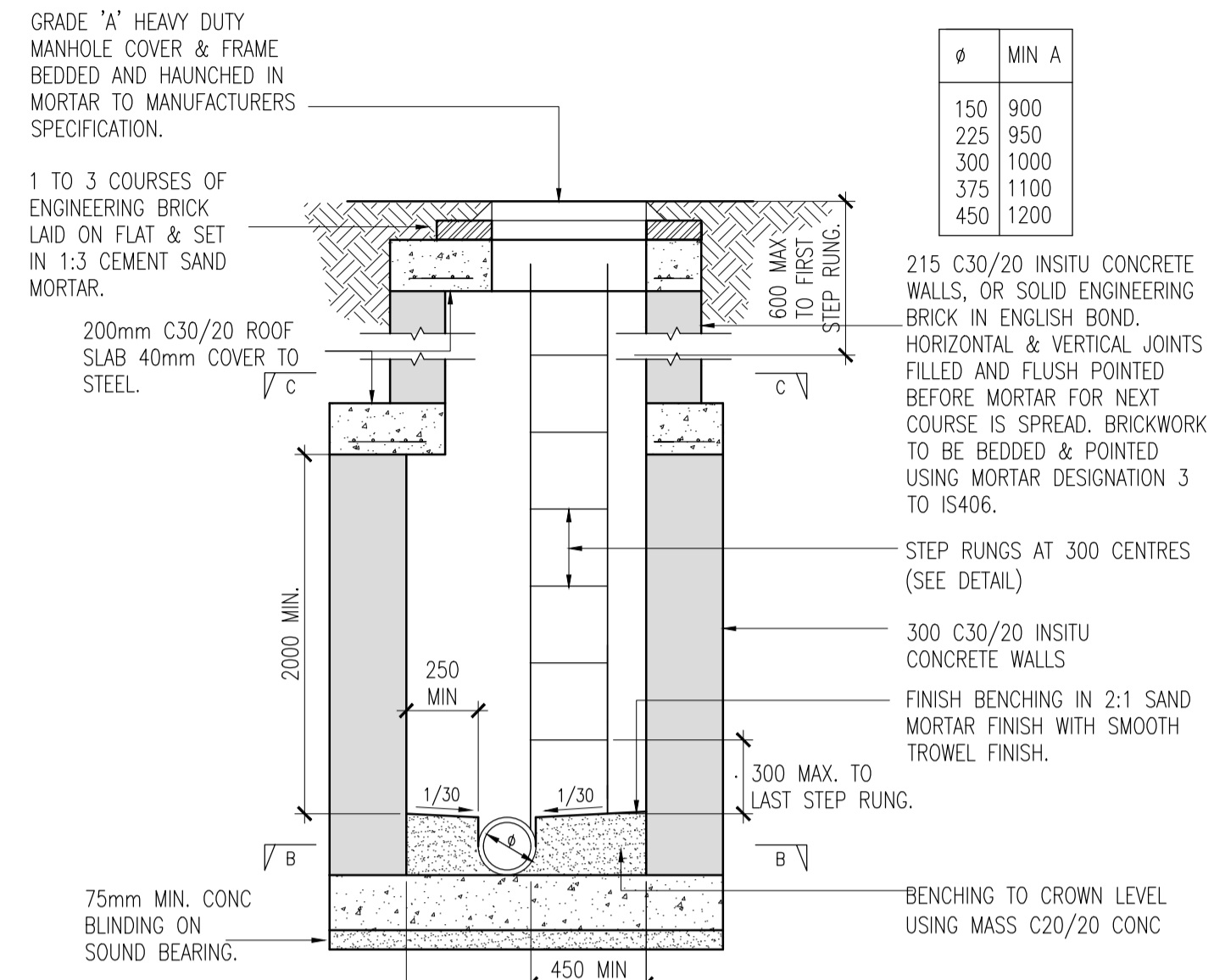
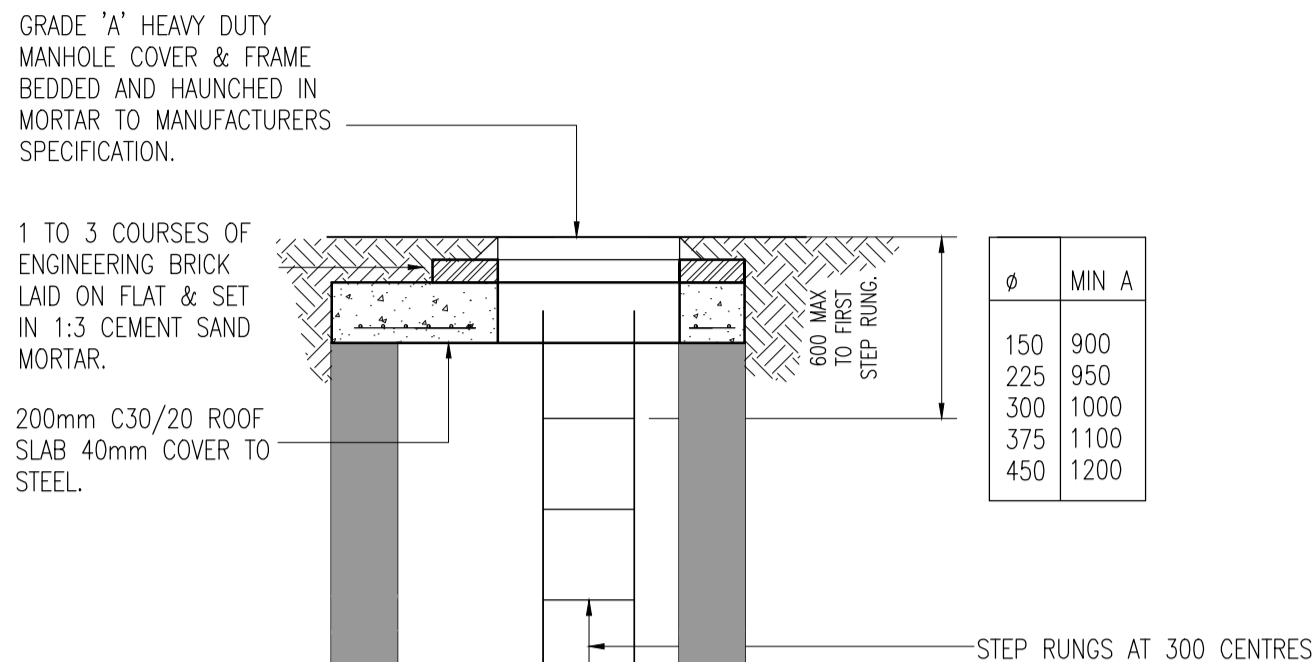
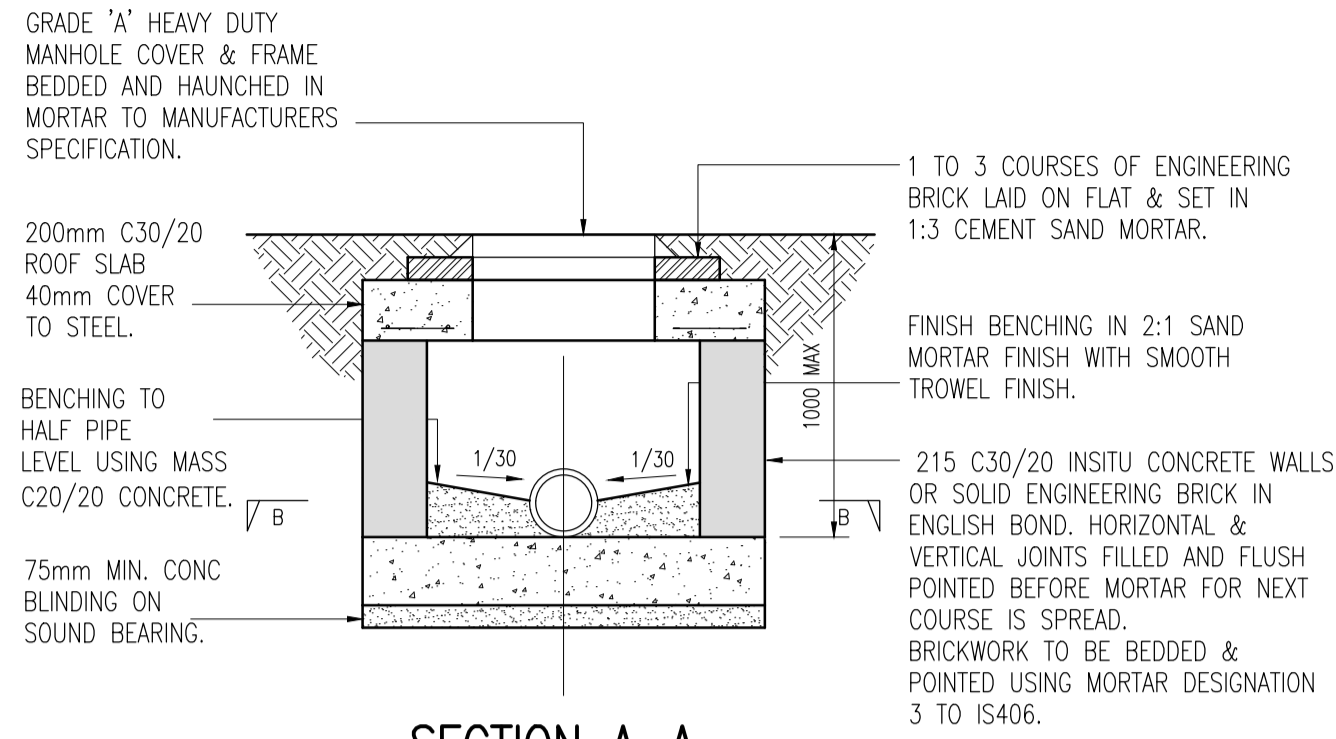


