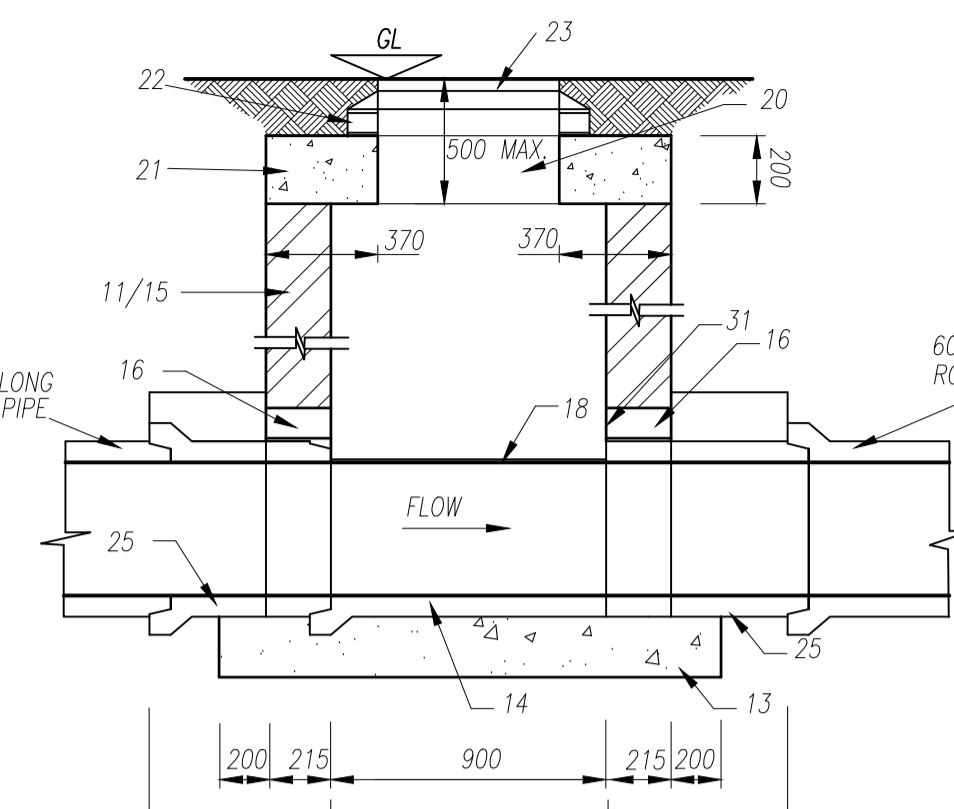
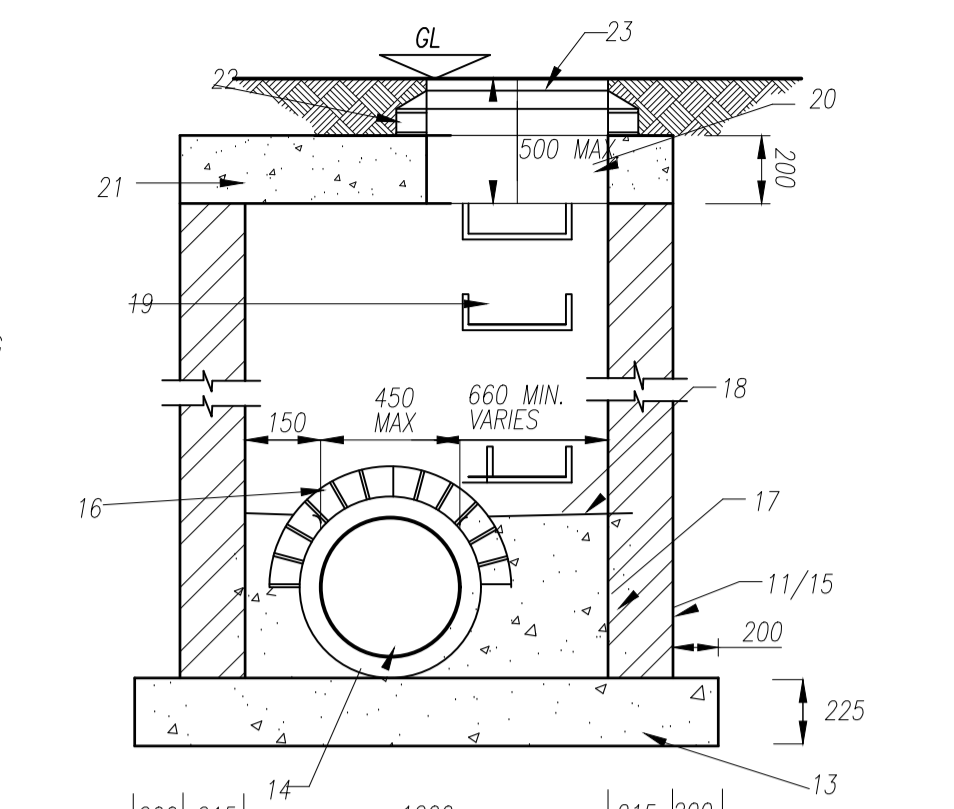


