



Republic of the Philippines
Department of Environment and Natural Resources
PROVINCIAL ENVIRONMENT NATURAL RESOURCES
MIMAROPA Region



September 05, 2022

MEMORANDUM

FOR : The Regional Executive Director
DENR - MIMAROPA Region
Roxas Blvd., Ermita Manila

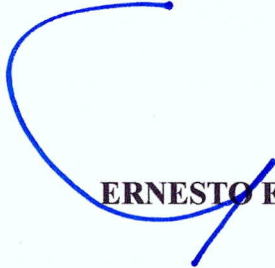
THRU : The ARD, Technical Services Division

FROM : The OIC, PENR Officer

SUBJECT : SUBMISSION OF COPIES OF DETAILED ENGINEERING
DESIGN, BILL OF QUANTITIES AND DETAILED ESTIMATES
IN THE CONSTRUCTION OF SMALL WATER IMPOUNDING
SYSTEM (SWIS) LOCATED AT SITIO IBANAG, NAIBUAN, SAN
JOSE, OCCIDENTAL MINDORO

Respectfully forwarded herewith is the Memorandum dated August 26, 2022 of CENRO San Jose relative to the above-mentioned subject. The said generated design including bill of quantities and detailed estimates of Small Impounding System (SWIS) shall be used as reference in the validation of SWIS documents as well as in the supervision and monitoring/evaluation of the SWIS project to be constructed within CBFM area of Ibanag, Multi-Purpose Cooperative (MPC) located at Sitio Ibanag, Brgy. Naibuan, San Jose, Occidental Mindoro.

For your information and record.


ERNESTO E. TAÑADA

TSD-CDS 09/05/2022

So. Pag-asa, Brgy. Payompon,
Mamburao, Occidental Mindoro
Email: penroccmin.com.gov.ph



Republic of the Philippines
Department of Environment and Natural Resources
MIMAROPA Region
Community Environment and Natural Resources Office

AUG 26 2022

MEMORANDUM

FOR : The Regional Executive Director
DENR-MIMAROPA Region
Roxas Blvd., Ermita, Manila

THRU : The OIC-PENR Officer
Mamburao, Occidental Mindoro

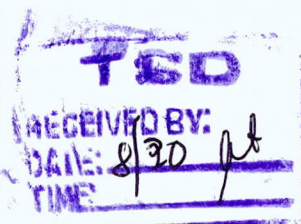
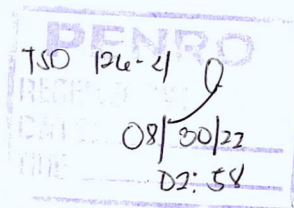
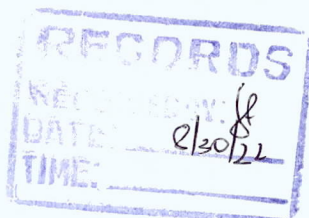
FROM : The CENR Officer

SUBJECT : SUBMISSION OF COPIES OF DETAILED ENGINEERING
DESIGN, BILL OF QUANTITIES AND DETAILED
ESTIMATES IN THE CONSTRUCTION OF THE SMALL
WATER IMPOUNDING SYSTEM (SWIS) LOCATED AT SO.
IBANAG, BRGY. NAIBUAN, SAN JOSE, OCCIDENTAL
MINDORO

Respectfully submitting copies of the detailed engineering design, bill of quantities and detailed estimates of the Small Water Impounding System (SWIS) to be constructed within the CBFM area of Ibanag Multi-Purpose Cooperative (IMPC) located at So. Ibanag, Brgy. Naibuan, San Jose, Occidental Mindoro for your reference.

For information and record.

EFREN L. DELOS REYES



BILL OF QUANTITIES

SMALL WATER IMPOUNDING SYSTEM (SWIS)
So. Ibanag, Barangay Naibuan, San Jose, Occidental Mindoro

ITEM No.	DESCRPTION	UNIT	QTY	AMOUNT PHP
I	Mobilization / Demobilization	Lot	1	Ps 37,002.00
II	Temporary Facilities	Lot	1	30,064.65
III	Safety & Health	Lot	1	51,975.00
IV	Hauling of Materials	Lot	1	303,187.50
V	Earthworks	Lot	1	317,625.00
VI	Formworks / Scaffoldings	Lot	1	323,268.75
VII	Spring Box	Lot	1	95,740.31
VIII	Concrete Reservoir	Lot	1	576,312.19
IX	Transmission & Distribution Lines	Lot	1	638,498.44
X	River/Canal Crossing & Supports	Lot	1	277,009.69
XI	Public Faucet	Lot	1	62,717.81
XII	Painting & Waterproofing Works	Lot	1	40,274.06
XIII	Hydrotesting & Disinfection	Lot	1	11,031.56
XIV.	Fabrication/Installation of Billboards	Lot	1	15,435.00
			TOTAL	Ps. 2,780,141.96

SAY Ps. 2,780,000.00

Submitted by:



