



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

DETAILED ENGINEERING DESIGN PLANS

**ESTABLISHMENT OF BRGY. PATICUI SOLAR
POWERED IRRIGATION SYSTEM (SPIS)**

BRGY. PATICUI, HINIGARAN, NEGROS OCCIDENTAL

HVCDP 2025

Submitted by:


LINGGROISES D. MANA-AY
Engineer V (License No. 0005077)
Chief, MAED

Recommending Approval:


MARIA TERESA T. SOLIS
OIC-RTD for Operations

Approved by:


DENNIS ARRIA
Regional Executive Director

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TECHNICAL DATA

PUMP:	5 HP
INVERTER/ CONTROLLER:	5 KW
SOLAR ARRAY:	12 MONOCRYSTALLINE SOLAR PANELS - 550 WATT / PANE
TOTAL POWER:	6,600 WP, minimum
DISCHARGE PIPE:	21.30M
DELIVERY PIPE:	55M
DISCHARGE:	196.6 ILL. H. DAY
SERVICE AREA:	3 HAS

THIS SITE



Item No.	Scope of Works	Quantity	Unit
A	Temporary Facility/Field Office		
A.1.1 (B)	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	Modification/Demolition	1.00	lot
C.	DRILLING WORKS		
C.1	Well Construction (with groundwater/lumping test)	1.00	lot
D.	SOLAR MOUNTING STRUCTURES AND ACCESSORIES		
D.1	Structural Excavation	3.39	cu m
D.2	Structural Backfill	0.40	cu m
D.3	Leveling Course	0.22	cu m
D.4	Reinforcing Steel Bars	105.16	kgs
D.5	Formworks	7.68	sq m
D.6	Concrete Works (Class A)	0.73	cu m
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	4.80	cu m
E.2	Structural Backfill	2.70	cu m
E.3	Leveling Course	0.26	cu m
E.4	Reinforcing Steel Bars	83.62	kgs
E.5	Formworks	7.68	sq m
E.6	Concrete Works Class A	1.24	cu m
E.7	Tank Pool and Frame, Water Tank	1.00	lot

SCOPE OF WORKS

LOCATION MAP



GENERAL NOTES:

- ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
- ALL ELEVATIONS ARE IN METERS.
- NEUTRAL STEEL CONNECTIONS MUST BE FULL WELD.
- ALL EXPOSED STEEL MATERIALS MUST BE PAINTED WITH TWO COATS OF EPOXY PRIMER (GALV).
- REINFORCING BARS SHALL BE DEFORMED SILET- STEEL OF INTERMEDIATE GRADE (ASTM 615 OR PS 2X) GRADE 40.
- CONCRETE COVER FOR REINFORCEMENT SHALL NOT BE LESS THAN THE FOLLOWING:
 - FROM THE GROUND CONTACT SURFACE OF CONCRETE FOOTINGS AND OTHER MEMBERS IN WHICH CONCRETE IS CASTED.
 - FROM CONCRETE SURFACE EXPOSED TO WATER FLOW OR BE IN CONTACT WITH THE GROUND AFTER REMOVAL OF FORMS.



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WESTERN VISAYAS
PABOLA, ILOILO CITY

ESTABLISHMENT OF BRGY. PATANI
SOLAR POWERED IRRIGATION
SYSTEM (SPIS)

