4.0 ARCHITECTURAL INVENTORY AND EVALUATION

4.1 METHODOLOGY

4.1.1 Archival Research

Parsons conducted background research on the Draper/Bonk House at 16046 Federal Street/ SR5, the dwelling at 14559 Sand Hill Road, the dwelling at 14102 Sand Hill Road, and two bridges, Bridge 3-918 and Bridge 3-806, located at SR30 over Reynolds Mill Pond and S319 over Diamond Pond, respectively. Parsons utilized deed research, investigations of DelDOT files, information at the State Historic Preservation Office, discussions with building owners, and extensive research at local and state repositories to gather information. Repositories consulted for this project include the Delaware Public Archives, the DelDOT library, the Delaware SHPO, the Milton Public Library, the Sussex County Recorder of Deeds Office, the State Historic Preservation Office, and the Library of Congress.

4.1.2 On-Site Investigation

On-site investigations were conducted on September 9-12 and 23-26, 2002, consisting of one site visit for each resource that included reconnaissance level survey and assessment of physical integrity. Black and white 3"x5" photographs were taken of each resource and the surrounding landscape (Figure 4-1).

4.1.3 Recordation

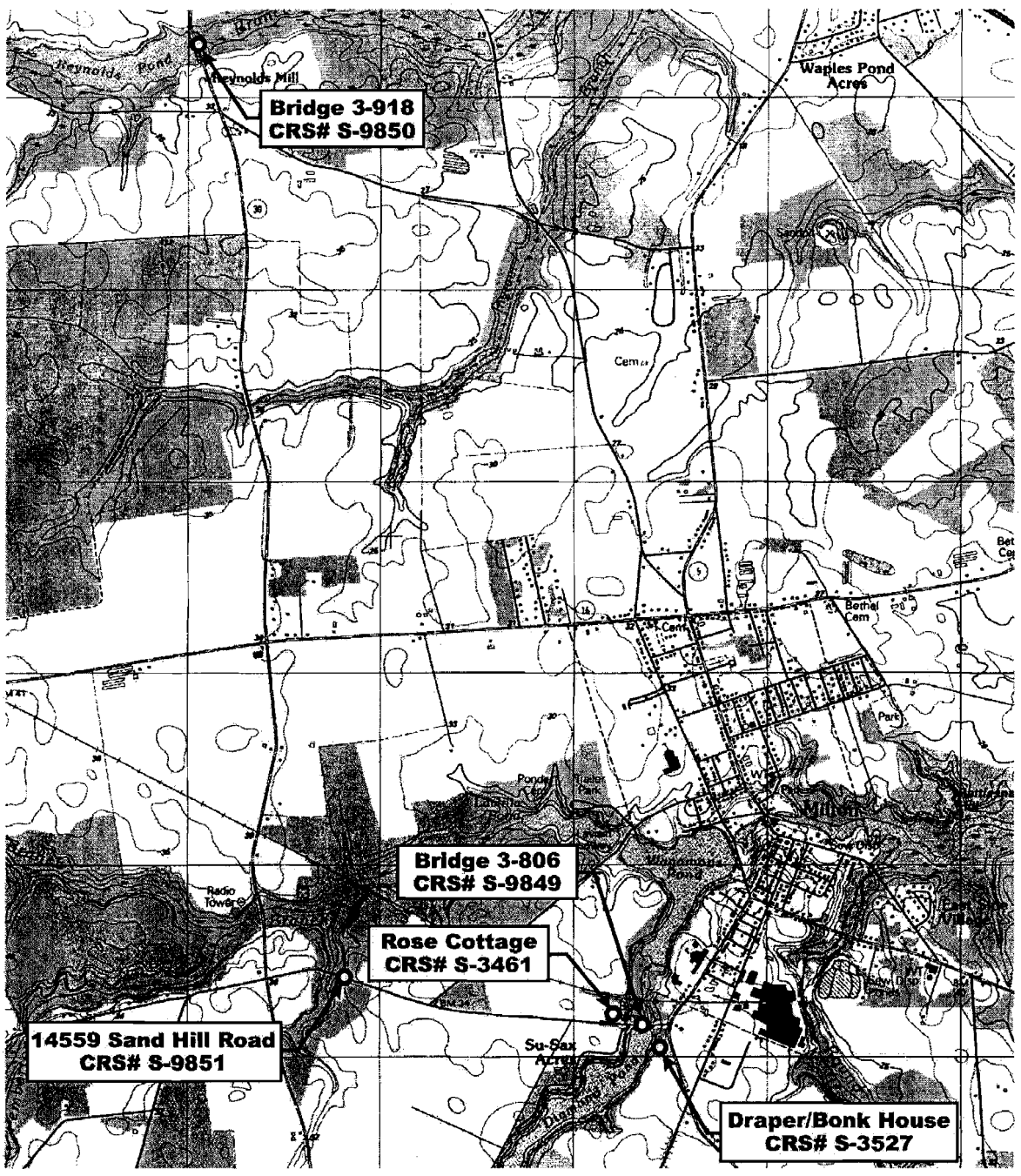
Delaware SHPO CRS Forms were completed for each respective property, which includes a property identification form (CRS-1) and building or structure specific forms (CRS-2-9). For properties previously surveyed, a survey update form (CRS-10) was completed in conjunction with the property identification form and building or structure specific forms. CRS forms are located in Appendix C.

4.2 NRHP CRITERIA

The methodological basis for the evaluation of these resources was the *National Register Bulletin 15: How to Apply National Register Criteria for Evaluation.* An analysis was made for each property's ability to meet the NRHP's criteria by:

- Being associated with an important context *and*
- Retaining historic integrity of those features necessary to convey its significance

First, each resource was classified as either a district, site, building, structure, or object. Secondly, a Native American or historical context represented by each resource was determined. The NRHP states that a resource's significance must lie in "American history, architecture, archaeology, engineering or culture" when being evaluated within the context of



Source:
7.5' USGS Quad, 1992
Milton, DE

Quadrangle Location

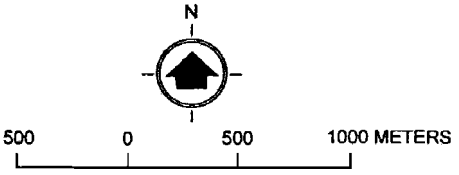


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Figure 4-1. Architectural Resources in the Project Area.

a relevant geographic area. Thirdly, each property's significance was determined under the NRHP Criteria. The four areas of criteria include:

A. Properties that are associated with events that have made a significant contribution to the broad patterns of our history;

B. Properties that are associated with the lives of persons significant in our past;

C. Properties that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; and

D. Properties that have yielded, or may be likely to yield, information important in prehistory or history.

Fourthly, each resource was determined if they represent a type usually excluded from the NRHP, designated as Criteria Considerations. This includes religious properties, cemeteries, moved properties, reconstructed properties or properties less than fifty years old.

Finally, each resource was evaluated to determine whether it retains integrity. Integrity is the ability of a resource to convey its significance. The seven aspects of integrity are location, design, setting, materials, workmanship, feeling and association. In order to retain historical integrity, a resource will always possess several, usually most, of the aspects. Retaining the specific aspects of integrity is paramount for a property to convey its significance. The determination of which of these aspects are most important to a particular property requires knowing why, where, and when the property is significant.

The assessment of integrity can only be determined after the significance of the resource is fully established. The defined steps in assessing integrity are:

- Define the essential physical features that must be present for a property to represent its significance.
- Determine whether the essential physical features are visible enough to convey their significance.
- Determine whether the property needs to be compared with similar properties. And,
- Determine, based on the significance and essential physical features, which aspects of integrity are particularly vital to the property being nominated and if they are present.

4.3 ARCHITECTURAL CONTEXT AND EVALUATION

4.3.1 14559 Sand Hill Road, Broadkill Hundred, Sussex County, Delaware (CSR #S-9851)

General Description

The ca. 1944 single-family dwelling at 14559 Sand Hill Road is located in a rural area of Sussex County on approximately three acres of land. The site is extensively landscaped with

mature trees and shrubs and slopes approximately six feet up from Sand Hill Road. Substantial ivy cover is located at the north side of the property along this road. A gravel and concrete driveway is located west of the house and provides access to the outbuildings at the rear of the property. The property includes the main house, a ca.1944 garage, a ca.1944 shed, a ca. 1980 garage, in-ground swimming pool, a doghouse and a greenhouse. The property was partially inaccessible allowing for evaluation of the main house, two garages and the shed only.

Main House. The one-story, four bays wide, vernacular house is oriented north towards Sand Hill Road. The layout of the building is T-shaped consisting of the main block of the house at the east and the shaft of the T extending west (Figure 4-2). The house is constructed upon a raised, parged concrete foundation and is faced in wood siding (weatherboard). The house has a modest molded wood cornice and a low-pitched, cross-gable roof with a shed roof extension at the southeast corner of the rear elevation. The roof is clad in asphalt shingles.

