DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REPUBLIC OF THE PHILIPPINES

JAPAN INTERNATIONAL COOPERATION AGENCY

THE DETAILED DESIGN OF PASIG-MARIKINA RIVER CHANNEL IMPROVEMENT PROJECT (PHASE III)

FINAL REPORT

VOLUME-V

COST ESTIMATE

FEBRUARY 2013

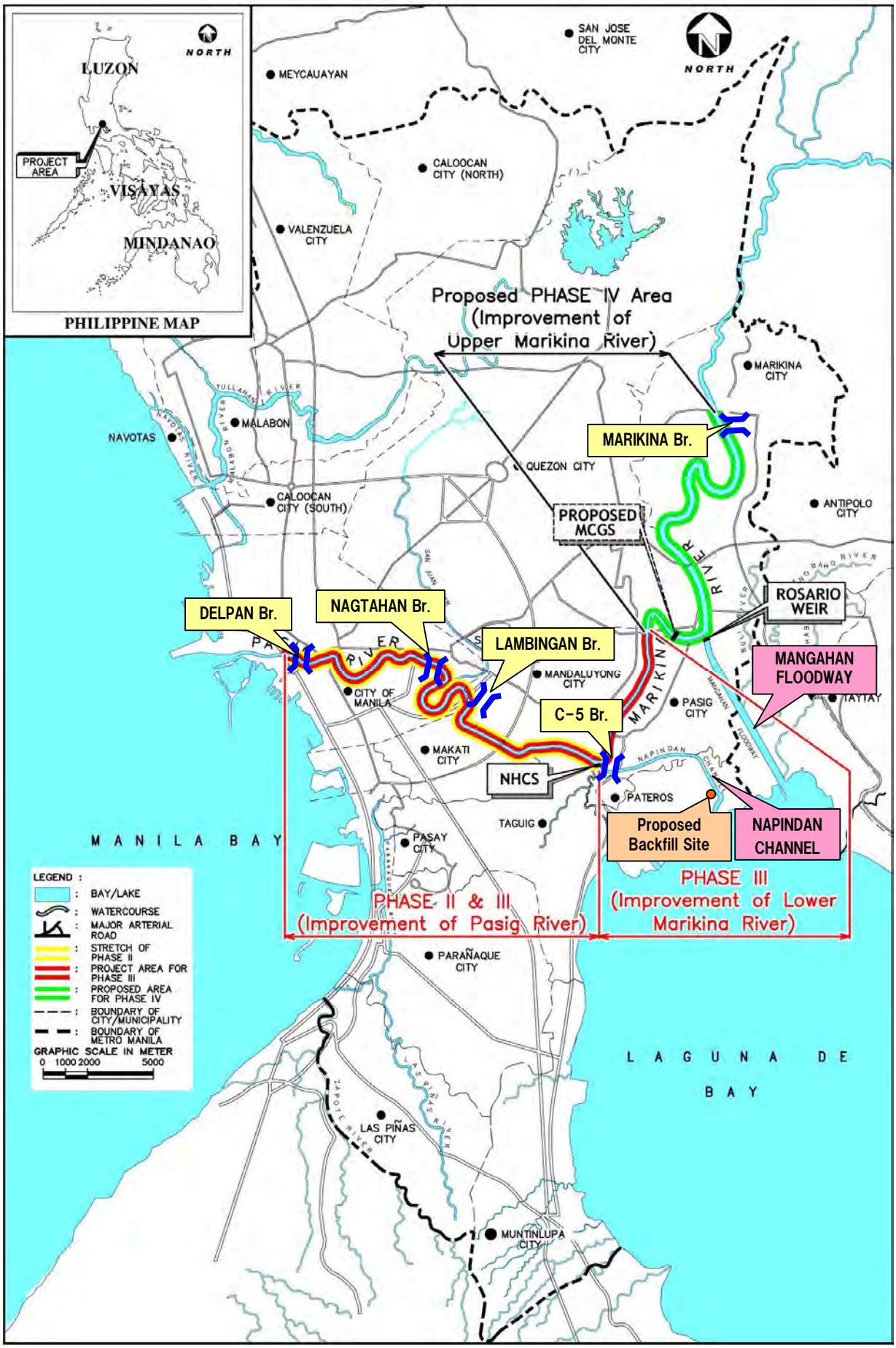
CTI Engineering International Co., Ltd.
Consulting Engineers

COMPOSITION OF FINAL REPORT

VOLUME-I	**:**	**SUMMARY**
VOLUME-II	**:**	**MAIN REPORT**
VOLUME-III-1	**:**	**STRUCTURAL CALCULATION OF PASIG RIVER**
VOLUME-III-2	**:**	**STRUCTURAL CALCULATION OF LOWER MARIKINA RIVER**
VOLUME-IV-1	**:**	**QUANTITY CALCULATION OF PASIG RIVER**
VOLUME-IV-2	**:**	**QUANTITY CALCULATION OF LOWER MARIKINA RIVER**
VOLUME-V	**:**	**COST ESTIMATE**

EXCHANGE RATES USED IN THE REPORT:
PHP 1.00 = JPY 1.968
USD 1.00 = JPY 80.940 = PHP 41.123

(Monthly Average in November 2012 of Central Bank of the Philippines)



PROJECT LOCATION MAP

THE DETAILED DESIGN
OF
PASIG-MARIKINA RIVER CHANNEL
IMPROVEMENT PROJECT (PHASE III)

FINAL REPORT
Vol.-V COST ESTIMATE

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ABBREVIATIONS AND ACRONYMS

Government Institutions and Organizations

AASHTO	:	American Association of the State Highway and Transportation Office
ACEL	:	Association on Carriers and Equipment, Inc.
ACI	:	American Concrete Institute
ASTM	:	American Society for Testing Materials
BOC	:	Bureau of Construction, DPWH
BOD	:	Bureau of Design, DPWH
DENR	:	Department of Environmental and Natural Resources
DOLE	:	Department of Labor and Employment
DPWH	:	Department of Public Works and Highways
EMB	:	Environmental Management Bureau, DENR
FMC	:	Flood Mitigation Committee
GOJ	:	Government of Japan
GOP	:	Government of the Philippines
ICC-CC	:	Investment Coordinate Committee - Cabinet Committee
JBIC	:	Japan Bank for International Cooperation (formerly OECF)
JGS	:	Japan Geological Society
JICA	:	Japan International Cooperation Agency
LGU(s)	:	Local Government Unit(s)
LLDA	:	Laguna Lake Development Authority
LWUA	:	Local Water Utility Administration
MCGS	:	Marikina Control Gate Structure
MERALCO	:	Manila Electric Company
MWCI	:	Manila Water Company, Inc.
MWSI	:	Maynilad Water Services, Inc.
MWSS	:	Metropolitan Water Supply and Sewerage System
NAMRIA	:	National Mapping and Resources Information Authority
NCR	:	National Capital Region
NEDA	:	National Economic and Development Authority
NHCS	:	Napindan Hydraulic Control Structure
NHRC	:	National Hydraulic Research Center
NIA	:	National Irrigation Administration
PAGASA	:	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PMC	:	Price Monitoring Committee
PMO	:	Project Management Office, DPWH
PMO-MFCP	:	Project Management Office for Major Flood Control Projects, DPWH
PMRCIP	:	Pasig-Marikina River Channel Improvement Project
PRRC	:	Pasig River Rehabilitation Committee
SSS	:	Social Security System
STEP	:	Special Term Economic Partnership
UP	:	University of the Philippines
USEPA	:	United States Environmental Protection Agency

Others

ASD	:	Allowable Stress Design
BAC	:	Bids and Awards Committee
BOQ	:	Bill of Quantities
CAD	:	Computer Assisted Design
CARI	:	Contractor’s All Risk Insurance
DAO	:	DENR Administrative Order

D/D	:	Detailed Design
DHWL	:	Design High Water Level
D.O.	:	Department Order
EAM	:	Average End Method
ECC	:	Environmental Compliance Certificate
EIA	:	Environmental Impact Assessment
EIS	:	Environmental Impact Statement
EMP	:	Environmental Management Plan
EMoP	:	Environmental Monitoring Plan
F/S	:	Feasibility Study
GDOP	:	Geometric Dilution of Precision
GPS	:	Global Positioning System
ICB	:	International Competitive Bidding
ICP	:	Information Campaign Policy
IEE	:	Initial Environmental Examination
IRR	:	Implementing Rules and Regulation
JIS	:	Japanese Industrial Standards
JV	:	Joint Venture
L/A	:	Loan Agreement
MHHW	:	Mean Higher High Water
MLLW	:	Mean Lower Low Water
MP	:	Master Plan
MSHHW	:	Mean Spring Higher Water Level
MSL	:	Mean Sea Level
MVFS	:	Marikina Valley Fault System
NBCP	:	National Building Code of the Philippines
NESC	:	National Electrical Safety Code
NSCP	:	National Structure Code of the Philippines
O&M	:	Operation and Maintenance
ODA	:	Official Development Assistance
PMRCIP	:	Pasig-Marikina River Channel Improvement Project
PNS	:	Philippine National Standards
P/Q	:	Prequalification
RA	:	Republic Act
RAP	:	Resettlement Action Plan
R/D	:	Record of Discussion
ROW	:	Right of Way
SAPROF	:	Special Assistance for Project Formulation
SBD	:	Sample Bidding Document
SPD	:	Sample Prequalification Document
TAC	:	Technical Advisory Committee
TCLP	:	Toxicity Characteristic Leading Procedure
TTS	:	Telegraphic Transfer Selling
TWG	:	Technical Working Group
VAT	:	Value Added Tax

Units of Measurement

mm	:	millimeter
cm	:	centimeter
m	:	meter
km	:	kilometer
g, gr	:	gram
kg	:	kilogram
t, ton	:	metric ton

m^2	:	square meter
ha, has	:	hectare, hectares
km^2	:	square kilometer
l,lt.,ltr	:	liter
m^3	:	cubic meter
s, sec	:	second
m, min.	:	minute
h, hr	:	hour
y, yr	:	year
MW	:	megawatt
mm/hr	:	millimeter per hour
m/s	:	meter per second
km/hr	:	kilometer per hour
mg/l	:	milligram per liter
m^3/s	:	cubic meter per second
$m^3/s/km^2$	:	cubic meter per second per square kilometer
%	:	percent
ppm	:	parts per million
x x	:	symbol of multiplication (times)
≤ , ≥	:	Inequality sign (e.g. A≤B means that value A is less than or equal to value B.)
< , >	:	Inequality sign (e.g. A<B means that value A is less than value B.)
Y, Y, JPY	:	Japanese Yen
P, P, PHP	:	Philippine Peso
$	:	US Dollar

CHAPTER 1 CONSTRUCTION COST

1.1 Cost Estimation Conditions

The following are the conditions for cost estimation:

(1) Type of Scheme: Japan's ODA Loan Scheme (STEP: Special Terms for Economic Partnership),
(2) Procurement Conditions: Prime contractors must be Japanese firms. Subcontractors may be from any country.
(3) Procurement of Goods and Services under STEP: Not less than 30% of the total amount of contracts (excluding consulting services) must be from Japan or provided by Japanese firms.
(4) Procurement Method: International Competitive Bidding (ICB).
(5) Contract Method: Unit Cost Contract with Bill of Quantities (BOQ)

1.2 Basic Conditions of Cost Estimate

1.2.1 Price Level

The cost estimates are updated on the price level as of November 2012.

1.2.2 Exchange Rate

Exchange rates are referred to the monthly average in November 2012 of Central Bank of the Philippines.

1.0 PHP = 1.968 JPY

1.0 USD = 80.940 JPY = 41.123 PHP .

1.2.3 Currency for Cost Estimates

The project cost component shall consist of foreign currency and local currency portions. Philippine Peso shall be used for both the local and foreign currency portions.

The classifications of foreign and local portions are as given below.

(1) Local Currency Portion
- All Labor Costs
- Cost of construction material and equipment lease locally procured;
- Value Added Tax (VAT)

(2) Foreign Currency Portion
- Cost of construction materials, equipment and services procured from Japan and/or third countries

1.2.4 Reference Guidelines/Manuals

The cost estimates are referred to the following guidelines/manuals indicated below:

- DPWH Department Order No. 72, Series of 2012 (Amendment to D.O. 29 Series of 2011 Re: Revised Guidelines on the Preparation of Approved Budget for the Contract)
- DPWH Department Order No. 71, Series of 2012 (Guidelines for the Establishment of Construction Materials Price, Standard Labor and Equipment Rental Rates Data Base)
- DPWH Department Order No. 03, Series of 2010 (Guidelines on the Acquisition of Motor Vehicles for Use in Infrastructure Project Supervision)
- DPWH Department Order No. 46, Series of 2007 (Application of Daywork and Provisional Sum Items in Contract Management)
- Civil Engineering Work Estimation Standard for Ministry of Land, Infrastructure, Transport and Tourism of Japan

1.3 Methodology of Cost Estimate

Costs for construction works are essentially estimated on the unit price basis. The construction cost consists of direct cost and indirect costs. The direct cost consists of equipment, material and labor costs. Indirect cost includes overhead expenses, contingencies, miscellaneous expenses, contractor's profit margin and VAT.

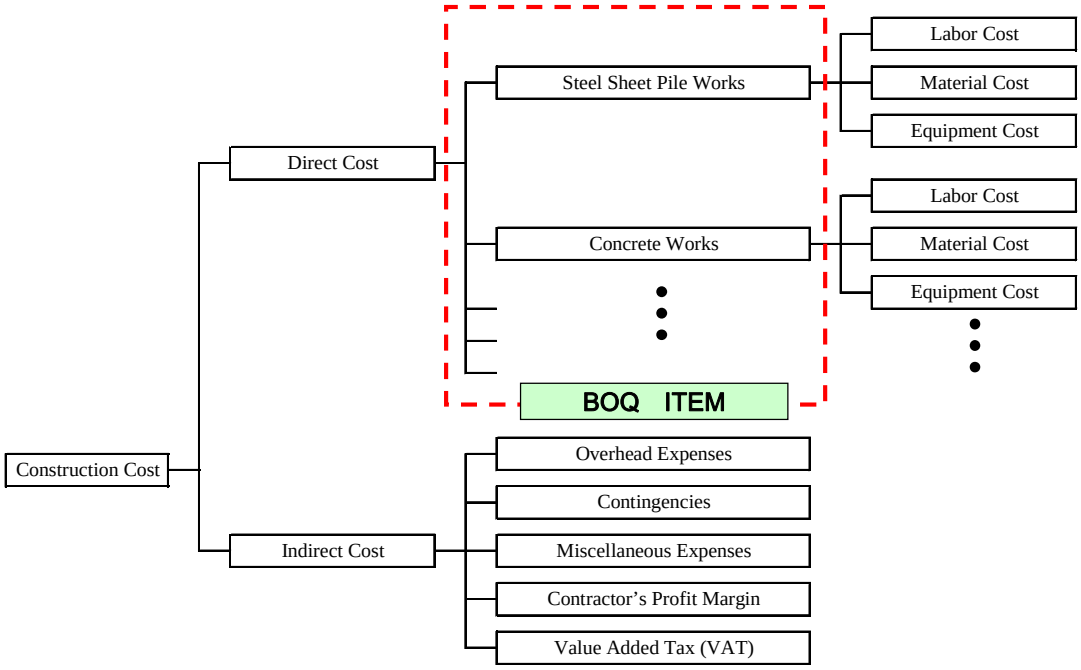

Figure R 1.3.1 Composition of Construction Cost

Composition of the unit price as well as production rates are basically referred to the past construction records in the Philippines and on the approved cost estimate report by the DPWH, such as the Pasig-Marikina River Channel Improvement Project, Phase I and Phase II. Moreover, the adopted unit price is verified by the unit price analysis from DPWH as well as from Japanese estimation standards.

The composition of unit price is as described below.

1.3.1 Direct Cost

(1) Labor Cost

The labor rates are estimated based on the minimum labor rate approved by the Department of Labor and Employment (DOLE) – National Capital Region (NCR). The labor wages used in the cost estimates include leave, bonus, Social Security System (SSS), PhilHealth, Pag-ibig Fund, and all other mandatory benefits, all in accordance with the Labor Code of the Philippines.

(2) Material Cost

In accordance with the "DPWH Department Order No. 72, Series of 2012," allowance for waste and/or losses shall not exceed 5% of materials requirement.

On the other hand, the "Manual on Design and Cost Estimates for JICA Preparatory Study, March 2009" mentions the allowance as follows:

Re-Bars:	8%
Form:	7%
Unreinforced Concrete:	6%
Reinforced Concrete:	6%

Based on DPWH Department Order No. 72, the allowance adopted in this project is 5%.

The costs of construction materials and supplies including the delivery cost to the site were obtained mostly from local suppliers in Metro Manila. Material procurement from Japan is considered if Japanese technology is applied, including transportation cost from Japan to the site.

The costs for locally produced and supplied materials cost were estimated based on the quarterly updated report by the Price Monitoring Committee (PMC) of DPWH, and on the obtained quotations from the three (3) or more suppliers or distributors.

(3) Equipment Cost

The hourly-operated rental rates issued by the Association of Carriers and Equipment Lessors, Inc. (ACEL) through its Equipment Guidebook are presently applied for DPWH projects. This book as well is being used in this Project for the equipments considered in the unit price analysis.

For the special equipment and machinery, such as water-jet machine and drilling equipment for hard soil strata, their operation costs have been estimated with reference to the "Depreciation Estimate Table of Construction Machinery and Equipment" by the Japan Construction Mechanization Association (JCMA).

In accordance with DPWH Department Order No. 72, Series of 2012, "Mobilization and Demobilization shall be treated as a separate equipment cost. The amount shall not exceed 1% of estimated direct cost". This percentage of the estimated direct cost has been referred in this project.

1.3.2 Indirect Cost

The computation of indirect cost has been referred to "DPWH Department Order No. 72, Series of 2012" as well as the past yen-loan-financed project, as prescribed below:

(1) Overhead Expenses

Overhead expenses range from 5 to 8% of the estimated direct cost, which includes Engineering and Administrative Supervision, Transportation Allowance, Office Expenses (for office equipment, power and water consumption, and maintenance), Premium on Contractor's All Risk Insurance (CARI), Financing Cost (Premiums on Bid Security, Performance Security, Surety for Advance Payment and Warranty Bond for one (1) year).

(2) Contingencies

Contingencies range from 0.5 to 3% of the estimated direct cost. These include expenses for meetings, coordination with other stakeholders, billboards, stages during ground breaking and inauguration ceremonies, and other unforeseen events.

(3) Miscellaneous Expenses

Miscellaneous Expenses range from 0.5 to 1% of the estimated direct cost. These include laboratory tests for quality control and plan preparation.

(4) Contractor's Profit Margin

Contractor's Profit Margin shall be 8% and 10% of the estimated direct cost for projects costing above five (5) million pesos and for projects of up to five (5) million pesos, respectively. As a result of the cost estimate, the computed direct cost exceeded to five (5) million pesos. Hence, the Contractor's Profit Margin shall be 8%.

(5) Value Added Tax (VAT)

VAT component shall be 12% of the sum of Estimated Direct Cost, Overhead Expenses, Contingencies, Miscellaneous Expenses and Contractor's Profit Margin.

The percentages of the Estimated Direct Cost regarding, Overhead Expanses, Contingencies, Miscellaneous Expenses and Contractor's Profit Margin are as given in the table below.

Table R 1.3.1 Indirect Cost List by Estimated Direct Cost

Estimated Direct Cost	Indirect Cost (%)*		Total Indirect Cost excluding VAT (%)*
	Overhead, Contingencies, Miscellaneous Expenses (%)*	Contractor's Profit Margin (%)*	
Up to 5 Million Pesos (MP)	12	10	22
Above 5 MP up to 50 MP	9	8	17
Above 50 MP up to 150 MP	7	8	15
Above 150 MP	6	8	14

* Percentage of Estimated Direct Cost

1.4 Summarization of Construction Cost

The construction cost is summarized below.

Table R 1.4.1 Summary of Construction Cost for Pasig River (CP-1)

Bill No.	Section Title	Amounts (Peso)				Total
		Local Currency	Foreign Currency	excl. VAT	VAT	
1	PRELIMINARY AND GENERAL	144,613,436	0	144,613,436	17,353,612	161,967,048
2	ENVIRONMENT	3,756,024	0	3,756,024	450,723	4,206,747
3	NOT USED					
4	EXCAVATION AND EARTHWORKS	190,772,727	0	190,772,727	22,892,727	213,665,454
5	CONCRETE	199,000,835	31,012	199,031,847	23,883,822	222,915,669
6	PILING	241,605,604	1,527,951,167	1,769,556,771	212,346,812	1,981,903,583
7	PROTECTION WORKS	184,820,534	0	184,820,534	22,178,464	206,998,998
8	DRAINAGE	4,740,586	13,899,023	18,639,609	2,236,753	20,876,362
9	NOT USED					
10	NOT USED					
11	NOT USED					
12	NOT USED					
13	NOT USED					
14	NOT USED					
15	MISCELLANEOUS WORKS	45,409,849	0	45,409,849	5,449,182	50,859,031
SUB-TOTAL OF BILLS 1 TO 15 INCLUSIVE		1,014,719,595	1,541,881,201	2,556,600,796	306,792,096	2,863,392,892
PROVISIONAL SUMS (from Table A)		100,459,533	0	100,459,533	12,055,144	112,514,676
DAYWORK LABOUR (from Daywork Schedule I)		458,001	0	458,001	54,960	512,961
DAYWORK MATERIALS (from Daywork Schedule II)		1,456,726	0	1,456,726	174,807	1,631,533
DAYWORK CONTRACTOR'S EQUIPMENT (from Daywork Schedule III)		3,226,200	0	3,226,200	387,144	3,613,344
SUB-TOTAL OF PROVISIONAL SUMS & DAYWORK ITEMS		105,600,460	0	105,600,460	12,672,055	118,272,515
TOTALS		1,120,320,055	1,541,881,201	2,662,201,256	319,464,151	2,981,665,407

Table R 1.4.2 Summary of Construction Cost for Lower Marikina River (CP-2)

Bill No.	Section Title	Amounts (Peso)				Total
		Local Currency	Foreign Currency	excl. VAT	VAT	
1	PRELIMINARY AND GENERAL	139,102,208	0	139,102,208	16,692,265	155,794,473
2	ENVIRONMENTAL	9,902,007	0	9,902,007	1,188,241	11,090,248
3	NOT USED					
4	EXCAVATION AND EARTHWORKS	1,199,659,287	433,192,440	1,632,851,727	195,942,207	1,828,793,935
5	CONCRETE	65,339,328	13,225,241	78,564,569	9,427,748	87,992,317
6	PILING	33,348,939	246,188,056	279,536,995	33,544,439	313,081,435
7	PROTECTION WORKS	28,998,324	18,539,575	47,537,899	5,704,548	53,242,447
8	DRAINAGE	3,362,727	8,077,532	11,440,260	1,372,831	12,813,091
9	ROAD WORKS	5,940,160	0	5,940,160	712,819	6,652,979
10	NOT USED					
11	STRUCTURAL AND MISCELLANEOUS METALWORK	868,390	0	868,390	104,207	972,597
12	NOT USED					
13	NOT USED					
14	NOT USED					
15	MISCELLANEOUS WORKS	1,060,650	0	1,060,650	127,278	1,187,928
SUB-TOTAL OF BILLS 1 TO 15 INCLUSIVE		1,487,582,021	719,222,845	2,206,804,865	264,816,584	2,471,621,449
PROVISIONAL SUMS (from Table A)		41,959,533	0	41,959,533	5,035,144	46,994,676
DAYWORK LABOUR (from Daywork Schedule I)		458,001	0	458,001	54,960	512,961
DAYWORK MATERIALS (from Daywork Schedule II)		1,456,726	0	1,456,726	174,807	1,631,533
DAYWORK CONTRACTOR'S EQUIPMENT (from Daywork Schedule III)		3,226,200	0	3,226,200	387,144	3,613,344
SUB-TOTAL OF PROVISIONAL SUMS & DAYWORK ITEMS		47,100,460	0	47,100,460	5,652,055	52,752,515
TOTALS		1,534,682,481	719,222,845	2,253,905,325	270,468,639	2,524,373,964

1.5 Basic Cost

(1) Labor Rates

Labor Rates are as given in Table 1.5.1.

(2) Construction Materials

Construction Materials are as presented in Table 1.5.5.

(3) Equipment Rental Rates

Equipment Rental Rates are as shown in Table 1.5.6.

1.6 Unit Cost Analyses

Unit Cost Analyses are as described in Table 1.5.7.

1.7 Estimation of Unit Cost for BOQ

Estimation of Unit Cost for Bill of Quantities (BOQ) is as tabulated in Table 1.5.8.

1.8 BOQ items

BOQ items of Pasig River (CP-1) and Lower Marikina River (CP-2) are as given in Table 1.5.9 and Table 1.5.10, respectively.

CHAPTER 2 PROJECT COST

2.1 Composition of Project Cost

Project Cost consists of construction cost, consulting services cost, compensation cost, administration expenses, and contingencies.

2.1.1 Construction Cost

The composition of Construction Cost is as stipulated in Section 1.3 . Each item quantity in the BOQ shall be multiplied by the unit price derived. The sum of the estimated direct cost and the indirect cost is the construction cost of the Project

Imported materials are counted as STEP materials.

2.1.2 Consulting Services Cost

The Consulting Services Cost is composed of construction supervision cost excluding detailed engineering design cost, and as described in Table 2.1.1.

2.1.3 Compensation Cost

Compensation Cost consists of land acquisition, resettlement, structural improvement and tree cutting are estimated based on the outsourcing survey results, and as described in Table 2.1.5.

2.1.4 Administrative Cost

In accordance with the internal regulations of DPWH, the administrative cost is computed at three and a half percent (3.5%) of the total of construction cost, consulting services cost and compensation cost.

2.1.5 Physical and Price Contingencies, and Price Escalation

(1) Physical Contingency

The physical contingency for unforeseen conditions is assumed at about five percent (5%) of the sum of construction cost, consulting services cost and compensation cost..

(2) Price Contingency and Price Escalation

The annual inflation rates applied for the price contingency are:

- 4.0% for local currency portion
- 1.6% for foreign currency portion

2.2 Project Cost and Disbursement Schedule

The total project cost is as shown in Table 2.2.1.

The annual disbursement schedule of the project cost for Phase III is as given in Table 2.2.2.

2.3 Ratio of Procurement from Japan

The total cost of construction material or service to be procured from Japan must be no less than 30% of the total amount of contract financed by yen loan due to STEP project.

In this section, the Japanese procurement ratio to be mentioned in bid document is discussed and recommended.

2.3.1 Procurement Ration for Cost Estimate Result

As a result of cost estimate, the Japanese procurement ratio is more than 30 % of the total amount of contract. In cases where contract package is divided into Pasig River and Lower Marikina River, however, the Japanese procurement ratio of C.P. No.2 (Lower Marikina River) is less than 30 % of total amount of construction cost in C.P. No.2. The result of estimated construction cost is described in following table.

Table R 2.3.1 Construction Cost and Procurement Ratio

Unit: JPY

Contract Package		L.C.	F.C.	excl. VAT	VAT	Total
C.P. No.1	Amount	2,205,074,212	3,034,813,544	5,239,887,756	628,786,531	5,868,674,286
	Rate	37.6%	51.7%			100.0%
C.P. No.2	Amount	3,020,644,634	1,415,613,101	4,436,257,735	532,350,928	4,968,608,663
	Rate	60.8%	28.5%			100.0%
Total	Amount	5,225,718,846	4,450,426,645	9,676,145,491	1,161,137,459	10,837,282,950
	Rate		**41.1%**			100.0%

2.3.2 Calculation of Japanese Procurement Ratio under Expected Condition

In terms of estimated construction cost, there is a possibility of fluctuation in Japanese procurement ratio because of computation error or cost competition. The following cases are computed in this section.

- Case 1-1: Computation error of Japanese Procurement Amount is 10 % of Total Cost

- Case 1-2: Computation error of Japanese Procurement Amount is 10 % of Total Cost, and the Bidder of C.P. No.1 offers 60 % of Case 1-1

- Case 1-3: Computation error of Japanese Procurement Amount is 10 % of Total Cost, and the Bidder of C.P. No.1 offers 50 % of Case 1-1

- Case 2-1: Computation error of Japanese Procurement Amount is 20 % of Total Cost

- Case 2-2: Computation error of Japanese Procurement Amount is 20 % of Total Cost, and the Bidder of C.P. No.1 offers 60 % of Case 2-1

- Case 2-3: Computation error of Japanese Procurement Amount is 20 % of Total Cost, and the Bidder of C.P. No.1 offers 50 % of Case 2-1

The calculation results of the above cases are shown in below respectively.

Case 1-1: Computation error of Japanese Procurement Amount is 10 % of Total Cost

C.P. No.1: Japanese Procurement Amount = (Estimated Cost) x 0.9	2,731,332,189 円	49.40%
C.P. No.1: Total Amount (Inclusive VAT)	5,528,775,169 円	100.00%
C.P. No.2: Japanese Procurement Amount = (Estimated Cost) x 0.9	1,274,051,791 円	26.49%
C.P. No.2: Total Amount (Inclusive VAT)	4,810,059,996 円	100.00%
C.P. No.1+2: Japanese Procurement Amount	4,005,383,980 円	38.74%
C.P. No.1+2 Total Amount (Inclusive VAT)	10,338,835,165 円	100.00%

Case 1-2: Computation error of Japanese Procurement Amount is 10 % of Total Cost, and the Bidder of C.P. No.1 offers 60 % of Case 1-1

C.P. No.1: Japanese Procurement Amount = (Case1-1) x 0.6	1,638,799,314 円	49.40%
C.P. No.1: Total Amount (Inclusive VAT) =(Case1-1) x 0.6	3,317,265,102 円	100.00%
C.P. No.2: Japanese Procurement Amount = (Estimated Cost) x 0.9	1,274,051,791 円	26.49%
C.P. No.2: Total Amount (Inclusive VAT)	4,810,059,996 円	100.00%
C.P. No.1+2: Japanese Procurement Amount	2,912,851,105 円	35.84%
C.P. No.1+2 Total Amount (Inclusive VAT)	8,127,325,098 円	100.00%

Case 1-3: Computation error of Japanese Procurement Amount is 10 % of Total Cost, and the Bidder of C.P. No.1 offers 50 % of Case 1-1

C.P. No.1: Japanese Procurement Amount = (Case1-1) x 0.5	1,365,666,095 円	49.40%
C.P. No.1: Total Amount (Inclusive VAT) =(Case1-1) x 0.5	2,764,387,585 円	100.00%
C.P. No.2: Japanese Procurement Amount = (Estimated Cost) x 0.9	1,274,051,791 円	26.49%
C.P. No.2: Total Amount (Inclusive VAT)	4,810,059,996 円	100.00%
C.P. No.1+2: Japanese Procurement Amount	2,639,717,886 円	34.85%
C.P. No.1+2 Total Amount (Inclusive VAT)	7,574,447,581 円	100.00%

Case 2-1: Computation error of Japanese Procurement Amount is 20 % of Total Cost

C.P. No.1: Japanese Procurement Amount = (Estimated Cost) x 0.8	2,427,850,835 円	46.79%
C.P. No.1: Total Amount (Inclusive VAT)	5,188,876,052 円	100.00%
C.P. No.2: Japanese Procurement Amount = (Estimated Cost) x 0.8	1,132,490,481 円	24.35%
C.P. No.2: Total Amount (Inclusive VAT)	4,651,511,329 円	100.00%
C.P. No.1+2: Japanese Procurement Amount	3,560,341,316 円	36.18%
C.P. No.1+2 Total Amount (Inclusive VAT)	9,840,387,381 円	100.00%

Case 2-2: Computation error of Japanese Procurement Amount is 20 % of Total Cost, and the Bidder of C.P. No.1 offers 60 % of Case 2-1

C.P. No.1: Japanese Procurement Amount = (Case2-1) x 0.6	1,456,710,501 円	46.79%
C.P. No.1: Total Amount (Inclusive VAT) =(Case2-1) x 0.6	3,113,325,631 円	100.00%
C.P. No.2: Japanese Procurement Amount = (Estimated Cost) x 0.8	1,132,490,481 円	24.35%
C.P. No.2: Total Amount (Inclusive VAT)	4,651,511,329 円	100.00%
C.P. No.1+2: Japanese Procurement Amount	2,589,200,982 円	33.35%
C.P. No.1+2 Total Amount (Inclusive VAT)	7,764,836,960 円	100.00%

Case 2-3: Computation error of Japanese Procurement Amount is 20 % of Total Cost, and the Bidder of C.P. No.1 offers 50 % of Case 2-1

C.P. No.1: Japanese Procurement Amount = (Case2-1) x 0.5	1,213,925,417 円	46.79%
C.P. No.1: Total Amount (Inclusive VAT) =(Case2-1) x 0.5	2,594,438,026 円	100.00%
C.P. No.2: Japanese Procurement Amount = (Estimated Cost) x 0.8	1,132,490,481 円	24.35%
C.P. No.2: Total Amount (Inclusive VAT)	4,651,511,329 円	100.00%
C.P. No.1+2: Japanese Procurement Amount	2,346,415,898 円	32.38%
C.P. No.1+2 Total Amount (Inclusive VAT)	7,245,949,355 円	100.00%

2.3.3 Recommendation of Japanese Procurement Ratio

In view of the case of the lowest procurement ratio (Case 2-3), the recommended procurement ratio to be mentioned in bid document is below.

- C.P. No.1 (Pasig River) : 46%

- C.P. No.2 (Lower Marikina River) : 24%

Table 1.5.1 Labor Rates

as of November 2012

Qualification of Labor	Grade	Labor Cost Index	Basic Wage		Monthly Benefit						Labor Unit Rate		Item Code
			Daily (1)	EMR[a] (2)	Leave[b] (3)=(2)/12	Bonus[c] (4)=(2)/12	HDMF[d] (5)	SSS[e] (6)	NHIP[f] (7)	E.C.[g] (8)	Monthly (9)=Σ[(2)~(8)]	Daily[h] (10)	
Dredge Master	1	2.20	1,003.20	25,080.00	2,090.00	2,090.00	100.00	1,060.0	312.50	30.00	30,762.50	1,230.50	L-DRM
Foreman	1	2.20	1,003.20	25,080.00	2,090.00	2,090.00	100.00	1,060.0	312.50	30.00	30,762.50	1,230.50	L-FOR
H.Equip.Operator	2	2.00	912.00	22,800.00	1,900.00	1,900.00	100.00	1,060.0	275.00	30.00	28,065.00	1,122.60	L-HEO
Mechanic	2	2.00	912.00	22,800.00	1,900.00	1,900.00	100.00	1,060.0	275.00	30.00	28,065.00	1,122.60	L-MEC
Barge Crew	3	1.75	798.00	19,950.00	1,662.50	1,662.50	100.00	1,060.0	237.50	30.00	24,702.50	988.10	L-BRC
L.Equip.Operator	3	1.75	798.00	19,950.00	1,662.50	1,662.50	100.00	1,060.0	237.50	30.00	24,702.50	988.10	L-LEO
Rigger	3	1.75	798.00	19,950.00	1,662.50	1,662.50	100.00	1,060.0	237.50	30.00	24,702.50	988.10	L-RIG
Welder	3	1.75	798.00	19,950.00	1,662.50	1,662.50	100.00	1,060.0	237.50	30.00	24,702.50	988.10	L-WEL
Carpenter	4	1.50	684.00	17,100.00	1,425.00	1,425.00	100.00	1,060.0	212.50	30.00	21,352.50	854.10	L-CAR
Concrete Worker	4	1.50	684.00	17,100.00	1,425.00	1,425.00	100.00	1,060.0	212.50	30.00	21,352.50	854.10	L-CON
Electrician	4	1.50	684.00	17,100.00	1,425.00	1,425.00	100.00	1,060.0	212.50	30.00	21,352.50	854.10	L-ELE
Mason	4	1.50	684.00	17,100.00	1,425.00	1,425.00	100.00	1,060.0	212.50	30.00	21,352.50	854.10	L-MAS
Painter	4	1.50	684.00	17,100.00	1,425.00	1,425.00	100.00	1,060.0	212.50	30.00	21,352.50	854.10	L-PAI
Plasterer	4	1.50	684.00	17,100.00	1,425.00	1,425.00	100.00	1,060.0	212.50	30.00	21,352.50	854.10	L-PLA
Scaffolder	4	1.50	684.00	17,100.00	1,425.00	1,425.00	100.00	1,060.0	212.50	30.00	21,352.50	854.10	L-SCA
Skilled Labor	4	1.50	684.00	17,100.00	1,425.00	1,425.00	100.00	1,060.0	212.50	30.00	21,352.50	854.10	L-SKL
Steel Worker	4	1.50	684.00	17,100.00	1,425.00	1,425.00	100.00	1,060.0	212.50	30.00	21,352.50	854.10	L-STW
Driver	5	1.25	570.00	14,250.00	1,187.50	1,187.50	100.00	1,024.7	175.00	10.00	17,934.70	717.39	L-DRI
Common Labor	6	1.00	456.00	11,400.00	950.00	950.00	100.00	812.7	137.50	10.00	14,360.20	574.41	L-COL

Notes :
(a) EMR : Equivalent Monthly Rate = (Daily Rate of Basic Wage) x 300.00 days / 12 months
(b) Leave : Service Incentive, Paternity, Parental, Vacation and Sick Leave = EMR / 12 ---(1 month per year)
(c) Bonus : Bonus or 13th Month Pay = EMR / 12 ---(1 month per year)
(d) HDMF : Home Development Mutual Fund (Pag-Ibig); Amount equivalent to employer's contribution of HDMF, (Effective January 1995)
(e) SSS : Social Security System = Amount equivalent to employer's contribution, Graduated Scale (Effective January, 2007)
(f) NHIP : National Health Insurance Program = Amount equivalent to employer's contribution, Graduated Scale (Effective January, 2007)
(g) E.C. : Employee's Compensation = Amount equivalent to employer's contribution, Graduated Scale (Effective January 1, 2007)
(h) Daily Labor Unit Rate = (Monthly Labor Unit Rate) x 12 months / 300.00 days , Daily Working Time = Eight (8) hours per day
(i) All labor costs are computed for Local Currency (L.C.) portion only.

Sources :
(1) National Wages and Productivity Commission
(2) Department of Labor and Employment (DOLE)
(3) Department of Public Works and Highways (DPWH), Regional Office NCR
(4) National Statistics Office (NSO)
(5) Philippine Constructors Association (PCA)

Table 1.5.2 Contribution Schedule for SSS and Employee's Compensation

as of January 2007

	Range of Compensation		Monthly Salary Credit	Monthly Contributions			Total of SSS	Check Calc.	
				Employer		Employee			
				SSS	Employee's Compensation	SSS		Employer SSS	MSC
	Peso		Peso	7.07%	1.000%	3.33%	Peso	Peso	Peso
1	5750	~ 6249.99	6000	424.00	10.00	200.00	624.00	424.00	5,800
2	6250	~ 6749.99	6500	459.30	10.00	216.70	676.00	424.00	5,900
3	6750	~ 7249.99	7000	494.70	10.00	233.30	728.00	424.00	6,000
4	7250	~ 7749.99	7500	530.00	10.00	250.00	780.00	424.00	6,100
5	7750	~ 8249.99	8000	565.30	10.00	266.70	832.00	424.00	6,200
6	8250	~ 8749.99	8500	600.70	10.00	283.30	884.00	459.30	6,300
7	8750	~ 9249.99	9000	636.00	10.00	300.00	936.00	459.30	6,400
8	9250	~ 9749.99	9500	671.30	10.00	316.70	988.00	459.30	6,500
9	9750	~ 10249.99	10000	706.70	10.00	333.30	1,040.00	494.70	7,000
10	10250	~ 10749.99	10500	742.00	10.00	350.00	1,092.00	530.00	7,500
11	10750	~ 11249.99	11000	777.30	10.00	366.70	1,144.00	565.30	8,000
12	11250	~ 11749.99	11500	812.70	10.00	383.30	1,196.00	600.70	8,500
13	11750	~ 12249.99	12000	848.00	10.00	400.00	1,248.00	636.00	9,000
14	12250	~ 12749.99	12500	883.30	10.00	416.70	1,300.00	671.30	9,500
15	12750	~ 13249.99	13000	918.70	10.00	433.30	1,352.00	706.70	10,000
16	13250	~ 13749.99	13500	954.00	10.00	450.00	1,404.00	918.70	13,000
17	13750	~ 14249.99	14000	989.30	10.00	466.70	1,456.00	1,024.70	14,251
18	14250	~ 14749.99	14500	1,024.70	10.00	483.30	1,508.00	1,024.70	14,749
19	14750	OVER	15000	1,060.00	**30.00**	500.00	1,560.00	1,060.00	20,000

SSS : Social Security System = 10.4% of average monthly compensation not exceeding P.15,000 and payable by both employer (7.067%) and employee (3.333%)
Emp.Comp. : Employee's Compensation = 1% of average monthly compensation not exceeding P1,000 and payable by employer.
Monthly Salary Credit (MSC)<P14,500 --- EC=P10, MSC>P15,000 --- EC=P30
Source: Schedule of SS and EC contributions, effective January 1,2007
Medicare Program was Transferred to the Philippine Health Insurance Corporation (PhilHealth), (Effective July 1999)

Table 1.5.3 Grade of Labor : GLabor

Grade	Index
1	2.20
2	2.00
3	1.75
4	1.50
5	1.25
6	1.00

Table 1.5.4 PhilHealth : PH

	Monthly Salary Range		Salary	Monthly	ErS	EeS		
	From	To	Base	Contributi	Employer Share	Employee Share	ERS	Salary
	Peso	Peso	Peso	2.500%	50%	50%		
1	0	~ 4999.00	4000	100.00	50.00	50.00	50.00	3,000
2	5000	~ 5999.99	5000	125.00	62.50	62.50	50.00	4,000
3	6000	~ 6999.99	6000	150.00	75.00	75.00	62.50	5,000
4	7000	~ 7999.99	7000	175.00	87.50	87.50	75.00	6,000
5	8000	~ 8999.99	8000	200.00	100.00	100.00	87.50	7,000
6	9000	~ 9999.99	9000	225.00	112.50	112.50	87.50	7,500
7	10000	~ 10999.99	10000	250.00	125.00	125.00	87.50	7,900
8	11000	~ 11999.99	11000	275.00	137.50	137.50	100.00	8,000
9	12000	~ 12999.99	12000	300.00	150.00	150.00	125.00	10000
10	13000	~ 13999.99	13000	325.00	162.50	162.50	125.00	10100
11	14000	~ 14999.99	14000	350.00	175.00	175.00	150.00	12000
12	15000	~ 15999.99	15000	375.00	187.50	187.50	175.00	14000
13	16000	~ 16999.99	16000	400.00	200.00	200.00	200.00	16000
14	17000	~ 17999.99	17000	425.00	212.50	212.50	112.50	9472
15	18000	~ 18999.99	18000	450.00	225.00	225.00	137.50	11840
16	19000	~ 19999.99	19000	475.00	237.50	237.50	175.00	14208
17	20000	~ 20999.99	20000	500.00	250.00	250.00	200.00	16576
18	21000	~ 21999.99	21000	525.00	262.50	262.50	225.00	18944
19	22000	~ 22999.99	22000	550.00	275.00	275.00	250.00	20839
20	23000	~ 23999.99	23000	575.00	287.50	287.50	50.00	3999
21	24000	~ 24999.99	24000	600.00	300.00	300.00	50.00	4235
22	25000	~ 25999.99	25000	625.00	312.50	312.50	62.50	5867
23	26000	~ 26999.99	26000	650.00	325.00	325.00	50.00	4235
24	27000	~ 27999.99	27000	675.00	337.50	337.50	50.00	3999
25	28000	~ 28999.99	28000	700.00	350.00	350.00	62.50	5867
26	29000	~ 29999.99	29000	725.00	362.50	362.50	50.00	4235
27	30000	Up	30000	750.00	375.00	375.00	50.00	4659

Source: 2007 NHIP Monthly Contribution Schedule

Table 1.5.5 (1/4) Construction Materials

Item Code	Name of Materials	Unit	Unit Price (Peso)
Fuel and Lubricants			
Cmb-1	Gasoline	ltr.	55.00
Cmb-2	Diesel Fuel (Light Oil)	ltr.	45.00
Cmb-3	Kerosene	ltr.	52.00
Cmb-4	Grease	kg	280.00
Cmb-5	Lubrication Oil	ltr.	180.00
Sand and Stones			
SS-AG-B	Aggregate Base Course (for Road)	cu.m.	960.00
SS-AG-SB	Aggregate Sub-base Course (for Road)	cu.m.	980.00
SS-RIP-D	Class D: 100kg~200kg (Blue Rocks)	cu.m.	1,250.00
SS-RIP-C	Class C: 60kg~100kg (Blue Rocks)	cu.m.	1,200.00
SS-RIP-B	Class B: 30kg~70kg (Blue Rocks)	cu.m.	1,150.00
SS-RIP-A	Class A: 15kg~25kg (Blue Rocks)	cu.m.	1,050.00
SS-COB	Cobble Stone (5cm~35cm Dia.)	cu.m.	1,050.00
SS-FIL	Common Filling Materials	cu.m.	480.00
SS-FIS	Sand for Filling and Base Course	cu.m.	520.00
SS-G-A	Coarse Aggregate (for Concrete); 3/4"	cu.m.	750.00
SS-G-C	Gravel, Crushed (ex.G-1)	cu.m.	600.00
SS-G-UC	Gravel, Uncrushed	cu.m.	844.00
SS-SND	Sand (washed)	cu.m.	594.00
Concrete and Asphalt			
CA-NO	Non Shrinkage Mortar	kg	30.00
CA-1	Portland Cement, Ordinary, 40kg/bag	bag.	215.00
CA-CBP	Concrete Paving Block, 23 x 11 x 8cm, Red	sq.m.	641.00
CA-PRC-30	Precast PC/RC Pile, 300mm x 300mm	L.m.	3,600.00
CA-PRC-45	Precast RC Pile, 450mm x 450mm	L.m.	8,100.00
CA-RM-A	Ready Mixed Concrete;Class-A(20.7Mpa), Gmax=37.5mm(G1)	cu.m.	3,210.00
CA-RM-B	Ready Mixed Concrete;Class-B(17.24Mpa), Gmax=50mm	cu.m.	3,000.00
CA-RM-C	Ready Mixed Concrete;Class-C(20.7Mpa), Gmax=12.5mm(3/8)	cu.m.	3,420.00
CA-RM-D	Ready Mixed Concrete;Class-D(17.9Mpa), Gmax=37.5mm(G1)	cu.m.	3,000.00
CA-RM-E	Ready Mixed Concrete;Class-E(27.6Mpa), Gmax=25mm	cu.m.	3,825.00
CA-RM-F	Ready Mixed Concrete;Class-F(11.7Mpa), Gmax=40mm	cu.m.	2,825.00
CA-RM-P	Ready Mixed Concrete;Class-P(37.7Mpa), Gmax=19mm(3/4)	cu.m.	4,285.00
CA-RCP-12	RC Pipe Culvert, 300mm(12") Dia.	L.m.	390.00
CA-RCP-18	RC Pipe Culvert, 460mm(18") Dia.	L.m.	610.00
CA-RCP-21	RC Pipe Culvert, 525mm(21") Dia.	L.m.	700.00
CA-RCP-24	RC Pipe Culvert, 610mm(24") Dia.	L.m.	915.00
CA-RCP-30	RC Pipe Culvert, 760mm(30") Dia.	L.m.	1,785.00
CA-RCP-36	RC Pipe Culvert, 910mm(36") Dia.	L.m.	2,565.00
CA-RCP-42	RC Pipe Culvert, 1070mm(42") Dia.	L.m.	3,200.00
CA-RCP-48	RC Pipe Culvert, 1220mm(48") Dia.	L.m.	4,455.00
CA-RCP-54	RC Pipe Culvert, 1370mm(54") Dia.	L.m.	5,400.00
CA-RCP-60	RC Pipe Culvert, 1520mm(60") Dia.	L.m.	7,255.00
CA-AS-TA	Bituminous Tack Coat (Emulsifed Asphalt, Bitumuls SS-1)	m.t.	57,750.00
CA-AS-PM	Bituminous Prime Coat (Cutback Asphalt, Midum Curing, Grade 79)	m.t.	46,090.00
CA-BT	Bituminous Concrete Surface Course, Hot Laid	m.t.	4,540.00
CA-CHB-100	CHB, 100mm thick (Load bearing, 700psi)	pc	20.00
CA-CHB-150	CHB, 150mm thick (Load bearing, 700psi)	pc	21.00
CA-NRC-150	NRC Pipe, 150mm(6") Dia., t=19mm	L.m.	158.00
CA-NRC-200	NRC Pipe, 200mm(8") Dia., t=22mm	L.m.	206.00
CA-NRC-250	NRC Pipe, 250mm(10") Dia., t=25mm	L.m.	250.00
Log and Timber			
LT-FL	Form Lumber	bd.ft.	36.00
LT-LUM	Good Lumber	bd.ft.	40.00
LT-PW	Plank wood	bd.ft.	75.00
LT-PLY-M12	Plywood, Water Proof, 120 x 240, 10mm thk.	sheet	700.00
LT-PLY-M6	Plywood, Water Proof, 120 x 240, 6mm thk.	sheet	380.00
LT-PLY-O12	Plywood, Ordinary, 120 x 240, 10mm thk.	sheet	550.00
LT-PLY-O6	Plywood, Ordinary, 120 x 240, 6mm thk.	sheet	350.00
Metal / Iron / Steel			
IR-SPL-6	Steel Plate, 6mm thick	kg	33.00
IR-SPL-8	Steel Plate, 8mm thick	kg	33.00
IR-SPL-12	Steel Plate, 12mm thick	kg	33.00
IR-GM-3	Gabion Mattress; 3.7mm, Galvanized + PVC coated, 2.0m x 1.0m x 0.5m, 60mm x 80mm mesh size	pcs.	2,900.00
IR-GSP-300	Galvanized Iron Pipe, 300mm Dia.	L.m.	4,933.00
IR-GSP-250	Galvanized Iron Pipe, 250mm Dia.	L.m.	3,900.00
IR-GSP-200	Galvanized Iron Pipe, 200mm Dia.	L.m.	2,625.00
IR-GSP-150	Galvanized Iron Pipe, 150mm Dia.	L.m.	1,708.00
IR-GSP-100	Galvanized Iron Pipe, 100mm Dia.	L.m.	1,050.00
IR-GSP-75	Galvanized Iron Pipe, 75mm Dia.	L.m.	706.00
IR-GSP-60	Galvanized Iron Pipe, 65mm Dia.	L.m.	530.00
IR-GSP-50	Galvanized Iron Pipe, 50mm Dia.	L.m.	341.00
IR-GSP-40	Galvanized Iron Pipe, 40mm Dia.	L.m.	252.00
IR-GSP-30	Galvanized Iron Pipe, 32mm Dia.	L.m.	213.00
IR-NAIL	Nail, Common Use	kg	75.00
IR-NAIL-CO	Concrete Nails	kg	100.00
IR-NAIL-FI	Finishing Nails	kg	75.00
IR-NAIL-RO	Roofing Nails	kg	100.00

Table 1.5.5 (2/4) Construction Materials

Item Code	Name of Materials	Unit	Unit Price (Peso)
IR-RB4-D	Reinforcing Bar, Deformed, Grade 40 (275)	kg	34.00
IR-RB6-D	Reinforcing Bar, Deformed, Grade 60 (415)	kg	36.00
IR-RB4-R	Reinforcing Bar, Round, Grade 40	kg	34.00
IR-RB6-R	Reinforcing Bar, Round, Grade 60	kg	40.00
IR-SPL-6k	Metal Form (Steel Plate, 6mm thk.)	kg	32.00
IR-SPSP-15	Steel Pipe Sheet Pile, 1,500mm Dia., t=25mm	ton	89,927.00
IR-SPP-05	Steel Pipe Pile 500~900mm Dia.	ton	89,927.00
IR-SSP-2	Steel Sheet Pile, Type II (Purchasing)	ton	65,000.00
IR-SSP-2W	Steel Sheet Pile, Type II-W (Purchasing)	ton	65,032.00
IR-FLX-10H-A	Flexible Joiint SSP-10H-100-A	nos.	1,720,201.00
IR-FLX-10H-B	Flexible Joiint SSP-10H-100-B	nos.	1,244,211.00
IR-FLX-10H-C	Flexible Joiint SSP-10H-100-C	nos.	2,045,075.00
IR-FLX-10H-D	Flexible Joiint SSP-10H-200-D	nos.	2,280,721.00
IR-FLX-10H-E	Flexible Joiint SSP-10H-100-E	nos.	1,807,492.00
IR-FLX-10H-F	Flexible Joiint SSP-10H-100-F	nos.	1,564,417.00
IR-FLX-10H-G	Flexible Joiint SSP-10H-100-G	nos.	1,797,839.00
IR-FLX-10H-H	Flexible Joiint SSP-10H-100-H	nos.	1,989,696.00
IR-FLX-10H-I	Flexible Joiint SSP-10H-200-I	nos.	1,281,396.00
IR-FLX-10H-J	Flexible Joiint SSP-10H-100-J	nos.	1,312,196.00
IR-FLX-10H-K	Flexible Joiint SSP-10H-200-K	nos.	1,357,002.00
IR-FLX-10H-L	Flexible Joiint SSP-10H-100-L	nos.	1,289,937.00
IR-FLX-10H-M	Flexible Joiint SSP-10H-200-M	nos.	1,433,115.00
IR-FLX-10H-N	Flexible Joiint SSP-10H-100-N	nos.	1,198,486.00
IR-FLX-10H-O	Flexible Joiint SSP-10H-100-O	nos.	1,244,211.00
IR-FLX-10H-P	Flexible Joiint SSP-10H-200-P	nos.	1,433,115.00
IR-FLX-10H-Q	Flexible Joiint SSP-10H-200-Q	nos.	1,478,841.00
IR-FLX-10H-R	Flexible Joiint SSP-10H-200-R	nos.	1,433,115.00
IR-FLX-25H-A	Flexible Joiint SSP-25H-100-A	nos.	2,069,111.00
IR-FLX-25H-B	Flexible Joiint SSP-25H-100-B	nos.	1,656,876.00
IR-FLX-25H-C	Flexible Joiint SSP-25H-100-C	nos.	2,326,879.00
IR-FLX-25H-D	Flexible Joiint SSP-25H-200-D	nos.	2,536,710.00
IR-FLX-25H-E	Flexible Joiint SSP-25H-100-E	nos.	2,155,318.00
IR-FLX-25H-F	Flexible Joiint SSP-25H-100-F	nos.	2,153,286.00
IR-FLX-25H-G	Flexible Joiint SSP-25H-100-G	nos.	2,153,286.00
IR-FLX-25H-H	Flexible Joiint SSP-25H-100-H	nos.	2,196,979.00
IR-FLX-25H-I	Flexible Joiint SSP-25H-200-I	nos.	2,439,326.00
IR-SSP-3	Steel Sheet Pile, Type III (Purchasing)	ton	65,000.00
IR-SSP-3A	Steel Sheet Pile, Type III-A (Purchasing)	ton	65,000.00
IR-SSP-3W	Steel Sheet Pile, Type III-W (Purchasing)	ton	65,032.00
IR-SSP-4W	Steel Sheet Pile, Type IV-W (Purchasing)	ton	63,600.00
IR-SSP-5L	Steel Sheet Pile, Type V-L (Purchasing)	ton	69,097.00
IR-SSP-6L	Steel Sheet Pile, Type VI-L (Purchasing)	ton	69,097.00
IR-SSP-HAT	Steel Sheet Pile, HAT-10H/25H (Purchasing)	ton	69,097.00
IR-SSP-HS	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchasing)	ton	76,210.00
IR-SSP-HL	Steel Sheet Pile, HAT-10H/25H with H1000mm (Purchasing)	ton	78,750.00
IR-LSSP-2	Steel Sheet Pile, Type II (Local purchase)	ton	43,120.00
IR-LSSP-2W	Steel Sheet Pile, Type II-W (Local purchase)	ton	33,801.00
IR-LSSP-3A	Steel Sheet Pile, Type III-A (Local purchase)	ton	43,119.00
IR-LLSP-1	Lightweight Steel Sheet Pile, Type I (Local purchase)	ton	51,327.00
IR-HBEAM	H-beam (Local purchase), SS41	kg	45.00
IR-SS-M	Metal (Steel) Structure	kg	73.00
IR-SST-SM41	Structural Steel	kg	48.00
IR-WIRE-16	Tie Wire (Ga.16)	kg	75.00
IR-GUR	Guard Rail	L.m.	945.00
IR-CW-1.5	Cyclone Wire: H=1.5m	sq.m.	133.00
IR-CW-2.0	Cyclone Wire: H=2.0m	sq.m.	120.00
IR-WW-1.8	Welded Wire: H=1.8m	sq.m.	83.00
IR-WB	Barbed Wire	L.m.	9.00
IR-L-100	L-100mm x 100mm x 10mm x 6m long	kg	50.00
IR-L-75	L-75mm x 75mm x 9mm x 6m long	kg	49.00
IR-C-380	C-380mm x 100mm x 55.2kgs/m x 9.6~10.05mm x 17.4~18.2mm x 6 meter long	kg	53.00
IR-C-300	C-300mm x 90mm x 9mm (41kgs/m) x 6 meter long	kg	42.00
IR-C-200	C-200mm x 90mm x 8mm x 13.5mm (30.3kgs/m) x 6 meter long	kg	55.00
IR-C-125	C-125mm x 65mm x 6mm x 8mm(13.4kg/m) x 6 meter long	kg	47.00
IR-H-488	H-488mm x 300mm x tw=11mm x tf=18mm x 6 meter long	kg	41.00
IR-H-400	H-400mm x 400mm x tw=13mm x tf=21mm x 6 meter long (172kgs/m)	kg	41.00
IR-H-350	H-350mm x 350mm x tw=12mm x tf=19mm x 6 meter long (137kgs/m)	kg	53.00
IR-CP-60	Commemorative panels (Brass Plate)	sheet	39,000.00
IR-NWS-80	Navigation Warning Signs (Aluminium)	sheet	11,800.00
IR-TR-1400	Trash screen 1400 x 1400	set	48,079.00
IR-TR-1600	Trash screen 1600 x 1600	set	52,452.00
IR-TR-1800	Trash screen 1800 x 1800	set	58,977.00
IR-TR-1900	Trash screen 1900 x 1900	set	62,261.00
IR-TR-2000	Trash screen 2000 x 2000	set	65,973.00
IR-TR-2400	Trash screen 2400 x 2000	set	74,840.00
IR-TR-3100	Trash screen 3100 x 1600	set	76,407.00
IR-BLT-M22	Bolt, M22 x 70 (F10T)	nos.	15.00
Gates			

Table 1.5.5 (3/4) Construction Materials

Item Code	Name of Materials	Unit	Unit Price (Peso)
GT-FLG-C12	FRP Flap Gate, 300mm(12") Dia. Pipe	set	77,226.00
GT-FLG-C18	FRP Flap Gate, 450mm(18") Dia. Pipe	set	114,772.00
GT-FLG-C24	FRP Flap Gate, 600mm(24") Dia. Pipe	set	152,013.00
GT-FLG-C36	FRP Flap Gate, 900mm(36") Dia. Pipe	set	294,169.00
GT-FLG-C44	FRP Flap Gate, 1,100mm(44") Dia. Pipe	set	421,694.00
GT-FLG-C48	FRP Flap Gate, 1,200mm(48") Dia. Pipe	set	445,065.00
GT-FLG-R42	Aluminum, Rectangle Flap Gate, 1,000mm(42")	set	240,823.00
GT-FLG-R48	Aluminum, Rectangle Flap Gate, 1,200mm(48")	set	399,847.00
GT-FLG-R54	Aluminum, Rectangle Flap Gate, 1,400mm(54")	set	660,484.00
GT-FLG-R60	Aluminum, Rectangle Flap Gate, 1,500mm(60")	set	762,097.00
GT-FLG-R64	Aluminum, Rectangle Flap Gate, 1,600mm(64")	set	863,710.00
GT-FLG-R78_64	Aluminum, Rectangle Flap Gate, 2.0m x 1.6m	set	1,397,178.00
GT-TRP	Transportation Cost for Flap Gate, Japan to Manila	set	21,182.00
Chemicals			
CH-FC-02	Filter Cloth, t=1.9mm, Polyester Nonwoven	sq.m.	65.00
CH-FC-03	Filter Cloth, t=2.9mm, Polyester Nonwoven	sq.m.	110.00
CH-FC-05	Filter Cloth, t=5.3mm, Polyester Nonwoven	sq.m.	129.00
CH-FOIL	Form Oil	ltr.	87.00
CH-JF-LTR	Joint Filler, Hot-Poured Type	ltr.	165.00
CH-JFE-10	Joint Filler, 10mm thick (Elastic)	sq.m.	889.00
CH-JFE-20	Joint Filler, 20mm thick (Elastic)	sq.m.	1,296.00
CH-JFC-10	Joint Filler, 10mm thick (Cork)	sq.m.	1,204.00
CH-JFC-20	Joint Filler, 20mm thick (Cork)	sq.m.	1,532.00
CH-JS	Joint Sealant	ltr.	770.00
CH-PEPS	Epoxy Painting with Sandblast for Corrosion Proof	sq.m.	1,264.00
CH-PNR	Paint (Non-reflectorized)	ltr.	153.00
CH-PSTL	Paint for Steel	ltr.	325.00
CH-PVC-50	PVC Pipe, 50mm Dia.	L.m.	70.00
CH-PVC-75	PVC Pipe, 75mm Dia.	L.m.	140.00
CH-PVC-100	PVC Pipe, 100mm Dia.	L.m.	170.00
CH-PVC-150	PVC Pipe, 150mm Dia.	L.m.	282.00
CH-PVC-200	PVC Pipe, 200mm Dia.	L.m.	424.00
CH-PVC-250	PVC Pipe, 250mm Dia.	L.m.	760.00
CH-PVC-300	PVC Pipe, 300mm Dia.	L.m.	1,200.00
CH-PVC-350	PVC Pipe, 350mm Dia.	L.m.	1,800.00
CH-PVC-400	PVC Pipe, 400mm Dia.	L.m.	2,300.00
CH-PVC-450	PVC Pipe, 450mm Dia.	L.m.	4,981.00
CH-PVC-500	PVC Pipe, 500mm Dia.	L.m.	6,149.00
CH-PVC-550	PVC Pipe, 550mm Dia.	L.m.	7,714.00
CH-PVC-600	PVC Pipe, 600mm Dia., HDPE, Sanitary	L.m.	9,763.00
CH-SB	Sand Bag	pcs.	5.00
CH-WS-200	Waterstop; PVC, 200mm x 10mm	L.m.	492.00
CH-WS-R3	Waterstop, Rubber, W=300mm	L.m.	1,230.00
CH-WS-HSH	Waterstop, High Swell Hydeophilic	L.m.	1,270.00
CH-NETG	Net Gabion	nos.	4,651.00
CH-FJ-1000	Flexible Joint for Box Culvert (1000x1000)	set	459,828.00
CH-FJ-1200	Flexible Joint for Box Culvert (1200x1200)	set	540,305.00
CH-FJ-1400	Flexible Joint for Box Culvert (1400x1400)	set	620,783.00
CH-FJ-1500	Flexible Joint for Box Culvert (1500x1500)	set	661,021.00
CH-FJ-1600	Flexible Joint for Box Culvert (1600x1600)	set	701,260.00
CH-FJ-2000	Flexible Joint for Box Culvert (2000x1600)	set	781,738.00
CH-FJ-18X11	Flexible Joint for U-shaped retaining wall (1800x1100)	set	459,828.00
CH-FJ-18X13	Flexible Joint for U-shaped retaining wall (1800x1300)	set	500,067.00
CH-FJ-18X15	Flexible Joint for U-shaped retaining wall (1800x1500)	set	540,305.00
CH-FJ-20X11	Flexible Joint for U-shaped retaining wall (2000x1100)	set	479,947.00
CH-FJ-21X10	Flexible Joint for U-shaped retaining wall (2100x1000)	set	469,888.00
CH-FJ-21X12	Flexible Joint for U-shaped retaining wall (2100x1200)	set	510,126.00
CH-FJ-22X13	Flexible Joint for U-shaped retaining wall (2200x1300)	set	540,305.00
CH-FJ-26X05	Flexible Joint for U-shaped retaining wall (2600x500)	set	419,589.00
CH-FJ-35X10	Flexible Joint for U-shaped retaining wall (3500x1000)	set	610,723.00
Plants and Grass			
PG-SG	Sodding Grass (Carabao grass)	sq.m.	50.00
Office Supply and Furniture			
OF-DSK	Desk, 1.5m x 0.7m x 0.75m	set	6,500.00
OF-TBL-CF	Conference table, W240 x D100 x H750	set	11,000.00
OF-CHR	Chairs for conference and reference table	set	2,300.00
OF-CBT-6D	6-drawer plan cabinet	set	12,100.00
OF-CBT-3D	Lockable 3-drawer filing cabinet	set	7,200.00
OF-CBD	Cupboard with shelves	set	1,229.00
OF-COPY	Photocopy machine with sorter and accessories (A-3 size, Copy Speed: 25 copies/min for A4)	set	398,900.00
OF-PC-D	Desk Top Computer with 80GB hard disk, 1GB memory and 2.6GHz processor, 17" color display	set	71,100.00
OF-PRN	Printer (FUJI-XEROX DocuPrint 255 or equivalent)	set	61,950.00
OF-WB	Whiteboard, Wall type, 1.2m x 1.8m	set	7,500.00
OF-AC-W	Air conditioner window type, 1.5PS	set	16,495.00
OF-FRG	Refrigerator	set	10,295.00
OF-WCL	Water Dispenser/Water cooler	set	3,330.00
OF-WCLOC	Wall Clock	set	300.00
OF-FAX	Fax Machine	set	4,950.00

Table 1.5.5 (4/4) Construction Materials

Item Code	Name of Materials	Unit	Unit Price (Peso)
OF-HRT	Handheld radio transceiver, 10km range	set	5,500.00
OF-CART	Cartridge of Printer	set	10,000.00
OF-A4	A4 Paper	reams	205.00
OF-A3	A3 Paper	reams	405.00
OF-TON	Tonner of Photocopy machine	set	6,576.00
PPE Equipment			
PPE-HH	Hard Hat for construction	pc	230.00
PPE-SS-L	Safety shoes with steel toe; low cut	pair	850.00
PPE-SS-H	Safety shoes with steel toe; high cut	pair	950.00
PPE-SBOOT	Safety boots	pair	485.00
PPE-PG	Protective gloves	pair	135.00
PPE-SBLL	Safety belt/lifeline	pc	950.00
PPE-EPRO	Eye Protection	pc	150.00
PPE-EPLUG	Ear Plug	pc	30.00
PPE-DM	Dust Mask	pc	9.00
PPE-APRN	Apron	pc	140.00
PPE-RCT	Raincoat/Rainwear	pc	380.00
Others			
OT-GP-450	Grout Pipe, 100mm Dia. x 450mm	nos.	48,673.00
OT-GP-500	Grout Pipe, 100mm Dia. x 500mm	nos.	49,536.00
OT-GP-750	Grout Pipe, 100mm Dia. x 750mm	nos.	53,601.00
OT-GP-800	Grout Pipe, 100mm Dia. x 800mm	nos.	54,007.00
OT-TRP-A	Transportation Type-A, 4WD Car, Toyota Fortuner	nos.	1,396,000.00
OT-TRP-B	Transportation Type-B, Motor Cycle, 200cc	nos.	95,703.00
OT-TRP-C	Transportation Type-C, Boat, Quintrex 460 Dory w/ 40HP Engine	nos.	900,000.00
OT-LPOST-70W	Lighting Post (70W)	nos.	8,526.00
OT-LPOST-400W	Lighting Post (400W)	nos.	26,960.00
OT-C-LB	Life Ring Buoy	nos.	1,550.00
OT-C-LV	Lifevest Free Size	nos.	650.00
OT-FS-V3	Fender System, V-300mm, L=600mm	pcs.	9,800.00

Table 1.5.6 (1/3) Equipment Rental Rates

Item Code	Name of Equipment	Model	Horse Power	Capacity	Description	Hourly Rate (peso)
Earthmoving Equipment						
TR-CRW-140	Crawler Tractor (Bulldozer) 140HP	TD15C PS/TC	140	15 ton		2,361.0
TR-CRW-215	Crawler Tractor (Bulldozer) 215HP	CAD D7H LGP SERIE	215	21 ton		4,657.0
TR-CRW-335	Crawler Tractor (Bulldozer) 335HP	CAD D8L PS	335			6,102.0
TR-CRW-140S	Crawler Tractor (Swamp Type) 165HP	CAT D6H LGP II	165			3,181.0
TR-CRW-215S	Crawler Tractor (Swamp Type) 215HP	CAT D7H LGP II	215			4,657.0
LD-WL-R3	Wheel Loader (Articulated), 3.44cu.m., 216HF	CAT 966E	216	3.44 cu.m.	Articulated	2,387.0
LD-WL-28	Wheel Loader (Articulated), 3.10cu.m., 170HF	CAT 950F	170	3.10 cu.m.	Articulated	3,453.0
LD-WL-20	Wheel Loader, 2.00cu.m., 125HP	CAT 928G	125	2.00 cu.m.	Articulated	2,761.0
LD-WL-15	Wheel Loader, 1.53cu.m., 98HP	CAT 918F	98	1.53 cu.m.	Articulated	1,329.0
GR-MO-135	Motor Grader, 135HP	CAT 130G	135		74V (1992-1995)	1,970.0
GR-MO-125	Motor Grader, 125HP	CAT 120G	125	Blade 3.66m (12	87V (1992-1995)	1,898.0
Compaction Equipment						
RLS-S23-10	Static 2&3 Smooth Drum, 9~11t	All Model	105	10 t		567.0
RLS-STR-10	Static Pneumatic-tire Roller, 10 t	9-WHL, 9.00x20, 4PR	107	10 t		553.0
RLS-STR-20	Static Pneumatic-tire Roller, 20 t	Bomag BW16R	74	20 t	8Wheels	1,750.0
RLS-VSD-11	Vibratory Single Smooth Drum, 11t	Bomag BW212D-2	106	11 t		2,004.0
RLS-VSD-6	Vibratory Single Smooth Drum, 6t	Dynapac CA151D	80	6.45 t		1,119.0
RLS-VTD-1.5	Vibratory Tandem Smooth Drum, 2.0t	WACKER RD11A	18	2.0 t		667.0
RLS-VTD-10.0	Vibratory Tandem Smooth Drum, 10.0t	DA50	115	10.0 t		1,526.0
P-TMP-280	Vibratory Rammer (Tamper), 280-330		3.0~4.0	280~330mm	3025 lbs/blow (13.4 kN)	209.0
P-CMP-12	Vibratory Plate Compactor, 13.5HP	Diesel, Reversible	13.5	550~700mm	13,500 lbs/blow (60 kN)	572.0
P-CMP-7	Vibratory Plate Compactor, Single, 7HP	Gasoline Engine	6.0~8.0	500~600mm	Single Direction, 4050~5625	158.0
Lifting Equipment						
CR-CRW-200	Crawler Crane 200t, 400HP	All Model	400	200 t		8,411.0
CR-CRW-150	Crawler Crane 150t, 350HP	All Model	350	150 t		6,799.0
CR-CRW-120	Crawler Crane 120t, 290HP	All Model	290	120 t		5,151.0
CR-CRW-100	Crawler Crane 100t, 290HP	All Model	290	100 t		4,873.0
CR-CRW-80	Crawler Crane 80t, 285HP	All Model	285	80 t		3,268.0
CR-CRW-60	Crawler Crane, 60t, 275HP	All Model	275	60 t		2,526.0
CR-CRW-50	Crawler Crane 50t, 190HP	All Model	190	50 t		2,245.0
CR-CRW-40	Crawler Crane, 40t, 190HP	All Model	190	40 t		1,729.0
CR-CRW-35	Crawler Crane, 35t, 190HP	All Model	190	35 t		1,525.0
CR-CRW-25	Crawler Crane, 25t, 145HP	All Model	145	25 t		1,384.0
CR-CRW-15	Crawler Crane, 15t, 145HP	All Model	145	15 t		865.0
CR-LBTK-40	Lattice-Boom Truck Crane, 40t, 238HP	All Model	238	40 t		1,656.0
CR-HTK-180	Telescopic Boom Truck Crane, 180t, 420HP	All Model	420	180 t		8,590.0
CR-HTK-120	Telescopic Boom Truck Crane, 120t, 290HP	All Model	290	120 t		6,142.0
CR-HTK-100	Telescopic Boom Truck Crane, 100t, 290HP	All Model	290	100 t		4,584.0
CR-HTK-90	Telescopic Boom Truck Crane, 90t, 285HP	All Model	285	90 t		3,659.0
CR-HTK-80	Telescopic Boom Truck Crane, 80t, 285HP	All Model	285	80 t		2,974.0
CR-HTK-60	Telescopic Boom Truck Crane, 60t, 280HP	All Model	280	60 t		2,495.0
CR-HTK-45	Telescopic Boom Truck Crane, 45t, 246HP	All Model	246	45 t		2,250.0
CR-HTK-40	Telescopic Boom Truck Crane, 40t, 238HP	All Model	238	40 t		1,836.0
CR-HTK-25	Telescopic Boom Truck Crane, 25t, 200HP	All Model	200	25 t		1,427.0
CR-HTK-20	Telescopic Boom Truck Crane, 20t, 180HP	All Model	180	20 t		1,184.0
CR-HTK-15	Telescopic Boom Truck Crane, 15t, 160HP	All Model	160	15 t		994.0
CR-HTK-10	Telescopic Boom Truck Crane, 10t, 100HP	All Model	100	10t		579.0
CR-HTK-5	Telescopic Boom Truck Crane, 5t, 100HP	All Model	100	5t		518.0
CR-HRTR-25	Rough Terrain Crane, 25t, 200HP	All Model	200	25t		1,676.0

Table 1.5.6 (2/3) Equipment Rental Rates

Item Code	Name of Equipment	Model	Horse Power	Capacity	Description	Hourly Rate (peso)
Excavating Equipment						
BH-CRW-200	Hydraulic Crawler Backhoe, 2.0cu.m., 268HP	CAT 330D	268	2.0 cu.m.		6,677.0
BH-CRW-150	Hydraulic Crawler Backhoe, 1.5cu.m., 222HP	CAT 330L	222	1.5 cu.m.	34 t	4,242.0
BH-CRW-100	Hydraulic Crawler Backhoe, 1.0cu.m., 138HP	CAT 320C	138	1.0 cu.m.	19 t	3,106.0
BH-CRW-063	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	CAT E140	89	0.63 cu.m.	13 t	1,739.0
BH-CRW-055	Hydraulic Crawler Backhoe, 0.55cu.m., 96HP	Hitachi EX 150	96.3	0.55m3		1,795.0
BH-CRW-045	Hydraulic Crawler Backhoe, 0.45cu.m., 86HP	Hitachi EX120-2	86.2	0.45m3		1,514.0
BH-CRW-016	Hydraulic Crawler Backhoe, 0.16cu.m., 36HP	Hitachi EX45-2	36	0.16m3		1,084.0
CLB-40	Clamshell Bucket 40 (Excavating Attachment)	Rate: 10% of Crawler (			10% Attached Crawler Crane	0.0
CLB-60	Clamshell Bucket 60 (Excavating Attachment)	Rate: 10% of Crawler (			10% Attached Crawler Crane	0.0
Foundation Equipment (Pile Driving / Bored Piling)						
HAM-DS-15	Diesel Hammer, 1.5t	Mitsubishi MH15-DSL		4500kg-m	Ram=1.5 t	823.0
HAM-DS-25	Diesel Hammer, 2.5t	Mitsubishi MH25-DSL		7500kg-m	Ram=2.5 t	1,120.0
HAM-DS-35	Diesel Hammer, 3.5t	Mitsubishi MH35-DSL		105000kg-m	Ram=3.5 t	1,418.0
HAM-DS-45	Diesel Hammer, 4.5t	Mitsubishi MH45B-DS		13500kg-m	Ram=4.5 t	1,948.0
HAM-DS-72	Diesel Hammer, 7.2t	Mitsubishi MH72B-DS		21600kg-m	Ram=7.2 t	3,687.0
HAM-VE-60	Electric Vibratory Hammer, 60kW	Tomen VM2-4000E	60 kW		w/o Generator Set	622.0
HAM-VH-12	Hydraulic Vibratory Hammer, 120kN-m	MHF12	222	165kW	with Hydraulic Power Pack	4,118.0
HAM-VH-45	Hydraulic Vibratory Hammer, 450kN-m	Fonceur, PTC25H1A	272.22	203kW	45,000 kg-m	3,069.0
HAM-VH-70	Hydraulic Vibratory Hammer, 700 kN-m	Fonceur, PTC50H1A	402.3	300kW	70,000 kg-m	4,803.0
HAM-WJ325	Water Jet Cutter, 325ltr./min	14.7MPa	100kW	325L/min	JPY48,000/day	1,981.0
HAM-WJ895	Water Jet Cutter, 895ltr./min	14.7MPa	243kW	895L/min	JPY114,000/day	4,706.0
DR-MR	Drilling Rig, Mechanical Rotary	CMV, Model TRM 35/	175	68m	600~2000mm, w/o Crane	3,847.0
Asphalting/Paving Equipment						
AP-D	Asphalt Distributor, 5 ton	ETNYRE BT-RS/ 5ton	100	3000 USG		1,071.0
AP-PF	Paver/Finisher, 80HP	NF220BIVDM	80			1,833.0
AP-SS	Soil Stabilizer	Koehring LA-107	440			2,591.0
Concreting Equipment						
CN-MIX-0.5	Concrete Mixer, 0.5 bagger	Tilting Drum	-	1~3cu.ft/min.		150.0
CN-MIX-2	Concrete Mixer, 2 bagger	Tilting Drum	-	7~26cu.ft/min.		190.0
CN-TMX-5	Transit Mixer, 5cu.m.	All Model	175	5~6cu.yd.	4~5cu.m.	1,418.0
CN-PMP-100	Concrete Pump, 100cu.m./hr.	Challenge 905 PR	130	100cu.m./hr.	Squeeze Crete w/ Truck & B	1,835.0
CN-PMP-70	Concrete Pump, 70cu.m./hr.	Callaghan S-100B	175	70cu.m./hr.	Stationary	2,349.0
CN-PMP-50	Concrete Pump, 60cu.m./hr.	Whiteman 100D	-	50cu.m./hr.	Pumpcrete	1,583.0
CN-GM-636	Grouting Machine, 6x3x6 Air Driven	Garner Denver	-	-	6x3x6 Air Driven	866.0
Hauling Equipment						
TK-DMP-15	Dump Truck, 15cu.m., 20t	All Model	380	15 cu.m.	20 t	1,716.0
TK-DMP-11	Dump Truck, 11cu.m., 15t	All Model	290	11 cu.m.	15 t	1,470.0
TK-DMP-9	Dump Truck, 9cu.m., 12t	All Model	275	9 cu.m.	12 t	1,306.0
TK-DMP-6.5	Dump Truck, 6.5cu.m., 9t	All Model	220	6.5 cu.m.	9 t	1,036.0
TK-CRG-10	Cargo Truck, 10t	US & Europe Makes	270	10.0ton		1,189.0
TK-CRG-5	Cargo Truck, 5t	US & Europe Makes	160	5.0ton		781.0
Air Equipment						
ARC-350	Air Compressor, 350Cfm, 103HP	All Models	103	331-350Cfm		675.0
ARC-250	Air Compressor, 250Cfm, 73HP	All Models	73	186-250Cfm		574.0
ARC-160	Air Compressor, 160Cfm, 51HP	All Models	51	126-160Cfm		417.0
JKH	Pneumatic Breaker (Jackhammer)	All Models	-	-	w/50ft Hose, Oiler & Attach.	51.0
Pumping Equipment						
PMP-DW200	Submersible Pump, 200mm (8"), 7885lpm	Electric Model	59 kW	7500~8400 lpm	Submersible Pump, Three Ph	1,846.0
PMP-DW150	Submersible Pump, 150mm (6"), 6000lpm	Electric Model	22 kW	5000~6100 lpm	Submersible Pump, Three Ph	754.0
PMP-DW100	Submersible Pump, 100mm (4"), 3500lpm	Electric Model	9 kW	2400~3500 lpm	Submersible Pump, Three Ph	385.0
PMP-DW75	Submersible Pump, 75mm (3"), 1000lpm	Electric Model	2.5 kW	750~1000 lpm	Submersible Pump, Three Ph	200.0

Table 1.5.6 (3/3) Equipment Rental Rates

Item Code	Name of Equipment	Model	Horse Power	Capacity	Description	Hourly Rate (peso)
Power Generating Equipment						
GEN-400	Generator Set, 400kW	All Makes		351-400kw	439-500kVA	598.0
GEN-300	Generator Set, 300kW	All Makes		251-300kW	314-375kVA	485.0
GEN-200	Generator Set, 200kW	All Makes		151-200kW	189-250kVA	322.0
GEN-150	Generator Set, 150kW	All Makes		101-150kW	126-188kVA	201.0
GEN-100	Generator Set, 100kW	All Makes		51-100kW	64-125kVA	167.0
GEN-50	Generator Set, 50kW	All Makes		41-50kW	51-62kVA	143.0
GEN-40	Generator Set, 40kW	All Makes		31-40kW	39-50kVA	127.0
GEN-30	Generator Set, 30kW	All Makes		21-30kW	26-38kVA	126.0
GEN-20	Generator Set, 20kW	All Makes		16-20kW	20-25kVA	111.0
GEN-15	Generator Set, 15kW	All Makes		11-15kW	14-19kVA	81.0
Shop Equipment						
WLD-GD-500	Welding Machine, Gas/Diesel, 500Amp	Gas/Diesel Driven	70	500 Amperes		539.0
WLD-E-500	Welding Machine, Electric, 500Amp	Electric Driven	-	500 Amperes	DC Output	391.0
Special Support Equipment						
TK-WTR-1	Water Truck, 500~1,000gals	All Makes	360	500-1000gals.		1,065.0
TK-WTR-3	Water Truck, 1,000~3000gals. w/ Sprinkler	All Makes	552	1001-3000gals.	3800-11400 ltr.	1,475.0
SV-CR	Service Car	Toyota Tamaraw FX '9	80			149.0
SV-PU2	Pick-Up Truck, 2t	Mitsubishi L300		2 ton	Pick-up Type	234.0
Miscellaneous Equipment						
BRM-H3	Boring Machine	Richmond 4-71		300 t	Horizontal Type	589.0
RCD-55	Reverse Circulation Drill, 55kW	Hitachi HS300		55 kW	Electric Driven	284.0
RD-BR5	Rock Drill / Breaker	Pionjar 120	5		20 cfm Petrol Driven	156.0
RD-PBR	Potable Breaker/Drill	BH23	4			126.0
CSW	Chainsaw	Husqvarna 162/266	8		w/o Blade	22.0
MMM	Metal Muncher Machine	Central Elec. MM90C			Electric Driven	89.0
JT-SL	Joint Sealer	Gas/Diesel Driven			w/ Hot/Cold spray nozzle	56.0
CN-VB	Concrete Vibrator Head, 25mm(1") Dia.	Flexible Shaft Type	-	-	4~6m Shaft	82.0
CN-VB-D	Concrete Vibrator Drive Unit, Gasoline	Gasoline Drive Unit	3.5	-		61.0
CN-SW-14	Concrete Saw, 14" Dia.	Blade 14" Dia.	7.5	Cut 4 3/4" (120r	Manual	167.0
CN-SW-26	Concrete Saw, 26" Dia.	Blade 26" Dia.	25	Cut 10 3/4" Dep	Self-Propelled	826.0
BR-CT	Bar Cutter	D32mm Max.		3 Phase	Max. Rebar diameter D32mr	316.0
BR-BND	Bar Bender	D32mm Max.		3 Phase	Max. Rebar diameter D32mr	440.0
TW-LT-12	Tower Light, 12 ft., 2 x 400W		5	Generator 2.4kW		273.0
PBR-27	Pavement Breaker, 27kg	Stanley BR72		105~140 bar	Oil Flow Range 26~34 lpm	229.0
CP-HM-25	Chipping Hammer, 11kg	Maruzen BH112		90~130 bar	Oil Flow Range 20~25 lpm	156.0
Plants						
PLN-CNB-50	Concrete Batch Plant w/ Cement Silo	Poss Unit Plant		50cu.m./hr.	P6527/Month/(cu.m./hr.)	1,632.0
PLN-CNB-40	Concrete Batch Plant w/o Cement Silo	ELBA Mixer EM41		40cu.m./hr.	w/o Cement Silo, w/ Batcher	804.0
Off-Shore Equipment						
DRGR-E	Cutter Suction Dredger, 3,235HP	Cutter Suction	3235	5,000 cu.m./hr.	600mm Dia., max. dist. 2000	60,520.0
DRGR-T	Trailer Suction Dredger, 1,795HP	Trailer Suction	1795	3,000 cu.m./hr.	300mm Dia., dredge depth 0	55,001.0
DRGR-SB	Single Bucket Grab Dredger, 1,300HP	Self Propelled	1300	13 cu.m./bucket	Dredge depth 50m, Hopper 1	61,525.0
BRG-CR-1	Crane Barge, GW-319t, w/ Crane 60t	GW-319 tons	275	60 tons	non-propelled	3,843.0
BRG-HP-800	Hopper Barge, DWT-800t, 550cu.m.	DWT-800 tons	-	550 cu.m. net	non-propelled, bottom dump	1,030.0
BRG-DK-650	Deck Barge, DWT 650 t	Non-propelled	-	650 t	LOA35.5 x B9.85 x D3.05 m	537.0
BRG-DK-1K	Deck Barge, DWT 1,000 t	Non-propelled	-	1,000 t	LOA45.12 x B10.98 x D3.66	825.0
T-BOAT-500	Tugboat, 500HP		500		Dim.13.3x4.65x1.85 m	1,603.0
PL-PLT	Modular Float, Piling Platform 500t	Soil Mec.Piling Platfor		500 ton		2,507.0
Others						
OTHS-PB	Power Broom	Towed Type w/ Engine		6 to 30 kms / hr.		87.0
MIX-PLANT	Mixing Plant for Stabilization of Dredged Mat					42,936.0

Table 1.5.7(1/296) Unit Cost Analyses

1. Preliminary & General

UC No.	1-SC	**Description :**	**Site Clean Up**										
Unit of Work		Detail of Work :											
Month		Quantity of Unit Cost Analysis :			1	month		(	10day	)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@0.25	day	2.50	1,231	3,076	-	-	3,076	*1230.5*	*1.00*		
1.2	Driver	@5 for Pick-Up Truck	day	50.00	717	35,870	-	-	35,870	*717.39*	*1.00*		
1.3	Common Labor	@5	day	50.00	574	28,721	-	-	28,721	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					67,666		0	67,666				
2	MATERIALS												
2.1	Diesel Fuel (Light Oil)	for 10 Trucks	ltr.	2,148	45	96,660	0	0	96,660	*45.00*	*1.00*		
	SUB-TOTAL FOR MATERIAL					96,660		0	96,660				
3	EQUIPMENT												
3.1	Pick-Up Truck, 2t	@5 x 10days x 8 hr./day	hr.	400.0	234	93,600	0	0	93,600	*234.00*	*1.00*		
3.2	Miscellaneous Tools	20 % of Truck	%	20.0	0	18,720	0	0	18,720				
	SUB-TOTAL FOR EQUIPMENT					112,320		0	112,320				
	ESTIMATED DIRECT COST (EDC)					276,646		0	276,646				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		38,730		0	38,730				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		37,845		0	37,845				
	TOTAL COST FOR	1 month		Including VAT		353,222		0	353,222				
	UNIT COST FOR	**1 month**		Excluding VAT		315,377		0	315,377				
	UNIT COST FOR	**1 month**		Including VAT		353,222		0	353,222				

* Working Day of Site Clean Up

10 days/month x 1 month = 10 days

(*) : Diesel Fuel Consumption for Truck :

Hourly Diesel Fuel Consumption = 5.370 ltr./hr. Here; Capacity = 89.484 kW = 120 HP

Diesel Fuel Consumption Rate = 0.06 ltr./kW-hr.

@5 Trucks x 5.370 ltr./hr. x 8.0hr. x 10day = 2,148 ltr.

Tb 1. 10

Table 1.5.7(2/296) Unit Cost Analyses

UC No.	1-TC-L	**Description :**	**Traffic Control on Land**
Unit of Work		Detail of Work :	Traffic Control On-shore, incl. necessary materials
Mth.-set		Quantity of Unit Cost Analysis :	1 Mth.-Set (Unit: Month-Set)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.0 x 25days /month	day	25.00	1,230.50	30,762.50	-	-	30,762.50	*1230.50*	*1.00*	
1.2	Skilled Labor	@2.0 x 25days /month	day	50.00	854.10	42,705.00	-	-	42,705.00	*854.10*	*1.00*	
1.3	Common Labor	@2.0 x 25days /month	day	50.00	574.41	28,720.50	-	-	28,720.50	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					102,188.00		0.00	102,188.00			
2	MATERIALS											
2.1	Miscellaneous Materials	5 % of Labor	%	5	0.00	5,109.40	0.00	0.00	5,109.40			
	SUB-TOTAL FOR MATERIAL					5,109.40		0.00	5,109.40			
3	EQUIPMENT											
3.1	Service Car	@1 x 25days 2.0hr.	hr.	50.0	149.00	7,450.00	0.00	0.00	7,450.00	*149.00*	*1.00*	
3.2	Pick-Up Truck, 2t	@1 x 25days 4.0hr.	hr.	100.0	234.00	23,400.00	0.00	0.00	23,400.00	*234.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Equipments	%	10.0	0.00	3,085.00	0.00	0.00	3,085.00			
	SUB-TOTAL FOR EQUIPMENT					33,935.00		0.00	33,935.00			
	ESTIMATED DIRECT COST (EDC)					141,232.40		0.00	141,232.40			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			8%		11,298.59		0.00	11,298.59			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		18,303.72		0.00	18,303.72			
	TOTAL COST FOR	1 Mth.-Set		Including VAT		170,834.71		0.00	170,834.71			
	UNIT COST FOR	**1 Mth.-Set**		Excluding VAT		152,530.99		0.00	152,530.99			
	UNIT COST FOR	**1 Mth.-Set**		Including VAT		170,834.71		0.00	170,834.71			

Tb 1. 11

Table 1.5.7(3/296) Unit Cost Analyses

UC No.	1-TC-W	**Description :**	**Traffic Control on Water**										
Unit of Work		Detail of Work :	Traffic Control Off-shore, incl. necessary materials										
Mth.-set		Quantity of Unit Cost Analysis :	1 Mth.-Set (Unit: Month-Set)										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1.0 x 25days /month	day	25.00	1,230.50	30,762.50	-	-	30,762.50	*1230.50*	*1.00*	
1.2	Barge Crew	@1.0 x 25days /month	day	25.00	988.10	24,702.50	-	-	24,702.50	*988.10*	*1.00*	
1.3	Skilled Labor	@2.0 x 25days /month	day	50.00	854.10	42,705.00	-	-	42,705.00	*854.10*	*1.00*	
1.4	Common Labor	@2.0 x 25days /month	day	50.00	574.41	28,720.50	-	-	28,720.50	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					126,890.50		0.00	126,890.50			
2	MATERIALS											
2.1	Transportation Type-C, Boat, Quintrex 460 Dory w/ 40HP En		nos.	0.03	900,000.00	25,000.00	0.00	0.00	25,000.00	*900,000.00*	*1.00*	
2.2	Gasoline	10 ltr./day x 25days	ltr.	250.00	55.00	13,750.00	0.00	0.00	13,750.00	*55.00*	*1.00*	
2.3	Miscellaneous Materials	5 % of Labor	%	5	0.00	6,344.53	0.00	0.00	6,344.53			
	SUB-TOTAL FOR MATERIAL					45,094.53		0.00	45,094.53			
3	EQUIPMENT											
3.1	Service Car	@1 x 25days 2.0hr.	hr.	50.0	149.00	7,450.00	0.00	0.00	7,450.00	*149.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Equipments	%	10.0	0.00	745.00	0.00	0.00	745.00			
	SUB-TOTAL FOR EQUIPMENT					8,195.00		0.00	8,195.00			
	ESTIMATED DIRECT COST (EDC)					180,180.03		0.00	180,180.03			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			8%		14,414.40		0.00	14,414.40			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		23,351.33		0.00	23,351.33			
	TOTAL COST FOR	1 Mth.-Set		Including VAT		217,945.76		0.00	217,945.76			
	UNIT COST FOR	**1 Mth.-Set**		Excluding VAT		194,594.43		0.00	194,594.43			
	UNIT COST FOR	**1 Mth.-Set**		Including VAT		217,945.76		0.00	217,945.76			

Tb 1.12

Table 1.5.7(4/296) Unit Cost Analyses

UC No. 1-PR-FE	**Description : Provision of Furnishings and Equipment**
Unit of Work	Detail of Work :
L.S.	Quantity of Unit Cost Analysis : 1 L.S.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
	SUB-TOTAL FOR LABOR					0		0	0.00			
2	MATERIALS											
2.1	Desk, 1.5m x 0.7m x 0.75m		set	7.00	6,500	45,500	0	0	45,500	*6,500*	*1.00*	
2.2	Conference table, W240 x D100 x H750		set	1.00	11,000	11,000	0	0	11,000	*11,000*	*1.00*	
2.3	Chairs for conference and reference table		set	14.00	2,300	32,200	0	0	32,200	*2,300*	*1.00*	
2.4	6-drawer plan cabinet		set	1.00	12,100	12,100	0	0	12,100	*12,100*	*1.00*	
2.5	Lockable 3-drawer filing cabinet		set	2.00	7,200	14,400	0	0	14,400	*7,200*	*1.00*	
2.6	Cupboard with shelves		set	1.00	1,229	1,229	0	0	1,229	*1,229*	*1.00*	
2.7	Photocopy machine with sorter and accessories (A-3 size, Cop		set	1.00	398,900	398,900	0	0	398,900	*398,900*	*1.00*	
2.8	Desk Top Computer with 80GB hard disk, 1GB memory and		set	5.00	71,100	355,500	0	0	355,500	*71,100*	*1.00*	
2.9	Printer (FUJI-XEROX DocuPrint 255 or equivalent)		set	1.00	61,950	61,950	0	0	61,950	*61,950*	*1.00*	
2.10	Whiteboard, Wall type, 1.2m x 1.8m		set	1.00	7,500	7,500	0	0	7,500	*7,500*	*1.00*	
2.11	Air conditioner window type, 1.5PS		set	7.00	16,495	115,465	0	0	115,465	*16,495*	*1.00*	
2.13	Refrigerator		set	1.00	10,295	10,295	0	0	10,295	*10,295*	*1.00*	
2.14	Water Dispenser/Water cooler		set	1.00	3,330	3,330	0	0	3,330	*3,330*	*1.00*	
2.14	Wall Clock		set	2.00	300	600	0	0	600	*300*	*1.00*	
2.15	Fax Machine		set	1.00	4,950	4,950	0	0	4,950	*4,950*	*1.00*	
	SUB-TOTAL FOR MATERIAL					1,074,919		0	1,074,919			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0		0	0			
	ESTIMATED DIRECT COST (EDC)					1074919		0	1,074,919			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			8%		85,994		0	85,994			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		139,310		0	139,310			
	TOTAL COST FOR	1 L.S.		Including VAT		1,300,222		0	1,300,222			
	UNIT COST FOR	**1 L.S.**		Excluding VAT		1,160,913		0	1,160,913			
	UNIT COST FOR	**1 L.S.**		Including VAT		1,300,222		0	1,300,222			

Tb 1.13

Table 1.5.7(5/296) Unit Cost Analyses

New

UC No.	1-PR-CO	**Description :**	**Provision of Consumables**										
Unit of Work		Detail of Work :											
L.S.		Quantity of Unit Cost Analysis :			1	L.S.							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0		0	0.00			
2	MATERIALS											
2.1	Cartridge of Printer		set	50.00	10,000	500,000	0	0	500,000	*10,000*	*1.00*	
2.2	A4 Paper		reams	100.00	205	20,500	0	0	20,500	*205*	*1.00*	
2.3	A3 Paper		reams	50.00	405	20,250	0	0	20,250	*405*	*1.00*	
2.4	Tonner of Photocopy machine		set	5.00	6,576	32,880	0	0	32,880	*6,576*	*1.00*	
	SUB-TOTAL FOR MATERIAL					573,630		0	573,630			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0		0	0			
	ESTIMATED DIRECT COST (EDC)					573630		0	573,630			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			8%		45,890		0	45,890			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		74,342		0	74,342			
	TOTAL COST FOR	1 L.S.		Including VAT		693,863		0	693,863			
	UNIT COST FOR	**1 L.S.**		Excluding VAT		619,520		0	619,520			
	UNIT COST FOR	**1 L.S.**		Including VAT		693,863		0	693,863			

Tb 1. 14

Table 1.5.7(6/296) Unit Cost Analyses

New

UC No.	1-PR-PPE	**Description :**	**Provision of Personal Protective Equipment (PPE)**										
Unit of Work		Detail of Work :											
Set		Quantity of Unit Cost Analysis :			1	Set							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0		0	0.00			
2	MATERIALS											
2.1	Hard Hat for construction		pc	1.00	230	230	0	0	230	*230*	*1.00*	
2.2	Safety boots		pair	1.00	485	485	0	0	485	*485*	*1.00*	
2.3	Protective gloves		pair	1.00	135	135	0	0	135	*135*	*1.00*	
2.4	Safety belt/lifeline		pc	1.00	950	950	0	0	950	*950*	*1.00*	
2.5	Eye Protection		pc	1.00	150	150	0	0	150	*150*	*1.00*	
2.6	Lifevest Free Size		nos.	1.00	650	650	0	0	650	*650*	*1.00*	
2.7	Dust Mask		pc	1.00	9	9	0	0	9	*9*	*1.00*	
2.8	Raincoat/Rainwear		pc	1.00	380	380	0	0	380	*380*	*1.00*	
	SUB-TOTAL FOR MATERIAL					2,989		0	2,989			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0		0	0			
	ESTIMATED DIRECT COST (EDC)					2989		0	2,989			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			8%		239		0	239			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		387		0	387			
	TOTAL COST FOR	1 Set		Including VAT		3,615		0	3,615			
	UNIT COST FOR	**1 Set**		Excluding VAT		3,228		0	3,228			
	UNIT COST FOR	**1 Set**		Including VAT		3,615		0	3,615			

Tb 1.15

Table 1.5.7(7/296) Unit Cost Analyses

UC No.	1-TR-AP	**Description :**	**Provide Type A Transportation Item, Toyota Fortuner 4WD**										
Unit of Work		Detail of Work :											
Nos.		Quantity of Unit Cost Analysis :			1	Nos.							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0		0	0.00			
2	MATERIALS											
2.1	Transportation Type-A, 4WD Car, Toyota Fortuner		nos.	1.00	1,396,000	1,396,000	0	0	1,396,000	*1,396,000*	*1.00*	
2.2	Registration Fee		nos.	1.00	9,700	9,700	0	0	9,700	*9,700*	*1.00*	
2.3	Fitting Items	5 % of Price	%	5	0	69,800	0	0	69,800			
	SUB-TOTAL FOR MATERIAL					1,475,500		0	1,475,500			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0		0	0			
	ESTIMATED DIRECT COST (EDC)					1475500		0	1,475,500			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			0%		0		0	0			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		177,060		0	177,060			
	TOTAL COST FOR	1 Nos.		Including VAT		1,652,560		0	1,652,560			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		1,475,500		0	1,475,500			
	UNIT COST FOR	**1 Nos.**		Including VAT		1,652,560		0	1,652,560			

Tb 1. 16

Table 1.5.7(8/296) Unit Cost Analyses

UC No.	1-TR-BP	**Description :**	**Provide Type B Transportation Item, Motor Cycle, 200cc Capacity**										
Unit of Work		Detail of Work :											
Nos.		Quantity of Unit Cost Analysis :			1	Nos.							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0		0	0.00			
2	MATERIALS											
2.1	Transportation Type-B, Motor Cycle, 200cc		nos.	1.00	95,703	95,703	0	0	95,703	*95,703*	*1.00*	
2.2	Registration Fee		nos.	1.00	2,100	2,100	0	0	2,100	*2,100*	*1.00*	
2.3	Fitting Items	5 % of Price	%	5	0	4,785	0	0	4,785			
	SUB-TOTAL FOR MATERIAL					102,588		0	102,588			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0		0	0			
	ESTIMATED DIRECT COST (EDC)					102588.15		0	102,588			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			0%		0		0	0			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		12,311		0	12,311			
	TOTAL COST FOR	1 Nos.		Including VAT		114,899		0	114,899			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		102,588		0	102,588			
	UNIT COST FOR	**1 Nos.**		Including VAT		114,899		0	114,899			

Tb 1. 17

Table 1.5.7(9/296) Unit Cost Analyses

UC No.	1-TR-CP	**Description :**	**Provide Type C Transportation Item, Quintrex 460 Dory Boat w/ 40HP Outboard Engine**										
Unit of Work		Detail of Work :											
Nos.		Quantity of Unit Cost Analysis :			1	Nos.							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0		0	0.00			
2	MATERIALS											
2.1	Transportation Type-C, Boat, Quintrex 460 Dory w/ 40HP En		nos.	1.00	900,000	900,000	0	0	900,000	*900,000*	*1.00*	
2.2	Registration Fee		nos.	1.00	5,000	5,000	0	0	5,000	*5,000*	*1.00*	
2.3	Life Ring Buoy		nos.	2.00	1,550	3,100	-	-	3,100	*1,550*	*1.00*	
2.4	Lifevest Free Size		nos.	6.00	650	3,900	0	0	3,900	*650*	*1.00*	
2.5	Fitting Items	5 % of Price	%	5	0	45,000	0	0	45,000			
	SUB-TOTAL FOR MATERIAL					957,000		0	957,000			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0		0	0			
	ESTIMATED DIRECT COST (EDC)					957000		0	957,000			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			0%		0		0	0			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		114,840		0	114,840			
	TOTAL COST FOR	1 Nos.		Including VAT		1,071,840		0	1,071,840			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		957,000		0	957,000			
	UNIT COST FOR	**1 Nos.**		Including VAT		1,071,840		0	1,071,840			

Tb 1. 18

Table 1.5.7(10/296) Unit Cost Analyses

UC No.	1-TR-AM	**Description :**	**Maintain Type A Transportation Item, Toyota Fortuner 4WD**
Unit of Work		Detail of Work :	
Nos.-Mth		Quantity of Unit Cost Analysis :	1 Nos.-Month

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Driver	@1.0 x 25days /month	day	25.00	717.39	17,934.75	-	-	17,934.75	*717.39*	*1.00*	
1.2	Mechanic	@1.0 x 3days /month	day	3.00	1,122.60	3,367.80	-	-	3,367.80	*1122.60*	*1.00*	
	SUB-TOTAL FOR LABOR					21,303		0	21,302.55			
2	MATERIALS											
2.1	Transportation Type-A, 4WD Car, Toyota Fortuner		nos.	0.00	1,396,000	0	0	0	0	*1,396,000*	*1.00*	
2.2	Gasoline	(*1)	ltr.	312.50	55	17,188	0	0	17,188	*55*	*1.00*	
2.3	Grease		kg	1.00	280	280	0	0	280	*280*	*1.00*	
2.4	Lubrication Oil		ltr.	8.00	180	1,440	0	0	1,440	*180*	*1.00*	
2.5	Miscellaneous Materials	0.20 % of Price	%	0.20	0	2,792	0	0	2,792			
	SUB-TOTAL FOR MATERIAL					21,700		0	21,700			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0		0	0			
	ESTIMATED DIRECT COST (EDC)					43002.05		0	43,002			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			0%		0		0	0			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,160		0	5,160			
	TOTAL COST FOR	1 Nos.-Month		Including VAT		48,162		0	48,162			
	UNIT COST FOR	**1 Nos.-Month**		Excluding VAT		43,002		0	43,002			
	UNIT COST FOR	**1 Nos.-Month**		Including VAT		48,162		0	48,162			

(*1): Gasoline Consumption : 100 km/day / 8 km/ltr. x 25day = 312.5 ltr/month

Tb 1.19

Table 1.5.7(11/296) Unit Cost Analyses

UC No.	1-TR-BM	**Description :**	**Maintain Type B Transportation Item, , Motor Cycle, 200cc Capacity**
Unit of Work		Detail of Work :	
Nos.-Mth		Quantity of Unit Cost Analysis :	1 Nos.-Month

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Driver	@0.0 x 0days /month	day	0.00	717.39	0.00	-	-	0.00	*717.39*	*1.00*	
1.2	Mechanic	@1.0 x 1days /month	day	1.00	1,122.60	1,122.60	-	-	1,122.60	*1122.60*	*1.00*	
	SUB-TOTAL FOR LABOR					1,122.60		0.00	1,122.60			
2	MATERIALS											
2.1	Transportation Type-B, Motor Cycle, 200cc		nos.	0.00	95,703.00	0.00	0.00	0.00	0.00	*95,703*	*1.00*	
2.2	Gasoline	(*1)	ltr.	125.00	55.00	6,875.00	0.00	0.00	6,875.00	*55*	*1.00*	
2.3	Grease		kg	1.00	280.00	280.00	0.00	0.00	280.00	*280*	*1.00*	
2.4	Lubrication Oil		ltr.	4.00	180.00	720.00	0.00	0.00	720.00	*180*	*1.00*	
2.5	Miscellaneous Materials	0.50 % of Price	%	0.50	0.00	478.52	0.00	0.00	478.52			
	SUB-TOTAL FOR MATERIAL					8,353.52		0.00	8,353.52			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					9,476.12		0.00	9,476.12			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			0%		0.00		0.00	0.00			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,137.13		0.00	1,137.13			
	TOTAL COST FOR	1 Nos.-Month		Including VAT		10,613.25		0.00	10,613.25			
	UNIT COST FOR	**1 Nos.-Month**		Excluding VAT		9,476.12		0.00	9,476.12			
	UNIT COST FOR	**1 Nos.-Month**		Including VAT		10,613.25		0.00	10,613.25			

(*1): Gasoline Consumption : 100 km/day / 20 km/ltr. x 25day = 125 ltr/month

Tb 1. 20

Table 1.5.7(12/296) Unit Cost Analyses

UC No.	1-TR-CM	Description :	Maintain Type C Transportation Item, Quintrex 460 Dory Boat w/ 40HP Outboard Engine
Unit of Work		Detail of Work :	
Nos.-Mth		Quantity of Unit Cost Analysis :	1 Nos.-Month

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Driver	@1.0 x 25days /month	day	25.00	717.39	17,934.75	-	-	17,934.75	*717.39*	*1.00*	
1.2	Mechanic	@1.0 x 5days /month	day	3.00	1,122.60	3,367.80	-	-	3,367.80	*1122.60*	*1.00*	
	SUB-TOTAL FOR LABOR					21,302.55		0.00	21,302.55			
2	MATERIALS											
2.1	Transportation Type-C, Boat, Quintrex 460 Dory w/ 40HP En		nos.	0.00	900,000.00	0.00	0.00	0.00	0.00	*900,000*	*1.00*	
2.2	Gasoline	(*1)	ltr.	300.00	55.00	16,500.00	0.00	0.00	16,500.00	*55*	*1.00*	
2.3	Grease		kg	1.00	280.00	280.00	0.00	0.00	280.00	*280*	*1.00*	
2.4	Lubrication Oil		ltr.	4.00	180.00	720.00	0.00	0.00	720.00	*180*	*1.00*	
2.5	Miscellaneous Materials	1.00 % of Price	%	1.00	0.00	9,000.00	0.00	0.00	9,000.00			
	SUB-TOTAL FOR MATERIAL					26,500.00		0.00	26,500.00			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					47,802.55		0.00	47,802.55			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			0%		0.00		0.00	0.00			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,736.31		0.00	5,736.31			
	TOTAL COST FOR	1 Nos.-Month		Including VAT		53,538.86		0.00	53,538.86			
	UNIT COST FOR	**1 Nos.-Month**		Excluding VAT		47,802.55		0.00	47,802.55			
	UNIT COST FOR	**1 Nos.-Month**		Including VAT		53,538.86		0.00	53,538.86			

(*1): Gasoline Consumption : 4 hr./day x 3.0 ltr./hr.(*2) x 25day = 300 ltr/month

(*2): Fuel Consumption Rate of Engine : Hourly Fuel Consumption = 3.0 ltr./hr.

