28-10 1/2"
3 9
32-2



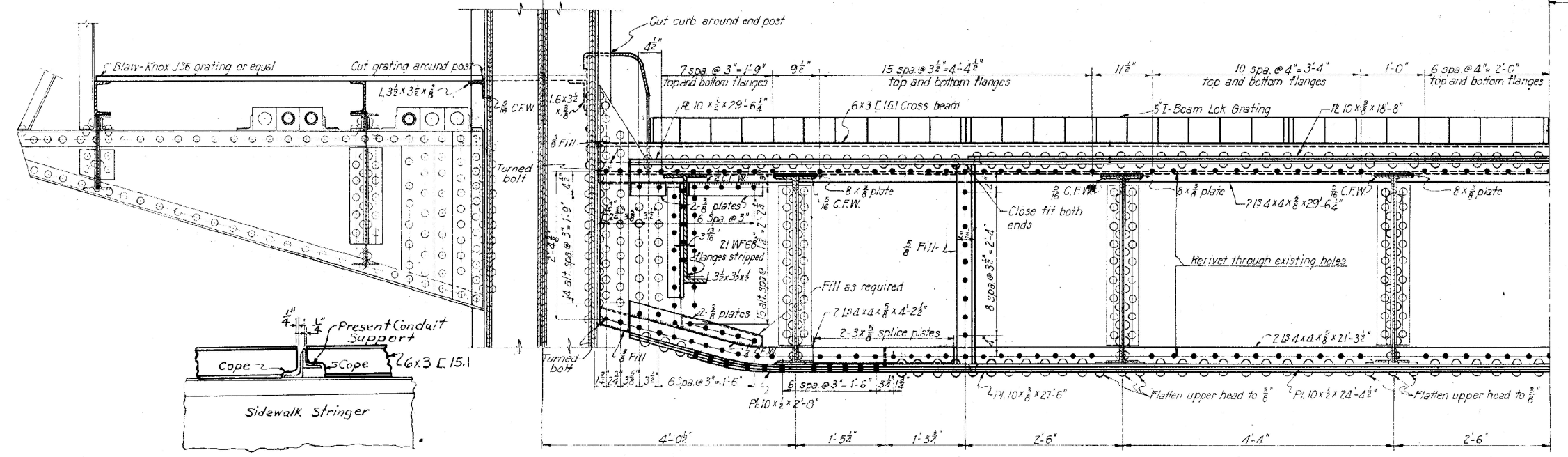
HALF SECTION AT INTERIOR FLOORBEAM

TYPICAL FLOORBEAM SECTION

Symmetrical about roadway except as noted.

28-15 1/2"
1'-2"
30'-1/2"

Notes:
All material indicated by size to be new unless otherwise noted.
New holes shall be drilled in web as required for stiffeners and plates.
All rivets are to be 5/8" rivets.
Present 3/8" holes in web of floorbeam shall be reamed to 1/8" for 5/8" rivets.
Cross beams shall be welded to stringers with 1/8" C.F.W.
Connections of 21" WF68 and 18" L427 as shown are typical connections of those members to any floorbeam.
The Contractor shall check all measurements in the field to assure the proper fit.
Flanges of stringers may be cut at ends to permit driving of rivets in floorbeam.
Flanges of 21" WF68 are stripped only at connection angles.



DETAIL AT PRESENT INTERMEDIATE CONDUIT SUPPORT

THE STATE ROAD COMMISSION OF WEST VIRGINIA
OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
WHEELING, W. VA.
ROUTE U. S. 40 OHIO COUNTY

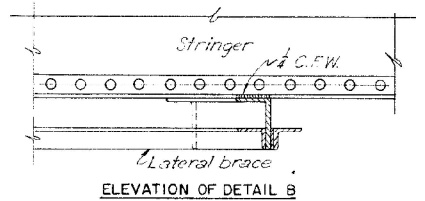
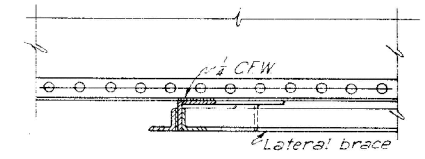
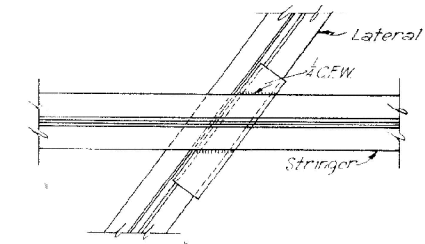
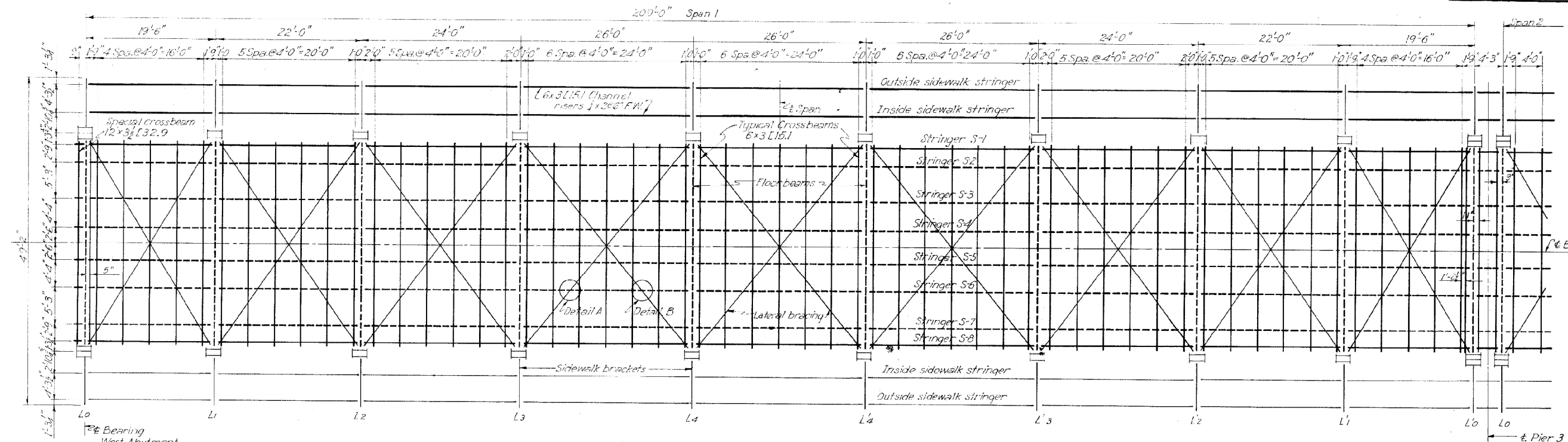
PROJECT 3803

ROADWAY SECTIONS

SCALE 1" = 10'
MADE P.O.D. DATE 1-24-49
TRCD R.O.M. DATE 2-14-49
OHIO R.D.M. DATE 3-1-49

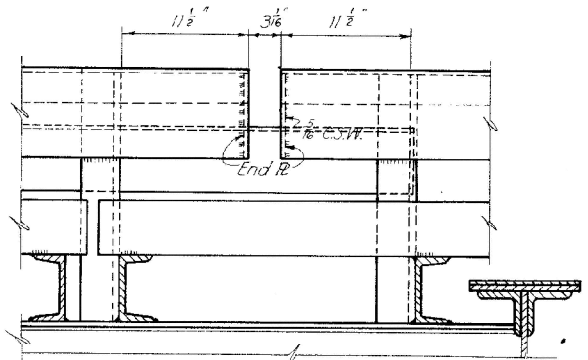
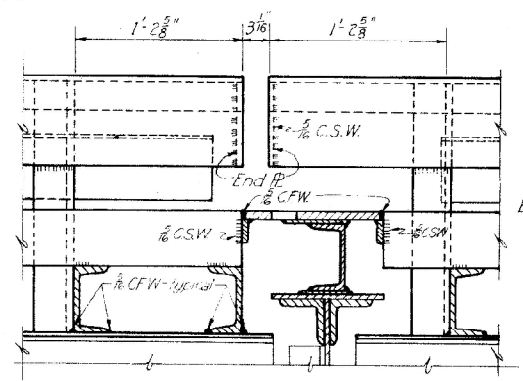
HOWARD, NEEDLES, TAMMEN & BERENSON
CONSULTING ENGINEERS
KANSAS CITY, NEW YORK
775 SHEET

FEDERAL ROAD DISTRICT NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
				5	12

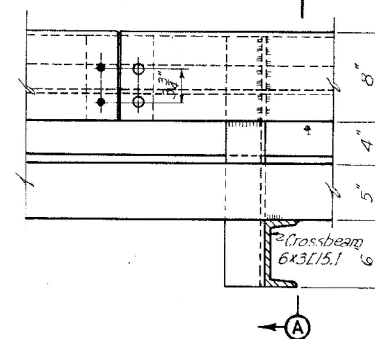
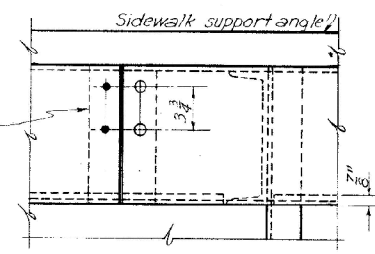


AT ATTACHMENT OF BOTTOM LATERAL BRACING TO STRINGERS
Scale 1"=1'-0"

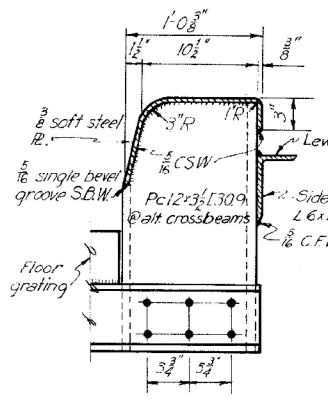
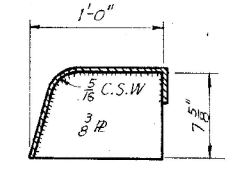
Note: No new material required



