



**BIDS AND AWARDS COMMITTEE II**  
**University of the Philippines Manila**  
Padre Faura St., cor. Ma. Orosa St.  
Ermita, Manila

**Invitation to Bid**  
**(RE-BID)**

**Project Title: INSTALLATION OF FIRE DETECTION AND ALARM SYSTEM AT CPH, College of Public Health Buildings Lara Hall, Annex 1 & 2 University of the Philippines Manila**

1. The University of the Philippines Manila, through the fund UGTFI 4/25/2017 intends to apply the sum of **Two Million Seven Hundred Eighteen Thousand Four Hundred Forty Six Pesos and Sixty Centavos (Php2,718,446.60)** being the **Approved Budget for the Contract (ABC)** to payments under the contract for **Installation of Fire Detection and Alarm System at CPH, College of Public Health Buildings Lara Hall, Annex 1 & 2, University of the Philippines**. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The University of the Philippines Manila now invites bids for provision of all materials, equipment, tools, apparatus, appliances, accessories, transportation, labor and supervision for the complete construction of the subject project, as shown on the drawings, and called for in these specifications, ready for use. Completion of the Works is required within **One Hundred Twenty (120) Calendar Days**. Bidders should have completed, at least one (1) contract that is similar to the contract to be bid, and whose value adjusted to current price using the NSO consumer price indices must be at least fifty percent (50%) of the ABC to be bid. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II, Instructions to Bidders.
3. Bidding will be conducted through open competitive bidding procedures using non-discretionary pass/fail criterion as specified in the Implementing Rules and Regulations (IRR) of Republic Act 9184 (RA 9184), otherwise known as the "Government Procurement Reform Act".  
  
Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least seventy five percent (75%) interest or outstanding capital stock belonging to citizens of the Philippines.
4. Interested bidders may obtain further information from University of the Philippines Manila and inspect the Bidding Documents at the address given below during office hours from 8:00 AM to 5:00 PM.
5. A complete set of Bidding Documents may be purchased by interested Bidders starting **07 July 2017** from the **BAC II Secretariat Office at 8/F PGH Compound, Taft Avenue Manila** and upon payment of a non-refundable fee for the Bidding Documents in the amount of **Five Thousand Pesos only (P5,000.00)**
6. The University of the Philippines Manila - Bids and Awards Committee II through the Campus Planning Development and Maintenance Office (CPDMO) shall conduct a site inspection on **18 July 2017, 10:00 AM**. Meeting place at the Campus Planning Development and Maintenance Office (CPDMO). The University of the Philippines Manila - Bids and Awards Committee II will hold a Pre-Bid Conference on **18 July 2017, 1:30 PM**, at the **Social Hall 8<sup>th</sup> Floor, PGH Taft Avenue Manila**, which shall be open to all interested parties.

7. Bids must be delivered to the address below on or before **11:30 AM, 01 August 2017**. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 18.

**Internal Audit Office, UP Manila  
8/F, Philippine General Hospital  
Taft Avenue, Manila**

Bid opening shall be on **01 August 2017, 1:30 PM at the address below**. Bids will be opened in the presence of the bidders' representatives who choose to attend at the address below. Late bids shall not be accepted.

**8/F, Social Hall, Philippine General Hospital  
Taft Avenue, Manila**

8. The University of the Philippines Manila assumes no responsibility whatsoever to compensate or indemnify bidders for any expenses incurred in the preparation of their bids.
9. The University of the Philippines Manila reserves the right to accept or reject any bid, to annul the bidding process, and to reject all bids at any time prior to contract award, without thereby incurring any liability to the affected bidder or bidders.
10. For further information, please refer to:

ELENA M. VENTURINA  
BAC II Secretary  
UP Manila Bids and Awards Committee Office  
Padre Faura St. cor. Ma. Orosa St.  
Ermita, Manila  
Tel. No: 567-23-62

*Approved:*

**(SGD.)ROMEO R. QUIZON, MSc Eng'g**  
BAC 2, Chair

**NOTED:**

**(SGD.)ARLENE A. SAMANIEGO, MD**  
Vice Chancellor for Administration

**Posting Date: PhilGEPS, UPM Website, BAC 2 Bulletin Board  
on 07 July 2017**





**CAMPUS PLANNING, DEVELOPMENT & MAINTENANCE OFFICE**  
**UNIVERSITY OF THE PHILIPPINES MANILA**  
*The Health Sciences Center*  
 P. Faura Street, Ermita, Manila Tel. No. 525-2233 Telefax No. 526-8420



REFERENCE NO. : **WD197NPG01192017**

PROJECT TITLE : **PROPOSED INSTALLATION OF FIRE DETECTION AND ALARM SYSTEM AT CPH**  
 College of Public Health Buildings Lara Hall, Annex 1 & 2  
 University of the Philippines Manila

SUBJECT : **SCOPE OF WORKS AND SPECIFICATIONS**

#### **Section 01000 General Requirements**

1. The Contractor shall furnish all materials, equipment, tools, apparatus, appliances, accessories, transportation, labor and supervision required for the complete construction of the subject project, as shown on the drawings and called for in these specifications, ready for use.
2. All Contractors submitting proposal for this project shall first examine the site. All proposals shall take into consideration all such conditions that may affect the work under this contract. The specifications and plans shall form part as one. Anything mentioned on plans and not mentioned on the scope of work and specifications and vice versa shall be properly consulted to the CPDMO Project Architect/Engineer for clarification. Any work or materials not in accordance with the drawings or specifications shall be replaced with new at the Contractor's expense.
3. The Contractor shall coordinate his work with all parties to ensure proper phasing or schedule of works. The Contractor shall engage under him, a registered Engineer or Architect to supervise his work. He shall remain at all times in the construction site.
4. A logbook shall be available at the site. It shall contain the daily activities in the site, including weather condition, delivery, manpower and other matter pertaining to the condition of the project. It will also serve as data for Contractor and the Project Inspector.
5. Identification Card of construction workers and engineer/representative shall be supplied by CPDMO with corresponding fees; it should be worn at all times while inside the building/campus premises. Those without IDs shall not be allowed to enter for security purposes.
6. No alteration or addition that will result in an additive or deductive cost change from the contract shall be allowed without the approval of the Chancellor/ Vice Chancellor for Administration.
7. Complete specifications with product sample shall be submitted by the contractor to CPDMO for evaluation. Inspection of the Project Architect/Engineer in-charge of CPDMO and End-users shall be required prior to installation of any item/material on the work.
8. Regular coordination meeting shall be conducted with CPDMO, Contractor and End-user for proper project monitoring.

