

SECTION THRO' PIPE TRENCH UNDER ROAD / PAVED AREAS (1:20)

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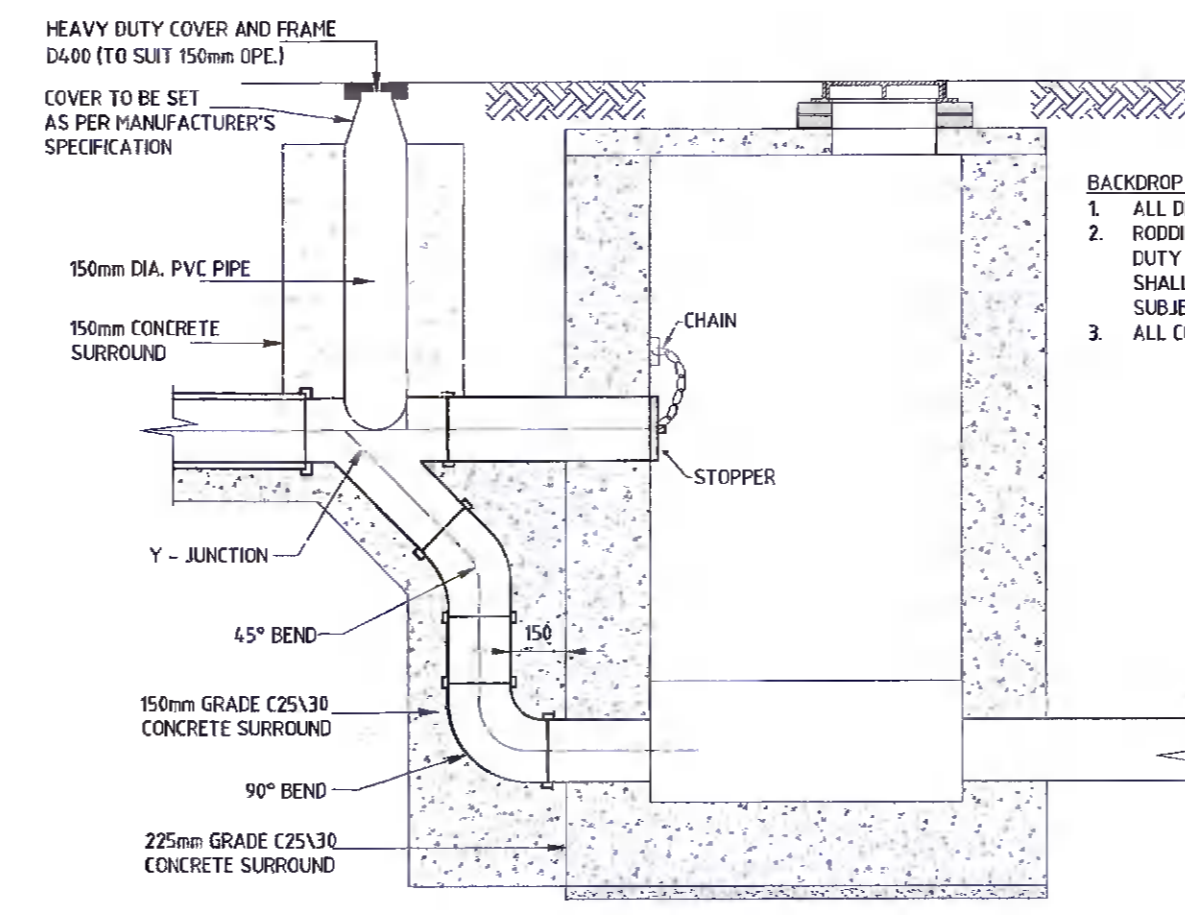
TRENCH BACKFILL AND BEDDING DETAILS

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
100	500
150	600
200	700
250	750
300	800
350	850
400	900
450	950

