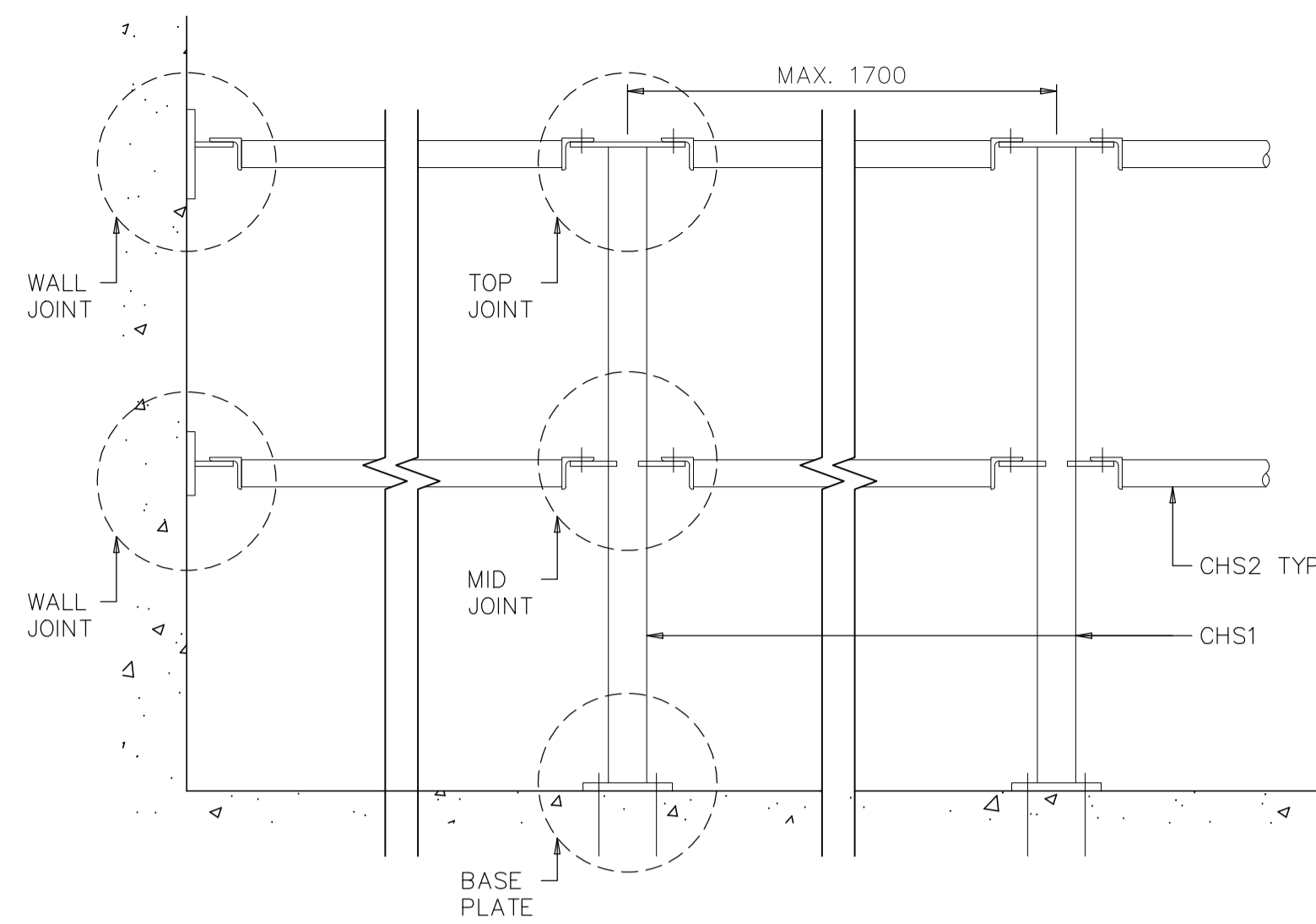
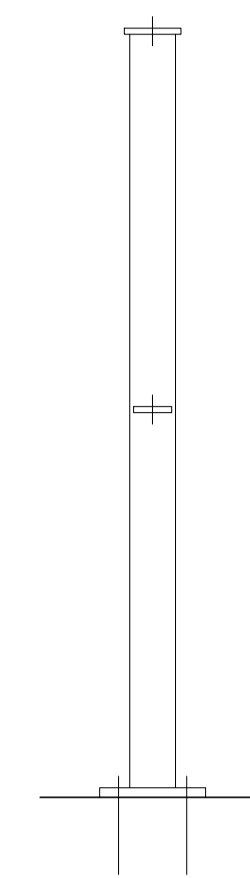


