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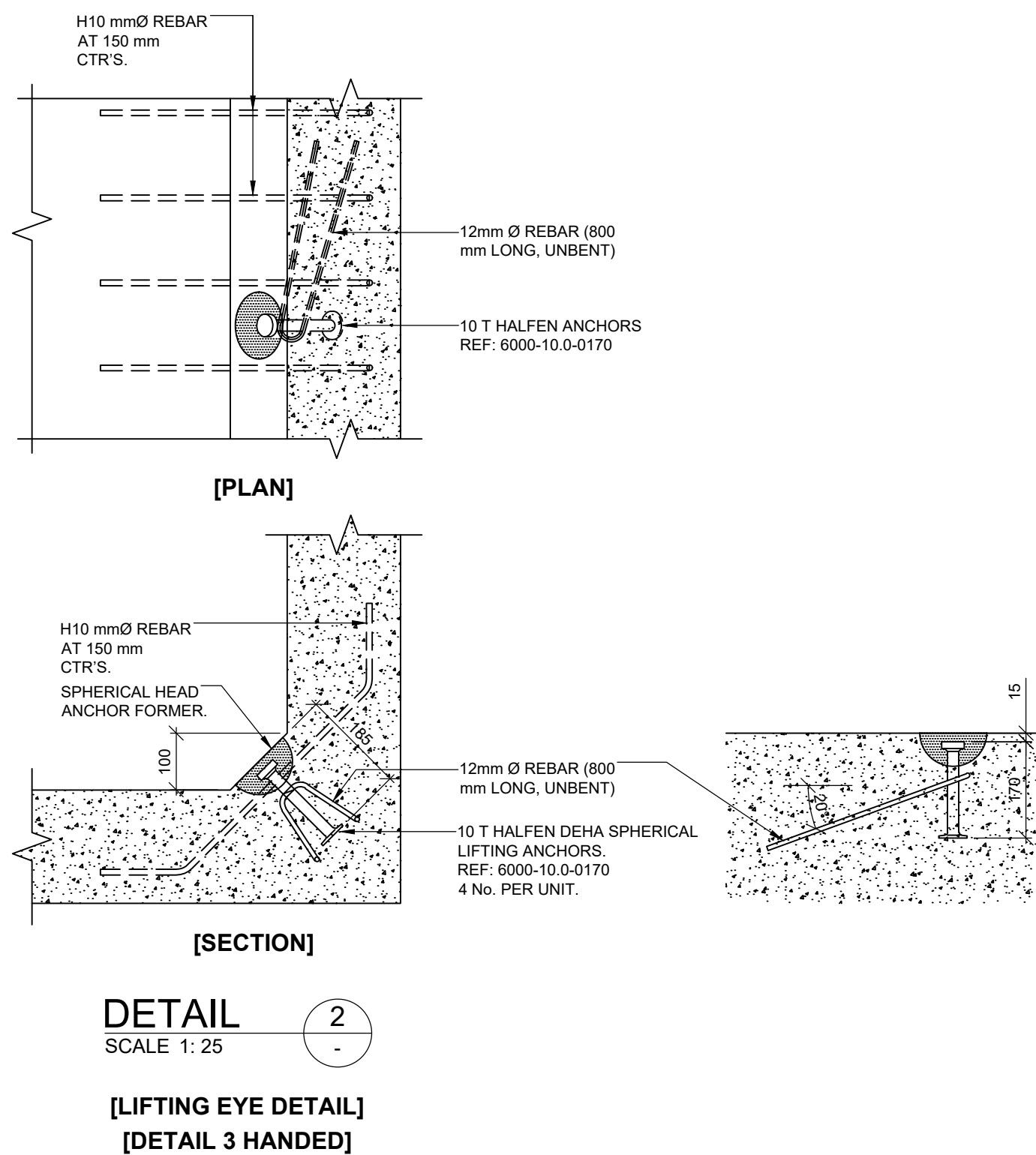
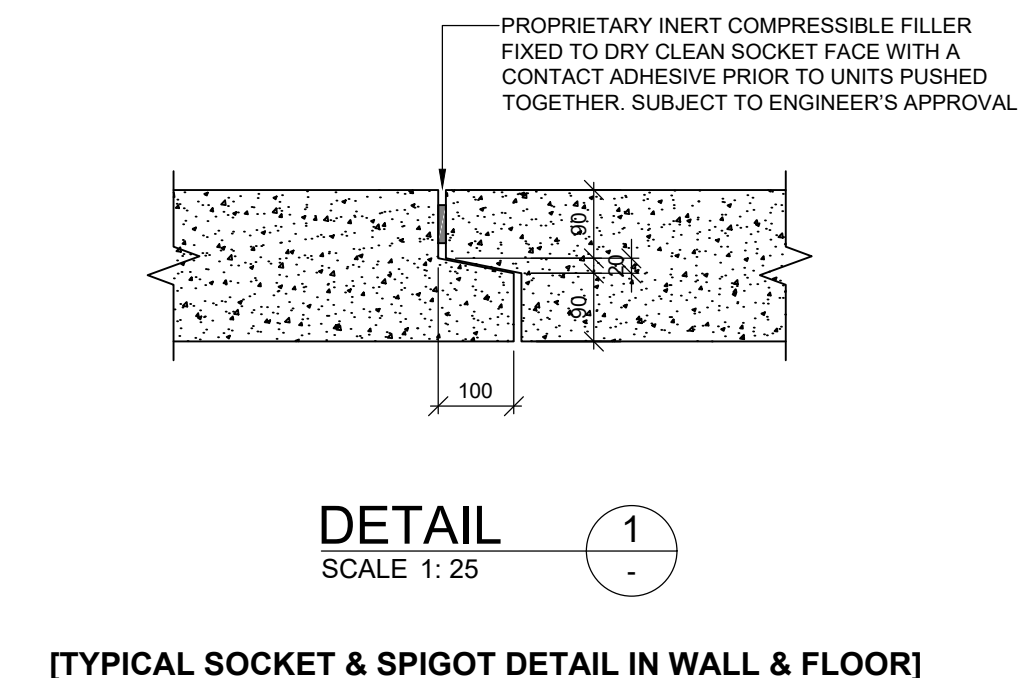
