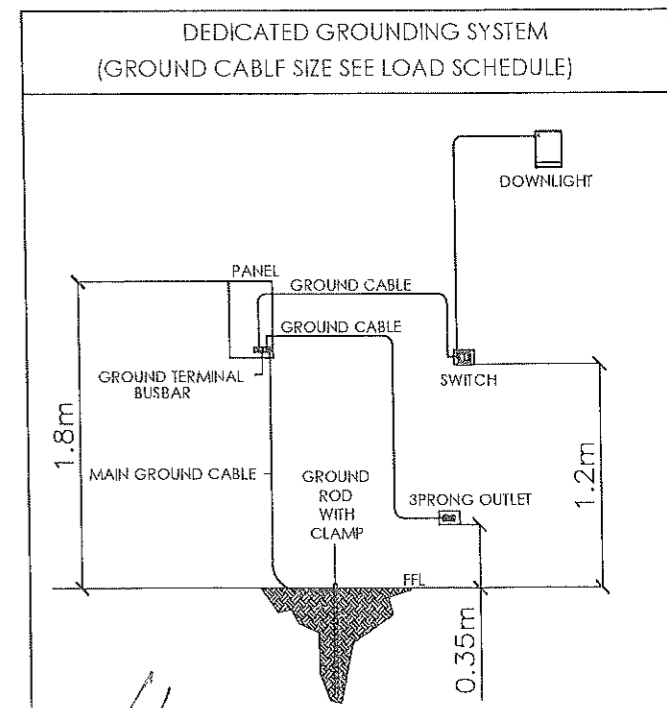
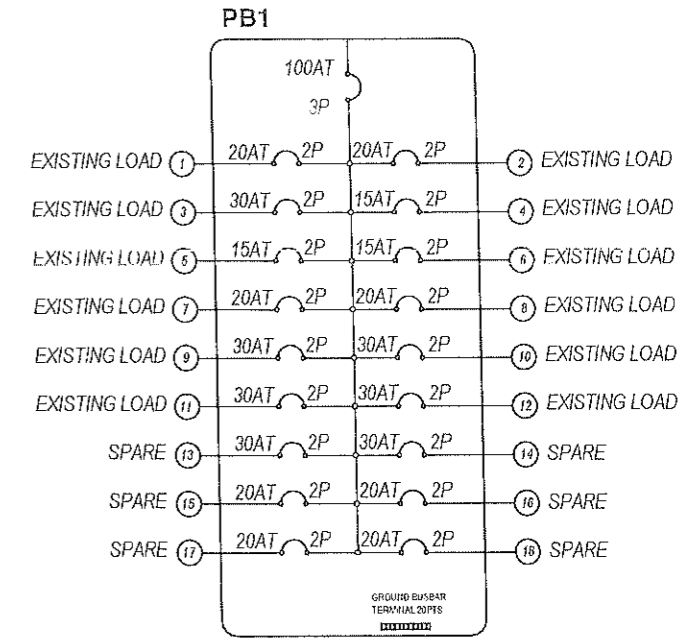
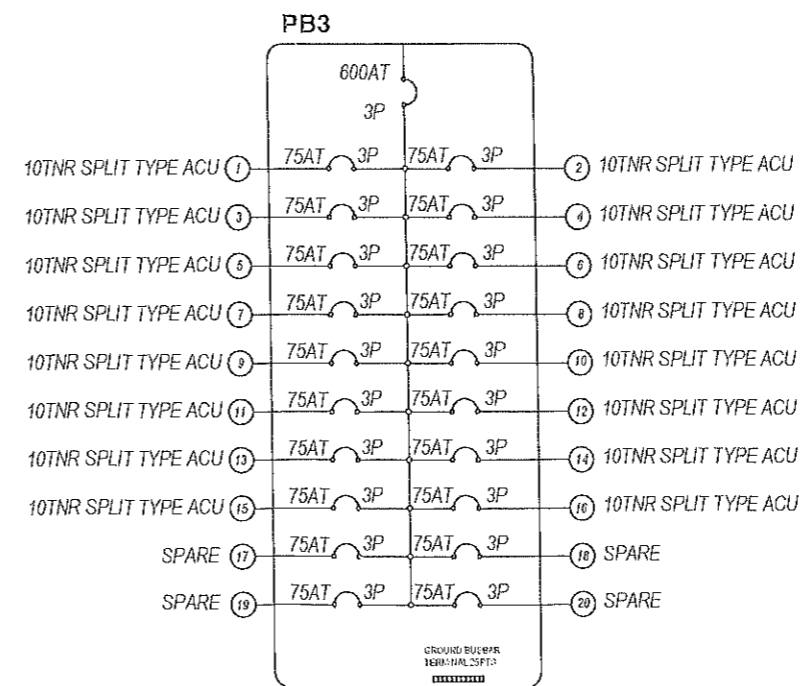