BRGY. PATANI - HINIGARAN
CITY - ILOILO CITY

ENGR. JEFFREY D. FLORES
CIVIL ENGINEER

ENGR. MARIE LOUISE H. SIBI
CIVIL ENGINEER

ENGR. NERVEN D. DUMALAY
CIVIL ENGINEER

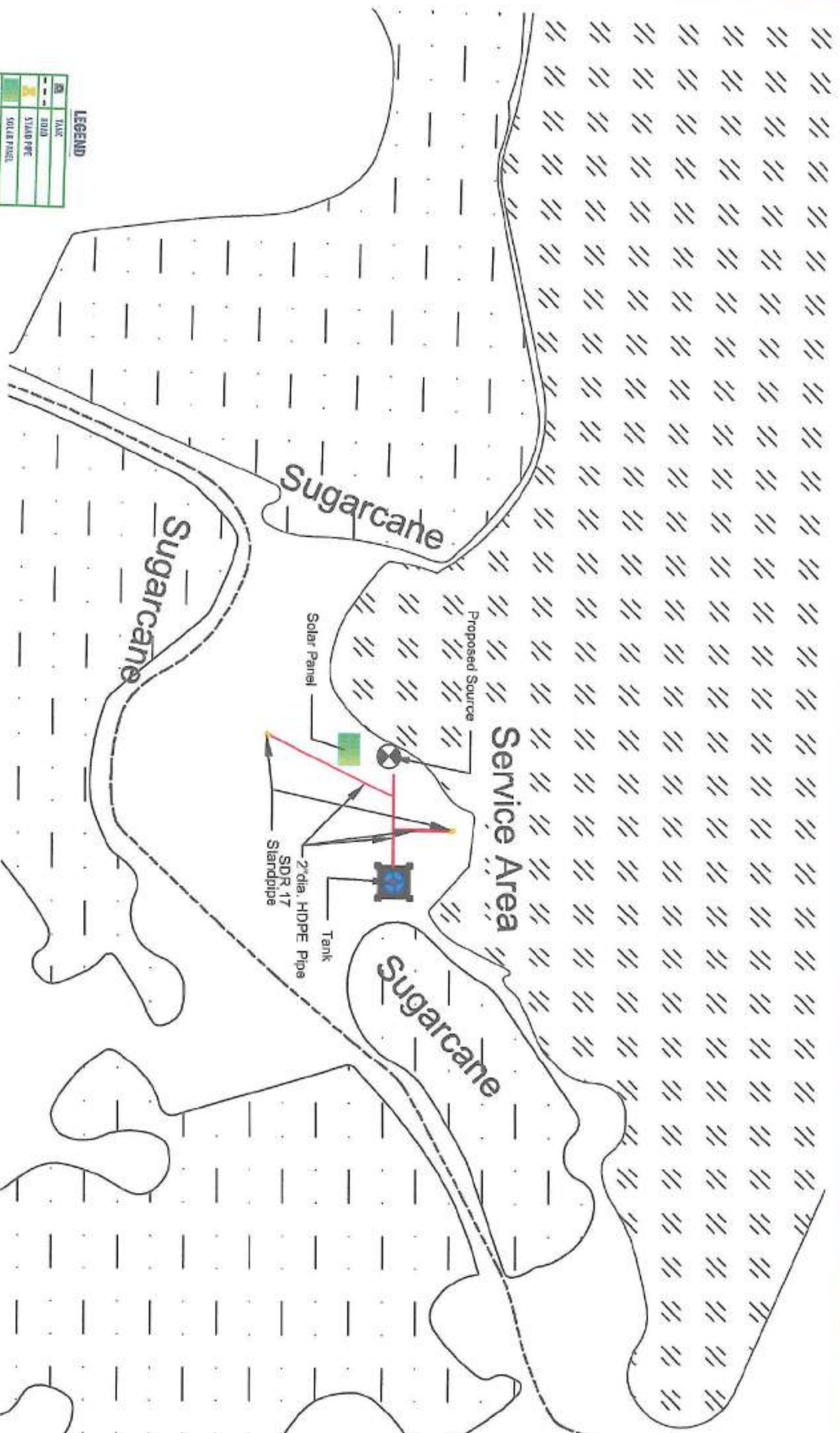
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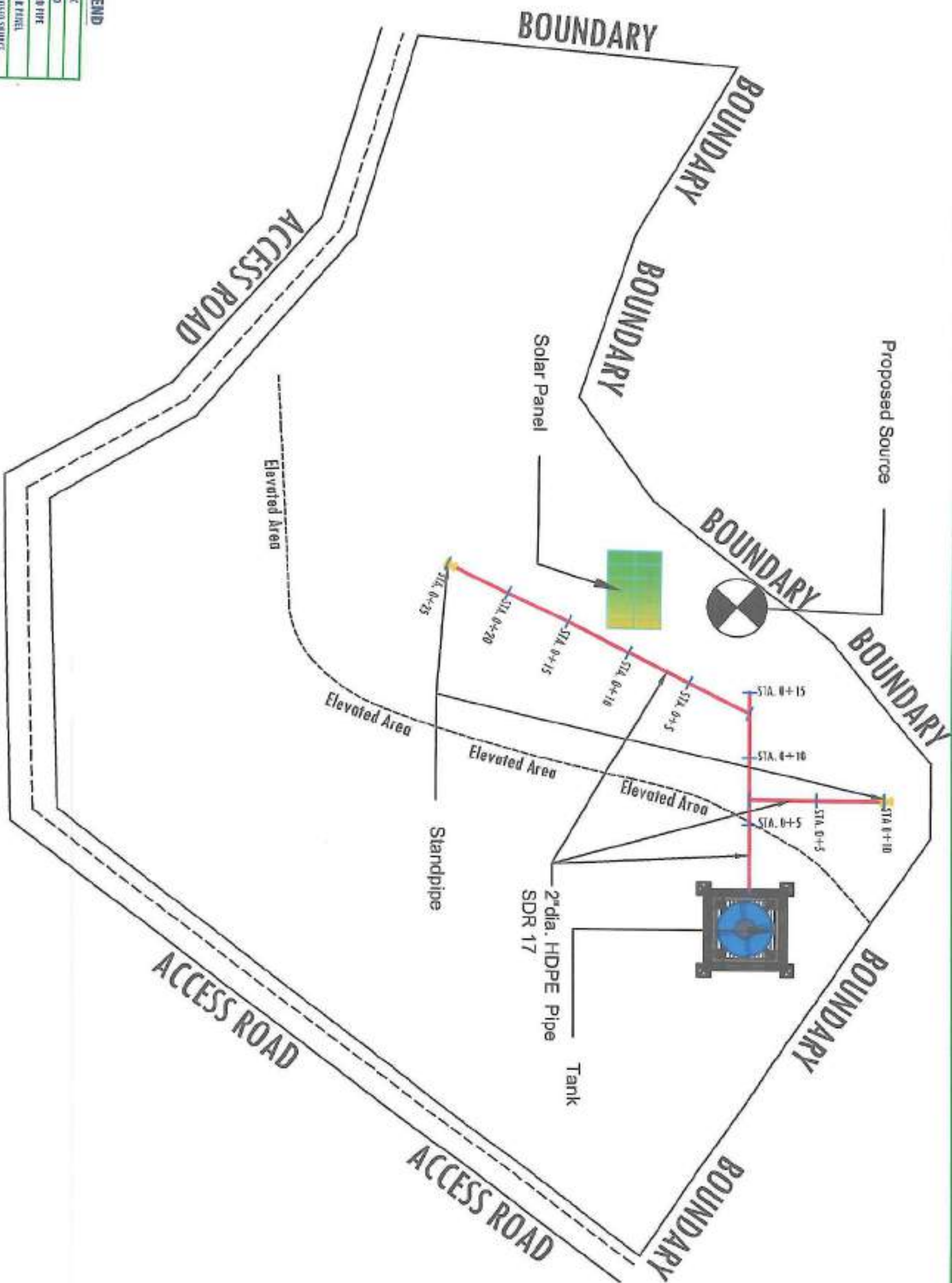
ENGR. NERVEN D. DUMALAY
CIVIL ENGINEER

