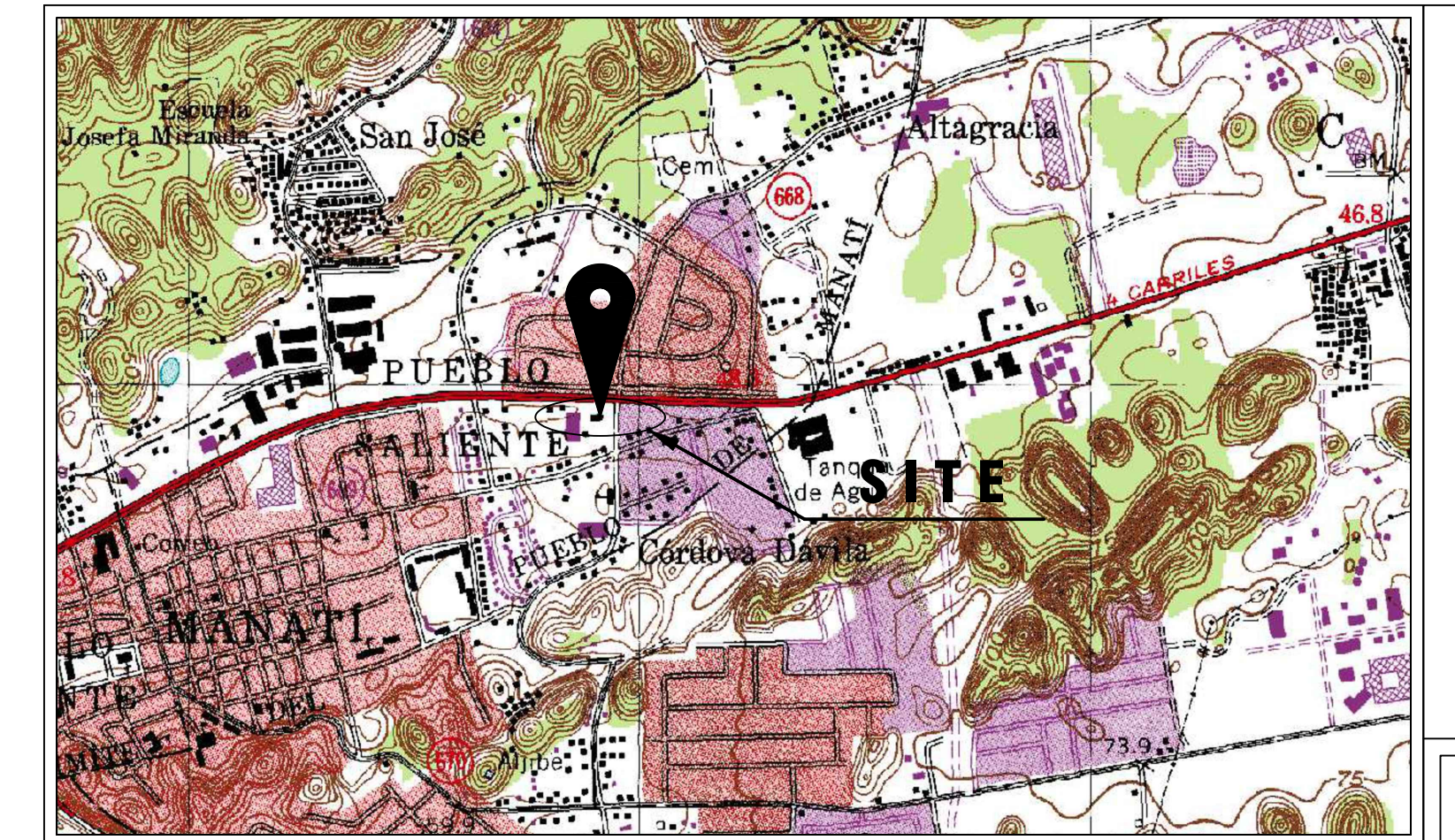
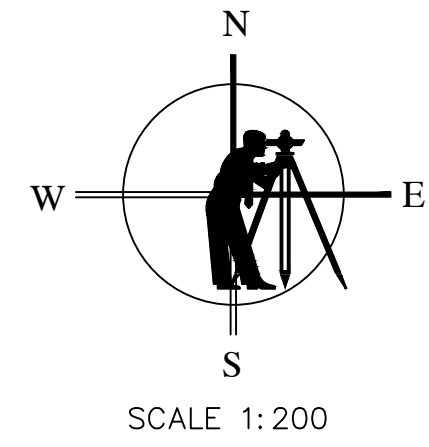


# GENERADOR DE EMERGENCIA: TRIBUNAL DE MANATI, SITA EN LA PR-2, KM. 48.4, BO. PUEBLO, MANATI, PUERTO RICO.

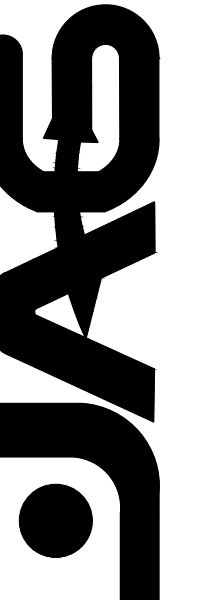


**TOPOGRAPHIC** SCALE 1:20,000  
COORDENADAS Nad83 x: 194790.4086, y: 266233.2855 (Lat: 18.43174099, Lon: -66.48264431)

**CATASTRO : 056-013-108-35**  
**COORDENADAS Nad83 x: 194790.4086, y: 266233.2855 (Lat: 18.43174099, Lon: -66.48264431)**

