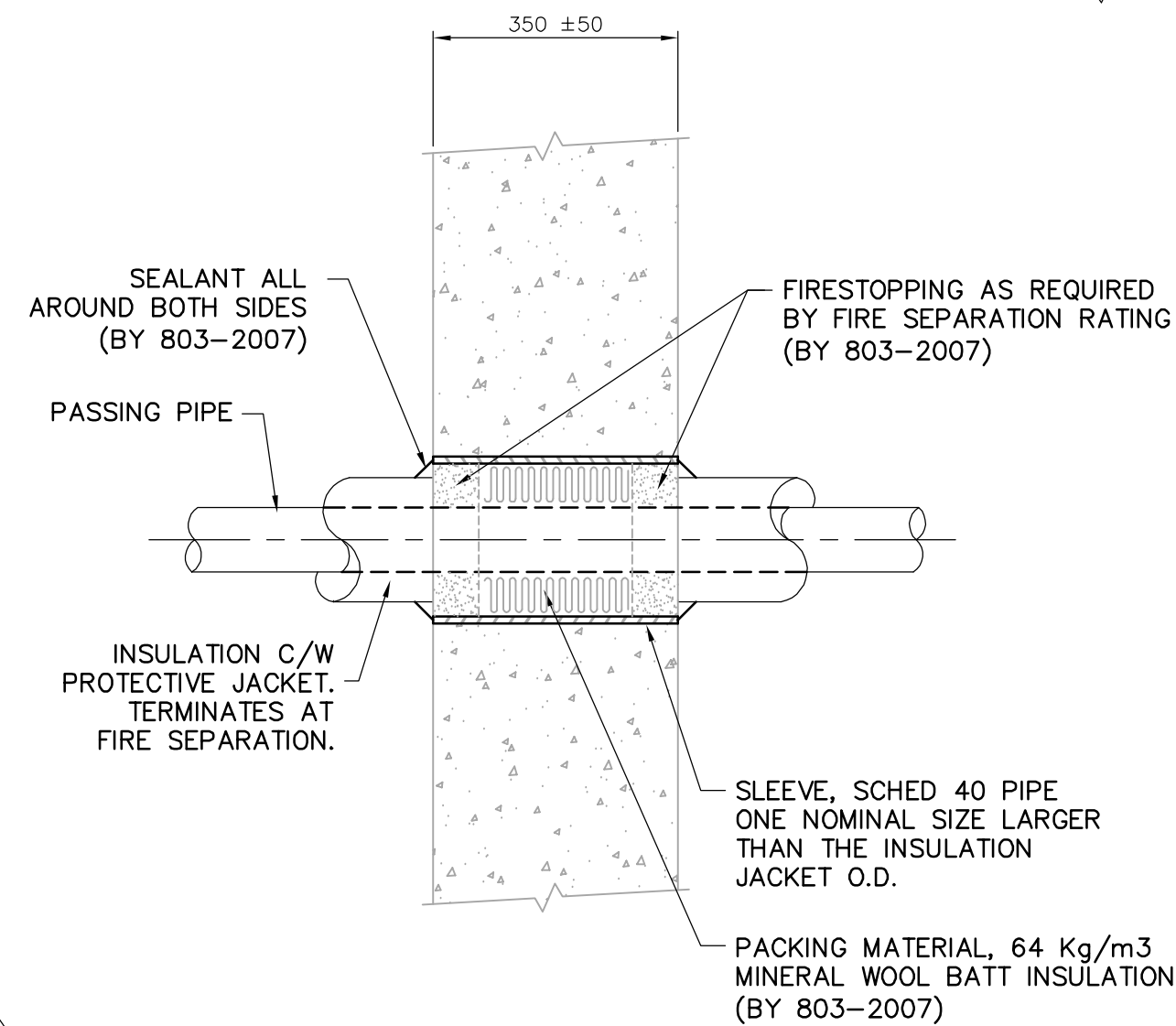


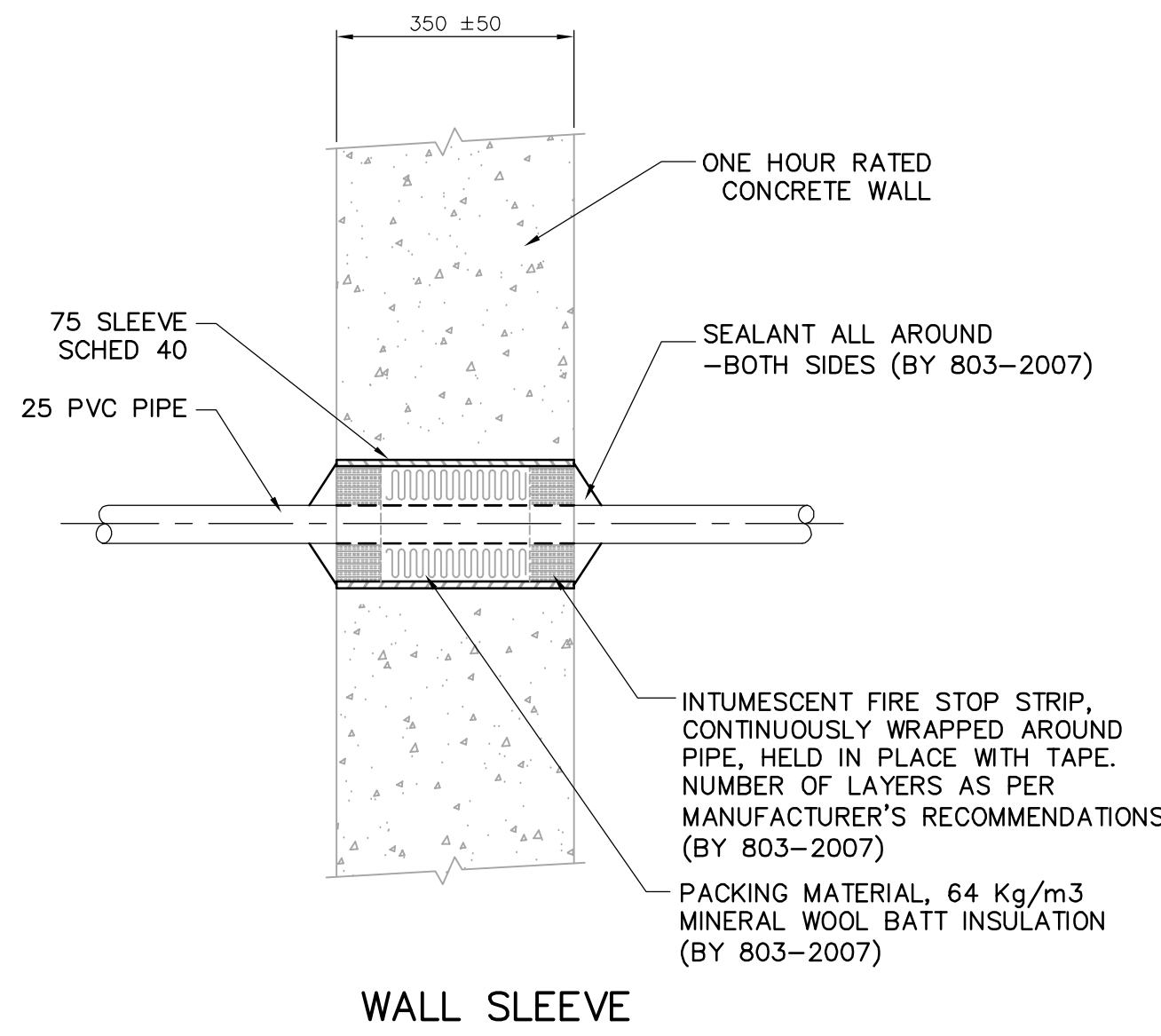
APPLICATION NOTES:
 1. LESS THAN 75mm NOMINAL I.D. FOR PIPES.
 2. SIZES 100mm AND SMALLER FOR ELECTRICAL CONDUIT.
 3. ALLOW TRANSVERSE MOVEMENT

