

NOTES

1. EXTENT OF WORKS

THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE ELECTRICAL SERVICES.
- CO-ORDINATION.
- INSPECTIONS.
- TESTING AND COMMISSIONING.
- MAINTENANCE.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- POWER DISTRIBUTION.
- POWER SUPPLY AUDIT.
- LIGHTING.
- CEILING FANS AND CONTROLLERS.
- COMMUNICATIONS CABLING.
- SCORE BOARD CONTROL CABLING.
- PUBLIC ADDRESS.
- ACCESS CONTROL.
- CCTV SYSTEM.
- INTRUDER DETECTION SYSTEM.
- ALL MINOR COMPONENTS AND INCIDENTAL WORKS NOT SPECIFICALLY REFERRED TO, HOWEVER NECESSARY TO COMPLETE THE ELECTRICAL SERVICES INSTALLATION SUCH THAT IT IS HANDED OVER COMPLETE, OPERATIONAL AND FIT FOR THE INTENDED USE.

SUPPLY ALL LABOUR, MATERIALS, EQUIPMENT, AND ALL OTHER ITEMS, WHETHER MENTIONED IN DETAIL OR NOT, REQUIRED FOR THE SATISFACTORY COMPLETION OF THE ELECTRICAL SERVICES INSTALLATION, LEAVING IN FULL WORKING ORDER TO THE SATISFACTION OF THE PROJECT MANAGER.

ACCEPT FULL RESPONSIBILITY FOR LIASING, ARRANGING AND CO-ORDINATION ALL WORKS THAT HAVE AN EFFECT ON OR WILL BE AFFECTED BY THE ELECTRICAL SERVICES.

REMOVE ALL OF THE EXISTING ELECTRICAL SERVICES THAT BECOME REDUNDANT DUE TO THE WORKS.

UNDERTAKE A COMPREHENSIVE SURVEY OF THE EXISTING UNDERGROUND ELECTRICAL SERVICES WITHIN THE VICINITY OF THE WORKS IDENTIFYING ALL CABLE LOCATIONS PRIOR TO ANY EXCAVATION.

2. WORKMANSHIP

ENSURE THAT THE WORK IS PERFORMED BY THE HOLDER OF A CURRENT ELECTRICAL SUB CONTRACTOR LICENSE. ENSURE THE INSTALLATION AND ALL COMPONENTS, FIXTURES, FITTINGS, OUTLETS AND CABLES ARE SUPPLIED AND INSTALLED TO A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER, TO THE CURRENT INDUSTRY STANDARDS. ENSURE ALL MATERIALS AND COMPONENTS OF A SIMILAR TYPE ARE OF THE SAME MANUFACTURER AND INSTALLED IN A UNIFORM MANNER.

IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE INSTALLATION IS FIT FOR PURPOSE AND IS PROVIDED AS A COMPLETE WORKING INSTALLATION. IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL COMPONENTS, FITTINGS, FIXTURES, SYSTEMS, PROGRAMMING ETC IRRESPECTIVE OF THE LEVEL DETAILED IN THE DOCUMENTS SUCH THAT THE INSTALLATION IS PROVIDED AS A COMPLETE WORKING INSTALLATION.

CONCEAL ALL WIRING AND CONDUITS. EXPOSED CABLING OR CONDUITS ARE GENERALLY NOT ACCEPTABLE. IT IS NOTED THAT CHASING AND REINSTATEMENT WILL BE REQUIRED. ENSURE ALL COMPONENTS, EQUIPMENT AND MATERIALS SUPPLIED ARE NEW, UNUSED, DESIGNED AND SELECTED TO ENSURE SATISFACTORY OPERATION UNDER VARYING ATMOSPHERIC, CLIMATIC, HUMID TROPICAL CONDITIONS WITHOUT DISTORTION AND DETERIORATION IN ANY PART AFFECTING EFFICIENCY AND RELIABILITY OF THE SYSTEMS. DESIGN AND SELECT ALL EQUIPMENT TO PROVIDE THE NECESSARY SAFETY TO HUMAN LIFE AND PROPERTY DURING OPERATION AND MAINTENANCE WITH PARTICULAR ATTENTION GIVEN TO ELECTRICAL SAFETY AND SEGREGATION PRECAUTIONS.

CHECK THE FINISHED PAINTWORK AROUND THE AREA OF EACH INSTALLATION AND TOUCH UP ALL DAMAGED PARTS AND FINISHES AFTER THE INSTALLATION OF THE ELECTRICAL SERVICES.

ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDER'S PROGRAM. ENSURE ALL FINAL LOCATIONS OF OUTLETS AND FITTINGS ARE CO-ORDINATED ONSITE WITH THE ARCHITECT AND ALL OTHER SERVICES, TO THE APPROVAL OF THE PROJECT MANAGER. ALLOW TO CO-ORDINATE THE FINAL LOCATION OF ALL EQUIPMENT, FITTINGS, & OUTLETS, SUCH THAT THEY ARE INSTALLED IN ACCORDANCE WITH THE AS3000 RESTRICTED ZONES, AND ARE NOT COVERED INAPPROPRIATELY.

ENSURE THAT ALL METAL SURFACES ARE SUITABLY PROTECTED AGAINST CORROSION, AND THAT ALL PLASTIC MATERIALS ARE UV STABILISED.

PROVIDE ALL MATERIALS AS NEW, AND OF THE HIGHEST CLASS AVAILABLE FOR THEIR RESPECTIVE TYPES. ENSURE ALL ASPECTS OF THE WORK ARE OF A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER, TO THE CURRENT INDUSTRY STANDARDS.

3. STANDARDS

IRRESPECTIVE OF INFORMATION CONTAINED IN THE ELECTRICAL SERVICES DOCUMENTS OR IN INSTRUCTIONS, IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL ELECTRICAL SERVICES WORKS ARE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING. REFER ANY DISCREPANCIES BETWEEN THE REQUIREMENTS OF THE FOLLOWING AND/OR THE ELECTRICAL SERVICES DOCUMENTS AND INSTRUCTIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO THE PLACING OF ORDERS, FABRICATION OR INSTALLATION OF THE ITEMS/METHODS IN DISCREPANCY.

- NCC BUILDING CODE OF AUSTRALIA.
- ELECTRICITY ACT.
- ELECTRICAL SAFETY ACT.
- AS/NZS3000.
- AS3008.
- WORKPLACE HEALTH AND SAFETY ACT.
- TELECOMMUNICATIONS ACT.
- ACMA REQUIREMENTS.

4. AUTHORITIES

ENSURE ALL OF THE ELECTRICAL SERVICES COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AUTHORITIES HAVING JURISDICTION OVER THE SITE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- ACMA.
- LOCAL COUNCIL.
- LOCAL SUPPLY AUTHORITY.
- STATE GOVERNMENT DEPARTMENT OF ENVIRONMENT AND HERITAGE.
- QLD GOVERNMENT, DIVISION OF WORKPLACE, HEALTH AND SAFETY.
- QLD FIRE AND RESCUE AUTHORITY.

5. CABLES

UNLESS OTHERWISE SPECIFIED, INSTALL AND TERMINATE CABLES IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS. DETERMINE THE FINAL ROUTES TO SUIT THE BUILDING STRUCTURE AND SITE CONDITIONS. UNLESS NOTED OTHERWISE, PROVIDE ALL 240 VOLT POWER AND LIGHTING WIRING AS 2.5mm² TWIN & EARTH STRANDED COPPER CONDUCTORS, PVC INSULATED 0.6/1kV V75 GRADE TO AS3174, PROTECTED BY A 20 AMP CIRCUIT BREAKER. ALL CONDUIT AND FITTINGS TO BE RIGID UPVC TO AS2053, UNLESS NOTED OTHERWISE.

NOTES

6. POWER DISTRIBUTION

THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES PROVIDING A NEW ERGON SUPPLY TO A NEW MAIN SWITCHBOARD VIA A NEW GALVANISED PROPERTY POLE AND UNDERGROUND CONSUMERS MAINS. COORDINATE THE POINT OF ATTACHMENT WITH ERGON. THE ERGON OFFER OF SUPPLY IS WR2108411 (CX26GE00 646232A). THE EXISTING OVERHEAD AERIAL SERVICE IS TO BE REMOVED. THE EXISTING MEN LINK, ERGON METERS AND ASSOCIATE LABELLING IS TO BE REMOVED. RETURN THE EXISTING METERS TO THE METER RETAILER. ARRANGE WITH ERGON AND THE ELECTRICITY RETAILERS TO HAVE NEW RETAIL METERING PROVIDED IN THE NEW MSB.

PROVIDE NEW UNDERGROUND CONSUMERS MAINS TO THE NEW MAIN SWITCHBOARD AND NEW UNDERGROUND SUBMAINS TO THE EXISTING DISTRIBUTION BOARD DB-A. PROVIDE THE NEW BUILDING WITH A DISTRIBUTION BOARD DB-B TO SUPPLY ALL OF THE NEW CIRCUITS.

THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- POWER DISTRIBUTION.
- EARTHING.
- UNDERGROUND CONSUMERS MAINS.
- MSB.
- REMOVAL OF THE EXISTING ERGON SUPPLY AND RETAIL METERS.
- SUB MAINS.
- DISTRIBUTION BOARD DB-B.
- CIRCUITS.
- ISOLATORS AND OUTLETS.
- TESTING AND COMMISSIONING.
- CONNECT THE EXISTING OFF PEAK HWS IN THE EXISTING BUILDING TO DB-A ONCE THE EXISTING ERGON SERVICE HAS BEEN REMOVED.

PROVIDE THE SITE MAIN SWITCHBOARD (MSB) AS FOLLOWS:

- PLINTH MOUNTED MECHANICALLY FIXED TO THE WALL.
- NATIONAL ELECTRICITY MARKET (NEM) COMPLIANT RETAIL METERING.
- PROVIDE A COPY OF THE ERGON APPROVAL OF THE MSB.
- IP65
- THE DOORS, ENCLOSURE AND ESCUTCHEONS ARE TO BE ALUMINIUM.
- POWDER COATED LIGHT GREY ENCLOSURE AND DOORS WITH GLOSS WHITE ESCUTCHEONS.
- ENSURE THE MSB IS DESIGNED TO OPERATE IN AN AMBIENT TEMPERATURE OF 40 DEGREES.
- LIFT OFF HINGES ON ALL DOORS AND ESCUTCHEONS.
- 1/4 TURN LATCHES AND D HANDLES ON ALL ESCUTCHEONS.
- ALL SWITCHGEAR TO BE SCHNEIDER OR NHP/ TERASAKI.
- SPACE FOR FOUR TWO PHASE 100 AMP CIRCUIT BREAKERS AND 24 SPARE DIN RAIL POLES FOR THE FUTURE CONNECTION SOLAR / BATTERIES AS PER JD05 OF THE NCC BCA 2022. - PROVIDE SHOP DRAWINGS FOR APPROVAL.
- ALL COMPONENTS ARE TO BE LABELLED WITH NON-STICK LABELS.
- TWO 92268 KEYS AND TWO ERGON PADLOCK KEYS. .
- ERGON PADLOCK ON THE METER PANEL.

REFER TO THE DISTRIBUTION BOARD SCHEDULE FOR ADDITIONAL REQUIREMENTS AND CIRCUIT DETAILS.

PROVIDE THE DISTRIBUTION BOARD DB-B AS FOLLOW:

- IP56.
- LIGHT GREY ENCLOSURE WHITE ESCUTCHEON.
- 3 POINT LOCKABLE HANDLES ON ALL DOORS.
- LIFT OFF HINGES ON ALL DOORS AND ESCUTCHEONS.
- 1/4 TURN LATCHES AND D HANDLES ON ALL ESCUTCHEONS.
- ALL SWITCHGEAR TO BE SCHNEIDER OR NHP/ TERASAKI.
- PROVIDE SHOP DRAWINGS FOR APPROVAL.

7. LIGHTING

ALL OF THE LIGHT FITTINGS, LAMPS AND ACCESSORIES ARE TO BE PROVIDED AS PART OF THIS CONTRACT. THE LIGHTING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- LIGHTING.
- LIGHT FITTINGS AND ACCESSORIES.
- CEILING FANS AND THE ASSOCIATED CONTROLS.
- EARTHING OF THE LIGHTING INSTALLATION.
- LIGHTING CONTROL.
- LIGHTING SUBSTITUTES.
- TESTING AND COMMISSIONING.

PROVIDE A SINGLE POINT EMERGENCY LIGHTING SYSTEM THAT COMPLIES WITH THE LATEST ISSUE OF ALL PARTS AS2293 AND THE RELEVANT PARTS OF THE NCC BCA.

INSTALL EMERGENCY LIGHT FITTINGS NOMINATED AS MAINTAINED WITH THE LAMP PERMANENTLY ON SUPPLIED VIA AN UNSWITCHED ACTIVE MAINS SUPPLY WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE, THE LAMP IS TO REMAIN ON SUPPLIED BY THE EMERGENCY PACK. SINGLE LAMP MAINTAINED EMERGENCY LIGHTS ARE NOT SWITCHED WITH THE LOCAL GENERAL AREA LIGHTING. (THE LAMP IS ALWAYS ON.)

