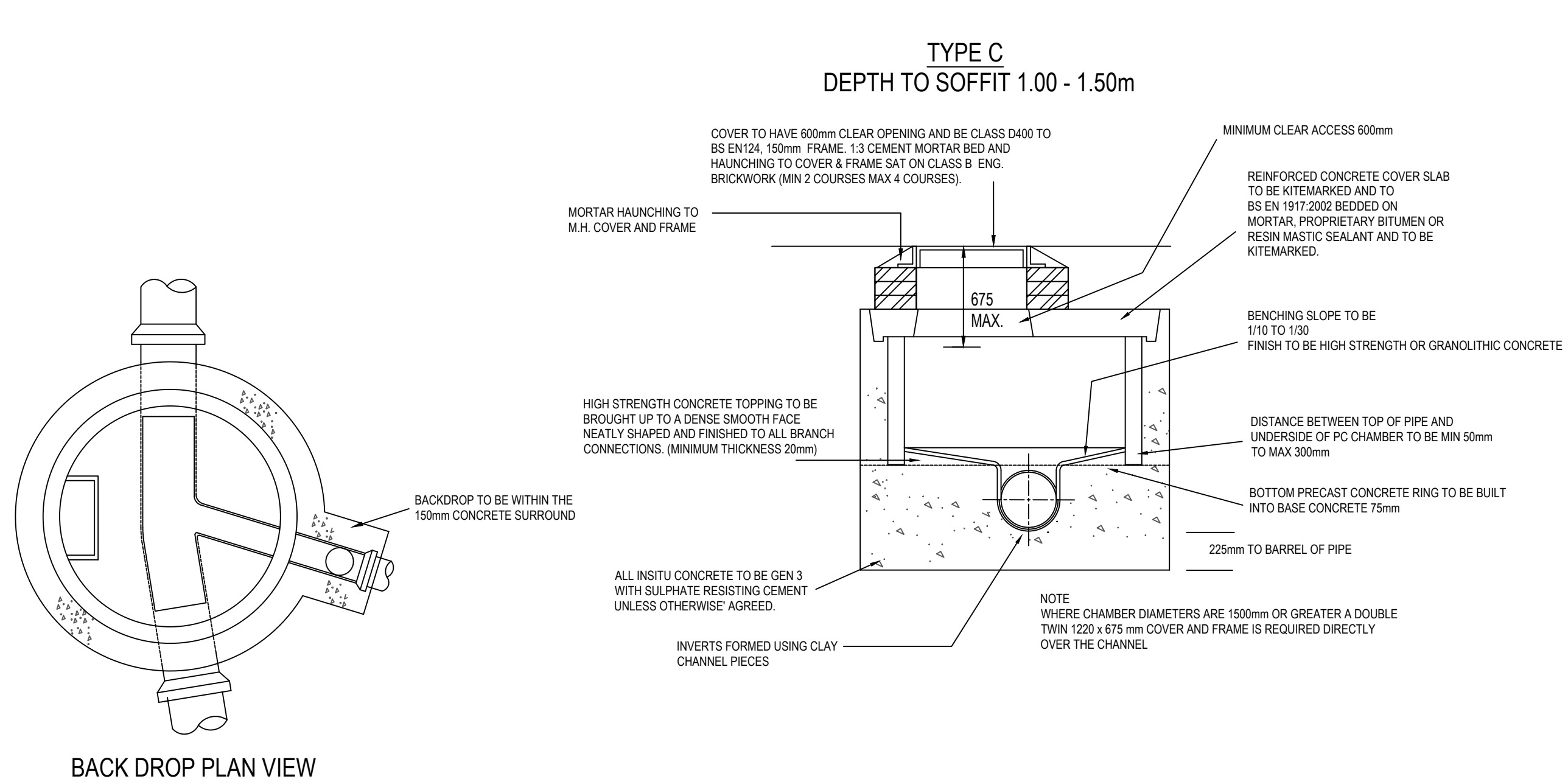
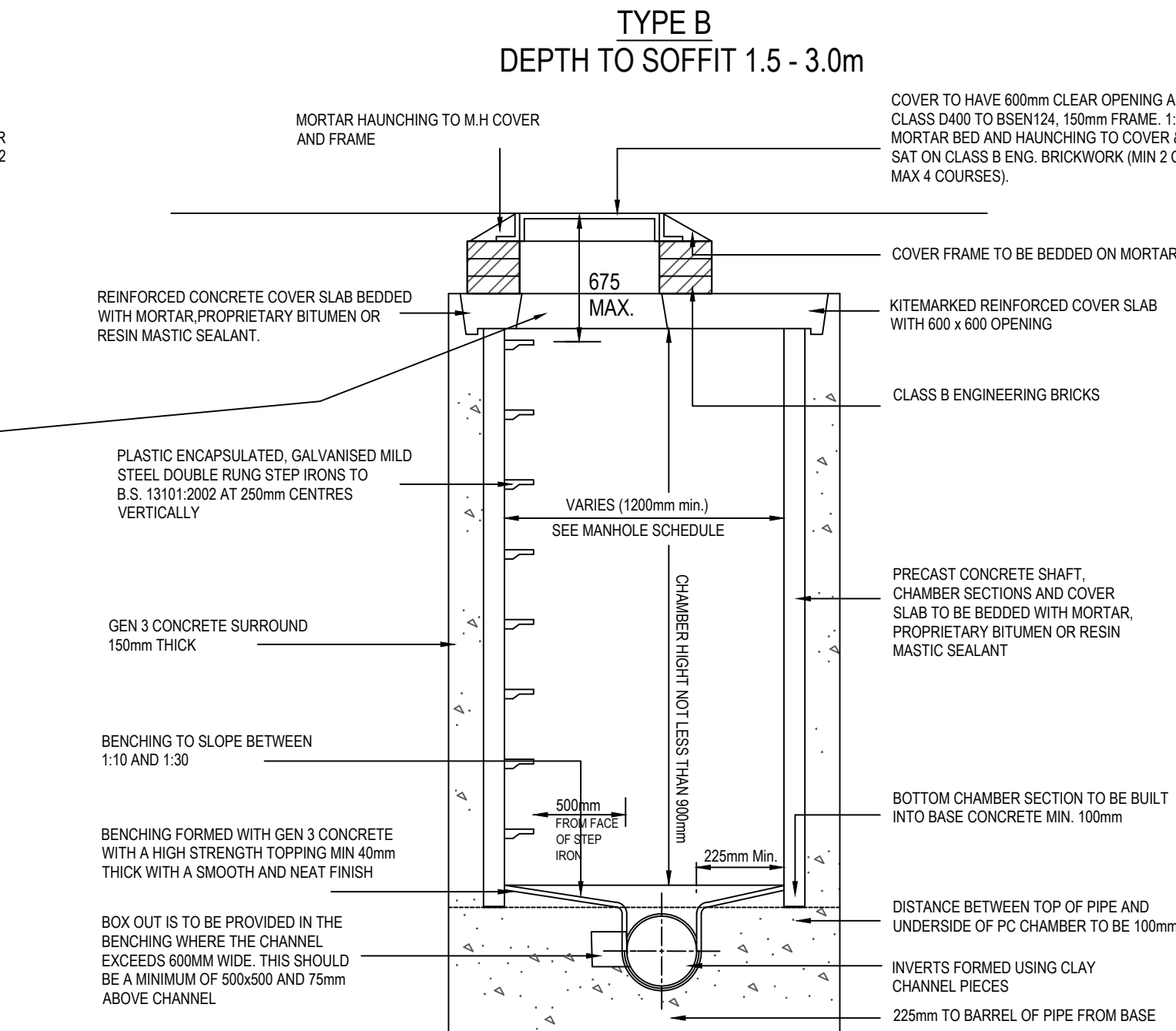
