



DEPARTMENT OF AGRICULTURE

RFO XIII - CARAGA
CAPITOL SITE, BUTUAN CITY

ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)

BRGY. CANCOHOY, DEL CARMEN, SURIGAO DEL NORTE
CARAGA REGION

GENERAL NOTES & SPECIFICATION

1. PUMP: Surface Pump
 - a) 1"x1" Non-Self Priming Surface Centrifugal Pump with complete pipes & fittings
 - b) 0.75 KW built-in controller.

2. SOLAR POWER MODULES
 - q) 1350WP total Solar Power Modules (minimum) or its equivalent
 - b) 1956 x 992 x 40mm 450WP per Solar Power Module
 - c) Manufactured in ISO 9001-Certified Factories
 - d) Must be CE marked
 - e) Must have TÜV Certification (IEC 61215)
 - f) Cell Type: Monocrystalline
 - g) 10° - 15° Tilt Angle
 - h) Facing South Orientation

3. STEEL WORKS
 - a) All welding works shall be full weld, plain finish, and painted with red oxide for rust resistant.

4. DISTRIBUTION PIPE
 - a) 40 linear meters (1" Ø HDPE Pipe SPR II) - From Source to Existing Tank
 - b) 30 linear meters (1" Ø HDPE Pipe SPR II) - From Existing Tank to Greenhouse
 - c) 30 linear meters (1" Ø HDPE Pipe SPR II) - From Existing Tank to Nurseries

Republic of the Philippines DEPARTMENT OF AGRICULTURE Caraga Region	PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY:  JAY D. ESPANOLA ENGINEER II	CHECKED & REVIEWED BY:  THEODORINO P. LIMAS ENGINEER II	SUBMITTED BY:  RENAN R. MORALES ENGINEER / CHIEF RAED	NOTED BY:  CLARK B. CRIST II AGRICULTURIST II / OVP, LOCAL PERSON	RECOMMENDING / APPROVAL:  BERTHA M. ORTEGA RPD FOR OPERATION	APPROVED BY:  ENGR. M. ONATE, JR. REGIONAL EXECUTIVE DIRECTOR	SHEET NO. 1 8
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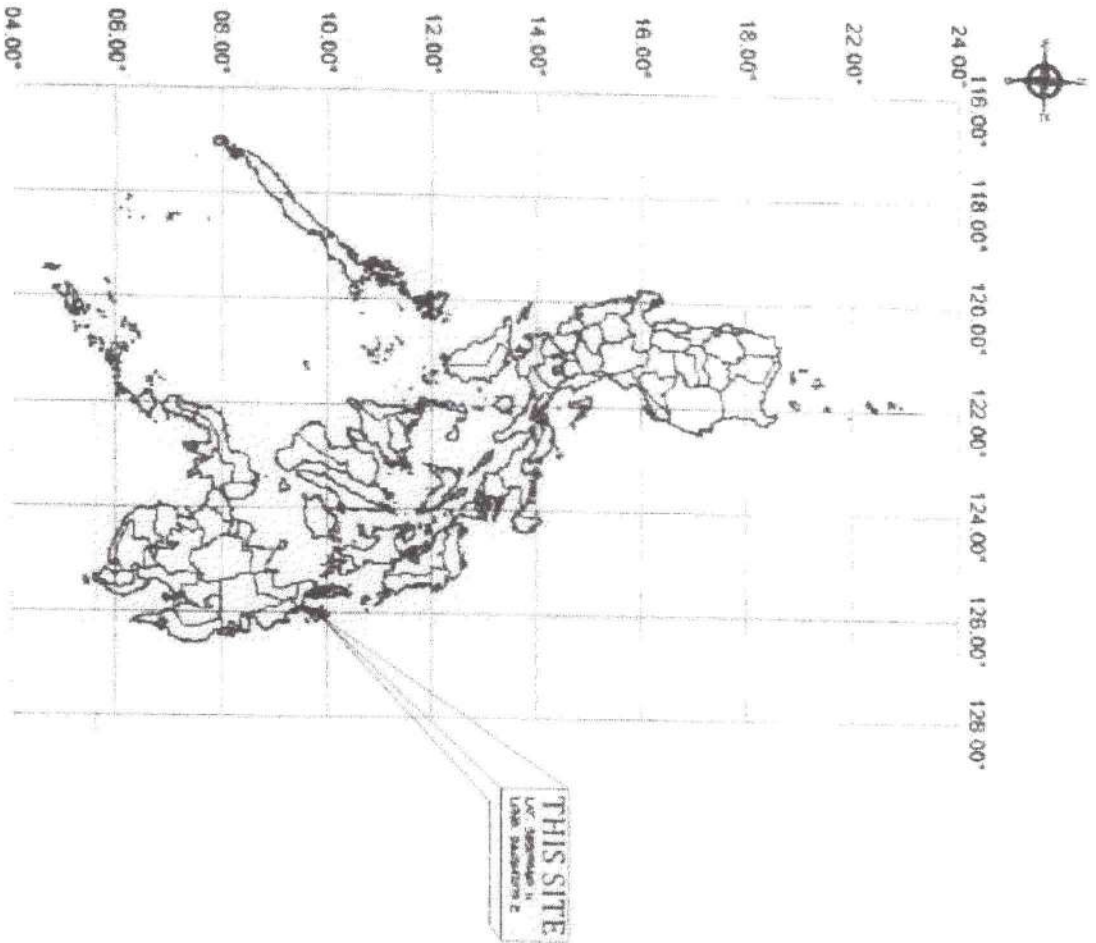
NAME OF PROJECT: ESTABLISHMENT OF SOLAR POWER IRRIGATION SYSTEM (SPIS)

