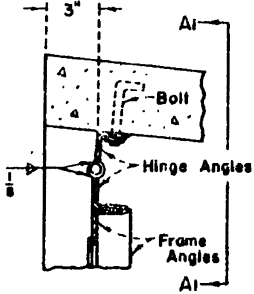
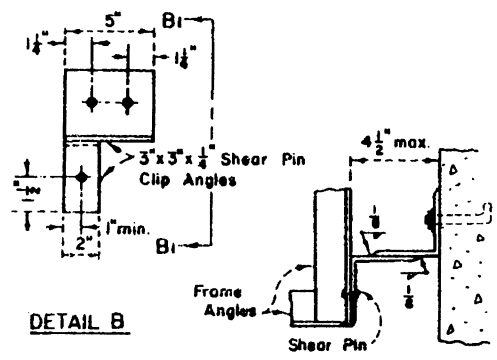


SECTION A1-A1  
(See Note No. 11 & 12)

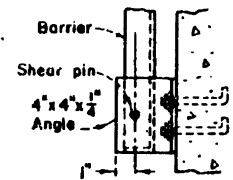


DETAIL A  
(See Note No. 12)

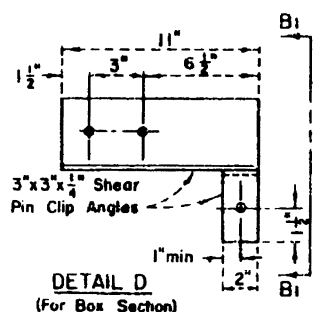


DETAIL B

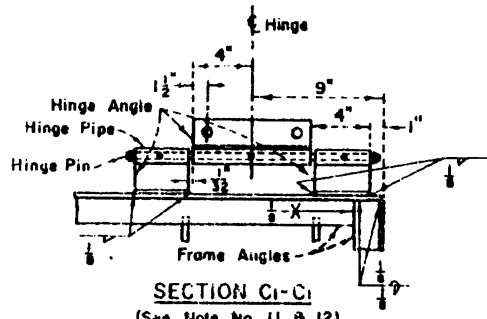
SECTION B1-B1



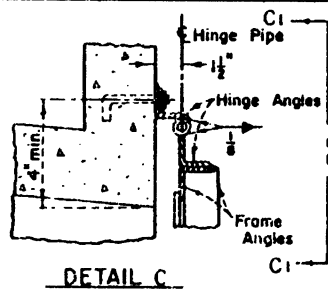
SECTION E-E  
(See ELEVATION, Sheet 2)  
for pipe only



DETAIL D  
(For Box Section)



SECTION C1-C1  
(See Note No. 11 & 12)



DETAIL C

GENERAL NOTES:

- Angles connected with shear pins shall fit snugly and truly face to face.
- The shear pin holes shall be drilled so as to provide a tight fit with the shear pins in place.
- All shear pins shall be peened on both ends after installation.
- The aluminum shear pin material will be furnished by the District to the Contractor.
- All 5/8-inch diameter bolt holes shall be drilled on the gage lines of the angles.
- All bolts shall be 5/8-inch in diameter embedded a minimum of 4 inches into concrete, or equivalent expansion bolts, and shall be furnished with hex nuts and metallic washers at least 3/32-inch thick.
- Frame, brace, and hinge angles shall have the outstanding legs facing in the direction of flow for both inlets and outlets, see Section sheet 2.
- Thread ends of hinge pin so that nuts and lock washers will be flush with the hinge angle. Damage threads beyond the nut face. Use bolt stock for pin.
- Galvanize all ferrous parts after fabrication.
- Cover all movable contact surfaces with a coat of waterproof grease prior to installation.
- For barriers 36 inches and less in width, use one hinge the full width of barrier.
- If the barrier width exceeds 12 feet, provide an additional hinge on the centerline of the barrier.
- For barriers exceeding 6 feet in height or width, use brace angles evenly spaced at a maximum of 6 feet on center.
- Shear pin material shall be commercially pure aluminum wire, alloy 1100, temper O, Federal Specification QQ-A-411.
- Refer to part J of the specifications for additional requirements and material specifications.

Barrier No.	Frame Angles	Brace Angles	Shear Pins	Inlet Hinge Angles		Outlet Hinge Angles	Hinge	
				Upper	Lower		Std. Pipe	Pin
1	2"x2"x1/4"	2"x2"x1/4"	1/8" φ	2"x2"x1/4"	2"x2"x1/4"	2"x2"x1/4"	1/2" φ	1/2" φ
2	3"x3"x1/16"	2"x2"x1/4"	1/8" φ	2 1/2"x2 1/2"x1/4"	2 1/2"x2 1/2"x1/4"	2 1/2"x2 1/2"x1/4"	1" φ	3/4" φ
3	4"x4"x1/8"	2"x2"x1/4"	1/8" φ	3"x3"x1/8"	3"x3"x1/8"	3"x3"x1/8"	1 1/2" φ	1" φ
4	5"x5"x1/8"	2 1/2"x2 1/2"x1/4"	1/4" φ	5" x 5" x 1/2"	3"x3"x1/8"	3"x3"x1/8"	1 1/2" φ	1 1/2" φ

DRAWN BY		REVISIONS		
P.M.M.		MARK	DATE	DESCRIPTION
CHANGED BY	K.O.	Δ	9-11-67	Changed angle size
DESIGNED BY	C.W.H.-K.O.	□	3-15-68	Changed sizes of hinge Standard Pipe.
SUBMITTED BY	C.W.H.	○	1-22-69	Revised (NOTES)
		Δ	2-11-75	Revised Note 15

SUPERSEDES DRAWING  
2-D 261 DATED SEPT., 1959

**LOS ANGELES COUNTY  
FLOOD CONTROL DISTRICT**

**PROTECTION BARRIER**

**PROTECTION BARRIER DETAILS  
AND GENERAL NOTES**

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DESIGNED BY: *C.E. Cahill* APPROVED BY: *W.D. ...*

APPROVED BY: *...* CHIEF ENGINEER

SCALE	DATE	DWG. NO. 2-D261.3
NONE	JAN. 10, 67	SHEET 3 OF 3