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.
- LIGHTING.
- COMMUNICATIONS CABLING.
- PUBLIC ADDRESS SYSTEM.
- INTRUDER DETECTION.
- CCTV.
- FIRE ALARM SYSTEM.
- TV ANTENNA 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 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 ARCHITECT PRIOR TO ROUGH-IN.

IN ADDITION TO THE WORKS CURRENTLY DETAILED ON THE ELECTRICAL DOCUMENTS PROVIDE A SUITABLE SYSTEM OF SECURITY LIGHTING TO OPERATE FROM DUSK TO DAWN WITHIN ALL AREAS WHERE THE PUBLIC MAY GAIN ACCESS, INCLUDING CAR PARKING AREAS, BUILDING ENTRANCES AND VEGETATED AREAS. ENSURE THAT ALL EXTERNAL LIGHTING IS IN ACCORDANCE WITH AUSTRALIAN STANDARD - AS4282- CONTROL OF THE OBTRUSIVE EFFECTS OF OUTDOOR LIGHTING SO AS NOT TO CAUSE NUISANCE TO NEARBY RESIDENTS OR PASSING MOTORISTS. ENSURE LIGHTING OVER PUBLICLY ACCESSIBLE PATHWAYS COVERED BY PERMANENT AWNINGS IS IN ACCORDANCE WITH AUSTRALIAN STANDARD - AS/NZS 11 58.3.1 LIGHTING FOR ROADS AND PUBLIC SPACES - PEDESTRIAN AREA (CATEGORY P) LIGHTING - PERFORMANCE AND DESIGN REQUIREMENTS.

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 ELECTRICAL DOCUMENTS OR IN INSTRUCTIONS, IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL ELECTRICAL SERVICES ARE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING. REFER ANY DISCREPANCIES BETWEEN THE REQUIREMENTS OF THE FOLLOWING AND/OR THE ELECTRICAL 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.
- AS/NZS3008.
- AS/NZS1670.1.
- 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.
- QUEENSLAND FIRE AND RESCUE.

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. DOCUMENTATION

WITHIN TWO WEEKS OF PRACTICAL COMPLETION PROVIDE THE FOLLOWING DOCUMENTATION.

AS CONSTRUCTED DRAWINGS INCLUDING:
- ELECTRICIANS NAME AND CONTACT DETAILS.
- PROJECT NAME, ADDRESS AND DATE OF PRACTICAL COMPLETION.
- FITTING POSITIONS AND TYPES CROSS REFERENCED TO A FITTING / EQUIPMENT SCHEDULE.
- OUTLET, SWITCH, AND CONNECTION POSITIONS CROSS REFERENCED TO A FITTING / EQUIPMENT SCHEDULE.
- REMOTE DRIVER LOCATIONS.
- CIRCUITS CROSS REFERENCED TO A DISTRIBUTION BOARD SCHEDULE.
- LIGHTING CONTROL CHANNELS CROSS REFERENCED TO A LIGHTING CONTROL SCHEDULE.
- POWER SCHEMATIC.
- SWITCHBOARD SHOP DRAWINGS.
- CABLE ACCESS ROUTES.

A FITTING / EQUIPMENT SCHEDULE INCLUDING.
- FITTING DETAILS INCLUDING THE MANUFACTURERS CATALOGUE NUMBERS WITH THE TYPES CROSS REFERENCED TO THE AS CONSTRUCTED DRAWINGS.
- OUTLETS AND SWITCHES INCLUDING THE MANUFACTURERS CATALOGUE NUMBERS WITH THE TYPES CROSS REFERENCED TO THE AS CONSTRUCTED DRAWINGS.

DISTRIBUTION BOARD SCHEDULES CROSS REFERENCED TO THE AS CONSTRUCTED DRAWINGS.

LIGHTING CONTROL SCHEDULE CROSS REFERENCED TO THE AS CONSTRUCTED DRAWINGS.

PHOTOS OF EACH SWITCHBOARD INCLUDING:
- CLOSED POSITION SUCH THAT THE SWITCHBOARD DESIGNATION AND CLEARANCE IS VISIBLE.
- THE SUBMAIN LABEL.
- DOOR/S OPEN ESCUTCHEON/S CLOSED SUCH THAT THE SPARE CAPACITY AND LABELLING IS VISIBLE.
- DOOR/S OPEN ESCUTCHEON/S REMOVED SUCH THAT THE SWITCHGEAR AND INTERNAL CABLING IS VISIBLE.

