



REQUEST FOR QUOTATION (RFQ)

| | |
|----------------------|---|
| <i>Title</i> | UPGRADING ELECTRICAL SWITCHBOARD AT SENKURONG EXCHANGE PHASE 1, JLN TUTONG, BSB |
| <i>Reference No.</i> | TBB-OPT-201712-Q-NFE-049 / PR 100009413 |
| <i>Opening Date</i> | FRIDAY 9 TH MARCH 2018 |
| <i>Closing Date</i> | TUESDAY 20 TH MARCH 2018 BEFORE 2.00PM LOCAL TIME |
| <i>Work Category</i> | REGISTERED WITH TELBRU UNDER TE4 |

Telekom Brunei Berhad (TelBru) seeks qualified vendors to execute the above work. Documents may be obtained from TelBru's Vendor Registration Unit, Supply Chain Management, Level 4, RB Plaza, Jalan Sultan, BS8811, Bandar Seri Begawan, Negara Brunei Darussalam from **Monday to Thursday (8.00am – 11.30am and 1.15pm – 4.45pm)** and **Friday (7.45am – 11.15am and 2.15pm – 4.45pm)** at **no charge**, or can otherwise be downloaded from <https://www.telbru.com.bn/equotes>

Note:

This is a Request for Quotation only and is in no way constitutes as a firm Purchase Order (PO) or Contract. Telekom Brunei Berhad is not bound to accept the Vendor's quotation in part or whole.

TelBru's General Conditions of Purchase (GCP) shall prevail over the RFQ and any PO. The GCP and other relevant details are available for reference at <https://www.telbru.com.bn/scm/>

No correction fluid shall be used in the document. Errors shall be crossed out and initialed by the respective Vendor. Any Quotation found to be corrected using correction fluid will not be entertained.

Vendor Company's name and address is NOT to be printed on the cover of Quotation submission envelope which must be fully sealed. Description on the envelope shall be **RFQ Title, Reference Number, RFQ Opening & Closing Dates**. Quotations submitted shall be addressed to:

THE CHAIRPERSON OF TELBRU QUOTATION COMMITTEE
LEVEL 4, RB PLAZA, JALAN SULTAN, BS 8811
BANDAR SERI BEGAWAN,
NEGARA BRUNEI DARUSSALAM

For TELEKOM BRUNEI BERHAD



QUOTATION SUBMISSION

IMPORTANT:

Vendors to provide all information requested below. Failure to do so may result in disqualification. Information submitted should be completed on basis of EITHER Bill of Quantities (BOQ) + Bill of Materials (BOM) OR Bill of Materials (BOM) Only. Only Authorised Officers of the Vendor to sign and stamp the bid submission.

VENDOR DETAILS

- A. Company Name:
- B. Company Address:
.....
.....
- C. TelBru's Vendor Registration Certificate: **(please attach)**
- D. Authorised Vendor
Representative Name:
- E. Company Position:
- F. Telephone No:
- G. Fax No:
- H. Email Address:
- I. Signature:
- J. Date:

FORM OF SUBMISSION

FOR SERVICES AND MATERIALS (BOQ AND BOM)

Please attach all details of the following and tick box to confirm attachments:

- A. Vendor Organization Chart for Project Delivery
- B. Equipment List (Based on the work awarded on the BOQ and BOM)
- C. Workmen's Compensation, Public Liability (3rd party insurance) and Work Permit for non-local staff who will be part of project delivery

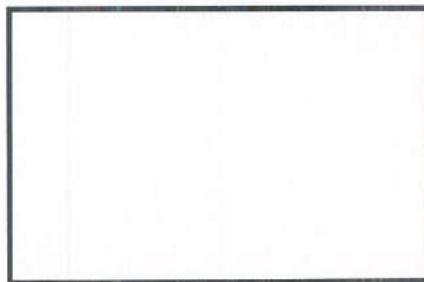
- D. Project Timeline & Implementation Plan (**TWO MONTHS** from the date of award of project)
- E. Model/Brand for Materials:
- F. Manufacturer and Country of Origin for Materials:
- G. Delivery Period of Materials:
- H. Bid Validity period:
- I. Warranty Period:

