

Wax Lake Bridge Construction Photographs 1940-1941

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Abstract:

A collection of construction photographs of a steel railroad bridge erected on a dry flat plain which eventually became a Mississippi River floodway channel. The channel beneath the bridge elements was dredged after the bridge was constructed. This construction procedure was in reverse of the usual building process. Construction by Bethlehem Steel began in late 1940 and completed in early 1941. The reverse building process was unusual at the time. The bridge is also known as the Wax Lake Outlet Railway Bridge. During construction it was also referred to as the Calumet Bridge.

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Creator:

Bethlehem Steel Corporation.
The Serice Studio, Franklin, LA.

Title:

Wax Lake Bridge construction photographs, 1940-1941

Restrictions to Access:

This collection is open for research.

Preferred Citation:

[Identification of item], Wax Lake Bridge construction photographs, 1940-1941, Special Collections, Linderman Library, Lehigh University, Bethlehem, PA

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Historical Note:

The Wax Lake Outlet Railway Bridge, located near Calumet, Louisiana, was a unique railroad bridge construction job. The bridge was built before the canal that it crosses was dug, in reverse of the usual construction procedure. The 1340-ft. steel railroad bridge was built across a level stretch of dry land as this collection of photographs indicates. Later, when the bridge was finished, a canal was dug under the structure. The canal, a part of the Morganza Floodway, carries Mississippi River flood waters to the Gulf of Mexico. The Wax Lake Bridge was built to serve the Texas and New Orleans Railroad Company (a subsidiary of the Southern Pacific Company). Modjeski and Masters, bridge engineers, did the design and construction supervision. Bethlehem Steel Company manufactured the structural members and erected the bridge. The design was completed in 1939 and construction occurred from late 1940 to early 1941. The bridge won an American Institute of Steel Construction Honorable Mention, Class B, for bridges in 1941. The channel was dug by the McWilliams Dredging Co.

Reference:

Engineering News-Record, July 17, 1941, p. 105.

Scope and Content Note:

The collection consists of 104 black and white photographs, mostly 4" x 5", but some as large as 8" x 10" and as small as 2 ¾" x 4 ½," originally mounted in a photo album but now stored in Mylar sleeves. Most photos were coded with an alpha-numeric number and date written on the album page as well as on the back of the photograph. Many of the photos are marked on the back "The Serice Studio Franklin, La." The time span noted for the photographs is from December 31, 1940 to March 20, 1941. The subject matter is construction photographs of railroad bridge construction built with Bethlehem Steel Co. structural steel members across Wax Lake, St. Mary's Parish, near Calumet, Louisiana.

Organization of the Content:

The collection of 104 photographs is arranged mostly chronologically beginning December 31, 1940 and ending March 20, 1941.

Indexing Terms

Corporate Subjects:

Bethlehem Steel Company.
Calumet Bridge.
Modjeski and Masters Engineers.
Morganza Floodway.
Texas and New Orleans Railroad.
Wax Lake Bridge.
Wax Lake Outlet Railway Bridge.
The Serice Studio, Franklin, La.

Topical subjects:

Flood control--Mississippi River.
Railroad bridges--Louisiana--Construction.

Detailed Description of Collection:

0009.01 B1 Bethlehem Steel Co. Wax Lake Bridge – CW 3935, P. O. Box 222, Franklin, - La. December 31, 1940 (notation stamped on back of photo along with photographer name: The Serice Studio Franklin, La.), ≈ 4" x 5" black and white photo (showing a dirt road curving from left to right approaching a steel through bridge on the horizon)

0009.02 B2 Bethlehem Steel Co. (same notation as previous) ≈ 4" x 5" black and white photo (concrete foundation in foreground of construction site, clump of trees in background and crane)

0009.03 B3 Bethlehem Steel Co. (same notation as previous) ≈ 4" x 5" black and white photo (steel railroad bridge span being set in place with a crane on an embankment, rumble-seated car and a McWilliams Dredging Co. pickup truck at side of embankment)

