

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)

Date : _____

NAME OF PROJECT :	Appropriation : P 154,000,000.00
Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City	Source of Funds : CY-2018 GAA
LOCATION:	Issued Obligated Authority :
Zamboanga City	Released :
PROJECT CATEGORY :	Cal. Days to Complete : 360 Calendar Days
	Desirable Starting Date : upon approval
	Mode of Implementation : by contract

PROJECT DESCRIPTION :	Station Limits:	Length
Scope of Work : Flood Control	LS 6+500.00 7+030.00	530.00
Road Width :	RS 6+500.00 7+020.00	520.00
Roadbed Width :		
Subbase Course :		
Surface Course :		
	Net Length:	1,050.00 In.m. / 1.05 km.

MINIMUM EQUIPMENT REQUIREMENT :			TECHNICAL PERSONNEL REQUIRED :		
Description	No.	Description	No.	Description	No.
Dump Truck	12	Water Pump	1	Project Engineer	1
Gen. Set	1	Welding Machine	1	Materials Engineer	1
Backhoe (Wheel Type)	2	Concrete Vibrator	2	Geometric Surveyor	1
Backhoe	3	Concrete Cutter	2	Foreman	1
Road Grader	2	Bar Cutter	1	Materials Lab. Tech.	1
Road Roller	2	Bar Bender	1	Mason	12
Vibro Hammer	1	One Bagger Mixer	2	Carpenter	8
Water Truck	2	Cargo Truck	1	Laborers (Skilled)	20
Water Tank	2			Laborers (Unskilled)	30
Cutting Outfit	1			Safety Practitioner	1

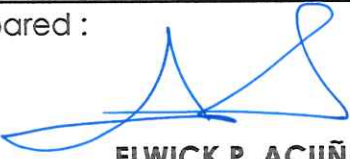
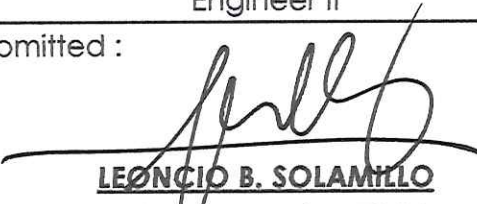
ESTIMATED COST OF PROPOSED WORK

ITEM NO.	DESCRIPTION	% OF TOTAL	UNIT	QUANTITY	DIRECT COST	
					TOTAL	UNIT COST
PART I - FACILITIES FOR THE ENGINEER						
A.1.1(3)	Construction of Field Office for the Engineer	0.31	L.S.	1.00	372,700.10	372,700.10
A.1.1(11)	Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer	0.27	L.S.	1.00	317,340.00	317,340.00
A.1.2(5)	Operation and Maintenance of 4x4 Pick Up Type Service Vehicle for the Engineer	0.33	month	12.00	390,375.20	32,531.27
PART II - OTHER GENERAL REQUIREMENTS						
B.4(1)	Construction Survey & Staking	0.04	km.	1.05	47,721.31	45,448.86
B.5	Project Billboard/Signboard	0.01	each	2.00	10,809.20	5,404.60
B.7	Occupation Safety and Health Program	0.30	month	12.00	356,457.60	29,704.80
B.9	Mobilization & Demobilization	0.96	L.S.	1.00	1,148,562.00	1,148,562.00
PART III - CIVIL, MECHANICAL, ELECTRICAL AND SANITARY/PLUMBING WORKS						
DIVISION I - GENERAL						
PART B - PLAIN AND REINFORCED CONCRETE WORK						
900(1)c1	Structural Concrete, Class 'A'	6.76	cu.m.	1,197.00	8,088,589.95	6,757.39
902(1)a1	Reinforcing Steel, Grade 40	0.55	kg.	13,869.00	653,488.40	47.12
902(1)a2	Reinforcing Steel, Grade 60	0.61	kg.	14,912.00	733,948.34	49.22

ITEM NO.	DESCRIPTION	% OF TOTAL	UNIT	QUANTITY	DIRECT COST	
					TOTAL	UNIT COST
DIVISION IV – FLOOD CONTROL, DRAINAGE AND WATER SUPPLY						
PART J – FLOOD CONTROL AND DRAINAGE						
Part I-A – EARTHWORKS						
1702(1)a	Structure Excavation	0.11	cu.m.	550.00	126,563.61	230.12
1704(1)	Embankment	11.22	cu.m.	26,534.00	13,432,957.79	506.25
Part I-B – BANK AND SLOPE PROTECTION						
508(1)	Handlaid Rock Embankment	21.13	cu.m.	18,858.00	25,282,958.32	1,340.70
1710(2)	Grouted Riprap, Class "A"	9.17	cu.m.	3,701.00	10,973,792.35	2,965.09
1713(1)	Rubble Concrete	6.13	cu.m.	2,195.00	7,331,288.61	3,339.99
1716(6)	Structural Steel Sheet Piles, Furnished	32.38	m.	15,750.00	38,755,098.05	2,460.64
1716(12)	Structural Steel Sheet Piles, Driven	9.71	m.	15,750.00	11,620,109.81	737.78
1726(16)	Steel Sheet Test Piles, Furnished and Driven	0.03	m.	12.00	37,638.05	3,136.50
TOTAL		100.00			P 119,680,398.69	

NAME OF PROJECT : Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City
Zamboanga City

BREAKDOWN OF ESTIMATED EXPENDITURES	% OF TOTAL	AMOUNT
I. ESTIMATED COST		
A. DIRECT COST		
A.1. Labor	5.23	8,048,991.41
A.2. Equipment Expenses	11.20	17,254,783.87
A.3. Materials	61.28	94,376,623.40
SUB-TOTAL (DIRECT COST)	77.71	P 119,680,398.69
B. INDIRECT COST (Per D.O. # 197, s. 2016)		
B.1. Overhead, Contingency & Misc. (10 % Max. of D.C.)	7.63	11,746,766.39
B.2. Profit (8 % Max. of D.C.)	6.14	9,451,316.92
C. VAT (5% of D.C. and I.C. Per D.O. # 197, s. 2016)	4.57	7,043,924.10
SUBTOTAL (CONTRACT COST)	96.05	P 147,922,406.10
II. ESTIMATED GOVERNMENT EXPENDITURES		
1. Engineering and Administrative Overhead (3.5%)	3.50	5,390,000.00
2. Detailed Engineering (1%)		
3. Reserved for the Payment of RROW	0.00	
4. Physical Reserved	0.45	687,593.90
TOTAL ESTIMATED PROJECT COST	100.00	P 154,000,000.00

Prepared :  ELWICK P. ACUÑA Engineer II	Checked :  JERALD R. BARRERA 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	

Republic of the Philippines
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PROGRAM OF WORK

(For all types of Project)

Date : _____

NAME OF PROJECT : Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City LOCATION: Zamboanga City PROJECT CATEGORY :	Appropriation	:	P	154,000,000.00
	Source of Funds	:		CY-2018 GAA
	Issued Obligated Authority	:		
	Released	:		
	Cal. Days to Complete	:	360	Calendar Days
	Desirable Starting Date	:		upon approval
	Mode of Implementation	:		by contract
PROJECT DESCRIPTION :		Station Limits:		
Scope of Work	:	Flood Control		
Road Width	:			
Roadbed Width	:			
Subbase Course	:			
Surface Course	:			
			Length	
		LS	6+500.00	7+030.00
		RS	6+500.00	7+020.00
				530.00
				520.00
			Net Length:	1,050.00 In.m. / 1.05 km.

