



REPUBLIC OF THE PHILIPPINES  
**DEPARTMENT OF AGRICULTURE**  
WESTERN VISAYAS  
PAROLA, ILOILO CITY

**DETAILED ENGINEERING DESIGN PLANS**  
**ESTABLISHMENT OF BRGY. MATAB-ANG SOLAR  
POWERED IRRIGATION SYSTEM (SPIS)**

BRGY. MATAB-ANG, TALISAY CITY, NEGROS OCCIDENTAL

**HVCDP 2025**

Submitted by:

  
**ENGR. MOISES D. MANA-AY**  
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Chief, RAED

Recommending Approval:

  
**MARIA THERESA T. SOLIS**  
LIC RTD for Operations

Approved by:

  
**DE R. ARPJA**  
Regional Executive Director



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## TECHNICAL DATA

PUMP:	5 HP
INVERTER/ CONTROLLER:	5.5KW
SOLAR ARRAY:	12 MONOCRYSTALLINE SOLAR PANELS- 320 WP/ PANEL
TOTAL POWER:	6,600 WP/ 480VAC
DISCHARGE PIPE:	1.5M
DELIVERY PIPE:	25M
DISCHARGE:	248.75 CUM./DAY
SERVICE AREA:	3 HAS

## THIS SITE



## VICINITY MAP MAP

SCALE: NTS

Item No.	Scope of Works	Quantity	Unit
A	Temporary Facility/Field Office		
A.1 (a)	Provision of Temporary Facility (Rental Basis)	1.00	lot
B.	GENERAL REQUIREMENTS		
B.1	Project Billboard, Marker, Signboard & COA Billboard	1.00	lot
B.2	Mobilization/Demobilization	1.00	lot
C.	DRILLING WORKS		
C.1	Well Construction (with groundwater pumping test)	1.00	lot
D.	SOLAR MOUNTING STRUCTURES AND ACCESSORIES		
D.1	Structural Excavation	3.39	cum
D.2	Structural Backfill	0.40	cum
D.3	Leveling Course	0.22	cum
D.4	Reinforcing Steel Bars	105.16	kgs
D.5	Formworks	7.69	sqm
D.6	Concrete Works (Class A)	0.73	cum
D.7	Solar Power Module Mounting Structure (with inverter cage)	1.00	lot
D.8	Solar Power Module (6600 Wp. Minimum)	1.00	lot
D.9	Inverter and Controller 5.5 KW w/ accessories	1.00	unit
D.10	Submersible Pump (5hp)	1.00	unit
D.11	Pipes Fittings and Other Accessories	1.00	lot
E.	ELEVATED TANK		
E.1	Structural Excavation	4.00	cum
E.2	Structural Backfill	2.78	cum
E.3	Leveling Course	0.26	cum
E.4	Reinforcing Steel Bars	93.62	kgs
E.5	Formworks	7.69	sqm
E.6	Concrete Works Class A	1.24	cum
E.7	Tank Peel and Frame, Water Tank	1.00	lot

## SCOPE OF WORKS

SCALE: NTS

## LOCATION MAP

SCALE: NTS



## GENERAL NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
2. ALL ELEVATIONS ARE IN METERS.
3. METAL STEEL CONNECTIONS MUST BE FULL WELD.
4. ALL EXPOSED STEEL WATERBULBS MUST BE PAINTED WITH TWO COATS OF EPOXY PRIMER (GRAY), REPAIRING BARE STEEL, OR DEFORSED BULLET-STEEL, OF AUTOMATICALLY GRADE (ASTM A153 OR AS BY GRADE 40).
5. CONCRETE COVER FOR REINFORCEMENT SHALL NOT BE LESS THAN THE FOLLOWING:
  - a. FROM THE GROUND CONTACT SURFACE OF CONCRETE FOOTINGS AND OTHER MEMBERS WHICH CONCRETE IS DEFERRED AGAINST THE GROUND, USE 75MM.
  - b. FROM CONCRETE SURFACE EXPOSED TO WATER FLOW OR BE IN CONTACT WITH THE GROUND AFTER REMOVAL OF FORMS, USE MINIMUM 75MM.



