



GENERAL NOTES

1. ALL STEELWORK TO BE FABRICATED IN ACCORDANCE WITH AS 3990.
2. AFTER FABRICATION, ALL BURRS AND SHARP EDGES TO BE REMOVED.
3. QUANTITIES STATED ARE FOR ONE COMPLETE STRUCTURE.

MILD STEEL NOTES

1. UNLESS NOTED OTHERWISE:
 - (a) ALL HOT ROLLED FLATS TO BE GRADE 250 MINIMUM IN ACCORDANCE WITH AS 1594.
 - (b) ALL HOT ROLLED BARS & SECTIONS TO BE GRADE 300 MINIMUM IN ACCORDANCE WITH AS 3679.
 - (c) ALL HOLLOW SECTIONS TO BE GRADE C350 MINIMUM IN ACCORDANCE WITH AS 1163.
2. ALL WELDING TO BE IN ACCORDANCE WITH AS 1554.1.
 - (a) A WELDING PROCEDURE SHALL BE QUALIFIED BEFORE WELDING.
 - (b) A WELDING PROCEDURE SPECIFICATION (WPS) TO BE DEVELOPED FROM THE PROCEDURE QUALIFICATION RECORD (PQR).
 - (c) PRODUCE DOCUMENTARY EVIDENCE OF MACRO TEST, TENSILE AND BEND TEST IN ACCORDANCE WITH AS 1554.1
3. CONSUMABLES (ELECTRODES) SHALL BE MATCHED WITH THE STEEL TYPE IN COMPLIANCE WITH AS/NZS 1554.1 TABLE 4.6.1(A) & THE RELEVANT COLUMNS OF THE TABLE DEPENDING ON THE TYPE OF WELDING PROCESS BEING UNDERTAKEN.
4. UNLESS NOTED OTHERWISE:
 - (a) ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS, CATEGORY GP.
 - (b) BUTT WELDS SHALL BE CONTINUOUS FULL PENETRATION, CATEGORY SP.
 - (c) ALL WELDS TO BE CARRIED OUT IN THE SHOP UNLESS NOTED AS 'WELD ON SITE'.
5. WELDS SHALL BE INSPECTED TO AS/NZS 1554.1 CLAUSE 7.3 (VISUAL INSPECTION OF WORK) UNLESS THE WELDING PROCESS IS SUPERVISED AND CARRIED OUT BY QUALIFIED PERSONNEL AS DEFINED IN AS/NZS 1554.1 CLAUSE 4.12.1 AND CLAUSE 4.12.2.
6. AFTER FABRICATION, ALL WELDS TO BE CHIPPED FREE OF SLAG.
7. AFTER FABRICATION, ALL STEELWORK TO BE HOT DIP GALVANISED TO AS 4680. GALVANISING MINIMUM AVERAGE COATING THICKNESS AND MASS TO BE IN ACCORDANCE WITH AS 4680 TABLE 1. AVERAGE THICKNESS SHALL BE DETERMINED IN ACCORDANCE WITH AS 2312.

SURFACE FINISH : THE GALVANISED COATING TO BE CONTINUOUS, ADHERENT, AS SMOOTH AND EVENLY DISTRIBUTED AS POSSIBLE, AND FREE FROM ANY DEFECT THAT IS DETRIMENTAL TO THE STATED END USE OF THE COATED ARTICLE. ANY RECTIFICATION TO BE CARRIED OUT AS PER CLAUSE 8 OF AS 4680.

ADHESION : THE GALVANISED COATING SHALL BE SUFFICIENTLY ADHERENT TO WITHSTAND NORMAL HANDLING DURING TRANSPORT AND ERECTION.
8. AFTER GALVANISING, ALL HOLES TO BE CLEARED AND SHARP EDGES TO BE REMOVED.
9. WHERE THE GALVANISING FINISH HAS BEEN DAMAGED, AREA TO BE TREATED WITH COLD GALVANISING PAINT SIMILAR TO ZINCIFIX. COATINGS TO BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
10. ALL BOLTS, NUTS AND WASHERS TO BE HOT DIP GALVANISED TO AS 1214.
11. ALL BOLTS TO BE GRADE 4.6/s TO AS 1111.