OR

FOR SUPPLY OF MATERIALS (BOM ONLY)

Please attach all details of the following and tick box to confirm attachments:

- A. Model/Brand for Materials:
- B. Manufacturer and Country of Origin of Materials
- C. Supporting Document/technical Document for Materials
- D. Delivery Period:
- E. Sample availability: **YES/NO** (Please circle **YES** if available, **NO** for unavailability)
- F. Bid Validity period:
- G. Warranty Period:



SIGNATURE OF AUTHORISED VENDOR REPRESENTATIVE & COMPANY STAMP

NAME OF SIGNATORY:

DATE:

SCHEDULE OF PRICES

| NO. | BILL OF QUANTITIES (BOQ) | QUANTITY | UOM | UNIT PRICE | TOTAL PRICE |
|-----|---|----------|-----|------------|-------------|
| 1 | To upgrade electrical switchboard at Sengkurong Exchange. (The work covered under this Electrical installation comprises the supply, delivery, installation, testing, commissioning and operation and maintenance during the defects liability period of 12 months as follows) | | | | |
| 2 | Supply, Install, Testing and Commissioning of sub-switchboard including all ancillaries and accessories as per latest DES Technical specification: | | | | |
| 3 | 600A GENSET switchboard modification to include providing busbar, MCCB and all other necessary items. 1. modification 600A genset switchboard. (refer to SLD) | 1 | no | | |
| 4 | NEW-SSB-MA Intake metalclad, Form MSB, wall-mounted switchboard c/w 400A MCCB, DPM, DTL relays, protection relays, selectors, padlock able rotary handles, switches, indicators, ammeters, voltmeters, CT's and accessories to DES Approved Manufacturer | 1 | no | | |
| 5 | Submain Cabling work: i) Supply and install 1x4C/240sq. mm XLPE/SWA/PVC cable lay in cable trunking or cable tray. | 15 | m | | |
| | ii) Supply and install 1x4C/185 sq. mm XLPE/SWA/PVC cable lay in cable trunking or cable tray. | 35 | m | | |
| | iii) Existing cable trunking, cable tray need to be removed and supply and install cable tray, cable trunking or cable ladder as per site condition | 1 | lot | | |
| | iv) Final circuit insulation test in SSB & DB test report submit to telbru engineer | 1 | lot | | |
| | v) supply and install Earthing Pit c/w heavy duty polycarbonate inspection chamber, earthing copper rods, connections to meet earthing requirement of <1ohm resistance | 1 | lot | | |
| | vi) All necessary termination/connection works as required including installation works for switchboards and distribution boards | 1 | lot | | |

| | | | | | |
|--------------------------|---|---|-----|--|--|
| 6 | Testing and Commissioning as per DES requirements | 1 | lot | | |
| 7 | Removal of existing switchboard (MSB&SSB) and equipment, to be disposed of with care send to Telbru store (sinarubai) | 1 | lot | | |
| 8 | Allow cost for temporary switchboard, Genset, including cable, joint termination, all other necessary items. | 1 | lot | | |
| GRAND TOTAL PRICE | | | | | |

| NO. | BILL OF MATERIALS (BOM) | QUANTITY | UOM | UNIT PRICE | TOTAL PRICE |
|--------------------------|---------------------------------|----------|-----|------------|--------------------|
| 1 | INTENTIONALLY LEFT BLANK | | | | |
| 2 | | | | | |
| 3 | | | | | SUPPLIED BY TELBRU |
| 4 | | | | | SUPPLIED BY TELBRU |
| 5 | | | | | SUPPLIED BY TELBRU |
| GRAND TOTAL PRICE | | | | | |

| NO. | DESCRIPTION | AMOUNT |
|--------------------------|--------------------|--------|
| 1.0 | BILL OF QUANTITIES | |
| 2.0 | BILL OF MATERIALS | |
| GRAND TOTAL PRICE | | |

PROJECT: SUPPLY & INSTALL ELECTRICAL SWITCHBOARD AT SENGKURONG EXCHANGE PHASE 1, JLN TUTONG, BSB.

