NPS Form 10-900
(Rev. 10-90

OMB No. 1024-0018

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

29

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name BLACKBURN POINT BRIDGE

other names/site number FMSF #SO1890

2. Location

street & number Blackburn Point Road at Gulf Intracoastal Waterway N/A ☐ not for publication

city or town Osprey N/A ☐ vicinity

state FLORIDA code FL county Sarasota code 115 zip code 34229

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☒ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☒ meets ☐ does not meet the National Register criteria. I recommend that this property be considered significant ☐ nationally ☐ statewide ☒ locally. (☐ See continuation sheet for additional comments.)

Janet Snyder Matthews 2/6/2001
Signature of certifying official/Title Date

Florida State Historic Preservation Officer, Division of Historical Resources
State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

☒ entered in the National Register
☐ See continuation sheet

☐ determined eligible for the National Register
☐ See continuation sheet.

☐ determined not eligible for the National Register
☐ See continuation sheet.

☐ removed from the National Register.

☐ other, (explain) _____

for Edson H. Beall
Signature of the Keeper

3/29/01
Date of Action

5. Classification

Ownership of Property
(Check as many boxes as apply)

- ☐ private
- ☒ public-local
- ☐ public-State
- ☐ public-Federal

Category of Property
(Check only one box)

- ☐ buildings
- ☐ district
- ☐ site
- ☒ structure
- ☐ object

Number of Resources within Property
(Do not include any previously listed resources in the count)

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	total

Name of related multiple property listings
(Enter "N/A" if property is not part of a multiple property listing.)

"N/A"

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

TRANSPORTATION: road-related (vehicular) bridge

Current Functions
(Enter categories from instructions)

TRANSPORTATION: road-related (vehicular) bridge

7. Description

Architectural Classification
(Enter categories from instructions)

OTHER: Warren Pony Truss

Materials
(Enter categories from instructions)

foundation CONCRETE
walls METAL: steel
roof
other METAL: steel

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- ☒ **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- ☐ **B** Property is associated with the lives of persons significant in our past.
- ☒ **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- ☐ **D** Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- ☐ **A** owned by a religious institution or used for religious purposes.
- ☐ **B** removed from its original location.
- ☐ **C** a birthplace or grave.
- ☐ **D** a cemetery.
- ☐ **E** a reconstructed building, object, or structure.
- ☐ **F** a commemorative property.
- ☐ **G** less than 50 years of age or achieved significance within the past 50 years

Areas of Significance
(Enter categories from instructions)

TRANSPORTATION
ENGINEERING

Period of Significance

1925-1951

Significant Dates

1925

Significant Person

N/A

Cultural Affiliation

N/A

Architect/Builder

Champion Bridge Company
Quinn and Powell Construction

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography
Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- ☐ preliminary determination of individual listing (36 CFR 36) has been requested
- ☐ previously listed in the National Register
- ☐ previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings Survey
  #
- ☒ recorded by Historic American Engineering Record #17100-1601

Primary location of additional data:

- ☒ State Historic Preservation Office
- ☒ Other State Agency
- ☐ Federal agency
- ☒ Local government
- ☐ University
- ☐ Other

Name of Repository
FDOT; Sarasota Co. Dept. of Historical Resources

Blackburn Point Bridge
Name of Property

Sarasota Co., FL
County and State

10. Geographical Data

Acreage of Property less than one

UTM References
(Place additional references on a continuation sheet.)

	Zone	Easting	Northing
1	17	351930	3007040
2			
3			
4			

☐ See continuation sheet

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Rebecca Spain Schwarz/Robert O. Jones, Historic Sites Specialist

organization Bureau of Historic Preservation date February 2001

street & number R.A. Gray Building, 500 S. Bronough Street telephone (850) 487-2333

city or town Tallahassee state Florida zip code 32399-0250

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items
(check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Sarasota County Commission: contact Lorrie Muldowney

street & number P.O. Box 8 telephone 941-316-1115

city or town Sarasota state FL zip code 34230

SUMMARY

The Blackburn Point Bridge (FDOT Bridge No. 170064) is located in Sarasota County, on County Road 789, Florida. The bridge is in the vicinity of Osprey, halfway between the cities of Sarasota and Venice, Florida (Figure 1). The steel truss swing bridge was constructed in 1925-1926. The 142-foot long single span Warren pony truss (with verticals) was fabricated by the Champion Bridge Company from Wilmington, Ohio. The 19-foot wide bridge, with a roadway width of 15.75 feet, now carries only one lane of traffic at a time.

Documentation, meeting Historic American Engineering Record (HAER) standards, was prepared for this bridge in 1992. This included four sheets of drawings (Site Plan, Plans, Elevation and Section, and Details), large format photographs, and a brief history. The documentation is located at the Florida State Archives in Tallahassee (figures 2-5).

SETTING

The Blackburn Point Bridge is the easternmost of two bridges which carries the two-lane Blackburn Point Road over the Gulf Intracoastal Waterway (Photographs 1 & 2), a federal navigation channel. The Dryman Bay Bridge, a non-historic 145-foot long multi-span reinforced concrete bridge built in 1955, is located approximately 700 feet to the west. The bridges are separated by a small island which was enlarged on the north end with fill land (Figures 6 & 7). Little Sarasota Bay lies to the north (Photograph 3) and Dryman Bay to the south. The setting is rural, primarily characterized by mangroves along the water's edge. A marina is located northeast of the Blackburn Point Bridge, and a few small wood frame structures and docks for small fishing boats are located south of the road, on both the mainland and the island. The island between the two bridges contains a county park, a library, and water storage tanks north of the road. This bridge connects the old Tamiami Trail (US 41), the primary north/south route on the mainland, with the northern part of Casey Key. Development along the north end of Casey Key consists of private single family residences, generally one- to two-stories in height.

PHYSICAL DESCRIPTION

The Blackburn Point Bridge is a pony truss swing span that carries Blackburn Point Road. The bridge is a Warren pony truss with vertical supports (Figures 3-5, Photographs 4-7). The steel trusses on each side are 9.58 feet high and are composed of eight panels which are each 17.5 feet wide (center to center). The top and bottom chords, as well as the inclined end posts, are 12" x 10" I-beams. Hip verticals and diagonal chords are made up of 2 ½" x 3 ½" angle bars connected by 6" x 12" plates at approximately 20" on center. Connections were riveted on-site which reflects the new technology at the beginning of the century. Floor beams are 20 ¾" x 6 ¼" I- beams, running north-south, attached to the sides of the bottom chords at 17.5 feet on center. Eight floor stringers (10" x 4 5/8" I-beams) span between the floor beams at 2.0 to 2.75 feet on center. Sway bracing, consisting of 3" x 5" x ¼" steel angles, is placed in an X-shape under the stringers within each panel. Metal

grate decking serves as the road surface at the bridge. The bridge is 19 feet wide, with a roadway width of 15.9 feet.

The metal grate decking has a 3" x 4" open grid. The center portion, above the swing mechanism, is filled with concrete. Wooden curbs along the bridge sides are approximately 5" x 8". A narrow walkway area along the north side, adjacent to the travel lane, has a smaller grid spacing. Pipe handrails (2 ¼" outside diameter) are placed at approximately 2.4 and 4.0 feet above the bottom of the bottom chord. The trusses, decking, handrail, and wooden curb are all painted with aluminum paint. When closed, the bridge has a vertical clearance of 9 feet above mean high water and a horizontal clearance of 51 feet for navigation. The road deck is approximately 12.4 feet above mean high water. Wood fenders flank the intracoastal waterway channel on the east and west sides. Wood bulkheads serve as retaining walls at the east and west bridge abutments. The center-bearing pivot swing mechanism is located mid-channel on a concrete pier. The bridge is supported on eight wheels which turn on this 10-foot diameter circular rail.