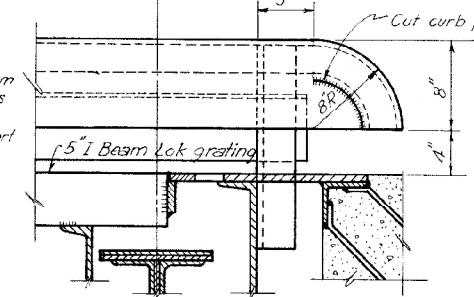
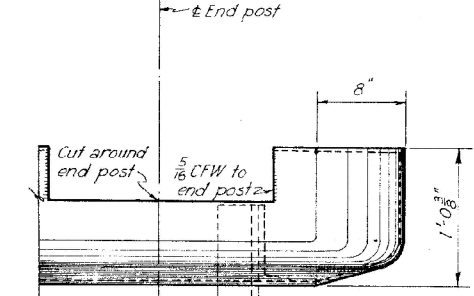
ELEVATION OF JOINT AT PIER 2



ELEVATION AT SPLICE



SECTION A-A



END OF CURB ELEVATION

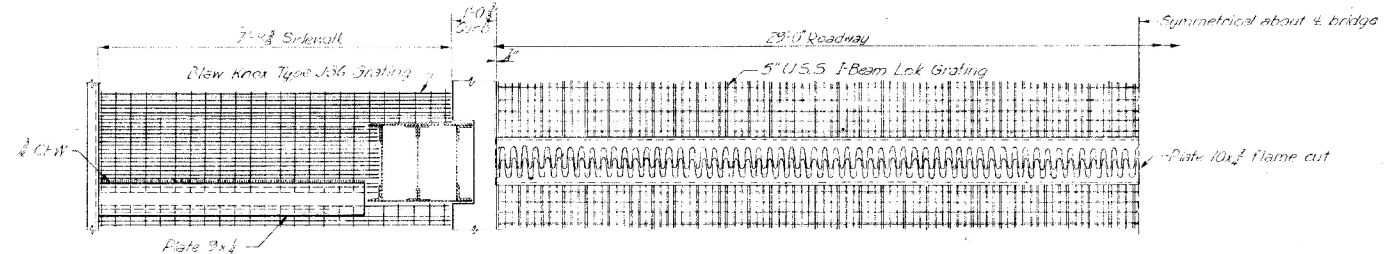
Notes:
Legend:
— New material
- - - New material added to existing material
--- Existing material
For spacing of cross beams at Pier 2 see Section of Roadway Joint at Pier 2 on sheet 6.
Curb splices shall be made as near a support as possible.
Stop sidewalk support angle at each post.

THE STATE ROAD COMMISSION
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OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
WHEELING, W. VA.
ROUTE U. S. 40 OHIO COUNTY

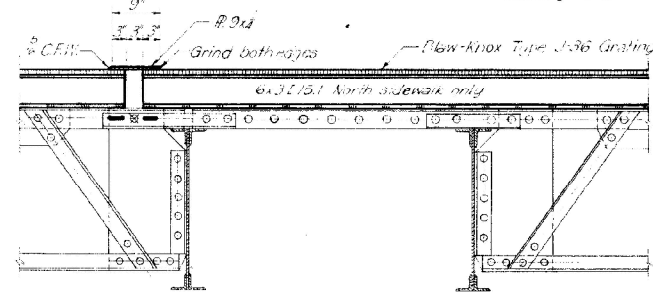
PROJECT 3803

FRAMING PLAN & CURB DETAILS

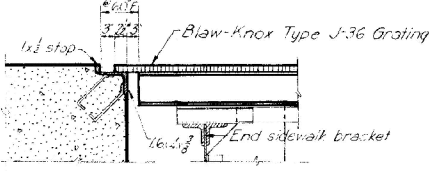
SCALE 1/8"=1'-0"
M. DEERBERG, JR. DATE 1-26-49
T. JOHNSON, JR. DATE 2-15-49
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
ARCHT. ENGRS.
KANSAS CITY, MO.
775 SHEET 5



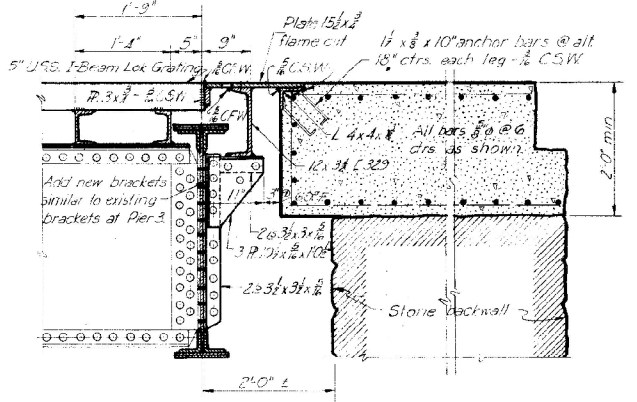
HALF PLAN OF EXPANSION JOINT AT PIER 3
Scale: 1/2" = 1'-0"



SECTION OF SIDEWALK EXPANSION JOINT
Scale: 1/2" = 1'-0"

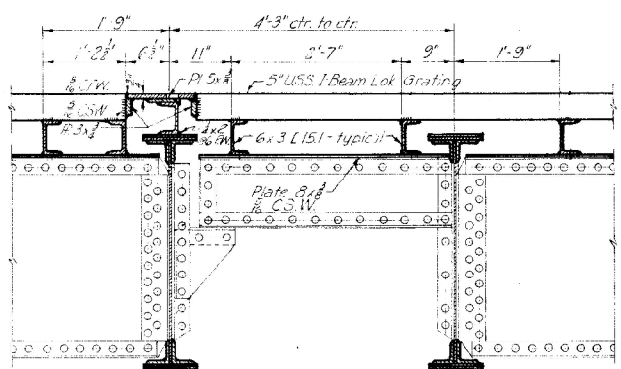


SECTION OF SIDEWALK EXPANSION JOINT AT ABUTMENT
Scale: 1/2" = 1'-0"

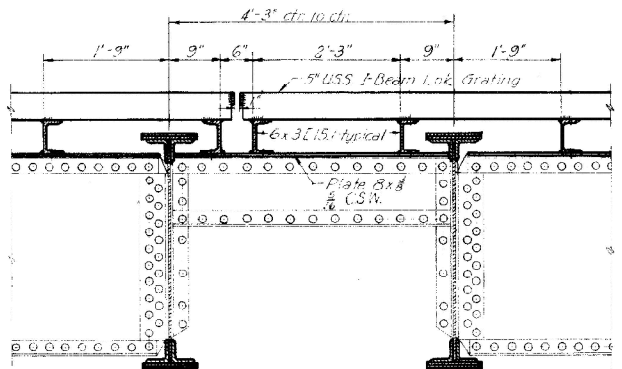


SECTION OF ROADWAY EXPANSION JOINT AT ABUTMENT
Scale: 1/2" = 1'-0"

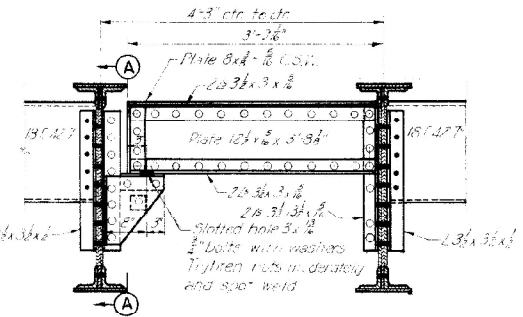
Note: Remove backwall a minimum of 2'-0" below level of roadway and pour concrete cap.



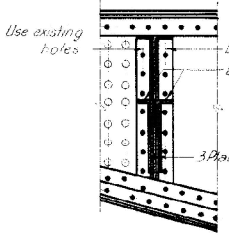
SECTION OF ROADWAY EXPANSION JOINT AT PIER 3
Scale: 1/2" = 1'-0"



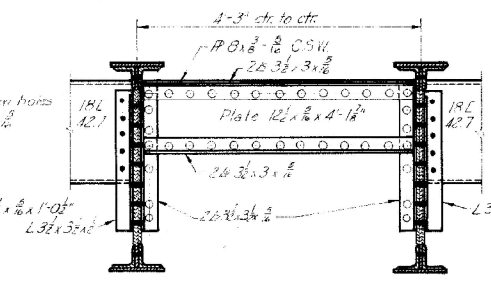
SECTION OF ROADWAY JOINT AT PIER 2
Scale: 1/2" = 1'-0"



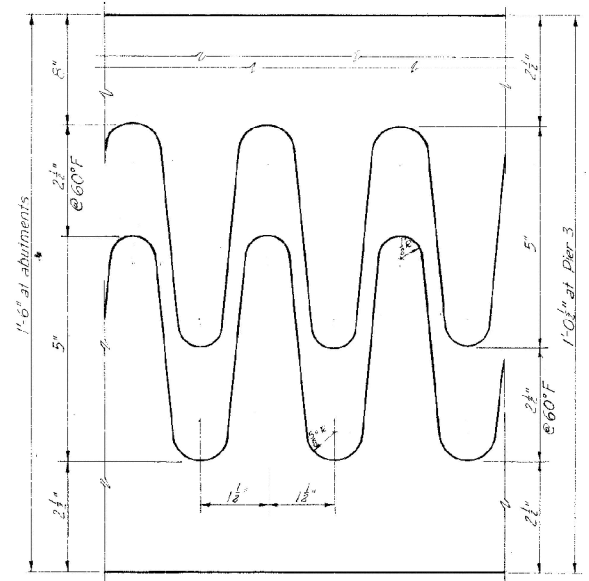
NEW CURBLINE STRINGER AT PIER 3
Scale: 1/2" = 1'-0"



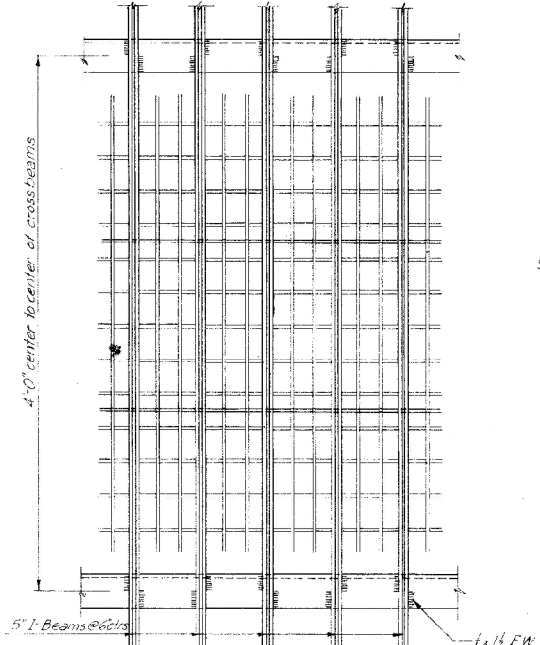
SECTION A-A
Scale: 1/2" = 1'-0"



