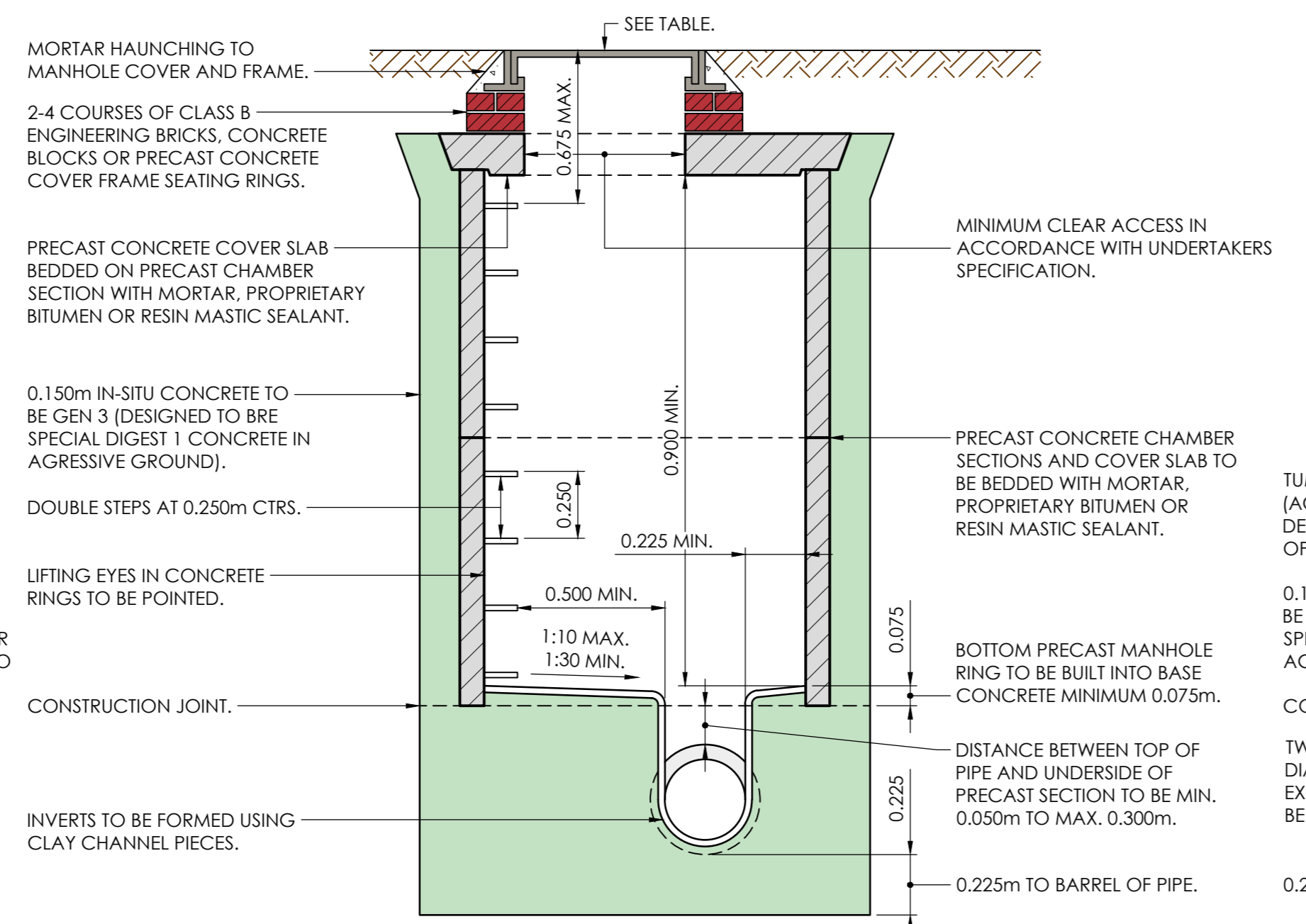
