

DRAFT

**S-502A
3-Bay Spillway**

Revisions 3 August 2000 - Original submission

XY Coord 841125 627835

Location On Griffin Road 1000 feet west of US27 southbound lanes.

Purpose Maintain stage divide between northern and southern EBS.
Controls WCA-2B conveyance and WCA-3A seepage flows directed south.

Notes 1. Riprap requirements have not been verified with Geotech.

Design Conditions

Discharge (CFS)	2,000 cfs
Headwater Elevation	7.45 ft,NGVD
Tailwater Elevation	7.20 ft,NGVD

Maximum Expected Stages

Headwater Elevation	9.00 ft,NGVD
Tailwater Elevation	8.75 ft,NGVD

Maximum Head Difference

Maximum Headwater Elevation	7.50 ft,NGVD
Minimum Tailwater Elevation	6.50 ft,NGVD

Crest Data

Shape	Ogee
Crest Elevation	-3.25 ft, NGVD
Ogee Flow Length	14.8 feet
Net Crest Length	60.0 feet
Number and Width of Piers	2@3.25 feet
Approach Apron Elevation	-7.50 ft, NGVD
Approach Apron Width =	66.50 feet
Approach Apron Length =	10.70 feet

Gate Data

Weir Control	Slide Gate
Number of Gates	3
Gate Bay Width	20.00 feet
Gate Height	14.40 feet
Gate Clearance Elevation	10.00 feet NGVD
Base of Breastwall Elevation	None

Stilling Basin Data

Design Discharge	2,500 cfs
Apron Elevation	-8.50 ft,NGVD
Training Wall Elevation	8.75 ft,NGVD
Apron Length from Toe of Ogee to Toe of Endsill	27.75 feet
End Sill Elevation	-7.75 ft,NGVD
Slope from apron to Top of End Sill	1 on 5
Baffle Block Elevation	-6.75 ft,NGVD
Baffle Block Width	1.75 feet
Rows of Baffle Blocks	2
Distance from toe of Ogee to 1st Row of Baffle Blocks	12.85 feet
Distance from toe of Ogee to 2st Row of Baffle Blocks	17.15 feet

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Canal Data

Side Slopes Cotangent	1
Upstream Bottom Width	130.0 feet
Upstream Bottom Elevation	-8.00 ft,NGVD
Downstream Bottom Width	100.0 feet
Downstream Bottom Elevation	-10.00 ft,NGVD

Riprap Requirements

Design Endsill Velocity	2.64 fps
Design Riprap Velocity	4.00 fps
Riprap Protected Area	1,600 sq-ft
Riprap Thickness	1.5 feet
Riprap Bedding Thickness	1.0 feet

Control Protection Elevation

11.00 ft,NGVD