

Figure B 33
Typical manhole detail – Type C
Depth from cover level to soffit of pipe less than 1.5 m
Maximum pipe size 450 mm diameter
Rigid material construction

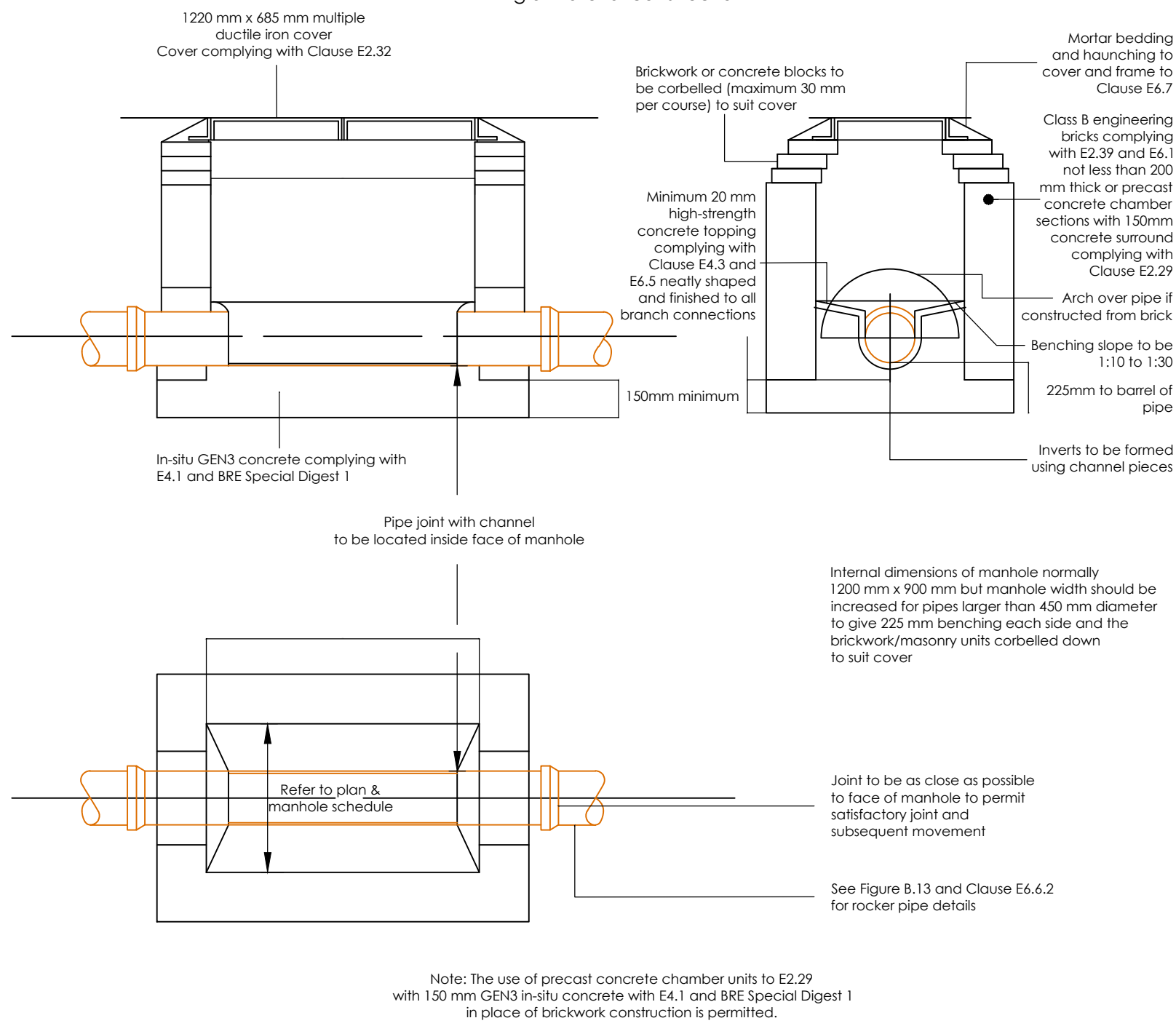


Figure B 15
Typical manhole detail – Type C
Depth from cover level to soffit of pipe less than 1.5 m
Maximum pipe size 450 mm diameter
Rigid material construction