AR. JEMUEL MARK M. VENERACION
RJ Construction and Designs

DETAILED ESTIMATES

PROJECT : SMALL WATER IMPOUNDING SYSTEM (SWIS)

LOCATION : So. Ibanag, Barangay Naibuan, San Jose, Occidental Mindoro

M No.	PARTICULARS	QTY	UNIT COST	TOTAL
I. MOBILIZATION / DEMOBILIZATION				
A. MATERIALS / VEHICLE				
	Lumpsum			Ps 30,000.00
			SUB-TOTAL	Ps 30,000.00
B. LABOR				
	1 Foreman	4 days	600.00	Ps 2,400.00
	2 Laborers	4 days	355.00	2,840.00
			SUB-TOTAL	Ps 5,240.00
			TOTAL	Ps 35,240.00
II. TEMPORARY FACILITIES				
A. MATERIALS				
	Lumpsum			Ps 20,000.00
			SUB-TOTAL	Ps 20,000.00
B. LABOR				
	1 Foreman	2 days	600.00	1,200.00
	3 Skilled Workers	2 days	450.00	2,700.00
	3 Laborers	2 days	355.00	2,130.00
			SUB-TOTAL	Ps 6,030.00
			TOTAL	Ps 26,030.00
III. SAFETY & HEALTH				
A. MATERIALS				
	Lumpsum (Includes signages, barricades, PPE, first aid kit, etc.)			Ps 15,000.00
			SUB-TOTAL	Ps 15,000.00
B. LABOR				
	1 Safety & Health Personnel			Ps 30,000.00
			SUB-TOTAL	Ps 30,000.00
			TOTAL	Ps 45,000.00
IV. HAULING OF MATERIALS				
A. LABOR				
	1 Foreman	30 days	600.00	Ps 18,000.00
	20 Laborers	30 days	355.00	213,000.00
			SUB-TOTAL	Ps 231,000.00
			TOTAL	Ps 231,000.00
V. EARTHWORKS				
A. MATERIALS				
	Gravel	2 cu.m.	2,500.00	5,000.00
			SUB-TOTAL	Ps 5,000.00
B. LABOR				
	1 Foreman	30 days	600.00	Ps 18,000.00
	20 Laborers	30 days	355.00	213,000.00
			SUB-TOTAL	Ps 231,000.00
C. EQUIPMENT				
	1 Water Pump	10 days	600.00	Ps 6,000.00
			SUB-TOTAL	Ps 6,000.00
			TOTAL	Ps 242,000.00

VI.	FORMWORKS / SCAFFOLDINGS				
A.	MATERIALS				
	½" Thk Marine Plywood	60 pcs	Ps 1,200.00	Ps	72,000.00
	Asst'd sizes of Good Lumber	2100 bd.ft.	50.00		105,000.00
	Asst'd sizes of CW Nails	100 kgs	90.00		9,000.00
			SUB-TOTAL	Ps	186,000.00
B.	LABOR				
	1 Foreman	20 days	600.00	Ps	12,000.00
	3 Skilled Workers	20 days	450.00		27,000.00
	3 Laborers	20 days	355.00		21,300.00
			SUB-TOTAL	Ps	60,300.00
			TOTAL	Ps	246,300.00

VII.	SPRING BOX				
A.	MATERIALS				
	Portland Cement	25 bags	Ps 275.00	Ps	6,875.00
	Sahara	25 packs	50.00		1,250.00
	Gravel ¾"	3 cu.m.	2,500.00		7,500.00
	Sand S1	2 cu.m.	2,500.00		5,000.00
	12mmØ x 6m RSB	40 pcs	265.00		10,600.00
	#16 GI Tie Wire	10 kgs	95.00		950.00
	2"Ø GI Pipe Sch. 40	1 pc	2,520.00		2,520.00
	2"Ø Brass Gate Valve	2 pc	2,550.00		5,100.00
	2"Ø GI Union	1 pc	380.00		380.00
	4"Ø GI Elbow	2 pcs	1,180.00		2,360.00
	4"Ø x 12" GI Nipple Sch. 40	4 pcs	655.00		2,620.00
	2"Ø x 12" GI Nipple Sch. 40	3 pcs	290.00		870.00
	Teflon Tape	10 rolls	25.00		250.00
			SUB-TOTAL	Ps	46,275.00
B.	LABOR				
	1 Foreman	7 days	600.00	Ps	4,200.00
	2 Skilled Workers	7 days	450.00		6,300.00
	2 Laborers	7 days	355.00		4,970.00
			SUB-TOTAL	Ps	15,470.00
C.	EQUIPMENT				
	1 One Bagger Concrete Mixer	7 days	1,000.00	Ps	7,000.00
	1 Vibrator	7 days	600.00		4,200.00
			SUB-TOTAL	Ps	11,200.00
			TOTAL	Ps	72,945.00