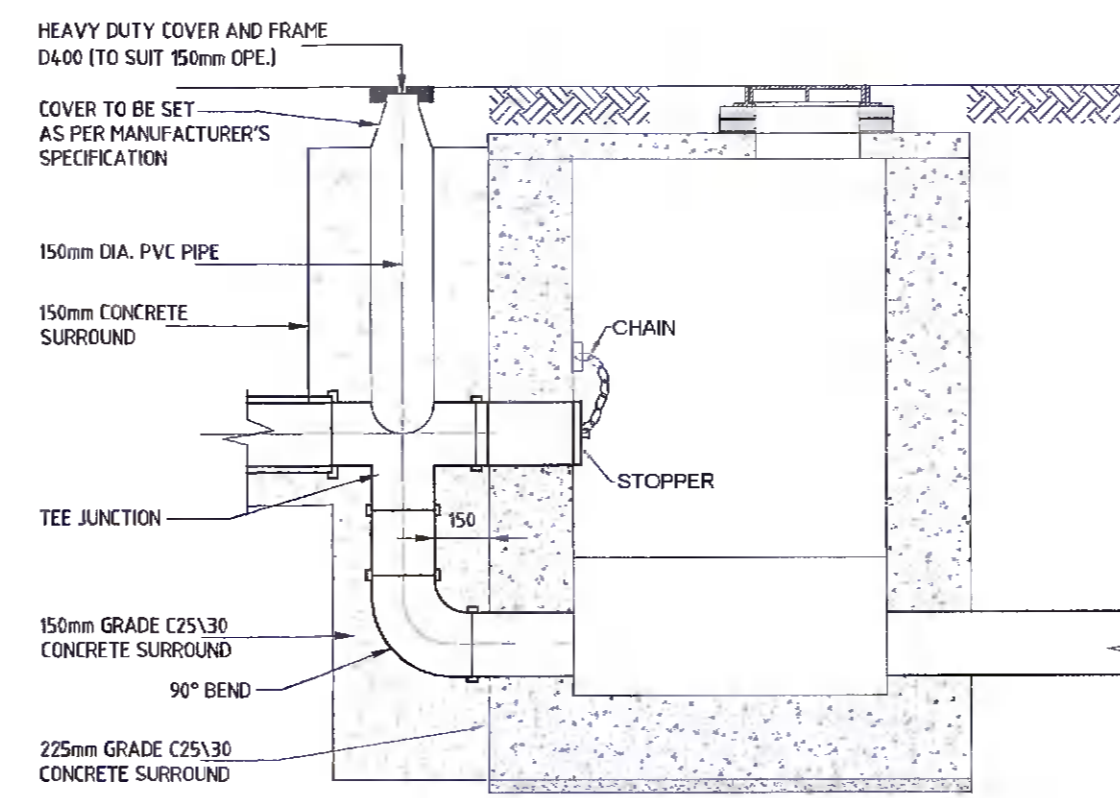
PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
100	150
150 - 450	200

