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E2-GF-0202	Sacristy, Alter & Kitchen Details
E2-GF-0211	Ground Floor Lighting Layout
E2-GF-0212	Sacristy and Alter Lighting Details

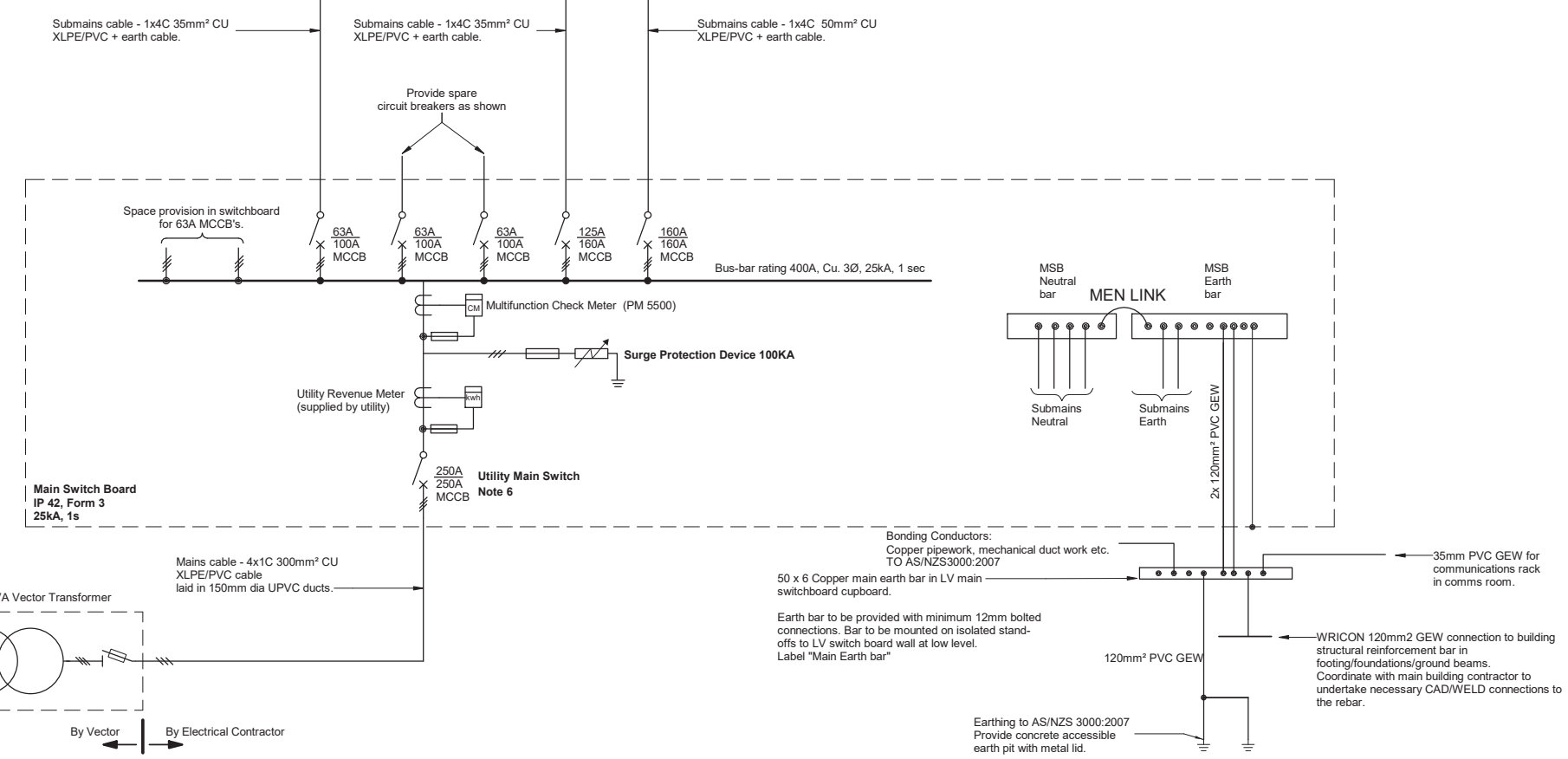
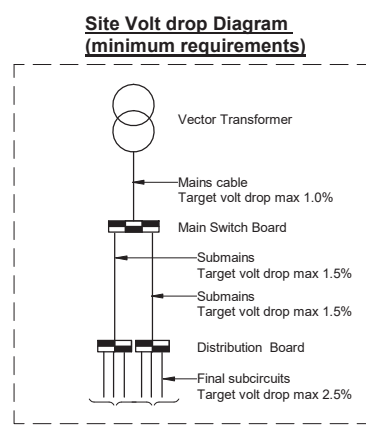
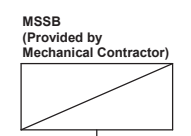
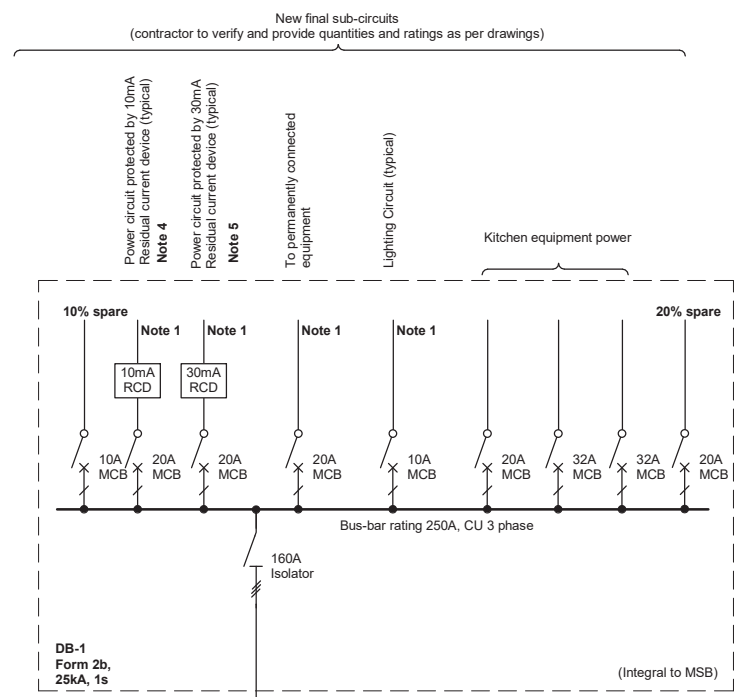
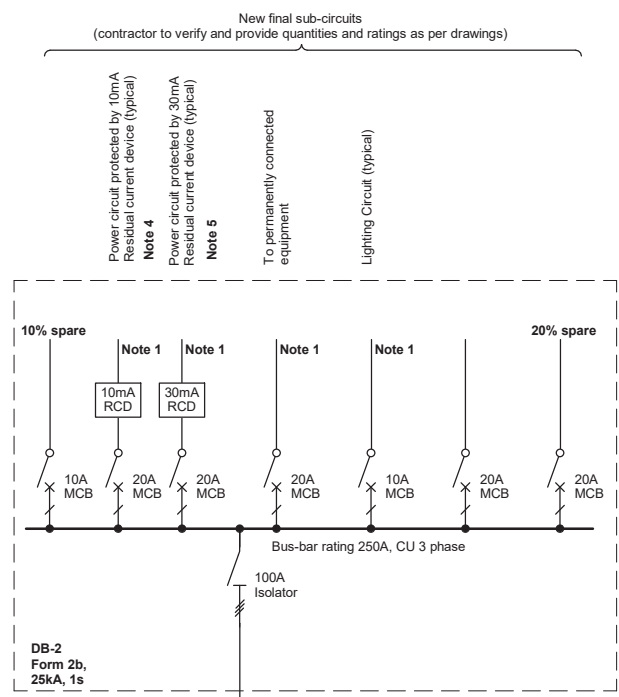


