

10. NAME(S) OF STRUCTURE

State Bridge Number 202

11. PHOTOS (W/ FILM ROLL & FRAME NO) AND SKETCH MAP OF LOCATION

16A:22-28



16A:27

Mack, Warren W. "A History of Motor Highways in Delaware", in Reed, Henry Clay, Delaware: A History of the First State, vol.2, pp.535-550 (NY: Lewis Historical Publishing Co., 1947).

Delaware State Program. Delaware State Highways: The Story of Roads in Delaware... [Newark, Delaware: Press of Kells, 1919].

Federal Writers Project. Delaware: A Guide to the First State. (New York: Viking Press, 1938).

Carter, Dick. The History of Sussex County. Georgetown, Delaware: Community Newspaper Corp., 1976.

Hancock, Harold Bell. The History of Sussex County, Delaware. [s.l. : s.n.] 1976.

Spero, Paula A. C. A Survey and Photographic Inventory of Concrete and Masonry Arch Bridges in Virginia. (Charlottesville, Virginia: Virginia Highway & Transportation Research Council, 1984).

Delaware State Archives. Sussex County Road Papers. 1875-1940. ms. State Archives, Dover, Delaware.

Delaware DOT records: contract files.

Plans on file at Delaware DOT: Contract #7

13. INVENTORIED BY:

P.A.C. Spero & Company with Kidde Consultants for Delaware DOT

AFFILIATION

DATE

April-November 1988

HABS/HAER INVENTORY

See "HABS/HAER Inventory Guidelines" before filling out this card.

1. NAME(S) OF STRUCTURE

State Bridge Number 202

2. LOCATION

Route 13 over Clear Brook
Seaford, Sussex County, Delaware

3. DATE(S) OF CONSTRUCTION

1919

4. USE (ORIGINAL/CURRENT)

Vehicular

5. RATING

CA

6. CONDITION

Excellent.

State Highway Bridge Number 202 (Hearns Mill Bridge) is a 26'-8" long reinforced concrete arch bridge, consisting of a filled concrete segmental arch with a clear span of 24'-0" and a rise of 6'-9". It carries two lanes of traffic on a 32'-0" wide deck. The substructure consists of concrete abutments and flared wing walls on timber piles. A corbeled band follows the intrados of the arch; the sloping wing walls have corbeled caps, and a wide band defines the top of the fascia. The parapet is solid concrete with incised rectangular panels, a corbeled base and cap and square end blocks in a style similar to other bridges built during the same period.

Bridge 202 was built under Delaware Highway Department Contract Number 7; it was designated Federal Aid Project Number 2 in Federal Aid District Number 9. Charles M. Upham was Chief Engineer of the State Highway Department for the duration of this project. The project encompassed the construction of a 6.6 mile concrete road from Seaford to Bridgeville, and included all bridges and culverts necessary. The estimated cost of the entire project totaled \$537,827.40 with \$20,415.10 requested from the Federal Aid program. The New York firm of Kaufman and Garcey was awarded the construction contract and received the executed copy on May 31, 1918. The progress of the work was delayed by shortages of material and labor during World War I; Chief Engineer Upham complained to H. K. Bishop, District Engineer for the Office of Public Roads and Rural Engineering of the U. S. Department of Agriculture, that the project was "on the verge of being held up by the government," and received assurance that Bishop considered "the maintenance of our transportation system, including the highways, is an indirect necessity" to the war effort. Original drawings, dated April 1918, show design details for the bridge; reinforcement consisted of twisted square bars, and the roadway consisted of a reinforced slab, covered with earth fill and a concrete wearing surface. Added notes state: "Foundations weakened during storm September 6, 1935 and sheeting added." The bridge was designed for a 20 ton truck.

State Bridge Number 202 is a typical example of a concrete arch bridge designed by in-house highway department staff in a style similar to the "plain design" Luten arch bridges, patented by Daniel B. Luten. It was constructed during the period of rapid expansion of Delaware's transportation network, following the Federal Aid Highway Act of 1916 and the establishment of the Delaware State Highway Department in 1917. The availability of federal financial assistance enabled the State Highway Department to accelerate its program of improvements to the state's primary road system. Bridge 202, the product of one of the first Federal Aid projects undertaken in Delaware, is associated with this period of expansion, and retains a high level of integrity.