

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
ALTERATIONS TO BRIDGE OVER  
HURON RIVER IN VILLAGE OF HURON

S.H. 3

SEC. HURON (BRIDGE)

PET. No. 6944

ERIE COUNTY

The Standard Specifications of the State of Ohio, Department of Highways, in force on date of contract will govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that traffic will be maintained as specified on this sheet.

Approved: H. H. Hurd  
Date, 3-19-30 Resident District Deputy Director

Approved: W. L. Quinn  
Date, 3-19-30 Resident Division Deputy Director

Approved: J. V. Burkey  
Date, 3-19-30 Deputy Director and Chief Engineer, Bureau of Bridges.

Approved: Robt. J. Reightlin  
Date, 3-19-30 Deputy Director and Chief Engineer, Bureau of Construction.

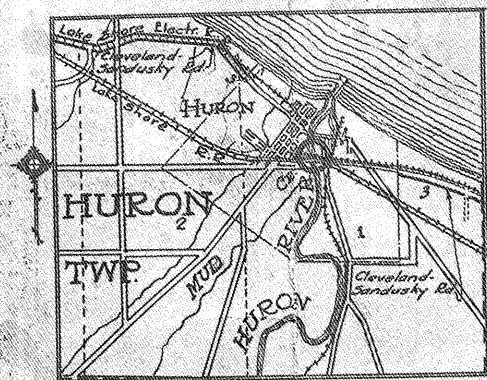
Approved: \_\_\_\_\_  
Date, \_\_\_\_\_ Deputy Director and Chief Engineer, Bureau of Maintenance.

Approved: Wm. S. Beck  
Date, 3-19-30 First Ass't. Director and Chief Engineer.

Approved: Robert H. Waid  
Date, 3-19-30 Director of Highways.

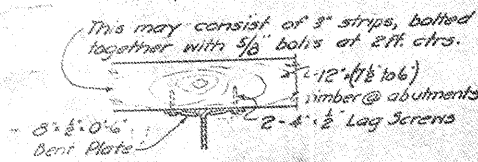
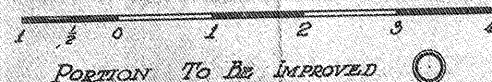
We, the Commissioners of Erie County, hereby approve these plans and certify that the right-of-way is available for the construction, maintenance and repair of above highway.

H. G. Coward  
Chas. J. ...  
Date, 3-19-30 County Commissioners

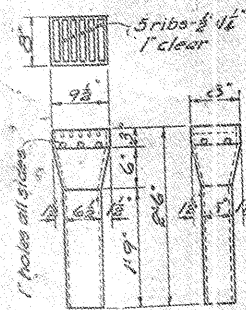


LOCATION MAP

SCALE IN MILES



DETAIL SHOWING FASTENING OF END TIMBER TO JOISTS AT ABUTMENTS



SCUPPER DETAIL

WORK REQUIRED

Because of the density of traffic at the site of this proposed work, and the inconvenience to traffic on account of the single-lane detour, provided there-with, it is important that the contractor make special arrangements to have all materials delivered promptly and to begin work at the earliest possible date, and that he arrange his construction operations so that traffic will not be interrupted in the use of the highway bridge for a period of more than 21 days. He shall make all necessary arrangements for working 24 hours per day, with 3 shifts, in order to expedite this work. If it is necessary to maintain highway and pedestrian traffic over the railway portion of the bridge, as described later, for a period longer than 21 days, the additional expense of maintaining signalmen and other expenses in connection with the handling of traffic will be charged against the contractor as liquidated damages in addition to the liquidated damages called for in the Construction Specifications in case the work is not entirely completed by the date specified, May 29, 1930. Such charges will be deducted from his estimate.

The contractor shall first construct a temporary detour over that portion of the bridge and approaches used by the Lake Shore Electric Railway Company, including approximately 75 ft. of approach at each end of bridge. This detour shall provide a clear width of 4 ft. 10 in. on each side of the center line of track, with a plank floor level with top of rails, and shall have a substantial railing, extending 3 ft. above the floor along each side. A sketch of this proposed construction is shown on the attached plans. It shall be substantially constructed and shall be maintained by the contractor until after highway and pedestrian traffic is again routed over the highway portion of the bridge, after which the contractor shall remove all material so as to leave the railway portion in its original condition. He shall cooperate with the railway company, so as to reduce to a minimum interference with railway traffic during the construction, maintenance and removal of the floor and railing of this detour. All material furnished by the contractor in connection with this detour will become his property after its removal. Suitable approaches, surfaced with traffic-bound material, shall be provided at the ends of the plank floor,

for the purpose of taking care of one-way traffic over

this detour, signalmen will be provided 24 hours per day and the detour will be illuminated at night by an electric lighting system. The however, is not a part of this contract and will be taken care of by the state, county and/or other agency, subject to the liquidated damage provision described above.

The proposed work on the highway and sidewalk portion of this bridge is described both by the specifications on this sheet and by sketches on the attached photographic prints. These latter were made from blueprints of two of the sheets of the original bridge plans, with the new work sketched thereon. Because of the special nature of much of this work, it shall be carefully studied by the contractor in collaboration with the Resident Engineer, and all details not specifically described, but necessary for a proper execution of the work, shall be taken care of in a satisfactory and workmanlike manner. All alterations shall be so made as not to interfere with the proper operation of this structure as a movable bridge. Alterations may be made from details as proposed, if approved by the Bureau of Bridges.

