



# MARIANO MARCOS STATE UNIVERSITY

## Bids and Awards Committee

### INVITATION TO MAKE AN OFFER: Negotiated Procurement

21-015

**THE PROJECT: Provision of FDAS and Emergency Lights at CIT, Paoay, Ilocos Norte**  
**Number of Working Days: 70 calendar days**  
**ABC: P948,690.96**

1. The Mariano Marcos State University (MMSU), with offices at Quiling Sur, City of Batac, Ilocos Norte, invites the public to make an offer to furnish all labor, materials, tools and equipment necessary and proper for the implementation of the above Project as per approved designs, plans and drawings.
2. This process is in accordance with Section 53 of R.A. 9184, the Government Procurement reform Act and Section 53.9 of the Implementing Rules and Regulations where interested and qualified contractors are to submit proposals.
4. The offer must be in writing submitted at the address below on or before **October 18, 2021; 2:00 PM** together with the following documents:
  - a) The amount of the offer in writing duly signed by the person making the offer, indicated in numbers and figures.
  - b) The particulars of the offer as to labor, materials, tools, equipment and other work details.
  - c) Documents in support of the legal, technical and financial capability of the person making the offer, which documents shall be confirmed and verified (3 copies).
5. It is understood that any offer may be accepted or rejected, or the process invalidated, at any time prior to contract award, without liability to anyone.
6. Documents for this procurement may be secured from the MMSU BAC Secretariat at the address below or downloaded from the MMSU website or from the Philippine Government Electronic Procurement System (PhilGEPS) website.
7. For questions and inquiries, please write or email the University President, thru the BAC Chair, at the address indicated below.

**Mariano Marcos State University**  
Quiling Sur, City of Batac  
[www.mmsu.edu.ph](http://www.mmsu.edu.ph)

October 13, 2021

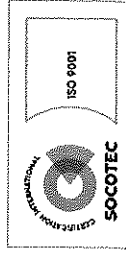
  
**NATHANIEL R. ALIBUYOG**  
BAC CHAIR

Received: \_\_\_\_\_  
Received: \_\_\_\_\_  
Received: \_\_\_\_\_

Rm105 FEM Hall, MMSU, #16S Quiling Sur, City of Batac, Ilocos Norte  
✉ [bac@mmsu.edu.ph](mailto:bac@mmsu.edu.ph) ☎ (077) 600-0459 [www.mmsu.edu.ph](http://www.mmsu.edu.ph)



**STAR<sup>SM</sup>**  
RATING SYSTEM



Republic of the Philippines  
Mariano Marcos State University  
City of Batac, Ilocos Norte

### PROJECT INFORMATION DOCUMENT

**Project Title** : Provision of FDAS and Emergency Lights at CIT – Paoay  
**Project Location** : MMSU CIT – Paoay, Ilocos Norte

#### General Instructions:

The project calls for the furnishing of all materials, labor, tools and equipment needed for the provision of FDAS and Emergency Lights at College of Industrial Technology, Paoay, Ilocos Norte. The said project shall be done in strict conformity with the design, plans, and other details, as well as the specifications, this Project Information Document and other related contract documents prepared and approved for the said project. It is highly recommended that the contract shall conduct site inspection in order to assess the existing condition of the site where the project will take place.

It also calls for the employment of manpower with the appropriate skills and expertise to undertake the specific scope of works and to enable the contractor to produce and deliver to satisfaction of the owner the needed services and output required for this undertaking. The contractor shall provide a site engineer that will serve as the Project-in-Charge, a safety officer and shall have adequate and readily available construction equipment to be utilized during the construction activities.

The contractor shall ensure that the construction activities must not interfere, obstruct or disturb any on-going operation of the building and other facilities. Hence, the contractor shall isolate the working area from the other portions of the building.

#### f. Electrical Works

- a. All electrical works must be done by a duly accredited electrician (NCII) under the direct supervision of a licensed Electrical Practitioner, PEE/REE/RME and shall be done in strict compliance with the Requirements of the Philippine Electrical Code, RA 7920 and all other existing Laws, Regulations, Codes and Local Ordinances.
- b. The contractor shall provide one (1) licensed Electrical Practitioner, PEE/REE/RME, on the job site as a resident project supervisor for the electrical works. No installation shall be done without the presence of the project supervisor.
- c. Before starting any works, the contractor must provide its metering equipment (kWhr Meter) for the power consumption throughout the project construction. The power consumption shall be paid by the contractor to the university after all works is done.

b

- d. Sample of each fixture, wiring devices, and other accessories shall be submitted for approval by the project inspector or technical committee of PDDO prior to installation. *No installation shall be made without the approval of materials.*
- e. The LED Emergency Lights must be rechargeable twin head emergency light and shall be installed in a workmanship manner to the nearest electrical line provided for the said lighting fixtures.
- f. The conduits to be installed shall be supported for permanent connection following the latest Philippine Electrical Code (PEC) and/or being referred from the approved plans.
- g. Color coding of wires shall be observed following the latest PEC: Line A (Red), Line B (Yellow), Line C (Blue), and Ground Wire (Green).
- h. Maximum number of wires inside the cable tray shall be observed (20% of the total cross-sectional area). Also, the maximum number of wires inside the pipes and conduits must be observed.
- i. Existing electrical system shall remain functional and must be in normal operation until the new/added electrical system is ready to be energized.
- j. All wiring shall be tested for circuit continuity and shall be tested to assure that the wiring system is free from short-circuit, accidental grounding or other defects prior to normal system operation.
- k. Energize the Electrical System. After the contractor has assured that the wiring system is free of faults, the contractor shall energize the system from their normal power sources and confirm that the system is operational as required by the contract documents, prior to final inspection.
- l. In case of conflict in specifications and quality of materials, installations procedure and in the plans and drawings as well as in the other contract documents before and during the implementation stage, the same should be referred to the end user and the technical committee for the proper resolution of the said conflicts.
- m. All other items or scope of works not mentioned or not shown and/or indicated in the plans, drawings and specifications and needed for the proper functioning of the system, the contractor shall likewise furnish all materials, labor and equipment necessary to complete the same.
- n. Where the above-mentioned items or scope of works requires the approval for the quality of the materials to be used or their testing before they are installed, embedded in concrete or enclosed with the specified covering materials, the contractor shall secure the university clearance or permission related hereto.

## II. Fire Detection and Alarm System

- a. All Electronics works and installation shall be done in strict compliance with the Requirements of the Fire Code of the Philippines, Philippine Electronics Code. R.A. 9292 and all other existing Laws, Regulations, Codes and Local Ordinances.
- b. All Electronic works shall be done in a neat and workmanship manner.
- c. All Electronics work shall be under the direct supervision of a duly Licensed Professional Electronics Engineer and/or Electronics Engineer.
- d. House Cabling Installations shall be done in accordance with the following recommendations: ANSI/TIA/EIA 569 - Commercial Building standard for Telecommunications Pathways and Spaces and ANSI/TIA/EIA-607 - Commercial Building Grounding and Bonding Requirements for Telecommunications
- e. All materials to be used shall be new and approved type for location.
- f. Contractor must be responsible for reviewing the full set of bid documents and be of the total scope of work prior to submission of bid. All works shown on the drawings not specifically called out as existing shall be considered work to be performed under the contract.
- g. Prior to submission of Proposal, Bidders, shall visit and carefully examine the site to become familiar with the existing conditions and he difficulties that may arise during the execution of this work. Submission of proposal shall be construed as evidence that such examination has been made. Later claims will not be recognized for extra labor, equipment or materials required due to difficulties encountered. No allowance shall be subsequently given to the contractor by reason of any error due to the contractor's negligence to comply with this requirement. Any discrepancies between the drawings and conditions should be reported to the Engineering/Planning office or any personnel who is in authority to the project.
- h. Before commencing work. the Contractor shall file all required permits, test reports/results, certifications for TCO and CO and pay all required fees.
- i. Upon completion of all Electronics work, the Contractor shall calibrate, test and adjust all circuits, devices and other components/items installed in the system. Any of these circuits, devices and other components/items found to be defective and ineffective shall be immediately replaced with a new one and will be recalibrated, tested and readjusted. All such remedial work provided shall be at NO cost to the owner.
- j. All notations of "SCALE" are intended as approximations. The contractor shall be responsible to ascertain as the exact dimensions in the actual field.

