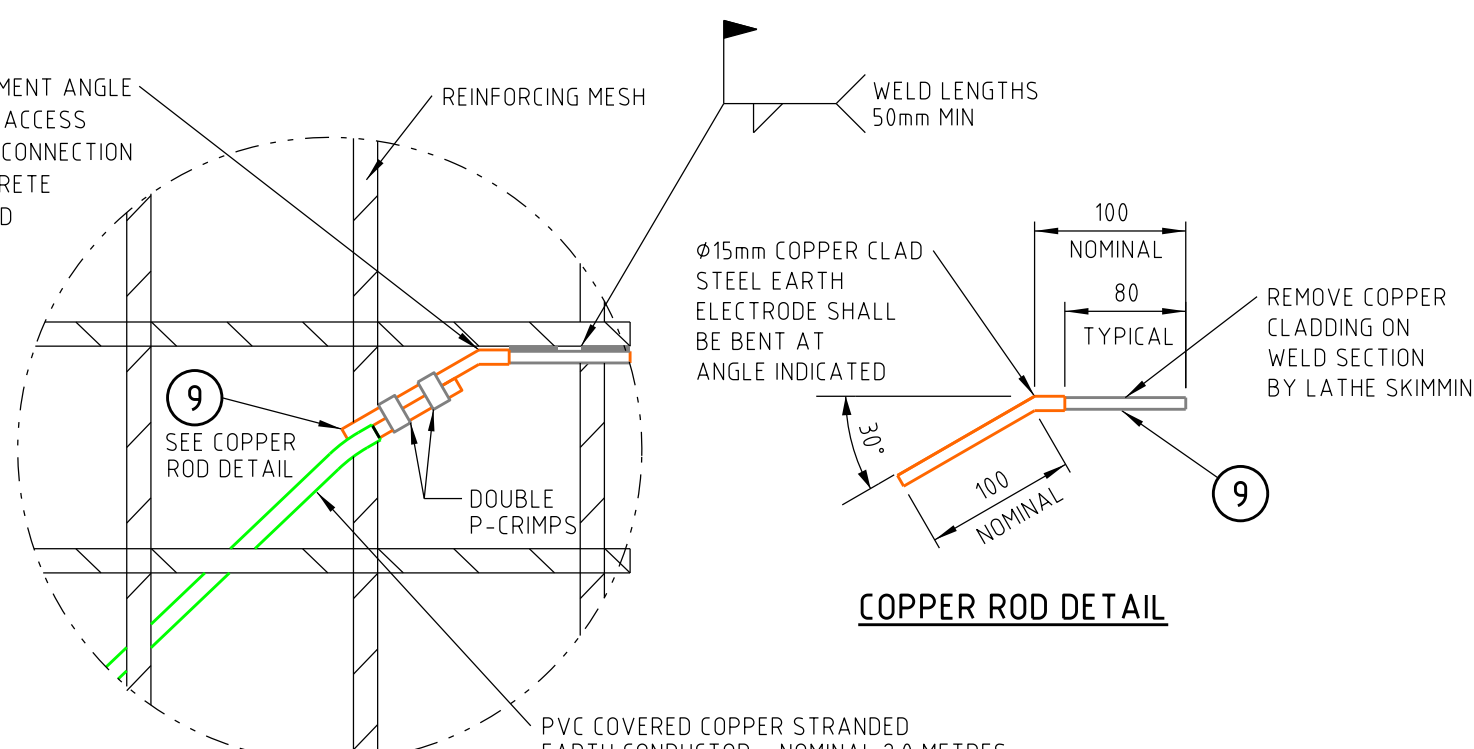