Here; Capacity = 40.0 HP = 29.8 kW

Fuel Consumption Rate = 0.079 ltr./kW-hr.

Tb 1.21

Table 1.5.7(13/296) Unit Cost Analyses

3. WATER CONTROL

UC No.	3-DW	Description :	Dewatering, 150mm Dia. Pump x 2 sets										
Unit of Work		Detail of Work :	2 sets of dewatering pump										
Day		Quantity of Unit Cost Analysis :			1	Day							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.1	day	0.10	1,230.50	123.05	-	-	123.05	*1230.5*	*1.00*	
1.2	Skilled Labor	@1.0	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Common Labor	@3.0	day	3.00	574.41	1,723.23	-	-	1,723.23	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,700.38		0.00	2,700.38			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)	3.8 ltr./hr. x 10.0hr.	ltr.	38.00	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					1,710.00		0.00	1,710.00			
3	EQUIPMENT											
3.1	Submersible Pump, 150mm (6"), 6	@2 x 5 hr./day	hr.	10.00	754.00	7,540.00	0.00	0.00	7,540.00	*754.00*	*1.00*	
3.2	Generator Set, 20kW	@2 x 5 hr./day	hr.	10.00	111.00	1,110.00	0.00	0.00	1,110.00	*111.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					8,650.00		0.00	8,650.00			
	ESTIMATED DIRECT COST (EDC)					13,060.38		0.00	13,060.38			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,828.45		0.00	1,828.45			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,786.66		0.00	1,786.66			
	TOTAL COST FOR	1 Day		Including VAT		16,675.49		0.00	16,675.49			
	UNIT COST FOR	**1 Day**		Excluding VAT		14,888.83		0.00	14,888.83			
	UNIT COST FOR	**1 Day**		Including VAT		16,675.49		0.00	16,675.49			

(*): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 20 kW

Hourly Diesel Fuel Consumption = 3.8 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 22

Table 1.5.7(14/296) Unit Cost Analyses

UC No.	3-DW-DR	**Description :**	**Dewatering for Drainage Coffering, 150mm Dia. Pump x 2 set**										
Unit of Work		Detail of Work :											
Day		Quantity of Unit Cost Analysis :			1	Day							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@0.1	day	0.10	1,230.50	123.05	-	-	123.05	*1230.5*	*1.00*	
1.2	Skilled Labor	@1.0	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Common Labor	@1.0	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,551.56		0.00	1,551.56			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)	3.8 ltr./hr. x 16.0hr.	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					2,736.00		0.00	2,736.00			
3	EQUIPMENT											
3.1	Submersible Pump, 150mm (6"), 6	@2 x 8 hr./day	hr.	16.00	754.00	12,064.00	0.00	0.00	12,064.00	*754.00*	*1.00*	
3.2	Generator Set, 20kW	@2 x 8 hr./day	hr.	16.00	111.00	1,776.00	0.00	0.00	1,776.00	*111.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					13,840.00		0.00	13,840.00			
	ESTIMATED DIRECT COST (EDC)					18,127.56		0.00	18,127.56			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,537.86		0.00	2,537.86			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,479.85		0.00	2,479.85			
	TOTAL COST FOR	1 Day		Including VAT		23,145.27		0.00	23,145.27			
	UNIT COST FOR	**1 Day**		Excluding VAT		20,665.42		0.00	20,665.42			
	UNIT COST FOR	**1 Day**		Including VAT		23,145.27		0.00	23,145.27			

(*): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 20 kW

Hourly Diesel Fuel Consumption = 3.8 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.23

Table 1.5.7(15/296) Unit Cost Analyses

UC No. 3-SB	**Description :** **Sand Bag**
Unit of Work	Detail of Work : Furnishing, Stacking and Removing of Sand Bag
Cu.m.	Quantity of Unit Cost Analysis : 2.00 Cu.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor		day	3.00	574.41	1,723.23	-	-	1,723.23	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,953.73		0.00	2,953.73			
2	MATERIALS											
2.1	Sand Bag		pcs.	100	5.00	500.00	0.00	0.00	500.00	*5.00*	*1.00*	
2.2	Stuffing Soil	Excavated Material	cu.m.	2.00	0.00	0.00	0.00	0.00	0.00	*0.00*		
	SUB-TOTAL FOR MATERIAL					500.00		0.00	500.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor cost	%	10	0.00	295.37	0.00	0.00	295.37			
	SUB-TOTAL FOR EQUIPMENT					295.37		0.00	295.37			
	ESTIMATED DIRECT COST (EDC)					3,749.10		0.00	3,749.10			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		524.87		0.00	524.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		512.88		0.00	512.88			
	TOTAL COST FOR	2 Cu.m.		Including VAT		4,786.85		0.00	4,786.85			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		2,136.99		0.00	2,136.99			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		2,393.43		0.00	2,393.43			

* Volume of 1 pcs. Sand Bag = 0.02 cu.m.
for 100 pcs.of Sand Bag = 2.00 cu.m.

Tb 1.24

Table 1.5.7(16/296) Unit Cost Analyses

4. EARTHWORKS

UC No.	4-CG	Description :	Clearing and Grubbing										
Unit of Work		Detail of Work :											
Sq.m.		Quantity of Unit Cost Analysis :			2,000	Sq.m.	/ Day of Area of Vegetation						
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	L.Equip.Operator	@2 for Chainsaw	day	2.00	988.10	1,976.20	-	-	1,976.20	*988.1*	*1.00*	
1.3	Common Labor	@5	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,078.75		0.00	6,078.75			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)	10 sq.m./ltr.	ltr.	200.00	45.00	9,000.00	0.00	0.00	9,000.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					9,000.00		0.00	9,000.00			
3	EQUIPMENT											
3.1	Crawler Tractor (Bulldozer) 140HP		hr.	8.00	2,361.00	18,888.00	0.00	0.00	18,888.00	*2,361.00*	*1.00*	
3.2	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	4.00	1,739.00	6,956.00	0.00	0.00	6,956.00	*1,739.00*	*1.00*	
3.3	Chainsaw	@2	hr.	16.00	22.00	352.000	0.00	0.00	352.00	*22.00*	*1.00*	
3.4	Miscellaneous Tools	10 % of Labor	%	10	0.00	607.88	0.00	0.00	607.88			
	SUB-TOTAL FOR EQUIPMENT					26,803.88		0.00	26,803.88			
	ESTIMATED DIRECT COST (EDC)					41,882.63		0.00	41,882.63			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,863.57		0.00	5,863.57			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,729.54		0.00	5,729.54			
	TOTAL COST FOR	2,000 Sq.m.		Including VAT		53,475.74		0.00	53,475.74			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		23.87		0.00	23.87			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		26.74		0.00	26.74			

Tb 1. 25

Table 1.5.7(17/296) Unit Cost Analyses

UC No. 4-RST	**Name of Work : Removal and Stripping of Topsoil**
Unit of Work	Description of Work : Stripping Thickness = 20 cm. Hauling Distance = 1.0 km (Assumed Distance to Backfill Site)
Cu.m.	Quantity of Unit Cost Analysis : 91 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@5	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,102.55		0.00	4,102.55			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Crawler Tractor (Bulldozer) 140HP		hr.	8.00	2,361.00	18,888.00	0.00	0.00	18,888.00	*2,361.00*	*1.00*	
3.2	Wheel Loader, 1.53cu.m., 98HP		hr.	8.00	1,329.00	10,632.00	0.00	0.00	10,632.00	*1,329.00*	*1.00*	
3.3	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.000	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					39,968.00		0.00	39,968.00			
	ESTIMATED DIRECT COST (EDC)					44,070.55		0.00	44,070.55			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,169.88		0.00	6,169.88			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		6,028.85		0.00	6,028.85			
	TOTAL COST FOR	91 Cu.m.		Including VAT		56,269.28		0.00	56,269.28			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		552.09		0.00	552.09			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		618.34		0.00	618.34			

Tb 1. 26

Table 1.5.7(18/296) Unit Cost Analyses

UC No. 4-CIP	**Name of Work : Chipping of Concrete Surface by Chipping Hammer**
Unit of Work	Description of Work : Chipping Work of Existing Concrete Structure
Sq.m.	Quantity of Unit Cost Analysis : 32.00 Sq.m. /day (Structure: t= 0.200 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@4	day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor	@4 @0.56 for Loading	day	4.56	574.41	2,616.76	-	-	2,616.76	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					7,263.66		0.00	7,263.66			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)		ltr.	0.00	45.00	0.00	0.00	0.00	0.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Chipping Hammer, 11kg	@2	hr.	16.00	156.00	2,496.00	0.00	0.00	2,496.00	*156.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	726.37	0.00	0.00	726.37			
	SUB-TOTAL FOR EQUIPMENT					3,222.37		0.00	3,222.37			
	ESTIMATED DIRECT COST (EDC)					10,486.02		0.00	10,486.02			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,468.04		0.00	1,468.04			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,434.49		0.00	1,434.49			
	TOTAL COST FOR	32 Sq.m.		Including VAT		13,388.55		0.00	13,388.55			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		373.56		0.00	373.56			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		418.39		0.00	418.39			

(1) Daily Production of Chipping Hammer : 2.00 sq.m./hr.-set x @2set x 8.0hr. = **32.00** sq.m./day

32 sq.m./day x 0.20m = 6.40 cu.m./day

(2) Productivity of Manpower Loading 1.4 cu.m/hr.-man x 8.0hr. = 11.52 cu.m./man-day

6.40 cu.m./day / 11.52 cu.m./man-day = 0.56 men

Tb 1.27

Table 1.5.7(19/296) Unit Cost Analyses

UC No. 4-DMB-L	**Name of Work : Demolition and Removal of Concrete/Metal Structure & Bridge on Land**
Unit of Work	Description of Work : Demolition of Bridge & Concrete Structure, Incl. Loading
Cu.m.	Quantity of Unit Cost Analysis : 15.00 Cu.m. /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.00	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Welder	@2.00	day	2.00	988.10	1,976.20	-	-	1,976.20	*988.1*	*1.00*	
1.3	Skilled Labor	@2.00	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.4	Common Labor	@5.00	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
1.5	Scaffolder	@3.00 for Scaffold	day	3.00	854.10	2,562.30	-	-	2,562.30	*854.1*	*1.00*	
	SUB-TOTAL FOR LABOR					10,349.25		0.00	10,349.25			
2	MATERIALS											
2.1	Good Lumber	for Scaffold	bd.ft.	80.00	40.00	3,200.00	0.00	0.00	3,200.00	*40.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					3,200.00		0.00	3,200.00			
3	EQUIPMENT											
3.1	Rock Drill / Breaker	@1	hr.	8.00	156.00	1,248.00	0.00	0.00	1,248.00	*156.00*	*1.00*	
3.2	Metal Muncher Machine	@1	hr.	8.00	89.00	712.00	0.00	0.00	712.00	*89.00*	*1.00*	
3.3	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	for Breaker	hr.	8.00	1,739.00	13,912.00	0.00	0.00	13,912.00	*1,739.00*	*1.00*	
3.4	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	for Loading	hr.	3.00	1,739.00	5,217.00	0.00	0.00	5,217.00	*1,739.00*	*1.00*	
3.6	Miscellaneous Tools	10 % of Labor	%	10	0.00	1,034.93	0.00	0.00	1,034.93			
	SUB-TOTAL FOR EQUIPMENT					22,123.93		0.00	22,123.93			
	ESTIMATED DIRECT COST (EDC)					35,673.18		0.00	35,673.18			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,994.24		0.00	4,994.24			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,880.09		0.00	4,880.09			
	TOTAL COST FOR	15 Cu.m.		Including VAT		45,547.51		0.00	45,547.51			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		2,711.16		0.00	2,711.16			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		3,036.50		0.00	3,036.50			

* Productivity of Backhoe Loading

0.6 cu.m./cycl. x (60min. / 2.00 min./cycl.) x 30% = 5.40 cu.m./hr.

Therefore, Loading Time for 15.0cu.m. = 15.0cu.m. / 5.4cu.m./hr. = 2.78 hr. -------- **3.0** hr.

Tb 1.28

Table 1.5.7(20/296) Unit Cost Analyses

UC No.	4-DMB-W	**Name of Work :**	**Demolition and Removal of Concrete/Metal Structure & Bridge on Water**											
Unit of Work		Description of Work :	Demolition of Bridge & Concrete Structure, Incl. Loading											
Cu.m.		Quantity of Unit Cost Analysis :			15.00	Cu.m.	/day							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)			For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount		Unit Cost	Amount				
1	LABOR												
1.1	Foreman	@1.00	day	1.00	1,230.50	1,230.50		-	-	1,230.50	*1230.5*	*1.00*	
1.2	Welder	@2.00	day	2.00	988.10	1,976.20		-	-	1,976.20	*988.1*	*1.00*	
1.3	Skilled Labor	@2.00	day	2.00	854.10	1,708.20		-	-	1,708.20	*854.1*	*1.00*	
1.4	Common Labor	@5.00	day	5.00	574.41	2,872.05		-	-	2,872.05	*574.41*	*1.00*	
1.5	Scaffolder	@3.00 for Scaffold	day	3.00	854.10	2,562.30		-	-	2,562.30	*854.1*	*1.00*	
	SUB-TOTAL FOR LABOR					10,349.25			0.00	10,349.25			
2	MATERIALS												
2.1	Good Lumber	for Scaffold	bd.ft.	80.00	40.00	3,200.00		0.00	0.00	3,200.00	*40.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					3,200.00			0.00	3,200.00			
3	EQUIPMENT												
3.1	Rock Drill / Breaker	@1	hr.	8.00	156.00	1,248.00		0.00	0.00	1,248.00	*156.00*	*1.00*	
3.2	Metal Muncher Machine	@1	hr.	8.00	89.00	712.00		0.00	0.00	712.00	*89.00*	*1.00*	
3.3	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	for Breaker	hr.	8.00	1,739.00	13,912.00		0.00	0.00	13,912.00	*1,739.00*	*1.00*	
3.4	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	for Loading	hr.	3.00	1,739.00	5,217.00		0.00	0.00	5,217.00	*1,739.00*	*1.00*	
3.5	Miscellaneous Tools	10 % of Labor	%	10	0.00	1,034.93		0.00	0.00	1,034.93			
3.6	Deck Barge, DWT 650 t		hr.	8.00	537.00	4,296.00		0.00	0.00	4,296.00	*537.00*	*1.00*	
3.7	Tugboat, 500HP		hr.	8.00	1,603.00	12,824.00		0.00	0.00	12,824.00	*1,603.00*	*1.00*	
]	SUB-TOTAL FOR EQUIPMENT					39,243.93			0.00	39,243.93			
	ESTIMATED DIRECT COST (EDC)					52,793.18			0.00	52,793.18			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		7,391.04			0.00	7,391.04			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		7,222.11			0.00	7,222.11			
	TOTAL COST FOR	15 Cu.m.		Including VAT		67,406.33			0.00	67,406.33			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		4,012.28			0.00	4,012.28			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		4,493.76			0.00	4,493.76			

* Productivity of Backhoe Loading

0.6 cu.m./cycl. x (60min. / 2.00 min./cycl.) x 30% = 5.40 cu.m./hr.

Therefore, Loading Time for 15.0cu.m. = 15.0cu.m. / 5.4cu.m./hr. = 2.78 hr. -------- **3.0** hr.

Tb 1.29

Table 1.5.7(21/296) Unit Cost Analyses

UC No. 4-DMP	**Name of Work : Demolition and Removal of Pavement**
Unit of Work	Description of Work : Demolition of Pavement, Incl. Loading
Sq.m.	Quantity of Unit Cost Analysis : 128 Sq.m. /day (t = 0.230 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@8	day	8.00	854.10	6,832.80	-	-	6,832.80	*854.1*	*1.00*	
1.3	Common Labor	@8	day	8.00	574.41	4,595.28	-	-	4,595.28	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					12,658.58		0.00	12,658.58			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)		ltr.	104.00	45.00	4,680.00	0.00	0.00	4,680.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					4,680.00		0.00	4,680.00			
3	EQUIPMENT											
3.1	Pneumatic Breaker (Jackhammer)	@4	hr.	32.00	51.00	1,632.00	0.00	0.00	1,632.00	*51.00*	*1.00*	
3.2	Air Compressor, 250Cfm, 73HP		hr.	8.00	574.00	4,592.00	0.00	0.00	4,592.00	*574.00*	*1.00*	
3.3	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	1.44	1,739.00	2,508.14	0.00	0.00	2,508.14	*1,739.00*	*1.00*	
3.4	Miscellaneous Tools	10 % of Labor	%	10	0.00	1,265.86	0.00	0.00	1,265.86			
	SUB-TOTAL FOR EQUIPMENT					9,998.00		0.00	9,998.00			
	ESTIMATED DIRECT COST (EDC)					27,336.58		0.00	27,336.58			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,827.12		0.00	3,827.12			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,739.64		0.00	3,739.64			
	TOTAL COST FOR	128 Sq.m.		Including VAT		34,903.34		0.00	34,903.34			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		243.47		0.00	243.47			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		272.68		0.00	272.68			
	UNIT COST FOR	1 Cu.m.		Including VAT		1,185.58		0.00	1,185.58			

(1) Daily Production of Jackhammer : 4 sq.m./hr. x @4 x 8.0hr. = 128.00 sq.m./day

128 sq.m./day x 0.23m = 29.44 cu.m./day

(2) Productivity of Backhoe : 60min. / 1.67 min./cycle x 0.57cu.m. x 8.0hr. = 163.30 cu.m./day

29.44 cu.m./day / 163.30 cu.m./day x 8.0hr. = 1.44 hr.

(3) Computation of Diesel Fuel Consumption of Compressor : Hourly Diesel Fuel Consumption = 13.0 ltr./hr.

Here; Capacity = 73.0 HP = 54.4 kW

Diesel Fuel Consumption Rate = 0.232 ltr./kW-hr.

Table 1.5.7(22/296) Unit Cost Analyses

UC No. 4-DMS	**Name of Work : Demolition by Jackhammer and Removal of Concrete Structure**
Unit of Work	Description of Work : Demolition, Incl. Loading
Cu.m.	Quantity of Unit Cost Analysis : 9.60 Cu.m. /day (Structure: t= 0.400 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@6	day	6.00	854.10	5,124.60	-	-	5,124.60	*854.1*	*1.00*	
1.3	Common Labor	@4 @0.83 for Loading	day	4.83	574.41	2,776.32	-	-	2,776.32	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					9,131.42		0.00	9,131.42			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)		ltr.	72.00	45.00	3,240.00	0.00	0.00	3,240.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					3,240.00		0.00	3,240.00			
3	EQUIPMENT											
3.1	Pneumatic Breaker (Jackhammer)	@3	hr.	24.00	51.00	1,224.00	0.00	0.00	1,224.00	*51.00*	*1.00*	
3.2	Air Compressor, 160Cfm, 51HP		hr.	8.00	417.00	3,336.00	0.00	0.00	3,336.00	*417.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	913.14	0.00	0.00	913.14			
	SUB-TOTAL FOR EQUIPMENT					5,473.14		0.00	5,473.14			
	ESTIMATED DIRECT COST (EDC)					17,844.56		0.00	17,844.56			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,498.24		0.00	2,498.24			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,441.14		0.00	2,441.14			
	TOTAL COST FOR	10 Cu.m.		Including VAT		22,783.93		0.00	22,783.93			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		2,119.04		0.00	2,119.04			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		2,373.33		0.00	2,373.33			
	UNIT COST FOR	1 Sq.m.		Including VAT		949.33		0.00	949.33			

(1) Daily Production of Jackhammer : 1.00 sq.m./hr.-set x @3set x 8.0hr. = 24.00 sq.m./day

24 sq.m./day x 0.40m = 9.60 cu.m./day

(2) Productivity of Manpower Loading 1.4 cu.m/hr.-mai x 8.0hr. = 11.52 cu.m./man-day

9.60 cu.m./day / 11.52 cu.m./man-day = 0.83 men

(3) Computation of Diesel Fuel Consumption of Compressor : Hourly Diesel Fuel Consumption = 9.0 ltr./hr.

Here; Capacity = 51.0 HP = 38.0 kW

Diesel Fuel Consumption Rate = 0.232 ltr./kW-hr.

Tb 1. 31

Table 1.5.7(23/296) Unit Cost Analyses

New

UC No.	4-RM-CR	**Name of Work :**	**Removal of Collapsed Revetment on Water**										
Unit of Work		Description of Work :	Removal of existing collapsed revetment										
Cu.m.		Quantity of Unit Cost Analysis :	260 Cu.m. /day										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	######	day	10.40	574.41	5,973.86	-	-	5,973.86	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					7,204.36		0.00	7,204.36			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	10.67	1,739.00	18,549.33	0.00	0.00	18,549.33	*1,739.00*	*1.00*	
3.2	Deck Barge, DWT 650 t		hr.	8.00	537.00	4,296.00	0.00	0.00	4,296.00	*537.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	8.00	1,603.00	12,824.00	0.00	0.00	12,824.00	*1,603.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					35,669.33		0.00	35,669.33			
	ESTIMATED DIRECT COST (EDC)					42,873.70		0.00	42,873.70			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,002.32		0.00	6,002.32			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,865.12		0.00	5,865.12			
	TOTAL COST FOR	260 Cu.m.		Including VAT		54,741.14		0.00	54,741.14			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		187.98		0.00	187.98			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		210.54		0.00	210.54			

Tb 1. 32

Table 1.5.7(24/296) Unit Cost Analyses

UC No.	4-RM-FP	**Name of Work : Removal of Foundation Pile (Pull Out) in the River (on Water)**											
Unit of Work		Description of Work : Pull out of Foundation Pile of Boat Station, Jetty and Pile Dolphin											
Nos.		Quantity of Unit Cost Analysis : 30.00 Nos. /day											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Barge Crew	@1	day	1.00	988.10	988.10	-	-	988.10	*988.1*	*1.00*	
1.2	Welder	@1	day	1.00	988.10	988.10	-	-	988.10	*988.1*	*1.00*	
1.2	Rigger	@2	day	2.00	988.10	1,976.20	-	-	1,976.20	*988.1*	*1.00*	
1.2	Skilled Labor	@3	day	3.00	854.10	2,562.30	-	-	2,562.30	*854.1*	*1.00*	
1.3	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,042.84		0.00	10,042.84			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)		ltr.	304.00	45.00	13,680.00	0.00	0.00	13,680.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					13,680.00		0.00	13,680.00			
3	EQUIPMENT											
3.1	Electric Vibratory Hammer, 60kW		hr.	8.00	622.00	4,976.00	0.00	0.00	4,976.00	*622.00*	*1.00*	
3.2	Crawler Crane, 40t, 190HP		hr.	8.00	1,729.00	13,832.00	0.00	0.00	13,832.00	*1,729.00*	*1.00*	
3.3	Generator Set, 200kW		hr.	8.00	322.00	2,576.00	0.00	0.00	2,576.00	*322.00*	*1.00*	
3.4	Deck Barge, DWT 650 t		hr.	8.00	537.00	4,296.00	0.00	0.00	4,296.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 20t, 180HP		hr.	4.00	1,184.00	4,736.00	0.00	0.00	4,736.00	*1,184.00*	*1.00*	
3.6	Miscellaneous Tools	10 % of Labor	%	10	0.00	1,004.28	0.00	0.00	1,004.28			
	SUB-TOTAL FOR EQUIPMENT					31,420.28		0.00	31,420.28			
	ESTIMATED DIRECT COST (EDC)					55,143.12		0.00	55,143.12			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		7,720.04		0.00	7,720.04			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		7,543.58		0.00	7,543.58			
	TOTAL COST FOR	30 Nos.		Including VAT		70,406.74		0.00	70,406.74			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		2,095.44		0.00	2,095.44			
	UNIT COST FOR	**1 Nos.**		Including VAT		2,346.89		0.00	2,346.89			

(1) Daily Pulling out Number of Piles : 30.00 nos./day

Length[m]	0~6	6~10	10~16	16~
Nos.	52	38	30	24

(2) Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 33

Table 1.5.7(25/296) Unit Cost Analyses

UC No. 4-TM-DP	**Name of Work : Trimming of Existing Drainage Pipe**
Unit of Work	Description of Work :
L.m.	Quantity of Unit Cost Analysis : 3 L.m. (t = 0.100 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Skilled Labor	@0.13	day	0.13	854.10	106.76	-	-	106.76	*854.1*	*1.00*	
1.3	Common Labor	@0.38	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					475.98		0.00	475.98			
2	MATERIALS											
2.1	Gasoline		ltr.	4.00	55.00	220.00	-	-	220.00	*55.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					220.00		0.00	220.00			
3	EQUIPMENT											
3.1	Concrete Saw, 14" Dia.		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	47.60	0.00	0.00	47.60			
	SUB-TOTAL FOR EQUIPMENT					381.60		0.00	381.60			
	ESTIMATED DIRECT COST (EDC)					1,077.58		0.00	1,077.58			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		150.86		0.00	150.86			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		147.41		0.00	147.41			
	TOTAL COST FOR	3 L.m.		Including VAT		1,375.85		0.00	1,375.85			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		409.48		0.00	409.48			
	UNIT COST FOR	**1 L.m.**		Including VAT		458.62		0.00	458.62			
	UNIT COST FOR	1 Sq.m.		Including VAT		4,586.17		0.00	4,586.17			

(1) Computation of Fuel Consumption : Hourly Fuel Consumption = 2.0 ltr./hr.

Here; Capacity = 7.5 HP = 5.6 kW

Fuel Consumption Rate = 0.254 ltr./kW-hr.

Tb 1. 34

Table 1.5.7(26/296) Unit Cost Analyses

New

UC No.	4-STRUT	**Name of Work :**	**Removal and Re-erection of Fence Support Strut**											
Unit of Work		Description of Work	Removal and Re-erection of Fence Support Strut											
Nos.		Quantity of Unit Cost Analysis :			100	Nos.								
No.	Name of Item	Description		Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
						Unit Cost	Amount	Unit Cost	Amount				
1	LABOR	Removal	Re-erection										
1.1	Foreman	@0.90	@1.20	day	2.10	1,230.50	2,584.05	-	-	2,584.05	*1230.5*	*1.00*	
1.2	Common Labor	@5.18	@6.90	day	12.08	574.41	6,936.00	-	-	6,936.00	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						9,520.05		0.00	9,520.05			
2	MATERIALS												
2.3	Miscellaneous Materials	9 % of Labor		%	9	0.00	856.80	0.00	0.00	856.80			
	SUB-TOTAL FOR MATERIAL						856.80		0.00	856.80			
3	EQUIPMENT												
	SUB-TOTAL FOR EQUIPMENT						0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)						10,376.86		0.00	10,376.86			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		1,452.76		0.00	1,452.76			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		1,419.55		0.00	1,419.55			
	TOTAL COST FOR	100.00 Nos.			Including VAT		13,249.17		0.00	13,249.17			
	UNIT COST FOR	**1 Nos.**			Excluding VAT		118.30		0.00	118.30			
	UNIT COST FOR	**1 Nos.**			Including VAT		132.49		0.00	132.49			

Tb 1. 35

Table 1.5.7(27/296) Unit Cost Analyses

New

UC No.	4-FENCE	**Name of Work :**	**Removal of existing Fence**											
Unit of Work		Description of Work :	Mesh Gauge 10.5cm*10.5cm, H=1.5m											
L.m.		Quantity of Unit Cost Analysis :	100 m											
No.	Name of Item	Description		Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
						Unit Cost	Amount	Unit Cost	Amount				
1	LABOR	Foundation/Post	Fence										
1.1	Foreman	@0.71	@0.45	day	1.16	1,230.50	1,430.46	-	-	1,430.46	*1230.5*	*1.00*	
1.2	Common Labor	@6.15	@7.58	day	13.73	574.41	7,883.78	-	-	7,883.78	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						9,314.23		0.00	9,314.23			
2	MATERIALS												
2.3	Miscellaneous Materials	1 % of Labor		%	1	0.00	93.14	0.00	0.00	93.14			
	SUB-TOTAL FOR MATERIAL						93.14		0.00	93.14			
3	EQUIPMENT												
	SUB-TOTAL FOR EQUIPMENT						0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)						9,407.38		0.00	9,407.38			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		1,317.03		0.00	1,317.03			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		1,286.93		0.00	1,286.93			
	TOTAL COST FOR	100.00 m			Including VAT		12,011.34		0.00	12,011.34			
	UNIT COST FOR	**1 m**			Excluding VAT		107.24		0.00	107.24			
	UNIT COST FOR	**1 m**			Including VAT		120.11		0.00	120.11			

Tb 1. 36

Table 1.5.7(28/296) Unit Cost Analyses

New

UC No. 4-GRAIL	**Name of Work : Removal of existing guardrail**
Unit of Work	Description of Work :
L.m.	Quantity of Unit Cost Analysis : 10 m

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Common Labor	@2.8	day	4.20	574.41	2,412.52	-	-	2,412.52	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,412.52		0.00	2,412.52			
2	MATERIALS											
2.3	Miscellaneous Materials	2 % of Labor	%	2	0.00	53.08	0.00	0.00	53.08			
	SUB-TOTAL FOR MATERIAL					53.08		0.00	53.08			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					2,465.60		0.00	2,465.60			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		345.18		0.00	345.18			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		337.29		0.00	337.29			
	TOTAL COST FOR	10.00 m		Including VAT		3,148.07		0.00	3,148.07			
	UNIT COST FOR	**1 m**		Excluding VAT		281.08		0.00	281.08			
	UNIT COST FOR	**1 m**		Including VAT		314.81		0.00	314.81			

Tb 1. 37

Table 1.5.7(29/296) Unit Cost Analyses

New

UC No. 4-LPOST	**Name of Work : Removal of Lighting Post**												
Unit of Work	Description of Work : Removal of Lighting Post												
Nos.	Quantity of Unit Cost Analysis : 10 Nos.												
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Electrician		day	3.75	854.10	3,202.88	-	-	3,202.88	*854.1*	*1.00*	
1.2	Common Labor		day	3.00	574.41	1,723.23	-	-	1,723.23	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,926.11		0.00	4,926.11			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.85day	hr.	6.80	518.00	3,522.40	0.00	0.00	3,522.40	*518.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,522.40		0.00	3,522.40			
	ESTIMATED DIRECT COST (EDC)					8,448.51		0.00	8,448.51			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,182.79		0.00	1,182.79			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,155.76		0.00	1,155.76			
	TOTAL COST FOR 10 Nos.			Including VAT		10,787.05		0.00	10,787.05			
	UNIT COST FOR 1 Nos.			Excluding VAT		963.13		0.00	963.13			
	UNIT COST FOR 1 Nos.			Including VAT		1,078.71		0.00	1,078.71			

Tb 1. 38

Table 1.5.7(30/296) Unit Cost Analyses

New

UC No. 4-WOOD-ST	**Name of Work : Demolition and Removal of Existing Wooden Structure**
Unit of Work	Description of Work : Demolition and removal of existing wooden structure
Sq.m.	Quantity of Unit Cost Analysis : 1 Sq.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.06	1,230.50	73.83	-	-	73.83	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.06	854.10	51.25	-	-	51.25	*854.1*	*1.00*	
	SUB-TOTAL FOR LABOR					125.08		0.00	125.08			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	0.012day	hr.	0.13	1,739.00	222.59	0.00	0.00	222.59	*1,739.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					222.59		0.00	222.59			
	ESTIMATED DIRECT COST (EDC)					347.67		0.00	347.67			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		48.67		0.00	48.67			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		47.56		0.00	47.56			
	TOTAL COST FOR 1 Sq.m.			Including VAT		443.90		0.00	443.90			
	UNIT COST FOR 1 Sq.m.			Excluding VAT		396.34		0.00	396.34			
	UNIT COST FOR 1 Sq.m.			Including VAT		443.90		0.00	443.90			

Tb 1. 39

Table 1.5.7(31/296) Unit Cost Analyses

New

UC No.	4-CUT-BOAT	**Name of Work :**	**Dismantlement and Removal of Existing Abandoned Boat**										
Unit of Work		Description of Work :	Dismantlement and Removal of Existing Abandoned Boat										
Ton		Quantity of Unit Cost Analysis :			10	ton							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman		day	1.63	1,230.50	1,999.56	-	-	1,999.56	*1230.5*	*1.00*	
1.2	Welder		day	3.28	988.10	3,236.03	-	-	3,236.03	*988.1*	*1.00*	
1.3	Skilled Labor		day	2.60	854.10	2,220.66	-	-	2,220.66	*854.1*	*1.00*	
1.4	Common Labor		day	0.95	574.41	545.69	-	-	545.69	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					8,001.94		0.00	8,001.94			
2	MATERIALS											
2.3	Miscellaneous Materials	17 % of Labor	%	17	0.00	1,360.33	0.00	0.00	1,360.33			
	SUB-TOTAL FOR MATERIAL					1,360.33		0.00	1,360.33			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t	0.650day	hr.	5.20	3,843.00	19,983.60	0.00	0.00	19,983.60	*3,843.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					19,983.60		0.00	19,983.60			
	ESTIMATED DIRECT COST (EDC)					29,345.87		0.00	29,345.87			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,108.42		0.00	4,108.42			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,014.51		0.00	4,014.51			
	TOTAL COST FOR	10 ton		Including VAT		37,468.81		0.00	37,468.81			
	UNIT COST FOR	**1 ton**		Excluding VAT		3,345.43		0.00	3,345.43			
	UNIT COST FOR	**1 ton**		Including VAT		3,746.88		0.00	3,746.88			

Tb 1. 40

Table 1.5.7(32/296) Unit Cost Analyses

New

UC No.	4-RM-PIPE	**Name of Work :**	**Removal of Existing Pipe at Backfill Site**										
Unit of Work		Description of Work :	Removal of Existing Pipe, 700 ~ 1000 mm Dia.										
L.m.		Quantity of Unit Cost Analysis :	10.00 L.m.										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.15	854.10	128.12	-	-	128.12	*854.1*	*1.00*	
1.3	Common Labor		day	0.75	574.41	430.81	-	-	430.81	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,112.65		0.00	1,112.65			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP		hr.	1.90	518.00	984.20	0.00	0.00	984.20	*518.00*	*1.00*	
3.2	Miscellaneous Tools	31 % of Labor & Equip.	%	31	0.00	650.02	0.00	0.00	650.02			
	SUB-TOTAL FOR EQUIPMENT					1,634.22		0.00	1,634.22			
	ESTIMATED DIRECT COST (EDC)					2,746.87		0.00	2,746.87			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		384.56		0.00	384.56			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		375.77		0.00	375.77			
	TOTAL COST FOR	10 L.m.		Including VAT		3,507.20		0.00	3,507.20			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		313.14		0.00	313.14			
	UNIT COST FOR	**1 L.m.**		Including VAT		350.72		0.00	350.72			

Tb 1. 41

Table 1.5.7(33/296) Unit Cost Analyses

UC No. 4-EXTL	**Name of Work : Excavation, Open Cut (Volume>50,000cu.m.) by Bulldozer (335HP)**
Unit of Work	Description of Work : Excavation, such as Floodway or Pond, Using Bulldozer 335HP
Cu.m.	Quantity of Unit Cost Analysis : 202.0 Cu.m. / Hr.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	0.13	574.41	71.80	-	-	71.80	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					225.61		0.00	225.61			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Crawler Tractor (Bulldozer) 335HP		hr.	1.00	6,102.00	6,102.00	0.00	0.00	6,102.00	*6,102.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	22.56	0.00	0.00	22.56			
	SUB-TOTAL FOR EQUIPMENT					6,124.56		0.00	6,124.56			
	ESTIMATED DIRECT COST (EDC)					6,350.18		0.00	6,350.18			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		889.02		0.00	889.02			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		868.70		0.00	868.70			
	TOTAL COST FOR	202 Cu.m.		Including VAT		8,107.90		0.00	8,107.90			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		35.84		0.00	35.84			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		40.14		0.00	40.14			

* Productivity of Bulldozer 20 m of Handling Distance

5.55cu.m./cycle x (60min. / 1.3 min./cycle) x 80% = 202.00 cu.m./hr.

Tb 1. 42

Table 1.5.7(34/296) Unit Cost Analyses

UC No.	4-EXTS	**Name of Work :**	**Excavation, Open Cut (Volume<50,000cu.m.) by Bulldozer (215HP)**										
Unit of Work		Description of Work :	Excavation, Using Bulldozer 215HP										
Cu.m.		Quantity of Unit Cost Analysis :	111.0	Cu.m.	/ Hr.								
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	0.13	574.41	71.80	-	-	71.80	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					225.61		0.00	225.61			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Crawler Tractor (Bulldozer) 215HP		hr.	1.00	4,657.00	4,657.00	0.00	0.00	4,657.00	*4,657.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	22.56	0.00	0.00	22.56			
	SUB-TOTAL FOR EQUIPMENT					4,679.56		0.00	4,679.56			
	ESTIMATED DIRECT COST (EDC)					4,905.18		0.00	4,905.18			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		686.72		0.00	686.72			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		671.03		0.00	671.03			
	TOTAL COST FOR	111 Cu.m.		Including VAT		6,262.93		0.00	6,262.93			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		50.38		0.00	50.38			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		56.42		0.00	56.42			

* Productivity of Bulldozer 20 m of Handling Distance

3.06cu.m./cycle x (60min. / 1.3 min./cycle) x 80% = 111.00 cu.m./hr.

Tb 1. 43

Table 1.5.7(35/296) Unit Cost Analyses

UC No. 4-EXBL	**Name of Work : Excavation and Loading by Backhoe (1.5 cu.m.)**
Unit of Work	Description of Work : Backhoe Excavation & Loading: for River Channel or Drainage Channel
Cu.m.	Quantity of Unit Cost Analysis : 600.0 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 1.5cu.m., 222HP		hr.	8.00	4,242.00	33,936.00	0.00	0.00	33,936.00	*4,242.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	180.49	0.00	0.00	180.49			
	SUB-TOTAL FOR EQUIPMENT					34,116.49		0.00	34,116.49			
	ESTIMATED DIRECT COST (EDC)					35,921.40		0.00	35,921.40			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,029.00		0.00	5,029.00			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,914.05		0.00	4,914.05			
	TOTAL COST FOR	600 Cu.m.		Including VAT		45,864.44		0.00	45,864.44			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		68.25		0.00	68.25			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		76.44		0.00	76.44			

* Productivity of Backhoe 600 cu.m./day = 75 cu.m./hr.

Tb 1. 44

Table 1.5.7(36/296) Unit Cost Analyses

UC No. 4-EXBS	**Name of Work : Excavation and Loading by Backhoe (0.63 cu.m.)**
Unit of Work	Description of Work : Backhoe Excavation & Loading: for Structures and Revetments
Cu.m.	Quantity of Unit Cost Analysis : 200.0 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	8.00	1,739.00	13,912.00	0.00	0.00	13,912.00	*1,739.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	180.49	0.00	0.00	180.49			
	SUB-TOTAL FOR EQUIPMENT					14,092.49		0.00	14,092.49			
	ESTIMATED DIRECT COST (EDC)					15,897.40		0.00	15,897.40			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,225.64		0.00	2,225.64			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,174.76		0.00	2,174.76			
	TOTAL COST FOR 200 Cu.m.			Including VAT		20,297.80		0.00	20,297.80			
	UNIT COST FOR 1 Cu.m.			Excluding VAT		90.62		0.00	90.62			
	UNIT COST FOR 1 Cu.m.			Including VAT		101.49		0.00	101.49			

* Productivity of Backhoe 200 cu.m./day = 25 cu.m./hr.

Tb 1. 45

Table 1.5.7(37/296) Unit Cost Analyses

UC No. 4-EXB-SS	**Name of Work : Excavation, Small Amount (Volume<100cu.m./location) by Backhoe (0.2cu.m.)**
Unit of Work	Description of Work : Backhoe Excavation: Small Amount for Structures and Revetments, Total volume in each site < 100 cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 35.0 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.16cu.m., 36HP		hr.	8.00	1,084.00	8,672.00	0.00	0.00	8,672.00	*1,084.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	180.49	0.00	0.00	180.49			
	SUB-TOTAL FOR EQUIPMENT					8,852.49		0.00	8,852.49			
	ESTIMATED DIRECT COST (EDC)					10,657.40		0.00	10,657.40			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,492.04		0.00	1,492.04			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,457.93		0.00	1,457.93			
	TOTAL COST FOR	35 Cu.m.		Including VAT		13,607.37		0.00	13,607.37			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		347.13		0.00	347.13			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		388.78		0.00	388.78			

* Productivity of Backhoe 35 cu.m./day = 4.375 cu.m./hr.

Tb 1. 46

Table 1.5.7(38/296) Unit Cost Analyses

UC No. 4-EXM	**Name of Work : Excavation, Manpower**
Unit of Work	Description of Work : Manpower Excavation
Cu.m.	Quantity of Unit Cost Analysis : 10.0 Cu.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@6	day	6.00	574.41	3,446.46	-	-	3,446.46	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,676.96		0.00	4,676.96			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor	%	10	0.00	467.70	0.00	0.00	467.70			
	SUB-TOTAL FOR EQUIPMENT					467.70		0.00	467.70			
	ESTIMATED DIRECT COST (EDC)					5,144.66		0.00	5,144.66			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		720.25		0.00	720.25			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		703.79		0.00	703.79			
	TOTAL COST FOR	10 Cu.m.		Including VAT		6,568.70		0.00	6,568.70			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		586.49		0.00	586.49			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		656.87		0.00	656.87			

Tb 1.47

Table 1.5.7(39/296) Unit Cost Analyses

UC No. 4-LD1	**Name of Work : Loading, Using Wheel Loader (2.80 cu.m.)**
Unit of Work	Description of Work : Wheel Loader (145HP) : Loading for Excavated Materials - Excavated by Bulldozer
Cu.m.	Quantity of Unit Cost Analysis : 134.0 Cu.m. / Hr.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.00	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	0.13	574.41	71.80	-	-	71.80	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					225.61		0.00	225.61			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Wheel Loader (Articulated), 3.10cu.m., 170HP		hr.	1.00	3,453.00	3,453.00	0.00	0.00	3,453.00	*3,453.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	22.56	0.00	0.00	22.56			
	SUB-TOTAL FOR EQUIPMENT					3,475.56		0.00	3,475.56			
	ESTIMATED DIRECT COST (EDC)					3,701.18		0.00	3,701.18			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		518.16		0.00	518.16			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		506.32		0.00	506.32			
	TOTAL COST FOR	134 Cu.m.		Including VAT		4,725.66		0.00	4,725.66			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		31.49		0.00	31.49			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		35.27		0.00	35.27			

* Productivity of Wheel Loader

2.80cu.m./cycle x (60min. / 1.0 min./cycle) x 80% = 134.00 cu.m./hr.

Tb 1. 48

Table 1.5.7(40/296) Unit Cost Analyses

UC No. 4-LD2	**Name of Work : Loading, Using Backhoe (1.5 cu.m.)**
Unit of Work	Description of Work : Loading for Excavated Materials -Excavated by Bulldozer
Cu.m.	Quantity of Unit Cost Analysis : 780.0 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.00	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 1.5cu.m., 222HP		hr.	8.00	4,242.00	33,936.00	0.00	0.00	33,936.00	*4,242.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	180.49	0.00	0.00	180.49			
	SUB-TOTAL FOR EQUIPMENT					34,116.49		0.00	34,116.49			
	ESTIMATED DIRECT COST (EDC)					35,921.40		0.00	35,921.40			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,029.00		0.00	5,029.00			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,914.05		0.00	4,914.05			
	TOTAL COST FOR	780 Cu.m.		Including VAT		45,864.44		0.00	45,864.44			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		52.50		0.00	52.50			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		58.80		0.00	58.80			

* Productivity of Backhoe 780 cu.m./day = 97.5 cu.m./hr.

Tb 1. 49

Table 1.5.7(41/296) Unit Cost Analyses

UC No.	4-LD3	**Name of Work :**	**Loading, Using Backhoe (0.63 cu.m.)**										
Unit of Work		Description of Work :	Loading for Excavated Materials -Excavated by Bulldozer										
Cu.m.		Quantity of Unit Cost Analysis :			310.0	Cu.m.	/ Day						
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1.00	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	8.00	1,739.00	13,912.00	0.00	0.00	13,912.00	*1,739.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	180.49	0.00	0.00	180.49			
	SUB-TOTAL FOR EQUIPMENT					14,092.49		0.00	14,092.49			
	ESTIMATED DIRECT COST (EDC)					15,897.40		0.00	15,897.40			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,225.64		0.00	2,225.64			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,174.76		0.00	2,174.76			
	TOTAL COST FOR	310 Cu.m.		Including VAT		20,297.80		0.00	20,297.80			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		58.46		0.00	58.46			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		65.48		0.00	65.48			

* Productivity of Backhoe 310 cu.m./day = 38.75 cu.m./hr.

Tb 1. 50

Table 1.5.7(42/296) Unit Cost Analyses

New

UC No. 4-LD4	**Name of Work : Loading, Using Backhoe (1.0 cu.m.) at Napindan Jetty**
Unit of Work	Description of Work : Loading for Excavated Materials -Excavated by Bulldozer at Napindan Jetty
Cu.m.	Quantity of Unit Cost Analysis : 611.2 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.00	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 1.0cu.m., 138HP	@2	hr.	16.00	3,106.00	49,696.00	0.00	0.00	49,696.00	*3,106.00*	*1.00*	
3.2	Deck Barge, DWT 650 t		hr.	8.00	537.00	4,296.00	0.00	0.00	4,296.00	*537.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	180.49	0.00	0.00	180.49			
	SUB-TOTAL FOR EQUIPMENT					54,172.49		0.00	54,172.49			
	ESTIMATED DIRECT COST (EDC)					55,977.40		0.00	55,977.40			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		7,836.84		0.00	7,836.84			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		7,657.71		0.00	7,657.71			
	TOTAL COST FOR	611 Cu.m.		Including VAT		71,471.95		0.00	71,471.95			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		104.41		0.00	104.41			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		116.94		0.00	116.94			

* Productivity of Backhoe 611.20 cu.m./day = 76.4 cu.m./hr.

Tb 1.51

Table 1.5.7(43/296) Unit Cost Analyses

UC No. 4-HBL05	**Name of Work : Hauling - 0.5 km, Loaded by Backhoe (1.5 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 0.5 Km, Loading = Backhoe 1.5cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 200 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR 200 Cu.m.			Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR 1 Cu.m.			Excluding VAT		64.12		0.00	64.12			
	UNIT COST FOR 1 Cu.m.			Including VAT		71.81		0.00	71.81			

* Productivity of Hauling

100.0cu.m. / 0.50day = 200 cu.m./day

Tb 1.52

Table 1.5.7(44/296) Unit Cost Analyses

UC No. 4-HBL1	**Name of Work : Hauling - 1 km, Loaded by Backhoe (1.5 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 1 Km, Loading = Backhoe 1.5cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 167 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	167 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		76.94		0.00	76.94			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		86.18		0.00	86.18			

* Productivity of Hauling

100.0cu.m. / 0.60day = 166.667 cu.m./day

Tb 1. 53

Table 1.5.7(45/296) Unit Cost Analyses

UC No. 4-HBL1.5	**Name of Work : Hauling - 1.5 km, Loaded by Backhoe (1.5 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 1.5 Km, Loading = Backhoe 1.5cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 143 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	143 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		89.77		0.00	89.77			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		100.54		0.00	100.54			

* Productivity of Hauling

100.0cu.m. / 0.70day = 142.857 cu.m./day

Tb 1.54

Table 1.5.7(46/296) Unit Cost Analyses

UC No. 4-HBL2	**Name of Work : Hauling - 2 km, Loaded by Backhoe (1.5 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 2 Km, Loading = Backhoe 1.5cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 125 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	125 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		102.59		0.00	102.59			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		114.90		0.00	114.90			

* Productivity of Hauling

100.0cu.m. / 0.80day = 125 cu.m./day

Tb 1.55

Table 1.5.7(47/296) Unit Cost Analyses

UC No. 4-HBL5	**Name of Work : Hauling - 5 km, Loaded by Backhoe (1.5 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 5 Km, Loading = Backhoe 1.5cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 67.00 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	67 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		191.40		0.00	191.40			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		214.37		0.00	214.37			

* Productivity of Hauling

100.0cu.m. / 1.50day = 67.0 cu.m./day

Tb 1. 56

Table 1.5.7(48/296) Unit Cost Analyses

UC No. 4-HBL10	**Name of Work : Hauling - 10 km, Loaded by Backhoe (1.5 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 10 Km, Loading = Backhoe 1.5cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 37 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	37 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		346.59		0.00	346.59			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		388.18		0.00	388.18			

* Productivity of Hauling

100.0cu.m. / 2.70day = 37 cu.m./day

Tb 1.57

Table 1.5.7(49/296) Unit Cost Analyses

UC No. 4-HBS05	**Name of Work : Hauling - 0.5 km, Loaded by Backhoe (0.63 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 0.5 Km, Loading = Backhoe 0.63cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 143 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	143 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		89.77		0.00	89.77			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		100.54		0.00	100.54			

* Productivity of Hauling

100.0cu.m. / 0.70day = 142.857 cu.m./day

Tb 1.58

Table 1.5.7(50/296) Unit Cost Analyses

UC No. 4-HBS1	**Name of Work : Hauling - 1 km, Loaded by Backhoe (0.63 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 1 Km, Loading = Backhoe 0.63cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 125 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	125 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		102.59		0.00	102.59			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		114.90		0.00	114.90			

* Productivity of Hauling

100.0cu.m. / 0.80day = 125 cu.m./day

Tb 1.59

Table 1.5.7(51/296) Unit Cost Analyses

UC No. 4-HBS1.5	**Name of Work : Hauling - 1.5 km, Loaded by Backhoe (0.63 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 1.5 Km, Loading = Backhoe 0.63cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 111 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	111 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		115.42		0.00	115.42			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		129.27		0.00	129.27			

* Productivity of Hauling

100.0cu.m. / 0.90day = 111.111 cu.m./day

Tb 1. 60

Table 1.5.7(52/296) Unit Cost Analyses

UC No. 4-HBS2	**Name of Work : Hauling - 2 km, Loaded by Backhoe (0.63 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 2 Km, Loading = Backhoe 0.63cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 100 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	100 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		128.24		0.00	128.24			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		143.63		0.00	143.63			

* Productivity of Hauling

100.0cu.m. / 1.00day = 100 cu.m./day

Tb 1. 61

Table 1.5.7(53/296) Unit Cost Analyses

UC No. 4-HBS5	**Name of Work : Hauling - 5 km, Loaded by Backhoe (0.63 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 5 Km, Loading = Backhoe 0.63cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 59.00 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	59 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		217.35		0.00	217.35			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		243.44		0.00	243.44			

* Productivity of Hauling

100.0cu.m. / 1.70day = 59.0 cu.m./day

Tb 1. 62

Table 1.5.7(54/296) Unit Cost Analyses

UC No.	4-HBS10	**Name of Work : Hauling - 10 km, Loaded by Backhoe (0.63 cu.m.)**											
Unit of Work		Description of Work : Hauling Distance = 10 Km, Loading = Backhoe 0.63cu.m.											
Cu.m.		Quantity of Unit Cost Analysis : 35 Cu.m. / Day											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	35 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		366.40		0.00	366.40			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		410.37		0.00	410.37			

* Productivity of Hauling

100.0cu.m. / 2.85day = 35 cu.m./day

Tb 1. 63

Table 1.5.7(55/296) Unit Cost Analyses

UC No. 4-HBS15	**Name of Work : Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)**
Unit of Work	Description of Work : Hauling Distance = 15 Km, Loading = Backhoe 0.63cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 21 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@0.13	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					728.22		0.00	728.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Dump Truck, 9cu.m., 12t		hr.	8.00	1,306.00	10,448.00	0.00	0.00	10,448.00	*1,306.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	72.82	0.00	0.00	72.82			
	SUB-TOTAL FOR EQUIPMENT					10,520.82		0.00	10,520.82			
	ESTIMATED DIRECT COST (EDC)					11,249.04		0.00	11,249.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,574.87		0.00	1,574.87			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,538.87		0.00	1,538.87			
	TOTAL COST FOR	21 Cu.m.		Including VAT		14,362.78		0.00	14,362.78			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		610.66		0.00	610.66			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		683.94		0.00	683.94			

* Productivity of Hauling

100.0cu.m. / 4.70day = 21 cu.m./day

Tb 1. 64

Table 1.5.7(56/296) Unit Cost Analyses

UC No. 4-SP	**Name of Work : Spreading in Stockpile or Backfill Site**
Unit of Work	Description of Work : Spread, Using Bulldozer 15t (140HP)
Cu.m.	Quantity of Unit Cost Analysis : 1,024 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,379.32		0.00	2,379.32			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Crawler Tractor (Bulldozer)	140HP	hr.	8.00	2,361.00	18,888.00	0.00	0.00	18,888.00	*2,361.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	237.93	0.00	0.00	237.93			
	SUB-TOTAL FOR EQUIPMENT					19,125.93		0.00	19,125.93			
	ESTIMATED DIRECT COST (EDC)					21,505.25		0.00	21,505.25			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,010.74		0.00	3,010.74			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,941.92		0.00	2,941.92			
	TOTAL COST FOR	1,024 Cu.m.		Including VAT		27,457.91		0.00	27,457.91			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		23.94		0.00	23.94			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		26.81		0.00	26.81			

* Productivity of Spreading

Q = 86.0 cu.m./hr. - 1.1 x 20.00m = 64.00 cu.m./hr.

Hp = 100 / Q x 0.5 = 0.781 hr./100cu.m. ----- 128.00 cu.m./hr. = 1,024.00 cu.m./day

Tb 1. 65

Table 1.5.7(57/296) Unit Cost Analyses

UC No.	4-SF	**Name of Work :**	**Sand Fill, in Wide Area**
Unit of Work		Description of Work :	Sand Placing and Compaction, Using Purchased Material
Cu.m.		Quantity of Unit Cost Analysis :	690 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,379.32		0.00	2,379.32			
2	MATERIALS											
2.1	Sand (washed)	Bulking Factor= 1.35	cu.m.	931.50	594.00	553,311.00	0.00	0.00	553,311.00	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					553,311.00		0.00	553,311.00			
3	EQUIPMENT											
3.1	Crawler Tractor (Bulldozer) 140HP	@690cu.m./day	hr.	8.00	2,361.00	18,888.00	0.00	0.00	18,888.00	*2,361.00*	*1.00*	
3.2	Static Pneumatic-tire Roller, 20 t	@1,330cu.m./day	hr.	4.15	1,750.00	7,262.50	0.00	0.00	7,262.50	*1,750.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	237.93	0.00	0.00	237.93			
	SUB-TOTAL FOR EQUIPMENT					26,388.43		0.00	26,388.43			
	ESTIMATED DIRECT COST (EDC)					582,078.75		0.00	582,078.75			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		81,491.03		0.00	81,491.03			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		79,628.37		0.00	79,628.37			
	TOTAL COST FOR	690 Cu.m.		Including VAT		743,198.15		0.00	743,198.15			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		961.70		0.00	961.70			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		1,077.10		0.00	1,077.10			

* Productivity of Sand Fill

Bulldozer :	690.0 cu.m./day ---	8 hour						
Compactor :	1,330.0 cu.m./day ---	690.0	/	1,330.0	=	0.519	day	
					=	4.150	hour	

Tb 1. 66

Table 1.5.7(58/296) Unit Cost Analyses

UC No.	4-SF-SS	**Name of Work :**	**Sand Fill, in Small Area: V<100 cu.m./location**
Unit of Work		Description of Work :	Sand Placing and Compaction, Using Purchased Material, Total volume in each site < 100 cu.m.
Cu.m.		Quantity of Unit Cost Analysis :	41.0 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1 /100cu.m.	day	0.41	1,230.50	504.51	-	-	504.51	*1230.5*	*1.00*	
1.2	Common Labor	@7 /100cu.m.	day	2.87	574.41	1,648.56	-	-	1,648.56	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,153.06		0.00	2,153.06			
2	MATERIALS											
2.1	Sand (washed)		cu.m.	54.67	594.00	32,473.98	0.00	0.00	32,473.98	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					32,473.98		0.00	32,473.98			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.16cu.m., 36HP	41cu.m./day	hr.	8.00	1,084.00	8,672.00	0.00	0.00	8,672.00	*1,084.00*	*1.00*	
3.2	Vibratory Rammer (Tamper), 280-330	37cu.m./day	hr.	8.86	209.00	1,851.74	0.00	0.00	1,851.74	*209.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	215.31	0.00	0.00	215.31			
	SUB-TOTAL FOR EQUIPMENT					10,739.05		0.00	10,739.05			
	ESTIMATED DIRECT COST (EDC)					45,366.09		0.00	45,366.09			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,351.25		0.00	6,351.25			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		6,206.08		0.00	6,206.08			
	TOTAL COST FOR	41 Cu.m.		Including VAT		57,923.42		0.00	57,923.42			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		1,261.40		0.00	1,261.40			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		1,412.77		0.00	1,412.77			

* Productivity of Sand Fill	Backhoe :	41.0 cu.m./day ---	8 hour						
	Compactor :	37.0 cu.m./day ---	41.0	/	37.0	=	1.108	day	
						=	8.860	hour	
* Material Volume Required :	Sand (washed)	41.0 cu.m.	/	0.9	x	1.2	=	54.67	cu.m.
				"C" factor		"L" factor			

Tb 1.67

Table 1.5.7(59/296) Unit Cost Analyses

UC No. 4-BF1	**Name of Work : Backfill, in Wide Area by Bulldozer (with Excavated Material)**
Unit of Work	Description of Work : Filling & Compaction of Wide Area, such as Existing Channel or Pond, using Excavated Material
Cu.m.	Quantity of Unit Cost Analysis : 50 Cu.m. / hr.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					297.42		0.00	297.42			
2	MATERIALS											
2.1	Sand (washed)		cu.m.	0.00	594.00	0.00	0.00	0.00	0.00	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Crawler Tractor (Bulldozer)	140HP	hr.	1.00	2,361.00	2,361.00	0.00	0.00	2,361.00	*2,361.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	29.74	0.00	0.00	29.74			
	SUB-TOTAL FOR EQUIPMENT					2,390.74		0.00	2,390.74			
	ESTIMATED DIRECT COST (EDC)					2,688.16		0.00	2,688.16			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		376.34		0.00	376.34			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		367.74		0.00	367.74			
	TOTAL COST FOR	50 Cu.m.		Including VAT		3,432.24		0.00	3,432.24			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		61.29		0.00	61.29			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		68.64		0.00	68.64			

* Productivity of Hauling

100.0cu.m. / 2.0hr. = 50 cu.m./hr.

Tb 1.68

Table 1.5.7(60/296) Unit Cost Analyses

UC No. 4-BF2	**Name of Work : Backfill, about Structures and Services (with Excavated Material)**
Unit of Work	Description of Work : Filling & Compaction around Structure & Services, using Excavated Material
Cu.m.	Quantity of Unit Cost Analysis : 100 Cu.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.0	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@6.0 for Spreading	day	6.00	574.41	3,446.46	-	-	3,446.46	*574.41*	*1.00*	
1.3	Common Labor	@4.5 for Compaction	day	4.50	574.41	2,584.85	-	-	2,584.85	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					7,261.81		0.00	7,261.81			
2	MATERIALS											
2.1	Sand (washed)		cu.m.	0.00	594.00	0.00	0.00	0.00	0.00	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	6.00	1,739.00	10,434.00	0.00	0.00	10,434.00	*1,739.00*	*1.00*	
3.2	Vibratory Rammer (Tamper), 280-330		hr.	24.00	209.00	5,016.00	0.00	0.00	5,016.00	*209.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	726.18	0.00	0.00	726.18			
	SUB-TOTAL FOR EQUIPMENT					16,176.18		0.00	16,176.18			
	ESTIMATED DIRECT COST (EDC)					23,437.99		0.00	23,437.99			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,281.32		0.00	3,281.32			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,206.32		0.00	3,206.32			
	TOTAL COST FOR 100 Cu.m.			Including VAT		29,925.62		0.00	29,925.62			
	UNIT COST FOR 1 Cu.m.			Excluding VAT		267.19		0.00	267.19			
	UNIT COST FOR 1 Cu.m.			Including VAT		299.26		0.00	299.26			

Tb 1.69

Table 1.5.7(61/296) Unit Cost Analyses

UC No. 4-BF2-S	**Name of Work : Backfill, about Structures and Services (with Purchased Sand)**
Unit of Work	Description of Work : Filling & Compaction around Structure & Services, using Purchased Material
Cu.m.	Quantity of Unit Cost Analysis : 100 Cu.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@6 for Spreading	day	6.00	574.41	3,446.46	-	-	3,446.46	*574.41*	*1.00*	
1.3	Common Labor	@5 for Compaction	day	4.50	574.41	2,584.85	-	-	2,584.85	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					7,261.81		0.00	7,261.81			
2	MATERIALS											
2.1	Sand for Filling and Base Course		cu.m.	133.34	520.00	69,336.80	0.00	0.00	69,336.80	*520.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					69,336.80		0.00	69,336.80			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	6.00	1,739.00	10,434.00	0.00	0.00	10,434.00	*1,739.00*	*1.00*	
3.2	Vibratory Rammer (Tamper), 280-330		hr.	24.00	209.00	5,016.00	0.00	0.00	5,016.00	*209.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	726.18	0.00	0.00	726.18			
	SUB-TOTAL FOR EQUIPMENT					16,176.18		0.00	16,176.18			
	ESTIMATED DIRECT COST (EDC)					92,774.79		0.00	92,774.79			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		12,988.47		0.00	12,988.47			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		12,691.59		0.00	12,691.59			
	TOTAL COST FOR	100 Cu.m.		Including VAT		118,454.85		0.00	118,454.85			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		1,057.63		0.00	1,057.63			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		1,184.55		0.00	1,184.55			

* Material Volume Required : Sand for Filling and Base Course 100 cu.m. / 0.9 "C" factor x 1.2 "L" factor = 133.34 cu.m.

Tb 1.70

Table 1.5.7(62/296) Unit Cost Analyses

UC No. 4-BF3	**Name of Work : Backfill, Common/Random (with Excavated Material)**
Unit of Work	Description of Work : Filling & Compaction, using Excavated Material
Cu.m.	Quantity of Unit Cost Analysis : 100 Cu.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.00	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@3.20 for Spreading	day	3.20	574.41	1,838.11	-	-	1,838.11	*574.41*	*1.00*	
1.3	Common Labor	@0.24 for Plate Compaction	day	0.24	574.41	137.86	-	-	137.86	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,206.47		0.00	3,206.47			
2	MATERIALS											
2.1	Sand (washed)		cu.m.	0.00	594.00	0.00	0.00	0.00	0.00	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	2.80	1,739.00	4,869.20	0.00	0.00	4,869.20	*1,739.00*	*1.00*	
3.2	Crawler Tractor (Bulldozer) 140HP		hr.	1.20	2,361.00	2,833.20	0.00	0.00	2,833.20	*2,361.00*	*1.00*	
3.3	Vibratory Tandem Smooth Drum, 2.0t		hr.	2.80	667.00	1,867.60	0.00	0.00	1,867.60	*667.00*	*1.00*	
3.4	Vibratory Rammer (Tamper), 280-330		hr.	0.96	209.00	200.64	0.00	0.00	200.64	*209.00*	*1.00*	
3.5	Miscellaneous Tools	10 % of Labor	%	10	0.00	320.65	0.00	0.00	320.65			
	SUB-TOTAL FOR EQUIPMENT					10,091.29		0.00	10,091.29			
	ESTIMATED DIRECT COST (EDC)					13,297.76		0.00	13,297.76			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,861.69		0.00	1,861.69			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,819.13		0.00	1,819.13			
	TOTAL COST FOR	100 Cu.m.		Including VAT		16,978.58		0.00	16,978.58			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		151.59		0.00	151.59			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		169.79		0.00	169.79			

* Productivity of Plate Compactor

3.00day / 100.0cu.m. = 0.03 day/cu.m. ------ 4.0cu.m. x 0.03 day/cu.m. = 0.120 day

Tb 1.71

Table 1.5.7(63/296) Unit Cost Analyses

UC No.	4-BF4	**Name of Work : Backfill/Filling with Cemented Soil (with Excavated Material)**											
Unit of Work		Description of Work : Filling & Compaction, using Excavated Material & Cement(3%~6% of Soil Weight)											
Cu.m.		Quantity of Unit Cost Analysis : 100 Cu.m.											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1.00	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@3.20 for Spreading	day	3.20	574.41	1,838.11	-	-	1,838.11	*574.41*	*1.00*	
1.3	Common Labor	@0.24 for Plate Compaction	day	0.24	574.41	137.86	-	-	137.86	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,206.47		0.00	3,206.47			
2	MATERIALS											
2.1	Portland Cement, Ordinary	2.0 bags/cu.m.	bag.	200.00	215.00	43,000.00	0.00	0.00	43,000.00	*215.00*	*1.00*	
2.1	Sand (washed)		cu.m.	0.00	594.00	0.00	0.00	0.00	0.00	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					43,000.00		0.00	43,000.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	2.80	1,739.00	4,869.20	0.00	0.00	4,869.20	*1,739.00*	*1.00*	
3.2	Crawler Tractor (Bulldozer) 140HP		hr.	1.20	2,361.00	2,833.20	0.00	0.00	2,833.20	*2,361.00*	*1.00*	
3.3	Vibratory Tandem Smooth Drum, 2.0t		hr.	2.80	667.00	1,867.60	0.00	0.00	1,867.60	*667.00*	*1.00*	
3.4	Vibratory Plate Compactor, 13.5HP		hr.	0.96	572.00	549.12	0.00	0.00	549.12	*572.00*	*1.00*	
3.5	Miscellaneous Tools	10 % of Labor	%	10	0.00	320.65	0.00	0.00	320.65			
	SUB-TOTAL FOR EQUIPMENT					10,439.77		0.00	10,439.77			
	ESTIMATED DIRECT COST (EDC)					56,646.24		0.00	56,646.24			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		7,930.47		0.00	7,930.47			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		7,749.21		0.00	7,749.21			
	TOTAL COST FOR	100 Cu.m.		Including VAT		72,325.92		0.00	72,325.92			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		645.77		0.00	645.77			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		723.26		0.00	723.26			

* Productivity of Plate Compactor

3.00day / 100.0cu.m. = 0.03 day/cu.m. ------ 4.0cu.m. x 0.03 day/cu.m. = 0.120 day

Tb 1.72

Table 1.5.7(64/296) Unit Cost Analyses

UC No. 4-BF-SS	**Name of Work : Backfill, in Small Area: V<100 cu.m./location (with Excavated Material)**
Unit of Work	Description of Work : Filling & Compaction in very Small Area, using Excavated Material, Total volume in each site < 100 cu.m.
Cu.m.	Quantity of Unit Cost Analysis : 41 Cu.m. / Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1 /100cu.m.	day	0.41	1,230.50	504.51	-	-	504.51	*1230.5*	*1.00*	
1.2	Common Labor	@11 /100cu.m.	day	4.31	574.41	2,472.84	-	-	2,472.84	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,977.34		0.00	2,977.34			
2	MATERIALS											
2.1	Sand (washed)		cu.m.	0.00	594.00	0.00	0.00	0.00	0.00	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.16cu.m., 36HP	41cu.m./day	hr.	8.00	1,084.00	8,672.00	0.00	0.00	8,672.00	*1,084.00*	*1.00*	
3.2	Vibratory Rammer (Tamper), 280-330	37cu.m./day	hr.	8.86	209.00	1,851.74	0.00	0.00	1,851.74	*209.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	297.73	0.00	0.00	297.73			
	SUB-TOTAL FOR EQUIPMENT					10,821.47		0.00	10,821.47			
	ESTIMATED DIRECT COST (EDC)					13,798.81		0.00	13,798.81			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,931.83		0.00	1,931.83			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,887.68		0.00	1,887.68			
	TOTAL COST FOR	41 Cu.m.		Including VAT		17,618.33		0.00	17,618.33			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		383.67		0.00	383.67			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		429.72		0.00	429.72			

* Productivity of Sand Fill Backhoe : 41.0 cu.m./day --- 8 hour

Compactor : 37.0 cu.m./day --- 41.0 / 37.0 = 1.108 day

= 8.860 hour

Tb 1.73

Table 1.5.7(65/296) Unit Cost Analyses

UC No. 4-DEM	**Name of Work : Dike Embankment (with Excavated Material)**
Unit of Work	Description of Work : Spreading & Compaction of Dike Embankment, Using Excavated Materials
Cu.m.	Quantity of Unit Cost Analysis : 50 Cu.m. / Hr.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					369.22		0.00	369.22			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Crawler Tractor (Bulldozer) 140HP		hr.	1.00	2,361.00	2,361.00	0.00	0.00	2,361.00	*2,361.00*	*1.00*	
3.2	Vibratory Single Smooth Drum, 11t	@50cu.m./hr.	hr.	1.00	2,004.00	2,004.00	0.00	0.00	2,004.00	*2,004.00*	*1.00*	
3.3	Water Truck, 1,000~3000gals. w/ Sprinkler		hr.	0.50	1,475.00	737.50	0.00	0.00	737.50	*1,475.00*	*1.00*	
3.4	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	0.50	1,739.00	869.50	0.00	0.00	869.50	*1,739.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,972.00		0.00	5,972.00			
	ESTIMATED DIRECT COST (EDC)					6,341.22		0.00	6,341.22			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		887.77		0.00	887.77			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		867.48		0.00	867.48			
	TOTAL COST FOR 50 Cu.m.			Including VAT		8,096.46		0.00	8,096.46			
	UNIT COST FOR 1 Cu.m.			Excluding VAT		144.58		0.00	144.58			
	UNIT COST FOR 1 Cu.m.			Including VAT		161.93		0.00	161.93			

* Embankment Productivity

400.0cu.m. / 1.00day = 50.0 cu.m./hr.

Tb 1.74

Table 1.5.7(66/296) Unit Cost Analyses

UC No. 4-DEM-S	**Name of Work : Dike Embankment (with Parchased Sand)**
Unit of Work	Description of Work : Spreading & Compaction of Dike Embankment, Using Parchesed Sand
Cu.m.	Quantity of Unit Cost Analysis : 50 Cu.m. / Hr.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					369.22		0.00	369.22			
2	MATERIALS											
2.1	Sand for Filling and Base Course		cu.m.	66.67	520.00	34,668.40	0.00	0.00	34,668.40	*520.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					34,668.40		0.00	34,668.40			
3	EQUIPMENT											
3.1	Crawler Tractor (Bulldozer) 140HP		hr.	1.00	2,361.00	2,361.00	0.00	0.00	2,361.00	*2,361.00*	*1.00*	
3.2	Vibratory Single Smooth Drum, 11t	@50cu.m./hr.	hr.	1.00	2,004.00	2,004.00	0.00	0.00	2,004.00	*2,004.00*	*1.00*	
3.3	Water Truck, 1,000~3000gals. w/ Sprinkler		hr.	0.50	1,475.00	737.50	0.00	0.00	737.50	*1,475.00*	*1.00*	
3.4	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	0.50	1,739.00	869.50	0.00	0.00	869.50	*1,739.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,972.00		0.00	5,972.00			
	ESTIMATED DIRECT COST (EDC)					41,009.62		0.00	41,009.62			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,741.35		0.00	5,741.35			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,610.12		0.00	5,610.12			
	TOTAL COST FOR 50 Cu.m.			Including VAT		52,361.08		0.00	52,361.08			
	UNIT COST FOR 1 Cu.m.			Excluding VAT		935.02		0.00	935.02			
	UNIT COST FOR 1 Cu.m.			Including VAT		1,047.22		0.00	1,047.22			

* Embankment Productivity

400.0cu.m. / 1.00day = 50.0 cu.m./hr.

* Material Volume Required : Sand for Filling and Base Course 50 cu.m. / 0.9 x 1.2 = 66.67 cu.m.

Tb 1.75

Table 1.5.7(67/296) Unit Cost Analyses

UC No. 4-GS	**Name of Work : Grass Sodding**												
Unit of Work	Description of Work :												
Sq.m.	Quantity of Unit Cost Analysis : 3 Sq.m. / Hr.												
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Common Labor	@1	day	0.13	574.41	71.80	-	-	71.80	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					71.80		0.00	71.80			
2	MATERIALS											
2.1	Sodding Grass (Carabao grass)		sq.m.	3.00	50.00	150.00	0.00	0.00	150.00	*50.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					150.00		0.00	150.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor & Material	%	10	0.00	22.18	0.00	0.00				
	SUB-TOTAL FOR EQUIPMENT					22.18		0.00	22.18			
	ESTIMATED DIRECT COST (EDC)					243.98		0.00	243.98			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		34.16		0.00	34.16			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		33.38		0.00	33.38			
	TOTAL COST FOR	3 Sq.m.		Including VAT		311.52		0.00	311.52			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		92.71		0.00	92.71			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		103.84		0.00	103.84			

Tb 1.76

Table 1.5.7(68/296) Unit Cost Analyses

UC No. 4-DR-BH6	**Name of Work : River Bank Excavation by Long Arm Backhoe, Hauling by Hopper Barge to Temp. Yard (Pasig)**
Unit of Work	Description of Work : Dredging using Long Arm Backhoe, Hauling to Temporary Stack Yard by Barge
Cu.m	Quantity of Unit Cost Analysis : 22 Cu.m. / Hr. (*1) (Hauling Dist. = 10.00 km)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Dredge Master	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.3	Barge Crew	@4.26	day	0.53	988.10	526.16	-	-	526.16	*988.1*	*1.00*	
1.4	Skilled Labor	@1	day	0.13	854.10	106.76	-	-	106.76	*854.1*	*1.00*	
1.5	Common Labor	@10	day	1.25	574.41	718.01	-	-	718.01	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,658.56		0.00	1,658.56			
2	MATERIALS											
2.1	Miscellaneous Materials	10 % of Equipment	%	10	0.00	909.43	0.00	0.00				
	SUB-TOTAL FOR MATERIAL					909.43		0.00	909.43			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	1.00	1,739.00	1,739.00	0.00	0.00	1,739.00	*1,739.00*	*1.00*	
3.2	Deck Barge, DWT 650 t	@1.00set	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.3	Hopper Barge, DWT-800t, 550cu.m.	@1.13set	hr.	1.13	1,030.00	1,163.90	0.00	0.00	1,163.90	*1,030.00*	*1.00*	
3.4	Crane Barge, GW-319t, w/ Crane 60t	@1.00set	hr.	1.00	3,843.00	3,843.000	0.00	0.00	3,843.00	*3,843.00*	*1.00*	
3.5	Tugboat, 500HP	@1.13set	hr.	1.13	1,603.00	1,811.390	0.00	0.00	1,811.39	*1,603.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					9,094.29		0.00	9,094.29			
	ESTIMATED DIRECT COST (EDC)					11,662.28		0.00	11,662.28			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,632.72		0.00	1,632.72			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,595.40		0.00	1,595.40			
	TOTAL COST FOR	22 Cu.m.		Including VAT		14,890.40		0.00	14,890.40			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		604.32		0.00	604.32			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		676.84		0.00	676.84			

*1) Productivity of Backhoe (Dredging Capacity)

0.60cu.m./cycle x (60min. / 0.5 min./cycle) x 30% = 22.00 cu.m./hr.

= 176.00 cu.m./day

*2) Required nos. of Hopper Barge = 22 cu.m./hr. x (0.10hr. + 20.0 km / 7.4 km/hr.) / 500.0 cu.m. + 1

[Hauling dist.(go & back)] [Hauling speed] [cap.of Hop. Barge] [Loading]

= 1.12 barges ------- 1.13 barges are required

Table 1.5.7(69/296) Unit Cost Analyses

Arrangec

UC No.	4-DR-CLAY	**Name of Work :**	**Dredging (for clay material)**										
Unit of Work		Description of Work :	Dredging for clay, using Backhoe 2.0 Cu.m.										
Cu.m		Quantity of Unit Cost Analysis :	773 Cu.m. / day (*1)										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Dredge Master	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.3	Barge Crew	@4.26	day	4.26	988.10	4,209.31	-	-	4,209.31	*988.1*	*1.00*	
1.4	Skilled Labor	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.5	Common Labor	@10	day	10.00	574.41	5,744.10	-	-	5,744.10	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					13,268.51		0.00	13,268.51			
2	MATERIALS											
2.1	Miscellaneous Materials	10 % of Equipment	%	10	0.00	11,410.40	0.00	0.00				
	SUB-TOTAL FOR MATERIAL					11,410.40		0.00	11,410.40			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 2.0cu.m., 268HP		hr.	8.00	6,677.00	53,416.00	0.00	0.00	53,416.00	*6,677.00*	*1.00*	
3.2	Deck Barge, DWT 650 t	@1.00set	hr.	8.00	537.00	4,296.00	0.00	0.00	4,296.00	*537.00*	*1.00*	
3.4	Crane Barge, GW-319t, w/ Crane 60t	@1.00set	hr.	8.00	3,843.00	30,744.000	0.00	0.00	30,744.00	*3,843.00*	*1.00*	
3.5	Tugboat, 500HP	@2.00set	hr.	16.00	1,603.00	25,648.000	0.00	0.00	25,648.00	*1,603.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					114,104.00		0.00	114,104.00			
	ESTIMATED DIRECT COST (EDC)					138,782.91		0.00	138,782.91			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		19,429.61		0.00	19,429.61			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		18,985.50		0.00	18,985.50			
	TOTAL COST FOR	773 Cu.m.		Including VAT		177,198.01		0.00	177,198.01			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		204.60		0.00	204.60			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		229.16		0.00	229.16			

*1) Productivity of Backhoe (Dredging Capacity)

Q= q x E1 x E2 x T = 119.7 x 0.85 x 0.95 x 8.00 = 773.26 cu.m./hr.

Tb 1.78

Table 1.5.7(70/296) Unit Cost Analyses

Arrangec

UC No.	4-DR-SAND	**Name of Work :**	**Dredging (for sand material)**										
Unit of Work		Description of Work :	Dredging for sand, using Backhoe 2.0 Cu.m.										
Cu.m		Quantity of Unit Cost Analysis :	663 Cu.m. / day (*1)										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Dredge Master	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.3	Barge Crew	@4.26	day	4.26	988.10	4,209.31	-	-	4,209.31	*988.1*	*1.00*	
1.4	Skilled Labor	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.5	Common Labor	@10	day	10.00	574.41	5,744.10	-	-	5,744.10	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					13,268.51		0.00	13,268.51			
2	MATERIALS											
2.1	Miscellaneous Materials	10 % of Equipment	%	10	0.00	11,410.40	0.00	0.00				
	SUB-TOTAL FOR MATERIAL					11,410.40		0.00	11,410.40			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 2.0cu.m., 268HP		hr.	8.00	6,677.00	53,416.00	0.00	0.00	53,416.00	*6,677.00*	*1.00*	
3.2	Deck Barge, DWT 650 t	@1.00set	hr.	8.00	537.00	4,296.00	0.00	0.00	4,296.00	*537.00*	*1.00*	
3.4	Crane Barge, GW-319t, w/ Crane 60t	@1.00set	hr.	8.00	3,843.00	30,744.000	0.00	0.00	30,744.00	*3,843.00*	*1.00*	
3.5	Tugboat, 500HP	@2.00set	hr.	16.00	1,603.00	25,648.000	0.00	0.00	25,648.00	*1,603.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					114,104.00		0.00	114,104.00			
	ESTIMATED DIRECT COST (EDC)					138,782.91		0.00	138,782.91			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		19,429.61		0.00	19,429.61			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		18,985.50		0.00	18,985.50			
	TOTAL COST FOR	663 Cu.m.		Including VAT		177,198.01		0.00	177,198.01			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		238.70		0.00	238.70			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		267.35		0.00	267.35			

*1) Productivity of Backhoe (Dredging Capacity)

Q= q x E1 x E2 x T = 102.6 x 0.85 x 0.95 x 8.00 = 662.80 cu.m./hr.

Tb 1.79

Table 1.5.7(71/296) Unit Cost Analyses

Arrangec

UC No. 4-H-BG8	**Name of Work : Hauling by Barge - 8km, excl. Loading & Un-Loading (for clay material)**
Unit of Work	Description of Work : Transportation of Clay Materials, excl. Loading & Un-Loading
Cu.m.	Quantity of Unit Cost Analysis : 264.5 Cu.m. / Day (Hauling Dist. = 8.00 km)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@2	day	2.00	1,230.50	2,461.00	-	-	2,461.00	*1230.5*	*1.00*	
1.2	Barge Crew	@4	day	4.00	988.10	3,952.40	-	-	3,952.40	*988.1*	*1.00*	
1.3	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.4	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,419.24		0.00	10,419.24			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)		ltr.	264.49	45.00	11,902.06	0.00	0.00	11,902.06	*45.00*	*1.00*	
2.2	Miscellaneous Materials	1 % of Equipment	%	1	0.00	179.76	0.00	0.00	179.76			
	SUB-TOTAL FOR MATERIAL					12,081.82		0.00	12,081.82			
3	EQUIPMENT											
3.1	Tugboat, 500HP	@1	hr.	8.00	1,603.00	12,824.00	0.00	0.00	12,824.00	*1,603.00*	*1.00*	
3.2	Deck Barge, DWT 650 t	@1	hr.	8.00	537.00	4,296.00	0.00	0.00	4,296.00	*537.00*	*1.00*	
3.3	Miscellaneous Tools	5 % of Offshore Equip.	%	5	0.00	856.00	0.00	0.00	856.00			
	SUB-TOTAL FOR EQUIPMENT					17,976.00		0.00	17,976.00			
	ESTIMATED DIRECT COST (EDC)					40,477.06		0.00	40,477.06			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,666.79		0.00	5,666.79			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,537.26		0.00	5,537.26			
	TOTAL COST FOR	264 Cu.m.		Including VAT		51,681.11		0.00	51,681.11			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		174.46		0.00	174.46			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		195.40		0.00	195.40			

* Loading Time (Productivity of Backhoe) : 600 t (=Barge Capacity) / 2 t/cu.m x 1 barge/cycle = 300.00cu.m.

q0= q x E1 x E2 / f = 119.7 x 0.85 x 0.95 / 0.95 = 101.75 cu.m./hr.

300.0 cu.m. /cycle / 101.75 cu.m./hr. = 2.95hr. /cycle

* Landing Time (Port & Job Site) : = 2.00hr.

* Un-Loading Time (Productivity of Backhoe) :

300.0 cu.m. /cycle / 152.80 cu.m./hr. = 1.96hr. /cycle

* Hauling (Shipping) Time (Go & Back, Port & Job Site) : 8 km x 2 ways / 7.4 km/hr. = 2.16hr.

Transportation	Unit	Total	Loading	Landing	Hauling	Unloading	Volume
Cycle Time	hr.	9.07hr.	2.95hr.	2.00hr.	2.16hr.	1.96hr.	300.0 cu.m.
for 1 Day (8 hr.)	hr.	8.00hr.	2.60hr.	1.76hr.	1.91hr.	1.73hr.	**264.5 cu.m.**

Tb 1. 80

Table 1.5.7(72/296) Unit Cost Analyses

Arrangec

UC No. 4-H-BG11	**Name of Work : Hauling by Barge - 11km, excl. Loading & Un-Loading (for sand material)**
Unit of Work	Description of Work : Transportation of Sand Materials, excl. Loading & Un-Loading
Cu.m.	Quantity of Unit Cost Analysis : 235.4 Cu.m. / Day (Hauling Dist. = 11.00 km)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@2	day	2.00	1,230.50	2,461.00	-	-	2,461.00	*1230.5*	*1.00*	
1.2	Barge Crew	@4	day	4.00	988.10	3,952.40	-	-	3,952.40	*988.1*	*1.00*	
1.3	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.4	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,419.24		0.00	10,419.24			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)		ltr.	235.40	45.00	10,593.17	0.00	0.00	10,593.17	*45.00*	*1.00*	
2.2	Miscellaneous Materials	1 % of Equipment	%	1	0.00	224.87	0.00	0.00	224.87			
	SUB-TOTAL FOR MATERIAL					10,818.04		0.00	10,818.04			
3	EQUIPMENT											
3.1	Tugboat, 500HP	@2	hr.	8.00	1,603.00	12,824.00	0.00	0.00	12,824.00	*1,603.00*	*1.00*	
3.2	Deck Barge, DWT 650 t	@2	hr.	16.00	537.00	8,592.00	0.00	0.00	8,592.00	*537.00*	*1.00*	
3.3	Miscellaneous Tools	5 % of Offshore Equip.	%	5	0.00	1,070.80	0.00	0.00	1,070.80			
	SUB-TOTAL FOR EQUIPMENT					22,486.80		0.00	22,486.80			
	ESTIMATED DIRECT COST (EDC)					43,724.08		0.00	43,724.08			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,121.37		0.00	6,121.37			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,981.45		0.00	5,981.45			
	TOTAL COST FOR	235 Cu.m.		Including VAT		55,826.91		0.00	55,826.91			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		211.74		0.00	211.74			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		237.15		0.00	237.15			

* Loading Time (Productivity of Backhoe) : 600 t (=Barge Capacity) / 2 t/cu.m x 1 barge/cycle = 300.00cu.m.

q0= q x E1 x E2 / f = 102.6 x 0.85 x 0.95 / 0.90 = 92.06 cu.m./hr.

300.0 cu.m. /cycle / 92.06 cu.m./hr. = 3.26hr. /cycle

* Landing Time (Port & Job Site) : = 2.00hr.

* Un-Loading Time (Productivity of Backhoe) :

300.0 cu.m. /cycle / 152.80 cu.m./hr. = 1.96hr. /cycle

* Hauling (Shipping) Time (Go & Back, Port & Job Site) : 11 km x 2 ways / 7.4 km/hr. = 2.97hr.

Transportation	Unit	Total	Loading	Landing	Hauling	Unloading	Volume
Cycle Time	hr.	10.20hr.	3.26hr.	2.00hr.	2.97hr.	1.96hr.	300.0 cu.m.
for 1 Day (8 hr.)	hr.	8.00hr.	2.56hr.	1.57hr.	2.33hr.	1.54hr.	**235.4 cu.m.**

Tb 1.81

Table 1.5.7(73/296) Unit Cost Analyses

UC No. 4-H-BG2	**Name of Work : Hauling by Barge - 2km, incl. Loading & Un-Loading**
Unit of Work	Description of Work : Transportation of Materials, incl. Loading & Un-Loading
Cu.m.	Quantity of Unit Cost Analysis : 172.9 Cu.m. / Day (Hauling Dist. = 2.00 km)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@2	day	2.00	1,230.50	2,461.00	-	-	2,461.00	*1230.5*	*1.00*	
1.2	Barge Crew	@4	day	4.00	988.10	3,952.40	-	-	3,952.40	*988.1*	*1.00*	
1.3	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.4	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,419.24		0.00	10,419.24			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)		ltr.	172.86	45.00	7,778.56	0.00	0.00	7,778.56	*45.00*	*1.00*	
2.2	Miscellaneous Materials	1 % of Equipment	%	1	0.00	228.61	0.00	0.00	228.61			
	SUB-TOTAL FOR MATERIAL					8,007.16		0.00	8,007.16			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	Load/Unload	hr.	6.69	1,739.00	11,641.75	0.00	0.00	11,641.75	*1,739.00*	*1.00*	
3.2	Tugboat, 500HP	@1	hr.	1.31	1,603.00	2,092.70	0.00	0.00	2,092.70	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	@2	hr.	16.00	537.00	8,592.00	0.00	0.00	8,592.00	*537.00*	*1.00*	
3.4	Miscellaneous Tools	5 % of Offshore Equip.	%	5	0.00	534.24	0.00	0.00	534.24			
	SUB-TOTAL FOR EQUIPMENT					22,860.69		0.00	22,860.69			
	ESTIMATED DIRECT COST (EDC)					41,287.09		0.00	41,287.09			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,780.19		0.00	5,780.19			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,648.07		0.00	5,648.07			
	TOTAL COST FOR	173 Cu.m.		Including VAT		52,715.36		0.00	52,715.36			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		272.29		0.00	272.29			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		304.97		0.00	304.97			

* Loading Time (Productivity of Backhoe) : 325 t (=Barge Capacity) / 1.8 t/cu.m x 2 barge/cycle = 361.11cu.m.

361.1 cu.m. /cycle / 0.60cu.m. /cycle x (60min./0.5 min./cycle) x 80% = 6.27hr. /cycle

* Landing Time (Port & Job Site) : = 2.00hr.

* Un-Loading Time (Productivity of Backhoe) :

361.1 cu.m. /cycle / 0.60cu.m. /cycle x (60min./0.5 min./cycle) x 65% = 7.72hr. /cycle

* Hauling (Shipping) Time (Go & Back, Port & Job Site) : 2 km x 2 ways / 5.5 km/hr. = 0.73hr.

Transportation	Unit	Total	Loading	Landing	Hauling	Unloading	Volume
Cycle Time	hr.	16.71hr.	6.27hr.	2.00hr.	0.73hr.	7.72hr.	361.1 cu.m.
for 1 Day (8 hr.)	hr.	8.00hr.	3.00hr.	0.96hr.	0.35hr.	3.69hr.	**172.9 cu.m.**

Tb 1.82

Table 1.5.7(74/296) Unit Cost Analyses

UC No. 4-H-BG5	**Name of Work : Hauling by Barge - 5km, incl. Loading & Un-Loading**
Unit of Work	Description of Work : Transportation of Materials, incl. Loading & Un-Loading
Cu.m.	Quantity of Unit Cost Analysis : 162.3 Cu.m. / Day (Hauling Dist. = 5.00 km)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@2	day	2.00	1,230.50	2,461.00	-	-	2,461.00	*1230.5*	*1.00*	
1.2	Barge Crew	@4	day	4.00	988.10	3,952.40	-	-	3,952.40	*988.1*	*1.00*	
1.3	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.4	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,419.24		0.00	10,419.24			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)		ltr.	162.27	45.00	7,301.93	0.00	0.00	7,301.93	*45.00*	*1.00*	
2.2	Miscellaneous Materials	1 % of Equipment	%	1	0.00	228.38	0.00	0.00	228.38			
	SUB-TOTAL FOR MATERIAL					7,530.30		0.00	7,530.30			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	Load/Unload	hr.	6.28	1,739.00	10,928.40	0.00	0.00	10,928.40	*1,739.00*	*1.00*	
3.2	Tugboat, 500HP	@1	hr.	1.72	1,603.00	2,750.26	0.00	0.00	2,750.26	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	@2	hr.	16.00	537.00	8,592.00	0.00	0.00	8,592.00	*537.00*	*1.00*	
3.4	Miscellaneous Tools	5 % of Offshore Equip.	%	5	0.00	567.11	0.00	0.00	567.11			
	SUB-TOTAL FOR EQUIPMENT					22,837.78		0.00	22,837.78			
	ESTIMATED DIRECT COST (EDC)					40,787.32		0.00	40,787.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,710.23		0.00	5,710.23			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,579.71		0.00	5,579.71			
	TOTAL COST FOR	162 Cu.m.		Including VAT		52,077.25		0.00	52,077.25			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		286.55		0.00	286.55			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		320.94		0.00	320.94			

* Loading Time (Productivity of Backhoe) : 325 t (=Barge Capacity) / 1.8 t/cu.m x 2 barge/cycle = 361.11cu.m.

361.1 cu.m. /cycle / 0.60cu.m. /cycle x (60min./0.5 min./cycle) x 80% = 6.27hr. /cycle

* Landing Time (Port & Job Site) : = 2.00hr.

* Un-Loading Time (Productivity of Backhoe) :

361.1 cu.m. /cycle / 0.60cu.m. /cycle x (60min./0.5 min./cycle) x 65% = 7.72hr. /cycle

* Hauling (Shipping) Time (Go & Back, Port & Job Site) : 5 km x 2 ways / 5.5 km/hr. = 1.82hr.

Transportation	Unit	Total	Loading	Landing	Hauling	Unloading	Volume
Cycle Time	hr.	17.80hr.	6.27hr.	2.00hr.	1.82hr.	7.72hr.	361.1 cu.m.
for 1 Day (8 hr.)	hr.	8.00hr.	2.82hr.	0.90hr.	0.82hr.	3.47hr.	**162.3 cu.m.**

Tb 1.83

Table 1.5.7(75/296) Unit Cost Analyses

UC No. 4-H-BG10	**Name of Work : Hauling by Barge - 10km, incl. Loading & Un-Loading**
Unit of Work	Description of Work : Transportation of Materials, incl. Loading & Un-Loading
Cu.m.	Quantity of Unit Cost Analysis : 147.2 Cu.m. / Day (Hauling Dist. = 10.00 km)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@2	day	2.00	1,230.50	2,461.00	-	-	2,461.00	*1230.5*	*1.00*	
1.2	Barge Crew	@4	day	4.00	988.10	3,952.40	-	-	3,952.40	*988.1*	*1.00*	
1.3	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.4	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,419.24		0.00	10,419.24			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)		ltr.	147.23	45.00	6,625.32	0.00	0.00	6,625.32	*45.00*	*1.00*	
2.2	Miscellaneous Materials	1 % of Equipment	%	1	0.00	228.05	0.00	0.00	228.05			
	SUB-TOTAL FOR MATERIAL					6,853.37		0.00	6,853.37			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	Load/Unload	hr.	5.70	1,739.00	9,915.76	0.00	0.00	9,915.76	*1,739.00*	*1.00*	
3.2	Tugboat, 500HP	@1	hr.	2.30	1,603.00	3,683.71	0.00	0.00	3,683.71	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	@2	hr.	16.00	537.00	8,592.00	0.00	0.00	8,592.00	*537.00*	*1.00*	
3.4	Miscellaneous Tools	5 % of Offshore Equip.	%	5	0.00	613.79	0.00	0.00	613.79			
	SUB-TOTAL FOR EQUIPMENT					22,805.26		0.00	22,805.26			
	ESTIMATED DIRECT COST (EDC)					40,077.87		0.00	40,077.87			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,610.90		0.00	5,610.90			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,482.65		0.00	5,482.65			
	TOTAL COST FOR	147 Cu.m.		Including VAT		51,171.42		0.00	51,171.42			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		310.32		0.00	310.32			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		347.56		0.00	347.56			

* Loading Time (Productivity of Backhoe) : 325 t (=Barge Capacity) / 1.8 t/cu.m x 2 barge/cycle = 361.11cu.m.

361.1 cu.m. /cycle / 0.60cu.m. /cycle x (60min./0.5 min./cycle) x 80% = 6.27hr. /cycle

* Landing Time (Port & Job Site) : = 2.00hr.

* Un-Loading Time (Productivity of Backhoe) :

361.1 cu.m. /cycle / 0.60cu.m. /cycle x (60min./0.5 min./cycle) x 65% = 7.72hr. /cycle

* Hauling (Shipping) Time (Go & Back, Port & Job Site) : 10 km x 2 ways / 5.5 km/hr. = 3.64hr.

Transportation	Unit	Total	Loading	Landing	Hauling	Unloading	Volume
Cycle Time	hr.	19.62hr.	6.27hr.	2.00hr.	3.64hr.	7.72hr.	361.1 cu.m.
for 1 Day (8 hr.)	hr.	8.00hr.	2.56hr.	0.82hr.	1.48hr.	3.15hr.	**147.2 cu.m.**

Tb 1.84

Table 1.5.7(76/296) Unit Cost Analyses

UC No. 4-TGB	**Name of Work : Tagboat Operation**
Unit of Work	Description of Work : Modular Float as Working Platform on the Water
Day	Quantity of Unit Cost Analysis : 1.0 Day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Barge Crew	@1	day	1.00	988.10	988.10	-	-	988.10	*988.1*	*1.00*	
	SUB-TOTAL FOR LABOR					988.10		0.00	988.10			
2	MATERIALS											
2.1	Miscellaneous Materials	1 % of Equipment	%	1	0.00	128.24	0.00	0.00	128.24			
	SUB-TOTAL FOR MATERIAL					128.24		0.00	128.24			
3	EQUIPMENT											
3.1	Tugboat, 500HP		hr.	8.00	1,603.00	12,824.00	0.00	0.00	12,824.00	*1,603.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					12,824.00		0.00	12,824.00			
	ESTIMATED DIRECT COST (EDC)					13,940.34		0.00	13,940.34			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,951.65		0.00	1,951.65			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,907.04		0.00	1,907.04			
	TOTAL COST FOR	1 Day		Including VAT		17,799.03		0.00	17,799.03			
	UNIT COST FOR	**1 Day**		Excluding VAT		15,891.99		0.00	15,891.99			
	UNIT COST FOR	**1 Day**		Including VAT		17,799.03		0.00	17,799.03			

Tb 1.85

Table 1.5.7(77/296) Unit Cost Analyses

UC No. 4-X-CS	**Name of Work : Treatment of Hazardous Material, Cement Solidification**
Unit of Work	Description of Work : Cement mixing and Compaction, average depth = 0.5m, Cement: 5% of Soil Weight
Cu.m.	Quantity of Unit Cost Analysis : 390 Cu.m. /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.0	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@3.0	day	3.00	854.10	2,562.30	-	-	2,562.30	*854.1*	*1.00*	
1.3	Common Labor	@3.0	day	3.00	574.41	1,723.23	-	-	1,723.23	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					5,516.03		0.00	5,516.03			
2	MATERIALS											
2.1	Portland Cement, Ordinary	2.0 bags/cu.m.	bag.	780.00	215.00	167,700.00	0.00	0.00	167,700.00	*215.00*	*1.00*	
2.2	Sand (washed)		cu.m.	0.00	594.00	0.00	0.00	0.00	0.00	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					167,700.00		0.00	167,700.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	8.00	1,739.00	13,912.00	0.00	0.00	13,912.00	*1,739.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 5t, 100HP		hr.	8.00	518.00	4,144.00	0.00	0.00	4,144.00	*518.00*	*1.00*	
3.3	Soil Stabilizer		hr.	8.00	2,591.00	20,728.00	0.00	0.00	20,728.00	*2,591.00*	*1.00*	
3.4	Crawler Tractor (Bulldozer) 140HP		hr.	8.00	2,361.00	18,888.00	0.00	0.00	18,888.00	*2,361.00*	*1.00*	
3.5	Static 2&3 Smooth Drum, 9~11t		hr.	8.00	567.00	4,536.00	0.00	0.00	4,536.00	*567.00*	*1.00*	
3.6	Miscellaneous Tools	6 % of Labor & Equip..	%	6	0.00	4,063.44	0.00	0.00	4,063.44			
	SUB-TOTAL FOR EQUIPMENT					66,271.44		0.00	66,271.44			
	ESTIMATED DIRECT COST (EDC)					239,487.47		0.00	239,487.47			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		33,528.25		0.00	33,528.25			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		32,761.89		0.00	32,761.89			
	TOTAL COST FOR	390 Cu.m.		Including VAT		305,777.60		0.00	305,777.60			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		700.04		0.00	700.04			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		784.05		0.00	784.05			

* Daily Productivity of Work: 780 sq.m./day x 0.5 m (depth) = **390.0** cu.m./day

* Required Amount of Cemen 5% of Soil Weight x Unit Weight of Soil 1.6 t/cu.m. = 80 kg/cu.m.(Cement)

(Cement 40 kg/bag) ==> **2.0** bag/cu.m.(Cement)

Daily Requirement: 390.0 cu.m./day x 2.0 bag/cu.m. = **780** bag/day

Tb 1.86

Table 1.5.7(78/296) Unit Cost Analyses

New

UC No.	4-SOLD-PC-75	**Name of Work : Solidification/Stabilization of Dredged Material with 75 kg/Cu.m. Cement Additive**											
Unit of Work		Description of Work : Solidification/Stabilization of Dredged Material with 75 kg/Cu.m. Cement Additive											
Cu.m.		Quantity of Unit Cost Analysis : 560 Cu.m. /day											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.0	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Mechanic	@1.0	day	2.50	1,122.60	2,806.50	-	-	2,806.50	*1122.6*	*1.00*	
1.3	Skilled Labor	@2.0	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.4	Common Labor	@5.0	day	12.50	574.41	7,180.13	-	-	7,180.13	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					17,333.38		0.00	17,333.38			
2	MATERIALS											
2.1	Portland Cement, Ordinary, 40kg/b	1.9 bags/cu.m.	bag.	1,102.50	215.00	237,037.50	0.00	0.00	237,037.50	*215.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					237,037.50		0.00	237,037.50			
3	EQUIPMENT											
3.1	Mixing Plant for Stabilization of Dredged Material		hr.	8.00	0.00	0.00	42,936.00	343,488.00	343,488.00	*42,936.00*	*0.00*	
3.2	Hydraulic Crawler Backhoe, 1.0cu.m., 138HP		hr.	8.00	3,106.00	24,848.00	0.00	0.00	24,848.00	*3,106.00*	*1.00*	
3.3	Miscellaneous Tools	0.5 % of Labor	%	0.5	0.00	86.67	0.00	0.00	86.67			
	SUB-TOTAL FOR EQUIPMENT					24,934.67		343,488.00	368,422.67			
	ESTIMATED DIRECT COST (EDC)					279,305.54		343,488.00	622,793.54			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		39,102.78		48,088.32	87,191.10			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		38,209.00		46,989.16	85,198.16			
	TOTAL COST FOR	560 Cu.m.		Including VAT		356,617.32		438,565.48	795,182.79			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		568.59		699.24	1,267.83			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		636.82		783.15	1,419.97			

* Daily Productivity of Work:

Q= q x E1 x E2 x E3 x T = 125 x 0.8 x 1 x 1 x 5.6 = **560.0** cu.m./hr.

