



# MARIANO MARCOS STATE UNIVERSITY

## Bids and Awards Committee

### INVITATION TO MAKE AN OFFER: Negotiated Procurement

21-015-1

**THE PROJECT:** Provision of FDAS and Emergency Lights at CIT, Paoyay, 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 27, 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.

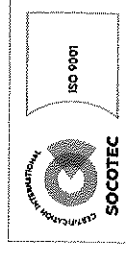
**Mariano Marcos State University**  
Quiling Sur, City of Batac  
[www.mmsu.edu.ph](http://www.mmsu.edu.ph)

October 22, 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)



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.

- i. Electrical Works
  - a. All electrical works must be done by a duly accredited electrician (NC-II) 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.

- 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.

- 3
- 3
- 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.
- 8

- 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> Pipe, Conduits and Fittings Conductors, Lead Free Rechargeable Twin-head LED Emergency Lamp, 2 Heads (24X0.06 Watts) Duplex Universal Convenience Outlet, with Cover Plate	1.0 1.0 31 31	Lot Lot Sets Sets
II.	<b>Fire Detection and Alarm System</b> Addressable Fire Alarm Control Panel (FACP) with three addressable loops Addressable Smoke Detector Addressable Manual Call Point Fire Alarm Bell Pipes, Conduits, Utility Box, and other supporting accessories Fire Retardant Cable	1.0 23 5 5 1.0 1.0	Unit Pieces Pieces Pieces Lot 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 - Paoay**  
**Project Location : MMSU CIT - Paoay, Ilocos Norte**


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

Prepared By :

  
**LEMUEL JOSEPH 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>				
	1	lot		
	Quantity	Unit	Unit Price	Sub-Total
<b>MATERIALS COST</b>	Description			
	Pipe, Thick Wall 20mmØ, 2.2mm thick, PVC			
	Elbow, Thick Wall 20mmØ, PVC			
	Utility Box, 2X4			
	3.5 mm <sup>2</sup> , THHN			
	2.0 mm <sup>2</sup> , THHN			
	Rechargeable Twinhead LED Emergency Lamp, 220V, 60Hz, 2 Heads (24 X 0.06 Watts)			
	Duplex Universal Convenience Outlet, with Cover Plate, with Grounding, Wide Series			
	Electrical Tape, Vinyl, Big			
Total Materials Cost				Sub-Total:
				Unit Cost:
<b>EQUIPMENT COST</b>	Description			
	1 - Electric Drill @350/day	Quantity	Unit	Unit Price
				Sub-Total
	Total Equipment Cost			Unit Cost
<b>LABOR COST</b>	Description			
	1 - PEE/REE/RME @650/day	Quantity	Unit	Unit Price
	1 - Accredited Electrician @ 450/day			
	2 - Electrical Helper @ 350/day			
Total Labor Cost			Sub-Total	Unit Cost

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.:	Quantity	Unit	Unit Price	Sub-Total
<b>II</b>				
<b>Description: Fire Detection and Alarm System</b>				
<b>MATERIALS COST</b>				
Description	Quantity	Unit	Unit Price	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				
<b>Total Materials Cost</b>				<b>Sub-Total:</b>
				<b>Unit Cost:</b>
<b>EQUIPMENT COST</b>				
Description	Quantity	Unit	Unit Price	Sub-Total
<b>Total Equipment Cost</b>				<b>Sub-Total</b>
				<b>Unit Cost</b>
<b>LABOR COST</b>				
Description	Quantity	Unit	Unit Price	Sub-Total
<b>Total Labor Cost</b>				<b>Sub-Total</b>
				<b>Unit Cost</b>

DIRECT COST:  
 DIRECT UNIT COST:

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

**Total Direct and Indirect Cost:**



PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
ADDRESS: 202 254 4141, WASHINGTON, DC 20535  
PHONE: (301) 975-2000

