

- This drawing is to be read in conjunction with all other Bright Plan Civils drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.
- Bright Plan Civils accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.
- Do not scale, work to figured dimensions only. All dimensions are in millimeters unless noted otherwise and all levels are in metres from the topographic survey datum.
- Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care whilst undertaking the works.
- All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.
- The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. Bright Plan Civils logos and company information must be removed from copies if information is re-used.

RESIDUAL HAZARDS

In addition to the hazard/risks normally associated with the type of work detailed on this drawing, note the following:

- Uncharted buried services. Contractor to use CAT prior to excavating.
- Working in live carriageway. Contractor to implement traffic management to ensure safety of the workforce and public.
- Working in live sewers. Contractor to ensure operatives are familiar with the dangers of working in live sewers.
- Excavations close to existing structures. Contractor to prepare method statement to ensure stability of existing structures.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement.

HEADWALL CONSTRUCTION NOTES:

- CONCRETE TO HEADWALL SHALL BE CLASS GEN3
- WIRE MESH REINFORCEMENT A252 TO CLAUSE 1008 AND BS 4483:1998. MINIMUM COVER 50mm, MAXIMUM LAP 250
- WINGWALLS SHALL NOT PROJECT INTO SWALE
- ALL ST CONCRETE SHALL BE TO S.H.W. CLAUSE 2602
- CLASS F2 FINISH ON EXPOSED FACES TO SHW CL 1708. CLASS F1 FINISH ON OTHER FACES TO SHW CL 1708. CLASS F2 FINISH ON UPPER FACES TO SHW CL 1708.
- HEADWALL TO BE FACED WITH A ½ BRICK SKIN OF CLASS B ENGINEERING BRICKS LAID WITH 1:3 CEMENT:SAND MORTAR IN STRETCHER BOND WITH A BRICK-ON-EDGE COPING TO THE TOP OF THE WING AND REAR WALLS AND THE CIRCULAR OPENING FOR THE PIPE TO BE FORMED WITH ROWLOCK ORIENTATED BRICK BATS. SHOT-FIRED GALVANISED MILD-STEEL FRAME TIES TO FIX BRICK SKIN TO CONCRETE HEADWALL STRUCTURE AT 300mm CENTRES EVERY OTHER COURSE.

All adoptable drainage works to be constructed as detailed in Sewers for Adoption, 7th edition or as stipulated in Thames Water's Addendum.

Thames Water Reference TBC

-	-	-
Rev.	Amendments	Date



BRIGHT PLAN CIVILS
Transport Planning and Infrastructure Design Consultants
2 West Barn, Norton Lane, Chichester, West Sussex PO20 3AF
Tel: 01243 210418
www.bpcivils.co.uk enquiries@bpcivils.co.uk