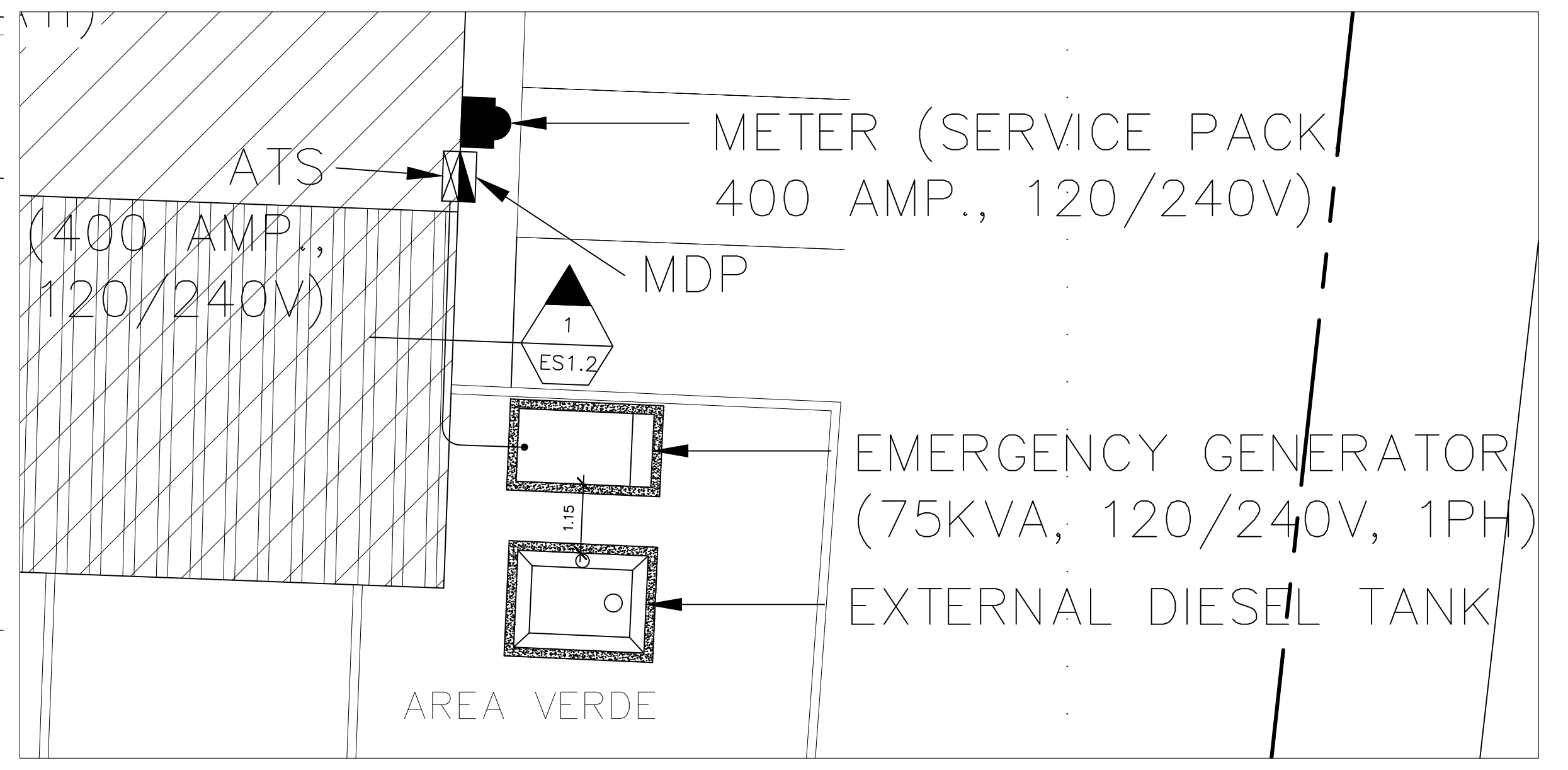
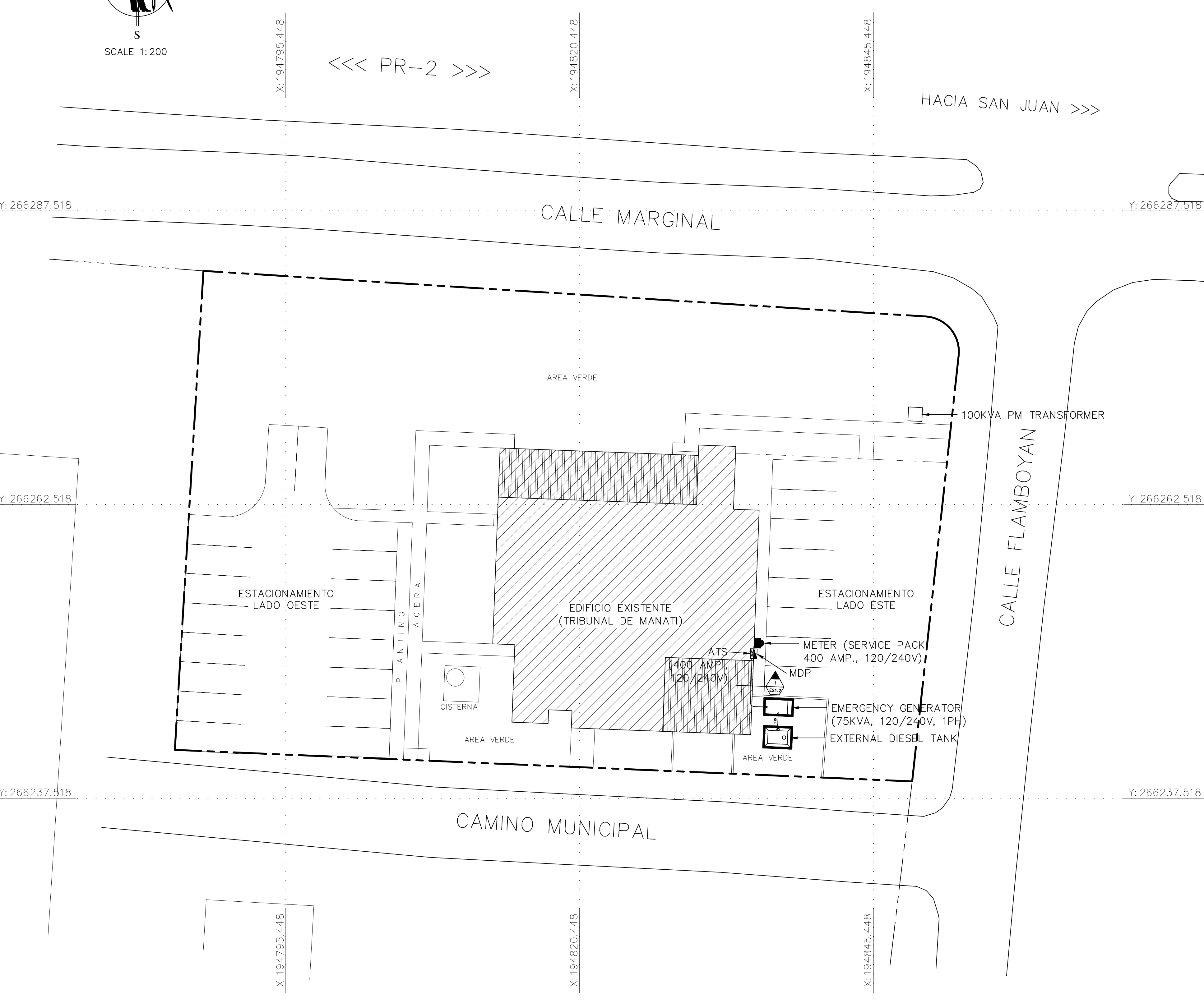
REVISIONS	SYMBOL	DATE	BY