MINIMUM EQUIPMENT REQUIREMENT :			TECHNICAL PERSONNEL REQUIRED :		
Description	No.	Description	No.	Description	No.
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Backhoe	3	Concrete Cutter	2	Foreman	1
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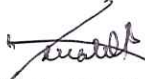
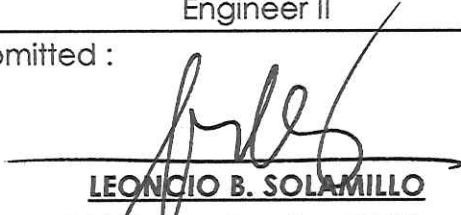
ESTIMATED COST OF PROPOSED WORK

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B.9	Mobilization & Demobilization	0.96	L.S.	1.00	1,148,562.00	1,148,562.00
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DIVISION I - GENERAL						
PART B - PLAIN AND REINFORCED CONCRETE WORK						
900(1)c1	Structural Concrete, Class 'A'	6.76	cu.m.	1,197.00	8,088,589.95	6,757.39
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TOTAL		100.00			P 119,680,398.69	

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Zamboanga City

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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/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Teluan - Tugbungan Section, Zamboanga City

Stations : 6,500.00 to 7,030.00
6,500.00 to 7,020.00

Length : 1,050.00 m.m.

Contract Duration : 360 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 (9)	5% (5) + (9)	(9) + (10)	(5) + (11)	(12) / (3)
PART I - FACILITIES FOR THE ENGINEER												
A.1.1(3)	Construction of Field Office for the Engineer	1.00	L.S.	372,700.10	10.00	8.00	18.00	67,086.02	21,989.31	89,075.32	461,775.42	461,775.42
A.1.1(11)	Provision of Furniture/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer	1.00	L.S.	317,340.00	-	8.00	8.00	25,387.20	17,136.36	42,523.56	359,863.56	359,863.56
A.1.2(5)	Operation and Maintenance of 4x4 Pick Up Type Service Vehicle for the Engineer	12.00	month	390,375.20	-	-	-	-	19,518.76	19,518.76	409,893.96	34,157.83
SUB - TOTAL FOR PART I				1,080,415.30					58,644.43	151,117.64	1,231,532.94	
PART II - OTHER GENERAL REQUIREMENTS												
B.4(1)	Construction Survey & Staking	1.05	km.	47,721.31	10.00	8.00	18.00	6,589.84	2,815.56	11,405.39	59,126.70	56,311.14
B.5	Project Billboard/Signboard	2.00	each	10,809.20	10.00	8.00	18.00	1,945.66	637.74	2,583.40	13,392.60	6,696.30
B.7	Occupation Safety and Health Program	12.00	month	356,457.60	-	8.00	8.00	28,516.61	19,248.71	47,765.32	404,222.92	33,685.24
B.9	Mobilization & Demobilization	1.00	L.S.	1,148,562.00	-	-	-	-	57,428.10	57,428.10	1,205,990.10	1,205,990.10
SUB - TOTAL FOR PART II				1,563,550.11					80,130.11	119,182.21	1,682,732.31	
PART III - CIVIL, MECHANICAL, ELECTRICAL AND SANITARY/PLUMBING WORKS												
DIVISION I - GENERAL												
PART B - PLAIN AND REINFORCED CONCRETE WORK												
9001(1c1)	Structural Concrete, Class "A"	1,197.00	cum.	8,088,589.95	10.00	8.00	18.00	1,455,946.19	477,226.81	1,933,173.00	10,021,762.95	8,372.40
9002(1a1)	Reinforcing Steel, Grade 40	13,869.00	kg.	653,488.40	10.00	8.00	18.00	1,319,631.95	38,555.82	1,56,183.73	809,672.13	58.38
9002(1a2)	Reinforcing Steel, Grade 60	14,912.00	kg.	733,948.34	10.00	8.00	18.00	132,110.70	43,302.95	175,413.65	909,362.00	60.98
SUB - TOTAL FOR PART III - DIV. - I - PART B				9,476,026.70					559,085.58	2,264,770.38	11,740,797.00	
DIVISION IV - FLOOD CONTROL, DRAINAGE AND WATER SUPPLY												
PART J - FLOOD CONTROL AND DRAINAGE												
PART I-A - EARTHWORKS												
1702(1a)	Structure Excavation	550.00	cum.	126,563.61	10.00	8.00	18.00	22,781.45	7,467.25	30,248.70	156,812.31	285.11
1704(1)	Embankment	26,534.00	cum.	13,432,957.79	10.00	8.00	18.00	2,417,932.40	792,544.51	3,210,476.91	16,643,434.70	627.25
SUB - TOTAL FOR PART III - DIV. - I - PART J - PART I-A				13,559,521.39					800,011.76	3,240,725.61	16,800,247.01	
PART I-B - BANK AND SLOPE PROTECTION												
508(1)	Handlaid Rock Embankment	18,858.00	cum.	25,282,958.32	10.00	8.00	18.00	4,550,932.50	1,491,694.54	6,042,627.04	31,325,585.35	1,661.13
1710(2)	Grouted Riprap, Class "A"	3,701.00	cum.	10,973,792.35	10.00	8.00	18.00	1,975,282.62	647,453.75	2,622,736.37	13,596,528.73	3,673.74
1713(1)	Rubble Concrete	2,195.00	cum.	7,331,288.61	10.00	8.00	18.00	1,319,631.95	432,546.03	1,752,177.98	9,083,466.59	4,138.25
1716(6)	Structural Steel Sheet Piles, Furnished	15,750.00	m.	38,755,098.05	10.00	8.00	18.00	6,975,917.65	2,286,550.78	9,262,468.43	48,017,566.48	3,048.73
1716(12)	Structural Steel Sheet Piles, Driven	15,750.00	m.	11,620,107.81	10.00	8.00	18.00	2,091,619.77	685,586.48	2,777,206.25	14,397,316.06	914.12
1726(16)	Steel Sheet Test Piles, Furnished and Driven	12.00	m.	37,638.05	10.00	8.00	18.00	6,774.85	2,220.65	8,995.49	46,633.55	3,886.13
SUB - TOTAL FOR PART III - DIV. - I - PART J - PART I-B				94,000,885.19					5,545,052.23	22,466,211.56	116,467,096.75	
TOTAL				179,680,398.69					7,043,924.10	28,242,007.41	147,922,406.10	

Prepared by :

Submitted by :

Recommending Approval

Approved by :

BELEN A. SAPIQUEDA
Head, BAC Technical Working Group

LEONCIO B. SOLAMILLO
Chief, Construction Division

CAYANO BAO D. DIA
Assistant Regional Director

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

APPROVED BUDGET FOR THE CONTRACT

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Stations: 6,500.00 to 7,030.00
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Length: 1,050.00 m.m.