* Required Amount of Cement:

75 kg/cu.m.(Cement)

(Cement 40 kg/bag) ==> **1.9** bag/cu.m.(Cement)

Daily Requirement: 560.0 cu.m./day x 1.9 bag/cu.m. = 1050 bag/day

1050 bag/day x (1 + 0.05) = **1102.5** bag/day

Tb 1.87

Table 1.5.7(79/296) Unit Cost Analyses

New

UC No. 4-SOLD-PC-50	**Name of Work : Solidification/Stabilization of Dredged Material with 50 kg/Cu.m. Cement Additive**
Unit of Work	Description of Work : Solidification/Stabilization of Dredged Material with 50 kg/Cu.m. Cement Additive
Cu.m.	Quantity of Unit Cost Analysis : 560 Cu.m. /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.0	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Mechanic	@1.0	day	2.50	1,122.60	2,806.50	-	-	2,806.50	*1122.6*	*1.00*	
1.3	Skilled Labor	@2.0	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.4	Common Labor	@5.0	day	12.50	574.41	7,180.13	-	-	7,180.13	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					17,333.38		0.00	17,333.38			
2	MATERIALS											
2.1	Portland Cement, Ordinary, 40kg/b	1.3 bags/cu.m.	bag.	735.00	215.00	158,025.00	0.00	0.00	158,025.00	*215.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					158,025.00		0.00	158,025.00			
3	EQUIPMENT											
3.1	Mixing Plant for Stabilization of Dredged Material		hr.	8.00	0.00	0.00	42,936.00	343,488.00	343,488.00	*42,936.00*	*0.00*	
3.2	Hydraulic Crawler Backhoe, 1.0cu.m., 138HP		hr.	8.00	3,106.00	24,848.00	0.00	0.00	24,848.00	*3,106.00*	*1.00*	
3.3	Miscellaneous Tools	0.5 % of Labor	%	0.5	0.00	86.67	0.00	0.00	86.67			
	SUB-TOTAL FOR EQUIPMENT					24,934.67		343,488.00	368,422.67			
	ESTIMATED DIRECT COST (EDC)					200,293.04		343,488.00	543,781.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		28,041.03		48,088.32	76,129.35			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		27,400.09		46,989.16	74,389.25			
	TOTAL COST FOR	560 Cu.m.		Including VAT		255,734.16		438,565.48	694,299.63			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		407.74		699.24	1,106.98			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		456.67		783.15	1,239.82			

* Daily Productivity of Work:

Q= q x E1 x E2 x E3 x T = 125 x 0.8 x 1 x 1 x 5.6 = **560.0** cu.m./hr.

* Required Amount of Cement: 50 kg/cu.m.(Cement)

(Cement 40 kg/bag) ==> **1.3** bag/cu.m.(Cement)

Daily Requirement: 560.0 cu.m./day x 1.3 bag/cu.m. = 700 bag/day

700 bag/day x (1 + 0.05) = **735** bag/day

Tb 1.88

Table 1.5.7(80/296) Unit Cost Analyses

5. CONCRETE

UC No.	5-MPL2	**Name of Work : Plastering with Cement Mortar (1:2), t=12mm**											
Unit of Work		Description of Work : Cement Mortar (1:2) Plastering for Wall, t=12mm											
Sq.m.		Quantity of Unit Cost Analysis : 50.00 Sq.m /day Cement : Sand = 1 / 2.00 in Volume											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.50*	*1.00*	
1.2	Plasterer	@20.0 sq.m./man-day	day	3.00	854.10	2,562.30	-	-	2,562.30	*854.10*	*1.00*	
1.3	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.10*	*1.00*	
1.4	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,649.82		0.00	6,649.82			
2	MATERIALS											
2.1	Portland Cement, Ordinary, 40kg/bag	for Mortar	bag.	15.00	215.00	3,225.00	0.00	0.00	3,225.00	*215.00*	*1.00*	
2.2	Sand (washed)	for Mortar	cu.m.	0.72	594.00	427.68	0.00	0.00	427.68	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					3,652.68		0.00	3,652.68			
3	EQUIPMENT											
3.1	Concrete Mixer, 2 bagger		hr.	1.00	190.00	190.00	0.00	0.00	190.00	*190.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	664.98	0.00	0.00	664.98			
	SUB-TOTAL FOR EQUIPMENT					854.98		0.00	854.98			
	ESTIMATED DIRECT COST (EDC)					11,157.48		0.00	11,157.48			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,562.05		0.00	1,562.05			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,526.34		0.00	1,526.34			
	TOTAL COST FOR	50 Sq.m		Including VAT		14,245.87		0.00	14,245.87			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		254.39		0.00	254.39			
	UNIT COST FOR	**1 Sq.m**		Including VAT		284.92		0.00	284.92			

(1) Daily Production of Mortar, using Concrete Mixer :

Hourly = 0.20 cu.m./batch x 3.00 batch/hr. = 0.60 cu.m./hr.

Daily = 0.60 cu.m./hr. x 1.00 hr. /day = 0.60 cu.m.of Mortar / day

(2) Required Amount of Cement & Sand for 1cu.m. of Mortar : C/S =1 / 2.0 in volume (Unit Weight of Loosened Cement = 1,600 t/cu.m.)

Cement : 0.5 cu.m = 800.0kg / 40kg/bag = 20.00bag / 1cu.m.of Mortar

Sand : 1.0 cu.m. / 1cu.m.of Mortar

Required Amount for 0.60 cu.m. of Mortar Including 20 % of loss

Cement : 0.60 cu.m. x 20.0bag /cu.m. x (1+ 20.00%) = 15.0 bag

Sand : 0.60 cu.m. x 1.0cu.m. /cu.m. x (1+ 20.00%) = 0.72 cu.m.

(3) Daily Production of Cement Mortar Plastering : t= **12.0** mm

0.60cu.m./day (of Mortar) / 0.012cu.m. of mortar / 1sq.m. of plastering = **50.0** sq.m of plastering / day

Tb 1.89

Table 1.5.7(81/296) Unit Cost Analyses

UC No. 5-MP-NS	**Name of Work : Plastering with Non Shrinkage Mortar, t=12mm**
Unit of Work	Description of Work : Cement (Non Shrinkage) Mortar (1:2) Plastering for Wall, t=12mm
Sq.m.	Quantity of Unit Cost Analysis : 50.00 Sq.m /day Cement : Sand = 1 / 2.00 in Volume

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.50*	*1.00*	
1.2	Plasterer	@20.0 sq.m./man-day	day	3.00	854.10	2,562.30	-	-	2,562.30	*854.10*	*1.00*	
1.3	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.10*	*1.00*	
1.4	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,649.82		0.00	6,649.82			
2	MATERIALS											
2.1	Non Shrinkage Mortar	for Mortar	kg	550	30.00	16,500.00	0.00	0.00	16,500.00	*30.00*	*1.00*	
2.2	Sand (washed)	for Mortar	cu.m.	0.66	594.00	392.04	0.00	0.00	392.04	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					16,892.04		0.00	16,892.04			
3	EQUIPMENT											
3.1	Concrete Mixer, 2 bagger		hr.	1.00	190.00	190.00	0.00	0.00	190.00	*190.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	664.98	0.00	0.00	664.98			
	SUB-TOTAL FOR EQUIPMENT					854.98		0.00	854.98			
	ESTIMATED DIRECT COST (EDC)					24,396.84		0.00	24,396.84			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,415.56		0.00	3,415.56			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,337.49		0.00	3,337.49			
	TOTAL COST FOR	50 Sq.m		Including VAT		31,149.89		0.00	31,149.89			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		556.25		0.00	556.25			
	UNIT COST FOR	**1 Sq.m**		Including VAT		623.00		0.00	623.00			

(1) Daily Production of Mortar, using Concrete Mixer :

Hourly = 0.20 cu.m./batch x 3.00 batch/hr. = 0.60 cu.m./hr.

Daily = 0.60 cu.m./hr. x 1.00 hr. /day = 0.60 cu.m.of Mortar / day

(2) Required Amount of Cement & Sand for 1cu.m. of Mortar : C/S =1 / 2.0 in volume (Unit Weight of Loosened Cement = 1,600 t/cu.m.)

Cement : 0.5 cu.m = 800.0kg / 25kg/bag = 32.00bag / 1cu.m.of Mortar

Sand : 1.0 cu.m. / 1cu.m.of Mortar

Required Amount for 0.60 cu.m. of Mortar Including 10 % of loss

Cement : 0.60 cu.m. x 32.0bag /cu.m. x (1+ 10.00%) = 22.0 bag = 550 kg

Sand : 0.60 cu.m. x 1.0cu.m. /cu.m. x (1+ 10.00%) = 0.66 cu.m.

(3) Daily Production of Cement Mortar Plastering : t= **12.0** mm

0.60cu.m./day (of Mortar) / 0.012cu.m. of mortar / 1sq.m. of plastering = **50.0** sq.m of plastering / day

Table 1.5.7(82/296) Unit Cost Analyses

UC No. 5-CP-P	**Name of Work : Concrete Work for Prestressed Concrete, Class-P, Concrete Pump Placing**
Unit of Work	Description of Work : Placing of Class-P Concrete for Prestressed Concrete Structure, Using Concrete Pump
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (40 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Concrete Worker		day	0.84	854.10	717.44	-	-	717.44	*854.1*	*1.00*	
1.3	Common Labor		day	0.96	574.41	551.43	-	-	551.43	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	1.11	574.41	637.60	-	-	637.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,275.62		0.00	2,275.62			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-P(37.7Mpa), Gmax=19mm(3/4)		cu.m.	10.50	4,285.00	44,992.50	0.00	0.00	44,992.50	*4,285.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					44,992.50		0.00	44,992.50			
3	EQUIPMENT											
3.1	Concrete Pump, 60cu.m./hr.		hr.	0.92	1,583.00	1,456.36	0.00	0.00	1,456.36	*1,583.00*	*1.00*	
3.2	Miscellaneous Tools	1 % of Labor &Equip.	%	1	0.00	30.94	0.00	0.00	30.94			
3.3	Miscellaneous Tools	16 % of Curing Labor	%	16	0.00	102.02	0.00	0.00	102.02			
	SUB-TOTAL FOR EQUIPMENT					1,589.32		0.00	1,589.32			
	ESTIMATED DIRECT COST (EDC)					48,857.44		0.00	48,857.44			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,840.04		0.00	6,840.04			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		6,683.70		0.00	6,683.70			
	TOTAL COST FOR	10 Cu.m.		Including VAT		62,381.18		0.00	62,381.18			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		5,569.75		0.00	5,569.75			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		6,238.12		0.00	6,238.12			

* Concrete Volume of Prestressed Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1.91

Table 1.5.7(83/296) Unit Cost Analyses

UC No.	5-CP-M	**Name of Work : Concrete Work for Prestressed Concrete, Class-P, Manpower Placing**											
Unit of Work		Description of Work : Placing of Class-P Concrete for Prestressed Concrete Structure, Using Manpower											
Cu.m.		Quantity of Unit Cost Analysis : 10 Cu.m. (7 cu.m./day)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman		day	1.44	1,230.50	1,771.92	-	-	1,771.92	*1230.5*	*1.00*	
1.2	Concrete Worker		day	1.68	854.10	1,434.89	-	-	1,434.89	*854.1*	*1.00*	
1.3	Common Labor		day	4.59	574.41	2,636.54	-	-	2,636.54	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	1.11	574.41	637.60	-	-	637.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,480.95		0.00	6,480.95			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-P(37.7Mpa), Gmax=19mm(3/4)		cu.m.	10.50	4,285.00	44,992.50	0.00	0.00	44,992.50	*4,285.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					44,992.50		0.00	44,992.50			
3	EQUIPMENT											
3.1	Miscellaneous Tools	4 % of Labor &Equip.	%	4	0.00	233.73	0.00	0.00	233.73			
3.2	Miscellaneous Tools	16 % of Curing Labor	%	16	0.00	102.02	0.00	0.00	102.02			
	SUB-TOTAL FOR EQUIPMENT					335.75		0.00	335.75			
	ESTIMATED DIRECT COST (EDC)					51,809.19		0.00	51,809.19			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		7,253.29		0.00	7,253.29			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		7,087.50		0.00	7,087.50			
	TOTAL COST FOR	10 Cu.m.		Including VAT		66,149.98		0.00	66,149.98			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		5,906.25		0.00	5,906.25			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		6,615.00		0.00	6,615.00			

* Concrete Volume of Prestressed Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1.92

Table 1.5.7(84/296) Unit Cost Analyses

UC No. 5-CA-P	**Name of Work : Concrete Work for Reinforced Concrete, Class-A, Concrete Pump Placing**
Unit of Work	Description of Work : Placing of Class-A Concrete for Reinforced Concrete Structure, Using Concrete Pump
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (40 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Concrete Worker		day	0.84	854.10	717.44	-	-	717.44	*854.1*	*1.00*	
1.3	Common Labor		day	0.96	574.41	551.43	-	-	551.43	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	0.21	574.41	120.63	-	-	120.63	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,758.65		0.00	1,758.65			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-A(20.7Mpa), Gmax=37.5mm(C		cu.m.	10.50	3,210.00	33,705.00	0.00	0.00	33,705.00	*3,210.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					33,705.00		0.00	33,705.00			
3	EQUIPMENT											
3.1	Concrete Pump, 60cu.m./hr.		hr.	0.92	1,583.00	1,456.36	0.00	0.00	1,456.36	*1,583.00*	*1.00*	
3.2	Miscellaneous Tools	1 % of Labor &Equip.	%	1	0.00	30.94	0.00	0.00	30.94			
3.3	Miscellaneous Tools	41 % of Curing Labor	%	41	0.00	49.46	0.00	0.00	49.46			
	SUB-TOTAL FOR EQUIPMENT					1,536.76		0.00	1,536.76			
	ESTIMATED DIRECT COST (EDC)					37,000.41		0.00	37,000.41			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,180.06		0.00	5,180.06			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,061.66		0.00	5,061.66			
	TOTAL COST FOR	10 Cu.m.		Including VAT		47,242.13		0.00	47,242.13			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		4,218.05		0.00	4,218.05			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		4,724.21		0.00	4,724.21			

* Concrete Volume of Reinforced Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1.93

Table 1.5.7(85/296) Unit Cost Analyses

UC No. 5-CA-M	**Name of Work : Concrete Work for Reinforced Concrete, Class-A, Manpower Placing**
Unit of Work	Description of Work : Placing of Class-A Concrete for Reinforced Concrete Structure, Using Manpower
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (16 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.82	1,230.50	1,009.01	-	-	1,009.01	*1230.5*	*1.00*	
1.2	Concrete Worker		day	1.56	854.10	1,332.40	-	-	1,332.40	*854.1*	*1.00*	
1.3	Common Labor		day	1.85	574.41	1,059.79	-	-	1,059.79	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	0.21	574.41	120.63	-	-	120.63	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,521.82		0.00	3,521.82			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-A(20.7Mpa), Gmax=37.5mm(C		cu.m.	10.50	3,210.00	33,705.00	0.00	0.00	33,705.00	*3,210.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					33,705.00		0.00	33,705.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	4 % of Labor &Equip.	%	4	0.00	136.05	0.00	0.00	136.05			
3.2	Miscellaneous Tools	41 % of Curing Labor	%	41	0.00	49.46	0.00	0.00	49.46			
	SUB-TOTAL FOR EQUIPMENT					185.50		0.00	185.50			
	ESTIMATED DIRECT COST (EDC)					37,412.32		0.00	37,412.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,237.73		0.00	5,237.73			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,118.01		0.00	5,118.01			
	TOTAL COST FOR	10 Cu.m.		Including VAT		47,768.05		0.00	47,768.05			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		4,265.00		0.00	4,265.00			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		4,776.81		0.00	4,776.81			

* Concrete Volume of Reinforced Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1.94

Table 1.5.7(86/296) Unit Cost Analyses

UC No. 5-CB-P	**Name of Work : Concrete Work for Massive Concrete, Class-B, Concrete Pump Placing**
Unit of Work	Description of Work : Placing of Class-B Concrete for Massive Concrete Structure, Using Concrete Pump
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (70 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.22	1,230.50	270.71	-	-	270.71	*1230.5*	*1.00*	
1.2	Concrete Worker		day	0.72	854.10	614.95	-	-	614.95	*854.1*	*1.00*	
1.3	Common Labor		day	0.71	574.41	404.96	-	-	404.96	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	0.44	574.41	249.87	-	-	249.87	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,540.49		0.00	1,540.49			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-B(17.24Mpa), Gmax=50mm		cu.m.	10.50	3,000.00	31,500.00	0.00	0.00	31,500.00	*3,000.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					31,500.00		0.00	31,500.00			
3	EQUIPMENT											
3.1	Concrete Pump, 60cu.m./hr.		hr.	0.68	1,583.00	1,076.44	0.00	0.00	1,076.44	*1,583.00*	*1.00*	
3.2	Miscellaneous Tools	1 % of Labor &Equip.	%	1	0.00	23.67	0.00	0.00	23.67			
3.3	Miscellaneous Tools	31 % of Curing Labor	%	31	0.00	77.46	0.00	0.00	77.46			
	SUB-TOTAL FOR EQUIPMENT					1,177.57		0.00	1,177.57			
	ESTIMATED DIRECT COST (EDC)					34,218.06		0.00	34,218.06			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,790.53		0.00	4,790.53			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,681.03		0.00	4,681.03			
	TOTAL COST FOR	10 Cu.m.		Including VAT		43,689.62		0.00	43,689.62			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		3,900.86		0.00	3,900.86			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		4,368.96		0.00	4,368.96			

* Concrete Volume of Massive Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1.95

Table 1.5.7(87/296) Unit Cost Analyses

UC No. 5-CB-M	**Name of Work : Concrete Work for Massive Concrete, Class-B, Manpower Placing**
Unit of Work	Description of Work : Placing of Class-B Concrete for Massive Concrete Structure, Using Manpower
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (16 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.82	1,230.50	1,009.01	-	-	1,009.01	*1230.5*	*1.00*	
1.2	Concrete Worker		day	1.56	854.10	1,332.40	-	-	1,332.40	*854.1*	*1.00*	
1.3	Common Labor		day	1.85	574.41	1,059.79	-	-	1,059.79	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	0.44	574.41	249.87	-	-	249.87	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,651.06		0.00	3,651.06			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-B(17.24Mpa), Gmax=50mm		cu.m.	10.50	3,000.00	31,500.00	0.00	0.00	31,500.00	*3,000.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					31,500.00		0.00	31,500.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	4 % of Labor &Equip.	%	4	0.00	136.05	0.00	0.00	136.05			
3.2	Miscellaneous Tools	31 % of Curing Labor	%	31	0.00	77.46	0.00	0.00	77.46			
	SUB-TOTAL FOR EQUIPMENT					213.51		0.00	213.51			
	ESTIMATED DIRECT COST (EDC)					35,364.57		0.00	35,364.57			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,951.04		0.00	4,951.04			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,837.87		0.00	4,837.87			
	TOTAL COST FOR	10 Cu.m.		Including VAT		45,153.48		0.00	45,153.48			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		4,031.56		0.00	4,031.56			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		4,515.35		0.00	4,515.35			

* Concrete Volume of Massive Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1. 96

Table 1.5.7(88/296) Unit Cost Analyses

UC No. 5-CC-P	**Name of Work : Concrete Work for Small Concrete, Class-C, Concrete Pump Placing**
Unit of Work	Description of Work : Placing of Class-C Concrete for Small Concrete Structure, Using Concrete Pump
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (50 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Concrete Worker		day	0.84	854.10	717.44	-	-	717.44	*854.1*	*1.00*	
1.3	Common Labor		day	0.96	574.41	551.43	-	-	551.43	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	1.11	574.41	637.60	-	-	637.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,275.62		0.00	2,275.62			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-C(20.7Mpa), Gmax=12.5mm(3		cu.m.	10.50	3,420.00	35,910.00	0.00	0.00	35,910.00	*3,420.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					35,910.00		0.00	35,910.00			
3	EQUIPMENT											
3.1	Concrete Pump, 60cu.m./hr.		hr.	0.92	1,583.00	1,456.36	0.00	0.00	1,456.36	*1,583.00*	*1.00*	
3.2	Miscellaneous Tools	1 % of Labor &Equip.	%	1	0.00	30.94	0.00	0.00	30.94			
3.3	Miscellaneous Tools	16 % of Curing Labor	%	16	0.00	102.02	0.00	0.00	102.02			
	SUB-TOTAL FOR EQUIPMENT					1,589.32		0.00	1,589.32			
	ESTIMATED DIRECT COST (EDC)					39,774.94		0.00	39,774.94			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,568.49		0.00	5,568.49			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,441.21		0.00	5,441.21			
	TOTAL COST FOR	10 Cu.m.		Including VAT		50,784.65		0.00	50,784.65			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		4,534.34		0.00	4,534.34			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		5,078.46		0.00	5,078.46			

* Concrete Volume of Small Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1.97

Table 1.5.7(89/296) Unit Cost Analyses

UC No. 5-CC-M	**Name of Work : Concrete Work for Small Structure, Class-C, Manpower Placing**
Unit of Work	Description of Work : Placing of Class-C Concrete for Small Structure, Using Manpower
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (7 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.44	1,230.50	1,771.92	-	-	1,771.92	*1230.5*	*1.00*	
1.2	Concrete Worker		day	1.68	854.10	1,434.89	-	-	1,434.89	*854.1*	*1.00*	
1.3	Common Labor		day	4.59	574.41	2,636.54	-	-	2,636.54	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	1.11	574.41	637.60	-	-	637.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,480.95		0.00	6,480.95			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-C(20.7Mpa), Gmax=12.5mm(3		cu.m.	10.50	3,420.00	35,910.00	0.00	0.00	35,910.00	*3,420.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					35,910.00		0.00	35,910.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	4 % of Labor	%	4	0.00	233.73	0.00	0.00	233.73			
3.2	Miscellaneous Tools	16 % of Curing Labor	%	16	0.00	102.02	0.00	0.00	102.02			
	SUB-TOTAL FOR EQUIPMENT					335.75		0.00	335.75			
	ESTIMATED DIRECT COST (EDC)					42,726.69		0.00	42,726.69			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,981.74		0.00	5,981.74			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,845.01		0.00	5,845.01			
	TOTAL COST FOR	10 Cu.m.		Including VAT		54,553.44		0.00	54,553.44			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		4,870.84		0.00	4,870.84			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		5,455.34		0.00	5,455.34			

* Concrete Volume of Small Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1.98

Table 1.5.7(90/296) Unit Cost Analyses

UC No. 5-CE-P	**Name of Work : Concrete Work for R.C. Pile, Class-E, Concrete Pump Placing**
Unit of Work	Description of Work : Placing of Class-E Concrete for Reinforced Concrete Pile, Using Concrete Pump
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (40 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Concrete Worker		day	0.84	854.10	717.44	-	-	717.44	*854.1*	*1.00*	
1.3	Common Labor		day	0.96	574.41	551.43	-	-	551.43	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	0.21	574.41	120.63	-	-	120.63	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,758.65		0.00	1,758.65			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-E(27.6Mpa), Gmax=25mm		cu.m.	10.50	3,825.00	40,162.50	0.00	0.00	40,162.50	*3,825.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					40,162.50		0.00	40,162.50			
3	EQUIPMENT											
3.1	Concrete Pump, 60cu.m./hr.		hr.	0.92	1,583.00	1,456.36	0.00	0.00	1,456.36	*1,583.00*	*1.00*	
3.2	Miscellaneous Tools	1 % of Labor &Equip.	%	1	0.00	30.94	0.00	0.00	30.94			
3.3	Miscellaneous Tools	41 % of Curing Labor	%	41	0.00	49.46	0.00	0.00	49.46			
	SUB-TOTAL FOR EQUIPMENT					1,536.76		0.00	1,536.76			
	ESTIMATED DIRECT COST (EDC)					43,457.91		0.00	43,457.91			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,084.11		0.00	6,084.11			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,945.04		0.00	5,945.04			
	TOTAL COST FOR	10 Cu.m.		Including VAT		55,487.06		0.00	55,487.06			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		4,954.20		0.00	4,954.20			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		5,548.71		0.00	5,548.71			

* Concrete Volume of Reinforced Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1.99

Table 1.5.7(91/296) Unit Cost Analyses

UC No. 5-CE-M	**Name of Work : Concrete Work for R.C. Pile, Class-E, Manpower Placing**
Unit of Work	Description of Work : Placing of Class-E Concrete for Reinforced Concrete Pile, Using Manpower
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (16 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.82	1,230.50	1,009.01	-	-	1,009.01	*1230.5*	*1.00*	
1.2	Concrete Worker		day	1.56	854.10	1,332.40	-	-	1,332.40	*854.1*	*1.00*	
1.3	Common Labor		day	1.85	574.41	1,059.79	-	-	1,059.79	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	0.21	574.41	120.63	-	-	120.63	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,521.82		0.00	3,521.82			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-E(27.6Mpa), Gmax=25mm		cu.m.	10.50	3,825.00	40,162.50	0.00	0.00	40,162.50	*3,825.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					40,162.50		0.00	40,162.50			
3	EQUIPMENT											
3.1	Miscellaneous Tools	4 % of Labor &Equip.	%	4	0.00	136.05	0.00	0.00	136.05			
3.2	Miscellaneous Tools	41 % of Curing Labor	%	41	0.00	49.46	0.00	0.00	49.46			
	SUB-TOTAL FOR EQUIPMENT					185.50		0.00	185.50			
	ESTIMATED DIRECT COST (EDC)					43,869.82		0.00	43,869.82			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,141.78		0.00	6,141.78			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		6,001.39		0.00	6,001.39			
	TOTAL COST FOR	10 Cu.m.		Including VAT		56,012.99		0.00	56,012.99			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		5,001.16		0.00	5,001.16			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		5,601.30		0.00	5,601.30			

* Concrete Volume of Reinforced Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1. 100

Table 1.5.7(92/296) Unit Cost Analyses

UC No. 5-CF-P	**Name of Work : Concrete Work for Leveling Concrete, Class-F, Concrete Pump Placing**
Unit of Work	Description of Work : Placing of Class-F Concrete for Leveling Concrete, Using Concrete Pump
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (70 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.22	1,230.50	270.71	-	-	270.71	*1230.5*	*1.00*	
1.2	Concrete Worker		day	0.72	854.10	614.95	-	-	614.95	*854.1*	*1.00*	
1.3	Common Labor		day	0.71	574.41	404.96	-	-	404.96	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	0.44	574.41	249.87	-	-	249.87	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,540.49		0.00	1,540.49			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-F(11.7Mpa), Gmax=40mm		cu.m.	10.50	2,825.00	29,662.50	0.00	0.00	29,662.50	*2,825.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					29,662.50		0.00	29,662.50			
3	EQUIPMENT											
3.1	Concrete Pump, 60cu.m./hr.		hr.	0.68	1,583.00	1,076.44	0.00	0.00	1,076.44	*1,583.00*	*1.00*	
3.2	Miscellaneous Tools	1 % of Labor &Equip.	%	1	0.00	23.67	0.00	0.00	23.67			
3.3	Miscellaneous Tools	31 % of Curing Labor	%	31	0.00	77.46	0.00	0.00	77.46			
	SUB-TOTAL FOR EQUIPMENT					1,177.57		0.00	1,177.57			
	ESTIMATED DIRECT COST (EDC)					32,380.56		0.00	32,380.56			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,533.28		0.00	4,533.28			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,429.66		0.00	4,429.66			
	TOTAL COST FOR	10 Cu.m.		Including VAT		41,343.50		0.00	41,343.50			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		3,691.38		0.00	3,691.38			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		4,134.35		0.00	4,134.35			

* Concrete Volume of Leveling Concrete : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1. 101

Table 1.5.7(93/296) Unit Cost Analyses

UC No. 5-CF-M	**Name of Work : Concrete Work for Leveling Concrete, Class-F, Manpower Placing**
Unit of Work	Description of Work : Placing of Class-F Concrete for Leveling Concrete Structure, Using Manpower
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (16 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.82	1,230.50	1,009.01	-	-	1,009.01	*1230.5*	*1.00*	
1.2	Concrete Worker		day	1.56	854.10	1,332.40	-	-	1,332.40	*854.1*	*1.00*	
1.3	Common Labor		day	1.85	574.41	1,059.79	-	-	1,059.79	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	0.44	574.41	249.87	-	-	249.87	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,651.06		0.00	3,651.06			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-F(11.7Mpa), Gmax=40mm		cu.m.	10.50	2,825.00	29,662.50	0.00	0.00	29,662.50	*2,825.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					29,662.50		0.00	29,662.50			
3	EQUIPMENT											
3.1	Miscellaneous Tools	4 % of Labor &Equip.	%	4	0.00	136.05	0.00	0.00	136.05			
3.2	Miscellaneous Tools	31 % of Curing Labor	%	31	0.00	77.46	0.00	0.00	77.46			
	SUB-TOTAL FOR EQUIPMENT					213.51		0.00	213.51			
	ESTIMATED DIRECT COST (EDC)					33,527.07		0.00	33,527.07			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,693.79		0.00	4,693.79			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,586.50		0.00	4,586.50			
	TOTAL COST FOR	10 Cu.m.		Including VAT		42,807.36		0.00	42,807.36			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		3,822.09		0.00	3,822.09			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		4,280.74		0.00	4,280.74			

* Concrete Volume of Leveling Concrete : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1. 102

Table 1.5.7(94/296) Unit Cost Analyses

UC No. 5-CF-MX	**Name of Work : Concrete Work for Leveling Concrete, Class-F, Using Concrete Mixer**
Unit of Work	Description of Work : Leveling Concrete (11.7Mpa)
Cu.m.	Quantity of Unit Cost Analysis : 7.20 Cu.m. / Day (*2)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Concrete Worker	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor	@6	day	6.00	574.41	3,446.46	-	-	3,446.46	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,385.16		0.00	6,385.16			
2	MATERIALS											
2.1	Portland Cement, Ordinary, 40kg/bag	(*1)	bag.	50.40	215.00	10,836.00	0.00	0.00	10,836.00	*215.00*	*1.00*	
2.2	Sand (washed)	(*1)	cu.m.	3.60	594.00	2,138.40	0.00	0.00	2,138.40	*594.00*	*1.00*	
2.3	Gravel, Crushed (ex.G-1)	(*1)	cu.m.	7.20	600.00	4,320.00	0.00	0.00	4,320.00	*600.00*	*1.00*	
2.4	Admixture	10 % of Materials for Conc.	%	10	0.00	1,729.44	0.00	0.00	1,729.44			
	SUB-TOTAL FOR MATERIAL					19,023.84		0.00	19,023.84			
3	EQUIPMENT											
3.1	Concrete Mixer, 2 bagger		hr.	8.00	190.00	1,520.00	0.00	0.00	1,520.00	*190.00*	*1.00*	
3.2	Water Truck, 1,000~3000gals. w/ Sprinkler		hr.	1.00	1,475.00	1,475.00	0.00	0.00	1,475.00	*1,475.00*	*1.00*	
3.3	Concrete Vibrator Head, 25mm(1") Dia.		hr.	8.00	82.00	656.00	0.00	0.00	656.00	*82.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,651.00		0.00	3,651.00			
	ESTIMATED DIRECT COST (EDC)					29,060.00		0.00	29,060.00			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,068.40		0.00	4,068.40			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,975.41		0.00	3,975.41			
	TOTAL COST FOR	7 Cu.m.		Including VAT		37,103.81		0.00	37,103.81			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		4,601.17		0.00	4,601.17			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		5,153.31		0.00	5,153.31			

(*1) Component of Concrete per Cu.m., Class-E

Portland Cement :	7.0 Bag	(*2) Production of Concrete Mixer :							
Fine Aggregate :	0.5 Cu.m.	Hourly =	0.30 cu.m./batch	x	3.00 batch/hr.	=	0.9 cu.m./hr.		
Coarse Aggregate :	1.0 Cu.m.	Daily =	0.90 cu.m./hr.	x	8.00 hr. /day	=	7.20 cu.m./day		
Water :	0.2 Cu.m.								

Tb 1. 103

Table 1.5.7(95/296) Unit Cost Analyses

UC No. 5-CD-M	**Name of Work : Concrete Work for Concrete Block, Class-D, Manpower Placing**
Unit of Work	Description of Work : Placing of Class-D Concrete for Concrete Blocks, Using Manpower
Cu.m.	Quantity of Unit Cost Analysis : 10 Cu.m. (7 cu.m./day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.44	1,230.50	1,771.92	-	-	1,771.92	*1230.5*	*1.00*	
1.2	Concrete Worker		day	1.68	854.10	1,434.89	-	-	1,434.89	*854.1*	*1.00*	
1.3	Common Labor		day	4.59	574.41	2,636.54	-	-	2,636.54	*574.41*	*1.00*	
1.4	Common Labor	for Curing Work	day	1.11	574.41	637.60	-	-	637.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,480.95		0.00	6,480.95			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-D(17.9Mpa), Gmax=37.5mm(C		cu.m.	10.50	3,000.00	31,500.00	0.00	0.00	31,500.00	*3,000.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					31,500.00		0.00	31,500.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	4 % of Labor	%	4	0.00	233.73	0.00	0.00	233.73			
3.2	Miscellaneous Tools	16 % of Curing Labor	%	16	0.00	102.02	0.00	0.00	102.02			
	SUB-TOTAL FOR EQUIPMENT					335.75		0.00	335.75			
	ESTIMATED DIRECT COST (EDC)					38,316.69		0.00	38,316.69			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,364.34		0.00	5,364.34			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,241.72		0.00	5,241.72			
	TOTAL COST FOR	10 Cu.m.		Including VAT		48,922.76		0.00	48,922.76			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		4,368.10		0.00	4,368.10			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		4,892.28		0.00	4,892.28			

* Concrete Volume of Small Structure : 10 x (1 + 0.05) = 10.5 cu.m.

Tb 1. 104

Table 1.5.7(96/296) Unit Cost Analyses

UC No. 5-FR-L	**Name of Work : Formwork F1 (for Large Sized Structure)**
Unit of Work	Description of Work :
sq.m.	Quantity of Unit Cost Analysis : 30.3 sq.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Carpenter	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.4	Common Labor	@5	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					7,518.95		0.00	7,518.95			
2	MATERIALS											
2.1	Form Lumber	5 bd.ft. / 1sq.m. of form	bd.ft.	75.76	36.00	2,727.27	0.00	0.00	2,727.27	*36.00*	*1.00*	
2.2	Plywood, Ordinary, 120 x 240, 10mm thk.	10% loss	sheet	3.858	550.00	2,121.91	0.00	0.00	2,121.91	*550.00*	*1.00*	
2.3	Good Lumber	for Scaffold	bd.ft.	50.51	40.00	2,020.20	0.00	0.00	2,020.20	*40.00*	*1.00*	
2.4	Form Oil	0.2 ltr./sq.m.	ltr.	6.06	87.00	527.27	0.00	0.00	527.27	*87.00*	*1.00*	
2.5	Nail, Common Use	0.2 kg/sq.m.	kg	6.06	75.00	454.55	0.00	0.00	454.55	*75.00*	*1.00*	
2.6	Tie Wire (Ga.16)	0.2 kg/sq.m.	kg	6.06	75.00	454.55	0.00	0.00	454.55	*75.00*	*1.00*	
2.7	Miscellaneous Materials	1 % of other Materials	%	1	0.00	83.06	0.00	0.00	83.06			
	SUB-TOTAL FOR MATERIAL					8,388.81		0.00	8,388.81			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor cost	%	10	0.00	751.90	0.00	0.00	751.90			
	SUB-TOTAL FOR EQUIPMENT					751.90		0.00	751.90			
	ESTIMATED DIRECT COST (EDC)					16,659.65		0.00	16,659.65			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,332.35		0.00	2,332.35			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,279.04		0.00	2,279.04			
	TOTAL COST FOR	30 sq.m.		Including VAT		21,271.05		0.00	21,271.05			
	UNIT COST FOR	**1 sq.m.**		Excluding VAT		626.74		0.00	626.74			
	UNIT COST FOR	**1 sq.m.**		Including VAT		701.94		0.00	701.94			

* Daily Production : 0.379sq.m. /man-hr. x 10 men x 8.0hr. = 30.30 sq.m./day

Form Usage : 3 re-uses for forms (@ 10% loss of Plywood) and falsework (@ 5.0 bd.ft. per sq.m. of forms)

: 2 re-uses for form Lumber

Tb 1. 105

Table 1.5.7(97/296) Unit Cost Analyses

UC No.	5-FR-S	**Name of Work : Formwork F2 (for Small Sized Structure)**											
Unit of Work		Description of Work :											
sq.m.		Quantity of Unit Cost Analysis : 35.29 sq.m.											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Carpenter	@3	day	3.00	854.10	2,562.30	-	-	2,562.30	*854.1*	*1.00*	
1.3	Skilled Labor	@3	day	3.00	854.10	2,562.30	-	-	2,562.30	*854.1*	*1.00*	
1.4	Common Labor	@5	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					9,227.15		0.00	9,227.15			
2	MATERIALS											
2.1	Form Lumber	6 bd.ft. / 1sq.m. of form	bd.ft.	105.88	36.00	3,811.76	0.00	0.00	3,811.76	*36.00*	*1.00*	
2.2	Plywood, Ordinary, 120 x 240, 6mm thk.	20% loss	sheet	4.902	350.00	1,715.69	0.00	0.00	1,715.69	*350.00*	*1.00*	
2.3	Good Lumber	for Scaffold	bd.ft.	58.82	40.00	2,352.94	0.00	0.00	2,352.94	*40.00*	*1.00*	
2.4	Form Oil	0.2 ltr./sq.m.	ltr.	7.06	87.00	614.12	0.00	0.00	614.12	*87.00*	*1.00*	
2.5	Nail, Common Use	0.3 kg/sq.m.	kg	10.59	75.00	794.12	0.00	0.00	794.12	*75.00*	*1.00*	
2.6	Tie Wire (Ga.16)	0.3 kg/sq.m.	kg	10.59	75.00	794.12	0.00	0.00	794.12	*75.00*	*1.00*	
2.7	Miscellaneous Materials	1 % of other Materials	%	1	0.00	100.83	0.00	0.00	100.83			
	SUB-TOTAL FOR MATERIAL					10,183.57		0.00	10,183.57			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor cost	%	10	0.00	922.72	0.00	0.00	922.72			
	SUB-TOTAL FOR EQUIPMENT					922.72		0.00	922.72			
	ESTIMATED DIRECT COST (EDC)					20,333.44		0.00	20,333.44			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,846.68		0.00	2,846.68			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,781.61		0.00	2,781.61			
	TOTAL COST FOR	35 sq.m.		Including VAT		25,961.73		0.00	25,961.73			
	UNIT COST FOR	**1 sq.m.**		Excluding VAT		656.77		0.00	656.77			
	UNIT COST FOR	**1 sq.m.**		Including VAT		735.58		0.00	735.58			

* Daily Production : 0.368sq.m. /man-hr. x 12 men x 8.0hr. = 35.29 sq.m./day

Form Usage : 3 re-uses for forms (@ 20% loss of Plywood) and falsework (@ 5.0 bd.ft. per sq.m. of forms)

: 2 re-uses for form Lumber

Tb 1. 106

Table 1.5.7(98/296) Unit Cost Analyses

UC No.	5-FR-LVL	**Name of Work :**	**Formwork for Leveling Concrete**
Unit of Work		Description of Work :	for Concrete Class-F
Sq.m.		Quantity of Unit Cost Analysis :	10 Sq.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.20	1,230.50	246.10	-	-	246.10	*1230.5*	*1.00*	
1.2	Carpenter		day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor		day	0.60	574.41	344.65	-	-	344.65	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,298.95		0.00	2,298.95			
2	MATERIALS											
2.1	Form Lumber	2 bd.ft. / 1sq.m. of form	bd.ft.	20.00	36.00	720.00	0.00	0.00	720.00	*36.00*	*1.00*	
2.2	Plywood, Ordinary, 120 x 240, 6mm thk.	10% loss	sheet	1.273	350.00	445.60	0.00	0.00	445.60	*350.00*	*1.00*	
2.3	Form Oil	0.2 ltr./sq.m.	ltr.	2.00	87.00	174.00	0.00	0.00	174.00	*87.00*	*1.00*	
2.4	Nail, Common Use	0.2 kg/sq.m.	kg	2.00	75.00	150.00	0.00	0.00	150.00	*75.00*	*1.00*	
2.5	Tie Wire (Ga.16)	0.2 kg/sq.m.	kg	2.00	75.00	150.00	0.00	0.00	150.00	*75.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					1,639.60		0.00	1,639.60			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor	%	10	0.00	229.89	0.00	0.00	229.89			
	SUB-TOTAL FOR EQUIPMENT					229.89		0.00	229.89			
	ESTIMATED DIRECT COST (EDC)					4,168.44		0.00	4,168.44			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		583.58		0.00	583.58			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		570.24		0.00	570.24			
	TOTAL COST FOR	10 Sq.m.		Including VAT		5,322.27		0.00	5,322.27			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		475.20		0.00	475.20			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		532.23		0.00	532.23			

Tb 1.107

Table 1.5.7(99/296) Unit Cost Analyses

UC No. 5-RB-60	**Name of Work : Reinforcing Bar (Grade 415)**
Unit of Work	Description of Work : Cutting, Bending and Setting of Reinforcing Bar, Using Crane
Ton	Quantity of Unit Cost Analysis : 1 Ton

No.	Name of Item	Description		Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR	Cut & Bend	Set										
1.1	Foreman	@0.40	@0.80	day	1.20	1,230.50	1,476.60	-	-	1,476.60	*1230.5*	*1.00*	
1.2	Steel Worker	@2.20	@3.60	day	5.80	854.10	4,953.78	-	-	4,953.78	*854.1*	*1.00*	
1.3	Common Labor	@1.05	@2.25	day	3.30	574.41	1,895.55	-	-	1,895.55	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						8,325.93		0.00	8,325.93			
2	MATERIALS												
2.1	Reinforcing Bar, Deformed, Grade 60 (415)			kg	1,050	36.00	37,800.00	0.00	0.00	37,800.00	*36.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL						37,800.00		0.00	37,800.00			
3	EQUIPMENT												
3.1	Telescopic Boom Truck Crane, 15t, 160HP		(0.04day)	hr.	0.32	994.00	318.08	0.00	0.00	318.08	*994.00*	*1.00*	
3.2	Bar Cutter			hr.	4.20	316.00	1,327.20	0.00	0.00	1,327.20	*316.00*	*1.00*	
3.3	Bar Bender			hr.	4.20	440.00	1,848.00	0.00	0.00	1,848.00	*440.00*	*1.00*	
3.4	Miscellaneous Tools	1 % of Labor		%	1	0.00	83.26	0.00	0.00	83.26			
	SUB-TOTAL FOR EQUIPMENT						3,576.54		0.00	3,576.54			
	ESTIMATED DIRECT COST (EDC)						49,702.47		0.00	49,702.47			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		6,958.35		0.00	6,958.35			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		6,799.30		0.00	6,799.30			
	TOTAL COST FOR	1 Ton			Including VAT		63,460.12		0.00	63,460.12			
	UNIT COST FOR	**1 Ton**			Excluding VAT		56,660.82		0.00	56,660.82			
	UNIT COST FOR	**1 Ton**			Including VAT		63,460.12		0.00	63,460.12			

* Quantity of Reinforcing Steel Bar for Calc. : 1 x (1 + 0.05) = 1.05 t

Tb 1. 108

Table 1.5.7(100/296) Unit Cost Analyses

UC No. 5-RB-40	**Name of Work : Reinforcing Bar (Grade 275)**
Unit of Work	Description of Work : Cutting, Bending and Setting of Reinforcing Bar, Using Crane
Ton	Quantity of Unit Cost Analysis : 1 Ton

No.	Name of Item	Description		Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR	Cut & Bend	Set										
1.1	Foreman	@0.40	@0.80	day	1.20	1,230.50	1,476.60	-	-	1,476.60	*1230.5*	*1.00*	
1.2	Steel Worker	@2.20	@3.60	day	5.80	854.10	4,953.78	-	-	4,953.78	*854.1*	*1.00*	
1.3	Common Labor	@1.05	@2.25	day	3.30	574.41	1,895.55	-	-	1,895.55	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						8,325.93		0.00	8,325.93			
2	MATERIALS												
2.1	Reinforcing Bar, Deformed, Grade 40 (275)			kg	1,050	34.00	35,700.00	0.00	0.00	35,700.00	*34.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL						35,700.00		0.00	35,700.00			
3	EQUIPMENT												
3.1	Telescopic Boom Truck Crane, 15t, 160HP		(0.04day)	hr.	0.32	994.00	318.08	0.00	0.00	318.08	*994.00*	*1.00*	
3.2	Bar Cutter			hr.	4.20	316.00	1,327.20	0.00	0.00	1,327.20	*316.00*	*1.00*	
3.3	Bar Bender			hr.	4.20	440.00	1,848.00	0.00	0.00	1,848.00	*440.00*	*1.00*	
3.4	Miscellaneous Tools	1 % of Labor		%	1	0.00	83.26	0.00	0.00	83.26			
	SUB-TOTAL FOR EQUIPMENT						3,576.54		0.00	3,576.54			
	ESTIMATED DIRECT COST (EDC)						47,602.47		0.00	47,602.47			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		6,664.35		0.00	6,664.35			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		6,512.02		0.00	6,512.02			
	TOTAL COST FOR	1 Ton			Including VAT		60,778.84		0.00	60,778.84			
	UNIT COST FOR	**1 Ton**			Excluding VAT		54,266.82		0.00	54,266.82			
	UNIT COST FOR	**1 Ton**			Including VAT		60,778.84		0.00	60,778.84			

* Quantity of Reinforcing Steel Bar for Calc. : 1 x (1 + 0.05) = 1.05 t

Tb 1. 109

Table 1.5.7(101/296) Unit Cost Analyses

UC No. 5-RB-AB	**Name of Work : Anchor Bar for Concrete Structures**
Unit of Work	Description of Work : Drilling (200mm), Mortar Grouting, and Setting of Anchor Bar D16 (L=300mm)
Kg	Quantity of Unit Cost Analysis : 38 Kg /Day

No.	Name of Item	Description		Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR	Cut & Bend	Set										
1.1	Foreman	@1.00	@1.00	day	2.00	1,230.50	2,461.00	-	-	2,461.00	*1230.5*	*1.00*	
1.2	Skilled Labor	@1.00	@2.00	day	3.00	854.10	2,562.30	-	-	2,562.30	*854.1*	*1.00*	
1.3	Common Labor	@2.00	@3.00	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						7,895.35		0.00	7,895.35			
2	MATERIALS												
2.1	Reinforcing Bar, Deformed, Grade 40 (275)			kg	39.900	34.00	1,356.60	0.00	0.00	1,356.60	*34.00*	*1.00*	
2.2	Non Shrinkage Mortar			kg	10.080	30.00	302.40	0.00	0.00	302.40	*30.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL						1,659.00		0.00	1,659.00			
3	EQUIPMENT												
3.1	Telescopic Boom Truck Crane, 5t, 100HP			hr.	1.00	518.00	518.00	0.00	0.00	518.00	*518.00*	*1.00*	
3.2	Potable Breaker/Drill			hr.	16.00	126.00	2,016.00	0.00	0.00	2,016.00	*126.00*	*1.00*	
3.3	Bar Cutter			hr.	4.00	316.00	1,264.00	0.00	0.00	1,264.00	*316.00*	*1.00*	
3.4	Bar Bender			hr.	4.00	440.00	1,760.00	0.00	0.00	1,760.00	*440.00*	*1.00*	
3.5	Miscellaneous Tools	1 % of Labor		%	1	0.00	78.95	0.00	0.00	78.95			
	SUB-TOTAL FOR EQUIPMENT						5,636.95		0.00	5,636.95			
	ESTIMATED DIRECT COST (EDC)						15,191.30		0.00	15,191.30			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		2,126.78		0.00	2,126.78			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		2,078.17		0.00	2,078.17			
	TOTAL COST FOR	38 Kg			Including VAT		19,396.26		0.00	19,396.26			
	UNIT COST FOR	**1 Kg**			Excluding VAT		455.74		0.00	455.74			
	UNIT COST FOR	**1 Kg**			Including VAT		510.43		0.00	510.43			

* Quantity of Anchor Bar :

D16	1.578	kg/m	x	0.30m	=	0.473	kg/set
	10	set/hr.	x	8.0hr. /day	=	80	set/day
	38.0 Work Q'ty		x (1 +	0.05) =		39.900 Mt'l Q'ty	kg/day

* Quantity of Non Shrinkage Mortar : 40 ml/set x 80 set/day = 3,200 ml/day

(317.5 ml/kg) 0.126 kg/set x 80 set/day = 10.08 kg/day

Table 1.5.7(102/296) Unit Cost Analyses

UC No.	5-ST	**Name of Work :**	**Staging/Scaffolding Work**										
Unit of Work		Description of Work :											
Sq.m.		Quantity of Unit Cost Analysis :			100	Sq.m.							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman		day	3.00	1,230.50	3,691.50	-	-	3,691.50	*1230.5*	*1.00*	
1.2	Scaffolder		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	10.00	574.41	5,744.10	-	-	5,744.10	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					12,852.00		0.00	12,852.00			
2	MATERIALS											
3.1	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	3,216.99	0.00	0.00	3,216.99			
	SUB-TOTAL FOR MATERIAL					3,216.99		0.00	3,216.99			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 15t, 160HP		hr.	8.00	994.00	7,952.00	0.00	0.00	7,952.00	*994.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor	%	5	0.00	642.60	0.00	0.00	642.60			
	SUB-TOTAL FOR EQUIPMENT					8,594.60		0.00	8,594.60			
	ESTIMATED DIRECT COST (EDC)					24,663.59		0.00	24,663.59			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,452.90		0.00	3,452.90			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,373.98		0.00	3,373.98			
	TOTAL COST FOR	100 Sq.m.		Including VAT		31,490.47		0.00	31,490.47			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		281.16		0.00	281.16			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		314.90		0.00	314.90			

Tb 1. 111

Table 1.5.7(103/296) Unit Cost Analyses

UC No.	5-SF	**Name of Work :**	**Supporting/Scaffolding Work**										
Unit of Work		Description of Work :											
Cu.m.		Quantity of Unit Cost Analysis :			100	Cu.m.							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman		day	4.50	1,230.50	5,537.25	-	-	5,537.25	*1230.5*	*1.00*	
1.2	Skilled Labor	as Form Worker	day	9.00	854.10	7,686.90	-	-	7,686.90	*854.1*	*1.00*	
1.3	Scaffolder		day	3.00	854.10	2,562.30	-	-	2,562.30	*854.1*	*1.00*	
1.4	Common Labor		day	12.00	574.41	6,892.92	-	-	6,892.92	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					22,679.37		0.00	22,679.37			
2	MATERIALS											
3.1	Miscellaneous Materials	20 % of Labor & Equip.	%	20	0.00	6,353.07	0.00	0.00	6,353.07			
	SUB-TOTAL FOR MATERIAL					6,353.07		0.00	6,353.07			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 15t, 160HP		hr.	8.00	994.00	7,952.00	0.00	0.00	7,952.00	*994.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor	%	5	0.00	1,133.97	0.00	0.00	1,133.97			
	SUB-TOTAL FOR EQUIPMENT					9,085.97		0.00	9,085.97			
	ESTIMATED DIRECT COST (EDC)					38,118.41		0.00	38,118.41			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,336.58		0.00	5,336.58			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,214.60		0.00	5,214.60			
	TOTAL COST FOR	100 Cu.m.		Including VAT		48,669.58		0.00	48,669.58			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		434.55		0.00	434.55			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		486.70		0.00	486.70			

Tb 1. 112

Table 1.5.7(104/296) Unit Cost Analyses

Arrangec

UC No.	5-CJF	**Name of Work :**	**Cork Joint Filler**										
Unit of Work		Description of Work :	Supply and Install of Cork Joint Filler, t=10mm										
Sq.m.		Quantity of Unit Cost Analysis :	10.00 Sq.m. /day					(t = 10.0 mm)					
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,379.32		0.00	2,379.32			
2	MATERIALS											
2.1	Joint Filler, 10mm thick (Cork)		sq.m.	10.50	1,204.00	12,642.00	0.00	0.00	12,642.00	*1,204.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					12,642.00		0.00	12,642.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor	%	10	0.00	237.93	0.00	0.00	237.93			
	SUB-TOTAL FOR EQUIPMENT					237.93		0.00	237.93			
	ESTIMATED DIRECT COST (EDC)					15,259.25		0.00	15,259.25			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,136.30		0.00	2,136.30			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,087.47		0.00	2,087.47			
	TOTAL COST FOR	10 Sq.m.		Including VAT		19,483.01		0.00	19,483.01			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,739.55		0.00	1,739.55			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		1,948.30		0.00	1,948.30			

* Area of Elastic Joint Filler for Calculation : (Wastage Rate is assumed to be equal to 5 %)

10.00 x (1 + 0.05) = 10.500 sq.m.

Tb 1. 113

Table 1.5.7(105/296) Unit Cost Analyses

UC No. 5-EJF	**Name of Work : Elastic Joint Filler**												
Unit of Work	Description of Work : Supply and Install of Elastic Joint Filler, t=10mm												
Sq.m.	Quantity of Unit Cost Analysis : 10.00 Sq.m. /day (t = 10.0 mm)												
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,379.32		0.00	2,379.32			
2	MATERIALS											
2.1	Joint Filler, 10mm thick (Elastic)		sq.m.	10.50	889.00	9,334.50	0.00	0.00	9,334.50	*889.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					9,334.50		0.00	9,334.50			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor	%	10	0.00	237.93	0.00	0.00	237.93			
	SUB-TOTAL FOR EQUIPMENT					237.93		0.00	237.93			
	ESTIMATED DIRECT COST (EDC)					11,951.75		0.00	11,951.75			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,673.25		0.00	1,673.25			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,635.00		0.00	1,635.00			
	TOTAL COST FOR 10 Sq.m.			Including VAT		15,260.00		0.00	15,260.00			
	UNIT COST FOR 1 Sq.m.			Excluding VAT		1,362.50		0.00	1,362.50			
	UNIT COST FOR 1 Sq.m.			Including VAT		1,526.00		0.00	1,526.00			

* Area of Elastic Joint Filler for Calculation : (Wastage Rate is assumed to be equal to 5 %)

10.00 x (1 + 0.05) = 10.500 sq.m.

Tb 1. 114

Table 1.5.7(106/296) Unit Cost Analyses

New

UC No. 5-JS-C	**Name of Work : Joint Sealant at Contraction Joint**											
Unit of Work	Description of Work : Supply and Install of Joint Sealant at Contraction Joint											
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m. (A= 900.0 Sq.mm)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Skilled Labor	@0.44	day	0.66	854.10	563.71	-	-	563.71	*854.1*	*1.00*	
	SUB-TOTAL FOR LABOR					563.71		0.00	563.71			
2	MATERIALS											
2.1	Joint Sealant		ltr.	9.45	770.00	7,276.50	0.00	0.00	7,276.50	*770.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					7,276.50		0.00	7,276.50			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Material	%	10	0.00	727.65	0.00	0.00	727.65			
	SUB-TOTAL FOR EQUIPMENT					727.65		0.00	727.65			
	ESTIMATED DIRECT COST (EDC)					8,567.86		0.00	8,567.86			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,199.50		0.00	1,199.50			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,172.08		0.00	1,172.08			
	TOTAL COST FOR 10 L.m.			Including VAT		10,939.44		0.00	10,939.44			
	UNIT COST FOR 1 L.m.			Excluding VAT		976.74		0.00	976.74			
	UNIT COST FOR 1 L.m.			Including VAT		1,093.94		0.00	1,093.94			

* Area of Elastic Joint Filler for Calculation : (Wastage Rate is assumed to be equal to 5 %)

9.00 x (1 + 0.05) = 9.450 ltr.

Tb 1. 115

Table 1.5.7(107/296) Unit Cost Analyses

New

UC No. 5-JS-Ex	**Name of Work : Joint Sealant at Expansion Joint**
Unit of Work	Description of Work : Supply and Install of Joint Sealant at Expansion Joint
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m. (A= 125.0 Sq.mm)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Skilled Labor	@0.24	day	0.36	854.10	307.48	-	-	307.48	*854.1*	*1.00*	
	SUB-TOTAL FOR LABOR					307.48		0.00	307.48			
2	MATERIALS											
2.1	Joint Sealant		ltr.	1.31	770.00	1,010.63	0.00	0.00	1,010.63	*770.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					1,010.63		0.00	1,010.63			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Material	%	10	0.00	101.06	0.00	0.00	101.06			
	SUB-TOTAL FOR EQUIPMENT					101.06		0.00	101.06			
	ESTIMATED DIRECT COST (EDC)					1,419.16		0.00	1,419.16			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		198.68		0.00	198.68			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		194.14		0.00	194.14			
	TOTAL COST FOR 10 L.m.			Including VAT		1,811.99		0.00	1,811.99			
	UNIT COST FOR 1 L.m.			Excluding VAT		161.78		0.00	161.78			
	UNIT COST FOR 1 L.m.			Including VAT		181.20		0.00	181.20			

* Area of Elastic Joint Filler for Calculation : (Wastage Rate is assumed to be equal to 5 %)

1.25 x (1 + 0.05) = 1.313 ltr.

Tb 1. 116

Table 1.5.7(108/296) Unit Cost Analyses

UC No.	5-PT-CW	**Name of Work :**	**Painting on Concrete Surface**										
Unit of Work		Description of Work :											
Sq.m.		Quantity of Unit Cost Analysis :			40	Sq.m.	/ day						
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Painter	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.10*	*1.00*	
1.4	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,090.44		0.00	6,090.44			
2	MATERIALS											
2.1	Paint (Non-reflectorized)	1.0 kg/sq.m	ltr.	30.77	153.00	4,707.69	0.00	0.00	4,707.69	*153.00*	*1.00*	
2.2	Miscellaneous Materials	1 % of other Materials	%	1.00	0.00	47.08	0.00	0.00	47.08			
	SUB-TOTAL FOR MATERIAL					4,754.77		0.00	4,754.77			
3	EQUIPMENT											
3.1	Miscellaneous Equipments	10 % of Labor	%	10	0.00	609.04	0.00	0.00	609.04			
	SUB-TOTAL FOR EQUIPMENT					609.04		0.00	609.04			
	ESTIMATED DIRECT COST (EDC)					11,454.25		0.00	11,454.25			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,603.60		0.00	1,603.60			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,566.94		0.00	1,566.94			
	TOTAL COST FOR	40 Sq.m.		Including VAT		14,624.79		0.00	14,624.79			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		326.45		0.00	326.45			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		365.62		0.00	365.62			

* Specific gravity for paint materia 1.3 (ton/cu.m.) = 1.3 (kg/ltr.)

Tb 1. 117

Table 1.5.7(109/296) Unit Cost Analyses

UC No. 5-WT	**Name of Work : Water Stop, PVC W=200mm**												
Unit of Work	Description of Work : Setting of Water Stop												
L.m.	Quantity of Unit Cost Analysis : 50 L.m /day												
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,528.14		0.00	3,528.14			
2	MATERIALS											
2.1	Waterstop; PVC, 200mm x 10mm		L.m.	52.50	492.00	25,830.00	0.00	0.00	25,830.00	*492.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					25,830.00		0.00	25,830.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	1 % of Labor	%	1	0.00	35.28	0.00	0.00	35.28			
	SUB-TOTAL FOR EQUIPMENT					35.28		0.00	35.28			
	ESTIMATED DIRECT COST (EDC)					29,393.42		0.00	29,393.42			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,115.08		0.00	4,115.08			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,021.02		0.00	4,021.02			
	TOTAL COST FOR 50 L.m			Including VAT		37,529.52		0.00	37,529.52			
	UNIT COST FOR 1 L.m			Excluding VAT		670.17		0.00	670.17			
	UNIT COST FOR 1 L.m			Including VAT		750.59		0.00	750.59			

* Quantity of Water Stop for Calculation : 1 x (1 + 0.05) = 1.05 L.m.

Tb 1. 118

Table 1.5.7(110/296) Unit Cost Analyses

New

UC No. 5-HSHWT	**Name of Work : High Swell Hydeophilic Water Stop, for connection to existing wall**												
Unit of Work	Description of Work : Setting of Water Stop												
L.m.	Quantity of Unit Cost Analysis : 50 L.m /day												
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,528.14		0.00	3,528.14			
2	MATERIALS											
2.1	Waterstop, High Swell Hydeophilic		L.m.	52.50	0.00	0.00	1,270.00	66,675.00	66,675.00	*1,270.00*	*0.00*	
	SUB-TOTAL FOR MATERIAL					0.00		66,675.00	66,675.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	1 % of Labor	%	1	0.00	35.28	0.00	0.00	35.28			
	SUB-TOTAL FOR EQUIPMENT					35.28		0.00	35.28			
	ESTIMATED DIRECT COST (EDC)					3,563.42		66,675.00	70,238.42			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		498.88		9,334.50	9,833.38			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		487.48		9,121.14	9,608.62			
	TOTAL COST FOR 50 L.m			Including VAT		4,549.78		85,130.64	89,680.42			
	UNIT COST FOR 1 L.m			Excluding VAT		81.25		1,520.19	1,601.44			
	UNIT COST FOR 1 L.m			Including VAT		91.00		1,702.61	1,793.61			

* Quantity of Water Stop for Calculation : 1 x (1 + 0.05) = 1.05 L.m.

Tb 1. 119

Table 1.5.7(111/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-1000	**Name of Work :**	**Flexible Joint for Box Culvert (1000x1000)**
Unit of Work		Description of Work :	Setting of Flexible Joint for Box Culvert (1000x1000)
Set		Quantity of Unit Cost Analysis :	1 Set /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for Box Culvert (1000x1000)		set	1.00	0.00	0.00	459,828.00	459,828.00	459,828.00	*459,828.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		459,828.00	459,828.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		459,828.00	470,678.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		64,375.92	65,895.03			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		62,904.47	64,388.86			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		587,108.39	600,962.69			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		524,203.92	536,573.83			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		587,108.39	600,962.69			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 120

Table 1.5.7(112/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-1200	**Name of Work :**	**Flexible Joint for Box Culvert (1200x1200)**
Unit of Work		Description of Work :	Setting of Flexible Joint for Box Culvert (1200x1200)
Set		Quantity of Unit Cost Analysis :	1 Set /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for Box Culvert (1200x1200)		set	1.00	0.00	0.00	540,305.00	540,305.00	540,305.00	*540,305.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		540,305.00	540,305.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		540,305.00	551,155.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		75,642.70	77,161.81			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		73,913.72	75,398.11			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		689,861.42	703,715.73			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		615,947.70	628,317.61			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		689,861.42	703,715.73			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 121

Table 1.5.7(113/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-1400	**Name of Work :**	**Flexible Joint for Box Culvert (1400x1400)**
Unit of Work		Description of Work :	Setting of Flexible Joint for Box Culvert (1400x1400)
Set		Quantity of Unit Cost Analysis :	1 Set /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for Box Culvert (1400x1400)		set	1.00	0.00	0.00	620,783.00	620,783.00	620,783.00	*620,783.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		620,783.00	620,783.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		620,783.00	631,633.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		86,909.62	88,428.73			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		84,923.11	86,407.50			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		792,615.73	806,470.04			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		707,692.62	720,062.53			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		792,615.73	806,470.04			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 122

Table 1.5.7(114/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-1500	**Name of Work :**	**Flexible Joint for Box Culvert (1500x1500)**										
Unit of Work		Description of Work :	Setting of Flexible Joint for Box Culvert (1500x1500)										
Set		Quantity of Unit Cost Analysis :	1 Set /day										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for Box Culvert (1500x1500)		set	1.00	0.00	0.00	661,021.00	661,021.00	661,021.00	*661,021.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		661,021.00	661,021.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		661,021.00	671,871.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		92,542.94	94,062.05			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		90,427.67	91,912.06			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		843,991.61	857,845.91			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		753,563.94	765,933.85			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		843,991.61	857,845.91			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 123

Table 1.5.7(115/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-1600	**Name of Work :**	**Flexible Joint for Box Culvert (1600x1600)**
Unit of Work		Description of Work :	Setting of Flexible Joint for Box Culvert (1600x1600)
Set		Quantity of Unit Cost Analysis :	1 Set /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for Box Culvert (1600x1600)		set	1.00	0.00	0.00	701,260.00	701,260.00	701,260.00	*701,260.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		701,260.00	701,260.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		701,260.00	712,110.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		98,176.40	99,695.51			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		95,932.37	97,416.76			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		895,368.77	909,223.07			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		799,436.40	811,806.31			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		895,368.77	909,223.07			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 124

Table 1.5.7(116/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-2000	**Name of Work :**	**Flexible Joint for Box Culvert (2000x1600)**										
Unit of Work		Description of Work :	Setting of Flexible Joint for Box Culvert (2000x1600)										
Set		Quantity of Unit Cost Analysis :	1 Set /day										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for Box Culvert (2000x1600)		set	1.00	0.00	0.00	781,738.00	781,738.00	781,738.00	*781,738.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		781,738.00	781,738.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		781,738.00	792,588.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		109,443.32	110,962.43			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		106,941.76	108,426.15			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		998,123.08	1,011,977.38			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		891,181.32	903,551.23			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		998,123.08	1,011,977.38			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 125

Table 1.5.7(117/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-1811	**Name of Work :**	**Flexible Joint for U-shaped Retaining Wall (1800x1100)**										
Unit of Work		Description of Work :	Setting of Flexible Joint for U-shaped Retaining Wall (1800x1100)										
Set		Quantity of Unit Cost Analysis :			1	Set	/day						
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for U-shaped retaining wall (1800x1100)		set	1.00	0.00	0.00	459,828.00	459,828.00	459,828.00	*459,828.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		459,828.00	459,828.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		459,828.00	470,678.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		64,375.92	65,895.03			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		62,904.47	64,388.86			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		587,108.39	600,962.69			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		524,203.92	536,573.83			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		587,108.39	600,962.69			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 126

Table 1.5.7(118/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-1813	**Name of Work :**	**Flexible Joint for U-shaped Retaining Wall (1800x1300)**										
Unit of Work		Description of Work :	Setting of Flexible Joint for U-shaped Retaining Wall (1800x1300)										
Set		Quantity of Unit Cost Analysis :	1 Set /day										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for U-shaped retaining wall (1800x1300)		set	1.00	0.00	0.00	500,067.00	500,067.00	500,067.00	*500,067.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		500,067.00	500,067.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		500,067.00	510,917.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		70,009.38	71,528.49			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		68,409.17	69,893.56			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		638,485.55	652,339.85			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		570,076.38	582,446.29			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		638,485.55	652,339.85			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 127

Table 1.5.7(119/296) Unit Cost Analyses

New

UC No. 5-FLEXJ-1815	**Name of Work : Flexible Joint for U-shaped Retaining Wall (1800x1500)**
Unit of Work	Description of Work : Setting of Flexible Joint for U-shaped Retaining Wall (1800x1500)
Set	Quantity of Unit Cost Analysis : 1 Set /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for U-shaped retaining wall (1800x1500)		set	1.00	0.00	0.00	540,305.00	540,305.00	540,305.00	*540,305.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		540,305.00	540,305.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		540,305.00	551,155.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		75,642.70	77,161.81			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		73,913.72	75,398.11			
	TOTAL COST FOR 1 Set			Including VAT		13,854.30		689,861.42	703,715.73			
	UNIT COST FOR 1 Set			Excluding VAT		12,369.91		615,947.70	628,317.61			
	UNIT COST FOR 1 Set			Including VAT		13,854.30		689,861.42	703,715.73			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 128

Table 1.5.7(120/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-2011	**Name of Work :**	**Flexible Joint for U-shaped Retaining Wall (2000x1100)**										
Unit of Work		Description of Work :	Setting of Flexible Joint for U-shaped Retaining Wall (2000x1100)										
Set		Quantity of Unit Cost Analysis :	1 Set /day										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for U-shaped retaining wall (2000x1100)		set	1.00	0.00	0.00	479,947.00	479,947.00	479,947.00	*479,947.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		479,947.00	479,947.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		479,947.00	490,797.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		67,192.58	68,711.69			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		65,656.75	67,141.14			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		612,796.33	626,650.63			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		547,139.58	559,509.49			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		612,796.33	626,650.63			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 129

Table 1.5.7(121/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-2110	**Name of Work :**	**Flexible Joint for U-shaped Retaining Wall (2100x1000)**										
Unit of Work		Description of Work :	Setting of Flexible Joint for U-shaped Retaining Wall (2100x1000)										
Set		Quantity of Unit Cost Analysis :	1 Set /day										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for U-shaped retaining wall (2100x1000)		set	1.00	0.00	0.00	469,888.00	469,888.00	469,888.00	*469,888.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		469,888.00	469,888.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		469,888.00	480,738.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		65,784.32	67,303.43			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		64,280.68	65,765.07			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		599,953.00	613,807.30			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		535,672.32	548,042.23			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		599,953.00	613,807.30			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.130

Table 1.5.7(122/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-2112	**Name of Work :**	**Flexible Joint for U-shaped Retaining Wall (2100x1200)**										
Unit of Work		Description of Work :	Setting of Flexible Joint for U-shaped Retaining Wall (2100x1200)										
Set		Quantity of Unit Cost Analysis :	1 Set /day										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for U-shaped retaining wall (2100x1200)		set	1.00	0.00	0.00	510,126.00	510,126.00	510,126.00	*510,126.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		510,126.00	510,126.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		510,126.00	520,976.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		71,417.64	72,936.75			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		69,785.24	71,269.63			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		651,328.88	665,183.18			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		581,543.64	593,913.55			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		651,328.88	665,183.18			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.131

Table 1.5.7(123/296) Unit Cost Analyses

New

UC No. 5-FLEXJ-2213	**Name of Work : Flexible Joint for U-shaped Retaining Wall (2200x1300)**
Unit of Work	Description of Work : Setting of Flexible Joint for U-shaped Retaining Wall (2200x1300)
Set	Quantity of Unit Cost Analysis : 1 Set /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for U-shaped retaining wall (2200x1300)		set	1.00	0.00	0.00	540,305.00	540,305.00	540,305.00	*540,305.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		540,305.00	540,305.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		540,305.00	551,155.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		75,642.70	77,161.81			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		73,913.72	75,398.11			
	TOTAL COST FOR 1 Set			Including VAT		13,854.30		689,861.42	703,715.73			
	UNIT COST FOR 1 Set			Excluding VAT		12,369.91		615,947.70	628,317.61			
	UNIT COST FOR 1 Set			Including VAT		13,854.30		689,861.42	703,715.73			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.132

Table 1.5.7(124/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-2605	**Name of Work :**	**Flexible Joint for U-shaped Retaining Wall (2600x500)**										
Unit of Work		Description of Work :	Setting of Flexible Joint for U-shaped Retaining Wall (2600x500)										
Set		Quantity of Unit Cost Analysis :	1 Set /day										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for U-shaped retaining wall (2600x500)		set	1.00	0.00	0.00	419,589.00	419,589.00	419,589.00	*419,589.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		419,589.00	419,589.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		419,589.00	430,439.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		58,742.46	60,261.57			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		57,399.78	58,884.16			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		535,731.24	549,585.54			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		478,331.46	490,701.37			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		535,731.24	549,585.54			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.133

Table 1.5.7(125/296) Unit Cost Analyses

New

UC No.	5-FLEXJ-3510	**Name of Work :**	**Flexible Joint for U-shaped Retaining Wall (3500x1000)**										
Unit of Work		Description of Work :	Setting of Flexible Joint for U-shaped Retaining Wall (3500x1000)										
Set		Quantity of Unit Cost Analysis :	1 Set /day										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	2.50	1,230.50	3,076.25	-	-	3,076.25	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	5.00	854.10	4,270.50	-	-	4,270.50	*854.1*	*1.00*	
1.3	Common Labor	@2	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					10,218.80		0.00	10,218.80			
2	MATERIALS											
2.1	Flexible Joint for U-shaped retaining wall (3500x1000)		set	1.00	0.00	0.00	610,723.00	610,723.00	610,723.00	*610,723.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*1)	ltr.	38.0	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		610,723.00	610,723.00			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	4.00	391.00	1,564.00	0.00	0.00	1,564.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	2.00	167.00	334.00	0.00	0.00	334.00	*167.00*	*1.00*	
3.3	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.00	518.00	1,036.00	0.00	0.00	1,036.00	*518.00*	*1.00*	
3.4	Bar Cutter		hr.	2.00	316.00	632.00	0.00	0.00	632.00	*316.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					632.00		0.00	632.00			
	ESTIMATED DIRECT COST (EDC)					10,850.80		610,723.00	621,573.80			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,519.11		85,501.22	87,020.33			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,484.39		83,546.91	85,031.30			
	TOTAL COST FOR	1 Set		Including VAT		13,854.30		779,771.13	793,625.43			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,369.91		696,224.22	708,594.13			
	UNIT COST FOR	**1 Set**		Including VAT		13,854.30		779,771.13	793,625.43			

(*1): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 134

Table 1.5.7(126/296) Unit Cost Analyses

6. PILING

UC No.	6-CPL-EP	**Name of Work : Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)**											
Unit of Work		Description of Work : Sandblast, Zinc Rich Primer, Zinc Rich Paint, 3 Layer of Epoxy Resin Paint, Total Thickness 0.3mm~0.5mm											
Sq.m.		Quantity of Unit Cost Analysis : 1 Sq.m.											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Skilled Labor	@1 man-hr.	day	0.13	854.10	106.76	-	-	106.76	*854.1*	*1.00*	
	SUB-TOTAL FOR LABOR					106.76		0.00	106.76			
2	MATERIALS											
2.1	Epoxy Painting with Sandblast for Corrosion Proof		sq.m.	1.00	1,264.00	1,264.00	0.00	0.00	1,264.00	*1,264.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					1,264.00		0.00	1,264.00			
3	EQUIPMENT											
3.1	Miscellaneous Equipments	10 % of Labor	%	10	0.00	10.68	0.00	0.00	10.68			
	SUB-TOTAL FOR EQUIPMENT					10.68		0.00	10.68			
	ESTIMATED DIRECT COST (EDC)					1,381.44		0.00	1,381.44			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		193.40		0.00	193.40			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		188.98		0.00	188.98			
	TOTAL COST FOR	1 Sq.m.		Including VAT		1,763.82		0.00	1,763.82			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,574.84		0.00	1,574.84			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		1,763.82		0.00	1,763.82			

Tb 1. 135

Table 1.5.7(127/296) Unit Cost Analyses

UC No.	6-SSP-FH	**Name of Work :**	**Furnishing Steel Pipe Sheet Pile (HAT 10H, 25H)**										
Unit of Work		Description of Work :	Furnishing Steel Sheet Pile (SSP Type HAT 10H, 25H)										
Ton		Quantity of Unit Cost Analysis :	1 Ton										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0.00		0.00	0.00			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	1.00	0.00	0.00	69,097.00	69,097.00	69,097.00	*69,097.00*	*0.00*	
	SUB-TOTAL FOR MATERIAL					0.00		69,097.00	69,097.00			
3	EQUIPMENT											
3.1	Miscellaneous Equipments	0 % of Pile	%	0	0.00	0.00	0.00	0.00	0.00			
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					0.00		69,097.00	69,097.00			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		0.00		9,673.58	9,673.58			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		0.00		9,452.47	9,452.47			
	TOTAL COST FOR	1 Ton		Including VAT		0.00		88,223.05	88,223.05			
	UNIT COST FOR	**1 Ton**		Excluding VAT		0.00		78,770.58	78,770.58			
	UNIT COST FOR	**1 Ton**		Including VAT		0.00		88,223.05	88,223.05			

Tb 1.136

Table 1.5.7(128/296) Unit Cost Analyses

UC No.	6-SSP-FW	**Name of Work :**	**Furnishing Steel Sheet Pile (II-w, III-w, IV-w)**
Unit of Work		Description of Work :	Furnishing Steel Sheet Pile (Type IIw, IIIw, IVw), SYW295
Ton		Quantity of Unit Cost Analysis :	1 Ton

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
	SUB-TOTAL FOR LABOR					0.00		0.00	0.00			
2	MATERIALS											
2.1	Steel Sheet Pile, Type II-W (Purchasing)		ton	1.00	0.00	0.00	65,032.00	65,032.00	65,032.00	*65,032.00*	*0.00*	
	SUB-TOTAL FOR MATERIAL					0.00		65,032.00	65,032.00			
3	EQUIPMENT											
3.1	Miscellaneous Equipments	0 % of Pile	%	0	0.00	0.00	0.00	0.00	0.00			
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					0.00		65,032.00	65,032.00			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		0.00		9,104.48	9,104.48			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		0.00		8,896.38	8,896.38			
	TOTAL COST FOR	1 Ton		Including VAT		0.00		83,032.86	83,032.86			
	UNIT COST FOR	**1 Ton**		Excluding VAT		0.00		74,136.48	74,136.48			
	UNIT COST FOR	**1 Ton**		Including VAT		0.00		83,032.86	83,032.86			

Tb 1.137

Table 1.5.7(129/296) Unit Cost Analyses

UC No.	6-SSP-FL	**Name of Work : Furnishing Steel Sheet Pile (V-L, VI-L)**										
Unit of Work		Description of Work : Furnishing Steel Sheet Pile (Type V-L, VI-L), SYW295										
Ton		Quantity of Unit Cost Analysis : 1 Ton										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0.00		0.00	0.00			
2	MATERIALS											
2.1	Steel Sheet Pile, Type V-L (Purchasing)		ton	1.00	0.00	0.00	69,097.00	69,097.00	69,097.00	*69,097.00*	*0.00*	
	SUB-TOTAL FOR MATERIAL					0.00		69,097.00	69,097.00			
3	EQUIPMENT											
3.1	Miscellaneous Equipments	0 % of Pile	%	0	0.00	0.00	0.00	0.00	0.00			
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					0.00		69,097.00	69,097.00			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		0.00		9,673.58	9,673.58			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		0.00		9,452.47	9,452.47			
	TOTAL COST FOR	1 Ton		Including VAT		0.00		88,223.05	88,223.05			
	UNIT COST FOR	**1 Ton**		Excluding VAT		0.00		78,770.58	78,770.58			
	UNIT COST FOR	**1 Ton**		Including VAT		0.00		88,223.05	88,223.05			

Tb 1.138

Table 1.5.7(130/296) Unit Cost Analyses

UC No.	6-SSP-FHS	**Name of Work :**	**Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900**										
Unit of Work		Description of Work :	Furnishing HAT Type Steel Sheet Pile (Type 10H, 25H), SYW295, with H-Beam H400mm~900mm, SM490A										
Ton		Quantity of Unit Cost Analysis :	1 Ton										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0.00		0.00	0.00			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	1.00	0.00	0.00	76,210.00	76,210.00	76,210.00	*76,210.00*	*0.00*	
	SUB-TOTAL FOR MATERIAL					0.00		76,210.00	76,210.00			
3	EQUIPMENT											
3.1	Miscellaneous Equipments	0 % of Pile	%	0	0.00	0.00	0.00	0.00	0.00			
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					0.00		76,210.00	76,210.00			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		0.00		10,669.40	10,669.40			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		0.00		10,425.53	10,425.53			
	TOTAL COST FOR	1 Ton		Including VAT		0.00		97,304.93	97,304.93			
	UNIT COST FOR	**1 Ton**		Excluding VAT		0.00		86,879.40	86,879.40			
	UNIT COST FOR	**1 Ton**		Including VAT		0.00		97,304.93	97,304.93			

Tb 1.139

Table 1.5.7(131/296) Unit Cost Analyses

UC No.	6-SSP-FHL	**Name of Work :**	**Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 1000**										
Unit of Work		Description of Work :	Furnishing HAT Type Steel Sheet Pile (Type 10H, 25H), SYW295, with H-Beam H1000mm, SM490A										
Ton		Quantity of Unit Cost Analysis :	1 Ton										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0.00		0.00	0.00			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H1000mm (Purchasing)		ton	1.00	0.00	0.00	78,750.00	78,750.00	78,750.00	*78,750.00*	*0.00*	
	SUB-TOTAL FOR MATERIAL					0.00		78,750.00	78,750.00			
3	EQUIPMENT											
3.1	Miscellaneous Equipments	0 % of Pile	%	0	0.00	0.00	0.00	0.00	0.00			
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					0.00		78,750.00	78,750.00			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		0.00		11,025.00	11,025.00			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		0.00		10,773.00	10,773.00			
	TOTAL COST FOR	1 Ton		Including VAT		0.00		100,548.00	100,548.00			
	UNIT COST FOR	**1 Ton**		Excluding VAT		0.00		89,775.00	89,775.00			
	UNIT COST FOR	**1 Ton**		Including VAT		0.00		100,548.00	100,548.00			

Tb 1. 140

Table 1.5.7(132/296) Unit Cost Analyses

Arrangec

UC No.	6-SP3-L8	**Name of Work :**	**Vibro-Hummer Piling of SSP Type III-w, on Land, L=8m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-10H, (On-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	30 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	22 % of Labor & Equip.	%	22	0.00	880.77	0.00	0.00	880.77			
	SUB-TOTAL FOR MATERIAL					2,248.77		0.00	2,248.77			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,252.24		0.00	6,252.24			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		875.31		0.00	875.31			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		855.31		0.00	855.31			
	TOTAL COST FOR	30 L.m.		Including VAT		7,982.86		0.00	7,982.86			
	UNIT COST FOR	1 L.m.		Including VAT		266.10		0.00	266.10			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		263.98		0.00	263.98			
	UNIT COST FOR	**1 Sq.m**		Including VAT		295.66		0.00	295.66			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 30.00 pcs./day Average Driving Length = 8.00 L.m.

Daily Driving Quantity = 240.00 L.m./day ===> Hourly Driving Quantity = 30.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 141

Table 1.5.7(133/296) Unit Cost Analyses

Arranged

UC No.	6-SP3-WJ7	**Name of Work :**	**Vibro-Hummer Piling of SSP Type III-w, on Water, w/ Water Jet, L=7m**										
Unit of Work		Description of Work :	Driving of SSP Type IV-w, (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	11 L.m. / Hr. (*1)						(Width of SSP = 0.60 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,644.10		0.00	1,644.10			
2	MATERIALS											
2.1	Steel Sheet Pile, Type III-W (Purchasing)		ton	0.00	0.00	0.00	65,032.00	0.00	0.00	*65,032.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	21 % of Labor & Equip.	%	21	0.00	1,451.60	0.00	665.62	2,117.21			
	SUB-TOTAL FOR MATERIAL					4,187.60		665.62	4,853.21			
3	EQUIPMENT											
3.1	Water Jet Cutter, 325ltr./min	@2set	hr.	1.60	0.00	0.00	1,981.00	3,169.60	3,169.60	*1,981.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 75mm (3"), 1000lpm		hr.	0.80	200.00	160.00	0.00	0.00	160.00	*200.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,638.80		3,169.60	8,808.40			
	ESTIMATED DIRECT COST (EDC)					11,470.50		3,835.22	15,305.72			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,605.87		536.93	2,142.80			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,569.16		524.66	2,093.82			
	TOTAL COST FOR	11 L.m.		Including VAT		14,645.54		4,896.80	19,542.34			
	UNIT COST FOR	1 L.m.		Including VAT		1,331.41		445.16	1,776.58			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,981.27		662.45	2,643.71			
	UNIT COST FOR	**1 Sq.m**		Including VAT		2,219.02		741.94	2,960.96			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 14.00 pcs./day Average Driving Length = 7.30 L.m.

Work Coefficient = 0.88 Daily Driving Quantity = 89.94 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW

Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.142

Table 1.5.7(134/296) Unit Cost Analyses

Arrangec

UC No.	6-SP4-W8	**Name of Work :**	**Vibro-Hummer Piling of SSP Type IV-w, on Water, L=8m**										
Unit of Work		Description of Work :	Driving of SSP Type IV-w, (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :			20	L.m.	/ Hr. (*1)		(Width of SSP =	0.60	m)		
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,430.58		0.00	1,430.58			
2	MATERIALS											
2.1	Steel Sheet Pile, Type IV-W (Purchasing)		ton	0.00	0.00	0.00	63,600.00	0.00	0.00	*63,600.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	947.71	0.00	0.00	947.71			
	SUB-TOTAL FOR MATERIAL					2,315.71		0.00	2,315.71			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,004.28		0.00	9,004.28			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,260.60		0.00	1,260.60			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,231.79		0.00	1,231.79			
	TOTAL COST FOR	20 L.m.		Including VAT		11,496.67		0.00	11,496.67			
	UNIT COST FOR	1 L.m.		Including VAT		574.83		0.00	574.83			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		855.41		0.00	855.41			
	UNIT COST FOR	**1 Sq.m**		Including VAT		958.06		0.00	958.06			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 18.00 pcs./day Average Driving Length = 8.80 L.m.

Daily Driving Quantity = 158.40 L.m./day ===> Hourly Driving Quantity = 20.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.143

Table 1.5.7(135/296) Unit Cost Analyses

Arranged

UC No.	6-SP4-WJ8	**Name of Work :**	**Vibro-Hummer Piling of SSP Type IV-w, on Water, w/ Water Jet, L=8m**										
Unit of Work		Description of Work :	Driving of SSP Type IV-w, (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	11 L.m. / Hr. (*1)						(Width of SSP = 0.60 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,644.10		0.00	1,644.10			
2	MATERIALS											
2.1	Steel Sheet Pile, Type IV-W (Purchasing)		ton	0.00	0.00	0.00	63,600.00	0.00	0.00	*63,600.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	21 % of Labor & Equip.	%	21	0.00	1,451.60	0.00	665.62	2,117.21			
	SUB-TOTAL FOR MATERIAL					4,187.60		665.62	4,853.21			
3	EQUIPMENT											
3.1	Water Jet Cutter, 325ltr./min	@2set	hr.	1.60	0.00	0.00	1,981.00	3,169.60	3,169.60	*1,981.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 75mm (3"), 1000lpm		hr.	0.80	200.00	160.00	0.00	0.00	160.00	*200.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,638.80		3,169.60	8,808.40			
	ESTIMATED DIRECT COST (EDC)					11,470.50		3,835.22	15,305.72			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,605.87		536.93	2,142.80			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,569.16		524.66	2,093.82			
	TOTAL COST FOR	11 L.m.		Including VAT		14,645.54		4,896.80	19,542.34			
	UNIT COST FOR	1 L.m.		Including VAT		1,331.41		445.16	1,776.58			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,981.27		662.45	2,643.71			
	UNIT COST FOR	**1 Sq.m**		Including VAT		2,219.02		741.94	2,960.96			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 12.00 pcs./day Average Driving Length = 8.40 L.m.

Work Coefficient = 0.88 Daily Driving Quantity = 88.70 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW

Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 144

Table 1.5.7(136/296) Unit Cost Analyses

Arranged

UC No.	6-SP4-SPWJ8	**Name of Work : w/ SPLICE, Vibro-Hummer Piling of SSP Type IV-w, on Water, w/ Water Jet, L=8m**											
Unit of Work		Description of Work : Driving of SSP Type IV-w, (Off-shore Driving)											
m.		Quantity of Unit Cost Analysis : 3 m. / Hr. (*1) (Width of SSP = 0.60 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,644.10		0.00	1,644.10			
2	MATERIALS											
2.1	Steel Sheet Pile, Type IV-W (Purchasing)		ton	0.00	0.00	0.00	63,600.00	0.00	0.00	*63,600.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Splice fee incl. weiding, plate, etc.	(*3)	nos.	1.20	4,176.29	5,011.55	0.00	0.00	5,011.55	*4,176.29*	*1.00*	
2.4	Miscellaneous Materials	20 % of Labor & Equip.	%	20	0.00	1,382.47	0.00	633.92	2,016.39			
	SUB-TOTAL FOR MATERIAL					9,130.02		633.92	9,763.94			
3	EQUIPMENT											
3.1	Water Jet Cutter, 325ltr./min	@2set	hr.	1.60	0.00	0.00	1,981.00	3,169.60	3,169.60	*1,981.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 75mm (3"), 1000lpm		hr.	0.80	200.00	160.00	0.00	0.00	160.00	*200.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,638.80		3,169.60	8,808.40			
	ESTIMATED DIRECT COST (EDC)					16,412.93		3,803.52	20,216.45			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,297.81		532.49	2,830.30			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,245.29		520.32	2,765.61			
	TOTAL COST FOR 3 m.			Including VAT		20,956.02		4,856.33	25,812.36			
	UNIT COST FOR 1 m.			Excluding VAT		6,236.91		1,445.34	7,682.25			
	UNIT COST FOR 1 m.			Including VAT		6,985.34		1,618.78	8,604.12			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 3.00 pcs./day Average Driving Length = 8.00 L.m.
Work Coefficient = 0.88 Daily Driving Quantity = 21.12 L.m./day ===> Hourly Driving Quantity = 3.0 L.m./hr.
(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW
Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.
(*3): Length of SSP per sheet= 10 m, Number of cutting SSP per shee 4 pc., Length of cutting SSP : 2.5 m
Number of splice per "Hourly Driving Quantity' 1.2 nos.

Table 1.5.7(137/296) Unit Cost Analyses

Arrangec

UC No.	6-SP5-W9	**Name of Work :**	**Vibro-Hummer Piling of SSP Type V-L, on Water, L=9m**										
Unit of Work		Description of Work :	Driving of SSP Type V-L, (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	17 L.m. / Hr. (*1)						(Width of SSP = 0.50 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,430.58		0.00	1,430.58			
2	MATERIALS											
2.1	Steel Sheet Pile, Type V-L (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	947.71	0.00	0.00	947.71			
	SUB-TOTAL FOR MATERIAL					2,315.71		0.00	2,315.71			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,004.28		0.00	9,004.28			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,260.60		0.00	1,260.60			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,231.79		0.00	1,231.79			
	TOTAL COST FOR	17 L.m.		Including VAT		11,496.67		0.00	11,496.67			
	UNIT COST FOR	1 L.m.		Including VAT		676.27		0.00	676.27			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,207.63		0.00	1,207.63			
	UNIT COST FOR	**1 Sq.m**		Including VAT		1,352.55		0.00	1,352.55			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 15.00 pcs./day Average Driving Length = 9.30 L.m.

Daily Driving Quantity = 139.50 L.m./day ===> Hourly Driving Quantity = 17.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 146

Table 1.5.7(138/296) Unit Cost Analyses

UC No.	6-SP5-WJ10	**Name of Work : Vibro-Hummer Piling of SSP Type V-L, on Water, w/ Water Jet, L=10m**											
Unit of Work		Description of Work : Driving of SSP Type V-L, (Off-shore Driving)											
Sq.m.		Quantity of Unit Cost Analysis : 10 L.m. / Hr. (*1) (Width of SSP = 0.50 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,644.10		0.00	1,644.10			
2	MATERIALS											
2.1	Steel Sheet Pile, Type V-L (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	21 % of Labor & Equip.	%	21	0.00	1,451.60	0.00	665.62	2,117.21			
	SUB-TOTAL FOR MATERIAL					4,187.60		665.62	4,853.21			
3	EQUIPMENT											
3.1	Water Jet Cutter, 325ltr./min	@2set	hr.	1.60	0.00	0.00	1,981.00	3,169.60	3,169.60	*1,981.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 75mm (3"), 1000lpm		hr.	0.80	200.00	160.00	0.00	0.00	160.00	*200.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,638.80		3,169.60	8,808.40			
	ESTIMATED DIRECT COST (EDC)					11,470.50		3,835.22	15,305.72			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,605.87		536.93	2,142.80			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,569.16		524.66	2,093.82			
	TOTAL COST FOR 10 L.m.			Including VAT		14,645.54		4,896.80	19,542.34			
	UNIT COST FOR 1 L.m.			Including VAT		1,464.55		489.68	1,954.23			
	UNIT COST FOR 1 Sq.m.			Excluding VAT		2,615.27		874.43	3,489.70			
	UNIT COST FOR 1 Sq.m			Including VAT		2,929.11		979.36	3,908.47			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 10.00 pcs./day Average Driving Length = 9.50 L.m.

Work Coefficient = 0.88 Daily Driving Quantity = 83.60 L.m./day ===> Hourly Driving Quantity = 10.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW

Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.147

Table 1.5.7(139/296) Unit Cost Analyses

Arrangec

UC No.	6-SP6-W10	**Name of Work :**	**Vibro-Hummer Piling of SSP Type VI-L, on Water, L=10m**										
Unit of Work		Description of Work :	Driving of SSP Type VI-L, (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	19 L.m. / Hr. (*1)						(Width of SSP = 0.50 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,430.58		0.00	1,430.58			
2	MATERIALS											
2.1	Steel Sheet Pile, Type VI-L (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	947.71	0.00	0.00	947.71			
	SUB-TOTAL FOR MATERIAL					2,315.71		0.00	2,315.71			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,004.28		0.00	9,004.28			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,260.60		0.00	1,260.60			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,231.79		0.00	1,231.79			
	TOTAL COST FOR	19 L.m.		Including VAT		11,496.67		0.00	11,496.67			
	UNIT COST FOR	1 L.m.		Including VAT		605.09		0.00	605.09			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,080.51		0.00	1,080.51			
	UNIT COST FOR	**1 Sq.m**		Including VAT		1,210.18		0.00	1,210.18			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 15.00 pcs./day Average Driving Length = 10.10 L.m.

Daily Driving Quantity = 151.50 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.148

Table 1.5.7(140/296) Unit Cost Analyses

Arrangec

UC No.	6-SP6-SPW10	**Name of Work : w/ SPLICE, Vibro-Hummer Piling of SSP Type VI-L, on Water, L=10m**											
Unit of Work		Description of Work : Driving of SSP Type VI-L, (Off-shore Driving)											
m.		Quantity of Unit Cost Analysis : 3 m. / Hr. (*1) (Width of SSP = 0.50 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,430.58		0.00	1,430.58			
2	MATERIALS											
2.1	Steel Sheet Pile, Type VI-L (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Splice fee incl. weiding, plate, etc.	(*3)	nos.	1.25	4,049.27	5,061.59	0.00	0.00	5,061.59	*4,049.27*	*1.00*	
2.4	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	947.71	0.00	0.00	947.71			
	SUB-TOTAL FOR MATERIAL					7,377.30		0.00	7,377.30			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					14,065.88		0.00	14,065.88			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,969.22		0.00	1,969.22			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,924.21		0.00	1,924.21			
	TOTAL COST FOR 3 m.			Including VAT		17,959.31		0.00	17,959.31			
	UNIT COST FOR 1 m.			Excluding VAT		5,345.03		0.00	5,345.03			
	UNIT COST FOR 1 m.			Including VAT		5,986.44		0.00	5,986.44			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 2.00 pcs./day Average Driving Length = 10.00 L.m.
Daily Driving Quantity = 20.00 L.m./day ===> Hourly Driving Quantity = 3.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW
Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of SSP per sheet= 12 m, Number of cutting SSP per shee 5 pc., Length of cutting SSP : 2.4 m
Number of splice per "Hourly Driving Quantity" 1.25 nos.

Table 1.5.7(141/296) Unit Cost Analyses

Arrangec

UC No.	6-SP6-WJ10	**Name of Work : Vibro-Hummer Piling of SSP Type VI-L, on Water, w/ Water Jet, L=10m**											
Unit of Work		Description of Work : Driving of SSP Type VI-L, (Off-shore Driving)											
Sq.m.		Quantity of Unit Cost Analysis : 11 L.m. / Hr. (*1) (Width of SSP = 0.50 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,644.10		0.00	1,644.10			
2	MATERIALS											
2.1	Steel Sheet Pile, Type VI-L (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	21 % of Labor & Equip.	%	21	0.00	1,451.60	0.00	665.62	2,117.21			
	SUB-TOTAL FOR MATERIAL					4,187.60		665.62	4,853.21			
3	EQUIPMENT											
3.1	Water Jet Cutter, 325ltr./min	@2set	hr.	1.60	0.00	0.00	1,981.00	3,169.60	3,169.60	*1,981.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 75mm (3"), 1000lpm		hr.	0.80	200.00	160.00	0.00	0.00	160.00	*200.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,638.80		3,169.60	8,808.40			
	ESTIMATED DIRECT COST (EDC)					11,470.50		3,835.22	15,305.72			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,605.87		536.93	2,142.80			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,569.16		524.66	2,093.82			
	TOTAL COST FOR 11 L.m.			Including VAT		14,645.54		4,896.80	19,542.34			
	UNIT COST FOR 1 L.m.			Including VAT		1,331.41		445.16	1,776.58			
	UNIT COST FOR 1 Sq.m.			Excluding VAT		2,377.52		794.94	3,172.46			
	UNIT COST FOR 1 Sq.m			Including VAT		2,662.82		890.33	3,553.15			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 10.00 pcs./day Average Driving Length = 9.90 L.m.

Work Coefficient = 0.88 Daily Driving Quantity = 87.12 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW

Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.150

Table 1.5.7(142/296) Unit Cost Analyses

Arrangec

UC No.	6-SP6-SPWJ10	**Name of Work : w/ SPLICE, Vibro-Hummer Piling of SSP Type VI-L, on Water, w/ Water Jet, L=10m**											
Unit of Work		Description of Work : Driving of SSP Type VI-L, (Off-shore Driving)											
m.		Quantity of Unit Cost Analysis : 5 m. / Hr. (*1) (Width of SSP = 0.50 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,644.10		0.00	1,644.10			
2	MATERIALS											
2.1	Steel Sheet Pile, Type VI-L (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Splice fee incl. weiding, plate, etc.	(*3)	nos.	0.91	4,049.27	3,681.16	0.00	0.00	3,681.16	*4,049.27*	*1.00*	
2.4	Miscellaneous Materials	20 % of Labor & Equip.	%	20	0.00	1,382.47	0.00	633.92	2,016.39			
	SUB-TOTAL FOR MATERIAL					7,799.63		633.92	8,433.55			
3	EQUIPMENT											
3.1	Water Jet Cutter, 325ltr./min	@2set	hr.	1.60	0.00	0.00	1,981.00	3,169.60	3,169.60	*1,981.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 75mm (3"), 1000lpm		hr.	0.80	200.00	160.00	0.00	0.00	160.00	*200.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,638.80		3,169.60	8,808.40			
	ESTIMATED DIRECT COST (EDC)					15,082.54		3,803.52	18,886.06			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,111.55		532.49	2,644.05			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,063.29		520.32	2,583.61			
	TOTAL COST FOR 5 m.			Including VAT		19,257.38		4,856.33	24,113.72			
	UNIT COST FOR 1 m.			Excluding VAT		3,438.82		867.20	4,306.02			
	UNIT COST FOR 1 m.			Including VAT		3,851.48		971.27	4,822.74			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 5.00 pcs./day Average Driving Length = 9.00 L.m.
Work Coefficient = 0.88 Daily Driving Quantity = 39.60 L.m./day ===> Hourly Driving Quantity = 5.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW
Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of SSP per sheet= 11 m, Number of cutting SSP per shee 2 pc., Length of cutting SSP : 5.5 m
Number of splice per "Hourly Driving Quantity' 0.91 nos.

Tb 1.151

Table 1.5.7(143/296) Unit Cost Analyses

Arrangec

UC No.	6-SP10H-L2TO4	**Name of Work : Vibro-Hummer Piling of SSP Type 10H, on Land, L=2~4m**											
Unit of Work		Description of Work : Driving of SSP Type HAT-10H, (On-shore Driving)											
Sq.m.		Quantity of Unit Cost Analysis : 11 L.m. / Hr. (*1) (Width of SSP = 0.90 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		0.00	2,088.63			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		0.00	6,092.10			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		0.00	852.89			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		0.00	833.40			
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		0.00	7,778.40			
	UNIT COST FOR	1 L.m.		Including VAT		707.13		0.00	707.13			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		701.51		0.00	701.51			
	UNIT COST FOR	**1 Sq.m**		Including VAT		785.70		0.00	785.70			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.152

Table 1.5.7(144/296) Unit Cost Analyses

Arrangec

UC No.	6-SP10H-L4TO6	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 10H, on Land, L=4~6m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-10H, (On-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	18 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		0.00	2,088.63			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		0.00	6,092.10			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		0.00	852.89			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		0.00	833.40			
	TOTAL COST FOR	18 L.m.		Including VAT		7,778.40		0.00	7,778.40			
	UNIT COST FOR	1 L.m.		Including VAT		432.13		0.00	432.13			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		428.70		0.00	428.70			
	UNIT COST FOR	**1 Sq.m**		Including VAT		480.15		0.00	480.15			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 35.00 pcs./day Average Driving Length = 4.00 L.m.

Daily Driving Quantity = 140.00 L.m./day ===> Hourly Driving Quantity = 18.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.153

Table 1.5.7(145/296) Unit Cost Analyses

Arrangec

UC No. 6-SP10H-SPL4TO6	**Name of Work : w/ SPLICE, Vibro-Hummer Piling of SSP Type 10H, on Land, L=4~6m**
Unit of Work	Description of Work : Driving of SSP Type HAT-25H, (On-shore Driving)
m.	Quantity of Unit Cost Analysis : 3 m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Splice fee incl. weiding, plate, etc.	(*3)	nos.	1.00	6,401.61	6,401.61	0.00	0.00	6,401.61	*6,401.61*	*1.00*	
2.4	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					8,490.24		0.00	8,490.24			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					12,493.72		0.00	12,493.72			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,749.12		0.00	1,749.12			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,709.14		0.00	1,709.14			
	TOTAL COST FOR 3 m.			Including VAT		15,951.98		0.00	15,951.98			
	UNIT COST FOR 1 m.			Excluding VAT		4,747.61		0.00	4,747.61			
	UNIT COST FOR 1 m.			Including VAT		5,317.33		0.00	5,317.33			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 5.00 pcs./day Average Driving Length = 4.00 L.m.

Daily Driving Quantity = 20.00 L.m./day ===> Hourly Driving Quantity = 3.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of SSP per sheet= 6 m, Number of cutting SSP per shee 2 pc., Length of cutting SSP : 3 m

Number of splice per "Hourly Driving Quantity' 1 nos.

Tb 1.154

Table 1.5.7(146/296) Unit Cost Analyses

Arrangec

UC No.	6-SP10H-L6TO9	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 10H, on Land, L=6~9m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-10H, (On-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	22 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		0.00	2,088.63			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		0.00	6,092.10			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		0.00	852.89			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		0.00	833.40			
	TOTAL COST FOR	22 L.m.		Including VAT		7,778.40		0.00	7,778.40			
	UNIT COST FOR	1 L.m.		Including VAT		353.56		0.00	353.56			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		350.76		0.00	350.76			
	UNIT COST FOR	**1 Sq.m**		Including VAT		392.85		0.00	392.85			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 29.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 174.00 L.m./day ===> Hourly Driving Quantity = 22.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.155

Table 1.5.7(147/296) Unit Cost Analyses

Arrangec

UC No.	6-SP10H-L9TO12	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 10H, on Land, L=9~12m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-10H, (On-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	27 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		0.00	2,088.63			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		0.00	6,092.10			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		0.00	852.89			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		0.00	833.40			
	TOTAL COST FOR	27 L.m.		Including VAT		7,778.40		0.00	7,778.40			
	UNIT COST FOR	1 L.m.		Including VAT		288.09		0.00	288.09			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		285.80		0.00	285.80			
	UNIT COST FOR	**1 Sq.m**		Including VAT		320.10		0.00	320.10			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 24.00 pcs./day Average Driving Length = 9.00 L.m.

Daily Driving Quantity = 216.00 L.m./day ===> Hourly Driving Quantity = 27.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.156

Table 1.5.7(148/296) Unit Cost Analyses

UC No. 6-SP10H&H400-W10	**Name of Work : Vibro-Hummer Piling of SSP Type 10H+H400, on Water, L=10m**
Unit of Work	Description of Work : Driving of SSP Type HAT-10H with H-400x200x9x22, (Off-shore Driving)
Sq.m.	Quantity of Unit Cost Analysis : 13 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,554.09		0.00	1,554.09			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	966.23	0.00	0.00	966.23			
	SUB-TOTAL FOR MATERIAL					2,334.23		0.00	2,334.23			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,146.32		0.00	9,146.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,280.49		0.00	1,280.49			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,251.22		0.00	1,251.22			
	TOTAL COST FOR	13 L.m.		Including VAT		11,678.03		0.00	11,678.03			
	UNIT COST FOR	1 L.m.		Including VAT		898.31		0.00	898.31			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		891.18		0.00	891.18			
	UNIT COST FOR	**1 Sq.m**		Including VAT		998.12		0.00	998.12			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 10.00 pcs./day Average Driving Length = 10.30 L.m.

