



## **Invitation to Bid**

### **Construction Works for Material Recovery Facility (MRF), Sorsogon, Philippines for Marine Plastics ODA Project (2023–2028) – PEMSEA Resource Facility (PRF)**

**Bid Reference No.:** [PRF/ODA/2026-002]

**Date of Issue:** 17 February 2026

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#### **BACKGROUND**

The Marine Plastics ODA Project (2023–2028) is a regional initiative implemented under PEMSEA with support from the Ministry of Oceans and Fisheries (MOF) of the Republic of Korea. The Project addresses marine plastic pollution in the East Asian Seas through improved local governance, demonstration of community-driven solutions, systematic monitoring, and strengthened partnerships.

Under the Project, PRF will hire a construction company to construct a Material Recovery Facility (MRF) to enable plastic recycling and local plastic diversion activities in Bulan Municipality.

#### **PROCURING ENTITY AND PROJECT SITES**

Procuring Entity: PEMSEA Resource Facility (PRF)

Project: Marine Plastics ODA Project (2023–2028)

Project Site:

- Municipality of Bulan, Sorsogon – Construction of Material Recovery Facility (MRF) / plastic processing facility area (target completion: December 2026)

PRF will award the Contract to the Lowest Evaluated Responsive Bid (LERB), subject to PRF's best value determination and bidder capacity.

## **SCOPE OF WORKS**

The Contractor shall provide all labor, supervision, materials, tools, equipment, and incidentals necessary to complete the Works, including but not limited to:

- Pre-construction site visit, measurements, and finalization of work method and schedule.
- Site preparation, safety barricades/signage, temporary facilities, and housekeeping.
- Civil works: flooring/slab works, minor structural repairs, equipment pads/foundations (as applicable), and drainage improvements.
- Building works: masonry/partition, roofing repairs (if any), doors/windows repairs, painting, and basic finishing works.
- Utilities: electrical works (panel board upgrades, wiring, grounding, outlets, lighting), water supply lines, and wastewater/drain connections suitable for recycling operations.
- Provision/installation of required safety features: emergency exits clearances, fire extinguishers brackets/locations, safety railings/guards (as applicable).
- Testing and commissioning of installed utilities (electrical continuity/insulation tests, grounding tests, water pressure/leak tests), and rectification of defects.
- Preparation of as-built drawings, turnover documentation, and orientation of LGU facility staff on installed utilities and maintenance.

## **REFERENCE PLANS, SPECIFICATIONS, AND STANDARDS**

The Works shall comply with the latest applicable Philippine laws and standards, including the National Building Code of the Philippines, relevant DPWH standards, the Philippine Electrical Code, the Philippine Plumbing Code, and local ordinances.

The Bidder shall base its proposal on the PRF/LGU-provided drawings/specifications as attached in Annex A and the site conditions verified during the site inspection. In case of discrepancy, the Bidder shall raise it during the clarification period.

## **MINIMUM TECHNICAL REQUIREMENTS**

Bidders shall meet or exceed the following minimum requirements. Detailed technical specifications are provided in Annex A Layout of the MRF and Annex B Bill of Materials.

- Flooring/Slab: Adequate thickness and reinforcement for industrial use and for intended equipment placement (as applicable), with smooth, non-slip finish and proper slope to drains.
- Foundations/Pads: Level and adequately reinforced pads for equipment placement (as applicable) with anchor provisions as needed.
- Electrical: Dedicated circuits for industrial loads; properly sized wires/cables; breaker protection; grounding system; labeled panel board; emergency shut-off provision (where applicable).
- Water/Drainage: Leak-free piping; valves; adequate drainage with trap and cleanout; proper slope; wastewater discharge consistent with LGU requirements.

- Safety: Compliance with basic occupational safety and health (OSH) requirements; clear working space, lighting, and access routes.

## **CONTRACT DURATION AND MILESTONES**

The Contract duration shall be 180 calendar days from the Notice to Proceed (NTP). The Bidder shall propose a detailed work schedule, including key milestones: mobilization, civil works, utilities installation, testing, punchlisting, and final turnover.

## **ELIGIBILITY AND QUALIFICATION REQUIREMENTS**

Bidders must be legally, technically, and financially capable to undertake construction works of similar nature and scale.

- Valid business registration (SEC/DTI), Business Permit, and BIR registration.
- For Philippine contractors: Valid PCAB license with appropriate category/classification for the project cost (or equivalent proof of construction license/registration).
- Completed at least two (2) similar construction projects within the last five (5) years (attach contracts/POs, completion/acceptance certificates, and client references).
- Key personnel with relevant experience (Project Engineer, Safety Officer, Electrical/Plumbing personnel as applicable).
- Proof of equipment availability (owned/leased) appropriate for the Works.
- Financial capacity to deliver the Works (audited financial statements or equivalent).

## **SITE INSPECTION AND PRE-BID MEETING**

Site inspection is strongly recommended (and may be required for the winning bidder) to validate access, working areas, existing utilities, and constraints. Bidders are responsible for factoring actual site conditions in their bid price.

A pre-bid meeting may be conducted to address technical and administrative questions. PRF will issue supplemental/bid bulletins, if any.

## **REQUIRED BID DOCUMENTS**

Bidders shall submit two (2) separate electronic files marked "TECHNICAL" and "FINANCIAL". All documents must be signed by an authorized representative.

### **A. Technical Proposal**

1. Letter of Intent / Bidder's Letter.
2. Company profile and legal documents: SEC/DTI registration, Business Permit, BIR registration, and latest audited financial statements (or equivalent).
3. Proof of authority of signatory (Board Resolution/Secretary's Certificate or Special Power of Attorney).
4. PCAB license (Philippines) or equivalent construction license/registration.

5. Similar Project Experience Forms with supporting documents.
6. Key Personnel CVs and licenses/certifications.
7. List of equipment/tools to be used.
8. Construction Method Statement and Work Program/Gantt chart.
9. Project Quality Plan and Safety & Health Plan.
10. Warranty/Defects Liability commitment.

#### **B. Financial Proposal**

11. Duly accomplished Price Schedule / Bill of Quantities (BOQ) for the Works (Annex G).
12. Bid validity (minimum 90 days from bid submission deadline).
13. Proposed payment terms and any applicable discounts.
14. Taxes/duties included and other commercial terms.

### **BID SUBMISSION, OPENING, AND CLARIFICATIONS**

- Deadline for Submission: 30 April 2026, 5:00 PM (Philippine Time)
- Submission Address/Email: [oda@pemsea.org](mailto:oda@pemsea.org)

**\*Compress all bidding documents into a zipped folder**

**\*Put “CONFIDENTIAL – BID SUBMISSION FOR PRF/ODA/2026/002” in the subject line**

Requests for clarifications must be submitted in writing to [emerina@pemsea.org](mailto:emerina@pemsea.org) no later than ten (10) calendar days before the submission deadline. Late bids will not be accepted. PRF reserves the right to accept or reject any bid and to annul the bidding process at any time without incurring any liability.

### **EVALUATION AND AWARD**

Bids will be evaluated for compliance, responsiveness, and value for money. Award will be made to the Lowest Evaluated Responsive Bid (LERB), subject to PRF’s best value determination.

- Completeness and validity of eligibility and technical documents.
- Technical responsiveness to the required scope, method, schedule, and safety plan.
- Demonstrated capacity to mobilize and complete within the required duration.
- Financial evaluation of the BOQ/price schedule and reasonableness of unit rates.
- PRF may request clarifications, conduct site visits, and verify references during evaluation.

### **KEY CONTRACT TERMS**

Delivery/Completion: Completed Works at the designated LGU site, including testing of utilities and turnover documentation.

Payment Terms:

- 20% mobilization advance upon signing of and submission of required securities/insurance.
- 30% payment upon completion of site preparation and foundation works.

- 20% payment upon completion of structural framework and roofing
- 20% payment upon completion of mechanical, electrical and plumbing (MEP) works
- 10% retention fee released within 6 months after defects liability period ends.

Performance Security: 10% of contract price in acceptable form to be submitted within 10 days from Notice of Award.

Warranty / Defects Liability: Minimum 6 months from Final Acceptance; Contractor shall remedy defects at its own cost within a reasonable period after notice.

