

American Bridge Company Collection

(formerly U.S. Steel Corporation, American Bridge Division)

Scope and content

The American Bridge Company collection consists of 93 original drawings of the Eads Bridge. Please note that Washington University does not hold any corporate records of the American Bridge Company, or project files for other bridges built by the company. The American Bridge Company can be contacted at:

American Bridge Company
1000 American Bridge Way
Coraopolis, Pennsylvania 15108
(412) 631-1000
(412) 631-1050

In addition, Washington University holds no personnel files related to the construction of the Eads Bridge.

Historical note re: Eads Bridge

Begun in 1867 and completed in 1874, the Eads Bridge was named after its designer, James Buchanan Eads. It was the first bridge to span the Mississippi at St. Louis, the first bridge to make significant use of steel, and one of the first bridges in the U.S. to make use of pneumatic caissons (the caissons sunk for the bridge are still among the deepest ever). It was also the first bridge to be built entirely using cantilever construction methods, avoiding the need for falsework, and the first bridge designed so that any part could be removed for repair or replacement. The bridge is now a National Historic Landmark.

Source of acquisition

The 93 drawings which make up the American Bridge Company collection were placed on permanent loan to Washington University and the Museum of Transportation in 1978 by the U.S. Steel Corporation, American Bridge Division. The company is now known as the American Bridge Company, and this company continues to hold ownership of the drawings. 570 additional drawings of the bridge, formerly owned by the Terminal Railroad Association are also available.

Restrictions on access

No restrictions on access. Because of their age and physical condition, the original drawings are not available for Interlibrary Loan. Permission to publish or broadcast must be obtained from the American Bridge Company.

American Bridge Company Collection

| <u>A.B. number</u> | <u>W.U. number</u> | <u>Description</u> |
|--------------------|--------------------|---|
| AB-1 | TR-401 | #2: Cast iron bed plates for lower members (24 pieces required) |
| AB-2 | TR-413 | #3: Wrought iron skewbacks for upper members (24 pieces required) |
| AB-3 | TR-412 | #4: Wrought iron skewbacks for lower members (24 pieces required) |
| AB-4 | TR-411 | #5 (revised): Anchor bolts for steel ribs, includes bolts through piers and bolts in abutments, duplicate |
| AB-5 | TR-410 | #6: Sections of staves used for tubes in centre span, duplicate |
| AB-6 | TR-409 | #6 (revised): Sections of staves used for tubes in centre span, copy |
| AB-7 | TR-408 | #7 (revised): Steel pins for upper members of middle span (172 pieces exclusive skewback pins), duplicate |
| AB-8 | TR-407 | #8: Steel pins for lower members of middle span (176 pieces exclusive skewback pins), duplicate |
| AB-9 | TR-406 | #9: Tubes for middle span |
| AB-10 | TR-660 | #10 (revised): Eyeplate washers for middle span (steel) |
| AB-11 | TR-405 | #11 & 21 (revised): Tension rods between steel ribs with connecting straps and bolts (steel) for middle span and side spans |
| AB-12 | TR-404 | #11 (revised): Tension rods between steel ribs of middle span with connecting straps and bolts |
| AB-13 | TR-404 | #12 (revised): Steel sleeve couplings connecting tubes of middle span |
| AB-14 | TR-403 | #13 (revised): Skewback tubes and pins for middle span |
| AB-15 | TR-402 | #14 (revised): Wrought iron bars for braces of middle span |

| A.B. number | W.U. number | Description |
|--------------------|--------------------|--|
| AB-16 | TR-400 | #15: Horizontal stays between steel ribs of middle span (revised) |
| AB-17 | TR-399 | #16: Sections of staves used for tubes in side spans, copy of tracing |
| AB-18 | TR-398 | #16 (revised): Sections of staves used for tubes in side spans |
| AB-19 | TR-397 | #17: Steel pins for upper members of side spans (328 pins exclusive of skewback pins), duplicate |
| AB-20 | TR-396 | #18: Steel pins for lower members of side spans (336 pins exclusive skewback pins), duplicate |
| AB-21 | TR-395 | #19: Tubes for side spans |
| AB-22 | TR-394 | #20: Eye plate washers for side spans (steel) |
| AB-23 | TR-393 | #21: Tension rods between steel ribs of side spans with connecting straps and bolts (steel) |
| AB-24 | TR-392 | #22 (revised): Steel sleeve couplings connecting tubes of side spans |
| AB-25 | TR-376 | #23: Skewback tubes and pins for side spans |
| AB-26 | TR-377 | #24: Wrought iron bars for braces of side spans |
| AB-27 | TR-378 | #25: Horizontal stays between steel ribs of side spans (revised) |
| AB-28 | TR-431 | #26: Main braces, includes specifications for middle and side span braces |
| AB-29 | TR-379 | #27A (revised): Full size section of wrought iron longitudinal beam and steel rail used in construction of railway |
| AB-30 | TR-380 | #27B (revised): Full size section of wrought iron cross beam used in construction of railway |
| AB-31 | TR-375 | #28 (revised): Constuction of railway track in centre part of spans |
| AB-32 | TR-374 | #29 (revised): Suspension rods |

