

Republic of the Philippines
Department of Public Works and Highways

Bureau : DPWH
Region : IX
District/City : Zamboanga City

PROGRAM OF WORK (For all types of Project)						
NAME OF PROJECT : Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan			Appropriation : P 135,000,000.00 Source of Funds : CY-2018 GAA Issued Obligated Authority : Released : Cal. Days to Complete : 349 Calendar Days Desirable Starting Date : upon approval Mode of Implementation : by contract			
LOCATION: Isabela City, Basilan			Net Length: Net Length: 4,370.50 in.m.			
PROJECT CATEGORY : NATIONAL ROAD						
PROJECT DESCRIPTION :						
MINIMUM EQUIPMENT REQUIREMENT :			TECHNICAL PERSONNEL REQUIRED :			
Description	No.	Description	No.	Description	No.	
Dump Truck	6	Cargo Truck	1	Project Engineer	1	
Backhoe w/ Pavement Breaker	1	Payloader	2	Materials Engineer	1	
Bulldozer	2	Water Truck	3	Geometric Surveyor	1	
Backhoe	2	Bar Bender	1	Foreman	1	
Concrete Vibrator	3	One Bagger Mixer	3	Materials Lab. Tech.	1	
Bar Cutter	1	Batching Plant	1	Mason	12	
				Carpenter	8	
				Laborers (Skilled)	15	
				Laborers (Unskilled)	20	
				Safety Practitioner	1	
ESTIMATED COST OF PROPOSED WORK						
ITEM NO.	DESCRIPTION	% OF TOTAL	UNIT	QUANTITY	DIRECT COST	
					TOTAL	UNIT COST
PART A - FACILITIES FOR THE ENGINEER						
A.1.1 (3)	Bunkhouse, 7.00 m. x 9.00 m.	0.46	LS.	1.00	481,229.36	481,229.36
A.1.1 (11)	Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer	0.09	LS.	1.00	92,122.74	92,122.74
A.1.2(5)	Operation and Maintenance of Government Service Vehicle Engineer	0.61	month	11.63	643,739.68	55,335.79
PART B - OTHER GENERAL REQUIREMENTS						
B.4(1)	Construction Survey & Staking	0.15	km.	4.371	156,304.63	35,763.56
B.5	Project Billboard/Signboard	0.01	each	2.00	13,249.20	6,624.60
B.7	Occupation Safety and Health Program	0.78	month	11.63	820,647.12	70,542.73
B.9	Mobilization & Demobilization	0.77	LS.	1.00	801,900.00	801,900.00
PART C - EARTHWORKS						
101 (3)b1	Removal of Existing PCCP	0.14	sq.m.	1,238.00	142,969.04	115.48
1702(1)a	Structure Excavation	4.77	cu.m.	21,712.00	4,996,270.99	230.12
403(5)	Structural Steel, Furnished, Fabricated & Erected	0.61	kg	8,613.37	642,709.42	74.62
404(1)a	Reinforcing Steel, (Grade 40)	22.14	kg	410,080.00	23,205,265.31	56.59
404(1)b	Reinforcing Steel, (Grade 60)	12.51	kg	223,361.00	13,108,424.23	58.69
405(1)b3	Structural Concrete, Class "A"	42.81	cu.m.	5,396.00	44,873,842.62	8,316.13
407(8)	Lean Concrete	3.72	cu.m.	495.00	3,897,938.10	7,874.62
502(3)a6	Catch Basin	6.69	each	399.00	7,013,568.90	17,577.87
502(5)	Metal Frame and Gratings, Type	1.99	pair	399.00	2,081,995.67	5,218.03
508(1)	Hand Laid Rock Embankment	1.76	cu.m.	986.00	1,847,253.31	1,873.48
TOTAL		100.00			P 104,819,430.32	

PROJECT: CONSTRUCTION/ REPAIR/ REHABILITATION/ IMPROVEMENT OF VARIOUS INFRASTRUCTURE INCLUDING LOCAL PROJECTS - FLOOD CONTROL AND DRAINAGE - FLOOD CONTROL STRUCTURES/ FACILITIES - CONSTRUCTION OF FLOOD CONTROL- DRAINAGE AT ISABELA CITY PROPER, ISABELA CITY, BASILAN

LIMITS :

Beg. of Project	0 + 000.00	LENGTH
End of Project	0 + 436.50	436.50

STRAIGHT LINE DIAGRAM LIMITS:

DRAINAGE-1	LENGTH	DRAINAGE-6	
Beg. of Project	0 + 000.00	Beg. of Project	0 + 000.00
End of Project	0 + 486.00	End of Project	0 + 177.00
DRAINAGE-2		DRAINAGE-7	
Beg. of Project	0 + 000.00	Beg. of Project	0 + 000.00
End of Project	0 + 845.00	End of Project	0 + 116.00
DRAINAGE-3		DRAINAGE-8	
Beg. of Project	0 + 000.00	Beg. of Project	0 + 000.00
End of Project	0 + 240.00	End of Project	0 + 634.00
DRAINAGE-4		DRAINAGE-9	
Beg. of Project	0 + 000.00	Beg. of Project	0 + 000.00
End of Project	0 + 385.00	End of Project	0 + 200.00
DRAINAGE-5		DRAINAGE-10	
Beg. of Project	0 + 000.00	Beg. of Project	0 + 000.00
End of Project	0 + 183.00	End of Project	0 + 668.00

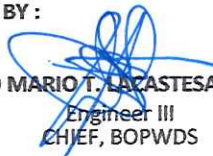
NET LENGTH: 4,370.50 Ln.M.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	REMARKS
			AS TO PLAN	
A.1.1(3)	CONSTRUCTION OF FIELD OFFICE FOR THE ENGINEER	L.S.	1.00	
A.1.1(11)	PROVISION OF FURNITURES/FIXTURES, EQUIPMENT & APPLIANCES FOR THE FIELD OFFICE FOR THE ENGINEER	L.S.	1.00	
A.1.2(5)	OPERATION AND MAINTENANCE OF GOVERNMENT SERVICE VEHICLE	L.S.	1.00	
B.4(1)	CONSTRUCTION SURVEY AND STAKING	KM.	4.371	
B5	PROJECT BILLBOARD	Each	2.00	
B7	CONSTRUCTION SAFETY AND HEALTH	L.S.	1.00	
B9	MOBILIZATION & DEMOBILIZATION	L.S.	1.00	
101(3)	REMOVAL OF EXISTING PCCP	Sq.M.	1,238.00	
1702(1)	STRUCTURE EXCAVATION	Cu.M.	21,712.00	
403(5)	STRUCTURAL STEEL (75mmX75mmX12mm) (50mmX50mmX9.4mm) (75mmX12mm FLAT BAR) (50mmX50mmX4.5mm)	kG.	8,613.37	For Manhole Cover Frame
404(1)a	REINFORCING STEEL, GRADE 40	kG.	410,080.00	For Drainage
404(1)b	REINFORCING STEEL, GRADE 60	kG.	223,361.00	For Drainage
405(1)b3	STRUCTURAL CONCRETE, fc' = 27.58 M Pa	Cu.M.	5,396.00	For Drainage
407	LEAN CONCRETE	Cu.M.	495.00	0.10m thick
502(3) a6	CATCH BASIN	Each	399.00	10.00 Meters Interval
502(5)	METAL FRAME AND GRATINGS, TYPE	Pair	399.00	10.00 Meters Interval
508(1)	HAND-LAID ROCK EMBANKMENT	Cu.M.	986.00	