Daily Driving Quantity = 103.00 L.m./day ===> Hourly Driving Quantity = 13.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.157

Table 1.5.7(149/296) Unit Cost Analyses

UC No.	6-SP10H&H400-WJ10	**Name of Work : Vibro-Hummer Piling of SSP Type 10H+H400, on Water, w/ Water Jet, L=10m**											
Unit of Work		Description of Work : Driving of SSP Type HAT-10H with H-400x200x9x22, (Off-shore Driving)											
Sq.m.		Quantity of Unit Cost Analysis : 7 L.m. / Hr. (*1) (Width of SSP = 0.90 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,767.62		0.00	1,767.62			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	21 % of Labor & Equip.	%	21	0.00	1,477.53	0.00	665.62	2,143.15			
	SUB-TOTAL FOR MATERIAL					4,213.53		665.62	4,879.15			
3	EQUIPMENT											
3.1	Water Jet Cutter, 325ltr./min	@2set	hr.	1.60	0.00	0.00	1,981.00	3,169.60	3,169.60	*1,981.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 75mm (3"), 1000lpm		hr.	0.80	200.00	160.00	0.00	0.00	160.00	*200.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,638.80		3,169.60	8,808.40			
	ESTIMATED DIRECT COST (EDC)					11,619.95		3,835.22	15,455.17			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,626.79		536.93	2,163.72			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,589.61		524.66	2,114.27			
	TOTAL COST FOR	7 L.m.		Including VAT		14,836.35		4,896.80	19,733.16			
	UNIT COST FOR	1 L.m.		Including VAT		2,119.48		699.54	2,819.02			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		2,102.66		693.99	2,796.65			
	UNIT COST FOR	**1 Sq.m**		Including VAT		2,354.98		777.27	3,132.25			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 6.00 pcs./day Average Driving Length = 10.30 L.m.
Work Coefficient = 0.88 Daily Driving Quantity = 54.38 L.m./day ===> Hourly Driving Quantity = 7.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW
Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.158

Table 1.5.7(150/296) Unit Cost Analyses

UC No. 6-SP10H&H400-SPWJ10	**Name of Work : w/ SPLICE, Vibro-Hummer Piling of SSP Type 10H+H400, on Water, w/ Water Jet, L=10m**
Unit of Work	Description of Work : Driving of SSP Type HAT-10H with H-400x200x9x22, (Off-shore Driving)
m.	Quantity of Unit Cost Analysis : 4 m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,767.62		0.00	1,767.62			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Splice fee incl. weiding, plate, etc.	(*3)	nos.	0.70	24,590.32	17,106.31	0.00	0.00	17,106.31	*24,590.32*	*1.00*	
2.4	Miscellaneous Materials	20 % of Labor & Equip.	%	20	0.00	1,407.18	0.00	633.92	2,041.10			
	SUB-TOTAL FOR MATERIAL					21,249.49		633.92	21,883.41			
3	EQUIPMENT											
3.1	Water Jet Cutter, 325ltr./min	@2set	hr.	1.60	0.00	0.00	1,981.00	3,169.60	3,169.60	*1,981.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 75mm (3"), 1000lpm		hr.	0.80	200.00	160.00	0.00	0.00	160.00	*200.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,638.80		3,169.60	8,808.40			
	ESTIMATED DIRECT COST (EDC)					28,655.90		3,803.52	32,459.42			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,011.83		532.49	4,544.32			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,920.13		520.32	4,440.45			
	TOTAL COST FOR 4 m.			Including VAT		36,587.86		4,856.33	41,444.19			
	UNIT COST FOR 1 m.			Excluding VAT		8,166.93		1,084.00	9,250.94			
	UNIT COST FOR 1 m.			Including VAT		9,146.96		1,214.08	10,361.05			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 4.00 pcs./day Average Driving Length = 9.50 L.m.
Work Coefficient = 0.88 Daily Driving Quantity = 33.44 L.m./day ===> Hourly Driving Quantity = 4.0 L.m./hr.
(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW
Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.
(*3): Length of SSP per sheet= 11.5 m, Number of cutting SSP per shee 2 pc., Length of cutting SSP : 5.75 m
Number of splice per "Hourly Driving Quantity' 0.70 nos.

Table 1.5.7(151/296) Unit Cost Analyses

UC No. 6-SP10H&H450-W11	**Name of Work : Vibro-Hummer Piling of SSP Type 10H+H450, on Water, L=11m**
Unit of Work	Description of Work : Driving of SSP Type HAT-10H with H-450x200x12x25/H-450x250x9x22/H-450x250x12x28, (Off-shore Driving)
Sq.m.	Quantity of Unit Cost Analysis : 9 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,554.09		0.00	1,554.09			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	966.23	0.00	0.00	966.23			
	SUB-TOTAL FOR MATERIAL					2,334.23		0.00	2,334.23			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,146.32		0.00	9,146.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,280.49		0.00	1,280.49			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,251.22		0.00	1,251.22			
	TOTAL COST FOR	9 L.m.		Including VAT		11,678.03		0.00	11,678.03			
	UNIT COST FOR	1 L.m.		Including VAT		1,297.56		0.00	1,297.56			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,287.26		0.00	1,287.26			
	UNIT COST FOR	**1 Sq.m**		Including VAT		1,441.73		0.00	1,441.73			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 7.00 pcs./day Average Driving Length = 10.60 L.m.

Daily Driving Quantity = 74.20 L.m./day ===> Hourly Driving Quantity = 9.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.160

Table 1.5.7(152/296) Unit Cost Analyses

UC No.	6-SP10H&H450-WJ11	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 10H+H450, on Water, w/ Water Jet, L=11m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-10H with H-450x200x12x25/H-450x250x9x22/H-450x250x12x28, (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	6 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,767.62		0.00	1,767.62			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	21 % of Labor & Equip.	%	21	0.00	1,477.53	0.00	665.62	2,143.15			
	SUB-TOTAL FOR MATERIAL					4,213.53		665.62	4,879.15			
3	EQUIPMENT											
3.1	Water Jet Cutter, 325ltr./min	@2set	hr.	1.60	0.00	0.00	1,981.00	3,169.60	3,169.60	*1,981.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 75mm (3"), 1000lpm		hr.	0.80	200.00	160.00	0.00	0.00	160.00	*200.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,638.80		3,169.60	8,808.40			
	ESTIMATED DIRECT COST (EDC)					11,619.95		3,835.22	15,455.17			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,626.79		536.93	2,163.72			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,589.61		524.66	2,114.27			
	TOTAL COST FOR	6 L.m.		Including VAT		14,836.35		4,896.80	19,733.16			
	UNIT COST FOR	1 L.m.		Including VAT		2,472.73		816.13	3,288.86			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		2,453.10		809.66	3,262.76			
	UNIT COST FOR	**1 Sq.m**		Including VAT		2,747.47		906.82	3,654.29			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 5.00 pcs./day Average Driving Length = 11.40 L.m.

Work Coefficient = 0.88 Daily Driving Quantity = 50.16 L.m./day ===> Hourly Driving Quantity = 6.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW

Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 161

Table 1.5.7(153/296) Unit Cost Analyses

Arrangec

UC No.	6-SP10H&H500-W12	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 10H+H500, on Water, L=12m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-10H with H-500x200x12x25/H-500x250x12x28 (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	9 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,554.09		0.00	1,554.09			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	966.23	0.00	0.00	966.23			
	SUB-TOTAL FOR MATERIAL					2,334.23		0.00	2,334.23			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,146.32		0.00	9,146.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,280.49		0.00	1,280.49			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,251.22		0.00	1,251.22			
	TOTAL COST FOR	9 L.m.		Including VAT		11,678.03		0.00	11,678.03			
	UNIT COST FOR	1 L.m.		Including VAT		1,297.56		0.00	1,297.56			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,287.26		0.00	1,287.26			
	UNIT COST FOR	**1 Sq.m**		Including VAT		1,441.73		0.00	1,441.73			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 6.00 pcs./day Average Driving Length = 11.80 L.m.

Daily Driving Quantity = 70.80 L.m./day ===> Hourly Driving Quantity = 9.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.162

Table 1.5.7(154/296) Unit Cost Analyses

Arrangec

UC No. 6-SP10H&H500-SPW12	**Name of Work : w/ SPLICE, Vibro-Hummer Piling of SSP Type 10H+H500, on Water, L=12m**
Unit of Work	Description of Work : Driving of SSP Type HAT-10H with H-500x200x12x25/H-500x250x12x28 (Off-shore Driving)
m.	Quantity of Unit Cost Analysis : 3 m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,554.09		0.00	1,554.09			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Splice fee incl. weiding, plate, etc.	(*3)	nos.	0.67	33,481.45	22,320.97	0.00	0.00	22,320.97	*33,481.45*	*1.00*	
2.4	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	966.23	0.00	0.00	966.23			
	SUB-TOTAL FOR MATERIAL					24,655.20		0.00	24,655.20			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					31,467.29		0.00	31,467.29			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,405.42		0.00	4,405.42			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,304.73		0.00	4,304.73			
	TOTAL COST FOR	3 m.		Including VAT		40,177.44		0.00	40,177.44			
	UNIT COST FOR	**1 m.**		Excluding VAT		11,957.57		0.00	11,957.57			
	UNIT COST FOR	**1 m.**		Including VAT		13,392.48		0.00	13,392.48			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 2.00 pcs./day Average Driving Length = 11.50 L.m.
Daily Driving Quantity = 23.00 L.m./day ===> Hourly Driving Quantity = 3.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW
Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of SSP per sheet= 13.5 m, Number of cutting SSP per shee 3 pc., Length of cutting SSP : 4.5 m
Number of splice per "Hourly Driving Quantity" 0.66666667 nos.

Tb 1.163

Table 1.5.7(155/296) Unit Cost Analyses

UC No. 6-SP10H&H550-W13	**Name of Work : Vibro-Hummer Piling of SSP Type 10H+H550, on Water, L=13m**
Unit of Work	Description of Work : Driving of SSP Type HAT-10H with H-500x200x12x25/H-500x250x12x28 (Off-shore Driving)
Sq.m.	Quantity of Unit Cost Analysis : 8 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,554.09		0.00	1,554.09			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	966.23	0.00	0.00	966.23			
	SUB-TOTAL FOR MATERIAL					2,334.23		0.00	2,334.23			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,146.32		0.00	9,146.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,280.49		0.00	1,280.49			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,251.22		0.00	1,251.22			
	TOTAL COST FOR	8 L.m.		Including VAT		11,678.03		0.00	11,678.03			
	UNIT COST FOR	1 L.m.		Including VAT		1,459.75		0.00	1,459.75			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,448.17		0.00	1,448.17			
	UNIT COST FOR	**1 Sq.m**		Including VAT		1,621.95		0.00	1,621.95			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 5.00 pcs./day Average Driving Length = 13.00 L.m.

Daily Driving Quantity = 65.00 L.m./day ===> Hourly Driving Quantity = 8.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 164

Table 1.5.7(156/296) Unit Cost Analyses

UC No. 6-SP10H&H600-W13	**Name of Work : Vibro-Hummer Piling of SSP Type 10H+H600, on Water, L=13m**
Unit of Work	Description of Work : Driving of SSP Type HAT-10H with H-600x200x12x28/H-600x250x12x28, (Off-shore Driving)
Sq.m.	Quantity of Unit Cost Analysis : 8 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,554.09		0.00	1,554.09			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	966.23	0.00	0.00	966.23			
	SUB-TOTAL FOR MATERIAL					2,334.23		0.00	2,334.23			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,146.32		0.00	9,146.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,280.49		0.00	1,280.49			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,251.22		0.00	1,251.22			
	TOTAL COST FOR	8 L.m.		Including VAT		11,678.03		0.00	11,678.03			
	UNIT COST FOR	1 L.m.		Including VAT		1,459.75		0.00	1,459.75			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,448.17		0.00	1,448.17			
	UNIT COST FOR	**1 Sq.m**		Including VAT		1,621.95		0.00	1,621.95			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 5.00 pcs./day Average Driving Length = 13.20 L.m.

Daily Driving Quantity = 66.00 L.m./day ===> Hourly Driving Quantity = 8.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.165

Table 1.5.7(157/296) Unit Cost Analyses

Arrangec

UC No.	6-SP10H&H650-W14	**Name of Work : Vibro-Hummer Piling of SSP Type 10H+H650, on Water, L=14m**											
Unit of Work		Description of Work : Driving of SSP Type HAT-10H with H-650x200x12x28/H-650x250x12x28, (Off-shore Driving)											
Sq.m.		Quantity of Unit Cost Analysis : 8 L.m. / Hr. (*1) (Width of SSP = 0.90 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,554.09		0.00	1,554.09			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	966.23	0.00	0.00	966.23			
	SUB-TOTAL FOR MATERIAL					2,334.23		0.00	2,334.23			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,146.32		0.00	9,146.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,280.49		0.00	1,280.49			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,251.22		0.00	1,251.22			
	TOTAL COST FOR	8 L.m.		Including VAT		11,678.03		0.00	11,678.03			
	UNIT COST FOR	1 L.m.		Including VAT		1,459.75		0.00	1,459.75			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,448.17		0.00	1,448.17			
	UNIT COST FOR	**1 Sq.m**		Including VAT		1,621.95		0.00	1,621.95			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 4.20 pcs./day Average Driving Length = 14.50 L.m.

Daily Driving Quantity = 60.90 L.m./day ===> Hourly Driving Quantity = 8.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 166

Table 1.5.7(158/296) Unit Cost Analyses

UC No.	6-SP10H&H650-WJ13	**Name of Work : Vibro-Hummer Piling of SSP Type 10H+H650, on Water, w/ Water Jet, L=13m**											
Unit of Work		Description of Work : Driving of SSP Type HAT-10H with H-650x200x12x28/H-650x250x12x28, (Off-shore Driving)											
Sq.m.		Quantity of Unit Cost Analysis : 6 L.m. / Hr. (*1) (Width of SSP = 0.90 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,767.62		0.00	1,767.62			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	12 % of Labor & Equip.	%	12	0.00	914.82	0.00	903.55	1,818.37			
	SUB-TOTAL FOR MATERIAL					3,650.82		903.55	4,554.37			
3	EQUIPMENT											
3.1	Water Jet Cutter, 895ltr./min	@2set	hr.	1.60	0.00	0.00	4,706.00	7,529.60	7,529.60	*4,706.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Crawler Crane, 60t, 275HP		hr.	0.40	2,526.00	1,010.40	0.00	0.00	1,010.40	*2,526.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 100mm (4"), 3500lpm		hr.	0.80	385.00	308.00	0.00	0.00	308.00	*385.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					6,226.40		7,529.60	13,756.00			
	ESTIMATED DIRECT COST (EDC)					11,644.83		8,433.15	20,077.99			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,630.28		1,180.64	2,810.92			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,593.01		1,153.66	2,746.67			
	TOTAL COST FOR	6 L.m.		Including VAT		14,868.12		10,767.45	25,635.57			
	UNIT COST FOR	1 L.m.		Including VAT		2,478.02		1,794.57	4,272.60			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		2,458.35		1,780.33	4,238.69			
	UNIT COST FOR	**1 Sq.m**		Including VAT		2,753.36		1,993.97	4,747.33			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 4.20 pcs./day Average Driving Length = 13.00 L.m.

Work Coefficient = 0.88 Daily Driving Quantity = 48.05 L.m./day ===> Hourly Driving Quantity = 6.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW

Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 167

Table 1.5.7(159/296) Unit Cost Analyses

UC No.	6-SP10H&H750-WJ15	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 10H+H750, on Water, w/ Water Jet, L=15m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-10H with H-750x250x12x25, (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	6 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3 + Water Jet @2	day	0.63	854.10	533.81	-	-	533.81	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,767.62		0.00	1,767.62			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	60.80	45.00	2,736.00	0.00	0.00	2,736.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	12 % of Labor & Equip.	%	12	0.00	914.82	0.00	903.55	1,818.37			
	SUB-TOTAL FOR MATERIAL					3,650.82		903.55	4,554.37			
3	EQUIPMENT											
3.1	Water Jet Cutter, 895ltr./min	@2set	hr.	1.60	0.00	0.00	4,706.00	7,529.60	7,529.60	*4,706.00*	*0.00*	
3.2	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.3	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.4	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.5	Crawler Crane, 60t, 275HP		hr.	0.40	2,526.00	1,010.40	0.00	0.00	1,010.40	*2,526.00*	*1.00*	
3.6	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.7	Submersible Pump, 100mm (4"), 3500lpm		hr.	0.80	385.00	308.00	0.00	0.00	308.00	*385.00*	*1.00*	
3.8	Generator Set, 400kW	for Hammer, Jet, Pump	hr.	0.80	598.00	478.40	0.00	0.00	478.40	*598.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					6,226.40		7,529.60	13,756.00			
	ESTIMATED DIRECT COST (EDC)					11,644.83		8,433.15	20,077.99			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,630.28		1,180.64	2,810.92			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,593.01		1,153.66	2,746.67			
	TOTAL COST FOR	6 L.m.		Including VAT		14,868.12		10,767.45	25,635.57			
	UNIT COST FOR	1 L.m.		Including VAT		2,478.02		1,794.57	4,272.60			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		2,458.35		1,780.33	4,238.69			
	UNIT COST FOR	**1 Sq.m**		Including VAT		2,753.36		1,993.97	4,747.33			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 3.70 pcs./day Average Driving Length = 15.30 L.m.

Work Coefficient = 0.88 Daily Driving Quantity = 49.82 L.m./day ===> Hourly Driving Quantity = 6.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 400 kW

Hourly Diesel Fuel Consumption = 76 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 168

Table 1.5.7(160/296) Unit Cost Analyses

Arrangec

UC No.	6-SP25H&H850-W17	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 25H+H850, on Water, L=17m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-25H with H-800x250x16x28, (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	8 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,554.09		0.00	1,554.09			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H with H400~900mm (Purchas		ton	0.00	0.00	0.00	76,210.00	0.00	0.00	*76,210.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	966.23	0.00	0.00	966.23			
	SUB-TOTAL FOR MATERIAL					2,334.23		0.00	2,334.23			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,146.32		0.00	9,146.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,280.49		0.00	1,280.49			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,251.22		0.00	1,251.22			
	TOTAL COST FOR	8 L.m.		Including VAT		11,678.03		0.00	11,678.03			
	UNIT COST FOR	1 L.m.		Including VAT		1,459.75		0.00	1,459.75			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,448.17		0.00	1,448.17			
	UNIT COST FOR	**1 Sq.m**		Including VAT		1,621.95		0.00	1,621.95			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 3.70 pcs./day Average Driving Length = 17.00 L.m.

Daily Driving Quantity = 62.96 L.m./day ===> Hourly Driving Quantity = 8.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 169

Table 1.5.7(161/296) Unit Cost Analyses

Arrangec

UC No.	6-SP25H-L2TO4	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 25H, on Land, L=2~4m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-25H, (On-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :			10	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)	
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		0.00	2,088.63				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		0.00	6,092.10				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		0.00	852.89				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		0.00	833.40				
	TOTAL COST FOR	10 L.m.		Including VAT		7,778.40		0.00	7,778.40				
	UNIT COST FOR	1 L.m.		Including VAT		777.84		0.00	777.84				
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		771.67		0.00	771.67				
	UNIT COST FOR	**1 Sq.m**		Including VAT		864.27		0.00	864.27				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 39.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 78.00 L.m./day ===> Hourly Driving Quantity = 10.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.170

Table 1.5.7(162/296) Unit Cost Analyses

Arrangec

UC No.	6-SP25H-L4TO6	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 25H, on Land, L=4~6m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-25H, (On-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	16 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		0.00	2,088.63			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		0.00	6,092.10			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		0.00	852.89			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		0.00	833.40			
	TOTAL COST FOR	16 L.m.		Including VAT		7,778.40		0.00	7,778.40			
	UNIT COST FOR	1 L.m.		Including VAT		486.15		0.00	486.15			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		482.29		0.00	482.29			
	UNIT COST FOR	**1 Sq.m**		Including VAT		540.17		0.00	540.17			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 31.00 pcs./day Average Driving Length = 4.00 L.m.

Daily Driving Quantity = 124.00 L.m./day ===> Hourly Driving Quantity = 16.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.171

Table 1.5.7(163/296) Unit Cost Analyses

Arrangec

UC No.	6-SP25H-L6TO9	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 25H, on Land, L=6~9m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-25H, (On-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :	19 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		0.00	2,088.63			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		0.00	6,092.10			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		0.00	852.89			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		0.00	833.40			
	TOTAL COST FOR	19 L.m.		Including VAT		7,778.40		0.00	7,778.40			
	UNIT COST FOR	1 L.m.		Including VAT		409.39		0.00	409.39			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		406.14		0.00	406.14			
	UNIT COST FOR	**1 Sq.m**		Including VAT		454.88		0.00	454.88			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.172

Table 1.5.7(164/296) Unit Cost Analyses

Arrangec

UC No. 6-SP25H-SPL6TO9	**Name of Work : w/ SPLICE, Vibro-Hummer Piling of SSP Type 25H, on Land, L=6~9m**
Unit of Work	Description of Work : Driving of SSP Type HAT-25H, (On-shore Driving)
m.	Quantity of Unit Cost Analysis : 2 m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Splice fee incl. weiding, plate, etc.	(*3)	nos.	1.05	6,401.61	6,738.54	0.00	0.00	6,738.54	*6,401.61*	*1.00*	
2.4	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					8,827.17		0.00	8,827.17			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					12,830.64		0.00	12,830.64			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,796.29		0.00	1,796.29			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,755.23		0.00	1,755.23			
	TOTAL COST FOR 2 m.			Including VAT		16,382.17		0.00	16,382.17			
	UNIT COST FOR 1 m.			Excluding VAT		7,313.47		0.00	7,313.47			
	UNIT COST FOR 1 m.			Including VAT		8,191.08		0.00	8,191.08			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 2.00 pcs./day Average Driving Length = 7.50 L.m.

Daily Driving Quantity = 15.00 L.m./day ===> Hourly Driving Quantity = 2.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of SSP per sheet= 9.5 m, Number of cutting SSP per shee 5 pc., Length of cutting SSP : 1.9 m

Number of splice per "Hourly Driving Quantity" 1.05263158 nos.

Tb 1.173

Table 1.5.7(165/296) Unit Cost Analyses

UC No.	6-SP25H-W7	**Name of Work :**	**Vibro-Hummer Piling of SSP Type 25H, on Water, L=7m**										
Unit of Work		Description of Work :	Driving of SSP Type HAT-25H, (Off-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis :			15	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)	
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,430.58		0.00	1,430.58			
2	MATERIALS											
2.1	Steel Sheet Pile, HAT-10H/25H (Purchasing)		ton	0.00	0.00	0.00	69,097.00	0.00	0.00	*69,097.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	947.71	0.00	0.00	947.71			
	SUB-TOTAL FOR MATERIAL					2,315.71		0.00	2,315.71			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,004.28		0.00	9,004.28			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,260.60		0.00	1,260.60			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,231.79		0.00	1,231.79			
	TOTAL COST FOR	15 L.m.		Including VAT		11,496.67		0.00	11,496.67			
	UNIT COST FOR	1 L.m.		Including VAT		766.44		0.00	766.44			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		760.36		0.00	760.36			
	UNIT COST FOR	**1 Sq.m**		Including VAT		851.61		0.00	851.61			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 17.00 pcs./day Average Driving Length = 7.00 L.m.

Daily Driving Quantity = 119.00 L.m./day ===> Hourly Driving Quantity = 15.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.174

Table 1.5.7(166/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-A	**Name of Work :**	**Flexible Joiint SSP-10H-100-A, L=8.5m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-100-A										
	L.m.	Quantity of Unit Cost Analysis :	18	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-10H-100-A	(*3)	nos.	1.06	0.00	0.00	1,720,201.00	1,821,389.29	1,821,389.29	*1,720,201.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,821,389.29	1,823,477.92				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,821,389.29	1,827,481.40				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		254,994.50	255,847.40				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		249,166.06	249,999.46				
	TOTAL COST FOR	18 L.m.		Including VAT		7,778.40		2,325,549.85	2,333,328.25				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		385.83		115,354.66	115,740.49				
	UNIT COST FOR	**1 L.m.**		Including VAT		432.13		129,197.21	129,629.35				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 35.00 pcs./day Average Driving Length = 4.00 L.m.

Daily Driving Quantity = 140.00 L.m./day ===> Hourly Driving Quantity = 18.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 8.5 m x 2 pcs. = 17.0 m

Tb 1.175

Table 1.5.7(167/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-B	**Name of Work :**	**Flexible Joiint SSP-10H-100-B, L=5.5m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-100-B										
	L.m.	Quantity of Unit Cost Analysis :	11 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-10H-100-B	(*3)	nos.	1.00	0.00	0.00	1,244,211.00	1,244,211.00	1,244,211.00	*1,244,211.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		1,244,211.00	1,246,299.63			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,244,211.00	1,250,303.10			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		174,189.54	175,042.43			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		170,208.06	171,041.46			
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,588,608.60	1,596,387.00			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		128,945.50	129,576.87			
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		144,418.96	145,126.09			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 5.5 m x 2 pcs. = 11.0 m

Tb 1.176

Table 1.5.7(168/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-C	Name of Work :	Flexible Joiint SSP-10H-100-C, L=10.0m
Unit of Work		Description of Work :	Flexible Joiint SSP-10H-100-C
L.m.		Quantity of Unit Cost Analysis :	22 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-10H-100-C	(*3)	nos.	1.10	0.00	0.00	2,045,075.00	2,249,582.50	2,249,582.50	*2,045,075.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		2,249,582.50	2,251,671.13			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		2,249,582.50	2,255,674.60			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		314,941.55	315,794.44			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		307,742.89	308,576.29			
	TOTAL COST FOR	22 L.m.		Including VAT		7,778.40		2,872,266.94	2,880,045.33			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		315.68		116,569.28	116,884.96			
	UNIT COST FOR	**1 L.m.**		Including VAT		353.56		130,557.59	130,911.15			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 29.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 174.00 L.m./day ===> Hourly Driving Quantity = 22.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 10 m x 2 pcs. = 20.0 m

Tb 1.177

Table 1.5.7(169/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-D	Name of Work :	Flexible Joiint SSP-10H-200-D, L=10.5m
Unit of Work		Description of Work :	Flexible Joiint SSP-10H-200-D
L.m.		Quantity of Unit Cost Analysis :	22 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-10H-200-D	(*3)	nos.	1.05	0.00	0.00	2,280,721.00	2,389,326.76	2,389,326.76	*2,280,721.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		2,389,326.76	2,391,415.39			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		2,389,326.76	2,395,418.87			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		334,505.75	335,358.64			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		326,859.90	327,693.30			
	TOTAL COST FOR	22 L.m.		Including VAT		7,778.40		3,050,692.41	3,058,470.81			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		315.68		123,810.57	124,126.25			
	UNIT COST FOR	**1 L.m.**		Including VAT		353.56		138,667.84	139,021.40			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 29.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 174.00 L.m./day ===> Hourly Driving Quantity = 22.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 10.5 m x 2 pcs. = 21.0 m

Tb 1.178

Table 1.5.7(170/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-E	Name of Work :	Flexible Joiint SSP-10H-100-E, L=9.0m
Unit of Work		Description of Work :	Flexible Joiint SSP-10H-100-E
L.m.		Quantity of Unit Cost Analysis :	22 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-10H-100-E	(*3)	nos.	1.22	0.00	0.00	1,807,492.00	2,209,156.89	2,209,156.89	*1,807,492.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		2,209,156.89	2,211,245.51			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		2,209,156.89	2,215,248.99			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		309,281.96	310,134.86			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		302,212.66	303,046.06			
	TOTAL COST FOR	22 L.m.		Including VAT		7,778.40		2,820,651.52	2,828,429.91			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		315.68		114,474.49	114,790.18			
	UNIT COST FOR	**1 L.m.**		Including VAT		353.56		128,211.43	128,565.00			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 29.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 174.00 L.m./day ===> Hourly Driving Quantity = 22.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 9 m x 2 pcs. = 18.0 m

Tb 1.179

Table 1.5.7(171/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-F	**Name of Work :**	**Flexible Joiint SSP-10H-100-F, L=7.5m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-100-F										
	L.m.	Quantity of Unit Cost Analysis :	18	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-10H-100-F	(*3)	nos.	1.20	0.00	0.00	1,564,417.00	1,877,300.40	1,877,300.40	*1,564,417.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,877,300.40	1,879,389.03				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,877,300.40	1,883,392.50				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		262,822.06	263,674.95				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		256,814.69	257,648.09				
	TOTAL COST FOR	18 L.m.		Including VAT		7,778.40		2,396,937.15	2,404,715.55				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		385.83		118,895.69	119,281.53				
	UNIT COST FOR	**1 L.m.**		Including VAT		432.13		133,163.18	133,595.31				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 35.00 pcs./day Average Driving Length = 4.00 L.m.

Daily Driving Quantity = 140.00 L.m./day ===> Hourly Driving Quantity = 18.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 7.5 m x 2 pcs. = 15.0 m

Tb 1.180

Table 1.5.7(172/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-G	**Name of Work :**	**Flexible Joiint SSP-10H-100-G, L=9.0m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-100-G										
	L.m.	Quantity of Unit Cost Analysis :	18	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-10H-100-G	(*3)	nos.	1.00	0.00	0.00	1,797,839.00	1,797,839.00	1,797,839.00	*1,797,839.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,797,839.00	1,799,927.63				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,797,839.00	1,803,931.10				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		251,697.46	252,550.35				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		245,944.38	246,777.77				
	TOTAL COST FOR	18 L.m.		Including VAT		7,778.40		2,295,480.84	2,303,259.23				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		385.83		113,863.14	114,248.97				
	UNIT COST FOR	**1 L.m.**		Including VAT		432.13		127,526.71	127,958.85				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 35.00 pcs./day Average Driving Length = 4.00 L.m.

Daily Driving Quantity = 140.00 L.m./day ===> Hourly Driving Quantity = 18.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 9 m x 2 pcs. = 18.0 m

Tb 1.181

Table 1.5.7(173/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-H	Name of Work :	Flexible Joiint SSP-10H-100-H, L=10.0m
Unit of Work		Description of Work :	Flexible Joiint SSP-10H-100-H
L.m.		Quantity of Unit Cost Analysis :	22 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-10H-100-H	(*3)	nos.	1.10	0.00	0.00	1,989,696.00	2,188,665.60	2,188,665.60	*1,989,696.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		2,188,665.60	2,190,754.23			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		2,188,665.60	2,194,757.70			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		306,413.18	307,266.08			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		299,409.45	300,242.85			
	TOTAL COST FOR	22 L.m.		Including VAT		7,778.40		2,794,488.24	2,802,266.64			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		315.68		113,412.67	113,728.35			
	UNIT COST FOR	**1 L.m.**		Including VAT		353.56		127,022.19	127,375.76			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 29.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 174.00 L.m./day ===> Hourly Driving Quantity = 22.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 10 m x 2 pcs. = 20.0 m

Tb 1.182

Table 1.5.7(174/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-I	**Name of Work :**	**Flexible Joiint SSP-10H-200-I, L=5.0m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-200-I										
	L.m.	Quantity of Unit Cost Analysis :	11 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-10H-200-I	(*3)	nos.	1.10	0.00	0.00	1,281,396.00	1,409,535.60	1,409,535.60	*1,281,396.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		1,409,535.60	1,411,624.23			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,409,535.60	1,415,627.70			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		197,334.98	198,187.88			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		192,824.47	193,657.87			
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,799,695.05	1,807,473.45			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		146,079.14	146,710.51			
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		163,608.64	164,315.77			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 5 m x 2 pcs. = 10.0 m

Tb 1.183

Table 1.5.7(175/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-J	**Name of Work :**	**Flexible Joiint SSP-10H-100-J, L=6.0m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-100-J										
	L.m.	Quantity of Unit Cost Analysis :	11	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-10H-100-J	(*3)	nos.	0.92	0.00	0.00	1,312,196.00	1,202,846.33	1,202,846.33	*1,312,196.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,202,846.33	1,204,934.96				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,202,846.33	1,208,938.44				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		168,398.49	169,251.38				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		164,549.38	165,382.78				
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,535,794.20	1,543,572.60				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		124,658.62	125,289.98				
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		139,617.65	140,324.78				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 6 m x 2 pcs. = 12.0 m

Tb 1.184

Table 1.5.7(176/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-K	**Name of Work :**	**Flexible Joiint SSP-10H-200-K, L=5.5m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-200-K										
	L.m.	Quantity of Unit Cost Analysis :	11	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-10H-200-K	(*3)	nos.	1.00	0.00	0.00	1,357,002.00	1,357,002.00	1,357,002.00	*1,357,002.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,357,002.00	1,359,090.63				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,357,002.00	1,363,094.10				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		189,980.28	190,833.17				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		185,637.87	186,471.27				
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,732,620.15	1,740,398.55				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		140,634.75	141,266.12				
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		157,510.92	158,218.05				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 5.5 m x 2 pcs. = 11.0 m

Tb 1.185

Table 1.5.7(177/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-L	**Name of Work :**	**Flexible Joiint SSP-10H-100-L, L=5.5m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-100-L										
	L.m.	Quantity of Unit Cost Analysis :	11	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-10H-100-L	(*3)	nos.	1.00	0.00	0.00	1,289,937.00	1,289,937.00	1,289,937.00	*1,289,937.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,289,937.00	1,292,025.63				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,289,937.00	1,296,029.10				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		180,591.18	181,444.07				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		176,463.38	177,296.78				
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,646,991.56	1,654,769.96				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		133,684.38	134,315.74				
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		149,726.51	150,433.63				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 5.5 m x 2 pcs. = 11.0 m

Tb 1.186

Table 1.5.7(178/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-M	Name of Work :	Flexible Joiint SSP-10H-200-M, L=6.0m
Unit of Work		Description of Work :	Flexible Joiint SSP-10H-200-M
L.m.		Quantity of Unit Cost Analysis :	11 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-10H-200-M	(*3)	nos.	0.92	0.00	0.00	1,433,115.00	1,313,688.75	1,313,688.75	*1,433,115.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		1,313,688.75	1,315,777.38			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,313,688.75	1,319,780.85			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		183,916.43	184,769.32			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		179,712.62	180,546.02			
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,677,317.80	1,685,096.19			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		136,145.93	136,777.29			
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		152,483.44	153,190.56			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 6 m x 2 pcs. = 12.0 m

Tb 1.187

Table 1.5.7(179/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-N	**Name of Work :**	**Flexible Joiint SSP-10H-100-N, L=5.5m**											
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-100-N											
	L.m.	Quantity of Unit Cost Analysis :	11	L.m.	/ Hr. (*1)				(Width of SSP =	0.90	m)			
No.	Name of Item	Description		Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR													
1.1	Foreman	@1		day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2		day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1		day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2		day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2		day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR						881.48		0.00	881.48				
2	MATERIALS													
2.1	Flexible Joiint SSP-10H-100-N		(*3)	nos.	1.00	0.00	0.00	1,198,486.00	1,198,486.00	1,198,486.00	*1,198,486.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set	(*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.		%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL						2,088.63		1,198,486.00	1,200,574.63				
3	EQUIPMENT													
3.1	Crawler Crane 50t, 190HP			hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP			hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW			hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer		hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT						3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)						6,092.10		1,198,486.00	1,204,578.10				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		852.89		167,788.04	168,640.93				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		833.40		163,952.88	164,786.28				
	TOTAL COST FOR	11 L.m.			Including VAT		7,778.40		1,530,226.92	1,538,005.32				
	UNIT COST FOR	**1 L.m.**			Excluding VAT		631.36		124,206.73	124,838.09				
	UNIT COST FOR	**1 L.m.**			Including VAT		707.13		139,111.54	139,818.67				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 5.5 m x 2 pcs. = 11.0 m

Tb 1.188

Table 1.5.7(180/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-O	**Name of Work :**	**Flexible Joiint SSP-10H-100-O, L=5.5m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-100-O										
	L.m.	Quantity of Unit Cost Analysis :	11	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-10H-100-O	(*3)	nos.	1.00	0.00	0.00	1,244,211.00	1,244,211.00	1,244,211.00	*1,244,211.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,244,211.00	1,246,299.63				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,244,211.00	1,250,303.10				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		174,189.54	175,042.43				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		170,208.06	171,041.46				
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,588,608.60	1,596,387.00				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		128,945.50	129,576.87				
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		144,418.96	145,126.09				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 5.5 m x 2 pcs. = 11.0 m

Tb 1.189

Table 1.5.7(181/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-P	**Name of Work :**	**Flexible Joiint SSP-10H-200-P, L=6.0m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-200-P										
	L.m.	Quantity of Unit Cost Analysis :	11	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-10H-200-P	(*3)	nos.	0.92	0.00	0.00	1,433,115.00	1,313,688.75	1,313,688.75	*1,433,115.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,313,688.75	1,315,777.38				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,313,688.75	1,319,780.85				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		183,916.43	184,769.32				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		179,712.62	180,546.02				
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,677,317.80	1,685,096.19				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		136,145.93	136,777.29				
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		152,483.44	153,190.56				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 6 m x 2 pcs. = 12.0 m

Tb 1.190

Table 1.5.7(182/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-Q	**Name of Work :**	**Flexible Joiint SSP-10H-200-Q, L=6.0m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-10H-200-Q										
	L.m.	Quantity of Unit Cost Analysis :	11	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-10H-200-Q	(*3)	nos.	0.92	0.00	0.00	1,478,841.00	1,355,604.25	1,355,604.25	*1,478,841.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,355,604.25	1,357,692.88				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,355,604.25	1,361,696.35				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		189,784.60	190,637.49				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		185,446.66	186,280.06				
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,730,835.51	1,738,613.90				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		140,489.90	141,121.26				
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		157,348.68	158,055.81				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 6 m x 2 pcs. = 12.0 m

Tb 1.191

Table 1.5.7(183/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-10H-R	Name of Work :	Flexible Joiint SSP-10H-200-R, L=6.0m
Unit of Work		Description of Work :	Flexible Joiint SSP-10H-200-R
L.m.		Quantity of Unit Cost Analysis :	11 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-10H-200-R	(*3)	nos.	0.92	0.00	0.00	1,433,115.00	1,313,688.75	1,313,688.75	*1,433,115.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		1,313,688.75	1,315,777.38			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,313,688.75	1,319,780.85			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		183,916.43	184,769.32			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		179,712.62	180,546.02			
	TOTAL COST FOR	11 L.m.		Including VAT		7,778.40		1,677,317.80	1,685,096.19			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		631.36		136,145.93	136,777.29			
	UNIT COST FOR	**1 L.m.**		Including VAT		707.13		152,483.44	153,190.56			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 42.00 pcs./day Average Driving Length = 2.00 L.m.

Daily Driving Quantity = 84.00 L.m./day ===> Hourly Driving Quantity = 11.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 6 m x 2 pcs. = 12.0 m

Tb 1.192

Table 1.5.7(184/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-25H-A	**Name of Work :**	**Flexible Joiint SSP-25H-100-A, L=10.0m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-25H-100-A										
	L.m.	Quantity of Unit Cost Analysis :	19 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description		Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR												
1.1	Foreman	@1		day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2		day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1		day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2		day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2		day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						881.48		0.00	881.48			
2	MATERIALS												
2.1	Flexible Joiint SSP-25H-100-A		(*3)	nos.	0.95	0.00	0.00	2,069,111.00	1,965,655.45	1,965,655.45	*2,069,111.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set	(*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.		%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL						2,088.63		1,965,655.45	1,967,744.08			
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP			hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP			hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW			hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer		hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT						3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)						6,092.10		1,965,655.45	1,971,747.55			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		852.89		275,191.76	276,044.66			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		833.40		268,901.67	269,735.07			
	TOTAL COST FOR	19 L.m.			Including VAT		7,778.40		2,509,748.88	2,517,527.28			
	UNIT COST FOR	**1 L.m.**			Excluding VAT		365.53		117,939.33	118,304.85			
	UNIT COST FOR	**1 L.m.**			Including VAT		409.39		132,092.05	132,501.44			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 10 m x 2 pcs. = 20.0 m

Tb 1.193

Table 1.5.7(185/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-25H-B	**Name of Work :**	**Flexible Joiint SSP-25H-100-B, L=7.5m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-25H-100-B										
	L.m.	Quantity of Unit Cost Analysis :	19 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-25H-100-B	(*3)	nos.	1.27	0.00	0.00	1,656,876.00	2,098,709.60	2,098,709.60	*1,656,876.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		2,098,709.60	2,100,798.23			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		2,098,709.60	2,104,801.70			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		293,819.34	294,672.24			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		287,103.47	287,936.87			
	TOTAL COST FOR	19 L.m.		Including VAT		7,778.40		2,679,632.42	2,687,410.81			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		365.53		125,922.58	126,288.10			
	UNIT COST FOR	**1 L.m.**		Including VAT		409.39		141,033.29	141,442.67			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 7.5 m x 2 pcs. = 15.0 m

Tb 1.194

Table 1.5.7(186/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-25H-C	Name of Work :	Flexible Joiint SSP-25H-100-C, L=11.0m
Unit of Work		Description of Work :	Flexible Joiint SSP-25H-100-C
L.m.		Quantity of Unit Cost Analysis :	19 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-25H-100-C	(*3)	nos.	0.86	0.00	0.00	2,326,879.00	2,009,577.32	2,009,577.32	*2,326,879.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		2,009,577.32	2,011,665.94			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		2,009,577.32	2,015,669.42			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		281,340.82	282,193.72			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		274,910.18	275,743.58			
	TOTAL COST FOR	19 L.m.		Including VAT		7,778.40		2,565,828.32	2,573,606.72			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		365.53		120,574.64	120,940.17			
	UNIT COST FOR	**1 L.m.**		Including VAT		409.39		135,043.60	135,452.99			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 11 m x 2 pcs. = 22.0 m

Tb 1.195

Table 1.5.7(187/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-25H-D	**Name of Work :**	**Flexible Joiint SSP-25H-200-D, L=11.0m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-25H-200-D										
	L.m.	Quantity of Unit Cost Analysis :	19	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-25H-200-D	(*3)	nos.	0.86	0.00	0.00	2,536,710.00	2,190,795.00	2,190,795.00	*2,536,710.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		2,190,795.00	2,192,883.63				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		2,190,795.00	2,196,887.10				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		306,711.30	307,564.19				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		299,700.76	300,534.16				
	TOTAL COST FOR	19 L.m.		Including VAT		7,778.40		2,797,207.06	2,804,985.45				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		365.53		131,447.70	131,813.23				
	UNIT COST FOR	**1 L.m.**		Including VAT		409.39		147,221.42	147,630.81				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 11 m x 2 pcs. = 22.0 m

Tb 1.196

Table 1.5.7(188/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-25H-E	**Name of Work :**	**Flexible Joiint SSP-25H-100-E, L=10.5m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-25H-100-E										
	L.m.	Quantity of Unit Cost Analysis :	19 L.m. / Hr. (*1)						(Width of SSP = 0.90 m)				
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-25H-100-E	(*3)	nos.	0.90	0.00	0.00	2,155,318.00	1,950,049.62	1,950,049.62	*2,155,318.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		1,950,049.62	1,952,138.24			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,950,049.62	1,956,141.72			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		273,006.95	273,859.84			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		266,766.79	267,600.19			
	TOTAL COST FOR	19 L.m.		Including VAT		7,778.40		2,489,823.35	2,497,601.75			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		365.53		117,002.98	117,368.50			
	UNIT COST FOR	**1 L.m.**		Including VAT		409.39		131,043.33	131,452.72			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 10.5 m x 2 pcs. = 21.0 m

Tb 1.197

Table 1.5.7(189/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-25H-F	Name of Work :	Flexible Joiint SSP-25H-100-F, L=10.5m
Unit of Work		Description of Work :	Flexible Joiint SSP-25H-100-F
L.m.		Quantity of Unit Cost Analysis :	19 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-25H-100-F	(*3)	nos.	0.90	0.00	0.00	2,153,286.00	1,948,211.14	1,948,211.14	*2,153,286.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		1,948,211.14	1,950,299.77			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,948,211.14	1,954,303.25			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		272,749.56	273,602.45			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		266,515.28	267,348.68			
	TOTAL COST FOR	19 L.m.		Including VAT		7,778.40		2,487,475.99	2,495,254.38			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		365.53		116,892.67	117,258.19			
	UNIT COST FOR	**1 L.m.**		Including VAT		409.39		130,919.79	131,329.18			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 10.5 m x 2 pcs. = 21.0 m

Tb 1.198

Table 1.5.7(190/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-25H-G	Name of Work :	Flexible Joiint SSP-25H-100-G, L=10.5m
Unit of Work		Description of Work :	Flexible Joiint SSP-25H-100-G
L.m.		Quantity of Unit Cost Analysis :	19 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-25H-100-G	(*3)	nos.	0.90	0.00	0.00	2,153,286.00	1,948,211.14	1,948,211.14	*2,153,286.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		1,948,211.14	1,950,299.77			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,948,211.14	1,954,303.25			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		272,749.56	273,602.45			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		266,515.28	267,348.68			
	TOTAL COST FOR	19 L.m.		Including VAT		7,778.40		2,487,475.99	2,495,254.38			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		365.53		116,892.67	117,258.19			
	UNIT COST FOR	**1 L.m.**		Including VAT		409.39		130,919.79	131,329.18			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 10.5 m x 2 pcs. = 21.0 m

Tb 1.199

Table 1.5.7(191/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-25H-H	**Name of Work :**	**Flexible Joiint SSP-25H-100-H, L=10.5m**										
	Unit of Work	Description of Work :	Flexible Joiint SSP-25H-100-H										
	L.m.	Quantity of Unit Cost Analysis :	19	L.m.	/ Hr. (*1)			(Width of SSP =	0.90	m)			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*		
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*		
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*		
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48				
2	MATERIALS												
2.1	Flexible Joiint SSP-25H-100-H	(*3)	nos.	0.90	0.00	0.00	2,196,979.00	1,987,742.90	1,987,742.90	*2,196,979.00*	*0.00*		
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*		
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63				
	SUB-TOTAL FOR MATERIAL					2,088.63		1,987,742.90	1,989,831.53				
3	EQUIPMENT												
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00				
	ESTIMATED DIRECT COST (EDC)					6,092.10		1,987,742.90	1,993,835.01				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		278,284.01	279,136.90				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		271,923.23	272,756.63				
	TOTAL COST FOR	19 L.m.		Including VAT		7,778.40		2,537,950.14	2,545,728.54				
	UNIT COST FOR	**1 L.m.**		Excluding VAT		365.53		119,264.57	119,630.10				
	UNIT COST FOR	**1 L.m.**		Including VAT		409.39		133,576.32	133,985.71				

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 10.5 m x 2 pcs. = 21.0 m

Tb 1.200

Table 1.5.7(192/296) Unit Cost Analyses

Arrangec

UC No.	6-FLX-25H-I	Name of Work :	Flexible Joiint SSP-25H-200-I, L=10.5m
Unit of Work		Description of Work :	Flexible Joiint SSP-25H-200-I
L.m.		Quantity of Unit Cost Analysis :	19 L.m. / Hr. (*1) (Width of SSP = 0.90 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	0.25	854.10	213.53	-	-	213.53	*854.10*	*1.00*	
1.5	Common Labor	@2	day	0.25	574.41	143.60	-	-	143.60	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					881.48		0.00	881.48			
2	MATERIALS											
2.1	Flexible Joiint SSP-25H-200-I	(*3)	nos.	0.90	0.00	0.00	2,439,326.00	2,207,009.24	2,207,009.24	*2,439,326.00*	*0.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	18 % of Labor & Equip.	%	18	0.00	720.63	0.00	0.00	720.63			
	SUB-TOTAL FOR MATERIAL					2,088.63		2,207,009.24	2,209,097.86			
3	EQUIPMENT											
3.1	Crawler Crane 50t, 190HP		hr.	0.80	2,245.00	1,796.00	0.00	0.00	1,796.00	*2,245.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					3,122.00		0.00	3,122.00			
	ESTIMATED DIRECT COST (EDC)					6,092.10		2,207,009.24	2,213,101.34			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		852.89		308,981.29	309,834.19			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		833.40		301,918.86	302,752.26			
	TOTAL COST FOR	19 L.m.		Including VAT		7,778.40		2,817,909.40	2,825,687.79			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		365.53		132,420.55	132,786.08			
	UNIT COST FOR	**1 L.m.**		Including VAT		409.39		148,311.02	148,720.41			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 25.00 pcs./day Average Driving Length = 6.00 L.m.

Daily Driving Quantity = 150.00 L.m./day ===> Hourly Driving Quantity = 19.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

(*3): Length of Flexible Joiint SSP : 10.5 m x 2 pcs. = 21.0 m

Tb 1.201

Table 1.5.7(193/296) Unit Cost Analyses

UC No.	6-WJP-WELD	**Name of Work : Welding of Water Jet Pipe onto Sheet Pile**											
Unit of Work		Description of Work : Weld Driving of SSP Type HAT-25H with H-1000x300x16x32, (Off-shore Driving)											
Pile		Quantity of Unit Cost Analysis : 7.0 piles / day(*1)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1,230.50*	*1.00*	
1.2	Rigger	@1	day	1.00	988.10	988.10	-	-	988.10	*988.10*	*1.00*	
1.3	Welder	@2	day	2.00	988.10	1,976.20	-	-	1,976.20	*988.10*	*1.00*	
1.4	Skilled Labor	@1	day	1.00	854.10	854.10	-	-	854.10	*854.10*	*1.00*	
1.5	Common Labor	@1	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					5,623.31		0.00	5,623.31			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	152.0	45.00	6,840.00	0.00	0.00	6,840.00	*45.00*	*1.00*	
2.2	Miscellaneous Materials	10 % of Labor & Equip.	%	10	0.00	1,688.73	0.00	0.00	1,688.73			
	SUB-TOTAL FOR MATERIAL					8,528.73		0.00	8,528.73			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp	@2set	hr.	16.00	391.00	6,256.00	0.00	0.00	6,256.00	*391.00*	*1.00*	
3.2	Generator Set, 100kW		hr.	8.00	167.00	1,336.00	0.00	0.00	1,336.00	*167.00*	*1.00*	
3.3	Crawler Crane 50t, 190HP		hr.	1.00	2,245.00	2,245.00	0.00	0.00	2,245.00	*2,245.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	1.00	1,427.00	1,427.00	0.00	0.00	1,427.00	*1,427.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					11,264.00		0.00	11,264.00			
	ESTIMATED DIRECT COST (EDC)					25,416.04		0.00	25,416.04			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,558.25		0.00	3,558.25			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,476.91		0.00	3,476.91			
	TOTAL COST FOR	7 piles		Including VAT		32,451.20		0.00	32,451.20			
	UNIT COST FOR	**1 Pile**		Excluding VAT		4,139.18		0.00	4,139.18			
	UNIT COST FOR	**1 Pile**		Including VAT		4,635.89		0.00	4,635.89			

(*1): Computation of Daily Working Quantity : Required Welding Days for 10 Piles = 1.50 day/10pile Daily Working Quantity = 7.00 pile/day

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 100 kW

Hourly Diesel Fuel Consumption = 19 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.202

Table 1.5.7(194/296) Unit Cost Analyses

UC No.	6-SP-O	**Name of Work :**	**Pulling Out of Steel Sheet Pile, All Type**										
Unit of Work		Description of Work :											
Sq.m.		Quantity of Unit Cost Analysis :			300	L.m.	/ Day			(Width of SSP =	0.40	m)	
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*		
1.2	Rigger	@2	day	2.00	988.10	1,976.20	-	-	1,976.20	*988.1*	*1.00*		
1.3	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					4,355.52		0.00	4,355.52				
2	MATERIALS												
2.1	Diesel Fuel (Light Oil)	for Generator Set (*)	ltr.	304.00	45.00	13,680.00	0.00	0.00	13,680.00	*45.00*	*1.00*		
	SUB-TOTAL FOR MATERIAL					13,680.00		0.00	13,680.00				
3	EQUIPMENT												
3.1	Crawler Crane, 40t, 190HP		hr.	8.00	1,729.00	13,832.00	0.00	0.00	13,832.00	*1,729.00*	*1.00*		
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*		
3.3	Electric Vibratory Hammer, 60kW		hr.	8.00	622.00	4,976.00	0.00	0.00	4,976.00	*622.00*	*1.00*		
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	8.00	322.00	2,576.00	0.00	0.00	2,576.00	*322.00*	*1.00*		
	SUB-TOTAL FOR EQUIPMENT					32,800.00		0.00	32,800.00				
	ESTIMATED DIRECT COST (EDC)					50,835.52		0.00	50,835.52				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		7,116.97		0.00	7,116.97				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		6,954.30		0.00	6,954.30				
	TOTAL COST FOR	300 L.m.		Including VAT		64,906.79		0.00	64,906.79				
	UNIT COST FOR	1 L.m.		Including VAT		216.36		0.00	216.36				
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		482.94		0.00	482.94				
	UNIT COST FOR	**1 Sq.m.**		Including VAT		540.89		0.00	540.89				

(*) : Diesel Fuel Consumption Computation for Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.203

Table 1.5.7(195/296) Unit Cost Analyses

UC No.	6-SP-OH	**Name of Work :**	**Pulling Out of H-Beam**										
Unit of Work		Description of Work :											
L.m.		Quantity of Unit Cost Analysis :			340	L.m.	/ Day						
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Rigger	@2	day	2.00	988.10	1,976.20	-	-	1,976.20	*988.1*	*1.00*	
1.3	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,355.52		0.00	4,355.52			
2	MATERIALS											
2.1	Diesel Fuel (Light Oil)	for Generator Set (*)	ltr.	304.00	45.00	13,680.00	0.00	0.00	13,680.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					13,680.00		0.00	13,680.00			
3	EQUIPMENT											
3.1	Crawler Crane, 40t, 190HP		hr.	8.00	1,729.00	13,832.00	0.00	0.00	13,832.00	*1,729.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	8.00	622.00	4,976.00	0.00	0.00	4,976.00	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	8.00	322.00	2,576.00	0.00	0.00	2,576.00	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					32,800.00		0.00	32,800.00			
	ESTIMATED DIRECT COST (EDC)					50,835.52		0.00	50,835.52			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		7,116.97		0.00	7,116.97			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		6,954.30		0.00	6,954.30			
	TOTAL COST FOR	340 L.m.		Including VAT		64,906.79		0.00	64,906.79			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		170.45		0.00	170.45			
	UNIT COST FOR	**1 L.m.**		Including VAT		190.90		0.00	190.90			

(*) : Diesel Fuel Consumption Computation for Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 204

Table 1.5.7(196/296) Unit Cost Analyses

UC No. 6-SP2T	**Name of Work : Temporary Steel Sheet Pile, Type II, Furnishing and Driving**											
Unit of Work	Description of Work : **5 Times Re-Use of SSP**, Furnishing and Driving of Steel Sheet Pile (On-shore Driving)											
Sq.m.	Quantity of Unit Cost Analysis : 22 L.m. / Hr. (*1) (Width of SSP = 0.40 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Common Labor	@4	day	0.50	574.41	287.21	-	-	287.21	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					688.04		0.00	688.04			
2	MATERIALS											
2.1	Steel Sheet Pile, Type II (Local purchase)	48.0kg/m	ton	0.21	43,120.00	9,106.94	0.00	0.00	9,106.94	*43,120.00*	*1.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	38.00	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	for Pile Guide, 10% of SSP	%	10	0.00	910.69	0.00	0.00	910.69			
	SUB-TOTAL FOR MATERIAL					11,727.64		0.00	11,727.64			
3	EQUIPMENT											
3.1	Crawler Crane, 40t, 190HP		hr.	1.00	1,729.00	1,729.00	0.00	0.00	1,729.00	*1,729.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	1.00	1,427.00	1,427.00	0.00	0.00	1,427.00	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	1.00	622.00	622.00	0.00	0.00	622.00	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	1.00	322.00	322.00	0.00	0.00	322.00	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					4,100.00		0.00	4,100.00			
	ESTIMATED DIRECT COST (EDC)					16,515.68		0.00	16,515.68			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,312.20		0.00	2,312.20			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,259.35		0.00	2,259.35			
	TOTAL COST FOR	22 L.m.		Including VAT		21,087.22		0.00	21,087.22			
	UNIT COST FOR	1 L.m.		Including VAT		958.51		0.00	958.51			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		2,139.53		0.00	2,139.53			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		2,396.28		0.00	2,396.28			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 177.00 L.m./day

Hourly Driving Quantity = 22 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.205

Table 1.5.7(197/296) Unit Cost Analyses

UC No.	6-SP3AT	**Name of Work : Temporary Steel Sheet Pile, Type IIIA, Furnishing and Driving**										
Unit of Work		Description of Work : **5** Times Re-Use of SSP, Furnishing and Driving of Steel Sheet Pile (On-shore Driving)										
Sq.m.		Quantity of Unit Cost Analysis : 20 L.m. / Hr. (*1) (Width of SSP = 0.40 m)										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Common Labor	@4	day	0.50	574.41	287.21	-	-	287.21	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					688.04		0.00	688.04			
2	MATERIALS											
2.1	Steel Sheet Pile, Type III-A (Local purchase)	58.4kg/m	ton	0.23	43,119.00	10,072.60	0.00	0.00	10,072.60	*43,119.00*	*1.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*)	ltr.	38.00	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	for Pile Guide, 10% of SSP	%	10	0.00	1,007.26	0.00	0.00	1,007.26			
	SUB-TOTAL FOR MATERIAL					12,789.86		0.00	12,789.86			
3	EQUIPMENT											
3.1	Crawler Crane, 40t, 190HP		hr.	1.00	1,729.00	1,729.00	0.00	0.00	1,729.00	*1,729.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	1.00	1,427.00	1,427.00	0.00	0.00	1,427.00	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	1.00	622.00	622.00	0.00	0.00	622.00	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	1.00	322.00	322.00	0.00	0.00	322.00	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					4,100.00		0.00	4,100.00			
	ESTIMATED DIRECT COST (EDC)					17,577.90		0.00	17,577.90			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,460.91		0.00	2,460.91			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,404.66		0.00	2,404.66			
	TOTAL COST FOR	20 L.m.		Including VAT		22,443.46		0.00	22,443.46			
	UNIT COST FOR	1 L.m.		Including VAT		1,122.17		0.00	1,122.17			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		2,504.85		0.00	2,504.85			
	UNIT COST FOR	**1 Sq.m**		Including VAT		2,805.43		0.00	2,805.43			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 156.00 L.m./day

Hourly Driving Quantity = 20.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1. 206

Table 1.5.7(198/296) Unit Cost Analyses

UC No. 6-SP2WT	**Name of Work : Temporary Steel Sheet Pile, Type II-w, Furnishing and Driving**
Unit of Work	Description of Work : **5** Times Re-Use of SSP, Furnishing and Driving of Steel Sheet Pile (On-shore Driving)
Sq.m.	Quantity of Unit Cost Analysis : 26 L.m. / Hr. (*1) (Width of SSP = 0.60 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Common Labor	@4	day	0.50	574.41	287.21	-	-	287.21	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					688.04		0.00	688.04			
2	MATERIALS											
2.1	Steel Sheet Pile, Type II-W	(Local purchase) (*2)	ton	0.482	33,801.00	16,293.43	-	-	16,293.43	*33,801.00*	*1.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*3)	ltr.	38.00	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	for Pile Guide, 10% of SSP	%	10	0.00	1,629.34	0.00	0.00	1,629.34			
	SUB-TOTAL FOR MATERIAL					19,632.78		0.00	19,632.78			
3	EQUIPMENT											
3.1	Crawler Crane, 40t, 190HP		hr.	1.00	1,729.00	1,729.00	0.00	0.00	1,729.00	*1,729.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	1.00	1,427.00	1,427.00	0.00	0.00	1,427.00	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	1.00	622.00	622.00	0.00	0.00	622.00	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	1.00	322.00	322.00	0.00	0.00	322.00	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					4,100.00		0.00	4,100.00			
	ESTIMATED DIRECT COST (EDC)					24,420.82		0.00	24,420.82			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,418.91		0.00	3,418.91			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,340.77		0.00	3,340.77			
	TOTAL COST FOR	26 L.m.		Including VAT		31,180.50		0.00	31,180.50			
	UNIT COST FOR	1 L.m.		Including VAT		1,199.25		0.00	1,199.25			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,784.60		0.00	1,784.60			
	UNIT COST FOR	**1 Sq.m**		Including VAT		1,998.75		0.00	1,998.75			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 52.0 nos./day = 208.00 L.m./day

Hourly Driving Quantity = 26.0 L.m./hr. (Ave. Driving Length = 4.00 L.m./nos.)

(*2): Computation of Required Quantity of SSP : (Required Length of SSP = 6.00 L.m./nos.) (Unit Weight 61.80 kg/m)

Required Quantity of SSP = 52.0 nos./day = 312.0 L.m./day = 39.0 L.m./hr. = 2.410 ton/hr.

5 Times Re-Use of SSP ===> 0.482 ton/hr.

(*3): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Table 1.5.7(199/296) Unit Cost Analyses

Arrangec

UC No. 6-HT	**Name of Work : Temporary H-Beam, Furnishing and Driving**
Unit of Work	Description of Work : **1** Times Re-Use of H-Beam, Furnishing and Driving of H-Beam (On-shore Driving)
L.m.	Quantity of Unit Cost Analysis : 16 L.m. / Hr. (*1)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.1*	*1.00*	
1.3	Common Labor	@4	day	0.50	574.41	287.21	-	-	287.21	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					688.04		0.00	688.04			
2	MATERIALS											
2.1	H-beam (Local purchase),	H-400*400*13*21 172.0kg/m	kg	2752.00	45.00	123,840.00	0.00	0.00	123,840.00	*45.00*	*1.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*)	ltr.	38.00	45.00	1,710.00	0.00	0.00	1,710.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	22% of Labor & Equipment	%	22	0.00	1,053.37	0.00	0.00	1,053.37			
	SUB-TOTAL FOR MATERIAL					126,603.37		0.00	126,603.37			
3	EQUIPMENT											
3.1	Crawler Crane, 40t, 190HP		hr.	1.00	1,729.00	1,729.00	0.00	0.00	1,729.00	*1,729.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 25t, 200HP		hr.	1.00	1,427.00	1,427.00	0.00	0.00	1,427.00	*1,427.00*	*1.00*	
3.3	Electric Vibratory Hammer, 60kW		hr.	1.00	622.00	622.00	0.00	0.00	622.00	*622.00*	*1.00*	
3.4	Generator Set, 200kW	for Vibratory Hammer	hr.	1.00	322.00	322.00	0.00	0.00	322.00	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					4,100.00		0.00	4,100.00			
	ESTIMATED DIRECT COST (EDC)					131,391.41		0.00	131,391.41			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		18,394.80		0.00	18,394.80			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		17,974.35		0.00	17,974.35			
	TOTAL COST FOR 16 L.m.			Including VAT		167,760.55		0.00	167,760.55			
	UNIT COST FOR 1 L.m.			Excluding VAT		9,361.64		0.00	9,361.64			
	UNIT COST FOR 1 L.m.			Including VAT		10,485.03		0.00	10,485.03			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 125.00 L.m./day

Hourly Driving Quantity = 16.0 L.m./hr.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.208

Table 1.5.7(200/296) Unit Cost Analyses

New

UC No.	6-SUPT-20	**Name of Work : Support for Lightweight SSP, Furnishing, installation and removal, less than 2.0m (Single Waling)**											
Unit of Work		Description of Work : **10** Times Re-Use of support material, furnishing, installation and removal of support, shallower than 2.0m											
L.m.		Quantity of Unit Cost Analysis : 100 L.m.											
No.	Name of Item	Description		Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
						Unit Cost	Amount	Unit Cost	Amount				
1	LABOR (*1)	Installation	Removal										
1.1	Foreman	@1.3	@0.9	day	5.50	1,230.50	6,767.75	-	-	6,767.75	*1230.5*	*1.00*	
1.2	Rigger	@1.3	@0.9	day	5.50	988.10	5,434.55	-	-	5,434.55	*988.1*	*1.00*	
1.3	Common Labor	@3.2	@1.8	day	12.50	574.41	7,180.13	-	-	7,180.13	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						19,382.43		0.00	19,382.43			
2	MATERIALS												
2.1	C-200mm x 90mm x 8mm x 13.5n Waling		(*2)	kg	10.00	55.00	550.00	0.00	0.00	550.00	*55.00*	*1.00*	
2.2	Galvanized Iron Pipe, 150mm Dia. Strut		(*3)	L.m.	13.33	1,708.00	22,773.33	0.00	0.00	22,773.33	*1,708.00*	*1.00*	
2.3	Miscellaneous Materials	10% of Material		%	10	0.00	2,332.33	0.00	0.00	2,332.33			
	SUB-TOTAL FOR MATERIAL						25,655.67		0.00	25,655.67			
3	EQUIPMENT												
	SUB-TOTAL FOR EQUIPMENT						0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)						45,038.09		0.00	45,038.09			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		6,305.33		0.00	6,305.33			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		6,161.21		0.00	6,161.21			
	TOTAL COST FOR	100 L.m.			Including VAT		57,504.64		0.00	57,504.64			
	UNIT COST FOR	1 **L.m.**			Excluding VAT		513.43		0.00	513.43			
	UNIT COST FOR	**1 L.m.**			Including VAT		575.05		0.00	575.05			

(*1):

Labor for installation of Waling		Labor for installation of Strut		Labor for removal of Waling		Labor for removal of Strut	
Foreman:	0.6	Foreman:	0.7	Foreman:	0.3	Foreman:	0.6
Rigger:	0.6	Rigger:	0.7	Rigger:	0.3	Rigger:	0.6
Common Labor:	1.7	Common Labor:	1.5	Common Labor:	0.6	Common Labor:	1.2

(*2): Length of Wailing: 1 (single) x 100 L.m. = 100 L.m.

10 Times Re-Use of Waling ===> 10.000 L.m.

(*3): Length of Strut: 1 (single) x 4 m (Width of Earth Bracing) @3.0 m/ 100 m = 133.3 m

10 Times Re-Use of Strut ===> 13.333 L.m.

Tb 1.209

Table 1.5.7(201/296) Unit Cost Analyses

New

UC No.	6-SUPT-35	**Name of Work : Support for Lightweight SSP, Furnishing, installation and removal, less than 3.5m (Double Waling)**											
Unit of Work		Description of Work : **10** Times Re-Use of support material, furnishing, installation and removal of support, shallower than 3.5m											
L.m.		Quantity of Unit Cost Analysis : 100 L.m.											
No.	Name of Item	Description		Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
						Unit Cost	Amount	Unit Cost	Amount				
1	LABOR (*1)	Installation	Removal										
1.1	Foreman	@2.6	@1.8	day	11.00	1,230.50	13,535.50	-	-	13,535.50	*1230.5*	*1.00*	
1.2	Rigger	@2.6	@1.8	day	11.00	988.10	10,869.10	-	-	10,869.10	*988.1*	*1.00*	
1.3	Common Labor	@6.4	@3.7	day	25.25	574.41	14,503.85	-	-	14,503.85	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						38,908.45		0.00	38,908.45			
2	MATERIALS												
2.1	C-200mm x 90mm x 8mm x 13.5n Waling		(*2)	kg	20.00	55.00	1,100.00	0.00	0.00	1,100.00	*55.00*	*1.00*	
2.2	Galvanized Iron Pipe, 150mm Dia. Strut		(*3)	L.m.	26.67	1,708.00	45,546.67	0.00	0.00	45,546.67	*1,708.00*	*1.00*	
2.3	Miscellaneous Materials	10% of Material		%	10	0.00	4,664.67	0.00	0.00	4,664.67			
	SUB-TOTAL FOR MATERIAL						51,311.33		0.00	51,311.33			
3	EQUIPMENT												
	SUB-TOTAL FOR EQUIPMENT						0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)						90,219.79		0.00	90,219.79			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		12,630.77		0.00	12,630.77			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		12,342.07		0.00	12,342.07			
	TOTAL COST FOR	100 L.m.			Including VAT		115,192.62		0.00	115,192.62			
	UNIT COST FOR	1 **L.m.**			Excluding VAT		1,028.51		0.00	1,028.51			
	UNIT COST FOR	**1 L.m.**			Including VAT		1,151.93		0.00	1,151.93			

(*1):

Labor for installation of Waling		Labor for installation of Strut		Labor for removal of Waling		Labor for removal of Strut	
Foreman:	1.1	Foreman:	1.5	Foreman:	0.6	Foreman:	1.2
Rigger:	1.1	Rigger:	1.5	Rigger:	0.6	Rigger:	1.2
Common Labor:	3.4	Common Labor:	3	Common Labor:	1.3	Common Labor:	2.4

(*2): Length of Wailing: 2 (single) x 100 L.m. = 200 L.m.

10 Times Re-Use of Waling ===> 20.000 L.m.

(*3): Length of Strut: 2 (single) x 4 m (Width of Earth Bracing) @3.0 m/ 100 m = 266.7 m

10 Times Re-Use of Strut ===> 26.667 L.m.

Tb 1.210

Table 1.5.7(202/296) Unit Cost Analyses

New

UC No.	6-LSP-20	**Name of Work : Temporary Lightweight SSP, Furnishing, installation and removal, less than 2.0m**											
Unit of Work		Description of Work : **10** Times Re-Use of Lightweight SSP, furnishing, installation and removal of lightweight SSP, shallower than 2.0m											
L.m.		Quantity of Unit Cost Analysis : 100 L.m.											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR	Installation Removal										
1.1	Foreman	@3.5 @2.3	day	14.50	1,230.50	17,842.25	-	-	17,842.25	*1230.5*	*1.00*	
1.2	Rigger	@3.5 @2.3	day	14.50	988.10	14,327.45	-	-	14,327.45	*988.1*	*1.00*	
1.3	Common Labor	@10.5 @4.6	day	37.75	574.41	21,683.98	-	-	21,683.98	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					53,853.68		0.00	53,853.68			
2	MATERIALS											
2.1	Lightweight Steel Sheet Pile, Type I (Local purc	166.4kg/m	ton	1.66	51,327.00	85,408.13	0.00	0.00	85,408.13	*51,327.00*	*1.00*	
2.3	Miscellaneous Materials	10% of Material	%	10	0.00	8,540.81	0.00	0.00	8,540.81			
	SUB-TOTAL FOR MATERIAL					93,948.94		0.00	93,948.94			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	for installation	hr.	14.50	1,739.00	25,215.50	0.00	0.00	25,215.50	*1,739.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 5t, 100HP	for removal	hr.	18.40	518.00	9,531.20	0.00	0.00	9,531.20	*518.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					34,746.70		0.00	34,746.70			
	ESTIMATED DIRECT COST (EDC)					182,549.32		0.00	182,549.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		25,556.90		0.00	25,556.90			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		24,972.75		0.00	24,972.75			
	TOTAL COST FOR 100 L.m.			Including VAT		233,078.97		0.00	233,078.97			
	UNIT COST FOR 1 L.m.			Excluding VAT		2,081.06		0.00	2,081.06			
	UNIT COST FOR 1 L.m.			Including VAT		2,330.79		0.00	2,330.79			

Tb 1.211

Table 1.5.7(203/296) Unit Cost Analyses

New

UC No. 6-LSP-35	**Name of Work : Temporary Lightweight SSP, Furnishing, installation and removal, less than 3.5m**
Unit of Work	Description of Work : **10** Times Re-Use of Lightweight SSP, furnishing, installation and removal of lightweight SSP, shallower than 3.5m
L.m.	Quantity of Unit Cost Analysis : 100 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR	Installation Removal										
1.1	Foreman	@4.4 @2.9	day	18.25	1,230.50	22,456.63	-	-	22,456.63	*1230.5*	*1.00*	
1.2	Rigger	@4.4 @2.9	day	18.25	988.10	18,032.83	-	-	18,032.83	*988.1*	*1.00*	
1.3	Common Labor	@13.3 @5.8	day	47.75	574.41	27,428.08	-	-	27,428.08	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					67,917.53		0.00	67,917.53			
2	MATERIALS											
2.1	Lightweight Steel Sheet Pile, Type I (Local purc	291.2kg/m	ton	2.91	51,327.00	149,464.22	0.00	0.00	149,464.22	*51,327.00*	*1.00*	
2.3	Miscellaneous Materials	10% of Material	%	10	0.00	14,946.42	0.00	0.00	14,946.42			
	SUB-TOTAL FOR MATERIAL					164,410.65		0.00	164,410.65			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP	for installation	hr.	21.60	1,739.00	37,562.40	0.00	0.00	37,562.40	*1,739.00*	*1.00*	
3.2	Telescopic Boom Truck Crane, 5t, 100HP	for removal	hr.	23.20	518.00	12,017.60	0.00	0.00	12,017.60	*518.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					49,580.00		0.00	49,580.00			
	ESTIMATED DIRECT COST (EDC)					281,908.17		0.00	281,908.17			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		39,467.14		0.00	39,467.14			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		38,565.04		0.00	38,565.04			
	TOTAL COST FOR 100 L.m.			Including VAT		359,940.36		0.00	359,940.36			
	UNIT COST FOR 1 L.m.			Excluding VAT		3,213.75		0.00	3,213.75			
	UNIT COST FOR 1 L.m.			Including VAT		3,599.40		0.00	3,599.40			

Tb 1.212

Table 1.5.7(204/296) Unit Cost Analyses

Arrangec

UC No.	6-DOLPN	**Name of Work :**	**Driving Dolphin on Water**										
Unit of Work		Description of Work :	Driving Dolphin on Water										
Nos.		Quantity of Unit Cost Analysis :			1	Nos.	/ Hr. (*1)						

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1,230.50*	*1.00*	
1.2	Rigger	@2	day	0.25	988.10	247.03	-	-	247.03	*988.10*	*1.00*	
1.3	Welder	@1	day	0.13	988.10	123.51	-	-	123.51	*988.10*	*1.00*	
1.4	Skilled Labor	@3	day	0.38	854.10	320.29	-	-	320.29	*854.10*	*1.00*	
1.5	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
1.6	Barge Crew	@3	day	0.38	988.10	370.54	-	-	370.54	*988.10*	*1.00*	
	SUB-TOTAL FOR LABOR					1,430.58		0.00	1,430.58			
2	MATERIALS											
2.1	H-beam (Local purchase), SS41		kg	0.00	45.00	0.00	0.00	0.00	0.00	*45.00*	*1.00*	
2.2	Diesel Fuel (Light Oil)	for Generator Set (*2)	ltr.	30.40	45.00	1,368.00	0.00	0.00	1,368.00	*45.00*	*1.00*	
2.3	Miscellaneous Materials	15 % of Labor & Equip.	%	15	0.00	947.71	0.00	0.00	947.71			
	SUB-TOTAL FOR MATERIAL					2,315.71		0.00	2,315.71			
3	EQUIPMENT											
3.1	Crane Barge, GW-319t, w/ Crane 60t		hr.	0.80	3,843.00	3,074.40	0.00	0.00	3,074.40	*3,843.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	0.20	1,603.00	320.60	0.00	0.00	320.60	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t	for Pile Loading	hr.	1.00	537.00	537.00	0.00	0.00	537.00	*537.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 25t, 200HP		hr.	0.40	1,427.00	570.80	0.00	0.00	570.80	*1,427.00*	*1.00*	
3.5	Electric Vibratory Hammer, 60kW		hr.	0.80	622.00	497.60	0.00	0.00	497.60	*622.00*	*1.00*	
3.6	Generator Set, 200kW	for Vibratory Hammer	hr.	0.80	322.00	257.60	0.00	0.00	257.60	*322.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,258.00		0.00	5,258.00			
	ESTIMATED DIRECT COST (EDC)					9,004.28		0.00	9,004.28			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,260.60		0.00	1,260.60			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,231.79		0.00	1,231.79			
	TOTAL COST FOR	1 Nos.		Including VAT		11,496.67		0.00	11,496.67			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		10,264.88		0.00	10,264.88			
	UNIT COST FOR	**1 Sq.m**		Including VAT		11,496.67		0.00	11,496.67			

(*1): Computation of Hourly Working Quantity : Daily Driving Quantity = 8.00 pcs./day Average Driving Length = 10.00 L.m.

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 200 kW

Hourly Diesel Fuel Consumption = 38 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.213

Table 1.5.7(205/296) Unit Cost Analyses

7. PROTECTION WORKS

UC No.	7-GBB	Name of Work : Gravel Bedding and Backfill											
Unit of Work Cu.m.		Description of Work : Supply, Place and Compact of Gravel Bedding and Backfill Quantity of Unit Cost Analysis : 60 Cu.m. / day											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor	@5	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					5,810.75		0.00	5,810.75			
2	MATERIALS											
2.1	Gravel, Uncrushed		cu.m.	80.00	844.00	67,520.00	0.00	0.00	67,520.00	*844.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					67,520.00		0.00	67,520.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	3.00	1,739.00	5,217.00	0.00	0.00	5,217.00	*1,739.00*	*1.00*	
3.2	Vibratory Plate Compactor, 13.5HP		hr.	8.00	572.00	4,576.00	0.00	0.00	4,576.00	*572.00*	*1.00*	
3.3	Miscellaneous Tools	1 % of Labor	%	1	0.00	58.11	0.00	0.00	58.11			
	SUB-TOTAL FOR EQUIPMENT					9,851.11		0.00	9,851.11			
	ESTIMATED DIRECT COST (EDC)					83,181.86		0.00	83,181.86			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		11,645.46		0.00	11,645.46			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		11,379.28		0.00	11,379.28			
	TOTAL COST FOR	60 Cu.m.		Including VAT		106,206.60		0.00	106,206.60			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		1,580.46		0.00	1,580.46			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		1,770.11		0.00	1,770.11			

Working Time of Backhoe : 60 cu.m./day / 0.60cu.m. x 2.0 min./cycle / 60min.

= 3 hour/day

* Volume of Gravel for Calculation : 60.0 cu.m. / 0.9 "C" factor x 1.2 "L" factor = 80.00 cu.m.

Tb 1. 214

Table 1.5.7(206/296) Unit Cost Analyses

UC No.	7-GMT	**Name of Work :**	**Gabion Mattress, w/ Filter Cloth Bedding**										
Unit of Work		Description of Work :	Supply and Place of Gabion Mattress, Dimension : 3.0m x 1.0m x 0.50m										
Cu.m.		Quantity of Unit Cost Analysis :	54 Sq.m. / day					L 2.00m	W 1.00m	H 0.50m			
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman		day	2.00	1,230.50	2,461.00	-	-	2,461.00	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	9.00	574.41	5,169.69	-	-	5,169.69	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					11,047.09		0.00	11,047.09			
2	MATERIALS											
2.1	Gabion Mattress; 3.7mm, Galvanized + PVC coated, 2.0m x 1		pcs.	27.00	2,900.00	78,300.00	0.00	0.00	78,300.00	*2,900.00*	*1.00*	
2.2	Filter Cloth, t=5.3mm, Polyester Nonwoven		sq.m.	141.75	129.00	18,285.75	0.00	0.00	18,285.75	*129.00*	*1.00*	
2.3	Cobble Stone (5cm~35cm Dia.)	Bulking Factor= 1.2	cu.m.	32.40	1,050.00	34,020.00	0.00	0.00	34,020.00	*1,050.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					130,605.75		0.00	130,605.75			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	8.00	1,739.00	13,912.00	0.00	0.00	13,912.00	*1,739.00*	*1.00*	
3.2	Miscellaneous Tools	1 % of Labor	%	1	0.00	110.47	0.00	0.00	110.47			
	SUB-TOTAL FOR EQUIPMENT					14,022.47		0.00	14,022.47			
	ESTIMATED DIRECT COST (EDC)					155,675.31		0.00	155,675.31			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		21,794.54		0.00	21,794.54			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		21,296.38		0.00	21,296.38			
	TOTAL COST FOR	54 Sq.m.		Including VAT		198,766.24		0.00	198,766.24			
	UNIT COST FOR	1 Sq.m.		Including VAT		3,680.86		0.00	3,680.86			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		6,572.96		0.00	6,572.96			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		7,361.71		0.00	7,361.71			

Working Time for H0.5m x W1.2m x L10m = 1.8 hr.

Working Time for H0.5m x W1.0m x L10m = 1.8hr. x (1.0m / 1.2m) = 1.50 hr. (1 day = 8 hr.)

* Daily Production : 8.0hr. / 1.50hr. x 1.00m x 10.00m = 53.33 Sq.m./day

= 27 pcs./day

*Filter Cloth = 210 % of Construction Area of Gabion Mattress

Tb 1.215

Table 1.5.7(207/296) Unit Cost Analyses

UC No. 7-RF-AB	**Name of Work : Rock Fill, Type A & B (Cobble Stone)**
Unit of Work	Description of Work : Supply, Place and Compact of Cobble Stone
Cu.m.	Quantity of Unit Cost Analysis : 60 Cu.m. / day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor	@8	day	8.00	574.41	4,595.28	-	-	4,595.28	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					7,533.98		0.00	7,533.98			
2	MATERIALS											
2.1	Cobble Stone (5cm~35cm Dia.)		cu.m.	72.00	1,050.00	75,600.00	0.00	0.00	75,600.00	*1,050.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					75,600.00		0.00	75,600.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	3.00	1,739.00	5,217.00	0.00	0.00	5,217.00	*1,739.00*	*1.00*	
3.2	Vibratory Plate Compactor, 13.5HP		hr.	8.00	572.00	4,576.00	0.00	0.00	4,576.00	*572.00*	*1.00*	
3.3	Miscellaneous Tools	1 % of Labor	%	1	0.00	75.34	0.00	0.00	75.34			
	SUB-TOTAL FOR EQUIPMENT					9,868.34		0.00	9,868.34			
	ESTIMATED DIRECT COST (EDC)					93,002.32		0.00	93,002.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		13,020.32		0.00	13,020.32			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		12,722.72		0.00	12,722.72			
	TOTAL COST FOR	60 Cu.m.		Including VAT		118,745.36		0.00	118,745.36			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		1,767.04		0.00	1,767.04			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		1,979.09		0.00	1,979.09			

Working Time of Backhoe : 60 cu.m./day / 0.60cu.m. x 2.0 min./cycle / 60min.
= 3 hour/day

* Volume of Cobble Stone for Calculation : 60.0 cu.m. / 1.0 "C" factor x 1.2 "L" factor = 72.00 cu.m.

Tb 1.216

Table 1.5.7(208/296) Unit Cost Analyses

UC No. 7-RF-C	**Name of Work : Rock Fill, Type C (Boulder)**
Unit of Work	Description of Work : Supply, Place and Compact of Boulder
Cu.m.	Quantity of Unit Cost Analysis : 60 Cu.m. / day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor	@8	day	8.00	574.41	4,595.28	-	-	4,595.28	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					7,533.98		0.00	7,533.98			
2	MATERIALS											
2.1	Class B: 30kg~70kg (Blue Rocks)		cu.m.	72.00	1,150.00	82,800.00	0.00	0.00	82,800.00	*1,150.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					82,800.00		0.00	82,800.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	3.00	1,739.00	5,217.00	0.00	0.00	5,217.00	*1,739.00*	*1.00*	
3.2	Vibratory Plate Compactor, 13.5HP		hr.	8.00	572.00	4,576.00	0.00	0.00	4,576.00	*572.00*	*1.00*	
3.3	Miscellaneous Tools	1 % of Labor	%	1	0.00	75.34	0.00	0.00	75.34			
	SUB-TOTAL FOR EQUIPMENT					9,868.34		0.00	9,868.34			
	ESTIMATED DIRECT COST (EDC)					100,202.32		0.00	100,202.32			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		14,028.32		0.00	14,028.32			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		13,707.68		0.00	13,707.68			
	TOTAL COST FOR	60 Cu.m.		Including VAT		127,938.32		0.00	127,938.32			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		1,903.84		0.00	1,903.84			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		2,132.31		0.00	2,132.31			

Working Time of Backhoe : 60 cu.m./day / 0.60cu.m. x 2.0 min./cycle / 60min.
= 3 hour/day

* Volume of Gravel for Calculation : 60.0 cu.m. / 1.0 "C" factor x 1.2 "L" factor = 72.00 cu.m.

Tb 1.217

Table 1.5.7(209/296) Unit Cost Analyses

UC No.	7-RPRP-L	**Name of Work :**	**Riprap (Boulder, 30~50cm Dia.) on Land**										
Unit of Work		Description of Work :	Supply, Place and Compact of Boulder										
Cu.m.		Quantity of Unit Cost Analysis :	96.00 Cu.m.										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Mason	@6	day	6.00	854.10	5,124.60	-	-	5,124.60	*854.1*	*1.00*	
1.3	Skilled Labor	@6	day	6.00	854.10	5,124.60	-	-	5,124.60	*854.1*	*1.00*	
1.4	Common Labor	@12	day	12.00	574.41	6,892.92	-	-	6,892.92	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					18,372.62		0.00	18,372.62			
2	MATERIALS											
2.1	Class B: 30kg~70kg (Blue Rocks)		cu.m.	116.16	1,150.00	133,584.00	0.00	0.00	133,584.00	*1,150.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					133,584.00		0.00	133,584.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	8.00	1,739.00	13,912.00	0.00	0.00	13,912.00	*1,739.00*	*1.00*	
3.2	Miscellaneous Tools	1 % of Labor	%	1	0.00	183.73	0.00	0.00	183.73			
	SUB-TOTAL FOR EQUIPMENT					14,095.73		0.00	14,095.73			
	ESTIMATED DIRECT COST (EDC)					166,052.35		0.00	166,052.35			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		23,247.33		0.00	23,247.33			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		22,715.96		0.00	22,715.96			
	TOTAL COST FOR	96 Cu.m.		Including VAT		212,015.64		0.00	212,015.64			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		1,971.87		0.00	1,971.87			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		2,208.50		0.00	2,208.50			

(1) Daily Production of Backhoe :

60min. / 3.0 min./cycle x 0.60cu.m. x 8.0hr. = 96.00 cu.m./day

(2) Daily Production of Manpower (Common Labor) :

1.0 cu.m./man/hour x 8.0hr. = 8.00 cu.m./man/day

(3) Number of Required Labor : = (1) / (2) = 12 ------ 12 man

(4) Volume of Boulder for Calculation : 96.00 x (1 + 0.21) = 116.160 cu.m.

Tb 1.218

Table 1.5.7(210/296) Unit Cost Analyses

Arrangec

UC No.	7-RPRP-W	**Name of Work :**	**Riprap (Boulder, 30~50cm Dia.) on Water**
Unit of Work		Description of Work :	Supply, Place and Compact of Boulder
Cu.m.		Quantity of Unit Cost Analysis :	96.00 Cu.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Mason	@6	day	6.00	854.10	5,124.60	-	-	5,124.60	*854.1*	*1.00*	
1.3	Skilled Labor	@6	day	6.00	854.10	5,124.60	-	-	5,124.60	*854.1*	*1.00*	
1.4	Common Labor	@12	day	12.00	574.41	6,892.92	-	-	6,892.92	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					18,372.62		0.00	18,372.62			
2	MATERIALS											
2.1	Class B: 30kg~70kg (Blue Rocks)		cu.m.	116.16	1,150.00	133,584.00	0.00	0.00	133,584.00	*1,150.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					133,584.00		0.00	133,584.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	8.00	1,739.00	13,912.00	0.00	0.00	13,912.00	*1,739.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	8.00	1,603.00	12,824.00	0.00	0.00	12,824.00	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t		hr.	8.00	537.00	4,296.00	0.00	0.00	4,296.00	*537.00*	*1.00*	
3.4	Miscellaneous Tools	1 % of Labor	%	1	0.00	183.73	0.00	0.00	183.73			
	SUB-TOTAL FOR EQUIPMENT					31,215.73		0.00	31,215.73			
	ESTIMATED DIRECT COST (EDC)					183,172.35		0.00	183,172.35			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		25,644.13		0.00	25,644.13			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		25,057.98		0.00	25,057.98			
	TOTAL COST FOR	96 Cu.m.		Including VAT		233,874.45		0.00	233,874.45			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		2,175.17		0.00	2,175.17			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		2,436.19		0.00	2,436.19			

(1) Daily Production of Backhoe :

60min. / 3.0 min./cycle x 0.60cu.m. x 8.0hr. = 96.00 cu.m./day

(2) Daily Production of Manpower (Common Labor) :

1.0 cu.m./man/hour x 8.0hr. = 8.00 cu.m./man/day

(3) Number of Required Labor : = (1) / (2) = 12 ------ 12 man

(4) Volume of Boulder for Calculation : 96.00 x (1 + 0.21) = 116.160 cu.m.

Tb 1.219

Table 1.5.7(211/296) Unit Cost Analyses

New

UC No. 7-NETG	**Name of Work : Net Gabion**
Unit of Work	Description of Work : Supply and Place of Net Gabion
Cu.m.	Quantity of Unit Cost Analysis : 52 Cu.m. / day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.50	1,230.50	1,845.75	-	-	1,845.75	*1230.5*	*1.00*	
1.2	Skilled Labor		day	1.50	854.10	1,281.15	-	-	1,281.15	*854.1*	*1.00*	
1.3	Common Labor		day	3.00	574.41	1,723.23	-	-	1,723.23	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,850.13		0.00	4,850.13			
2	MATERIALS											
2.1	Net Gabion		pcs.	42.00	0.00	0.00	4,651.00	195,342.00	195,342.00	*4,651.00*	*0.00*	
2.3	Cobble Stone (5cm~35cm Dia.)		cu.m.	54.60	1,050.00	57,330.00	-	-	57,330.00	*1,050.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					57,330.00		195,342.00	252,672.00			
3	EQUIPMENT											
3.1	Hydraulic Crawler Backhoe, 0.63cu.m., 89HP		hr.	8.00	1,739.00	13,912.00	-	-	13,912.00	*1,739.00*	*1.00*	
3.2	Tugboat, 500HP		hr.	8.00	1,603.00	12,824.00	-	-	12,824.00	*1,603.00*	*1.00*	
3.3	Deck Barge, DWT 650 t		hr.	8.00	537.00	4,296.00	-	-	4,296.00	*537.00*	*1.00*	
3.4	Crawler Crane, 25t, 145HP		hr.	8.00	1,384.00	11,072.00	-	-	11,072.00	*1,384.00*	*1.00*	
3.5	Miscellaneous Tools	2 % of Labor	%	2	0.00	48.50	0.00	0.00	98.04			
	SUB-TOTAL FOR EQUIPMENT					31,032.00		0.00	31,032.00			
	ESTIMATED DIRECT COST (EDC)					93,212.13		195,342.00	288,554.13			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		13,049.70		27,347.88	40,397.58			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		12,751.42		26,722.79	39,474.20			
	TOTAL COST FOR 52 Cu.m.			Including VAT		119,013.25		249,412.67	368,425.91			
	UNIT COST FOR 1 Cu.m.			Excluding VAT		2,043.50		4,282.50	6,325.99			
	UNIT COST FOR 1 Cu.m.			Including VAT		2,288.72		4,796.40	7,085.11			

* Daily Production : 40 pcs./day , 1.3 Cu.m./pcs. , therefore 52 Cu.m./day

* Volume of Net Gabion for Calculation : 40.00 x (1 + 0.05) = 42.0 pcs.

* Volume of Cobble Stone for Calculation : 52.00 x (1 + 0.05) = 54.6 pcs.

Tb 1.220

Table 1.5.7(212/296) Unit Cost Analyses

UC No. 7-RP-SB	**Description :**	**Sand Bag Rip-rap**
Unit of Work	Detail of Work :	Furnishing, Stacking and Compacting of Sand Bag Rip-rap
Cu.m.	Quantity of Unit Cost Analysis :	1.040 Cu.m. (for 100 pcs. of Sand Bag Rip-rap)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR	Mixing Stuffing Stacking										
1.1	Foreman	@0.5 @0.5	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@1.0 @1.0 @1.0	day	3.00	854.10	2,562.30	-	-	2,562.30	*854.1*	*1.00*	
1.3	Common Labor	@1.0 @2.0 @1.0	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,090.44		0.00	6,090.44			
2	MATERIALS											
2.1	Sand Bag		pcs.	100	5.00	500.00	0.00	0.00	500.00	*5.00*	*1.00*	
2.2	Portland Cement, Ordinary, 40kg/b	for Mortar, C/G=1/6	bag.	7.29	215.00	1,567.35	0.00	0.00	1,567.35	*215.00*	*1.00*	
2.3	Gravel, Crushed (ex.G-1)	for Mortar, C/G=1/6	cu.m.	1.09	600.00	655.20	0.00	0.00	655.20	*600.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					2,722.55		0.00	2,722.55			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP		hr.	0.22	518.00	112.23	0.00	0.00	112.23	*518.00*	*1.00*	
3.2	Concrete Mixer, 2 bagger		hr.	0.87	190.00	164.67	0.00	0.00	164.67	*190.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor cost	%	10	0.00	609.04	0.00	0.00	609.04			
	SUB-TOTAL FOR EQUIPMENT					885.94		0.00	885.94			
	ESTIMATED DIRECT COST (EDC)					9,698.93		0.00	9,698.93			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,357.85		0.00	1,357.85			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,326.81		0.00	1,326.81			
	TOTAL COST FOR	1.040 Cu.m.		Including VAT		12,383.60		0.00	12,383.60			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		10,631.52		0.00	10,631.52			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		11,907.31		0.00	11,907.31			

* Volume of 1 pcs. Sand Bag : 0.010 cu.m. (Unit Weight of Gravel Mortar : 25 kg/bag 2.4 t/cu.m)

for 100 pcs.of Sand Bag = **1.040** cu.m.

(1) Required Amount of Cement & Gravel for 1cu.m. of Mortar : C/G =1 / 6.0 in volume (Unit Wight of Loosened Cement = 1,600 t/cu.m.)

Cement : 0.1667 cu.m = 267.0kg / 40kg/bag = 6.68bag / 1cu.m.of Mortar

Gravel : 1.0 cu.m. / 1cu.m.of Mortar

Required Amount for 1.040 cu.m. of Mortar Including 5 % of loss

Cement : 1.040 cu.m. x 6.7bag /cu.m. x (1+ 5.00%) = 7.290 bag

Gravel : 1.040 cu.m. x 1.0cu.m. /cu.m. x (1+ 5.00%) = 1.092 cu.m.

(2) Mixing Time of Mortar, using Concrete Mixer :

Hourly Mixing Volume= 0.30 cu.m./batch x 4.00 batch/hr. = 1.2 cu.m./hr.

Mixing Time= 1.040 cu.m. / 1.2 cu.m./hr.= 0.867 hr.

Tb 1.221

Table 1.5.7(213/296) Unit Cost Analyses

UC No.	7-RSM	**Name of Work :**	**Rubble Concrete/Rubble Stone Masonry**										
Unit of Work		Description of Work :	Supply and Place of Rubble Stone Masonry										
Cu.m.		Quantity of Unit Cost Analysis :			30.00	Cu.m. /day							
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor	@8	day	8.00	574.41	4,595.28	-	-	4,595.28	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					7,533.98		0.00	7,533.98			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-B(17.24Mpa), Gmax=50mm		cu.m.	9.00	3,000.00	27,000.00	0.00	0.00	27,000.00	*3,000.00*	*1.00*	
2.2	Class A: 15kg~25kg (Blue Rocks)		cu.m.	30.00	1,050.00	31,500.00	0.00	0.00	31,500.00	*1,050.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					58,500.00		0.00	58,500.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 15t, 160HP		hr.	8.00	994.00	7,952.00	0.00	0.00	7,952.00	*994.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	753.40	0.00	0.00	753.40			
	SUB-TOTAL FOR EQUIPMENT					8,705.40		0.00	8,705.40			
	ESTIMATED DIRECT COST (EDC)					74,739.38		0.00	74,739.38			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		10,463.51		0.00	10,463.51			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		10,224.35		0.00	10,224.35			
	TOTAL COST FOR	30 Cu.m.		Including VAT		95,427.24		0.00	95,427.24			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		2,840.10		0.00	2,840.10			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		3,180.91		0.00	3,180.91			

*Required Volume of Concrete : Boukder 30.0 cu.m. x 30.0 % = **9.0** cu.m.

Tb 1.222

Table 1.5.7(214/296) Unit Cost Analyses

UC No. 7-WSM20	**Name of Work : Stone Masonry/Wet Stone Masonry, t=200mm**
Unit of Work	Description of Work :
Sq.m.	Quantity of Unit Cost Analysis : 120.00 Sq.m. /day (t = 0.20 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	24 sq.m./man-day	day	5.00	1,230.50	6,152.50	-	-	6,152.50	*1230.5*	*1.00*	
1.2	Mason	12 sq.m./man-day	day	10.00	854.10	8,541.00	-	-	8,541.00	*854.1*	*1.00*	
1.3	Skilled Labor	12 sq.m./man-day	day	10.00	854.10	8,541.00	-	-	8,541.00	*854.1*	*1.00*	
1.4	Common Labor	4 sq.m./man-day	day	30.00	574.41	17,232.30	-	-	17,232.30	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					40,466.80		0.00	40,466.80			
2	MATERIALS											
2.1	Cobble Stone (5cm~35cm Dia.)		cu.m.	26.40	1,050.00	27,720.00	0.00	0.00	27,720.00	*1,050.00*	*1.00*	
2.2	Ready Mixed Concrete;Class-F(11.7Mpa), Gmax=40mm		cu.m.	14.40	2,825.00	40,680.00	0.00	0.00	40,680.00	*2,825.00*	*1.00*	
2.3	Portland Cement, Ordinary, 40kg/b	for Mortar, c/s=1/2	bag.	87.00	215.00	18,705.00	0.00	0.00	18,705.00	*215.00*	*1.00*	
2.4	Sand (washed)	for Mortar, c/s=1/2	cu.m.	4.80	594.00	2,851.20	0.00	0.00	2,851.20	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					89,956.20		0.00	89,956.20			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 15t, 160HP		hr.	8.00	994.00	7,952.00	0.00	0.00	7,952.00	*994.00*	*1.00*	
3.2	Concrete Mixer, 2 bagger		hr.	8.00	190.00	1,520.00	0.00	0.00	1,520.00	*190.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	4,046.68	0.00	0.00	4,046.68			
	SUB-TOTAL FOR EQUIPMENT					13,518.68		0.00	13,518.68			
	ESTIMATED DIRECT COST (EDC)					143,941.68		0.00	143,941.68			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		20,151.84		0.00	20,151.84			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		19,691.22		0.00	19,691.22			
	TOTAL COST FOR	120 Sq.m.		Including VAT		183,784.74		0.00	183,784.74			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,367.45		0.00	1,367.45			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		1,531.54		0.00	1,531.54			

(1) Daily Production of Mortar, using Concrete Mixer :

Hourly = 0.30 cu.m./batch x 2.00 batch/hr. = 0.6 cu.m./hr.

Daily = 0.60 cu.m./hr. x 8.00 hr. /day = 4.80 cu.m.of Mortar / day

(2) Required Amount of Cement & Sand for 1cu.m. of Mortar(c/s=1/2) :

Cement : 720 kg / 40.0kg/bag = 18.00 bag / 1cu.m.of Mortar

Sand : 1.0 cu.m. / 1cu.m.of Mortar

Required Amount for 4.80 cu.m. of Mortar(c/s=1/2) :

Cement : 4.80 cu.m. x 18.0bag /cu.m. = 87 bag

Sand : 4.80 cu.m. x 1.0cu.m. /cu.m. = 4.80 cu.m.

(3) Daily Production of Wet Stone Masonry :

4.80cu.m./day (of Mortar) / 0.2cu.m. of mortar / 1cu.m.of W.S.M = 24.0 cu.m.of W.S.M / day

24.0 cu.m. / 0.20m = 120.0 sq.m.of W.S.M / day

1 cu.m. of Wet Stone Masonry(W.S.M) consists :		
Cobble Stone :	1.1	cu.m.
Concrete :	0.6	cu.m.
Mortar :	0.2	cu.m.
Amount for 24.0cu.m. of W.S.M		
Cobble Stone :	26.4	cu.m.
Concrete :	14.4	cu.m.
Mortar :	4.8	cu.m.

Tb 1. 223

Table 1.5.7(215/296) Unit Cost Analyses

UC No. 7-WSM25	**Name of Work : Stone Masonry/Wet Stone Masonry, t=250mm**
Unit of Work	Description of Work :
Sq.m.	Quantity of Unit Cost Analysis : 96.00 Sq.m. /day (t = 0.25 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	24 sq.m./man-day	day	4.00	1,230.50	4,922.00	-	-	4,922.00	*1230.5*	*1.00*	
1.2	Mason	12 sq.m./man-day	day	8.00	854.10	6,832.80	-	-	6,832.80	*854.1*	*1.00*	
1.3	Skilled Labor	12 sq.m./man-day	day	8.00	854.10	6,832.80	-	-	6,832.80	*854.1*	*1.00*	
1.4	Common Labor	4 sq.m./man-day	day	24.00	574.41	13,785.84	-	-	13,785.84	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					32,373.44		0.00	32,373.44			
2	MATERIALS											
2.1	Cobble Stone (5cm~35cm Dia.)		cu.m.	26.40	1,050.00	27,720.00	0.00	0.00	27,720.00	*1,050.00*	*1.00*	
2.2	Ready Mixed Concrete;Class-F(11.7Mpa), Gmax=40mm		cu.m.	14.40	2,825.00	40,680.00	0.00	0.00	40,680.00	*2,825.00*	*1.00*	
2.3	Portland Cement, Ordinary, 40kg/b	for Mortar, c/s=1/2	bag.	87.00	215.00	18,705.00	0.00	0.00	18,705.00	*215.00*	*1.00*	
2.4	Sand (washed)	for Mortar, c/s=1/2	cu.m.	4.80	594.00	2,851.20	0.00	0.00	2,851.20	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					89,956.20		0.00	89,956.20			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 15t, 160HP		hr.	8.00	994.00	7,952.00	0.00	0.00	7,952.00	*994.00*	*1.00*	
3.2	Concrete Mixer, 2 bagger		hr.	8.00	190.00	1,520.00	0.00	0.00	1,520.00	*190.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	3,237.34	0.00	0.00	3,237.34			
	SUB-TOTAL FOR EQUIPMENT					12,709.34		0.00	12,709.34			
	ESTIMATED DIRECT COST (EDC)					135,038.98		0.00	135,038.98			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		18,905.46		0.00	18,905.46			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		18,473.33		0.00	18,473.33			
	TOTAL COST FOR	96 Sq.m.		Including VAT		172,417.77		0.00	172,417.77			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,603.59		0.00	1,603.59			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		1,796.02		0.00	1,796.02			

(1) Daily Production of Mortar, using Concrete Mixer :

Hourly = 0.30 cu.m./batch x 2.00 batch/hr. = 0.6 cu.m./hr.

Daily = 0.60 cu.m./hr. x 8.00 hr. /day = 4.80 cu.m.of Mortar / day

(2) Required Amount of Cement & Sand for 1cu.m. of Mortar(c/s=1/2) :

Cement : 720 kg / 40.0kg/bag = 18.00 bag / 1cu.m.of Mortar

Sand : 1.0 cu.m. / 1cu.m.of Mortar

Required Amount for 4.80 cu.m. of Mortar(c/s=1/2) :

Cement : 4.80 cu.m. x 18.0bag /cu.m. = 87 bag

Sand : 4.80 cu.m. x 1.0cu.m. /cu.m. = 4.80 cu.m.

1 cu.m. of Wet Stone Masonry(W.S.M) consists :		
Cobble Stone :	1.1	cu.m.
Concrete :	0.6	cu.m.
Mortar :	0.2	cu.m.
Amount for 24.0cu.m. of W.S.M		
Cobble Stone :	26.4	cu.m.
Concrete :	14.4	cu.m.
Mortar :	4.8	cu.m.

(3) Daily Production of Wet Stone Masonry :

4.80cu.m./day (of Mortar) / 0.2cu.m. of mortar / 1cu.m.of W.S.M = 24.0 cu.m.of W.S.M / day

24.0 cu.m. / 0.25m = 96.0 sq.m.of W.S.M / day

Table 1.5.7(216/296) Unit Cost Analyses

UC No. 7-PVC	**Name of Work : Supply and Place of PVC Weepholes with Filter Cloth**
Unit of Work	Description of Work : Using PVC Pipe 50mm Dia. as Weepholes, w/ Filter Cloth (1sq.m./ea.)
Pcs.	Quantity of Unit Cost Analysis : 48.00 Pcs. /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Carpenter	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,233.42		0.00	3,233.42			
2	MATERIALS											
2.1	PVC Pipe, 50mm Dia.	0.5 l.m./pcs.	L.m.	25.20	70.00	1,764.00	0.00	0.00	1,764.00	*70.00*	*1.00*	
2.2	Filter Cloth, t=1.9mm, Polyester N	0.1 sq.m./pcs.	sq.m.	4.54	65.00	294.84	0.00	0.00	294.84	*65.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					2,058.84		0.00	2,058.84			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor	%	10	0.00	323.34	0.00	0.00	323.34			
	SUB-TOTAL FOR EQUIPMENT					323.34		0.00	323.34			
	ESTIMATED DIRECT COST (EDC)					5,615.60		0.00	5,615.60			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		786.18		0.00	786.18			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		768.21		0.00	768.21			
	TOTAL COST FOR	48 Pcs.		Including VAT		7,170.00		0.00	7,170.00			
	UNIT COST FOR	**1 Pcs.**		Excluding VAT		133.37		0.00	133.37			
	UNIT COST FOR	**1 Pcs.**		Including VAT		149.38		0.00	149.38			

(1) Daily Production of PVC Weephole :

60min. / 10.0 min./pcs. x 8.0hr. = 48.00 pcs./day

* Volume of Material : 48.00 x (1 + 0.05) = 50.4 pcs./day

Tb 1.225

Table 1.5.7(217/296) Unit Cost Analyses

Arrangec

UC No.	7-PVC-GW	**Name of Work : Supply and Place of PVC Weepholes with Filter Cloth for Gravity Wall**
Unit of Work		Description of Work : Using PVC Pipe 50mm Dia. as Weepholes, w/ Filter Cloth (1sq.m./ea.)
Pcs.		Quantity of Unit Cost Analysis : 48.00 Pcs. /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Carpenter	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,233.42		0.00	3,233.42			
2	MATERIALS											
2.1	PVC Pipe, 50mm Dia.	1.1 l.m./pcs.	L.m.	55.44	70.00	3,880.80	0.00	0.00	3,880.80	*70.00*	*1.00*	
2.2	Filter Cloth, t=1.9mm, Polyester N	0.1 sq.m./pcs.	sq.m.	4.54	65.00	294.84	0.00	0.00	294.84	*65.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					4,175.64		0.00	4,175.64			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor	%	10	0.00	323.34	0.00	0.00	323.34			
	SUB-TOTAL FOR EQUIPMENT					323.34		0.00	323.34			
	ESTIMATED DIRECT COST (EDC)					7,732.40		0.00	7,732.40			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,082.54		0.00	1,082.54			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,057.79		0.00	1,057.79			
	TOTAL COST FOR	48 Pcs.		Including VAT		9,872.73		0.00	9,872.73			
	UNIT COST FOR	**1 Pcs.**		Excluding VAT		183.64		0.00	183.64			
	UNIT COST FOR	**1 Pcs.**		Including VAT		205.68		0.00	205.68			

(1) Daily Production of PVC Weephole :

60min. / 10.0 min./pcs. x 8.0hr. = 48.00 pcs./day

* Volume of Material : 48.00 x (1 + 0.05) = 50.4 pcs./day

Tb 1. 226

Table 1.5.7(218/296) Unit Cost Analyses

UC No. 7-CB-MF	**Name of Work : Metal Form for Concrete Blocks**
Unit of Work	Description of Work : Using 2mm thick Steel Plate
Sq.m.	Quantity of Unit Cost Analysis : 40.00 Sq.m. /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor	@5	day	5.00	574.41	2,872.05	-	-	2,872.05	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,102.55		0.00	4,102.55			
2	MATERIALS											
2.1	Metal (Steel) Structure	100 Times Re-use Metal Form	kg	6.268	73.00	457.56	0.00	0.00	457.56	*73.00*	*1.00*	
2.2	Form Oil	0.20 ltr./sq.m.	ltr.	8.00	87.00	696.00	0.00	0.00	696.00	*87.00*	*1.00*	
2.3	Miscellaneous Materials	1.0 % of other Materials	%	1.00	0.00	11.54	0.00	0.00	11.54			
	SUB-TOTAL FOR MATERIAL					1,165.10		0.00	1,165.10			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor	%	10	0.00	410.26	0.00	0.00	410.26			
	SUB-TOTAL FOR EQUIPMENT					410.26		0.00	410.26			
	ESTIMATED DIRECT COST (EDC)					5,677.90		0.00	5,677.90			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		794.91		0.00	794.91			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		776.74		0.00	776.74			
	TOTAL COST FOR	40 Sq.m.		Including VAT		7,249.55		0.00	7,249.55			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		161.82		0.00	161.82			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		181.24		0.00	181.24			

* Computational Condition of Metal Form

- Metal Form may be made with Steel Plate of 2mm thick.

