GUYANA SHORE BASE INC.(GYSBI)

PROVISION OF GWI WATER SUPPLY AND DISTRIBUTION INFRASTRUCTURE, GYSBI INDUSTRIAL ESTATE

BILLS OF QUANTITIES

PROVISION OF GWI WATER SUPPLY AND DISTRIBUTION INFRASTRUCTURE, GYSBI INDUSTRIAL ESTATE
GRAND SUMMARY

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	Contingency (5%)	
	TOTAL CONSTRUCTION COST OF PROJECT	

PROVISION OF GWI WATER SUPPLY AND DISTRIBUTION INFRASTRUCTURE, GYSBI INDUSTRIAL ESTATE
BILL NO.1 - PRELIMINARIES

Ref	Description	Unit	Amount
1.1	**CLASS A: GENERAL ITEMS**		
1.1.1	**NAME OF PROJECT**		
1.1.1.1	**"The Project" shall be called -** Provision of GWI Water Supply and Distribution Infrastructure, GYSBI Industrial Estate		
1.1.2	**NATURE OF PROJECT**		
1.1.2.1	The works outlined in this project comprises of the earthworks, pipe installation and testing and reinforced concrete works.		
1.1.3	**LOCATION OF PROJECT**		
1.1.3.1	The Project is located at GYSBI Industrial Estate, Guyana Shore Base, McDoom, EBD.		
1.1.4	**"Employer" shall mean -**		
1.1.4.1	Guyana Shore Base Inc (GYSBI) Houston E.B.D		
1.1.5	**LIST OF DRAWINGS**		
1.1.5.1	The Drawings attached in Appendix B were used in the preparation of the Bills of Quantities will form part of the Tender Documents.		
1.1.6	**EXISTING BUILDINGS ON OR ADJACENT TO SITE**		
1.1.6.1	The Contractor is deemed to have visited the Site prior to his Tender submission to ascertain to his satisfaction, the existing nature of the Site and existing buildings and structures and take every precaution to minimize the effects of the Works on existing infrastructure and opertaions.	-	-
1.1.7	**METHOD OF MEASUREMENT**		
1.1.7.1	The Bills of Quantities have been prepared generally in accordance with the Civil Engineering Standard Method of Measurement of Building works 4th Edition Revised 2012.	-	-
1.1.8	**DESCRIPTION OF WORKS**		
1.1.8.1	The works outlined in this project comprises of the earthworks, supply, installation and testing of 347 metres of 2 inch diameter HDPE pipe line and 266 metres of 4 inch diameter HDPE pipe line and construction of a 4.76m wide x 9.65m long x 2.65m deep reinforced concrete reservoir.	-	-
1.1.9	PRICING OF BILLS: **Alterations and qualifications to Bills of Quantities must not be made without the written consent of the Company.** Costs relating to items which are not priced will be deemed to have been included elsewhere in the Bills of Quantities.	-	-
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Ref	Description	Unit	Amount
1.1.2	**CONTRACTUAL REQUIREMENTS**		
1.1.2.1	Allow for the provision of the following insurances for the duration of the project:		
1.1.2.1.1	Contractor's All Risk - **Coverage $22,000,000**	Fixed Charge	
1.1.2.1.2	Company Liability - **Coverage $11,000,000**		
1.1.2.1.3	Public Liability - **Coverage $11,000,000**		
1.1.2.2	Allow for providing **Mobilization Advance Bond**; for the duration of the project, by an approved surety. Coverage **20%** of **Contract Sum**.	Fixed Charge	
1.1.2.3	Allow for providing **Performance Bond**; for the duration of the project, by an approved surety. Coverage **10%** of **Contract Sum**.	Fixed Charge	
1.1.3	**SPECIFIED REQUIREMENTS**		
1.1.3.1	The Contractor shall provide a dedicated (full time) QHSSE Inspector for the duration of the project. The Officer shall have a minimum of 3 years experience with projects of a similar nature. A signed CV shall be submitted as part of the Tender Documents.	Fixed Charge	
1.1.3.2	**Surveying**		
1.1.3.2.1	Allow for surveying before, during and after construction; and setting out of the works by a Sworn Land Surveyor.	Fixed Charge	
1.1.3.3	**Shoring to Excavation**		
1.1.3.3.1	The Contractor shall provide shoring to support the walls of the excavations for the construction of the reservior and execution of pipe works. The Contractor shall be responsible for the supply and installation of all elements of the shoring system necessary to allow works to be safely performed within the excavation with safeguards implemented to preserve the safety of other site users. **The shoring design shall be approved prior to installation.**	Fixed Charge	
1.1.3.4	**Project Engineer's Site Meeting:** • The Project Engineer will hold regular site meeting to review progress and other matters arising from the administration of the Contract. Meetings will be held as agreed by both parties. • Ensure the availability of accommodation at the time of such meetings. • Attend all meetings and inform subcontractors and suppliers when their presence is required. • The Project Engineer will chair the meetings and take and distribute minutes.	Included	Included
1.1.3.5	**Good Practice:** Where and to the extent that materials, products and workmanship are not fully detailed or specified, they are to be: • Of a standard appropriate to the Works and suitable for the functions stated in or reasonably to be inferred from the project documents, and • In accordance with good building practice.	Included	Included
1.1.3.6	**General Quality of Products:** • Products to be new unless otherwise specified. • Where a choice of manufacturer or source of supply is allowed for any particular product, the whole quantity required to complete the work must be of the same type, manufacture and/or source unless otherwise approved. Produce written evidence of sources of supply when requested by the Project Engineer.	Included	Included
	Page Total (GUY$) Carried to Collection BN1-2		