PREPARED BY :


DANILO MALANDE
Engineer I

CHECKED BY :

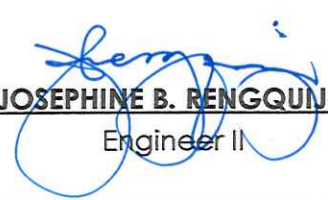

PIO MARIO T. LACASTESANTOS
Engineer III
CHIEF, BOPWDS

NAME OF PROJECT : Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Isabela City

BREAKDOWN OF ESTIMATED EXPENDITURES	% OF TOTAL	AMOUNT
I. ESTIMATED COST		
A. DIRECT COST		
A.1. Labor	5.99	8,087,992.83
A.2. Equipment Expenses	8.15	11,005,599.35
A.3. Materials	63.50	85,725,838.14
SUB-TOTAL (DIRECT COST)	77.64	P 104,819,430.32
B. INDIRECT COST (Per D.O. # 197, s. 2016)		
B.1. Overhead, Contingency & Misc. (10 % Max. of D.C.)	7.59	10,246,102.08
B.2. Profit (8 % Max. of D.C.)	6.13	8,269,903.25
C. VAT (5% of D.C. and I.C. Per D.O. # 197, s. 2016)	4.57	6,166,771.78
SUBTOTAL (CONTRACT COST)	95.93	P 129,502,207.43
II. ESTIMATED GOVERNMENT EXPENDITURES		
1. Engineering and Administrative Overhead (3.5%)	3.50	4,725,000.00
2. Detailed Engineering (1%)		
3. Reserved for the Payment of RROW	0.00	
4. Physical Reserved	0.57	772,792.57
TOTAL ESTIMATED PROJECT COST	100.00	P 135,000,000.00

Prepared :


JOSEPHINE B. RENGQUINO
Engineer II

Submitted :


LEONCIO B. SOLAMILLO
Chief, Construction Division

Recommending Approval :


CAYAMOMBAO D. DIA
Assistant Regional Director

Approved :


JORGE U. SEBASTIAN, JR., CESO III
Regional Director

APPROVED BUDGET FOR THE CONTRACT

Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Stations :

Length : 4,370.50 In.m.

Contract Duration : 349 CD

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UPS IN % OCM	PROFIT	TOTAL MARK-UPS %	VALUE	VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
								(5) x (8)	5%[(5) + (9)]	(9) + (10)	(5) + (11)	(12) / (3)
PART A - FACILITIES FOR THE ENGINEER												
A.1.1(3)	Bunkhouse, 7.00 m. x 9.00 m.	1.00	L.S.	481,229.36	10.00	8.00	18.00	86,621.29	28,392.53	115,013.82	596,243.18	596,243.18
A.1.1(11)	Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer	1.00	L.S.	92,122.74	-	8.00	8.00	7,369.82	4,974.63	12,344.45	104,467.19	104,467.19
A.1.2(5)	Operation and Maintenance of Government Service Vehicle Engineer	11.63	month	643,739.68	-	-	-	-	32,186.98	32,186.98	675,926.66	58,102.58
TOTAL OF PART A				1,217,091.79				93,991.10	65,554.14	159,545.25	1,376,637.04	
PART B - OTHER GENERAL REQUIREMENTS												
B.4(1)	Construction Survey & Staking	4.37	km.	156,304.63	10.00	8.00	18.00	28,134.83	9,221.97	37,356.81	193,661.43	44,311.05
B.5	Project Billboard/Signboard	2.00	each	13,249.20	10.00	8.00	18.00	2,384.86	781.70	3,166.56	16,415.76	8,207.88
B.7	Occupation Safety and Health Program	11.63	month	820,647.12	-	8.00	8.00	65,651.77	44,314.94	109,966.71	930,613.83	79,995.46
B.9	Mobilization & Demobilization	1.00	L.S.	801,900.00	-	-	-	-	40,095.00	40,095.00	841,995.00	841,995.00
TOTAL OF PART B				1,792,100.95				96,171.46	94,413.62	190,585.08	1,982,686.03	
PART C - EARTHWORKS												
101(3)b1	Removal of Existing PCCP	1,238.00	sq.m.	142,969.04	10.00	8.00	18.00	25,734.43	8,435.17	34,169.60	177,138.64	143.08
1702(1)a	Structure Excavation	21,712.00	cu.m.	4,996,270.99	10.00	8.00	18.00	899,328.78	294,779.99	1,194,108.77	6,190,379.76	285.11
403(5)	Structural Steel, Furnished, Fabricated & Erected	8,613.37	kg	642,709.42	10.00	8.00	18.00	115,687.70	37,919.86	153,607.55	796,316.97	92.45
404(1)a	Reinforcing Steel, (Grade 40)	410,080.00	kg	23,205,265.31	10.00	8.00	18.00	4,176,947.76	1,369,110.65	5,546,058.41	28,751,323.71	70.11
404(1)b	Reinforcing Steel, (Grade 60)	223,361.00	kg	13,108,424.23	10.00	8.00	18.00	2,359,516.36	773,397.03	3,132,913.39	16,241,337.63	72.71
405(1)b3	Structural Concrete, Class "A"	5,396.00	cu.m.	44,873,842.62	10.00	8.00	18.00	8,077,291.67	2,647,556.71	10,724,848.39	55,598,691.01	10,303.69
407(8)	Lean Concrete	495.00	cu.m.	3,897,938.10	10.00	8.00	18.00	701,628.86	229,978.35	931,607.21	4,829,545.30	9,756.66
502(3)a6	Catch Basin	399.00	each	7,013,568.90	10.00	8.00	18.00	1,262,442.40	413,800.57	1,676,242.97	8,689,811.87	21,778.98
502(5)	Metal Frame and Gratings, Type	399.00	pair	2,081,995.67	10.00	8.00	18.00	374,759.22	122,837.74	497,596.96	2,579,592.63	6,465.14
508(1)	Hand Laid Rock Embankment	986.00	cu.m.	1,847,253.31	10.00	8.00	18.00	332,505.60	108,987.95	441,493.54	2,288,746.85	2,321.24
TOTAL OF PART C				101,810,237.58				18,325,842.77	6,006,804.02	24,332,646.78	126,142,884.37	
TOTAL				104,819,430.32				18,516,005.33	6,166,771.78	24,682,777.11	129,502,207.43	