Liquidated Damages: Applicable for delay beyond contract duration at 0.1% per calendar day of delay, subject to contract provisions.

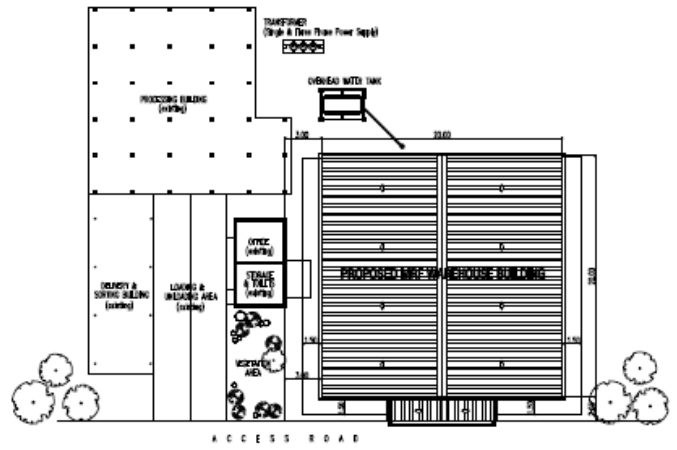
Insurance and Safety: Contractor shall comply with OSH requirements and maintain adequate insurance coverage for workers and third-party liability, as required.

**Annex A – Lay-out of the MRF**

Lay out of the Expanded MRF



**1 PERSPECTIVE**  
SCALE: 1/8" = 1'-0" MS



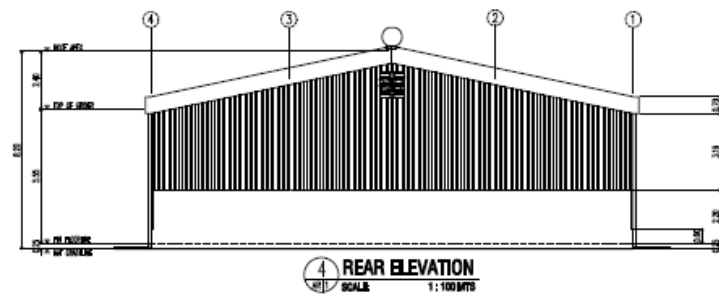
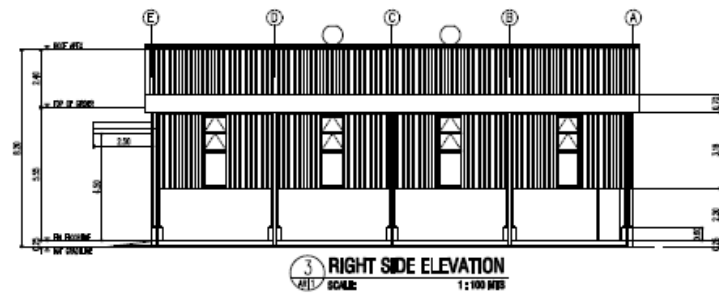
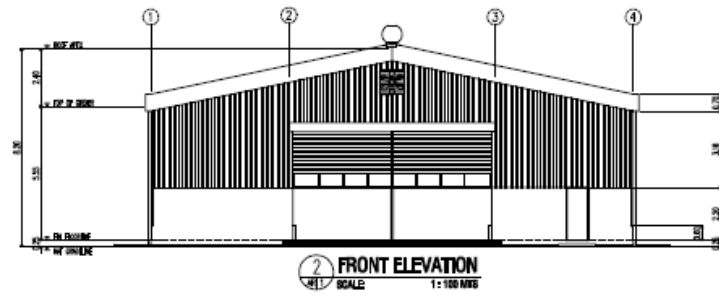
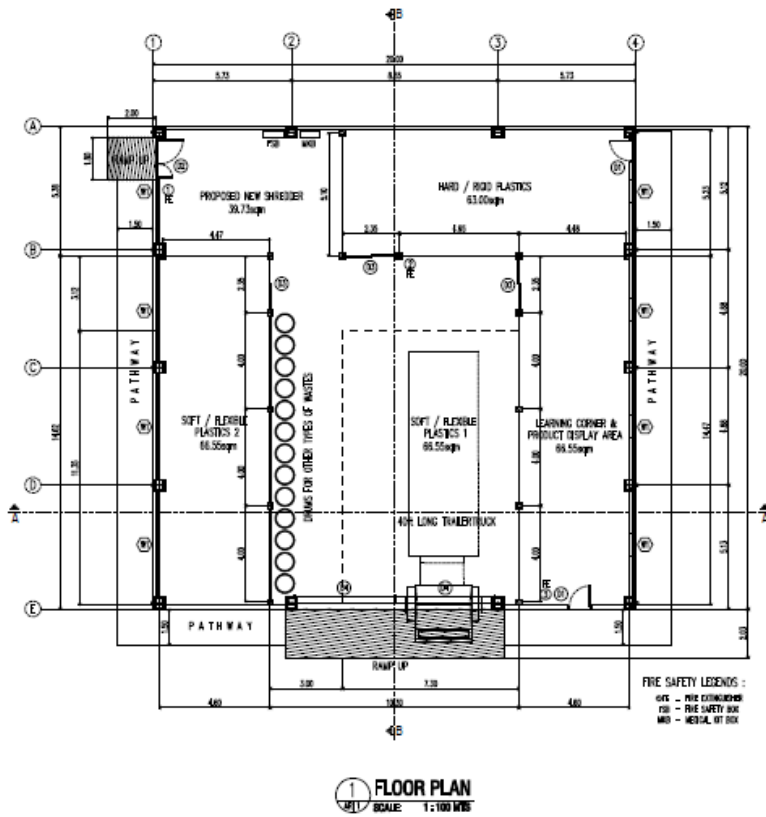
**2 SITE DEVELOPMENT PLAN**  
SCALE: 1" = 500' MS

TABLE OF CONTENTS		Department of Public Works Transportation and Communication OFFICE OF THE BUILDING OFFICIAL
CS1	PERSPECTIVE SITE DEVELOPMENT PLAN VICINITY LOCATION MAP	CITY/MUNICIPALITY
AR1	FLOOR PLAN FRONT ELEVATION RIGHT SIDE ELEVATION REAR ELEVATION	LAND USE & ZONING
AR2	LEFT SIDE ELEVATION CROSS SECTION - A CROSS SECTION - B SCHEDULE OF DOORS & WINDOWS STRUCTURAL BAY SECTION	LINE & GRADE
ST1	FOUNDATION PLAN COLUMN FOOTING DETAIL WALL FOOTING DETAIL COLUMN FOOTING SCHEDULE TIE BEAM DETAIL & SCHEDULE PEDESTAL DETAIL & SCHEDULE ANCHOR SECTION BASE PLATE DETAIL	ARCHITECTURAL
ST2	STEEL COLUMN, TRUSS & GIRDER SECTION PARTITION WALL DETAIL SITE, GRID LAYOUT ROOF FRAMING PLAN TRUSS DETAIL	STRUCTURAL
PL1	PLUMBING & WASTE MANAGEMENT LAYOUT ISOMETRIC PLUMBING LAYOUT SETTLING POND DETAIL CATCH BASIN DETAIL PLUMBING NOTES & LEGENDS	SANITARY
EL1	LIGHTING AND POWER LAYOUT SCHEDULE OF ELECTRICAL LOADS RESISTOR DIAGRAM ELECTRICAL NOTES & SYMBOLS VICINITY LOCATION MAP	ELECTRICAL
		MECHANICAL

CERTIFIED BY: <b>PATRICK A. SALINAS JR.</b> AGENCY	DA No. 0385 Sec. 33, Act. 401 of 2004	PROJECT TITLE & LOCATION <b>PROPOSED MRF WAREHOUSE BUILDING</b> SILAN, SORSOGON, PHILIPPINES	APPROVED BY: <b>PEMSEA</b>
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DESIGN & DRAWN BY: <b>PATRICK A. SALINAS JR.</b> AGENCY	No.	REVISIONS	DATE	SHEET CONTENT	SHEET NO.
CHECKED:				AS SHOWN	<b>CS1</b> 1
DATE:					

