

**LANDSCOPE (MAURITIUS) LTD**  
**INFRASTRUCTURE WORKS FOR EDUCATION AND HEALTH HUB AT COTE D'OR**  
**REF No.: LM/CD/OC23/35**

---

**ADDENDUM NO. 3**

**Date: 26<sup>th</sup> January 2024**

**To: All Potential Bidders**

1. With respect to the above-mentioned project, please find enclosed **Addendum No. 3** to the Bidding Documents, pursuant to Clause 11.2 of the Instructions to Bidders.
2. A soft copy of the BOQ in excel format is hereby availed to all Bidders as attached.
3. **Clarification No. 3** to queries from bidders is herewith enclosed (2 pages) and changes brought to the bidding documents have been detailed hereunder:

**Volume 1 of 4 – Bidding Procedures**

**Annex A** – Pages 128 and 185 have been replaced by Pages 128, 131-1, 185 and 185-1 with labelling “Addendum No. 3”

**Annex B** - Pages 83, 84, 85, 86, 87, 159, 160, 161, 162, 163, 164 and 165 have been replaced by Pages 83, 84, 85, 86, 87, 159, 160, 161, 162, 163, 164 and 165 with labelling “Addendum No. 3”

**Annex C** - Page 181 has been replaced by Page 181 with labelling “Addendum No. 3”

**Annex D** - Page 183 has been replaced by Page 183 with labelling “Addendum No. 3”

**Annex E** - Page 207 has been replaced by Page 207 with labelling “Addendum No. 3”

**Annex F** - Page 127 has been replaced by Page 127 with labelling “Addendum No. 3”

**Annex G** - Page 146 has been replaced by Page 146 with labelling “Addendum No. 3”

**ADDENDUM NO. 3**

**CLARIFICATION NO. 3**

**LANDSCOPE (MAURITIUS) LTD**  
**INFRASTRUCTURE WORKS FOR EDUCATION AND HEALTH HUB AT COTE D'OR**  
**REF No.: LM/CD/OC23/35**

SN	Original Queries by Bidders	Reply from Employer
1.	<p>Price 1222 Rising Mains – HDPE pressure pipes PE100 PN16 DN400</p> <p>Can you tell us whether price 1222A includes the following items in addition to the trench and the supply and laying of the pipe?</p> <ul style="list-style-type: none"> <li>- Manhole (96 No)</li> <li>- Air valves</li> <li>- Drain/washout valves</li> <li>- Refurbishment of roads, kerbs and footpath at the roads crossing</li> </ul> <p>Cantilever pipe support at bridge crossing</p>	<p>A detailed bill of quantities for Item 1222 has been provided as part of Addendum 3. It is hereby brought to the attention of bidders that Pages 128 and 185 of Volume 1 of 4 of the Bidding Documents have been replaced by Pages 128, 131-1, 185 and 185-1 with labelling “Addendum No. 3” as attached in <b>Annex A</b>.</p> <p>The bidder shall quote as per the updated bill of quantities. A soft copy of the updated bill of quantities is hereby availed to all bidders.</p>
2.	BOQ: Where are we paid for Massive Support of Equipment in Sewage Station	The bidder shall price same under Bill Item 1219 on Page 183 of Volume 1 of 4 of the Bidding Documents.
3.	<p>Offsite works for rising main</p> <p>We find that demolition and reinstatement works may be required along the trenchworks at specific locations such as road crossings. Please advise if same has been catered in the BOQ</p>	Refer to Reply to Query No. 1
4.	<p>Lot 1 Bill Item 101S, 101T, 106 TO 109</p> <p>Bill items do not match the “Bill Description” provided. Please advise.</p>	<p>Bill items and bill descriptions for Bill No. 1 have been amended.</p> <p>It is hereby brought to the attention of bidders that Pages 83, 84, 85, 86, 87, 159, 160, 161, 162, 163, 164 and 165 of Volume 1 of 4 of the Bidding Documents have been replaced by Pages 83, 84, 85, 86, 87, 159, 160, 161, 162, 163, 164 and 165 with labelling “Addendum No. 3” as attached in <b>Annex B</b>.</p>
5.	<p>Lot 1 Bill Item 1217A &amp; 1217G</p> <p>Kindly provide a detailed schedule for pipes &amp; fittings</p>	It is hereby brought to the attention of bidders that Page 181 of Volume 1 of 4 of the Bidding Documents has been replaced by Page 181 with labelling “Addendum No. 3” as attached in <b>Annex C</b>

**LANDSCOPE (MAURITIUS) LTD**  
**INFRASTRUCTURE WORKS FOR EDUCATION AND HEALTH HUB AT COTE D'OR**  
**REF No.: LM/CD/OC23/35**

---

SN	Original Queries by Bidders	Reply from Employer
6.	Lot 1 Bill Item 1220A to 1220D Kindly provide a detailed schedule for pipes & fittings.	It is hereby brought to the attention of bidders that Page 183 of Volume 1 of 4 of the Bidding Documents has been replaced by Page 183 with labelling "Addendum No. 3" as attached in <b>Annex D</b> .
7.	Lot 1 Bill Item 1314A to 1314F (pg 207), 1315A to 1315T (pg 207 & 208), 1317E to 1317F (pg 209) Kindly provide a detailed schedule for pipes & fittings.	It is hereby brought to the attention of bidders that Page 207 of Volume 1 of 4 of the Bidding Documents has been replaced by Page 207 with labelling "Addendum No. 3" as attached in <b>Annex E</b> .
8.	For the Sewage Pump set The BOQ specified a Total capacity: 330 m3/hr whereas the technical documentation mentioned 4000 m3/hr, can you please advise which one shall taken into consideration?	It is hereby brought to the attention of bidders that Page 127 of Volume 1 of 4 of the Bidding Documents has been replaced by Page 127 with labelling "Addendum No. 3" as attached in <b>Annex F</b> .

