An Historic American Engineering Record

Level II Documentation
DRAFT REPORT

of the

ROUTE 30 BRIDGE
SPANNING MINEKILL CREEK

NYS DOT PIN 9044.53.121
Route 30 / Minekill Creek
Town of Gilboa
Schoharie County
New York

prepared by:

Mark S. LoRusso

sponsored by:

The Federal Highway Administration
The New York State Department of Transportation

NEW YORK State Museum

CULTURAL RESOURCE SURVEY PROGRAM

HISTORIC AMERICAN ENGINEERING RECORD
STATE ROUTE 30 BRIDGE OVER MINEKILL CREEK

Location:

State Route 30 Bridge
Spanning Minekill Creek
Town of Gilboa
Schoharie County, New York
UTM: 18.543360.4696320
Quad: *Gilboa N.Y.* 1:24,000

Type:

Open Spandrel Concrete Deck Arch

Dates of Construction:

1928-1931

Engineer:

New York State Department of Public Works, Division of Highways
C. M. Edwards - District Engineer
F. M. Teal - Engineer in Charge

Builder:

P. J. Meade Engineering and Construction, Inc.
O'Connell Construction Company

Present Owner:

New York State Department of Transportation

Present Use:

Vehicular bridge (BIN 1-02092-0)

Significance:

The Route 30/Minekill Creek Bridge is Eligible for the National Register of Historic Places by representing significant variation in concrete deck arch bridge construction in New York State. Open spandrel concrete arch bridges were relatively uncommon - the 2002 State Department of Transportation Historic Bridge Inventory identified only nine existing open spandrel types compared 308 filled spandrel concrete arch bridges on state roads. The Route 30 bridge is notable among these because of its very light graceful appearance, designed to enhance its crossing of picturesque Mine Kill Falls. The principal visual change to the bridge has been the removal of its arched balustrades.

The Route 30 bridge is the second span built at Mine Kill Falls, replacing an iron truss span erected here in 1886. The truss bridge bypassed the original crossing in the shallows upstream from the falls.

Project Information:

The New York State Department of Transportation has determined the Route 30/Minekill Creek Bridge to be unsafe for vehicular traffic due to structural deterioration, including advanced corrosion of the transverse beams, spalling on the arches, and effloresence on the deck, beams and footings. Due to these deficiencies, the Department of Transportation has proposed removal, rather than rehabilitation of the bridge, under PIN 9044.53.121. The Department of Transportation has requested this Level II Historic American Engineering Record documentation to mitigate the adverse effect to the bridge resulting from its removal.

Mark S. LoRusso
Cultural Resources Survey Program
Research and Collections
New York State Museum
Albany, New York 12230

Bridge Setting

The Route 30/Minekill Creek Bridge is located four miles south of the hamlet of North Blenheim, in the Town of Gilboa, Schoharie County, New York. It is situated at the northern edge of the Catskill Mountains at an elevation of 1098 feet above sea level. Route 30 is a primary north-south highway which follows the Schoharie Creek the length of Schoharie County. The Minekill Creek is a Schoharie Creek tributary which flows into the Blenheim-Gilboa Reservoir a mile east of the bridge.

Route 30 crosses the Minekill Creek at the picturesque Mine Kill Falls. The falls descend over ledges through a wooded gorge cut in the sandstone and shale of the Panther Mountain geologic formation. Minekill State Park encompasses the Minekill Creek over its length between Route 30 and the reservoir, including Mine Kill Falls. A viewing platform overlooking the falls is reached from a parking area southeast of the bridge.

Above the falls west of the bridge the creek bed is shallow and has a concrete barrier on the south side to control and monitor floodwater. Abandoned road segments on this side correspond to alignments for earlier creek crossings. An historic family cemetery overlooks the creek from a hill northwest of the bridge.

Bridge Description

The Route 30/Minekill Creek Bridge is a single span, open spandrel, concrete deck arch. The bridge is built perpendicular to Minekill Creek on a north-south orientation. The bridge is 139 feet in length and 32 feet in width, and stands approximately 60 feet above Minekill Creek near the top of Mine Kill Falls.

The bridge consists of a concrete arch main span with two concrete slab approach spans at each end. The bridge has individually poured steel reinforced components. The main span is an open arch and column structure that is 84 feet in length. The arch has a clear span of 80 feet and a rise of 23 feet 11-3/8 inches. The arch ribs are 5 feet wide and 1 foot 8 inches thick at the top of the arch, and become gradually thicker toward the ends. They are reinforced with ten lengthwise 7/8 inch steel bars along the top and bottom faces, which are paired with one-inch steel bars to join the arch to the abutments. The arch is braced by two cross struts, 2 feet 6 inches high by 1 foot 6 inches wide, at the second and fifth columns.

Eight spandrel columns extend up from the arch to support the bridge floor. The columns are doweled to bases on the arch ribs and have arched spandrel beams. The columns are spaced 10 feet 2 inches apart. The six interior columns are slightly less than five feet wide and 1 foot 6 inches thick and are cantilevered to support the bridge deck. The end columns are 6 feet 10 inches wide and 1 foot 10 inches thick. The columns are reinforced with five or six one-inch vertical bars on each face with 1/4 inch cross hoops at a 1-foot spacing.

The approach spans are 11 feet 1/2 inch in length. The spans are supported on the end abutments of the bridge, on center piers with columns 1 foot 10 inches thick and 4 feet 9 inch wide with a cap beam, and on end columns that are 1 foot 10 inches thick and 6 feet 10 inches wide with a cap beam that rest on the arch abutments. The columns are reinforced with five or six one-inch lengthwise bars on each face with 1/4 inch cross hoops at a 1-foot spacing. The support structure for both approaches is enclosed within one-inch thick concrete walls.

The substructure of the bridge is footed on bedrock. The arch abutments are 10 feet 6 inches high, with a width of 6 feet 6 inches at the foot, 5 feet 6 inches at the base of the arch rib, and 3 feet 4 inches at the top of the abutment. The abutments are reinforced with one-inch vertical bars at 6-inch (bottom) and 1-foot (top) spacing, with 1/2 inch cross bars at a 1-foot spacing on both faces. Both abutments sit on a layer of hard sandstone between layers of friable shale. The south abutment has a deep footing built around the irregular rock face on this side, extending approximately 20 feet below the abutment to the creek bed.

The end abutments for the bridge are spread-on-rock concrete structures with no reinforcing bars. The abutments taper from 7 feet 6 inches wide at the base to 1 foot 6 inches wide at the top, with a 5 on 1 batter on the inside face and a 12 on 1 batter on the outside face. The abutment bases and columns of the approach span piers are stepped across the width of the bridge to conform to the sloping surface of the bedrock.

The original 27-foot bridge deck was a one foot thick reinforced concrete slab with cement concrete pavement and one foot curbs. The original wearing surface was replaced in 1960 (Contract RC-67). The existing 32-foot monolithic concrete deck was built on top of the original deck during a rehabilitation of the bridge in 1973 (Contract RCR 72-28). A high density concrete pavement with an armored joint system was overlaid on this deck during a second rehabilitation in 1988 (D500368).

The bridge originally had 3 foot 6 inch high concrete balustrades. The main span balustrades consisted of open arched panels with 1-foot 6 inch piers above the arch columns. The approach span balustrades consisted of solid parapet walls with 8-foot piers at the arch abutments and 6-foot piers at the end abutments. The balustrades were replaced by steel railings during the 1973 rehabilitation and these were replaced by the existing steel railings during the 1988 rehabilitation.

The bridge structure otherwise is largely intact. The 1973 rehabilitation repaired damaged concrete on the arch ribs and columns and painted all exposed concrete on the bridge. The superstructure was cleaned under later contracts in 1995 (D256413) and 1997 (D257134).

Historical Context

The southern part of Schoharie County was crossed by several turnpikes which opened the area to settlement in the early 1800's. The Susquehanna Turnpike from Catskill to Unadilla, a primary westward route from the Hudson Valley, crossed the Schoharie Creek at Gilboa and was joined just west of Gilboa by a well-traveled alternate route known as the Windham Turnpike. The Delaware and Albany Turnpike crossed the Schoharie Creek at North Blenheim and continued west through Schoharie County as the Blenheim and Jefferson Mountain Turnpike. The Gilboa-Jefferson Turnpike linked these primary routes, following the Minekill Creek northwest from Gilboa.

The hamlet of Gilboa developed around mills and trade by its position on the Schoharie Creek and Susquehanna Turnpike, becoming the largest settlement in the upper Schoharie Valley. Several miles to the north, Patchin Hollow (North Blenheim) emerged where the West Kill and Mill Creek crossed the Blenheim-Jefferson Turnpike. The Town of Gilboa separated from the Town of Blenheim in 1848, with Gilboa and North Blenheim as the respective town seats. Early farms between these hamlets included Lansing Manor, built by John Lansing for his daughter in 1819, which overlooked the Schoharie Creek south of North Blenheim. This currently is a National Register Listed property on Route 30 north of the Minekill Creek bridge.

Numerous roads were built across Minekill Creek in the 1830's and 1840's as farm-to-market connectors to the turnpikes. By the 1850's, a road from North Blenheim to the Gilboa-Jefferson Turnpike crossed the creek just west of Mine Kill Falls, on the general course of Route 30. Historic maps show that this road approached the creek near the existing bridge location, but jogged sharply to the west to cross the shallows above the falls. The dwelling of farmer Peter Mattice and a saw mill were located at this crossing in the 1850's and 1860's. A family cemetery was established nearby on a hill overlooking the north side of the creek.

Mine Kill Falls and other nearby falls were popular attractions for tourists who followed the Schoharie Valley to the Catskill Mountains in the late nineteenth century. In a diary written in August 1886, Ursula Best describes a trip to Mount Pisgah which included visits to Gilboa Falls and Mine Kill Falls. Heading to the mountain

from a guest house in Broome Center, her party drove for hours through "pretty villages, one of which we noticed in particular-Gilboa, where the Schoharie rushes over a precipice of forty feet, forming the Gilboa Falls." Continuing their tour the next day, they took the "Blenheim Road" to Mine Kill Falls, probably driving south from North Blenheim.

> The road in many places is just wide enough for a carriage, the high ground on one side, and a deep precipice on the other. We drove on, admiring each picture of the beautiful panorama, until nearly twelve o'clock we came to one that seemed grander still than the others...We had just driven up to the Minekill bridge, that had been completed two weeks. It is an iron bridge, and spans an abyss sixty feet deep, through which the water flows peacefully along, after rushing over rock after rock, forming in all, the picturesque Minekill Falls. As we stood on the bridge we looked up to where a narrow stream flows over a precipice, on a ledge of rocks. Here it again falls, now surging over a descent of thirty feet, into what is known as the Devil's bedroom. It then falls again as a narrow stream, over another precipice, where the rocks seem almost to meet, there being just space enough, as you stand in the right position to see the falls above. Here we see the most picturesque part, as the water falls over rocks forty feet high and thirty feet wide, making a grand foaming cataract.
> (*Schoharie County Historical Review* LXII, No.1: 3-6)

The iron bridge described in this passage was the original bridge built over Minekill Falls, bypassing the earlier crossing upstream. As shown, this bridge afforded travelers an easy view of the falls which likely increased the visibility of the attraction in the years to come. The new bridge was higher above the creek than the original crossing and less susceptible to floods, but still included dangerous turns at either end. On April 13, 1911, the *Jefferson Courier* reported a livery team being frightened and plunging over the bridge onto the rocks below, yet, escaping with minor injuries. This bridge appears to have survived until the Route 30 bridge replaced it in 1931.

Bridge History

The Route 30 bridge over Minekill Creek was built as part of the Improvement of the Grand Gorge-Breakabeen State Highway by the State Department of Public Works in 1928 to 1931 (State Highway 5718). This highway was a segment in the larger improvement of Route 30 from the Delaware River to Tupper Lake, within a state through highway network. The Grand Gorge-Breakabeen improvement called for straightening, grading, and paving the old road and replacing five bridges over the Minekill Creek and other streams. The bridge over Minekill Creek was erected on the site of the earlier truss bridge, with a realigned highway providing much straighter approaches on both ends.

The contract for building State Highway 5718 was awarded to P. J. Meade Engineering and Contracting Inc. on July 18, 1928. On August 15, 1929, The *Schoharie Republican* reported that the base of the new road had been built and the macadam top surface would soon be started. "Construction of the road was started early last year, but progress has been slow because of the extremely heavy grading required to provide minimum grades through the mountainous country. One of the features of this new road is a bridge of elaborate design spanning Mine Kiln (sic) gorge at a point seventy-one feet above the bottom of the gorge. This bridge is anchored to the bottom of the gorge with open work extending to the top. A parapet three and one-half feet high with fancy open work will extend along the top of the bridge. The cost of the new highway, including five new bridges, will be $511,000."

The road construction would prove slow to completion due to the failure of the original contractor and reassignment of the contract to the O'Connell Construction Company on September 9, 1930. An article in the *Schoharie Republican*, on May 14, 1931, expressed local frustrations with the project. "When will the Blenheim-Grand-Gorge road be completed?...The original contractor on the job failed and a new contract was let: progress under the new contractor seems to be about as slow. This road will be an important link in the route through the

valley in New York and the south. It has been a bone of contention for years and its completion has dragged on year after year."