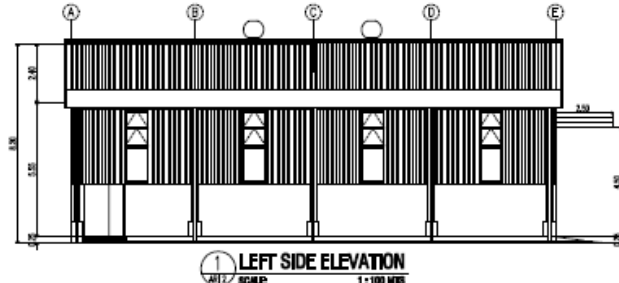
Lay out of the Expanded MRF



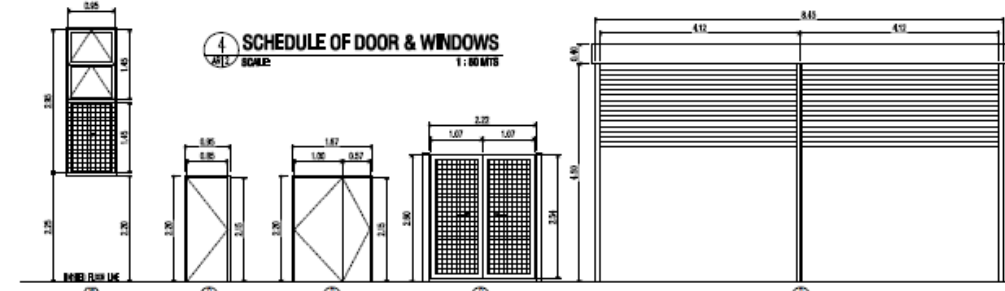
CERTIFIED BY: <b>PATRICK A. SHANE, JR.</b> ARCHITECT REG. NO. 52889    LICENSED    SIN 14, 2021 P.O. NO. 34102111    EXPIRES    JAN. 13, 2025 Firm Name: Agroneo, Inc.	SA No. 5285 (see 23 App. Act of 2004) Drawing is the author's sole design, prepared in accordance with the provisions of the applicable laws and regulations of the Republic of the Philippines, and the author shall be held responsible for the design and construction of the building or work. I shall not be held responsible for the design or construction of the building or work if the author is not the author of the design or construction of the building or work. I shall not be held responsible for the design or construction of the building or work if the author is not the author of the design or construction of the building or work.	PROJECT TITLE & LOCATION:	APPROVED BY:	DESIGN & DRAWN BY: PATRICK A. SHANE, JR. ARCHITECT	NO.	REVISIONS	DATE	SHEET CONTENT	SHEET NO.
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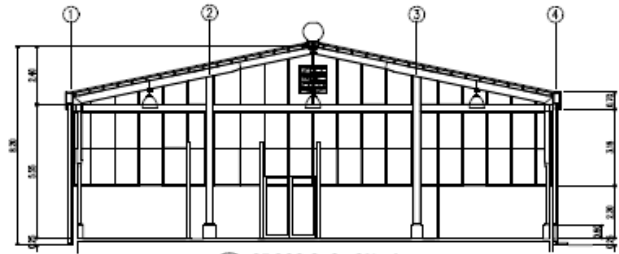
Lay out Expanded MRF



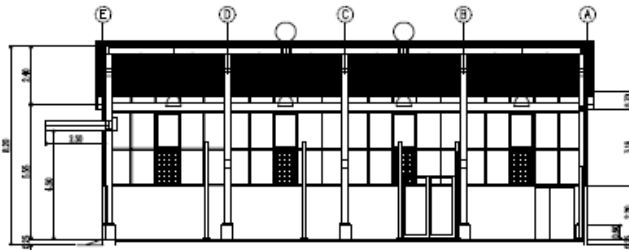
1 LEFT SIDE ELEVATION  
SCALE: 1:100 MBS



4 SCHEDULE OF DOOR & WINDOWS  
SCALE: 1:100 MBS

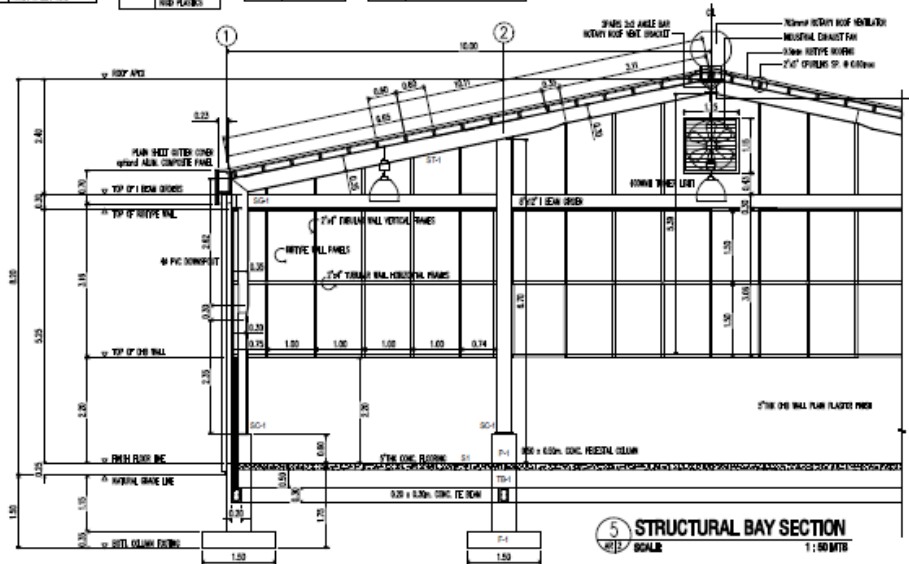


2 CROSS SECTION . A  
SCALE: 1:100 MBS



3 LONGITUDINAL SECTION . B  
SCALE: 1:100 MBS

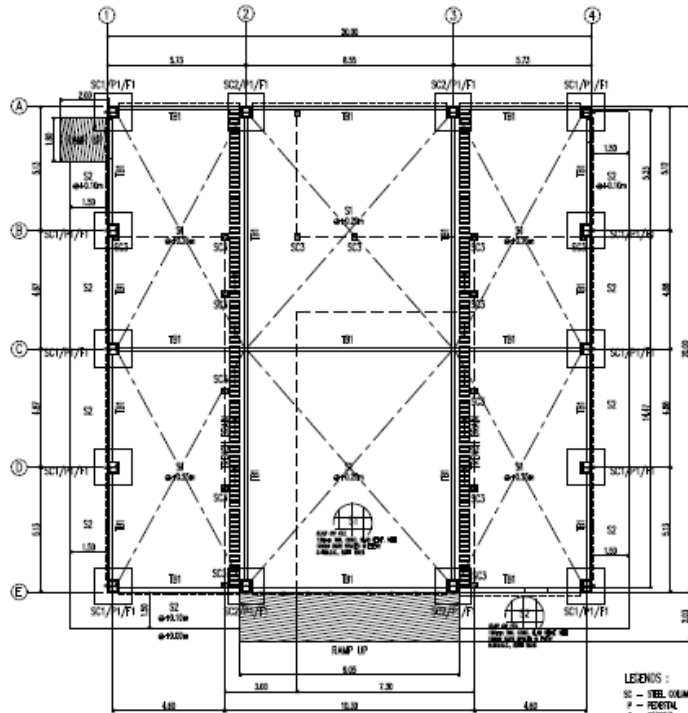
<p>DOOR: FINE GLASS &amp; WOOD TOP GLASS: 6MM W/ CLEAR ANGLE HORIZONTAL: 6MM W/ CLEAR ANGLE H/1: WOODEN SIDING FRAM: ALUMINUM FRAMING QUANTITY: 8 LOCATION: WEST &amp; EAST SIDE</p>	<p>DOOR: 100% TINTED GLASS DOOR JAMB: 1 1/2" STEEL JAMB FRAM: BLACK STEEL GLASS TOP CASE QUANTITY: 2 LOCATION: LEARNING CENTER, WEST PLAZA</p>	<p>DOOR: 100% TINTED GLASS DOOR JAMB: 1 1/2" STEEL JAMB FRAM: BLACK STEEL GLASS TOP CASE QUANTITY: 1 LOCATION: SHOOTING ARCH</p>	<p>DOOR: 100% TINTED GLASS DOOR JAMB: 1 1/2" STEEL JAMB FRAM: BLACK STEEL GLASS TOP CASE QUANTITY: 3 LOCATION: LEARNING CENTER, PLAZA SPAN</p>	<p>DOOR: ALUMINUM ROLL-UP DOOR FRAM: ALUMINUM ROLL-UP DOOR QUANTITY: 2 LOCATION: MAIN ENTRANCE - EAST</p>
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5 STRUCTURAL BAY SECTION  
SCALE: 1:100 MBS