DEPTH TO IL  $\leq$  1.0  
 $\phi$ 's 150 TO 450 INCL

1.0 < DEPTH TO IL  $\leq$  3.0  
 $\phi$ 's 150 TO 450 INCL

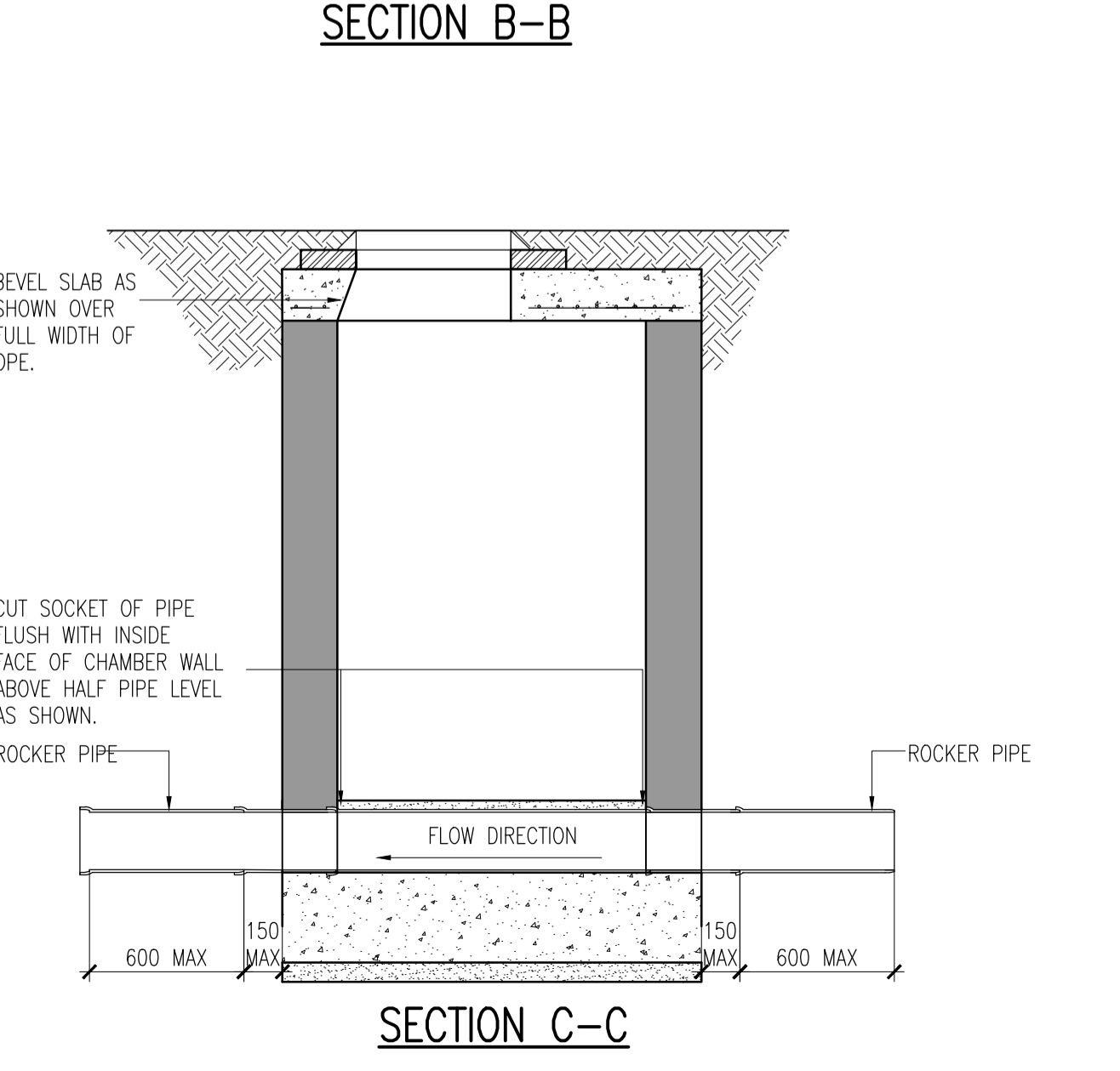
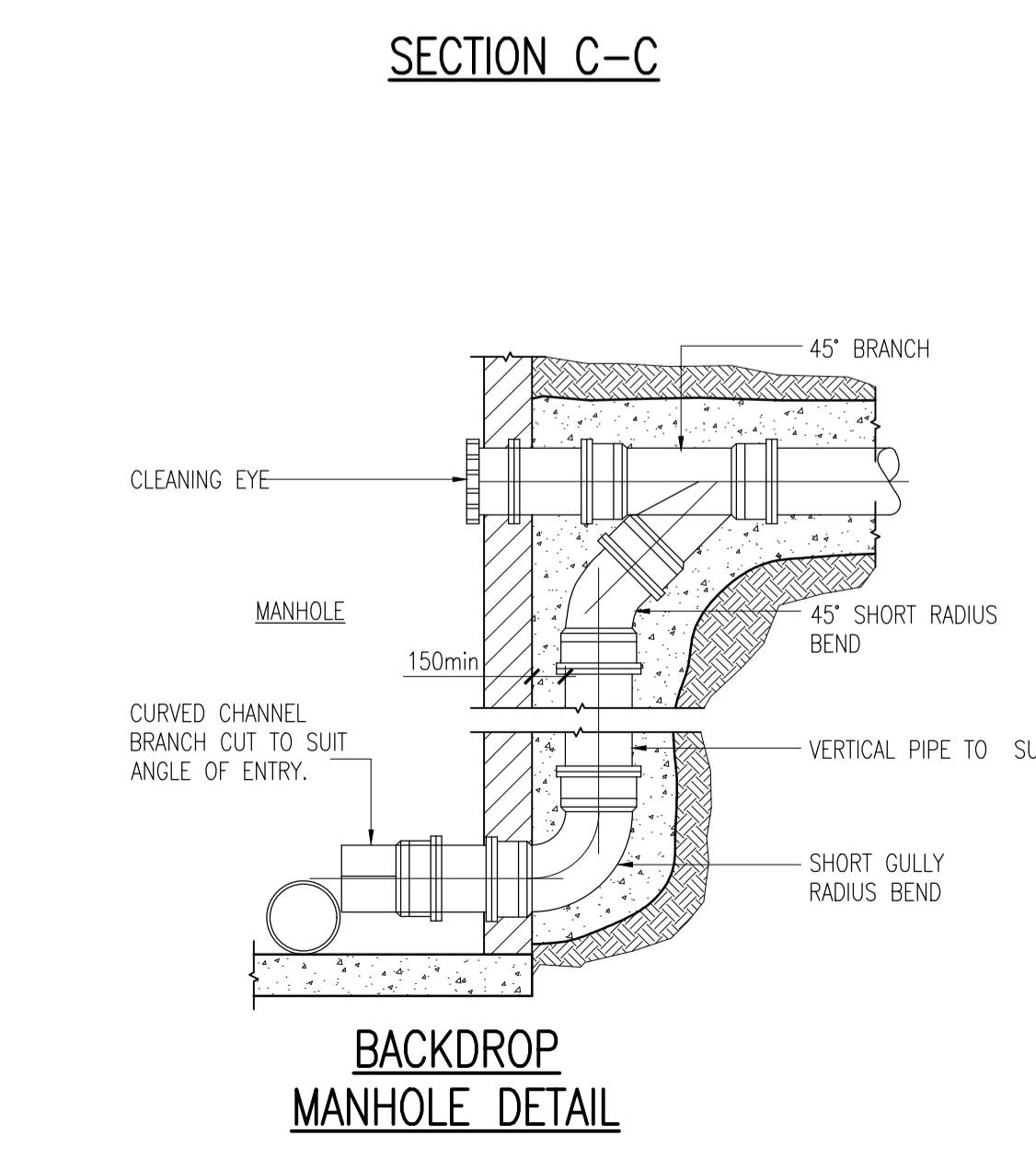
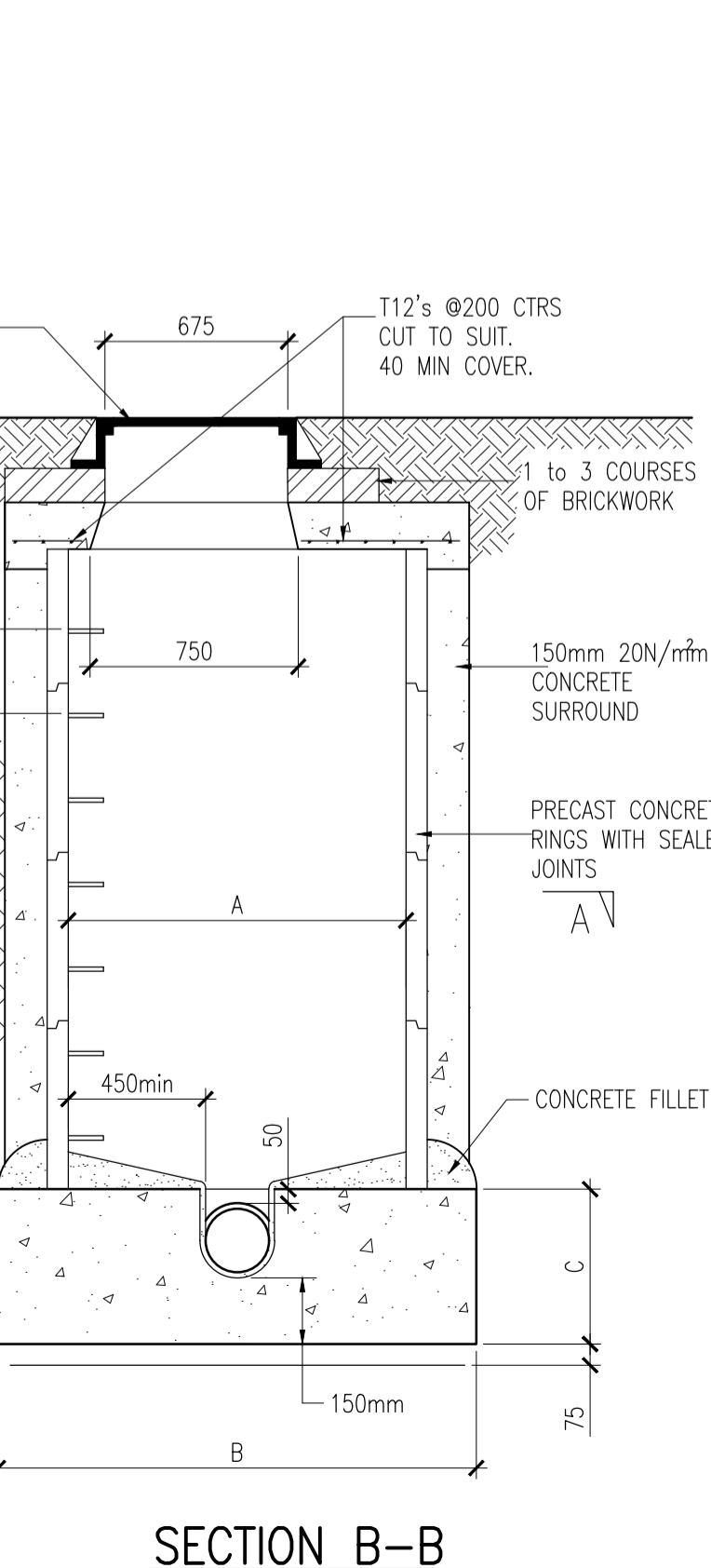