PROJECT LOCATION: BRGY. CANCAYAY, DEL CARMEN, SURIGAO DEL NORTE

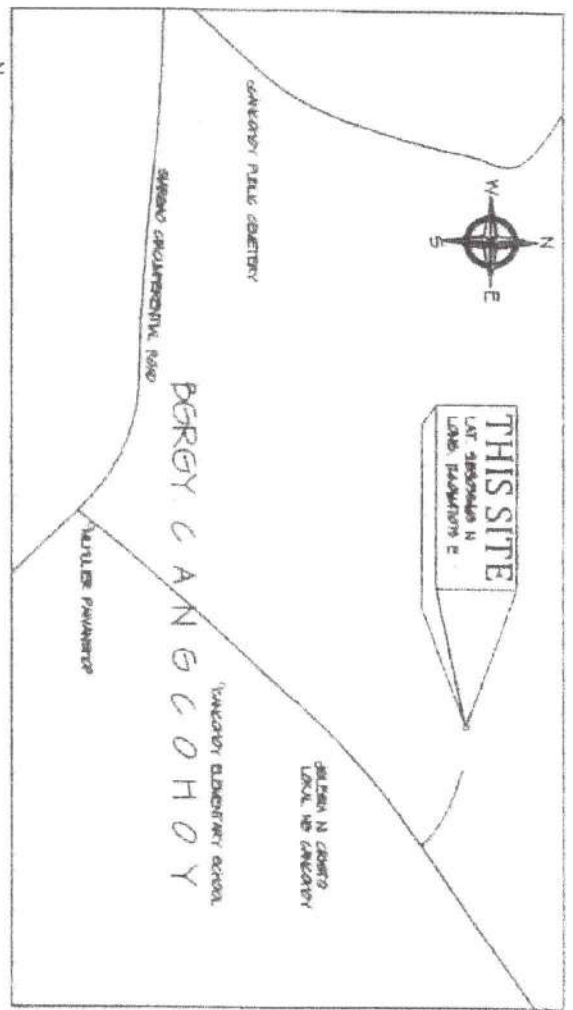
BILL OF QUANTITIES

Item No.	Scope of Work	Quantity	Unit
PART I	GENERAL REQUIREMENTS		
B.5	Project Billboard/SignBoard	1.00	each
PART II	PART A - EARTHWORK		
803(1)a	Structure Excavation	2.76	cu.m.
804 (1)b	Embankment (Side Borrow)	3.76	cu.m.
804(4)	Gravel Fill	1.74	cu.m.
	PART B - PLAIN AND REINFORCED CONCRETE WORKS		
902(1)a	Reinforcing Steel (Deformed), grade 40	113.35	kgs.
900	Concrete Works	5.72	cu.m.
	PART C - FINISHING AND OTHER CIVIL WORKS		
	C.1 Fabricated Materials		
403(7)	Structural Steel Furnished Fabricated & Erected	1.00	lot
	C.2 Finishing Works		
SPL-1	Solar Power Modules w/ complete cabling and related accessories	1.00	lot
SPL-2	1 hp Pump Engine with Complete Accessories	1.00	lot