ELECTRICAL SITE



Project Name and Address  
**PLANO DE MEDICION**  
**TRIBUNAL DE MANATI**  
**SITA EN LA PR-2, KM. 48.4, BO. PUEBLO,**  
**MANATI, PUERTO RICO.**

STAMP:  
Date: **AGO/2024**  
Scale: **INDICADA**  
Sheet: **1/3**  
Sheet number: **E1.1**



**CERTIFICACION DEL DISEÑADOR / DESIGNER'S CERTIFICATION**

1. Certifico que soy ingeniero, agrimensor, arquitecto, licenciado en cumplimiento con la Ley 173 de 1988, según enmendada, y estoy autorizado por el dueño del proyecto a presentar estos planos de construcción ante LUMA Energy como operador y administrador del Sistema de Transmisión y Distribución de la AEE. (I certify that I am a licensed and registered engineer, surveyor, or architect in compliance with Act 173 of 1988, as amended) and authorized by the project or land owner to submit these construction plans to LUMA Energy as operator and administrator of the Transmission and Distribution System of the Puerto Rico Electric Power Authority.

2. En armonía con las disposiciones de la Ley Núm. 135 de 15 de junio de 1987, según enmendada, conocida como Ley de Certificación de Planos y Proyectos, certifico que preparé el diseño eléctrico de este proyecto en conformidad con los códigos, patrones, normas y reglamentos aprobados por la AEE, la Junta de Planificación y la Oficina de Permisos, LUMA Energy y el Manual de Prácticas Profesionales del CIGARP, / in compliance with Act No. 135 of June 15, 1987, as amended known as the "Construction Plans and Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permit Management Office and the CIGARP Professional Practice Manual.

FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE

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**LUMA** ENDOSO / ENDORSEMENT

Nombre del Proyecto / Project Name: **Generador de Emergencia Tribunal de Manati**  
Número de Proyecto / Project Number: \_\_\_\_\_ Revisión / Revision: **0**  
Carga / Load: (kVA): **75**

ENDOSADO POR / ENDORSED BY

---

1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación solicitada por el diseñador en cumplimiento con la Ley Núm. 135 del 15 de julio de 1987, según enmendada. / LUMA endorses the electric design shown in these construction plans based on the certification presented by the designer in compliance with Act 135 of July 15, 1987, as amended.

