

MARIBYRNONG RIVER CHILDREN'S CENTRE REDEVELOPMENT

6 WESTS RD, MARIBYRNONG

MARIBYRNONG CITY COUNCIL

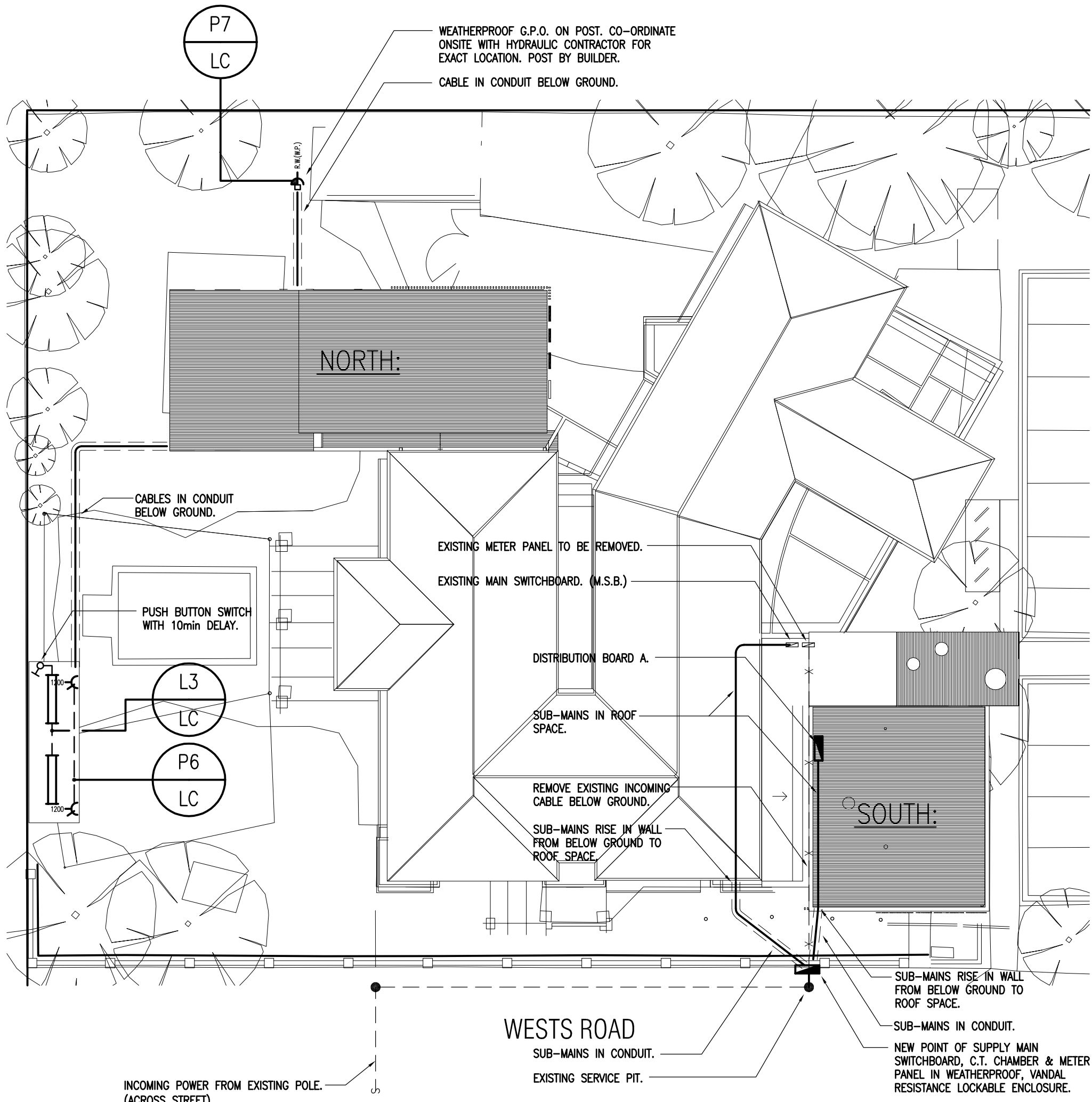
ELECTRICAL SERVICES

DRAWING INDEX

- E1 - SPECIFICATION & SITE PLAN
- E2 - LIGHTING & POWER LAYOUT PLAN
- E3 - SCHEMATICS & DETAILS

GENERAL NOTES

- THESE NOTES SHALL BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION. THE SPECIFICATION SHALL TAKE PRECEDENCE OVER THESE NOTES, FOR ANY DISCREPANCIES.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MANUFACTURED ITEMS, MATERIALS AND LABOUR DESCRIBED HEREIN AND DETERMINED ON SITE FOR THE PROPER EXECUTION OF THE WORKS.
- WORKMANSHIP SHALL BE NEAT AND TIDY TO THE APPROVAL OF THE ARCHITECT.
- THE ELECTRICAL CONTRACTOR SHALL CO-ORDINATE THE WORKS WITH ALL OTHER TRADES.
- THE DRAWINGS ARE DIAGRAMMATIC ONLY AND DO NOT PURPORT TO SHOW ALL STRUCTURAL AND ARCHITECTURAL DETAILS. FINAL LOCATIONS OF ALL EQUIPMENT SHALL BE DETERMINED IN CO-ORDINATION WITH OTHER SERVICES, STRUCTURAL AND ARCHITECTURAL DRAWINGS. ALL LOCATIONS ARE TO BE CONFIRMED PRIOR TO INSTALLATION. DO NOT SCALE DRAWINGS.
- THE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE SUPPLY AUTHORITY, B.C.A., A.S.3000/2007 AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE INSTALLATION.
- THE CONTRACT DOCUMENTS ARE FORMED BY THE FOLLOWING DRAWINGS: - DRAWINGS E1, E2 & E3 (PROJECT No. 15-1071).
- REFERENCE TO WORKS 'BY OTHERS' OR 'OTHER TRADES' IN THIS DOCUMENTATION IS INTENDED ONLY TO ASSIST IN THE DELINEATION OF THE SERVICES SUB-CONTRACTOR'S SCOPE OF WORK.
- THE ELECTRICAL CONTRACTOR SHALL, PRIOR TO COMMENCING WORK ON THE FABRICATION OF EQUIPMENT AND THE LIKE, PREPARE SHOP DRAWINGS AND SUBMIT TO THE ARCHITECT FOR REVIEW.
- THE ELECTRICAL CONTRACTOR SHALL BE DEEMED TO HAVE THOROUGHLY INSPECTED THE SITE PRIOR TO TENDERING AND TO HAVE TAKEN INTO ACCOUNT ANY CONDITIONS LIKELY TO AFFECT THE EXTENT OR PERFORMANCE OF THE CONTRACT.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY INFORMATION TO THE HEAD CONTRACTOR DURING THE TENDER PERIOD TO ENABLE THE HEAD CONTRACTOR TO ALLOW FOR ALL ASSOCIATED WORKS IN THE TENDER PRICE.
- ADVISE THE ARCHITECT AS SOON AS ANY WORKS CONFLICT, SHOW INCONSISTENCY OR IF OTHER PROBLEMS ARISE. DO NOT PROCEED WITH THE AFFECTED PORTION OF THE WORKS UNTIL A RESOLUTION WITH THE ARCHITECT IS REACHED.
- THE SITE SHALL BE KEPT CLEAN AND TIDY THROUGHOUT THE COURSE OF THE WORK AND ALL RUBBISH SHALL BE REMOVED REGULARLY. PRIOR TO PRACTICAL COMPLETION AND AT THE CONCLUSION OF THE WORK, ALL DEBRIS AND RUBBISH SHALL BE CLEARED AWAY AND REMOVED FROM SITE AND THE COMPLETED INSTALLATION SHALL BE LEFT THOROUGHLY CLEAN.
- EXACT SIZE AND LOCATION OF STRUCTURAL PENETRATIONS TO BE DETERMINED ON SITE IN ACCORDANCE WITH THE STRUCTURAL ENGINEER'S REQUIREMENTS. WHERE APPLICABLE ALL PENETRATIONS SHALL BE MADE FIRE RATED WITH APPROVED MATERIALS TO AUTHORITY'S REQUIREMENTS AND SHALL BE WATERPROOF.
