

THE SUPPLY OF THE CONTROL VALVES FOR THE PACALTSDORP AND THEMBALETHU  
WATER TOWERS

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**Part C3: SCOPE OF WORKS**

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**Status**

Should any requirement or provision in the parts of the Scope of Work conflict with any requirement of any Standardised Specification, particular specification or any drawings, the order of precedence, unless otherwise specified, is:

- Drawings
- Scope of Work (Parts C3.1, C3.4, C3.5 and C3.6)
- SANS or other Standardised Specifications

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**C3.1 DESCRIPTION OF THE WORKS**

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**THE SUPPLY OF THE CONTROL VALVES FOR THE PACALTSDORP AND THEMBALETHU WATER TOWERS**

**1. EMPLOYER'S OBJECTIVE**

The Pacaltsdorp and Themba lethu water towers were commissioned a long time ago. The towers supply water to Pacaltsdorp and Themba lethu suburbs.

Both towers are fed from a local reservoir next to the tower via pumps. The pumps that feed the towers cannot operate when electricity is off, thus reducing the water supply security.

Pacaltsdorp and Themba lethu water towers must be upgraded to provide alternatives, should the pumps stop working

**2. OVERVIEW AND EXTENT OF THE WORKS**

**2.1 Overview of the works**

The overall concept of the upgrading of the works is described below with reference to the Layout Sketch No. 20160429 and Sketch No. 20160428\_2. PLEASE NOTE THAT THIS OVERVIEW OF THE WORKS IS NOT A DESCRIPTION OF THE WORK TO BE UNDERTAKEN FOR THIS CONTRACT. The scope for this contract is set out under item C3.1.2.2.

Gate and control valves shall be supplied (subject to this contract) and installed (not subject to this contract).

A valve chamber shall be extended (not subject to this tender).

**2.2 Scope of work**

The Works to be carried out by the Contractor under this Contract comprises mainly of the following:

**Supply of Flow Control Equipment**

- Control Valves:
  - Supply of 2 altitude automatic control valves
  - Supply of a gate valve
  - Supply of pipe specials, brackets and fittings
- Calibrate, commissioning and testing of the equipment works
- Compile and submit an Operation and Control Manual with the required set point.

The scope and extent of these works is elaborated upon in the drawings and the Bill of Quantities. Approximate quantities of each type of work are given in the Bill of Quantities.

The description of the Works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract.

**3. LOCATION OF THE WORKS**

The Pacaltsdorp Water Tower is located south of the commercial area of George. The co-ordinates of the works are 34° 0'43.10"S, 22°26'59.84"E.

Directions to the site from the N2 national road:

- Head East on the N2.
- Take the R102 York Street exit off the N2 (exit 431).
- Turn right towards Beach Road (Pacaltsdorp)
- Turn right onto Olympic Street (Approximately 1.4km from the N2 exit).
- Follow Olympic Street for approximately 55 m to the entrance of the Pacaltsdorp Water Tower.

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The Thembaletu Water Tower is located south-east of the commercial area of George.  
The co-ordinates of the works are 34° 0'13.22"S, 22°29'10.57"E.

Directions to the site from the N2 national road:

- Head East on the N2.
- Exit off the N2 towards Thembaletu (exit 434)
- Turn right onto Nelson Mandela Boulevard
- Follow Nelson Mandela Boulevard for approximately 1.5 km to the entrance of the Thembaletu Water Tower.

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The second A1 copy must be maintained on site by the Contractor for the purpose of recording as-built detail.

These copies are issued free of charge and the Contractor shall make any additional copies he may require at his own cost.

Only figured dimensions shall be used and drawings shall not be scaled unless otherwise instructed.

An unbundled Asset Register of the work shall be provided by the Contractor at completion, in a format required by the George Municipality.

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**1. PREFERENTIAL PROCUREMENT PROCEDURES**

Tenders will be evaluated in terms of the Municipality's Supply Chain Management Policy, as adopted by the George Municipality. Copies of the policy are obtainable from the George Municipality Supply Chain Unit Tel: (044) 801 9111.

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**1. WORK SPECIFICATIONS**

**1.1 Description of the works**

The scope of this Contract covers the complete supply of mechanical equipment of the Works as described in Clause C3.1.

**1.2 Description of site and access**

Access to the site is described in C3.1.3 of this document.