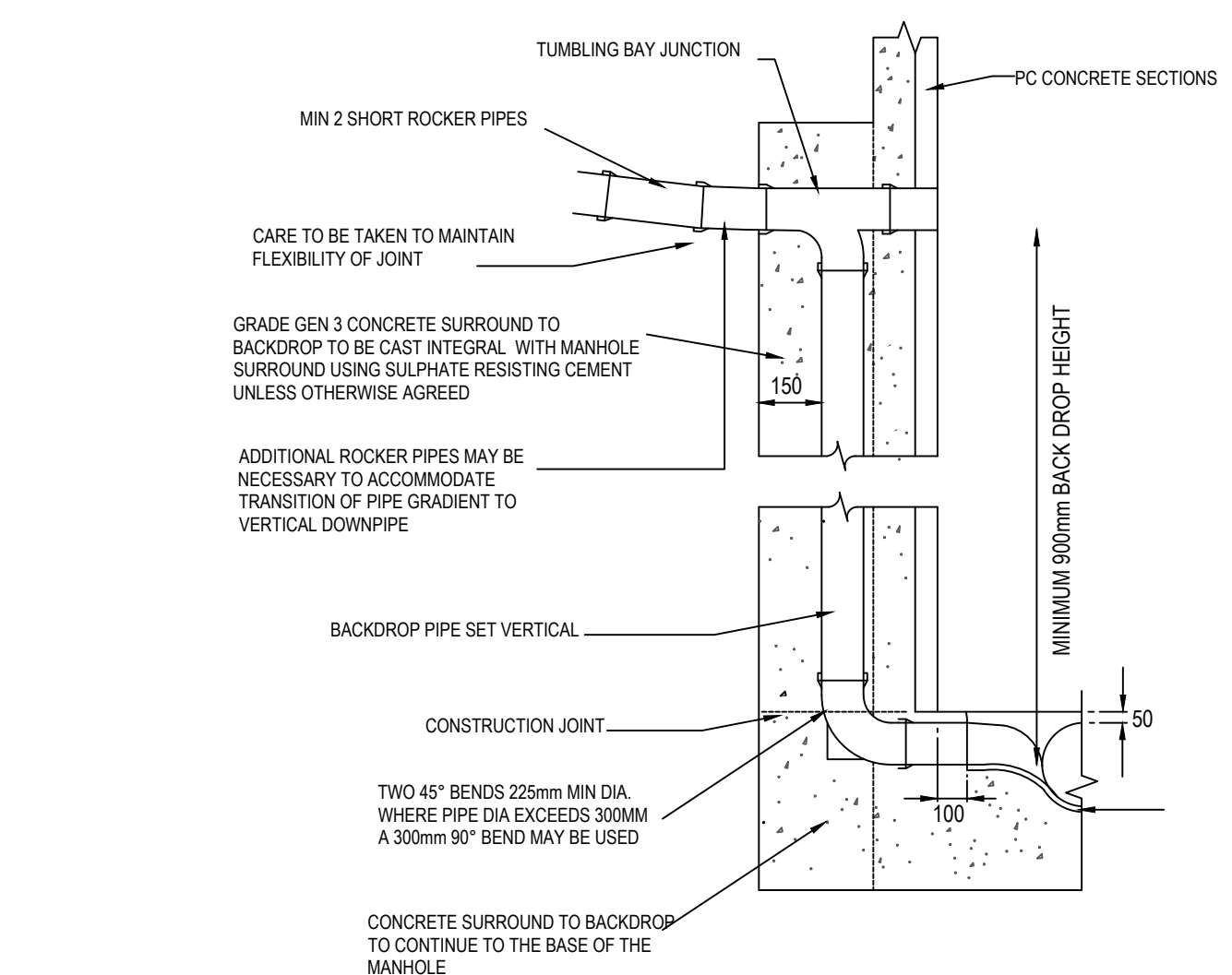