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St Lukes Parish Church
 Electrical Services

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- NOTES**
1. Circuit shown is indicative/ typical only. Electrical contractor to refer to layout drawings for exact quantities of final sub circuits. Provide 30% spare circuit breakers as shown.
 2. Contractor to ensure switch board design will fit within the switch boards cupboards.
 3. Contractor to confirm 100% discrimination is achieved between upstream and down stream protection devices.
 4. All MCB/RCD/RCBO used for final subcircuits shall be rated to 10kA fault level.
 5. All power socket outlet circuits shall be protected by 30mA including fixed ICT equipments but excluding permanently connected equipments such as domestic hot water, ovens, panel heaters, vents etc.
 6. Main switch to be labelled as per section 2.3.3.4 of AS/NZS 3000.
 7. All distribution boards to be labelled as described in electrical specification.
 8. Any alterations to circuit breaker ratings, cable sizes during construction installation shall be approved by the electrical engineer.
 9. Isolator/ switch disconnector ratings in all distribution boards to be same as upstream MCCB ratings in the MSB.
 10. Contractor to liaise with Vector for their LV pillar protection settings and ensure that the mains cable is protected under fault and overcurrent.
 11. All circuit breakers including MCCB's, and MCB's shall be from Schneider Electric or similar approved by engineer.

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Client **St Lukes Parish Church**
Chapel Road, Flat Bush
Auckland

Notes

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1	08.08.2019	MMD	Tender Issue	P.B.	W.I.B.
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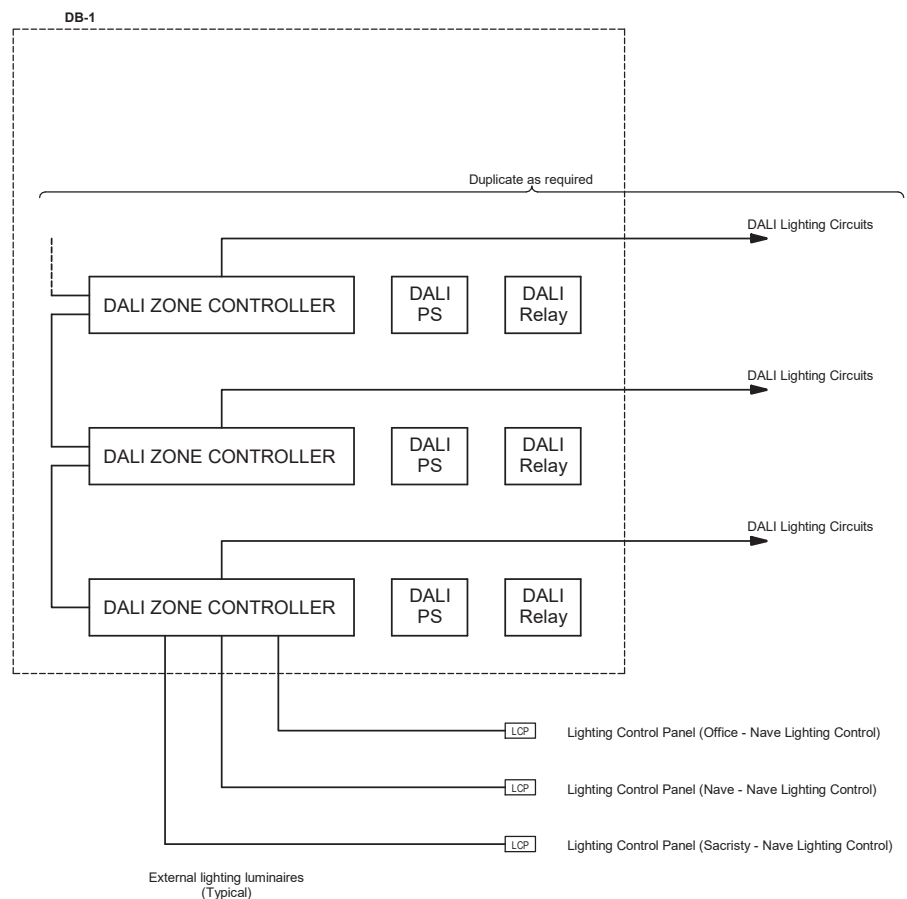
Title **St Lukes Parish Church**
Electrical Services
Power Distribution Single Line Diagram

Designed	A.Chand	A.C.	Eng. check.	Sugu.R	S.R.
Drawn	N.Ridgley	N.R.	Coordination	N/A	N/A
Dwg. check.	G. Singh	G.S.	Approved	W. Bruntton	W.B.
Scale at A1	N.T.S.	Status	TEN	Rev	1
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Drawing Number **MMD-385529-DR-E0-XX-0002**

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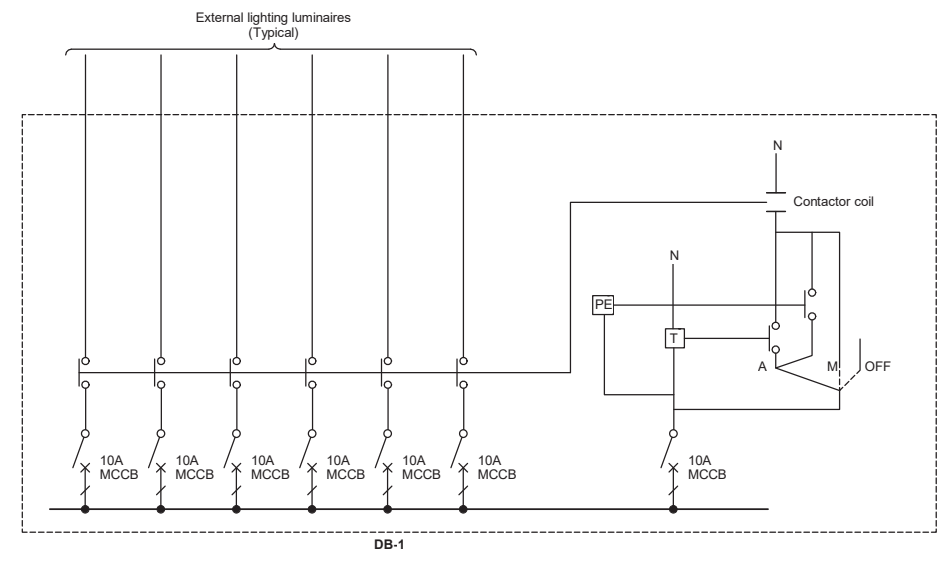
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Typical RAPIX/C-BUS LIGHTING CONTROL ARRANGEMENT (N.T.S.)