Since the bridge carries only one lane of traffic at a time, a stop sign is located at each end of the bridge. A traffic arm is located approximately 100 feet away from each end of the bridge (Photographs 8 & 9). This is used to prevent traffic from crossing the bridge while it is being opened. A signal post with four red lights and a bell (not included in the nomination) is also located further out from the traffic arm as a warning device.

ALTERATIONS

The first bridge tender house was constructed in 1927 but has since been replaced by a newer tender house (Photo #2) (not included in the nomination). In 1931, the Blackburn Point Bridge needed new decking so, apparently due to a lack of funds, the Board of County Commissioners voted to use as much of the salvaged material from the North Creek Bridge as possible (Stiles 1989:7). In the early 1970s, the swing drive was electrified with a 7½ horsepower motor. In 1981, the bridge was struck by a barge which required extensive repairs. These were completed in 1981-82 by Kunde, Driver, Simpson and Associates of Miami. Other repair work was performed by Kissinger Campo Associates of Tampa in 1987, that required that the bridge be lifted off the swing mechanism and placed on shore for repairs. Essential repairs were again made in 1995-1996, when materials were primarily repaired or replaced in-kind. The dimensions of the bridge have not changed, and the Blackburn Point Bridge has retained its physical integrity and character.

SUMMARY

The Blackburn Point Bridge is nominated to the National Register for its significance at the local level under Criteria A and C in the areas of Transportation and Engineering. It is an excellent example of a typical small-scale steel Warren pony truss swing bridge, and the only one remaining in Sarasota County. Constructed in 1925-26, at the height of the Florida 1920s Land Boom, it connected the mainland of Sarasota County with the north end of Casey Key, a narrow barrier island fronting the Gulf of Mexico. Its construction facilitated the "frenzied" development of the Key. Its picturesque rural setting has remained relatively unaltered despite the encroachment of miles of modern development in its vicinity.

HISTORICAL CONTEXT

Casey Key was named after Captain John Charles Casey who assisted with the first U.S. Coast and Geodetic Survey between 1848 and 1851. A map prepared in 1856 depicted Casey's Pass and Casey Key. Captain Casey was appointed to serve as commissioner for the removal of the Seminoles from Florida in 1849 (Matthews 1989a).

At the end of the Civil War a major wave of settlers came into Florida, including Sarasota County, encouraged by the 1862 Homestead Act. Among the earliest were John and Eliza Webb who arrived with their family from Utica, New York, in 1867 and settled along the bay at present day Osprey. They were soon joined by Jesse and Caroline Knight and their family who settled on land to the south, at present day Nokomis and Venice. In 1881, John and Belinda Blackburn arrived from Iowa to homestead land along the bay, just south of the Webb homestead. Their son Benjamin arrived a few years later to settle 80 acres about a mile and half south of his parents' homestead, along present day Blackburn Bay. Blackburn Point was originally called Bee Point where Robert Griffith set up a home with his wife, Anna Webb, daughter of John and Eliza Webb. Early pioneer homesteaders and guests would cross over to Casey Key by boat to hunt animals such as bobcats, panthers, and raccoons; to collect turtle eggs; and to cut buttonwood, mangrove and cedar (Matthews 1989a).

In the late 1880s, local residents petitioned Congress to dredge a channel from Casey's Pass to Tampa Bay for a total of 33 miles. Natural obstructions, such as oyster bars over hard sand, prevented regular commercial transportation along this route. One such oyster bar was noted as being at Blackburn's Point. All types of citrus, vegetables, tropical fruits (such as bananas and pineapples), corn, tobacco, honey, sugar, cattle, hogs, turtles, fish, shellfish, and phosphates were being produced along the bay. Only irregular trips to send these products to ports up north were possible, using light draught and steam boats or hauling them over bad roads for 40 to 60 miles to the Manatee River. The homesteaders proposed that production would increase markedly with improvements, and asked for a continuous channel to a depth of 4 ½ to 6 feet. At the time, the U.S. Army, Chief of Engineers, recommended that a channel, 100 feet wide and 5 feet deep, be constructed from Tampa Bay south to Sarasota, and a channel, 75 feet wide and 3 feet deep be constructed from Sarasota south to Casey's Pass. This would allow the farmers south of Sarasota to transport their fruits and vegetables in flats or sailboats up to Little Sarasota Bay or to Sarasota where they could be sent to Tampa Bay and loaded

onto larger steamers there. "A channel through the mangroves, to link the upper and lower bays and to avoid the necessity of outside passage for Venice producers, accounted for two-thirds of the projected costs" (Matthews 1989a:143-44).

Just after the turn of the century, Isaac Shumard brought his family, including 2 sons and 4 daughters, to settle on Casey Key. In 1903, Isaac's son Jesse settled federal lands at the northern end of Casey Key, across the bay from Osprey. "By 1910, his homestead included a six-room house, a dock house, workshop, artesian well, a fenced six-acre orchard, and a vegetable garden." Zachariah M. Dryman homesteaded more than 100 acres on Casey Key, to the south, in 1909. The bay along this area was later called Dryman Bay (Matthews 1989a:152). In the early 1910s, Isaac T. Shumard sold most of his land to the Sarasota-Venice Company but retained the 10 acres which contained the family's "Island Home" (Matthews 1989a:185).

Activities at the turn of the century prompted optimism and an excitement over growth and development. In 1902, the United States & West Indies Railroad & Steamship Co., a subsidiary of the Seaboard line, started laying track from Tampa through Bradenton into Sarasota. The first train arrived in March 1903 and the track was later extended into Venice in 1912 (Marth 1973:40). In addition, the advent of the automobile in the early 20th century led to an increased need for an improved network of roads and bridges in the United States. The first few decades of the century signified a period of great ingenuity utilizing American engineering technology. Federal policy after World War I was committed to the completion of a connected system of highways, creating an incessant demand for new bridges. The automobile also increased the ease for mobility, both of people and products. Manatee County residents, like the rest of the nation, desired mobility, but were frustrated with their remote, isolated location. Prior to 1912, there was nothing but trails and a few flimsy bridges south of Tampa. In March of 1912, a 9-foot hard surfaced road was completed south to the city of Sarasota. The new hard-surfaced road did not withstand the weather well, so few winter visitors came to Sarasota by automobile at the time.

Present-day Sarasota County consisted of the southern portion of Manatee County at that time, with a county seat at Bradenton. In 1914, the Sarasota-Venice Road and Bridge District was formed for southern Manatee County, realizing that the leaders in Bradenton would not provide an adequate system so far away. After much public debate, a bond issue of $250,000 was approved for roads and bridges in 1915. The bond issue was re-approved in 1916 when it was realized that the proposed 15-foot wide road would be too expensive; therefore, a 9-foot wide alternative was approved. Included in this bond issue was a new road to connect Sarasota with Venice. Also in 1915, a group of businessmen met to discuss the feasibility of a cross-state highway from Tampa to Miami by way of Sarasota. This route would include the road constructed from the Hillsborough County line to Sarasota in 1912 and the road from Sarasota to Venice, soon to be constructed. This road was eventually designated U.S. 41, or the Tamiami Trail, but was not completed until April 1928 (Scupholm 1997:20-22).

