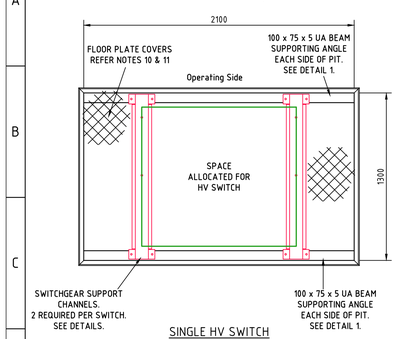
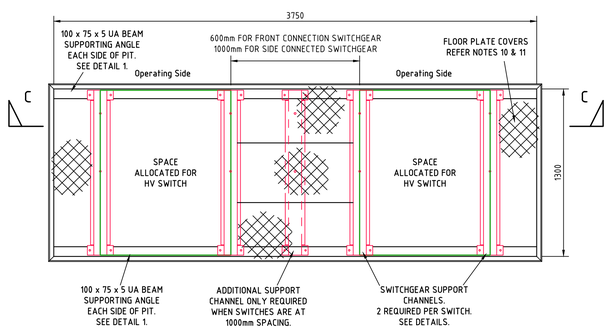
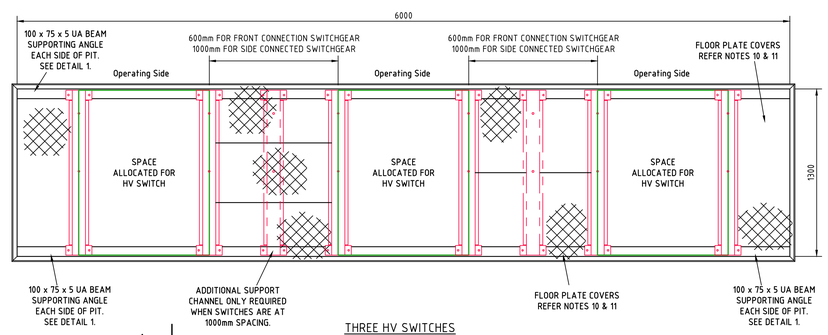


SINGLE HV SWITCH

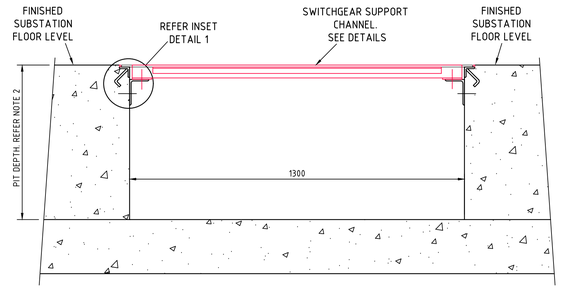


TWO HV SWITCHES

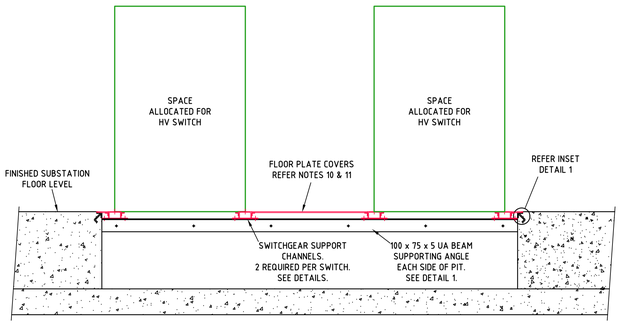


THREE HV SWITCHES

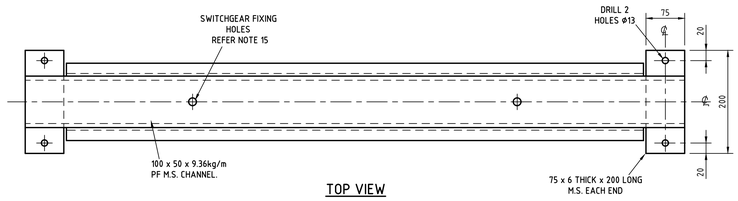
PLANS
FITOUT OF HV PIT
(INCLUDING HVC SUBSTATIONS)
SCALE 1:20



