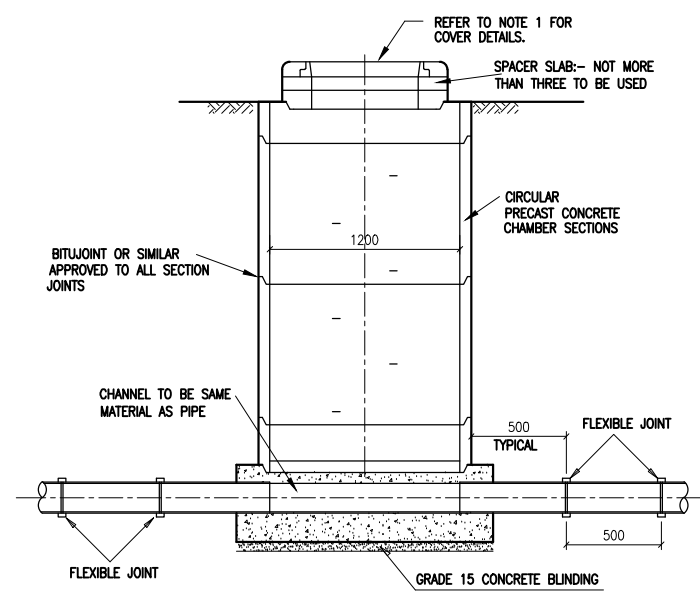
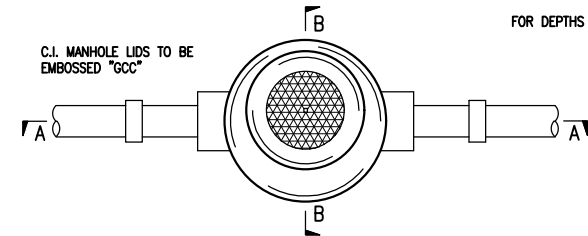


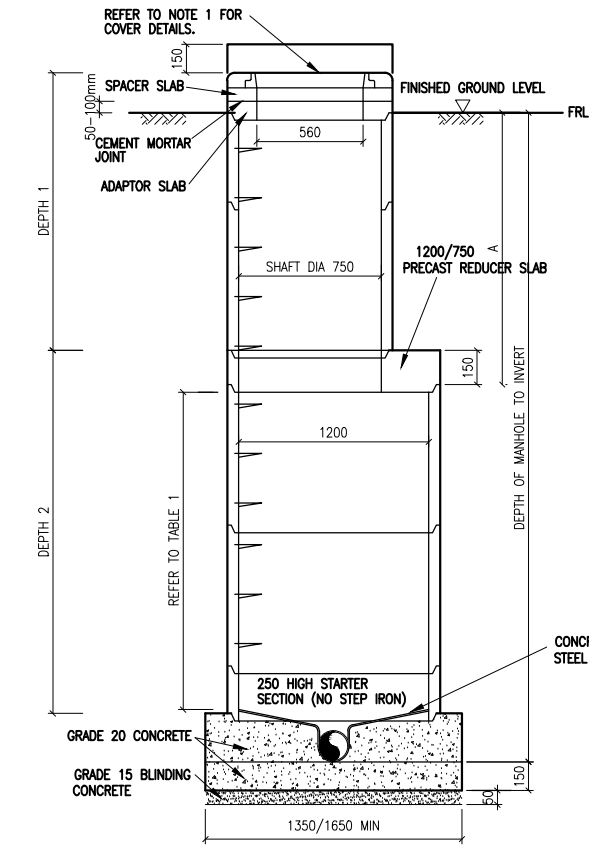
**CROSS SECTION
MANHOLE TYPE 1**
FOR DEPTHS UP TO 3.5m