2. LUMA no asume responsabilidad sobre el diseño certificado. El endoso por parte de la LUMA no releva al diseñador de la responsabilidad profesional que asume al certificar estos planos. Este endoso no releva al constructor ni al inspector de obra privada de cumplir con las disposiciones del Código Eléctrico Nacional, Código Eléctrico de Seguridad, códigos, patrones, normas y reglamentos vigentes de LUMA y de otras agencias de gobierno, así como leyes federales y estatales, vigentes al inicio de las obras. / LUMA does not assume responsibility over the certified design. LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these projects' plans. This endorsement releases neither the builder nor private inspector from compliance with standing dispositions from: National Electric Code, National Electric Safety Code, construction standards, norms, and regulations from LUMA and other government agencies as well as federal and state laws ruling by the time construction begins.

3. El presente endoso tiene vigencia de un (1) año. De iniciar las obras eléctricas dentro de este término, mediante notificación previa a LUMA, el endoso mantendrá su vigencia hasta la terminación de las mismas. En caso de que no se certifique obra eléctrica en ese periodo, este endoso perderá su vigencia. Este endoso no es para cumplir el proceso de emisión de Permiso de Construcción y Garantía del equipo. Para esto es necesario cumplir con todo lo dispuesto en el Reglamento de Servidumbre Para la Autoridad de Energía Eléctrica (72R de 2007). This endorsement is valid for one (1) year. If electrical works have begun during this period, with prior notification to LUMA, the endorsement will still be valid until work's completion. In case there is no certified electrical work during this period, this endorsement will lose its validity. This endorsement is not to constitute an easement or to complete the Assignment, Transfer and Guarantee process of the equipment. For this, it is necessary to comply with all the provisions of the Easements Regulation for the Puerto Rico Electric Power Authority (72R of 2007).

**ELECTRICAL SITE PLAN**  
SCALE 1:200



**LUMA/P.R.E.P.A. GENERAL NOTES:**

- THIS DRAWINGS ARE AN EXACT COPY OF THE DRAWINGS SUBMITTED TO THE OGP.
- BEFORE STARTING DATE OF THE PROJECT THE OWNER IS RESPONSIBLE IN OBTAINING ALL THE NECESSARY ENDORSEMENTS AND PERMITS FROM ALL THE STATE, MUNICIPALITY AND FEDERAL GOVERNMENT AGENCIES THAT COULD BE REQUIRED FOR THIS TYPE OF PROJECT.
- THE OWNER SHALL CONTRACT THE SERVICES OF A LICENSE ENGINEER TO INSPECT ALL THE ELECTRICAL WORKS IN ACCORDANCE WITH THE CERTIFIED LAW (LAW NO. 7, JULY 19, 1995) AND THE P.R.E.P.A. MANUAL "REGLAMENTOS DE CERTIFICACION DE PLANOS DE PROYECTOS DE CONSTRUCCION ELECTRICA" THE OWNER IS RESPONSIBLE OF NOTIFYING THE P.R.E.P.A. THE ASSIGNED PRIVATE INSPECTOR BEFORE STARTING ANY WORKS.
- ALL CONSTRUCTION SHALL BE DONE IN A THOROUGH AND WORKMANLIKE MANNER, IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DRAWINGS. THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, NESC, IEEE, NEMA AND ANSI STANDARDS. SHALL BE FOLLOWED, EXCEPT WHERE LOCAL REGULATIONS ARE MORE STRINGENT, IN WHICH CASE LOCAL REGULATIONS SHALL GOVERN.
- THE CONTRACTOR IS NOT AUTHORIZED TO MAKE CHANGES FROM THE ELECTRICAL DESIGN. IT SHOULD BE RESPONSIBLE TO CONSULT THE ELECTRICAL DESIGNER OR THE PROJECT INSPECTOR ANY DOUBTS OF INTERPRETATIONS OF THE DRAWINGS, EXECUTION OF THE WORK, TECHNICAL SPECIFICATIONS OR ANY DISCREPANCIES BETWEEN THE EXISTING FIELD CONDITIONS AND THE PROPOSED DESIGN.
- THE OWNER OF ELECTRIC CONTRACTOR WILL NOTIFY THE PREPA THE BEGINNING OF THE WORKS OF THE PROJECT, BY MEANS OF THE DELIVERY A START NOTIFICATION DOCUMENT TO THE CORRESPONDING REGION'S DISTRIBUTION ENGINEERING DEPARTMENT.
- THE PRIVATE INSPECTOR AND THE CONTRACTOR ARE RESPONSIBLE IN ASSISTING TO A PRE-CONSTRUCTION MEETING TO COORDINATE ALL THE WORKS WITH THE ENGINEERING DISTRIBUTION DEPARTMENT OF THE CORRESPONDING REGION.
- ALL WORKS NEEDED TO BE DONE IN THE EXISTING ENERGIZED P.R.E.P.A. LINES INCLUDING CONNECTING THE PROJECT HAS TO BE DONE BY P.R.E.P.A. THE OWNER WILL BE RESPONSIBLE OF ALL THE EQUIPMENT COST, MATERIALS AND LABOR. THE OWNER SHALL REQUEST TO THE P.R.E.P.A. AN ESTIMATE OF THE NECESSARY WORKS. THE ESTIMATE WILL BE VALID FOR A PERIOD OF THREE (3) MONTHS AFTER BEING EXPEDITED.
- IT WILL BE PROHIBIT TO DO ANY WORK IN THE EXISTING P.R.E.P.A. RIGHT-OF-WAY WITH OUT A WRITTEN AUTHORIZATION LETTER FROM THE P.R.E.P.A.
- THE P.R.E.P.A. WILL NOT AUTHORIZE ANY CONNECTION IF THERE IS A RIGHT-OF-WAY INVASION CONDITION OR IF THE LINES DOES NOT COMPLY WITH THE SECURITY CLEARANCES.