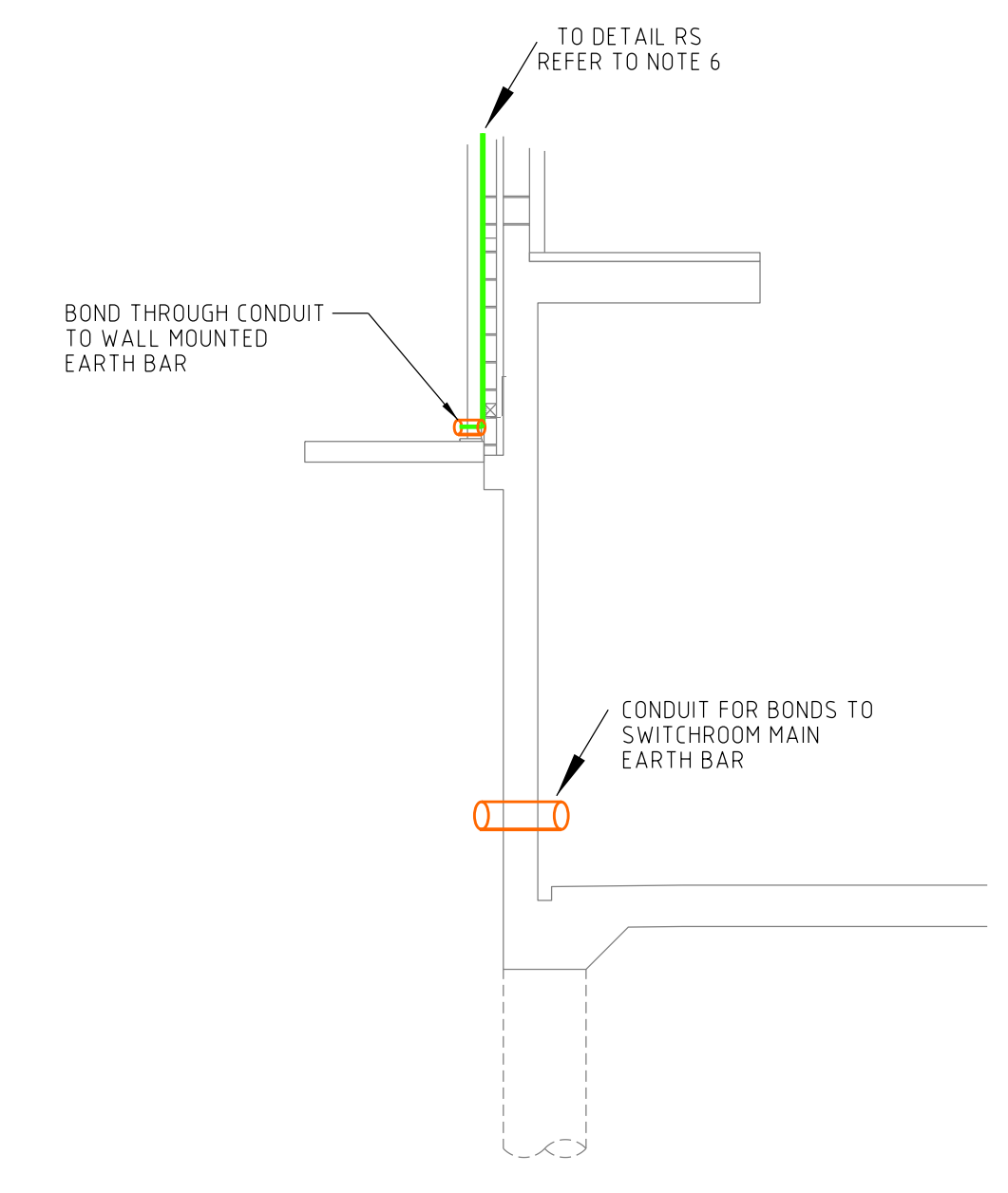