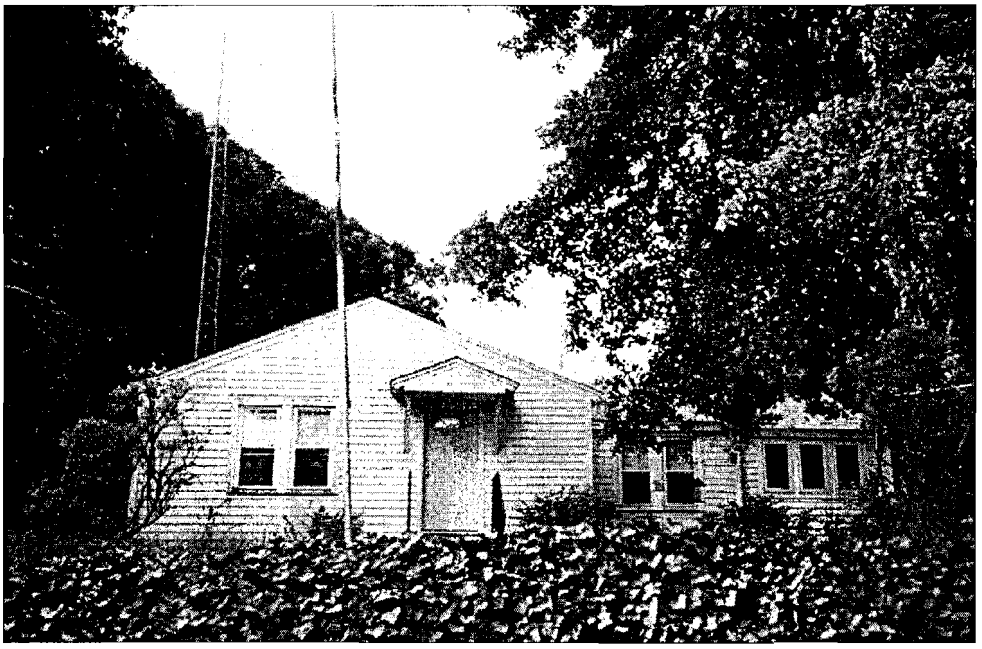


Figure 4-2. View of 14559 Sand Hill Road, Main Elevation (9/2002)

The main (north) elevation is four bays wide with the main block of the house consisting of two bays with a pair of 1/1 double-hung, vinyl sash replacement windows with modest wood sills and surrounds at the east bay. The main entrance, located at the second bay, has a modern metal and glass, single-leaf door with a semi-circular pane. Concrete stairs lead to the main entrance and the entrance is capped by a projecting, pedimented hood. The shaft of the T is recessed from the main block and includes a pair of 1/1 double-hung, vinyl sash windows with modest wood sills and surrounds at the third bay. The west end of the main elevation is pierced by a ribbon (3) of vinyl casement windows with vinyl sills and surrounds.

The west elevation of the house is presented with one bay at the extending shaft and a second bay at the south side of the shed roof extension off the main block for a total of two bays at

the west elevation. The extending shaft is one bay wide with a fixed window at the basement level and a modest oriel window with two vinyl casement windows and one fixed window at the first story. A small, wood louvered opening is located at the attic level. There are no openings at the north side of the main block's west elevation. A single 1/1 double-hung, vinyl sash window is located at the first story of the shed roof extension's west elevation. This window has a modest wood sill and surround.

The rear (south) elevation is five bays wide with a secondary entrance at the first bay. The single-leaf, metal and glass door is accessed by a three-step, concrete stair. A projecting pedimented hood caps the secondary entrance. Two 1/1 double-hung vinyl sash windows with wood sills are located at the second and third bays. A projecting, concrete chimney is located between the third and fourth bays. A 3-light, fixed window is located at the basement level of the fourth bay and a one-light awning window is located at the first story. The final bay, located at the shed roof extension of the main block, is pierced by a 1/1 double-hung, vinyl sash window with a modest wood sill and surround.

The east elevation is three bays wide with a single fixed window opening at the center of the basement level and two vents with metal grilles at the north bay of the basement level. Three 1/1 double-hung, vinyl sash windows with modest wood sills and surrounds are located at the first story.

Domestic Outbuildings. The three main outbuildings located at the rear of the main house include a ca. 1944 garage, a ca. 1944 shed, and a ca. 1980 garage. These resources were only partially accessible. Secondary resources that are located on the property but were inaccessible include the in-ground swimming pool, doghouse and greenhouse.

The ca. 1944 garage is a small, one-story, one-bay frame building constructed of wood (possibly plywood) panels. The garage is constructed upon a concrete slab foundation with a front-gable roof clad in asphalt shingles. Located at the north (main) elevation is the original pair of vertical, wood garage doors. The west and south (rear) elevations of the garage were not visible and were inaccessible. The east elevation of the garage is pierced by a single 9-light fixed wood window. The window has a modest wood sill and surround.

The ca. 1944 shed is a small, one-story, two bays wide, frame building constructed upon a concrete slab foundation. The frame building is constructed of wood (possibly plywood) panels with a side-gable roof clad in asphalt shingles. The main (north) elevation is pierced by a single-leaf wood door constructed of vertical wood boards and a 9-light fixed wood window with a modest wood surround and sill. There are no openings at the west elevation. The remaining secondary elevations were not visible and were inaccessible.

The ca. 1980 garage is a large, one-story, two bays wide, frame building constructed of wood siding (weatherboard) upon a concrete slab foundation. The front-gable roof is clad in asphalt shingles. The north elevation is pierced by a paneled, metal garage door and an awning window. The west and south (rear) elevations were not visible and were inaccessible. The east elevation is five bays wide with awning windows at the first, third and fourth bays. Single-leaf, paneled metal doors are located at the second and fifth bays and provide pedestrian access into the garage.

Southeast of the ca. 1980 garage is an in-ground swimming pool and south of the pool is the greenhouse. A small, wood frame doghouse is located south of the main house. These resources were inaccessible.

Historical Context

Herman Hassemer granted the property located at 14559 Sand Hill Road to Kristie M. Brown in March 1990 (SCDB 1990: 87). Hassemer assembled the tract of land in two separate transactions. The first tract, which included approximately 6 acres of land but not the land where the house is sited, was purchased from Linford C. Willey, et al. in August 1951. The second tract, including approximately 1.3 acres with the house and its associated outbuildings, was purchased by Hassemer from Richard Draper in December 1954 (SCDB 1954b). Draper had retained ownership for approximately nine months, purchasing the house and acreage from Willard Donovan in March 1954. The deed between Donovan and Draper mentions the dwelling and a ½ acre garden (SCDB 1954a). Although textual documentation does not exist to determine the exact date of construction, physical evidence and the building's listing on the 1944 USGS (Milton Quad) places the building's construction date at ca. 1944. The building's vernacular form and lack of specific stylistic features presents a level of difficulty in conducting a comparative analysis of similar buildings in the county.

Evaluation

14559 Sand Hill Road, constructed ca. 1944, was evaluated for its individual significance and potential eligibility for listing on the NRHP. Analysis of 14559 Sand Hill Road indicates that the resource is not associated with events that have made a significant contribution to the broad patterns of history (Criterion A) and the resource is not known to be associated with the lives of significant persons (Criterion B). The design of the house is a typical example of a vernacular building and the resource does not represent the work of a master or possess high artistic values. The house does not portray distinctive characteristics of a type or method of construction (Criterion C). Archaeological potential was not assessed for this property (Criterion D).

14559 Sand Hill Road is a typical example of a World War II era, vernacular dwelling in rural Sussex County. Although the location of the building and its rural setting has been retained, an increase of development pressure and the addition of modern outbuildings have altered the physical setting. The overall integrity of the design, materials and workmanship of the house has been retained, but the house lacks individual distinction and significance. The introduction of non-compatible materials, such as vinyl windows and trim, detract from the building's original design. The physical association of the building was altered with the demolition of additional associated outbuildings. 14559 Sand Hill Road does not retain sufficient aspects of integrity to convey its individual significance (Table 4-1). Based on the on-site study of the resource and extensive research to develop an historical context for the building, it has been determined that the resource is recommended as not eligible for listing on the NRHP.

Table 4-1. Integrity for 14559 Sand Hill Road

Aspect of Integrity	Finding
Location	Yes
Setting	No
Design	No
Materials	No
Workmanship	No
Feeling	No
Association	No
Overall Assessment	**Loss of Integrity**

4.3.2 14102 Sand Hill Road, Broadkill Hundred, Sussex County, Delaware (CRS #S-3461)

General Description

The ca. 1937 single-family dwelling at 14102 Sand Hill Road, currently known as the Rose Cottage, is located on approximately 7 acres in a rural area of Sussex County outside of the town of Milton. The site is extensively landscaped with mature trees and shrubs with a large grouping of trees at the east side of the property. A crushed oyster shell driveway is located along the east side of the house and provides access to the garage at the rear of the property. The property includes the main house, a modern garage and a modern gazebo.

Main House. The one-and-a-half story, three-bays wide bungalow is orientated south towards Sand Hill Road (Figure 4-3). The layout of the main block of the building is rectangular with a one story, one room deep, kitchen addition at the rear. The frame construction of the house is faced in wood shingles and constructed upon a raised, rock-faced concrete block foundation. The house has a full, unfinished basement level. The house has a modest wood cornice and a front-gable roof clad in asphalt shingles with a center, brick chimney.