VIII.	CONCRETE RESERVOIR				
A.	MATERIALS				
	Portland Cement	160 bags	Ps 275.00	Ps	44,000.00
	Sahara	160 packs	50.00		8,000.00
	¾" Gravel	20 cu.m.	2,500.00		50,000.00
	Sand S1	10 cu.m.	2,500.00		25,000.00
	16 mm x 6m RSB	4 pcs	470.00		1,880.00
	12 mm x 6m RSB	450 pcs	265.00		119,250.00
	#16 GI Tie Wire	75 kgs	95.00		7,125.00
	3"Ø GI Pipe Sch. 40	1 pc	4,950.00		4,950.00
	2"Ø GI Pipe Sch. 40	1 pc	2,520.00		2,520.00
	3"Ø Brass Gate Valve	1 pc	5,950.00		5,950.00
	2"Ø Brass Gate Valve	1 pc	2,550.00		2,550.00
	1"Ø Ball Valve w/ Lockwing	6 pcs	640.00		3,840.00
	3"Ø x 90° GI Elbow	2 pcs	610.00		1,220.00
	2"Ø x 90° GI Elbow	2 pcs	250.00		500.00
	1"Ø x 90° GI Elbow	12 pcs	90.00		1,080.00
	3"Ø x 12" GI Nipple Sch. 40	3 pcs	570.00		1,710.00
	2"Ø x 12" GI Nipple Sch. 40	2 pcs	290.00		580.00
	1"Ø x 12" GI Nipple Sch. 40	12 pcs	120.00		1,440.00

	1"Ø x 6" GI Nipple Sch. 40	6 pcs	75.00	450.00
	Teflon Tape	50 rolls	25.00	1,250.00
	6" Rubber Water Stop(PVC Corr. Rib Type w/ Center Bulb)	2 rolls	9,500.00	19,000.00
	SUB-TOTAL			Ps 302,295.00
B. LABOR				
	1 Foreman	20 days	600.00	Ps 12,000.00
	4 Skilled Workers	20 days	450.00	36,000.00
	8 Laborers	20 days	355.00	56,800.00
	SUB-TOTAL			Ps 104,800.00
C. EQUIPMENT				
	1 One Bagger Concrete Mixer	20 days	1,000.00	Ps 20,000.00
	1 Vibrator	20 days	600.00	12,000.00
	SUB-TOTAL			Ps 32,000.00
	TOTAL			Ps 439,095.00

IX TRANSMISSION & DISTRIBUTION LINES				
A. MATERIALS				
	3"Ø GI Pipe Sch. 40	6 pcs	Ps 4,950.00	Ps 29,700.00
	2"Ø GI Pipe Sch. 40	10 pcs	2,520.00	25,200.00
	3"Ø GI France Coupling	3 pcs	450.00	1,350.00
	2"Ø GI France Coupling	10 pcs	250.00	2,500.00
	2"Ø GI Union	5 pcs	380.00	1,900.00
	2"Ø PE Pipe SDR 11	17 rolls	15,460.00	262,820.00
	1"Ø PE Pipe SDR 11	10 rolls	6,200.00	62,000.00
	2"Ø Plastic PE Coupling	17 pc	540.00	9,180.00
	2"Ø Plastic PE Male Adapter	2 pcs	340.00	680.00
	1"Ø Plastic PE Coupling	10 pcs	105.00	1,050.00
	1"Ø PE Male Adapter	7 pcs	75.00	525.00
	1"Ø x ¾"Ø Plastic PE Coupling Reducer	6 pcs	120.00	720.00
	Teflon Tape	50 rolls	25.00	1,250.00
	SUB-TOTAL			Ps 398,875.00
B. LABOR				
	1 Foreman	30 days	600.00	Ps 18,000.00
	2 Plumbers	30 days	450.00	27,000.00
	4 Laborers	30 days	355.00	42,600.00
	SUB-TOTAL			Ps 87,600.00
	TOTAL			Ps 486,475.00

X RIVER/CANAL CROSSING & SUPPORTS				
A. MATERIALS				
	Cement Portland	55 bags	Ps 275.00	Ps 15,125.00
	¾" Gravel	6 cu.m.	2,500.00	15,000.00
	Sand S1	3 cu.m.	2,500.00	7,500.00
	16mm x 6m RSB	50 pcs	470.00	23,500.00
	12mm x 6m RSB	20 pcs	265.00	5,300.00
	10mm x 6m RSB	30 pcs	185.00	5,550.00
	#16 GI Tie Wire	20 kgs	95.00	1,900.00
	20 mm Ø Cable Wire (steel)	95 mts	650.00	61,750.00
	12 mm Ø Round Bar	20 pcs	550.00	11,000.00
	22 mm Turn buckle	1 pc	950.00	950.00
	20 mm Cable Clamp	8 pcs	350.00	2,800.00
	1/4" x 2" Flat Bar	2 pcs	885.00	1,770.00
	3/16" x 1 1/2" Flat Bar	5 pcs	530.00	2,650.00
	1/2" x 6" Hex Bolt w/ N & W	12 pcs	30.00	360.00
	1/2" x 1 1/2" Stainless Hex Bolt w/ N & W	60 pcs	35.00	2,100.00
	Welding Rod	5 boxes	250.00	1,250.00
	SUB-TOTAL			Ps 158,505.00
B. LABOR				
	1 Foreman	10 days	600.00	Ps 6,000.00

