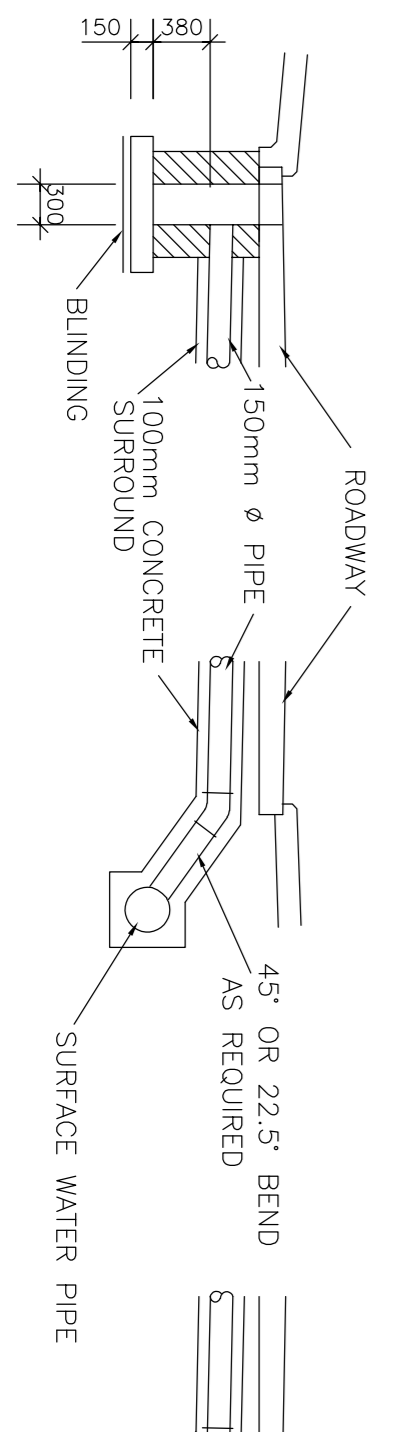