Prepared by :

Submitted by :

Recommending Approval

Approved by :

BELEN A. SAPALLEDA
Head, BAC Technical Working Group

LEONCIO B. SOYAMILLO
Chief, Construction Division

CAYAMONBAO D. DIA
Assistant, Regional Director

JORGE M. SANTIAGO, III
Regional Director

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description: 101(3)b1 Removal of Existing PCCP
Unit of Measurement: sq.m.
Output per hour: 40.00
Quantity: 1,238.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	3.87	611.92	2,367.37
	b. Unskilled Labor	2	3.87	342.24	2,648.08
Sub-total for A					P 5,015.45
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Backhoe w/ Pavement Breaker (0.80 cu.m.)	1	3.87	15,984.80	61,841.20
	b. Payloader (1.50 cu.m.), LX80-2C	1	3.87	13,864.00	53,636.35
	c. Dump Truck (12 cu.yd.)	1	1.93	11,360.00	21,974.50
	Minor Tools 10% of Labor				501.54
Sub-total for B					P 137,953.59
C.	Total (A+B)				142,969.04
D.	Output/day 320.00 sq.m./day				
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E					P -
F.	Direct Cost (C + E)				142,969.04
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		14,296.90
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		11,437.52
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		8,435.17
J.	Total Unit Cost				143.08

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:1702(1)a Structure Excavation

Unit of Measurement:cu.m.

Output per hour:20.00

Quantity:21,712.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	135.70	611.92	83,037.54
	b. Unskilled Labor	3	135.70	342.24	139,325.90
Sub-total for A				P	222,363.45
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Dump Truck	2	135.70	11,360.00	3,083,104.00
	b. Backhoe Minc	1	135.70	12,296.00	1,668,567.20
					22,236.34
Sub-total for B				P	4,773,907.54
C.	Total (A+B)				4,996,270.99
D.	Output/day	160.00	ln.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E				P	-
F.	Direct Cost (C + E)				4,996,270.99
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		499,627.10
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		399,701.68
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		294,779.99
J.	Total Unit Cost				285.11

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description: 403(5) Structural Steel, Furnished, Fabricated & Erected
Unit of Measurement: kg
Output per hour: 180.00
Quantity: 8,613.37

For Manhole Cover Frame

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	5.98	611.92	3,660.20
	b. Skilled Laborer	2	5.98	443.20	5,302.01
	c. Unskilled Laborer	2	5.98	342.24	4,094.22
Sub-total for A					P 13,056.43
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Welding Machine	2	5.98	4,312.00	51,584.52
	b. Generator Set	1	5.98	6,982.96	41,768.62
	c. Cutting Outfit	2	5.98	363.60	4,349.75
					-
	Minor Tools 10% of Labor				1,305.64
Sub-total for B					P 99,008.53
C.	Total (A+B)				112,064.97
D.	Output/day 1,440.00	In.m./day			
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. 75mm x 75mm x 12mm	394.06	kgs.	58.00	22,855.48
	b. 50mm x 50mm x 12mm	406.61	kgs.	58.00	23,583.38
	c. 75mm x 12mm	1,281.87	kgs.	58.00	74,348.46
	d. 50mm x 50mm x 4.50 mm	6,530.83	kgs.	58.00	378,788.14
	d. Welding Rod	172.61	kgs.	180.00	31,068.99
					-
Sub-total for E					P 530,644.45
F.	Direct Cost (C + E)				642,709.42
G.	Overhead, Contingencies and Miscellaneous	10% per D.O. 197, s. 2016			64,270.94
H.	Contractor's Profit (CP)	8% per D.O. 197, s. 2016			51,416.75
I.	Value Added Tax (VAT)	5% per D.O. 197, s. 2016			37,919.86
J.	Total Unit Cost				92.45

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:404(1) a Reinforcing Steel, (Grade 40)

Unit of Measurement:kg

Output per hour:180.00

Quantity:410,080.00

For Drainage

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	142.39	611.92	87,130.61
	b. Skilled Labor	4	142.39	443.20	252,427.02
	c. Unskilled Labor	16	142.39	342.24	779,698.77
Sub-total for A					P 1,119,256.40
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Bar Cutter	2	71.19	1,758.00	250,319.67
	b. Bar Bender	2	71.19	2,812.00	400,397.56
	c. Cargo Truck	2	21.36	9,696.00	414,180.80
Sub-total for B					P 1,064,898.02
C.	Total (A+B)				2,184,154.43
D.	Output/day	2,880.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Reinforcing Steel Bars, Grade 60	430,584.00	kgs	47.00	20,237,448.00
	b. Tie Wire	8,611.68	kgs	91.00	783,662.88
Sub-total for E					P 21,021,110.88
F.	Direct Cost (C + E)				23,205,265.31
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		2,320,526.53
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		1,856,421.22
I.	Value Added Tax (VAT)		12% per D.O. 197, s. 2016		3,285,865.57
J.	Total Unit Cost				74.79

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:404(1)b Reinforcing Steel, (Grade 60)

Unit of Measurement:kg

Output per hour:180.00

Quantity:223,361.00

For Drainage

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	77.56	611.92	47,458.01
	b. Skilled Labor	4	77.56	443.20	137,491.10
	c. Unskilled Labor	16	77.56	342.24	424,683.71
Sub-total for A				P	609,632.83
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Bar Cutter	2	38.78	1,758.00	136,343.28
	b. Bar Bender	2	38.78	2,812.00	218,087.20
	c. Cargo Truck	2	11.63	9,696.00	225,594.61
Sub-total for B				P	580,025.09
C.	Total (A+B)				1,189,657.91
D.	Output/day	2,880.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Reinforcing Steel Bars, Grade 60	234,529.05	kgs	49.00	11,491,923.45
	b. Tie Wire	4,690.58	kgs	91.00	426,842.87
Sub-total for E				P	11,918,766.32
F.	Direct Cost (C + E)				13,108,424.23
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		1,310,842.42
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		1,048,673.94
I.	Value Added Tax (VAT)		12% per D.O. 197, s. 2016		1,856,152.87
J.	Total Unit Cost				77.56