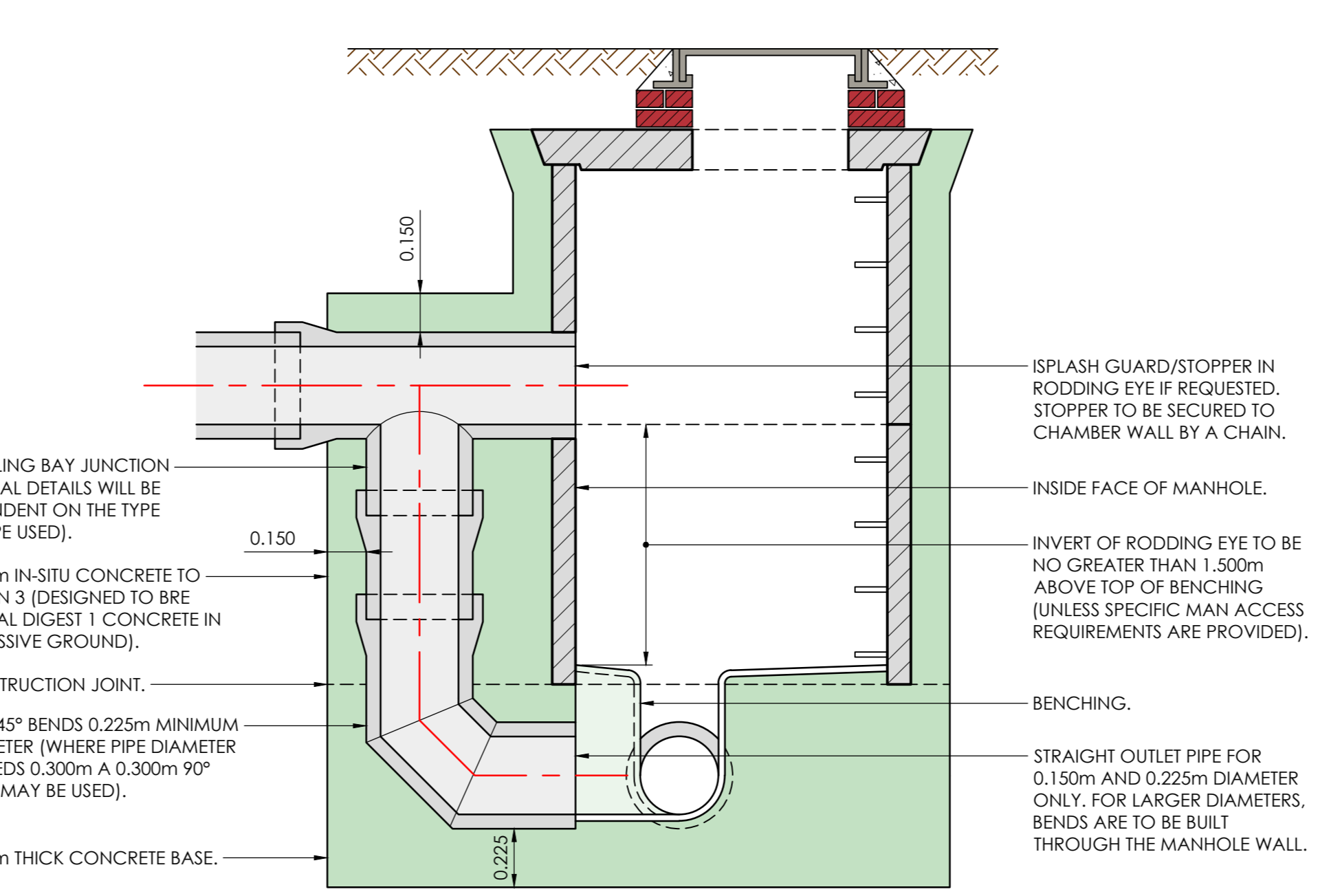