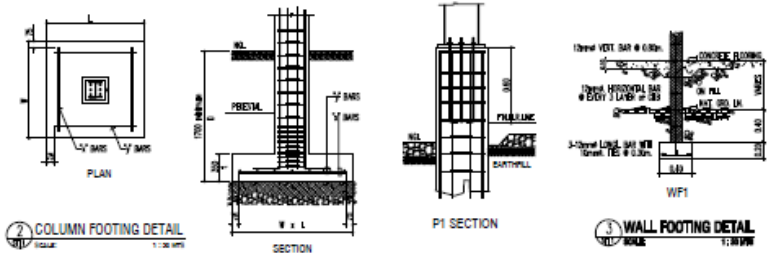
<p>CERTIFIED BY: <b>PATRICK A. SALINAS JR.</b> REGISTERED PROFESSIONAL ENGINEER No. 26888    Exp. 12/31/2027 P.E. No. 54183111    Date Issued: Apr. 13, 2022 Place Issued: Agordo, Oregon</p>	<p>PROJECT: Drawing &amp; Specification only subject to contract or master specification of contract are the primary and controlling unless indicated otherwise for subject to which they are made. It is intended that this drawing be used for any project only for the specific project and shall not be used for any other project without the written consent of the engineer. It is the responsibility of the user to verify the accuracy of the information and to ensure that the drawing is suitable for use in the project. It is the responsibility of the user to ensure that the drawing is suitable for use in the project.</p>	<p>PROJECT TITLE &amp; LOCATION:</p>	<p>APPROVED BY:</p>	<p>DESIGN &amp; DRAWING BY: <b>PATRICK A. SALINAS JR.</b> <b>PRINCEY</b></p>	<p>NO.    REVISIONS    DATE</p>	<p>SHEET CONTENT</p>	<p>SHEET NO.</p>
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Lay out of the Expanded MRF



1 FOUNDATION PLAN  
SCALE: 1:100 MRS

- LEGENDS :
- SC - STEEL COLUMN
  - P - PEDESTAL
  - F - FOOTING
  - B - BEAM
  - WF - WALL FOOTING
  - SS - STEEL SHEET
  - RS - RIGID JOINT
  - SI - SLAB ON RLL 150mm FIBRE
  - SJ - SLAB ON RLL 150mm FIBRE
  - T - TRUSS
  - IT - INFERIOR TRUSS
  - IS - ISOLATION



2 COLUMN FOOTING DETAIL  
SCALE: 1:30 MRS

3 WALL FOOTING DETAIL  
SCALE: 1:30 MRS

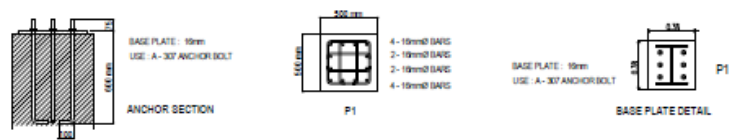
COLUMN FOOTING SCHEDULE

MARK	DIMENSIONS				REMARKS
	W (D)	L (D)	h	"x"	
F1	1500	1500	350	8 - Ø 16	1.70 m, below natural grade line minimum



TIE BEAM DETAIL & SCHEDULE

BEAM MARK	SIZE D & D	SECTION	ELEVATION	CONT. TOP BAR		EXTRA TOP BAR		BOTTOM BAR		WEB STIFFENER	EXTRA TOP BAR		
				LEFT	RIGHT	LEFT	RIGHT	CONT.	EXTRA		LEFT	MID	RIGHT
TB1	200x300	---	---	2 - Ø 16	---	---	---	2 - Ø 16	---	---	10 @ 100	Ø 200	10 @ 100

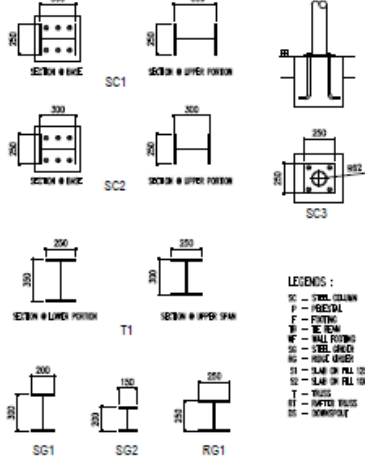


PEDESTAL DETAIL & SCHEDULE

COLUMN MARK	TYPE	SIZE D & H	VERTICAL REINF.	DEPTH from F.F.L.	HOOPS		REMARKS
					H1	H2	
P1	A	500x500	12 - Ø 16	1.20 m. max.	8 @ 100	REST @ 200	TOP OF FOOTING TO MID HEIGHT OF PEDESTAL

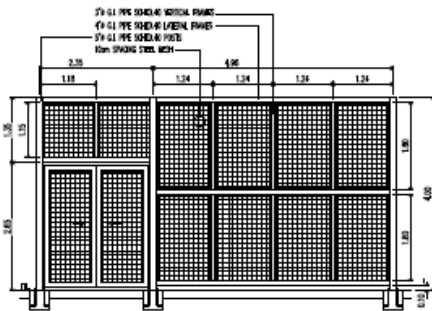
CERTIFIED BY  GHE ENGINEER	RA no. 8285 Sec. 13 Arch. act of 2006  Creating a Foundation like original, intended to avoid introduction of Corrosion and the company will guarantee a better finished product for the project and the user. It is intended to not be used for any other purpose, and the user should consult the engineer or architect of the work. Documents to be available for use in the Republic of the Philippines to be used under the same conditions as in the original.	PROJECT TITLE & LOCATION	APPROVED BY	DESIGN & DRAWN BY: PATRICIA A. SALINAS JR. ARQUITECT	NO.	REVISIONS	DATE	SHEET CONTENT AS SHOWN	SHEET NO. ST1 4
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DATE:				DATE:					

Lay out of the Expanded MRF

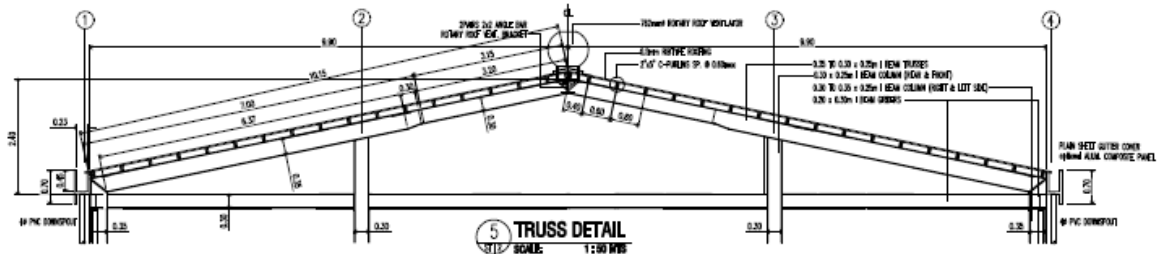


- LEGENDS :
- SC - STEEL COLUMN
  - F - FIBERGLASS
  - P - PASTURE
  - W - WALL
  - WF - WALL FOOTING
  - SG - STEEL GIRDER
  - RG - RIGID GIRDER
  - SI - SLAB ON PILE
  - SI - SLAB ON PILE WITH TRUSS
  - T - TRUSS
  - TT - TRUSS TRUSS
  - TT - TRUSS TRUSS