**ANNEX A**

iii. **CABLES BETWEEN MCC AND PUMPS INCLUDING CABLE TRAY AND FIXINGS**

This price includes the following:

- supply of all the cables between the Motor Control Centre and the Pumps
- all transport, labour, materials, tools, equipment, plant as necessary
- supply of cable tray and all fittings for fixing the cables as necessary
- Any miscellaneous costs arising.

iv. **MANUAL HOIST FOR LIFTING OF PUMP AND STEEL BEAM COMPLETE**

This price includes the following:

- design, supply and fixing a manual hoist for lifting of pump.
- frame and fixing hook and control chain
- design of all fixation to be made in the roof slab to be able to use the manual hoist
- shall be capacity to lift the pump plus a safety of 20 %
- supply and fix the steel beam, support and fixation complete.
- all transport, labour, materials, tools, equipment, plant as necessary
- Any miscellaneous costs arising.

v. **APF CLEANER TO MAINTAIN CLEANING CYCLES OF THE SUMP c/w CURRENT TRANSFORMER**

The price includes:

- APF cleaner to maintain cleaning cycles of the sump c/w current transformer.
- allow for all fixation as may be required
- all transport, labour, materials, tools, equipment, plant as necessary
- Any miscellaneous costs arising.

vi. **SUMP PUMP, PIPEWORK AND VALVES COMPLETE INCLUDING CABLES, MOTOR STARTER, DISCHARGE HOSE AND DISCHARGE PIPEWORK, LEVEL SWITCHES.**

This price includes the following:

- supply and placing sump pump complete made of stainless steel 304 flowrate 10m<sup>3</sup>/h @ 12 m head.
- supply and fix all piping required for discharge to the wet well.
- testing and commissioning of the pumps
- supply and fix support to the pumps
- Any miscellaneous costs arising.

z) **PIPES, VALVES AND FITTINGS**

This price includes the following:

- supply, lay, joint and test all Ductile iron/HDPE pipes and fittings required to connect the pumping station to the rising main, and for the rising main pipe in accordance to the bill of quantities, specifications and as approved by the Engineer.
- supply, lay, joint and test enlargers/reducers in ductile iron to connect the outlet pipe to the pumps in accordance to the specifications and as approved by the Engineer.
- supply, lay, joint and test ductile iron Tee fittings 200/300 mm diameter, PN 10 in accordance to the specifications and as approved by the Engineer

**nn) PERMANENT REINSTATEMENT OF ASPHALTIC CONCRETE (50MM THICK)**

▪

The price quoted for this item shall include:-

- Core sampling to determine thickness of damaged asphalt to be milled, where required
- Cutting of existing asphaltic concrete neatly in straight lines with diamond tipped circular power saw or other method acceptable to the Engineer
- Milling of asphaltic concrete surface to depth to be instructed by the Engineer but not exceeding 70 mm, using milling machine.
- Cleaning of milled surface to receive asphaltic concrete
- Disposal of excess material to spoil tip as located by Contractor and approved by Engineer
- Possible recuperation and re-use of milled materials according to the Engineer's instructions
- Adequate surface preparation prior to spraying of tack coat.
- Traffic control inclusive of all necessary signage
- Backfilling, compaction and laying of asphalt on completion to original condition or as required by the relevant Road Authorities
- Provision of bank guarantees to the relevant authorities
- All associated Preliminary and General Items

**oo) TRAFFIC DIVERSION**

This price includes the following:

- all deviation works as per Technical Specifications to complete the works including traffic along the motorway M3 and local roads,
- Liaison with all relevant authorities i.e. TMRSU, NTA, MNICD, Police, etc.
- preparation and submission of drawings showing traffic diversion and
- accommodation and indicating position and type of signalisation,
- supply and maintenance of temporary traffic signs, barriers, flash beacons, portable traffic signals as agreed by the Engineer,
- temporary traffic marking,
- provision of electrical generator for power supply,
- all security and warning lights for work that may be required at night,
- additional costs and salaries for work at night,
- construction and maintenance of temporary deviation roads including earthworks, crusher run, bituminous concrete materials as per Engineer's Instructions,
- temporary accesses,
- clearing and reinstating all routes used as deviations to their initial conditions,
- any miscellaneous costs arising

Unit: Lump Sum

Item	Description	Unit	Qty	Unit Price (MUR)	Total Amount (MUR)
				<b>BF</b>	
1221L	DI flanged spigot pipe with central puddle flange	Lot	1		
1221M	DI flap valve including coupling	Lot	1		
1221N	Coupler DI/HDPE	Lot	1		
1221O	DI knife type gate valve at interface pump outlet / rising mains	Lot	1		
	<b>RISING MAINS</b>				
	<b>Rising mains - HDPE pressure pipe, rated to PE 100 PN16, from Pump Station to Discharge Manhole, complete with all electrofusion accessories e.g. Fittings, Reducers, Elbow, Reducing Elbows, Tees, Reducing Tees, Transition Fittings, Flanged Couplings etc and scour valve and air valve complete with chamber and marker posts.</b>				
1222	<b>Excavate of trench for pipe HDPE sewer pipes, PE 100 PN 16 as specified. Rate to also include for excavation in any material including rock, compaction and backfilling in layers and temporary reinstatement of asphalt road to original road condition</b>				
	<b>For 400mm dia. HDPE</b>				
1222A	Excavate to depth to invert not exceeding and equal to 1.5m	m	1250		
1222B	Excavate to depth greater than 1.5 and not exceeding 2.0m	m	2900		
1222C	Excavate to depth greater than 2.0m	m	3250		
	<b>For 110mm dia. HDPE</b>				
1222D	Depth to invert not exceeding and equal to 1.5m	m	700		
1222E	Depth greater than 1.5 and not exceeding 2.0m	m	100		
	<b>PIPE PROTECTION</b>				
1222F	Supply, lay, and compact Class S bedding and surround to 400mm HDPE pipe	m	6200		
1222G	Supply, lay, and compact Class S bedding and surround to 110mm HDPE pipe	m	800		
	<b>CONCRETE SURROUND</b>				
1222H	C12/15 concrete surround to 400mm diameter HDPE pipe as per drawing	m	1,300		
1222I	C12/15 concrete surround to 110mm diameter HDPE pipe as per drawing	m	100		
	<b>SUPPLY, TRANSPORT, STORE, INSURE AGAINST ALL PERILS, LAY, JOINT, AND TEST PIPE</b>				
	<b>Rates to include for handling, hoisting using mechanical equipment, making cuts, cleaning, jointing and testing as required.</b>				
1222J	High Density Polyethene pipe DN400mm pipe	m	7400		
1222K	High Density Polyethene pipe DN110mm pipe	m	800		
	<b>SUPPLY, TRANSPORT, STORE, INSURE AGAINST ALL PERILS, LAY, JOINT, AND TEST FITTINGS ON RISING MAINS</b>				
	<b>Extra Over for the supply, lay, joint and test HDPE and Ductile Iron fittings for sewer rising mains.</b>				
1222L	HDPE Electrofused bend 400mm x 11.5 deg	No.	9		
1222M	HDPE Electrofused bend 400mm x 22.5 deg	No.	10		
1222N	HDPE Electrofused bend 400mm x 45 deg	No.	5		
1222O	HDPE Electrofused bend 110mm x 11.5 deg	No.	3		
1222P	HDPE Electrofused bend 110mm x 22.5 deg	No.	6		
1222Q	HDPE Electrofused bend 110mm x 45 deg	No.	3		
1222R	Supply & install Air Valve arrangement complete including 50mm dia type Vent O Mat RGXII series or similar approved on 400mm dia. HDPE pipes complete with all associated fittings, d/f isolating valve, GMS nuts, bolts, washers and steel gaskets all as per drawings	Set	1		
	<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL NO. 12</b>				