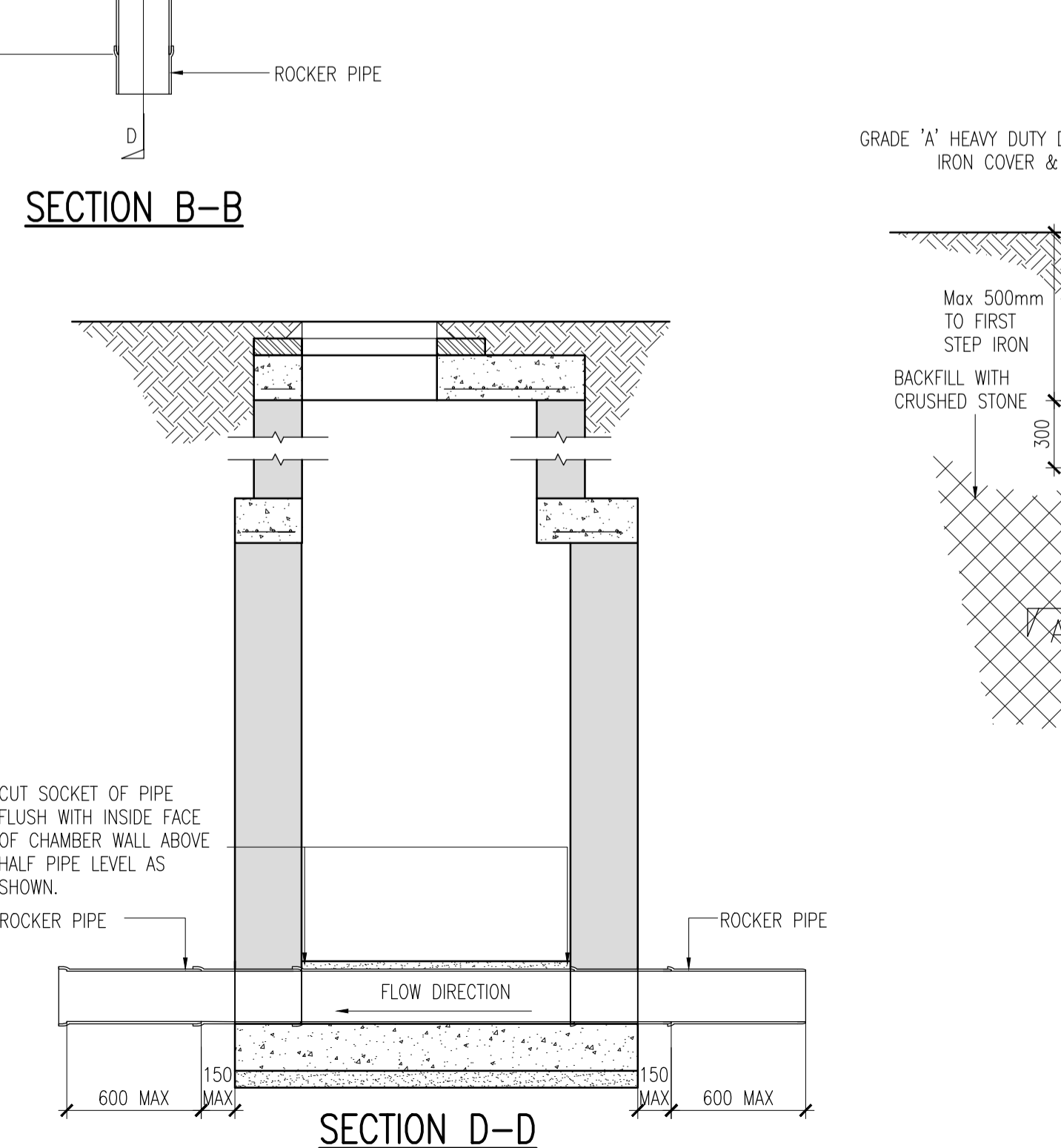
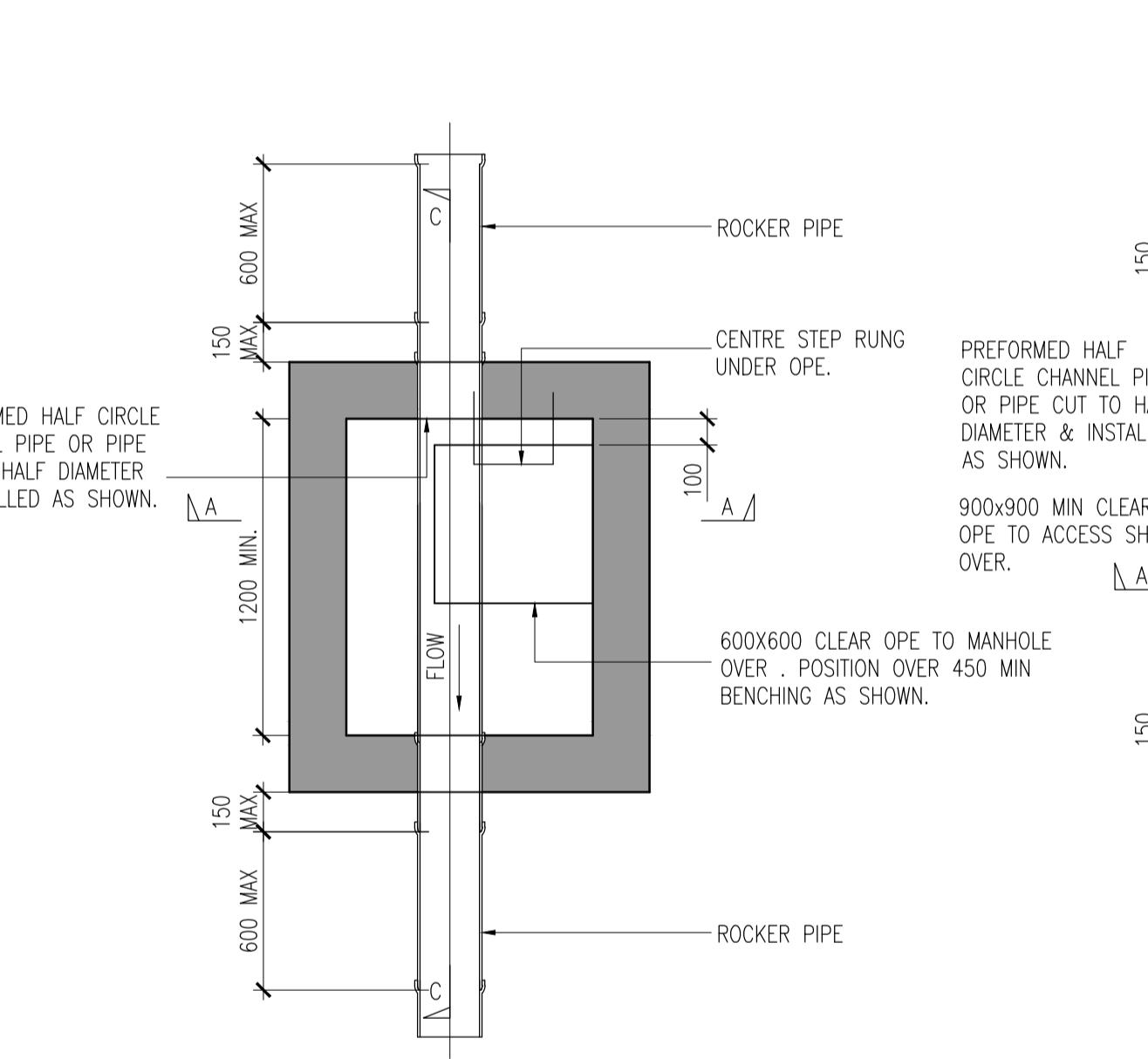
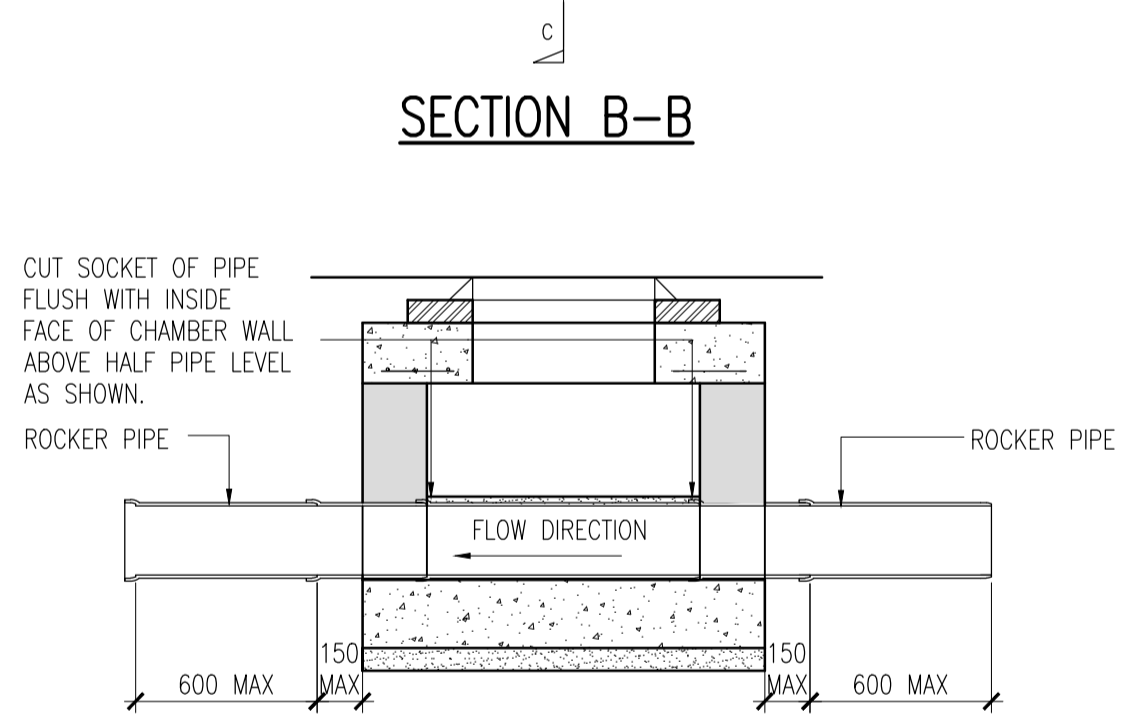
