



**Photo 5-47. Bob Graham Sunshine Skyway Bridge (No. 150189)**

**Bob Graham Sunshine Skyway Bridge**

Pinellas and Manatee  
Counties  
FDOT #150189,  
8PI11962, 8MA1798

The 1986 Bob Graham Sunshine Skyway Bridge carries I-275 over Tampa Bay to link Pinellas and Manatee Counties. Construction began in 1982 and was completed in February 1987 at a cost of \$244 million. The bridge was opened to traffic on April 20, 1987. The new Sunshine Skyway Bridge replaced

the original 1954 steel cantilevered truss bridge, and its sister bridge, added to the east in 1971, following the partial collapse of the 1971 southbound main pier resulting from the May 9, 1980 collision of the Summit Venture freighter. The approach spans of the 1954 northbound and 1971 southbound bridges are used as fishing piers.

The Sunshine Skyway Bridge is 29,040 feet in length, with a main span measuring 1,200 feet and a vertical clearance of 193 feet. Eight approach spans fabricated from precast concrete flank the cable-stayed spans, four at each side. The main span features 21 steel cables in a harp design, which carry the weight of the structure. The cables are encased in yellow-painted steel pipes. It is one of the first cable-stayed bridges constructed with the cables attached at the center of the roadway instead of at the outer edges. It was awarded the Presidential Design Award from the National Endowment for the Arts in 1988.

The new bridge features a precast deck superstructure designed by the renowned Figg & Muller Engineering Group and built by the American Bridge Company. It includes a bridge protection system designed by Parsons Brinckerhoff. This protection system consists of large concrete bumpers, called dolphins, located around the piers and designed to withstand an impact from an 87,000-ton tanker traveling at 10 knots.

Several significant modern bridges in Florida were designed by Eugene C. Figg. He graduated in 1958 from The Citadel, the military university in South Carolina, and was introduced to prestressed concrete by William Dean, then the chief engineer for FDOT, during a three-year bridge design training program. After Figg left FDOT in 1964, he went on to work with the architectural/engineering firm of Barrett, Daffin and Figg in Tallahassee. Later, he began his own firm, Figg and Muller Engineers, with French engineer Jean Muller. Their firm promoted the idea of segmental bridge construction with prestressed concrete as an economically viable option. When Figg and Muller coupled the prestressed concrete segmental technology with cable-stayed supports, they increased the effective use of high-strength concrete in long-span bridges and changed the way bridges were built in America.

While this bridge is less than 50 years old, it has been excluded by the FHWA from the Advisory Council for Historic Preservation's Section 106 Exemption Regarding Effects to the Interstate Highway System,

and was determined eligible for listing in the NRHP in 2007 in the area of Engineering. Because it has achieved exceptional significance within the past 50 years, Criterion Consideration G is applicable.

### **Culverts**



**Photo 5-48. CR-18 over Braggs Branch, Bradford County (No. 280036)**

#### **County Road 18 Arch Culverts**

Bradford County

FDOT #280036 (Braggs Branch),  
8BF00730

FDOT #280037 (Gum Branch),  
8BF00731

FDOT #280038 (Branch of Sampson  
River), 8BF00732

The three unadorned 1940 corrugated steel arch culverts along CR-18 in Bradford County are interesting late examples of their type. In contrast to the arched, stone-faced New Deal era culverts, these three have smooth concrete facades. Their intermediate piers feature fluted boots to assist with water flow. Structure Nos. 280036 (**Photo 5-48**) and 280038 have two spans and measure 26 feet and 27 feet in

length, respectively. The three-span culvert over Gum Creek (No. 280037) (**Photo 5-49**) extends 43 feet.

The Bauhaus and International movement influence and the cost-constraints of the Great Depression meant an end to high-style, ornate structures in the built environment. After the 1930s, adorned structures became a rarity. Specifically with culverts, this was manifested in a shift from an arched to boxed form and a stone-faced to unadorned façade. As concrete gained further acceptance as a bridge building material, cast-in-place, unadorned concrete box culverts emerged in the 1930s and have been prevalent ever since.

The corrugated steel arch culverts featured here represent a continuum in the design trends for its type but are also included for additional consideration as representatives that mark the end of a design paradigm. Due to their integrity, increasing rarity, and at-risk condition, the three culverts are noteworthy examples of their type. Further in-depth research may reveal that the 1940s arched culverts are associated with the WPA or CCC. They are newly recommended NRHP-eligible under



**Photo 5-49. CR-18 over Gum Creek, Bradford County (No. 280037)**