

PENNSSTATE



Guide to the Pennsylvania Bridges Collection, 1884-1915

Accession number: 1991-0012H
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The Pennsylvania State University
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Historical Collections and Labor Archives

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Descriptive Summary

- Title:** Pennsylvania Bridges Collection, 1884-1915
- Accession:** 1991-0012H
- Provenance:** From the collection of Professor Henry Jacoby at Cornell University, Dept. of Civil Engineering. Purchased from Charles Apfelbaum, 1991.
- Extent:** 140 black-and-white photographic prints; 15 black-and-white lantern slides
- Repository:** Pennsylvania State University, University Libraries, Special Collections Library

Administrative Information

Access

Unrestricted access.

Preferred Citation

Pennsylvania Bridges Collection, 1884-1915, Accession 1991-0012H, Historical Collections and Labor Archives, Special Collections Library, University Libraries, Pennsylvania State University.

Arrangement

The collection is organized into three series: I. Photographs; II. Technical Drawings; III. Lantern Slides.

Alternative Form Available

Twenty-three of the photographs and technical drawings have been digitized through the Making of America II Testbed Project.

Scope and Content

The collection contains photographs of railroad bridges in Pennsylvania, mostly in the Pittsburgh area, 1891-1915; photographs of technical drawings produced by the Pennsylvania State College, Civil Engineering Dept. depicting structural details and complete designs of modern railroad bridges, 1903-1904; and lantern slides of railroad bridges, 1884-ca. 1904.

The railroad bridges, built in the 19th century, were photographed between 1891-1915, and depict different types of bridges, structural details, transmission towers, and bridge construction. The bridges were used by at least seventeen different railroads including the Pennsylvania Railroad, Pittsburgh, Cincinnati, Chicago and St. Louis Railroad, Susquehanna and Buffalo Railroad, West Penn Railway, and the West Virginia and Ohio Railroad.

Photographers include H. B. Harmer, R. W. Johnston, F. H. Miller, C. K. Mohler , H. E. Platt, and Lewis R. Snow .

Index Terms

These materials are indexed under the following headings in the catalog of the Pennsylvania State University. Researchers wishing to find related materials should search the catalog under these index terms.

Corporate Subjects

Pennsylvania Railroad

Pittsburgh, Cincinnati, Chicago and St. Louis Railroad

Susquehanna and Buffalo Railroad

West Penn Railway

West Virginia and Ohio Railroad

Topical Subjects

Bridges--Design and construction

Bridges, Arched--Pennsylvania--Pictorial works

Bridges, Cantilever--Pennsylvania--Pictorial works

Bridges, Concrete--Pennsylvania--Pictorial works

Bridges, Stone--Pennsylvania--Pictorial works

Bridges, Suspension--Pennsylvania--Pictorial works

Bridges, Truss--Pennsylvania--Pictorial works

Railroad bridges--Pennsylvania--19th century--Pictorial works

Railroad bridges--Pennsylvania--20th century--Pictorial works

Viaducts--Pennsylvania--Pictorial works

Photographers

Harmer, H. B.

Johnston, R. W.

Miller, F. H.

Mohler, Charles Keagle, 1864-

Platt, H. E.

Snow, Lewis R.

Corporate Creators

Pennsylvania State College. Civil Engineering Dept.

Form/Genre Terms

Black-and-white photographs

Lantern slides

Container List

Photographs Series

Photographs, 1891-1915.

Box 1

[Item 5242]

Three-hinged arch bridge, Schenley Park, Pittsburgh, Pa., built 1898? Bridge crosses Panther Hollow. Photo by Steiner and Co.

Box 1

[Item 5243]

Two-hinged arch bridge, Forbes Street, Pittsburgh, Pa., built 1898. Street and Street Railroad bridge crosses Baltimore and Ohio Railroad. Photo by C. K. Mohler, 1906.

Box 1

[Item 5244]

Three-hinged arch, pin connected bridge, Schenley Park, Pittsburgh, Pa., built 1896. Bridge crosses Baltimore and Ohio Railroad. Photo by C. K. Mohler.