LEGEND	
	TANK
	STAND PIPE
	SOLAR PANEL
	PROPOSED SOURCE
	2" HDPE PIPE (DR 17)

FARM PLAN
SCALE: NTS



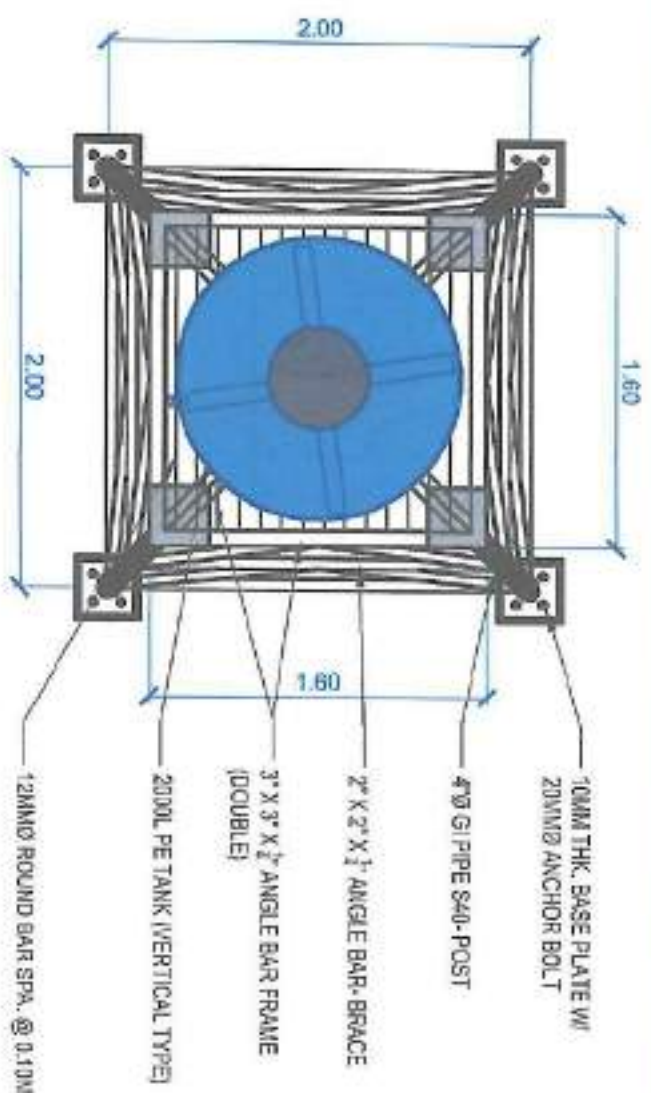
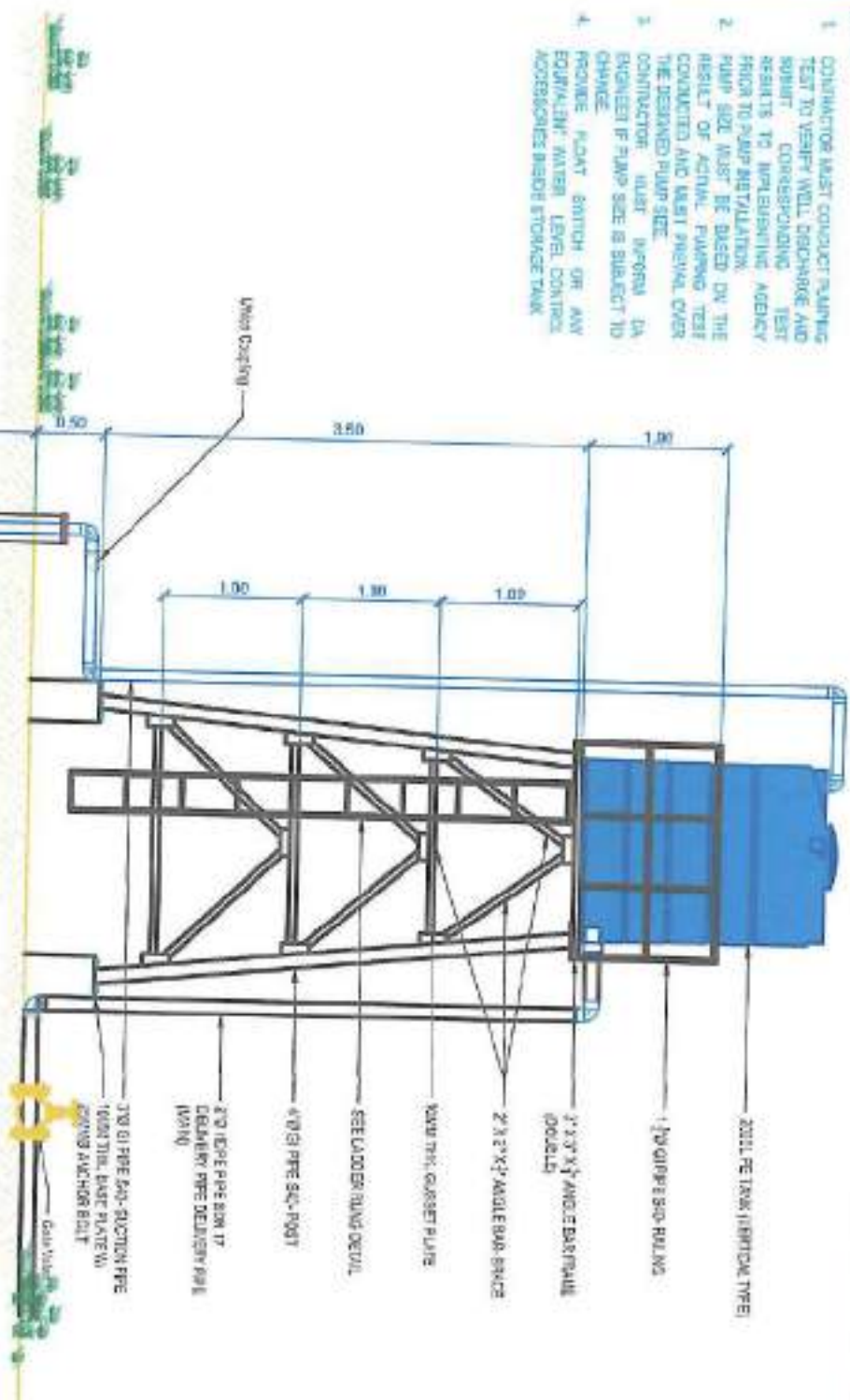
LEGEND	
---	ROAD
---	STAND PIPE
---	SOLAR PANEL
---	PROPOSED SOURCE
---	2" HDPE PIPE SDR 17