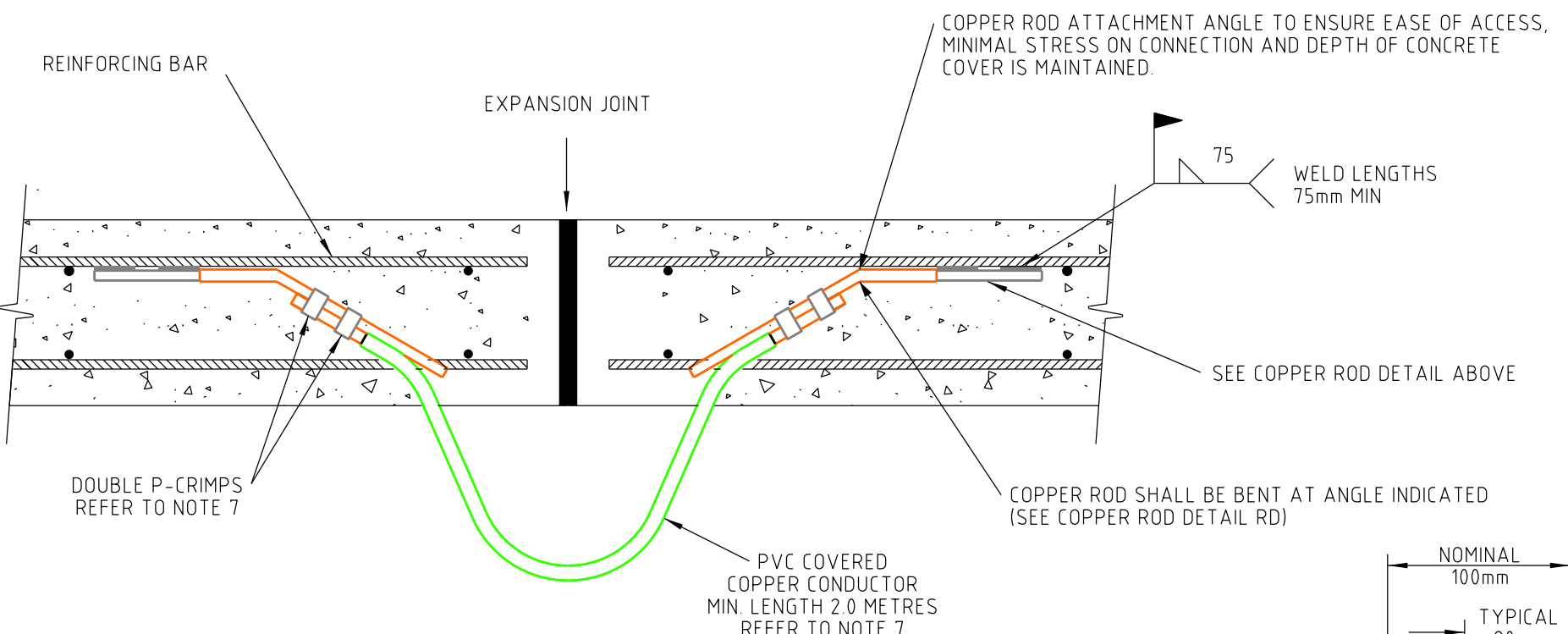
**EMBEDDED CONCRETE BONDING USING COPPER ROD DETAIL (D1)**