The automobile, telephone, and electricity began to transform Manatee County from an isolated area into a county linked with the rest of the state and nation. New residents and tourists arrived by automobile as well as by boat. Developers promoted Florida as the eternal garden to attract tourists and new residents. Around 1917, a resident of Casey Key even tried to promote his development by changing the name of the Key

to Treasure Island, causing a great deal of debate over the name in later years (Wacker and Whitlock 1979:2). A $1.3 million Treasure Island Hotel was proposed by the Sarasota-Venice Company for the southern end of Casey Key (Matthews 1989a:200). The United States entered World War I, however, and all dreams of expansion ended for a while.

Residents of Sarasota and Venice continued to be frustrated with the lack of good roads and bridges. The people in southern Manatee County began talks of forming another county. A public meeting was held in June 1920, and Sarasota County was formed in 1921, with a county seat at the city of Sarasota. "Even though one of the chief reasons Sarasota County was formed was for better roads and bridges, not much progress was made in the first few years due largely to the fact that Manatee and Sarasota counties were embroiled in battles over indebtedness with respect to the old Sarasota-Venice and Englewood Special Road and Bridge Districts. In August of 1924, the controversy was settled with a $40,500.03 bond issue" (Stiles 1989a:4). Sarasota made up for lost time, however, and in less than five years spent $4.8 million for roads and bridges, including the Blackburn Point Bridge.

Roads and bridges were the foundation of the new county and were of the highest priority, even higher than building a new county courthouse. "The founders realized the economic base of the new County was dependent on this road and bridge network. The more accessible the lands were and the more facility with which one could travel from point to point, the greater the land values and the bigger the development, putting money into the County coffers" (Stiles 1989b:3).

The mid-1920s marked the peak of the "land boom" in Florida, with escalating land values everywhere. Development of the keys off Sarasota County seemed ideal at the time. "Though they boasted having some of the most beautiful beaches in the world, they were accessible for the most part only by boat. Siesta Key had been connected to the mainland with a bridge as early as 1917, but it is in the 1920s that keys are linked with bridges and ribboned with roads. In January of 1923 a tall bridge was privately built at the south end of Treasure Island (now Casey Key); in February of 1926 the Ringling Causeway was opened to Lido and St. Armands; a new Siesta Key bridge was completed in 1927; and the New Pass bridge connecting Lido and Longboat was opened in April of 1929. All of these bridges have since been replaced. Because of the development opportunities on Casey Key, a bridge and road at Blackburn Point were high priority" (Stiles 1989a:4-5).

HISTORIC SIGNIFICANCE

The 1924 bond issue, approved for 15 roads and five new bridges, included both the Blackburn Point Road and the Blackburn Point Bridge which would serve to connect Casey Key to the mainland (Figure 8). On February 2, 1925, the Sarasota County Commission awarded the contract for construction of the Blackburn Point and Stickney Point bridges to the Champion Bridge Company of Wilmington, Ohio. The construction was subject to the approval of the War Department and the total cost for both bridges was modified from the original bid of $46,438 to $45,000. In March, the bid for construction of both the Blackburn Point and Stickney Point bridges and roads was awarded for $371,785 (Stiles 1989a:5).

Constructed in 1925-26, this is a typical swing bridge fabricated by the Champion Bridge Company of Wilmington, Ohio (contract #4946, dated March 10, 1925) and was provided to Sarasota County for $22,890 (Miars 1992; FDOT 1992). A proposed site plan and plans for the center and end piers were prepared for application by the Board of County Commissioners, Sarasota County, Florida, dated February 27, 1925. Charles S. Wadsworth is noted on the drawings as Sarasota County Engineer (plans on file at FDOT District 1). Quinn and Powell Construction Company, of Fort Lauderdale, Florida, erected the bridge on site, using riveted connections, which reflects the new technology at the beginning of the century, and completed it in late 1926.

On December 6, 1926, the bid for a bridge tender was awarded to H.T. Campbell for $50 per month. It was considered a 24-hour job, and the bridge tender had to furnish the oil for the lamps on the bridge and the grease for the drive system. The bridge went into operation around December 15, 1926. On January 28, 1927, J.D.F. Boggs received the contract to build a bridge tender's house for $965 (Stiles 1989a:6). (This structure has since been replaced with a newer one.)

Soon after completion of the bridge, the boom began to wane. "By 1927, real estate values crashed, many businesses went bankrupt, scores of houses and apartments were sacrificed to pay mortgages, and three leading hotels went into receivership" (Stiles 1989a:6-7). Culminating with the stock market crash in 1929, the local economy could no longer sustain the road and bridge boom started in Sarasota County. Growth went into hiatus during the Depression.

During World War II, Florida served as a training ground for many branches of the armed services. After the war, many of these young servicemen returned to Florida to settle with their families. Car ownership also increased, as did inexpensive mobility and vacations. Between 1940 and 1950, Florida's population increased from 1,897,414 to 2,771, 305, resulting in a second land boom. Development of Casey Key, was initiated, but due to its remoteness, narrow configuration, and naturally altering shoreline, development was primarily at the southern end near Nokomis Beach.

During the 1950s, the residents of Casey Key formed what became the Casey Key Protective Association. The association purchased a segment of the bay bottom to prevent dredge and fill, zoned the middle of the island for residential use only, and paved the old shell road with the stipulation that the road would retain a "country road" look (Wacker and Whitlock 1979:3). An inland navigation route (Gulf Intracoastal Waterway) along Florida's west coast from Tarpon Springs to Fort Myers, planned in the 1950s, was ceremoniously opened in 1967 (Matthews 1989b:156).

The Blackburn Point Bridge is associated with the creation of Sarasota County and the development of the county's transportation system during the 1920s. The desire for good transportation was one of the primary reasons for the formation of Sarasota County in 1921. This bridge was part of the first transportation multi-million dollar development program funded by the newly formed county. The bridge is also significant for its role in making Casey Key more accessible and developable, as well as being part of a larger network to make all of the land in the county desirable and profitable, and therefore increase the new county's economic base. The Blackburn Point Bridge is all that remains of that important road and bridge network era. It is interesting to note that the bond issue for new roads and bridges was passed one year prior to the bond issue for construction of a new county courthouse.

Today the bridge opens on demand for boats 24 hours a day, 7 days a week. There are on average 700 openings per month, varying with the day of the week and the season of the year. The bridge tender controls the lights, bell and traffic barrier from a control box located outside of the tender's house. The bridge tender then walks to the center of the bridge where the electrical controls for the swing mechanism are located, on the south truss, and opens the bridge (Photograph 7).

ENGINEERING CONTEXT

Iron and steel bridges of the late 19th and early 20th century derived their structural form from earlier wooden covered bridges, but were built with materials that did not require extensive protection from the elements, as the wooden structures did. In addition, iron and steel provided a strong, safe structure at a cost within the financial capabilities of many communities. "These bridges were often prefabricated by specialized bridge companies and then erected throughout the country in both rural and urban settings. As a result, their presence provides a unifying structural and visual element within the American landscape" (Comp and Jackson 1977).

Metal truss bridges were the most common type built between 1850 and 1925. The most common types in America were either the Pratt or the Warren truss. Both forms were developed in the 1840s. Metal trusses are composed of many small pieces, or members, of iron or steel joined together in a series of triangles. These structural triangles interconnect to make one long truss, necessary to provide the length and strength for the bridge. Each member is put in either tension or compression to resist the loads placed on the truss by gravity. "If a member is in compression, then the forces acting on it tend to push it together. If it is in tension, then these forces tend to pull it apart. The main members of a truss are either stiff heavy struts or posts, or thin flexible rods or bars. Stiff struts or posts are capable of withstanding tension and compression, however, thin rods or bars are only capable of withstanding tension" (Comp and Jackson 1977:2). The Blackburn Point Bridge features a Warren truss and has stiff struts or posts throughout.

