### 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.
- LIGHTING. - COMMUNICATIONS CABLING.

- 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.

IN ADDITION TO THE WORKS DETAILED ON THE ELECTRICAL DOCUMENTS INCLUDE THE FOLLOWING ALLOWANCES TO INVESTIGATE AND RELOCATE EXISTING ELECTRICAL, COMMUNICATIONS, SECURITY AND AUDIO-VISUAL SERVICES THAT ARE NOT SHOWEN FROM THE PAC STAGE WINGS: - 120 HOURS OF LABOUR.

- A PROVISIONAL SUM OF \$20,000.00 PLUS GST FOR MATERIALS.

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 OF 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. 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 2.5mm<sup>2</sup> TWIN & EARTH STRANDED COPPER CONDUCTORS, PVC INSULATED 0.6/1kV V75 GRADE TO AS3174. PROTECTED BY A 20 AMP RCBO BREAKER. ALL CONDUIT AND FITTINGS TO BE RIGID UPVC TO AS2053, UNLESS NOTED OTHERWISE.

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USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE.				
ALL DIMENSIONS TO BE VERIFIED ONSITE.				

# **NOTES**

#### 6. POWER DISTRIBUTION

OF WORK:

- POWER DISTRIBUTION.
- EARTHING. - REMOVAL OF EXISTING REDUNDANT CIRCUITS.
- CIRCUITS. - ISOLATORS AND OUTLETS.
- TESTING AND COMMISSIONING.
- CABLE ACCESS WAYS. TERMINATION PANEL.

ENSURE THAT POWER IS MAINTAINED TO THE REMAINING PARTS OF THE BUILDINGS THAT ARE NOT PART OF THE WORKS BETWEEN 6. 00AM AND 11. 00PM. ANY INTERRUPTIONS TO THE POWER SUPPLY MUST BE LIMITED TO LESS THAN FOUR HOURS BETWEEN 11. OOPM AND 6. OOAM AND THE SCHOOL MUST BE PROVIDED WITH TWO WEEKS NOTICE PRIOR TO THE INTERRUPTION.

REMOVE ALL OF EXISTING POWER CABLING AND COMPONENTS MADE REDUNDANT BY THE WORKS.

PROVIDE A WALL MOUNTED 240 VOLT CABLE TERMINATION PANEL IN THE RIGHT-HAND STAGE WING TO ALLOW THE EXISTING CEILING SPACE CABLING TO BE JOINED AND EXTENDED TO THE DISTRIBUTION BOARD VIA A NEW CABLE TRAY SYSTEM MOUNTED AT HIGH LEVEL.

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.
- EARTHING OF THE LIGHTING INSTALLATION.
- LIGHTING CONTROL LIGHTING SUBCIRCUITS.
- EMERGENCY AND EXIT LIGHTING. TESTING AND COMMISSIONING.

PLUG.

UTILISE THE EXISTING PACE STAGE WING LIGHTING CONTROL CHANNELS AND CIRCUITS TO SUPPLY THE NEW STAGE WING LIGHTING.

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 AS FOLLOWS: - IF THE FITTING IS NOT BEING SWITCHED, THE LAMP IS TO REMAIN 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. UNSWITCHED SINGLE LAMP 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.)

- IF THE FITTING IS BEING SWITCHED, THE LAMP IS TO BE SUPPLIED AND CONTROLLED WITH THE LOCAL GENERAL AREA LIGHTING 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. (THE LAMP IS ON WHEN TURNED ON WITH THE LOCAL GENERAL LIGHTING OR THE MAIN 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

DURATION OF THE MAINTENANCE PERIOD IN ACCORDANCE WITH AS 2293.2.

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.

REMOVE ALL OF EXISTING LIGHT FITTINGS, CONTROLS, CABLING AND COMPONENTS MADE REDUNDANT BY THE WORKS.

#### THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES MODIFYING AND UPGRADING THE EXISTING DISTRIBUTION BOARDS TO ACCOMMODATE THE CHANGES AND NEW CIRCUITS. ALL OF THE EXISTING CIRCUITS THAT BECOME REDUNDANT ARE TO BE REMOVED AND THE LABELLING UPDATED. PROVIDE ALL NEW SWITCHGEAR AS REQUIRED TO MATCH THE EXISTING IN BRAND AND STYLE. THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT

ALL LIGHT FITTINGS MOUNTED IN OR ON A SUSPENDED CEILING ARE TO BE PROVIDED WITH A FLEX AND

PROVIDE WRITTEN EVIDENCE OF THE INITIAL COMMISSIONING AND TESTING AND TESTING FOR THE

# NOTES

### 8. COMMUNICATIONS

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES CAT 6 CABLING AND OUTLETS AND RELOCATING / REPLACING THE EXISTING PACE STAGE WING AUDIO-VISUAL AND SECURITY CABLING TO FACILITATE THE REMOVAL OF THE SUSPENDED CEILING. THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK: – CAT 6 OUTLETS.

- PATCH PANELS AS REQUIRED.
- CABLING. TESTING AND COMMISSIONING.
- PAC STAGE WING CABLING MODIFICATION.

ENSURE THAT ALL EXISTING COMMUNICATIONS SERVICES OUTSIDE OF THE WORKS AREA REMAIN OPERATIONAL AT ALL TIMES.

REMOVE ALL OF EXISTING COMMUNICATIONS CABLING, OUTLETS AND COMPONENTS MADE REDUNDANT BY THE WORKS.

LABEL THE COMMUNICATIONS OUTLETS USING THE SCHOOLS STANDARDIZED NAMING AND NUMBERING SYSTEM BASED ON THE PATCH PANELS IN THE COMMUNICATIONS ROOM AND BUILDING WITH THE FOLLOWING FORMAT: PATCH PANEL ID PORT NUMBER

- PATCH PANEL ID: A UNIQUE IDENTIFIER FOR EACH PATCH PANEL IN THE COMMS ROOM (E.G., A, B, C).

- PORT NUMBER: THE SPECIFIC PORT NUMBER ON THE PATCH PANEL (E.G., 1, 2, 3, 4, 5).

ENSURE EACH OUTLET IS UNIQUELY IDENTIFIED CORRESPONDING TO ITS PATCH PANEL AND PORT NUMBER.

THE COMMUNICATIONS OUTLET LABELS MUST BE: - CLEAR AND LEGIBLE: UTILIZE EASY-TO-READ FONTS AND SIZES.

- DURABLE: PRINTED ON MATERIALS RESISTANT TO FADING, SMEARING, OR PEELING OVER TIME. - CONSISTENTLY PLACED: LOCATED ON BOTH THE FACEPLATE OF THE OUTLET AND THE CORRESPONDING

PORT ON THE PATCH PANEL - INCLUDE THE FULL IDENTIFIER (E.G., A1, B3) ON ALL LABELS.

UPDATE THE SCHOOLS NETWORK DIAGRAMS AND DOCUMENTATION TO REFLECT THE CHANGES TO THE EXISTING AND NEW COMMUNICATIONS OUTLETS. PROVIDE A LIST CORRELATING EACH OUTLET'S IDENTIFIER WITH ITS PHYSICAL LOCATION AND INTENDED USE. PROVIDE A WIRING SCHEDULE OF THE COMMUNICATIONS OUTLETS INCLUDING:

- OUTLET NUMBER. EXAMPLE (3)

- OUTLET MODEL. EXAMPLE (CLIPSAL C2000) - OUTLET MOUNTING ARRANGEMENT. EXAMPLE (WALL)
- OUTLET NAMING CONVENTION. EXAMPLE (A3)

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BRISBANE

ELECTRICAL BUILDING

**HILLBROOK - 2024 MINOR WORKS** 

45 HURDCOTTE STREET. ENOGGERA

А	TENDER			05/11/2024			
REV:	DESCRIPTION:			DATE:			
DRAWING:							
<b>ELECTRICAL SERVICES</b> NOTES							
SCALE:		PROJECT NO:	DRAWING NO:	REVISION:			
NOT	TO SCALE AT A1	<u>C3390a</u>	<b>E02</b>				