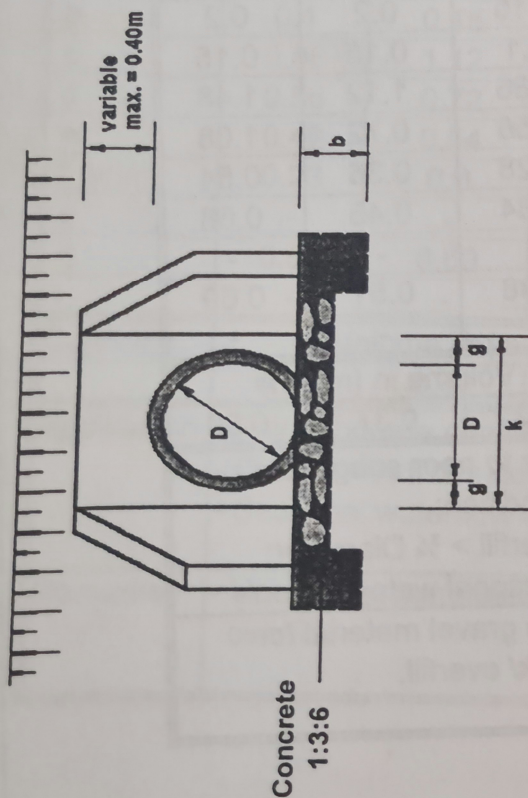
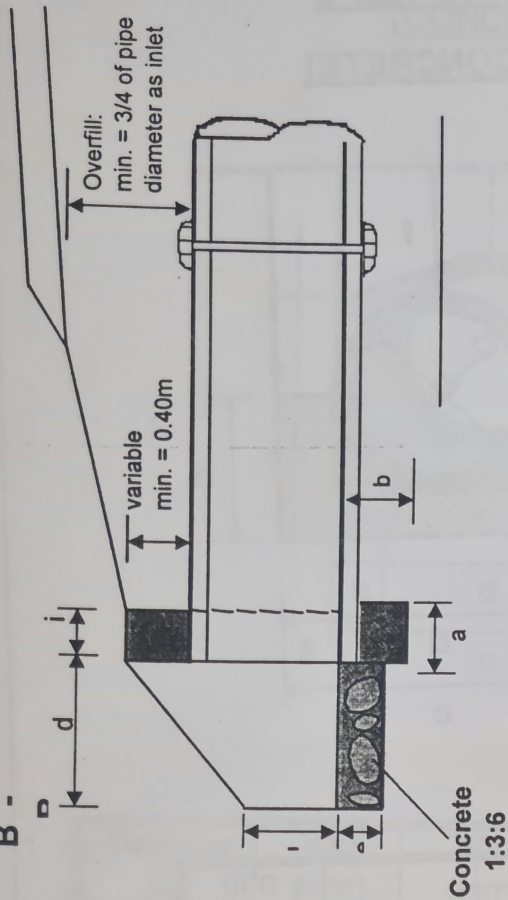


FIGURE E.12 - HEADWALL TYPE 4 (FOR ACCESS CULVERTS)

A - A



B -



DIMENSIONS AND MATERIAL REQUIREMENTS

PIPE DIAMETER IN (M)	UNIT	TYPE A (CONCRETE BLOCKS)			TYPE B (STONE MASONRY)		
		450	600	900	450	600	900
a FOUNDATION	m	0.30	0.30		0.40	0.40	
b FOUNDATION	m	0.30	0.30		0.30	0.30	
c APRON	m	1.34	1.49		1.34	1.49	
d APRON	m	0.60	0.60		0.60	0.60	
e APRON	m	0.20	0.20		0.20	0.20	
f WINGWALLS	m	0.20	0.20		0.40	0.40	
g WINGWALLS	m	0.10	0.10		0.10	0.10	
h HEADWALLS	m	0.69	0.69		0.69	0.69	
i HEADWALLS	m	0.20	0.20		0.40	0.40	
k HEADWALLS	m	0.65	0.80		0.65	0.80	
l HEADWALLS	m	0.40	0.40		0.40	0.40	
MATERIAL REQUIREMENT							
FOUNDATION							
(Concrete 1:2:4, 1:3:6)	m ³	0.18	0.2		0.24	0.26	
HEADWINGWALLS							
(Concrete/Masonry)	m ³	0.25	0.29		0.50	0.58	
APRON							
(Concrete)	m ³	0.12	0.14		0.12	0.14	

PLAN

