

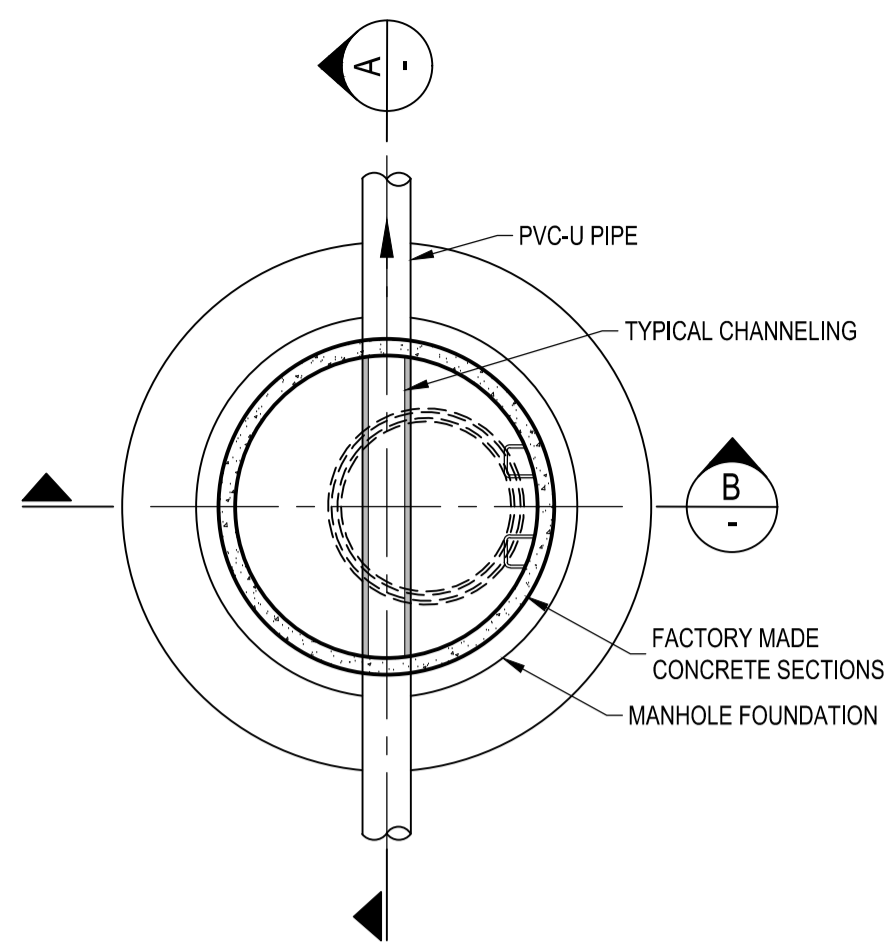
NOTES AND SPECIFICATIONS

GENERAL

1. MINIMUM REQUIREMENTS ARE INDICATED ON THE DRAWING. THE CONSULTANT / DESIGNER IS RESPONSIBLE AND LIABLE FOR FURTHER DETAILS AND TO ENSURE EFFECTIVE OPERATION AND MAINTENANCE OF THE INSTALLATION.
2. THE SIGNATURE OR INITIALS ON THIS DRAWING OF COE OFFICIAL DOES NOT REMOVE ANY RESPONSIBILITY WHATSOEVER FROM THE CONSULTANT / DESIGNER.
3. THE CONSULTANT / DESIGNER REMAINS RESPONSIBLE TO ENSURE THAT ALL THE GUIDELINES, STANDARD DRAWINGS, STANDARDS AND SPECIFICATIONS OF THE WATER AND SANITATION DEPARTMENT HAVE BEEN MET AND ARE COMPLIED WITH IN THE DESIGN.
4. ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SANS STANDARD.
5. FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.
6. ALL DIMENSIONS TO BE CHECKED AND APPROVED ON SITE.
7. ALL DIMENSIONS ARE IN mm (UNLESS OTHERWISE SPECIFIED).
8. DO NOT SCALE FROM THESE DRAWINGS.
9. CLASS OF CONCRETE UNLESS OTHERWISE SPECIFIED ON DRAWING DETAILS:
 REINFORCED CLASS 30/19
 THRUST BLOCKS CLASS 20/19
 BLINDING CLASS 15/19
 FLOOR SCREED SAND : CEMENT = 3 : 1
10. PRE-CAST CONCRETE RINGS AND COVER SLABS TO COMPLY WITH SANS 1294.
11. JOINTS BETWEEN CONCRETE RINGS AND BETWEEN COVER SLABS AND BETWEEN RINGS AND FLOORS TO BE SEALED WITH BITUMEN SEALANT (APPROVED BY THE DESIGNER).
12. SEWERS INSTALLED WITHIN ROAD RESERVE BOUNDARIES MUST BE POSITIONED IN ACCORDANCE WITH THE APPLICABLE SERVICES LAYOUT DRAWING.