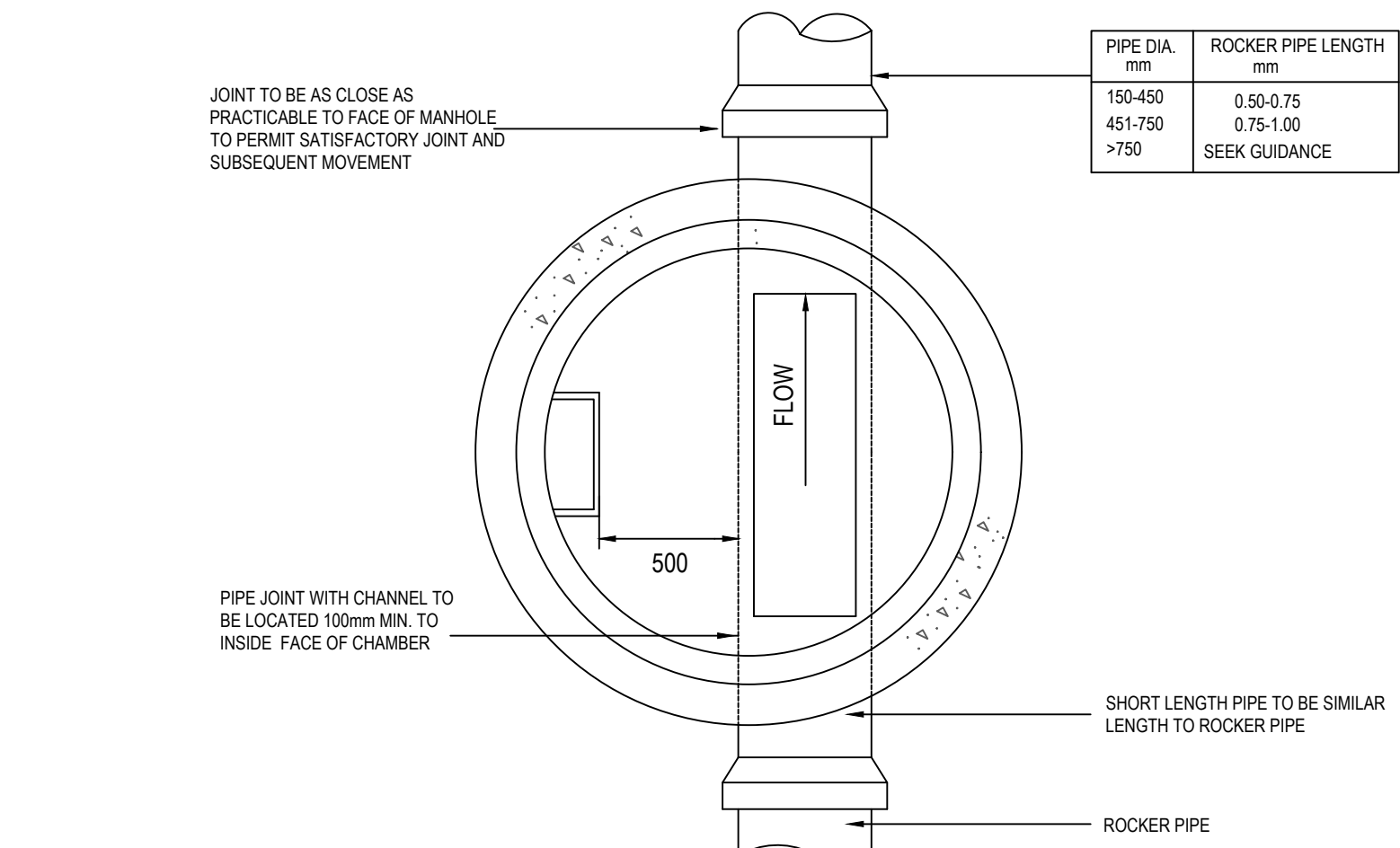
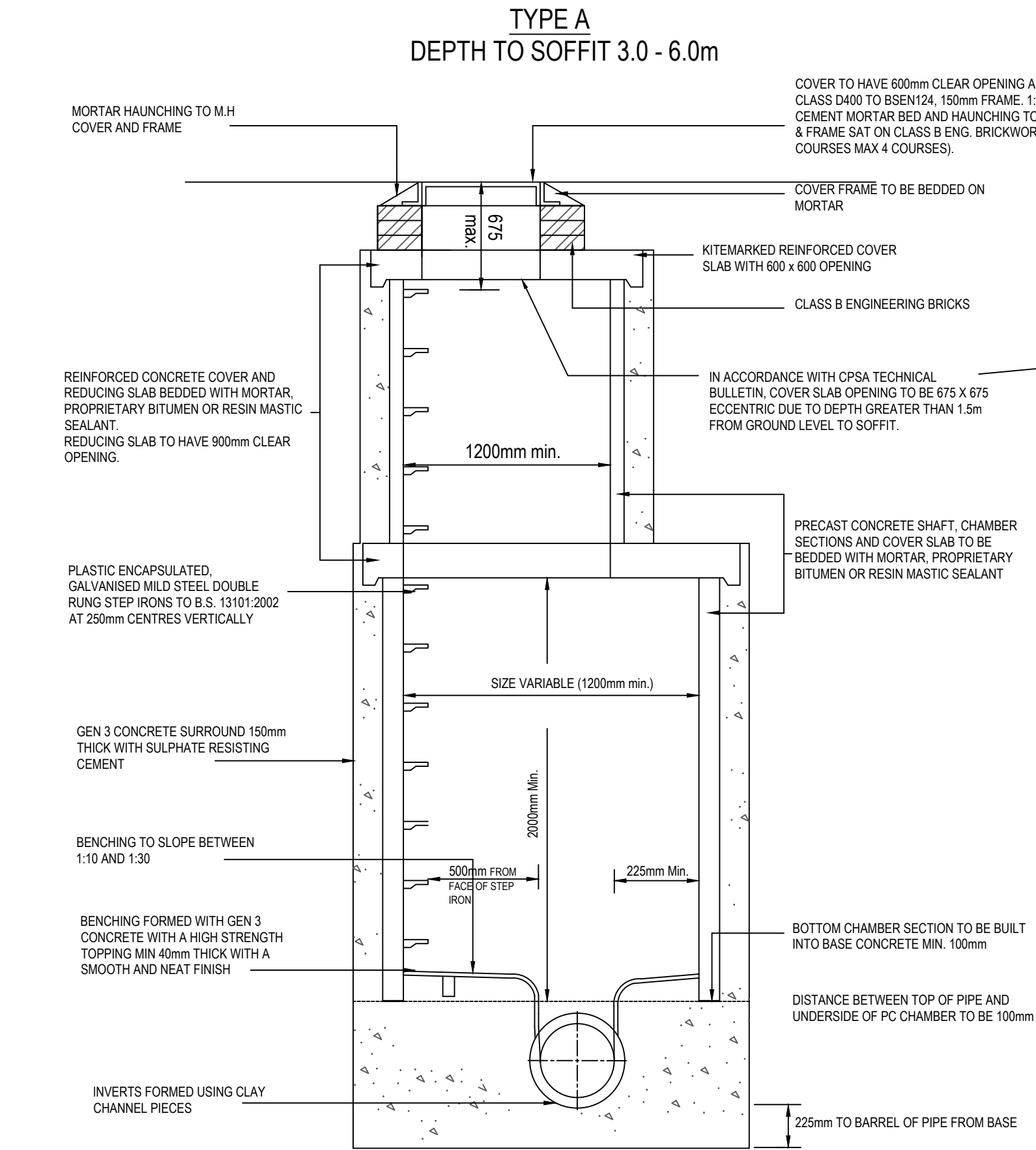