7. POWER DISTRIBUTION

THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES A NEW UNDERGROUND SUPPLY FROM THE EXISTING SITE MSB TO A NEW DISTRIBUTION BOARD DB-A. PROVIDE THE EXISTING MSB WITH A NEW MCCB TO SUPPLY THE NEW DISTRIBUTION BOARD DB-A VIA A NEW CABLE ACCESS SYSTEM. THE MSB MODIFICATIONS ARE TO COMPLY WITH AS/NZE 3439 AND DO NOT NEED TO COMPLY WITH AS/NZS 61439.

PROVIDE DB-A WITH MCCBS TO SUPPLY THE INTEGRAL DB-A POWER AND LIGHTING CHASSIS AN THE SUBMAIN TO THE MECHANICAL SWITCHBOARD MSSB. PROVIDE DB-A WITH 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 DB-T AS A TEMPORARY WEATHERPROOF LOCKABLE DISTRIBUTION BOARD C/W SUPPORT AMD MOUNTING TO SUPPLY ALL OF THE EXISTING FIELD LIGHTS SUPPLIED FROM DB-CD. PROVIDE DB-T WITH A SEPARATE EXTERNALLY MOUNTED LOCKABLE WEATHERPROOF HINGED HOUSING CONTAINING CONTROLS FOR THE VIC WALSH OVAL LIGHTING AND THE JACK ROSS OVAL LIGHTING WITH THE SAME LEVEL OF FUNCTION AS THE EXISTING CONTROLS. ALL CONTROLS ARE TO BE PROVIDED WITH CLEAR LABELLING. REDIRECT / EXTEND THE EXISTING DB-CD SUPPLY SUBMAIN TO DB-T. REDIRECT / EXTEND ALL OF THE EXITING VIC WALSH OVAL LIGHTING AND THE JACK ROSS OVAL LIGHTING CIRCUITS AND CONTROLS TO DB-T VIA NEW UNDERGROUND CONDUITS LOCATED TO ALLOW THE DEMOLITION AND CONSTRUCTION OF THE PROPOSED WORKS.

ONCE THE NEW DB-A IS OPERATIONAL REMOVE DB-T AND RESUPPLY ALL OF THE ASSOCIATED FIELD LIGHTING FROM THE DB-A LIGHTING CHASSIS CONTROLLED FROM THE NEW LIGHTING CONTROL PANEL (LCP). ONCE DB-T HAS BEEN REMOVED, REMOVE THE EXISTING SUBMAIN FROM THE MSB USED TO SUPPLY DB-T. ADJUST THE EXISTING MSB DB-CD MCCB TO 80 AMPS AND RELABLE IT EASTERN FIELD LIGHTING. REMOVE THE EXISTING 80 AMP FIELD LIGHTING MCCB AND RECONNECT THE EXITING SUBMAIN FROM DB-FL TO THE 160 / 80- AMP MCCB LABLED FIELD LIGHTING EAST.

THE ELECTRICAL COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:
- POWER DISTRIBUTION.
- EARTHING.
- PROVIDE A NEW MCCB IN THE MSB.
- NEW SUBMAINS FROM THE MSB TO DB-A.
- MSB MODIFICATIONS.
- DB-T AND ALL ASSOCIATED TEMPORARY WORKS.
- DISTRIBUTION BOARD DB-A.
- SUBMAINS FROM DB-A TO THE MSSB.
- 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.
- DB-A SHOP DRAWING.

THE POWER SUPPLY TO THE REMAINDER OF THE SITE MUST BE MAINTAINED AT ALL TIMES THE SITE IS OPERATING. ANY INTERRUPTION TO THE POWER SUPPLY MUST BE ADVISED TO THE OPERATOR IN WRITING TWO WEEKS PRIOR.

ALL SWITCHBOARDS AND SWITCHGEAR ARE TO BE SCHNEIDER TO MATCH THE EXISTING. ALL SWITCHBOARDS ARE TO BE LIGHT GREY. ORANGE SWITCHBOARDS ARE NOT ACCEPTABLE. PROVIDE 92268 KEY LOCKABLE DOORS ON ALL SWITCHBOARDS. ALL SWITCHBOARDS AND CIRCUITS MUST BE UNIQUELY NAMED WITH SWITCHBOARDS PROVIDED WITH A LABEL CONTAINING:
- SOURCE NAME.
- SOURCE OVERLOAD RATING IN AMPS.
- SUBMAIN CABLE TYPE, SIZE, CONFIGURATION AND LENGTH.