- PRIOR TO THE COMMENCEMENT OF ANY CIVIL WORKS THE CONTRACTOR SHALL SURVEY THE SITE AND IDENTIFY THE ROUTES OF ALL EXISTING SERVICES IN THE AREA. THE ELECTRICAL SERVICES CONTRACTOR SHALL CO-ORDINATE WITH ALL OTHER CONTRACTORS TO ENSURE THAT ANY CIVIL OR DEMOLITION WORKS DO NOT DAMAGE EXISTING SERVICES WHICH ARE TO REMAIN IN SERVICE OR RE-USED FOR THE PROJECT. UNLESS OTHERWISE NOTED ALL EXISTING SERVICES ARE TO REMAIN.
- ALL SWITCHPLATES, SWITCHES, SOCKET OUTLETS, ETC., UNLESS OTHERWISE INDICATED SHALL BE CULPSAL - 2000 SERIES - COLOUR AS SELECTED BY THE ARCHITECT.
- PROVIDE 12 MONTH WARRANTY & MAINTENANCE PERIOD FOR ALL WORKS COVERED BY THIS CONTRACT.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE THREE COPIES OF AS-INSTALLED DRAWINGS, ELECTRONIC VERSION IN PDF AND CAD FILE AND THREE COPIES OF OPERATION AND MAINTENANCE MANUALS PRIOR TO COMPLETION OF THE WORKS.
- THE ELECTRICAL CONTRACTOR SHALL CARRY OUT ALL TESTING AND COMMISSIONING NECESSARY TO ENSURE THAT THE SYSTEMS ARE OPERATING SAFELY, EFFICIENTLY AND IN ACCORDANCE WITH THE DOCUMENTS.
- THE ELECTRICAL CONTRACTOR SHALL ALLOW FOR ONE INFORMATIVE SITE VISIT FOR INSTRUCTING THE USERS ON THE OPERATION OF THE ELECTRICAL SERVICES.
- THE ELECTRICAL CONTRACTOR SHALL ISSUE A CERTIFICATE OF COMPLIANCE BEFORE THE DATE OF PRACTICAL COMPLETION. THE CERTIFICATE SHALL STATE THAT THE COMPLETE INSTALLATION COMPLIES WITH ALL THE REQUIREMENTS OF THIS SPECIFICATION AS WELL AS THE RELEVANT AUSTRALIAN STANDARDS AND REGULATIONS WHICH APPLY TO THE INSTALLATION.
- ALL SERVICES PENETRATING FIRE RATED WALLS, FLOORS, ETC. SHALL BE PACKED WITH FIRE RESISTANT MATERIAL TO MAINTAIN FIRE RATING.



PROJECT SPECIFICATION

EQUIPMENT SUPPLIED BY OTHER SUBCONTRACTORS

THE FOLLOWING EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY OTHERS:

- HOT WATER UNITS
- EXHAUST FANS
- AIR CONDITIONING UNITS

THE ELECTRICAL CONTRACTOR SHALL ONLY WIRE TO AND CONNECT IN CIRCUIT, UNLESS NOTED OTHERWISE.

INSPECTION OF THE SITE

THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING A TENDER TO FAMILIARISE THEMSELVES WITH THE EXISTING CONDITIONS.

NOTIFICATION, PERMITS AND REGULATIONS

NOTIFY ALL RELEVANT AUTHORITIES OF THE NATURE OF THE WORK TO BE CARRIED OUT AND PAY ALL NECESSARY RATES AND FEES DUE TO SUCH AUTHORITIES AND SHALL BE RESPONSIBLE FOR ANY LIABILITY DUE TO SUCH NOTIFICATION NOT BEING CARRIED OUT.

ALL WORK IS TO BE IN ACCORDANCE WITH THE BUILDING REGULATIONS, HEALTH COMMISSION REGULATIONS, LOCAL COUNCIL REGULATIONS, AND AUSTRALIAN STANDARD CODES GOVERNING THIS TYPE OF INSTALLATION.

THE INSTALLATION SHALL BE STRICTLY IN ACCORDANCE WITH THE SAA WIRING RULES, AS/NZ 3000-2007, THE VICTORIAN SERVICE AND INSTALLATION RULES AND ANY ADDITIONAL REQUIREMENTS OF THE SUPPLY AUTHORITY. FOLLOWING COMPLETION OF THE INSTALLATION THE CONTRACTOR SHALL ARRANGE TO HAVE THE WORK INSPECTED BY THE RELEVANT AUTHORITIES. PROVIDE COPIES OF TEST REPORTS AND CERTIFICATES WHERE REQUIRED BY REGULATIONS OR AUTHORITIES.

