

1. 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.

2. THE ELECTRICAL WORKS SHALL BE UNDER THE IMMEDIATE SUPERVISION OF A DULY LICENSED ELECTRICAL ENGINEER DEDICATED SOLELY TO THE PROJECT.

3. THE ELECTRIC SERVICE ENTRANCE SHALL BE THREE PHASE SYSTEM WITH 3 WIRES AND GROUND, 220 VOLTS, 60HZ. THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF SERVICE ENTRANCE POWER SUPPLY WITH COORDINATION WITH THE UTILITY COMPANY.

4. THE ELECTRICAL WIRING INSTALLATION SHALL BE DONE IN INTERMEDIATE METALLIC CONDUIT (IMC) AND ELECTRICAL METALIC TUBING (EMT) FOR ALL EXPOSED INSTALLATIONS. POLYVINYL CHLORIDE (PVC) SHALL BE USED FOR ALL EMBEDDED INSTALLATIONS. FLEXIBLE METALLIC CONDUIT SHALL BE USED WHERE REQUIRED.

5. THE MINIMUM SIZE FOR ALL CONDUIT SHALL BE 15MM NOMINAL INSIDE DIAMETER ELECTRICAL TRADE SIZE, FOR PVC CONDUIT USED, IT SHALL BE SCHEDULE 40.

6. ALL WIRES SHALL BE COPPER, TYPE 'THW', 'THHN' OR 'THWN' SHALL BE USED. THE MINIMUM SIZE OF WIRE FOR LIGHTING AND POWER SHALL BE 1.5mm², THERMOPLASTIC TYPE @ 900V INSULATION WITH 98% CONDUCTIVITY.

7. ALL EQUIPMENT, LIGHTING FIXTURES, WIRING DEVICES, PANEL, BOARDS, AND ALL NON-CURRENT CARRYING METAL PARTS SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE.

8. ALL PIPE SLEEVES SHALL BE PROVIDED WITH PROPER SUPPORT OR ANCHORAGE NECESSARY FOR PERMANENT CONNECTION WITH CONCRETE WALL OR BEAM. PROVIDE PULL WIRES IN ALL SPARE DUCT AND EMPTY CONDUIT. PROVIDE PULL BOXES WHENEVER NECESSARY EVEN NOT INDICATED IN PLANS.

9. UTILIZED RECESSED LIGHTING FIXTURES FOR SPACES WITH CEILINGS, AND USE SURFACE MOUNTED FIXTURE WHEN THERE IS NO CEILING OR IN SLAB INSTALLATIONS. ALL LIGHTING FIXTURES AND WIRING DEVICES SHALL BE FOR ENGINEERS / ARCHITECTS APPROVAL. LIGHT SAMPLES.

10. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE WITH INTERRUPTING CAPACITY AS INDICATED IN THE PLANS. PANEL BOARDS AND WIRE WAYS SHALL BE GALVANIZED SHEET POWDER COATED GAUGE 16 MINIMUM.

11. FEEDER AND BRANCH CIRCUIT CONDUCTORS IN CABLE TRAYS SHALL BE GROUPED, BONDED AND TAGGED TO INDICATE CLEARLY THE ELECTRICAL CHARACTERISTICS, SUCH AS CIRCUIT NUMBER AND PANEL DESIGNATION.

12. ALL INDOOR PANEL BOARD AND ENCLOSED CIRCUIT BREAKER ENCLOSURES, SHALL BE NEMA TYPE 1 OR EQUIVALENT. ALL OUTDOOR PANEL BOARD AND ENCLOSED CIRCUIT BREAKER ENCLOSURES LOCATED IN WET OR DUSTY ENVIRONMENT, SHALL BE RATED AT LEAST NEMA 3R OR 4X, WEATHER PROOF, DUST TIGHT AND CORROSION RESISTANT, SUITABLE FOR RAIN, HIGH HUMIDITY, AND UV EXPOSURE.