PARTICULAR

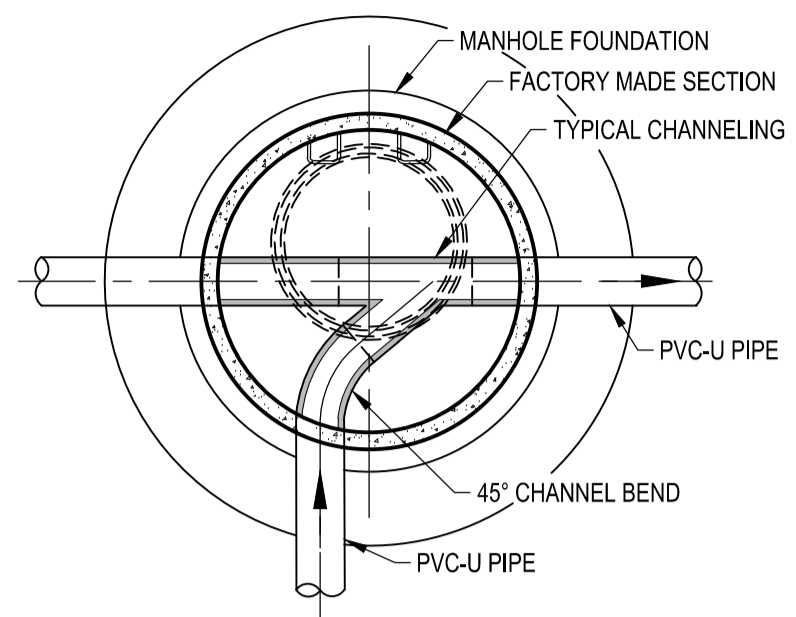
1. STEP IRONS TO BE COPOLYMER POLYPROPYLENE ENCAPSULED 12mm HIGH TENSILE STEEL BAR
2. TYPICAL VALUES FOR H
 H = 50 - 75mm WITHIN ERVEN & ROAD RESERVES
 = 250mm LOW COST HOUSING DEVELOPMENTS & UNDEFINED ROADWAYS
 = 500mm OPEN VELD OR ROAD RESERVES WHERE POSITION OF MANHOLES CAN BE CONCEALED BY LONG GRASS OR OTHER GROWTH
3. CONCRETE SECTIONS MUST BE FIXED WITH AN APPROVED EPOXY SEALER



PLAN

SCALE 1:25

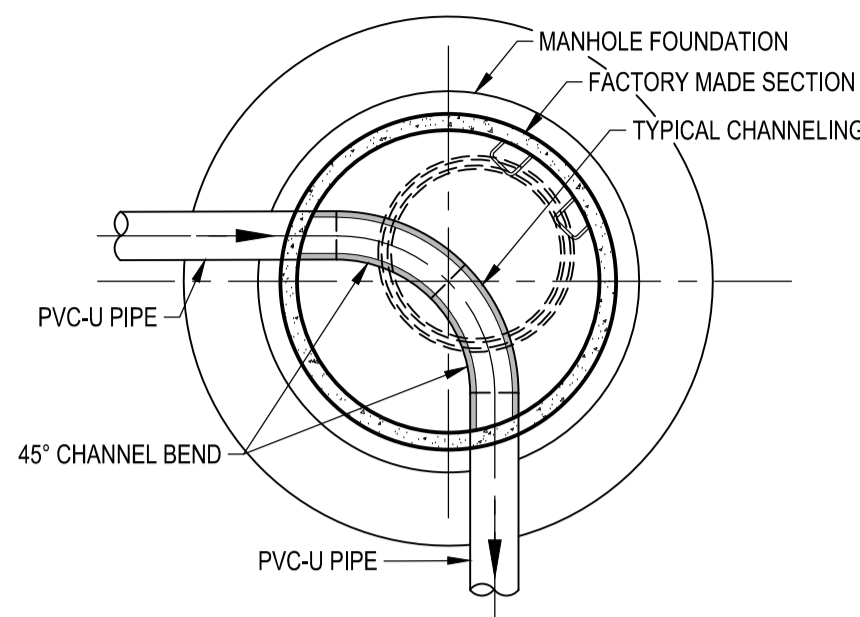
TYPICAL EXAMPLE OF THROUGH CONNECTION IN MANHOLE