SWITCHBOARDS

GENERAL

PROVIDE A SWITCHBOARD OF THE DEAD FRONT, FRONT ACCESS TYPE, MANUFACTURED FROM STEEL, WITH A LOCKABLE LIFT OFF REMOVABLE DOOR SUITABLE TO THE SUPPLY CAPACITY. FOR THE MANUFACTURE OF THE SWITCHBOARD USE COLD ROLLED COMMERCIAL BRIGHT MILD STEEL, SUPPLIED FLAT, FREE FROM DENTS, RUST, SCALE AND OTHER BLEMISHES. DOORS SHALL BE FITTED WITH A CLOUT LOCK. FOUR (4) KEYS FOR THE LOCK ARE TO BE HANDED TO THE SUPERINTENDENT AT THE COMPLETION OF THE PROJECT.

WORKMANSHIP IS TO BE OF THE HIGHEST STANDARD IN ALL CASES, AND THE FINISHED ENCLOSURE MUST PRESENT A NEAT AND ATTRACTIVE APPEARANCE.

SWITCHBOARD SHALL CONTAIN ALL RCD'S AND OTHER CONTROL GEAR REQUIRED FOR THE INSTALLATION TOGETHER WITH TWO SPARE 20A RCD'S AND 20% SPARE CAPACITY. PROVIDE A CIRCUIT INDEX ENCLOSED IN MOULDED PLASTIC FITTED TO THE INSIDE OF THE DOORS. PROVIDE AND INSTALL ALL EQUIPMENT AND ALL CONTROL AND PROTECTIVE EQUIPMENT THAT IS REQUIRED FOR THE SAFE AND SATISFACTORY OPERATION OF THIS INSTALLATION. PROVIDE SCREWED SWITCHBOARD LABEL ON THE OUTSIDE OF THE SWITCHBOARD.

CIRCUIT BREAKERS

ALL MOULDED CIRCUIT BREAKERS AND RESIDUAL CURRENT SERVICES SHALL BE TYPE 'C' & SHALL BE SUPPLIED BY THE ONE MANUFACTURER AND MOUNTED ON AN APPROVED MOUNTING CHASSIS BEHIND A REMOVABLE ESCUTCHION PLATE.

CIRCUIT BREAKERS ARE TO BE OF THE THERMAL/MAGNETIC TYPE AND OF SIZES AS REQUIRED. THE BREAKERS ARE TO HAVE QUICK-MADE, QUICK-BREAK TOGGLE ACTION, BE TRIP-FREE AND HAVE CONSTANT CHARACTERISTICS IRRESPECTIVE OF THE PHYSICAL PLANE IN WHICH THEY ARE MOUNTED. SELECT CIRCUIT BREAKERS TO ENSURE PROTECTION DISCRIMINATION IS ACHIEVED AND CO-ORDINATED THROUGHOUT THE DISTRIBUTION NETWORK.

IT IS REQUIRED THAT ONLY THE DOWNSTREAM PROTECTION DEVICE IS TO TRIP FOR ANY AND ALL POSSIBLE FAULTS AT ITS POINT IN THE DISTRIBUTION NETWORK.

UNLESS NOTED OTHERWISE ALL CIRCUIT BREAKERS PROVIDED ARE TO HAVE AN INTERRUPTING CAPACITY OF NOT LESS THAN 6kA AT NOMINAL VOLTAGE.

PROVIDE OVERLOAD AND SHORT CIRCUIT PROTECTION UNLESS OTHERWISE SHOWN.

ALL CIRCUIT BREAKERS ARE TO HAVE PHYSICAL INDICATION SHOWING WHETHER THEY WERE TRIPPED MANUALLY OR AUTOMATICALLY.

CIRCUIT BREAKER MOUNTING ARRANGEMENTS ARE TO BE SUCH THAT A FUTURE BREAKER MAY BE READILY MOUNTED ON THE SPARE MOUNTINGS PROVIDED AND CIRCUIT BREAKERS MAY BE READILY REPLACED WITHOUT DISTURBING ADJACENT CIRCUIT BREAKERS.

RCD'S SHALL BE 30mA AND SAME MANUFACTURE AS THE CIRCUIT BREAKERS.

CABLING AND SUB-CIRCUIT WIRING

GENERAL

POWER CABLE RATINGS HAVE BEEN DETERMINED ON THE BASIS OF AS3008.1 AND GENERALLY ARE ASSUMED TO BE INSTALLED WHEREVER AIR CIRCULATION IS RESTRICTED, I.E. FIXED DIRECTLY TO A WALL, FLOOR, CEILING OR SIMILAR SURFACE.

SUPPLY AND INSTALL MAINS AND FINAL SUB-CIRCUIT CABLES AS SHOWN ON THE DRAWINGS. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL BE SATISFIED THAT THESE CABLES ARE ADEQUATE FOR THE PRESENT LOAD, AS SHOWN ON THE DRAWINGS, PLUS A FURTHER 30%.

SUB-CIRCUIT CABLE SIZES

SUPPLY AND INSTALL CABLES FOR FINAL SUB-CIRCUITS WHERE SHOWN ON THE DRAWINGS. THE FOLLOWING SIZES ARE THE MINIMUM SIZE CONDUCTORS PERMITTED, WITH DUE ALLOWANCE TO DE-RATINGS AS NOMINATED IN AS3008.1 AND BE UPGRADED IN ACCORDANCE WITH AS3008.1 WHERE NECESSARY.

LIGHTING & POWER CIRCUITS, UNLESS OTHERWISE SHOWN, SHALL BE 2.5mm² (7/0.67) MULTI-STRAND, CABLES.

ALL CONDUCTORS ARE TO BE COPPER AND BE MULTI-STRANDED, UNLESS SPECIFICALLY NOTED OTHERWISE. ALUMINIUM CONDUCTORS ARE NOT ACCEPTABLE AND WILL NOT BE PERMITTED ON SITE.

IN ALL CASES, INSULATE ALL CABLES TO 660 VOLTS.