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description: 405(1)b3 Structural Concrete, Class "A"
Unit of Measurement: cu.m.
Output per hour: 1.40
Quantity: 5,396.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	120.45	611.92	73,703.58
	c. Skilled Laborer	16	120.45	443.20	854,109.71
	c. Unskilled Laborer	32	120.45	342.24	1,319,090.74
	Installation/Removal of Formworks				
	c. Skilled Laborer	16	120.45	443.20	854,109.71
	c. Unskilled Laborer	32	120.45	342.24	1,319,090.74
Sub-total for A					P 4,420,104.49
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	4	120.45	1,376.00	662,937.14
	b. Concrete Vibrator	4	120.45	261.04	125,765.34
	c. Water Truck	4	12.04	19,600.00	944,300.00
	Minor Tools (5% of Labor)				221,005.22
Sub-total for B					P 1,954,007.71
C.	Total (A+B)				6,374,112.20
D.	Output/day	44.80	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Portland Cement	51,262.00	bag	308.56	15,817,239.72
	b. Fine Aggregates	2,698.00	cu.m.	2,501.75	6,749,721.50
	c. Coarse Aggregates	5,396.00	cu.m.	1,801.75	9,722,243.00
	d. Form Lumber	94,430.00	bd.ft.	56.00	5,288,080.00
	e. Plywood	2,158.40	pc.	388.00	837,459.20
	f. Assorted CW Nails	944.30	kg.	90.00	84,987.00
Sub-total for E					P 38,499,730.42
F.	Direct Cost (C + E)				44,873,842.62
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		4,487,384.26
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		3,589,907.41
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		2,647,556.71
J.	Total Unit Cost				10,303.69

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:407(8) Lean Concrete

Unit of Measurement:cu.m.

Output per hour:1.40

Quantity:495.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	44.20	611.92	27,044.68
	b. Skilled Labor	4	44.20	443.20	78,351.43
	c. Unskilled Labor	8	44.20	342.24	121,006.29
Sub-total for A				P	226,402.39
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	44.20	1,376.00	60,814.29
	b. Concrete Vibrator	1	44.20	261.04	11,537.04
	c. Water Truck	1	44.20	19,600.00	866,250.00
Sub-total for B				P	938,601.32
C.	Total (A+B)				1,165,003.71
D.	Output/day	11.20	each/day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
					-
					-
					-
	a. Portland Cement	3,960.00	bag	308.56	1,221,885.01
	b. Fine Aggregates	247.50	cu.m.	2,501.75	619,183.13
	c. Coarse Aggregates	495.00	cu.m.	1,801.75	891,866.25
Sub-total for E				P	2,732,934.38
F.	Direct Cost (C + E)				3,897,938.10
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		389,793.81
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		311,835.05
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		229,978.35
J.	Total Unit Cost				9,756.66

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:502(3)a6 Catch Basin

Unit of Measurement:each

Output per hour:1.00

Quantity:399.00

10.00 Meters Interval

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	49.88	611.92	30,519.51
	b. Skilled Labor	2	49.88	443.20	44,209.20
	c. Unskilled Labor	8	49.88	342.24	136,553.76
Sub-total for A					P 211,282.47
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	49.88	1,376.00	68,628.00
	b. Water Truck	1	24.94	19,600.00	488,775.00
Sub-total for B					P 557,403.00
C.	Total (A+B)				768,685.47
D.	Output/day	8.00	each/day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Portland Cement	7,063.00	bag	309.00	2,182,467.00
	b. Fine Aggregates	315.21	cu.m.	2,501.75	788,576.62
	c. Coarse Aggregates	626.43	cu.m.	1,801.75	1,128,670.25
	d. Form Lumber	7,811.42	bd.ft.	56.00	437,439.66
	e. # 16 GI Tie Wire	389.29	kls	91.00	35,425.24
	f. Reinforcing Steel	18,537.54	kgs	47.00	871,264.38
	g. CW Nails	78.11	kls	90.00	7,030.28
	h. Plywood- 4 uses	798.00	pcs.	995.00	794,010.00
Sub-total for E					P 6,244,883.43
F.	Direct Cost (C + E)				7,013,568.90
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		701,356.89
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		561,085.51
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		413,800.57
J.	Total Unit Cost				21,778.98

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:502(5) Metal Frame and Gratings, Type

Unit of Measurement:pair

Output per hour:1.00 pair/hr.

Quantity:399.00

10.00 Meters Interval

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	12.47	611.92	7,629.88
	b. Skilled Labor	1	12.47	443.20	5,526.15
	c. Unskilled Labor	1	12.47	342.24	4,267.31
Sub-total for A				P	17,423.33
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	Minor Tools (10 % of Labor)			-	-
				-	1,742.33
Sub-total for B				P	1,742.33
C.	Total (A+B)				19,165.67
D.	Output/day	16.00	pair/day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. 410mm x 610mm x 60mm, CI Cover w/ frame	399.00	bag	5,170.00	2,062,830.00
					-
					-
					-
					-
					-
Sub-total for E				P	2,062,830.00
F.	Direct Cost (C + E)				2,081,995.67
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		208,199.57
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		166,559.65
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		122,837.74
J.	Total Unit Cost				6,465.14

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:508(1) Hand Laid Rock Embankment

Unit of Measurement:cu.m.

Output per hour:3.125

Quantity:986.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	39.44	611.92	24,134.12
	b. Skilled Labor	2	39.44	443.20	34,959.62
	c. Unskilled Labor	8	39.44	342.24	107,983.56
Sub-total for A				P	167,077.31
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	Minor Tools 10% of Labor				16,707.73
Sub-total for B				P	16,707.73
C.	Total (A+B)				183,785.04
D.	Output/day	25.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Boulders	1,035.30	cu.m.	1,606.75	1,663,468.28
Sub-total for E				P	1,663,468.28
F.	Direct Cost (C + E)				1,847,253.31
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		184,725.33
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		147,780.26
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		108,987.95
J.	Total Unit Cost				2,321.24

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description: B.9 Mobilization & Demobilization

Unit of Measurement: L.S.

Output per hour:

Quantity:1.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
Sub-total for A				P	-
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Low Bed Trailer	2	2.00	34,043.00	136,172.00
	b. Water Truck	2	4.00	19,600.00	156,800.00
	c. Backhoe	2		12,296.00	-
	d. Bulldozer	2	4.00	27,032.00	216,256.00
	e. Dumptruck	4	4.00	11,360.00	181,760.00
	f. Payloader	2	4.00	13,864.00	110,912.00
Sub-total for B				P	801,900.00
C.	Total (A+B)				801,900.00
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E				P	-
F.	Direct Cost (C + E)				801,900.00
G.	Overhead, Contingencies and Miscellaneous		per D.O. 197, s. 2016		-
H.	Contractor's Profit(CP)		per D.O. 197, s. 2016		-
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		40,095.00
J.	Total Unit Cost				841,995.00

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:8.4(1) Construction Survey & Staking

Unit of Measurement:km.