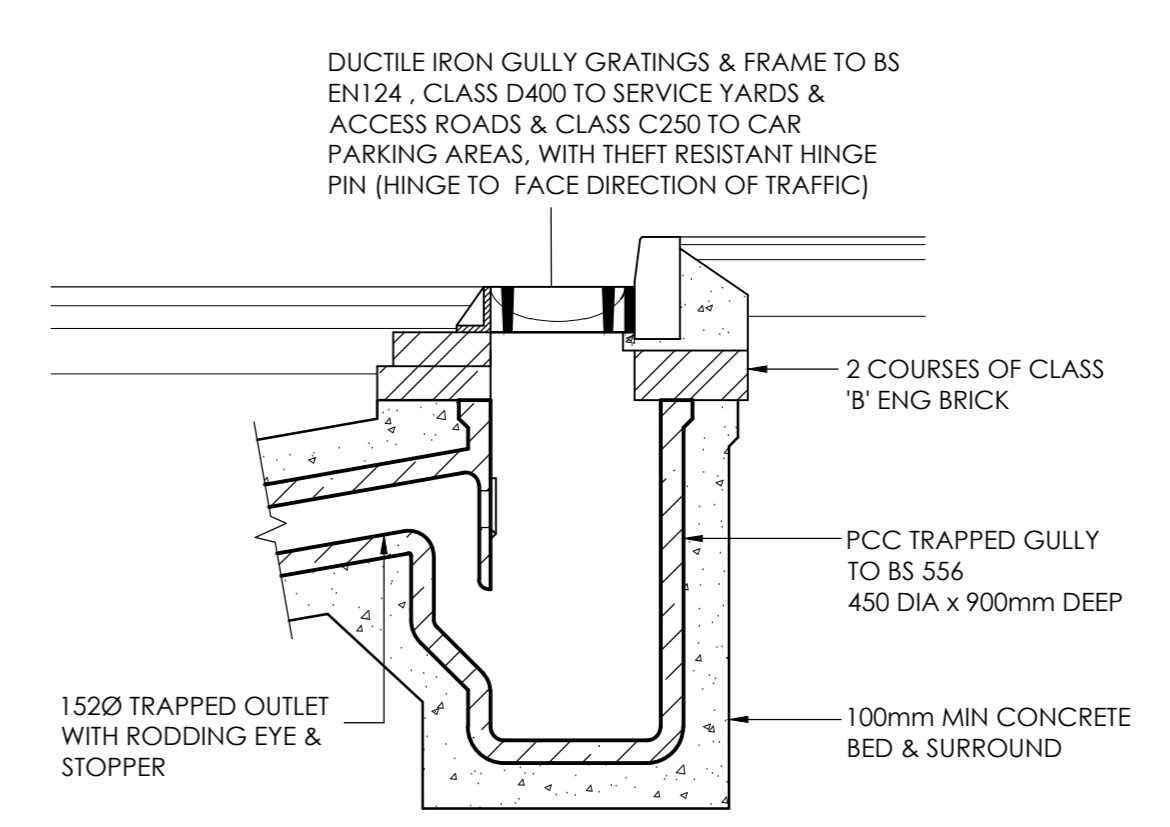
**TYPICAL MANHOLE DETAIL - TYPE A**  
 (MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3.000m - 6.000m)  
 SCALE 1:20