**INSTALLATION OF FIRE DETECTION & ALARM SYSTEM AT CPH**

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9. Existing condition of the work site shall be documented by the contractor and photos shall be taken before commencement of work to ensure such status. Any damage on the areas due to the contractor's on going work shall be refurbished at his expense.
10. The Contractor shall provide a complete copy of "As-built plans" of the project/unit concerned layout in a 20" x 30" original sheets together with e-file. It should be properly drawn indicating all the specifications, layouts and necessary data.
11. After completion of all works, the Contractor shall promptly remove from the premises all rubbish, trash, debris, and all superfluous building materials and restore all areas that were damaged as affected by the works and leave the site clean to the satisfaction of the Project Inspector or his representative and End-user.

#### **Section 01510 Temporary Facilities**

- Provide Temporary enclosures/canvass on all areas for building protection. Such coverings shall be adequate enough to cover all the building facilities throughout the span of project.
- Charges for restoration or replacement of any damage facility, equipment, material and the like shall be made on the contractor due to his negligence in providing suitable temporary covering.

#### **Division 2 – Site construction**

##### **Section 02200 Site Preparation**

###### *Mobilization/Demobilization*

- This work includes mobilization process, provision for warning signs, including barricades, temporary facilities, temporary fences, warning lights and similar safeguards shall be provided by the Contractor as they required for protection of his manpower and others during the working life of his project.
- Demobilization procedure shall include clearing of the affected areas from all rubbish, trash, debris, and all superfluous building materials and restore all areas that were damaged as affected by the works and leave the site clean to the satisfaction of the Project Inspector or his representative and End-user.

##### **Section 02230 Site Clearing**

- Clear the area from all obstructions or as affected by the works, except those structures indicated on the drawings or designated by the Project/Engineer and End-users to be left standing. It shall be properly protected from incidental damage due to work by the section of suitable barriers upon approval of the project Architect/Engineer and End-users.
- The Contractor shall be responsible for the accuracy of his work and any necessary chiseling, drilling, coring, cutting and patching or other works required due to plugged or misplaced conduit shall be done at the expense of the Contractor including the restoration on the damaged part of the building finish.

##### **Section 02290 Site Monitoring**

- Site Monitoring shall be a must to the contractor for the effective implementation of the project, any discrepancies on plans and actual site conditions shall be

INSTALLATION OF FIRE DETECTION & ALARM SYSTEM AT CPH

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properly coordinated with the project Architect/Engineer concerned for verification.

- Regular Coordination meeting shall be done between contractor or its representative and the project Architect/Engineer concerned at UP CPDMO.

#### **Section 02500 Utility Services**

##### *Utility Service/Consumption*

- Provision of electric and water meter shall be included in the quotation to be charged to the contractor's overhead. All utility consumption shall be provided with meters to the limit usage of such during working period. Payments of bills shall be made thru the Cashiers Office after renovation period presenting statement of account issued by accounting upon recommendation of the Chief of CPDMO.

#### **Division 16 - Electrical**

##### *Workmanship and Materials*

- All works shall be done in accordance with the requirements of the latest edition of the Philippine Electrical Code and National Safety Code. Nothing contained in these specifications or shown on the plan shall conflict with the requirements of these Codes, any discrepancies should be consulted to the Project Inspector / Electrical Engineer.
- All materials and equipment to be used and installed hereunder shall be of the approved type bearing the stamp or approval of the proper authorities concerned. Locally made or constructed materials shall first be approved before installation.
- All works shall be done in workmanlike manner and should present a neat and mechanical appearance when completed.

##### *Plans*

- The accompanying drawings shall indicate the general arrangement of the equipment, detectors (SD/HD) and other works. When it is necessary to deviate from the arrangement indicated on plans in order to meet the structural conditions, such deviation shall be made at the expense of the Contractor and upon approval from the Project Inspector / Electrical Engineer.
- The exact location of all detectors (SD/HD) and manual call point shall be determined by the Project Inspector/Electrical Engineer and the same shall be located accordingly.

#### **Section 16050 Basic Electrical Materials and Methods**

##### *Conduit System*

- EMT and PVC conduit pipes is primarily required for this work. Conduit runs shall be well supported especially on ceiling and slab. All conduits placed on walls and partition shall be embedded, exposed layout will not be allowed. Conduit ends shall be provided with adapter, locknut and bushing. Conduit shall enter knockouts squarely. Locknuts and bushing shall be used at termination of conduits in pull or junction boxes. Locknuts shall be screwed tight. Bends and offsets shall be avoided if possible, but when necessary it shall be made with an approved Field bend or pipe / conduit bending machine. The use of pipe tee or vice bending conduits will not be permitted.

INSTALLATION OF FIRE DETECTION & ALARM SYSTEM AT CPH

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#### Restrictions

- Supply and installation of all material not shown in the drawing nor mentioned in this specification but necessary for the completion of the construction works shall be included. Coordination with CPDMO and designated Project Inspector should be done for proper installation of all wiring systems.