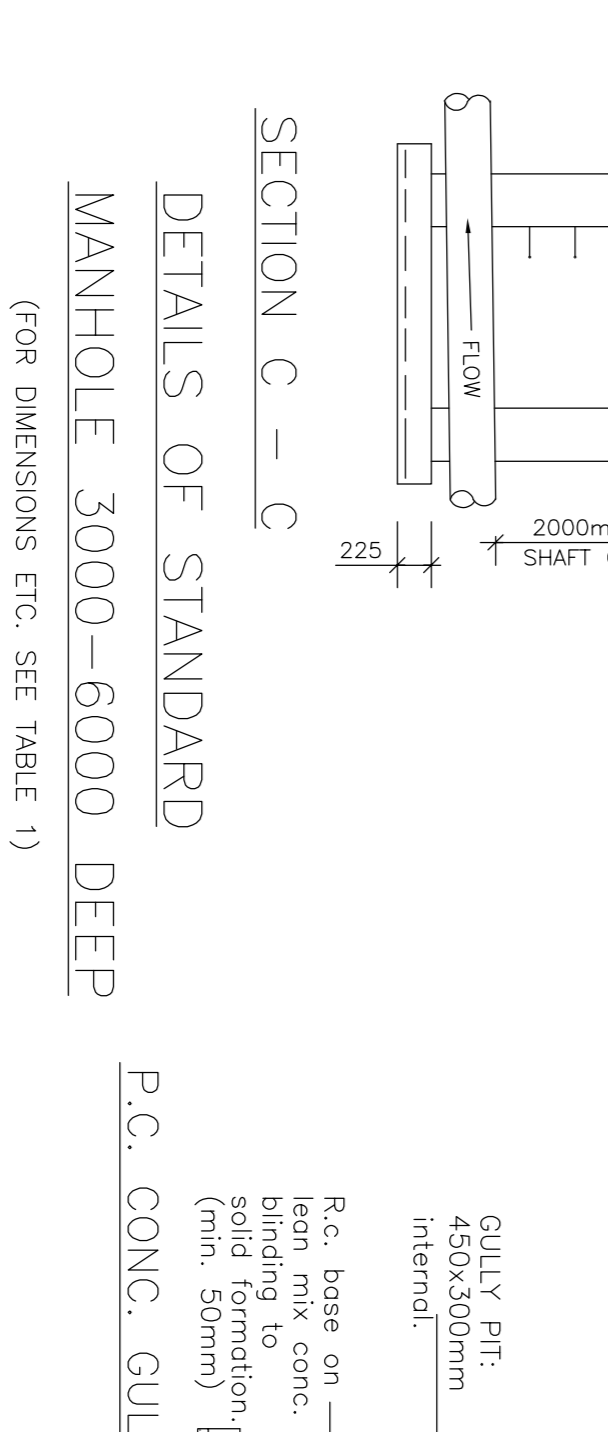
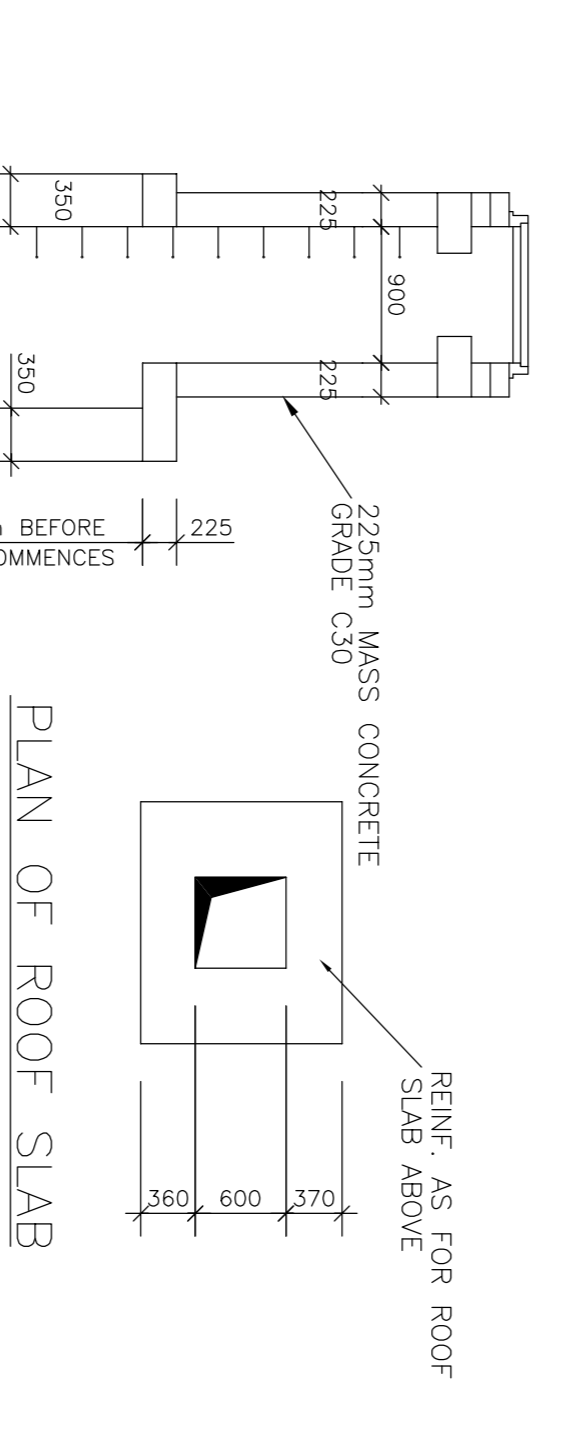