CABLE TERMINATIONS

PROVIDE ALL NECESSARY CABLE BOXES, GLAND PLATES, CABLE GLANDS, CABLE TRAYS, CABLE LUGS, CONDUIT ENTRIES AND ACCESSORIES NECESSARY FOR THE TERMINATION OF THE CABLES.

IDENTIFY ALL INCOMING AND OUTGOING CABLES USING NUMBERED FERRULES.

LEGEND

20.7W LED SURFACE MOUNTED 600x600 SQUARE FITTING. "EAGLE LIGHTING" AURELED FLOW. MODEL No. EL-AUR-1164-000 (SURFACE)

13.5W LED (40°) RECESSED DOWNLIGHT (4000K). "EAGLE LIGHTING" ORION PHANTOM. MODEL No. EL-OR-340-310-000

3W LED 25° ADJUSTABLE 15° IN-GROUND UPLIGHTER C/W RECESSING BOX (3200K). "SIMES" MINIRING. MODEL No. S.4951W.19

18W (3200K) TC-D SURFACE MOUNTED BUNKER LIGHT. "SIMES" VEDO ROUND. MODEL No. S.6809 VEDO

2x28W T5 DIFFUSED BATTEN FITTING. "EAGLE LIGHTING" MODEL No. EL-BAT-228-101-000

"KLK SYSTEMS" KLK EDO LED RANGE 5 W/m C/W SNAP ON SURFACE MOUNTING CLIPS & REMOTE GEARS AS REQUIRED. LENGTH TO SUIT LAYOUT.

18W (3200K) HIGH CORROSION RESISTANCE MARINE GRADE STAINLESS STEEL 10MM THICK TOUGHENED AOD-ETCHED GLASS IN GROUND LED STRIP C/W ASYMMETRIC REFLECTOR, RECESSING BOX & FAST CONNECTOR. "SIMES" LINEAR STAINLESS STEEL WALK-OVER. MODEL No. S.5942W.19

IP56 LED STRIP LIGHT (6000K) C/W IP56 REMOTE DRIVER.

1.3W RECESSED LED EMERGENCY LIGHT. "CLEVERTRONICS" LIFEGLIGHT MODEL No. LLFE C0-D40, C90-D40.

LED MAINTAINED RECESSED BLADE EMERGENCY EXIT LIGHT WITH PICTOGRAM. "CLEVERTRONICS" ULTRABLADE EXIT. MODEL No. PUBLED C0-D5, C90-E3.2

CEILING SURFACE MOUNTED 360° MOTION DETECTOR WITH BUILT IN P.E. SENSOR & ADJUSTABLE TIME DELAY. "CULPSAL" MODEL No. 753R.

DOUBLE 10A G.P.O. (300 mm AFF.L)

SINGLE 10A G.P.O. (300mm AFF.L)

DEDICATED SINGLE G.P.O.

3ø POWER OUTLET.

DATA OUTLET

TELEPHONE OUTLET

T.V. OUTLET

ELECTRIC DOOR STRIKE/LOCK

DISTRIBUTION BOARD / SWITCHBOARD.

SINGLE SWITCH.

CIRCUIT NUMBER / DISTRIBUTION BOARD NUMBER.

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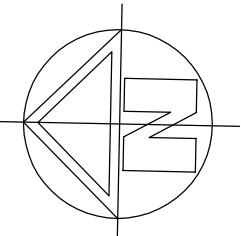
No.	Revisions Date	
2	TENDER ISSUE	30-06-15



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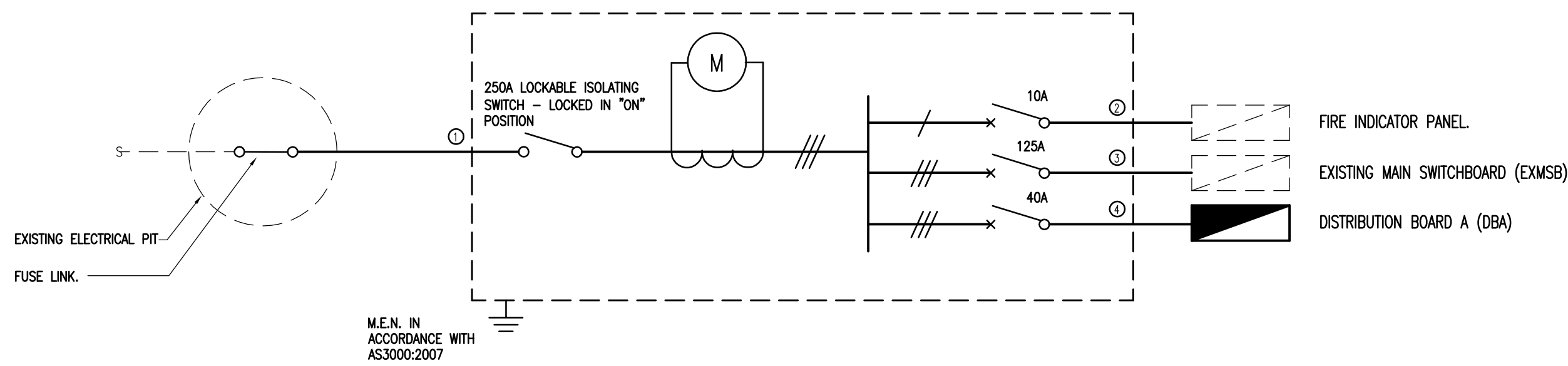
Title ELECTRICAL SERVICES SITE LAYOUT	
Project PROPOSED CHILDCARE REDEVELOPMENT 6 WESTS ROAD, MARIBYRNONG, VIC 3032	
Client MARIBYRNONG CITY COUNCIL	
Architect k20 ARCHITECTURE	
Scale 1:200 @ A1	Project No. 15-1071
Drawn J.L.	Drawing No. E1 OF 3
Checked	
Date MAY '15	
Revision	Issue