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ESTABLISHMENT OF BRGY. MATIANG SOLAR POWERED IRRIGATION SYSTEM  
BRGY. MATIANG, TALISAY CITY  
NEPROM-000-000000

• Bidding  
• Design  
• Supervision

ENGR. DARWIN O. FLORDES  
Project Engineer

ENGR. YVONNE R. BARRERA  
Project Engineer

ENGR. NORA B. BARRERA  
Project Engineer

ENGR. NORA B. BARRERA  
Project Engineer

ENGR. NORA B. BARRERA  
Project Engineer

ENGR. NORA B. BARRERA  
Project Engineer





**LEGEND**

	TANK
	ROAD
	CREEK
	SOLAR PANEL
	PROPOSED SOURCE
	2" GI PIPE S40

**FARM PLAN**  
SCALE NTS

ESTABLISHMENT OF BRGY.  
MATAB-ANG SOLAR POWERED  
IRRIGATION SYSTEM  
BRGY. MATAB-ANG, TALISAY CITY,  
NEEDS IDENTIFICATION

ENGR. JOY O. FLORES  
Civil Engineer

ENGR. YVONNE GRACIA SUB  
Civil Engineer

ENGR. ANDREA M. MANAY  
Civil Engineer

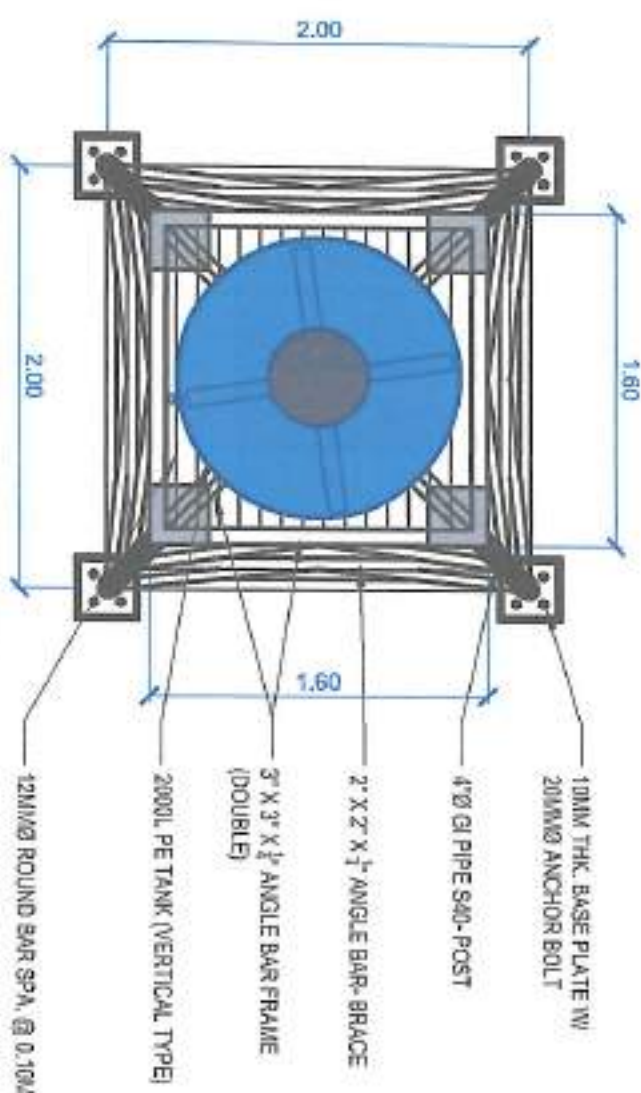
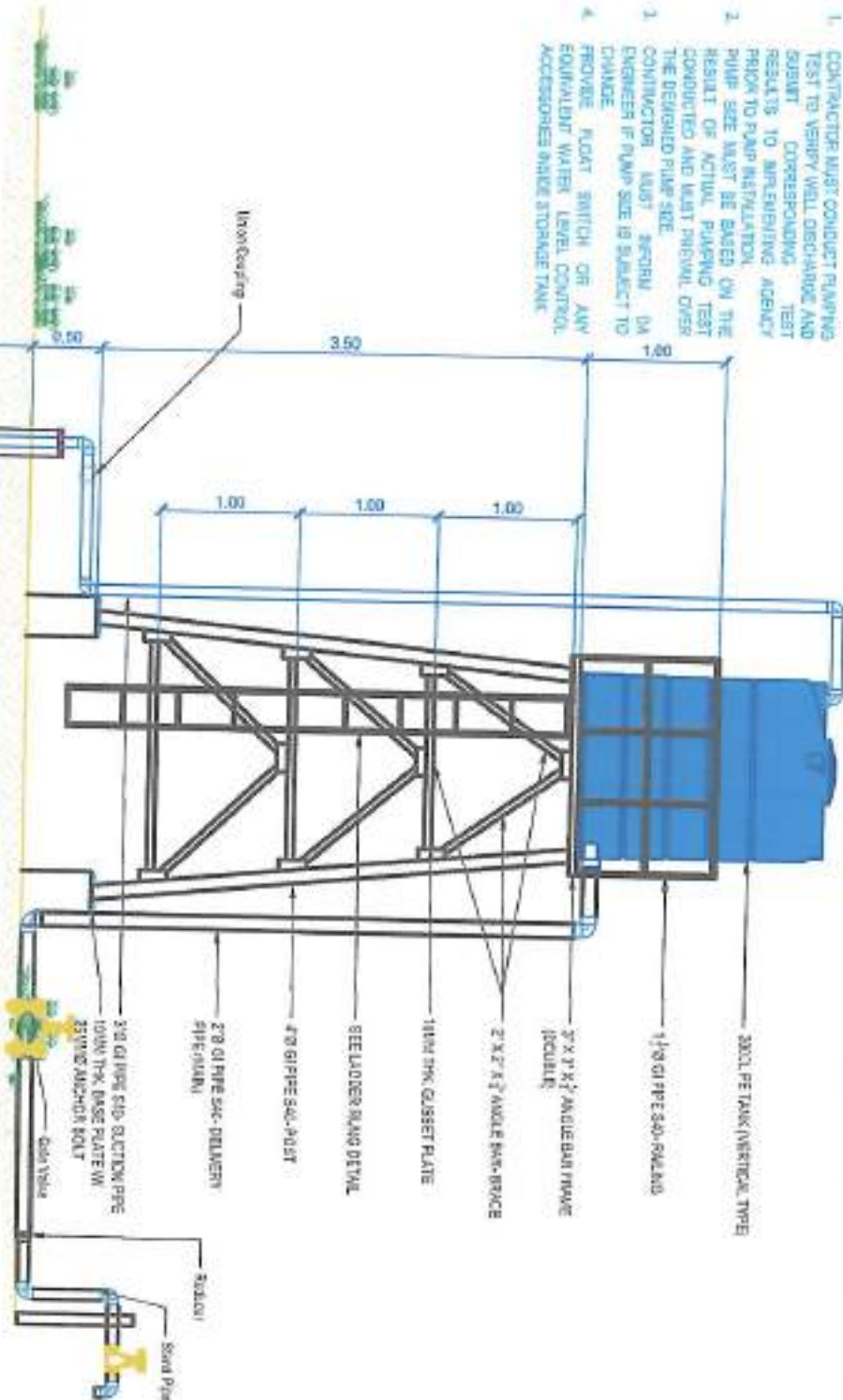
ENGR. JESSICA T. SONG  
Civil Engineer