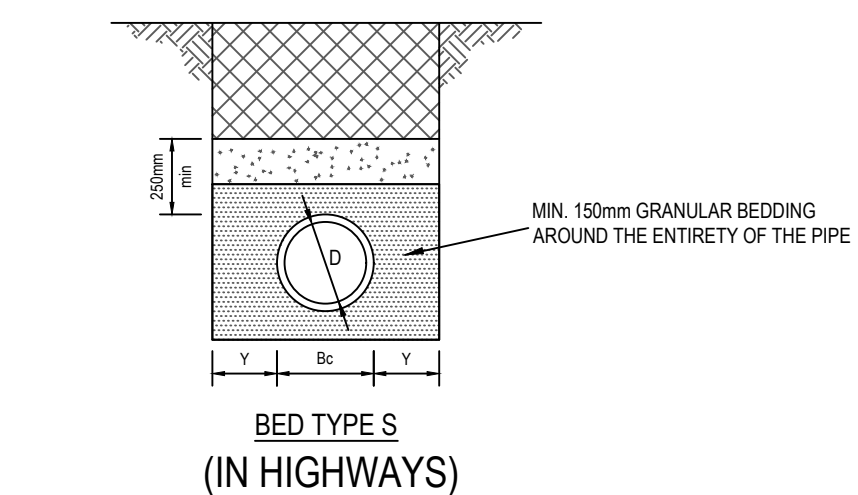