- k. Unless otherwise noted, electronics equipment and all other passive and active components of the system as reflected on the drawings shall be considered visible at their approximate locations. The contractor shall install these items as per instructions and approval of the authorized representative of the Owner.
- l. All conduit runs reflected on the drawings are shown to outline the general routing of the major feeders and branch wiring. It is not within the scope of these drawings to show all necessary bends, pivots, offsets pull boxes and obstructions. It will be the responsibility of the contractor to install the system in compliance to the requirements of the Fire Code of the Philippines.
- m. Additional component such as pull boxes, junction boxes, cable race and trays that are not shown on the drawings shall be provided as per requirement of existing codes or as per safety purposes. These components shall be installed so as NOT to destroy the internal aesthetic view of the building. Should any of these components prevent the installation of raceway as delineated on the contract, deviation must be approved by the designer prior to installation of any variation due to field conditions and shall not represent any additional cost to the owner.
- n. All conduits and boxes that are installed as part of this project are exposed except in areas with accessible hung ceiling. Exposed conduits and boxes shall be painted with primer and finish coating with colors specified by the Architect to match the surrounding surfaces.
- o. Electrical outlet or dedicated power source or electronic equipment and active components shall be provided including inside the terminal and distribution cabinets.
- p. All openings/holes between floors, through rated fire and smoke walls created by the contractor for cable or conduit pass through shall be sealed with fire stopping materials and to be installed acceptable by local Fire and Building Official. Any other openings/holes created by the contractor that is left unused should also be sealed at the end of installation.
- q. All exposed noncurrent-carrying metal parts of electronic and electrical equipment including raceways shall be grounded. A separate ground conductor shall be incorporated in all conduits. All metallic enclosures ensure continuity of the grounding circuit from the supply panel board grounding bus to the load ground terminal. The resistance from the service equipment ground bus to any load ground terminal should not exceed 0.5 ohms.
- r. No low voltage wiring shall be permitted in the same raceway as power wiring.
- s. All equipment shall have copper current carrying parts including ground bus and terminals.
- t. Remove all debris resulting from removal and/or installation of electronics and electrical work from the premises.

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- u. Unless otherwise noted, "INSTALL" means to be PROVIDED, INSTALLED, CALIBRATED and COMMISSIONED BY THE CONTRACTOR.
- v. The contractor shall be responsible for all restoration, sealing, waterproofing leaks and penetrations, core drilling, cutting, patching and painting for the complete contracted work indicated.

After all the works have been completed, the surrounding immediate areas affected in the prosecution of the project shall be cleaned and cleared of all excess materials and debris, temporary structures, facilities and utilities used during the construction period. All spillages and scattered caused by the painting work, grouts, adhesives, as well as markings and signage shall likewise be removed to the full satisfaction of the Owner.

All works indicated in the plans, specifications and in this document shall be fully completed within 70 calendar days from the receipt of the Notice to Proceed. The given duration of the project is already inclusive of pre-determined unworkable days.

The approved budget for the project to bid is *Nine Hundred Forty-Eight Thousand Six Hundred Ninety and 96/100 Pesos Only (₱948,690.96)*

Prepared by:


  
**LEMUEL JOSHUA P. BAGAYAS**  
Electrical Engineer

  
**WILSON R. DULDULAO**  
Professional Electronics Engineer

Checked by:

  
**AIDA V. CABANG**  
Chief, Physical Planning Section

Noted by:

  
**ROMEO R. DULDULAO**  
Director, Physical Planning and Development Office

Republic of the Philippines  
Mariano Marcos State University  
City of Batac, Ilocos Norte

**BILL OF QUANTITIES**

**Project Title** : Provision of FDAS and Emergency Lights at CIT – Paoay  
**Project Location** : MMSU CIT – Paoay, Ilocos Norte

| Item No. | Description  | Quantity                          | Unit   |
|----------|--|-----------------------------------|--|
| i.       | <b>Electrical Works</b><br>Pipe, Conduits and Fittings<br>Conductors, Lead Free<br>Rechargeable Twin-head LED Emergency<br>Lamp, 2 Heads (24X0.06 Watts)<br>Duplex Universal Convenience Outlet, with<br>Cover Plate   | 1.0<br>1.0<br>31<br>31            | Lot<br>Lot<br>Sets<br>Sets                       |
| ii.      | <b>Fire Detection and Alarm System</b><br>Addressable Fire Alarm Control Panel<br>(FACP) with three addressable loops<br>Addressable Smoke Detector<br>Addressable Manual Call Point<br>Fire Alarm Bell<br>Pipes, Conduits, Utility Box, and other<br>supporting accessories<br>Fire Retardant Cable | 1.0<br>23<br>5<br>5<br>1.0<br>1.0 | Unit<br>Pieces<br>Pieces<br>Pieces<br>Lot<br>Lot |

Prepared by:

  
**LEMUEL JOSHUA P. BAGAYAS**  
Electrical Engineer

  
**WILSON R. DULDULAO**  
Professional Electronics Engineer

Checked by:

  
**AIDA V. CABANG**  
Chief, Physical Planning Section

Noted by:

  
**ROMEO R. DULDULAO**  
Director, PPDO

**SPECIFICATION**

**Project Title : Provision of FDAS and Emergency Lights at CIT - Paoy**  
**Project Location : MMSU CIT - Paoy, Ilocos Norte**


| Item No. | Description  |
|----------|--|
| I.       | <b>Electrical Works</b><br>Pipes, Conduits and Fittings<br>It must be painted the same color as the surface where it will be installed.<br><br>Conductors, Lead Free<br>UL listed brands, lead free, and 100% Copper Wire.<br><br>Lighting Fixtures, Convenience Outlets and others<br>Rechargeable Twin-head LED Emergency Lamp, 2 Heads (24X0.06 Watts)<br>Duplex Universal Convenience Outlet, with Cover Plate |
| II.      | <b>Fire Detection and Alarm System</b><br>Addressable Fire Alarm Control Panel (FACP) with three addressable loops<br>Addressable Smoke Detector<br>Addressable Manual Call Point<br>Fire Alarm Bell<br>Pipes, Conduits, Utility Box and other supporting accessories<br>Fire Retardant Cable  |

Prepared By :


  
**LEMUEL JOSHUA P. BAGAYAS**  
Electrical Engineer

  
**WILSON R. DULDULAO**  
Professional Electronics Engineer

Checked by:

  
**AIDA V. CABANG**  
Chief, Physical Planning Section

Recommending Approval:

  
**ROMEO R. DULDULAO**  
Director, PPDO





**DETAILED ESTIMATES**

| Item No.:                            | Quantity  | Unit | Unit Price | Sub-Total |  |
|--------------------------------------|---|------|------------|-----------|--|
| <b>Electrical Works</b>              |   |      |            |           |  |
| <b>MATERIALS COST</b>                | Pipe, Thick Wall<br>20mmØ, 2.2mm thick, PVC   |      |            |           |  |
|                                      | Elbow, Thick Wall<br>20mmØ, PVC   |      |            |           |  |
|                                      | Utility Box, 2X4  |      |            |           |  |
|                                      | 3.5 mm <sup>2</sup> , THHN  |      |            |           |  |
|                                      | 2.0 mm <sup>2</sup> , THHN  |      |            |           |  |
|                                      | Rechargeable Twinhead LED Emergency Lamp,<br>220V, 60Hz, 2 Heads (24 X 0.06 Watts)    |      |            |           |  |
|                                      | Duplex Universal Convenience Outlet, with Cover Plate,<br>with Grounding, Wide Series |      |            |           |  |
|                                      | Electrical Tape, Vinyl, Big   |      |            |           |  |
|                                      | <b>Total Materials Cost</b>   |      |            |           |  |
|                                      | <b>EQUIPMENT COST</b>   |      |            |           |  |
| <b>Description</b>                   |   |      |            |           |  |
| 1 - Electric Drill @350/day          |   |      |            |           |  |
| <b>Total Equipment Cost</b>          |   |      |            |           |  |
| <b>LABOR COST</b>                    |   |      |            |           |  |
| <b>Description</b>                   |   |      |            |           |  |
| 1 - PEE/REE/RME @650/day             |   |      |            |           |  |
| 1 - Accredited Electrician @ 450/day |   |      |            |           |  |
| 2 - Electrical Helper @ 350/day      |   |      |            |           |  |
| <b>Total Labor Cost</b>              |   |      |            |           |  |

**DIRECT COST:**  
**DIRECT UNIT COST:**

Plus Indirect Cost:  
 15% OCM  
 10% CP  
 5% VAT  
 Indirect Unit Cost:

**Total Direct and Indirect Cost:**



**DETAILED ESTIMATES**

| Item No.:             | II   | Quantity | 1    | lot        |
|-----------------------|--|----------|------|------------|
| Description:          |  | Unit:    |      |            |
| <b>MATERIALS COST</b> | Description  | Quantity | Unit | Sub-Total  |
|                       | Addressable Fire Alarm Control Panel (FACP) with three (3) addressable loops   |          |      |            |
|                       | Addressable Smoke Detector   |          |      |            |
|                       | Addressable Manual Call Point (Manual Pull Station)  |          |      |            |
|                       | Fire Alarm Bell  |          |      |            |
|                       | Octagonal Metallic Utility Box   |          |      |            |
|                       | 3m X 25mmØ IMC or EMT Conduit Pipes  |          |      |            |
|                       | Metallic Coupling (for IMC or MET and Utility Box, asstd   |          |      |            |
|                       | Pipe Hangers, Anchor Bolt, Screws, Tox and other mounting accessories and materials, asstd                                 |          |      |            |
|                       | 4-core AWG #16 Fire Retardant Cable  |          |      |            |
|                       | Installation cost, inclusive of other additional parts of the cabling installation accessories and electrical requirements |          |      |            |
|                       | Total Materials Cost   |          |      | Sub-Total: |
| <b>EQUIPMENT COST</b> | Description  | Quantity | Unit | Sub-Total  |
|                       |  |          |      |            |
|                       | Total Equipment Cost   |          |      | Sub-Total  |
| <b>LABOR COST</b>     | Description  | Quantity | Unit | Sub-Total  |
|                       |  |          |      |            |
|                       | Total Labor Cost   |          |      | Sub-Total  |

DIRECT COST:  
 DIRECT UNIT COST:

Plus Indirect Cost:  
 15% OCM  
 10% CP  
 5% VAT  
 Indirect Unit Cost:

**Total Direct and Indirect Cost:**

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PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
NO. 202 257 4171  
1100 11th Street, N.W.  
Washington, D.C. 20037  
Tel: (202) 462-1111

LEVEL: 05th FLOOR  
ADDRESS: P. BAGAYAS

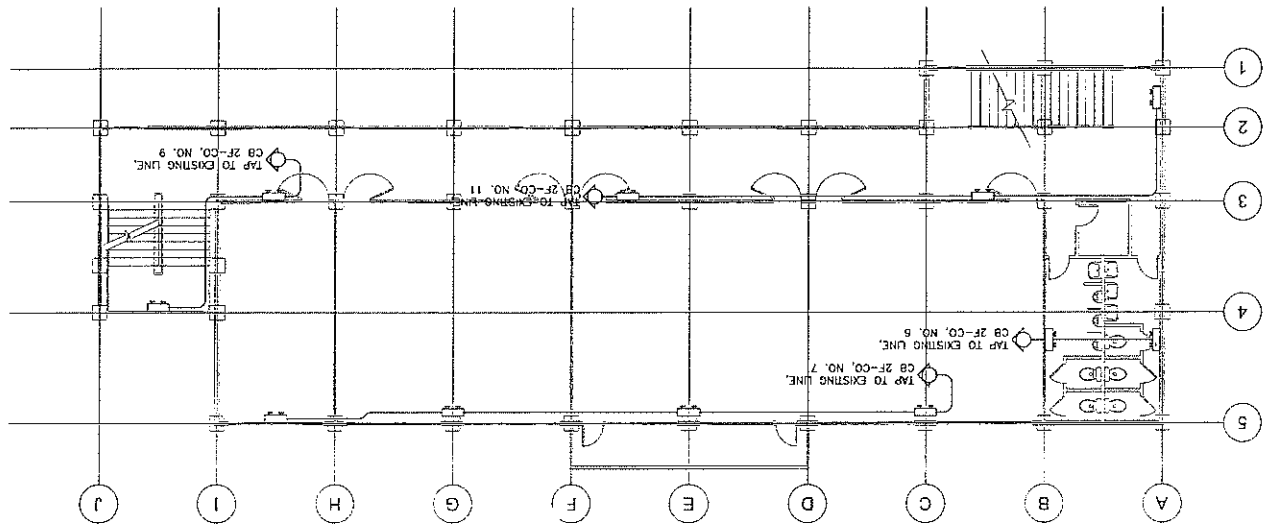
PROVISION OF FGAS AND  
EMERGENCY LIGHTS FOR CIT-PAOAY

DESIGNED BY: CESAR V. VILLANUEVA  
CHECKED BY: [Signature]  
APPROVED BY: [Signature]