**1.3 Nature of ground and subsoil conditions**

No geotechnical investigation required.

**1.4 Details of Contract**

A general overview of the works and particulars of the works to be carried out under this Contract are set out in C3.1.2 of this document

**1.5 Construction Regulations, 2014**

The Contractor shall be required to comply with the Occupational Health and Safety Act, 1993: Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37305 and Regulation Gazette No 10113 of 7 February 2014. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Project Specifications, Schedule of Quantity and Drawings, as well as in the Employers' health and safety specifications (regulation 5(1)) of the Construction Regulations 2014, which are bound in the Contract document.

The Contractor shall in terms of regulation 7(1) provide a comprehensive health and safety plan detailing his proposed compliance with the regulations, for approval by the Employer.

The Contractor shall at all times be responsible for full compliance with the approved plan as well as the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.

A payment item is included in the Schedule of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

**1.6 Applicable Standardized Specification**

For the purposes of this Contract, the latest editions, including all amendments, of the following shall apply:

None

**1.7 Applicable International Standards**

None

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**1.8 Particular/Generic Specifications**

The following Particular Specifications for work not covered by the SABS 1200 Standardized Specifications are also bound in Portion 2 of the Project Specifications:

Mechanical works:

M1001 General Mechanical Engineering

M1002 Corrosion Protection

M2001 Operation and Maintenance

M4001 Nuts, Bolts and Fastening Sets

M5001 General: Medium Pressure Pipes

M7001 General Valves

M7003 Actuators

PVN: Particular Specification for Hydraulically Operated Diaphragm-Actuated Control Valves

**1.9 Certification by Recognized Bodies**

None.

**1.10 Agrément Certificates**

None.

**1.12 Monthly Statements and Payment Certificates**

None.

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**2. PLANT AND MATERIALS**

**2.1 Plant and Materials Supplied by the Employer**

None.

**2.2 Materials, Samples and Shop Drawings**

*2.2.1 Materials and Samples*

The Contractor shall at his own cost, supply all samples that may be required. Materials or work which does not conform to the approved samples submitted in terms of Subclause 23.4 of the General Conditions of Contract will be rejected. The Engineer reserves to himself the right to submit samples to any tests to ensure that the material represented by the sample conforms to the requirements of the specifications.

The costs of any such tests conducted by or on behalf of the Engineer, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of the General Conditions of Contract, be for the Contractor's account.

The recommendations of the manufacturers of patented materials must be strictly adhered to regarding the use, application, fastening, etc. thereof except when otherwise instructed in writing by the Engineer.

Where proprietary materials are specified it is to indicate the quality or type of materials or articles required, and where the terms "or other approved", "or approved equivalent", or "similar approved" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the Engineer.

*2.2.2 Drawings – Figured dimensions to be used*

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Engineer. The Engineer will, on the request of the Contractor in accordance with the provisions of the General Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

**3. SUPPLY PROGRAMME AND EQUIPMENT**

**3.1 General**

The Contractor's programme is to be submitted in terms of Clause 12 of the General Conditions of Contract shall take full account of all matters that may impact on the sequence of executing the various components of the Works and the requisite rate of progress of the Works, as are specified in or reasonably to be inferred from the Contract.

**3.2 Format**

**3.2.1** The supply programme to be submitted by the Contractor in accordance with the provisions of Clause 12 of the General Conditions of Contract shall:

- a) be in the form of a bar chart;
- b) clearly indicate the start and end dates and duration of all construction activities and identify the critical path; and
- c) take full cognizance of all the Contractor's risks and obligations in terms of the Contract.

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**3.2.2** The said programme and all revisions thereto shall also be provided to the Engineer in electronic digital format using the MS Project (Version 2010 or later) software.

**3.3 Failure to maintain Supply Programme**

If the construction programme has to be revised in terms of Clause 12 of the General Conditions of Contract because the Contractor is falling behind in his programme, the Contractor shall submit a revised programme of how he intends to regain lost time to ensure completion of the Works before the Due Completion Date. Any proposals by the Contractor to increase the tempo of work must incorporate positive steps to increase production either by the provision of more labour on the production site, or by using the available labour and Plant in a more efficient manner.

Failure on the part of the Contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as set out in Subclause 55(1)(3) of the General Conditions of Contract.