The Grand Gorge-Breakabeen highway was officially completed on August 29, 1931. The Schoharie Republican extolled the importance of this highway as a scenic link on the motor route through the Schoharie Valley to the Catskill Mountains. "...when you get to North Blenheim you reach a point where most motorists have turned back heretofoe (sic). The road over the ridge mounts here at a stiff grade which, in rainy weather, has been troublesome. Because of the difficulties of the road, thousands have lost the exhilaration of the trip to the top of the Catskills. When the new road is opened late this summer, you will be able to make it easily. It will take you into one of the most wonderful regions..." (*Schoharie Republican*, July 9, 1931).

The bridge over Minekill Creek was well designed to compliment Mine Kill Falls. An improvement on the earlier truss bridge, the deck arch design allowed an unobstructed view from above while attractively framing the falls from below, and the light, open spandrels, allowed the bridge to blend well with the surroundings. Concrete deck arch bridges became an inexpensive alternative to truss bridges in the early twentieth century and were adaptable to long or short spans. Solid spandrel designs were used for most crossings. Open spandrel bridges were preferred where a high rise arch was needed or in long spans where a substantial saving in materials could be gained. The narrow Minekill Creek gorge required a high arch to allow the abutments to be placed on solid bedrock 25 feet below the roadway. The light weight of the open spandrel design also allowed the use of relatively small abutments in the rock face.

The Route 30/Minekill Creek Bridge was determined Eligible for the National Register of Historic Places by representing significant variation in concrete arch bridge construction in New York State. The rarity of the open spandrel design is shown in the 2002 State Department of Transportation Historic Bridge Inventory, which identified only nine existing open spandrel arch bridges versus 308 filled spandrel arches on New York highways. The Route 30 bridge stands out among the open spandrel examples because of its relatively light construction and dramatic setting. The primary visual change to the bridge has been the removal of the decorative balustrade, though the superstructure is essentially intact.

SOURCES OF INFORMATION

Engineering Drawings

New York State Department of Public Works, Division of Highways,
Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718. April 30, 1928. New York State Department of Transportation Design Division, Record Plans Office, 50 Wolf Road, Albany.

New York State Department of Transportation, Design and Construction Division,
Plans for Reconstructing the Grand Gorge-Breakabeen, Part 2, State Highway No 8312. Contract RCR 72-28 and Contract FARCR 72-29. New York State Department of Transportation Design Division, Record Plans Office, 50 Wolf Road, Albany.

New York State Department of Transportation, Office of Engineering,
Rehabilitation of Four Bridges on Routes 30 and 28 State Highways 8325, 8017, and 5577 in the Towns of Middletown and Gilboa Delaware and Schoharie Counties, Record Plans. Contract D500368. November 10, 1988. New York State Department of Transportation Design Division, Record Plans Office, 50 Wolf Road, Albany.

Historical Views

No historical views of the bridge were available. Consulted sources included the Gilboa Historical Society, the *Schoharie County Historical Review* and the *Schoharie Republican* newspaper.

Bibliography

Bailey, Mildred,
"Floods and Dams on Schoharie Creek at Gilboa" *Schoharie County Historical Review*, Spring-Summer 1975, Schoharie County Historical Society, Schoharie, N.Y.

Best, Ursula,
"Summersett House, Leonard Hill, Broome Center, August 18, 1886" *Schoharie County Historical Review*, Spring-Summer 1998, Schoharie County Historical Society, Schoharie, N.Y.

Beers, S. N. and D. G.,
New Topographical Atlas of Schoharie County, New York. Stone and Stewart, Philadelphia, 1866.

Kubik, Dorothy,
West Through the Catskills: The Story of the Susquehanna Turnpike. Purple Mountain Press, Fleischmanns, N.Y.

Gilboa Monitor, Gilboa, N.Y. Home & Vicinity column, September 1, 1887.

The Jefferson Courier, Jefferson, N.Y. April 13, 1911. http://www.usgenweb.org/~nyschoha/miscellany2.html

Mead & Hunt, Inc., and Allee King Rosen & Fleming, Inc.,
Contextual Study of New York State's Pre-1961 Bridges. Prepared for the New York State Department of Transportation, November, 1999.

SOURCES OF INFORMATION
(Continued)

Mead & Hunt, Inc., and Allee King Rosen & Fleming, Inc.,
Evaluation of National Register Eligibility, Task C3 of the Historic Bridge Inventory New York State Department of Transportation Historic Bridge Database. Prepared for the New York State Department of Transportation and the Federal Highway Administration, January 2002.

Mead & Hunt, Inc., and Allee King Rosen & Fleming, Inc.,
New York State Department of Transportation Historic Bridge Database. Prepared for the New York State Department of Transportation and the Federal Highway Administration, January 2002.

New York State Department of Public Works
Annual Report for the Years 1928, 1929, 1930, 1931. New York State Department of Public Works, Albany, N.Y.

The Schoharie Republican, Schoharie, New York. Reviewed January 1, 1929 to December 31, 1931.

Scranton, Samuel A., Jr.,
"Old Roads of Schoharie County," *Schoharie County Historical Review*, Fall-Winter 1966, No. 2. Schoharie County Historical Society, Schoharie, N.Y.

Roscoe, William E.,
History of Schoharie County, New York. D. Mason and Co, Syracuse, 1882.

Waddell, J. A. L.,
Bridge Engineering, John Wiley and Sons, Inc., New York, 1916.

Wenig, E., and Lorey, W.,
Map of Schoharie County, New York. Wenig and Lorey, Philadelphia, 1856.

Zimmer, Chester G.,
"Gilboa Dam Background and Issue Summary." *Schoharie County Historical Review*, Fall-Winter 1996. Schoharie County Historical Society, Schoharie, N.Y.

Area of Detail

Bridge Location

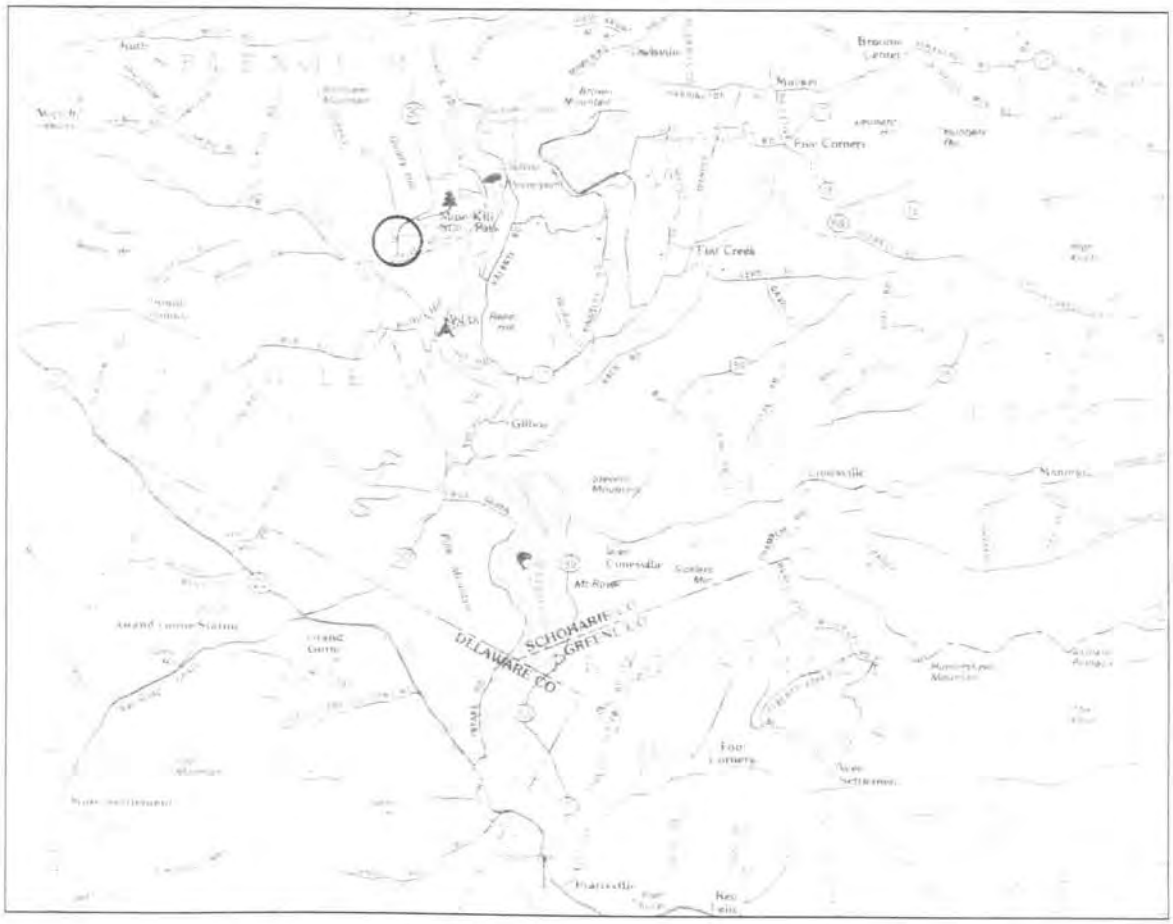

Figure 1. Route 30 / Minekill Creek Bridge Location in Schoharie County.

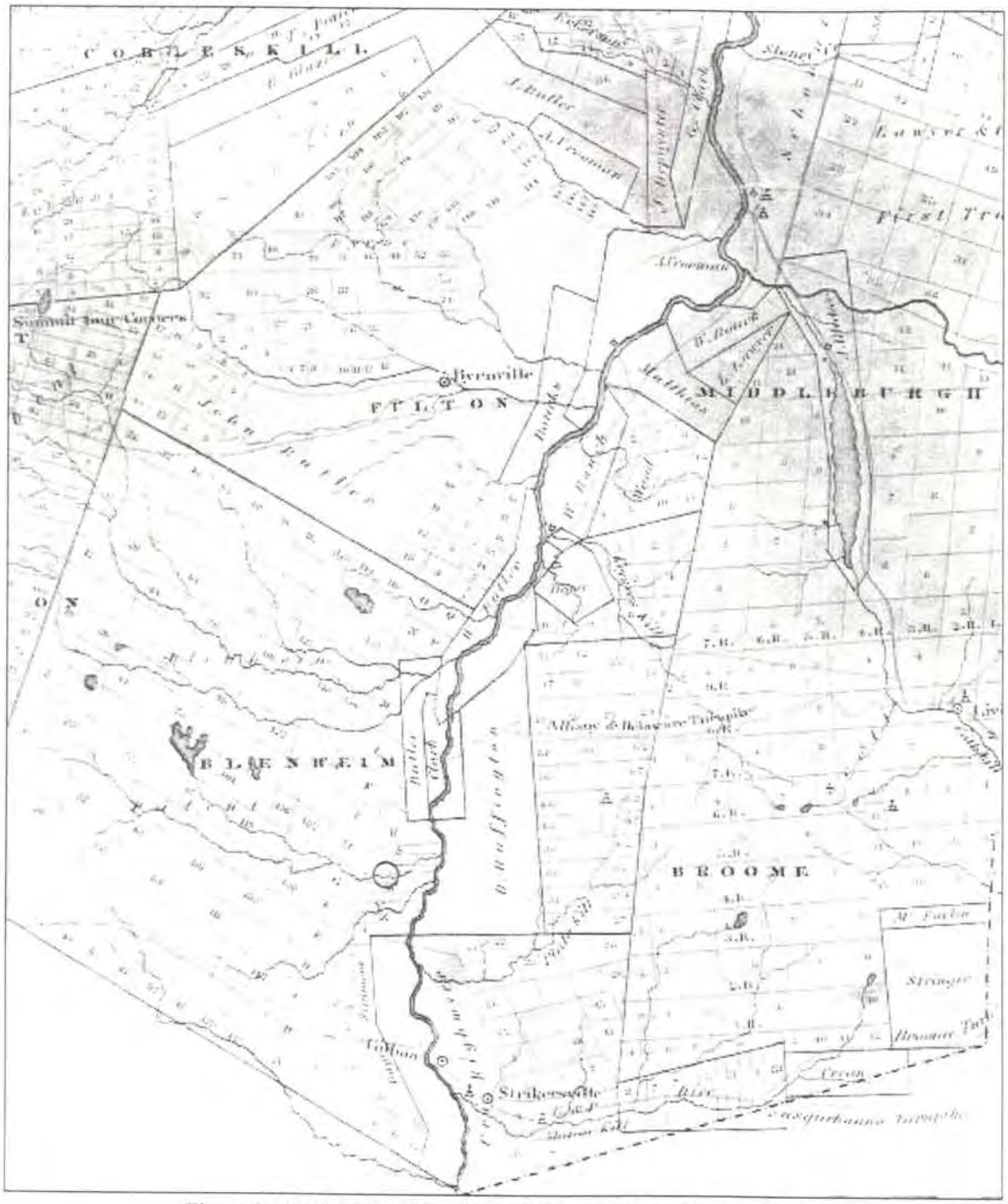

Figure 2. 1829 Atlas of New York State - Schoharie County (Burr).