Item	Description	Unit	Qty	Unit Price (MUR)	Total Amount (MUR)
				<b>BF</b>	
1222S	Supply & install drain valve arrangement for HDPE 400 complete including all associated fittings, GMS nuts, bolts, washers, and steel gaskets all as per drawings	Set	3		
1222T	Supply & install drain valve arrangement for HDPE 110 complete including all associated fittings, GMS nuts, bolts, washers, and steel gaskets all as per drawings	Set	2		
1222U	Supply & install washout arrangement for HDPE 400 complete including all associated fittings, GMS nuts, bolts, washers, and steel gaskets all as per drawings	Set	10		
1222V	Supply & install washout arrangement for HDPE 110 complete including all associated fittings, GMS nuts, bolts, washers, and steel gaskets all as per drawings	Set	2		
	<b>CONCRETE WORKS</b>				
	<b>Construct r.c. valve chambers complete incl. HD, D400 DI ventilated &amp; standard covers &amp; frames for the following valve sizes as per the drawings</b>				
1222W	Air Valve Chamber HDPE 400 (ventilated)	No.	1		
1222X	Drain Valve Chamber HDPE 400	No.	3		
1222Y	Washout Chamber HDPE 400	No.	10		
1222Z	Drain Valve Chamber HDPE 110	No.	2		
1222AA	Washout Chamber HDPE 110	No.	2		
1222AB	Construct of concrete thrust blocks, anchor blocks, pipe supports	No.	40		
	<b>MARKER POST</b>				
1222AC	Supply and fix marker posts with letter AV as per typical drawing	No.	1		
1222AD	Supply and fix marker posts with letter DV as per typical drawing	No.	5		
1222AE	Supply and fix marker posts with letter W.O as per typical drawing	No.	12		
	<b>ROAD REINSTATEMENT AND CROSSING FOR RISING MAIN</b>				
1222AF	Permanent reinstatement of road asphalt wearing course (50mm thick)	m2	8000		
	<b>MISCELLANEOUS</b>				
1222AG	All associated works for connection of Rising Main to discharge chamber	P.Sum	1	500,000.00	500,000
1222AH	Civil works for fixing of rising main pipe on culvert and Bridge	P.Sum	1	5,000,000.00	5,000,000.00
1222AI	Allow for temporary Traffic diversion	Lump Sum			
<b>1223</b>	<b>SURGE ATTENUATION</b>	<b>XXX</b>			
1223A	Allow for carrying out surge analysis for pumpstations where instructed by the Engineer.	Lot	1		
1223B	Allow for provision, installation & testing of surge vessels if surge analysis results warrant surge attenuation. Costs to include all M&E works & design & construction of concrete base slab	Lot	1		
1224	<b>PUMPING STATION</b>				
	<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL NO. 12</b>				

**ANNEX B**

Each relevant item will be certified for payment after 75% of the Contractor's supervision (foreman level and above) specific to each Portion of the works respectively have been fully mobilised on the Site and ready to commence work.

Unit: Lump Sum

**101R SECONDARY OBLIGATIONS RELATING TO BILL NO. 7 - ROAD MARKING AND EQUIPMENT**

This price includes full compensation in respect of the Contractor's FC's not already included under primary obligations for financing, recruitment/mobilisation, establishment, setting up of systems and facilities, etc., as applicable for the timeous and due fulfilment of the Contractor's respective early obligations to each Portion of the works.

Each relevant item will be certified for payment after 75% of the Contractor's supervision (foreman level and above) specific to each Portion of the works respectively have been fully mobilised on the Site and ready to commence work.

Unit: Lump Sum

**101S SECONDARY OBLIGATIONS RELATING TO BILL NO. 8 – POTABLE WATER SUPPLY NETWORK**

This price includes full compensation in respect of the Contractor's FC's not already included under primary obligations for financing, recruitment/mobilisation, establishment, setting up of systems and facilities, etc., as applicable for the timeous and due fulfilment of the Contractor's respective early obligations to each Portion of the works.

Each relevant item will be certified for payment after 75% of the Contractor's supervision (foreman level and above) specific to each Portion of the works respectively have been fully mobilised on the Site and ready to commence work.

Unit: Lump Sum

**101T SECONDARY OBLIGATIONS RELATING BILL 9 - TELECOMMUNICATION NETWORK**

This price includes full compensation in respect of the Contractor's FC's not already included under primary obligations for financing, recruitment/mobilisation, establishment, setting up of systems and facilities, etc., as applicable for the timeous and due fulfilment of the Contractor's respective early obligations to each Portion of the works.

Each relevant item will be certified for payment after 75% of the Contractor's supervision (foreman level and above) specific to each Portion of the works respectively have been fully mobilised on the Site and ready to commence work.

Unit: Lump Sum

**101U SECONDARY OBLIGATIONS RELATING BILL 10 – ELECTRICAL SUPPLY NETWORK**

This price includes full compensation in respect of the Contractor's FC's not already included under primary obligations for financing, recruitment/mobilisation, establishment, setting up of systems and facilities, etc., as applicable for the timeous and due fulfilment of the Contractor's respective early obligations to each Portion of the works.

Each relevant item will be certified for payment after 75% of the Contractor's supervision (foreman level and above) specific to each Portion of the works respectively have been fully mobilised on the Site and ready to commence work.

Unit: Lump Sum

**101V SECONDARY OBLIGATIONS RELATING BILL 11 - GRAVITY SEWER PIPELINES**

This price includes full compensation in respect of the Contractor's FC's not already included under primary obligations for financing, recruitment/mobilisation, establishment, setting up of systems and facilities, etc., as applicable for the timeous and due fulfilment of the Contractor's respective early obligations to each Portion of the works.

Each relevant item will be certified for payment after 75% of the Contractor's supervision (foreman level and above) specific to each Portion of the works respectively have been fully mobilised on the Site and ready to commence work.

Unit: Lump Sum

**101W SECONDARY OBLIGATIONS RELATING BILL 12 - SEWERAGE LIFTING STATION & RISING MAIN**

This price includes full compensation in respect of the Contractor's FC's not already included under primary obligations for financing, recruitment/mobilisation, establishment, setting up of systems and facilities, etc., as applicable for the timeous and due fulfilment of the Contractor's respective early obligations to each Portion of the works.