Ref	Description	Unit	Amount
	General Quality of Products (cont'd): • Ensure that the whole quantity of each product required to complete the work is of consistent kind, size, quality and overall appearance. • Where consistency of appearance is desirable ensure consistency of supply from the same source. Unless otherwise approved do not use different colour batches where they can be seen together. • If products are prone to deterioration or have a limited shelf life, order in suitable quantities to a programme and use in appropriate sequence. Do not use if there are any signs of deterioration, setting or other unsatisfactory condition.	Included	Included
1.1.3.7	**Work At or After Completion; Generally:** • Make good all damage consequent upon the work. • Remove all temporary markings, coverings and protective wrappings unless otherwise instructed. • Clean the works thoroughly inside and out including all accessible ducts and voids, remove all splashes, deposits, efflorescence, rubbish and surplus materials consequent upon the execution of the work. • Cleaning materials and methods to be as recommended by manufacturers of products being cleaned, and to be such that there is no damage or disfigurement to other materials or construction. • Touch up minor faults in newly painted/repainted work, carefully matching colour, and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions. • Adjust, ease and lubricate moving parts of new work as necessary to ensure easy and efficient operation, including doors, windows, drawers, ironmongery, appliances, valves and controls.	Included	Included
1.1.3.8	**Approvals:** Where and to the extent that products or work are specified to be approved or the Project Engineer instructs or requires that they are to approved, the same must be supplied and executed to comply with all other requirements and in respect of the stated or implied characteristics either: • To the express approval of the Project Engineer or • To match a sample expressly approved by the Project Engineer as a standard for the purpose.	Included	Included
1.1.3.9	**Testing of Materials:**		
1.1.3.9.1	Allow for material testing, inclusive of Laboratory Modified Proctor Testing and particle size distribution of sandfill, white sand/sand clay and granular materials in accordance with ASTM D1557, ASTM D6913 and the Technical Specifications.	Fixed Charge	
1.1.3.10	**Testing of Works:**		
1.1.3.10.1	Allow for pressure testing for 4 inch diameter and 2 inch diameter pipe networks in accordance with the Technical Specifications and as agreed with the Project Engineer.	Fixed Charge	
1.1.3.10.2	Allow for disinfecting 4 inch diameter and 2 inch diameter pipe networks in accordance with the Technical Specifications and as agreed with the Project Engineer.	Fixed Charge	
1.1.3.10.3	Allow for compaction tests, inclusive of in-situ moisture content and maximum dry density of sandfill, white sand/sand clay and granular materials in accordance with the Technical Specifications; 1No. test on every 30 m^2 of material placed as directed by the Engineer. (Provisional Quantity: 54)	Fixed Charge	
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Ref	Description	Unit	Amount
1.1.3.10.4	Allow for the cost in connection with preparation and testing of concrete inclusive of slump tests and compressive strength testing for all concrete works at an approved laboratory in accordance with ASTM C39 and as directed by the Engineer. (Provisional Quantity: 27)	Fixed Charge	
1.1.4	**SECURITY/ SAFETY/ PROTECTION**		
1.1.4.1	**Protect Against the Following:**		
1.1.4.1.1	**Pollution**: Take all reasonable precautions to prevent pollution of the site, the Works and the general environment including streams and waterways. If pollution occurs, inform the appropriate Authorities and the Project Engineer without delay and provide them with all relevant information.	Included	Included
1.1.4.1.2	**Waste:** • Remove rubbish, debris, surplus material and spoil regularly and keep the site and Works clean and tidy. • Remove all rubbish, dirt and residues from voids and cavities in the construction before closing in.	Included	Included
1.1.4.2	**Protect the Following:**		