**CRIMPED & WELDED CONNECTION TO WELDED REINFORCING MESH DETAIL (DM)**

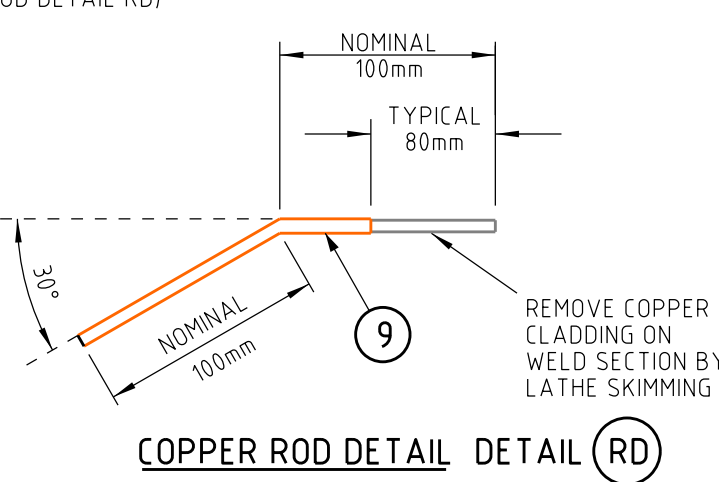


**CONDUIT THROUGH SWITCHROOM WALL DETAIL (RB)**

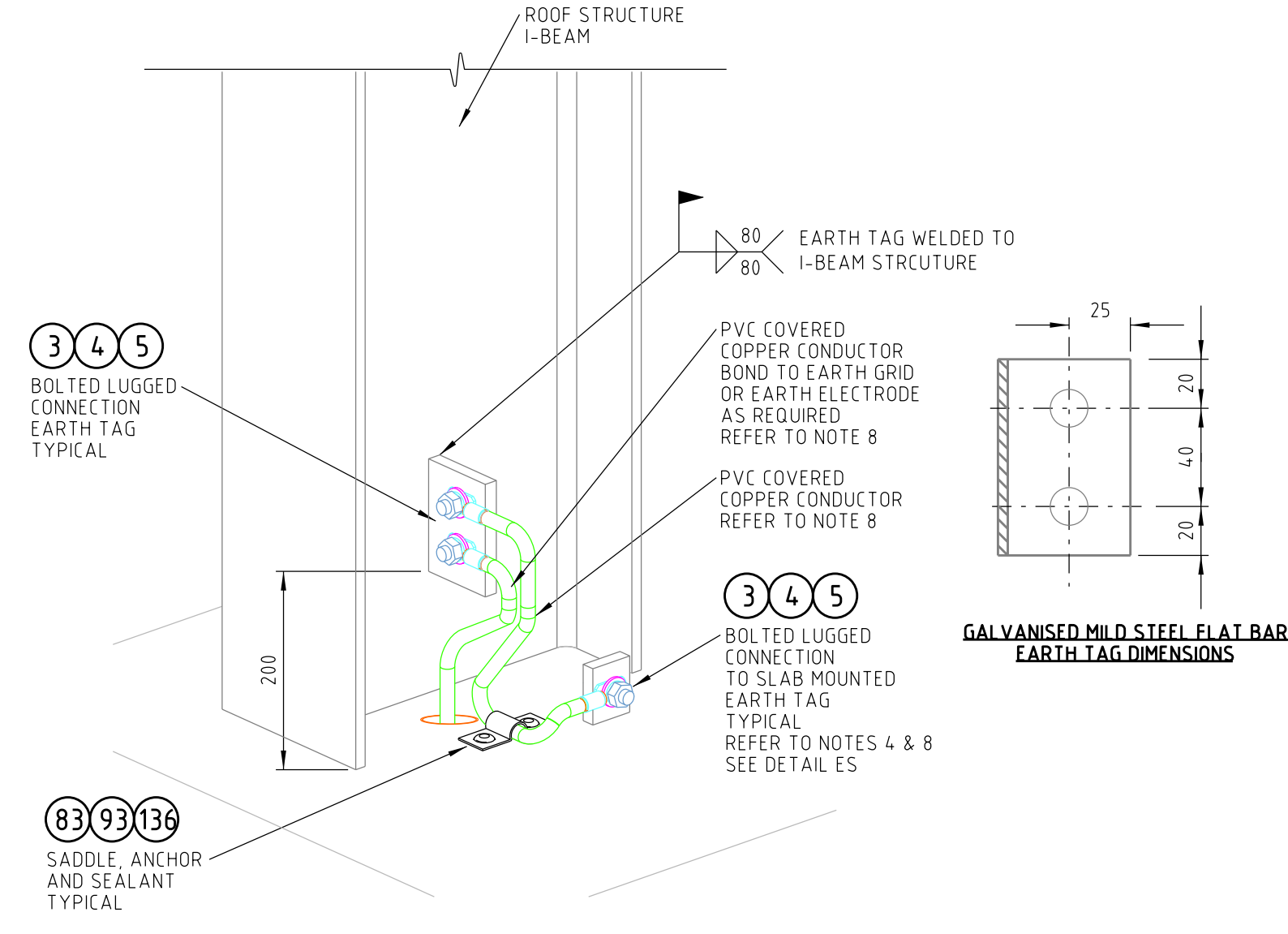


**DIRECT BURIED - CONCRETE EXPANSION JOINT EQUIPOTENTIAL BONDING USING COPPER ROD DETAIL (D2)**

TYPICAL INSTALLATIONS BOTH SIDES