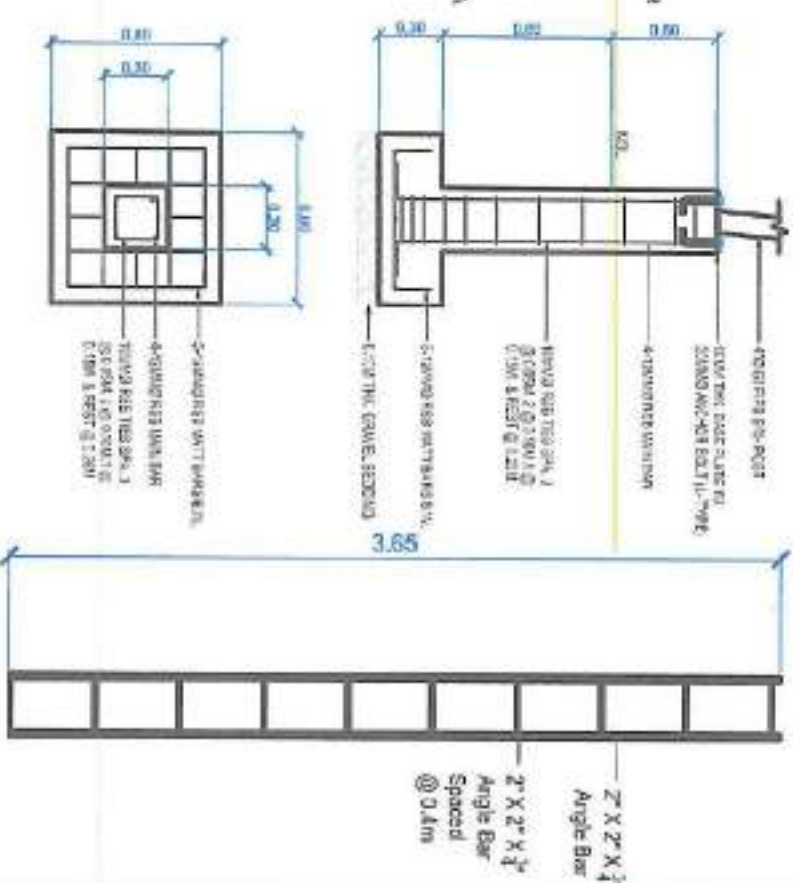
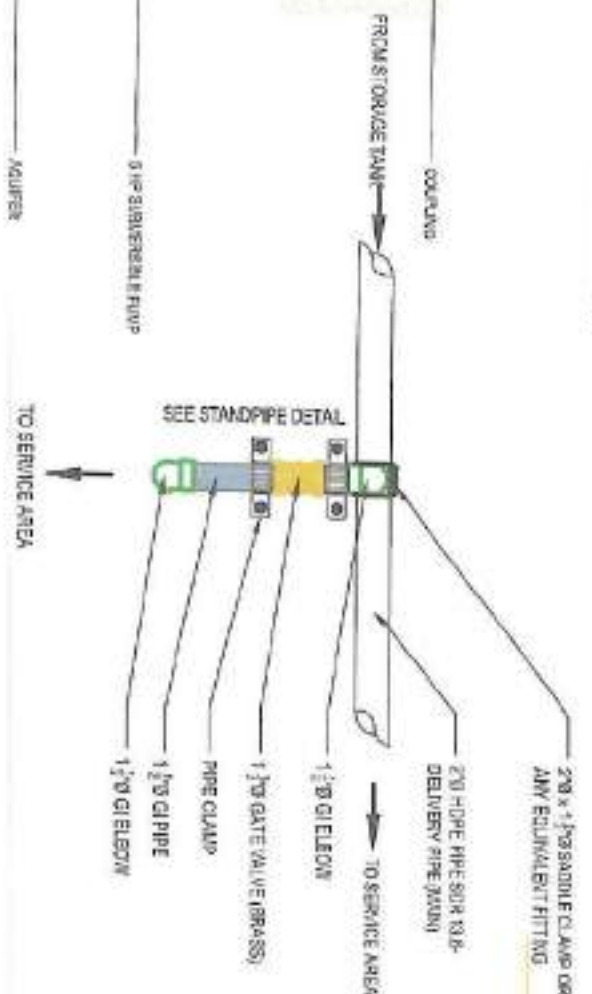
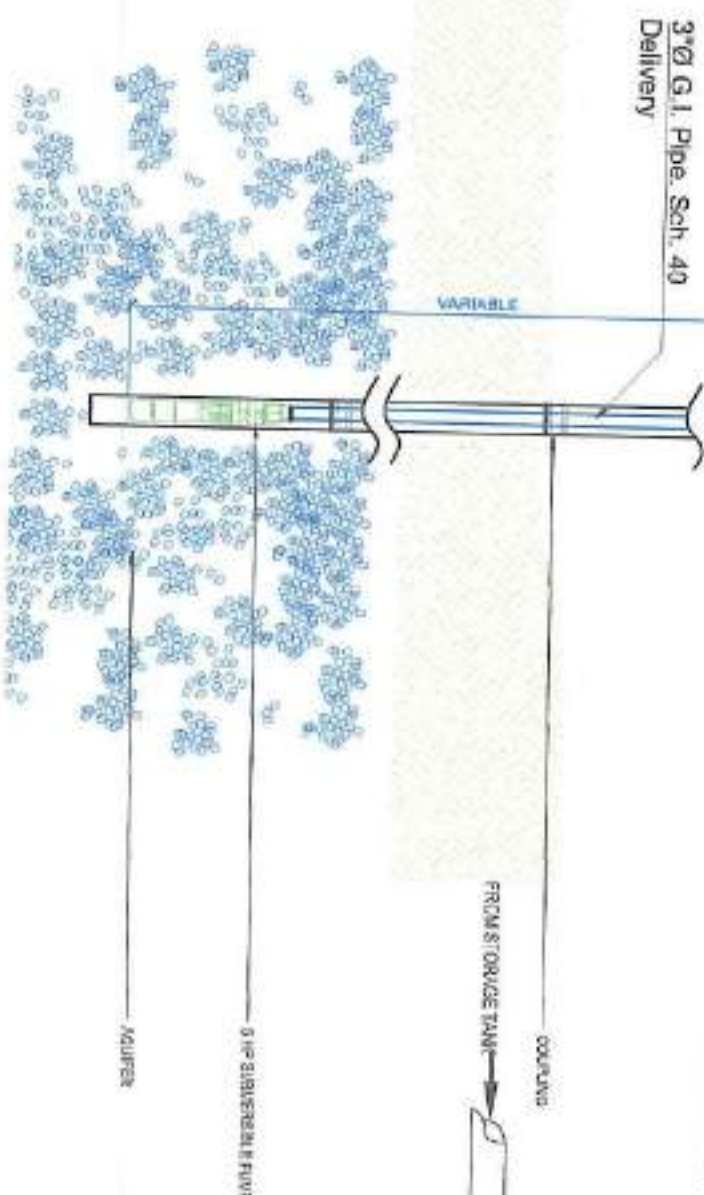
SITE DEVELOPMENT PLAN
SCALE: NTS