**SPECIAL LUMAP/R.E.P.A. NOTES:**

- THE OWNER OF THE PROJECT MUST CONTRIBUTE:
  - THE AMOUNT OF \$ 0.00 FOR IMPROVEMENTS IN THE EXISTING ELECTRICAL INFRASTRUCTURE.
  - REQUIRED WORKS SPECIFIED IN THE EVALUATION OF THIS PROJECT DATE ON XXXX

THIS CONTRIBUTION ARE DONE ACCORDING TO THE PROPOSED AGREEMENT WITH THE "REGLAMENTO PARA DETERMINAR Y COBRAR LAS APORTACIONES DE PERSONAS O INSTITUCIONES EN PROYECTOS DE DESARROLLO VIGENTE".
- P.R.E.P.A. WILL NOT ENERGIZE THE SYSTEM UNTIL ALL THE CORRESPONDING RIGHTS-OF-WAY, ON THE PROJECT AND/OR OFF-SITE, HAVE BEEN GRANTED AS REQUIRED IN THE "REGLAMENTO DE SERVIDUMBRE PARA LA AUTORIDAD DE ENERGIA ELECTRICA". THIS REQUIREMENT AND NOTES APPLIES TO ALL REQUIRED RIGHT-OF-WAYS, INSIDE OR OUTSIDE OF THE PROJECT LIMITS.
- THE INSTALLATION OF THE METERING EQUIPMENT MUST BE CONSULTED AND COORDINATED WITH METERING OFFICE OF THE CORRESPONDING REGION. THE DESIGNER OR THE ELECTRICAL CONTRACTOR MUST MAKE SURE TO CONSULT WITH THE METERING OFFICE THE EQUIPMENT AND MATERIALS TO BE USED AND THE LOCATION OF THE PROPOSED EQUIPMENTS.
- IT IS NOT PERMITTED TO INSTALL TRANSFORMERS, SUBSTATION OR ANY ELECTRICAL EQUIPMENT ABOVE SEWER OR WATER INFRASTRUCTURE.

**LUMAP/R.E.P.A. MATERIAL NOTES:**

- ALL THE EQUIPMENT TO BE USED SHALL COMPLY WITH THE IEEE, ANSI, NEMA AND ASTM STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE OF VERIFYING THAT ALL THE MATERIALS OR EQUIPMENTS ARE APPROVED BY THE P.R.E.P.A. BEFORE ANY PURCHASE AND INSTALLATION. THE P.R.E.P.A. RESERVES THE RIGHT OF ACCEPTING ANY EQUIPMENT.
- WITHIN (1) MILE OF THE SEASHORE, ALL ENCLOSURES, EQUIPMENT AND MATERIALS SHALL BE STAINLESS STEEL, EXCEPT THE METERING BASES.
- ALL UNDERGROUND P.R.E.P.A. ELECTRICAL LINES SHALL USE PRIMARY CABLES WITH 15 KV TERMINATIONS FOR DISTRIBUTION SYSTEMS AND 46 KV TERMINATIONS FOR 38 KV ELECTRICAL LINES.
- AERIAL P.R.E.P.A. ELECTRICAL LINES SHALL USE 15 KV POLYMER INSULATION TERMINALS FOR DISTRIBUTION LINES AND 46 KV TERMINALS FOR 38 KV ELECTRICAL LINES.
- THE CONTRACTOR IS RESPONSIBLE TO PRINT IN ALL THE TRANSFORMERS THE PROPERTY NUMBER ASSIGNED BY THE CORRESPONDING ENGINEERING DISTRIBUTION DEPARTMENT.

