# 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.
- AS BUILT DRAWINGS.
- MAINTENANCE MANUAL.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- POWER DISTRIBUTION.
- SOLAR PV SYSTEM.
- LIGHTING.
- COMMUNICATIONS CABLING.
- PUBLIC ADDRESS SYSTEM.
- ACCESS CONTROL.
- INTRUDER DETECTION.
- CORROSION PROTECTION
- ALL WORKS AND MATERIALS TO CREATE A SAFE WORK SITE INCLUDING RESTRICTING ACCESS TO NON-AUTHORISED PEOPLE.
- ALL MACHINERY REQUIRED TO COMPLETE THE INSTALLATION INCLUDING LIFTING AND HOISTING MACHINERY, TRANSPORTATION MACHINERY, WINCHES, FORKLIFTS. SCISSOR LIFTS, HOISTS, BOOMS, CHERRY PICKERS.
- ALL NECESSARY WASTE MANAGEMENT AND WASTE REMOVAL.
- 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 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 COLLEGE PRIOR TO ROUGH-IN.

UPDATE THE COLLEGES EXISTING AS BUILT DOCUMENTS AND MAINTENANCE MANUAL TO INCLUDE THE NEW 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 CONDUITS WILL NEED TO BE INCLUDED WITHIN THE PRECAST PANELS. 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.

ALL WORK IS TO BE UNDERTAKEN IN SUCH A MANNER THAT THE OPERATION OF THE REMAINING COLLEGE AREAS ARE NOT UNDULY EFFECTED BY THE WORKS.

3. STANDARDS

IRRESPECTIVE OF INFORMATION CONTAINED IN THE FIRE ALARM SYSTEM DOCUMENTS OR IN INSTRUCTIONS, IT IS THE FIRE ALARM SYSTEM SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL FIRE ALARM SYSTEM WORKS ARE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING. REFER ANY DISCREPANCIES BETWEEN THE REQUIREMENTS OF THE FOLLOWING AND/OR THE FIRE ALARM SYSTEM 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.
- FIRE ENGINEERING REPORT.
- ELECTRICITY ACT.
- ELECTRICAL SAFETY ACT.
- AS/NZS3000.
- AS3008.
- AS1670. 1.
- AS/NZS 5033: 2021.
- AS/NZS 4777. 1: 2024
- 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 WORKPLACE, HEALTH AND SAFETY AUTHORITY.
- LOCAL FIRE AND RESCUE AUTHORITY.
- SOLAR ACCREDITATION AUSTRALIA.

# NOTES

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.

6. POWER DISTRIBUTION

THE POWER DISTRIBUTION WORKS INCLUDES ESTABLISHING AN ENERGEX PADMOUNT SUBSTATION, A NEW MAIN SWITCHBOARD, NEW SUBMAINS ASSOCIATED UNDERGROUND CABLE ACCESS WAYS AND ASSOCIATED WORKS. THE EXISTING JUNIOR SCHOOL OVERHEAD ENERGEX SUPPLY IS TO BE ABOLISHED AND THE EXISTING JUNIOR SCHOOL MAIN SWITCHBOARD IS TO BE REPLACED WITH A JUNIOR SCHOOL MAIN DISTRIBUTION BOARD. THE EXISTING SUBMAINS SUPPLIED FROM THE REMOVED JUNIOR SCHOOL MAIN SWITCHBOARD ARE TO BE RESUPPLIED FROM THE NEW JUNIOR SCHOOL MAIN DISTRIBUTION BOARD WHICH IS TURMN IS TO BE PROVIDED WITH A NEW SUPPLY FROMT HE NEW JUNIOR SCHOOL MAIN SWITCHBOARD.

ENERGEX HAVE PROVIDED A CONTRACT WR8122819 - CX24CHE1160333A FOR THE NEW SUBSTATION WHICH HAS BEEN ACCEPTED BY THE COLLEGE.