The present plank and wood block floor shall be removed from the roadway and a wood floor composed of 3" (1 1/2" to 6") strips shall be placed over the entire bridge. This floor shall be 7/8" thick and level for a width of approximately 5-3 along the middle of roadway, and shall be sloped to 6" thickness at curbs. New railing strips, 4" thick, shall be furnished on the main portion of bridge.

The width between curbs shall be 21'-0" on the new roadway instead of 19'-0" as on the present roadway, the extra two feet being obtained on the south side of bridge by reducing the width of sidewalk.

The present steel joists shall be removed from the two approach spans of each end of bridge and replaced with 2 lines of I beams, (I 12 @ 40' or C.B. 12 @ 40'), spaced 8'-7" c/c to c/c. The new joists shall be neatly embedded in masonry with their tops level and at an elevation of 7 1/2 inches below grade. The strip floor shall be fastened to the joists by means of universal construction cleats (or equal) at 12" alternate spacing along each joist.

A new 6" x 6" felloe guard shall be placed along each side of roadway, arranging the south felloe guard to form a 12" curb as shown in accompanying detail drawings.

The present sidewalk and railing strips shall be removed and replaced by a new 3" plank floor with railing strips.

The present steel sidewalk joists shall be removed from the two approach spans of each end of bridge and replaced with 2 lines of 10" I beams salvaged from the old roadway joists.

The pipe railing along each side of bridge shall be reset and painted.

A reinforced concrete approach slab shall be constructed at each end of bridge; slab to be 24'-0" long, 14" thick and constructed according to Standard Drawing No. A5-2430, except that the concrete mix shall be 1-4-4 and the mixing time shall be 3 minutes to cause early hardening. The approach slabs shall be placed as soon as possible and at least 10 days before highway portion of structure is open to traffic.

The strip floor, railing strips and felloe guard shall be cross-bred L.L.X.P. or cross-bred Douglas Fir. The floor strips shall be fastened together with 60 d spikes, at 2'-0" spacing, and every other strip shall be nailed to alternate railing strips with one 20 d spike. The sidewalk floor shall be untreated 3" Oak plank, securely nailed.

All materials removed from the existing bridge, shall become the property of the contractor as part payment for removal and shall be removed from the site.

The Contractor shall verify all dimensions before ordering materials.

Construction cleats and felloe guard bolts included with strip floor for payment.

The tops of all old joists and all other members which will be inaccessible after the new floor is in place shall be cleaned thoroughly of all dirt, rust and scale and given two coats of red lead paint before the floor is laid.

Sixteen cast iron scuppers of the design shown shall be furnished and installed, 8 along each side of the roadway at regular intervals and as near the felloe guard as practical.