**3.4 Specific Programme Requirements**

The Contractor's programme shall also take full account of the matters described in the Subclauses below. No additional payments will be made to the Contractor in respect of any additional costs incurred in consequence of arranging or adjusting the Contractor's programme to accommodate the said matters and the Contractor's various tendered rates and prices shall be deemed to be fully inclusive of such costs.

The provisions of this clause are supplementary to the provisions of Clause 12 and Clause 55 of the General Conditions of Contract.

A preliminary project programme is included as Section 4.5 in Part C4: Site information of this document. The preliminary project programme is to be used as a guideline to complete the Construction Programme. The Supply Programme and cashflow will be agreed between the Contractor, the Employer and the Employer's representative. Penalties for late completion for the Works or part of the Works will be applied per day based on the agreed Construction Programme. The penalty applied will be equal to the figure stated in contract data.

An estimated and itemised monthly cash flow for the value of permanent work to be executed under the contract shall accompany the programme. This cash flow shall be based on the programme, the unit rates tendered and on the tender quantities; but it shall exclude contingency items, price variation, provision sums, prime cost items and materials on site which have not been incorporated in the Works.

The Contractor shall submit with each payment claim an itemised statement of the actual cash flow achieved for the period covered by the payment claim. This statement shall be completed on the same basis as that stipulated in the fourth paragraph of this clause.

If, at any time during the Contract, the Contractor:

1. Fails to adhere to the programme, or
2. Fails to achieve the running total of the estimated monthly cash flow.

The Contractor shall then submit a revised programme and method statement as to how he proposes to make up for lost time.

If, in the opinion of the Engineer, such revised programme will not make up the lost time, the Engineer shall have the right to request the Contractor to reorganise his work in a manner which will ensure an acceptable programme. Claims for additional payment to meet any costs incurred due to such reorganisation will not be accepted.

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The approval by the Engineer of any programme, estimated monthly cash flow or actual monthly cash flow shall not in any way be construed as relieving the Contractor of his obligations in terms of this Clause or in terms of the Contract as a whole.

The Contractor's programme and method statement will not be accepted as the basis for claims for additional compensation without due reference to all relevant associated factors.

**3.5 Requirements for Equipment**

All equipment and vehicles used by the Contractor shall be roadworthy at all times and all drivers and operators shall be in possession of valid drivers' licences.

**3.6 Plant and Materials Supplied by the Employer**

None.

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**1. MANAGEMENT OF THE WORKS**

**1.1 Applicable SANS/SABS standards**

As specified in the technical specification of this document.

**1.2 Particular/Generic specifications**

None, other than already elsewhere specified in this document.

**1.3 Planning and Programming**

**PROGRAMME CONSTRAINTS**

The Contractor must complete the work in the prescribed contract period in the contract data.

**FINANCIAL CONSTRAINTS**

It is a condition of this contract that the Employer reserves the right to limit the expenditure on the works. In this event, notwithstanding the actual tendered amount, the Employer reserves the right to limit the total value of the work by reducing the extent of the contract and hence the amounts in the Schedule of Quantities.

**EXECUTION PROGRAMME**

The Contractor shall not later than fourteen (14) days from the date of award of Contract, supply the Engineer/ Employer with his detailed programme of all phases of the Works. The Programme shall identify all major activities, principal items of plant and equipment and their components. The following activities and their duration shall in addition to the requirements of the General Conditions of Contract form the minimum basis for the preparation of the Programme:-

- Insurance Bond and general obligations
- Health and Safety plan and obligations and Risk Assessment
- Project Quality Plan and work methodology
- Inspection and works testing
- Execution of the work
- Commissioning

The Contractor shall update the programme at regular intervals and shall reflect any alterations to the order of the Works.

**Please note that the works are operational and shut downs must be limited.**

**INFORMATION TO BE SUPPLIED BY SUCCESSFUL TENDERER**

The submission of the above information shall be in accordance with the provisions of the General Conditions of Contract and approval or otherwise shall be provided within fourteen (14) days.

It is essential that the Contractor furnish a program within the time stated in the Contract Data. If necessary, the Engineer may instruct the Contractor to adjust his programme to suit other activities. If a preliminary program has been required in terms of the tender, then it shall be used as a basis for this programme. The programme shall be in the form of a bar chart and shall show the anticipated quantities and value of work to be performed each month.

