

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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AT&T Co Standard

MANHOLES
MANHOLE EXTENSION RINGS

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1. GENERAL

1.01 This section describes a method of raising the level of manhole covers to accommodate elevations in street grades resulting from pavement resurfacing operations. The method entails the use of a ring designed to fit in the seat of the frame and provide a new seat for the cover at the desired level.

1.02 This section is reissued to add a second series of rings of 3-inch elevation for use in situations where the rise provided by the 2-inch ring would be inadequate.

2. DESCRIPTION

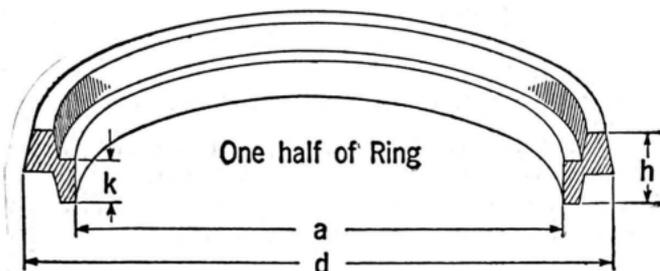
2.01 Manhole Extension Rings are made of cast iron with a cross-section approximating the letter Z. One leg fits in the seat of the frame and provides a new seat and the other leg overhangs the frame and serves as the rim.

2.02 Rings are furnished in five nominal diameters to fit all standard highway frames of corresponding sizes and types. In addition to fitting the Type A and Type B frames, these rings will also fit the Type SA and Type SB frames of corresponding nominal diameters.

2.03 In each of the five nominal diameters, rings providing either a 2-inch or 3-inch rise in the level of the cover are available. The suffix "3" has been added to the size designation to identify the 3-inch rings. For example, under the size

designation of the table following, 27A signifies a 2-inch ring to fit the 27-inch Type A or SA frames and the designation 27A3 signifies a 3-inch ring to fit the same frames.

MANHOLE EXTENSION RING



Size Designation	Dimension (inches)				Approx. Weight (lbs.)
	a	d	h	k	
27A	31½	36½	3½	2	123
27A3	31½	36½	4½	3	178
30A	34½	39½	3½	2	134
30A3	34½	39½	4½	3	192
24B	24	29	3⅞	2	94
24B3	24	29	4⅞	3	139
27B	27	32	3⅞	2	105
27B3	27	32	4⅞	3	155
30B	30	35	3⅞	2	117
30B3	30	35	4⅞	3	171

3. USE OF RINGS

3.01 Manhole Extension Rings are intended to be used where existing pavement is to be resurfaced and where it would otherwise be necessary to raise the frame to the new level. Ordinarily, the 2-inch or 3-inch elevation provided by the rings will be adequate for the thickness of topping being applied. If the average thickness is slightly over or under these figures, it can be adjusted by the paving contractor to conform at the manhole location.

3.02 Where conditions require, combinations of two rings can be used to obtain the desired elevation. Beyond this, the manhole frame itself should be raised.

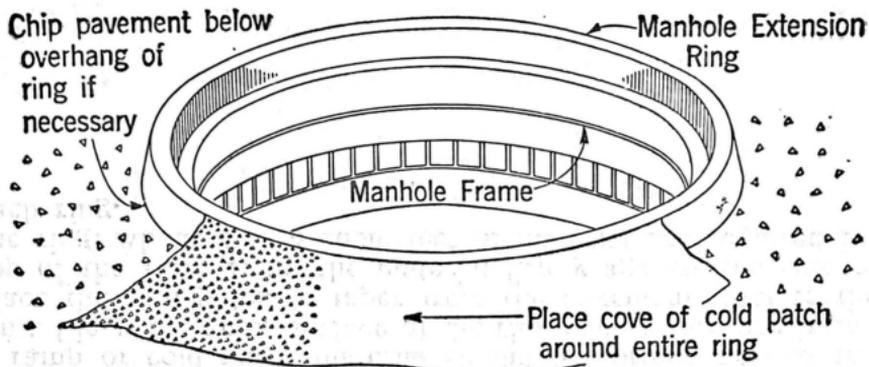
3.03 The rings are designed to provide 1/16-inch clearance above the rims of standard frames so that the ring will bear only on the frame seat. With a wire brush, clean the frame seat and the lower finished surface of the ring. Set the ring in the frame and run a putty knife blade or similar feeler gauge under the outer edge of the ring to make certain that there is clearance between the ring and the frame rim. Grind off any projections on the rim that are disclosed. Similarly, chip away any portions of the old pavement that may stand above the level of the rim and interfere with proper seating.

3.04 Place the ring in the frame and shift it around in the seat until a position is reached where there is a minimum of vertical motion between the ring and the frame. If there is little or no motion, paving work may proceed without further work on the frame.

3.05 If the motion is pronounced, i.e., over 1/8-inch of vertical movement, consideration should be given to securing the ring to the frame by welding around the joint between ring and seat. Otherwise the installation may be noisy and the rocking may cause the paving material to break up around the margins of the ring. Adequate precautions should be taken to test for inflammable gas and provide continuous ventilation before welding is undertaken.

3.06 On older frames, the presence of a fillet of metal at the junction of the vertical and horizontal surfaces of the seat may interfere with uniform bearing of the ring in the frame. This can usually be corrected by grinding off the lower outside corner of the ring to correspond. No more metal should be removed than is necessary to allow the ring to reach solid bearing.

3.07 It is desirable to place the ring just as the paving operation approaches the manhole location. If this cannot be arranged, with the result that the ring will be in place for several days while the thoroughfare is still open to traffic, a ramp of cold patch material should be formed around the ring. Clean the outer surface of the ring with a wire brush and place the cold patch to taper from the pavement level to the top of the ring. Tamp the material firmly against the side of the ring. About 2 or 3 cubic feet of material are required for each ring.



3.08 If the original cover provided a satisfactory fit in its frame, it will also be suitable for reuse in the ring. Otherwise, a new cover should be obtained to avoid premature wear on the new ring.

3.09 Manhole Extension Rings should not be placed where their use will result in any portion of the ring remaining above the level of the finished pavement.