LEVEL: JOSEPH P. BAGWAS

PROVISION OF FGAS AND  
EMERGENCY LIGHTS FOR CIT-PAGAY

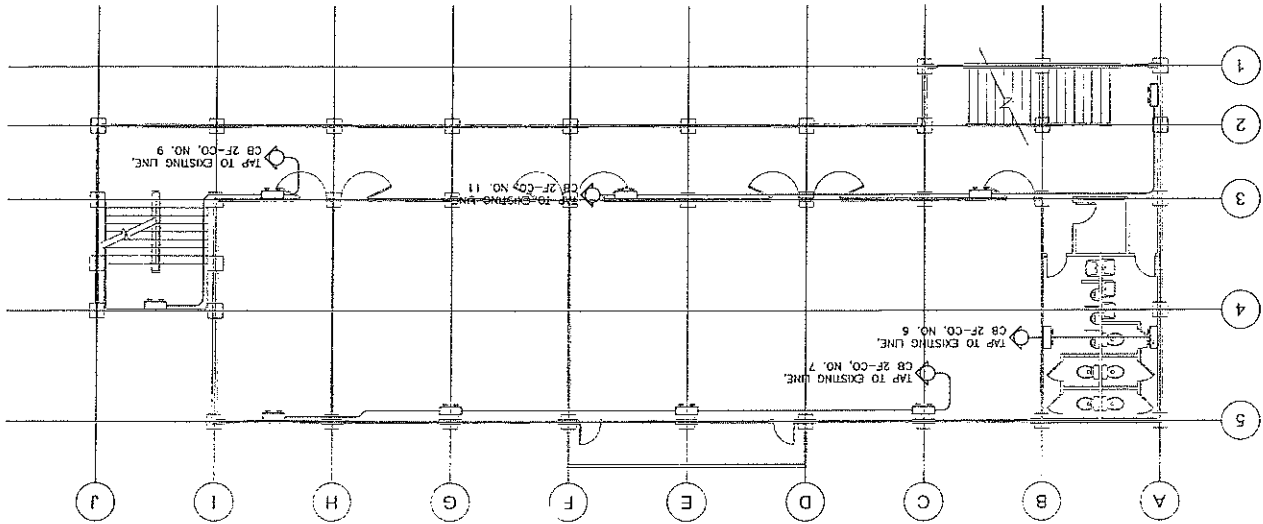
LOCATION: UNSU - CIT, PAVY, ADDRESS: NORTH 2902

APPROVED BY: [Signature]

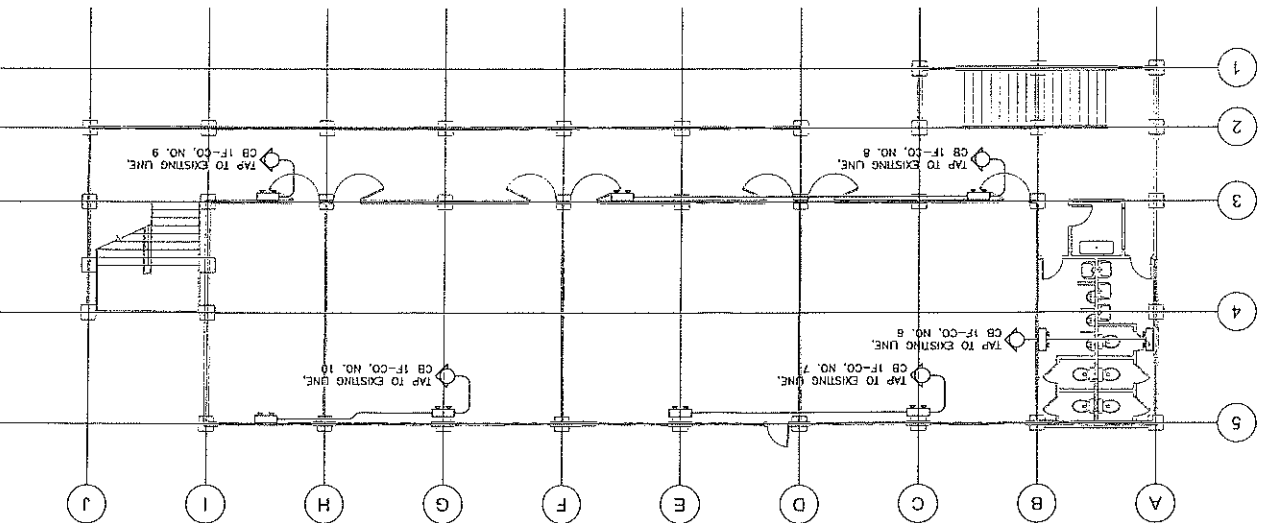
SHEET NO. 1/2

E

SECOND FLOOR EMERGENCY LIGHTS LAYOUT PLAN



GROUND FLOOR EMERGENCY LIGHTS LAYOUT PLAN





PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
 5000 202 2141, 50000 MARBOK STRAIT, KUCHING  
 (4091) - 65 (22) 792-5181

REPUBLIC OF MALAYSIA  
 JERAMBA  
 KUALA BELANGA

PROVISION OF FAS AND  
 EMERGENCY LIGHTS FOR CI-PAAVA

RECORDING SEAL  
 PROJECT NO. 2022  
 DATE: 11/01/2022

REVISIONS  
 SHEET NO. 2/2  
 E

SCHEDULE OF LOADS

FEDER CONDUCTION  
 USE: 3 (20.82) = 35.73 A  
 USE: 3 = 22.00mm<sup>2</sup> & 1 = 8.00mm<sup>2</sup> THW CU WIRE IN CABLE TRAY

