NOTES

1. EXTENT OF WORKS

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

 SURVEY OF ALL EXISTING UNDERGROUND SERVICES IN THE VICINITY OF THE WORKS. SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE ELECTRICAL SERVICES.

- CO-ORDINATION.

- INSPECTIONS. TESTING AND COMMISSIONING.

- MAINTENANCE.

AS BUILT DRAWINGS.

MAINTENANCE MANUAL

- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS. - POWER DISTRIBUTION.
- LIGHTING.

COMMUNICATIONS CABLING.

MODIFICATION, RELOCATION AND EXTENSION AS NECESSARY OF ALL EXISTING SERVICES THAT ARE IMPACTED BY THE WORKS OR REQUIRED TO BE EXTENDED BY THE WORKS. REMOVAL OF ALL EXISTING SERVICES MADE REDUNDANT BY THE WORKS.

 ANY TEMPORARY WORKS REQUIRED TO KEEP THE SITE OPERATING DURING THE CONSTRUCTION PROCESS. - 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.

PRIOR TO COMMENCING WORK CONSULT THE SITES MANAGEMENT FOR ANY HAZARDOUS MATERIAL AND OR ASBESTOS REGISTERS AS WELL AS UNDERTAKE A THOROUGH INSPECTION OF THE SITE TO IDENTIFY ANY POTENTIAL HAZARDOUS MATERIALS, ASBESTOS AND HEALTH OR SAFETY RISKS. ADVISE THE CONTRACTOR OF ANY POTENTIAL HAZARDOUS MATERIALS. ASBESTOS AND HEALTH OR SAFETY RISKS IF IDENTIFIED AND DO NOT COMMENCE WORK UNTIL AN APPROPRIATE MANAGEMENT PLAN HAS BEEN DEVELOPED AND AGREED TO BY ALL PARTIES

PRIOR TO COMMENCING WORK UNDERTAKE A DETAILED ACTIVE SURVEY OF ALL EXISTING UNDERGROUND SERVICES IN THE VICINITY OF THE WORKS. IDENTIFY ALL EXISTING UNDERGROUND SERVICES WITHIN THE SCOPE OF THE WORKS. THE SURVEY WILL NEED TO INCLUDE VACUUM EXCAVATION. PROVIDE A COPY OF THE SURVEY FOR APPROVAL INCLUDING ALL PITS AND CONDUITS DIMENSIONED OFF EXISTING BUILDINGS, THE CONTENTS OF THE CONDUITS INCLUDING THE CABLE TYPE SOURCE AND DESTINATION.

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.

CONFIRM THE POSITION OF ALL OUTLETS ON SITE WITH THE OPERATOR PRIOR TO ROUGH-IN.

ANY INTERRUPTION TO ANY ELECTRICAL SERVICES OUTSIDE OF THE AREA OF WORKS MUST BE RESTRICTED TO OUTSIDE OF THE FACILITIES OPERATING HOURS AND MUST BE ADVISED TO THE OPERATOR IN WRITING TWO WEEKS PRIOR AND LIMITED TO FOUR HOURS.

2. WORKMANSHIP

ENSURE THAT THE ELECTRICAL WORK IS PERFORMED BY THE HOLDER OF A CURRENT ELECTRICAL SUB CONTRACTOR LICENSE AND THE SERVICES COVERED BY THE ACMA IS PERFORMED BY THE HOLDER OF THE APPROPRIATE CURRENT ACMA 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

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.

ENERGEX REQUIREMENTS.

- THE QUEENSLAND ELECTRICITY CONNECTION MANUAL V4 (QECM) AND THE NATIONAL ELECTRICITY METERING STANDARDS (NEM).

- AS/NZS3000.

- AS3008. LOCAL BRIGADE.
- WORKPLACE HEALTH AND SAFETY ACT.

 TELECOMMUNICATIONS ACT. ACMA REQUIREMENTS

NOTES

3. 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.
- ENERGEX.
- STATE GOVERNMENT DEPARTMENT OF ENVIRONMENT AND HERITAGE. - QLD GOVERNMENT, DIVISION OF WORKPLACE, HEALTH AND SAFETY.
- QLD FIRE AND EMERGENCY SERVICES.
- 4. 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.

5. POWER DISTRIBUTION

IN ADDITION TO THE WORKS ASSOCIATED WITH THE BUILDINGS THE POWER DISTRIBUTION COMPONENT OF THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES REPLACING THE EXISTING ENERGEX SUPPLY AND MSB WITH A NEW ENERGEX SUPPLY AND MSB.

ENSURE THE NEW ENERGEX SUPPLY, MSB AND MDB ARE COMPLETE AT LEAST ONE MONTH PRIOR TO PRACTICAL COMPLETION FOR COMMISSIONING. PROVIDE AN UNDERGROUND CONSUMERS MAIN FROM THE ENERGEX 315A CFS PILLAR TO A NEW MAIN SWITCHBOARD.