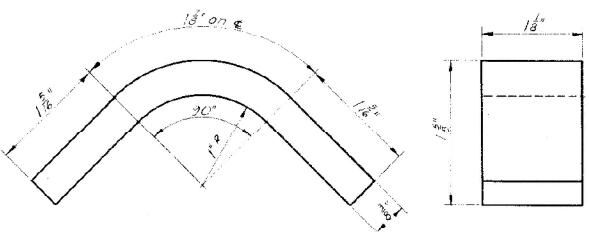
NEW CURBLINE STRINGER AT PIER 2
Scale: 1/2" = 1'-0"



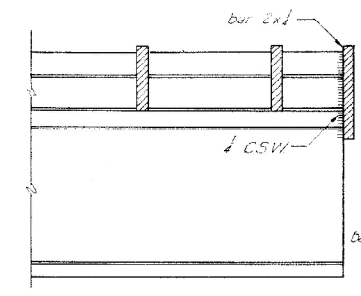
TOOTHED EXPANSION DETAIL
Half Size



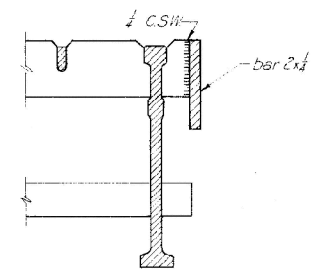
FIELD WELDING TO CROSS BEAMS
Scale: 1 1/2" = 1'-0"



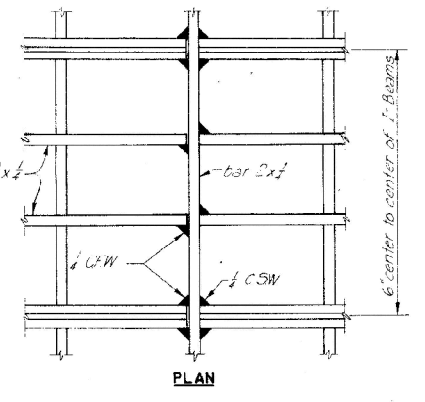
SPLICE ANGLE DETAIL
Full Size



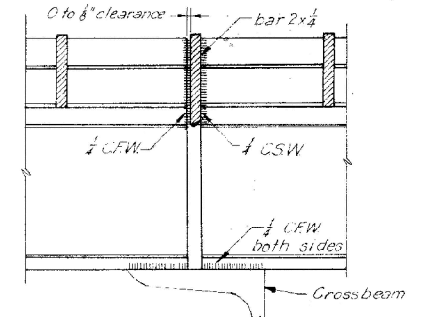
END TRIM
Half Size



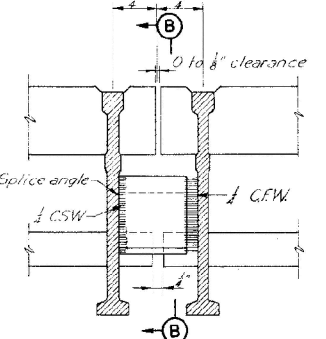
SIDE TRIM
Half Size



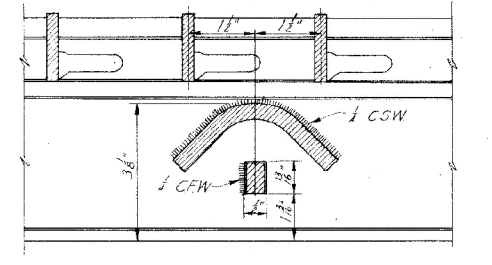
PLAN



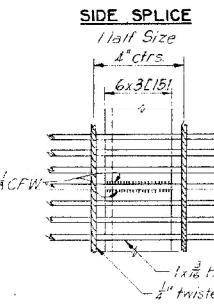
ELEVATION END SPLICE
Half Size



SIDE SPLICE
Half Size



SECTION B-B
Half Size



SIDEWALK GRATING DETAIL
Scale: 3" = 1'-0"

Note: Sidewalk grating bars shall be welded to each sidewalk stringer on 1'-0" ctrs. with 1/2" C.F.W. both sides. For details of hatch over the telephone manholes see sheet 11.