FEDER CONDUCTION  
 USE: 3 (20.82) = 35.82 A  
 USE: 3 = 22.00mm<sup>2</sup> & 1 = 8.00mm<sup>2</sup> THW CU WIRE IN CABLE TRAY

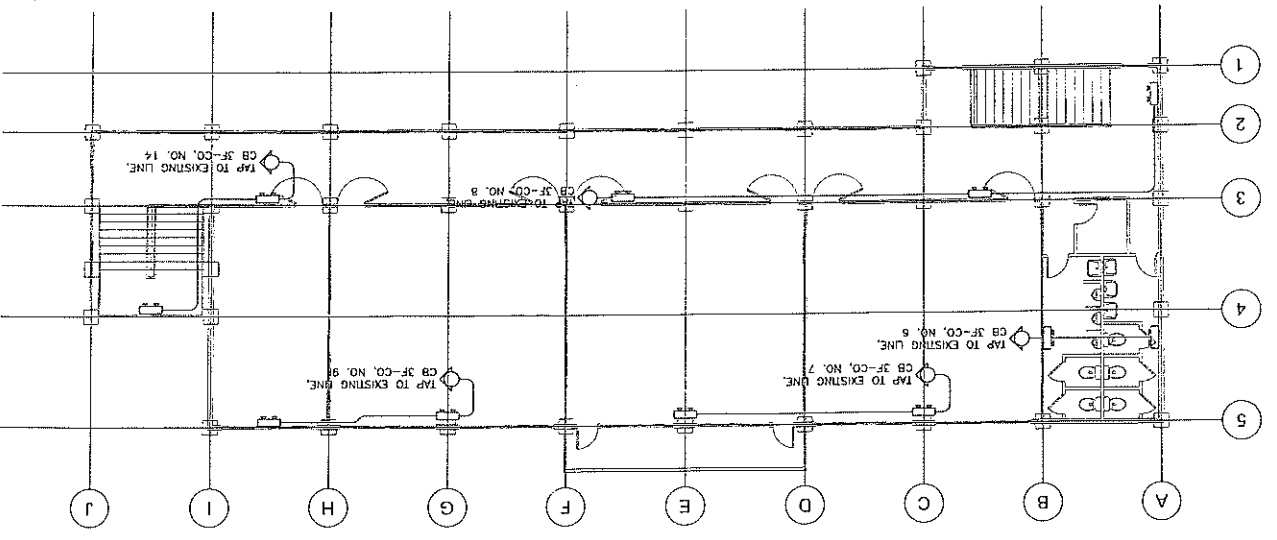
FEDER PROTECTION  
 USE: 3 (20.82) = 35.73 A  
 USE: 3 = 22.00mm<sup>2</sup> & 1 = 8.00mm<sup>2</sup> THW CU WIRE IN CABLE TRAY

NO.	DESCRIPTION	UNIT	QTY	LOAD (KW)	LOAD (KVA)	LOAD (A)	LOAD (V)	LOAD (Hz)	LOAD (Type)
1	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
2	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
3	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
4	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
5	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
6	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
7	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
8	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
9	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
10	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
11	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
12	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
13	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
14	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
15	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
16	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
17	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
18	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
19	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
20	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT

NO.	DESCRIPTION	UNIT	QTY	LOAD (KW)	LOAD (KVA)	LOAD (A)	LOAD (V)	LOAD (Hz)	LOAD (Type)
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11	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
12	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
13	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
14	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
15	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
16	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
17	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
18	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
19	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
20	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT

NO.	DESCRIPTION	UNIT	QTY	LOAD (KW)	LOAD (KVA)	LOAD (A)	LOAD (V)	LOAD (Hz)	LOAD (Type)
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2	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
3	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
4	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
5	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
6	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
7	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
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12	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
13	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
14	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
15	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
16	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
17	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
18	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
19	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT
20	100W	WATT	1	100	100	0.45	240	50	INCANDESCENT

THIRD FLOOR EMERGENCY LIGHTS LAYOUT PLAN





PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
2/F 288 ADMINISTRATION BLDG. MARCOS AVENUE, MARCOS STATE UNIVERSITY  
CAMPUS, MARCOS CITY, PANGASINAN, PHILIPPINES  
PHONE: (045) 722-1211  
FAX: (045) 722-1212