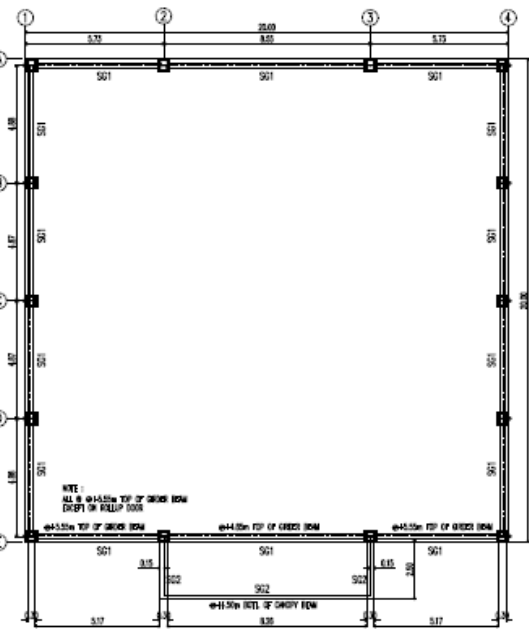
1 STEEL COLUMN, TRUSS & GIRDER SECTIONS  
SCALE: 1:100 MMS



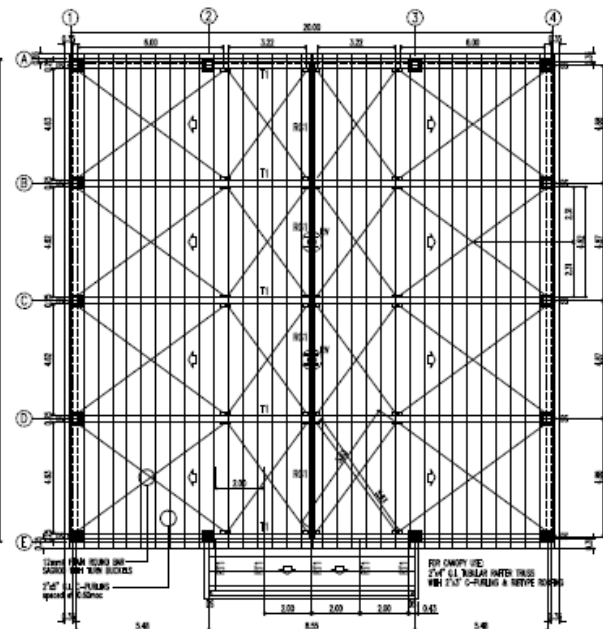
2 PARTITION WALL DETAIL  
SCALE: 1:100 MMS



5 TRUSS DETAIL  
SCALE: 1:100 MMS



3 STEEL GIRDER LAYOUT  
SCALE: 1:100 MMS



4 ROOF FRAMING PLAN  
SCALE: 1:100 MMS

CERTIFIED BY _____ CHL. SIGNATURE DATE: _____ (Date Issued)	RA no. 8285 Sec.23 Act. 4th of 2004 Drawing is classified as 'as per' category in water and fire resistance and is not to be used for any other purpose. It is not to be used for any other purpose. The drawing is not to be used for any other purpose. The drawing is not to be used for any other purpose. The drawing is not to be used for any other purpose.	PROJECT TITLE & LOCATION	APPROVED BY _____	DESIGN & DRAWN BY PATRICK A. GILMAN JR. HENRY	NO. _____ REVISIONS DATE _____	SHEET CONTENT AS SHOWN	SHEET NO. ST2 5
				CHECKED _____ DATE: _____	DATE: _____	DATE: _____	DATE: _____

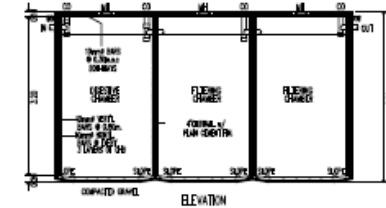
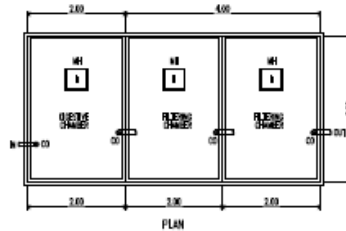
# Lay out of the Expanded MRF

## PLUMBING NOTES

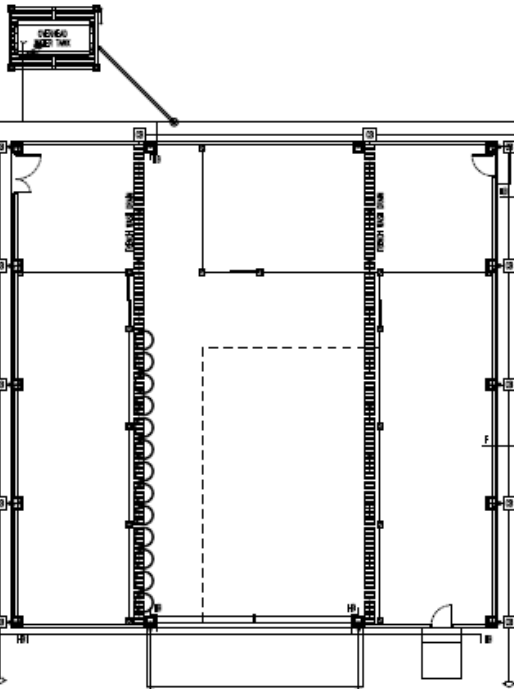
1. ALL WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A LICENSED SANITARY ENGINEER OR WAIVER PLUMBER IN STRICT ACCORDANCE WITH THESE SPECS. & BY THE SERVICES AS PROVIDED BY THE ORIGINAL PLUMBING CODE OF THE JURISDICTION.
2. INSTALL ALL FITTINGS & ACCESSORIES IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, MARKING PIPE FITTINGS.
3. ALL SUBSTRATE PIPES, PVC PIPES, & DRAINAGE PIPES SHALL HAVE A MINIMUM SLOPE OF 1/4".
4. FITTINGS AND ACCESSORIES MUST BE STANDARD OR EQUIVALENT.
5. ALL WORKING ON THIS SHEET ON SOIL, WATER, & DRAIN LINE SHALL BE PROVIDED BY REMOVING FITTING OR RECEIVERS PERMITTED.
6. INSTALL PLUMBING FITTINGS AS INDICATED BY DRAWING, EXCEPTING ALL BRACKETS, SEALS, FLANGES, & WELDS REQUIRED TO SUPPORT FITTINGS WORKING PLACE.
7. INSTALL LAMING PROVIDED FROM A LOCAL TO AVOID EASY ACCESS FOR CLEANING.
8. PROTECT PIPES BY APPROVAL, WORKING TO MAINTAIN PROPER CONDITIONS, REMOVING WORK DAMAGED & REPLACE BY PERFECT WORK WITH EXTRA CARE TO THE OWNER.
9. PROVIDE CORRECTLY LOCATED COUPLING OF PROPER SIZES UNDER PRESSURE, IN BRACE AND PROTECT FOR PROTECTIVE PIPING.
10. ALL PIPES SHALL BE CUT ACCURATELY TO MEASUREMENTS & WORKED INTO PLACE WITH SPRINGING OR FORCE.
11. ONE SHALL BE TAKEN AS NOT TO MEMBER STRUCTURAL PORTION OF THE BUILDING.

## LEGENDS :

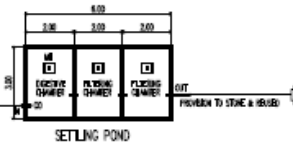
- F FINISH
- HL HOSE HUB
- DS DOWNSPUT
- CO COVER BRUSH
- LP LEADER PIPE
- SP SETTLING POND
- MM MAIN WALK
- CO CLEAN OUT
- 1/2" & 3/4" WOOD SUPPLY PIPE
- 1/2" & 3/4" SYNTHETIC PIPE LINE
- 1/2" & 3/4" SOIL PIPE LINE



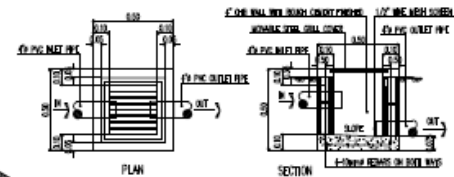
3 SETTLING POND DETAIL  
SCALE: 1:80 MTR