TRENCH BACKFILL AND BEDDING NOTES:-

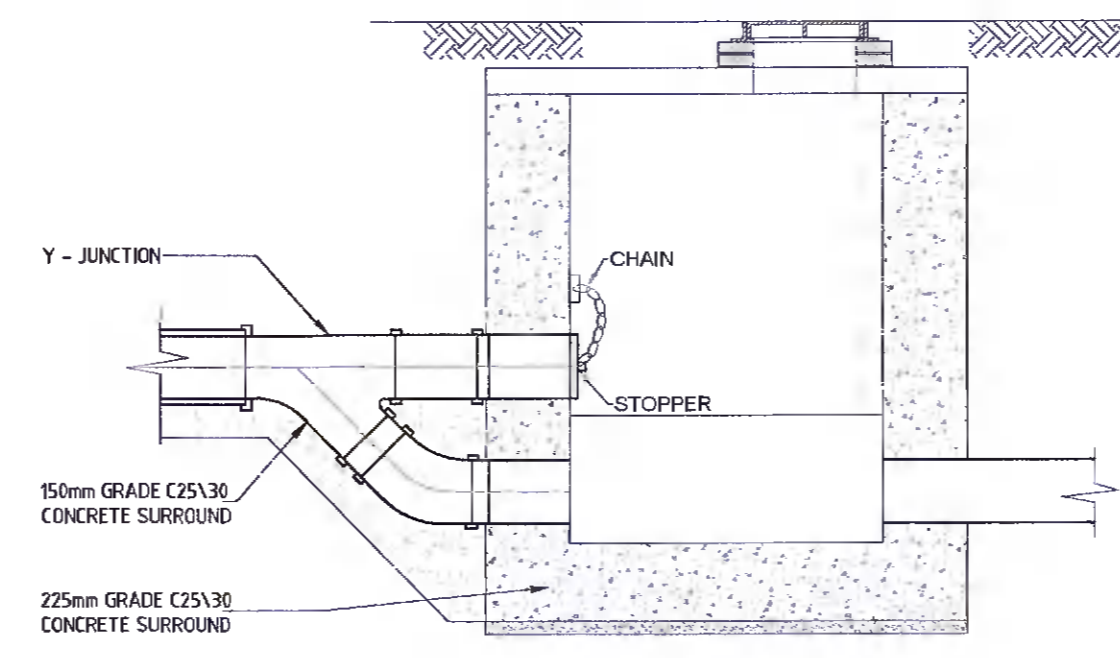
- ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE.
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO CROWN OF GRAVITY PIPES WITHOUT PROTECTION SHOULD BE AS FOLLOWS.
 - GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS - DEPTH NOT LESS THAN 0.5m (THIS WOULD NORMALLY RELATE TO DRAINS IN PRIVATE PROPERTY, SHALLOW PIPES OF THIS NATURE ARE UNSERVICEABLE AND SHOULD BE INSTALLED IN ACCORDANCE WITH THE CURRENT BUILDING REGULATIONS)
 - DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.75m.
 - DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (EG. HEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.9m.
 - DEPTHS OF SEWERS IN GATED ESTATES SHALL BE SIMILAR TO THAT OUTLINED ABOVE.
 - AGRICULTURAL LAND AND PUBLIC OPEN SPACE - DEPTH NOT LESS THAN 0.9m.
 - OTHER HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 1.2m.
- BACKFILL BELOW BUILDINGS AND FOR A DISTANCE OF 1200mm FROM A BUILDING SHOULD BE IN ACCORDANCE WITH IS EN13242 AND SECTION A12016.
- CLAUSE B08 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE B08 IS TO BE COMPACTED AS PER CLAUSE B02 OF THE NATIONAL ROAD AUTHORITY SPECIFICATION OF IRISH WATER.
- SELECTED EXCAVATED MATERIAL MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUNDED MATERIAL SUBJECT TO THE APPROVAL OF IRISH WATER.
- PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IEN 4-08-01 GRANULAR MATERIAL SHALL BE 10mm TO 5mm GRADED AGGREGATE OR 10mm SINGLE SIZE AGGREGATE TO IS EN 12424 WITH COMPACTION FACTOR VALUE NOT GREATER THAN 0.2 COMPACT IN 100mm LAYERS.
- PIPES SHALL NOT BE SUPPORTED ON STONES, ROCKS OR ANY HARD OBJECTS AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE EXCAVATED TO A DEPTH OF 50mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE B08 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
- NON DEGRADABLE MARKER TAPE SHOULD BE INSTALLED AT TOP OF PIPE BEDDING LAYER. IN THE CASE OF NON METAL PIPE MATERIAL, THE MARKER TAPE SHOULD INCORPORATE A TRACE WIRE WHICH IS LINKED TO FITTINGS AND TERMINATED AT THE WASTE WATER PUMPING STATION AND THE DISCHARGE MANHOLE.