PLAN

SCALE 1:25

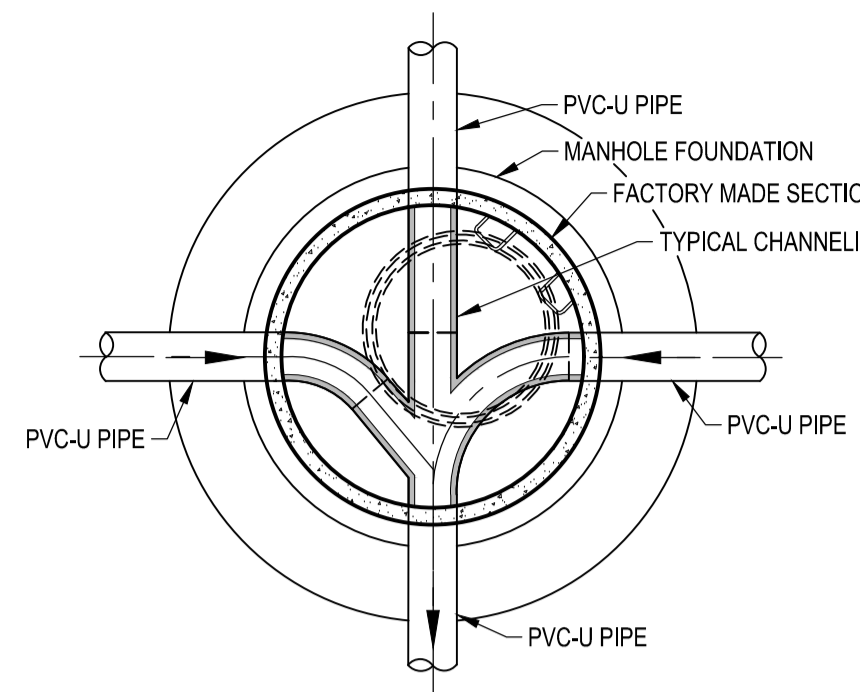
TYPICAL EXAMPLE OF 90° CONNECTION IN MANHOLE