Drawing Status

FOR APPROVAL

Client

THAKEHAM

Project

BILSHAM ROAD
YAPTON

Drawing Title

S104-CONSTRUCTION DETAILS
SHEET 2 OF 2

Scale

NTS

Date

FEB 22

Drawn By

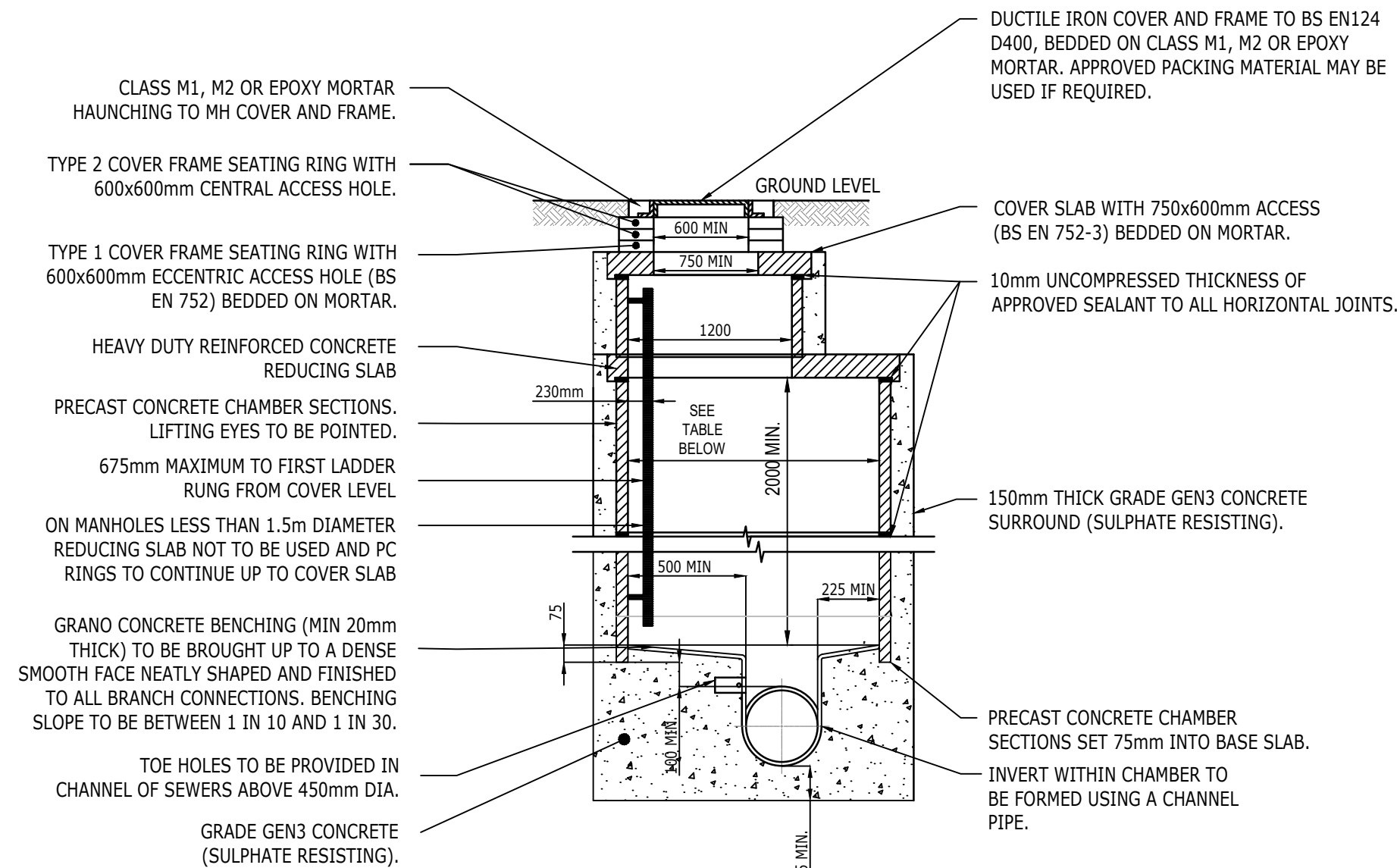
Checked By

Drawing No.

D1956-15-101

Rev.

-



TOE HOLES TO BE PROVIDED IN CHANNEL OF SEWERS ABOVE 450mm DIA.

SHAFT DIAMETERS	
DIA OF LARGEST PIPE IN MH (mm)	INTERNAL DIA. OF MH (mm)
LESS THAN 375	1200
375 TO 750	1500
750 TO 900	1800