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|---------------------------|---------------------------|--|
| AB-33 | TR-373 | #31: Showing mode of supporting the cross beams of railroad on joints 9 & 10 of side spans |
| AB-34 | TR-372 | #32 (revised): Support of cross beam of lower roadway at joints nos. 31 & 32 (side spans) |
| AB-35 | TR-371 | #33: Struts made of 6" channel bars (172 struts required), with attached sheet listing struts made of 6" channel bars (3/30/1872) |
| AB-36 | TR-370 | #34: Struts made of 7" channel bars (96 struts required), with attached sheet listing struts made of 7" channel bars (3/30/1872) |
| AB-37 | TR-423 | #35: Struts made of 8" channel bars (88 pieces required), with attached list of revised strut statistics dated 3/30/1872 |
| AB-38 | TR-425 | #36: Struts made of 9" channel bars (88 pieces required), with attached list of revised strut statistics dated 3/30/1872 |
| AB-39 | TR-424 | #37: Struts made of 10" channel bars (80 pieces required), with attached list of revised strut statistics dated 3/30/1872 |
| AB-40 | TR-369 | #38 (revised): Showing mode of supporting railway at joints (0-7) and (37-44) middle span and (0-6) and (35-42) side spans |
| AB-41 | TR-368 | #39: Wrought iron tension rods between struts, with attached sheet listing bracing above railway (3/30/1872) |
| AB-42 | TR-367 | #40: Eye plates connecting struts with steel pins and wrought iron nuts & washers for steel pins, including list of eye plates |
| AB-43 | TR-427 | #41: Upper roadway, with 35 attached sheets showing revision, extract, and location of sleeve units for tension rods and elevation of wind truss for middle span |
| AB-44 | TR-427 | #41: Upper roadway, with 3 attached sheets showing revision, extract, and location of sleeve units for tension rods and elevation of wind truss for middle span |

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| AB-45 | TR-427 | #41: Upper roadway, with 3 attached sheets showing revision, extract, and location of sleeve units for tension rods and elevation of wind truss for middle span |
| AB-46 | TR-427 | #41: Upper roadway, with 3 attached sheets showing revision, extract, and location of sleeve units for tension rods and elevation of wind truss for middle span |
| AB-47 | TR-428 | #41 & 42 (revised): Upper roadway and iron wind truss for centre span |
| AB-48 | TR-429 | #42: Iron wind truss of upper roadway in centre span, including details of end of wind truss, centre part, top view of one half truss, and plan of plates in flange of wind truss |
| AB-49 | TR-365 | #43: Iron wind truss of upper roadway in side span, for details see #42 |
| AB-50 | TR-366 | #43 (revised): Iron wind truss of upper roadway in side span, for details see #42 |
| AB-51 | TR-381 | #43a: Plan showing location of sleeve nuts for tension rods and elevation of wind truss for side spans |
| AB-52 | TR-420 | #44: Anchorage of wind truss of upper roadway at piers, 4 sets required |
| AB-53 | TR-421 | #45: Anchorage of wind truss of upper roadway at abutments |
| AB-54 | TR-383 | #46 (revised): Showing mode of supporting the railway on joints 7 & 34 of side spans and 8 & 36 centre span |
| AB-55 | TR-384 | #47 (revised): Support of cross beam of lower roadway at joint no. 8 (side span) |
| AB-56 | TR-385 | #48 (revised): Showing mode of supporting the railway at joint 33 (side span) |
| AB-57 | TR-386 | #49 (revised): Showing mode of supporting the railway at joints 9 & 35 (centre span) |
| AB-58 | TR-191 | #50: Skeleton of Illinois and St. Louis Bridge |