BACK DROP MANHOLE TYPE 'NO 1' (1:20)



BACK DROP MANHOLE TYPE 'NO 2' (1:20)



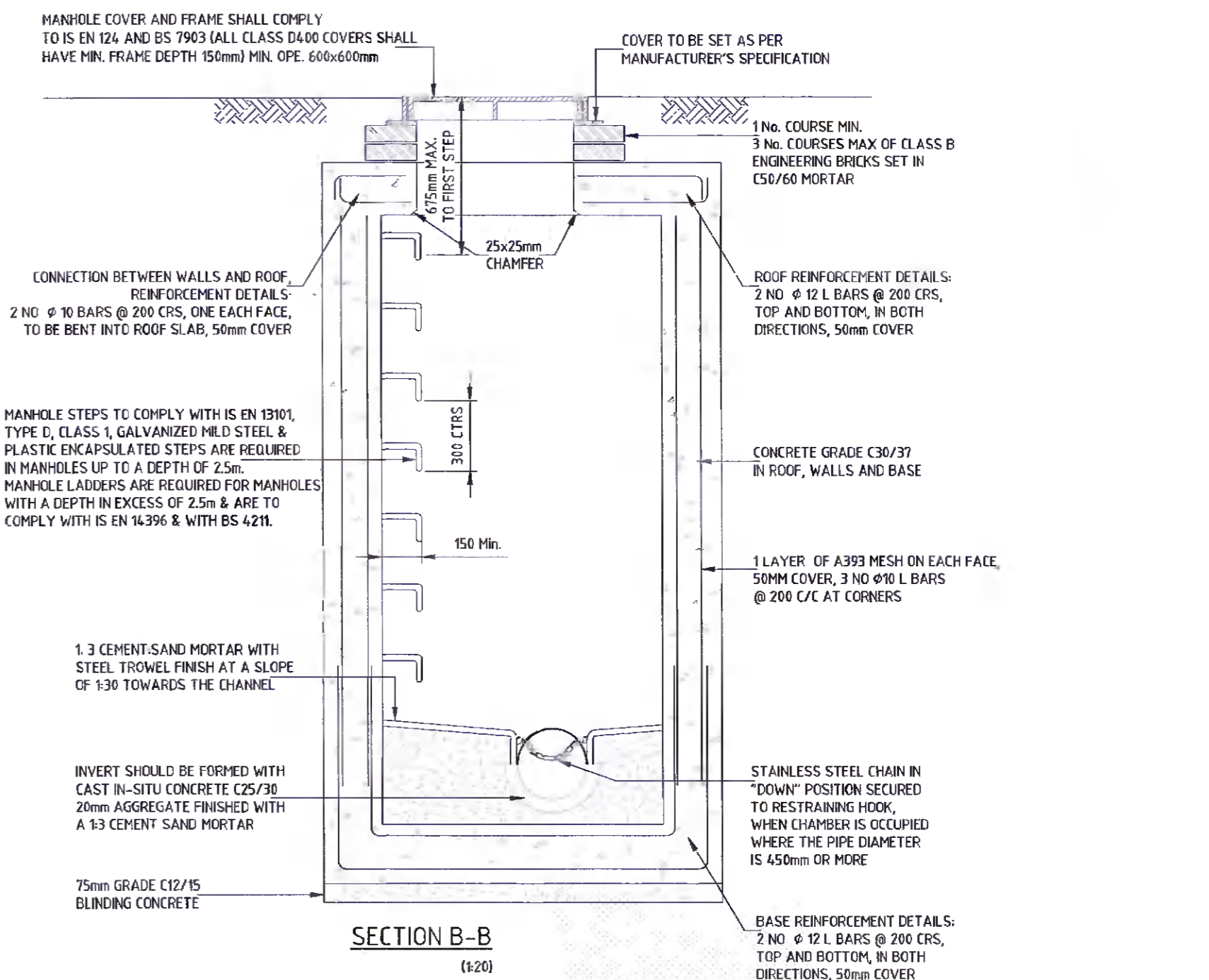
BACK DROP MANHOLE TYPE 'NO 3' (1:20)