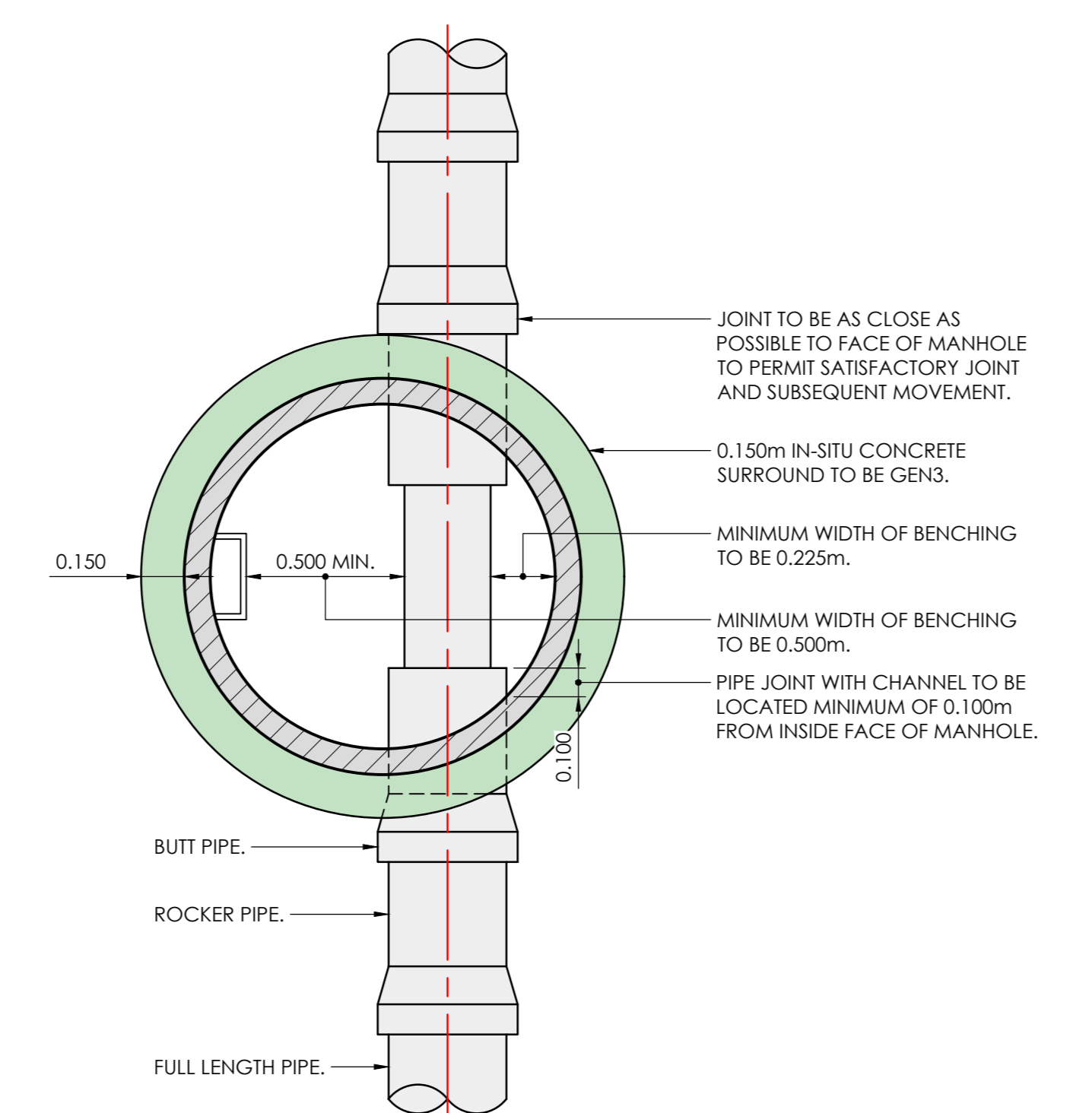
**TYPICAL MANHOLE DETAIL - TYPE B**  
 (MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 1.500m - 3.000m)  
 SCALE 1:20