SCOPE OF WORK

The scope of work under Electrical Services shall include but not limited to the supply, delivery to site, installation, testing, commissioning and maintenance (during Defects Liability Period) of the whole Work as described in this Specification and Bills of Quantity, and as depicted in the Drawings. The Work shall comprise:

- supply and install switchboard equipment including earthing to DES requirement
- electrical switchboards, sub-switchboards and distribution boards,
- All submains cable inclusive of excavation, cable ladder, cable tray, cable trunking, pipe sleeves, support and all accessories.
- All final sub circuits inclusive of all trunking, conduits, support and other accessories.
- All necessary cutting and hacking work including making good thereafter.
- Earthing for the whole electrical installation

The contractor shall deliver to the owner a complete working system/s described above including all minor and incidental items necessary for the proper functioning of the whole system, even though not specifically detailed or mentioned in the quotation /contract document. Tender price shall include allowance for such items and any exchange, duty, tax, excise and levy on material and labour.

L.V. MAIN SWITCHBOARD

1 General Requirements

- Factory built assembly to BS 5486.
- Protective standard IP 54 to BS 5420, including the base plate.
- Floor mounted type, with front access to all equipment including cable termination.
- All components shall be suitable for indoor use under tropical conditions.

Drawings

Refer to clause **SHOP DRAWINGS**

Submit the following drawings to the Engineer for review.

- Details of the base support arrangement showing the necessary support steelwork as described above. This drawing shall be submitted for review in time for any work required to be cast into the switch room slab.
- Detailed drawing showing the type, arrangement, actual dimensions and assembly of the switchboard. To be submitted for review prior to fabrication.
- A neat "AS FITTED" drawing showing the schematic wiring diagram of the switchboard arrangement. The drawing is to be framed and displayed in the main switch room.

EARTH FAULT & OVERCURRENT PROTECTION

1 Over-current Relay

Triple pole type in a single casing.

For IDMT induction disc type relays, graded tap range shall be 50-200% of 5A, with 7 plug tappings at 2.5, 3.0, 3.75, 5.0, 6.0, 7.5, and 10A.

Time setting adjustable from 0-1.3 seconds at 10 times the current setting.

PROJECT: SUPPLY & INSTALL ELECTRICAL SWITCHBOARD AT SENGKURONG EXCHANGE PHASE 1, JLN TUTONG, BSB.

2 Earth Fault Relay

Single pole type.

Graded tap range 10-40% of 5A, with 7 plug tappings at 0.5, 0.6, 0.75, 1.0, 1.2, 1.5 and 2.0A.

Time setting adjustable from 0-3 seconds at 10 times the current setting.

3 DPM

Alarm notification by e-mail Real time viewing of data Diagnostic via predefined web pages Web server

