

# **EXTERNAL FRAME SEAL**

## **PART 1 GENERAL**

### **1.01 WORK REQUIRED**

A frame seal, as shown on the attached drawings, shall be installed on all sanitary manholes in accordance with the manufacturer's instructions.

### **1.02 SUBMITTALS**

The contractor shall make submittals of the manufacturer's literature, shop drawings, installation instructions, and other items in accordance with the provisions of the Standard Specifications.

## **PART 2 PRODUCTS**

### **2.01 FRAME SEAL**

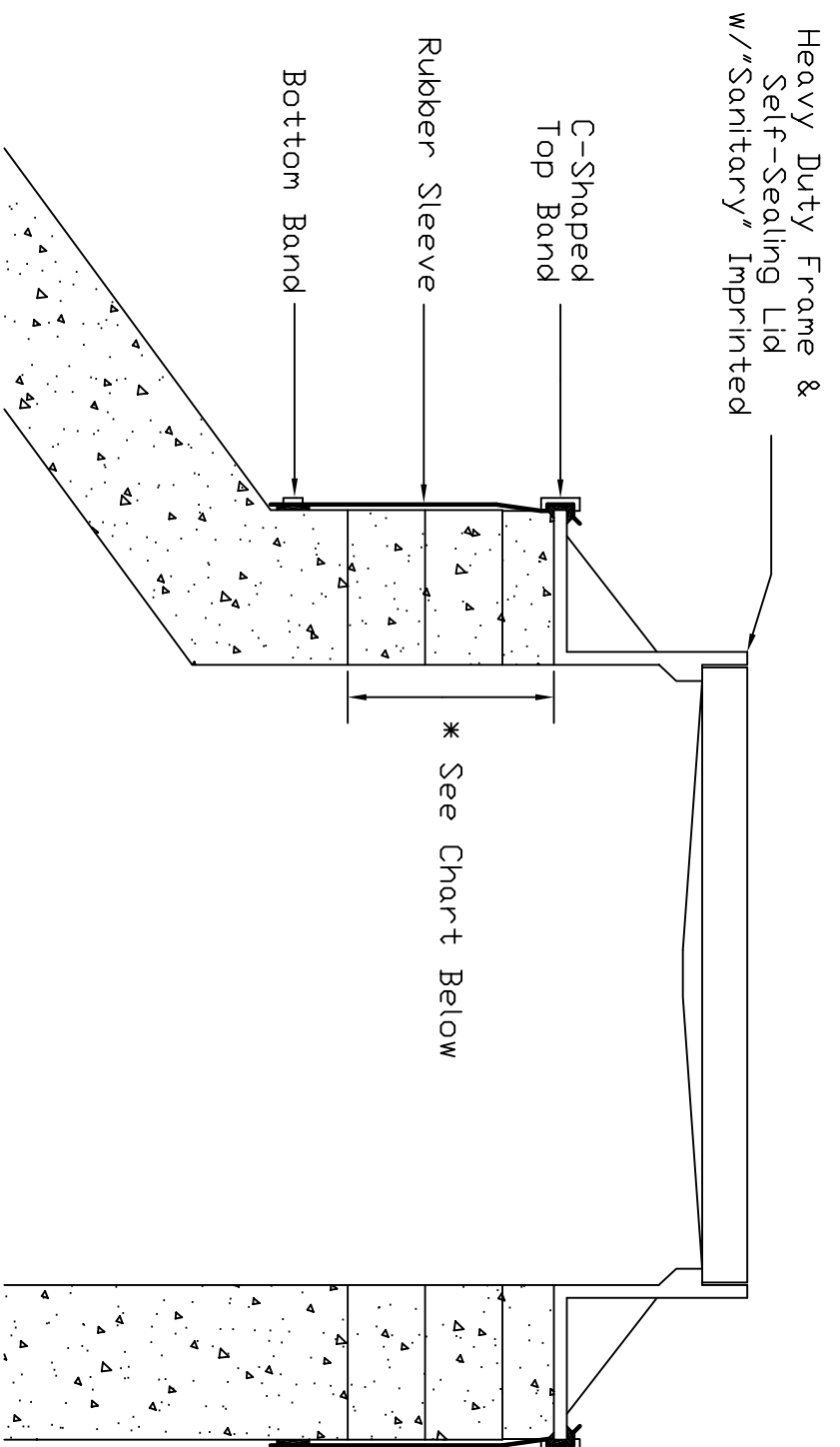
Frame seals shall be the SurSeal as manufactured by MarMac Construction Products or a pre-approved equal conforming to the following requirements.

The seal shall remain flexible throughout a 25 year design life, allowing repeated vertical movement of the frame of not less than 2 inches and repeated horizontal movement of the frame of not less than 1/2 inch. The sleeve portion of the seal shall have a nominal vertical height of 7", 11", or 16". The sleeve shall have a minimum thickness of 60 mils and shall be made from high quality E.P.D.M. rubber suitable for both above and below grade applications. A butyl rubber strip conforming to ASHTO M-198 shall be attached 1/4" from the bottom edge of the sleeve. The butyl rubber strip shall be 98% solids and shall be 1 1/2" wide by 1/4" thick. The form fitted flange gasket shall be EPDM rubber with a hardness, (durometer), of  $40 \pm 5$ . The top compression band shall be "C" shaped to uniformly compress the flange gasket and mechanically lock the seal onto the frame base flange. Both the top and bottom compression bands shall contain take-up mechanisms capable of developing a minimum of 400 lbs. of torque.

## **PART 3 MEASUREMENT AND PAYMENT**

### **3.01 FRAME SEAL**

All costs for furnishing and installing the seal shall be included in the unit bid price for sanitary manholes.



\* To Span Chimney Heights Of:  
 0" to 3" - Narrow (7") Sleeve  
 Over 3" to 7" - Standard (11") Sleeve  
 Over 7" to 12" - Wide (16") Sleeve

**NOTES:**

External Chimney Seals Shall Be Installed On All Sanitary Manholes.

External Chimney Seals Shall Be The "SURSEAL" As Manufactured By Mar Mac Construction Products Co., Inc. Or Pre-Approved Equal.

DATE	REVISIONS	External Manhole Chimney Seal
11/20/03	Original	Marathon Materials, Inc.