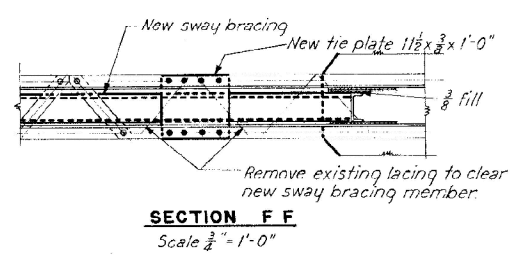
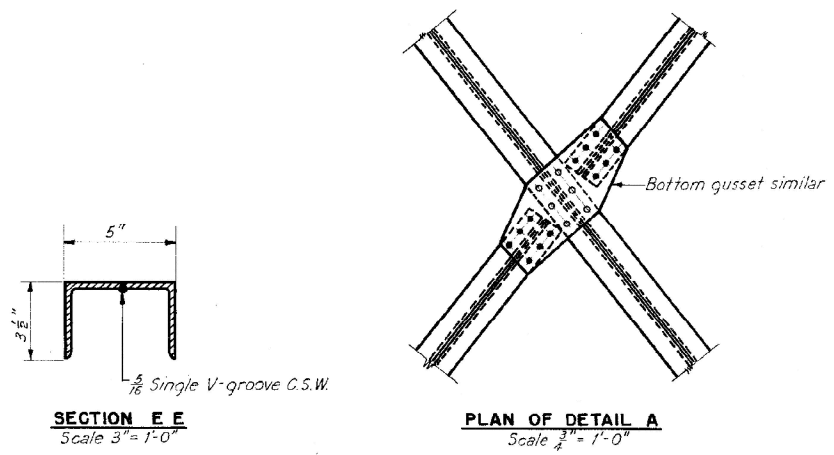
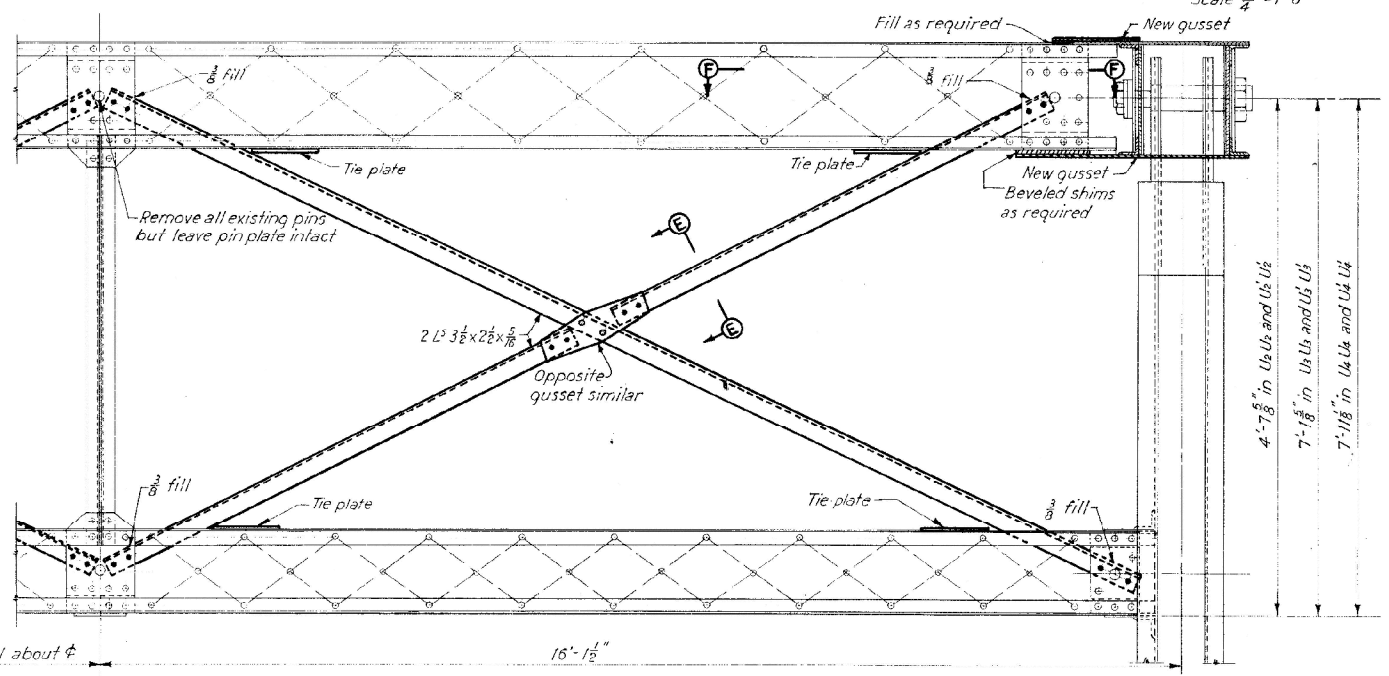
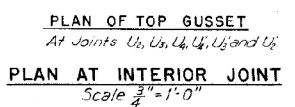
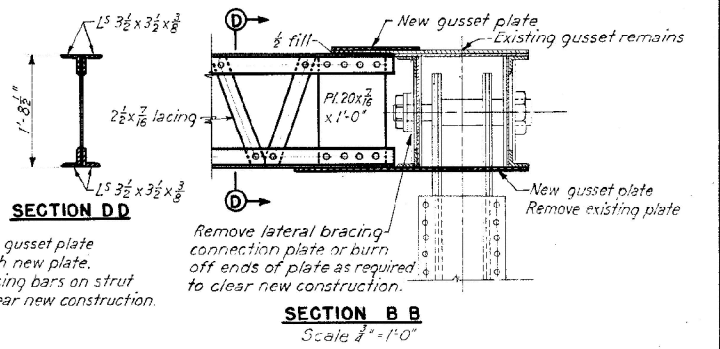
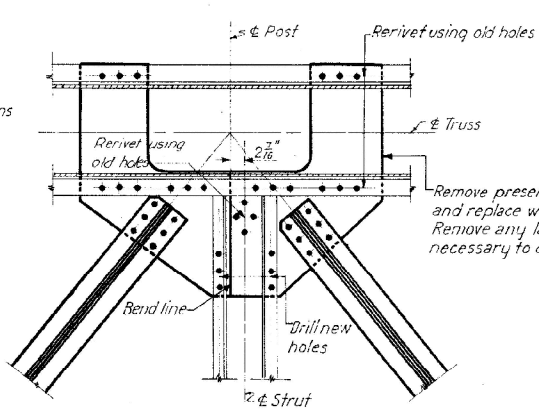
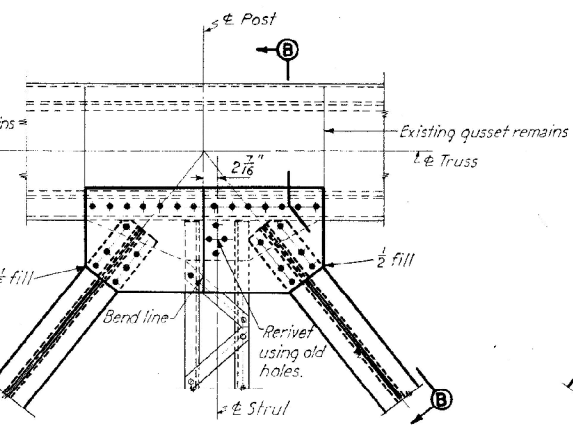
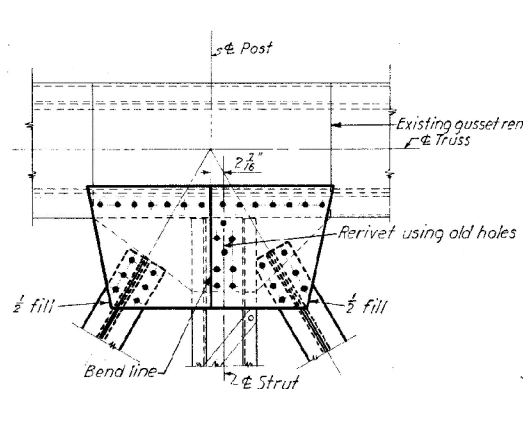
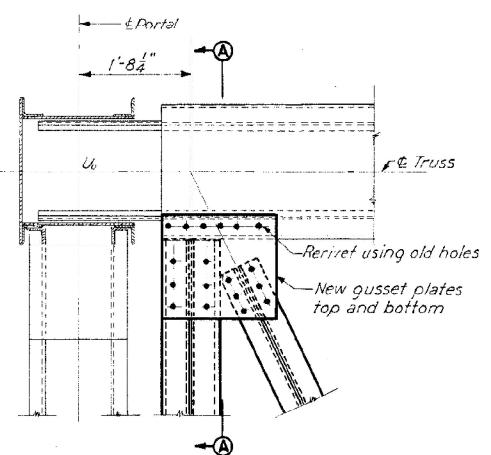
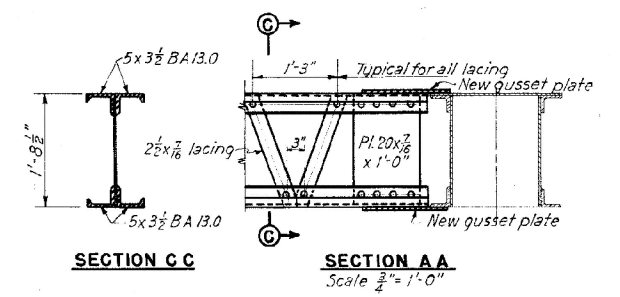
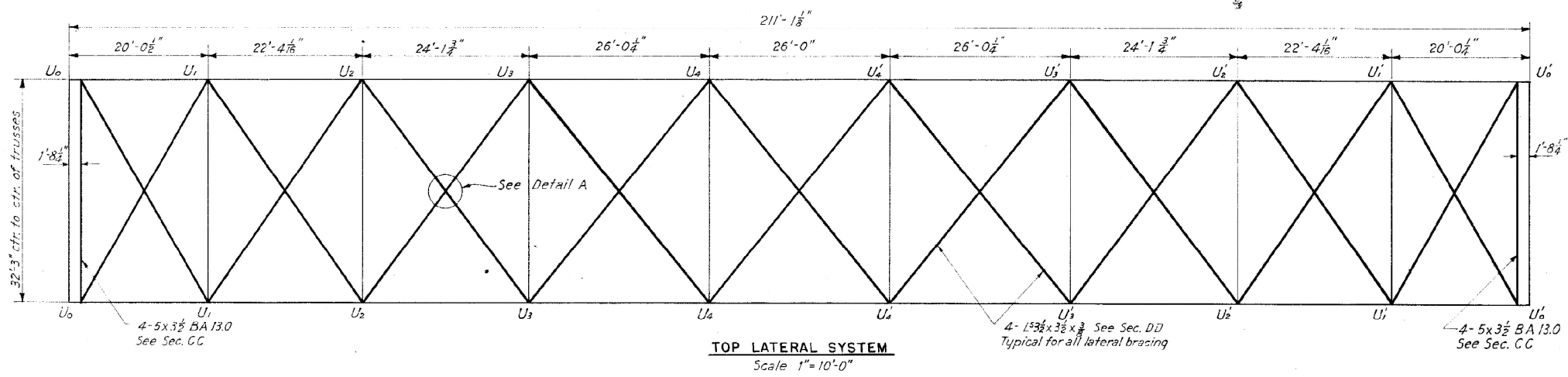
Notes: Roadway expansion joints are required at Pier 3 and both abutments. Sidewalk expansion joints are required at both piers and both abutments. For widths of roadway and sidewalk grating see sheet 4. Lengths of roadway and sidewalk grating are to be determined by the Contractor.

THE STATE ROAD COMMISSION
OF WEST VIRGINIA
OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
WHEELING, W. VA.
ROUTE U. S. 40 OHIO COUNTY

PROJECT 3903

EXPANSION AND GRATING DETAILS

FEDERAL ROAD DISTRICT NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
				7	12



Note:
All rivets shall be 7/8" φ rivets.
Remove existing rivets as required to give clearance to new work.
All gusset plates to be 3/8" thick unless otherwise noted.
Sway bracing is used only in panels U₂ U₃, U₄ U₄, U₅ U₅, and U₅ U₆.
Present rod laterals and rod sway bracing shall be removed.

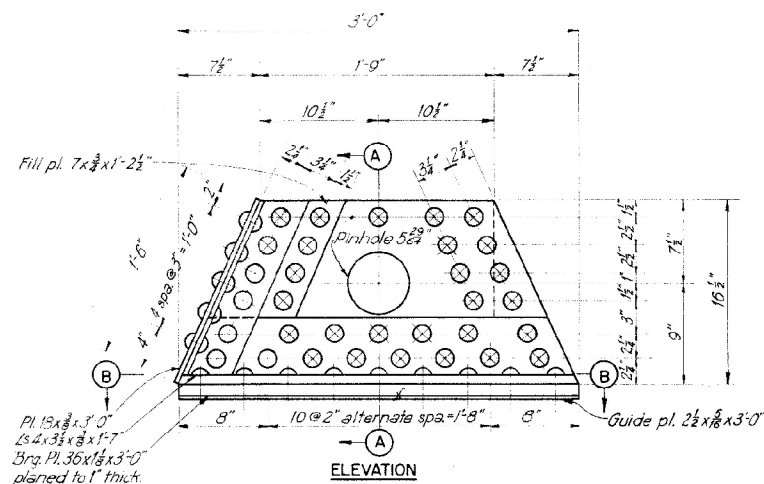
THE STATE ROAD COMMISSION
OF WEST VIRGINIA
OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
WHEELING, W. VA.
ROUTE U. S. 40 OHIO COUNTY

PROJECT 3803

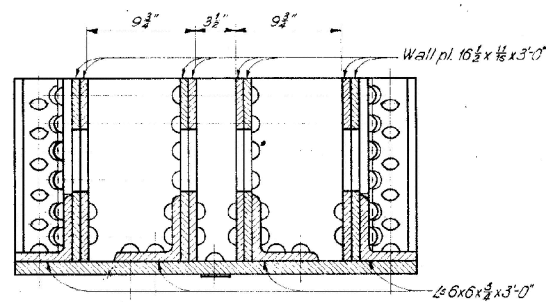
BRACING DETAILS

SCALE As Noted
MADE R.O.D. DATE 2-11-49
TRCD V.F.D. DATE 2-15-49
CHAD R.R.M. DATE 2-22-49

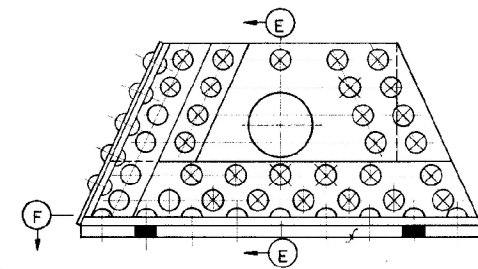
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY, N. W. YORK
775 SHEET 7



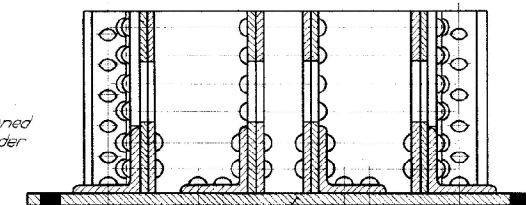
ELEVATION



SECTION A-A



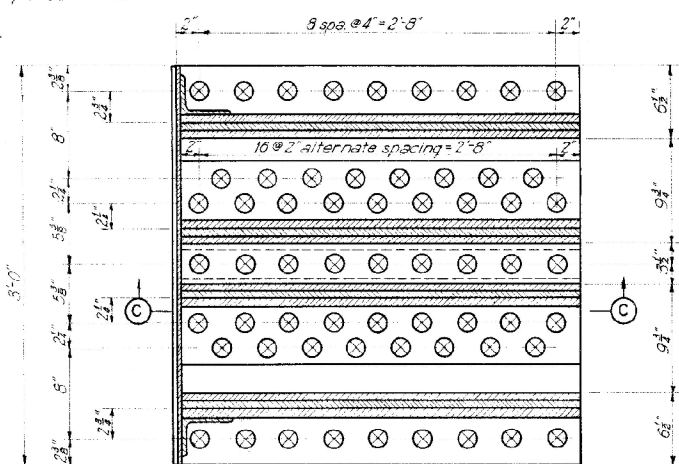
ELEVATION



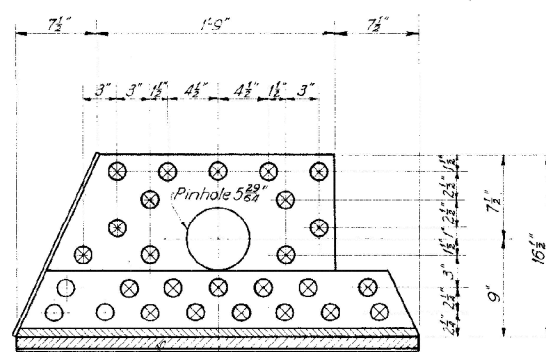
SECTION E-E

Shoes to be cleaned and painted under pay item 95.

