

## BILL OF QUANTITY

Ref No	Description	Unit	Qty	Rate	Extension
	<b>BILL NO 1</b>				
	<b>PRELIMINARIES /GENERAL CONDITIONS</b>				
<b>1.0</b>	<i>PROJECT PARTICULARS</i>				
	Name: Drainage and slope protection. Nature: to slow the velocity of heavy water runoff. Location: Calder Hall/Friendsfiels, Tobago.				
1.1	Construct box drain 115m long; Supply, fabricate and place 2m x 1m x 1m gabion basket 175m long and construct retaining wall 10m long.	item			
	Name and Addresses of Employer and Consultants				
1.2	Employer: Division of Infrastructure Quarries and Urban Development. 2-10 Old Government Farm Road, Shaw Park, Tobago.	item			
<b>2.0</b>	<i>TENDER AND CONTRACT DOCUMENTS</i>				
	Documents				
	List of drawings/other documents from the bills of quantities were prepared.				
2.1	as received	item			

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3.0	<p><i>THE SITE/EXISTING BUILDINGS</i></p> <p>The site/ existing buildings</p> <p>Existing buildings on or adjacent to the site</p>				
3.1	take due care in ensuring protection to existing buildings on or adjacent to the site	item	1		
4.0	<p><i>THE CONTRACT/SUB-CONTRACT</i></p> <p>Form of contract</p> <p>Schedule of clause headings of standard conditions</p> <p>FIDIC, conditions of Contract for Construction, for building and engineering works. Green book.</p>				
4.1	Special conditions or amendments to standard conditions	item	1		
4.2	Contractor's insurance responsibility				
4.2	Contractors all risk	item	1		
	Performance guarantee bond/collateral warranties				
	under seal	XX			

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5.0	<p>EMPLOYER'S REQUIREMENTS: TENDERING/SUB-LETTING/SUPPLY</p> <p>Employer's requirements or limitations</p> <p>All subcontractors/suppliers must be approved by the client prior to their being undertaken to complete any work/s</p>				
5.1	Fixed charge	item	1		
6.0	<p>EMPLOYER'S REQUIREMENTS: PROVISION, CONTENT AND USE OF DOCUMENTS</p> <p>Employer's requirements or limitations</p> <p>Certified copies of contract documents to be made available for inspection at all reasonable times to the Employers/Architects personnel</p>				
6.1	Fixed charge	item	1		

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<b>7.0</b>	<b>EMPLOYER'S Requirements: QUALITY STANDARDS/CONTROL</b>				
	Employer's requirements or limitations				
	Quality assurance: Employ the services of building surveyor				
7.1	Fixed charge	item	1		
	Quality assurance; Testing of materials/testing of works				
	Fixed charges	item	1		
<b>8.0</b>	<b>EMPLOYER'S REQUIREMENTS: SECURITY/SAFETY/PROTECTION</b>				
	Employer's requirements or limitations, details stated				
	Noise and pollution control				
8.1	Time related charge	item	1		
	Maintain public and private roads				
8.2	Time related charge	item	1		
<b>9.0</b>	<b><i>CONTRACTOR'S GENERAL COST ITEMS: MANAGEMENT AND STAFF</i></b>				
	Engineering, Surveyor				
9.1	Time related charges	item	1		
9.2	Fixed charges	item	1		
9.3	Time related charge	item	1		

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Ref No	Description	Unit	Qty	Rate	Extension
<b>10.0</b>	<i>CONTRACTOR'S GENERAL COST ITEMS: SITE ACCOMMODATIONS</i>				
	Site Accommodations				
10.1	Fixed charges	item	1		
10.2	Time related charge	item	1		
<b>11.0</b>	<i>CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES</i>				
	<i>Services and Facilities</i>				
	Power				
11.1	Time related charge	item	1		
	Water				
11.2	Time related charge	item	1		
	Safety, health and welfare				
11.3	Time related charge	item	1		
	Storage of materials				
11.4	Time related charge	item	1		
	Rubbish disposal				
11.5	Time related charge	item	1		
	Maintenance of public road and private roads				
11.6	Time related charge	item	1		
	Small plant and tools				
11.7	Time related charge	item	1		

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Ref No	Description	Unit	Qty	Rate	Extension
<b>12.0</b>	<i>CONTRACTOR'S GENERAL COST ITEMS: MECHANICAL PLANT</i>				
	Mechanical Plant				
	Earthmoving plant				
12.1	Fixed charge	item	1		
12.2	Time related charge	item	1		
<b>13.0</b>	<i>CONTRACTOR'S GENERAL COST ITEMS: TEMPORARY WORKS</i>				
	Temporary works				
	Create temporary access according to instructions of the assigned Engineer				
13.1	Time related charge	item	1		
	<i>to collection</i>				
	General Conditions				
	Preliminaries and Insurances				