1.1.4.2.1	**Work in All Sections:** Adequately protect all types of work and all parts of the Works, including work carried out by others, throughout the Contract. Wherever work is of an especially vulnerable nature or is exposed to abnormal risks provide special protection to ensure that damage does not occur.	Included	Included
1.1.4.2.2	**Existing Services:** • Obtain approval(s) from the Company, all service authorities and/or adjacent owners of the proposed works not less than one week before commencing site operations. • Before starting work check positions of existing services. Where positions are not shown on drawings obtain relevant details from service authorities or other owners. • Adequately protect, and prevent damage to all services. Do not interfere with their operation without consent of the service authorities or other owners. • All necessary isolations and certificates must be instated prior to the execution of works	Included	Included
1.1.5	**SPECIFIC LIMITATIONS ON METHOD/ SEQUENCE/ TIMING/ USE OF SITE**		
1.1.5.1	**Programme:** Within **3 days** of delivery of the **Letter of Acceptance**, the Contractor shall provide the Project Engineer in an approved form a master programme for the Works, in accordance with the Technical Specifications.	Included	Included
1.1.5.2	**Site Access:** All personnel require the company's approval for acces to the site. Contractor's Personnel requiring access shall request access via **https://visit.gysbi.gy/register.**	Included	Included
1.1.5.3	**Vendor HSE Pre-Qualification Survey:** The Contractor is required to complete the pre-qualification before doing works for the Company. If not already completed, Contractor(s) are required to complete the form via **https://forms.office.com/r/M3km0Ke6BW**.	Included	Included
1.1.5.4	**Induction Training:** Before the execution of any works on the company's property, the **Contractor's employees shall attend an induction training** for intended to inform the Contractor's employess of GYSBI's QHSSE protocols. The training exercise will be conducted over a period **one (1) day**.	Included	Included
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Ref	Description	Unit	Amount
1.1.5.5	**Start of Work:** No work activity shall commence without a Permit to Work (PTW), including necessary isolation/ excavation certificates, issued by the Base Manager/ Area Authority as applicable. PTW applications are to be submitted a minimum of 24 hours prior to the commencement of the shift.	Included	Included
1.1.5.6	**Working Hours:** The Site is available to the Contractor on a 24 hours basis for the execution of project related activities. In the event that work hours will be disrupted by the Client, adequate notice to the Contractor will be provided, with the exception of emergency/ high priority interruptions.	Included	Included
1.1.6	**FACILITIES/TEMPORARY WORKS/SERVICES**		
1.1.6.1	**Locations:** Inform Project Engineer of the intended siting of all spoil heaps, temporary works and services.	Included	Included
1.1.7	**SITE ACCOMODATION**		
1.1.7.1	- Site Accomodation: The Contractor shall make provisions for office(s), sanitary facilities and the like, as required for the duration of the project.	Included	Included
1.1.8	**SERVICES AND FACILITIES**		
1.1.8.1	- Safety Health and Welfare - Provision of Personal Protective Equipment (PPE) for all staff, construction workers and visitors to the construction site for the duration of the project.	Fixed Charge	
1.1.8.2	- Rubbish Disposal for the duration of the project.	Included	Included
1.1.8.3	- Protection of work in all sections for the duration of the project.	Included	Included
1.1.9	**TEMPORARY WORKS**		
1.1.9.1	Allow for cost in connection with the provision of safety requirements for excavations such as cones, safety tape, barriers, etc. for the duration of the project.	Included	Included
1.1.9.2	Allow for all works in connection with the de-watering of excavations as necessary for the duration of the project.	Included	Included
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PROVISION OF GWI WATER SUPPLY AND DISTRIBUTION INFRASTRUCTURE, GYSBI INDUSTRIAL ESTATE
BILL NO.1 - PRELIMINARIES