Note: Dimensions of fixed shoe are the same as for expansion shoe except as noted.

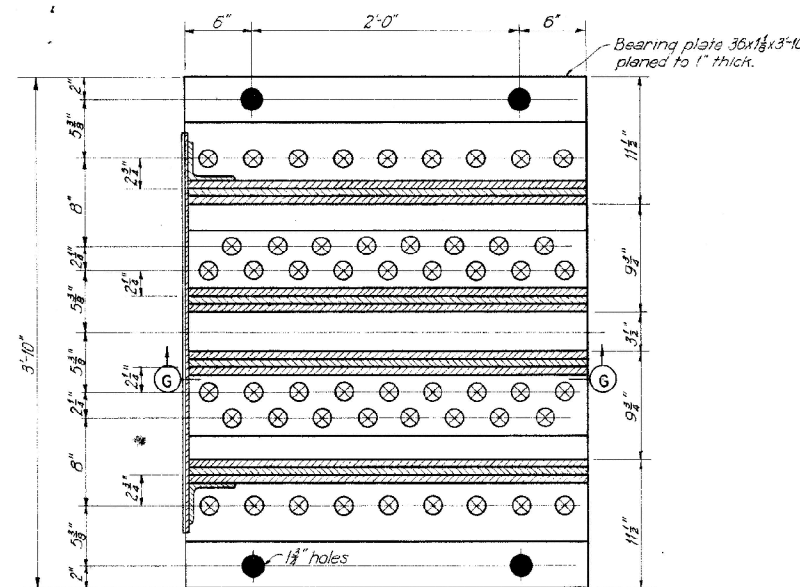


SECTION B-B

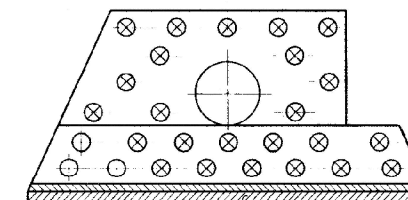


SECTION C-C

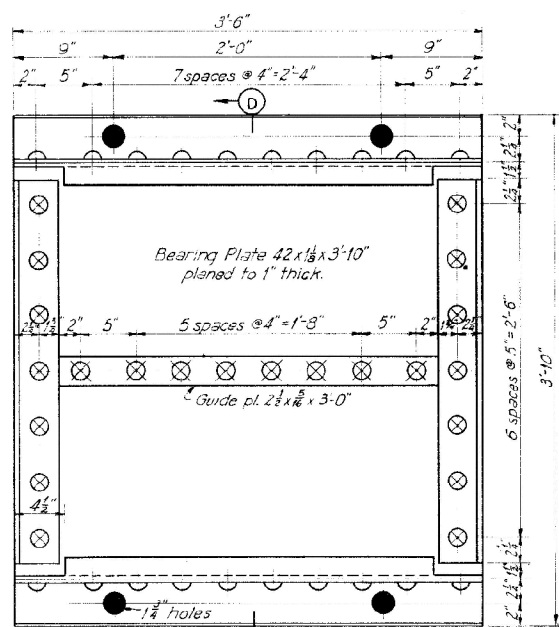
Note: Mill bottom and side ends of wall plates.



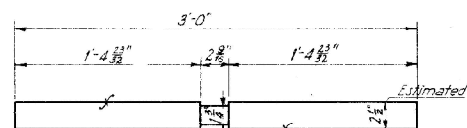
SECTION F-F



SECTION G-G



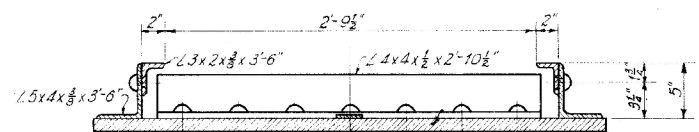
PLAN OF MASONRY PLATE



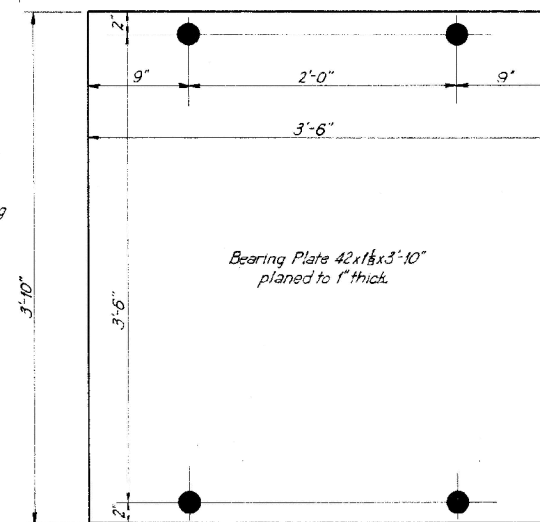
ROLLER

14 estimated for each shoe.

If rollers are replaced they shall be same size and number as in existing shoe.



SECTION D-D



PLAN OF MASONRY PLATE

Masonry plate to be replaced if directed by the Engineer after cleaning inspection. If replaced payment to be under item 92 b.

Note: All rivets are 5/8" rivets. The number of shoes to be replaced shall be determined after the existing shoes have been cleaned. Details shown are taken from available shop drawings. The Contractor shall make all field measurements necessary to verify data and insure proper fit to new parts.

EXPANSION SHOE

FIXED SHOE

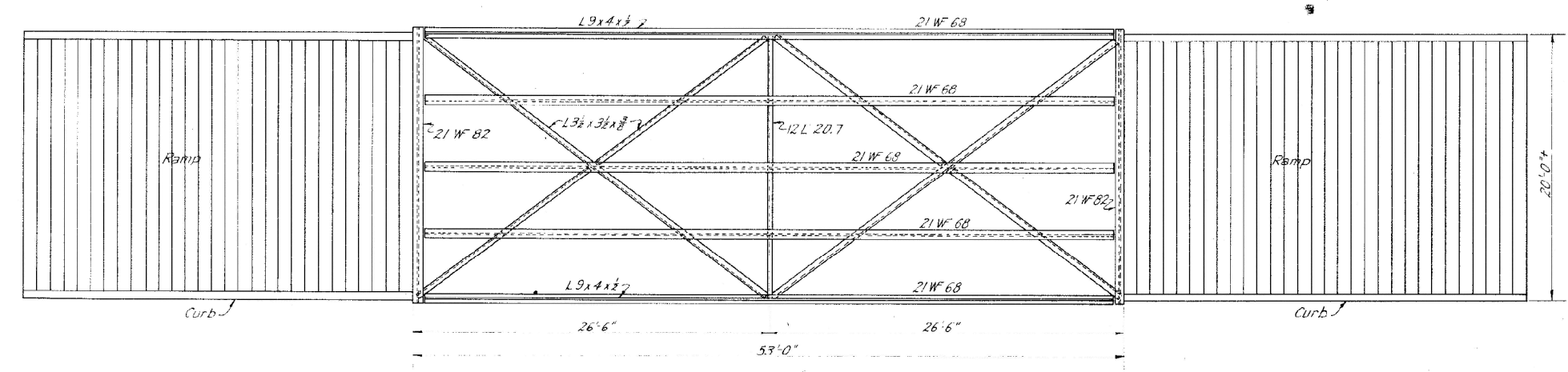
THE STATE ROAD COMMISSION
OF WEST VIRGINIA
OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
WHEELING, W. VA.
ROUTE U. S. 40 OHIO COUNTY

PROJECT 3803

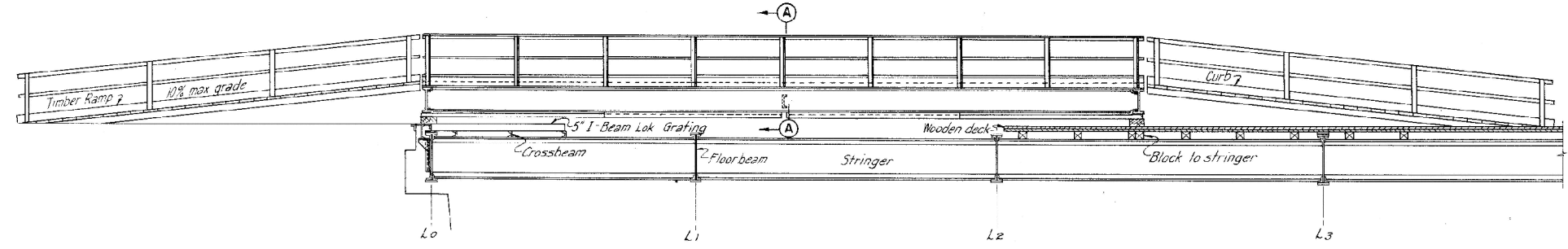
SHOE DETAILS

SCALE 1/4" = 1'-0" HOWARD, NEEDLES, TAMMEN & BERGENDOFF
MADE R.O.D. DATE 1-2-49 CONSULTING ENGINEERS
TRCD 106-1 DATE 1-21-49 KANSAS CITY NEW YORK
CHKD. F.H.B. DATE 1-2-49 775 SHEET 8