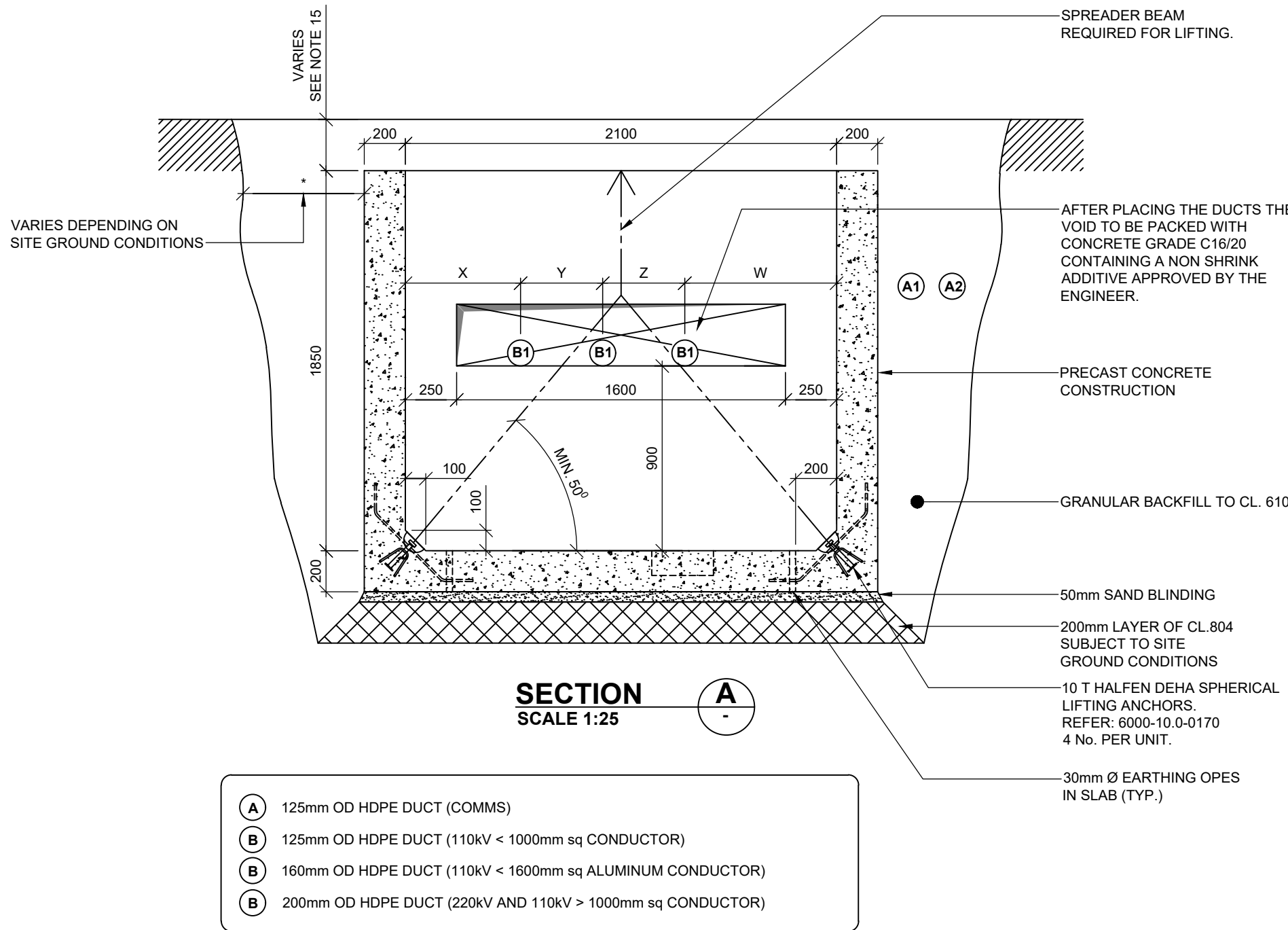