Each relevant item will be certified for payment after 75% of the Contractor's supervision (foreman level and above) specific to each Portion of the works respectively have been fully mobilised on the Site and ready to commence work.

Unit: Lump Sum

**101X SECONDARY OBLIGATIONS RELATING BILL 13 - SERVICE RESERVOIR & PUMPING STATION**

This price includes full compensation in respect of the Contractor's FC's not already included under primary obligations for financing, recruitment/mobilisation, establishment, setting up of systems and facilities, etc., as applicable for the timeous and due fulfilment of the Contractor's respective early obligations to each Portion of the works.

Each relevant item will be certified for payment after 75% of the Contractor's supervision (foreman level and above) specific to each Portion of the works respectively have been fully mobilised on the Site and ready to commence work.

Unit: Lump Sum

**101Y SECONDARY OBLIGATIONS RELATING BILL 14 – BRIDGE CONSTRUCTION**

This price includes full compensation in respect of the Contractor's FC's not already included under primary obligations for financing, recruitment/mobilisation, establishment, setting up of systems and facilities, etc., as applicable for the timeous and due fulfilment of the Contractor's respective early obligations to each Portion of the works.

Each relevant item will be certified for payment after 75% of the Contractor's supervision (foreman level and above) specific to each Portion of the works respectively have been fully mobilised on the Site and ready to commence work.

Unit: Lump Sum

**101Z ANY OTHER SECONDARY GENERAL OBLIGATIONS NOT INCLUDED ELSEWHERE**

This price includes full compensation in respect of the Contractor's Secondary Obligations not covered under any item of the Bill of Quantities.

Unit: Lump Sum

## **102 FIXED CHARGE ITEMS - PROVISION AND REMOVAL OF FACILITIES AND EQUIPMENT**

The sums tendered shall be full compensation in respect of the Contractor's charges not already included elsewhere for the timeous provision, erection, establishment, construction and Tests on Completion (as applicable) on the Site and the specified facilities, equipment, plant, services, etc., adequately equipped to allow work to commence and proceed to completion in due fulfilment of the Contract, including for:

- a) Initial financing, mobilisation and transport to the Site.
- b) Installation including any ancillary works such as cabling, earthworks, foundations, access provisions, structures, security and other fencing, gates, etc., not already covered in rates and prices tendered elsewhere.
- c) Demolition or dismantling when the facility is no longer required as authorised by the Engineer.
- d) Provision of all necessary interior fixtures/fixed furniture, equipment, services, access, etc., as applicable to render the facility fit for the specified or implied purpose for which it is provided except where otherwise specified.
- e) Removal from the Site as applicable.
- f) Reinstatement and rehabilitation of the Site.
- g) Particular provisions not already covered above in respect of each group of equipment to render it continuously fit for the specified or implied purpose for which it is provided:
  - i. Maintenance of facilities provided by the Employer primarily the access road to the site and accommodation;
  - ii. Facilities to be provided and maintained by the Contractor primarily for the use of the Engineer which includes the Engineer's Site Office, any offices in working areas on the Site and vehicles facilities;
  - iii. Facilities to be provided and maintained by the Contractor to his working areas primarily for his own purposes, including fencing of the Engineer's Site Office and provision of services to the Engineer's Site Office.
- h) Assistance to the Engineer: Payment shall for this item will be certified after the assistants have been appointed and been fully mobilised on Site ready to commence work.
- i) Installation including ancillary works such as cabling, earthworks, foundations, access provisions, structures, etc. not already covered in the rates and prices tendered
- j) Particular requirements not already covered above in respect of each group of equipment to render it fit for the specified or implied purpose for which it is provided.

*The above works shall apply to Items 102A to 102AC.*

## **103 TIME RELATED CHARGE ITEMS - PRIMARY AND SECONDARY OBLIGATIONS**

The sums tendered shall be full compensation in respect of the Contractor's Time Related Charges (TRCs) not already included under item 101 for continuing the respective obligations for the duration of the Contract for Primary Obligations under the Contract and for the respective durations as tendered in the relevant tender schedules for secondary obligations. Each TRC item for financing, continued provision, replacements, operation, maintenance and running of systems and facilities, etc, as applicable, for the due fulfilment of the Contractor's respective on-going obligations, including for:

- a. Compliance in full with the conditions of contract as relevant to each item;
- b. Compliance in full with any details required in terms of the Specification, as relevant each item;
- c. Payment of all salaries, wages and any duties and dues not specifically tendered against the various work items; and
- d. Submission to the Engineer from time to time for approval and/or information such documents as are required or necessary for the Contractor to fulfil the on-going obligation in respect of each item.

Payment for TRC items will be certified (after payment for the relevant FC item has been certified), by way of incremental amounts (calculated by the division of the tendered sum by the tendered duration) in each of the subsequent progress certificates until the sums tendered have been fully certified. Tendered duration means the time for completion for items under primary obligations and the tendered durations in the applicable tender schedule for secondary obligations.

*The above works apply to Items 103A to 103Z*

### **104 TIME RELATED CHARGE ITEMS - PROVISION AND REMOVAL OF FACILITIES AND EQUIPMENT**

The sums tendered shall be full compensation in respect of the Contractor's TRCs not already included under item 102 for the continued provision, operation and maintenance of the specified facilities & Equipment for the respective durations as tendered for each TRC item for the due fulfilment of the Contract, including for:

- a) Continued financing of the facilities such as rentals, salaries and wages directly associated with the facility, interest and depreciation charges on buildings, furnishings, equipment, vehicle facilities, services, access provisions, etc.;
- b) Timeous repairs, replacements, renewals and other maintenance necessary to keep the facility and associated furnishings etc., and as described above in a fit state of operation at all times for the specified or implied purpose for which it is provided on the Site;
- c) Operation as required including for all staffing, fuels, power consumption, consumables, etc; and
- d) (Particular provisions as specified in the Specification, in respect of the various categories of facility and Equipment

Payment for TRC items will be certified (after payment for the relevant FC item has been certified), by way of incremental amounts (calculated by the division of the tendered sum by the tendered duration) in each of the subsequent progress certificates until the sums tendered have been fully certified. Tendered duration means the time for completion for items under primary obligations and the tendered durations in the applicable tender schedule for secondary obligations.