	2 Skilled Workers	10 days	450.00	9,000.00
	4 Laborers	10 days	355.00	14,200.00
	1 Welder	7 days	450.00	3,150.00
	SUB-TOTAL			Ps 32,350.00
C. EQUIPMENT				
	1 One Bagger Concrete Mixer	10 days	1,000.00	Ps 10,000.00
	1 Vibrator	10 days	600.00	6,000.00
	1 Welding Machine	7 days	600.00	4,200.00
	SUB-TOTAL			Ps 20,200.00
	TOTAL			Ps 211,055.00

XI PUBLIC FAUCET				
A. MATERIALS				
	Portland Cement	20 bags	Ps 275.00	Ps 5,500.00
	¾" Gravel	2 cu.m.	2,500.00	5,000.00
	Sand S1	1 cu.m.	2,500.00	2,500.00
	¾"Ø PE Pipe SDR 11	2 rolls	5,690.00	11,380.00
	¾"Ø PE Male Adapter	10 pcs	52.00	520.00
	¾"Ø GI Pipe Sch. 40	6 pcs	850.00	5,100.00
	½"Ø Ball Valve Faucet	10 pcs	350.00	3,500.00
	¾"Ø Ball Valve w/ Lockwing	5 pcs	450.00	2,250.00
	¾"Ø GI Tee	5 pcs	70.00	350.00
	¾"Ø x 90° GI Elbow	10 pcs	55.00	550.00
	¾"Ø x ½"Ø GI Reducer Elbow	10 pcs	65.00	650.00
	¾"Ø x 4" GI Nipple	5 pcs	30.00	150.00
	Teflon Tape	20 rolls	25.00	500.00
	SUB-TOTAL			Ps 37,950.00
B. LABOR				
	1 Foreman	7 days	600.00	Ps 4,200.00
	1 Plumbers	7 days	450.00	3,150.00
	1 Laborers	7 days	355.00	2,485.00
	SUB-TOTAL			Ps 9,835.00
	TOTAL			Ps 47,785.00

XII PAINTING & WATERPROOFING WORKS				
A. MATERIALS				
	Flat Latex White	1 pail	Ps 2,885.00	Ps 2,885.00
	Semi-Gloss Latex Paint	1 pail	3,280.00	3,280.00
	Red Oxide Primer	2 gals	650.00	1,300.00
	Mortaseal Waterproofing	6 bags	1,800.00	10,800.00
	Concrete Putty	1 gal	430.00	430.00
	Paint Thinner	1 gal	450.00	450.00
	Lacquer Thinner	1 gal	400.00	400.00
	Concrete Neutralizer	2 gals	475.00	950.00
	Sand Paper	10 ft	75.00	750.00
	Paint Roller w/ Pan	2 sets	150.00	300.00
	Paint Brush	4 pcs	75.00	300.00
	SUB-TOTAL			Ps 21,845.00
B. LABOR				
	1 Foreman	4 days	600.00	Ps 2,400.00
	2 Painters	4 days	450.00	3,600.00
	2 Laborers	4 days	355.00	2,840.00
	SUB-TOTAL			Ps 8,840.00
	TOTAL			Ps 30,685.00

XIII. HYDROTESTING & DIS-INFECTION				
A. MATERIALS				
	Concentrated Chlorine Granules	20 kgs	Ps 350.00	Ps 7,000.00
	SUB-TOTAL			Ps 7,000.00
B. LABOR				
	1 Foreman	1 day	600.00	600.00

1 Skilled Worker	1 day	450.00	450.00
1 Laborer	1 day	355.00	355.00
SUB-TOTAL			Ps 1,405.00
TOTAL			Ps 8,405.00

XIV. FABRICATION/INSTALLATION OF BILLBOARDS			
A. MATERIALS			
Lumpsum			Ps 10,000.00
SUB-TOTAL			Ps 10,000.00
B. LABOR			
1 Foreman	1 day	600.00	Ps 600.00
1 Skilled Worker	1 day	450.00	450.00
2 Laborers	1 day	355.00	710.00
SUB-TOTAL			Ps 1,760.00
TOTAL			Ps 11,760.00

