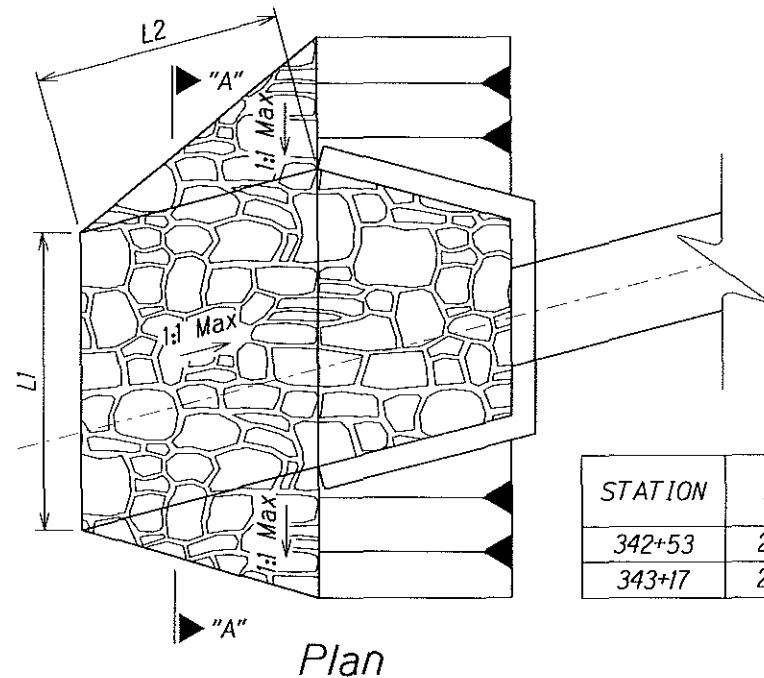
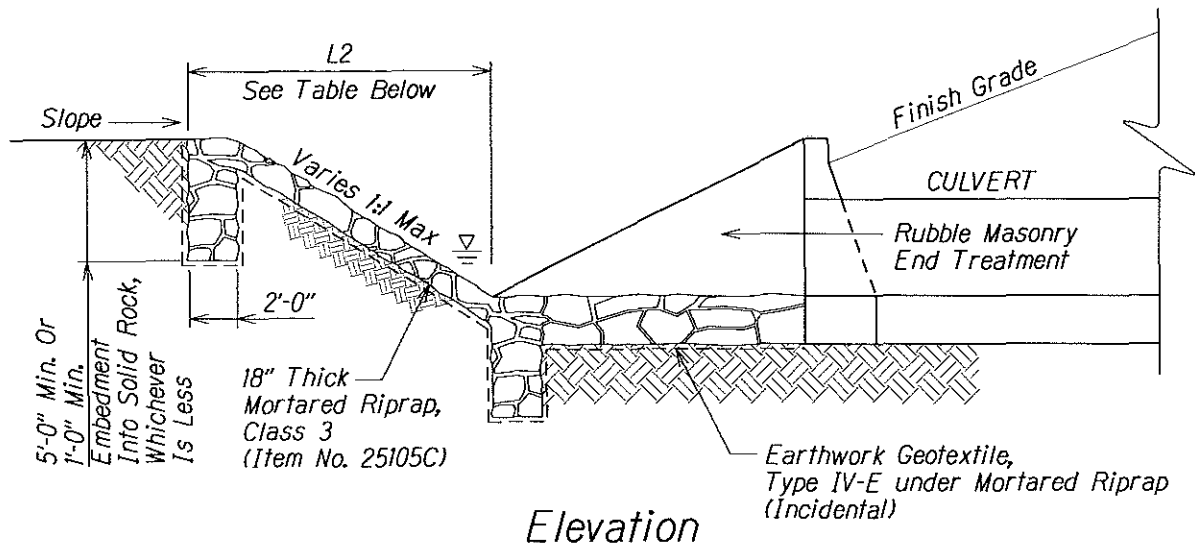
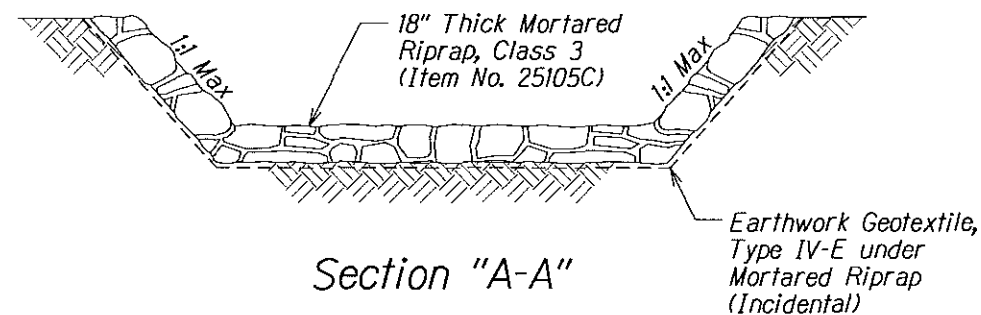


STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) # 200(1)	L14	L16

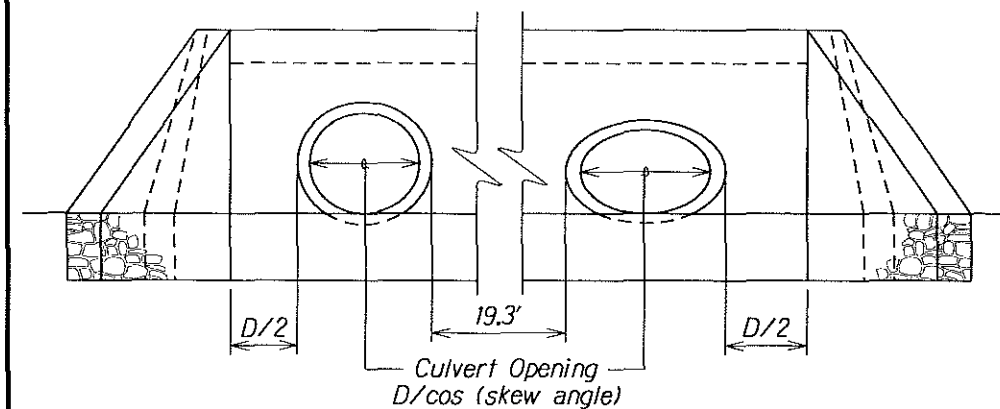
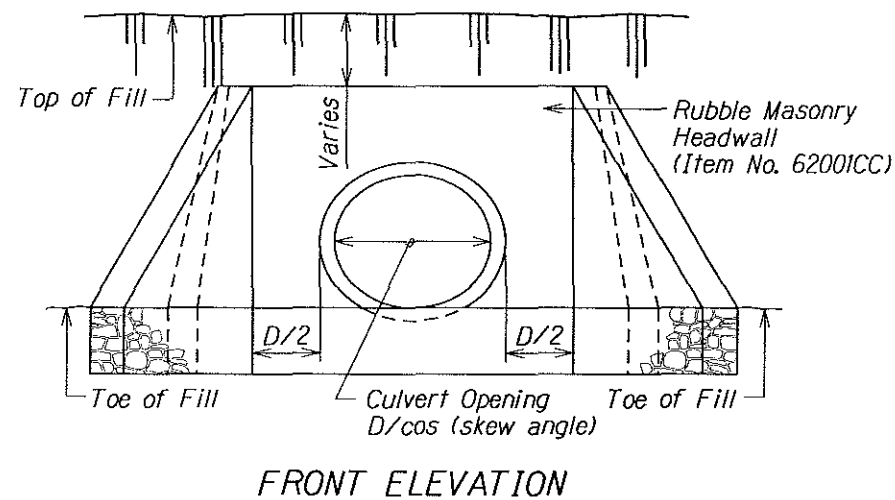
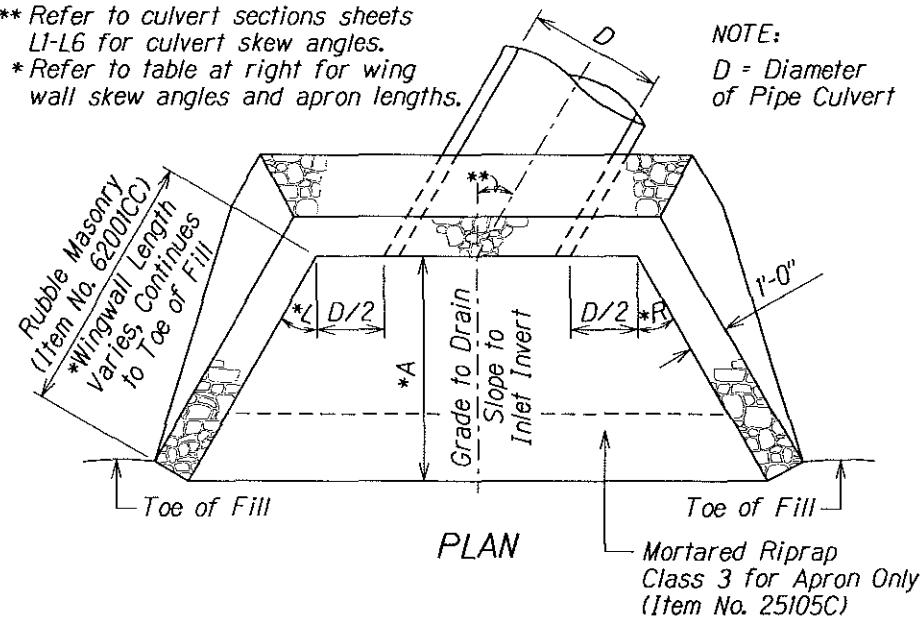