Contract Duration: 360 CD

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
								(5) x (9)	5% (5) + (9)	(9) + (10)	(5) + (11)	(12) / (3)
PART I - FACILITIES FOR THE ENGINEER												
A.1.1(3)	Construction of Field Office for the Engineer	1.00	L.S.	372,700.10	10.00	8.00	18.00	67,086.02	21,989.31	89,075.32	461,775.42	461,775.42
A.1.1(11)	Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer	1.00	L.S.	317,340.00	-	8.00	8.00	25,387.20	17,136.36	42,523.56	359,863.56	359,863.56
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	SUB - TOTAL FOR PART I			1,080,415.30					58,644.43	151,117.64	1,231,532.94	
PART II - OTHER GENERAL REQUIREMENTS												
B.4(1)	Construction Survey & Staking	1.05	km.	47,721.31	10.00	8.00	18.00	8,589.84	2,815.56	11,405.39	59,126.70	56,311.14
B.5	Project Billboard/Signboard	2.00	each	10,809.20	10.00	8.00	18.00	1,945.66	637.74	2,583.40	13,392.60	6,696.30
B.7	Occupation Safety and Health Program	12.00	month	356,457.60	-	8.00	8.00	28,516.61	19,248.71	47,765.32	404,222.92	33,685.24
B.9	Mobilization & Demobilization	1.00	L.S.	1,148,562.00	-	-	-	-	57,428.10	57,428.10	1,205,990.10	1,205,990.10
	SUB - TOTAL FOR PART II			1,563,550.11					80,130.11	119,182.21	1,682,732.31	
PART III - CIVIL, MECHANICAL, ELECTRICAL AND SANITARY/PLUMBING WORKS												
DIVISION I - GENERAL												
PART B - PLAIN AND REINFORCED CONCRETE WORK												
900(1)c1	Structural Concrete, Class "A"	1,197.00	cum.	8,088,589.95	10.00	8.00	18.00	1,455,946.19	477,226.81	1,933,173.00	10,021,762.95	8,372.40
902(1)a1	Reinforcing Steel, Grade 40	13,869.00	kg.	653,488.40	10.00	8.00	18.00	117,627.91	38,555.82	156,183.73	809,672.13	58.38
902(1)a2	Reinforcing Steel, Grade 60	14,912.00	kg.	733,948.34	10.00	8.00	18.00	132,110.70	43,302.95	175,413.65	909,362.00	60.98
	SUB - TOTAL FOR PART III - DIV. - I - PART B			9,476,026.70					559,085.58	2,264,770.38	11,740,797.08	
DIVISION IV - FLOOD CONTROL, DRAINAGE AND WATER SUPPLY												
PART J - FLOOD CONTROL AND DRAINAGE												
PART I-A - EARTHWORKS												
1702(1)a	Structure Excavation	550.00	cum.	126,563.61	10.00	8.00	18.00	22,761.45	7,467.25	30,248.70	156,812.31	285.11
1704(1)	Embankment	26,534.00	cum.	13,432,957.79	10.00	8.00	18.00	2,417,932.40	792,544.51	3,210,476.91	16,643,434.70	627.25
	SUB - TOTAL FOR PART III - DIV. - I - PART J - PART I-A			13,559,521.39					800,011.76	3,240,725.61	16,800,247.01	
PART I-B - BANK AND SLOPE PROTECTION												
508(1)	Handlaid Rock Embankment	18,858.00	cum.	25,282,958.32	10.00	8.00	18.00	4,550,932.50	1,491,594.54	6,042,627.04	31,325,585.35	1,661.13
1710(2)	Grouted Riprap, Class "A"	3,701.00	cum.	10,973,792.35	10.00	8.00	18.00	1,975,282.62	647,453.75	2,622,736.37	13,596,528.73	3,673.74
1713(1)	Rubble Concrete	2,195.00	cum.	7,331,288.61	10.00	8.00	18.00	1,319,631.95	432,546.03	1,752,177.98	9,083,466.59	4,136.25
1716(6)	Structural Steel Sheet Piles, Furnished	15,750.00	m.	38,755,098.05	10.00	8.00	18.00	6,975,917.65	2,286,550.78	9,262,468.43	48,017,566.48	3,048.73
1716(12)	Structural Steel Sheet Piles, Driven	15,750.00	m.	11,620,109.81	10.00	8.00	18.00	2,091,619.77	685,586.48	2,777,206.25	14,397,316.06	914.12
1726(16)	Steel Sheet Test Piles, Furnished and Driven	12.00	m.	37,638.05	10.00	8.00	18.00	6,774.85	2,220.65	8,995.49	46,633.55	3,886.13
	SUB - TOTAL FOR PART III - DIV. - I - PART J - PART I-B			94,000,885.19					5,546,052.23	22,466,211.56	116,467,096.75	
	TOTAL			179,680,398.69					7,043,924.10	28,242,007.41	147,922,406.10	

Prepared by:

Submitted by:

Recommending Approval:

Approved by:

JEEN A. SAMPALIDA
Head, BAC Technical Working Group

LEONCIO B. SOLAMILLO
Chief, Construction Division

CAYANO BAO D. DIA
Assistant Regional Director

KORFEE U. SERRANO, JR.
Regional Director

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City
 Item No./Description: A.1.1 (3) Construction of Field Office for the Engineer
 Unit of Measurement: L.S.
 Output per hour:
 Quantity: 1.00

