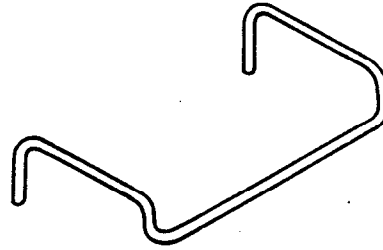
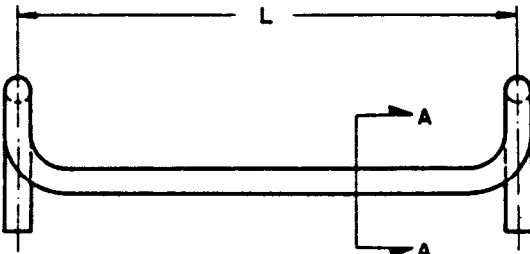


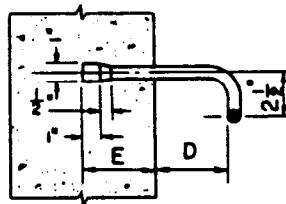
PLAN VIEW



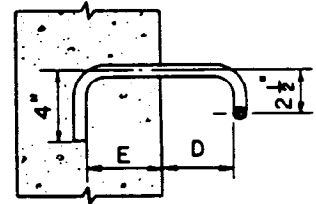
PERSPECTIVE VIEW



ELEVATION



ALTERNATE SECTION A-A



SECTION A-A

STRUCTURE	LOCATION OF STEPS	L	D	E
▽ Manholes	1. Top step 12" max. below top surface. 2. Steps spaced 12" apart. 3. Bottom step 16" max. above floor.	14"	Top step - 2 1/2" Others 4"	See Note 4
▽ Catch Basins	1. Top step 12" max. below top surface. 2. Steps spaced 12" apart. 3. Bottom step 16" max. above floor.	14"	Top step - 2 1/2" Others 4"	4" Min.
▽ All others	1. Top step 12" max. below top surface. 2. Steps spaced 12" apart. 3. Bottom step 12" max. above floor.	16 3/4"	7"	6" Min.

NOTES:

1. Steps shall be steel conforming to ASTM designation A 307 and shall be galvanized after fabrication.
- ▽ 2. See Project Plans for special requirements when height of structure exceeds 20 feet.
- ▽ 3. Steps may be installed in a concrete wall by drilling a 1" diameter hole and dry packing the step in place with class "C" mortar.
- ▽ 4. For approved precast concrete manholes, the step shall be embedded the full thickness of the manhole wall and all exposed steel shall be covered with 1" thick class "C" mortar.
- ▽ 5. The step shall not deflect more than 1/8" upon the application of a 800 lb vertical load. The step shall rebound to its original configuration upon removal of the load.
- ▽ 6. The step shall resist a 400 lb horizontal load applied normal to dimension "L" without any cracking or other failure of the concrete or any displacement of the embedded segment of the step. The step shall rebound to its original configuration upon removal of the load.

DEPARTMENT OF PUBLIC WORKS

BUREAU OF ENGINEERING

CITY OF LOS ANGELES

STEEL STEP FOR CONCRETE STRUCTURES

STANDARD PLAN  
S-348-1

SUBMITTED June 23, 1972

DESIGNED BY  
*Harold R. Newberg*  
CITY ENGINEER

APPROVED *Robert L. Kelly* 1972  
CITY ENGINEER

DESIGNED BY: LIE  
DRAWN BY: A.J.W.  
CHECKED BY: A.G.

REVISIONS

NO	DATE	DESCRIPTION	ENGR OF DESIGN	CITY ENGR.
▽		ADDED "ALL OTHERS" FOR STRUCTURES OTHER THAN CB'S AND MH'S. CLARIFIED DIMENSIONS (E), MODIFIED BY NOTE RE INSTALLATION INTO EXISTING STRUCTURE.	<i>Harold R. Newberg</i>	<i>Robert L. Kelly</i>

SUPERSEDES B-3903

REFERENCES

VAULT INDEX NUMBER B-4012

SHEET / OF / SHEETS