RAPIX/C-BUS Lighting Control Arrangement Notes

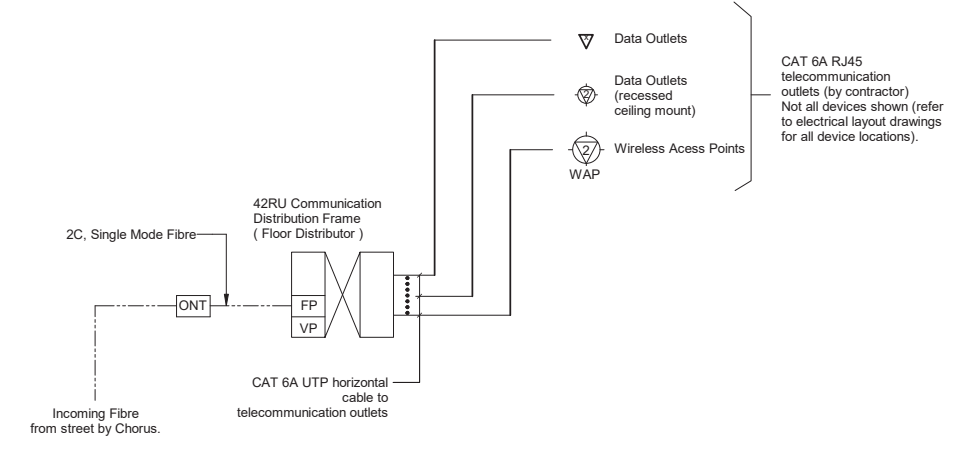
1. Lighting control system shall be RAPIX or C-BUS DALI system. System shall be provided by Intelligent Environment Ltd.
2. The supplier/system integrator shall provide a detailed shop drawing for the lighting set up for approval.
3. The supplier/system integrator shall allow for a minimum of 8 lighting presets within the system set up. Lighting presets to be confirmed with client.



EXTERIOR LIGHTING CONTROL ARRANGEMENT (N.T.S.)

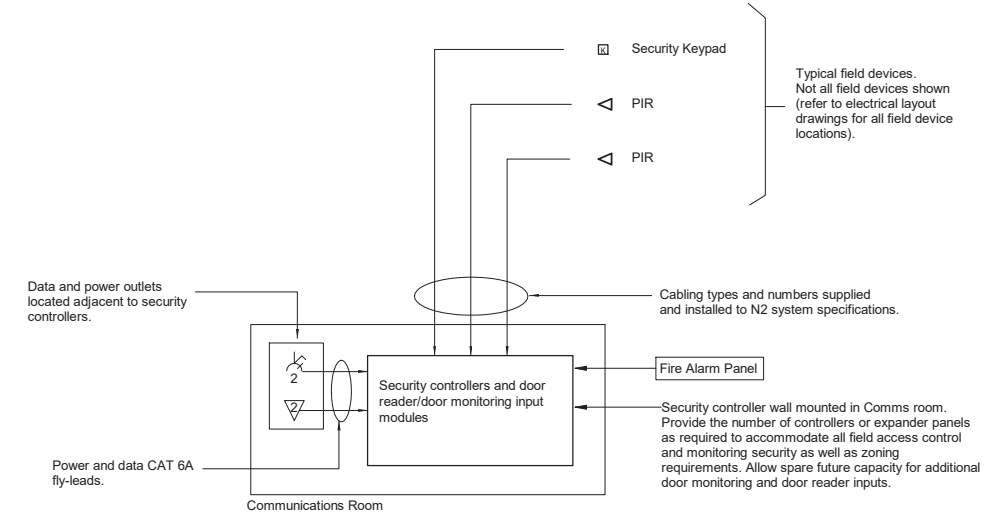
External Lighting Control Arrangement Notes

1. All exterior lighting to be controlled by combination of digital timer and photocell. ON/OFF/AUTO override switches to be located in the electrical distribution board.
2. Exterior lighting control arrangement is typical and indicative only. Contractor to provide final design prior to construction installation as part of shop drawings.

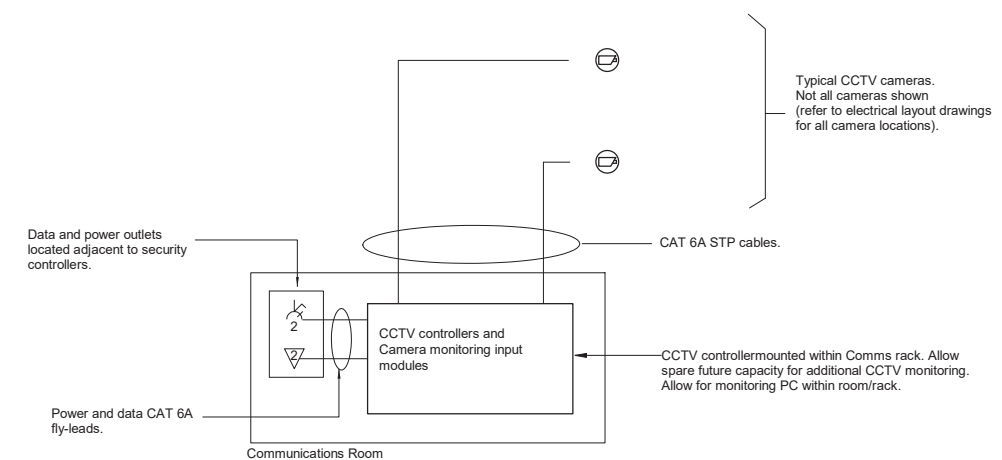


STRUCTURED CABLING SCHEMATIC (N.T.S.)

Note: All multimode OM3 fibre cores shall be fusion spliced with LC terminated pig-tails.



SECURITY AND INTRUDER DETECTION SCHEMATIC DIAGRAM (N.T.S.)



CCTV SCHEMATIC DIAGRAM (N.T.S.)



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Title
St Lukes Parish Church
Electrical Services
ELV Schematics

Designed	S. Ramachandran	S.R.	Eng. check.	Sugu.R	S.R.
Drawn	N. Ridgley	N.R.	Coordination	N/A	N/A
Dwg. check.	G. Singh	G.S.	Approved	W. Brunton	W.B.
Scale at A1	N.T.S.	Status	Rev	1	Security
Drawing Number	MMD-385529-DR-E0-XX-0003				