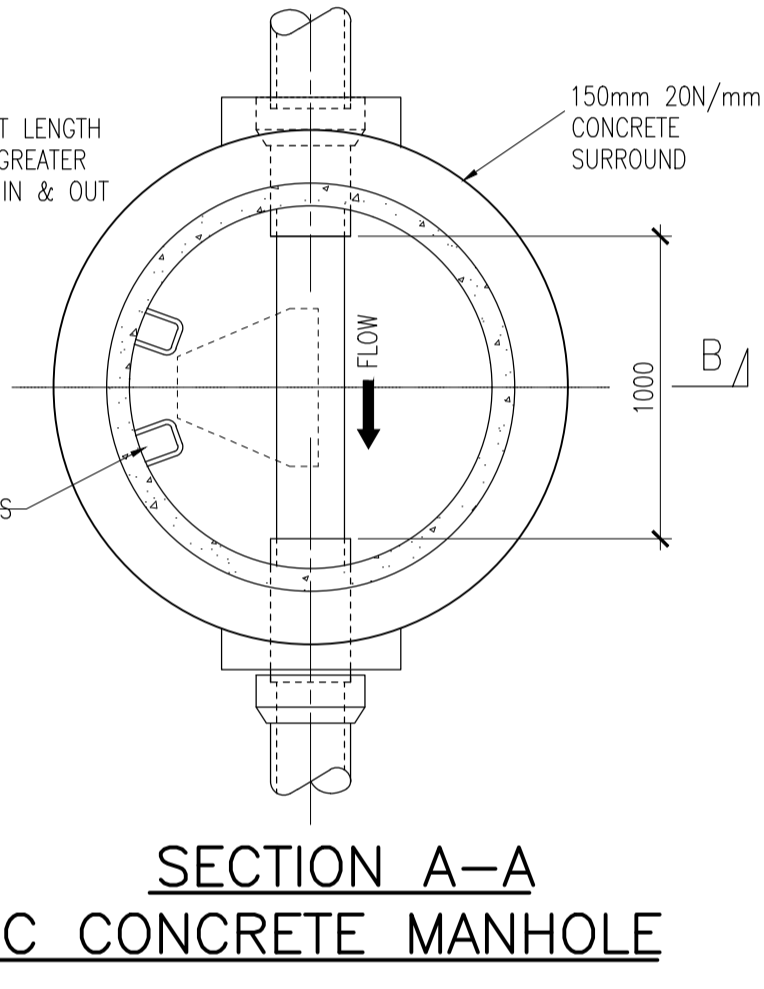
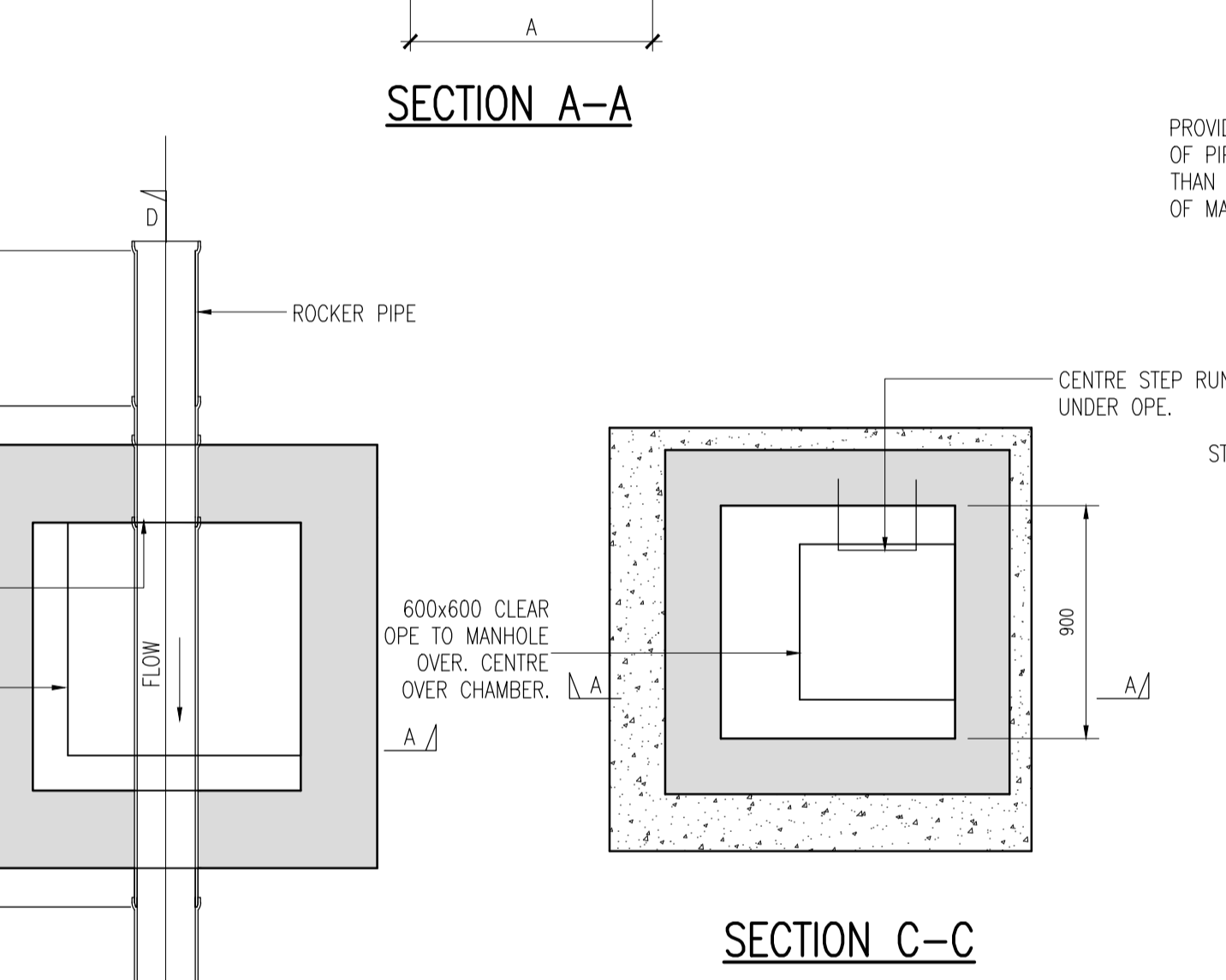