**LUMA/P.R.E.P.A. SYSTEM NOTES:**

- THE OWNER IS RESPONSIBLE FOR TESTING ALL THE PRIMARY AND SECONDARY CABLES WITH THEIR CORRESPONDING TERMINATIONS. THE TEST RESULTS SHALL BE IN ACCORDANCE WITH THE PARAMETERS ESTABLISHED BY THE P.R.E.P.A. THIS TEST MUST BE PERFORMED IN COORDINATION WITH A REPRESENTANT FROM P.R.E.P.A. INSPECTION OFFICE OF THE CORRESPONDING REGION.
- DURING THE CABLE INSTALLATION, THIS MUST BE PROTECTED FROM MOISTURE AND ABRASIONS. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE CABLE USING RECOMMENDED PRACTICES TO NOT EXCEED THE TENSIONS SPECIFIED FOR THE CABLE.
- ALL THE COVERS OF ANY MANHOLE INSTALLED IN THE PLANTING AREA SHALL BE PROTECTED WITH REINFORCED CONCRETE ACCORDING TO THE P.R.E.P.A. STANDARD URD-52.
- WHERE THE PROJECT IS LOCATED WITHIN ONE (1) MILE OF THE SEASHORE THE RISER SHALL BE PVC SCH. 80 OR FIBERGLASS APPROVED BY THE P.R.E.P.A.
- ALL UNDERGROUND TRENCHES SHALL BE INSPECTED BY THE P.R.E.P.A. BEFORE IT IS COVERED AND COMPACTED.
- ALL UNDERGROUND ELECTRICAL LINES UNDER OR EXPOSED VEHICULAR TRAFFIC AREA SHALL BE PROTECTED WITH CONCRETE. WHERE OTHER UTILITIES ARE PRESENT IT MUST MAINTAIN A MINIMUM CLEARANCE OF 13".
- THE CONTRACTOR SHALL PROVIDE SPARES FUSES EQUAL TO THE AMOUNT USED IN THE SUB-STATION.
- ALL THE GROUND CONNECTION SHALL BE COMPRESSION OR THERMO-WELD TYPE.
- THE CONTRACTOR SHALL PROVIDE A FISHWIRE FOR ALL SPARE CONDUITS.
- MAXIMUM RESISTANCE TO GROUND SHALL BE 10 OHMS OR LESS. A GROUND ROD SHALL BE INSTALLED TO CONNECT THE NEUTRAL EVERY FOUR (4) POLES OR EVERY 1,000 FEET AND IN ALL THE TRANSFORMERS.
- EACH POLE CONCRETE BASE SHALL INCLUDE TWO (2) SPARE CONDUITS FOR FUTURE USE, AS REQUIRED BY THE P.R.E.P.A.
- EACH POLE CONCRETE BASE SHALL INSPECTED BY THE P.R.E.P.A. IN THE CONSTRUCTION STAGE.

**IMPORTANT NOTES:** (FOR PROJECTS LESS THAN ONE (1) MILE FROM SEASHORE)

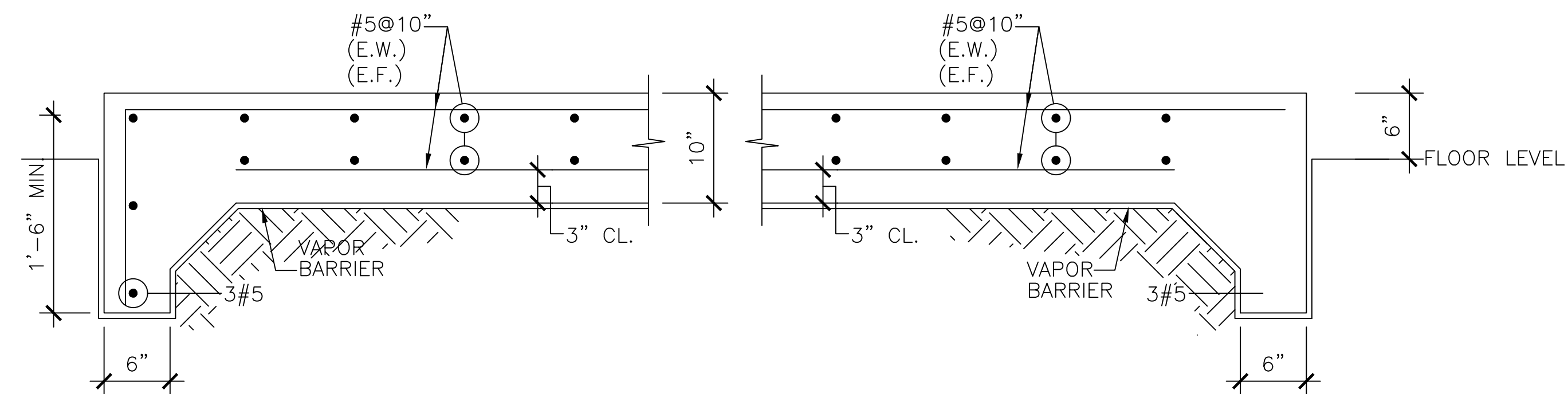
- ALL ELECTRICAL EQUIPMENT ENCLOSURES NOT RELATED TO PREPA, LOCATED OUTDOORS SHALL BE RAINIGHT AND STAINLESS STEEL OR APPROVED UV LIGHT RESISTANT PLASTIC.
- SUPPORTS CHANNELS UNISTRUTS SHALL BE OF STAINLESS STEEL OR ALUMINUM MATERIALS.
- CONDUITS STRAPS SHALL BE OF ALUMINUM OR STAINLESS STEEL MATERIAL.
- DISSIMILAR METALS SHALL BE SEPARATED BY A DIELECTRICS GASKET.
- EXPOSED CONDUITS SHALL BE PVC SCH. 80 OR PAINTED RGS CONDUITS.
- SUB-STATION TRANSCLOSURES, TRANSFORMERS AND PREPA EQUIPMENT CABINET SHALL BE STAINLESS STEEL AS PER PREPA SPECIFICATIONS.
- OUTDOOR HIGH VOLTAGE CABLE TERMINATIONS SHALL BE RATED 27 KV.
- SUB-STATION LOUVERS WINDOWS SHALL BE STAINLESS STEEL.

**METERING NOTE:**

- "ESTE PROYECTO REQUIRE CONTRATO DE CUENTAS AL POR MAYOR, EL CUAL ES REQUISITO QUE SE FIRME PREVIO A LA ENERGIZACION DEL PROYECTO. EL TIPO DE MEDICION, LOS EQUIPOS A UTILIZARSE Y LA UBICACION DEL EQUIPO DE MEDICION FUE COORDINADA CON EL GERENTE DE ESTANDARES Y PROCEDIMIENTOS."

