3-94.1

U.S. Department of Agriculture
Soil Conservation Service

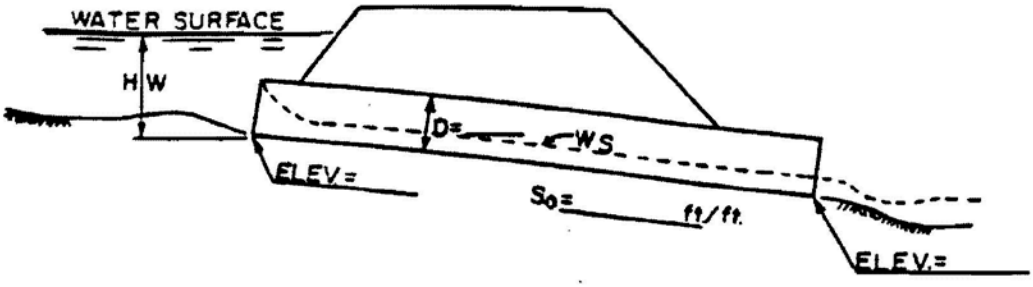
CULVERT CAPACITY

Name: _____ Location: _____

Designed by: _____ Date: _____ Checked by: _____ Date: _____

Q Required = _____cfs Culvert Type _____

Concrete n = 0.012
CMP n = 0.024



INLET CONTROL

Type of Inlet: Head wall_____: Mitered to Conform to Slope _____; Projecting _____

D = _____Ft., HW _____ Ft.

HW/D = _____/_____ = _____

n = _____, Q = _____ C.F.S. (Exhibit 3-9 or 3-10, EFH)

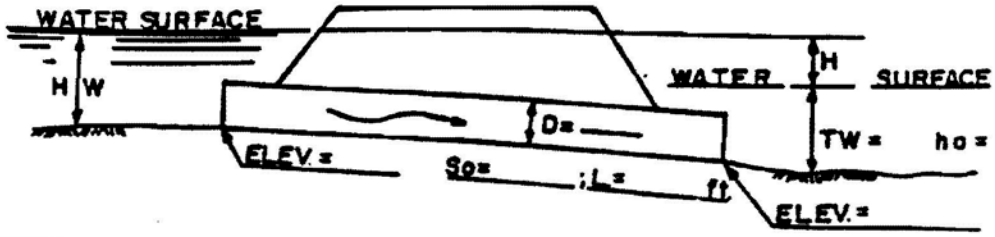
Sn = _____* (Exhibit 3-5, EFH)

a. If So more than Sn . . . . . Inlet Control
Use Q above for culvert

b. If So less than Sn . . . . . Outlet Control (Proceed below)

c. If So = Sn; compute Q for both inlet and outlet control, use the lower Q.

*NOTE: Use Q as determined for inlet control to determine Sn.



OUTLET CONTROL

D = _____ Ft., HW = _____ Ft., ho = _____ Ft.

H = HW - ho + SoL = _____ - _____ + _____ = _____ Ft.

(For Free Outlet, ho = 3/4 D)

n = _____, Ke = _____, (Table 3-3, EFH)

Q = _____ C.F.S. (Exhibit 3-11 or 3-12, EFH)

(Alternate Method - See Other Side)

Exhibit 3-12a

Continued -- See alternate method on other side.

PROJECT: _____ DESIGNER: _____

DATE: _____

HYDROLOGIC AND CHANNEL INFORMATION

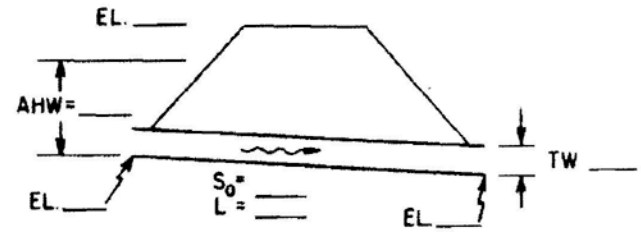
Q_1 = _____ TW_1 = _____

Q_2 = _____ TW_2 = _____

(Q_1 = DESIGN DISCHARGE, SAY Q_{25}
Q_2 = CHECK DISCHARGE, SAY Q_{50} OR Q_{100})

SKETCH

STATION: _____



MEAN STREAM VELOCITY = _____

MAX. STREAM VELOCITY = _____

CULVERT DESCRIPTION (ENTRANCE TYPE)	Q	SIZE	HEADWATER COMPUTATION										CONTROLLING HW	OUTLET VELOCITY	COST	COMMENTS
			INLET CONT.		OUTLET CONTROL $HW = H + h_0 - LS_0$											
			$\frac{HW}{D}$	HW	K_e	H	d_c	$\frac{d_c+D}{2}$	TW	h_0	LS_0	HW				

SUMMARY & RECOMMENDATIONS:

See U.S. Department of Commerce, Bureau of Public Roads, Hydraulic Engineering Circular No. 5, December 1965, Hydra[illegible] Charts for the Selection of Highway [illegible]

3-94.2