*The above works apply to Items 104A to 104AC*

### **105 LABORATORY**

This price includes the following:

Construction and/or or provision of laboratory complete of:

- all equipment necessary to carry out tests for the selection of materials,
- design of mixes, control of materials and workmanship in compliance with the Specifications,
- employment of qualified laboratory technicians under the direct supervision of the Engineer,
- maintenance of and replacement of the Equipment,
- maintenance, cleaning and watching of the laboratory and premises,
- any other costs arising from the above for operating the laboratory
- excluding costs for testing which are deemed included in the prices in the Bill of Quantities, wherever testing is required to comply with the Specifications.

Tests which cannot be carried out in the Contractor's Laboratory must be done at the Laboratories mentioned below:

- a) Ministry of National Infrastructure and Community Development, Materials and Testing Laboratory;
- b) Road Development Authority;
- c) University of Mauritius;
- d) Any other laboratory to be approved by Engineer

Price 105 is a LUMP SUM to be paid as follows:

Fifty per cent (50%) when the site laboratory is provided to the satisfaction of the Engineer

Fifty per cent (50%) to be paid in equal monthly instalments for the duration of the Contract, but subject to tests having been carried out to the satisfaction of the Engineer.

Unit: Lump Sum

**106 TRAFFIC DIVERSION**

This price includes the following:

- all deviation works as per Technical Specifications,
- Liaison with all relevant authorities i.e. TMRSU, NTA, MNICD, Police, etc.
- preparation and submission of drawings showing traffic diversion and
- accommodation and indicating position and type of signalisation,
- supply and maintenance of temporary traffic signs, barriers, flash beacons, portable traffic signals as agreed by the Engineer,
- temporary traffic marking,
- provision of electrical generator for power supply,
- all security and warning lights for work that may be required at night,
- additional costs and salaries for work at night,
- construction and maintenance of temporary deviation roads including earthworks, crusher run, bituminous concrete materials as per Engineer's Instructions,
- temporary accesses,
- clearing and reinstating all routes used as deviations to their initial conditions,
- any miscellaneous costs arising

Unit: Lump Sum

**107 REROUTING OF EXISTING SERVICES**

This provisional sum will cover the cost of any work to be executed on the CEB networks, MT networks, Irrigation Network, Sewer Network and CWA networks.

The prices will have to be agreed with the Engineer.

Any miscellaneous costs arising.

Unit: Provisional Sum

**108 ADDITIONAL & CONTINGENT WORKS**

This price includes various additional and contingent works to be performed under the contract. Price 108 is a PROVISIONAL SUM to be applied, based on billed prices, as agreed with the Engineer.

Unit: Provisional Sum

**109 PROVISIONAL SUM FOR LANDSCAPING WORKS**

This provisional sum includes the following:

- the cost of works to be executed in connection with employment of a landscape architect, provision, plantation and maintenance for landscaping along the Motorway and development
- the cost for any bridge embellishment to be effected as agreed with Employer

The prices will have to be agreed with the Engineer and shall include any miscellaneous cost arising.

Unit: Provisional Sum

**110 PROVISIONAL SUM FOR ADDITIONAL WORK REQUIRED FOR UPGRADING OF EXISTING ROUNDABOUT**

This price includes various additional and contingent works to be performed near the existing roundabout at the Sports Complex entrance under the contract. Price 110 is a PROVISIONAL SUM to be applied, based on billed prices, as agreed with the Engineer.

Unit: Provisional Sum

Item	Description	Unit	Qty	Rate (MUR)	Total Amount (MUR)
	<b><u>BILL No 1</u></b>				
	<b><u>PRELIMINARIES AND GENERAL LOT 1 AND LOT 2</u></b>				
<b>101</b>	<b>Fixed Charge Items - Primary and Secondary Obligations</b>	<b>XXX</b>			
101A	Performance Security	Lump Sum			
101B	All Insurances and deductibles (incl. Property Damage Insurance and Professional Indemnity Insurance, if applicable)	Lump Sum			
101C	Head office contract management and overheads	Lump Sum			
101D	General site supervision and overheads	Lump Sum			
101E	Access Control and Security	Lump Sum			
101F	Programming requirements	Lump Sum			
101G	Quality management	Lump Sum			
101H	Contractors returns	Lump Sum			
101I	Health and safety	Lump Sum			
101J	Environmental considerations including compliance with Environmental Management/Monitoring Plan	Lump Sum			
101K	Surveys and Consistency Checks	Lump Sum			
101L	Any other primary general obligations not included elsewhere	Lump Sum			
101M	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 2 - Preparatory Works	Lump Sum			
101N	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 3 - Earthworks	Lump Sum			
101O	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 4 - Sub Base and Road Base	Lump Sum			
101P	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 5 - Bituminous Courses	Lump Sum			
<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL NO 1</b>					



Item	Description	Unit	Qty	Rate (MUR)	Total Amount (MUR)
101Q	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 6 - Drainage, Sidewalks and Accesses	Lump Sum	<b>B.F</b>		
101R	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 7 - Marking & Equipment and Road Lighting	Lump Sum			
101S	Secondary Obligations relating to Lot 2 - Bill 8 - Potable Water Supply Network	Lump Sum			
101T	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 9 - Telecommunication Network	Lump Sum			
101U	Secondary Obligations relating to Lot 2 - Bill 10 - Electrical Supply Network	Lump Sum			
101V	Secondary Obligations relating to Lot 2 - Bill 11 - Gravity Sewer Pipelines	Lump Sum			
101W	Secondary Obligations relating to Lot 1 - Bill 12 - Sewerage Lifting Stations and Rising Mains	Lump Sum			
101X	Secondary Obligations relating to Lot 1 - Bill 13 - Service Reservoir, Pump Station, & Borehole	Lump Sum			
101Y	Secondary Obligations relating to Lot 1 - Bill 14 - Bridge Construction	Lump Sum			
101Z	Any other secondary general obligations not included elsewhere	Lump Sum			
<b>102</b>	<b>Fixed Charge Items - Provision and Removal of Facilities and Equipment</b>	<b>XXX</b>			
102A	Facilities provided by the Contractor for the Engineer	Lump Sum			
102B	Facilities provided by the Contractor for the construction of the Works	Lump Sum			
102C	Project Signboard	Lump Sum			
102D	Any other facilities by the contractor not covered elsewhere	Lump Sum			
102E	Supervisory staff transport	Lump Sum			
102F	Labour staff transport	Lump Sum			
102G	General access and transport in and around the Works	Lump Sum			
102H	General Plant for the execution of the works	Lump Sum			
<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL No.1</b>					