SPL-3	Pipes w/ complete fittings & accessories	1.00	lot
900(2)	Cement Plaster Finish	52.48	sq.m.
1032(1)a	Painting Works(Masonry/Concrete)Acrylic Finish	62.58	sq.m.
1032(1)c	Painting Works(Steel)	1.00	lot

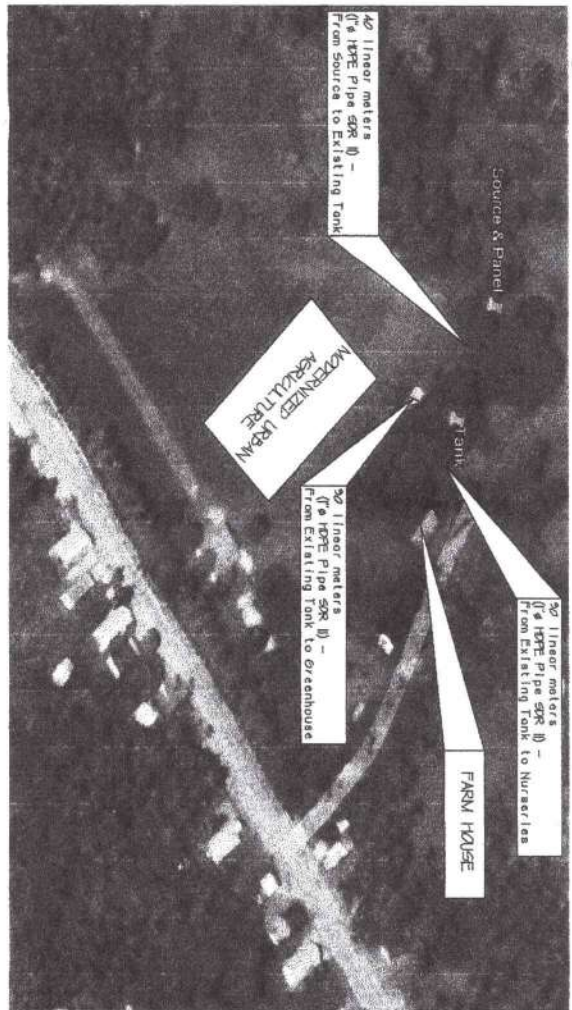
Republic of the Philippines DEPARTMENT OF AGRICULTURE Caraga Region	PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY: JAY D. PANAGA ENGINEER II	CHECKED & REVIEWED BY: THEO LYN P. LIMAS ENGINEER II	SUBMITTED BY: REZA ANGRANES ENGINEER / CHIEF RAED	NOTED BY: JIMMY D. BANGKO AGRICULTURIST II / ZAP. FODA PERSON	RECOMMENDING APPROVAL: REZA ANGRANES ENGINEER	APPROVED BY: ENGR. ARMANDO M. ONATE, JR. REGIONAL EXECUTIVE DIRECTOR	SHEET NO. 2 8
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PROJECT LOCATION
DRAWN NOT TO SCALE