FEDERAL ROAD DISTRICT NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
				9	12

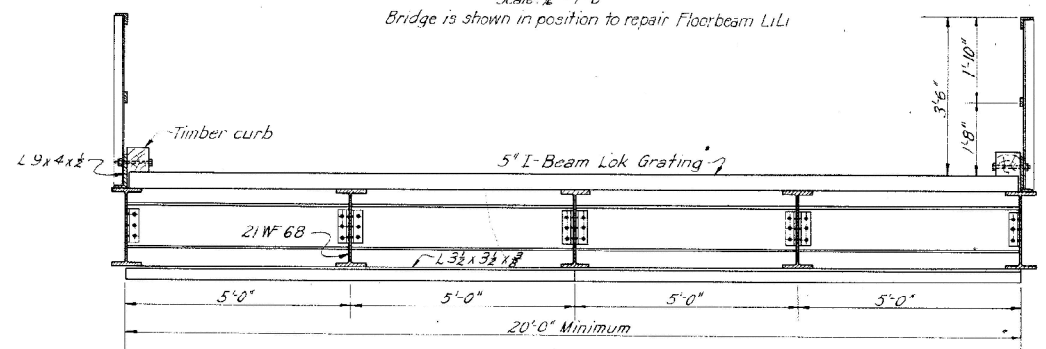


PLAN
Scale: 1/8" = 1'-0"



ELEVATION
Scale: 1/8" = 1'-0"

Bridge is shown in position to repair Floorbeam L1L1



SECTION A-A
Scale: 1/8" = 1'-0"

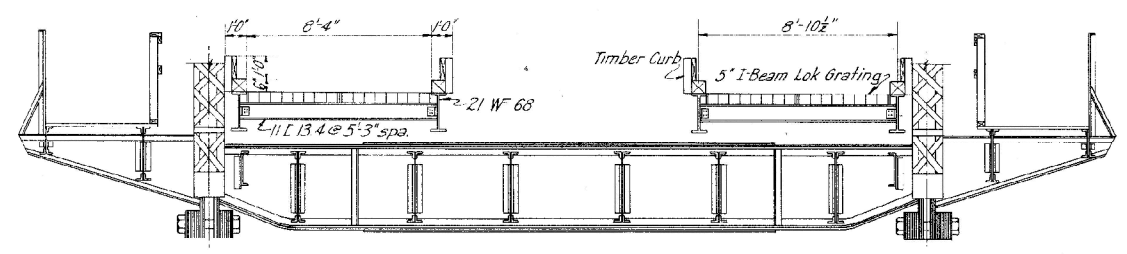
Note:
The Contractor shall determine the vertical clearance under the temporary bridge and provide adequate anchorage against longitudinal movement.

CONSTRUCTION SEQUENCE

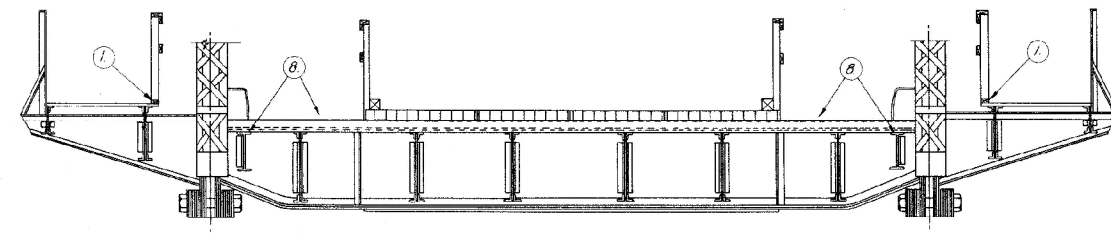
The double lane temporary bridge or an alternate of two single lane bridges are required to span two panels so that the new flanges can be added to the intermediate floorbeam in an unstressed condition. The use of these bridges is mandatory only for repair of the floorbeams. Their use for repairing the stringers and for placing new deck, curbs, expansion joints and crossbeams is optional with the Contractor. For this work the Contractor may elect to use the temporary bridges, the method outlined in the construction sequence on sheet 10, or any other method acceptable to the Engineers. If the temporary bridge is used exclusively the following sequence is suggested.

1. Cut sidewalks to the width shown in the Roadway Cross Section and place temporary railing
2. Place the temporary bridge over the end floorbeam at the West Abutment and block up over floorbeam L1 L1 and on the approach pavement.
3. Remove present timber deck and curb in panel L0 L1.
4. Replace the floorbeam flanges at L0 L0, add cover plates on stringers, and place new cross beams, new sidewalk stringers, new curbs, first sections of new grating, all in panel L0 L1, and the fingered expansion at backwall and the new section of back wall.
5. Move temporary bridge ahead so it is spanning L1 L1 and ends are blocked up over L0 L0 and between L2 L2 and L3 L3 as shown in the Elevation.
6. Repair floorbeams and stringers and add new sidewalk stringers, curbs, cross beams and grating deck as in step 4 in panel L1 L2.
7. Proceed from floorbeam to floorbeam following the same sequence.
8. In the last six panels of span 3 omit the outside sections of deck and new sidewalk stringers and erect temporary railing and curb as shown in the Roadway Cross Section. When the use of the temporary bridge is completed, salvage deck grating to be used for outside sections of roadway and use 21 WF 68 girders in place of 18 L 42.7 sidewalk stringers.
9. Replace existing wooden sidewalks with new sidewalk grating.

TEMPORARY BRIDGE - ONE DOUBLE LANE SPAN



TEMPORARY BRIDGE - TWO SINGLE LANE SPANS
Scale: 1/4" = 1'-0"



ROADWAY CROSS SECTION
Scale: 1/4" = 1'-0"

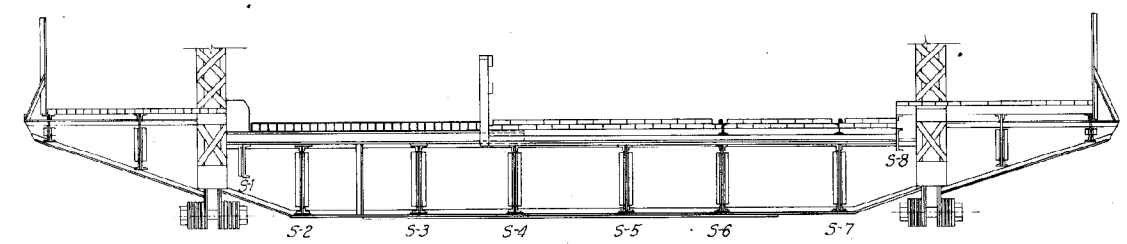
THE STATE ROAD COMMISSION
OF WEST VIRGINIA
OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
WHEELING, W. VA.
ROUTE U. S. 40 CHIO COUNTY

PROJECT 3801

TEMPORARY BRIDGES

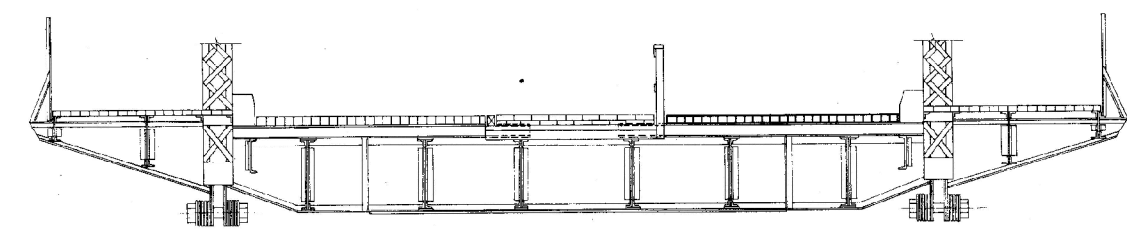
SCALE 1/2" = 1'-0" HOWARD, NEEDLES TAMMEN & BERGENDOFF
MADE LAST RECD DATE 2-22-49
TRCD DATE 2-24-49 KANSAS CITY N. Y. YORK
DWD. S.E.M. DATE 2-25-49 775 SHEET 9

FEDERAL ROAD DISTRICT NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
				10	



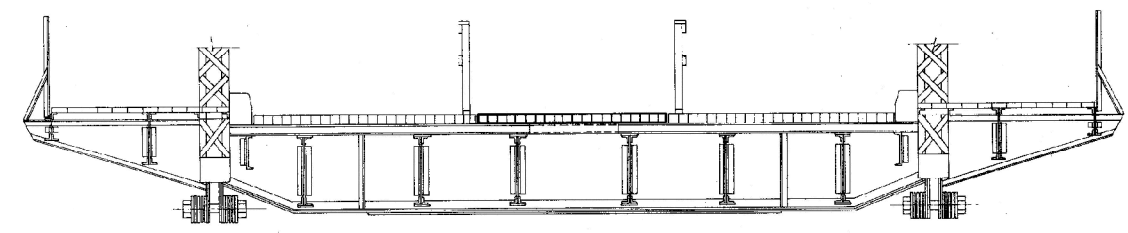
FIRST STAGE
Scale: $\frac{1}{4}'' = 1'-0''$

1. Using the temporary bridge on sheet 9, clean floorbeams and replace flanges. Replace any roadway planking removed to complete this step so that traffic may be resumed on existing deck. See details.
2. Barricade south 11' of roadway and erect temporary railing at south edge of remaining roadway.
3. Detour all sidewalk traffic to north sidewalk and remove the south sidewalk flooring, supporting angle and the channel at the south curb line.
4. Remove 2" x 8" flooring, 3" x 8" sub-flooring, street car rails and 2" fills on cross-ties from south 11' of roadway. Cut timber cross-ties 1' south of the center line of stringer S-4 except as needed to support temporary railing.
5. Clean stringers S-2 and S-3 and weld on top cover plates.
6. Erect new stringer S-1 at south curb line.
7. Place new lengths of steel cross beams from stringers S-1 to S-4 and thread between the remaining timber cross ties at stringer S-4. Use a temporary $\frac{3}{4}''$ fill on stringer S-4.
8. Install 2 outside sections of roadway grating.
9. Erect new curb, supporting angle and steel grating on the south sidewalk.