DESIGNED BY: *[Signature]*

DRAWN BY: *[Signature]*

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

MASQUIT, PANGASINAN, LOCOS NORTE

LOCATION: 01-11-2023 IN 122-42-123

DATE: 01-11-2023

SCALE: 1:100

PROJECT NO: 0033311

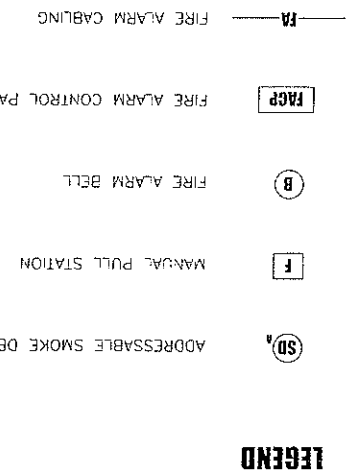
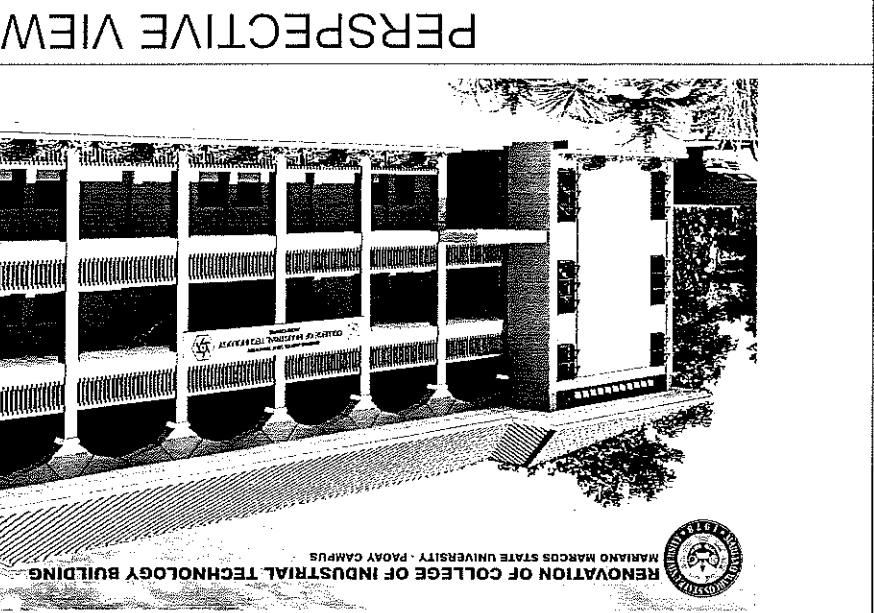
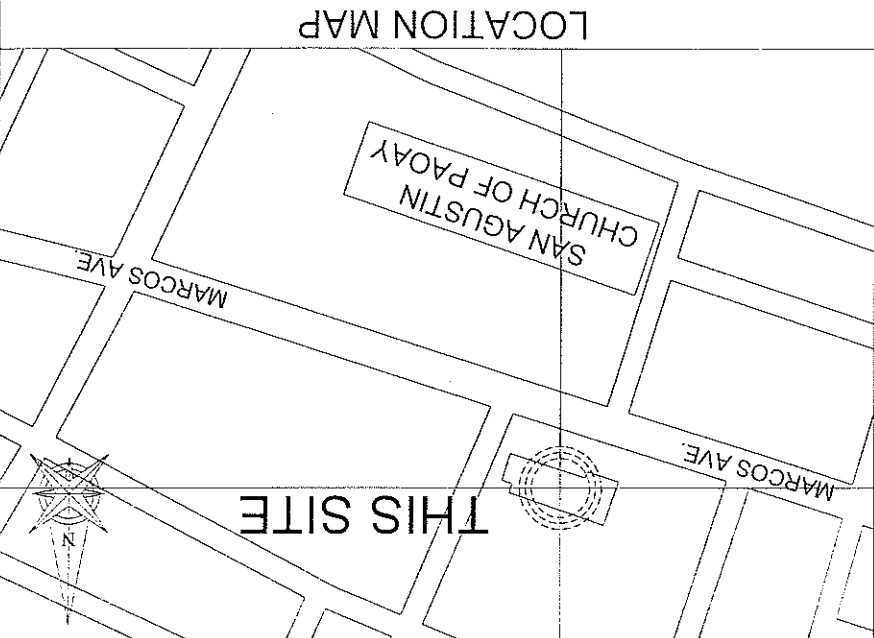
REVISIONS: *[Table with 2 columns: No., Description]*