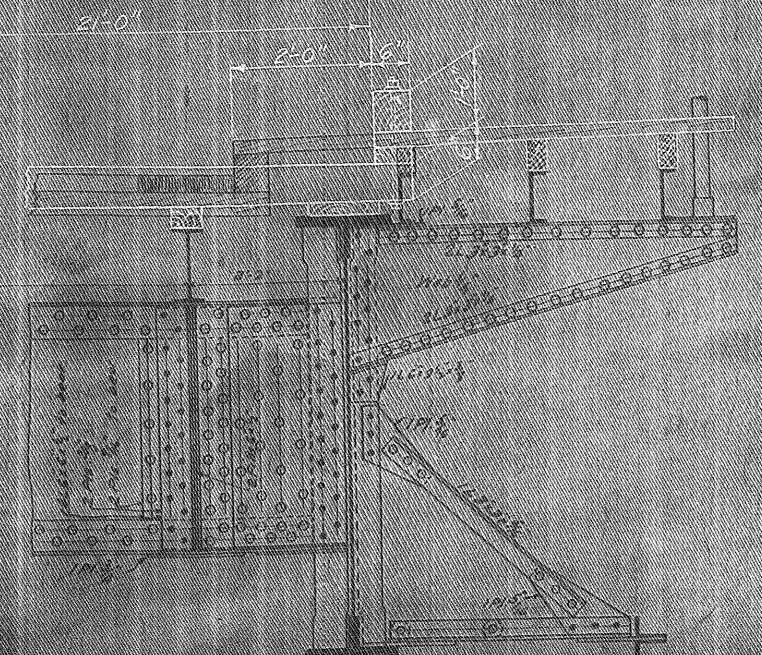
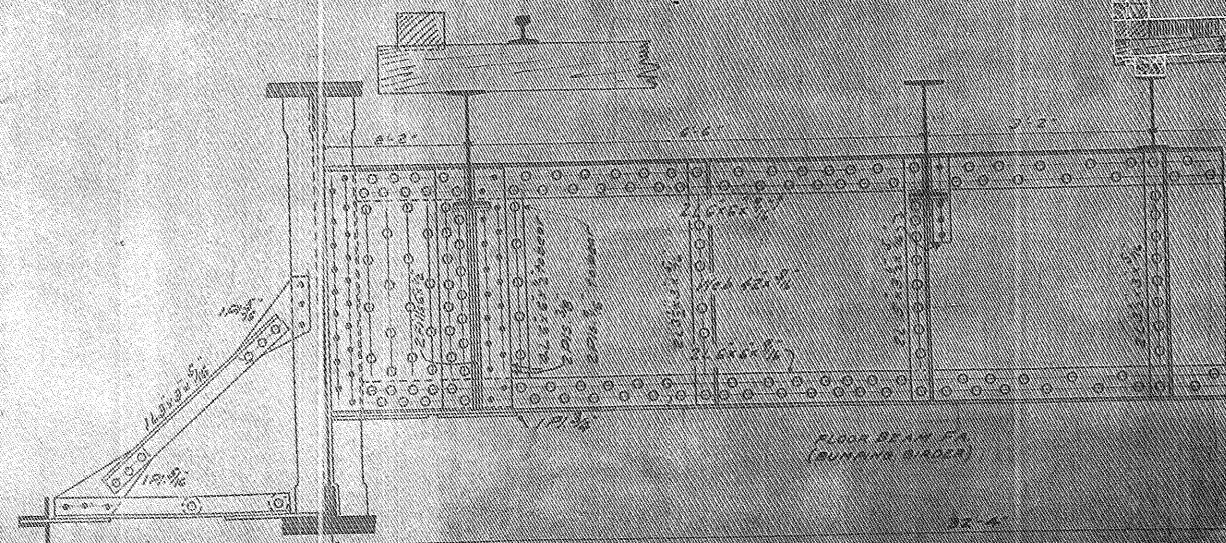
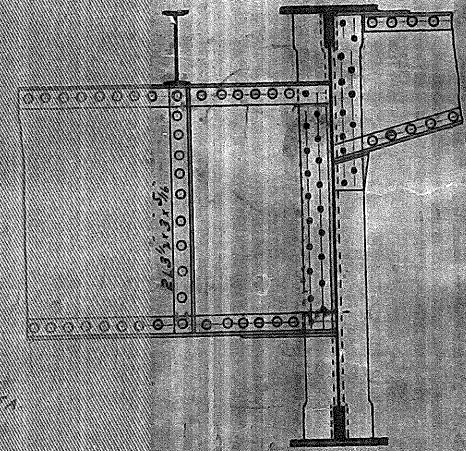
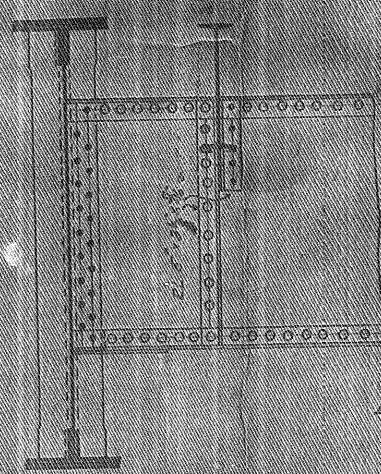
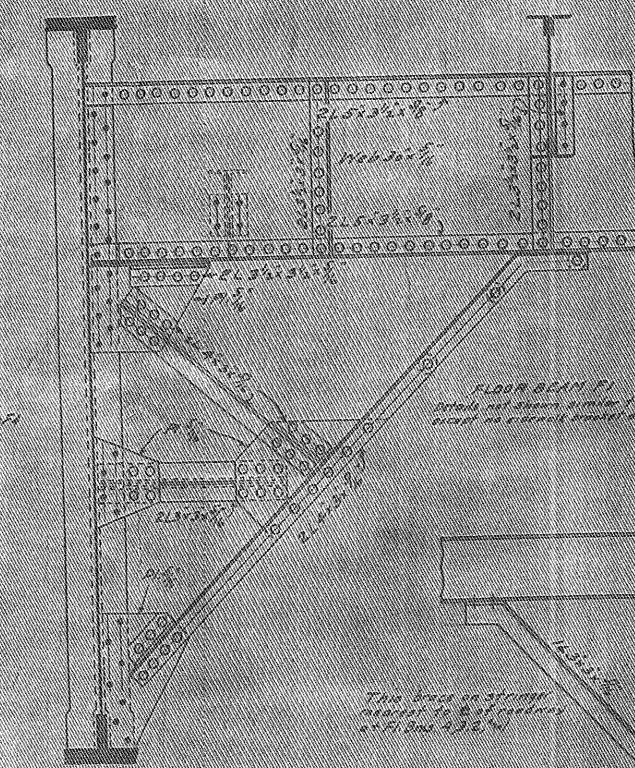
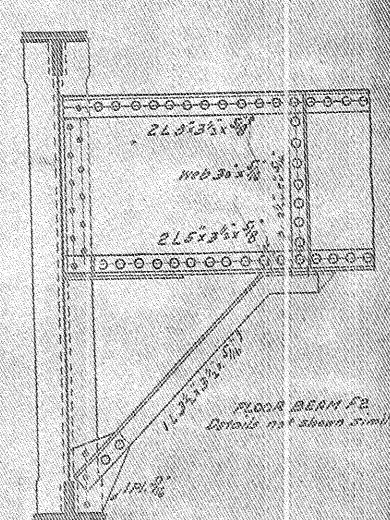
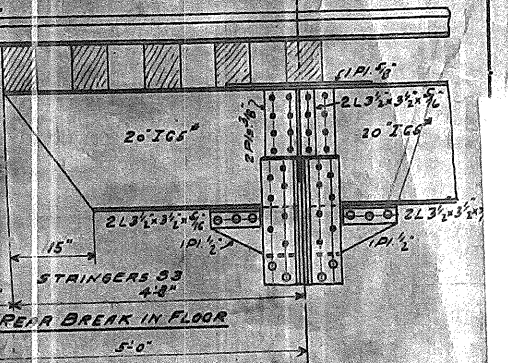