BACKDROP MANHOLES NOTES:-

- ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE.
- RODDING EYE CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 AND BS 5834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

IN-SITU CONCRETE MANHOLE NOTES:-

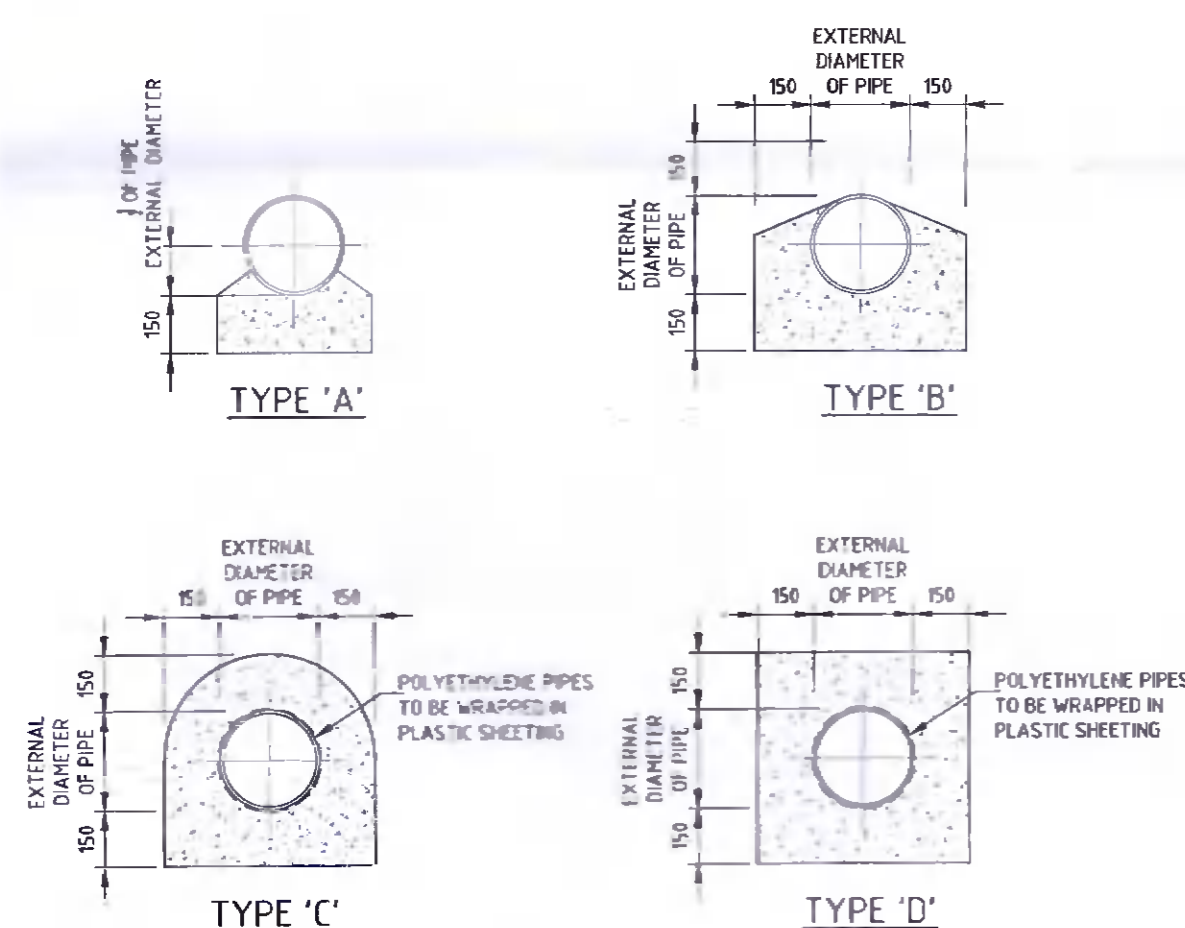
- ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE.
- IN-SITU MANHOLES TO HAVE A MINIMUM WALL AND FLOOR THICKNESS 225mm FOR MANHOLE DEPTHS UP TO 3.0m AND 300mm OR MORE WHERE MANHOLE DEPTH EXCEEDS 3.0m.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206:2013.



