



MARIANO MARCOS STATE UNIVERSITY

Bids and Awards Committee

INVITATION TO MAKE AN OFFER: Negotiated Procurement

2022-012-2

THE PROJECT: Refurbishment of SIRMATA Office, Student Center

Project Location: MMSU Student Center, City of Batac, I.N.

Number of Working Days: 30 calendar days

ABC: P481,021.44

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 not later than 5 days 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

August 31, 2022.

NATHANIEL R. ALIBUYOG
BAC CHAIR

Received: _____ Received: _____

Rm105 FEM Hall, MMSU, #16S Quiling Sur, City of Batac, Ilocos Norte
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PROJECT INFORMATION DOCUMENT

Project Title : Refurbishment of SIRMATA Office, Student Center
Project Location : MMSU Student Center, City of Batac, Ilocos Norte

GENERAL INSTRUCTIONS

The project calls for the furnishing of all materials, labor, tools and equipment needed for the refurbishment of SIRMATA Office. The said project shall be done in strict conformity with the designs, plans, drawings and other details, as well as the specifications, this Project Information Document and other related contract documents prepared and approved for this project. It is highly recommended that the contractor conduct site inspection for them to have an idea on the existing condition of the site.

It also calls for the employment of manpower with the appropriate skills and expertise to undertake the specific items of work and to enable the contractor to produce and deliver to the satisfaction of the owner the needed services and output required of this undertaking. The contractor shall provide competent project in charge (architect, civil engineer, electrical engineer and mechanical engineer) 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 and 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. In addition, the contractor shall be required to provide its own water and power supply system needed in the proper execution of the various works for the duration of the contract.

I. COUNTER TOP WORKS - This scope of works includes fabrication and installation of preparation counter with cabinet with materials as indicated in the approved plans of the project. The Contractor shall strictly conform to the plans and specifications of the project. Contractor shall submit samples of each materials included in the specifications for the approval of the end-user.

II. ELECTRICAL WORKS

- a. Works shall be done by a duly accredited electrician (NC II) under the direct supervision of a licensed electrical practitioner, PEE/REE/RME.
- b. The contractor shall provide 1 (one) 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 are furnished. The provision shall be limited to equipment for drilling and cutting only but not including welding machines. Welding works shall be done outside the project site premises or other power supply shall be used by the contractor, whichever is more convenient.
- d. Sample of each fixture, wires, wiring devices, circuit breaker panels shall be submitted for approval by the technical committee or inspection committee of the University prior to their installation. *No installation shall be made without the approval of materials by the technical committee of the University.*

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Project Title : Refurbishment of SIRMATA Office, Student Center
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- e. Pipes for the additional convenience outlets must be embedded and finished in a workmanship manner and the affected part to be painted with the same as the existing.
- f. Airconditioning units must be tapped to the existing circuit breakers provided for indicated in the Electrical Plans.
- g. All wires shall be copper 99%, plastic insulated for 600V type THHN, lead free, stranded, except for the feeder lines, transformer wirings, ecb wirings, THW must be used or approved brand by the technical committee of the University. **ONLY ONE (1) BRAND OF WIRE SHALL BE USED.**
- h. Conduit/cable tray shall be supported for permanent connection following the latest PEC and/or refer the approved plans.
- i. No termination of wires shall be done inside the conduits.
- j. Color coding of wires shall be observed following the latest PEC: Line A (red), Line B (yellow), Line C (blue), and Ground (green).
- k. All switches and convenience outlets shall be the wide series type and shall be rated in 15 amperes respectively. Convenience outlet shall be in 3 wire grounding type.
- l. The mounting heights of wiring devices shall be as follows:
 - Convenience outlets – 0.30 m above finished floor line or as required
 - A/C outlet, outlets for motors – not less than 0.40 m above fin. Floor line or as required
- m. Grounding system - All exposed non-current-carrying metallic parts of electrical equipment, metallic raceway system, grounding conductor and neutral conductor or wiring system shall be grounded. The ground connection shall be made at the main service equipment and shall be made to the driven rods on the exterior of the building.
- n. Existing electrical system shall remain functional and normal operation until the new electrical system is ready to be energized.
- o. All wirings shall be tested for circuit continuity and shall be tested to assure that the wiring system is free of short-circuit, accidental grounding or other defects prior to normal system operation.
- p. Tests shall be performed after all wiring is completed and connected ready for the attachment of the fixtures and equipment and again after fixture and equipment are connected ready for use. Tests shall be made with an instrument capable of measuring accurately the resistance involved and having a voltage rating of 500 volts. Reading shall be taken after the voltage has been applied continuously for one minute. The insulation resistance between the conductors and between each conductor and ground shall be measured.
- q. Tests shall be done for each item of control equipment will function not less than five times. All tests shall be performed in the presence of the university inspection or technical committee. All test results shall be submitted in three copies.

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Project Title : Refurbishment of SIRMATA Office, Student Center
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- r. Energize the system. After the contractor has assured himself that the wiring systems are free of faults, the contractor shall energize the system from their normal power source and confirm that the system is operational as required by the contract documents, prior to final inspection.
- s. In case that a conflict arises in specification and quality of materials, installation procedure and in the plans and drawings as well as in the contract documents before and during the implementation stage, the same should be referred to the end-used, and PPDO for proper resolution of the said conflict.

III. MECHANICAL WORKS

This include the supply and installation of Split Type Air Conditioning Unit and its appurtenances such as drain lines, refrigerant piping and supports.

A. Quality and Features of Air-conditioning Unit

1. The Air-conditioning Unit or ACU shall be a Split Type Vapor Compression Unit
2. The cooling capacity is specified in the Technical Specification Sheet
3. The ACU shall be fast cooling type with energy saving features
4. The ACU shall be equipped with Auto Cleaning and Allergy Filter
5. The ACU shall be low noise level
6. The ACU shall be constructed with a durable material with a 10 years warranty

B. Quality and Features of Air-conditioning Unit

7. Mechanical Works shall be done by a duly licensed air-conditioning specialist, supplier and technicians.
8. Installation of the Split Type ACU shall be in accordance with the mechanical plan provide by MMSU PPDO.
9. The Fan Coil Unit (FCU) or Indoor Unit shall be installed where there is no obstruction of air flow of at least 300mm at both sides.
10. The Air-Cooled Condensing Unit (ACCU) or Outdoor Unit shall be at least 500mm above the ground.
11. The ACCU shall be properly ventilated and installed with a clearance of at least 300mm from the wall.
12. The refrigerant piping shall be copper material, properly installed with 1" thick insulation and a white film vapor barrier.
13. Provide pipe sleeves for all piping penetrating wall. The penetrating wall shall be sealed with fire retardant material after installation of refrigerant piping

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14. Condensate drain line shall be 3/4" Polyvinyl Chloride (PVC) pipe shall be directly routed toward outside the building for proper disposal of condensate and to avoid flooding inside the building.

