10. NAME(S) OF STRUCTURE

State Bridge Number 456

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

26B:10-14

26B:12

12. SOURCES

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).

Delaware State Archives. New Castle County Levy Court Records. Specifications, Proposals, Contract and Bond files.

Delaware State Archives. New Castle County Road Commissioners Records, 1750-1940.

Delaware DOT records: Photo archives; contract files.

Plans on file at Delaware DOT: Contract #274A

13. INVENTORIED BY:	**AFFILIATION**	**DATE**
P.A.C. Spero & Company with Kidde Consultants for Delaware DOT		April-November 1988

HABS/HAER INVENTORY

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

1. NAME(S) OF STRUCTURE

State Bridge Number 456

2. LOCATION

Road 45 over Saw Mill Bridge
Chambersville, New Castle County, Delaware

3. DATE(S) OF CONSTRUCTION

1934

4. USE (ORIGINAL/CURRENT)

Vehicular

5. RATING

TB

6. CONDITION

Good

7. DESCRIPTION

State Highway Bridge 456 comprises two 15'-6" timber girder spans, for an overall length of 31'-0". It carries two lanes of traffic on a 22'-0" wide deck. The substructure rests on timber bents, comprising a 10" x 12" timber pile cap on seven 12" diameter pilings. The abutments are constructed of 4" x 10" planks; the flared wing walls are stone, laid in semi-coursed rubble masonry. Eleven girders, 6" x 14" in section, support the deck, which is constructed of 4" x 10" planks. The parapet consists of two 2"X4" wooden rails on 4"X6" posts.

8. HISTORICAL DATA

Delaware Department of Transportation records state that Bridge 456 was constructed in 1934 under State Highway Department Contract 274A. The contract was executed on October 11, 1934 with Spear-Jones and Company of Dover, Delaware; their bid of $5,658.00 was the only one received. This bridge replaced a 17'-0" rubble masonry arch constructed in 1876 on the same site, which washed out on May 3, 1934; timber bridges offered an inexpensive and quickly-erected replacement for washed-out crossings. Original drawings, dated August 1934, also note plans for the realignment of Road 45. Typical of timber bridges built during this period, Bridge 456 was designed for a 15 ton live truck load, without impact. Notes specify the use of creosoted timber piles and lumber for this structure; acceptable materials included southern yellow pine, douglas fir, oak, and southern cypress. The empty cell process was specified for treatment, with the piles to receive 12 pounds of No. I creosote oil and the structural timber to receive 8 pounds.

9. SIGNIFICANCE

State Bridge 456 appears to retain much of its original fabric and is considered a good representative example of the type; its construction is also associated with the expansion of the rural transportation network in Delaware. Its two-span length distinguishes it among Delaware timber bridges, most of which comprise a single span. The majority of bridges surveyed on secondary roads in southern Delaware are simple timber bridges, mostly single spans, consisting of timber stringers on pile bents with wood decks and railings. Their structural configuration is simple and represents the continued use of one of the most primitive types of early bridges. Most of the bridges surveyed in Delaware date to the 1930s, although some are attributed earlier dates by the Department. Historic photographs illustrate that the type was built widely prior to the 1920s; it continued to be built in the 1940s. These bridges represent a specific engineering response to conditions characteristic of the region: they present a low-cost solution to the need for short spans crossing the numerous small waterways of southern Delaware. The structural simplicity of the type, the use of readily available materials, and the speed of erection also made it an ideal choice for use as a replacement bridge in emergency situations, such as after the disastrous floods of September 1935 when approximately 100 bridges were destroyed in Delaware.