Ref	Description	Unit	Amount
	COLLECTION		
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	Page BN 1-2		
	Page BN 1-3		
	Page BN 1-4		
	Page BN 1-5		
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Ref	Description	Unit	Qty	Rate	Amount
	WATER SUPPLY PIPE LINES				
2.1	**CLASS E: EARTHWORKS**				
2.1.1	**General Excavation**				
2.1.1.1	Excavate as indicated in drawings to accept bedding for pipes. Crusher run to be properly stockpiled for reuse in another location determined by Engineer. Excavated materials not to be stockpiled within 1 meter of trench edge. Unused trench spoils will be stockpiled at the north side of G-City. Excavation beyond the limits will not be measured unless directed by the Engineer. Bottom of excavation to be compacted with no less than 3 passes of a plate compactor.	m^3	496		
2.1.2	**Pipe Bedding**				
2.1.2.1	Place pipe bedding; thickness 100mm; with imported clean white sand to be supplied by the Contractor. Reuse of existing material not allowed. Material to be moistened and compacted with no less than 5 passes of a plate compactor.	m^3	42		
2.1.3	**Pipe Zone**				
2.1.3.1	Backfill with clean white sand to be supplied by the Contractor 150mm above top of pipe. When multiple pipes are in the same trench, compact 150mm of sand above the first pipe before the second pipe is installed. Material to be moistened and compacted with no less than 5 passes of a plate compactor. Add sand as necessary to maintain 150mm of sand above pipe.	m^3	230		
2.1.4	**Trench Backfill**				
2.1.4.1	Backfill in 150mm lifts. Moisten and compact with no less than 5 passes with a plate compactor. Backfill to 200mm below finish grade.	m^3	159		
2.1.5	**Trench Surfacing**				
2.1.5.1	Backfill with 2" minus crusher run in 100mm lifts. Moisten and compact with no less than 5 passes of a plate compactor. Grade flush with existing grade. Material to conform to ASTM D1241 gradation.	m^3	84		
2.2	**CLASS I: PIPEWORK**				
2.2.1	**Pipes** **All pipe connections, fittings and extensions for HDPE and shall be installed using either the butt fusion or electrofusion welding method.**				
2.2.2	**Main Supply - 4 Inch Diameter - HDPE**				
2.2.2.1	Supply, lay and joint pipes; HDPE; 4 inch diameter; SDR 11; pressure class 200 psi, IPS, in trench in accordance with the Drawings or as directed by the Engineer. **Rate to include couplings for connecting pipe line sections.**	m	269		
2.2.3	**Main Supply - 4 Inch Diameter - Ductile Iron**				
2.2.3.1	Supply, lay and joint pipes; ductile iron; 4 inch diameter; pressure class 350 psi, IPS, in trench in accordance with the Drawings or as directed by the Engineer.	m	6		
2.2.4	**Main Supply Sleeve - 8 Inch Diameter - PVC**				
2.2.4.1	Supply, lay and joint pipes; PVC; 8 Inch Diameter; SDR 26, to form drain crossing sleeve in accordance with the Drawings or as directed by the Engineer.	m	4		
2.2.5	**Return Water Feed - 2 Inch Diameter - HDPE**				
2.2.5.1	Supply, lay and joint pipes; HDPE; 2 inch diameter; SDR 11; pressure class 200 psi, IPS, in trench in accordance with the Drawings or as directed by the Engineer. **Rate to include couplings for connecting pipe line sections.**	m	347		
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Ref	Description	Unit	Qty	Rate	Amount
2.2.6	**Return Water Feed Sleeve - 2 inch diameter - PVC**				