0009.04 B4 (same notation as previous) (same size as previous, photo of rough surface construction site with concrete pier and foundation in middle of photo, bare tree on horizon)

0009.05 B5 (same notation as previous) (same size as previous, photo shows construction site with large steel structural beams with "BETHLEHEM" stenciled on beam web, "B.S. Co. Erection Car" stenciled on large crane cab with extended crane boom, four men around concrete pier, four autos on embankment)

0009.06 S5 (same notation as previous) dated January 8, 1941, 2 ¾" x 4 ½" black and white photo (Pennsylvania Rail Road insignia on a railroad car supporting a huge steel structural member, stacks of steel girders piled on side, two men beneath steel structural member, flat landscape)

0009.07 S6 (same notation as previous) (same sizes as previous, construction site, crane hook suspending a huge steel structural member, "BETHL" stenciled on beam web attached to concrete pier, above pier is railroad flat car with another huge structural member, eight men on site, group of autos parked on embankment)

0009.08 S1 (same notation as previous) dated January 11, 1941, (same size, rough clods of dirt on site with wooden cribbing in foreground, body of water left side of photo with concrete pier protruding, on horizon is a group of foliated trees and a crane boom)

0009.09 S2 (same notation as previous, same size, rough clods on site with close up of wooden crib located near body of water with concrete pier protruding, barge in distance and second concrete pier)

0009.10 S7 (same notation as previous) dated January 8, 1941, (same size as previous, eight men wearing hard hats working on rollers beneath huge riveted structural member supported on foundation, erection car with "HEM STEEL" stenciled on side)

0009.11 S8 (same notation as previous, same size, same view but different position of men working on rollers)

0009.12 B6 (same notation as previous), dated January 16, 1941, $\approx 4'' \times 5''$ black and white photo, (center of photo is B.S. Co. Erection Car No. 48 with crane hook holding steel lattice beam, eight men visible on erection site working around steel beam support for railroad car, surveyor's transit visible on left)

0009.13 S4 (same notation as previous), dated January 11, 1941, $2 \frac{3}{4}'' \times 4 \frac{1}{2}''$ (black and white photo, riveted steel beam floor support beams with "BETHLEHEM" stenciled on web, crane cab in distance)

0009.14 S3 (same notation as previous) (same size, foreground shows water with reflection of steel superstructure, bridge superstructure propped up on wooden supports, two concrete piers visible)

0009.15 B7 (same notation as previous), dated January 16, 1941, $\approx 4'' \times 5''$ (black and white photo of riveted steel member supported by crane hook suspended from crane boom, five men working on site beneath suspended member)

0009.16 B8 (same notation as previous) (same size, close up of suspended structural member, seven men visible around suspended structural member)

0009.17 B9 (same notation as previous), dated January 20, 1941, (same size, close up of six men working on wood cribbing and steel support beneath and in front of erection car)

0009.18 B10 (same notation as previous) (same size, overview of erection car with one suspended structural member, in foreground are piles sticking out of soil, five men visible working around erection car)

0009.19 B11 (same notation as previous) (same size, a more distant view but two structural members visible)

0009.20 B12 (same notation as previous) (same size, same as previous but closer showing three structural members being readied for erection)

0009.21 B13 (same notation) (same size, close up view of two structural members being positioned for joining, "Baltimore & Ohio" stenciled on a railroad car behind railroad car supporting the erection car with "Bethlehem Steel Company" stenciled on side, one man beneath the structural joint guiding a cable)

0009.22 S9 (same notation), $2 \frac{3}{4}'' \times 4 \frac{1}{2}''$ (black and white photograph), January 20, 1941, (long overview of riveted structural member in place beneath

erection car, two men at a finished joint, three autos and railroad cars visible in distant left)

0009.23 S10 (same notation) (same size as previous, close up view of two men working on the jointure of two steel structural members, “Bethlehem Steel Company” stenciled on side of car above the joint)

0009.24 (no number), (same notation, same size as previous, four men wearing hard hats standing on platform on lumber piling supporting an embankment in water)

0009.25 S11 (same notation) (same size, in foreground two men standing on platform supported by lumber pilings, in background large structural steel member, flat dirt landscape)