Output per hour:0.04

Quantity:4.371

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	For Field Works				
	a. Geodetic Engineer	1	13.66	833.31	11,381.19
	b. Skilled Laborer	3	13.66	443.20	18,159.43
	c. Laborer	3	13.66	342.24	14,022.75
	For Office Works				
	a. Geodetic Engineer	1	40.97	833.31	34,143.58
	b. Skilled Laborer	2	40.97	443.20	36,318.86
Sub-total for A				P	114,025.80
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Total Station w/ complete accessories	1	13.66	800.00	10,926.25
	Minor Tools 10% of Labor				11,402.58
Sub-total for B				P	22,328.83
C.	Total (A+B)				136,354.63
D.	Output/day	0.32	km./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Standard Stake Plan (800 mm x 910 mm)	40.00	pc	400.00	16,000.00
	b. Blue Printing	200.00	pc	15.00	3,000.00
	Miscellaneous 5% of Materials Cost				950.00
Sub-total for E				P	19,950.00
F.	Direct Cost (C + E)				156,304.63
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		15,630.46
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		12,504.37
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		9,221.97
J.	Total Unit Cost				44,311.05

NAME OF PROJECT : Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Isabela City

BREAKDOWN OF ESTIMATED EXPENDITURES	% OF TOTAL	AMOUNT
I. ESTIMATED COST		
A. DIRECT COST		
A.1. Labor	5.99	8,087,992.83
A.2. Equipment Expenses	8.15	11,005,599.35
A.3. Materials	63.50	85,725,838.14
SUB-TOTAL (DIRECT COST)	77.64	P 104,819,430.32
B. INDIRECT COST (Per D.O. # 197, s. 2016)		
B.1. Overhead, Contingency & Misc. (10 % Max. of D.C.)	7.59	10,246,102.08
B.2. Profit (8 % Max. of D.C.)	6.13	8,269,903.25
C. VAT (5% of D.C. and I.C. Per D.O. # 197, s. 2016)	4.57	6,166,771.78
SUBTOTAL (CONTRACT COST)	95.93	P 129,502,207.43
II. ESTIMATED GOVERNMENT EXPENDITURES		
1. Engineering and Administrative Overhead (3.5%)	3.50	4,725,000.00
2. Detailed Engineering (1%)		
3. Reserved for the Payment of RROW	0.00	
4. Physical Reserved	0.57	772,792.57
TOTAL ESTIMATED PROJECT COST	100.00	P 135,000,000.00

Prepared :	Submitted :
JOSEPHINE B. RENGQUIJO Engineer II	LEONCIO B. SOLAMILLO Chief, Construction Division
Recommending Approval :	
CAYAMOMBAO D. DIA Assistant Regional Director	
Approved :	
JORGE U. SEBASTIAN, JR., CESO III Regional Director	

APPROVED BUDGET FOR THE CONTRACT

Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Stations : _____
Length : 4,370.50 km.
Contract Duration : 349 CD

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UPS IN %		TOTAL MARK-UPS		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
PART A - FACILITIES FOR THE ENGINEER												
A.1.1(3)	Bunkhouse, 7.00 m. x 9.00 m.	1.00	L.S.	481,229.26	10.00	8.00	18.00	86,621.29	28,392.53	115,013.82	596,243.18	596,243.18
A.1.1(1)	Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer	1.00	L.S.	92,122.74	-	8.00	8.00	7,369.82	4,974.63	12,344.45	104,467.19	104,467.19
A.1.2(5)	Operation and Maintenance of Government Service Vehicle Engineer	11.63	month	643,739.68	-	-	-	-	32,186.98	32,186.98	675,926.66	58,102.58
TOTAL OF PART A				1,217,091.79				93,991.10	65,554.14	159,545.25	1,376,637.04	
PART B - OTHER GENERAL REQUIREMENTS												
B.4(1)	Construction Survey & Staking	4.37	km.	156,304.63	10.00	8.00	18.00	28,134.83	9,221.97	37,356.81	193,661.43	44,311.05
B.5	Project Billboard/Signboard	2.00	each	13,249.20	10.00	8.00	18.00	2,384.86	781.70	3,166.56	16,415.76	8,207.88
B.7	Occupation Safety and Health Program	11.63	month	820,647.12	-	8.00	8.00	65,651.77	44,314.94	109,966.71	930,613.83	79,995.46
B.9	Mobilization & Demobilization	1.00	L.S.	801,900.00	-	-	-	-	40,095.00	40,095.00	841,995.00	841,995.00
TOTAL OF PART B				1,792,100.95				96,171.46	94,413.62	190,585.08	1,982,686.03	
PART C - EARTHWORKS												
101(2)(b)	Removal of Existing PCCP	1,238.00	sq.m.	142,969.04	10.00	8.00	18.00	25,734.43	8,435.17	34,169.60	177,138.64	143.08
1702(1)(c)	Structure Excavation	21,712.00	cu.m.	4,996,270.99	10.00	8.00	18.00	899,328.78	294,779.99	1,194,108.77	6,190,379.76	285.11
403(5)	Structural Steel, Furnished, Fabricated & Erected	8,613.37	kg	642,709.42	10.00	8.00	18.00	115,687.70	37,919.86	153,607.55	796,316.97	92.45
404(1)(c)	Reinforcing Steel, (Grade 40)	410,080.00	kg	23,205,265.31	10.00	8.00	18.00	4,176,947.76	1,369,110.65	5,546,058.41	28,751,323.71	70.11
404(1)(b)	Reinforcing Steel, (Grade 60)	223,361.00	kg	13,108,424.23	10.00	8.00	18.00	2,359,516.36	773,397.03	3,132,913.39	16,241,337.63	72.71
405(1)(b3)	Structural Concrete, Class "A"	5,396.00	cu.m.	44,873,842.62	10.00	8.00	18.00	8,077,291.67	2,647,556.71	10,724,848.39	55,598,545.30	10,303.69
407(8)	Lean Concrete	495.00	cu.m.	3,897,938.10	10.00	8.00	18.00	701,628.86	229,978.35	931,607.21	4,829,545.30	9,756.66
502(3)(c6)	Catch Basin	399.00	each	7,013,568.90	10.00	8.00	18.00	1,262,442.40	413,800.57	1,676,242.97	8,689,811.87	21,776.98
502(5)	Metel Frame and Gratings, Type	399.00	prof.	2,081,995.67	10.00	8.00	18.00	374,759.22	122,837.74	497,596.96	2,579,592.63	6,465.14
508(1)	Hard Laid Rock Embankment	986.00	cu.m.	1,847,253.31	10.00	8.00	18.00	332,505.60	108,987.95	441,493.54	2,288,746.85	2,321.24
TOTAL OF PART C				101,810,237.68				18,325,842.77	6,006,804.02	24,332,646.78	126,142,884.37	
TOTAL				104,819,430.32				18,516,005.33	6,166,771.78	24,682,777.11	129,502,207.43	

Prepared by :

Submitted by :

Recommending Approval:

Approved by :

BELEN A. SAPALEDA
Head, BAC Technical Working Group

LEONCIO B. SOLAMILLO
Chief, Construction Division

CAYAMOMBAD D. DIA
Assistant, Regional Director

JORGE U. SEBASTIAN JR. CESO III
Regional Director

UNIT COST ANALYSIS FOR HAULING COST FOR PORTLAND CEMENT

TOTAL QUANTITY REQUIREMENTS FOR PORTLAND CEMENT

DESCRIPTION	QUANTITY (Bags)
Portland Cement Concrete Pavement, 280 mm. thk.	0.00
Portland Cement Concrete Pavement, 150 mm. thk.	0.00
Structural Concrete, Class "A "	51,262.00
Lean Concrete	3,960.00
Grouted Riprap, Class 'A'	0.00
Stone Masonry	0.00
Bunkhouse, 7.00 m. x 9.00 m.	135.00
T O T A L	55,357.00

Quantity = 55,357.00 Bags

Delivery Charge = P 0.120 / bag / km.