The main (south) elevation is three bays wide with the first story pierced by two 6/1 double-hung, wood sash windows flanking a 15-light, single-leaf, wood and glass door. The windows and main entrance have a decorative wood surround with a molded cap. The one story porch has a concrete floor with spindle balusters and turned porch supports. The Queen Anne style balusters and porch supports are not original to the building and were installed during the later two decades of the twentieth century. The half-hipped roof is clad in asphalt shingles and the rafters are exposed. A 6/1 double-hung, wood sash window pierces the gable end.

The east elevation is three bays wide with each bay having a single window opening at the basement level. At the first-story, each bay has a pair of 6/1 double-hung, wood sash windows. The two pairs of windows at the main block of the house have a decorative wood surround with a molded cap. The pair of windows at the rear extension has a similar wood surround without the molded cap.

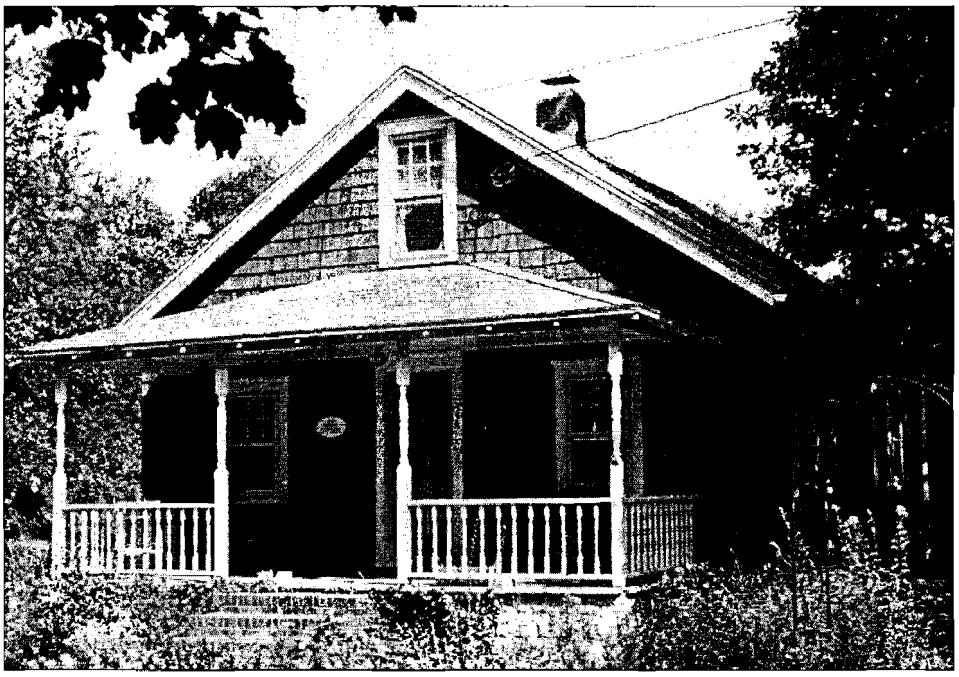


Figure 4-3. View of 14102 Sand Hill Road (Rose Cottage), Main Elevation (9/2002)

The rear (north) elevation is obscured by extensive tree coverage and was inaccessible. A survey conducted in 1983 recorded the rear elevation as being three bays wide with a center entrance flanked by 6/1 double-hung wood sash windows (Delaware SHPO 1983). The date of construction of the kitchen addition is unknown and was not noted on the original 1983 survey.

The west elevation is three bays wide with window openings at the first two bays of the basement level. The three bays each have a single 6/1 double-hung, wood sash window. The two windows at the main block of the house have a decorative wood surround and molded cap. The third bay at the rear extension has a similar wood surround without the molded cap.

The owner provided access to the interior of the house, which revealed extensive alterations to the original floor plan. The owner indicated that first floor bathroom was enlarged during the 1990s. A kitchen addition was constructed during the second half of the twentieth century prior to the present owner's occupation.

Outbuilding. The late twentieth century garage, located northeast of the main house, is a one story, one bay wide building with aluminum siding. The front gable roof is clad in asphalt shingles with vertical aluminum siding at the gable and a modest wood cornice. The main (south) elevation is dominated by the metal and glass garage door. The east elevation is pierced by a single 6/1 double-hung, wood sash window with a modest wood surround. The west elevation has a 6/6 double-hung, sash window with a similar wood surround. The rear (north) elevation was inaccessible.

A late-twentieth-century wood gazebo is located east of the garage. The one-story, hexagonal structure is screened-in with wood balusters, posts and a wood shingle roof.

According to conversations with the owner, the original outbuildings associated with the property were demolished in the late 1990s. Mrs. Smith remembers little about these buildings due to their highly deteriorated state at the time of demolition (Elaine Smith 2002, pers. comm.).

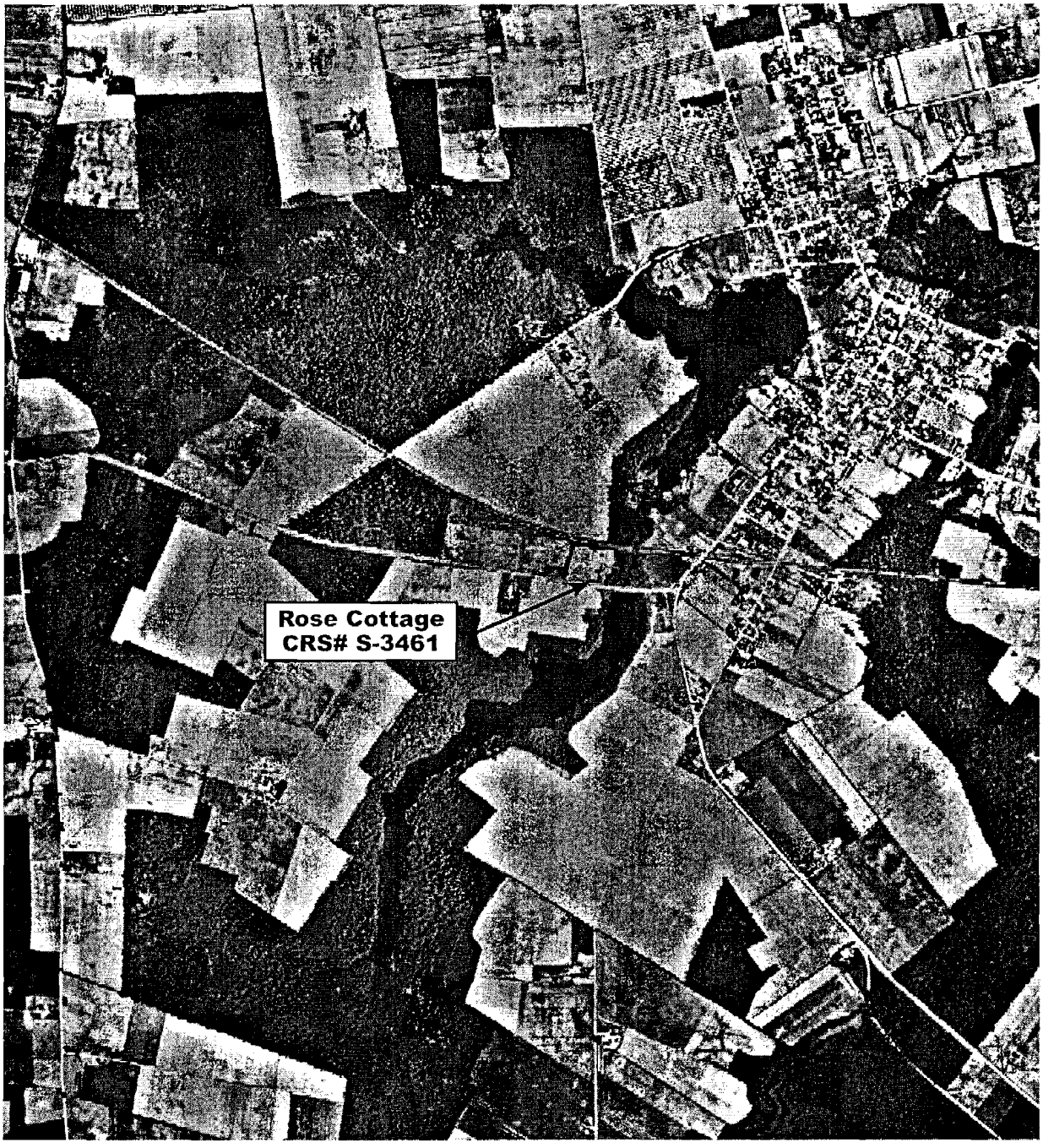
Historical Context

Historically, this property was owned by Joseph Maull (1781 – 1846) by the 1840s. Maull became a doctor and was practicing in Broadkiln Hundred by 1809. By 1836, Maull owned over 300 acres in Broadkiln Hundred, including 3 mills, a mansion house in Milton, and several tenant houses (BKA 1836). Maull died in 1846 and his property descended to his heirs. The future Rose Cottage property was still owned by his heirs in 1853 (Figure 2-4) and may have been a nine-acre parcel near Milton worth $90.00 in 1852 (BKA 1852).