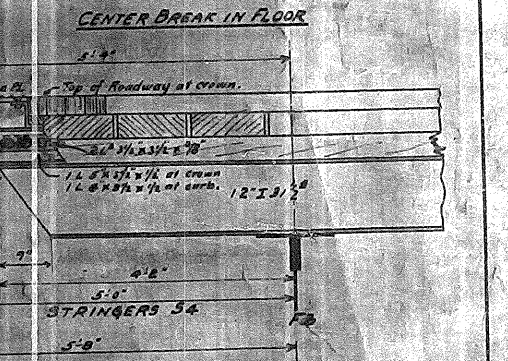
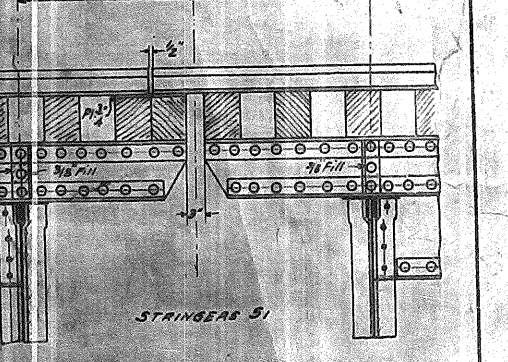
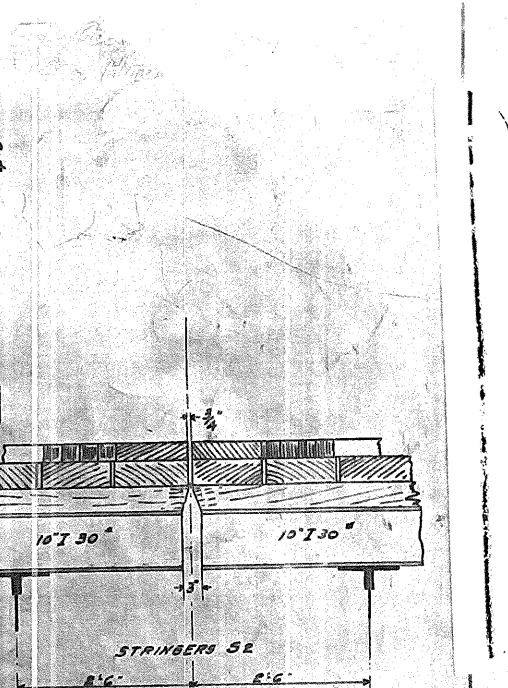
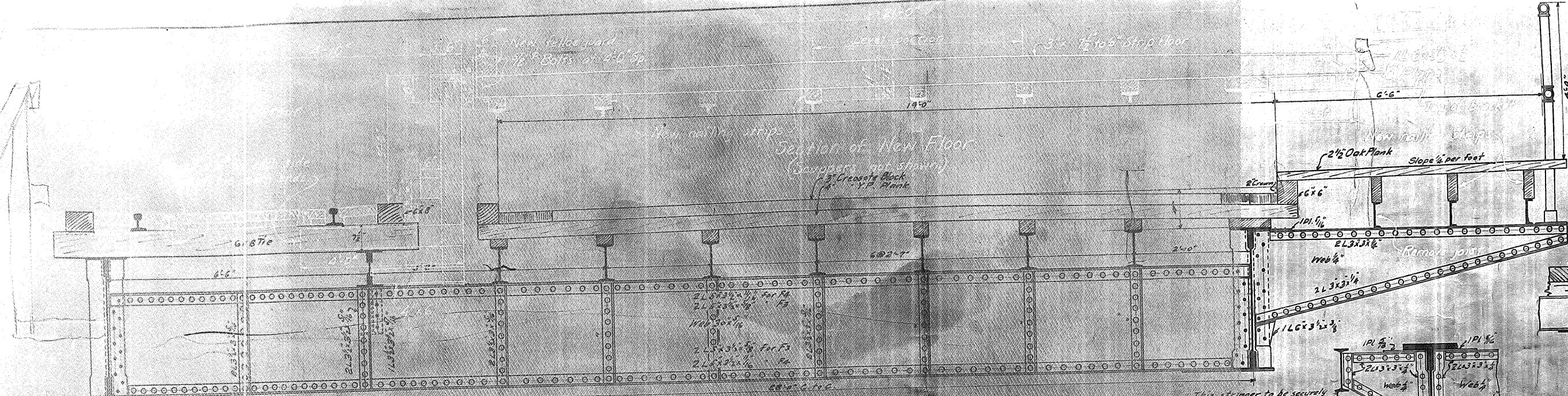
For the sidewalk on the approach spans, either construction cleats or railing strips shall be provided for fastening the sidewalk plank to the joists.