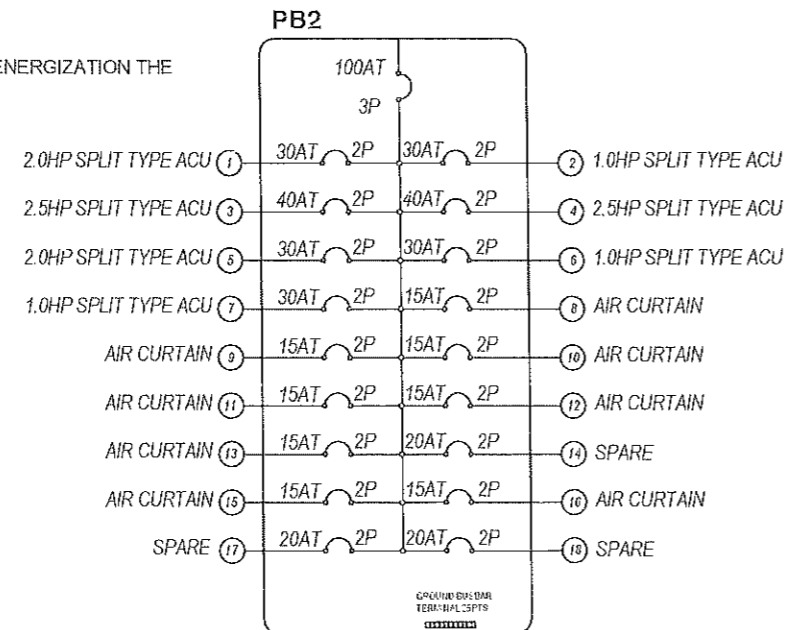
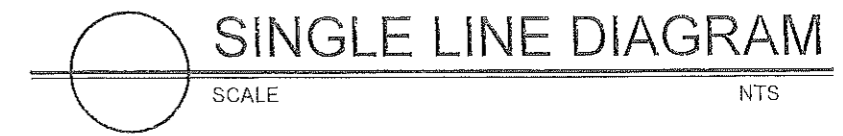
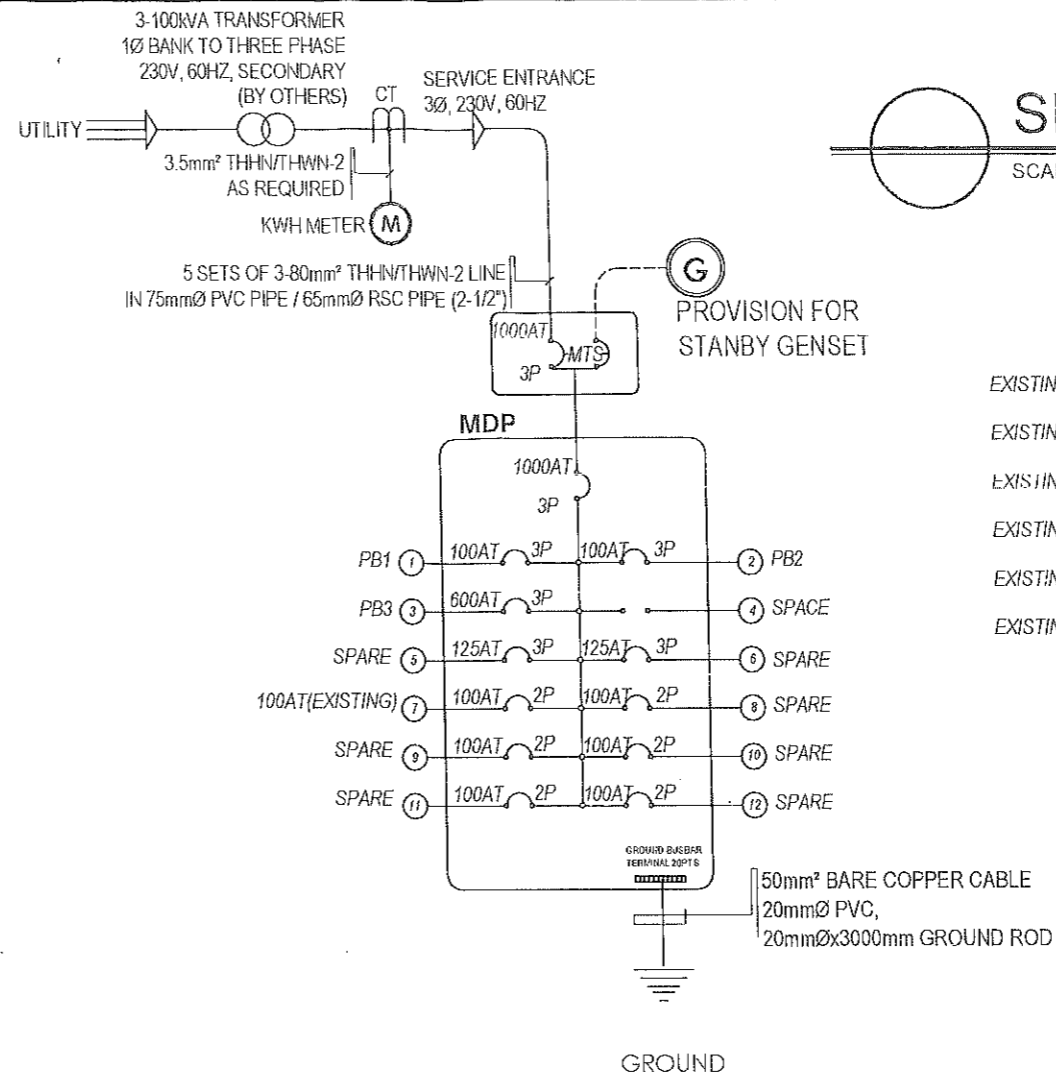