SECTION B-B (1:20)

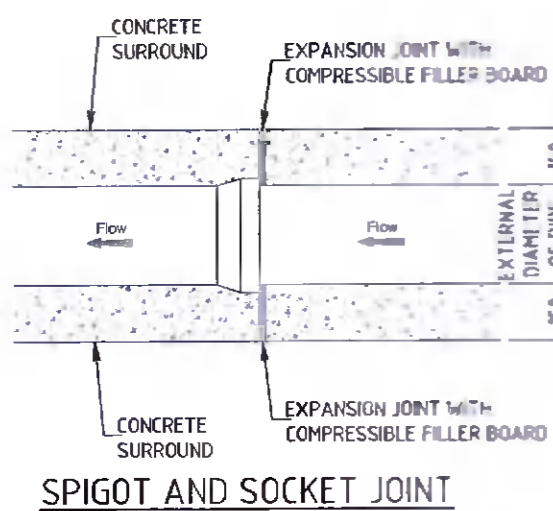
PLAN - IN SITU CONCRETE MANHOLE (1:20)

MINIMUM MANHOLE DIMENSION "D"	
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIMENSION OF MANHOLE (mm)
LESS THAN 375	1200
375 TO 450	1350
500 TO 750	1500



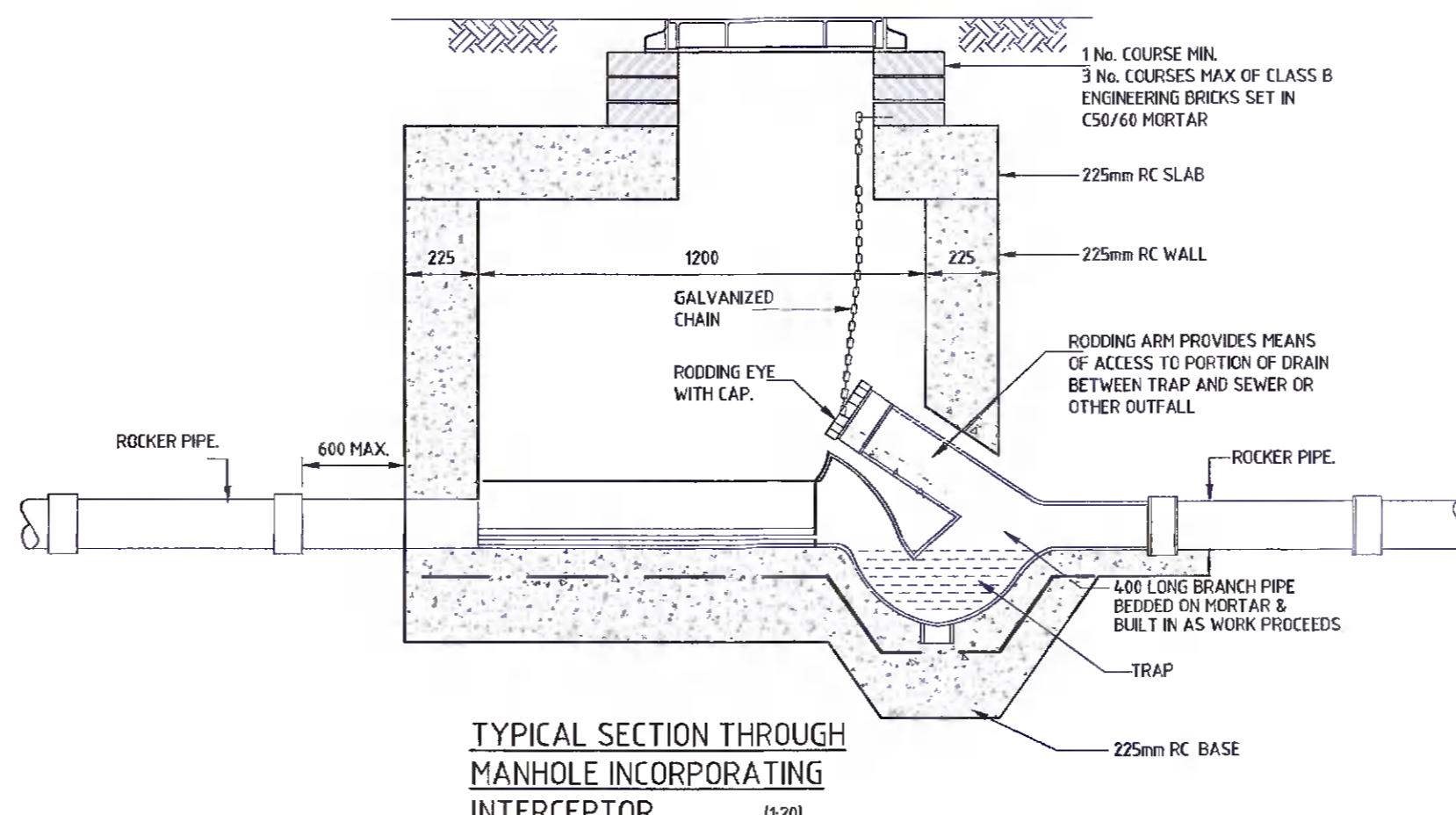
CONCRETE BED, HAUNCH AND SURROUND NOTES:-

- ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE.
- ALL PIPES WITH COVER TO CROWN LESS THAN 0.5m IN PAVED AREAS AND 1.2m UNDER ROADS TO BE WRAPPED IN MEMBRANE AND BEDDED AND SURROUNDED IN CONCRETE.
- CONCRETE PIPE BEDS AND HAUNCHES SHALL HAVE A MINIMUM THICKNESS OF 75mm WITH AN ABSOLUTE MINIMUM DEPTH OF COVER ABOVE THE EXTERNAL CROWN OF THE PIPE OF 75mm.
- CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 AND TO BE CLASS C16/20. THE HAUNCHES AND SURROUNDS TO BE FORMED USING FORM WORK TO PROVIDE A ROUGH CAST FINISH.
- EXPANSION JOINTS IN THE CONCRETE SHALL BE PROVIDED AT ALL PIPE JOINTS TO ALLOW FOR PIPE FLEXIBILITY. COMPRESSIBLE FILLER BOARD TO BE IN ACCORDANCE WITH BS EN 622-1 AND BS EN 622-4, AND TO BE 18mm THICK.
- POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
- BUTYLBUTS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PE OR PVC PIPES



SPIGOT AND SOCKET JOINT

CONCRETE BED, HAUNCH BED AND SURROUND DETAILS (1:20)



TYPICAL SECTION THROUGH MANHOLE INCORPORATING INTERCEPTOR (1:20)

REV	DESCRIPTION	DATE
A	ISSUED FOR F.I. REQUEST	03.05.22

Donnelly Troy & Associates
CONSULTING STRUCTURAL & CIVIL ENGINEERS
First Floor
Richmond House
Richmond Road
Fairview, Dublin 3.
Telephone: 6532223
Fax: 6532224
info@donnelly-troy.com

ARCHITECT
MODULE
ARCHITECTURE DESIGN (PRODUCT) MANAGEMENT
10 Fitzroy Street, Dublin 1, Co. Dublin
t: +353 1 529 8211 f: +353 1 529 8212 www.module.ie

PROJECT
Proposed Development
At 36 KEW PARL CRESCENT, LUCAN,
CO. DUBLIN

DRG. TITLE
STANDARD MANHOLE DETAILS

drawn by	AB	scales	AS SHOWN AT A1
checked by	S.C.	date	MAY '22
JOB No.	22029	DRG. No.	02
		REV.	A