*7.00 m. x 9.00 m., 1 - Classroom, 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.	901.00	3,153.50
	b. Selected Fill	10.00	cu.m.	328.00	3,280.00
	c. Soil Poisoning	2.50	L	1,900.00	4,750.00
	II. Concrete Works (Footings, Columns, Beams & Slab on Grade)				
	a. Portland Cement	90.00	bag	280.00	25,200.00
	b. Crushed Gravel	21.00	cu.m.	901.00	18,921.00
	c. Washed Sand	18.00	cu.m.	901.00	16,218.00
	III. Reinforcing Bars (Footings, Columns, Beams, & Slabs on Grade)				
	a. Deformed Round Bar, Grade 40	435.00	kg.	38.00	16,530.00
	b. No. 16 GI Tie Wire	20.00	kg.	80.00	1,600.00
	IV. Formworks (Columns & Beams)				
	a. Coco Lumber	400.00	bd.ft.	24.50	9,800.00
	b. Ordinary Plywood, 1/4"x4"x8'	18.00	pc.	385.00	6,930.00
	c. CWN, Assorted	5.00	kg.	65.00	325.00
	V. Masonry Works (masonry walls & plastering)				
	a. CHB 6" thk	650.00	pc.	16.00	10,400.00
	b. Portland Cement	45.00	bag	280.00	12,600.00
	c. Washed Sand	8.00	cu.m.	901.00	7,208.00
	d. 10mm dia. X 6m RSB	65.00	kg.	38.00	2,470.00
	e. No. 16 GI Tie Wire	2.50	kg.	80.00	200.00
	VI. Doors and Windows				
	a. D-1, Hollow Core Flush Type swing door, complete w/ accessories, 0.90mx2.1m	2.00	set	1,765.26	3,530.52
	b. W-1, Jalousie window, 1.4m x 1.2m	2.00	set	924.00	1,848.00
	c. W-2, Jalousie window, 2.8m x 1.2m	2.00	set	1,848.00	3,696.00
Sub-total for E					P 148,660.02
Sub-total for E (I + II + III)					P 297,987.97
F.	Direct Cost (C + E)				372,700.10
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		37,270.01
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		29,816.01
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		21,989.31
J.	Total Unit Cost				461,775.42

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City
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.	48.00	16,800.00
	b. 50 x 50 x 6mm. L	250.00	kg.	48.00	12,000.00
	c. 50 x 50 x 4mm. L	100.00	kg.	48.00	4,800.00
	d. Purlins C- 150 x 50 x 3mm.	18.00	kg.	48.00	864.00
	e. 16mm dia. Cross bracing	35.00	kg.	38.00	1,330.00
	f. 16mm dia. Turn buckle	20.00	pc.	118.00	2,360.00
	g. 12mm thk base plate	25.00	kg.	47.00	1,175.00
	h. 10mm thk batten plate	15.00	kg.	47.00	705.00
	i. 10mm dia. Sag rod	10.00	kg.	38.00	380.00
	j. 20mm dia. X 350 mm anchor bolts	10.00	pc.	36.00	360.00
	k. Welding Rod	15.00	kg.	166.33	2,494.95
	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.	420.00	23,100.00
	b. Pre-painted ridge roll ga 24, 0.60m width	10.00	ln.m.	113.00	1,130.00
	c. Pre-painted flashing, ga. 24	2.00	ln.m.	113.00	226.00
	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.	37.00	18,500.00
	b. Plywood, ordinary 1/4" x 4' x 8'	30.00	pc.	385.00	11,550.00
	c. Finishing Nails	5.00	kg.	100.00	500.00
	d. Common Wire Nails	10.00	kg.	65.00	650.00
	e. Wood Preservative Brown	5.00	L	400.00	2,000.00
Sub-total for E				P	105,329.95
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/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City
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 Fluorescent 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	170.00	510.00
	e. 3.5mm2 thw	3.00	roll	3,600.00	10,800.00
	f. 8.00mm2 thw	25.00	m	70.00	1,750.00
	g. 15mm dia. PVC pipe	20.00	pc	73.00	1,460.00
	h. 15mm dia. PVC Coupling	25.00	pc	5.00	125.00
	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	9.00	27.00
	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	7,375.00	7,375.00
	b. Lavatory (include fitting & Accessories)	1.00	set	6,615.00	6,615.00
	c. 1/2" GI Pipe S-40	2.00	pc	166.00	332.00
	d. 1/2" Water Faucet	2.00	pc	321.00	642.00
	e. 1/2" Assorted Connector	8.00	pc	20.00	160.00
	f. 4" PVC series 1000	1.00	pc	640.00	640.00
	g. 2" PVC series 1000	1.00	pc	305.00	305.00
	h. 4" PVC assorted Connector	6.00	pc	77.00	462.00
	i. 2" PVC assorted Connector	8.00	pc	56.00	448.00
Sub-total for E				P	43,998.00
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/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City

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	2.00	unit	1,370.00	2,740.00
	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
	Various Office Supply	1.00	L.S.	45,000.00	45,000.00
	(Folders, Bond Paper, Yellow Pads, Ball Pens, Pencil, Envelopes, etc.)				
	Kitchenware	1.00	L.S.	30,000.00	30,000.00
	(Plates, Spoons & Forks, Glasses, etc.)				
	Dining Table	1.00	set	8,000.00	8,000.00
	Digital Camera	2.00	set	12,000.00	24,000.00
	Cellphone	4.00	set	15,000.00	60,000.00
	Desktop Computer	1.00	set	60,000.00	60,000.00
	Lighting/Water Fixtures				
	a. Electrical Bill	12.00	mos.	3,000.00	36,000.00
	b. Water Bill	12.00	mos.	1,500.00	18,000.00
	c. LPG (11 kg)	12.00	mos.	1,000.00	12,000.00
Sub-total for E				P	317,340.00
F.	Direct Cost (C + E)				317,340.00
G.	Overhead, Contingencies and Miscellaneous			per D.O. 197, s. 2016	-
H.	Contractor's Profit (CP)			8% per D.O. 197, s. 2016	25,387.20
I.	Value Added Tax (VAT)			5% per D.O. 197, s. 2016	17,136.36
J.	Total Unit Cost				359,863.56

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City

Item No./Description: A.1.2(5) Operation and Maintenance of 4x4 Pick Up Type Service Vehicle for the Engineer

Unit of Measurement: month

Output per hour: 12.00

Quantity: 12.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Driver	1	360	422.32	152,035.20
Sub-total for A					P 152,035.20
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)				152,035.20
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Diesel	3,600.00	L	31.00	111,600.00
	b. Spare Parts	1.00	L.S.	60,000.00	60,000.00
	c. Engine Oil & Lubricants	1.00	L.S.	16,740.00	16,740.00
	d. Miscellaneous	1.00	L.S.	50,000.00	50,000.00
Sub-total for E					P 238,340.00
F.	Direct Cost (C + E)				390,375.20
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		19,518.76
J.	Total Unit Cost				34,157.83

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
 Section, Zamboanga City
 Item No./Description: B.4(1) Construction Survey & Staking
 Unit of Measurement: km.
 Output per hour: 0.04
 Quantity: 1.050