The Warren truss was patented in 1848 by two British engineers, Captain James Warren and Theobald Monzani. Its simple, straightforward design was quickly adopted by American bridge designers and has proved to be so successful that it is still being used today by bridge engineers. "The basic Warren truss has diagonals which are alternately placed in either tension or compression. As a result, the Warren truss is most easily recognized by its triangular outline. Most Warren trusses are built with vertical members which help strengthen the structure" (Comp and Jackson 1977:8). Both the Pratt and Warren truss forms "offered simplified fabrication and construction because they used a limited number of different members in their webs. They also surpassed other designs in the ability to fully describe the distribution of stresses through mathematical analysis" (Rudge 1989:E-2).

Technical advancements improved metal truss bridge design from the late 1850s through the 1890s. In 1859, the first pin-constructed bridge in the United States, a railroad bridge in Pennsylvania, enabled assembly in the field rather than in the shop where rivets and bolts were used. "The ability to ship unassembled members, rather than large pre-assembled components permitted the erection of iron bridges on roads far distant from rail

lines. In the same year the first all wrought-iron bridge went up, a considerable improvement because cast iron was recognized as a brittle material unsuitable for bridges" (Rudge 1989:E-3). Steel began to replace the use of iron in the late 1870s but "engineers and fabricators distrusted steel, particularly for tension members, until the perfection of the open-hearth process of steel production around 1890. By that time, the common structural shapes (plates, channels and angles) were available in steel at prices comparable to wrought iron. The final important technical change came in the means of assembling bridges in the field. Pinned connections had been favored for their ease of assembly, even though engineers realized that riveted connections provided superior rigidity. Late in the 19th century, innovations in pneumatic field riveting overcame the cost advantage of pinned joints, and riveting became standard" (Rudge 1989:E-8). By 1895, the use of steel and pneumatic field riveting was almost universally adopted for the construction of bridges.

ENGINEERING SIGNIFICANCE

There are three basic types of bridge trusses: "through," "pony," and "deck." The Blackburn Point Bride is a pony truss, meaning that the bridge carries the load supported by the bottom chords with no lateral bracing between the top chords as there would be with a through truss.

The Blackburn Point Bridge is one of only four historic bridges left in the county, and is the only one connecting the mainland with a barrier island. The Champion Bridge Company provided a second swing bridge to Sarasota County in 1925 at Stickney Point further north, but it was removed. The truss swing bridge was once a popular bridge in Florida, generally used over coastal waterways where many simple, sturdy movable spans were required. A 1990 statewide inventory of historic bridges identified only eight pony truss swing bridges left in the state (FDOT 1992: 92).

The swing bridge operates on a center-bearing pivot, patented by the Schertzer Rolling Lift Company, located on a concrete pier mid-channel (Photograph 5). The original swing mechanism was operated by a woman walking around a 10-foot diameter circle at the center of the bridge pushing on a lever.

The Blackburn Point Bridge is an excellent example of the bridge technology of the era in which it was built. "Though modest in scale, the Warren truss (with verticals) swing bridge expresses the machine aesthetic of the 1920s and 1930s in America. It is an honest expression of its structural and mechanical system and is devoid of any extraneous decoration. Reflective of material and strength, it is a machine in the landscape, and it is clearly a product of its time" "The refined simplicity of the Blackburn Point Bridge would not have been possible were it not for the technological advancements of the day. Design possibilities were undergoing rigorous scientific testing for loads and wind resistance, and structural steel (which had replaced iron) had greatly improved in quality and strength. Also important was the fact that the price had undergone considerable reduction" (Stiles 1989a:8).

BIBLIOGRAPHY

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_____ Sarasota: Journey to Centennial. Sarasota: Pine Level Press, Inc., 1989b.

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Stiles, Wilson, "Bridge at Blackburn Point," 12 page typed manuscript which accompanied a letter to Mr. George Percy, Division of Historical Resources, May 31, 1989, (file at the Sarasota County Department of Historical Resources).

_____ Letter to George W. Percy, Division of Historical Resources, July 27, 1989b, (file at the Sarasota County Department of Historical Resources).

Wacker, E.S. and H.J. Whitlock, "Casey Key." Casey Key Protective Association, Casey Key, 1979.

Wall, Alexander C., "Blackburn Point Swing Bridge: Study of Mechanical Drive System," September 16, 1987, (10 page typed manuscript on file at FDOT District One, Bartow, Florida).

VERBAL BOUNDARY DESCRIPTION

The historic boundaries for the Blackburn Point Bridge include only the bridge itself and the central pier containing the swing mechanism.

BOUNDARY JUSTIFICATION

The bridge and the swing mechanism are the most significant elements which have retained their original integrity.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section number Photo Page 1 **BLACKBURN POINT BRIDGE, SARASOTA COUNTY, FLORIDA**

LIST OF PHOTOGRAPHS

1. Blackburn Point Bridge
2. Sarasota, Florida
3. Rebecca Spain Schwarz
4. July 27, 1999
5. PBS&J, Tampa, Florida
6. North truss of bridge, looking southwest
7. Photo # 1 of 9

Information for items 1 through 5 is the same for the following photographs:

6. East approach to the bridge, including newer tender's house, looking southwest
7. Photo # 2 of 9

6. View of Little Sarasota Bay from east bank of bridge, looking north
7. Photo # 3 of 9

6. West end of bridge, looking southeast
7. Photo # 4 of 9

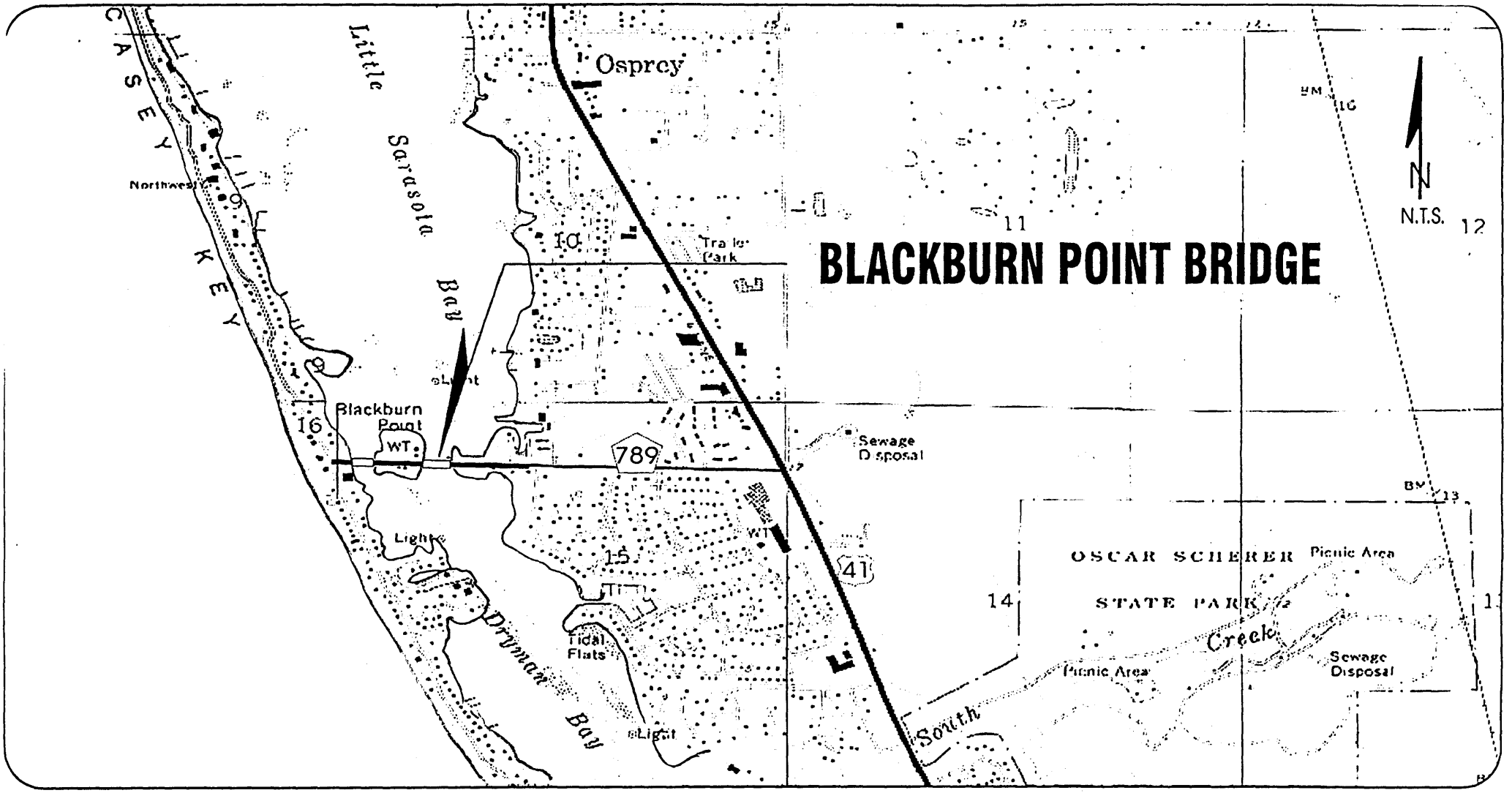
6. North truss of bridge, from west bank, looking southeast
7. Photo # 5 of 9

6. South truss of bridge from road, looking southwest
7. Photo # 6 of 9

6. Detail of south truss of bridge at center, looking south
7. Photo # 7 of 9

6. East approach to bridge, looking west
7. Photo # 8 of 9

6. West approach to bridge, looking east
7. Photo # 9 of 9



LEGEND

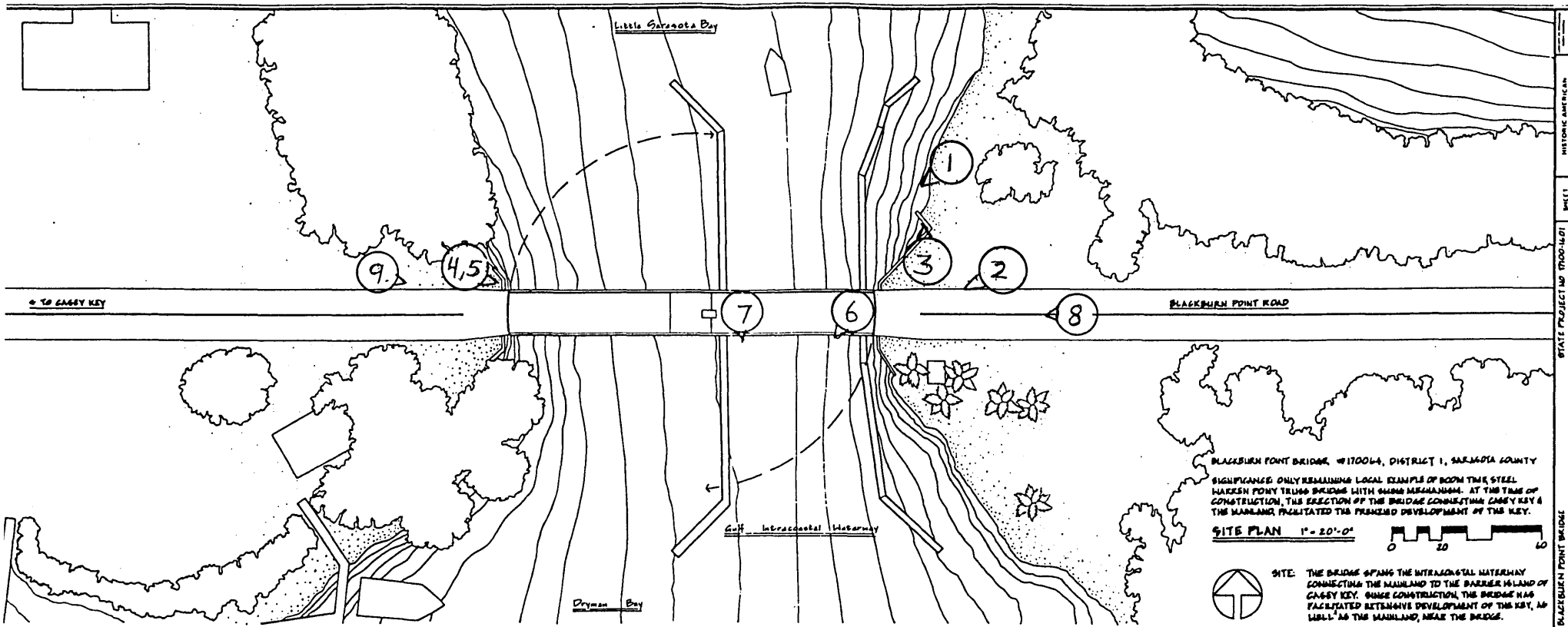
FLORIDA DEPARTMENT OF TRANSPORTATION

CR 789 (BLACKBURN POINT ROAD)
AT BRIDGE NO. 170064
PD&E STUDY
Sarasota County, Florida

BLACKBURN POINT BRIDGE

FP ID NO.: 200538 1 32 01
WPI SEG. NO.: 1129029
SPN NO.: 17100-1605

FIGURE 1



BLACKBURN POINT BRIDGE, #170064, DISTRICT 1, SARASOTA COUNTY

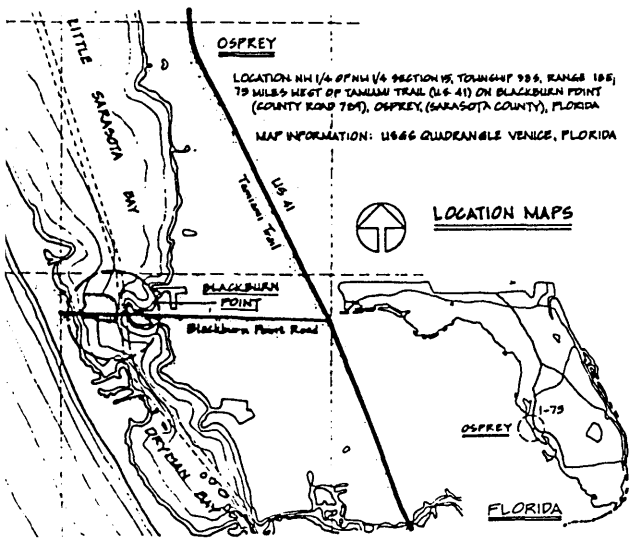
SIGNIFICANCE: ONLY REMAINING LOCAL EXAMPLE OF BOOM TIME STEEL WARREN PONY TRUSS BRIDGE WITH SWING MECHANISM. AT THE TIME OF CONSTRUCTION, THE ERECTION OF THE BRIDGE CONNECTING CASEY KEY & THE MAINLAND, FACILITATED THE PLANNED DEVELOPMENT OF THE KEY.