**ELECTRICAL CERTIFICATION NOTE:**

- THE ELECTRICAL CERTIFICATION FOR THE GENERATORS INSTALLATIONS MUST SPECIFY THE TYPE OF DOUBLE-THROW SWITCH USED, BE IT MANUAL OR AUTOMATIC. THIS CERTIFICATION MUST BE ACCOMPANIED WITH THE FORM "REGISTRATION OF THE EMERGENCY PLANT". THE ELECTRICAL INSTALLATION CERTIFICATION AS WELL AS THE REGISTRATION OF THE ELECTRICAL PLANT WILL BE DELIVERED BY CONTRACTOR DURING THE INSPECTION STAGE OF THE PROJECT. OTHERS WILL PRESENT THE TECHNICAL SPECIFICATIONS OF THE DOUBLE THROW SWITCH IF YOU USE AN AUTOMATIC ONE, ACCORDING TO TECHNICAL COMMUNICATION 05-02.



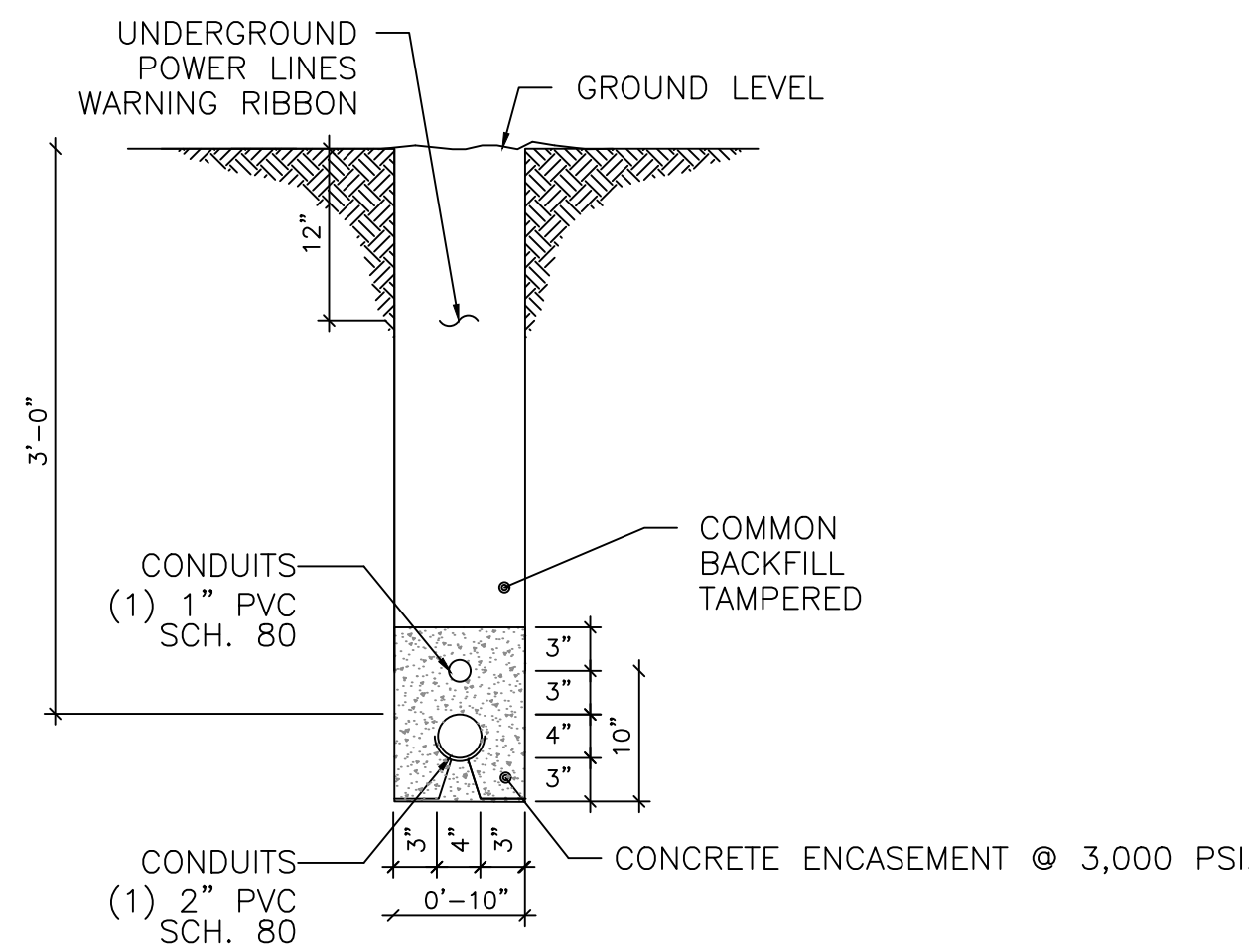
**TYP. ELECTRICAL GENERATOR STRUCTURAL PAD**  
SCALE: 3/4"=1'-0"

