



REPUBLIC OF THE PHILIPPINES
TECHNOLOGICAL UNIVERSITY OF THE PHILIPPINES
CAVITE CAMPUS

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October 7, 2022

OFFICE OF THE BIDS AND AWARDS COMMITTEE
SUPPLEMENTAL BID BULLETIN
NO. 2022 – 03

Project : **Construction of Micro-Farming Facility and Landscaping**
 Subject : Bid Bulletin No. 3
 Date : October 7, 2022

This Bid Bulletin No. 3 is issued to the prospective bidders and other concerned parties for information and consideration in the bidding process.

Particulars	Details
Painting of Perimeter Walls	Perimeter wall within the vicinity of the landscaping area includes painting works
Measurements of chairs and tables and bris o leil shed	See attached detailed plan for exact measurements. Bris o leil Shed – 51 pcs as stated in Bill of Quantity
Water Pump	0.5 hp
Plants	In cases of unavailability, propose alternative subject to approval of BAC 1 year warranty
Green house (Micro-Farming)	Frame encased with 200 microns plastic Insect Net Leveling of flooring Gravel size 1/4
SLCC	General Construction

For the guidance and information of all concerned.

Prepared by:

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 BAC Chairperson
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GENERAL SPECIFICATIONS

A. PROPOSED CONSTRUCTION OF MICRO-FARMING FACILITY AND LANDSCAPING

I. MOBILIZATION

Mobilization shall include transportation to the site of Contractor's plant, materials, equipment, employees and furnishing of contractor's temporary facilities.

II. CLEARING/ DEMOBILIZATION

The building site shall be leveled according to the plans and cleared of rubbish, roots and other perishable and objectionable matters to a suitable subgrade. All unsuitable materials shall be removed from the building site as may be directed by the Engineer in-charge of the construction. Also, if there is any demolition, it must be in accordance with the command of the engineer in-charge.

Demobilization includes dismantling and removal from the site of Contractor's plant, materials and equipment and all temporary facilities. Demobilization shall also include clean-up of the site after completion of the Contract Work as approved by the PMO and transportation from the site of Contractor's employee.

III. EXCAVATION

All excavation shall be made to the grade indicated in the drawings where the building site is covered with any kind of fill. The footing and all structural excavations should be made deeper until the stratum for safe bearing capacity of the soil is safe. All excavations shall be inspected and approved before pouring any concrete, laying underground services for placing select fill materials.

IV. BACKFILLING

After concrete for foundation is hard enough to resist pressure resulting from fills, backfilling may then be done. Materials excavated may be used for backfilling. Fills and backfilling shall be placed in layers not exceeding six (6) inches in thickness and shall be thoroughly compacted by wetting, tamping and rolling. Specified backfilling includes the use of garden soil spread throughout the plants and shrubs as ground cover.

V. CONCRETE/MASONRY WORKS

All concrete works shall be done according to standard specifications for concrete, in accordance with the National Building Code.

1. CEMENT

Portland cement shall conform to the "Standard Specifications for Portland Cement" (ASTM C-150).

2. CONCRETE AGGREGATES

Concrete aggregates shall be well graded, clean and hard particles of gravel crushed rocks.

- a. Fine aggregates shall be white sand or any washed sand of approve type as approved by the PMC.
- b. Coarse aggregates shall be of first class machine crushed stone gravel. Coarse aggregate shall be well graded as to size ranging from 20 mm in size for slabs, beams and columns and 25 mm for foundation works and footings.

3. WATER

Water to be used in mixing concrete shall be clean and free from injurious amounts of oil, acids, alkali, organic materials and other deleterious substances.

4. REINFORCING STEEL

All reinforcing steel bars to be used shall be new, and free from rust, oil, defects, grease, or-kinks.

All rebars shall be billet steel, structural grade, ASTM A-15 deformed bars, $F_y = 230 \text{ MPa}$

All column dowels shall be extended by a minimum of 1 meter from the second floor slab with epoxy primer coating.

5. QUALITY OF CONCRETE

Strength of concrete shall be attained after twenty-eight (28) days with a compressive stress of 20.7 MPa for structural components such as footing, columns, beams and 17.24 MPa for slab on fill.