2.2.6.1	Supply, lay and joint pipes; PVC; 4 inch diameter; SDR 26, to form drain crossing sleeve in accordance with the Drawings or as directed by the Engineer. Rate to include couplings for connecting pipe line sections.	m	4		
2.2.7	**Bowser Supply - 4 Inch Diameter - Ductile Iron**				
2.2.7.1	Supply, lay and joint pipes; ductile iron; 4 inch diameter; pressure class 350 psi, IPS, to reservior in accordance with the Drawings or as directed by the Engineer.	m	19		
2.30	**CLASS J: FITTINGS AND VALVES**				
2.3.1	**Main Supply - 4 inch diameter**				
2.3.1.1	Supply and install pipe fittings; HDPE; pressure rating 200 psi, compatibale with SDR 11 HDPE pipes, in trench in accordance with the Drawings or as directed by the Engineer:				
2.3.1.1.1	Bend - 90 degree - 4 inch diameter	nr.	4		
2.3.1.1.2	Bend - 45 degree - 4 inch diameter	nr.	8		
2.3.1.1.3	End cap - 4 inch diameter	nr.	2		
2.3.1.1.4	Gate valve - 4 inch diameter; cast iron, with ANSI 150 flange, 2" operating nut. Rate to include for spiral wound PTFE gasket kits, stainless steel bolts, nuts and washers. **Must be compatible with flange adapter.**	nr.	2		
2.3.1.1.5	Float valve - 4 inch diameter; ductile iron, epoxy coated, with ANSI 150 flange. Rate to include for stilling well, spiral wound PTFE gasket kits, stainless steel bolts, nuts and washers. Float valve shall be OCV Series 8000 or similarly approved. **Must be compatible with flange adapter.**	nr.	2		
2.3.1.1.6	Check valve - 4 inch diameter; in-line valve body; cast steel, **cracking pressure <0.1psi**, with ANSI 150 flange. Rate to include for spiral wound PTFE gasket kits, stainless steel bolts, nuts and washers. In-line check valve shall be Sharpe Series 25114 or similarly approved. **Must be compatible with flange adapter.**	nr.	1		
2.3.1.1.7	Adapter - HDPE pipe to ANSI 150 flange	nr.	5		
2.3.1.1.8	Adapter - Ductile iron pipe to ANSI 150 flange	nr.	1		
2.3.2	**Bowser Supply - 4 inch diameter - Ductile Iron**				
2.3.2.1	Supply and install pipe fittings; ductile iron; pressure rating 200 psi, compatibale with SDR 11, ductile iron pipes, in trench in accordance with the Drawings or as directed by the Engineer:				
2.3.2.1.1	Bend - 90 degree - 4 inch diameter	nr.	6		
2.3.2.1.2	Tee - 4 inch diameter	nr.	1		
2.3.2.1.3	Check valve - 4 inch diameter; in-line valve body; cast steel, **cracking pressure <0.1psi**, with ANSI 150 flange. Rate to include for spiral wound PTFE gasket kits, stainless steel bolts, nuts and washers. In-line check valve shall be Sharpe Series 25114 or similarly approved. **Must be compatible with flange adapter.**	nr.	2		
2.3.2.1.4	Adapter - Ductile iron pipe to ANSI 150 flange	nr.	4		
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Ref	Description	Unit	Qty	Rate	Amount
2.3.3	**Return Water Feed - 2 inch diameter**				
2.3.3.1	Supply and install pipe fittings; HDPE pressure rating 200 psi, compatibale with SDR 11 HDPE pipes, in trench in accordance with the Drawings or as directed by the Engineer:				
2.3.3.1.1	Bend - 90 degree - 2 inch diameter	nr.	5		
2.3.3.1.2	Tee - 2 inch diameter	nr.	6		
2.3.3.1.3	Bend - 45 degree - 2 inch diameter	nr.	6		
2.3.3.1.4	Plug - 2 inch diameter, brass, NPT thread	nr.	7		