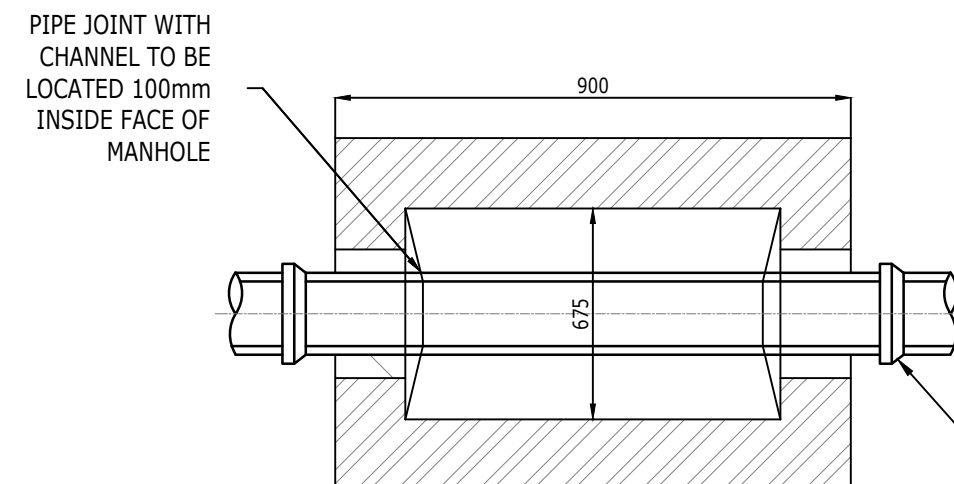
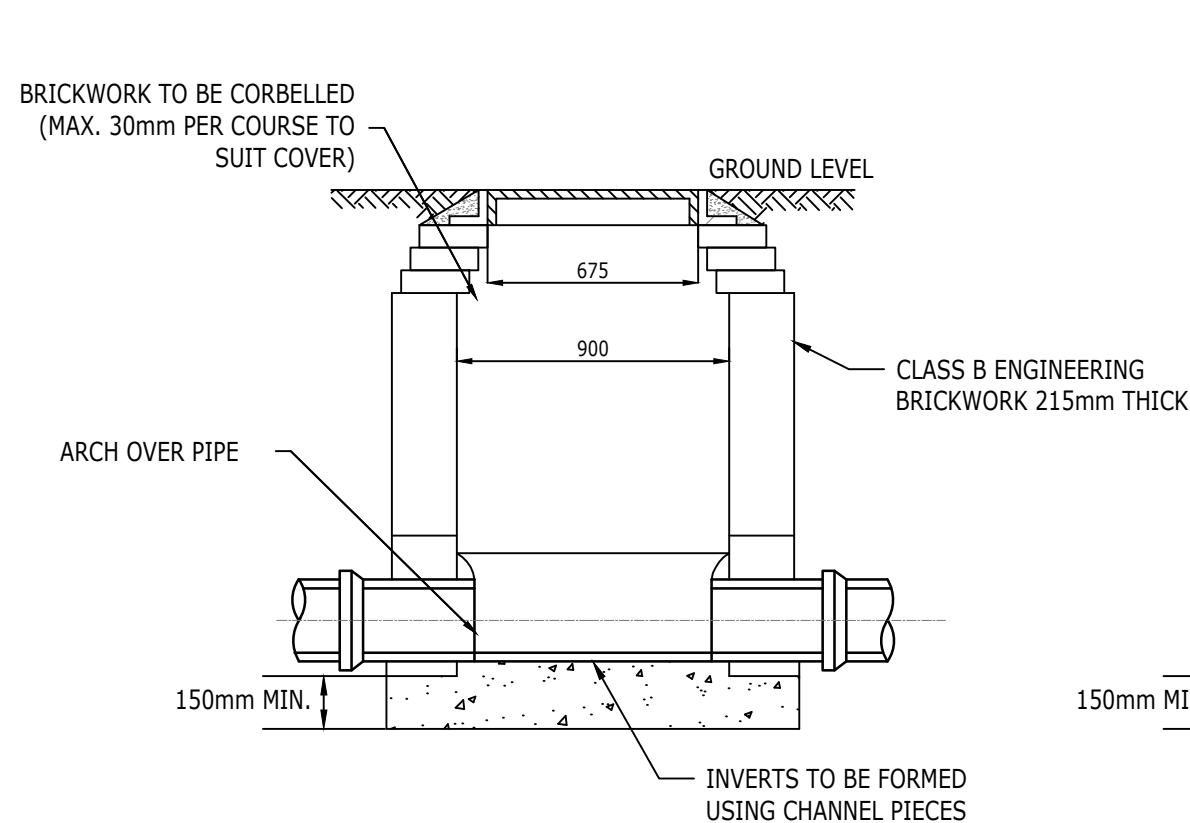
MANHOLE CHAMBERS WITH OUTGOING PIPES 600 DIA. OR GREATER SHALL BE FITTED WITH REMOVABLE STAINLESS STEEL (GRADE 316) SAFETY CHAINS OR POLYPROPYLENE ROPE. MANHOLES GREATER THAN 6m DEPTH SHALL BE SUBJECT TO SPECIFIC DESIGN

LADDER COMPLYING WITH BS EN 14396 SEE CLAUSE E2.37

MANHOLE TYPE A
(DEPTH TO SOFFIT 3.0m - 6.0m)
N.T.S.