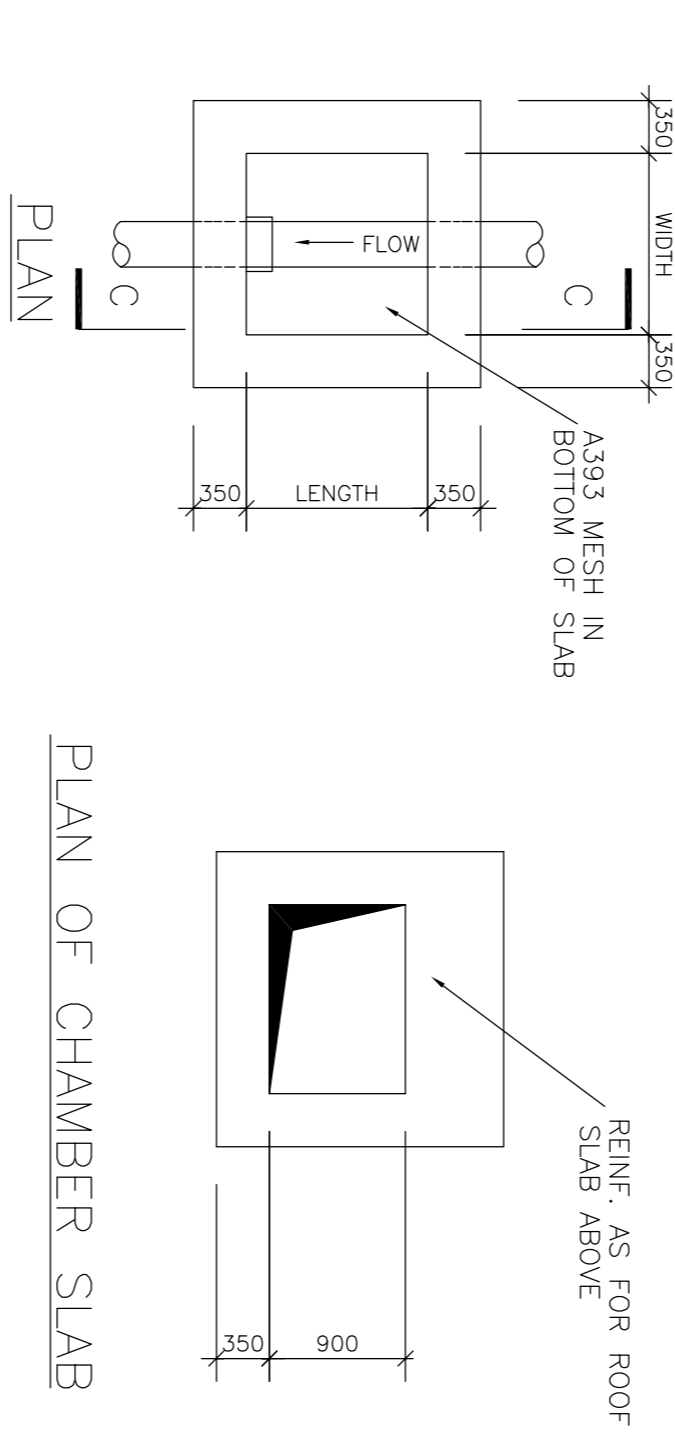