Item	Description	Unit	Qty	Rate (MUR)	
			<b>B.F</b>		
102I	Equipment for construction and maintenance of the Contractor's work areas	Lump Sum			
102J	Minor equipment and small tools for the whole site	Lump Sum			
102K	General civil engineering equipment for the site not provided for elsewhere (earthworks, drainage, concrete transport and placement, asphalt transport and placement, crushing plant, formwork, rebar, equipment)	Lump Sum			
102L	Equipment and associated equipment for storing & managing concrete aggregates, cementitious and bituminous materials	Lump Sum			
102M	Equipment and associated equipment for protective clothing and equipment	Lump Sum			
102N	Equipment and associated equipment for dust and vehicle emission control	Lump Sum			
102O	Equipment and associated equipment for noise control	Lump Sum			
102P	Specific Equipment relating to Lot 1 and Lot 2 - Bill 2 - Preparatory Works	Lump Sum			
102Q	Specific Equipment relating to Lot 1 and Lot 2 - Bill 3 - Earthworks	Lump Sum			
102R	Specific Equipment relating to Lot 1 and Lot 2 - Bill 4 - Sub Base and Road Base	Lump Sum			
102S	Specific Equipment relating to Lot 1 and Lot 2 - Bill 5 - Bituminous Courses	Lump Sum			
102T	Specific Equipment relating to Lot 1 and Lot 2 - Bill 6 - Drainage, Sidewalks and Accesses	Lump Sum			
102U	Specific Equipment relating to Lot 1 and Lot 2 - Bill 7 - Road Marking & Equipment and Road Lighting	Lump Sum			
102V	Specific Equipment relating to Lot 2 - Bill 8 - Potable Water Supply Network	Lump Sum			
102W	Specific Equipment relating to Lot 1 and Lot 2 - Bill 9 - Telecommunication Network	Lump Sum			
102X	Specific Equipment relating to Lot 2 - Bill 10 - Electrical Supply Network	Lump Sum			
<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL No.1</b>					

Item	Description	Unit	Qty	Rate (MUR)	Total Amount (MUR)
102Y	Specific Equipment relating to Lot 2 - Bill 11 - Gravity Sewer Pipelines	Lump Sum	<b>B.F</b>		
102Z	Specific Equipment relating to Lot 1 - Bill 12 - Sewerage Lifting Stations and Rising Mains	Lump Sum			
102AA	Specific Equipment relating to Lot 1 - Bill 13 - Service Reservoir, Pump Station, & Borehole	Lump Sum			
102AB	Specific Equipment relating to Lot 1 - Bill 14 - Bridge Construction	Lump Sum			
102AC	Any other General or Specific Equipment not included elsewhere	Lump Sum			
<b>103</b>	<b>Time Related Charge Items - Primary and Secondary Obligations</b>	<b>XXX</b>			
103A	Performance Security	Lump Sum			
103B	All Insurances and deductibles (incl. Property Damage Insurance and Professional Indemnity Insurance, if applicable)	Lump Sum			
103C	Head office contract management and overheads	Lump Sum			
103D	General site supervision and overheads	Lump Sum			
103E	Access Control and Security	Lump Sum			
103F	Programming requirements	Lump Sum			
103G	Quality management	Lump Sum			
103H	Contractors returns	Lump Sum			
103I	Health and safety	Lump Sum			
103J	Environmental considerations including compliance with environmental management/monitoring plan	Lump Sum			
103K	Surveys and Consistency Checks	Lump Sum			
103L	Any other primary general obligations not included elsewhere	Lump Sum			
103M	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 2 - Preparatory Works	Lump Sum			
<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL No.1</b>					

Item	Description	Unit	Qty	Rate (MUR)	Total Amount (MUR)
			<b>BF.</b>		
103N	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 3 - Earthworks	Lump Sum			
103O	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 4 - Sub Base and Road Base	Lump Sum			
103P	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 5 - Bituminous Courses	Lump Sum			
103Q	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 6 - Drainage, Sidewalks and Accesses	Lump Sum			
103R	Secondary Obligations relating to Lot 1 and Lot 2- Bill 7 - Road Marking & Equipment and Road Lighting	Lump Sum			
103S	Secondary Obligations relating to Lot 2 - Bill 8 - Potable Water Supply Network	Lump Sum			
103T	Secondary Obligations relating to Lot 1 and Lot 2 - Bill 9 - Telecommunication Network	Lump Sum			
103U	Secondary Obligations relating to Lot 2 -Bill 10 - Electrical Supply Network	Lump Sum			
103V	Secondary Obligations relating to Lot 2 -Bill 11 - Gravity Sewer Pipeline	Lump Sum			
103W	Secondary Obligations relating to Lot 1 -Bill 12 - Sewerage Lifting Stations and Rising Mains	Lump Sum			
103X	Secondary Obligations relating to Lot 1 - Bill 13 - Service Reservoir, Pump Station, and Borehole	Lump Sum			
103Y	Secondary Obligations relating to Lot 1 - Bill 14 - Bridge Construction	Lump Sum			
103Z	Any other secondary general obligations not included elsewhere	Lump Sum			
<b>104</b>	<b>Time Related Charge Items - Provision and Removal of Facilities and Equipment</b>	<b>XXX</b>			
104A	Facilities provided by the Contractor for the Engineer	Lump Sum			
104B	Facilities provided by the Contractor for the construction of the Works	Lump Sum			
104C	Project Signboard	Lump Sum			
104D	Any other facilities by the contractor not covered elsewhere	Lump Sum			
104E	Supervisory staff transport	Lump Sum			
<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL No.1</b>					

Item	Description	Unit	Qty	Rate (MUR)	Total Amount (MUR)
			<b>BF.</b>		
104F	Labour staff transport	Lump Sum			
104G	General access and transport in and around the Works	Lump Sum			
104H	General Plant for the execution of the works	Lump Sum			
104I	Equipment for construction and maintenance of the Contractor's work areas	Lump Sum			
104J	Minor equipment and small tools for the whole site	Lump Sum			
104K	General civil engineering equipment for the site not provided for elsewhere (earthworks, drainage, concrete transport and placement, asphalt transport and placement, crushing plant, formwork, rebar, equipment)	Lump Sum			
104L	Equipment and associated equipment for storing & managing concrete aggregates, cementitious and bituminous materials	Lump Sum			
104M	Equipment and associated equipment for protective clothing and equipment	Lump Sum			
104N	Equipment and associated equipment for dust and vehicle emission control	Lump Sum			
104O	Equipment and associated equipment for noise control	Lump Sum			
104P	Specific Equipment relating to Lot 1 and Lot 2 - Bill 2 - Preparatory Works	Lump Sum			
104Q	Specific Equipment relating to Lot 1 and Lot 2 - Bill 3 - Earthworks	Lump Sum			
104R	Specific Equipment relating to Lot 1 and Lot 2 - Bill 4 - Sub Base and Road Base	Lump Sum			
104S	Specific Equipment relating to Lot 1 and Lot 2 - Bill 5 - Bituminous Courses	Lump Sum			
104T	Specific Equipment relating to Lot 1 and Lot 2 - Bill 6 - Drainage, Sidewalks and Accesses	Lump Sum			
<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL No.1</b>					