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	For Field Works				
a.	Geodetic Engineer	1	3.28	833.31	2,734.30
b.	Skilled Laborer	3	3.28	443.20	4,362.75
c.	Laborer	3	3.28	342.24	3,368.93
	For Office Works				
a.	Geodetic Engineer	1	9.84	833.31	8,202.90
b.	Skilled Laborer	2	9.84	443.20	8,725.50
Sub-total for A				P	27,394.37
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
a.	Total Station w/ complete accessories	1	3.28	800.00	2,625.00
	Minor Tools 10% of Labor				2,739.44
Sub-total for B				P	5,364.44
C.	Total (A+B)				32,758.81
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)	30.00	pc	400.00	12,000.00
b.	Blue Printing	150.00	pc	15.00	2,250.00
	Miscellaneous 5% of Materials Cost				712.50
Sub-total for E				P	14,962.50
F.	Direct Cost (C + E)				47,721.31
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		4,772.13
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		3,817.70
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		2,815.56
J.	Total Unit Cost				56,311.14

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City

Item No./Description: B.5 Project Billboard/Signboard

Unit of Measurement: each

Output per hour: 2.00

Quantity: 2.00

Per D.O. 141, s. 2016

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.	750.00	1,500.00
	b. Tarpaulin (4' x 8')	2.00	pc.	1,000.00	2,000.00
	c. Assorted Lumber	100.00	bd.ft.	37.00	3,700.00
	d. Assorted CW Nails	2.00	kg.	65.00	130.00
Sub-total for E					P 7,330.00
F.	Direct Cost (C + E)				10,809.20
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		1,080.92
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		864.74
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		637.74
J.	Total Unit Cost				6,696.30

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City

Item No./Description: B.7 Occupation Safety and Health Program

Unit of Measurement: month

Output per hour:

Quantity: 12.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Safety Practioner	1	180.00	611.92	110,145.60
	b. First Aider	1	360.00	443.20	159,552.00
Sub-total for A					P 269,697.60
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Warning Signs and Barricades				60,000.00
Sub-total for B					P 60,000.00
C.	Total (A+B)				329,697.60
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)				356,457.60
G.	Overhead, Contingencies and Miscellaneous		per D.O. 197, s. 2016		-
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		28,516.61
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		19,248.71
J.	Total Unit Cost				33,685.24

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City
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	1	6.00	34,043.00	204,258.00
b.	Water Truck	1	6.00	19,600.00	117,600.00
c.	Backhoe	2	6.00	12,296.00	147,552.00
d.	Backhoe (Wheel Type 0.28 cu.m.)	2	6.00	7,376.00	88,512.00
e.	Dumptruck	4	6.00	11,360.00	272,640.00
f.	Truck Mounted Crane (45 T)	1	6.00	20,848.00	125,088.00
g.	Grader	1	6.00	17,384.00	104,304.00
h.	Vibratory Roller	1	6.00	14,768.00	88,608.00
Sub-total for B				P	1,148,562.00
C.	Total (A+B)				1,148,562.00
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)				1,148,562.00
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	57,428.10
J.	Total Unit Cost				1,205,990.10

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City
Item No./Description: 508(1) Handlaid Rock Embankment
Unit of Measurement: cu.m.
Output per hour: 12.50
Quantity: 18,858.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	188.58	611.92	115,395.87
	b. Skilled Labor	4	188.58	443.20	334,314.62
	c. Skilled Labor	8	188.58	443.20	668,629.25
	d. Unskilled Labor	32	188.58	342.24	2,065,267.81
	use quadruple gang of labor and equipment				
Sub-total for A					P 3,183,607.56
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	Minor Tools 10% of Labor				318,360.76
Sub-total for B					P 318,360.76
C.	Total (A+B)				3,501,968.32
D.	Output/day	100.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Boulders	19,800.90	cu.m.	1,100.00	21,780,990.00
Sub-total for E					P 21,780,990.00
F.	Direct Cost (C + E)				25,282,958.32
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		2,528,295.83
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		2,022,636.67
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		1,491,694.54
J.	Total Unit Cost				1,661.13

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City

Item No./Description: 900(1)c1 Structural Concrete, Class 'A'

Unit of Measurement: cu.m.

Output per hour: 5.60

Quantity: 1,197.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	26.72	611.92	16,349.74
	b. Leadman	4	26.72	561.36	59,995.35
	b. Skilled Labor	16	26.72	443.20	189,468.00
	c. Unskilled Labor	32	26.72	342.24	292,615.20
	use quadruple gang of labor and equipment				
Sub-total for A				P	558,428.29
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	4	26.72	1,376.00	147,060.00
	b. Concrete Vibrator	4	26.72	730.00	78,018.75
	c. Water Truck/Pump (16000 L)	4	2.67	19,600.00	209,475.00
	Minor Tools 5% of Labor				27,921.41
Sub-total for B				P	462,475.16
C.	Total (A+B)				1,020,903.45
D.	Output/day	44.80	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Lumber, Good - 4 uses	83,790.00	bd.ft.	37.00	775,057.50
	b. Ordinary Plywood (1/2" x 4' x 8')	1,915.20	pc.	750.00	1,436,400.00
	c. Assorted CWN (1 kg./100 bd.ft. of Lumber)	837.90	kg.	65.00	54,463.50
	d. Cement	11,371.50	bag	280.00	3,184,020.00
	e. Sand	598.50	cu.m.	901.00	539,248.50
	f. Gravel	1,197.00	cu.m.	901.00	1,078,497.00
Sub-total for E				P	7,067,686.50
F.	Direct Cost (C + E)				8,088,589.95
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		808,859.00
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		647,087.20
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		477,226.81
J.	Total Unit Cost				8,372.40

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City

Item No./Description: 902(1)a1 Reinforcing Steel, Grade 40

Unit of Measurement: kg.

Output per hour: 180.00

Quantity: 13,869.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	9.63	611.92	5,893.55
	b. Skilled Laborer	2	9.63	443.20	8,537.14
	c. Unskilled Laborer	8	9.63	342.24	26,369.59
Sub-total for A					P 40,800.29
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Bar Cutter	1	4.82	1,758.00	8,465.87
	b. Bar Bender	1	4.82	2,812.00	13,541.54
	c. Cargo Truck (9 - 10 mt.)	1	1.44	9,696.00	14,007.69
Sub-total for B					P 36,015.10
C.	Total (A+B)				76,815.38
D.	Output/day	1,440.00	kg./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Tie Wire (2% of RSB)	291.25	kg.	80.00	23,299.92
	b. Reinforcing Steel Bar, Grade 40	14,562.45	kg.	38.00	553,373.10
Sub-total for E					P 576,673.02
F.	Direct Cost (C + E)				653,488.40
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		65,348.84
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		52,279.07
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		38,555.82
J.	Total Unit Cost				58.38

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City

Item No./Description: 902(1) a2 Reinforcing Steel, Grade 60

Unit of Measurement: kg.