BACK DROP PLAN VIEW



COMPRESSIBLE FILLER AND PACKING FOR PIPELINES

1. COMPRESSIBLE FILLER FOR INTERRUPTING CONCRETE PROTECTION TO PIPES SHALL CONSIST OF BITUMEN IMPREGNATED INSULATING BOARD TO BS 1142: PART 3 OR OTHER EQUALLY COMPRESSIBLE MATERIAL. THE THICKNESS OF COMPRESSIBLE FILLER SHALL BE AS FOLLOWS.

NOMINAL DIAMETER OF PIPE (mm)	THICKNESS OF COMPRESSIBLE FILLER
LESS THAN 450	18
450 - 1200	36
EXCEEDING 1200	54

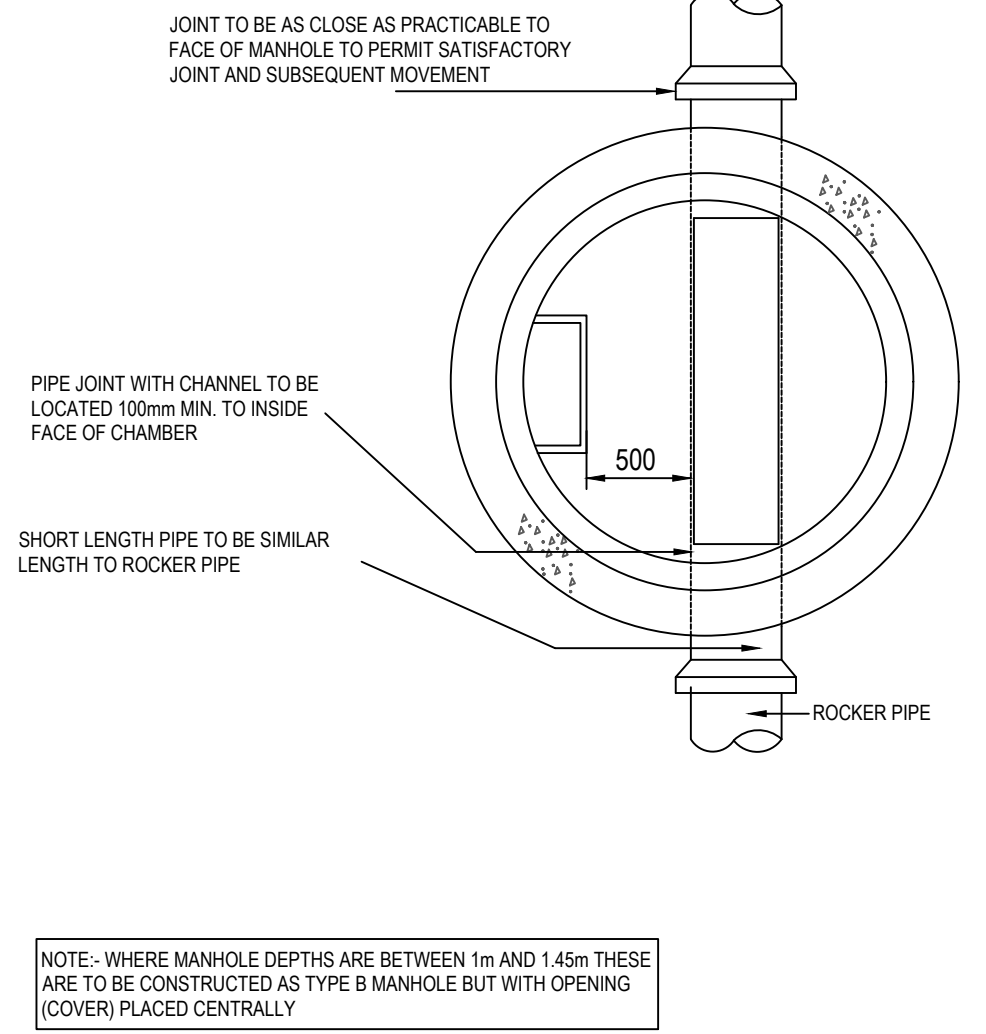
2. COMPRESSIBLE PACKING FOR USE BETWEEN PIPES AND PRE CAST CONCRETE SETTING BLOCKS SHALL CONSIST OF BITUMEN DAMP-PROOF SHEETING COMPLYING WITH BS 743

ALTERNATIVE NOMINAL MIXES BY VOLUME

CEMENT-LIME-SAND	CEMENT-SAND	CEMENT SAND WITH PLASTICIZER
1 : 3 1/4	1 : 3	1 : 2 to 3 1/2

ALL SEWERAGE WORKS TO BE IN ACCORDANCE WITH THE DESIGN AND CONSTRUCTION GUIDANCE DOCUMENT (DCG)