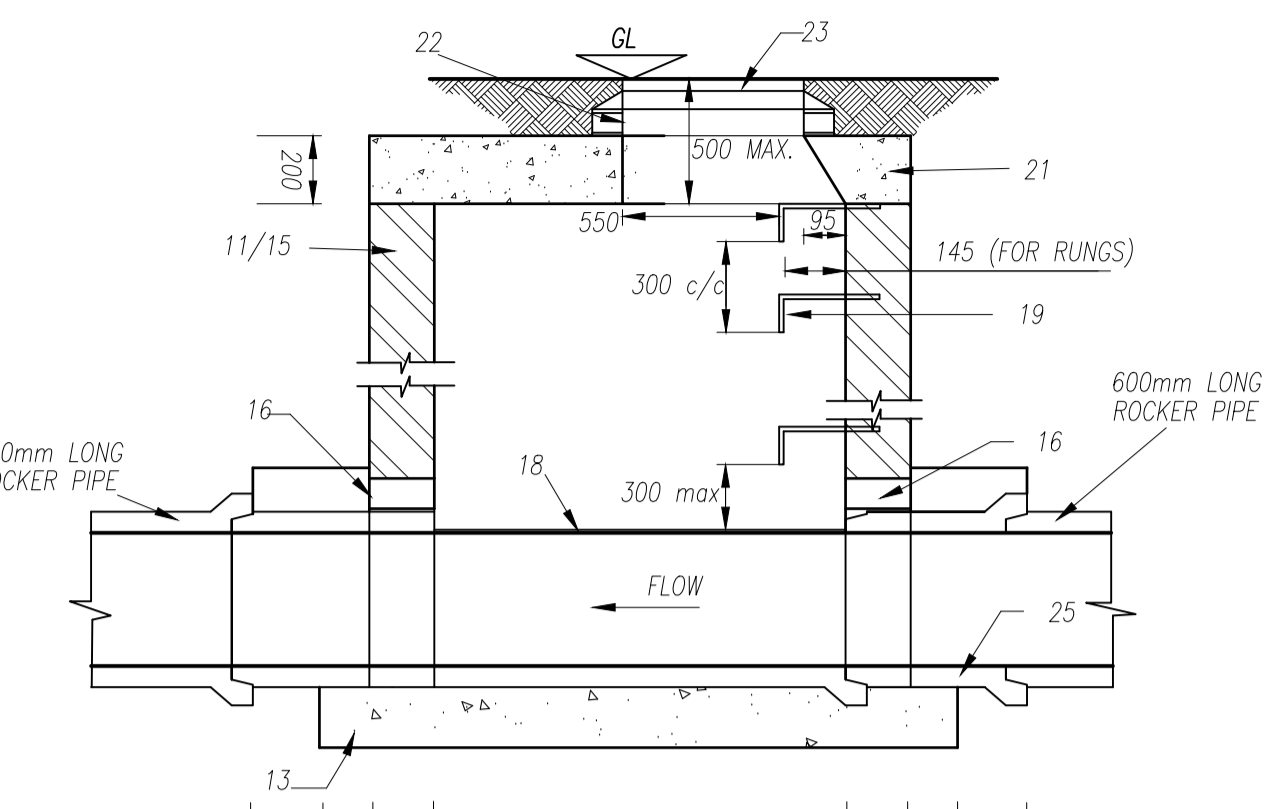
SECTION A-A



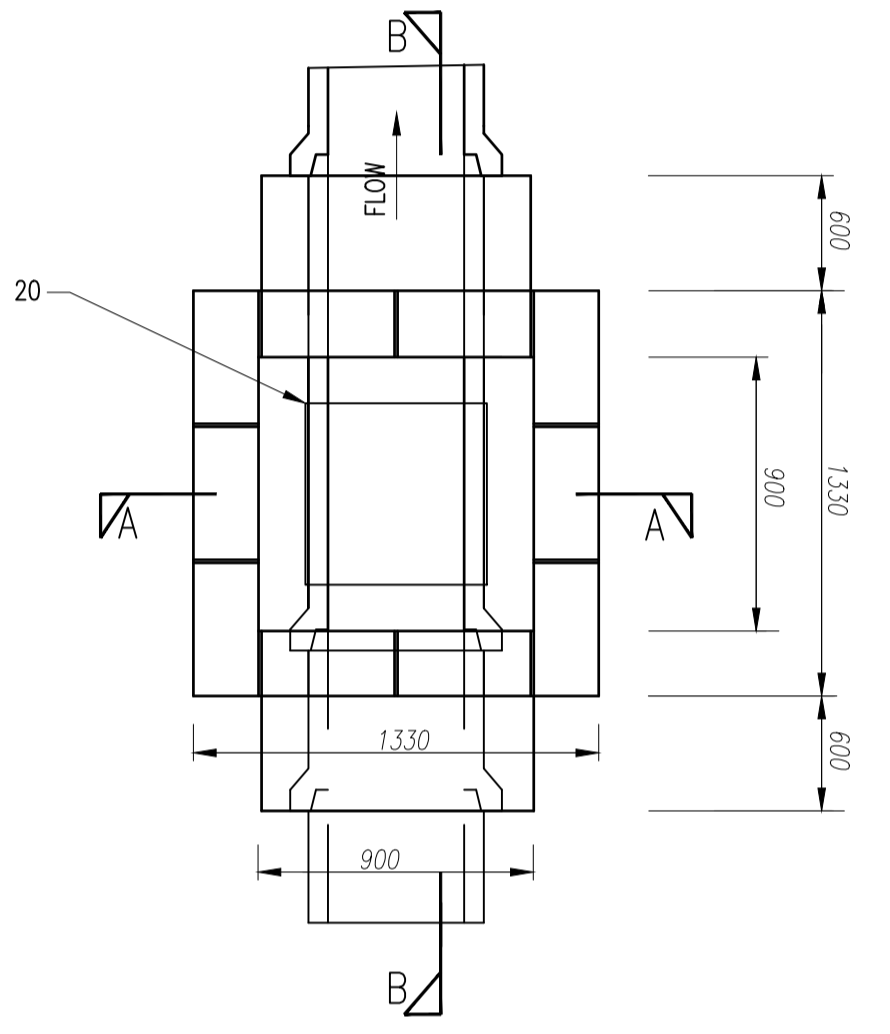
SECTION B-B



SECTION C-C