Item	Description	Unit	Qty	Rate (MUR)	Total Amount (MUR)
			<b>BF.</b>		
104U	Specific Equipment relating to Lot 1 and Lot 2 - Bill 7 - Road Marking & Equipment and Road Lighting	Lump Sum			
104V	Specific Equipment relating to Lot 1 and Lot 2 - Bill 8 - Potable Water Supply Network	Lump Sum			
104W	Specific Equipment relating to Lot 1 and Lot 2 - Bill 9 - Telecommunications Network	Lump Sum			
104X	Specific Equipment relating to Lot 2 - Bill 10 - Electrical Supply Network	Lump Sum			
104Y	Specific Equipment relating to Lot 2 - Bill 11 - Gravity Sewer Pipelines	Lump Sum			
104Z	Specific Equipment relating to Lot 1 - Bill 12 - Sewerage Lifting Stations and Rising Mains	Lump Sum			
104AA	Specific Equipment relating to Lot 1 - Bill 13 - Service Reservoir, Pump Station, and Borehole	Lump Sum			
104AB	Specific Equipment relating to Lot 1 - Bill 14 - Bridge Construction	Lump Sum			
104AC	Any other General or Specific Equipment not included elsewhere	Lump Sum			
105	Laboratory	Lump Sum	1		
106	Traffic Diversion	Lump Sum	1		
107	Rerouting of existing services	Prov. Sum	1	3,000,000.00	3,000,000.00
107A	Contractor's Overheads and Profit on Item 107	%			
108	Additional & Contingent Works	Prov. Sum	1	20,000,000.00	20,000,000.00
108A	Contractor's Overheads and Profit on Item 109	%			
109	Provisional Sum for Landscaping Works	Prov. Sum	1	20,000,000.00	20,000,000.00
109A	Contractor's Overheads and Profit on Item 109	%			
<b>110</b>	<b>Provisional Sum</b>	<b>XXX</b>			
110A	Provisional Sum for additional work required for upgrading of existing roundabout	Prov. Sum	1	3,000,000.00	3,000,000.00
<b>TOTAL FOR LOT 1 - BILL No. 1 CARRIED TO LOT 1 SUMMARY</b>					

**ANNEX C**

Item	Description	Unit	Qty	Unit Price (MUR)	Total Amount (MUR)
				<b>BF</b>	
<b>1215</b>	<b>Enabling Works for Off-Site Water Supplies</b>	<b>XXX</b>			
1215A	Allow for the provision of off-site potable water supplies. Rate to include for all civil works, connection charges, CWA deposits, & installation of meters by CWA.	P.Sum	1	1,000,000.00	1,000,000.00
<b>1216</b>	<b>Drainage</b>	<b>XXX</b>			
1216A	Allow for drainage facilities during construction period, in line with statutory requirements.	Lot	1		-
	<b>INLET WORKS</b>				
<b>1217</b>	<b>Ductile Iron gravity pipework (to BS EN 545:2010) and fittings within the inlet works with flanges to PN16 (as per BS EN 1092-2:1997), including all bends, metallic gaskets, gate valves, puddle/thrust flanges, dismantling joints, flange adaptors (VJ), HDG nuts, bolts &amp; washers, grease, tape protection &amp; final painting etc., all as specified and as shown on drawings.</b>	<b>XXX</b>			
	<b>Different DN / sizes for items listed, for complete installation</b>				
1217A	Flanged/spigot DI pipe	m	5		
1217B	DI tee	No.	1		
1217C	DI pipe	m	10		
1217D	DI 90° bend	No.	1		
1217E	DI dismantling joint	No.	1		
1217F	DI puddle flanges	No.	1		
1217G	DI sluice valves	No.	1		
1217H	Grade 316 SS screen baskets 40x40mm aperture size c/w lifting eyes, SS guide rails, handles, lifting chains etc., all 316 SS as shown on drawings.	No.	0		
1217I	Grade 316 SS screen baskets 25x25mm aperture size c/w lifting eyes, SS guide rails, handles, lifting chains etc., all 316 SS as shown on drawings.	No.	0		
	<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL NO. 12</b>				



**ANNEX D**

Item	Description	Unit	Qty	Unit Price (MUR)	Total Amount (MUR)
				<b>BF</b>	
<b>1219</b>	<b>HOISTING EQUIPMENT</b>	<b>XXX</b>			
1219A	Electric hoist with push trolley mounted on I-beam in indoor setup, c/w hook suspension, trailing cable and pendant controller. Paintwork to be suitable for a pumping station with chlorine usage / storage. Mounting height: 3-4m; Working load : up to 1000kg.	Set	1		
	<b>PIPEWORKS &amp; FITTINGS</b>				
<b>1220</b>	<b>Ductile Iron suction and delivery pipework and fittings (to BS EN 545:2010) within the pumpstation structure and pump room drywell up to the flowmeter with flanges to PN16 (as per BS EN 1092-2:1997), including all transition sections, tapers, bends, delivery pipe manifold, metallic gaskets, gate valves, check valves, pressure gauges, puddle/thrust flanges, dismantling joints, flange adaptors (VJ), HDG nuts, bolts &amp; washers, grease, tape protection &amp; final painting etc., all as specified and as shown on drawings.</b>	<b>XXX</b>			
	<b>Allow for flanged connections between SS304 pump discharge pipes and DI delivery pipework in dry-well up to rising mains.</b>				
	<b>Suction accessories to include DI puddle flanges, bellmouths, large radius bends, expansion bellows, as required.</b>				
	<b>Dimensions:</b>				
1220A	DN 150 (pump connections)	m	8		
1220B	DN 200 (suction flanges, suction manifold, pump outlet)	m	12		
1220C	DN 315 (from pump outlet connecting to delivery manifold)	m	8		
1220D	DN 400 (delivery manifold up to rising mains)	m	6		
<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL NO. 12</b>					