DETAILS OF STANDARD MANHOLE UP TO 3000 DEEP  
(FOR DIMENSIONS ETC. SEE TABLE 1)



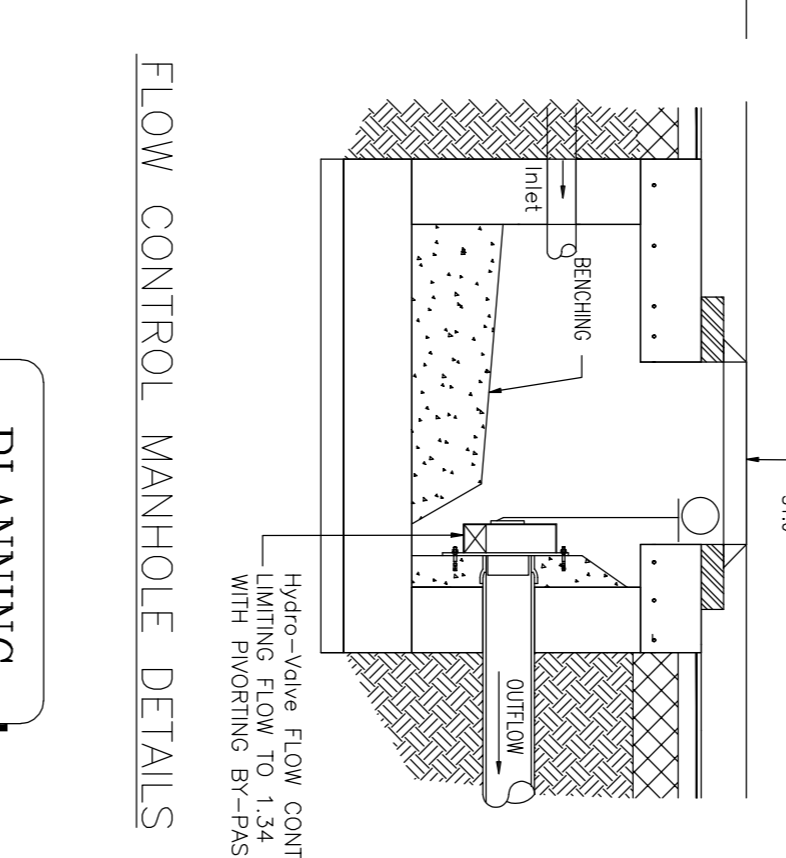
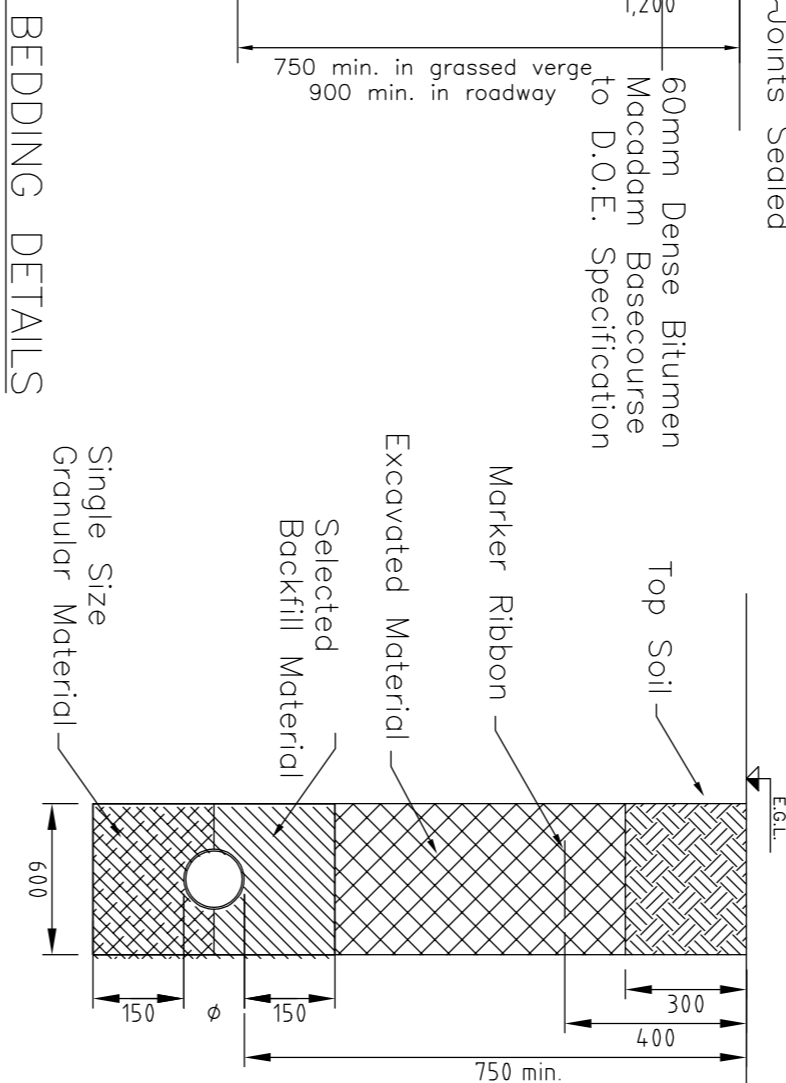
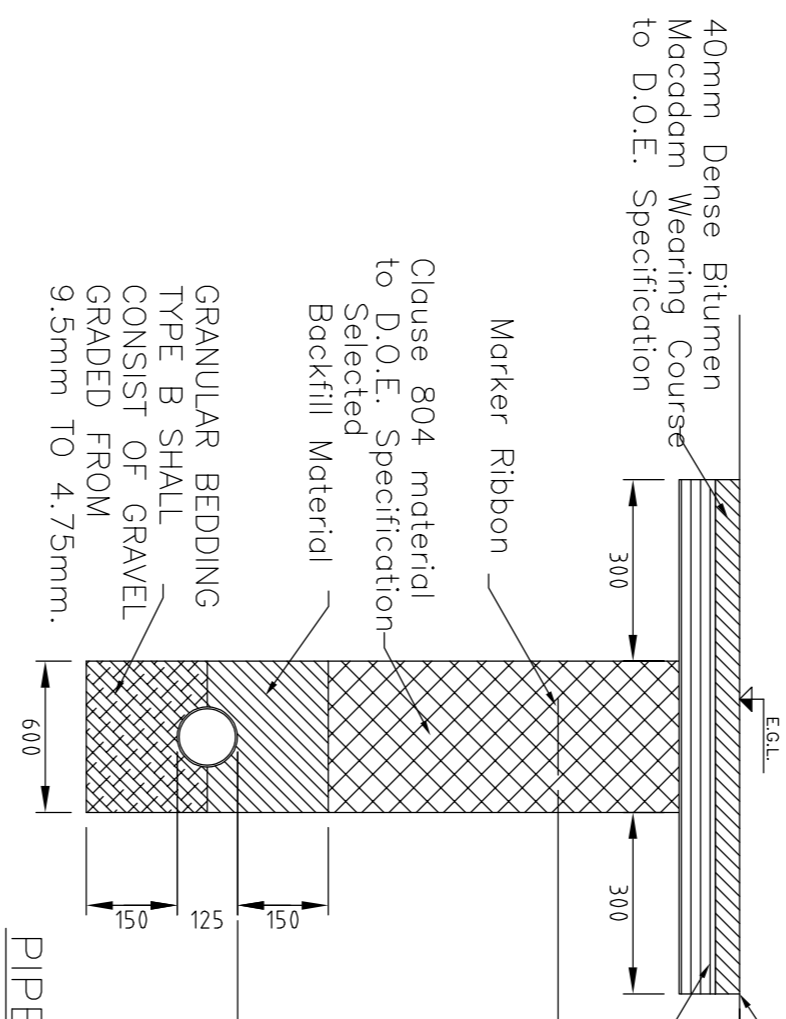
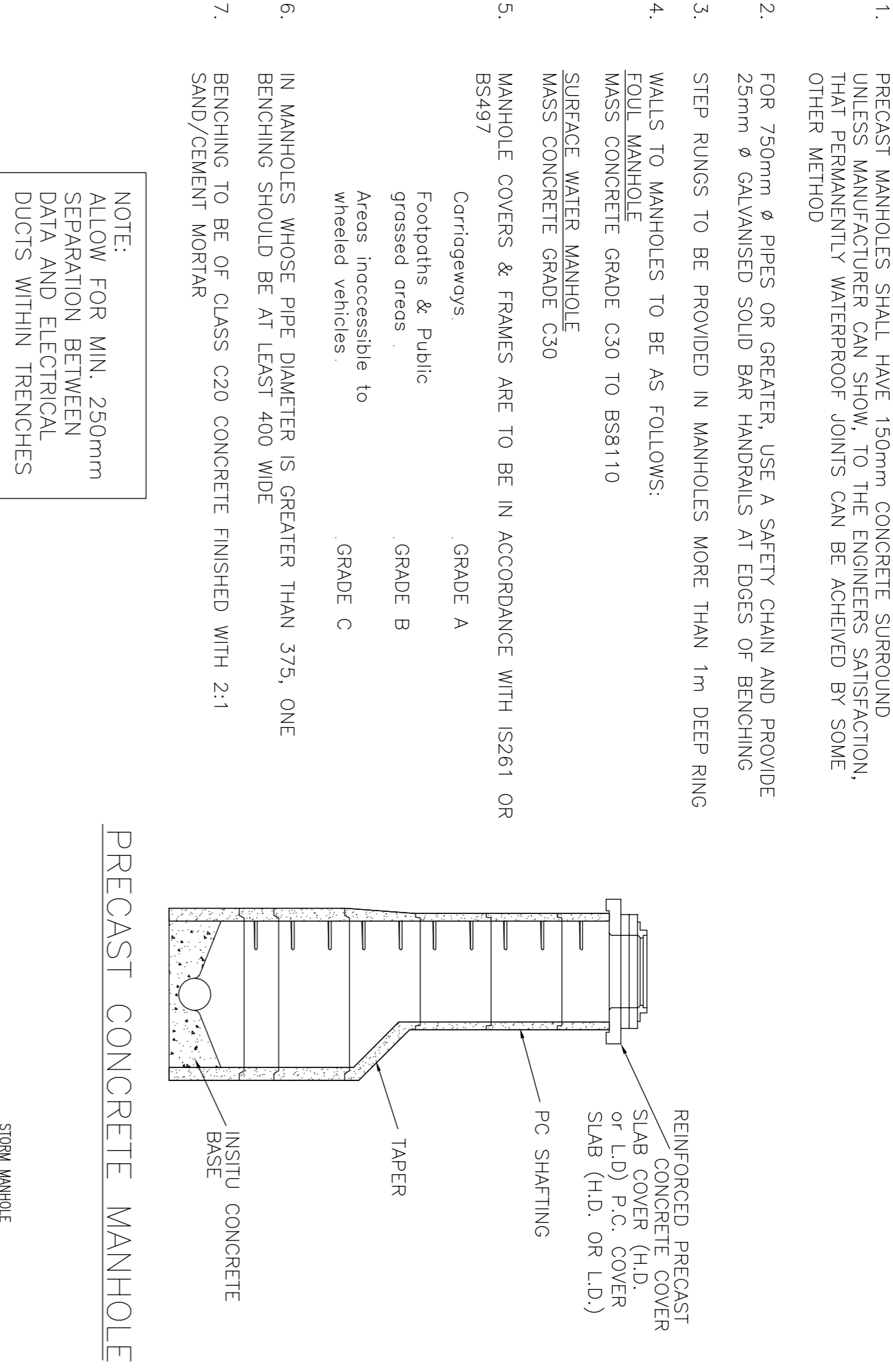
DEPTH	DIAMETER OF PIPE	ANGLE	MINIMUM LENGTH	WIDTH	P.C. CONCRETE CIRCULAR SHAFT INTERNAL MH Ø
1200-1500	100	0-90°	1200	750	1050
1200-1500	150	0-90°	1200	750	1050
1200-1500	225	0-30°	1200	750	1050
1200-1500	225	0-30°	1200	750	1050
1200-1500	300	0-30°	1200	750	1050
1200-1500	300	30°-90°	1200	900	1050
1200-1500	375	0-90°	1200	900	1050
1200-1500	450	0-90°	1200	1050	1050
1200-1500	525	0-90°	1200	1200	1200
1200-1500	600	0-45°	1200	1350	1350
1200-1500	750	0-45°	1200	1350	1350
1200-1500	900	0-45°	1350	1500	1500
1200-1500	900	45°-90°	1500	1500	1500