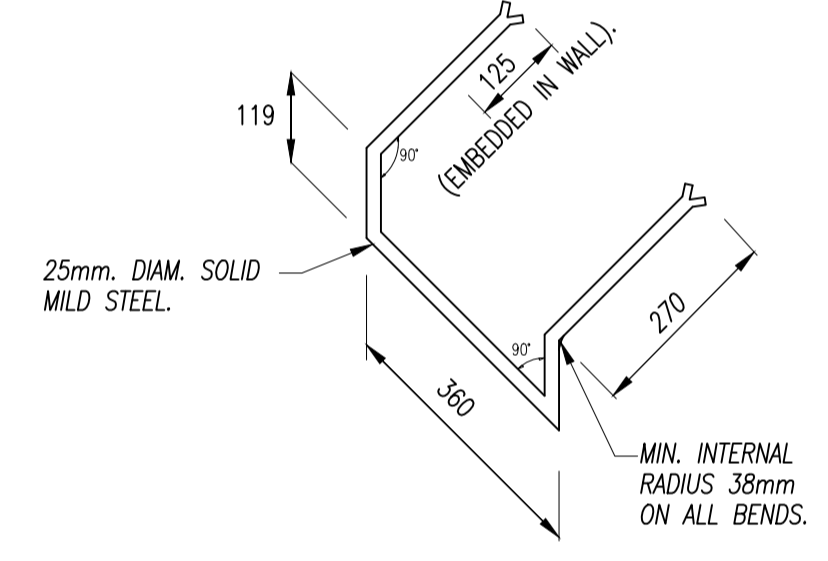


SECTION D-D

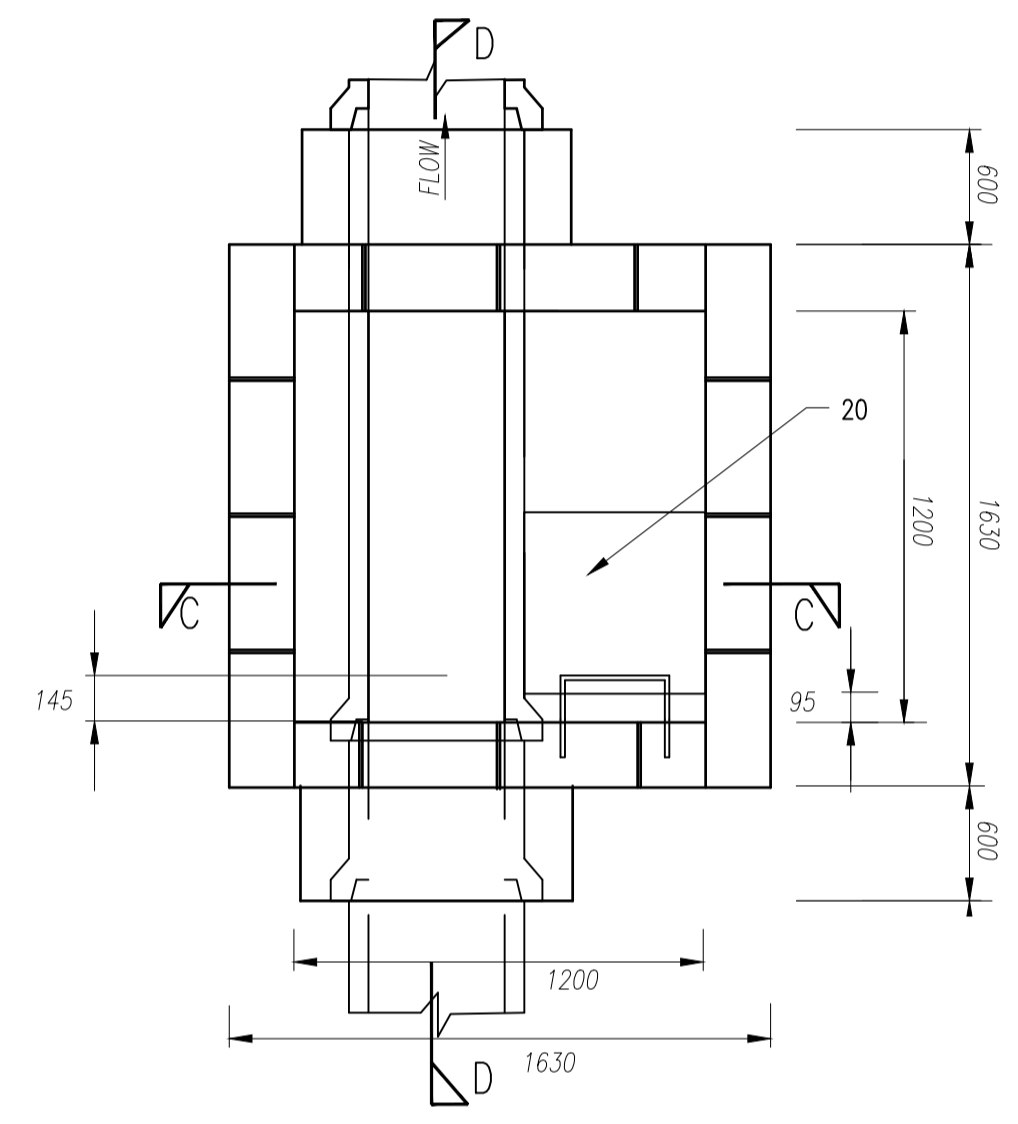


PLAN

TYPICAL MANHOLE DETAIL 'TYPE A'
(FOR LAST PRIVATE MANHOLES WHERE DEPTH TO INVERT IS 1m OR LESS)



MANHOLE RUNG (HOT DIPPED GALVANISED)
(IRON STEPS NOT PERMITTED)

