



NATIONAL IRRIGATION ADMINISTRATION
SUMMARY OF CY 2019 PROGRAM OF WORK

Annex "E"
MC No. 69, s. 2018

REGION / PMO : IV-A / Laguna-Rizal Management Office
PROJECT TITLE : SIP CY 2019
NAME OF SYSTEM / PROJECT : HALAYHAYIN SMALL IRRIGATION PROJECT
SYSTEMS CATEGORY :
(NIS/CIS, NIS RIP) : Small Irrigation Project
PROJECT DESCRIPTION : PROPOSED PROTECTION WORKS, CANAL SYSTEM & STRUCTURES AND PROCUREMENT, DELIVERY & INSTALLATION OF SOLAR POWER PUMP & ENGINE

I. GENERAL INFORMATION			
1. Project Location		6. Overall Project Cost (P)	Original
a. Region	IV-A	a. GOP	7,500,000.00
b. Province /	Rizal	b. Loan proceeds	
City / Municipality	Pililla	c. Others (Equity, etc.)	
District	II	TOTAL	7,500,000.00
2. Service Area /		7. Physical Target (Overall)	
Designed area (ha.)	41.01 has. (New)	a. New Area (Ha)	41.01 has. (New)
Area For Generation		b. Restored Area (Ha)	
3. Source of Water		c. Repair Works (specific for rehab)	
3.a Drainage Area		c.1 Earth Canal (km)	
3.b Dependable Flow	✓	c.2 Lined canal & Pipe Line (km)	1.70
		c.3 Structures(units)	1.00
4. Type of Irrigation		c.4 Coconet Slope Prot.(sqm)	
(Pls check the type of Irrigation)		c.5 Concrete Service Roads(km)	
		c.6 Earth/gravel Roads (km)	
		c.7 Rehab area, Ha (attribution)	
		8. Overall Implementation Schedule	
		a. Physical Starting Date	Original
		b. Completion Date	Revised
			January, 2019
			May, 2019

II. WORK TO BE DONE (For the current year)			
1. Performance Weight		4. Physical Target	
a. CONTRACT WORKS	94.52%	a. New Area (Ha)	41.01 has. (New)
b. FORCE ACCOUNT WORKS		b. Restored Area (Ha)	
b-1) Construction Survey	0.75%	c. Repair Works (specific for rehab)	
b-2) IDP	1.89%	c.1 Earth Canal (km)	
c. FSSM	2.84%	c.2 Lined canal (km)	
d. GESA	0.00%	c.3 Structures(units)	
e. Management Fee	0.00%	c.4 Coconet Slope Prot.(sqm)	
TOTAL	100.00%	c.5 Concrete Service Roads(km)	
2. Starting Date:	January, 2019	c.6 Earth/gravel Roads (km)	
3. No. of days to Complete	150 Days	c.7 Rehab area, Ha (attribution)	

III. BREAKDOWN OF CURRENT YEAR PROGRAM				PREPARED / SUBMITTED BY:	
A. DIRECT COST				LOUIE JAY P. SAN JUAN Engineering Assistant A	
I. CONTRACT WORKS	Field Office	Central Office	Total	CHECKED / RECOMMENDING APPROVAL BY:	
1. CIVIL WORKS	7,089,323.64		7,089,323.64	ARMANDO L. FLORES Engineer A	
II. FORCE ACCOUNT WORKS				APPROVED BY:	
1. IDP	141,786.47		141,786.47	NICASIO C. RAGDANSANAN, JR. Division Manager	
2. CONSTRUCTION SURVEY	56,210.18		56,210.18	NOTED BY:	
III. FIELD SUPPORT, SUPERVISION & MONITORING	212,679.71		212,679.71	ROMEO M. LOPEZ Acting Regional Manager	
IV. PROCUREMENT OF EQUIPMENT & VEHICLES (for FAP'S)				CDR-8 RMA-8 GLH-8	
V. RIGHT OF WAY ACQUISITION/ DAMAGES				NOTED BY:	
VI. CONSULTING SERVICES				DELSY J. REVELLAME Acting Manager, Operation Department	
VII. TAXES (For selected FAPs)					
VIII. CONTINGENCIES					
10. CONTINGENCIES					
SUB-TOTAL (A) DIRECT COST	7,500,000.00		7,500,000.00		
B. INDIRECT COST					
I. GESA					
II. MANAGEMENT FEE					
SUB-TOTAL (B) INDIRECT COST					
GRAND TOTAL (A+B)	7,500,000.00		7,500,000.00		
IV. SOURCES OF FUNDS					
A. CAPITAL OUTLAY					
1. GOP					
2. LOAN PROCESS					