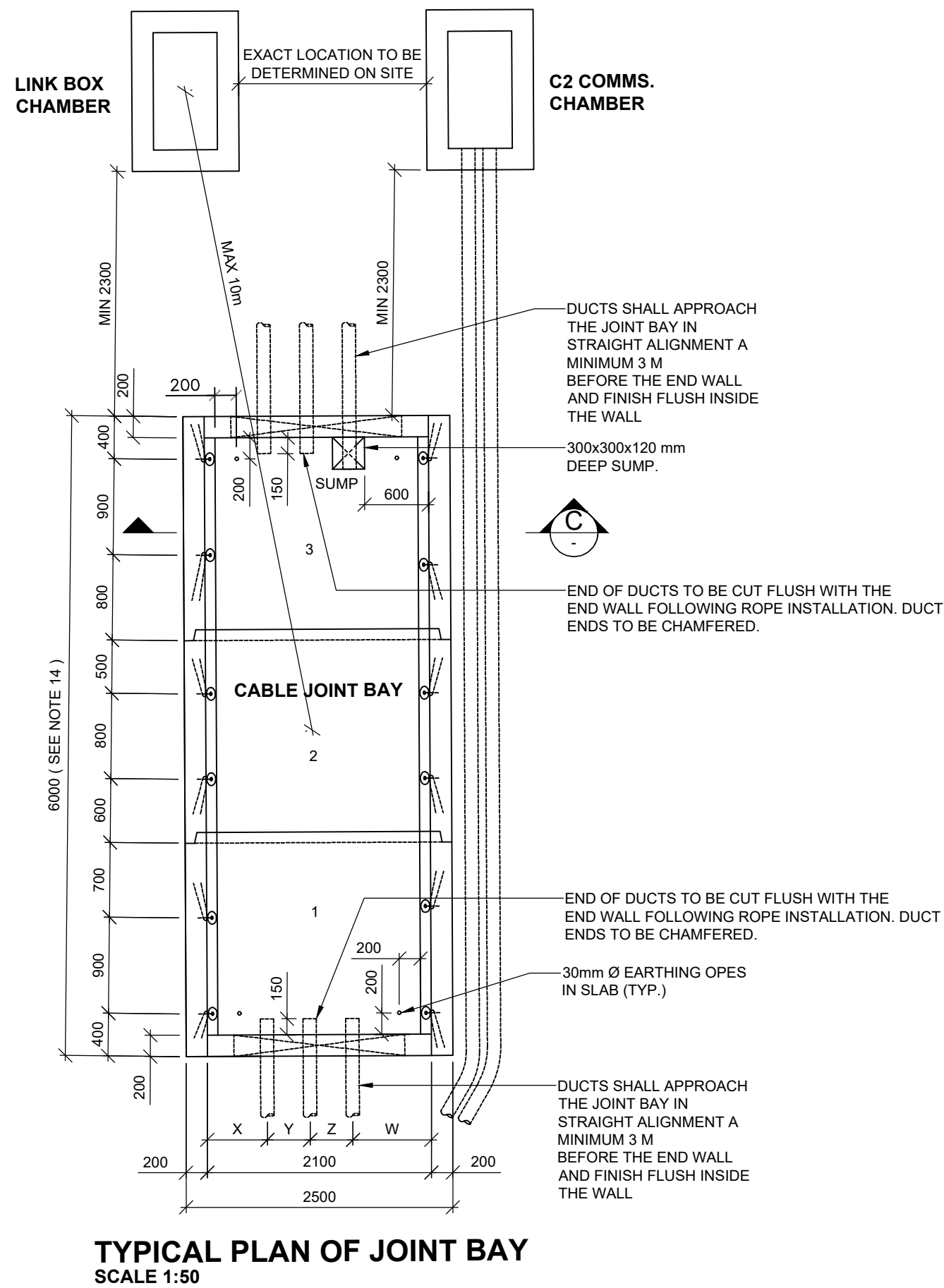
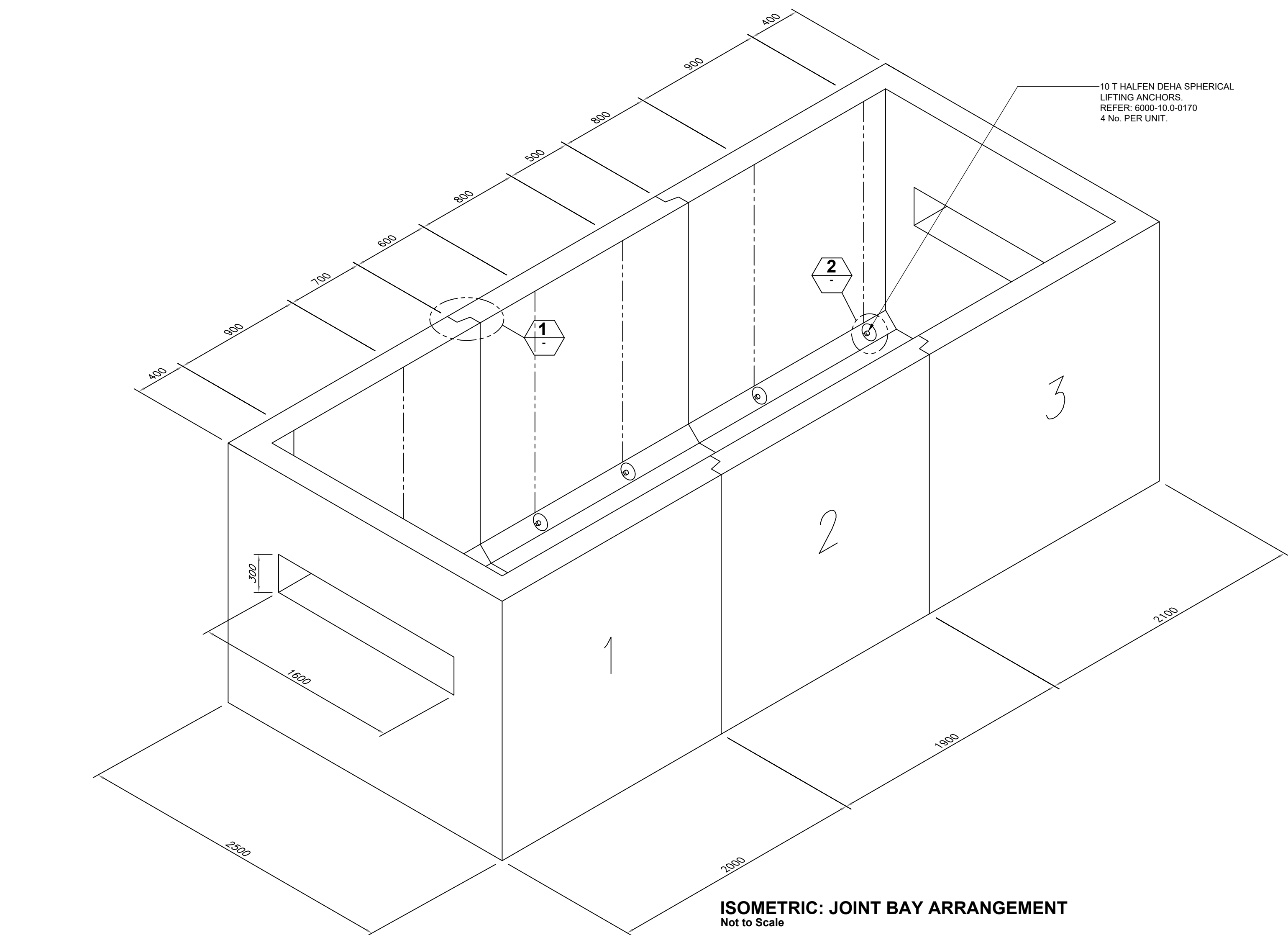