7 WALL PENETRATION NO. 7
 N.T.S.

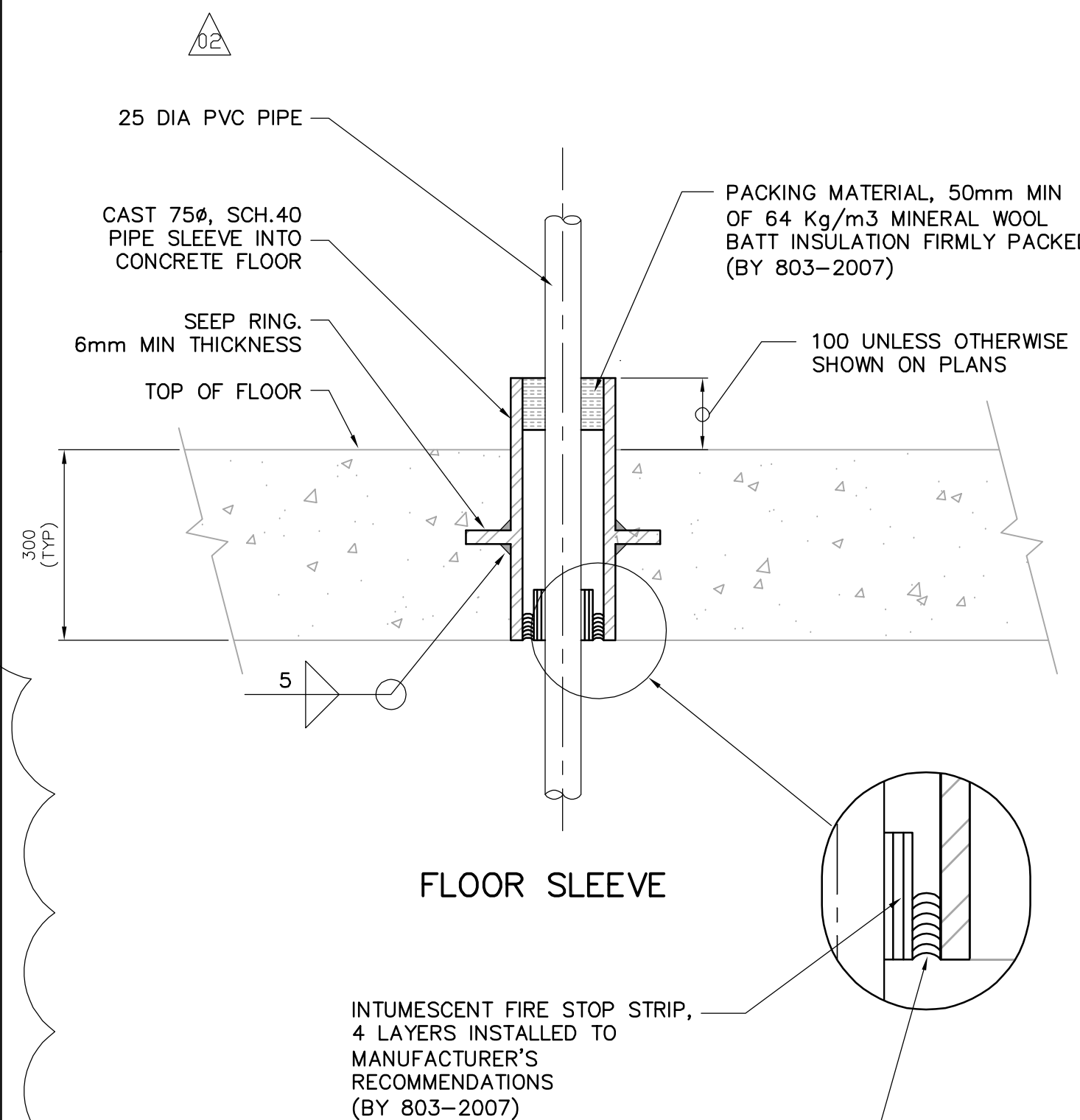


APPLICATION NOTES:
 1. INSULATED PIPE THROUGH A FIRE SEPARATION
 2. METALLIC PASSING PIPES ONLY

8 WALL PENETRATION NO. 8
 N.T.S.

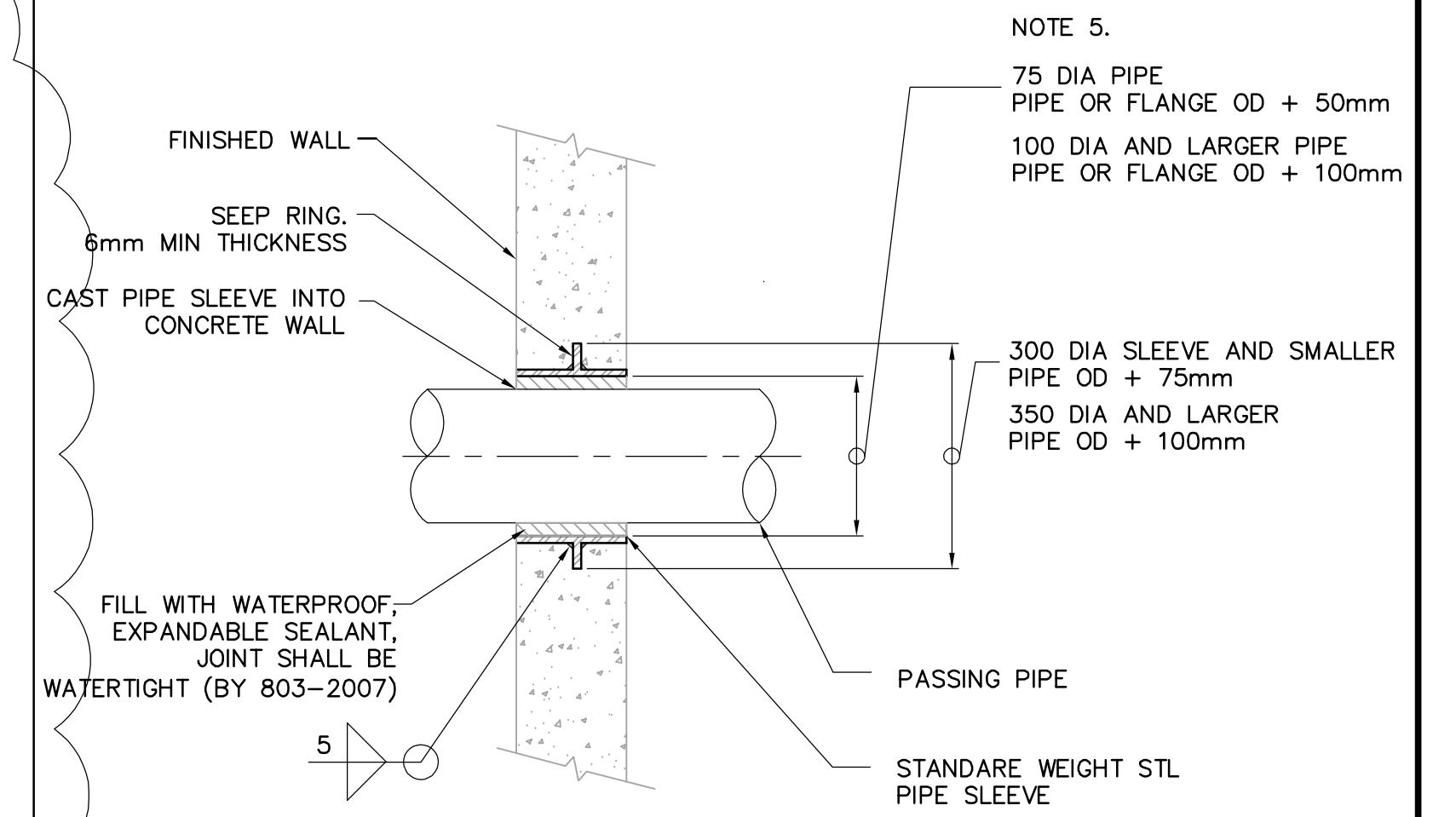


WALL SLEEVE

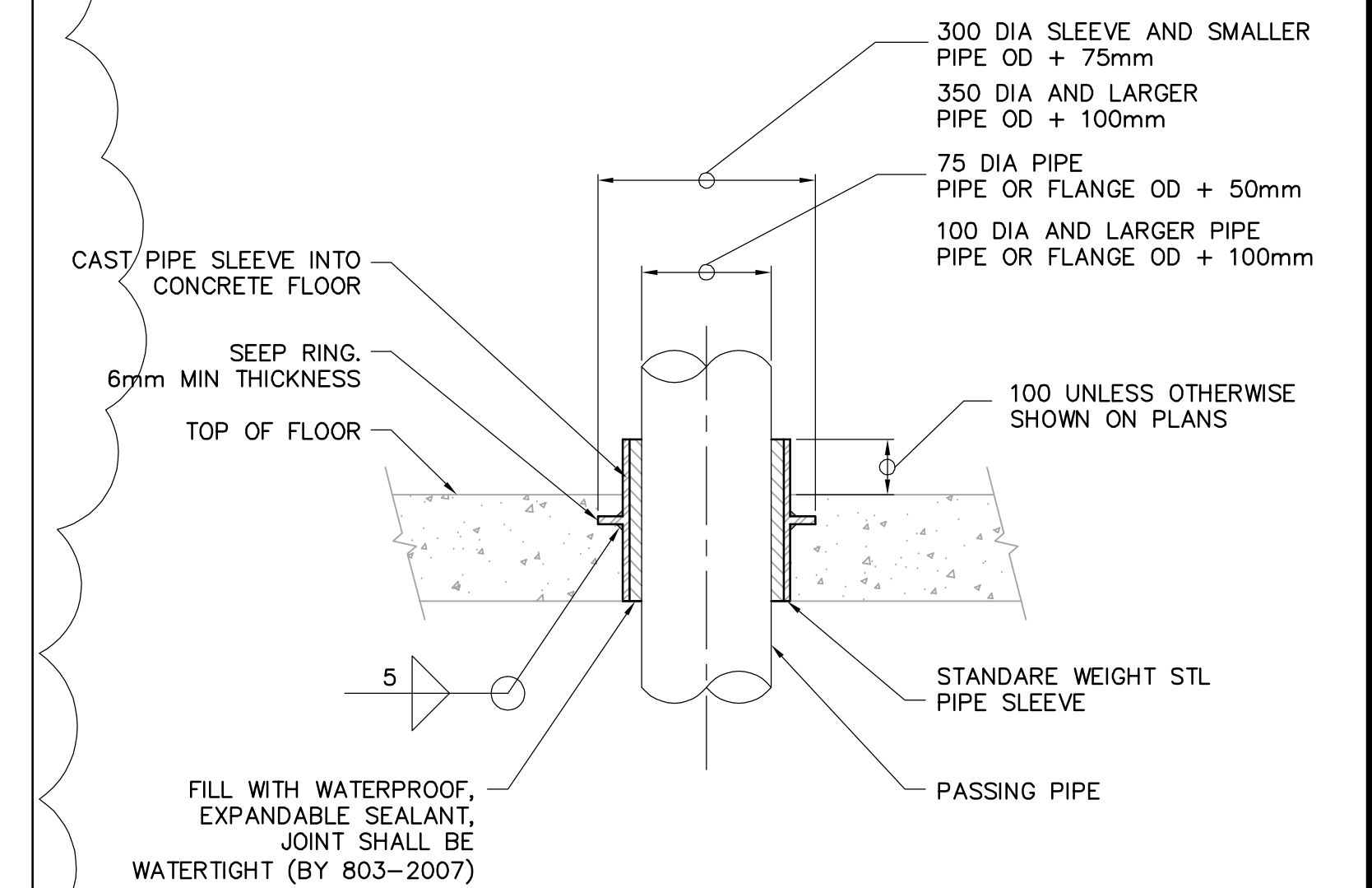


FLOOR SLEEVE

12 POLYMER PIPING WALL AND FLOOR SLEEVE (PLS-25)
 N.T.S.