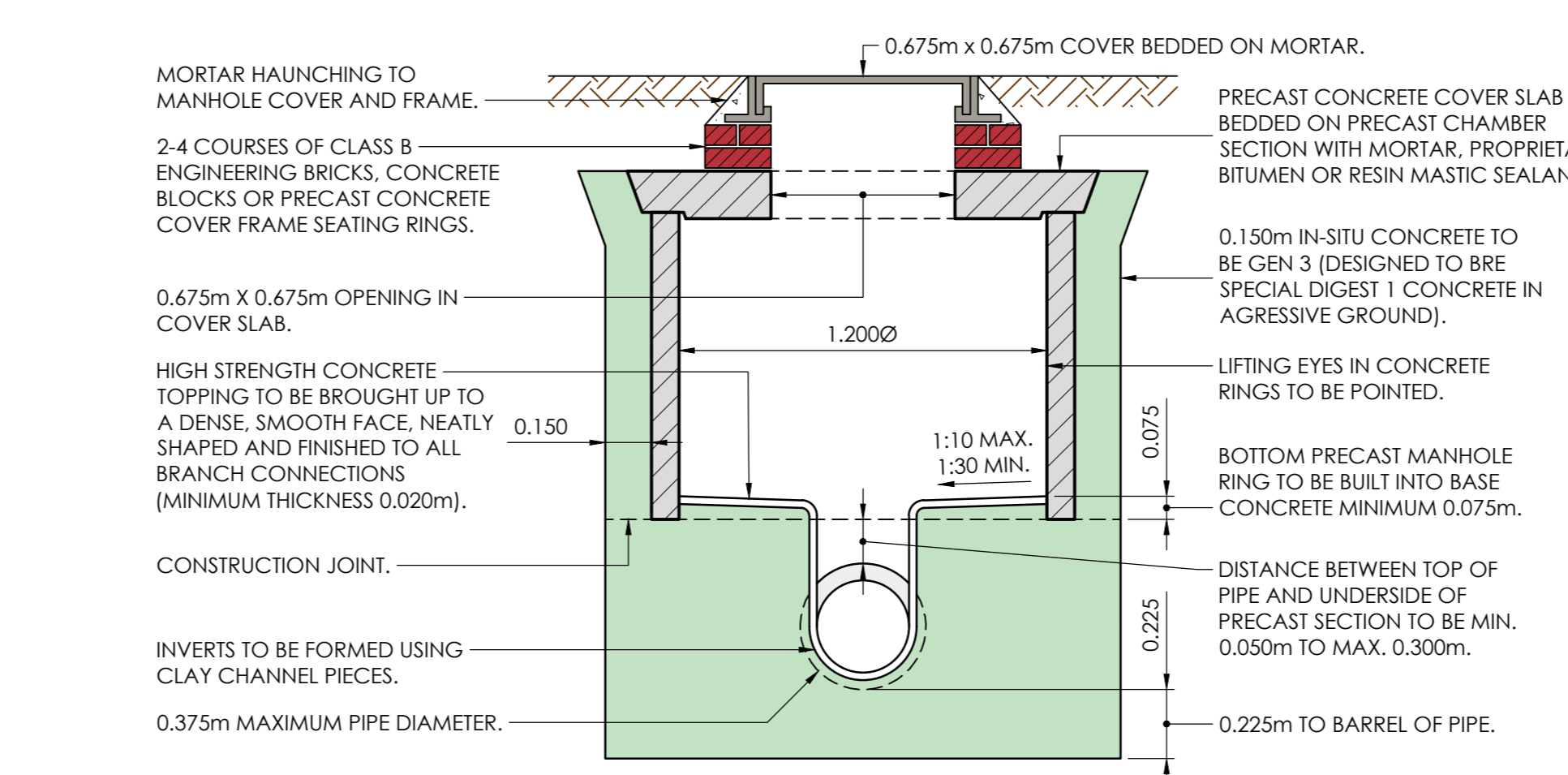
**TYPICAL MANHOLE DETAIL - BACKDROP**  
 SCALE 1:20



