

**Notes:**  
 1. This drawing is to be read in conjunction with all relevant architect's and engineer's drawings.  
 2. It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.

All private drainage works are to comply fully with Part H of the Building Regulations.

All existing invert levels to be checked by the contractor at the start of works and any other discrepancies notified to the Engineer prior to commencing works. All levels are based on topographical survey information provided by others.

All materials to bear the relevant B.S. Kitemark and comply fully with the specifications. All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur to withstand a class 3 condition).

All opening notices etc. as required under Highways Acts etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A., NHBC or United Utilities as applicable.

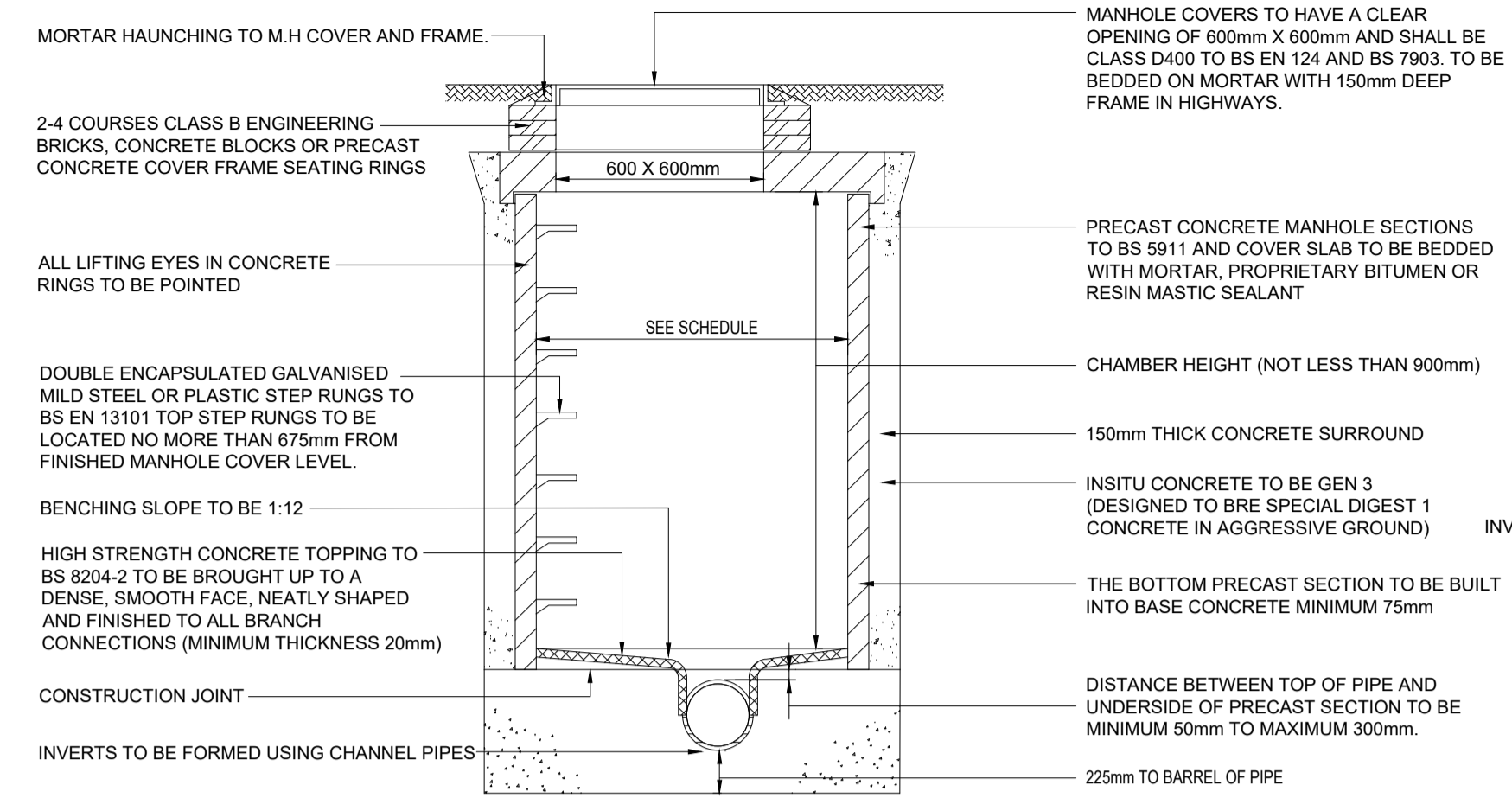
Where "Ultra Rib" UPVC pipes (or similar approved) are used in adoptable drainage they shall still be handled and laid in accordance with the specification and guidance issued by the High Performance Pipe Association.