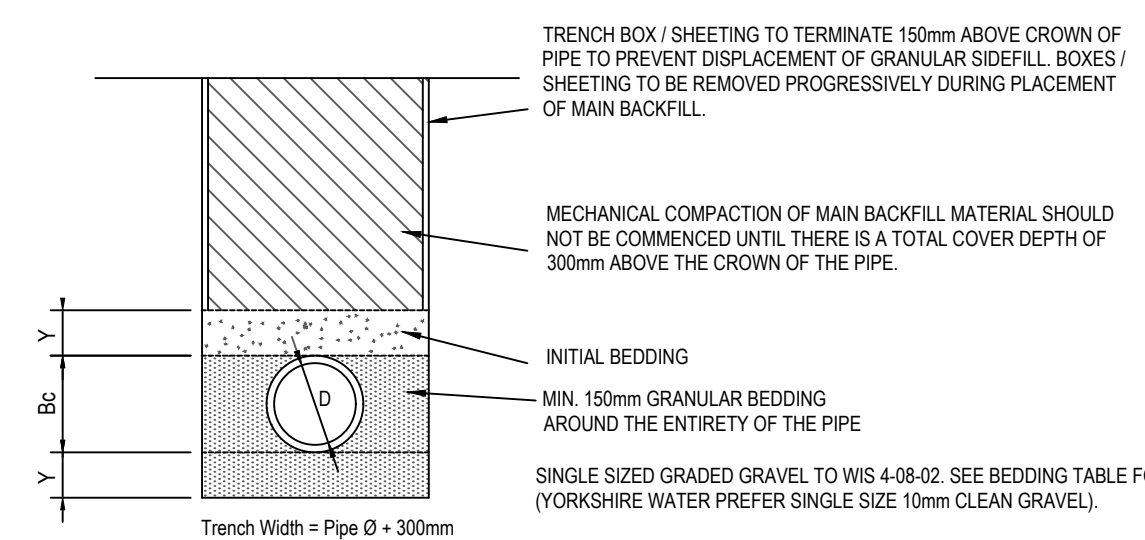
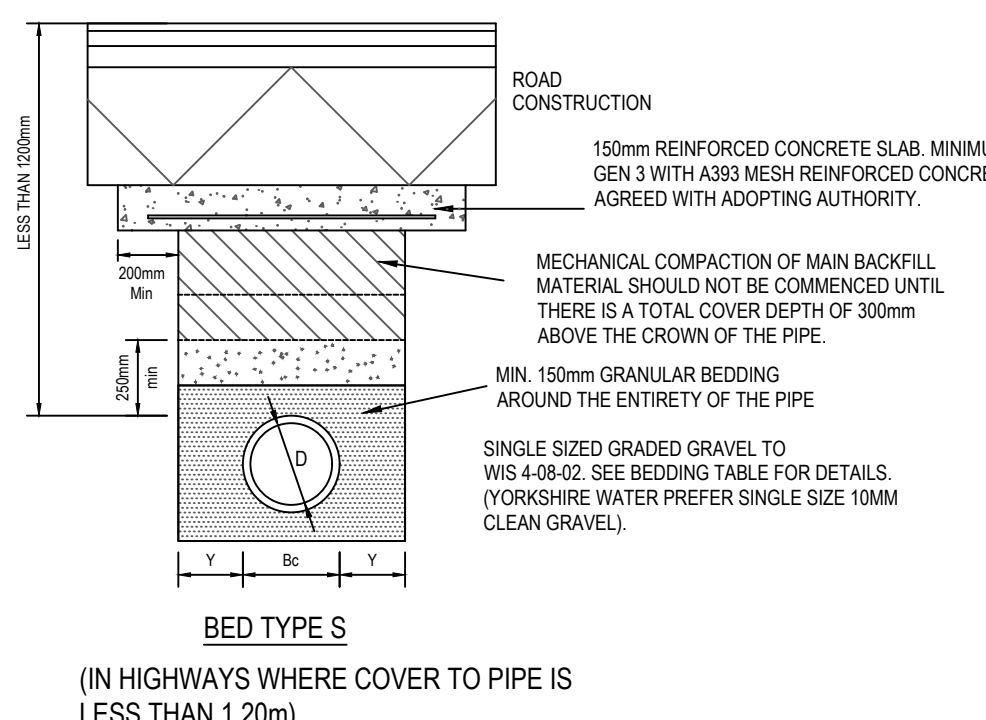
PIPE DIA mm	ROCKER PIPE LENGTH mm
150-450	0.50-0.75
451-750	0.75-1.00
>750	SEEK GUIDANCE



BEDDING TABLE

DIAMETER mm	MAX TRENCH WIDTH	Bc	Y (mm)	PIPE BEDDING MATERIAL	
				SINGLE SIZE (mm)	GRADED (mm)
150	900	178	150	10 or 14	14-5
225	1021	271	150	10, 14 or 20	14-5 or 20-5
300	1160	410	150	10, 14 or 20	14-5 or 20-5
375	1240	490	150	14 or 20	14-5 or 20-5
450	1326	576	150	14 or 20	14-5 or 20-5
525	1420	670	150	14, 20 or 40	14-5, 20-5 or 40-5
600	1522	772	150	14, 20 or 40	14-5, 20-5 or 40-5