Proportioning of concrete shall be as follows:

- a. Class "A" (1:2:4) for all concrete footings, columns, and beams.
- b. Class "B" (1:2½ :5) for all concrete slabs on fill.
- c. Mixtures of 1:3 and 1:5 are to be used for plastering and mortar respectively.

6. CONSISTENCY, MIXING, DEPOSITING AND CURING OF CONCRETE

a. Concrete shall be machine mixed and be done in a batch mixer of approved type and will ensure uniform distribution of materials throughout the mass. Job mixing will be allowed only when approved by the IDO and with closed supervision.

b. Continuous and monolithic pouring is preferred for all slabs and beams. Whenever possible, no construction joint shall be allowed on any parts of the structure without the approval of the engineer in charge of construction. Before depositing concrete, debris shall be removed from the space occupied by the concrete and forms shall be thoroughly wetted and buttered.

c. Exposed surfaces of concrete shall be protected from premature drying by covering them with canvass, earth sand and other satisfactory materials and kept thoroughly wetted for a period of at least 10 days after being deposited.

7. MASONRY - All concrete hollow blocks shall be sound and free from cracks or other defects that would interfere with the proper placing of the unit or impair the strength of construction. Sizes of blocks shall be 5"x8"x16" unless otherwise specified.

All concrete hollow blocks shall be laid plumb, true to the line and in accurately spaced courses, and shall reveal corners plumb and true and with each course breaking joint halfway with the course below. Units shall be wetted before laying. Joint shall be 3/8". The mortar on both the horizontal and vertical joints shall be buttered on the block at the time of laying and not flush or grouted in place. Reinforcement shall consist of 12mm vertical bars at 0.80 meters on center and 12mm horizontal bars placed at every third layer. Reinforcing bars shall have a lap of 40 bar diameter. All cells of concrete hollow blocks shall be filled with 1:5 concrete mortar.

VI. FORMS/SCAFFOLDINGS WORKS

Use steel scaffoldings or any approved equal for all scaffolding works for concreting, carpentry, steel works and other elevated portions of the building.

VII. ELECTRICAL WORKS

All works shall comply with the provisions of the latest approved edition of the Philippine Electrical Code.

1. MATERIALS

- a. Feeder wiring shall be rigid steel conduit (RSC) and for branch circuit, it shall be made of PVC
- b. Minimum size of conductor shall be 3.5 mm² THWN+1.2mm² rated for 230 V and conduit shall be 15 mmø PVC trade size unless otherwise noted or indicated.
- c. All switches, convenience outlets and plates shall be National or any approved equal.
- d. All convenience outlets to be used shall be waterproof duplex.
- e. Circuit breaker shall be with its total number of circuits as indicated on the plan.
- f. Panel board shall be bolt-on type

2. INSTALLATION

No branch circuit running shall have a load of more than 80% of its rating. Boxes shall be provided if necessary although not seen in the layout. All splices shall be properly insulated and shall be done only inside boxes. Wall switches shall be installed 1.37m (4' 6") and convenience outlets at 0.30m (12") above floor unless otherwise specified or shown in the plans.

VIII. PLUMBING

1. Ceramic tiles (16"x16") shall be used for fountains and shall be as approved by the engineer.

2. Roughing-in for pipes shall be carried along with the building construction. Correctly located openings of proper sizes shall be provided where required in the walls and floors for the passage of pipes. All items to be embedded in concrete shall be thoroughly clean and free from dust scale and paint. All works shall be done in accordance with the National Plumbing Code.
3. Check installed rough-in pipe (sewer and water supply) before the installation of fixtures.
4. Pumps for TUPC façade should be 0.5hp submit material approval.

MATERIALS:

- a. Use ½" (12mm) PVC pipe for water lines and ¾" (18mm) PVC pipe for riser or any approved equal as approved by the supervising Engineer.
- b. Use PVC fittings or any approved equivalent.
- c. Use 2" ,3" and 4" Neltex PVC pipe for waste lines or any approved equal.

IX. STRUCTURAL STEEL WORKS

This work shall consist of furnishing, fabricating, erecting and painting structural steel used to complete the structures in accordance with the plans and the specifications.