Box 1

[Item 5245]

Union bridge. Simple truss, wood portal, burr truss, "The Point," Pittsburgh, Pa., built circa 1865. Street and Street Railroad bridge crosses Allegheny River. Photo by C. K. Mohler, 1906.

Box 1

[Item 5246]

Glenwood Bridge. Penn. truss, Glenwood, Pittsburgh, Pa., built 1894. Bridge crosses Monongahela River. Photo by C. K. Mohler.

Box 1

[Item 5247]

16th Street Bridge. Covered timber burr truss, Pittsburgh, Pa., built 1866. Bridge crosses Allegheny River. Photo by C. K. Mohler, 1906.

Box 1

[Item 5248]

16th Street Bridge. Burr truss, Pittsburgh, Pa., built 1866. Bridge crosses Allegheny River. Photo by C. K. Mohler, 1906.

Box 1

[Item 5249]

Two ribbed plate girder steel arch bridge, Forbes Street, Pittsburgh, Pa., built 1901. Bridge crosses Fern Hollow, Nine Mile Run. Photo by C. K. Mohler, 1906.

Box 1

[Item 5250]

Skew whipple pin connected truss bridge, Ellsworth Avenue, Pittsburgh, Pa., built 1875. Bridge crosses Pennsylvania Railroad. Photo by C. K. Mohler, 1906.

Box 1

[Item 5251]

Glenwood Bridge. Modified pin connected Penn. truss, Pittsburgh, Pa., built 1894. Pittsburgh Railways bridge crosses Monongahela River. Photo by C. K. Mohler, 1906.

Box 1

[Item 5252]

Three-hinged arch, main span modified bowstring truss bridge, 22nd Street, Pittsburgh, Pa., built 1896. Pittsburgh Railways bridge crosses Monongahela River. Photo by C. K. Mohler, 1906.

Box 1

[Item 5253]

Point Bridge. Trussed eye bow suspension, "The Point," Pittsburgh, Pa., built 1876. Bridge crosses Monongahela River. Photo by C. K. Mohler, 1906.

Box 1

[Item 5254]

43rd Street Bridge. Enclosed wooden burr truss, Pittsburgh, Pa., built 1870. Bridge

crosses Allegheny River. Photo by C. K. Mohler, 1906.

Box 1

[Item 5255]

Whipple truss, cast posts bridge, Ellsworth Avenue, Pittsburgh, Pa., built 1875. Bridge crosses Pennsylvania Railroad. Photo by C. K. Mohler, 1906.

Box 1

[Item 5256]

Stone and brick arch, oblique bridge, Pittsburgh, Pa. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge.

Box 1

[Item 5257]

Pin, whipple truss, cast posts, wrought tension bridge. Main diagonal corroded by locomotive gases, Ellsworth Avenue, Pittsburgh, Pa., built 1875. Bridge crosses Pennsylvania Railroad. Photo by C. K. Mohler, 1906.

Box 1

[Item 5258]

Glenwood Bridge. Truss approach columns. Posts bent due to lack of transverse bracing, 2nd Street, Pittsburgh, Pa., built 1894. Street and Street Railroad bridge crosses 22nd Avenue, Baltimore and Ohio Railroad, Monongahela River. Photo by C. K. Mohler, 1906.

Box 1

[Item 5259]

48-inch steel water main. Corrosion and pitting produced by electrolysis, 28th Street and Smallman, Pittsburgh, Pa., built circa 1902. Photo by C. K. Mohler, 1906.

Box 1

[Item 5260]

Segmented stone arch, Schenley Park, Pittsburgh, Pa. Photo by C. K. Mohler, 1906.

Box 1

[Item 5261]

Continuous truss over three spans bridge, 30th Street, Pittsburgh, Pa. Bridge crosses Allegheny River.

Box 1

[Item 5262]

Whipple truss bridge, corroded by locomotive gases, Ellsworth Avenue, Pittsburgh, Pa., built 1875. Photo by C. K. Mohler, 1906.

Box 1

[Item 5263]

Simple truss bridge, Smithfield Street, Pittsburgh, Pa., built 1875. Bridge crosses Monongahela River.

Box 1

[Item 5264]

Pan Handle Bridge. Simple truss, Pittsburgh, Pa. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge crosses Monongahela River.