ENGR. R. BARRERA  
Civil Engineer



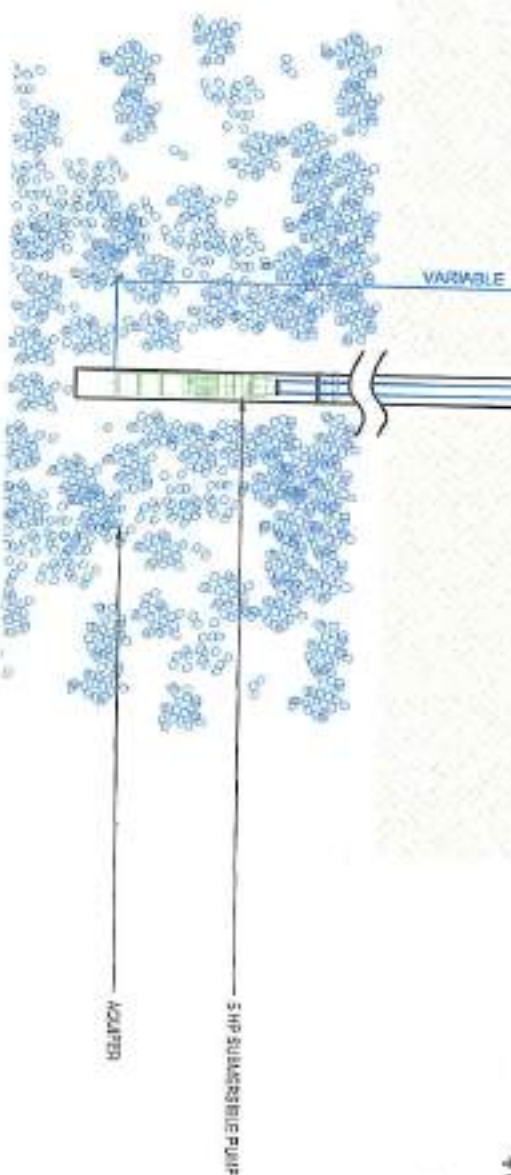
# NOTES:

1. CONTRACTOR MUST CONDUCT PLANNING TEST TO VERIFY WELL DISCHARGE AND SUBMIT CORRESPONDING TEST RESULTS TO APPLICABLE AGENCY PRIOR TO PUMP INSTALLATION.
2. PUMP SIZE MUST BE BASED ON THE RESULT OF ACTUAL PLANNING TEST CONDUCTED AND MUST PREVAIL OVER THE DESIGN PUMP SIZE.
3. CONTRACTOR MUST SECURE DA ENGINEER IF PUMP SIZE IS SUBJECT TO CHANGE.
4. PROVIDE FLOAT SWITCH OR ANY EQUIVALENT WATER LEVEL CONTROL ACCESSORIES W/IN STORAGE TANK.

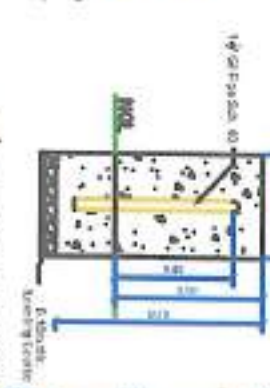


**TOP VIEW**  
SCALE: 1:35M

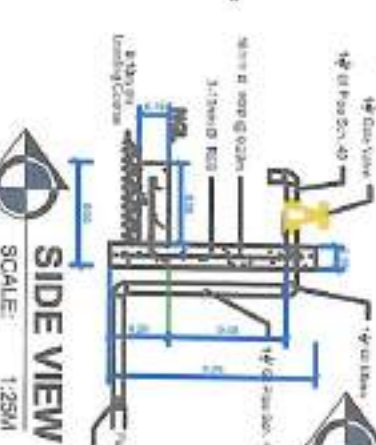
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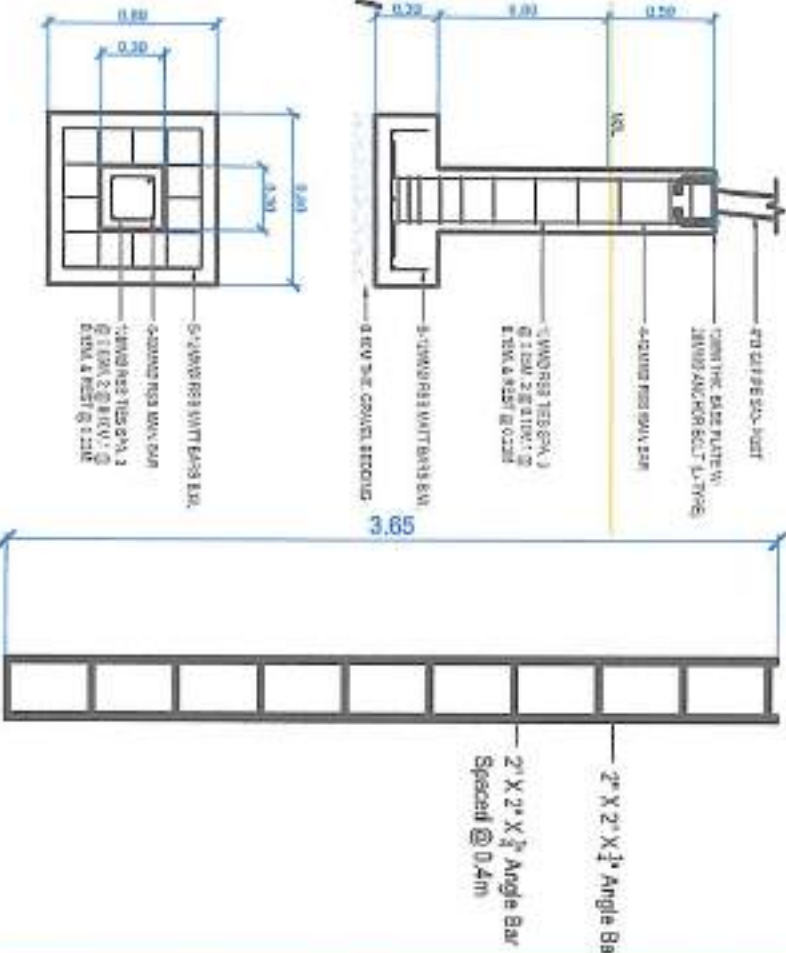
**DRILLING WORKS AND TANK DETAILS**  
SCALE: 1:35M