Output per hour: 180.00

Quantity: 14,912.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	10.36	611.92	6,336.77
	b. Skilled Labor	2	10.36	443.20	9,179.16
	c. Unskilled Labor	8	10.36	342.24	28,352.68
Sub-total for A					P 43,868.62
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Bar Cutter	1	5.18	1,758.00	9,102.53
	b. Bar Bender	1	5.18	2,812.00	14,559.91
	c. Cargo Truck (9 - 10 mt.)	1	1.55	9,696.00	15,061.12
Sub-total for B					P 38,723.56
C.	Total (A+B)				82,592.18
D.	Output/day	1,440.00	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Tie Wire (2% of RSB)	313.15	kg.	80.00	25,052.16
	b. Reinforcing Steel Bar, Grade 60	15,657.60	kg.	40.00	626,304.00
Sub-total for E					P 651,356.16
F.	Direct Cost (C + E)				733,948.34
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		73,394.83
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		58,715.87
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		43,302.95
J.	Total Unit Cost				60.98

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City
1702(1)c Structure Excavation

Item No./Description:
Unit of Measurement: cu.m.
Output per hour: 20.00
Quantity: 550.00

For Disposal

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	3.44	611.92	2,103.48
	b. Unskilled Labor	3	3.44	342.24	3,529.35
Sub-total for A					P 5,632.83
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Dump Truck (12 cu.yd.)	2	3.44	11,360.00	78,100.00
	b. Backhoe (0.80 cu.m.)	1	3.44	12,296.00	42,267.50
	Minor Tools 10% of Labor Cost				563.28
Sub-total for B					P 120,930.78
C.	Total (A+B)				126,563.61
D.	Output/day 160.00 cu.m./day				
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E					P -
F.	Direct Cost (C + E)				126,563.61
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		12,656.36
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		10,125.09
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		7,467.25
J.	Total Unit Cost				285.11

A

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City
 1704(1) Embankment
 Item No./Description:
 Unit of Measurement: cu.m.
 Output per hour: 150.00
 Quantity: 26,534.00 Compacted Volume

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	22.11	611.92	13,530.57
	b. Leadman	3	22.11	561.36	37,237.82
	c. Unskilled Laborer	6	22.11	342.24	45,404.98
	used triple gang of labor and equipment				
Sub-total for A					P 96,173.37
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Motorized Road Grader (140 hp), G170A	3	22.11	17,384.00	1,153,167.64
	b. Vibratory Roller (10 mt), SD100C	3	22.11	14,768.00	979,635.28
	c. Water Truck/Pump (16000 L)	3	5.53	19,600.00	325,041.50
Sub-total for B					P 2,457,844.42
C.	Total (A+B)				2,554,017.79
D.	Output/day	1,200.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Common Borrow (with 25% Shrinkage Factor)	33,167.50	cu.m.	328.00	10,878,940.00
Sub-total for E					P 10,878,940.00
F.	Direct Cost (C + E)				13,432,957.79
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		1,343,295.78
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		1,074,636.62
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		792,544.51
J.	Total Unit Cost				627.25

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City
Item No./Description: 1710(2) Grouted Riprap, Class "A"
Unit of Measurement: cu.m.
Output per hour: 5.00
Quantity: 3,701.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	92.53	611.92	56,617.90
	b. Leadman	4	92.53	561.36	207,759.34
	c. Skilled Labor	8	92.53	443.20	328,056.64
	d. Unskilled Labor	32	92.53	342.24	1,013,304.19
	use quadruple gang of labor and equipment				
Sub-total for A				P	1,605,738.07
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	4	92.53	1,376.00	509,257.60
	b. Water Truck/Pump (16000 L)	4	4.63	19,600.00	362,698.00
	Minor Tools 5% of Labor				80,286.90
Sub-total for B				P	952,242.50
C.	Total (A+B)				2,557,980.57
D.	Output/day 40.00 cu.m./day				
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	11,103.00	bag	280.00	3,108,840.00
	b. Sand	925.25	cu.m.	901.00	833,650.25
	c. Gravel	55.52	cu.m.	901.00	50,019.02
	d. Weep Holes (PVC)	1,110.30	m.	50.83	56,440.25
	e. Filter Cloth	55.52	sq.m.	160.00	8,882.40
	f. Boulders (15 - 25 kg.)	3,886.05	cu.m.	1,100.00	4,274,655.00
	Miscellaneous 1% of Materials Cost				83,324.87
Sub-total for E				P	8,415,811.78
F.	Direct Cost (C + E)				10,973,792.35
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		1,097,379.24
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		877,903.39
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		647,453.75
J.	Total Unit Cost				3,673.74

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Turnaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City
Item No./Description: 1713(1) Rubble Concrete
Unit of Measurement: cu.m.
Output per hour: 5.60
Quantity: 2,195.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	49.00	611.92	29,981.35
	b. Leadman	4	49.00	561.36	110,016.54
	c. Skilled Labor	8	49.00	443.20	173,718.57
	d. Unskilled Labor	32	49.00	342.24	536,583.43
	use quadruple gang of labor and equipment				
Sub-total for A				P	850,299.88
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	4	49.00	1,376.00	269,671.43
	b. Water Truck/Pump (16000 L)	4	2.45	19,600.00	192,062.50
	c. Backhoe (Wheel Type 0.28 cu.m.)	4	4.90	7,376.00	144,556.43
	Minor Tools 5% of Labor				42,514.99
Sub-total for B				P	648,805.35
C.	Total (A+B)				1,499,105.24
D.	Output/day	44.80	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	9,219.00	bag	280.00	2,581,320.00
	b. Sand	576.19	cu.m.	901.00	519,144.94
	c. Gravel	43.90	cu.m.	901.00	39,553.90
	d. Weep Holes (PVC)	658.50	m.	50.83	33,473.75
	e. Filter Cloth	32.93	sq.m.	160.00	5,268.00
	f. Boulders	1,382.85	cu.m.	1,100.00	1,521,135.00
	g. Gravel	1,152.38	cu.m.	901.00	1,038,289.88
	Miscellaneous 2% of Materials Cost				93,997.91
Sub-total for E				P	5,832,183.37
F.	Direct Cost (C + E)				7,331,288.61
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		733,128.86
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		586,503.09
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		432,546.03
J.	Total Unit Cost				4,138.25

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City

Item No./Description: 1716(6) Structural Steel Sheet Piles, Furnished

Unit of Measurement: m.