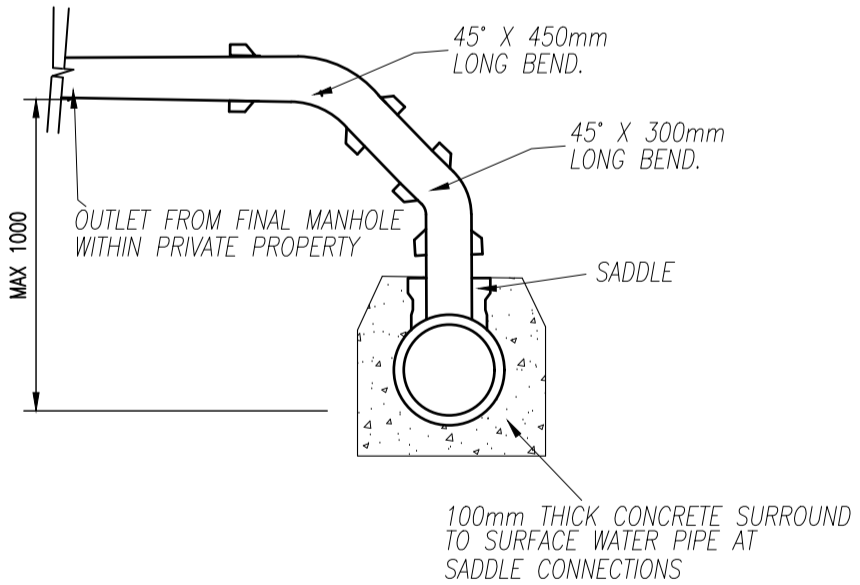


PLAN

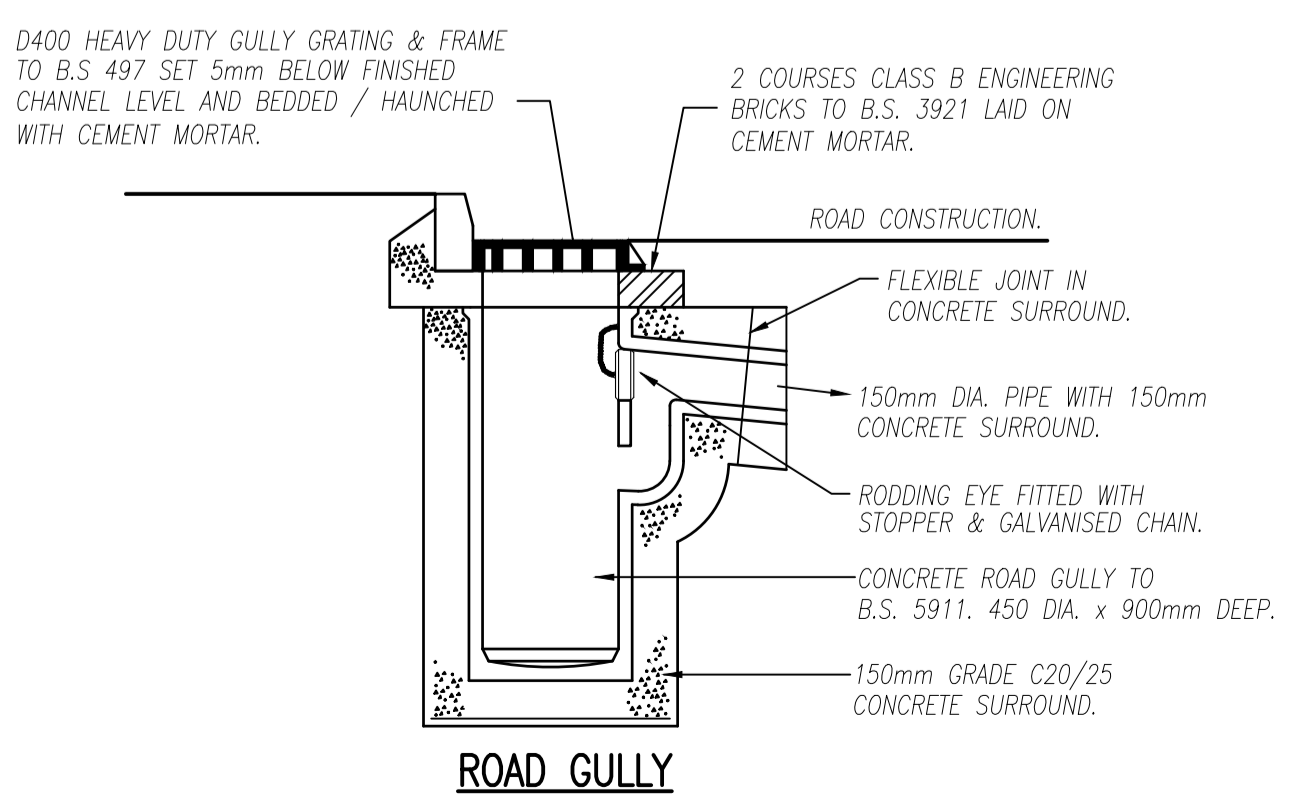
TYPICAL MANHOLE DETAIL 'TYPE B'
(FOR LAST PRIVATE MANHOLES WHERE DEPTH TO INVERT IS 1m TO 3m)

26. WHEN DEPTH OF MANHOLES TO INVERT IS GREATER THAN 3.0m, LADDERS SHALL BE USED INSTEAD OF RUNGS, TO BS 4211 EXCEPT THAT STRINGERS SHOULD BE NOT LESS THAN 65x12mm IN SECTION AND RUNGS 25mm IN DIAM. FIXED LADDERS SHOULD MEET THE DIMENSIONAL REQUIREMENTS OF BS:4211.
27. TOEHOLES OF 230mm MINIMUM DEPTH AND GALVANISED STEEL SAFETY RAILINGS TO BE PROVIDED IN BENCHING OF SEWERS GREATER THAN 525mm diam. AND DEPTH TO INVERT >3m FOR ACCESS TO INVERT.
28. 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.
29. 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.
30. ALL LADDERS, RUNGS, HANDRAILS, SAFETY CHAINS ETC. SHALL BE HOT DIP GALVANISED TO B.S.729.
31. SOCKET OF PIPE SHOULD BE CUT FLUSH WITH THE INSIDE SURFACE OF THE MANHOLE WALL.
32. POSITION OF 910mm SQUARE OPE IN INTERMEDIATE ROOF SLAB THE MANHOLE WALL.