APPROVED BY: *[Signature]*

CONTRACTOR: *[Signature]*

AS SHOWN

EL-1



- GENERAL NOTES: (For FDAS and BMS)**
- All Electronics works and installation shall be done in strict compliance with the Requirements of the Fire Code of the Philippines, Philippine Electronics Code, RA. 9232 and all other existing Laws, Regulations, Codes and Local Ordinances.
  - All Electronics works shall be done in a neat and workmanlike manner.
  - All Electronics work shall be under the direct supervision of a duly Licensed Professional Electronics Engineer and/or Electronics Engineer.
  - House Cabling Installations shall be done in accordance with the following recommendations: ANSITVA/IEA 569 - Commercial Building Standards for Telecommunications Pathways and Spaces; ANSITVA/IEA-607 - Commercial Building Grounding and Bonding Requirements for Telecommunications.
  - All materials to be used shall be new and approved type for location.
  - 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.
  - 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 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 advance 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.
  - Before commencing work, the Contractor shall file all required permits, test reports/results, certifications for TCO and CO and pay all required fees.
  - Upon completion of all Electronics work, the Contractor shall calibrate, test and adjust all circuits, devices and other components/systems installed in the system. Any of these circuits, devices and other components/systems 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.
  - All notations of "SCALE" are intended as approximations. The contractor shall be responsible to ascertain as the exact dimensions in the actual field.
  - Unless otherwise noted, electronics equipment and all other passive and active components of the system as reflected on the drawings shall be considered visible as their approximate locations. The contractor shall install these items as per instructions and approval of the authorized representative of the Owner.
  - 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 wires, pipes, chases 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.
  - 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 raceways as delineated on the contract, deviation must be approved by the designer prior to installation of any conduit and boxes that are installed as part of this project and exposed 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.
  - Electrical outlet or dedicated power source or electronic equipment and active components shall be provided including inside the terminal and distribution cabinets.
  - All openings/cracks between floors, through rated fire and smoke walls created by the contractor or conduit pass through shall be sealed with fire stopping materials and to be installed acceptably by local Fire and Building Official. Any other openings/cracks created by the contractor that is left unused should also be sealed at the end of installation.
  - 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.
  - No low voltage wiring shall be permitted in the same raceway as power wiring.
  - All equipment shall have copper current carrying parts including ground bus and terminals.
  - Remove all debris resulting from removal and/or installation of electronics and electrical work from the premises.
  - Unless otherwise noted, "INSTALL" means to be PROVIDED, INSTALLED, CALIBRATED and COMMISSIONED BY THE CONTRACTOR.
  - 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.



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DESIGNED BY:  
BIA/ADRYAN

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

APPROVED BY:  
CESARIO A. PACHECO  
REGISTERED ARCHITECT  
RECOMMENDING APPROVAL:  
PAUL M. DUTRA  
REGISTERED ARCHITECT  
MARCH 07, 2014  
MARCH 07, 2014