ALL REMOVABLE PANELS AND ESCUTCHEONS MUST BE SECURED VIA 1/4 TURN LATCHES THAT REMAIN PART OF THE PANEL / ESCUTCHEON. IT IS NOT ACCEPTABLE TO SECURE REMOVABLE PANELS AND ESCUTCHEONS BY BOLTS, NUTS OR SCREWS.

ALL CIRCUIT BREAKERS AND CIRCUIT SCHEDULES MUST BE LABELLED / CONTAIN THE SUBMAIN / CIRCUIT USE AND LOCATION SUCH THAT THE CONNECTION / OUTLET CAN BE SIMPLY IDENTIFIED.

OUTLETS ARE TO BE PROVIDED WITH A NEAT HAND WRITTEN CIRCUIT DESIGNATION BY INDELIBLE INK ON THE FACEPLATE SUCH THAT IT IS NOT VISIBLE WHEN THE COVER IS CONCEALED.

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

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.

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.
- TEMPORARY AND PERMANENT FIELD LIGHTING CONTROL.
- TEMPORARY AND PERMANENT FIELD LIGHTING POWER SUPPLIES.
- 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

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 A NEW FOBOT IN THE EXISTING COMMUNICATIONS RACK CR-E VIA A NEW CABLE ACCESS WAY.

PROVIDE THE COMMUNICATIONS SYSTEM AS A PROPRIETY COMMSCOPE OR MOLEX STRUCTURED CABLING SYSTEM WITH A COMPONENT MANUFACTURERS 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.

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:
- COMMUNICATIONS OUTLETS AND CABLING.
- COMMUNICATIONS RACK CR-A.
- PATCH PANELS.
- FOBOTS.
- OPTICAL FIBRE CABLE CONNECTION CR-E TO CR-A.
- 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, AND ACTIVE COMMUNICATIONS EQUIPMENT WILL BE PROVIDED BY THE OPERATOR.

10. PUBLIC ADDRESS SYSTEM

THE PUBLIC ADDRESS SYSTEM COMPONENT OF THIS CONTRACT INCLUDES AN AUSTRALIAN MONITOR ZONE MIX MULTI ZONE AUDIO MIXING AND PAGING SYSTEM UTILISING MULTI TAP 100V SPEAKERS AND HORNS CABLED TO POWER AUSTRALIAN MONITOR HPS MULTI CHANNEL AMPLIFIERS MOUNTED WITH IN THE TOP OF COMMUNICATIONS RACK CR-A. MOUNT THE AUSTRALIAN MONITOR MONEMIX8 MIXER WITHIN CR-A. ENSURE THE AMPLIFIERS ARE SIZED SUCH THAT EACH CHANNEL IS ONLY LOADED TO 75% WHEN EVERY SPEAKER ATTACHED TO THAT CHANNEL IS TAPPED AT 100%. CONFIGURE THE SPEAKERS WITH THE FOLLOWING CHANNELS / ZONES:
- GYM.
- CLUB ROOM.
- OFFICE.
- MEETING ROOM.
- COACHES ROOMS AND BROAD CAST ROOM.
- LEVEL 2 CORPORATE ROOM.
- REMAINING INTERNAL SPACES.
- EXTERNAL.

PROVIDE THE FOLLOWING SPACES / CHANNELS / ZONES EACH WITH A DEDICATED WALL MOUNTED SELECTION / VOLUME CONTROLLER:
- GYM.
- CLUB ROOM.
- OFFICE.
- MEETING ROOM.
- LEVEL 2 CORPORATE ROOM.

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.
- CABLING.
- MIXER.
- AMPLIFIERS.
- ZONE SELECTION / VOLUME CONTROLLERS.
- AUDIO INPUT PANELS.
- SOFTWARE FOR THIRD PARTY PC.
- PROGRAMMING.
- COMMISSIONING.
- TRAINING.

PROVIDE SHOP DRAWINGS THAT INCLUDES COMPREHENSIVE DETAILS OF THE PROPOSED EQUIPMENT AND COMPONENTS A CABLING SCHEMATIC AND SPECIFIC DETAILS ON ALL COMPONENTS OF THE PA SYSTEM.

COORDINATE THE NETWORK CONNECTIONS AND IP ADDRESS OF THE PA SYSTEM WITH THE OPERATORS IT STAFF.