The Burr Atlas shows the original highways through southern Schoharie County. The Susquehanna Turnpike from Catskill to Unadilla crossed the Schoharie Creek at Gilboa and the Albany and Delaware Turnpike crossed the creek north of Gilboa, at the eventual location of Patchin Hollow (North Blenheim). No north-south roads are shown along the Schoharie Creek in the Town of Blenheim (including the Town of Gilboa), though farms did exist along the Mine Kill Creek and neighboring tributaries by this time.

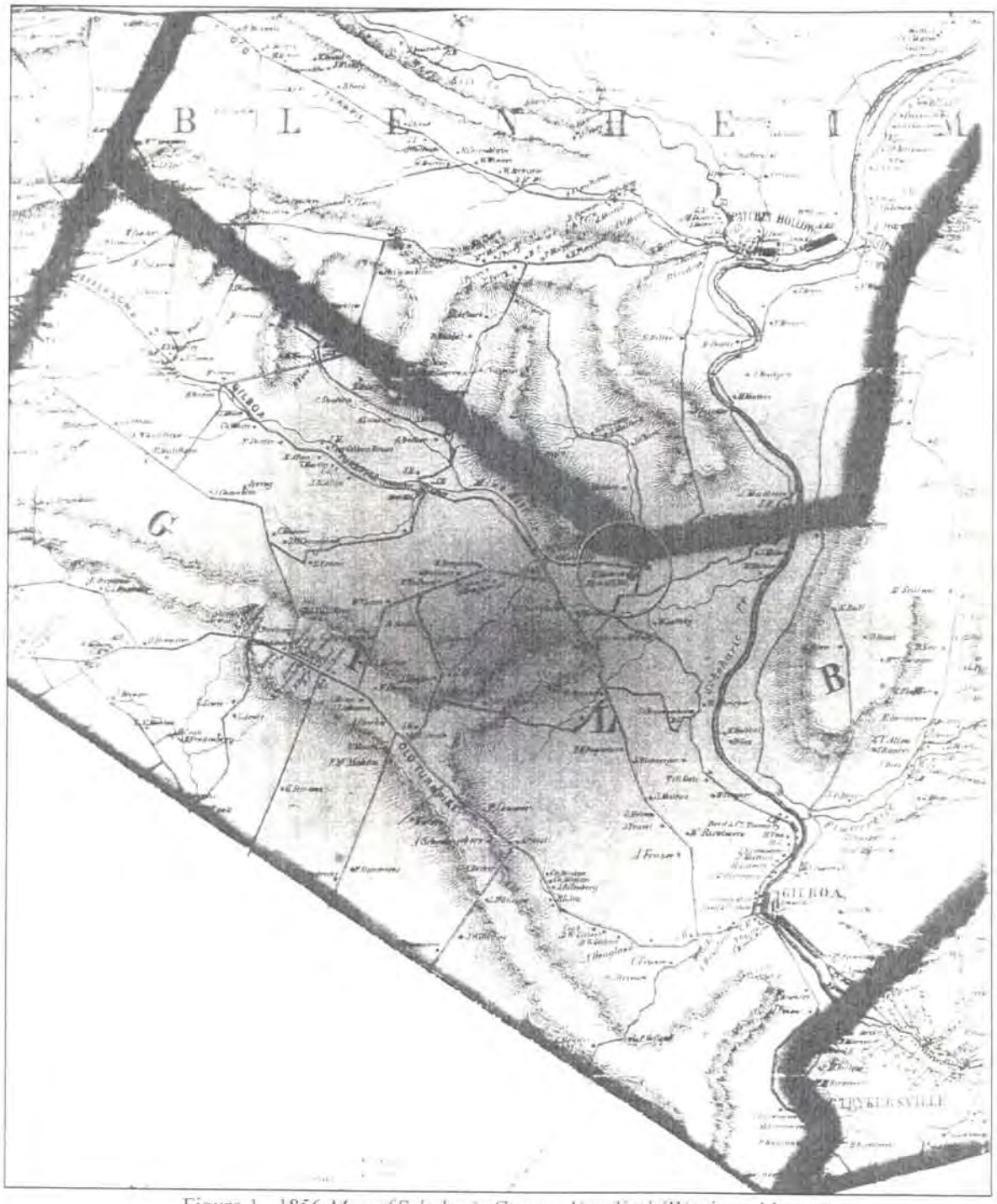

Figure 1. 1856 *Map of Schoharie County, New York* (Wenig and Lorey)

The Wenig and Lorey map shows the turnpikes and farm to market roads built by the mid-nineteenth century. The Jefferson and Gilboa Turnpike joined the Susquehanna Turnpike ("Old Turnpike) at Gilboa, following the Mine Kill Creek over part of its route. A portion of this road and a connecting road to North Blenheim generally correspond to Route 30. This road took a sharp bend at Mine Kill Creek in order to cross the shallows above Mine Kill Falls.

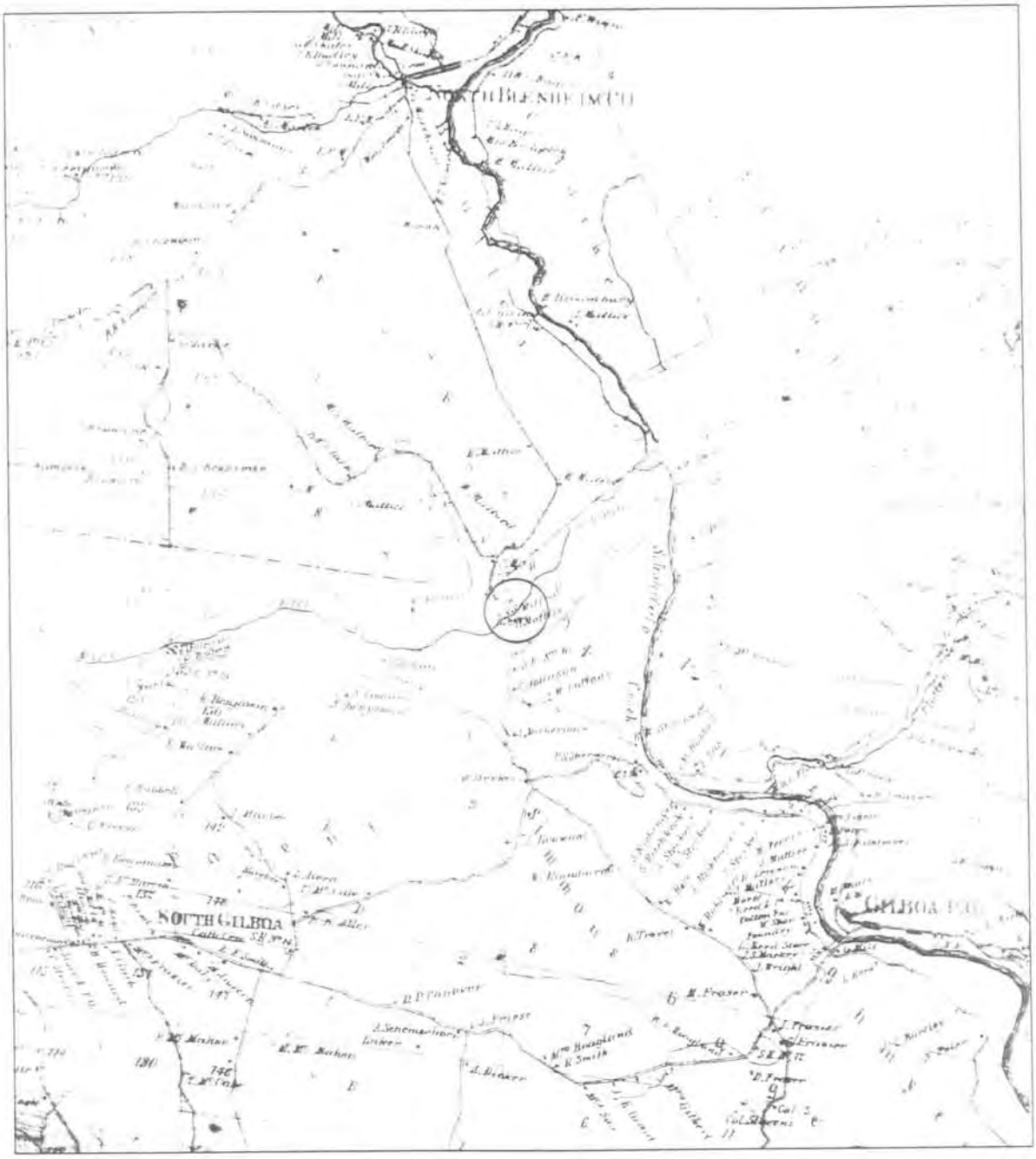

Figure 2. 1866 *New Topographical Atlas of Schoharie County, New York* (Beers).

The Beers Atlas more clearly depicts the original crossing over the Mine Kill Creek. This crossing was bypassed in 1886 by a truss bridge built over Mine Kill Falls. Note "P. Mattice" dwelling and saw mill at the crossing. A family cemetery was located nearby.

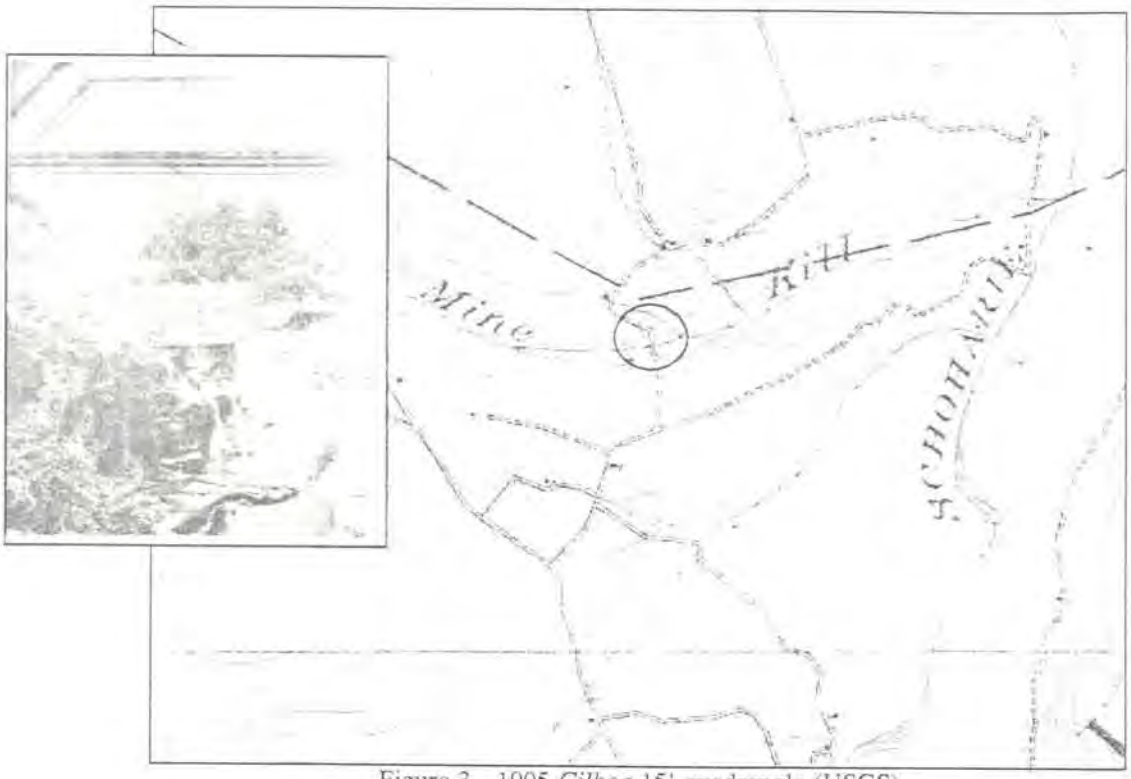

Figure 3. 1905 *Gilboa* 15' quadrangle (USGS)
Shows the 1886 truss bridge crossing at Mine Kill Falls. The truss bridge is pictured in the inset (*Schoharie County Historical Review*, Spring-Summer 1998: 5).

