

STRUCTURE 20A

This structure is a reinforced concrete, gated spillway with discharge controlled by a cable operated, vertical lift gate. Operation of the gate can be automatically controlled so that the gate hydraulic operating system opens or closes the gate in accordance with the seasonal operational criteria. The structure is located on Levee 31E about 2 miles from the shore of Biscayne Bay, at the point where the proposed Canal 106 would cross L-31E.

PURPOSE

The proposed purpose of this structure is to maintain the optimum water control stages in the upstream agricultural area; it is designed to pass the flood (40 percent of the Standard Project Flood) without exceeding upstream flood design stage, and restricts downstream flood stages and discharge velocities to non-damaging levels, and to prevent saline intrusion during periods of high flood tides. Since construction of C-106 has been postponed indefinitely, the structure serves only to prevent saline intrusion and to drain the upstream area in the event of unusually large floods and to allow rapid drainage of salt water which might be trapped behind L-31E in the event of a hurricane.

OPERATION

This structure will normally be closed. Discharge of the tailwater drainage area will occur through the borrow ditch of L-31E.

Structural Limitations

The differential head across the structure shall not be allowed to exceed 5.0 feet for stability purposes.

FLOOD DISCHARGE CHARACTERISTICS

	Design	Standard Project Flood
Discharge Rate	<u>575</u> c.f.s. <u>40</u> %SPF	<u>1000</u> c.f.s. <u>100</u> %SPF
Headwater Elevation	<u>1.7</u> feet	<u>2.0</u> feet
Tailwater Elevation	<u>1.2</u> feet	<u>1.5</u> feet
Type Discharge	uncontrolled <u>submerged</u>	uncontrolled <u>submerged</u>

Estimate Max. Hurricane
Tide 15.2 feet m.s.l.

DESCRIPTION OF STRUCTURE

Type Fixed crest, reinforced concrete gated spillway

Weir Crest

Net Length 16.0 feet

Elevation -9.3 feet

Service Bridge Elevation 7.0 feet

Water Level which will by-pass structure 7.0 feet

Gates

Number 1

Size 13.3 feet high by 16.75 feet wide

Type Vertical lift with two auxiliary manually operated slide gates
on the main gate. Clear opening of each slide gate is 1' -6"
high by 6' -5" wide, sill elevation 1.0.

Bottom elevation of gates, full open 5.0 feet

Top elevation of gates, full closed 4.0 feet

Control Structure is non-operational

Date of Transfer February 9, 1968

ACCESS: Access road on south bank of Florida City Canal and Levee 31E

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Water Level on-site, dual recorder

Gate Position Recorder on-site type PAV

DEWATERING FACILITIES

Storage Miami Field Station

Type timber stop logs

Size & number (per bay)

Upstream & Downstream

Number: 31 total Size: 12" X 12" X 17'-8" long