NOTES

1. CONTRACTOR MUST CONDUCT PUMPING TEST TO VERIFY WELL DISCHARGE AND SUBMIT CORRESPONDING TEST RESULTS TO IMPROVING AGENCY PRIOR TO PUMP INSTALLATION. PUMP SIZE MUST BE BASED ON THE RESULT OF ACTUAL PUMPING TEST CONDUCTED AND MUST PREVIEW OVER CONTRACTOR. MUST REPORT TO AGENCY IF PUMP SIZE IS SUBJECT TO CHANGE.
2. PROVIDE FLOAT SWITCH OR ANY EQUIVALENT WATER LEVEL CONTROL ACCESSORIES BENEATH STORAGE TANK.



TOP VIEW
SCALE: 1:25M



DRILLING WORKS AND TANK DETAILS
SCALE: 1:50M

PIPE CONNECTION DETAILS
SCALE: NTS

POST AND LADDER RUNG DETAILS
SCALE: 1:50M



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PAROLA, ILOILO CITY

ESTABLISHMENT OF BRGY. PATCON
SOLAR POWERED IRRIGATION
SYSTEM (SPIS)
BRGY. PATCON, IRRIGA, PAROLA,
WESTERN VISAYAS, ILOILO CITY

DESIGNED BY
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REGISTERED ELECTRICAL ENGINEER
No. 000-000000