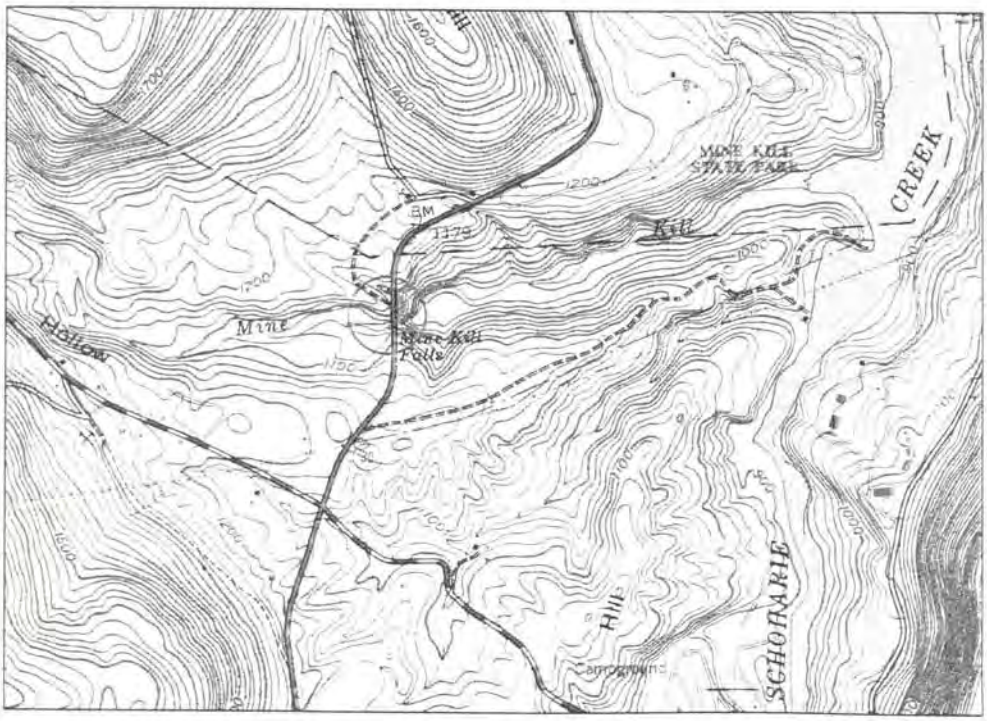

Figure 4. 1945/80 *Gilboa* 7.5' quadrangle (USGS).
Shows the existing Route 30 alignment. Note dotted line of bypassed highway north of the bridge.

HISTORIC AMERICAN ENGINEERING RECORD
INDEX TO PHOTOGRAPHS

State Route 30
Spanning Minekill Creek
Town of Gilboa
Schoharie County
New York

Field Photographer: Gregory Troup

November 2007

FIELD PHOTOGRAPHS

Photo 1	View of the bridge looking north.
Photo 2	View of the bridge looking south.
Photo 3	West side, view east.
Photo 4	West side, main span, view east.
Photo 5	West side and underside, view northeast.
Photo 6	East side, view west.
Photo 7	East side and underside, view southwest.

DOCUMENT PHOTOGRAPHS

Photo 8	Photocopy reduction from microfilm New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 8.
Photo 9	Photocopy reduction from microfilm New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 8R.
Photo 10	Photocopy reduction from microfilm New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 9.
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Photo 12	Photocopy reduction from microfilm New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 11.

INDEX TO PHOTOGRAPHS
(continued)

Photo 13 Photocopy reduction from microfilm
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Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway,
Contract SH 5718, April 30, 1928; Sheet 12.

Photo 14 Photocopy reduction from microfilm
New York State Department of Public Works, Division of Highways
Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway,
Contract SH 5718, April 30, 1928; Sheet 13.

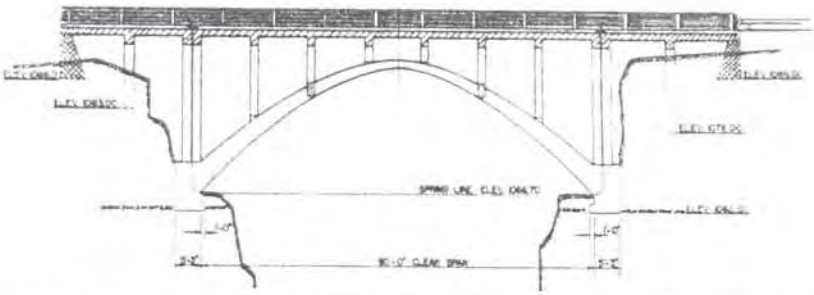
Photo 15 Photocopy reduction from microfilm
New York State Department of Public Works, Division of Highways
Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway,
Contract SH 5718, April 30, 1928; Sheet 31.

Photo 16 Photocopy reduction from microfilm
New York State Department of Transportation, Design and Construction Division,
Plans for Reconstructing the Grand Gorge-Breakabeen, Part 2, State Highway No 8312,
Contract RCR 72-28 and Contract FARCR 72-29. Sheet 6R.

Photo 17 Photocopy reduction from microfilm
New York State Department of Transportation, Office of Engineering,
Rehabilitation of Four Bridges on Routes 30 and 28 State Highways 8325, 8017, and 5577 in the Towns of Middletown and Gilboa Delaware and Schoharie Counties, Record Plans. Contract D500368. November 10, 1988, Sheet 1.

Photo 18 Photocopy reduction from microfilm
New York State Department of Transportation, Office of Engineering,
Rehabilitation of Four Bridges on Routes 30 and 28 State Highways 8325, 8017, and 5577 in the Towns of Middletown and Gilboa Delaware and Schoharie Counties, Record Plans. Contract D500368. November 10, 1988. Sheet 25R1.

HISTORIC AMERICAN ENGINEERING RECORD
KEY TO PHOTOGRAPHS



West Elevation

KEY

Route 30 / Minekill Creek Bridge

Field Photos

Old Road Alignments

East Elevation

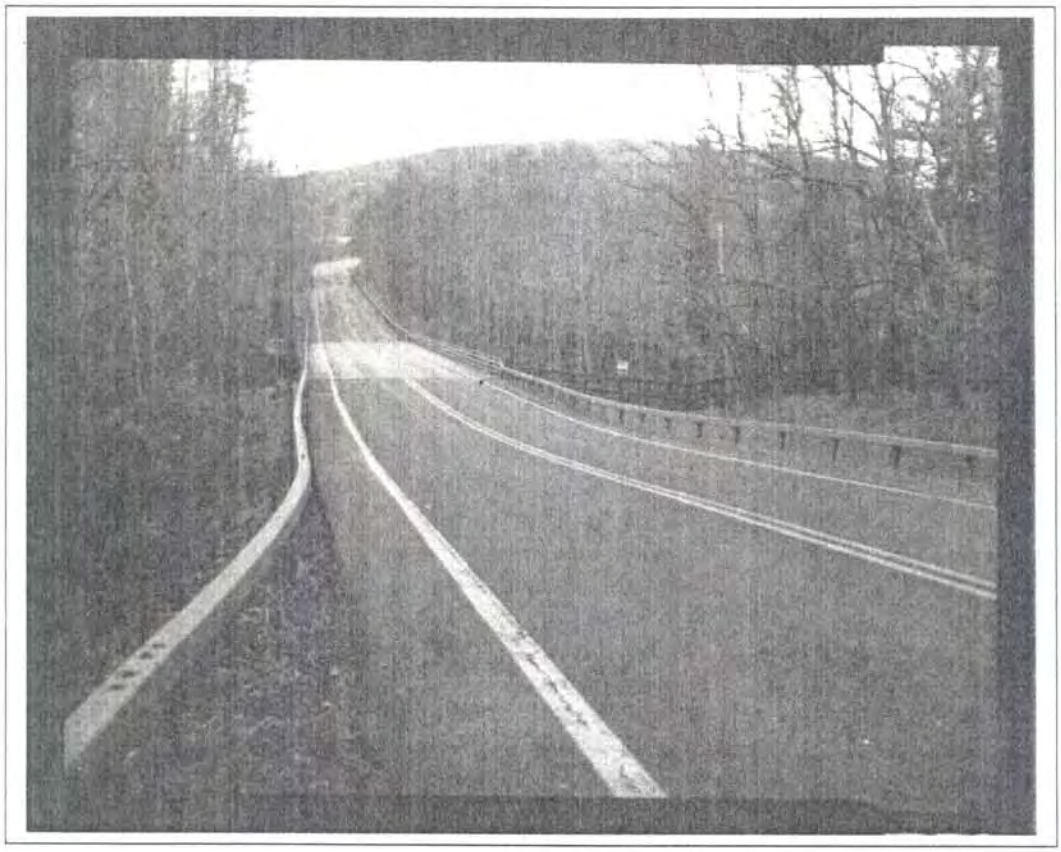


Photo 1. View north on Route 30. The Minekill Creek Bridge is located at center.

Photo 2. View south on Route 30. The Minekill Creek Bridge is located at center. The old road turns west (right) in the foreground. An old family cemetery overlooks the creek from the hill at right.

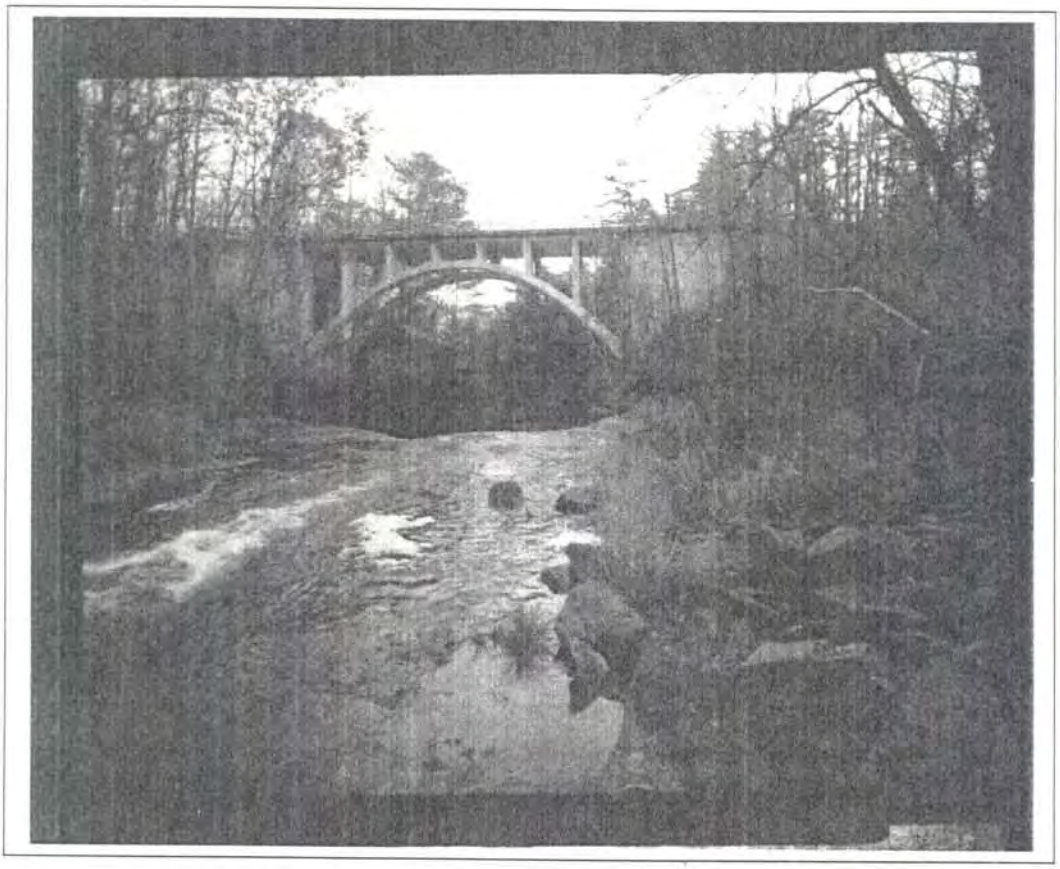


Photo 3. West side of the Route 30/Minekill Creek Bridge, view east.

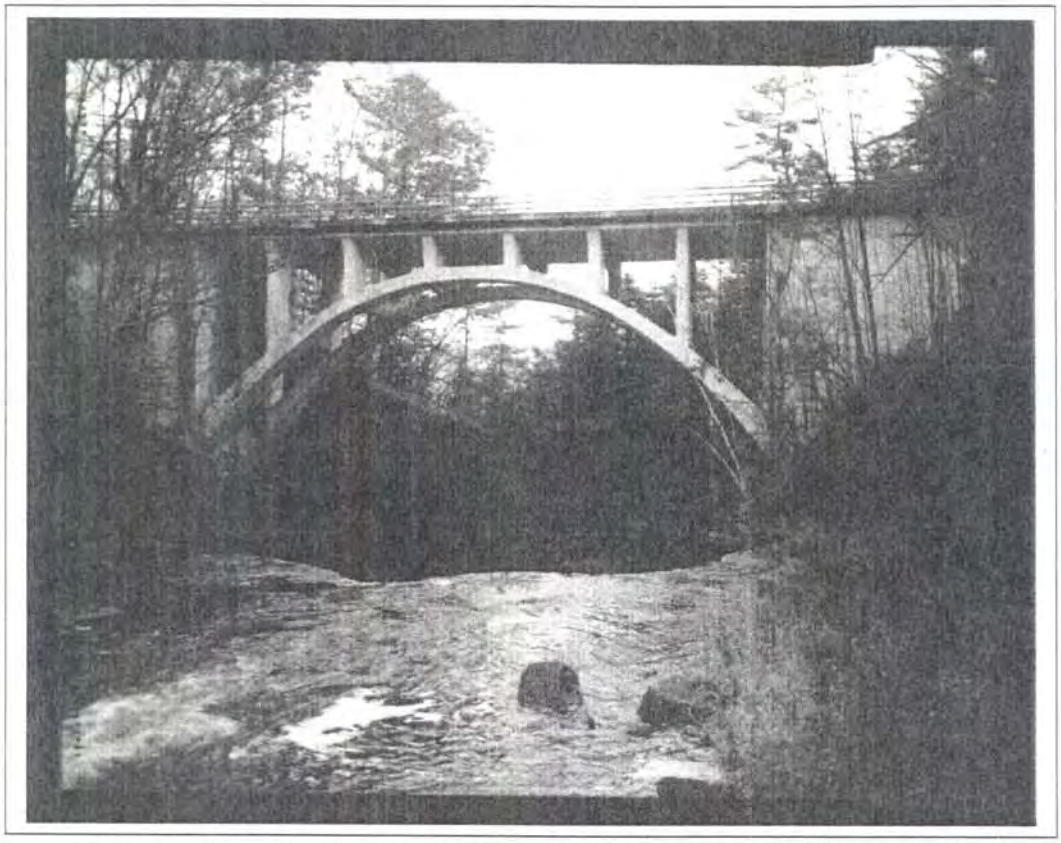


Photo 4. West side of the Route 30/Minekill Creek Bridge main span, view east.