 - A) ALL MANHOLES SHALL BE WATERTIGHT TO THE SATISFACTION OF THE ENGINEER.
 - B) FORMWORK TO REINFORCED CONCRETE AND MASS CONCRETE SHALL COMPLY TO CLASS 2, SECTION 6.2.7, BS 8110: PART1: 1997.
 - C) FINISH TO THE TOP OF SLABS SHALL COMPLY TO TYPE A, SECTION 6.2.7, BS 8110 : PART 1 : 1997.
 - D) PLAN DIMENSIONS OF MANHOLES ARE BASED ON BLOCKWORK HAVING A CO-ORDINATING SIZE OF 450 X 225 X 100.
 - E) MANHOLES ARE DESIGNED TO B.S.8005 AND WALL THICKNESSES TO I.S.325 BLOCKWORK DESIGN CODE TAKING GRANULAR FILL PRESSURE AND H.B. SURCHARGE.
 - F) REINFORCEMENT TO SLABS TO ENGINEERS DETAILS.
33. FOR MANHOLES >3m DEPTH TO INVERT USE 30N/20 IN-SITU CONCRETE. REINFORCING MESH REF. A393@6.16kg/m TO BE FIXED AT MID POINT OF WALL. ADDITIONAL REINFORCEMENT TO BE SUPPLIED OVER PIPE CROWN. (REFER TO RC DETAILS)
34. ALL DRAINAGE WORKS INCLUDING OUTFALL MANHOLES WITHIN PRIVATE AREAS, ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTISE FOR DRAINAGE WORKS.