1. MATERIALS

- All structural steel angle bars and flat bars shall conform to ASTM A-36 (fy = 36000 psi).
- All Galvanized Iron (GI) pipes should be class A.
- Steel use for brise soleil shall be 2"x6"x1.2mm.

2. FABRICATION

All fabrication including workmanship, cutting, assembling, welding, finishing and tolerances shall be accomplished in accordance with the National Building Code and the National Structural Code of the Philippines. Welding electrodes shall be E 70 XX series.

3. ERECTION

In no case shall any part of the load of a steel superstructure be transferred to a "Concrete Masonry" substructure before the 7th day after the date on which the pouring of the substructure unit is completed.

X. FLOOR / WALL FINISHES

EXTERIOR:

DESCRIPTION	LOCATION
Painted plain cement plaster finish	Exterior wall
Decorative stone	Entrance(post part from natural ground floor to top)

XI. FINISHING HARDWARES

All hardware shall be suitable to the services required to fully equip all satisfactions of doors, windows, toilet, etc. Whenever available, locally made meeting these specifications are preferred although equivalent imported brands may be accepted and used. Lockset, door hinges, showerhead, shower valve, faucets, hose bib, etc. shall be based on the recommendation of the engineer or the owner.

XII. PAINTING

PREPARATION

1. All surfaces to be painted shall be examined carefully before beginning any work and see that all work of other trades or subcontractors are installed in workmanlike condition to achieve paint, stain or particular finish.
2. Before proceeding with any painting or finishing, thoroughly clean, sand, and seal if necessary by removing from all surfaces all dust, dirt, grease, or other foreign substances

which would affect either the satisfactory execution or permanency of the work. Such cleaning shall be done after the general cleaning executed under the separate division of the work.

3. Only skilled painters shall be employed in the work. All workmanship shall be executed in accordance with the best acceptable practices.
4. Finished hardware, lighting fixtures, plates and other similar items shall be removed by workmen skilled in these trades, or otherwise protected during painting operation or reposition upon completion of each space.
5. Neither paint nor any other finished treatment shall be applied over wet or damp surfaces. Allow at least two (2) days from drying the preceding coat before applying the succeeding coat.
6. Begin work only when resident IDO representative inspected and approved prepared surface otherwise no credit for coat applied shall be given. The contractor shall assume responsibility to recoat the work in question. Notify IDO when the particular coat applied is complete, ready for inspection and approval.

Schedule of painting shall be as follows:

1. All masonry wall cement-finished surface – one (1) coat neutralizer and two (2) coats of latex paint.
2. Fiber cement surface ceiling or wall partitions – two (2) coats of semi-gloss enamel.
3. Wooden doors and door jambs shall be coated by putty.
4. Steel and metal works – one (1) coat epoxy primer and two (2) coats quick-drying enamel.
5. The paint to be used shall be Boysen or any approved equal.

XIII. MISCELLANEOUS

All concrete chairs shown in the drawing shall be painted and able to resist weather change and thermal expansion that will cause it to crack or fail. Refer for the existing sample in front of the Research and Extension Office.

XIV. PLANTS

Use the images as reference for the landscaping. Specifications may vary depending on the availability of such plants. All grass and plants shall have one (1) year warranty. If in case the mentioned plants is not available, submit replacement plants for approval.



Dwarf Pandakaki Plant

Common Name: Dwarf Silver Pandakaki and Dwarf Green Pandakaki.
Scientific Name: *Tabernaemontana pandacaqui*.



Picara Plant

Common Name: Picara/ Chinese Croton
Scientific Name: *Excoecaria cochinchinensis*



Boxwood

Common Name: Buxus/ Boxwood
Scientific Name: *Buxus sempervirens*



Photinia

Common Name: Chinese photinia or hawthorn
Scientific Name: *Photinia serratifolia*



San Francisco Plant
Common Name: Tropical croton plant
Scientific Name: *Codiaeum variegatum*



Dwarf Holly
Common Name: Chinese photinia or hawthorn
Scientific Name: *Photinia serratifolia*



Keyhole Pavers



Solar Garden Lamps



Waterproof Lights



Spotlight Lights



Pin Lamp

Prepared by:


Engr. CARLITO R. SAPIDA
IDO - Chairperson



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Carlos Q. Trinidad Ave., Salawag, Dasmariñas City, Cavite

**PROGRAM OF WORK FOR THE PROPOSED
CONSTRUCTION OF MICROFARMING FACILITY AND LANDSCAPING**

SCOPE OF WORKS

I. MOBILIZATION AND DEMOBILIZATION WORKS

Clearing, Delivery of materials and equipment, Cleaning and removing of debris
Soil scraping and back filling placing of garden soil

MATERIALS:

DESCRIPTION	QTY UNIT	UNIT PRICE		AMOUNT
Clearing and Back fill	1 lot	/lot	P	-
Garden soil	160 cu.m	/cu.m	P	-
				-
		MATERIAL COST	P	-
		LABOR COST	P	-
		DIRECT COST	P	-

II. CONCRETING AND MASONRY WORKS

CHB laying and plastering of the interior and exterior walls and the likes
installation of tiles and the likes, canopies, concrete benches

MATERIALS:

DESCRIPTION	QTY UNIT	UNIT PRICE		AMOUNT
Cement	600 bags	/bag	P	-
water proofing agent (sahara)	7 bags	/bag	P	-
Sand	27 cu.m	/cu.m	P	-
Gravel	23 cu.m	/cu.m	P	-
Concrete Pavers	95 sq.m	/sq.m	P	-
6" thk CHB	1350 pcs	/pc	P	-
4" thk CHB	400 pcs	/pc	P	-
		MATERIAL COST	P	-
		LABOR COST	P	-
		DIRECT COST	P	-

III. REINFORCEMENT BAR WORKS

Reinforcement for CHB laying (dowels) and the likes

MATERIALS:

DESCRIPTION	QTY UNIT	UNIT PRICE		AMOUNT
16mm dia.	60 pcs	/pc	P	-
12mm dia.	31 pcs	/pc	P	-
10mm dia.	120 pcs	/pc	P	-
Tie wire (no. 16)	3 roll	/roll	P	-
		MATERIAL COST	P	-
		LABOR COST	P	-
		DIRECT COST	P	-

IV. FORMS/SCAFFOLDING WORKS

Installation of scaffolding on all concreting, plastering, ceiling and painting works
Installation of forms on all concreting works, canopies

MATERIALS:

DESCRIPTION	QTY	UNIT PRICE		AMOUNT
1/2" x 4' x 8' plywood	20	pcs	P	-
2" x 2" x 10' coco lumber	15	pcs	P	-
2" x 3" x 10' coco lumber	15	pcs	P	-
H- frame rental/Pipe scaffolds	30	pcs	P	-
cwn 1 1/2"	20	kg	P	-
cwn 2"	20	kg	P	-
cwn 3"	20	kg	P	-
		MATERIAL COST	P	-
		LABOR COST	P	-
		DIRECT COST	P	-

V. ELECTRICAL WORKS

Installation of electrical pipes,wires and fixtures

MATERIALS:

DESCRIPTION	QTY UNIT	UNIT PRICE	AMOUNT
15mm dia electrical conduit	90 pcs	/pc	-
20mm dia electrical conduit	20 pcs	/pc	-
flexible hose	15 ln/m	/ln.m	-
15mm coupling	30 pcs	/pc	-
15mm elbow	30 pcs	/pc	-
20mm coupling	20 pcs	/pc	-
20mm elbow	20 pcs	/pc	-
3.5mm ² THWN Wire	2 box	/box	-
5.5mm ² THWN Wire	2 box	/box	-
Utility box	35 pcs	/pc	-
junction box	40 pcs	/pc	-
Two gang switch	2 set	/set	-
Convenience outlet	2 set	/set	-
Panel box	1 pcs	/pc	-
30A Circuit Breaker	1 pcs	/pc	-
Cove light (led strip light)	1 set	/set	-
waterproof light	3 pcs	/pc	-
circular lamp (pin light)	6 set	/pc	-
spot light	4 pcs	/set	-
100 watts solar street lamp	3 pcs	/set	-
solar post	2 pcs	/pcs	-
Solar garden lamp	20 pcs	/set	-
Consumables	1 lot	/lot	-
		MATERIAL COST	P -
		LABOR COST	-
		DIRECT COST	P -