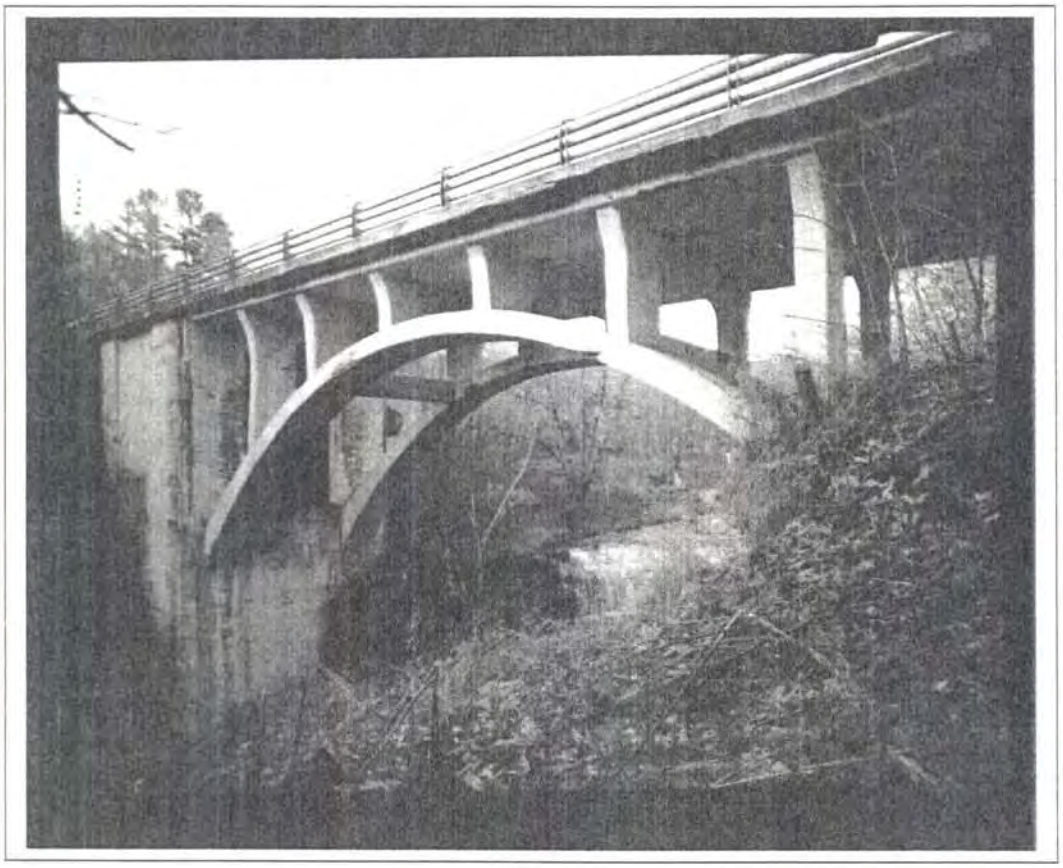


Photo 5. West side and underside of the Route 30/Minekill Creek Bridge, view northeast.

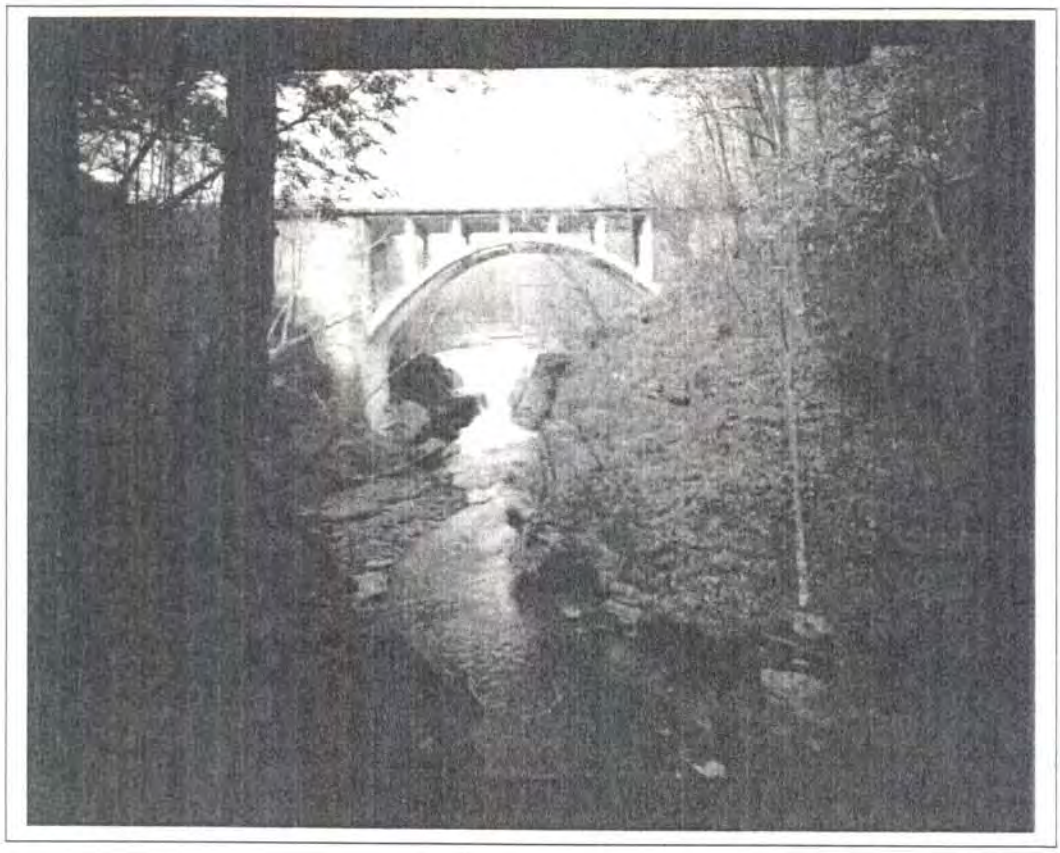


Photo 6. East side of the Route 30/Minekill Creek Bridge, view west.

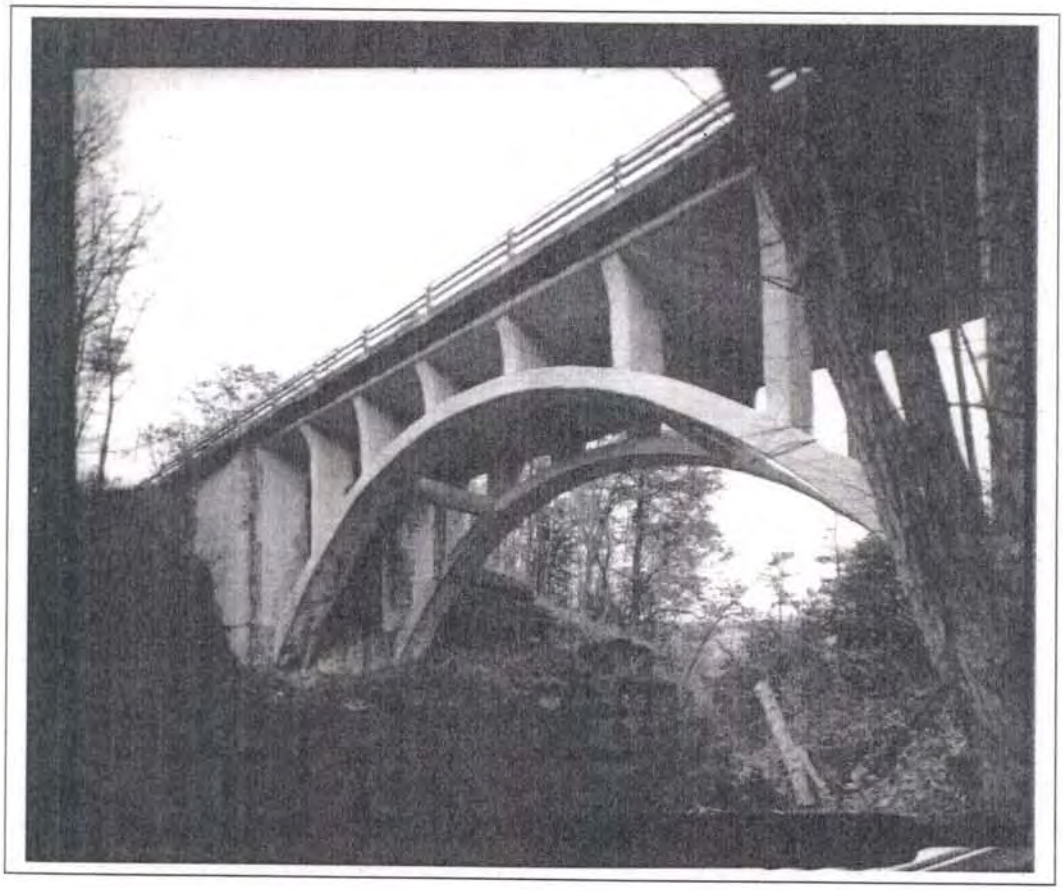


Photo 7. East side and underside of the Route 30/Minekill Creek Bridge, view southwest.

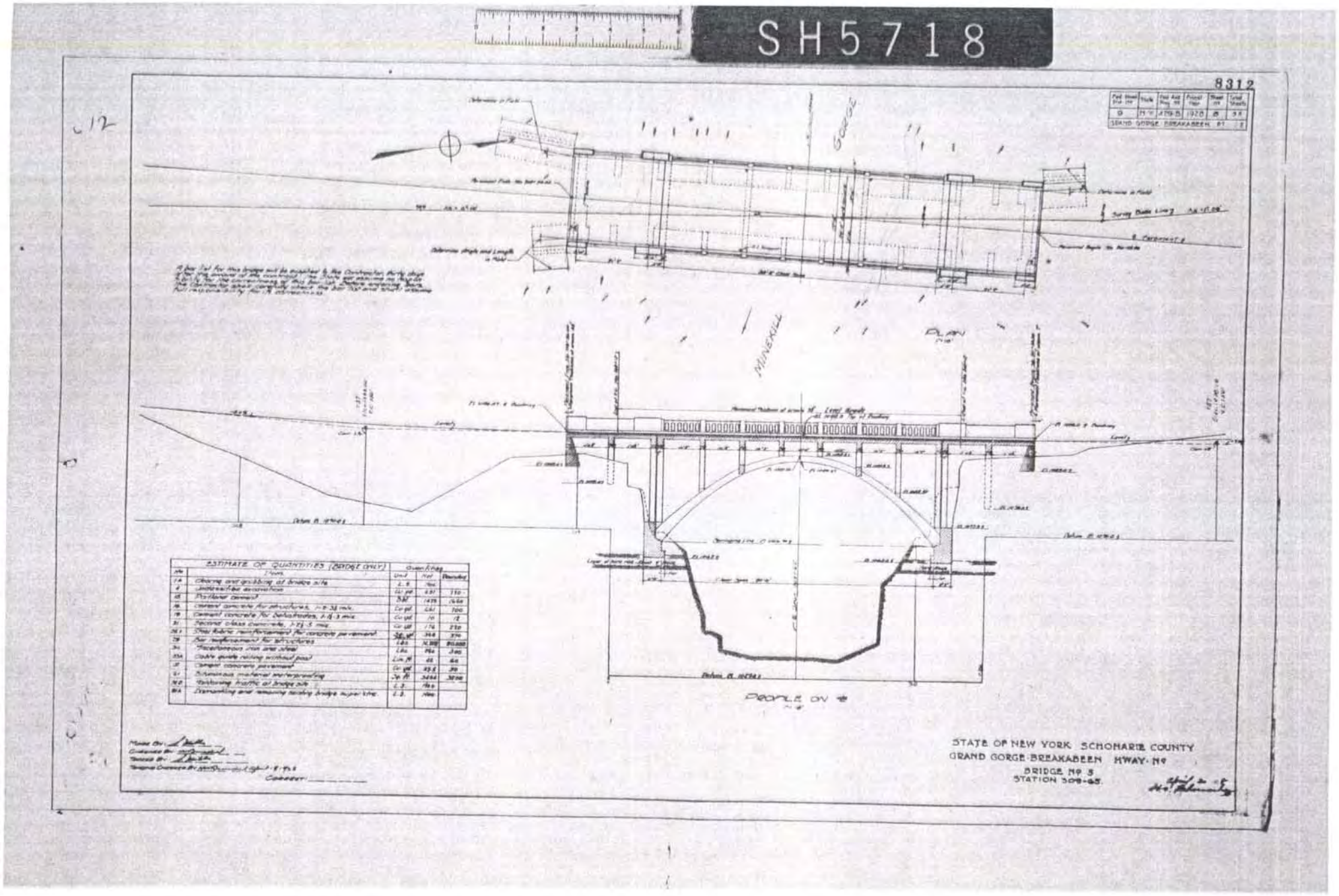


Photo 8. New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 8.