0009.26 S12 (same notation) (same size), January 22, 1941, (in foreground concrete foundation, four men working to line up steel beam on concrete foundation, in background erection car and crane)

0009.27 B14 (same notation), $\approx 4 \times 5 \frac{1}{2}$ ” (black and white photograph), January 22, 1941, (overview of erection car and crane hoisting steel beam onto concrete foundation, two other cranes visible in background, six men visible guiding beam into place)

0009.28 B15 (same notation) (same as previous, view of steel beam suspended between land and concrete foundation in water, group of men on foundation)

0009.29 B16 (same notation) (same as previous, close up view of structural member suspended in a hoist, two men in hard hats guiding structural member onto concrete foundation pier)

0009.30 S13 (same notation), $2 \frac{3}{4}$ ” x $4 \frac{1}{2}$ ” (black and white photograph), January 22, 1941, (similar view as previous except more men visible on steel beam and leafy trees at right side of photo)

0009.31 S14 (same notation) (same size as previous, close up of group of men guiding a beam into place on foundation pier, front view of erection cab and man with felt hat in front of erection cab observing group)

0009.32 B17 (same notation) $\approx 4 \times 5 \frac{1}{2}$ ” (black and white photograph), January 27, 1941, (in foreground sign “DANGER KEEP AWAY AND AVOID

INJURY,” erection crane behind bridge superstructure supports that are beginning to be put in place, seven men visible)

0009.33 B18 (same notation) (same size as previous, in foreground six vehicles parked by beam with “Bethlehem” stenciled on side, above is erection car with crane boom hoisting bridge superstructure beams into place)

0009.34 B19 (same notation, same size as previous, detailed view of connections of steel superstructure to floor beam, erection cab and crane at right, in foreground sign “DANGER KEEP AWAY AND AVOID INJURY”)

0009.35 B20 (same notation) (same size), January 28, 1941, (clouds of steam coming out of erection car, four autos parked by beam with Bethlehem stenciled on side, part of superstructure in place on both side of erection car)

0009.36 B21 (same notation, same size), January 29, 1941, (four autos parked beneath bridge, reeds in foreground, half of superstructure erected, erection car and gondola car in center of bridge with crane boom upright, puff of steam coming from erection car)

0009.37 B24 (same notation) (same size, half erected bridge superstructure, train locomotive in center of superstructure, railroad car with “HEM” stenciled on side partially visible in left foreground in front of water tank tower, sign “DANGER KEEP AWAY AND AVOID INJURY” visible at right side)

0009.38 B22 (same notation) (same size, head on view through bridge superstructure onto back of railroad car B.S. CO. Erection Car No. 48, puffs of steam visible, small track car with barrel in foreground, flat landscape)

0009.39 B23 (same notation) (same size, head on view of front of erection car with crane boom in background framed by bridge superstructure, water tank tower at left side, leafy trees on right in background)

0009.40 B25 (same notation) (same size), January 30, 1941, (close up side view of top chord being placed in bridge superstructure, erection car and crane boom and gondola car visible through side braces)

0009.41 B26 (same notation) (same size, wide view of side of bridge superstructure, erection car and crane hoisting a top brace, in foreground flat road and rough grasses)

0009.42 (same notation) (same size), January 31, 1941, (angled view of through bridge superstructure top connection lattice visible, steam puff erupting from erection car, rough dirt surface in foreground at left is water)

0009.43 B28 (same notation, same size, closer angled view of bridge top chord suspended into place)

0009.44 B29 Bethlehem Steel Co. Calumet Bridge – CW 3935, P. O. Box 222, Franklin, La. - February 9, 1941 (printed on back of photograph), $\approx 4'' \times 5 \frac{1}{2}''$ (black and white photograph, tight view of steel girder with “THLEHEM” stenciled on side, a completed through steel span, crane booms at far end of span, left side of span is water tower and a lighter weight steel span)