IV. MODULAR PARTITION AND FURNITURE

This include the supply and installation modular partition and furniture. The Contractor shall strictly conforms to the plans and specifications of the project. Contractor shall submit samples of each materials included in the specifications for the approval of the end-user.

Supplementary Provisions

All other items or scope of works not mentioned in this document but show/or indicated in the plans, drawings and specifications, except where it is specifically mentioned as "to be provided by others" the contractor shall likewise furnish all materials, labor and equipment necessary to complete the work.

In case of conflicts that will arise among the specifications and quality of materials, installation 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 PPDO Project-in-Charge in proper resolution of the said conflicts.

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.

- A. Time is a very important factor in the implementation of this project and as such, all works indicated in the plans, specifications and in this document shall be fully completed within **30 calendar days** from receipt of the Notice to Proceed.
- B. Before final acceptance by the end-user, the Contractor shall post a warranty security in accordance with the following schedule as prescribe in Section 62.2.3.3 of RA 9184

Form of Warranty Security	Amount of Warranty Security (Equal to percentage of the Total Contract Price)
a) Cash or Letter of Credit issued by a Universal or Commercial Bank: Provided, however, that the LC shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	Five percent (5%)
b) Bank guarantee confirmed by a Universal or Commercial Bank.	Ten percent (10%)
c) Surety bond callable upon demand issue by GSIS or a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	Thirty percent (30%)

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to cover warranty against structural defects to cover the following periods as follows in accordance with Section 62.2.3.2

- C. Permanent Structures (15 years)
- D. Semi-Permanent Structures (5 years)
- E. Other Structures (2 years)

C. The Approved Budget for the Project to be bid is **Four Hundred Eighty One Thousand Twenty One and 44/100 Only (Php. 481,021.44)**

Prepared by:

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Civil Engineer

LEMUEL JOSHUA P. BAGAYAS
Registered Electrical Engineer

DENNIS CLYDE G. ACANTILADO
Mechanical Engineer

Checked by:


AIDA V. CABANG
Chief, Physical Planning Section

Noted by:


ROMEO R. DUMLAO
Director PPDO

Republic of the Philippines
 MARIANO MARCOS STATE UNIVERSITY
 PHYSICAL PLANNING AND DEVELOPMENT OFFICE
 City of Batac, 2906, Ilocos Norte

Refurbishment of SIRMATA Office, Student Center
 (MMSU Batac Campus, City of Batac, Ilocos Norte)

BILL OF QUANTITIES		
Item No.	Description	Unit
PART A	COUNTER TOP WORKS	
	20mm Thick Granite Slab	lot
	Granite Adhesive	1.00
	¾" Laminated Plywood	0.96 sq.m.
	1"x2"x10' Good Lumber	1.00 set
	2"x3"x8' Good Lumber	2.00 pcs
	Concealed Hinges	4.00 pcs
	Aluminum Cabinet Door Handle	8.00 pcs
	1" Finishing Nail	4.00 kgs
	1 1/2" Finishing Nail	0.50 kgs
	Wood Glue	1.00 liter
	Clear Wood Preservative with Paint Brush	1.00 liter
PART B	ELECTRICAL WORKS	
	Adapter with Locknut/Straight Connector 20mmØ, PVC	1.00 lot
	Pipe, Thick wall, 20mmØ, PVC, 2.2mm thick	10.00 pcs.
	Conductors, Lead Free, 3.5 mm ² THHN	6.00 pcs.
	Conductors, Lead Free, 2.0 mm ² THHN	28.00 meters
	Utility Box, 2"x4"	14.00 meters
	Duplex Convenience Outlet with Cover Plate, Grounding Type, Wide Series	5.00 pcs.
		5.00 sets
PART C	MECHANICAL	
	Airconditioning Works	1.00 lot
	Split Type Wall Mounted Air Converter – Super Inverter Cooling Capacity = 19,738 Btu/hr / 20,820 kJ/hr or higher, complete with all accessories and mounting (see plan details), including ¾" PVC pipe with pvc elbow for condensate drain line, caulking sealant for wall penetration (Supply, Installation, and Delivery) with ff. features: Air Filter PM 1.0, Plasmaquad, Plasmater, NANOeX	2.00 sets
PART D	MODULAR PARTITION AND FURNITURE	
	STAFF/HEAD PANEL PARTITION	1.00 lot
	Laminate with stripes "frosted" glass panel partition 6cm thick; powder coated metal trims and strips in beige color Dimension: 90Wx180H cm 70Wx180H cm 70Wx150H cm 70Wx150H cm Door with complete accessories 100W x 180H cm	7.00 sets 1.00 sets 8.00 sets 3.00 sets 1.00 sets
	STAFF/HEAD PANEL PARTITION	
	2D Post 180H Powder Coated Metal Post Beige Color	1.00 sets
	End Post 180H Powder Coated Metal Post Beige Color	3.00 sets
	Mid Post 180H Powder Coated Metal Post Beige Color	6.00 sets
	2D Post 150H Powder Coated Metal Post Beige Color	3.00 sets
	End Post 150H Powder Coated Metal Post Beige Color	8.00 sets
	Mid Post 150H Powder Coated Metal Post Beige Color	4.00 sets
	Worktop Table – Woodgrain laminated top 25mm thick with flat edging; with powder coated metal bracket Dimension: 140Wx60D cm (main table) 90Wx45D cm (side table)	3.00 sets 3.00 sets
	Mobile Pedestal with 3 drawers in powder coated metal body gauge 20; beige color	3.00 sets
	Midback chair with armrest and gaslift height adjustment with tilt mechanism; black starbase; fabric or leatherette upholstery	3.00 sets

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 MARIANO MARCOS STATE UNIVERSITY
 PHYSICAL PLANNING AND DEVELOPMENT OFFICE
 City of Batac, 2906, Ilocos Norte