**GENERAL ELECTRICAL NOTES:**

- ALL ELECTRICAL INSTALLATION WORKS HEREIN SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE RULES AND REGULATIONS OF THE LOCAL ENFORCING AUTHORITY, AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE COMPANIES. THE ELECTRICAL WORKS SHALL BE UNDER THE IMMEDIATE SUPERVISION OF A DULY LICENSED ELECTRICAL ENGINEER.
- SERVICE FROM THE ELECTRIC POWER COMPANY SHALL BE 230V, 3PHASE, 60HZ ALL INSTALLATIONS SHALL BE CONCEALED FROM VIEW BY INSTALLING CONDUCTORS IN PVC CONDUIT. POWER AND LIGHTING DISTRIBUTION EMBEDDED IN CONCRETE SHALL BE IN PVC CONDUITS. EXPOSED POWER AND LIGHTING DISTRIBUTION SHALL BE IN RSC CONDUITS, BY MEANS OF HANGERS
- ALL WIRES SHALL BE COPPER AND THERMOPLASTIC INSULATED TYPE "THHN" UNLESS OTHERWISE INDICATED THE MINIMUM SIZE FOR POWER AND LIGHTING SHALL BE 3.5 sqmm WIRE
- THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF SERVICE ENTRANCE FOR CONNECTION TO THE POWER SUPPLY.
- ALL RECEPTACLES SHALL BE OF THE GROUNDING TYPE.
- ALL SERVICE ENTRANCE EQUIPMENT, SWITCHES, PANELBOARDS, LIGHTING FIXTURES AND ALL NON-CURRENT CARRYING METAL PARTS BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PHILIPPINE ELECTRICAL CODE. ALL PANELBOARDS SHALL BE PROVIDED WITH GROUNDING BUS.
- CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE AND OF THE THERMAL-MAGNETIC TYPE, COMMON TRIP WITH THE RATINGS AND NUMBER OF POLES AS INDICATED IN THE DRAWINGS.
- THE MOUNTING HEIGHTS OF WIRING DEVICES SHALL BE AS FOLLOWS:
  - LIGHT SWITCHES ..... 1.3M ABOVE FLOOR FINISH TO BOTTOM SWITCH.
  - CONVENIENCE OUTLETS ..... 0.35M ABOVE FLOOR FINISH TO BOTTOM C.O.
  - TELEPHONE OUTLETS ..... 0.35M ABOVE FLOOR FINISH TO BOTTOM T.O..
  - PANELBOARDS & CABINETS .... 1.8M ABOVE FLOOR FINISH AT TOP OF PANEL
- ALL MOUNTING HEIGHTS SHALL BE SUBJECT TO ARCHITECTS APPROVAL PRIOR TO INSTALLATION.
- WHENEVER NECESSARY PULL BOXES SHALL BE PROVIDED EVEN IF NOT INDICATED IN THE PLANS.
- ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY QUALIFIED LICENSED ELECTRICAL ENGINEER.
- PROVIDE LIGHTNING ELECTRODE AND ARRESTER TO GROUND.
- ONLY POWER SUPPLY SHALL BE PROVIDED FOR THE PROVISION OF AIRCON
- THE 3 PHASE WIRE COLOR CODING SHALL BE AS FOLLOW:
  - LINE 1 - RED
  - LINE 2 - YELLOW
  - LINE 3 - BLUE
  - GROUND - GREEN