VICINITY MAP
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SITE DEVELOPMENT PLAN
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Republic of the Philippines DEPARTMENT OF AGRICULTURE Caraga Region	PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY: JAY P. PERALTA ENGINEER II	CHECKED & REVIEWED BY: THEA LYN P. LIMAS ENGINEER III	SUBMITTED BY: RENATA ZAMORA ENGINEER / ARCHITECT RAED	NOTED BY: ANDY B. CANEDO AGRICULTURIST II / OFF. FOCAL PERSON	RECOMMENDING APPROVAL: REBECCA B. MANALAYA RPT FOR OPERATIONS	APPROVED BY: ENGR. RICARDO M. ONATE, JR. REGIONAL EXECUTIVE DIRECTOR	SHEET NO. 3 B
	LOC: BERG CANCAYO, DEL CARMEN, SAN							



Republic of the Philippines
 DEPARTMENT OF AGRICULTURE
 Caraga Region
 Capital Site, Butuan City
 Tel. No. (085) 342-4092, Telefax No. (085) 341-2114

Project Name: Establishment of Solar Powered Irrigation System (SPIS)
 Location: Brgy. Canchoy, Dal Carmen, Surigao del Norte
 Implementing Agency/Team: DA-Caraga Region
 Development Partners
 Contractor/Supplier
 Brief Description