THE POWER DISTRIBUTION WORKSINCLUDE THOUGH ARE NOT LIMITED TO THE FOLLOWING:
- ENERGEX CIVIL WORKS AS DETAILED ON THE ENERGEX APPROVED PADMOUNT SUBSTATION DOCUMENTS.
- ENERGEX FOOTPATH CONDUITS BY AN ENERGEX APPROVED CIVIL CONTRACTOR.
- ARRANGING WITH ENERGEX TO INSTALL PADMOUNT SUBSTATION.
- REPAIR OF ANY SERVICES HIT BY THE TRENCH DIGGING (INCLUSIVE OF BUT NOT LIMITED TO ELECTRICAL, PLUMBING, COMMUNICATIONS, ETC)
- ARRANGE THE COLLEGES ELECTRICITY RETAILER AND ENERGEX TO HAVE THE NEW PADMOUNT SUBSTATION CONNECTED TO SUPPLY THE COLLEGE.
- REMOVAL OF THE EXISTING OVERHEAD ENERGEX SUPPLY, CONSUMERS MAINS, MSB, RETAIL METERING, MEN LINK, EARTH STAKE AND ASSOCIATED CABLING.
- REMOVAL OF THE EXISTING ELECTRICAL SERVICES THAT BECOME REDUNDANT.
- NEGOTIATION AND COORDINATION WITH ENERGEX AND THE SCHOOLS ELECTRICITY RETAILER FOR THE UPGRADED SUPPLY AND METERING.
- TEMPORARY WORKS.
- EARTHING.
- NEW ENERGEX PADMOUNT SUBSTATION.
- NEW UNDERGROUND CONSUMERS MAINS.
- NEW MAIN SWITCHBOARD (MSB).
- REMOVAL OF THE EXISTING OVERHEAD JUNIOR SCHOOL ENERGEX SERVICE.
- REMOVAL OF THE EXUISTIGN JUNIOR SCHOOL MAIN SWITCHBOARD.
- NEW JUNIOR SCHOOL MAIN DISTRIBUTION BOARD (MDB).
- RECONNECTION OF THE EXISTING JUNIOR SCHOOL SUBMAINS TO THE NEW MDB.
- UNDERGROUND SUBMAIN FROM THE NEW MSB TO THE MDB.
- UNDERGROUND PIT AND CONDUIT SYSTEM.
- NEW SUBMAINS FROM THE MSB TO DB-A.
- ENERGY MONITORING SYSTEM.
- DISTRIBUTION BOARD DB-A.
- SUBMAINS FROM DB-A TO THE SOLAR INVERTERS AND THE MSSBS.
- PROVIDE AN INFRARED SCAN OF THE MSB AND ALL DISTRIBUTION BOARDS PROVIDED AS PART OF THE WORKS ONE WEEK AFTER PRACTICAL COMPLETION. PROVIDE A LOGGING CHART RECORDING OF THE DB-A MAINS CURRENT, VOLTAGE, FREQUENCY FOR THE FIRST 14 DAYS FOLLOWING PRACTICAL COMPLETION AND SUBMIT THE THERMOSCAN AND CHART RECORDING AND FOR APPROVAL.
- CIRCUITS.
- ISOLATORS AND OUTLETS.
- TESTING AND COMMISSIONING.
- SWITCHBOARD SHOP DRAWING.

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

ARRANGE WITH ENERGEX TO INSPECT AND APPROVE THE ENERGEX FOOTPATH CONDUITS AND THE SUBSTATION SITE AT LEAST SIX WEEKS PRIOR TO THE SUPPLY HAVING TO BE ENERGISED.

THE POWER SUPPLY TO THE REMAINDER OF THE COLLEGE MUST BE MAINTAINED AT ALL TIMES THE COLLEGE IS OPEN INCLUDING THE AFTER HOURS CARE. ANY INTERRUPTION TO THE POWER SUPPLY MUST BE ADVISED TO THE COLLEGE IN WRITING TWO WEEKS PRIOR. AS PART OF THE TENDER PROVIDE A PROGRAM FOR EACH OPTION INCLUDING ANY INTERRUPTIONS TO THE POWER SUPPLY AND THE DURATION OF ANY SUCH INTERRUPTION.