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Ref No	Description	Unit	Qty	Rate	Extension
<b>BILL NO. 2</b>					
<b>14.0</b>	<b><i>PROVISIONAL WORK</i></b>				
	Unspecified				
	Include the following Provisional Sums:				
	For defined work				
14.1	provision of materials, samples and testing	sum	1		
14.2	imported fill, around and top site, work to be carried out in accordance with engineer's instructions	sum	1		
14.3	road access, works to be carried out in accordance with engineer's instruction. See drawing C20; drawing no.3.	sum	1		
14.4	provision for drops when constructing drain. Approval and inspection carried by engineer.	sum	1		
14.5	all works not measured or listed in bill, works carried out in accordance with engineer's instructions	sum	1		

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Ref No	Description	Unit	Qty	Rate	Extension
<b>BILL NO. 2</b>					
<b>15.0</b>	<b>DAYWORKS</b>				
	Include the following provisional sums				
	The following schedule of Dayworks shall be defined in "Definition of prime cost of daywork carried out under a building contract"				
15.1	LABOUR: - include the provisional sum of 15000.00 for labour	sum	1		
15.2	add for incidental cost, overheads and profit	%			
15.3	MATERIALS AND GOODS: - include the provisional 25000.00 for materials and goods	sum	1		
15.4	add for incidental cost, overheads and profit	%			
15.5	PLANT: include the provisional sum of 18000.00 for plant (plant shall be charged at the market rates current at the time the work is executed)	sum	1		
15.6	add for incidental cost, overheads and profit	%			
<p><b><i>to collection</i></b></p> <p>Provisional sum Dayworks</p>					

## BILL OF QUANTITY

Ref No	Description	Unit	Qty	Rate	Extension
	<b>MEASURED WORKS</b> <b>BILL NO. 3</b>				
<b>16.0</b>	<b><i>KERBS/EDGINGS/CHANNELS/PAVING ACCESSORIES</i></b>  <b><i>Construction of box drain</i></b>  Construction of box drain including earthworks and excavation, backfilling, installation and dismantling of formwork, concrete placing, testing, inclusive if vibration leveling and compaction, placing of rebars, all the like accessories and all transportation as per specifications. See drawing C02; drawing no. 1				
<b>16.1</b>	<b><i>EXCAVATING AND FILLING</i></b>				
16.1.0	Excavating; trenches, width 0.30m; maximum depth 1.00m	m3	45		
16.1.1	Breaking out existing materials; rock (provisional quantity) Extra over excavation irrespective of depth for breaking out	m3	11		
16.1.2	Extra over excavation irrespective of depth for excavating				
16.1.4	soft spots; unsuitable topsoil and fill; including all earthwork support; compacting; disposal of excavation material offsite; backfilling as engineers' specification	m3	11		
16.1.4	next to existing structure; generally,	item	1		

*balance carried forward*

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Ref No	Description	Unit	Qty	Rate	Extension
	<i>balance brought forward</i>				
	<b>Construction of box drain</b>				
16.1.5	working space allowance to excavations; trenches	m2	210.5		
16.1.6	Earthwork support; maximum depth 1.00m; distance between opposing faces 2.00m	m2	210.5		
16.1.7	Disposal; surface water	item	1		
16.1.8	Disposal; excavated material; off site	m3	45		
16.1.9	Filling to excavation; average thickness 0.25m; obtained off site, hardcore Hardcore filling; coarse aggregate material, well graded; spread, level; and compacted	m3	17		
<b>17.0</b>	<b>MIXING/CASTING/CURING IN SITU CONCRETE</b>				
17.1.0	Blinding; 10 Mpa (N/mm2) Foundations; poured on or against earth or unblinded hardcore	m3	11		
17.1.1	reinforced concrete 25 Mpa (N/mm2) base/foundation; reinforced	m3	43		
17.1.2	walls; reinforced	m3	60		
<b>18.0</b>	<b>FORMWORK FOR IN SITU CONCRETE</b>				
18.1.0	Sides of foundations; plain verticals; 1.00m	m2	600		
	<i>balance carried forward</i>				

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Ref No	Description	Unit	Qty	Rate	Extension
<b>19.0</b>	<i>balance brought forward</i> <b>REINFORCEMENT FOR IN SITU CONCRETE</b> reinforcement steel work; supplying, cutting, bending, placing				
19.1.1	T10 rebars	kg	116		
19.1.2	T12 rebars	kg	200		
19.1.3	Fabric; B.S. 4483, hard drawn plain round steel; welded	m2	210.5		
<b>20.0</b>	<b>WORKED FINISHES/CUTTING TO IN SITU CONCRETE</b>				
20.1.0	Troweling;	m2	810.5		
<i>to collection construction of box drain</i>					

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Ref No	Description	Unit	Qty	Rate	Extension
	<p style="text-align: center;"><b>MEASURED WORKS</b> <b>BILL NO. 3</b></p> <p><b><i>CRIB WALLS/GABIONS/REINFORCED EARTH</i></b> <b><i>Construction of retaining wall</i></b></p> <p>Construction of retaining wall including earthworks and excavation, backfilling, installation and dismantling of formwork, concrete placing, testing, inclusive if vibration leveling and compaction, placing of rebars, all the like accessories and all transportation as per specifications. See drawing C02; drawing no. 5</p>				
<b>21.0</b>	<b><i>DEMOLITION</i></b>				
21.1	Individual structures remove existing structure, dispose offsite and make good for proposed works	item	1		
<b>22.0</b>	<b><i>EXCAVATING AND FILLING</i></b>				
22.1.0	Excavating; trenches, width 0.30m; maximum depth 1.00m	m3	7.2		
22.1.1	Extra over excavation irrespective of depth for breaking out structure (provisional quantity)	item	1		
	<i>balance carried forward</i>				