Box 1

[Item 5265]

Pan Handle Bridge. Simple truss, Pittsburgh, Pa. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge crosses Monongahela River.

Box 1

[Item 5266]

7th Street Bridge. Suspension, Pittsburgh, Pa. Bridge crosses Allegheny River. Photo by J. Beeby.

Box 1

[Item 5267]

Simple truss bridge, Pittsburgh, Pa. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge crosses Monongahela River.

Box 1

[Item 5268]

Corrosion of rivet heads at foot of column, before cleaning two rivets, 2nd Avenue, Pittsburgh, Pa. Bridge crosses 2nd Avenue. Photo by C. K. Mohler, 1906.

Box 1

[Item 5269]

Corrosion of rivet heads at foot of column, 2nd Avenue, Pittsburgh, Pa. Bridge crosses 2nd Avenue. Photo by C. K. Mohler, 1906.

Box 1

[Item 5270]

Simple truss bridge, Pittsburgh, Pa. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge crosses Monongahela River.

Box 1

[Item 5271]

Larimer Avenue Bridge, Pittsburgh, Pa. Photo 1913.

Box 1

[Item 5272]

Murray Avenue Bridge, Pittsburgh, Pa. Photo 1915.

Box 1

[Item 5273]

Murray Avenue Bridge, Pittsburgh, Pa. Photo 1915.

Box 1

[Item 5274]

Atherton Avenue Bridge, Pittsburgh, Pa. Bridge crosses Pennsylvania Railroad. Photo 1914.

Box 1

[Item 5276]

Cresheim Aqueduct. Stone arch, Wissahickon high-level sewer, Fairmount Park, Philadelphia, Pa., built 1892. Bridge crosses Cresheim Creek. Photo by Department of Public Works, 1892.

Box 1

[Item 5285]

Power house, [Pittsburgh, Pa.] West Penn Railway. Photo 1907.

Box 1

[Item 5286]

Reinforced concrete main transmission tower, [Pittsburgh, Pa.] West Penn Railway. Photo 1906.

Box 1

[Item 5294]

Reinforced concrete high tension transmission tower, [Pittsburgh, Pa.] West Penn Railway. Photo 1906.

Box 1

[Item 5288]

Reinforced concrete high tension transmission pole (main tower), [Pittsburgh, Pa.] West Penn Railway.

Box 1

[Item 5289]

Reinforced concrete transmission tower. Arrangement of machinery, [Pittsburgh, Pa.] West Penn Railway. Photo 1906.

Box 1

[Item 5290]

Power house, [Pittsburgh, Pa.] West Penn Railway. Photo 1907.

Box 1

[Item 5291]

Power house, [Pittsburgh, Pa.] West Penn Railway. Photo 1907.

Box 1

[Item 5292]

Power house, [Pittsburgh, Pa.] West Penn Railway. Photo 1907.

Box 1

[Item 5293]

Power house, [Pittsburgh, Pa.] West Penn Railway. Photo 1907.

Box 1

[Item 5295]

Reinforced concrete main transmission tower, [Pittsburgh, Pa.] West Penn Railway. Photo 1906.

Box 1

[Item 5296]

Reinforced concrete main transmission tower. Footing details, [Pittsburgh, Pa.] West Penn Railway. Photo 1906.

Box 1

[Item 5297]

Viaduct pedestal, Trafford City, [Pa.], built 1905? Bridge crosses Turtle Creek. Photo by C. K. Mohler, 1906.

Box 1

[Item 5298]

Advertisement for hydraulic testing machine, Phoenixville Iron Company, Phoenixville, [Pa.]

Box 1

[Item 5299]

Plate girder viaduct, west of Monessen Ferry, [Pa.], built circa 1903. Pittsburgh Railways. Photo by C. K. Mohler, 1906.

Box 1

[Item 5300]

Riveted Warren truss, near 5th Avenue, McKeesport, Pa., built circa 1903. Street and Street Railroad bridge crosses Pittsburgh and Lake Erie Railroad. Photo by C. K. Mohler, 1906.

Box 1

[Item 5301]

Simple truss bridge, Homestead, Pa., built 1897. Bridge crosses Monongahela River.

