

GENERAL NOTES

- G1. STABILITY OF THE BUILDINGS, TRANSFORMERS & OTHER EQUIPMENT & FOUNDATIONS DURING CONSTRUCTION & THE CONSEQUENCES OF EXCAVATION IN THE VICINITY OF ADJACENT STRUCTURES ARE THE BUILDER'S RESPONSIBILITY.
- G2. ALL PROPRIETARY ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- G3. ALL WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE CURRENT STANDARDS AUSTRALIA CODES AND BUILDING CODE OF AUSTRALIA.
- G4. DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETRES.
- G5. ALL LEVELS ARE IN METERS ON AUSTRALIAN HEIGHT DATUM UNLESS NOTED OTHERWISE.
- G6. ELECTRICAL SAFETY SHALL BE IN ACCORDANCE WITH ENERGY AUSTRALIA'S ELECTRICAL SAFETY RULES, NS 165 AND AS REQUIRED BY EA SUPERINTENDENT.
- G7. MAINTAIN EARTHING GRID AT ALL TIMES. MAKING & BREAKING OF EARTHING CONNECTIONS WILL BE BY ENERGY AUSTRALIA.
- G8. HANDLE & DISPOSE OF ALL CONTAMINATED MATERIAL IN ACCORDANCE WITH RELEVANT O.H.&S. ACTS & REGULATIONS AND E.P.A. REQUIREMENTS.

EARTHING NOTES

- E1. EARTHING STRAP TO BE CONNECTED TO STEEL REINFORCEMENT TO ALLOW CONNECTION TO THE EARTH GRID BY ENERGY AUSTRALIA.
- E2. EA TO PROVIDE EMBEDDED EARTH BOND.

STEELWORK NOTES

- S1. FABRICATE & ERECT ALL STRUCTURAL STEELWORK IN ACCORDANCE WITH A.S. 4100, A.S. 1554, A.S. 1252, A.S. 11013, THE SPECIFICATION, LAYOUT & ARCHITECTURAL PLANS & OTHER RELEVANT CODES.
- S2. VERIFY ALL SETTING OUT DIMENSIONS BEFORE STARTING WORK.
- S3. UNLESS NOTED OTHERWISE:
 - (a) ALL HOLDING DOWN BOLTS ARE TO BE GRADE 4.6/S TO A.S. 1111.
 - (b) ALL BOLTS AND HOLDING DOWN BOLTS TO BE HOT DIP GALVANISED TO A.S. 1214.
- S4. GROUT UNDER BASE PLATES AFTER COMPLETION OF ELECTRICAL EQUIPMENT ERECTION.

CONCRETE NOTES

C1. ALL CONCRETE MUST BE IN ACCORDANCE WITH THE CURRENT AS CODE 3600. ALL CONCRETE TO BE MANUFACTURED AND SUPPLIED IN QUALITY CONTROLLED CERTIFIED PLANT, IN ACCORDANCE WITH AS 1379. NO SITE MIXING PERMITTED. CONCRETE TESTS AS REQUIRED BY AS 1379 - CERTIFICATES TO BE PROVIDED AS FOLLOWS:

ITEM	REQUIREMENT
- SLUMP	- AS PER CODE
- 7 DAY STRENGTH	- IF REQUIRED
- 28 DAY CHARACTERISTIC STRENGTH	- FIRST TRUCK, 3rd TRUCK AND EVERY 5th TRUCK FOLLOWING BUT NOT LESS THAN CODE
- FLEXURAL STRENGTH	- FOR PAVING SLABS WHERE FLEXURAL STRENGTH IS SPECIFIED
- CHLORINE & SULPHATE CONTENT	- AS PER CODE
- DRYING SHRINKAGE	- AS PER CODE
- AIR CONTENT	- NOT REQUIRED

C2. CONCRETE QUALITY WATER/CEMENT RATIO SHALL NOT BE GREATER THAN 0.55. NO WATER TO BE ADDED ON SITE.

ELEMENT	MAX. AGG SIZE	SLUMP	CHARACTERISTIC STRENGTH FCC (AS 3600) AT 28 DAYS	MAXIMUM SHRINKAGE STRAIN ϵ
FOOTINGS	20 mm	80 mm	32 MPa	650

C3. CLEAR CONCRETE COVER IN mm TO REINFORCEMENT UNLESS NOTED OTHERWISE.