2.3.3.1.5	Ball Valve Curb Stop, 2 inch diameter, brass, female NPT x female NPT thread, 1" key slot operating nut (Ford Meter Company B11-777-NL or equivalent)	nr.	7		
2.3.3.1.6	Adapter, 2 inch diameter, HDPE by male NPT thread	nr.	7		
2.40	**CLASS K: MANHOLES AND PIPEWORK ANCILLERIES**				
2.4.1	**Concrete Inspection Chambers**				
2.4.1.1	Supply and install concrete inspection chambers in accordanance with the Drawings and Technical Specifications. Rate to include for all associated works. Concrete mix ratio 1:1.5:3, w:c 0.5.				
2.4.1.1.1	Type 1 - 2.65m x 1.50m x 1.58m	nr.	1		
2.4.1.1.2	Type 2 - 1.55m x 1.61m x 1.58m	nr.	1		
2.4.2	**Metal Cover - Inspection Chamber**				
2.4.2.1	Supply and install metal cover to inspection chamber; formed from 2" x 2" x 1/8" angle iron bearing strips and a 1/8" thick non-slip metal plate inaccordance with the Drawings. Cost to include for one (1) coat of red oxide primer and two (2) coats of anti-corrosive paint; black.				
2.4.2.1.1	Type 1 - 1.14m x 2.30m	nr.	1		
2.4.2.1.2	Type 2 - 1.19m x 1.25m	nr.	1		
2.4.3	**Valve Box**				
2.4.3.1	Supply and install heavy duty, cast/ gray iron valve box, screw type, range 27"-37", complete with box cover, box bottom and box top, in accordance with the manufacturer's specifications. **Must be compatible with ball valve.**	nr.	7		
2.4.4	**Road Crossing**				
2.4.4.1	Supply and install pipes; 200mm diameter, PVC, SDR 26, to form buried conduits, in accordance with drawings. Rate to include for 2no. elbows and 2 no. end caps.				
2.4.4.1.1	Type 1 - 8" diameter; 15m long	nr.	2		
2.4.1.1.2	Type 2 - 8" diameter; 25m long	nr.	4		
2.4.1.1.3	Type 3 - 2" diameter; 15m long	nr.	1		
2.4.1.1.4	Type 4 - 2" diameter; 25m long	nr.	2		
2.4.5	**Coring of Concrete Drains**				
2.4.5.1	Core reinforced concrete drain wall to install pipe sleeve across drain. Gaps shall be filled with an approved non-shrink grout.	nr.	9		
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Ref	Description	Unit	Qty	Rate	Amount
2.4.6	**Pipe Line Marker**				
2.4.6.1	Supply and install pipe line markers; tape type, 152.6mm widths, laid ina accordance with Drawings or as directed by Engineer.	m	616		
2.50	**CLASS L: PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION**				
2.5.1	**Concrete Pipe Supports**				
2.5.1.1	Mass cast-in-place concrete supports under pipe in chambers. Concrete mix 1:1.5:3. Rate to include for all works relating to the provision of the thrust block.	nr.	2		
2.60	**CLASS Z; BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS**				
2.6.1	**Pump System - Return Water Feed - 2 inch**				
2.6.1.1	Supply and install pump system consisting of: - Grundfos; self priming pump, 20gpm; 80 feet total dynamic head, complete with electrical control box - 2 no. x 120 gal, well water pressure tanks; fibre glass, - Fittings and installation kit, - **Pump system design to be approved prior to installation.**	Nr.	1		
2.6.2	**Pump System - Bowser Supply - 4 inch**				
2.6.2.1	Supply and install pump system consisting of: - Multiqiup ST41460; 423gpm; 138 feet total head, complete with electrical control box, - Fittings, - Stainless steel lifting frame, **- Pump system design to be approved prior to installation.**	Nr.	2		
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PROVISION OF GWI WATER SUPPLY AND DISTRIBUTION INFRASTRUCTURE, GYSBI INDUSTRIAL ESTATE