TABLE 1

MANHOLE TYPE	DIA. OF INLET	DROP	DIA. OF DROP	X
TYPE A	225	0-500	225	-
TYPE B	225	500-1000	225	225
TYPE C	225	> 1000	225	225
TYPE A	300	0-600	300	-
TYPE B	300	600-1000	300	300
TYPE C	300	> 1000	225	300
TYPE A	375	0-750	450	-
TYPE B	375	750-1200	300	450
TYPE C	375	> 1200	300	300
TYPE A	450	0-750	450	-
TYPE B	450	750-1200	300	450
TYPE C	450	> 1200	300	300
TYPE A	525	0-750	525	-
TYPE B	525	750-1200	375	525
TYPE C	525	> 1200	300	375
TYPE A	600	0-750	600	-
TYPE B	600	750-1500	375	375
TYPE C	600	> 1500	375	375
TYPE A	750	0-750	600	-
TYPE B	750	750-1500	450	450
TYPE C	750	> 1500	375	450

TABLE 2

- NOTES
- PRECAST MANHOLES SHALL HAVE 150mm CONCRETE SURROUND UNLESS MANUFACTURER CAN SHOW THE ENGINEER SATISFACTION. THAN PERMANENTLY WATERPROOF JOINTS CAN BE ACHIEVED BY SOME OTHER METHOD
  - FOR 750mm Ø PIPES OR GREATER, USE A SAFETY CHAIN AND PROVIDE 25mm Ø GALVANISED SOLID BARR HANDRAILS AT EDGES OF BENCHING
  - STEP RUNGS TO BE PROVIDED IN MANHOLES MORE THAN 1m DEEP RING
  - WALLS TO MANHOLES TO BE AS FOLLOWS:  
FOUL MANHOLE MASS CONCRETE GRADE C30 TO BS8110
  - SURFACE WATER MANHOLE MASS CONCRETE GRADE C30 TO BS8110
  - MANHOLE COVERS & FRAMES ARE TO BE IN ACCORDANCE WITH IS261 OR BS497
  - MANHOLES WHOSE PIPE DIAMETER IS GREATER THAN 375, ONE BENCHING TO BE OF CLASS C20 CONCRETE FINISHED WITH 2:1 SAND/CEMENT MORTAR



PLANNING

**MANHOLE CONSTRUCTION**

SURFACE WATER MANHOLES HIGH-BENEFIT BLOCKS TO CLASS 0 OR 20 FROM 1750/1800 TO 4500/5000mm CONCRETE WORK SHALL BE BENCHING TO CLASS 0 OR 20. JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR AS THE BLOCKS ARE LAID.

JOINTS SHALL BE FINISH POINTED AS THE WORK PROGRESSES.

1. FILL WITH SAND/CEMENT MORTAR TO 1 METRE ABOVE BENCHING LEVEL TO BE BENCHING TO ROCK WORK USING ENGLISH GARDEN WALL BOND.

**MANHOLE CONSTRUCTION**

PRECAST P.C. ROOF SLAB SHALL BE 200mm THICK WITH 25mm COVER TO STEEL.

CLASS 9000 OR E200 MANHOLE COVER AND FRAME TO 675x124 150mm DEEP. NON-BLOCK DESIGN, COATED KEYS, MANUFACTURED FROM SPHERULIC GRANITE CAST IRON (OUTLET CAST IRON), 600 x 600 RING IN CLEAR OPENING. COVER TO HAVE A MINIMUM MASS OF 1400g/m<sup>2</sup> FRAME BEARING MASS SHALL BE 8000g/m<sup>2</sup>. FRAMES SHALL BE BENCHING TO MANUFACTURER'S INSTRUCTIONS.