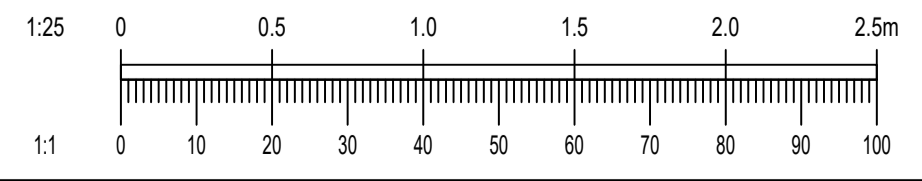
- NOTES:
1. DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.
 3. ALL WORKS SHALL BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH THE REQUIREMENTS OF DUBLIN CITY COUNCIL (WEBSITE www.dublincity.ie)
 4. GRANULAR FILL SHALL COMPLY WITH CLAUSE 808 COMPACTED IN 150mm LAYERS UNLESS OTHERWISE SPECIFIED BY THE ROADS MAINTENANCE ENGINEER.
 5. ALL BRICK TO BE ENGINEERING BRICK.
 6. PIPE TYPES - FOR TAKING IN CHARGE CONCRETE SEWER PIPES WITH SPIGOT AND SOCKET JOINTS AND RUBBER RINGS FITTING TO IS 6:1974 CLASS M OR CLASS H.
 7. CONCRETE BED AND SURROUND SHALL BE USED ON ALL PIPES WHERE COVER TO THE SOFFIT OF THE PIPE IS LESS THAN 1.2m IN ROADS, FOOTPATHS AND GRASS MARGINS AND 0.9m IN OPEN SPACES AND FIELDS.
 8. ALL CONCRETE FOR PIPE BEDDING, HAUNCHING AND SURROUNDS SHALL BE GRADE 20N/20 UNLESS OTHERWISE STATED.
 9. ALL PIPE TRENCHES / EXCAVATIONS SHALL BE BACKFILLED AND COMPACTED STRICTLY IN ACCORDANCE WITH REQUIREMENTS OF CLAUSE 505, DEPARTMENT OF THE ENVIRONMENT, SPECIFICATION FOR ROAD WORKS.
 10. ALL PRIVATE DRAINS TO REAR OF HOUSING SHALL BE ACCORDANCE WITH BUILDING REGULATIONS 1997 TABLE 7.
 11. ALL FOUL SEWER MANHOLES SHALL BE EITHER IN-SITU CONCRETE OR BLOCKWORK WITH INTERIOR BRICK LINING. FOR TAKING IN CHARGE THE LAST MH BEFORE CONNECTING INTO PUBLIC SEWER TO BE TO D.C.C. STANDARDS.
 12. INTERCEPTOR (BROAD) TRAPS TO BE PLACED AT ALL FINAL FOUL MH CONNECTIONS PRIOR TO ENTERING PUBLIC SEWERS.
 13. 225mm THICK CLAUSE 20/20 MASS CONCRETE FOUNDATIONS. WHERE BACKDROP DEPTH > 2.5M, PLACE 1 LAYER A142 MESH INTO CONCRETE AT BASE OF TUMBLE BAY.
 14. 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 MANHOLE WALL. BLOCKWORK SHALL BE BEDDED AND JOINTED USING MORTAR DESIGNATION 3 TO 1.5.406. 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 INSITU SOLID ENGINEERING BRICK (MIN. CLASS A OR B) OR INSITU CONCRETE FOR 1m ABOVE BENCHING LEVEL. BRICKS TO BE BONDED TO BLOCKWORK USING ENGLISH GARDEN WALL BOND.