ESTIMATED QUANTITIES

Structural Steel	44,000	Lbs.
Cast Iron Scuppers	16	Pcs.
Cross-bred Lumber (L.L.X.P. or Douglas Fir)	62,000	Ft. B.M.
Oak Lumber (untreated)	3,200	Ft. B.M.
14" Reinforced Concrete Approach Slab (1 1/2 mi)	115	Sq. Yds.
Detour (including construction, maintenance and removal of plank, railing, traffic-bound approaches and other necessary construction)		Lump Sum
Removal of old floor, sidewalk and concrete pavement		Lump Sum
Miscellaneous work, including resetting and painting railing, constructing new joist seats on approach spans and seats for approach slabs; cleaning and painting tops of existing joists; alteration of details at break in floor; work and materials required for sidewalk joists on approach spans; and any other incidental construction not included in other items.		Lump Sum

3/24/30





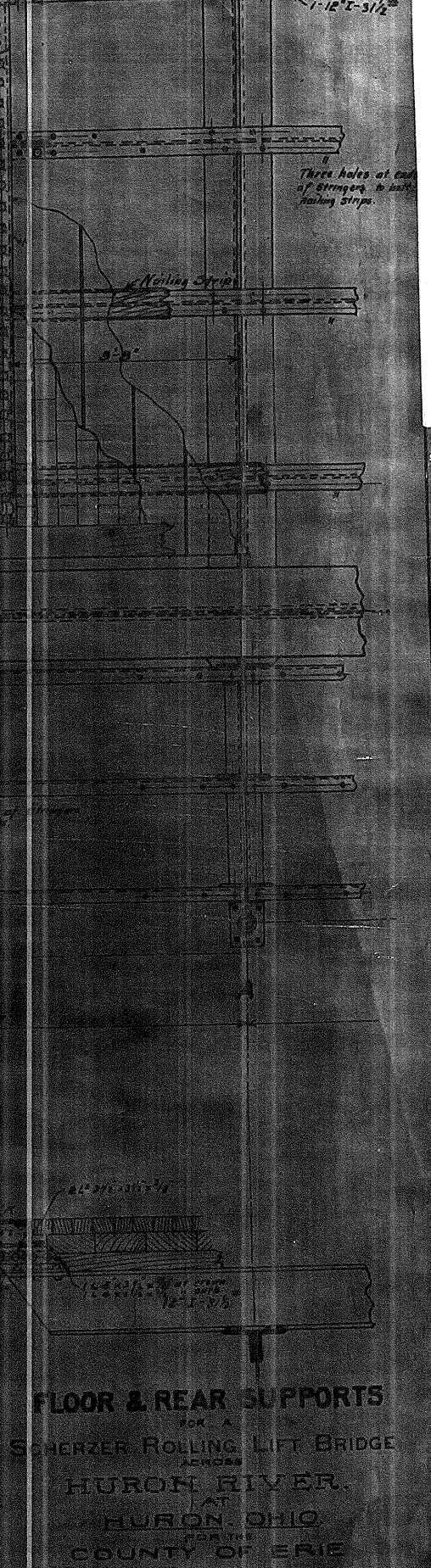
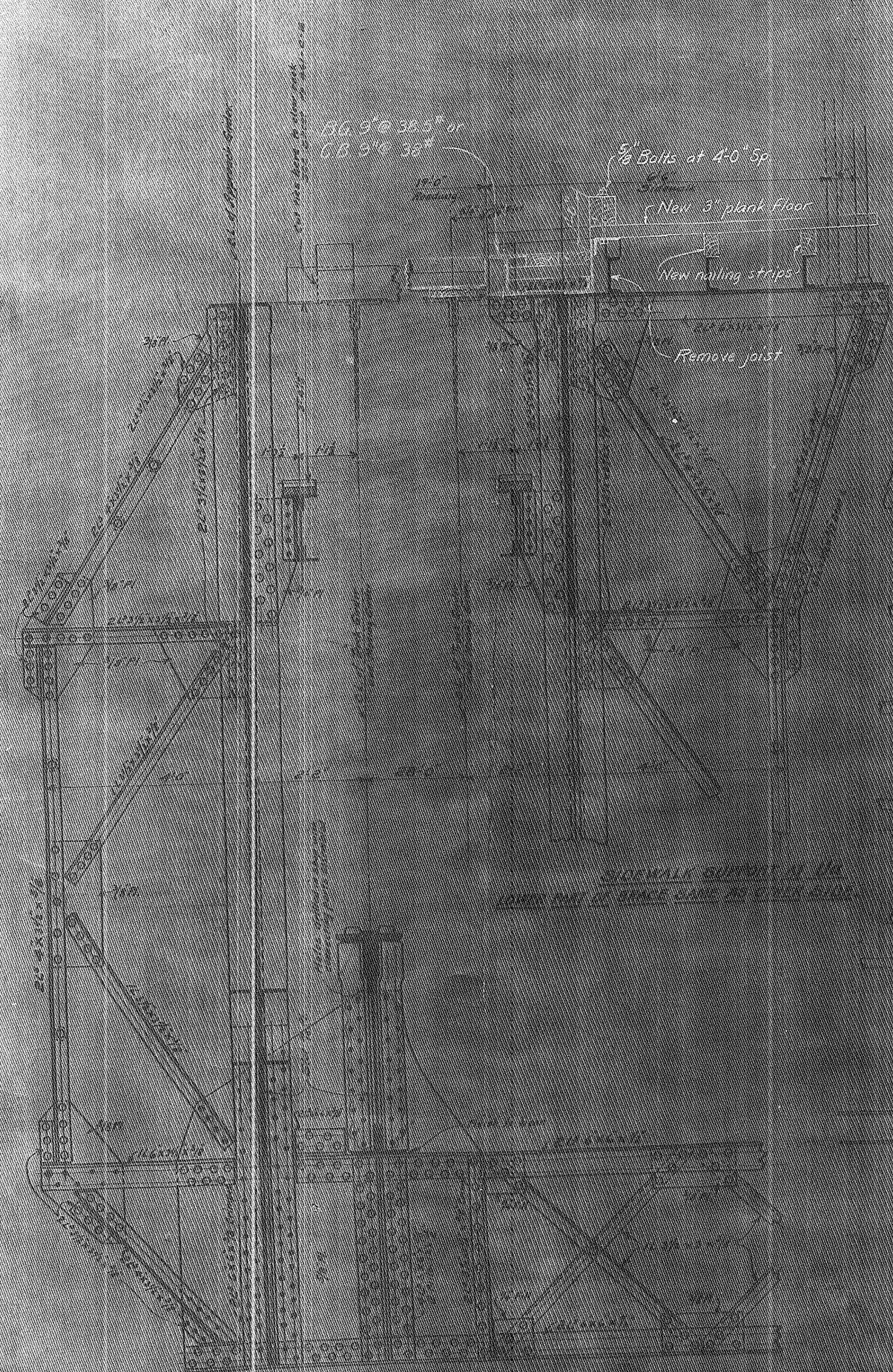
NOTES:  
 All detail requirements of the specifications regarding shop work or field work should be covered by notes on the shop detail plans to which they relate.  
 All rivets in 3" legs of B, 10" rivets in 4" x 4" diam.  
 All other rivets 1/2" diam.

