

DRAFT

**S-519B
Gated Box Culverts**

Revisions 22 December 2000 - Original Submission

XY Coord 837880 519400

Location At S-520 pump station, junction of C-503 and C-4 Canals.

Purpose Provides for the backpumping of C-4 west basin runoff.
Allows reverse flow for C-4/2 dry-season deliveries.

Notes 1. Reverse flow of 300 cfs is part of normal operations.
2. Riprap requirements have not been verified with Geotech.

Design Conditions

Discharge (CFS)	600 cfs
Headwater Elevation	4.45 ft,NGVD
Tailwater Elevation	3.75 ft,NGVD

Maximum Expected Stages

Headwater Elevation	7.25 ft,NGVD
Tailwater Elevation	8.00 ft,NGVD

Maximum Head Difference

Maximum Headwater Elevation	4.50 ft,NGVD
Minimum Tailwater Elevation	8.00 ft,NGVD

Culvert Data

Number of Barrels	2
Barrel Type	Concrete
Single Culvert Barrel Width	8.0 feet
Single Culvert Barrel Height	8.0 feet
Barrel Length	40.0 feet
Barrel Invert Elevation	-10.00 ft, NGVD
Type of Control	Slide Gate

Canal Data

Side Slopes Cotangent	1
Upstream Bottom Width	Pool feet
Upstream Bottom Elevation	-5.00 ft,NGVD
Downstream Bottom Width	Pool feet
Downstream Bottom Elevation	-14.00 ft,NGVD

Riprap Requirements

Design Barrel Velocity	4.69 fps
Design Riprap Velocity	8.00 fps
Riprap Protection Area	800 sq-ft
Riprap Thickness	2.0 feet
Riprap Bedding Thickness	1.0 feet

Control Protection Elevation 9.00 ft,NGVD