**SECTION ALONG PIPE
MANHOLE TYPE 1**
FOR DEPTHS UP TO 3.5m



PLAN - PRECAST CONCRETE RING MANHOLE

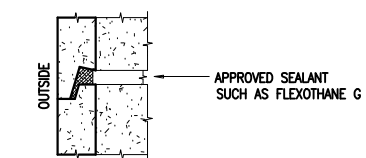


MANHOLE TYPE 2
PRECAST CONCRETE RING MANHOLES
DEPTH TO INVERT GREATER THAN 3.5m

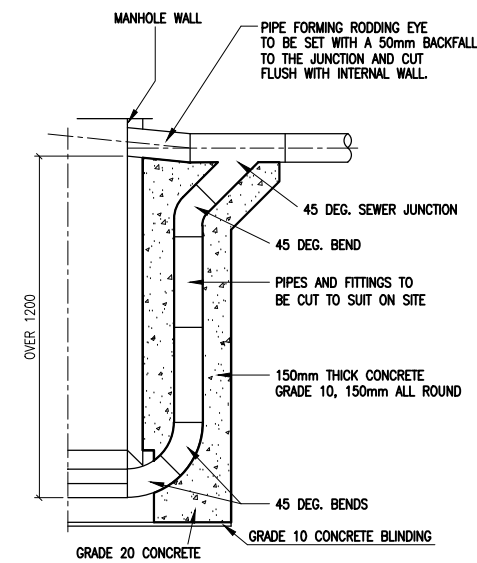
MANHOLE DEPTH	DEPTH 1	DEPTH 2	CHAMBER SIZE
< 1.5 m	0 m	MANHOLE DEPTH	1000 mm
1.5 - 2.5m	0 m	MANHOLE DEPTH	1250 mm
> 2.5 m	1.5 m (max)	2.5 m (min)	1250 mm

Table 1. MANHOLE TYPE 2

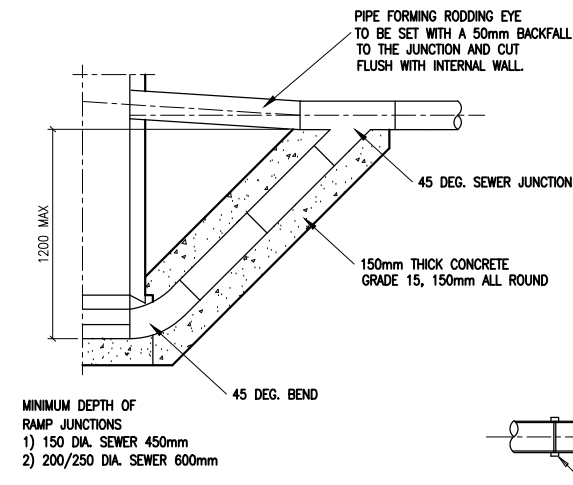
DEPTH TO INVERT LEVEL (m)	DIMENSION 'A' (mm)
0 - 3.5	1200 Ø
3.5 +	1500 Ø