SITE PLAN 1" = 20'-0"

0 20 40

SITE: THE BRIDGE SPANS THE INTRACOASTAL WATERWAY CONNECTING THE MAINLAND TO THE BARRIER ISLAND OF CASEY KEY. SINCE CONSTRUCTION, THE BRIDGE HAS FACILITATED EXTENSIVE DEVELOPMENT OF THE KEY, AS WELL AS THE MAINLAND, NEAR THE BRIDGE.

PHOTOGRAPHIC DIAGRAM



LOCATION: NW 1/4 OF NW 1/4 SECTION 19, TOWNSHIP 38S, RANGE 18E; 79 MILES WEST OF TAMIAMI TRAIL (U.S. 41) ON BLACKBURN POINT (COUNTY ROAD 789), OSPREY, (SARASOTA COUNTY), FLORIDA

MAP INFORMATION: USGS QUADRANGLE VENICE, FLORIDA

LOCATION MAPS

BLACKBURN POINT BRIDGE SARASOTA COUNTY FLORIDA

BOARD OF COUNTY COMMISSIONERS

GEO. B. PRIME CHAIRMAN
M.L. WREAD J.J. CROWLEY
F.L. ZEIGLER M.L. TOWNSEND
CHAS. H. WADSWORTH COUNTY ENGINEER

BUILT BY
THE CHAMPION BRIDGE CO.
WILMINGTON, OHIO
1925

HISTORICAL OUTLINE

DATE OF ERECTION: 1923-1924. THE CONTRACT FOR CONSTRUCTION WAS AWARDED IN MARCH OF 1923. THE BRIDGE WAS OPENED AROUND THE 15TH OF DECEMBER 1924.

BRIDGE FABRICATOR: CHAMPION BRIDGE COMPANY OF WILMINGTON, OHIO.

CONTRACTOR: QUINN AND FOWELL CONSTRUCTION OF FORT LAUDERDALE, FLORIDA.

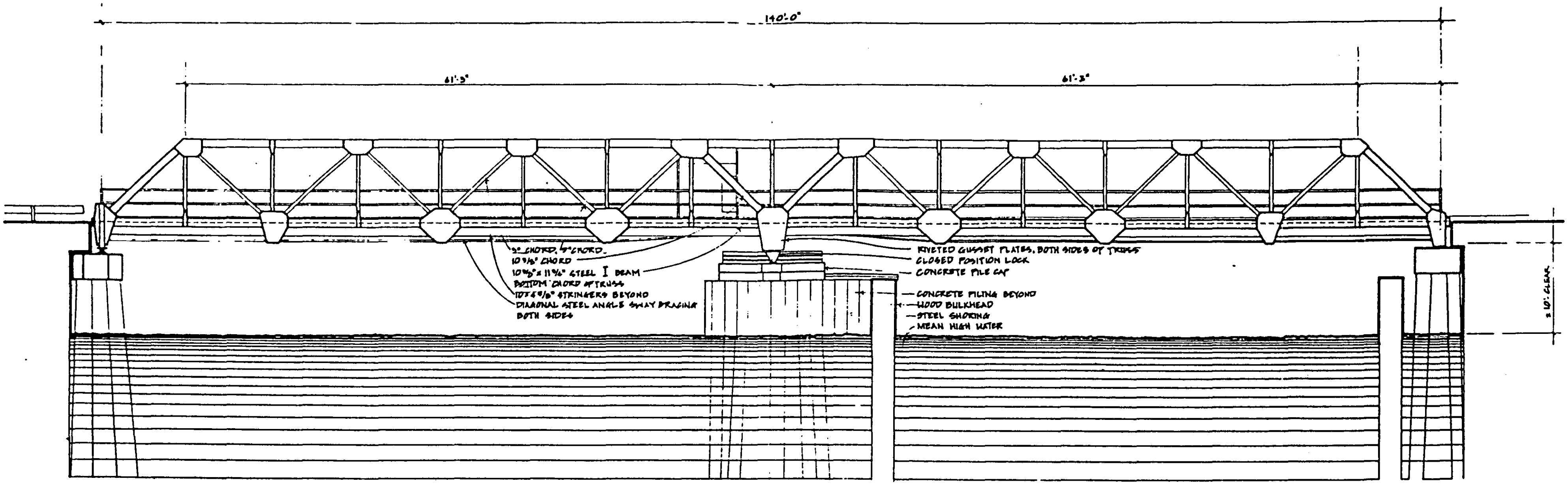
ORIGINAL PLANS AND CONSTRUCTION: PREFABRICATED.

STRUCTURE: THE BRIDGE IS A SINGLE SPAN, WARREN PONY TRUSS, AND SWING SPAN STRUCTURE. IT CARRIES ONE LANE OF TRAFFIC OVER THE INTRACOASTAL WATERWAY BETWEEN THE MAINLAND AND CASEY KEY. THE STEEL TRUSS CONSISTS OF A LOWER AND UPPER CHORD, WITH DIAGONAL MEMBERS IN TWO DIRECTIONS AND VERTICAL MEMBERS SUPPORTING FLOOR BEAMS AND STRINGERS.

THE SWING OR DRAW MECHANISM WAS PATENTED BY THE SCHERZER ROLLING LIFT COMPANY, CHICAGO. IT ALLOWED THE BRIDGE TENDER TO ROTATE THE BRIDGE BY TURNING A WRENCH MECHANISM. THIS ALLOWED THE SPAN TO SWING THE FULL WIDTH OF THE ABUTMENT, GIVING FULL CLEARANCE, AN ADVANTAGE OVER THE BASCULE TYPE BRIDGES.

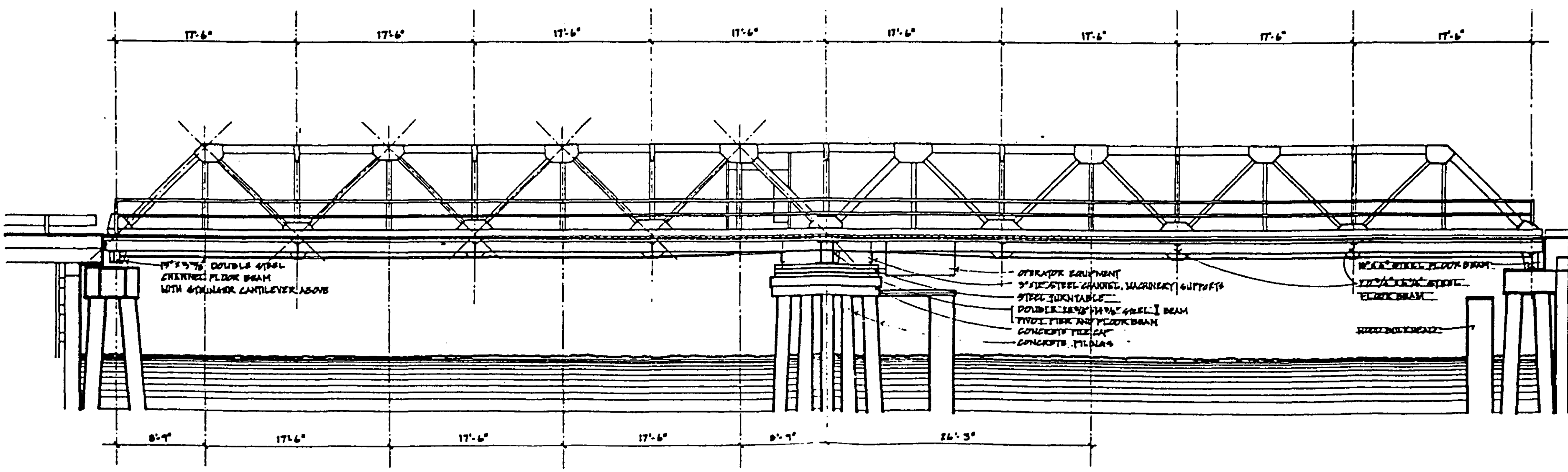
THE RIVETED CONNECTIONS REFLECT NEW TECHNOLOGY AT THE BEGINNING OF THE CENTURY, AND THE SELECTION OF A WARREN TRUSS WAS INDICATIVE OF BOTH THE EASE OF ASSEMBLY AND REFINED ELEGANCE OF CERTAIN EARLY TWENTIETH CENTURY BRIDGES. IT IS AN HONEST EXPRESSION OF INDUSTRY, STRUCTURE, AND MECHANICS FREE OF ADDITIONAL ORNAMENT.