VI. STEEL WORKS

Fabrication and installation of brise soleil

Fabrication and Installation of greenhouse structure and the likes

MATERIALS:

DESCRIPTION	QTY UNIT	UNIT PRICE	AMOUNT
G.I. pipe 1 1/2" dia	27 pcs	/set	P -
G.I. pipe 1 " dia	60 pcs	/set	P -
G.I. pipe 3/4" dia	50 pcs	/set	P -
door steel hinges	4 set	/set	P -
Flat bar 3/4" x 1/8"	45 pcs	/set	P -
2" x 6" Tubular	51 pcs	/lot	P -
welding rod	10 kg	/kg	P -
Consumables	1 lot	/lot	P -
		MATERIAL COST	P -
		LABOR COST	-
		DIRECT COST	P -

VII. PLUMBING WORKS

Installation of plumbing fixtures

Plumbing layout shower curtain fountain

MATERIALS:

DESCRIPTION	QTY UNIT	UNIT PRICE	AMOUNT
Water Pipe lay out	1 lot	/lot	P -
Water pump	1 set	/set	P -
		MATERIAL COST	P -
		LABOR COST	-
		DIRECT COST	P -

VIII. FINISHING WORKS/TILE WORKS

Installation of tiles on flooring, façade decostone

water proofing

MATERIALS:

DESCRIPTION	QTY UNIT	UNIT PRICE	AMOUNT
20" x 20" ceramic floor tiles (fountain)	60 pcs	/pc	P -
Decorative stone (façade)	75 sq.m	/sq.m	P -

Water proofing (reservior)	2 gallon	/gallon	P	-
Tile adhesive	7 bags	/bag	P	-
Tile grout	2 kgs	/kg	P	-
			MATERIAL COST	P
			LABOR COST	-
			DIRECT COST	P -

IX. PAINTING WORKS

Painting of exterior wall, steel works painting
 Painting of framing brise soleil

MATERIALS:

DESCRIPTION	QTY	UNIT	UNIT PRICE		AMOUNT
Epoxy primer	10	gals	/gal	P	-
Flat latex paint	20	tins	/tin	P	-
Elastomeric paint	20	tins	/tin	P	-
Enamel paint	10	tin	/tin	P	-
Polyester body filler(polituff)	20	gal	/gal	P	-
Concete neutralizer	15	gals	/gal	P	-
Skim Coat	10	bags	/bag	P	-
Paint thinner	5	gals	/gal	P	-
Paint brush 2"	3	pcs	/pcs	P	-
Paint brush 3"	3	pcs	/pcs	P	-
Paint roller	3	pcs	/pcs	P	-
Consumables	1	lot	/lot	P	-
			MATERIAL COST	P	-
			LABOR COST	-	-
			DIRECT COST	P -	

X. MISCELLANEOUS

full Grown Plants and decorations, green house net, green house plastics
 adobe stone and the likes

MATERIALS:

DESCRIPTION	QTY	UNIT	UNIT PRICE		AMOUNT
adobe stones (random big size)	50	pcs	/pcs	P	-
concrete stone chairs and table	5	set	/sets	P	-
boxwood plant	170	pcs	/pcs	P	-
dwarf holly	80	pcs	/pcs	P	-
picara	10	pcs	/pcs	P	-
photinia	45	pcs	/pcs	P	-
pandakaki	45	pcs	/pcs	P	-
san francisco	10	pcs	/pcs	P	-
frog grass	550	sq.m	/sq.m	P	-
green house net 4m x 60 (32x32 mesh insect net)	6	roll	/roll	P	-
green house plastic 11.5x 25m (200 mc)	4	roll	/roll	P	-
			MATERIAL COST	P	-
			LABOR COST	P	-
			DIRECT COST	P -	

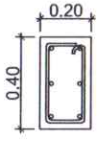
A TOTAL DIRECT COST	P	-
B OVERHEAD/CONTIGENCY/MISC		-
C CONTRACTOR'S PROFIT		-
EVAT (12%)	12%*(A+B+C)	-
TOTAL ESTIMATED PROJECT COST	P -	