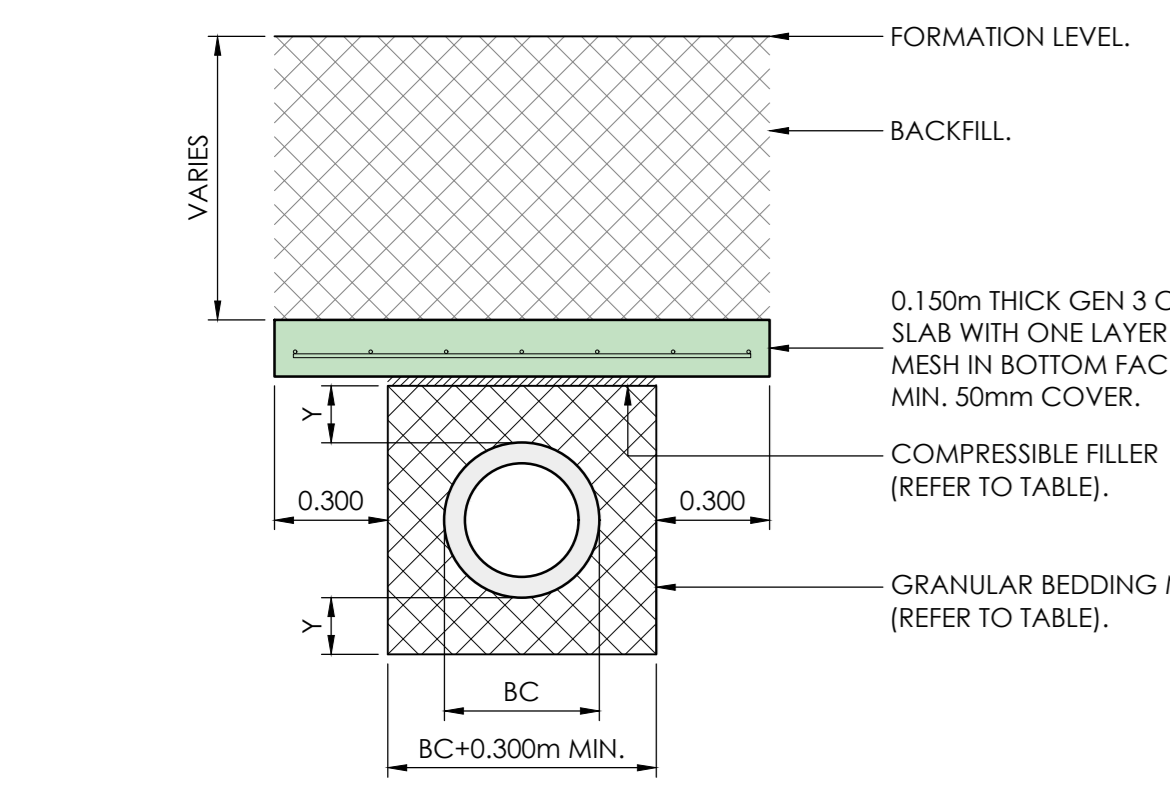
**TYPICAL ROAD GULLY DETAIL**



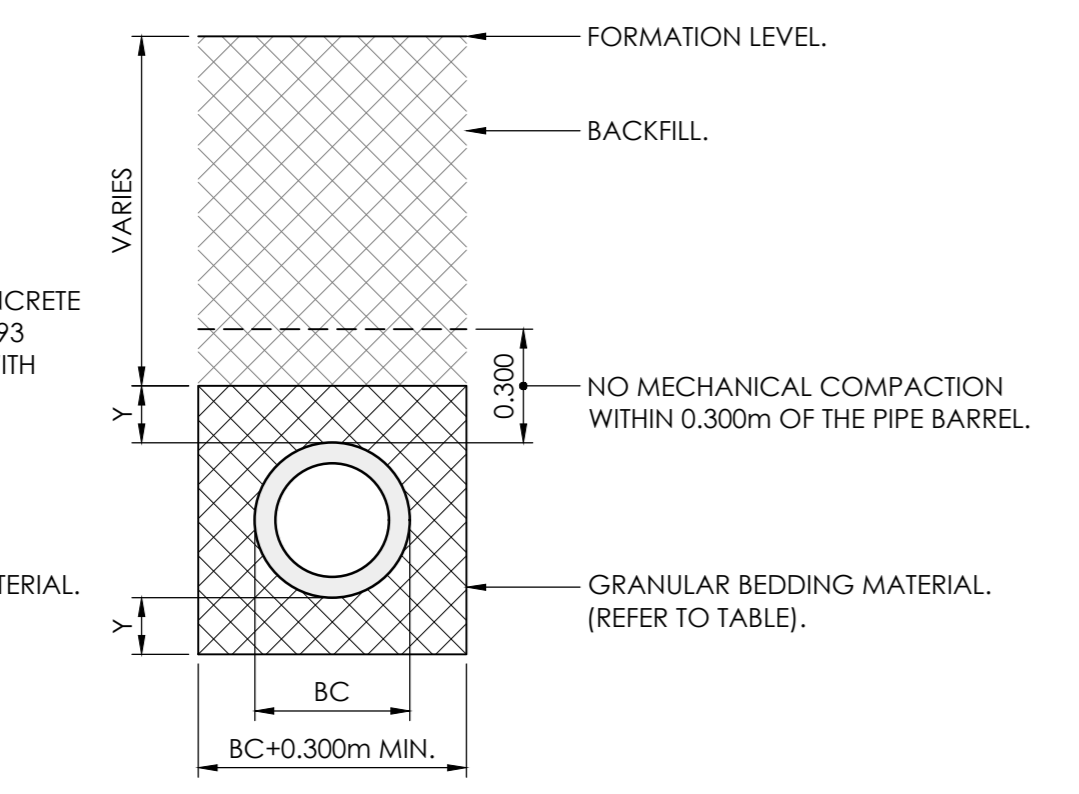
**TYPICAL MANHOLE DETAIL - PLAN VIEW**  
 SCALE 1:20



**TYPICAL MANHOLE DETAIL - TYPE E**  
 (MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 1.000m - 1.500m)  
 SCALE 1:20



**TYPICAL PROTECTION DETAIL FOR PIPES LAID AT SHALLOW DEPTHS**  
 SCALE 1:20



**CLASS S BEDDING DETAIL**  
 SCALE 1:20

**COMPRESSIBLE FILLER TABLE**  
 (BITUMEN IMPREGNATED INSULATING BOARD TO BS 1142: PART 3)

NOMINAL DIAMETER	THICKNESS OF COMPRESSIBLE FILLER
LESS THAN 0.450m	18mm
0.450m-1.200m	36mm
GREATER THAN 1.200m	54mm

**GRANULAR BEDDING MATERIAL**  
 (ALL AGGREGATES TO TABLE 4 OF BS 882:1983)

NOMINAL DIAMETER	SINGLE SIZED	GRADE