If, during the progress of the work, the quantities of work performed per month fall below those shown on the programme, or if the sequence of operations is altered, or if the programme is

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deviated from in any other way, the Contractor shall, within one week of being notified by the Engineer, submit a revised programme and cash flow projection.

If the programme has to be revised by reason of the Contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the works within the time for completion as defined in the general conditions of contract or any granted extension of time. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by either providing more resources on site, or using the available resources in a more efficient manner.

Failure on the part of the Contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the engineer to take steps as provided in the general conditions of contract.

The approval by the Engineer of any programme shall have no contractual significance other than that the Engineer will be satisfied if the work is carried out according to such programme and that the contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right of the Engineer to instruct the contractor to vary the programme should circumstances make this necessary.

**PLANNING TO TAKE COMMISSIONING AND TRIAL OPERATION INTO ACCOUNT**

The construction programme must take all commissioning and trial operation periods into account, noting the following constraints:

- Procedures for commissioning and trial operation must be submitted by the Contractor before either commissioning or trial operation may commence.
- Commissioning may only commence once O&M manuals have been submitted and approved.
- Trial operation may only commence once all as-built drawings and a report setting out the results of all tests (including tests on completion) as required in the specifications has been submitted.
- The plant must be successfully trial operated for 14 days, with certification by the Engineer to this effect, prior to practical completion (or taking-over) can be certified.

**1.4 Sequence of the works**

The Contractor will only be permitted to work in the area affected by the Works.

The Contractor shall employ on site a suitably qualified supervisor for the full duration of the installation/ construction period who shall be experienced in the type of work executed and whose appointment shall be approved by the Employer.

The work shall be carried out by skilled artisans and technicians experienced in the type of work to be executed and shall be supervised in their activities at all times. The work is to be of neat and workmanlike appearance, solidly and evenly supported, plumb, true to line and level to tolerances specified. The methods used and the equipment employed shall be subject to the approval of the Employer.

The tendered price is to include for the supply of all construction tools and equipment, lifting and scaffolding, consumables and all other equipment.

Where mobile craneage is required for the installation of plant and equipment it shall be adequately rated for the duty, due consideration being given to support and wind conditions. The operator shall have a certificate of competency as proof of operational competence.

The selection of the crane capacity and type shall be approved by the Engineer before the crane is brought on site.

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When the work must of necessity, be carried out in conjunction with the Employer it shall be co-ordinated, discussed and agreed with the Employer, so that interference with plant operations is minimised, as well as affording every reasonable facility to the Employers employees.

**1.5 Software applications for programming**

Programmes submitted electronically must be done on MS Project.

**1.6 Quality plans and control**

The Contractor shall be solely responsible for the production of work that complies fully with the specifications. It will be the full responsibility of the Contractor to undertake appropriate quality control (QC) and quality assurance (QA) measures. The Contractor shall submit full details with his tender of the proposed quality control system together with typical documentation, which shows how the system will be applied. The data sheets shall cover items such as temperature, humidity, wind, preparation work, coating system, and materials used and shall be subject to the approval of the Engineer.

**NOTE:**

The submission of an outline of the proposed QA system with the Tender is Compulsory. The proposal shall be regarded as an indicator of the Contractor's experience and ability to complete the works successfully. Hence, a submission dealing with all principal aspects of QA is essential and failure to submit this documentation will disqualify the tender.

**1.6.1 General**

Only Contractors capable of manufacturing, designing, supplying, installing, testing and commissioning of plant and equipment to the quality standards required under this Contract will be considered. Materials and components used by the Contractor shall comply with the requirements of the Specification and, in addition, shall be of demonstrated quality for the purpose for which they are intended. Tenderers will be required to demonstrate compliance with these requirements by the submission of their Quality System at the time of tender.

**1.6.2 Quality Systems**

The Quality System shall take the form of a co-ordinated and formally documented statement and shall include quality management objectives, policies, organisation, procedures, and work instructions that demonstrate the Contractor's implementation of the requirements of ISO 9001 - 1994 Code for Quality Management Systems.

The Contractor shall submit an assessment report on his Quality System with his tender. The assessment report shall be issued by an independent quality assurance authority approved by the Engineer, and shall have been carried out not more than 12 months prior to the date of submission of this tender.