TENDER ISSUE



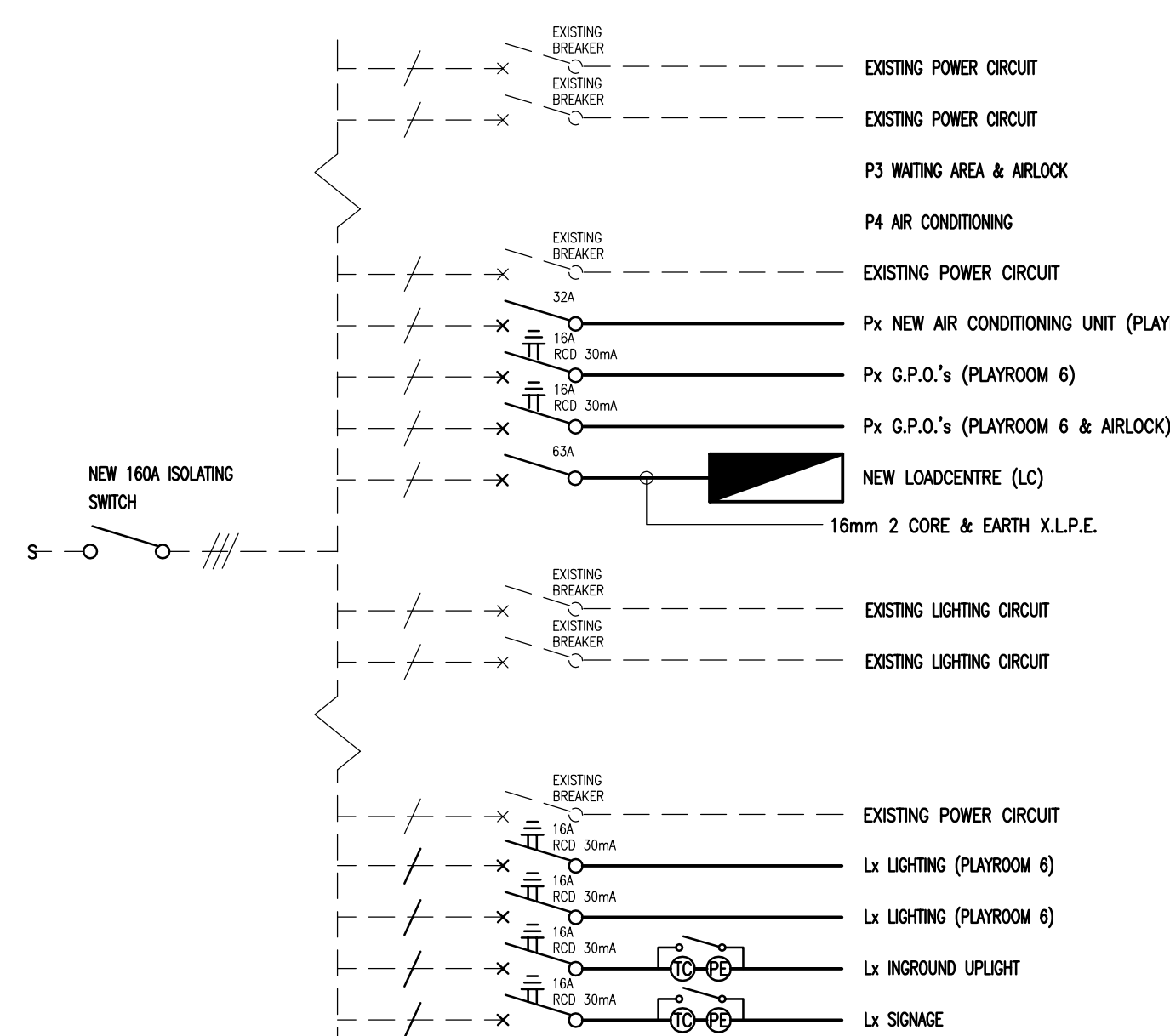


Scale	1:100 @ A1	Project No. 15-1071
Drawn	C.R.	
Checked	J.L.	Drawing No. E2 OF 3
Date	MAY '15	
Revision		Issue 1



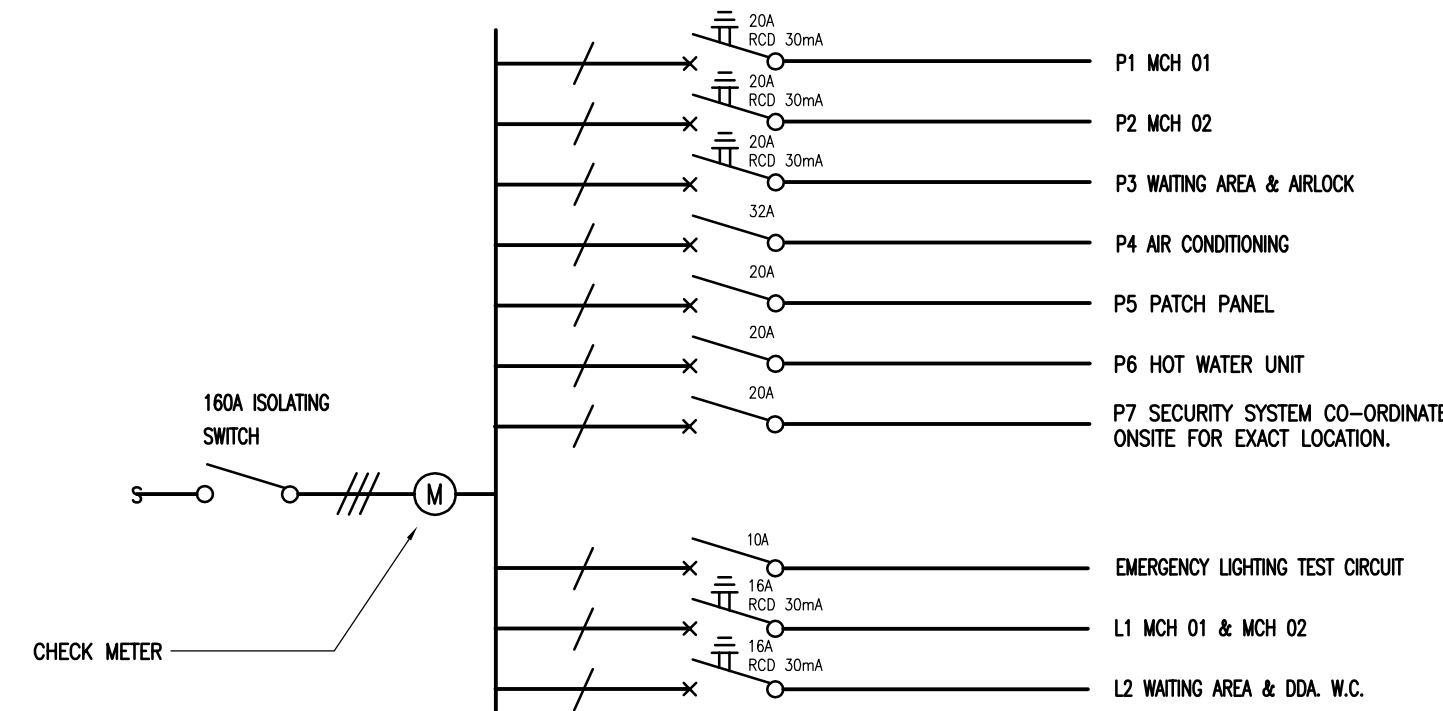
MAIN SWITCHBOARD, C.T. CHAMBER & METER PANEL SCHEMATIC