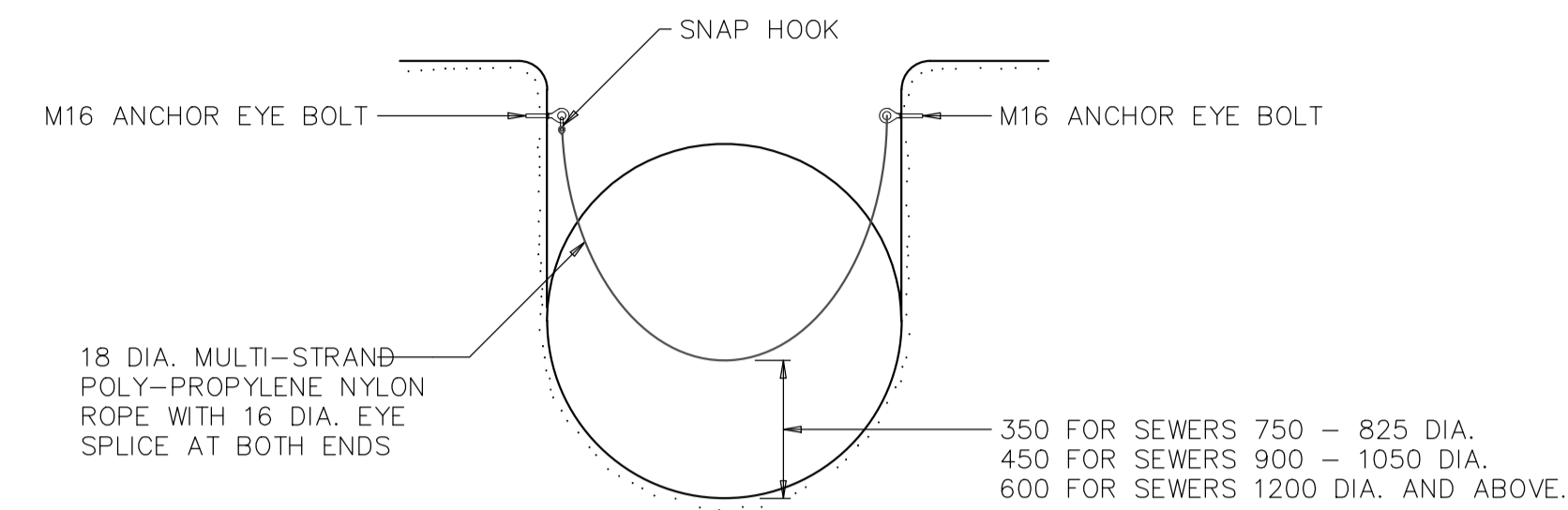
OPENING FOR ACCESS
SCALE 1 : 10



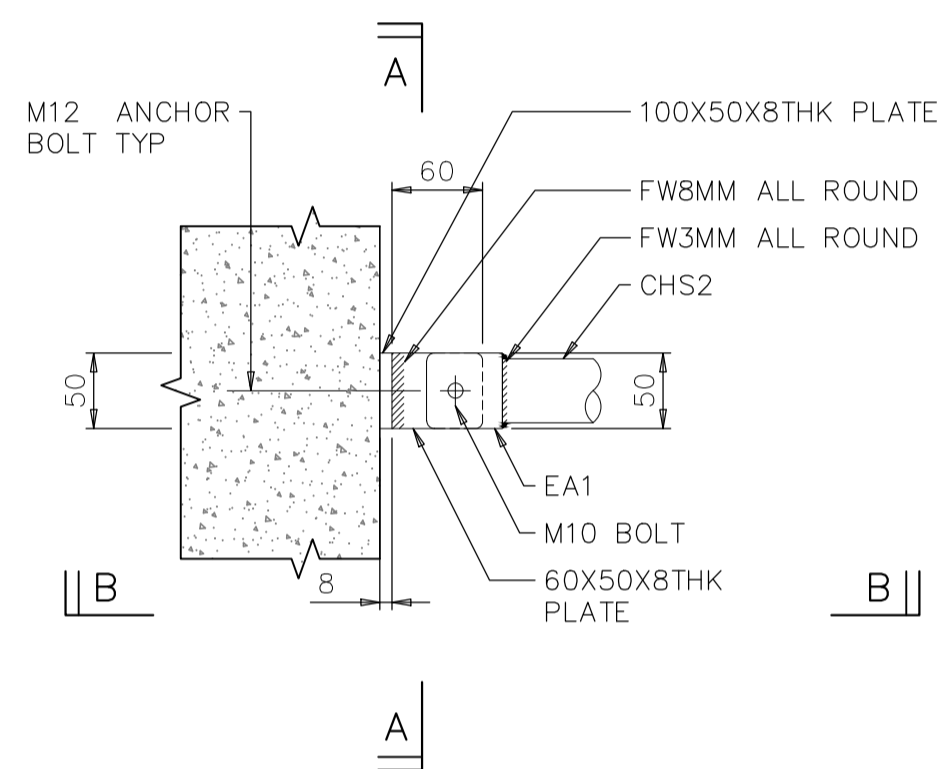
TYPICAL HANDRAIL ARRANGEMENT
SCALE 1 : 10