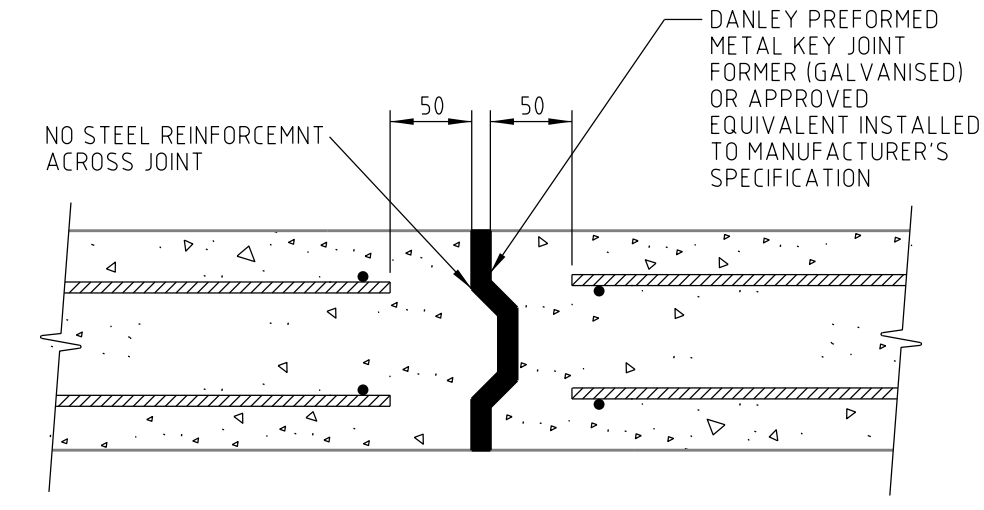


**COPPER ROD DETAIL (RD)**

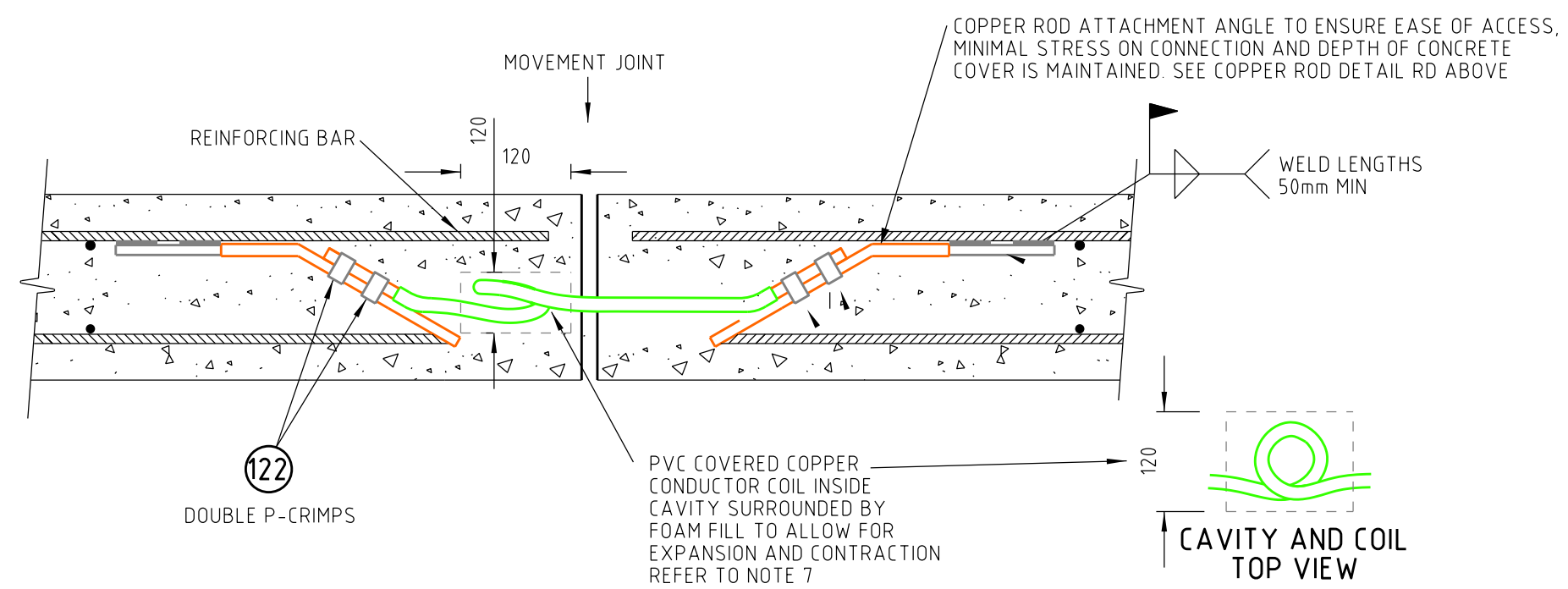


**EARTH TAG WELDED TO ROOF STRUCTURE I-BEAM BOND TO SLAB MOUNTED EARTH TAG AND EARTH GRID DETAIL (EE)**

MATERIAL: 40 x 12 FL MILD STEEL, HOT DIP GALV.