- THE FOLLOWING TEST SHALL BE DONE BEFORE ENERGIZATION THE ELECTRICAL SYSTEM
  - CONTINUITY TEST
  - INSULATION RESISTANCE TEST
  - EARTH RESISTANCE TEST
  - PHASE SEQUENCE TEST
  - FUNCTIONALITY TEST



|  |   |  |                                       |   |   |  |   |                 |            |
|--|---|--|---------------------------------------|---|---|--|---|-----------------|------------|
|  | FROM THE OFFICE OF:                                 | PROJECT TITLE:   | PREPARED BY:                          | CHECKED BY:                                       | VERIFIED & SUBMITTED BY:                          | RECOMMENDING APPROVAL:                   | APPROVED BY:  | SHEET CONTENTS: | SHEET NO.: |
|  | REPUBLIC OF THE PHILIPPINES<br>PROVINCE OF PAMPANGA | IMPROVEMENT OF ELECTRICAL SYSTEM<br>AT JOSE SONGCO LAPID CULTURAL<br>SPORTS AND CIVIC CENTER | GISELLE P. JUAN<br>ENGINEER I         | RUSSEL L. HERNANDEZ<br>CONSTRUCTION DIVISION HEAD | WILFREDO A. MANALILI<br>ASST. PROVINCIAL ENGINEER | OLIMPIO M. PANGAN<br>PROVINCIAL ENGINEER | HON. DENNIS G. PINEDA<br>GOVERNOR<br>BY THE AUTHORITY OF THE GOVERNOR:<br>ATTY. CHARLIE G. CHUA<br>PROVINCIAL ADMINISTRATOR | AS- SHOWN       | 1          |
|  | PROVINCIAL ENGINEER'S OFFICE                        | LOCATION: CANGATBA, PORAC, PAMPANGA  | MICHAEL T. MONTEMAYOR<br>ENGINEER III |   |   |  |   |                 | 1 / 4      |



# LOAD CALCULATION

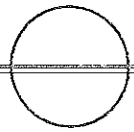
SCALE

NTS

| PANEL NAME: PB1                              |               | JOSE SONGCO LAPID CIVIC CENTER POWER LOAD CALCULATION |       |       |       |                              |      |                         |    |   |    |                            |  |
|--|---------------|---|-------|-------|-------|------------------------------|------|-------------------------|----|---|----|----------------------------|--|
| FEED FROM: WPP                               |               |   |       |       |       |                              |      |                         |    |   |    |                            |  |
| SYSTEM: 230V, 3Ø, 3WIRE + GROUND, 60HZ       |               |   |       |       |       |                              |      |                         |    |   |    |                            |  |
| ENCLOSURE: NEMA1, SURFACE MOUNTED, BOLT-ON,  |               |   |       |       |       |                              |      |                         |    |   |    |                            |  |
| 20 BUSBAR TERMINAL POINTS                    |               |   |       |       |       |                              |      |                         |    |   |    |                            |  |
| CMT. NO.                                     | DESCRIPTION   | CONNECTED LOAD  |       |       |       |                              |      | OVER CURRENT PROTECTION |    |   |    | SIZE OF WIRE AND PVC PIPES |  |
|  |               | V   | VA    | AB    | CA    | BC                           | ABC  | AT                      | AF | P   | KA |                            |  |
| 1  | EXISTING LOAD | 230   | 1000  | 4.35  |       |                              |      | 20                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 2  | EXISTING LOAD | 230   | 1000  | 4.35  |       |                              |      | 20                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 3  | EXISTING LOAD | 230   | 1000  |       | 4.35  |                              |      | 30                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 4  | EXISTING LOAD | 230   | 1000  |       | 4.35  |                              |      | 15                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 5  | EXISTING LOAD | 230   | 1000  |       |       | 4.35                         |      | 15                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 6  | EXISTING LOAD | 230   | 1000  |       |       | 4.35                         |      | 15                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 7  | EXISTING LOAD | 230   | 1000  | 4.35  |       |                              |      | 20                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 8  | EXISTING LOAD | 230   | 1000  | 4.35  |       |                              |      | 20                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 9  | EXISTING LOAD | 230   | 1000  |       | 4.35  |                              |      | 30                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 10   | EXISTING LOAD | 230   | 1000  |       | 4.35  |                              |      | 30                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 11   | EXISTING LOAD | 230   | 1000  |       |       | 4.35                         |      | 30                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 12   | EXISTING LOAD | 230   | 1000  |       |       | 4.35                         |      | 30                      | 50 | 2   | 10 | EXISTING WIRES AND PIPES   |  |
| 13   | SPARE         | 230   | 1500  | 6.52  |       |                              |      | 30                      | 50 | 2   | 10 | 20mmØ PVC PIPE STUB-OUT    |  |
| 14   | SPARE         | 230   | 1500  | 6.52  |       |                              |      | 30                      | 50 | 2   | 10 | 20mmØ PVC PIPE STUB-OUT    |  |
| 15   | SPARE         | 230   | 1500  |       | 6.52  |                              |      | 20                      | 50 | 2   | 10 | 20mmØ PVC PIPE STUB-OUT    |  |
| 16   | SPARE         | 230   | 1500  |       | 6.52  |                              |      | 20                      | 50 | 2   | 10 | 20mmØ PVC PIPE STUB-OUT    |  |
| 17   | SPARE         | 230   | 1500  |       |       | 6.52                         |      | 20                      | 50 | 2   | 10 | 20mmØ PVC PIPE STUB-OUT    |  |
| 18   | SPARE         | 230   | 1000  |       |       | 4.35                         |      | 20                      | 50 | 2   | 10 | 20mmØ PVC PIPE STUB-OUT    |  |
| <b>TOTAL CONNECTED LOAD:</b>                 |               |   | 20500 | 30.43 | 30.43 | 28.26                        | 0.00 |                         |    |   |    |                            |  |
| FEEDER LINE COMPUTATION:                     |               | MAIN CIRCUIT BREAKER COMPUTATION:                     |       |       |       | USE:                         |      |                         |    |   |    |                            |  |
| $I = \{(30.435 \times 1.732) + 0\} 100\% DF$ |               | $I = \{(30.435 \times 1.732) + 0\} 100\% DF$          |       |       |       | 100A/100AF, 3P, 65KAIC, MCCB |      |                         |    | 3-30mm² THHN/THWN-2 (L) + 8.0mm² THHN/THWN-2 (G) IN 40mmØ PVC PIPE OR IN 32mmØ RSC PIPE |    |                            |  |
| I = 52.72 Amps                               |               | I = 52.72 Amps  |       |       |       |                              |      |                         |    |   |    |                            |  |