— ERIE COUNTY OHIO —  
 Approved 1910  
 County Surveyor  
 County Auditor  
 County Commissioners  
 THE SCHERZER ROLLING LIFT BRIDGE CO.  
 Approved by *W. L. ...* Chief Engineer  
 Plan made by *R. W. Flower*  
 Plan checked by *R. W. Flower*  
 Corrected by *C. L. ...*

**FLOOR BEAMS & STRINGERS**  
 FOR A  
**SCHERZER ROLLING LIFT BRIDGE**  
 ACROSS  
**HURON RIVER**  
 AT  
**HURON, OHIO.**  
 FOR THE  
**COUNTY OF ERIE**

DESIGNED BY  
 THE SCHERZER ROLLING LIFT BRIDGE CO.  
 1816 MONROE BLOCK CHICAGO  
 Aug-27-1910. Scale 1/2" = 1'-0"





SHORLY SUPPORT OF THE  
LOWER PART OF BRACE GIRDS TO CROSS GIRDS

Alter End Finish to fit  
floor construction

TRACK GIRDER SUPPORT  
AND STRUT AT L.C.

NOTES:  
All rivets to ultimate except in  
places of change of beam and stay of 12  
inches to 14 in diameter.  
All steel requirements of the specifications  
regarding shop work or field work shall be  
covered by notes on the shop detail plans to  
which they refer.

ERIE COUNTY OHIO

County Engineer  
County Auditor  
County Commissioners

THE SCHERZER ROLLING LIFT BRIDGE CO.  
Approved by *[Signature]* Chief Engineer  
Plan made by *[Signature]*  
Plan checked by *[Signature]*  
Correct *[Signature]*

FLOOR & REAR SUPPORTS  
FOR A  
SCHERZER ROLLING LIFT BRIDGE  
ACROSS  
HURON RIVER.  
AT  
HURON, OHIO  
FOR THE  
COUNTY OF ERIE

DESIGNED BY  
THE SCHERZER ROLLING LIFT BRIDGE CO.  
100 HONOLULU BUILDING  
HONOLULU, HAWAII

O.K.  
WITH  
3/11/10

461-C-8



STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
**ALTERATIONS TO BRIDGE OVER  
 HURON RIVER IN VILLAGE OF HURON**  
 S.H. 3 SEC. HURON (BRIDGE) PET. No. 6944  
**ERIE COUNTY**

The Standard Specifications of the State of Ohio, Department of Highways, in force on date of contract will govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that traffic will be maintained as specified on this sheet.

Approved: H. Shedd  
 Date, 3-19-30 Resident District Deputy Director

Approved: W. W. Quinn  
 Date, 3-19-30 Resident Division Deputy Director

Approved: J. V. Burkey  
 Date, 3-19-30 Deputy Director and Chief Engineer, Bureau of Bridges.