Trench backfill in highways to within 1m of highway shall, as directed by the Highway Authority be a suitable granular material in accordance with Sewers for Adoption.

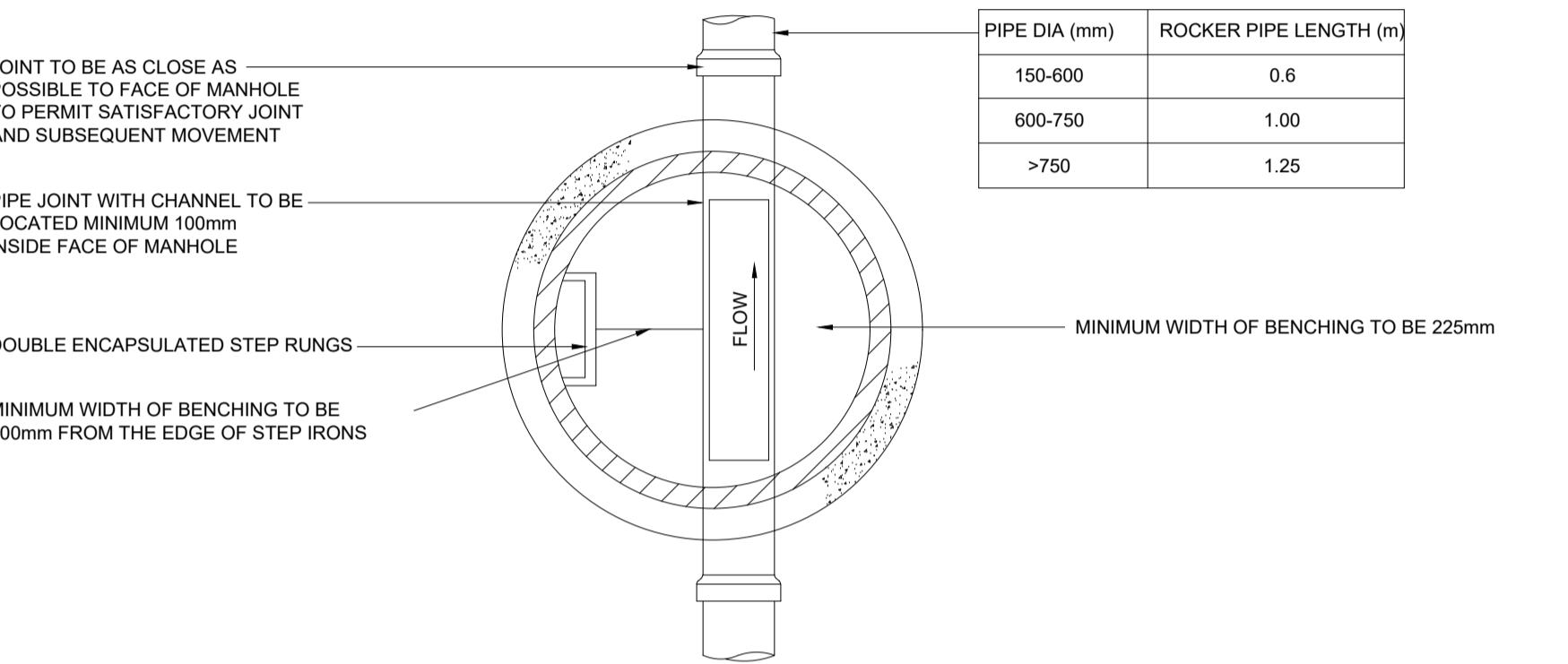
Cover loadings shall be as detailed on the Manhole Schedule.

Drain trenches should not be excavated lower than the foundations of any building nearby unless either:

- a) The trench is within 1m of the foundation, the trench is filled with concrete up to the lowest level of the foundation, or
- b) Where the trench is further than 1m from the building, the trench is filled with concrete to a level below the lowest level for the building equal to the distance from the build, less 150mm.

