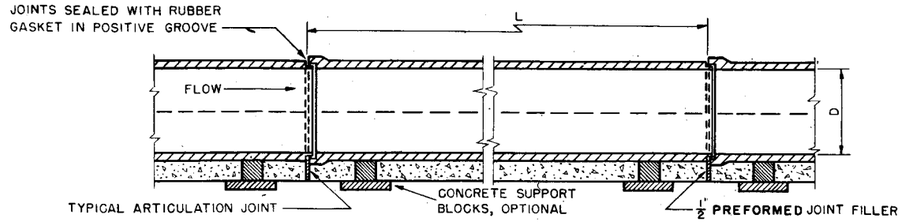
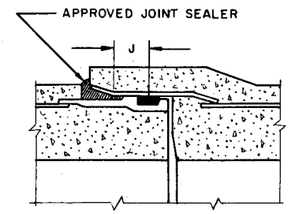
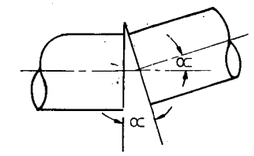


DETAIL OF PIPE CONDUIT
SECTION ON ℄—A2 CRADLE SHOWN

WHEN A1 CRADLE USED:
CUT LONGITUDINAL BARS AT 3" FROM EACH SIDE OF ARTICULATION JOINT. USE NO DOWELS.



JOINT EXTENSIBILITY



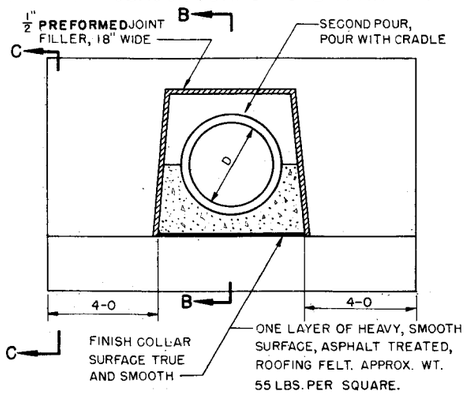
JOINT ROTATION CAPACITY

PIPE JOINT DISPLACEMENT CHARACTERISTICS

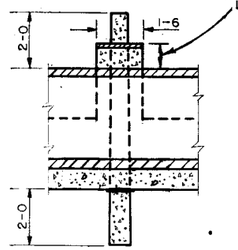
L	J	α
LENGTH OF PIPE SECTION	REQ'D JOINT EXTENSIBILITY	REQ'D JOINT ROTATION CAPACITY
FEET	INCHES	RADIANS

PRIOR APPROVAL OF PIPE AND PIPE JOINT DETAIL PROPOSED FOR USE, TO BE REQUIRED BY THE SPECIFICATIONS.

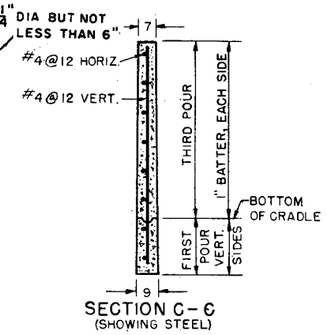
CLASS (a) DAMS MORE THAN 50 FT. HIGH, AND ALL CLASS (b) AND CLASS (c) DAMS



DETAIL SHOWN FOR EARTH FOUNDATION. FOR ROCK FOUNDATION, FOUND BOTTOM OF CRADLE ON ROCK LINE AND KEY COLLAR 6" INTO ROCK.



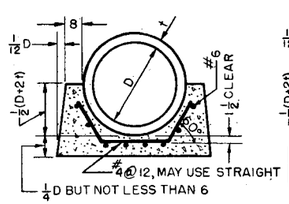
SECTION B-B



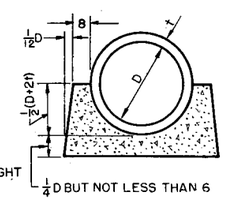
SECTION C-C
(SHOWING STEEL)

SIDES OF ANTI-SEEP COLLARS TO BE FORMED ABOVE BOTTOM OF CRADLE. MAX. SPACING OF COLLARS = 25'.