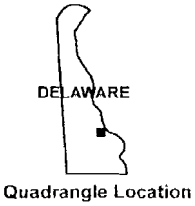
The property was owned by William B. Tomlinson by 1907, and encompassed roughly two acres north of the public road from Milton to Georgetown (S319), and west of a one-acre parcel abutting Paynter's Mill Pond (SCO 1907: 212). There was a narrow strip of land north of these parcels and south of the railroad right-of-way; the strip was part of the neighboring tract of 17 acres to the east of Tomlinson, owned by the estate of Elizabeth A. Jackson, deceased.

William B. Tomlinson had extensive land holdings in Sussex County. The parcel fronting on present-day S319 may have been a lot plus house valued at $1,500.00 before 1905 and $1,800.00 by 1905 (BKA 1892, 1893, 1896 – 1900, 1901 – 1904, 1905 – 1908, 1913). A building is shown north of and set back from S319 in the approximate location of the Tomlinson property by 1914 (Figure 2-3). However, the building could be the former miller's house on the Paynter/Wagamon property to the east of Tomlinson and west of Paynter's Mill Pond (Figure 2-4).

After 1913 and by 1933, the tract was owned by Margaret Moore. Margaret is not listed in the 1913 Farm Journal for Sussex County as a landowner, tenant, boarder, or as the wife of a Moore (Farm Journal 1913). Other buildings located close to the right-of-way on S319 (Sand Hill Road) are identified on a 1933 plat (Delaware State Highway Department 1933;Figure 2-6). However, the bungalow at 14102 Sand Hill Road is not identified on the plat. Physical evidence, in conjunction with existing textual documentation and oral history, leads to a ca. 1937 date of construction for the bungalow. The house was reportedly built by the Moore family in 1937 (Elaine Smith 2002, pers. comm.). By 1938, the bungalow appears on an aerial photograph (DelDOT 1938) (Figure 4-4). Margaret Moore and her husband had seven children: Clayton, Isadore, Clarence, Leona, Jeanatte, George, and Martha (Elaine Smith 2002, pers. comm.). The property had passed down to Clarence Moore by 1973 (mentioned in SCDB 1973: 643). The current owner of the property (Parcel 2-35 20.00 10.00) is Elaine Smith. The 2.77-acre tract was valued at $4,200.00 for the land and $10,000.00 for the improvements in 2003 (Sussex County Real Estate – Property Taxes 2003b).



Source:
DelDOT Aerial, 1938
Milton, DE



Quadrangle Location

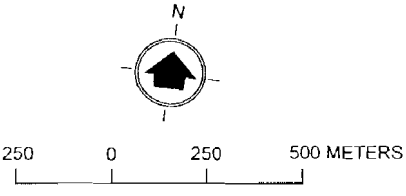


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Figure 4-4 . The Diamond Pond Area in 1938 (DelDOT 1938)

The older house that reportedly was bulldozed by 14102 Sand Hill Road owner's husband years ago may have been a Tomlinson property rental home that appears on the tax rolls from the 1890s to 1913 or later. However, the house may have been the former miller's house on the former Paynter/Wagamon property to the east. The presence of an entrance drive to the Wagamon property on the 1933 DelDOT plat suggests that there was still a building standing in 1933; the absence of a driveway depicted on the adjacent Moore tract would seem to indicate the lack of a dwelling on the Moore property in 1933. Maps of the area from 1914 (Farm Journal) and 1918 (USGS) show only one building in the vicinity of the Wagamon and Moore properties; the building is set back from (north of) S319 (Sand Hill Road). Most of the former Wagamon tract appears to be wooded in the 1938 aerial photograph, with the possible exception of its northwest corner (Figure 4-4). A map from 1955 shows two buildings, with the western building closer to S319 (Figure 2-8). The western building appears to be the Rose Cottage, while the eastern building is likely the former miller's house (perhaps located in the northwest corner of the former Wagamon tract that was still cleared in 1938).

In summary, the bungalow currently known as the Rose Cottage was constructed ca. 1937 by the Moore family. The single-family dwelling that is extant today was not associated with the mills or miller's house that had previously occupied the neighboring property; the former Wagamon tract was not purchased by the Smiths until 1994 (see the Paynter Mills discussion; SCDB 1994: 216).

The Early Suburbanization and the Bungalow in Sussex County, Delaware (1930s-1940s). An extensive historical context on the built environment during the early suburbanization period of Sussex County was developed for the Sussex East West Corridor Study south of the Milton area and provides an excellent sampling of the typical single-family dwellings constructed in Sussex County during the first half of the twentieth century (Tabachnick et al. 1992:29). The suburbanization of the county during this period before World War II was directly related to changes in the agricultural activity in Sussex County. Between 1880 and 1940, less than forty percent of the land in the county was being farmed with the most dramatic decline occurring between 1910 and 1940 with a decrease of more than fifteen percent (Bausman 1941:4, 7). A substantial increase in roadway improvements continued to spur development with most of the new or improved road construction being built in the county between the 1920s and 1930s. The increasing access between rural Sussex County and the urban areas of Wilmington and beyond led inhabitants of Sussex County to be aware of the new suburban developments in these areas. The new residential development in Sussex County incorporated a number of building types from the typical nineteenth-century I-House, common to the agricultural landscape in Sussex County, to the introduction of foursquares and bungalows.

The bungalow building type included the Craftsman variation whose popularity was propelled by the *Craftsman,* a journal published between 1901 and 1916 by Gustav Stickley. This popular journal advertised the typical one-and-a-half story bungalow design with a full width porch, wide overhanging roof and gabled dormer (Carley 1994:208, 212). A second wide-spread source for bungalow designs was the mail order catalog from Sears, Roebuck, and Company. House kits could be purchased from Sears and between 1908-1940, over 100,000 single-family dwellings were constructed based on more than 440 different designs

(Stevenson and Jandl 1986:19). The bungalow designs available from Sears and other mail order catalogues included the Craftsman bungalow and a modest variation of the bungalow type. The latter was an extremely popular building type for its minimal, exterior decorative features and efficient layout of the interior space. Various designs of one and one-and-a-half story bungalows with a front gable roof and front porch were available and were copied by builders across the United States. "The bungalow's thrifty design made it attractive to...rural...dwellers, who were encouraged by the simultaneous proliferation of bungalow advertisements, floor plans and decorating ides published in the popular literature" (Chase 1995:186).

Physical evidence suggests that 14102 Sand Hill Road was not a Sears house, but its design is very similar to the Sears House design for two types of bungalows, "The Hampton" and "The Crafton". 14102 Sand Hill Road is a smaller house being two rooms deep with a kitchen addition at the rear. The "Hampton" and "Crafton" designs incorporated a one-and-a-half story, three bays wide bungalow with a front gable roof and exposed rafters and a one-story porch with a half-hipped roof. These designs were three rooms deep and featured four to six rooms with one full bath (Stevenson and Jandl 1986:77, 81). The typical, modest bungalow design was utilized throughout Sussex County and a number of extant examples have been previously identified in the Sussex East West Corridor Study (Tabachnick et al. 1992: 30). Within the study area, located south of the Milton area, six bungalows of similar design were identified and evaluated for possible eligibility for listing on the NRHP (Tabachnick et al. 1992). Of these six resources, three (3) buildings (CRS S-8414, S-8495, S-899) were recommended as not eligible for listing, two (2) buildings (CRS S-8507 & S-8508) were recommended as contributing elements to a proposed historical district, and the final resource (CRS S-3569) was recommend as eligible for listing on the NRHP. This resource (CRS S-3569), which included its agricultural outbuildings, was recommended as architecturally significant for being representative "of a typical, small family owned farm of the first half of the twentieth century" (Tabachnick et al. 1992: 317). An intensive study of the rural adaptation of bungalows in Sussex County and the changes to the interior floor plans of these buildings was conducted by Susan Mulchahey Chase. Although the study was focused on bungalow interiors, Chase lists the typical characteristics of the bungalow exterior as including a "low-pitched roof, projecting in deep overhanging eaves, and supported by substantial, though simple, brackets" (Chase 1995:180). In addition, bungalows typically include "a broad porch that ranges across the front and is anchored solidly at the corners by heavy pillars." A number of bungalows have been nominated to the NRHP as contributing elements to the Milton Historic District (Carter 1980), including the ca. 1925 bungalow at 424 Federal Street and the early twentieth century house at 302 Chestnut Street.

The bungalow at 14102 Sand Hill Road is a typical example of a bungalow and it lacks individual distinction and significance. Although it retains a majority of its original characteristics and features, the house is a standard representative of this building type.