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Ref No	Description	Unit	Qty	Rate	Extension
	<i>balance brought forward</i>				
22.1.2	Extra over excavation irrespective of depth for excavating				
22.1.3	soft spots; unsuitable topsoil and fill; including all earthwork support; compacting; disposal of excavation material offsite; backfilling as engineer's specification	item	1		
22.1.4	next to existing structure; generally,	item	1		
22.1.5	Disposal; surface water	item			
22.1.6	Disposal; excavated material; off site	m3	7.2		
22.1.7	Filling to excavation Hardcore filling; coarse aggregate material, well graded; spread, level; and compacted	item	1		
<b>23.0</b>	<b><i>MIXING/CASTING/CURING IN SITU CONCRETE</i></b>				
23.1.0	Blinding; 10 Mpa (N/mm <sup>2</sup> ) Foundations; poured on or against earth or unblinded hardcore	m3	1		
23.1.1	reinforced concrete 25 Mpa (N/mm <sup>2</sup> ) base/foundation	m3	6		
23.1.2	wall	m3	5		
	<i>balance carried forward</i>				

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Ref No	Description	Unit	Qty	Rate	Extension
	<i>balance brought forward</i>				
<b>24.0</b>	<b><i>FORMWORK FOR IN SITU CONCRETE</i></b>				
24.1	Sides of foundations; plain verticals; 1.00m	m2	30		
<b>25.0</b>	<b><i>REINFORCEMENT FOR IN SITU CONCRETE</i></b>				
	reinforcement steel work; supplying, cutting, bending, placing				
25.1.0	T10 rebars	kg	80		
25.1.1	T12 rebars	kg	102		
25.1.2	T16 rebars	kg	90		
<b>26.0</b>	<b><i>WORKED FINISHES/CUTTING TO IN SITU CONCRETE</i></b>				
26.1.0	Troweling;	m2	18		
26.1.1	accessories for in situ concrete (pipes for weep holes, nails etc.)	item	1		
<b><i>to collection construction of retaining wall</i></b>					

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Ref No	Description	Unit	Qty	Rate	Extension
	<b>MEASURED WORKS BILL NO. 3</b>				
	<b><i>CRIB WALLS/GABIONS/REINFORCED EARTH</i></b>				
	<b><i>Gabion basket supply and place-in</i></b>				
<b>27.0</b>	<b><i>EXCAVATING AND FILLING</i></b>				
27.1.0	clear site of trees, shrubs and unsuitable materials	item	1		
27.1.1	Extra over excavation irrespective of depth for excavating foundation				
27.1.2	soft spots; unsuitable topsoil and fill; including all earthwork support; compacting; disposal of excavation material offsite	item	1		
27.1.3	Supply selected granular backfill as engineer's specification	item	1		
<b>28.0</b>	<b><i>MIXING/CASTING/CURING IN SITU CONCRETE</i></b>				
	Blinding; 10 Mpa (N/mm <sup>2</sup> )				
28.1.0	Foundations; poured on or against earth or unblinded hardcore	m <sup>3</sup>	10		
	<i>balance carried forward</i>				

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Ref No	Description	Unit	Qty	Rate	Extension
	<i>balance brought forward</i>				
	Supply of gabion basket/ mattress, with binding wire, mesh wire including rolling, cutting and weaving; assembling gabion basket, placing in position including, stretching, forming compartments, tying with bracing wires and tying lids complete. Providing and filling stone/boulder in gabion baskets including dressing, bedding, bounding and all transportation as per specifications. See drawing C20; drawing no. 4.				
28.1.1	Assembly 2m x 1m x 1m gabion baskets and secure	nr	402		
28.1.2	Supply suitable stones 100mm - 200mm all complete	m3	730		
28.1.3	Filling gabion baskets all complete	nr	402		
28.1.4	Supply and place non-woven filter fabric	m2	700		
	<i>to collection gabion basket supply and place-in</i>				

## BILL OF QUANTITY

<b>Summary</b>				
BILL NO. 1	<b>PRELIMINARIES</b>			
BILL NO. 2	<b>PROVISIONAL SUM &amp; DAYWORKS</b>			
BILL NO. 3	<b>MEASURED WORKS</b>			
	<i>Construction of box drain</i>			
	<i>Retaining wall</i>			
	<i>Gabion basket supply and place-in</i>			
	<b>Sub total</b>			
	<b>VAT 12.5%</b>		<b>12.5%</b>	
	<b>Total</b>			
	<b>CONTINGENCIES</b>		<b>10%</b>	
	<b>Total</b>			