

STRUCTURE 120

This structure is a single-barreled reinforced concrete box culvert, located on Canal 100A at U.S. Highway #1. Control is effected by a manually operated sluice gate mounted on a reinforced concrete head structure.

PURPOSE

This structure maintains optimum upstream water control stages in Canal 100A; it passes the design flood (40% of the Standard Project Flood) without exceeding the upstream flood design stage, and restricts downstream flood stages and channel velocities to non-damaging levels.

OPERATION

This structure is operated solely for flood control. Under low-water conditions the gate is closed and the optimum upstream stage is maintained with uncontrolled discharge occurring over the control structure. Flood control releases are made through the manually operated control gate, while maintaining an upstream water surface elevation of 5.0 feet.

FLOOD DISCHARGE CHARACTERISTICS

	Design	Standard Project Flood
Discharge Rate	<u>150</u> cfs	<u>380</u> cfs
	<u>40</u> % SPF	<u>100</u> % SPF
Headwater Elevation	<u>4.8</u> feet	<u>7.0</u> feet
Tailwater Elevation	<u>4.3</u> feet	<u>6.3</u> feet
Type Discharge (gate open)	controlled <u>submerged</u>	<u>submerged</u>

DESCRIPTION OF STRUCTURE

Type reinforced concrete box culvert with upstream control

Number of barrels 1

Size of barrels 9 ft. X 9 ft.

Length of barrels 104 ft.

Flow line elevation -3.0

Service bridge elevation 15.0 feet

Water level which will by-pass structure 11.0 feet

Control

Structure Discharge is controlled by a box structure at the upstream end of the culvert. Upstream water surfaces to elevation 5.0 feet can be controlled by a sluice gate. Higher water surfaces will discharge uncontrolled over the top of the box structure into the culvert.

Gates

Number 1

Type sluice gate mounted on box structure at upstream end of culvert

Size 6' X 6'

Gate Sill -1.0

Top of the Box 5.0

Control manual

Lifting Mechanism pedestal mounted, manually operated hoist

Date of Transfer: September 15, 1966

ACCESS: structure located on U.S. Highway #1

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Water Level Upstream and downstream staff gauges only

Gate Position Recorder None

Other _____

DEWATERING FACILITIES (per barrel) None