Evaluation

14102 Sand Hill Road, constructed 1937, was evaluated for its individual significance and potential eligibility for listing on the NRHP. Analysis of 14102 Sand Hill Road indicates that the resource is not associated with events that have made a significant contribution to the

broad patterns of history (Criterion A) and the resource is not known to be associated with the lives of significant persons (Criterion B). Although the house was constructed upon land historically associated with the Tomlinson family, the house itself has no substantiated connection to the locally significant family and was not constructed by the Tomlinson family. The building is not related to the milling operation of Wagamon's Pond. The design of 14102 Sand Hill Road is a typical example of a bungalow and the resource does not represent the work of a master or possess high artistic values. The house lacks individual distinction and significance. The house does not portray distinctive characteristics of a type or method of construction (Criterion C).

14102 Sand Hill Road is a typical example of a bungalow constructed in the rural area of Sussex County. The resource's physical location was been retained. Its rural setting has been primarily retained, but an increase of development pressure and the addition of modern outbuildings have altered the physical setting. The demolition of its associated outbuildings has compromised the historical association of the house to its surroundings. The overall integrity of the design, materials and workmanship of the house has been retained, but the house lacks individual distinction and significance. The introduction of non-compatible decorative features, such as Queen Anne style balusters and supports at the front porch, detract from the building's original design. According to the present owner, the interior floor plan has been altered and the rear kitchen addition is not original. In addition, comparative analysis documents that this bungalow is not the best preserved extant example of this type and other bungalows in the Milton area have been listed in the NRHP as contributing resources to the Milton Historic District. The physical association was altered with the demolition of its associated outbuildings. 14102 Sand Hill Road does not retain sufficient aspects of integrity to convey its individual significance (Table 4-2). Based on the on-site study of the resource and extensive research to develop an historical context for the building, it is recommended as not eligible for listing on the NRHP.

Table 4-2. Integrity for 14102 Sand Hill Road

Aspect of Integrity	Finding
Location	Yes
Setting	No
Design	Yes
Materials	Yes
Workmanship	Yes
Feeling	No
Association	No
Overall Assessment	**Loss of Integrity**

4.3.3 Draper/Bonk House, 16046 Federal Street, Milton, Sussex County, DE (CRS #S-3527)

General Description

The Draper/Bonk House property at 16046 Federal Street is located on approximately 98 acres of land in Milton, Sussex County, Delaware. The Draper/Bonk House is sited on

approximately 2 acres of heavily wooded land with the remaining acreage used for agricultural purposes. The Draper/Bonk House is set back from Federal Street and is screened by extensive landscaping. A semi-circular, front driveway provides access to the front of the house.

Main House. The Draper/Bonk House is a one-and-a-half story, eight bays, house designed in the Colonial Revival style. Constructed in 1938, the house is clad in clinker brick and is apparently constructed with a steel girder frame (Bonk 2002, pers. comm.). The house is presented in three sections, the one-and-a-half story center and main block of the house, the one-story garage wing to the north and the one-story wing to the south (Figure 4-5). The asymmetrical house has a modest wood cornice with the side gable roof clad in slate shingles at the main, center block. An interior brick chimney is located at each gable end of the main block. The garage wing has a half-gable roof with a projecting front gable at the main and rear elevations. The south wing has a side gable roof with a projecting front gable at the main and rear elevations. The roof of the two wings is also clad in slate shingles.

The east (main) elevation is pierced by a 6/6, double-hung, wood sash window with a pair of two-paneled, fixed wood shutters at the first bay and an 8/1 double-hung, wood sash window at the projecting gable (second bay) of the south wing. The main block of the house is pierced by a single, multi-diamond pane casement window at the third bay, a ribbon (4) of multi-diamond pane casement windows with a pair of two-paneled, fixed wood shutters at the fourth bay and a projecting ribbon (3) of multi-diamond pane casement windows at the sixth bay. The two bays of the garage wing have a 6/6 double-hung, wood sash windows with two-paneled, fixed wood shutters at each bay. The main entrance, located at the fifth bay, has a wood paneled door with multi-pane sidelights and a molded, wood surround with an entablature and pilasters. The second story of the main block is pierced by four gabled dormers with 6/6 double-hung, wood sash windows. The second story of the garage wing (north) has a single, flat roof dormer with a multi-diamond pane casement window.

The north elevation of the garage wing is two bays wide and is pierced by two, wood and glass garage doors. The decorative elements at the north elevation include the modest wood surrounds at the garage doors.

The west (rear) elevation is nine bays wide with a projecting gable at the second, fourth, and eighth bays. A wood door with a modest wood surround is located at the first bay. The projecting gable at the second bay has an exterior, clinker brick chimney. A ribbon (4) of 6-light casement windows are located at the third bay and the second projecting gable is pierced by an 8/8 double-hung, wood sash window with flanking 2/2 double-hung, wood sash windows. The windows have modest wood surrounds. The central bays (main block of the house) incorporate a screened-in, wood porch with a paneled base and a central, rear entrance to the house. The projecting gable at the eight bay is pierced by an 8/8 double-hung, wood sash window with a modest wood surround. The final (ninth) bay has a 6/6 double-hung, wood sash window. Two gabled dormers with 6/6 double-hung wood sash windows pierce the second story of the main block.

Figure 4-5. View of Draper/Bonk House, Main (East) Elevation (9/2002)

The south elevation is pierced by a single, 6/6 double-hung, wood sash window with a pair of wood, paneled shutters.

Domestic Structure. A barbecue, constructed of clinker brick, is located in the backyard west of the main house. The barbecue appears to date from the same construction period as the house. The barbecue has a central chimney with U-shaped wings projecting from the chimney and main cooking area.

Historical Context

The Draper family and its relationship with the town of Milton begins with the early settlement of Alexander Draper in the area that would become Sussex County, Delaware. Draper immigrated to the Northern Neck area of Virginia in 1658 and had settled in present day Sussex County, Delaware by 1676. An extensive landowner, Alexander Draper was very influential in the early development of Sussex County and was appointed as a surveyor of the roads and bridges in the County in 1681. Three children, Alexander Jr., Rebecca and Henry, had been born to Draper and his second wife Rebecca between 1680 and 1684. Draper died in 1691, but his decedents would continue to have an impact on the development of Sussex County and the Milton area (Donovan 2002).

George Henry Draper, Sr., born in 1846, first became involved with the canning industry in Sussex County in 1880. This enterprise would eventually be operated under George's son, George Jr. under the trade name of Draper Foods, Inc. George Sr. partnered with Daniel Hirsh in ca. 1899 to establish the canning company of Draper and Hirsh in Milford. The Drapers entered the canning industry in Milton in 1907 when Harry R. Draper, son of George H. Draper Sr., purchased a tomato cannery in the town (*The TownCrier* 1955:9). The death of Harry R. Draper in 1912 saw the company transfer control of its operations to his brother

George H. Draper Jr. until Harry's three sons, Richard, Harry Jr. and H. Carlton became intimately involved with the company in the 1920s and 1930s. By the 1940s, Richard, Harry Jr. and H. Carlton were Vice-President, Secretary and Treasurer of the corporation respectively. A subsidiary, Draper's Frozen Products Inc. was established in 1947 by the three brothers with H. Carlton serving as President. In addition to the factories, the Draper empire owned numerous farms in both Sussex and Kent Counties which produced the fruits and vegetables the company was canning.

Located east of Chestnut Street in Milton, the factory was serviced by the railroad which allowed goods to be shipped throughout the nation (Sanborn Map Company 1911). During its existence, the Company further established the Draper family's influence on Milton's economical and social development. At the time of the company's peak production years, between the late 1930s through the 1950s, the company employed approximately 500 employees during the height of the season and roughly 100 employees during the off-peak season. The employees were made up of both local Miltonians and migrant workers who moved into the area during the peak season. The influence of the Draper family and its canning company to the town of Milton was a direct result of the company's increasing fortunes. In comparison to other canneries in the area, the Draper King Cole Cannery was one of only a few canneries that were successfully owned and operated by a local Delaware family. The volatile nature of the cannery business disillusioned many people who "entered the business with the intent of reaping quick profits and then abandoning the factory or were driven out by one or two years of disappointing returns. More than half of the state's canneries operated for less than ten years" (Doerrfeld et al. 1993:50).

During this time of aggressive marketing and expansion, H. Carlton Draper married and constructed the large Colonial Revival style house at 16046 Federal Street. The Draper family has lived in this house since its construction in 1938 with the house being later occupied by Draper's daughter, Patricia Draper, and her husband Harry Bonk. In 1940, H. Carlton Draper's 92-acre parcel with improvements near Milton was valued at $15,980.00 (BKA 1940). By 2003, Patricia Bonk's 98.99-acre tract was assessed at $67,700.00 ($3,000.00 for land, $64,700.00 for improvements; Sussex County Real Estate – Property Taxes 2003c).

Harry Bonk had been intimately involved with the canning company since joining the firm in 1948 after completing his Master's Degree from the University of Maryland and marrying Patricia Draper. Bonk and Patricia Draper purchased the canning company in 1960. The Draper King Cole Cannery Company operated under control of the Draper family until 1999 when it was finally closed due to competition (King Cole Cannery 2002).