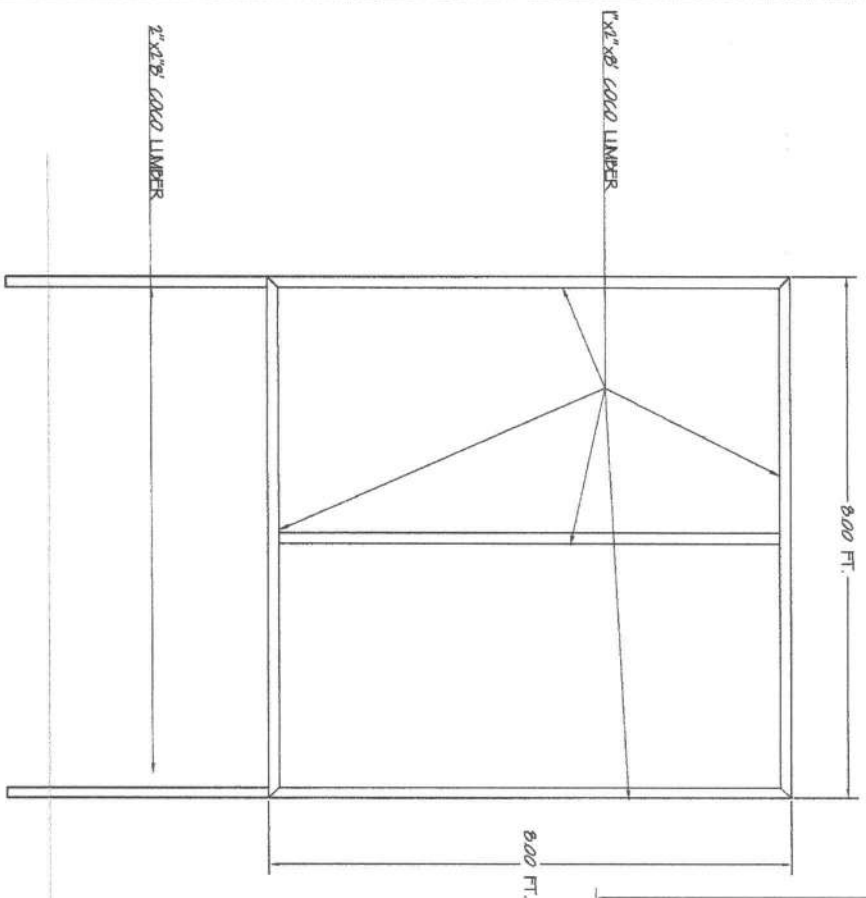
Cost
 Fund Source/s

Project Details

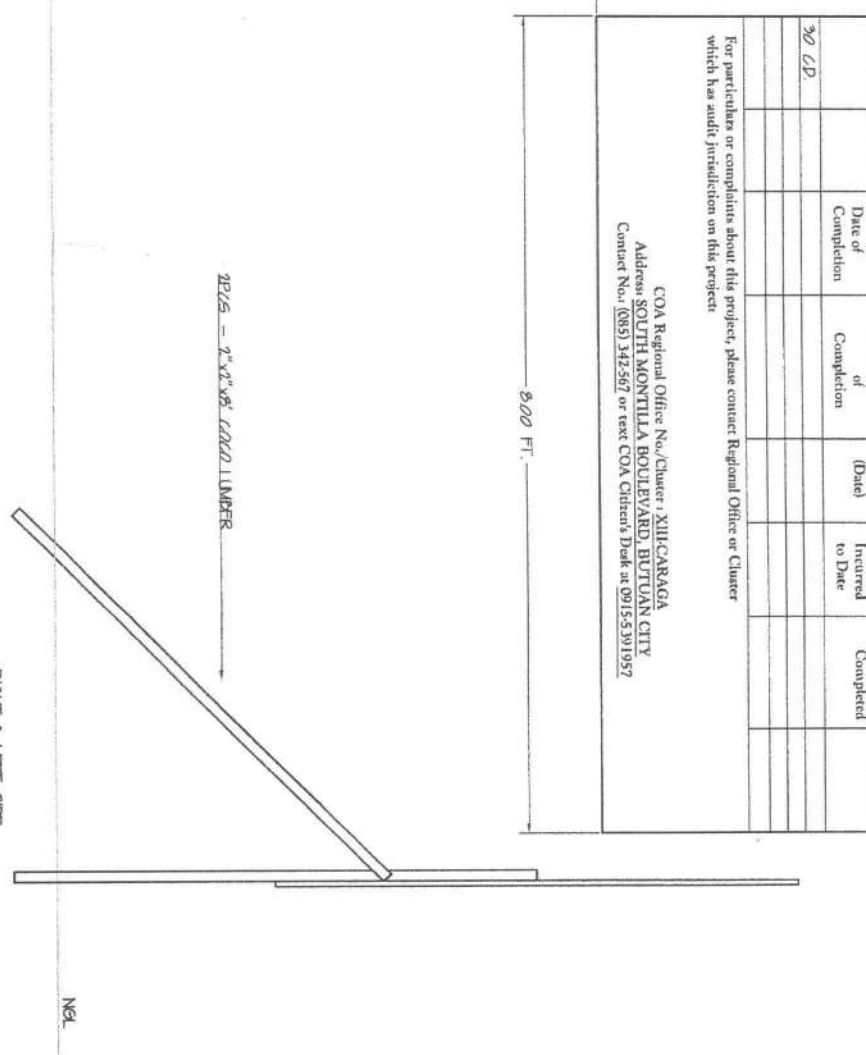
Duration	Searched	Target Date of Completion	Percentage of Completion	Project Status		Date Completed	Remarks
				As of Date	Cost Incurred to Date		
% CD							

For particulars or complaints about this project, please contact Regional Office or Cluster which has audit jurisdiction on this project.