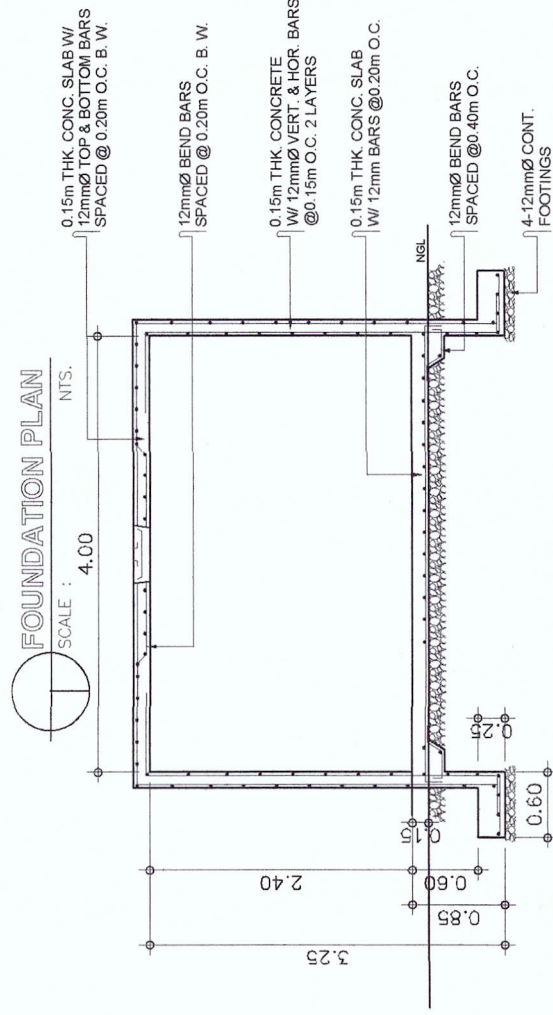
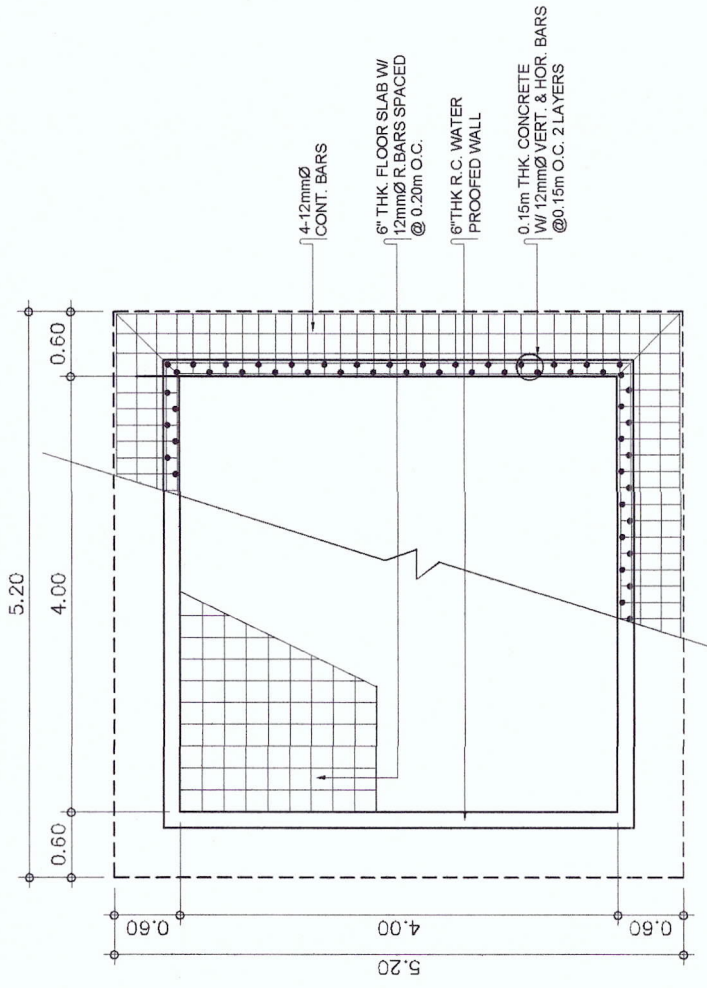
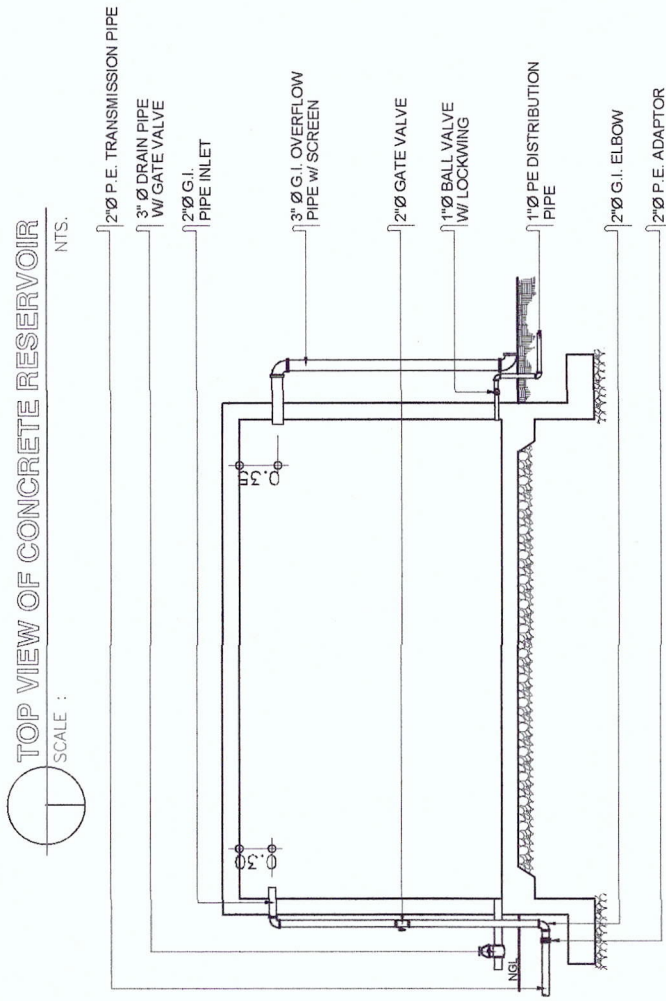
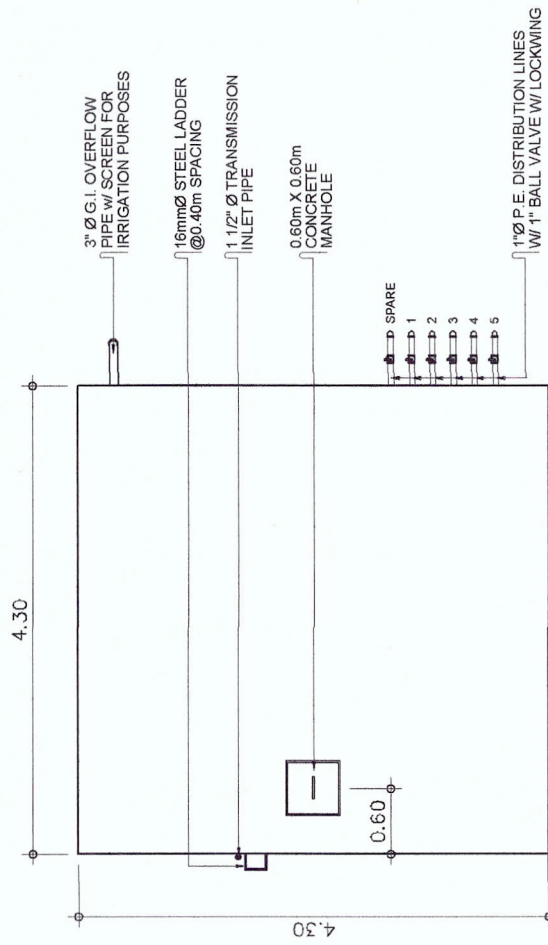
SUMMARY OF PROJECT COST
SMALL WATER IMPOUNDING SYSTEM (SWIS)
So. Ibanag, Barangay Naibuan, San Jose, Occidental Mindoro