S I T E	HAULING DISTANCE
Isabela City DEO	25.00
Batching plant	

*Average hauling distance from Source to assumed Stockpiling area :
say 25.00 km.

Delivery Charge = P 0.120 x 25.00
= P 3.00 / bag

*Delivery Truck : 55,357.00 bags., (hauling works)
20,000.00 kgs., (capacity per haul)
or 500.00 bags, (capacity per haul)

*Capacity of Laborers unloading bags of Cement from Delivery Truck :
Assume (10) laborers can unload 500.00 bags of Cement.

*Dumptruck (10 Wheeler) days computation : TIME-MOTION ANALYSIS

Speed when loaded : 30.00 kph
Speed when unloaded : 40.00 kph
Loaded running = $\frac{25.00 \times 60}{30.00}$ = 50.00 mins.
Unloaded running = $\frac{25.00 \times 60}{40.00}$ = 37.50 mins.
Loading and Unloading : 45.00 mins.
Capacity of Dumptruck : 8.00 cu.m.
: 500.00 bags
Total Cycle time : 132.50 mins.
No. of trips for Dumptruck per day = $\frac{8.0 \times 60.00}{132.50}$ = 3.62 say 3.62 trip
Dumptruck daily output = 500 x 3.62 = 1,811.32 cu.m.
Using (4) Dumptrucks = 4 x 1811.32 = 7,245.28 cu.m.

1. No. of days for Delivery Truck = $\frac{55,357.00}{7,245.28} = 7.64$ say 7.64 days
2. No. of days for Labor, for unloading = complimentary to D. Truck days = 7.64 days

DELIVERY COST :

55,357.00 - Bags, Portland Cement	@ P	3.00	/ bag	= P	166,071.00
Sub - Total				P	166,071.00

LABOR :

1 - Foreman	@ P	611.92 /day	x 7.64 days	= P	4,675.33
10 - Laborers, unloading	@ P	342.24 /day	x 7.64 days	= P	26,148.57
Sub - Total				P	30,823.90

MATERIALS :

55,357.00 - Bags, Portland Cement (Pick-Up Price)	@ P	305.00	/ bag	= P	16,883,885.00
Sub - Total				P	16,883,885.00

Estimated Quantity	55,357.00 Bags				
Unit Cost	P	308.56 / Bag,	say P	308.56 / Bag	
Grand Total	P	17,080,779.90			
Delivery Cost	P	166,071.00			
Labor	P	30,823.90			
Materials	P	16,883,885.00			

UNIT COST ANALYSIS FOR HAULING COST FOR ALL AGGREGATES

Hauling Cost from the Quarry to Batching plant

Item No. : ALL AGGREGATES Terrain : Flat to Rolling
 Quantity : 1,000.00 Unit : cu.m.
 Hauling Distance : 25.00 km.
 Effective Working Hours : 8.00 hrs.

Hauling: Using 10.00 cu.m.capacity Dumptruck

Weight of Dumptruck (cap. 10.00 cu.m.) : 16,000.00 kgs.
 Unit weight of Fine Aggregates : 1,640.00 kg/m³
 Unit weight of Coarse Aggregates : 1,534.00 kg/m³
 Maximum Volume to be Carried per DT : 11.57 cu.m.

*Dumptruck (10 Wheeler) days computation : TIME-MOTION ANALYSIS

Speed when loaded : 30.00 kph
 Speed when unloaded : 40.00 kph
 Loaded running = $\frac{5.00 \times 60}{30.00}$ = 10.00 mins.
 Unloaded running = $\frac{5.00 \times 60}{40.00}$ = 7.50 mins.
 Loading and Unloading : 5.00 mins.
 Capacity of Dumptruck : 10.00 cu.m.
 Total Cycle time : 22.50 mins.
 No. of trips for Dumptruck per day = $\frac{8 \times 60.00}{22.50}$ = 21.33 say 21.33 trips
 Dumptruck daily output = 10 x 21.33 = 213.33 cu.m.
 Using (4) Dumptrucks = 4 x 213.33 = 853.33 cu.m.
 1. No. of days for Dumptrucks = $\frac{1,000.00}{853.33}$ = 1.17 say 1.17 days

EQUIPMENT USED : (2009 ACEL RATES)

4 - Unit Dumptruck @ P 11,360.00 /day x 1.17 days = P 53,250.00
Sub - Total P 53,250.00

Estimated Quantity 1,000.00 cu.m.
Unit Cost P 2.13 /cu. m./km. (Unit Cost, Hauling per cu.m.per km.)
 Grand Total P 53,250.00
 Equipment P 53,250.00
 Labor P
 Materials P

	Hauling Distance		Unit Cost per cu.m./km.		Hauling Cost per cu.m.		Unit Price		Unit Cost per cu.m.
Cost of Fine Aggregates:	25.00	x	12.07	=	301.75	+	2,200.00	=	2,501.75
Cost of Coarse Aggregates:	25.00	x	12.07	=	301.75	+	1,500.00	=	1,801.75
Cost of Item 200 Materials:	25.00	x	12.07	=	301.75	+	1,500.00	=	1,801.75
Cost of Item 300 Materials:	25.00	x	12.07	=	301.75	+	1,400.00	=	1,701.75
Cost of Boulders:	25.00	x	12.07	=	301.75	+	1,305.00	=	1,606.75
Cost of Embankment, Selected Borrow:	25.00	x	12.07	=	301.75	+	355.00	=	656.75

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description: A.1.1(3) Bunkhouse, 7.00 m. x 9.00 m.

Unit of Measurement: L.S.