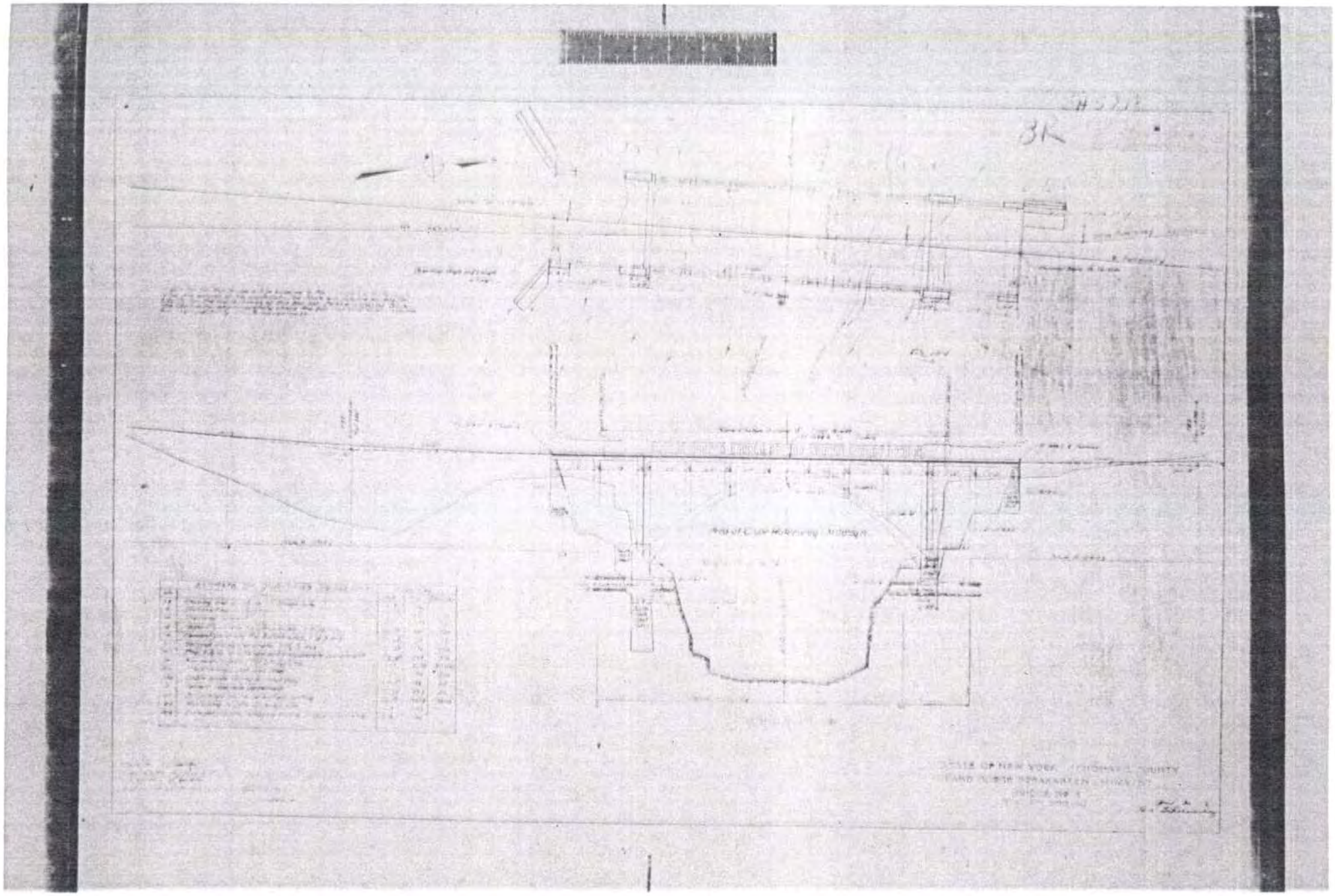


Photo 9. New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 8R.

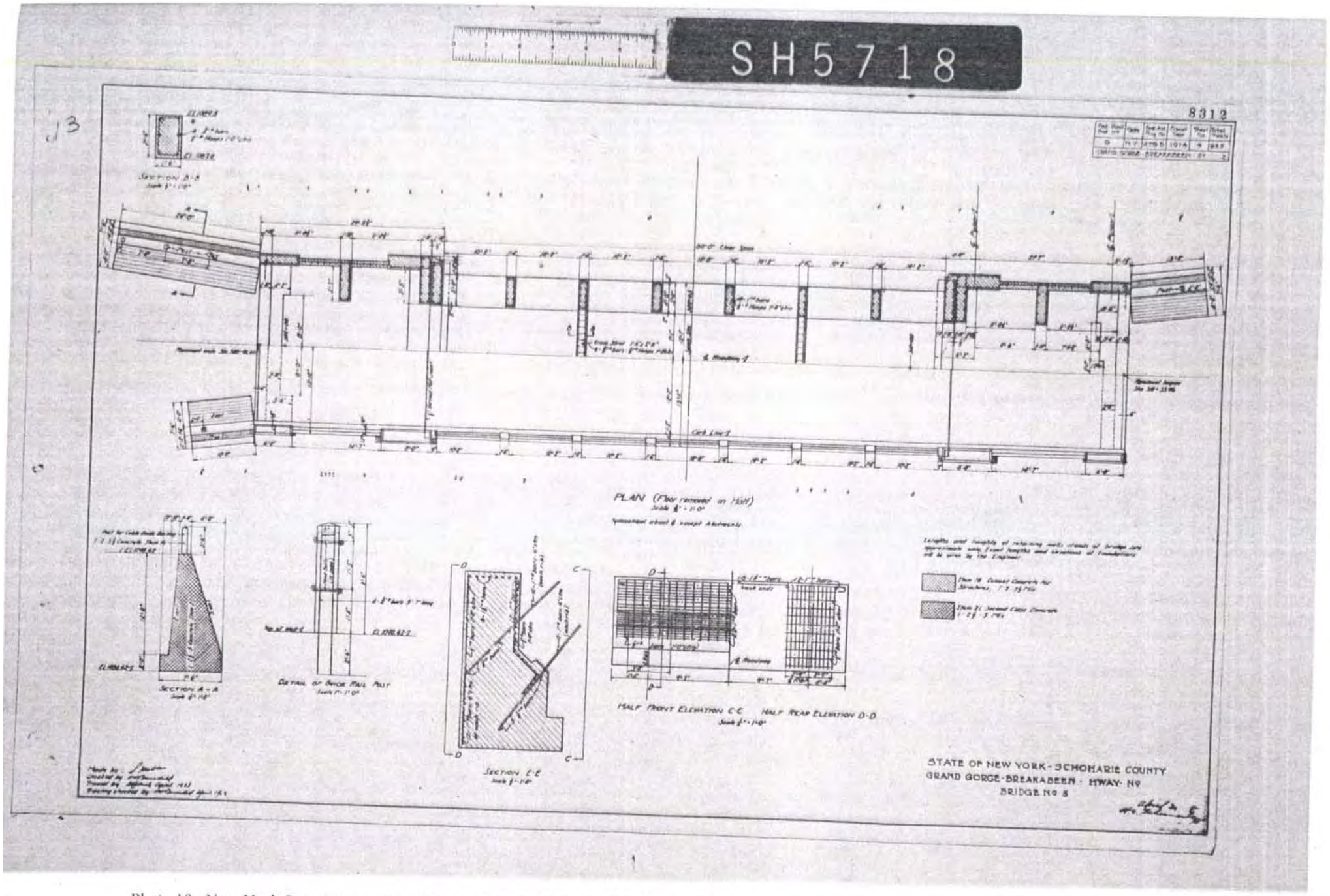


Photo 10. New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 9.

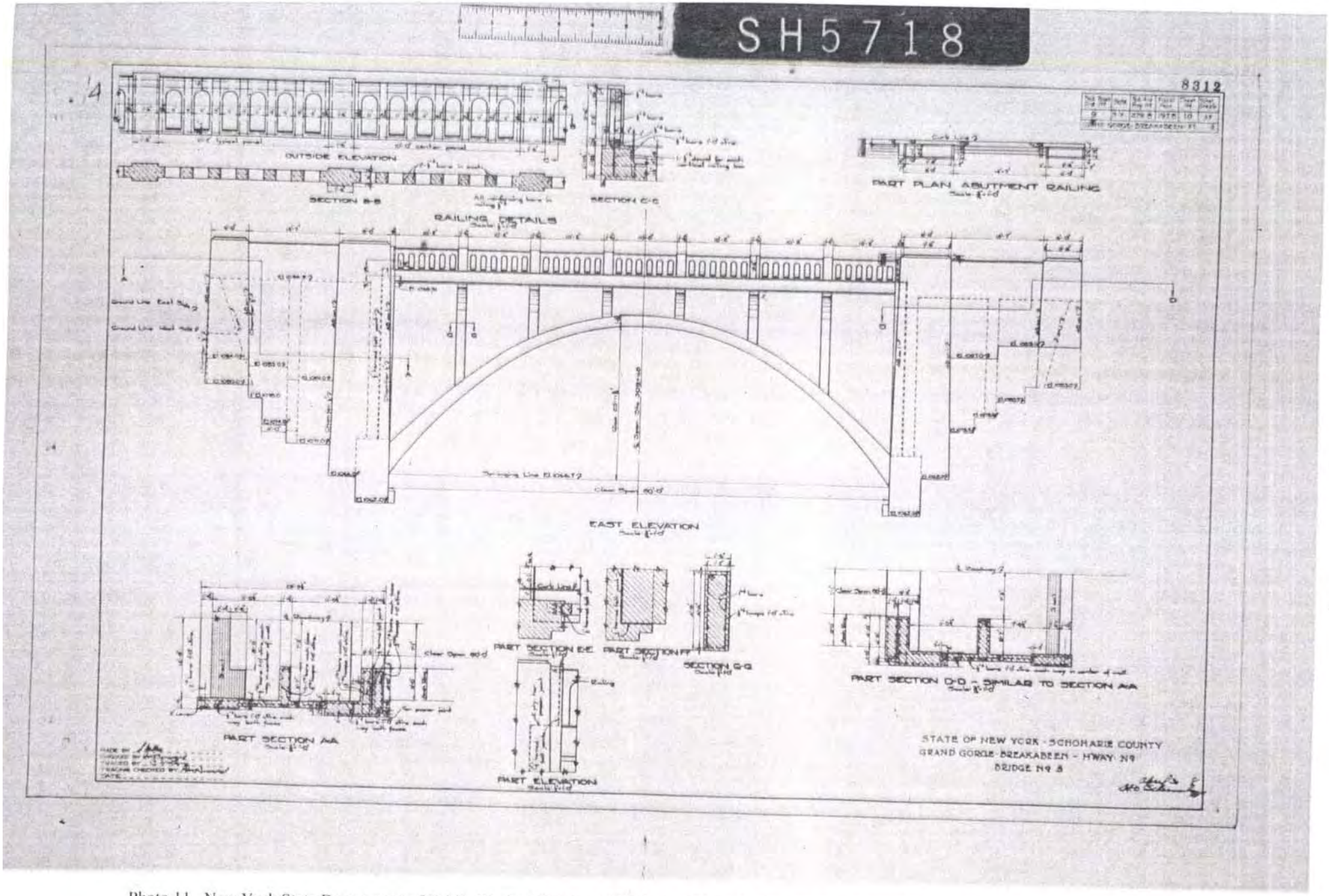


Photo 11. New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 10.