SECOND STAGE
Scale: $\frac{1}{4}'' = 1'-0''$

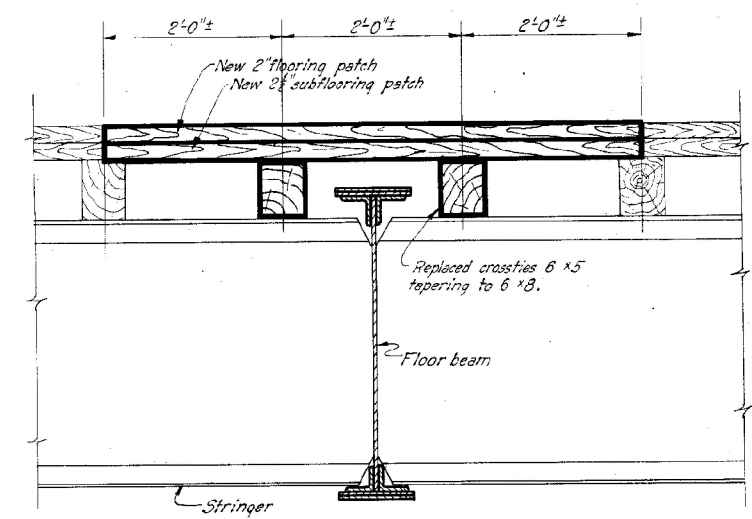
1. Detour pedestrian traffic to the south sidewalk, barricade the north sidewalk and rebuild similar to program outline for the south sidewalk.
2. Barricade the north 11' of bridge roadway and detour traffic to south 18' strip of roadway. Reconstruct the north 11' strip similar to steps 2-8 in First Stage.



THIRD STAGE
Scale: $\frac{1}{4}'' = 1'-0''$

1. Barricade the center roadway strip and detour all vehicular traffic to the north and south lanes.
2. Erect temporary railings on both sides of the center roadway lane.
3. Remove 2" x 8" flooring, 3" x 8" sub-flooring, 2" x 8" fills and timber cross ties from center strip of roadway.
4. Clean stringers S-4 and S-5 and weld cover plates on top flanges. Place center crossbeams and bolt back to back to the outside crossbeams at lap on stringers S-4 and S-5.
5. Place 2 center sections of roadway grating.

Note:
No special payment will be made for temporary bridging, temporary flooring or other arrangements for maintaining traffic during construction, but the cost thereof shall be considered included in payments made under bid items in the Proposal.



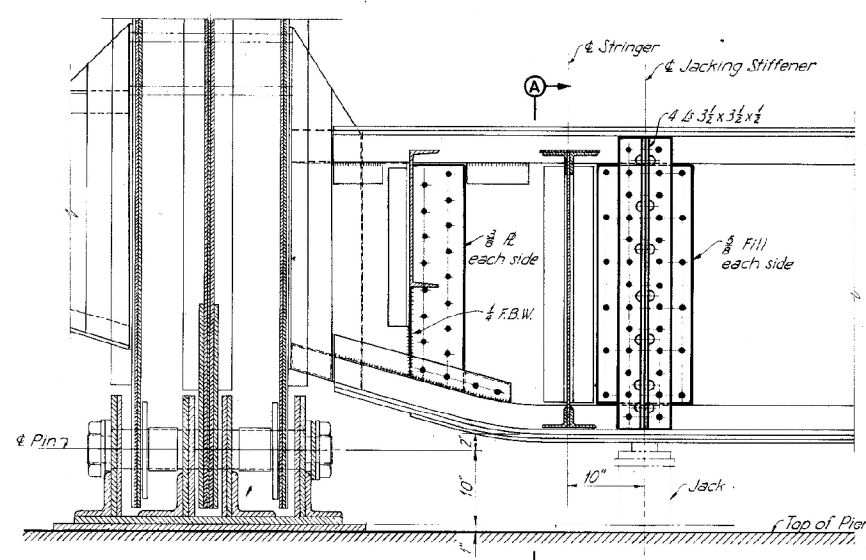
FLOORING PATCH OVER FLOORBEAM
Scale: $1'' = 1'-0''$

THE STATE ROAD COMMISSION
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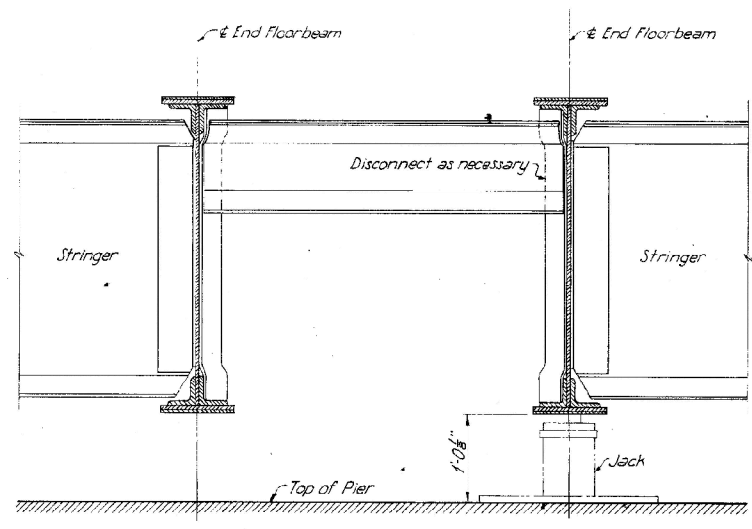
CONSTRUCTION SEQUENCE

SCALE $\frac{1}{4}'' = 1'-0''$ HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 MADE *E.H.B.* DATE 1-6-49 CONSULTING ENGINEERS
 T-100 *C.N.V.* DATE 2-24-49 KANSAS CITY N.Y.
 CHD *B.R.N.* DATE 3-1-49 775 SHEET 10

FEDERAL ROAD DISTRICT NO.	STATE	FEDERAL AID PROJECT NO.	FINAL YEAR	SHEET NO.	TOTAL SHEETS
				11	12



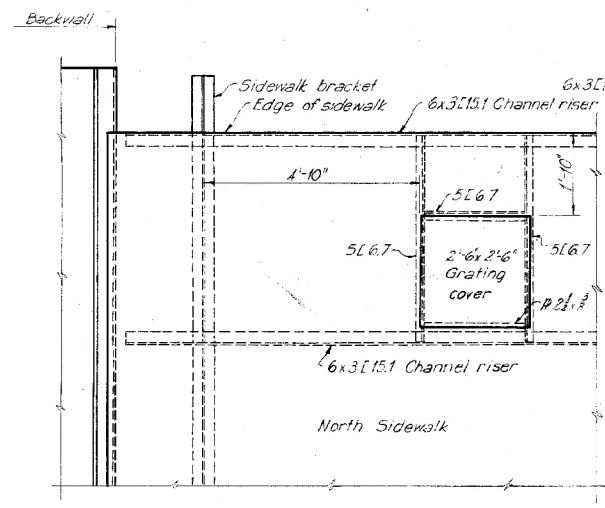
ELEVATION END FLOORBEAM
(Fixed Pier)



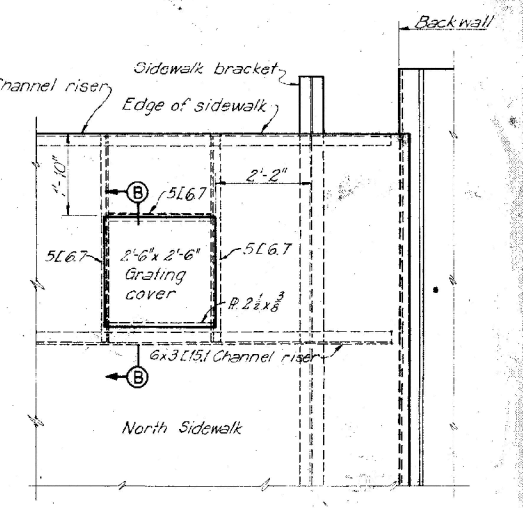
SECTION A-A

Note: Only additional material required for jacking or material changed by these additions is billed and shown by heavy lines. Bridge is shown in remodeled condition. Ends of stiffeners shall be milled.

PROVISIONS FOR JACKING
Scale: 1" = 1'-0"

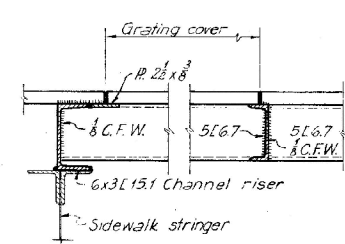


PLAN AT WEST ABUTMENT
Scale: 1/2" = 1'-0"

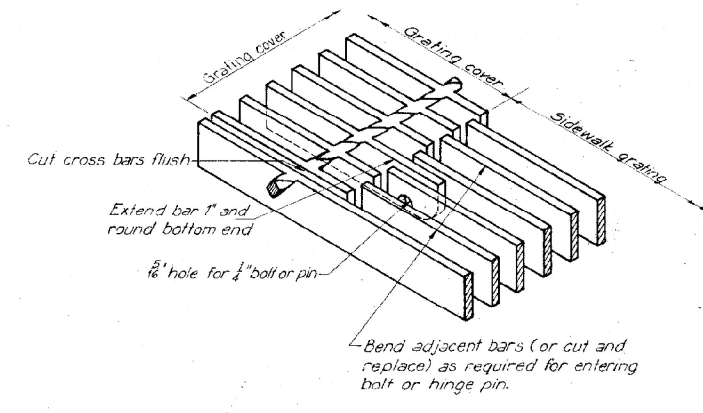


PLAN AT EAST ABUTMENT
Scale: 1/2" = 1'-0"

Note: Exact location of grating covers to be determined by field measurement. Location to be approved by Cond P Telephone Co. prior to fabrication of the grating.