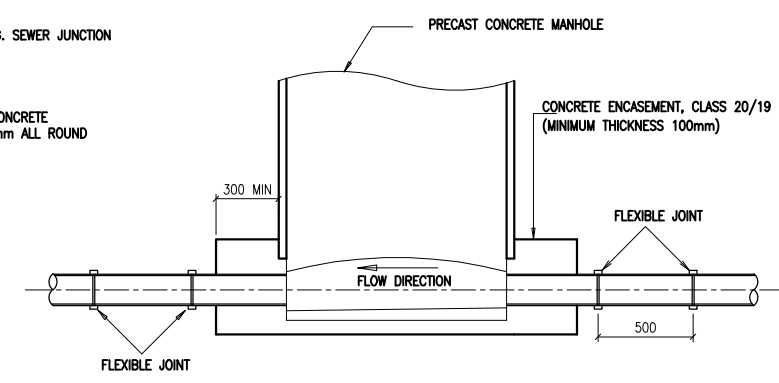
INTERLOCKING JOINT
SCALE 1:2



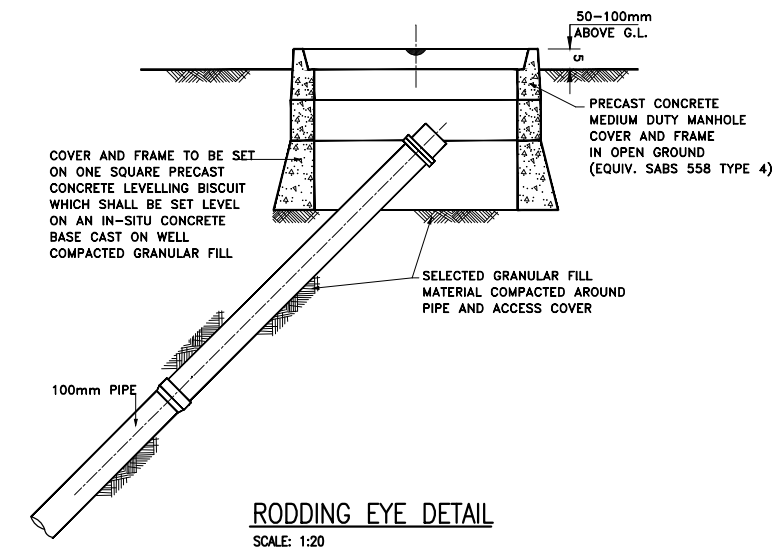
BACKDROP MANHOLE DETAIL



RAMP MANHOLE DETAIL



DETAIL OF FLEXIBLE JOINTS AT MANHOLES
(UPVC PIPE)



RODDING EYE DETAIL
SCALE: 1:20

- NOTES:**
- MANHOLE COVERS AND FRAMES TO COMPLY WITH THE REQUIREMENTS OF SABS 558 HEAVY DUTY : TYPE 2A IN ROAD RESERVES AND MEDIUM DUTY TYPE 4 IN OPEN AREAS. FINISHED COVER LEVEL TO BE FLUSH WITH GROUND OR FINISHED ROAD SURFACE IN ROAD RESERVES AND 150mm ABOVE NATURAL GROUND LEVEL IN OPEN AREAS.
 - PRECAST CONCRETE MANHOLE SECTIONS AND SLABS TO COMPLY WITH THE REQUIREMENTS OF SABS 1294 - 1981
 - ALL PIPES AND FITTINGS SHALL BE PROVIDED WITH FLEXIBLE JOINTS.
 - MAIN CHANNEL INVERTS SHALL BE FORMED IN HALF-ROUND CHANNELS AND OF THE SAME DIAMETER AS THE DOWNSTREAM PIPE. BRANCH CONNECTIONS SHALL BE CURVED IN THE DIRECTION OF FLOW AND SHALL DELIVER OVER THE MAIN CHANNEL
 - BENCHING SHALL BE IN GRADE 20/19 CONCRETE FINISHED SMOOTH WITH STEEL FLOAT
 - MANHOLE STEP IRONS TO BS 1247 AND GALVANISED.
 - ALL MANHOLES TO HAVE 150mm CLASS 20/19 CONCRETE SURROUND
 - ALL PIPES TO PROJECT A NOMINAL DISTANCE OF 25mm INTO MANHOLE TO SUIT SITE CONDITIONS.
 - THE OVERALL HEIGHT OF CHAMBER AND SHAFT RINGS INCLUDING MAKE-UP BRICKWORK AND MAKE-UP CONCRETE ARE TO BE CALCULATED IN ACCORDANCE WITH THE STANDARD DETAIL. CONTRACTOR TO CHECK GROUND LEVELS BEFORE PREPARING ORDER FOR PRECAST PRODUCTION.
 - BACKFILLING BEHIND CHAMBER AND SHAFT RINGS SHALL BE CAREFULLY CARRIED OUT AND SHALL BE BROUGHT UP AS MANHOLE CONSTRUCTION PROCEEDS AS SPECIFIED. BACKFILL SHALL BE TO 93% MOD AASHTO. MIN.
 - ALL INSITU CONCRETE SHALL BE 20MPa MIX THROUGHOUT OR AS SHOWN.
 - WHERE LIFTING HOLES ARE USED IN CONSTRUCTION THEY MUST BE EFFECTIVELY SEALED.
 - COMPLETED MANHOLES MUST BE WATERTIGHT.
 - ALL PRECAST CONCRETE WORK SHALL BE MANUFACTURED FROM DOLOMITIC AGGREGATES
 - UPVC PIPE TYPE MATERIAL (CLASS 34 TO SABS 791) SHALL BE USED.
 - UNLESS INSTRUCTED OTHERWISE ALL MANHOLE COVERS IN OPEN AREAS SHALL BE PRECAST CONCRETE.