ALL GRANULAR MATERIAL TO COMPLY WITH THE REQUIREMENTS OF BS 882:1983



BED FOR STRUCTURED WALL SEWER PIPE TO WIS 4-35-01

- MAIN BACK FILL MATERIAL COMPACTED IN LAYERS NOT EXCEEDING 250mm THICK. TO BE TYPE 1 GRANULAR MATERIAL UNDER ROADS WHERE DIRECTED MECHANICAL COMPACTION OF MAIN BACKFILL MATERIAL SHOULD NOT BE COMMENCED UNTIL THERE IS A TOTAL COVER DEPTH OF 300mm ABOVE THE CROWN OF THE PIPE.
- INITIAL BACK FILL MATERIAL NOT LESS THAN 150mm THICK. HEAVY COMPACTION EQUIPMENT NOT TO BE USED.
- PIPE ZONE MATERIAL CONFORMING TO BEDDING TABLE
- C20 GRADE CONCRETE WITH COMPRESSIBLE FIBRE AS DESCRIBED IN TABLE PLACED AT EACH PIPE JOINT TO PRESERVE FLEXIBILITY

Only PDF/DWG Issues of this drawing are controlled. All other formats (eg. DWG AutoCAD FILES) are UN-controlled and are used at your own risk.

GENERAL NOTES:

- DO NOT USE THIS DRAWING IN ISOLATION. THIS DRAWING HAS BEEN PREPARED AS PART OF A SET, AND MUST THEREFORE BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORKS.
- THIRD PARTY INFORMATION IS USED TO PREPARE THE ENGINEERING DESIGN (INCLUDING ARCHITECTURAL LAYOUT, GROUND INVESTIGATION EXISTING UTILITIES RECORDS, AND SPECIALIST DESIGN ITEMS). THE ENGINEERING DESIGN MUST THEREFORE BE READ IN CONJUNCTION WITH ALL THIRD PARTY INFORMATION PRIOR TO COMMENCING WORK. QUEENSBERRY DESIGN LTD ARE NOT RESPONSIBLE FOR ANY THIRD PARTY INFORMATION OR DETAILS.
- DRAWING STATUS WILL REMAIN PRELIMINARY UNTIL FULL TECHNICAL APPROVAL IS RECEIVED FROM LOCAL AUTHORITY AND SEWERAGE UNDERTAKER. WORKS COMMENCED PRIOR TO TECHNICAL APPROVAL ARE DONE SO AT RISK AND MAY BE SUBJECT TO CHANGE.
- THE CONTRACTOR IS EXPECTED TO PREPARE APPROPRIATE CONSTRUCTION METHOD STATEMENTS FOR ALL ASPECTS OF PROPOSED WORK. THIS SHOULD INCLUDE ANY TEMPORARY PROTECTION / WORKS.
- LAND DRAINAGE IS NOT PERMITTED TO DISCHARGE INTO THE PUBLIC SEWER NETWORK. ANY NEED FOR LAND DRAINAGE SHOULD BE ASSESSED BY THE GROUND WORKER AND LANDSCAPER DURING CONSTRUCTION AND PLACEMENT OF GARDENS ON AN INDIVIDUAL PLOT BASIS. IF LAND DRAINAGE DESIGNS ARE REQUIRED, THEY SHOULD BE APPOINTED PRIOR TO PLOT COMPLETION.
- THE CONTRACTOR IS EXPECTED TO CROSS CHECK ALL DRAINAGE INVERTS PRIOR TO COMMENCING WORK. THE WAY INVOLE COMPLETION OF TRAIL HOLES IN INVERT LEVELS HAVE BEEN INTERPOLATED. THE POSITION LINE AND DIAMETER OF ALL EXISTING DRAINAGE APPARATUS SHOULD BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORKS. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR MUST MONITOR THE "AS BUILT" PROGRESS OF EACH CONSTRUCTION STAGE (ROADS/SEWERS/LOT WORKS ETC), TO ENABLE THE NEXT STAGES OF CONSTRUCTION TO BE CHECKED BEFORE INSTALLATION.