ENSURE ALL OUTLETS AND ISOLATORS ARE POSITIONED SUCH THAT THEY ARE NOT COVERED BY THE EQUIPMENT. THE FINAL POSITION OF ALL OUTLETS AND ISOLATORS ARE TO BE CONFIRMED ON SITE BY THE COLLEGE.

7. SWITCHBOARD

PROVIDE THE NEW MSB AS / WITH:
- A FRONT SECTION FACING THE ROAD AS PER THE QECM V4 REQUIREMENTS.
- A REAR SECTION FACING THE COLLEGE CONTAINING THE DISTRIBUTION CHASSIS.
- SHOP DRAWINGS FOR APPROVAL.
- PLINTH MOUNTED.
- 316 STAINLESS STEEL.
- THE ENCLOSURE IS TO BE POWDER COATED A COLOUR AS ADVISED BY THE ARCHITECT.
- WHITE ESCUTCHEONS WITH LIFT OFF HINGES AND 1/4 TURN LATCHES TO SECURE THE ESCUTCHEON THAT REMAIN PART OF THE ESCUTCHEON.
- DOORS ON ALL CUBICLES.
- IP66.
- BOTTOM ENTRY ONLY. THE TOP OF THE SWITCHBOARD IS TO BE WELDED SEALED WITHOUT ANY PENETRATIONS.
- DESIGN THE SWITCHBOARD TO OPERATE IN 40 DEG AMBIENT.
- ENERGEX PADLOCK ON THE METER CUBICAL.
- 3 POINT LOCKABLE HANDLES ON ALL NON-METER CUBICAL DOORS WITH 92268 KEYING.
- TWO ENERGEX PADLOCK KEYS AND TWO 92268 KEYS.
- FORM 2B
- ENSURE ALL CABLE CONNECTIONS CAN BE THERMALLY SCANNED WITHOUT ISOLATING THE POWER.
- EACH CUBICAL CONTAINING SWITCHGEAR IS TO CONTAIN AN AUTOMATIC TEMPERATURE CONTROLLED ANTI CONDENSATION HEATER.
- RETAIL METERING.
- PRIVATE MAXIMUM DEMAND INDICATORS (MDI) AND FACILITY TO ACCOMMODATE SOLAR GRID PROTECTION METERING.
- 600 WIDE X 600 HIGH EMPTY COMPARTMENT WITH A REMOVABLE WHITE MOUNTING PAN FOR USE BY THE SOLAR INSTALLER.

PROVIDE DB-A WITH SPACE FOR SOLAR PROTECTION EQUIPMENT, THE ENERGY MONITORING EQUIPMENT AND 24 SPARE DIN RAIL POLES FOR THE FUTURE CONNECTION SOLAR / BATTERIES AS PER J9D5 OF THE NCC BCA 2022. LABEL ONE OF THE SPARE CIRCUIT BREAKER POSITIONS AND TWELVE OF THE DIN RAIL SPACES (RESERVED FOR SOLAR / BATTERIES).

PROVIDE AN ENERGY MONITORING SYSTEM AS PER J9D3 OF THE NCC BCA 2022 THAT COLLATES THE TIME-OF-USE ENERGY DATA TO A SINGLE INTERFACE WHERE IT CAN BE STORED, ANALYSED AND REVIEWED. SUBMIT DETAILS OF THE ENERGY MONITORING SYSTEM FOR APPROVAL.