### Section 16070 Hangers and Supports

#### Hangers and Support

- All electrical pipes and accessories shall be using appropriate hangers and support follow existing features. Exposed layout on walls and partition inside offices shall not be allowed. Chipping works required. Use "UNITRUST"

### Section 16080 Testing

#### Testing of system

- Complete testing of the system involved in operation and provision of all system apparatus for making test and guarantee for a period of one (1) year after acceptance of the project and shall agree to repair and make good at no additional cost to the end user.

### Section 16090 Restoration and Repair

#### Restoration Works

- All the necessary restoration works in all affected areas in the implementation of the project shall be the Contractors liability.

### Section 16120 Conductors and Cables

- Wires and cable for power shall be type THHN/THW 600 volts insulation approved type building wire. No. 3.5 mm THHN shall be used from the panel board to the last outlet, and #18 AWG TF-wires shall be for the fire alarm systems.

#### Scope of Works

- Complete supply and installation of wires and cable shall be included in this scope of works.

### Section 16130 Raceway and Boxes

#### Boxes and Pull boxes

- All conduit boxes and fittings shall be standard manufactured by reputable electrical manufacturers. All conduit boxes not over 100 cubic inches in size, if constructed of sheet metal, the metal shall not be less than No.14 US gauge and shall be set flush with the surface of the structure in which they are installed and where conduit runs are concealed. Care shall be exercised to line up all outlet boxes, 4" octagon type and 1-1/2" depth. When more than two conduits enter the outlet box, the 2-1/8" depth type box shall be removed. All outlet boxes indicated to be used for lighting fixtures shall be provided with standard flat metal covers.



- Horizontal or vertical gang boxes shall be installed as indicated or when required. All conduit boxes, junction boxes, and blank outlet boxes shall be fitted with standard flat metal conduit box covers.

#### **Section 16410 Enclosed switches and Circuit Breakers**

- ECB20AT/50AF 2P 250V in NEMA 1 enclosure and grounding terminal
- The enclosure shall be galvanized steel of code thickness, powdered coated enamel finish and shall be installed plumb and symmetrical with the surrounding devices.
- 2" x 4", 4" x 4" EMT junction boxes
- 130mmx130mmx150mm pull box with cover enamel coated finished with ½ and ¾ knock outs.
- Electrical tapes, rubber tapes, pull wires, mica tubes and assorted screws

#### **Section 16720 Fire Detection & Alarm System**

- Supply and Installation of brand new Intelligent Fire Alarm Control Panel two loop with capacity of 477 devices surface mount on structure 30 zones, integrated PSU with battery charger, excluding battery (certified by LPCB) optional accessories Back up Battery Matrix model N7, 12Vdc 7 Ah Back up battery.
- Supply and installation of brand new Intelligent Photo Electronic Smoke Detector Intelligent Optical Detector with remote indicator output (Certified by LPCB) without base
- Supply and installation of brand new Digital Manual Call point flush mount resettable (Non-breaking glass), Supplied with surface mount back box and special reset key.
- Supply and installation of brand new Addressable single input/output module Single input/output Module 24Vdc required Certified by LPCB
- Supply and installation of brand new Addressable Combined Sounder and strobe 24VDC required.
- Supply and installation of brand new Common Detector Base for Addressable Detector and for conventional detector using EOLR
- Passive LCD Repeater, must be compatible with the other devices.
- Supply and installation of brand new #18AWG TF wire, 3.5mm<sup>2</sup>THHN wire, ½ Ø EMT conduit pipes, flexible metallic conduit and consumables
- Programming, Testing and commissioning
- Restoration works of affected areas as result of the project implementation.

#### **NOTE**

The foregoing list of item of works does not in any way limit the responsibility of the Contractor to perform all other works necessary for the completion of the project, Installation of Fire Detection & Alarm System at CPH.

#### **GUARANTEE**

The Contractor shall guarantee all works under this contract to be free from any technical defects and shall replace and repair to the satisfaction of the Project Architect / Engineer and/or to the Chief of CPDMO on any part or portion of the

INSTALLATION OF FIRE DETECTION & ALARM SYSTEM AT CPH

SCOPE OF WORKS AND SPECIFICATIONS


work which may fail within a period of one (1) year after the final acceptance of the system provided such failure is due to defects in the material or workmanship.

#### COMPLETION PERIOD

The Contractor is given **One Hundred Twenty (120) calendar days** to execute the installation works and all system requirements. The Contractor shall coordinate to CPDMO Inspector and End-users for the schedule of systems testing and other related job.

Prepared by:

  
**JEFFERSON B. LIM**  
Engineer I, Civil

  
**RENATO B. REMORQUE**  
Engineer I, Electrical

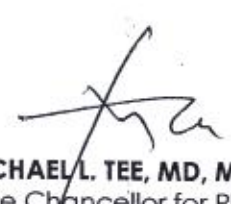
  
**AR. MARK ANTHONY C. QUNITIO**  
Draftsman III

Certified Correct:


  
**AR. ALLEN R. BUENAVENTURA, MCM**  
Chief

Recommending Approval:

  
**ROMEO R. QUIZON, MSc Eng'g**  
Dean, College of Arts & Sciences  
m 82/27/17

  
**MICHAEL L. TEE, MD, MHPed, MBA.**  
Vice Chancellor for Planning and Development

Approved:

  
**ARLENE A. SAMANIEGO, MD**  
Vice Chancellor for Administration  
05 MAY 2017





CAMPUS PLANNING, DEVELOPMENT &amp; MAINTENANCE OFFICE

UNIVERSITY OF THE PHILIPPINES MANILA

*The Health Sciences Center*

P. Faura Street, Ermita, Manila Tel. No. 525-2233 Telefax No. 526-8420

CPDMO



REF. NO. :

PROJECT TITLE :