ALL PIPES ENTERING OR LEAVING MANHOLES SHALL HAVE A FLEXIBLE JOINT WITHIN 600mm OF THE INSIDE FACE OF THE MANHOLE. THE NEXT PIPE SHALL BE A SHORT "ROCKER PIPE" WITH LENGTH AS TABLE BELOW.

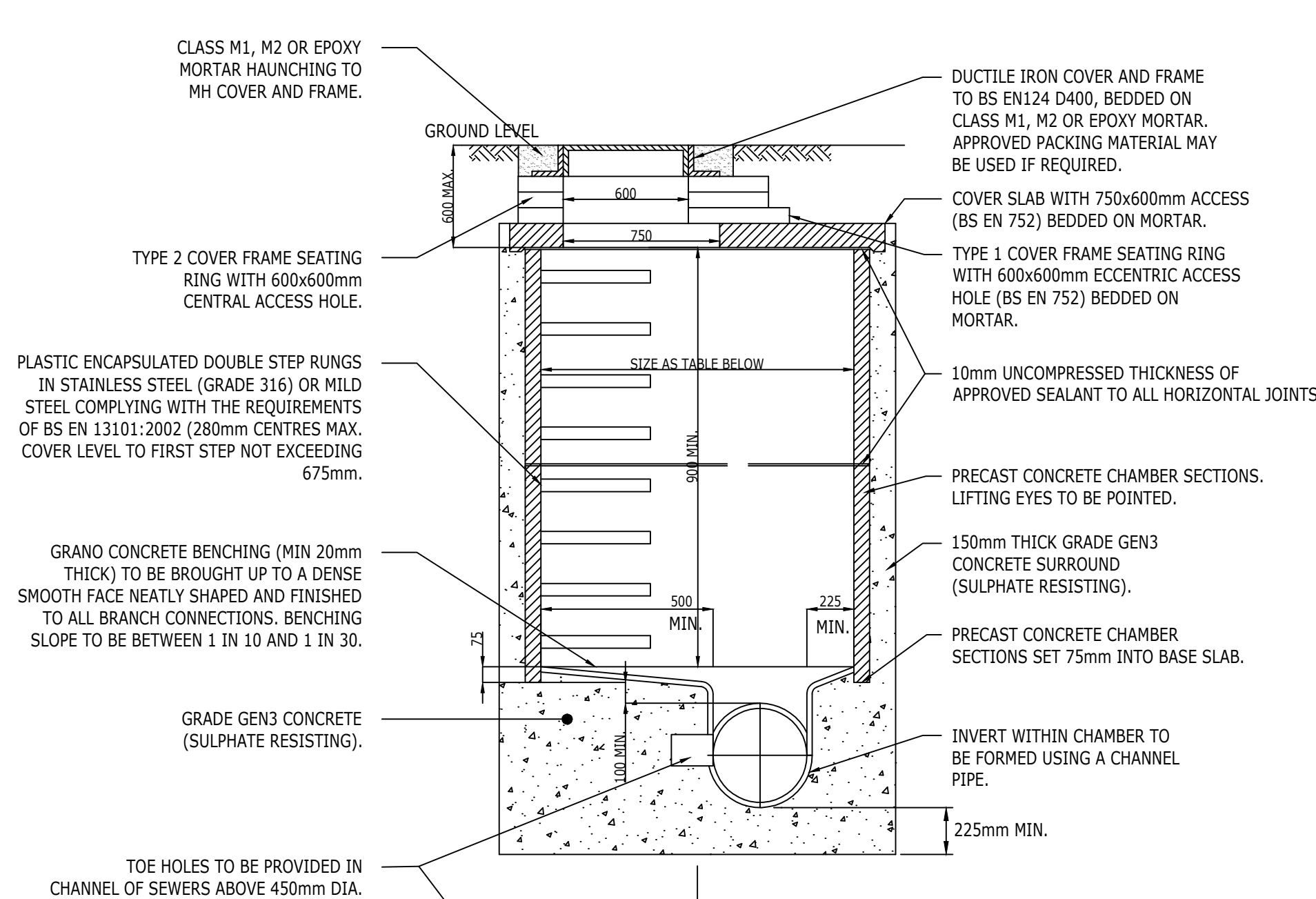
ROCKER PIPES	
SEWER DIAMETER (mm)	EFFECTIVE LENGTH (mm)
150 TO 600	600
675 TO 750	1000
825 AND OVER	1250



