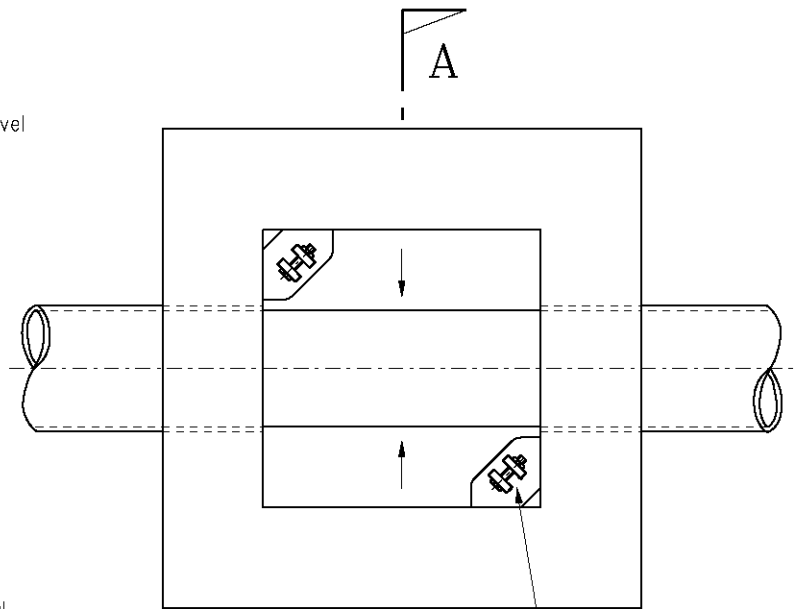


Notes:

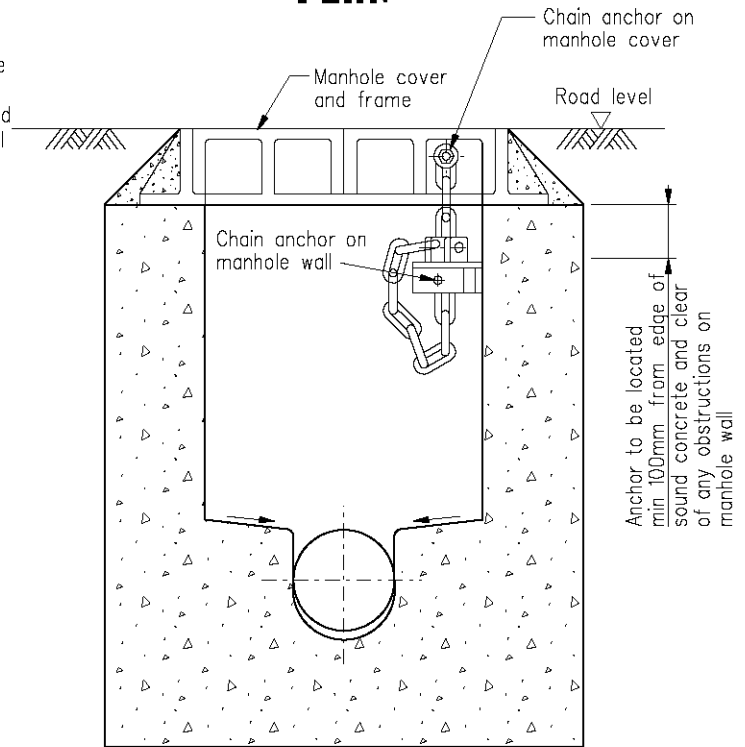
1. All dimensions are in millimetres.
2. Chain length to be adjusted on site to allow the cover to be lifted and moved sideways to allow clear access to the manhole and not to sag lower than the crown level of pipes to avoid trapping rubbish and cause choking.
3. Detail shown is for DSD standard manhole Type E, and standard double triangular manhole cover, which are the most commonly used. Detail may be adapted for different type of manhole and cover.
4. Chain to be Grade 80 alloy steel chain.
5. Anchor chain and fixing to be liberally coated with grease after installation and at each subsequent opening to reduce the rate of corrosion.

Notes for steelwork:

1. The works shall comply with the latest edition of General Specification for Civil Engineering Works, unless specified otherwise.
2. All steelwork shall be Grade 43 to BS 4360 : 1990 unless otherwise stated.
3. Welding of steel shall be in accordance with BS 5135 : 1984.
4. Wire wool and wire brushes should be used to clean surfaces both before and after welding. All exposed butt joints shall be ground smooth and buffed. The direction of grinding shall follow the grain pattern.
5. After fabrication all steel work (except stainless steel) is to be hot-dip galvanized in accordance with BS EN ISO 1461 to the appropriate coating weight. Surfaces shall be properly prepared removing all rust, oil, paint and other surface contaminants, mill scale and welding slag shall be removed by grit blasting. Cut faces and outside arrises shall be ground smooth. The size and position of any vent holes required by the galvanizer, together with his proposed method of re-sealing, shall be notified to the Engineer for his approval.
6. Fasteners for steelwork shall be ISO metric hexagonal bolts, studs and nuts to BS 4190 as appropriate with compatible washers. Each fastener shall be complete with either a locking nut or spring washer.
7. The diameter of a bolt hole shall be 2mm larger than the nominal diameter of the bolt, unless indicated otherwise.
8. Stainless steel bolts, nuts, and washer shall be insulated from galvanized steel by nylon or other approved non-metallic washers unless shown otherwise.
9. Material and workmanship shall comply with BS 5950 : Part 5 : 2001.
10. Sleeve for bolts shall be uPVC and shall have a nominal wall thickness not exceeding 2mm.



PLAN



SECTION A-A

	New Issue		Jan 09
REF.	REVISION	SIGNATURE	DATE

**COVER RESTRAINT FOR
DRAINAGE MANHOLES
(SHEET 1 OF 2)**

HIGHWAYS DEPARTMENT

REFERENCE

DRAWING No.

CAD

SCALE

1 : 15

H 3145