ELEMENT	FORMED & SHELTERED	FORMED & EXPOSED	AGAINST EARTH
FOOTINGS	40 mm	45 mm	65 mm

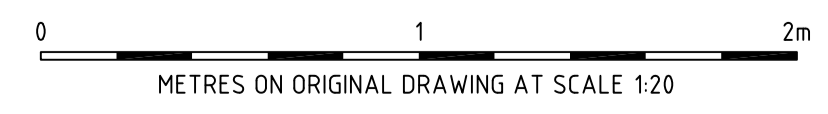
- C4. NO ADMIXTURES ARE TO BE ADDED TO CONCRETE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE EA STRUCTURAL ENGINEER.
- C5. CONCRETE SHALL NOT BE POURED ON HOT WINDY DAYS WITH EVAPORATION RATES GREATER THAN 15 l/m²/hr. WHERE THE EVAPORATION RATE IS ABOVE 0.6 l/m²/hr ALIPHATIC ALCOHOL (E.G. CONFILM) SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS TO PREVENT PLASTIC SHRINKAGE CRACKING.
- C6. ALL CONCRETE SHALL BE CURED IMMEDIATELY AFTER FINISHING CONCRETE TO ENSURE THE PREVENTION OF CRACKING AND TO SATISFY THE REQUIREMENTS OF STRENGTH, SERVICEABILITY AND DURABILITY. ALL CONCRETE SURFACES TO BE KEPT CONTINUOUSLY WET FOR 7 DAYS AND THEN ALLOWED TO GRADUALLY DRY OUT. THE USE OF SPRAYED MEMBRANE-FORMING CURING COMPOUNDS COMPLYING WITH AS 3799 SHALL BE PERMITTED, SUBJECT TO PRIOR APPROVAL BY THE EA STRUCTURAL ENGINEER.
- C7. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN & SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT. FABRIC REINFORCEMENT MINIMUM SIDE & END LAPS SHALL BE 400mm.
- C8. ALL REINFORCEMENT TO BE ACCURATELY PLACED IN POSITION SHOWN & TIED & ADEQUATELY SUPPORTED TO GIVE SPECIFIED COVER.
- C9. CONCRETE SIZES SHOWN DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C10. DEPTH OF BEAM IS GIVEN FIRST & INCLUDES SLAB THICKNESS.
- C11. CONDUITS PIPES ETC. MUST NOT BE PLACED IN CONCRETE COVER & NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ALLOWED UNLESS APPROVED IN WRITING BY THE EA STRUCTURAL ENGINEER.
- C12. ALL TIE RODS WHERE NOT SHOWN ON THE DRAWING SHALL BE N12-200. PROVIDE N12 TIES AS REQUIRED TO SUPPORT REINFORCEMENT BARS IF STANDARD BAR CHAIRS ARE OF INADEQUATE HEIGHT.
- C13. ALL BAR CHAIRS TO BE PLASTIC OR CONCRETE TYPE UNLESS NOTED OTHERWISE. STEEL BAR CHAIRS PERMITTED IN SWITCHYARD FOOTINGS ONLY.
- C14. CONCRETE ELEMENTS SHALL BE FINISHED IN ACCORDANCE WITH AS 3610 AS FOLLOWS:

ITEM	FINISH
FOOTINGS - FORMED SURFACES	CLASS 4
FOOTINGS - UNFORMED SURFACES	STEEL TROWEL

REINFORCEMENT SYMBOLS

- C15. RL DENOTES RECTANGULAR LOW DUCTILITY REINFORCING FABRIC TO AS/NZS 4671
 - SL DENOTES SQUARE LOW DUCTILITY REINFORCING FABRIC TO AS/NZS 4671
 - R DENOTES STRUCTURAL GRADE ROUND BAR TO AS/NZS 4671
 - N DENOTES 500 GRADE DEFORMED BAR NORMAL DUCTILITY TO AS/NZS 4671
 - C DENOTES COLD WORKED DEFORMED BAR TO AS/NZS 4671
- THE NUMBER FOLLOWING THE SYMBOLS RL, SL, R, N, AND C IS THE BAR DIAMETER IN MILLIMETRES
- C16. THE EXPOSED EDGE OF THE CONCRETE SHALL BE FINISHED WITH A 10mm RADIUS CORNER

Mast Height (m)	Working Base Moment(kN m)	A (mm)	B (mm)	C (mm)	D (mm)	Ref. Dwg.	Bolt
7	13.75	1500	1500	400	500	162812	4-M24 350PCD
12	22.13	1800	1800	400	600	162812	4-M24 350PCD
15	27.50	1800	1800	550	700	162293	4-M30 500PCD
18	32.25	2100	2100	550	500	162293	4-M30 500PCD
20	41.56	2100	2100	550	700	162293	4-M30 500PCD



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SCALE	AS SHOWN
DESIGNED	DAVID STANBURY
DRAWN	MAX THOMAS
CHECKED	PAUL LOVARINI
APPROVED	KATINA GALLEN
DATE	24 NOVEMBER 2010
PRJTRK No.	-
PROJECT NUMBER	-

CONSTRUCTION ISSUE

STANDARD YARD CONSTRUCTION
STEEL FLANGE MOUNTED LIGHTNING MAST
CONCRETE PAD FOOTING DETAIL

DRAWING No	215497	SHEET	1	AMD	1	SIZE	A1
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CAD DRAWING	AMENDMENTS
DO NOT MANUALLY AMEND	
INITIAL ISSUE	
FOOTING DIMENSIONS TABLE ALTERED. CONDUITS ADDED. ISSUED FOR CONSTRUCTION	
DWN: M. LIDLIC	
CHKD: D. STANBURY	
DATE: 18-02-11	
APP'D BY: D. STANBURY	