NOTE: INTERNAL DIMENSIONS OF MANHOLE NORMALLY 900x675mm BUT MANHOLE WIDTH SHOULD BE INCREASED FOR PIPES LARGER THAN 225mm Ø TO GIVE 225mm BENCHING EACH SIDE AND THE BRICKWORK/MASONRY UNITS CORBELLED DOWN TO SUIT COVER.

JOINT OF 600mm LONG ROCKER PIPE TO BE AS CLOSE AS POSSIBLE TO FACE OF MANHOLE TO PERMIT SATISFACTORY JOINT AND SUBSEQUENT MOVEMENT

MANHOLE TYPE D
(DEPTH TO SOFFIT UP TO 1.00m - SUBJECT TO ENGINEER APPROVAL)



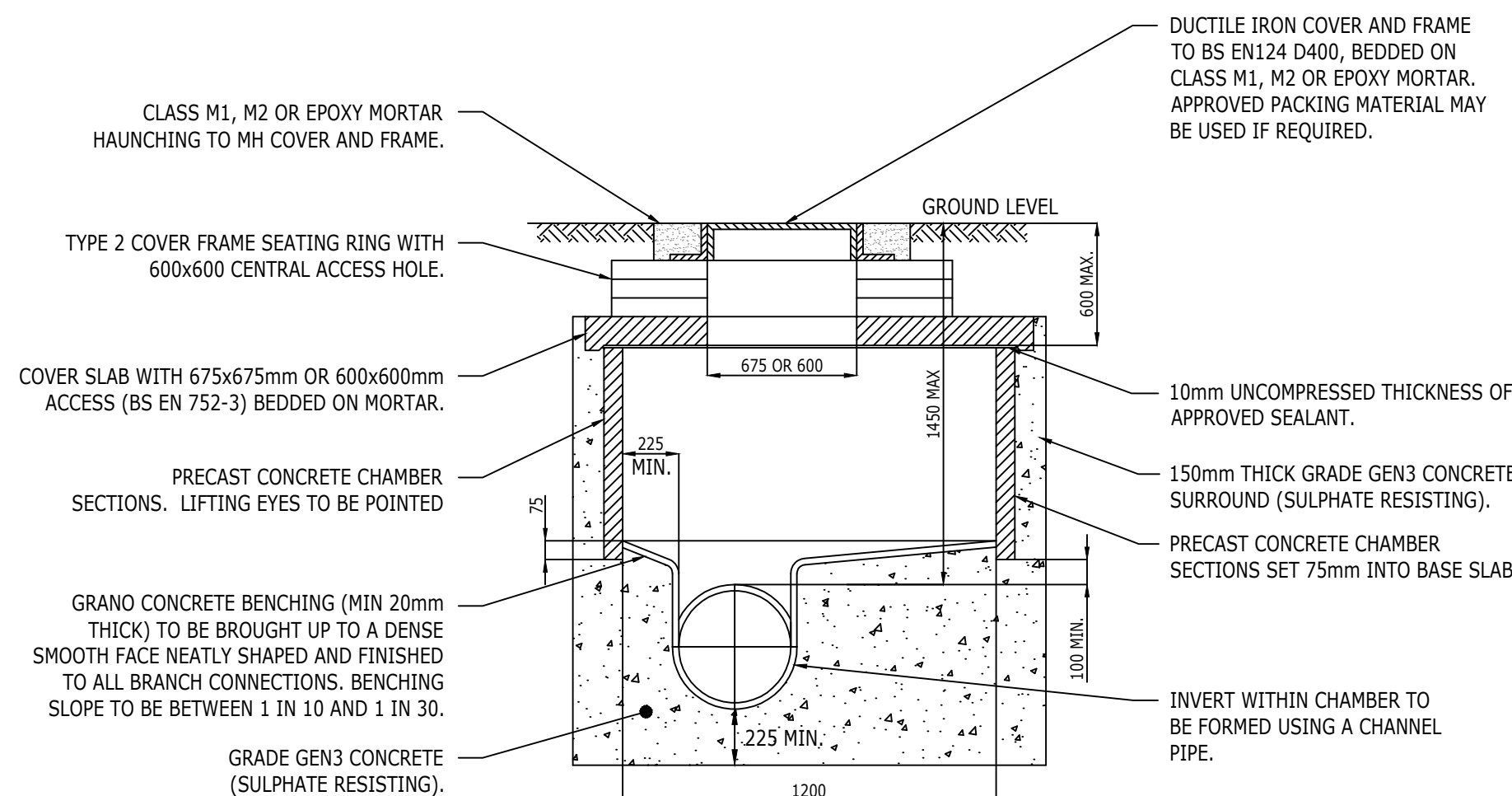
SHAFT DIAMETERS	
DIA OF LARGEST PIPE IN MH (mm)	INTERNAL DIA. OF MH (mm)
LESS THAN 375	1200
375 TO 750	1500
750 TO 900	1800

