

## G-57

This structure is a reinforced concrete, gated spillway with discharge controlled by two stem operated, vertical lift gates. Operation of the gates is automatically controlled so that the gate operating system opens or closes the gates in accordance with the operational criteria. The structure is located on the Old Pompano Canal just east of Cypress Road.

### **PURPOSE**

This structure maintains upstream water control stages in Old Pompano Canal. It passes the design flood without exceeding the upstream flood design stage, and restricts downstream flood stages and channel velocities to non-damaging levels; and it prevents saline intrusion.

### **OPERATING CRITERIA**

This structure is operated to maintain an optimum water surface of 4.5 feet insofar as possible. The automatic operations are actuated by the headwater elevation as follows:

When the headwater elevation rises to 4.8 feet, the gates begin to open at 6 inches per minute; the amount of opening is described below.

When the headwater elevation rises or falls to elevation 4.6, the gates become stationary.

When the headwater elevation falls to 4.3, the gates begin to close.

In addition to maintaining optimum upstream fresh water control, as described above, the automatic controls on this structure have an overriding control which closes the gates, regardless of the upstream water level in the event of a high floodtide, whenever the differential between the head and the tailwater pool elevation reaches 0.2 feet.

### **FLOOD DISCHARGE CHARACTERISTICS**

	Design
Discharge Rate	<u>375 cfs</u>
Headwater Elevation	<u>5.0 feet</u>
Tailwater Elevation	<u>4.5 feet</u>
Type Discharge	<u>submerged controlled</u>

### **DESCRIPTION OF STRUCTURE**

Type Fixed crest, reinforced concrete gated spillway

Weir Crest

Net Length 28 feet

Elevation -1.0 feet

Service Bridge Elevation 17 feet

Water level which will bypass structure 9 feet

Gates

Number 2

Size 6 ft. high by 14 ft. wide

Type Vertical lift gates

Control: Automatic, on-site upstream control with override differential water surfer control sensed by bubbler system and remote computer control.

Bottom elevation of gates, full open 5 feet

Top elevation of gates, full closed 5.0 feet

Lifting mechanism

Normal power source commercial electricity

Emergency power source LP gas driven generator with automatic transfer switch

Type hoist direct drive electric motor, gear connected to gear box and stems

**ACCESS:** The structure is located adjacent to Atlantic Boulevard.

**HYDRAULIC & HYDROLOGIC MEASUREMENTS**

Water Level Remote digital recorder

Gate Position Recorder Remote digital recorder

Rain Gauge None

**DEWATERING FACILITIES**

Storage Ft. Lauderdale Field Station