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**Deysseldorp Clinic  
Bulk Water Storage Tank  
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	<b>Brought Forward</b>			R
	<u>Prescribed density tests on filling:</u>			
8	"Modified AASHTO Density" test	No	4	
	<b><u>CONCRETE FORMWORK AND REINFORCING</u></b>			
	<u>Supplementary Preambles:</u>			
	The costs of preliminary test prior to approval of the Contractor's materials and mixes shall be born by the Contractor.			
	The cost of subsequent tests shall be borne by the Employer unless the results show that the materials or concrete do not conform with the specific requirements.			
	Should the Engineer require any load tests o be carried out due to the Contractor's failure to comply with specified requirements, the costs of such load test shall be borne by the Contractor.			
	<u>Cost of tests</u>			
	The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests for approval. The testing shall be undertaken by an approved independent firm or institution nominated by the contractor (test cubes are measured separately)			
	<u>Formwork</u>			
	Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use			
	<b>Carried Forward</b>			R
	Section No. 1 Bill No. 1 Builderswork			

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<b>Brought Forward</b>			R
<p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p> <p><b><u>UN REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b></p> <p><u>15 MPa/19mm concrete</u></p>			
9	Surface blinding beds under footings and bases	m3	2
<p><b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b></p> <p><u>30 MPa/19mm concrete</u></p>			
10	Bases	m3	14
11	Stub columns	m3	1
<b>Carried Forward</b>			R
<p>Section No. 1 Bill No. 1 Builderswork</p>			

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Brought Forward			R
<b><u>TEST CUBES</u></b>			
12	Prepare a set of six concrete cubes each cube size 150 x 150 x 150 mm for strength test and deliver to an approved laboratory for testing and pay all charges in connection therewith (Provisional allowance - one set for every 50m <sup>3</sup> concrete cast).	Sets	1
<b><u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u></b>			
13	Rectangular stub columns not exceeding 1.5m high.	m2	5
<b><u>REINFORCEMENT</u></b>			
<u>High tensile and mild steel reinforcement in lengths not exceeding 13 m long manufactured, cut, bent, delivered to site and fixed in:</u>			
14	All diameter bars	t	3.09
<u>Cover blocks</u>			
15	Allow for cover blocks and spacers in accordance with SABS 0146 as discribed.	Item	
<b><u>STRUCTURAL STEELWORK</u></b>			
<b><u>GENERAL NOTES</u></b>			
The tenderer will be deemed to have visited the site to ascertain site conditions and the scope of works.			
Tenderers must check all site dimensions and levels prior to commencing with any manufacture and/or fabrication of structural steelwork.			
Tenderers will be required to have sufficient teams on site at all times so as to ensure that programme dates are met. No claims for additional workmen or site management will be entertained at any stage of the project.			
Carried Forward			R
Section No. 1 Bill No. 1 Builderswork			

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<p style="text-align: right;"><b>Brought Forward</b></p> <p>Drawings issued with this tender document are preliminary and subject to change, contractors are required to check with the Engineer regarding any changes in specification, detail or design, prior to fabrication and/or erection of steelwork.</p> <p>Where temporary bracing or propping is necessary, the tenderer shall be responsible for the design, maintenance and removal of such supports, as may be required</p> <p><b><u>SHOP DRAWINGS</u></b></p> <p>Shop drawings to be submitted to Structural Engineer for approval before manufacture.</p> <p><b><u>DESCRIPTIONS</u></b></p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>Description of bolts shall be deemed to include nuts and washers and should read grade or class 8.8, unless otherwise noted.</p> <p><b><u>WELDING</u></b></p> <p>All welding to be as per SANS 044, and to the engineers specifications</p> <p><b><u>LIASON WITH OTHER TRADES</u></b></p> <p>Tenderers are to include in their rates, for executing the installation in conjunction with other services, as no claims for coordination, additional site visits or interrupted programme activities will be entertained at any stage.</p>	<p style="text-align: right;">R</p>
<p style="text-align: right;"><b>Carried Forward</b></p> <p>Section No. 1 Bill No. 1 Builderswork</p>	<p style="text-align: right;">R</p>

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<p style="text-align: right;"><b>Brought Forward</b></p> <p><b><u>PAINTING</u></b></p> <p>Tenderers are to include in their rates for "shop priming" of all structural steelwork delivered to site. After erection has been completed, the steelwork is to be examined, and all damaged paintwork is to be touched up.</p> <p>Tenderers should make provision for "site priming" of all connections, fixings, bolts, nuts, etc.</p> <p>No alternative paintwork specification will be considered without written approval from the Engineer.</p> <p>Painting to steelwork has been measured in relation to the total tonnage of all measured steelwork.</p> <p><b><u>TESTS</u></b></p> <p>All standard tests (as required to meet the project specifications, etc) are deemed to be included in the tenderers rates. No claims in this regard will be entertained.</p> <p><b><u>FINAL DIMENSIONS FOR FABRICATION AND MANUFACTURE</u></b></p> <p>The successful tenderer will be required to check and verify all final measurements on site prior to the commencement of any work to be "put in hand". All discrepancies should be reported to the Engineer.</p> <p><b><u>THE FOLLOWING IN PAINTED STRUCTURAL STEELWORK ALL IN ACCORDANCE WITH THE ENGINEER'S SPECIFICATIONS AND DRAWINGS (PAINTWORK SEPARATELY MEASURED)</u></b></p> <p><b><u>All welds to be 6mm continuous fillet welds unless noted otherwise by the Engineer</u></b></p>		R	
<p style="text-align: right;"><b>Carried Forward</b></p> <p>Section No. 1 Bill No. 1 Builderswork</p>		R	