Box 1

[Item 5302]

Simple truss bridge, Homestead, Pa., built 1897. Bridge crosses Monongahela River.

Box 1

[Item 5303]

Lowries Run Viaduct. Warren truss viaduct, west of Allegheny, Pa., built 1906. Pittsburgh Railways bridge crosses Lowries Run. Photo by C. K. Mohler, 1906.

Box 1

[Item 5304]

Ohio River Bridge Pier No. 3. open caisson, Beaver, Pa. Pittsburgh and Lake Erie Railroad bridge crosses Ohio River. Photo 1908.

Box 1

[Item 5305]

Simple span, pin bridge, H Street, Oakmont, Pa., built 1910? Bridge crosses Allegheny River. Photo by R. W. Johnston.

Box 1

[Item 5306]

Simple span, pin bridge, H Street, Oakmont, Pa., built 1910? Bridge crosses Allegheny River. Photo by R. W. Johnston.

Box 1

[Item 5307]

Deck, riveted, Warren truss bridge, Airbrake Avenue, Wilmerding, Pa., built circa 1902. Street and Street Railroad, D Track. Photo by C. K. Mohler, 1906.

Box 1

[Item 5308]

Highway bridge, Troy, Pa.

Box 1

[Item 5309]

Deck pin, Pratt truss bridge. Lower chord bent by flood drift, Heidelberg, Pa., built circa 1897. Pittsburgh Railways bridge crosses Chartiers Creek. Photo by C. K. Mohler, 1906.

Box 1

[Item 5310]

Deck Pratt truss bridge. Damage to shoe pedestal by flood drift striking lower chord of span, Heidelberg, Pa., built circa 1897. Pittsburgh Railways bridge crosses Chartiers Creek. Photo by C. K. Mohler, 1906.

Box 1

[Item 5311]

Suspension bridge, Bethlehem, Pa. Bridge crosses Lehigh River.

Box 1

[Item 5312]

Bridge 8024. Simple truss, Township Road, Altoona, Pa., built 1902. Bridge crosses Pennsylvania Railroad. Photo by Pennsylvania Railroad.

Box 1

[Item 5313]

Bridge 8024. Simple truss, Township Road, Altoona, Pa., built 1902. Bridge crosses Pennsylvania Railroad.

Box 1

[Item 5314]

Bridge 8024. Simple truss, Township Road, Altoona, Pa., built 1902. Bridge crosses Pennsylvania Railroad.

Box 1

[Item 5315]

Panther Creek Viaduct, Pa. Wilkes Barre and Eastern Railroad bridge crosses Panther Creek. Photo by Pennsylvania Railroad.

Box 1

[Item 5316]

Port Perry Bridge. Simple truss, Port Perry, Pa., built circa 1877. Pennsylvania Railroad bridge crosses Monongahela River.

Box 1

[Item 5317]

Harrison Building, 15th and Market, Philadelphia, Pa.

Box 1

[Item 5318]

Simple truss bridge, Manayunk, Pa., built 1845. Catawissa Railroad bridge crosses a small stream south of Flat Rock Tunnel.

Box 1

[Item 5319]

Simple truss bridge, Manayunk, Pa., built 1845. Catawissa Railroad bridge crosses a small stream south of Flat Rock Tunnel.

Box 3

[Item 5217]

Viaduct, Philadelphia and Reading Railroad bridge crosses Dark Run. Photo by H. P. Harmen, Philadelphia.

Box 3

[Item 5218]

Simple truss bridge, Philadelphia, Pa. Bridge crosses Schuylkill River. Photo by Lewis R. Snow, Dept. of Public Works.

Box 3

[Item 5219]

Simple truss bridge, Philadelphia, Pa. Bridge crosses Schuylkill River. Photo by Lewis R. Snow, Dept. of Public Works.

Box 3

[Item 5220]

Simple truss bridge, riveted, South Bethlehem, Pa., built 1908. Philadelphia and Reading Railroad bridge.

Box 3

[Item 5221]

Simple truss bridge. Photo by H. E. Platt, Pittsburgh, Pa.