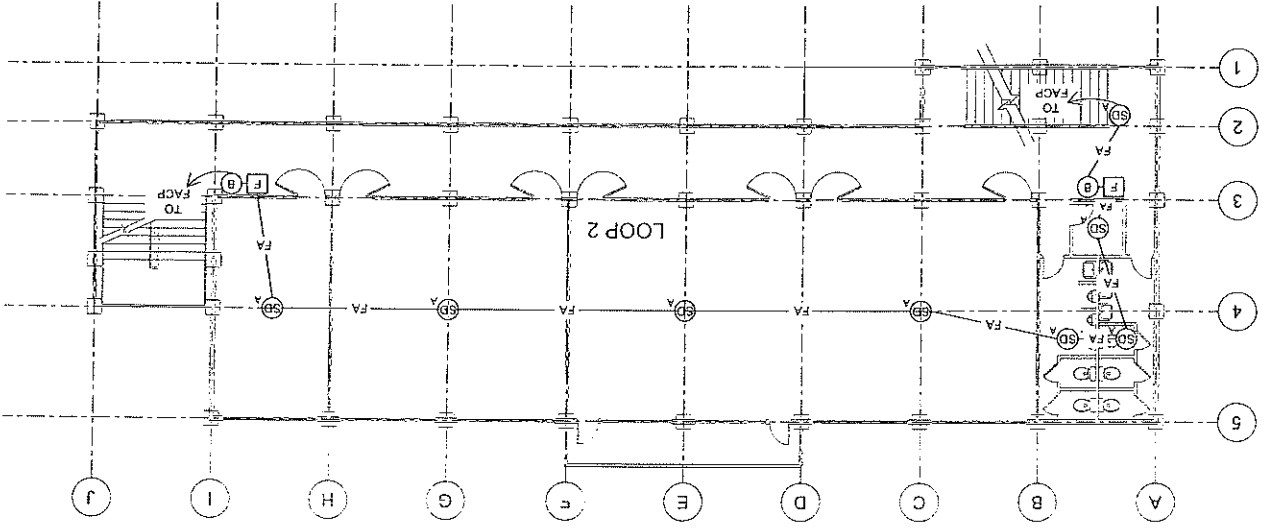
APPROVED BY:  
SHELEY C. AGUIPIS

AS SHOWN

EL-2

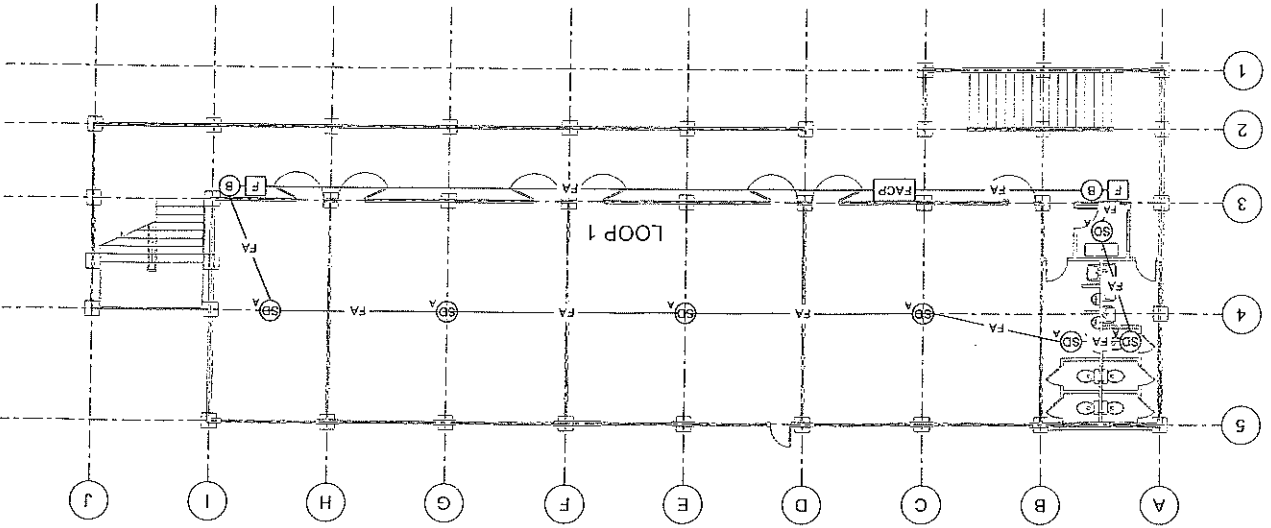
### SECOND FLOOR FIRE DETECTION AND ALARM SYSTEM

SCALE



### GROUND FLOOR FIRE DETECTION AND ALARM SYSTEM

SCALE





PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
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 (092) 782-1181

DRAWN BY: *Blay Davang*

DESIGNED BY: *Wilson R. Delgado*  
 PROJECT TITLE: **PROVISION OF FDAS AND EMERGENCY LIGHT AT CIT-PAOAY**

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

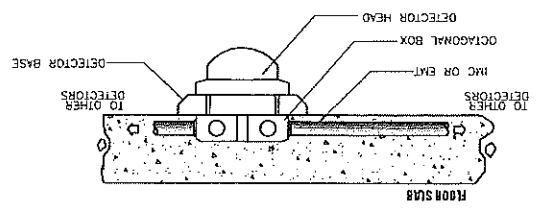
CONTOUR: *Cesarby Rags*

APPROVED BY: *Shirley A. Agrupis*

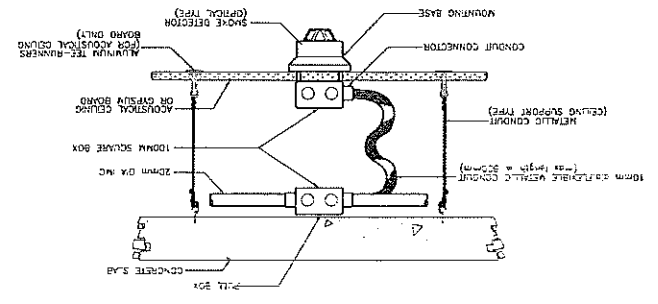
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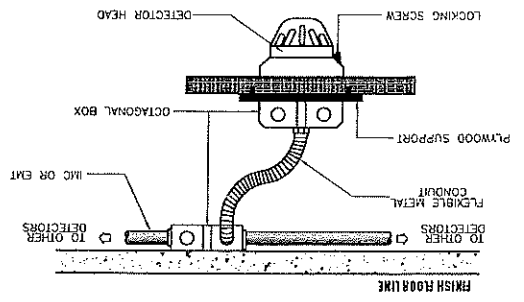
**SURFACE MOUNTED DETECTOR DETAIL**