**PROPOSED INSTALLATION OF FIRE DETECTION AND ALARM SYSTEM AT CPH**

College of Public Health Buildings Lara Hall, Annex 1 &amp; 2

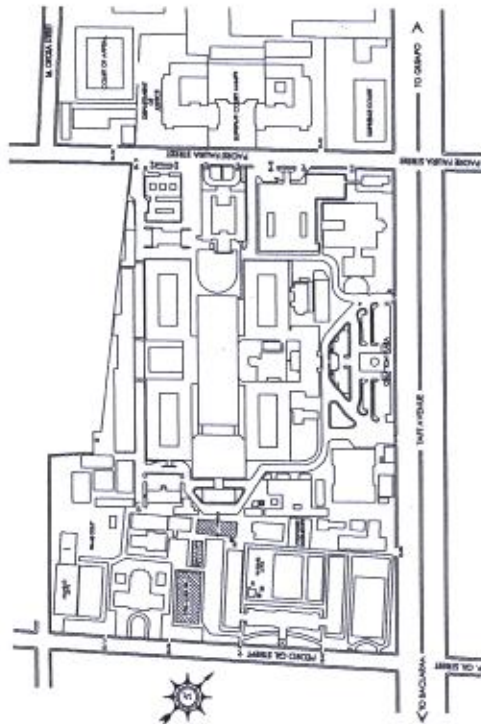
University of the Philippines Manila

SUBJECT :

ITEM	QTY.	UNIT(S)	DESCRIPTION(S)	UNIT COST	TOTAL COST
<b>1.00 GEN. REQ'Ts. / SITEWORKS</b>					
1.01 Mobilization/Demobilization					
1.00	lot	Mobilization & Demobilization	PhP	PhP	
		<b>Sub-Direct Cost</b>		<b>PhP</b>	
1.02 Temporary Facilities and Utilities					
1.00	lot	Utility Service/Consumption	PhP	PhP	
10.00	set(s)	Personal Protective Equipment (Hard hats, Dust mask, safety gloves, eye protections & other protective equipment)			
1.00	lot	Scaffolding, boards ups, canvass/temporary covering and safety signages			
		<b>Sub-Direct Cost</b>		<b>PhP</b>	
		<b>Total for General Requirements / Siteworks</b>		<b>PhP</b>	
<b>2.00 CIVIL &amp; FINISHING WORKS</b>					
1.00	lot	Chipping works	PhP	PhP	
1.00	lot	Restoration works of affected area			
		<b>Sub-Direct Cost</b>		<b>PhP</b>	
		<b>Total for Civil &amp; Finishing Works</b>		<b>PhP</b>	
<b>3.00 AUXILIARY WORKS</b>					
Fire Alarm Detection & Alarm System					
Equipment					
1.00	ea	Intelligent Fire Alarm Control Panel, two loop with capacity of 477 devices, flush mount new structure 30 Zones, Integrated PSU with Battery charger, Excluding batteries (Certificated by LPCB)	PhP	PhP	
198.00	ea	Digital Optical Detector, with Remote Indicator Output without base			
198.00	ea	Common Detector Base for Digital Detectors and for Innovation Detectors using EOLR			
19.00	ea	Flush mount Resettable (Non-Breaking Glass), Supplied with surface mount back box and Special Reset Key (Certificated by LPCB)			
19.00	ea	Addressable Combined Sounder and Strobe, 24VDC required			
4.00	ea	Back up battery, 12 VDC 7AH Back up battery (Matrix N7)			
2.00	ea	Passive LCD Repeater. Must be Compatible with the other devices.			
1.00	ea	Intelligent PSU, 5A 24VDC Intelligent PSU, Display shows DC output voltage and load current fully (PSU24-5) monitored with selftest facilities excluding batteries			
1.00	ea	AVR, SVC-1000VA AVR 1KVA			
		<b>Sub-Direct Cost</b>		<b>PhP</b>	

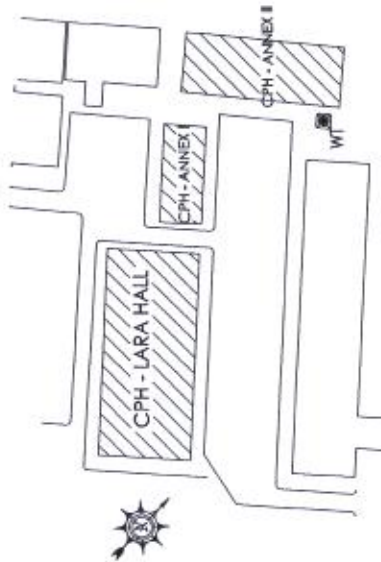
75.00	roll(s)	TF wire #18AWG	PhP	PhP
6.00	box	3.5mm² THHN		
782.00	length(s)	EMT conduit pipes 1/2"		
780.00	unit	Flexible metallic conduit 1/2'		
23.00		PVC Pipe 1/2" Ø		
945.00	unit	EMT coupling 1/2"		
945.00	unit	EMT connector 1/2"		
430.00	unit	Flexible metallic hose adapter 1/2"		
1,477.00	unit	EMT bushing 1/2"		
1,538.00	unit	EMT locknut 1/2"		
1,538.00	unit	C-Clamp 1/2		
17.00	unit	Pull box   130x130x150)mm		
400.00	unit	EMT junction box with cover #18		
1.00	lot	Consumables		
1.00	unit	ECB 20AT 2P bolt on type in NEMA 1 enclosure		
Sub-Direct Cost			PhP	
1.00	lot	Testing and Commisioning		
1.00	lot	Programming		
Sub-Direct Cost			PhP	
Material Cost			PhP	
Labor Cost				
Sub-Direct Cost			PhP	
Total for Auxilliary Works			PhP	
SUMMARY				
1.00	GEN. REQ'Ts. / SITEWORKS		PhP	
2.00	CIVIL & FINISHING WORKS			
3.00	AUXILLIARY WORKS			
Total Materials and Labor Cost			PhP	
Overhead Cost			@	15%
Tax			@	12%
Sub-total Cost			PhP	
TOTAL PROJECT COST			PhP	