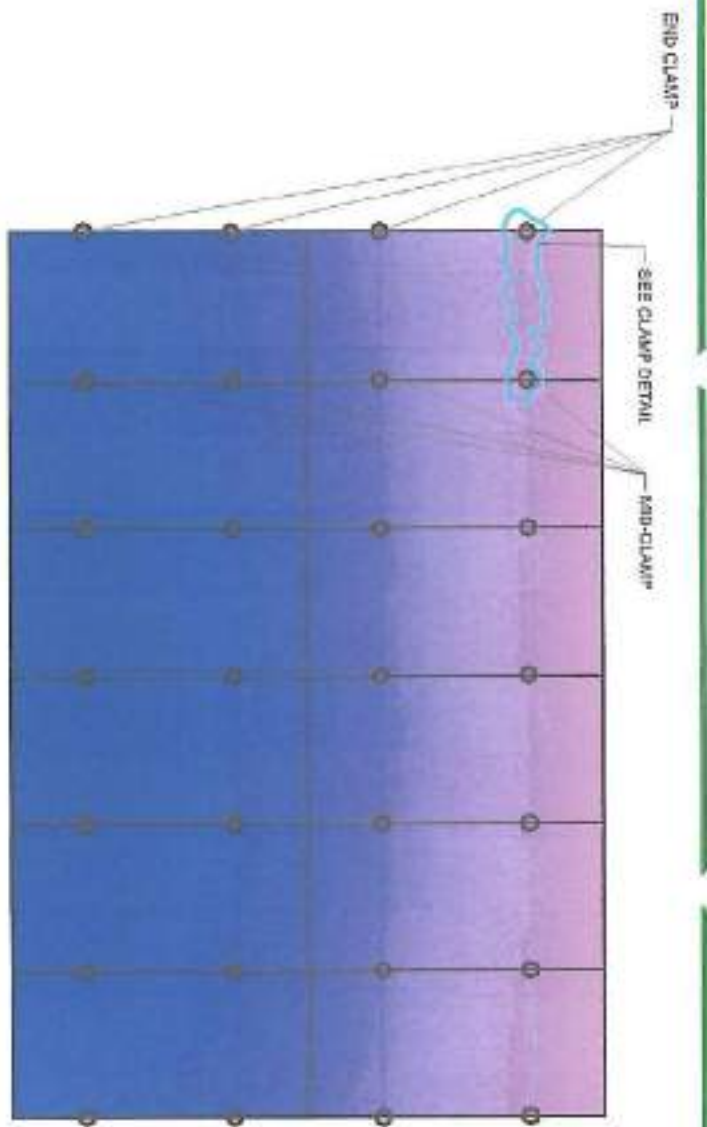
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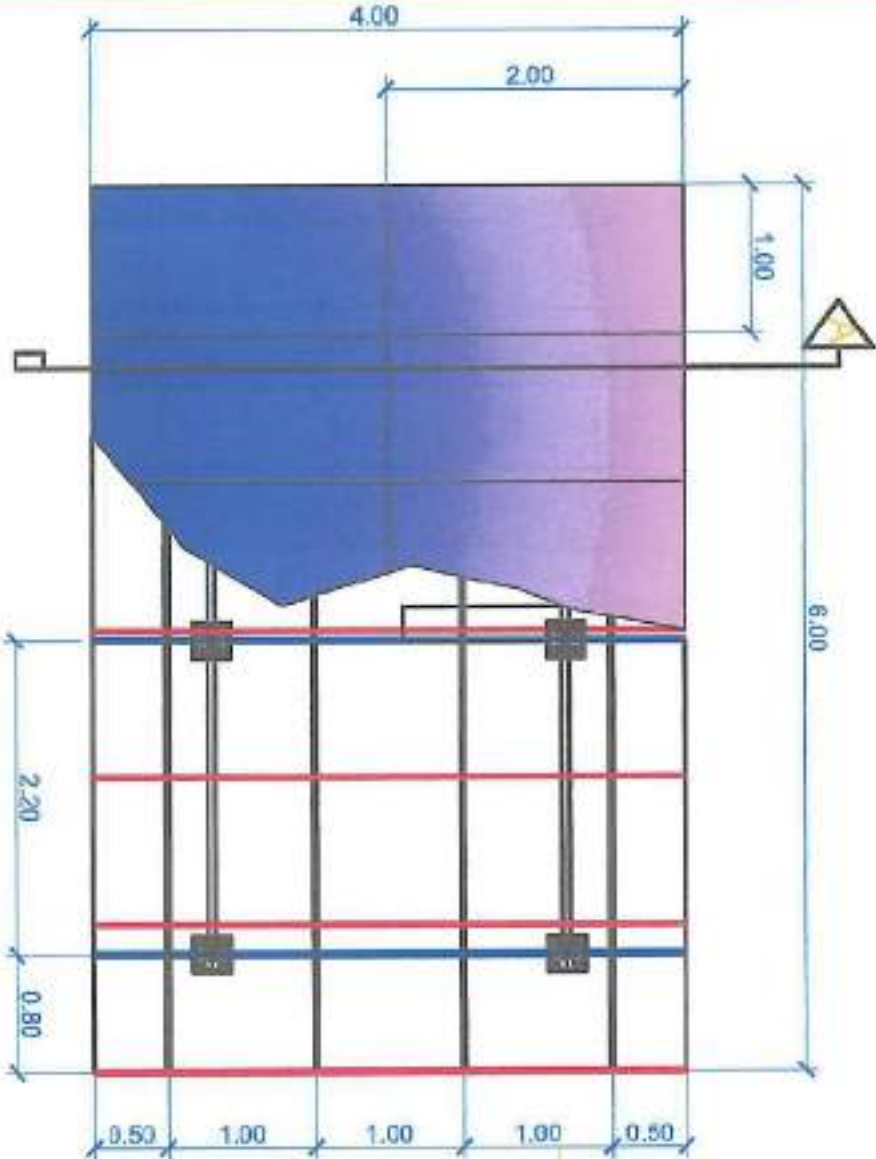
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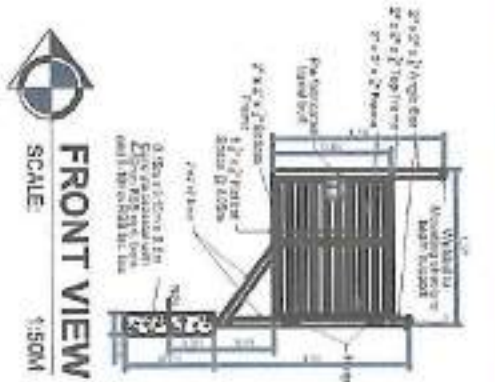
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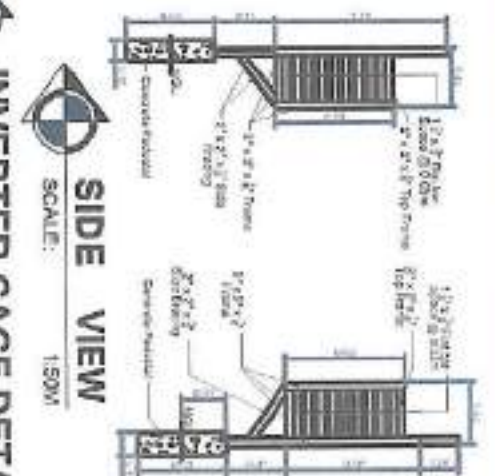
TOP VIEW
SCALE: 1:50M