INSTALL EMERGENCY LIGHT FITTINGS NOMINATED AS NON-MAINTAINED WITH THE LAMP OFF WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE THE LAMP IS TO BE SWITCHED ON SUPPLIED BY THE EMERGENCY PACK. NON-MAINTAINED EMERGENCY LIGHTS ARE NOT SWITCHED WITH THE LOCAL GENERAL AREA LIGHTING. (THE LAMP IS ON ONLY WHEN THE MAINS SUPPLY IS NOT AVAILABLE.)

INSTALL EMERGENCY LIGHTS SUCH THAT THE STATUS INDICATOR L.E.D. IS CLEARLY VISIBLE AND THE TEST BUTTONS ARE READILY ACCESSIBLE. LABEL EACH CIRCUIT BREAKER WHICH CONTROLS THE UNSWITCHED ACTIVE TO EXIT LIGHTS WITH A LABEL FIXED ADJACENT; ENGRAVED PLASTIC LAMINATE, GREEN BACKGROUND WITH WHITE CHARACTERS: -

WARNING
INTERRUPTING SUPPLY WILL DISCHARGE
EMERGENCY LIGHTING BATTERIES

PROVIDE WRITTEN EVIDENCE OF THE INITIAL COMMISSIONING AND TESTING AND TESTING FOR THE DURATION OF THE MAINTENANCE PERIOD IN ACCORDANCE WITH AS 2293.2.

THIS EVIDENCE IS TO BE IN THE FORM OF A LOG BOOK SIMILAR TO THE GENERAL LIGHTING SERVICE PTY LTD "EMERGENCY LIGHTING MAINTENANCE LOG BOOK AND MANUAL" WHICH IS TO BE PROVIDED BY THE ELECTRICAL SUB-CONTRACTOR AND HAVE ALL ENTRIES FULLY COMPLETED AND BE PRESENTED FOR INSPECTION AT PRACTICAL COMPLETION. THE LOG BOOK IS TO BE RETAINED BY THE ELECTRICAL SUB-CONTRACTOR FOR THE DURATION OF THE MAINTENANCE PERIOD, AND THE SIX MONTHLY TEST AND MAINTENANCE RESULTS ENTERED. THE LOG BOOK IS TO BE PRESENTED FOR APPROVAL AT FINAL COMPLETION (EXPIRY OF THE MAINTENANCE PERIOD) AND WILL BE FORWARDED TO THE OPERATOR FOR THEIR USE.

PROVIDE MAINTENANCE OF THE EMERGENCY AND EXIT LIGHTING INSTALLATION INCLUDING RECORDS IN ACCORDANCE WITH THE LATEST ISSUE OF ALL PARTS AS2293 AND THE RELEVANT PARTS OF THE NCC BCA. PROVIDE THE EMERGENCY LIGHTING SYSTEM WITH A SUPPLY SENSING AND TESTING FACILITY IN ACCORDANCE WITH AS 2293.1.

NOTES

8. COMMUNICATIONS

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES AN UNDERGROUND LC 6 CORE OM3 FIBRE CABLE FROM A NEW FIBROT MOUNTED IN THE EXISTING BUILDING COMMUNICATIONS RACK TO THE NEW COMMUNICATIONS RACK CR-B FULLY TERMINATED WITH LC CONNECTORS. THE COMMUNICATIONS OUTLETS WITHIN THE COVERED AREA ARE TO BE CAT 6 OUTLETS RUN IN STAR CONFIGURATION TO PATCH PANELS IN CR-B.

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES THE PROVISION OF A COMMUNICATIONS RACK CR-B SUPPORTING A CAT 6 INSTALLATION WITH A COMMSCOPE MANUFACTURERS WARRANTY. UTILISE DIFFERENT COLOUR UTP CABLING AND PATCH LEADS FOR THE COMMUNICATIONS OUTLETS, AV CABLING AND CCTV CABLING.

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- COMMUNICATIONS RACK CR-B.
- CABLE ACCESS TO THE MAIN BUILDING COMMUNICATION RACK.
- A FIBROT AS REQUIRED IN THE MAIN BUILDING COMMUNICATION RACK.
- OPTICAL FIBRE CABLE CONNECTING THE EXISTING BUILDING COMMUNICATION RACK FIBROT TO CR-B.
- NEW CAT 6 COMMUNICATIONS OUTLETS.
- TESTING AND COMMISSIONING.
- 2 X 500IA UNDERGROUND COMMUNICATIONS CONDUITS CONNECTING THE EXISTING BUILDING COMMUNICATIONS RACK TO THE NEW COMMUNICATIONS RACK CR-B.