  Weight of Steel Plate = 7,835 kg/cu.m. x 0.002m x 1 sq.m. = 15.67 kg/sq.m.

- Metal Form may be Re-Used for 100 Times.

Tb 1.227

Table 1.5.7(219/296) Unit Cost Analyses

UC No. 7-CB-T1	**Name of Work : Installation of Concrete Block Type I**
Unit of Work	Description of Work : 2 ton Class
Nos.	Quantity of Unit Cost Analysis : 10.00 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.64	854.10	546.62	-	-	546.62	*854.1*	*1.00*	
1.3	Common Labor		day	0.77	574.41	442.30	-	-	442.30	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,542.64		0.00	1,542.64			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP		hr.	4.64	1,427.00	6,621.28	0.00	0.00	6,621.28	*1,427.00*	*1.00*	
3.2	Dump Truck, 9cu.m., 12t		hr.	1.70	1,306.00	2,220.20	0.00	0.00	2,220.20	*1,306.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	154.26	0.00	0.00	154.26			
	SUB-TOTAL FOR EQUIPMENT					8,995.74		0.00	8,995.74			
	ESTIMATED DIRECT COST (EDC)					10,538.39		0.00	10,538.39			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,475.37		0.00	1,475.37			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,441.65		0.00	1,441.65			
	TOTAL COST FOR	10 Nos.		Including VAT		13,455.42		0.00	13,455.42			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		1,201.38		0.00	1,201.38			
	UNIT COST FOR	**1 Nos.**		Including VAT		1,345.54		0.00	1,345.54			

* Computation of Work Crew for 10 Blocks

Work Crew	Unit	Total	Gathering	Loading	Hauling	Installation
Foreman	day	0.45	0.12	0.14	0	0.19
Skilled labor	day	0.64	0.12	0.14	0	0.38
Common labor	day	0.77	0.12	0.27	0	0.38
25ton Wheel crane	hr.	4.64	0.96	2.16	0	1.52
10ton Dump truck	hr.	1.7	-	1.7		

(*) Work Crew calculation is based on Japanese Estimation Standard

Cycle Time of Loading, Hauling(less than 15km) and Installation = 51.0 min./cycl.

* for 1 cycle 5 nos. of Blocks are Hauled.

5 nos./cycl. x 60min. / 51.00 min./cycl. = 5.88 nos./hr.

Cycle Time for 10 nos. of Concrete Blocks

10 nos. / 5.88 nos./hr. = 1.70hr.

Tb 1.228

Table 1.5.7(220/296) Unit Cost Analyses

UC No. 7-CB-T2	**Name of Work : Installation of Concrete Block Type II**
Unit of Work	Description of Work : 1.5 ton Class
Nos.	Quantity of Unit Cost Analysis : 10.00 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.64	854.10	546.62	-	-	546.62	*854.1*	*1.00*	
1.3	Common Labor		day	0.77	574.41	442.30	-	-	442.30	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,542.64		0.00	1,542.64			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP		hr.	4.64	1,427.00	6,621.28	0.00	0.00	6,621.28	*1,427.00*	*1.00*	
3.2	Dump Truck, 9cu.m., 12t		hr.	1.21	1,306.00	1,580.26	0.00	0.00	1,580.26	*1,306.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	154.26	0.00	0.00	154.26			
	SUB-TOTAL FOR EQUIPMENT					8,355.80		0.00	8,355.80			
	ESTIMATED DIRECT COST (EDC)					9,898.45		0.00	9,898.45			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,385.78		0.00	1,385.78			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,354.11		0.00	1,354.11			
	TOTAL COST FOR	10 Nos.		Including VAT		12,638.34		0.00	12,638.34			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		1,128.42		0.00	1,128.42			
	UNIT COST FOR	**1 Nos.**		Including VAT		1,263.83		0.00	1,263.83			

* Computation of Work Crew for 10 Blocks

Work Crew	Unit	Total	Gathering	Loading	Hauling	Installation
Foreman	day	0.45	0.12	0.14	0	0.19
Skilled labor	day	0.64	0.12	0.14	0	0.38
Common labor	day	0.77	0.12	0.27	0	0.38
25ton Wheel crane	hr.	4.64	0.96	2.16	0	1.52
10ton Dump truck	hr.	1.21	-		1.21	

(*) Work Crew calculation is based on Japanese Estimation Standard

Cycle Time of Loading, Hauling(less than 15km) and Installation = 51.0 min./cycl.

* for 1 cycle 7.0 nos. of Blocks are Hauled.

7 nos./cycl. x 60min. / 51.00 min./cycl. = 8.24 nos./hr.

Cycle Time for 10 nos. of Concrete Blocks

10 nos. / 8.24 nos./hr. = 1.21hr.

Tb 1.229

Table 1.5.7(221/296) Unit Cost Analyses

UC No. 7-CB-T3	**Name of Work : Installation of Concrete Block Type III**
Unit of Work	Description of Work : 1.0 ton Class
Nos.	Quantity of Unit Cost Analysis : 10.00 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.64	854.10	546.62	-	-	546.62	*854.1*	*1.00*	
1.3	Common Labor		day	0.77	574.41	442.30	-	-	442.30	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,542.64		0.00	1,542.64			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP		hr.	4.64	1,427.00	6,621.28	0.00	0.00	6,621.28	*1,427.00*	*1.00*	
3.2	Dump Truck, 9cu.m., 12t		hr.	0.77	1,306.00	1,005.62	0.00	0.00	1,005.62	*1,306.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	154.26	0.00	0.00	154.26			
	SUB-TOTAL FOR EQUIPMENT					7,781.16		0.00	7,781.16			
	ESTIMATED DIRECT COST (EDC)					9,323.81		0.00	9,323.81			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,305.33		0.00	1,305.33			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,275.50		0.00	1,275.50			
	TOTAL COST FOR 10 Nos.			Including VAT		11,904.64		0.00	11,904.64			
	UNIT COST FOR 1 Nos.			Excluding VAT		1,062.91		0.00	1,062.91			
	UNIT COST FOR 1 Nos.			Including VAT		1,190.46		0.00	1,190.46			

* Computation of Work Crew for 10 Blocks

Work Crew	Unit	Total	Gathering	Loading	Hauling	Installation
Foreman	day	0.45	0.12	0.14	0	0.19
Skilled labor	day	0.64	0.12	0.14	0	0.38
Common labor	day	0.77	0.12	0.27	0	0.38
25ton Wheel crane	hr.	4.64	0.96	2.16	0	1.52
10ton Dump truck	hr.	0.77	-		0.77	

(*) Work Crew calculation is based on Japanese Estimation Standard

Cycle Time of Loading, Hauling(less than 15km) and Installation = 51.0 min./cycl.

* for 1 cycle 11.0 nos. of Blocks are Hauled.

11 nos./cycl. x 60min. / 51.00 min./cycl. = 12.94 nos./hr.

Cycle Time for 10 nos. of Concrete Blocks

10 nos. / 12.94 nos./hr. = 0.77hr.

Tb 1.230

Table 1.5.7(222/296) Unit Cost Analyses

UC No. 7-CBW	**Name of Work : Installation of Concrete Block Retaining Wall**
Unit of Work	Description of Work : Including Transportation
Sq.m.	Quantity of Unit Cost Analysis : 1.00 Sq.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.045	1,230.50	55.37	-	-	55.37	*1230.5*	*1.00*	
1.2	Mason		day	0.111	854.10	94.81	-	-	94.81	*854.1*	*1.00*	
1.3	Driver	for Pick-Up Truck	day	0.190	717.39	136.30	-	-	136.30	*717.39*	*1.00*	
1.4	Common Labor		day	0.217	574.41	124.65	-	-	124.65	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					411.13		0.00	411.13			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 15t, 160HP		hr.	0.32	994.00	318.08	0.00	0.00	318.08	*994.00*	*1.00*	
3.2	Pick-Up Truck, 2t		hr.	0.19	234.00	44.93	0.00	0.00	44.93	*234.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	41.11	0.00	0.00	41.11			
	SUB-TOTAL FOR EQUIPMENT					404.12		0.00	404.12			
	ESTIMATED DIRECT COST (EDC)					815.25		0.00	815.25			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		114.13		0.00	114.13			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		111.53		0.00	111.53			
	TOTAL COST FOR	1 Sq.m.		Including VAT		1,040.91		0.00	1,040.91			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		929.38		0.00	929.38			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		1,040.91		0.00	1,040.91			

Tb 1.231

Table 1.5.7(223/296) Unit Cost Analyses

9. ROAD WORKS

UC No.	9-SG	Name of Work : Subgrade Preparation											
Unit of Work		Description of Work :											
Sq.m.		Quantity of Unit Cost Analysis : 2,000 Sq.m. /day											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Common Labor	@3	day	3.00	574.41	1,723.23	-	-	1,723.23	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,807.83		0.00	3,807.83			
2	MATERIALS											
2.1	Sand (washed)	t= 0.050m	cu.m.	100.00	594.00	59,400.00	0.00	0.00	59,400.00	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					59,400.00		0.00	59,400.00			
3	EQUIPMENT											
3.1	Motor Grader, 125HP		hr.	8.00	1,898.00	15,184.00	0.00	0.00	15,184.00	*1,898.00*	*1.00*	
3.2	Vibratory Single Smooth Drum, 11t		hr.	8.00	2,004.00	16,032.00	0.00	0.00	16,032.00	*2,004.00*	*1.00*	
3.3	Static Pneumatic-tire Roller, 20 t		hr.	8.00	1,750.00	14,000.00	0.00	0.00	14,000.00	*1,750.00*	*1.00*	
3.4	Water Truck, 1,000~3000gals. w/ Sprinkler		hr.	8.00	1,475.00	11,800.00	0.00	0.00	11,800.00	*1,475.00*	*1.00*	
3.5	Miscellaneous Tools	1 % of Labor	%	1	0.00	38.08	0.00	0.00	38.08			
	SUB-TOTAL FOR EQUIPMENT					57,054.08		0.00	57,054.08			
	ESTIMATED DIRECT COST (EDC)					120,261.91		0.00	120,261.91			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		16,836.67		0.00	16,836.67			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		16,451.83		0.00	16,451.83			
	TOTAL COST FOR	2,000 Sq.m.		Including VAT		153,550.40		0.00	153,550.40			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		68.55		0.00	68.55			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		76.78		0.00	76.78			

Tb 1.232

Table 1.5.7(224/296) Unit Cost Analyses

UC No. 9-SBC	**Name of Work : Sub-base Course**											
Unit of Work	Description of Work : Sub-Base Course, Maximum Thickness of One(1) Layer = 150mm											
Cu.m.	Quantity of Unit Cost Analysis : 1,300 Sq.m. /day (t = 0.150 m / layer)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor	@6	day	6.00	574.41	3,446.46	-	-	3,446.46	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,385.16		0.00	6,385.16			
2	MATERIALS											
2.1	Aggregate Sub-base Course (for Road)		cu.m.	249.60	980.00	244,608.00	0.00	0.00	244,608.00	*980.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					244,608.00		0.00	244,608.00			
3	EQUIPMENT											
3.1	Motor Grader, 125HP		hr.	8.00	1,898.00	15,184.00	0.00	0.00	15,184.00	*1,898.00*	*1.00*	
3.2	Vibratory Single Smooth Drum, 11t		hr.	8.00	2,004.00	16,032.00	0.00	0.00	16,032.00	*2,004.00*	*1.00*	
3.3	Static Pneumatic-tire Roller, 20 t		hr.	8.00	1,750.00	14,000.00	0.00	0.00	14,000.00	*1,750.00*	*1.00*	
3.4	Water Truck, 1,000~3000gals. w/ Sprinkler		hr.	8.00	1,475.00	11,800.00	0.00	0.00	11,800.00	*1,475.00*	*1.00*	
3.5	Miscellaneous Tools	1 % of Labor	%	1	0.00	63.85	0.00	0.00	63.85			
	SUB-TOTAL FOR EQUIPMENT					57,079.85		0.00	57,079.85			
	ESTIMATED DIRECT COST (EDC)					308,073.01		0.00	308,073.01			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		43,130.22		0.00	43,130.22			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		42,144.39		0.00	42,144.39			
	TOTAL COST FOR	1,300 Sq.m.		Including VAT		393,347.62		0.00	393,347.62			
	UNIT COST FOR	1 Sq.m.		Including VAT		302.58		0.00	302.58			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		1,801.04		0.00	1,801.04			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		2,017.17		0.00	2,017.17			

* Volume of Aggregate for Calculation :

(Shrinkage & Loss Factor of Aggregate is assumed to be equal to 28 %)

1,300.0 sq.m. x 0.15m x (1 + 0.28) = 249.6 cu.m.

Tb 1.233

Table 1.5.7(225/296) Unit Cost Analyses

UC No. 9-BC	**Name of Work : Base Course**											
Unit of Work	Description of Work : Base Course, Maximum Thickness of One(1) Layer = 150mm											
Cu.m.	Quantity of Unit Cost Analysis : 1,200 Sq.m. /day (t = 0.150 m / layer)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor	@6	day	6.00	574.41	3,446.46	-	-	3,446.46	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,385.16		0.00	6,385.16			
2	MATERIALS											
2.1	Aggregate Base Course (for Road)		cu.m.	230.40	960.00	221,184.00	0.00	0.00	221,184.00	*960.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					221,184.00		0.00	221,184.00			
3	EQUIPMENT											
3.1	Motor Grader, 125HP		hr.	8.00	1,898.00	15,184.00	0.00	0.00	15,184.00	*1,898.00*	*1.00*	
3.2	Vibratory Single Smooth Drum, 11t		hr.	8.00	2,004.00	16,032.00	0.00	0.00	16,032.00	*2,004.00*	*1.00*	
3.3	Static Pneumatic-tire Roller, 20 t		hr.	8.00	1,750.00	14,000.00	0.00	0.00	14,000.00	*1,750.00*	*1.00*	
3.4	Water Truck, 1,000~3000gals. w/ Sprinkler		hr.	8.00	1,475.00	11,800.00	0.00	0.00	11,800.00	*1,475.00*	*1.00*	
3.5	Miscellaneous Tools	1 % of Labor	%	1	0.00	63.85	0.00	0.00	63.85			
	SUB-TOTAL FOR EQUIPMENT					57,079.85		0.00	57,079.85			
	ESTIMATED DIRECT COST (EDC)					284,649.01		0.00	284,649.01			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		39,850.86		0.00	39,850.86			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		38,939.98		0.00	38,939.98			
	TOTAL COST FOR	1,200 Sq.m.		Including VAT		363,439.86		0.00	363,439.86			
	UNIT COST FOR	1 Sq.m.		Including VAT		302.87		0.00	302.87			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		1,802.78		0.00	1,802.78			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		2,019.11		0.00	2,019.11			

* Volume of Aggregate for Calculation :

(Shrinkage & Loss Factor of Aggregate is assumed to be equal to 28 %)

1,200.0 sq.m. x 0.15m x (1 + 0.28) = 230.4 cu.m.

Tb 1. 234

Table 1.5.7(226/296) Unit Cost Analyses

UC No. 9-GS	**Name of Work : Gravel Surfacing**											
Unit of Work	Description of Work : Gravel Pavement, t=200mm											
Cu.m.	Quantity of Unit Cost Analysis : 1,200 Sq.m. /day (t = 0.200 m)											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor	@6	day	6.00	574.41	3,446.46	-	-	3,446.46	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,385.16		0.00	6,385.16			
2	MATERIALS											
2.1	Gravel, Crushed (ex.G-1)		cu.m.	300.00	600.00	180,000.00	0.00	0.00	180,000.00	*600.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					180,000.00		0.00	180,000.00			
3	EQUIPMENT											
3.1	Motor Grader, 125HP		hr.	8.00	1,898.00	15,184.00	0.00	0.00	15,184.00	*1,898.00*	*1.00*	
3.2	Vibratory Single Smooth Drum, 11t		hr.	8.00	2,004.00	16,032.00	0.00	0.00	16,032.00	*2,004.00*	*1.00*	
3.3	Static Pneumatic-tire Roller, 20 t		hr.	8.00	1,750.00	14,000.00	0.00	0.00	14,000.00	*1,750.00*	*1.00*	
3.4	Water Truck, 1,000~3000gals. w/ Sprinkler		hr.	8.00	1,475.00	11,800.00	0.00	0.00	11,800.00	*1,475.00*	*1.00*	
3.5	Miscellaneous Tools	1 % of Labor	%	1	0.00	63.85	0.00	0.00	63.85			
	SUB-TOTAL FOR EQUIPMENT					57,079.85		0.00	57,079.85			
	ESTIMATED DIRECT COST (EDC)					243,465.01		0.00	243,465.01			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		34,085.10		0.00	34,085.10			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		33,306.01		0.00	33,306.01			
	TOTAL COST FOR 1,200 Sq.m.			Including VAT		310,856.13		0.00	310,856.13			
	UNIT COST FOR 1 Sq.m.			Including VAT		259.05		0.00	259.05			
	UNIT COST FOR 1 Cu.m.			Excluding VAT		1,156.46		0.00	1,156.46			
	UNIT COST FOR 1 Cu.m.			Including VAT		1,295.23		0.00	1,295.23			

* Volume of Aggregate for Calculation :

(Shrinkage & Loss Factor of Aggregate is assumed to be equal to 25 %)

1,200.0 sq.m. x 0.20m x (1 + 0.25) = 300.0 cu.m.

Tb 1.235

Table 1.5.7(227/296) Unit Cost Analyses

UC No. 9-PV-B	**Name of Work : Concrete Block Pavement**
Unit of Work	Description of Work : Pavement with Paving Block
Sq.m.	Quantity of Unit Cost Analysis : 10 Sq.m. /day Cement : Sand = 1 / 4.00 in Volume of Bond Mortar

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Mason	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Skilled Labor	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.4	Common Labor	@4	day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					5,236.34		0.00	5,236.34			
2	MATERIALS											
2.1	Concrete Paving Block, 23 x 11 x 8cm, Red	5% loss	sq.m.	10.50	641.00	6,730.50	0.00	0.00	6,730.50	*641.00*	*1.00*	
2.2	Sand (washed)		cu.m.	0.07	594.00	43.22	0.00	0.00	43.22	*594.00*	*1.00*	
2.3	Portland Cement, Ordinary, 40kg/bag		bag.	0.73	215.00	156.95	0.00	0.00	156.95	*215.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					6,930.67		0.00	6,930.67			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor cost	%	10	0.00	523.63	0.00	0.00	523.63			
	SUB-TOTAL FOR EQUIPMENT					523.63		0.00	523.63			
	ESTIMATED DIRECT COST (EDC)					12,690.64		0.00	12,690.64			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,776.69		0.00	1,776.69			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,736.08		0.00	1,736.08			
	TOTAL COST FOR	10 Sq.m.		Including VAT		16,203.42		0.00	16,203.42			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,446.73		0.00	1,446.73			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		1,620.34		0.00	1,620.34			

(1) Production :

Material requirement for **10.0** sq.m of Paving Block: Thickness of Bond Mortar = 1 mm Brick Size : L 0.23m W 0.11m H 0.08m

(a) Brick : 10 sq.m / (L 0.2310m x W 0.11m) = 391.0 pcs. of Block

(b) Mortar : 1 mm L 0.230m H 0.08m 391 pcs. = 0.0071944 cu.m

1 mm W 0.110m H 0.08m 391 pcs. = 0.0034408 cu.m

(c) Mortar Bedding : 10.0 sq.m x 5 mm thk. = 0.0500000 cu.m

(Loss & Wastage Rate is assumed to be equal to 20 %) 0.0606352 cu.m ===> 0.0728cu.m.

1 sq.m. of Block Pavement consists of :

Brick : 39.10 pcs.

Bond Mortar : 0.0073 cu.m.

(2) Required Amount of Cement & Sand for 1cu.m. of Mortar : C/S =1 / 4.0 in volume (Unit Wight of Loosened Cement = 1,600 t/cu.m.)

Cement : 0.25 cu.m = 400.0kg / 40kg/bag = 10.00bag / 1cu.m.of Mortar

Sand : 1.0 cu.m. / 1cu.m.of Mortar

Required Amount for 0.07 cu.m. of Mortar

Cement : 0.07 cu.m. x 10.0bag /cu.m. = 0.730 bag

Sand : 0.1 cu.m. x 1.0cu.m. /cu.m. = 0.073 cu.m.

Tb 1. 236

Table 1.5.7(228/296) Unit Cost Analyses

UC No.	9-CPV	**Name of Work :**	**Portland Cement Concrete Pavement**
Unit of Work		Description of Work :	Paving with Ready Mixed Concrete (Class-A), t=230mm, by Manpower
Sq.m.		Quantity of Unit Cost Analysis :	100 Sq.m. (t = 0.230 m)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	3.12	1,230.50	3,839.16	-	-	3,839.16	*1230.5*	*1.00*	
1.2	Concrete Worker		day	9.70	854.10	8,284.77	-	-	8,284.77	*854.1*	*1.00*	
1.3	Skilled Labor		day	9.70	854.10	8,284.77	-	-	8,284.77	*854.1*	*1.00*	
1.4	Common Labor		day	13.85	574.41	7,952.71	-	-	7,952.71	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					28,361.41		0.00	28,361.41			
2	MATERIALS											
2.1	Ready Mixed Concrete;Class-A(20.7Mpa), Gmax=37.5mm(C		cu.m.	24.15	3,210.00	77,521.50	0.00	0.00	77,521.50	*3,210.00*	*1.00*	
2.2	Form Lumber		bd.ft.	16.03	36.00	577.12	0.00	0.00	577.12	*36.00*	*1.00*	
2.3	Joint Filler, 20mm thick (Elastic)		sq.m.	1.39	1,296.00	1,797.55	0.00	0.00	1,797.55	*1,296.00*	*1.00*	
2.4	Joint Filler, Hot-Poured Type		ltr.	16.52	165.00	2,725.73	0.00	0.00	2,725.73	*165.00*	*1.00*	
2.5	Reinforcing Bar, Round, Grade 40	Dowel Bar	kg	134.90	34.00	4,586.60	0.00	0.00	4,586.60	*34.00*	*1.00*	
2.6	Reinforcing Bar, Deformed, Grade 40 (275)	Tie Bar	kg	178.12	34.00	6,056.08	0.00	0.00	6,056.08	*34.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					93,264.58		0.00	93,264.58			
3	EQUIPMENT											
3.1	Concrete Vibrator Head, 25mm(1") Dia.		hr.	8.00	82.00	656.00	0.00	0.00	656.00	*82.00*	*1.00*	
3.2	Concrete Saw, 26" Dia.		hr.	8.00	826.00	6,608.00	0.00	0.00	6,608.00	*826.00*	*1.00*	
3.3	Miscellaneous Tools	10 % of Labor	%	10	0.00	2,836.14	0.00	0.00	2,836.14			
	SUB-TOTAL FOR EQUIPMENT					10,100.14		0.00	10,100.14			
	ESTIMATED DIRECT COST (EDC)					131,726.13		0.00	131,726.13			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		18,441.66		0.00	18,441.66			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		18,020.13		0.00	18,020.13			
	TOTAL COST FOR	100 Sq.m.		Including VAT		168,187.92		0.00	168,187.92			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,501.68		0.00	1,501.68			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		1,681.88		0.00	1,681.88			

* Volume of Concrete for Calculation :

(Loss Factor of Concrete is assumed to be equal to 5 %)

100.0 sq.m. x 0.23m x (1 + 0.05) = 24.2 cu.m.

Tb 1.237

Table 1.5.7(229/296) Unit Cost Analyses

New Reference : Updated Direct Unit Price Analysis for Different Items of Works for National Roads and Bridges (March 09, 2012)

UC No. 9-BTC	**Name of Work : Bituminous Tack Coat**
Unit of Work	Description of Work : Bituminous Tack Coat
Sq.m.	Quantity of Unit Cost Analysis : 0.3 m.t. /hr.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					369.22		0.00	369.22			
2	MATERIALS											
2.1	Bituminous Tack Coat (Emulsifed Asphalt, Bitu	5% loss	m.t.	0.32	57,750.00	18,191.25	0.00	0.00	18,191.25	*57,750.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					18,191.25		0.00	18,191.25			
3	EQUIPMENT											
3.1	Asphalt Distributor, 5 ton		hr.	1.00	1,071.00	1,071.00	0.00	0.00	1,071.00	*1,071.00*	*1.00*	
3.2	Power Broom		hr.	1.00	87.00	87.00	0.00	0.00	87.00	*87.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					1,158.00		0.00	1,158.00			
	ESTIMATED DIRECT COST (EDC)					19,718.47		0.00	19,718.47			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,760.59		0.00	2,760.59			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,697.49		0.00	2,697.49			
	TOTAL COST FOR 0.3 m.t.			Including VAT		25,176.54		0.00	25,176.54			
	UNIT COST FOR 1 Sq.m.			Excluding VAT		44.96		0.00	44.96			
	UNIT COST FOR 1 Sq.m.			Including VAT		50.35		0.00	50.35			

* Asphalt Tack Coat Volume : 1 x (1 + 0.05) = 1.05 m.t.

* Output per hour : 0.3 m.t./hr. * Application Amount : 0.6 l/Sq.m.

* Unit weight : 1 kg/l Weight per Sq.m. : 0.0006 m.t./Sq.m

Tb 1.238

Table 1.5.7(230/296) Unit Cost Analyses

New Reference : Updated Direct Unit Price Analysis for Different Items of Works for National Roads and Bridges (March 09, 2012)

UC No. 9-BPC	**Name of Work : Bituminous Prime Coat**
Unit of Work	Description of Work : Bituminous Prime Coat
Sq.m.	Quantity of Unit Cost Analysis : 0.3 m.t. /hr.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*	
1.2	Common Labor	@3	day	0.38	574.41	215.40	-	-	215.40	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					369.22		0.00	369.22			
2	MATERIALS											
2.1	Bituminous Prime Coat (Cutback Asphalt, Midu	5% loss	m.t.	0.32	46,090.00	14,518.35	0.00	0.00	14,518.35	*46,090.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					14,518.35		0.00	14,518.35			
3	EQUIPMENT											
3.1	Asphalt Distributor, 5 ton		hr.	1.00	1,071.00	1,071.00	0.00	0.00	1,071.00	*1,071.00*	*1.00*	
3.2	Power Broom		hr.	1.00	87.00	87.00	0.00	0.00	87.00	*87.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					1,158.00		0.00	1,158.00			
	ESTIMATED DIRECT COST (EDC)					16,045.57		0.00	16,045.57			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,246.38		0.00	2,246.38			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,195.03		0.00	2,195.03			
	TOTAL COST FOR 0.3 m.t.			Including VAT		20,486.98		0.00	20,486.98			
	UNIT COST FOR 1 Sq.m.			Excluding VAT		60.97		0.00	60.97			
	UNIT COST FOR 1 Sq.m.			Including VAT		68.29		0.00	68.29			

* Asphalt Tack Coat Volume : 1 x (1 + 0.05) = 1.05 m.t.

* Output per hour : 0.3 m.t./hr. * Application Amount : 1 l/Sq.m.

* Unit weight : 1 kg/l Weight per Sq.m. : 0.001 m.t./Sq.m

Tb 1.239

Table 1.5.7(231/296) Unit Cost Analyses

New Reference : Updated Direct Unit Price Analysis for Different Items of Works for National Roads and Bridges (March 09, 2012)

UC No.	9-BCSC	**Name of Work :**	**Bituminous Concrete Surface Course**										
Unit of Work		Description of Work :	Bituminous Concrete Surface Course										
Sq.m.		Quantity of Unit Cost Analysis :			20.0	m.t.	/hr.		(t =	0.050	m)		
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum	
1	LABOR												
1.1	Foreman	@1	day	0.13	1,230.50	153.81	-	-	153.81	*1230.5*	*1.00*		
1.2	Skilled Labor	@4	day	0.50	854.10	427.05	-	-	427.05	*854.1*	*1.00*		
1.3	Common Labor	@8	day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*		
	SUB-TOTAL FOR LABOR					1,155.27		0.00	1,155.27				
2	MATERIALS												
2.1	Bituminous Concrete Surface Course, Hot Laid	5% loss	m.t.	21.00	4,540.00	95,340.00	0.00	0.00	95,340.00	*4,540.00*	*1.00*		
	SUB-TOTAL FOR MATERIAL					95,340.00		0.00	95,340.00				
3	EQUIPMENT												
3.1	Paver/Finisher, 80HP		hr.	1.00	1,833.00	1,833.00	0.00	0.00	1,833.00	*1,833.00*	*1.00*		
3.2	Static Pneumatic-tire Roller, 10 t		hr.	1.00	553.00	553.00	0.00	0.00	553.00	*553.00*	*1.00*		
3.3	Vibratory Tandem Smooth Drum, 10.0t		hr.	1.00	1,526.00	1,526.00	0.00	0.00	1,526.00	*1,526.00*	*1.00*		
3.4	Water Truck, 500~1,000gals		hr.	1.00	1,065.00	1,065.00	0.00	0.00	1,065.00	*1,065.00*	*1.00*		
3.5	Miscellaneous Tools	10 % of Labor	%	10	0.00	115.53	0.00	0.00	115.53				
	SUB-TOTAL FOR EQUIPMENT					5,092.53		0.00	5,092.53				
	ESTIMATED DIRECT COST (EDC)					101,587.80		0.00	101,587.80				
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		14,222.29		0.00	14,222.29				
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		13,897.21		0.00	13,897.21				
	TOTAL COST FOR	20.0 m.t.		Including VAT		129,707.30		0.00	129,707.30				
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		651.43		0.00	651.43				
	UNIT COST FOR	**1 Sq.m.**		Including VAT		729.60		0.00	729.60				

* Asphalt Tack Coat Volume : 1 x (1 + 0.05) = 1.05 m.t.

* Output per hour : 20.0 m.t./hr.

* Unit weight : 2.25 t/Cu.m. Weight per Sq.m. : 0.113 m.t./Sq.m

Tb 1.240

Table 1.5.7(232/296) Unit Cost Analyses

UC No. 9-GR	**Name of Work : Steel Flex Beam of Guard Rail**
Unit of Work	Description of Work : Procurement & Installation of Guard Rail
L.m.	Quantity of Unit Cost Analysis : 40 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,087.52		0.00	4,087.52			
2	MATERIALS											
2.1	Guard Rail		L.m.	42.00	945.00	39,690.00	-	-	39,690.00	*945.00*	*1.00*	
2.2	Miscellaneous Materials	5 % of Guard Rail	%	5	0.00	1,984.50	0.00	0.00	1,984.50			
	SUB-TOTAL FOR MATERIAL					41,674.50		0.00	41,674.50			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor cost	%	10	0.00	408.75	0.00	0.00	408.75			
	SUB-TOTAL FOR EQUIPMENT					408.75		0.00	408.75			
	ESTIMATED DIRECT COST (EDC)					46,170.77		0.00	46,170.77			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,463.91		0.00	6,463.91			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		6,316.16		0.00	6,316.16			
	TOTAL COST FOR	40 L.m.		Including VAT		58,950.84		0.00	58,950.84			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		1,315.87		0.00	1,315.87			
	UNIT COST FOR	**1 L.m.**		Including VAT		1,473.77		0.00	1,473.77			

Tb 1.241

Table 1.5.7(233/296) Unit Cost Analyses

10. DRAINAGE

UC No. 10-CP-CL	**Name of Work : Cement Mortar (1:2) for Joint Collar of RC Pipe Culvert**
Unit of Work	Description of Work : Cement Mortar (1:2) Plastering Work for Joint Collar of RC Pipe Culvert
Cu.m.	Quantity of Unit Cost Analysis : 0.68 Cu.m. /hr. Cement : Sand = 1 / 2.00 in Volume

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1 4.0hr.	day	0.50	1,230.50	615.25	-	-	615.25	*1230.5*	*1.00*	
1.2	Concrete Worker	@1 8.0hr.	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Skilled Labor	@1 4.0hr.	day	0.50	854.10	427.05	-	-	427.05	*854.1*	*1.00*	
1.4	Common Labor	@2 8.0hr.	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					3,045.22		0.00	3,045.22			
2	MATERIALS											
2.1	Portland Cement, Ordinary, 40kg/bag		bag.	11.00	215.00	2,365.00	0.00	0.00	2,365.00	*215.00*	*1.00*	
2.2	Sand (washed)		cu.m.	0.57	594.00	339.29	0.00	0.00	339.29	*594.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					2,704.29		0.00	2,704.29			
3	EQUIPMENT											
3.1	Concrete Mixer, 0.5 bagger		hr.	8.00	150.00	1,200.00	0.00	0.00	1,200.00	*150.00*	*1.00*	
3.2	Miscellaneous Tools	10 % of Labor	%	10	0.00	304.52	0.00	0.00	304.52			
	SUB-TOTAL FOR EQUIPMENT					1,504.52		0.00	1,504.52			
	ESTIMATED DIRECT COST (EDC)					7,254.03		0.00	7,254.03			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,015.56		0.00	1,015.56			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		992.35		0.00	992.35			
	TOTAL COST FOR	0.68 Cu.m.		Including VAT		9,261.95		0.00	9,261.95			
	UNIT COST FOR	**1 Cu.m.**		Excluding VAT		12,161.18		0.00	12,161.18			
	UNIT COST FOR	**1 Cu.m.**		Including VAT		13,620.52		0.00	13,620.52			

(1) Daily Production of Mortar, using Concrete Mixer : Concrete Mixer, 0.5 bagger

Hourly = 0.017 cu.m./batch x 5.00 batch/hr. = 0.09 cu.m./hr.

Daily = 0.09 cu.m./hr. x **8.00** hr. /day = **0.6800** cu.m.of Mortar / day

(2) Required Amount of Cement & Sand for 1cu.m. of Mortar : C/S =1 / 2.0 in volume (Unit Wight of Loosened Cement = 1,600 t/cu.m.)

Cement : 0.4 cu.m = 640.0kg / 40kg/bag = 16.00bag / 1cu.m.of Mortar

Sand : 0.8 cu.m. / 1cu.m.of Mortar

Required Amount for 0.68 cu.m. of Mortar Including 5 % of loss

Cement : 0.68 cu.m. x 16.0bag /cu.m. x (1+ 5.00%) = 11.0 bag

Sand : 0.68 cu.m. x 0.8cu.m. /cu.m. x (1+ 5.00%) = 0.57 cu.m.

(3) Daily Production of Cement Mortar Plastering : t= **90.0** mm

0.68cu.m./day (of Mortar) / 0.090cu.m. of mortar / 1sq.m. of plastering = **7.6** sq.m of plastering / day

7.6 sq.m of plastering / day / @20.0 sq.m./man-day = 0.38day = **4.00hr.**

Tb 1.242

Table 1.5.7(234/296) Unit Cost Analyses

UC No. 10-CP-12	**Name of Work : Installation of RC Pipe Culvert, 300mm (12") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 300mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.30	854.10	256.23	-	-	256.23	*854.1*	*1.00*	
1.3	Common Labor		day	0.80	574.41	459.53	-	-	459.53	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,084.91		0.00	1,084.91			
2	MATERIALS											
2.1	RC Pipe Culvert, 300mm(12") Dia.		L.m.	10.00	390.00	3,900.00	0.00	0.00	3,900.00	*390.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					3,900.00		0.00	3,900.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.30day	hr.	2.40	518.00	1,243.20	0.00	0.00	1,243.20	*518.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	651.87	0.00	0.00	651.87			
	SUB-TOTAL FOR EQUIPMENT					1,895.07		0.00	1,895.07			
	ESTIMATED DIRECT COST (EDC)					6,879.98		0.00	6,879.98			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		963.20		0.00	963.20			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		941.18		0.00	941.18			
	TOTAL COST FOR	10 L.m.		Including VAT		8,784.36		0.00	8,784.36			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		784.32		0.00	784.32			
	UNIT COST FOR	**1 L.m.**		Including VAT		878.44		0.00	878.44			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~	Dia.mm
Foreman	day	**0.3**	0.3	0.4	0.4	0.5	0.6	0.7	
Skilled labor	day	**0.3**	0.3	0.4	0.4	0.5	0.6	0.7	
Common labor	day	**0.8**	1.0	1.0	1.3	1.5	1.7	1.9	
5ton Wheel crane	day	**0.3**	0.4	0.5	0.5	0.6	0.7	-	
25ton Wheel crane	day	-	-	-	-	-	-	0.9	

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1.243

Table 1.5.7(235/296) Unit Cost Analyses

UC No. 10-CP-18	**Name of Work : Installation of RC Pipe Culvert, 460mm (18") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 460mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.30	854.10	256.23	-	-	256.23	*854.1*	*1.00*	
1.3	Common Labor		day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,199.79		0.00	1,199.79			
2	MATERIALS											
2.1	RC Pipe Culvert, 460mm(18") Dia.		L.m.	10.00	610.00	6,100.00	0.00	0.00	6,100.00	*610.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					6,100.00		0.00	6,100.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.40day	hr.	3.20	518.00	1,657.60	0.00	0.00	1,657.60	*518.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	800.07	0.00	0.00	800.07			
	SUB-TOTAL FOR EQUIPMENT					2,457.67		0.00	2,457.67			
	ESTIMATED DIRECT COST (EDC)					9,757.46		0.00	9,757.46			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,366.04		0.00	1,366.04			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,334.82		0.00	1,334.82			
	TOTAL COST FOR 10 L.m.			Including VAT		12,458.32		0.00	12,458.32			
	UNIT COST FOR 1 L.m.			Excluding VAT		1,112.35		0.00	1,112.35			
	UNIT COST FOR 1 L.m.			Including VAT		1,245.83		0.00	1,245.83			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~
Foreman	day	0.3	**0.3**	0.4	0.4	0.5	0.6	0.7
Skilled labor	day	0.3	**0.3**	0.4	0.4	0.5	0.6	0.7
Common labor	day	0.8	**1.0**	1.0	1.3	1.5	1.7	1.9
5ton Wheel crane	day	0.3	**0.4**	0.5	0.5	0.6	0.7	-
25ton Wheel crane	day	-	-	-	-	-	-	0.9

Dia.mm

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1. 244

Table 1.5.7(236/296) Unit Cost Analyses

Arrangec

UC No. 10-CP-21	**Name of Work : Installation of RC Pipe Culvert, 525mm (21") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 525mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.40	1,230.50	492.20	-	-	492.20	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.40	854.10	341.64	-	-	341.64	*854.1*	*1.00*	
1.3	Common Labor		day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,408.25		0.00	1,408.25			
2	MATERIALS											
2.1	RC Pipe Culvert, 525mm(21") Dia.		L.m.	10.00	700.00	7,000.00	0.00	0.00	7,000.00	*700.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					7,000.00		0.00	7,000.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.50day	hr.	4.00	518.00	2,072.00	0.00	0.00	2,072.00	*518.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	974.47	0.00	0.00	974.47			
	SUB-TOTAL FOR EQUIPMENT					3,046.47		0.00	3,046.47			
	ESTIMATED DIRECT COST (EDC)					11,454.72		0.00	11,454.72			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,603.66		0.00	1,603.66			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,567.01		0.00	1,567.01			
	TOTAL COST FOR	10 L.m.		Including VAT		14,625.39		0.00	14,625.39			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		1,305.84		0.00	1,305.84			
	UNIT COST FOR	**1 L.m.**		Including VAT		1,462.54		0.00	1,462.54			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~
Foreman	day	0.3	0.3	**0.4**	0.4	0.5	0.6	0.7
Skilled labor	day	0.3	0.3	**0.4**	0.4	0.5	0.6	0.7
Common labor	day	0.8	1.0	**1.0**	1.3	1.5	1.7	1.9
5ton Wheel crane	day	0.3	0.4	**0.5**	0.5	0.6	0.7	-
25ton Wheel crane	day	-	-	-	-	-	-	0.9

Dia.mm

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1.245

Table 1.5.7(237/296) Unit Cost Analyses

UC No. 10-CP-24	**Name of Work : Installation of RC Pipe Culvert, 610mm (24") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 610mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.40	1,230.50	492.20	-	-	492.20	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.40	854.10	341.64	-	-	341.64	*854.1*	*1.00*	
1.3	Common Labor		day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,408.25		0.00	1,408.25			
2	MATERIALS											
2.1	RC Pipe Culvert, 610mm(24") Dia.		L.m.	10.00	915.00	9,150.00	0.00	0.00	9,150.00	*915.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					9,150.00		0.00	9,150.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.50day	hr.	4.00	518.00	2,072.00	0.00	0.00	2,072.00	*518.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	974.47	0.00	0.00	974.47			
	SUB-TOTAL FOR EQUIPMENT					3,046.47		0.00	3,046.47			
	ESTIMATED DIRECT COST (EDC)					13,604.72		0.00	13,604.72			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,904.66		0.00	1,904.66			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,861.13		0.00	1,861.13			
	TOTAL COST FOR 10 L.m.			Including VAT		17,370.51		0.00	17,370.51			
	UNIT COST FOR 1 L.m.			Excluding VAT		1,550.94		0.00	1,550.94			
	UNIT COST FOR 1 L.m.			Including VAT		1,737.05		0.00	1,737.05			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~
Foreman	day	0.3	0.3	**0.4**	0.4	0.5	0.6	0.7
Skilled labor	day	0.3	0.3	**0.4**	0.4	0.5	0.6	0.7
Common labor	day	0.8	1.0	**1.0**	1.3	1.5	1.7	1.9
5ton Wheel crane	day	0.3	0.4	**0.5**	0.5	0.6	0.7	-
25ton Wheel crane	day	-	-	-	-	-	-	0.9

Dia.mm

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1.246

Table 1.5.7(238/296) Unit Cost Analyses

UC No. 10-CP-30	**Name of Work : Installation of RC Pipe Culvert, 760mm (30") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 760mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.40	1,230.50	492.20	-	-	492.20	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.40	854.10	341.64	-	-	341.64	*854.1*	*1.00*	
1.3	Common Labor		day	1.30	574.41	746.73	-	-	746.73	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,580.57		0.00	1,580.57			
2	MATERIALS											
2.1	RC Pipe Culvert, 760mm(30") Dia.		L.m.	10.00	1,785.00	17,850.00	0.00	0.00	17,850.00	*1,785.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					17,850.00		0.00	17,850.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.50day	hr.	4.00	518.00	2,072.00	0.00	0.00	2,072.00	*518.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	1,022.72	0.00	0.00	1,022.72			
	SUB-TOTAL FOR EQUIPMENT					3,094.72		0.00	3,094.72			
	ESTIMATED DIRECT COST (EDC)					22,525.29		0.00	22,525.29			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,153.54		0.00	3,153.54			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,081.46		0.00	3,081.46			
	TOTAL COST FOR	10 L.m.		Including VAT		28,760.29		0.00	28,760.29			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		2,567.88		0.00	2,567.88			
	UNIT COST FOR	**1 L.m.**		Including VAT		2,876.03		0.00	2,876.03			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~
Foreman	day	0.3	0.3	0.4	**0.4**	0.5	0.6	0.7
Skilled labor	day	0.3	0.3	0.4	**0.4**	0.5	0.6	0.7
Common labor	day	0.8	1.0	1.0	**1.3**	1.5	1.7	1.9
5ton Wheel crane	day	0.3	0.4	0.5	**0.5**	0.6	0.7	-
25ton Wheel crane	day	-	-	-	-	-	-	0.9

Dia.mm

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1.247

Table 1.5.7(239/296) Unit Cost Analyses

UC No. 10-CP-36	**Name of Work : Installation of RC Pipe Culvert, 910mm (36") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 910mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.50	1,230.50	615.25	-	-	615.25	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.50	854.10	427.05	-	-	427.05	*854.1*	*1.00*	
1.3	Common Labor		day	1.50	574.41	861.62	-	-	861.62	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,903.92		0.00	1,903.92			
2	MATERIALS											
2.1	RC Pipe Culvert, 910mm(36") Dia.		L.m.	10.00	2,565.00	25,650.00	0.00	0.00	25,650.00	*2,565.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					25,650.00		0.00	25,650.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.60day	hr.	4.80	518.00	2,486.40	0.00	0.00	2,486.40	*518.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	1,229.29	0.00	0.00	1,229.29			
	SUB-TOTAL FOR EQUIPMENT					3,715.69		0.00	3,715.69			
	ESTIMATED DIRECT COST (EDC)					31,269.60		0.00	31,269.60			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,377.74		0.00	4,377.74			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,277.68		0.00	4,277.68			
	TOTAL COST FOR	10 L.m.		Including VAT		39,925.03		0.00	39,925.03			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		3,564.73		0.00	3,564.73			
	UNIT COST FOR	**1 L.m.**		Including VAT		3,992.50		0.00	3,992.50			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~
Foreman	day	0.3	0.3	0.4	0.4	**0.5**	0.6	0.7
Skilled labor	day	0.3	0.3	0.4	0.4	**0.5**	0.6	0.7
Common labor	day	0.8	1.0	1.0	1.3	**1.5**	1.7	1.9
5ton Wheel crane	day	0.3	0.4	0.5	0.5	**0.6**	0.7	-
25ton Wheel crane	day	-	-	-	-	-	-	0.9

Dia.mm

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1.248

Table 1.5.7(240/296) Unit Cost Analyses

UC No. 10-CP-42	**Name of Work : Installation of RC Pipe Culvert, 1070mm (42") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 1070mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.60	1,230.50	738.30	-	-	738.30	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.60	854.10	512.46	-	-	512.46	*854.1*	*1.00*	
1.3	Common Labor		day	1.70	574.41	976.50	-	-	976.50	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,227.26		0.00	2,227.26			
2	MATERIALS											
2.1	RC Pipe Culvert, 1070mm(42") Dia.		L.m.	10.00	3,200.00	32,000.00	0.00	0.00	32,000.00	*3,200.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					32,000.00		0.00	32,000.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.70day	hr.	5.60	518.00	2,900.80	0.00	0.00	2,900.80	*518.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	1,435.86	0.00	0.00	1,435.86			
	SUB-TOTAL FOR EQUIPMENT					4,336.66		0.00	4,336.66			
	ESTIMATED DIRECT COST (EDC)					38,563.91		0.00	38,563.91			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		5,398.95		0.00	5,398.95			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		5,275.54		0.00	5,275.54			
	TOTAL COST FOR 10 L.m.			Including VAT		49,238.40		0.00	49,238.40			
	UNIT COST FOR 1 L.m.			Excluding VAT		4,396.29		0.00	4,396.29			
	UNIT COST FOR 1 L.m.			Including VAT		4,923.84		0.00	4,923.84			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~
Foreman	day	0.3	0.3	0.4	0.4	0.5	**0.6**	0.7
Skilled labor	day	0.3	0.3	0.4	0.4	0.5	**0.6**	0.7
Common labor	day	0.8	1.0	1.0	1.3	1.5	**1.7**	1.9
5ton Wheel crane	day	0.3	0.4	0.5	0.5	0.6	**0.7**	-
25ton Wheel crane	day	-	-	-	-	-	-	0.9

Dia.mm

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1.249

Table 1.5.7(241/296) Unit Cost Analyses

UC No. 10-CP-48	**Name of Work : Installation of RC Pipe Culvert, 1220mm (48") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 1220mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.70	1,230.50	861.35	-	-	861.35	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.70	854.10	597.87	-	-	597.87	*854.1*	*1.00*	
1.3	Common Labor		day	1.90	574.41	1,091.38	-	-	1,091.38	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,550.60		0.00	2,550.60			
2	MATERIALS											
2.1	RC Pipe Culvert, 1220mm(48") Dia.		L.m.	10.00	4,455.00	44,550.00	0.00	0.00	44,550.00	*4,455.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					44,550.00		0.00	44,550.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	0.90day	hr.	7.20	1,427.00	10,274.40	0.00	0.00	10,274.40	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	3,591.00	0.00	0.00	3,591.00			
	SUB-TOTAL FOR EQUIPMENT					13,865.40		0.00	13,865.40			
	ESTIMATED DIRECT COST (EDC)					60,966.00		0.00	60,966.00			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		8,535.24		0.00	8,535.24			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		8,340.15		0.00	8,340.15			
	TOTAL COST FOR	10 L.m.		Including VAT		77,841.39		0.00	77,841.39			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		6,950.12		0.00	6,950.12			
	UNIT COST FOR	**1 L.m.**		Including VAT		7,784.14		0.00	7,784.14			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~
Foreman	day	0.3	0.3	0.4	0.4	0.5	0.6	**0.7**
Skilled labor	day	0.3	0.3	0.4	0.4	0.5	0.6	**0.7**
Common labor	day	0.8	1.0	1.0	1.3	1.5	1.7	**1.9**
5ton truck crane	day	0.3	0.4	0.5	0.5	0.6	0.7	-
25ton truck crane	day	-	-	-	-	-	-	**0.9**

Dia.mm

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1.250

Table 1.5.7(242/296) Unit Cost Analyses

UC No. 10-CP-54	**Name of Work : Installation of RC Pipe Culvert, 1370mm (54") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 1370mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.70	1,230.50	861.35	-	-	861.35	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.70	854.10	597.87	-	-	597.87	*854.1*	*1.00*	
1.3	Common Labor		day	1.90	574.41	1,091.38	-	-	1,091.38	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,550.60		0.00	2,550.60			
2	MATERIALS											
2.1	RC Pipe Culvert, 1370mm(54") Dia.		L.m.	10.00	5,400.00	54,000.00	0.00	0.00	54,000.00	*5,400.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					54,000.00		0.00	54,000.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	0.90day	hr.	7.20	1,427.00	10,274.40	0.00	0.00	10,274.40	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	3,591.00	0.00	0.00	3,591.00			
	SUB-TOTAL FOR EQUIPMENT					13,865.40		0.00	13,865.40			
	ESTIMATED DIRECT COST (EDC)					70,416.00		0.00	70,416.00			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		9,858.24		0.00	9,858.24			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		9,632.91		0.00	9,632.91			
	TOTAL COST FOR	10 L.m.		Including VAT		89,907.15		0.00	89,907.15			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		8,027.42		0.00	8,027.42			
	UNIT COST FOR	**1 L.m.**		Including VAT		8,990.71		0.00	8,990.71			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~
Foreman	day	0.3	0.3	0.4	0.4	0.5	0.6	**0.7**
Skilled labor	day	0.3	0.3	0.4	0.4	0.5	0.6	**0.7**
Common labor	day	0.8	1.0	1.0	1.3	1.5	1.7	**1.9**
5ton truck crane	day	0.3	0.4	0.5	0.5	0.6	0.7	-
25ton truck crane	day	-	-	-	-	-	-	**0.9**

Dia.mm

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1.251

Table 1.5.7(243/296) Unit Cost Analyses

UC No. 10-CP-60	**Name of Work : Installation of RC Pipe Culvert, 1520mm (60") Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Reinforced Concrete Pipe Culvert, 1520mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.70	1,230.50	861.35	-	-	861.35	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.70	854.10	597.87	-	-	597.87	*854.1*	*1.00*	
1.3	Common Labor		day	1.90	574.41	1,091.38	-	-	1,091.38	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,550.60		0.00	2,550.60			
2	MATERIALS											
2.1	RC Pipe Culvert, 1520mm(60") Dia.		L.m.	10.00	7,255.00	72,550.00	0.00	0.00	72,550.00	*7,255.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					72,550.00		0.00	72,550.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	0.90day	hr.	7.20	1,427.00	10,274.40	0.00	0.00	10,274.40	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	28 % of Labor & Equip.	%	28	0.00	3,591.00	0.00	0.00	3,591.00			
	SUB-TOTAL FOR EQUIPMENT					13,865.40		0.00	13,865.40			
	ESTIMATED DIRECT COST (EDC)					88,966.00		0.00	88,966.00			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		12,455.24		0.00	12,455.24			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		12,170.55		0.00	12,170.55			
	TOTAL COST FOR	10 L.m.		Including VAT		113,591.79		0.00	113,591.79			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		10,142.12		0.00	10,142.12			
	UNIT COST FOR	**1 L.m.**		Including VAT		11,359.18		0.00	11,359.18			

* Computation of Work Crew for 10.00 Pipes

Work Crew	Unit	300~350	400~450	500~600	700	800~900	1000~1100	1200~
Foreman	day	0.3	0.3	0.4	0.4	0.5	0.6	**0.7**
Skilled labor	day	0.3	0.3	0.4	0.4	0.5	0.6	**0.7**
Common labor	day	0.8	1.0	1.0	1.3	1.5	1.7	**1.9**
5ton truck crane	day	0.3	0.4	0.5	0.5	0.6	0.7	**-**
25ton truck crane	day	-	-	-	-	-	-	**0.9**

Dia.mm

(*) Work Crew calculation is based on Japanese Estimation Standard

Tb 1.252

Table 1.5.7(244/296) Unit Cost Analyses

New

UC No.	10-NRC-15	**Name of Work : Installation of NRC Pipe Culvert, 150mm Dia.**										
Unit of Work		Description of Work : Furnishing and Installation of Non-Reinforced Concrete Pipe Culvert, 150mm Dia.										
L.m.		Quantity of Unit Cost Analysis : 10.00 L.m.										
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.45	854.10	384.35	-	-	384.35	*854.1*	*1.00*	
1.3	Common Labor		day	1.05	574.41	603.13	-	-	603.13	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,541.20		0.00	1,541.20			
2	MATERIALS											
2.1	NRC Pipe, 150mm(6") Dia., t=19mm		L.m.	10.00	158.00	1,580.00	0.00	0.00	1,580.00	*158.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					1,580.00		0.00	1,580.00			
3	EQUIPMENT											
3.2	Miscellaneous Tools	31 % of Labor & Equip.	%	31	0.00	381.46	0.00	0.00	381.46			
	SUB-TOTAL FOR EQUIPMENT					381.46		0.00	381.46			
	ESTIMATED DIRECT COST (EDC)					3,502.66		0.00	3,502.66			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		490.37		0.00	490.37			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		479.16		0.00	479.16			
	TOTAL COST FOR	10 L.m.		Including VAT		4,472.19		0.00	4,472.19			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		399.30		0.00	399.30			
	UNIT COST FOR	**1 L.m.**		Including VAT		447.22		0.00	447.22			

Tb 1.253

Table 1.5.7(245/296) Unit Cost Analyses

New

UC No. 10-NRC-20	**Name of Work : Installation of NRC Pipe Culvert, 200mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Non-Reinforced Concrete Pipe Culvert, 200mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.15	854.10	128.12	-	-	128.12	*854.1*	*1.00*	
1.3	Common Labor		day	0.60	574.41	344.65	-	-	344.65	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					841.91		0.00	841.91			
2	MATERIALS											
2.1	NRC Pipe, 200mm(8") Dia., t=22mm		L.m.	10.00	206.00	2,060.00	0.00	0.00	2,060.00	*206.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					2,060.00		0.00	2,060.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.40	518.00	1,243.20	0.00	0.00	1,243.20	*518.00*	*1.00*	
3.2	Miscellaneous Tools	31 % of Labor & Equip.	%	31	0.00	646.38	0.00	0.00	646.38			
	SUB-TOTAL FOR EQUIPMENT					1,889.58		0.00	1,889.58			
	ESTIMATED DIRECT COST (EDC)					4,791.50		0.00	4,791.50			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		670.81		0.00	670.81			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		655.48		0.00	655.48			
	TOTAL COST FOR	10 L.m.		Including VAT		6,117.78		0.00	6,117.78			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		546.23		0.00	546.23			
	UNIT COST FOR	**1 L.m.**		Including VAT		611.78		0.00	611.78			

Tb 1.254

Table 1.5.7(246/296) Unit Cost Analyses

New

UC No. 10-NRC-25	**Name of Work : Installation of NRC Pipe Culvert, 250mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of Non-Reinforced Concrete Pipe Culvert, 250mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.15	854.10	128.12	-	-	128.12	*854.1*	*1.00*	
1.3	Common Labor		day	0.60	574.41	344.65	-	-	344.65	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					841.91		0.00	841.91			
2	MATERIALS											
2.1	NRC Pipe, 250mm(10") Dia., t=25mm		L.m.	10.00	250.00	2,500.00	0.00	0.00	2,500.00	*250.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					2,500.00		0.00	2,500.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.40	518.00	1,243.20	0.00	0.00	1,243.20	*518.00*	*1.00*	
3.2	Miscellaneous Tools	31 % of Labor & Equip.	%	31	0.00	646.38	0.00	0.00	646.38			
	SUB-TOTAL FOR EQUIPMENT					1,889.58		0.00	1,889.58			
	ESTIMATED DIRECT COST (EDC)					5,231.50		0.00	5,231.50			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		732.41		0.00	732.41			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		715.67		0.00	715.67			
	TOTAL COST FOR	10 L.m.		Including VAT		6,679.57		0.00	6,679.57			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		596.39		0.00	596.39			
	UNIT COST FOR	**1 L.m.**		Including VAT		667.96		0.00	667.96			

Tb 1.255

Table 1.5.7(247/296) Unit Cost Analyses

New

UC No. 10-PVC-05	**Name of Work : Installation of PVC Pipe, 50mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of PVC Pipe, 50mm Dia.
L.m.	Quantity of Unit Cost Analysis : 100.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.3	Common Labor		day	1.35	574.41	775.45	-	-	775.45	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					775.45		0.00	775.45			
2	MATERIALS											
2.1	PVC Pipe, 50mm Dia.	including 5.0% of loss	L.m.	105.00	70.00	7,350.00	0.00	0.00	7,350.00	*70.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					7,350.00		0.00	7,350.00			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					8,125.45		0.00	8,125.45			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,137.56		0.00	1,137.56			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,111.56		0.00	1,111.56			
	TOTAL COST FOR 100 L.m.			Including VAT		10,374.58		0.00	10,374.58			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		92.63		0.00	92.63			
	UNIT COST FOR	**1 L.m.**		Including VAT		103.75		0.00	103.75			

Tb 1.256

Table 1.5.7(248/296) Unit Cost Analyses

New

UC No. 10-PVC-10	**Name of Work : Installation of PVC Pipe, 100mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of PVC Pipe, 100mm Dia.
L.m.	Quantity of Unit Cost Analysis : 100.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.3	Common Labor		day	1.35	574.41	775.45	-	-	775.45	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					775.45		0.00	775.45			
2	MATERIALS											
2.1	PVC Pipe, 100mm Dia.	including 5.0% of loss	L.m.	105.00	170.00	17,850.00	0.00	0.00	17,850.00	*170.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					17,850.00		0.00	17,850.00			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					18,625.45		0.00	18,625.45			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,607.56		0.00	2,607.56			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,547.96		0.00	2,547.96			
	TOTAL COST FOR 100 L.m.			Including VAT		23,780.98		0.00	23,780.98			
	UNIT COST FOR 1 L.m.			Excluding VAT		212.33		0.00	212.33			
	UNIT COST FOR 1 L.m.			Including VAT		237.81		0.00	237.81			

Tb 1.257

Table 1.5.7(249/296) Unit Cost Analyses

New

UC No. 10-PVC-15	**Name of Work : Installation of PVC Pipe, 150mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of PVC Pipe, 150mm Dia.
L.m.	Quantity of Unit Cost Analysis : 100.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.3	Common Labor		day	1.35	574.41	775.45	-	-	775.45	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					775.45		0.00	775.45			
2	MATERIALS											
2.1	PVC Pipe, 150mm Dia.	including 5.0% of loss	L.m.	105.00	282.00	29,610.00	0.00	0.00	29,610.00	*282.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					29,610.00		0.00	29,610.00			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					30,385.45		0.00	30,385.45			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,253.96		0.00	4,253.96			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		4,156.73		0.00	4,156.73			
	TOTAL COST FOR 100 L.m.			Including VAT		38,796.15		0.00	38,796.15			
	UNIT COST FOR 1 L.m.			Excluding VAT		346.39		0.00	346.39			
	UNIT COST FOR 1 L.m.			Including VAT		387.96		0.00	387.96			

Tb 1.258

Table 1.5.7(250/296) Unit Cost Analyses

New

UC No. 10-PVC-20	**Name of Work : Installation of PVC Pipe, 200mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of PVC Pipe, 200mm Dia.
L.m.	Quantity of Unit Cost Analysis : 100.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.90	1,230.50	1,107.45	-	-	1,107.45	*1230.5*	*1.00*	
1.3	Common Labor		day	2.70	574.41	1,550.91	-	-	1,550.91	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,550.91		0.00	1,550.91			
2	MATERIALS											
2.1	PVC Pipe, 200mm Dia.	including 5.0% of loss	L.m.	105.00	424.00	44,520.00	0.00	0.00	44,520.00	*424.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					44,520.00		0.00	44,520.00			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					46,070.91		0.00	46,070.91			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,449.93		0.00	6,449.93			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		6,302.50		0.00	6,302.50			
	TOTAL COST FOR 100 L.m.			Including VAT		58,823.33		0.00	58,823.33			
	UNIT COST FOR 1 L.m.			Excluding VAT		525.21		0.00	525.21			
	UNIT COST FOR 1 L.m.			Including VAT		588.23		0.00	588.23			

Tb 1.259

Table 1.5.7(251/296) Unit Cost Analyses

New

UC No. 10-PVC-25	**Name of Work : Installation of PVC Pipe, 250mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of PVC Pipe, 250mm Dia.
L.m.	Quantity of Unit Cost Analysis : 100.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.90	1,230.50	1,107.45	-	-	1,107.45	*1230.5*	*1.00*	
1.3	Common Labor		day	2.70	574.41	1,550.91	-	-	1,550.91	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,550.91		0.00	1,550.91			
2	MATERIALS											
2.1	PVC Pipe, 250mm Dia.	including 5.0% of loss	L.m.	105.00	760.00	79,800.00	0.00	0.00	79,800.00	*760.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					79,800.00		0.00	79,800.00			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					81,350.91		0.00	81,350.91			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		11,389.13		0.00	11,389.13			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		11,128.80		0.00	11,128.80			
	TOTAL COST FOR 100 L.m.			Including VAT		103,868.84		0.00	103,868.84			
	UNIT COST FOR 1 L.m.			Excluding VAT		927.40		0.00	927.40			
	UNIT COST FOR 1 L.m.			Including VAT		1,038.69		0.00	1,038.69			

Tb 1.260

Table 1.5.7(252/296) Unit Cost Analyses

New

UC No. 10-PVC-30	**Name of Work : Installation of PVC Pipe, 300mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of PVC Pipe, 300mm Dia.
L.m.	Quantity of Unit Cost Analysis : 100.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.90	1,230.50	1,107.45	-	-	1,107.45	*1230.5*	*1.00*	
1.3	Common Labor		day	2.70	574.41	1,550.91	-	-	1,550.91	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,550.91		0.00	1,550.91			
2	MATERIALS											
2.1	PVC Pipe, 300mm Dia.	including 5.0% of loss	L.m.	105.00	1,200.00	126,000.00	0.00	0.00	126,000.00	*1,200.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					126,000.00		0.00	126,000.00			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					127,550.91		0.00	127,550.91			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		17,857.13		0.00	17,857.13			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		17,448.96		0.00	17,448.96			
	TOTAL COST FOR 100 L.m.			Including VAT		162,857.00		0.00	162,857.00			
	UNIT COST FOR 1 L.m.			Excluding VAT		1,454.08		0.00	1,454.08			
	UNIT COST FOR 1 L.m.			Including VAT		1,628.57		0.00	1,628.57			

Tb 1.261

Table 1.5.7(253/296) Unit Cost Analyses

New

UC No. 10-GI-10	**Name of Work : Installation of GI Pipe, 100mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of GI Pipe, 100mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.45	854.10	384.35	-	-	384.35	*854.1*	*1.00*	
1.3	Common Labor		day	1.05	574.41	603.13	-	-	603.13	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,541.20		0.00	1,541.20			
2	MATERIALS											
2.1	Galvanized Iron Pipe, 100mm Dia.		L.m.	10.00	1,050.00	10,500.00	0.00	0.00	10,500.00	*1,050.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					10,500.00		0.00	10,500.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	31 % of Labor & Equip.	%	31	0.00	477.77	0.00	0.00	477.77			
	SUB-TOTAL FOR EQUIPMENT					477.77		0.00	477.77			
	ESTIMATED DIRECT COST (EDC)					12,518.97		0.00	12,518.97			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,752.66		0.00	1,752.66			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,712.60		0.00	1,712.60			
	TOTAL COST FOR	10 L.m.		Including VAT		15,984.22		0.00	15,984.22			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		1,427.16		0.00	1,427.16			
	UNIT COST FOR	**1 L.m.**		Including VAT		1,598.42		0.00	1,598.42			

Tb 1.262

Table 1.5.7(254/296) Unit Cost Analyses

New

UC No. 10-GI-15	**Name of Work : Installation of GI Pipe, 150mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of GI Pipe, 150mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.45	1,230.50	553.73	-	-	553.73	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.45	854.10	384.35	-	-	384.35	*854.1*	*1.00*	
1.3	Common Labor		day	1.05	574.41	603.13	-	-	603.13	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,541.20		0.00	1,541.20			
2	MATERIALS											
2.1	Galvanized Iron Pipe, 150mm Dia.		L.m.	10.00	1,708.00	17,080.00	0.00	0.00	17,080.00	*1,708.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					17,080.00		0.00	17,080.00			
3	EQUIPMENT											
3.1	Miscellaneous Tools	31 % of Labor & Equip.	%	31	0.00	477.77	0.00	0.00	477.77			
	SUB-TOTAL FOR EQUIPMENT					477.77		0.00	477.77			
	ESTIMATED DIRECT COST (EDC)					19,098.97		0.00	19,098.97			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,673.86		0.00	2,673.86			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,612.74		0.00	2,612.74			
	TOTAL COST FOR	10 L.m.		Including VAT		24,385.57		0.00	24,385.57			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		2,177.28		0.00	2,177.28			
	UNIT COST FOR	**1 L.m.**		Including VAT		2,438.56		0.00	2,438.56			

Tb 1.263

Table 1.5.7(255/296) Unit Cost Analyses

New

UC No. 10-GI-20	**Name of Work : Installation of GI Pipe, 200mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of GI Pipe, 200mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.15	854.10	128.12	-	-	128.12	*854.1*	*1.00*	
1.3	Common Labor		day	0.60	574.41	344.65	-	-	344.65	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					841.91		0.00	841.91			
2	MATERIALS											
2.1	Galvanized Iron Pipe, 200mm Dia.		L.m.	10.00	2,625.00	26,250.00	0.00	0.00	26,250.00	*2,625.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					26,250.00		0.00	26,250.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.40	518.00	1,243.20	0.00	0.00	1,243.20	*518.00*	*1.00*	
3.2	Miscellaneous Tools	31 % of Labor & Equip.	%	31	0.00	646.38	0.00	0.00	646.38			
	SUB-TOTAL FOR EQUIPMENT					1,889.58		0.00	1,889.58			
	ESTIMATED DIRECT COST (EDC)					28,981.50		0.00	28,981.50			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		4,057.41		0.00	4,057.41			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,964.67		0.00	3,964.67			
	TOTAL COST FOR	10 L.m.		Including VAT		37,003.57		0.00	37,003.57			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		3,303.89		0.00	3,303.89			
	UNIT COST FOR	**1 L.m.**		Including VAT		3,700.36		0.00	3,700.36			

Tb 1. 264

Table 1.5.7(256/296) Unit Cost Analyses

New

UC No. 10-GI-30	**Name of Work : Installation of GI Pipe, 300mm Dia.**
Unit of Work	Description of Work : Furnishing and Installation of GI Pipe, 300mm Dia.
L.m.	Quantity of Unit Cost Analysis : 10.00 L.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.30	1,230.50	369.15	-	-	369.15	*1230.5*	*1.00*	
1.2	Skilled Labor		day	0.15	854.10	128.12	-	-	128.12	*854.1*	*1.00*	
1.3	Common Labor		day	0.60	574.41	344.65	-	-	344.65	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					841.91		0.00	841.91			
2	MATERIALS											
2.1	Galvanized Iron Pipe, 300mm Dia.		L.m.	10.00	4,933.00	49,330.00	0.00	0.00	49,330.00	*4,933.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					49,330.00		0.00	49,330.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP		hr.	2.40	518.00	1,243.20	0.00	0.00	1,243.20	*518.00*	*1.00*	
3.2	Miscellaneous Tools	31 % of Labor & Equip.	%	31	0.00	646.38	0.00	0.00	646.38			
	SUB-TOTAL FOR EQUIPMENT					1,889.58		0.00	1,889.58			
	ESTIMATED DIRECT COST (EDC)					52,061.50		0.00	52,061.50			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		7,288.61		0.00	7,288.61			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		7,122.01		0.00	7,122.01			
	TOTAL COST FOR	10 L.m.		Including VAT		66,472.12		0.00	66,472.12			
	UNIT COST FOR	**1 L.m.**		Excluding VAT		5,935.01		0.00	5,935.01			
	UNIT COST FOR	**1 L.m.**		Including VAT		6,647.21		0.00	6,647.21			

Tb 1.265

Table 1.5.7(257/296) Unit Cost Analyses

UC No. 10-FG-12	**Name of Work : Installation of FRP Type Flap Gate 300mm**
Unit of Work	Description of Work : Furnishing and Installation of **FRP Type** Flap Gate, 300mm
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor		day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,087.52		0.00	4,087.52			
2	MATERIALS											
2.1	FRP Flap Gate, 300mm(12") Dia. Pipe		set	1.00	0.00	0.00	77,226.00	77,226.00	77,226.00	*77,226.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	4,920.40	4,920.40			
	SUB-TOTAL FOR MATERIAL					0.00		103,328.40	103,328.40			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.40day	hr.	3.20	518.00	1,657.60	0.00	0.00	1,657.60	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	287.26	0.00	0.00	287.26			
	SUB-TOTAL FOR EQUIPMENT					1,944.86		0.00	1,944.86			
	ESTIMATED DIRECT COST (EDC)					6,032.38		103,328.40	109,360.78			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		844.53		14,465.98	15,310.51			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		825.23		14,135.33	14,960.55			
	TOTAL COST FOR	1 Set		Including VAT		7,702.14		131,929.70	139,631.84			
	UNIT COST FOR	**1 Set**		Excluding VAT		6,876.91		117,794.38	124,671.28			
	UNIT COST FOR	**1 Set**		Including VAT		7,702.14		131,929.70	139,631.84			

Tb 1.266

Table 1.5.7(258/296) Unit Cost Analyses

UC No. 10-FG-18	**Name of Work : Installation of FRP Type Flap Gate 450mm**
Unit of Work	Description of Work : Furnishing and Installation of **FRP Type** Flap Gate, 450mm
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor		day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,087.52		0.00	4,087.52			
2	MATERIALS											
2.1	FRP Flap Gate, 450mm(18") Dia. Pipe		set	1.00	0.00	0.00	114,772.00	114,772.00	114,772.00	*114,772.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	5,738.60	5,738.60			
	SUB-TOTAL FOR MATERIAL					0.00		141,692.60	141,692.60			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.40day	hr.	3.20	518.00	1,657.60	0.00	0.00	1,657.60	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	287.26	0.00	0.00	287.26			
	SUB-TOTAL FOR EQUIPMENT					1,944.86		0.00	1,944.86			
	ESTIMATED DIRECT COST (EDC)					6,032.38		141,692.60	147,724.98			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		844.53		19,836.96	20,681.50			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		825.23		19,383.55	20,208.78			
	TOTAL COST FOR	1 Set		Including VAT		7,702.14		180,913.11	188,615.25			
	UNIT COST FOR	**1 Set**		Excluding VAT		6,876.91		161,529.56	168,406.47			
	UNIT COST FOR	**1 Set**		Including VAT		7,702.14		180,913.11	188,615.25			

Tb 1.267

Table 1.5.7(259/296) Unit Cost Analyses

UC No. 10-FG-24	**Name of Work : Installation of FRP Type Flap Gate 600mm**
Unit of Work	Description of Work : Furnishing and Installation of **FRP Type** Flap Gate, 600mm
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.3	Common Labor		day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					4,087.52		0.00	4,087.52			
2	MATERIALS											
2.1	FRP Flap Gate, 600mm(24") Dia. Pipe		set	1.00	0.00	0.00	152,013.00	152,013.00	152,013.00	*152,013.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	7,600.65	7,600.65			
	SUB-TOTAL FOR MATERIAL					0.00		180,795.65	180,795.65			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.50day	hr.	4.00	518.00	2,072.00	0.00	0.00	2,072.00	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	307.98	0.00	0.00	307.98			
	SUB-TOTAL FOR EQUIPMENT					2,379.98		0.00	2,379.98			
	ESTIMATED DIRECT COST (EDC)					6,467.50		180,795.65	187,263.15			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		905.45		25,311.39	26,216.84			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		884.75		24,732.84	25,617.60			
	TOTAL COST FOR	1 Set		Including VAT		8,257.70		230,839.89	239,097.58			
	UNIT COST FOR	**1 Set**		Excluding VAT		7,372.95		206,107.04	213,479.99			
	UNIT COST FOR	**1 Set**		Including VAT		8,257.70		230,839.89	239,097.58			

Tb 1.268

Table 1.5.7(260/296) Unit Cost Analyses

UC No. 10-FG-36	**Name of Work : Installation of FRP Type Flap Gate 900mm**
Unit of Work	Description of Work : Furnishing and Installation of **FRP Type** Flap Gate, 900mm
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	FRP Flap Gate, 900mm(36") Dia. Pipe		set	1.00	0.00	0.00	294,169.00	294,169.00	294,169.00	*294,169.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	14,708.45	14,708.45			
	SUB-TOTAL FOR MATERIAL					0.00		330,059.45	330,059.45			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.90day	hr.	7.20	518.00	3,729.60	0.00	0.00	3,729.60	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	533.71	0.00	0.00	533.71			
	SUB-TOTAL FOR EQUIPMENT					4,263.31		0.00	4,263.31			
	ESTIMATED DIRECT COST (EDC)					11,207.85		330,059.45	341,267.30			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,569.10		46,208.32	47,777.42			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,533.23		45,152.13	46,685.37			
	TOTAL COST FOR	1 Set		Including VAT		14,310.18		421,419.91	435,730.08			
	UNIT COST FOR	**1 Set**		Excluding VAT		12,776.95		376,267.77	389,044.72			
	UNIT COST FOR	**1 Set**		Including VAT		14,310.18		421,419.91	435,730.08			

Tb 1.269

Table 1.5.7(261/296) Unit Cost Analyses

UC No. 10-FG-42	**Name of Work : Installation of Rectangle Type Flap Gate 1000mm**
Unit of Work	Description of Work : Furnishing and Installation of **Rectangle Type** Flap Gate, 1000mm
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Aluminum, Rectangle Flap Gate, 1,000mm(42")		set	1.00	0.00	0.00	240,823.00	240,823.00	240,823.00	*240,823.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	12,041.15	12,041.15			
	SUB-TOTAL FOR MATERIAL					0.00		274,046.15	274,046.15			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	1.00day	hr.	8.00	518.00	4,144.00	0.00	0.00	4,144.00	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	554.43	0.00	0.00	554.43			
	SUB-TOTAL FOR EQUIPMENT					4,698.43		0.00	4,698.43			
	ESTIMATED DIRECT COST (EDC)					11,642.97		274,046.15	285,689.12			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,630.02		38,366.46	39,996.48			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,592.76		37,489.51	39,082.27			
	TOTAL COST FOR	1 Set		Including VAT		14,865.74		349,902.12	364,767.86			
	UNIT COST FOR	**1 Set**		Excluding VAT		13,272.98		312,412.61	325,685.59			
	UNIT COST FOR	**1 Set**		Including VAT		14,865.74		349,902.12	364,767.86			

Tb 1.270

Table 1.5.7(262/296) Unit Cost Analyses

UC No. 10-FG-C42	**Name of Work : Installation of FRP Type Flap Gate 1100mm**
Unit of Work	Description of Work : Furnishing and Installation of **FRP Type** Flap Gate, 1100mm
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	FRP Flap Gate, 1,100mm(44") Dia. Pipe		set	1.00	0.00	0.00	421,694.00	421,694.00	421,694.00	*421,694.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	21,084.70	21,084.70			
	SUB-TOTAL FOR MATERIAL					0.00		463,960.70	463,960.70			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	1.00day	hr.	8.00	518.00	4,144.00	0.00	0.00	4,144.00	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	554.43	0.00	0.00	554.43			
	SUB-TOTAL FOR EQUIPMENT					4,698.43		0.00	4,698.43			
	ESTIMATED DIRECT COST (EDC)					11,642.97		463,960.70	475,603.67			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,630.02		64,954.50	66,584.51			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,592.76		63,469.82	65,062.58			
	TOTAL COST FOR	1 Set		Including VAT		14,865.74		592,385.02	607,250.76			
	UNIT COST FOR	**1 Set**		Excluding VAT		13,272.98		528,915.20	542,188.18			
	UNIT COST FOR	**1 Set**		Including VAT		14,865.74		592,385.02	607,250.76			

Tb 1.271

Table 1.5.7(263/296) Unit Cost Analyses

UC No.	10-FG-48	**Name of Work : Installation of Rectangle Type Flap Gate 1200mm**
Unit of Work		Description of Work : Furnishing and Installation of **Rectangle Type** Flap Gate, 1200mm
Set		Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Aluminum, Rectangle Flap Gate, 1,200mm(48")		set	1.00	0.00	0.00	399,847.00	399,847.00	399,847.00	*399,847.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	19,992.35	19,992.35			
	SUB-TOTAL FOR MATERIAL					0.00		441,021.35	441,021.35			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	0.90day	hr.	7.20	1,427.00	10,274.40	0.00	0.00	10,274.40	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	860.95	0.00	0.00	860.95			
	SUB-TOTAL FOR EQUIPMENT					11,135.35		0.00	11,135.35			
	ESTIMATED DIRECT COST (EDC)					18,079.89		441,021.35	459,101.24			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,531.18		61,742.99	64,274.17			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,473.33		60,331.72	62,805.05			
	TOTAL COST FOR	1 Set		Including VAT		23,084.40		563,096.06	586,180.46			
	UNIT COST FOR	**1 Set**		Excluding VAT		20,611.07		502,764.34	523,375.41			
	UNIT COST FOR	**1 Set**		Including VAT		23,084.40		563,096.06	586,180.46			

Tb 1.272

Table 1.5.7(264/296) Unit Cost Analyses

UC No. 10-FG-54	**Name of Work : Installation of Rectangle Type Flap Gate1400mm**
Unit of Work	Description of Work : Furnishing and Installation of **Rectangle Type** Flap Gate, 1400mm
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Aluminum, Rectangle Flap Gate, 1,400mm(54")		set	1.00	0.00	0.00	660,484.00	660,484.00	660,484.00	*660,484.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	33,024.20	33,024.20			
	SUB-TOTAL FOR MATERIAL					0.00		714,690.20	714,690.20			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	0.90day	hr.	7.20	1,427.00	10,274.40	0.00	0.00	10,274.40	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	860.95	0.00	0.00	860.95			
	SUB-TOTAL FOR EQUIPMENT					11,135.35		0.00	11,135.35			
	ESTIMATED DIRECT COST (EDC)					18,079.89		714,690.20	732,770.09			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,531.18		100,056.63	102,587.81			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,473.33		97,769.62	100,242.95			
	TOTAL COST FOR	1 Set		Including VAT		23,084.40		912,516.45	935,600.85			
	UNIT COST FOR	**1 Set**		Excluding VAT		20,611.07		814,746.83	835,357.90			
	UNIT COST FOR	**1 Set**		Including VAT		23,084.40		912,516.45	935,600.85			

Tb 1.273

Table 1.5.7(265/296) Unit Cost Analyses

UC No. 10-FG-60	**Name of Work : Installation of Rectangle Type Flap Gate 1500mm**
Unit of Work	Description of Work : Furnishing and Installation of **Rectangle Type** Flap Gate, 1500mm
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Aluminum, Rectangle Flap Gate, 1,500mm(60")		set	1.00	0.00	0.00	762,097.00	762,097.00	762,097.00	*762,097.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	38,104.85	38,104.85			
	SUB-TOTAL FOR MATERIAL					0.00		821,383.85	821,383.85			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					19,278.57		821,383.85	840,662.42			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,699.00		114,993.74	117,692.74			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,637.31		112,365.31	115,002.62			
	TOTAL COST FOR	1 Set		Including VAT		24,614.87		1,048,742.90	1,073,357.77			
	UNIT COST FOR	**1 Set**		Excluding VAT		21,977.57		936,377.59	958,355.16			
	UNIT COST FOR	**1 Set**		Including VAT		24,614.87		1,048,742.90	1,073,357.77			

Tb 1.274

Table 1.5.7(266/296) Unit Cost Analyses

UC No. 10-FG-64	**Name of Work : Installation of Rectangle Type Flap Gate 1600mm**
Unit of Work	Description of Work : Furnishing and Installation of **Rectangle Type** Flap Gate, 1600mm
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Aluminum, Rectangle Flap Gate, 1,600mm(64")		set	1.00	0.00	0.00	863,710.00	863,710.00	863,710.00	*863,710.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	43,185.50	43,185.50			
	SUB-TOTAL FOR MATERIAL					0.00		928,077.50	928,077.50			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					19,278.57		928,077.50	947,356.07			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,699.00		129,930.85	132,629.85			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,637.31		126,961.00	129,598.31			
	TOTAL COST FOR	1 Set		Including VAT		24,614.87		1,184,969.35	1,209,584.23			
	UNIT COST FOR	**1 Set**		Excluding VAT		21,977.57		1,058,008.35	1,079,985.92			
	UNIT COST FOR	**1 Set**		Including VAT		24,614.87		1,184,969.35	1,209,584.23			

Tb 1.275

Table 1.5.7(267/296) Unit Cost Analyses

UC No.	10-FG-78	**Name of Work : Installation of Rectangle Type Flap Gate for 2000mm x 1600mm**
Unit of Work		Description of Work : Furnishing and Installation of **Rectangle Type** Flap Gate, for 2000mm x 1600mm
Set		Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Aluminum, Rectangle Flap Gate, 2.0m x 1.6m		set	1.00	0.00	0.00	1,397,178.00	1,397,178.00	1,397,178.00	*1,397,178.00*	*0.00*	
2.2	Transportation Cost for Flap Gate, Japan to Manila		set	1.00	0.00	0.00	21,182.00	21,182.00	21,182.00	*21,182.00*	*0.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	0.00	0.00	69,858.90	69,858.90			
	SUB-TOTAL FOR MATERIAL					0.00		1,488,218.90	1,488,218.90			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					19,278.57		1,488,218.90	1,507,497.47			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		2,699.00		208,350.65	211,049.65			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		2,637.31		203,588.35	206,225.65			
	TOTAL COST FOR	1 Set		Including VAT		24,614.87		1,900,157.89	1,924,772.77			
	UNIT COST FOR	**1 Set**		Excluding VAT		21,977.57		1,696,569.55	1,718,547.11			
	UNIT COST FOR	**1 Set**		Including VAT		24,614.87		1,900,157.89	1,924,772.77			

Tb 1.276

Table 1.5.7(268/296) Unit Cost Analyses

11. STRUCTURAL AND MISCELLANEOUS METALWORKS

UC No. 11-CB-MF	**Name of Work : Metal Form for Concrete Columns/Blocks**
Unit of Work	Description of Work : Using 6mm thick Steel Plate
Sq.m.	Quantity of Unit Cost Analysis : 26.65 Sq.m. /day

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Steel Worker	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Welder	@1	day	1.00	988.10	988.10	-	-	988.10	*988.1*	*1.00*	
1.4	Skilled Labor	@2	day	2.00	854.10	1,708.20	-	-	1,708.20	*854.1*	*1.00*	
1.5	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					5,929.72		0.00	5,929.72			
2	MATERIALS											
2.1	Metal Form (Steel Plate, 6	53 times re-use	kg	30.729	32.00	983.32	0.00	0.00	983.32	*32.00*	*1.00*	
2.2	Structural Steel	10 % of Steel Plate	kg	3.07	48.00	147.50	0.00	0.00	147.50	*48.00*	*1.00*	
2.3	Form Oil	0.20 ltr./sq.m.	ltr.	5.33	87.00	463.70	0.00	0.00	463.70	*87.00*	*1.00*	
2.4	Miscellaneous Materials	1.0 % of other Materials	%	1.00	0.00	15.95	0.00	0.00	15.95			
	SUB-TOTAL FOR MATERIAL					1,610.46		0.00	1,610.46			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor	%	10	0.00	592.97	0.00	0.00	592.97			
	SUB-TOTAL FOR EQUIPMENT					592.97		0.00	592.97			
	ESTIMATED DIRECT COST (EDC)					8,133.15		0.00	8,133.15			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,138.64		0.00	1,138.64			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,112.62		0.00	1,112.62			
	TOTAL COST FOR	26.65 Sq.m.		Including VAT		10,384.41		0.00	10,384.41			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		347.92		0.00	347.92			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		389.67		0.00	389.67			

* Computational Condition of Metal Form

- Quantity Concrete Railing — Column 15.4 pcs./10m ===> 7,100 pcs. in Total; Concrete 0.221 cu.m./10m ===> 0.014 cu.m./pcs.; Formwork 9.12 sq.m./10m ===> 0.592 sq.m./pcs.

Daily production = **45** pcs./day ===> Formwork, daily required = **26.649** sq.m./day

- Production Cycle 7,100 pcs. / 45 pcs./cycle / **3** sets of formwork = 53.0 cycles
  - Metal Form shall be Re-Used for 53 Times.
- Metal Form may be made with Steel Plate of 6mm thick.

Weight of Steel Plate = 7,835 kg/cu.m. x 0.006m x 1 sq.m. = 47.01 kg/sq.m.

- Making cost of Metal Form may be 30 % of material cost of metal.

*Quantity of Metal = 47.01 kg/sq.m. x 130% / 53 times x 26.65 sq.m. = 30.73 kg

Tb 1.277

Table 1.5.7(269/296) Unit Cost Analyses

UC No. 11-MT-HR	**Name of Work : Handrail, Galvanized Pipe 50mm Dia. & 38mm Dia.**
Unit of Work	Description of Work : Handrail H=0.90m, Galvanized Pipe 50mm Dia. For Main Structure & 38mm Dia. For Middle Bar
Kg	Quantity of Unit Cost Analysis : 240 Kg /hr. (12 m/day)

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Steel Worker	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Welder	@1	day	1.00	988.10	988.10	-	-	988.10	*988.1*	*1.00*	
1.4	Skilled Labor	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.5	Common Labor	@2	day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					5,075.62		0.00	5,075.62			
2	MATERIALS											
2.1	Galvanized Iron Pipe, 50mm Dia.		L.m.	29.00	341.00	9,889.00	0.00	0.00	9,889.00	*341.00*	*1.00*	
2.2	Galvanized Iron Pipe, 40mm Dia.		L.m.	22.00	252.00	5,544.00	0.00	0.00	5,544.00	*252.00*	*1.00*	
2.3	Miscellaneous Materials	10 % of others (Welding Rod	%	10	0.00	1,543.30	0.00	0.00	1,543.30			
2.4	Diesel Fuel (Light Oil)		ltr.	28.50	45.00	1,282.50	0.00	0.00	1,282.50	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					18,258.80		0.00	18,258.80			
3	EQUIPMENT											
3.1	Bar Cutter		hr.	3.00	316.00	948.00	0.00	0.00	948.00	*316.00*	*1.00*	
3.2	Welding Machine, Electric, 500Amp		hr.	3.00	391.00	1,173.00	0.00	0.00	1,173.00	*391.00*	*1.00*	
3.3	Generator Set, 50kW		hr.	3.00	143.00	429.00	0.00	0.00	429.00	*143.00*	*1.00*	
3.4	Telescopic Boom Truck Crane, 5t, 100HP		hr.	0.50	518.00	259.00	0.00	0.00	259.00	*518.00*	*1.00*	
3.5	Miscellaneous Tools	10 % of Labor	%	10	0.00	507.56	0.00	0.00	507.56			
	SUB-TOTAL FOR EQUIPMENT					3,316.56		0.00	3,316.56			
	ESTIMATED DIRECT COST (EDC)					26,650.98		0.00	26,650.98			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,731.14		0.00	3,731.14			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,645.85		0.00	3,645.85			
	TOTAL COST FOR	239.57 Kg		Including VAT		34,027.97		0.00	34,027.97			
	UNIT COST FOR	**1 Kg**		Excluding VAT		126.82		0.00	126.82			
	UNIT COST FOR	**1 Kg**		Including VAT		142.04		0.00	142.04			

(*1): Required Material Volume for Calculation : 6.00m of Handrail/man-day x 2 workers = 12 m/day

Galvanized Iron Pipe, 50mm Dia.	1.00m	x 9	x 2	=	18.00m	==>	5.31 kg/m	=	95.58	kg
Galvanized Iron Pipe, 50mm Dia.	5.50m	x 1	x 2	=	11.00m	==>	5.31 kg/m	=	58.41	kg
Galvanized Iron Pipe, 40mm Dia.	5.50m	x 2	x 2	=	22.00m	==>	3.89 kg/m	=	85.58	kg
									239.57	kg

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 50 kW

Hourly Diesel Fuel Consumption = 9.5 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.278

Table 1.5.7(270/296) Unit Cost Analyses

UC No. 11-MT-SW	**Name of Work : Structural Steelwork**
Unit of Work	Description of Work : Structural steelwork, such as roof structure
Kg	Quantity of Unit Cost Analysis : 1 Kg

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Steel Worker	@1	day	0.13	854.10	106.76	-	-	106.76	*854.1*	*1.00*	
	SUB-TOTAL FOR LABOR					106.76		0.00	106.76			
2	MATERIALS											
2.1	Metal (Steel) Structure		kg	0.50	73.00	36.50	0.00	0.00	36.50	*73.00*	*1.00*	
2.2	Structural Steel		kg	0.50	48.00	24.00	0.00	0.00	24.00	*48.00*	*1.00*	
2.3	Processing and Installation	30 % material cost	%	30	0.00	18.15	0.00	0.00	18.15			
	SUB-TOTAL FOR MATERIAL					78.65		0.00	78.65			
3	EQUIPMENT											
3.1	Miscellaneous Tools	10 % of Labor	%	10	0.00	10.68	0.00	0.00	10.68			
	SUB-TOTAL FOR EQUIPMENT					10.68		0.00	10.68			
	ESTIMATED DIRECT COST (EDC)					196.09		0.00	196.09			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		27.45		0.00	27.45			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		26.82		0.00	26.82			
	TOTAL COST FOR	1.00 Kg		Including VAT		250.37		0.00	250.37			
	UNIT COST FOR	**1 Kg**		Excluding VAT		223.54		0.00	223.54			
	UNIT COST FOR	**1 Kg**		Including VAT		250.37		0.00	250.37			

Tb 1.279

Table 1.5.7(271/296) Unit Cost Analyses

New

UC No. 11-MT-ITCP	**Name of Work : Installation of Temporary Covering Plate**
Unit of Work	Description of Work :
Sq. m	Quantity of Unit Cost Analysis : 100 Sq. m

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@2.9	day	7.25	1,230.50	8,921.13	-	-	8,921.13	*1230.5*	*1.00*	
1.2	Steel Worker	@4.6	day	11.50	854.10	9,822.15	-	-	9,822.15	*854.1*	*1.00*	
1.3	Welder	@2.1	day	5.25	988.10	5,187.53	-	-	5,187.53	*988.1*	*1.00*	
1.5	Common Labor	@5.1	day	12.75	574.41	7,323.73	-	-	7,323.73	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					31,254.53		0.00	31,254.53			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.4	Rough Terrain Crane, 25t, 200HP		hr.	23.20	1,676.00	38,883.20	0.00	0.00	38,883.20	*1,676.00*	*1.00*	
3.5	Miscellaneous Tools	3 % of Labor	%	3	0.00	937.64	0.00	0.00	937.64			
	SUB-TOTAL FOR EQUIPMENT					39,820.84		0.00	39,820.84			
	ESTIMATED DIRECT COST (EDC)					71,075.36		0.00	71,075.36			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		9,950.55		0.00	9,950.55			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		9,723.11		0.00	9,723.11			
	TOTAL COST FOR	100.00 Sq. m		Including VAT		90,749.02		0.00	90,749.02			
	UNIT COST FOR	**1 Sq. m**		Excluding VAT		810.26		0.00	810.26			
	UNIT COST FOR	**1 Sq. m**		Including VAT		907.49		0.00	907.49			

Tb 1.280

Table 1.5.7(272/296) Unit Cost Analyses

New

UC No. 11-MT-RTCP	**Name of Work : Removal of Temporary Covering Plate**
Unit of Work	Description of Work :
Sq. m	Quantity of Unit Cost Analysis : 100 Sq. m

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1.8	day	4.50	1,230.50	5,537.25	-	-	5,537.25	*1230.5*	*1.00*	
1.2	Steel Worker	@2.7	day	6.75	854.10	5,765.18	-	-	5,765.18	*854.1*	*1.00*	
1.3	Welder	@1.3	day	3.25	988.10	3,211.33	-	-	3,211.33	*988.1*	*1.00*	
1.5	Common Labor	@3.2	day	8.00	574.41	4,595.28	-	-	4,595.28	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					19,109.03		0.00	19,109.03			
2	MATERIALS											
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.4	Rough Terrain Crane, 25t, 200HP		hr.	14.40	1,676.00	24,134.40	0.00	0.00	24,134.40	*1,676.00*	*1.00*	
3.5	Miscellaneous Tools	4 % of Labor	%	4	0.00	764.36	0.00	0.00	764.36			
	SUB-TOTAL FOR EQUIPMENT					24,898.76		0.00	24,898.76			
	ESTIMATED DIRECT COST (EDC)					44,007.79		0.00	44,007.79			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		6,161.09		0.00	6,161.09			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		6,020.27		0.00	6,020.27			
	TOTAL COST FOR	100.00 Sq. m		Including VAT		56,189.15		0.00	56,189.15			
	UNIT COST FOR	**1 Sq. m**		Excluding VAT		501.69		0.00	501.69			
	UNIT COST FOR	**1 Sq. m**		Including VAT		561.89		0.00	561.89			

Tb 1.281

Table 1.5.7(273/296) Unit Cost Analyses

New

UC No.	11-MT-SMTBLN	Name of Work :	Provision of Steel Metal for Temporary Jetty at Laguna Area (Napindan Channel Side)
Unit of Work		Description of Work :	Members
L.S.		Quantity of Unit Cost Analysis :	1 L.S.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
	SUB-TOTAL FOR LABOR					0.00		0.00	0.00			
2	MATERIALS											
2.1	L-75mm x 75mm x 9mm x	L-75*75*9 9.96kg/m	kg	6045.72	49.00	296,240.28	0.00	0.00	296,240.28	*49.00*	*1.00*	
2.2	H-400mm x 400mm x tw=	H-400*400*13*21 172.0kg/m	kg	0.00	41.00	0.00	0.00	0.00	0.00	*41.00*	*1.00*	
2.3	Steel Plate, 6mm thick	Plate 900*1996*6 91.3kg/sheet	kg	62449.20	33.00	2,060,823.60	0.00	0.00	2,060,823.60	*33.00*	*1.00*	
2.4	H-350mm x 350mm x tw=	H-194*150*6*9 30.6kg/m	kg	167443.20	53.00	8,874,489.60	0.00	0.00	8,874,489.60	*53.00*	*1.00*	
2.5	C-125mm x 65mm x 6mm	[-125*65*6*8 17.1kg/m	kg	19240.20	47.00	904,289.17	0.00	0.00	904,289.17	*47.00*	*1.00*	
2.6	Steel Plate, 8mm thick	Plate 94*176*8 1.1kg/sheet	kg	9028.80	33.00	297,950.40	0.00	0.00	297,950.40	*33.00*	*1.00*	
2.7	L-75mm x 75mm x 9mm x	Flange Angle (L-75*7 9.96kg/m	kg	13488.83	49.00	660,952.57	0.00	0.00	660,952.57	*49.00*	*1.00*	
2.8	H-488mm x 300mm x tw=	Main beam (H488*30 128.00kg/m	kg	88320.00	41.00	3,621,120.00	0.00	0.00	3,621,120.00	*41.00*	*1.00*	
2.9	C-300mm x 90mm x 9mm	Cross Beam([300*90 48.57kg/m	kg	33221.88	42.00	1,395,318.96	0.00	0.00	1,395,318.96	*42.00*	*1.00*	
2.10	C-380mm x 100mm x 55.2	Beam Seat([380*100 85.70kg/m	kg	56047.80	53.00	2,970,533.40	0.00	0.00	2,970,533.40	*53.00*	*1.00*	
2.11	L-100mm x 100mm x 10m	Vertical Booth (L-10 14.90kg/m	kg	19745.48	50.00	987,274.00	0.00	0.00	987,274.00	*50.00*	*1.00*	
2.12	C-200mm x 90mm x 8mm	Horizontal Brace ([-2 38.65kg/m	kg	25230.72	55.00	1,387,689.60	0.00	0.00	1,387,689.60	*55.00*	*1.00*	
2.13	Bolt, M22 x 70 (F10T)	Bolt (M-22) 0.137kg/pcs.	nos.	822.00	15.00	12,330.00	0.00	0.00	12,330.00	*15.00*	*1.00*	
2.14	Steel Plate, 12mm thick	Plate (300*500*12) 13.9kg/sheet	kg	4490.64	33.00	148,191.12	0.00	0.00	148,191.12	*33.00*	*1.00*	
2.15	H-350mm x 350mm x tw=	H-350*350*12*19 fo 137.00kg/m	kg	1644.00	53.00	87,132.00	0.00	0.00	87,132.00	*53.00*	*1.00*	
2.16	L-75mm x 75mm x 9mm x	Flange Angle (L-75*7 9.96kg/m	kg	119.52	49.00	5,856.48	0.00	0.00	5,856.48	*49.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					23,413,950.90		0.00	23,413,950.90			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					23,413,950.90		0.00	23,413,950.90			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,277,953.13		0.00	3,277,953.13			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,203,028.48		0.00	3,203,028.48			
	TOTAL COST FOR	1.00 L.S.		Including VAT		29,894,932.51		0.00	29,894,932.51			
	UNIT COST FOR	**1 L.S.**		Excluding VAT		26,691,904.02		0.00	26,691,904.02			
	UNIT COST FOR	**1 L.S.**		Including VAT		29,894,932.51		0.00	29,894,932.51			

L-75*75*9	**607**	m
H-400*400*13*21	**0**	m
Plate 900*1996*6	**684**	sheet
H-194*150*6*9	**5472**	m
[-125*65*6*8	**1124.5**	m
Plate 94*176*8	**8208**	sheet
Flange Angle (L-75*75*9)	**1354.3**	m
Main beam (H488*300*11*18)	**690**	m

Cross Beam([300*90.9*13)	**684**	m
Beam Seat([380*100*13*20)	**654**	m
Vertical Booth (L-100*100*10)	**1325.2**	m
Horizontal Brace ([-200*90*8*13.5)	**652.8**	m
Bolt (M-22)	**6000**	Nos.
Plate (300*500*12)	**324**	Nos.
H-350*350*12*19 for Base	**12.00**	m
Flange Angle (L-75*75*9)	**12.00**	m

Table 1.5.7(274/296) Unit Cost Analyses

New

UC No.	11-MT-SMTBLB	**Name of Work : Provision of Steel Metal for Temporary Bridge at Laguna Area (Existing Channel)**											
Unit of Work		Description of Work : Members											
L.S.		Quantity of Unit Cost Analysis : 1 L.S.											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
	SUB-TOTAL FOR LABOR					0.00		0.00	0.00			
2	MATERIALS											
2.1	L-75mm x 75mm x 9mm x	L-75*75*9 9.96kg/m	kg	660.75	49.00	32,376.57	0.00	0.00	32,376.57	*49.00*	*1.00*	
2.2	H-400mm x 400mm x tw=	H-400*400*13*21 172.0kg/m	kg	0.00	41.00	0.00	0.00	0.00	0.00	*41.00*	*1.00*	
2.3	Steel Plate, 6mm thick	Plate 900*1996*6 91.3kg/sheet	kg	3286.80	33.00	108,464.40	0.00	0.00	108,464.40	*33.00*	*1.00*	
2.4	H-350mm x 350mm x tw=	H-194*150*6*9 30.6kg/m	kg	8812.80	53.00	467,078.40	0.00	0.00	467,078.40	*53.00*	*1.00*	
2.5	C-125mm x 65mm x 6mm	[-125*65*6*8 17.1kg/m	kg	1012.91	47.00	47,606.86	0.00	0.00	47,606.86	*47.00*	*1.00*	
2.6	Steel Plate, 8mm thick	Plate 94*176*8 1.1kg/sheet	kg	475.20	33.00	15,681.60	0.00	0.00	15,681.60	*33.00*	*1.00*	
2.7	L-75mm x 75mm x 9mm x	Flange Angle (L-75*7 9.96kg/m	kg	710.15	49.00	34,797.25	0.00	0.00	34,797.25	*49.00*	*1.00*	
2.8	H-488mm x 300mm x tw=	Main beam (H488*30 128.00kg/m	kg	6144.00	41.00	251,904.00	0.00	0.00	251,904.00	*41.00*	*1.00*	
2.9	C-300mm x 90mm x 9mm	Cross Beam([300*90 48.57kg/m	kg	1748.52	42.00	73,437.84	0.00	0.00	73,437.84	*42.00*	*1.00*	
2.10	C-380mm x 100mm x 55.2	Beam Seat([380*100 85.70kg/m	kg	3290.88	53.00	174,416.64	0.00	0.00	174,416.64	*53.00*	*1.00*	
2.11	L-100mm x 100mm x 10m	Vertical Booth (L-10 14.90kg/m	kg	0.00	50.00	0.00	0.00	0.00	0.00	*50.00*	*1.00*	
2.12	C-200mm x 90mm x 8mm	Horizontal Brace ([-2 38.65kg/m	kg	0.00	55.00	0.00	0.00	0.00	0.00	*55.00*	*1.00*	
2.13	Bolt, M22 x 70 (F10T)	Bolt (M-22) 0.137kg/pcs.	nos.	27.13	15.00	406.89	0.00	0.00	406.89	*15.00*	*1.00*	
2.14	Steel Plate, 12mm thick	Plate (300*500*12) 13.9kg/sheet	kg	332.64	33.00	10,977.12	0.00	0.00	10,977.12	*33.00*	*1.00*	
2.15	H-350mm x 350mm x tw=	H-350*350*12*19 fo 137.00kg/m	kg	0.00	53.00	0.00	0.00	0.00	0.00	*53.00*	*1.00*	
2.16	L-75mm x 75mm x 9mm x	Flange Angle (L-75*7 9.96kg/m	kg	119.52	49.00	5,856.48	0.00	0.00	5,856.48	*49.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					1,190,627.49		0.00	1,190,627.49			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					1,190,627.49		0.00	1,190,627.49			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		166,687.85		0.00	166,687.85			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		162,877.84		0.00	162,877.84			
	TOTAL COST FOR	1.00 L.S.		Including VAT		1,520,193.17		0.00	1,520,193.17			
	UNIT COST FOR	**1 L.S.**		Excluding VAT		1,357,315.33		0.00	1,357,315.33			
	UNIT COST FOR	**1 L.S.**		Including VAT		1,520,193.17		0.00	1,520,193.17			

L-75*75*9	**66.34**	m
H-400*400*13*21	**0**	m
Plate 900*1996*6	**36**	sheet
H-194*150*6*9	**288**	m
[-125*65*6*8	**59.2**	m
Plate 94*176*8	**432**	sheet
Flange Angle (L-75*75*9)	**71.3**	m
Main beam (H488*300*11*18)	**48**	m

Cross Beam([300*90.9*13)	**36**	m
Beam Seat([380*100*13*20)	**38.4**	m
Vertical Booth (L-100*100*10)	**0**	m
Horizontal Brace ([-200*90*8*13.5)	**0**	m
Bolt (M-22)	**198**	Nos.
Plate (300*500*12)	**24**	Nos.
H-350*350*12*19 for Base	**0.00**	m
Flange Angle (L-75*75*9)	**12.00**	m

Tb 1.283

Table 1.5.7(275/296) Unit Cost Analyses

New

UC No.	11-FENCE-FP	**Name of Work :**	**Installation of Fence**											
Unit of Work		Description of Work :		Mesh Gauge 10.5cm*10.5cm, H=1.5m										
L.m.		Quantity of Unit Cost Analysis :			100	m								
No.	Name of Item	Description		Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
						Unit Cost	Amount	Unit Cost	Amount				
1	LABOR	Foundation/Post	Fence										
1.1	Foreman	@0.95	@0.60	day	2.33	1,230.50	2,860.91	-	-	2,860.91	*1230.5*	*1.00*	
1.2	Common Labor	@8.20	@10.10	day	27.45	574.41	15,767.55	-	-	15,767.55	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						18,628.47		0.00	18,628.47			
2	MATERIALS												
2.1	Galvanized Iron Pipe, 75mm Dia.			L.m.	105.00	706.00	74,130.00	0.00	0.00	74,130.00	*706.00*	*1.00*	
2.2	Cyclone Wire: H=1.5m			sq.m.	157.50	133.00	20,947.50	0.00	0.00	20,947.50	*133.00*	*1.00*	
2.3	Miscellaneous Materials	2 % of Labor		%	2	0.00	372.57	0.00	0.00	372.57			
	SUB-TOTAL FOR MATERIAL						95,450.07		0.00	95,450.07			
3	EQUIPMENT												
	SUB-TOTAL FOR EQUIPMENT						0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)						114,078.54		0.00	114,078.54			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		15,971.00		0.00	15,971.00			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		15,605.94		0.00	15,605.94			
	TOTAL COST FOR	100.00 m			Including VAT		145,655.48		0.00	145,655.48			
	UNIT COST FOR	**1 m**			Excluding VAT		1,300.50		0.00	1,300.50			
	UNIT COST FOR	**1 m**			Including VAT		1,456.55		0.00	1,456.55			

Tb 1.284

Table 1.5.7(276/296) Unit Cost Analyses

New

UC No.	11-TMP-EN	**Name of Work :**	**Installation and Removal of Temporary Fence**											
Unit of Work		Description of Work :	Installation & Removal of Temporary Enclosure											
L.m.		Quantity of Unit Cost Analysis :	10 m											
No.	Name of Item	Description		Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
						Unit Cost	Amount	Unit Cost	Amount				
1	LABOR	Installation	Removal										
1.1	Foreman	@0.43	@0.31	day	0.73	1,230.50	904.04	-	-	904.04	*1230.5*	*1.00*	
1.2	Common Labor	@2.14	@1.53	day	3.67	574.41	2,110.08	-	-	2,110.08	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR						3,014.12		0.00	3,014.12			
2	MATERIALS												
2.1	Temporary Enclosure Material			day	3.91	70.11	274.19	0.00	0.00	274.19	*70.11*	*1.00*	
2.3	Miscellaneous Materials	10 % of Labor		%	10	0.00	301.41	0.00	0.00	301.41			
	SUB-TOTAL FOR MATERIAL						575.60		0.00	575.60			
3	EQUIPMENT												
	SUB-TOTAL FOR EQUIPMENT						0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)						3,589.72		0.00	3,589.72			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)				14%		502.56		0.00	502.56			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)				12%		491.07		0.00	491.07			
	TOTAL COST FOR	10.00 m			Including VAT		4,583.36		0.00	4,583.36			
	UNIT COST FOR	**1 m**			Excluding VAT		409.23		0.00	409.23			
	UNIT COST FOR	**1 m**			Including VAT		458.34		0.00	458.34			

Computation of Hourly Working Quantity : Daily installation Quantity = 35.00 L.m./day Daily removal Quantity = 49.00 L.m.