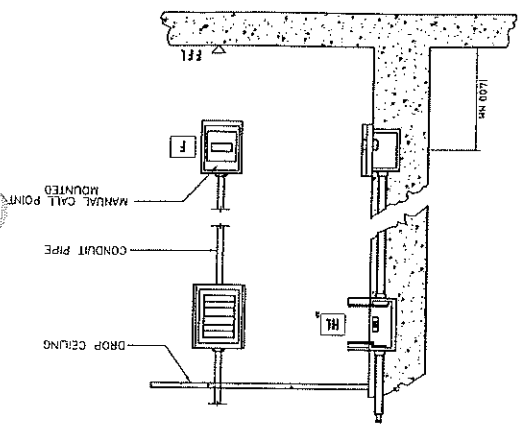
**SMOKE DETECTOR MOUNTING DETAILS**



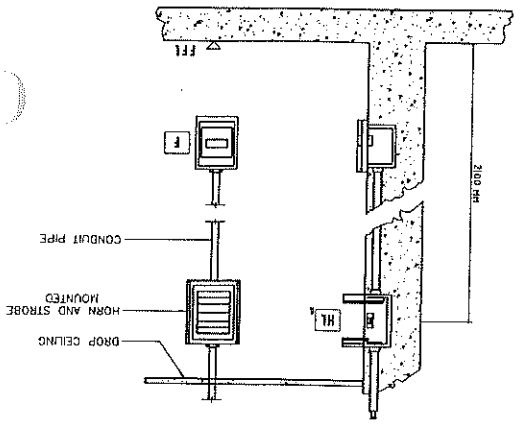
**DETECTOR DETAIL ON DROP CEILING WITH CONDUIT EXPOSED**



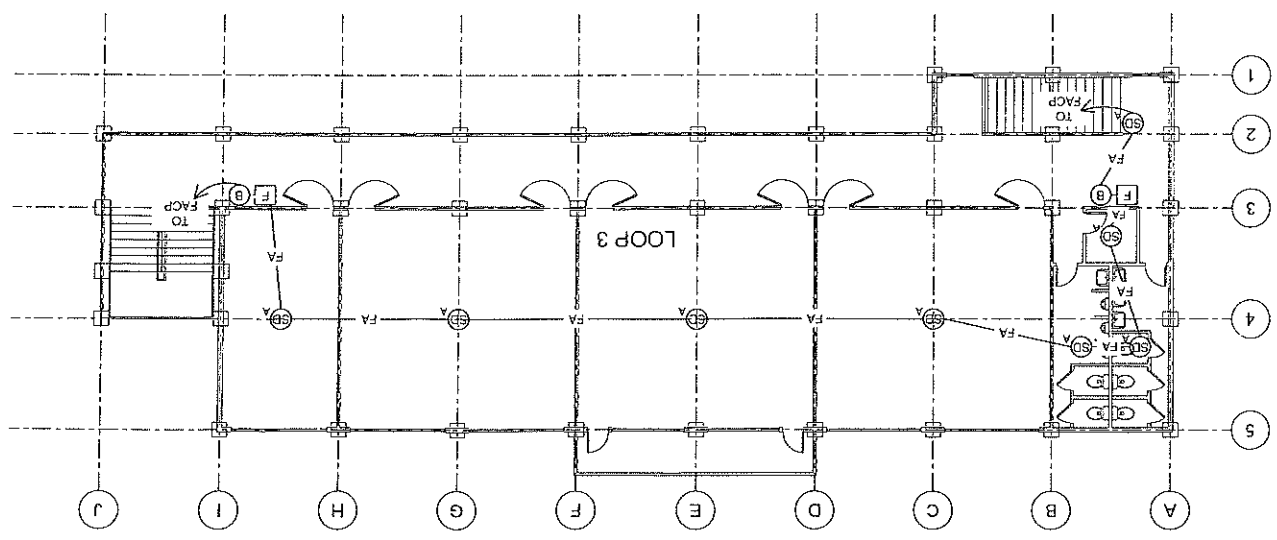
**MOUNTED DETAIL OF MANUAL DETECTION**



**MOUNTED DETAIL OF HORN STROBE**



**GROUND FLOOR FIRE DETECTION AND ALARM SYSTEM**





PHYSICAL PLANNING AND DEVELOPMENT OFFICE  
STATE UNIVERSITY OF MARIKINA CITY  
MARIKINA, CAVITE

DESIGNED BY: BLAY A. GAYANG

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

APPROVED BY: [Signature]  
RECOMMENDING APPROVAL: [Signature]