Approved: Robt. J. Reightler  
 Date, 3-19-30 Deputy Director and Chief Engineer, Bureau of Construction.

Approved: \_\_\_\_\_  
 Date, \_\_\_\_\_ Deputy Director and Chief Engineer, Bureau of Maintenance.

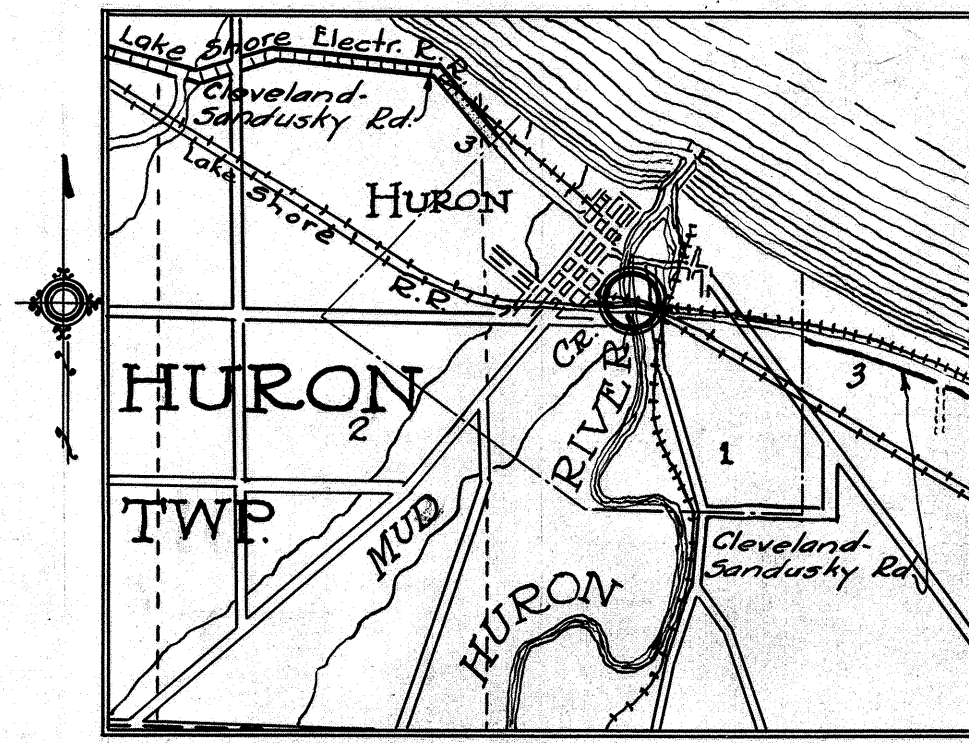
Approved: Am. B. ...  
 Date, 3-19-30 First Asst. Director and Chief Engineer.

Approved: Robert McVaid  
 Date, 3-19-30 Director of Highways.

We, the Commissioners of Erie County, hereby approve these plans and certify that the right-of-way is available for the construction maintenance and repair of above highway.

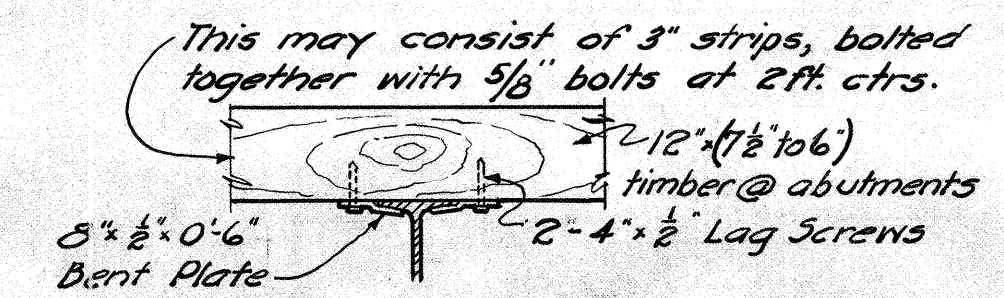
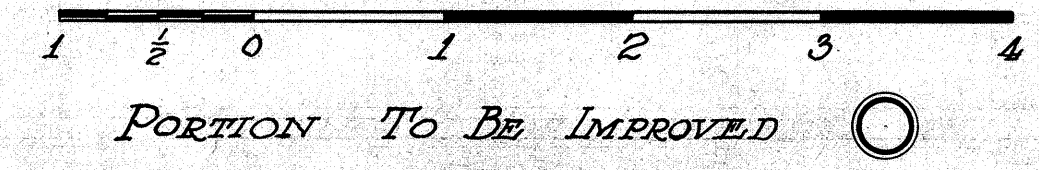
G. S. ...  
H. G. ...  
H. J. ...