0.150m	10mm OR 14mm	14mm-5mm
0.200m-0.300m	10mm, 14mm OR 20mm	14mm-5mm OR 20mm-5mm
0.375m-0.525m	14mm OR 20mm	14mm-5mm OR 20mm-5mm
GREATER THAN 0.525m	14mm, 20mm OR 40mm	14mm-5mm, 20mm-5mm OR 40mm-5mm

**PIPE TRENCH BEDDING NOTES**  
 BC = OUTSIDE DIAMETER OF PIPE BARREL.  
 Y = FOR UNIFORM SOILS: SLEEVE JOINTED PIPES, MIN. 50mm OR 1/6BC, WHICHEVER IS THE GREATER. SOCKETED PIPE, MIN. 100mm OR 1/6BC, WHICHEVER IS THE GREATER UNDER BARRELS AND NOT LESS THAN 50mm UNDER SOCKETS.  
 ROCK OR MIXED SOILS CONTAINING ROCK BANDS, BOULDERS, STONES OR OTHER IRREGULAR HARD SPOTS: SLEEVE JOINTED PIPES, MIN. 150mm OR 1/4BC, WHICHEVER IS THE GREATER. SOCKETED PIPE, MIN. 200mm OR 1/4BC, WHICHEVER IS THE GREATER UNDER BARRELS AND NOT LESS THAN 150mm UNDER SOCKETS.