MANHOLE CHAMBERS WITH OUTGOING PIPES 600 DIA. OR GREATER SHALL BE FITTED WITH REMOVABLE STAINLESS STEEL (GRADE 316) SAFETY CHAINS OR POLYPROPYLENE ROPE.

MANHOLE TYPE B
(DEPTH TO SOFFIT 1.5m - 3.0m)
N.T.S.

ALL PIPES ENTERING OR LEAVING MANHOLES SHALL HAVE A FLEXIBLE JOINT WITHIN 600mm OF THE INSIDE FACE OF THE MANHOLE. THE NEXT PIPE SHALL BE A SHORT "ROCKER PIPE" WITH LENGTH AS TABLE BELOW.

ROCKER PIPES	
SEWER DIAMETER (mm)	EFFECTIVE LENGTH (mm)
150 TO 600	600
675 TO 750	1000
825 AND OVER	1250



SHAFT DIAMETERS	
DIA OF LARGEST PIPE IN MH (mm)	INTERNAL DIA. OF MH (mm)
LESS THAN 375	1200

NOTE: IF PIPE DIAMETER IS 375mm OR ABOVE USE MH TYPE B OR C

ALL PIPES ENTERING OR LEAVING MANHOLES SHALL HAVE A FLEXIBLE JOINT WITHIN 600mm OF THE INSIDE FACE OF THE MANHOLE. THE NEXT PIPE SHALL BE A SHORT "ROCKER PIPE" 600mm LONG.

ROCKER PIPES	
SEWER DIAMETER (mm)	EFFECTIVE LENGTH (mm)
150 TO 600	600
675 TO 750	1000
825 AND OVER	1250

MANHOLE TYPE E
(DEPTH TO SOFFIT 1.00m TO 1.50m)

TYPE A MATERIAL

GRANULAR BEDDING AND SIDEFILL MATERIALS FOR FLEXIBLE PIPES	
PIPE DIA. (mm)	GRADING
150	10 OR 14 SINGLE SIZE OR 14 TO 5mm GRADED
225 300	10, 14 OR 20mm SINGLE SIZE OF 14 TO 5mm GRAGED OR 20 TO 5mm GRADED
375 450 525	14 OR 20mm SINGLE SIZE OF 14 TO 5mm GRAGED OR 20 TO 5mm GRADED
GREATER THAN 600	14, 20 OR 40mm SINGLE SIZE OF 14 TO 5mm GRAGED OR 20 TO 5mm GRADED OR 40 TO 5mm GRADED