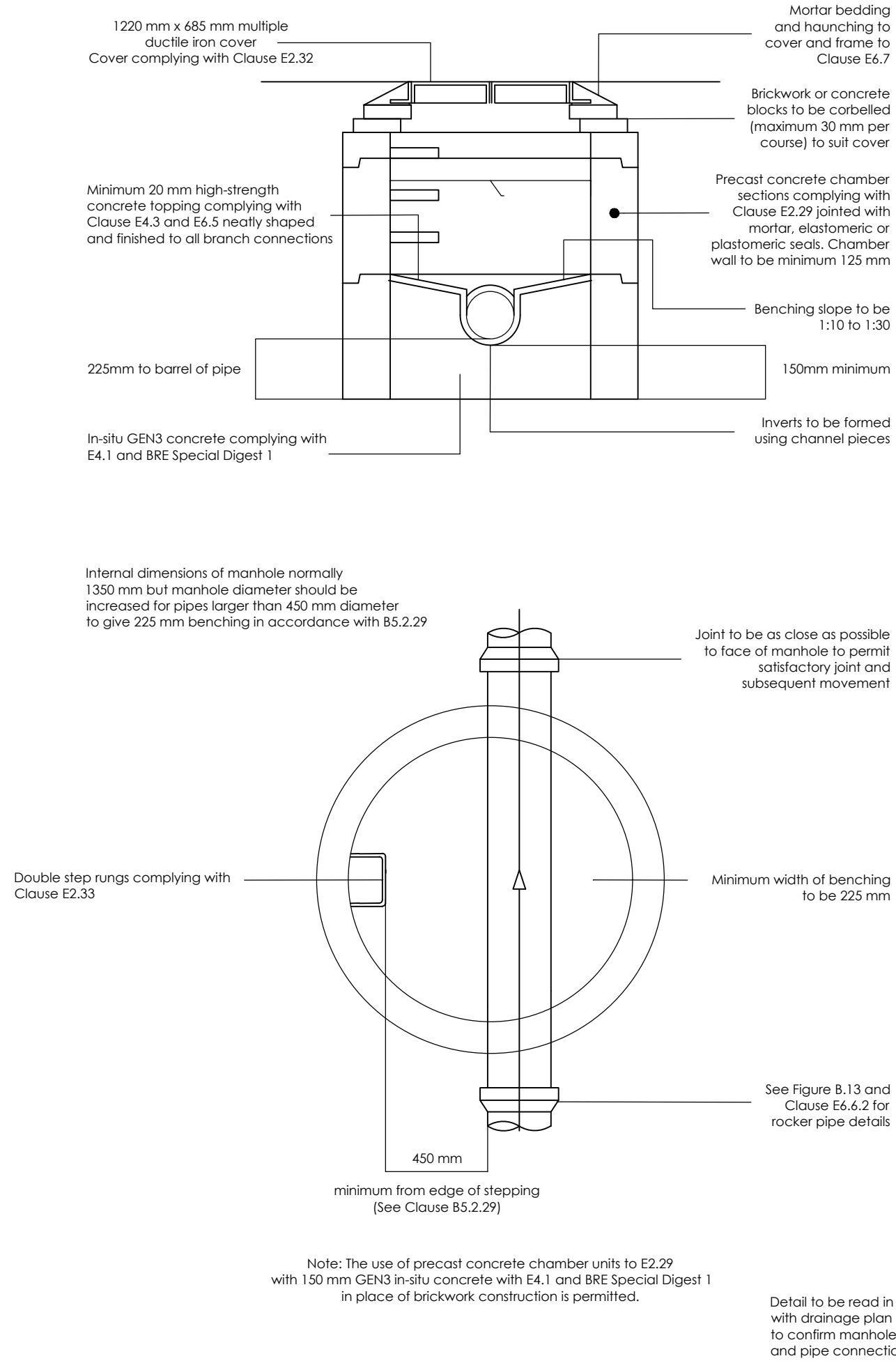


Figure B 37
Typical inspection chamber detail – Type D
Depth from cover level to soffit of pipe up to 3 m
Flexible material construction for use in areas subject to vehicle loading