- NOTE:
1. DETERMINE MAXIMUM PROSPECTIVE FAULT CURRENT WITH AUTHORITY PRIOR COMMENCING MANUFACTURE OF SWITCHBOARD.
 2. CONTRACTOR IS RESPONSIBLE FOR DISCRIMINATION AND EQUAL POTENTIAL BONDING IN ACCORDANCE WITH AS3000-2007.
 3. FORM 2 SEPARATION.
 4. CONTRACTOR TO ENSURE ESSENTIAL SERVICES ARE APPROPRIATELY SEGREGATED TO AS. 3000.
 5. INCOMING SUPPLY ARRANGEMENT MAY CHANGE DUE TO AUTHORITY OFFER OF SUPPLY.



EXISTING MAIN SWITCHBOARD (EXMSB) SCHEMATIC.

NOTE: CONTRACTOR TO ALLOW FOR PHASE REBALANCING

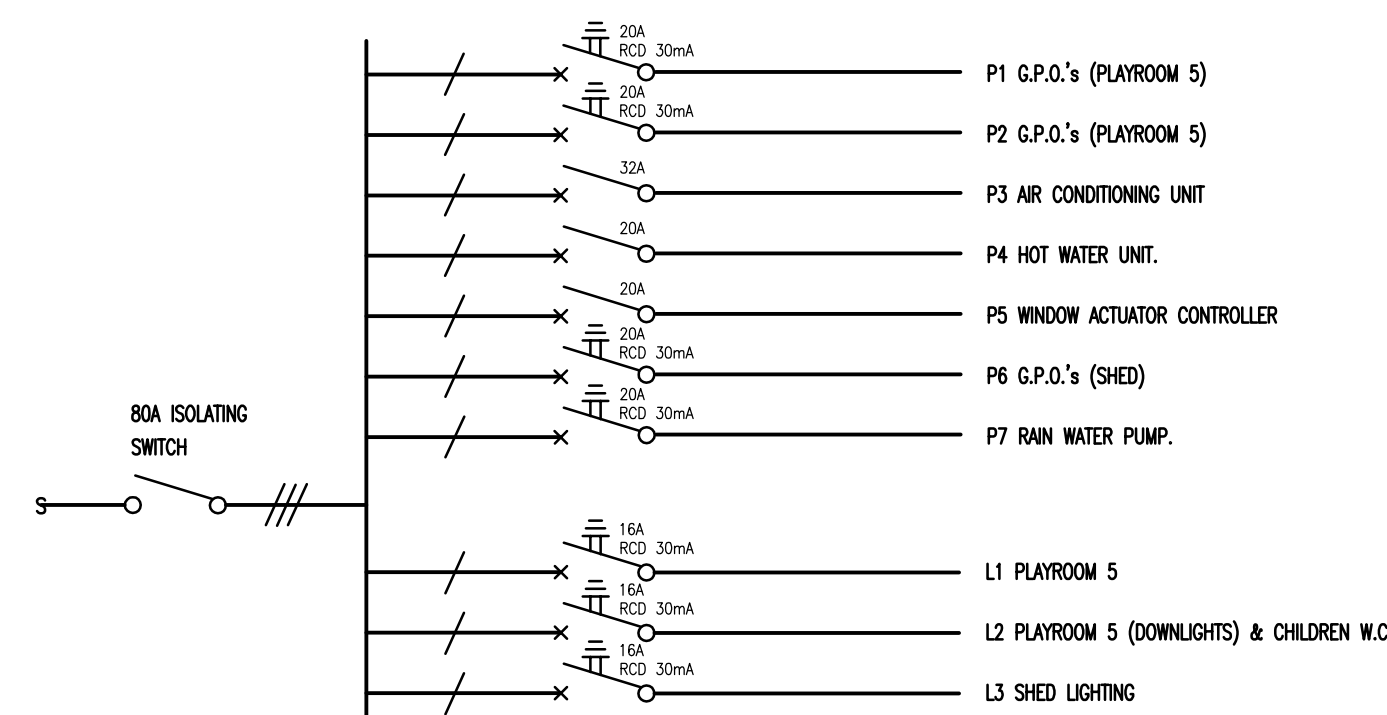


DISTRIBUTION BOARD (DBA) SCHEMATIC.

NOTE: CONTRACTOR TO SUPPLY & INSTALL MIN. 24 POLE DISTRIBUTION BOARD.