Tb 1.285

Table 1.5.7(277/296) Unit Cost Analyses

UC No. 11-FWBW	**Name of Work : Fence with Barb wire**
Unit of Work	Description of Work : Mesh Gauge 10.5cm*10.5cm, H=1.5m
Sq.m.	Quantity of Unit Cost Analysis : 100 Sq.m.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman	@1	day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor	@1	day	1.00	854.10	854.10	-	-	854.10	*854.1*	*1.00*	
1.3	Common Labor	@8	day	8.00	574.41	4,595.28	-	-	4,595.28	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,679.88		0.00	6,679.88			
2	MATERIALS											
2.1	Galvanized Iron Pipe, 75mm Dia.		L.m.	105.00	706.00	74,130.00	0.00	0.00	74,130.00	*706.00*	*1.00*	
2.2	Galvanized Iron Pipe, 50mm Dia.		L.m.	105.00	341.00	35,805.00	0.00	0.00	35,805.00	*341.00*	*1.00*	
2.3	Cyclone Wire: H=1.5m		sq.m.	105.00	133.00	13,965.00	0.00	0.00	13,965.00	*133.00*	*1.00*	
2.4	Barbed Wire		L.m.	315.00	9.00	2,835.00	0.00	0.00	2,835.00	*9.00*	*1.00*	
2.5	Miscellaneous Materials	10 % of others (Welding Rod	%	10	0.00	12,673.50	0.00	0.00	12,673.50			
2.6	Diesel Fuel (Light Oil)		ltr.	95.00	45.00	4,275.00	0.00	0.00	4,275.00	*45.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					139,408.50		0.00	139,408.50			
3	EQUIPMENT											
3.1	Welding Machine, Electric, 500Amp		hr.	10.00	391.00	3,910.00	0.00	0.00	3,910.00	*391.00*	*1.00*	
3.2	Generator Set, 50kW		hr.	10.00	143.00	1,430.00	0.00	0.00	1,430.00	*143.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,340.00		0.00	5,340.00			
	ESTIMATED DIRECT COST (EDC)					151,428.38		0.00	151,428.38			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		21,199.97		0.00	21,199.97			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		20,715.40		0.00	20,715.40			
	TOTAL COST FOR	100.00 Sq.m.		Including VAT		193,343.76		0.00	193,343.76			
	UNIT COST FOR	**1 Sq.m.**		Excluding VAT		1,726.28		0.00	1,726.28			
	UNIT COST FOR	**1 Sq.m.**		Including VAT		1,933.44		0.00	1,933.44			

(*2): Computation of Diesel Fuel Consumption of Generator : Here; Capacity = 50 kW

Hourly Diesel Fuel Consumption = 9.5 ltr./hr. Diesel Fuel Consumption Rate = 0.19 ltr./kW-hr.

Tb 1.286

Table 1.5.7(278/296) Unit Cost Analyses

Arrangec

UC No. 11-TR-1400	**Name of Work : Fabrication & Installation of Trash Screen, 1400 x 1400**
Unit of Work	Description of Work : Fabrication & Installation of **Trash Screen,** 1400 x 1400
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Trash screen 1400 x 1400		set	1.00	48,079.00	48,079.00	-	-	48,079.00	*48,079.00*	*1.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	2,403.95	0.00	0.00	2,403.95			
	SUB-TOTAL FOR MATERIAL					50,482.95		0.00	50,482.95			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					69,761.52		0.00	69,761.52			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		9,766.61		0.00	9,766.61			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		9,543.38		0.00	9,543.38			
	TOTAL COST FOR	1 Set		Including VAT		89,071.50		0.00	89,071.50			
	UNIT COST FOR	**1 Set**		Excluding VAT		79,528.13		0.00	79,528.13			
	UNIT COST FOR	**1 Set**		Including VAT		89,071.50		0.00	89,071.50			

Tb 1.287

Table 1.5.7(279/296) Unit Cost Analyses

Arrangec

UC No. 11-TR-1600	**Name of Work : Fabrication & Installation of Trash Screen, 1600 x 1600**
Unit of Work	Description of Work : Fabrication & Installation of **Trash Screen,** 1600 x 1600
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Trash screen 1600 x 1600		set	1.00	52,452.00	52,452.00	-	-	52,452.00	*52,452.00*	*1.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	2,622.60	0.00	0.00	2,622.60			
	SUB-TOTAL FOR MATERIAL					55,074.60		0.00	55,074.60			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					74,353.17		0.00	74,353.17			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		10,409.44		0.00	10,409.44			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		10,171.51		0.00	10,171.51			
	TOTAL COST FOR	1 Set		Including VAT		94,934.12		0.00	94,934.12			
	UNIT COST FOR	**1 Set**		Excluding VAT		84,762.61		0.00	84,762.61			
	UNIT COST FOR	**1 Set**		Including VAT		94,934.12		0.00	94,934.12			

Tb 1.288

Table 1.5.7(280/296) Unit Cost Analyses

Arrangec

UC No. 11-TR-1800	**Name of Work : Fabrication & Installation of Trash Screen, 1800 x 1800**
Unit of Work	Description of Work : Fabrication & Installation of **Trash Screen,** 1800 x 1800
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Trash screen 1800 x 1800		set	1.00	58,977.00	58,977.00	-	-	58,977.00	*58,977.00*	*1.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	2,948.85	0.00	0.00	2,948.85			
	SUB-TOTAL FOR MATERIAL					61,925.85		0.00	61,925.85			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					81,204.42		0.00	81,204.42			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		11,368.62		0.00	11,368.62			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		11,108.76		0.00	11,108.76			
	TOTAL COST FOR	1 Set		Including VAT		103,681.80		0.00	103,681.80			
	UNIT COST FOR	**1 Set**		Excluding VAT		92,573.04		0.00	92,573.04			
	UNIT COST FOR	**1 Set**		Including VAT		103,681.80		0.00	103,681.80			

Tb 1.289

Table 1.5.7(281/296) Unit Cost Analyses

Arrangec

UC No. 11-TR-1900	**Name of Work : Fabrication & Installation of Trash Screen, 1900 x 1900**
Unit of Work	Description of Work : Fabrication & Installation of **Trash Screen,** 1900 x 1900
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Trash screen 1900 x 1900		set	1.00	62,261.00	62,261.00	-	-	62,261.00	*62,261.00*	*1.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	3,113.05	0.00	0.00	3,113.05			
	SUB-TOTAL FOR MATERIAL					65,374.05		0.00	65,374.05			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					84,652.62		0.00	84,652.62			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		11,851.37		0.00	11,851.37			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		11,580.48		0.00	11,580.48			
	TOTAL COST FOR	1 Set		Including VAT		108,084.46		0.00	108,084.46			
	UNIT COST FOR	**1 Set**		Excluding VAT		96,503.98		0.00	96,503.98			
	UNIT COST FOR	**1 Set**		Including VAT		108,084.46		0.00	108,084.46			

Tb 1.290

Table 1.5.7(282/296) Unit Cost Analyses

Arrangec

UC No. 11-TR-2000	**Name of Work : Fabrication & Installation of Trash Screen, 2000 x 2000**
Unit of Work	Description of Work : Fabrication & Installation of **Trash Screen,** 2000 x 2000
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Trash screen 2000 x 2000		set	1.00	65,973.00	65,973.00	-	-	65,973.00	*65,973.00*	*1.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	3,298.65	0.00	0.00	3,298.65			
	SUB-TOTAL FOR MATERIAL					69,271.65		0.00	69,271.65			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					88,550.22		0.00	88,550.22			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		12,397.03		0.00	12,397.03			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		12,113.67		0.00	12,113.67			
	TOTAL COST FOR	1 Set		Including VAT		113,060.92		0.00	113,060.92			
	UNIT COST FOR	**1 Set**		Excluding VAT		100,947.25		0.00	100,947.25			
	UNIT COST FOR	**1 Set**		Including VAT		113,060.92		0.00	113,060.92			

Tb 1.291

Table 1.5.7(283/296) Unit Cost Analyses

Arrangec

UC No. 11-TR-2400	**Name of Work : Fabrication & Installation of Trash Screen, 2400 x 2000**
Unit of Work	Description of Work : Fabrication & Installation of **Trash Screen,** 2400 x 2000
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Trash screen 2400 x 2000		set	1.00	74,840.00	74,840.00	-	-	74,840.00	*74,840.00*	*1.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	3,742.00	0.00	0.00	3,742.00			
	SUB-TOTAL FOR MATERIAL					78,582.00		0.00	78,582.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					97,860.57		0.00	97,860.57			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		13,700.48		0.00	13,700.48			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		13,387.33		0.00	13,387.33			
	TOTAL COST FOR	1 Set		Including VAT		124,948.37		0.00	124,948.37			
	UNIT COST FOR	**1 Set**		Excluding VAT		111,561.05		0.00	111,561.05			
	UNIT COST FOR	**1 Set**		Including VAT		124,948.37		0.00	124,948.37			

Tb 1.292

Table 1.5.7(284/296) Unit Cost Analyses

Arrangec

UC No. 11-TR-3100	**Name of Work : Fabrication & Installation of Trash Screen, 3100 x 1600**
Unit of Work	Description of Work : Fabrication & Installation of **Trash Screen,** 3100 x 1600
Set	Quantity of Unit Cost Analysis : 1 Set

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Skilled Labor		day	4.00	854.10	3,416.40	-	-	3,416.40	*854.1*	*1.00*	
1.3	Common Labor		day	4.00	574.41	2,297.64	-	-	2,297.64	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					6,944.54		0.00	6,944.54			
2	MATERIALS											
2.1	Trash screen 3100 x 1600		set	1.00	76,407.00	76,407.00	-	-	76,407.00	*76,407.00*	*1.00*	
2.3	Miscellaneous Materials	5 % of other Materials	%	5	0.00	3,820.35	0.00	0.00	3,820.35			
	SUB-TOTAL FOR MATERIAL					80,227.35		0.00	80,227.35			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 25t, 200HP	1.00day	hr.	8.00	1,427.00	11,416.00	0.00	0.00	11,416.00	*1,427.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	918.03	0.00	0.00	918.03			
	SUB-TOTAL FOR EQUIPMENT					12,334.03		0.00	12,334.03			
	ESTIMATED DIRECT COST (EDC)					99,505.92		0.00	99,505.92			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		13,930.83		0.00	13,930.83			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		13,612.41		0.00	13,612.41			
	TOTAL COST FOR	1 Set		Including VAT		127,049.15		0.00	127,049.15			
	UNIT COST FOR	**1 Set**		Excluding VAT		113,436.75		0.00	113,436.75			
	UNIT COST FOR	**1 Set**		Including VAT		127,049.15		0.00	127,049.15			

Tb 1.293

Table 1.5.7(285/296) Unit Cost Analyses

12. MISCELLANEOUS WORKS

Arrangec

UC No.	12-GP-450	**Name of Work : Installation of Grout Pipe, 100mm Dia. x 450mm**											
Unit of Work		Description of Work : Furnishing and Installation of Grout Pipe, 100mm Dia. x 450mm											
Nos.		Quantity of Unit Cost Analysis : 1 Nos.											
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor		day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
2.1	Grout Pipe, 100mm Dia. x 450mm		nos.	1.00	0.00	0.00	48,673.00	48,673.00	48,673.00	*48,673.00*	*0.00*	
2.2	Miscellaneous Materials	1 % of other Materials	%	1	0.00	0.00	0.00	486.73	486.73			
	SUB-TOTAL FOR MATERIAL					0.00		49,159.73	49,159.73			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.10day	hr.	0.80	518.00	414.40	0.00	0.00	414.40	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	110.97	0.00	0.00	110.97			
	SUB-TOTAL FOR EQUIPMENT					525.37		0.00	525.37			
	ESTIMATED DIRECT COST (EDC)					2,330.28		49,159.73	51,490.01			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		326.24		6,882.36	7,208.60			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		318.78		6,725.05	7,043.83			
	TOTAL COST FOR	1 Nos.		Including VAT		2,975.30		62,767.14	65,742.44			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		2,656.51		56,042.09	58,698.61			
	UNIT COST FOR	**1 Nos.**		Including VAT		2,975.30		62,767.14	65,742.44			

Tb 1.294

Table 1.5.7(286/296) Unit Cost Analyses

Arrangec

UC No. 12-GP-500	**Name of Work : Installation of Grout Pipe, 100mm Dia. x 500mm**
Unit of Work	Description of Work : Furnishing and Installation of Grout Pipe, 100mm Dia. x 500mm
Nos.	Quantity of Unit Cost Analysis : 1 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor		day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
2.1	Grout Pipe, 100mm Dia. x 500mm		nos.	1.00	0.00	0.00	49,536.00	49,536.00	49,536.00	*49,536.00*	*0.00*	
2.2	Miscellaneous Materials	1 % of other Materials	%	1	0.00	0.00	0.00	495.36	495.36			
	SUB-TOTAL FOR MATERIAL					0.00		50,031.36	50,031.36			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.10day	hr.	0.80	518.00	414.40	0.00	0.00	414.40	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	110.97	0.00	0.00	110.97			
	SUB-TOTAL FOR EQUIPMENT					525.37		0.00	525.37			
	ESTIMATED DIRECT COST (EDC)					2,330.28		50,031.36	52,361.64			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		326.24		7,004.39	7,330.63			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		318.78		6,844.29	7,163.07			
	TOTAL COST FOR	1 Nos.		Including VAT		2,975.30		63,880.04	66,855.34			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		2,656.51		57,035.75	59,692.26			
	UNIT COST FOR	**1 Nos.**		Including VAT		2,975.30		63,880.04	66,855.34			

Tb 1.295

Table 1.5.7(287/296) Unit Cost Analyses

Arrangec

UC No. 12-GP-750	**Name of Work : Installation of Grout Pipe, 100mm Dia. x 750mm**
Unit of Work	Description of Work : Furnishing and Installation of Grout Pipe, 100mm Dia. x 750mm
Nos.	Quantity of Unit Cost Analysis : 1 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor		day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
2.1	Grout Pipe, 100mm Dia. x 750mm		nos.	1.00	0.00	0.00	53,601.00	53,601.00	53,601.00	*53,601.00*	*0.00*	
2.2	Miscellaneous Materials	1 % of other Materials	%	1	0.00	0.00	0.00	536.01	536.01			
	SUB-TOTAL FOR MATERIAL					0.00		54,137.01	54,137.01			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.10day	hr.	0.80	518.00	414.40	0.00	0.00	414.40	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	110.97	0.00	0.00	110.97			
	SUB-TOTAL FOR EQUIPMENT					525.37		0.00	525.37			
	ESTIMATED DIRECT COST (EDC)					2,330.28		54,137.01	56,467.29			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		326.24		7,579.18	7,905.42			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		318.78		7,405.94	7,724.72			
	TOTAL COST FOR	1 Nos.		Including VAT		2,975.30		69,122.13	72,097.43			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		2,656.51		61,716.19	64,372.71			
	UNIT COST FOR	**1 Nos.**		Including VAT		2,975.30		69,122.13	72,097.43			

Tb 1.296

Table 1.5.7(288/296) Unit Cost Analyses

Arrangec

UC No. 12-GP-800	**Name of Work : Installation of Grout Pipe, 100mm Dia. x 800mm**												
Unit of Work	Description of Work : Furnishing and Installation of Grout Pipe, 100mm Dia. x 800mm												
Nos.	Quantity of Unit Cost Analysis : 1 Nos.												
No.	Name of Item	Description	Unit	Qty.	Loc. Component (P)		For. Component (P)		Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
					Unit Cost	Amount	Unit Cost	Amount				
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor		day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
2.1	Grout Pipe, 100mm Dia. x 800mm		nos.	1.00	0.00	0.00	54,007.00	54,007.00	54,007.00	*54,007.00*	*0.00*	
2.2	Miscellaneous Materials	1 % of other Materials	%	1	0.00	0.00	0.00	540.07	540.07			
	SUB-TOTAL FOR MATERIAL					0.00		54,547.07	54,547.07			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.10day	hr.	0.80	518.00	414.40	0.00	0.00	414.40	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	110.97	0.00	0.00	110.97			
	SUB-TOTAL FOR EQUIPMENT					525.37		0.00	525.37			
	ESTIMATED DIRECT COST (EDC)					2,330.28		54,547.07	56,877.35			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		326.24		7,636.59	7,962.83			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		318.78		7,462.04	7,780.82			
	TOTAL COST FOR	1 Nos.		Including VAT		2,975.30		69,645.70	72,620.99			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		2,656.51		62,183.66	64,840.17			
	UNIT COST FOR	**1 Nos.**		Including VAT		2,975.30		69,645.70	72,620.99			

Tb 1.297

Table 1.5.7(289/296) Unit Cost Analyses

New

UC No. 12-O-WELL	**Name of Work : Installation of Observation Well at Backfill Site**
Unit of Work	Description of Work : Installation of Observation Well at Backfill Site
L.m.	Quantity of Unit Cost Analysis : 10 m

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Skilled Labor	@0.1	day	0.15	854.10	128.12	-	-	128.12	*854.1*	*1.00*	
1.2	Common Labor	@0.1	day	0.15	574.41	86.16	-	-	86.16	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					214.28		0.00	214.28			
2	MATERIALS											
2.1	PVC Pipe, 50mm Dia.		L.m.	10.50	70.00	735.00	-	-	735.00	*70.00*	*1.00*	
2.1	Sand for Filling and Base Course		cu.m.	0.04	520.00	20.80	-	-	20.80	*520.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					755.80		0.00	755.80			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					970.08		0.00	970.08			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		135.81		0.00	135.81			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		132.71		0.00	132.71			
	TOTAL COST FOR	10 m		Including VAT		1,238.59		0.00	1,238.59			
	UNIT COST FOR	**1 m**		Excluding VAT		110.59		0.00	110.59			
	UNIT COST FOR	**1 m**		Including VAT		123.86		0.00	123.86			

Tb 1.298

Table 1.5.7(290/296) Unit Cost Analyses

UC No. 12-FS-V3	**Name of Work : Installation of Rubber Fender for Boat Station**
Unit of Work	Description of Work : Furnishing and Installation of Rubber Fender System
Nos.	Quantity of Unit Cost Analysis : 1 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	1.00	1,230.50	1,230.50	-	-	1,230.50	*1230.5*	*1.00*	
1.2	Common Labor		day	1.00	574.41	574.41	-	-	574.41	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,804.91		0.00	1,804.91			
2	MATERIALS											
2.1	Fender System, V-300mm, L=600mm		pcs.	1.00	9,800.00	9,800.00	-	-	9,800.00	*9,800.00*	*1.00*	
2.2	Miscellaneous Materials	1 % of other Materials	%	1	0.00	98.00	0.00	0.00	98.00			
	SUB-TOTAL FOR MATERIAL					9,898.00		0.00	9,898.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	0.10day	hr.	0.80	518.00	414.40	0.00	0.00	414.40	*518.00*	*1.00*	
3.2	Miscellaneous Tools	5 % of Labor & Equip.	%	5	0.00	110.97	0.00	0.00	110.97			
	SUB-TOTAL FOR EQUIPMENT					525.37		0.00	525.37			
	ESTIMATED DIRECT COST (EDC)					12,228.28		0.00	12,228.28			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,711.96		0.00	1,711.96			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,672.83		0.00	1,672.83			
	TOTAL COST FOR	1 Nos.		Including VAT		15,613.06		0.00	15,613.06			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		13,940.23		0.00	13,940.23			
	UNIT COST FOR	**1 Nos.**		Including VAT		15,613.06		0.00	15,613.06			

Tb 1.299

Table 1.5.7(291/296) Unit Cost Analyses

New

UC No. 12-CP-60	**Name of Work : Installation of Commemorative Panel**
Unit of Work	Description of Work : Furnishing and Installation of Commemorative Panel
Nos.	Quantity of Unit Cost Analysis : 10 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Common Labor		day	2.10	574.41	1,206.26	-	-	1,206.26	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,206.26		0.00	1,206.26			
2	MATERIALS											
2.1	Commemorative panels (Brass Plate)		sheet	10.00	39,000.00	390,000.00	-	-	390,000.00	*39,000.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					390,000.00		0.00	390,000.00			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					391,206.26		0.00	391,206.26			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		54,768.88		0.00	54,768.88			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		53,517.02		0.00	53,517.02			
	TOTAL COST FOR	10 Nos.		Including VAT		499,492.15		0.00	499,492.15			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		44,597.51		0.00	44,597.51			
	UNIT COST FOR	**1 Nos.**		Including VAT		49,949.22		0.00	49,949.22			

Tb 1.300

Table 1.5.7(292/296) Unit Cost Analyses

New

UC No. 12-NWS-80	**Name of Work : Installation of Navigation Warning Signs**
Unit of Work	Description of Work : Furnishing and Installation of Navigation Warning Signs
Nos.	Quantity of Unit Cost Analysis : 10 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Common Labor		day	2.10	574.41	1,206.26	-	-	1,206.26	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					1,206.26		0.00	1,206.26			
2	MATERIALS											
2.1	Navigation Warning Signs (Aluminium)		sheet	10.00	11,800.00	118,000.00	-	-	118,000.00	*11,800.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					118,000.00		0.00	118,000.00			
3	EQUIPMENT											
	SUB-TOTAL FOR EQUIPMENT					0.00		0.00	0.00			
	ESTIMATED DIRECT COST (EDC)					119,206.26		0.00	119,206.26			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		16,688.88		0.00	16,688.88			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		16,307.42		0.00	16,307.42			
	TOTAL COST FOR	10 Nos.		Including VAT		152,202.55		0.00	152,202.55			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		13,589.51		0.00	13,589.51			
	UNIT COST FOR	**1 Nos.**		Including VAT		15,220.26		0.00	15,220.26			

Tb 1. 301

Table 1.5.7(293/296) Unit Cost Analyses

New

UC No. 12-LPOST-70	**Name of Work : Installation of Lighting Post for 70kW**
Unit of Work	Description of Work : Furnishing and Installation of Lighting Post
Nos.	Quantity of Unit Cost Analysis : 10 Nos.

	No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
	1	LABOR											
	1.1	Electrician		day	12.50	854.10	10,676.25	-	-	10,676.25	*854.1*	*1.00*	
	1.2	Common Labor		day	10.00	574.41	5,744.10	-	-	5,744.10	*574.41*	*1.00*	
		SUB-TOTAL FOR LABOR					16,420.35		0.00	16,420.35			
	2	MATERIALS											
W	2.1	Lighting Post (70W)		nos.	0.00	8,526.00	0.00	-	-	0.00	*8,526.00*	*1.00*	
		SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
	3	EQUIPMENT											
	3.1	Telescopic Boom Truck Crane, 5t, 100HP	1.70day	hr.	13.60	518.00	7,044.80	0.00	0.00	7,044.80	*518.00*	*1.00*	
		SUB-TOTAL FOR EQUIPMENT					7,044.80		0.00	7,044.80			
		ESTIMATED DIRECT COST (EDC)					23,465.15		0.00	23,465.15			
		OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,285.12		0.00	3,285.12			
		VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,210.03		0.00	3,210.03			
		TOTAL COST FOR 10 Nos.			Including VAT		29,960.30		0.00	29,960.30			
		UNIT COST FOR 1 Nos.			Excluding VAT		2,675.03		0.00	2,675.03			
		UNIT COST FOR 1 Nos.			Including VAT		2,996.03		0.00	2,996.03			

Tb 1.302

Table 1.5.7(294/296) Unit Cost Analyses

New

UC No. 12-LPOST-400	**Name of Work : Installation of Lighting Post for 400kW**
Unit of Work	Description of Work : Furnishing and Installation of Lighting Post
Nos.	Quantity of Unit Cost Analysis : 10 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Electrician		day	12.50	854.10	10,676.25	-	-	10,676.25	*854.1*	*1.00*	
1.2	Common Labor		day	10.00	574.41	5,744.10	-	-	5,744.10	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					16,420.35		0.00	16,420.35			
2	MATERIALS											
2.1	Lighting Post (400W)		nos.	0.00	26,960.00	0.00	-	-	0.00	*26,960.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					0.00		0.00	0.00			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP	1.70day	hr.	13.60	518.00	7,044.80	0.00	0.00	7,044.80	*518.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					7,044.80		0.00	7,044.80			
	ESTIMATED DIRECT COST (EDC)					23,465.15		0.00	23,465.15			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		3,285.12		0.00	3,285.12			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		3,210.03		0.00	3,210.03			
	TOTAL COST FOR 10 Nos.			Including VAT		29,960.30		0.00	29,960.30			
	UNIT COST FOR 1 Nos.			Excluding VAT		2,675.03		0.00	2,675.03			
	UNIT COST FOR 1 Nos.			Including VAT		2,996.03		0.00	2,996.03			

Tb 1. 303

Table 1.5.7(295/296) Unit Cost Analyses

New

UC No. 11-TMP-SHR	**Name of Work : Temporary Removal and Re-installation of Existing Steel Handrail**
Unit of Work	Description of Work : Temporary Removal and Re-installation of Existing Steel Handrail
L.m.	Quantity of Unit Cost Analysis : 100 m

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.50	1,230.50	615.25	-	-	615.25	*1230.5*	*1.00*	
1.2	Steel Worker		day	0.50	854.10	427.05	-	-	427.05	*854.1*	*1.00*	
1.3	Common Labor		day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,191.12		0.00	2,191.12			
2	MATERIALS											
2.1	Miscellaneous Materials	10 % of Labor	%	10	0.00	219.11	0.00	0.00	219.11			
	SUB-TOTAL FOR MATERIAL					219.11		0.00	219.11			
3	EQUIPMENT											
3.1	Telescopic Boom Truck Crane, 5t, 100HP		hr.	11.10	518.00	5,749.80	0.00	0.00	5,749.80	*518.00*	*1.00*	
	SUB-TOTAL FOR EQUIPMENT					5,749.80		0.00	5,749.80			
	ESTIMATED DIRECT COST (EDC)					8,160.03		0.00	8,160.03			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		1,142.40		0.00	1,142.40			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		1,116.29		0.00	1,116.29			
	TOTAL COST FOR	100.00 m		Including VAT		10,418.73		0.00	10,418.73			
	UNIT COST FOR	**1 m**		Excluding VAT		93.02		0.00	93.02			
	UNIT COST FOR	**1 m**		Including VAT		104.19		0.00	104.19			

Tb 1. 304

Table 1.5.7(296/296) Unit Cost Analyses

New

UC No. 12-PBB	**Name of Work : Installation of Project Billboard**
Unit of Work	Description of Work : Installation of Project Billboard
Nos.	Quantity of Unit Cost Analysis : 1 Nos.

No.	Name of Item	Description	Unit	Qty.	Loc. Component (P) Unit Cost	Loc. Component (P) Amount	For. Component (P) Unit Cost	For. Component (P) Amount	Total Amount (P)	Unit Cost (P)	L.C. Factor	Memorandum
1	LABOR											
1.1	Foreman		day	0.50	1,230.50	615.25	-	-	615.25	*1230.5*	*1.00*	
1.2	Steel Worker		day	0.50	854.10	427.05	-	-	427.05	*854.1*	*1.00*	
1.3	Common Labor		day	2.00	574.41	1,148.82	-	-	1,148.82	*574.41*	*1.00*	
	SUB-TOTAL FOR LABOR					2,191.12		0.00	2,191.12			
2	MATERIALS											
2.1	Good Lumber		bd.ft.	42	40	1,680	0	0	1,680	*40.00*	*1.00*	
2.2	Plywood, Water Proof, 120 x 240, 10mm thk.		sheet	1	700	700	0	0	700	*700.00*	*1.00*	
2.3	Nail, Common Use		kg	0.42	75	32	0	0	32	*75.00*	*1.00*	
	SUB-TOTAL FOR MATERIAL					1,680.00		0.00	1,680.00			
3	EQUIPMENT											
3.1	Miscellaneous Materials	10 % of Labor	%	10.00	0.00	219.11	0.00	0.00	219.11			
	SUB-TOTAL FOR EQUIPMENT					219.11		0.00	219.11			
	ESTIMATED DIRECT COST (EDC)					4,090.23		0.00	4,090.23			
	OVERHEAD, CONTINGENCIES, MISC. AND PROFIT ; (% OF EDC)			14%		572.63		0.00	572.63			
	VALUE ADDED TAX (VAT) ; (% OF EDC, OCM AND PROFIT)			12%		559.54		0.00	559.54			
	TOTAL COST FOR	1.00 Nos.		Including VAT		5,222.41		0.00	5,222.41			
	UNIT COST FOR	**1 Nos.**		Excluding VAT		4,662.86		0.00	4,662.86			
	UNIT COST FOR	**1 Nos.**		Including VAT		5,222.41		0.00	5,222.41			

Tb 1. 305

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (1/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 1 – PRELIMINARY AND GENERAL														
1.10/1-A	**Mobilization and demobilization**		**LS**	**1.00**	**23,000,000**	**0**	**2,760,000**	**23,000,000**	**0**	**23,000,000**	**2,760,000**	**25,760,000**	**25,760,000**	
	1 % of Estimated Direct Cost	-	LS	1.00	23,000,000	0	2,760,000	23,000,000	0	23,000,000	2,760,000			
1.10/1-B	**Mobilization and demobilization**		**LS**	**1.00**	**19,000,000**	**0**	**2,280,000**	**19,000,000**	**0**	**19,000,000**	**2,280,000**	**21,280,000**	**21,280,000**	
	1 % of Estimated Direct Cost	-	LS	1.00	19,000,000	0	2,280,000	19,000,000	0	19,000,000	2,280,000			
1.11/1-A	**Survey of ground profiles**		**LS**	**1.00**	**3,065,975**	**0**	**367,917**	**3,065,975**	**0**	**3,065,975**	**367,917**	**3,433,892**	**3,433,892**	
	Fabrication & Installation of Concrete Piller	-	no	100.00	5,500	0	660	550,000	0	550,000	66,000			
	Control Traverse	-	no	100.00	2,500	0	300	250,000	0	250,000	30,000			
	Control Leveling	-	km	100.00	5,000	0	600	500,000	0	500,000	60,000			
	Topographic Survey	-	ha	24.00	30,000	0	3,600	720,000	0	720,000	86,400			
	Cross Section Survey	-	ha	49.50	15,500	0	1,860	767,250	0	767,250	92,070			
	Assistance to Engineer for Survey (% of Contractor's survey)	-	%	10.00	5,850	0	702	278,725	0	278,725	33,447			
1.11/1-B	**Survey of ground profiles**		**LS**	**1.00**	**2,928,750**	**0**	**351,450**	**2,928,750**	**0**	**2,928,750**	**351,450**	**3,280,200**	**3,280,200**	
	Fabrication & Installation of Concrete Piller	-	no	90.00	5,500	0	660	495,000	0	495,000	59,400			
	Control Traverse	-	no	90.00	2,500	0	300	225,000	0	225,000	27,000			
	Control Leveling	-	km	90.00	5,000	0	600	450,000	0	450,000	54,000			
	Topographic Survey	-	ha	19.60	30,000	0	3,600	588,000	0	588,000	70,560			
	Cross Section Survey	-	ha	27.00	15,500	0	1,860	418,500	0	418,500	50,220			
	Hydrographic Survey	-	ha	54.00	9,000	0	1,080	486,000	0	486,000	58,320			
	Assistance to Engineer for Survey (% of Contractor's survey)	-	%	10.00	6,750	0	810	266,250	0	266,250	31,950			
1.13/1-A	**Foundation investigation**		**m**	**960.00**	**2,950**	**0**	**354**	**2,831,590**	**0**	**2,831,590**	**339,791**	**3,304**	**3,171,381**	**20 m/site**
	Boring at Off shore (L=20m)	-	no	48.00	17,250	0	2,070	828,000	0	828,000	99,360			
	Fabrication of drilling raft	-	no	1.00	80,000	0	9,600	80,000	0	80,000	9,600			
	SPT, ASTM D1586	-	Time	866.00	115	0	14	99,590	0	99,590	11,951			
	Groundwater Level	-	no	48.00	1,000	0	120	48,000	0	48,000	5,760			
	Shalby Sampling, ASTM D1587	-	no	192.00	7,500	0	900	1,440,000	0	1,440,000	172,800			
	Geological Columns	-	no	48.00	1,000	0	120	48,000	0	48,000	5,760			
	Classification, ASTM D2487	-	Sample	240.00	20	0	2	4,800	0	4,800	576			
	Specific gravity, ASTM D854	-	Sample	240.00	150	0	18	36,000	0	36,000	4,320			
	Moisture Content, ASTM D2216	-	Sample	240.00	30	0	4	7,200	0	7,200	864			
	Particle size, ASTM D422	-	Sample	240.00	200	0	24	48,000	0	48,000	5,760			
	LL, ASTM D4318	-	Sample	96.00	100	0	12	9,600	0	9,600	1,152			
	PL, ASTM D4318	-	Sample	96.00	100	0	12	9,600	0	9,600	1,152			
	Unconfined Compression, ASTM D2166	-	Sample	288.00	600	0	72	172,800	0	172,800	20,736			
1.13/1-B	**Foundation investigation**		**m**	**400.00**	**3,910**	**0**	**469**	**1,564,100**	**0**	**1,564,100**	**187,692**	**4,379**	**1,751,792**	**20 m/site**
	Boring at Off shore (L=20m)	-	no	20.00	17,250	0	2,070	345,000	0	345,000	41,400			
	Fabrication of drilling raft	-	no	1.00	80,000	0	9,600	80,000	0	80,000	9,600			
	SPT, ASTM D1586	-	Time	340.00	115	0	14	39,100	0	39,100	4,692			
	Groundwater Level	-	no	20.00	1,000	0	120	20,000	0	20,000	2,400			
	Shalby Sampling, ASTM D1587	-	no	120.00	7,500	0	900	900,000	0	900,000	108,000			
	Geological Columns	-	no	20.00	1,000	0	120	20,000	0	20,000	2,400			
	Classification, ASTM D2487	-	Sample	100.00	20	0	2	2,000	0	2,000	240			
	Specific gravity, ASTM D854	-	Sample	100.00	150	0	18	15,000	0	15,000	1,800			
	Moisture Content, ASTM D2216	-	Sample	100.00	30	0	4	3,000	0	3,000	360			
	Particle size, ASTM D422	-	Sample	100.00	200	0	24	20,000	0	20,000	2,400			
	LL, ASTM D4318	-	Sample	60.00	100	0	12	6,000	0	6,000	720			
	PL, ASTM D4318	-	Sample	60.00	100	0	12	6,000	0	6,000	720			
	Unconfined Compression, ASTM D2166	-	Sample	180.00	600	0	72	108,000	0	108,000	12,960			
1.15/1	**Traffic Management Plan**		**LS**	**1.00**	**1,092,000**	**0**	**131,040**	**1,092,000**	**0**	**1,092,000**	**131,040**	**1,223,040**	**1,223,040**	
	Consultancy Services (Road Engineer for Vehicular Traffic Control)	-	Man-Mth	3.00	140,000	0	16,800	420,000	0	420,000	50,400			
	Consultancy Services (Engineer for Water-borne Traffic Control)	-	Man-Mth	3.00	140,000	0	16,800	420,000	0	420,000	50,400			
	Support Staff	-	%	30.00	84,000	0	10,080	252,000	0	252,000	30,240			

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (2/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
1.15/2	**Implementation and operation of traffic management plan**		**mo**	**1.00**	**871,556**	**0**	**104,587**	**871,556**	**0**	**871,556**	**104,587**	**976,142**	**976,142**	
	Traffic Control on Land	1-TC-L	Mth.-set	2.00	152,531	0	18,304	305,062	0	305,062	36,607			
	Traffic Control on Water	1-TC-W	Mth.-set	1.00	194,594	0	23,351	194,594	0	194,594	23,351			
	Installation of Project Billboard	12-PBB	Nos.	30.00	4,663	0	560	139,886	0	139,886	16,786			
	Installation and Removal of Temporary Fence	11-TMP-EN	L.m.	200.00	409	0	49	81,846	0	81,846	9,821			
	Portland Cement Concrete Pavement	9-CPV	Sq.m.	100.00	1,502	0	180	150,168	0	150,168	18,020			Road maintenance
1.16/1	**Quality Management Plan**		**LS**	**1.00**	**1,092,000**	**0**	**131,040**	**1,092,000**	**0**	**1,092,000**	**131,040**	**1,223,040**	**1,223,040**	
	Consultancy Services (Engineer for Establishment of Quality Plan)	-	Man-Mth	3.00	140,000	0	16,800	420,000	0	420,000	50,400			
	Consultancy Services (Engineer for Establishment of Quality Manual)	-	Man-Mth	3.00	140,000	0	16,800	420,000	0	420,000	50,400			
	Support Staff	-	%	30.00	84,000	0	10,080	252,000	0	252,000	30,240			
1.16/2	**Implementation and operation of quality management plan**		**mo**	**1.00**	**529,000**	**0**	**63,480**	**529,000**	**0**	**529,000**	**63,480**	**592,480**	**592,480**	
	Engineer for Review of Quality Plan & Manual	-	Man-Mth	0.10	140,000	0	16,800	14,000	0	14,000	1,680			
	Quality Assurance Engineer	-	Man-Mth	1.00	140,000	0	16,800	140,000	0	140,000	16,800			
	Support Staff for Quality Assurance Engineer	-	Man-Mth	3.00	50,000	0	6,000	150,000	0	150,000	18,000			
	Laboratory Test and Reporting (% of Support Staff)	-	%	150.00	75,000	0	9,000	225,000	0	225,000	27,000			
1.16/3	**Provisional of laboratory equipment for Employer**		**LS**	**1.00**	**916,900**	**0**	**110,028**	**916,900**	**0**	**916,900**	**110,028**	**1,026,928**	**1,026,928**	
	Sample splitter	-	no	1.00	5,200	0	624	5,200	0	5,200	624			
	ASTM standard sieve set	-	no	1.00	55,400	0	6,648	55,400	0	55,400	6,648			
	Plastic limit test set	-	no	1.00	1,200	0	144	1,200	0	1,200	144			
	Liquid limit test set	-	no	1.00	12,000	0	1,440	12,000	0	12,000	1,440			
	Standard/Modified compaction test set	-	no	1.00	4,950	0	594	4,950	0	4,950	594			
	Field density test set	-	no	1.00	4,500	0	540	4,500	0	4,500	540			
	Specific gravity and absorption test set	-	no	1.00	95,000	0	11,400	95,000	0	95,000	11,400			
	Los Angeles Abrasion machine	-	no	1.00	70,000	0	8,400	70,000	0	70,000	8,400			
	Concrete test mould, cylinder 150 mm x 300 mm	-	no	18.00	1,400	0	168	25,200	0	25,200	3,024			
	Concrete test mould, cube 150 mm x 150 mm	-	no	12.00	1,800	0	216	21,600	0	21,600	2,592			
	Slump cone	-	no	2.00	1,600	0	192	3,200	0	3,200	384			
	Concrete compressive strength testing machine	-	no	1.00	270,000	0	32,400	270,000	0	270,000	32,400			
	Cylindrical concrete specimen capping set	-	no	1.00	3,850	0	462	3,850	0	3,850	462			
	Entrained air meter with complete accessories	-	no	1.00	54,000	0	6,480	54,000	0	54,000	6,480			
	Field oven with temperature control	-	no	1.00	46,500	0	5,580	46,500	0	46,500	5,580			
	Balance, 2610 g capacity, 0.1 g sensitivity	-	no	1.00	5,000	0	600	5,000	0	5,000	600			
	Balance with O-Haus 16 kg capacity	-	no	1.00	42,800	0	5,136	42,800	0	42,800	5,136			
	Triple beam balance, 2610 g cap., 0.10 sensitivity	-	no	1.00	5,000	0	600	5,000	0	5,000	600			
	Heavy duty balance, 20 kg capacity, 1g sensitivity	-	no	1.00	58,000	0	6,960	58,000	0	58,000	6,960			
	Flatform balance 100 kg	-	no	1.00	8,500	0	1,020	8,500	0	8,500	1,020			
	Speedy moisture tester 0-20 %	-	no	1.00	88,000	0	10,560	88,000	0	88,000	10,560			
	Laboratory concrete mixer	-	no	1.00	37,000	0	4,440	37,000	0	37,000	4,440			
1.17/1	**Programming and Reporting**		**LS**	**1.00**	**15,480,000**	**0**	**1,857,600**	**15,480,000**	**0**	**15,480,000**	**1,857,600**	**17,337,600**	**17,337,600**	
	Construction Planner	-	Man-Mth	36.00	140,000	0	16,800	5,040,000	0	5,040,000	604,800			
	Computer Operator	-	Man-Mth	108.00	60,000	0	7,200	6,480,000	0	6,480,000	777,600			
	Support Staff for Construction Planner	-	Man-Mth	72.00	50,000	0	6,000	3,600,000	0	3,600,000	432,000			
	Progress and Completion Report (% of Support Staff)	-	%	10.00	5,000	0	600	360,000	0	360,000	43,200			
1.18/1	**Health and Safety Plan**		**LS**	**1.00**	**500,000**	**0**	**60,000**	**500,000**	**0**	**500,000**	**60,000**	**560,000**	**560,000**	
	Health and Safety Officer	-	Man-Mth	2.00	140,000	0	16,800	280,000	0	280,000	33,600			
	Support Staff for Health and Safety Officer	-	Man-Mth	4.00	50,000	0	6,000	200,000	0	200,000	24,000			
	Reporting (% of Support Staff)	-	%	10.00	5,000	0	600	20,000	0	20,000	2,400			
1.18/2	**Implementation and operation of health and safety plan**		**mo**	**36.00**	**205,003**	**0**	**24,600**	**7,380,103**	**0**	**7,380,103**	**885,612**	**229,603**	**8,265,715**	
	Health and Safety Officer	-	Man-Mth	12.00	140,000	0	16,800	1,680,000	0	1,680,000	201,600			
	Support Staff for Health and Safety Officer	-	Man-Mth	36.00	50,000	0	6,000	1,800,000	0	1,800,000	216,000			
	Provision of Personal Protective Equipment (PPE)	1-PR-PPE	Set	300.00	3,228	0	387	968,436	0	968,436	116,212			
	Sand Bag	3-SB	Cu.m.	500.00	2,137	0	256	1,068,494	0	1,068,494	128,219			
	Installation and Removal of Temporary Fence	11-TMP-EN	L.m.	500.00	409	0	49	204,614	0	204,614	24,554			
	First Aid Kit	-	no	20.00	6,214	0	746	124,273	0	124,273	14,913			
	Lighting Equipments	-	mo	36.00	26,250	0	3,150	945,000	0	945,000	113,400			
	Sanitary Control (Toilet Facility and its O/M cost)	-	Unit	2.00	294,643	0	35,357	589,286	0	589,286	70,714			

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (3/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
1.20/1	**Progress photographs**		**mo**	**36.00**	**159,833**	**0**	**19,180**	**5,754,000**	**0**	**5,754,000**	**690,480**	**179,013**	**6,444,480**	
	Digital Camera	-	no	10.00	30,000	0	3,600	300,000	0	300,000	36,000			
	Staff (Photographing and Data Recording)	-	Man-Mth	108.00	50,000	0	6,000	5,400,000	0	5,400,000	648,000			
	Recording Materials (% of Support Staff)	-	%	1.00	500	0	60	54,000	0	54,000	6,480			
1.22/1	**Provision of office for Employer's Personnel**		**LS**	**1.00**	**2,470,000**	**0**	**296,400**	**2,470,000**	**0**	**2,470,000**	**296,400**	**2,766,400**	**2,766,400**	
	Construction of office	-	Sq.m.	200.00	12,000	0	1,440	2,400,000	0	2,400,000	288,000			
	Parking Area	-	Sq.m.	100.00	700	0	84	70,000	0	70,000	8,400			
1.22/2	**Maintenance of office for Employer's Personnel**		**mo**	**1.00**	**231,849**	**0**	**27,822**	**231,849**	**0**	**231,849**	**27,822**	**259,671**	**259,671**	
	Utility	-	Man-Mth	1.00	50,000	0	6,000	50,000	0	50,000	6,000			
	Cleaner	-	Man-Mth	1.00	50,000	0	6,000	50,000	0	50,000	6,000			
	Clerk	-	Man-Mth	2.00	50,000	0	6,000	100,000	0	100,000	12,000			
	Materials and Equipments (% of Staff)	-	%	5.00	7,500	0	900	10,000	0	10,000	1,200			
	Electricity Consumption, 1000kWh/month	-	Month	1.00	16,000	0	1,920	16,000	0	16,000	1,920			
	Water Consumption, 100 cu.m /month	-	Month	1.00	3,200	0	384	3,200	0	3,200	384			
	LPG Gas, 11kg tank, 3 tanks/month	-	Month	1.00	2,649	0	318	2,649	0	2,649	318			
1.23/4	**Maintain Type A transportation item**		**mo**	**1.00**	**43,002**	**0**	**5,160**	**43,002**	**0**	**43,002**	**5,160**	**48,162**	**48,162**	
	Maintain Type A Transportation Item, Toyota Fortuner 4WD	1-TR-AM	Nos.-Mth	1.00	43,002	0	5,160	43,002	0	43,002	5,160			
1.23/5	**Maintain Type B transportation item**		**mo**	**1.00**	**9,476**	**0**	**1,137**	**9,476**	**0**	**9,476**	**1,137**	**10,613**	**10,613**	
	Maintain Type B Transportation Item, , Motor Cycle, 200cc Capacity	1-TR-BM	Nos.-Mth	1.00	9,476	0	1,137	9,476	0	9,476	1,137			
1.23/6	**Maintain Type C transportation item**		**mo**	**1.00**	**47,803**	**0**	**5,736**	**47,803**	**0**	**47,803**	**5,736**	**53,539**	**53,539**	
	Maintain Type C Transportation Item, Quintrex 460 Dory Boat w/ 40HP Outboard Engine	1-TR-CM	Nos.-Mth	1.00	47,803	0	5,736	47,803	0	47,803	5,736			
1.24/1-A	**Commemorative panels**		**no**	**1.00**	**53,257**	**0**	**6,391**	**53,257**	**0**	**53,257**	**6,391**	**59,647**	**59,647**	
	Installation of Commemorative Panel	12-CP-60	Nos.	1.00	44,598	0	5,352	44,598	0	44,598	5,352			
	Anchor Bar for Concrete Structures	5-RB-AB	Kg	19.00	456	0	55	8,659	0	8,659	1,039			
1.24/1-B	**Commemorative panels**		**no**	**1.00**	**53,257**	**0**	**6,391**	**53,257**	**0**	**53,257**	**6,391**	**59,647**	**59,647**	
	Installation of Commemorative Panel	12-CP-60	Nos.	1.00	44,598	0	5,352	44,598	0	44,598	5,352			
	Anchor Bar for Concrete Structures	5-RB-AB	Kg	19.00	456	0	55	8,659	0	8,659	1,039			
1.25/1	**Site clean up**		**LS**	**1.00**	**11,353,562**	**0**	**1,362,427**	**11,353,562**	**0**	**11,353,562**	**1,362,427**	**12,715,990**	**12,715,990**	
	Site Clean Up	1-SC	Month	36.00	315,377	0	37,845	11,353,562	0	11,353,562	1,362,427			

Tb 1.308

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (4/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 2 – ENVIRONMENTAL														
2.1/1-A	**Contractor's environmental management**		**LS**	**1.00**	**3,756,024**	**0**	**450,723**	**3,756,024**	**0**	**3,756,024**	**450,723**	**4,206,747**	**4,206,747**	
	Consultancy Services (Engineer for Establishment of Construction Contractor's Environmental Program)	-	Man-Mth	3.00	140,000	0	16,800	420,000	0	420,000	50,400			
	Environmentalist	-	Man-Mth	7.20	140,000	0	16,800	1,008,000	0	1,008,000	120,960			
	Support Staff for Environmentalist including	-	Man-Mth	36.00	50,000	0	6,000	1,800,000	0	1,800,000	216,000			
	Progress and Completion Report (% of Support Staff)	-	%	10.00	5,000	0	600	180,000	0	180,000	21,600			
	Noise meter	-	no	2.00	26,673	0	3,201	53,347	0	53,347	6,402			
	Vibration meter	-	no	2.00	147,339	0	17,681	294,677	0	294,677	35,361			
2.1/1-B	**Contractor's environmental management**		**LS**	**1.00**	**8,024,107**	**0**	**962,893**	**8,024,107**	**0**	**8,024,107**	**962,893**	**8,987,000**	**8,987,000**	
	Consultancy Services (Engineer for Establishment of Construction Contractor's Environmental Program)	-	Man-Mth	3.00	140,000	0	16,800	420,000	0	420,000	50,400			
	Environmentalist	-	Man-Mth	14.40	140,000	0	16,800	2,016,000	0	2,016,000	241,920			
	Support Staff for Environmentalist including	-	Man-Mth	72.00	50,000	0	6,000	3,600,000	0	3,600,000	432,000			
	Solid Waste (Once)	-	LS	1.00	4,000	0	480	4,000	0	4,000	480			Backfill Site
	Water Quality (Once a day)	-	LS	1.00	125,000	0	15,000	125,000	0	125,000	15,000			Backfill Site
	Groundwater Quality (Monthly)	-	LS	1.00	576,000	0	69,120	576,000	0	576,000	69,120			Backfill Site
	Air Quality (Monthly)	-	LS	1.00	360,000	0	43,200	360,000	0	360,000	43,200			Backfill Site
	People (Daily)	-	LS	1.00	150,000	0	18,000	150,000	0	150,000	18,000			Backfill Site
	Progress and Completion Report (% of Support Staff)	-	%	10.00	5,000	0	600	360,000	0	360,000	43,200			
	pH meter	-	no	2.00	32,542	0	3,905	65,083	0	65,083	7,810			
	Noise meter	-	no	2.00	26,673	0	3,201	53,347	0	53,347	6,402			Marikina River
	Vibration meter	-	no	2.00	147,339	0	17,681	294,677	0	294,677	35,361			Marikina River
2.14/1-B	**Testing of dredged materials**		**LS**	**1.00**	**1,877,900**	**0**	**225,348**	**1,877,900**	**0**	**1,877,900**	**225,348**	**2,103,248**	**2,103,248**	
	Elutriate Test (Before treatment)													
	Pretreatment	-	Sample	178.00	1,000	0	120	178,000	0	178,000	21,360			
	Cd	-	Sample	178.00	300	0	36	53,400	0	53,400	6,408			
	Cr+6	-	Sample	178.00	300	0	36	53,400	0	53,400	6,408			
	Pb	-	Sample	178.00	275	0	33	48,950	0	48,950	5,874			
	T-Hg	-	Sample	178.00	500	0	60	89,000	0	89,000	10,680			
	CN	-	Sample	178.00	500	0	60	89,000	0	89,000	10,680			
	As	-	Sample	178.00	400	0	48	71,200	0	71,200	8,544			
	PCB	-	Sample	178.00	3,000	0	360	534,000	0	534,000	64,080			
	TCLP Test (Before treatment)													
	Pretreatment	-	Sample	178.00	2,500	0	300	445,000	0	445,000	53,400			
	Cd	-	Sample	178.00	300	0	36	53,400	0	53,400	6,408			
	Cr	-	Sample	178.00	300	0	36	53,400	0	53,400	6,408			
	Pb	-	Sample	178.00	275	0	33	48,950	0	48,950	5,874			
	T-Hg	-	Sample	178.00	500	0	60	89,000	0	89,000	10,680			
	As	-	Sample	178.00	400	0	48	71,200	0	71,200	8,544			

Tb 1.309

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (5/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 4 - EXCAVATION AND EARTHWORKS														
4.5/1-A	**Demolition and removal of existing steel handrail**		**lm**	**391.90**	**2,259**	**0**	**271**	**885,175**	**0**	**885,175**	**106,221**	**2,530**	**991,396**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	195.95	2,119	0	254	415,228	0	415,228	49,827			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	391.90	243	0	29	95,415	0	95,415	11,450			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	391.90	287	0	34	112,301	0	112,301	13,476			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	391.90	58	0	7	22,911	0	22,911	2,749			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	391.90	611	0	73	239,320	0	239,320	28,718			
4.5/2-A	**Removal of existing concrete debris**		**m^3**	**2,505.49**	**4,968**	**0**	**596**	**12,447,165**	**0**	**12,447,165**	**1,493,660**	**5,564**	**13,940,824**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	2,505.49	4,012	0	481	10,052,727	0	10,052,727	1,206,327			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	2,505.49	287	0	34	717,956	0	717,956	86,155			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	2,505.49	58	0	7	146,474	0	146,474	17,577			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	2,505.49	611	0	73	1,530,008	0	1,530,008	183,601			
4.5/3-A	**Removal and restoration of existing lighting post**		**no**	**112.00**	**15,486**	**0**	**1,858**	**1,734,457**	**0**	**1,734,457**	**208,135**	**17,345**	**1,942,592**	
	Removal of Lighting Post	4-LPOST	Nos.	112.00	963	0	116	107,871	0	107,871	12,944			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	112.00	243	0	29	27,268	0	27,268	3,272			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	112.00	2,119	0	254	237,333	0	237,333	28,480			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	280.00	287	0	34	80,235	0	80,235	9,628			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	112.00	4,032	0	484	451,535	0	451,535	54,184			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	537.60	657	0	79	353,080	0	353,080	42,370			
	Installation of Lighting Post for 70kW	12-LPOST-70	Nos.	112.00	2,675	0	321	299,603	0	299,603	35,952			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	112.00	58	0	7	6,548	0	6,548	786			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	280.00	611	0	73	170,985	0	170,985	20,518			
4.5/4-A	**Removal of existing concrete blocks at Sta. 3+040**		**LS**	**1.00**	**129,785**	**0**	**15,574**	**129,785**	**0**	**129,785**	**15,574**	**145,359**	**145,359**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	26.00	4,012	0	481	104,319	0	104,319	12,518			
	Hauling by Barge - 10km, incl. Loading & Un-Loading	4-H-BG10	Cu.m.	26.00	310	0	37	8,068	0	8,068	968			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	26.00	58	0	7	1,520	0	1,520	182			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	26.00	611	0	73	15,877	0	15,877	1,905			
4.5/5-A	**Removal and re-erection of fence support struts between Sta. 2+850 and 3+070**		**LS**	**1.00**	**93,273**	**0**	**11,193**	**93,273**	**0**	**93,273**	**11,193**	**104,466**	**104,466**	
	Removal and Re-erection of Fence Support Strut	4-STRUT	Nos.	25.00	118	0	14	2,957	0	2,957	355			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	12.50	2,119	0	254	26,488	0	26,488	3,179			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	12.50	287	0	34	3,582	0	3,582	430			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	12.50	4,032	0	484	50,395	0	50,395	6,047			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	15.00	657	0	79	9,852	0	9,852	1,182			
4.5/6-A	**Demolition and removal of existing concrete stairs at Sta. 5+220**		**LS**	**1.00**	**99,359**	**0**	**11,923**	**99,359**	**0**	**99,359**	**11,923**	**111,282**	**111,282**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	20.00	4,012	0	481	80,246	0	80,246	9,629			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	20.00	287	0	34	5,731	0	5,731	688			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	20.00	58	0	7	1,169	0	1,169	140			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	20.00	611	0	73	12,213	0	12,213	1,466			
4.5/7-A	**Demolition and removal of existing collapsed revetment**		**m^3**	**1,242.45**	**5,156**	**0**	**619**	**6,406,024**	**0**	**6,406,024**	**768,723**	**5,775**	**7,174,747**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	1,242.45	4,012	0	481	4,985,077	0	4,985,077	598,209			
	Removal of Collapsed Revetment on Water	4-RM-CR	Cu.m.	1,242.45	188	0	23	233,562	0	233,562	28,027			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	1,242.45	287	0	34	356,029	0	356,029	42,724			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	1,242.45	58	0	7	72,636	0	72,636	8,716			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	1,242.45	611	0	73	758,720	0	758,720	91,046			

Tb 1.310

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (6/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.5/8-A	**Temporary removal and reinstallation of steel dolphins**		**no**	**2.00**	**14,654**	**0**	**1,758**	**29,308**	**0**	**29,308**	**3,517**	**16,412**	**32,825**	
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	2.00	2,095	0	251	4,191	0	4,191	503			
	Driving Dolphin on Water	6-DOLPN	Nos.	2.00	10,265	0	1,232	20,530	0	20,530	2,464			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	4.80	287	0	34	1,375	0	1,375	165			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	4.80	58	0	7	281	0	281	34			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	4.80	611	0	73	2,931	0	2,931	352			
4.5/9-A	**Demolition and removal of existing collapsed wall and abandoned shanty at Sta. 5+**		**LS**	**1.00**	**99,359**	**0**	**11,923**	**99,359**	**0**	**99,359**	**11,923**	**111,282**	**111,282**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	20.00	4,012	0	481	80,246	0	80,246	9,629			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	20.00	287	0	34	5,731	0	5,731	688			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	20.00	58	0	7	1,169	0	1,169	140			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	20.00	611	0	73	12,213	0	12,213	1,466			
4.5/10-A	**Demolition and removal of existing steel fence**		**lm**	**820.44**	**1,475**	**0**	**177**	**1,210,553**	**0**	**1,210,553**	**145,266**	**1,653**	**1,355,819**	
	Removal of existing Fence	4-FENCE	L.m.	820.44	107	0	13	87,987	0	87,987	10,558			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	410.22	243	0	29	99,875	0	99,875	11,985			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	205.11	2,119	0	254	434,636	0	434,636	52,156			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	615.33	287	0	34	176,324	0	176,324	21,159			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	615.33	58	0	7	35,973	0	35,973	4,317			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	615.33	611	0	73	375,758	0	375,758	45,091			
4.5/11-A	**Demolition and removal of existing collapsed wall and abandoned shanty at Sta. 6+**		**LS**	**1.00**	**99,359**	**0**	**11,923**	**99,359**	**0**	**99,359**	**11,923**	**111,282**	**111,282**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	20.00	4,012	0	481	80,246	0	80,246	9,629			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	20.00	287	0	34	5,731	0	5,731	688			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	20.00	58	0	7	1,169	0	1,169	140			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	20.00	611	0	73	12,213	0	12,213	1,466			
4.5/12-A	**Removal of existing concrete blocks at Sta. 7+500**		**LS**	**1.00**	**156,044**	**0**	**18,725**	**156,044**	**0**	**156,044**	**18,725**	**174,769**	**174,769**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	31.41	4,012	0	481	126,026	0	126,026	15,123			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	31.41	287	0	34	9,001	0	9,001	1,080			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	31.41	58	0	7	1,836	0	1,836	220			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	31.41	611	0	73	19,181	0	19,181	2,302			
4.5/13-A	**Demolition and removal of abandoned jetty at Sta. 8+500**		**LS**	**1.00**	**267,959**	**0**	**32,155**	**267,959**	**0**	**267,959**	**32,155**	**300,114**	**300,114**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	30.00	4,012	0	481	120,368	0	120,368	14,444			
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	30.00	2,095	0	251	62,863	0	62,863	7,544			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	90.00	272	0	33	24,506	0	24,506	2,941			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	90.00	58	0	7	5,262	0	5,262	631			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	90.00	611	0	73	54,960	0	54,960	6,595			
4.5/14-A	**Demolition and removal of existing concrete structure at Sta. 8+660**		**LS**	**1.00**	**99,074**	**0**	**11,889**	**99,074**	**0**	**99,074**	**11,889**	**110,963**	**110,963**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	20.00	4,012	0	481	80,246	0	80,246	9,629			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	20.00	272	0	33	5,446	0	5,446	653			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	20.00	58	0	7	1,169	0	1,169	140			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	20.00	611	0	73	12,213	0	12,213	1,466			
4.5/15-A	**Demolition and removal of abandoned boat station**		**no**	**2.00**	**221,342**	**0**	**26,561**	**442,684**	**0**	**442,684**	**53,122**	**247,903**	**495,806**	
	Demolition and Removal of Existing Wooden	4-WOOD-ST	Sq.m.	200.00	396	0	48	79,268	0	79,268	9,512			
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	12.00	2,095	0	251	25,145	0	25,145	3,017			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	25.00	4,012	0	481	100,307	0	100,307	12,037			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	249.00	287	0	34	71,352	0	71,352	8,562			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	249.00	58	0	7	14,557	0	14,557	1,747			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	249.00	611	0	73	152,055	0	152,055	18,247			

Tb 1.311

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (7/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.5/16-A	**Demolition and removal of existing wooden structure at Sta. 8+860**		**LS**	**1.00**	**382,226**	**0**	**45,867**	**382,226**	**0**	**382,226**	**45,867**	**428,093**	**428,093**	
	Demolition and Removal of Existing Wooden	4-WOOD-ST	Sq.m.	100.00	396	0	48	39,634	0	39,634	4,756			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	10.00	4,012	0	481	40,123	0	40,123	4,815			
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	50.00	2,095	0	251	104,772	0	104,772	12,573			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	210.00	272	0	33	57,181	0	57,181	6,862			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	210.00	58	0	7	12,277	0	12,277	1,473			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	210.00	611	0	73	128,239	0	128,239	15,389			
4.5/17-A	**Demolition and removal of boat station at Sta. 8+930**		**LS**	**1.00**	**219,566**	**0**	**26,348**	**219,566**	**0**	**219,566**	**26,348**	**245,914**	**245,914**	
	Demolition and Removal of Existing Wooden	4-WOOD-ST	Sq.m.	100.00	396	0	48	39,634	0	39,634	4,756			
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	6.00	2,095	0	251	12,573	0	12,573	1,509			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	12.50	4,012	0	481	50,154	0	50,154	6,018			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	124.50	272	0	33	33,900	0	33,900	4,068			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	124.50	58	0	7	7,278	0	7,278	873			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	124.50	611	0	73	76,027	0	76,027	9,123			
4.5/18-A	**Demolition and removal of boat station at Sta. 8+970**		**LS**	**1.00**	**219,566**	**0**	**26,348**	**219,566**	**0**	**219,566**	**26,348**	**245,914**	**245,914**	
	Demolition and Removal of Existing Wooden	4-WOOD-ST	Sq.m.	100.00	396	0	48	39,634	0	39,634	4,756			
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	6.00	2,095	0	251	12,573	0	12,573	1,509			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	12.50	4,012	0	481	50,154	0	50,154	6,018			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	124.50	272	0	33	33,900	0	33,900	4,068			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	124.50	58	0	7	7,278	0	7,278	873			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	124.50	611	0	73	76,027	0	76,027	9,123			
4.5/19-A	**Removal of existing steel pipe at Sta. 8+890**		**LS**	**1.00**	**103,429**	**0**	**12,411**	**103,429**	**0**	**103,429**	**12,411**	**115,840**	**115,840**	
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	1.00	2,095	0	251	2,095	0	2,095	251			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	20.00	4,012	0	481	80,246	0	80,246	9,629			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	22.40	272	0	33	6,099	0	6,099	732			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	22.40	58	0	7	1,310	0	1,310	157			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	22.40	611	0	73	13,679	0	13,679	1,641			
4.5/20-A	**Removal of existing sandbags at Sta. 8+950**		**LS**	**1.00**	**154,942**	**0**	**18,593**	**154,942**	**0**	**154,942**	**18,593**	**173,535**	**173,535**	
	River Bank Excavation by Long Arm Backhoe, Hauling by Hopper Barge to Temp. Yard (Pasig)	4-DR-BH6	Cu.m	100.00	604	0	73	60,432	0	60,432	7,252			
	Demolition and Removal of Existing Wooden	4-WOOD-ST	Sq.m.	25.00	396	0	48	9,909	0	9,909	1,189			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	25.00	272	0	33	6,807	0	6,807	817			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	25.00	58	0	7	1,462	0	1,462	175			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	125.00	611	0	73	76,333	0	76,333	9,160			
4.5/21-A	**Demolition and removal of existing collapsed wall and abandoned shanty at Sta. 9+**		**LS**	**1.00**	**157,286**	**0**	**18,874**	**157,286**	**0**	**157,286**	**18,874**	**176,161**	**176,161**	
	Demolition and Removal of Existing Wooden	4-WOOD-ST	Sq.m.	25.00	396	0	48	9,909	0	9,909	1,189			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	25.00	4,012	0	481	100,307	0	100,307	12,037			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	50.00	272	0	33	13,615	0	13,615	1,634			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	50.00	58	0	7	2,923	0	2,923	351			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	50.00	611	0	73	30,533	0	30,533	3,664			

Tb 1.312

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (8/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.5/22-A	**Temporary removal and reinstallation of existing fence, bollards and canopy betw**		**LS**	**1.00**	**2,227,193**	**0**	**267,263**	**2,227,193**	**0**	**2,227,193**	**267,263**	**2,494,456**	**2,494,456**	
	Removal of existing Fence	4-FENCE	L.m.	200.00	107	0	13	21,449	0	21,449	2,574			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	100.00	243	0	29	24,347	0	24,347	2,922			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	50.00	2,119	0	254	105,952	0	105,952	12,714			
	Temporary removal and reinstallation of existing	-	no	1.00	1,000,000	0	120,000	1,000,000	0	1,000,000	120,000			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	125.00	272	0	33	34,036	0	34,036	4,084			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	50.00	4,032	0	484	201,578	0	201,578	24,189			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	100.00	657	0	79	65,677	0	65,677	7,881			
	Fence with Barb wire	11-FWBW	Sq.m.	400.00	1,726	0	207	690,513	0	690,513	82,862			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	125.00	58	0	7	7,308	0	7,308	877			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	125.00	611	0	73	76,333	0	76,333	9,160			
4.5/23-A	**Demolition and removal of existing structure at Sta. 9+220**		**LS**	**1.00**	**114,987**	**0**	**13,798**	**114,987**	**0**	**114,987**	**13,798**	**128,785**	**128,785**	
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	4.00	2,095	0	251	8,382	0	8,382	1,006			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	20.00	4,012	0	481	80,246	0	80,246	9,629			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	28.00	272	0	33	7,624	0	7,624	915			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	28.00	58	0	7	1,637	0	1,637	196			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	28.00	611	0	73	17,099	0	17,099	2,052			
4.5/24-A	**Removal of wooden dolphins**		**no**	**30.00**	**4,007**	**0**	**481**	**120,204**	**0**	**120,204**	**14,424**	**4,488**	**134,628**	
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	30.00	2,095	0	251	62,863	0	62,863	7,544			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	60.00	287	0	34	17,193	0	17,193	2,063			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	60.00	58	0	7	3,508	0	3,508	421			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	60.00	611	0	73	36,640	0	36,640	4,397			
4.5/25-A	**Demolition and removal of existing concrete handrail**		**lm**	**1,506.87**	**2,259**	**0**	**271**	**3,403,503**	**0**	**3,403,503**	**408,420**	**2,530**	**3,811,923**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	753.43	2,119	0	254	1,596,555	0	1,596,555	191,587			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	1,506.87	243	0	29	366,871	0	366,871	44,025			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	1,506.87	287	0	34	431,797	0	431,797	51,816			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	1,506.87	58	0	7	88,093	0	88,093	10,571			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	1,506.87	611	0	73	920,186	0	920,186	110,422			
4.5/26-A	**Demolition and removal of existing river wall between Sta. 9+720 and 9+750**		**LS**	**1.00**	**148,611**	**0**	**17,833**	**148,611**	**0**	**148,611**	**17,833**	**166,444**	**166,444**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	30.00	4,012	0	481	120,368	0	120,368	14,444			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	30.00	272	0	33	8,169	0	8,169	980			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	30.00	58	0	7	1,754	0	1,754	210			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	30.00	611	0	73	18,320	0	18,320	2,198			
4.5/27-A	**Removal of abandoned boats at Sta. 9+740**		**LS**	**1.00**	**302,497**	**0**	**36,300**	**302,497**	**0**	**302,497**	**36,300**	**338,797**	**338,797**	
	Dismantlement and Removal of Existing Abandoned	4-CUT-BOAT	Ton	6.00	3,345	0	401	20,073	0	20,073	2,409			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	300.00	272	0	33	81,687	0	81,687	9,802			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	300.00	58	0	7	17,538	0	17,538	2,105			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	300.00	611	0	73	183,199	0	183,199	21,984			
4.5/28-A	**Demolition and removal of existing river wall between Sta. 9+800 and 9+950**		**LS**	**1.00**	**396,296**	**0**	**47,555**	**396,296**	**0**	**396,296**	**47,555**	**443,851**	**443,851**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	80.00	4,012	0	481	320,983	0	320,983	38,518			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	80.00	272	0	33	21,783	0	21,783	2,614			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	80.00	58	0	7	4,677	0	4,677	561			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	80.00	611	0	73	48,853	0	48,853	5,862			
4.5/29-A	**Demolition and removal of existing concrete structure between Sta. 10+140 and 10**		**LS**	**1.00**	**91,814**	**0**	**11,018**	**91,814**	**0**	**91,814**	**11,018**	**102,831**	**102,831**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	30.00	2,119	0	254	63,571	0	63,571	7,629			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	30.00	272	0	33	8,169	0	8,169	980			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	30.00	58	0	7	1,754	0	1,754	210			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	30.00	611	0	73	18,320	0	18,320	2,198			

Tb 1.313

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (9/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.5/30-A	**Temporary removal and reinstallation of existing fence and lighting posts between**		**LS**	**1.00**	**721,132**	**0**	**86,536**	**721,132**	**0**	**721,132**	**86,536**	**807,668**	**807,668**	
	Removal of Lighting Post	4-LPOST	Nos.	3.00	963	0	116	2,889	0	2,889	347			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	3.00	243	0	29	730	0	730	88			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	3.00	2,119	0	254	6,357	0	6,357	763			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	7.50	272	0	33	2,042	0	2,042	245			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	3.00	4,032	0	484	12,095	0	12,095	1,451			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	14.40	657	0	79	9,457	0	9,457	1,135			
	Installation of Lighting Post for 70kW	12-LPOST-70	Nos.	3.00	2,675	0	321	8,025	0	8,025	963			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	7.50	611	0	73	4,580	0	4,580	550			
	Removal of existing Fence	4-FENCE	L.m.	110.00	107	0	13	11,797	0	11,797	1,416			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	55.00	243	0	29	13,391	0	13,391	1,607			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	27.50	2,119	0	254	58,274	0	58,274	6,993			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	68.75	272	0	33	18,720	0	18,720	2,246			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	27.50	4,032	0	484	110,868	0	110,868	13,304			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	55.00	657	0	79	36,122	0	36,122	4,335			
	Fence with Barb wire	11-FWBW	Sq.m.	220.00	1,726	0	207	379,782	0	379,782	45,574			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	68.75	58	0	7	4,019	0	4,019	482			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	68.75	611	0	73	41,983	0	41,983	5,038			
4.5/31-A	**Temporary removal and reinstallation of existing fences**		**lm**	**495.29**	**5,284**	**0**	**634**	**2,617,278**	**0**	**2,617,278**	**314,073**	**5,919**	**2,931,351**	
	Removal of existing Fence	4-FENCE	L.m.	495.29	107	0	13	53,116	0	53,116	6,374			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	247.64	243	0	29	60,293	0	60,293	7,235			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	123.82	2,119	0	254	262,382	0	262,382	31,486			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	309.55	272	0	33	84,288	0	84,288	10,115			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	123.82	4,032	0	484	499,193	0	499,193	59,903			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	247.64	657	0	79	162,644	0	162,644	19,517			
	Installation of Fence	11-FENCE-FP	L.m.	990.57	1,300	0	156	1,288,232	0	1,288,232	154,588			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	309.55	58	0	7	18,097	0	18,097	2,172			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	309.55	611	0	73	189,032	0	189,032	22,684			
4.5/32-A	**Temporary removal and reinstallation of existing bollards between Sta. 10+950 an**		**LS**	**1.00**	**464,927**	**0**	**55,791**	**464,927**	**0**	**464,927**	**55,791**	**520,718**	**520,718**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	60.00	2,119	0	254	127,142	0	127,142	15,257			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	60.00	272	0	33	16,337	0	16,337	1,960			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	60.00	4,032	0	484	241,894	0	241,894	29,027			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	60.00	657	0	79	39,406	0	39,406	4,729			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	60.00	58	0	7	3,508	0	3,508	421			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	60.00	611	0	73	36,640	0	36,640	4,397			
4.5/33-A	**Remove wooden and steel dolphins between Sta. 11+050 and 11+150**		**LS**	**1.00**	**120,204**	**0**	**14,424**	**120,204**	**0**	**120,204**	**14,424**	**134,628**	**134,628**	
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	30.00	2,095	0	251	62,863	0	62,863	7,544			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	60.00	287	0	34	17,193	0	17,193	2,063			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	60.00	58	0	7	3,508	0	3,508	421			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	60.00	611	0	73	36,640	0	36,640	4,397			
4.5/34-A	**Removal of existing steel sheet pile Sta. 11+150 and 11+263**		**LS**	**1.00**	**808,887**	**0**	**97,066**	**808,887**	**0**	**808,887**	**97,066**	**905,954**	**905,954**	
	Pulling Out of Steel Sheet Pile, All Type	6-SP-O	Sq.m.	1,200.00	483	0	58	579,525	0	579,525	69,543			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	240.00	287	0	34	68,773	0	68,773	8,253			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	240.00	58	0	7	14,031	0	14,031	1,684			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	240.00	611	0	73	146,559	0	146,559	17,587			

Tb 1.314

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (10/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.5/35-A	**Temporary removal and reinstallation of existing fence and handrail between Sta.**		**LS**	**1.00**	**169,170**	**0**	**20,300**	**169,170**	**0**	**169,170**	**20,300**	**189,470**	**189,470**	
	Removal of existing Fence	4-FENCE	L.m.	30.00	107	0	13	3,217	0	3,217	386			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	15.00	243	0	29	3,652	0	3,652	438			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	7.50	2,119	0	254	15,893	0	15,893	1,907			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	7.50	4,032	0	484	30,237	0	30,237	3,628			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	15.00	657	0	79	9,852	0	9,852	1,182			
	Installation of Fence	11-FENCE-FP	L.m.	60.00	1,300	0	156	78,030	0	78,030	9,364			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	1.50	2,119	0	254	3,179	0	3,179	381			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	1.50	4,032	0	484	6,047	0	6,047	726			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	20.25	272	0	33	5,514	0	5,514	662			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	20.25	58	0	7	1,184	0	1,184	142			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	20.25	611	0	73	12,366	0	12,366	1,484			
4.5/36-A	**Demolition and removal of existing platform between Sta. 12+030 and 12+090**		**LS**	**1.00**	**368,602**	**0**	**44,232**	**368,602**	**0**	**368,602**	**44,232**	**412,834**	**412,834**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	50.00	4,012	0	481	200,614	0	200,614	24,074			
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	30.00	2,095	0	251	62,863	0	62,863	7,544			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	110.00	287	0	34	31,521	0	31,521	3,783			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	110.00	58	0	7	6,431	0	6,431	772			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	110.00	611	0	73	67,173	0	67,173	8,061			
4.5/37-A	**Demolition and removal of existing Brgy. outpost at Sta. 13+800**		**LS**	**1.00**	**133,308**	**0**	**15,997**	**133,308**	**0**	**133,308**	**15,997**	**149,305**	**149,305**	
	Demolition and Removal of Existing Wooden	4-WOOD-ST	Sq.m.	50.00	396	0	48	19,817	0	19,817	2,378			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	10.00	4,012	0	481	40,123	0	40,123	4,815			
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	4.00	2,095	0	251	8,382	0	8,382	1,006			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	68.00	287	0	34	19,486	0	19,486	2,338			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	68.00	58	0	7	3,975	0	3,975	477			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	68.00	611	0	73	41,525	0	41,525	4,983			
4.5/38-A	**Demolition and removal of boat station at Sta. 13+740**		**LS**	**1.00**	**196,329**	**0**	**23,560**	**196,329**	**0**	**196,329**	**23,560**	**219,889**	**219,889**	
	Demolition and Removal of Pavement	4-DMP	Sq.m.	100.00	243	0	29	24,347	0	24,347	2,922			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	25.00	4,012	0	481	100,307	0	100,307	12,037			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	75.00	287	0	34	21,491	0	21,491	2,579			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	75.00	58	0	7	4,385	0	4,385	526			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	75.00	611	0	73	45,800	0	45,800	5,496			
4.5/39-A	**Demolition and removal of existing river wall between Sta. 13+800 and 13+930**		**LS**	**1.00**	**322,917**	**0**	**38,750**	**322,917**	**0**	**322,917**	**38,750**	**361,667**	**361,667**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	65.00	4,012	0	481	260,798	0	260,798	31,296			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	65.00	287	0	34	18,626	0	18,626	2,235			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	65.00	58	0	7	3,800	0	3,800	456			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	65.00	611	0	73	39,693	0	39,693	4,763			
4.5/40-A	**Demolition and removal of existing river wall between Sta. 14+070 and 14+250**		**LS**	**1.00**	**445,833**	**0**	**53,500**	**445,833**	**0**	**445,833**	**53,500**	**499,333**	**499,333**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	90.00	4,012	0	481	361,105	0	361,105	43,333			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	90.00	272	0	33	24,506	0	24,506	2,941			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	90.00	58	0	7	5,262	0	5,262	631			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	90.00	611	0	73	54,960	0	54,960	6,595			
4.5/41-A	**Demolition and removal of boat station at Sta. 14+880**		**LS**	**1.00**	**196,329**	**0**	**23,560**	**196,329**	**0**	**196,329**	**23,560**	**219,889**	**219,889**	
	Demolition and Removal of Pavement	4-DMP	Sq.m.	100.00	243	0	29	24,347	0	24,347	2,922			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	25.00	4,012	0	481	100,307	0	100,307	12,037			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	75.00	287	0	34	21,491	0	21,491	2,579			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	75.00	58	0	7	4,385	0	4,385	526			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	75.00	611	0	73	45,800	0	45,800	5,496			

Tb 1.315

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (11/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.5/42-A	**Removal of existing sandbags at Sta. 15+050**		**LS**	**1.00**	**127,344**	**0**	**15,281**	**127,344**	**0**	**127,344**	**15,281**	**142,626**	**142,626**	
	River Bank Excavation by Long Arm Backhoe, Hauling by Hopper Barge to Temp. Yard (Pasig)	4-DR-BH6	Cu.m	100.00	604	0	73	60,432	0	60,432	7,252			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	100.00	58	0	7	5,846	0	5,846	702			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	100.00	611	0	73	61,066	0	61,066	7,328			
4.5/43-A	**Demolition and removal of boat station at Sta. 15+290**		**LS**	**1.00**	**198,112**	**0**	**23,773**	**198,112**	**0**	**198,112**	**23,773**	**221,886**	**221,886**	
	Demolition and Removal of Pavement	4-DMP	Sq.m.	100.00	243	0	29	24,347	0	24,347	2,922			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	25.00	4,012	0	481	100,307	0	100,307	12,037			
	Hauling by Barge - 10km, incl. Loading & Un-Loading	4-H-BG10	Cu.m.	75.00	310	0	37	23,274	0	23,274	2,793			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	75.00	58	0	7	4,385	0	4,385	526			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	75.00	611	0	73	45,800	0	45,800	5,496			
4.5/44-A	**Demolition and removal of boat station at Sta. 15+440**		**LS**	**1.00**	**198,112**	**0**	**23,773**	**198,112**	**0**	**198,112**	**23,773**	**221,886**	**221,886**	
	Demolition and Removal of Pavement	4-DMP	Sq.m.	100.00	243	0	29	24,347	0	24,347	2,922			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	25.00	4,012	0	481	100,307	0	100,307	12,037			
	Hauling by Barge - 10km, incl. Loading & Un-Loading	4-H-BG10	Cu.m.	75.00	310	0	37	23,274	0	23,274	2,793			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	75.00	58	0	7	4,385	0	4,385	526			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	75.00	611	0	73	45,800	0	45,800	5,496			
4.5/45-A	**Demolition and removal of boat station at Sta. 16+150**		**LS**	**1.00**	**262,372**	**0**	**31,485**	**262,372**	**0**	**262,372**	**31,485**	**293,857**	**293,857**	
	Demolition and Removal of Existing Wooden	4-WOOD-ST	Sq.m.	100.00	396	0	48	39,634	0	39,634	4,756			
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	25.00	4,012	0	481	100,307	0	100,307	12,037			
	Hauling by Barge - 10km, incl. Loading & Un-Loading	4-H-BG10	Cu.m.	125.00	310	0	37	38,790	0	38,790	4,655			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	125.00	58	0	7	7,308	0	7,308	877			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	125.00	611	0	73	76,333	0	76,333	9,160			
4.5/46-A	**Temporary removal and reinstallation of wooden dolphins**		**no**	**33.00**	**14,654**	**0**	**1,758**	**483,580**	**0**	**483,580**	**58,030**	**16,412**	**541,610**	
	Removal of Foundation Pile (Pull Out) in the River (on Water)	4-RM-FP	Nos.	33.00	2,095	0	251	69,149	0	69,149	8,298			
	Driving Dolphin on Water	6-DOLPN	Nos.	33.00	10,265	0	1,232	338,741	0	338,741	40,649			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	79.20	287	0	34	22,695	0	22,695	2,723			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	79.20	58	0	7	4,630	0	4,630	556			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	79.20	611	0	73	48,364	0	48,364	5,804			
4.5/47-A	**Demolition and removal of portion of extended wall at Sta. 16+564**		**LS**	**1.00**	**148,611**	**0**	**17,833**	**148,611**	**0**	**148,611**	**17,833**	**166,444**	**166,444**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	30.00	4,012	0	481	120,368	0	120,368	14,444			
	Hauling by Barge - 2km, incl. Loading & Un-Loading	4-H-BG2	Cu.m.	30.00	272	0	33	8,169	0	8,169	980			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	30.00	58	0	7	1,754	0	1,754	210			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	30.00	611	0	73	18,320	0	18,320	2,198			
4.5/48-A	**Demolition and removal of existing revetment**		**m^3**	**6,265.88**	**4,968**	**0**	**596**	**31,128,605**	**0**	**31,128,605**	**3,735,433**	**5,564**	**34,864,038**	
	Demolition and Removal of Concrete/Metal Structure & Bridge on Water	4-DMB-W	Cu.m.	6,265.88	4,012	0	481	25,140,453	0	25,140,453	3,016,854			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	6,265.88	287	0	34	1,795,506	0	1,795,506	215,461			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	6,265.88	58	0	7	366,312	0	366,312	43,957			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	6,265.88	611	0	73	3,826,334	0	3,826,334	459,160			
4.5/49-A	**Demolition and restoration of existing sidewalks**		**m^2**	**1,835.90**	**2,319**	**0**	**278**	**4,258,262**	**0**	**4,258,262**	**510,991**	**2,598**	**4,769,254**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	367.18	2,119	0	254	778,071	0	778,071	93,369			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	367.18	287	0	34	105,217	0	105,217	12,626			
	Concrete Block Pavement	9-PV-B	Sq.m.	1,835.90	1,447	0	174	2,656,064	0	2,656,064	318,728			
	Sand Fill, in Small Area: V<100 cu.m./location	4-SF-SS	Cu.m.	275.39	1,261	0	151	347,371	0	347,371	41,685			
	Subgrade Preparation	9-SG	Sq.m.	1,835.90	69	0	8	125,850	0	125,850	15,102			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	367.18	58	0	7	21,466	0	21,466	2,576			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	367.18	611	0	73	224,224	0	224,224	26,907			

Tb 1.316

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (12/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.5/50-A	**Demolition and restoration of existing CHB wall**		**m^2**	**3,842.37**	**2,735**	**0**	**328**	**10,508,097**	**0**	**10,508,097**	**1,260,972**	**3,063**	**11,769,069**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	768.47	2,119	0	254	1,628,428	0	1,628,428	195,411			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	768.47	287	0	34	220,209	0	220,209	26,425			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	768.47	4,032	0	484	3,098,150	0	3,098,150	371,778			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	7,684.74	657	0	79	5,047,107	0	5,047,107	605,653			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	768.47	58	0	7	44,926	0	44,926	5,391			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	768.47	611	0	73	469,278	0	469,278	56,313			
4.5/51-A	**Temporary removal and re-installation of existing steel handrail**		**lm**	**195.30**	**1,544**	**0**	**185**	**301,582**	**0**	**301,582**	**36,190**	**1,730**	**337,772**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	19.53	2,119	0	254	41,385	0	41,385	4,966			
	Temporary Removal and Re-installation of Existing Steel Handrail	11-TMP-SHR	L.m.	195.30	93	0	11	18,168	0	18,168	2,180			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	19.53	4,032	0	484	78,736	0	78,736	9,448			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	78.12	657	0	79	51,307	0	51,307	6,157			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	117.18	287	0	34	33,578	0	33,578	4,029			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	117.18	58	0	7	6,851	0	6,851	822			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	117.18	611	0	73	71,557	0	71,557	8,587			
4.5/52-A	**Restoration of existing revetment**		**m^3**	**690.17**	**7,315**	**0**	**878**	**5,048,841**	**0**	**5,048,841**	**605,861**	**8,193**	**5,654,701**	
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	690.17	4,032	0	484	2,782,442	0	2,782,442	333,893			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	3,450.83	657	0	79	2,266,398	0	2,266,398	271,968			
4.5/1-B	**Demolition and removal of existing concrete wall and structure between Sta. 0+921**		**LS**	**1.00**	**259,299**	**0**	**31,116**	**259,299**	**0**	**259,299**	**31,116**	**290,415**	**290,415**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	93.00	2,119	0	254	197,071	0	197,071	23,648			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	93.00	58	0	7	5,437	0	5,437	652			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	93.00	611	0	73	56,792	0	56,792	6,815			

Tb 1.317

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (13/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.5/2-B	**Demolition and removal of existing net fence between Sta. 0+921 and 1+338L**		**LS**	**1.00**	**422,294**	**0**	**50,675**	**422,294**	**0**	**422,294**	**50,675**	**472,970**	**472,970**	
	Removal of existing Fence	4-FENCE	L.m.	335.00	107	0	13	35,927	0	35,927	4,311			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	167.50	243	0	29	40,781	0	40,781	4,894			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	83.75	2,119	0	254	177,470	0	177,470	21,296			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	251.25	58	0	7	14,688	0	14,688	1,763			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	251.25	611	0	73	153,429	0	153,429	18,411			
4.5/3-B	**Demolition and removal of existing concrete road between Sta. 0+921 and 1+338L**		**LS**	**1.00**	**926,033**	**0**	**111,124**	**926,033**	**0**	**926,033**	**111,124**	**1,037,157**	**1,037,157**	
	Demolition and Removal of Pavement	4-DMP	Sq.m.	2,330.43	243	0	29	567,383	0	567,383	68,086			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	536.00	58	0	7	31,335	0	31,335	3,760			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	536.00	611	0	73	327,315	0	327,315	39,278			
4.5/4-B	**Demolition and removal of existing guard rail between Sta. 0+921 and 1+338L**		**LS**	**1.00**	**56,502**	**0**	**6,780**	**56,502**	**0**	**56,502**	**6,780**	**63,282**	**63,282**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	8.07	2,119	0	254	17,094	0	17,094	2,051			
	Removal of existing guardrail	4-GRAIL	L.m.	121.00	281	0	34	34,010	0	34,010	4,081			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	8.07	58	0	7	472	0	472	57			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	8.07	611	0	73	4,926	0	4,926	591			
4.5/5-B	**Temporary relocation and re-installation of lighting post between Sta. 0+921 and 1**		**LS**	**1.00**	**176,935**	**0**	**21,232**	**176,935**	**0**	**176,935**	**21,232**	**198,167**	**198,167**	
	Removal of Lighting Post	4-LPOST	Nos.	13.00	963	0	116	12,521	0	12,521	1,502			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	13.00	2,119	0	254	27,548	0	27,548	3,306			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	13.00	4,032	0	484	52,410	0	52,410	6,289			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	62.40	657	0	79	40,982	0	40,982	4,918			
	Installation of Lighting Post for 70kW	12-LPOST-70	Nos.	13.00	2,675	0	321	34,775	0	34,775	4,173			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	13.00	58	0	7	760	0	760	91			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	13.00	611	0	73	7,939	0	7,939	953			
4.5/6-B	**Demolition and removal of existing concrete wall and structure between Sta. 3+033**		**LS**	**1.00**	**426,589**	**0**	**51,191**	**426,589**	**0**	**426,589**	**51,191**	**477,780**	**477,780**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	153.00	2,119	0	254	324,213	0	324,213	38,906			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	153.00	58	0	7	8,945	0	8,945	1,073			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	153.00	611	0	73	93,431	0	93,431	11,212			
4.5/7-B	**Demolition and removal of existing net fence between Sta. 3+033 and 3+621R**		**LS**	**1.00**	**751,306**	**0**	**90,157**	**751,306**	**0**	**751,306**	**90,157**	**841,463**	**841,463**	
	Removal of existing Fence	4-FENCE	L.m.	596.00	107	0	13	63,917	0	63,917	7,670			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	298.00	243	0	29	72,553	0	72,553	8,706			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	149.00	2,119	0	254	315,737	0	315,737	37,888			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	447.00	58	0	7	26,132	0	26,132	3,136			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	447.00	611	0	73	272,966	0	272,966	32,756			
4.5/8-B	**Demolition & removal of existing concrete road between Sta. 3+033 and 3+621R**		**LS**	**1.00**	**993,412**	**0**	**119,209**	**993,412**	**0**	**993,412**	**119,209**	**1,112,622**	**1,112,622**	
	Demolition and Removal of Pavement	4-DMP	Sq.m.	2,500.00	243	0	29	608,666	0	608,666	73,040			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	575.00	58	0	7	33,615	0	33,615	4,034			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	575.00	611	0	73	351,131	0	351,131	42,136			
4.5/9-B	**Temporary relocation and re-installation of lighting post between Sta. 3+033 and 3**		**LS**	**1.00**	**136,104**	**0**	**16,332**	**136,104**	**0**	**136,104**	**16,332**	**152,436**	**152,436**	
	Removal of Lighting Post	4-LPOST	Nos.	10.00	963	0	116	9,631	0	9,631	1,156			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	10.00	2,119	0	254	21,190	0	21,190	2,543			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	10.00	4,032	0	484	40,316	0	40,316	4,838			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	48.00	657	0	79	31,525	0	31,525	3,783			
	Installation of Lighting Post for 70kW	12-LPOST-70	Nos.	10.00	2,675	0	321	26,750	0	26,750	3,210			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	10.00	58	0	7	585	0	585	70			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	10.00	611	0	73	6,107	0	6,107	733			

Tb 1.318

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (14/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.5/10-B	**Demolition and removal of existing steel structure, gate, plate and speaker post bet**		**LS**	**1.00**	**341,581**	**0**	**40,990**	**341,581**	**0**	**341,581**	**40,990**	**382,571**	**382,571**	
	Removal of existing Fence	4-FENCE	L.m.	10.00	107	0	13	1,072	0	1,072	129			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	400.00	243	0	29	97,387	0	97,387	11,686			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	50.00	2,119	0	254	105,952	0	105,952	12,714			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	205.00	58	0	7	11,985	0	11,985	1,438			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	205.00	611	0	73	125,186	0	125,186	15,022			
4.5/11-B	**Demolition and removal of existing concrete wall and structure between Sta. 3+898**		**LS**	**1.00**	**741,652**	**0**	**88,998**	**741,652**	**0**	**741,652**	**88,998**	**830,650**	**830,650**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	266.00	2,119	0	254	563,665	0	563,665	67,640			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	266.00	58	0	7	15,551	0	15,551	1,866			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	266.00	611	0	73	162,436	0	162,436	19,492			
4.5/12-B	**Demolition and removal of existing net fence between Sta. 3+898 and 4+670L**		**LS**	**1.00**	**913,417**	**0**	**109,610**	**913,417**	**0**	**913,417**	**109,610**	**1,023,027**	**1,023,027**	
	Removal of existing Fence	4-FENCE	L.m.	724.60	107	0	13	77,709	0	77,709	9,325			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	362.30	243	0	29	88,208	0	88,208	10,585			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	181.15	2,119	0	254	383,864	0	383,864	46,064			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	543.45	58	0	7	31,771	0	31,771	3,813			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	543.45	611	0	73	331,864	0	331,864	39,824			
4.5/13-B	**Demolition & removal of existing concrete road between Sta. 3+898 and 4+670L**		**LS**	**1.00**	**1,603,367**	**0**	**192,404**	**1,603,367**	**0**	**1,603,367**	**192,404**	**1,795,771**	**1,795,771**	
	Demolition and Removal of Pavement	4-DMP	Sq.m.	4,035.00	243	0	29	982,387	0	982,387	117,886			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	928.05	58	0	7	54,255	0	54,255	6,511			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	928.05	611	0	73	566,725	0	566,725	68,007			
4.5/14-B	**Temporary relocation and re-installation of lighting post between Sta. 3+898 and 4**		**LS**	**1.00**	**558,026**	**0**	**66,963**	**558,026**	**0**	**558,026**	**66,963**	**624,989**	**624,989**	
	Removal of Lighting Post	4-LPOST	Nos.	41.00	963	0	116	39,488	0	39,488	4,739			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	41.00	2,119	0	254	86,881	0	86,881	10,426			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	41.00	4,032	0	484	165,294	0	165,294	19,835			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	196.80	657	0	79	129,252	0	129,252	15,510			
	Installation of Lighting Post for 70kW	12-LPOST-70	Nos.	41.00	2,675	0	321	109,676	0	109,676	13,161			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	41.00	58	0	7	2,397	0	2,397	288			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	41.00	611	0	73	25,037	0	25,037	3,004			
4.5/15-B	**Demolition and removal of existing sluice structure and steel post between Sta. 3+8**		**LS**	**1.00**	**254,390**	**0**	**30,527**	**254,390**	**0**	**254,390**	**30,527**	**284,917**	**284,917**	
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	100.00	2,119	0	254	211,904	0	211,904	25,428			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	100.00	58	0	7	5,846	0	5,846	702			
	Hauling - 10 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS10	Cu.m.	100.00	366	0	44	36,640	0	36,640	4,397			
4.7/1-A	**River bank excavation**		**m^3**	**33,200.00**	**1,417**	**0**	**170**	**47,038,053**	**0**	**47,038,053**	**5,644,566**	**1,587**	**52,682,619**	dumped in backfill
	River Bank Excavation by Long Arm Backhoe, Hauling by Hopper Barge to Temp. Yard (Pasig)	4-DR-BH6	Cu.m	33,171.60	604	0	73	20,046,204	0	20,046,204	2,405,544			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	33,171.60	58	0	7	1,939,259	0	1,939,259	232,711			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	33,171.60	611	0	73	20,256,650	0	20,256,650	2,430,798			
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	33,171.60	145	0	17	4,795,941	0	4,795,941	575,513			

Tb 1.319

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (15/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.8/1-A	**Excavation for manholes and junction manholes**		**m^3**	**8,400.00**	**780**	**0**	**94**	**6,551,166**	**0**	**6,551,166**	**786,140**	**873**	**7,337,306**	
4.8/1-(1)	Excavation for manholes		Cu.m.	6,800.75	804	0	96	5,465,530	0	5,465,530	655,864	900	6,121,393	
	Excavation, Small Amount (Volume<100cu.m./location) by Backhoe (0.2cu.m.)	4-EXB-SS	Cu.m.	6,800.75	347	0	42	2,360,721	0	2,360,721	283,286			
	Clearing and Grubbing	4-CG	Sq.m.	6,603.00	24	0	3	157,634	0	157,634	18,916			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	0.00	243	0	29	0	0	0	0			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 2.0m (Single Waling)	6-SUPT-20	L.m.	0.00	513	0	62	0	0	0	0			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 3.5m (Double Waling)	6-SUPT-35	L.m.	151.20	1,029	0	123	155,510	0	155,510	18,661			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 2.0m	6-LSP-20	L.m.	0.00	2,081	0	250	0	0	0	0			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 3.5m	6-LSP-35	L.m.	151.20	3,214	0	386	485,919	0	485,919	58,310			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	2,213.24	287	0	34	634,211	0	634,211	76,105			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	2,213.24	611	0	73	1,351,544	0	1,351,544	162,185			
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	2,213.24	145	0	17	319,990	0	319,990	38,399			
4.8/1-(2)	Excavation for junction manholes (junction pits)		Cu.m.	1,595.04	681	0	82	1,085,636	0	1,085,636	130,276	762	1,215,913	
	Excavation, Small Amount (Volume<100cu.m./location) by Backhoe (0.2cu.m.)	4-EXB-SS	Cu.m.	1,595.04	347	0	42	553,683	0	553,683	66,442			
	Clearing and Grubbing	4-CG	Sq.m.	1,117.49	24	0	3	26,678	0	26,678	3,201			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	0.00	243	0	29	0	0	0	0			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 2.0m (Single Waling)	6-SUPT-20	L.m.	0.00	513	0	62	0	0	0	0			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 3.5m (Double Waling)	6-SUPT-35	L.m.	0.00	1,029	0	123	0	0	0	0			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 2.0m	6-LSP-20	L.m.	0.00	2,081	0	250	0	0	0	0			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 3.5m	6-LSP-35	L.m.	0.00	3,214	0	386	0	0	0	0			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	485.00	287	0	34	138,980	0	138,980	16,678			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	485.00	611	0	73	296,174	0	296,174	35,541			
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	485.00	145	0	17	70,122	0	70,122	8,415			
4.8/1-B	**Excavation for manholes and junction manholes**		**m^3**	**2,400.00**	**1,036**	**0**	**124**	**2,487,376**	**0**	**2,487,376**	**298,485**	**1,161**	**2,785,861**	
	Excavation, Small Amount (Volume<100cu.m./location) by Backhoe (0.2cu.m.)	4-EXB-SS	Cu.m.	2,383.71	347	0	42	827,450	0	827,450	99,294			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	23.10	2,119	0	254	48,950	0	48,950	5,874			
	Hauling - 10 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS10	Cu.m.	2,117.12	366	0	44	775,706	0	775,706	93,085			
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	2,117.12	145	0	17	306,092	0	306,092	36,731			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 2.0m (Single Waling)	6-SUPT-20	L.m.	0.00	513	0	62	0	0	0	0			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 3.5m (Double Waling)	6-SUPT-35	L.m.	124.74	1,029	0	123	128,296	0	128,296	15,395			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 2.0m	6-LSP-20	L.m.	0.00	2,081	0	250	0	0	0	0			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 3.5m	6-LSP-35	L.m.	124.74	3,214	0	386	400,884	0	400,884	48,106			