Date, 3-19-30 County Commissioners

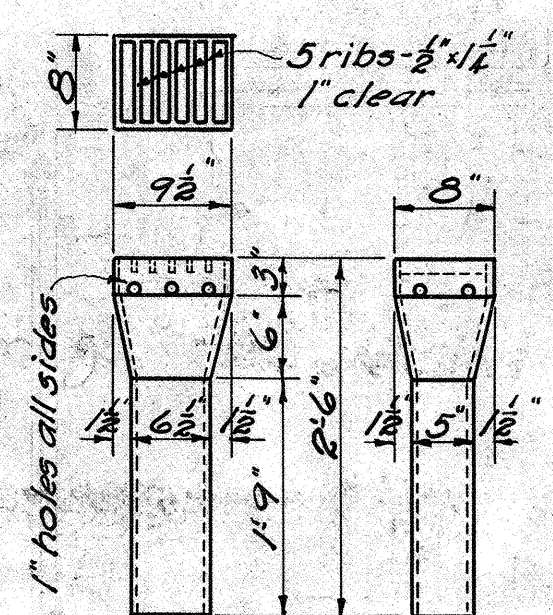


LOCATION MAP

SCALE IN MILES



DETAIL SHOWING FASTENING OF END TIMBER TO JOISTS AT ABUTMENTS



SCUPPER DETAIL  
 Cast Iron 1/4 Required (These shall be securely fastened to floor)

**WORK REQUIRED**

Because of the density of traffic at the site of this proposed work, and the inconvenience to traffic on account of the single-lane detour provided there-with, it is important that the contractor make special arrangements to have all materials delivered promptly and to begin work at the earliest possible date, and that he arrange his construction operations so that traffic will not be interrupted in the use of the highway bridge for a period of more than 21 days. He shall make all necessary arrangements for working 24 hours per day, with 3 shifts, in order to expedite this work. If it is necessary to maintain highway and pedestrian traffic over the railway portion of the bridge, as described later, for a period longer than 21 days, the additional expense of maintaining signalmen and other expenses in connection with the handling of traffic will be charged against the contractor as liquidated damages in addition to the liquidated damages called for in the Construction Specifications in case the work is not entirely completed by the date specified, May 29, 1930. Such charges will be deducted from his estimates.

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For the purpose of taking care of one-way traffic over

this detour, signalmen will be provided 24 hours per day and the detour will be illuminated at night by an electric lighting system. This, however, is not a part of this contract and will be taken care of by the state, county and/or other agency, subject to the liquidated damage provision described above.

The proposed work on the highway and sidewalk portion of this bridge is described both by the specifications on this sheet and by sketches on the attached photostatic prints. These latter were made from blueprints of two of the sheets of the original bridge plans, with the new work sketched thereon. Because of the special nature of much of this work, it shall be carefully studied by the contractor in collaboration with the Resident Engineer, and all details not specifically described, but necessary for a proper execution of the work, shall be taken care of in a satisfactory and workmanlike manner. All alterations shall be so made as not to interfere with the proper operation of this structure as a movable bridge. Alterations may be made from details as proposed, if approved by the Bureau of Bridges.

The present plank and wood block floor shall be removed from the roadway and a wood floor composed of 3\"/>

The width between curbs shall be 21'-0\"/>

The present steel joists shall be removed from the two approach spans at each end of bridge and replaced with 9 lines of I beams, (B.I. 12\"/>

A new 6\"/>

The present sidewalk and nailing strips shall be removed and replaced by a new 3\"/>

The present steel sidewalk joists shall be removed from the two approach spans at each end of bridge and replaced with 2 lines of 10\"/>

The pipe railing along each side of bridge shall be reset and painted.

A reinforced concrete approach slab shall be constructed at each end of bridge; slab to be 24'-0\"/>

The strip floor, nailing strips and felloe guard shall be creosoted L.L.Y.P. or creosoted Douglas Fir. The floor strips shall be fastened together with 60 d spikes, at 2'-0\"/>

All materials removed from the existing bridge, shall become the property of the contractor as part payment for removal and shall be removed from the site.

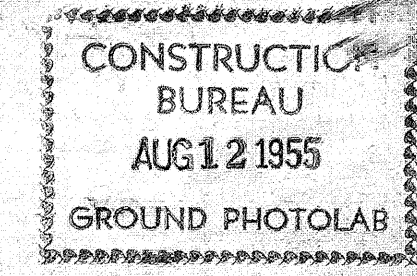
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The tops of all old joists and all other members which will be inaccessible after the new floor is in place shall be cleaned thoroughly of all dirt, rust and scale and given two coats of red lead paint before the floor is laid.

Sixteen cast iron scuppers of the design shown shall be furnished and installed, 8 along each side of the roadway at regular intervals and as near the felloe guard as practical.

For the sidewalk on the approach spans, either construction cleats or nailing strips shall be provided for fastening the sidewalk plank to the joists.



ESTIMATED QUANTITIES		
Structural Steel	44,000	Lbs.
Cast Iron Scuppers	16	Pcs.
Creosoted Lumber (L.L.Y.P. or Douglas Fir)	68,000	Ft. B.M.
Oak Lumber (untreated)	3,200	Ft. B.M.
14\"/>		
Detour (including construction, maintenance and removal of plank, railing, traffic-bound approaches and other necessary construction)		Lump Sum
Removal of old floor, sidewalk and concrete pavement		Lump Sum
Miscellaneous work; including resetting and painting railing, constructing new joist seats on approach spans and seats for approach slabs; cleaning and painting tops of existing joists; alteration of details at break in floor; work and materials required for sidewalk joists on approach spans; and any other incidental construction not included in other items.		Lump Sum

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 178 ERIE 3 HURON Br