DETAILED BREAKDOWN

PROPOSED PROTECTION WORKS, CANAL SYSTEM & STRUCTURES AND PROCUREMENT, DELIVERY & INSTALLATION OF SOLAR POWER PUMP & ENGINE

Under SIP CY 2019
Pililla, Rizal

ATTACHMENT "D"

ACTIVITY	Unit	WORK TO BE DONE									
		Quantity	Estimated Direct Cost		Indirect Cost				TOTAL		
			Unit Cost	Total EDC	OCM	Profit	Vat	Total	Unit Cost	Project Cost	
A. DIRECT COST											
I. CIVIL WORKS											
1. Grouted Riprap	cu.m.	144.48	5,952.03	859,949.29	714.24	476.16	357.12	1,547.52	7,499.55	1,083,534.98	
2. Class "B" Concrete - Flooring	cu.m.	54.72	9,826.03	537,680.36	1,179.12	786.08	589.56	2,554.76	12,380.79	677,476.83	
3. Class "B" Concrete - Wall & TB	cu.m.	100.99	12,232.30	1,235,339.98	1,467.88	978.58	733.94	3,180.40	15,412.70	1,556,528.57	
4. Class "A" Concrete - Flooring	cu.m.	2.91	12,220.65	35,562.09	1,466.48	977.65	733.24	3,177.37	15,398.02	44,808.24	
5. Class "A" Concrete - Wall & TB	cu.m.	5.36	13,063.71	70,021.49	1,567.65	1,045.10	783.82	3,396.57	16,460.28	88,227.10	
6. Class "A" Concrete - Structure (Pump Sump)	cu.m.	2.55	14,049.37	35,825.89	1,685.92	1,123.95	842.96	3,652.83	17,702.20	45,140.61	
7. HDPE Pipe 8"Ø x 6.0m - SDR 11	pcs.	34.00							20,075.00	682,550.00	
8. 8" Ø - Elbow 90°	pc.	1.00							8,611.00	8,611.00	
9. Desilting	cu.m.	23.54	245.33	5,775.07	29.44	19.63	14.72	63.79	309.12	7,276.68	
10. Corrugated Pipe 3"Ø x 30.0m	pcs.	22.00							10,571.00	232,562.00	
11. Manual Excavation	cu.m.	132.84	147.20	19,554.05	17.66	11.78	8.83	38.27	185.47	24,637.83	
12. Manual Backfill w/ Compaction (Side Borrow)	cu.m.	109.50	196.27	21,491.57	23.55	15.70	11.78	51.03	247.30	27,079.35	
13. Manual Backfill w/ Compaction (Haul Borrow)	cu.m.	97.01	1,790.77	173,722.60	214.89	143.26	107.45	465.60	2,256.37	218,890.45	
									SUB-TOTAL 1	4,697,323.64	
II. PUMP WORKS											
PROCUREMENT, DELIVERY & INSTALLATION OF SOLAR POWER PUMP & ACCESSORIES											
1 Solar Controller cum Inverter for 7.5hp, 220-230V, 3Ph Pump and Motor	set	1.00								270,000.00	270,000.00
2 Stainless Steel Submersible Pump and Motor											
A. 7.5hp Submersible Motor Power Rating											
B. 6in pump and motor nominal diameter											
C. 200gpm discharge at 32m head and 3450rpm											
D. No. of Stages = 3,											
E. Impeller = Stainless 304											
F. Degree of Protection = IP58/IP68	set	1.00								380,000.00	380,000.00
G. Impeller Seal Ring = Nitrite Butyl Rubber											
H. Pump Shaft = Stainless 431											
I. Coupling Splines = Stainless 431											
J. Upper and Lower Housing = Cast iron											
K. Thrust Pad = Carbon Graphite											
L. Efficiency = 80.5%											