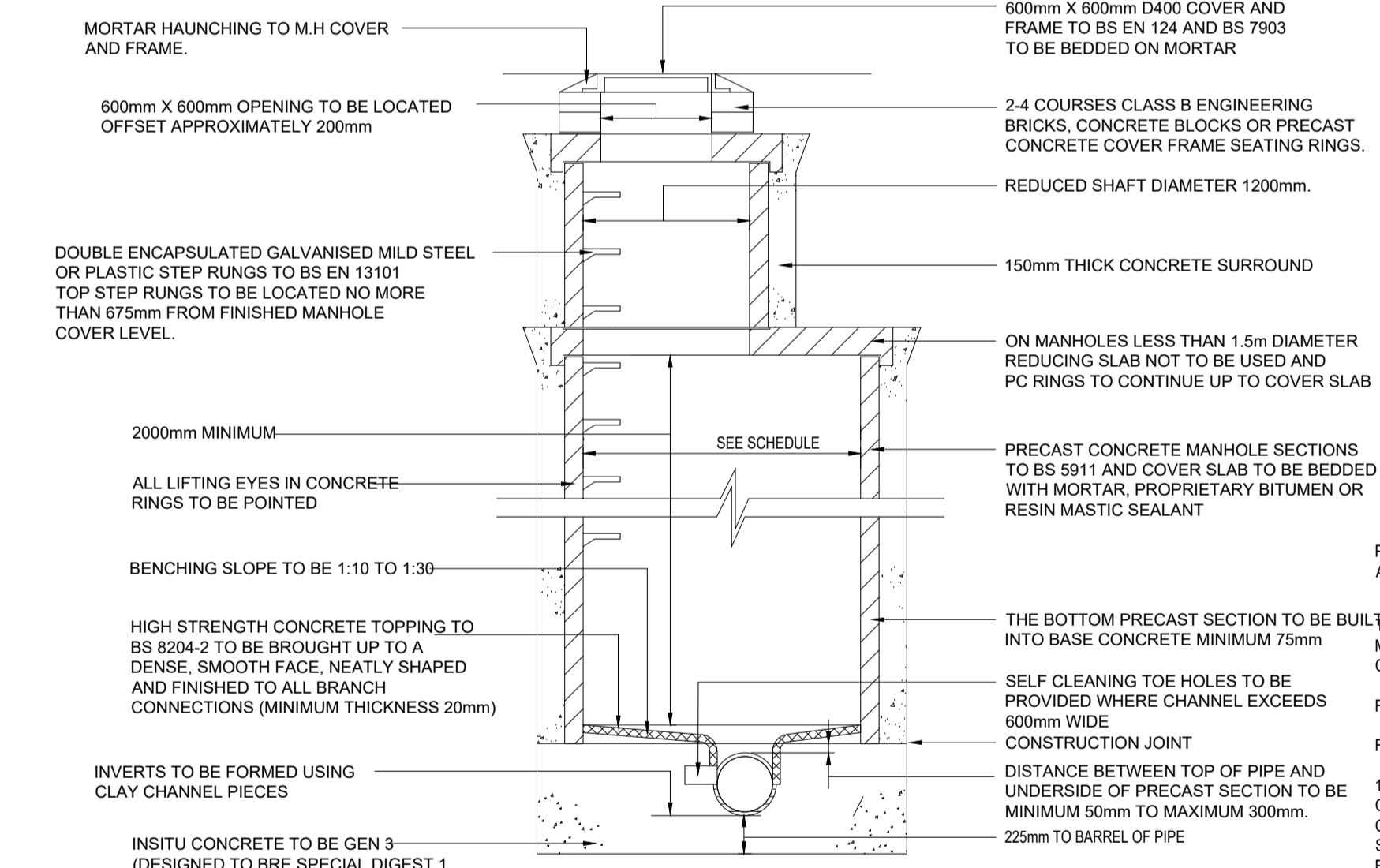


SECTION

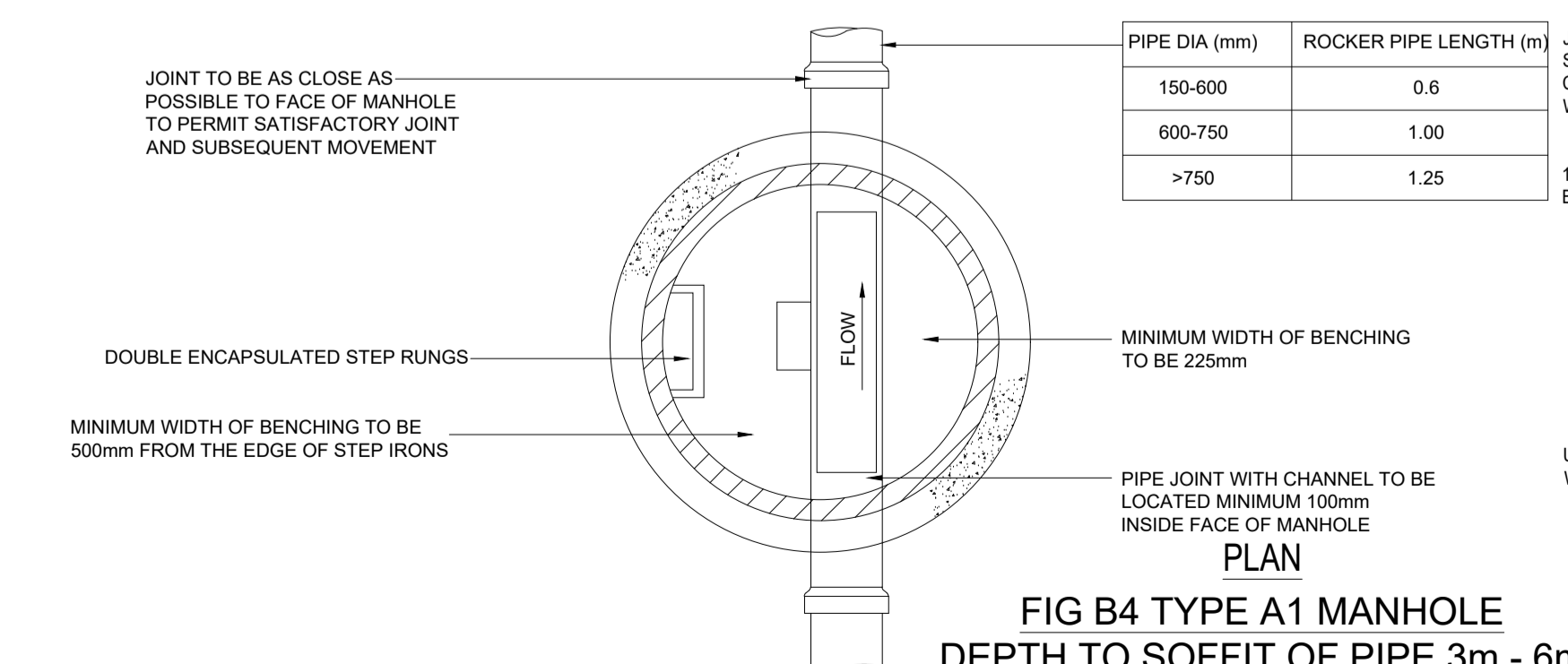


PLAN

FIG B9 TYPE B MANHOLE  
 DEPTH TO SOFFIT OF PIPE 1.5m - 3m  
 SCALE 1:20

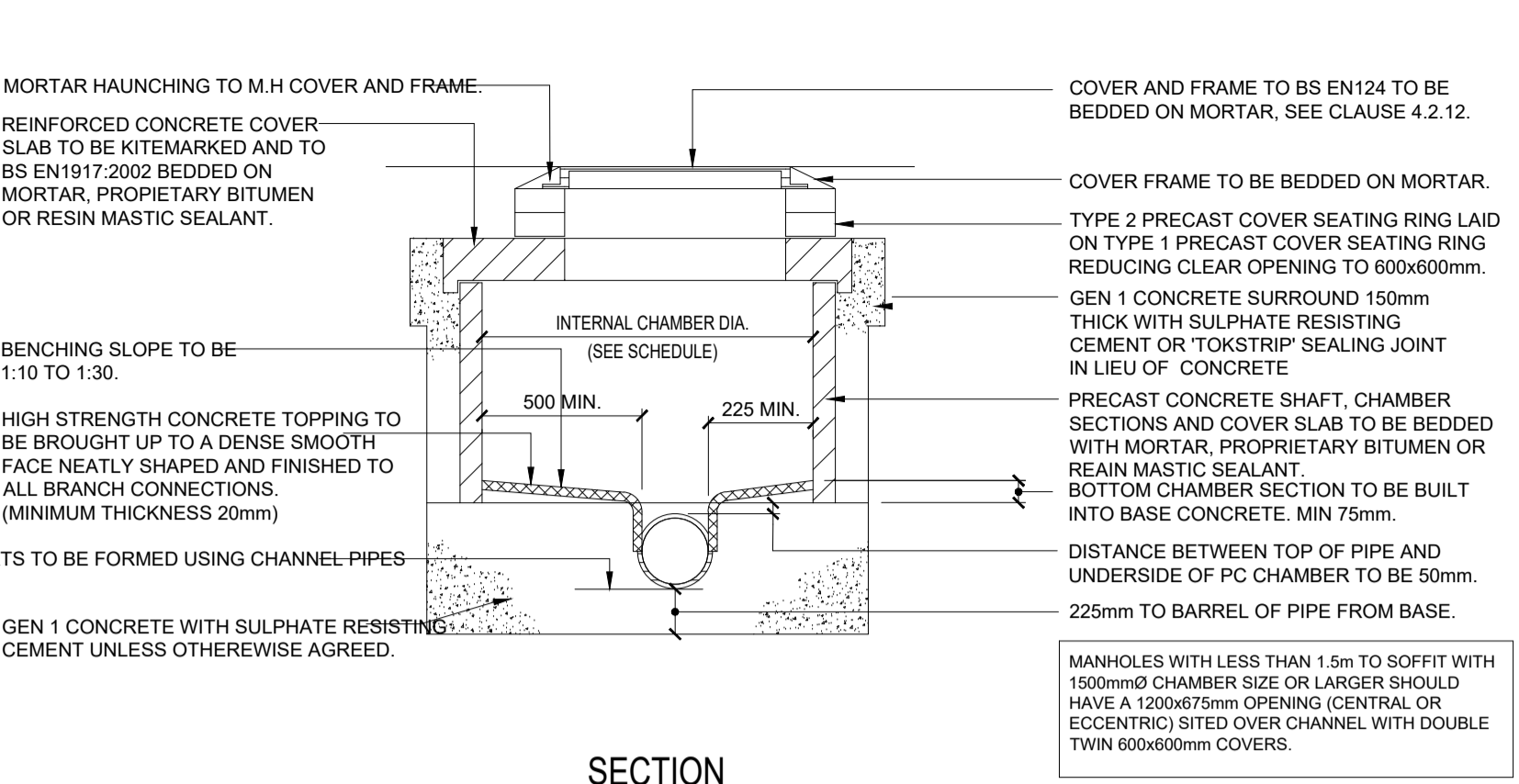


SECTION

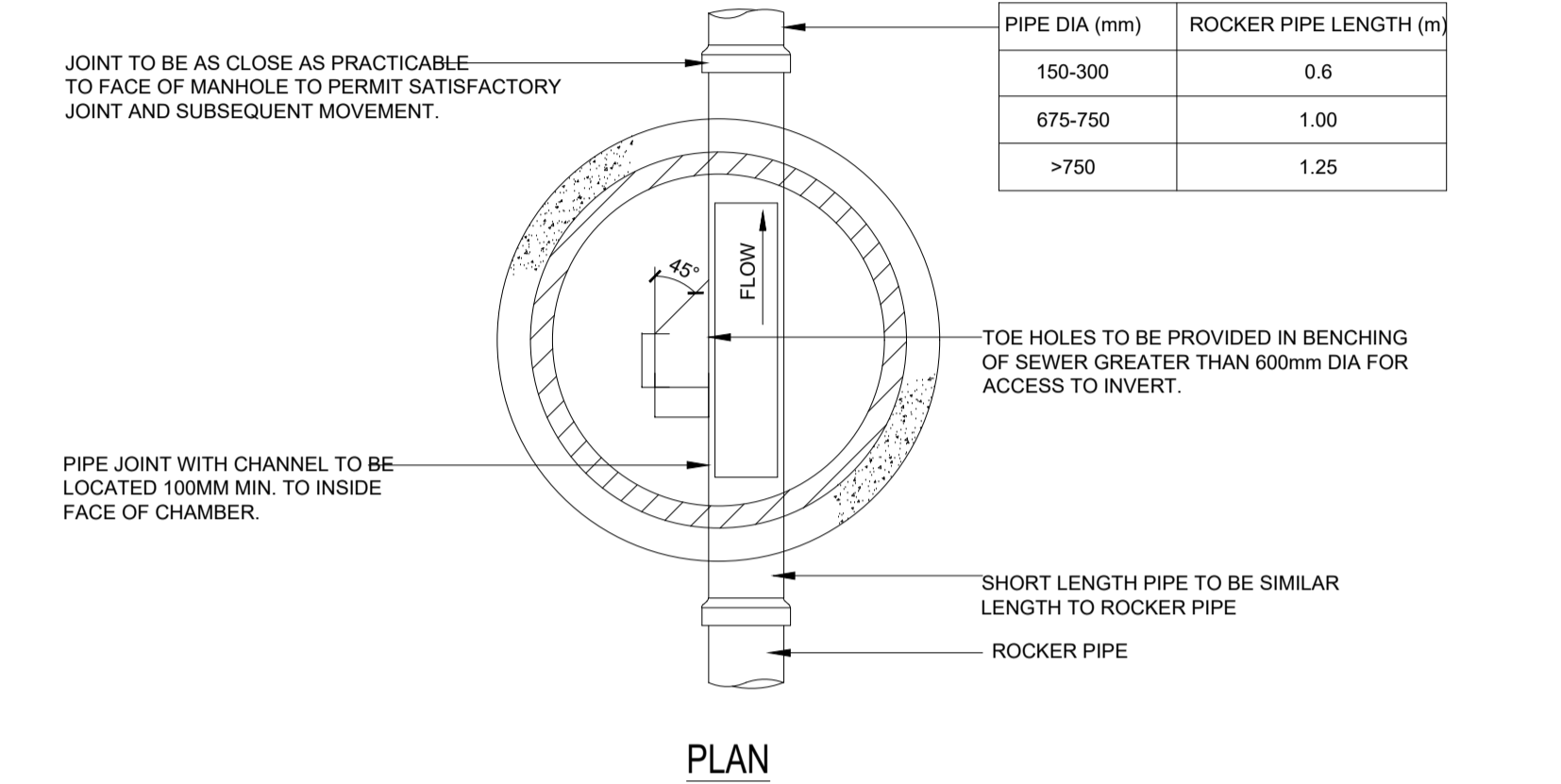


PLAN