**REAR VIEW**  
SCALE: 1:25M

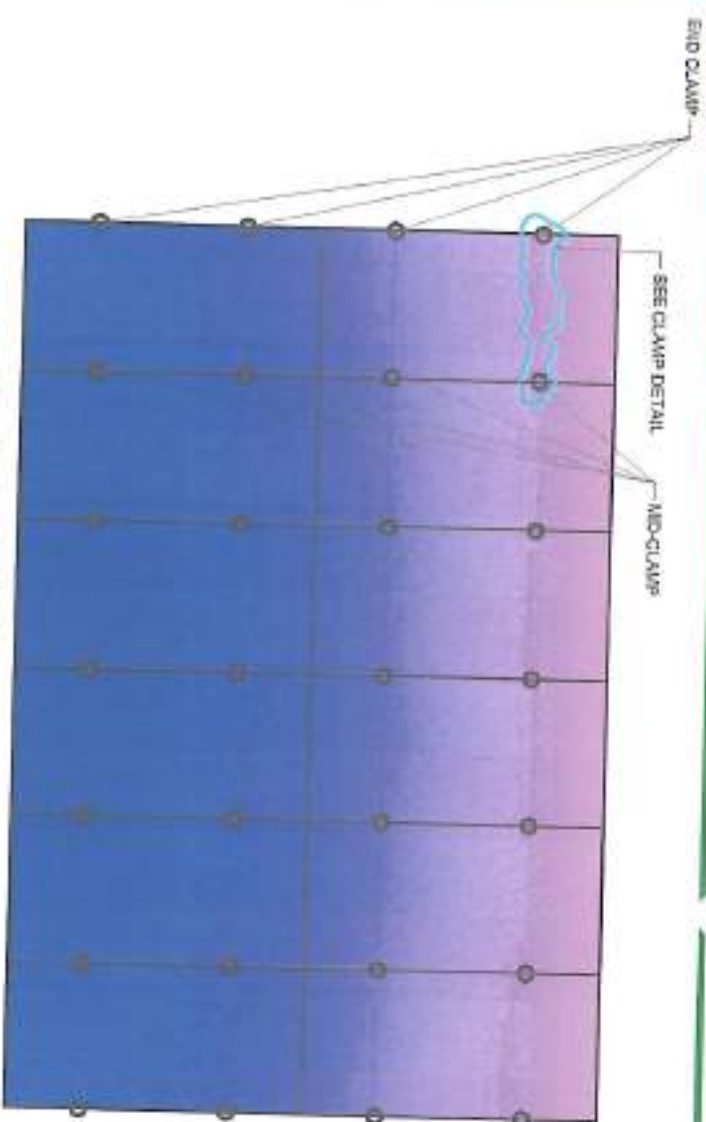


**SIDE VIEW**  
SCALE: 1:25M

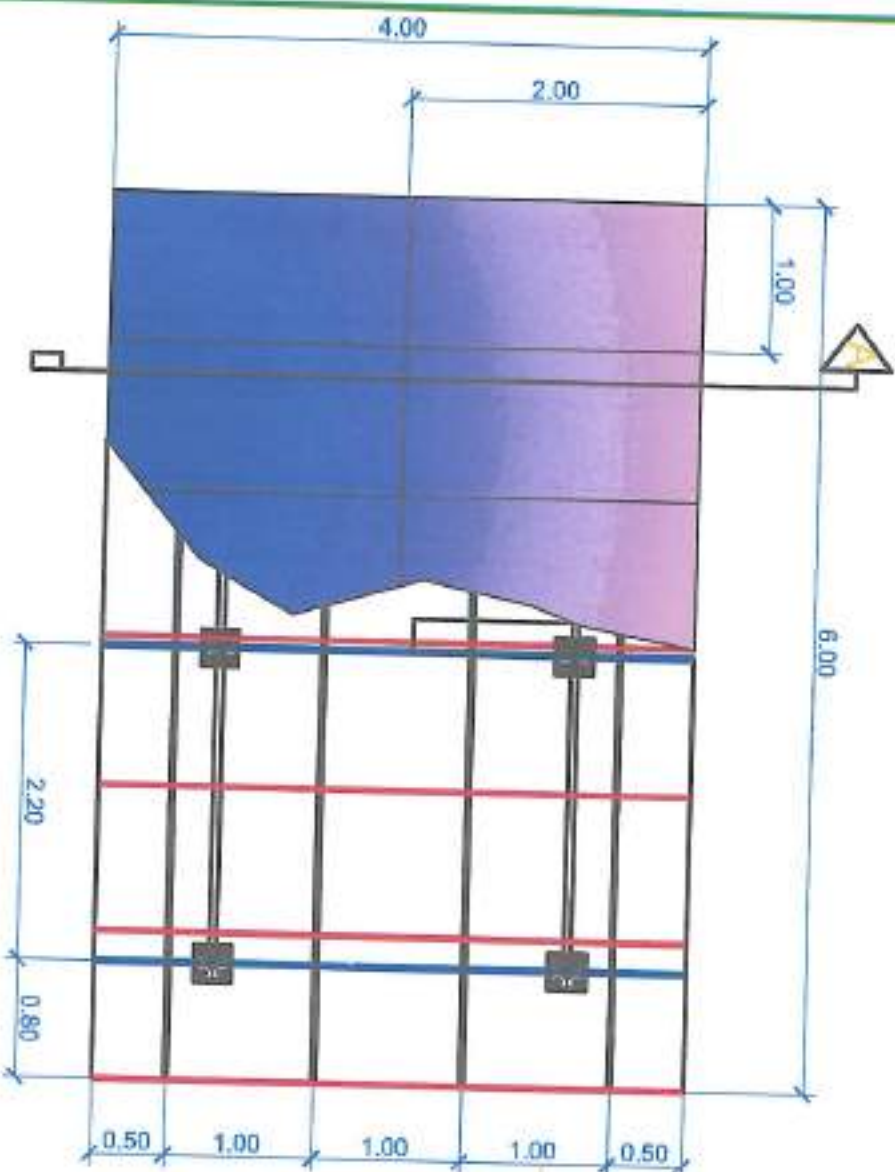


**POST AND LADDER RUNG DETAILS**  
SCALE: 1:35M





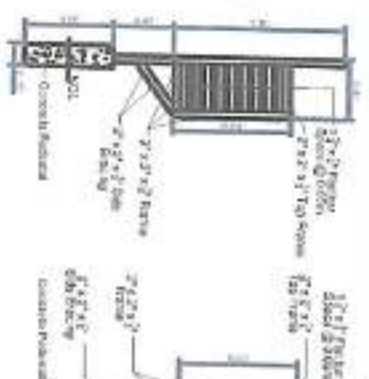