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



HINGE DETAIL
Half Size

HATCHWAY DETAILS

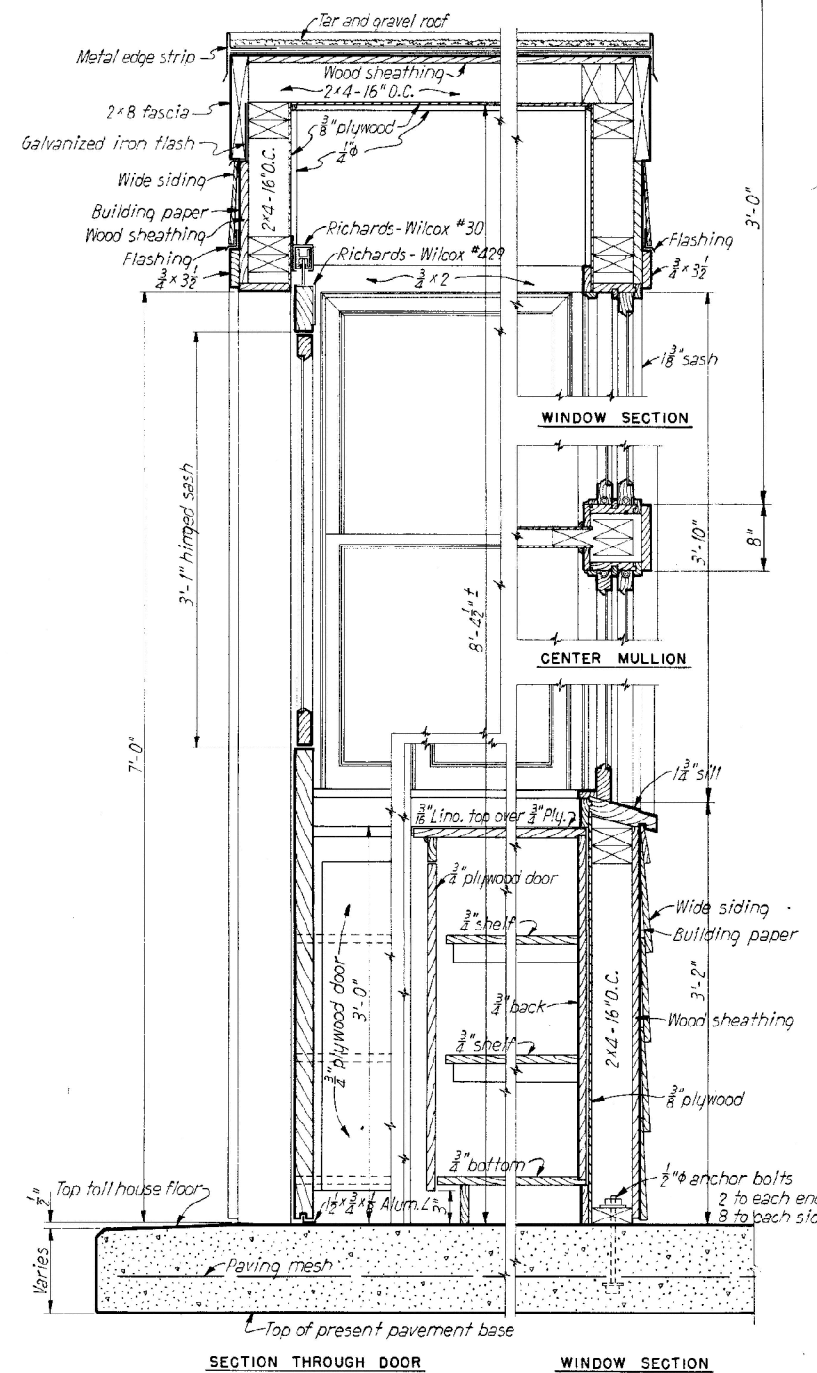
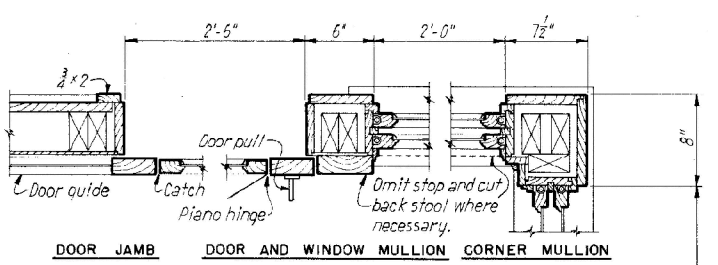
THE STATE ROAD COMMISSION OF WEST VIRGINIA
OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
PROJECT 3803 ROUTE U. S. 40 OHIO COUNTY

END FLOORBEAM-PROVISIONS FOR JACKING
TELEPHONE HATCHWAYS

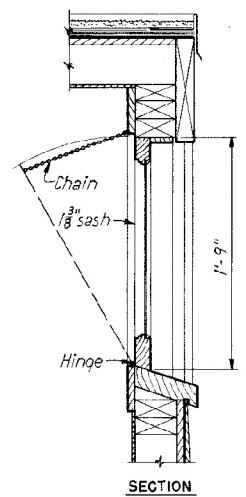
SCALE: As Noted
MADE P.W. DATE 4-8-49
TRCD R.O.D. DATE 4-12-49
CHRD R.O.D. DATE 2-1-49

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY, NEW YORK
775 SHEET 11

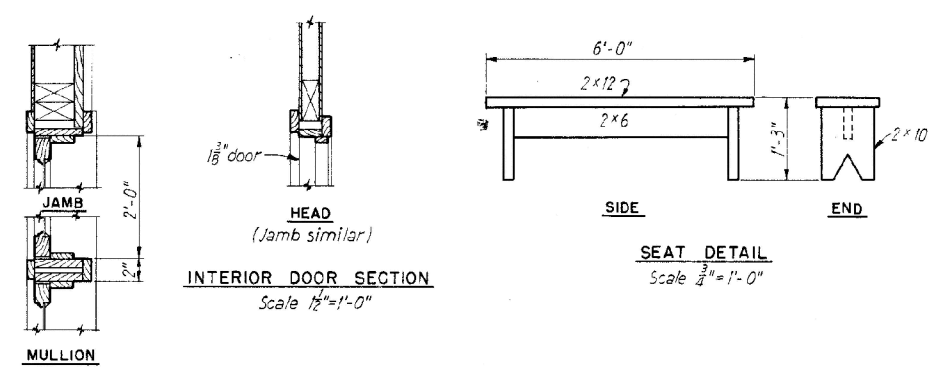
FEDERAL ROAD DISTRICT NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
				12	12



TOLL COLLECTION ROOM DETAILS
Scale 1/2" = 1'-0"

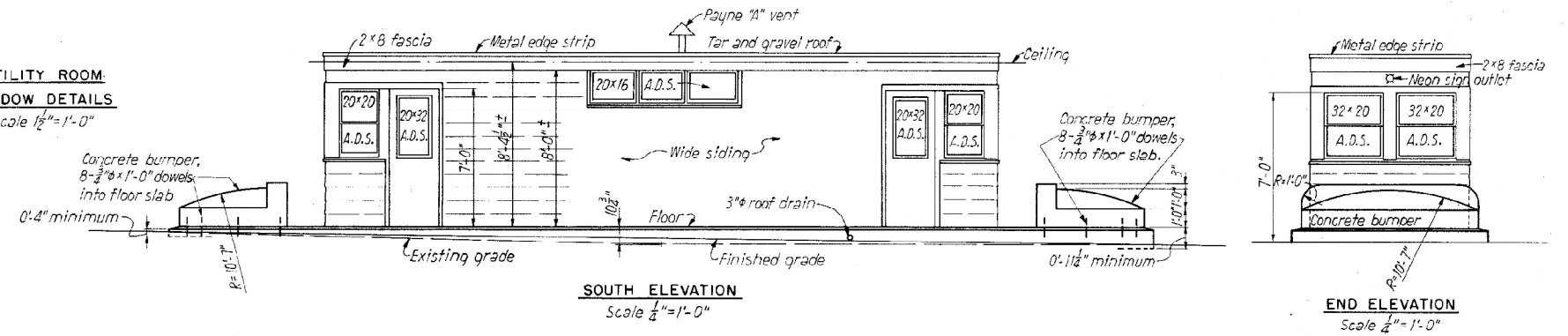


UTILITY ROOM WINDOW DETAILS
Scale 1/2" = 1'-0"



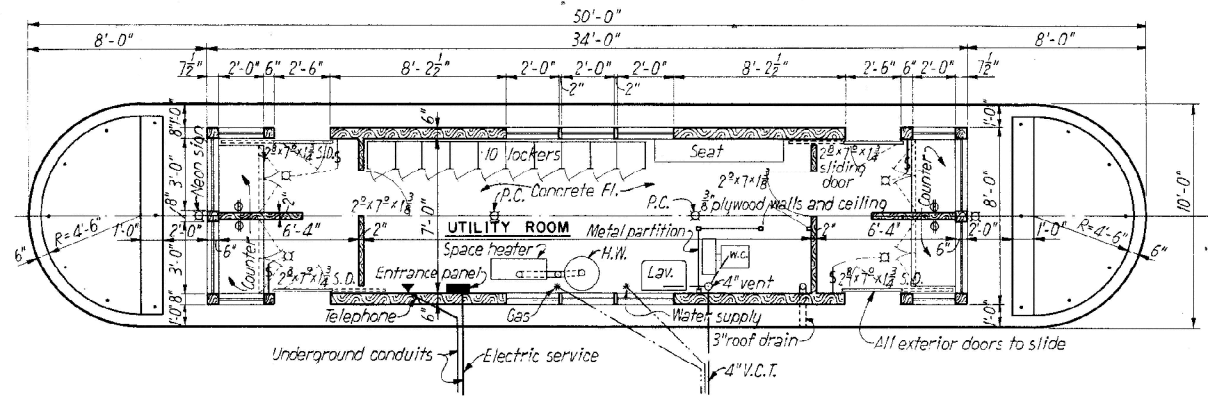
INTERIOR DOOR SECTION
Scale 1/2" = 1'-0"

SEAT DETAIL
Scale 3/4" = 1'-0"



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

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



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

THE STATE ROAD COMMISSION
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OHIO RIVER
NEW FLOOR AND REPAIRS
BRIDGEPORT BRIDGE NO. 1687
WHEELING, W. VA.
ROUTE U. & 40 OHIO COUNTY

TOLL HOUSE
PLANS, ELEVATIONS AND DETAILS

SCALE: 1/4" = 1'-0" HOWARD, NEEDLES, TAMMEN & BERGENDOFF
MADE: 11/29 DATE: 2-3-47 CONSULTING ENGINEERS
TRCD: 11/29 DATE: 2-30-49 KANSAS CITY NEW YORK
CHKD: 2/20 DATE: 4-7-49 775 SHEET 12

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