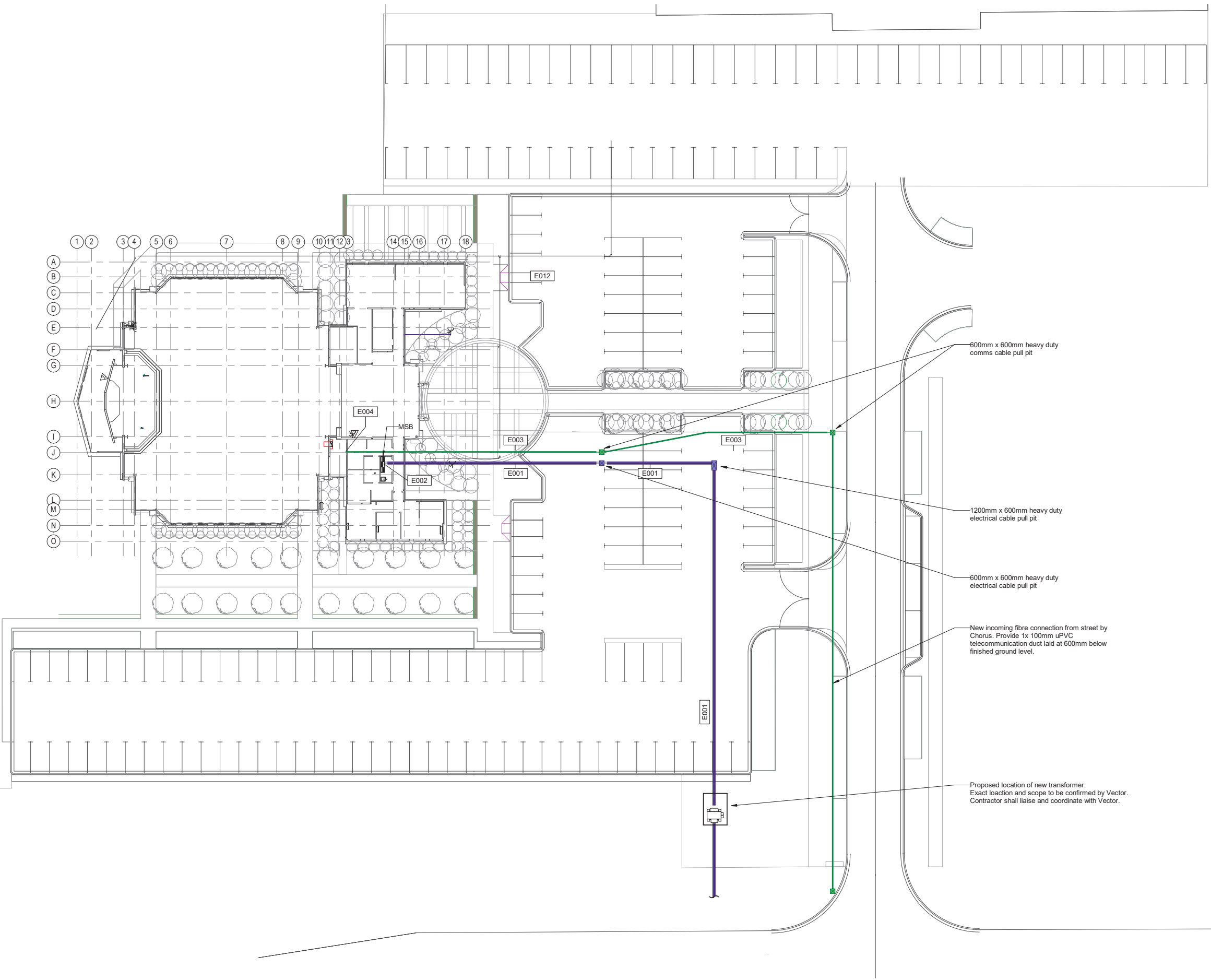
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Refer to drawing
MMD-385529-E0-DR-XX-0001
for Legend and General Notes.

Sheet Keynotes	
Key	Keynote Text
E001	New electrical mains cable laid in uPVC duct. Provide 2x 150mm uPVC electrical duct laid 600mm below finished ground level. Provide minimum 2 sets of pull strings/rope in each duct.
E002	Low Voltage uPVC duct building entry point directly under Main Electrical Switchboard (MSB). Provide large sweep bends. All ducts to be laid at 600mm below finished ground level.
E003	New incoming fibre connection from street laid in uPVC duct. Provide 1x 100mm uPVC comms duct laid 600mm below finished ground level. Provide minimum 2 sets of pull strings/rope in duct. Contractor shall supply and install Chorus 20mm lead-in greenpipe in the 100mm duct for Chorus fibre installation.
E004	Comms uPVC duct building entry point directly under ONT (in comms room). Provide large sweep bends.
E012	Contractor shall employ GPR/EMI method to locate and identify existing underground services within the site. Please note, there is existing High Voltage cable reticulation which runs in front of the building towards the school.



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0	09.11.2018	MMD	Building Consent & Tender Issue	P.B.	W.I.B.

Title
St Lukes Parish Church
Electrical Services
Site Power Layout

Designed	S. Ramachandran	S.R.	Eng. check.	S. Ramachandran	S.R.
Drawn	N. Ridgley	N.R.	Coordination	N. Ridgley	N.R.
Dwg. check.	G. Singh	G.S.	Approved	W. Brunton	W.B.
Scale at A1	Status	Rev	Security		
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Drawing Number	MMD-385529-DR-E1-XX-0101				

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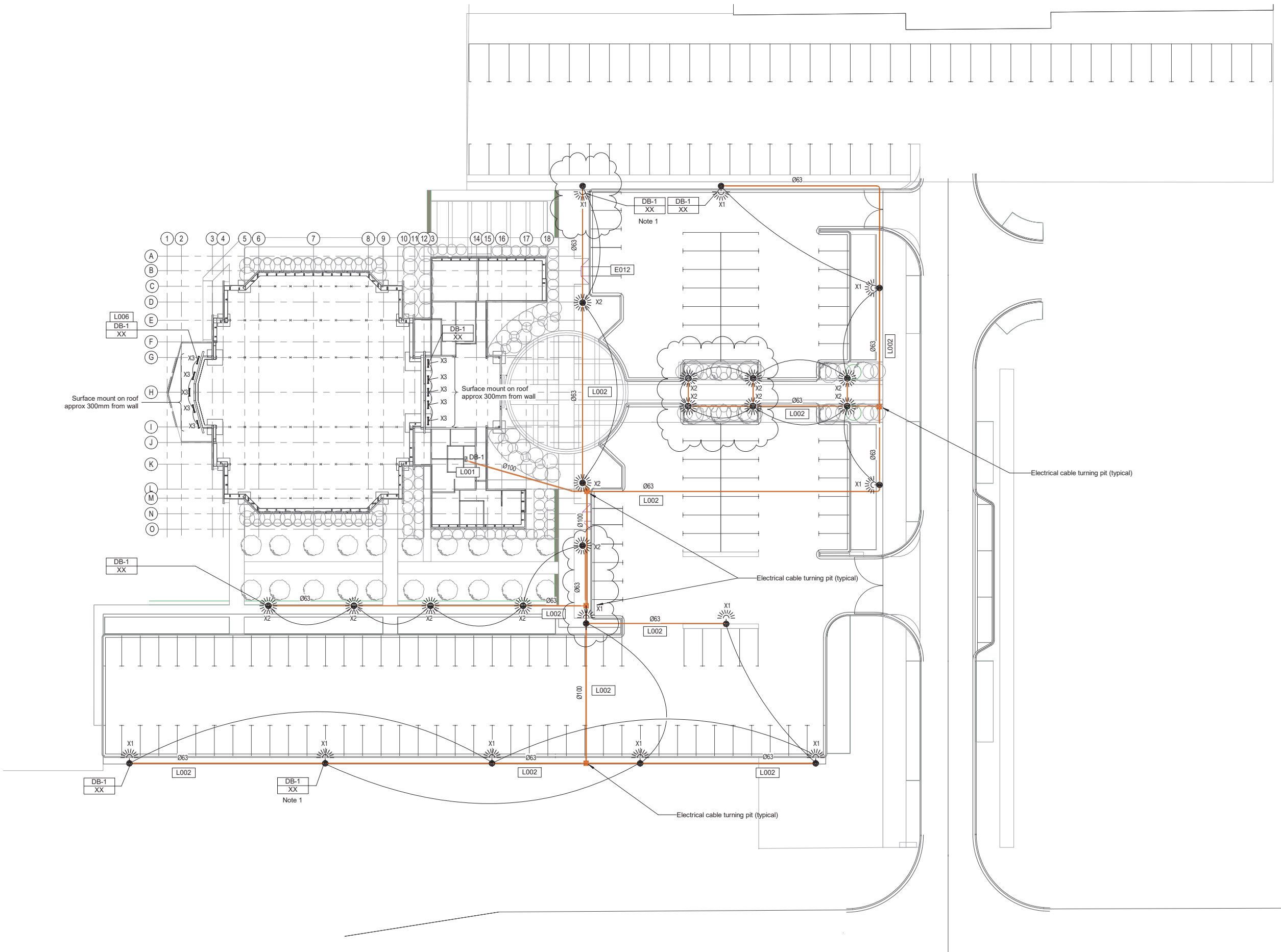


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Refer to drawing
MMD-385529-E0-DR-XX-0001
for Legend and General Notes.