Refurbishment of SIRMATA Office, Student Center
 MMSU Batac Campus, City of Batac, Ilocos Norte

SPECIFICATIONS	
Building Part / Material	Specifications
ARCHITECTURAL	
Preparation Counter	(show sample of material for approval by the end-user)
Counter Top	20mm thick granite slab
Cabinet	¾" Laminated Plywood
ELECTRICAL	
Pipes, Conduits, and Fittings	It must meet the standard thickness and diameter
Conductors, Lead Free	It must be UL listed brands, lead free, and at least 99% made from copper wire
MECHANICAL	
Air conditioning	Split Type Wall Mounted Air Converter – Super Inverter Cooling Capacity = 19,738 Btu/hr / 20,820 kJ/hr or higher, complete with all accessories and mounting (see plan details), including ¾" PVC pipe with pvc elbow for condensate drain line, caulking sealant for wall penetration (Supply, Installation, and Delivery) with ff. features: Air Filter PM 1.0, Plasmaquad, Plasmater, NANOeX
MODULAR PARTITION AND FURNITURE	
Staff/Head Panel Partition	Laminate with stripes "frosted" glass panel partition 6cm thick; powder coated metal trims and strips in beige color Dimension: 90Wx180H cm 70Wx180H cm 70Wx150H cm 70Wx150H cm Door with complete accessories 100W x 180H cm
Partition Panel Accessories	2D Post 180H Powder Coated Metal Post Beige Color End Post 180H Powder Coated Metal Post Beige Color Mid Post 180H Powder Coated Metal Post Beige Color 2D Post 150H Powder Coated Metal Post Beige Color End Post 150H Powder Coated Metal Post Beige Color Mid Post 150H Powder Coated Metal Post Beige Color
Furniture	Worktop Table – Woodgrain laminated top 25mm thick with flat edging; with powder coated metal bracket Dimension: 140Wx60D cm (main table) 90Wx45D cm (side table) Mobile Pedestal with 3 drawers in powder coated metal body gauge 20; beige color Midback chair with armrest and gaslift height adjustment with tilt mechanism; black starbase; fabric or leatherette upholstery

Republic of the Philippines
MARIANO MARCOS STATE UNIVERSITY
 City of Batac, 2906, Ilocos Norte

DETAILED ESTIMATES

Item No.:	Description:	Quantity:	Unit:	1.00	
Description: Counter Top Works		Unit:		lot	
MATERIALS COST	PREPARATION COUNTER				
	20mm Thick Granite Slab		sq.m.	-	
	Granite Adhesive		set	-	
	3/4" Laminated Plywood		pcs	-	
	1"x2"x10' Good Lumber		pcs	-	
	2"x3"x8' Good Lumber		pcs	-	
	Concealed Hinges		pcs	-	
	Aluminum Cabinet Door Handle		pcs	-	
	1" Finishing nail		kgs	-	
	1 1/2" Finishing Nail		kgs	-	
	Wood Glue		liter	-	
	Clear Wood Preservative with Paint Brush		liter	-	
Total Materials Cost			Sub-Total	-	
			Unit Cost	-	
EQUIPMENT COST	Description	Quantity	Unit	Sub-Total	
	Minor Tools				
	Total Equipment Cost			Sub-Total	-
				Unit Cost	-
LABOR COST	Description	Quantity	Unit	Sub-Total	
	Construction Foreman		days		
	Skilled Laborer		days		
	Unskilled Laborer		days		
	Total Labor Cost			Sub-Total	-
			Unit Cost	-	

DIRECT COST: -
 DIRECT UNIT COST: -

Plus Indirect Cost:
 OCM -
 CP -
 VAT -

INDIRECT COST: -
 INDIRECT UNIT COST: -

Total Direct and Indirect Cost: -

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 City of Batac, 2906, Ilocos Norte

DETAILED ESTIMATES

Item No.:	II	Quantity:	1.00	lot
Description:	Electrical Works	Unit:		

	Description	Quantity	Unit	Unit Price	Sub-Total
MATERIALS COST	Adapter with Locknut / Straight Connector 20mmØ, PVC Pipe, Thick Wall		pcs.		-
	20mmØ, PVC, 2.2mm thk Conductors, Lead Free, 3.5mm2 THHN Conductors, Lead Free, 2.0mm2 THHN Utility Box, 2"X 4"		pcs. meters meters pcs.		- - - -
	Duplex Convenience Outlet with Cover Plate, Grounding Type, Wide Series		sets		-
	Total Materials Cost			Sub-Total	-
				Unit Cost	-
				Unit Price	Sub-Total
EQUIPMENT COST	Minor Tools		Unit		
	Total Equipment Cost			Sub-Total	-
				Unit Cost	-
LABOR COST	PEE / REE / RME Accredited Electrician Electrical Helper		Unit days days days		
	Total Labor Cost			Sub-Total	-
				Unit Cost	-
				Unit Price	Sub-Total

DIRECT COST: -
 DIRECT UNIT COST: -

Plus Indirect Cost:
 OCM -
 CP -
 VAT -

INDIRECT COST: -
 INDIRECT UNIT COST: -

Total Direct and Indirect Cost: -

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MARIANO MARCOS STATE UNIVERSITY
 City of Batac, 2906, Ilocos Norte

DETAILED ESTIMATES

Item No.:	III	Quantity:	1.00
Description:	Mechanical Works		lot
MATERIALS COST	Description	Quantity	Unit Price
	Split Type Wall Mounted Air Converter - Super Inverter Cooling Capacity = 19,738 Btu/hr/ 20,820 KJ/hr or higher, complete with all accessories and mounting (see plan details), including 3/4" PVC pipe with pvc elbow for condensate drain line, caulking sealant for wall penetration (Supply, Installation and Delivery) with ff. features: Air Filter PM 1.0 Plasmaquad Plasmater NANOeX	set	
	Total Materials Cost		Sub-Total
			Unit Cost
		Unit	Sub-Total
EQUIPMENT COST	Description	Quantity	Unit Price
	Total Equipment Cost		Sub-Total
			Unit Cost
		Unit	Sub-Total
LABOR COST	Description	Quantity	Unit Price
	Total Labor Cost		Sub-Total
			Unit Cost
			Sub-Total