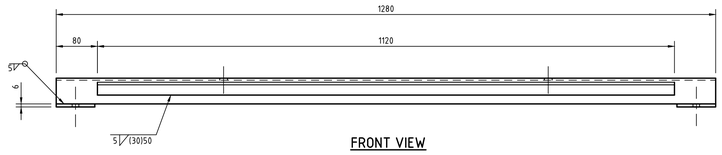
SECTION A-A
HV PIT CONSTRUCTION
SCALE 1:10



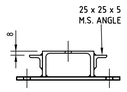
SECTION C-C
SCALE 1:20



TOP VIEW

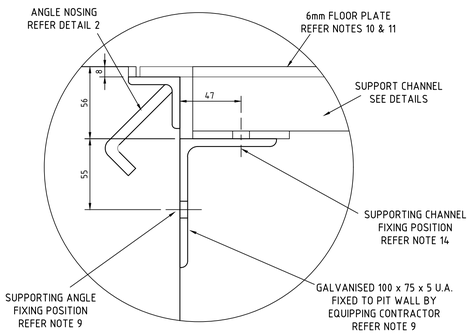


FRONT VIEW

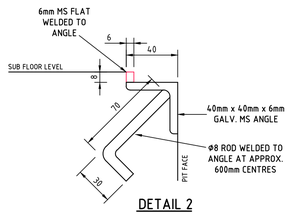


RIGHT SIDE VIEW

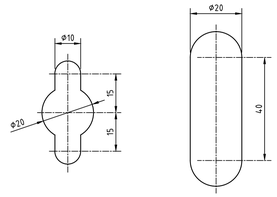
SUPPORT CHANNEL DETAILS
(2 REQUIRED PER HV SWITCH)
SCALE 1:5