Tb 1.320

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (16/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.8/2-A	**Excavation for pipe culverts**		**m^3**	**7,400.00**	**784**	**0**	**94**	**5,804,193**	**0**	**5,804,193**	**696,503**	**878**	**6,500,696**	
	Excavation, Small Amount (Volume<100cu.m./location) by Backhoe (0.2cu.m.)	4-EXB-SS	Cu.m.	7,342.31	347	0	42	2,548,714	0	2,548,714	305,846			
	Clearing and Grubbing	4-CG	Sq.m.	4,938.36	24	0	3	117,894	0	117,894	14,147			
	Demolition and Removal of Pavement	4-DMP	Sq.m.	0.00	243	0	29	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 2.0m (Single Waling)	6-SUPT-20	L.m.	120.54	513	0	62	61,889	0	61,889	7,427			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 3.5m (Double Waling)	6-SUPT-35	L.m.	0.00	1,029	0	123	0	0	0	0			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 2.0m	6-LSP-20	L.m.	120.54	2,081	0	250	250,851	0	250,851	30,102			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 3.5m	6-LSP-35	L.m.	0.00	3,214	0	386	0	0	0	0			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	3,740.32	611	0	73	2,284,071	0	2,284,071	274,088			
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	3,740.32	145	0	17	540,774	0	540,774	64,893			
4.8/2-B	**Excavation for pipe culverts**		**m^3**	**6,800.00**	**853**	**0**	**102**	**5,797,215**	**0**	**5,797,215**	**695,666**	**955**	**6,492,881**	
	Excavation, Small Amount (Volume<100cu.m./location) by Backhoe (0.2cu.m.)	4-EXB-SS	Cu.m.	6,722.73	347	0	42	2,333,640	0	2,333,640	280,037			
	Hauling - 10 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS10	Cu.m.	4,807.32	366	0	44	1,761,390	0	1,761,390	211,367			
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	4,807.32	145	0	17	695,041	0	695,041	83,405			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 2.0m (Single Waling)	6-SUPT-20	L.m.	388.19	513	0	62	199,307	0	199,307	23,917			
	Support for Lightweight SSP, Furnishing, installation and removal, less than 3.5m (Double Waling)	6-SUPT-35	L.m.	0.00	1,029	0	123	0	0	0	0			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 2.0m	6-LSP-20	L.m.	388.19	2,081	0	250	807,837	0	807,837	96,940			
	Temporary Lightweight SSP, Furnishing, installation and removal, less than 3.5m	6-LSP-35	L.m.	0.00	3,214	0	386	0	0	0	0			
4.8/3-A	**Excavation for other structures**		**m^3**	**6,700.00**	**909**	**0**	**109**	**6,088,893**	**0**	**6,088,893**	**730,667**	**1,018**	**6,819,560**	
	Excavation, Manpower	4-EXM	Cu.m.	6,645.20	586	0	70	3,897,347	0	3,897,347	467,682			
	Clearing and Grubbing	4-CG	Sq.m.	1,049.62	24	0	3	25,058	0	25,058	3,007			
	Hauling - 15 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS15	Cu.m.	2,868.60	611	0	73	1,751,746	0	1,751,746	210,210			
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	2,868.60	145	0	17	414,741	0	414,741	49,769			
4.8/3-B	**Excavation for other structures**		**m^3**	**12,400.00**	**220**	**0**	**26**	**2,724,454**	**0**	**2,724,454**	**326,934**	**246**	**3,051,388**	
	Excavation and Loading by Backhoe (0.63 cu.m.)	4-EXBS	Cu.m.	12,353.15	91	0	11	1,119,383	0	1,119,383	134,326			
	Clearing and Grubbing	4-CG	Sq.m.	0.00	24	0	3	0	0	0	0			
	Hauling - 10 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS10	Cu.m.	3,141.18	366	0	44	1,150,920	0	1,150,920	138,110			
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	3,141.18	145	0	17	454,151	0	454,151	54,498			
4.11/1-B	**Dike Embankment**		**m^3**	**11,100.00**	**927**	**0**	**111**	**10,288,952**	**0**	**10,288,952**	**1,234,674**	**1,038**	**11,523,626**	
	Removal and Stripping of Topsoil	4-RST	Cu.m.	0.00	552	0	66	0	0	0	0			
	Dike Embankment (with Parchased Sand)	4-DEM-S	Cu.m.	11,004.00	935	0	112	10,288,952	0	10,288,952	1,234,674			
4.15/1-A	**Free-draining backfill**		**m^3**	**26,400.00**	**1,066**	**0**	**128**	**28,141,279**	**0**	**28,141,279**	**3,376,953**	**1,194**	**31,518,232**	
	Clearing and Grubbing	4-CG	Sq.m.	13,200.00	24	0	3	315,125	0	315,125	37,815			
	Backfill, about Structures and Services (with Purchased Sand)	4-BF2-S	Cu.m.	26,309.85	1,058	0	127	27,826,154	0	27,826,154	3,339,138			Backfill behind revetment
4.16/1-A	**Random backfill**		**m^3**	**10,300.00**	**267**	**0**	**32**	**2,748,025**	**0**	**2,748,025**	**329,763**	**299**	**3,077,788**	
	Backfill, about Structures and Services (with Excavated Material)	4-BF2	Cu.m.	10,284.79	267	0	32	2,748,025	0	2,748,025	329,763			Backfill behind small structures
4.16/1-B	**Random backfill**		**m^3**	**11,200.00**	**267**	**0**	**32**	**2,990,467**	**0**	**2,990,467**	**358,856**	**299**	**3,349,323**	
	Backfill, about Structures and Services (with Excavated Material)	4-BF2	Cu.m.	11,192.16	267	0	32	2,990,467	0	2,990,467	358,856			Backfill behind small structures
4.17/1-A	**Zone B pipe backfill**		**m^3**	**1,900.00**	**1,214**	**0**	**146**	**2,306,337**	**0**	**2,306,337**	**276,760**	**1,360**	**2,583,097**	
	Sand Fill, in Small Area: V<100 cu.m./location	4-SF-SS	Cu.m.	1,828.40	1,261	0	151	2,306,337	0	2,306,337	276,760			purchased material
4.17/1-B	**Zone B pipe backfill**		**m^3**	**2,300.00**	**1,246**	**0**	**149**	**2,864,958**	**0**	**2,864,958**	**343,795**	**1,395**	**3,208,753**	
	Sand Fill, in Small Area: V<100 cu.m./location	4-SF-SS	Cu.m.	2,271.26	1,261	0	151	2,864,958	0	2,864,958	343,795			purchased material

Tb 1.321

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (17/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.17/2-A	**Zone C pipe backfill**		**m^3**	**4,200.00**	**149**	**0**	**18**	**624,649**	**0**	**624,649**	**74,958**	**167**	**699,607**	excavated material
	Backfill, Common/Random (with Excavated Material)	4-BF3	Cu.m.	4,120.53	152	0	18	624,649	0	624,649	74,958			
4.17/2-B	**Zone C pipe backfill**		**m^3**	**1,100.00**	**140**	**0**	**17**	**153,746**	**0**	**153,746**	**18,450**	**157**	**172,196**	excavated material
	Backfill, Common/Random (with Excavated Material)	4-BF3	Cu.m.	1,014.20	152	0	18	153,746	0	153,746	18,450			
4.18/1-B	**Dredging**		**m^3**	**889,100.00**	**404**	**0**	**48**	**359,321,321**	**0**	**359,321,321**	**43,118,559**	**453**	**402,439,880**	
	Dredging (for clay material)	4-DR-CLAY	Cu.m	576,800.00	205	0	25	118,015,598	0	118,015,598	14,161,872			
	Dredging (for sand material)	4-DR-SAND	Cu.m	312,300.00	239	0	29	74,547,474	0	74,547,474	8,945,697			
	Hauling by Barge - 8km, excl. Loading & Un-Loading (for clay material)	4-H-BG8	Cu.m.	576,800.00	174	0	21	100,630,467	0	100,630,467	12,075,656			
	Hauling by Barge - 11km, excl. Loading & Un-Loading (for sand material)	4-H-BG11	Cu.m.	312,300.00	212	0	25	66,127,782	0	66,127,782	7,935,334			
4.19/1-B	**Disposal of dredged material Type A**		**m^3**	**267,500.00**	**1,247**	**755**	**240**	**333,557,617**	**201,982,033**	**535,539,649**	**64,264,758**	**2,242**	**599,804,407**	
	Moisture Content, ASTM D2216	-	Sample	268.00	30	0	4	8,040	0	8,040	965			
	Particle size, ASTM D422	-	Sample	268.00	200	0	24	53,600	0	53,600	6,432			
	Mixing and Compaction, ASTM 558, 698	-	Sample	268.00	1,500	0	180	402,000	0	402,000	48,240			
	Cone Penetrate Test, JIS A 1228	-	Sample	268.00	750	0	90	201,000	0	201,000	24,120			
	Boring (L=10m)	-	no	1.00	17,250	0	2,070	17,250	0	17,250	2,070			For Observation Well
	Installation of Observation Well at Backfill Site	12-O-WELL	L.m.	10.00	111	0	13	1,106	0	1,106	133			For Observation Well
	Installation and Removal of Temporary Fence	11-TMP-EN	L.m.	933.33	409	0	49	381,946	0	381,946	45,834			Temporary Fence
	Removal and Stripping of Topsoil	4-RST	Cu.m.	9,061.33	552	0	66	5,002,695	0	5,002,695	600,323			Removal and Stripping of Topsoil incl. cleaning of formation surface
	Spreading in Stockpile or Backfill Site	4-SP	Cu.m.	9,000.00	24	0	3	215,473	0	215,473	25,857			Spreading of stripped Topsoil
	Excavation, Small Amount (Volume<100cu.m./location) by Backhoe (0.2cu.m.)	4-EXB-SS	Cu.m.	209.33	347	0	42	72,665	0	72,665	8,720			Excavation for other structure
	Backfill, about Structures and Services (with Excavated Material)	4-BF2	Cu.m.	46.00	267	0	32	12,291	0	12,291	1,475			Random backfill
	Installation of RC Pipe Culvert, 910mm (36") Dia.	10-CP-36	L.m.	10.67	3,565	0	428	38,024	0	38,024	4,563			Temporary RC Pipe
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	3.00	4,265	0	512	12,795	0	12,795	1,535			Concrete Structure
	Concrete Work for Leveling Concrete, Class-F, Manpower Placing	5-CF-M	Cu.m.	16.00	3,822	0	459	61,153	0	61,153	7,338			Leveling Concrete
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	31.67	657	0	79	20,798	0	20,798	2,496			
	Formwork for Leveling Concrete	5-FR-LVL	Sq.m.	5.00	475	0	57	2,376	0	2,376	285			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.07	54,267	0	6,512	3,618	0	3,618	434			
	Gravel Bedding and Backfill	7-GBB	Cu.m.	600.00	1,580	0	190	948,273	0	948,273	113,793			Temporary Road
	Removal of Existing Pipe at Backfill Site	4-RM-PIPE	L.m.	20.00	313	0	38	6,263	0	6,263	752			Removal of Pipe
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	166.67	2,119	0	254	353,174	0	353,174	42,381			Removal of Concrete Structure
	Provision of Steel Metal for Temporary Jetty at Laguna Area (Napindan Channel Side)	11-MT-SMTBLN	L.S.	0.33	26,691,904	0	3,203,028	8,897,301	0	8,897,301	1,067,676			Temporary Jetty
	Provision of Steel Metal for Temporary Bridge at Laguna Area (Existing Channel)	11-MT-SMTBLB	L.S.	0.33	1,357,315	0	162,878	452,438	0	452,438	54,293			Temporary Bridge
	Installation of Temporary Covering Plate	11-MT-ITCP	Sq. m	480.00	810	0	97	388,924	0	388,924	46,671			Temporary Jetty/Bridge
	Removal of Temporary Covering Plate	11-MT-RTCP	Sq. m	480.00	502	0	60	240,811	0	240,811	28,897			Temporary Jetty/Bridge
	Temporary H-Beam, Furnishing and Driving	6-HT	L.m.	933.00	9,362	0	1,123	8,734,408	0	8,734,408	1,048,129			Temporary Jetty/Bridge
	Pulling Out of H-Beam	6-SP-OH	L.m.	933.00	170	0	20	159,028	0	159,028	19,083			Temporary Jetty/Bridge
	Loading, Using Backhoe (1.0 cu.m.) at Napindan Jetty	4-LD4	Cu.m.	267,500.00	104	0	13	27,929,170	0	27,929,170	3,351,500			Loading at temporary jetty
	Hauling - 0.5 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS05	Cu.m.	267,500.00	90	0	11	24,012,773	0	24,012,773	2,881,533			Hauling from jetty to plant
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	267,500.00	58	0	7	15,638,427	0	15,638,427	1,876,611			Dump into plant
	Installation and Removal of Mixing Plant		no	1.00	5,436,291	14,934,415	2,444,485	5,436,291	14,934,415	20,370,706	2,444,485			
	Solidification/Stabilization of Dredged Material with 75 kg/Cu.m. Cement Additive	4-SOLD-PC-75	Cu.m.	267,500.00	569	699	152	152,096,830	187,047,617	339,144,447	40,697,334			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	267,500.00	58	0	7	15,638,427	0	15,638,427	1,876,611			Loading to dump truck
	Hauling - 1 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS1	Cu.m.	267,500.00	103	0	12	27,443,170	0	27,443,170	3,293,180			Hauling within backfill site
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	267,500.00	145	0	17	38,675,078	0	38,675,078	4,641,009			

Tb 1.322

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (18/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.19/2-B	**Disposal of dredged material Type B**		**m^3**	**309,300.00**	**1,070**	**748**	**218**	**331,014,403**	**231,210,408**	**562,224,811**	**67,466,977**	**2,036**	**629,691,788**	
	Moisture Content, ASTM D2216	-	Sample	310.00	30	0	4	9,300	0	9,300	1,116			
	Particle size, ASTM D422	-	Sample	310.00	200	0	24	62,000	0	62,000	7,440			
	Mixing and Compaction, ASTM 558, 698	-	Sample	310.00	1,500	0	180	465,000	0	465,000	55,800			
	Cone Penetrate Test, JIS A 1228	-	Sample	310.00	750	0	90	232,500	0	232,500	27,900			
	Boring (L=10m)	-	no	1.00	17,250	0	2,070	17,250	0	17,250	2,070			For Observation Well
	Installation of Observation Well at Backfill Site	12-O-WELL	L.m.	10.00	111	0	13	1,106	0	1,106	133			For Observation Well
	Installation and Removal of Temporary Fence	11-TMP-EN	L.m.	933.33	409	0	49	381,946	0	381,946	45,834			Temporary Fence
	Removal and Stripping of Topsoil	4-RST	Cu.m.	9,061.33	552	0	66	5,002,695	0	5,002,695	600,323			Removal and Stripping of Topsoil incl. cleaning of formation surface
	Spreading in Stockpile or Backfill Site	4-SP	Cu.m.	9,000.00	24	0	3	215,473	0	215,473	25,857			Spreading of stripped Topsoil
	Excavation, Small Amount (Volume<100cu.m./location) by Backhoe (0.2cu.m.)	4-EXB-SS	Cu.m.	209.33	347	0	42	72,665	0	72,665	8,720			Excavation for other structure
	Backfill, about Structures and Services (with Excavated Material)	4-BF2	Cu.m.	46.00	267	0	32	12,291	0	12,291	1,475			Random backfill
	Installation of RC Pipe Culvert, 910mm (36") Dia.	10-CP-36	L.m.	10.67	3,565	0	428	38,024	0	38,024	4,563			Temporary RC Pipe
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	3.00	4,265	0	512	12,795	0	12,795	1,535			Concrete Structure
	Concrete Work for Leveling Concrete, Class-F, Manpower Placing	5-CF-M	Cu.m.	16.00	3,822	0	459	61,153	0	61,153	7,338			Leveling Concrete
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	31.67	657	0	79	20,798	0	20,798	2,496			
	Formwork for Leveling Concrete	5-FR-LVL	Sq.m.	5.00	475	0	57	2,376	0	2,376	285			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.07	54,267	0	6,512	3,618	0	3,618	434			
	Gravel Bedding and Backfill	7-GBB	Cu.m.	600.00	1,580	0	190	948,273	0	948,273	113,793			Temporary Road
	Removal of Existing Pipe at Backfill Site	4-RM-PIPE	L.m.	20.00	313	0	38	6,263	0	6,263	752			Removal of Pipe
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	166.67	2,119	0	254	353,174	0	353,174	42,381			Removal of Concrete Structure
	Provision of Steel Metal for Temporary Jetty at Laguna Area (Napindan Channel Side)	11-MT-SMTBLN	L.S.	0.33	26,691,904	0	3,203,028	8,897,301	0	8,897,301	1,067,676			Temporary Jetty
	Provision of Steel Metal for Temporary Bridge at Laguna Area (Existing Channel)	11-MT-SMTBLB	L.S.	0.33	1,357,315	0	162,878	452,438	0	452,438	54,293			Temporary Bridge
	Installation of Temporary Covering Plate	11-MT-ITCP	Sq. m	480.00	810	0	97	388,924	0	388,924	46,671			Temporary Jetty/Bridge
	Removal of Temporary Covering Plate	11-MT-RTCP	Sq. m	480.00	502	0	60	240,811	0	240,811	28,897			Temporary Jetty/Bridge
	Temporary H-Beam, Furnishing and Driving	6-HT	L.m.	933.00	9,362	0	1,123	8,734,408	0	8,734,408	1,048,129			Temporary Jetty/Bridge
	Pulling Out of H-Beam	6-SP-OH	L.m.	933.00	170	0	20	159,028	0	159,028	19,083			Temporary Jetty/Bridge
	Loading, Using Backhoe (1.0 cu.m.) at Napindan Jetty	4-LD4	Cu.m.	309,300.00	104	0	13	32,293,429	0	32,293,429	3,875,211			Loading at temporary jetty
	Hauling - 0.5 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS05	Cu.m.	309,300.00	90	0	11	27,765,050	0	27,765,050	3,331,806			Hauling from jetty to plant
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	309,300.00	58	0	7	18,082,114	0	18,082,114	2,169,854			Dump into plant
	Installation and Removal of Mixing Plant		no	1.00	5,436,291	14,934,415	2,444,485	5,436,291	14,934,415	20,370,706	2,444,485			
	Solidification/Stabilization of Dredged Material with 50 kg/Cu.m. Cement Additive	4-SOLD-PC-50	Cu.m.	309,300.00	408	699	133	126,113,798	216,275,992	342,389,791	41,086,775			
	Loading, Using Backhoe (0.63 cu.m.)	4-LD3	Cu.m.	309,300.00	58	0	7	18,082,114	0	18,082,114	2,169,854			Loading to dump truck
	Hauling - 1 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS1	Cu.m.	309,300.00	103	0	12	31,731,485	0	31,731,485	3,807,778			Hauling within backfill site
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	309,300.00	145	0	17	44,718,511	0	44,718,511	5,366,221			

Tb 1.323

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (19/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
4.19/3-B	**Disposal of dredged material Type C**		**m^3**	**312,300.00**	**448**	**0**	**54**	**139,897,870**	**0**	**139,897,870**	**16,787,744**	**502**	**156,685,615**	
	Moisture Content, ASTM D2216	-	Sample	313.00	30	0	4	9,390	0	9,390	1,127			
	Particle size, ASTM D422	-	Sample	313.00	200	0	24	62,600	0	62,600	7,512			
	Boring (L=10m)	-	no	1.00	17,250	0	2,070	17,250	0	17,250	2,070			For Observation Well
	Installation of Observation Well at Backfill Site	12-O-WELL	L.m.	10.00	111	0	13	1,106	0	1,106	133			For Observation Well
	Installation and Removal of Temporary Fence	11-TMP-EN	L.m.	933.33	409	0	49	381,946	0	381,946	45,834			Temporary Fence
	Removal and Stripping of Topsoil	4-RST	Cu.m.	9,061.33	552	0	66	5,002,695	0	5,002,695	600,323			Removal and Stripping of Topsoil incl. cleaning of formation surface
	Spreading in Stockpile or Backfill Site	4-SP	Cu.m.	9,000.00	24	0	3	215,473	0	215,473	25,857			Spreading of stripped Topsoil
	Excavation, Small Amount (Volume<100cu.m./location) by Backhoe (0.2cu.m.)	4-EXB-SS	Cu.m.	209.33	347	0	42	72,665	0	72,665	8,720			Excavation for other structure
	Backfill, about Structures and Services (with Excavated Material)	4-BF2	Cu.m.	46.00	267	0	32	12,291	0	12,291	1,475			Random backfill
	Installation of RC Pipe Culvert, 910mm (36") Dia.	10-CP-36	L.m.	10.67	3,565	0	428	38,024	0	38,024	4,563			Temporary RC Pipe
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	3.00	4,265	0	512	12,795	0	12,795	1,535			Concrete Structure
	Concrete Work for Leveling Concrete, Class-F, Manpower Placing	5-CF-M	Cu.m.	16.00	3,822	0	459	61,153	0	61,153	7,338			Leveling Concrete
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	31.67	657	0	79	20,798	0	20,798	2,496			
	Formwork for Leveling Concrete	5-FR-LVL	Sq.m.	5.00	475	0	57	2,376	0	2,376	285			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.07	54,267	0	6,512	3,618	0	3,618	434			
	Gravel Bedding and Backfill	7-GBB	Cu.m.	600.00	1,580	0	190	948,273	0	948,273	113,793			Temporary Road
	Removal of Existing Pipe at Backfill Site	4-RM-PIPE	L.m.	20.00	313	0	38	6,263	0	6,263	752			Removal of Pipe
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	166.67	2,119	0	254	353,174	0	353,174	42,381			Removal of Concrete Structure
	Provision of Steel Metal for Temporary Jetty at Laguna Area (Napindan Channel Side)	11-MT-SMTBLN	L.S.	0.33	26,691,904	0	3,203,028	8,897,301	0	8,897,301	1,067,676			Temporary Jetty
	Provision of Steel Metal for Temporary Bridge at Laguna Area (Existing Channel)	11-MT-SMTBLB	L.S.	0.33	1,357,315	0	162,878	452,438	0	452,438	54,293			Temporary Bridge
	Installation of Temporary Covering Plate	11-MT-ITCP	Sq. m	480.00	810	0	97	388,924	0	388,924	46,671			Temporary Jetty/Bridge
	Removal of Temporary Covering Plate	11-MT-RTCP	Sq. m	480.00	502	0	60	240,811	0	240,811	28,897			Temporary Jetty/Bridge
	Temporary H-Beam, Furnishing and Driving	6-HT	L.m.	933.00	9,362	0	1,123	8,734,408	0	8,734,408	1,048,129			Temporary Jetty/Bridge
	Pulling Out of H-Beam	6-SP-OH	L.m.	933.00	170	0	20	159,028	0	159,028	19,083			Temporary Jetty/Bridge
	Loading, Using Backhoe (1.0 cu.m.) at Napindan Jetty	4-LD4	Cu.m.	312,300.00	104	0	13	32,606,653	0	32,606,653	3,912,798			Loading at temporary jetty
	Hauling - 1.5 km, Loaded by Backhoe (0.63 cu.m.)	4-HBS1.5	Cu.m.	312,300.00	115	0	14	36,044,167	0	36,044,167	4,325,300			Hauling within backfill site
	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	312,300.00	145	0	17	45,152,250	0	45,152,250	5,418,270			

Tb 1.324

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (20/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 5 - CONCRETE														
5.11/1-A	**Reinforcement Grade 275**		**Ton**	**794.63**	**54,267**	**0**	**6,512**	**43,122,015**	**0**	**43,122,015**	**5,174,642**	**60,779**	**48,296,657**	
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	794.63	54,267	0	6,512	43,122,015	0	43,122,015	5,174,642			
5.11/1-B	**Reinforcement Grade 275**		**Ton**	**228.30**	**54,267**	**0**	**6,512**	**12,388,968**	**0**	**12,388,968**	**1,486,676**	**60,779**	**13,875,644**	
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	228.30	54,267	0	6,512	12,388,968	0	12,388,968	1,486,676			
5.16/1-A	**Precast concrete manhole and junction box covers**		**m^3**	**41.370**	**13,984**	**0**	**1,678**	**578,518**	**0**	**578,518**	**69,422**	**15,662**	**647,940**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	41.370	4,265	0	512	176,443	0	176,443	21,173			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	5.87	54,267	0	6,512	318,519	0	318,519	38,222			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	133.319	627	0	75	83,556	0	83,556	10,027			
5.16/1-B	**Precast concrete manhole and junction box covers**		**m^3**	**11.382**	**16,084**	**0**	**1,930**	**183,063**	**0**	**183,063**	**21,968**	**18,014**	**205,030**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	11.382	4,265	0	512	48,544	0	48,544	5,825			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	1.60	54,267	0	6,512	86,724	0	86,724	10,407			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	76.259	627	0	75	47,795	0	47,795	5,735			
5.16/2-A	**Precast concrete U-ditch covers**		**m^3**	**32.036**	**24,781**	**0**	**2,974**	**793,878**	**0**	**793,878**	**95,265**	**27,755**	**889,143**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	32.036	4,265	0	512	136,632	0	136,632	16,396			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	4.44	54,267	0	6,512	241,026	0	241,026	28,923			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	664.107	627	0	75	416,220	0	416,220	49,946			
5.16/2-B	**Precast concrete U-ditch covers**		**m^3**	**22.444**	**15,192**	**0**	**1,823**	**340,967**	**0**	**340,967**	**40,916**	**17,015**	**381,884**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	22.444	4,265	0	512	95,723	0	95,723	11,487			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	2.96	54,267	0	6,512	160,847	0	160,847	19,302			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	134.663	627	0	75	84,398	0	84,398	10,128			
5.21/1-A	**Anchor bars for concrete structures**		**kg**	**4,351.20**	**456**	**0**	**55**	**1,983,012**	**0**	**1,983,012**	**237,961**	**510**	**2,220,973**	
	Anchor Bar for Concrete Structures	5-RB-AB	Kg	4,351.20	456	0	55	1,983,012	0	1,983,012	237,961			
5.22/1-A	**Concrete in manholes, junction manholes and outlets**		**m^3**	**1,276.87**	**41,773**	**0**	**5,013**	**53,338,649**	**0**	**53,338,649**	**6,400,638**	**46,786**	**59,739,287**	
5.22/1-1	Concrete in manholes		Cu.m.	785.97	10,038	0	1,205	7,889,794	0	7,889,794	946,775	11,243	8,836,569	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	785.97	4,265	0	512	3,352,153	0	3,352,153	402,258			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	5,300.89	657	0	79	3,481,468	0	3,481,468	417,776			
	Staging/Scaffolding Work	5-ST	Sq.m.	3,595.13	281	0	34	1,010,823	0	1,010,823	121,299			
	Supporting/Scaffolding Work	5-SF	Cu.m.	104.36	435	0	52	45,349	0	45,349	5,442			
5.22/1-2	Concrete in junction manholes (junction pits)		Cu.m.	185.81	12,584	0	1,510	2,338,244	0	2,338,244	280,589	14,094	2,618,834	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	185.81	4,265	0	512	792,472	0	792,472	95,097			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	1,828.52	657	0	79	1,200,919	0	1,200,919	144,110			
	Staging/Scaffolding Work	5-ST	Sq.m.	1,220.77	281	0	34	343,238	0	343,238	41,189			
	Supporting/Scaffolding Work	5-SF	Cu.m.	3.72	435	0	52	1,615	0	1,615	194			
5.22/1-3	Concrete in outlets		Cu.m.	305.10	8,284	0	994	2,527,557	0	2,527,557	303,307	9,279	2,830,864	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	305.10	4,265	0	512	1,301,247	0	1,301,247	156,150			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	1,442.00	657	0	79	947,060	0	947,060	113,647			
	Staging/Scaffolding Work	5-ST	Sq.m.	833.67	281	0	34	234,398	0	234,398	28,128			
	Supporting/Scaffolding Work	5-SF	Cu.m.	103.22	435	0	52	44,852	0	44,852	5,382			
5.22/1-4	Sheet Pile Cofferdams at Drainage Outlets		no	190.05	213,539	0	25,625	40,583,054	0	40,583,054	4,869,966	239,163	45,453,021	
	Temporary Steel Sheet Pile, Type II-w, Furnishing and Driving	6-SP2WT	Sq.m.	9,578.52	1,785	0	214	17,093,811	0	17,093,811	2,051,257			
	Pulling Out of Steel Sheet Pile, All Type	6-SP-O	Sq.m.	9,578.52	483	0	58	4,625,826	0	4,625,826	555,099			
	Sand Bag	3-SB	Cu.m.	2,394.63	2,137	0	256	5,117,297	0	5,117,297	614,076			
	Dewatering for Drainage Coffering, 150mm Dia. Pump	3-DW-DR	Day	665.18	20,665	0	2,480	13,746,120	0	13,746,120	1,649,534			

Tb 1.325

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (21/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
5.22/1-B	**Concrete in manholes, junction manholes and outlets**		**m^3**	**229.53**	**10,233**	**0**	**1,228**	**2,348,761**	**0**	**2,348,761**	**281,851**	**11,461**	**2,630,612**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	229.53	4,265	0	512	978,947	0	978,947	117,474			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	1,365.42	657	0	79	896,767	0	896,767	107,612			
	Staging/Scaffolding Work	5-ST	Sq.m.	1,472.63	281	0	34	414,050	0	414,050	49,686			
	Supporting/Scaffolding Work	5-SF	Cu.m.	135.77	435	0	52	58,997	0	58,997	7,080			
5.22/2-A	**Concrete for pipe bedding**		**m^3**	**53.16**	**5,919**	**0**	**710**	**314,680**	**0**	**314,680**	**37,762**	**6,630**	**352,442**	
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	53.16	4,032	0	484	214,324	0	214,324	25,719			
	Formwork for Leveling Concrete	5-FR-LVL	Sq.m.	211.19	475	0	57	100,356	0	100,356	12,043			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/2-B	**Concrete for pipe bedding**		**m^3**	**11.97**	**15,286**	**0**	**1,834**	**182,978**	**0**	**182,978**	**21,957**	**17,121**	**204,935**	
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	11.97	4,032	0	484	48,258	0	48,258	5,791			
	Formwork for Leveling Concrete	5-FR-LVL	Sq.m.	283.50	475	0	57	134,720	0	134,720	16,166			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/3-A	**Concrete in box culverts**		**m^3**	**147.67**	**12,092**	**0**	**1,451**	**1,785,651**	**0**	**1,785,651**	**214,278**	**13,543**	**1,999,929**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	147.67	4,265	0	512	629,822	0	629,822	75,579			
	Cork Joint Filler	5-CJF	Sq.m.	12.63	1,740	0	209	21,973	0	21,973	2,637			
	Water Stop, PVC W=200mm	5-WT	L.m.	101.01	670	0	80	67,694	0	67,694	8,123			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	173.36	162	0	19	28,046	0	28,046	3,366			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	1,444.55	657	0	79	948,736	0	948,736	113,848			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	205.68	435	0	52	89,380	0	89,380	10,726			
5.22/3-B	**Concrete in box culverts**		**m^3**	**353.96**	**6,229**	**0**	**747**	**2,204,651**	**0**	**2,204,651**	**264,558**	**6,976**	**2,469,209**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	353.96	4,265	0	512	1,509,620	0	1,509,620	181,154			
	Cork Joint Filler	5-CJF	Sq.m.	35.28	1,740	0	209	61,371	0	61,371	7,365			
	Water Stop, PVC W=200mm	5-WT	L.m.	163.91	670	0	80	109,844	0	109,844	13,181			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	147.84	162	0	19	23,918	0	23,918	2,870			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	761.15	657	0	79	499,897	0	499,897	59,988			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/4-A	**Concrete in sheet pile copings**		**m^3**	**3,959.55**	**7,252**	**0**	**870**	**28,713,079**	**0**	**28,713,079**	**3,445,569**	**8,122**	**32,158,648**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	3,959.55	4,265	0	512	16,887,500	0	16,887,500	2,026,500			
	Cork Joint Filler	5-CJF	Sq.m.	391.02	1,740	0	209	680,201	0	680,201	81,624			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	1,170.96	162	0	19	189,443	0	189,443	22,733			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	16,681.54	657	0	79	10,955,935	0	10,955,935	1,314,712			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/4-B	**Concrete in sheet pile copings**		**m^3**	**1,030.89**	**6,322**	**0**	**759**	**6,516,973**	**0**	**6,516,973**	**782,037**	**7,080**	**7,299,010**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	1,030.89	4,265	0	512	4,396,751	0	4,396,751	527,610			
	Cork Joint Filler	5-CJF	Sq.m.	90.38	1,740	0	209	157,228	0	157,228	18,867			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	290.85	162	0	19	47,055	0	47,055	5,647			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	2,917.22	657	0	79	1,915,939	0	1,915,939	229,913			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			

Tb 1.326

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (22/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
5.22/5-A	**Concrete in vertical walls VW**		**m^3**	**935.55**	**11,365**	**6**	**1,364**	**10,632,366**	**5,473**	**10,637,839**	**1,276,541**	**12,735**	**11,914,379**	
5.22/5-1	Concrete in vertical walls VW		Cu.m.	935.55	11,359	0	1,363	10,626,710	0	10,626,710	1,275,205	12,722	11,901,915	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	935.55	4,265	0	512	3,990,125	0	3,990,125	478,815			
	Cork Joint Filler	5-CJF	Sq.m.	44.59	1,740	0	209	77,573	0	77,573	9,309			
	Water Stop, PVC W=200mm	5-WT	L.m.	227.36	670	0	80	152,368	0	152,368	18,284			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	1,269.22	977	0	117	1,239,694	0	1,239,694	148,763			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	423.07	162	0	19	68,447	0	68,447	8,214			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	7,763.00	657	0	79	5,098,503	0	5,098,503	611,820			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/5-2	End connection to existing wall		no	3.00	1,885	1,824	445	5,656	5,473	11,129	1,335	4,155	12,464	
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	13.80	162	0	19	2,233	0	2,233	268			
	High Swell Hydeophilic Water Stop, for connection to existing wall	5-HSHWT	L.m.	3.60	81	1,520	192	292	5,473	5,765	692			
	Cork Joint Filler	5-CJF	Sq.m.	1.80	1,740	0	209	3,131	0	3,131	376			
5.22/6-B	**Concrete in parapet walls PW Type 1**		**m^3**	**359.63**	**11,375**	**0**	**1,365**	**4,090,808**	**0**	**4,090,808**	**490,897**	**12,740**	**4,581,705**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	359.63	4,265	0	512	1,533,802	0	1,533,802	184,056			
	Cork Joint Filler	5-CJF	Sq.m.	20.37	1,740	0	209	35,435	0	35,435	4,252			
	Water Stop, PVC W=200mm	5-WT	L.m.	76.65	670	0	80	51,369	0	51,369	6,164			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	453.60	977	0	117	443,047	0	443,047	53,166			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	337.05	162	0	19	54,530	0	54,530	6,544			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	3,003.53	657	0	79	1,972,625	0	1,972,625	236,715			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/7-A	**Concrete in parapet walls PW Type 2**		**m^3**	**903.00**	**7,706**	**14**	**926**	**6,958,682**	**12,770**	**6,971,451**	**836,574**	**8,647**	**7,808,026**	
5.22/7-1	Concrete in parapet walls PW Type 2		Cu.m.	903.00	7,692	0	923	6,945,484	0	6,945,484	833,458	8,615	7,778,942	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	903.00	4,265	0	512	3,851,299	0	3,851,299	462,156			
	Cork Joint Filler	5-CJF	Sq.m.	36.97	1,740	0	209	64,312	0	64,312	7,717			
	Water Stop, PVC W=200mm	5-WT	L.m.	99.31	670	0	80	66,554	0	66,554	7,986			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	459.96	977	0	117	449,255	0	449,255	53,911			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	153.32	162	0	19	24,805	0	24,805	2,977			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	3,790.15	657	0	79	2,489,259	0	2,489,259	298,711			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/7-2	End connection to existing wall		no	7.00	1,885	1,824	445	13,198	12,770	25,968	3,116	4,155	29,084	
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	32.20	162	0	19	5,209	0	5,209	625			
	High Swell Hydeophilic Water Stop, for connection to existing wall	5-HSHWT	L.m.	8.40	81	1,520	192	682	12,770	13,452	1,614			
	Cork Joint Filler	5-CJF	Sq.m.	4.20	1,740	0	209	7,306	0	7,306	877			
5.22/8-A	**Concrete in parapet walls PW Type 3**		**m^3**	**863.10**	**7,470**	**6**	**897**	**6,447,769**	**5,473**	**6,453,242**	**774,389**	**8,374**	**7,227,631**	
5.22/8-1	Concrete in parapet walls PW Type 3		Cu.m.	863.10	7,464	0	896	6,442,113	0	6,442,113	773,054	8,360	7,215,166	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	863.10	4,265	0	512	3,681,126	0	3,681,126	441,735			
	Cork Joint Filler	5-CJF	Sq.m.	41.60	1,740	0	209	72,367	0	72,367	8,684			
	Water Stop, PVC W=200mm	5-WT	L.m.	68.78	670	0	80	46,091	0	46,091	5,531			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	396.61	977	0	117	387,382	0	387,382	46,486			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	132.20	162	0	19	21,388	0	21,388	2,567			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	2,878.62	657	0	79	1,890,589	0	1,890,589	226,871			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
	Chipping of Concrete Surface by Chipping Hammer	4-CIP	Sq.m.	918.63	374	0	45	343,169	0	343,169	41,180			

Tb 1.327

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (23/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
5.22/8-2	End connection to existing wall		no	3.00	1,885	1,824	445	5,656	5,473	11,129	1,335	4,155	12,464	
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	13.80	162	0	19	2,233	0	2,233	268			
	High Swell Hydeophilic Water Stop, for connection to existing wall	5-HSHWT	L.m.	3.60	81	1,520	192	292	5,473	5,765	692			
	Cork Joint Filler	5-CJF	Sq.m.	1.80	1,740	0	209	3,131	0	3,131	376			
5.22/9-A	**Concrete in parapet walls PW Type 4**		**m^3**	**14.70**	**11,372**	**248**	**1,394**	**167,175**	**3,648**	**170,824**	**20,499**	**13,015**	**191,322**	
5.22/9-1	Concrete in parapet walls PW Type 4		Cu.m.	14.70	11,225	0	1,347	165,014	0	165,014	19,802	12,573	184,816	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	14.70	4,265	0	512	62,696	0	62,696	7,523			
	Cork Joint Filler	5-CJF	Sq.m.	0.39	1,740	0	209	676	0	676	81			
	Water Stop, PVC W=200mm	5-WT	L.m.	10.26	670	0	80	6,875	0	6,875	825			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	13.86	977	0	117	13,538	0	13,538	1,625			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	4.62	162	0	19	747	0	747	90			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	113.36	657	0	79	74,450	0	74,450	8,934			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
	Chipping of Concrete Surface by Chipping Hammer	4-CIP	Sq.m.	16.15	374	0	45	6,033	0	6,033	724			
5.22/9-2	End connection to existing wall		no	3.00	720	1,216	232	2,161	3,648	5,809	697	2,169	6,506	
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	5.70	162	0	19	922	0	922	111			
	High Swell Hydeophilic Water Stop, for connection to existing wall	5-HSHWT	L.m.	2.40	81	1,520	192	195	3,648	3,843	461			
	Cork Joint Filler	5-CJF	Sq.m.	0.60	1,740	0	209	1,044	0	1,044	125			
5.22/10-A	**Concrete in raised wall RW**		**m^3**	**84.00**	**10,313**	**43**	**1,243**	**866,299**	**3,648**	**869,947**	**104,394**	**11,599**	**974,341**	
5.22/10-1	Concrete in raised wall RW		Cu.m.	84.00	10,268	0	1,232	862,528	0	862,528	103,503	11,500	966,031	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	84.00	4,265	0	512	358,260	0	358,260	42,991			
	Cork Joint Filler	5-CJF	Sq.m.	3.94	1,740	0	209	6,849	0	6,849	822			
	Water Stop, PVC W=200mm	5-WT	L.m.	16.61	670	0	80	11,132	0	11,132	1,336			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	563.07	657	0	79	369,809	0	369,809	44,377			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
	Chipping of Concrete Surface by Chipping Hammer	4-CIP	Sq.m.	311.80	374	0	45	116,476	0	116,476	13,977			
5.22/10-2	End connection to existing wall		no	2.00	1,885	1,824	445	3,771	3,648	7,419	890	4,155	8,310	
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	9.20	162	0	19	1,488	0	1,488	179			
	High Swell Hydeophilic Water Stop, for connection to existing wall	5-HSHWT	L.m.	2.40	81	1,520	192	195	3,648	3,843	461			
	Cork Joint Filler	5-CJF	Sq.m.	1.20	1,740	0	209	2,087	0	2,087	250			
5.22/11-A	**Concrete in inclined walls IW**		**m^3**	**1,954.05**	**11,153**	**0**	**1,338**	**21,793,128**	**0**	**21,793,128**	**2,615,175**	**12,491**	**24,408,304**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	1,954.05	4,265	0	512	8,334,033	0	8,334,033	1,000,084			
	Cork Joint Filler	5-CJF	Sq.m.	91.80	1,740	0	209	159,694	0	159,694	19,163			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	1,331.02	977	0	117	1,300,051	0	1,300,051	156,006			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	443.67	162	0	19	71,779	0	71,779	8,614			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	15,135.53	657	0	79	9,940,562	0	9,940,562	1,192,867			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supply and Place of PVC Weepholes with Filter Cloth	7-PVC	Pcs.	4,542.30	133	0	16	605,809	0	605,809	72,697			
	Supporting/Scaffolding Work	5-SF	Cu.m.	3,178.46	435	0	52	1,381,200	0	1,381,200	165,744			

Tb 1.328

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (24/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
5.22/12-A	**Concrete in stair-type inclined walls**		**m^3**	**108.15**	**12,373**	**0**	**1,485**	**1,338,144**	**0**	**1,338,144**	**160,577**	**13,858**	**1,498,721**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	108.15	4,265	0	512	461,260	0	461,260	55,351			
	Cork Joint Filler	5-CJF	Sq.m.	5.22	1,740	0	209	9,078	0	9,078	1,089			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	93.90	977	0	117	91,717	0	91,717	11,006			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	31.30	162	0	19	5,064	0	5,064	608			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	708.46	657	0	79	465,293	0	465,293	55,835			
	Staging/Scaffolding Work	5-ST	Sq.m.	743.88	281	0	34	209,153	0	209,153	25,098			
	Supply and Place of PVC Weepholes with Filter Cloth	7-PVC	Pcs.	239.40	133	0	16	31,929	0	31,929	3,831			
	Supporting/Scaffolding Work	5-SF	Cu.m.	148.78	435	0	52	64,650	0	64,650	7,758			
5.22/13-A	**Concrete in L type parapet walls**		**m^3**	**673.05**	**9,529**	**0**	**1,143**	**6,413,206**	**0**	**6,413,206**	**769,585**	**10,672**	**7,182,791**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	673.05	4,265	0	512	2,870,561	0	2,870,561	344,467			
	Cork Joint Filler	5-CJF	Sq.m.	31.41	1,740	0	209	54,632	0	54,632	6,556			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	708.68	977	0	117	692,192	0	692,192	83,063			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	236.23	162	0	19	38,218	0	38,218	4,586			
	Water Stop, PVC W=200mm	5-WT	L.m.	13.14	670	0	80	8,803	0	8,803	1,056			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	4,185.33	657	0	79	2,748,800	0	2,748,800	329,856			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/14-A	**Concrete in handrail bases**		**m^3**	**22.05**	**8,513**	**0**	**1,022**	**187,711**	**0**	**187,711**	**22,525**	**9,535**	**210,236**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	22.05	4,265	0	512	94,043	0	94,043	11,285			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	134.52	657	0	79	88,346	0	88,346	10,601			
	Supply and Place of PVC Weepholes with Filter Cloth	7-PVC	Pcs.	39.90	133	0	16	5,321	0	5,321	639			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/15-A	**Filler concrete (Class B)**		**m^3**	**140.70**	**4,032**	**0**	**484**	**567,241**	**0**	**567,241**	**68,069**	**4,515**	**635,309**	
	Cork Joint Filler	5-CJF	Sq.m.	0.00	1,740	0	209	0	0	0	0			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	140.70	4,032	0	484	567,241	0	567,241	68,069			
5.22/15-B	**Filler concrete (Class B)**		**m^3**	**734.06**	**4,032**	**0**	**484**	**2,959,387**	**0**	**2,959,387**	**355,126**	**4,515**	**3,314,514**	
	Cork Joint Filler	5-CJF	Sq.m.	0.00	1,740	0	209	0	0	0	0			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	734.06	4,032	0	484	2,959,387	0	2,959,387	355,126			
5.22/16-A	**Concrete in U-ditches**		**m^3**	**786.15**	**12,804**	**0**	**1,536**	**10,065,860**	**0**	**10,065,860**	**1,207,903**	**14,341**	**11,273,764**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	786.15	4,265	0	512	3,352,914	0	3,352,914	402,350			
	Cork Joint Filler	5-CJF	Sq.m.	0.00	1,740	0	209	0	0	0	0			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	10,221.15	657	0	79	6,712,946	0	6,712,946	805,554			
5.22/16-B	**Concrete in U-ditches**		**m^3**	**316.89**	**7,998**	**0**	**960**	**2,534,537**	**0**	**2,534,537**	**304,144**	**8,958**	**2,838,681**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	316.89	4,265	0	512	1,351,537	0	1,351,537	162,184			
	Water Stop, PVC W=200mm	5-WT	L.m.	66.78	670	0	80	44,754	0	44,754	5,370			
	Cork Joint Filler	5-CJF	Sq.m.	39.27	1,740	0	209	68,312	0	68,312	8,197			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	56.30	162	0	19	9,108	0	9,108	1,093			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	1,615.22	657	0	79	1,060,825	0	1,060,825	127,299			

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Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (25/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
5.22/17-A	**Concrete in repair Type R3**		**m^3**	**63.00**	**7,364**	**0**	**884**	**463,929**	**0**	**463,929**	**55,671**	**8,248**	**519,600**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	63.00	4,265	0	512	268,695	0	268,695	32,243			
	Water Stop, PVC W=200mm	5-WT	L.m.	1.47	670	0	80	985	0	985	118			
	Chipping of Concrete Surface by Chipping Hammer	4-CIP	Sq.m.	50.68	374	0	45	18,934	0	18,934	2,272			
	Cork Joint Filler	5-CJF	Sq.m.	2.27	1,740	0	209	3,945	0	3,945	473			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	39.57	977	0	117	38,651	0	38,651	4,638			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	13.19	162	0	19	2,134	0	2,134	256			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	198.83	657	0	79	130,584	0	130,584	15,670			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
5.22/18-B	**Concrete in gravity wall**		**m^3**	**219.35**	**5,523**	**0**	**663**	**1,211,450**	**0**	**1,211,450**	**145,374**	**6,186**	**1,356,824**	
	Elastic Joint Filler	5-EJF	Sq.m.	17.75	1,362	0	163	24,178	0	24,178	2,901			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Supply and Place of PVC Weepholes with Filter Cloth for Gravity Wall	7-PVC-GW	Pcs.	121.80	184	0	22	22,368	0	22,368	2,684			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	219.35	4,032	0	484	884,303	0	884,303	106,116			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	427.25	657	0	79	280,602	0	280,602	33,672			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
5.22/19-B	**Concrete revetment**		**m^3**	**12.18**	**6,607**	**524**	**856**	**80,478**	**6,385**	**86,863**	**10,424**	**7,987**	**97,286**	
	Cork Joint Filler	5-CJF	Sq.m.	0.00	1,740	0	209	0	0	0	0			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	High Swell Hydeophilic Water Stop, for connection to existing wall	5-HSHWT	L.m.	4.20	81	1,520	192	341	6,385	6,726	807			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	12.18	4,032	0	484	49,104	0	49,104	5,893			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	47.25	657	0	79	31,032	0	31,032	3,724			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
5.22/20-B	**Concrete in base type A for concrete block retaining wall**		**m^3**	**153.41**	**6,131**	**0**	**736**	**940,470**	**0**	**940,470**	**112,856**	**6,866**	**1,053,327**	
	Elastic Joint Filler	5-EJF	Sq.m.	24.57	1,362	0	163	33,477	0	33,477	4,017			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	153.41	4,032	0	484	618,462	0	618,462	74,215			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	439.32	657	0	79	288,532	0	288,532	34,624			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
5.22/21-B	**Concrete in base type B for concrete block retaining wall**		**m^3**	**100.80**	**7,187**	**0**	**862**	**724,494**	**0**	**724,494**	**86,939**	**8,050**	**811,433**	
	Elastic Joint Filler	5-EJF	Sq.m.	19.32	1,362	0	163	26,323	0	26,323	3,159			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	100.80	4,265	0	512	429,912	0	429,912	51,589			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	408.45	657	0	79	268,258	0	268,258	32,191			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
5.22/22-B	**Concrete in partition for concrete block retaining wall**		**m^3**	**29.93**	**10,279**	**0**	**1,233**	**307,601**	**0**	**307,601**	**36,912**	**11,513**	**344,513**	
	Elastic Joint Filler	5-EJF	Sq.m.	69.09	1,362	0	163	94,135	0	94,135	11,296			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	29.93	4,032	0	484	120,644	0	120,644	14,477			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	141.33	657	0	79	92,821	0	92,821	11,139			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			

Tb 1.330

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (26/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
5.22/23-B	**Backfill concrete for concrete block retaining wall**		**m^3**	**360.78**	**10,543**	**0**	**1,265**	**3,803,589**	**0**	**3,803,589**	**456,431**	**11,808**	**4,260,020**	
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	360.78	4,032	0	484	1,454,506	0	1,454,506	174,541			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	3,576.72	657	0	79	2,349,083	0	2,349,083	281,890			
5.22/24-B	**Top Concrete for Concrete Block Retaining Wall**		**m^3**	**111.41**	**5,999**	**0**	**720**	**668,294**	**0**	**668,294**	**80,195**	**6,719**	**748,489**	
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	111.41	4,032	0	484	449,136	0	449,136	53,896			
	Elastic Joint Filler	5-EJF	Sq.m.	0.00	1,362	0	163	0	0	0	0			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	333.69	657	0	79	219,158	0	219,158	26,299			
5.22/25-B	**Concrete in stair block**		**m^3**	**63.00**	**8,125**	**0**	**975**	**511,902**	**0**	**511,902**	**61,428**	**9,100**	**573,330**	
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	63.00	4,032	0	484	253,988	0	253,988	30,479			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	392.70	657	0	79	257,914	0	257,914	30,950			
5.22/26-B	**Concrete in boundary wall**		**m^3**	**528.26**	**5,345**	**0**	**641**	**2,823,438**	**0**	**2,823,438**	**338,813**	**5,986**	**3,162,251**	
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	528.26	4,032	0	484	2,129,692	0	2,129,692	255,563			
	Cork Joint Filler	5-CJF	Sq.m.	0.00	1,740	0	209	0	0	0	0			
	Joint Sealant at Contraction Joint	5-JS-C	L.m.	0.00	977	0	117	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	1,056.30	657	0	79	693,746	0	693,746	83,250			
5.22/27-B	**Concrete in sluice structures**		**m^3**	**585.80**	**31,158**	**22,566**	**6,447**	**18,251,917**	**13,218,856**	**31,470,773**	**3,776,493**	**60,170**	**35,247,266**	
5.22/27-1	Concrete in Sluice Structures		Cu.m.	585.80	7,513	22,566	3,609	4,401,318	13,218,856	17,620,174	2,114,421	33,689	19,734,595	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	585.80	4,265	0	512	2,498,418	0	2,498,418	299,810			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	1,698.80	657	0	79	1,115,718	0	1,115,718	133,886			
	Staging/Scaffolding Work	5-ST	Sq.m.	730.91	281	0	34	205,505	0	205,505	24,661			
	Supporting/Scaffolding Work	5-SF	Cu.m.	120.23	435	0	52	52,244	0	52,244	6,269			
	Cork Joint Filler	5-CJF	Sq.m.	97.97	1,740	0	209	170,415	0	170,415	20,450			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	259.88	162	0	19	42,044	0	42,044	5,045			
	Water Stop, PVC W=200mm	5-WT	L.m.	50.93	670	0	80	34,128	0	34,128	4,095			
	Installation of Grout Pipe, 100mm Dia. x 450mm	12-GP-450	Nos.	3.00	2,657	56,042	7,044	7,970	168,126	176,096	21,131			
	Installation of Grout Pipe, 100mm Dia. x 500mm	12-GP-500	Nos.	6.00	2,657	57,036	7,163	15,939	342,215	358,154	42,978			
	Installation of Grout Pipe, 100mm Dia. x 750mm	12-GP-750	Nos.	3.00	2,657	61,716	7,725	7,970	185,149	193,118	23,174			
	Installation of Grout Pipe, 100mm Dia. x 800mm	12-GP-800	Nos.	6.00	2,657	62,184	7,781	15,939	373,102	389,041	46,685			
	Flexible Joint for Box Culvert (1000x1000)	5-FLEXJ-1000	Set	1.00	12,370	524,204	64,389	12,370	524,204	536,574	64,389			
	Flexible Joint for Box Culvert (1200x1200)	5-FLEXJ-1200	Set	3.00	12,370	615,948	75,398	37,110	1,847,843	1,884,953	226,194			
	Flexible Joint for Box Culvert (1400x1400)	5-FLEXJ-1400	Set	2.00	12,370	707,693	86,408	24,740	1,415,385	1,440,125	172,815			
	Flexible Joint for Box Culvert (1500x1500)	5-FLEXJ-1500	Set	2.00	12,370	753,564	91,912	24,740	1,507,128	1,531,868	183,824			
	Flexible Joint for Box Culvert (1600x1600)	5-FLEXJ-1600	Set	1.00	12,370	799,436	97,417	12,370	799,436	811,806	97,417			
	Flexible Joint for U-shaped Retaining Wall	5-FLEXJ-1811	Set	1.00	12,370	524,204	64,389	12,370	524,204	536,574	64,389			
	Flexible Joint for U-shaped Retaining Wall	5-FLEXJ-1813	Set	1.00	12,370	570,076	69,894	12,370	570,076	582,446	69,894			
	Flexible Joint for U-shaped Retaining Wall	5-FLEXJ-1815	Set	1.00	12,370	615,948	75,398	12,370	615,948	628,318	75,398			
	Flexible Joint for U-shaped Retaining Wall	5-FLEXJ-2011	Set	1.00	12,370	547,140	67,141	12,370	547,140	559,509	67,141			
	Flexible Joint for Box Culvert (2000x1600)	5-FLEXJ-2000	Set	1.00	12,370	891,181	108,426	12,370	891,181	903,551	108,426			
	Flexible Joint for U-shaped Retaining Wall	5-FLEXJ-2110	Set	1.00	12,370	535,672	65,765	12,370	535,672	548,042	65,765			
	Flexible Joint for U-shaped Retaining Wall	5-FLEXJ-2112	Set	1.00	12,370	581,544	71,270	12,370	581,544	593,914	71,270			
	Flexible Joint for U-shaped Retaining Wall	5-FLEXJ-2213	Set	1.00	12,370	615,948	75,398	12,370	615,948	628,318	75,398			
	Flexible Joint for U-shaped Retaining Wall	5-FLEXJ-2605	Set	1.00	12,370	478,331	58,884	12,370	478,331	490,701	58,884			
	Flexible Joint for U-shaped Retaining Wall	5-FLEXJ-3510	Set	1.00	12,370	696,224	85,031	12,370	696,224	708,594	85,031			
5.22/27-2	Sheet Pile Cofferdams at Sluice Structures		no	9.00	1,538,955	0	184,675	13,850,599	0	13,850,599	1,662,072	1,723,630	15,512,671	
	Temporary Steel Sheet Pile, Type II-w, Furnishing and Driving	6-SP2WT	Sq.m.	1,080.00	1,785	0	214	1,927,366	0	1,927,366	231,284			
	Pulling Out of Steel Sheet Pile, All Type	6-SP-O	Sq.m.	1,080.00	483	0	58	521,572	0	521,572	62,589			
	Sand Bag	3-SB	Cu.m.	113.40	2,137	0	256	242,335	0	242,335	29,080			
	Dewatering for Drainage Coffering, 150mm Dia. Pump	3-DW-DR	Day	540.00	20,665	0	2,480	11,159,326	0	11,159,326	1,339,119			

Tb 1.331

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (27/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
5.22/28-B	**Concrete in drainage outlet structure at Laguna backfill area**		**m^3**	**116.55**	**7,945**	**0**	**953**	**926,023**	**0**	**926,023**	**111,123**	**8,899**	**1,037,146**	
	Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	116.55	4,265	0	512	497,086	0	497,086	59,650			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	653.10	657	0	79	428,937	0	428,937	51,472			
	Staging/Scaffolding Work	5-ST	Sq.m.	0.00	281	0	34	0	0	0	0			
	Supporting/Scaffolding Work	5-SF	Cu.m.	0.00	435	0	52	0	0	0	0			
	Cork Joint Filler	5-CJF	Sq.m.	0.00	1,740	0	209	0	0	0	0			
	Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	0.00	162	0	19	0	0	0	0			
5.23/1-A	**Leveling concrete**		**m^3**	**460.00**	**5,369**	**0**	**644**	**2,469,844**	**0**	**2,469,844**	**296,381**	**6,014**	**2,766,225**	
	Concrete Work for Leveling Concrete, Class-F, Manpower Placing	5-CF-M	Cu.m.	459.52	3,822	0	459	1,756,332	0	1,756,332	210,760			
	Formwork for Leveling Concrete	5-FR-LVL	Sq.m.	1,501.49	475	0	57	713,511	0	713,511	85,621			
5.23/1-B	**Leveling concrete**		**m^3**	**300.00**	**4,462**	**0**	**535**	**1,338,580**	**0**	**1,338,580**	**160,630**	**4,997**	**1,499,210**	
	Concrete Work for Leveling Concrete, Class-F, Concrete Pump Placing	5-CF-P	Cu.m.	292.00	3,691	0	443	1,077,884	0	1,077,884	129,346			
	Formwork for Leveling Concrete	5-FR-LVL	Sq.m.	548.60	475	0	57	260,696	0	260,696	31,284			

Tb 1.332

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (28/42)

BQ No.		Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
						L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 6 – PILING															
6.4/1-A		**Type IIIw U-shape**		**m**	**3,310.92**	**2,199**	**6,445**	**1,037**	**7,280,111**	**21,339,748**	**28,619,860**	**3,434,383**	**9,681**	**32,054,243**	
	A	Furnishing Steel Sheet Pile (II-w, III-w, IV-w)	6-SSP-FW	Ton	270.10	0	74,136	8,896	0	20,023,967	20,023,967	2,402,876			
	A	Vibro-Hummer Piling of SSP Type III-w, on Water, w/ Water Jet, L=7m	6-SP3-WJ7	Sq.m.	1,986.25	1,981	662	317	3,935,286	1,315,782	5,251,068	630,128			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	359.04	4,139	0	497	1,486,133	0	1,486,133	178,336			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	1,180.24	1,575	0	189	1,858,693	0	1,858,693	223,043			
6.4/1-B		**Type IIIw U-shape**		**m**	**112.71**	**158**	**6,050**	**745**	**17,852**	**681,843**	**699,695**	**83,963**	**6,953**	**783,659**	
	B	Furnishing Steel Sheet Pile (II-w, III-w, IV-w)	6-SSP-FW	Ton	9.20	0	74,136	8,896	0	681,843	681,843	81,821			
	B	Vibro-Hummer Piling of SSP Type III-w, on Land,	6-SP3-L8	Sq.m.	67.63	264	0	32	17,852	0	17,852	2,142			
	B	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	0.00	4,139	0	497	0	0	0	0			
	B	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	0.00	1,575	0	189	0	0	0	0			
6.4/2-A		**Type IVw U-shape**		**m**	**23,535.99**	**1,457**	**8,007**	**1,136**	**34,280,325**	**188,462,262**	**222,742,587**	**26,729,110**	**10,600**	**249,471,697**	
	A	Furnishing Steel Sheet Pile (II-w, III-w, IV-w)	6-SSP-FW	Ton	2,494.82	0	74,136	8,896	0	184,957,025	184,957,025	22,194,843			
	A	Vibro-Hummer Piling of SSP Type IV-w, on Water, L=8m	6-SP4-W8	Sq.m.	8,830.24	855	0	103	7,553,451	0	7,553,451	906,414			
	A	Vibro-Hummer Piling of SSP Type IV-w, on Water, w/ Water Jet, L=8m	6-SP4-WJ8	Sq.m.	5,291.35	1,981	662	317	10,483,588	3,505,237	13,988,825	1,678,659			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	853.74	4,139	0	497	3,533,787	0	3,533,787	424,054			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	8,070.34	1,575	0	189	12,709,499	0	12,709,499	1,525,140			
6.4/3-A		**Type VL U-shape**		**m**	**14,583.96**	**1,518**	**8,459**	**1,197**	**22,138,043**	**123,368,314**	**145,506,357**	**17,460,763**	**11,174**	**162,967,120**	
	A	Furnishing Steel Sheet Pile (V-L, VI-L)	6-SSP-FL	Ton	1,531.33	0	78,771	9,452	0	120,623,437	120,623,437	14,474,812			
	A	Vibro-Hummer Piling of SSP Type V-L, on Water, L=9m	6-SP5-W9	Sq.m.	4,152.93	1,208	0	145	5,015,217	0	5,015,217	601,826			
	A	Vibro-Hummer Piling of SSP Type V-L, on Water, w/ Water Jet, L=10m	6-SP5-WJ10	Sq.m.	3,139.05	2,615	874	419	8,209,476	2,744,877	10,954,353	1,314,522			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	542.64	4,139	0	497	2,246,087	0	2,246,087	269,530			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	4,233.61	1,575	0	189	6,667,262	0	6,667,262	800,071			
6.4/4-A		**Type VIL U-shape**		**m**	**49,765.80**	**1,529**	**9,668**	**1,344**	**76,092,749**	**481,150,024**	**557,242,773**	**66,869,133**	**12,541**	**624,111,906**	
	A	Furnishing Steel Sheet Pile (V-L, VI-L)	6-SSP-FL	Ton	5,971.90	0	78,771	9,452	0	470,409,712	470,409,712	56,449,165			
	A	Vibro-Hummer Piling of SSP Type VI-L, on Water, L=10m	6-SP6-W10	Sq.m.	11,371.98	1,081	0	130	12,287,586	0	12,287,586	1,474,510			
	A	Vibro-Hummer Piling of SSP Type VI-L, on Water, w/ Water Jet, L=10m	6-SP6-WJ10	Sq.m.	13,510.92	2,378	795	381	32,122,509	10,740,312	42,862,821	5,143,539			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	2,263.38	4,139	0	497	9,368,546	0	9,368,546	1,124,226			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	14,169.13	1,575	0	189	22,314,109	0	22,314,109	2,677,693			
6.4/5-B		**Type10H Hat-shape**		**m**	**2,194.02**	**430**	**6,806**	**868**	**942,725**	**14,932,013**	**15,874,738**	**1,904,969**	**8,104**	**17,779,707**	
	B	Furnishing Steel Pipe Sheet Pile (HAT 10H, 25H)	6-SSP-FH	Ton	189.56	0	78,771	9,452	0	14,932,013	14,932,013	1,791,842			
	B	Vibro-Hummer Piling of SSP Type 10H, on Land, L=2~4m	6-SP10H-L2TO4	Sq.m.	699.52	702	0	84	490,721	0	490,721	58,887			
	B	Vibro-Hummer Piling of SSP Type 10H, on Land, L=4~6m	6-SP10H-L4TO6	Sq.m.	371.79	429	0	51	159,388	0	159,388	19,127			
	B	Vibro-Hummer Piling of SSP Type 10H, on Land, L=6~9m	6-SP10H-L6TO9	Sq.m.	528.31	351	0	42	185,308	0	185,308	22,237			
	B	Vibro-Hummer Piling of SSP Type 10H, on Land, L=9~12m	6-SP10H-L9TO12	Sq.m.	375.46	286	0	34	107,308	0	107,308	12,877			
	B	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	0.00	1,575	0	189	0	0	0	0			

Tb 1.333

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (29/42)

BQ No.		Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
						L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
6.4/6-B		**Type 10H Hat-shape with flexible joint**		**m**	**254.00**	**485**	**125,270**	**15,091**	**123,151**	**31,818,615**	**31,941,766**	**3,833,012**	**140,846**	**35,774,778**	
	B	Flexible Joiint SSP-10H-100-A, L=8.5m	6-FLX-10H-A	L.m.	17.00	386	115,355	13,889	6,559	1,961,029	1,967,588	236,111			
	B	Flexible Joiint SSP-10H-100-B, L=5.5m	6-FLX-10H-B	L.m.	11.00	631	128,946	15,549	6,945	1,418,401	1,425,346	171,041			
	B	Flexible Joiint SSP-10H-100-C, L=10.0m	6-FLX-10H-C	L.m.	20.00	316	116,569	14,026	6,314	2,331,386	2,337,699	280,524			
	B	Flexible Joiint SSP-10H-200-D, L=10.5m	6-FLX-10H-D	L.m.	21.00	316	123,811	14,895	6,629	2,600,022	2,606,651	312,798			
	B	Flexible Joiint SSP-10H-100-E, L=9.0m	6-FLX-10H-E	L.m.	18.00	316	114,474	13,775	5,682	2,060,541	2,066,223	247,947			
	B	Flexible Joiint SSP-10H-100-F, L=7.5m	6-FLX-10H-F	L.m.	15.00	386	118,896	14,314	5,787	1,783,435	1,789,223	214,707			
	B	Flexible Joiint SSP-10H-100-G, L=9.0m	6-FLX-10H-G	L.m.	18.00	386	113,863	13,710	6,945	2,049,536	2,056,481	246,778			
	B	Flexible Joiint SSP-10H-100-H, L=10.0m	6-FLX-10H-H	L.m.	20.00	316	113,413	13,647	6,314	2,268,253	2,274,567	272,948			
	B	Flexible Joiint SSP-10H-200-I, L=5.0m	6-FLX-10H-I	L.m.	10.00	631	146,079	17,605	6,314	1,460,791	1,467,105	176,053			
	B	Flexible Joiint SSP-10H-100-J, L=6.0m	6-FLX-10H-J	L.m.	12.00	631	124,659	15,035	7,576	1,495,903	1,503,480	180,418			
	B	Flexible Joiint SSP-10H-200-K, L=5.5m	6-FLX-10H-K	L.m.	11.00	631	140,635	16,952	6,945	1,546,982	1,553,927	186,471			
	B	Flexible Joiint SSP-10H-100-L, L=5.5m	6-FLX-10H-L	L.m.	11.00	631	133,684	16,118	6,945	1,470,528	1,477,473	177,297			
	B	Flexible Joiint SSP-10H-200-M, L=6.0m	6-FLX-10H-M	L.m.	12.00	631	136,146	16,413	7,576	1,633,751	1,641,327	196,959			
	B	Flexible Joiint SSP-10H-100-N, L=5.5m	6-FLX-10H-N	L.m.	11.00	631	124,207	14,981	6,945	1,366,274	1,373,219	164,786			
	B	Flexible Joiint SSP-10H-100-O, L=5.5m	6-FLX-10H-O	L.m.	11.00	631	128,946	15,549	6,945	1,418,401	1,425,346	171,041			
	B	Flexible Joiint SSP-10H-200-P, L=6.0m	6-FLX-10H-P	L.m.	12.00	631	136,146	16,413	7,576	1,633,751	1,641,327	196,959			
	B	Flexible Joiint SSP-10H-200-Q, L=6.0m	6-FLX-10H-Q	L.m.	12.00	631	140,490	16,935	7,576	1,685,879	1,693,455	203,215			
	B	Flexible Joiint SSP-10H-200-R, L=6.0m	6-FLX-10H-R	L.m.	12.00	631	136,146	16,413	7,576	1,633,751	1,641,327	196,959			
6.4/7-A		**Type 10H Hat-shape w/H-400x200x9x22**		**m**	**12,920.34**	**2,142**	**15,822**	**2,156**	**27,671,075**	**204,430,016**	**232,101,091**	**27,852,131**	**20,120**	**259,953,222**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	2,299.18	0	86,879	10,426	0	199,751,553	199,751,553	23,970,186			
	A	Vibro-Hummer Piling of SSP Type 10H+H400, on Water, L=10m	6-SP10H&H400-W10	Sq.m.	4,887.02	891	0	107	4,355,220	0	4,355,220	522,626			
	A	Vibro-Hummer Piling of SSP Type 10H+H400, on Water, w/ Water Jet, L=10m	6-SP10H&H400-WJ10	Sq.m.	6,741.38	2,103	694	336	14,174,823	4,678,463	18,853,286	2,262,394			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	608.94	4,139	0	497	2,520,515	0	2,520,515	302,462			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	4,203.93	1,575	0	189	6,620,518	0	6,620,518	794,462			
6.4/8-A		**Type 10H Hat-shape w/H-450x200x12x25**		**m**	**3,631.20**	**2,291**	**17,613**	**2,388**	**8,320,761**	**63,955,207**	**72,275,969**	**8,673,116**	**22,293**	**80,949,085**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	722.36	0	86,879	10,426	0	62,758,551	62,758,551	7,531,026			
	A	Vibro-Hummer Piling of SSP Type 10H+H450, on Water, L=11m	6-SP10H&H450-W11	Sq.m.	1,790.10	1,287	0	154	2,304,325	0	2,304,325	276,519			
	A	Vibro-Hummer Piling of SSP Type 10H+H450, on Water, w/ Water Jet, L=11m	6-SP10H&H450-WJ11	Sq.m.	1,477.98	2,453	810	392	3,625,634	1,196,656	4,822,290	578,675			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	117.30	4,139	0	497	485,526	0	485,526	58,263			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	1,209.82	1,575	0	189	1,905,276	0	1,905,276	228,633			
6.4/9-A		**Type 10H Hat-shape w/H-450x250x9x22**		**m**	**6,179.16**	**2,376**	**17,573**	**2,394**	**14,683,406**	**108,583,961**	**123,267,367**	**14,792,084**	**22,343**	**138,059,451**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	1,223.29	0	86,879	10,426	0	106,278,354	106,278,354	12,753,402			
	A	Vibro-Hummer Piling of SSP Type 10H+H450, on Water, L=11m	6-SP10H&H450-W11	Sq.m.	2,713.20	1,287	0	154	3,492,595	0	3,492,595	419,111			
	A	Vibro-Hummer Piling of SSP Type 10H+H450, on Water, w/ Water Jet, L=11m	6-SP10H&H450-WJ11	Sq.m.	2,847.64	2,453	810	392	6,985,538	2,305,608	9,291,146	1,114,937			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	238.68	4,139	0	497	987,940	0	987,940	118,553			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	2,042.96	1,575	0	189	3,217,332	0	3,217,332	386,080			
6.4/10-A		**Type 10H Hat-shape w/H-450x250x12x28**		**m**	**1,670.76**	**3,103**	**20,597**	**2,844**	**5,184,137**	**34,413,392**	**39,597,529**	**4,751,703**	**26,544**	**44,349,232**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	382.09	0	86,879	10,426	0	33,195,924	33,195,924	3,983,511			
	A	Vibro-Hummer Piling of SSP Type 10H+H450, on Water, w/ Water Jet, L=11m	6-SP10H&H450-WJ11	Sq.m.	1,503.68	2,453	810	392	3,688,688	1,217,468	4,906,156	588,739			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	128.52	4,139	0	497	531,968	0	531,968	63,836			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	611.80	1,575	0	189	963,481	0	963,481	115,618			

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Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (30/42)

BQ No.		Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
						L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
6.4/11-A		**Type 10H Hat-shape w/H-500x200x12x25**		**m**	**1,785.00**	**1,923**	**17,728**	**2,358**	**3,433,370**	**31,645,126**	**35,078,497**	**4,209,420**	**22,010**	**39,287,916**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	364.24	0	86,879	10,426	0	31,645,126	31,645,126	3,797,415			
	A	Vibro-Hummer Piling of SSP Type 10H+H500, on Water, L=12m	6-SP10H&H500-W12	Sq.m.	1,606.50	1,287	0	154	2,067,984	0	2,067,984	248,158			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	867.00	1,575	0	189	1,365,386	0	1,365,386	163,846			
6.4/12-A		**Type 10H Hat-shape w/H-500x250x12x28**		**m**	**798.66**	**1,603**	**20,305**	**2,629**	**1,280,115**	**16,216,909**	**17,497,024**	**2,099,643**	**24,537**	**19,596,667**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	186.66	0	86,879	10,426	0	16,216,909	16,216,909	1,946,029			
	A	Vibro-Hummer Piling of SSP Type 10H+H500, on Water, L=12m	6-SP10H&H500-W12	Sq.m.	718.79	1,287	0	154	925,275	0	925,275	111,033			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	225.32	1,575	0	189	354,840	0	354,840	42,581			
6.4/13-A		**Type 10H Hat-shape w/H-550x250x12x28**		**m**	**428.40**	**1,760**	**20,768**	**2,703**	**754,168**	**8,897,146**	**9,651,314**	**1,158,158**	**25,232**	**10,809,471**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	102.41	0	86,879	10,426	0	8,897,146	8,897,146	1,067,657			
	A	Vibro-Hummer Piling of SSP Type 10H+H550, on Water, L=13m	6-SP10H&H550-W13	Sq.m.	385.56	1,448	0	174	558,356	0	558,356	67,003			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	124.34	1,575	0	189	195,812	0	195,812	23,497			
6.4/14-A		**Type 10H Hat-shape w/H-600x200x12x28**		**m**	**1,656.48**	**1,998**	**19,248**	**2,550**	**3,308,952**	**31,884,392**	**35,193,344**	**4,223,201**	**23,795**	**39,416,545**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	367.00	0	86,879	10,426	0	31,884,392	31,884,392	3,826,127			
	A	Vibro-Hummer Piling of SSP Type 10H+H600, on Water, L=13m	6-SP10H&H600-W13	Sq.m.	1,490.83	1,448	0	174	2,158,975	0	2,158,975	259,077			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	730.22	1,575	0	189	1,149,977	0	1,149,977	137,997			
6.4/15-A		**Type 10H Hat-shape w/H-600x250x12x28**		**m**	**933.30**	**1,952**	**21,117**	**2,768**	**1,821,577**	**19,708,418**	**21,529,995**	**2,583,599**	**25,837**	**24,113,594**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	226.85	0	86,879	10,426	0	19,708,418	19,708,418	2,365,010			
	A	Vibro-Hummer Piling of SSP Type 10H+H600, on Water, L=13m	6-SP10H&H600-W13	Sq.m.	839.56	1,448	0	174	1,215,827	0	1,215,827	145,899			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	384.64	1,575	0	189	605,750	0	605,750	72,690			
6.4/16-A		**Type 10H Hat-shape w/H-650x200x12x28**		**m**	**1,927.80**	**3,160**	**21,286**	**2,933**	**6,091,005**	**41,034,706**	**47,125,711**	**5,655,085**	**27,379**	**52,780,796**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	436.76	0	86,879	10,426	0	37,945,794	37,945,794	4,553,495			
	A	Vibro-Hummer Piling of SSP Type 10H+H650, on Water, w/ Water Jet, L=13m	6-SP10H&H650-WJ13	Sq.m.	1,735.02	2,458	1,780	509	4,265,293	3,088,912	7,354,205	882,505			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	128.52	4,139	0	497	531,968	0	531,968	63,836			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	821.51	1,575	0	189	1,293,744	0	1,293,744	155,249			
6.4/17-A		**Type 10H Hat-shape w/H-650x250x12x28**		**m**	**959.31**	**1,913**	**21,579**	**2,819**	**1,835,580**	**20,700,928**	**22,536,509**	**2,704,381**	**26,312**	**25,240,890**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	238.27	0	86,879	10,426	0	20,700,928	20,700,928	2,484,111			
	A	Vibro-Hummer Piling of SSP Type 10H+H650, on Water, L=14m	6-SP10H&H650-W14	Sq.m.	863.43	1,448	0	174	1,250,392	0	1,250,392	150,047			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	371.59	1,575	0	189	585,189	0	585,189	70,223			

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Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (31/42)

BQ No.		Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
						L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
6.4/18-A		**Type 10H Hat-shape w/H-750x250x12x25**		**m**	**4,869.99**	**3,043**	**23,109**	**3,138**	**14,817,738**	**112,539,688**	**127,357,427**	**15,282,891**	**29,290**	**142,640,318**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 400~900	6-SSP-FHS	Ton	1,205.54	0	86,879	10,426	0	104,736,418	104,736,418	12,568,370			
	A	Vibro-Hummer Piling of SSP Type 10H+H750, on Water, w/ Water Jet, L=15m	6-SP10H&H750-WJ15	Sq.m.	4,383.04	2,458	1,780	509	10,775,068	7,803,270	18,578,338	2,229,401			
	A	Welding of Water Jet Pipe onto Sheet Pile	6-WJP-WELD	Pile	284.58	4,139	0	497	1,177,929	0	1,177,929	141,351			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	1,819.07	1,575	0	189	2,864,741	0	2,864,741	343,769			
6.4/19-A		**Type 25H Hat-shape**		**m**	**1,276.02**	**1,393**	**8,903**	**1,236**	**1,777,581**	**11,360,923**	**13,138,504**	**1,576,620**	**11,532**	**14,715,125**	
	A	Furnishing Steel Pipe Sheet Pile (HAT 10H, 25H)	6-SSP-FH	Ton	144.23	0	78,771	9,452	0	11,360,923	11,360,923	1,363,311			
	A	Vibro-Hummer Piling of SSP Type 25H, on Water, L=7m	6-SP25H-W7	Sq.m.	1,148.42	760	0	91	873,213	0	873,213	104,786			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	574.26	1,575	0	189	904,368	0	904,368	108,524			
6.4/19-B		**Type 25H Hat-shape**		**m**	**19,807.89**	**1,216**	**8,901**	**1,214**	**24,085,204**	**176,311,525**	**200,396,729**	**24,047,607**	**11,331**	**224,444,336**	
	B	Furnishing Steel Pipe Sheet Pile (HAT 10H, 25H)	6-SSP-FH	Ton	2,238.29	0	78,771	9,452	0	176,311,525	176,311,525	21,157,383			
	B	Vibro-Hummer Piling of SSP Type 25H, on Land, L=6~9m	6-SP25H-L6TO9	Sq.m.	17,827.10	406	0	49	7,240,303	0	7,240,303	868,836			
	B	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	10,696.26	1,575	0	189	16,844,901	0	16,844,901	2,021,388			
6.4/20-B		**Type 25H Hat-shape with flexible joint**		**m**	**184.00**	**366**	**121,979**	**14,681**	**67,257**	**22,444,059**	**22,511,316**	**2,701,358**	**137,025**	**25,212,674**	
	B	Flexible Joiint SSP-25H-100-A, L=10.0m	6-FLX-25H-A	L.m.	20.00	366	117,939	14,197	7,311	2,358,787	2,366,097	283,932			
	B	Flexible Joiint SSP-25H-100-B, L=7.5m	6-FLX-25H-B	L.m.	15.00	366	125,923	15,155	5,483	1,888,839	1,894,322	227,319			
	B	Flexible Joiint SSP-25H-100-C, L=11.0m	6-FLX-25H-C	L.m.	22.00	366	120,575	14,513	8,042	2,652,642	2,660,684	319,282			
	B	Flexible Joiint SSP-25H-200-D, L=11.0m	6-FLX-25H-D	L.m.	22.00	366	131,448	15,818	8,042	2,891,849	2,899,891	347,987			
	B	Flexible Joiint SSP-25H-100-E, L=10.5m	6-FLX-25H-E	L.m.	21.00	366	117,003	14,084	7,676	2,457,063	2,464,739	295,769			
	B	Flexible Joiint SSP-25H-100-F, L=10.5m	6-FLX-25H-F	L.m.	21.00	366	116,893	14,071	7,676	2,454,746	2,462,422	295,491			
	B	Flexible Joiint SSP-25H-100-G, L=10.5m	6-FLX-25H-G	L.m.	21.00	366	116,893	14,071	7,676	2,454,746	2,462,422	295,491			
	B	Flexible Joiint SSP-25H-100-H, L=10.5m	6-FLX-25H-H	L.m.	21.00	366	119,265	14,356	7,676	2,504,556	2,512,232	301,468			
	B	Flexible Joiint SSP-25H-200-I, L=10.5m	6-FLX-25H-I	L.m.	21.00	366	132,421	15,934	7,676	2,780,832	2,788,508	334,621			
6.4/21-A		**Type 25H Hat-shape w/H-850x250x16x28**		**m**	**271.32**	**1,651**	**28,688**	**3,641**	**448,078**	**7,783,493**	**8,231,570**	**987,788**	**33,980**	**9,219,359**	
	A	Furnishing Steel Sheet Pile (HAT 10H, 25H) with H-Beam 1000	6-SSP-FHL	Ton	86.70	0	89,775	10,773	0	7,783,493	7,783,493	934,019			
	A	Vibro-Hummer Piling of SSP Type 25H+H850, on Water, L=17m	6-SP25H&H850-W17	Sq.m.	244.19	1,448	0	174	353,625	0	353,625	42,435			
	A	Corrosion Proof Lining (Epoxy Painting System with Sandblast Preparation)	6-CPL-EP	Sq.m.	59.98	1,575	0	189	94,453	0	94,453	11,334			
6.4/22		**End Connection Type 1**		**no**	**43.00**	**75,620**	**0**	**9,074**	**3,251,664**	**0**	**3,251,664**	**390,200**	**84,695**	**3,641,864**	
		Cork Joint Filler	5-CJF	Sq.m.	24.08	1,740	0	209	41,888	0	41,888	5,027			
		Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	129.00	162	0	19	20,870	0	20,870	2,504			
		Concrete Work for Reinforced Concrete, Class-A, Manpower Placing	5-CA-M	Cu.m.	193.50	4,265	0	512	825,278	0	825,278	99,033			
		Reinforcing Bar (Grade 275)	5-RB-40	Ton	19.35	54,267	0	6,512	1,050,063	0	1,050,063	126,008			
		Geotextile, t=1.9mm, Polymer Nonwoven	-	sq.m.	516.00	129	0	15	66,564	0	66,564	7,988			
		Steel Plate, 16mm thk.	-	kg	21,500.00	58	0	7	1,247,000	0	1,247,000	149,640			
6.4/23		**End Connection Type 2**		**no**	**14.00**	**1,187**	**0**	**142**	**16,613**	**0**	**16,613**	**1,994**	**1,329**	**18,607**	
		Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	7.84	2,119	0	254	16,613	0	16,613	1,994			
6.4/24		**End Connection Type 3**		**no**	**13.00**	**3,661**	**0**	**439**	**47,592**	**0**	**47,592**	**5,711**	**4,100**	**53,303**	
		Cork Joint Filler	5-CJF	Sq.m.	19.50	1,740	0	209	33,921	0	33,921	4,071			
		Joint Sealant at Expansion Joint	5-JS-Ex	L.m.	84.50	162	0	19	13,671	0	13,671	1,640			

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (32/42)

BQ No.		Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
						L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
6.4/25-A		**Extra-over cost of installing sheet piles beneath bridges and HV cables**		**m**	**949.62**	**7,446**	**502**	**954**	**7,070,963**	**476,513**	**7,547,475**	**905,697**	**8,902**	**8,453,172**	
	A	w/ SPLICE, Vibro-Hummer Piling of SSP Type IV-w, on Water. w/ Water Jet. L=8m	6-SP4-SPWJ8	m.	142.80	6,237	1,445	922	890,631	206,394	1,097,025	131,643			
	A	w/ SPLICE, Vibro-Hummer Piling of SSP Type VI-L, on Water, L=10m	6-SP6-SPW10	m.	232.56	5,345	0	641	1,243,041	0	1,243,041	149,165			
	A	w/ SPLICE, Vibro-Hummer Piling of SSP Type VI-L, on Water, w/ Water Jet, L=10m	6-SP6-SPWJ10	m.	179.52	3,439	867	517	617,337	155,680	773,017	92,762			
	A	w/ SPLICE, Vibro-Hummer Piling of SSP Type 10H+H400, on Water, w/ Water Jet, L=10m	6-SP10H&H400-SPWJ10	m.	105.57	8,167	1,084	1,110	862,183	114,438	976,621	117,195			
	A	w/ SPLICE, Vibro-Hummer Piling of SSP Type 10H+H500, on Water, L=12m	6-SP10H&H500-SPW12	m.	289.17	11,958	0	1,435	3,457,771	0	3,457,771	414,933			
6.4/25-B		**Extra-over cost of installing sheet piles beneath bridges and HV cables**		**m**	**787.95**	**10,296**	**0**	**1,236**	**8,112,751**	**0**	**8,112,751**	**973,530**	**11,532**	**9,086,281**	
	B	Excavation and Loading by Backhoe (0.63 cu.m.)	4-EXBS	Cu.m.	2,356.20	91	0	11	213,508	0	213,508	25,621			Excavation for setup of Backhoe
	B	Sand Bag	3-SB	Cu.m.	600.78	2,137	0	256	1,283,860	0	1,283,860	154,063			Installation of sandbag on excavated slope
	B	Dewatering, 150mm Dia. Pump x 2 sets	3-DW	Day	61.20	14,889	0	1,787	911,197	0	911,197	109,344			Dewatering during SSP driving
	B	Dike Embankment (with Excavated Material)	4-DEM	Cu.m.	2,356.20	145	0	17	340,659	0	340,659	40,879			Backfilling at excavated area
	B	w/ SPLICE, Vibro-Hummer Piling of SSP Type 10H, on Land, L=4~6m	6-SP10H-SPL4TO6	m.	155.55	4,748	0	570	738,491	0	738,491	88,619			
	B	w/ SPLICE, Vibro-Hummer Piling of SSP Type 25H, on Land. L=6~9m	6-SP25H-SPL6TO9	m.	632.40	7,313	0	878	4,625,037	0	4,625,037	555,004			

Tb 1.337

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (33/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 7 – PROTECTION WORKS														
7.4/1-A	**Riprap Class B**		**m^3**	**67,799.55**	**2,462**	**0**	**295**	**166,903,828**	**0**	**166,903,828**	**20,028,459**	**2,757**	**186,932,287**	
	Riprap (Boulder, 30~50cm Dia.) on Water	7-RPRP-W	Cu.m.	67,799.55	2,175	0	261	147,475,656	0	147,475,656	17,697,079			
	Hauling by Barge - 5km, incl. Loading & Un-Loading	4-H-BG5	Cu.m.	67,799.55	287	0	34	19,428,171	0	19,428,171	2,331,381			
7.5/1-A	**Gravel bedding and backfill**		**m^3**	**1,372.35**	**1,580**	**0**	**190**	**2,168,938**	**0**	**2,168,938**	**260,273**	**1,770**	**2,429,210**	
	Gravel Bedding and Backfill	7-GBB	Cu.m.	1,372.35	1,580	0	190	2,168,938	0	2,168,938	260,273			
7.5/1-B	**Gravel bedding and backfill**		**m^3**	**2,924.36**	**1,580**	**0**	**190**	**4,621,812**	**0**	**4,621,812**	**554,617**	**1,770**	**5,176,430**	
	Gravel Bedding and Backfill	7-GBB	Cu.m.	2,924.36	1,580	0	190	4,621,812	0	4,621,812	554,617			
7.6/1-A	**Stone masonry repair Type R4**		**m^2**	**1,079.79**	**10,173**	**0**	**1,221**	**10,984,845**	**0**	**10,984,845**	**1,318,181**	**11,394**	**12,303,027**	
7.6/1-1	Stone Masonry repair Type R4		m^2	1,079.79	1,367	0	164	1,476,552	0	1,476,552	177,186	1,532	1,653,739	
	Stone Masonry/Wet Stone Masonry, t=200mm	7-WSM20	Sq.m.	1,079.79	1,367	0	164	1,476,552	0	1,476,552	177,186			
7.6/1-2	Sheet Pile Cofferdams at R4 repair		lm	315.24	30,162	0	3,619	9,508,293	0	9,508,293	1,140,995	33,782	10,649,288	
	Temporary Steel Sheet Pile, Type II-w, Furnishing and Driving	6-SP2WT	Sq.m.	1,716.96	1,785	0	214	3,064,084	0	3,064,084	367,690			
	Pulling Out of Steel Sheet Pile, All Type	6-SP-O	Sq.m.	1,716.96	483	0	58	829,184	0	829,184	99,502			
	Sand Bag	3-SB	Cu.m.	429.24	2,137	0	256	917,281	0	917,281	110,074			
	Dewatering for Drainage Coffering, 150mm Dia. Pump	3-DW-DR	Day	227.32	20,665	0	2,480	4,697,743	0	4,697,743	563,729			
7.8/1-B	**Gabion mattresses**		**m^3**	**1,130.27**	**6,573**	**0**	**789**	**7,429,233**	**0**	**7,429,233**	**891,508**	**7,362**	**8,320,741**	
	Gabion Mattress, w/ Filter Cloth Bedding	7-GMT	Cu.m.	1,130.27	6,573	0	789	7,429,233	0	7,429,233	891,508			
7.9/1-A	**Sandbag riprap**		**m^3**	**448.00**	**10,632**	**0**	**1,276**	**4,762,923**	**0**	**4,762,923**	**571,551**	**11,907**	**5,334,473**	
	Sand Bag Rip-rap	7-RP-SB	Cu.m.	448.00	10,632	0	1,276	4,762,923	0	4,762,923	571,551			
7.10/1-B	**Precast concrete block retaining wall**		**m^2**	**2,864.57**	**2,634**	**0**	**316**	**7,546,567**	**0**	**7,546,567**	**905,588**	**2,951**	**8,452,155**	
	Supply and Place of PVC Weepholes with Filter Cloth	7-PVC	Pcs.	1,432.28	133	0	16	191,024	0	191,024	22,923			
	Elastic Joint Filler	5-EJF	Sq.m.	188.00	1,362	0	163	256,150	0	256,150	30,738			
	Staging/Scaffolding Work	5-ST	Sq.m.	684.00	281	0	34	192,317	0	192,317	23,078			
	Metal Form for Concrete Blocks	7-CB-MF	Sq.m.	15,489.87	162	0	19	2,506,575	0	2,506,575	300,789			
	Installation of Concrete Block Retaining Wall	7-CBW	Sq.m.	2,864.57	929	0	112	2,662,282	0	2,662,282	319,474			
	Concrete Work for Massive Concrete, Class-B, Concrete Pump Placing	5-CB-P	Cu.m.	445.60	3,901	0	468	1,738,219	0	1,738,219	208,586			
7.11/1-B	**Grass sodding**		**m^2**	**5,980.00**	**93**	**0**	**11**	**554,108**	**0**	**554,108**	**66,493**	**104**	**620,601**	
	Grass Sodding	4-GS	Sq.m.	5,976.60	93	0	11	554,108	0	554,108	66,493			
7.15/1-B	**Protection of existing bridge foundations**		**m^3**	**4,329.15**	**2,043**	**4,282**	**759**	**8,846,604**	**18,539,575**	**27,386,179**	**3,286,341**	**7,085**	**30,672,520**	
	Net Gabion	7-NETG	Cu.m.	4,329.15	2,043	4,282	759	8,846,604	18,539,575	27,386,179	3,286,341			

Tb 1.338

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (34/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 8 - DRAINAGE														
8.4/1	**Reinforced concrete pipe – 300 mm dia.**		**lm**	**105.00**	**1,004**	**0**	**121**	**105,466**	**0**	**105,466**	**12,656**	**1,125**	**118,122**	
	Installation of RC Pipe Culvert, 300mm (12") Dia.	10-CP-12	L.m.	105.00	784	0	94	82,353	0	82,353	9,882			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	1.90	12,161	0	1,459	23,112	0	23,112	2,773			
8.4/2	**Reinforced concrete pipe – 460 mm dia.**		**lm**	**105.00**	**1,390**	**0**	**167**	**145,911**	**0**	**145,911**	**17,509**	**1,556**	**163,420**	
	Installation of RC Pipe Culvert, 460mm (18") Dia.	10-CP-18	L.m.	105.00	1,112	0	133	116,797	0	116,797	14,016			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	2.39	12,161	0	1,459	29,114	0	29,114	3,494			
8.4/3	**Reinforced concrete pipe – 525 mm dia.**		**lm**	**1.05**	**1,671**	**0**	**200**	**1,754**	**0**	**1,754**	**211**	**1,871**	**1,965**	
	Installation of RC Pipe Culvert, 525mm (21") Dia.	10-CP-21	L.m.	1.05	1,306	0	157	1,371	0	1,371	165			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	0.03	12,161	0	1,459	383	0	383	46			
8.4/4	**Reinforced concrete pipe – 610 mm dia.**		**lm**	**10.50**	**1,831**	**0**	**220**	**19,222**	**0**	**19,222**	**2,307**	**2,050**	**21,528**	
	Installation of RC Pipe Culvert, 610mm (24") Dia.	10-CP-24	L.m.	10.50	1,551	0	186	16,285	0	16,285	1,954			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	0.24	12,161	0	1,459	2,937	0	2,937	352			
8.4/5	**Reinforced concrete pipe – 760 mm dia.**		**lm**	**21.00**	**3,012**	**0**	**361**	**63,247**	**0**	**63,247**	**7,590**	**3,373**	**70,837**	
	Installation of RC Pipe Culvert, 760mm (30") Dia.	10-CP-30	L.m.	21.00	2,568	0	308	53,926	0	53,926	6,471			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	0.77	12,161	0	1,459	9,322	0	9,322	1,119			
8.4/6-A	**Reinforced concrete pipe – 910 mm dia.**		**lm**	**757.05**	**4,123**	**0**	**495**	**3,121,344**	**0**	**3,121,344**	**374,561**	**4,618**	**3,495,905**	
	Installation of RC Pipe Culvert, 910mm (36") Dia.	10-CP-36	L.m.	757.05	3,565	0	428	2,698,682	0	2,698,682	323,842			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	34.76	12,161	0	1,459	422,662	0	422,662	50,719			
8.4/6-B	**Reinforced concrete pipe – 910 mm dia.**		**lm**	**739.20**	**4,214**	**0**	**506**	**3,115,175**	**0**	**3,115,175**	**373,821**	**4,720**	**3,488,996**	
	Installation of RC Pipe Culvert, 910mm (36") Dia.	10-CP-36	L.m.	739.20	3,565	0	428	2,635,052	0	2,635,052	316,206			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	39.48	12,161	0	1,459	480,123	0	480,123	57,615			
8.4/7-A	**Reinforced concrete pipe – 1,070 mm dia.**		**lm**	**8.40**	**5,004**	**0**	**601**	**42,036**	**0**	**42,036**	**5,044**	**5,605**	**47,081**	
	Installation of RC Pipe Culvert, 1070mm (42") Dia.	10-CP-42	L.m.	8.40	4,396	0	528	36,929	0	36,929	4,431			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	0.42	12,161	0	1,459	5,108	0	5,108	613			
8.4/7-B	**Reinforced concrete pipe – 1,070 mm dia.**		**lm**	**8.40**	**5,156**	**0**	**619**	**43,313**	**0**	**43,313**	**5,198**	**5,775**	**48,511**	
	Installation of RC Pipe Culvert, 1070mm (42") Dia.	10-CP-42	L.m.	8.40	4,396	0	528	36,929	0	36,929	4,431			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	0.53	12,161	0	1,459	6,385	0	6,385	766			
8.4/8	**Unreinforced concrete Pipe – 200 mm dia.**		**lm**	**4.20**	**607**	**0**	**73**	**2,550**	**0**	**2,550**	**306**	**680**	**2,855**	
	Installation of NRC Pipe Culvert, 200mm Dia.	10-NRC-20	L.m.	4.20	546	0	66	2,294	0	2,294	275			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	0.02	12,161	0	1,459	255	0	255	31			
8.4/9	**Unreinforced concrete Pipe – 250 mm dia.**		**lm**	**1.05**	**1,762**	**0**	**211**	**1,850**	**0**	**1,850**	**222**	**1,974**	**2,073**	
	Installation of NRC Pipe Culvert, 200mm Dia.	10-NRC-20	L.m.	1.05	546	0	66	574	0	574	69			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
	Cement Mortar (1:2) for Joint Collar of RC Pipe	10-CP-CL	Cu.m.	0.11	12,161	0	1,459	1,277	0	1,277	153			

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (35/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
8.6/1	**FRP Flap gate – 300 mm dia.**		**no**	**3.00**	**6,877**	**117,794**	**14,961**	**20,631**	**353,383**	**374,014**	**44,882**	**139,632**	**418,896**	
	Installation of FRP Type Flap Gate 300mm	10-FG-12	Set	3.00	6,877	117,794	14,961	20,631	353,383	374,014	44,882			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.6/2	**FRP Flap gate – 910 mm dia.**		**no**	**36.00**	**12,777**	**376,268**	**46,685**	**459,970**	**13,545,640**	**14,005,610**	**1,680,673**	**435,730**	**15,686,283**	
	Installation of FRP Type Flap Gate 900mm	10-FG-36	Set	36.00	12,777	376,268	46,685	459,970	13,545,640	14,005,610	1,680,673			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.6/3	**Rectangular aluminium fap gate – 1000 x 1000**		**no**	**1.00**	**13,273**	**312,413**	**39,082**	**13,273**	**312,413**	**325,686**	**39,082**	**364,768**	**364,768**	
	Installation of Rectangle Type Flap Gate 1000mm	10-FG-42	Set	1.00	13,273	312,413	39,082	13,273	312,413	325,686	39,082			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.6/4	**Rectangular aluminium flap gate – 1200 x 1200**		**no**	**3.00**	**20,611**	**502,764**	**62,805**	**61,833**	**1,508,293**	**1,570,126**	**188,415**	**586,180**	**1,758,541**	
	Installation of Rectangle Type Flap Gate 1200mm	10-FG-48	Set	3.00	20,611	502,764	62,805	61,833	1,508,293	1,570,126	188,415			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.6/5	**Rectangular aluminium flap gate – 1400 x 1400**		**no**	**2.00**	**20,611**	**814,747**	**100,243**	**41,222**	**1,629,494**	**1,670,716**	**200,486**	**935,601**	**1,871,202**	
	Installation of Rectangle Type Flap Gate1400mm	10-FG-54	Set	2.00	20,611	814,747	100,243	41,222	1,629,494	1,670,716	200,486			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.6/6	**Rectangular aluminium flap gate – 1500 x 1500**		**no**	**2.00**	**21,978**	**936,378**	**115,003**	**43,955**	**1,872,755**	**1,916,710**	**230,005**	**1,073,358**	**2,146,716**	
	Installation of Rectangle Type Flap Gate 1500mm	10-FG-60	Set	2.00	21,978	936,378	115,003	43,955	1,872,755	1,916,710	230,005			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.6/7	**Rectangular aluminium flap gate – 1600 x 1600**		**no**	**1.00**	**21,978**	**1,058,008**	**129,598**	**21,978**	**1,058,008**	**1,079,986**	**129,598**	**1,209,584**	**1,209,584**	
	Installation of Rectangle Type Flap Gate 1600mm	10-FG-64	Set	1.00	21,978	1,058,008	129,598	21,978	1,058,008	1,079,986	129,598			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.6/8	**Rectangular aluminium flap gate – 2000 x 1600**		**no**	**1.00**	**21,978**	**1,696,570**	**206,226**	**21,978**	**1,696,570**	**1,718,547**	**206,226**	**1,924,773**	**1,924,773**	
	Installation of Rectangle Type Flap Gate for 2000mm x 1600mm	10-FG-78	Set	1.00	21,978	1,696,570	206,226	21,978	1,696,570	1,718,547	206,226			
	Demolition by Jackhammer and Removal of Concrete Structure	4-DMS	Cu.m.	0.00	2,119	0	254	0	0	0	0			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.9/1	**PVC drainage pipe – 50 mm dia.**		**lm**	**18.90**	**93**	**0**	**11**	**1,751**	**0**	**1,751**	**210**	**104**	**1,961**	
	Installation of PVC Pipe, 50mm Dia.	10-PVC-05	L.m.	18.90	93	0	11	1,751	0	1,751	210			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.9/2	**PVC drainage pipe – 100 mm dia.**		**lm**	**378.00**	**212**	**0**	**25**	**80,261**	**0**	**80,261**	**9,631**	**238**	**89,892**	
	Installation of PVC Pipe, 100mm Dia.	10-PVC-10	L.m.	378.00	212	0	25	80,261	0	80,261	9,631			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.9/3	**PVC drainage pipe – 150 mm dia.**		**lm**	**541.80**	**346**	**0**	**42**	**187,676**	**0**	**187,676**	**22,521**	**388**	**210,198**	
	Installation of PVC Pipe, 150mm Dia.	10-PVC-15	L.m.	541.80	346	0	42	187,676	0	187,676	22,521			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.9/4	**PVC drainage pipe – 200 mm dia.**		**lm**	**409.50**	**525**	**0**	**63**	**215,073**	**0**	**215,073**	**25,809**	**588**	**240,882**	
	Installation of PVC Pipe, 200mm Dia.	10-PVC-20	L.m.	409.50	525	0	63	215,073	0	215,073	25,809			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.9/5	**PVC drainage pipe – 250 mm dia.**		**lm**	**44.10**	**927**	**0**	**111**	**40,898**	**0**	**40,898**	**4,908**	**1,039**	**45,806**	
	Installation of PVC Pipe, 250mm Dia.	10-PVC-25	L.m.	44.10	927	0	111	40,898	0	40,898	4,908			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			

Tb 1.340

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (36/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
8.9/6	**PVC drainage pipe – 300 mm dia.**		**lm**	**18.90**	**1,454**	**0**	**174**	**27,482**	**0**	**27,482**	**3,298**	**1,629**	**30,780**	
	Installation of PVC Pipe, 300mm Dia.	10-PVC-30	L.m.	18.90	1,454	0	174	27,482	0	27,482	3,298			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.10/1	**Galvanised iron drainage pipes – 100 mm dia.**		**lm**	**6.30**	**1,427**	**0**	**171**	**8,991**	**0**	**8,991**	**1,079**	**1,598**	**10,070**	
	Installation of GI Pipe, 100mm Dia.	10-GI-10	L.m.	6.30	1,427	0	171	8,991	0	8,991	1,079			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.10/2	**Galvanised iron drainage pipes – 150 mm dia.**		**lm**	**37.80**	**2,177**	**0**	**261**	**82,301**	**0**	**82,301**	**9,876**	**2,439**	**92,177**	
	Installation of GI Pipe, 150mm Dia.	10-GI-15	L.m.	37.80	2,177	0	261	82,301	0	82,301	9,876			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			
8.10/3	**Galvanised iron drainage pipes – 300 mm dia.**		**lm**	**18.90**	**5,935**	**0**	**712**	**112,172**	**0**	**112,172**	**13,461**	**6,647**	**125,632**	
	Installation of GI Pipe, 300mm Dia.	10-GI-30	L.m.	18.90	5,935	0	712	112,172	0	112,172	13,461			
	Trimming of Existing Drainage Pipe	4-TM-DP	L.m.	0.00	409	0	49	0	0	0	0			

Tb 1.341

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (37/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 9 – ROAD WORKS														
9.6/1	**Base course**		**m^3**	**1,172.85**	**1,499**	**0**	**180**	**1,758,343**	**0**	**1,758,343**	**211,001**	**1,679**	**1,969,344**	
	Subgrade Preparation	9-SG	Sq.m.	5,864.25	69	0	8	401,990	0	401,990	48,239			
	Gravel Surfacing	9-GS	Cu.m.	1,172.85	1,156	0	139	1,356,353	0	1,356,353	162,762			
9.8/1	**Bituminous concrete surface course**		**m^2**	**5,870.00**	**712**	**0**	**85**	**4,181,817**	**0**	**4,181,817**	**501,818**	**798**	**4,683,635**	
	Bituminous Prime Coat	9-BPC	Sq.m.	5,870.00	61	0	7	357,912	0	357,912	42,949			
	Bituminous Concrete Surface Course	9-BCSC	Sq.m.	5,870.00	651	0	78	3,823,904	0	3,823,904	458,869			

Tb 1.342

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (38/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 11 – STRUCTURAL AND MISCELLANEOUS METALWORKS														
11.10/1	**Trash screen 1400 x 1400**		**no**	**1.00**	**79,528**	**0**	**9,543**	**79,528**	**0**	**79,528**	**9,543**	**89,072**	**89,072**	
	Fabrication & Installation of Trash Screen, 1400 x	11-TR-1400	Set	1.00	79,528	0	9,543	79,528	0	79,528	9,543			
11.10/2	**Trash screen 1600 x 1600**		**no**	**1.00**	**84,763**	**0**	**10,172**	**84,763**	**0**	**84,763**	**10,172**	**94,934**	**94,934**	
	Fabrication & Installation of Trash Screen, 1600 x	11-TR-1600	Set	1.00	84,763	0	10,172	84,763	0	84,763	10,172			
11.10/3	**Trash screen 1800 x 1800**		**no**	**2.00**	**92,573**	**0**	**11,109**	**185,146**	**0**	**185,146**	**22,218**	**103,682**	**207,364**	
	Fabrication & Installation of Trash Screen, 1800 x	11-TR-1800	Set	2.00	92,573	0	11,109	185,146	0	185,146	22,218			
11.10/4	**Trash screen 1900 x 1900**		**no**	**2.00**	**96,504**	**0**	**11,580**	**193,008**	**0**	**193,008**	**23,161**	**108,084**	**216,169**	
	Fabrication & Installation of Trash Screen, 1900 x	11-TR-1900	Set	2.00	96,504	0	11,580	193,008	0	193,008	23,161			
11.10/5	**Trash screen 2000 x 2000**		**no**	**1.00**	**100,947**	**0**	**12,114**	**100,947**	**0**	**100,947**	**12,114**	**113,061**	**113,061**	
	Fabrication & Installation of Trash Screen, 2000 x	11-TR-2000	Set	1.00	100,947	0	12,114	100,947	0	100,947	12,114			
11.10/6	**Trash screen 2400 x 2000**		**no**	**1.00**	**111,561**	**0**	**13,387**	**111,561**	**0**	**111,561**	**13,387**	**124,948**	**124,948**	
	Fabrication & Installation of Trash Screen, 2400 x	11-TR-2400	Set	1.00	111,561	0	13,387	111,561	0	111,561	13,387			
11.10/7	**Trash screen 3100 x 1600**		**no**	**1.00**	**113,437**	**0**	**13,612**	**113,437**	**0**	**113,437**	**13,612**	**127,049**	**127,049**	
	Fabrication & Installation of Trash Screen, 3100 x	11-TR-3100	Set	1.00	113,437	0	13,612	113,437	0	113,437	13,612			