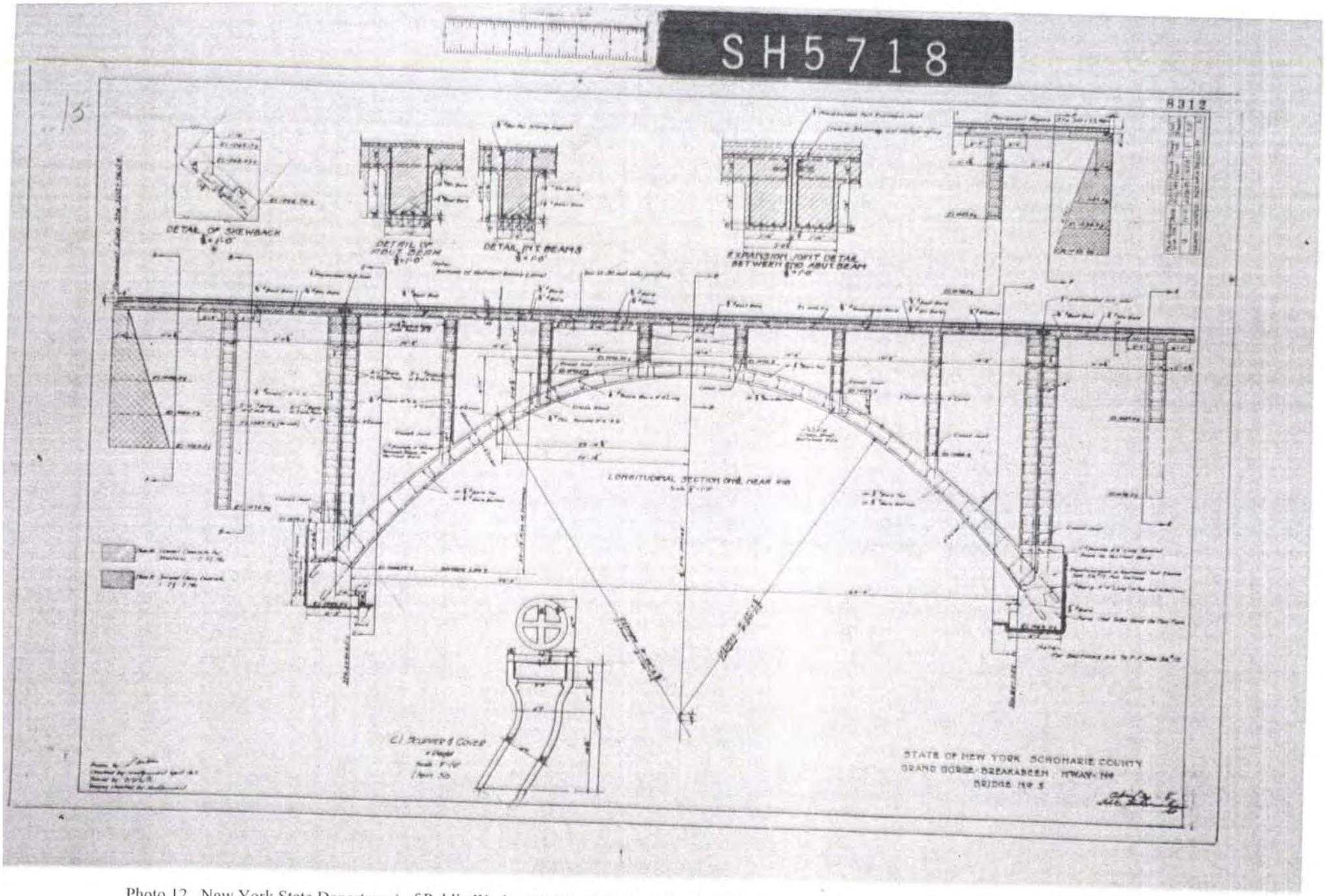


Photo 12. New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway, Contract SH 5718, April 30, 1928: Sheet 11.

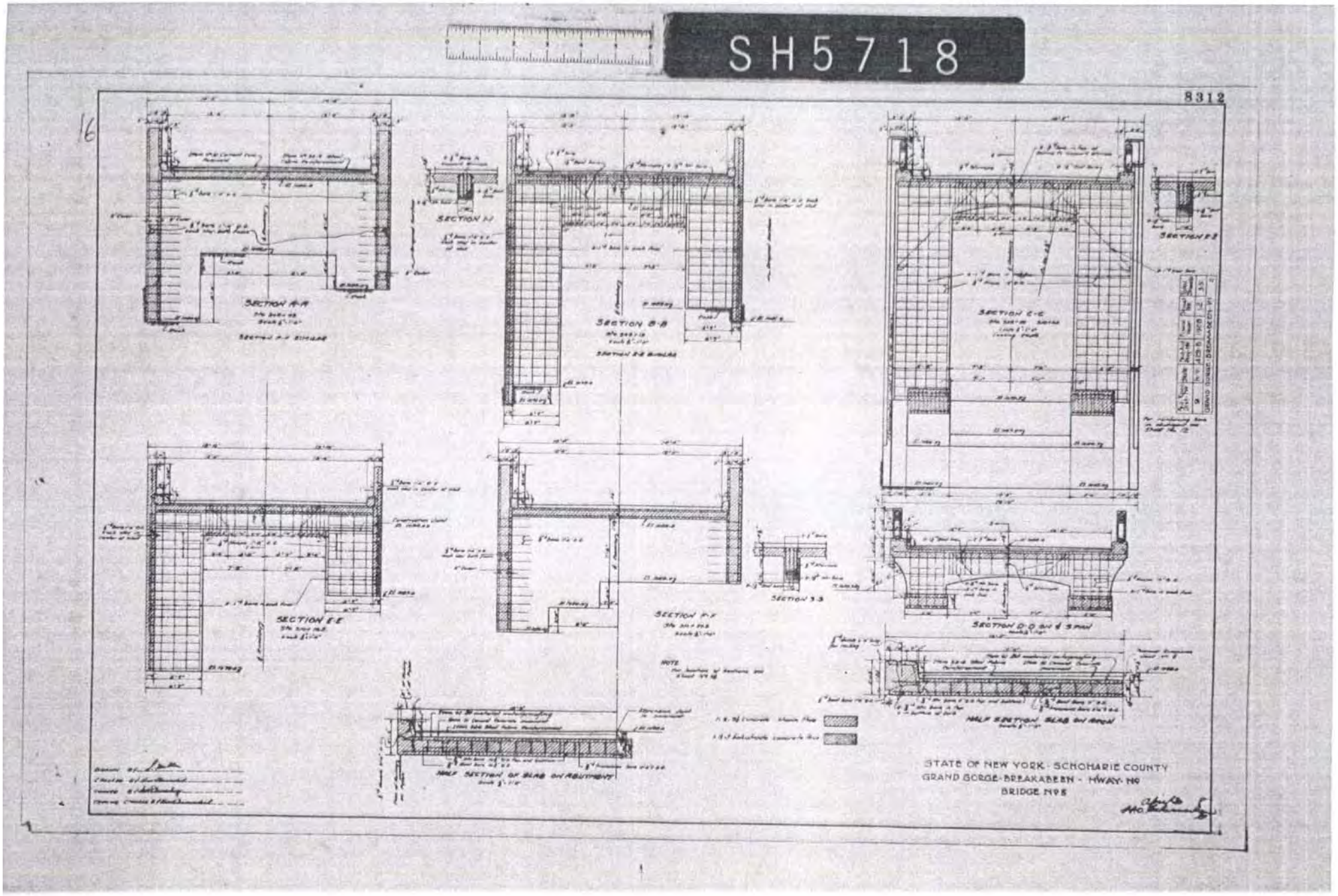


Photo 13. New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 12.

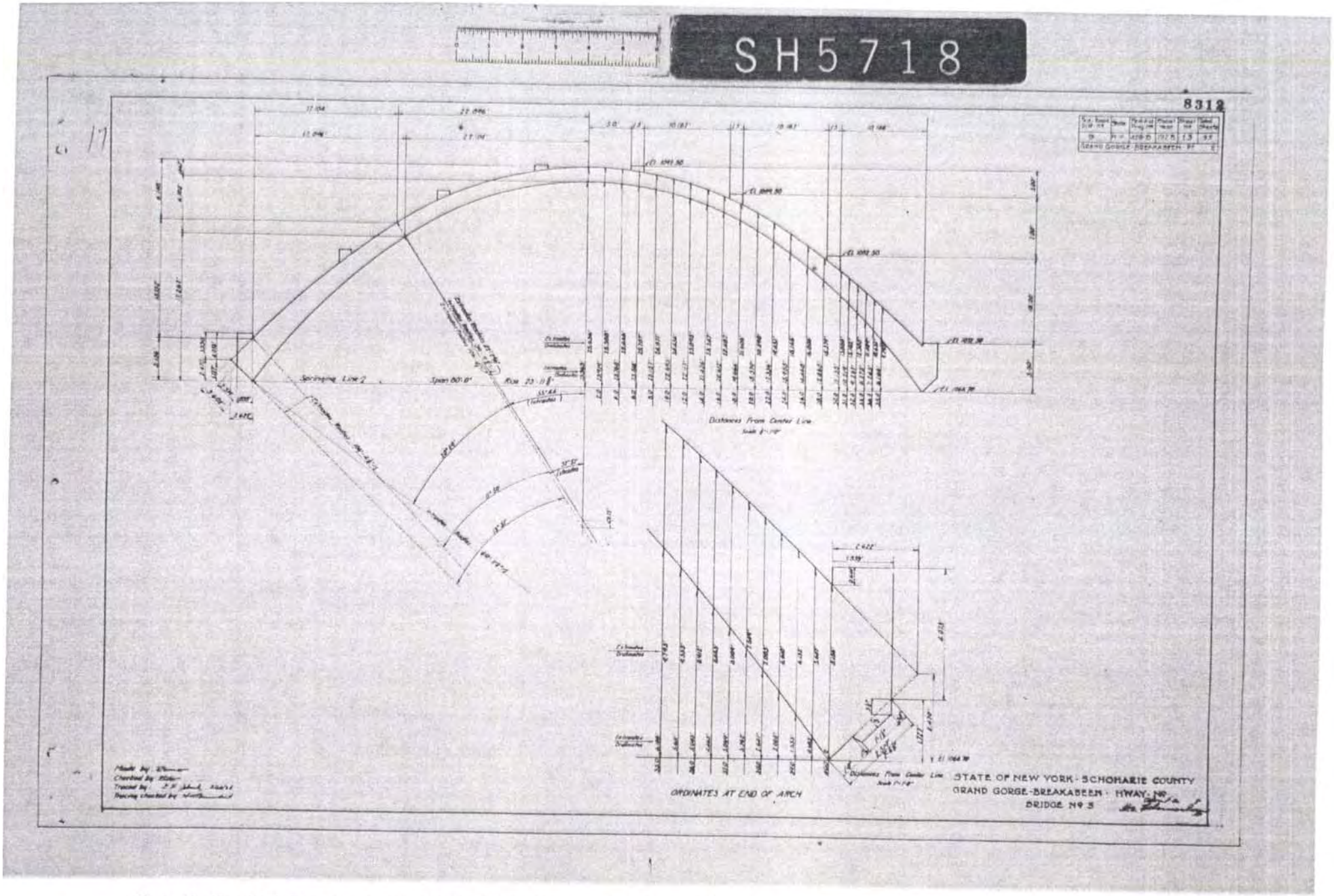


Photo 14. New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 13.

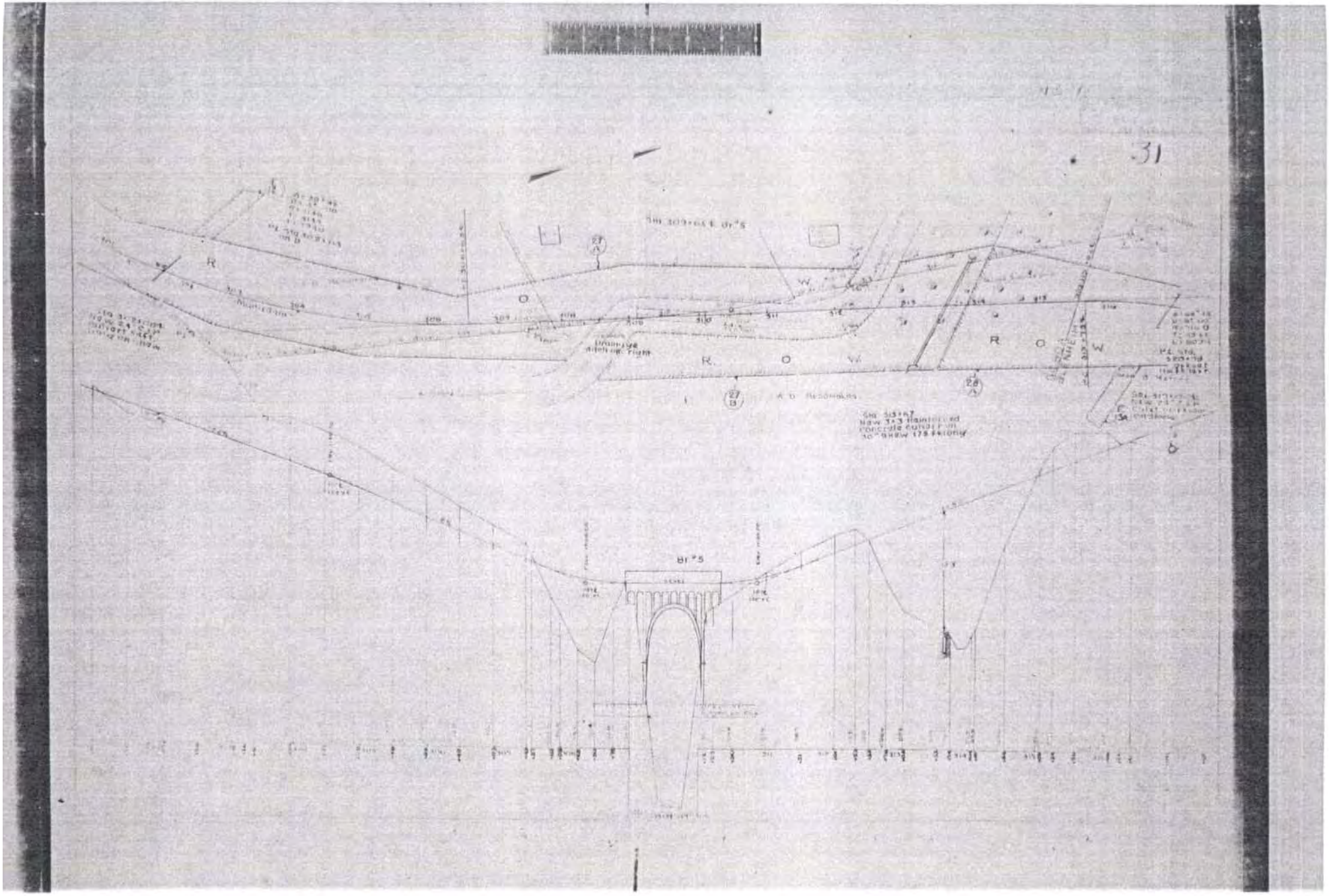


Photo 15. New York State Department of Public Works, Division of Highways Plans for Improving the Grand Gorge-Breakabeen, Part 1, State Highway. Contract SH 5718, April 30, 1928: Sheet 31.