Sheet Keynotes	
Key	Keynote Text
E012	Contractor shall employ GPR/EMI method to locate and identify existing underground services within the site. Please note, there is existing High Voltage cable reticulation which runs in front of the building towards the school.
L001	Distribution board DB-1 in electrical cupboard. Provide ON/OFF/AUTO override switch on DB panel for external lighting circuits.
L002	All conduit ducts for external lighting shall be heavy duty uPVC. Contractor shall verify and provide additional conduit runs as required for a complete functional system.
L006	Lighting circuits shall be programmed and controlled via the RAPIX/C-BUS lighting control system. Lights controlled from touch screen Lighting Control Panel (LCP).

Note 1: Lighting circuit to be switched as security lighting



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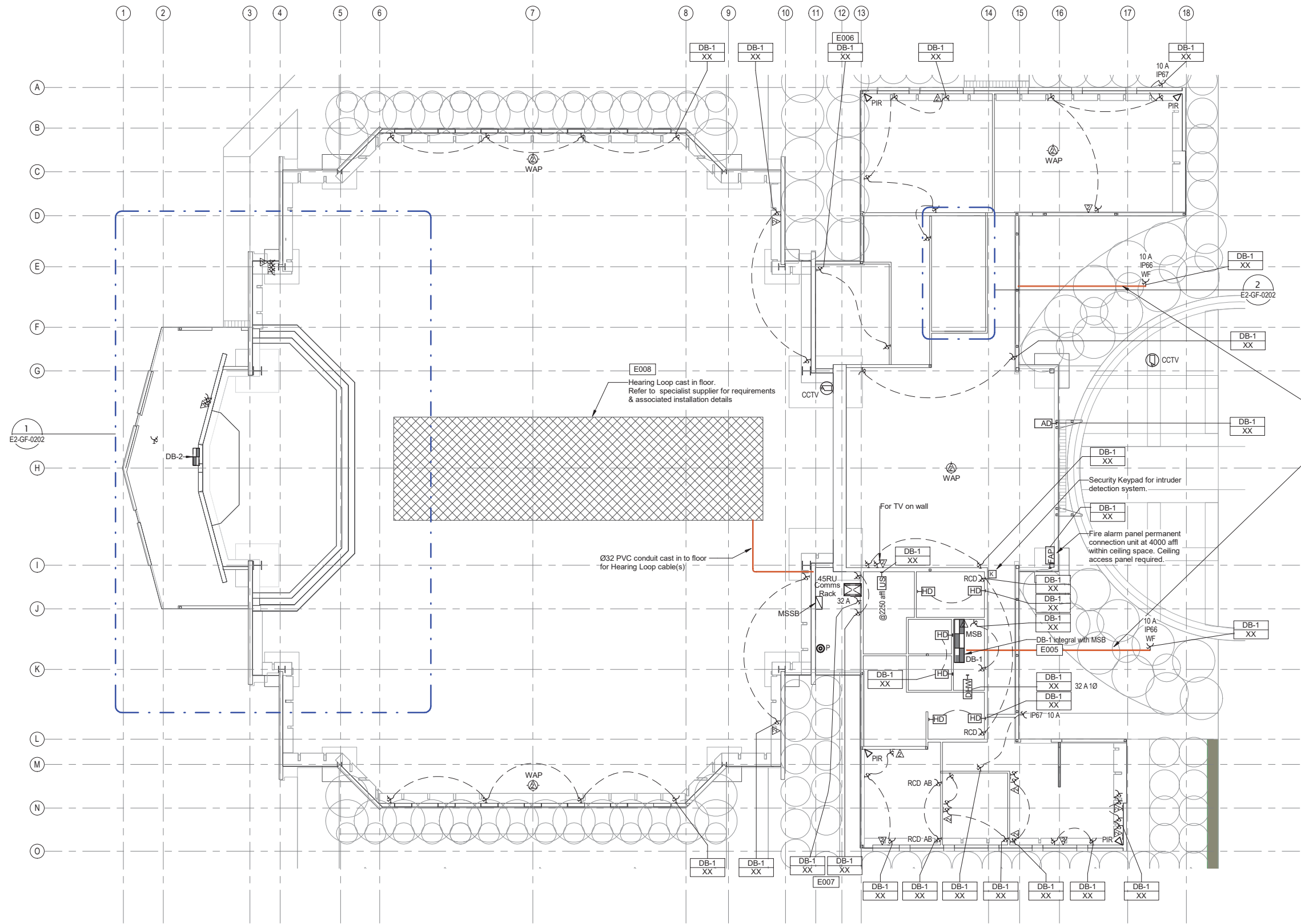
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1	17.04.2019	MMD	Building Consent & Tender Issue	P.B.	W.I.B.
0	09.11.2018	MMD	Building Consent & Tender Issue	P.B.	W.I.B.

Title
St Lukes Parish Church
Electrical Services
Site Lighting Layout

Designed	S. Ramachandran	S.R.	Eng. check.	S. Ramachandran	S.R.
Drawn	N. Ridgley	N.R.	Coordination	N. Ridgley	N.R.
Dwg. check.	G. Singh	G.S.	Approved	W. Brunton	W.B.
Scale at A1	1:250	Status	TEN	Rev	2
Security					
Drawing Number MMD-385529-DR-E1-XX-0111					



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**Refer to drawing
MMD-385529-E0-DR-XX-0001
for Legend and General Notes.**

Sheet Keynotes	
Key	Keynote Text
E005	All switch socket outlets circuit shall be protected by 30mA residual current device (RCD) at distribution board, unless noted otherwise. 10mA RCD protection shall be provided for circuits as indicated.
E006	Power circuit shall be protected via 10mA RCD at the Distribution Board.
E007	Contractor to coordinate power outlet locations in conjunction with setout of equipment within room.
E008	Hatched area denotes extent of hearing loop system coverage. Contractor shall liaise and coordinate with specialist supplier to allow for all necessary cabling, controls, amplifier and interface for a fully functional system. Amplifier and active equipment to be installed in communication room/rack.