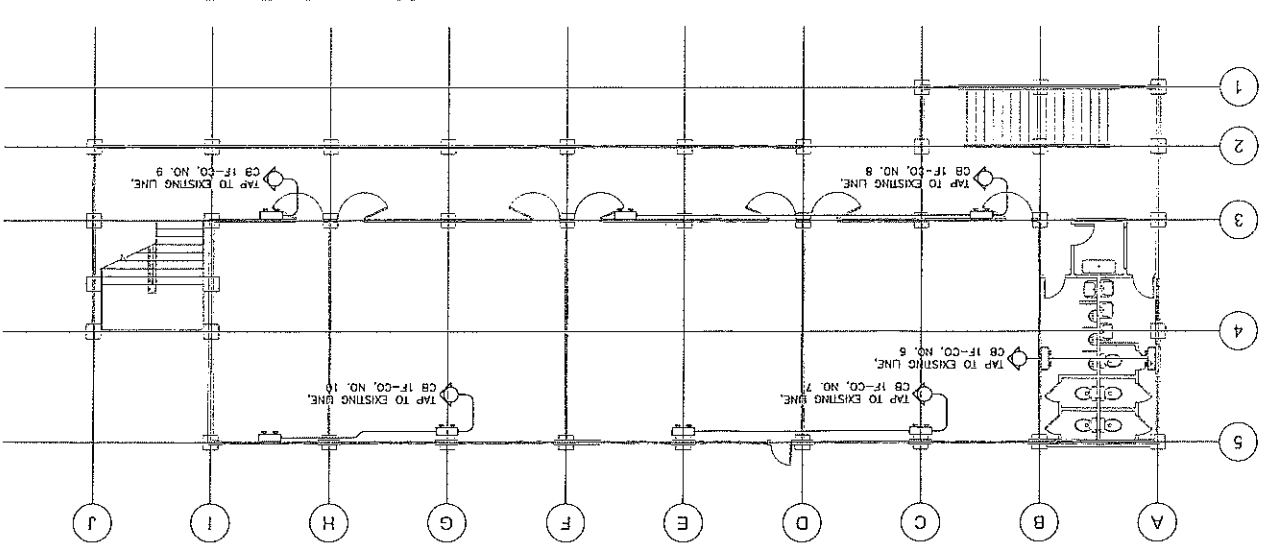
DATE: 11/12/2015  
PROJECT NO.: 15-011

PROJECT TITLE: PROVISION OF FGAS AND EMERGENCY LIGHTS FOR CIT-PAOAY  
DRAWING NO.: 1/2  
SHEET NO.: E

SECOND FLOOR EMERGENCY LIGHTS LAYOUT PLAN



GROUND FLOOR EMERGENCY LIGHTS LAYOUT PLAN





PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
ROOM 202, 1400 N. ORMOND BOULEVARD, SUITE 100, METairie, LA 70002  
PHONE: (504) 885-1311 FAX: (504) 885-1311

ENGINEER  
JENNEL JOSEPH P. BAYARAS

PROVISION OF FCAS AND  
EMERGENCY LIGHTS FOR OUT-PAOAY

PROJECT FILE

CONTRACTOR

APPROVED BY

SIGNATURE

THREE FLOOR EMERGENCY LIGHTS

2/2  
E

### SCHEDULE OF LOADS

FEDDER CONDUCTOR  
FEEDER PROTECTION  
USE: 3 - 22.0mm<sup>2</sup> & 1 - 8.0mm<sup>2</sup> THW CU WIRE IN CABLE TRAY  
FEEDER PROTECTION  
USE: 3 POLE 70A, 50KVA CIRCUIT BREAKER, 240V, 100AF, 60HZ

FEDDER CONDUCTOR  
FEEDER PROTECTION  
USE: 3 - 22.0mm<sup>2</sup> & 1 - 8.0mm<sup>2</sup> THW CU WIRE IN CABLE TRAY  
FEEDER PROTECTION  
USE: 3 POLE 70A, 50KVA CIRCUIT BREAKER, 240V, 100AF, 60HZ

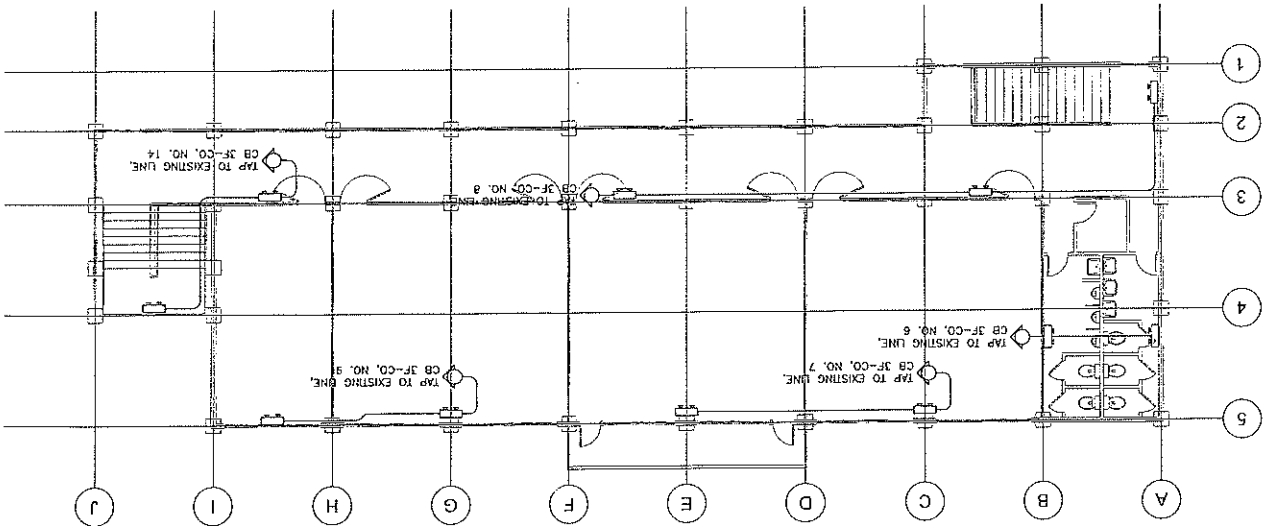
FEDDER CONDUCTOR  
FEEDER PROTECTION  
USE: 3 - 22.0mm<sup>2</sup> & 1 - 8.0mm<sup>2</sup> THW CU WIRE IN CABLE TRAY  
FEEDER PROTECTION  
USE: 3 POLE 70A, 50KVA CIRCUIT BREAKER, 240V, 100AF, 60HZ

| NO. | DESCRIPTION | AMOUNT | UNIT | REMARKS  |
|-----|-------------|--------|------|----------|
| 1   | 1000 VA     | 1      | UNIT | 1000 VA  |
| 2   | 2000 VA     | 1      | UNIT | 2000 VA  |
| 3   | 3000 VA     | 1      | UNIT | 3000 VA  |
| 4   | 4000 VA     | 1      | UNIT | 4000 VA  |
| 5   | 5000 VA     | 1      | UNIT | 5000 VA  |
| 6   | 6000 VA     | 1      | UNIT | 6000 VA  |
| 7   | 7000 VA     | 1      | UNIT | 7000 VA  |
| 8   | 8000 VA     | 1      | UNIT | 8000 VA  |
| 9   | 9000 VA     | 1      | UNIT | 9000 VA  |
| 10  | 10000 VA    | 1      | UNIT | 10000 VA |
| 11  | 11000 VA    | 1      | UNIT | 11000 VA |
| 12  | 12000 VA    | 1      | UNIT | 12000 VA |
| 13  | 13000 VA    | 1      | UNIT | 13000 VA |
| 14  | 14000 VA    | 1      | UNIT | 14000 VA |
| 15  | 15000 VA    | 1      | UNIT | 15000 VA |
| 16  | 16000 VA    | 1      | UNIT | 16000 VA |
| 17  | 17000 VA    | 1      | UNIT | 17000 VA |
| 18  | 18000 VA    | 1      | UNIT | 18000 VA |
| 19  | 19000 VA    | 1      | UNIT | 19000 VA |
| 20  | 20000 VA    | 1      | UNIT | 20000 VA |