**1.6.3 Quality Plan**

The successful Contractor shall submit a Project Quality Plan for the Contract within 4 weeks from the date of award of the Contract. The plan shall indicate how the Contractor's Quality System shall apply to the specific requirements of the Contract and shall clearly indicate by way of written description, schedules, flow diagrams and procedures to be adopted by him to ensure compliance with ISO 9001 - 1994 and his Sub-Contractors to ensure compliance with ISO 9001, 9002 or 9003 - 1994 as appropriate to the classification of the product or service.

The Quality Plan shall identify all documentation concerning implementation of the procedures and will form part of the demonstration of conformance to requirements for the plant materials and equipment to be supplied under this Contract.

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The Project Quality Plan shall be subject to the Engineer's approval.

The vocabulary submission shall comply with the requirements of ISO 8402-1994.

#### 1.6.4 Component Quality Plans

Component Quality Plans shall be prepared by the Contractor or his Sub-Contractor/Supplier for each component or group of components, or item of equipment, or service in accordance with an approved schedule of all plant and equipment and services to be provided under the contract according to the designated category.

Component Quality Plans shall be submitted to the Engineer for approval and insertion of his surveillance requirements before construction, manufacturing or installation may take place. The following surveillance requirements shall generally be provided for and affirmed:

Record (R)	Documentary evidence of the activity scheduled and statistical data in the Quality Plan is to be retained and included in the data book
Verification (V)	The Engineer or his representative will not necessarily be present during the activity but documentary evidence is to be produced to demonstrate that the requirements of the Component Quality Plan were met. A copy will be required by the Engineer and included in the Data Book.
Witness (W) :	The Engineer or his representative requires notification to permit witnessing of that particular stage of manufacture. The Contractor is to notify the Engineer timeously (at least 72 hours' notice in writing) with a copy of his surveillance report attached.
Hold (H)	The Contractor and/or his Sub-Contractor/Supplier may not proceed to the following operation until the Engineer or his representative has cleared the preceding activities and the initial hold point.
Random (R)	Surveillance by random inspection.

#### 1.6.5 Categorisation

The following categories shall apply in determining the preparation of Component Quality Plans:

<u>Category</u>	<u>Classification</u>	<u>Quality Plan</u>
Critical:	A component or permanent assembly. The failure of which is likely to significantly affect the performance of the plant of which it is a part, and/or will cause a detrimental environmental impact, and/or is likely to result in hazardous or unsafe conditions for individuals operating, maintaining or being in the vicinity of such component or assembly, and/or requires 24 hours or more to replace assuming, immediate availability.	Required on all components or assemblies
Major:	A component or permanent assembly other than critical the failure of which is likely to materially reduce ability of the plant, of which it is a part, to perform.	As determined by the Engineer
Minor:	All items other than those designated critical and major.	Not required

#### 1.6.6 Quality Assurance Staff

The Contractor shall at the time of tender submit the names of all staff responsible for administration of the Contract, the quality assurance procedures, and control of the quality of material and components to be used in the manufacture of the plant and equipment. Curriculum vitae for each employee so nominated and the management representative responsible for implementation of the system shall also be submitted.

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1.6.7 *Quality Management Audit and Meetings*

The Engineer shall carry out periodic assessments of the adherence to the Quality Plan and inspection and surveillance during design manufacture and supply and may elect to appoint an independent quality assurance representative to act in this capacity. A formal quality assurance meeting will be held at least once a month.

1.6.8 *Corrective Action*

Failure to conform to the documented requirements will result in the issue by the Engineer of a CORRECTIVE ACTION REQUEST. Failure to rectify the deficiencies covered by a corrective action request within the period stated will be considered to be default by the Contractor in terms of the General Conditions of Contract.

1.6.9 *Standard Specifications*

Where reference is made to Specifications of the South African Bureau of Standards (SABS), International Standards Organisation (ISO), British Standards Institution (BS), American Standards or any other independent national or international testing and approving authority, it shall be deemed to include all revisions of and/or additions to such specifications ruling at the closing date for tenders.

Where reference is made to design and material Codes of Practice issued by an approved national or international authority in terms of statutory requirements it shall be deemed to include all revisions or amendments prevailing at the time of approval or testing.

1.6.10 *Drawings*

The Contractor and/or his Sub-Contractor/Supplier may not proceed to the following operation until the Engineer has approved drawings as follows:

1.6.10.1 *General Arrangement Drawings*

General Arrangement drawings require an approved or approved with comments release from the Engineer.