**MANHOLE COVER TYPES**

LOCATION	COVER TYPE
ACCESS ROAD / SERVICE YARD	D400
CAR PARK AREAS	C250
LANDSCAPED AREAS	B125

**ROCKER PIPE LENGTHS**

NOMINAL DIAMETER	EFFECTIVE LENGTH
0.150m-0.600m	0.600m
0.600m-0.750m	1.000m
OVER 0.750m	1.250m

**MANHOLE DIAMETERS**

DIAMETER OF LARGEST PIPE IN MANHOLE	INTERNAL DIAMETER OF MANHOLE
LESS THAN 0.375m	1.200m
0.375m-0.700m	1.500m
0.750m-0.900m	1.800m
GREATER THAN 0.900m	CONSULT UNDERTAKER

**CONCRETE MIX**

STANDARD MIX	STRENGTH OF CONCRETE	APPLICATIONS
GEN1	C10	FILLINGS, BINDINGS, SOFT SPOTS AND DRAINAGE SUMPS
GEN3	C20	ALL OTHER APPLICATIONS

**MINIMUM CLEAR ACCESS OPENING SIZES AND REQUIREMENTS FOR FITTINGS**

	STANDARD ACCESS (SEWER DIAMETERS)		MANHOLE FITTING REQUIREMENTS ALL MANHOLE TYPES			NON-MAN ENTRY CHAMBERS ACCEPTED?		
	150-874	875-1074	1075 OR GREATER	DOUBLE ENCAPSULATED STEP RUNGS	SAFETY CHAINS (MATERIALS)		LADDERS (0.230m CLEARANCE WALL TO LADDER)	
SEWERAGE UNDERTAKER								
ANGLIAN WATER				LESS THAN 3.000m	0.600m OR GREATER (STAINLESS STEEL OR POLYPROPYLENE ROPES)	GREATER THAN 3.000m	YES	
UNITED UTILITIES				600x600	LESS THAN 3.000m	0.525m OR GREATER (STAINLESS STEEL)	GREATER THAN 3.000m (STAINLESS STEEL)	
YORKSHIRE WATER					LESS THAN 4.000m	NO	GREATER THAN 4.000m	
THAMES WATER					LESS THAN 3.000m	0.900m OR GREATER	GREATER THAN 3.000m	
SEVERN TRENT WATER*					LESS THAN 3.000m	NO	GREATER THAN 3.000m	
DŴR CYMRU WELSH WATER					NO	0.600m OR GREATER (HOOKS ONLY)	NO	NO
NORTHUMBRIAN WATER					LESS THAN 3.000m	0.600m OR GREATER	GREATER THAN 3.000m	
SOUTHERN WATER					NO	NO	NO	
SOUTH WEST WATER					LESS THAN 3.000m	0.375m OR GREATER	GREATER THAN 3.000m	
WESSEX WATER					LESS THAN 4.000m	0.600m OR GREATER (HOOKS ONLY)	GREATER THAN 4.000m	

REV	DESCRIPTION	DATE	BY
P01	FIRST ISSUE	08/02/21	MCJ/W

Project  
 BARUGH GREEN ROAD  
 PROPOSED ROUNDABOUT

Drawing Title  
 DRAINAGE CONSTRUCTION DETAILS

**TENDER ISSUE**  
 Architect

**JPG**  
 www.jpg.group  
 Leeds London Birmingham 0113 263 1155

JPG Project Ref	Scale of A0	Date	Checked	Drawn
4848	A3	FEB 21	IMW	IMW

4848 - JPG - SW - 00 - DR - D - 1441 S4 P01