Output per hour: 1.00

Quantity: 1.00

For Government Field Office, fully furnished as shown on plans

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	8.00	611.92	4,895.36
	b. Mason	3	8.00	443.20	10,636.80
	c. Carpenter	3	8.00	443.20	10,636.80
	d. Laborer	6	8.00	342.24	16,427.52
Sub-total for A				P	42,596.48
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	6.00	1,376.00	8,256.00
	b. Water Truck	1	1.00	19,600.00	19,600.00
	Minor Tools 10% of Labor				4,259.65
Sub-total for B				P	32,115.65
C.	Total (A+B)				74,712.13
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	I. Earthworks (Excavation, Embankment, Bedding)				
	a. Gravel Bedding	3.50	cu.m.	1,801.75	6,306.13
	b. Selected Fill	10.00	cu.m.	656.75	6,567.50
	c. Soil Poisoning	2.50	L	2,100.00	5,250.00
	II. Concrete Works (Footings, Columns, Beams & Slab on Grade)				
	a. Portland Cement	90.00	bag	308.56	27,770.11
	b. Crushed Gravel	21.00	cu.m.	1,801.75	37,836.75
	c. Washed Sand	18.00	cu.m.	2,501.75	45,031.50
	III. Reinforcing Bars(Footing Columns, Beams, & Slabs on Grade)				
	a. Deformed Round Bar, Grade 40	435.00	kg.	47.00	20,445.00
	b. No. 16 GI Tie Wire	20.00	kg.	91.00	1,820.00
	IV. Formworks (Columns & Beams)				
	a. Coco Lumber	400.00	bd.ft.	13.00	5,200.00
	b. Ordinary Plywood, 1/4"x4'x8'	18.00	pc.	525.00	9,450.00
	c. CWN, Assorted	5.00	kg.	90.00	450.00
	V. Masonry Works (masonry walls & plastering)				
	a. CHB 6" thk	650.00	pc.	18.00	11,700.00
	b. Portland Cement	45.00	bag	308.56	13,885.06
	c. Washed Sand	8.00	cu.m.	2,501.75	20,014.00
	d. 10mm dia. X 6m RSB	65.00	kg.	47.00	3,055.00
	e. No. 16 GI Tie Wire	2.50	kg.	91.00	227.50
	VI. Doors and Windows				
	a. D-1, Hollow Core Flush Type swing door, complete w/ accessories, 0.90mx2.1m	2.00	set	2,018.52	4,037.04
	b. W-1, Jalousie window, 1.4m x 1.2m	2.00	set	1,310.40	2,620.80
	c. W-2, Jalousie window, 2.8m x 1.2m	2.00	set	2,620.80	5,241.60
Sub-total for E				P	226,907.99
Sub-total for E (I + II + III)				P	406,517.24
F.	Direct Cost (C + E)				481,229.36
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		48,122.94
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		38,498.35
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		28,392.53
J.	Total Unit Cost				596,243.18

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:A.1.1(3) Bunkhouse, 7.00 m. x 9.00 m.

Unit of Measurement:L.S.

Output per hour:

Quantity:1.00

For Government Field Office, fully furnished as shown on plans

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
Sub-total for A				P	-
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				-
Sub-total for B				P	-
C.	Total (A+B)				-
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
VII. Steel Works					
a.	65 x 65 x 6mm. L	350.00	kg.	58.00	20,300.00
b.	50 x 50 x 6mm. L	250.00	kg.	58.00	14,500.00
c.	50 x 50 x 4mm. L	100.00	kg.	58.00	5,800.00
d.	Purlins C- 150 x 50 x 3mm.	18.00	kg.	58.00	1,044.00
e.	16mm dia. Cross bracing	35.00	kg.	58.00	2,030.00
f.	16mm dia. Turn buckle	20.00	pc.	118.00	2,360.00
g.	12mm thk base plate	25.00	kg.	44.00	1,100.00
h.	10mm thk batten plate	15.00	kg.	47.00	705.00
i.	10mm dia. Sag rod	10.00	kg.	58.00	580.00
j.	20mm dia. X 350 mm anchor bolts	10.00	pc.	36.00	360.00
k.	Welding Rod	15.00	kg.	180.00	2,700.00
l.	Primer, Zinc Cromate	5.00	gal.	531.00	2,655.00
VIII Roofing Works					
a.	Pre-painted GI Roofing Sheet long span	55.00	sq.m.	562.00	30,910.00
b.	Pre-painted ridge roll ga 24, 0.60m width	10.00	ln.m.	237.00	2,370.00
c.	Pre-painted flashing, ga. 24	2.00	ln.m.	242.00	484.00
d.	Teckscrew 1 1/2"	1,000.00	pc.	1.25	1,250.00
e.	Roof Sealant	2.00	L	250.00	500.00
IX. Carpentry Works					
a.	Rough Lumber, sun dried tanguile	500.00	bd.ft.	56.00	28,000.00
b.	Plywood, ordinary 1/4" x 4' x 8'	30.00	pc.	403.00	12,090.00
c.	Finishing Nails	5.00	kg.	126.00	630.00
d.	Common Wire Nails	10.00	kg.	90.00	900.00
e.	Wood Preservative Brown	5.00	L	430.00	2,150.00
Sub-total for E				P	133,418.00
F.	Direct Cost (C + E)				
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		
J.	Total Unit Cost				

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description: A.1.1(3) Bunkhouse, 7.00 m. x 9.00 m.

Unit of Measurement: L.S.

Output per hour:

Quantity: 1.00

For Government Field Office, fully furnished as shown on plans

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
Sub-total for A				P	-
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
Sub-total for B				P	-
C.	Total (A+B)				-
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	X. Electrical Works				
a.	2 x 40w Flourescent lighting fixtures	5.00	set	1,030.00	5,150.00
b.	Porcelain Ceiling Outlet w/ female socket	2.00	pc	50.00	100.00
c.	Duplex Convenience outlet	3.00	pc	170.00	510.00
d.	two gang switch	3.00	pc	132.00	396.00
e.	3.5mm2 thw	3.00	roll	3,600.00	10,800.00
f.	8.00mm2 thw	25.00	m	69.33	1,733.25
g.	15mm dia. PVC pipe	20.00	pc	73.00	1,460.00
h.	15mm dia. PVC Coupling	25.00	pc	16.00	400.00
i.	15mm dia. PVC Elbow	25.00	pc	26.00	650.00
j.	15mm dia. PVC Clamp	55.00	pc	8.00	440.00
k.	20mm dia. RSC Pipe	4.00	pc	240.00	960.00
l.	20mm dia. RSC Coupling	3.00	pc	36.00	108.00
m.	20mm dia. RSC elbow	3.00	pc	30.00	90.00
n.	20mm dia. RSC Clamp	10.00	pc	18.00	180.00
o.	20mm dia. Service entrance cap	2.00	pc	100.00	200.00
p.	wire holder	2.00	pc	50.00	100.00
q.	utility box	7.00	pc	32.00	224.00
r.	octagonal box	8.00	pc	34.00	272.00
s.	electrical tape (big)	7.00	pc	31.00	217.00
t.	panel board (side main w/ braches)	2.00	set	1,627.00	3,254.00
	XI. Plumbing Works				
a.	Water Closet (include. Fitting & Accessories)	1.00	set	8,280.00	8,280.00
b.	Lavatory (include fitting & Accessories)	1.00	set	7,200.00	7,200.00
c.	1/2" GI Pipe S-40	2.00	pc	500.00	1,000.00
d.	1/2" Water Faucet	2.00	pc	210.00	420.00
e.	1/2" Assorted Connector	8.00	pc	19.00	152.00
f.	4" PVC series 1000	1.00	pc	733.00	733.00
g.	2" PVC series 1000	1.00	pc	330.00	330.00
h.	4" PVC assorted Connector	6.00	pc	88.00	528.00
i.	2" PVC assorted Connector	8.00	pc	38.00	304.00
Sub-total for E				P	46,191.25
F.	Direct Cost (C + E)				
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		
J.	Total Unit Cost				

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:

Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:

A.1.1(11) Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer

Unit of Measurement:

L.S.