# 1 LOCATION PLAN

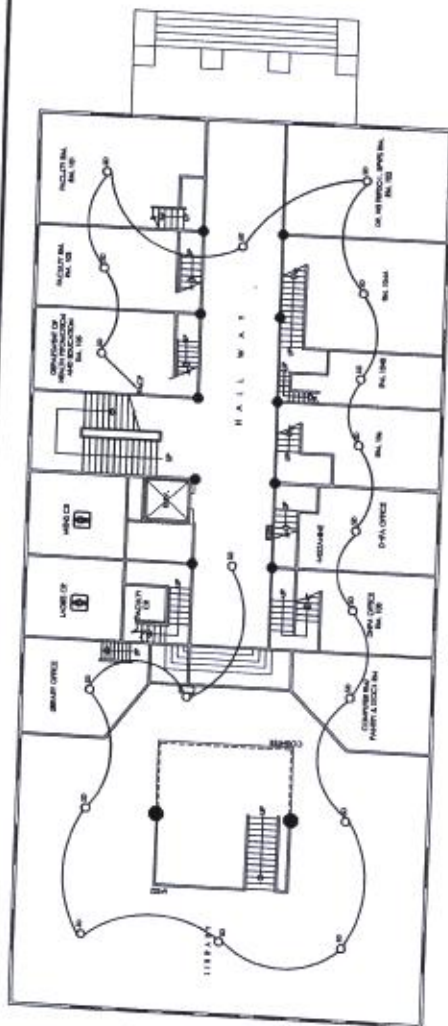
A-1 NTS



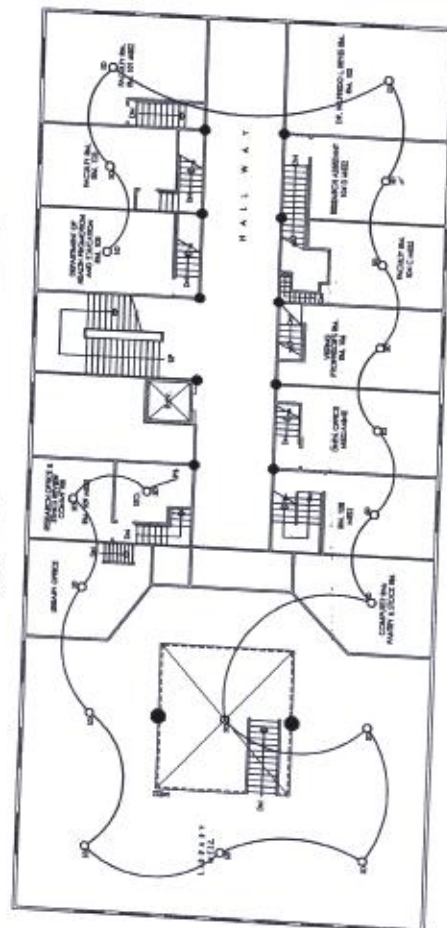
# 2 SITE DEVELOPMENT PLAN

A-1 NTS

<p><b>CPDMO</b> CAMPUS PLANNING &amp; DEVELOPMENT MAINTENANCE OFFICE U.P. MANILA P. O. Box 2000 Manila, Philippines Tel. No. 336-2000 Fax. No. 336-2001</p>	<p><b>PROJECT TITLE</b> PROPOSED INSTALLATION OF FIRE DETECTION AND ALARM SYSTEM AT CPH CAMPUS OF PUBLIC WORKS BUILDING LARA HALL, LARAS 1 &amp; 2 BANGAL, BANGAL</p>	<p><b>DESIGNED BY</b> AL-ABED T. BURNABENTUA, MCON CHIEF ENGINEER</p> <p><b>REVIEWED BY</b> AL-ABED T. BURNABENTUA, MCON CHIEF ENGINEER</p>	<p><b>APPROVED BY</b> MICHAEL C. TEE, MPE, MUP, MUP VICE CHIEF OF FIRE DETECTION AND ALARM SYSTEM</p>	<p><b>DATE SUBMITTED</b> JANUARY 15, 2017</p> <p><b>DATE COMPLETED</b> FEBRUARY 15, 2017</p> <p><b>REVISIONS</b> BY: [NAME] DATE: [DATE]</p>	<p><b>LOCATION PLAN</b> SITE DEVELOPMENT PLAN (CPH - LARA HALL, CPH ANNEX I, CPH ANNEX II)</p>	<p><b>DATE</b> JANUARY 15, 2017</p> <p><b>BY</b> [NAME]</p> <p><b>DATE</b> JANUARY 15, 2017</p> <p><b>BY</b> [NAME]</p>	<p><b>1 OF 3</b></p>
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CPH MAIN BUILDING - LARA HALL  
1. GROUND FLOOR FDAS LAYOUT