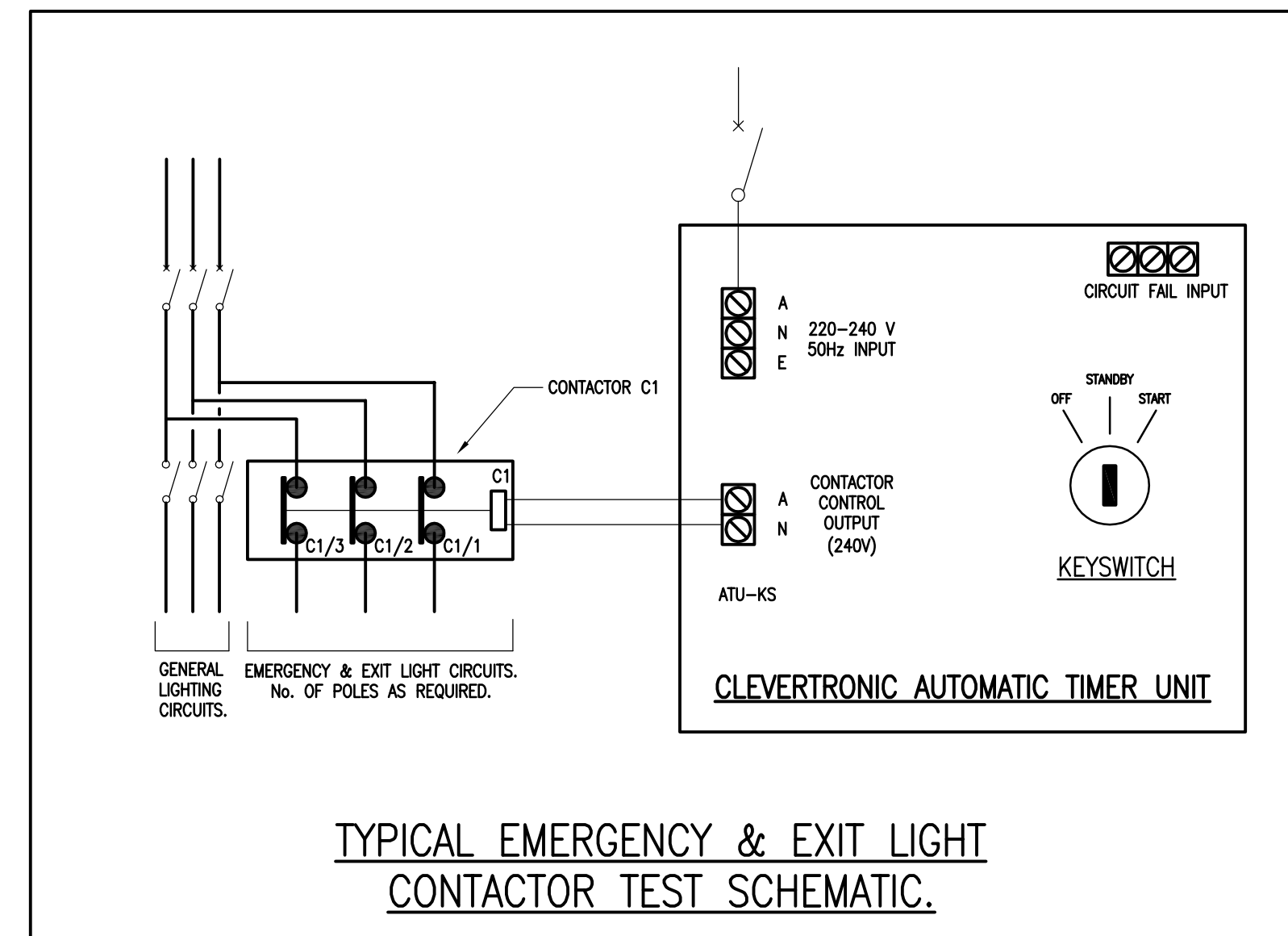
CABLE SCHEDULE

CABLE No.	TYPE & SIZE OF CABLE
①	MATCH INCOMING SUPPLY CABLE
②	2.5mm ² 2 CORE & EARTH RADOX
③	50mm ² 4 CORE & EARTH X.L.P.E.
④	16mm ² 4 CORE & EARTH X.L.P.E.

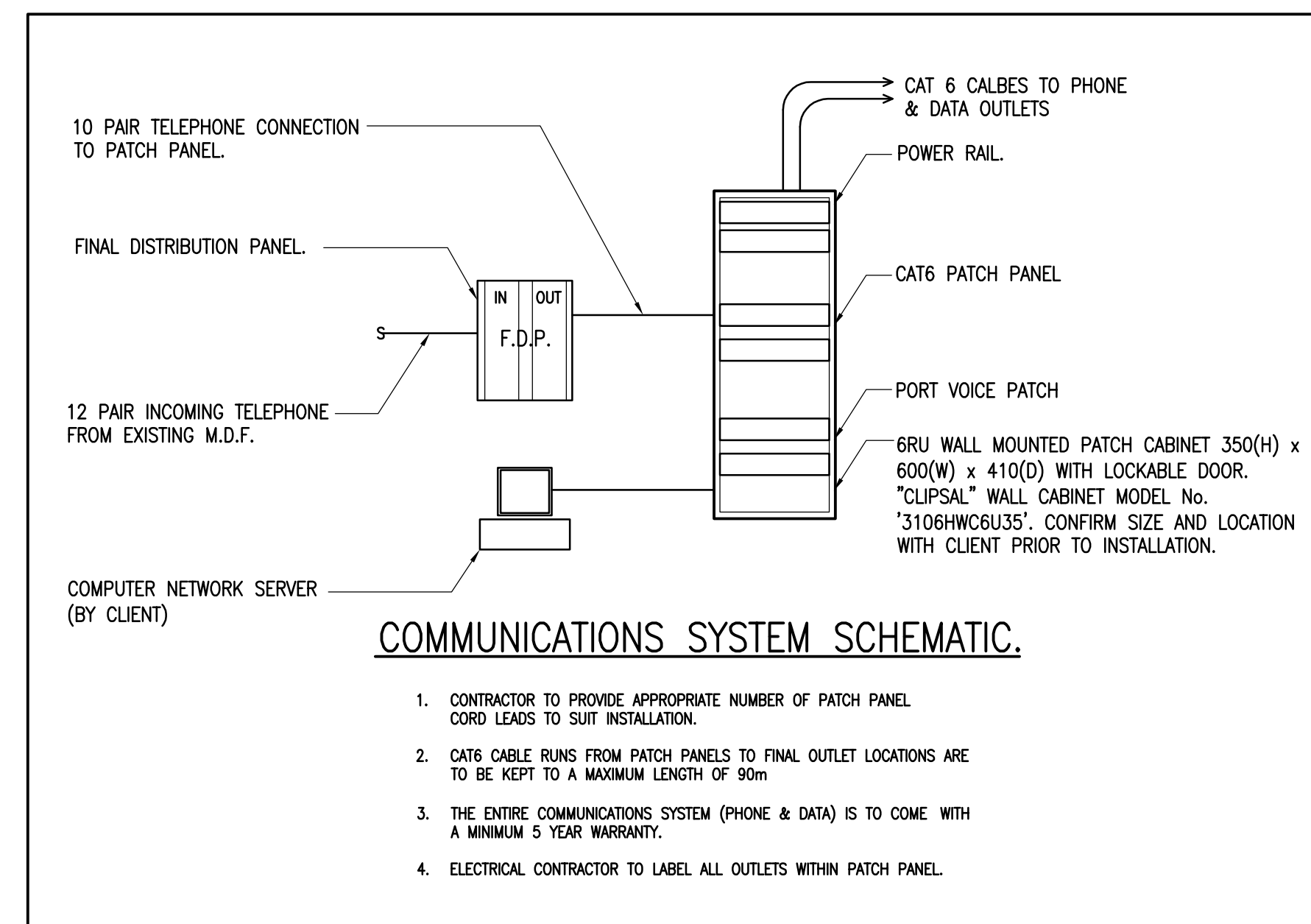


LOADCENTRE (LC) SCHEMATIC.