DELINEATED BY: FRANCESCA MORAN FIORE, JANE HARRISON McGARRY, A.C.I., 1992
BLACKBURN POINT BRIDGE RECORDING PROJECT
PARSONS, BRINCKERHOFF, QUADE AND DOUGLAS
UPI NO 1124024
OSPREY
BLACKBURN POINT BRIDGE
BLACKBURN POINT ROAD
COUNTY ROAD 789
SARASOTA COUNTY
STATE PROJECT NO 17001601
FLORIDA
HISTORIC AMERICAN ENGINEERING RECORD
SHEET 1 OF 2



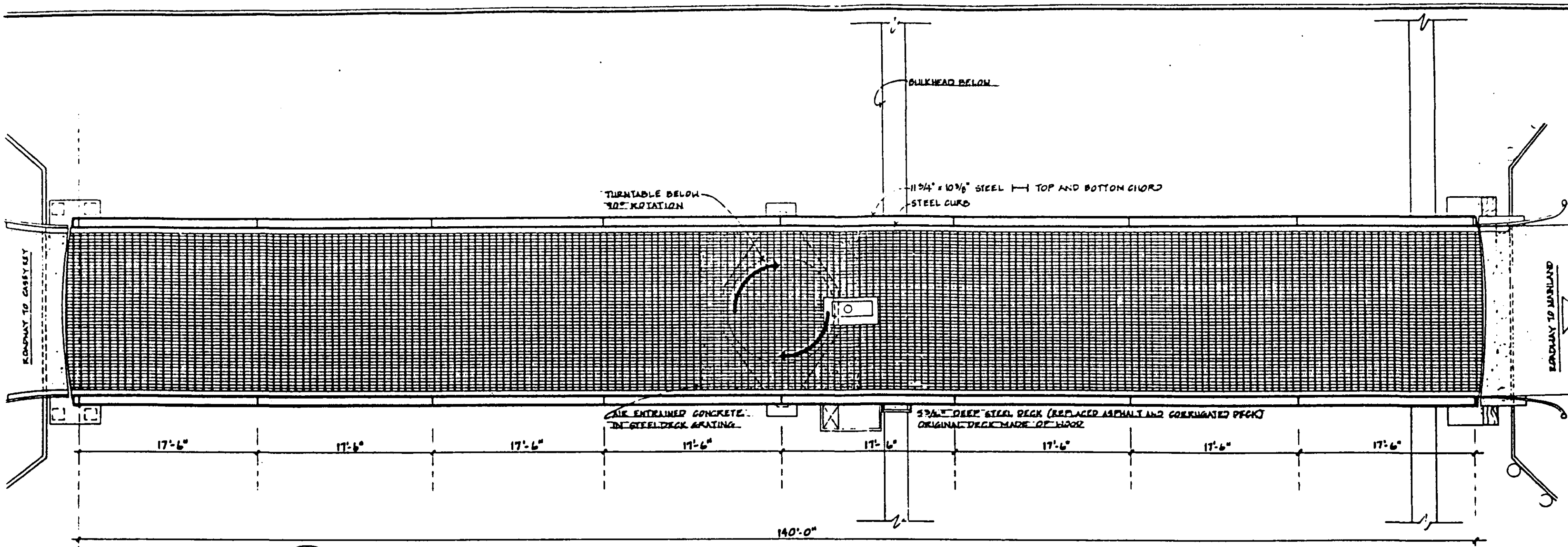
SOUTH ELEVATION
SCALE 3/16" = 1'-0"

LONGITUDINAL SECTION
SCALE 3/16" = 1'-0"



HISTORIC AMERICAN ENGINEERING RECORD

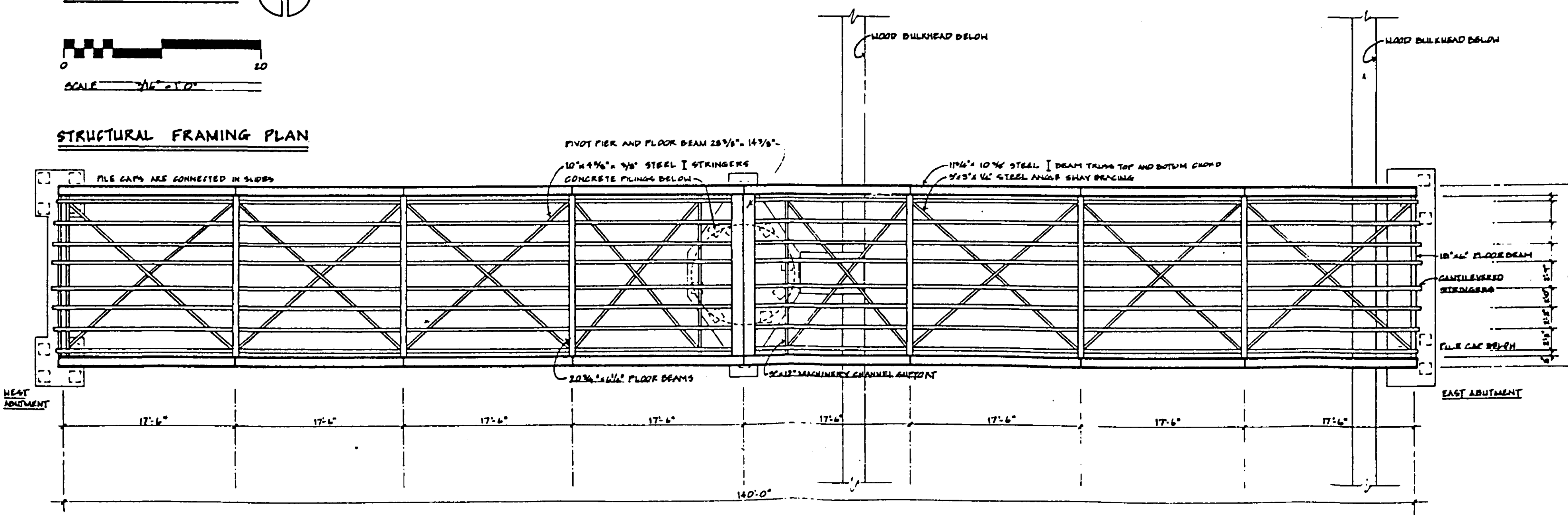
BLACKBURN POINT BRIDGE
BLACKBURN POINT ROAD, COUNTY ROAD 789
OSPREY, SARASOTA COUNTY, FLORIDA



BRIDGE DECK PLAN

SCALE 3/16" = 1'-0"