PLAN

SCALE 1:25

TYPICAL EXAMPLE OF 90° BEND IN MANHOLE

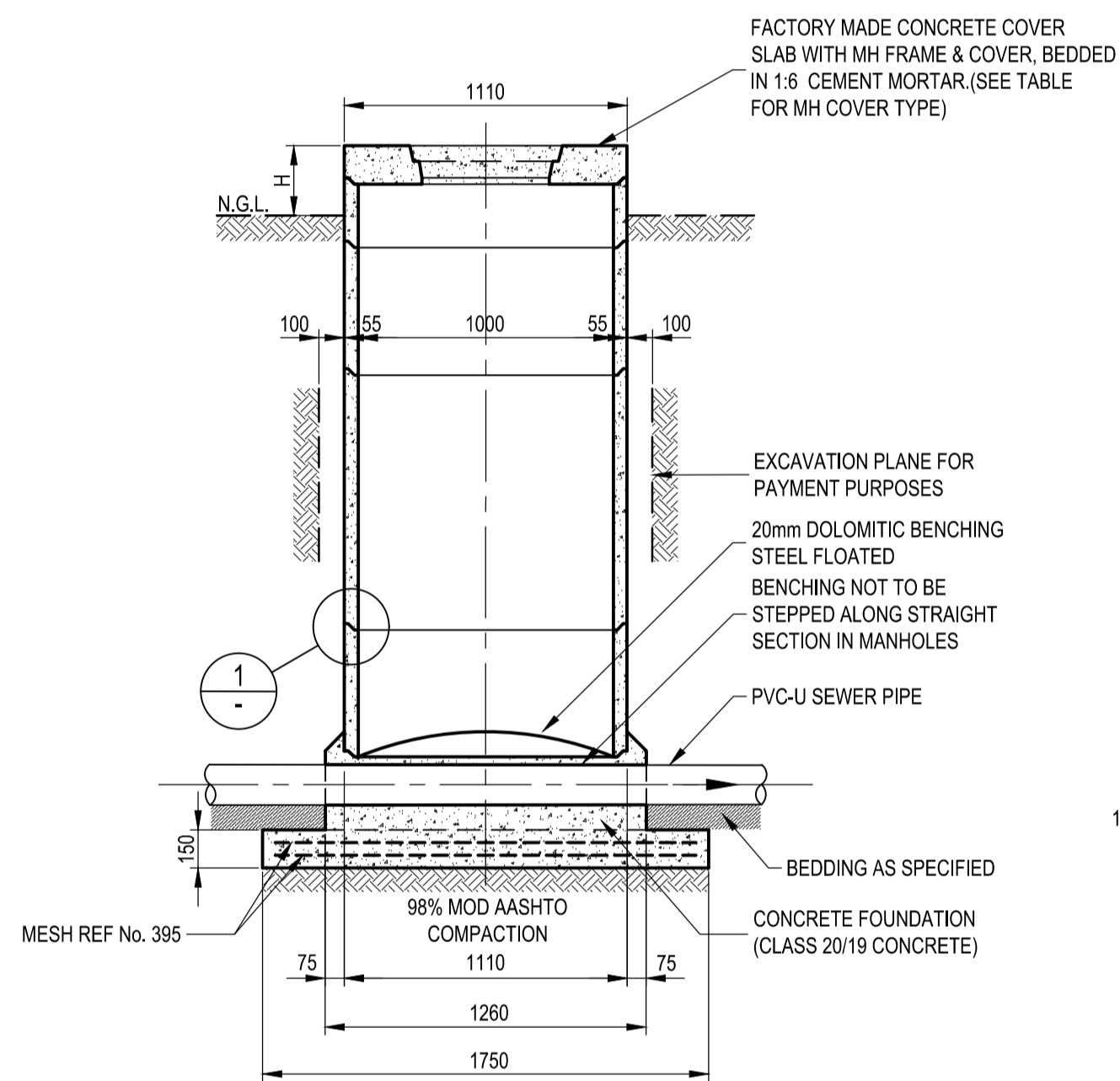