| PANEL NAME: PBZ  |                           | JOSE SONGCO LAPID CIVIC CENTER POWER LOAD CALCULATION         |       |       |       |                              |      |                         |    |   |    |  |  |
|--|---------------------------|---|-------|-------|-------|------------------------------|------|-------------------------|----|---|----|--|--|
| FEED FROM: WPP   |                           |   |       |       |       |                              |      |                         |    |   |    |  |  |
| SYSTEM: 230V, 3Ø, 3WIRE + GROUND, 60HZ                         |                           |   |       |       |       |                              |      |                         |    |   |    |  |  |
| ENCLOSURE: NEMA1, SURFACE MOUNTED, BOLT-ON,                    |                           |   |       |       |       |                              |      |                         |    |   |    |  |  |
| 25 BUSBAR TERMINAL POINTS                                      |                           |   |       |       |       |                              |      |                         |    |   |    |  |  |
| CMT. NO.   | DESCRIPTION               | CONNECTED LOAD  |       |       |       |                              |      | OVER CURRENT PROTECTION |    |   |    | SIZE OF WIRE AND PVC PIPES   |  |
|  |                           | V   | VA    | AB    | CA    | BC                           | ABC  | AT                      | AF | P   | KA |  |  |
| 1  | 2.0HP SPLIT TYPE ACU UNIT | 230   | 2760  | 12.00 |       |                              |      | 30                      | 50 | 2   | 10 | 2-5.5mm² THHN/THWN-2 LINE + 3.5mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 2  | 1.0HP SPLIT TYPE ACU UNIT | 230   | 2760  | 8.00  |       |                              |      | 30                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 3  | 2.5HP SPLIT TYPE ACU UNIT | 230   | 3450  |       | 15.00 |                              |      | 40                      | 50 | 2   | 10 | 2-8mm² THHN/THWN-2 LINE + 5.5mm² THHN/THWN-2 GROUND IN 25 mm DIA. PVC PIPE or 20mm dia. EMT PIPE   |  |
| 4  | 2.5HP SPLIT TYPE ACU UNIT | 230   | 3450  |       | 15.00 |                              |      | 40                      | 50 | 2   | 10 | 2-8mm² THHN/THWN-2 LINE + 5.5mm² THHN/THWN-2 GROUND IN 25 mm DIA. PVC PIPE or 20mm dia. EMT PIPE   |  |
| 5  | 2.0HP SPLIT TYPE ACU UNIT | 230   | 1840  |       |       | 12.00                        |      | 30                      | 50 | 2   | 10 | 2-5.5mm² THHN/THWN-2 LINE + 3.5mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 6  | 1.0HP SPLIT TYPE ACU UNIT | 230   | 1840  |       |       | 8.00                         |      | 30                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 7  | 1.0HP SPLIT TYPE ACU UNIT | 230   | 1840  | 8.00  |       |                              |      | 30                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 8  | AIR CURTAIN               | 230   | 300   | 1.30  |       |                              |      | 15                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 9  | AIR CURTAIN               | 230   | 300   |       | 1.30  |                              |      | 15                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 10   | AIR CURTAIN               | 230   | 300   |       | 1.30  |                              |      | 15                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 11   | AIR CURTAIN               | 230   | 300   |       |       | 1.30                         |      | 15                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 12   | AIR CURTAIN               | 230   | 300   |       |       | 1.30                         |      | 15                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 13   | AIR CURTAIN               | 230   | 300   | 1.30  |       |                              |      | 15                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 14   | SPARE                     | 230   | 1500  | 6.52  |       |                              |      | 20                      | 50 | 2   | 10 | 20mmØ PVC PIPE STUB-OUT  |  |
| 15   | AIR CURTAIN               | 230   | 300   |       | 1.30  |                              |      | 15                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 16   | AIR CURTAIN               | 230   | 300   |       | 1.30  |                              |      | 15                      | 50 | 2   | 10 | 2-3.5mm² THHN/THWN-2 LINE + 2.0mm² THHN/THWN-2 GROUND IN 20 mm DIA. PVC PIPE or 15mm dia. EMT PIPE |  |
| 17   | SPARE                     | 230   | 1500  |       |       | 6.52                         |      | 20                      | 50 | 2   | 10 | 20mmØ PVC PIPE STUB-OUT  |  |
| 18   | SPARE                     | 230   | 1500  |       |       | 6.52                         |      | 20                      | 50 | 2   | 10 | 20mmØ PVC PIPE STUB-OUT  |  |
| <b>TOTAL CONNECTED LOAD:</b>                                   |                           |   | 24840 | 37.13 | 35.22 | 35.65                        | 0.00 |                         |    |   |    |  |  |
| FEEDER LINE COMPUTATION:                                       |                           | MAIN CIRCUIT BREAKER COMPUTATION:                             |       |       |       | USE:                         |      |                         |    |   |    |  |  |
| $I = \{(37.131 \times 1.732) + 0 + (15 \times 0.25)\} 80\% DF$ |                           | $I = \{(37.131 \times 1.732) + 0 + (15 \times 1.5)\} 80\% DF$ |       |       |       | 100A/100AF, 3P, 65KAIC, MCCB |      |                         |    | 3-30mm² THHN/THWN-2 (L) + 8.0mm² THHN/THWN-2 (G) IN 40mmØ PVC PIPE OR IN 32mmØ RSC PIPE |    |  |  |
| I = 54.45 Amps   |                           | I = 87.45 Amps  |       |       |       |                              |      |                         |    |   |    |  |  |