| NO. | DESCRIPTION | AMOUNT | UNIT | REMARKS  |
|-----|-------------|--------|------|----------|
| 1   | 1000 VA     | 1      | UNIT | 1000 VA  |
| 2   | 2000 VA     | 1      | UNIT | 2000 VA  |
| 3   | 3000 VA     | 1      | UNIT | 3000 VA  |
| 4   | 4000 VA     | 1      | UNIT | 4000 VA  |
| 5   | 5000 VA     | 1      | UNIT | 5000 VA  |
| 6   | 6000 VA     | 1      | UNIT | 6000 VA  |
| 7   | 7000 VA     | 1      | UNIT | 7000 VA  |
| 8   | 8000 VA     | 1      | UNIT | 8000 VA  |
| 9   | 9000 VA     | 1      | UNIT | 9000 VA  |
| 10  | 10000 VA    | 1      | UNIT | 10000 VA |
| 11  | 11000 VA    | 1      | UNIT | 11000 VA |
| 12  | 12000 VA    | 1      | UNIT | 12000 VA |
| 13  | 13000 VA    | 1      | UNIT | 13000 VA |
| 14  | 14000 VA    | 1      | UNIT | 14000 VA |
| 15  | 15000 VA    | 1      | UNIT | 15000 VA |
| 16  | 16000 VA    | 1      | UNIT | 16000 VA |
| 17  | 17000 VA    | 1      | UNIT | 17000 VA |
| 18  | 18000 VA    | 1      | UNIT | 18000 VA |
| 19  | 19000 VA    | 1      | UNIT | 19000 VA |
| 20  | 20000 VA    | 1      | UNIT | 20000 VA |

| NO. | DESCRIPTION | AMOUNT | UNIT | REMARKS  |
|-----|-------------|--------|------|----------|
| 1   | 1000 VA     | 1      | UNIT | 1000 VA  |
| 2   | 2000 VA     | 1      | UNIT | 2000 VA  |
| 3   | 3000 VA     | 1      | UNIT | 3000 VA  |
| 4   | 4000 VA     | 1      | UNIT | 4000 VA  |
| 5   | 5000 VA     | 1      | UNIT | 5000 VA  |
| 6   | 6000 VA     | 1      | UNIT | 6000 VA  |
| 7   | 7000 VA     | 1      | UNIT | 7000 VA  |
| 8   | 8000 VA     | 1      | UNIT | 8000 VA  |
| 9   | 9000 VA     | 1      | UNIT | 9000 VA  |
| 10  | 10000 VA    | 1      | UNIT | 10000 VA |
| 11  | 11000 VA    | 1      | UNIT | 11000 VA |
| 12  | 12000 VA    | 1      | UNIT | 12000 VA |
| 13  | 13000 VA    | 1      | UNIT | 13000 VA |
| 14  | 14000 VA    | 1      | UNIT | 14000 VA |
| 15  | 15000 VA    | 1      | UNIT | 15000 VA |
| 16  | 16000 VA    | 1      | UNIT | 16000 VA |
| 17  | 17000 VA    | 1      | UNIT | 17000 VA |
| 18  | 18000 VA    | 1      | UNIT | 18000 VA |
| 19  | 19000 VA    | 1      | UNIT | 19000 VA |
| 20  | 20000 VA    | 1      | UNIT | 20000 VA |

### THIRD FLOOR EMERGENCY LIGHTS LAYOUT PLAN





PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
202 ADMINISTRATION BLDG. MARIANG MARCOS STATE UNIVERSITY  
C/O Bldg. 2002, 2003, 2004  
Tel. No. (077) 722-3151

DESIGNED BY: WILSON R. DOMINICO  
DRAWN BY: JAYSON DOMINICO

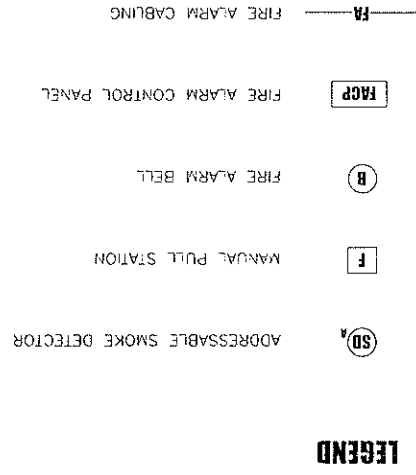
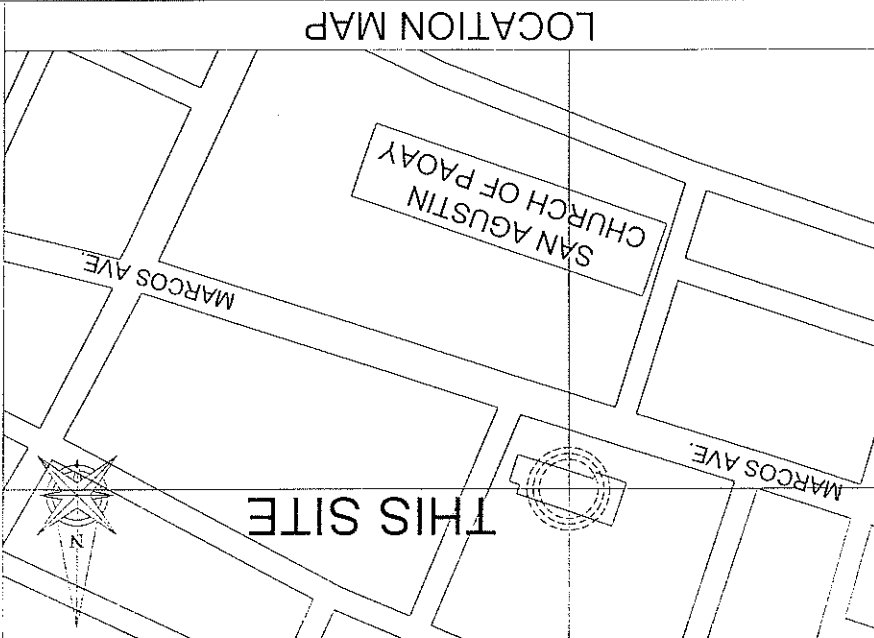
PROJECT TITLE: PROVISION OF FDAS AND EMERGENCY LIGHT AT CIT-PAOAY

