



1992 - Pelican Creek Bridge

Description

Meta Fields

Project Summary : 5-week construction of replacement bridge to access island

Project Location : On Chichagof Island approximately 80 miles west of Juneau in southeast Alaska

Mobility Impact Time : ABC: bridge constructed in five weeks Conventional: ABC is conventional construction in Alaska

Impact Category : Tier 5 (within 3 months)

Dimensions : 178-ft long and 19.08-ft wide three-span decked adjacent double-tee beam bridge (59.3 ft × 59.3 ft × 59.3 ft)

Average Daily Traffic At Time Of Construction : 100

Traffic Management : ABC is conventional construction in Alaska due to climate and terrain.

Existing Bridge Description : Built in 1992, the old one-lane timber bridge was structurally deficient and required rapid replacement to allow access for the small fishing community's new fire truck.

Replacement Or New Bridge : The new one-lane bridge consists of precast, pretensioned decked double-tee girders with precast pier and abutment caps on steel H piles. The superstructure cross-section consists of three adjacent 6.33-ft wide 2.67-ft deep girders with timber railing.

Construction Method : Construction requirements included staying out of the sensitive creek bed and completing work within a short time defined by the Department of Fish and Game. The Alaska DOT&PF chose a totally prefabricated bridge with all material, including rock for the approach fill, barged to the work site. The contractor floated in barges at high tide and anchored them in the creek. Crews drove the steel H piles from barges, drove a large-wheeled crane onto the barges, and then used the crane to install the caps. Cap pockets were filled with concrete. The crane was then used to erect the decked double-tee girders. The midspan diaphragms were then post-tensioned with 1-inch-diameter bars. No heavy equipment was lodged in the creek bed.

Contacts : Owner: Leslie Daugherty, P.E., S.E. Chief Bridge Engineer Alaska Department of Transportation and Public Facilities leslie.daugherty@alaska.gov 907-465-8891

Costs : The engineer's estimate for this project was \$219,000. The low bid was \$296,000 (\$77,000 = 35% higher than engineer's estimate). There were three bidders. The cost per square foot of bridge was \$87.

Funding Source : Federal and State

Contract Plans : 1

Year Abc Built : 1992

State : AK

Owner : State

Location : Rural

Spans : Three-span

Beam Material : Concrete

Max Span Length Ft : 59.3

Total Bridge Length Ft : 178

Construction Equipment : Conventional

State Id # : 1491

Nbi # : 1491

Latitude : 57.955

Longitude : -136.225

Project Delivery : Design-bid-build

Prefabricated Bridge Elements : adjacent T beam (double tee), precast pile cap, precast abutment cap

Miscellaneous Prefabricated : PT ducts/bonded, socket connection (in precast substructure)-(caps)

Abc Construction Equipment : Conventional

Specifications 0 Spec File : 2099