|  |  |   |   |   |   |  |   |                 |            |
|--|--|---|---|---|---|--|---|-----------------|------------|
|  | FROM THE OFFICE OF:  | PROJECT TITLE:  | PREPARED BY:  | CHECKED BY:                                       | VERIFIED & SUBMITTED BY:                          | RECOMMENDING APPROVAL:                   | APPROVED BY:  | SHEET CONTENTS: | SHEET NO.: |
|  | REPUBLIC OF THE PHILIPPINES<br>PROVINCE OF PAMPANGA<br>PROVINCIAL ENGINEER'S OFFICE<br>CAPITOL COMPOUND, CITY OF SAN FERNANDO, (P) | IMPROVEMENT OF ELECTRICAL SYSTEM<br>AT JOSE SONGCO LAPID CULTURAL<br>SPORTS AND CIVIC CENTER<br>LOCATION: CANGATBA, PORAC, PAMPANGA | GISELLE B. JUAN<br>ENGINEER II<br>MICHAEL L. MONTEMAYOR<br>ENGINEER III | RUSSEL L. HERNANDEZ<br>CONSTRUCTION DIVISION HEAD | WILFREDO A. MANALILI<br>ASST. PROVINCIAL ENGINEER | OLIMPIO M. PANGAN<br>PROVINCIAL ENGINEER | HON. DENNIS G. PINEDA<br>GOVERNOR<br>BY THE AUTHORITY OF THE GOVERNOR:<br>ATTY. CHARLIE G. CHUA<br>PROVINCIAL ADMINISTRATOR | AS- SHOWN       | 2<br>2/4   |