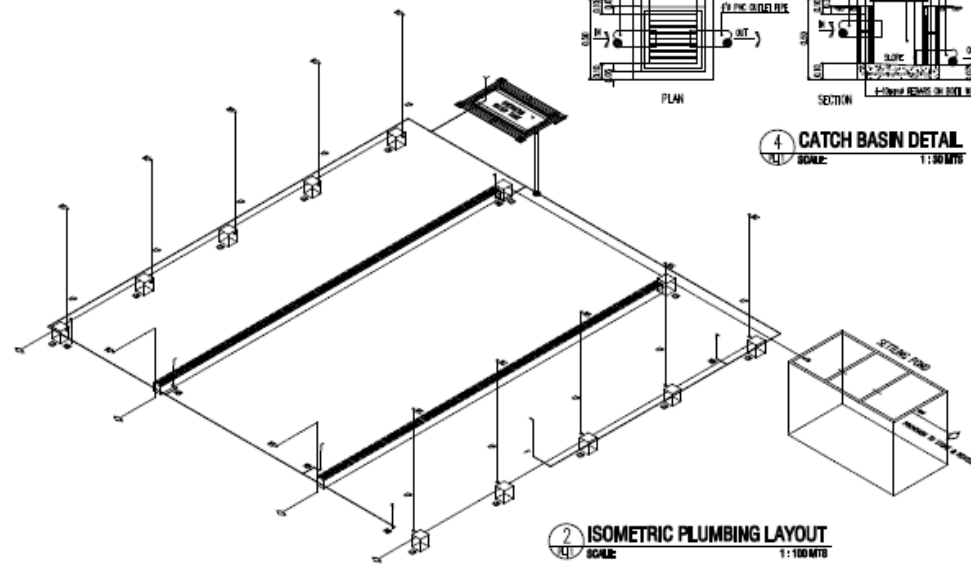
1 PLUMBING AND WASTE MANAGEMENT LAYOUT  
SCALE: 1:100 MTR



SETTLING POND



4 CATCH BASIN DETAIL  
SCALE: 1:80 MTR



2 ISOMETRIC PLUMBING LAYOUT  
SCALE: 1:100 MTR

CERTIFIED BY _____ SANITARY ENGINEER REG. NO. _____ EXP. DATE _____ PLACE: _____	SA No. 3265 Sec. 33 Rev. 04 of 2004 Drawing is based on the original approved in water and sewerage works and is not to be used for any other purpose without the approval of the Engineer in charge of the works.	PROJECT TITLE ALLOCATION _____	APPROVED BY _____	DESIGN & DRAWN BY PATRICK A. SALINAS JR. PROJECT	NO. _____	REVISIONS _____	DATE _____	SHEET CONTENT AS SHOWN	SHEET NO. PL1 6
				CHECKED BY _____	DATE _____	_____	_____	_____	

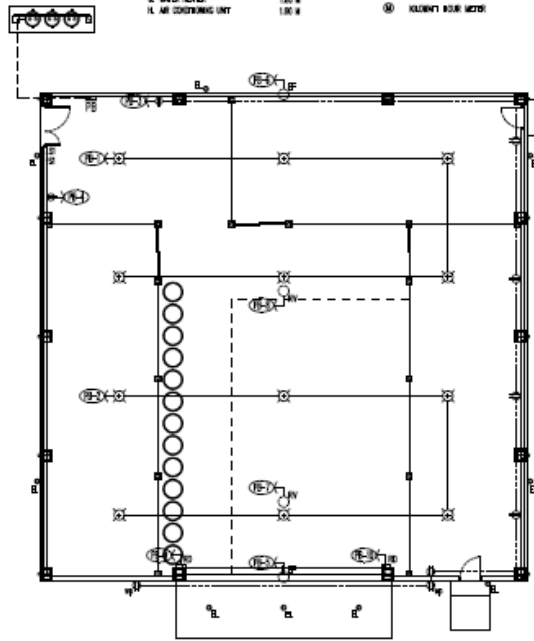
Annex A Layout of the Expanded MRF

ELECTRICAL GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE BY THE LATEST EDITION OF PHILIPPINE ELECTRICAL CODE.
  2. ALL MATERIALS TO BE USED SHALL BE NEW, FREE FROM DEFECTS AND APPROVED TYPE OF OWNER.
  3. MINIMUM SIZE OF WIRE SHALL BE 2.0mm<sup>2</sup> FOR LIGHTING OUTLET AND 3.0mm<sup>2</sup> FOR CONDUITANCE OUTLET.
- A. PANEL BOARD 1.00 M  
 B. SWITCHES 1.40 M  
 C. CONDUITANCE OUTLET 0.25 M  
 D. CATH/TEL 0.25 M  
 E. PANEL/REF 1.00 M  
 F. KILN/MT BURN METER 1.00 M  
 G. WATER METER 1.00 M  
 H. AIR CONDITIONING UNIT 1.00 M

ELECTRICAL SYMBOL

- RECEPTACLE OUTLET
- DUPLEX WEATHERPROOF OUTLET
- PENDANT TRACK LIGHTS
- SOLAR ESSENTIAL LIGHTS
- EXHAUST FAN
- ROTARY VALVE
- AUTOMATIC ROLL UP DOOR
- SINGLE SWITCH
- TWO GANG SWITCH
- THREE GANG SWITCH
- KILN/MT BURN METER
- CIRCUIT BREAKER
- PANEL BOARD
- CIRCUIT BREAKER
- SERVICE ENTRANCE

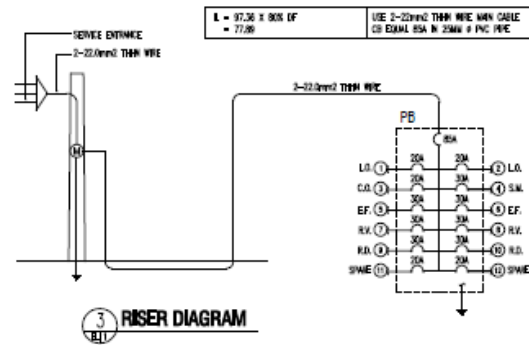


1 LIGHTING AND POWER LAYOUT  
SCALE 1:100 MTS

2 SCHEDULE OF ELECTRICAL LOADS

CIRCUIT NO.	DESCRIPTION	S1	S2	S3	NO. OF OUTLETS	TOTAL LOADS			SIZE OF WIRE	C.B. RATING		
						VA	W	AMP		TYPE	SIZE	AMP
1	LIGHTS, 400W/H	2			8	3000		13.04	2.0mm <sup>2</sup> PVC	2	20	50
2	LIGHTS, 400W/H				8	3000		13.04	2.0mm <sup>2</sup> PVC	2	20	50
3	CONVENIENCE OUTLET				8	1440		6.26	3.0mm <sup>2</sup> PVC	2	20	50
4	SHREDDER MACHINE				1	2000		8.70	3.0mm <sup>2</sup> PVC	2	30	50
5	INDUSTRIAL EXHAUST FAN				1	2239		9.73	3.0mm <sup>2</sup> PVC	2	30	50
6	INDUSTRIAL EXHAUST FAN				1	2239		9.73	3.0mm <sup>2</sup> PVC	2	30	50
7	ROOF VENTILATOR, 1.5HP				1	2239		9.73	3.0mm <sup>2</sup> PVC	2	30	50
8	ROOF VENTILATOR, 1.5HP				1	2239		9.73	3.0mm <sup>2</sup> PVC	2	30	50
9	ROLL UP DOOR				1	2000		8.70	3.0mm <sup>2</sup> PVC	2	30	50
10	ROLL UP DOOR				1	2000		8.70	3.0mm <sup>2</sup> PVC	2	30	50
11	SPARE									2	30	50
12	SPARE									2	30	50
TOTAL		2			27	22,396	230 V	97.36		2-22.0mm <sup>2</sup> THHN	1-3.0mm <sup>2</sup> TV WIRE	N 25mm <sup>2</sup> PVC

L = 97.36 x 80% IF = 77.89  
 USE 2-22.0mm<sup>2</sup> THHN WIRE MAIN CABLE  
 CB EQUAL 50A IN 25MM<sup>2</sup> PVC PIPE



3 RISER DIAGRAM

CERTIFIED BY	DATE: 0808 (see 22) Rev. 04/2024	PROJECT TITLE & LOCATION	APPROVED BY	DESIGN & DRAWN BY	NO.	REVISIONS	DATE	SHEET CONTENT	SHEET NO.
PROFESSIONAL ELECTRICAL ENGINEER				DATRICIA A. SALINAS JR.				AS SHOWN	ELI 7
CHECKED BY				PROJECT					
DATE				CHECKED					
				DATE					