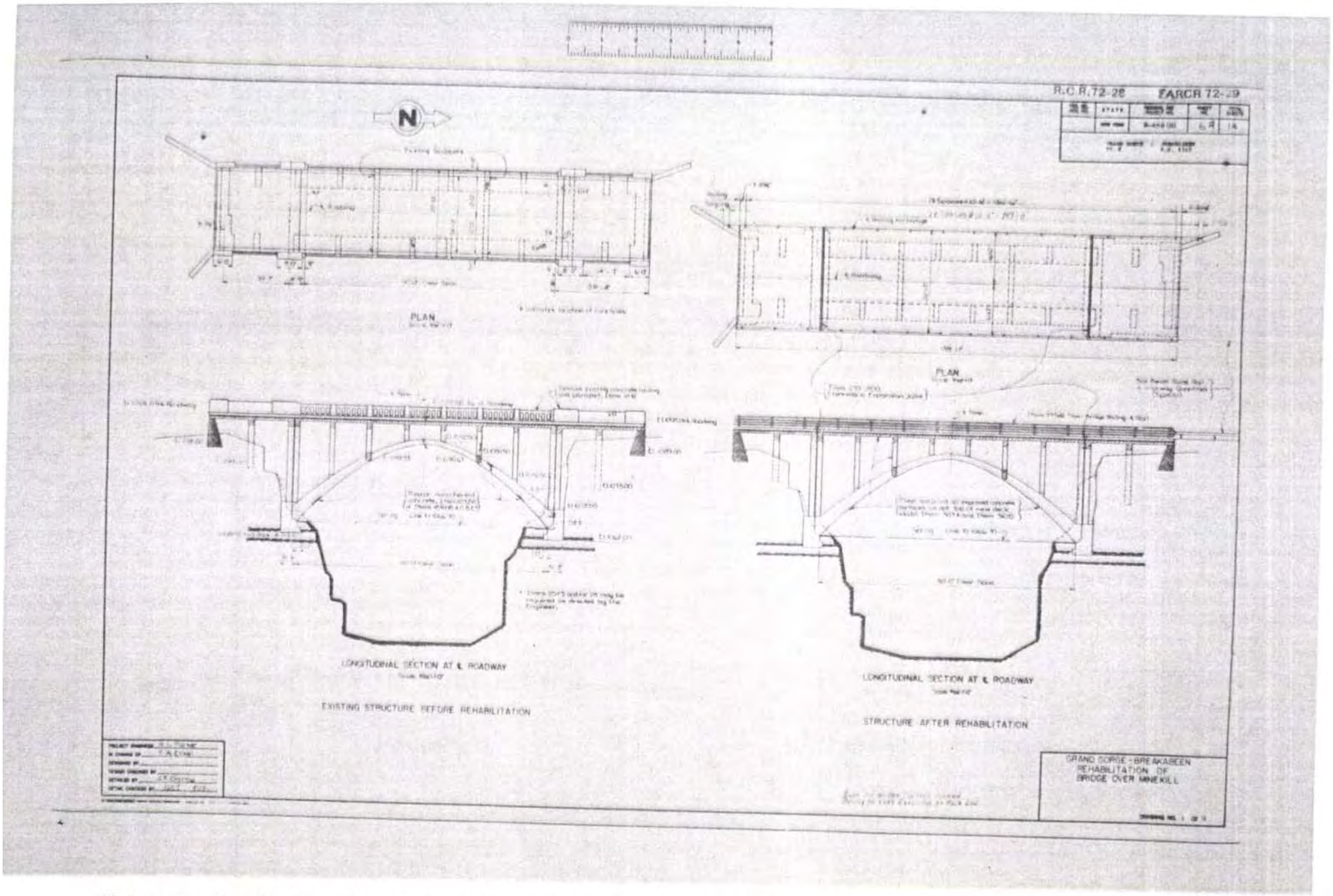


Photo 16. New York State Department of Transportation, Design and Construction Division, Plans for Reconstructing the Grand Gorge-Breakabeen, Part 2, State Highway No 8312. Contract RCR 72-28 and Contract FARCR 72-29. Sheet 6R.

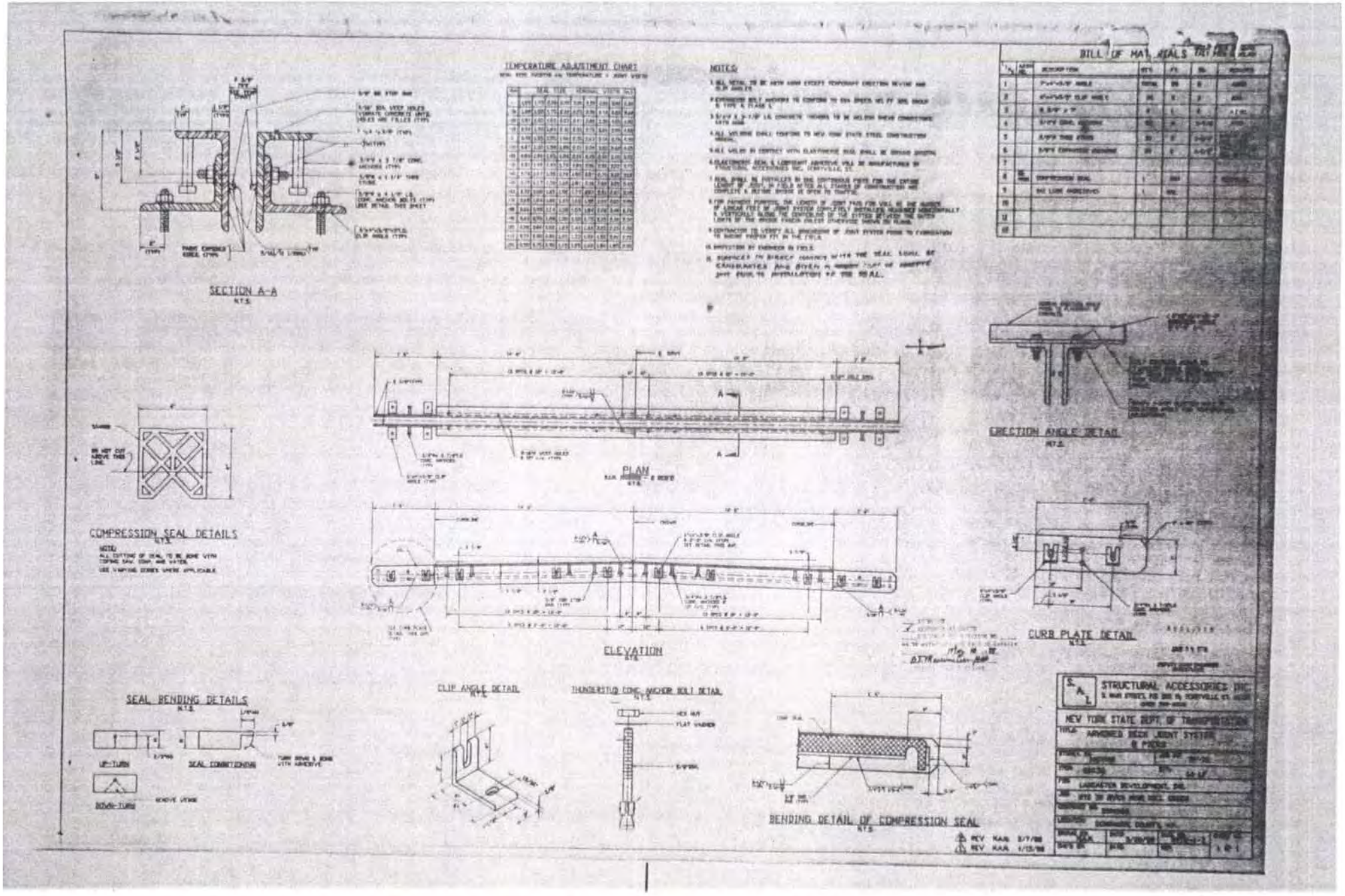


Photo 17. New York State Department of Transportation, Office of Engineering, Rehabilitation of Four Bridges on Routes 30 and 28 State Highways 8325, 8017, and 5577 in the Towns of Middletown and Gilboa Delaware and Schoharie Counties, Record Plans. Contract D500368. November 10, 1988. Sheet 1.

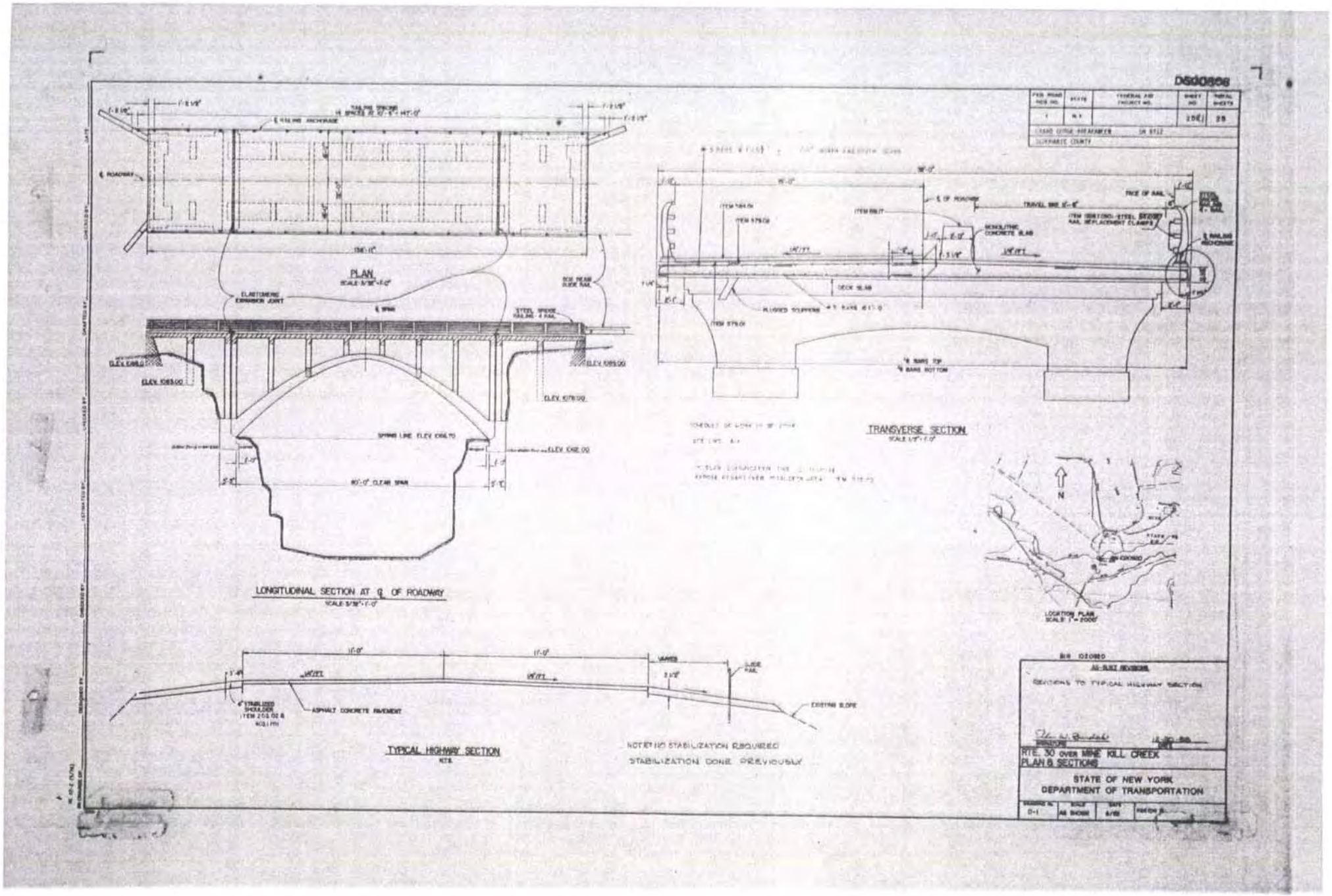


Photo 18. New York State Department of Transportation, Office of Engineering, Rehabilitation of Four Bridges on Routes 30 and 28 State Highways 8325, 8017, and 5577 in the Towns of Middletown and Gilboa Delaware and Schoharie Counties, Record Plans. Contract D500368. November 10, 1988. Sheet 25R1.