# LOAD CALCULATION

SCALE

NTS

| PANEL NAME: P-33   |                           | JOSE SONGCO LAPID CIVIC CENTER POWER LOAD CALCULATION  |      |    |    |   |        |                         |     |   |    |   |  |  |  |
|--|---------------------------|--|------|----|----|---|--------|-------------------------|-----|---|----|---|--|--|--|
| FEED FROM: MDP   |                           |  |      |    |    |   |        |                         |     |   |    |   |  |  |  |
| SYSTEM: 230V, 3Ø, 3WIRE + GROUND, 60HZ   |                           |  |      |    |    |   |        |                         |     |   |    |   |  |  |  |
| ENCLOSURE: NEMA1, SURFACE MOUNTED, BOLT-ON,  |                           |  |      |    |    |   |        |                         |     |   |    |   |  |  |  |
| 25 BUSBAR TERMINAL POINTS  |                           | CONNECTED LOAD   |      |    |    |   |        | OVER CURRENT PROTECTION |     |   |    | SIZE OF WIRE AND PVC PIPES  |  |  |  |
| CKT. NO.   | DESCRIPTION               | V  | VA   | AB | CA | BC  | ABC    | AT                      | AF  | P | KA | SIZE OF WIRE AND PVC PIPES  |  |  |  |
| 1  | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 2  | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 3  | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 4  | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 5  | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 6  | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 7  | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 8  | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 9  | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 10   | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 11   | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 12   | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 13   | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 14   | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 15   | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 16   | 10TNR SPLIT TYPE ACU UNIT | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 3-22mm <sup>2</sup> THHN/THWN-2 LINE + 8mm <sup>2</sup> THHN/THWN-2 GROUND IN 32 mm DIA. PVC PIPE or 25mm dia. EMT PIPE |  |  |  |
| 17   | SPARE                     | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 32mmØ PVC PIPE STUB-OUT   |  |  |  |
| 18   | SPARE                     | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 32mmØ PVC PIPE STUB-OUT   |  |  |  |
| 19   | SPARE                     | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 32mmØ PVC PIPE STUB-OUT   |  |  |  |
| 20   | SPARE                     | 230  | 6900 |    |    |   | 30.00  | 75                      | 100 | 3 | 10 | 32mmØ PVC PIPE STUB-OUT   |  |  |  |
| TOTAL CONNECTED LOAD:  |                           | 126000   |      |    |    |   | 600.00 |                         |     |   |    |   |  |  |  |
| FEEDER LINE COMPUTATION:<br>I = ((0 x 1.732) + 600 + (30 x 0.25)) / 80% DF<br>I = 486 Amps |                           | MAIN CIRCUIT BREAKER COMPUTATION:<br>I = ((0 x 1.732) + 600 + (30 x 1.5)) / 80% DF<br>I = 516 Amps |      |    |    | USE:<br>600AT/500AF, 3P, 65KAIC, MCCB<br>3 SETS OF 3-80mm <sup>2</sup> THHN/THWN-2 (L) + 30mm <sup>2</sup> THHN/THWN-2 (G)<br>IN 75 mmØ PVC PIPE OR IN 65mmØ RSC PIPE |        |                         |     |   |    |   |  |  |  |