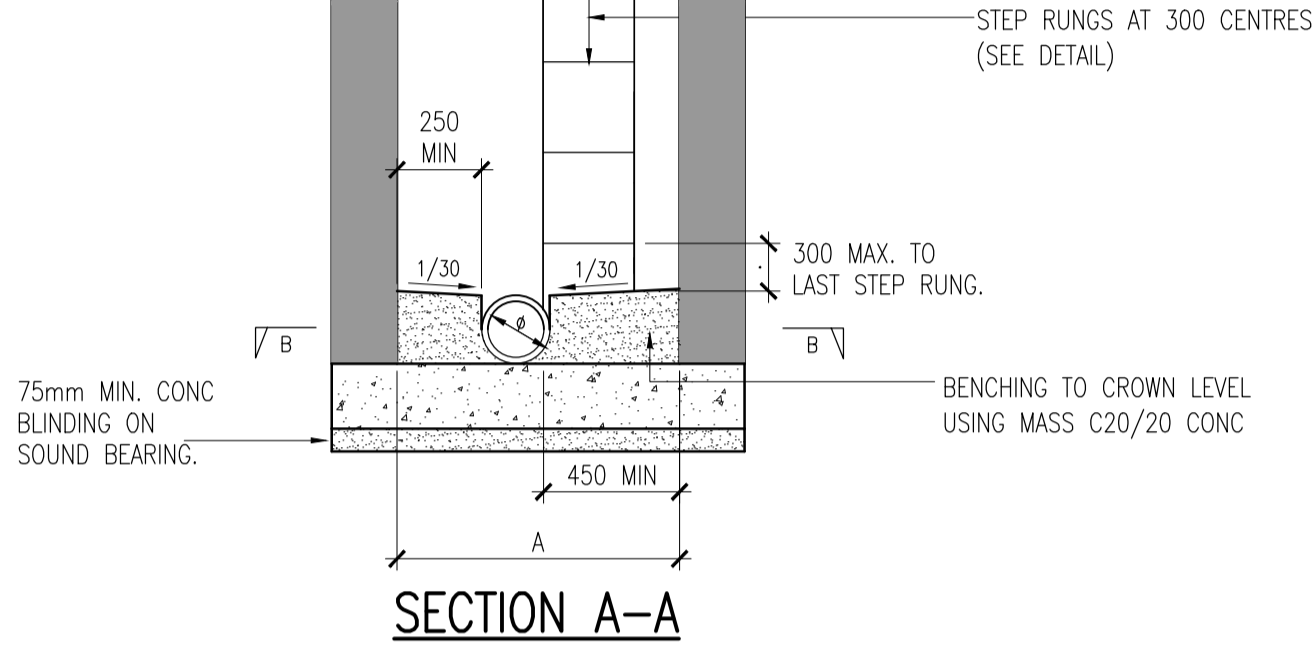
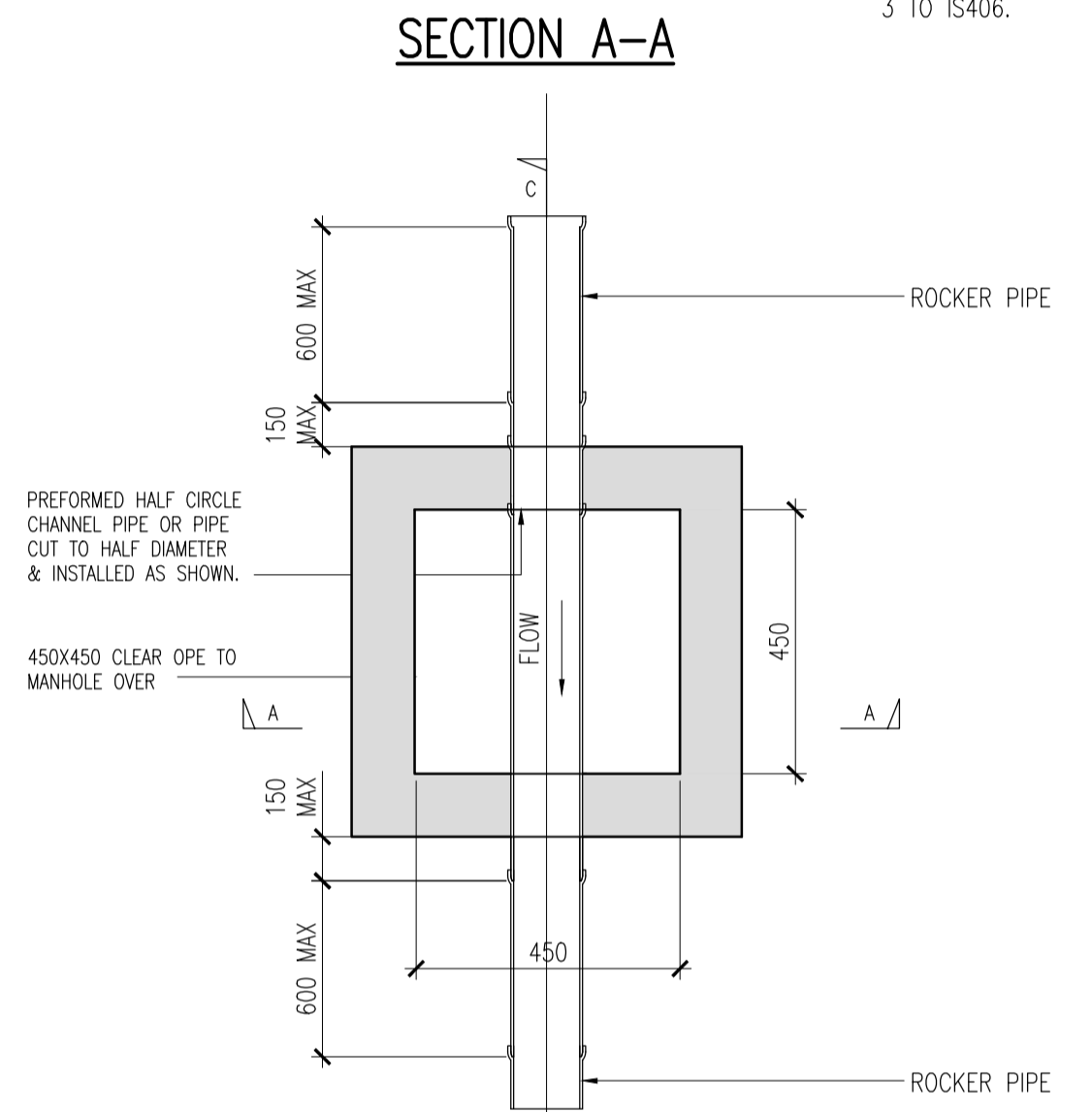
DEPTH TO IL > 3.0m  
 $\phi$ 's 150 TO 450 INCL