BILL NO.2 - WATER SUPPLY NETWORK

Ref	Description	Unit	Qty	Rate	Amount
	COLLECTION				
	Page BN 2-1				
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Ref	Description	Unit	Qty	Rate	Amount
	RESERVOIR				
3.1	**CLASS E: EARTHWORKS**				
3.1.1	**General Excavation**				
3.1.1.1	Excavate as indicated in drawings to accept sand fill for reservior. Crusher run to be properly stockpiled for reuse in another location determined by Engineer. Excavated materials not to be stockpiled within 2 meters of excavation. Unused pit spoils will be stockpiled at the north side of G-City or as directed by Engineer. Excavation beyond the limits will not be measured unless directed by the Engineer. Bottom of excavation to be compacted with no less than 5 passes of a plate compactor.	m^3	323		
3.1.2	**Reservior Bedding**				
3.1.2.1	Place reservior bedding; thickness 300mm; with imported clean white sand to be supplied by the Contractor. Reuse of existing material not allowed. Material to be moistened and compacted with no less than 5 passes of a plate compactor. Rate to include compacting in layers no greater that 150mm.	m^3	35		
3.1.3	**Excavation Backfill**				
3.1.3.1	-Backfill in 150mm lifts. Moisten and compact with no less than 5 passes with a plate compactor. Backfill to 200mm below finish grade.	m^3	139		
3.1.4	**Trench Surfacing**				
3.1.4.1	Backfill with 2" minus crusher run in 100mm lifts. Moisten and compact with no less than 5 passes of a plate compactor. Grade flush with existing grade. Material to conform to ASTM D1241 gradation.	m^3	31		
3.2	**CLASS F: IN SITU CONCRETE**				
3.2.1	**Blinding**				
3.2.1.1	Provide, place and compact mass concrete; unreinforced; 1:3 mix; 50mm thick, to form blinding beneath reservoir base.	m^2	60		
3.2.2	**Reinforced Concrete**				
3.2.2.1	*Provide, place and vibrate reinforced structural concrete (compressive strength of 5,000psi) at 28 days, with max. aggregate 3/4 minus and well-graded coarse aggregate. Concrete to incorporate a waterproofing admixture such as Eucon Vanex AM-10L or similar in accordance with the manufacturer's guidelines.*				
3.2.2.1.1	- Base slab and top slab; 254mm thick	m^3	27		
3.2.2.1.2	- Side Walls - 254mm thick	m^3	15		
3.2.2.1.3	- End Wall; lower - 254mm thick	m^3	2		
3.2.2.1.4	- End Wall; higher - 254mm thick	m^3	3		
3.3	**CLASS G; CONCRETE ANCILLARIES**				
3.3.1	Formwork concrete finish to be CSC3 in accordance with ACI 347.3R & Drawings. Rate to include for all braces, struts, ties, supports, anchorage, etc. required for the installation of the formwork.				
3.3.1.1	- Base slab; 300mm high	m^2	10		
3.1.1.2	- Top slab; 300mm high	m^2	55		
3.3.1.4	- Side walls; sloping; 1,960mm - 2,140mm high	m^2	113		
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Ref	Description	Unit	Qty	Rate	Amount
3.3.1.5	- End wall; lower; 1,960mm high	m^2	16		
3.3.1.6	- End wall; higher; 2,140mm high	m^2	18		
3.3.1.7	- Manhole in top slab; depth 300mm	nr.	4		
3.3.2	**REINFORCEMENT FOR IN SITU CONCRETE**				
3.3.2.1	High Yield steel tensile bar reinforcement to ASTM A615; Grade 60, include for all spacers, chairs, tying wires, bends, hooks, distance blocks and the likes as required; all in strict accordance with Drawings and Specifications.				
3.3.2.1.1	- 3/8" diameter	kg	3,000		
3.40	**CLASS K; PIPEWORK - MAHOLES AND PIPEWORK ANCILLARIES**				
3.4.1	Supply and install GFRP manhole cover assembly; cover diameter 1,000mm; Class A15. Rate to include works relating to provision of vents and opening in cover.	nr.	4		
3.50	**CLASS N; MISCELLANEOUS METALWORK**				
3.5.1	**Pump Shed**				
3.5.1.1	Fabricate and install rectangular hollow section; 4" x 2" x 1/8", to form frame. Rate to include for welding, end plates, bolts and the application of 1 coat of metal primer and 2 coats of anti-corrosion paint.	m	25		
3.5.1.2	Fabricate and install square hollow section; 2" x 2" x 1/8", to form truss. Rate to include for end plates, bolts and the application of 1 coat of metal primer and 2 coats of anti-corrosion paint.	m	42		
3.5.5.3	Fabricate and install square hollow section; 2" x 2" x 1/8", to form purlins. Rate to include for end plates, bolts and the application of 1 coat of metal primer and 2 coats of anti-corrosion paint.	m	34		
3.5.1.4	Supply and install prepainted trapezoidal profile; 26 gauge Galvalume sheets; cadmium plated screws and washers/ high quality neoprene fittings, to form roof. Sheets are to be vertical and lapped per manufacturer's guidelines. Colour to be neutral white. Rate to inclde for ridging.	m^2	25		
3.5.2	**Bowser Supply Frame**				
3.5.2.1	Fabricate and install square hollow section; 4" x 4" x 1/8", to form frame. Rate to include for welding, end plates, anchore bolts, straps and the application of 1 coat of metal primer and 2 coats of anti-corrosion paint.	m	13		
3.6	**CLASS V; PAINTING**				
3.6.1	Supply and apply epoxy system; food grade, to all interior surfaces of the reservior in accordance with the manufacturer's guidelines. Epoxy system shall consist of 1 coat epoxy primer; 100% soilds, penetrating, such as Dural epoxy primer and 2 coats; high build, 100% soilds, high performance epoxy such as Duralkote 240 or similarly approved.	m^2	182		
3.7	**CLASS W; WATERPROOFING**				
3.7.1	**Waterstop**				
3.7.1.1	152mm (6") high; PVC; Durajoint; type 4b or similar product. Rate to include for installation in accordance with the manufactuer's recommendations.	m	28		
	Page Total (GUY$) Carried to Collection BN3-2				

PROVISION OF GWI WATER SUPPLY AND DISTRIBUTION INFRASTRUCTURE, GYSBI INDUSTRIAL ESTATE

BILL NO.3 - RESERVIOR

Ref	Description	Unit	Qty	Rate	Amount
	COLLECTION				
	Page BN 3-1				
	Page BN 3-2				
	Page Total (GUY$) Carried to Grand Summary BN3-3				