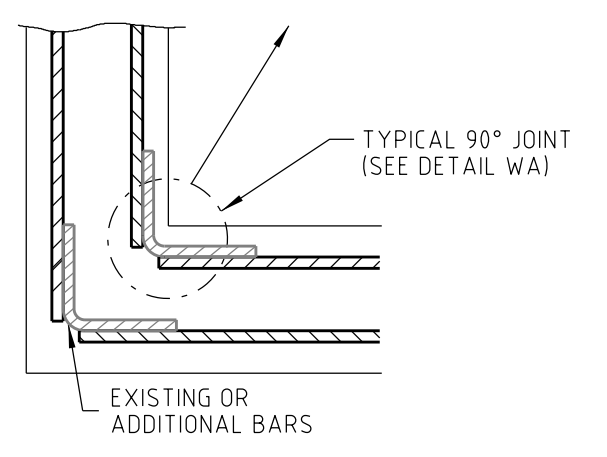
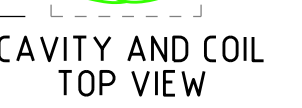


**ROADWAY ISOLATION USING PREFORMED METAL KEY JOINT DETAIL (RI)**

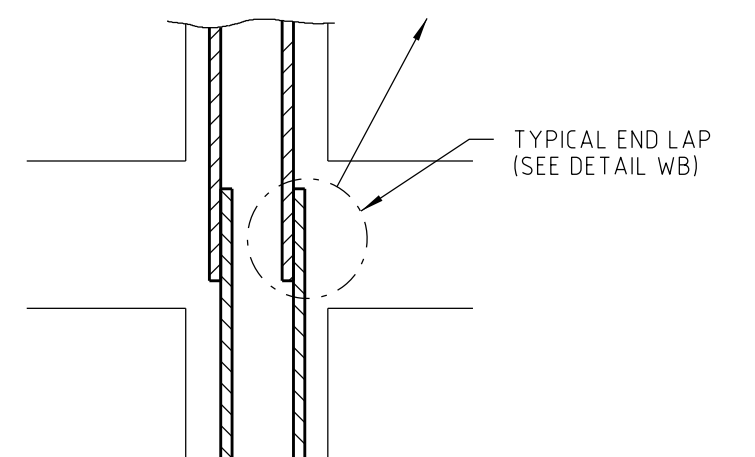


**DIRECT BURIED EQUIPOTENTIAL EMBEDDED CONCRETE BONDING USING COPPER ROD (FOR CONCRETE MOVEMENT JOINT) DETAIL (D3)**

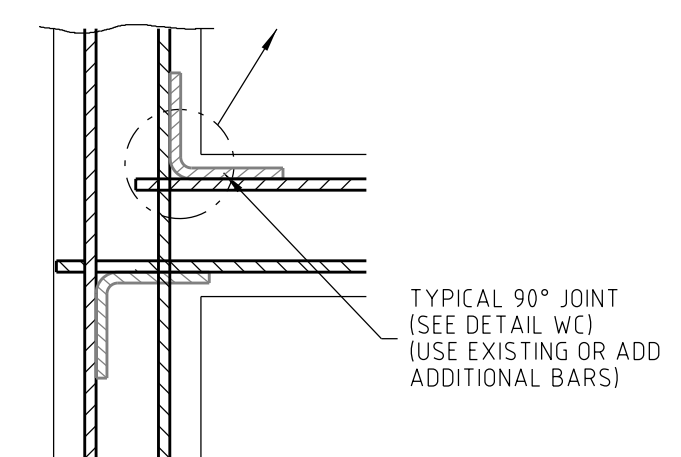
NOTE: TYPICAL INSTALLATIONS BOTH SIDES TWO BONDS ACROSS EACH JOINT REQUIRED



**SWITCHROOM BUILDING - EMBEDDED EARTHING DOUBLE WELDED 90° CONNECTION IN REINFORCING BARS (TO FORM EARTH RING) DETAIL (WD)**