REFER TO THE POWER SCHEMATIC AND DISTRIBUTION BOARD SCHEDULES FOR ADDITIONAL REQUIREMENTS AND CIRCUIT DETAILS

# NOTES

8. LIGHTING

THE LIGHTING COMPONENT OF THIS CONTRACT INCLUDES INTERNAL LIGHTING TO ALL AREAS OF THE BUILDING, EXTERNAL LIGHTING, GENERAL LIGHTING CONTROL, EMERGENCY AND EVACUATION LIGHTING AND THE LIGHTING SUB CIRCUIT WIRING. ALL OF THE LIGHT FITTINGS AND ACCESSORIES ARE TO BE PROVIDED AS PART OF THIS CONTRACT. ALL LIGHT SOURCES ARE TO BE SOLID STATE LED WITH A 5-YEAR MANUFACTURERS WARRANTY. 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:
- INTERNAL AND EXTERNAL LIGHTING.
- EMERGENCY AND EXIT LIGHTING.
- EARTHING OF THE LIGHTING INSTALLATION.
- LIGHTING CONTROL.
- INTERFACE THE INTERNAL LIGHTING TO THE SECURITY SYSTEM SUCH THAT WHEN THE SECURITY SYSTEM IS ARMED THE INTERNAL LIGHTS ARE DISABLED / OFF.
- LIGHTING SUBCIRCUITS.
- 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 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

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

9. COMMUNICATIONS CABLING

EDC SYSTEMS PTY LTD, 3/40 PROPRIETARY ST, TINGALPA QUEENSLAND 4173 - ROBERT BLAKE 0422796412 PHONE 07 38907068 robert. blake@edcsystems. com. au ARE TO BE ENGAGED AS A NOMINATED SUB-CONTRACTOR TO THE ELECTRICAL SUB-CONTRACT TO UNDERTAKE THE COMMUNICATIONS CABLING. THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES A NEW COMMUNICATION RACK CR-A TO SUPPORT CAT 6 RJ45 OUTLETS CABLED TO MODULAR PATCH PANELS IN THE COMMUNICATIONS RACK CR-A VIA CAT 6 UTP CABLING. PROVIDE AN UNDERGROUND LOOSE TUBE GEL FILLED 12 CORE OS2 OPTICAL FIBRE CABLES FULLY TERMINATED WITH LC CONNECTORS IN A FOBOT IN CR-A TO THE EXISTING JAC-CR COMMUNICATIONS RACK IN THE JAC BUILDING.

PROVIDE THE COMMUNICATIONS SYSTEM AS A PROPRIETY MOLEX STRUCTURED CABLING SYSTEM WITH A COMPONENT MANUFACTURER S 25-YEAR WARRANTY OVER THE COMMUNICATIONS INSTALLATION. INCLUDE A COPY OF THE PROPRIETY STRUCTURED CABLING SYSTEM MANUFACTURER S WARRANTY IN THE OPERATIONS AND MAINTENANCE MANUAL.

AS PART OF THE COMMUNICATIONS COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT PROVIDE CAT 6 RJ45 CCTV AND VAPE SENSOR PLUGS. THE COMMUNICATIONS COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES UNTERMINATED CABLING FOR THE ACCESS CONTROL SYSTEM AND INTRUDER DETECTION SECURITY SYSTEM. THE POSITION OF THE CCTV PLUGS, VAPE PLUGS, ACCESS CONTROL SYSTEM AND INTRUDER DETECTION SECURITY SYSTEM CABLES ARE TO BE CONFIRMED ON SITE WITH THE COLLEGE PRIOR TO ROUGHIN. THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:
- COMMUNICATIONS OUTLETS AND CABLING.
- CCTV AND VAPE PLUGS AND CABLING.
- HDMI OUTLETS AND CABLING.
- COMMUNICATIONS RACK CR-A.
- PATCH PANELS.
- FOBOT.
- OPTICAL FIBRE CABLE CONNECTION CR-A TO CR-JAC.
- LABELLING.
- CABLE ACCESS WAYS.
- TESTING AND COMMISSIONING.

ALL COMMUNICATIONS CABLING IS TO BE UNDERTAKEN BY AN ACMA LICENCE HOLDER. THE PATCH LEADS, FLY LEADS, UPS, VAPE SENSORS, CCTV CAMERAS AND ACTIVE COMMUNICATIONS EQUIPMENT WILL BE PROVIDED BY THE COLLEGE.