13. ANY DISCREPANCY IN LOCATION AND RATINGS OF EQUIPMENT AND OTHERS SHALL BE VERIFIED WITH THE OWNER OR ANY OF HIS REPRESENTATIVES. CHANGES SHALL BE MADE ACCORDINGLY. FOR EXACT LOCATION AND RATINGS OF MECHANICAL EQUIPMENT, REFER TO MECHANICAL DRAWINGS.

14. ALL MATERIALS TO BE USED AND EQUIPMENT TO BE INSTALLED SHALL BE BRAND NEW, MUST BE OF THE APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE INTENDED. ALL EQUIPMENT SHALL BE PROPERLY GROUNDED. SUBMIT SAMPLES FOR ENGINEERS/ARCHITECTS APPROVAL.

15. MOUNTING HEIGHTS HERE UNDER SHALL AS FOLLOWS:
1.80M TOP OF PANEL BOARD ABOVE FLOOR FINISH
0.30M CONVENIENCE OUTLET ABOVE FLOOR FINISH
0.30M TELEPHONE/TV CABLE OUTLET ABOVE FLOOR FINISH
0.15M COUNTERTOP OUTLET ABOVE THE SINK / TABLE
1.20M CENTER OF SWITCH ABOVE FLOOR FINISH
0.15M WATER HEATER OUTLET BELOW CEILING LINE

16. ALL WIRES COLOR CODING SHALL AS FOLLOWS:
LINE 1 - RED GROUND - GREEN
LINE 2 - YELLOW
LINE 3 - BLUE

Table 1: Typical Schedule of Loads for MOP-01. Columns include Ckt No., Volts, Load, Ampere Load, Voltage, Circuit Breaker, and Size of Wire.

Line 1: 157.72' x 3' x 100 Ampere
Feeder Line: Line 2: 200mm² THHN-1 + 1.5mm² THHN-10 @ 110°C PVC-100

Table 2: Typical Schedule of Loads for LP01. Columns include Ckt No., Volts, Load, Ampere Load, Voltage, Circuit Breaker, and Size of Wire.

Line 1: 66.18' x 3' x 100 Ampere
Feeder Line: Line 2: 200mm² THHN-1 + 1.5mm² THHN-10 @ 110°C PVC-100

Table 3: Typical Schedule of Loads for LP02. Columns include Ckt No., Volts, Load, Ampere Load, Voltage, Circuit Breaker, and Size of Wire.

Line 1: 66.18' x 3' x 100 Ampere
Feeder Line: Line 2: 200mm² THHN-1 + 1.5mm² THHN-10 @ 110°C PVC-100

2 TYPICAL SCHEDULE OF LOADS

Table 4: Voltage Drop Calculations for MOP-01. Columns include From, To, 3Ø Load, Wire Size, L (m), R (Ω/m), VD per Branch, VD From Main to Load, %VD, and Remarks.

Table 5: Voltage Drop Calculations for LP01. Columns include From, To, 3Ø Load, Wire Size, L (m), R (Ω/m), VD per Branch, VD From Main to Load, %VD, and Remarks.

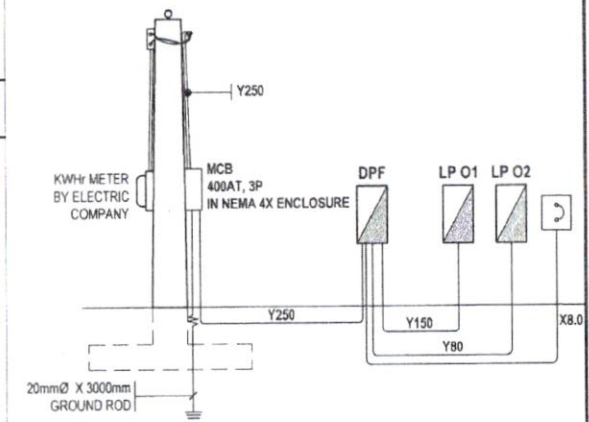
1 GENERAL NOTES SCALE: N.T.S.