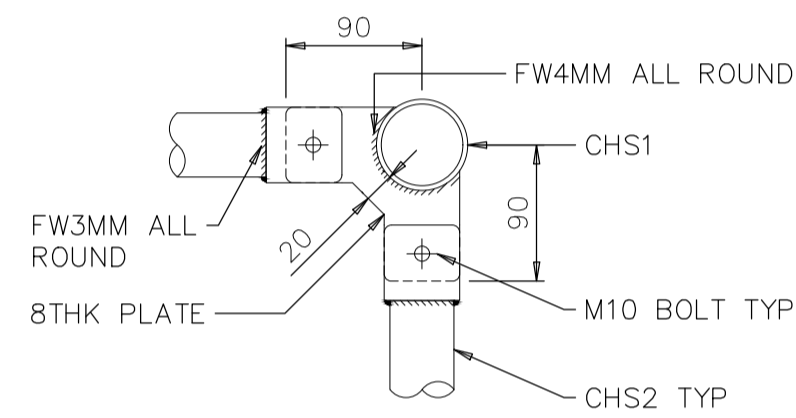
SIDE ELEVATION
SCALE 1 : 10



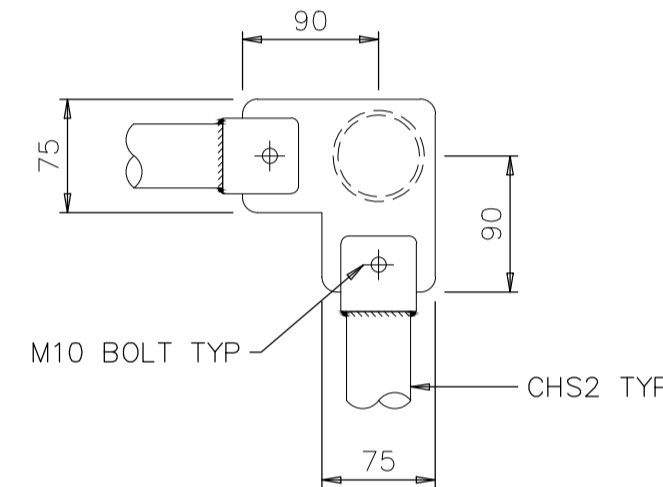
ARRANGEMENT OF SAFETY ROPE FOR MAIN SEWER IN MANHOLE BENCHING
SCALE 1 : 20



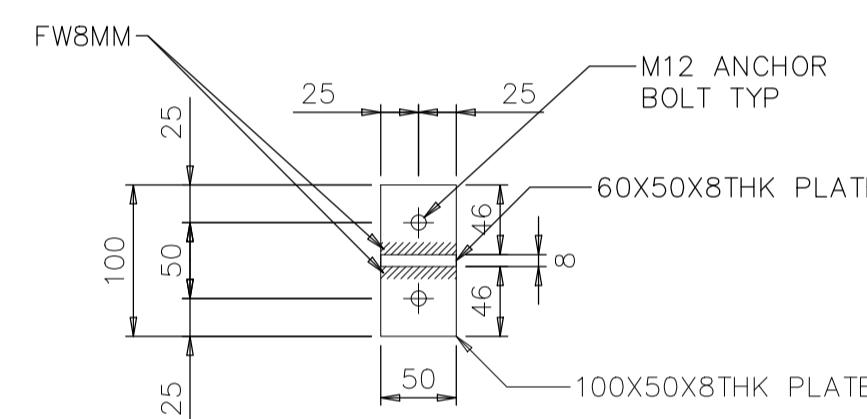
TYPICAL PLAN OF WALL JOINT
SCALE 1:5



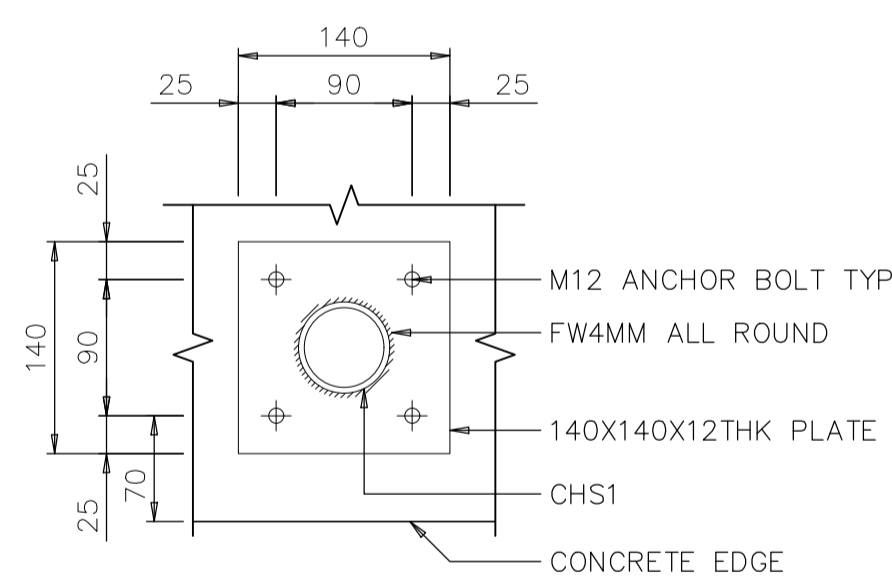
TYPICAL PLAN OF 90° MID JOINT
SCALE 1:5



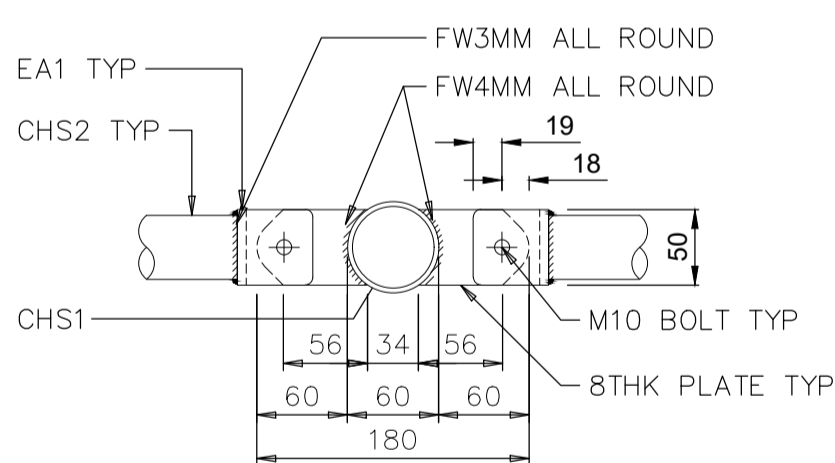
TYPICAL PLAN OF 90° TOP JOINT
SCALE 1:5



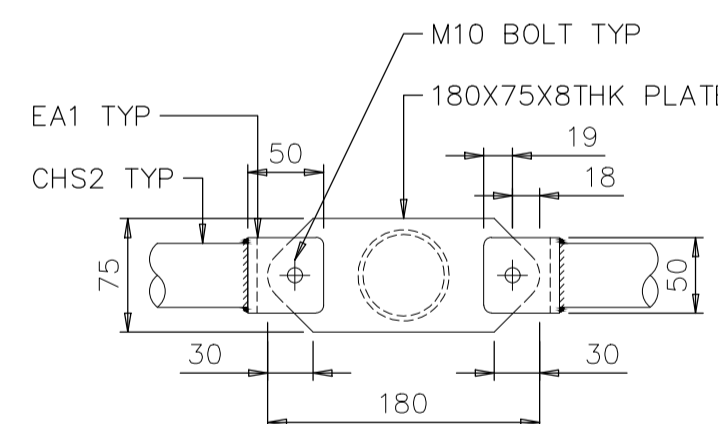
SECTION A-A
SCALE 1 : 5



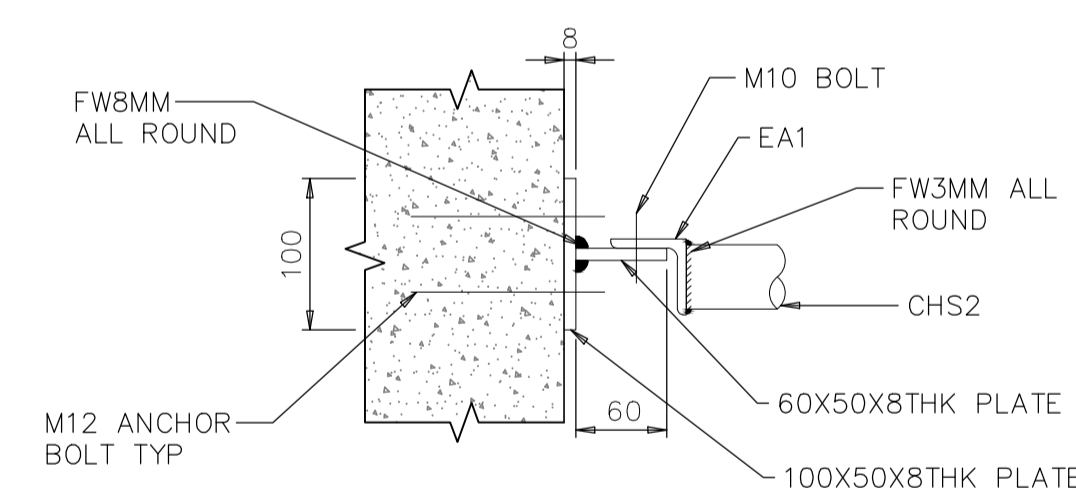