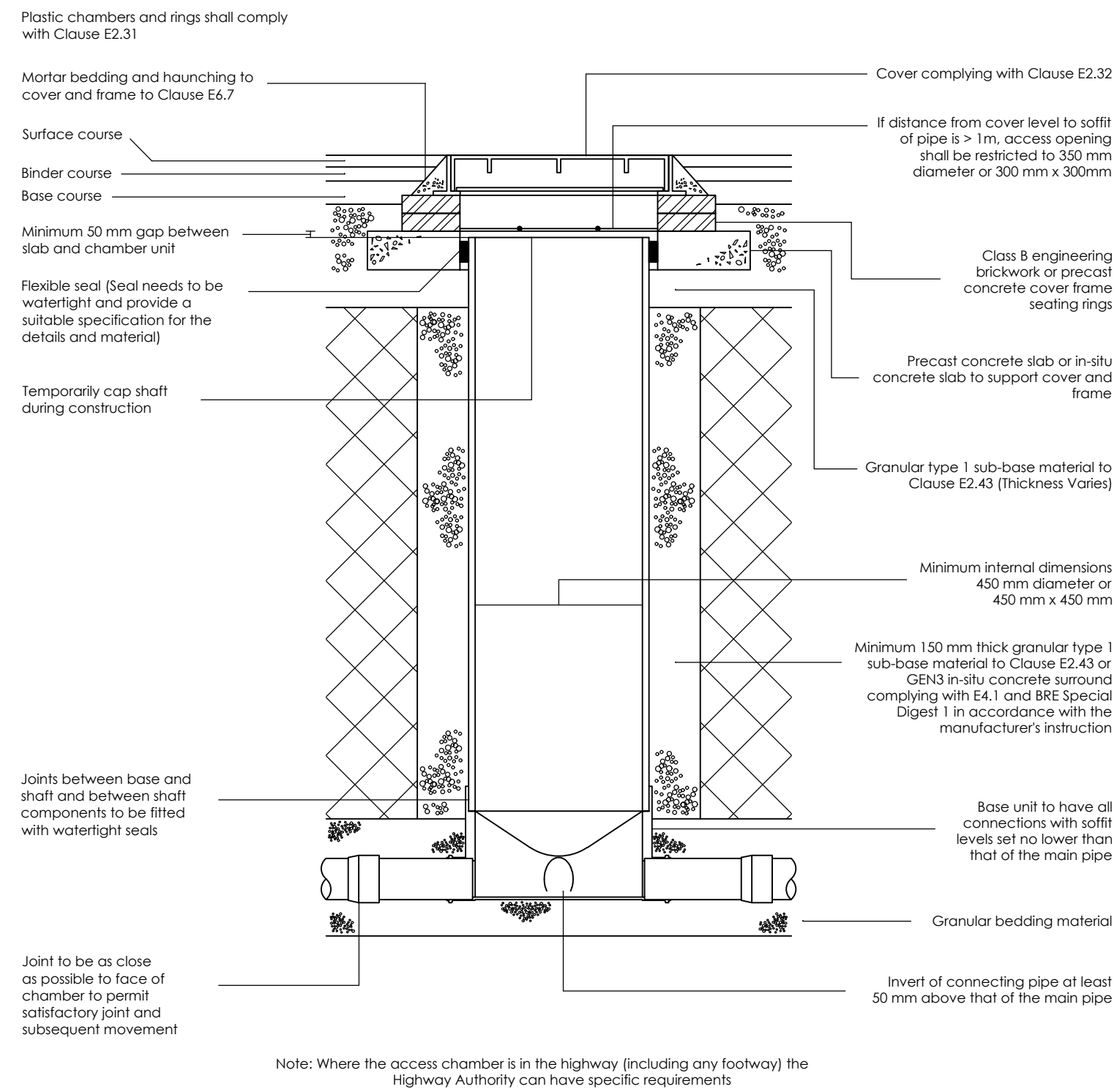


Figure B 22
Typical base layouts for Type D chambers

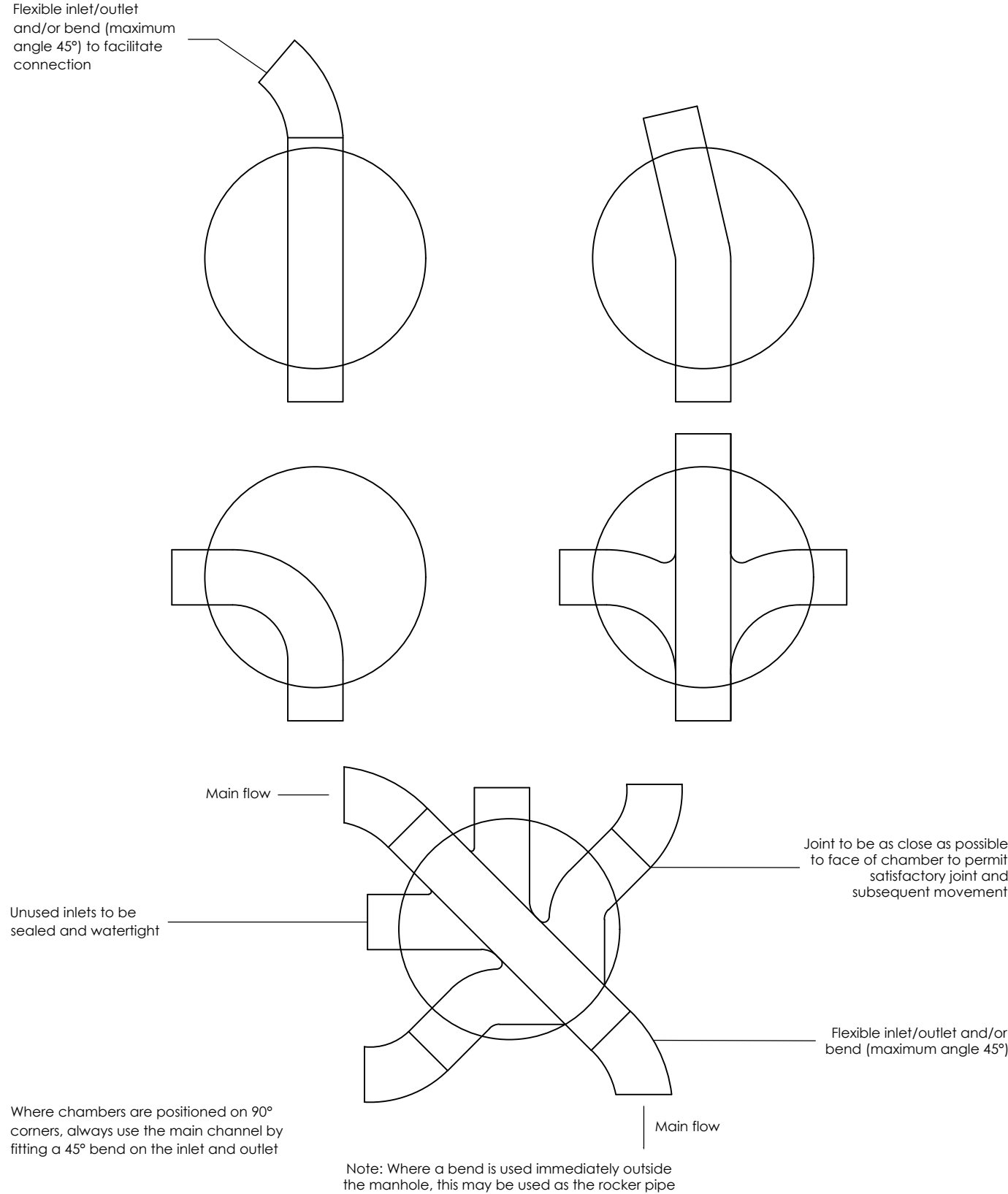


Figure B 9
Typical manhole detail – Type B
Depth from cover level to soffit of pipe 1.5 m to 3 m
Rigid material construction without concrete surround