3 VOLTAGE DROP CALCULATIONS

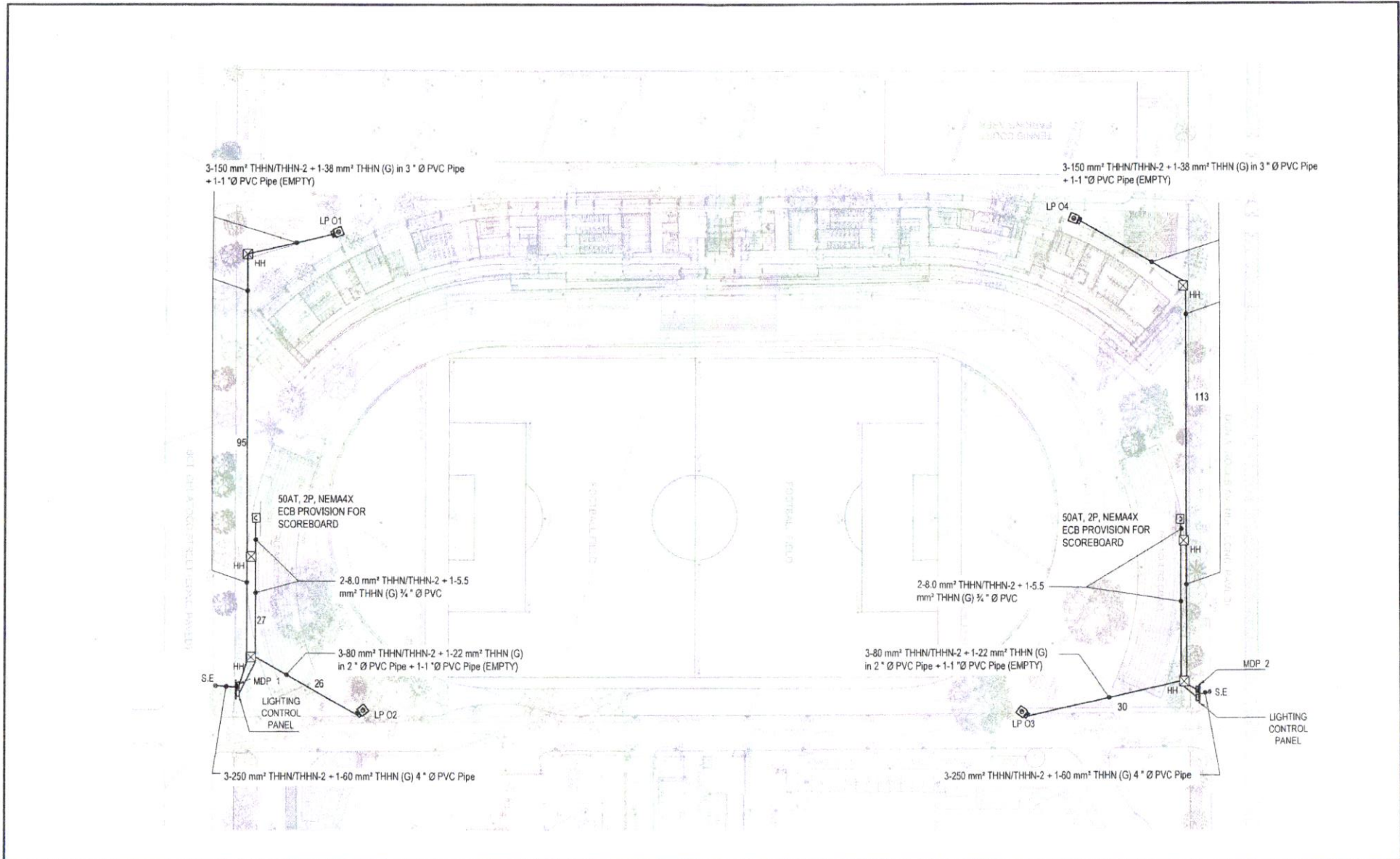
5 TYPICAL RISER DIAGRAMS SCALE: N.T.S.