DIRECT COST: -
 DIRECT UNIT COST: -

Plus Indirect Cost:
 OCM
 CP
 VAT

INDIRECT COST: -
 INDIRECT UNIT COST: -

Total Direct and Indirect Cost: -

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MARIANO MARCOS STATE UNIVERSITY
 City of Batac, 2906, Ilocos Norte

DETAILED ESTIMATES

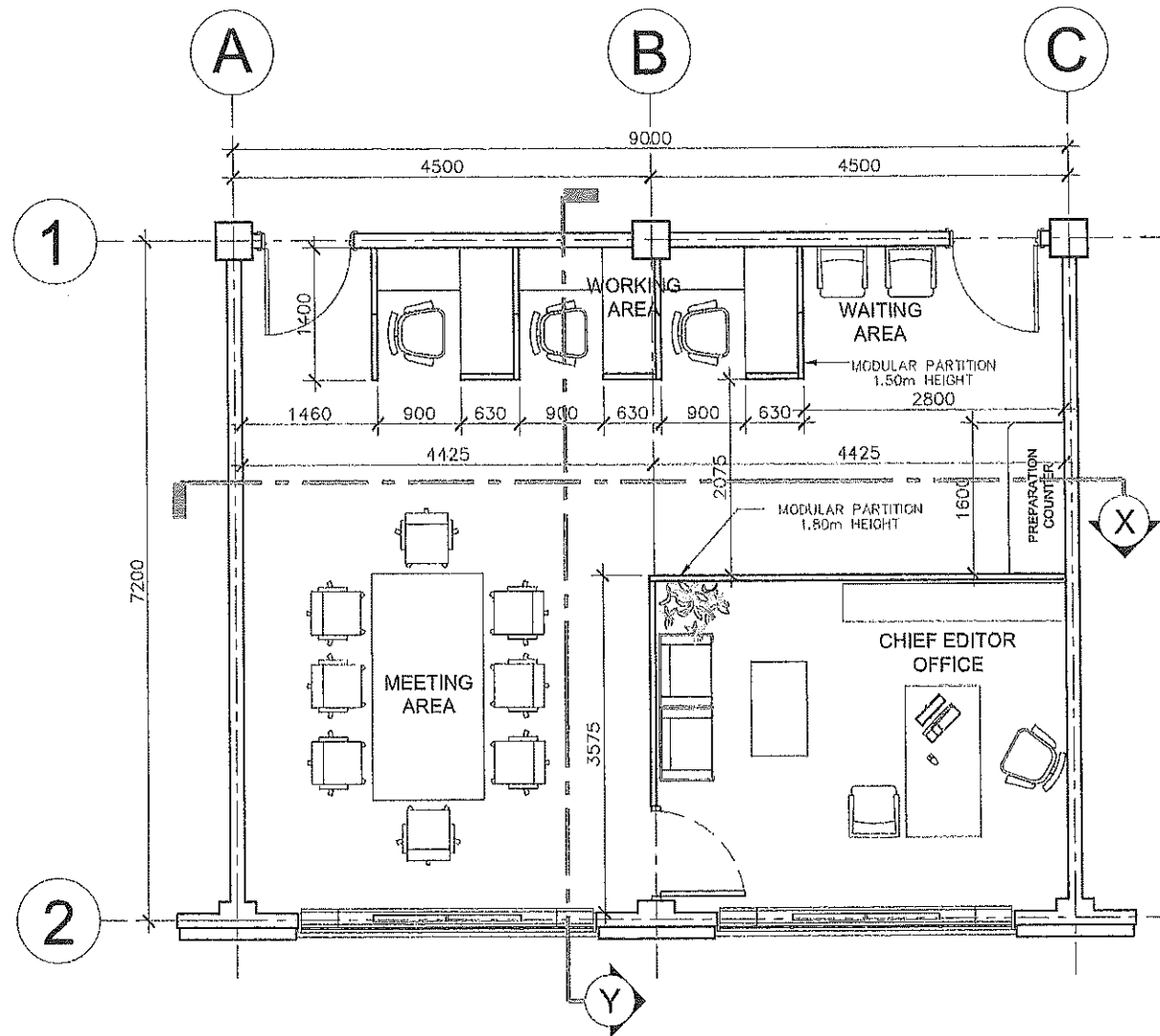
ITEM NUMBER DESCRIPTION	IV Modular Partition and Furnitures DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Total Price	1.00 lot
MATERIALS COST	STAFF/HEAD PANEL PARTITION					
	Laminated with stripes "frosted" glass panel partition 6 cm thk; powder coated metal trims and strips in beige color		set			
	Dimension:					
	90W x 180H cm		set			
	70W x 180H cm		set			
	70W x 150H cm		set			
	70W x 150H cm		set			
	Door with complete accessories 100W x 180H cm		set			
	PARTITION PANEL ACCESSORIES					
	2D Post 180H Powder coated metal post beige color		set			
	End Post 180H Powder coated metal post beige color		set			
	Mid Post 180H Powder coated metal post beige color		set			
	2D Post 150H Powder coated metal post beige color		set			
	End Post 150H Powder coated metal post beige color		set			
	Mid Post 150H Powder coated metal post beige color		set			
Worktop Table - woodgrain laminated top 25mm thick with flat edging; with powder coated metal bracket		set				
Dimension:						
140W x 60D cm (main table)		set				
90W x 45D cm (side table)		set				
Mobile Pedestal with 3 drawers in powder coated metal body gauge 20; beige color		set				
Midback chair with armrest and gaslift height adjustment with tilt mechanism; black starbase; fabric or leatherette upholstery		set				
Fabrication, Supply, and Delivery		lot				
	Total Materials Cost			Sub-Total:		
				Unit Cost:		
EQUIPMENT COST	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price	
				Sub-Total:		
				Unit Cost:		
LABOR COST	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price	
				Sub-Total:		
				Unit Cost:		

DIRECT COST:
UNIT COST:

Plus Indirect Cost:
 OCM
 CP
 VAT


INDIRECT COST:
INDIRECT UNIT COST:

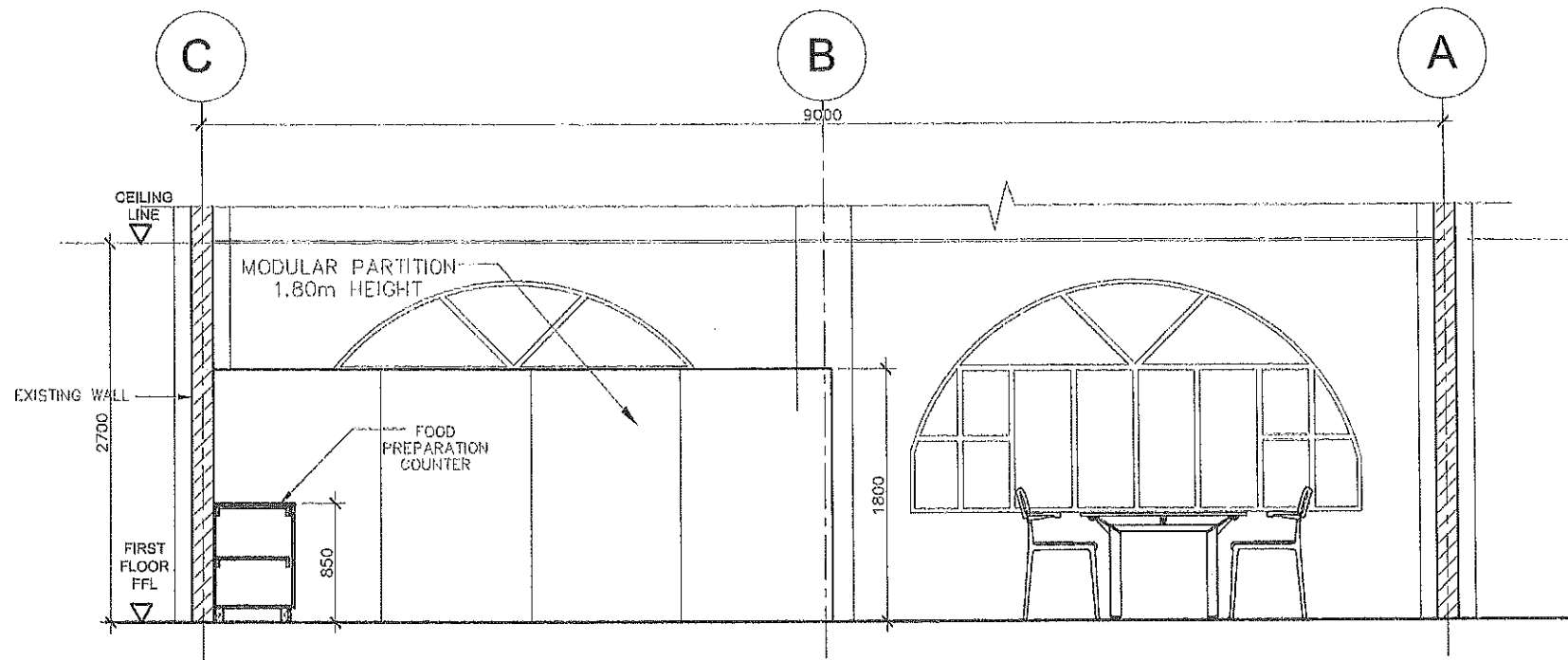
Total Direct and Indirect Cost:



FLOOR PLAN

SCALE 1:75 MTS

	FROM THE OFFICE: PHYSICAL PLANNING AND DEVELOPMENT OFFICE ROOM 202 FEM HALL, MARIANO MARCOS STATE UNIVERSITY City of Batang, 2906 Ilocos Norte Telefax: +63 (77) 792-3191	DRAWN AND PREPARED BY: DAVE CLARK E. PASCUA DRAFTSMAN II	PROJECT TITLE: REFURBISHMENT OF SIRMATA OFFICE, STUDENT CENTER	CONFORME: JAMICO CHRIS R. JUNGCO SIRMATA EDITOR-IN-CHIEF	APPROVED BY: SHIRLEY C. ASRUPIS UNIVERSITY PRESIDENT	SHEET CONTENTS: AS SHOWN REVISION AND DATE:	SHEET NO.: A-1 1 6
	CHECKED AND REVIEWED BY: AIDA V. CABANG CHIEF, PHYSICAL PLANNING	RECOMMENDING APPROVAL: ROMEO R. BULDULAO DIRECTOR, PPDO	LOCATION: IIMS STUDENT CENTER, CITY OF BATAANG, I.N.				



SECTION 'X'

SCALE 1:50 MTS



FROM THE OFFICE:
PHYSICAL PLANNING AND DEVELOPMENT OFFICE
 ROOM 202 FEM HALL, MARIANO MARCOS STATE UNIVERSITY
 City of Batang, 2908 Ilocos Norte
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DRAWN AND PREPARED BY:
Dave Clark E. Pasqua
DAVE CLARK E. PASCUA
 DRAFTSMAN II
 CHECKED AND REVIEWED BY:
Aida V. Cabang
AIDA V. CABANG
 CHIEF, PHYSICAL PLANNING

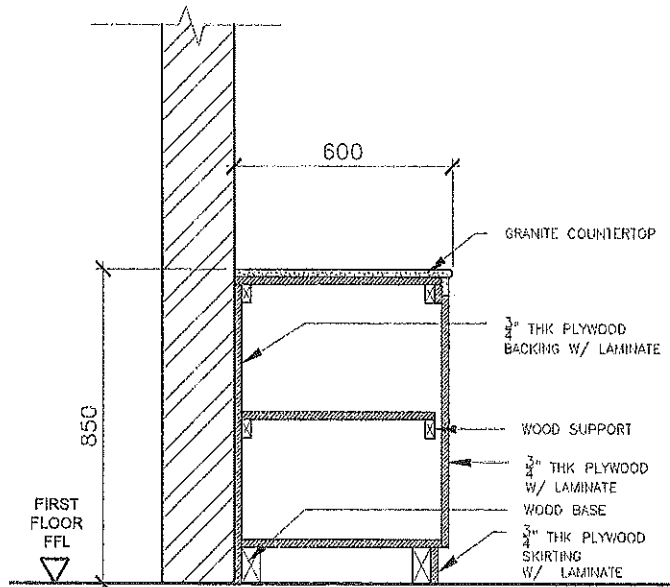
PROJECT TITLE:
REFURBISHMENT OF SIRMATA OFFICE, STUDENT CENTER
 LOCATION: IBSU STUDENT CENTER, CITY OF BATANG, I N

CONFORME:
Jamico Chris R. Jingco
JAMICO CHRIS R. JINGCO
 SIRMATA EDITOR-IN-CHIEF
 RECOMMENDING APPROVAL:
Romeo R. Duldulao
ROMEO R. DULDULAO
 DIRECTOR, PPOD