**Annex B – Bill of Materials**

Project : PROPOSED MRF WAREHOUSE BUILDING  
 Location : BULAN, SORSOGON  
 Owner :

*PROJECT BILL OF MATERIALS AND LABOR COST*

**A. WAREHOUSE BUILDING**

		<i>Materials</i>		<i>Labor</i>	<i>TOTAL</i>
		Unit Cost	Cost	Cost	
<b>I. GENERAL REQUIREMENTS AND SITEWORKS</b>					
<b>MOBILIZATION WORK</b>					
1.00 lot	Mobilization & Equipments	0.00	100,000.00	0.00	100,000.00
	Sub-total		<b>100,000.00</b>	-	<b>100,000.00</b>
<b>TEMPORARY FACILITIES</b>					
1.00 lot	Layout & Batterboards	0.00	15,000.00	0.00	15,000.00
1.00 lot	Scaffolding and Formworks	0.00	65,000.00	0.00	65,000.00
	Sub-total		<b>80,000.00</b>		<b>80,000.00</b>
<b>EARTHWORKS</b>					
82.85 cu m	Excavation	0.00		28,997.50	28,997.50
60.00 cu m	Compaction	160.00	0.00	21,000.00	21,000.00
	Sub-total		-	<b>49,997.50</b>	<b>49,997.50</b>
<b>TOTAL FOR GENERAL REQUIREMENTS &amp; SITEWORKS</b>			<b>180,000.00</b>	<b>49,997.50</b>	<b>229,997.50</b>

**II. STRUCTURAL WORKS**

**Column Footing 1 (CF1)**

93.56 bags	cement	215.00	20,114.33	8,045.73	28,160.06
5.72 cu.m.	sand	650.00	3,716.21	1,486.49	5,202.70
11.43 cu.m.	gravel 3/4	1100.00	12,577.95	5,031.18	17,609.13
61.80 pcs	16mm Ø x 6m def. bars	405.00	24,948.00	9,979.20	34,927.20
8.47 kl	Ga. 16 GI wire	80.00	677.60	271.04	948.64
	Sub-total		<b>62,034.09</b>	<b>24,813.64</b>	<b>86,847.72</b>

**Pedestal Column 1 (PC1)**

79.70 bags	cement	215.00	17,134.43	6,853.77	23,988.20
4.87 cu.m.	sand	650.00	3,165.66	1,266.27	4,431.93
9.74 cu.m.	gravel 3/4	1100.00	10,714.55	4,285.82	15,000.37
92.40 pcs	16mm Ø x 6m def. bars	405.00	37,422.00	14,968.80	52,390.80
157.42 pcs	10mm Ø x 6m def. bars Tie bar	145.00	22,826.22	9,130.49	31,956.71
34.35 kl	Ga. 16 GI wire	80.00	2,748.04	1,099.22	3,847.26
	Sub-total		<b>94,010.90</b>	<b>37,604.36</b>	<b>131,615.27</b>

**Reinforced Concrete Tie Beam 1 (TB1)**

142.56 bags	cement	215.00	30,650.40	12,260.16	42,910.56
8.71 cu.m.	sand	650.00	5,662.80	2,265.12	7,927.92
17.42 cu.m.	gravel	1100.00	19,166.40	7,666.56	26,832.96
396.00 pcs	16mm Ø x 6m def. bars	405.00	160,380.00	64,152.00	224,532.00
220.00 pcs	10mm Ø x 6m def. bars Tie bar	145.00	31,900.00	12,760.00	44,660.00
84.70 kl	Ga. 16 GI wire	80.00	6,776.00	2,710.40	9,486.40
	Sub-total		<b>254,535.60</b>	<b>101,814.24</b>	<b>356,349.84</b>

**Wall Footing ( outside & inside wall )**

66.88 bags	cement	215.00	14,379.20	5,751.68	20,130.88
3.87 cu.m.	sand	650.00	2,516.80	1,006.72	3,523.52
7.74 cu.m.	gravel 3/4	1100.00	8,518.40	3,407.36	11,925.76
42.90 pcs	10mm Ø x 6m def. bars Tie bar	145.00	6,220.50	2,488.20	8,708.70
23.47 pcs	10mm Ø x 6m def. bars Tie bar	145.00	3,402.67	1,361.07	4,763.73
9.13 kl	Ga. 16 GI wire	80.00	730.03	292.01	1,022.05
	Sub-total		<b>35,767.60</b>	<b>14,307.04</b>	<b>50,074.64</b>

**5" Chb Wall ( outside wall - WF1 )**

2884.28 pcs	5" CHB	14.00	37,579.85	15,031.94	52,611.79
240.47 bags	cement	215.00	51,700.64	20,680.26	72,380.90
19.94 cu.m.	sand	650.00	12,958.82	5,183.53	18,142.35
62.47 pcs	10mm Ø x 6m def. bars vertical reinf.	145.00	9,058.21	3,623.28	12,681.49
83.94 pcs	10mm Ø x 6m def. bars horizontal reinf	145.00	12,171.97	4,868.79	17,040.75

6.87 kl	Ga. 16 GI wire	80.00	549.74	219.90	769.64
	Sub-total		<b>124,019.22</b>	<b>49,607.69</b>	<b>173,626.91</b>
<b>Platering - Plain Finish</b>					
170.98 bags	cement	215.00	36,756.85	51,459.60	88,216.45
28.49 cu.m.	sand	650.00	18,520.90	25,929.25	44,450.15
	Sub-total		<b>55,277.75</b>	<b>77,388.85</b>	<b>132,666.60</b>
<b>Slab on Fill ( 150mm thick - S1 )</b>					
616.78 bags	cement	215.00	132,807.68	53,043.07	185,650.75
37.69 cu.m.	sand	650.00	24,499.87	9,799.95	34,299.82
75.38 cu.m.	gravel 3/4	1100.00	82,922.63	33,169.05	116,091.68
423.03 pcs	12mm Ø x 6m def. Bars @0.40moc	240.00	101,527.56	40,611.02	142,138.58
58.17 kl	Ga. 16 GI wire	80.00	4,653.35	1,861.34	6,514.68
	Sub-total		<b>346,211.08</b>	<b>138,484.43</b>	<b>484,695.51</b>
<b>Roofing Frames</b>					
134 pcs	2"x 5" x 1.40mm c- purlins galvanized	950.00	127,300.00	50,920.00	178,220.00
20 pcs	angle bar 2"x2" x 6mm thk.	660.00	13,200.00	5,280.00	18,480.00
418.04 sqm.	pre-painted Tile Span Roofing .5mm	460.00	192,298.40	76,919.36	269,217.76
20 pcs	stainless gutter 26 x 24	1,150.00	23,000.00	9,200.00	32,200.00
20 pcs	pre-painted flashing 24" x .4mm	480.00	9,800.00	3,840.00	13,440.00
20 pcs	stainless fascia cover 24" x .4mm	580.00	11,600.00	6,000.00	17,600.00
15 gal	laquer thinner	220.00	3,300.00	1,320.00	4,620.00
15 gal	epoxy primer - gray	650.00	9,750.00	3,900.00	13,650.00
18 boxes	welding rod	1,800.00	32,400.00	12,960.00	45,360.00
1.00 lot	consumables	42,244.84	42,244.84	16,897.94	59,142.78
	Sub-total		<b>464,693.24</b>	<b>187,237.30</b>	<b>651,930.54</b>
<b>Walling Frames , Rib-Steel Panel &amp; Steel Mesh Panel</b>					
98 pcs	2"x 4"x 1.20mm tubular wall frames	1,100.00	107,800.00	43,120.00	150,920.00
259.34 sqm.	RRSpan Wall Siding .5mm	460.00	119,296.40	47,718.56	167,014.96
83 lm	steel wire mesh	650.00	53,950.00	21,580.00	75,530.00
10 pcs	1" dia. g.i. pipe	890.00	8,900.00	3,000.00	11,900.00
10 gal	laquer thinner	220.00	2,200.00	880.00	3,080.00
10 gal	epoxy primer - gray	650.00	6,500.00	2,600.00	9,100.00
6 boxes	welding rod	1,800.00	10,800.00	4,320.00	15,120.00
1.00 lot	consumables	15,472.32	15,472.32	6,188.93	21,661.25
	Sub-total		<b>324,918.72</b>	<b>129,407.49</b>	<b>454,326.21</b>
<b>Steel Column &amp; Trusses</b>					
10 pcs	12" x 10" x 6m I-Beam Column, build-up	32,000.00	320,000.00	128,000.00	448,000.00
5 pcs	14" x 10" x 6m I-Beam Column, build-up	36,000.00	190,000.00	76,000.00	266,000.00
5 pcs	12" x 10" x 6m I-Beam Trusses,build-up	32,000.00	160,000.00	64,000.00	224,000.00
11 pcs	14" x 10" x 6m I-Beam Trusses,build-up	36,000.00	418,000.00	167,200.00	585,200.00
18 pcs	12" x 8" x 6m I-Beam Girders & Ridge	28,000.00	504,000.00	201,600.00	705,600.00
20 pcs	16mm dia. Cross Bracing w/ turn buckle	950.00	19,000.00	7,600.00	26,600.00
18 pcs	12mm round bar	320.00	5,760.00	5,400.00	11,160.00
3 pcs	M.S. Plate 4' x 8' x 4mm	3,850.00	11,550.00	900.00	12,450.00
84 pcs	Machine Bolts	350.00	29,400.00	25,200.00	54,600.00
84 pcs	Anchor Bolts	250.00	21,000.00	25,200.00	46,200.00
50 gal	laquer thinner	220.00	11,000.00	4,400.00	15,400.00
40 gal	epoxy primer - gray	650.00	26,000.00	10,400.00	36,400.00
50 boxes	welding rod	1,800.00	90,000.00	36,000.00	126,000.00
1.00 lot	consumables	36,114.20	36,114.20	14,445.68	50,559.88
	Sub-total		<b>1,841,824.20</b>	<b>766,345.68</b>	<b>2,608,169.88</b>
<b>TOTAL FOR STRUCTURAL WORKS</b>			<b>3,603,292.41</b>	<b>1,527,010.71</b>	<b>5,130,303.12</b>