- 33.50 m HT. HIGHMAST
LIGHTING PANEL
LIGHTING CONTROL PANEL
ENCLOSED CIRCUIT BREAKER
LIGHTING LINE
SERVICE ENTRANCE
1500w LED LIGHTING

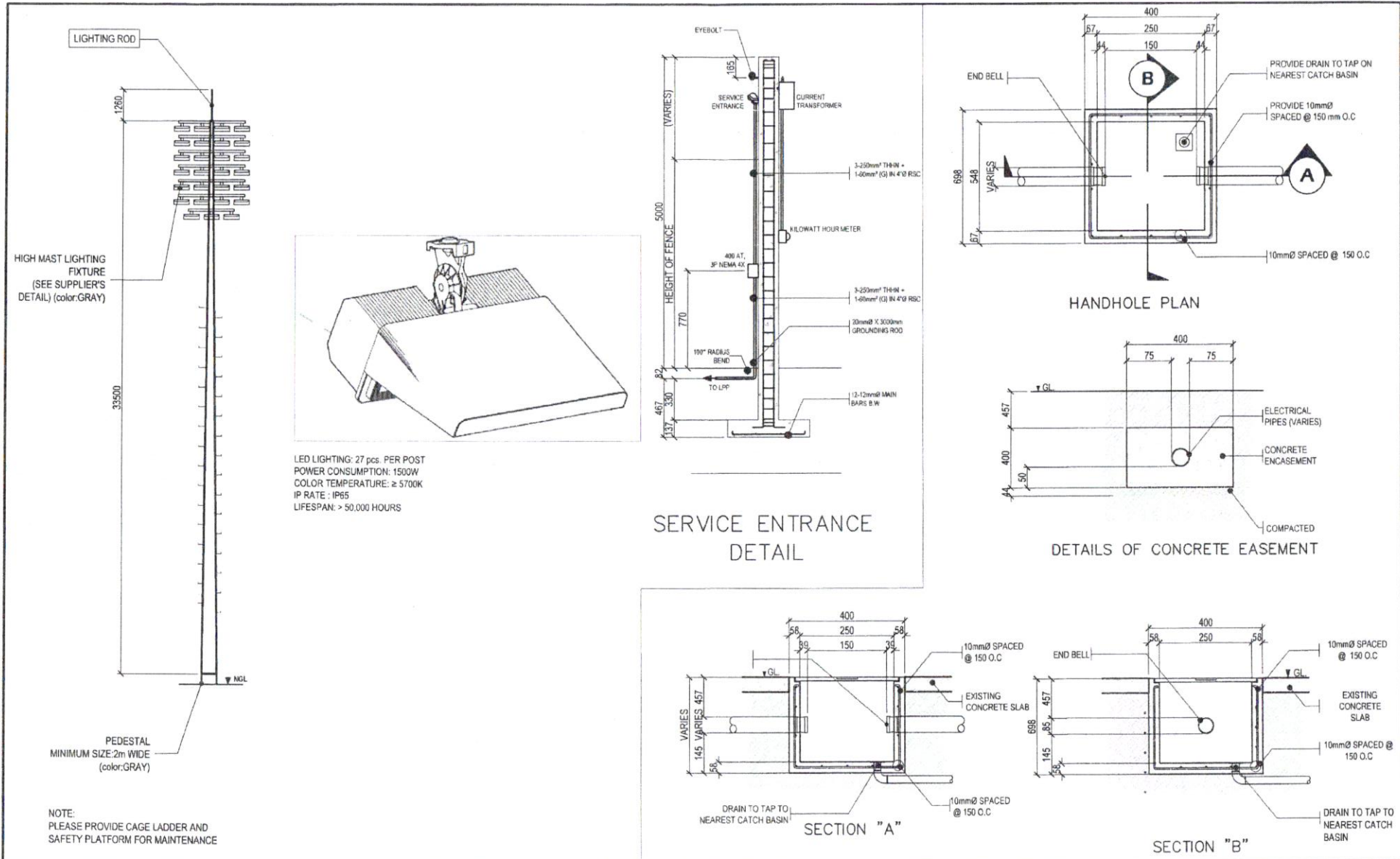
4 LEGEND & SYMBOLS



Project information block including Project Title (Detailed Engineering Design Plan), Designer (Engr. Juan Paolo M. Tolentino), Submitted By (Engr. Frediswin Dela Cruz), Approved By (Atty. Mark Dale Diamond P. Perral, F.P.C.E.), and City Administrator (Mr. Michael Victor N. Alimurung).