DISTRIBUTION BOARDS

General

- Wall mounted, dead front, totally enclosed, vermin proof front connected type to BS 5486 or IEC 60439-3 and protection category IP30 for all live parts. Isolators shall comply with BS 5419.
- Enclosure manufactured from 16 SWG galvanised mild steel sheet, finished in stoved semi gloss to BS 2660. Thickness of the finish shall be minimum 20 microns.
- Conduit knock-outs shall be provided at both top and bottom cover plates with an incoming 50mm knock-out.
- The cover shall have openings for access to the MCCBs, MCBs, ELCBs or fuses. These openings shall have slots to accept blanking plates. Fit circuit identification labels on the cover, and a circuit identification diagram inside the cover.
- Bus-bars shall be tinned or nickel plated copper, rated at a minimum of 100A, with incoming cable termination capacity of up to 50mm sq.
- Main earth terminal clamp shall be fitted inside the enclosure and a multi-terminal bar shall be provided for circuit protective conductors of at least equal capacity to the line conductors.
- Clip-on mounting rails shall be provided for mounting the MCCB, MCB.
- Multi-pole distribution boards shall have busbar arrangement presenting 1 or 2 banks of MCBs of mix combinations of 1P, 2P or 3P types, as indicated on the line diagrams.
- Single phase consumer units shall accept combinations of 1P and 2P MCB's and have busbars in horizontal arrangement.
- Distribution boards shall have maximum depth of 200mm.
- MCCB (or MCB) shall comply with BS 3871 or IEC 60898, HRC fuses shall be to BS 88 or relevant parts of IEC 60269.
- Ensure that the distribution boards can fit in the spaces provided.

Cable Termination

- Cable termination shall be carried out by experienced cable jointers using as far as possible original manufactured components of the cable suppliers.

PROJECT: SUPPLY & INSTALL ELECTRICAL SWITCHBOARD AT SENGKURONG EXCHANGE PHASE 1, JLN TUTONG, BSB.

Crossing

- Where the cables cross pipes and cables of other services, provide heavy duty G.I. or PVC sleeves at the crossing. Sleeves shall extend 1000mm beyond the services crossed. Cables shall be 300mm clear and above the crossed services.

MAIN EARTHING SYSTEM

1 General

The scope shall include supply, install and connect the main earthing system comprising, but not limited to the following:

- Distribution Board main earthing bar.
- Interconnecting conductors between main and sub-earthing bars. Interconnecting tapes or cables between main earthing bar and earthing electrodes.
- Earthing electrodes complete with approved earth chamber and heavy-duty cover.
- Interconnecting copper tapes between earth electrodes, to be connected in a ring circuit.
- Earthing conductors from electrical equipment, including cables lugs, sheath and support brackets, to the relevant earthing bars.
- Earthing shall comply strictly to latest IEE Regulations, the requirements of DES Brunei and this specification.

Testing and Commissioning

- The contractor shall be responsible for the testing of the switchboard and certifying that it safe and that all the equipment complies with the requirements of this specification. Generally, such tests shall include:
- Demonstration that all equipment is installed and all wiring connected so that the board functions as required.
- Tests of accuracy of all measuring instruments.
- Continuity, phasing out and insulating resistance testing.
- Protective equipment testing.
- Testing & Commissioning for the all electrical switchboard approved by qualified engineer register by MOD.
- Any other tests required by the Department of Electrical Services.
- All the above tests shall be performed in the manufacturer's factory. Allow the cost of two Engineer's representatives to witness the tests.
- Provide all certification required by the Department of Electrical Services, to ensure connection of supply.