A NEW DISTRIBUTION BOARD DB-K IS TO BE PROVIDED. A NEW DISTRIBUTION BOARD DB-1 IS TO BE PROVIDED TO SUPPLY THE EXISTING CIRCUITS SUPPLIED FROM THE EXISTING MSB. THE EXISTING DISTRIBUTION BOARD DB-A IS TO BE REPLACED. NEW SUBMAINS ARE TO BE PROVIDED FROM THE NEW MDB TO THE EXISTING DISTRIBUTION BOARD DB-2. THE NEW MSSB, THE NEW DISTRIBUTION BOARDS DB-K AND DB-1 AND THE REPLACED DISTRIBUTION BOARD DB-A. THE POWER DISTRIBUTION COMPONENT OF THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES THOUGH IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- ARRANGE THE ENERGEX SUPPLY CONNECTION AND METERING.

- UNDERGROUND CONSUMERS MAINS FROM THE ENERGEX 315A CFS PILLAR TO THE MSB.

- MAIN SWITCHBOARD (MSB) - SUBMAINS.
- NEW DISTRIBUTION BOARD DB-1 AND DB-K.
- REPLACEMENT OF DISTRIBUTION BOARD DB-A.
- EARTHING.
- CIRCUITS.
- ISOLATORS AND OUTLETS. - SWITCH PANELS.
- INSTALLATION OF THE HAND DRYERS.
- CABLE ACCESS WAYS.
- TESTING AND COMMISSIONING.

- REMOVAL OF THE EXISTING ENERGEX AERIAL SERVICE, PROPERTY POLE, CONSUMERS MAINS AND MSB. - REMOVAL OF ALL EXISTING SERVICES MADE REDUNDANT BY THE WORKS. - THERMOSCAN ALL OF THE SWITCHBOARDS SUPPLIED OR MODIFIED AS PART OF THE WORKS WITHIN THE

FIRST WEEK SCHOOL HAS COMMENCED AND SUBMIT THE THERMOSCAN FOR APPROVAL.

REFER TO THE POWER SCHEMATIC DRAWING FOR ADDITIONAL SWITCHBOARD REQUIREMENTS AND CONSTRUCTION NOTES. ENSURE ALL THREE PHASE CIRCUITS ARE PROVIDED WITH CORRECT PHASE ROTATION.

- PROVIDE THE NEW MAIN SWITCHBOARD (MSB) AS FOLLOWS:
- PLINTH MOUNTED MECHANICALLY FIXED TO THE WALL.
- NATIONAL ELECTRICITY MARKET (NEM) COMPLIANT RETAIL METERING.
- PROVIDE A COPY OF THE ENERGEX APPROVAL OF THE MSB.

- MANUAL GENERATOR CHANGE OVER FACILITY WITH A MECHANICAL INTERLOCK BETWEEN THE MAINS AND GENERATOR SUPPLY. - FACILITY TO CONNECT TEMPORARY GENERATOR MAINS OF THE SAME SIZE AS THE CONSUMERS MAINS

THROUGH THE MSB PIT TO THE CHANGE OVER FACILITY.

- IP66 FORM 1 - 316 STAINLESS STEEL OR ALUMINIUM ENCLOSURE, DOORS AND ESCUTCHEONS.

- POWDER COATED LIGHT GREY ENCLOSURE AND DOORS.
- POWDER COATED GLOSS WHITE ESCUTCHEONS.

- INTERNAL TEMPERATURE CONTROLLED ANTI CONDENSATION HEATER IN EACH CUBICAL - ENSURE THE MSB IS DESIGNED TO OPERATE IN DIRECT SUNLIGHT WITH AN AMBIENT TEMPERATURE OF 45 DEGREES. - DOORS ON ALL CUBICLES WITH 3 POINT 92268 KEY LOCKABLE HANDLES OTHER THAN THE METER CUBICAL

DOOR WHICH IS TO HAVE AN ENERGEX PADLOCK.

- 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.
- ALL COMPONENTS ARE TO BE LABELLED WITH NON-STICK LABELS. - ENERGEX PADLOCK ON THE METER CUBICAL.
- TWO ENERGEX PADLOCK KEYS AND TWO 92268 KEYS.

PROVIDE DISTRIBUTION BOARDS DB-1, DB-K AND DB-A AS FOLLOWS:

- WALL MOUNTED. - IP44 FORM 1.

- 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.
- 40% SPARE POLES AT PRACTICAL COMPLETION. - ALL COMPONENTS ARE TO BE LABELLED WITH NON-STICK LABELS.
- A CIRCUIT BREAKER TO SUPPLY THE KITCHEN REFRIGERATION SWITCHBOARD
- A CIRCUIT BREAKER TO SUPPLY THE KITCHEN MECHANICAL SERVICES SWITCHBOARD.

ENSURE ALL THREE PHASE CIRCUITS ARE PROVIDED WITH CORRECT PHASE ROTATION.