Prepared by:


 Engr. Ramon Christopher H. Escalona, PICE,SO2
 IDO-Chairperson

Approved by:

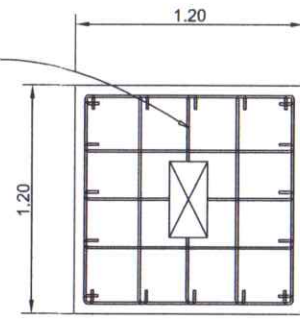

 Myrna M. Tejera, Ph.D.
 Campus Director



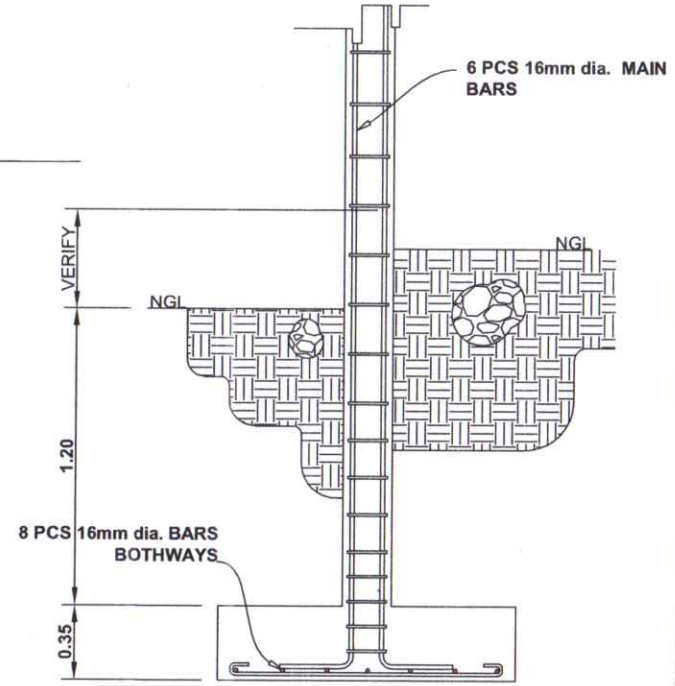
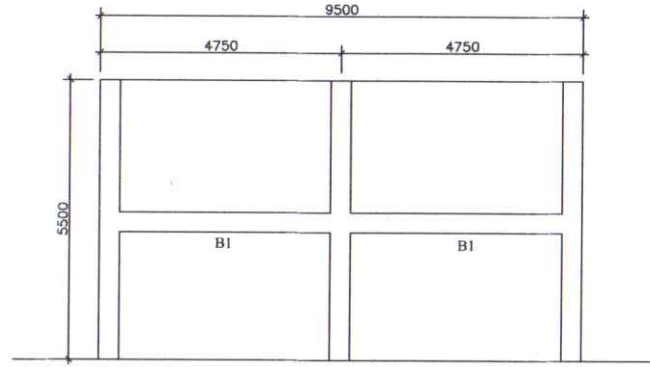
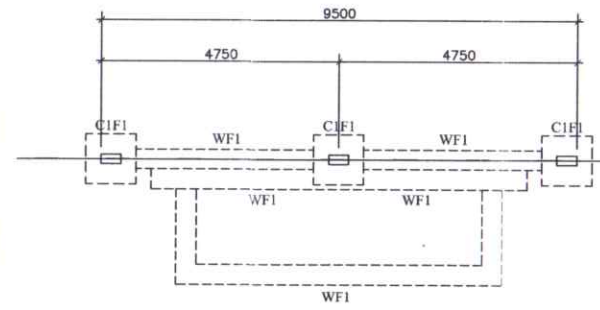
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LATERAL TIES 5
@ 0.5 mts. 5 @ 0.10 mts.
REST @ .20 mts. on center

C1 SCHEDULE OF COLUMN
SCALE NTS.

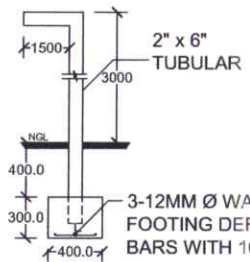
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BARS BOTHWAYS



FOOTING 1



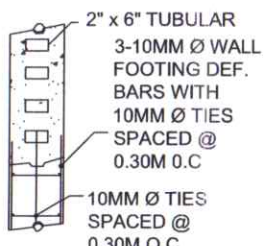
C1, SECTION
COLUMN FOOTING DETAILS
SCALE NTS.