0009.45 S16 (same notation as previous) , January 30, 1941, $2 \frac{3}{4}'' \times 4 \frac{1}{2}''$ (black and white photograph, “S16” visible on photo in lower right corner shows track bed leading onto incomplete steel span, steam puff around erection car and crane boom in upright position, flat country side impressive in background)

0009.46 S15 (same notation as previous), January 22, 1941, (same size, side view of steam locomotive 46 - “Southern Pacific Line” on coal tender, “E.J. & E.” stenciled on gondola car behind tender, railroad cars are on heavy structural steel beam railroad track, at left is a large steel girder with “ETHLEHEM” stenciled on side, clods of dirt in foreground)

0009.47 B30 (same notation as previous), February 9, 1941, $\approx 4'' \times 5 \frac{1}{2}''$ (black and white photograph, angled view of steel span erected over flat dirt site, some barrels scattered on site, crane boom in far distance, some trees in distance)

0009.48 B31 (same notation as previous), February 11, 1941, (same size, view of four men wearing hard hats setting a heavy structural member into place, erection car with crane upright suspending the steel member, in background is a finished span, at right side of erection car is the lighter weight steel span)

0009.49 B32 (same notation as previous) (same size, completed bridge span in left background, lighter weight partial span center background, in foreground erection car with large structural member in sling hanging from crane above five men wearing hard hats and one without, poles scattered about, lower left corner man wearing felt hat standing by auto, some trees in distance)

0009.50 B33 (same notation as previous, same size, almost same view as previous except man with felt hat is in front of auto, three men wearing hard hats away from beam)

0009.51 S17 (same notation as previous), 2 ¾" x 4 ½" (black and white, pile driver, concrete foundation in foreground, two men standing on foundation with plank leading across water around foundation, barge in water in background)

0009.52 S18 (same notation as previous) (same size, part of concrete foundation visible below ground, mound of dirt in front left, spans visible in center of photo, tree at left, pile driving men holding pile in place, surveyor's transit on foundation)

0009.53 S19 (same notation as previous) (same size, pile driver in trench driving pile, mound of dirt at right in front of two buildings beneath trees)

0009.54 S20 (same notation as previous), February 12, 1941, (same size, below ground view of capped piles, concrete foundation, two wooden buildings beneath trees, mound of dirt at right, pile driver in distance)

0009.55 S21 (same notation as previous, same size as previous, below ground view of piles and dirt mound in foreground, in background is front view of steel beams supported on cribbing with erector car and lightweight half arch bridge in distance)

0009.56 S22 (same notation) (same size as previous, foreground shows muddy water, embankment with exposed roots in front of lightweight arch bridge, six men in two groups standing beneath bridge span, "S22" in lower right corner)

0009.57 S23 (same notation as previous), February 14, 1941 (same size as previous, left side of photo shows rivet pattern on beam as it extends toward center of photo, right side shows dirt mounds, a wooden shack and auto beneath leafy trees)

0009.58 S24 (same notation as previous, same size as previous, close up of wooden cribbing supporting steel beams on left side of photos, right side shows dirt mounds, in distance are construction machines)

0009.59 Bethlehem Steel Co., Calumet Bridge – CW 3935, P. O. Box 222, Franklin, - La., February 12, 1941, Majestic Photo Finishers Beaumont, Texas Member Master Photo Finisher of America (615 stamped in blue on back), 3 ¼" x 5" (black and white photo framed in a delicate scroll, image of group of six men standing on rough site, in background is lightweight arch bridge with erector car at right side)

0009.60 (same notation as previous) February 11, 1941 (same size, "612" stamped in blue on back, at left stands a man between crane boom and pile being

driven in rough dirt, background is body of water and far distance a shoreline of trees)

0009.61 (same as previous, in foreground right is part of concrete foundation pier, at left is pile driver above rough cloddy soil, in distance is body of water and shoreline of trees)

0009.62 (No notation, photographer, or date), 2 3/4" x 4 1/2" (black and white photo, surveyor's transit in center of photo beneath railroad bridge, gondola car on bridge)