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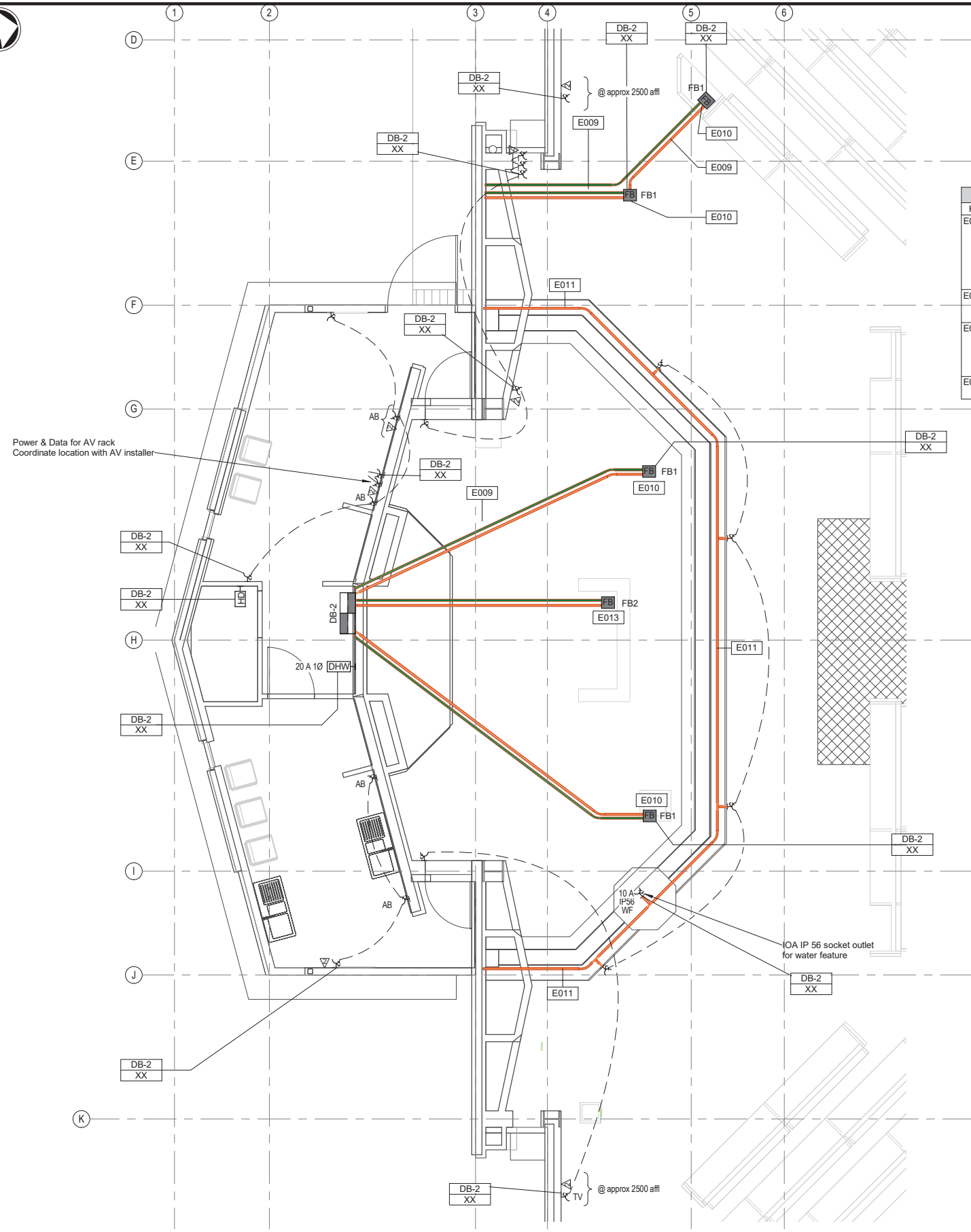
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0	09.11.2018	MMD	Building Consent & Tender Issue	P.B.	W.I.B.

Title
St Lukes Parish Church
Electrical Services
Ground Floor Power, Security &
Communications Layout

Designed	S. Ramachandran	S.R.	Eng. check.	S. Ramachandran	S.R.
Drawn	N. Ridgley	N.R.	Coordination	N. Ridgley	N.R.
Dwg. check.	G. Singh	G.S.	Approved	W. Brunton	W.B.
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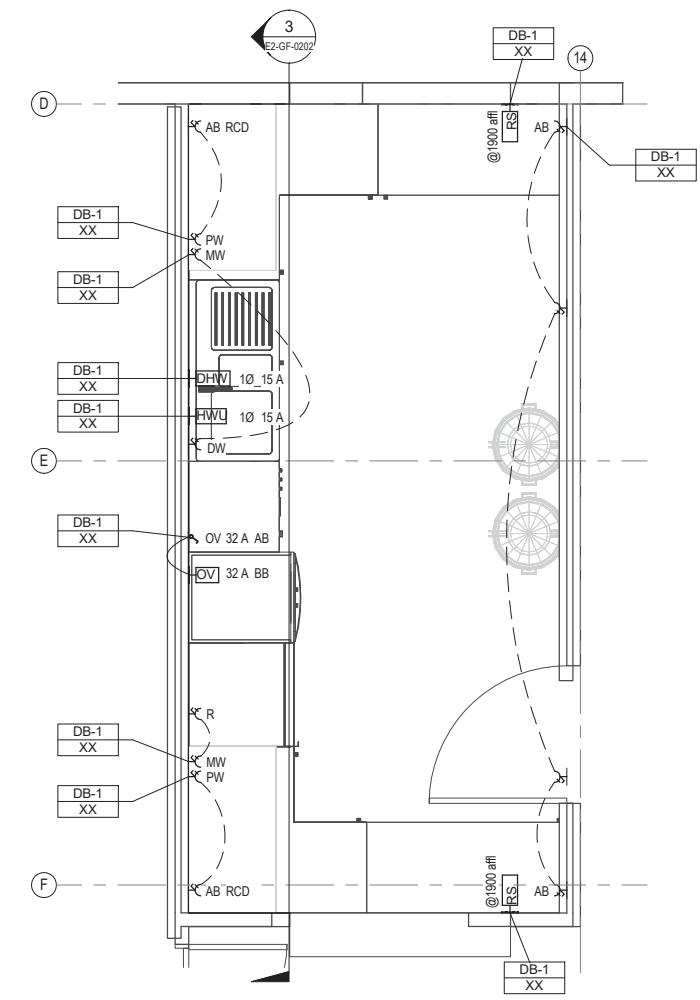
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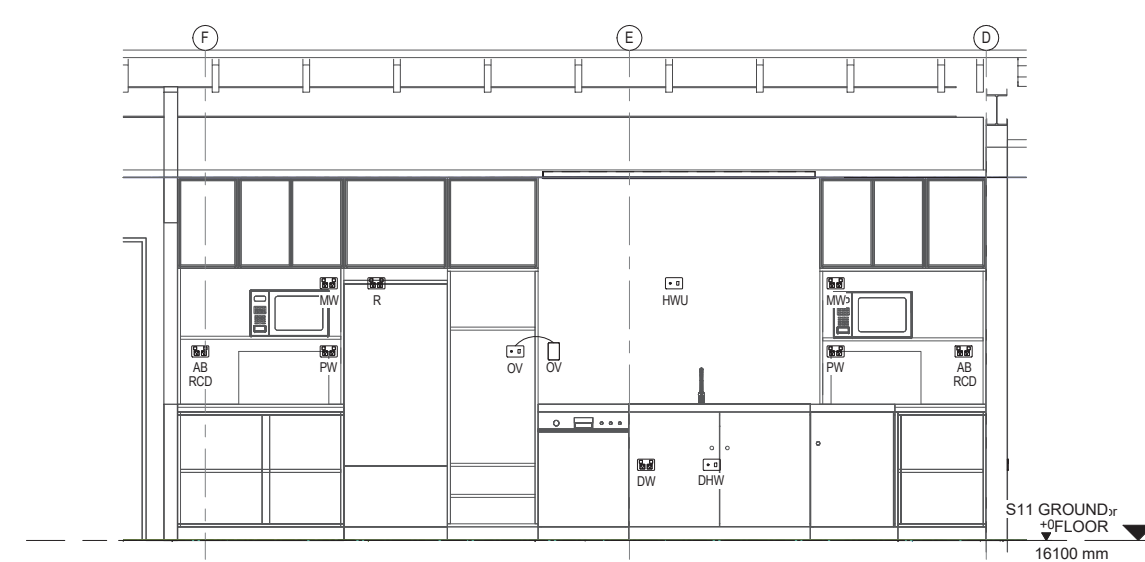
1 Power Security + Comms - Sacristy & Alter
Scale 1:50 @ A1

Refer to drawing
MMD-385529-E0-DR-XX-0001
for Legend and General Notes.