M. Outlet Size = 3inches/75mm											
N. Impeller Type = Mixed Flow Impeller											
3	PV Modules, 72 Cells, Polycrystalline class A, with certificate of conformance for Fill Factor Verification	watts peak	9,600.00						90.00		864,000.00
4	3"x3"x4mm Tubular Bars	pcs	36.00						5,200.00		187,200.00
5	PV Cable for DC connection	m	250.00						220.00		55,000.00
6	MC4 Connectors	set	30.00						350.00		10,500.00
7	3"x3"x4mm angle bars	pcs	30.00						2,600.00		78,000.00
8	3" 90 degrees elbow	pcs	6.00						1,700.00		10,200.00
9	3" GI coupling	pcs	6.00						700.00		4,200.00
10	3" Flange PN10/16	pcs	6.00						500.00		3,000.00
11	Gravel	cu.m	16.00						2,500.00		40,000.00
12	Sand	cu.m	16.00						1,800.00		28,800.00
13	Paint (Paint) for corrosion resistance	paint	5.00						5,000.00		25,000.00
14	Primer	gal.	20.00						1,200.00		24,000.00
15	Tetanized Treaded Botls w/ Double Nuts and Washers	sets	200.00						90.00		18,000.00
16	Corrugated Roof Sheet	pcs	12.00						800.00		9,600.00
17	Welding Rod 6011	box	10.00						3,700.00		37,000.00
18	Dynabolt 5/8" x 125mm	sets	180.00						125.00		22,500.00
19	Cocolumber (2"x3"x12')	pcs	100.00						350.00		35,000.00
20	Equipment Rental (Welding Machines, Boom Truck, Gen Sets, etc)	lot	1.00						60,000.00		60,000.00
21	Equipment Rental for Clearing and Grubbing	lot	1.00						30,000.00		30,000.00
22	Other Construction Materials	lot	1.00						50,000.00		50,000.00
23	Miscellaneous	lot	1.00						50,000.00		50,000.00
24	Mobilization/Demobilization/Freight Costs	lot	1.00						100,000.00		100,000.00
SUB-TOTAL 2											2,392,000.00
Total CONTRACT WORKS											7,089,323.64

II. FORCE ACCOUNT WORKS									
1.	Civil Works (Breakdown of Activities)								
2.	Institutional Development Program	L.S.	1.00	141,786.47	141,786.47			141,786.47	141,786.47
3.	Construction Survey (with support doc.)	L.S.	1.00	56,210.18	56,210.18			56,210.18	56,210.18
	Parcelly Survey (with support doc.)								
Total FORCE ACCOUNT WORKS					197,996.65			197,996.65	197,996.65
III. RIGHT OF WAY ACQUISITION/DAMAGES									
1.	Land Acquisition								
2.	Plant Damages								
3.	Property Damages								
IV. PROCUREMENT OF EQUIPMENT & VEHICLES									
V. FIELD SUPPORT, SUPERVISION & MONITORING									
		L.S.	1.00	212,679.71	212,679.71			212,679.71	212,679.71
VI. CONSULTING SERVICES									
VII. TAXES									
VII. TAXES									
VIII. CONTINGENCIES									
1.	Physical Contingency								
2.	Financial Contingency								
TOTAL DIRECT COST								7,500,000.00	7,500,000.00

SUMMARY OF ACTIVITIES
PROPOSED PROTECTION WORKS, CANAL SYSTEM & STRUCTURES AND PROCUREMENT, DELIVERY & INSTALLATION OF SOLAR POWER PUMP & ENGINE
 Under SIP CY 2019
 Pililla, Rizal