- HIGHWAYS**
- ALL HIGHWAY WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT LOCAL AUTHORITY DESIGN GUIDE AND SPECIFICATION
 - ALL EXCAVATIONS BELOW PROPOSED AND EXISTING HIGHWAYS TO BE BACK FILLED WITH GRANULAR TYPE 1 SUB BASE AND WELL COMPACTED IN LAYERS NOT EXCEEDING 150mm, UNLESS OTHERWISE AGREED.
 - HIGHWAY AUTHORITY TO BE NOTIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS.
- ADAPTABLE DRAINAGE**
- ALL ADAPTABLE SEWER WORKS AND MATERIAL TO BE IN ACCORDANCE WITH "CODE FOR ADOPTING" THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATER'S STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED
 - MANHOLE COVERS SHALL HAVE A CLEAR OPENING OF 600mm AND SHALL BE CLASS D400 TO BS EN 124 WITH 150mm DEEP FRAMES IN HIGHWAYS
 - FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT
 - YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAINAGE DRAINAGE RUN-OFF INTO THE PUBLIC SEWER NETWORK OR ADAPTABLE DRAINAGE SYSTEM (DIRECTLY OR INDIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUN-OFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIAISE WITH THE LOCAL AUTHORITY. LAND DRAINAGE SECTION REGARDING THE DISPOSAL OF THE FILTER DRAINAGE DRAINAGE RUN-OFF
 - THE ADAPTABLE SEWERS SHOULD BE A MINIMUM OF 1M AND MANHOLES 0.5M FROM KERB FACES AND SERVICE MARGINS
 - SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES OR THE WIDTH OF THE CANOPY AT MATURE HEIGHT
 - SEWERS TO BE LAD IN CLASS "S" REDDING (150mm GRANULAR BED AND SURROUND), WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.5m IN HIGHWAYS AND VERGES (OR LESS THAN 900mm IN NON-VEHICULAR ACCESS AREAS) THEN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED AND SURROUND
 - BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF WATER INDUSTRY SPECIFICATION 4-28-02 (TABLE A2)
 - YORKSHIRE WATER POLICY IS THAT TYPE "C" BRICK MANHOLES AND 1500mm DIAMETER MANHOLE RINGS ARE NOT PREFERRED. INSTEAD, IT IS PREFERRED THAT YOU USE A TYPE "B" MANHOLE WITH 1200mm DIAMETER OR 1500mm DIAMETER RINGS, WITH THE OPENING SITED OVER THE CHANNEL, WHERE DEPTH OF COVER TO PIPE SOFFIT IS 1.5m
 - ADAPTABLE PLASTIC SEWER PIPES TO BE BS KITEMARKED (CERTIFIED TO WIS 4-35-01 AND BS EN 13478). ADAPTABLE PLASTIC SEWER PIPES TO BE LAD IN MAXIMUM 3 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS. PLASTIC CHANNEL SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND YORKSHIRE WATER WOULD REQUIRE CLAY WARE CHANNEL IN MANHOLES
 - THE MINIMUM CRUSHING STRENGTH FOR CLAY PIPES SHOULD BE AS FOLLOWS: 1800mm DIA. 40kN/m, 1500mm DIA. 40kN/m, 225mm DIA. 450kN/m AND 300mm DIA. 720kN/m. THE MINIMUM CRUSHING STRENGTH FOR CONCRETE PIPES SHOULD BE: (CLASS 20 TO EN 1198) BS EN 11: 2002. PLASTIC PIPES SHOULD CONFORM TO WIS 4-35-01 AND BS EN 13478
 - WHERE A B125 COVER AND FRAME HAS BEEN APPROVED, THIS MUST NOT BE COATED IN PLASTIC AND MUST HAVE 4 LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SCREW DOWN COVERS ARE NOT ACCEPTABLE
 - THERE MUST BE ENOUGH CLEARANCE AT CROSSOVERS TO ACCOMMODATE BEDDING TO BOTH PIPES, APPROX. 300mm. IF CROSSOVER IS NEAR THE ROCKER THEN THE CLEARANCE NEEDED MAY NEED TO BE INCREASED.

EXISTING SERVICES

PRIOR TO THE COMMENCEMENT OF ANY WORKS UNDER GROUND MAPPING SURVEYS AND CONSTRAINTS PLAN IS TO BE REFERRED TO ANY DISCREPANCIES ARE TO BE REPORTED TO ENGINEER.

ANY EXISTING SERVICES WHICH MAY BE AFFECTED BY THE PROPOSED WORKS SHOULD BE LOCATED BY MEANS OF A HAND DIG IN CLOSE LIAISON WITH THE STATUTORY SERVICE AUTHORITIES. THE CONTRACTOR SHALL INFORM THE DEVELOPER OF ANY SERVICES THAT MAY AFFECT THE PROPOSED DESIGN. CONTRACTOR TO NOTIFY STATUTORY SERVICE AUTHORITIES PRIOR TO COMMENCEMENT OF WORK. AS CONSTRUCTED INFORMATION IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE THE FOLLOWING AS CONSTRUCTED DRAWINGS TO THE DEVELOPER. UPON THE COMPLETION OF THE WORKS COVERED BY THE CONTRACT:

- POSTHOLE CO-ORDINATES OF ALL ADAPTABLE MANHOLES
- INVERT AND COVER LEVELS OF ALL ADAPTABLE MANHOLES
- NEW GULLY POSITIONS AND CONNECTIONS
- POSITION AND DEPTH OF SERVICE DUCTS FOR WATER, GAS, ELECTRIC, BT, CABLE AND STREET LIGHTING, STATING SIZE AND NUMBER OF DUCTS.

A	06.09.23	YORKSHIRE WATER COMMENTS ADDED	NO	NO
-	18.02.22	FIRST ISSUE	NO	NO

Rev	Date	Revision Details	Drawn	Checked

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