ENSURE ALL OUTLETS AND ISOLATORS ARE POSITIONED SUCH THAT THEY ARE NOT COVERED BY THE EQUIPMENT.

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NOTES

6. LIGHTING

T RATING BENCH. SHED FLOOR LEVEL. W BENCH. ULKHEAD. EILING. IN CEILING SPACE. ITH. SYSTEM. CIRCUIT BREAKER. E CIRCUIT BREAKER. IBUTION BOARD. ARTH NEUTRAL LINK. HBOARD. SERVICES SWITCHBOARD. INDICATOR WHEN ON. ROTECTED VIA A 30mA RESIDUAL CURRENT DEVICE INTEGRAL TO THE CIRCUIT BREAKER ED OTHERWISE. - WASHING MACHINE. - WEATHERPROOF TO IP56 UNO. - NUMBER DENOTES MOUNTING HEIGHT AFFL.

THE LIGHTING COMPONENT OF THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES ALL OF THE INTERNAL AND EXTERNAL LIGHT FITTINGS, LAMPS AND ACCESSORIES. PROVIDE ALL NECESSARY ACCESSORIES TO SERVICES SUB-CONTRACT INCLUDES THOUGH IT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK: 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 SUPPLY WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE, THE LAMP NOT SWITCHED WITH THE LOCAL GENERAL AREA LIGHTING. (THE LAMP IS ALWAYS ON.) - IF THE FITTING IS NOT BEING SWITCHED, THE LAMP IS TO REMAIN OFF WHEN THE MAINS SUPPLY IS 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 - 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.) THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES NEW COMMUNICATION CAT 6 RJ45 CABLING. PROVIDE THE STRUCTURED CABLING SOLUTION TO MATCH THE EXISTING USED ACROSS THE SITE AND PROVIDED IT WITH A MANUFACTURERS 15 YEAR WARRANTY. ALL COMMUNICATIONS CABLING IS TO BE UNDERTAKEN BY AN ACMA LICENCE HOLDER. THE PATCH LEADS. WM WP 500

FACILITATE THE COMPLETE LIGHTING INSTALLATION. THE LIGHTING COMPONENT OF THE ELECTRICAL - EMERGENCY AND EXIT LIGHTING. - EARTHING OF THE LIGHTING INSTALLATION. LIGHTING CONTROL. - LIGHTING SUBCIRCUITS. - TESTING AND COMMISSIONING. NOMINATED AS MAINTAINED WITH THE LAMP PERMANENTLY ON SUPPLIED VIA AN UNSWITCHED ACTIVE MAINS IS TO REMAIN ON SUPPLIED BY THE EMERGENCY PACK. SINGLE LAMP MAINTAINED EMERGENCY LIGHTS ARE AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE THE LAMP IS TO BE SWITCHED ON SUPPLIED BY AVAILABLE.) OUTLETS CABLED TO MODULAR PATCH PANELS IN THE EXISTING COMMUNICATIONS RACK CR-A VIA CAT 6 UTP THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE - MODIFICATIONS TO COMMUNICATIONS RACK CR-A TO ACCOMMODATE THE NEW PATCH PANELS. - PATCH PANELS. - TESTING AND COMMISSIONING. FLY LEADS. POE SWITCH AND UPS WILL BE PROVIDED BY THE SCHOOL. 8. ABBREVIATIONS

- INTERNAL AND EXTERNAL LIGHTING. INSTALL EMERGENCY LIGHT FITTINGS NOMINATED AS NON-MAINTAINED AS FOLLOWS: 7. 0 COMMUNICATIONS CABLING FOLLOWING EXTENT OF WORK: - CAT 6 COMMUNICATIONS OUTLETS. - CAT 6 CABLING. - FACTORY TERMINATED HDMI CABLES. – LABELLING

٩	_	AMP CURRENT
٨B	_	MOUNT ABOVE
٩FFL	_	ABOVE FINIS
3B	_	MOUNT BELOW
ЗH	_	MOUNT ON BU
CEIL	_	MOUNT ON CE
CS	_	MOUNT WITHI
C/W	_	COMPLETE WI
DŔ	_	DRYER.
ЭW	- - -	DISHWASHER.
HWS	_	HOT WATER S
ИСВ	_	MINIATURE C
ИССВ	-	MOLDED CASE
MDB	_	MAIN DISTRI
MEN	—	MULTIPLE EA
I SB	—	MAIN SWITCH
ISSB	_	MECHANICAL
٨W	_	MICROWAVE.
N	_	NEON / LED
VTS	_	NOT TO SCAL
ΟV	_	OVEN.
RCBO	_	CIRCUIT PF
REF	_	REFRIGERATO
JNO	—	UNLESS NOTE
////	_	WASHING MAC

D REV:	CONSTRUCTION DESCRIPTION:			17/02/2025 DATE:			
DRAWING: ELECTRICAL SERVICES NOTES							
scale: NOT	TO SCALE AT A	1 C3227a	DRAWING NO:	REVISION:			