Output per hour: 96.00

Quantity: 15,750.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	20.51	611.92	12,549.14
	b. Leadman	2	20.51	561.36	23,024.53
	b. Skilled Laborer	4	20.51	443.20	36,356.25
	c. Unskilled Laborer	4	20.51	342.24	28,074.38
	use quadruple gang of labor and equipment				
Sub-total for A				P	100,004.30
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Truck Mounted Crane (45 T)	2	20.51	20,848.00	855,093.75
Sub-total for B				P	855,093.75
C.	Total (A+B)				955,098.05
D.	Output/day	768.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Steel Sheet Pile KSP II (delivered at site)	756,000.00	kg.	50.00	37,800,000.00
Sub-total for E				P	37,800,000.00
F.	Direct Cost (C + E)				38,755,098.05
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		3,875,509.80
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		3,100,407.84
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		2,286,550.78
J.	Total Unit Cost				3,048.73

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan Section, Zamboanga City

Item No./Description: 1716(12, Structural Steel Sheet Piles, Driven

Unit of Measurement: m.

Output per hour: 40.00

Quantity: 15,750.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	49.22	611.92	30,117.94
	b. Leadman	4	49.22	561.36	110,517.75
	c. Skilled Laborer	24	49.22	443.20	523,530.00
	d. Unskilled Laborer	24	49.22	342.24	404,271.00
	use quadruple gang of labor and equipment				
Sub-total for A					P 1,068,436.69
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Truck Mounted Crane (45 T)	4	49.22	20,848.00	4,104,450.00
	b. Vibro Hammer	4	49.22	16,984.00	3,343,725.00
	c. Gen. Set (876 - 1000 KVA)	4	49.22	10,373.36	2,042,255.25
	d. Welding Machine	4	49.22	2,968.00	584,325.00
	e. Cutting Outfit	4	24.61	363.60	35,791.88
Sub-total for B					P 10,110,547.13
C.	Total (A+B)				11,178,983.81
D.	Output/day	320.00	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Welding Rod	378.00	kg.	167.00	63,126.00
	b. Oxy/Acetylene	151.20	set	2,500.00	378,000.00
Sub-total for E					P 441,126.00
F.	Direct Cost (C + E)				11,620,109.81
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		1,162,010.98
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		929,608.79
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		685,586.48
J.	Total Unit Cost				914.12

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and
Principal Rivers - Construction of Flood Control at Tumaga River Basin, Tetuan - Tugbungan
Section, Zamboanga City
Item No./Description: 1726(16) Steel Sheet Test Piles, Furnished and Driven
Unit of Measurement: m.
Output per hour: 10.00
Quantity: 12.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	0.15	611.92	91.79
	b. Skilled Laborer	6	0.15	443.20	398.88
	c. Unskilled Laborer	6	0.15	342.24	308.02
Sub-total for A				P	798.68
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Truck Mounted Crane (45 T)	1	0.15	20,848.00	3,127.20
	b. Vibro Hammer	1	0.15	16,984.00	2,547.60
	c. Gen. Set (876-1000 KVA)	1	0.15	10,373.36	1,556.00
	d. Welding Machine	1	0.15	2,968.00	445.20
	e. Cutting Outfit	1	0.08	363.60	27.27
Sub-total for B				P	7,703.27
C.	Total (A+B)				8,501.96
D.	Output/day	80.00	m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Steel Sheet Piles KSP II (delivered at site)	576.00	kg.	50.00	28,800.00
	b. Welding Rod (1 kg./2000 kg. of Steel Sheet Pile)	0.29	kg.	167.00	48.10
	c. Oxy/Acetylene (1 set/5000 kg. of Steel Sheet Pile)	0.12	set	2,500.00	288.00
Sub-total for E				P	29,136.10
F.	Direct Cost (C + E)				37,638.05
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		3,763.81
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		3,011.04
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		2,220.65
J.	Total Unit Cost				3,886.13

PROJECT : Construction/Rehabilitation of Flood Mitigation Facilities within Major River Basins and Principal Rivers - Construction of Flood Control at Tumaga River Basin, Teluan - Tugbungan Section, Zamboanga City
 LOCATION : Zamboanga City
 LIMITS : 6+500.00 - 7+030.00
 6+500.00 - 7+020.00
 net length : 1,050.00 m.m.