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<b>Brought Forward</b>				R
<b><u>WATER RESERVOIR TOWER</u></b>				
16	203 x 203 x 52 H-section universal column	t	3.22	
17	254 x 146 x 31 I-section universal beams main beams	t	0.31	
18	203 x 133 x 25 I-section universal beams tank platform	t	0.62	
19	200 x 75 PFC channel tank platform	t	0.29	
20	50 x 50 x 6 Angle horizontal bracing	t	0.13	
21	70 x 70 x 6 Angle diagonal bracing	t	0.93	
<b><u>BASE PLATES, BOLTS, FASTENERS, CONNECTIONS, ETC</u></b>				
<b><u>Connections, base &amp; plates, etc .</u></b>				
22	350 x 350 x 20mm Base plate, four times holed, 27mm diameter for holding down bolts	t	0.08	
23	8mm Thick base plate stiffeners	t	0.02	
24	10mm Thick web plates	t	0.02	
25	8mm Thick cleat brackets Detail A & B (Bracing)	t	0.19	
26	16mm Thick end plates (Top of columns)	t	0.02	
<b><u>SUNDRIES :</u></b>				
<b><u>Bolts:</u></b>				
27	M20 Grade 4,8 Bolts, nuts and washers	t	0.30	
<b><u>Holding down bolts</u></b>				
28	910mm Long set of 4 No. 25mm L-shaped anchor bolts made up into cage with 38 x 5mm flat bar spacers as per Structural Engineer detail drawing, complete with hexagonal nuts, washers and template for casting in (setting up in position and casting in by others)	No	4	
<b>Carried Forward</b>				R
Section No. 1 Bill No. 1 Builderswork				



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Item No		Quantity	Rate	Amount
	<b><u>PLUMBING AND DRAINAGE</u></b>			
	<b><u>BILL NO 2</u></b>			
	<u>Preambles</u>			
	Tenderers are advised to study the General Preambles for Trades before pricing this Bill.			
	<b><u>PIPEWORK</u></b>			
	<b><u>Class A galvanised mild steel screwed and socketed piping including couplers in the running length</u></b>			
1	50mm Diameter pipes fixed to sides of steel water tower.	m	19	
2	100mm Diameter pipes fixed side of steel water tower.	m	38	
	<b><u>Extra over on piping for</u></b>			
3	50mm Flange T	No	1	
4	50mm 90 deg bend	No	1	
5	50mm Distance piece	No	2	
6	100mm 90 deg bend	No	1	
7	100mm Flange T	No	2	
8	100-50mm Reducer	No	1	
9	100mm Distance piece & 1000mm long FBE	No	1	
10	100mm Distance piece & 2000mm long FBE	No	1	
11	100mm Bell mouth	No	2	
	<u>Valves</u>			
12	50mm Isolating valve	No	1	
	<b>Carried Forward</b>		R	
	Section No. 1 Bill No. 2 Plumbing and Drainage			

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Brought Forward				R
13	100mm Isolation valve	No	2	
14	100mm Float control valve	No	1	
<u><b>Class 16 (uPVC) socketed pressure piping with ring seal pressure joints, including couplers in the running length, surrounding pipe with 100mm river sand bed and 300mm cover for the width of the trench and backfilling remainder with filling obtained from excavation including compaction to 95% Modified AASHTO dry density and dewatering of trenches</b></u>				
15	75mm Diameter pipe laid in ground not exceeding 1000mm deep	m	200	
<u><b>Extra over on piping for PVC fittings with intergral joints</b></u>				
16	75mm Bend - 90 degree	No	4	
17	100-75mm uPVC to steel reducer	No	2	
18	Extra over for excavating and jointing new to existing uPVC water main	No	2	
<u><b>Testing, sterilization</b></u>				
19	Sterilizing all water pipes prior to installation in strict accordance to the methods and specifications in SANS10252-1		Item	
Carried Forward				R
Section No. 1 Bill No. 2 Plumbing and Drainage				

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<b>Brought Forward</b>				R
	<b><u>GALVANISED WATER TANK</u></b>			
20	Approved hot dip galvanised steel sectional water tank, with a capacity of 43 m <sup>3</sup> litre, formed of 6mm thick sheeting, provided with one access openings covered with 3mm thick cover plates, one vermin and dust proof ventilator, one externally visible level indicator, one 50mm diameter scour connection (floor), including 100mm threaded inlet, outlet and over flow connections (walls), sealing of joints, stiffeners, brackets, bolts, nuts, external cat ladder, completely erected with bottom of tank on steel tower platform (elsewhere measured). All in accordance with the manufacturer's specifications and SABS CKS 114.	No	1	
<b>Carried Forward to Summary of Section No. 1</b>				R
Section No. 1				
Bill No. 2				
Plumbing and Drainage				

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