Box 3

[Item 5222]

Simple truss bridge and viaduct, Shepps Dam Crossing, Pa. Reading Railroad bridge. Photo by H. B. Harmen.

Box 3

[Item 5223]

Reinforced concrete arch, Meadow Street, Pittsburgh, Pa. Photo, 1910.

Box 3

[Item 5224]

Bridge 7, simple truss, PW and K Railroad, Pittsburgh Division, Pittsburgh (?), Pa. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge. Photo by Pittsburgh, Cincinnati, Chicago and St. Louis Railroad.

Box 3

[Item 5225]

Bridge 7, simple truss, PW and K Railroad, Pittsburgh Division, Pittsburgh (?), Pa. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge. Photo by Pittsburgh, Cincinnati, Chicago and St. Louis Railroad.

Box 3

[Item 5226]

Bridge 7, simple truss, PW and K Railroad, Pittsburgh Division, a duplicate of Bridge 15, Indianapolis Division, Pittsburgh (?), Pa. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge. Photo by Pittsburgh, Cincinnati, Chicago and St. Louis Railroad.

Box 3

[Item 5227]

Simple truss bridge, Pittsburgh, Pa. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge crosses Monongahela River. Photo by Pittsburgh, Cincinnati, Chicago and St. Louis Railroad.

Box 3

[Item 5228]

Simple truss bridge, span not flared, Pittsburgh, Pa., built 1903. Pittsburgh, Ft. Wayne and Chicago Railroad bridge crosses Allegheny River. Photo by Pittsburgh, Ft. Wayne and Chicago Railroad.

Box 3

[Item 5229]

Three hinged arch bridge, Pittsburgh, Pa. Bridge crosses Nine Mile Run.

Box 3

[Item 5230]

Liberty Street, Pittsburgh, Pa. Pennsylvania Railroad bridge. Photo by Steiner and Co., Pittsburgh.

Box 3

[Item 5231]

Pittsburgh, Pa., built 1892. Photo by Pennsylvania Line West.

Box 3

[Item 5232]

Three-hinged arch bridge, Pittsburgh, Pa. Bridge crosses Nine Mile Run.

Box 3

[Item 5233]

Simple truss bridge, Pittsburgh, Pa., built 1865. Pittsburgh, Cincinnati, Chicago and St. Louis Railroad bridge crosses Monongahela River. Photo by Pennsylvania Line West, 1903.

Box 3

[Item 5234]

Test chord, Pittsburgh, Pa. Photo by Pennsylvania Line West, 1893.

Box 3

[Item 5235]

Test chord, Pittsburgh, Pa. Photo by Pennsylvania Line West, 1892.

Box 3

[Item 5236]

Test chord, Pittsburgh, Pa. Photo by Pennsylvania Line West, 1892.

Box 3

[Item 5237]

Test chord, Pittsburgh, Pa. Photo by Pennsylvania Line West, 1893.

Box 3

[Item 5238]

Simple truss bridge, Pittsburgh, Pa., built 1903. Pittsburgh, Ft. Wayne and Chicago Railroad bridge crosses Allegheny River. Photo by Pennsylvania Line West.

Box 3

[Item 5239]

Test chord, Pittsburgh, Pa. Photo by Pennsylvania Line West, 1891.

Box 3

[Item 5240]

Three-hinged arch bridge, Pittsburgh, Pa. Bridge crosses Nine Mile Run. Photo by F. H. Miller.

Box 3

[Item 5241]

Simple truss bridge, Pittsburgh, Pa., built 1903. Pittsburgh, Ft. Wayne and Chicago Railroad bridge crosses Allegheny River. Photo by Pittsburgh, Ft. Wayne and Chicago Railroad.

Box 3

[Item 5275]

Simple truss bridge, Port Perry, Pa., built 1903. Pennsylvania Railroad bridge crosses Monongahela River.

Box 3

[Item 5277]

Cresheim Aqueduct. Stone arch, Wissahickon high-level sewer, Fairmount Park, Philadelphia, Pa., built 1892. Bridge crosses Cresheim Creek. Photo by Dept. of Public Works, 1892.