SECTIONAL PLAN C-C
SCALE 1:5



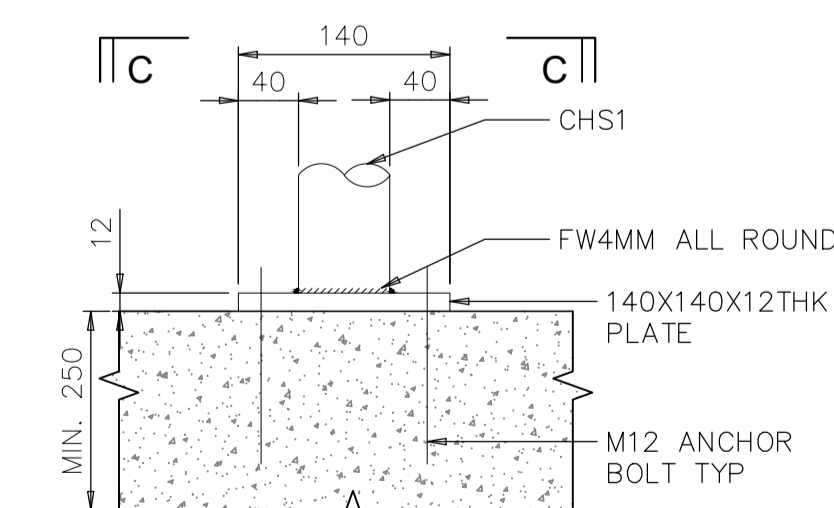
SECTIONAL PLAN D-D
SCALE 1:5



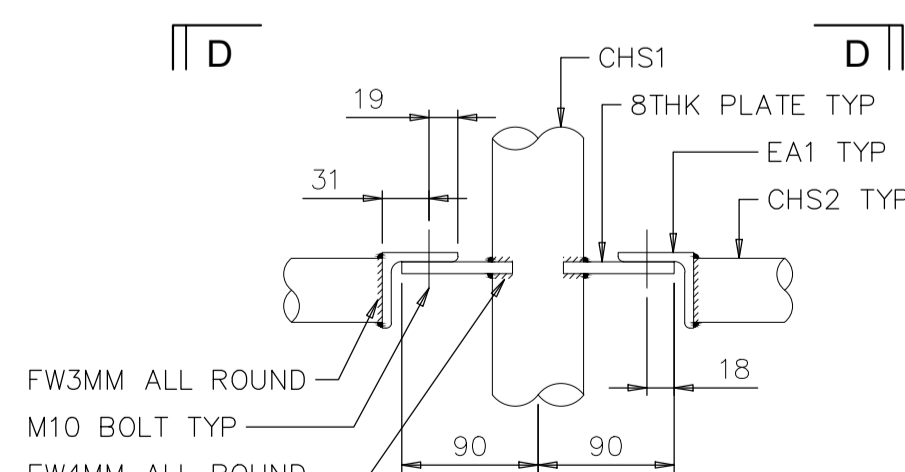
SECTIONAL PLAN E-E
SCALE 1:5



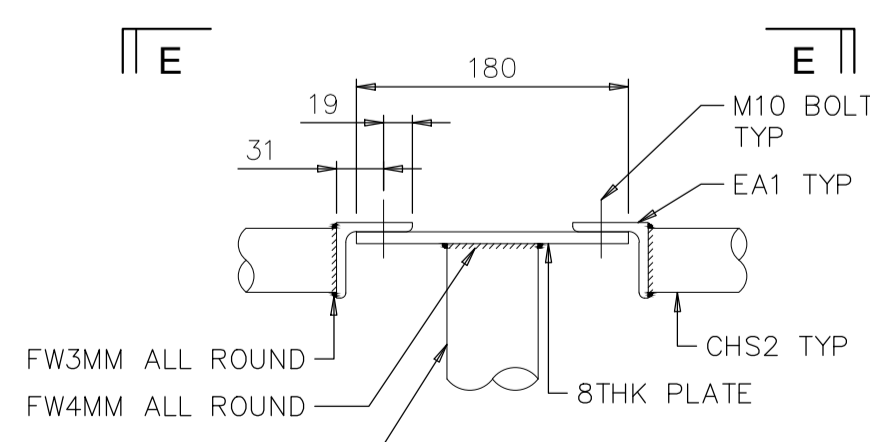
SECTION B-B
SCALE 1 : 5



BASE PLATE DETAIL
SCALE 1:5



MID JOINT DETAIL
SCALE 1:5



TOP JOINT DETAIL
SCALE 1:5

ELEMENT	SECTION/SIZE
CHS1	CHS 60.3X3.9THK
CHS2	CHS 42.4X3.2THK
EA1	EA 50X50X6THK

NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- THERE SHALL BE NO SHARP EDGE ON EXPOSED SURFACES.
- ALL CONCRETE SHALL BE MINIMUM GRADE C32/40.