The Colonial Revival Style and Clinker Brick Construction in Southern Delaware. The increasing pressure of suburbanization on the landscape of southern Delaware beginning in the first half of the twentieth century led to an influx of new residential development. Between 1900 and 1950, an additional 20,000 people moved to the county accounting for approximately 20% of the state's population growth (Munroe 1984:273). The increasing need for residential buildings led to new construction within Sussex County, although the rural roots of the county was reflected in the vernacular designs and domination of the I-House form early in the twentieth century. New architectural trends began to infiltrate the

county, including the introduction of bungalows, four squares and the Colonial Revival style (Tabachnick et al. 1992). The early examples of the Colonial Revival style led to designs more closely aligned with details and features based on original Colonial designs. By the 1930s, the style was simplified with more modest detailing and omission of the extensive ornate characteristics associated with the original Colonial style (McAlester and McAlester 1998:326). The Draper/Bonk House is an excellent example of the Colonial Revival style constructed during the Great Depression with its prototypical wood door surround with sidelights, gabled dormers, and modest cornice. The house is clad in clinker bricks, a common building material which had gained popularity during the first half of the twentieth century.

Clinker bricks were a popular building material for Craftsman style houses (1900-1930) in the western sections of the United States (Carley 1994: 208, 212). The use of clinker bricks was embraced by Delaware builders during the 1920s through the waning years of the Great Depression (late 1930s). In Delaware, this cladding material was used for various building styles, including Colonial Revival and Mission style designs. The extant examples in Southern Delaware, specifically the Colonial Revival-style buildings in the Milton and the Bethany Beach areas, include both residential and commercial designs with the cladding material used for both high style and modest buildings.

Clinker bricks are created from overfiring, causing the bricks to "melt" together and requiring them to be broken apart. This accounted for their unusual shapes and individuality. The dramatic and projecting angles of the clinker bricks give an additional dimension to the building's elevations. Clinker brick was a popular building material, although it was not as prevalent after the 1940s as modern techniques were developed which regulated the temperature of the kilns.

Evaluation

The Draper/Bonk House, constructed in 1938, was evaluated for its individual significance and potential eligibility for listing on the NRHP. Analysis of the Draper/Bonk House indicates that the resource is not associated with events that have made a significant contribution to the broad patterns of history (Criterion A). The Draper/Bonk House is associated with the Draper family, a locally significant family whose relationship to Milton includes the ownership of the Draper Cannery. At its peak between the 1930s and 1950s, the Draper Cannery Company employed approximately 500 employees during the height of the season and roughly 100 employees during the off-peak season. As stated in the *Historic Context Master Reference and Summary* of the *Delaware Comprehensive Historic Preservation Plan,* one of the major cultural trends in the Lower Peninsula area are the influences of Major Families, Individuals, and Events. The Draper family and the Draper/Bonk House are representative of this trend (Criterion B). The Draper/Bonk House is a fine example of the Colonial Revival style and is further enhanced by its clinker brick cladding (Criterion C).

The Draper/Bonk House's, constructed by H. Carlton Draper in 1938, is associated with the Draper family, who were locally significant for their contribution to the Milton area and its economy through the Draper Canning Company. The Draper/Bonk House is a fine example

of the Colonial Revival style. The Draper/Bonk House retains its historical fabric and character allowing it to accurately convey its contribution to this aspect of local construction history. The location and physical setting of the house has been retained. The original design has been retained and the materials and workmanship of the house has been preserved with materials replaced in-kind. Comparative analysis documents that clinker brick construction has been identified in the Bethany Beach area (CRS #S-9115, S-9117, S-911) and other examples are extant in the Milton area. The Draper/Bonk House retains sufficient aspects of integrity to convey its individual significance (Table 4-3). Based on the on-site study of the resource and extensive research to develop an historical context for the house, it has been determined that the resource has retained a sufficient level of integrity and is recommended as eligible for listing on the NRHP because it is locally significant for its association with the Draper family (Criterion B) and under the area of architecture (Criterion C).

Table 4-3. Integrity for the Draper/Bonk House

Aspect of Integrity	Finding
Location	Yes
Setting	Yes
Design	Yes
Materials	Yes
Workmanship	Yes
Feeling	Yes
Association	Yes
Overall Assessment	**Retention of Integrity**

4.3.4 Reynolds Mill Pond Bridge (3-918), SR30 Over Reynolds Mill Pond, Sussex County (CRS #S-9850)

General Description

The Reynolds Mill Pond Bridge (3-918) is located on SR30 over the waterway of Reynolds Mill Pond. SR30 at the Reynolds Mill Pond Bridge is a two-lane road northwest of the town of Milton, Sussex County, Delaware.

The Reynolds Mill Pond Bridge (3-918) is a reinforced concrete box culvert with a dual function, to carry traffic over the waterway and provide water flow control (Figure 4-6). The ca. 1925 bridge is a single cell, 10' long, 34' wide structure with a single rectangular parapet wall with a single, low arch at the west side of SR30. The parapet wall is not architecturally adorned and is modest in design. U-Shaped concrete wingwalls extend west from the parapet wall. A metal sluice gate, located in the waterway below the parapet wall, replaced a wood version in 1979. The single parapet wall rises to a height of approximately 2 ½' from ground level. The parapet wall measures approximately 8" thick and is constructed of rebar and concrete. The dam portion of the culvert was altered with the introduction of textured steel in isolated sections with the remaining portion retaining their wood construction (ca.1970s). The water flow is regulated through the raising and lowering of this gate.

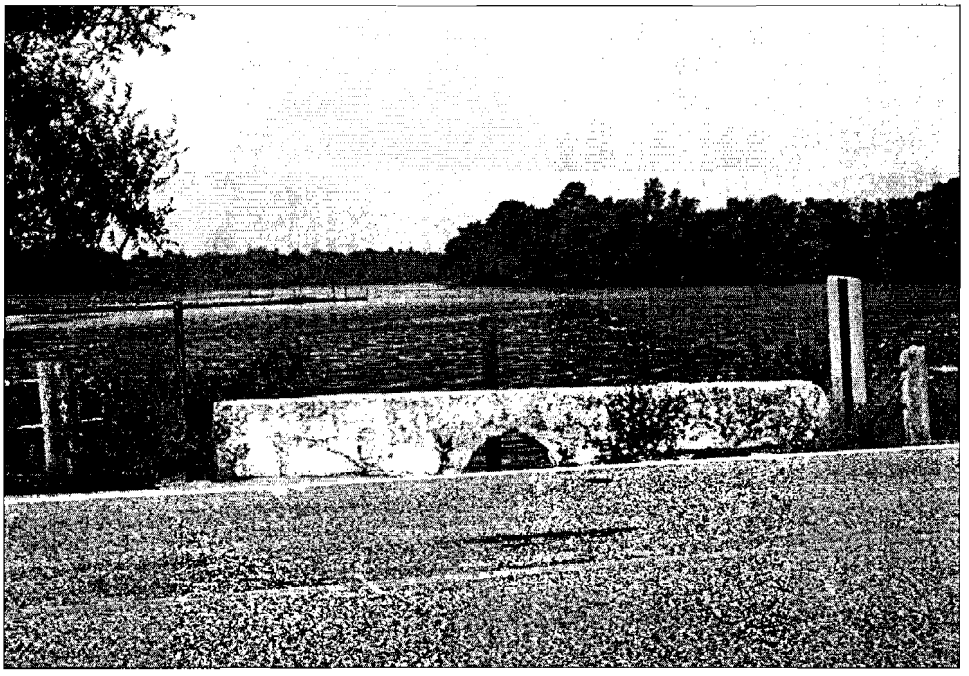

Figure 4-6. View of Bridge 3-918's Parapet Wall (West) at Reynolds Mill Pond (9/2002)

The east side of the culvert has two wingwalls which are situated perpendicular to the roadway. The associated parapet wall on this side of the roadway was not extant after the demolition of the saw and grist mill in the early 1970s that formerly occupied the east side of the roadway. DelDOT records indicate a split rail fencing was installed at this time, which was replaced in 1972 with a metal guardrail (DelDOT 1969, 1970). The east side of the culvert has a concrete pylon situated in the middle of the spillway. A small run off creek flows east.

The Reynolds Mill Pond Bridge is in extreme disrepair with exposed rebar throughout and substantial settlement of the wingwalls. The concrete contains cracks and spalling (erosion) and DelDOT has previously repaired the concrete to attempt to control the problem.

Historical Context

Historically, a sawmill and grist mill were located on the east side of SR30 at the Sow Bridge Branch of the Broadkill River. Sow Bridge Branch had been dammed to form a pond on the west side of SR30. The dam regulated the flow of water and the depth of the pond. According to deed research, a sawmill existed at this site since 1821 (SCDB 1821b) when William McIlvain purchased the property from Asa Conway. In 1849, Myers and Silas Reynolds purchased the property and sawmill and grist mill. For the first time, the pond dam and floodgates were specifically mentioned and documented (SCDB 1849: 260). The saw and grist mill on SR30 were owned by James Ponder by 1896, and were worth $1,000.00. This suggests the mills were still in operation at the turn of the twentieth century (BKA 1896 – 1900). Sallie W. Ponder's sawmill and grist mill were valued at $800.00 in 1901 (BKA 1901 – 1904). The sawmill was absent from the tax rolls for Sallie W. Ponder by 1905,

suggesting it was no longer standing or was a ruin. However, the grist mill and pond were evaluated at $500.00 in 1905.