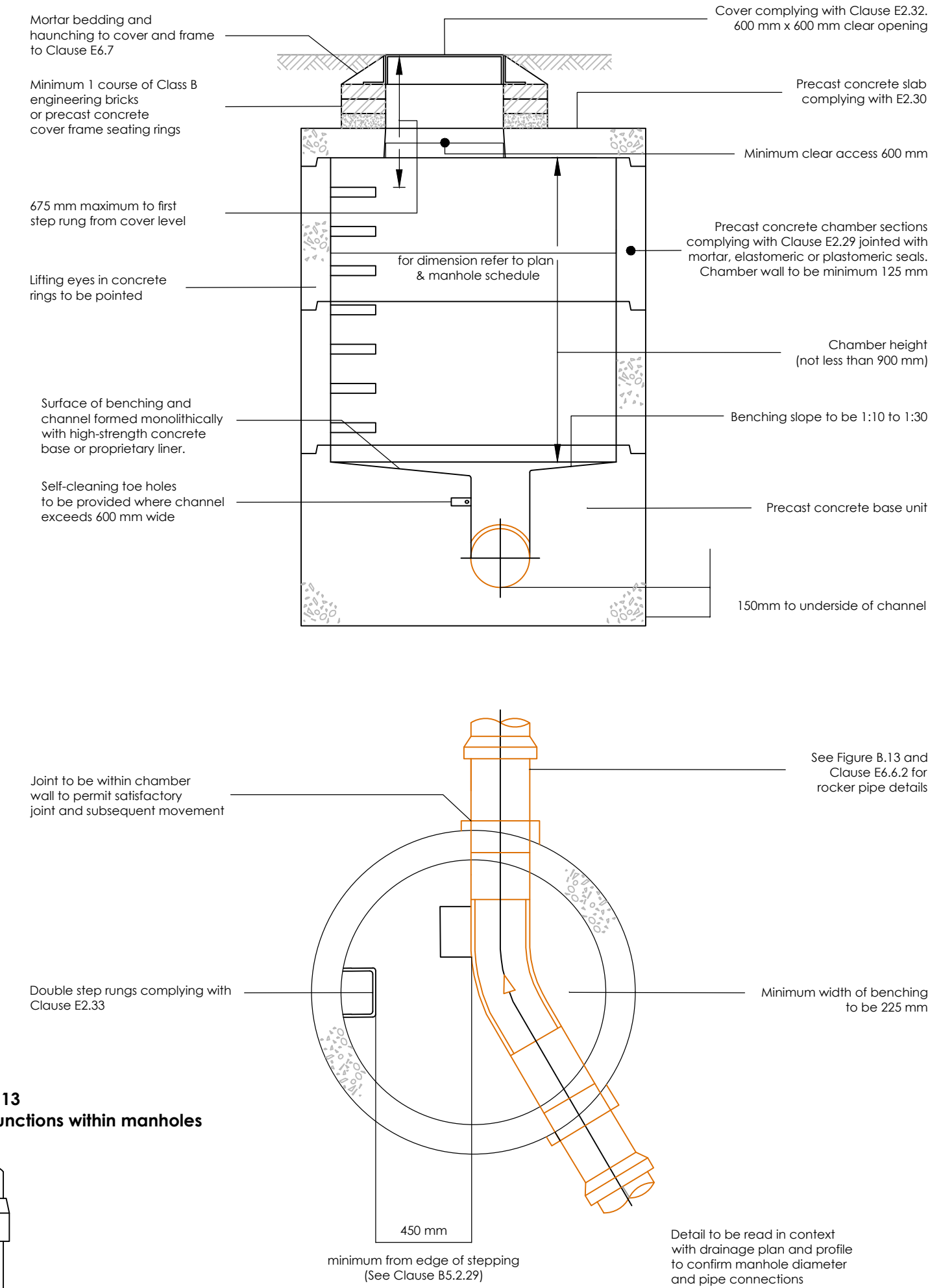