10. PUBLIC ADDRESS SYSTEM

THE PUBLIC ADDRESS SYSTEM COMPONENT OF THIS CONTRACT INCLUDES MULTI TAP 100V SPEAKERS AND HORNS CABLED TO POWER AMPLIFIERS MOUNTED WITH IN THE TOP OF COMMUNICATIONS RACK CR-A. PROVIDE THREE SEPARATE AMPLIFIERS CONFIGURED AS THREE ZONES BEING EXTERNAL, FIRST AND SECOND FLOORS INTERNAL AND GROUND. 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 AMPLIFIERS.
- 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 COLLEGE.

PROVIDE COMPREHENSIVE DETAILS OF THE PROPOSED EQUIPMENT AND COMPONENTS OF THE PA SYSTEM FOR APPROVAL.

# NOTES

11. SECURITY

DJF SECURITY DAN FARAGO 0451 871 932 dan@djfsecurity. com IS TO BE ENGAGED AS A NOMINATED SUB-CONTRACTOR TO THE ELECTRICAL SUB-CONTRACT TO UNDERTAKE THE SECURITY WORKS. THE SECURITY SYSTEM COMPONENT OF THIS CONTRACT INCLUDES THE EXPANSION OF THE COLLEGES EXISTING INNER RANGE INTEGRITY SECURITY SYSTEM INTO THE BUILDING TO PROVIDE INTRUDER DETECTION AND ACCESS CONTROL. PROVIDE THE BMS PANEL WITH A LOW-LEVEL SIGNAL TO INDICATE THE ARMING STATUS OF THE SECURITY SYSTEM TO THE BMS. COORDINATE THE CONNECTION WITH THE BMS CONTRACTOR ON SITE.

ALL SECURITY PANELS INCLUDING ANY EXPANDER PANELS MUST BE LOCATED WITHIN THE LEVEL 1 COMMUNICATIONS ROOM. CONNECT THE BUILDING SECURITY EQUIPMENT TO THE EXISTING SYSTEM VIA THE COLLEGES ETHERNET NETWORK VIA A COLE ETHERNET BRIDGE. THE ETHERNET SETTINGS ARE TO BE COORDINATED WITH THE COLLEGES IT STAFF. THE SECURITY SYSTEM COMPONENT OF THIS CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:
- INTRUDER DETECTION SYSTEM POWER SUPPLY AND DISTRIBUTION.
- EARTHING.
- MOVEMENT DETECTORS.
- PIEZO ALARMS.
- KEY PANELS.
- ZONE EXPANDERS.
- ETHERNET BRIDGES.
- CARD READERS.
- DOOR CONTROLLERS.
- AUTO DOOR INTERFACES.
- ROLLER SHUTTER DOOR INTERFACES.
- DATA BUS.
- CABLING.
- CABLE ACCESS WAYS.

THE ELECTRIC STRIKES AND CABLE TRANSFER HINGES WILL BE PROVIDED BY THE CONTRACTOR AND INSTALLED INTO THE DOOR FRAME IN THE DOOR FRAME PRIOR TO DELIVERY TO SITE.

12. 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.
DW - DISHWASHER.
MCB - MINIATURE CIRCUIT BREAKER.
MCCB - MOUNDED CASE CIRCUIT BREAKER.
MSB - MAIN SWITCHBOARD.
MSSB - MECHANICAL SERVICES SWITCHBOARD.
MW - MICROWAVE.
N - NEON / LED INDICATOR WHEN ON.
NTS - NOT TO SCALE.
RCBO - CIRCUIT PROTECTED VIA A 30mA RESIDUAL CURRENT DEVICE INTEGRAL TO THE CIRCUIT BREAKER.
REF - REFRIGERATOR.
SM - SURFACE MOUNTED.
UNO - UNLESS NOTED OTHERWISE.
WP - WEATHERPROOF TO IP56 UNO.
500 - NUMBER DENOTES MOUNTING HEIGHT AFFL.

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DRAWING:
**ELECTRICAL SERVICES**
NOTES

SCALE: NOT TO SCALE AT A1

| PROJECT NO: | DRAWING NO: | REVISION: |
|---|---|---|
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