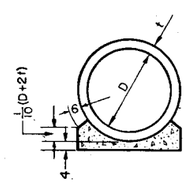
DETAIL OF ANTI-SEEP COLLAR



A1 CRADLE

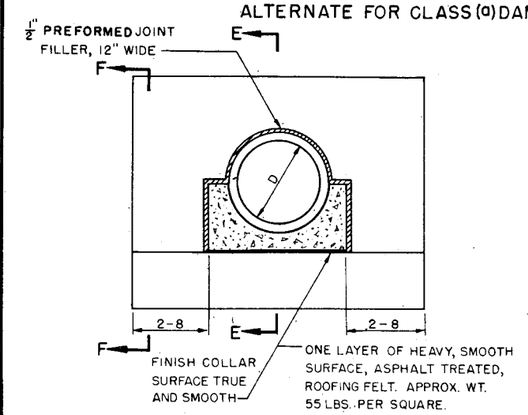


A2 CRADLE

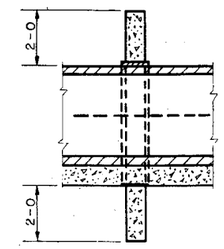


B1 BEDDING

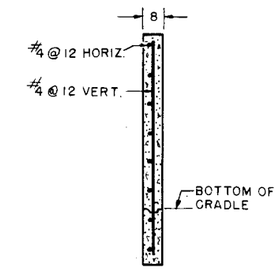
ALTERNATE FOR CLASS (a) DAMS LESS THAN 50 FT. HIGH



DETAIL SHOWN FOR EARTH FOUNDATION. FOR ROCK FOUNDATION, FOUND BOTTOM OF CRADLE ON ROCK LINE AND KEY COLLAR 6" INTO ROCK.



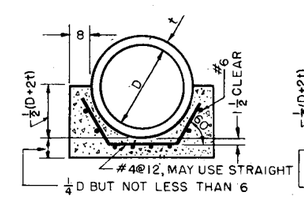
SECTION E-E



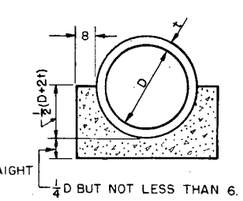
SECTION F-F
(SHOWING STEEL)

MAX. SPACING OF COLLARS = 25'.

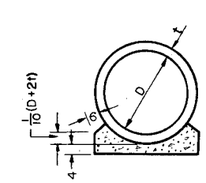
DETAIL OF ANTI-SEEP COLLAR



A1 CRADLE



A2 CRADLE



B1 BEDDING

PIPE AND CRADLE OR BEDDING ALTERNATES

MINIMUM THREE EDGE BEARING TEST STRENGTH LOAD IN POUNDS PER LINEAL FOOT OF PIPE FOR CORRESPONDING PIPE AND CRADLE OR BEDDING

CRADLE OR BEDDING	PIPE SPECIFICATION		LOAD TO PRODUCE NOT MORE THAN 0.01 INCH CRACK	LOAD TO PRODUCE NOT MORE THAN 0.001 INCH CRACK
A1	AWWA	C-300		
		C-301		
		C-302		
	ASTM	C 361		
A2	AWWA	C-300		
		C-301		
		C-302		
	ASTM	C 361		
B1	AWWA	C-300		
		C-301		
		C-302		
	ASTM	C-361		

SCOPE:

1. Pipe Diameters:
   D=24", 30, 36, 42, and 48

CRITERIA:

1. Materials (except pipe):
   Concrete: Class B, fc'=4000 psi, fc=1600 psi
   Reinforcing Steel: Intermediate grade
2. Applicable Criteria:
   Engineering Memorandum SCS-27
   Engineering Memorandum SCS-42 (rev. 2)
   Technical Release No. 5
   Technical Release No. 18

REFERENCE:
ES 154

FIGURE E-7
OUTLET CONDUIT DETAILS
EWP Unit Portland, Oregon