9. PUBLIC ADDRESS SYSTEM

THE PUBLIC ADDRESS SYSTEM COMPONENT OF THIS CONTRACT INCLUDES MULTI TAP 100V SPEAKERS AND HORNS CABLED TO AN AUSTRALIAN MONITOR HS250P POWER AMPLIFIERS MOUNTED WITHIN THE TOP OF COMMUNICATIONS RACK CR-B. PRIOR TO PRACTICAL COMPLETION, PROVIDE A TEMPORARY MUSIC SOURCE TO AIM / BALANCE THE SPEAKERS AND HORNS ON SITE AS DIRECTED BY THE COLLEGE.

THE PUBLIC ADDRESS SYSTEM COMPONENT OF THIS CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- SPEAKERS AND HORNS.
- RACK MOUNTED AMPLIFIER.
- CO-ORDINATION.
- TESTING, COMMISSIONING AND BALANCING.
- MAINTENANCE.
- AS CONSTRUCTED DOCUMENTS INCLUDING DRAWINGS DETAILING THE LOOP PATH OF EACH SPEAKER CABLE.
- OPERATION AND MAINTENANCE MANUAL.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- ALL MINOR COMPONENTS AND INCIDENTAL WORKS NOT SPECIFICALLY REFERRED TO, HOWEVER NECESSARY TO COMPLETE THE PUBLIC ADDRESS SYSTEM INSTALLATION SUCH THAT IT IS HANDED OVER COMPLETE, OPERATIONAL AND FIT FOR THE INTENDED USE.

ALL PUBLIC ADDRESS SYSTEM WORKS MUST BE UNDERTAKEN BY AN ACMA LICENCE HOLDER. THE AUDIO / IP CONVERTERS, THE CONNECTION OF THE AMPLIFIERS TO THE AUDIO / IP CONVERTERS AND PATCH LEADS WILL BE PROVIDED BY THE SCHOOL.

10. ACCESS CONTROL.

THE ACCESS CONTROL IS TO BE ALLOWED FOR IN TENDER DOCUMENTS AS A PC SUM. REFER TO THE HEAD CONTRACT DOCUMENTS FOR DETAILS OF THE ACCESS CONTROL PC SUM REQUIREMENTS.

11. CCTV SYSTEM.

THE CCTV SYSTEM IS TO BE ALLOWED FOR IN TENDER DOCUMENTS AS A PC SUM. REFER TO THE HEAD CONTRACT DOCUMENTS FOR DETAILS OF THE CCTV SYSTEM PC SUM REQUIREMENTS.

12. INTRUDER DETECTION.

THE INTRUDER DETECTION SYSTEM IS TO BE ALLOWED FOR IN TENDER DOCUMENTS AS A PC SUM. REFER TO THE HEAD CONTRACT DOCUMENTS FOR DETAILS OF THE INTRUDER DETECTION SYSTEM PC SUM REQUIREMENTS.

13. ABBREVIATIONS

A - AMP CURRENT RATING
AB - MOUNT ABOVE BENCH.
AFFL - ABOVE FINISHED FLOOR LEVEL.
BB - MOUNT BELOW BENCH.
BH - MOUNT ON BULKHEAD.
CEIL - MOUNT ON CEILING.
CS - MOUNT WITHIN CEILING SPACE.
C/W - COMPLETE WITH.
MCB - MINIATURE CIRCUIT BREAKER.
MSB - MAIN SWITCHBOARD.
N - NEON / LED INDICATOR WHEN ON.
NTS - NOT TO SCALE.
RCBO - CIRCUIT PROTECTED VIA A 30mA RESIDUAL CURRENT DEVICE INTEGRAL TO THE CIRCUIT BREAKER.
SUS - MOUNT SUSPENDED FROM CEILING.
UNO - UNLESS NOTED OTHERWISE.
WP - WEATHERPROOF TO IP56 UNO.
500 - NUMBER DENOTES MOUNTING HEIGHT AFFL.

			C1 CONSTRUCTION		14/09/2026
			REV: DESCRIPTION:		DATE:
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TRADING AS: ELECTRICAL DESIGN GROUP			SCALE: NOT TO SCALE AT A1	PROJECT NO: C3687a	DRAWING NO: E02
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ELECTRICAL

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