0009.63 B35 Bethlehem Steel Co. Calumet Bridge – CW 3935, P. O. Box 222 Franklin, - La. February 13, 1941, 3 3/4" x 4 3/4" (black and white photo, no photographer noted, four men standing on concrete pier guiding steel hanging in sling, one man leaning over side of steel riveted beam, one man seated on riveted beam on concrete pier, in distance body of water and shoreline)

0009.64 B36 (same notation as previous, concrete pier in foreground, steel beams bridging ground to pier supporting erection car, crane with loop suspended in mid air, nine men on pier, heavy steel railroad bridge and light frame bridge in background along with waterway and barge, far distance shoreline of trees)

0009.65 B37 (same as previous, concrete pier in foreground, water surrounds pier which has steel beams suspended from ground to pier supporting heavy steel structural members and erection crane with structural member in sling, man standing beneath end of structural member positioning it)

0009.66 B38 (same as previous, close up of concrete pier, ten men standing on pier positioning steel structural member)

0009.67 B34 (same as previous), February 11, 1941, (close-up of heavy steel railroad bridge, men on top of arch, light frame bridge in background)

0009.68 B39 (same as previous) February 18, 1941 (wide angle view of steel beams attached to concrete pier, two men sitting beside steel beams, erector car with crane in background in front of completed heavy arch, incomplete light frame arch bridge in background)

0009.69 B40 (same as previous, frontal view of tracks and trestle looking toward finished arch, leafy trees and shack at left, light framed bridge at right)

0009.70 B41 (same as previous), February 19, 1941, (essentially same view as B24/0009.37 except no water tower visible)

0009.71 S25 (same as previous), February 14, 1941, 2 ¾" x 4 ½" (close up of man driving rivets into a connection, erection car visible in upper right, "S25" visible in lower right)

0009.72 S26 (same as previous, view of men riveting connection, erection car visible in middle of photo, "BETHLEHEM" stenciled on beam)

0009.73 (no number, same notation), 3 ¼" x 5" with scroll border (on back printed in blue ink is number 615, image is of three men working on fastening a connection plate, one man looking at camera standing next to barrel)

0009.74 (same as previous, image of three men standing, one holding notebook, two men "ghostly" image superimposed standing in front of two arched bridge, grove of leafy trees at right behind mound of dirt)

0009.75 S27 (no notation), 2 ¾" x 4 ½" black and white photo, "March 6, 1941" handwritten on back of photo, group of six men in center of photo, pickup truck at right on embankment, at left is wooden cribbing)

0009.76 (no number, no notation, same size, no date, blurred image in foreground and to right but some wooden cribbing visible, two hard hats above blurred image, in background large structural steel girder in front of group of trees).

0009.77 S28 "March 6, 1941" handwritten on back of photo (no notation, six men standing in center between two wooden cribbing set-ups, in background is top of arch, pickup truck on embankment, large structural steel girder at right by tree)

0009.78 S29 "March 11, 1941" handwritten on back of photo (no notation, gondola car with large structural steel girder in center of photo, man in dark suit sitting on barrel beneath railroad car, background light arch bridge visible)

0009.79 B42 Bethlehem Steel Co., Calumet Bridge – CW 3935, P.O. Box 222, Franklin, - La. March 10, 1941, ≈ 4" x 5" (black and white photo similar to 0009.66 except not as close)

0009.80 B43 (same as previous except real close-up of workers inserting pin into structural joint)

0009.81 B44 (same notation as previous), March 11, 1941, (same size, "BETHLEHEM" stenciled on large steel girder, two men in foreground, two men in background guiding girder suspended on rope hanging from erector crane, light frame steel arch bridge visible behind girder)

0009.82 B45 (same notation, date, size as previous, different angled view of large steel girder position on concrete foundation, erector car at left, another crane at right, leafy tree in center)

0009.83 B46 (same notation and size as previous), March 21, 1941, (close up view of partially completed heavy structural steel railway bridge, steam coming from erector car with upright crane, two striped cautionary barriers at base of bridge)

0009.84 B47 (same notation and size as previous), March 25, 1941, (“Mar 27 1941” crossed out on back, three arches of railway bridge visible, four striped cautionary barriers visible beneath bridge, “BETHLEH” stenciled on girder, erector car with steam cloud and gondola)