**ANNEX E**

Item	Description	Unit	Qty	Rate (MUR)	Total Amount (MUR)
	<b>PIPEWORKS &amp; FITTINGS FOR PUMP ROOM STRUCTURE</b>			<b>BF.</b>	
1325	Ductile Iron suction and delivery pipework and fittings (to BS EN 545:2010) within the water tank / pump room structure, in the pump room up to the flowmeter with flanges to PN16 (as per BS EN 1092-2:1997), including all tapers, bends, delivery pipe manifold, metallic gaskets, gate valves, check valves, pressure gauges, puddle/thrust flanges, dismantling joints, flange adaptors (VJ), HDG nuts, bolts & washers, grease, tape protection & final painting etc., all as specified and as shown on drawings. Allow for flanged connections between SS304 pump discharge pipes and DI delivery pipework in pump room up to distribution mains. Suction accessories to include DI puddle flanges, bellmouths, large radius bends, expansion bellows, as required. Dimensions:	XXX			
1314A	DN 65 (standby inlets and outlets)	m	20		
1314B	DN 100	m	20		
1314C	DN 150	m	85		
1314D	DN 200 (overflow, washout)	m	30		
1314E	DN 250 (suction inlets, suction and delivery manifolds)	m	50		
1314F	DN 250 (pump outlet)	m	10		
	<b>VALVES</b>				
1315	Valves and fittings inside and outside the pump station with flanges to PN16 (as per BS EN 1092-2:1997) including steel gaskets, DI pipes, fittings, nuts bolts & washers and DI pipes & fittings incl HDG nuts, bolts & washers (outside wet wells), grease, tape protection & final painting etc., all as per specification and layouts. Delivery pipework and fitting diameters as appropriate to suit pump outlet diameter; equipment as required including but not limited to below:	XXX			
1315A	DI 90° flanged elbow	Lot	1		
1315B	DI flanged pipe - length to suit outlet level	Lot	1		
1315C	uPVC flap valve & coupling	Lot	1		
<b>TOTAL FOR THIS BILL CARRIED FORWARD TO LOT 1 - BILL NO. 13</b>					

**ANNEX F**

w) **PROVIDE FOR USE OF EMPLOYER'S STAFF WHEEL BARROW IN 20 GAUGE GMS STEEL INCLUSIVE OF PRIMER COATING AND PAINTING**

The rate includes:

- all transport, labour, materials, tools, equipment, plant as necessary
- primer coating and painting
- Any miscellaneous costs arising.

x) **SUPPLY AND INSTALL HANDRAIL AS PER DRAWINGS**

The rate includes:

- Excavation in all materials including rock to provide 600mm deep embedment of posts
- manufacture, hot dip galvanized, transport and fix steel hand railing as detailed and per specifications.
- supply and cast mass concrete bases to hand railing posts.
- allow for making good in asphaltic concrete at edges if necessary
- Any miscellaneous costs arising.

y) **PUMPS AND CONTROL SYSTEM**

i. **PUMPSET FOR RAW INDUSTRIAL SEWERAGE (2 DUTY AND 1 STANDY AND ALTERNATE MODE) WITH ANCILLARIES INCLUDING FLOAT LEVEL SWITCHES COMPLETE**

This price includes the following:

- supply and placing of three identical raw industrial sewerage pump vertically mounted motor and shaft to deliver 330 m<sup>3</sup>/hr when operating in parallel and one standby and alternate mode (Estimated total head 25m) (N-type impeller)
- testing and commissioning of the pumps
- supply and fix support to the pumps
- supply and fix temperature & leakage monitoring devices to protect each pump
- supply of pump characteristics curves for one pump working and when both pumps are working complete with all calculations to be approved by the Engineer
- supply all catalogues and specifications of the pumps
- supply and fix float switch, free mercury type for waste and sewerage application. Length of equal to greater than 13m.
- supply and fix of float switch support made of stainless steel.
- all transport, labour, materials, tools, equipment, plant as necessary for supply, fix, test and commission the pumps
- Any miscellaneous costs arising.

ii. **MOTOR CONTROL CENTRE (MCC) TO FEED LIGHTING, SWITCH SOCKET, CONTROL PANEL FOR PUMP, INSTRUMENTATIONS**

This price includes the following:

- supply and test of the Motor Control Centre
- testing and commissioning of the Motor Control Centre
- supply of 1 control panel for working of the mentioned pumps. The panel shall include soft starter for each pump, mode of operation: 2 duty & 1 stand by, alternate mode, cascade mode, ammeter, voltmeter, hour meter, phase control relay.
- supply of all fittings for fixing the Motor Control Centre as necessary
- all transport, labour, materials, tools, equipment, plant as necessary
- supply and fix alarm system including signal to a telephone line no. as per specification

**ANNEX G**

- trial mixes;
- mixing, placing in or against any surface, including soil faces, compaction, finishing and unformed surface finishes;
- concreting in waterlogged conditions including keeping working areas free of water
- curing and protection;
- construction joints, (whether or not shown on the drawings) water bars and stops including formwork;
- holes, ducts, pockets, sockets, mortices and the like including formwork;
- measures to control alkali-silica reaction;
- measures to allow for camber requirements;
- air entrainment;
- admixtures and additives;
- placing concrete by any means including pumping;
- placing of concrete at specified temperatures;
- provision for supplying a cover meter instrument and carrying out surveys to the completed structures and reporting results to the engineer and in a format to be agreed with the engineer
- supply of all materials, labour and equipment for transport, lifting and placing of all precast concrete elements
- Any miscellaneous costs arising.

**g) FORMWORKS**

This price includes the following:

- supply of all materials and plants
- trial panels for smooth and profiled finished
- formwork for kickers
- falsework, centering, fabricating, assembling, cutting, fitting and fixing in position and taking measures to produce the required shapes of concrete.
- all design calculation & warranty for special shapes and forms as and where directed by engineer.
- forming cambers and falls
- linings and taking measures to produce the required finish to the surfaces of the concrete
- cutting and fitting around projecting members, pipes, reinforcement and the like
- individual fillets, chamfers, splays, drips, rebates, recesses, grooves
- maintaining in place until striking and allowing for any variation from the minimum period for striking arising from prevailing weather conditions
- striking, taking down and removing
- concrete provided in lieu of formwork to fill over break and working space
- working in confined areas or areas with limited working spaces
- submit a certificate or certificates in connection with the erection and details of false and temporary works for sub and superstructures

The Contractor shall, in connection with erection and details of False and temporary works for Sub and Superstructure, submit to the Engineer prior to the commencement of the relevant parts of the Works a certificate or certificates in the form prescribed hereafter:

Each certificate shall be signed by a Structural Engineer with appropriate qualifications and experience who has not been concerned with the original design of the element of the Contractor's erection proposals and details of the False and temporary Works to which the certificate relates.