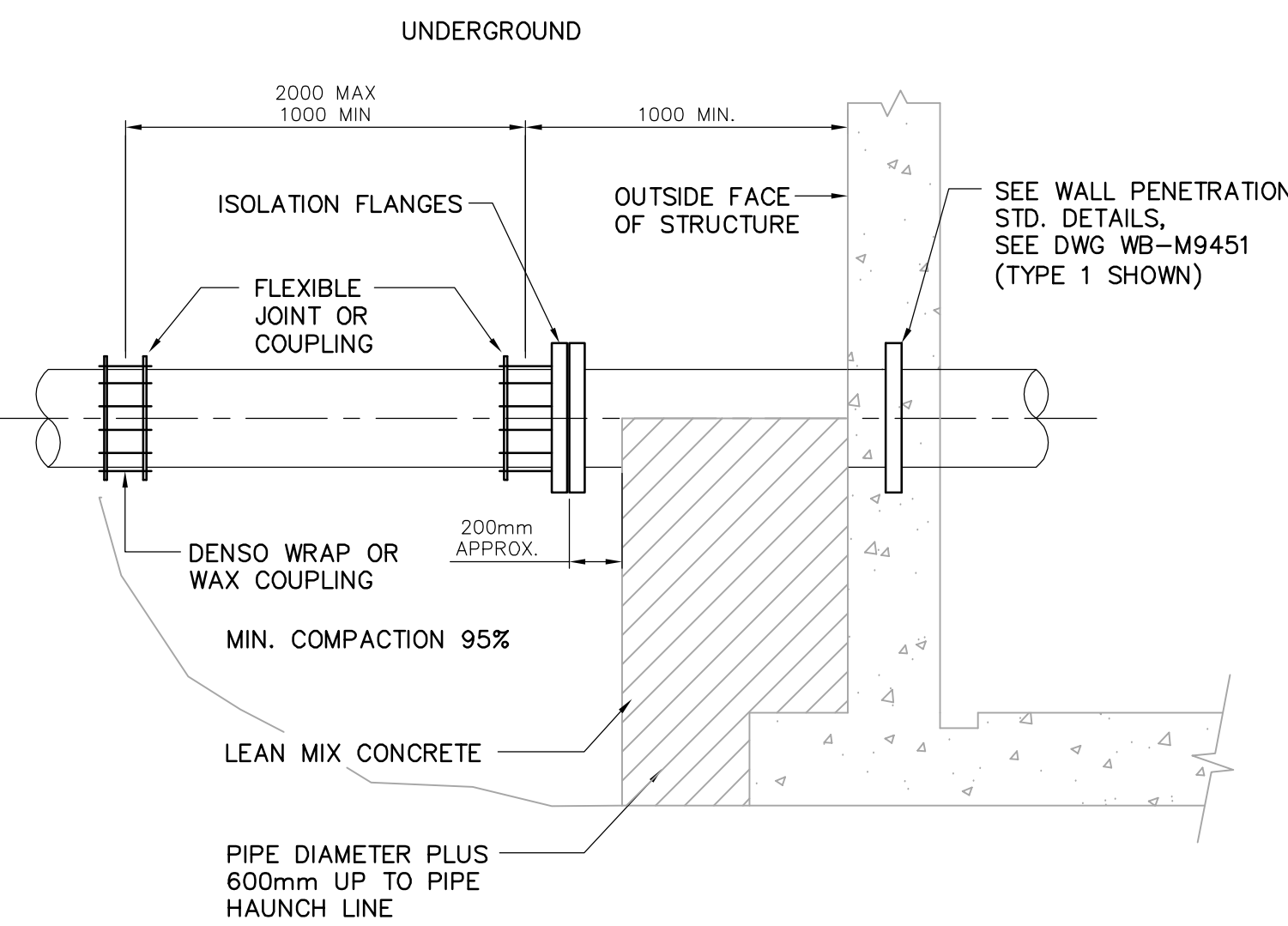
WALL SLEEVE



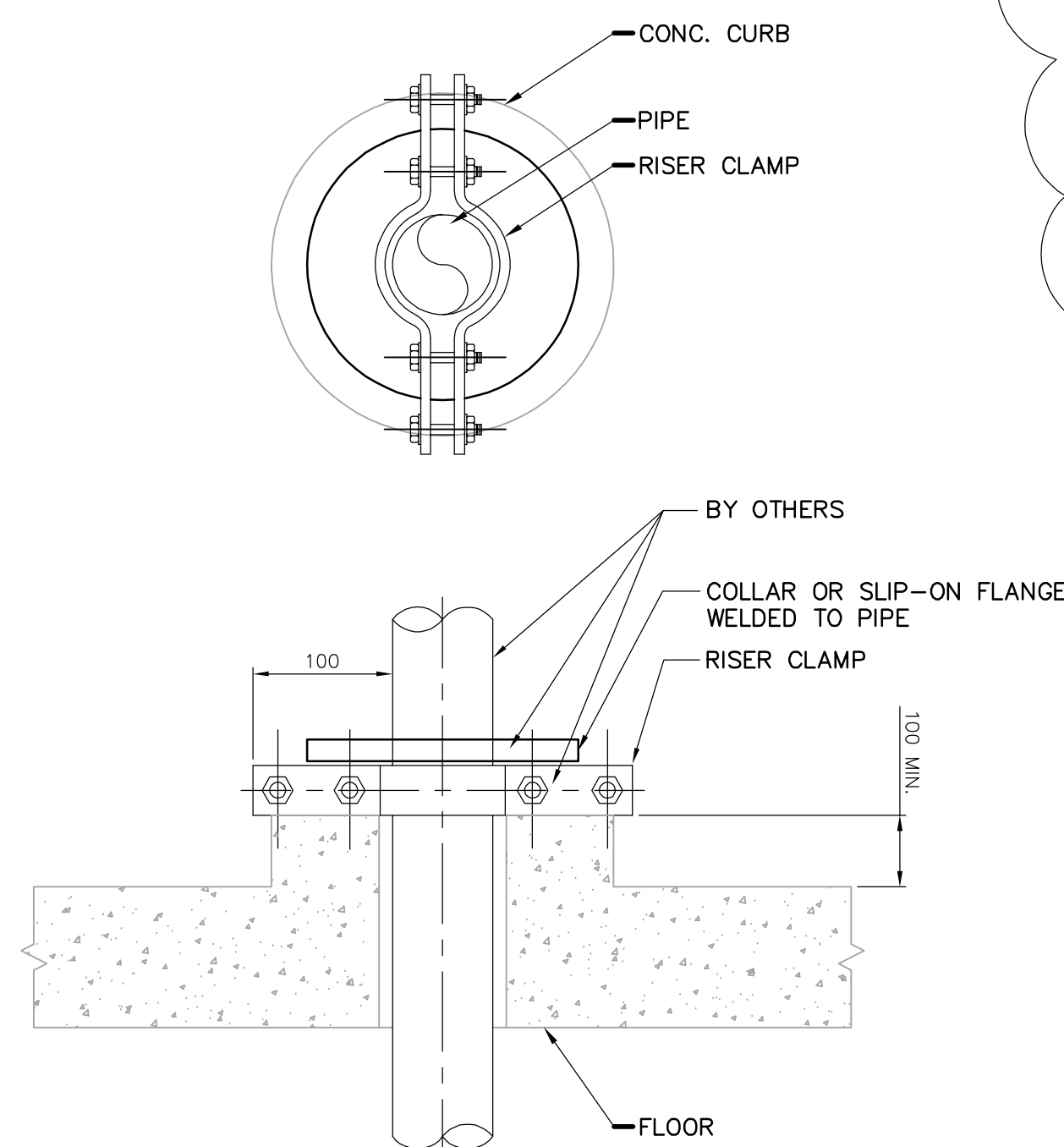
FLOOR SLEEVE

9 WALL AND FLOOR SLEEVE
 N.T.S.

NOTES:
 1. COAT SLEEVE WITH SPECIFIED PAINT SYSTEM BEFORE CONCRETE PLACEMENT HOT DIP GALVANIZE IF NO COATING IS SPECIFIED.
 2. PROVIDE WATERPROOF FIRE STOPPING FOR FIRE RATED FLOOR/WALL CONDITION.
 3. SEE ARCHITECTURAL DRAWINGS FOR THE TYPE OF FIRE SEPARATION.