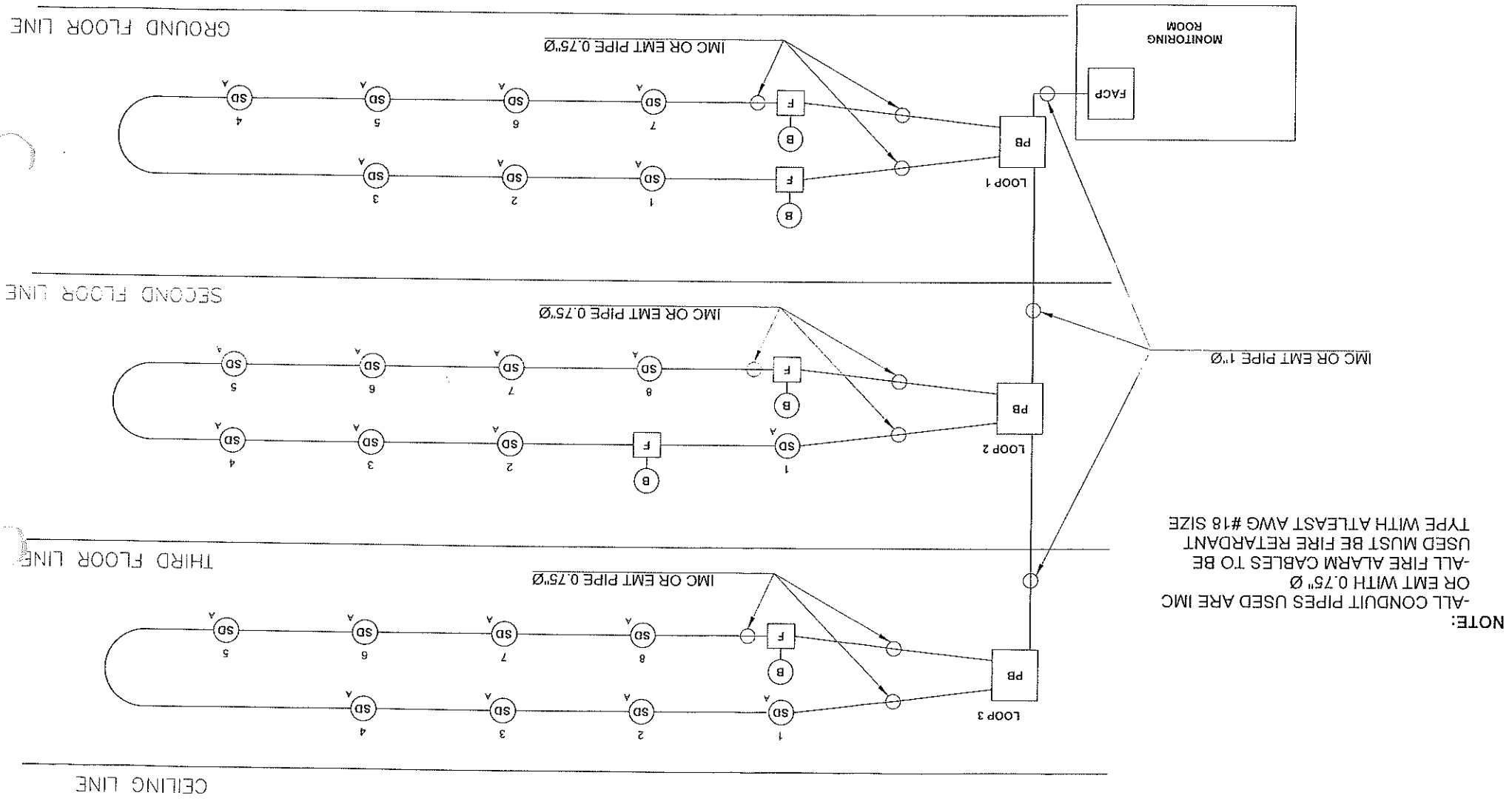
CONFORME: [Signature]

APPROVED BY: [Signature]

AS SHOWN

EL-4

# FDAS RISER SYSTEM DIAGRAM



**NOTE:**  
 -ALL CONDUIT PIPES USED ARE IMC  
 OR EMT WITH 0.75" Ø  
 -ALL FIRE ALARM CABLES TO BE  
 USED MUST BE FIRE RETARDANT  
 TYPE WITH ATLEAST AWG #18 SIZE