PLAN

SCALE 1:25

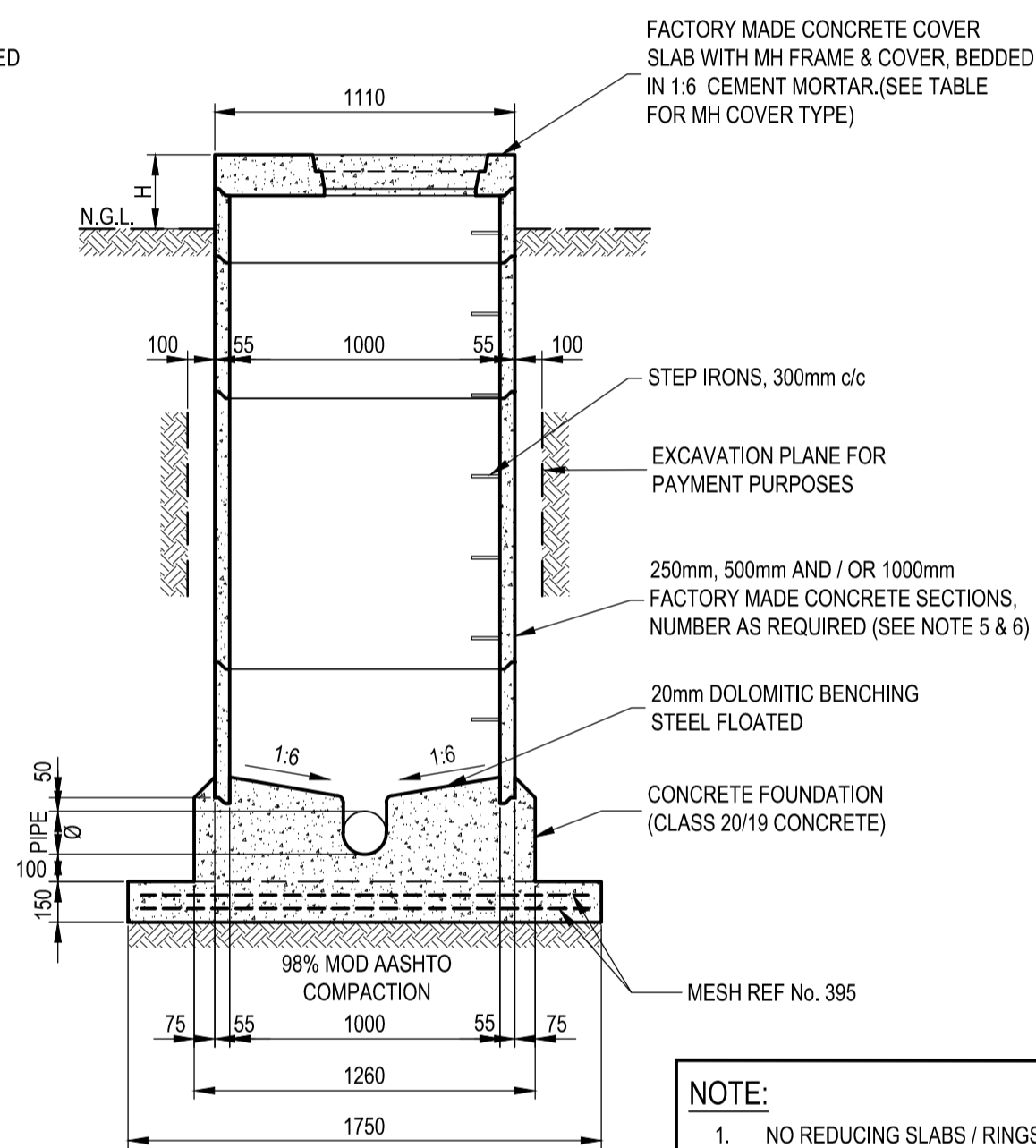
TYPICAL EXAMPLE OF SIDE CONNECTIONS IN MANHOLE