 4. DO NOT USE WHERE SUBJECT TO HYDROSTATIC PRESSURE.
 5. SLEEVE SIZE AS SHOWN HERE UNLESS OTHERWISE SHOWN IN EMBEDMENT SCHEDULE.



10 CONNECTION TO STRUCTURE UNDERGROUND PIPE
 N.T.S.



11 VERTICAL FLOOR PENETRATION SUPPORT
 N.T.S.

APEGM
 Certificate of Authorization
 CH2M HILL Canada Ltd.
 No. 1441 Expiry: April 30, 2007

| NO. | REVISIONS | DATE | BY |
|-----|----------------------------|----------|-----|
| 02 | ISSUED FOR TENDER 803-2007 | 08/01/29 | LAE |
| 01 | ISSUED FOR CONSTRUCTION | 06/07/28 | DKC |
| 00 | ISSUED FOR TENDER | 06/03/29 | DKC |

| DESIGNED BY | DKC | CHECKED BY | DL |
|-------------|------------|-------------------------------|---------------|
| DRAWN BY | EK | APPROVED BY | AHL |
| SCALE: | NONE | RELEASED FOR CONSTRUCTION BY: | R. SOROKOWSKI |
| DATE | 2005/09/12 | DATE | 2006/03/29 |

ENGINEER'S SEAL
 ORIGINAL SIGNED BY
 P. WOBMA
 2006/03/29
 CONSULTANT DRAWING NO.
 WB-M0452

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENGINEERING DIVISION

WATER TREATMENT PLANT
 MAIN BUILDING
 MECHANICAL AND ELECTRICAL

PROCESS MECHANICAL
 STANDARD DETAILS

CITY FILE NUMBER
 SHEET OF
 CITY DRAWING NUMBER
 1-0601B-A-M0452-001-020