NOTES

11. INTRUDER DETECTION

THE INTRUDER DETECTION SYSTEM COMPONENT OF THIS CONTRACT INCLUDES AN INNER RANGE INTEGRITI SECURITY SYSTEM WITH 12 MONTHS REMOTE MONITORING .
THE CONTROLLER, REQUIRED EXPANDERS, INTEGRAL BATTERY BACK UPS AND HOUSINGS ARE TO BE WALL MOUNTED WITHIN THE LEVEL 2 SERVER ROOM. ENSURE THE HOUSING ARE LARGE ENOUGH SUCH THE GPOS AND ALL REQUIRED POWER SUPPLIES ARE CONTAINED WITHIN THE HOUSINGS.

PROVIDE MULTIPLE ARMING / DISARMING KEY PANELS AND CONFIGURE / PROGRAM THE INTRUDER DETECTION SYSTEM AS DIRECTED BY THE OPERATOR ON SITE.

THE INTRUDER DETECTION SYSTEM COMPONENT OF THIS CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
- INNER RANGE INTEGRITI SECURITY CONTROLLER, REQUIRED EXPANDERS, INTEGRAL POWER SUPPLIES, BATTERY BACK UPS AND HOUSINGS.
- CABLING.
- DETECTORS.
- PIEZO SIRENS.
- EXTERNAL SATELLITE SIREN.
- ARMING / DISARMING KEY PANELS.
- PROGRAMMING.
- COMMISSIONING.
- TRAINING.
- 12 MONTH MONITORING.

AS PART OF THE TENDER CONFIRM THE STANDARD AFTER HOURS CALL OUT FEE.

PROVIDE SHOP DRAWINGS THAT INCLUDES COMPREHENSIVE DETAILS OF THE PROPOSED EQUIPMENT AND COMPONENTS A CABLING SCHEMATIC AND SPECIFIC DETAILS ON ALL COMPONENTS OF THE INTRUDER DETECTION SYSTEM.

COORDINATE THE NETWORK CONNECTIONS AND IP ADDRESS OF THE INTRUDER DETECTION SYSTEM WITH THE OPERATORS IT STAFF.

12. CCTV

PROVIDE A FULLY IP BASED SURVEILLANCE SOLUTION COMPRISING A HIKVISION DS-7732N1-14/24P NVR MOUNTED IN CR-A CONNECTED TO THE CAMERAS VIA CAT 6 CABLING TO A PATCH PANEL IN CR-A. PROVIDE THE NVR WITH SUFFICIENT STORAGE TO RECORD ALL OF THE CAMERAS FOR 60 DAYS. PROVIDE A CAT 6 COMMUNICATIONS OUTLET, PATCH LEAD AND FLY LEAD FOR EACH CAMERA. THE CCTV CAT 6 CABLING IS TO BE UNIQUELY COLOURED AND TERMINATED ON A DEDICATED PATCH PANEL IN CR-A.

CAMERAS ARE TO BE MOUNTED OVER THE MOUNTING BOX WITH THE FACEPLATE REMOVED WITH A CONCEALED FLY LEAD CONNECTING THE OUTLET TO THE CAMERA.

THE CCTV SYSTEM IS TO BE UNDERTAKEN BY A SPECIALIST SECURITY CONTRACTOR THAT IS FAMILIAR WITH AND EXPERIENCED IN INSTALLING AND COMMISSIONING THE HIKVISION EQUIPMENT.

PROVIDE A 19-INCH WALL MOUNTED MONITOR ADJACENT TO CR-A TO DISPLAY THE CCTV IMAGES. CONNECT THE NVR TO THE COMMUNAL INTERNET SERVICE SUCH THAT THE CCTV SYSTEM CAN BE SECURELY ACCESSED REMOTELY BY THE OPERATOR.

THE CCTV COMPONENT OF THIS CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:
- CAMERAS - NVR.
- LICENSING FOR FIVE YEARS BEYOND THE DATE OF PRACTICAL COMPLETION.
- MONITOR.
- CABLING.
- SOFTWARE FOR THIRD PARTY PC.
- PROGRAMMING.
- COMMISSIONING.
- TRAINING.

PROVIDE SHOP DRAWINGS THAT INCLUDES COMPREHENSIVE DETAILS OF THE PROPOSED EQUIPMENT AND COMPONENTS A CABLING SCHEMATIC AND SPECIFIC DETAILS ON ALL COMPONENTS OF THE CCTV SYSTEM.

ENSURE ALL CCTV WORK IS COMPLETED BY A CURRENT MEMBER ASIAL WHO HOLDS THE APPROPRIATE SECURITY EQUIPMENT INSTALLER LICENCE. PROVIDE A COPY OF THE ASIAL MEMBERSHIP AND SECURITY EQUIPMENT INSTALLER LICENCE OF EACH STAFF MEMBER WORKING ON THE CCTV INSTALLATION COMPONENT OF THE PROJECT FOR APPROVAL PRIOR TO THE COMMENCEMENT OF WORK. INCLUDE A COPY OF SUCH LICENSES IN THE OPERATIONS AND MAINTENANCE MANUAL.