APPROVED BY: ROMER DELA CRUZ  
RECOMMENDED APPROVAL: ROMER DELA CRUZ

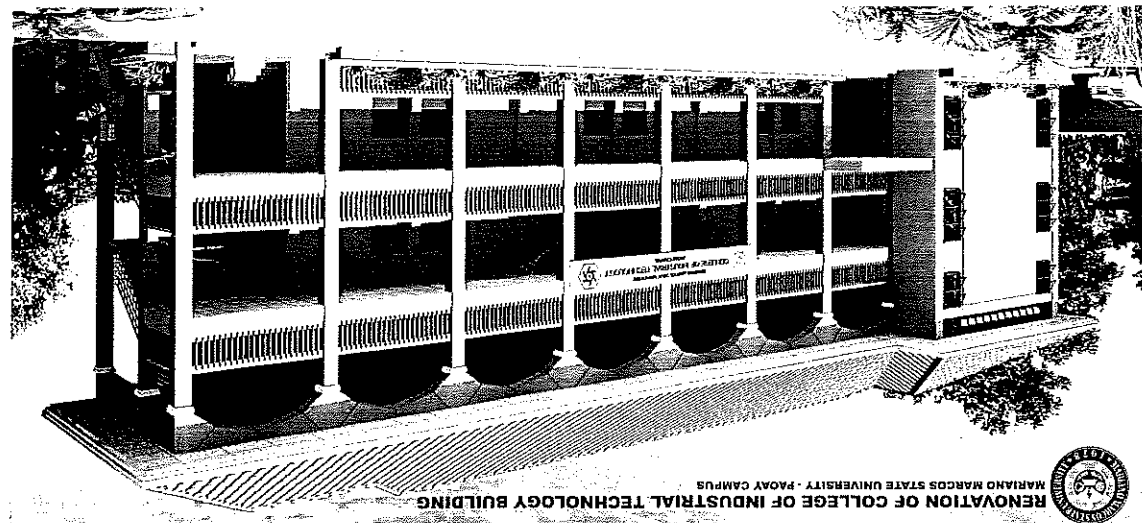
APPROVED BY: SHIBRAH AGUIPIS

AS SHOWN

SHEET NO. 01-1



### PERSPECTIVE VIEW



RENOVATION OF COLLEGE OF INDUSTRIAL TECHNOLOGY BUILDING  
MARIANG MARCOS STATE UNIVERSITY - PAOAY CAMPUS

### GENERAL NOTES: (For FDAS and BMS)

1. All Electronics works and installation shall be done in strict compliance with the Requirements of the Fire Code of the Philippines, Philippine Electronics Code, R.A. 9292 and all other existing Laws, Regulations, Codes and Local Ordinances.
2. All Electronic works shall be done in a neat and workmanlike manner.
3. All Electronics work shall be under the direct supervision of a duly Licensed Professional Electronics Engineer and/or Electronics Engineer.
4. House Cabling installations shall be done in accordance with the following recommendations: ANS/TIA/EIA 569 - Commercial Building standard for Telecommunications Pathways and Spaces ANS/TIA/EIA-607 - Commercial Building Grounding and Bonding Requirements for Telecommunications
5. All materials to be used shall be new and approved type for location.
6. Contractor must be responsible for reviewing the full set of bid documents and be of the total scope of work prior to submission of bid. All works shown on the drawings not specifically called out as existing shall be considered work to be performed under the contract.
7. Prior to submission of Proposal, Bidders, shall visit and carefully examine the site to become familiar with the existing conditions and the difficulties that may arise during the execution of the work. Submission of proposal shall be considered as evidence that such examination has been made. Later claims will not be recognized for extra labor, equipment or materials required due to difficulties encountered. No allowance shall be subsequently given to the contractor by reasons of any error due to the contractor's negligence to comply with this requirement. Any discrepancies between the drawings and conditions should be reported to the Engineering/Planning office or any personnel who is in authority to the project.
8. Before commencing work, the Contractor shall file all required permits, test reports/surveys, certifications for TCO and CO and pay all required fees.
9. Upon completion of all Electronics work, the Contractor shall calibrate, test and adjust all circuits, devices and other components/items installed in the system. Any of these circuits, devices and other components/items found to be defective and ineffective shall be immediately replaced with a new one and will be recalibrated, tested and readjusted. All such remedial work provided shall be at NO cost to the owner.
10. All notations of "SCALE" are intended as approximations. The contractor shall be responsible to as certain as the exact dimensions in the actual field.
11. Unless otherwise noted, electronics equipment and all other passive and active components of the system as reflected on the drawings shall be considered visible at their appropriate locations. The contractor shall install these items as per instructions and approval of the authorized representatives of the Owner.
12. All conduit runs reflected on the drawings are shown to outline the general routing of the major cables and branch wiring. It is not within the scope of these drawings to show all necessary fittings, joints, offsets pull boxes and observations. It will be the responsibility of the contractor to install the system in compliance to the requirements of the Fire Code of the Philippines.
13. Additional component such as pull boxes, junction boxes, cable race and trays that are not shown on the drawings shall be provided as per requirement of existing codes or as per safety purposes. These components shall be installed so as NOT to destroy the internal aesthetic view of the building. Should any of these components prevent the installation of raceway as delineated on the contract, deviation must be approved by the designer prior to installation of any ventilation due to field conditions and shall not represent any additional cost to the owner.
14. All conduits and boxes that are installed as part of this project are exposed except in areas with accessible hung ceiling. Exposed conduits and boxes shall be painted with primer and finish coating with color specified by the Architect to match the surrounding surfaces.
15. Electrical outlet or dedicated power source or electronic equipment and active components shall be provided including inside the terminal and distribution cabinets.
16. All openings/shelves between floors, through rated fire and smoke walls created by the contractor for cable or conduit pass through shall be sealed with fire stopping materials and to be installed acceptable by local Fire and Building Official. Any other openings/shelves created by the contractor that is left unused should also be sealed at the end of installation.
17. All exposed noncurrent-carrying metal parts of electronic and electrical equipment including raceways shall be grounded. A separate ground conductor shall be incorporated in all conditions. All metallic enclosures ensure continuity of the grounding circuit from the supply panel board bus to any load ground terminal should not exceed 0.5 ohms.
18. No low voltage wiring shall be permitted in the same raceway as power wiring.
19. All equipment shall have copper current carrying parts including ground bus and terminals.
20. Remove all debris resulting from removal and/or installation of electronics and electrical work from the premises.
21. Unless otherwise noted, "INSTALL" means to be PROVIDED, INSTALLED, CALIBRATED and COMMISSIONED BY THE CONTRACTOR.
22. The contractor shall be responsible for all restoration, sealing, waterproofing leaks and penetrations, core drilling, cutting, patching and painting for the complete contracted work indicated.



PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
202 ADMINISTRATION BLDG. MARINO MACOS STATE UNIVERSITY  
DILIMAN, QUEZON CITY 1101  
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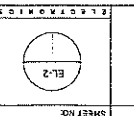
DESIGNED BY: *[Signature]*  
DRAWN BY: *[Signature]*

PROJECT TITLE: **PROVISION OF FDAS AND EMERGENCY LIGHT AT CIT-PAOAY**  
LOCATION: *[Handwritten: CIT-PAOAY, MARINO MACOS STATE UNIVERSITY]*

APPROVED BY: *[Signature]*  
DESIGNED BY: *[Signature]*  
REVISIONS:  
1. *[Handwritten: REVISIONS]*