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|--------------------|--------------------|--|
| AB-59 | TR-382 | #51: Mode of supporting the struts on joints 0 & 42 side spans and 0 & 44 centre span |
| AB-60 | TR-426 | #52: Elevation of half of middle span |
| AB-61 | TR-432 | #53: Longitudinal section of pier, showing connection of side and centre spans |
| AB-62 | TR-433 | #54: Cross section near pier |
| AB-63 | TR-419 | #55: Construction of upper roadway on piers |
| AB-64 | TR-659 | #57: Joint #22 of rib B of centre span |
| AB-65 | TR-661 | #59: Construction of roadway on western approaches |
| AB-66 | TR-658 | #60: Cornices for approaches over Levees |
| AB-67 | TR-418 | #61 (revised): Bridges across Main and 2nd Street |
| AB-68 | TR-417 | #62 (revised): Wrought iron girders for the bridges across Main Street and 2nd Street |
| AB-69 | TR-416 | #63 (revised): Wrought iron girders for bridge over alley between Main and 2nd Streets |
| AB-70 | TR-422 | #64: Wrought iron girders carrying the upper roadway in western approach |
| AB-71 | TR-387 | #64a: Girders between towers (2 girders required) |
| AB-72 | TR 663 | #68: Cast iron columns |
| AB-73 | TR-657 | #69: Swivels for steel tension rods |
| AB-74 | TR-388 | #70: Lateral stiffening of upper member of outer ribs in centre part of spans, with 3 drawings attached showing details and revisions of #70 |
| AB-75 | TR-388 | #70: Lateral stiffening of upper member of outer ribs in centre part of spans, with 3 drawings attached showing details and revisions of #70 |

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|--------------------|--------------------|--|
| AB-76 | TR-388 | #70: Lateral stiffening of upper member of outer ribs in centre part of spans, with 3 drawings attached showing details and revisions of #70 |
| AB-77 | TR-388 | #70: Lateral stiffening of upper member of outer ribs in centre part of spans, with 3 drawings attached showing details and revisions of #70 |
| AB-78 | TR-389 | #71: Cross beams of lower roadway in centre part of spans, with attached revision drawing |
| AB-79 | TR-389 | #71: Cross beams of lower roadway in centre part of spans, with attached revision drawing |
| AB-80 | TR-391 | #73: Adjusting arrangement in central tubes for side spans |
| AB-81 | TR-390 | #74: Diagrams showing lengths of tubes and braces near centres of spans |
| AB-82 | TR-662 | #15: Location of pumps in balance gauge |
| AB-83 | TR-288 | General plan of erecting Illinois & St. Louis Bridge by Keystone Bridge Co. Pittsburgh, PA, shows full span from Illinois to Missouri, includes aerial view and abutment pier/towers |
| AB-84 | TR-415 | Diagrams showing strains on various parts of side and centre spans, 3 drawings stapled together, one shows the influence of load & temperature on the upper and lower member of a rib of centre span |
| AB-85 | TR-415 | Diagrams showing strains on various parts of side and centre spans, 3 drawings stapled together, one shows the influence of load & temperature on the upper and lower member of a rib of centre span |
| AB-86 | TR-415 | Diagrams showing strains on various parts of side and centre spans, 3 drawings stapled together, one shows the influence of load & temperature on the upper and lower member of a rib of centre span |
| AB-87 | TR-414 | Diagrams showing strains on various parts of centre span, drawings numbered 1-6 stapled together |

| <u>A.B. number</u> | <u>W.U. number</u> | <u>Description</u> |
|---------------------------|---------------------------|--|
| AB-88 | TR-414 | Diagrams showing strains on various parts of centre span, drawings numbered 1-6 stapled together |
| AB-89 | TR-414 | Diagrams showing strains on various parts of centre span, drawings numbered 1-6 stapled together |
| AB-90 | TR-414 | Diagrams showing strains on various parts of centre span, drawings numbered 1-6 stapled together |
| AB-91 | TR-414 | Diagrams showing strains on various parts of centre span, drawings numbered 1-6 stapled together |
| AB-92 | TR-414 | Diagrams showing strains on various parts of centre span, drawings numbered 1-6 stapled together |
| AB-93 | TR-430 | General diagram of the Illinois and St. Louis Bridge, showing entire scheme |