COORDINATE THE NETWORK CONNECTIONS AND IP ADDRESS OF ALL CCTV EQUIPMENT WITH THE OPERATORS IT STAFF.

13. FIRE ALARM SYSTEM

THE FIRE ALARM SYSTEM COMPONENT OF THIS CONTRACT INCLUDES A STANDALONE AS/NZS 1670.1 COMPLIANT NON BRIGADE MONITORED ADDRESSABLE FIRE ALARM SYSTEM.

THE FIRE ALARM COMPONENT OF THIS CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
- THE PROVISION OF A STAND ALONE AS1670.1 2018 FIRE DETECTION AND ALARM SYSTEM.
- SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE FIRE ALARM SERVICES.
- CO-ORDINATION.
- INSPECTIONS.
- LOG BOOK.
- TESTING AND COMMISSIONING.
- MAINTENANCE.
- AS CONSTRUCTED DOCUMENTS INCLUDING DRAWINGS DETAILING THE LOOP PATH AND EACH COMPONENT ADDRESS.
- OPERATION AND MAINTENANCE MANUAL.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- FIP INCORPORATING THE FDCIE AND EWCIE.
- SYSTEM INTERFACE DIAGRAM.
- MANUAL CALL POINT ON THE FDCIE.
- ADDRESSABLE DETECTORS.
- SPEAKERS AND HORNS.
- INTERFACE TO THE SECURITY SYSTEM.
- ALL MINOR COMPONENTS AND INCIDENTAL WORKS NOT SPECIFICALLY REFERRED TO, HOWEVER NECESSARY TO COMPLETE THE FIRE ALARM SYSTEM INSTALLATION SUCH THAT IT IS HANDED OVER COMPLETE, OPERATIONAL AND FIT FOR THE INTENDED USE.

ALL COMPONENTS PROVIDED AS PART OF THE FIRE ALARM SYSTEM MUST BE GENERIC IN THAT THEY CAN BE EXPANDED UPON AND MAINTAINED BY ANY CONTRACTOR WHO HOLDS THE REQUIRED QBCC AND FIRE PROTECTION CONTRACTORS REGISTRATION BOARD OF QUEENSLAND INC REGISTRATIONS. ALL SUCH COMPONENTS MUST NOT BE LOCKED INTO A SINGLE MANUFACTURER OR LIMITED BY A LICENSING AGREEMENT.

ALL COMPONENTS PROVIDED AS PART OF THE FIRE ALARM SYSTEM MUST BE LISTED ON THE CSIRO.AU/ACTIVEFIRE WEB SITE AND BE PROVIDED WITH A CURRENT CERTIFICATE OF CONFORMITY. INCLUDE A COPY OF EACH CERTIFICATE OF CONFORMITY IN THE MANUAL.

ENSURE ALL AS1670.1: 2018 WORKS ARE UNDERTAKEN BY, OR UNDER THE DIRECTION OF A SUITABLY QUALIFIED AND EXPERIENCED FIRE ALARM SYSTEM INSTALLER WHO HOLD THE REQUIRED QBCC AND FIRE PROTECTION CONTRACTORS REGISTRATION BOARD OF QUEENSLAND INC REGISTRATIONS. INCLUDE A COPY OF ALL THE ABOVE REGISTRATIONS AND LICENCES IN THE MANUAL

PRIOR TO PRACTICAL COMPLETION CERTIFY THE INSTALLATION ON A FORM 12 AS COMPLYING WITH THE RELEVANT CODES AND STANDARDS AND INCLUDE A COPY OF THE CERTIFICATION IN THE MANUAL.

14. TV ANTENNA

PROVIDE A ROOF MOUNTED TELEVISION ANTENNA TO RECEIVE AND DISTRIBUTE THE LOCALLY AVAILABLE FREE TO AIR TELEVISION SERVICES TO THE MATV OUTLETS. THE MATV HEADEND AND DISTRIBUTION EQUIPMENT IS TO BE MOUNTED WITHIN CR-A.

THE TV ANTENNA SYSTEM COMPONENT OF THIS CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
- TV ANTENNA AND DOWN LEAD.
- TV OUTLET.
- CABLE ACCESS WAYS.
- TESTING AND CO