Key	Keynote Text
E009	Arrangement and routes for below-slab conduits to the floor boxes are indicative only. The conduits are to be chased into the top of the polystyrene pods immediately beneath the 125mm thick floor slab. The contractor is responsible to coordinate and determine exact route to these floor boxes. Provide 1x32mm Ø conduit for power, 1x50mm Ø for data and 1x32mm Ø as spare.
E010	All floor boxes shall be provided complete with 4xRJ45 Cat 6A data outlets and 4x10A sockets outlet. All floor boxes shall be provided with heavy duty recessed lids.
E011	Arrangement and routes for in-step conduits indicative only. The conduits are to be located within the concrete step. The contractor is responsible to coordinate and determine exact route to the power outlets. Provide 1x32mm Ø conduit for power.
E013	Floor Box FB2 shall be provided 2x10A socket outlet. Floor box shall be provided with heavy duty recessed lid.



2 Power Security + Comms - Kitchen
Scale 1:25 @ A1



3 Elevation - Kitchen Power Arrangement
Scale 1:25 @ A1

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0	09.11.2018	MMD	Building Consent & Tender Issue	P.B.	W.I.B.

Title
St Lukes Parish Church
Electrical Services
Sacristy, Alter & Kitchen Details

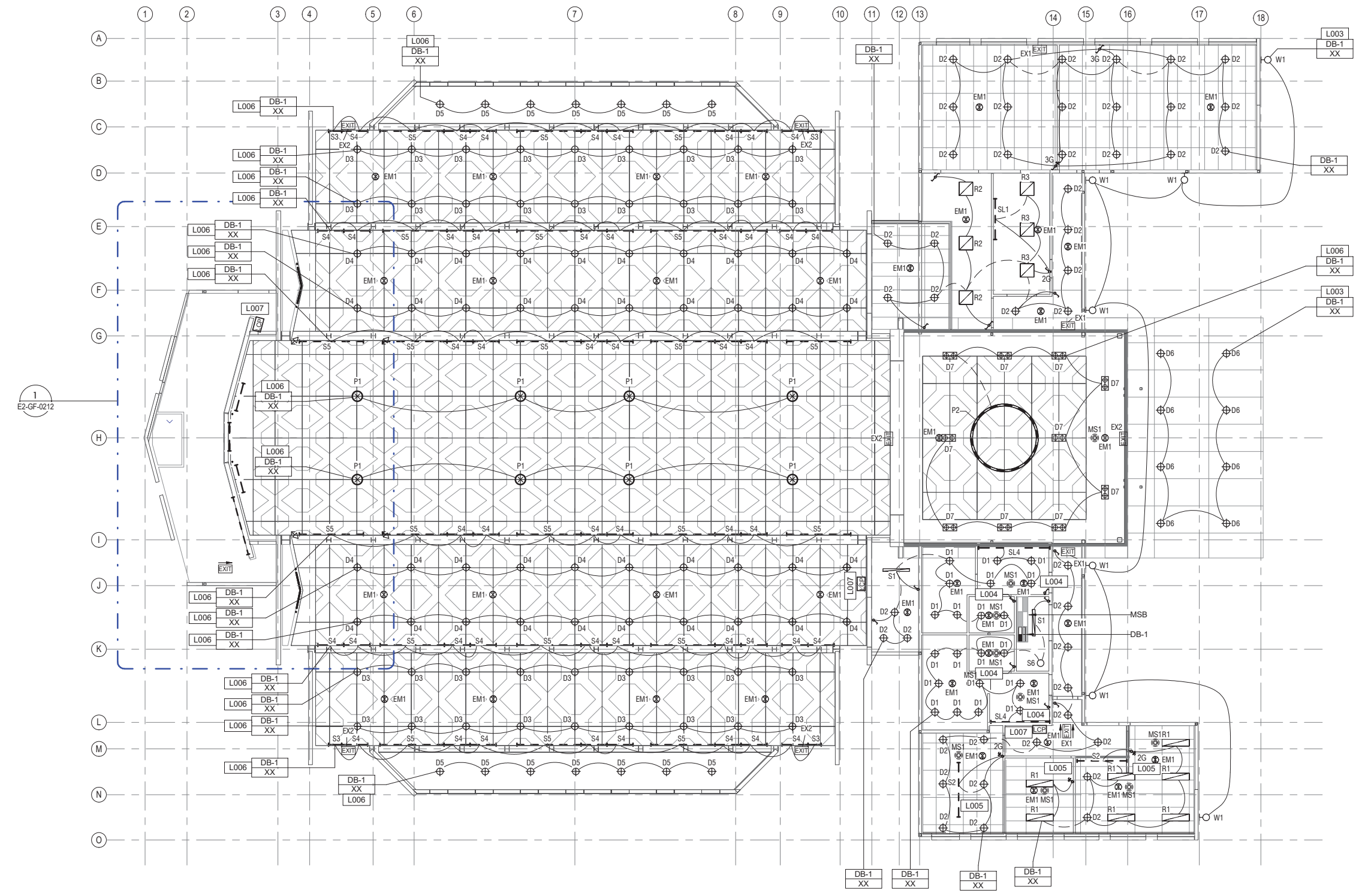
Designed	S. Ramachandran	S.R.	Eng. check.	S. Ramachandran	S.R.
Drawn	N. Ridgley	N.R.	Coordination	N. Ridgley	N.R.
Dwg. check.	G. Singh	G.S.	Approved	W. Brunton	W.B.
Scale at A1	Status	Rev	Security		
As indicated	TEN	1			
Drawing Number	MMD-385529-DR-E2-GF-0202				



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Refer to drawing
MMD-38529-E0-DR-XX-0001
for Legend and General Notes.

Sheet Keynotes	
Key	Keynote Text
L003	External lighting circuit to be controlled via photo cell and timer. ON/OFF/AUTO override switch to be mounted at the door of DB-1.
L004	ON/OFF/AUTO motion sensor override light switch mounted at 1100mm AFFL.
L005	Motion sensor and light switch to be wired to "Vacancy Mode", i.e. lightd to be manually turned ON, AUTO turned OFF.
L006	Lighting circuits shall be programmed and controlled via the RAPIX/C-BUS lighting control system. Lights controlled from touch screen Lighting Control Panel (LCP).
L007	Digital programmable touch screen lighting control panel to control lights within the church Nave, entrance foyer & Nave External lighting.