Box 3

[Item 5278]

Cantilever bridge, 62nd Street, Philadelphia, Pa. Bridge crosses Philadelphia, Baltimore and Washington Railroad. Photo by Bureau of Surveys.

Box 3

[Item 5279]

Swing and simple truss bridge, Gray's Ferry, Philadelphia, Pa. Bridge crosses Schuylkill River. Photo by Lewis R. Snow, Dept. of Public Works, 1898.

Box 3

[Item 5280]

Simple truss bridge, Easton, Pa., built 1903. Central Railroad Company of New Jersey bridge crosses Lehigh River. Photo by Wint, Allentown, Pa.

Box 3

[Item 5281]

Plate girder. Original masonry is entirely encased in concrete, new superstructure, one mile north of Clearfield Junction, Pa., built 1902. New York Central and Hudson River Railroad. Photo 1904.

Box 3

[Item 5282]

Simple truss bridge, South Bethlehem, Pa., built 1908. Central Railroad Company of New Jersey bridge crosses Lehigh River.

Box 3

[Item 5283]

Old Ohio River Bridge. Simple truss, pin. Replaced by cantilever bridge on new location. Removed August 1910, Beaver, Pa., built 1889. Pittsburgh and Lake Erie Railroad bridge crosses Ohio River. Photo by Vandivort, 1910.

Box 3

[Item 5284]

Simple truss bridge, Allentown, Pa., built 1903. Central Railroad Company of New Jersey bridge crosses Lehigh River. Photo by Wint, Allentown, Pa.

Technical Drawings Series

Technical Drawings, 1903-1904.

Box 3

[Item 5320]

Technical drawing: Details, int. posts and hangers, thro. pin connected railroad bridge. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 3

[Item 5321]

Technical drawing: Details, center diagonals and posts, thro. pin connected railroad bridge. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 3

[Item 5322]

Technical drawing: Complete design of a single track thro. plate girder span. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 3

[Item 5323]

Technical drawing: Complete design of a modern railroad bridge. General drawing for a thro. pin connected fixed span. Photo by Pennsylvania State College, Civil Engineering Dept., 1903.

Box 3

[Item 5324]

Technical drawing: Design of a double track petit truss railroad bridge. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5325]

Technical drawing: Complete design of a modern railroad bridge. Diagram of stresses and sections. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5326]

Technical drawing: Details of turning machinery, end lifting machinery, rail lift, latch, etc. for deck plate girder, railroad draw span. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5327]

Technical drawing: Details of shoes and roller nests for three single track thro. pin connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5328]

Technical drawing: Details of int. posts and hangers for three thro. single track pin

connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5329]

Technical drawing: Design of a double track petit truss railroad bridge. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5330]

Technical drawing: Design of thro. single track riveted railroad bridge. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5331]

Technical drawing: Complete design of a modern railroad bridge. Details of truss and end lifting machinery, single track pin connected railroad span. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5332]

Technical drawing: Complete design of a modern railroad bridge. Details of central panel for single track thro. pin connected draw span. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5333]

Technical drawing: Design of a thro. pin connected railroad bridge. General drawing. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5334]

Technical drawing: Detail of top lateral and transverse bracing for single track thro. pin connected railroad bridge for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5335]

Technical drawing: Details of deck plate girder span, standard railroad bridge. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5336]

Technical drawing: Complete design of a modern railroad bridge. Drum and operating machinery for one single track thro. pin connected draw span. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5337]

Technical drawing: Details of floor beams and end struts for three thro. single track pin connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5338]

Technical drawing: Erection diagram for three thro. single track pin connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5339]

Technical drawing: Details of intermediate stringers for three thro. single track pin connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5340]

Technical drawing: Complete design of a modern railroad bridge. Diagram of stresses and sections. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5341]

Technical drawing: Complete design of a modern railroad bridge. Abutments. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5342]

Technical drawing: Complete design of a modern railroad bridge. General drawing. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5343]

Technical drawing: Details of top chrd for three single track thro. pin connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5344]

Technical drawing: Complete design of a modern railroad bridge. Piers. Photo by Pennsylvania State College, Civil Engineering Dept., 1903.