PROVISION OF GWI WATER SUPPLY AND DISTRIBUTION INFRASTRUCTURE, GYSBI INDUSTRIAL ESTATE

BILL NO. 4 - MATERIAL TO BE SUPPLIED TO CLIENT

Ref	Description	Unit	Qty	Rate	Amount
4.1	Electrofusion Processor	EA	1		
4.1.1	Minimum Specifications:				
4.1.1.1	Waterproof Carrying Case				
4.1.1.2	Shock Resistant Carrying Case				
4.1.1.3	1/2" through 12" Capability				
4.1.1.4	Handheld Barcode Scanner				
4.1.1.5	NEMA 120V 30A Twist Lock Plug				
4.1.1.6	Charging Adapter Configured for Standard 120V Outlet				
4.1.1.7	4mm and 4.7mm Connection Pins				
4.1.1.8	Manual Barcode Entry Capable				
4.1.1.9	Data Logger with Internal Memory				
4.1.1.10	Capable of Scanning ASTM F2897-11 and ISO 12176-4 Barcodes				
4.1.1.11	Supply Voltage: 120V				
4.1.1.12	Supply Frequency: 60hz				
4.1.1.13	Output Voltage: 8VAC to 48VAC				
4.1.1.14	Output Current: 4AAC to 48AAC				
4.1.1.15	Language: English				
4.1.1.16	Calibration Certificate				
4.1.1.17	Dual Size Welding Leads				
4.2	Electrofusion Scraper Kit				
4.2.1	1/2" Size to 6" Size with Case	EA	1		
4.2.2	6" Size to 12" Size with Case	EA	1		
4.3	Electrofusion Pipe Alignment Tool				
4.3.1	3/4" to 2" Capability	EA	1		
4.3.2	2" to 8" Capability	EA	1		
4.4	Ratcheting Pipe Cutter				
4.4.1	Up to 1-1/4" Capability	EA	2		
4.4.2	Up to 2" Capability	EA	2		
4.5	Valve Curb Key for 2" Square and 1" U Style Valves	EA	2		
4.6	2" Electrofusion Couplings	EA	4		
4.7	4" Electrofusion Couplings	EA	4		
	Page Total (GUY$) Carried to Collection BN4-1				

PROVISION OF GWI WATER SUPPLY AND DISTRIBUTION INFRASTRUCTURE, GYSBI INDUSTRIAL ESTATE

BILL NO. 4 - MATERIAL TO BE SUPPLIED TO CLIENT

Ref	Description	Unit	Qty	Rate	Amount
	COLLECTION Page BN 4-1				
	Page Total (GUY$) Carried to Grand Summary BN4-2				

GUYANA SHORE BASE INC.(GYSBI)

TENDER SUBMISSION CHECKLIST

PROVISION OF GWI WATER SUPPLY AND DISTRIBUTION INFRASTRUCTURE, GYSBI INDUSTRIAL ESTATE

#	Question	Bidder's Response	
		Yes	No
1	Have you satisfied all of the requirements outlined in the Instruction to Bidders - Evaluation Criteria?		
2	Has the QHSSE Prequalification been completed and relevant documentation submitted?		
3	Are you aware that an project dedicated staff are requied to attend a one (1) day Induction Training and supervisors and HSE must attend the GOARC PTW training?		
4	Are you aware that all pipes and fittings are to be connected using the electrofusion/ butt fusion welding method?		
5	Are all HDPE pipe and fittings rated at SDR 11 (pc 200psi)?		
6	Are all ductile iron pipe and fittings at rated pc 350psi?		
7	Are all pipe fittings compatible with flanges?		
8	Do the proposed valves meet the outlined specifications and are complete with gasket kits and stainless steel bolts and nuts?		
9	Are the proposed valve boxes compatible with the ball valves?		
10	Are the proposed flange adapters rated ANSI 150?		
11	Are you aware that the pipe lines are to be pressure tested and disinfected?		
12	Are you aware that the reservior excavation requires shoring and all excavations must have access control measures?		
13	Are you aware that the required concrete strength is 5,000psi?		
14	Is the proposed epoxy system food grade compliant?		
15	Do the proposed pump systems satisfy the specifications?		
16	Do you have trained & competent confined space entry personnel, with certified and fit-for-purpose rescue equipment?		
17	Are the PPE compliant to ANSI and/or other recognized safety standards, and fit-for-purpose?		
18	Do your rates include all taxes,customs duties, VAT?		