APPROVED BY:
Shirley C. Agrupis
SHIRLEY C. AGRUPIS
 UNIVERSITY PRESIDENT

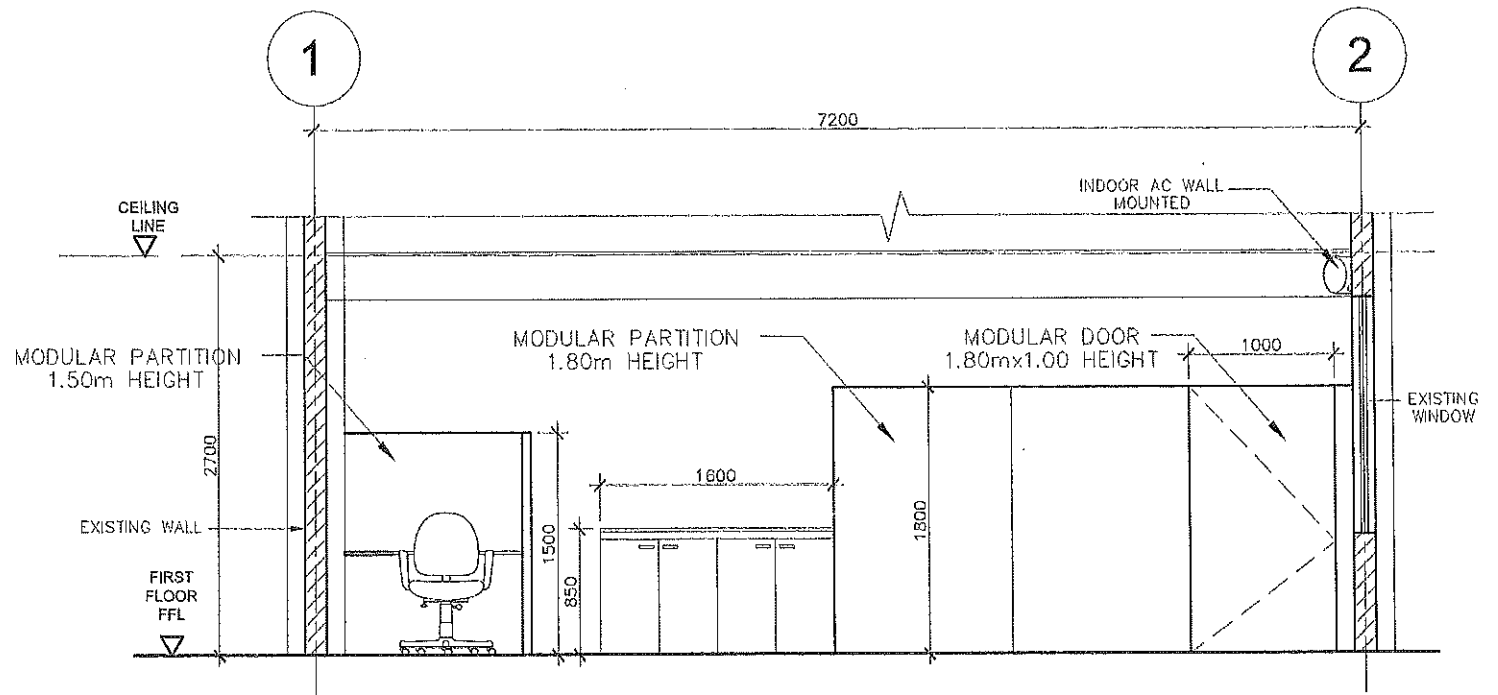
SHEET CONTENTS:
 AS SHOWN
 REVISION AND DATE:

SHEET NO:
 A-2
 2 | 6



**SECTION OF COUNTER
WITH CABINET**

SCALE 1:20 MTS



SECTION 'Y'

SCALE 1:50 MTS



FROM THE OFFICE:
PHYSICAL PLANNING AND DEVELOPMENT OFFICE
ROOM 202 FEM HALL, MARIANO MARCOS STATE UNIVERSITY
City of Batac, 2906 Ilocos Norte
Telefax: +63 (77) 792-3191

DRAWN AND PREPARED BY:
Clara
DAVE CLARK E. PASCUA
DRAFTSMAN II

CHECKED AND REVIEWED BY:
Aida
AIDA V. CABANG
CHIEF, PHYSICAL PLANNING

PROJECT TITLE:
**REFURBISHMENT OF
SIRMATA OFFICE,
STUDENT CENTER**

LOCATION: MMSU STUDENT CENTER, CITY OF BATAC, I. N.