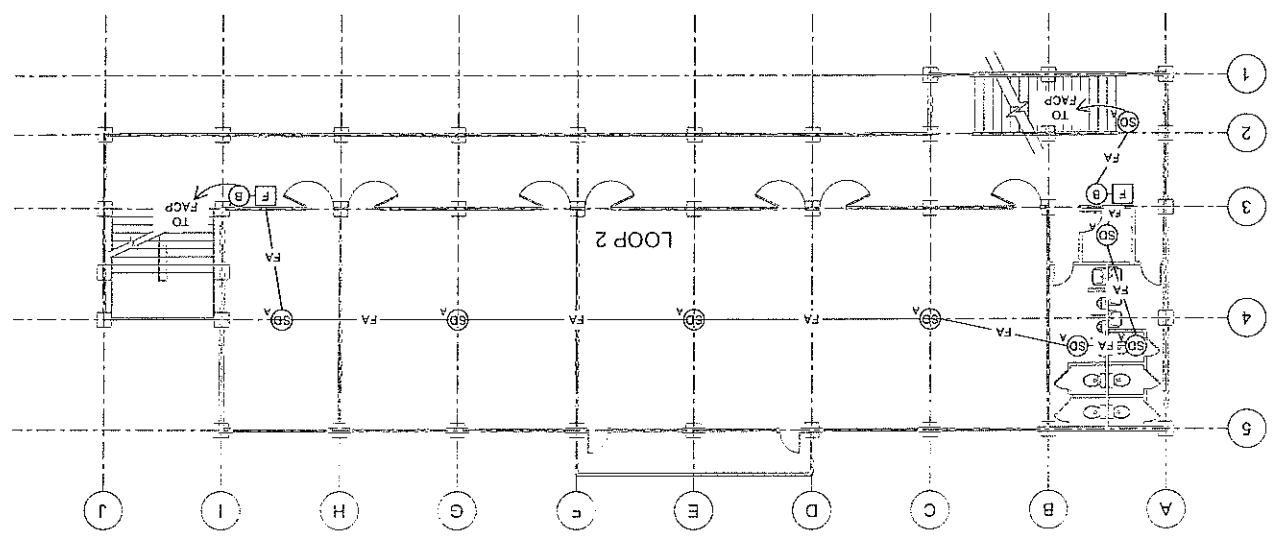
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DESIGNED BY: *[Signature]*

AS SHOWN



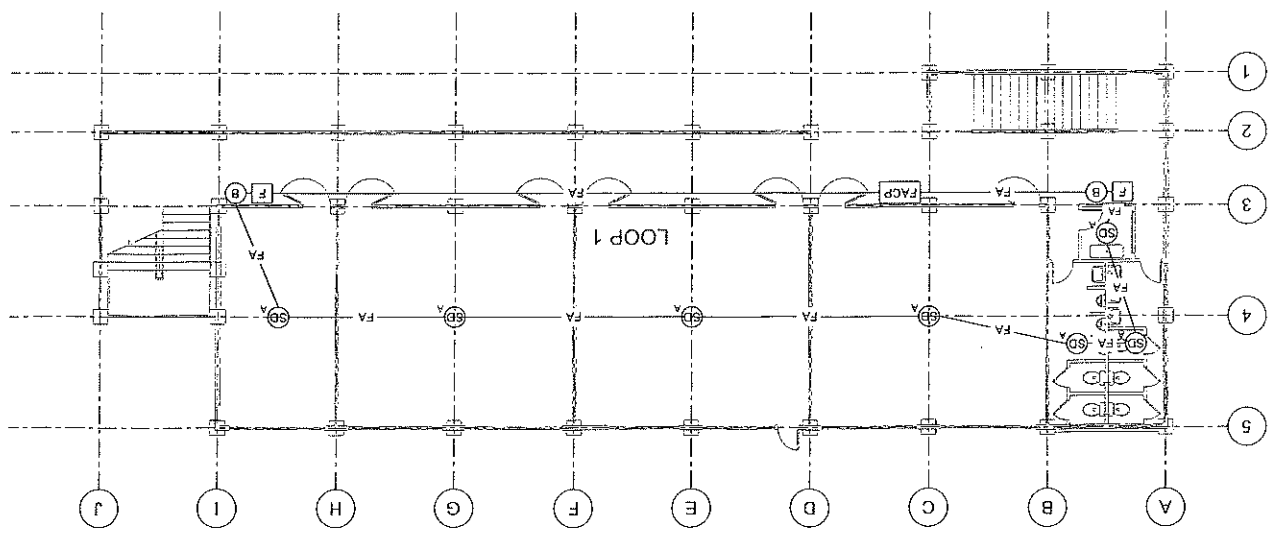
### SECOND FLOOR FIRE DETECTION AND ALARM SYSTEM

SCALE: 1:100



### GROUND FLOOR FIRE DETECTION AND ALARM SYSTEM

SCALE: 1:100





PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
2/F 203 ADMINISTRATION BLDG. MARINA MACAPAGS STATE UNIVERSITY  
TEL: (02) 771 332-3333  
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DOAWN BY: *[Signature]*

DESIGNER BY: *[Signature]*

PROJECT TITLE: **PROVISION OF FDAS AND EMERGENCY LIGHT AT CIT-PAOAY**

PROVISION OF FDAS AND EMERGENCY LIGHT AT CIT-PAOAY

CONVOYE: *[Signature]*

APPROVED BY: *[Signature]*

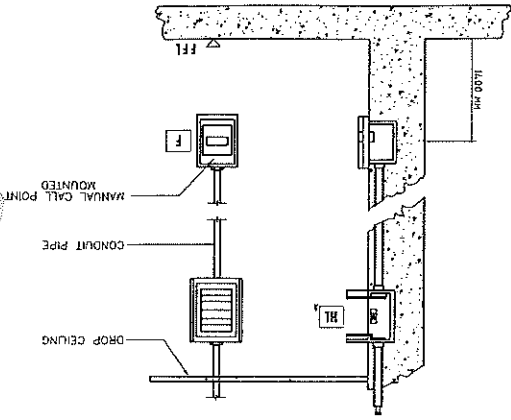
SHIRAZ A. AGUIPIS

AS SHOWN

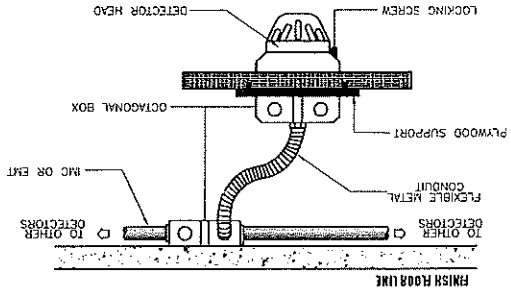


SHEET NO. 3

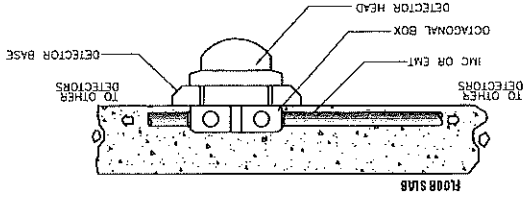
**MOUNTED DETAIL OF MANUAL DETECTION**



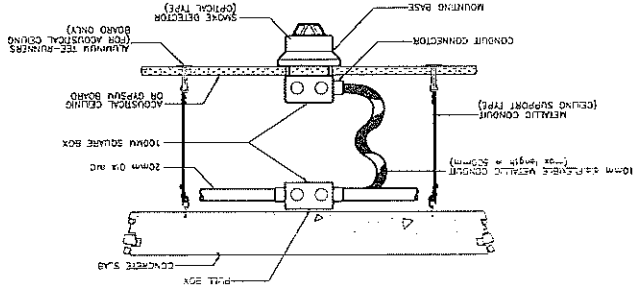
**DETECTOR DETAIL ON DROP CEILING WITH CONDUIT EXPOSED**