0009.85 S30 “March 27, 1941” handwritten on back (no notation), 2 ¾” x 4 ½” (black and white photo, head on view of heavy steel railway bridge, on left are trees, shack, sedan, on right light framed steel arch bridge with water beneath it)

0009.86 B48 Bethlehem Steel Co. Calumet Bridge – CW 3935 P.O. Box 222 Franklin, - LA. March 27, 1941, ≈ 4” x 5” (black and white photo, close up view of three completed arches of railway bridge, three striped barriers in foreground, in background is light framed arch bridge)

0009.87 (no number) Bethlehem Steel Co. Calumet Bridge – CW 3935 P. O. Box 222 Franklin, La. (notation stamped twice), Jan 25 ,1941, The Serice Studio Franklin. La. (stamped in purple ink), 8” x 10”(black and white photo, in foreground “HLEHEM” stenciled on girder with railroad tracks on top, water tower at left, man in dark suit standing on girder in center of photo, in distance waterway and tree line and single arched through railroad bridge)

0009.88 (same notations, size, date as previous except on photo in lower right corner is notation “Wax Lake Outlet Bridge Near Calumet, La. Steel Erection West End, No. 20 1-25-41,” flat landscape of three cranes, two concrete foundations visible in rough dirt, steel girders being positioned)

0009.89 (nothing on back of photo, date February 28, 1941 stamped on album page, on lower right corner is notation “Wax Lake Outlet Bridge Near Calumet, La. Center & West Spans No. 23 2-28-41,” seven men standing on ground beneath center span of bridge, one standing on top of center arch, steam erector car at right above notation in white)

0009.90 (nothing on back of photo except date February 28, 1941, 2 ¾”x 4 ½”, seems to be a clear close-up view of three men similar to 0009.74, all wearing

hard hats, one holding notebook, one wearing dark shirt with hands on hips, one wearing dark sweater)

0009.91 (same as previous, same group of men, different pose)

0009.92 (same as previous, two men one wearing dark shirt, one dark sweater)

0009.93 Bethlehem Steel Co. Wax Lake Bridge – CW 3935 P. O. Box 222 Franklin, La. January 13, 1941, The Serice Studio Franklin, La. (stamped in purple) on back of photo, (image shows light framed arch cantilevered over water off concrete pier, barge at left and one in foreground)

0009.94 (same as previous except date stamped twice, completed light framed arch bridge, barge on right side, waterway and concrete pier in distance with tree line)

0009.95 (same notation as previous, date stamped once, close up of previous view)

0009.96 (stamped in purple ink: “The Serice Studio Franklin, La.” and stamped on album page “January 15, 1941”), (image shows light framed steel arch bridge section being moved into place onto concrete piers by two barges in the water surrounding pier)

0009.97 Bethlehem Steel Co. Wax Lake Bridge – CW 3935 P. O. Box 222 Franklin, La. January 15, 1941, (stamped in purple ink: “The Serice Studio Franklin, La.”), (image shows bridge span suspended on piers with two barges beneath span)

0009.98 (same as previous, close up of bridge span with barges, four men in foreground)

0009.99 (nothing stamped on photo, same size as previous, view of three bridge spans, one barge and channel of water) (March 19, 1941 stamped on album page)

0009.100 (same as previous, but close up view of barge moving one span in channel approaching a distant bridge span)

0009.101 Bethlehem Steel Co. Wax Lake Bridge – CW 3935 P. O. Box 222 Franklin, - La. January 13, 1941, “The Serice Studio Franklin, La.” stamped on back of photo) (close up vertical view of barge carrying bridge span, “March 19, 1941” is stamped on album page beneath this photo)

0009.102 (only date "March 20, 1941" stamped on back and album page)
(photo shows a high view of bridge span being moved into place by barges, water
all around span)

0009.103 (same as previous except man visible standing on left end of front
barge)

0009.104 (same as previous except ground view and three men visible on left
end of barge)