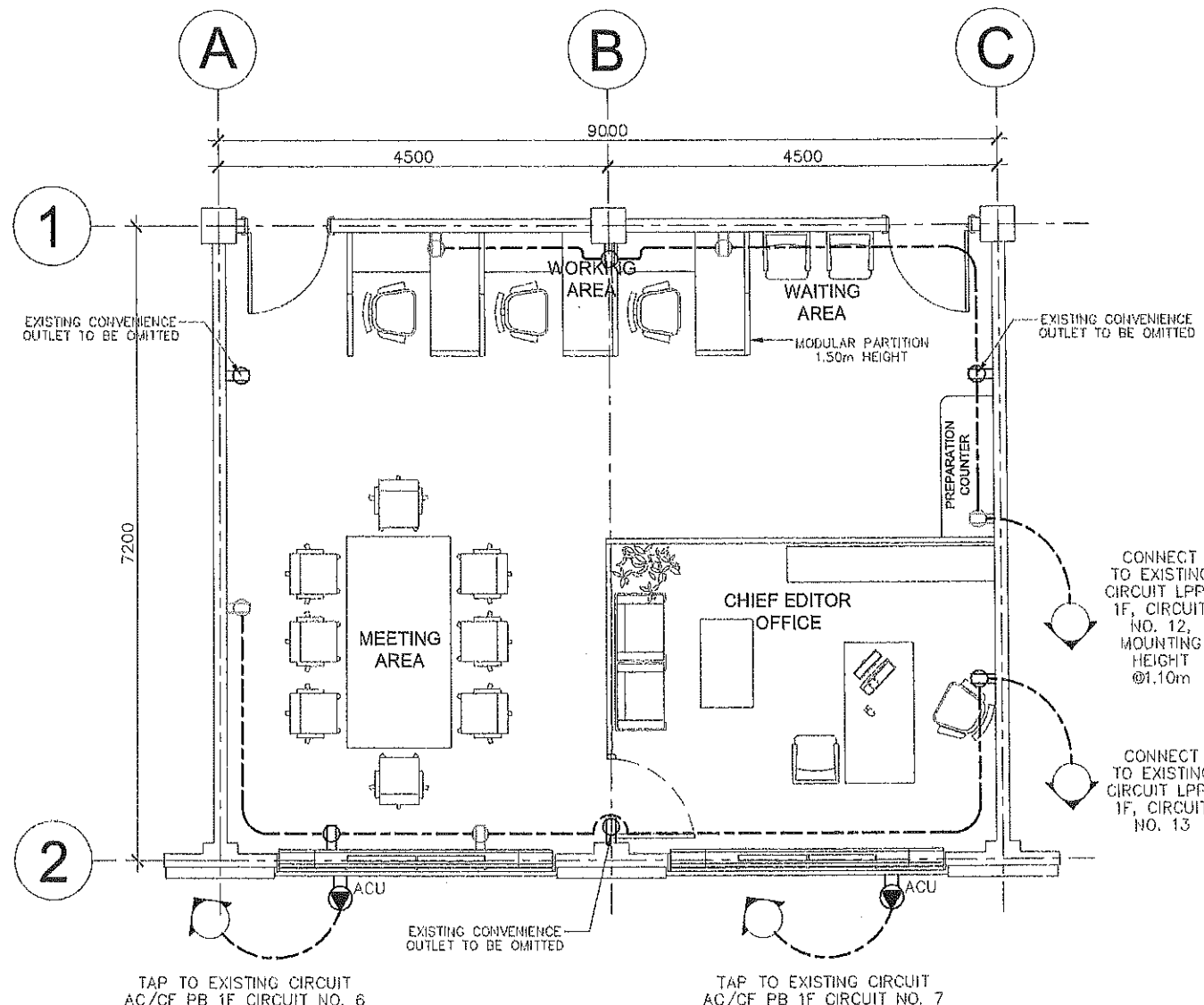
CONFORME:
Jamico
JAMICO CHRIS P. JINSCO
SIRMATA EDITOR-IN-CHIEF

RECOMMENDING APPROVAL:
Romeo
ROMEO R. DULDULAO
DIRECTOR, PPDO

APPROVED BY:
Shirley
SHIRLEY C. ASRUPIS
UNIVERSITY PRESIDENT

SHEET CONTENTS:
AS SHOWN
REVISION AND DATE:

SHEET NO.:
A-3
3 / 6

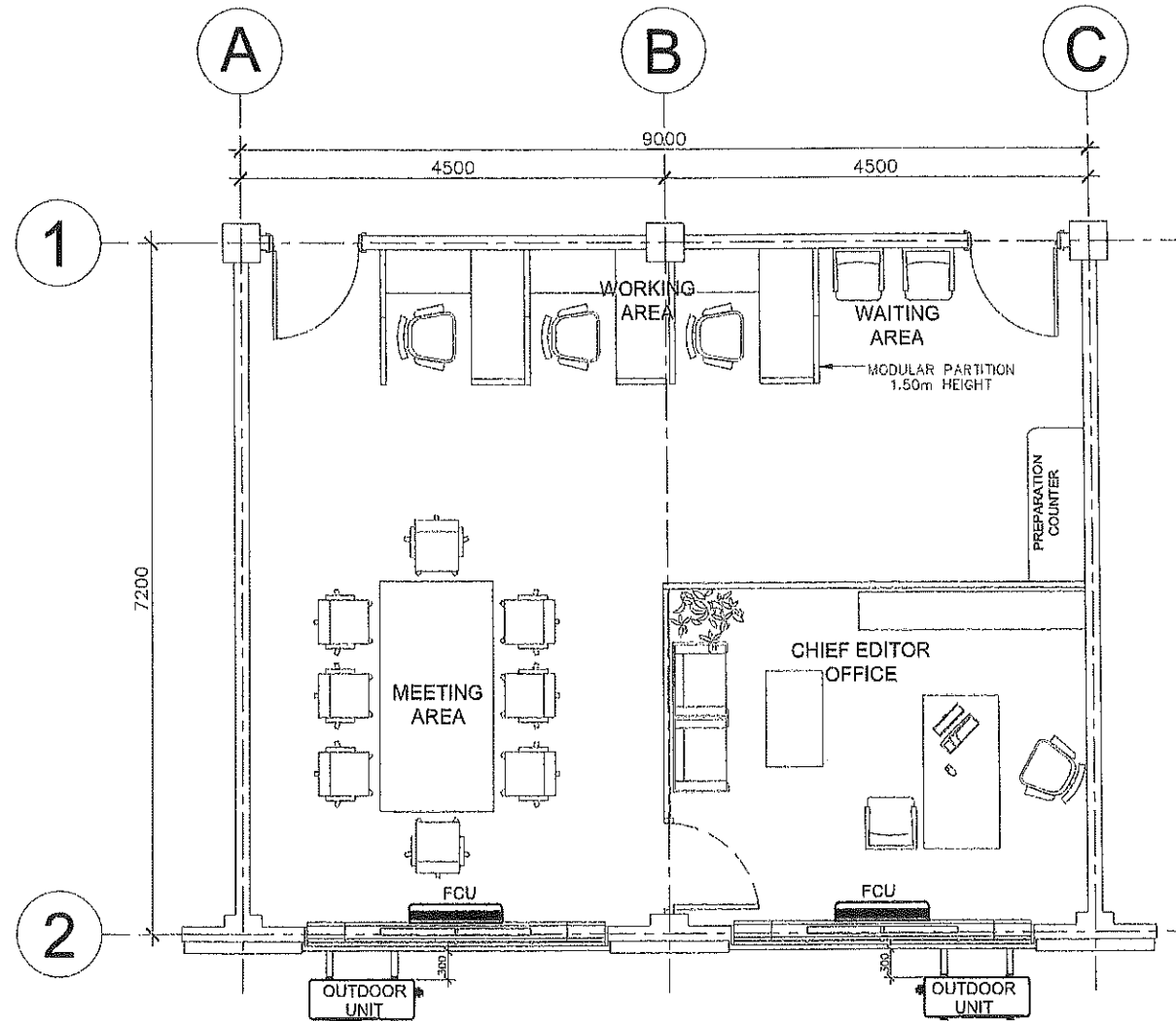


- LEGEND:**
- ACU
 - EXISTING CONVENIENCE OUTLET
 - ADDITIONAL CONVENIENCE OUTLET
 - CIRCUIT HOMERUN
 - CIRCUIT LINE
- CONNECT TO EXISTING CIRCUIT LPPB 1F, CIRCUIT NO. 12, MOUNTING HEIGHT @1.10m
- CONNECT TO EXISTING CIRCUIT LPPB 1F, CIRCUIT NO. 13