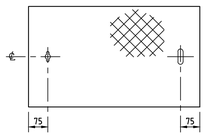
DETAIL 1
SUPPORT ANGLE FIXING
SCALE 1:2



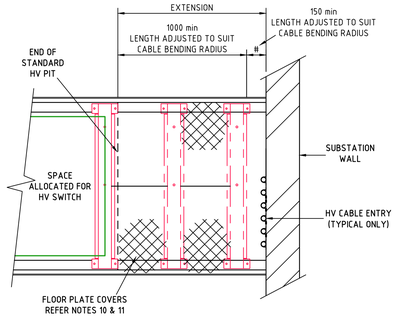
DETAIL 2
SCALE 1:2

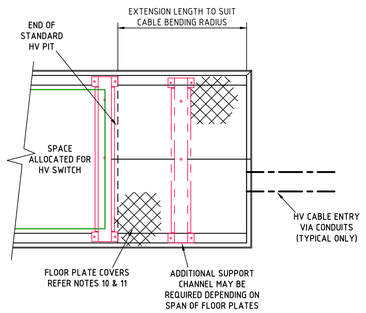


LIFTING EYE DETAILS
EITHER DETAIL IS ACCEPTABLE



TYPICAL FLOOR PLATE
SHOWING LOCATION OF LIFTING EYES
SEE NOTES 10 & 12





PLANS
EXAMPLES OF HV PIT EXTENSION
REFER NOTE 3
SCALE 1:20

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SUBSTATION LAYOUT DRAWING AND AUSGRID'S NETWORK STANDARDS.
2. EACH HV SWITCHGEAR PIT IS TO BE OF SUFFICIENT DEPTH TO ALLOW FOR CABLE BENDING RADII WITHIN THE PIT.
3. EACH HV PIT CAN BE EXTENDED BEYOND THE 2100mm, 3730mm AND 6000mm DIMENSIONS SPECIFIED ON THIS DRAWING TO ALLOW FOR CABLE ENTRY AND CABLE BENDING RADII. SOME EXAMPLES ARE SHOWN AND OTHERS MAY BE SUITABLE FOR THE SITUATION. IN ALL CASES OF PIT EXTENSION A MINIMUM OF 1000mm MUST BE MAINTAINED FROM THE EDGE OF THE SWITCH TO ANY WALL OR TO ANY WALL MOUNTED CABLE FIXINGS.
4. THE SUBSTATION EQUIPPING CONTRACTOR IS TO SUPPLY AND FIT THE SUPPORTING STEELWORK AND FLOOR PLATE COVERS TO SUIT THE ALLOCATED SWITCHGEAR.
5. THE POSITIONS OF SWITCHGEAR SUPPORTING CHANNELS AND INFILL FLOOR PLATE SHOWN ON THIS DRAWING IS INDICATIVE ONLY. SUPPORTING CHANNELS ARE TO BE LOCATED TO SUIT ALLOCATED SWITCHGEAR AND THE SIZE OF INFILL FLOOR PLATE IS TO BE ADJUSTED ACCORDINGLY. IN ALL CASES EACH PIECE OF FLOOR PLATE MUST MEET THE CRITERIA INDICATED IN NOTES 11 &12. FLOOR PLATE IS TO BE CUT ON SUIT TO ALLOW CABLE ACCESS AS REQUIRED.
6. THE SWITCHGEAR SUPPORTING CHANNELS HAVE BEEN DESIGNED TO SUPPORT HV SWITCHGEAR WITH A MAXIMUM WEIGHT OF 720kg.
7. THE SUPPORT CHANNELS AND 100 x 75 x 5UA SUPPORT ANGLES ARE TO BE HOT DIP GALVANISED TO AS 4680. WHERE THE GALVANISING FINISH HAS BEEN DAMAGED, THE GALVANISING IS TO BE RESTORED BY TREATING WITH COLD GALVANISING PAINT SIMILAR TO ZINCFIX. PAINT APPLICATION IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
8. SWITCHGEAR SUPPORTING CHANNELS ARE TO BE CONTINUOUS, WELDED OR BOLTED SECTIONS ARE NOT PERMITTED. CHANNEL SUPPORTING ANGLES CAN BE IN MULTIPLE SECTIONS PROVIDED THEY ADEQUATELY SUPPORT SWITCHGEAR CHANNELS AND THEIR FIXINGS DO NOT INTERFERE WITH CONDUITS ENTRY.
9. THE 100 x 75 x 5UA SUPPORT ANGLES ARE TO BE FIXED TO PIT WALLS BY HILTI HVU CHEMICAL CAPSULES WITH M12 HAS-E-F GALVANISED RODS. THE RODS ARE TO BE EMBEDDED AT LEAST 125mm INTO THE PIT WALLS. EACH FIXING IS TO BE NOT MORE THAN 150mm FROM EACH END AND AT NOT MORE THAN 600mm CENTRES. SUPPORT ANGLES MUST BE FIXED TO PIT WALLS SUCH THAT WHEN THE SWITCHGEAR SUPPORTING BEAMS ARE INSTALLED THEY DO NOT REQUIRE PACKING TO BE LEVEL IN EACH DIRECTION.
10. FLOOR PLATE COVERS ARE TO BE 6mm THICK & ARE TO BE SUPPLIED AND FITTED BY THE EQUIPPING CONTRACTOR TO SUIT ALLOCATED SWITCHGEAR. FLOOR PLATE MUST BE FITTED BETWEEN HV SWITCHES WHEN A COMMON PIT IS USED. EACH PIECE OF FLOOR PLATE IS TO CONTAIN LIFTING EYES AS SHOWN IN THE TYPICAL FLOOR PLATE DETAIL AND IS TO BE HOT DIP GALVANISED TO AS 4680. THE FLOOR PLATES ARE TO BE STRAIGHTENED AFTER GALVANISING.
11. WHERE GALVANISING OF FLOOR PLATE COVERS HAS BEEN DAMAGED OR STEEL EDGES EXPOSED BY CUTTING, THE GALVANISING IS TO BE RESTORED BY TREATING WITH COLD GALVANISING PAINT SIMILAR TO ZINCFIX. PAINT APPLICATION IS TO BE UNDERTAKEN IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
12. IF HV SWITCH SETOUT RESULTS IN AN UNCOVERED SPACE OF 100mm OR MORE BETWEEN THE SWITCH AND THE END OF THE PIT, THE SPACE MUST BE COVERED WITH 6mm FLOOR PLATE.
13. FLOOR PLATE COVERS SHALL NOT EXCEED 20kg IN MASS AND 600mm IN LENGTH AND ARE TO BE PROVIDED WITH TWO LIFTING EYES, ONE IN EACH END. SEE KEY HOLE & FLOOR PLATE DETAILS.
14. BEFORE INSTALLING EACH PIECE OF HV SWITCHGEAR THE EQUIPPING CONTRACTOR IS TO FIX EACH SUPPORTING CHANNEL TO THE SUPPORTING ANGLES WITH GALVANISED M12 NUTS AND BOLTS.
15. SWITCHGEAR FIXING HOLES ARE TO BE DRILLED ON SITE BY EQUIPPING CONTRACTOR TO SUIT SWITCHGEAR.
16. SWITCHGEAR FIXING NUTS, BOLTS & WASHERS ARE TO BE A MINIMUM SIZE OF M12 & ARE TO BE HOT DIP GALVANISED TO A.S. CODE 1214.