TYPICAL MANHOLE LAYOUTS SHOWING POSITIONS OF MANHOLE FRAME, STEPS & CHANNELING



SECTION A

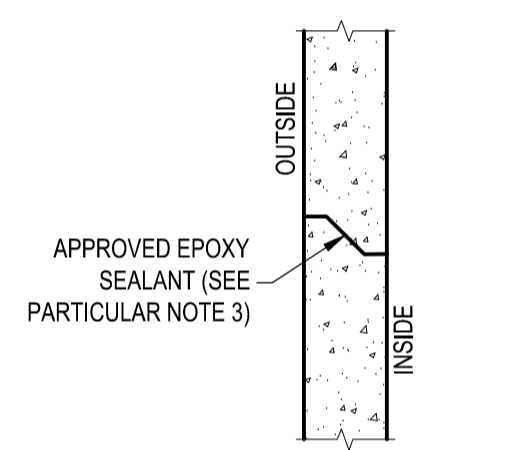
SCALE 1:25



SECTION B

SCALE 1:25

ALTERNATIVE LAYOUT WITH SPACERS



DETAIL 1

SCALE 1:5

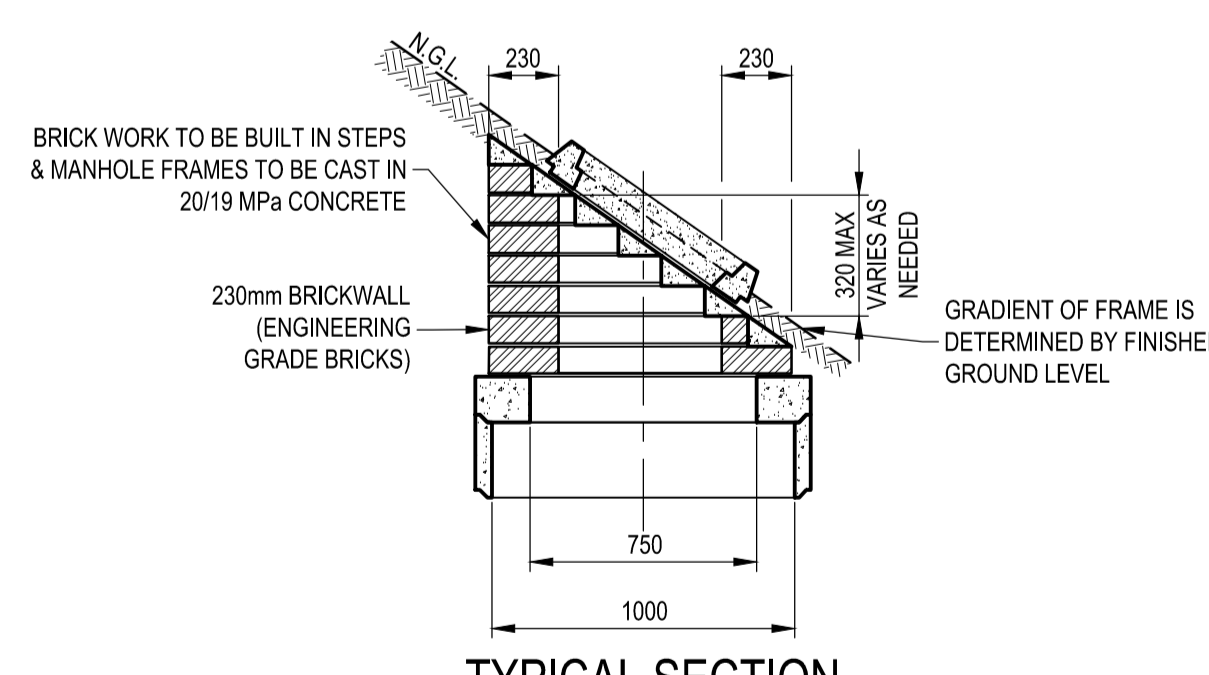
NOTE:
1. NO REDUCING SLABS / RINGS ALLOWED

MANHOLE COVERS AND FRAMES SANS 50124 (SABS EN 124)	
POSITION OF MANHOLE	FRAME AND COVER TYPE
CARRIAGEWAY	560mm Ø CLASS D400 POLYESTER RESIN
STREET RESERVE	560mm Ø CLASS B125 POLYESTER RESIN OR TYPE 4 CONCRETE REPLACEMENT
ERVEN	560mm Ø CLASS B125 POLYESTER RESIN OR TYPE 4 CONCRETE REPLACEMENT
GENERAL	ONLY 560mm Ø, CLASS D400 POLYESTER RESIN MAY BE USED FOR SEWERS 300mm Ø AND LARGER

NOTE: CAST IRON COVERS AND FRAMES ARE USED ONLY WITH WRITTEN INSTRUCTIONS FROM THE ENGINEER

MANHOLE CHAMBER SIZES	
NOMINAL Ø (mm)	USAGE
1000	150 ND PIPES WITH STRAIGHT THROUGH MANHOLES UP TO 1.25m DEEP
1250	BENDS IN MANHOLES, LARGER PIPES & MANHOLES BETWEEN 1.25m & 3.0m DEEP
1500	LARGER PIPES & MANHOLES DEEPER THAN 3.0m

NOTE: MANHOLE CHAMBER SIZES TO BE APPROVED BY THE COE WATER AND SANITATION DIVISION



TYPICAL SECTION

SCALE 1:25
BUILT IN MANHOLE FRAME AT FINISHED SLOPED SIDEWALKS (WITH WRITTEN PERMISSION FROM THE ENGINEER ONLY)



AMENDMENTS			
NR	DATE	APPROVED	DESCRIPTION

WATER AND SANITATION APPROVED ON BEHALF OF: OPERATIONS DIVISION	
NAME:.....	PROF REG No:.....
SIGNATURE:.....	DATE:.....
PROJECTS DIVISION	
NAME:.....	PROF REG No:.....
SIGNATURE:.....	DATE:.....
PLANNING DIVISION	
NAME:.....	PROF REG No:.....
SIGNATURE:.....	DATE:.....

DESIGNED NAME:..... SIGNATURE:..... DATE:.....		CONTRACT No.	PROJECT TITLE STANDARD GUIDELINE DRAWINGS
		PROJECT No.	
DRAWN NAME:..... SIGNATURE:..... DATE:.....		SHEET No.	DRAWING TITLE STANDARD DRAWING: SEWER RETICULATION MANHOLE DETAILS FOR SEWER PIPES UP TO 300mm NOMINAL DIAMETER
		PAPER SIZE A1	
APPROVED NAME:..... PROF REG No:..... SIGNATURE:..... DATE:.....		PAPER SIZE A1	COE DRAWING NUMBER STD-SR-007
		SCALE	
CONSULTANT DRAWING NUMBER		REVISION	REVISION

CONSULTANT DETAILS TO BE PLACED HERE