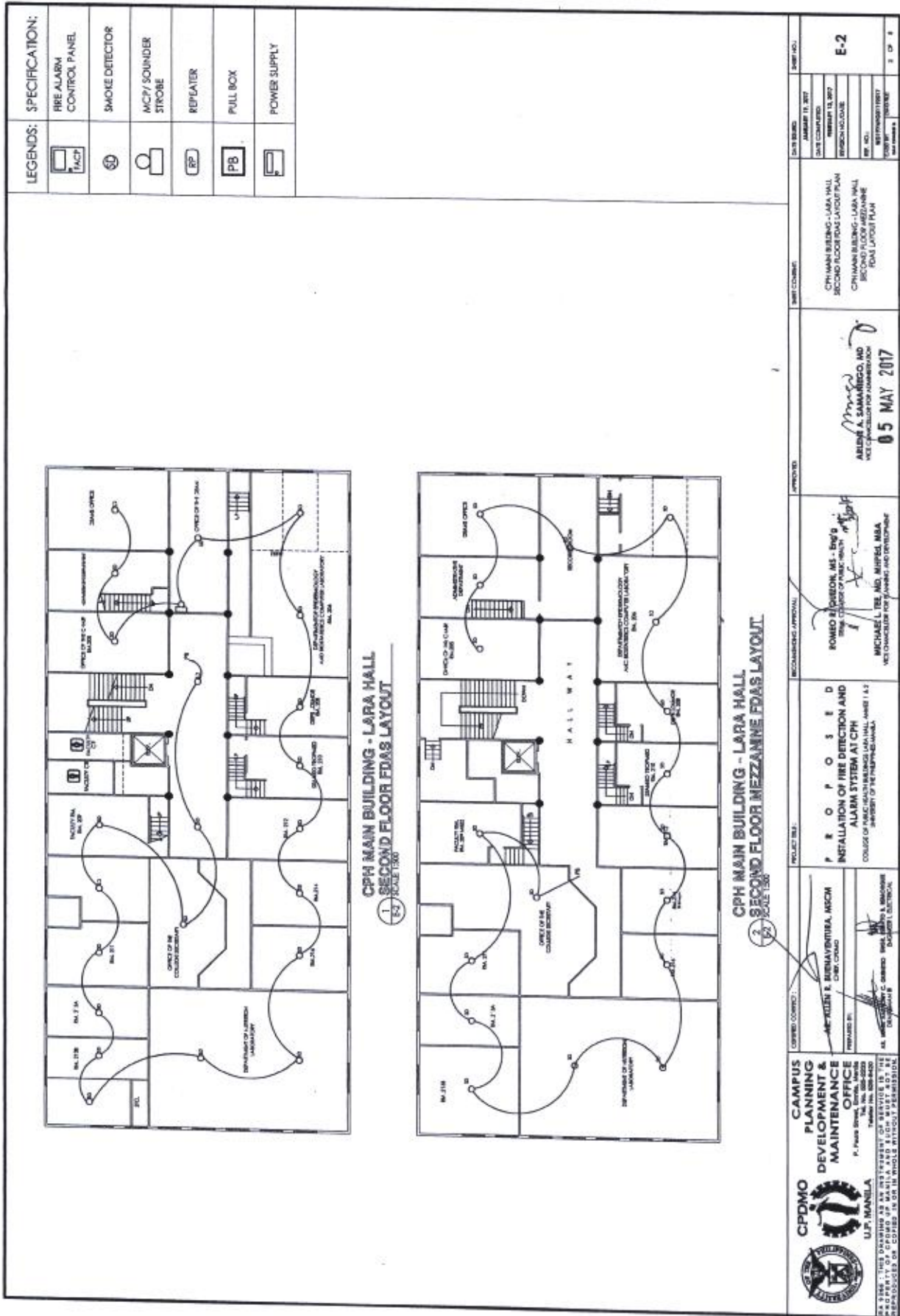


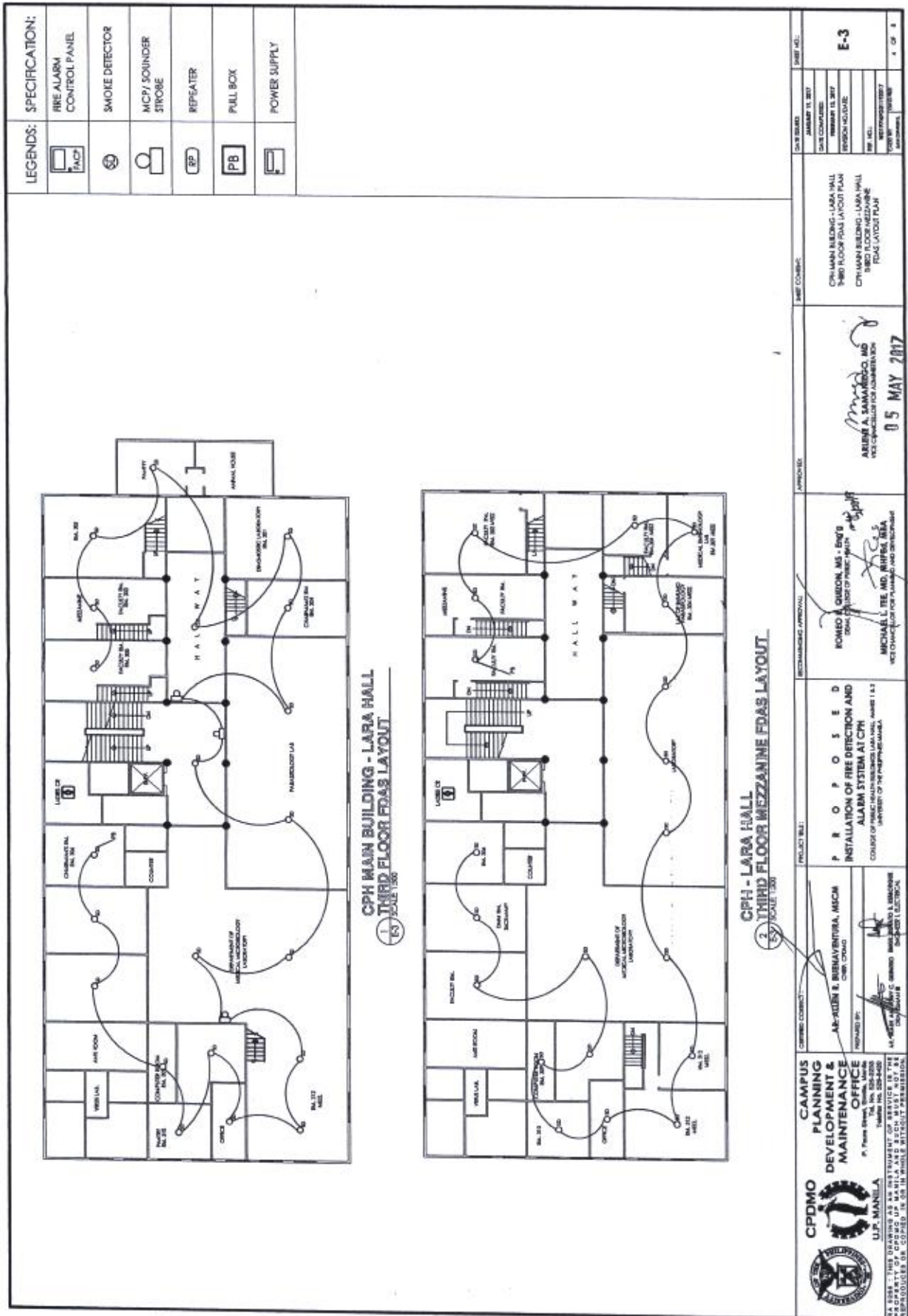
CPH MAIN BUILDING - LARA HALL  
2. GROUND FLOOR MEZZANINE FDAS LAYOUT