### III. ARCHITECTURAL WORKS

#### DOORS & JAMB

##### D1: Main Entrance

2 sets	4.00m.(w) x 4.50m.(h) Aluminum Roll Up Door	25,000.00	50,000.00	17,500.00	67,500.00
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##### D2: Hard Plastics Storage/ Leaming Corner

2 sets	0.85 x 2.15 Steel Panel Door with g.i. tubular Door Jamb	6,500.00	13,000.00	4,550.00	17,550.00
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##### D3: Shredder Area

1 set	Double Swing Steel Panel Door 1.00 x 2.15m & 0.6 x 2.15m	9,500.00	9,500.00	3,325.00	12,825.00
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		with g.i. tubular Door Jambs				
<b>D4: Shredder Area</b>						
3 sets	Double Swing Wire Mesh Door		5,500.00	16,500.00	5,775.00	22,275.00
	1.00 x 2.30m with g.i. Pipe Jambs					
	Sub-total			<b>89,000.00</b>	<b>31,150.00</b>	<b>120,150.00</b>
<b>WINDOWS</b>						
241.66 sq.ft.	aluminum framed fixed window			53,165.20	34,557.38	87,722.58
	w/ 1/4 thick clear glass					
	Sub-total			<b>53,165.20</b>	<b>34,557.38</b>	<b>87,722.58</b>
<b>PAINTING WORKS</b>						
<b>Exterior walls</b>						
152.02 sq.m.	(A) Permacoat Latex Paint			30404.00	25,083.30	55,487.30
<b>Interior wall</b>						
161.96 sq.m.	(B) Permacoat Latex Paint			32392.00	26,723.40	59,115.40
<b>Varnish</b>						
3.00 sets	Doors			3600.00	4,425.00	8,025.00
	Sub-total			<b>66,396.00</b>	<b>56,231.70</b>	<b>122,627.70</b>
<b>HARDWARES</b>						
3.00 sets	Stainless steel, knobset		940.00	2,820.00	987.00	3,807.00
12.00 pcs	loose pin hinges		145.00	1,740.00	609.00	2,349.00
	Sub-total			<b>4,560.00</b>	<b>1,596.00</b>	<b>6,156.00</b>
<b>TOTAL FOR ARCHITECTURAL WORKS</b>				<b>213,121.20</b>	<b>123,535.08</b>	<b>336,656.28</b>

#### IV. PLUMBING WORKS

##### PLUMBING ROUGH-IN

1 lot	Storm&SoilLines-neltex pipe&fittings			35,000.00	0.00	35,000.00
1 lot	Water Supply-fushiotherm pipe&fittings			10,000.00	0.00	10,000.00
	Sub-total			<b>45,000.00</b>		<b>45,000.00</b>

##### PLUMBING INSTALLATION COST

1.00 lot	PLUMBER Labor Cost		0.00	0.00	15,750.00	15,750.00
	Sub-total				0.00	15,750.00

<b>TOTAL FOR PLUMBING WORKS</b>				<b>45,000.00</b>	<b>15,750.00</b>	<b>60,750.00</b>
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#### V. ELECTRICAL WORKS

##### Conduits, Boxes & Fittings

32.00 pcs	2"x4" Utility Boxes		24.00	768.00	268.80	1,036.80
18.00 pcs	4"x4" Junction Boxes		28.00	504.00	176.40	680.40
60.00 pcs	1/2" neltex pvc pipe		65.00	3,900.00	1,365.00	5,265.00
45.00 pcs	3/4" neltex pvc pipe		98.00	4,410.00	1,543.50	5,953.50
1.00 lot	Other Accessories		2,586.00	2,586.00	905.10	3,491.10
	Sub-total			<b>12,168.00</b>	<b>4,258.80</b>	<b>16,426.80</b>

##### Wires & Cables

2.00 rolls	3.50 sq. m. TW		3,500.00	7,000.00	2,450.00	9,450.00
2.00 rolls	5.5mm sq Stranded Wires		5,500.00	11,000.00	3,850.00	14,850.00
5.00 lm	30 sq. m. TW		800.00	4,000.00	1,400.00	5,400.00
1.00 lot	Other Accessories		1,760.00	1,760.00	616.00	2,376.00
	Sub-total			<b>23,760.00</b>	<b>8,316.00</b>	<b>32,076.00</b>

##### Wiring Devices (Switch/Outlets)

8.00 sets	2 gang switch		157.00	1,256.00	439.60	1,695.60
2.00 sets	duplex convenience outlet weatherproof		550.00	1,100.00	385.00	1,485.00
10.00 sets	duplex convenience outlet		157.00	1,570.00	549.50	2,119.50
	Sub-total			<b>3,926.00</b>	<b>1,374.10</b>	<b>5,300.10</b>

##### Fixtures

5.00 sets	spotlight solar		1,200.00	6,000.00	2,100.00	8,100.00
12.00 sets	trofer pendant lighting		2,400.00	28,800.00	10,080.00	38,880.00
	Sub-total			<b>34,800.00</b>	<b>12,180.00</b>	<b>46,980.00</b>

##### Panelboards

2.00 pcs	20 ampere bolt on		450.00	900.00	315.00	1,215.00
2.00 pcs	30 ampere bolt on		450.00	900.00	315.00	1,215.00
1.00 pc	70 ampere bolt on-two pole		3,000.00	3,000.00	1,050.00	4,050.00
1.00 pc	panel board bolt on 10 branches-2pole		3,800.00	3,800.00	1,330.00	5,130.00
	Sub-total			<b>8,600.00</b>	<b>3,010.00</b>	<b>11,610.00</b>

<b>TOTAL FOR ELECTRICAL WORKS</b>	<b>83,254.00</b>	<b>29,138.90</b>	<b>112,392.90</b>
<b>TOTAL COST OF MATERIALS</b>	<b>4,124,667.61</b>		
<b>TOTAL COST OF LABOR</b>		<b>1,745,432.19</b>	
<b>WAREHOUSE BUILDING TOTAL COST</b>			<b>5,870,099.80</b>

Prepared by:

Approved by:

PATRICIO A. SALINAS JR.  
 ARCHITECT - 30886

OWNERS