1 TO 2 COURSES OF SOLID ENGINEERING BRICKS A CLASS 0 (CENTRE AND VERTICAL).

RELEASE ARCH FORMED BY 215x103x65 SOLID ENGINEERING BRICK CLASS A OR CLASS B AS PER DRAWING. RELIEFING ARCHES EXTEND OVER FULL P.C. DIAMETER GREATER THAN 80mm.

A DOUBLE RING IS TO BE FORMED FOR 200mm THICKNESS OF WALL.

60mm SQUARE OF IN ROOF.

PERMEABLE PAVING SPECIFICATION

- 25mm AC6 and 50mm AC14 topmcc.
- Non-woven permeable separator geotextile with min. 300mm laps between adjacent rolls, between sand and coarse aggregate.
- 450mm (min.) coarse graded aggregate to BS EN 12620:2002 for the proposed bus park.
- 2 layer of strengthening Tensor TX1160 OSA Geogrid.
- 2000 gauge impermeable liner laid in accordance with manufacturer's guidelines.
- Impermeable liner to be brought up to kerb haunch and cut flush with permeable blocks.

Finished Pavement Level

Non-woven permeable separator geotextile

2nd Tensar Geogrid-TX1160 OSA geogrid

1st Tensar Triax-TX1160 OSA geogrid over impermeable liner

Stone Capping

SCALE 1:20

**Section of Permeable Paving**

40mm COMPACTED DEPTH OF 35% COARSE AGGREGATE HOT ROLLED ASPHALT WEARING COARSE TO BS EN13108-4 HRA 35/14 F surf 40/60

60mm AC28 BIN 40/60

CLAUSE 804 GRANULAR SUB-BASE

CLAUSE 804 GRANULAR CAPPING LAYER

CLAUSE 804 GRANULAR CAPPING LAYER

<2% CBR

2-5% CBR

5-15% CBR

**MANHOLE DETAILS**

HYDRO-VALE FLOW CONTROL LIMITING FLOW TO 1.34 LPM WITH PIVOTING BR-PASS DOOR

OUTFLOW

INLET

MANHOLE

60mm SQUARE OF IN ROOF

200mm THICKNESS OF WALL

215x103x65 SOLID ENGINEERING BRICK CLASS A OR CLASS B AS PER DRAWING

RELIEFING ARCHES EXTEND OVER FULL P.C. DIAMETER GREATER THAN 80mm

A DOUBLE RING IS TO BE FORMED FOR 200mm THICKNESS OF WALL

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1. 25mm AC6 and 50mm AC14 topmcc.

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4. 2 layer of strengthening Tensor TX1160 OSA Geogrid.

5. 2000 gauge impermeable liner laid in accordance with manufacturer's guidelines.

6. Impermeable liner to be brought up to kerb haunch and cut flush with permeable blocks.

Finished Pavement Level

Non-woven permeable separator geotextile

2nd Tensar Geogrid-TX1160 OSA geogrid

1st Tensar Triax-TX1160 OSA geogrid over impermeable liner

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SCALE 1:20

**Section of Permeable Paving**

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60mm AC28 BIN 40/60

CLAUSE 804 GRANULAR SUB-BASE

CLAUSE 804 GRANULAR CAPPING LAYER

CLAUSE 804 GRANULAR CAPPING LAYER

<2% CBR

2-5% CBR

5-15% CBR

**Section of New Carriageway**

SCALE 1:20

**DETAIL SHEET 1**

Job Description: Proposed Enterprise Campus, O'Brien Road, Cortlow

Project No: 20P1457

Drawing Ref: 03

Scale: Various @ A1

Date: 10/03/21

Drawn By: NM

Checked By: IB

Project: Cortlow County Council

Client: Cortlow County Council

Author: [Redacted]

Issue register

No.	Date	Description	Issued by
02/04/21	Planning	NM	IB

Revision change notes

No.	Date	Description

Bowe Consulting Engineers

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