1.6.10.2 *Design Calculations*

Design calculations require an approved or approved with comments release from the Engineer. Calculations are to be submitted in PDF format.

1.6.10.3 *Detail Drawings*

Detail drawings require a reviewed status from the Engineer.

1.6.11 *Equipment Data Sheets*

A data sheet shall be prepared and submitted for approval by the Engineer on each item of plant and equipment and components therefore and all electrical components, and instrumentation, in accordance with a programme approved by the Engineer.

The data sheets shall be referenced by a unique code or tag number as utilised on and identified from the process flow and instrumentation diagram. The submission shall be in a form approved by the Engineer as appropriate to each item and component.

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The data sheet shall provide detailed information on each item and component which shall include but not be limited to the following:

General: (Heading)	Contract reference number Client reference Plant reference Date Sheet reference
General: (Item)	Tag Number Supplier Manufacturer Type and Size Model Number Drawing or Catalogue reference
Process Data:	Full details of process and duty requirements for each item and medium processed or utilised.
Construction Details:	Full details of materials of construction for each item and component.
Operational Data:	Ranges and operation limits.
Control:	Power and signal control (input and output), pneumatic, hydraulic, and other service requirements.

The approved data sheets shall be modified where necessary during commissioning of the plant and a printed copy with approved type face shall be incorporated into the Operating and Maintenance Manuals.

**1.6.12 Data Book**

A data book in duplicate shall be prepared and submitted on completion of manufacture, installation, testing and commissioning. The books shall include originals and a copy respectively of all product brochures, material certificates, certificates of testing, analyses, laboratory reports, commissioning reports, works test sheets, Quality Control Procedures and copies of orders generated during the execution of the Contract, as approved by the Engineer.

The data book shall be bound and submitted to the same procedure as the instruction manuals set out under Part A of the Project Specification.

**1.7 Procedures and manuals**

**PROCEDURES TO BE SUBMITTED**

Before proceeding with any of the following activities, the Contractor shall submit his procedures in writing for approval by the Employer together with data sheets setting out any tests and checks to be carried out for each item of plant and equipment:

- Testing of plant or equipment
- Tie-ins on any existing pipes or structures
- Commissioning of the works or any portion of the works
- Correction of any defect
- Trial operation of the works

The procedures and data sheets must include the necessary performance tests to ascertain compliance with the requirements of the detailed specification. These documents must also in particular point out any risks and hold points in any of the processes.

**THE SUPPLY OF THE CONTROL VALVES FOR THE PACALTSDORP AND THEMBALETHU WATER TOWERS**

**O&M MANUALS AND MAINTENANCE SCHEDULES**

The requirements for the Operation and Maintenance (O&M) manuals are set out in the detailed specifications (Specification M2001). In addition to the requirements for the O&M manuals, the following requirements for maintenance schedules must also be complied with:

- Maintenance Schedule books per equipment set shall be made up and bound with hard covers and with a facility for simple removal and replacement of individual pages.
- The books shall be supplied additionally to the overall operating and maintenance files.
- All information provided in the maintenance schedules and O&M manuals must be in the English language in a common format.
- Under no circumstances will photocopies of Standard Manufacturer's manuals or drawings or other information which is not perfectly legible be accepted.
- The Contractor shall carry out the necessary amendments to the operating and maintenance manuals during the adjustment testing and commissioning period and must submit four copies to the Employer within 2 weeks thereafter.
- The Works will not be considered accepted until such time that the final copies have been received and approved by the Employer.

**1.8 Format of communication**

No press statements are allowed without the prior written approval of the Employer.

Contractual communication will flow between the Contractor and Client.

All site correspondence need to be signed by both parties to acknowledge receipt.

**1.9 Key Personnel**

The Contractor shall employ suitably qualified management personnel who shall be experienced in the type of work and whose appointment shall be approved by the Employer.

The Contractor need to submit a schedule of key personnel with contact details to be employed.

**1.10 Electronic Payments**

Where the contractor opts to be paid electronically, he will have to make the necessary arrangements with the Employer's Finance department in this regard.

**1.11 Bonds and guarantees**

Not required

**1.12 Payment certificates**

Not required

**1.13 Proof of compliance with the law**

The contractor shall, upon request from the Engineer or Employer, provide proof of compliance with the various laws applicable to this contract.

**1.14 Insurance provided by the employer**

No insurance is to be provided by the Employer for the duration of the contract.