1
E2-GF-0212

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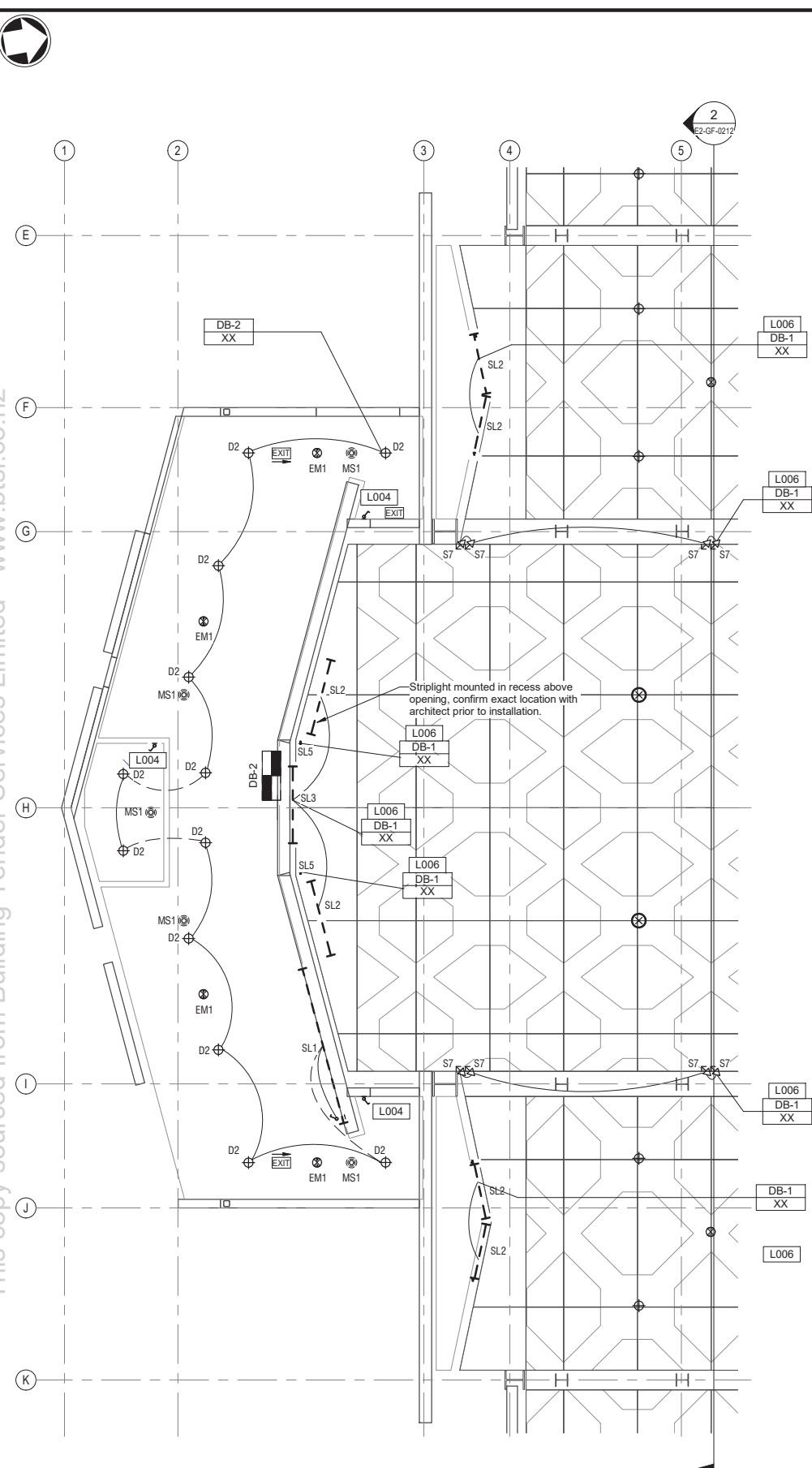
Title
St Lukes Parish Church
Electrical Services
Ground Floor Lighting Layout

Designed	S. Ramachandran	S.R.	Eng. check.	S. Ramachandran	S.R.
Drawn	N. Ridgley	N.R.	Coordination	N. Ridgley	N.R.
Dwg. check.	G. Singh	G.S.	Approved	W. Brunton	W.B.
Scale at A1	Status	Rev	Security		
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Drawing Number MMD-38529-DR-E2-GF-0211					

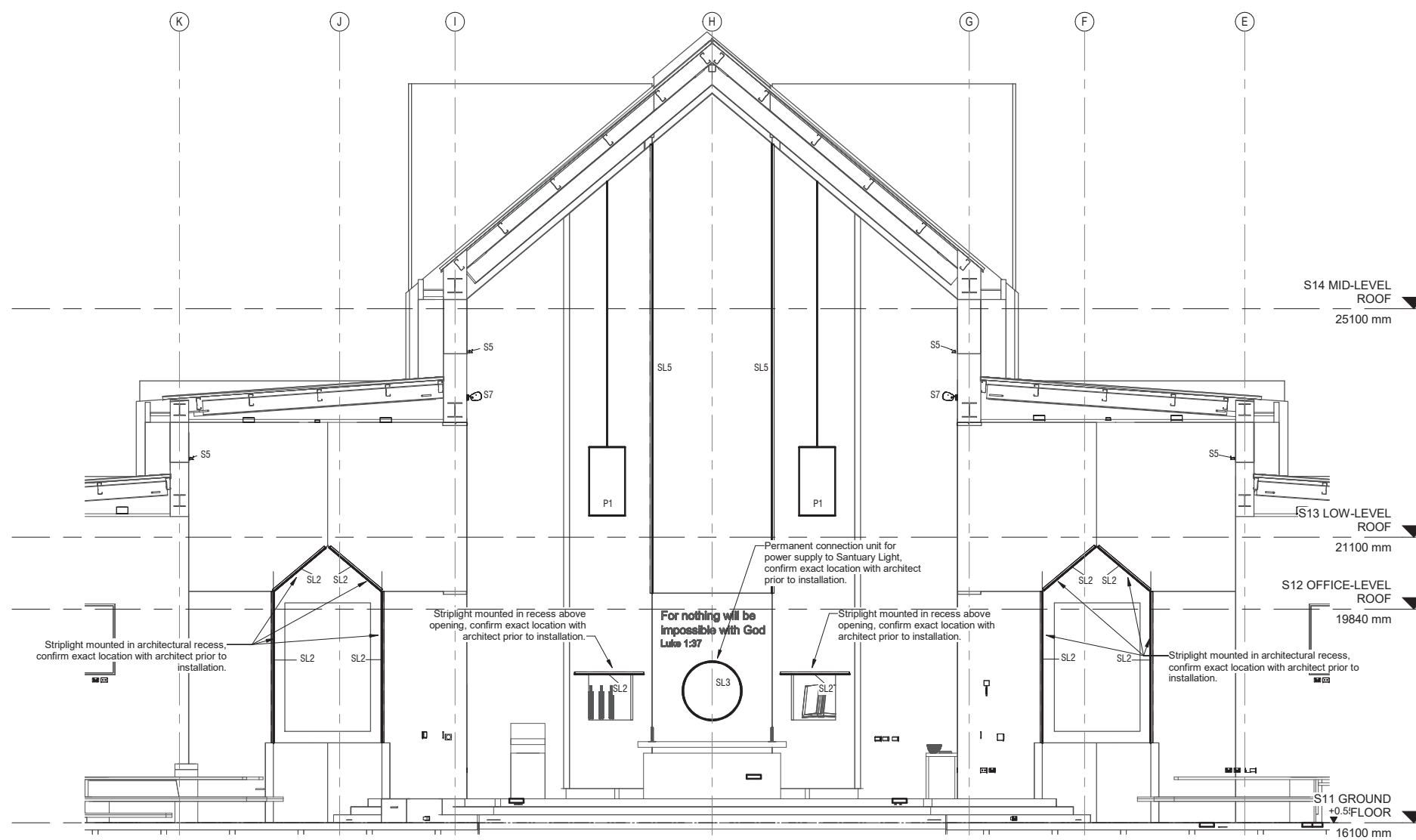
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for Legend and General Notes.

Sheet Keynotes	
Key	Keynote Text
L004	ON/OFF/AUTO motion sensor override light switch mounted at 1100mm AFFL.
L006	Lighting circuits shall be programmed and controlled via the RAPIX/C-BUS lighting control system. Lights controlled from touch screen Lighting Control Panel (LCP).



1 Sacristy and Alter Lighting Details



2 Elevation - Alter Lighting Arrangement

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Title
St Lukes Parish Church
Electrical Services
Sacristy and Alter Lighting Details

Designed	S. Ramachandran	S.R.	Eng. check.	S. Ramachandran	S.R.
Drawn	N. Ridgley	N.R.	Coordination	N. Ridgley	N.R.
Dwg. check.	G. Singh	G.S.	Approved	W. Brunton	W.B.
Scale at A1	1:50	Status	TEN	Rev	1
Drawing Number			Security		
MMD-385529-DR-E2-GF-0212					