**TOP VIEW**  
SCALE: 1:50M



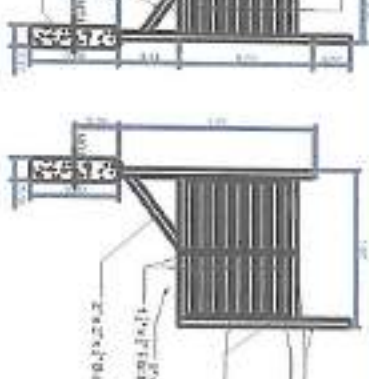
**SOLAR ARRAY DETAILS**  
SCALE: 1:50M



**FRONT VIEW**  
SCALE: 1:50M



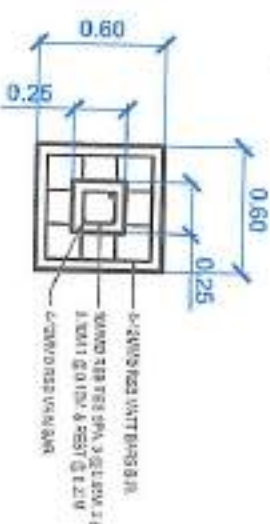
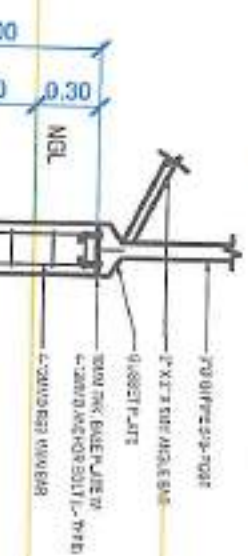
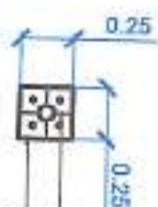