STRUCTURAL FRAMING PLAN



DELINEATED BY FRANCESCA MORAN FIORE, JANE HARRISON McGARRY, 1992, ARCHAEOLOGICAL CONSULTANTS INC

BLACKBURN POINT BRIDGE RECORDING PROJECT
PARSONS, BRINCKERHOFF QUADE AND DOUGLAS
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

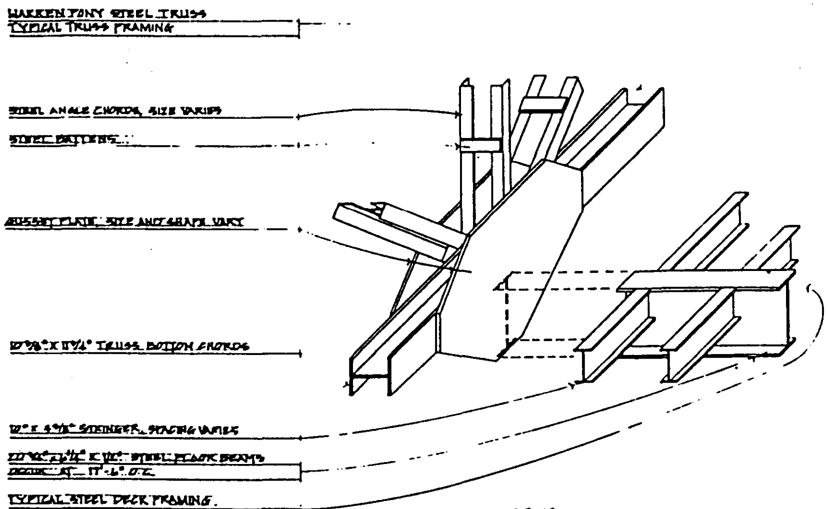
W.P.I. NO 1119029
OSPREY

BLACKBURN POINT BRIDGE
BLACKBURN POINT ROAD COUNTY ROAD 789
SARASOTA COUNTY

STATE PROJECT NO 17125-1601
FLORIDA

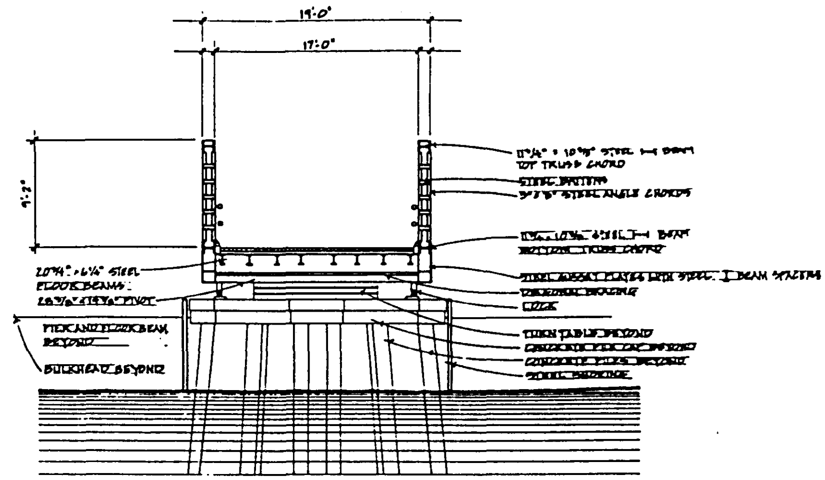
SHEET 2 OF 4

HISTORIC AMERICAN ENGINEERING RECORD



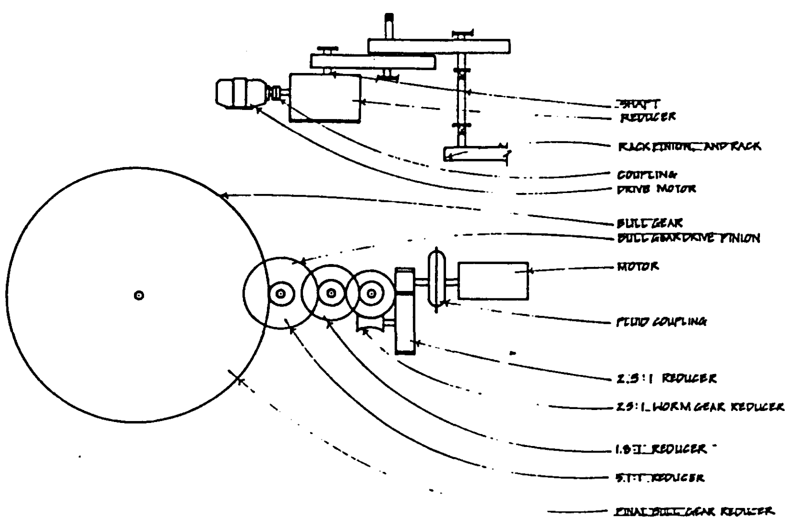
CONNECTION DETAIL

PLAN OBLIQUE VIEW — NO SCALE



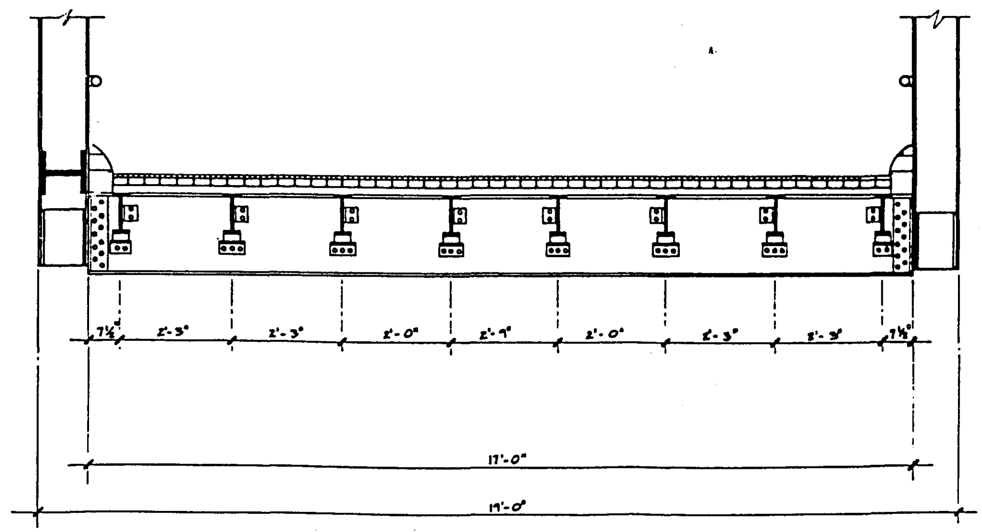
BRIDGE CROSS SECTION

SCALE 3/16" = 1'-0"



DRIVE DIAGRAM FOR TURNTABLE MECHANISM

NO SCALE



CROSS SECTION DETAIL

SCALE 3/4" = 1'-0"

DELINEATED BY FRANCESCA MORAN FIORE, JANE HARRISON McGARRY M92, ARCHAEOLOGICAL CONSULTANTS INC.

CRESENT POINT BRIDGE RECORDING PROJECT — SOUNS BRINCKERHOFF, QUADE AND DOUGLAS — NATIONAL PARK SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

WPI NO 229054 — OSPREY

BLACKBURN POINT BRIDGE — BLACKBURN POINT ROAD — COUNTY ROAD 789 — SARASOTA COUNTY

STATE PROJECT NO 17100-1601 — FLORIDA

SHEET 4 OF 4

HISTORIC AMERICAN ENGINEERING RECORD