Tb 1.343

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (39/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. 15 – MISCELLANEOUS WORKS														
15.2/1	**Concrete block paving**		**m^2**	**15,170.00**	**1,704**	**0**	**204**	**25,847,096**	**0**	**25,847,096**	**3,101,651**	**1,908**	**28,948,747**	
	Concrete Block Pavement	9-PV-B	Sq.m.	15,164.10	1,447	0	174	21,938,412	0	21,938,412	2,632,609			
	Sand Fill, in Small Area: V<100 cu.m./location	4-SF-SS	Cu.m.	2,274.62	1,261	0	151	2,869,196	0	2,869,196	344,304			
	Subgrade Preparation	9-SG	Sq.m.	15,164.10	69	0	8	1,039,488	0	1,039,488	124,739			
15.3/1	**Concrete railing – Type 1**		**lm**	**603.75**	**2,149**	**0**	**258**	**1,297,747**	**0**	**1,297,747**	**155,730**	**2,407**	**1,453,477**	
	Concrete Work for Small Structure, Class-C, Manpower Placing	5-CC-M	Cu.m.	27.17	4,871	0	585	132,335	0	132,335	15,880			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	987.74	657	0	79	648,715	0	648,715	77,846			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	3.58	54,267	0	6,512	194,255	0	194,255	23,311			
	Painting on Concrete Surface	5-PT-CW	Sq.m.	987.74	326	0	39	322,442	0	322,442	38,693			
15.3/2	**Concrete railing – Type 2**		**lm**	**87.15**	**2,284**	**0**	**274**	**199,047**	**0**	**199,047**	**23,886**	**2,558**	**222,933**	
	Concrete Work for Small Structure, Class-C, Manpower Placing	5-CC-M	Cu.m.	3.92	4,871	0	585	19,102	0	19,102	2,292			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	142.58	657	0	79	93,641	0	93,641	11,237			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.52	54,267	0	6,512	28,040	0	28,040	3,365			
	Painting on Concrete Surface	5-PT-CW	Sq.m.	142.58	326	0	39	46,544	0	46,544	5,585			
	Chipping of Concrete Surface by Chipping Hammer	4-CIP	Sq.m.	31.37	374	0	45	11,720	0	11,720	1,406			
15.3/3	**Concrete railing - Type 3**		**lm**	**332.85**	**2,149**	**0**	**258**	**715,454**	**0**	**715,454**	**85,854**	**2,407**	**801,308**	
	Concrete Work for Small Structure, Class-C, Manpower Placing	5-CC-M	Cu.m.	14.98	4,871	0	585	72,957	0	72,957	8,755			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	544.54	657	0	79	357,639	0	357,639	42,917			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	1.97	54,267	0	6,512	107,094	0	107,094	12,851			
	Painting on Concrete Surface	5-PT-CW	Sq.m.	544.54	326	0	39	177,764	0	177,764	21,332			
15.3/4	**Concrete railing - Type 4**		**lm**	**327.60**	**2,744**	**0**	**329**	**898,830**	**0**	**898,830**	**107,860**	**3,073**	**1,006,690**	
	Concrete Work for Small Structure, Class-C, Manpower Placing	5-CC-M	Cu.m.	19.66	4,871	0	585	95,741	0	95,741	11,489			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	683.18	657	0	79	448,690	0	448,690	53,843			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	2.42	54,267	0	6,512	131,378	0	131,378	15,765			
	Painting on Concrete Surface	5-PT-CW	Sq.m.	683.18	326	0	39	223,021	0	223,021	26,762			
15.4/1	**Navigation warning signs**		**no**	**20.00**	**13,259**	**0**	**1,591**	**265,185**	**0**	**265,185**	**31,822**	**14,850**	**297,007**	
	Staging/Scaffolding Work	5-ST	Sq.m.	0.48	281	0	34	135	0	135	16			
	Installation of Navigation Warning Signs	12-NWS-80	Nos.	19.50	13,590	0	1,631	264,996	0	264,996	31,799			
	Anchor Bar for Concrete Structures	5-RB-AB	Kg	0.12	456	0	55	54	0	54	6			
15.5/1	**Concrete curb**		**lm**	**5,432.70**	**2,025**	**0**	**243**	**11,001,754**	**0**	**11,001,754**	**1,320,210**	**2,268**	**12,321,964**	
	Concrete Work for Small Structure, Class-C, Manpower Placing	5-CC-M	Cu.m.	706.25	4,871	0	585	3,440,038	0	3,440,038	412,805			
	Concrete Work for Leveling Concrete, Class-F, Manpower Placing	5-CF-M	Cu.m.	162.98	3,822	0	459	622,927	0	622,927	74,751			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	9,778.86	657	0	79	6,422,462	0	6,422,462	770,695			
	Formwork for Leveling Concrete	5-FR-LVL	Sq.m.	1,086.54	475	0	57	516,326	0	516,326	61,959			
15.6/1	**Replacement boat station at Sta. 8+930**		**LS**	**1.00**	**620,262**	**0**	**74,431**	**620,262**	**0**	**620,262**	**74,431**	**694,694**	**694,694**	
	Structural Steelwork	11-MT-SW	Kg	1,504.00	224	0	27	336,206	0	336,206	40,345			
	Handrail, Galvanized Pipe 50mm Dia. & 38mm Dia.	11-MT-HR	Kg	413.00	127	0	15	52,376	0	52,376	6,285			
	Installation of Rubber Fender for Boat Station	12-FS-V3	Nos.	7.00	13,940	0	1,673	97,582	0	97,582	11,710			
	Concrete Work for Small Structure, Class-C, Manpower Placing	5-CC-M	Cu.m.	7.50	4,871	0	585	36,531	0	36,531	4,384			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	30.00	627	0	75	18,802	0	18,802	2,256			
	Staging/Scaffolding Work	5-ST	Sq.m.	50.00	281	0	34	14,058	0	14,058	1,687			
	Supporting/Scaffolding Work	5-SF	Cu.m.	50.00	435	0	52	21,727	0	21,727	2,607			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.79	54,267	0	6,512	42,979	0	42,979	5,158			

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (40/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
15.6/2	**Replacement boat station at Sta. 8+970**		**LS**	**1.00**	**620,262**	**0**	**74,431**	**620,262**	**0**	**620,262**	**74,431**	**694,694**	**694,694**	
	Structural Steelwork	11-MT-SW	Kg	1,504.00	224	0	27	336,206	0	336,206	40,345			
	Handrail, Galvanized Pipe 50mm Dia. & 38mm Dia.	11-MT-HR	Kg	413.00	127	0	15	52,376	0	52,376	6,285			
	Installation of Rubber Fender for Boat Station	12-FS-V3	Nos.	7.00	13,940	0	1,673	97,582	0	97,582	11,710			
	Concrete Work for Small Structure, Class-C, Mannower Placing	5-CC-M	Cu.m.	7.50	4,871	0	585	36,531	0	36,531	4,384			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	30.00	627	0	75	18,802	0	18,802	2,256			
	Staging/Scaffolding Work	5-ST	Sq.m.	50.00	281	0	34	14,058	0	14,058	1,687			
	Supporting/Scaffolding Work	5-SF	Cu.m.	50.00	435	0	52	21,727	0	21,727	2,607			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.79	54,267	0	6,512	42,979	0	42,979	5,158			
15.6/3	**Replacement boat station at Sta. 13+740**		**LS**	**1.00**	**620,262**	**0**	**74,431**	**620,262**	**0**	**620,262**	**74,431**	**694,694**	**694,694**	
	Structural Steelwork	11-MT-SW	Kg	1,504.00	224	0	27	336,206	0	336,206	40,345			
	Handrail, Galvanized Pipe 50mm Dia. & 38mm Dia.	11-MT-HR	Kg	413.00	127	0	15	52,376	0	52,376	6,285			
	Installation of Rubber Fender for Boat Station	12-FS-V3	Nos.	7.00	13,940	0	1,673	97,582	0	97,582	11,710			
	Concrete Work for Small Structure, Class-C, Mannower Placing	5-CC-M	Cu.m.	7.50	4,871	0	585	36,531	0	36,531	4,384			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	30.00	627	0	75	18,802	0	18,802	2,256			
	Staging/Scaffolding Work	5-ST	Sq.m.	50.00	281	0	34	14,058	0	14,058	1,687			
	Supporting/Scaffolding Work	5-SF	Cu.m.	50.00	435	0	52	21,727	0	21,727	2,607			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.79	54,267	0	6,512	42,979	0	42,979	5,158			
15.6/4	**Replacement boat station at Sta. 14+880**		**LS**	**1.00**	**620,262**	**0**	**74,431**	**620,262**	**0**	**620,262**	**74,431**	**694,694**	**694,694**	
	Structural Steelwork	11-MT-SW	Kg	1,504.00	224	0	27	336,206	0	336,206	40,345			
	Handrail, Galvanized Pipe 50mm Dia. & 38mm Dia.	11-MT-HR	Kg	413.00	127	0	15	52,376	0	52,376	6,285			
	Installation of Rubber Fender for Boat Station	12-FS-V3	Nos.	7.00	13,940	0	1,673	97,582	0	97,582	11,710			
	Concrete Work for Small Structure, Class-C, Mannower Placing	5-CC-M	Cu.m.	7.50	4,871	0	585	36,531	0	36,531	4,384			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	30.00	627	0	75	18,802	0	18,802	2,256			
	Staging/Scaffolding Work	5-ST	Sq.m.	50.00	281	0	34	14,058	0	14,058	1,687			
	Supporting/Scaffolding Work	5-SF	Cu.m.	50.00	435	0	52	21,727	0	21,727	2,607			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.79	54,267	0	6,512	42,979	0	42,979	5,158			
15.6/5	**Replacement boat station at Sta. 15+290**		**LS**	**1.00**	**620,262**	**0**	**74,431**	**620,262**	**0**	**620,262**	**74,431**	**694,694**	**694,694**	
	Structural Steelwork	11-MT-SW	Kg	1,504.00	224	0	27	336,206	0	336,206	40,345			
	Handrail, Galvanized Pipe 50mm Dia. & 38mm Dia.	11-MT-HR	Kg	413.00	127	0	15	52,376	0	52,376	6,285			
	Installation of Rubber Fender for Boat Station	12-FS-V3	Nos.	7.00	13,940	0	1,673	97,582	0	97,582	11,710			
	Concrete Work for Small Structure, Class-C, Mannower Placing	5-CC-M	Cu.m.	7.50	4,871	0	585	36,531	0	36,531	4,384			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	30.00	627	0	75	18,802	0	18,802	2,256			
	Staging/Scaffolding Work	5-ST	Sq.m.	50.00	281	0	34	14,058	0	14,058	1,687			
	Supporting/Scaffolding Work	5-SF	Cu.m.	50.00	435	0	52	21,727	0	21,727	2,607			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.79	54,267	0	6,512	42,979	0	42,979	5,158			
15.6/6	**Replacement boat station at Sta. 15+440**		**LS**	**1.00**	**620,262**	**0**	**74,431**	**620,262**	**0**	**620,262**	**74,431**	**694,694**	**694,694**	
	Structural Steelwork	11-MT-SW	Kg	1,504.00	224	0	27	336,206	0	336,206	40,345			
	Handrail, Galvanized Pipe 50mm Dia. & 38mm Dia.	11-MT-HR	Kg	413.00	127	0	15	52,376	0	52,376	6,285			
	Installation of Rubber Fender for Boat Station	12-FS-V3	Nos.	7.00	13,940	0	1,673	97,582	0	97,582	11,710			
	Concrete Work for Small Structure, Class-C, Mannower Placing	5-CC-M	Cu.m.	7.50	4,871	0	585	36,531	0	36,531	4,384			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	30.00	627	0	75	18,802	0	18,802	2,256			
	Staging/Scaffolding Work	5-ST	Sq.m.	50.00	281	0	34	14,058	0	14,058	1,687			
	Supporting/Scaffolding Work	5-SF	Cu.m.	50.00	435	0	52	21,727	0	21,727	2,607			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.79	54,267	0	6,512	42,979	0	42,979	5,158			

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (41/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
15.6/7	**Replacement boat station at Sta. 16+150**		**LS**	**1.00**	**620,262**	**0**	**74,431**	**620,262**	**0**	**620,262**	**74,431**	**694,694**	**694,694**	
	Structural Steelwork	11-MT-SW	Kg	1,504.00	224	0	27	336,206	0	336,206	40,345			
	Handrail, Galvanized Pipe 50mm Dia. & 38mm Dia.	11-MT-HR	Kg	413.00	127	0	15	52,376	0	52,376	6,285			
	Installation of Rubber Fender for Boat Station	12-FS-V3	Nos.	7.00	13,940	0	1,673	97,582	0	97,582	11,710			
	Concrete Work for Small Structure, Class-C, Manpower Placing	5-CC-M	Cu.m.	7.50	4,871	0	585	36,531	0	36,531	4,384			
	Formwork F1 (for Large Sized Structure)	5-FR-L	sq.m.	30.00	627	0	75	18,802	0	18,802	2,256			
	Staging/Scaffolding Work	5-ST	Sq.m.	50.00	281	0	34	14,058	0	14,058	1,687			
	Supporting/Scaffolding Work	5-SF	Cu.m.	50.00	435	0	52	21,727	0	21,727	2,607			
	Reinforcing Bar (Grade 275)	5-RB-40	Ton	0.79	54,267	0	6,512	42,979	0	42,979	5,158			
15.7/1	**Type III fencing**		**lm**	**341.00**	**5,108**	**0**	**613**	**1,741,730**	**0**	**1,741,730**	**209,008**	**5,721**	**1,950,737**	
	Installation of Fence	11-FENCE-FP	L.m.	988.90	1,300	0	156	1,286,060	0	1,286,060	154,327			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	85.25	4,032	0	484	343,691	0	343,691	41,243			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	170.50	657	0	79	111,979	0	111,979	13,438			
15.8/1	**Boundary markers**		**no**	**71.00**	**2,279**	**0**	**273**	**161,820**	**0**	**161,820**	**19,418**	**2,553**	**181,239**	
	Painting on Concrete Surface	5-PT-CW	Sq.m.	56.80	326	0	39	18,542	0	18,542	2,225			
	Concrete Work for Massive Concrete, Class-B, Manpower Placing	5-CB-M	Cu.m.	14.20	4,032	0	484	57,248	0	57,248	6,870			
	Formwork F2 (for Small Sized Structure)	5-FR-S	sq.m.	117.15	657	0	79	76,941	0	76,941	9,233			
	Gravel Bedding and Backfill	7-GBB	Cu.m.	5.75	1,580	0	190	9,089	0	9,089	1,091			

Tb 1.346

Table 1.5.8 Estimation of Unit Cost for Bill of Quantities (42/42)

BQ No.	Name of Item	UC No. /Ref. No.	Unit	Quantity	Unit Cost (Peso)			Amount (Peso)				Total (Peso)		Remarks
					L.C	F.C.	VAT	L.C	F.C.	Excl. VAT	VAT	Unit Cost	Amount	
BILL No. P – PROVISIONAL SUMS														
P1.14/1	**Relocation of utility or service facilities**		**P.S.**	**1.00**	**5,000,000**	**0**	**600,000**	**5,000,000**	**0**	**5,000,000**	**600,000**	**5,600,000**	**5,600,000**	
	Electric poles & lines, Telephone line, Water line and	-	LS	1.00	5,000,000	0	600,000	5,000,000	0	5,000,000	600,000			
P1.18/3	**STI, STD and HIV/AID Alleviation Programme**		**P.S.**	**1.00**	**1,500,000**	**0**	**180,000**	**1,500,000**	**0**	**1,500,000**	**180,000**	**1,680,000**	**1,680,000**	
	HIV Awareness and Prevention Program	-	LS	1.00	1,500,000	0	180,000	1,500,000	0	1,500,000	180,000			
P1.18/4	**PPE for Employer's Personnel**		**P.S.**	**1.00**	**103,057**	**0**	**12,367**	**103,057**	**0**	**103,057**	**12,367**	**115,424**	**115,424**	
	Provision of Personal Protective Equipment (PPE)	1-PR-PPE	Set	30.00	3,228	0	387	96,844	0	96,844	11,621			
	First Aid Kit	-	no	1.00	6,214	0	746	6,214	0	6,214	746			
P1.22/3	**Furnishings, equipment and consumables for office of Employer's Personnel**		**P.S.**	**1.00**	**3,030,000**	**0**	**363,600**	**3,030,000**	**0**	**3,030,000**	**363,600**	**3,393,600**	**3,393,600**	
	Provision of Furnishings and Equipment	1-PR-FE	L.S.	1.00	1,160,913	0	139,310	1,160,913	0	1,160,913	139,310			
	Provision of Consumables	1-PR-CO	L.S.	1.00	619,520	0	74,342	619,520	0	619,520	74,342			
	Utility	-	Man-Mth	36.00	15,000	0	1,800	540,000	0	540,000	64,800			
	Cleaner	-	Man-Mth	36.00	15,000	0	1,800	540,000	0	540,000	64,800			
	Materials and Equipments (% of Staff)	-	%	5.00	1,500	0	180	54,000	0	54,000	6,480			
	Electricity Consumption, 100kWh/month	-	Month	36.00	2,000	0	240	72,000	0	72,000	8,640			
	Water Consumption, 100 cu.m /month	-	Month	36.00	1,000	0	120	36,000	0	36,000	4,320			
	LPG Gas, 11kg tank, 3 tanks/month	-	Month	1.00	700	0	84	700	0	700	84			
	Adjustment for Round up	-	-	-	-	-	-	6,867	-	6,867	824			
P1.23/1	**Provide Type A transportation items**		**P.S.**	**1.00**	**7,377,500**	**0**	**885,300**	**7,377,500**	**0**	**7,377,500**	**885,300**	**8,262,800**	**8,262,800**	
	Provide Type A Transportation Item, Toyota Fortuner	1-TR-AP	Nos.	5.00	1,475,500	0	177,060	7,377,500	0	7,377,500	885,300			
P1.23/2	**Provide Type B transportation items**		**P.S.**	**1.00**	**307,764**	**0**	**36,932**	**307,764**	**0**	**307,764**	**36,932**	**344,696**	**344,696**	
	Provide Type B Transportation Item, Motor Cycle, 200cc Capacity	1-TR-BP	Nos.	3.00	102,588	0	12,311	307,764	0	307,764	36,932			
P1.23/3	**Provide Type C transportation items**		**P.S.**	**1.00**	**957,000**	**0**	**114,840**	**957,000**	**0**	**957,000**	**114,840**	**1,071,840**	**1,071,840**	
	Provide Type C Transportation Item, Quintrex 460 Dory Boat w/ 40HP Outboard Engine	1-TR-CP	Nos.	1.00	957,000	0	114,840	957,000	0	957,000	114,840			
P1.26/1	**Reimbursement of Employer's 50% share of DB costs**		**P.S.**	**1.00**	**3,084,211**	**0**	**370,105**	**3,084,211**	**0**	**3,084,211**	**370,105**	**3,454,316**	**3,454,316**	
	Reimbursement of Employer's 50% share of DB costs	-	LS	1.00	3,084,211	0	370,105	3,084,211	0	3,084,211	370,105			
P2.14/2-B	**Adjustment of pH of discharge water**		**P.S.**	**1.00**	**3,000,000**	**0**	**360,000**	**3,000,000**	**0**	**3,000,000**	**360,000**	**3,360,000**	**3,360,000**	
	Removal of obstruction for driving steel sheet pile	-	LS	1.00	3,000,000	0	360,000	3,000,000	0	3,000,000	360,000			
P4.5/1-A	**Removal and/or relocation of previously unidentified objects and structures**		**P.S.**	**1.00**	**74,100,000**	**0**	**8,892,000**	**74,100,000**	**0**	**74,100,000**	**8,892,000**	**82,992,000**	**82,992,000**	
	Removal of obstruction for driving steel sheet pile	-	LS	1.00	69,300,000	0	8,316,000	69,300,000	0	69,300,000	8,316,000			
	Removal of obstruction for installation of reinforced concrete floodwall	-	LS	1.00	4,800,000	0	576,000	4,800,000	0	4,800,000	576,000			
P4.5/1-B	**Removal and/or relocation of previously unidentified objects and structures**		**P.S.**	**1.00**	**12,600,000**	**0**	**1,512,000**	**12,600,000**	**0**	**12,600,000**	**1,512,000**	**14,112,000**	**14,112,000**	
	Removal of obstruction for driving steel sheet pile	-	LS	1.00	12,600,000	0	1,512,000	12,600,000	0	12,600,000	1,512,000			
P4.21/1-A	**Treatment and disposal of hazardous waste**		**P.S.**	**1.00**	**5,000,000**	**0**	**600,000**	**5,000,000**	**0**	**5,000,000**	**600,000**	**5,600,000**	**5,600,000**	
	Treatment, Transport and Disposal of Hazardous	-	LS	1.00	5,000,000	0	600,000	5,000,000	0	5,000,000	600,000			
P4.20/1-B	**Treatment and disposal of hazardous waste**		**P.S.**	**1.00**	**5,000,000**	**0**	**600,000**	**5,000,000**	**0**	**5,000,000**	**600,000**	**5,600,000**	**5,600,000**	
	Treatment, Transport and Disposal of Hazardous	-	LS	1.00	5,000,000	0	600,000	5,000,000	0	5,000,000	600,000			

Tb 1.347

Table 1.5.9 Bill of Quantities for Contract Package No.1 (1/7)

BILL No. 1 – PRELIMINARY AND GENERAL

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
1.10/1-A	K14	Mobilization and demobilization	LS	1	23,000,000.00	0.00	2,760,000.00	25,760,000.00	23,000,000.00	0.00	2,760,000.00	25,760,000.00
1.11/1-A	K14	Survey of ground profiles	LS	1	3,065,975.00	0.00	367,917.00	3,433,892.00	3,065,975.00	0.00	367,917.00	3,433,892.00
1.13/1-A	K14	Foundation investigation	m	960	2,949.57	0.00	353.95	3,303.52	2,831,590.00	0.00	339,790.80	3,171,380.80
1.15/1	K14	Traffic Management Plan	LS	1	1,092,000.00	0.00	131,040.00	1,223,040.00	1,092,000.00	0.00	131,040.00	1,223,040.00
1.15/2	K14	Implementation and operation of traffic management plan	mo	36	871,555.79	0.00	104,586.69	976,142.48	31,376,008.32	0.00	3,765,121.00	35,141,129.32
1.16/1	K14	Quality Management Plan	LS	1	1,092,000.00	0.00	131,040.00	1,223,040.00	1,092,000.00	0.00	131,040.00	1,223,040.00
1.16/2	K14	Implementation and operation of quality management plan	mo	36	529,000.00	0.00	63,480.00	592,480.00	19,044,000.00	0.00	2,285,280.00	21,329,280.00
1.16/3	K14	Provisional of laboratory equipment for Employer	LS	1	916,900.00	0.00	110,028.00	1,026,928.00	916,900.00	0.00	110,028.00	1,026,928.00
1.17/1	K14	Programming and Reporting	LS	1	15,480,000.00	0.00	1,857,600.00	17,337,600.00	15,480,000.00	0.00	1,857,600.00	17,337,600.00
1.18/1	K14	Health and Safety Plan	LS	1	500,000.00	0.00	60,000.00	560,000.00	500,000.00	0.00	60,000.00	560,000.00
1.18/2	K14	Implementation and operation of health and safety plan	mo	36	205,002.86	0.00	24,600.34	229,603.20	7,380,102.80	0.00	885,612.34	8,265,715.14
1.20/1	K14	Progress photographs	mo	36	159,833.33	0.00	19,180.00	179,013.33	5,754,000.00	0.00	690,480.00	6,444,480.00
1.22/1	K14	Provision of office for Employer's Personnel	LS	1	2,470,000.00	0.00	296,400.00	2,766,400.00	2,470,000.00	0.00	296,400.00	2,766,400.00
1.22/2	K14	Maintenance of office for Employer's Personnel	mo	36	231,849.00	0.00	27,821.88	259,670.88	8,346,564.00	0.00	1,001,587.68	9,348,151.68
1.23/4	K14	Maintain Type A transportation item	mo	180	43,002.05	0.00	5,160.25	48,162.30	7,740,369.00	0.00	928,844.28	8,669,213.28
1.23/5	K14	Maintain Type B transportation item	mo	108	9,476.12	0.00	1,137.13	10,613.25	1,023,420.42	0.00	122,810.45	1,146,230.87
1.23/6	K14	Maintain Type C transportation item	mo	36	47,802.55	0.00	5,736.31	53,538.86	1,720,891.80	0.00	206,507.02	1,927,398.82
1.24/1-A	K14	Commemorative panels	no	8	53,256.56	0.00	6,390.79	59,647.34	426,052.45	0.00	51,126.29	477,178.75
1.25/1	K14	Site clean up	LS	1	11,353,562.10	0.00	1,362,427.45	12,715,989.55	11,353,562.10	0.00	1,362,427.45	12,715,989.55
SUB-TOTAL CARRIED TO SUMMARY			1	PRELIMINARY AND GENERAL					144,613,435.89	0.00	17,353,612.31	161,967,048.20

BILL No. 2 – ENVIRONMENT

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
2.1/1-A	K14	Contractor's environmental management	LS	1	3,756,024.22	0.00	450,722.91	4,206,747.13	3,756,024.22	0.00	450,722.91	4,206,747.13
SUB-TOTAL CARRIED TO SUMMARY			2	ENVIRONMENT					3,756,024.22	0.00	450,722.91	4,206,747.13

Tb 1.348

Table 1.5.9 Bill of Quantities for Contract Package No.1 (2/7)

BILL No. 4 – EXCAVATION AND EARTHWORKS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
4.5/1-A	K11	Demolition and removal of existing steel handrail	lm	392	2,258.66	0.00	271.04	2,529.70	885,174.89	0.00	106,220.99	991,395.88
4.5/2-A	K11	Removal of existing concrete debris	m3	2,505	4,967.96	0.00	596.15	5,564.11	12,447,164.73	0.00	1,493,659.77	13,940,824.50
4.5/3-A	K11	Removal and restoration of existing lighting post	no	112	15,486.22	0.00	1,858.35	17,344.57	1,734,456.78	0.00	208,134.81	1,942,591.60
4.5/4-A	K11	Removal of existing concrete blocks at Sta. 3+040	LS	1	129,784.96	0.00	15,574.19	145,359.15	129,784.96	0.00	15,574.19	145,359.15
4.5/5-A	K11	Removal and re-erection of fence support struts between Sta. 2+850 and 3+070	LS	1	93,273.39	0.00	11,192.81	104,466.20	93,273.39	0.00	11,192.81	104,466.20
4.5/6-A	K11	Demolition and removal of existing concrete stairs at Sta.	LS	1	99,359.16	0.00	11,923.10	111,282.26	99,359.16	0.00	11,923.10	111,282.26
4.5/7-A	K11	Demolition and removal of existing collapsed revetment	m3	1,242	5,155.94	0.00	618.71	5,774.66	6,406,024.48	0.00	768,722.94	7,174,747.42
4.5/8-A	K11	Temporary removal and reinstallation of steel dolphins	no	2	14,653.95	0.00	1,758.47	16,412.42	29,307.90	0.00	3,516.95	32,824.84
4.5/9-A	K11	Demolition and removal of existing collapsed wall and abandoned shanty at Sta. 5+550	LS	1	99,359.16	0.00	11,923.10	111,282.26	99,359.16	0.00	11,923.10	111,282.26
4.5/10-A	K11	Demolition and removal of existing steel fence	lm	820	1,475.50	0.00	177.06	1,652.55	1,210,553.12	0.00	145,266.37	1,355,819.50
4.5/11-A	K11	Demolition and removal of existing collapsed wall and abandoned shanty at Sta. 6+200	LS	1	99,359.16	0.00	11,923.10	111,282.26	99,359.16	0.00	11,923.10	111,282.26
4.5/12-A	K11	Removal of existing concrete blocks at Sta. 7+500	LS	1	156,043.57	0.00	18,725.23	174,768.80	156,043.57	0.00	18,725.23	174,768.80
4.5/13-A	K11	Demolition and removal of abandoned jetty at Sta. 8+500	LS	1	267,958.90	0.00	32,155.07	300,113.97	267,958.90	0.00	32,155.07	300,113.97
4.5/14-A	K11	Demolition and removal of existing concrete structure at Sta. 8+660	LS	1	99,073.91	0.00	11,888.87	110,962.78	99,073.91	0.00	11,888.87	110,962.78
4.5/15-A	K11	Demolition and removal of abandoned boat station	no	2	221,342.08	0.00	26,561.05	247,903.13	442,684.16	0.00	53,122.10	495,806.26
4.5/16-A	K11	Demolition and removal of existing wooden structure at Sta.	LS	1	382,225.93	0.00	45,867.11	428,093.04	382,225.93	0.00	45,867.11	428,093.04
4.5/17-A	K11	Demolition and removal of boat station at Sta. 8+930	LS	1	219,566.40	0.00	26,347.97	245,914.37	219,566.40	0.00	26,347.97	245,914.37
4.5/18-A	K11	Demolition and removal of boat station at Sta. 8+970	LS	1	219,566.40	0.00	26,347.97	245,914.37	219,566.40	0.00	26,347.97	245,914.37
4.5/19-A	K11	Removal of existing steel pipe at Sta. 8+890	LS	1	103,428.75	0.00	12,411.45	115,840.20	103,428.75	0.00	12,411.45	115,840.20
4.5/20-A	K11	Removal of existing sandbags at Sta. 8+950	LS	1	154,941.97	0.00	18,593.04	173,535.00	154,941.97	0.00	18,593.04	173,535.00
4.5/21-A	K11	Demolition and removal of existing collapsed wall and abandoned shanty at Sta. 9+060	LS	1	157,286.29	0.00	18,874.36	176,160.65	157,286.29	0.00	18,874.36	176,160.65
4.5/22-A	K11	Temporary removal and reinstallation of existing fence, bollards and canopy between Sta. 9+150 and 9+350	LS	1	2,227,192.77	0.00	267,263.13	2,494,455.90	2,227,192.77	0.00	267,263.13	2,494,455.90
4.5/23-A	K11	Demolition and removal of existing structure at Sta. 9+220	LS	1	114,986.99	0.00	13,798.44	128,785.42	114,986.99	0.00	13,798.44	128,785.42
4.5/24-A	K11	Removal of wooden dolphins	no	30	4,006.79	0.00	480.82	4,487.61	120,203.78	0.00	14,424.45	134,628.23
4.5/25-A	K11	Demolition and removal of existing concrete handrail	lm	1,507	2,258.66	0.00	271.04	2,529.70	3,403,502.69	0.00	408,420.32	3,811,923.01
4.5/26-A	K11	Demolition and removal of existing river wall between Sta. 9+720 and 9+750	LS	1	148,610.87	0.00	17,833.30	166,444.18	148,610.87	0.00	17,833.30	166,444.18
4.5/27-A	K11	Removal of abandoned boats at Sta. 9+740	LS	1	302,496.91	0.00	36,299.63	338,796.53	302,496.91	0.00	36,299.63	338,796.53
4.5/28-A	K11	Demolition and removal of existing river wall between Sta. 9+800 and 9+950	LS	1	396,295.66	0.00	47,555.48	443,851.14	396,295.66	0.00	47,555.48	443,851.14
4.5/29-A	K11	Demolition and removal of existing concrete structure between Sta. 10+140 and 10+179	LS	1	91,813.67	0.00	11,017.64	102,831.31	91,813.67	0.00	11,017.64	102,831.31
4.5/30-A	K11	Temporary removal and reinstallation of existing fence and lighting posts between Sta. 10+232 and 10+341	LS	1	721,132.33	0.00	86,535.88	807,668.21	721,132.33	0.00	86,535.88	807,668.21
4.5/31-A	K11	Temporary removal and reinstallation of existing fences	lm	495	5,284.39	0.00	634.13	5,918.51	2,617,277.81	0.00	314,073.34	2,931,351.15
4.5/32-A	K11	Temporary removal and reinstallation of existing bollards between Sta. 10+950 and 11+260	LS	1	464,927.18	0.00	55,791.26	520,718.44	464,927.18	0.00	55,791.26	520,718.44
4.5/33-A	K11	Remove wooden and steel dolphins between Sta. 11+050 and 11+150	LS	1	120,203.78	0.00	14,424.45	134,628.23	120,203.78	0.00	14,424.45	134,628.23
4.5/34-A	K11	Removal of existing steel sheet pile Sta. 11+150 and 11+263	LS	1	808,887.39	0.00	97,066.49	905,953.88	808,887.39	0.00	97,066.49	905,953.88
4.5/35-A	K11	Temporary removal and reinstallation of existing fence and handrail between Sta. 11+788 and 11+803	LS	1	169,169.65	0.00	20,300.36	189,470.00	169,169.65	0.00	20,300.36	189,470.00
4.5/36-A	K11	Demolition and removal of existing platform between Sta. 12+030 and 12+090	LS	1	368,601.69	0.00	44,232.20	412,833.89	368,601.69	0.00	44,232.20	412,833.89
4.5/37-A	K11	Demolition and removal of existing Brgy. outpost at Sta.	LS	1	133,307.68	0.00	15,996.92	149,304.60	133,307.68	0.00	15,996.92	149,304.60
4.5/38-A	K11	Demolition and removal of boat station at Sta. 13+740	LS	1	196,329.44	0.00	23,559.53	219,888.98	196,329.44	0.00	23,559.53	219,888.98
4.5/39-A	K11	Demolition and removal of existing river wall between Sta. 13+800 and 13+930	LS	1	322,917.29	0.00	38,750.07	361,667.36	322,917.29	0.00	38,750.07	361,667.36

Tb 1.349

Table 1.5.9 Bill of Quantities for Contract Package No.1 (3/7)

4.5/40-A	K11	Demolition and removal of existing river wall between Sta. 14+070 and 14+250	LS	1	445,832.62	0.00	53,499.91	499,332.53	445,832.62	0.00	53,499.91	499,332.53
4.5/41-A	K11	Demolition and removal of boat station at Sta. 14+880	LS	1	196,329.44	0.00	23,559.53	219,888.98	196,329.44	0.00	23,559.53	219,888.98
4.5/42-A	K11	Removal of existing sandbags at Sta. 15+050	LS	1	127,344.21	0.00	15,281.31	142,625.52	127,344.21	0.00	15,281.31	142,625.52
4.5/43-A	K11	Demolition and removal of boat station at Sta. 15+290	LS	1	198,112.26	0.00	23,773.47	221,885.73	198,112.26	0.00	23,773.47	221,885.73
4.5/44-A	K11	Demolition and removal of boat station at Sta. 15+440	LS	1	198,112.26	0.00	23,773.47	221,885.73	198,112.26	0.00	23,773.47	221,885.73
4.5/45-A	K11	Demolition and removal of boat station at Sta. 16+150	LS	1	262,372.16	0.00	31,484.66	293,856.82	262,372.16	0.00	31,484.66	293,856.82
4.5/46-A	K11	Temporary removal and reinstallation of wooden dolphins	no	33	14,653.95	0.00	1,758.47	16,412.42	483,580.29	0.00	58,029.63	541,609.93
4.5/47-A	K11	Demolition and removal of portion of extended wall at Sta.	LS	1	148,610.87	0.00	17,833.30	166,444.18	148,610.87	0.00	17,833.30	166,444.18
4.5/48-A	K11	Demolition and removal of existing revetment	m3	6,266	4,967.96	0.00	596.15	5,564.11	31,128,605.36	0.00	3,735,432.64	34,864,038.00
4.5/49-A	K11	Demolition and restoration of existing sidewalks	m2	1,836	2,319.44	0.00	278.33	2,597.77	4,258,262.16	0.00	510,991.46	4,769,253.62
4.5/50-A	K11	Demolition and restoration of existing CHB wall	m2	3,842	2,734.80	0.00	328.18	3,062.97	10,508,097.39	0.00	1,260,971.69	11,769,069.08
4.5/51-A	K11	Temporary removal and re-installation of existing steel	lm	195	1,544.20	0.00	185.30	1,729.50	301,582.01	0.00	36,189.84	337,771.85
4.5/52-A	K11	Restoration of existing revetment	m3	690	7,315.41	0.00	877.85	8,193.26	5,048,840.55	0.00	605,860.87	5,654,701.42
4.7/1-A	K11	River bank excavation	m3	33,200	1,416.81	0.00	170.02	1,586.83	47,038,053.00	0.00	5,644,566.36	52,682,619.36
4.8/1-A	K11	Excavation for manholes and junction manholes	m3	8,400	779.90	0.00	93.59	873.49	6,551,166.08	0.00	786,139.93	7,337,306.02
4.8/2-A	K2	Excavation for pipe culverts	m3	7,400	784.35	0.00	94.12	878.47	5,804,192.89	0.00	696,503.15	6,500,696.04
4.8/3-A	K2	Excavation for other structures	m3	6,700	908.79	0.00	109.05	1,017.84	6,088,892.77	0.00	730,667.13	6,819,559.90
4.15/1-A	K2	Free-draining backfill	m3	26,400	1,065.96	0.00	127.91	1,193.87	28,141,278.74	0.00	3,376,953.45	31,518,232.19
4.16/1-A	K2	Random backfill	m3	10,300	266.80	0.00	32.02	298.81	2,748,024.79	0.00	329,762.97	3,077,787.76
4.17/1-A	K2	Zone B pipe backfill	m3	1,900	1,213.86	0.00	145.66	1,359.52	2,306,336.68	0.00	276,760.40	2,583,097.08
4.17/2-A	K1	Zone C pipe backfill	m3	4,200	148.73	0.00	17.85	166.57	624,648.73	0.00	74,957.85	699,606.58
SUB-TOTAL CARRIED TO SUMMARY			4	EXCAVATION AND EARTHWORKS					190,772,726.84	0.00	22,892,727.22	213,665,454.06

Tb 1. 350

Table 1.5.9 Bill of Quantities for Contract Package No.1 (4/7)

BILL No. 5 – CONCRETE

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
5.11/1-A	K12	Reinforcement Grade 275	Ton	794.63	54,266.82	0.00	6,512.02	60,778.84	43,122,014.82	0.00	5,174,641.78	48,296,656.59
5.16/1-A	K12	Precast concrete manhole and junction box covers	m3	41	13,983.99	0.00	1,678.08	15,662.07	578,517.87	0.00	69,422.14	647,940.01
5.16/2-A	K12	Precast concrete U-ditch covers	m3	32	24,781.19	0.00	2,973.74	27,754.93	793,877.83	0.00	95,265.34	889,143.17
5.21/1-A	K5	Anchor bars for concrete structures	kg	4,351	455.74	0.00	54.69	510.43	1,983,011.99	0.00	237,961.44	2,220,973.43
5.22/1-A	K5	Concrete in manholes, junction manholes and outlets	m3	1,277	41,772.85	0.00	5,012.74	46,785.60	53,338,649.44	0.00	6,400,637.93	59,739,287.37
5.22/2-A	K12	Concrete for pipe bedding	m3	53	5,919.32	0.00	710.32	6,629.64	314,680.16	0.00	37,761.62	352,441.77
5.22/3-A	K5	Concrete in box culverts	m3	148	12,092.01	0.00	1,451.04	13,543.05	1,785,651.03	0.00	214,278.12	1,999,929.15
5.22/4-A	K5	Concrete in sheet pile copings	m3	3,960	7,251.60	0.00	870.19	8,121.79	28,713,078.77	0.00	3,445,569.45	32,158,648.22
5.22/5-A	K5	Concrete in vertical walls VW	m3	936	11,364.83	5.85	1,364.48	12,735.16	10,632,366.15	5,472.68	1,276,540.66	11,914,379.50
5.22/7-A	K5	Concrete in parapet walls PW Type 2	m3	903	7,706.18	14.14	926.44	8,646.76	6,958,681.87	12,769.60	836,574.18	7,808,025.64
5.22/8-A	K5	Concrete in parapet walls PW Type 3	m3	863	7,470.48	6.34	897.22	8,374.04	6,447,768.94	5,472.68	774,388.99	7,227,630.62
5.22/9-A	K5	Concrete in parapet walls PW Type 4	m3	15	11,372.45	248.19	1,394.48	13,015.12	167,175.05	3,648.46	20,498.82	191,322.33
5.22/10-A	K5	Concrete in raised wall RW	m3	84	10,313.08	43.43	1,242.78	11,599.30	866,298.93	3,648.46	104,393.69	974,341.08
5.22/11-A	K5	Concrete in inclined walls IW	m3	1,954	11,152.80	0.00	1,338.34	12,491.14	21,793,128.19	0.00	2,615,175.38	24,408,303.57
5.22/12-A	K5	Concrete in stair-type inclined walls	m3	108	12,373.03	0.00	1,484.76	13,857.80	1,338,143.70	0.00	160,577.24	1,498,720.95
5.22/13-A	K5	Concrete in L type parapet walls	m3	673	9,528.57	0.00	1,143.43	10,672.00	6,413,206.32	0.00	769,584.76	7,182,791.08
5.22/14-A	K5	Concrete in handrail bases	m3	22	8,512.95	0.00	1,021.55	9,534.51	187,710.59	0.00	22,525.27	210,235.86
5.22/15-A	K5	Filler concrete (Class B)	m3	141	4,031.56	0.00	483.79	4,515.35	567,240.59	0.00	68,068.87	635,309.46
5.22/16-A	K5	Concrete in U-ditches	m3	786	12,804.07	0.00	1,536.49	14,340.56	10,065,860.35	0.00	1,207,903.24	11,273,763.59
5.22/17-A	K5	Concrete in repair Type R3	m3	63	7,363.95	0.00	883.67	8,247.62	463,928.89	0.00	55,671.47	519,600.36
5.23/1-A	K5	Leveling concrete	m3	460	5,369.23	0.00	644.31	6,013.53	2,469,843.95	0.00	296,381.27	2,766,225.22
SUB-TOTAL CARRIED TO SUMMARY			5	CONCRETE					199,000,835.43	31,011.88	23,883,821.68	222,915,668.98

Tb 1.351

BILL No. 6 – PILING

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
6.4/1-A	K14	Type IIIw U-shape	m	3,311	2,198.82	6,445.26	1,037.29	9,681.37	7,280,111.30	21,339,748.21	3,434,383.14	32,054,242.66
6.4/2-A	K14	Type IVw U-shape	m	23,536	1,456.51	8,007.41	1,135.67	10,599.58	34,280,324.99	188,462,261.84	26,729,110.42	249,471,697.26
6.4/3-A	K14	Type VL U-shape	m	14,584	1,517.97	8,459.18	1,197.26	11,174.41	22,138,042.72	123,368,314.32	17,460,762.85	162,967,119.89
6.4/4-A	K14	Type VIL U-shape	m	49,766	1,529.02	9,668.29	1,343.68	12,540.98	76,092,749.47	481,150,024.00	66,869,132.82	624,111,906.28
6.4/7-A	K14	Type 10H Hat-shape w/H-400x200x9x22	m	12,920	2,141.67	15,822.34	2,155.68	20,119.69	27,671,075.44	204,430,015.62	27,852,130.93	259,953,221.99
6.4/8-A	K14	Type 10H Hat-shape w/H-450x200x12x25	m	3,631	2,291.46	17,612.69	2,388.50	22,292.65	8,320,761.30	63,955,207.33	8,673,116.24	80,949,084.87
6.4/9-A	K14	Type 10H Hat-shape w/H-450x250x9x22	m	6,179	2,376.28	17,572.61	2,393.87	22,342.75	14,683,405.73	108,583,961.31	14,792,084.04	138,059,451.08
6.4/10-A	K14	Type 10H Hat-shape w/H-450x250x12x28	m	1,671	3,102.86	20,597.45	2,844.04	26,544.35	5,184,137.13	34,413,391.55	4,751,703.44	44,349,232.12
6.4/11-A	K14	Type 10H Hat-shape w/H-500x200x12x25	m	1,785	1,923.46	17,728.36	2,358.22	22,010.04	3,433,370.36	31,645,126.41	4,209,419.61	39,287,916.39
6.4/12-A	K14	Type 10H Hat-shape w/H-500x250x12x28	m	799	1,602.83	20,305.15	2,628.96	24,536.93	1,280,114.93	16,216,908.80	2,099,642.85	19,596,666.59
6.4/13-A	K14	Type 10H Hat-shape w/H-550x250x12x28	m	428	1,760.43	20,768.31	2,703.45	25,232.19	754,168.14	8,897,145.60	1,158,157.65	10,809,471.38
6.4/14-A	K14	Type 10H Hat-shape w/H-600x200x12x28	m	1,656	1,997.58	19,248.28	2,549.50	23,795.36	3,308,951.86	31,884,392.28	4,223,201.30	39,416,545.44
6.4/15-A	K14	Type 10H Hat-shape w/H-600x250x12x28	m	933	1,951.76	21,116.92	2,768.24	25,836.92	1,821,576.51	19,708,418.13	2,583,599.36	24,113,594.00
6.4/16-A	K14	Type 10H Hat-shape w/H-650x200x12x28	m	1,928	3,159.56	21,285.77	2,933.44	27,378.77	6,091,004.68	41,034,706.04	5,655,085.29	52,780,796.01
6.4/17-A	K14	Type 10H Hat-shape w/H-650x250x12x28	m	959	1,913.44	21,578.98	2,819.09	26,311.50	1,835,580.27	20,700,928.40	2,704,381.04	25,240,889.71
6.4/18-A	K14	Type 10H Hat-shape w/H-750x250x12x25	m	4,870	3,042.66	23,108.81	3,138.18	29,289.65	14,817,738.17	112,539,688.44	15,282,891.19	142,640,317.80
6.4/19-A	K14	Type 25H Hat-shape	m	1,276	1,393.07	8,903.41	1,235.58	11,532.05	1,777,580.94	11,360,923.21	1,576,620.50	14,715,124.65
6.4/21-A	K14	Type 25H Hat-shape w/H-850x250x16x28	m	271	1,651.47	28,687.50	3,640.68	33,979.65	448,077.87	7,783,492.50	987,788.44	9,219,358.81
6.4/22	K14	End Connection Type 1	no	43	75,620.09	0.00	9,074.41	84,694.51	3,251,664.07	0.00	390,199.69	3,641,863.75
6.4/23	K14	End Connection Type 2	no	14	1,186.66	0.00	142.40	1,329.06	16,613.28	0.00	1,993.59	18,606.88
6.4/24	K14	End Connection Type 3	no	13	3,660.93	0.00	439.31	4,100.24	47,592.12	0.00	5,711.05	53,303.17
6.4/25-A	K14	Extra-over cost of installing sheet piles beneath bridges and HV cables	m	950	7,446.10	501.79	953.75	8,901.64	7,070,962.77	476,512.63	905,697.05	8,453,172.45
SUB-TOTAL CARRIED TO SUMMARY			6	PILING					241,605,604.08	1,527,951,166.62	212,346,812.48	1,981,903,583.19

Table 1.5.9 Bill of Quantities for Contract Package No.1 (5/7)

BILL No. 7 – PROTECTION WORKS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
7.4/1-A	K4	Riprap Class B	m3	67,800	2,461.72	0.00	295.41	2,757.13	166,903,827.91	0.00	20,028,459.35	186,932,287.26
7.5/1-A	K4	Gravel bedding and backfill	m3	1,372	1,580.46	0.00	189.65	1,770.11	2,168,937.82	0.00	260,272.54	2,429,210.36
7.6/1-A	K10	Stone masonry repair Type R4	m2	1,080	10,173.15	0.00	1,220.78	11,393.92	10,984,845.16	0.00	1,318,181.42	12,303,026.57
7.9/1-A	K10	Sandbag riprap	m3	448	10,631.52	0.00	1,275.78	11,907.31	4,762,922.67	0.00	571,550.72	5,334,473.39
SUB-TOTAL CARRIED TO SUMMARY			7	PROTECTION WORKS					184,820,533.55	0.00	22,178,464.03	206,998,997.57

BILL No. 8 - DRAINAGE

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
8.4/1	K7	Reinforced concrete pipe – 300 mm dia.	lm	105	1,004.43	0.00	120.53	1,124.97	105,465.65	0.00	12,655.88	118,121.53
8.4/2	K7	Reinforced concrete pipe – 460 mm dia.	lm	105	1,389.63	0.00	166.76	1,556.38	145,910.64	0.00	17,509.28	163,419.92
8.4/3	K7	Reinforced concrete pipe – 525 mm dia.	lm	1	1,670.67	0.00	200.48	1,871.15	1,754.21	0.00	210.50	1,964.71
8.4/4	K7	Reinforced concrete pipe – 610 mm dia.	lm	11	1,830.65	0.00	219.68	2,050.32	19,221.77	0.00	2,306.61	21,528.39
8.4/5	K7	Reinforced concrete pipe – 760 mm dia.	lm	21	3,011.77	0.00	361.41	3,373.18	63,247.09	0.00	7,589.65	70,836.75
8.4/6-A	K7	Reinforced concrete pipe – 910 mm dia.	lm	757	4,123.04	0.00	494.76	4,617.80	3,121,344.13	0.00	374,561.30	3,495,905.42
8.4/7-A	K7	Reinforced concrete pipe – 1,070 mm dia.	lm	8	5,004.34	0.00	600.52	5,604.87	42,036.50	0.00	5,044.38	47,080.88
8.4/8	K7	Unreinforced concrete Pipe – 200 mm dia.	lm	4	607.04	0.00	72.84	679.88	2,549.55	0.00	305.95	2,855.50
8.4/9	K7	Unreinforced concrete Pipe – 250 mm dia.	lm	1	1,762.35	0.00	211.48	1,973.83	1,850.47	0.00	222.06	2,072.52
8.6/1	K7	FRP Flap gate – 300 mm dia.	no	3	6,876.91	117,794.38	14,960.55	139,631.84	20,630.73	353,383.13	44,881.66	418,895.52
8.6/2	K7	FRP Flap gate – 910 mm dia.	no	36	12,776.95	376,267.77	46,685.37	435,730.08	459,970.04	13,545,639.83	1,680,673.18	15,686,283.05
8.9/1	K7	PVC drainage pipe – 50 mm dia.	lm	19	92.63	0.00	11.12	103.75	1,750.71	0.00	210.09	1,960.80
8.9/2	K7	PVC drainage pipe – 100 mm dia.	lm	378	212.33	0.00	25.48	237.81	80,260.80	0.00	9,631.30	89,892.10
8.9/3	K7	PVC drainage pipe – 150 mm dia.	lm	542	346.39	0.00	41.57	387.96	187,676.36	0.00	22,521.16	210,197.52
8.9/4	K7	PVC drainage pipe – 200 mm dia.	lm	410	525.21	0.00	63.03	588.23	215,072.82	0.00	25,808.74	240,881.55
8.9/5	K7	PVC drainage pipe – 250 mm dia.	lm	44	927.40	0.00	111.29	1,038.69	40,898.35	0.00	4,907.80	45,806.16
8.9/6	K7	PVC drainage pipe – 300 mm dia.	lm	19	1,454.08	0.00	174.49	1,628.57	27,482.12	0.00	3,297.85	30,779.97
8.10/1	K7	Galvanised iron drainage pipes – 100 mm dia.	lm	6	1,427.16	0.00	171.26	1,598.42	8,991.13	0.00	1,078.94	10,070.06
8.10/2	K7	Galvanised iron drainage pipes – 150 mm dia.	lm	38	2,177.28	0.00	261.27	2,438.56	82,301.29	0.00	9,876.16	92,177.45
8.10/3	K7	Galvanised iron drainage pipes – 300 mm dia.	lm	19	5,935.01	0.00	712.20	6,647.21	112,171.70	0.00	13,460.60	125,632.30
SUB-TOTAL CARRIED TO SUMMARY			8	DRAINAGE					4,740,586.06	13,899,022.96	2,236,753.08	20,876,362.10

Tb 1.352

Table 1.5.9 Bill of Quantities for Contract Package No.1 (6/7)

BILL No. 15 – MISCELLANEOUS WORKS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
15.2/1	K9	Concrete block paving	m2	15,170	1,703.83	0.00	204.46	1,908.29	25,847,095.82	0.00	3,101,651.50	28,948,747.32
15.3/1	K9	Concrete railing – Type 1	lm	604	2,149.48	0.00	257.94	2,407.42	1,297,747.16	0.00	155,729.66	1,453,476.82
15.3/2	K9	Concrete railing – Type 2	lm	87	2,283.96	0.00	274.08	2,558.04	199,047.19	0.00	23,885.66	222,932.86
15.3/3	K9	Concrete railing - Type 3	lm	333	2,149.48	0.00	257.94	2,407.42	715,453.65	0.00	85,854.44	801,308.09
15.4/1	K9	Navigation warning signs	no	20	13,259.23	0.00	1,591.11	14,850.33	265,184.52	0.00	31,822.14	297,006.66
15.5/1	K9	Concrete curb	lm	5,433	2,025.10	0.00	243.01	2,268.11	11,001,753.85	0.00	1,320,210.46	12,321,964.31
15.6/1	K9	Replacement boat station at Sta. 8+930	LS	1	620,262.44	0.00	74,431.49	694,693.93	620,262.44	0.00	74,431.49	694,693.93
15.6/2	K9	Replacement boat station at Sta. 8+970	LS	1	620,262.44	0.00	74,431.49	694,693.93	620,262.44	0.00	74,431.49	694,693.93
15.6/3	K9	Replacement boat station at Sta. 13+740	LS	1	620,262.44	0.00	74,431.49	694,693.93	620,262.44	0.00	74,431.49	694,693.93
15.6/4	K9	Replacement boat station at Sta. 14+880	LS	1	620,262.44	0.00	74,431.49	694,693.93	620,262.44	0.00	74,431.49	694,693.93
15.6/5	K9	Replacement boat station at Sta. 15+290	LS	1	620,262.44	0.00	74,431.49	694,693.93	620,262.44	0.00	74,431.49	694,693.93
15.6/6	K9	Replacement boat station at Sta. 15+440	LS	1	620,262.44	0.00	74,431.49	694,693.93	620,262.44	0.00	74,431.49	694,693.93
15.6/7	K9	Replacement boat station at Sta. 16+150	LS	1	620,262.44	0.00	74,431.49	694,693.93	620,262.44	0.00	74,431.49	694,693.93
15.7/1	K9	Type III fencing	lm	341	5,107.71	0.00	612.93	5,720.64	1,741,729.66	0.00	209,007.56	1,950,737.22
SUB-TOTAL CARRIED TO SUMMARY			15	MISCELLANEOUS WORKS					45,409,848.92	0.00	5,449,181.87	50,859,030.79

TABLE A - PROVISIONAL SUMS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
P1.14/1		Relocation of utility or service facilities	P.S.	1	5,000,000.00	0.00	600,000.00	5,600,000.00	5,000,000.00	0.00	600,000.00	5,600,000.00
P1.18/3		STI, STD and HIV/AID Alleviation Programme	P.S.	1	1,500,000.00	0.00	180,000.00	1,680,000.00	1,500,000.00	0.00	180,000.00	1,680,000.00
P1.18/4		PPE for Employer's Personnel	P.S.	1	103,057.23	0.00	12,366.87	115,424.10	103,057.23	0.00	12,366.87	115,424.10
P1.22/3		Furnishings, equipment and consumables for office of Employer's Personnel	P.S.	1	3,030,000.00	0.00	363,600.00	3,393,600.00	3,030,000.00	0.00	363,600.00	3,393,600.00
P1.23/1		Provide Type A transportation items	P.S.	1	7,377,500.00	0.00	885,300.00	8,262,800.00	7,377,500.00	0.00	885,300.00	8,262,800.00
P1.23/2		Provide Type B transportation items	P.S.	1	307,764.45	0.00	36,931.73	344,696.18	307,764.45	0.00	36,931.73	344,696.18
P1.23/3		Provide Type C transportation items	P.S.	1	957,000.00	0.00	114,840.00	1,071,840.00	957,000.00	0.00	114,840.00	1,071,840.00
P1.26/1		Reimbursement of Employer's 50% share of DB costs	P.S.	1	3,084,210.89	0.00	370,105.31	3,454,316.20	3,084,210.89	0.00	370,105.31	3,454,316.20
P4.5/1-A		Removal and/or relocation of previously unidentified objects and structures	P.S.	1	74,100,000.00	0.00	8,892,000.00	82,992,000.00	74,100,000.00	0.00	8,892,000.00	82,992,000.00
P4.21/1-A		Treatment and disposal of hazardous waste	P.S.	1	5,000,000.00	0.00	600,000.00	5,600,000.00	5,000,000.00	0.00	600,000.00	5,600,000.00
CARRIED TO SUMMARY			PS	PROVISIONAL SUMS					100,459,532.57	0.00	12,055,143.91	112,514,676.48

Table 1.5.9 Bill of Quantities for Contract Package No.1 (7/7)

DAYWORK SCHEDULE I – LABOUR

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
DWI/1		Unskilled laborer	day	200	654.83	0.00	78.58	733.41	130,965.48	0.00	15,715.86	146,681.34
DWI/2		Semi-skilled laborer	day	200	973.67	0.00	116.84	1,090.51	194,734.80	0.00	23,368.18	218,102.98
DWI/3		Tradesman	day	20	1,402.77	0.00	168.33	1,571.10	28,055.40	0.00	3,366.65	31,422.05
DWI/4		Charge hand	day	5	1,402.77	0.00	168.33	1,571.10	7,013.85	0.00	841.66	7,855.51
DWI/5		Plant operator	day	60	1,279.76	0.00	153.57	1,433.34	76,785.84	0.00	9,214.30	86,000.14
DWI/6		Driver	day	25	817.82	0.00	98.14	915.96	20,445.62	0.00	2,453.47	22,899.09
CARRIED TO SUMMARY			DW1						458,000.99	0.00	54,960.12	512,961.10

DAYWORK SCHEDULE II – MATERIALS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
DWII/1		Cement (40kg/bag, 25bag/ton)	ton	10	6,127.50	0.00	735.30	6,862.80	61,275.00	0.00	7,353.00	68,628.00
DWII/2		Fine aggregate for concrete	cu.m.	200	677.16	0.00	81.26	758.42	135,432.00	0.00	16,251.84	151,683.84
DWII/3		40 mm aggregate for concrete	cu.m.	200	855.00	0.00	102.60	957.60	171,000.00	0.00	20,520.00	191,520.00
DWII/4		20 mm aggregate for concrete	cu.m.	200	855.00	0.00	102.60	957.60	171,000.00	0.00	20,520.00	191,520.00
DWII/5		12 mm aggregate for concrete	cu.m.	200	855.00	0.00	102.60	957.60	171,000.00	0.00	20,520.00	191,520.00
DWII/6		Reinforcing steel Grade 40 (1,000kg/ton)	ton	5	38,760.00	0.00	4,651.20	43,411.20	193,800.00	0.00	23,256.00	217,056.00
DWII/7		Reinforcing steel Grade 60 (1,000kg/ton)	ton	5	41,040.00	0.00	4,924.80	45,964.80	205,200.00	0.00	24,624.00	229,824.00
DWII/8		Timber – Hardwood (2.36ltr./bd.ft., 424bd.ft./cu.m.)	cu.m.	20	17,400.96	0.00	2,088.12	19,489.08	348,019.20	0.00	41,762.30	389,781.50
CARRIED TO SUMMARY			DW2						1,456,726.20	0.00	174,807.14	1,631,533.34

DAYWORK SCHEDULE III – CONTRACTOR'S EQUIPMENT

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
DWIII/1		Excavator or dragline up to and including 1 m3	hr.	100	3,540.84	0.00	424.90	3,965.74	354,084.00	0.00	42,490.08	396,574.08
DWIII/2		Excavator or dragline over 1 m3	hr.	100	4,835.88	0.00	580.31	5,416.19	483,588.00	0.00	58,030.56	541,618.56
DWIII/3		Truck crane 25 t	hr.	100	1,626.78	0.00	195.21	1,821.99	162,678.00	0.00	19,521.36	182,199.36
DWIII/4		Crawler crane 40 t	hr.	100	1,971.06	0.00	236.53	2,207.59	197,106.00	0.00	23,652.72	220,758.72
DWIII/5		Bulldozer up to and including 250 kW	hr.	100	5,308.98	0.00	637.08	5,946.06	530,898.00	0.00	63,707.76	594,605.76
DWIII/6		Front-end loader up to 2 m3	hr.	100	3,147.54	0.00	377.70	3,525.24	314,754.00	0.00	37,770.48	352,524.48
DWIII/7		Front-end loader over 2 m3	hr.	100	3,936.42	0.00	472.37	4,408.79	393,642.00	0.00	47,237.04	440,879.04
DWIII/8		Barge 650 DWT	hr.	100	612.18	0.00	73.46	685.64	61,218.00	0.00	7,346.16	68,564.16
DWIII/9		Tugboat 500 HP	hr.	100	1,827.42	0.00	219.29	2,046.71	182,742.00	0.00	21,929.04	204,671.04
DWIII/10		Dump truck up to and including 15 t	hr.	100	1,488.84	0.00	178.66	1,667.50	148,884.00	0.00	17,866.08	166,750.08
DWIII/11		Dump truck over 15 t	hr.	100	1,956.24	0.00	234.75	2,190.99	195,624.00	0.00	23,474.88	219,098.88
DWIII/12		Flat bed truck 10 t	hr.	100	1,355.46	0.00	162.66	1,518.12	135,546.00	0.00	16,265.52	151,811.52
DWIII/13		Compressor 250 cfm	hr.	100	654.36	0.00	78.52	732.88	65,436.00	0.00	7,852.32	73,288.32
CARRIED TO SUMMARY			DW3						3,226,200.00	0.00	387,144.00	3,613,344.00

Table 1.5.10 Bill of Quantities for Contract Package No.2 (1/6)

BILL No. 1 – PRELIMINARY AND GENERAL

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
1.10/1-B	K14	Mobilization and demobilization	LS	1	19,000,000.00	0.00	2,280,000.00	21,280,000.00	19,000,000.00	0.00	2,280,000.00	21,280,000.00
1.11/1-B	K14	Survey of ground profiles	LS	1	2,928,750.00	0.00	351,450.00	3,280,200.00	2,928,750.00	0.00	351,450.00	3,280,200.00
1.13/1-B	K14	Foundation investigation	m	400	3,910.25	0.00	469.23	4,379.48	1,564,100.00	0.00	187,692.00	1,751,792.00
1.15/1	K14	Traffic Management Plan	LS	1	1,092,000.00	0.00	131,040.00	1,223,040.00	1,092,000.00	0.00	131,040.00	1,223,040.00
1.15/2	K14	Implementation and operation of traffic management plan	mo	36	871,555.79	0.00	104,586.69	976,142.48	31,376,008.32	0.00	3,765,121.00	35,141,129.32
1.16/1	K14	Quality Management Plan	LS	1	1,092,000.00	0.00	131,040.00	1,223,040.00	1,092,000.00	0.00	131,040.00	1,223,040.00
1.16/2	K14	Implementation and operation of quality management plan	mo	36	529,000.00	0.00	63,480.00	592,480.00	19,044,000.00	0.00	2,285,280.00	21,329,280.00
1.16/3	K14	Provisional of laboratory equipment for Employer	LS	1	916,900.00	0.00	110,028.00	1,026,928.00	916,900.00	0.00	110,028.00	1,026,928.00
1.17/1	K14	Programming and Reporting	LS	1	15,480,000.00	0.00	1,857,600.00	17,337,600.00	15,480,000.00	0.00	1,857,600.00	17,337,600.00
1.18/1	K14	Health and Safety Plan	LS	1	500,000.00	0.00	60,000.00	560,000.00	500,000.00	0.00	60,000.00	560,000.00
1.18/2	K14	Implementation and operation of health and safety plan	mo	36	205,002.86	0.00	24,600.34	229,603.20	7,380,102.80	0.00	885,612.34	8,265,715.14
1.20/1	K14	Progress photographs	mo	36	159,833.33	0.00	19,180.00	179,013.33	5,754,000.00	0.00	690,480.00	6,444,480.00
1.22/1	K14	Provision of office for Employer's Personnel	LS	1	2,470,000.00	0.00	296,400.00	2,766,400.00	2,470,000.00	0.00	296,400.00	2,766,400.00
1.22/2	K14	Maintenance of office for Employer's Personnel	mo	36	231,849.00	0.00	27,821.88	259,670.88	8,346,564.00	0.00	1,001,587.68	9,348,151.68
1.23/4	K14	Maintain Type A transportation item	mo	180	43,002.05	0.00	5,160.25	48,162.30	7,740,369.00	0.00	928,844.28	8,669,213.28
1.23/5	K14	Maintain Type B transportation item	mo	108	9,476.12	0.00	1,137.13	10,613.25	1,023,420.42	0.00	122,810.45	1,146,230.87
1.23/6	K14	Maintain Type C transportation item	mo	36	47,802.55	0.00	5,736.31	53,538.86	1,720,891.80	0.00	206,507.02	1,927,398.82
1.24/1-B	K14	Commemorative panels	no	6	53,256.56	0.00	6,390.79	59,647.34	319,539.34	0.00	38,344.72	357,884.06
1.25/1	K14	Site clean up	LS	1	11,353,562.10	0.00	1,362,427.45	12,715,989.55	11,353,562.10	0.00	1,362,427.45	12,715,989.55
SUB-TOTAL CARRIED TO SUMMARY			1	PRELIMINARY AND GENERAL					139,102,207.78	0.00	16,692,264.93	155,794,472.71

BILL No. 2 – ENVIRONMENTAL

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
2.1/1-B	K14	Contractor's environmental management	LS	1	8,024,107.29	0.00	962,892.88	8,987,000.17	8,024,107.29	0.00	962,892.88	8,987,000.17
2.14/1-B	K14	Testing of dredged materials	LS	1	1,877,900.00	0.00	225,348.00	2,103,248.00	1,877,900.00	0.00	225,348.00	2,103,248.00
SUB-TOTAL CARRIED TO SUMMARY			2	ENVIRONMENTAL					9,902,007.29	0.00	1,188,240.88	11,090,248.17

Table 1.5.10 Bill of Quantities for Contract Package No.2 (2/6)

BILL No. 4 – EXCAVATION AND EARTHWORKS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
4.5/1-B	K11	Demolition and removal of existing concrete wall and structure between Sta. 0+921 and 1+338L	LS	1	259,299.34	0.00	31,115.92	290,415.26	259,299.34	0.00	31,115.92	290,415.26
4.5/2-B	K11	Demolition and removal of existing net fence between Sta. 0+921 and 1+338L	LS	1	422,294.45	0.00	50,675.33	472,969.78	422,294.45	0.00	50,675.33	472,969.78
4.5/3-B	K11	Demolition and removal of existing concrete road between Sta. 0+921 and 1+338L	LS	1	926,032.95	0.00	111,123.95	1,037,156.90	926,032.95	0.00	111,123.95	1,037,156.90
4.5/4-B	K11	Demolition and removal of existing guard rail between Sta. 0+921 and 1+338L	LS	1	56,501.65	0.00	6,780.20	63,281.85	56,501.65	0.00	6,780.20	63,281.85
4.5/5-B	K11	Temporary relocation and re-installation of lighting post between Sta. 0+921 and 1+338L	LS	1	176,934.92	0.00	21,232.19	198,167.11	176,934.92	0.00	21,232.19	198,167.11
4.5/6-B	K11	Demolition and removal of existing concrete wall and structure between Sta. 3+033 and 3+621R	LS	1	426,589.23	0.00	51,190.71	477,779.94	426,589.23	0.00	51,190.71	477,779.94
4.5/7-B	K11	Demolition and removal of existing net fence between Sta. 3+033 and 3+621R	LS	1	751,305.94	0.00	90,156.71	841,462.65	751,305.94	0.00	90,156.71	841,462.65
4.5/8-B	K11	Demolition & removal of existing concrete road between Sta. 3+033 and 3+621R	LS	1	993,412.21	0.00	119,209.47	1,112,621.67	993,412.21	0.00	119,209.47	1,112,621.67
4.5/9-B	K11	Temporary relocation and re-installation of lighting post between Sta. 3+033 and 3+621R	LS	1	136,103.78	0.00	16,332.45	152,436.24	136,103.78	0.00	16,332.45	152,436.24
4.5/10-B	K11	Demolition and removal of existing steel structure, gate, plate and speaker post between Sta. 3+033 and 3+621R	LS	1	341,581.44	0.00	40,989.77	382,571.22	341,581.44	0.00	40,989.77	382,571.22
4.5/11-B	K11	Demolition and removal of existing concrete wall and structure between Sta. 3+898 and 4+670L	LS	1	741,651.87	0.00	88,998.22	830,650.09	741,651.87	0.00	88,998.22	830,650.09
4.5/12-B	K11	Demolition and removal of existing net fence between Sta. 3+898 and 4+670L	LS	1	913,416.58	0.00	109,609.99	1,023,026.57	913,416.58	0.00	109,609.99	1,023,026.57
4.5/13-B	K11	Demolition & removal of existing concrete road between Sta. 3+898 and 4+670L	LS	1	1,603,367.31	0.00	192,404.08	1,795,771.38	1,603,367.31	0.00	192,404.08	1,795,771.38
4.5/14-B	K11	Temporary relocation and re-installation of lighting post between Sta. 3+898 and 4+670L	LS	1	558,025.52	0.00	66,963.06	624,988.58	558,025.52	0.00	66,963.06	624,988.58
4.5/15-B	K11	Demolition and removal of existing sluice structure and steel post between Sta. 3+898 and 4+670L	LS	1	254,390.00	0.00	30,526.80	284,916.79	254,390.00	0.00	30,526.80	284,916.79
4.8/1-B	K2	Excavation for manholes and junction manholes	m3	2,400	1,036.41	0.00	124.37	1,160.78	2,487,376.24	0.00	298,485.15	2,785,861.39
4.8/2-B	K2	Excavation for pipe culverts	m3	6,800	852.53	0.00	102.30	954.84	5,797,215.06	0.00	695,665.81	6,492,880.86
4.8/3-B	K2	Excavation for other structures	m3	12,400	219.71	0.00	26.37	246.08	2,724,453.85	0.00	326,934.46	3,051,388.31
4.11/1-B	K2	Dike Embankment	m3	11,100	926.93	0.00	111.23	1,038.16	10,288,951.83	0.00	1,234,674.22	11,523,626.05
4.16/1-B	K2	Random backfill	m3	11,200	267.01	0.00	32.04	299.05	2,990,467.20	0.00	358,856.06	3,349,323.26
4.17/1-B	K2	Zone B pipe backfill	m3	2,300	1,245.63	0.00	149.48	1,395.11	2,864,957.74	0.00	343,794.93	3,208,752.67
4.17/2-B	K2	Zone C pipe backfill	m3	1,100	139.77	0.00	16.77	156.54	153,746.32	0.00	18,449.56	172,195.88
4.18/1-B	K1	Dredging	m3	889,100	404.14	0.00	48.50	452.64	359,321,321.49	0.00	43,118,558.58	402,439,880.07
4.19/1-B	K3	Disposal of dredged material Type A	m3	267,500	1,246.94	755.07	240.24	2,242.26	333,557,616.89	201,982,032.57	64,264,757.93	599,804,407.39
4.19/2-B	K1	Disposal of dredged material Type B	m3	309,300	1,070.20	747.53	218.13	2,035.86	331,014,402.87	231,210,407.88	67,466,977.29	629,691,788.04
4.19/3-B	K1	Disposal of dredged material Type C	m3	312,300	447.96	0.00	53.76	501.72	139,897,870.37	0.00	16,787,744.44	156,685,614.81
SUB-TOTAL CARRIED TO SUMMARY			4	EXCAVATION AND EARTHWORKS					1,199,659,287.03	433,192,440.45	195,942,207.30	1,828,793,934.77

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Table 1.5.10 Bill of Quantities for Contract Package No.2 (3/6)

BILL No. 5 – CONCRETE

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
5.11/1-B	K12	Reinforcement Grade 275	Ton	228	54,266.82	0.00	6,512.02	60,778.84	12,388,968.13	0.00	1,486,676.18	13,875,644.31
5.16/1-B	K12	Precast concrete manhole and junction box covers	m3	11	16,083.52	0.00	1,930.02	18,013.54	183,062.61	0.00	21,967.51	205,030.13
5.16/2-B	K5	Precast concrete U-ditch covers	m3	22	15,192.09	0.00	1,823.05	17,015.14	340,967.42	0.00	40,916.09	381,883.51
5.22/1-B	K5	Concrete in manholes, junction manholes and outlets	m3	230	10,232.91	0.00	1,227.95	11,460.86	2,348,760.65	0.00	281,851.28	2,630,611.93
5.22/2-B	K12	Concrete for pipe bedding	m3	12	15,286.36	0.00	1,834.36	17,120.72	182,977.67	0.00	21,957.32	204,934.99
5.22/3-B	K5	Concrete in box culverts	m3	354	6,228.62	0.00	747.43	6,976.05	2,204,650.95	0.00	264,558.11	2,469,209.07
5.22/4-B	K5	Concrete in sheet pile copings	m3	1,031	6,321.70	0.00	758.60	7,080.30	6,516,973.18	0.00	782,036.78	7,299,009.97
5.22/6-B	K5	Concrete in parapet walls PW Type 1	m3	360	11,375.20	0.00	1,365.02	12,740.23	4,090,807.60	0.00	490,896.91	4,581,704.52
5.22/15-B	K5	Filler concrete (Class B)	m3	734	4,031.56	0.00	483.79	4,515.35	2,959,387.30	0.00	355,126.48	3,314,513.78
5.22/16-B	K5	Concrete in U-ditches	m3	317	7,998.16	0.00	959.78	8,957.94	2,534,536.93	0.00	304,144.43	2,838,681.36
5.22/18-B	K5	Concrete in gravity wall	m3	219	5,523.03	0.00	662.76	6,185.80	1,211,449.86	0.00	145,373.98	1,356,823.84
5.22/19-B	K5	Concrete revetment	m3	12	6,607.39	524.20	855.79	7,987.39	80,478.03	6,384.80	10,423.54	97,286.36
5.22/20-B	K5	Concrete in base type A for concrete block retaining wall	m3	153	6,130.64	0.00	735.68	6,866.31	940,470.40	0.00	112,856.45	1,053,326.85
5.22/21-B	K5	Concrete in base type B for concrete block retaining wall	m3	101	7,187.44	0.00	862.49	8,049.93	724,493.70	0.00	86,939.24	811,432.94
5.22/22-B	K5	Concrete in partition for concrete block retaining wall	m3	30	10,279.06	0.00	1,233.49	11,512.55	307,600.87	0.00	36,912.10	344,512.97
5.22/23-B	K5	Backfill concrete for concrete block retaining wall	m3	361	10,542.68	0.00	1,265.12	11,807.80	3,803,588.99	0.00	456,430.68	4,260,019.67
5.22/24-B	K5	Top Concrete for Concrete Block Retaining Wall	m3	111	5,998.78	0.00	719.85	6,718.63	668,293.61	0.00	80,195.23	748,488.85
5.22/25-B	K5	Concrete in stair block	m3	63	8,125.43	0.00	975.05	9,100.48	511,901.92	0.00	61,428.23	573,330.15
5.22/26-B	K5	Concrete in boundary wall	m3	528	5,344.84	0.00	641.38	5,986.22	2,823,438.29	0.00	338,812.60	3,162,250.89
5.22/27-B	K5	Concrete in sluice structures	m3	586	31,157.52	22,565.67	6,446.78	60,169.97	18,251,917.14	13,218,856.09	3,776,492.79	35,247,266.02
5.22/28-B	K5	Concrete in drainage outlet structure at Laguna backfill area	m3	117	7,945.28	0.00	953.43	8,898.72	926,022.82	0.00	111,122.74	1,037,145.56
5.23/1-B	K5	Leveling concrete	m3	300	4,461.93	0.00	535.43	4,997.37	1,338,580.11	0.00	160,629.61	1,499,209.73
SUB-TOTAL CARRIED TO SUMMARY			5	CONCRETE					65,339,328.20	13,225,240.89	9,427,748.29	87,992,317.38

BILL No. 6 – PILING

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
6.4/1-B	K14	Type IIIw U-shape	m	113	158.39	6,049.54	744.95	6,952.88	17,852.15	681,843.29	83,963.45	783,658.90
6.4/5-B	K14	Type10H Hat-shape	m	2,194	429.68	6,805.78	868.25	8,103.71	942,724.89	14,932,013.29	1,904,968.58	17,779,706.77
6.4/6-B	K14	Type 10H Hat-shape with flexible joint	m	254	484.85	125,270.14	15,090.60	140,845.58	123,150.95	31,818,615.24	3,833,011.94	35,774,778.13
6.4/19-B	K14	Type 25H Hat-shape	m	19,808	1,215.94	8,901.08	1,214.04	11,331.06	24,085,203.82	176,311,525.18	24,047,607.48	224,444,336.47
6.4/20-B	K14	Type 25H Hat-shape with flexible joint	m	184	365.53	121,978.58	14,681.29	137,025.40	67,256.82	22,444,058.94	2,701,357.89	25,212,673.65
6.4/25-B	K14	Extra-over cost of installing sheet piles beneath bridges and HV cables	m	788	10,296.02	0.00	1,235.52	11,531.54	8,112,750.59	0.00	973,530.07	9,086,280.66
SUB-TOTAL CARRIED TO SUMMARY			6	PILING					33,348,939.22	246,188,055.94	33,544,439.42	313,081,434.58

BILL No. 7 – PROTECTION WORKS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
7.5/1-B	K4	Gravel bedding and backfill	m3	2,924	1,580.46	0.00	189.65	1,770.11	4,621,812.34	0.00	554,617.48	5,176,429.82
7.8/1-B	K4	Gabion mattresses	m3	1,130	6,572.96	0.00	788.75	7,361.71	7,429,233.19	0.00	891,507.98	8,320,741.17
7.10/1-B	K10	Precast concrete block retaining wall	m2	2,865	2,634.45	0.00	316.13	2,950.59	7,546,567.18	0.00	905,588.06	8,452,155.24
7.11/1-B	K10	Grass sodding	m2	5,980	92.66	0.00	11.12	103.78	554,108.05	0.00	66,492.97	620,601.02
7.15/1-B	K10	Protection of existing bridge foundations	m3	4,329	2,043.50	4,282.50	759.12	7,085.11	8,846,603.72	18,539,574.88	3,286,341.43	30,672,520.04
SUB-TOTAL CARRIED TO SUMMARY			7	PROTECTION WORKS					28,998,324.48	18,539,574.88	5,704,547.92	53,242,447.29

Table 1.5.10 Bill of Quantities for Contract Package No.2 (4/6)

BILL No. 8 - DRAINAGE

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
8.4/6-B	K7	Reinforced concrete pipe – 910 mm dia.	lm	739	4,214.25	0.00	505.71	4,719.96	3,115,175.17	0.00	373,821.02	3,488,996.19
8.4/7-B	K7	Reinforced concrete pipe – 1,070 mm dia.	lm	8	5,156.36	0.00	618.76	5,775.12	43,313.42	0.00	5,197.61	48,511.03
8.6/3	K7	Rectangular aluminium fap gate – 1000 x 1000	no	1	13,272.98	312,412.61	39,082.27	364,767.86	13,272.98	312,412.61	39,082.27	364,767.86
8.6/4	K7	Rectangular aluminium flap gate – 1200 x 1200	no	3	20,611.07	502,764.34	62,805.05	586,180.46	61,833.21	1,508,293.02	188,415.15	1,758,541.38
8.6/5	K7	Rectangular aluminium flap gate – 1400 x 1400	no	2	20,611.07	814,746.83	100,242.95	935,600.85	41,222.14	1,629,493.66	200,485.90	1,871,201.69
8.6/6	K7	Rectangular aluminium flap gate – 1500 x 1500	no	2	21,977.57	936,377.59	115,002.62	1,073,357.77	43,955.13	1,872,755.18	230,005.24	2,146,715.55
8.6/7	K7	Rectangular aluminium flap gate – 1600 x 1600	no	1	21,977.57	1,058,008.35	129,598.31	1,209,584.23	21,977.57	1,058,008.35	129,598.31	1,209,584.23
8.6/8	K7	Rectangular aluminium flap gate – 2000 x 1600	no	1	21,977.57	1,696,569.55	206,225.65	1,924,772.77	21,977.57	1,696,569.55	206,225.65	1,924,772.77
SUB-TOTAL CARRIED TO SUMMARY			8	DRAINAGE					3,362,727.19	8,077,532.36	1,372,831.15	12,813,090.69

BILL No. 9 - ROAD WORKS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
9.6/1	K13	Base course	m3	1,173	1,499.21	0.00	179.90	1,679.11	1,758,342.87	0.00	211,001.14	1,969,344.01
9.8/1	K13	Bituminous concrete surface course	m2	5,870	712.40	0.00	85.49	797.89	4,181,816.87	0.00	501,818.02	4,683,634.89
SUB-TOTAL CARRIED TO SUMMARY			9	ROAD WORKS					5,940,159.74	0.00	712,819.17	6,652,978.91

BILL No. 11 - STRUCTURAL AND MISCELLANEOUS METALWORK

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
11.10/1	K13	Trash screen 1400 x 1400	no	1	79,528.13	0.00	9,543.38	89,071.50	79,528.13	0.00	9,543.38	89,071.50
11.10/2	K13	Trash screen 1600 x 1600	no	1	84,762.61	0.00	10,171.51	94,934.12	84,762.61	0.00	10,171.51	94,934.12
11.10/3	K13	Trash screen 1800 x 1800	no	2	92,573.04	0.00	11,108.76	103,681.80	185,146.07	0.00	22,217.53	207,363.60
11.10/4	K13	Trash screen 1900 x 1900	no	2	96,503.98	0.00	11,580.48	108,084.46	193,007.97	0.00	23,160.96	216,168.92
11.10/5	K13	Trash screen 2000 x 2000	no	1	100,947.25	0.00	12,113.67	113,060.92	100,947.25	0.00	12,113.67	113,060.92
11.10/6	K13	Trash screen 2400 x 2000	no	1	111,561.05	0.00	13,387.33	124,948.37	111,561.05	0.00	13,387.33	124,948.37
11.10/7	K13	Trash screen 3100 x 1600	no	1	113,436.75	0.00	13,612.41	127,049.15	113,436.75	0.00	13,612.41	127,049.15
SUB-TOTAL CARRIED TO SUMMARY			11	STRUCTURAL AND MISCELLANEOUS METALWORK					868,389.82	0.00	104,206.78	972,596.59

BILL No. 15 – MISCELLANEOUS WORKS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
15.3/4	K9	Concrete railing - Type 4	lm	328	2,743.68	0.00	329.24	3,072.92	898,830.07	0.00	107,859.61	1,006,689.68
15.8/1	K9	Boundary markers	no	71	2,279.16	0.00	273.50	2,552.66	161,820.12	0.00	19,418.41	181,238.53
SUB-TOTAL CARRIED TO SUMMARY			15	MISCELLANEOUS WORKS					1,060,650.19	0.00	127,278.02	1,187,928.21

Table 1.5.10 Bill of Quantities for Contract Package No.2 (5/6)

TABLE A - PROVISIONAL SUMS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
P1.14/1		Relocation of utility or service facilities	P.S.	1	5,000,000.00	0.00	600,000.00	5,600,000.00	5,000,000.00	0.00	600,000.00	5,600,000.00
P1.18/3		STI, STD and HIV/AID Alleviation Programme	P.S.	1	1,500,000.00	0.00	180,000.00	1,680,000.00	1,500,000.00	0.00	180,000.00	1,680,000.00
P1.18/4		PPE for Employer's Personnel	P.S.	1	103,057.23	0.00	12,366.87	115,424.10	103,057.23	0.00	12,366.87	115,424.10
P1.22/3		Furnishings, equipment and consumables for office of Employer's Personnel	P.S.	1	3,030,000.00	0.00	363,600.00	3,393,600.00	3,030,000.00	0.00	363,600.00	3,393,600.00
P1.23/1		Provide Type A transportation items	P.S.	1	7,377,500.00	0.00	885,300.00	8,262,800.00	7,377,500.00	0.00	885,300.00	8,262,800.00
P1.23/2		Provide Type B transportation items	P.S.	1	307,764.45	0.00	36,931.73	344,696.18	307,764.45	0.00	36,931.73	344,696.18
P1.23/3		Provide Type C transportation items	P.S.	1	957,000.00	0.00	114,840.00	1,071,840.00	957,000.00	0.00	114,840.00	1,071,840.00
P1.26/1		Reimbursement of Employer's 50% share of DB costs	P.S.	1	3,084,210.89	0.00	370,105.31	3,454,316.20	3,084,210.89	0.00	370,105.31	3,454,316.20
P2.14/2-B		Adjustment of pH of discharge water	P.S.	1	3,000,000.00	0.00	360,000.00	3,360,000.00	3,000,000.00	0.00	360,000.00	3,360,000.00
P4.5/1-B		Removal and/or relocation of previously unidentified objects and structures	P.S.	1	12,600,000.00	0.00	1,512,000.00	14,112,000.00	12,600,000.00	0.00	1,512,000.00	14,112,000.00
P4.20/1-B		Treatment and disposal of hazardous waste	P.S.	1	5,000,000.00	0.00	600,000.00	5,600,000.00	5,000,000.00	0.00	600,000.00	5,600,000.00
CARRIED TO SUMMARY			PS	PROVISIONAL SUMS					41,959,532.57	0.00	5,035,143.91	46,994,676.48

Tb 1.359

Table 1.5.10 Bill of Quantities for Contract Package No.2 (6/6)

DAYWORK SCHEDULE I – LABOUR

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
DWI/1		Unskilled laborer	day	200	654.83	0.00	78.58	733.41	130,965.48	0.00	15,715.86	146,681.34
DWI/2		Semi-skilled laborer	day	200	973.67	0.00	116.84	1,090.51	194,734.80	0.00	23,368.18	218,102.98
DWI/3		Tradesman	day	20	1,402.77	0.00	168.33	1,571.10	28,055.40	0.00	3,366.65	31,422.05
DWI/4		Charge hand	day	5	1,402.77	0.00	168.33	1,571.10	7,013.85	0.00	841.66	7,855.51
DWI/5		Plant operator	day	60	1,279.76	0.00	153.57	1,433.34	76,785.84	0.00	9,214.30	86,000.14
DWI/6		Driver	day	25	817.82	0.00	98.14	915.96	20,445.62	0.00	2,453.47	22,899.09
CARRIED TO SUMMARY			DW1						458,000.99	0.00	54,960.12	512,961.10

DAYWORK SCHEDULE II – MATERIALS

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
DWII/1		Cement (40kg/bag, 25bag/ton)	ton	10	6,127.50	0.00	735.30	6,862.80	61,275.00	0.00	7,353.00	68,628.00
DWII/2		Fine aggregate for concrete	cu.m.	200	677.16	0.00	81.26	758.42	135,432.00	0.00	16,251.84	151,683.84
DWII/3		40 mm aggregate for concrete	cu.m.	200	855.00	0.00	102.60	957.60	171,000.00	0.00	20,520.00	191,520.00
DWII/4		20 mm aggregate for concrete	cu.m.	200	855.00	0.00	102.60	957.60	171,000.00	0.00	20,520.00	191,520.00
DWII/5		12 mm aggregate for concrete	cu.m.	200	855.00	0.00	102.60	957.60	171,000.00	0.00	20,520.00	191,520.00
DWII/6		Reinforcing steel Grade 40 (1,000kg/ton)	ton	5	38,760.00	0.00	4,651.20	43,411.20	193,800.00	0.00	23,256.00	217,056.00
DWII/7		Reinforcing steel Grade 60 (1,000kg/ton)	ton	5	41,040.00	0.00	4,924.80	45,964.80	205,200.00	0.00	24,624.00	229,824.00
DWII/8		Timber – Hardwood (2.36ltr./bd.ft., 424bd.ft./cu.m.)	cu.m.	20	17,400.96	0.00	2,088.12	19,489.08	348,019.20	0.00	41,762.30	389,781.50
CARRIED TO SUMMARY			DW2						1,456,726.20	0.00	174,807.14	1,631,533.34

DAYWORK SCHEDULE III – CONTRACTOR'S EQUIPMENT

Item No.	Fluc'n factor	Description	Unit	Quantity	Unit Rates (Peso)				Amounts (Peso)			
					L.C.	F.C.	VAT	Total	L.C.	F.C.	VAT	Total
DWIII/1		Excavator or dragline up to and including 1 m3	hr.	100	3,540.84	0.00	424.90	3,965.74	354,084.00	0.00	42,490.08	396,574.08
DWIII/2		Excavator or dragline over 1 m3	hr.	100	4,835.88	0.00	580.31	5,416.19	483,588.00	0.00	58,030.56	541,618.56
DWIII/3		Truck crane 25 t	hr.	100	1,626.78	0.00	195.21	1,821.99	162,678.00	0.00	19,521.36	182,199.36
DWIII/4		Crawler crane 40 t	hr.	100	1,971.06	0.00	236.53	2,207.59	197,106.00	0.00	23,652.72	220,758.72
DWIII/5		Bulldozer up to and including 250 kW	hr.	100	5,308.98	0.00	637.08	5,946.06	530,898.00	0.00	63,707.76	594,605.76
DWIII/6		Front-end loader up to 2 m3	hr.	100	3,147.54	0.00	377.70	3,525.24	314,754.00	0.00	37,770.48	352,524.48
DWIII/7		Front-end loader over 2 m3	hr.	100	3,936.42	0.00	472.37	4,408.79	393,642.00	0.00	47,237.04	440,879.04
DWIII/8		Barge 650 DWT	hr.	100	612.18	0.00	73.46	685.64	61,218.00	0.00	7,346.16	68,564.16
DWIII/9		Tugboat 500 HP	hr.	100	1,827.42	0.00	219.29	2,046.71	182,742.00	0.00	21,929.04	204,671.04
DWIII/10		Dump truck up to and including 15 t	hr.	100	1,488.84	0.00	178.66	1,667.50	148,884.00	0.00	17,866.08	166,750.08
DWIII/11		Dump truck over 15 t	hr.	100	1,956.24	0.00	234.75	2,190.99	195,624.00	0.00	23,474.88	219,098.88
DWIII/12		Flat bed truck 10 t	hr.	100	1,355.46	0.00	162.66	1,518.12	135,546.00	0.00	16,265.52	151,811.52
DWIII/13		Compressor 250 cfm	hr.	100	654.36	0.00	78.52	732.88	65,436.00	0.00	7,852.32	73,288.32
CARRIED TO SUMMARY			DW3						3,226,200.00	0.00	387,144.00	3,613,344.00

Table 2.1.1 Consulting Services Cost

Item	Construction Supervision			Non-structural Measures			Total		
	FC(JPY)	LC(PHP)	VAT(PHP)	FC(JPY)	LC(PHP)	VAT(PHP)	FC(JPY)	LC(PHP)	VAT(PHP)
A. REMUNERATION									
Foreign Consultant	267,800,000	0	0	62,400,000			330,200,000		
	(103 M/M x Y2,600,000)			(24 M/M x Y2,600,000)					
Local Consultant	0	76,480,000	9,177,600		45,440,000	5,452,800		121,920,000	14,630,400
		(478 M/M x P160,000)			(284 M/M x P160,000)				
Local Staff	0	22,860,000	2,743,200		7,800,000	936,000		30,660,000	3,679,200
					(3x52MMxP50,000)				
Sub-total	**267,800,000**	**99,340,000**	**11,920,800**	**62,400,000**	**53,240,000**	**6,388,800**	**330,200,000**	**152,580,000**	**18,309,600**
B. OUT OF POCKET EXPENSES									
1.1) International Travel Cost	8,550,000			3,990,000			12,540,000		
	(30 round trips x Y285,000)			(14 round trips x Y285,000)					
1.2) Excess	1,080,000			840,000			1,920,000		
	(18 x 2 x 10 kg x Y3,000)			(14 x 2 x 10 kg x Y3,000)					
1.3) Pre-Travel Mobilization Expenses	3,000,000			1,400,000			4,400,000		
	(30 trip x Y100,000)			(14 trip x Y100,000)					
International Commnication Cost	260,000			0			260,000		
	(52 months x Y5,000)								
Per Diem for Foreign Consultants	18,540,000			4,320,000			22,860,000		
	(103 M/M x 30 days x Y6,000)			(24 M/M x 30 days x Y6,000)					
Home Support	520,000			0			520,000		
	(52 months x Y10,000)								
Office Rental Cost		12,480,000	1,497,600		0			12,480,000	1,497,600
		(52 months x 400 m2 x P600/m2/month)							
Office Running Cost		7,800,000	936,000		0			7,800,000	936,000
		(52 mnths x P150,000)							
Office Furniture and Fixture		1,000,000	120,000		0			1,000,000	120,000
Office Equipment		5,915,000	709,800		1,300,000	156,000		7,215,000	865,800
Local Communication Cost		1,560,000	187,200		0			1,560,000	187,200
		(52 months x P30,000)							
Car Rental		15,600,000	1,872,000		3,120,000	374,400		18,720,000	2,246,400
		(52 months x P60,000 x 5 units)			(52 months x P60,000 x 1 units)				
Reporting and Reproduction		1,590,000	190,800		390,000	46,800		1,980,000	237,600
Cost for Seminor					600,000	72,000		600,000	72,000
					(3 times x P200,000)				
Non-Structural Measures									
1) Materials for Information Campaign and Publicity					30,000,000	3,600,000		30,000,000	3,600,000
2) Materials for Hazard Map					500,000	60,000		500,000	60,000
3) Overseas Training Course				16,000,000			16,000,000		
				(2 Staff x4 times x Y2,000,000)					
Sub-contract									
1) Environmental Monitoring					40,500,000	4,860,000		40,500,000	4,860,000
2) External Monitoring for Resettlement					9,200,000	1,104,000		9,200,000	1,104,000
Sub-total	**31,950,000**	**45,945,000**	**5,513,400**	**26,550,000**	**85,610,000**	**10,273,200**	**58,500,000**	**131,555,000**	**15,786,600**
Total	**299,750,000**	**145,285,000**	**17,434,200**	**88,950,000**	**138,850,000**	**16,662,000**	**388,700,000**	**284,135,000**	**34,096,200**

	FC(PHP)	LC(PHP)	VAT(PHP)	Total
Construction Supervision	152,292,351	145,285,000	17,434,200	315,011,551
Non-structural Measures	45,192,342	138,850,000	16,662,000	200,704,342

Table 2.1.2 Remuneration of Local Staff

Position	No of M/M S/V	Monthly Rate		Estimated Amount S/V
1) Administrative Officer	52	35,000		1,820,000
2) Secretary	52	30,000		1,560,000
3) Typist	52	30,000		1,560,000
4) Encoder (1)	52	30,000		1,560,000
5) Encoder (2)	52	30,000		1,560,000
6) CAD Operator (1)	52	50,000		2,600,000
7) CAD Operator (2)	52	50,000	For Non-structural	2,600,000
8) Inspector (1)	52	50,000		2,600,000
9) Inspector (2)	52	50,000		2,600,000
10) Inspector (3)	52	50,000		2,600,000
11) Inspector (4)	52	50,000		2,600,000
12) Survey Aide (1)	4	30,000		120,000
13) Survey Aide (2)	4	30,000		120,000
14) Researcher (1)	52	50,000	For Non-structural	2,600,000
15) Researcher (2)	52	50,000	For Non-structural	2,600,000
16) Messanger	52	30,000		1,560,000
For Non-structural Measures				7,800,000
For Construction Supervision				22,860,000
Total	736			***30,660,000***

Table 2.1.3 Office Equipment to be Procured by the Consultants (C/S)

Particulars	Unit	Quantity	Unit Cost (Peso)	Total (Peso)
Construction Supervision				
1 Desktop Computer for Office	set	0	40,000	0
2 Notebook Computer for Field Work	set	13	80,000	1,040,000
3 System Equipment and Installation of LAN	system	1	350,000	350,000
4 Microsoft Windows and Office Software	set	13	35,000	455,000
5 Engineering Software (Auto CAD, GIS, etc.)	set	5	400,000	2,000,000
6 Photocopy Machine with Sorter and Accessories	set	1	450,000	450,000
7 Inkjet Color Plotter (A1 size)	set	1	200,000	200,000
8 Laser Printer (A3 size) w/ Accessories	set	6	80,000	480,000
9 Inkjet Color Printer (A3 size)	set	0	20,000	0
10 Digital Camera and Monitoring Device	set	4	30,000	120,000
11 LCD Projector	set	1	120,000	120,000
12 Telephone Set with Facsimile Equipment	set	0	7,000	0
13 Punching and Binding Machine	set	0	40,000	0
14 Laminating Machine	set	0	5,000	0
15 Survey Instrument	L.S.	1	1,000,000	1,000,000
16 Miscellaneous (Stationary, etc.)	lot	1	1,000,000	1,000,000
TOTAL				***7,215,000***

Table 2.1.4 Breakdown of Reporting Expenses (C/S)

Particulars	Unit	Quantity	Unit Cost (Peso)	Total (Peso)
Whole Period of Services				
Inception Report	Copies	10	1,000	10,000
Monthly Progress Report	Copies	960	1,000	960,000
Definitive Plan and Detailed Design				
Definitive Plan Reort	Copies	0	8,000	0
Draft Design Report including Tender Documents	Copies	0	20,000	0
Final Design Report including Tender Documents	Copies	0	30,000	0
Formulation and Conduct of Non-structural Measures				
Inception Reort	Copies	30	1,000	30,000
Bi-monthly Report Report	Copies	240	1,000	240,000
Completion Report	Copies	60	2,000	120,000
Tender Administration and Construction Supervision				
Quarterly Progress Report	Copies	160	1,000	160,000
Pre-qualification Evaluation Report	Copies	10	2,000	20,000
Tender Evaluation Report	Copies	10	2,000	20,000
Operation and Maintenance Manual	Copies	20	3,000	60,000
Environmental Mnitoring and Management Report	Copies	80	2,000	160,000
Services Completion Report	Copies	20	10,000	200,000
TOTAL				***1,980,000***

Table 2.1.5 Compensation Cost

Item	Pasig River (CP-1)	Marikina River (CP-2)	Total
Land Acquisition	22,779,080	0	22,779,080
Structural Improvement	4,184,775	0	4,184,775
Resettlement	20,174,440	0	20,174,440
Tree Cutting	2,537,836	1,341,587	3,879,423
Total	49,676,131	1,341,587	51,017,718

Table 2.2.1 Total Project Cost

Bill No.	Section Title	Bill Amounts for C.P. No.1 (Peso)					Bill Amounts for C.P. No.2 (Peso)					Total of No.1 & 2 (Peso)		
		L.C.	F.C.	excl. VAT	VAT	C.P. No.1 Total	L.C.	F.C.	excl. VAT	VAT	C.P. No.2 Total	excl. VAT	VAT	C.P. No.1&2 Total
1	PRELIMINARY AND GENERAL	144,613,436	0	144,613,436	17,353,612	161,967,048	139,102,208	0	139,102,208	16,692,265	155,794,473	283,715,644	34,045,877	317,761,521
2	ENVIRONMENT	3,756,024	0	3,756,024	450,723	4,206,747	9,902,007	0	9,902,007	1,188,241	11,090,248	13,658,032	1,638,964	15,296,995
3	NOT USED													
4	EXCAVATION AND EARTHWORKS	190,772,727	0	190,772,727	22,892,727	213,665,454	1,199,659,287	433,192,440	1,632,851,727	195,942,207	1,828,793,935	1,823,624,454	218,834,935	2,042,459,389
5	CONCRETE	199,000,835	31,012	199,031,847	23,883,822	222,915,669	65,339,328	13,225,241	78,564,569	9,427,748	87,992,317	277,596,416	33,311,570	310,907,986
6	PILING	241,605,604	1,527,951,167	1,769,556,771	212,346,812	1,981,903,583	33,348,939	246,188,056	279,536,995	33,544,439	313,081,435	2,049,093,766	245,891,252	2,294,985,018
7	PROTECTION WORKS	184,820,534	0	184,820,534	22,178,464	206,998,998	28,998,324	18,539,575	47,537,899	5,704,548	53,242,447	232,358,433	27,883,012	260,241,445
8	DRAINAGE	4,740,586	13,899,023	18,639,609	2,236,753	20,876,362	3,362,727	8,077,532	11,440,260	1,372,831	12,813,091	30,079,869	3,609,584	33,689,453
9	ROAD WORKS						5,940,160	0	5,940,160	712,819	6,652,979	5,940,160	712,819	6,652,979
10	NOT USED													
11	STRUCTURAL AND MISCELLANEOUS METALWORK						868,390	0	868,390	104,207	972,597	868,390	104,207	972,597
12	NOT USED													
13	NOT USED													
14	NOT USED													
15	MISCELLANEOUS WORKS	45,409,849	0	45,409,849	5,449,182	50,859,031	1,060,650	0	1,060,650	127,278	1,187,928	46,470,499	5,576,460	52,046,959
SUB-TOTAL OF BILLS 1 TO 15 INCLUSIVE		1,014,719,595	1,541,881,201	2,556,600,796	306,792,096	2,863,392,892	1,487,582,021	719,222,845	2,206,804,865	264,816,584	2,471,621,449	4,763,405,662	571,608,679	5,335,014,341
PROVISIONAL SUMS (from Table A)		100,459,533	0	100,459,533	12,055,144	112,514,676	41,959,533	0	41,959,533	5,035,144	46,994,676	142,419,065	17,090,288	159,509,353
DAYWORK LABOUR (from Daywork Schedule I)		458,001	0	458,001	54,960	512,961	458,001	0	458,001	54,960	512,961	916,002	109,920	1,025,922
DAYWORK MATERIALS (from Daywork Schedule II)		1,456,726	0	1,456,726	174,807	1,631,533	1,456,726	0	1,456,726	174,807	1,631,533	2,913,452	349,614	3,263,067
DAYWORK CONTRACTOR'S EQUIPMENT (from Daywork Schedule		3,226,200	0	3,226,200	387,144	3,613,344	3,226,200	0	3,226,200	387,144	3,613,344	6,452,400	774,288	7,226,688
SUB-TOTAL OF PROVISIONAL SUMS & DAYWORK ITEMS		105,600,460	0	105,600,460	12,672,055	118,272,515	47,100,460	0	47,100,460	5,652,055	52,752,515	152,700,920	18,324,110	171,025,030
TOTALS		1,120,320,055	1,541,881,201	2,662,201,256	319,464,151	2,981,665,407	1,534,682,481	719,222,845	2,253,905,325	270,468,639	2,524,373,964	4,916,106,581	589,932,790	5,506,039,371

Table 2.2.2 Project Disbursement Schedule

Unit : Million Peso

Year	Total (Million Peso)					2012				2013				2014				2015				2016			
Work Items	**L.C.**	**F.C.**	**Sub-total (excl. Tax)**	**VAT**	**Total**	L.C.	F.C.	VAT	TOTAL	L.C.	F.C.	VAT	TOTAL	L.C.	F.C.	VAT	TOTAL	L.C.	F.C.	VAT	TOTAL	L.C.	F.C.	VAT	TOTAL
A Main Construction Cost	3,138	2,492	5,630	676	6,306	0	0	0	0	0	0	0	0	1,006	817	219	2,042	1,046	831	226	2,103	1,086	844	231	2,161
1 Base Cost	2,656	2,262	4,918	590	5,508	0	0	0	0	0	0	0	0	886	754	197	1,837	886	754	197	1,837	884	754	196	1,834
Pasig	1,121	1,542	2,663	320	2,983	0	0	0	0	0	0	0	0	374	514	107	995	374	514	107	995	373	514	106	993
Lower Marikina	1,535	720	2,255	270	2,525	0	0	0	0	0	0	0	0	512	240	90	842	512	240	90	842	511	240	90	841
2 Physical Contingency	132	114	246	30	276	0	0	0	0	0	0	0	0	44	38	10	92	44	38	10	92	44	38	10	92
3 Price Escalation	350	116	466	56	522	0	0	0	0	0	0	0	0	76	25	12	113	116	39	19	174	158	52	25	235
B Engineering Services Cost	331	220	551	37	588	0	0	0	0	94	64	10	168	97	65	11	173	69	45	8	122	71	46	8	125
1 Base Cost	288	202	490	34	524	0	0	0	0	86	60	10	156	86	60	10	156	58	41	7	106	58	41	7	106
Detailed Design	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Formulation and Conduct of Non-structural Measures	140	48	188	16	204	0	0	0	0	42	14	5	61	42	14	5	61	28	10	3	41	28	10	3	41
Construction Supervision	148	154	302	18	320	0	0	0	0	44	46	5	95	44	46	5	95	30	31	4	65	30	31	4	65
2 Physical Contingency	14	10	24	0	24	0	0	0	0	4	3	0	7	4	3	0	7	3	2	0	5	3	2	0	5
3 Price Escalation	29	8	37	3	40	0	0	0	0	4	1	0	5	7	2	1	10	8	2	1	11	10	3	1	14
C Compensation Cost	56		56		56	0			0	56			56	0			0	0			0	0			0
1 Base Cost	51		51		51	0			0	51			51	0			0	0			0	0			0
2 Physical Contingency	3		3		3	0			0	3			3	0			0	0			0	0			0
3 Price Escalation	2		2		2	0			0	2			2	0			0	0			0	0			0
D Administration Cost	215		215		215	0			0	7			7	68			68	69			69	71			71
1 Base Cost	192		192		192	0			0	7			7	63			63	61			61	61			61
2. Price Escalation	23		23		23	0			0	0			0	5			5	8			8	10			10
Total (A to D)	3,740	2,712	6,452	713	**7,165**	0	0	0	0	157	64	10	231	1,171	882	230	2,283	1,184	876	234	2,294	1,228	890	239	2,357
Rate of Price Escalation Based on Currency Value in 2012	Local Currency					0.0%				4.0%				8.2%				12.5%				17.0%			
	Foreign Currency					0.0%				1.6%				3.2%				4.9%				6.6%			

1. Base Year used in estimating cost: November 2012
2. Exchange Rate: PHP 1.000 = JPY 1.968
3. Price Escalation (per annum): 1.6 % for foreign currency 4.0 % for local currency
4. Physical Contingency: 5.0 % x (Base Cost + Price Escalation)
5. Administration Cost: 3.5 % x (Construction Cost + Engineering Services + Compensation Cost)
6. VAT: 12.0 %