**SIDE VIEW**  
SCALE: 1:50M



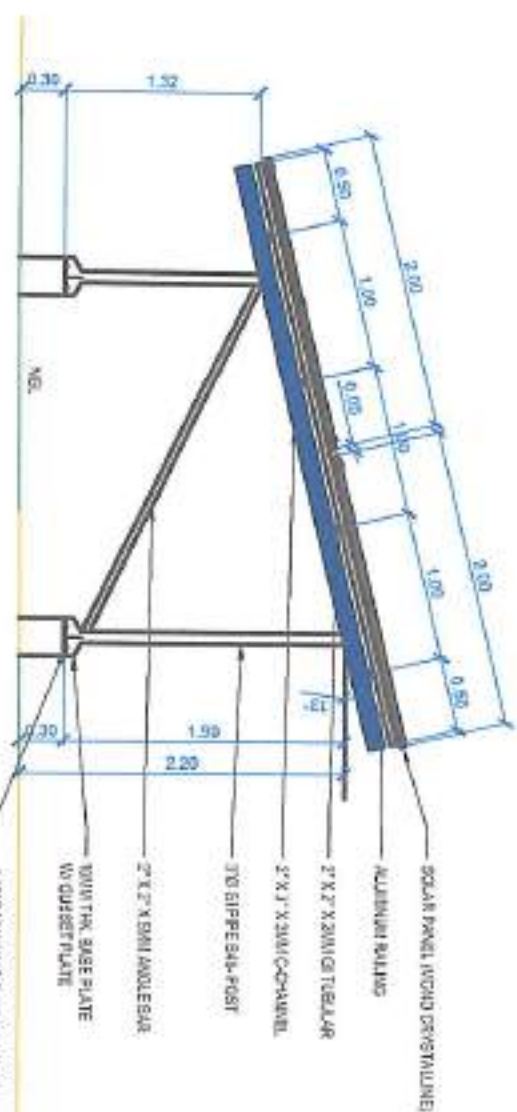
**REAR VIEW**  
SCALE: 1:50M



**CLAMP DETAILS**  
SCALE: 1:50M



**FRONT VIEW**  
SCALE: 1:50M



**SECTION THRU A**  
SCALE: 1:50M

**PEDESTAL DETAIL**  
SCALE: 1:50M