WF-2



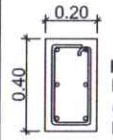
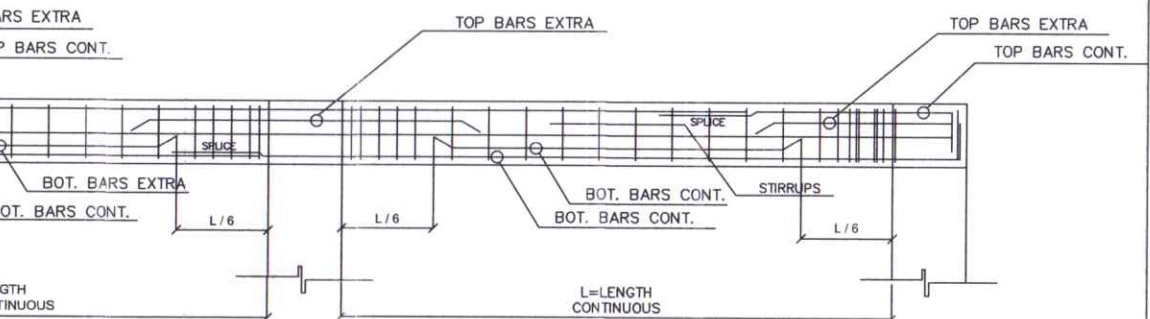
WF-1



WF-2



WF-1



REBARS 6 PCS 16mm dia.
LATERAL TIES 5
@ 0.5 mts. 5 @ 0.10 mts.
REST @ .20 mts. on center

B1 SCHEDULE OF COLUMN
SCALE NTS.



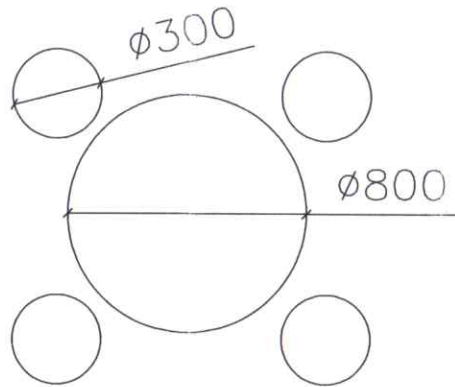
PROJECT TITLE:
PROPOSED CONSTRUCTION
OF MICRO-FARMING FACILITY
AND LANDSCAPING

PROPOSED BY:
Engr. Ramon Christopher H. Escalona
IDP CHAIRMAN

APPROVED BY:
Myrna M. Tejera, Ph.D.
CAMPUS DIRECTOR

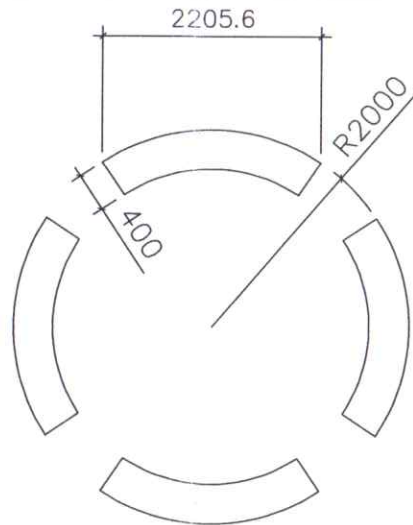
DESIGNED BY:
IDO - CAVITE
ACAD BY:
OJT 2022