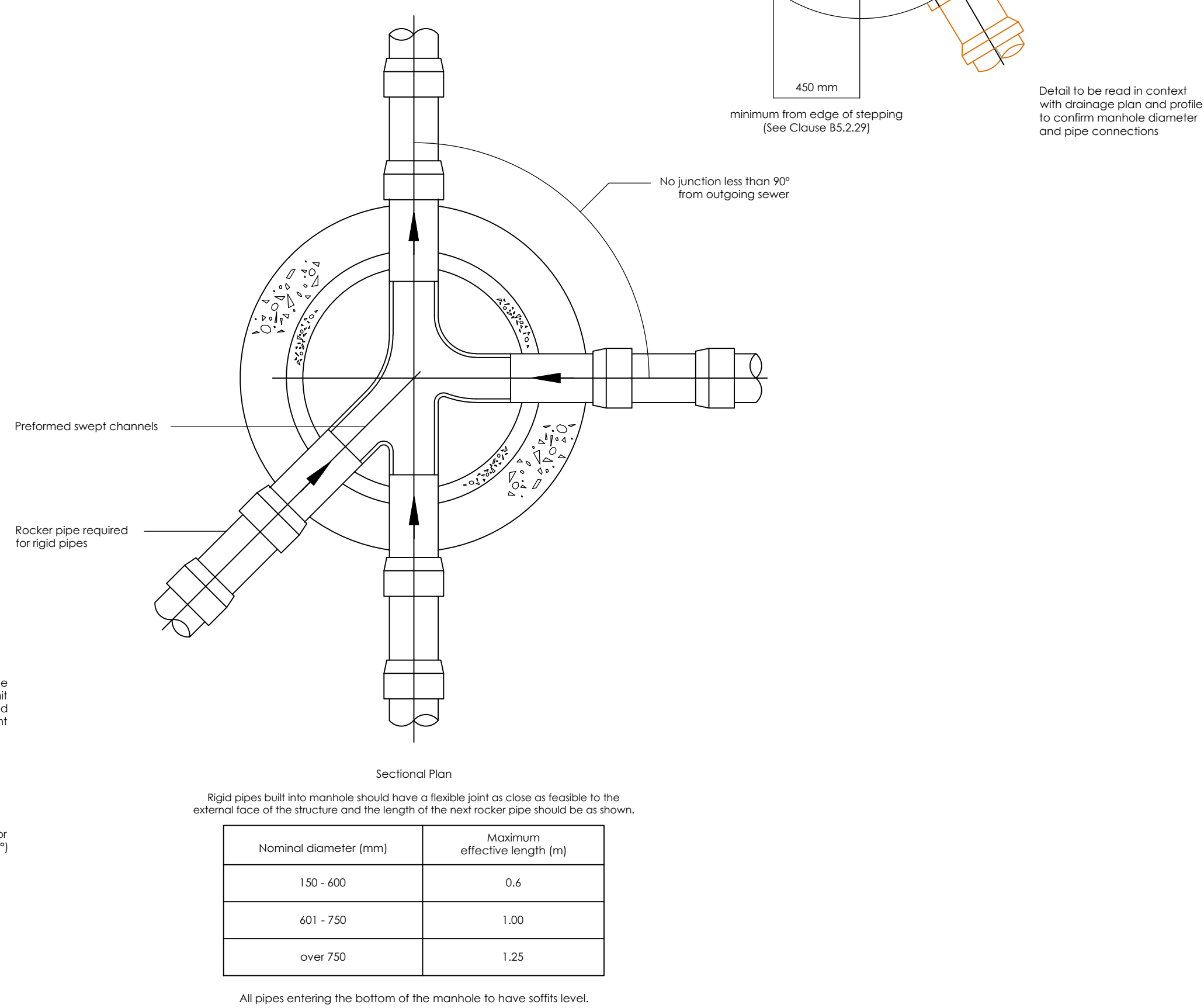