LEGENDS:	SPECIFICATION
	FIRE ALARM CONTROL PANEL
	SMOKE DETECTOR
	MCP/SOUNDER STROBE
	REPEATER
	PULL BOX
	POWER SUPPLY

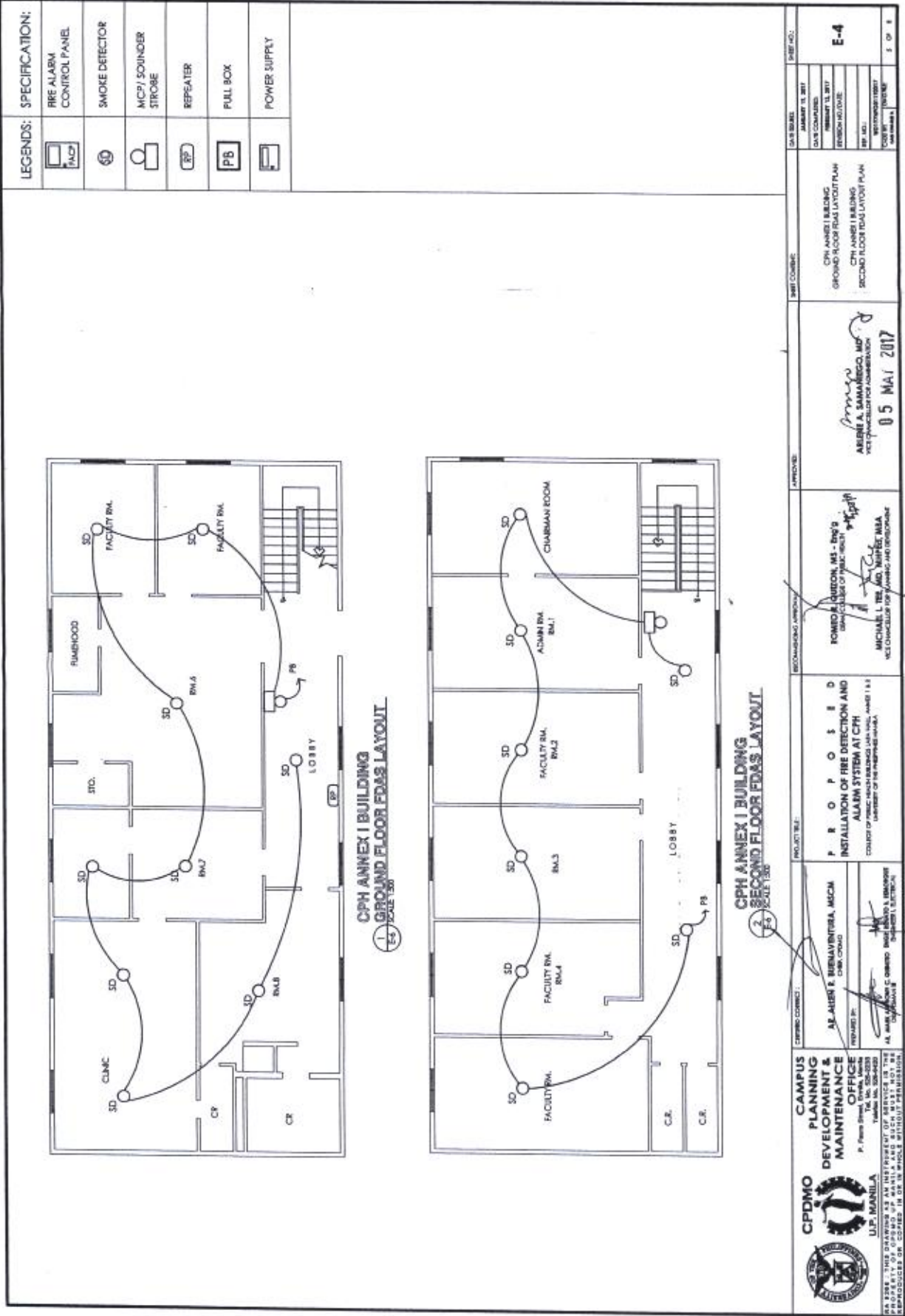
 <b>CPDMO</b> CAMPUS PLANNING & DEVELOPMENT & MAINTENANCE OFFICE P. Pineda Street, Santa Monica, Manila Telephone No. 8284-8088 FAX No. 8284-8088 E-MAIL: CPDMO@UPM.EDU.PH WEBSITE: CPDMO@UPM.EDU.PH	CHECKED BY: AL-JASER E. BUENAVENTURA, MSCM CHIEF, CPDMO	PROJECT NO.: <b>P R O P O S E D</b> <b>INSTALLATION OF FIRE DETECTION AND ALARM SYSTEM AT CPH</b> COURTESY OF THE UNIVERSITY OF THE PHILIPPINES - DILIG	RECOMMENDING AGENCY: ROMEL E. QUIZON, MS - Eng. DATA COURTESY OF PUBLIC HEALTH	APPROVED: ARLEN A. SAMANIEGO, MD VICE-CHANCELLOR FOR ADMINISTRATION 05 MAY 2017	SHEET NO.: 05-1 SHEET COUNT: 05-1 DATE SUBMITTED: 05 MAY 2017 DATE COMMENTED: 05 MAY 2017 REVISION NO.: 05-1 REVISION DESCRIPTION: 05 MAY 2017 NO. OF SHEETS: 05-1 NO. OF PAGES: 05-1
	PREPARED BY: DAVID S. CABANA, MS DESIGNER, ELECTRICAL	PROJECT NO.: <b>P R O P O S E D</b> <b>INSTALLATION OF FIRE DETECTION AND ALARM SYSTEM AT CPH</b> COURTESY OF THE UNIVERSITY OF THE PHILIPPINES - DILIG	RECOMMENDING AGENCY: ROMEL E. QUIZON, MS - Eng. DATA COURTESY OF PUBLIC HEALTH	APPROVED: ARLEN A. SAMANIEGO, MD VICE-CHANCELLOR FOR ADMINISTRATION 05 MAY 2017	SHEET NO.: 05-1 SHEET COUNT: 05-1 DATE SUBMITTED: 05 MAY 2017 DATE COMMENTED: 05 MAY 2017 REVISION NO.: 05-1 REVISION DESCRIPTION: 05 MAY 2017 NO. OF SHEETS: 05-1 NO. OF PAGES: 05-1