FIG B4 TYPE A1 MANHOLE  
 DEPTH TO SOFFIT OF PIPE 3m - 6m  
 SCALE 1:20

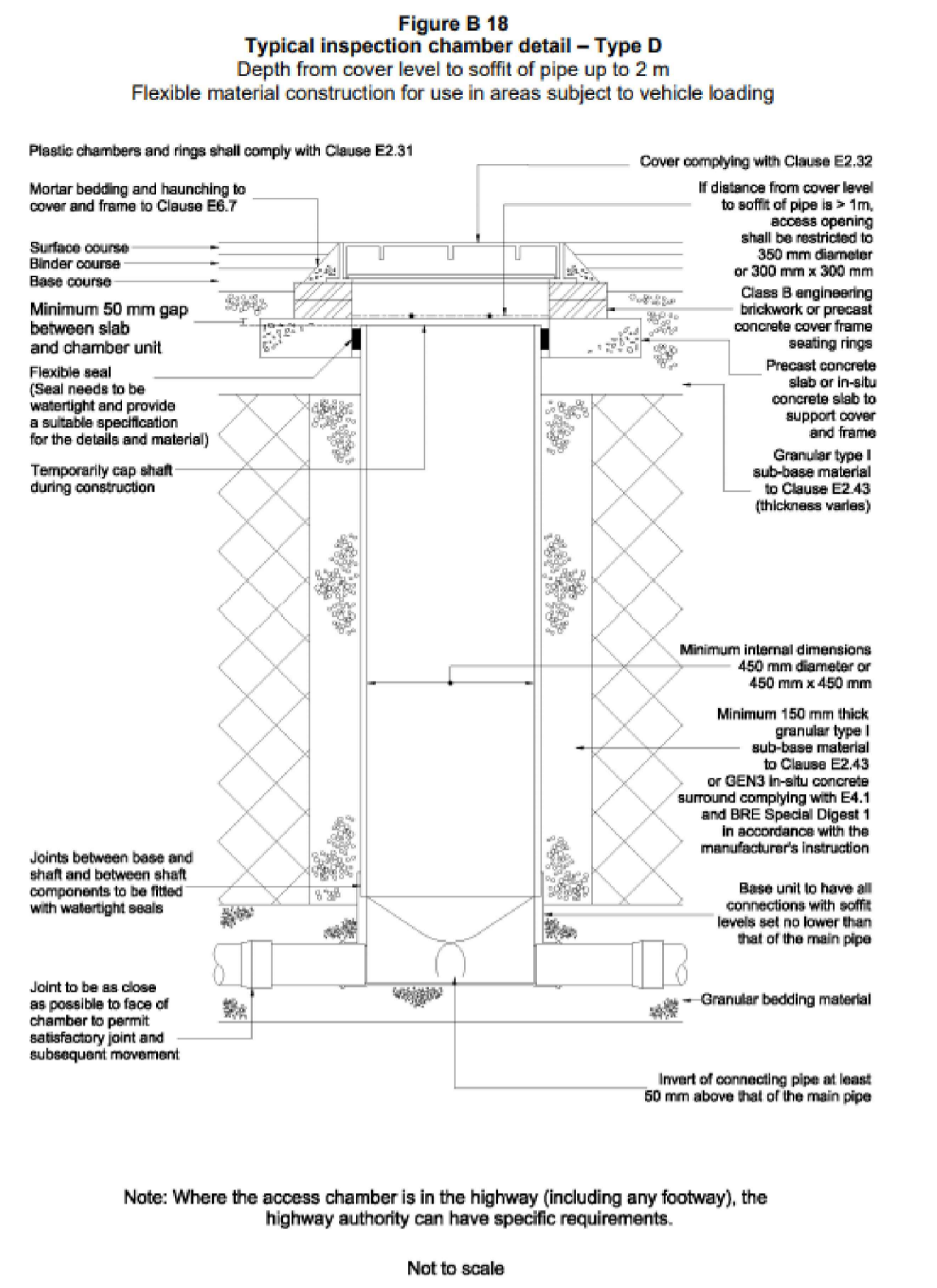


SECTION

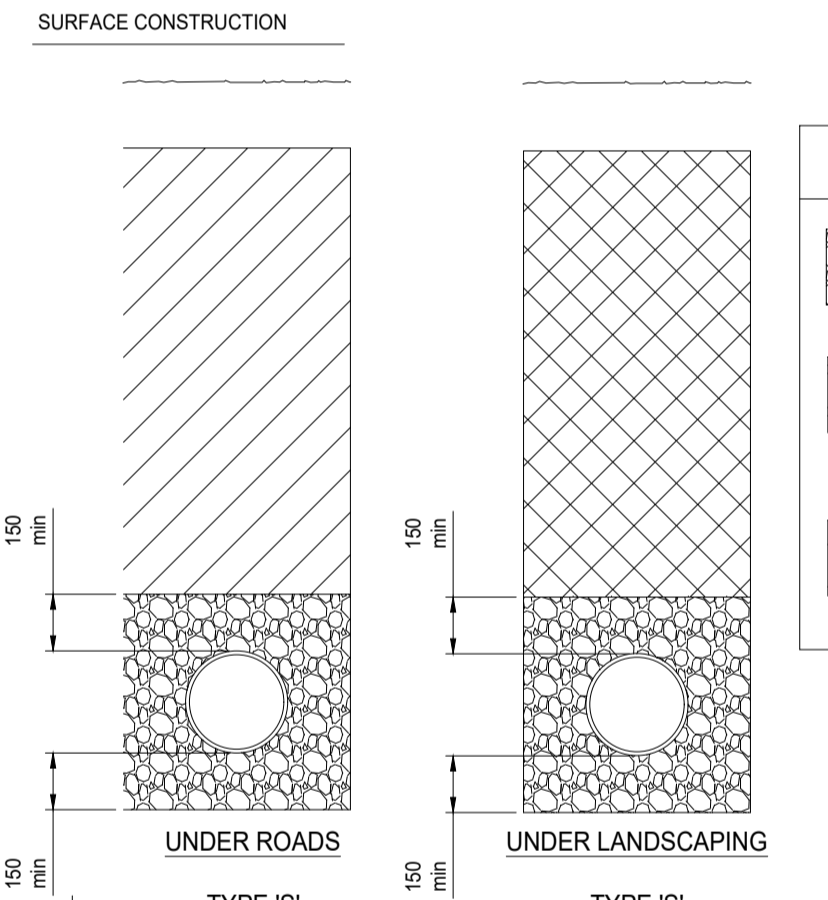


PLAN

TYPE B1 SHALLOW MANHOLE  
 DEPTH OF COVER TO PIPE 1-1.5m  
 OPENING TO BE SITED OVER CHANNEL



Not to scale