STATION	L1	L2
342+53	22'	15'
343+17	25'	14'



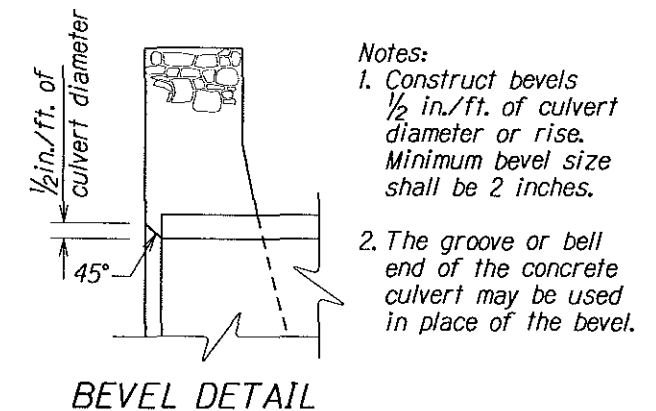
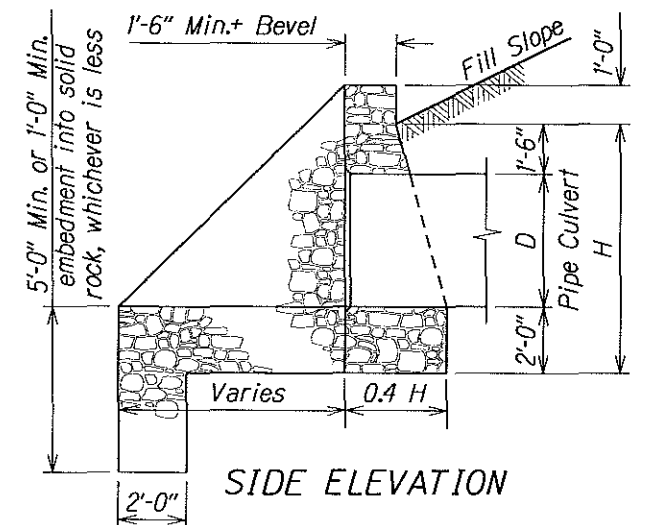
MORTARED RIPRAP APRON AT CULVERT INLET

** Refer to culvert sections sheets L1-L6 for culvert skew angles.
* Refer to table at right for wing wall skew angles and apron lengths.



RUBBLE MASONRY,
COARSE POINTED FINISH
CULVERT END TREATMENT

Station	Inlet			Outlet		
	L	R	A	L	R	A
342+53	30°	15°	16.5'	45°	-15°	12.3'
343+17	0°	60°	9.0'			
State Park 0+60.20	30°	30°	7.0'	30°	30°	8.1'
DOFAW No. 2 0+50	30°	30°	5.5'	0°	60°	4.6'
Pu'u O'o Ranch 0+74.73	30°	39°	9.0'	30°	30°	10.6'
1014+15	30°	30°	11.0'	30°	30°	11.0'
1119+50	30°	30°	13.5'	30°	30°	13.5'



- Notes:
- Construct bevels 1/2 in./ft. of culvert diameter or rise. Minimum bevel size shall be 2 inches.
 - The groove or bell end of the concrete culvert may be used in place of the bevel.

BRUCE K. MEYER
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No. 8336-C
HAWAII, U.S.A.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**MORTARED RIPRAP DETAILS &
RUBBLE MASONRY STRUCTURE**

Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1