| PANEL NAME: MDP   |             | JOSE SONGCO LAPID CIVIC CENTER POWER LOAD CALCULATION   |        |        |        |   |     |                         |     |   |    |  |  |  |  |
|---|-------------|---|--------|--------|--------|---|-----|-------------------------|-----|---|----|--|--|--|--|
| FEED FROM: UTILITY COMPANY  |             |   |        |        |        |   |     |                         |     |   |    |  |  |  |  |
| SYSTEM: 230V, 3Ø, 3WIRE + GROUND, 60HZ  |             |   |        |        |        |   |     |                         |     |   |    |  |  |  |  |
| ENCLOSURE: NEMA1, SURFACE MOUNTED, BOLT-ON,   |             |   |        |        |        |   |     |                         |     |   |    |  |  |  |  |
| 20 BUSBAR TERMINAL POINTS   |             | CONNECTED LOAD  |        |        |        |   |     | OVER CURRENT PROTECTION |     |   |    | SIZE OF WIRE AND PVC PIPES   |  |  |  |
| CKT. NO.  | DESCRIPTION | V   | VA     | AB     | CA     | BC  | ABC | AT                      | AF  | P | KA | SIZE OF WIRE AND PVC PIPES   |  |  |  |
| 1   | PB1         | 230   | 20900  | 30.43  | 30.43  | 28.26   |     | 100                     | 100 | 3 | 65 | 3-30mm <sup>2</sup> THHN/THWN-2 LINE + 8.0mm <sup>2</sup> THHN/THWN-2 GROUND IN 40 mm DIA. PVC PIPE or 32mm dia. EMT PIPE          |  |  |  |
| 2   | PB2         | 230   | 24840  | 37.13  | 35.22  | 35.65   |     | 100                     | 100 | 3 | 65 | 3-30mm <sup>2</sup> THHN/THWN-2 LINE + 8.0mm <sup>2</sup> THHN/THWN-2 GROUND IN 40 mm DIA. PVC PIPE or 32mm dia. EMT PIPE          |  |  |  |
| 3   | PB3         | 230   | 138000 |        |        |   | 600 | 600                     | 600 | 3 | 65 | 3 SETS OF 3-80mm <sup>2</sup> THHN/THWN-2 LINE + 30mm <sup>2</sup> THHN/THWN-2 GROUND IN 75 mm DIA. PVC PIPE or 65mm dia. EMT PIPE |  |  |  |
| 4   | SPACE       |   |        |        |        |   |     |                         |     |   |    | 50mm dia. Stub-up Pipe   |  |  |  |
| 5   | SPACE       | 230   | 34500  | 50     | 50     | 50  |     | 125                     | 200 | 3 | 65 | 50mm dia. Stub-up Pipe   |  |  |  |
| 6   | SPACE       | 230   | 34500  | 50     | 50     | 50  |     | 125                     | 200 | 3 | 65 | 50mm dia. Stub-up Pipe   |  |  |  |
| 7   | 600AT       | 230   | 13800  | 60     |        |   |     | 100                     | 100 | 2 | 65 | 2-30mm <sup>2</sup> THHN/THWN-2 LINE + 8.0mm <sup>2</sup> THHN/THWN-2 GROUND IN 40 mm DIA. PVC PIPE or 32mm dia. EMT PIPE          |  |  |  |
| 8   | SPACE       | 230   | 13800  | 60     |        |   |     | 100                     | 100 | 2 | 65 | 40mm dia. Stub-up Pipe   |  |  |  |
| 9   | SPACE       | 230   | 13800  |        | 60     |   |     | 100                     | 100 | 2 | 65 | 40mm dia. Stub-up Pipe   |  |  |  |
| 10  | SPACE       | 230   | 13800  |        | 60     |   |     | 100                     | 100 | 2 | 65 | 40mm dia. Stub-up Pipe   |  |  |  |
| 11  | SPACE       | 230   | 13800  |        | 60     |   |     | 100                     | 100 | 2 | 65 | 40mm dia. Stub-up Pipe   |  |  |  |
| 12  | SPACE       | 230   | 13800  |        | 60     |   |     | 100                     | 100 | 2 | 65 | 40mm dia. Stub-up Pipe   |  |  |  |
| TOTAL CONNECTED LOAD:   |             | 395140  | 287.57 | 285.65 | 283.91 | 600.00  |     |                         |     |   |    |  |  |  |  |
| FEEDER LINE COMPUTATION:<br>I = ((287.566 x 1.732) + 600 + (30 x 0.25)) / 80% DF<br>I = 884.46 Amps |             | MAIN CIRCUIT BREAKER COMPUTATION:<br>I = ((287.566 x 1.732) + 600 + (30 x 1.5)) / 80% DF<br>I = 914.46 Amps |        |        |        | USE:<br>1000AT/1000AF, 3P, 85KAIC, MCCB<br>5 SETS OF 3-80mm <sup>2</sup> THHN/THWN-2 (L) + 50mm <sup>2</sup> THHN/THWN-2 (G)<br>IN 75 mmØ PVC PIPE OR IN 65mmØ RSC PIPE |     |                         |     |   |    |  |  |  |  |

|  |  |   |   |  |   |  |   |                 |            |
|--|--|---|---|--|---|--|---|-----------------|------------|
|  | FROM THE OFFICE OF:  | PROJECT TITLE:  | PREPARED BY:  | CHECKED BY:                                    | VERIFIED & SUBMITTED BY:                          | RECOMMENDING APPROVAL:                   | APPROVED BY:  | SHEET CONTENTS: | SHEET NO.: |
|  | REPUBLIC OF THE PHILIPPINES<br>PROVINCE OF PAMPANGA<br>PROVINCIAL ENGINEER'S OFFICE<br>CAPITOL COMPOUND, CITY OF SAN FERNANDO, (P) | IMPROVEMENT OF ELECTRICAL SYSTEM<br>AT JOSE SONGCO LAPID CULTURAL<br>SPORTS AND CIVIC CENTER<br>LOCATION: CANGATBA, PORAC, PAMPANGA | GISELLE B. JUAN<br>ENGINEER I<br>MICHAEL V. MONTEMAYOR<br>ENGINEER II | RUSSEL HERNANDEZ<br>CONSTRUCTION DIVISION HEAD | WILFREDO A. MANALILI<br>ASST. PROVINCIAL ENGINEER | OLIMPIO M. PANGAN<br>PROVINCIAL ENGINEER | HON. DENNIS G. PINEDA<br>GOVERNOR<br>BY THE AUTHORITY OF THE POWER)OR:<br>ATTY. CHARLIE S. CHUA<br>PROVINCIAL ADMINISTRATOR | AS- SHOWN       | 3<br>3 / 4 |