TABLE 1

CONCRETE SPECIFICATION TO I.S. EN 206-1		
	BLINDING & MASS CONCRETE, DRAINAGE PIPE & MANHOLE SURROUNDS	FOUNDATIONS & WALLS
EXPOSURE CLASS	X0	XC2, XA2
MIN. CEMENT CONTENT (kg/m³)	240	340
MAX. WATER/CEMENT RATIO	-	0.50
CEMENT TYPE TO I.S. EN 197-1	CEM 1 N	CEM 1 N
CHLORIDE CONTENT CLASS	Cl. 1.0	Cl. 0.40
MAX. AGGREGATE (mm)	10	20
MIN. COVER (Cmin) (mm)	-	40
*COMPRESSIVE STRENGTH CLASS	C16/20	C30/37

NOTES: 1. *C16/20 to be read as follows: 16 - Refers to min. characteristic cylinder strength (N/mm²). 20 - Refers to min. characteristic cube strength (N/mm²).
2. Design working life to be 50 years minimum.

TABLE 2- DUCT SEPARATION

	X	Y	Z	W
110 kV	560	400	400	740
220 kV	375	675	675	375

TABLE 3

CABLE TYPE	MIN. JOINT BAY LENGTH (m)
110 KV 1000 mm² AL	6
110 KV 1000 mm² CU	6
110 KV 1600 mm² AL	6
110 KV 1600 mm² CU	7.9
220 KV 1600 mm² AL	7.9
220 KV 1600 mm² CU	7.9
220 KV 2500 mm² AL	7.9
220 KV 2500 mm² CU	7.9

GENERAL NOTES:

- ALL PRECAST CONCRETE ELEMENTS TO BE MANUFACTURED TO B.S. EN 13369 2004 "COMMON RULES FOR PRECAST CONCRETE PRODUCTS".
- LIFTING INSERTS TO BE DESIGNED & INSTALLED TO PD CEN/TR 15728:2008 DESIGN AND USE OF INSERTS FOR LIFTING AND HANDLING OF PRECAST CONCRETE ELEMENTS".
- SPECIFIED LIFTING INSERTS HAVE A S.W.L. OF 10 TONNE.
- LOCATION & SPECIFICATION OF LIFTING INSERTS ARE ASSUMED TO FACILITATE DEMOLDING AND HANDLING IN PRECAST MANUFACTURING FACTORY. IT IS THE RESPONSIBILITY OF THE PRECAST MANUFACTURER TO NOTIFY THE ESBI ENGINEER IF THESE ARE UNSUITABLE FOR HIS MANUFACTURING METHODOLOGY. ESBI ENGINEER TO BE INFORMED OF ANY ALTERNATIVE LIFTING LOCATIONS FOR FACTORY HANDLING & DEMOLDING.
- CONCRETE TO HAVE A MINIMUM STRENGTH OF 30 N/mm² PRIOR TO HANDLING OR DEMOULDING.
- MAIN CONTRACTOR TO ENSURE THAT A METHOD STATEMENT AND RISK ASSESSMENT INCLUDING A LIFTING PLAN, IS PRODUCED FOR INSTALLATION AND ARE AVAILABLE TO ESBI ENGINEER FOR REVIEW IF REQUESTED. LIFTING PLAN TO INCORPORATE REQUIREMENTS OF LIFTING INSERTS AND LIFTING LOOP EYES.
- A MINIMUM LIFTING SLING ANGLE OF 50° TO THE HORIZONTAL IS REQUIRED.
- A LIFTING SYSTEM WHICH ENSURES ALL LIFTING POINTS TAKE ON AN EQUAL LOAD IS REQUIRED.
- HALFEN DEHA SPHERICAL LIFTING ANCHORS TO BE USED AS SPECIFIED. ANY DEVIATION FROM THIS MUST BE NOTED TO ESBI ENGINEER BY PRECAST MANUFACTURER. LIFTING INSERTS TO BE INSTALLED AS PER MANUFACTURERS' GUIDELINES AND IN ACCORDANCE WITH PD CEN/TR 15728:2008.
- FORMWORK FOR PRECASTING TO BE OF A MINIMUM STANDARD OF VARNISHED WOODEN MOULD WITH PLANED BOARDS.
- COVER TO REINFORCEMENT TO BE 40mm.
- CONCRETE TO BE GRADE C30/37 AS SPECIFIED IN TABLE 1.
- ALL CONCRETE TO BE IN ACCORDANCE WITH I.S. EN 206-1: 2013 WITH THE MIX DESIGNS SHOWN IN TABLE 1.
- FOR 7.9 m JOINT BAY INSERT 1 No. ADDITIONAL PRECAST SECTION 2 FOR 9.8 m JOINT BAY INSERT 2 No. ADDITIONAL PRECAST SECTIONS 2
- THE DEPTH FROM GROUND/ROAD LEVEL TO THE TOP OF THE CONCRETE WALL SHALL BE:
A) 500 mm — IN CULTIVATED FIELDS AND GROSSED LANDS
B) 300 mm — IN PAVED ROADS AND GRASS VERGES
C) 350 mm — IN PAVED ROADS IN DUBLIN CITY COUNCIL ROADS AND GRASS VERGES.
- LINK BOX CHAMBER TO BE POSITIONED AT THE EDGE OF OR OFF ROAD.
- ALLOWABLE BEARING PRESSURE TO BE AT LEAST 185 kPa.
- FOR HIGHLY AGGRESSIVE CHEMICAL ENVIRONMENT TABLE 1 IS NOT APPLICABLE. CONSULT WITH ESBI ENGINEER FOR BESPOKE DESIGN.
- JOINT BAY TO BE UNIFORMLY BACKFILLED IN LAYERS NOT EXCEEDING 300 mm THICK.
- WHERE JOINT BAY IS TO BE INSTALLED ADJACENT TO TRAFFICKED LANE, A 1 m WIDE LATERAL SAFETY ZONE IS TO BE PROVIDED TO SATISFY DESIGN LOADING ASSUMPTIONS.
- CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC MANAGEMENT, INCLUDING WHERE NECESSARY SAFETY BARRIERS.
- FOR REQUIRED JOINT BAY SIZE REFER TO TABLE 3.

0	29.06.26	ISSUED FOR PLANNING PERMISSION	P.V.	I.B.
REV	DATE	DESCRIPTION	BY	APP

PROJECT: STEEVEN'S LANE 110KV GIS SUBSTATION

TITLE: JOINT BAY GENERAL ARRANGEMENT AND DETAILS

CLIENT: **ESB NETWORKS**

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