ALL WASTEWATER INFRASTRUCTURE WORKS TO BE IN ACCORDANCE WITH IRISH WATER STANDARD SPECIFICATION AND DETAILS. REFER TO WASTEWATER INFRASTRUCTURE STANDARD DETAILS, DOCUMENT NO IW-CDS-5030-03 FOR FURTHER INFORMATION.



PRECAST MANHOLE SIZES

Sewer Dia (D mm)	Chamber Dia (A mm)	Insitu Base Ext Dia (B mm)	Insitu Base Nom. Depth (C mm)
150	1050	1550	500
225	1200	1700	500
300	1200	1700	550
375	1200	1700	650
450	1350	1850	750
525	1350	1850	800
600	1350	1850	900
675	1350	1850	1000
750	1500	2000	1100
825	1500	2000	1150
900	1800	2330	1250
975	1800	2330	1350
1050	1800	2330	1400
1125	1800	2330	1500



GENERAL NOTES:-

- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS & ENGINEERS DRAWINGS & SPECIFICATIONS.
- DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. ALL DISCREPANCIES TO BE NOTIFIED, IN WRITING TO ENGINEERS & ARCHITECTS FOR RESOLUTION.
- ALL DIMENSIONS ON DRAWINGS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
- FOR DETAILS AND SETTING OUT OF RWP, SVP, WVP & ALL OPENINGS SEE THE RELEVANT ARCHITECTS DRAWINGS.
- FOR RADON BARRIER, D.P.C. & INSULATION DETAILS REFER TO ARCHITECTS DRAWINGS.