 16. RELIEVING ARCH FORMED BY 215x103x65 BRICK AS PER DRAWING. RELIEVING ARCHES USED IN BRICK OR BLOCKWORK MANHOLES TO EXTEND OVER FULL THICKNESS OF WALL. DOUBLE ARCH TO BE FORMED FOR PIPE DIAMETERS GREATER THAN 600mm.
 17. BENCHING AND PIPE CHANNEL PIPE SURROUND - CL. 20/20 CONCRETE.
 18. BENCHING FINISHED IN 2:1 SAND-CEMENT MORTAR WITH A SMOOTH TROWEL FINISH, LEVEL WITH PIPE SOFFIT AT 1 IN 30 SLOPE TOWARDS CHANNEL.
 19. STANDARD RUNGS AT 300c/c VERTICALLY AND GALVANISED TO BS 729. FOR MANHOLE DEEPER THAN 1m.
 20. 600mm SQUARE OPE IN ROOF SLAB POSITIONED OVER RUNG/LADDER POSITION.
 21. 200mm THICK PRECAST R.C. ROOF SLAB IN CL 30/20 CONCRETE. COVER POSITION.
 22. 1 TO 2 NO. ENGINEERING BRICKS CL. B TO I.S. 91: 1983 SET IN 1:3 (CEMENT SAND MORTAR).
 23. 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), 600 x 600 (or 600ø) CLEAR OPENING. COVER AND FRAME COATED IN BITUMEN OR OTHER APPROVED MATERIAL. COVER TO HAVE A MINIMUM MASS OF 140kg/m2. FRAME BEARING AREA SHALL BE 80,000mm2 min., FRAMES SHALL BE DESIGNED TO PREVENT COVERS FALLING INTO MANHOLE. FRAMES SHALL BE BEDDED ON APPROVED MORTAR TO MANUFACTURER'S INSTRUCTIONS.
 24. BACKDROP MANHOLES SHALL HAVE A HEAVY DUTY CLASS D400 COVER AND FRAME FITTED AT GROUND LEVEL TO THE INLET PIPE ON THE BACKDROP.
 25. SHORT LENGTH PIPE, PIPE JOINT EXTERNAL TO MANHOLE SHALL NOT EXCEED 600mm FROM THE INNER FACE OF THE MANHOLE WALL. SHORT LENGTH PIPES SURROUNDED IN 150mm THICK CL 20/20 CONCRETE AND SHALL BE CUT FLUSH WITH INSIDE SURFACE OF THE MH.



TYPICAL SADDLE CONNECTION DETAIL TO PUBLIC SEWER



ROAD GULLY



Rev	Date	Description	By	CHK
Amendments				
Project				
CHERRY ORCHARD POINT				
Title				
TYPICAL PUBLIC SURFACE WATER DRAINAGE CONSTRUCTION DETAILS				
Client				
LAND DEVELOPMENT AGENCY				
Status				
PLANNING				
Designed By	PJD	Approved	IW	Waterman Ref
Drawn By	PJD	Date	OCT 2023	22-010
				Scales @ A1 1:25
Project - Originator - Volume - Level - Type - Role - Number				
Revision				
COP-WMC-PH1-00-DR-C-P230				