POWER LAYOUT PLAN

SCALE 1:75 MTS

	<p>FROM THE OFFICE:</p> <p>PHYSICAL PLANNING AND DEVELOPMENT OFFICE ROOM 202 FEM HALL, MARIANO MARCOS STATE UNIVERSITY City of Balac, 2905, Iloilo Norte Telefax: +63 (77) 792-3191</p>	<p>DRAWN BY:</p> <p><i>Dave Clark E. Pascua</i> DAVE CLARK E. PASCUA DRAFTSMAN II</p> <p>PREPARED AND CHECKED BY:</p> <p><i>Lemuel Joshua P. Bagayas</i> LEMUEL JOSHUA P. BAGAYAS ELECTRICAL ENGINEER</p>	<p>PROJECT TITLE:</p> <p style="text-align: center;">REFURBISHMENT OF SIRMATA OFFICE, STUDENT CENTER</p> <p>LOCATION: MMSU STUDENT CENTER, CITY OF BATAVIA, I.L.N.</p>	<p>CONFORME:</p> <p><i>Jamico Chris F. Jinsco</i> JAMICO CHRIS F. JINSCO SIRMATA EDITOR-IN-CHIEF</p> <p>RECOMMENDING APPROVAL:</p> <p><i>Romeo R. Duldulao</i> ROMEO R. DULDULAO DIRECTOR, PPDO</p>	<p>APPROVED BY:</p> <p><i>Shirley C. Asikupis</i> SHIRLEY C. ASIKUPIS UNIVERSITY PRESIDENT</p>	<p>SHEET CONTENTS:</p> <p>AS SHOWN</p> <p>REVISION AND DATE:</p>	<p>SHEET NO.:</p> <p style="text-align: center;">E-1 1 / 6</p>
	<p><small>PHYSICAL PLANNING AND DEVELOPMENT OFFICE</small></p>						



ACU LAYOUT PLAN

SCALE 1:75 MTS



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 MECHANICAL ENGINEER/MASTER PLUMBER

PROJECT TITLE:
 REFURBISHMENT OF
 SIRMATA OFFICE,
 STUDENT CENTER

LOCATION: 1985U STUDENT CENTER, CITY OF BATAO, I.N.

CONFORME:
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 ROMEO R. DULDULAO
 DIRECTOR, PPDO

APPROVED BY:
Shirley C. Agrupis
 SHIRLEY C. AGRUPIS
 UNIVERSITY PRESIDENT

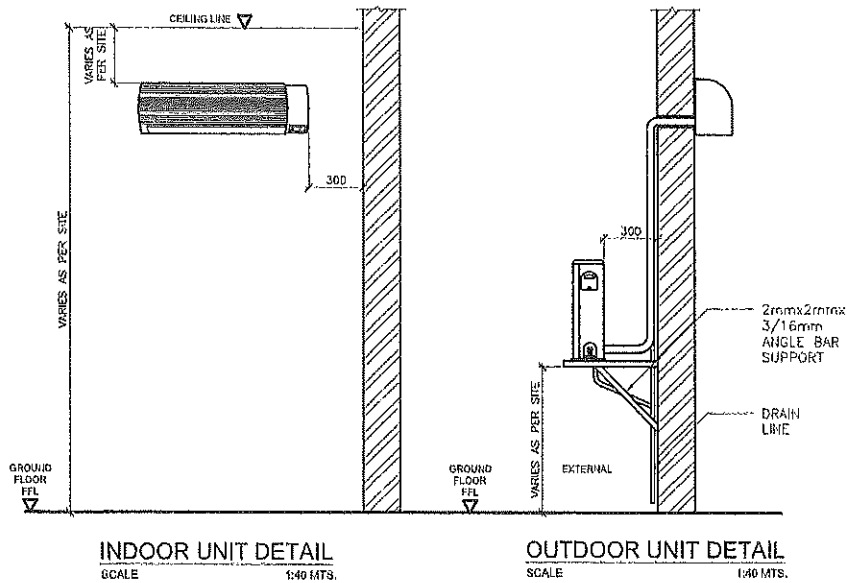
SHEET CONTENTS:

AS SHOWN

REVISION AND DATE:

SHEET NO:

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ITEM	DESCRIPTION	SPACE or ZONE	QTY	COOLING CAPACITY					V	Hz	PH	I, [AMP]	RATED POWER INPUT, [KW]	FULL LOAD CURRENT, [AMP]	AMP
				KW	BTU/HR	KJ/HR	TR	HP							
				ACU1	SPLIT TYPE WALL MOUNTED - VARIABLE FREQUENCY DRIVE WITH FF FEATURES: -AIR FILTER PM1.0 -PLASMAQUAD -PLASMASTER -NANOeX	SIRMATA	2	5.783							

AIRCONDITIONING AND VENTILATION DESIGN.

C. TOTAL LOAD, Q_t

Q_t = 1.3 x (30,365.5 btu/h)

Q_t = 39,475.2 btu/h

Q_t = 11,566.2 W or 11.6 KW

COOLING LOAD PER AREA

= 64.8 m² / 11.6 KW

= 5.58 m² / KW x 3.516 KW/TON

= 19.6 m² / TOR

- USE TWO AIRCONDITIONING UNITS, DIVIDE TOTAL LOAD TO TWO (2)

ITEM	DESCRIPTION	SPACE or ZONE	QTY	COOLING CAPACITY					V	Hz	PH
				KW	BTU/HR	KJ/HR	TR	HP			
				ACU1	SPLIT TYPE WALL MOUNTED - VARIABLE FREQUENCY DRIVE	SIRMATA	2	5.783			



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STUDENT CENTER
LOCATION: MMSU STUDENT CENTER, CITY OF BATANG, I.N.

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SHEET CONTENTS:
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2 6