Output per hour:

Quantity:

1.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
Sub-total for A				P	-
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
Sub-total for B				P	-
C.	Total (A+B)				-
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	Office Equipment/Facilities & Supplies				
	Electric Desk Fan	1.00	unit	1,370.00	1,370.00
	Folding Beds, Good Quality	2.00	each	2,700.00	5,400.00
	pillows w/ pillow cases, fitted sheets and blanket	2.00	each	5,000.00	10,000.00
	Double burner gas stove (Gasul)	1.00	unit	3,700.00	3,700.00
	10 cups Rice Cooker	1.00	unit	2,500.00	2,500.00
	Aluminum Cookware	1.00	set	3,500.00	3,500.00
	Plate, Glass, Spoon and fork	1.00	dozen	2,000.00	2,000.00
	6 seater dinning table	1.00	each	2,800.00	2,800.00
	Monoblock w/ Backrest chair	2.00	dozen	2,500.00	5,000.00
	Plastic Pail & Basin	2.00	pc.	250.00	500.00
	White Board	1.00	Unit	3,000.00	3,000.00
	Bond Paper (Long)	20.00	ream	300.00	6,000.00
	Bond Paper (Short)	20.00	ream	270.00	5,400.00
	Yellow Pad	6.00	pad	35.00	210.00
	White Board Marker	10.00	pc.	75.00	750.00
	Sign Pen (assorted color)	2.00	dozen	580.00	1,160.00
	Ballpen (assorted color)	4.00	box	180.00	720.00
	Mechanical Pencil	6.00	unit	350.00	2,100.00
	Pencil Lead, No. 5	4.00	box	145.00	580.00
	Puncher	1.00	unit	250.00	250.00
	Staple Pad w/ wire	2.00	unit	275.00	550.00
	Cutter Blade	2.00	box	240.00	480.00
	Scotch Tape	10.00	roll	45.00	450.00
	Brown Envelop	7.00	dozen	125.00	875.00
	Folder, Long	7.00	dozen	85.00	595.00
	Folder, Short	7.00	dozen	70.00	490.00
	Data File Folder	12.00	pc.	85.00	1,020.00
	Digital Camera	1.00	set	9,089.41	9,089.41
	Cellphone	1.00	set	10,000.00	10,000.00
	Lighting/Water Fixtures				
	a. Electrical Bill	11.63	mos.		-
	b. Water Bill	11.63	mos.		-
	c. LPG (11 kg)	11.63	mos.	1,000.00	11,633.33
Sub-total for E				P	92,122.74
F.	Direct Cost (C + E)				92,122.74
G.	Overhead, Contingencies and Miscellaneous		per D.O. 197, s. 2016		-
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		7,369.82
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		4,974.63
J.	Total Unit Cost				104,467.19

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:A.1.2(5) Operation and Maintenance of Government Service Vehicle Engineer

Unit of Measurement:month

Output per hour:

Quantity:11.63

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Driver	1	349	422.32	147,389.68
Sub-total for A				P	147,389.68
Name and Capacity		No. of Equipment	No. of Months	Monthly Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
Sub-total for B				P	-
C.	Total (A+B)				147,389.68
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Diesel	6,980.00	L	50.00	349,000.00
	b. Spare Parts	1.00	L.S.	50,000.00	50,000.00
	c. Engine Oil & Lubricants	1.00	L.S.	52,350.00	52,350.00
	d. Miscellaneous	1.00	L.S.	45,000.00	45,000.00
Sub-total for E				P	496,350.00
F.	Direct Cost (C + E)				643,739.68
G.	Overhead, Contingencies and Miscellaneous		per D.O. 197, s. 2016		-
H.	Contractor's Profit(CP)		per D.O. 197, s. 2016		-
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		32,186.98
J.	Total Unit Cost				58,102.58

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:8.5 Project Billboard/Signboard

Unit of Measurement:each

Output per hour:

Quantity:2.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	2.00	611.92	1,223.84
	b. Skilled Labor	1	2.00	443.20	886.40
	c. Unskilled Labor	2	2.00	342.24	1,368.96
Sub-total for A				P	3,479.20
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
Sub-total for B				P	-
C.	Total (A+B)				3,479.20
D.	Output/day	-	each/day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Ordinary Plywood 1/2" thk. x 4' x 8'	2.00	pc.	995.00	1,990.00
	b. Tarpaulin (4' x 8')	2.00	pc.	1,000.00	2,000.00
	c. Assorted Lumber	100.00	bd.ft.	56.00	5,600.00
	d. Assorted CW Nails	2.00	kg.	90.00	180.00
Sub-total for E				P	9,770.00
F.	Direct Cost (C + E)				13,249.20
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		1,324.92
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		1,059.94
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		781.70
J.	Total Unit Cost				8,207.88

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME:Construction/Repair/Rehabilitation/Improvement of Various Infrastructure Including Local Projects-Flood Control and Drainage-Flood Control Structures/Facilities-Construction of Flood Control-Drainage at Isabela City Proper, Isabela City, Basilan

Item No./Description:8.7 Occupation Safety and Health Program

Unit of Measurement:month

Output per hour:

Quantity:11.63

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Safety Practioner	1	349.00	611.92	213,560.08
	b. First Aider	1	175.00	443.20	77,560.00
	c. Flagman (2 per shift)	4	349.00	342.24	477,767.04
Sub-total for A					P 768,887.12
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Warning Signs and Barricades				25,000.00
Sub-total for B					P 25,000.00
C.	Total (A+B)				793,887.12
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Rubber Boots (Long w/ steel toe, Black)	24.00	pair	400.00	9,600.00
	b. Working Gloves (Maong Material)	24.00	pair	15.00	360.00
	c. Rain Coats (Reinforced, Hip Length)	24.00	pc.	100.00	2,400.00
	d. Safety Hats	24.00	pc,	600.00	14,400.00
Sub-total for E					P 26,760.00
F.	Direct Cost (C + E)				820,647.12
G.	Overhead, Contingencies and Miscellaneous		per D.O. 197, s. 2016		-
H.	Contractor's Profit(CP)		8% per D.O. 197, s. 2016		65,651.77
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		44,314.94
J.	Total Unit Cost				79,995.46