Figure B 13
Typical arrangement of pipe junctions within manholes



S104 ADOPTABLE DRAINAGE

- The planning, design and construction of sewers shall be in accordance with 'Design and Construction Guidance for foul and surface water sewers offered for adoption under the Code for adoption agreements for water and sewerage companies operating wholly or mainly in England (The Code)'. The Sewerage Sector Guidance document is for use by Developers when planning, designing and constructing adoptable foul and surface water drainage systems (including pumping stations and rising main).
- The minimum size of sewer where guide bars, safety chains, or other safety devices are required in Manholes shall be 375mm diameter.
- All manholes / inspection chambers should have a concrete surround. Concrete rings shall be sealed using "Tokstrip" and lifting eyes pointed with resin modified mortar.
- Compliance with Health & Safety matters on any trench/manhole is obligatory and a permit to enter a confined space is required when connecting site drainage to the existing public sewerage system. A permit to enter a confined space will be obtained from Southern Water Ltd prior to the works commencing on any public sewerage system.
- MH covers & frames shall be ductile iron with a minimum square opening of 600 x 600mm. Covers shall be double triangle for 675mm square openings and be provided with loose bolted connections.
- The use of ladders or steps in manholes, wet wells and valve chambers shall comply with the following: Steel plastic encapsulated MH single steps shall not be used in MHs of a greater depth than 1.0m. Steel plastic encapsulated double steps may be provided in MHs up to 3.0m in depth. Ladders shall be provided in accordance with BS 4211 in MHs between 3.0 & 4.0m deep. MHs greater than 4.0m deep shall be specially designed and have intermediate landings. Access holes in intermediate landings shall be provided with galvanised mild steel gratings to prevent persons falling through. The design of deep MHs shall permit the use of a winch or lifting gear mounted at ground level in case of emergencies.
- Only low carbon steel or stainless-steel ladders for vertical fixing to MHs will be acceptable.
- Proposed adoptable sewers are only permitted to have other sewer/gully connections and other services laid at an angle of between 45 and 90 degrees across the line with a vertical clearance in excess of 300mm.
- All ironwork to be kite marked by BSI or certified by equal inspection authority.
- Red coloured plastic marker tape at least 150mm wide shall be laid at a minimum of 200mm above the soffit of the pipe. The tape shall be printed with the words 'gravity sewer' in bold capital letters throughout its length and at intervals not exceeding 700mm and shall incorporate a corrosion resistant tracing system for non-metallic pipes.
- Minimum backdrop height shall be 1m between incoming sewer invert and outgoing sewer crown/top of benching. Maximum backdrop to be 1.5m. Backdrop heights to be checked by the Contractor and any discrepancies should be reported back to the Engineer prior to construction.
- Construction of Sewers to be carried out to the satisfaction of the Water Authority Inspector.
- Outside edge of all sewers shall be at least 1m from the kerb line and the outside edge of all manholes shall be at least 0.5m from the kerb line.
- All levels based on ordnance survey national grid datum.
- Pipe bedding for sewers is to be as indicated on the standard details drawing.
- Manhole types to be as indicated on the standard details and manhole schedules.
- Where a sewer connection is required to an existing Water Authority asset a Section 106 sewer connection application is to be obtained by the Contractor.

STANDARD DRAINAGE/SEWER NOTES:

- All drainage works are to commence at outfall.
- Location and level of existing manholes and outfalls to be verified onsite prior to construction.
- Any sewers which are to be abandoned are to be checked for any live connections.
- The position of the manholes from the coordinates given in the manhole schedules should be checked against the manhole position shown on the drainage layout plan. Any discrepancies should be reported back to the Engineer prior to construction.
- Private sewer and gully connections are not indicated on the adoptable manhole schedules.
- Cover to pipes should be in accordance with that shown on the standard details. Should any pipes not have sufficient cover then it should be reported back to the Engineer prior to construction.
- All pipe crossings should be checked by the Contractor prior to construction.
- The position and levels of any gullies and ditched channels should be checked against the proposed ground levels and external works to ensure all low points are sufficiently drained and that they can connect into the drainage run intended. Any areas of concern or un-drained low points, base of ramps, intersections or changes in camber should be reported back to the Engineer prior to construction.
- Should the drawings or specification contain any conflicting information then this should be reported back to the Engineer prior to construction.
- If the Contractor deviates from the approved design, any changes should be agreed with the client/Engineer and relevant approving body prior to construction.
- The contractor should implement and maintain the approved construction stage drainage proposals to ensure silt laden surface water run-off does not discharge from site throughout the construction process. If any additional measures are required to manage surface water run-off once construction activities commence these should be agreed with the Engineer and relevant approving body.
- No claims by the contractor will be entertained for any of the issues set out in the above notes.

Notes:

- This drawing is to be read in connection with site drainage plan 1305-03-DR-1001
- All adoptable drainage shall be in accordance with Sewer Sector Guidance appendix C: The Design and Construction Guidance and statutory undertakers requirement.

						PROJECT: Windmill Street, Gravesend			DESIGN BY:		
A	27.07.2024	INITIAL ISSUE	JB	CPY	CPY	TITLE: ADOPTABLE DRAINAGE STANDARD DETAILS					
REV	DATE	DESCRIPTION	BY	CHK	APD						
CLIENT: CHURCHILL LIVING						PROJECT No: 1305		DRAWING No: 03-CD-2003		REV: A	
DRAWING STATUS: DISCHARGE OF PLANNING CONDITIONS						SCALE @ A1: NOT TO SCALE					
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