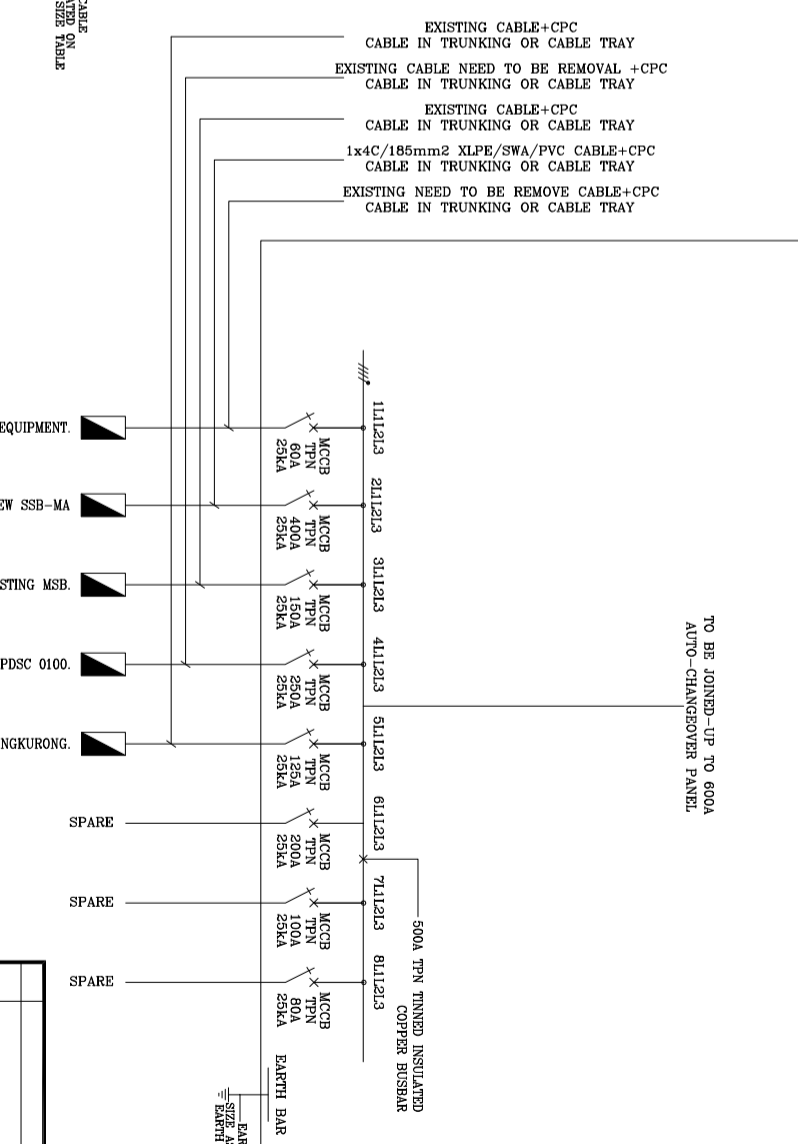
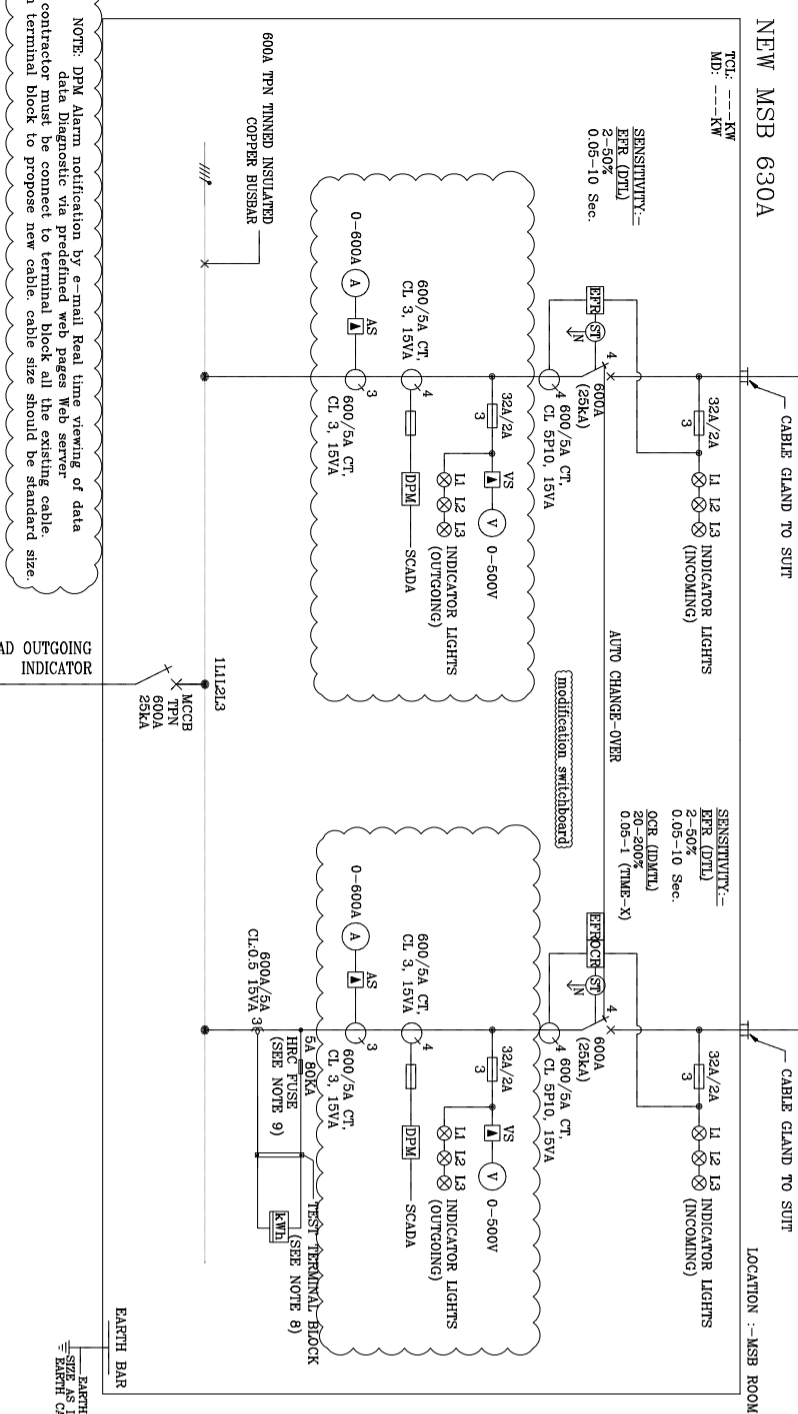
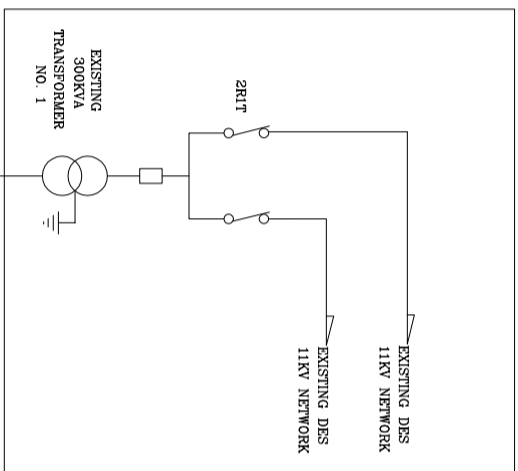
Note:

Please be informed that participants are required to conduct site survey at Sengkurong Exchange on 9th March, 2018 at 9:00 am to 10:30 am. Conducting SITE SURVEY is mandatory and failure to do so will be excluded from participating this project.

For further enquiries regarding the above requirements, kindly contact:

- (i) Abang Muhd Aisar bin Abang Hj Zainuddin (aisar.zainuddin@telbru.com.bn) or
- (ii) Nurezzah Istikhomah Zakeria (nurezzah.zakeria@telbru.com.bn)

APPROVED BY CLIENT



Option 1
MODIFICATION EXISTING-MSB

notes: contractor must be connect to terminal block all the existing cable. from terminal block to propose new cable. cable size should be standard size.

NOTE: DPM Alarm notification by e-mail Real time viewing of data data Diagnostic via predefined web pages Web server. contractor must be connect to terminal block all the existing cable. from terminal block to propose new cable. cable size should be standard size.

CPC TABLE

| | |
|----------------|--------------------------------|
| CONDUCTOR SIZE | CPC CABLE SIZE |
| 1.5 TO 16 | AS CONDUCTOR SIZE |
| 16 TO 35 | 16 SQ.MM CABLE |
| 50 TO 400 | 1/2 SIZE OF CONDUCTOR OR ABOVE |

REVISIONS

| | | | | | |
|----|-------------------------|----------|----|------|------|
| NO | DESCRIPTION | DATE | BY | CHKD | APPD |
| B | ISSUE FOR QUOTATION | Dec 2017 | KK | KK | BA |
| A | DESIGN APPROVAL STAGE 1 | Dec 2017 | KK | KK | BA |

DESIGNED: KK DATE: Dec-2017 CLIENT VOTE No: XXX
 DRAWN: KK CONTRACTOR PROJ. NO.: XXX
 CHECKED: OM
 APPROVED: BA

CLIENT: TelBru Berhad

PROJECT: UPGRADING FOR ELECTRICAL SWITCHBOARD AT SENGKURONG EXCHANGE, PHASE 1
 JLN TUIJONG, BSB

CONTRACTOR:

DRAWING TITLE: SSB-SUB SWITCHBOARD(NEW) SENGKURONG EXCHANGE

SCALE: AS SHOWN REVISIONS: A DRAWING No: E-001

**PROPOSED SSB APPROVED
BY TELBRU**

NEW SSB-MA

LOCATION :- MSB ROOM
GROUND FLOOR

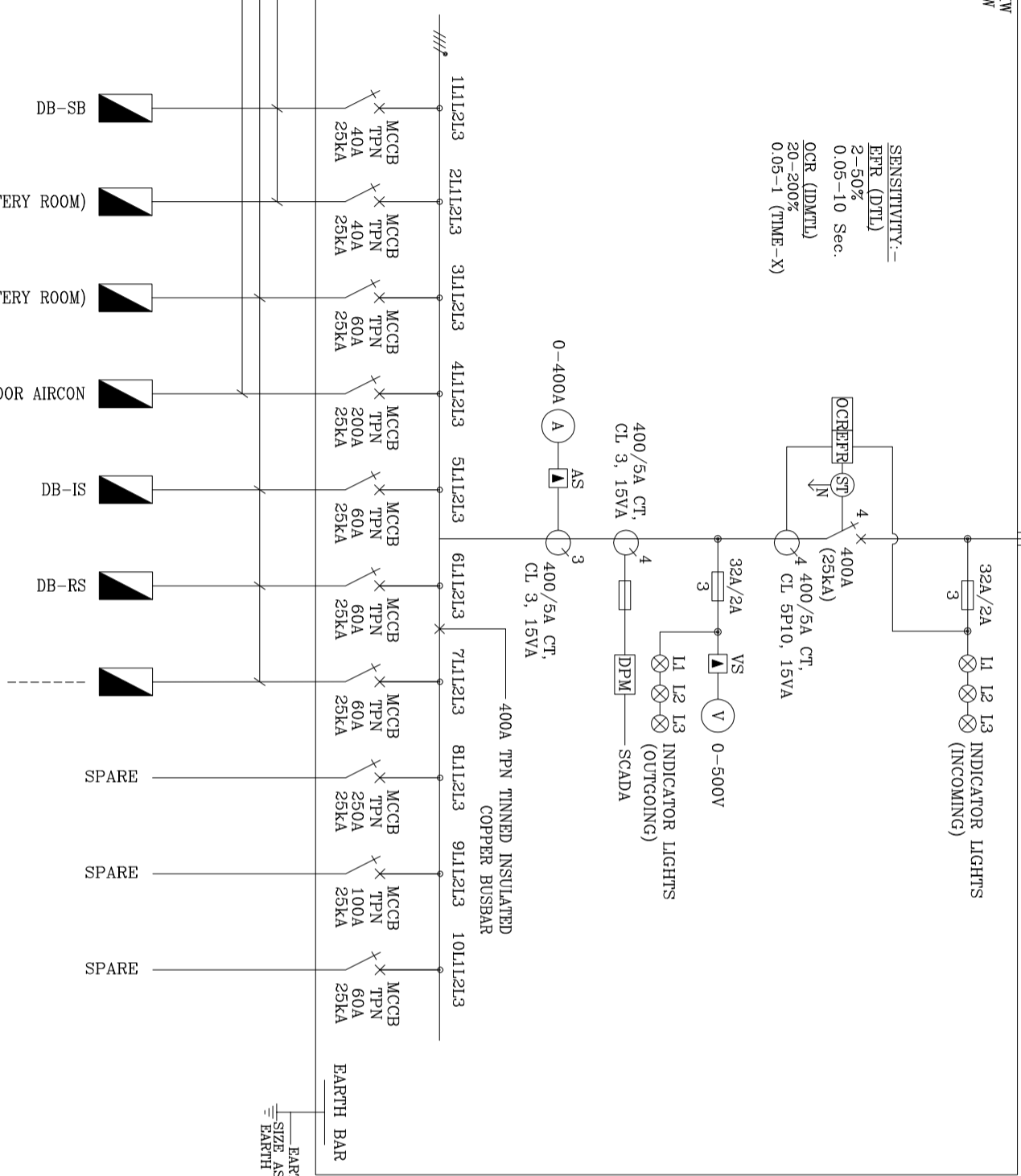
FROM NEW-SSB-1
1x4C/185SQ MM XLPE/SWA/PVC +
CPC CABLE IN TRUNKING OR CABLE TRAY