NOTE: CONTRACTOR TO SUPPLY & INSTALL MIN. 18 POLE LOADCENTRE.

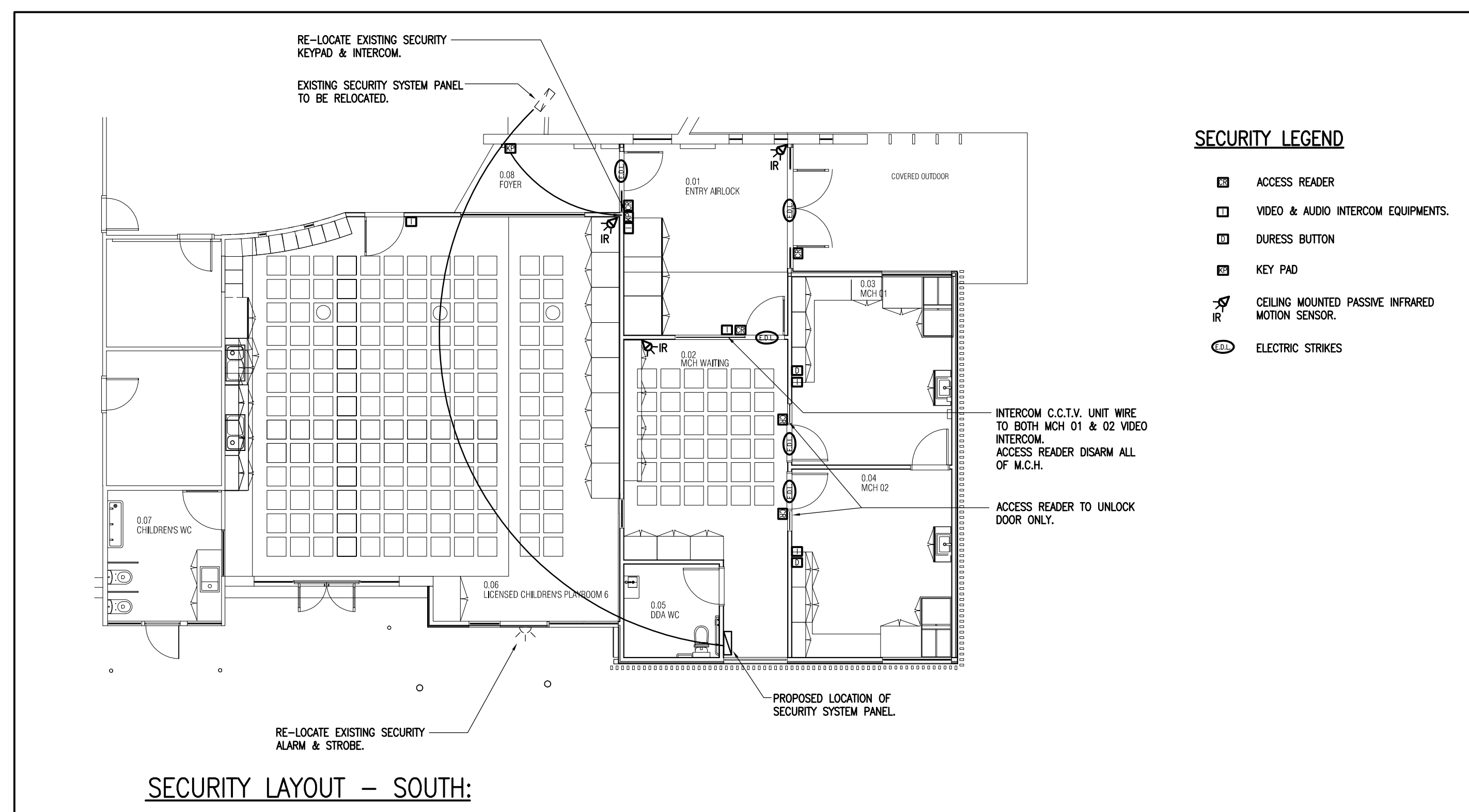


TYPICAL EMERGENCY & EXIT LIGHT CONTACTOR TEST SCHEMATIC.



COMMUNICATIONS SYSTEM SCHEMATIC.

1. CONTRACTOR TO PROVIDE APPROPRIATE NUMBER OF PATCH PANEL. CORD LEADS TO SUIT INSTALLATION.
2. CAT6 CABLE RUNS FROM PATCH PANELS TO FINAL OUTLET LOCATIONS ARE TO BE KEPT TO A MAXIMUM LENGTH OF 90m
3. THE ENTIRE COMMUNICATIONS SYSTEM (PHONE & DATA) IS TO COME WITH A MINIMUM 5 YEAR WARRANTY.
4. ELECTRICAL CONTRACTOR TO LABEL ALL OUTLETS WITHIN PATCH PANEL.



SECURITY LAYOUT – SOUTH:

SECURITY LEGEND

- ACCESS READER
- VIDEO & AUDIO INTERCOM EQUIPMENTS.
- DURESS BUTTON
- KEY PAD
- CEILING MOUNTED PASSIVE INFRARED MOTION SENSOR.
- ELECTRIC STRIKES

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2	TENDER ISSUE	30-06-15
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Title
ELECTRICAL SERVICES SCHEMATICS

Project
PROPOSED CHILDCARE REDEVELOPMENT
6 WESTS ROAD, MARIBYRNONG, VIC 3032

Client
MARIBYRNONG CITY COUNCIL

Architect
k20 ARCHITECTURE

Scale
1:100 @ A1

Drawn
J.L.

Checked

Date
MAY '15

Revision

Project No.

15-1071

Drawing No.

E3 OF 3

Issue
1

TENDER ISSUE