**SURFACE MOUNTED DETECTOR DETAIL**

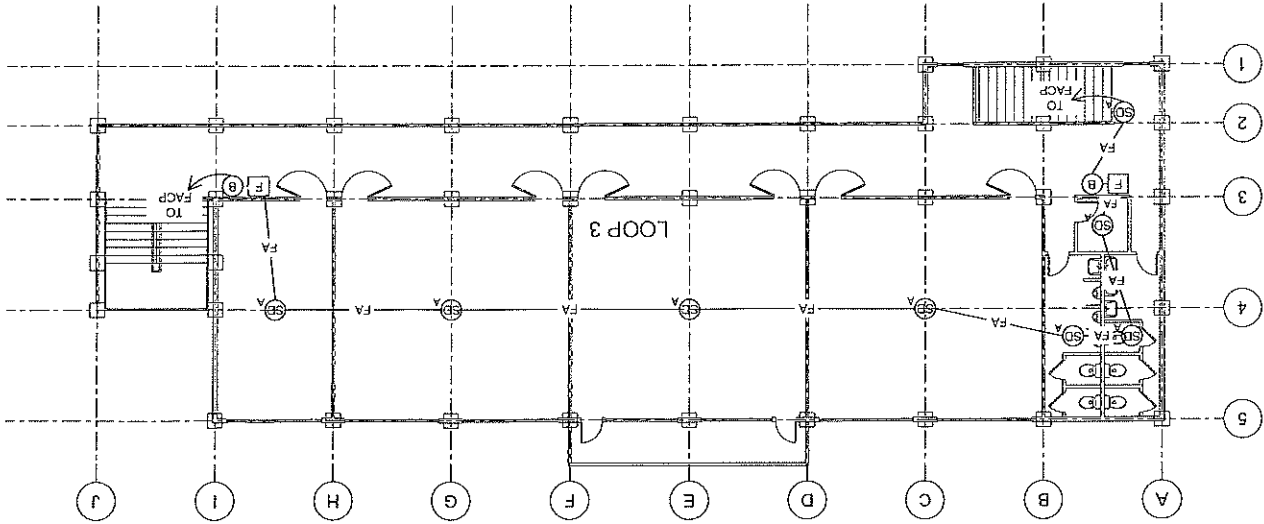


**SMOKE DETECTOR MOUNTING DETAILS**

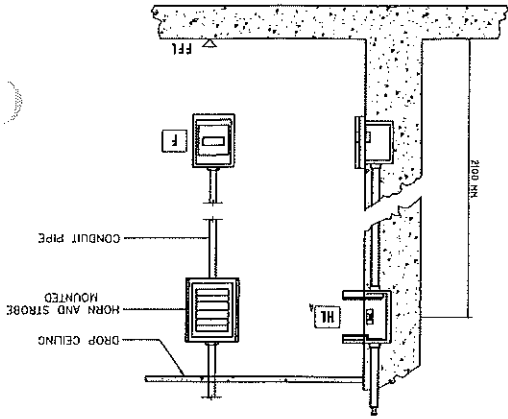


**GROUND FLOOR FIRE DETECTION AND ALARM SYSTEM**

SCALE



**MOUNTED DETAIL OF HORN STROBE**





PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
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TEL: (63) (77) 792-1811

DESIGNED BY: BLANK

DESIGNED BY: WILSON R. GUILLO  
DATE: 07/25/16  
PROJECT NO: 000011

PROJECT TITLE: PROVISION OF FDAS AND EMERGENCY LIGHT AT CIT-PAOAY

CONFIRME: CEARALYN PAIS

RECOMMENDING APPROVAL: HOMER DELA CRUZ

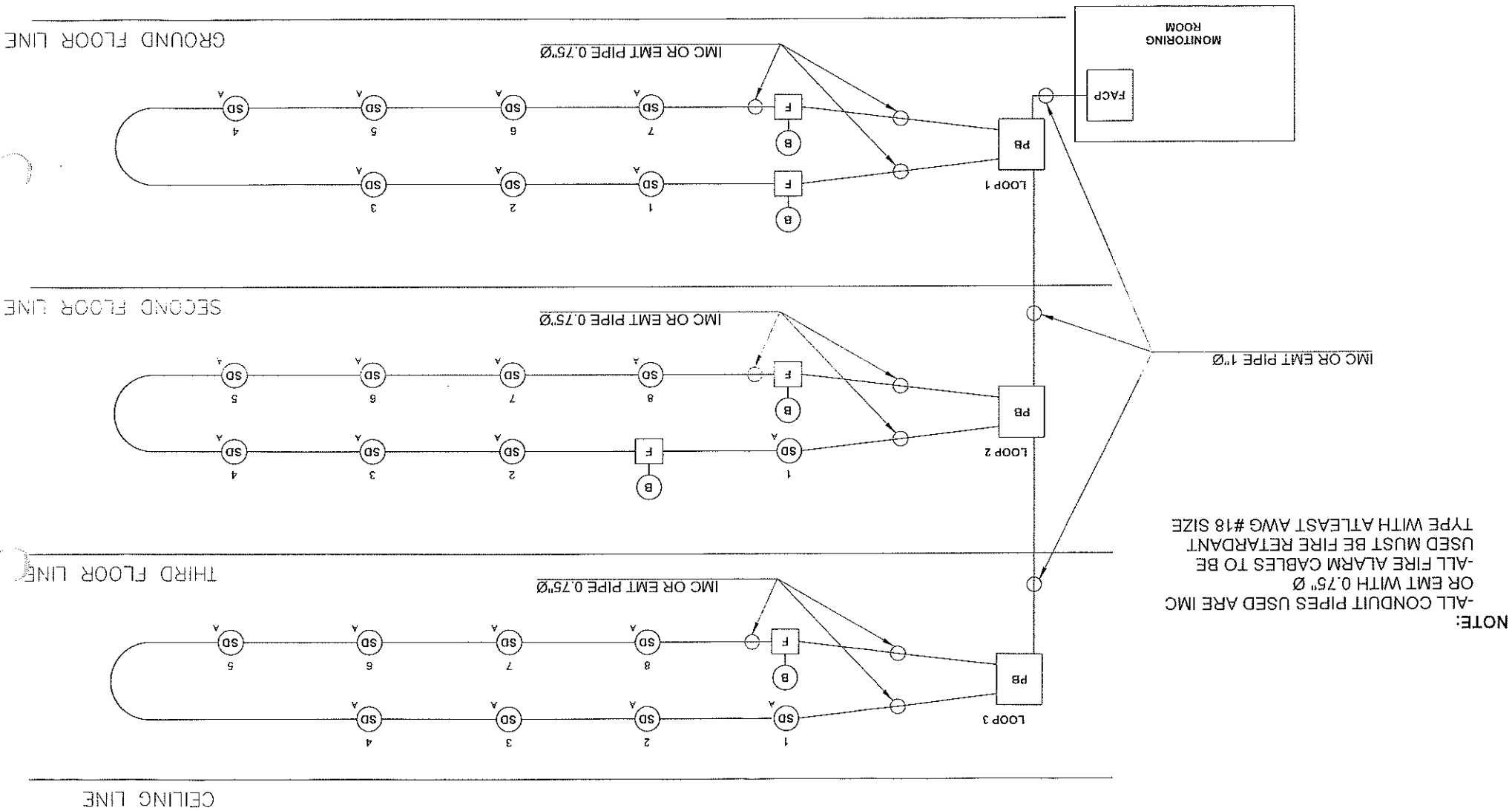
APPROVED BY: [Signature]

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SHEET CONTENTS:

AS SHOWN

### FDAS RISER SYSTEM DIAGRAM



GROUND FLOOR LINE

SECOND FLOOR LINE

THIRD FLOOR LINE

CEILING LINE