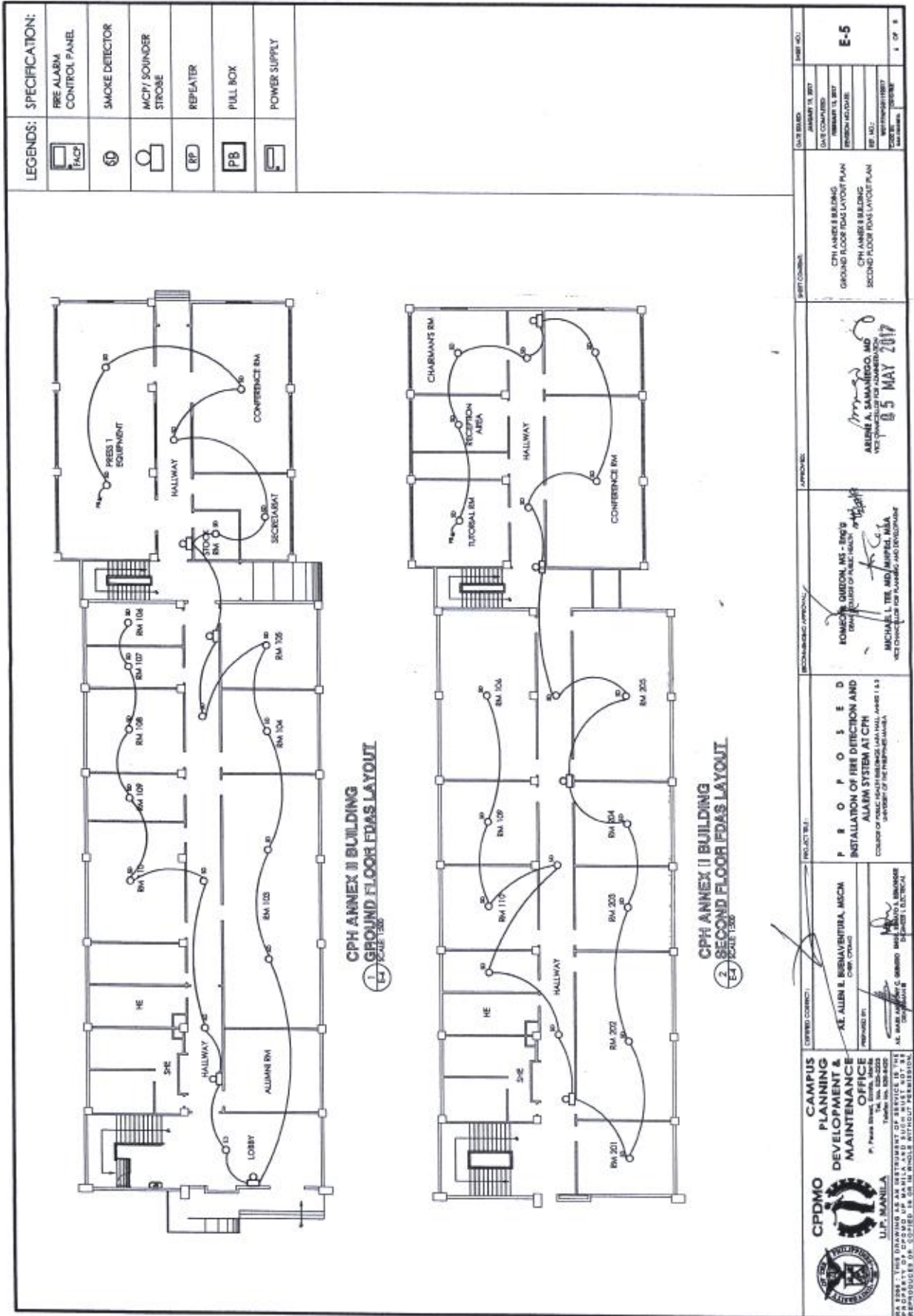












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**1 OF 5**