SUMMARY OF DETAILED ESTIMATES

ITEM NO.	DESCRIPTION	QTY.	UNIT	LABOR	EQUIPMENT	MATERIALS	OCM	PROFIT	VAT	TOTAL
PART I - FACILITIES FOR THE ENGINEER										
A.1.1(3)	Construction of Field Office for the Engineer	1.00	L.S.	42,596.48	32,115.65	297,987.97	37,270.01	29,816.01	21,989.31	461,775.42
A.1.1(11)	Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer	1.00	L.S.	-	-	317,340.00	-	25,387.20	17,136.36	359,863.56
A.1.2(5)	Operation and Maintenance of 4x4 Pick Up Type Service Vehicle for the Engineer	12.00	month	152,035.20	-	238,340.00	-	-	19,518.76	409,893.96
	TOTAL OF PART I			194,631.68	32,115.65	853,667.97	37,270.01	55,203.21	58,644.43	1,231,532.94
PART II - OTHER GENERAL REQUIREMENTS										
B.4(1)	Construction Survey & Staking	1.05	km.	27,594.37	5,364.44	14,962.50	4,772.13	3,817.70	2,815.56	59,126.70
B.5	Project Billboard/Signboard	2.00	each	3,479.20	-	7,330.00	1,080.92	864.74	637.74	13,392.60
B.7	Occupation Safety and Health Program	12.00	month	269,697.60	60,000.00	26,760.00	-	28,516.61	19,248.71	404,222.92
B.9	Mobilization & Demobilization	1.00	L.S.	-	1,148,562.00	-	-	-	57,428.10	1,205,990.10
	TOTAL OF PART II			300,571.17	1,213,926.44	49,052.50	5,853.05	33,199.05	80,130.11	1,682,732.31
PART III - CIVIL, MECHANICAL, ELECTRICAL AND SANITARY/PLUMBING WORKS										
DIVISION I - GENERAL										
PART B - PLAIN AND REINFORCED CONCRETE WORK										
900(1)c1	Structural Concrete, Class "A"	1,197.00	cum.	558,428.29	462,475.16	7,067,686.50	803,859.00	647,087.20	477,226.81	10,021,762.95
902(1)a1	Reinforcing Steel, Grade 40	13,869.00	kg.	40,800.29	36,015.10	576,673.02	65,348.84	52,279.07	38,555.82	809,672.13
902(1)a2	Reinforcing Steel, Grade 60	14,912.00	kg.	43,868.62	38,723.56	651,356.16	73,394.83	58,715.87	43,302.95	909,362.00
	SUB - TOTAL FOR PART III - DIV. - I - PART B			643,097.19	537,213.83	8,295,715.68	947,602.67	758,082.14	559,085.58	11,740,797.08
DIVISION IV - FLOOD CONTROL, DRAINAGE AND WATER SUPPLY										
PART J - FLOOD CONTROL AND DRAINAGE										
Part I-A - EARTHWORKS										
1702(1)a	Structure Excavation	550.00	cum.	5,632.83	120,930.78	-	12,656.36	10,125.09	7,467.25	156,812.31
1704(1)	Embankment	26,534.00	cum.	96,173.37	2,457,844.42	10,878,940.00	1,343,295.78	1,074,636.62	792,544.51	16,643,434.70
	SUB - TOTAL FOR PART III - DIV. - I - PART J - PART I-A			101,806.19	2,578,775.20	10,878,940.00	1,355,952.14	1,084,761.71	800,011.76	16,800,247.01
Part I-B - BANK AND SLOPE PROTECTION										
508(1)	Handlaid Rock Embankment	18,858.00	cum.	3,183,607.56	318,360.76	21,780,990.00	2,528,295.83	2,022,636.67	1,491,694.54	31,325,585.35
1710(2)	Grouted Riprap, Class "A"	3,701.00	cum.	1,605,738.07	952,242.50	8,415,811.78	1,097,379.24	877,903.39	647,453.75	13,596,528.73
1713(1)	Rubble Concrete	2,195.00	cum.	850,299.88	648,805.35	5,832,183.37	733,128.86	586,503.09	432,546.03	9,083,466.59
1716(6)	Structural Steel Sheet Piles, Furnished	15,750.00	m.	100,004.30	855,093.75	37,800,000.00	3,875,509.80	3,100,407.84	2,284,550.78	48,017,566.48
1716(12)	Structural Steel Sheet Piles, Driven	15,750.00	m.	1,068,436.69	10,110,547.13	441,126.00	1,162,010.98	929,608.79	685,586.48	14,397,316.06
1726(16)	Steel Sheet Test Piles, Furnished and Driven	12.00	m.	798.68	7,703.27	29,136.10	3,763.81	3,011.04	2,220.65	46,633.55
	SUB - TOTAL FOR PART III - DIV. - I - PART J - PART I-B			6,808,885.18	12,892,752.76	74,299,247.25	9,400,088.52	7,520,070.82	5,546,052.23	116,467,096.75
TOTAL										
				8,048,991.41	17,254,783.87	94,376,623.40	11,746,766.39	9,451,316.92	7,043,924.10	147,922,406.10

4

UNIT COST ANALYSIS FOR HAULING COST FOR PORTLAND CEMENT

TOTAL QUANTITY REQUIREMENTS FOR PORTLAND CEMENT

DESCRIPTION	QUANTITY (Bags)
Structural Concrete, Class 'A'	11,371.50
Grouted Riprap, Class "A"	11,103.00
Rubble Concrete	9,219.00
Construction of Field Office for the Engineer	90.00
T O T A L	31,783.50

Quantity = **31,783.50** Bags

Delivery Charge = P 0.120 / bag / km.

S I T E	HAULING DISTANCE
Zamboanga City DEO	5.00
Batching plant	

*Average hauling distance from Source to assumed Stockpiling area :
say 5.00 km.

Delivery Charge = P 0.120 x 5.00
= P **0.60** / bag

*Delivery Truck : 31,783.50 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	=	$\frac{5.00 \times 60}{30.00}$	=	10.00 mins.
Unloaded running	=	$\frac{5.00 \times 60}{40.00}$	=	7.50 mins.
Loading and Unloading	:	45.00	mins.	
allowance for delay/traffic	:	3.00	mins.	
Capacity of Dumptruck	:	8.00	cu.m.	
	:	500.00	bags	
Total Cycle time	:	65.50	mins.	
No. of trips for Dumptruck per day	=	$\frac{8.0 \times 60.00}{65.50}$	=	7.33 say 7.33 trip
Dumptruck daily output	=	500 x 7.33	=	3,664.12 cu.m.
Using (3) Dumptrucks	=	3 x 3664.12	=	10,992.37 cu.m.

W

1. No. of days for Delivery Truck = $\frac{31,783.50}{10,992.37} = 2.89$ say 2.89 days
2. No. of days for Labor, for unloading = complimentary to D. Truck days = 2.89 days

DELIVERY COST :

31,783.50 - Bags, Portland Cement	@ P	0.60	/ bag	= P	19,070.10
Sub - Total				P	19,070.10

LABOR :

1	- Foreman	@ P	611.92 /day	x	2.89 days = P	1,769.32
10	- Laborers, unloading	@ P	342.24 /day	x	2.89 days = P	9,895.58
					Sub - Total	P
						11,664.90

MATERIALS :

31,783.50 - Bags, Portland Cement	@ P	280.00	/ bag	= P	8,899,380.00
(Pick-Up Price)	Sub - Total				P 8,899,380.00

Estimated Quantity	31,783.50 Bags				
Unit Cost	P	280.97 / Bag,	say P	280.00 / Bag	
Grand Total	P	8,930,115.00			
Delivery Cost	P	19,070.10			
Labor	P	11,664.90			
Materials	P	8,899,380.00			

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 : 5.00 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.	
allowance for delay/traffic	:	3.00	mins.	
Capacity of Dumptruck	:	10.00	cu.m.	
Total Cycle time	:	25.50	mins.	
No. of trips for Dumptruck per day	=	$\frac{8 \times 60.00}{25.50}$	=	18.82 say 18.82 trips
Dumptruck daily output	=	10 x 18.82	=	188.24 cu.m.
Using (5) Dumptrucks	=	5 x 188.24	=	941.18 cu.m.
1. No. of days for Dumptrucks	=	$\frac{1,000.00}{941.18}$	=	1.06 say 1.06 days

EQUIPMENT USED : (2009 ACEL RATES)

5 - Unit Dumptruck @ P 11,360.00 /day x 1.06 days = P 60,350.00
 Sub - Total P 60,350.00

Estimated Quantity		1,000.00	cu.m.
Unit Cost	P	12.07	/cu.m./km. (Unit Cost, Hauling per cu.m.per km.)
Grand Total	P	60,350.00	
Equipment	P	60,350.00	
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:	x	12.07	=	901.00	= 901.00
Cost of Coarse Aggregates:	x	12.07	=	901.00	= 901.00
Cost of Item 200 Materials:	x	12.07	=	680.00	= 680.00
Cost of Item 300 Materials:	x	12.07	=	735.00	= 735.00
Cost of Boulders:	x	12.07	=	1,100.00	= 1,100.00
Cost of Embankment, Common Borrow:	x	12.07	=	328.00	= 328.00