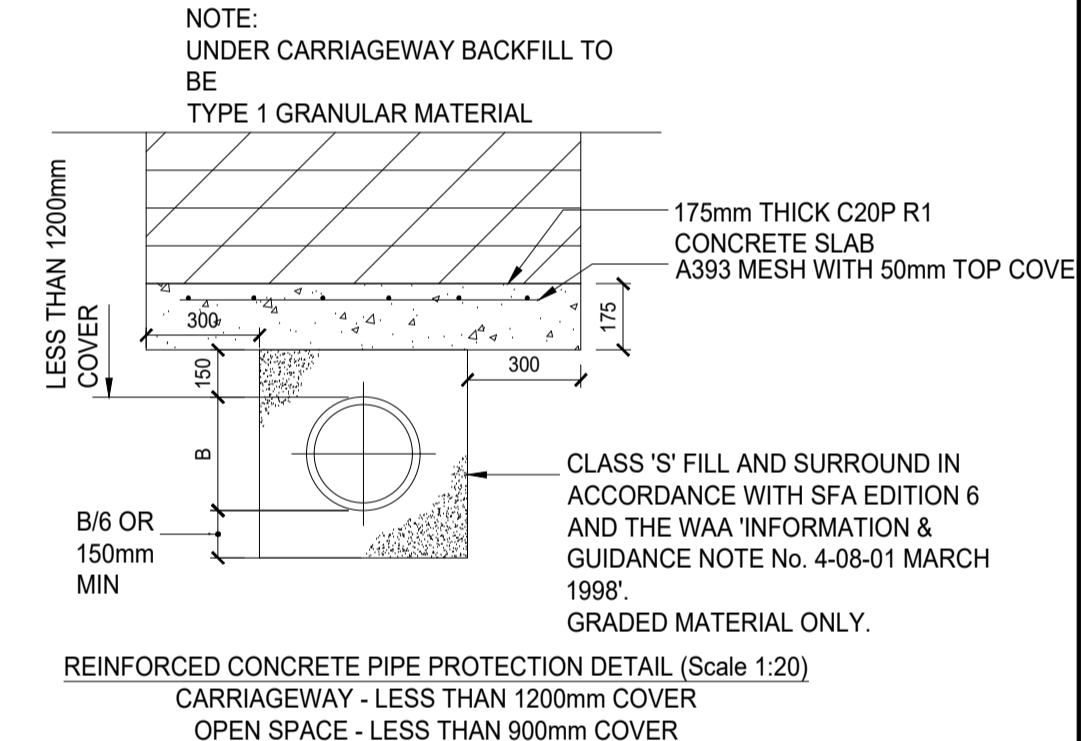


DRAINS WITH GRANULAR (TYPE S) BED AND SURROUND (SCALE 1:20)

DRAIN SURROUND DETAILS

PIPE DIAMETER	AGGREGATE	
	NOMINAL SINGLE-SIZED	GRADED
UP TO 100mm	10mm	
OVER 100mm TO 150mm	10mm 14mm	14mm TO 5mm
OVER 150mm TO 300mm	10mm 14mm 20mm	14mm TO 5mm 20mm TO 5mm