STAINLESS STEEL NOTES

1. UNLESS NOTED OTHERWISE:
 - (a) ALL HOT ROLLED PLATE TO BE IN ACCORDANCE WITH ASTM A240.
 - (b) ALL HOT ROLLED SECTIONS TO BE IN ACCORDANCE WITH ASTM A276.
 - (c) ALL HOLLOW SECTIONS TO BE IN ACCORDANCE WITH ASTM A312.
2. ALL WELDING TO BE IN ACCORDANCE WITH AS 1554 PART 6.
3. CONSUMABLES (ELECTRODES) SHALL BE MATCHED WITH THE STEEL TYPE IN COMPLIANCE WITH AS/NZS 1554.6 CLAUSE 2.3 & TABLE 4.5.1 & THE RELEVANT COLUMNS OF THE TABLE DEPENDING ON THE TYPE OF WELDING PROCESS BEING UNDERTAKEN.
4. UNLESS NOTED OTHERWISE:
 - (a) ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS WITH AN EXTERNAL WELD QUALITY OF CLASS C, GRADE 2.
 - (b) BUTT WELDS SHALL BE CONTINUOUS FULL PENETRATION WITH AN EXTERNAL WELD QUALITY OF CLASS C, GRADE 2.
5. WELDS SHALL BE INSPECTED TO AS/NZS 1554.6 CLAUSE 7.3 (VISUAL INSPECTION OF WORK) UNLESS THE WELDING PROCESS IS SUPERVISED AND CARRIED OUT BY QUALIFIED PERSONNEL AS DEFINED IN AS/NZS 1554.6 CLAUSE 4.12.1 AND CLAUSE 4.12.2.
6. AFTER FABRICATION, ALL WELDS TO BE CHIPPED FREE OF SLAG & CLEANED WITH A STAINLESS STEEL WIRE BRUSH.
7. PICKLE & PASSIFY ALL WELDS IN ACCORDANCE WITH THE STEEL MANUFACTURER'S RECOMMENDATIONS.
8. ALL BOLTS, NUTS AND WASHERS TO BE GRADE 316 STAINLESS STEEL.

MATERIAL SELECTION TABLE	
STAINLESS STEEL MAST - GRADE 316 & 316L	
MAST	- 48.26 O.D. x 3.68 WALL THK. S.S. PIPE
SPACER	- 33.4 O.D. x 4.55 WALL THK. S.S. PIPE
EARTH TAG	- GRADE 316 BAR
MOUNTING BRACKET	- GRADE 316 BAR
MILD STEEL MAST - HOT DIP GALVANISED	
MAST	- 48.3 O.D. x 3.2 WALL THK. M.S. PIPE
SPACER	- 33.7 O.D. x 4.0 WALL THK. M.S. PIPE
EARTH TAG	- M.S. BAR
MOUNTING BRACKET	- M.S. BAR

NOTE : THE USE OF STAINLESS STEEL OR GALVANISED MILD STEEL IS TO BE DETERMINED AFTER CONSIDERING THE LOCATION & THE LOCAL ENVIRONMENTAL CONDITIONS.

SAFETY IN DESIGN NOTES
THIS IS A STANDARD DRAWING SO SITE SPECIFIC SAFETY ISSUES HAVE NOT BEEN CONSIDERED. SITE SPECIFIC ISSUES SHALL BE CONSIDERED BY THE PROJECT DESIGN TEAM. REFER TO THE SAFETY IN DESIGN REPORT FOR THE PROJECT PRIOR TO USING THIS DRAWING

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SCALE	1 : 5 , 20
DESIGNED	COLIN SAWDY
DRAWN	COLIN SAWDY
CHECKED	MANCHULA VENDRIG
APPROVED	MANCHULA VENDRIG
DATE	20.01.2009
TRIM REF	
PROJECT NUMBER	ES-208-25-9-7

OUTDOOR SUBSTATIONS REINFORCED BLOCKWORK Tx BAY WALLS WALL MOUNTED LIGHTNING MAST ARRANGEMENT AND DETAILS			
SIZE	DRAWING No	SHEET	AMD
A2	202164	1	3