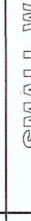
ITEM No.	SCOPE OF WORK	MATERIALS	LABOR	EQUIPMENT RENTAL	TOTAL
I	Mobilization / Demobilization	30,000.00	5,240.00		Ps 35,240.00
II	Temporary Facilities	20,000.00	6,030.00		26,030.00
III	Safety & Health	15,000.00	30,000.00		45,000.00
IV	Hauling of Materials		231,000.00		231,000.00
V	Earthworks	5,000.00	231,000.00	6,000.00	242,000.00
VI	Formworks / Scaffoldings	186,000.00	60,300.00		246,300.00
VII	Spring Box	46,275.00	15,470.00	11,200.00	72,945.00
VIII	Concrete Reservoir	302,295.00	104,800.00	32,000.00	439,095.00
IX	Transmission & Distribution Lines	398,875.00	87,600.00		486,475.00
X	River/Canal Crossing & Supports	158,505.00	32,350.00	20,200.00	211,055.00
XI	Public Faucet	37,950.00	9,835.00		47,785.00
XII	Painting & Waterproofing Works	21,845.00	8,840.00		30,685.00
XIII	Hydrotesting & Disinfection	7,000.00	1,405.00		8,405.00
XIV.	Fabrication/Installation of Billboards	10,000.00	1,760.00		11,760.00
	TOTAL	1,238,745.00	825,630.00	69,400.00	Ps 2,133,775.00

TOTAL DIRECT COST	Ps	2,133,775.00
OCM 15% (Except items I, II & III)		304,125.75
PROFIT 10% (Except items I)		209,853.50
VAT 5%		132,387.71
TOTAL PROJECT COST	Ps	2,780,141.96

Submitted by:

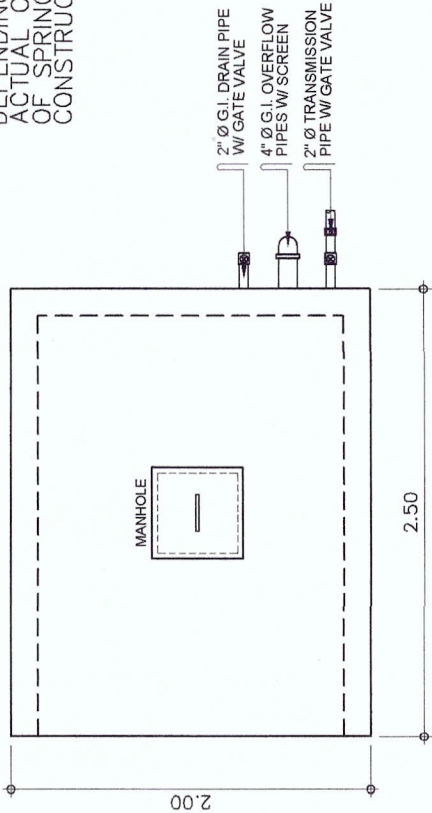

AR. JEMUEL MARK M. VENERACION
 RJ Construction and Designs



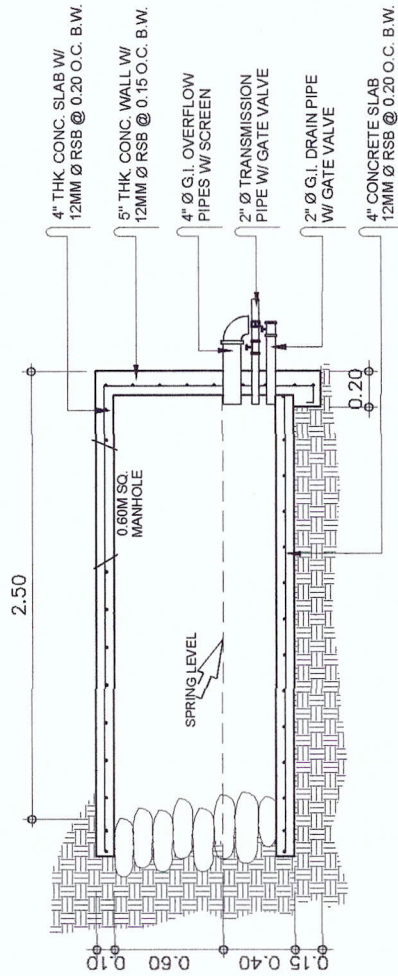
	DESIGNED BY:		APPROVED BY:		PROJECT: SMALL WATER IMPOUNDING SYSTEM LOCATION : SO. BAWAG, BRGY. NAIBUAN, SAN JOSE, OCCIDENTAL MINDORO	OWNER/IMPLEMENTING AGENCY : PENRO OCCIDENTAL MINDORO/ CENRO SANJOSE	SHEET NO : 02
	ENGR. RODEL M. VENERACION		 ERNESTO E. TANIADA OIC - PENRO				
	PTR NO. 4762027	AT: SJOM JAN 5, 2022					
	REG.NO. 45056	TIN. 166-385-702					

NOTE:

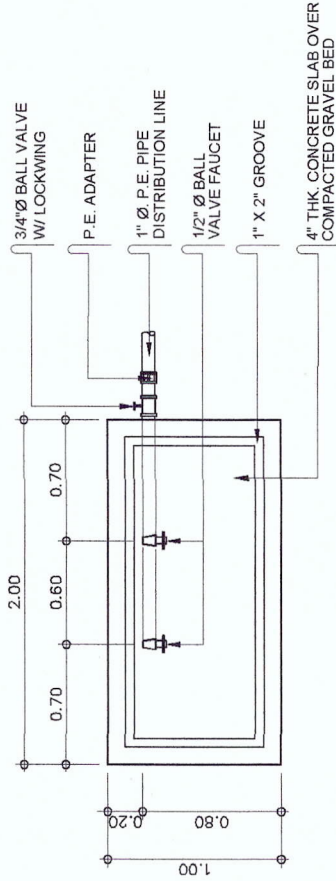
DIMENSION MAY VARY
DEPENDING ON THE
ACTUAL CONDITION
OF SPRING DURING
CONSTRUCTION.



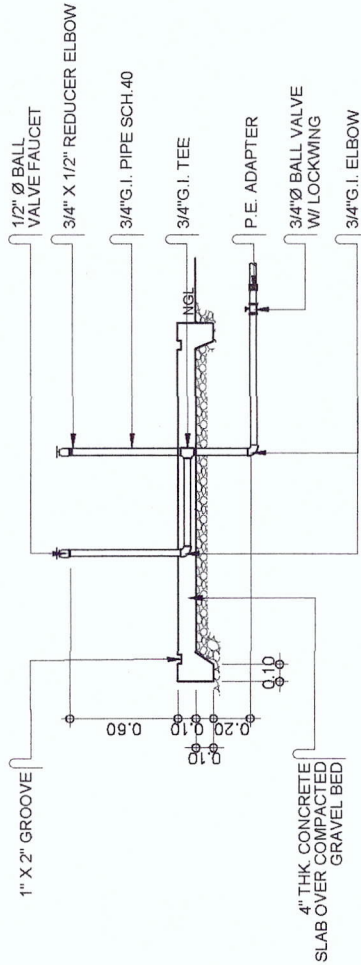
PLAN OF SPRING BOX
SCALE : NTS.



CROSS SECTION OF SPRING BOX
SCALE : NTS.



PLAN OF PUBLIC FAUCET
SCALE : NTS.



ELEVATION/SECTION OF PUBLIC FAUCET
SCALE : NTS.