COA Regional Office No./Cluster: XIII-CARAGA
 Address: SOUTH MONTILLA BOULEVARD, BUTUAN CITY
 Contact No. (085) 342-567 or text COA Citizens' Desk at 0915-5391957



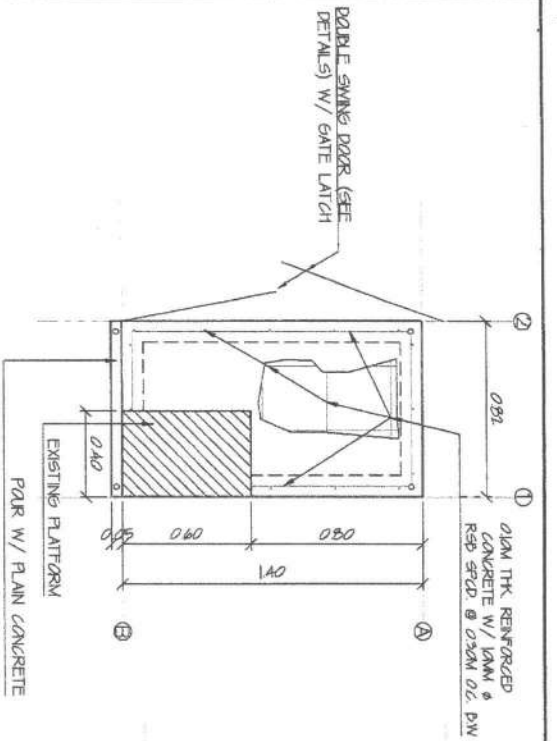
FRONT VIEW
 SCALE 1/25 MTS



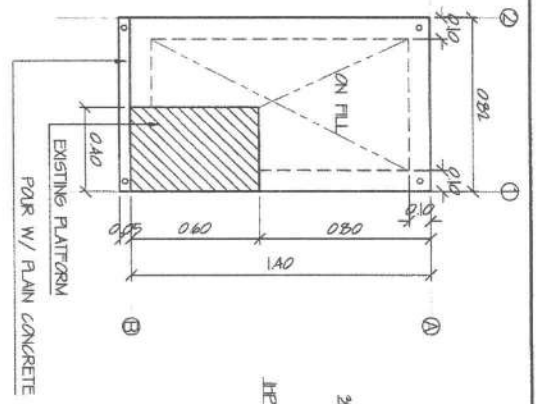
RIGHT & LEFT SIDE
 SCALE 1/25 MTS

PROJECT BILLBOARD DETAILS

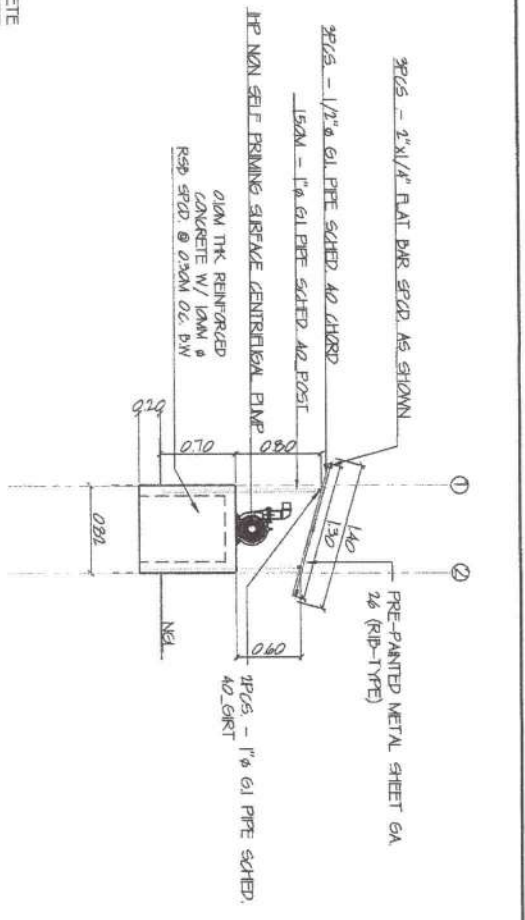
Republic of the Philippines DEPARTMENT OF AGRICULTURE Caraga Region		PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY: JAN D. BANGAL ENGINEER II	CHECKED & REVIEWED BY: THEO LIND L. LIMAS ENGINEER II	SUBMITTED BY: ROSEMARIE S. BANGAL ENGINEER I/VALVE RAID	NOTED BY: CAROL B. BANGAL AGRICULTURIST II / OPR. LOCAL PERSON	RECOMMENDING APPROVAL: REBECCA B. ALDEA R/O FOR OPERATIONS	APPROVED BY: ARMANDO M. ANATE JR. REGIONAL EXECUTIVE DIRECTOR	SHEET NO. 4 5
LOC: BRGY. CANCHOY, DAL CARMEN, SN									