SHEET NO.
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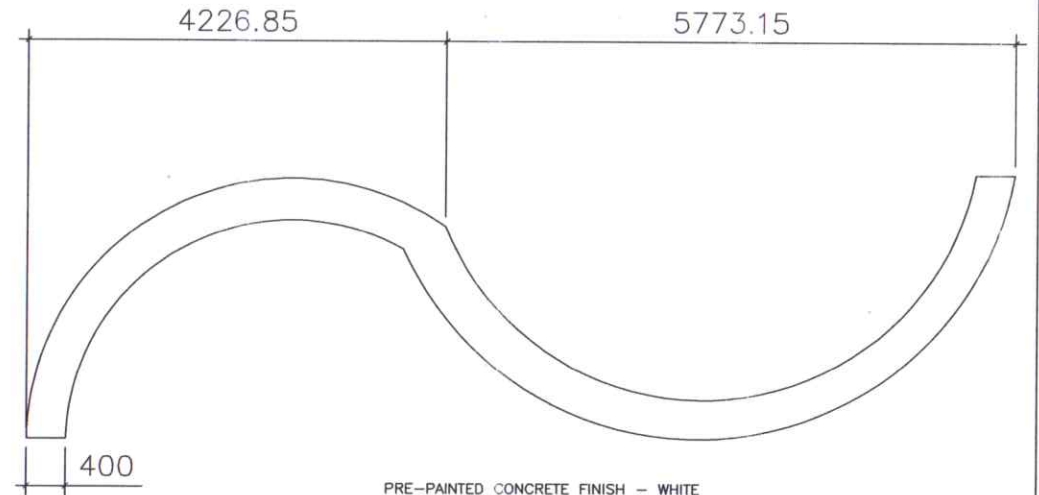
PRE-PAINTED CONCRETE
FINISH - RED

DETAIL A- PLAN



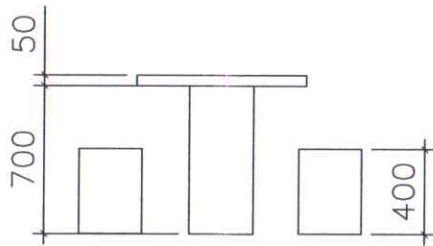
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FINISH - WHITE

DETAIL B- PLAN

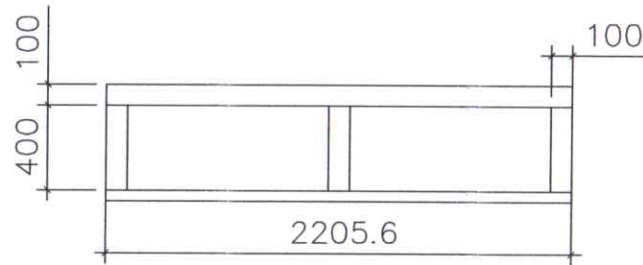


PRE-PAINTED CONCRETE FINISH - WHITE

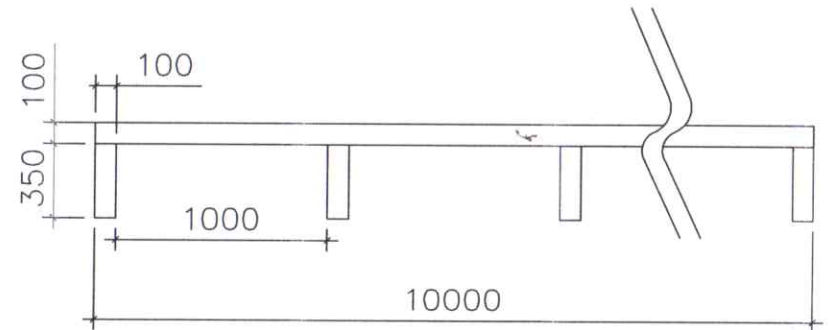
DETAIL C- PLAN



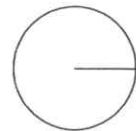
DETAIL A- ELEVATION



DETAIL B- ELEVATION



DETAIL C- ELEVATION



PROPOSED TUPC LANDSCAPING & MICRO-FARMING FACILITY
CONCRETE SEAT DETAILS
NOT TO SCALE



PROJECT TITLE:
PROPOSED CONSTRUCTION
OF MICRO-FARMING FACILITY
AND LANDSCAPING

PROPOSED BY:
Engr. Ramon Christopher H. Escalona
IDO CHAIRMAN

APPROVED BY:
Myrna M. Tejada, Ph.D.
CAMPUS DIRECTOR

DESIGNED BY:
IDO - CAVITE
ACAD BY:
OJT 2022

SHEET NO.
11
A