Sometime between the end of World War I and 1933, the current bridge (3-918) at Reynolds Mill Pond was constructed to replace the earlier dam/bridge system. Beginning in 1917, the newly established Delaware State Highway Department adopted the use of reinforced concrete box culverts as the standard for state highways (Lichtenstein Consulting Engineers, Inc. 2000:153). It is possible the Reynolds Mill Pond Bridge was constructed as a result of the 1919 State Aid Road Law which allowed counties to issue bonds to match available state funds. Sussex County was the first of the Delaware Counties to take advantage of the new law to improve its road system during the 1920s (Lichtenstein Consulting Engineers, Inc. 2000:12). A ca. 1940 construction plan for Contract No. 961 shows the culvert and the mill building at the mill pond (Jensen's Mill Pond) (Delaware State Highway Department 1940:Sheet 6).

The design of the reinforced concrete box culvert at Reynolds Mill Pond is a typical, early twentieth century design solution for a small span (10' long). The design allowed for the combination of vehicular movement and water flow control within one structure. The associated grist mill remained extant until the early 1970s and documented use of the mill gate controls for the pond was recorded in 1983 (DelDOT 1983). Harry Isaacs owned land adjacent to the millpond and also held the water rights to the pond as recently as 1983 (DelDOT 1983).

History of Reinforced Concrete Box Culverts in Delaware. The use of reinforced concrete box culverts in Delaware and in the United States was first introduced on highways during the early decades of the twentieth century. Concrete slab bridges and reinforced concrete box culverts are similar both in design and early history as a result of the increasing popularity of concrete as a building material in the early twentieth century. Concrete became the predominant type for highway bridges and short railroad spans in the early twentieth century as a result of improvements in concrete technology (P.A.C. Spero & Company 1991:122). Concrete was relatively economical to use and the simplicity of using the material made it a widely accepted choice for bridge construction in the United States and Delaware. A box culvert is similar in design to a slab bridge. A slab bridge concentrates reinforcing steel in the lower section of the slab and at the ends. The amount of steel and the depth of the slab are determined by its length and live-load capacity (Lichtenstein Consulting Engineers, Inc. 2000: 189). A box culvert differs with the exception of the slab being integral with the side walls and floor, or invert slab, constructed as part of the culvert. The box culverts can be single or multiple cell construction. They are excellent for areas where there are minor streams and they have been primarily used for spans between 8' and 15' in length. This construction type presented the state with an economical and efficient engineering solution. The technology of the reinforced concrete box culvert has remained relatively unchanged since the early half of the twentieth century with the exception of an increasing use of pre-cast box sections instead of cast-in place sections during the last quarter of the twentieth century (Lichtenstein Consulting Engineers, Inc. 2000: 224).

The extensive use of reinforced concrete for box culvert construction in Delaware throughout the twentieth century has led to numerous examples of this type extant throughout the state.

As of 2002, twenty-three (23) reinforced concrete box culverts have been inventoried in Delaware ranging from a construction date of ca. 1910 to 1956. Of these inventoried resources, six (6) are considered eligible for the NRHP, NC-430 (1928), NC-504 (1939), K-42A (1933), S-200-H-1 (1912), S-329 (ca.1910), and S-709 (1938). These resources were found to be good examples of the reinforced box culvert type. Only S-200H-1 retains its historically association with an existing mill complex, Hearn's Mill, in Sussex County. Three (3) of the six (6) are located within Sussex County, two (2) in New Castle County and one (1) Kent County. Bridge S-918 was not identified and recorded as part of the extensive surveys conducted in Delaware in 1991 or 2000. In addition, Federal Highway Administration and Delaware State bridge surveys traditionally do not record spans less the 20' and these structures are not considered bridges (Kevin Cunningham 2002, pers. comm.). However, there were fourteen (14) culverts less than 20' in length that were recorded as part of these surveys. It is unclear why Bridge S-918 was not identified and how many additional resources might have not been recorded.

Evaluation

The Reynolds Mill Pond Bridge, constructed ca. 1925, was evaluated for its individual significance and potential eligibility for listing on the NRHP. Analysis of the Reynolds Mill Pond Bridge indicates that the bridge is not associated with events that have made a significant contribution to the broad patterns of history (Criterion A) and the resource is not known to be associated with the lives of significant persons (Criterion B). The Reynolds Mill Pond Bridge is a modest and typical example of the reinforced concrete box culvert. The use of a single arch in the parapet wall is remnant of the multi-arch designs found at Bridge 3-806, Bridge 3-808 (demolished), and its associated penstock bridge (demolished). However, the resource does not represent the work of a master or possess high artistic values, and its extensive alterations obscure its embodiment of the distinctive characteristics of a type or method of construction (Criterion C).

Although the Reynolds Mill Pond Bridge was associated with the development of the infrastructure system and the milling industry in Delaware during the first half of the twentieth century, the bridge no longer possesses sufficient historical fabric and character that would allow it to accurately convey its contribution to those aspects of history. In addition, the demolition of the associated mills contributes to the resource's inability to accurately convey its significance in relation to the milling context. The resource's physical location has been retained. The rural setting of the resource has also been retained, but an increase of development pressure and traffic has begun to compromise its isolation. In particular, this type of bridge construction was common during the first half of the twentieth century in Delaware and it has undergone alterations that have compromised its integrity. The introduction of non-compatible building materials, for example the introduction of a metal sluice gate to replace the original wood sluice gate and the demolition of one of its original parapet walls, has contributed to a compromise of design, materials and workmanship. In addition, comparative analysis documents that this bridge is not one of the best preserved examples of reinforced concrete box culverts in Delaware. In terms of the execution of the arch in the parapet wall, Bridge #3-806 is similar in construction and function and incorporates a multi-arch design in its parapet wall. The physical association of the Reynolds Mills Pond Bridge was severely altered with the demolition of the grist mill and

associated buildings east of the bridge. The Reynolds Mill Pond Bridge no longer retains sufficient aspects of integrity to convey its individual significance (Table 4-4). Based on the on-site study of the resource and extensive research to develop an historical context for the bridge, it has been recommended as not eligible for listing on the NRHP.

Table 4-4. Integrity for the Reynolds Mill Pond Bridge

Aspect of Integrity	Finding
Location	Yes
Setting	Yes
Design	No
Materials	No
Workmanship	No
Feeling	No
Association	No
Overall Assessment	**Loss of Integrity**

4.3.5 Bridge on S319 over Diamond Pond (3-806), Broadkill Hundred, Sussex County (CRS #S-9849)

General Description

Bridge 3-806 over Diamond Pond is located on S319 in Sussex County, Delaware. S319 at Bridge 3-806 is a two-lane road in the town of Milton, Sussex County, Delaware.

Bridge 3-806 is a reinforced concrete box culvert that carries a two-lane road over the waterway of Diamond Pond. The dual function of the bridge includes carrying traffic over the waterway and water flow control. The ca. 1917 bridge is a single span, triple-cell, 14'-long, 22'-wide structure with two parapet walls each pierced by three arches (Figure 4-7). With the exception of the arches, the parapet walls are not architecturally embellished and are modest in design. The concrete parapet walls are approximately 3' from ground level and are approximately 8" thick. U-shaped concrete wingwalls extend from the parapet walls. The spillway of the multi-cell box culvert allows the water from the pond to spill into a stream. At the time of its construction, Bridge 3-806 water control functions included providing upstream water storage for the mills on Wagamon's Pond less than a mile away (demolished ca.1991). The functional wood gates that controlled the amount of water moving through the spillway are no longer extant. These gates were in existence as recently as 1992 (DelDOT 1992).

Bridge 3-806 has undergone a degree of deterioration to the parapet walls, wingwalls, and apron corner. The design of Bridge 3-806 has been attributed to the same designer of Bridge 3-808 and its associated penstock bridge off of Wagamon's Pond on Route 197 in Milton (demolished ca.1991). Bridge 3-806 and the penstock bridge were both multiple-cells, single span reinforced concrete box culverts with three arches in the parapet walls. The penstock bridge had a single parapet wall with functioning wood gates. Bridge 3-808 was a larger, multiple-cell, two-span, bridge and water flow control structure measuring 23' in length with six arches in each parapet wall. The multi-arch design in the otherwise modest parapet wall

at Bridge 3-806 is considered an "unusual design" and has been found on only two other inventoried bridges in the state, Bridge 3-808 and the penstock bridge at Wagamon's Pond (P.A.C. Spero & Company 1991:136; Heite 1991:34). The demolition of the bridges at Wagamon's Pond leaves Bridge 3-806 as the only extant example of this parapet wall design. However, Bridge 3-918 (over Reynolds Pond) is a single cell, reinforced concrete box culvert with a single arch in its remaining parapet wall.