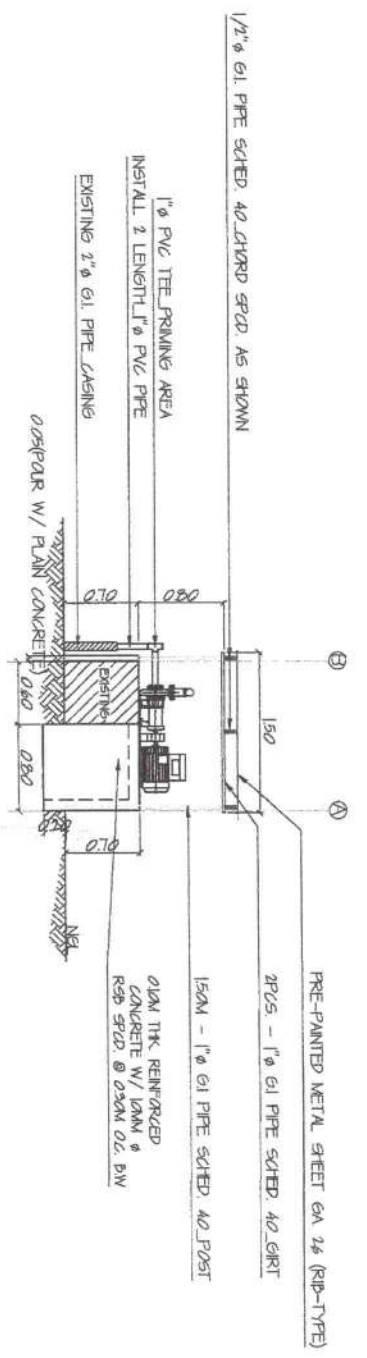
FLOOR PLAN
(PUMP HOUSE)
SCALE 1:25 MTS



FOUNDATION PLAN
(PUMP HOUSE)
SCALE 1:25 MTS



TRANSVERSE SECTION
(PUMP HOUSE)
SCALE 1:50 M



LONGITUDINAL SECTION
(PUMP HOUSE)
SCALE 1:50 M

Republic of the Philippines DEPARTMENT OF AGRICULTURE Caraga Region		PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY: MR. DANIELA ENGR. DANIELA	CHECKED & REVIEWED BY: MR. DANIELA ENGR. DANIELA	SUBMITTED BY: MR. DANIELA ENGR. DANIELA	NOTED BY: MR. DANIELA ENGR. DANIELA	RECOMMENDING APPROVAL: MR. DANIELA ENGR. DANIELA	APPROVED BY: MR. DANIELA ENGR. DANIELA	SHEET NO. 5 8
DEPARTMENT OF AGRICULTURE Caraga Region		PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY: MR. DANIELA ENGR. DANIELA	CHECKED & REVIEWED BY: MR. DANIELA ENGR. DANIELA	SUBMITTED BY: MR. DANIELA ENGR. DANIELA	NOTED BY: MR. DANIELA ENGR. DANIELA	RECOMMENDING APPROVAL: MR. DANIELA ENGR. DANIELA	APPROVED BY: MR. DANIELA ENGR. DANIELA	SHEET NO. 5 8