OVER 300mm TO 550mm	14mm 20mm	14mm TO 5mm 20mm TO 5mm
OVER 550mm	14mm 20mm 40mm	14mm TO 5mm 20mm TO 5mm 40mm TO 5mm

OUTSIDE DIAMETER	WIDTH OF TRENCH			
	TRENCH DEPTH			
	0m - 0.9m	1.0m - 1.74m	1.75m - 3.99m	4.0m+
100mm	500mm	800mm	900mm	1000mm
150mm	550mm	800mm	900mm	1000mm
225mm	625mm	800mm	900mm	1000mm
300mm	800mm	900mm	1000mm	1000mm
375mm		1075mm		
450mm		1150mm		
525mm		1225mm		
600mm		1300mm		
675mm		1375mm		
750mm		1600mm		
825mm		1675mm		
900mm		1750mm		
975mm		1825mm		
1050mm		1900mm		
1200mm		2050mm		
OVER 1200mm	PIPE DIAMETER + 1000mm			



P1	FIRST ISSUE	17.09.21	TA
No.	Revision	Date	Drwn
Status	PRELIMINARY		
Client	Mr R Nicholson		
Project	Eastoft Road, Crowle		
Drawing title	S104 Drainage Details		
Drawn	TA	Chkd	AD
Date	Sept 2021	Scale	1:250
Contract No.	21402	Drng No.	DR-C-0102
Revision			P1