CABLE GLAND TO SUIT

TCL: ---KW
MD: ---KW

SENSITIVITY:-
EPR (DTL)
2-50%
0.05-10 Sec.
OCR (DMTL)
20-200%
0.05-1 (TIME-X)

EXISTING CABLE
1x4C/70mm² XLPE/SWA/PVC CABLE+CPC
CABLE IN TRUNKING OR CABLE TRAY
1x4C/25mm² PVC/SWA/PVC CABLE+CPC
CABLE IN TRUNKING OR CABLE TRAY
1x4C/16mm² PVC/SWA/PVC CABLE+CPC
CABLE IN TRUNKING OR CABLE TRAY



EARTHING CABLE
SIZE AS INDICATED ON
EARTH CABLE SIZE TABLE

notes: contractor must be connect to terminal block all the existing cable.
from terminal block to propose new cable. cable size should be standard size.

| CPC TABLE | | |
|----------------|--------------------------------|--|
| CONDUCTOR SIZE | CPC CABLE SIZE | |
| 1.5 TO 16 | AS CONDUCTOR SIZE | |
| 16 TO 35 | 16 SQ.MM CABLE | |
| 50 TO 400 | 1/2 SIZE OF CONDUCTOR OR ABOVE | |

| REVISIONS | | | | | | | | | |
|-----------|--------------------------|----------|----|------|------|--|--|--|--|
| NO | DESCRIPTION | DATE | BY | CHKD | APPD | | | | |
| B | ISSUE FOR QUOTATION | Dec 2017 | KK | KK | BA | | | | |
| A | DESIGN APPROVAL, STAGE 1 | Dec 2017 | KK | KK | BA | | | | |

| REVISIONS (A: Prelim/Quoted Design, B: Tender/Contracting, C: Construction) | | | | | | | | | |
|---|-------|---------|----------|-----------------|-----------------|----------------------|--|--|--|
| DESIGNED | DRAWN | CHECKED | APPROVED | CLIENT VOTE No. | CLIENT VOTE No. | CONTRACTOR PROJ. NO. | | | |
| KK | KK | OM | BA | XXX | XXX | XXX | | | |

| | |
|-------------|--|
| CLIENT: | TelBru Berhad |
| PROJECT: | UPGRADING FOR ELECTRICAL SWITCHBOARD AT SENGKURONG EXCHANGE, PHASE 1 JLN TUIJONG, BSB. |
| CONTRACTOR: | |

| | |
|----------------|---|
| DRAWING TITLE: | SSB-SUB SWITCHBOARD(NEW) SENGKURONG EXCHANGE. |
| SCALE: | AS SHOWN |
| REVISIONS: | A |
| DRAWING NO.: | E-002 |