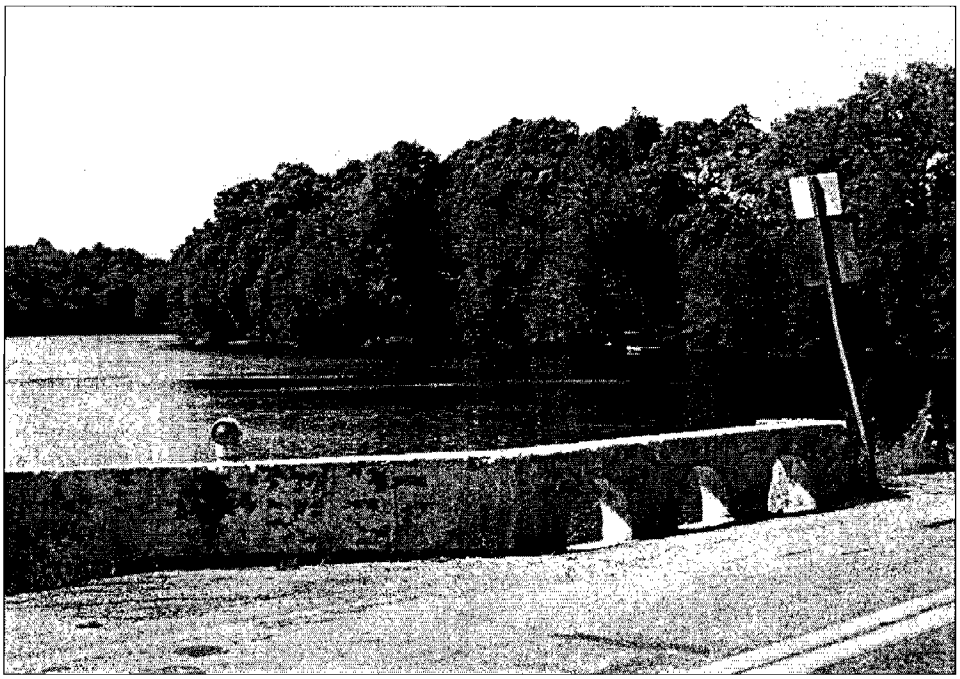

Figure 4-7. View of Bridge 3-806's Parapet Wall (South) at Diamond Pond (9/2002)

Historical Context

A sawmill stood in the area of Sand Hill Road (S319) in 1868, just beyond the town limits. The mill was on the east side of the stream that flowed northward into the Mill Pond, and on the north side of S319. The sawmill and a residence on the west of the stream and north of S319, were both owned by J. Paynter. The residence was probably the miller's house, since the mill operator usually lived in close proximity to his workplace. Caleb R. Paynter inherited the sawmill and residence in 1853 from Samuel R. Paynter, according to a plat filed in the Orphans Court Records (SCO 1853b). The one-acre tract containing the residence also included a bark mill, on the northwest side of the historical bridge crossing the mill pond. This bridge appears to correspond to the present-day location of S319 in the project area, but is not Bridge 3-806. In 1878, Paynter's sawmill was still in operation but the bark mill was a ruin (*The Delawarean* 1878 in Hancock and McCabe 1982). The property stayed in the Paynter family's hands for the remainder of the nineteenth century. The grist and sawmill belonging to Sallie Paynter's heirs were valued at only $1,000.00 in 1901, before they were sold to Henry K. Wagamon (Broadkiln Hundred Assessment 1901 - 1904).

By 1914, neither mill building is shown on a map of the area, and a single large pond (Mill Pond) still extends from west of the town of Milton southward. However, the residence building appears to still be standing in 1914 on the north side of S319. Physical and textual

documentation suggests that Bridge 3-806 was constructed during the same time period as Bridge 3-808 and its associated penstock bridge in ca.1917. Bridge 3-808 was constructed by Sussex County (Levy Court of Sussex County 1917).

In 1933, the State of Delaware purchased the right of way from Henry and Emma Wagamon to construct a state highway for one dollar. As part of the agreement between the Wagamon's and the state, it was understood that "this conveyance shall not include the water rights...and that if in the future it shall be found necessary to widen the bridge across the runway of the pond the State Highway Department of the State of Delaware shall extend and rebuild the water gates of the flume" (Delaware State Highway Department 1933). DelDOT records indicate the current bridge existed in 1933 and repairs were made throughout the remainder of the twentieth century.

History of Reinforced Concrete Box Culverts in Delaware. The use of reinforced concrete box culverts in Delaware and in the United States has been previously discussed under Section 4.3.4. The only two known examples of reinforced concrete box culverts in Delaware that had been designed with multi-arch parapet walls were Bridge 3-808 and its associated penstock bridge at Wagamon's Pond in Milton, Sussex County (demolished ca.1991). These bridges, constructed in 1917, appear to have been constructed in conjunction with Bridge 3-806 to provide water control flow for the Wagamon mills in Milton (Figure 4-4). The mills which were historically associated with the Paynter tract near the location of Bridge 3-806 had been demolished by the time construction commenced for the bridge. Bridge 3-806, located at Diamond Pond, provided upstream water storage for the Wagamon mills (Heite 1990:2). Bridge 3-808 and its penstock bridge were determined to be eligible for listing in the National Register of Historic Places (NRHP) by the Delaware State Historic Preservation Officer in 1991. Mitigation required HAER documentation, including black & white photographs and written documentation of the bridges prior to their demolition.

Evaluation

Bridge 3-806, constructed ca. 1917, was evaluated for its individual significance and potential eligibility for listing on the NRHP. Analysis of Bridge 3-806 indicates that the resource was not associated with events that have made a significant contribution to the broad patterns of history (Criterion A) and the resource was not known to be associated with the lives of significant persons (Criterion B). Although the resource did not represent the work of a master, its use of multiple arches in the parapet walls was a unique design feature for reinforced concrete box culverts in Delaware and similar bridges have been deemed eligible for listing in the NRHP (Criterion C).

Although Bridge 3-806 was associated with the development of the infrastructure system and the milling industry in Delaware during the first quarter of the twentieth century, its association had been compromised with the demolition of the Wagamon mills in ca. 1991 and the additional water control structures associated with this system. At one time, Bridge 3-806 and the associated water control structures were representative of an intact milling operation in Delaware. Bridge #-806 had been the remaining evidence of this operation. The resource's physical location had been retained. The rural setting of the resource had been

retained, but an increase of development pressure and traffic had begun to compromise its isolation. It had undergone alterations and a degree of deterioration, including the loss of its sluice gates, but the materials used for repairs were in-kind (concrete). The bridge was constructed after the demolition of the Paynter mills on Diamond Pond, but its water control features provided upstream storage for the Wagamon mills within the town limits of Milton (Heite 1990:2). The design, materials and workmanship of the bridge had been sufficiently retained to convey its significance for its architectural design (Table 4-5). In addition, it was the single remaining representative of the water flow control system constructed on Diamond Pond during this era. In particular, although reinforced concrete box culverts are a typical solution for this type of situation, Bridge 3-806 exhibited a unique architectural detailing of its parapet walls. Comparative analysis documents that this multi-arch, parapet wall design of a bridge was the remaining extant example of this type in the state of Delaware after the demolition of Bridge 3-808 and its penstock bridge in the 1990s. Prior to the demolition of these two resources, they were determined to be eligible for listing in the NRHP by the Delaware SHPO. A second example of the arch design is found at Bridge 3-918, but this resource is a smaller span with a single arch in its remaining parapet wall and it is not the best example of the reinforced box concrete culvert with the arch design. Based on the on-site study of the resource and extensive research to develop an historical context for the bridge, it was determined that the resource had retained a sufficient level of integrity and was recommended as eligible for listing on the NRHP because it is locally significant under the areas of architecture (Criterion C).

Table 4-5. Integrity for Bridge 3-806

Aspect of Integrity	Finding
Location	Yes
Setting	Yes
Design	Yes
Materials	Yes
Workmanship	Yes
Feeling	No
Association	No
Overall Assessment	**Retention of Integrity**

4.4 BRIDGE 3-806 HAER DOCUMENTATION AND CONSTRUCTION MONITORING RESULTS

As part of mitigation measures for Bridge 3-806, in compliance with Section 106 of the NHPA and DESHPO guidelines, Historic American Engineering Record (HAER) recordation was conducted prior to the initiation of work intended to widen the bridge. The HAER document was executed in accordance with the DESHPOs *Guidelines for Documentation of Historic Properties as Mitigation of an Adverse Effect under Section 106 of the NHPA*. The methodology for this report required submission of a written document, following HABS/HAER format; 35-mm black-and-white photographs; and measured drawings of the bridge. The methodology for the mitigation was accepted by the DESHPO in an e-mail message from Gwen Davis (DESHPO) to Simone Moffett (Parsons), dated July

3, 2003. Parsons completed the HAER documentation for Bridge 3-806 and submitted the draft report to DelDOT in September 2004. The final report was submitted in February 2005. A copy of the final narrative report can be found in Appendix F.

As part of the final HAER recordation, monitoring was conducted during removal the deck of the existing bridge to ascertain whether the bridge contained unique features that could only be discerned beneath the current road surface. The demolition process was monitored by the architect who recorded the structural and design details of the bridge for HAER documentation. No hidden architectural features of note were discovered once the deck was removed, and the HAER documentation was finalized accordingly.