MANHOLE NOTES:-

225mm THICK CL20/20 MASS CONCRETE FOUNDATIONS.  
 PREFORMED HALF CIRCLE CHANNEL PIPES. THE PIPELINE MAY WHERE PRACTICABLE, BE LAID THROUGH THE MANHOLE AND THE CROWN CUT OUT TO HALF DIAMETER, PROVIDED FLEXIBLE JOINTS ARE SITUATED ON EACH SIDE NO FURTHER THAN 600mm FROM THE INNER FACE OF THE MANHOLE WALL.  
 FOR SURFACE WATER MANHOLES HIGH DENSITY BLOCKS TO CLS10 OF I.S.20 PART 1: 1987 OR CL30/20 IN-SITU CONCRETE. BLOCKWORK SHALL BE BEDDED AND JOINTED USING MORTAR DESIGNATION THREE TO I.S.406. BEDS AND VERTICAL JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR AS THE BLOCKS ARE LAID. JOINTS SHALL BE FLUSH POINTED AS THE WORK PROCEEDS ALL FOUL MANHOLES MUST BE FACED IN SOLID ENGINEERING BRICK (MIN CLASS A OR B), OR IN-SITU CONCRETE FOR 1m ABOVE BENCHING LEVEL BRICK TO BE BONDED TO BLOCKWORK USING ENGLISH GARDEN WALL BOND.

RELIVING ARCH FORMED BY 215x103x65 BRICK AS PER DRAWING. RELIEVING ARCHES USED IN BRICK OR BLOCKWORK MANHOLES TO EXTEND OVER FULL THICKNESS OF WALL. DOUBLE ARCHES TO BE FORMED FOR PIPE DIAMETERS GREATER THAN 600mm.  
 BENCHING AND PIPE CHANNEL PIPE SURROUND -CL20/20 CONCRETE.  
 BENCHING FINISHED IN 2:1 SAND-CEMENT MORTAR WITH SMOOTH TROWEL FINISH, AT 1 IN 30 SLOPE TOWARDS CHANNEL.

STANDARD RUNGS AT 300c/c VERTICALLY AND GALVANISED TO BS729  
 600mm SQUARE OPE. IN ROOF SLAB.  
 200hk. PRECAST R.C. ROOF SLAB IN CL30/20 CONCRETE WITH 1No. A393 MESH. COVER TO STEEL SHALL BE 40mm.  
 1 TO 2 No. ENGINEERING BRICKS CLASS B TO I.S.91: 1983 SET IN 1:3 (CEMENT:SAND:MORTAR)  
 CLASS D400 MANHOLE COVER AND FRAME TO IS/EN 124. 150mm DEEP FRAME FOR ROADS, 100mm DEEP FOR FOOTPATHS AND GREEN AREAS. NON-ROCK DESIGN. CLOSED KEYWAYS, MANUFACTURED FROM SPHEROIDAL GRAPHITE CAST IRON (DUCTILE CAST IRON), 600x600 (OR 600 DIAM) CLEAR OPENING, COVER & FRAME COATED IN BITUMEN OR OTHER APPROVED MATERIAL, COVER TO HAVE A MINIMUM MASS OF 140kg/m<sup>2</sup>, FRAME BEARING AREA SHALL BE 80,000mm<sup>2</sup> MIN. FRAMES SHALL BE DESIGNED TO PREVENT COVERS FALLING INTO MANHOLE. FRAMES SHALL BE BEDDED ON APPROVED MORTAR TO MANUFACTURER'S CONSTRUCTIONS.

SHORT LENGTH PIPE, PIPE JOINT EXTERNAL TO MANHOLE SHALL NOT EXCEED 600mm FROM THE INNER FACE OF MANHOLE WALL.  
 TOE HOLES OF 230mm MIN. DEPTH AND GALVANISED STEEL SAFETY RAILINGS TO BE PROVIDED IN BENCHING OF SEWERS GREATER THAN 525 DIAMETER, AND DEPTH TO INVERT >3m FOR ACCESS TO INVERT.

SAFETY CHAIN TO BE PROVIDED IN MANHOLES >450mm. MILD STEEL SAFETY CHAIN SHALL BE 10mm NOMINAL SIZE GRADE M(H) NON CALIBRATED CHAIN TYPE 1, COMPLYING WITH BS: 4942 Part 2.

WHEN DEPTH OF MANHOLES TO INVERT IS GREATER THAN 3.0m LADDERS SHALL BE USED, INSTEAD OF RUNGS, TO BS4211 EXCEPT THAT STRINGERS SHOULD BE NOT LESS THAN 65x12mm IN SECTION AND RUNGS 25mm IN DIAMETER. FIXED LADDERS SHOULD MEET THE DIMENSIONAL REQUIREMENTS OF BS 4211.

LADDER STRINGERS SHOULD BE ADEQUATELY SUPPORTED FROM THE MANHOLE WALL AT INTERVALS OF NOT MORE THAN 2.0m. STRINGERS SHOULD BE BOLTED TO CLEATS TO FACILITATE RENEWAL.

ALL LADDERS, RUNGS, HANDRAILS, SAFETY CHAINS ETC. SHALL BE HOT DIP GALVANISED TO BS729.

Issue Register

No.	Date	Revision	By	Checked	Approved
PL1	24/04/18	PLANNING ISSUE	MT	EAD	MJP

PLANNING

Client: KILKENNY COUNTY COUNCIL

Project: LIBRARY AT MAYFAIR BUILDING KILKENNY

Drawing Title: PROPOSED MANHOLE DETAILS

Martin Peters Associates Consulting Engineers

Project No: 171029 Scale: 1:25@A1

Drawing No: 171029/C/030 Rev: PL1

Drawn: MT Checked: EJC Date: 23/08/18

T: +353 56 7702761 F: +353 56 7702728 E: info@mpa.ie