- ALL STEEL MEMBERS AND COMPONENTS INCLUDING BOLTS, ANCHOR BOLTS, ANCHOR EYE BOLTS, NUTS, WASHERS, SHACKLES, CHAINS, SNAP HOOKS, ETC SHALL BE STAINLESS STEEL 316.
- ALL BOLTS SHALL BE TIGHTENED WITH DOUBLE NUTS OF EQUAL THICKNESS.
- ALL WELDS SHALL BE STRUCTURAL TYPE MADE BY APPROVED WELDING TECHNIQUE TO GIVE SOUND, STRONG WELDS WITH A MAXIMUM THICKNESS NOT EXCEEDING THE THICKNESS OF JOINTING MEMBERS.
- ALL CORNER FILLETS SHOWN SHALL BE SMOOTH AND HAVE A MINIMUM RADIUS OF 2MM
- ALL ANCHOR BOLTS FOR RAILINGS SHALL BE M12 CHEMICAL/ MECHANICAL ANCHOR BOLTS EMBED MINIMUM 100 MM, WITH MINIMUM TENSILE CAPACITY 15KN, SHEAR CAPACITY 5KN. ALL ANCHOR BOLTS SHALL HAVE MINIMUM 60MM DISTANCE TO CONCRETE EDGE. BOLTS SHALL COMPLY WITH THE REQUIREMENTS SET BY THE BOLT MANUFACTURER.
- ALL SHACKLES, CHAINS, AND SNAP HOOKS FOR RAILING SAFETY CHAINS SHALL HAVE A MINIMUM WORKING LOAD OF 1.35 KN.
- ALL POLY-PROPYLENE NYLON ROPES, ANCHOR EYE BOLTS AND SNAP HOOKS FOR BENCHING SAFETY ROPE SHALL HAVE A MINIMUM WORKING LOAD OF 1.35 KN.
- ALL SNAP HOOKS SHALL BE PROPORTIONALLY SIZED TO ALLOW EASY HOOKING ONTO HANDRAIL BOLT HOLES OR SAFETY ROPE ANCHOR EYE BOLTS.

A	1) THICKNESS OF MEMBERS ADDED.
	2) VERTICAL MOUNTING STANDARD'S BASE DIMENSION REVISED.
	3) WALL BRACKET DIMENSION REVISED.
	4) STAINLESS STEEL GRADE ADDED.
	5) STAINLESS STEEL SAFETY CHAIN REMOVED.
	6) BASE OF DETACHABLE STANDARD DIMENSION REVISED.
B	7) BASE OF STANDARD (SIDE MOUNTING) DIMENSION REVISED.
	8) NOTE REVISED.
	1) NOTE REVISED.
	2) DESIGN AND MATERIAL REVISED

AMENDMENTS

ISSUED : JAN 2019

LAST REVIEWED : MAY 2023

SCALES

AS SHOWN

DETAILS OF HANDRAIL AND SAFETY CHAIN/ROPE