"Attachment F"

ACTIVITY	CANAL	STATION		Length (m.)	Location	ITEM OF WORKS														
		FROM	TO			Grouted Riprap	Class "B" Concrete - Flooring	Class "B" Concrete - Wall & TB	Class "A" Concrete - Flooring	Class "A" Concrete - Wall & TB	SOLAR POWER PUMP & ACCESSORIES	Class "A" Concrete - Structure (Pump Sump)	HDPE Pipe 8" Ø x 6.0m - SDR 11	8" Ø - Elbow 90°	Corrugated Pipe 3" Ø x 30.0m	Desilting	Manual Excavation	Manual Backfill w/ Compaction (Side Borrow)	Manual Backfill w/ Compaction (Haul Borrow)	
		(cu.m.)	(cu.m.)			(cu.m.)	(cu.m.)	(cu.m.)	(cu.m.)	(cu.m.)	(cu.m.)	(l.s.)	(cu.m.)	(cu.m.)	(pc.)	(pcs.)	(cu.m.)	(cu.m.)	(cu.m.)	(cu.m.)
CIVIL WORKS																				
1. Proposed Protection Works	MC 1 (Left & Right)	0+000.00	0+060.00	60.00	Pililla, Rizal	121.20											81.50	48.73		
2. Proposed Concrete Lining	MC 1	0+060.00	0+100.00	40.00		3.42	6.61											0.00	0.00	7.48
3. Proposed Concrete Lining	MC 1	0+100.00	0+140.00	40.00		2.87	5.37											0.00	0.00	1.30
4. Proposed Concrete Lining	MC 1	0+140.00	0+220.00	80.00		5.82	10.71											0.00	0.00	35.64
5. Proposed Concrete Lining	MC 1	0+220.00	0+260.00	40.00		2.91	5.36											0.00	0.00	17.16
6. Proposed Concrete Lining	MC 1	0+260.00	0+300.00	40.00		2.91	5.36											2.60	2.60	14.56
7. Proposed Concrete Lining	MC 1	0+300.00	0+420.00	120.00		8.74	16.07											9.10	9.10	12.90
8. Proposed Concrete Lining	MC 1	0+420.00	0+460.00	40.00				2.91	5.36									1.80	1.80	2.05
9. Proposed Concrete Lining	MC 1	0+460.00	0+580.00	120.00		8.74	16.07											8.10	8.10	0.70
10. Proposed Concrete Lining	MC 1	0+580.00	0+700.00	120.00		8.74	16.07											9.10	9.10	2.45
11. Proposed Concrete Lining	MC 1	0+700.00	0+845.00	145.00		10.56	19.37											12.85	12.85	0.77
12. Proposed Protection Works	MC 2	0+308.00	0+314.00	6.00														2.79	0.66	
13. Proposed Pipe Line (HDPE)	MC 2	0+150.00	0+354.00	204.00									34.00	1.00		23.54			16.56	
PUMP WORKS																				
14. Procurement, Delivery & Installation of Solar Power Pump & Accessories	DSFD	0+000.00								1.00										
15. Proposed Pump Sump	DSFD	0+000.00															5.00			
16. Proposed Pipe Line (Corrugated)	DSFD	0+000.00	0+645.00	645.00										22.00						
TOTAL				1,700.00		144.48	54.72	100.99	2.91	5.36	1.00	2.55	34.00	1.00	22.00	23.54	132.84	109.50	97.01	

PREPARED / SUBMITTED BY:


LOUIE JAY P. SAN JUAN
 Engineering Assistant A

CHECKED / RECOMMENDING APPROVAL BY:

ARMANDO L. FLORES
 Engineer A

APPROVED BY:

NICASIO C. PAGDANGANAN, JR.
 Division Manager

NOTED BY:

ROMEO M. LOPEZ
 Acting Regional Manager
 GLA-
 RMA-
 CDR-