**SWITCHROOM BUILDING - EMBEDDED EARTHING DOUBLE WELDED OVERLAP CONNECTION IN REINFORCING BARS (TO FORM EARTH RING) DETAIL (WB)**



**SWITCHROOM BUILDING - EMBEDDED EARTHING DOUBLE WELDED INTERSECTION CONNECTION IN REINFORCING BARS (TO FORM EARTH RING) DETAIL (WC)**

**NOTES:**

- THE TOP LAYER OF CONCRETE REINFORCEMENT BARS ARE TO BE WELDED TO FORM A CONTINUOUS ELECTRICAL PATH KNOWN AS PERIMETER EARTH RING. ADD EXTRA BAR TO FACILITATE THE WELDING OF PERIMETER EARTH RINGS WHERE NECESSARY.
- WHERE PERIMETER EARTH RING IS WELDED IN CONCRETE TO FORM EARTHING FOR STRUCTURES AND EQUIPMENT, IT IS TO BE BONDED TO THE EARTH GRID.
- CONNECTIONS TO CONCRETE SLAB REINFORCEMENT VIA EARTH TAGS OR WELDED CRIMPED CONNECTION WELDED TO PERIMETER EARTH RING. THESE WELDS ARE TO BE INSPECTED & TESTED BY THE DESIGNER PRIOR TO POURING CONCRETE (48hrs NOTICE REQUIRED).
- REINFORCING TO BE SOLIDLY WELDED FROM CONCRETE PILES TO BASEMENT AND FROM BASEMENT TO GROUND FLOOR AT LOCATIONS SHOW.
- LOCATE EARTH TAGS ON BASEMENT CEILING, SLABS AND WALLS AT NOMINAL LOCATIONS ON SITE WITH DESIGNER.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING 236805 SHEETS 1 & 3
- FOR CONDUCTOR, CRIMP & LUG SIZES REFER TO SITE SPECIFIC EARTHING DESIGN DOCUMENT.

**NETWORK STANDARD**

ITEM NO.	ITEM	DESCRIPTION	SAP CODE	MANUFACTURER	STD ORDER QTY.
136	JOINT SEALANT	SKA FLEX PRO - CONCRETE GREY			
122	CONNECTOR COMPRESSION	CONNECTOR - 120mm <sup>2</sup> BURNDY STYLE VGHF CRIMP	H31681	PREFORMED LINE PRODUCTS (PLP)	Each
93	ANCHOR	MUSHROOM HEAD SPIKE - POWERS 5mm <sup>2</sup> 38mm STAINLESS STEEL GRADE 316 FOR FIXING UP TO 6mm MATERIALS TO CONCRETE OR BRICK; PACK OF 100	180045	POWERS MHS6MMSS	100 Pk.
83	ANCHOR FULL SADDLE	ANCHOR SADDLE - FULL SADDLE STAINLESS STEEL GRADE 316 (70mm <sup>2</sup> CABLE)		PREPAGES WHOLESALE CCLM10-316DS	
9	ELECTRODE ROD	ELECTRODE ROD - Ø15mm - 1800mm LONG ELECTROPLATED	H31631	ERCO 615860	Each
5	FASTENERS WASHER	FASTENERS - WASHER - M12 BELLEVILLE STAINLESS STEEL GRADE 304	175903	JAMES GLEN 3543	100 Pk.
4	FASTENERS WASHER	FASTENERS - WASHER - M12 FLAT STAINLESS STEEL GRADE 316	49429	JAMES GLEN 4620	100 Pk.
3	FASTENERS BOLT & NUT	FASTENERS - BOLT & NUT - M12 HEX STAINLESS STEEL GRADE 316	VARIOUS	VARIOUS	N/A

**MATERIALS LIST**

**Ausgrid**

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DATE: 26/11/14

PROJECT NUMBER: E&I NS  
PROJTRAK NUMBER: B1

EARTHING & INSULATION COORDINATION  
STANDARD CONSTRUCTION  
CIVIL WORKS  
GENERAL EMBEDDED EARTHING  
DETAILS

DRAWING No: 236805  
SHEET: 02  
AHD: 0

CAD DRAWING  
DO NOT MANUALLY REVISION  
R. R. E. N. D. R. E. N. L. S.