**NOTES:**

FOR SLAB USE STRUCTURAL CONCRETE 28-DAYS STRENGTH 3500 PSI, TYPE HARDROCK AND W/C RATIO OF 0.60

**LEGEND:**

E.W. EACH WAY  
E.F. EACH FACE



**SECTION 1: UNDERGROUND SECONDARY FEEDER**

Version: 1	
<b>CERTIFICACION DEL DISEÑADOR / DESIGNER'S CERTIFICATION</b>	
<p>1. Certifico que soy ingeniero, agrimensor o arquitecto, licenciado y colegiado en cumplimiento con la Ley 173 de 1988, según enmendada, y estoy autorizado por el dueño del proyecto a presentar estos planos de construcción ante LUMA Energy como operador y administrador del Sistema de Transmisión y Distribución de la AEE. / I certify that I am a licensed and registered engineer, surveyor, or architect (in compliance with Act 173 of 1988, as amended) and authorized by the project or land owner to submit these construction plans to LUMA Energy as operator and administrator of the Transmission and Distribution System of the Puerto Rico Electric Power Authority.</p> <p>2. En armonía con las disposiciones de la Ley Núm. 135 de 15 de junio de 1987, según enmendada, conocida como Ley de Certificación de Planos y Proyectos, certifico que preparé el diseño eléctrico de este proyecto en conformidad con los códigos, patrones, normas y reglamentos aprobados por la AEE, la Junta de Planificación y la Oficina de Gerencia de Permisos, Luma Energy y el Manual de Prácticas Profesionales del CIGARR, / In compliance with Act No. 135 of June 15, 1987, as amended known as the "Construction Plans or Projects Certification Act", I certify that I prepared the electric design for this project in accordance with the codes, Standards, rules, and regulations approved by LUMA, Puerto Rico Planning Board and Permit Management Office and the CIGARR Professional Practice Manual.</p>	
<b>FIRMA DEL DISEÑADOR / DESIGNER'S SIGNATURE</b>	
<b>LUMA ENDOSO / ENDORSEMENT</b>	
<p>Nombre del Proyecto / Project Name: <b>Generador de Emergencia Tribunal de Manatí</b></p> <p>Número de Proyecto / Project Number: _____</p> <p>Carga / Load. (kVA): <b>75</b> Revisión / Revision: <b>0</b></p>	
<b>ENDOSADO POR / ENDORSED BY</b>	
<p>1. LUMA endosa el diseño eléctrico mostrado en estos planos de construcción basándose en la certificación sometida por el diseñador en cumplimiento con la Ley Núm. 135 del 15 de julio de 1987, según enmendada. / LUMA endorses the electric design shown in these construction plans based on the certification presented by the designer in compliance with Act 135 of July 15, 1987, as amended.</p> <p>2. LUMA no asume responsabilidad sobre el diseño certificado. El endoso por parte de LUMA no releva al diseñador de la responsabilidad profesional que asume al certificar estos planos. Este endoso no releva al constructor o al inspector de obra privada de cumplir con las disposiciones del Código Eléctrico Nacional, Código Eléctrico de Seguridad, códigos, patrones, normas y reglamentos vigentes de LUMA y de otras agencias de gobierno, así como leyes federales y estatales, vigentes al inicio de las obras. / LUMA does not assume responsibility over the certified design. LUMA's endorsement does not relieve the designer from the professional responsibility assumed with the certification of these projects plans. This endorsement releases neither the builder nor private inspector from compliance with standing dispositions from: National Electric Code, National Electric Safety Code, construction standards, norms, and regulations from LUMA and other government agencies as well as federal and state laws ruling by the time construction begins.</p> <p>3. El presente endoso tiene vigencia de un (1) año. De iniciar las obras eléctricas dentro de este término, mediante notificación previa a LUMA, el endoso mantendrá su vigencia hasta la terminación de las mismas. En caso de que no se certifique obra eléctrica en ese periodo, este endoso perderá su vigencia. Este endoso no es para consultar endosarse ni para completar proceso de Cesión, Traspaso y Garantía del equipo. Para esto es necesario cumplir con todo lo dispuesto en el Reglamento de Servidumbres Para la Autoridad de Energía Eléctrica (72R2 de 2007) / This endorsement will be valid until work's completion. In case there is no certified electrical work during this period, this endorsement will lose its validity. This endorsement is not to constitute an easement or to complete the Assignment, Transfer and Guarantee process of the equipment. For this, it is necessary to comply with all the provisions of the Easements Regulation for the Puerto Rico Electric Power Authority (72R2 of 2007).</p>	
Project Name and Address	<p><b>PLAZA DE MEDIOSURIA 8</b></p> <p><b>TRIBUNAL DE MANATÍ</b></p> <p><b>SITA EN LA PR-2, KM. 48-4, BO. PUEBLO, MANATÍ, PUERTO RICO.</b></p>
STAMP:	<p>DATE: <b>AGO/2024</b></p> <p>SCALE: <b>INDICADA</b></p> <p>SHEET: <b>3/3</b></p> <p>SHEET NUMBER: <b>E1.3</b></p>

<p>Sheet Title :</p> <p style="font-size: 2em; font-weight: bold; margin: 0;">JAE</p>	<p>GENERAL NOTES &amp; DETAILS</p>												
<p>Project Name and Address</p> <p><b>PLAZA DE MEDIOSURIA 8</b></p> <p><b>TRIBUNAL DE MANATÍ</b></p> <p><b>SITA EN LA PR-2, KM. 48-4, BO. PUEBLO, MANATÍ, PUERTO RICO.</b></p>	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	BY									
NO.	DATE	BY											