Box 1

[Item 5345]

Technical drawing: Four bridge drawings. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5346]

Technical drawing: Details of one deck plate girder span, standard railroad bridge. Photo by Pennsylvania State College, Civil Engineering Dept., 1903.

Box 1

[Item 5347]

Technical drawing: Details of top chord for three single track thro. pin connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5348]

Technical drawing: Details of cast pedestals for three single track thro. pin connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5349]

Technical drawing: Details of portal struts for three single track pin connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Box 1

[Item 5350]

Technical drawing: Complete design of a modern railroad bridge. Diagram of stresses and sections. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5351]

Technical drawing: Details of end posts for three single track thro. pin connected railroad spans for Susquehanna & Buffalo Railroad. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5352]

Technical drawing: Complete design for a modern railroad bridge. General drawing for two thro. pin connected fixed spans. Photo by Pennsylvania State College, Civil Engineering Dept., 1903.

Box 1

[Item 5353]

Technical drawing: Complete design of modern railroad bridge. Drum and operating machinery for one single track thro. pin connected draw span. Photo by Pennsylvania State College, Civil Engineering Dept.

Box 1

[Item 5354]

Technical drawing: Complete design of a modern railroad bridge. Drum and operating machinery for one single track thro. pin connected draw span. Photo by Pennsylvania State College, Civil Engineering Dept., 1903?

Box 1

[Item 5355]

Technical drawing: Complete design of a modern railroad bridge. Abutments. Photo by Pennsylvania State College, Civil Engineering Dept., 1903.

Box 1

[Item 5356]

Technical drawing: Details of center bearing, balance wheel girders, and transverse girders for one deck plate girder railroad span. Photo by Pennsylvania State College, Civil Engineering Dept., 1904.

Lantern Slides Series

Lantern Slides, 1884-circa 1904.

Box 2

[Item 5356]

Lantern slide: Central Railroad Company of New Jersey bridge 21, South Bethlehem, Pa. Central Railroad Company of New Jersey bridge crosses Lehigh River.

Box 2

[Item 5357]

Lantern slide: Highway bridge, Homestead, Pa. Bridge crosses Monongahela River.

Box 2

[Item 5358]

Lantern slide: Hydraulic testing machine, capacity 2,160,000 lbs. Tension and compression tests. Phoenixville, Pa.

Box 2

[Item 5359]

Lantern slide: Pan Handle Bridge, Pittsburgh, Pa. Pittsburgh, Cincinnati, Chicago & St. Louis Railroad bridge crosses Monongahela River.

Box 2

[Item 5360]

Lantern slide: View from arsenal tower of completed bridge, Harrisburg, Pa. (?) Photo 1899?

Box 2

[Item 5361]

Lantern slide: 52nd Street, Philadelphia, Pa. Pennsylvania Railroad bridge crosses freight yard.

Box 2

[Item 5362]

Lantern slide: Truss #2, Lancaster, Pa. Photo by Ace Photo Service, Inc., 1884.

Box 2

[Item 5363]

Lantern slide: Bridge 8024, Altoona, Pa. Pennsylvania Railroad bridge, built 1902.

Box 2

[Item 5364]

Lantern slide: 398 test cord from no. 18T, Pittsburgh, Pa. West Virginia & Ohio Railroad bridge.

Box 2

[Item 5365]

Lantern slide: 398 test cord from no. 18T, Pittsburgh, Pa. West Virginia & Ohio Railroad bridge.

Box 2

[Item 5366]

Lantern slide: 468 test cord from no. 21, Pittsburgh, Pa. West Virginia & Ohio Railroad bridge.

Box 2

[Item 5367]

Lantern slide: 405 test cord from no. 1T, Pittsburgh, Pa. West Virginia & Ohio Railroad bridge.

Box 2

[Item 5368]

Lantern slide: 401 test cord from no. 18T, Pittsburgh, Pa. West Virginia & Ohio Railroad bridge.

Box 2

[Item 5369]

Lantern slide: Wabash Railroad bridge, Pittsburgh, Pa., completed 1904. Wabash Railroad bridge crosses Monongahela River.

Box 2

[Item 5370]

Lantern slide: Paint Bridge, suspension, stiff trusses, Pittsburgh, Pa. Bridge crosses highway.