CAD DRAWING
(DO NOT MANUALLY AMEND)

AMENDMENTS

1. FLOOR PLATE SIZE IN NOTE 11 UPDATED.	30/06/2008	
P.JARVIS	I.ROBSON	
CHECKED:	M.THOMPSON	
APPROVED:	208-8-9-2	
PN:		
2. SWITCHGEAR SUPPORT BEAMS WERE ISOLATED. SUPPORTING ANGLES ADDED TO SUIT. SUPPORTING BEAMS NOTE 13 DELETED. REMAINING NOTES RENUMBERED.	09/03/2010	
P.JARVIS	I.ROBSON	
CHECKED:	P.TURRIN	
APPROVED:	DS209-1-55-2	
PN:		
3. SINGLE SWITCH PIT NOW 2.1m LONG. TWO SWITCH PIT NOW 3.75m LONG & THREE SWITCH PIT NOW 6.0m LONG. INTERNAL PIT WIDTH NOW 1.3m. SECTION A-A & DETAIL 1 UPDATED. SWITCHGEAR SUPPORT CHANNEL BEAMS DETAILED. KEY/HAND HOLE & TYPICAL FLOOR PLATE DETAILS ADDED.	31/01/2011	
P.WRIGHT	P.WRIGHT	
CHECKED:	B.HOOPER	
APPROVED:		
4. DRAWING BORDER UPDATED. NOTES UPDATED. SPLIT STEEL REPLACED BY Ø8 ROD IN DETAIL 2.	17/06/2011	
P.JARVIS	P.WRIGHT / P.TURRIN	
CHECKED:	P.TURRIN	
APPROVED:		
5. NEW DRAWING BORDER ADDED. LENGTH OF SUPPORT CHANNEL ADJUSTED. SUPPORT CHANNEL DIMENSIONS WAS 6.4mm. DETAIL 1. DIMENSIONS OF 6mm MS FLAT CLARIFIED IN DETAIL 2	16/11/2011	
M.CHARAN	C.MABBUTT	
CHECKED:	P.JARVIS	
APPROVED:	PM02-92010-1-5-1	
PN:		
6. BORDER & TITLE BLOCK UPDATED.	09/09/2024.	
M.BENNETT	L.MARTINUZZI	
CHECKED:	M.BENNETT	
APPROVED:		

Ausgrid
24-28 Campbell Street
SYDNEY NSW 2000

ISSUED FOR
CONSTRUCTION

SCALE	AS SHOWN
DESIGNED	-
DRAWN	PJ
CHECKED	IR
APPROVED	MT
DATE	04/06/2008
TRIM REF	-
PROJECT NUMBER	208/6/9/1

CUSTOMER CHAMBER SUBSTATIONS
HV PIT CONSTRUCTION AND
HV SWITCHGEAR SUPPORT STEELWORK

DRAWING No 191085 | SHEET 1 | AMD 6 | SIZE B1

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