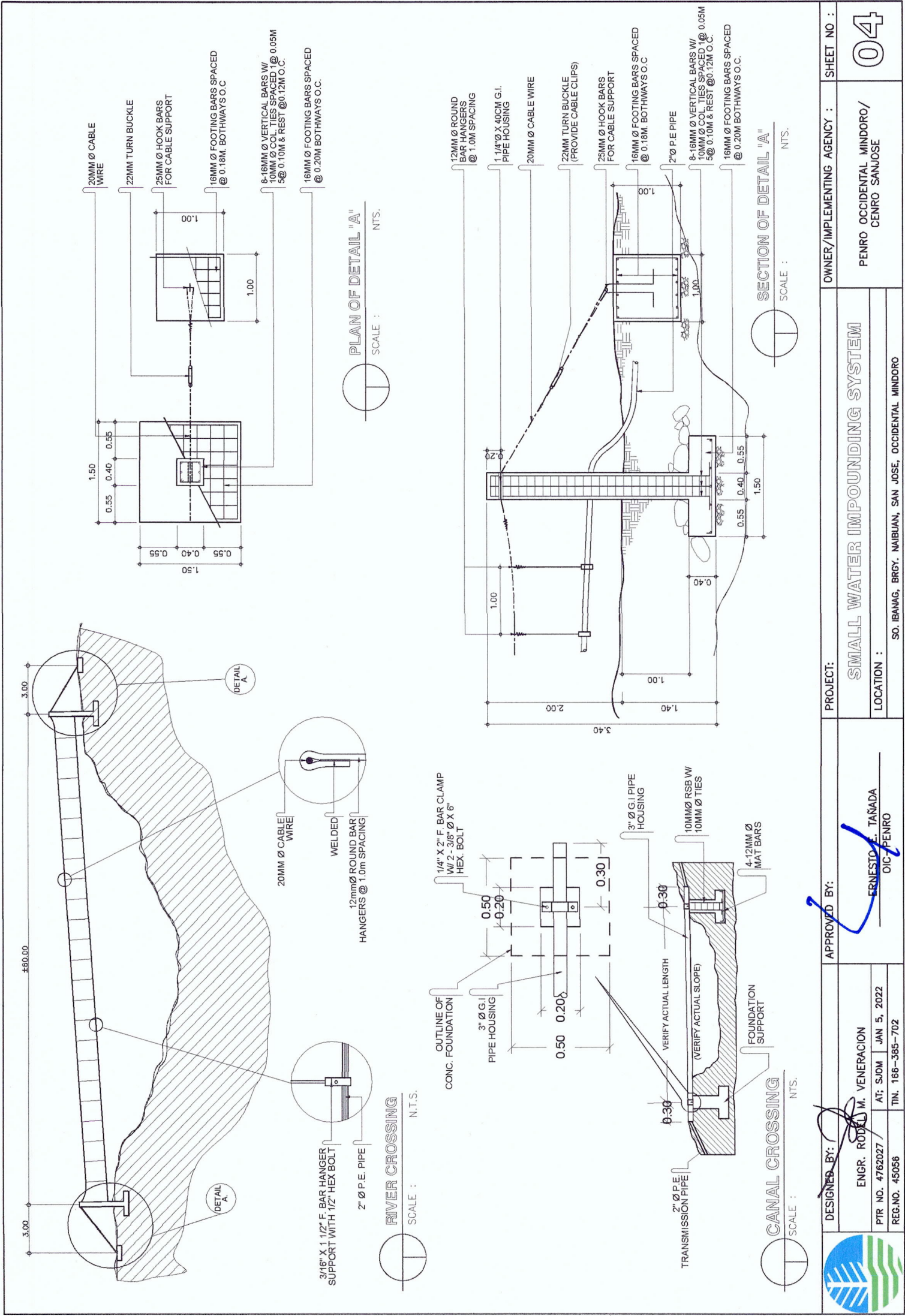
DESIGNED BY: ENGR. RODOLFO M. VENERACION
PTR NO. 4762027 AT: SJOM JAN 5, 2022
REG.NO. 45056 TIN. 165-385-702

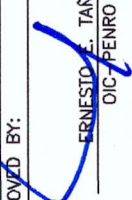
APPROVED BY: ERNESTO E. TAÑADA
OIC, PENRO

PROJECT: SMALL WATER IMPOUNDING SYSTEM
LOCATION : SO. IBANAG, BRGY. NAIBUAN, SAN JOSE, OCCIDENTAL MINDORO

OWNER/IMPLEMENTING AGENCY : PENRO OCCIDENTAL MINDORO/
CENTRO SANJOSE

SHEET NO : 03



	DESIGNED BY: ENGR. RODEL M. VENERACION PTR NO. 4762027 REG. NO. 45056	APPROVED BY:  ERNESTO E. TAKADA DIC-PENRO	PROJECT: SMALL WATER IMPOUNDING SYSTEM LOCATION: SO. IBANAG, BRGY. NAIBUAN, SAN JOSE, OCCIDENTAL MINDORO	OWNER/IMPLEMENTING AGENCY: PENRO OCCIDENTAL MINDORO/ CENRO SANJOSE	SHEET NO.: 04
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