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| <p>1 LIGHTING LAYOUT</p> | | <p>SCALE: N.T.S.</p> | | |
| <p>DEPARTMENT OF ENGINEERING</p> | <p>PROJECT TITLE: DETAILED ENGINEERING DESIGN PLAN</p> | <p>SHEET CONTENT: LIGHTING LAYOUT</p> | <p>DESIGNED BY: ENGR. JUAN PAOLO M. TOLENTINO PROFESSIONAL ELECTRICAL ENGINEER</p> | |
| | <p>LOCATION: BRGY. PALKISAHAN, DISTRICT 4, QUEZON CITY</p> | <p>SUBMITTED BY: ENGR. FREDISWINDOL DE GUZMAN HEAD, PLANNING AND DESIGN DIVISION</p> | <p>APPROVED BY: ATTY. MARK DALE DIAMOND P. PERRAL, F.PICE CITY ENGINEER</p> | <p>APPROVED BY: MR. MICHAEL VICTOR N. ALIMURUNG CITY ADMINISTRATOR</p> |
| <p>PRC NO. 2304514 VALID DATE: NOVEMBER 29, 2024</p> | <p>PTR NO. 4332953 ISSUED DATE: JANUARY 26, 2025</p> | <p>PRC NO. 867456 VALID DATE: MARCH 28, 2027</p> | <p>PTR NO. 5428420 ISSUED DATE: JANUARY 08, 2026</p> | <p>PRC NO. 8102942 VALID DATE: FEBRUARY 24, 2026</p> |
| <p>PTR NO. 6402712 ISSUED DATE: JANUARY 28, 2024</p> | <p>EL 02/03</p> | <p>02 03</p> | <p>02 03</p> | <p>02 03</p> |



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|---|--|--|--|---|---|--|-------------------------------|-----------------|--|
| 1 TYPICAL HIGH MAST DETAIL | | 2 HANDHOLE DETAIL | | | | | | | |
| <p>DEPARTMENT OF ENGINEERING Palangasahon, Quezon City 1000 Palangasahon, Quezon City 1000 Palangasahon, Quezon City</p> | PROJECT TITLE: DETAILED ENGINEERING DESIGN PLAN | SHEET CONTENT: TYPICAL HIGH MAST DETAIL, HANDHOLE DETAIL | DESIGNED BY: ENGR. JUAN PAOLO M. TOLENTINO, PROFESSIONAL ELECTRICAL ENGINEER | SUBMITTED BY: ENGR. FREDISWINDA DE GUZMAN, HEAD, PLANNING AND DESIGN DIVISION | APPROVED BY: ATTY. MARK DALE DIAMOND P. PERRAL, F.PICE, CITY ENGINEER | APPROVED BY: MR. MICHAEL VICTOR N. ALIMURUNG, CITY ADMINISTRATOR | SET NO. EL 03.03 | SHEET NO. 03 03 | |
| | LOCATION: BRGY. PALANGSAHAN, DISTRICT 4, QUEZON CITY | PRC NO. 0054614 | PTR NO. 8333558 | PRC NO. 8479556 | PTR NO. 8428420 | PRC NO. 8190582 | PTR NO. 8482712 | | |
| | | VALID DATE: NOVEMBER 28, 2028 | ISSUED DATE: JANUARY 05, 2026 | VALID DATE: MARCH 24, 2027 | ISSUED DATE: JANUARY 06, 2026 | VALID DATE: FEBRUARY 24, 2026 | ISSUED DATE: JANUARY 29, 2026 | | |