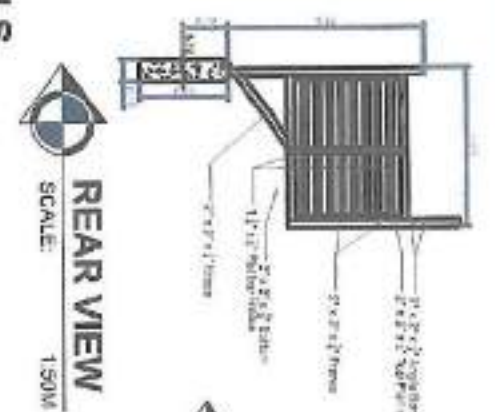
SOLAR ARRAY DETAILS
SCALE: 1:50M



FRONT VIEW
SCALE: 1:50M



SIDE VIEW
SCALE: 1:50M

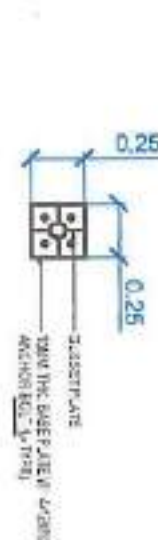


REAR VIEW
SCALE: 1:50M

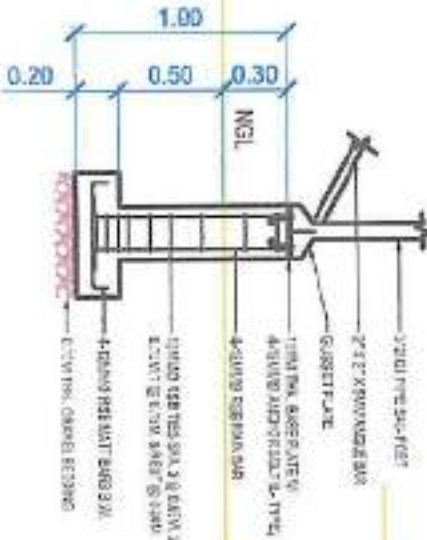
INVERTER CAGE DETAILS
SCALE: 1:50M



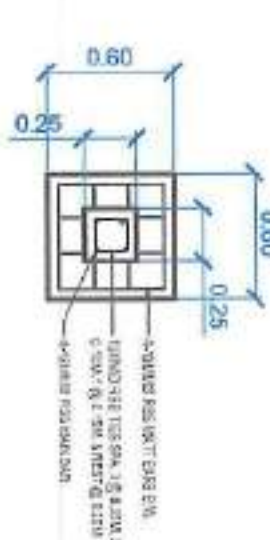
CLAMP DETAILS
SCALE: NTS



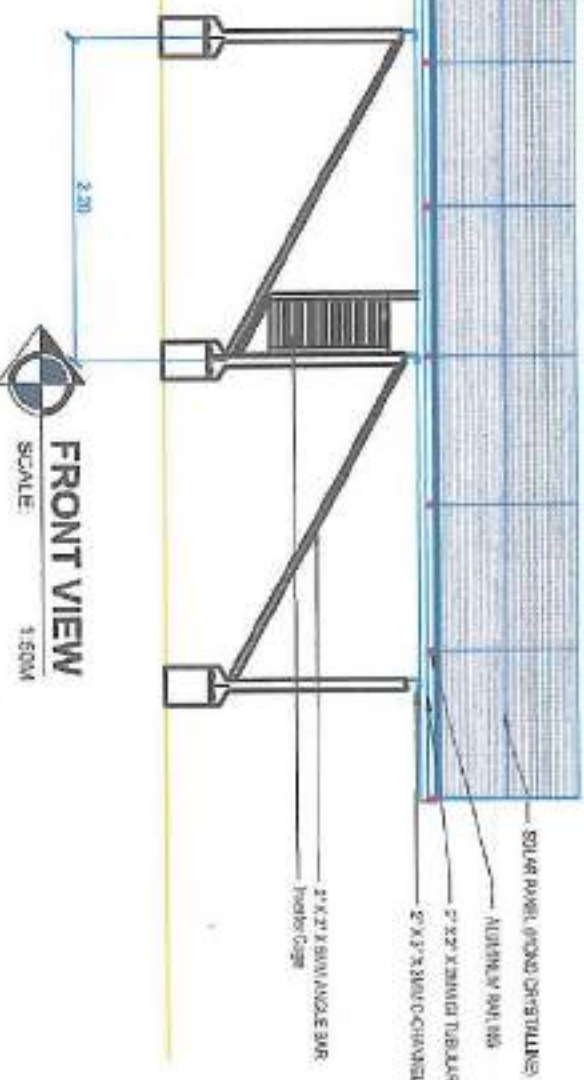
DETAIL
SCALE: 1:50M



DETAIL
SCALE: 1:50M



DETAIL
SCALE: 1:50M



FRONT VIEW
SCALE: 1:50M



SECTION THRU A
SCALE: 1:50M

